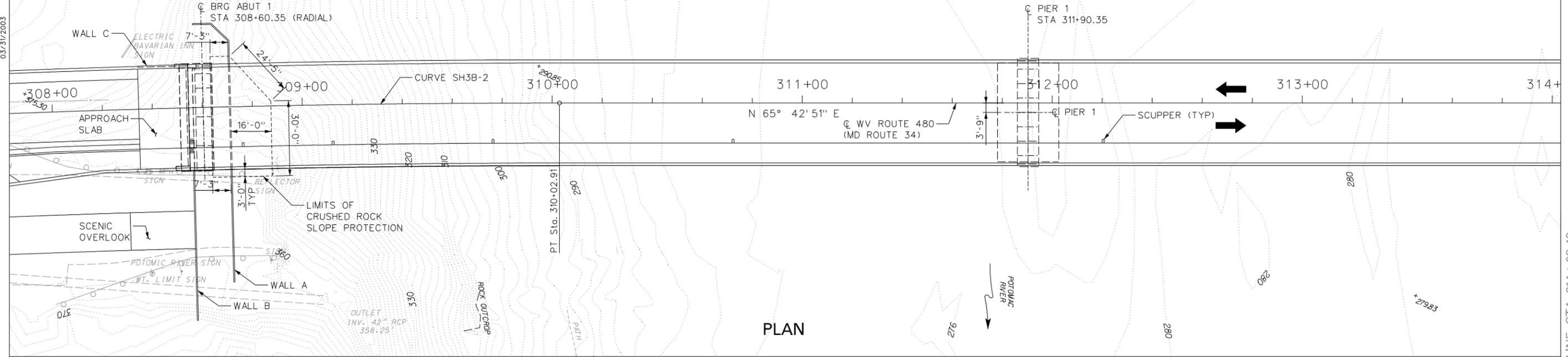
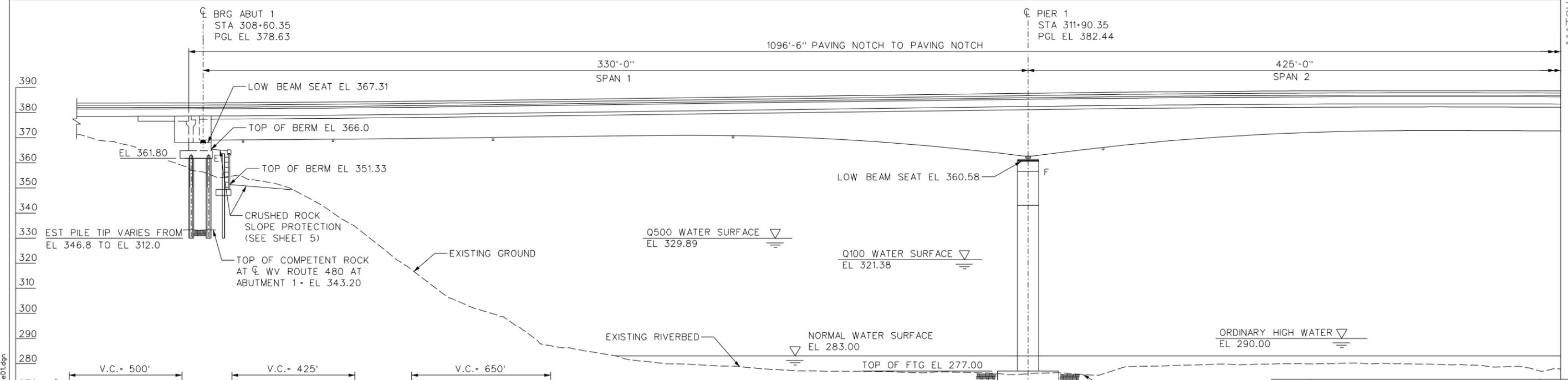


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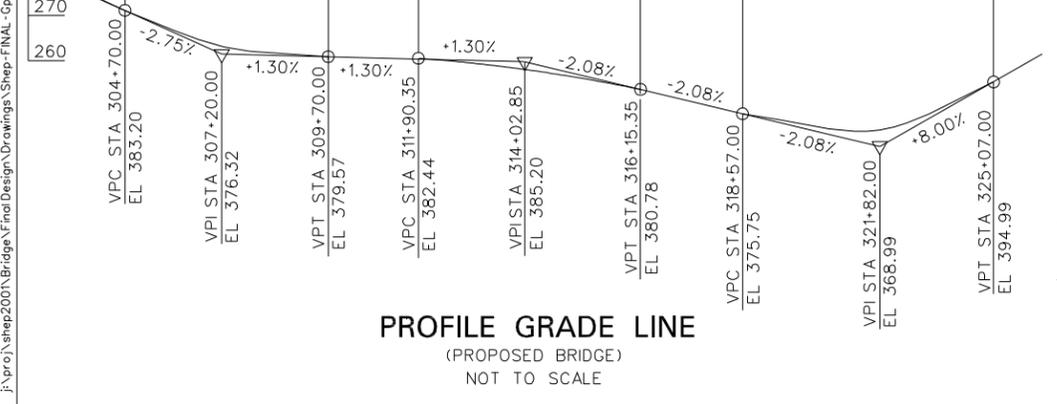
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	157	407



PLAN



ELEVATION



PROFILE GRADE LINE
(PROPOSED BRIDGE)
NOT TO SCALE

CURVE SH3B-2
 PI = 307+48.88
 $\Delta = 5^\circ 05' 03''$ (RT)
 D = 1° 00' 00"
 R = 5,729.58
 L = 508.41
 T = 254.37

CURVE SH3B-3
 PI = 319+85.72
 $\Delta = 5^\circ 05' 03''$ (RT)
 D = 1° 00' 00"
 R = 5,729.58
 L = 508.41
 T = 254.37

DESIGN TRAFFIC DATA
 ADT (2001) = 6900
 ADT (2021) = 10800
 DESIGN SPEED = 40 mph
 PERCENT TRUCKS = 5%

LEGEND:

- E = EXPANSION BEARING
- F = FIXED BEARING

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
GENERAL PLAN & ELEVATION - I**

DESIGNED <i>JSD</i>	DATE 11/02
DRAWN <i>JME</i>	11/02
CHECKED <i>JSD</i>	11/02
CHECKED <i>PWP</i>	11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET **1** OF **93**
BRIDGE NO. **4919**

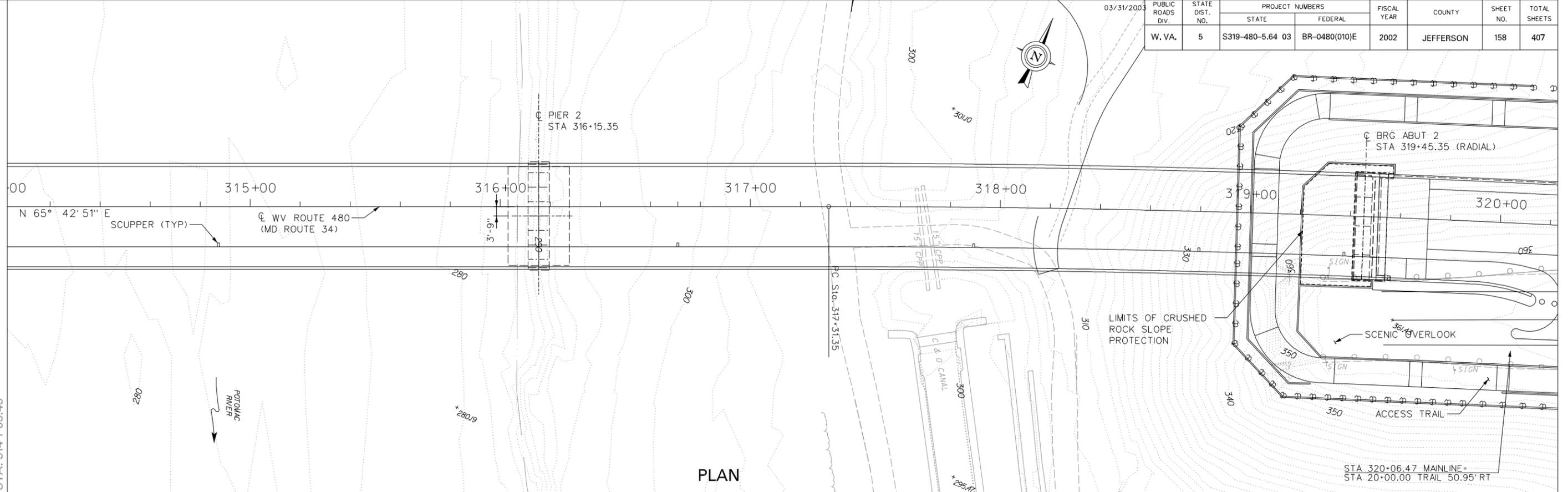
SCALE : 0 20 ft.

MATCHLINE STA. 314 + 03.43

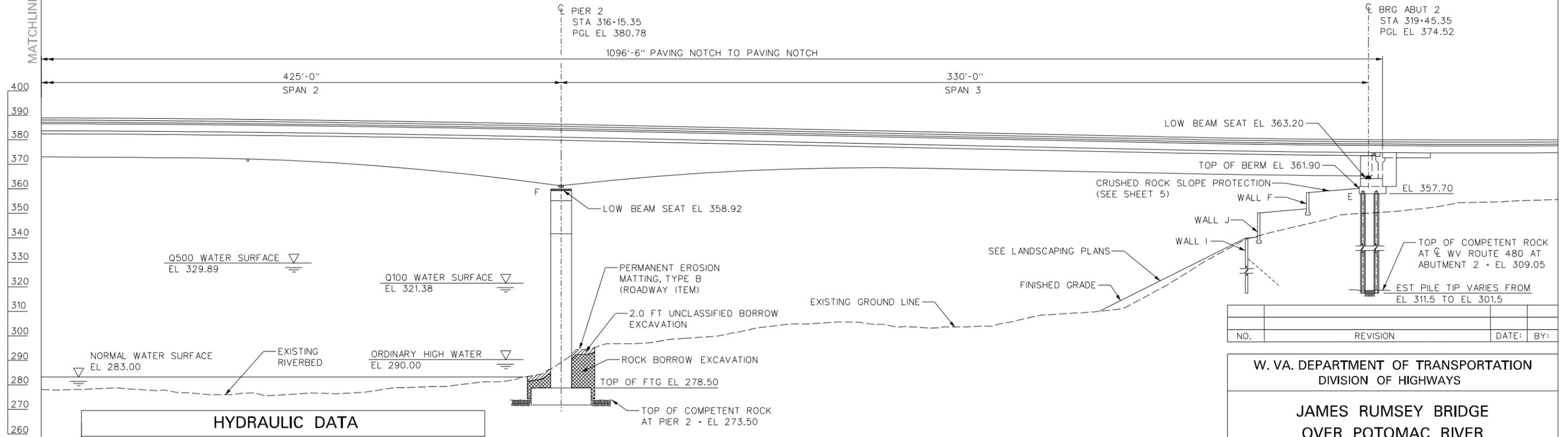
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03/31/2003

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	158	407



PLAN



ELEVATION

HYDRAULIC DATA			
DRAINAGE AREA = 5936 SQ MILES			
	MAGNITUDE	VELOCITY	ELEVATION
10 YEAR FLOOD	150,800 CFS	7.2 FT/SEC	309.9
50 YEAR FLOOD	255,000 CFS	9.2 FT/SEC	317.89
DESIGN FLOOD-100 YEARS	315,000 CFS	10.2 FT/SEC	321.38
500 YEAR FLOOD	475,000 CFS	12.2 FT/SEC	329.89

SCOUR HOLE ELEV	
PIER 1	270.00
PIER 2	273.50

LEGEND:
 E = EXPANSION BEARING
 F = FIXED BEARING

SCALE : 0 20 ft.

NO.	REVISION	DATE:	BY:

**W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
GENERAL PLAN & ELEVATION - II**

SHEET **2 OF 93**
BRIDGE NO. **4919**

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

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GENERAL NOTES

GOVERNING SPECIFICATIONS

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, STANDARD SPECIFICATIONS, ROADS AND BRIDGES, ADOPTED 2000, AND THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS SUPPLEMENTAL SPECIFICATIONS DATED JANUARY 1, 2003, THE CONTRACT PLANS, AND THE CONTRACT DOCUMENTS ARE THE GOVERNING PROVISIONS APPLICABLE TO THIS PROJECT.

DESIGN

THE BRIDGE DESIGN IS IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CUSTOMARY U.S. UNITS, SECOND EDITION, 1998, INCLUDING 1999, 2000, 2001, AND 2002 INTERIM SPECIFICATIONS.

THE STRUCTURE HAS BEEN DESIGNED FOR A LIVE LOAD CAPACITY OF 2 LANES OF HL-93 AND A SIDEWALK LIVE LOAD OF 75 PSF WHICH IS CONSIDERED SIMULTANEOUSLY WITH THE VEHICULAR DESIGN LIVE LOAD.

THE DESIGN PROVIDES FOR PERMANENT METAL DECK FORMS (15 PSF INCLUDING CONCRETE) AND A FUTURE WEARING SURFACE ON THE ROADWAY (25 PSF). THIS FUTURE WEARING SURFACE IS IN ADDITION TO THE 2" OVERLAY INDICATED ON THE CONTRACT PLANS. PERMANENT METAL DECK FORMS ARE TO BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH THE SUPPLEMENTAL SPECIFICATIONS.

THE STRUCTURE IS DESIGNED FOR SEISMIC PERFORMANCE CATEGORY A.

NO ANALYSIS FOR REDECKING OF THE BRIDGE HAS BEEN CONDUCTED.

THE DECK SLAB HAS BEEN DESIGNED IN ACCORDANCE WITH THE EMPIRICAL DESIGN PROCESS INCLUDED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECOND EDITION, DATED 1998, INCLUDING 1999, 2000, 2001, AND 2002 INTERIM SPECIFICATIONS.

THE DECK SLAB CONSISTS OF TWO STAGES: THE FIRST STAGE IS OF REINFORCED CONCRETE AND THE SECOND STAGE IS 2" OF SPECIALIZED CONCRETE OVERLAY (LATEX ONLY) BETWEEN THE CURB LINES. THE DECK SLAB HAS BEEN DESIGNED UTILIZING THE TOTAL THICKNESS OF THE TWO STAGES.

THE SUPERSTRUCTURE HAS BEEN DESIGNED AS A COMPOSITE SECTION FOR THE FULL LENGTH OF THE BRIDGE. THE COMPOSITE SECTION FOR LIVE LOAD INCLUDES THE GIRDERS AND TOTAL DECK THICKNESS OF REINFORCED CONCRETE AND SPECIALIZED CONCRETE OVERLAY. THE DESIGN WAS PERFORMED USING THE FINITE ELEMENT METHOD.

DESIGN UNIT STRESSES

CONCRETE:

CLASS B CONCRETE, $f' = 3.0$ KSI
ARCHITECTURAL CLASS B CONCRETE, $f' = 3.0$ KSI
CLASS K CONCRETE, $f' = 4.0$ KSI, $n = 8$

REINFORCING STEEL:

AASHTO M31, GRADE 60, $F_y = 60$ KSI

STRUCTURAL STEEL:

AASHTO M270 GRADE 50W, $F_y = 50$ KSI
AASHTO M270 GRADE 36, $F_y = 36$ KSI
AASHTO M270 GRADE HPS 70W, $F_y = 70$ KSI

CONCRETE

CONCRETE FOR BRIDGE DECKS, PARAPETS, SIDEWALK, AND SIDEWALK BARRIER SHALL BE CLASS K. ABUTMENTS AND FOOTINGS SHALL BE CLASS B CONCRETE. PIER STEMS SHALL BE ARCHITECTURAL CLASS B CONCRETE.

A WATER-REDUCING AND RETARDING ADMIXTURE IN ACCORDANCE WITH SECTION 707.2 OF THE STANDARD SPECIFICATIONS SHALL BE USED IN ALL DECK CONCRETE. PAYMENT SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 601003-001, CLASS K CONCRETE. RETARDER WILL NOT BE REQUIRED BELOW 50°F. THE CONTRACTOR'S ATTENTION IS CALLED TO THE TEST REQUIREMENTS FOR THE RETARDER ADMIXTURE.

CHAMFER ALL EXPOSED EDGES OF SUBSTRUCTURE CONCRETE 1" X 1" AND SUPERSTRUCTURE CONCRETE $\frac{3}{4}$ " X $\frac{3}{4}$ " UNLESS OTHERWISE NOTED.

ALL CONCRETE SHALL BE FINISHED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 601.11 OF THE STANDARD SPECIFICATIONS.

CAST-IN-PLACE CONCRETE SHALL BE CURED IN ACCORDANCE WITH SUBSECTION 601.12 OF THE STANDARD SPECIFICATIONS. IF USED, POLYETHYLENE COATED BURLAP SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 707.6 OF THE STANDARD SPECIFICATIONS.

THE CLEAR DISTANCE BETWEEN REINFORCING STEEL AND THE FACE OF CONCRETE SHALL BE AS FOLLOWS UNLESS NOTED, OTHERWISE:

TOP OF DECK SLAB (INCLUDING 2" OVERLAY) - 3"
BOTTOM OF DECK SLAB - 1"
PARAPETS - 1½"
ABUTMENT CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH - 3"
PIER FOOTING CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH - 3"
ALL OTHER LOCATIONS - 2"

WHENEVER CONCRETE IS PLACED USING A CONCRETE PUMP, A STANDBY CONCRETE PUMP SHALL BE PROVIDED AS A BACKUP TO AVOID INTERRUPTION TO THE CONCRETE PLACEMENT CAUSED BY A BREAKDOWN OF THE ORIGINAL PUMP.

ABUTMENT BACKWALLS SHALL BE FINISHED TO ROADWAY GRADE AND BRIDGE CROSS SLOPE.

BEARING SEATS ON ABUTMENTS AND PIERS, UPON WHICH BEARING DEVICES WILL BE SET, SHALL BE FINISHED TO THE TRUE ELEVATIONS AS SHOWN ON THE PLANS.

HORIZONTAL CONSTRUCTION JOINTS SHOWN ON THE PLANS SHALL BE ROUGHENED UNLESS NOTED OTHERWISE.

PROTECTION OF CONCRETE SUBSTRUCTURE

BEFORE PLACING ANY STEEL SUPERSTRUCTURE MEMBERS ON THE CONCRETE SUBSTRUCTURE UNITS, COAT ALL EXPOSED AREAS OF THE ABUTMENT, TOP, SIDES, AND ALL FACES OF PIER CAPS AND PIER STEMS TO THE GROUND OR WATERLINE ELEVATION WITH AN APPROVED SILANE-BASED CONCRETE SEALER. PREPARATION OF SURFACES, APPLICATION RATES, AND METHODS SHALL BE AS RECOMMENDED BY THE SEALER MANUFACTURER.

TAKE APPROPRIATE MEASURES TO PROTECT THE CONCRETE SUBSTRUCTURE FROM RUST STAINING DURING CONSTRUCTION AND CURING OF THE SUPERSTRUCTURE CONCRETE. DEFLECT WATER RUNOFF FROM CURING OPERATIONS AWAY FROM THE STEEL GIRDERS AND DO NOT ALLOW WATER TO DRAIN ONTO THE SUBSTRUCTURE CONCRETE AFTER COMING INTO CONTACT WITH THE WEATHERING STEEL.

UPON COMPLETION OF ALL SUPERSTRUCTURE CONCRETE CURING OPERATIONS, REMOVE ALL RUST STAINS FROM SUBSTRUCTURE UNITS USING PROPRIETARY CHEMICAL STAIN REMOVERS OR MILD ACID ETCHING. USE ABRASIVE BLAST CLEANING TO SUPPLEMENT THE OTHER CLEANING METHODS IF THE STAINED AREAS ARE SEVERE OR EXTENSIVE. ALL CLEANING METHODS SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.

RE-COAT SUBSTRUCTURE CONCRETE AT ALL AREAS WHERE RUST STAINS WERE REMOVED, REGARDLESS OF THE CLEANING METHOD USED, WITH AN APPROVED SILANE-BASED CONCRETE SEALER AS SPECIFIED ABOVE.

INCLUDE THE COST OF SILANE COATING, PROTECTING, CLEANING AND RECOATING SUBSTRUCTURE UNITS IN CLASS B CONCRETE, 601002.

CONCRETE FORMING AND FALSEWORK

PERMANENT METAL DECK FORMS SHALL BE USED IN PLACING THE DECK CONCRETE IN ACCORDANCE WITH SECTION 601.

DECK SLAB OVERHANG FORMS SHALL BE SUPPORTED FROM THE BOTTOM FLANGE OF FASCIA GIRDERS OR STRINGERS. THE CONTRACTOR SHALL SUBMIT FORMING PLANS AND SUPPORTING CALCULATIONS FOR THE OVERHANG TO THE ENGINEER FOR REVIEW PRIOR TO ERECTING THE FORMWORK. DESIGN FORMING AND FALSEWORK SHALL BE BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WEST VIRGINIA, WHO SHALL ALSO VERIFY THAT THE DESIGN IS UTILIZED.

FORM SYSTEMS THAT WILL CAUSE OVERSTRESS OR DEFORMATION TO PERMANENT BRIDGE MEMBERS SHALL NOT BE PERMITTED. THE CONTRACTOR SHALL SUBMIT CALCULATIONS VERIFYING THAT THIS REQUIREMENT IS SATISFIED.

CONCRETE FORMING SHALL BE IN ACCORDANCE WITH SECTION 601.8.

NO SLIP-FORMING OF SIDEWALK OR PARAPETS WILL BE PERMITTED.

DECK POURING SEQUENCE

THE DECK PLACEMENT SEQUENCE IS SHOWN BY POUR NUMBERS ON THE DECK PLANS. DECK CONCRETE MUST ATTAIN A MINIMUM STRENGTH OF 2000 PSI BEFORE ADJACENT POURS ARE MADE.

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REINFORCING STEEL BARS

BARS SHALL CONFORM TO AASHTO M31 GRADE 60, PAYMENT WILL BE MADE UNDER ITEM 602002-001, EPOXY COATED REINFORCING STEEL BAR OR ITEM 602001-001, REINFORCING STEEL BAR.

ALL BARS IN THE DECK SLAB, SIDEWALK, SIDEWALK BARRIER, PARAPETS, APPROACH SLABS, AND ABUTMENTS SHALL BE EPOXY COATED. EPOXY COATED BARS ARE LABELED WITH THE PREFIX 'E'.

ALL REINFORCEMENT SHALL BE LAPPED A MINIMUM OF 40 BAR DIAMETERS UNLESS SHOWN OTHERWISE ON THE PLANS. EMBEDMENT DIMENSIONS FOR REINFORCING ARE CLEAR DIMENSION UNLESS NOTED. BAR SPACING IS GIVEN TO THE CENTERLINE OF THE BAR.

STRUCTURAL STEEL

INCLUDE ALL STRUCTURAL STEEL COMPLETE IN PLACE INCLUDING ANCHOR BOLTS, DECK DRAINAGE COMPONENTS, PAINTING AND GALVANIZING IN THE LUMP SUM PRICE BID FOR ITEM 615001-001.

PROVIDE AASHTO M270, GRADE 50W STRUCTURAL STEEL FOR ALL SHAPES, EXCEPT THE EXPANSION JOINTS, WHICH SHALL BE AASHTO M270 GRADE 36. ALL GIRDER FLANGES, WEBS, CONNECTION PLATES, DIAPHRAGMS, AND SPLICE PLATES SHALL MEET AASHTO M270 GRADE 50W OR AASHTO M270 HPS 70W AS SHOWN ON THE CONTRACT PLANS.

PROVIDE STEEL MEETING THE CHARPY V-NOTCH REQUIREMENTS FOR AASHTO ZONE 2 FOR ALL STRUCTURAL STEEL USED IN GIRDER FLANGES, WEBS, ALL SPLICE PLATES, AND FILLS.

PROVIDE BLACK (UNCOATED), TYPE 3 (WEATHERING STEEL) $\frac{7}{8}$ " DIAMETER HIGH STRENGTH BOLTS WHICH MEET THE REQUIREMENTS OF SECTION 709.24, UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS, PROVIDE MECHANICALLY GALVANIZED HIGH STRENGTH FASTENERS, TYPE 1 OR 3, IN REGIONS OF THE STRUCTURE THAT REQUIRE PAINTING.

PROVIDE BOLT HOLE DIAMETERS $\frac{1}{16}$ " LARGER THAN NOMINAL DIAMETER OF HIGH STRENGTH FASTENERS.

REMOVE ALL LOOSE AND NON-ADHERENT RUST THAT MAY HAVE FORMED ON THE CONNECTION AREAS BY HAND OR POWER WIRE BRUSHING BEFORE ASSEMBLING THE HIGH STRENGTH BOLTED CONNECTIONS.

BOLTED CONNECTIONS ARE DESIGNED AS SLIP-CRITICAL JOINTS WITH ALL FAYING SURFACES HAVING A CLASS B SLIP COEFFICIENT.

DETAIL THE BEARING STIFFENERS AND GIRDER ENDS SUCH THAT THEY ARE PLUMB AFTER DEAD LOAD DEFLECTION OF THE STRUCTURE.

CAMBER ORDINATES, AS SHOWN ON THE PLANS, ARE COMPUTED TO COMPENSATE FOR ALL DEAD LOAD DEFLECTIONS AND FOR THE CURVATURE OF THE FINISHED GRADE PROFILE. DETAIL CROSS FRAME MEMBERS TO FIT THE CAMBERED (NO LOAD) POSITION OF THE GIRDERS.

DO NOT EXCEED THE MAXIMUM ALLOWABLE JACKING LOAD. THE MAXIMUM ALLOWABLE JACKING LOAD, APPLIED AT THE JACKING FRAMES IS 1600 KIPS AT THE PIER AND 415 KIPS AT THE ABUTMENTS (WORKING STRESS). JACKING FRAMES HAVE BEEN DESIGNED TO TAKE FULL DEAD LOAD PLUS 50% OF THE LIVE LOAD.

	GENERAL NOTE ADDED OR REVISED	2/17/03	JDD
NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
GENERAL NOTES - I

DESIGNED	DATE
JDD	11/02
DRAWN	
ME	11/02
CHECKED	
JRT	11/02
CHECKED	
PPA	11/02

Baker

Michael Baker Jr., Inc.

Charleston, W.Va.

SHEET

3 OF 93

BRIDGE NO.

4919

03/31/2003	PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
			STATE	FEDERAL				
	W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	160	407

BLAST CLEANING AND PAINTING

UPON COMPLETION OF ALL FABRICATION OPERATIONS IN THE SHOP, AND BEFORE SHIPMENT TO THE PROJECT SITE, ALL WEATHERING STEEL BRIDGE COMPONENTS SHALL BE BLAST CLEANED TO A NEAR WHITE SURFACE CONDITION ACCORDING TO SSPC-SP 10. PRIOR TO THE START OF ANY BLAST CLEANING, ALL OIL, GREASE, CUTTING FLUIDS, OR OTHER FOREIGN MATTER SHALL BE REMOVED FROM THE SURFACES OF THE STEEL BY SOLVENT CLEANING ACCORDING TO SSPC-SP 1.

THE MEMBERS OR PORTIONS OF MEMBERS LISTED BELOW SHALL BE BLAST CLEANED AND SHOP PAINTED ACCORDING TO SECTION 688, USING THE ZINC RICH, LOW VOC SYSTEM, SECTION 711.22. APPLY THE FULL PAINT SYSTEM IN THE FABRICATION SHOP, EXCEPT FOR FAYING SURFACES OF HIGH STRENGTH BOLTED CONNECTIONS AND SURFACES THAT ARE IN DIRECT CONTACT WITH FRESH CONCRETE, WHICH SHALL BE SHOP PAINTED WITH PRIMER ONLY, THE COLOR OF THE FINAL TOP COAT SHALL BE 30045 ACCORDING TO FEDERAL STANDARD 595 AND THE GLOSS AT AN ANGLE OF 60 DEGREES SHALL NOT EXCEED 25. PAINT THE ENDS OF THE GIRDERS AT THE ABUTMENTS 12'-6" IN LENGTH, INCLUDING ALL STRUCTURAL STEEL COMPONENTS IN THAT LENGTH INCLUDING THE EXPANSION JOINTS. ALL STEEL DRAINAGE MATERIAL SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111 AND/OR M232.

PREPARE AND PAINT THE GALVANIZED MATERIAL BELOW THE BOTTOM OF THE DECK IN ACCORDANCE WITH PAINT MANUFACTURER'S RECOMMENDATIONS. THE COLOR OF THE FINAL TOP COAT SHALL BE 30045 IN ACCORDANCE WITH FEDERAL STANDARD 595. COST TO BE INCLUDED IN THE PRICE BID OR ITEM 615001-001, STEEL SUPERSTRUCTURE. THE EXPOSED SURFACES OF THE GALVANIZED STEEL PORTIONS OF THE BEARINGS SHALL BE PAINTED.

AREAS OF THE SHOP APPLIED PAINT SYSTEM WHICH ARE DAMAGED DURING ERECTION, AND HIGH STRENGTH BOLTED CONNECTION AREAS THAT WERE ONLY PRIME PAINTED, SHALL BE PROPERLY CLEANED AND PAINTED ACCORDING TO SECTION 688, AND TO THE SATISFACTION OF THE ENGINEER.

AFTER COMPLETION OF ALL TIGHTENING OPERATIONS, MECHANICALLY GALVANIZED FASTENERS SHALL BE SOLVENT CLEANED AND FIELD PAINTED AS SPECIFIED FOR THE STRUCTURAL STEEL.

INCLUDE CLEANING AND PAINTING COSTS IN ITEM 615001-001, STEEL SUPERSTRUCTURE.

IDENTIFICATION MARKING STEEL MEMBERS

USE METAL TAGS, SOAPSTONE, OR SOME OTHER READILY REMOVABLE MATERIAL FOR ALL STEEL MILL AND FABRICATOR IDENTIFICATION MARKINGS FOR STEEL PLATES, SHAPES AND FABRICATED MEMBERS; OR, MARK IN AN AREA OF THE COMPLETED MEMBER WHICH WILL BE COVERED WITH CONCRETE. MARKING METHODS AND LOCATIONS ARE SUBJECT TO APPROVAL OF THE ENGINEER.

DO NOT USE PAINT OR WAX-BASED CRAYONS FOR MARKING.

HANDLING AND STORING STEEL MEMBERS

STEEL MEMBERS MUST NOT BE GOUGED, SCRATCHED, DENTED OR ALLOWED TO RUB AGAINST OTHER MEMBERS WHICH WOULD RESULT IN DAMAGE TO THE BLAST CLEANED PROFILE OF THE STEEL. MEMBERS SHALL BE HANDLED USING SOFTENERS AND SLINGS INSTEAD OF CHOKERS AND CHAINS.

STORE MEMBERS IN THE FABRICATION SHOP AND AT THE PROJECT SITE IN SUCH A MANNER AS TO BE KEPT FREE AND CLEAN OF ALL FOREIGN SUBSTANCES SUCH AS GREASE, OIL, MORTAR AND CONCRETE, SPLATTER, CHALK AND CRAYON MARKS, PAINT, AND DIRT. ALL STORAGE MUST BE ABOVE GROUND AND SLOPED TO ALLOW FREE DRAINAGE OF MELTED SNOW, RAINWATER AND DEW.

IF STORED FOR PERIODS LONGER THAN 3 MONTHS, THE MEMBERS MUST BE PLACED ON METAL SUPPORTS. FOR PERIODS OF STORAGE UP TO 3 MONTHS, MEMBERS MAY BE PLACED ON CLEAN, UNTREATED, WOOD TIMBERS.

STORE PLATE GIRDERS AND ROLLED BEAMS WITH THE WEB IN THE UPRIGHT POSITION. THE MEMBERS MAY BE STACKED, PROVIDED METAL OR WOOD SUPPORTS ARE USED, AS NOTED ABOVE.

ALUMINUM RAILING

ALUMINUM RAILING, POSTS AND BASE PLATES SHALL HAVE ANODIZED COLORING TO MATCH WEATHERING STEEL.

FINAL CLEANUP OF STRUCTURAL STEEL SURFACES

UPON COMPLETION OF ALL CONCRETE CURING OPERATIONS, THE CONTRACTOR SHALL CLEAN ALL STEEL SURFACES TO REMOVE ALL GREASE, OIL, CONCRETE RESIDUE, DIRT, AND OTHER FOREIGN SUBSTANCES TO THE SATISFACTION OF THE ENGINEER.

CLEANING SHALL BE PERFORMED BY ONE OR MORE OF THE FOLLOWING METHODS: HIGH-PRESSURE WATER, POWER AND/OR HAND WIRE BRUSHING, AND/OR BY BRUSH-OFF BLAST CLEANING ACCORDING TO SSPC-SP 7. CLEANING SHALL BE FOLLOWED BY A CLEAN WATER RINSE TO REMOVE ALL RESIDUES OF DETERGENTS AND CLEANERS IF THEY WERE USED. ALL GREASE AND OIL SHALL BE REMOVED PRIOR TO THE CLEAN WATER RINSE BY SOLVENT CLEANING.

DO NOT USE ACIDS TO REMOVE STAINS.

INCLUDE COSTS FOR FINAL CLEANUP OF STEEL SURFACES IN ITEM 615001-001, STEEL SUPERSTRUCTURE.

WELDING

ALL WELDING, FABRICATION AND NON-DESTRUCTIVE TESTING SHALL CONFORM TO THE ANSI/AASHTO/AWS BRIDGE WELDING CODE, (D1.5M/D1.5:2002), EXCEPT AS MODIFIED BY THE STANDARD SPECIFICATIONS.

DO NOT USE THE ELECTROSLAG OR ELECTROGAS WELDING PROCESS.

DO NOT FIELD WELD ON ANY PART OF THE STRUCTURE WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER, UNLESS SHOWN ON THE CONTRACT PLANS.

DO NOT WELD REINFORCEMENT BARS, DURING FABRICATION OR CONSTRUCTION.

BEARINGS

PROVIDE ANCHOR BOLTS MEETING THE REQUIREMENTS OF AASHTO M314 GRADE 105. GALVANIZE ANCHOR BOLTS, NUTS AND WASHERS. SOLVENT CLEAN AND FIELD PAINT THE EXPOSED PORTIONS OF THE ANCHOR BOLTS, NUTS AND WASHERS AS SPECIFIED FOR THE STRUCTURAL STEEL AFTER BEARING AND ANCHOR BOLT INSTALLATION IS COMPLETE.

SET ANCHOR BOLTS USING NON-SHRINK PORTLAND CEMENT GROUT IN PRE-FORMED HOLES OF THE SPECIFIED DIAMETER. DO NOT DRILL OR CORE ANCHOR BOLT HOLES. THE NON-SHRINK PORTLAND CEMENT GROUT SHALL CONFORM TO SECTION 715.5 OF THE STANDARD SPECIFICATIONS. USE THE GROUT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. INCLUDE COST OF CEMENT GROUT IN ITEM 601002, CLASS B CONCRETE.

STEEL TROWEL FINISH BEARINGS SEATS ON ABUTMENTS AND PIERS TO TRUE PLANES AND ELEVATIONS. THE FLATNESS OF THE FINISHED SURFACE SHALL NOT VARY FROM A STRAIGHT EDGE LAID ON THE SURFACE IN ANY DIRECTION WITHIN THE LIMITS OF THE MASONRY PLATE BY MORE THAN 1/16". GRIND SURFACES WHICH FAIL TO CONFORM TO THE REQUIRED FLATNESS UNTIL ACCEPTABLE.

INSTALL THE REINFORCED ELASTOMERIC BEARINGS AT THE AMBIENT TEMPERATURE BETWEEN 40 DEGREES AND 80 DEGREES FAHRENHEIT.

WELDED STUD SHEAR CONNECTORS

ALL WELDED STUD SHEAR CONNECTORS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 615.3.3 OF THE STANDARD SPECIFICATIONS. THE CONNECTORS SHALL BE ATTACHED IN THE FIELD. NO SHOP INSTALLATION OF WELDED STUD SHEAR CONNECTORS SHALL BE PERMITTED. THE FIELD INSTALLATION OF THE CONNECTORS SHALL NOT COMMENCE PRIOR TO THE INSTALLATION OF DECK FORMS IN THE AREA SURROUNDING THE STUDS. EXTERIOR DECK OVERHANG FORMS MAY BE INSTALLED AFTER THE WELDED STUD SHEAR CONNECTORS. THE SHEAR CONNECTORS AND DECK FORMS SHALL BE INSTALLED IN A SEQUENCE THAT PERMITS WORKERS ACCESS THROUGH THE DECK AREA WITHOUT WALKING THROUGH INSTALLED CONNECTORS.

ARCHITECTURAL TREATMENT

ARCHITECTURAL TREATMENT TO COMPLY WITH THE REQUIREMENTS OF SECTION 601.8.10 AND 626.4.1 OF THE STANDARD SPECIFICATIONS. NO PURCHASING OF PRODUCTION FORMLINER FOR ALL ARCHITECTURAL TREATMENT SHALL TAKE PLACE WITHOUT A WRITEN APPROVAL OF THE ENGINEER. ALL FORMLINERS FOR CAST-IN-PLACE AND PRECAST STRUCTURAL CONCRETE SHALL BE FROM THE SAME FORMLINER MANUFACTURER AND SAMPLE PANELS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT THE SAME TIME.

EXCAVATION

PAYMENT FOR ALL EXCAVATION, WITHIN THE LIMITS SHOWN ON THE DRAWINGS, SHALL BE AS STRUCTURE EXCAVATION, ITEM 212001-000, OR WET EXCAVATION, ITEM 212002-000. EXCAVATE ROCK AND SHALE UNDER THESE CLASSIFICATIONS TO THE NEAT LINES OF THE FOOTINGS ONLY. NO EXCAVATION SHALL BE CLASSIFIED AS ROCK EXCAVATION.

WET EXCAVATION, ITEM 212002-000, OCCURS AT PIERS 1 AND 2 WITHIN THE SPACE LIMITS INDICATED ON THE DRAWINGS, THE COST OF ANY COFFERDAM SHALL BE INCLUDED IN ITEM 212004-000, COFFERDAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 212.5 AND INSPECTED IN ACCORDANCE WITH SECTION 212.7. COST OF THE INSPECTION SHALL BE CONSIDERED AS INCIDENTAL TO ITEM 212004-000.

DESIGN OF THE COFFERDAMS SHALL BE BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WEST VIRGINIA WHO SHALL VERIFY THAT THE DESIGN IS UTILIZED. THE CONTRACTOR SHALL SUBMIT COFFERDAM PLANS TO THE DIVISION FOR REVIEW BY THE ENGINEER PRIOR TO CONSTRUCTION.

APPROACH SLABS

THE APPROACH SLABS SHALL BE IN ACCORDANCE WITH SECTION 502 EXCEPT AS NOTED.

REINFORCING STEEL BARS IN THE APPROACH SLABS SHALL BE EPOXY COATED AND SHALL BE ACCORDING TO AASHTO M31. GRADE 60

SILICONE JOINT SEALER SHALL CONFORM TO SECTION 708.4.

THE FOLLOWING APPROACH SLAB RELATED ITEMS ARE INCLUDED IN THE ROADWAY ESTIMATE OF QUANTITIES:

PAYMENT FOR CLASS B CONCRETE FOR THE APPROACH SLAB, COATED REINFORCING STEEL BARS IN THE UPPER AND LOWER MATS OF THE APPROACH SLAB, TRANSVERSE JOINT AT THE ABUTMENT, AND JOINT AND SEALER MATERIAL ALONG SIDES OF APPROACH SLAB IS INCLUDED IN ITEM 502001-012, 12" PORTLAND CEMENT CONCRETE APPROACH SLAB.

PAYMENT FOR AGGREGATE BASE COURSE IS INCLUDED IN ITEM 307001-000, AGGREGATE BASE COURSE, CLASS 1.

PAYMENT FOR ENGINEERING FABRIC UNDER THE AGGREGATE BASE COURSE, CLASS 1, BENEATH THE APPROACH SLAB IS INCLUDED IN ITEM 207034-000, FABRIC FOR SEPARATION.

PAYMENT FOR SUPERPAVE HOT MIX ASPHALT SKID RESISTANT PAVEMENT IS INCLUDED IN ITEM 402001, SUPERPAVE HOT MIX ASPHALT SKID RESISTANT PAVEMENT.

PAYMENT FOR BITUMINOUS MATERIAL BETWEEN THE TOP OF THE CONCRETE APPROACH SLAB AND THE BOTTOM OF THE SUPERPAVE HOT MIX ASPHALT SKID RESISTANT PAVEMENT SHALL BE PAID FOR UNDER ITEM 408002-001 BITUMINOUS MATERIAL.

NO.	REVISION	DATE:	BY:
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W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
GENERAL NOTES - II

DESIGNED <i>JDD</i>	DATE 11/02
DRAWN <i>JME</i>	11/02
CHECKED <i>JRT</i>	11/02
CHECKED <i>PPA</i>	11/02

Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

SHEET
4 OF **93**
BRIDGE NO.
4919

03/31/2003 03:49:37 PM

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	161	407

MAINTENANCE AND DEMOLITION OF EXISTING STRUCTURE

MAINTAIN THE EXISTING STRUCTURE IN A USEABLE AND SAFE MANNER UNTIL SUCH TIME AS THE NEW STRUCTURE IS COMPLETED, ACCEPTED BY THE ENGINEER AND FULLY OPENED TO TRAFFIC. REMOVE THE EXISTING STRUCTURE DURING STAGE III CONSTRUCTION AS SPECIFIED ON THE MAINTENANCE OF TRAFFIC DRAWINGS.

DISMANTLE AND REMOVE, IN ACCORDANCE WITH SECTION 203 OF THE STANDARD SPECIFICATIONS, THE ENTIRE SUPERSTRUCTURE AND THE SUBSTRUCTURE TO THE SPECIFIED DEPTH BELOW THE FINISHED GROUND LINE, AS SHOWN ON THE DEMOLITION PLAN. ALL MATERIAL REMOVED FROM THE BRIDGE WILL BECOME THE PROPERTY OF THE CONTRACTOR AND MUST BE REMOVED FROM THE RIGHT-OF-WAY.

EXISTING BRIDGE PLANS ARE PROVIDED FOR CONTRACTOR'S INFORMATION ONLY.

INCLUDE THE COST OF REMOVAL AND DISPOSAL OF THE EXISTING BRIDGE SUPERSTRUCTURE, PIERS AND ABUTMENTS, THE EXCAVATION, BACKFILL AND GRADING REQUIRED TO REDRESS THE GROUND LINES AT THE EXISTING PIER AND ABUTMENT LOCATIONS; AND THE FURNISHING, INSTALLATION, AND REMOVAL OF TEMPORARY SHIELDING REQUIRED TO PROTECT PERSONS AND PROPERTY IN THE LUMP SUM PRICE BID FOR ITEM 203001-000 DISMANTLING STRUCTURES (LS).

SUBMIT TO THE ENGINEER THE PROCEDURE FOR DISMANTLING THE STRUCTURE, INCLUDING THE NECESSARY PROTECTIVE SHIELDING.

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT THE EXISTING STRUCTURE CONTAINS LEAD BASED PAINT COATINGS AND ASBESTOS IN THE ABANDONED UTILITY CONDUIT.

WHILE THE CONCRETE DECK IS BEING REMOVED, DO NOT ALLOW DEBRIS TO ACCUMULATE UNDER THE BRIDGE. REMOVE ANY CONCRETE THAT FALLS DURING DECK REMOVAL. EXERCISE EXTREME CAUTION IN KEEPING DEBRIS FROM FALLING INTO THE RIVER OR ONTO NATIONAL PARK SERVICE LANDS DURING DEMOLITION. IMMEDIATELY REMOVE ANY DEBRIS WHICH FALLS INTO THE RIVER OR ONTO NATIONAL PARK SERVICE LANDS.

CONFORM TO THE REQUIREMENTS LISTED IN THE SPECIAL PROVISIONS WHEN REMOVING THE EXISTING STRUCTURE.

TEMPORARY CAUSEWAY

REFER TO "CONTRACTORS ACCESS AND CAUSEWAY PLANS" FOR CAUSEWAY QUANTITIES.

EXPLORATORY DRILLING

AS DIRECTED BY THE ENGINEER, PERFORM EXPLORATORY DRILLING AND SAMPLING AT EACH PILE LOCATION AT ABUTMENTS 1 AND 2 AND AT EACH PIER LOCATION AS SPECIFIED IN THE CONTRACT DOCUMENTS IN ACCORDANCE WITH THE SPECIAL PROVISION FOR SECTION 207 PRIOR TO THE START OF PILE DRIVING OPERATIONS. THE TEST HOLES SHALL EXTEND A MINIMUM OF 15 FEET INTO ROCK. PAYMENT SHALL BE BY LINEAR FOOT WITH ITEM 628004-001, "EXPLORATORY DRILLING AND SAMPLING" AND SHALL INCLUDE ALL NECESSARY INCIDENTAL ITEMS TO COVER THE COST OF PERFORMING THE WORK.

STEEL H-PILES

ALL PILES SHOWN IN THE PLANS SHALL CONFORM TO AASHTO M270 GRADE 50. AT PILE LOCATIONS WHERE EXPLORATORY DRILLING SHOWS ROCK IS ENCOUNTERED ABOVE THE MINIMUM PILE TIP ELEVATION SHOWN ON THE PLANS OR WHERE BOULDERS ARE ENCOUNTERED, THE PILES SHALL BE PREDRILLED AND DRIVEN AS DIRECTED BY THE ENGINEER. DRIVEN PILES SHALL BE DRIVEN TO REFUSAL AS SPECIFIED IN SUPPLEMENTAL SPECIFICATION 616 WITH A POWER HAMMER DEVELOPING A MINIMUM RATED ENERGY OF 30,000 FOOT POUNDS PER BLOW.

BLASTING

NO BLASTING WILL BE PERMITTED IN THE RIVER OR AT ANY LOCATION WITHIN THE PROJECT LIMITS.

BRIDGE PLATE

INSTALL A NEW BRIDGE PLATE ON THE ROADWAY FACE OF THE SIDEWALK PARAPET AT ABUTMENT 1 AS DIRECTED BY THE ENGINEER. EXISTING BRIDGE PLATE TO BE REMOVED WITHOUT DAMAGE AND SUBMITTED TO THE ENGINEER.

REMOVAL OF THE WATERLINE INTAKE

REFER TO ROADWAY PLANS FOR REMOVAL OF TEMPORARY RAW WATER INTAKE.

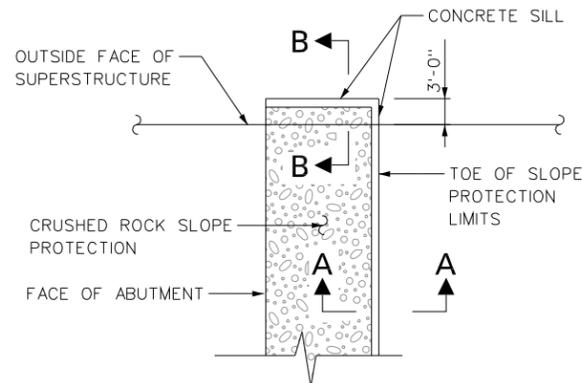
SHOP DRAWINGS

ALL SHOP DRAWINGS WILL BE SUBJECT TO THE REQUIREMENTS OF SECTION 105.2. SUBMIT SHOP DRAWINGS TO:

MICHAEL BAKER JR., INC
5088 WEST WASHINGTON STREET
CHARLESTON, WV 25313

LIST OF SPECIAL PROVISIONS:

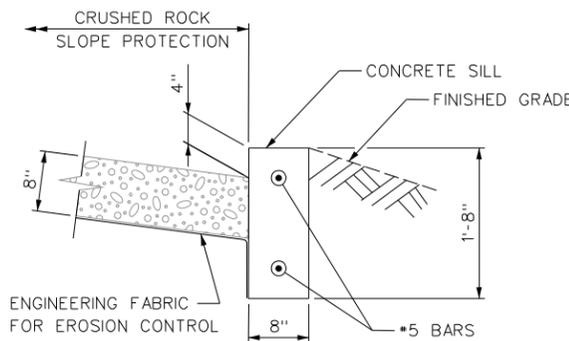
- DISMANTLING STRUCTURES
- EXPLORATORY DRILLING AND SAMPLING
- STEEL STRUCTURES - HIGH-PERFORMANCE STEEL
- TEMPORARY STRUCTURE FOR MAINTAINING TRAFFIC (EXISTING BRIDGE DECK REPAIR)
- LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC



CRUSHED ROCK SLOPE PROTECTION PLAN

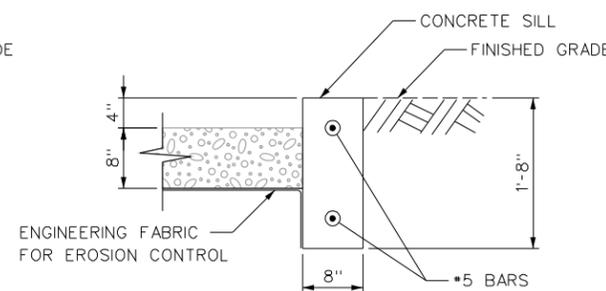
NOT TO SCALE

NOTE: COST OF CONCRETE SILL IS INCIDENTAL TO ITEM 218004-001, 8" CRUSHED ROCK SLOPE PROTECTION.



SECTION A-A

6 0 6 12 INCHES



SECTION B-B

6 0 6 12 INCHES

INDEX OF DRAWINGS

DWG. NO.	DESCRIPTION	DWG. NO.	DESCRIPTION
1	GENERAL PLAN & ELEVATION - I	48	DECK SLAB PLAN - IX
2	GENERAL PLAN & ELEVATION - II	49	LIGHT BLISTER DETAILS
3	GENERAL NOTES - I	50	CONCRETE END DIAPHRAGM DETAILS
4	GENERAL NOTES - II	51	BARRIER DETAILS - I
5	GENERAL NOTES - III AND INDEX OF DRAWINGS	52	BARRIER DETAILS - II
6	SUMMARY OF BRIDGE QUANTITIES	53	TOP OF DECK ELEVATIONS
7	SUBSTRUCTURE AND FOUNDATION LAYOUT	54	DECK SLAB BAR SCHEDULE
8	ABUTMENT 1 PLAN, ELEVATION & SECTION	55	SCUPPER DETAILS
9	ABUTMENT 1 FOUNDATION & STEM PLAN DETAILS	56	SCUPPER DRAINAGE SYSTEM PLAN AND ELEV. SPAN 3
10	ABUTMENT 1 DETAILS - I	57	SCUPPER DRAINAGE SYSTEM DETAILS
11	ABUTMENT 1 DETAILS - II	58	EXPANSION JOINT DETAILS - I
12	ABUTMENT 1 REINFORCEMENT BAR SCHEDULE	59	EXPANSION JOINT DETAILS - II
13	ABUTMENT 2 PLAN, ELEVATION & SECTION	60	EXPANSION JOINT DETAILS - III
14	ABUTMENT 2 FOUNDATION & STEM PLAN DETAILS	61	EXPANSION JOINT DETAILS - IV
15	ABUTMENT 2 DETAILS - I	62	EXPANSION JOINT DETAILS - V
16	ABUTMENT 2 DETAILS - II	63	EXPANSION JOINT DETAILS - VI
17	ABUTMENTS 2 REINFORCEMENT BAR SCHEDULE	64	EXPANSION JOINT DETAILS - VII
18	PIER 1 DETAILS - I	65	EXPANSION JOINT DETAILS - VIII
19	PIER 1 DETAILS - II	66	EXPANSION JOINT DETAILS - IX
20	PIER 2 DETAILS - I	67	EXPANSION JOINT DETAILS - X
21	PIER 2 DETAILS - II	68	RAILING DETAILS - I
22	PIERS 1 AND 2 REINFORCEMENT BAR SCHEDULE	69	RAILING DETAILS - II
23	STEEL FRAMING PLAN SPANS 1 & 2	70	CONDUIT DETAILS
24	STEEL FRAMING PLAN SPAN 3	71	APPROACH SLAB DETAILS - I
25	GIRDER ELEVATION - I	72	APPROACH SLAB DETAILS - II
26	GIRDER ELEVATION - II	73	APPROACH SLAB DETAILS - III
27	JACKING FRAME AT ABUTMENTS & PIERS	74	CONSTRUCTION SEQUENCE - I
28	CROSS FRAME AND INTERMEDIATE CONDUIT SUPPORT	75	CONSTRUCTION SEQUENCE - II
29	MISCELLANEOUS STEEL DETAILS - I	76	EXISTING BRIDGE DECK REPAIRS
30	MISCELLANEOUS STEEL DETAILS - II	77	DEMOLITION PLAN
31	SPLICE DETAILS - I	78	LOAD RATING, GIRDER 1
32	SPLICE DETAILS - II	79	LOAD RATING, GIRDER 2
33	SPLICE DETAILS - III	80	LOAD RATING, GIRDER 3
34	CAMBER SCHEDULE	81	LOAD RATING, GIRDER 4
35	GUIDED EXPANSION BEARINGS	82	SITUATION PLAN - I
36	NON-GUIDED EXPANSION BEARINGS	83	SITUATION PLAN - II
37	FIXED BEARINGS	84	CORE BORING - I
38	MISCELLANEOUS BEARING DETAILS	85	CORE BORING - II
39	TYPICAL SECTION	86	CORE BORING - III
40	DECK SLAB PLAN - I	87	CORE BORING - IV
41	DECK SLAB PLAN - II	88	CORE BORING - V
42	DECK SLAB PLAN - III	89	CORE BORING - VI
43	DECK SLAB PLAN - IV	90	CORE BORING - VII
44	DECK SLAB PLAN - V	91	CORE BORING - VIII
45	DECK SLAB PLAN - VI	92	CORE BORING - IX
46	DECK SLAB PLAN - VII	93	CORE BORING - X
47	DECK SLAB PLAN - VIII	---	EXISTING BRIDGE PLANS (17 SHEETS)

⚠	ADDED SPECIAL PROVISION	3/24/03	JDD
⚠	REVISED PLAN NOTE	2/5/03	JDD
NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
GENERAL NOTES - III
AND INDEX OF DRAWINGS

DESIGNED	JDD	DATE	11/02
DRAWN	JME		11/02
CHECKED	JRT		11/02
CHECKED	PRJ		11/02

Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

SHEET 5 OF 93
BRIDGE NO. 4919

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SUMMARY OF ESTIMATED BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	ABUT. 1	ABUT. 2	PIER 1	PIER 2	SUPERSTR.	TOTAL
203001-000	DISMANTLING STRUCTURES, EXISTING BRIDGE REMOVAL	LS	-	-	-	-	-	1
207034-000	FABRIC FOR SEPARATION	SY	65	65	-	-	-	130
211001-000	UNCLASSIFIED BORROW EXCAVATION	CY	-	-	-	92	-	92
211002-000	ROCK BORROW EXCAVATION	CY	-	-	-	422	-	422
212001-000	STRUCTURE EXCAVATION	CY	7	11	-	266	-	284
212002-000	WET EXCAVATION	CY	-	-	269	480	-	749
212004-000	COFFERDAM	EACH	-	-	1	1	-	2
212005-000	SELECT MATERIAL FOR BACKFILLING	CY	35	35	-	-	-	70
218004-001	8 INCH CRUSHED ROCK SLOPE PROTECTION	SY	112	115	-	-	-	227
218007-001	FABRIC FOR EROSION CONTROL	SY	112	169	-	-	-	281
601002-001	CLASS B CONCRETE	CY	155	155	251	251	-	812
601002-003	CLASS B CONCRETE, ARCHITECTURAL	CY	-	-	516	497	-	1013
601003-001	CLASS K CONCRETE	CY	-	-	-	-	1771	1715 1771 [△]
602001-001	REINFORCING STEEL BAR	LB	-	-	152563	150408	-	302971
602002-001	EPOXY COATED REINFORCING STEEL BAR	LB	23031	23085	-	-	311351	357467
615001-001	STEEL SUPERSTRUCTURE	LS	-	-	-	-	1	1
615028-001	GUIDED BEARING	EA	2	2	-	-	-	4
615029-001	NON-GUIDED BEARING	EA	2	2	-	-	-	4
615030-001	FIXED BEARING	EA	-	-	4	4	-	8
616004-016	HP14X89 STEEL BEARING PILE, DRIVEN	LF	240	340	-	-	-	580
616005-018	HP14X89 STEEL BEARING PILE, PRE-DRILLED AND DRIVEN	LF	190	340	-	-	-	530
617003-001	ALUMINUM RAILING, 2 RAIL	LF	-	-	-	-	1109	1085 1109 [△]
617003-001	ALUMINUM RAILING, 3 RAIL	LF	-	-	-	-	1101	1085 1101 [△]
627023-001	EXPANSION DAM, STEEL FINGER JOINT	LF	40	40	-	-	-	80
628004-001	EXPLORATORY DRILLING AND SAMPLING, PILE DRIVING	LF	610	750	-	-	-	1360
628004-001	EXPLORATORY DRILLING AND SAMPLING, SPREAD FOOTING	LF	-	-	210	210	-	420
636005-001	TEMPORARY STRUCTURE FOR MAINTAINING TRAFFIC	LS	-	-	-	-	1	1
639001-001	CONSTRUCTION LAYOUT STAKE, BRIDGE	LS	-	-	-	-	-	1
643010-024	10 INCH FIBERGLASS PIPE	LF	-	-	-	-	320	320
673001-001	INSTALL UTILITY CONDUIT SYSTEM, ELECTRIC	LS	-	-	-	-	1	1
673001-001	INSTALL UTILITY CONDUIT SYSTEM, TELEPHONE	LS	-	-	-	-	1	1
679002-001	SPECIALIZED CONCRETE OVERLAY, LATEX MODIFIED CONCRETE ONLY	CY	-	-	-	-	215	215
679006-001	TEST SLAB	LS	-	-	-	-	1	1

ITEM 602002-001 REINFORCING STEEL BAR (LB)

SIZE	ABUT. 1	ABUT. 2	PIER 1	PIER 2	SUPERSTR.	TOTAL
4	-	-	9554	9182	-	18736
5	-	-	340	340	-	680
6	-	-	15423	15423	-	30846
7	-	-	-	-	-	-
8	-	-	-	-	-	-
9	-	-	-	-	-	-
10	-	-	-	-	-	-
11	-	-	127246	125463	-	252708
TOTAL	0	0	152563	150408	0	302971

ITEM 602002-001 EPOXY-COATED REINF. STEEL BAR (LB)

SIZE	ABUT. 1	ABUT. 2	PIER 1	PIER 2	SUPERSTR.	TOTAL
3	14	14	-	-	1745	1773
4	1291	1294	-	-	162897	165482
5	4855	4906	-	-	110608	120369
6	11154	11154	-	-	35426	57734
7	-	-	-	-	675	675
8	5717	5717	-	-	-	11434
9	-	-	-	-	-	-
10	-	-	-	-	-	-
TOTAL	23031	23085	0	0	311351	357467

ITEM NO. 673001, INSTALL UTILITY CONDUIT SYSTEM INCLUDES:

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
673001-001	INSTALL UTILITY CONDUIT SYSTEM, ELECTRIC	LS	1
	FIBERGLASS CONDUIT, 2 @ 6 INCH DIA (ELEC) & 2 @ 6 INCH DIA (MISC)	FT	4386
	SUPPORT HANGERS	EA	111
	INTERMEDIATE CONDUIT SUPPORTS, AASHTO M270, GRADE 50W	LB	4415
673001-001	INSTALL UTILITY CONDUIT SYSTEM, TELEPHONE	LS	1
	FIBERGLASS CONDUIT, 3 @ 4 INCH DIA (TEL) & 2 @ 6 INCH DIA (MISC)	FT	5483
	SUPPORT HANGERS	EA	111
	INTERMEDIATE CONDUIT SUPPORTS, AASHTO M270, GRADE 50W	LB	4415

ITEM NO. 615001-001, STEEL SUPERSTRUCTURE INCLUDES:

DESCRIPTION	UNIT	QUANTITY
STRUCTURAL STEEL, AASHTO M270, GRADE 50W *	LB	3177654
STRUCTURAL STEEL, AASHTO M270, GRADE HPS70W	LB	808888
STRUCTURAL STEEL, AASHTO M270, GRADE 36 * *	LB	3954
STRUCTURAL STEEL TUBING, ASTM A 501	LB	224
ANCHOR BOLTS	LB	1103
STUD SHEAR CONNECTORS (7/8 INCH DIA x 6 1/2 INCH)	EA	7380

- * INCLUDES HAND RAILINGS
- * * INCLUDES SCUPPERS

△	QUANTITY CHANGED	1/01/03	F.T.
NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
SUMMARY OF BRIDGE QUANTITIES

DESIGNED	DATE
<i>AJF</i>	11/02
DRAWN	
<i>JME</i>	11/02
CHECKED	
<i>AJF</i>	11/02
CHECKED	
<i>SKA</i>	11/02

Baker Michael Baker Jr., Inc.	Charleston, W.Va.	SHEET	6 OF 93
		BRIDGE NO.	4919

03/31/2003

03/31/2003

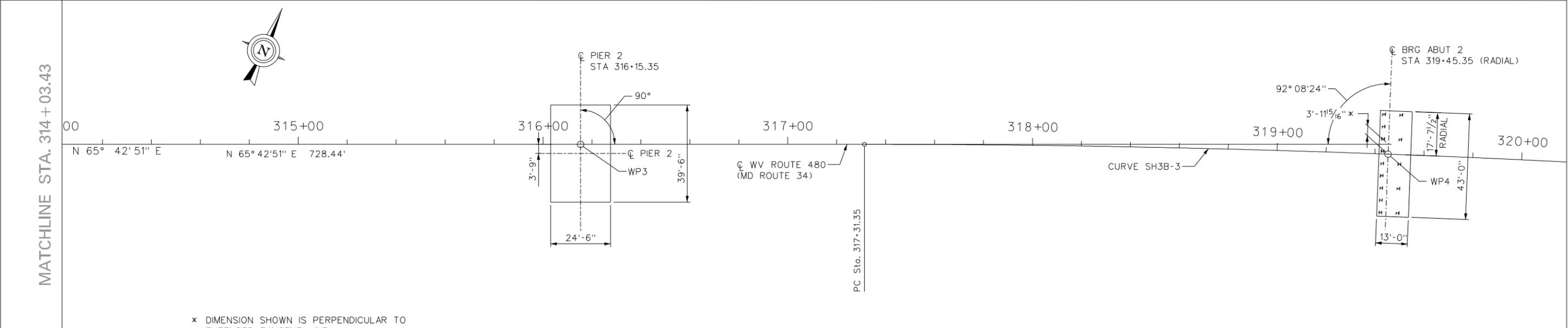
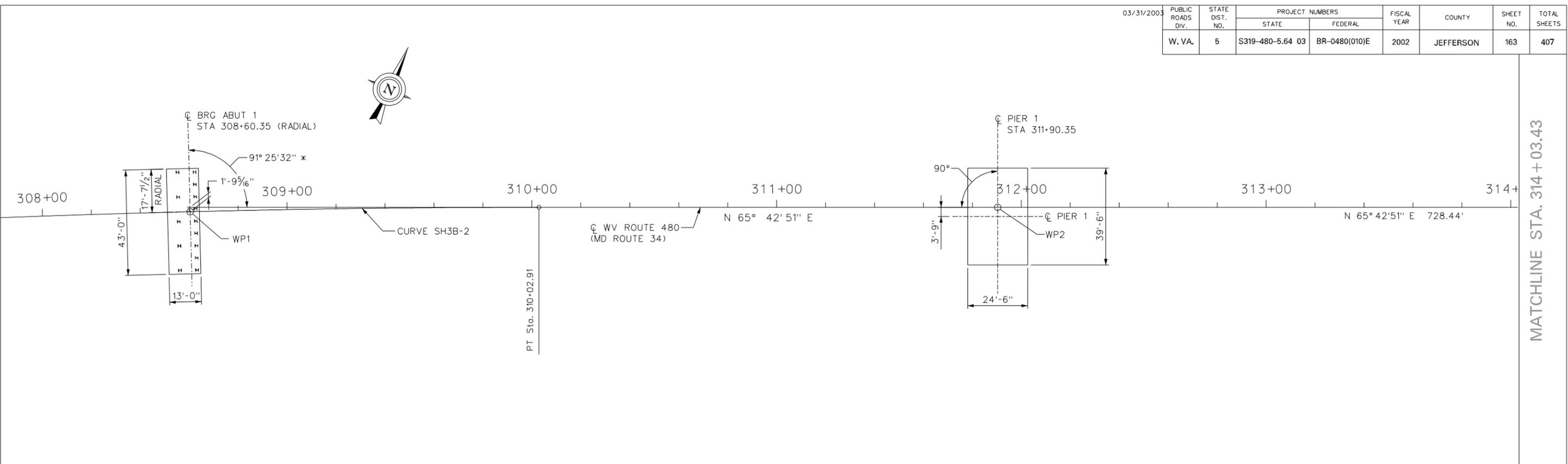
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06C29C98 - BRIDGE 6

03/31/2003

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	163	407

MATCHLINE STA. 314 + 03.43



* DIMENSION SHOWN IS PERPENDICULAR TO EXTENDED TANGENT LINE

COORDINATES (FT)		
	NORTHING	EASTING
WP1	345,438.2966	2,447,701.7401
WP2	345,575.6328	2,448,001.7938
WP3	345,750.4310	2,448,389.1832
WP4	345,882.4938	2,448,691.5779

CURVE SH3B-2
 PI = 307+48.88
 Δ = 5° 05' 03" (RT)
 D = 1° 00' 00"
 R = 5,729.58
 L = 508.41
 T = 254.37

CURVE SH3B-3
 PI = 319+85.72
 Δ = 5° 05' 03" (RT)
 D = 1° 00' 00"
 R = 5,729.58
 L = 508.41
 T = 254.37

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
 OVER POTOMAC RIVER
 SUBSTRUCTURE AND
 FOUNDATION LAYOUT**

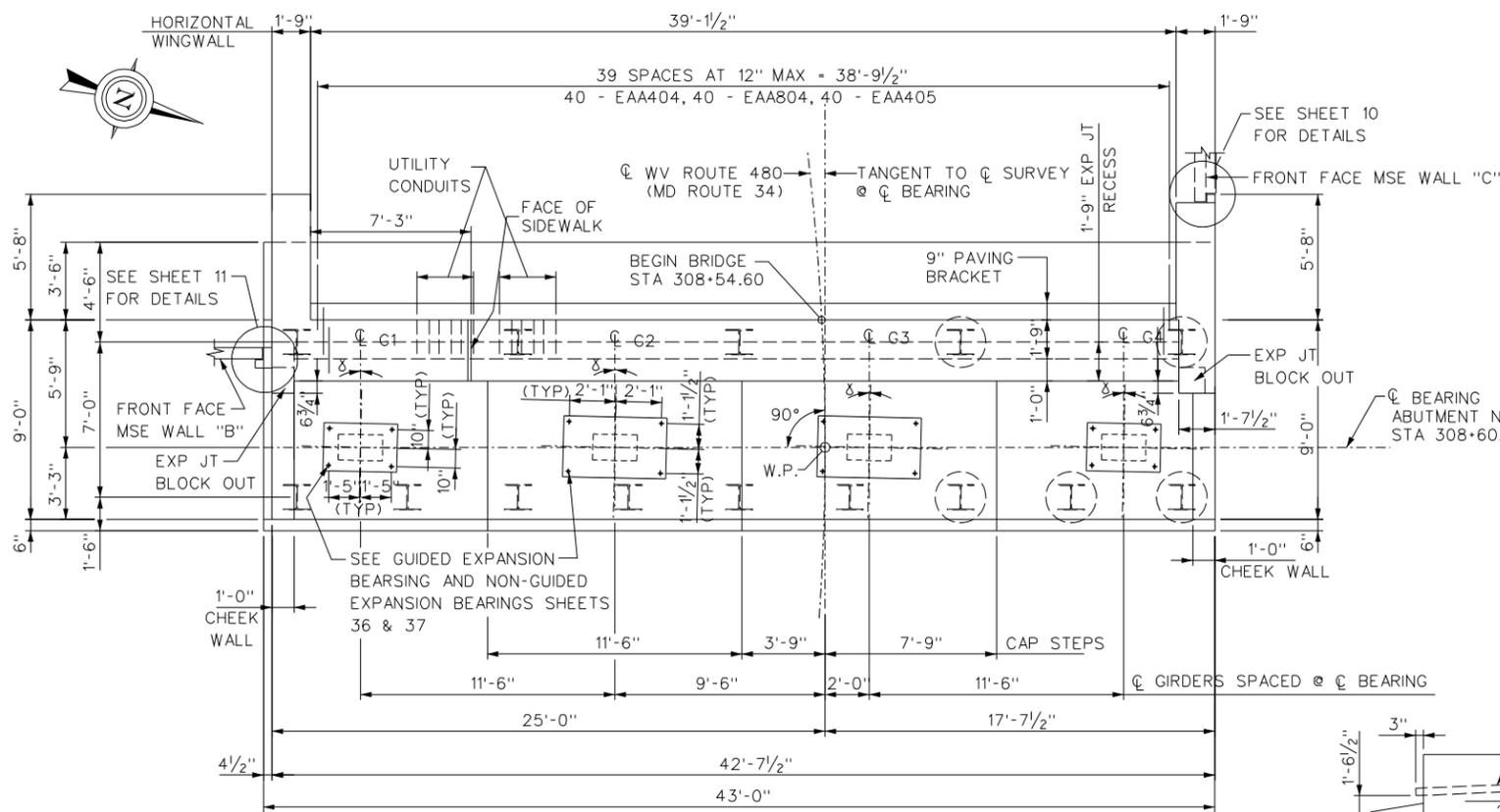
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<i>RBF</i>	11/02
DRAWN	DATE
<i>MLAD</i>	11/02
CHECKED	DATE
<i>RBF</i>	11/02
CHECKED	DATE
<i>JSD</i>	11/02

Baker
 Michael Baker Jr., Inc. Charleston, W.Va.

SHEET **7** OF **93**
 BRIDGE NO. **4919**

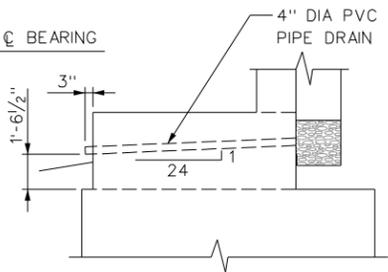
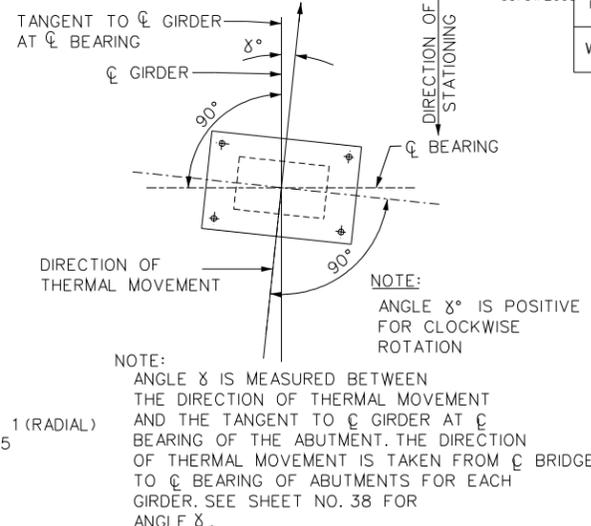
SCALE : 0 20 ft.

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	164	407

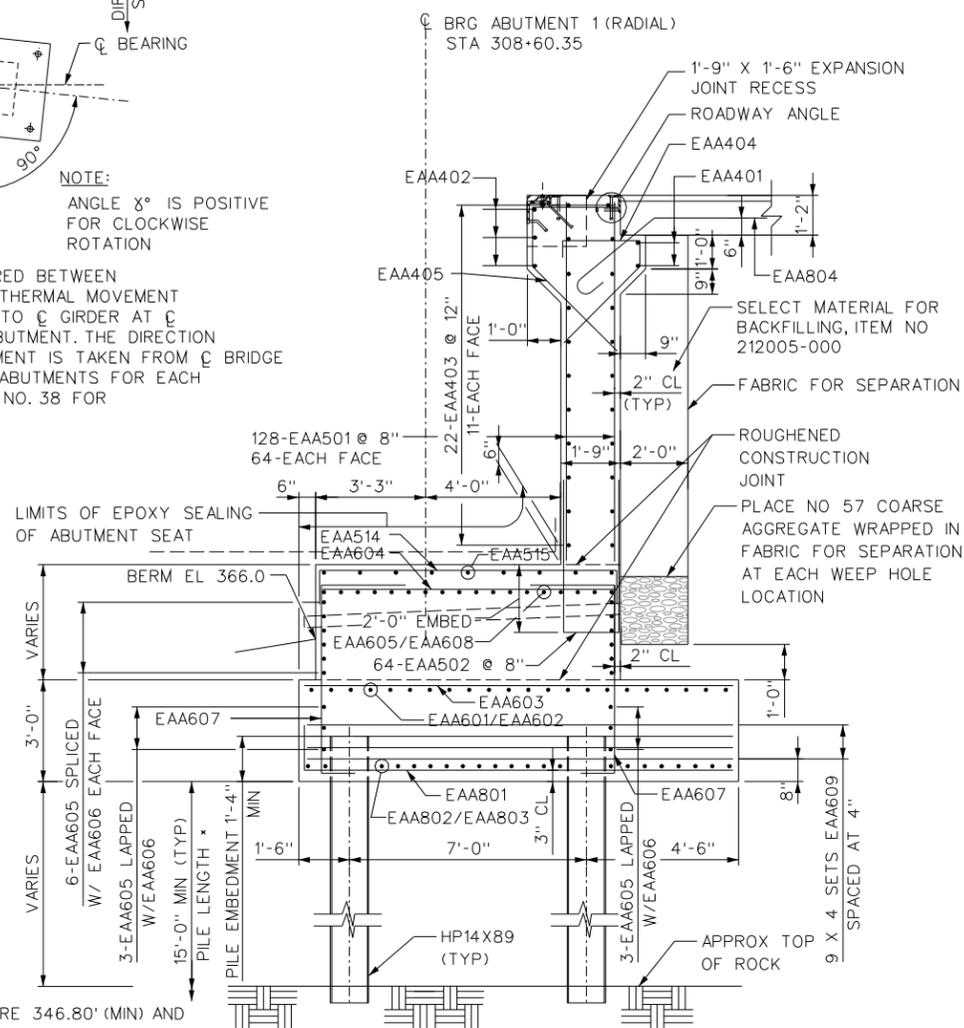


PLAN - ABUTMENT 1

INDICATES PILES REQUIRING PREDRILLING INTO ROCK TO ACHIEVE MINIMUM PILE LENGTH

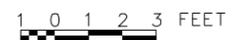


WEEP HOLE DETAILS NOT TO SCALE



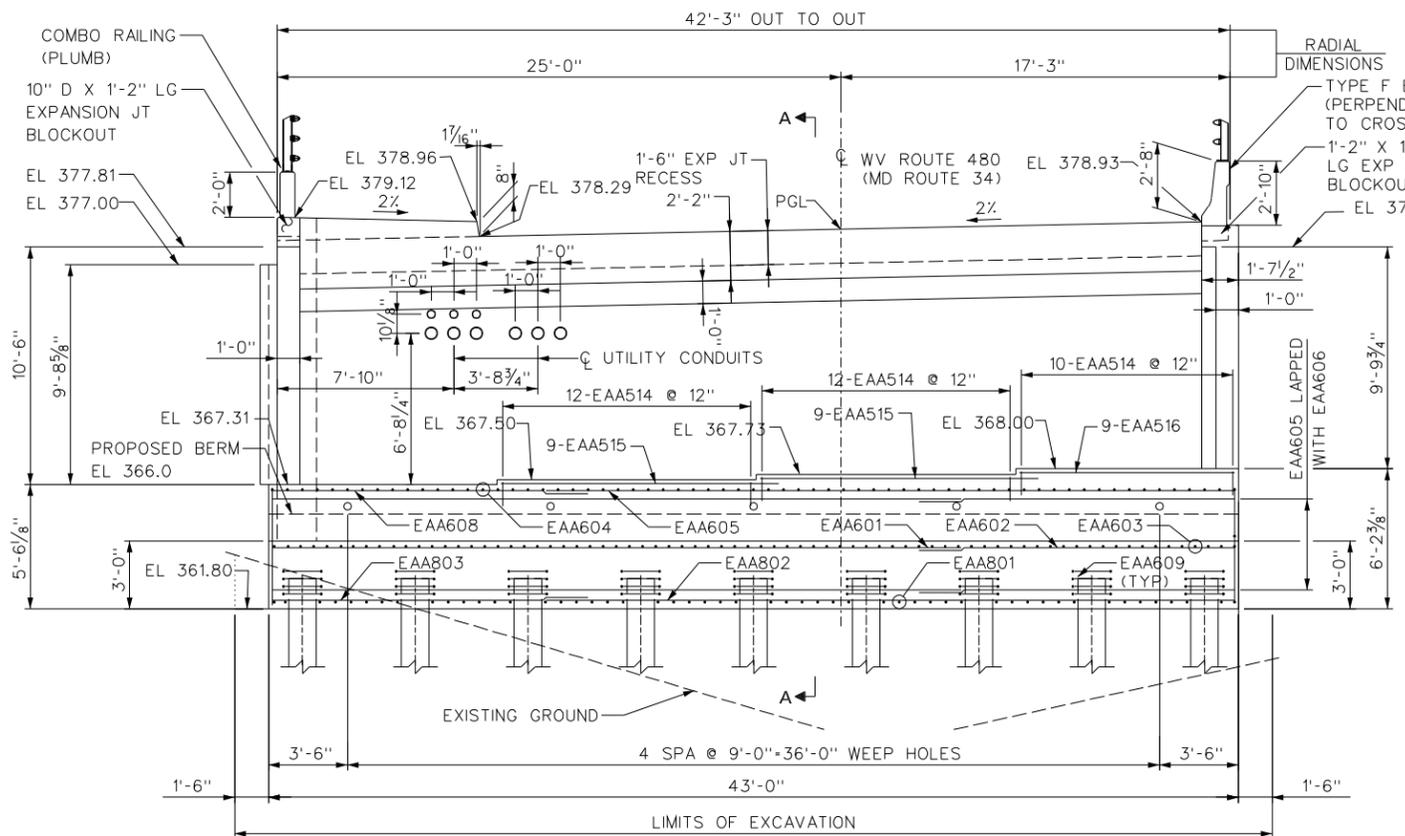
SECTION A-A

* PREDRILLING INTO ROCK MAY BE REQUIRED TO OBTAIN MINIMUM PILE LENGTH



NOTES:

- ESTIMATED PILE TIP ELEVATIONS ARE 346.80' (MIN) AND 312.0' (MAX). MIN PILE TIP ELEVATION FOR ALL PILES IS 346.80'
- FOR REINFORCING IN BACKWALL AND CHEEK WALL, SEE SHEET 10 AND SHEET 11.
- FOR FOOTING PLAN AND REINFORCING DETAILS, BRIDGE SEAT STEM PLAN AND REINFORCING DETAILS, SEE SHEET 9.
- FOR CONDUIT DETAIL THROUGH ABUTMENT, SEE SHEET 70.
- ALL PILE INSTALLATIONS SHALL HAVE EXPLORATORY DRILLING AND SAMPLING PERFORMED. SEE THE SPECIAL PROVISIONS. EXPLORATORY DRILLING SHALL BE ADVANCED AT LEAST 15 FT INTO BEDROCK OR TO ELEVATION 331.80, WHICHEVER IS DEEPER.
- MAXIMUM FACTORED AXIAL PILE LOAD IS 270 TONS. MAXIMUM NOMINAL PILE RESISTANCE FOR HP14X89 IS 725 TONS. MAXIMUM FACTORED RESISTANCE IS 290 TONS.
- MINIMUM RATED HAMMER ENERGY FOR PILE DRIVING SHALL BE 30,000 FOOT-POUNDS PER BLOW.
- FIELD BEND BARS AS NECESSARY TO INSTALL UTILITY CONDUITS.
- ALL REINFORCING STEEL IN ABUTMENT 1 TO BE EPOXY COATED.
- CONCRETE IN FOOTING, BRIDGE SEAT AND BACKWALL TO BE CLASS B. REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF AASHTO M31, GRADE 60.



ELEVATION - ABUTMENT 1

(ELEVATIONS ARE SHOWN AT BEGIN BRIDGE STA 308+54.60)



NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE OVER POTOMAC RIVER ABUTMENT 1

PLAN, ELEVATION AND SECTION

DESIGNED	KJC	DATE	11/02
DRAWN	WBR	DATE	11/02
CHECKED	JRS	DATE	11/02
CHECKED	GW	DATE	11/02

Baker Michael Baker Jr., Inc.

Charleston, W.Va.

SHEET 8 OF 93 BRIDGE NO. 4919

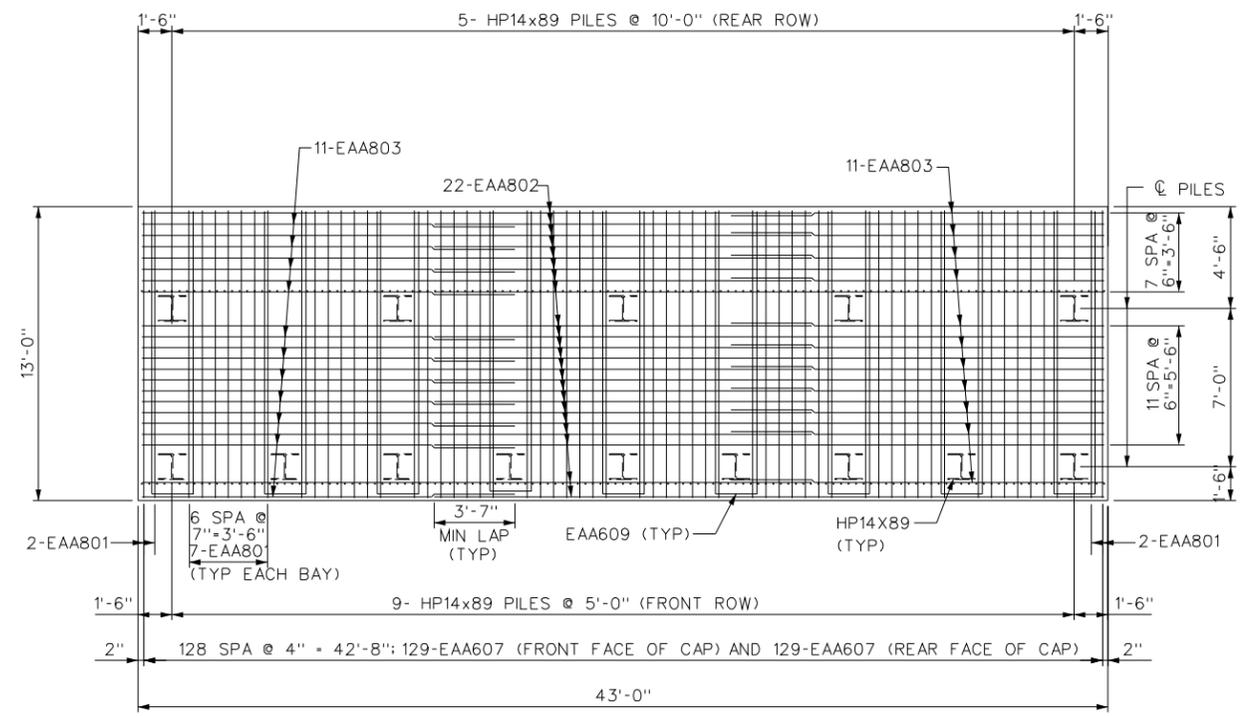
03/31/2003

03/31/2003

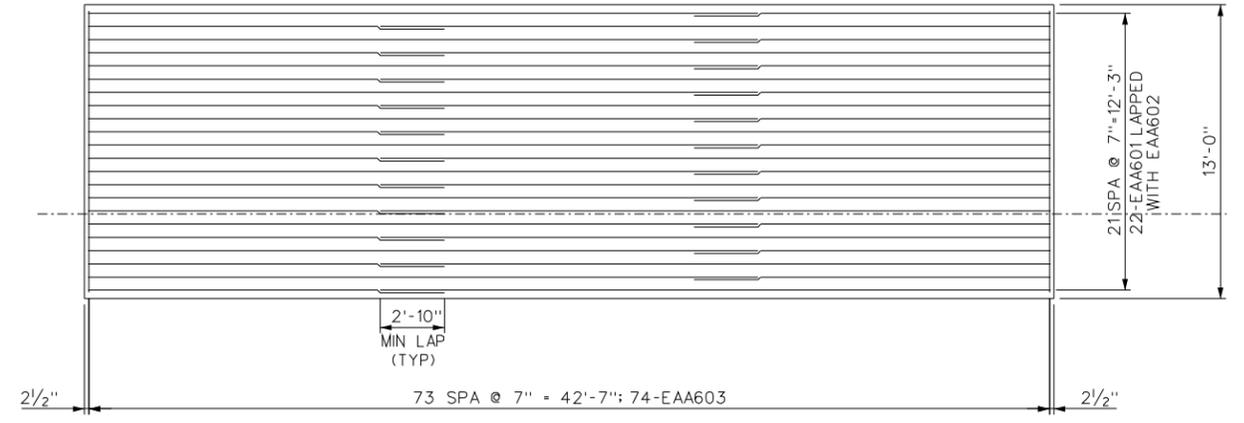
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06C29C98 - BRIDGE 5

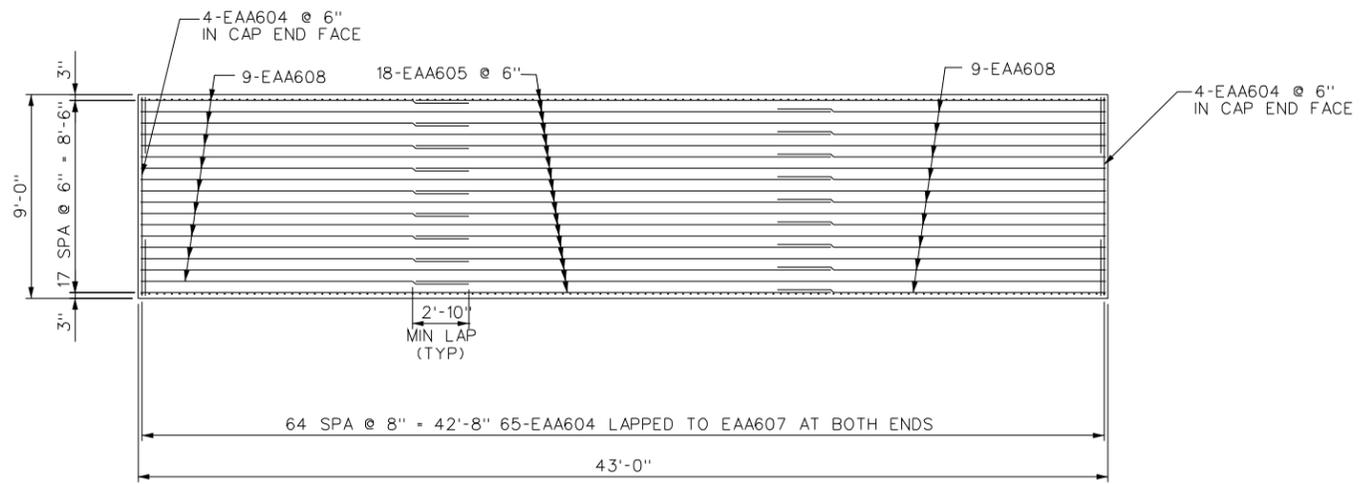
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	165	407



FOUNDATION PLAN – ABUTMENT 1
(SHOWING REINFORCING IN BOTTOM OF FOOTING)



FOUNDATION PLAN – ABUTMENT 1
(SHOWING REINFORCING IN TOP OF FOOTING)



STEM PLAN – ABUTMENT 1
(SHOWING REINFORCING IN TOP OF STEM)

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
207034-000	FABRIC FOR SEPARATION	SY	65
212001-000	STRUCTURE EXCAVATION	CY	7
212005-000	SELECT MATERIAL FOR BACKFILLING	CY	35
601002-001	CLASS B CONCRETE	CY	155
602002-001	EPOXY COATED REINFORCING STEEL	LB	23031
616004-016	HP14X89 STEEL BEARING PILES, DRIVEN	LF	240
616005-018	HP14X89 STEEL BEARING PILES, PREDRILLED AND DRIVEN	LF	190
628004-001	EXPLORATORY DRILLING AND SAMPLING	LF	610

NO.	REVISION	DATE:	BY:
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W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
ABUTMENT 1**

FOUNDATION & STEM PLAN DETAILS

DESIGNED <i>KJC</i>	DATE 11/02
DRAWN <i>WBE</i>	11/02
CHECKED <i>JRT</i>	11/02
CHECKED <i>GW</i>	11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET **9** OF **93**
BRIDGE NO. **4919**



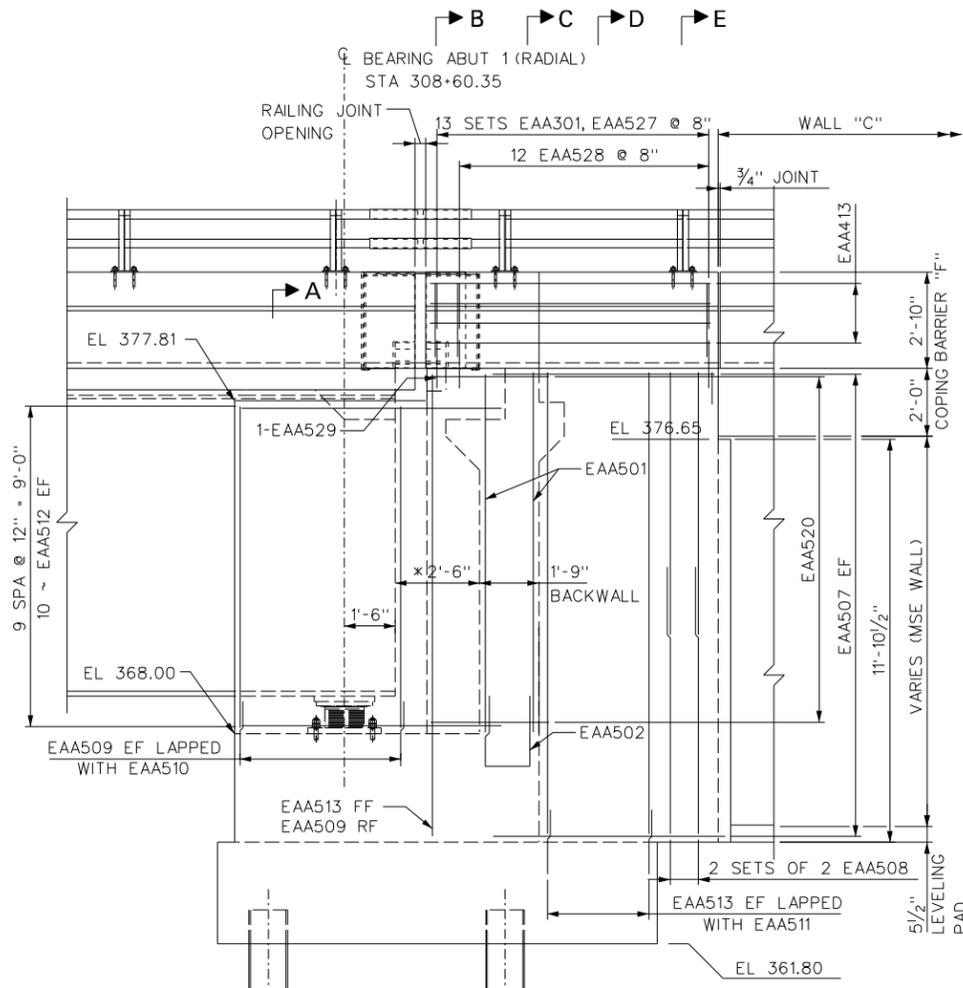
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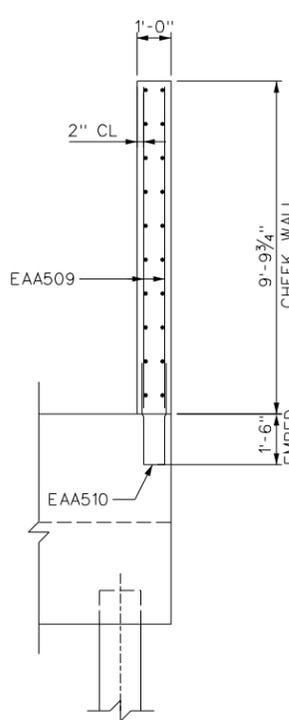
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			STATE	FEDERAL				
	W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	166	407



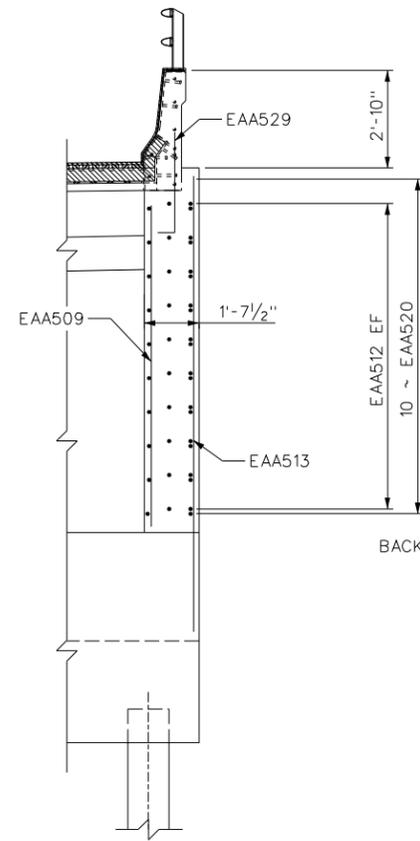
END ELEVATION
(LOOKING SOUTH)

FF FRONT FACE
 RF REAR FACE
 EF EACH FACE

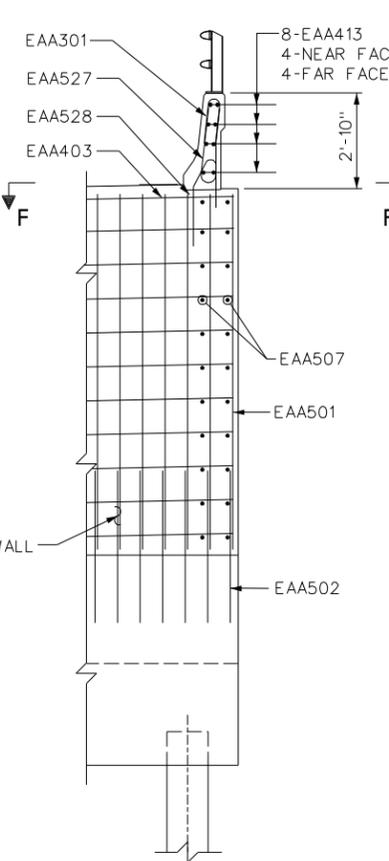
* DIMENSIONS AT 52°F



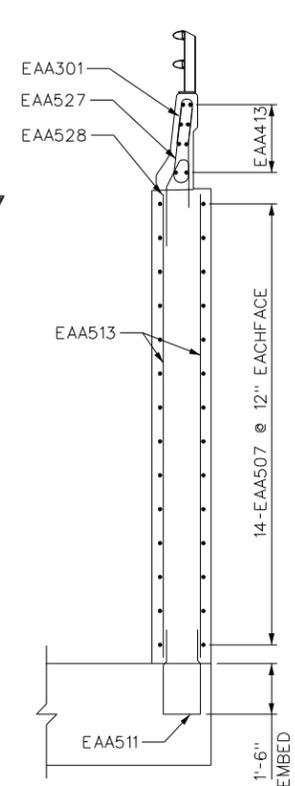
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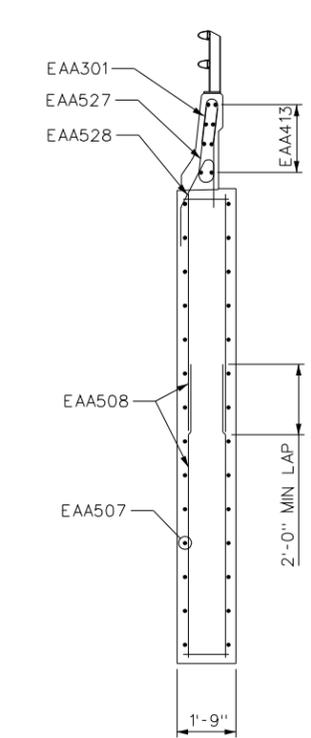
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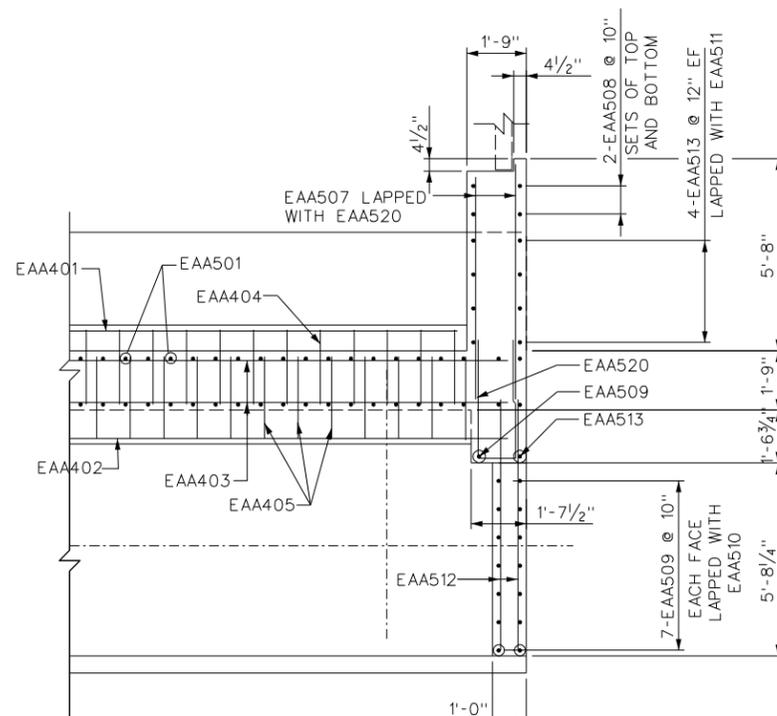
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

1 0 1 2 3 FEET

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
 OVER POTOMAC RIVER
 ABUTMENT 1 DETAILS - I

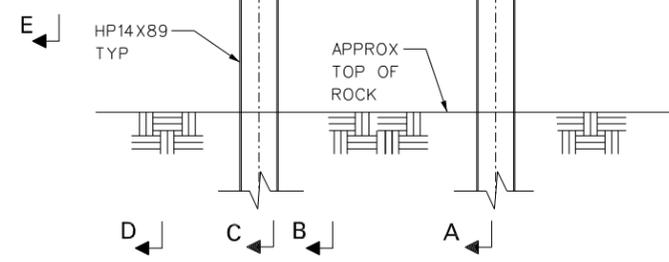
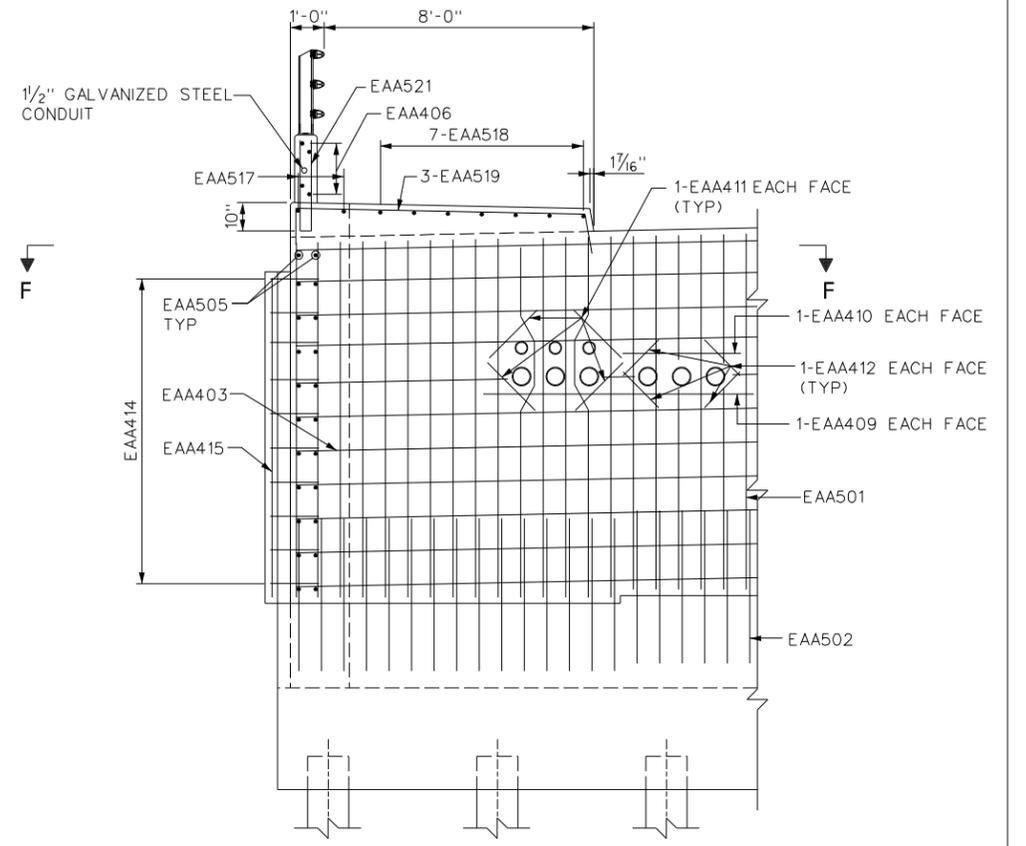
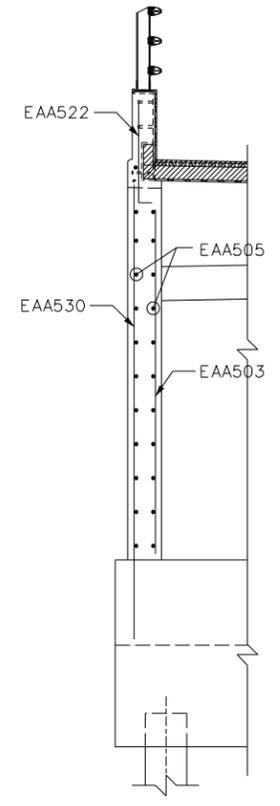
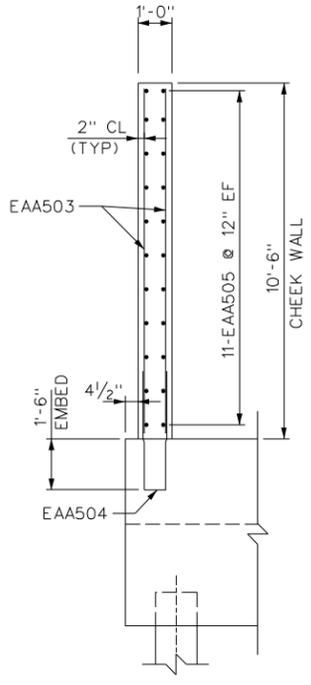
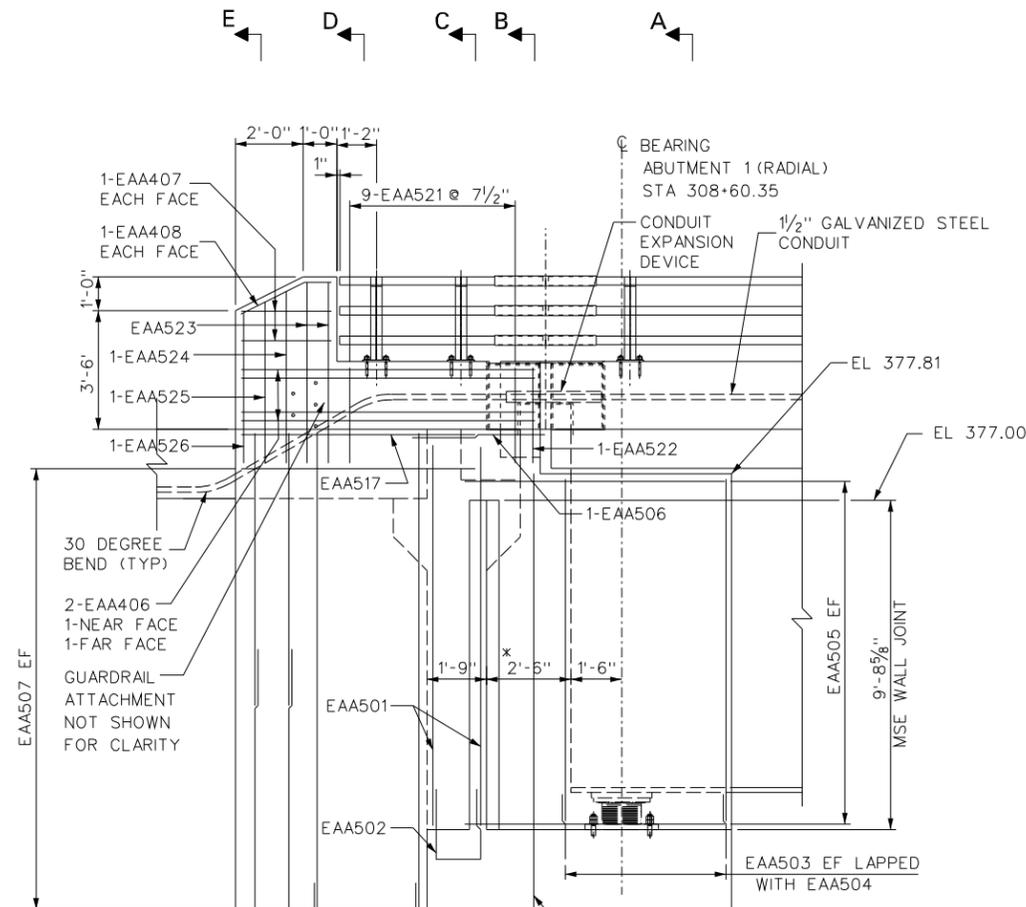
DESIGNED <i>KJC</i>	DATE 11/02
DRAWN <i>WBE</i>	11/02
CHECKED <i>JRT</i>	11/02
CHECKED <i>GW</i>	11/02

Baker
 Michael Baker Jr., Inc.

Charleston, W.Va.

SHEET
10 OF 93
 BRIDGE NO.
4919

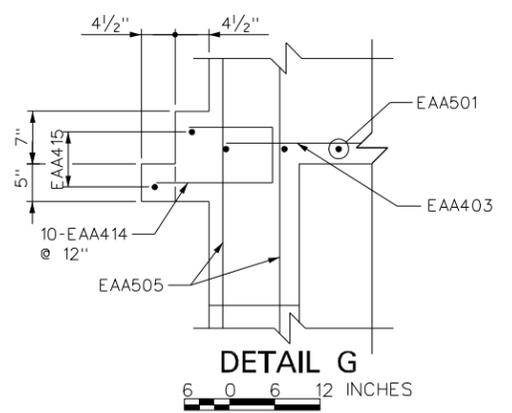
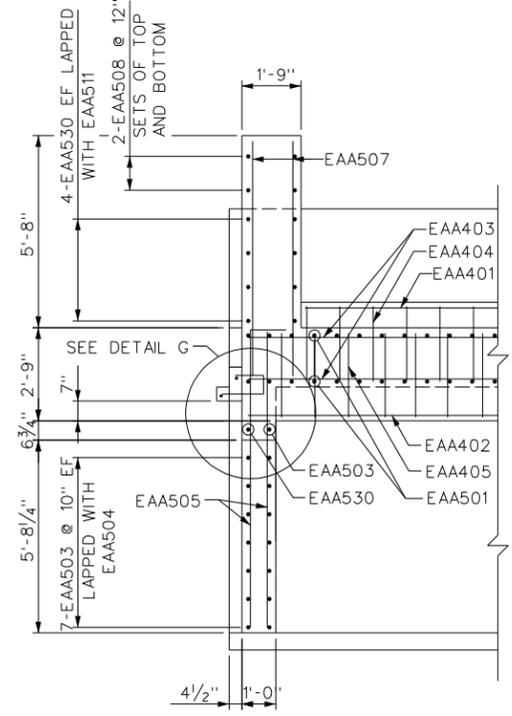
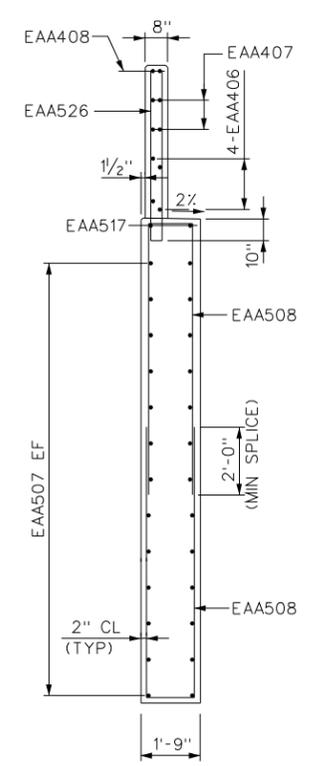
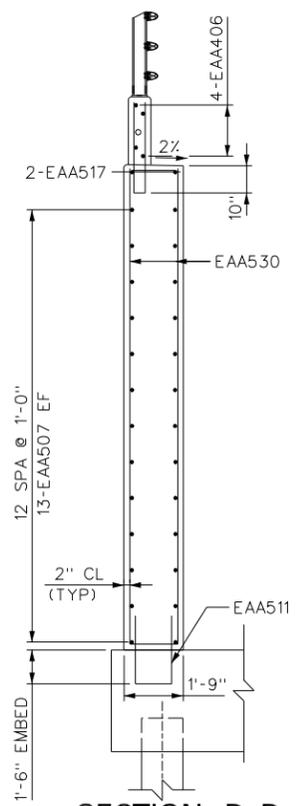
03/31/2003 PUBLIC ROADS DIV.	STATE DIST. NO. 5	PROJECT NUMBERS		FISCAL YEAR 2002	COUNTY JEFFERSON	SHEET NO. 167	TOTAL SHEETS 407
		STATE	FEDERAL				
W. VA.		S319-480-5.64	03 BR-0480(010)E				



* DIMENSIONS AT 52°F

FF FRONT FACE
RF REAR FACE
EF EACH FACE

NOTES:
EXPECTED BRIDGE MOVEMENT IS 3 1/2 INCHES CONTRACTION AND 2 7/8 INCHES EXPANSION. CONDUIT EXPANSION DEVICE SHALL ACCOMMODATE THIS MOVEMENT PLUS ONE INCH IN EACH DIRECTION.



NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
ABUTMENT 1 DETAILS - II

DESIGNED KJC	DATE 11/02
DRAWN WBC	DATE 11/02
CHECKED JKP	DATE 11/02
CHECKED GW	DATE 11/02

Baker
Michael Baker Jr., Inc.

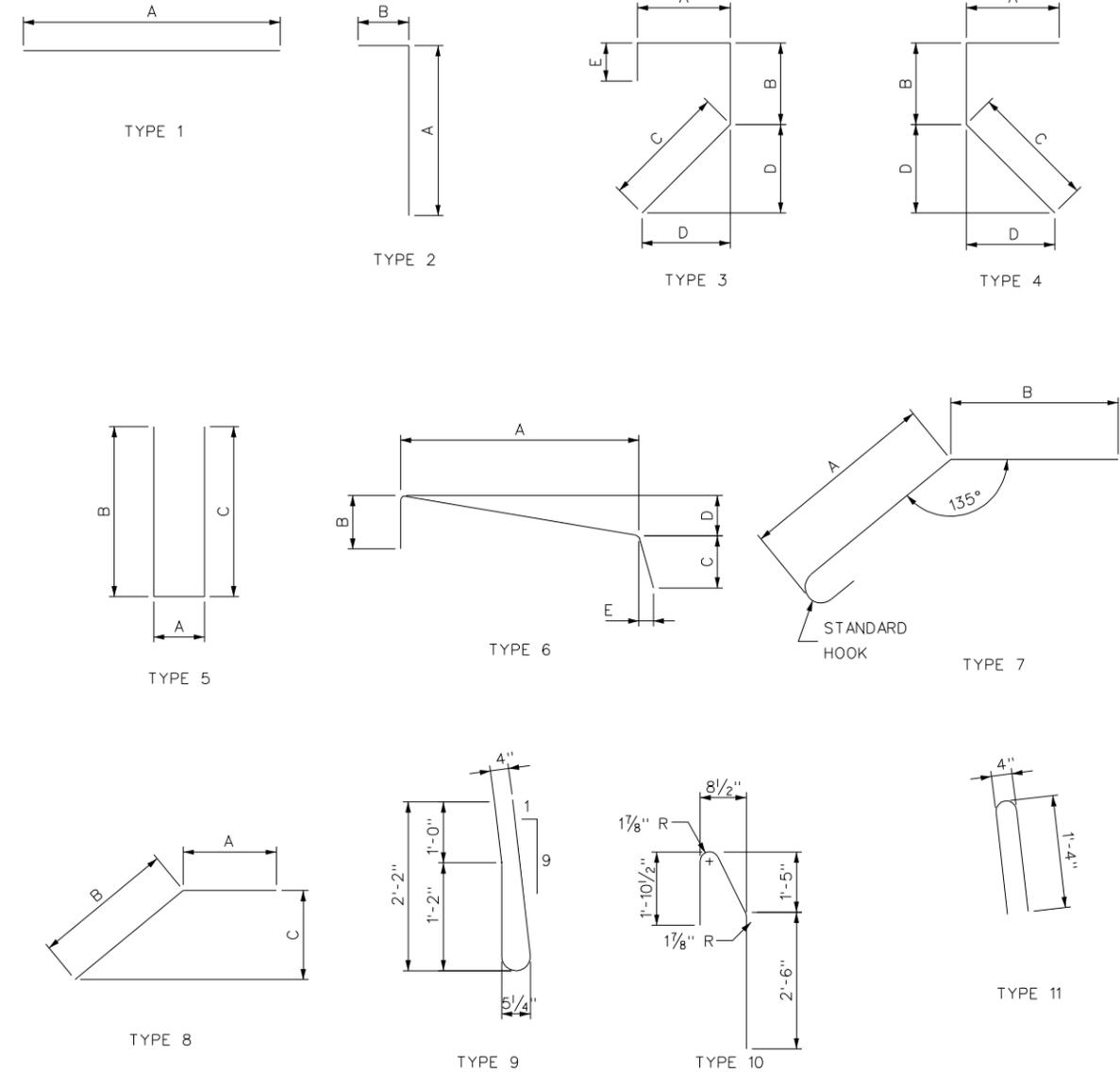
Charleston, W.Va.

SHEET
11 OF 93
BRIDGE NO.
4919

ABUTMENT 1 REINFORCEMENT BAR SCHEDULE

MARK	TYPE	SIZE	NO	LENGTH	LOCATION	A	B	C	D	E	REMARK
EAA301	11	3	13	2'-10"	TYPE "F" BARRIER						
EAA401	1	4	2	38'-9 1/2"	BACKWALL	38'-9 1/2"					
EAA402	1	4	3	42'-3 1/2"	BACKWALL	42'-3 1/2"					
EAA403	1	4	22	42'-3 1/2"	BACKWALL	42'-3 1/2"					
EAA404	3	4	40	6'-8"	BACKWALL	2'-4"	9"	3'-1"	2'-2"	6"	
EAA405	4	4	40	7'-7"	BACKWALL	2'-5"	1'-9"	3'-5"	2'-5"		
EAA406	1	4	4	8'-8"	COMBO RAIL WALL	8'-8"					
EAA407	1	4	4	2'-8"	COMBO RAIL WALL	2'-8"					
EAA408	8	4	2	2'-9"	COMBO RAIL WALL	9"	2'-0"	1'-0"			
EAA409	1	4	2	8'-0"	BACKWALL AT CONDUIT	8'-0"					
EAA410	1	4	2	3'-6"	BACKWALL AT CONDUIT	3'-6"					
EAA411	1	4	8	2'-6"	BACKWALL AT CONDUIT	2'-6"					
EAA412	1	4	8	2'-0"	BACKWALL AT CONDUIT	2'-0"					
EAA413	1	4	8	8'-2"	TYPE "F" BARRIER	8'-2"					
EAA414	5	4	10	3'-0"	WINGWALL	7 1/2"	1'-4 1/2"	1'-0"			
EAA415	1	4	2	9'-4"	WINGWALL	9'-4"					
EAA501	1	5	128	10'-7"	BACKWALL	10'-7"					
EAA502	5	5	64	10'-5"	STEM/BACKWALL	1'-5"	4'-6"	4'-6"			
EAA503	1	5	15	10'-3"	CHEEK WALL	10'-3"					
EAA504	5	5	7	8'-0"	STEM/CHEEK WALL	8"	3'-8"	3'-8"			
EAA505	1	5	22	8'-8"	CHEEK WALL	8'-8"					
EAA506	2	5	1	3'-8"	CHEEK WALL	3'-0"	8"				
EAA507	1	5	54	7'-0"	WINGWALL	7'-0"					
EAA508	5	5	8	17'-5"	WINGWALL	1'-5"	8'-0"	8'-0"			
EAA509	1	5	15	9'-7"	CHEEK WALL	9'-7"					
EAA510	5	5	7	8'-0"	STEM/CHEEK WALL	8"	3'-8"	3'-8"			
EAA511	5	5	8	8'-9"	STEM/CHEEK WALL	1'-5"	3'-8"	3'-8"			
EAA512	1	5	20	7'-4"	CHEEK WALL	7'-4"					
EAA513	1	5	9	13'-8"	WINGWALL	13'-8"					
EAA514	5	5	34	10'-8"	STEM	8'-8"	1'-0"	1'-0"			
EAA515	1	5	18	12'-6"	STEM	12'-6"					
EAA516	1	5	9	9'-6"	STEM	9'-6"					
EAA517	1	5	2	8'-1"	WINGWALL	8'-1"					
EAA518	1	5	7	2'-5"	SIDEWALK	2'-5"					
EAA519	6	5	3	11'-5"	SIDEWALK	8'-8"	1'-6"	1'-3"	2"	2 1/2"	
EAA520	5	5	10	8'-0"	WINGWALL	1'-2"	3'-5"	3'-5"			
EAA521	5	5	9	5'-8"	COMBO RAIL WALL	4"	2'-8"	2'-8"			
EAA522	2	5	1	3'-1"	COMBO RAIL WALL	2'-8"	5"				
EAA523	5	5	2	10'-8"	COMBO RAIL WALL	4"	5'-2"	5'-2"			
EAA524	5	5	1	10'-0"	COMBO RAIL WALL	4"	4'-10"	4'-10"			
EAA525	5	5	1	9'-4"	COMBO RAIL WALL	4"	4'-6"	4'-6"			
EAA526	5	5	1	8'-10"	COMBO RAIL WALL	4"	4'-3"	4'-3"			
EAA527	9	5	13	4'-7"	TYPE "F" BARRIER						
EAA528	10	5	12	5'-1"	TYPE "F" BARRIER						
EAA529	2	5	1	4'-4"	TYPE "F" BARRIER	3'-5"	11"				
EAA530	1	5	9	13'-11"	WINGWALL	13'-11"					
EAA601	1	6	22	30'-0"	FOOTING	30'-0"					
EAA602	1	6	22	15'-6"	FOOTING	15'-6"					
EAA603	1	6	74	12'-8"	FOOTING	12'-8"					
EAA604	1	6	73	8'-8"	STEM	8'-8"					
EAA605	1	6	36	30'-0"	FOOTING/STEM	30'-0"					
EAA606	1	6	18	15'-6"	FOOTING/STEM	15'-6"					
EAA607	5	6	258	8'-7"	FOOTING/STEM	5'-1"	2'-6"	1'-0"			
EAA608	2	6	18	17'-7"	STEM	15'-6"	2'-1"				
EAA609	5	6	36	26'-10"	FOOTING	1'-10"	12'-6"	12'-6"			
EAA801	2	8	60	14'-0"	FOOTING	12'-8"	1'-4"				
EAA802	1	8	22	30'-0"	FOOTING	30'-0"					
EAA803	1	8	22	16'-3"	FOOTING	16'-3"					
EAA804	7	8	40	7'-1"	BACKWALL	2'-10"	3'-4"				

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	168	407



TYPICAL REBAR DESIGNATION:
 EXAMPLE
 EAA501
 _____ DENOTES REBAR GROUP NO. 01
 _____ DENOTES REBAR SIZE # 5
 _____ AA DENOTES ABUTMENT 1
 _____ AB DENOTES ABUTMENT 2
 _____ DENOTES EPOXY COATED

DESIGNED	DATE
KJC	11/02
DRAWN	
WBE	11/02
CHECKED	
JF	11/02
CHECKED	
JKJ	11/02

NO.	REVISION	DATE:	BY:

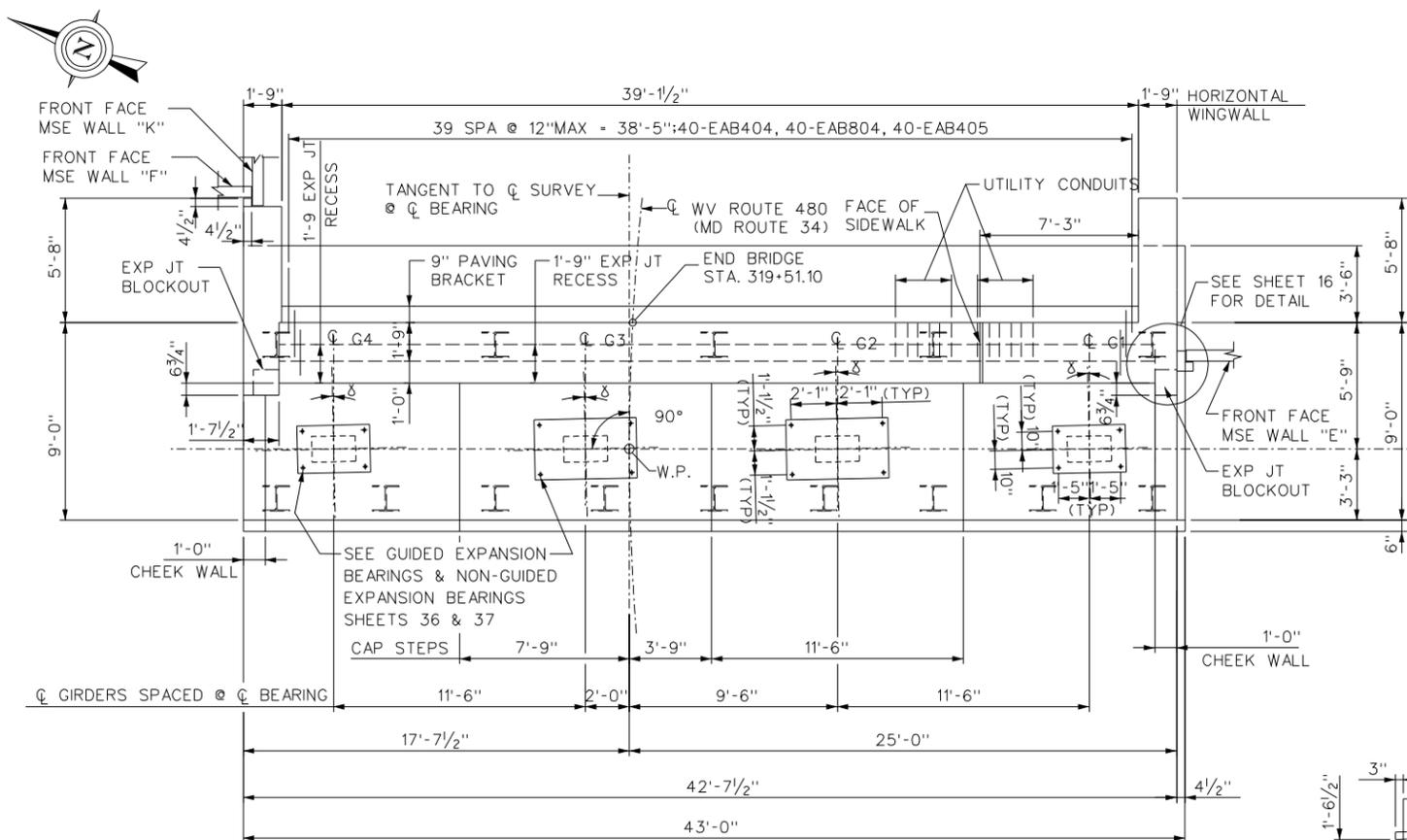
W. VA. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
 OVER POTOMAC RIVER
 ABUTMENT 1
 REINFORCEMENT BAR SCHEDULE

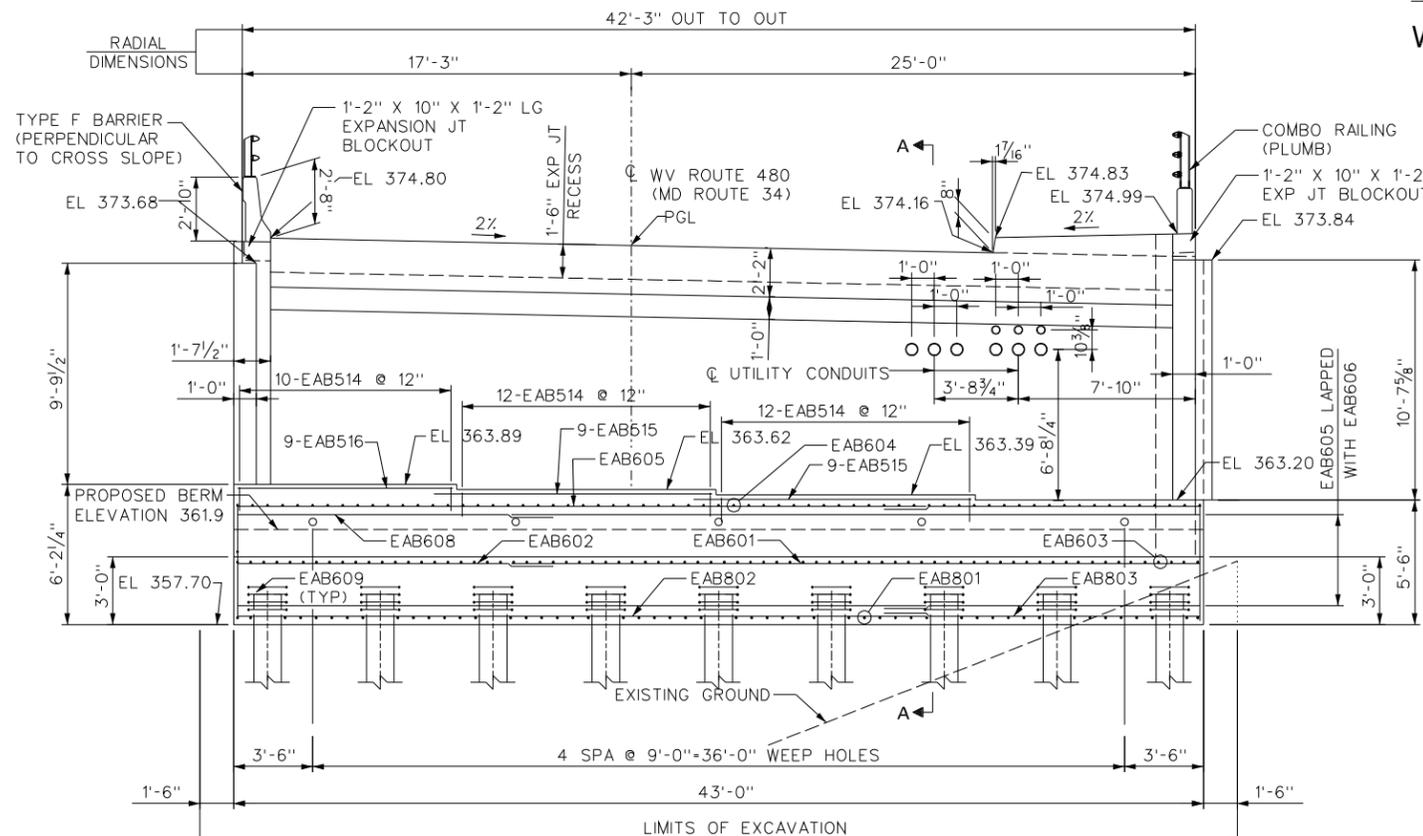
DESIGNED: KJC DATE: 11/02
 DRAWN: WBE DATE: 11/02
 CHECKED: JF DATE: 11/02
 CHECKED: JKJ DATE: 11/02

Baker
 Michael Baker Jr., Inc. Charleston, W.Va.

SHEET 12 OF 93
 BRIDGE NO. 4919

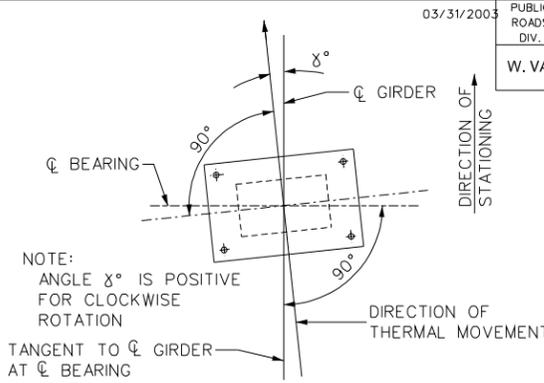


PLAN - ABUTMENT 2

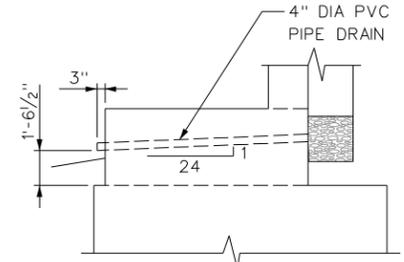


ELEVATION - ABUTMENT 2

(ELEVATIONS ARE SHOWN AT END BRIDGE STA. 319+51.10)



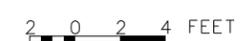
NOTE: ANGLE δ IS MEASURED BETWEEN THE DIRECTION OF THERMAL MOVEMENT AND THE TANGENT TO ϕ GIRDER AT ϕ BEARING OF THE ABUTMENT. THE DIRECTION OF THERMAL MOVEMENT IS TAKEN FROM ϕ BRIDGE TO ϕ BEARING OF ABUTMENTS FOR EACH GIRDER. SEE SHEET NO. 38 FOR ANGLE δ .



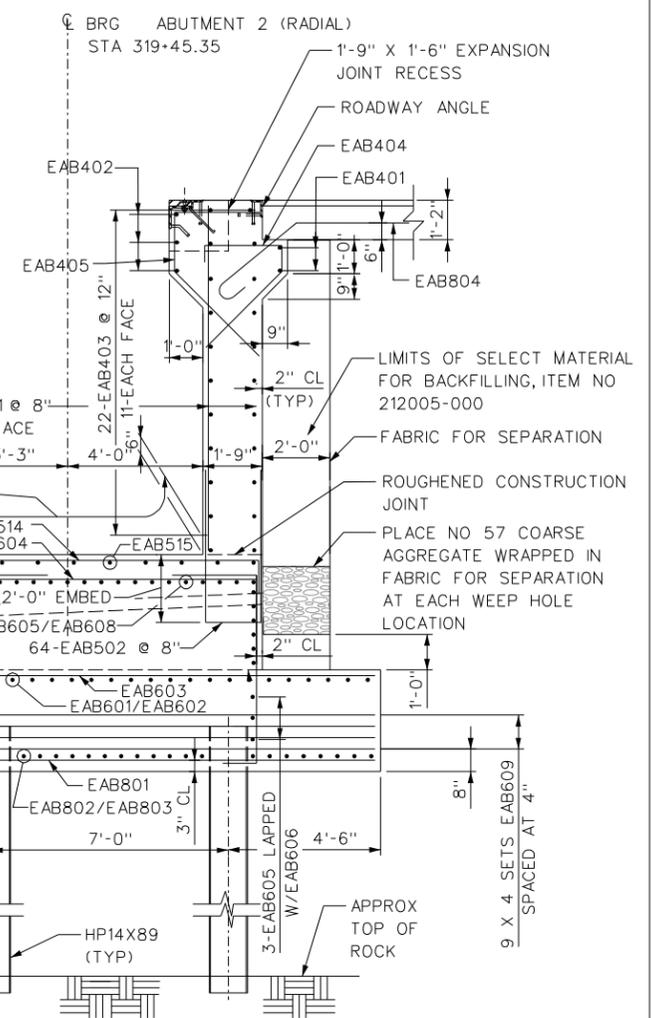
WEEP HOLE DETAILS
NOT TO SCALE

NOTES:

1. ESTIMATED PILE TIP ELEVATIONS ARE 311.5' (MIN) AND 301.5' (MAX). MINIMUM PILE TIP ELEVATION FOR ALL PILES IS 332.0.
2. FOR REINFORCING IN BACKWALL AND CHEEK WALL, SEE SHEET 15 AND SHEET 16.
3. FOR FOOTING PLAN AND REINFORCING DETAILS, BRIDGE SEAT STEM PLAN AND REINFORCING DETAILS, SEE SHEET 14.
4. FOR CONDUIT DETAIL THROUGH ABUTMENT, SEE SHEET 70.
5. ALL PILE INSTALLATIONS SHALL HAVE EXPLORATORY DRILLING AND SAMPLING PERFORMED. SEE THE SPECIAL PROVISIONS. EXPLORATORY DRILL SHALL BE ADVANCED AT LEAST 5 FT INTO BEDROCK.
6. MAXIMUM FACTORED AXIAL PILE LOAD IS 203 TONS. MAXIMUM NOMINAL PILE RESISTANCE FOR HP14X89 IS 725 TONS. MAXIMUM FACTORED RESISTANCE IS 290 TONS.
7. MINIMUM RATED HAMMER ENERGY FOR PILE DRIVING SHALL BE 30,000 FOOT-POUNDS PER BLOW.
8. FIELD BEND BARS AS NECESSARY TO INSTALL UTILITY CONDUITS.
9. ALL REINFORCING STEEL IN ABUTMENT 2 TO BE EPOXY COATED.
10. CONCRETE IN FOOTING, BRIDGE SEAT AND BACKWALL TO BE CLASS B. REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF AASHTO M31, GRADE 60.



PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	169	407



SECTION A-A



NO.	REVISION	DATE	BY

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
ABUTMENT 2**

PLAN, ELEVATION AND SECTION

DESIGNED	KJC	DATE	11/02
DRAWN	WBE	DATE	11/02
CHECKED	JRT	DATE	11/02
CHECKED	GW	DATE	11/02

Baker
Michael Baker Jr., Inc.

CHARLESTON, W.VA.

SHEET 13 OF 93
BRIDGE NO. 4919

03/31/2003

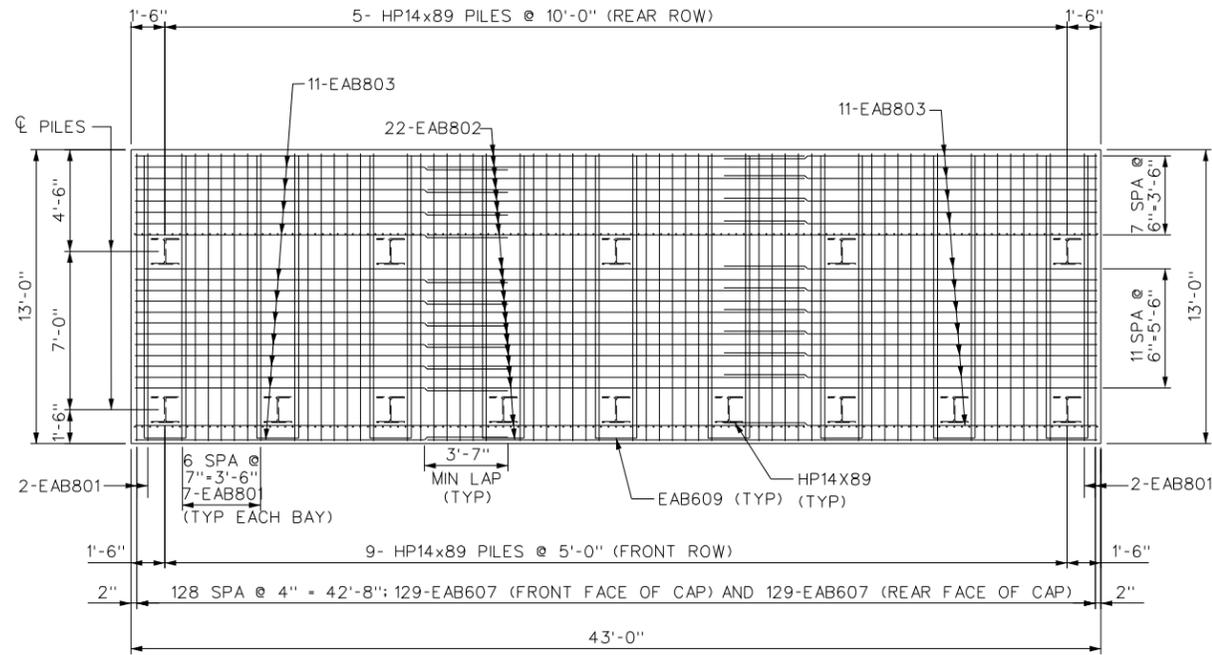
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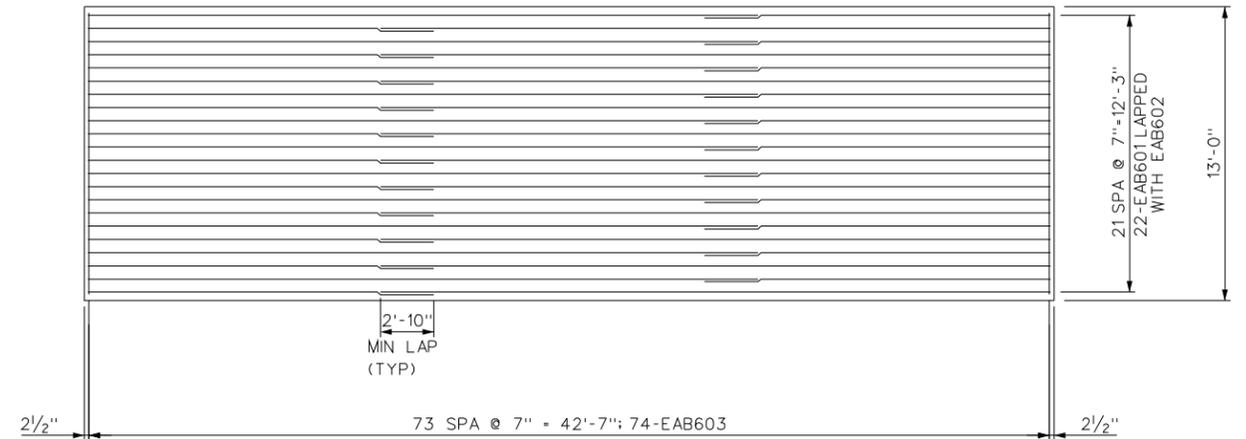
06C29C98 - BRIDGE 5

03/31/2003

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	170	407

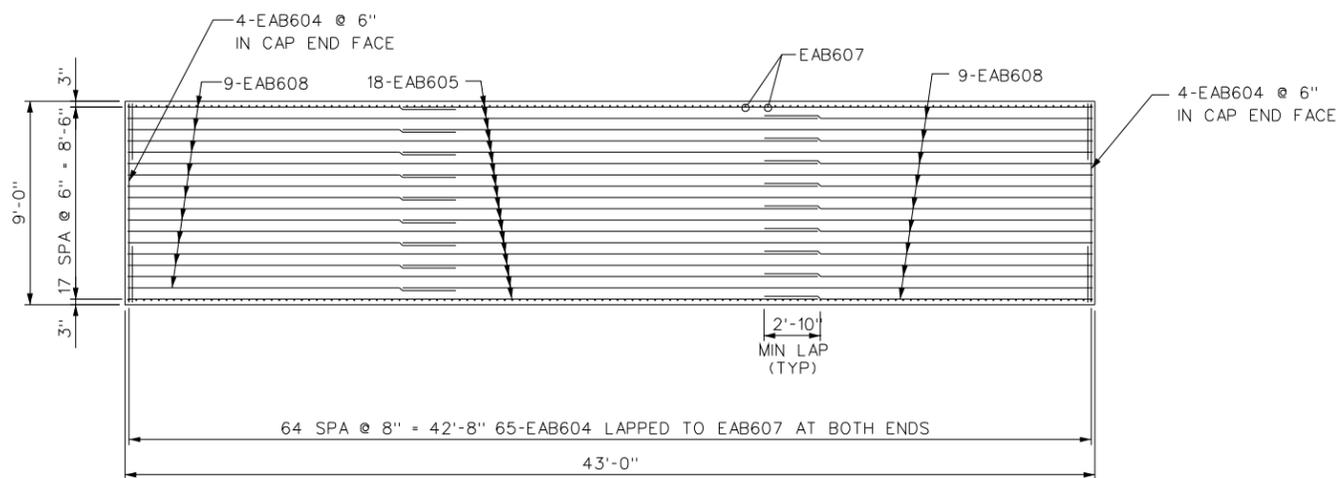


FOUNDATION PLAN - ABUTMENT 2
(SHOWING REINFORCING IN BOTTOM OF FOOTING)



FOUNDATION PLAN - ABUTMENT 2
(SHOWING REINFORCING IN TOP OF FOOTING)

ABUTMENT 2 STRUCTURE QUANTITY ESTIMATE			
ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
207034-000	FABRIC FOR SEPARATION	SY	65
212001-000	STRUCTURE EXCAVATION	CY	11
212005-000	SELECT MATERIAL FOR BACKFILLING	CY	35
601002-001	CLASS B CONCRETE	CY	155
602002-001	EPOXY COATED REINFORCING STEEL	LB	23085
616004-016	HP14X89 STEEL BEARING PILES, DRIVEN	LF	340
616005-018	HP14X89 STEEL BEARING PILES, PREDRILLED AND DRIVEN	LF	340
628004-001	EXPLORATORY DRILLING AND SAMPLING	LF	750



STEM PLAN - ABUTMENT 2
(SHOWING REINFORCING IN TOP OF STEM)

NO.	REVISION	DATE:	BY:
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W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
ABUTMENT 2**

FOUNDATION & STEM PLAN DETAILS

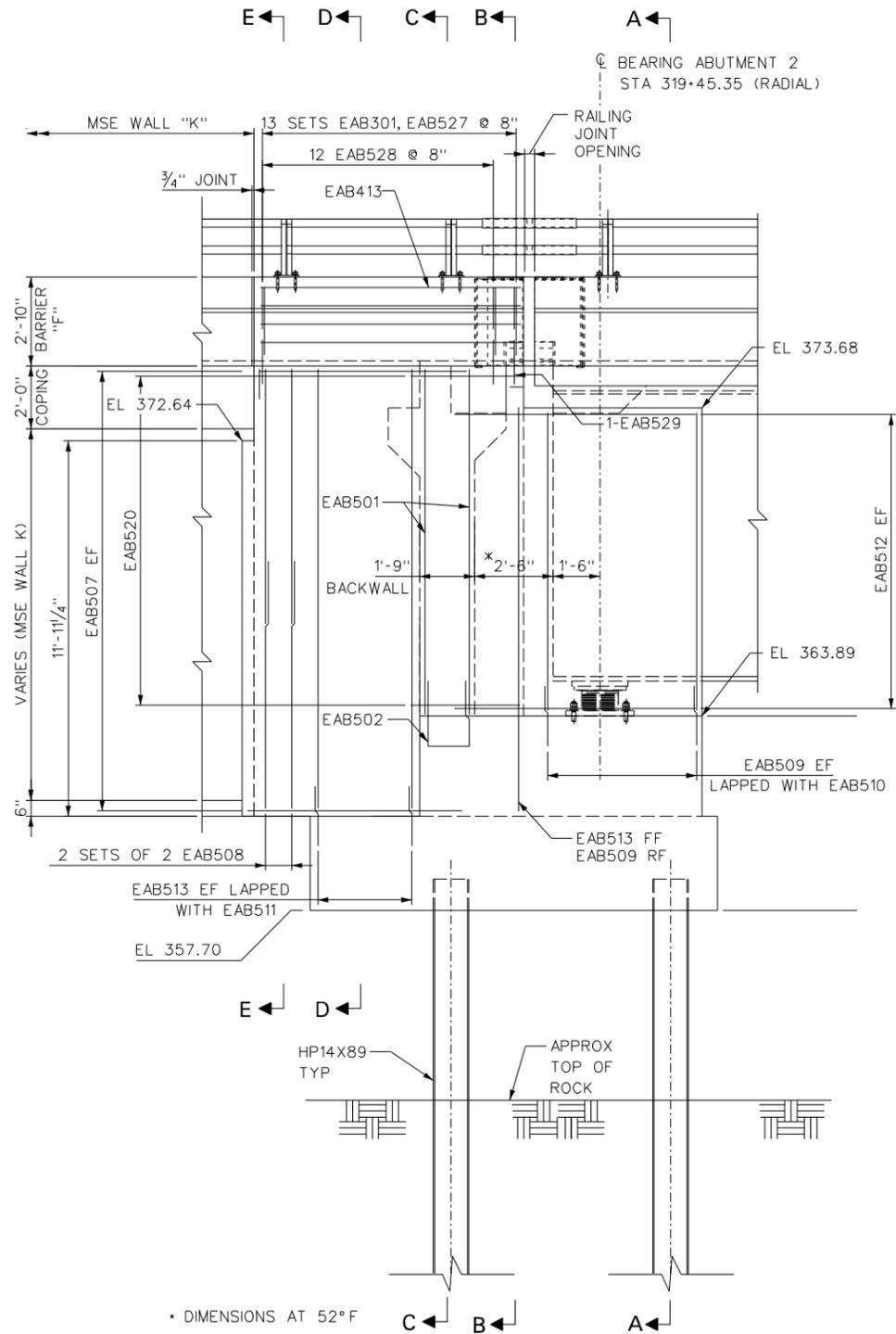
DESIGNED	DATE
<i>KJC</i>	11/02
DRAWN	
<i>WRE</i>	11/02
CHECKED	
<i>JKF</i>	11/02
CHECKED	
<i>GW</i>	11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

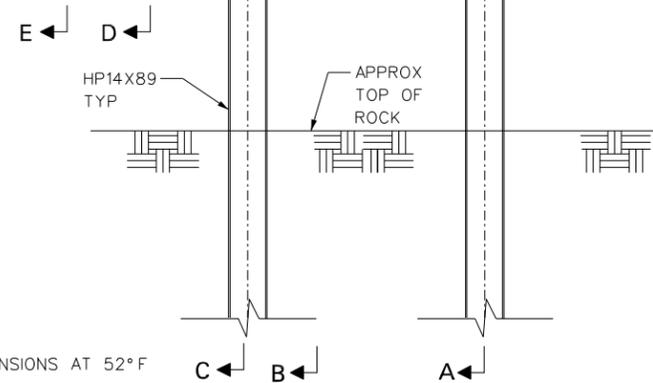
SHEET
14 OF **93**
BRIDGE NO.
4919



PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	171	407

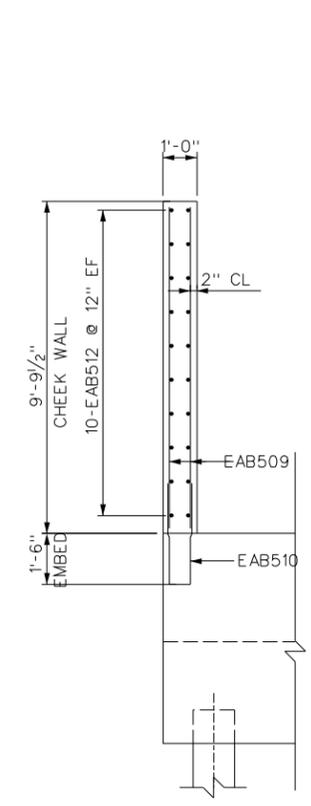


• DIMENSIONS AT 52°F

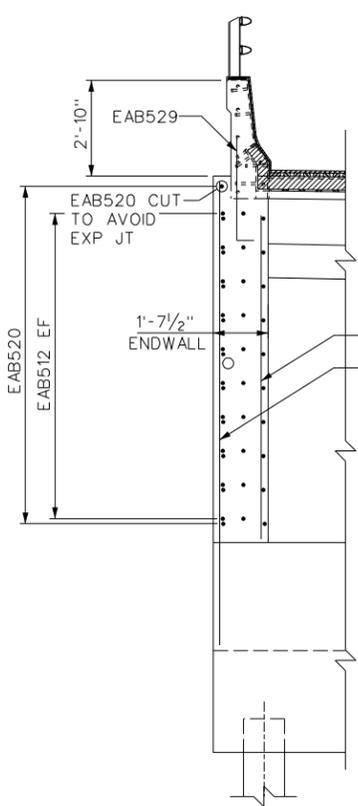


END ELEVATION
(LOOKING SOUTH)

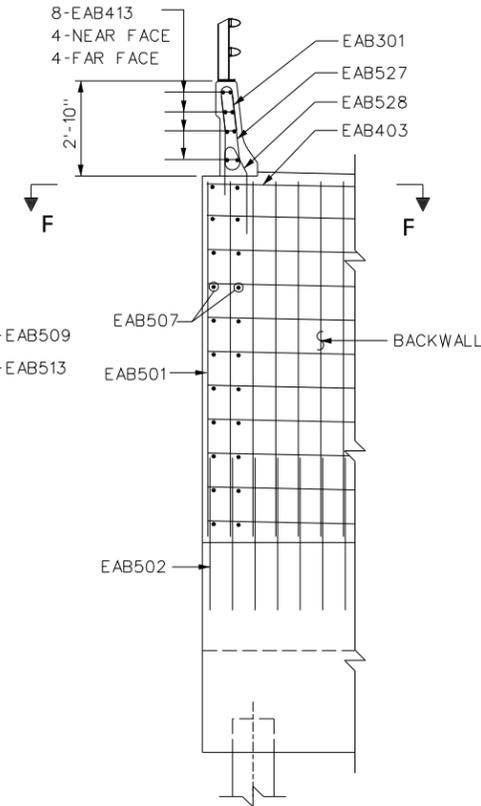
FF FRONT FACE
 RF REAR FACE
 EF EACH FACE



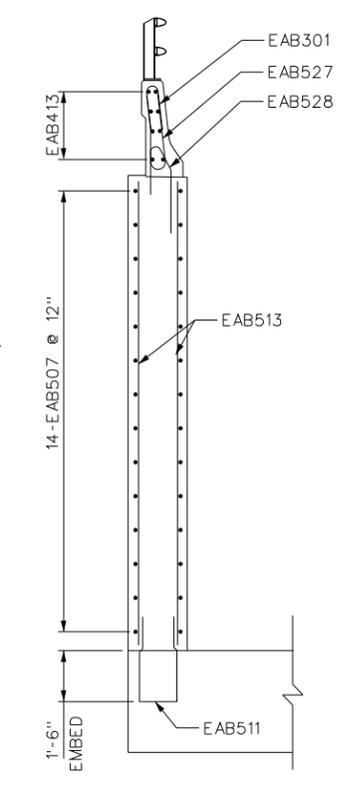
SECTION A-A



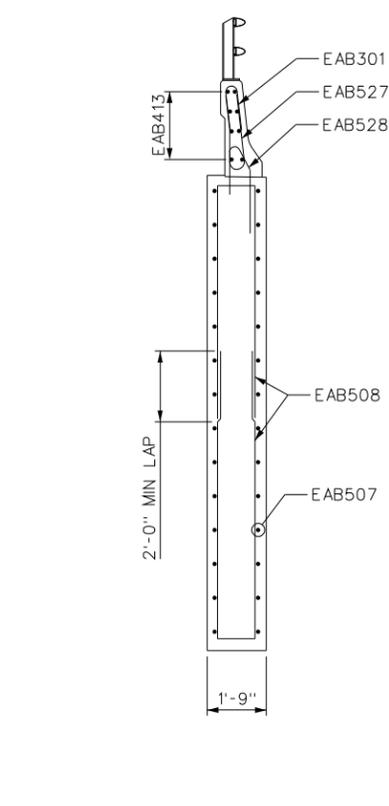
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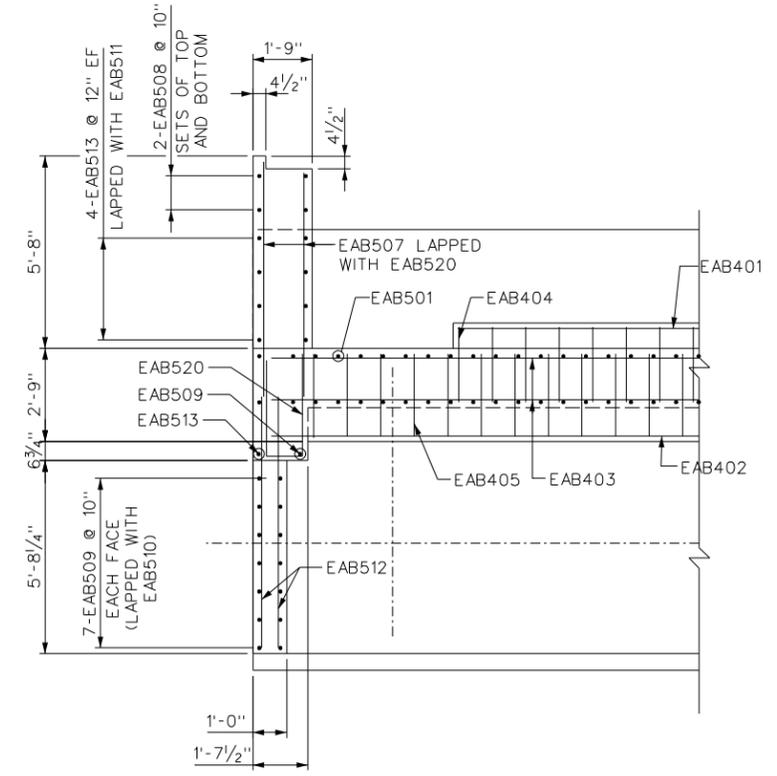
SECTION C-C



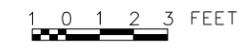
SECTION D-D



SECTION E-E



SECTION F-F



NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
 OVER POTOMAC RIVER
 ABUTMENT 2 DETAILS - I

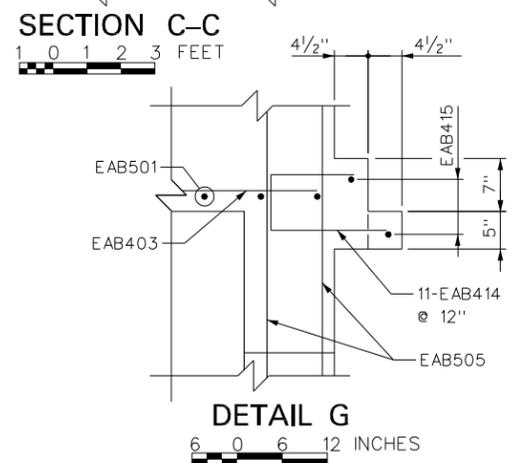
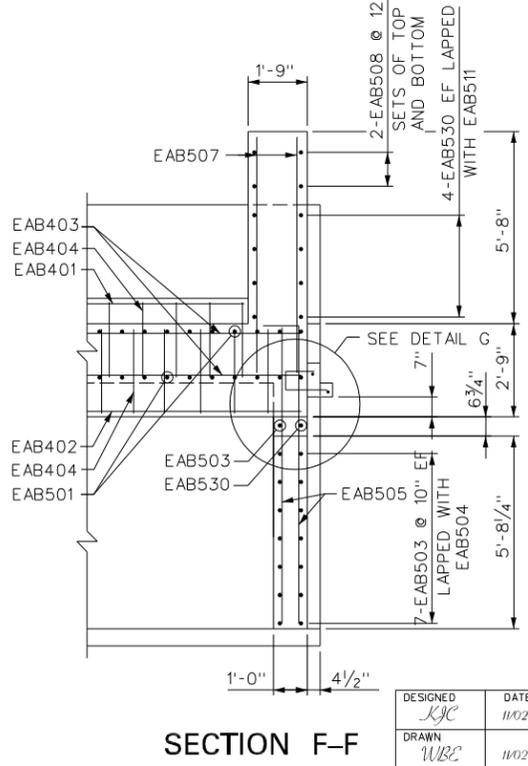
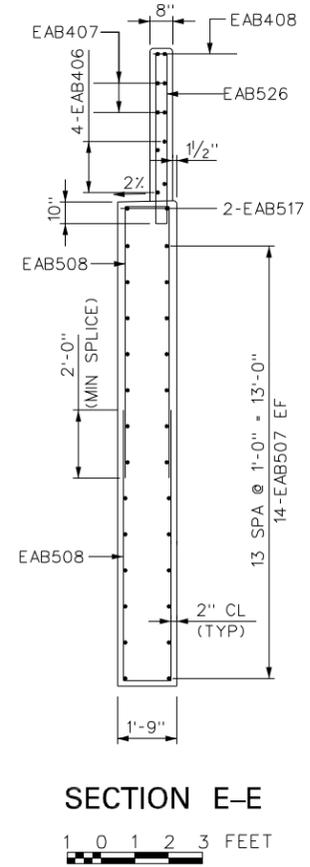
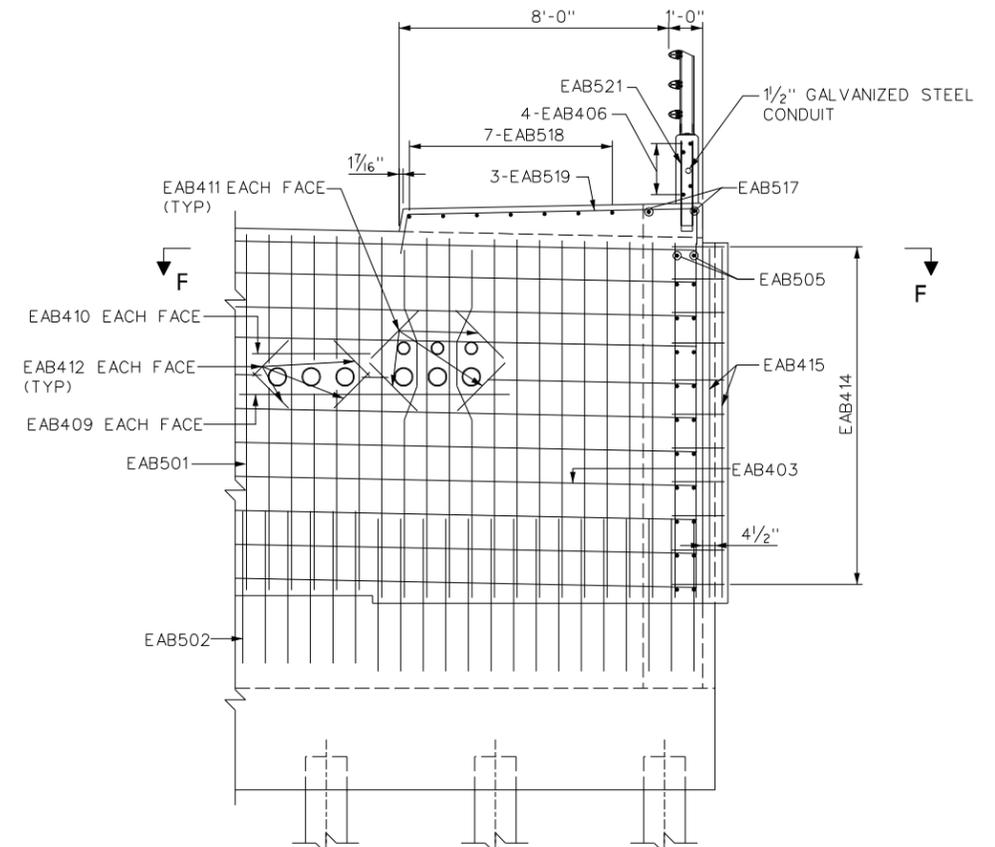
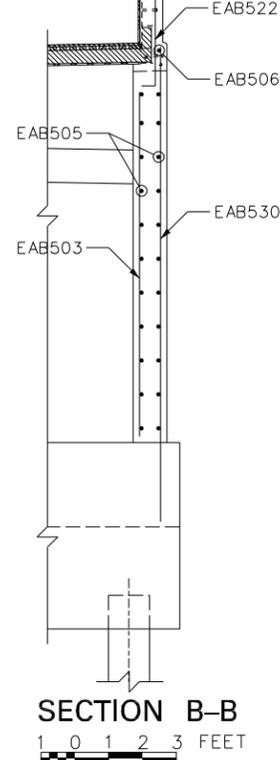
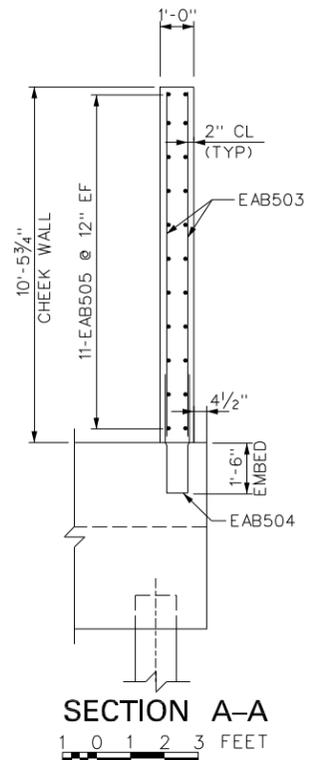
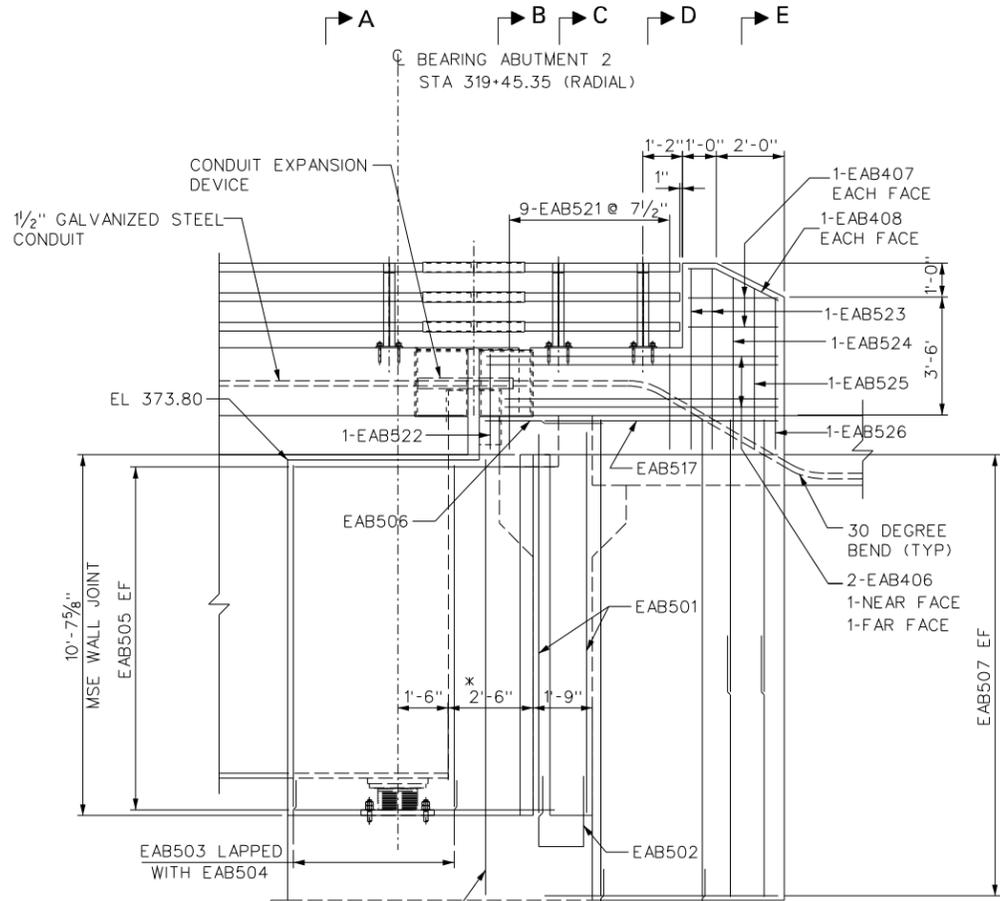
DESIGNED <i>KJC</i>	DATE 11/02
DRAWN <i>WBE</i>	11/02
CHECKED <i>JKT</i>	11/02
CHECKED <i>GW</i>	11/02

Baker
 Michael Baker Jr., Inc.

Charleston, W.Va.

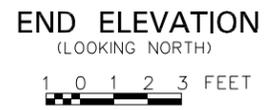
SHEET
15 OF 93
 BRIDGE NO.
4919

03/31/2003 PUBLIC ROADS DIV.	STATE DIST. NO. W. VA. 5	PROJECT NUMBERS		FISCAL YEAR 2002	COUNTY JEFFERSON	SHEET NO. 172	TOTAL SHEETS 407
		STATE	FEDERAL				
		S319-480-5.64	03 BR-0480(010)E				



* DIMENSIONS AT 52° F

FF FRONT FACE
RF REARFACE
EF EACH FACE



NOTES

EXPECTED BRIDGE MOVEMENT IS 3 1/2 INCHES CONTRACTION AND 2 7/8 INCHES EXPANSION. CONDUIT EXPANSION DEVICE SHALL ACCOMMODATE THIS MOVEMENT PLUS ONE INCH IN EACH DIRECTION.

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
ABUTMENT 2 DETAILS - II

DESIGNED KJC	DATE 11/02
DRAWN WRC	11/02
CHECKED JKJ	11/02
CHECKED GW	11/02

Baker
Michael Baker Jr., Inc.

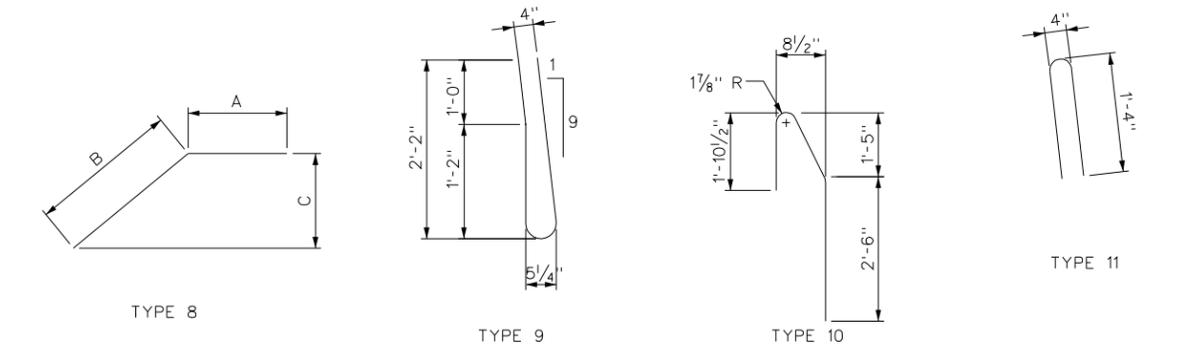
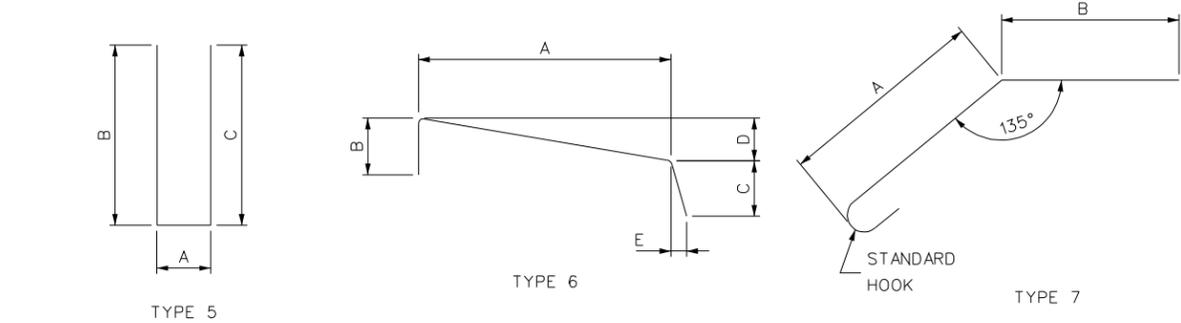
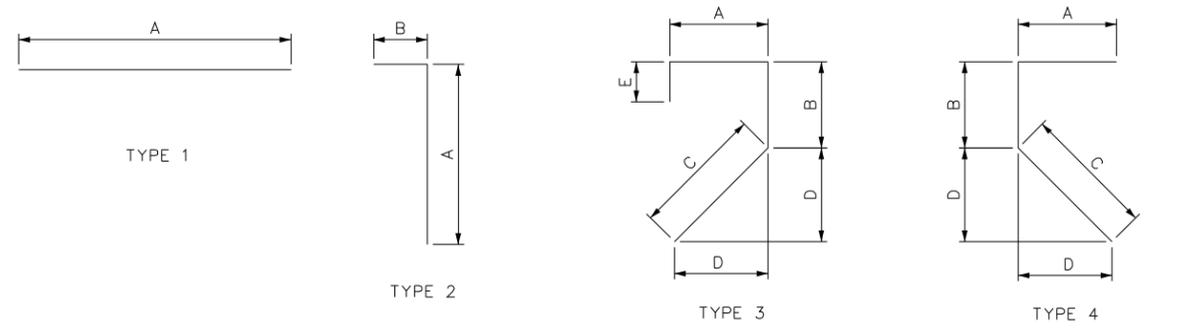
Charleston, W.Va.

SHEET
16 OF 93
BRIDGE NO.
4919

ABUTMENT 2 REINFORCEMENT BAR SCHEDULE

MARK	TYPE	SIZE	NO	LENGTH	LOCATION	A	B	C	D	E	REMARK
EAB301	11	3	13	2'-10"	TYPE "F" BARRIER						
EAB401	1	4	2	38'-9 1/2"	BACKWALL	38'-9 1/2"					
EAB402	1	4	3	42'-3 1/2"	BACKWALL	42'-3 1/2"					
EAB403	1	4	22	42'-3 1/2"	BACKWALL	42'-3 1/2"					
EAB404	3	4	40	6'-8"	BACKWALL	2'-4"	9"	3'-1"	2'-2"	6"	
EAB405	4	4	40	7'-7"	BACKWALL	2'-5"	1'-9"	3'-5"	2'-5"		
EAB406	1	4	4	8'-8"	COMBO RAIL WALL	8'-8"					
EAB407	1	4	4	2'-8"	COMBO RAIL WALL	2'-8"					
EAB408	8	4	2	2'-9"	COMBO RAIL WALL	9"	2'-0"	1'-0"			
EAB409	1	4	2	8'-0"	BACKWALL AT CONDUIT	8'-0"					
EAB410	1	4	2	3'-6"	BACKWALL AT CONDUIT	3'-6"					
EAB411	1	4	8	2'-6"	BACKWALL AT CONDUIT	2'-6"					
EAB412	1	4	8	2'-0"	BACKWALL AT CONDUIT	2'-0"					
EAB413	1	4	8	8'-2"	TYPE "F" BARRIER	8'-2"					
EAB414	5	4	11	3'-0"	WINGWALL	7 1/2"	1'-4 1/2"	1'-0"			
EAB415	1	4	2	10'-3"	WINGWALL	10'-3"					
EAB501	1	5	128	10'-7"	BACKWALL	10'-7"					
EAB502	5	5	64	10'-5"	STEM/BACKWALL	1'-5"	4'-6"	4'-6"			
EAB503	1	5	15	10'-3"	CHEEK WALL	10'-3"					
EAB504	5	5	7	8'-0"	STEM/CHEEK WALL	8"	3'-8"	3'-8"			
EAB505	1	5	22	8'-8"	CHEEK WALL	8'-8"					
EAB506	2	5	1	3'-8"	CHEEK WALL	3'-0"	8"				
EAB507	1	5	56	7'-0"	WINGWALL	7'-0"					
EAB508	5	5	8	17'-5"	WINGWALL	1'-5"	8'-0"	8'-0"			
EAB509	1	5	15	9'-7"	CHEEK WALL	9'-7"					
EAB510	5	5	7	8'-0"	STEM/CHEEK WALL	8"	3'-8"	3'-8"			
EAB511	5	5	8	8'-9"	STEM/CHEEK WALL	1'-5"	3'-8"	3'-8"			
EAB512	1	5	20	7'-4"	CHEEK WALL	7'-4"					
EAB513	1	5	9	13'-8"	CHEEK WALL	13'-8"					
EAB514	5	5	34	10'-8"	STEM	8'-8"	1'-0"	1'-0"			
EAB515	1	5	18	12'-6"	STEM	12'-6"					
EAB516	1	5	9	9'-6"	STEM	9'-6"					
EAB517	1	5	2	8'-1"	WINGWALL	8'-1"					
EAB518	1	5	7	2'-5"	SIDEWALK	2'-5"					
EAB519	6	5	3	11'-5"	SIDEWALK	8'-8"	1'-6"	1'-3"	2"	2 1/2"	
EAB520	5	5	14	8'-1"	WINGWALL	1'-3"	3'-5"	3'-5"			
EAB521	5	5	9	5'-8"	COMBO RAIL WALL	4"	2'-8"	2'-8"			
EAB522	2	5	1	3'-1"	COMBO RAIL WALL	2'-8"	5"				
EAB523	5	5	2	10'-8"	COMBO RAIL WALL	4"	5'-2"	5'-2"			
EAB524	5	5	1	10'-0"	COMBO RAIL WALL	4"	4'-10"	4'-10"			
EAB525	5	5	1	9'-4"	COMBO RAIL WALL	4"	4'-6"	4'-6"			
EAB526	5	5	1	8'-10"	COMBO RAIL WALL	4"	4'-3"	4'-3"			
EAB527	9	5	13	4'-7"	TYPE "F" BARRIER						
EAB528	10	5	12	5'-1"	TYPE "F" BARRIER						
EAB529	2	5	1	4'-4"	TYPE "F" BARRIER	3'-5"	11"				
EAB530	1	5	9	14'-1"	WINGWALL	14'-1"					
EAB601	1	6	22	30'-0"	FOOTING	30'-0"					
EAB602	1	6	22	15'-6"	FOOTING	15'-6"					
EAB603	1	6	74	12'-8"	FOOTING	12'-8"					
EAB604	1	6	73	8'-8"	STEM	8'-8"					
EAB605	1	6	36	30'-0"	FOOTING/STEM	30'-0"					
EAB606	1	6	18	15'-6"	FOOTING/STEM	15'-6"					
EAB607	5	6	258	8'-7"	FOOTING/STEM	5'-1"	2'-6"	1'-0"			
EAB608	2	6	18	17'-7"	STEM	15'-6"	2'-1"				
EAB609	5	6	36	26'-10"	FOOTING	1'-10"	12'-6"	12'-6"			
EAB801	1	8	60	12'-8"	FOOTING	12'-8"					
EAB802	1	8	22	30'-0"	FOOTING	30'-0"					
EAB803	1	8	22	16'-3"	FOOTING	16'-3"					
EAB804	7	8	40	7'-1"	BACKWALL	2'-10"	3'-4"				

03/31/2003	PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
	W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	173	407



TYPICAL REBAR DESIGNATION:
 EXAMPLE
 EAB501
 — DENOTES REBAR GROUP NO. 01
 — DENOTES REBAR SIZE # 5
 AA DENOTES ABUTMENT 1
 AB DENOTES ABUTMENT 2
 — DENOTES EPOXY COATED

DESIGNED	DATE
KJC	11/02
DRAWN	
WBC	11/02
CHECKED	
JF	11/02
CHECKED	
JKI	11/02

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
 OVER POTOMAC RIVER
 ABUTMENT 2
 REINFORCEMENT BAR SCHEDULE

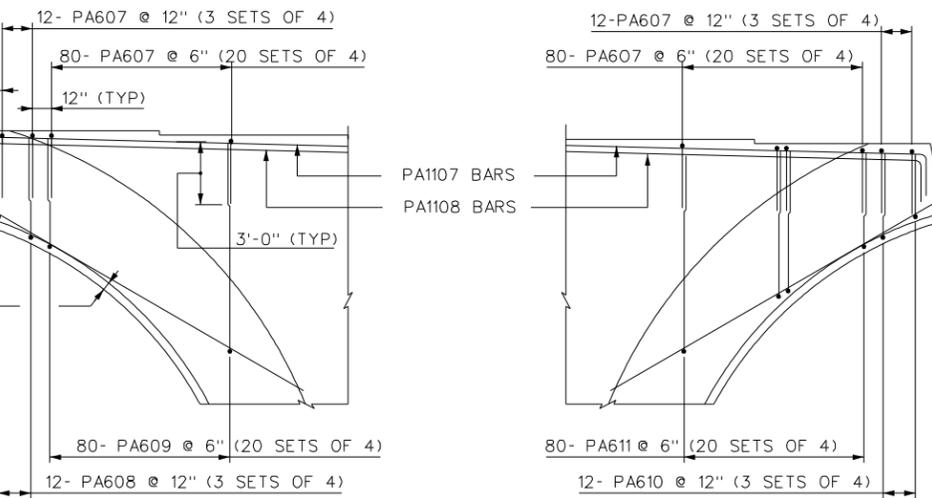
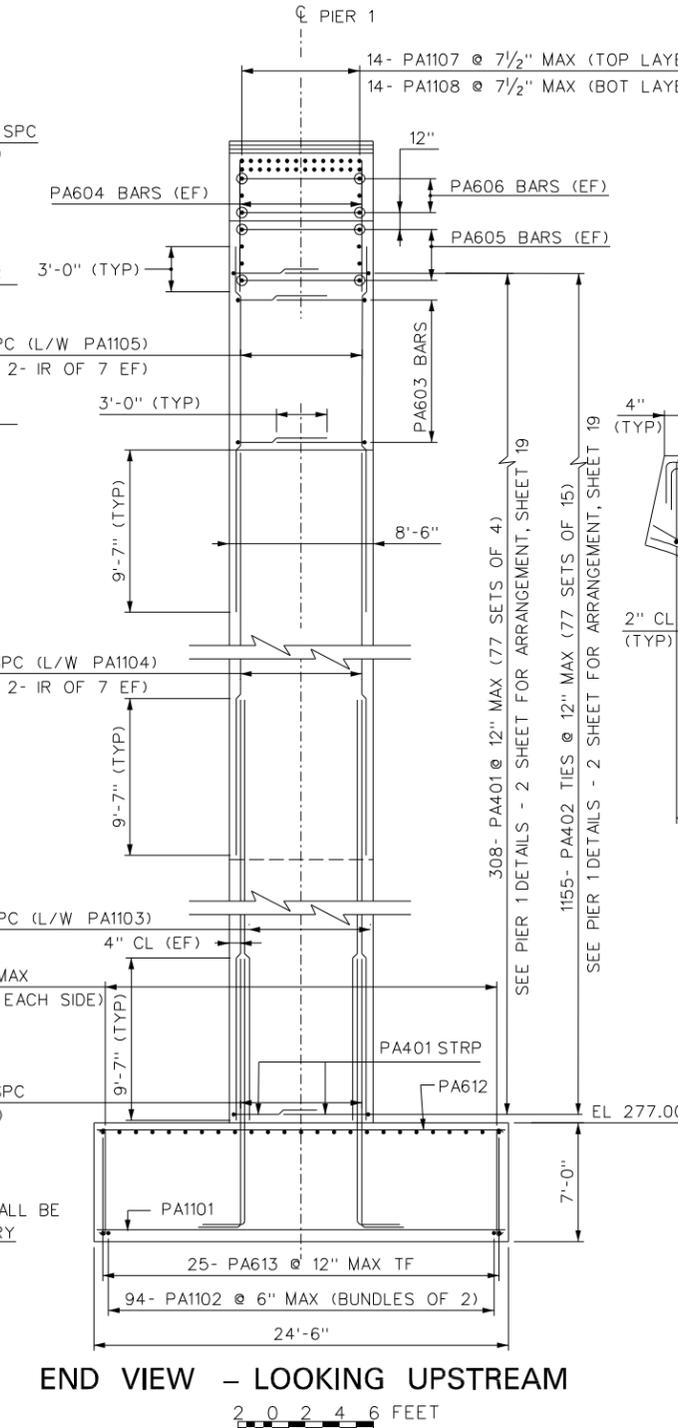
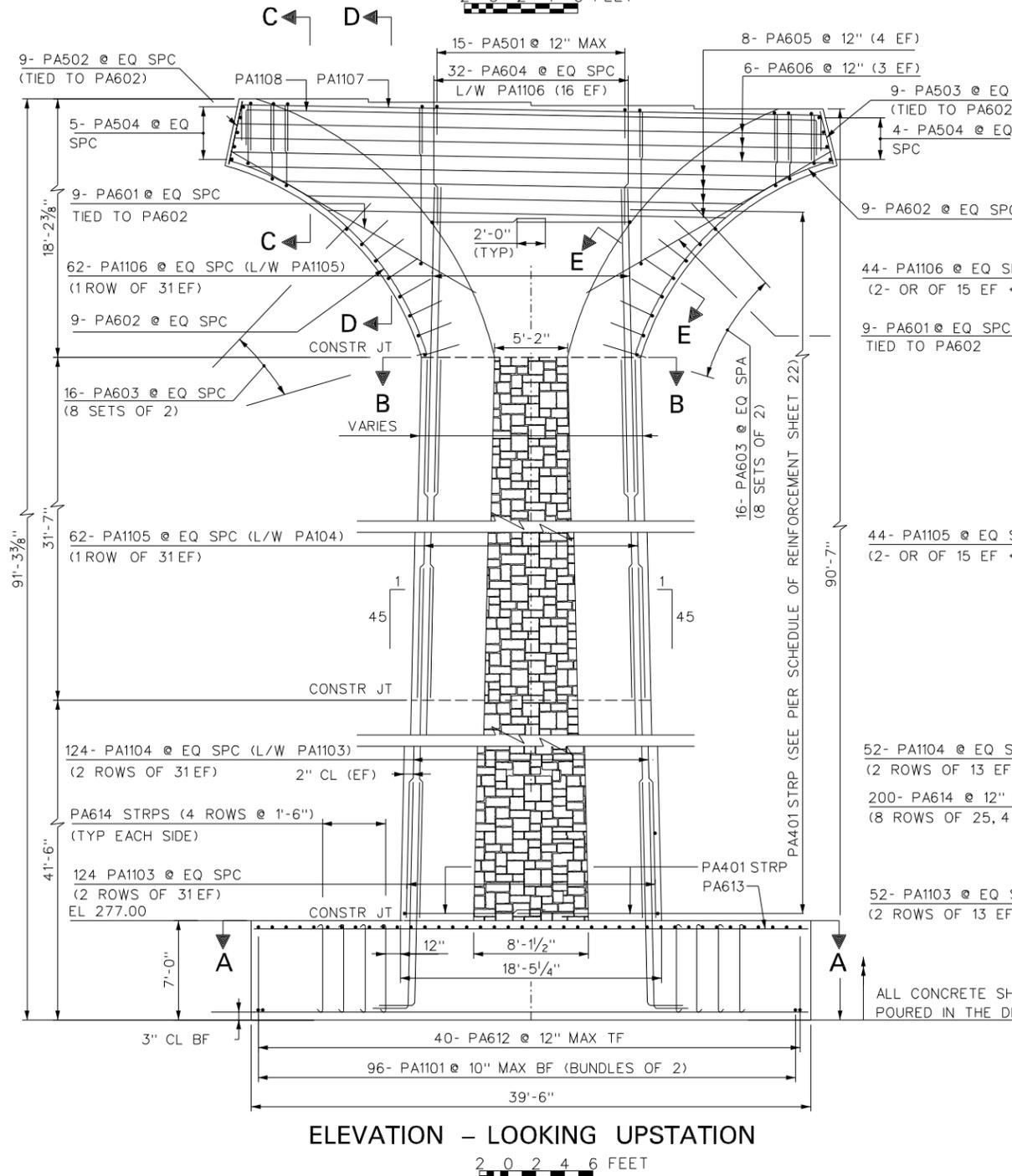
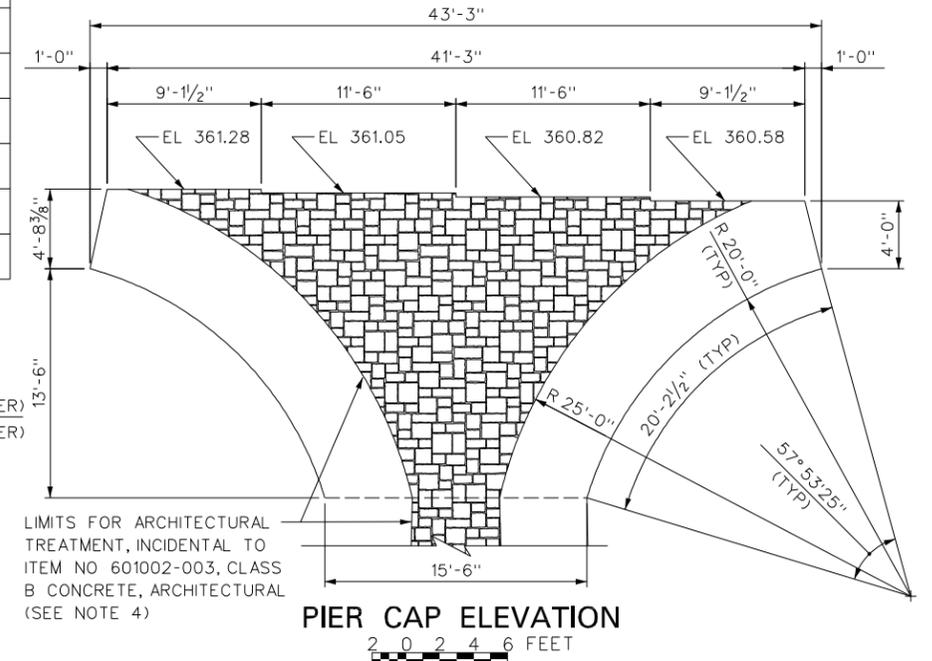
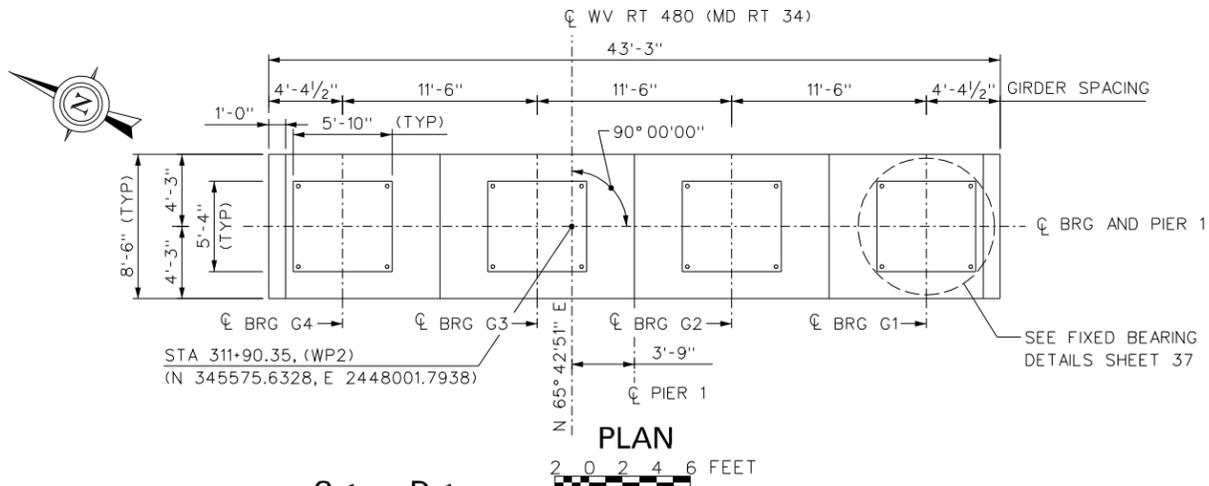
Baker
 Michael Baker Jr., Inc. Charleston, W.Va.

SHEET 17 OF 93
 BRIDGE NO. 4919

04:02:38 PM
03/31/2003

PUBLIC ROADS DIV.	STATE NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	174	407

ITEM NO	DESCRIPTION	UNIT	QUANTITY
212002-000	WET EXCAVATION	CY	269
212004-001	COFFERDAM, AT PIER 1	EA	1
601002-001	CLASS B CONCRETE	CY	251
601002-003	CLASS B CONCRETE, ARCHITECTURAL	CY	516
602001-001	REINFORCING STEEL BAR	LB	152563
628004-001	EXPLORATORY DRILLING AND SAMPLING	LF	210



- NOTES:**
- FOR ARRANGEMENT OF SHEAR REINFORCEMENT, SEE PIERS SCHEDULE OF REINFORCEMENT SHEET 22.
 - FOR ARRANGEMENT OF PA402 TIES, SEE PIER 1 DETAILS -2 SHEET 19.
 - FOR SECTIONS A-A, B-B, C-C, D-D, AND E-E DETAILS SEE PIER 1 DETAILS -2 SHEET 19.
 - ARCHITECTURAL TREATMENT SHALL BE CUSTOM ROCK PATTERN #12007 OR APPROVED EQUAL.

- LEGEND**
- TF = TOP FACE
 - BF = BOTTOM FACE
 - EF = EACH FACE
 - EQ = EQUAL
 - SPC = SPACING
 - L/W = LAPPED WITH
 - STRP = STIRRUP
 - CL = CLEAR COVER
 - OR = OUTSIDE ROW
 - IR = INSIDE ROW

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

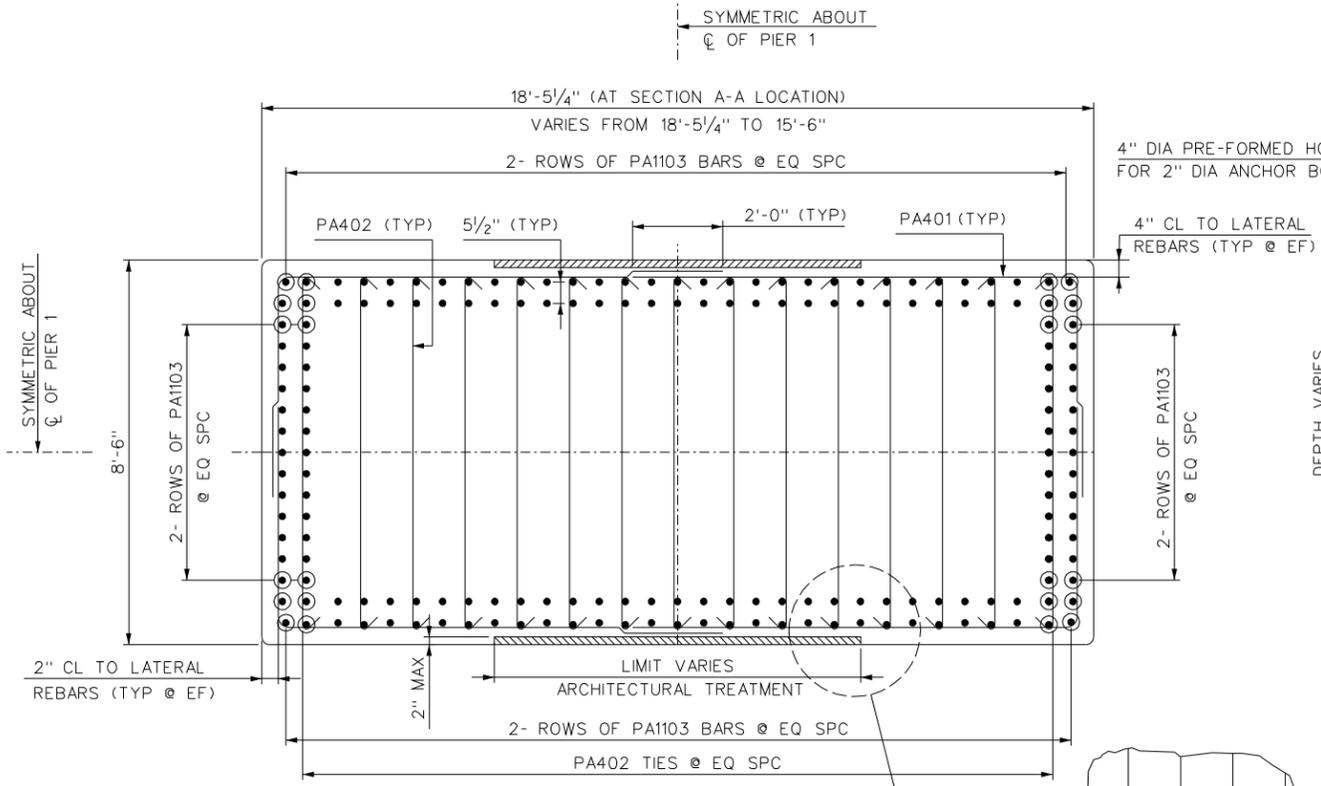
**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
PIER 1 DETAILS - I**

DESIGNED	DATE
DRAWN	11/02
CHECKED	11/02
CHECKED	11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET 18 OF 93
BRIDGE NO. 4919

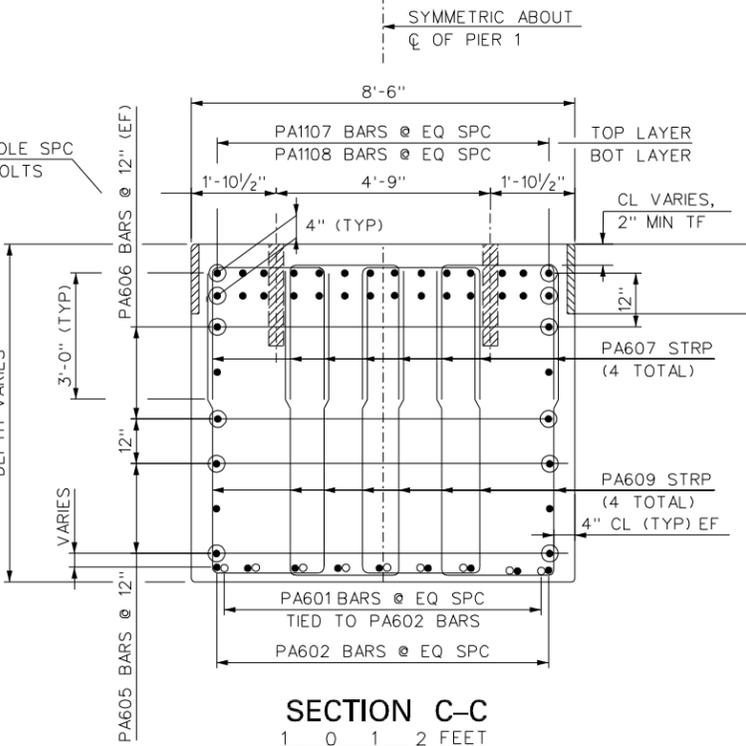
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	175	407



SECTION A-A

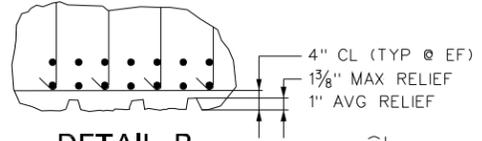
(SECTION AT TOP OF FOOTING EL 277.00)

1 0 1 2 FEET



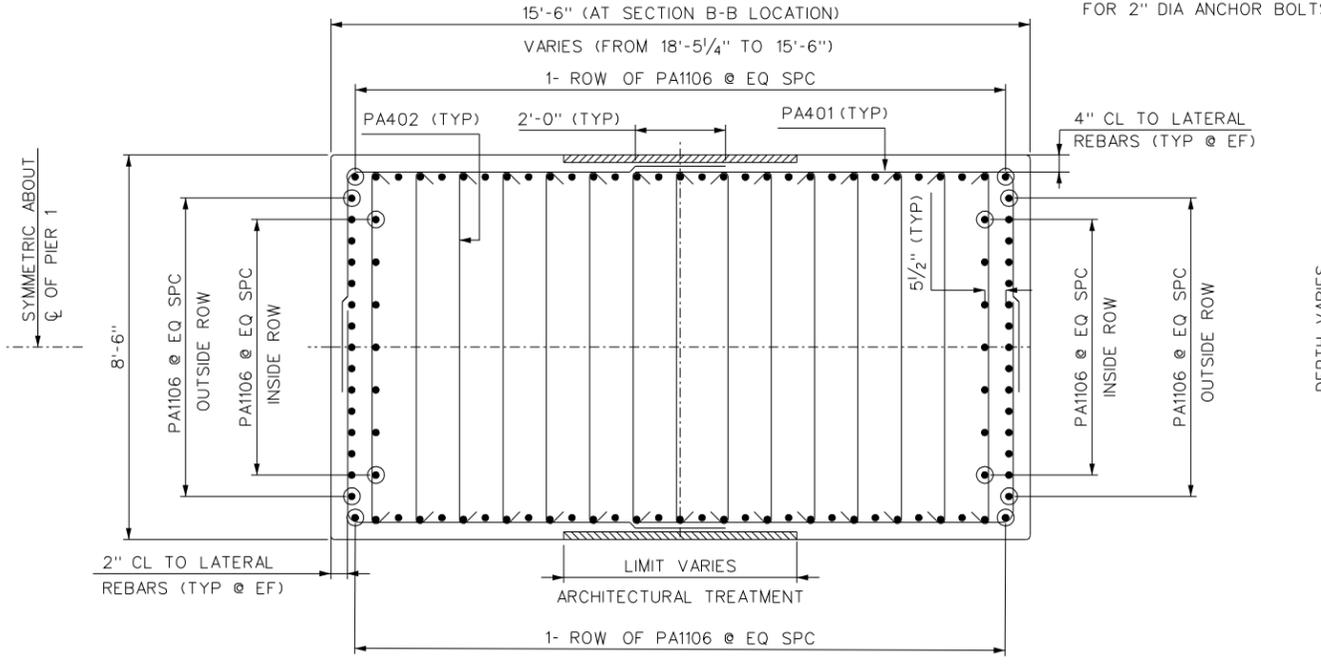
SECTION C-C

1 0 1 2 FEET



DETAIL B

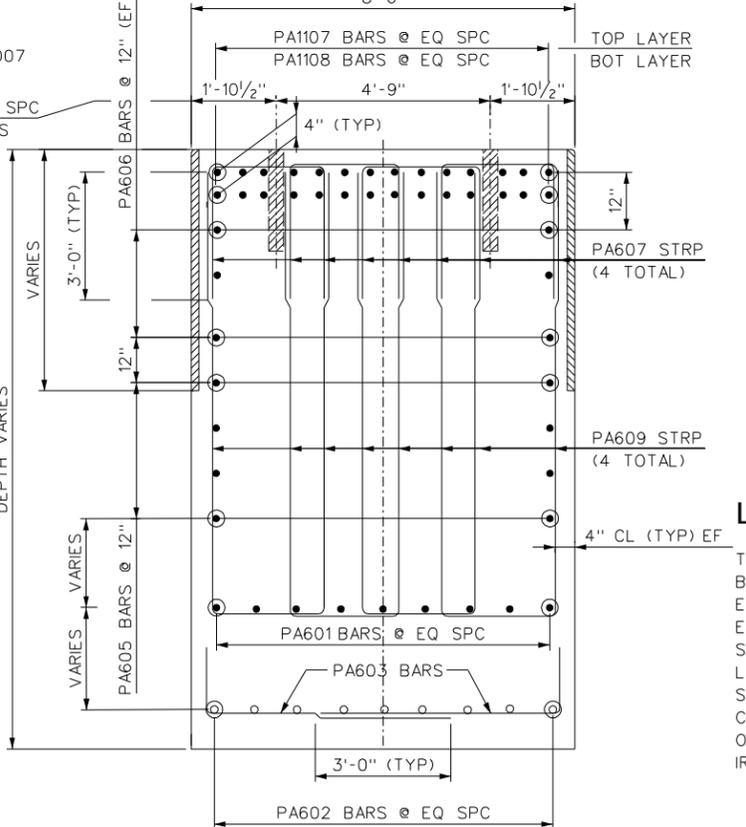
NOT TO SCALE
CUSTOM ROCK PATTERN #12007
OR APPROVED EQUAL
4" DIA PRE-FORMED HOLE SPC
FOR 2" DIA ANCHOR BOLTS



SECTION B-B

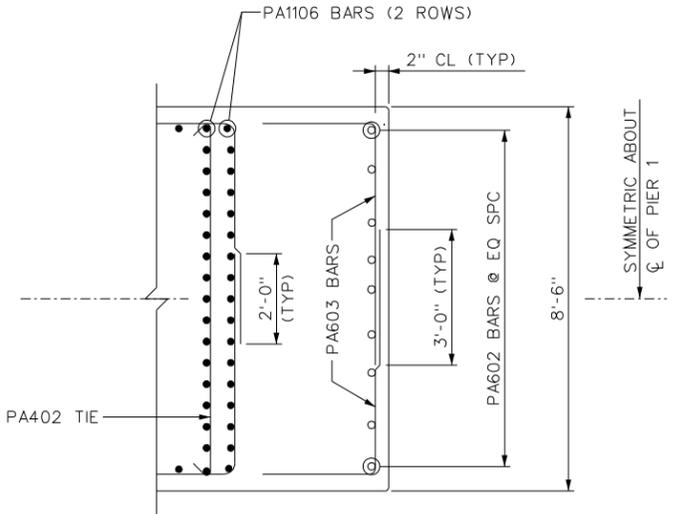
(SECTION AT TOP OF PIER STEM EL 343.08)

1 0 1 2 FEET



SECTION D-D

1 0 1 2 FEET



SECTION E-E

1 0 1 2 FEET

NOTES:

- FOOTING CONCRETE SHALL BE CLASS B CONCRETE, $f'_c = 3000$ PSI AND PAID FOR UNDER ITEM NO 601002-001. STEM CONCRETE SHALL BE CLASS B, ARCHITECTURAL, $f'_c = 3000$ PSI, AND PAID FOR UNDER ITEM NO 601002-003.
- ALL REINFORCING STEEL SHALL HAVE A 2" CLEAR COVER UNLESS OTHERWISE NOTED. ALL PIER REINFORCEMENT IS NON EPOXY-COATED.
- ALL EXPOSED CONCRETE EDGES SHALL HAVE A 1" X 1" CHAMFER.
- PIER FOUNDATION DOWEL BARS AND ALL VERTICAL STEM REINFORCEMENT SHALL SLOPE WITH THE PIER WALLS.
- FOR GIRDERS BEARINGS LOCATIONS AND ANCHOR BOLTS ARRANGEMENT, SEE PIER 1 DETAILS-I SHEET 18 AND FIXED BEARING DETAILS SHEET 37.
- THE MAXIMUM FACTORED BEARING PRESSURE = 40.52 KSF.
- THE ULTIMATE BEARING RESISTANCE OF ROCK = 48.0 KSF.
- ALL PA1103 DOWELS SHALL BE ORIENTED SUCH THAT THE LEG OF 90° HOOK IS POINTING OUTWARD AND NORMAL TO FACE OF THE PIER STEM.
- FOR WET EXCAVATION LIMITS, SEE REINFORCEMENT BAR SCHEDULE SHEET 22.
- ADJUST THE LOCATION OF PA1107, PA1108, PA501 AND SHEAR STIRRUPS AS NEEDED TO ALLOW FOR PROPER INSTALLATION OF THE 4" DIA PRE-FORMED HOLES.

LEGEND

- TF = TOP FACE
- BF = BOTTOM FACE
- EF = EACH FACE
- EQ = EQUAL
- SPC = SPACING
- L/W = LAPPED WITH
- STRP = STIRRUP
- CL = CLEAR COVER
- OR = OUTSIDE ROW
- IR = INSIDE ROW

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
PIER 1 DETAILS - II**

DESIGNED	DATE
DRAWN	11/02
CHECKED	11/02
CHECKED	11/02

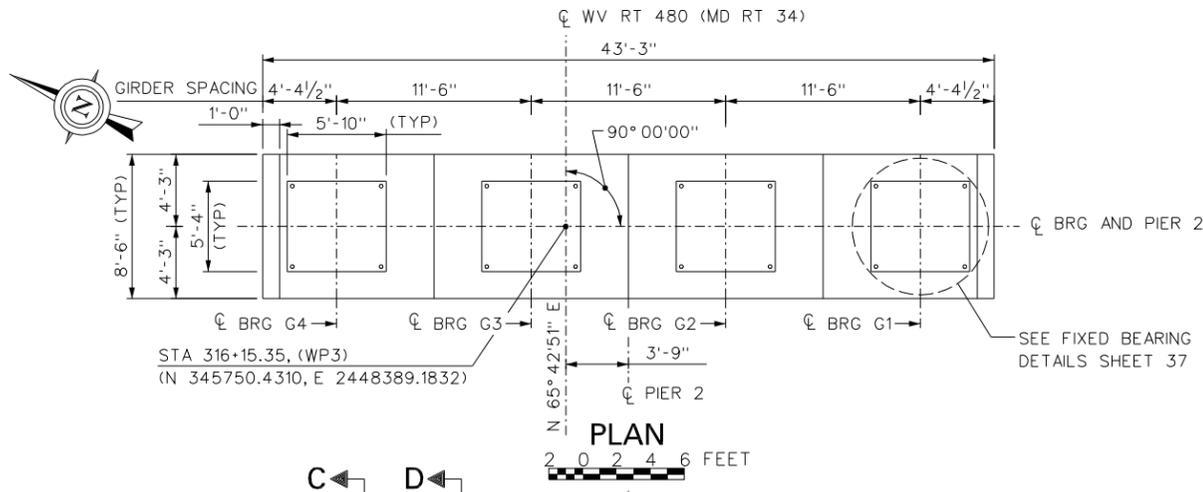
Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

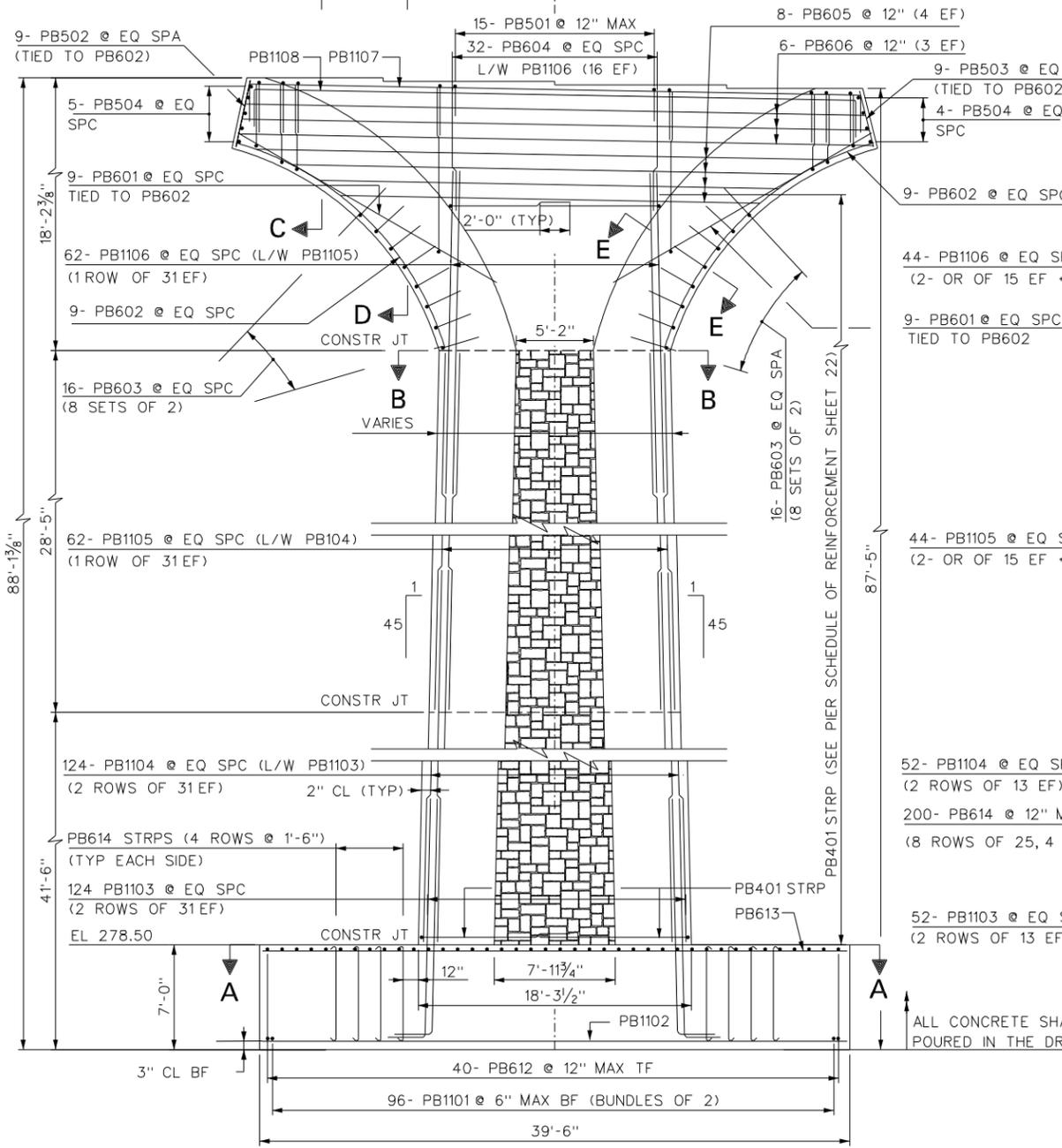
SHEET
19 OF 93
BRIDGE NO.
4919

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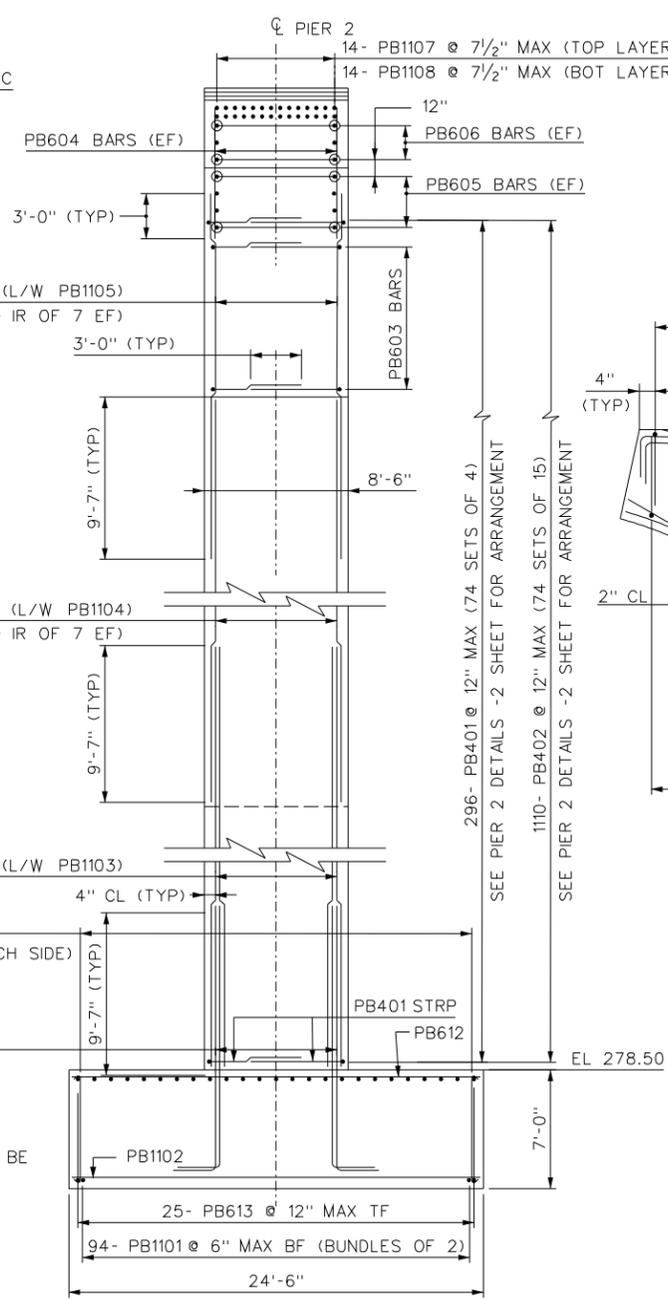
03/31/2003	PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
			STATE	FEDERAL				
	W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	176	407



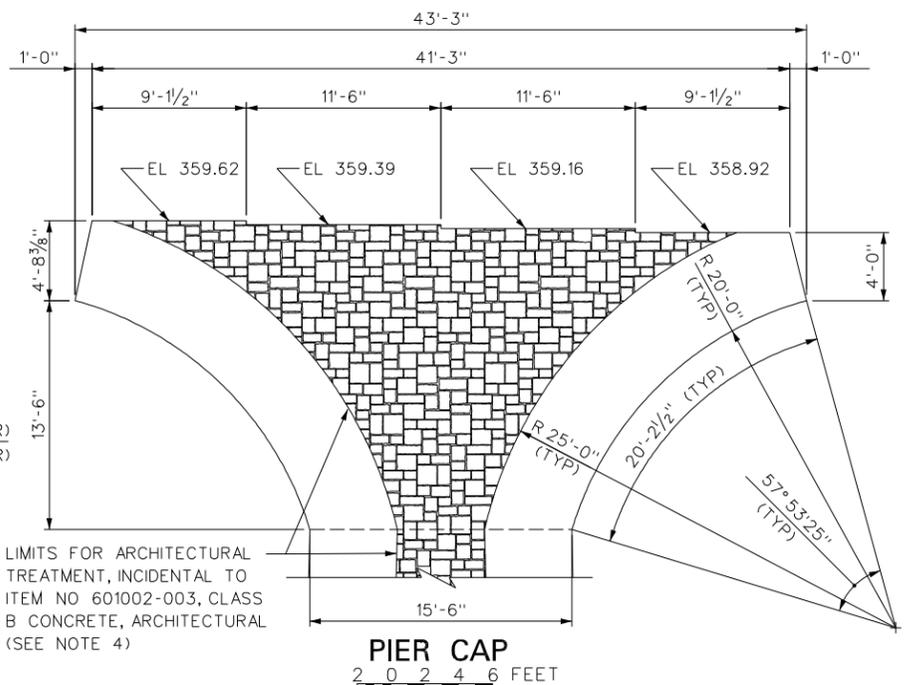
ITEM NO	DESCRIPTION	UNIT	QUANTITY
211001-000	UNCLASSIFIED BORROW EXCAVATION	CY	92
211002-000	ROCK BORROW EXCAVATION	CY	422
212001-000	STRUCTURE EXCAVATION	CY	266
212002-000	WET EXCAVATION	CY	480
212004-001	COFFERDAM, AT PIER 2	EA	1
601002-001	CLASS B CONCRETE	CY	251
601002-003	CLASS B CONCRETE, ARCHITECTURAL	CY	497
602001-001	REINFORCING STEEL BAR	LB	150408
628004-001	EXPLORATORY DRILLING AND SAMPLING	LF	210



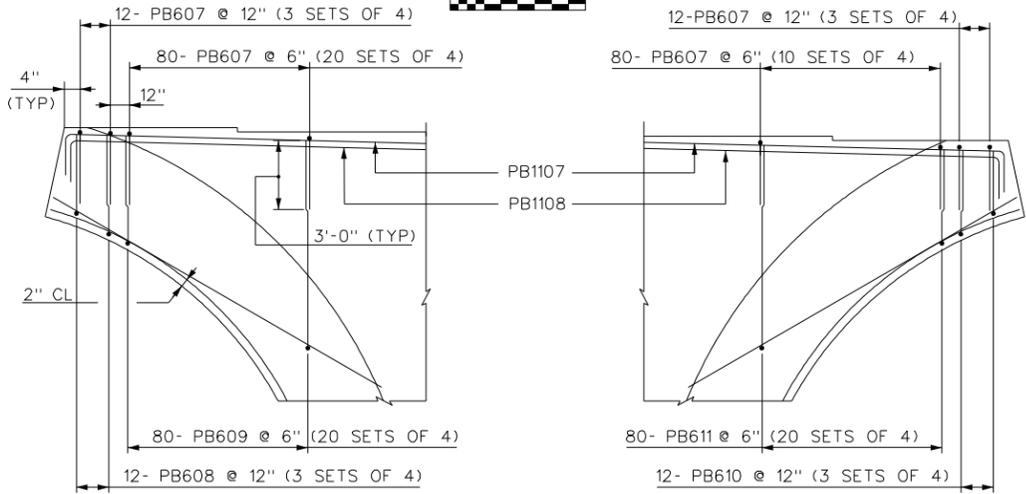
ELEVATION - LOOKING UPSTATION
2 0 2 4 6 FEET



END VIEW - LOOKING UPSTREAM
2 0 2 4 6 FEET



PIER CAP
2 0 2 4 6 FEET



PIER CAP SHEAR REINFORCEMENT
(NOT TO SCALE)

- NOTES:**
- FOR ARRANGEMENT OF SHEAR REINFORCEMENT, SEE PIERS SCHEDULE OF REINFORCEMENT SHEET 22.
 - FOR ARRANGEMENT OF PB402 TIES, SEE PIER 2 DETAILS - II SHEET 21.
 - FOR SECTIONS A-A, B-B, C-C, D-D, AND E-E DETAILS SEE PIER 2 DETAILS - II SHEET 21.
 - ARCHITECTURAL TREATMENT SHALL BE CUSTOM ROCK PATTERN #12007 OR APPROVED EQUAL.

LEGEND

- TF = TOP FACE
- BF = BOTTOM FACE
- EF = EACH FACE
- EQ = EQUAL
- SPC = SPACING
- L/W = LAPPED WITH
- STRP = STIRRUP
- CL = CLEAR COVER
- OR = OUTSIDE ROW
- IR = INSIDE ROW

NO.	REVISION	DATE:	BY:

**W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
PIER 2 DETAILS - I**

DESIGNED JF	DATE 11/02
DRAWN JF	DATE 11/02
CHECKED JF	DATE 11/02
CHECKED GW	DATE 11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

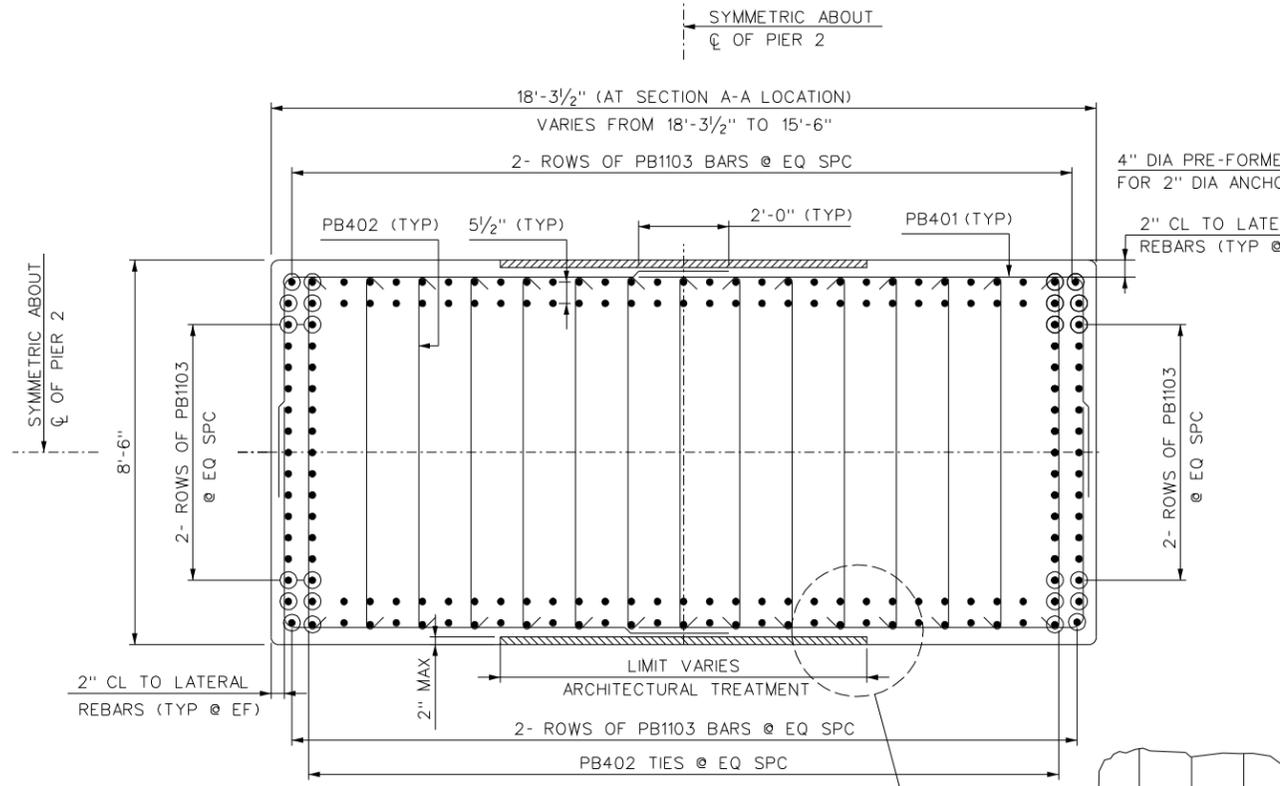
SHEET
20 OF 93
BRIDGE NO.
4919

04/04/07 PM

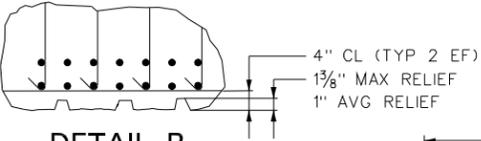
03/31/2003

03/31/2003

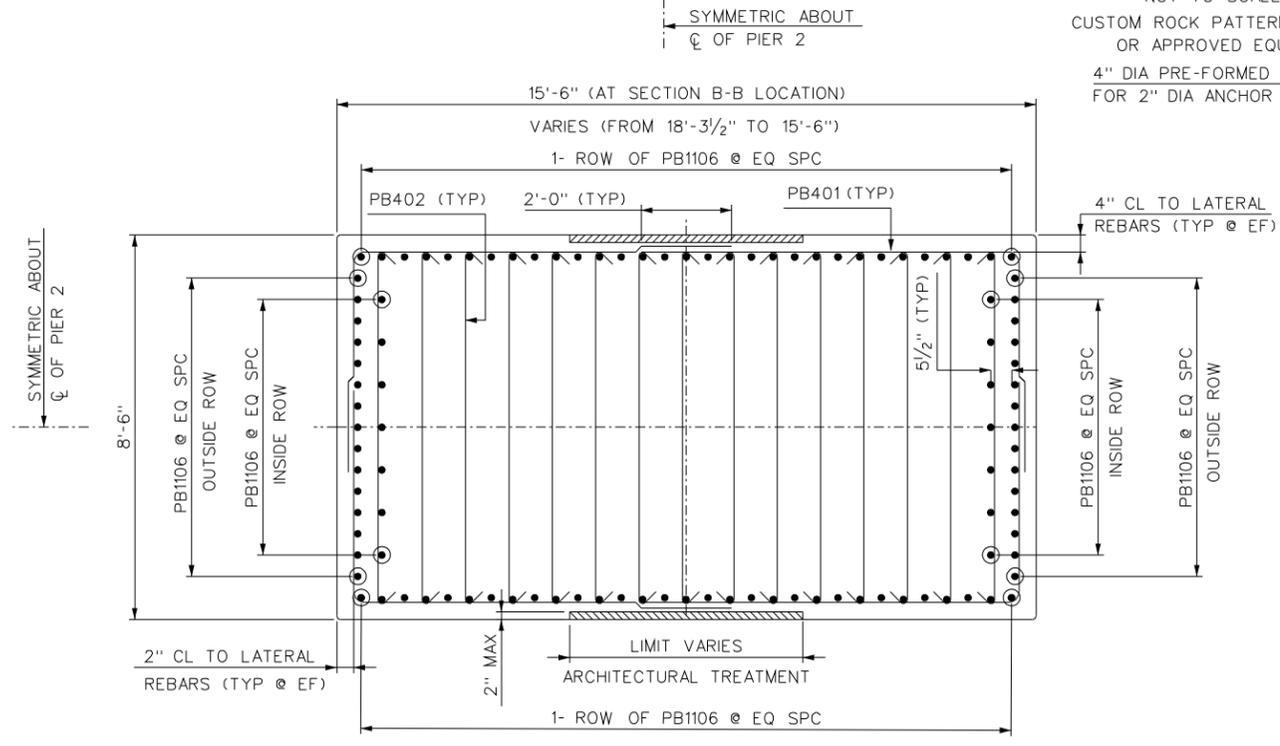
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	177	407



SECTION A-A
(SECTION AT TOP OF FOOTING EL 278.5)

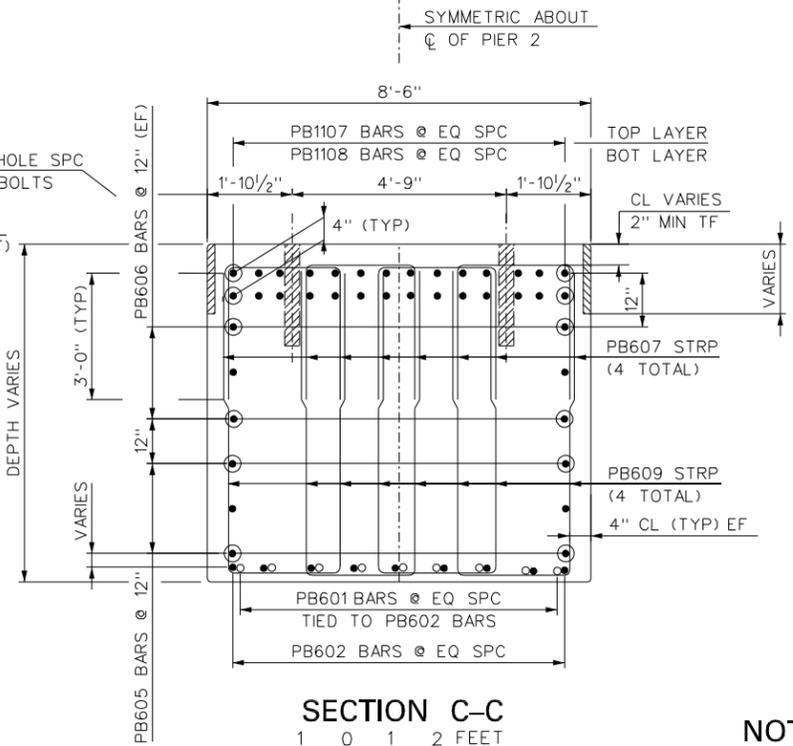
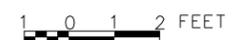


DETAIL B
NOT TO SCALE
CUSTOM ROCK PATTERN #12007
OR APPROVED EQUAL
4" DIA PRE-FORMED HOLE SPC
FOR 2" DIA ANCHOR BOLTS

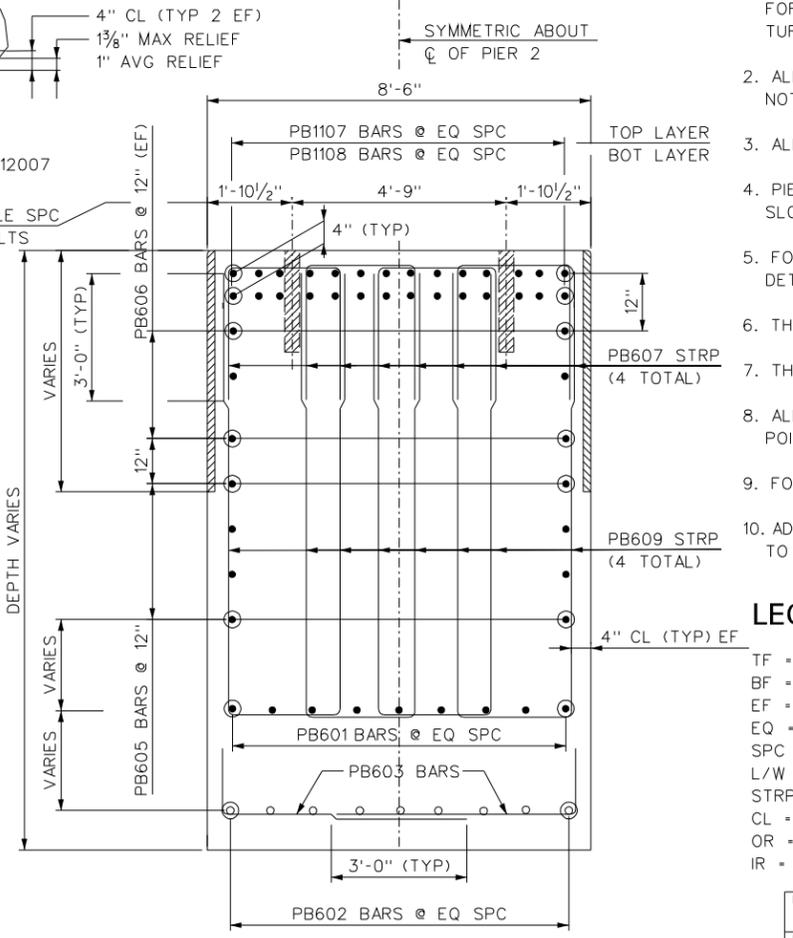


SECTION B-B

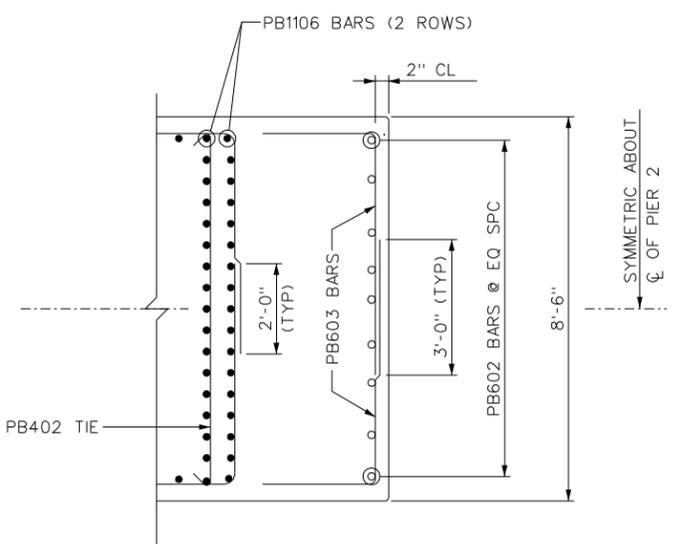
(SECTION AT TOP OF PIER STEM EL 341.42)



SECTION C-C



SECTION D-D



SECTION E-E



NOTES:

- FOOTING CONCRETE SHALL BE CLASS B CONCRETE, f'c = 3000 PSI AND PAID FOR UNDER ITEM NO 601002-001. STEM CONCRETE SHALL BE CLASS B, ARCHITECTURAL, f'c = 3000 PSI, AND PAID FOR UNDER ITEM NO 601002-003.
- ALL REINFORCING STEEL SHALL HAVE A 2" CLEAR COVER UNLESS OTHERWISE NOTED. ALL PIER REINFORCEMENT IS NON EPOXY-COATED.
- ALL EXPOSED CONCRETE EDGES SHALL HAVE A 1" X 1" CHAMFER.
- PIER FOUNDATION DOWEL BARS AND ALL VERTICAL STEM REINFORCEMENT SHALL SLOPE WITH THE PIER WALLS.
- FOR GIRDERS BEARINGS LOCATIONS AND ANCHOR BOLT ARRANGEMENT, SEE PIER 2 DETAILS-I SHEET 20 AND FIXED BEARING DETAILS SHEET 37.
- THE MAXIMUM FACTORED BEARING PRESSURE = 40.52 KSF.
- THE ULTIMATE BEARING RESISTANCE OF ROCK = 48.0 KSF.
- ALL PB1103 DOWELS SHALL BE ORIENTED SUCH THAT THE LEG OF THE 90° HOOK IS POINTING OUTWARD AND NORMAL TO THE FACE OF THE PIER STEM.
- FOR WET EXCAVATION LIMITS, SEE REINFORCEMENT BAR SCHEDULE SHEET 22.
- ADJUST THE LOCATION OF PB1107, PB1108, PB501 AND SHEAR STIRRUPS AS NEEDED TO ALLOW FOR PROPER INSTALLATION OF THE 4" DIA PRE-FORMED HOLES.

LEGEND

- TF = TOP FACE
- BF = BOTTOM FACE
- EF = EACH FACE
- EQ = EQUAL
- SPC = SPACING
- L/W = LAPPED WITH
- STRP = STIRRUP
- CL = CLEAR COVER
- OR = OUTSIDE ROW
- IR = INSIDE ROW

NO.	REVISION	DATE:	BY:

**W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
PIER 2 DETAILS - II**

DESIGNED JF	DATE 11/02
DRAWN JF	DATE 11/02
CHECKED JF	DATE 11/02
CHECKED GW	DATE 11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

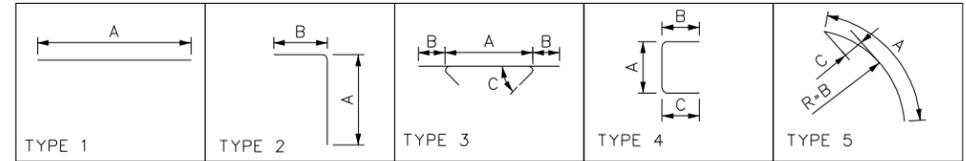
SHEET
21 OF **93**
BRIDGE NO.
4919

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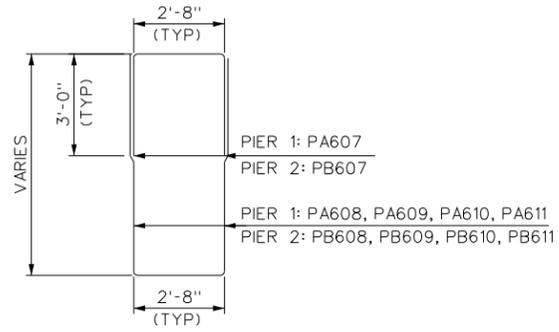
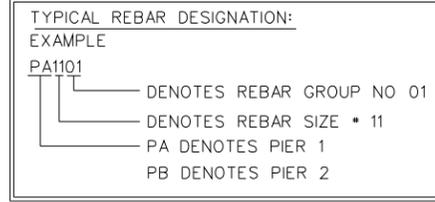
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	178	407

PIER 1 REINFORCEMENT BAR SCHEDULE

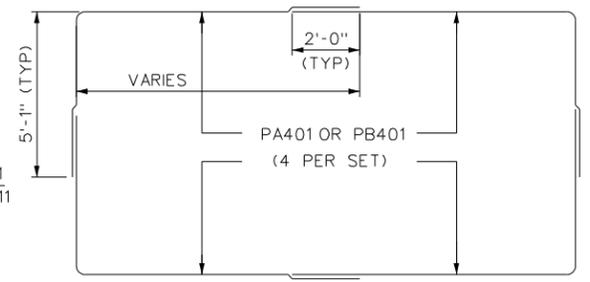
MARK	TYPE	SIZE	NO	LENGTH	LOCATION	A	B	C	REMARK
PA401	2	4	308	VARIES	STEM/CAP	5'-0"	VARIES		"B" VARIES FROM 10'-2" TO 8'-4" BY 1/2"
PA402	3	4	1155	8'-7"	STEM/CAP	7'-10"	4 1/2"	45°	
PA501	4	5	15	11'-10"	CAP	7'-10"	2'-0"	2'-0"	
PA502	1	5	9	4'-6 1/4"	CAP	4'-6 1/4"			
PA503	1	5	9	3'-10"	CAP	3'-10"			
PA504	1	5	9	7'-10"	CAP	7'-10"			
PA601	1	6	18	20'-0"	CAP	20'-0"			
PA602	5	6	18	20'-2 3/4"	CAP	20'-2 3/4"	20'-3"	2'-5 1/2"	RADIAL BAR, R=20'-3"
PA603	2	6	32	8'-0"	CAP	2'-6"	5'-6"		
PA604	1	6	32	8'-7"	CAP	8'-7"			
PA605	1	6	8	VARIES	CAP	VARIES	TWO GROUPS OF 4		"A" VARIES FROM 29'-10 1/2" TO 41'-3" BY 3'-9 1/2"
PA606	1	6	6	VARIES	CAP	VARIES	TWO GROUPS OF 3		"A" VARIES FROM 41'-6 3/4" TO 42'-5 3/4" BY 5 1/2"
PA607	4	6	184	8'-8"	CAP	2'-8"	3'-0"	3'-0"	
PA608	4	6	12	VARIES	CAP	2'-8"	VARIES	VARIES	"B-C", VARIES FROM 4'-1" TO 5'-3" BY 7"
PA609	4	6	80	VARIES	CAP	2'-8"	VARIES	VARIES	"B-C", VARIES FROM 5'-10" TO 11'-4 1/2" BY 3 1/2"
PA610	4	6	12	VARIES	CAP	2'-8"	VARIES	VARIES	"B-C", VARIES FROM 3'-5 1/2" TO 4'-7 1/2" BY 7"
PA611	4	6	80	VARIES	CAP	2'-8"	VARIES	VARIES	"B-C", VARIES FROM 5'-2 1/2" TO 10'-9" BY 3 1/2"
PA612	1	6	40	24'-2"	FOOTING	24'-2"			
PA613	1	6	25	39'-2"	FOOTING	39'-2"			
PA614	3	6	200	7'-11"	FOOTING	6'-7"	8"	45°	
PA1101	1	11	96	24'-2"	FOOTING	24'-2"			
PA1102	1	11	94	39'-2"	FOOTING	39'-2"			
PA1103	2	11	176	18'-10"	FOOTING/STEM	2'-6"	16'-4"		
PA1104	1	11	176	44'-0"	STEM	44'-0"			
PA1105	1	11	106	31'-3"	STEM	31'-3"			
PA1106	1	11	106	21'-8"	STEM/CAP	21'-8"			
PA1107	4	11	14	46'-1"	CAP	41'-1"	2'-6"	2'-6"	
PA1108	4	11	14	45'-4 1/2"	CAP	40'-4 1/2"	2'-6"	2'-6"	



"A" = DIMENSION A AS SHOWN IN BAR DIAGRAM
 "B" = DIMENSION B AS SHOWN IN BAR DIAGRAM
 "C" = DIMENSION C AS SHOWN IN BAR DIAGRAM



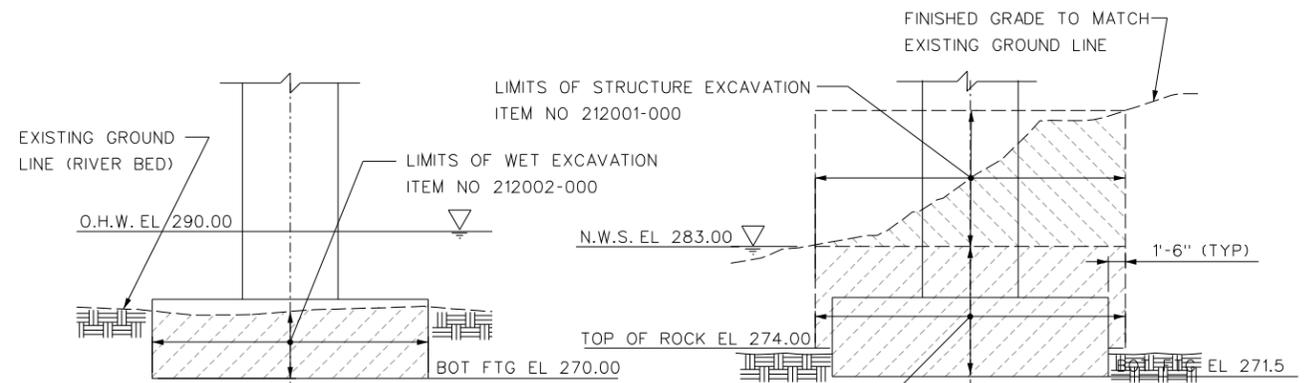
TYPICAL ARRANGEMENT OF SHEAR REINFORCEMENT
 (PIERS 1 AND 2 CAP)



TYPICAL ARRANGEMENT OF SHEAR REINFORCEMENT
 (PIERS 1 AND 2 STEM)

PIER 2 REINFORCEMENT BAR SCHEDULE

MARK	TYPE	SIZE	NO	LENGTH	LOCATION	A	B	C	REMARK
PB401	2	4	296	VARIES	STEM/CAP	5'-0"	VARIES		"B" VARIES FROM 10'-2" TO 8'-4" BY 1/2"
PB402	3	4	1110	8'-7"	STEM/CAP	7'-10"	4 1/2"	45°	
PB501	4	5	15	11'-10"	CAP	7'-10"	2'-0"	2'-0"	
PB502	1	5	9	4'-6 1/4"	CAP	4'-6 1/4"			
PB503	1	5	9	3'-10"	CAP	3'-10"			
PB504	1	5	9	7'-10"	CAP	7'-10"			
PB601	1	6	18	20'-0"	CAP	20'-0"			
PB602	5	6	18	20'-2 3/4"	CAP	20'-2 3/4"	20'-3"	2'-5 1/2"	RADIAL BAR, R=20'-3"
PB603	2	6	32	8'-0"	CAP	2'-6"	5'-6"		
PB604	1	6	32	8'-7"	CAP	8'-7"			
PB605	1	6	8	VARIES	CAP	VARIES	TWO GROUPS OF 4		"A" VARIES FROM 29'-10 1/2" TO 41'-3" BY 3'-9 1/2"
PB606	1	6	6	VARIES	CAP	VARIES	TWO GROUPS OF 3		"A" VARIES FROM 41'-6 3/4" TO 42'-5 3/4" BY 5 1/2"
PB607	4	6	184	8'-8"	CAP	2'-8"	3'-0"	3'-0"	
PB608	4	6	12	VARIES	CAP	2'-8"	VARIES	VARIES	"B-C", VARIES FROM 4'-1" TO 5'-3" BY 7"
PB609	4	6	80	VARIES	CAP	2'-8"	VARIES	VARIES	"B-C", VARIES FROM 5'-10" TO 11'-4 1/2" BY 3 1/2"
PB610	4	6	12	VARIES	CAP	2'-8"	VARIES	VARIES	"B-C", VARIES FROM 3'-5 1/2" TO 4'-7 1/2" BY 7"
PB611	4	6	80	VARIES	CAP	2'-8"	VARIES	VARIES	"B-C", VARIES FROM 5'-2 1/2" TO 10'-9" BY 3 1/2"
PB612	1	6	40	24'-2"	FOOTING	24'-2"			
PB613	1	6	25	39'-2"	FOOTING	39'-2"			
PB614	3	6	200	7'-11"	FOOTING	6'-7"	8"	45°	
PB1101	1	11	96	24'-2"	FOOTING	24'-2"			
PB1102	1	11	94	39'-2"	FOOTING	39'-2"			
PB1103	2	11	176	18'-10"	FOOTING/STEM	2'-6"	16'-4"		
PB1104	1	11	176	44'-0"	STEM	44'-0"			
PB1105	1	11	106	28'-1"	STEM	28'-1"			
PB1106	1	11	106	21'-8"	STEM/CAP	21'-8"			
PB1107	4	11	14	46'-1"	CAP	41'-1"	2'-6"	2'-6"	
PB1108	4	11	14	45'-4 1/2"	CAP	40'-4 1/2"	2'-6"	2'-6"	



PAY LIMITS (AT PIER 1)
 NOT TO SCALE

PAY LIMITS (AT PIER 2)
 NOT TO SCALE

2.0 FT OF UNCLASSIFIED BORROW EXCAVATION IN ACCORDANCE WITH SECTIONS 207 AND 716 OF THE SPECIFICATIONS

PERMANENT EROSION MATTING, TYPE B IN ACCORDANCE WITH SECTION 655 (ROADWAY ITEM)

ROCK BORROW EXCAVATION IN ACCORDANCE WITH SECTIONS 207 AND 716 OF THE SPECIFICATIONS

BACKFILL PAY LIMITS

(AT PIER 2), NOT TO SCALE

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
 OVER POTOMAC RIVER
 PIERS 1 AND 2
 REINFORCEMENT BAR SCHEDULE

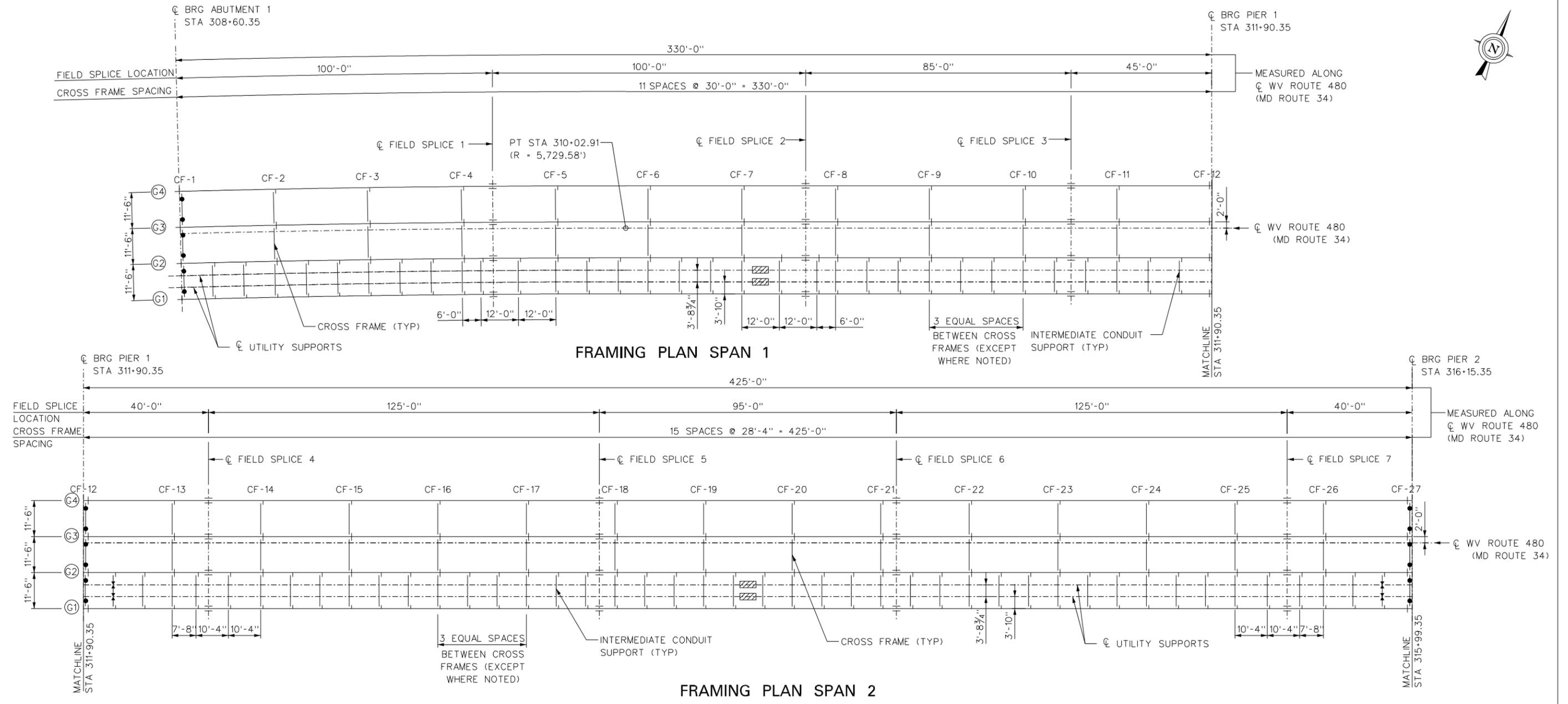
DESIGNED	DATE
DRAWN	11/02
CHECKED	11/02
CHECKED	11/02

Baker
 Michael Baker Jr., Inc.

Charleston, W.Va.

SHEET
 22 OF 93
 BRIDGE NO.
 4919

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	179	407



NOTES:

- DIMENSIONS LISTED ABOVE ARE MEASURED RADIALLY ALONG THE CURVED PORTIONS OF THE BRIDGE, AND MEASURED NORMAL TO CENTERLINE OF WV ROUTE 480 (MD ROUTE 34) ALONG THE TANGENT PORTION OF THE BRIDGE (BETWEEN STA 310+02.91 AND STA 317+31.35).
- ALL DIMENSIONS SHOWN ARE HORIZONTAL OR VERTICAL UNLESS NOTED OTHERWISE.
- ALL SUPERSTRUCTURE DIMENSIONS ARE BASED ON A NORMAL TEMPERATURE OF 52°F.
- SEE HIGHWAY PLANS FOR HORIZONTAL CONTROL.
- FOR GIRDER ELEVATIONS SEE SHEETS 25 & 26.
- FOR TABLE OF WEB DEPTHS AT CROSS FRAME LOCATIONS SEE SHEET 24.
- FOR GIRDER SPLICE DETAILS SEE SHEETS 31, 32 & 33.
- FOR CROSS FRAME DETAILS SEE SHEETS 27 & 28.
- FOR INSPECTION HANDRAIL DETAILS SEE SHEET 29.
- FOR COMMUNICATION CONDUIT DETAILS SEE SHEETS 28 & 70.
- FOR DRAINAGE DETAILS SEE SHEETS 55, 56 & 57.

LEGEND:

- CF = CROSS FRAME
- ▨ = CONDUIT EXPANSION FITTING
- ⊠ = CONDUIT FIXED POINT
- = JACKING POINTS

DESIGNED	DATE
MJC	11/02
DRAWN	
AJT	11/02
CHECKED	
MJC	11/02
CHECKED	
AJT	11/02

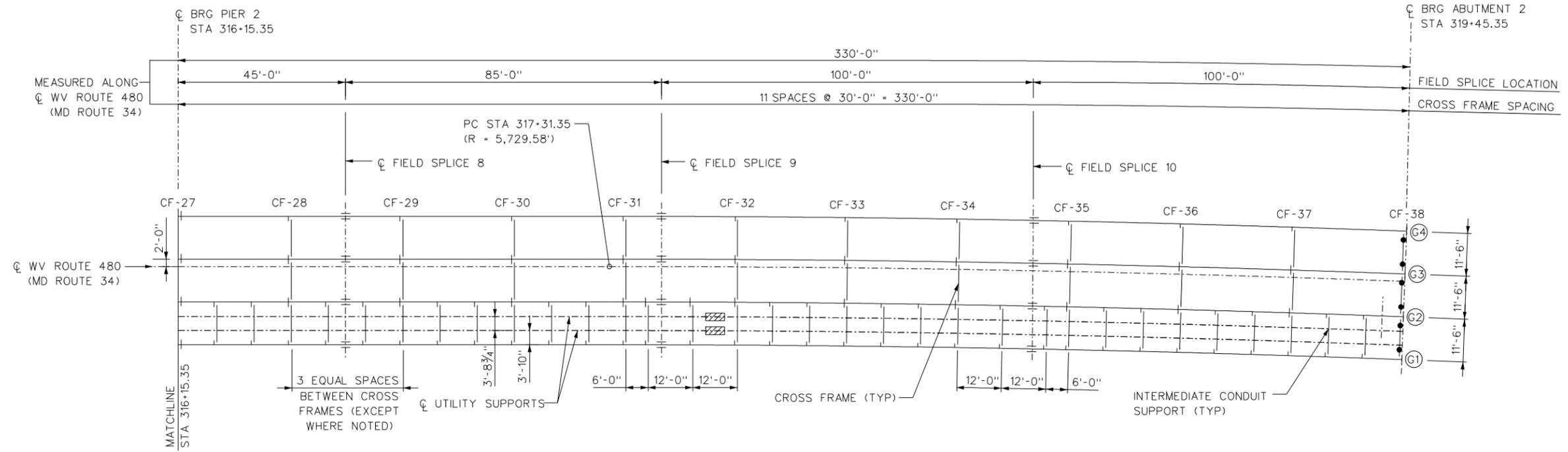
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NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
STEEL FRAMING PLAN
SPANS 1 & 2**

	SHEET	23 OF 93
	BRIDGE NO.	4919
Michael Baker Jr., Inc.		Charleston, W.Va.



FRAMING PLAN SPAN 3

CROSS FRAME	WEB DEPTH
CF-1	100.00"
CF-2	100.00"
CF-3	100.00"
CF-4	100.00"
CF-5	100.00"
CF-6	100.00"
CF-7	100.00"
CF-8	104.93"
CF-9	119.72"
CF-10	144.38"
CF-11	178.89"
CF-12	220.00"
CF-13	211.12"
CF-14	176.16"
CF-15	148.96"
CF-16	129.54"
CF-17	117.88"
CF-18	114.00"
CF-19	114.00"

CROSS FRAME	WEB DEPTH
CF-20	114.00"
CF-21	114.00"
CF-22	117.88"
CF-23	129.54"
CF-24	148.96"
CF-25	176.16"
CF-26	211.12"
CF-27	220.00"
CF-28	178.89"
CF-29	144.38"
CF-30	119.72"
CF-31	104.93"
CF-32	100.00"
CF-33	100.00"
CF-34	100.00"
CF-35	100.00"
CF-36	100.00"
CF-37	100.00"
CF-38	100.00"

NOTES:

- DIMENSIONS LISTED ABOVE ARE MEASURED RADIALLY ALONG THE CURVED PORTIONS OF THE BRIDGE, AND MEASURED NORMAL TO CENTERLINE OF WV ROUTE 480 (MD ROUTE 34) ALONG THE TANGENT PORTION OF THE BRIDGE (BETWEEN STA 310+02.91 AND STA 317+31.35).
- FOR ADDITIONAL FRAMING PLAN NOTES SEE SHEET 23.

LEGEND:

- CF = CROSS FRAME
- ▨ = CONDUIT EXPANSION FITTING
- ⊥ = CONDUIT FIXED POINT
- = JACKING POINT

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
STEEL FRAMING PLAN
SPAN 3

DESIGNED	DATE
<i>MJC</i>	11/02
DRAWN	DATE
<i>AJF</i>	11/02
CHECKED	DATE
<i>MJC</i>	11/02
CHECKED	DATE
<i>AJF</i>	11/02

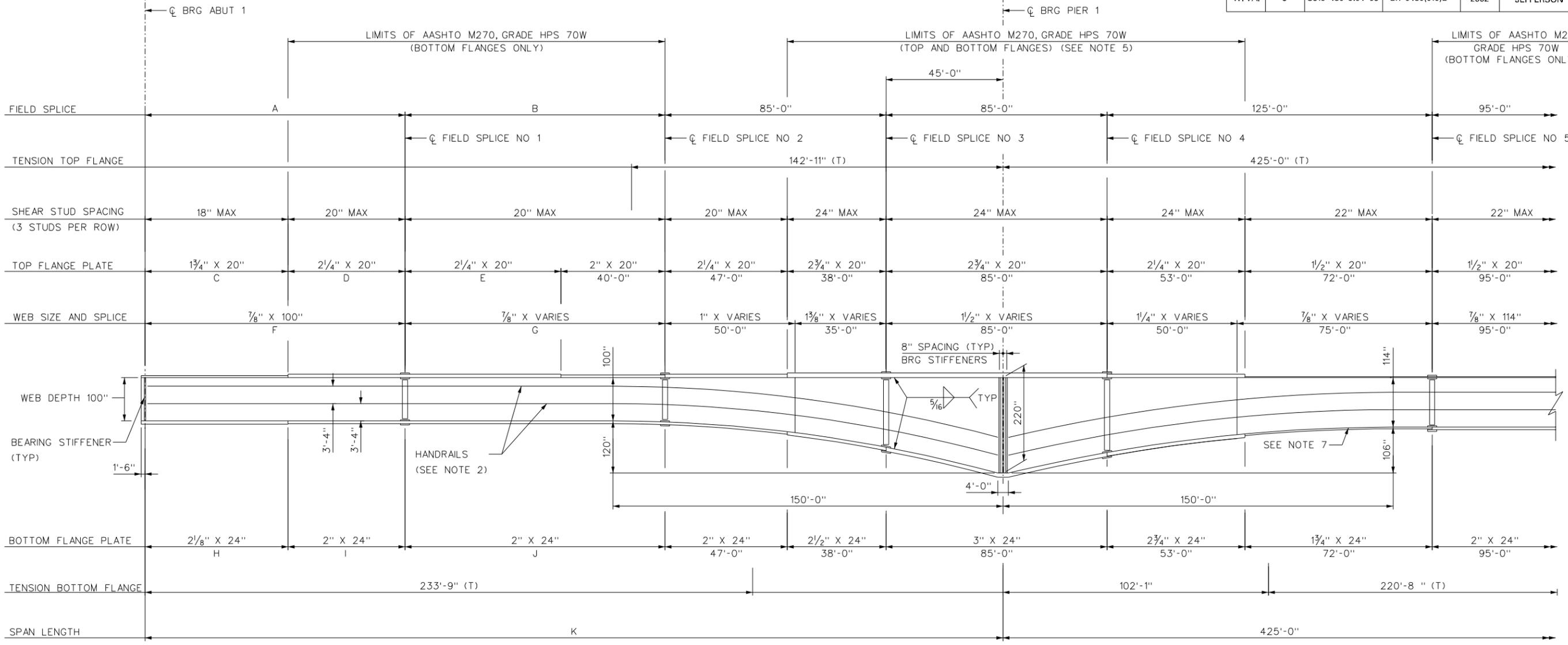
	SHEET 24 OF 93
	BRIDGE NO. 4919

Michael Baker Jr., Inc. **Charleston, W.Va.**



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PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	181	407



GIRDER ELEVATION

LOCATION	A	B	C	D	E	F	G	H	I	J	K
GIRDER 1	99' - 7 ⁵ / ₈ "	99' - 11 ¹ / ₄ "	54' - 9 ⁵ / ₈ "	44' - 10"	59' - 11 ¹ / ₄ "	99' - 7 ⁵ / ₈ "	99' - 11 ¹ / ₄ "	54' - 9 ⁵ / ₈ "	44' - 10"	99' - 11 ¹ / ₄ "	329' - 6 ⁷ / ₈ "
GIRDER 2	99' - 10"	99' - 11 ⁵ / ₈ "	54' - 10 ⁷ / ₈ "	44' - 11 ¹ / ₈ "	59' - 11 ⁵ / ₈ "	99' - 10"	99' - 11 ⁵ / ₈ "	54' - 10 ⁷ / ₈ "	44' - 11 ¹ / ₈ "	99' - 11 ⁵ / ₈ "	329' - 9 ⁵ / ₈ "
GIRDER 3	100' - 0 ³ / ₈ "	100' - 0 ¹ / ₈ "	55' - 0 ¹ / ₄ "	45' - 0 ¹ / ₄ "	60' - 0 ¹ / ₈ "	100' - 0 ³ / ₈ "	100' - 0 ¹ / ₈ "	55' - 0 ¹ / ₄ "	45' - 0 ¹ / ₄ "	100' - 0 ¹ / ₈ "	330' - 0 ¹ / ₂ "
GIRDER 4	100' - 2 ⁷ / ₈ "	100' - 0 ¹ / ₂ "	55' - 1 ¹ / ₂ "	45' - 1 ¹ / ₄ "	60' - 0 ¹ / ₂ "	100' - 2 ⁷ / ₈ "	100' - 0 ¹ / ₂ "	55' - 1 ¹ / ₂ "	45' - 1 ¹ / ₄ "	100' - 0 ¹ / ₂ "	330' - 3 ³ / ₈ "

NOTES:

- WORK THIS SHEET WITH SHEET 26.
- FOR HANDRAIL DETAILS, SEE SHEET 29. HANDRAIL SHALL BE PLACED ON INTERIOR SIDE ONLY OF GIRDERS 1 & 4 AND SHALL BE PLACED ON EACH FACE FOR GIRDERS 2 & 3.
- GIRDERS WEB AND FLANGE STEEL SHALL BE AASHTO M270, GRADE 50W UNLESS NOTED OTHERWISE. REFER TO THE GENERAL NOTES FOR COMPLETE DESCRIPTION ON STEEL GRADE AND LOCATION.
- JACKING STIFFENERS AND BEARING STIFFENERS SHALL BE TRULY VERTICAL IN THE FINAL CONSTRUCTED POSITION. INTERMEDIATE CROSS FRAME CONNECTION PLATES SHALL BE PERPENDICUTLAR TO THE FLANGES.
- INSTALL STUD CONNECTORS ON FLANGE SPLICE PLATES AT SPACING SHOWN.
- ALL WELDED STUD SHEAR CONNECTORS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 615.3.3 OF THE STANDARD SPECIFICATIONS. THE CONNECTORS SHALL BE ATTACHED IN THE FIELD. NO SHOP INSTALLATION OF WELDED STUD SHEAR CONNECTORS SHALL BE PERMITTED. THE FIELD INSTALLATION OF THE CONNECTORS SHALL NOT COMMENCE PRIOR TO THE INSTALLATION OF DECK FORMS IN THE AREA SURROUNDING THE STUDS. EXTERIOR DECK OVERHANG FORMS MAY BE INSTALLED AFTER THE WELDED STUD SHEAR CONNECTORS. THE SHEAR CONNECTORS AND DECK FORMS SHALL BE INSTALLED IN A SEQUENCE THAT PERMITS WORKERS ACCESS THROUGH THE DECK AREA WITHOUT WALKING THROUGH INSTALLED CONNECTORS.
- SEE SHEET 26 FOR PARABOLIC HAUNCH EQUATIONS.
- ~~HORIZONTAL WEB SPLICES ARE NOT PERMITTED.~~
- HORIZONTAL FIELD SPLICES ARE NOT PERMITTED IN THE WEB. HORIZONTAL BOLTED SPLICES ARE NOT PERMITTED IN THE WEB. HORIZONTAL SHOP WELDED WEB SPLICES ARE PERMITTED.



REVISION	NO.	DATE	BY
REVISED NOTE 8		3/24/03	JDD
ADDED NOTE 8		2/13/03	AF

**W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
GIRDER ELEVATION - I**

DESIGNED <i>AJF</i>	DATE 11/02
DRAWN <i>JME</i>	DATE 11/02
CHECKED <i>AJF</i>	DATE 11/02
CHECKED <i>FJ</i>	DATE 11/02

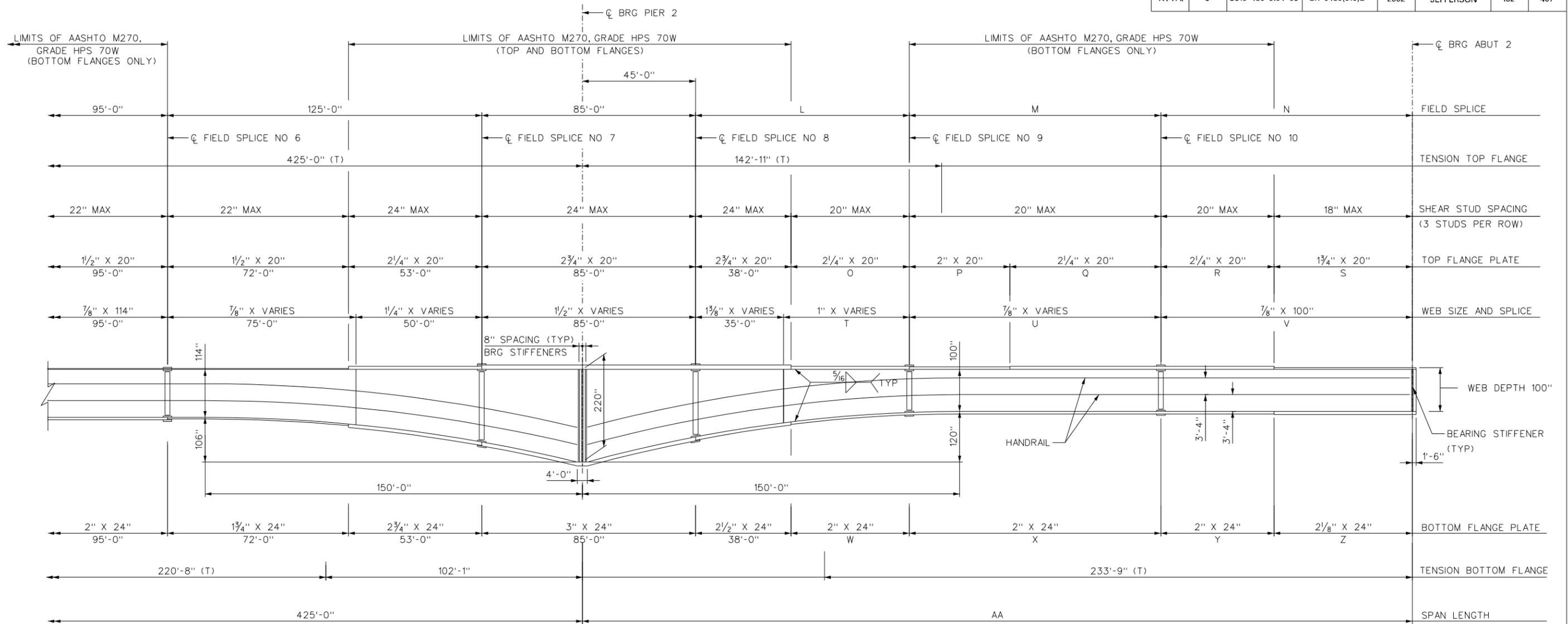
Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET
25 OF 93
BRIDGE NO.
4919

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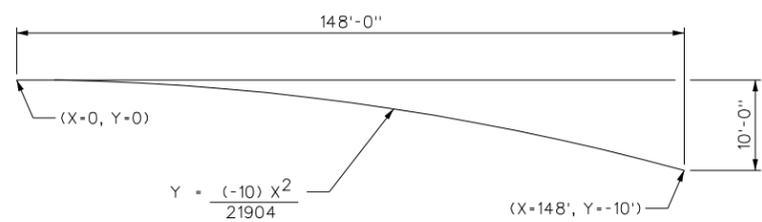
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PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	182	407

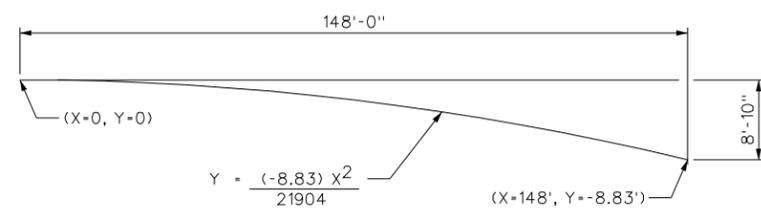


GIRDER ELEVATION

LOCATION	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
GIRDER 1	84' - 10 ³ / ₈ "	99' - 7 ⁵ / ₈ "	99' - 7 ⁵ / ₈ "	46' - 10 ³ / ₈ "	39' - 10 ¹ / ₄ "	59' - 9 ³ / ₈ "	44' - 10"	54' - 9 ⁵ / ₈ "	49' - 10 ³ / ₈ "	99' - 7 ⁵ / ₈ "	99' - 7 ⁵ / ₈ "	46' - 10 ³ / ₈ "	99' - 7 ⁵ / ₈ "	44' - 10"	54' - 9 ⁵ / ₈ "	329' - 1 ⁵ / ₈ "
GIRDER 2	84' - 11 ¹ / ₄ "	99' - 10"	99' - 10"	46' - 11 ¹ / ₄ "	39' - 11 ¹ / ₄ "	59' - 10 ³ / ₄ "	44' - 11 ¹ / ₈ "	54' - 10 ⁷ / ₈ "	49' - 11 ¹ / ₄ "	99' - 10"	99' - 10"	46' - 11 ¹ / ₄ "	99' - 10"	44' - 11 ¹ / ₈ "	54' - 10 ⁷ / ₈ "	329' - 7 ¹ / ₄ "
GIRDER 3	85' - 0 ¹ / ₈ "	100' - 0 ³ / ₈ "	100' - 0 ³ / ₈ "	47' - 0 ¹ / ₈ "	40' - 0 ¹ / ₈ "	60' - 0 ¹ / ₄ "	45' - 0 ¹ / ₄ "	55' - 0 ¹ / ₄ "	50' - 0 ¹ / ₈ "	100' - 0 ³ / ₈ "	100' - 0 ³ / ₈ "	47' - 0 ¹ / ₈ "	100' - 0 ³ / ₈ "	45' - 0 ¹ / ₄ "	55' - 0 ¹ / ₄ "	330' - 1"
GIRDER 4	85' - 1"	100' - 2 ⁷ / ₈ "	100' - 2 ⁷ / ₈ "	47' - 1"	40' - 1 ¹ / ₈ "	60' - 1 ³ / ₄ "	45' - 1 ¹ / ₄ "	55' - 1 ¹ / ₂ "	50' - 1"	100' - 2 ⁷ / ₈ "	100' - 2 ⁷ / ₈ "	47' - 1"	100' - 2 ⁷ / ₈ "	45' - 1 ¹ / ₄ "	55' - 1 ¹ / ₂ "	330' - 6 ⁵ / ₈ "



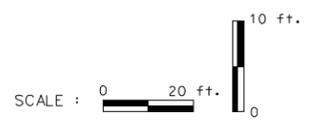
PARABOLIC HAUNCH FOR SPAN 1
(MIRROR FOR SPAN 3)



PARABOLIC HAUNCH FOR SPAN 2 AT PIER 2
(MIRROR FOR SPAN 2 AT PIER 1)

NOTES:

1. WORK THIS SHEET WITH SHEET 25.



NO.	REVISION	DATE:	BY:
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W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
GIRDER ELEVATION - II**

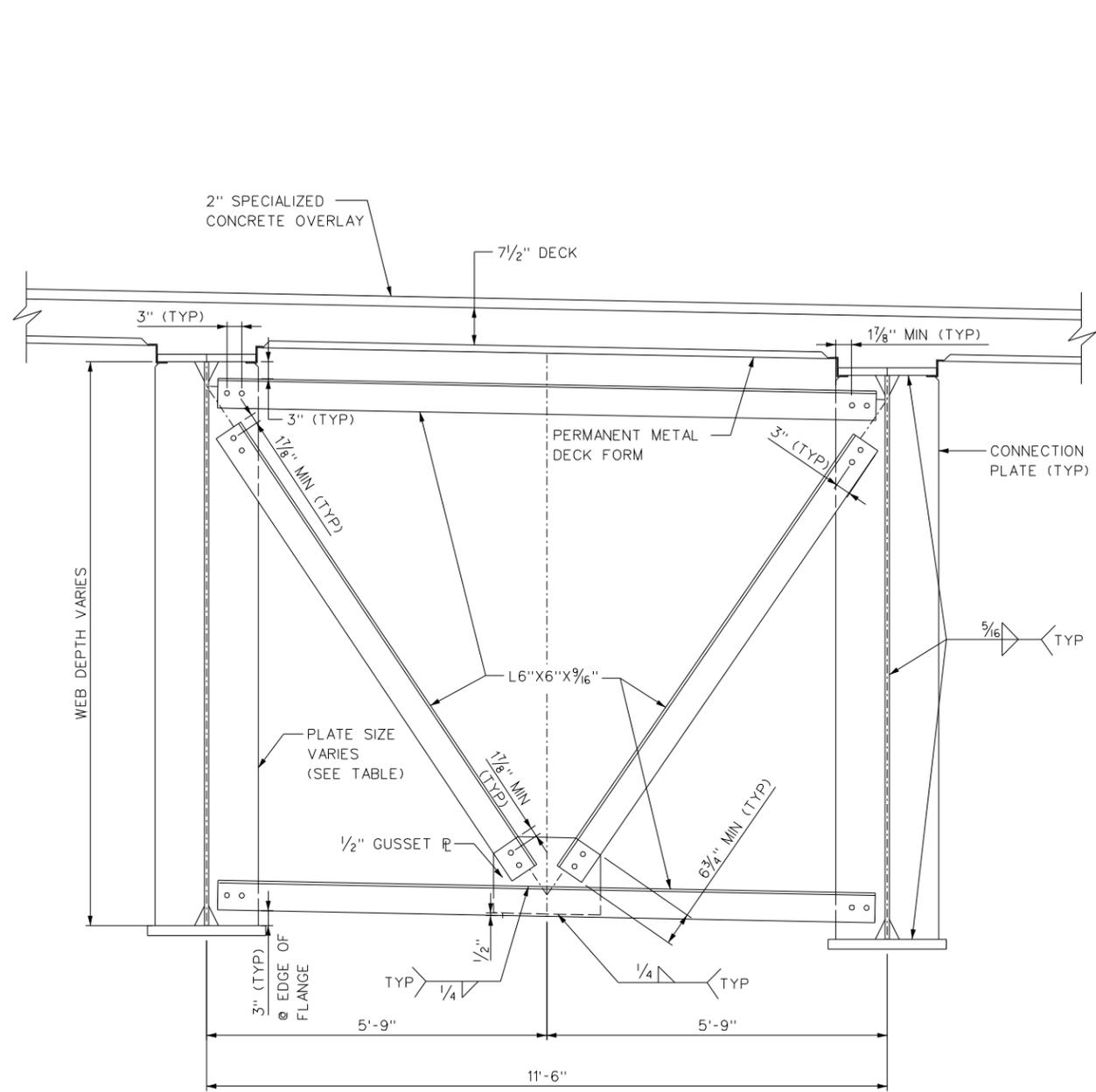
DESIGNED: *AJF* DATE: 11/02
DRAWN: *JMC* DATE: 11/02
CHECKED: *AJF* DATE: 11/02
CHECKED: *FJ* DATE: 11/02

Baker
Michael Baker Jr., Inc. Charleston, W. Va.

SHEET **26** OF **93**
BRIDGE NO. **4919**

j:\proj\shep2001\Bridges\Final Design\Drawings\Shep-Final-girder-elev2.dgn

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	184	407

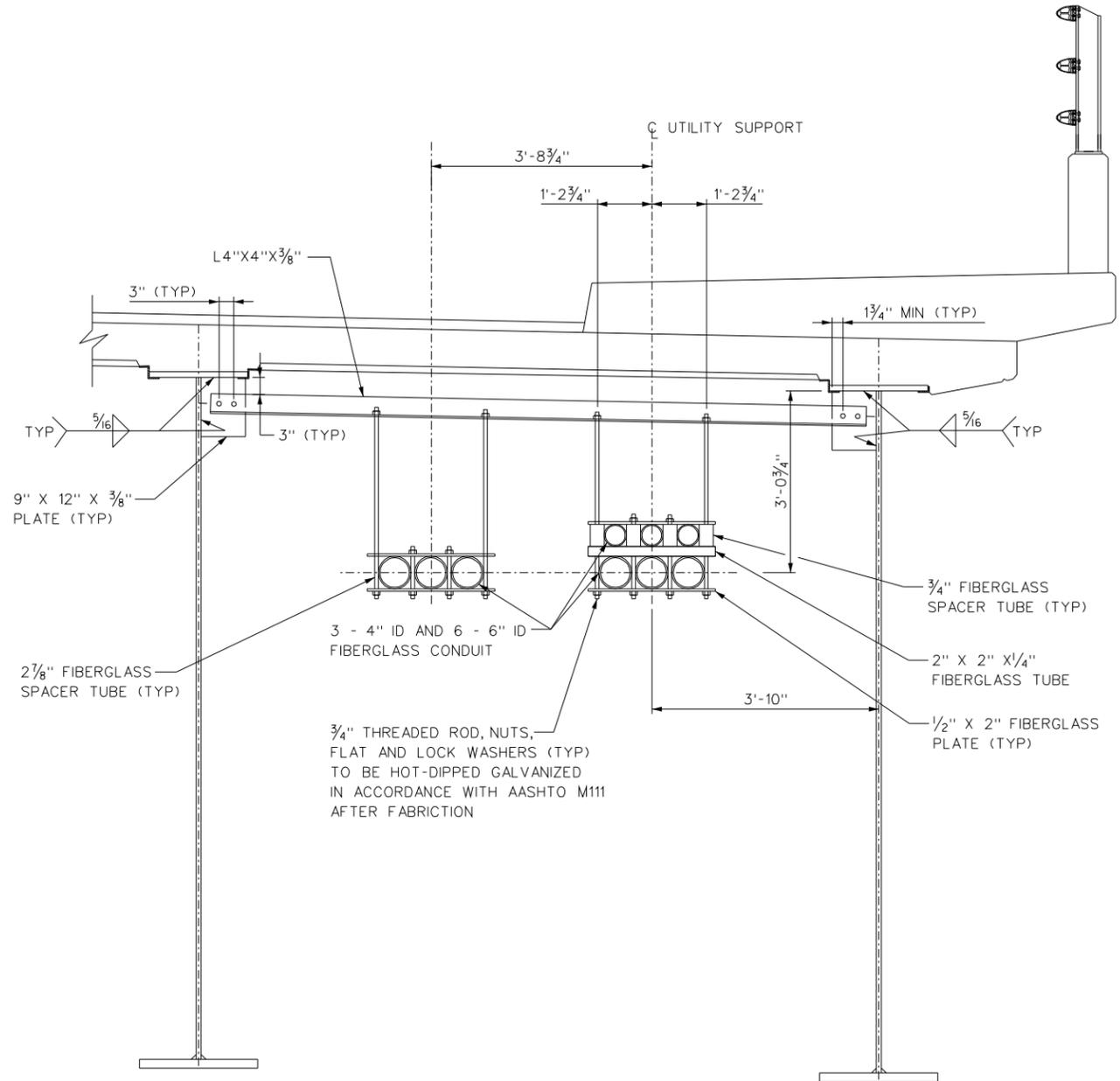


CROSS FRAME DETAIL

GIRDER	CONNECTION PLATE SIZE	CROSS FRAME LOCATIONS
GIRDER 1, 4	10" x 3/4"	CF-2 TO CF-9, CF-15 TO CF-24, CF-30 TO CF-37
	1 1/2" x 1"	CF-10, CF-11, CF-13, CF-14, CF-25, CF-26, CF-28, CF-29
GIRDER 2, 3	10" x 3/4"	CF-2 TO CF-9, CF-15 TO CF-24, CF-30 TO CF-37
	10" x 1"	CF-10, CF-11, CF-13, CF-14, CF-25, CF-26, CF-28, CF-29

NOTES:

- ALL BOLTS ARE 1" DIAMETER H.S. AASHTO M164 BOLTS IN STANDARD HOLES.
- CLASS B SURFACE CONDITIONS.
- FIBERGLASS CONDUIT SHALL HAVE SMOOTH INNER SURFACE.
- FOR ADDITIONAL CONDUIT DETAILS SEE SHEET 70.



INTERMEDIATE CONDUIT SUPPORT

NO.	REVISION	DATE:	BY:
-----	----------	-------	-----

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
CROSS FRAME AND
INTERMEDIATE CONDUIT SUPPORT

DESIGNED	DATE
<i>AJF</i>	11/02
DRAWN	
<i>JME</i>	11/02
CHECKED	
<i>RBF</i>	11/02
CHECKED	
<i>AJF</i>	11/02

Baker Michael Baker Jr., Inc.	SHEET 28 OF 93
	BRIDGE NO. 4919

Charleston, W.Va.



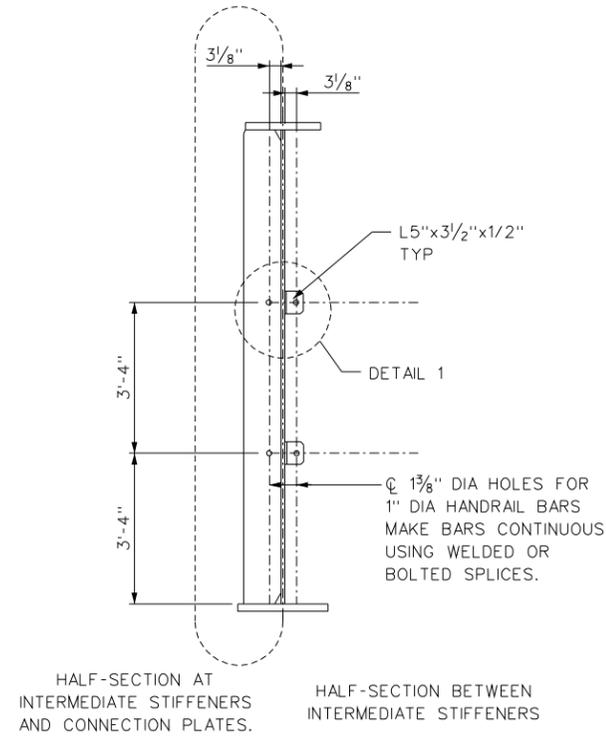
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03/31/2003

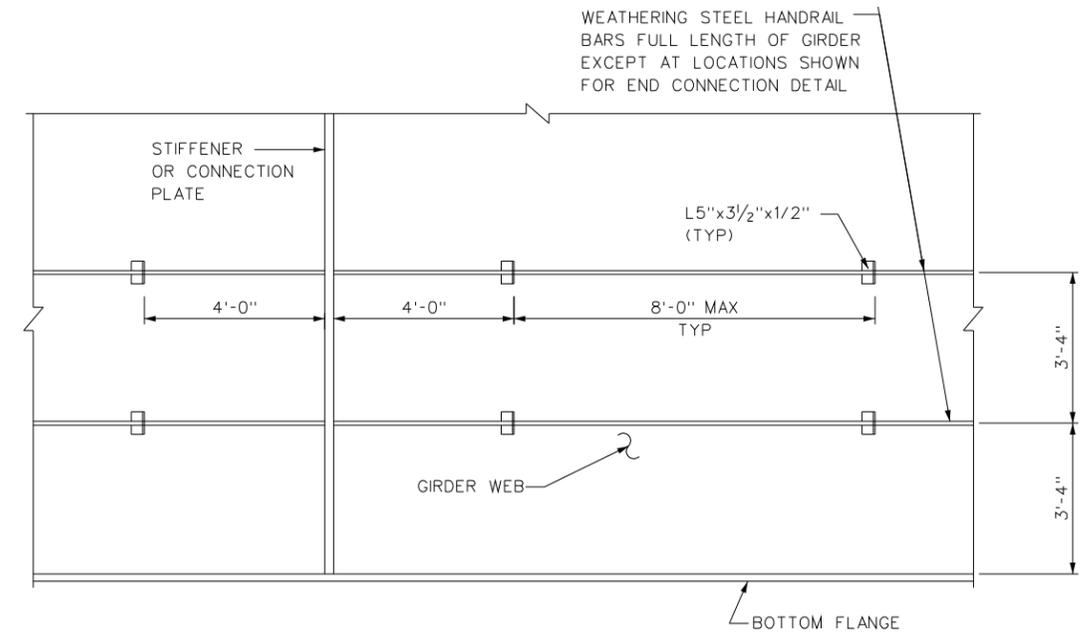
J:\proj\shp2001\Bridges\Final Design\Drawings\Sheep-Finial-steel\det1.dgn

J06C29C98 - BRIDGE 6

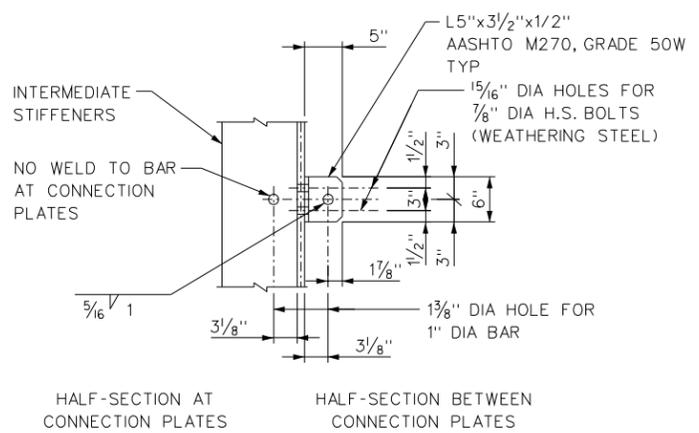
03/31/2003	PUBLIC ROADS DIV.	STATE DIST. NO. W. VA.	PROJECT NUMBERS		FISCAL YEAR 2002	COUNTY JEFFERSON	SHEET NO. 185	TOTAL SHEETS 407
			STATE	FEDERAL				
			S319-480-5.64	03 BR-0480(010)E				



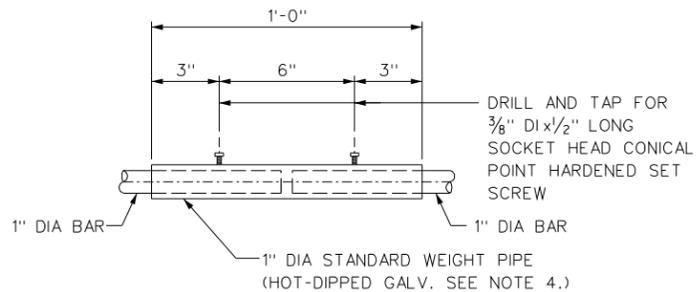
SECTION FOR HANDRAIL INSTALLATION



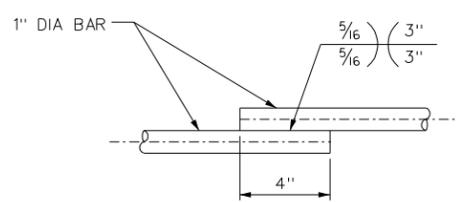
HANDRAIL ELEVATION



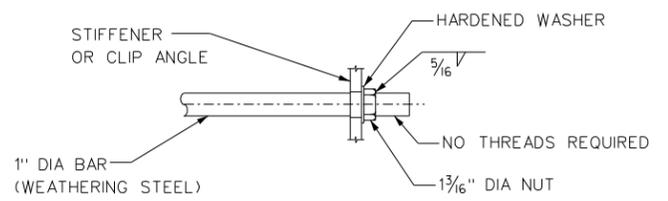
DETAIL 1



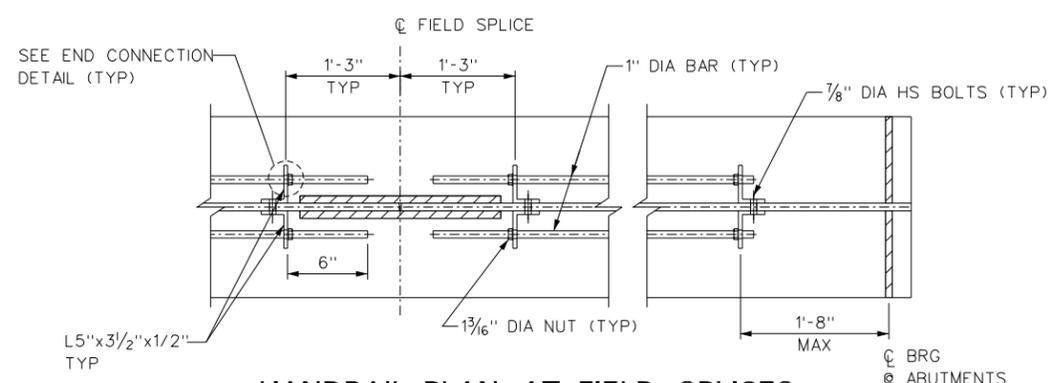
OPTIONAL HANDRAIL BOLTED FIELD SPlice



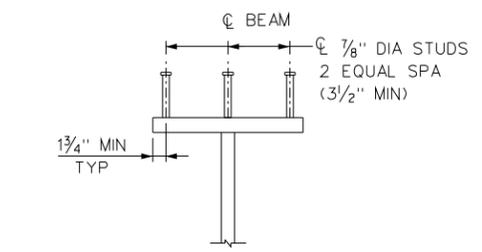
OPTIONAL HANDRAIL WELDED SHOP SPlice



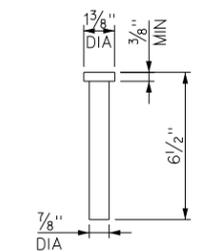
END CONNECTION DETAIL



HANDRAIL PLAN AT FIELD SPICES



SHEAR CONNECTOR DETAIL



STUD DETAIL



NOTES:

1. FOR GENERAL NOTES SEE SHEETS 3 TO 5.
2. HANDRAILING SHALL BE LOCATED ON BOTH SIDES OF INTERIOR GIRDERS AND ON THE INSIDE FACE ONLY OF THE EXTERIOR GIRDERS.
3. HANDRAIL SHALL BE FIELD ERRECTED WITHIN THE VICINITY OF THE GIRDER BOLTED FIELD SPLICES TO FACILITATE CONSTRUCTION. FINAL PLACEMENT OF THE HANDRAIL SHALL BE CONTINUOUS ALONG THE LENGTH OF THE GIRDER EXCEPT AT LOCATIONS INDICATED FOR HANDRAIL END CONNECTIONS. SEE GIRDER ELEVATION SHEETS 25 AND 26.
4. PREPARE AND PAINT THE GALVANIZED MATERIAL BELOW THE BOTTOM OF THE DECK IN ACCORDANCE WITH PAINT MANUFACTURER'S RECOMMENDATIONS. THE COLOR OF THE FINAL TOP COAT SHALL BE NO. 30045 IN ACCORDANCE WITH FEDERAL STANDARD 595. COST TO BE INCLUDED IN THE PRICE BID OR ITEM 615001-001, STEEL SUPERSTRUCTURE. THE EXPOSED SURFACES OF THE GALVANIZED STEEL PORTIONS OF THE BEARINGS SHALL BE PAINTED.

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

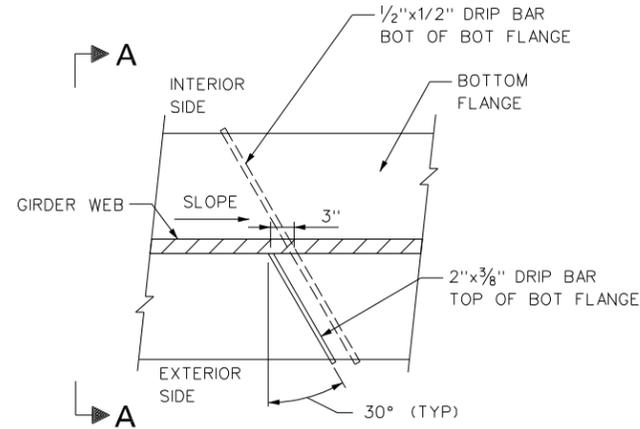
JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
MISCELLANEOUS STEEL DETAILS - I

DESIGNED	DATE
DRAWN	11/02
CHECKED	11/02
CHECKED	11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

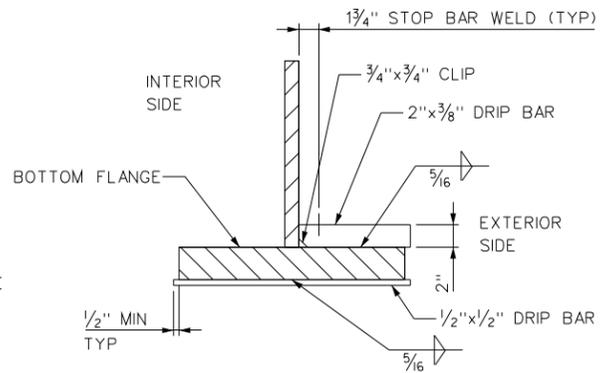
SHEET 29 OF 93
BRIDGE NO. 4919

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	186	407



PLAN DRIP BAR

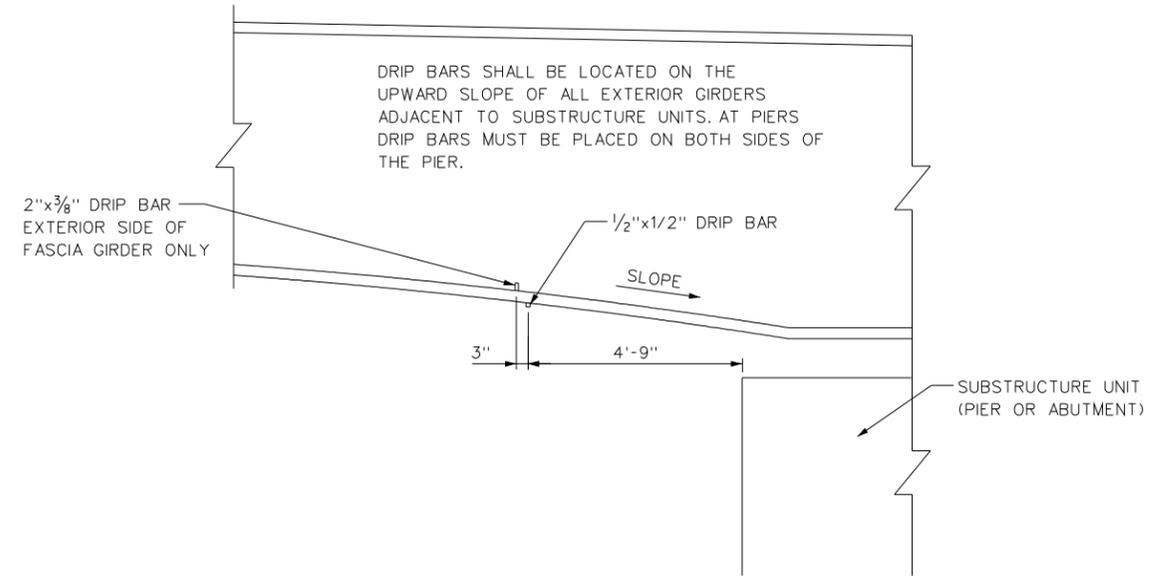
6 0 6 INCHES



NOTE:
DRIP BAR ON TOP OF BOTTOM FLANGE SHALL BE CAULKED WITH DARK BROWN CAULKING AGAINST FLANGE, WEB AND FILLET WELD. INCLUDE COST IN ITEM 615001-001, STEEL SUPERSTRUCTURE

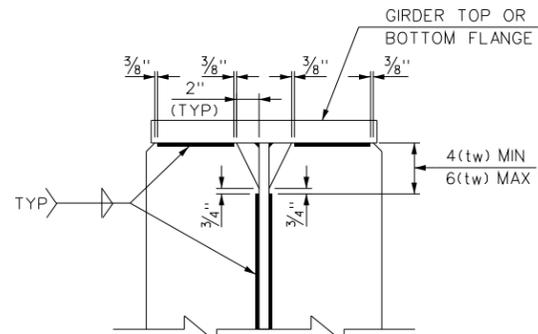
SECTION A-A

6 0 6 INCHES

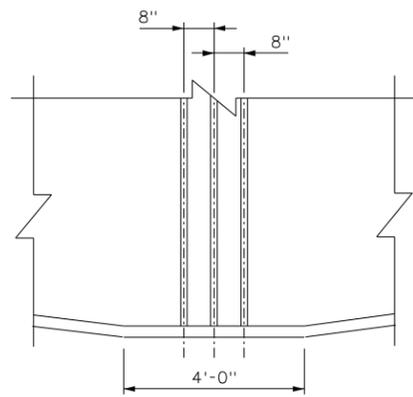


ELEVATION VIEW DRIP BAR LOCATIONS

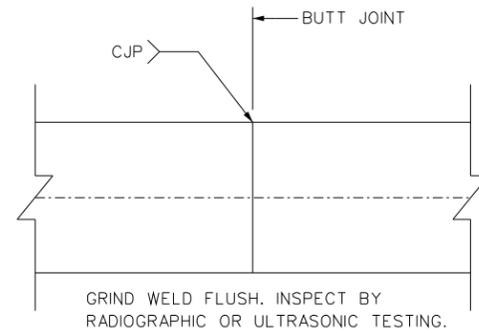
1 0 1 2 FEET



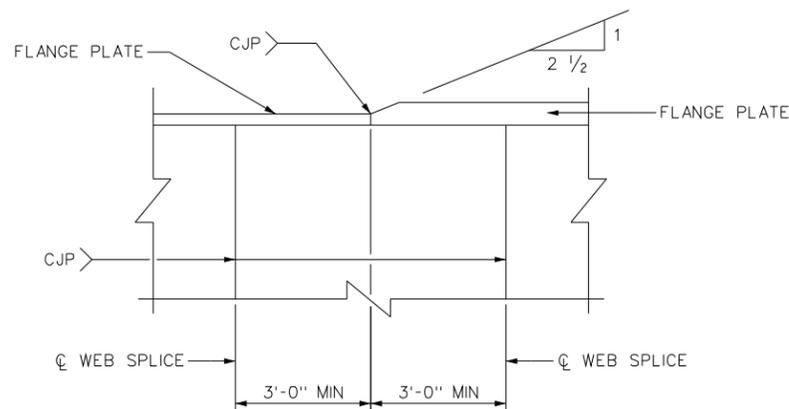
CONNECTION PLATE WELD DETAIL



BEARING STIFFENER SPACING AT PIERS



PLAN



ELEVATION FLANGE AND WEB SPLICE DETAIL

NO.	REVISION	DATE:	BY:
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W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
MISCELLANEOUS STEEL DETAILS - II

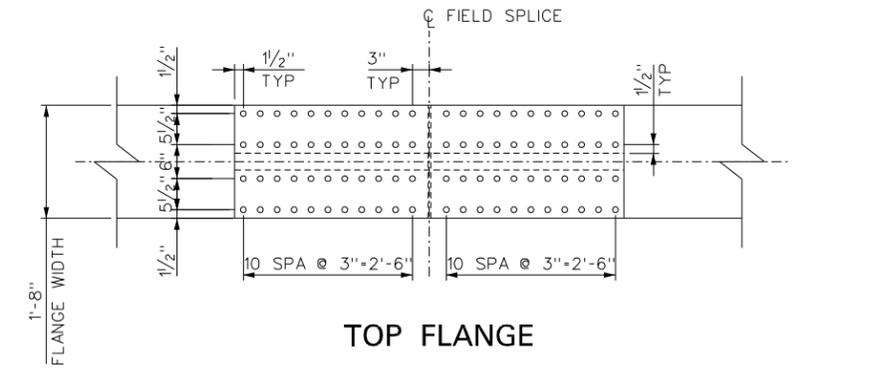
DESIGNED	DATE
JW	11/02
DRAWN	
LLH	11/02
CHECKED	
JW	11/02
CHECKED	
AJF	11/02

Baker
Michael Baker Jr., Inc.

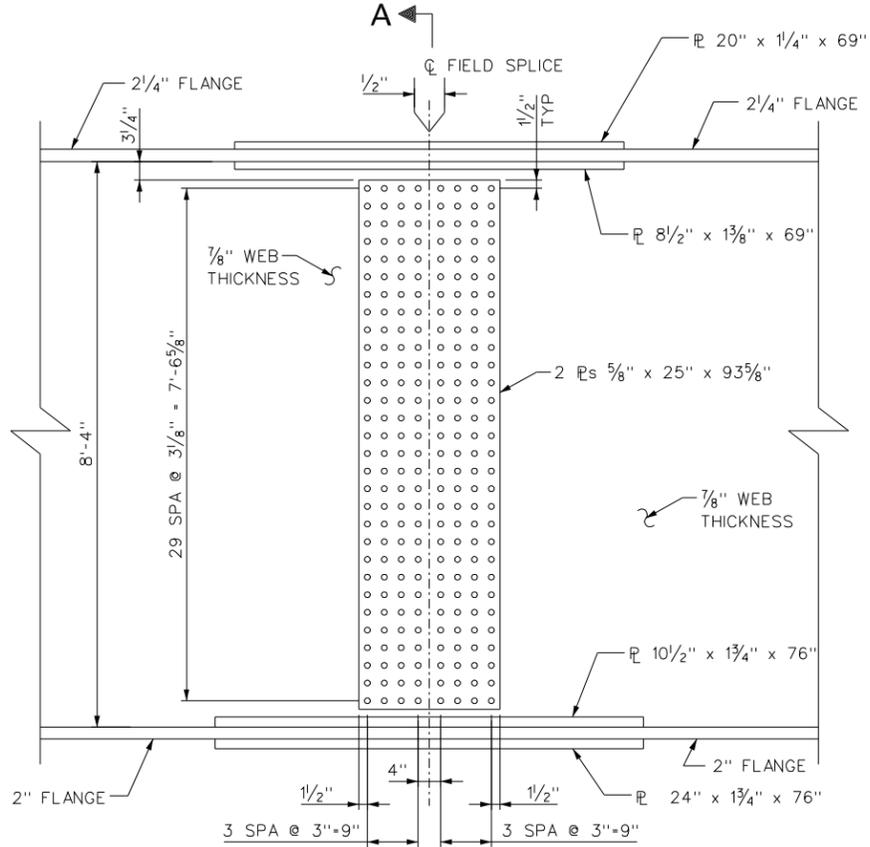
Charleston, W.Va.

SHEET
30 OF 93
BRIDGE NO.
4919

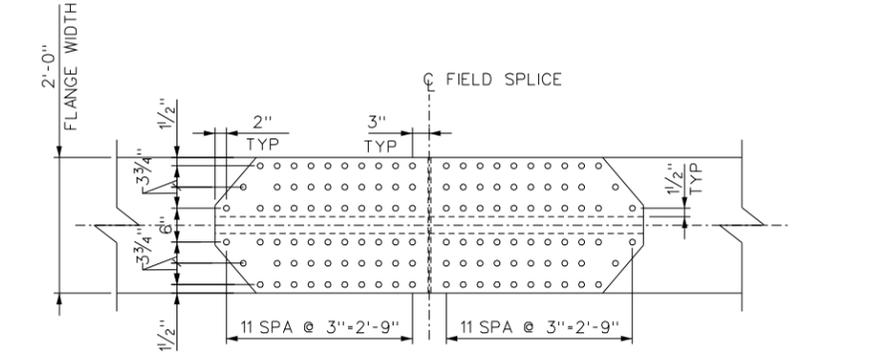
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	187	407



TOP FLANGE

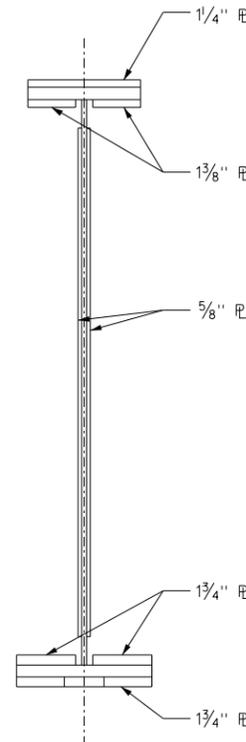


WEB SPLICE



BOTTOM FLANGE

FIELD SPLICE 1 & 10



SECTION A-A

NOTES:

1. FOR GENERAL NOTES, SEE SHEETS 3, 4, AND 5.
2. ALL BOLTS FOR SPLICE CONNECTIONS ARE 7/8" DIA H.S. BOLTS, TYPE 3, AASHTO M164.
3. ALL SPLICE MATERIAL (INCLUDING FILL PLATES) SHALL BE AASHTO M270 GRADE 50W.
4. SPLICE DESIGNS ARE BASED ON LOCATIONS SHOWN ON GIRDER ELEVATIONS, SEE SHEETS 25 AND 26.
5. ALL FAYING SURFACES HAVE CLASS B SURFACE CONDITIONS.
6. ALL BOLTS FOR THE SPLICE PLATE CONNECTIONS ARE TO HAVE THE BOLT THREADS EXCLUDED FROM THE SHEAR PLANES.

NO.	REVISION	DATE:	BY:
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W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
SPLICE DETAILS - I

DESIGNED <i>JKC</i>	DATE 11/02
DRAWN <i>JLH</i>	11/02
CHECKED <i>GW</i>	11/02
CHECKED <i>FJ</i>	11/02

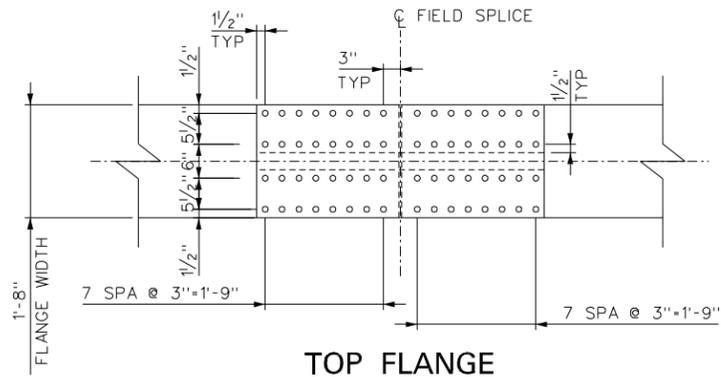
Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

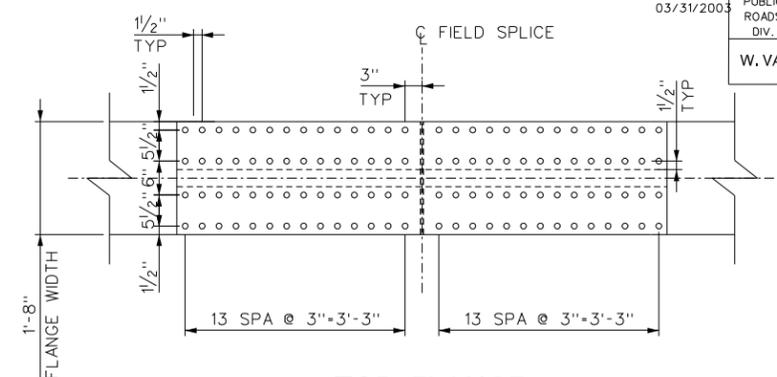
SHEET
31 OF **93**
BRIDGE NO.
4919



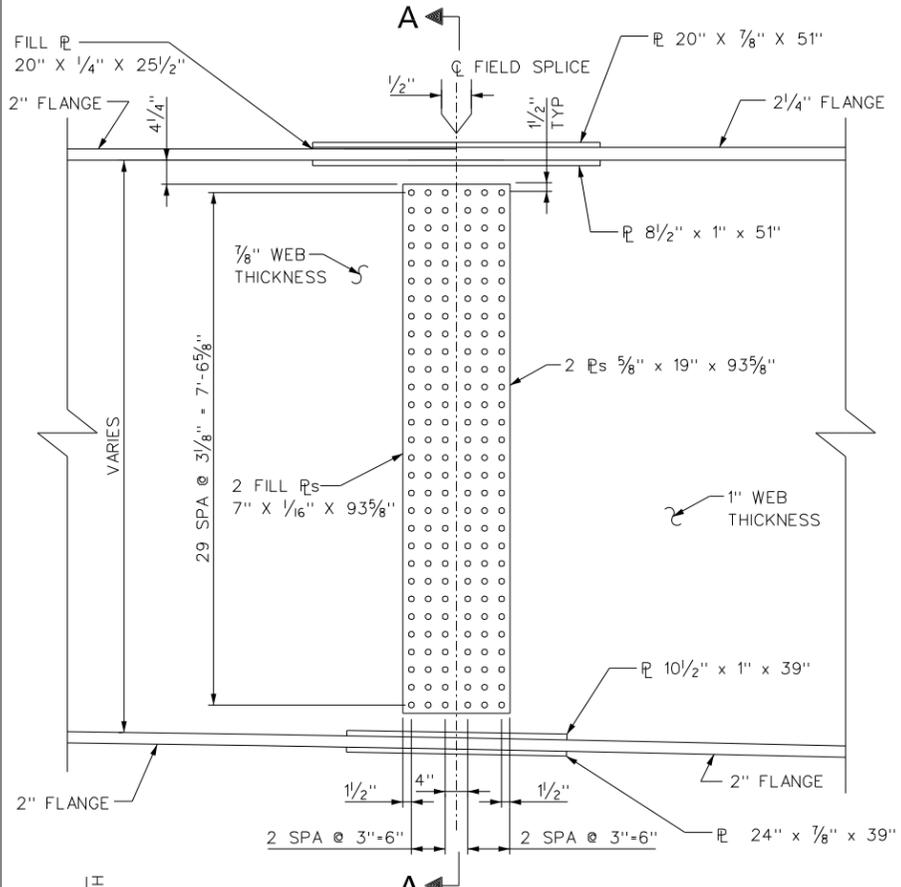
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	188	407



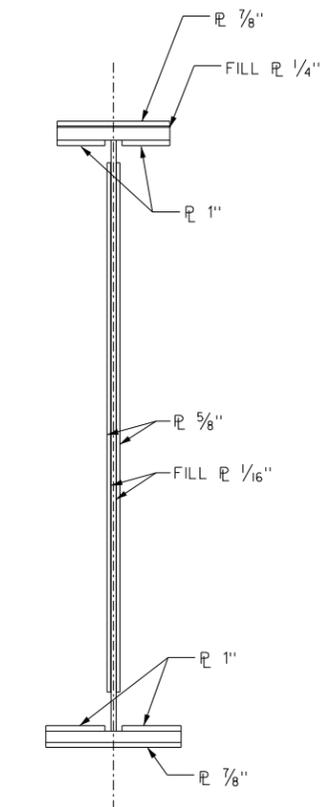
TOP FLANGE



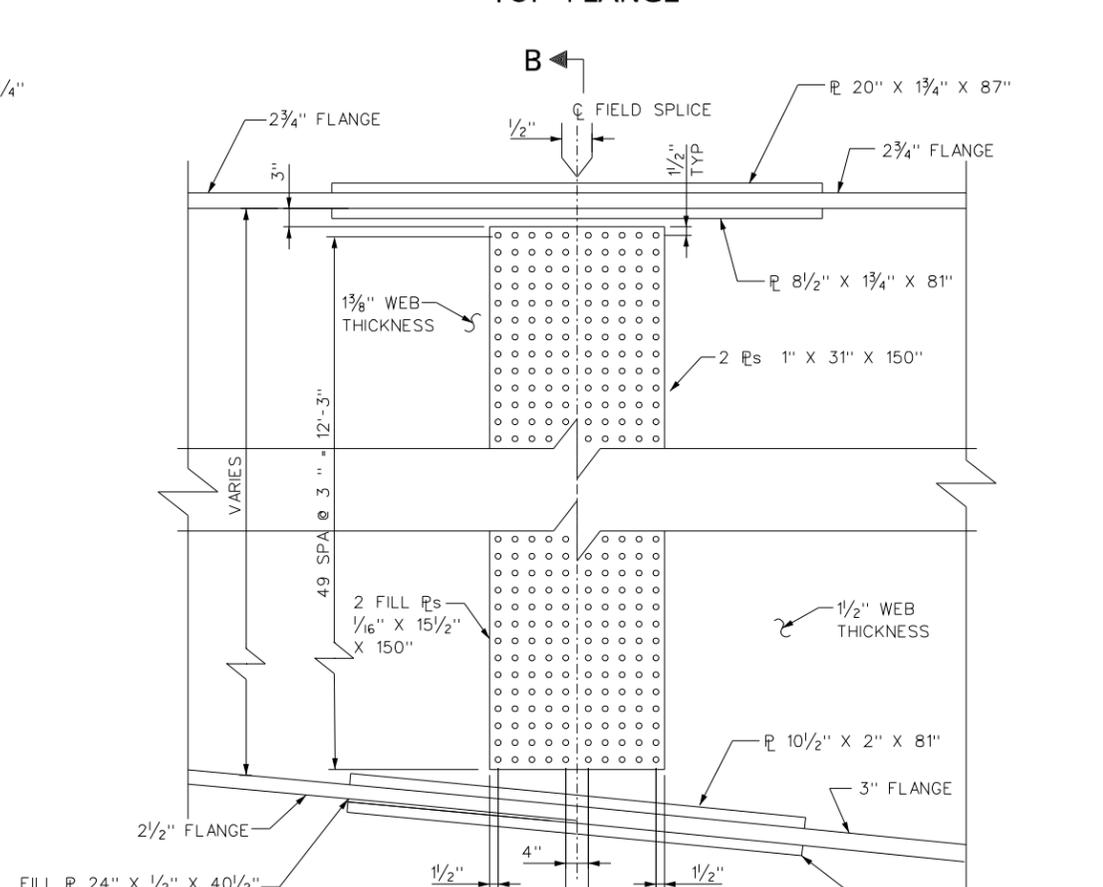
TOP FLANGE



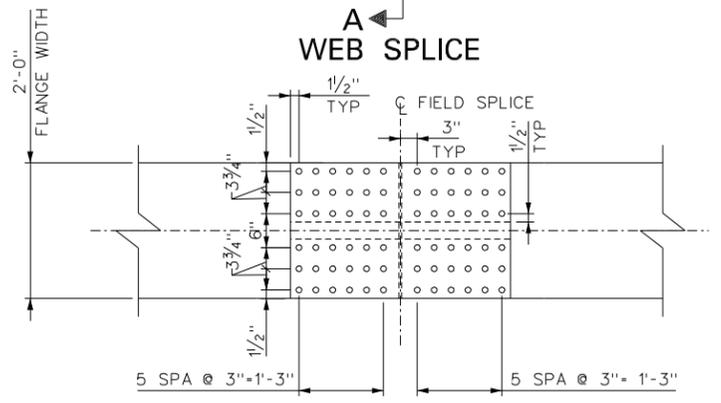
WEB SPLICE



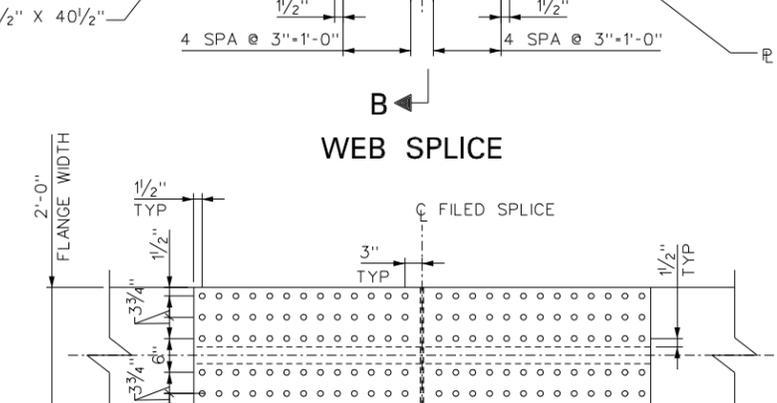
SECTION A-A



SECTION B-B



BOTTOM FLANGE
FIELD SPLICE 2 & 9



BOTTOM FLANGE
FIELD SPLICE 3 & 8

NOTE: FOR SPLICE DETAIL NOTES SEE SHEET 25.



NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

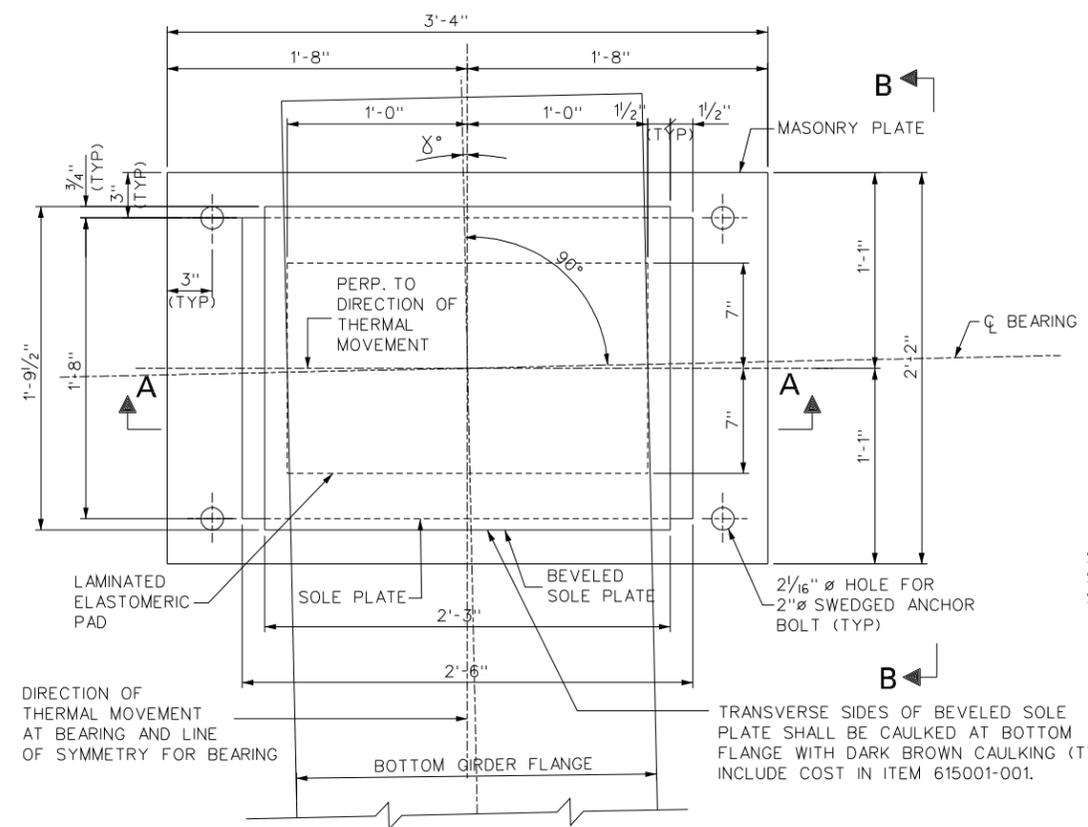
**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
SPLICE DETAILS - II**

DESIGNED <i>JKC</i>	DATE 11/02
DRAWN <i>JLH</i>	11/02
CHECKED <i>GW</i>	11/02
CHECKED <i>FJ</i>	11/02

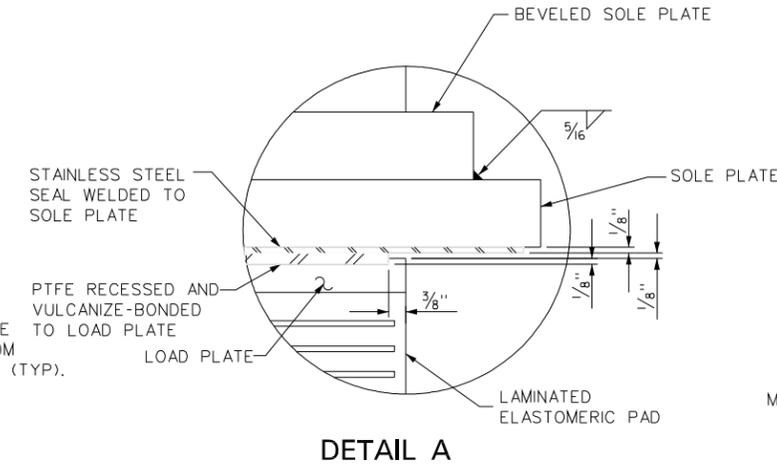
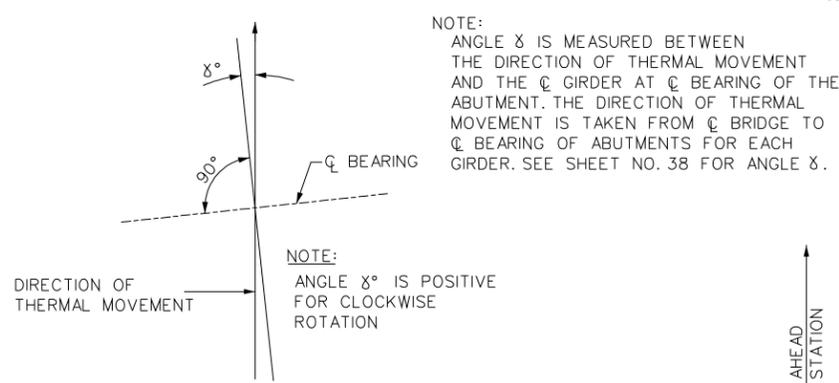
Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET **32** OF **93**
BRIDGE NO. **4919**

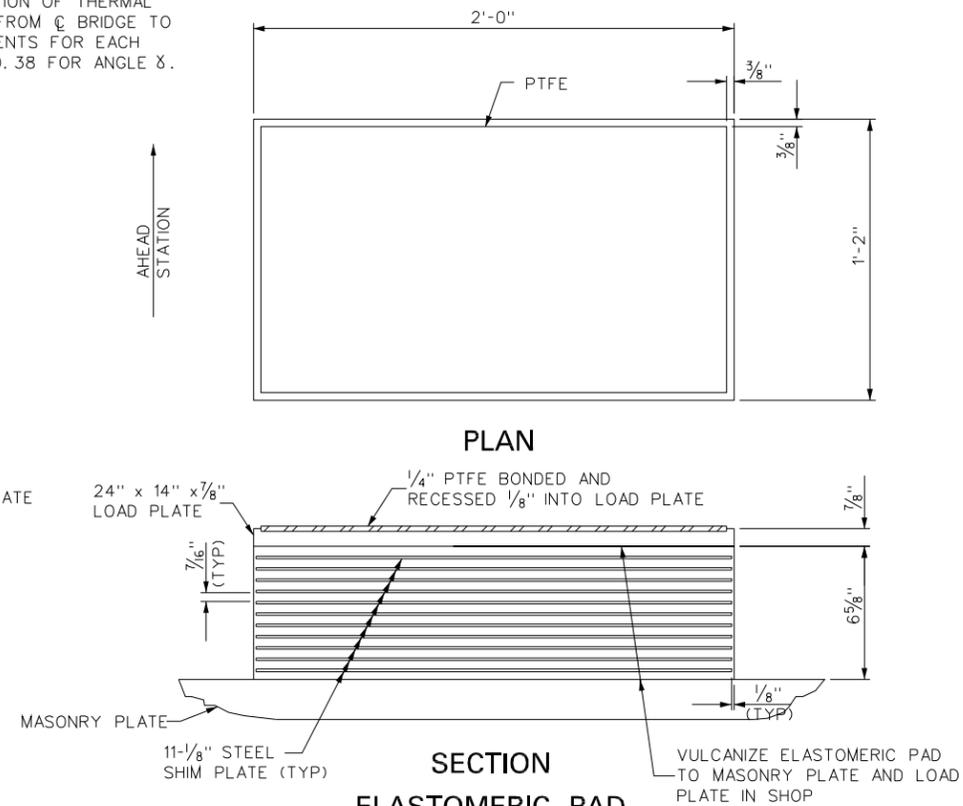
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	192	407



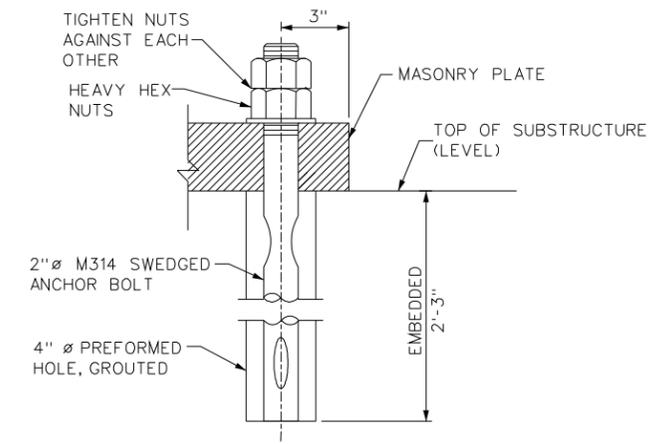
PLAN
NON-GUIDED EXPANSION BEARING



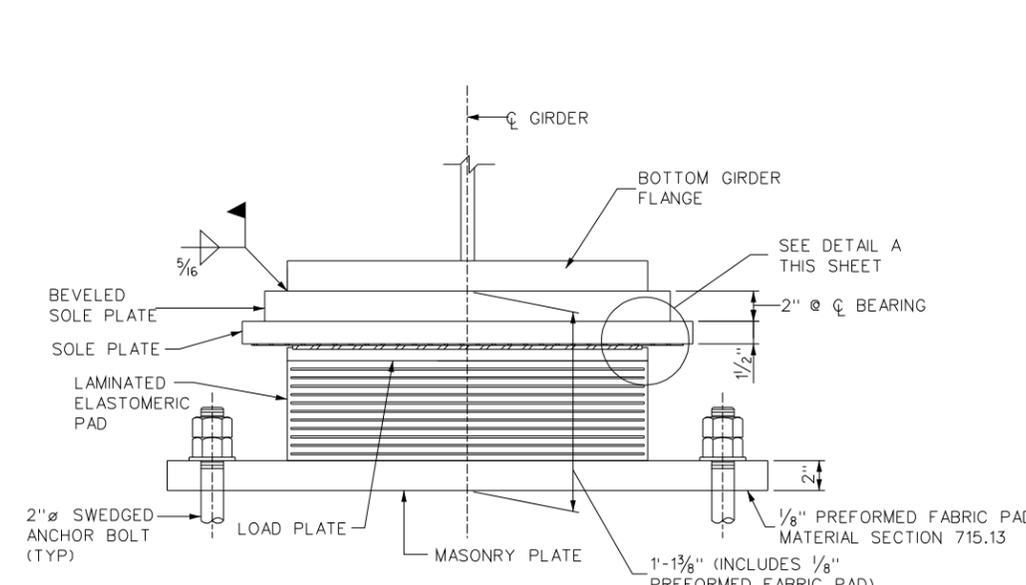
DETAIL A



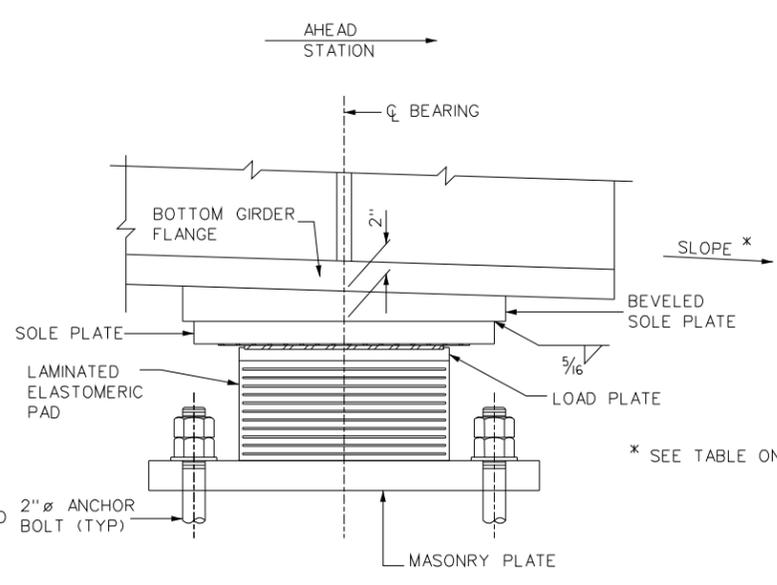
SECTION ELASTOMERIC PAD



TYPICAL ANCHOR BOLT DETAIL



SECTION A-A



SECTION B-B

- NOTES:
- FOR GENERAL NOTES SEE SHEETS 3, 4, AND 5. FOR ADDITIONAL BEARING NOTES SEE SHEET 38.
 - FOR TABLE OF DESIGN CRITERIA SEE SHEET 38.
 - FOR BEARING KEY PLAN SEE SHEET 38.



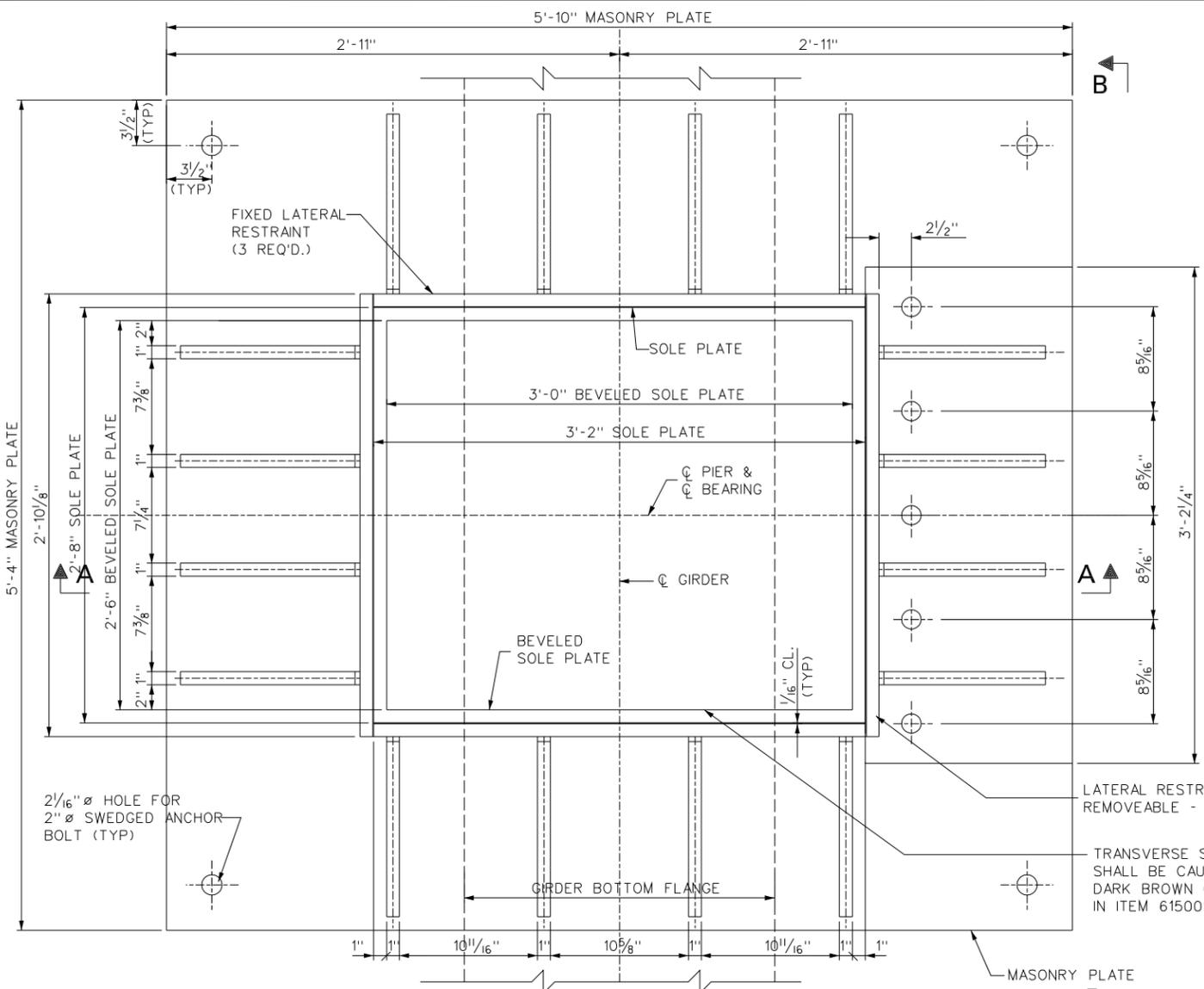
NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

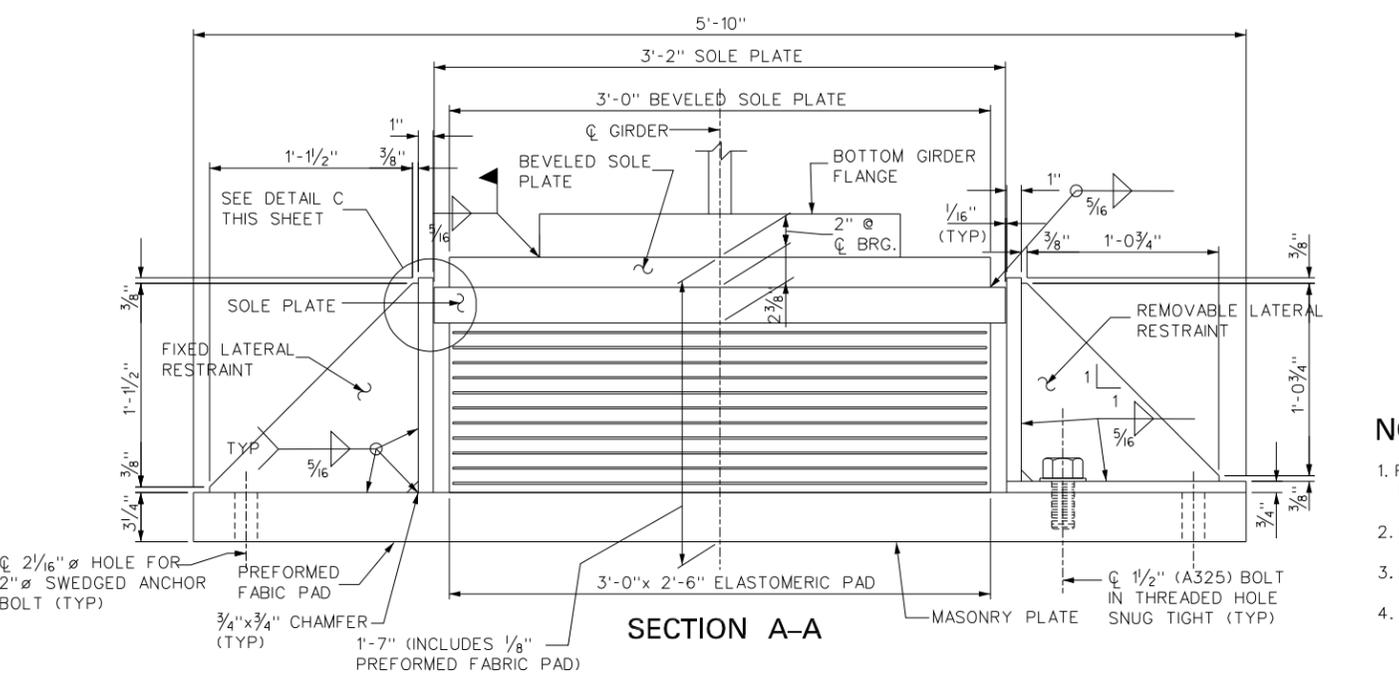
**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
NON-GUIDED EXPANSION BEARINGS**

DESIGNED <i>KJC</i>	DATE 11/02	Baker Michael Baker Jr., Inc. Charleston, W. Va.	SHEET 36 OF 93
DRAWN <i>WBC</i>	DATE 11/02		BRIDGE NO.
CHECKED <i>KJC</i>	DATE 11/02		4919
CHECKED <i>AP</i>	DATE 11/02		

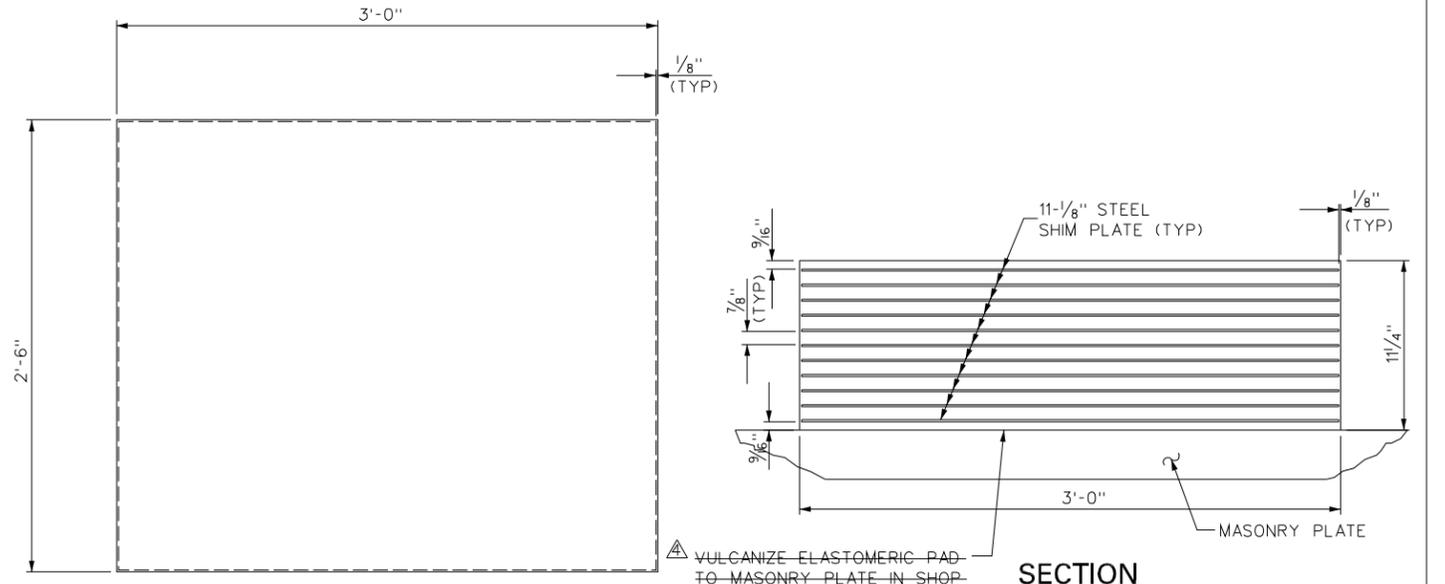
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	193	407



PLAN - FIXED BEARING



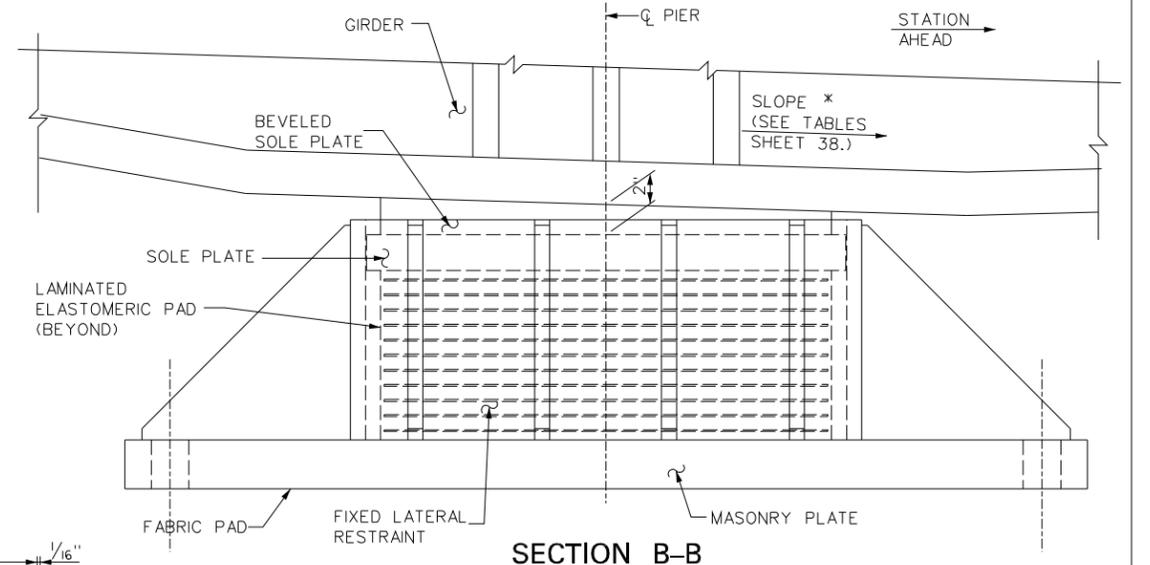
SECTION A-A



SECTION

PLAN

ELASTOMERIC PAD



SECTION B-B

x THE SLOPE IS POSITIVE WHEN ELEVATION INCREASES IN STATION AHEAD DIRECTION.

NOTES:

- FOR GENERAL NOTES SEE SHEETS 3, 4, AND 5. FOR ADDITIONAL BEARING NOTES SEE SHEET 38.
- FOR TABLE OF DESIGN CRITERIA SEE SHEET 38.
- FOR BEARING KEY PLAN SEE SHEET 38.
- FOR ANCHOR BOLT DETAILS SEE SHEET 36.

DETAIL C



NO.	VULCANIZING DELETED REVISION	3/24/03	JDD
		DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE OVER POTOMAC RIVER FIXED BEARINGS

DESIGNED	DATE
KJC	11/02
DRAWN	
WBL	11/02
CHECKED	
KJC	11/02
CHECKED	
AP	11/02

Baker Michael Baker Jr., Inc.

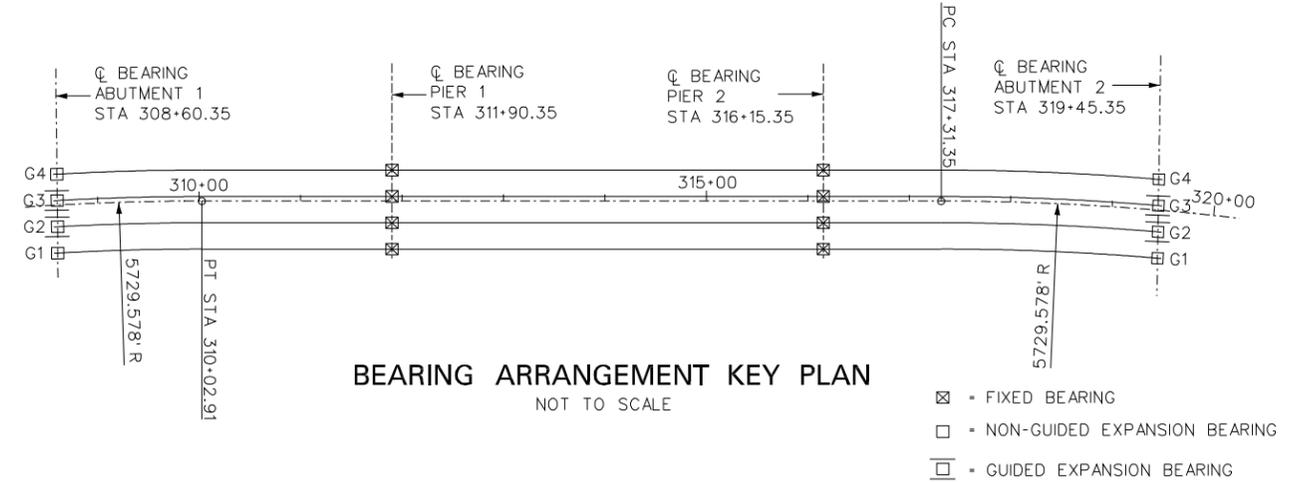
Charleston, W.Va.

SHEET 37 OF 93 BRIDGE NO. 4919

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	194	407

LOCATION	ABUTMENT 1				ABUTMENT 2			
	G1	G2	G3	G4	G1	G2	G3	G4
BEARING TYPE		EXP.	EXP.			EXP.	EXP.	
DL (kips)		282	300			283	298	
LL w/o IMPACT (kips)		112	117			113	117	
HORIZONTAL LD. (kips)		34	34			34	34	
THERMAL MOVEMENT (INCHES)		3.6	3.6			3.6	3.6	
ANGLE (Δ) (DEG)		1.239	1.238			-1.718	-1.718	
DESIGN ROTATION (RAD.)		0.007	0.007			0.007	0.007	
ROADWAY SLOPE %		0.41%	0.41%			-0.71%	-0.71%	
BEVELED SOLE PLATE T (IN)		2	2			2	2	
FLAT SOLE PLATE T (IN)		1 1/2	1 1/2			1 1/2	1 1/2	
MASONRY PLATE T (IN)		2 1/2	2 1/2			2 1/2	2 1/2	
ELASTOMERIC PAD T (IN)		6 5/8	6 5/8			6 5/8	6 5/8	
TOTAL BEARING DEPTH (IN)		13 7/8	13 7/8			13 7/8	13 7/8	

* INCLUDES .005 RAD. ALLOWANCES WITH UNCERTAINTIES DURING CONSTRUCTION.



LOCATION	PIER 1				PIER 2			
	G1	G2	G3	G4	G1	G2	G3	G4
BEARING TYPE	FIXED	FIXED	FIXED	FIXED	FIXED	FIXED	FIXED	FIXED
DL (kips)	1189	1283	1319	1291	1180	1284	1321	1301
LL w/o IMPACT (kips)	224	276	277	315	223	276	276	315
HORIZONTAL LD. (kips)	167	167	167	167	167	167	167	167
THERMAL MOVEMENT (INCHES)	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41
ANGLE (Δ) (DEG)	0	0	0	0	0	0	0	0
DESIGN ROTATION (RAD.)	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
ROADWAY SLOPE %	+1.295%	+1.295%	+1.295%	+1.295%	-2.08%	-2.08%	-2.08%	-2.08%
BEVELED SOLE PLATE T (IN)	2	2	2	2	2	2	2	2
FLAT SOLE PLATE T (IN)	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8
MASONRY PLATE T (IN)	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
ELASTOMERIC PAD T (IN)	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4
TOTAL BEARING DEPTH (IN)	19	19	19	19	19	19	19	19

LOCATION	ABUTMENT 1				ABUTMENT 2			
	G1	G2	G3	G4	G1	G2	G3	G4
BEARING TYPE	EXP.			EXP.	EXP.			EXP.
DL (kips)	246			308	243			312
LL w/o IMPACT (kips)	72			128	72			129
HORIZONTAL LD. (kips)	34			34	34			34
THERMAL MOVEMENT (INCHES)	3.6			3.6	3.6			3.6
ANGLE (Δ) (DEG)	1.239			1.238	-1.719			-1.717
DESIGN ROTATION (RAD.)	0.007			0.007	0.007			0.007
ROADWAY SLOPE %	0.41%			0.41%	-0.71%			-0.71%
BEVELED SOLE PLATE T (IN)	2			2	2			2
FLAT SOLE PLATE T (IN)	1 1/2			1 1/2	1 1/2			1 1/2
MASONRY PLATE T (IN)	2			2	2			2
ELASTOMERIC PAD T (IN)	6 5/8			6 5/8	6 5/8			6 5/8
TOTAL BEARING DEPTH (IN)	13 3/8			13 3/8	13 3/8			13 3/8

NOTES:

- DUROMETER 50 (HARDNESS) NEOPRENE SHALL BE USED FOR ELASTOMERIC PADS.
- THE BEARINGS ARE DESIGNED ACCORDING TO ARTICLE 14.7.5 OF AASHTO, 1998, LRFD BRIDGE DESIGN SPECIFICATIONS. THE BEARINGS SHALL BE TESTED IN ACCORDANCE WITH ARTICLE 18.7.5, AASHTO INTERIM 1998 (DIV. II).
- WELDING OF THE STEEL PLATES ADJACENT TO THE ELASTOMERIC BEARING PAD SHALL BE CONTROLLED SO THAT THE TEMPERATURE OF THE STEEL PLATE SURFACE IN CONTACT WITH ELASTOMERIC PAD SHALL NOT EXCEED 400°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. QUENCHING TO ACCELERATE COOLING IS NOT PERMITTED.
- WELDING OF THE STEEL PLATES ADJACENT TO THE ELASTOMERIC BEARING PAD AND/OR THE PTFE SLIDING SURFACE AND/OR THE STAINLESS STEEL SLIDING PLATE SHALL BE CONTROLLED SO THAT THE TEMPERATURE OF THE STEEL PLATE SURFACE IN CONTACT WITH THE ELASTOMERIC PAD OR THE STAINLESS STEEL SLIDING SURFACE ADJACENT TO THE PTFE SURFACE SHALL NOT EXCEED 250°F AS DETERMINED BY THE USE PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. QUENCHING TO ACCELERATE COOLING IS NOT PERMITTED.
- ANCHOR BOLTS AND THREADED PINS SHALL MEET THE REQUIREMENTS OF AASHTO M314, GRADE 105. ALL ANCHOR BOLTS AND THREADED PINS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M232.
- ALL BEARING STEEL PLATES SHALL BE HOT-DIP GALVANIZED AND EXPOSED SURFACES SHALL BE PAINTED EXCEPT FOR THE BEVELED SOLE PLATE WHICH SHALL BE PAINTED ONLY. DO NOT PAINT ELASTOMERIC, PTFE OR STAINLESS STEEL SURFACES. ALL NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291. ALL WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. ALL NUTS AND WASHERS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.
- SEE SHEET 27 FOR JACKING LOCATIONS FOR BEARING REPLACEMENT.
- ELASTOMERIC BEARING PAD THICKNESS SHOWN ARE UNCOMPRESSED.

REVISION	NO.	REVISION	DATE	BY
REVIS	3		3/24/03	JDD

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
MISCELLANEOUS BEARING DETAILS**

DESIGNED	DATE
<i>KJC</i>	11/02
DRAWN	
<i>WBL</i>	11/02
CHECKED	
<i>KJC</i>	11/02
CHECKED	
<i>AP</i>	11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

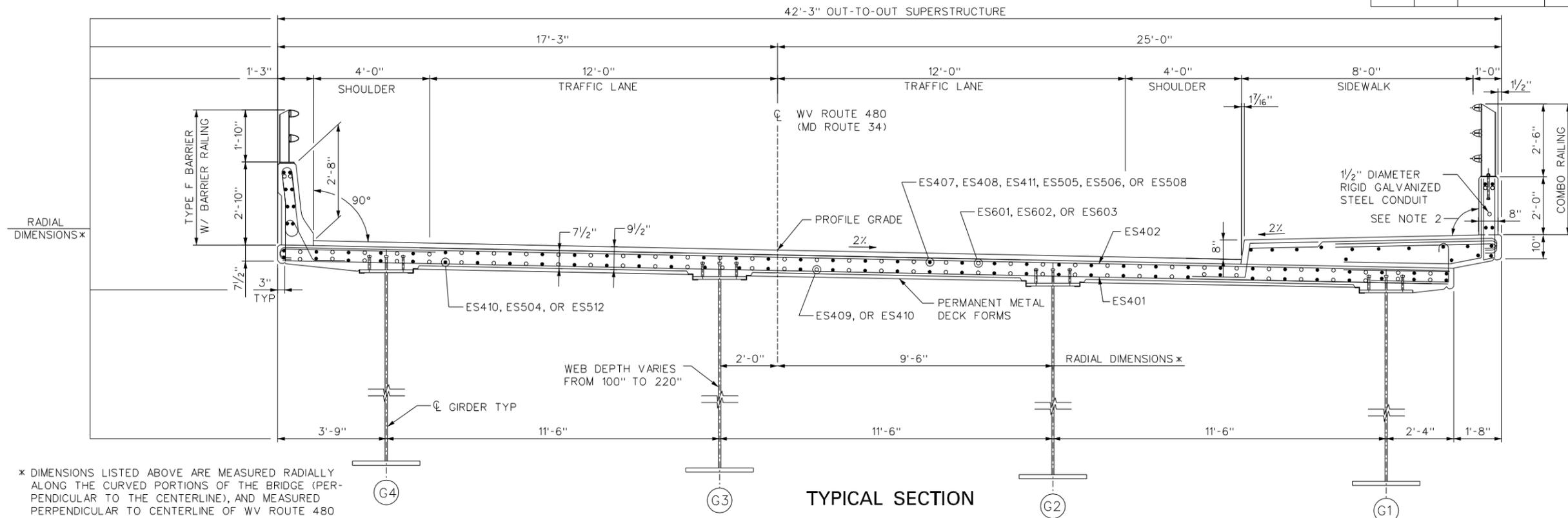
SHEET **38** OF **93**
BRIDGE NO. **4919**

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03/31/2003

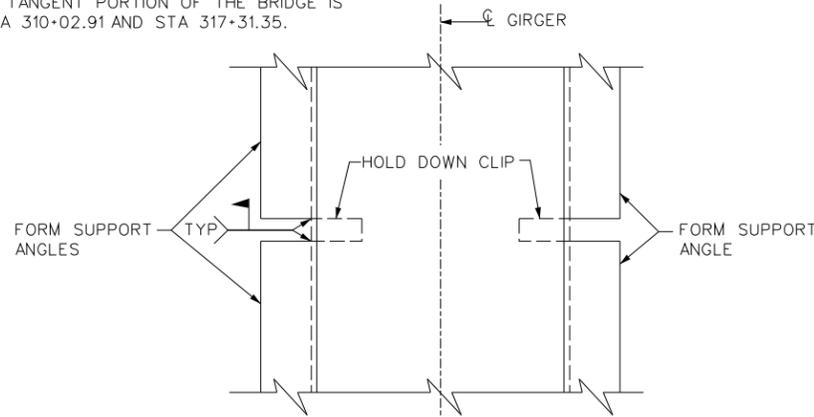
03/31/2003

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	195	407



* DIMENSIONS LISTED ABOVE ARE MEASURED RADIALLY ALONG THE CURVED PORTIONS OF THE BRIDGE (PERPENDICULAR TO THE CENTERLINE), AND MEASURED PERPENDICULAR TO CENTERLINE OF WV ROUTE 480 (MD ROUTE 34) ALONG THE TANGENT PORTION OF THE BRIDGE. THE TANGENT PORTION OF THE BRIDGE IS BETWEEN STA 310+02.91 AND STA 317+31.35.

TYPICAL SECTION



PLAN

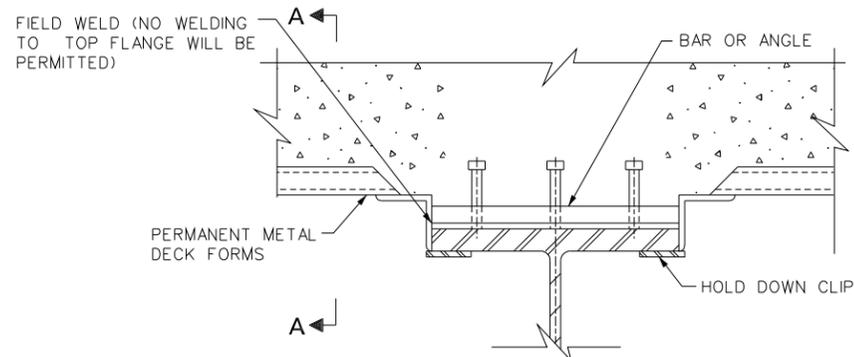
NOT TO SCALE

LEGEND

- SPA - SPACES
- EQ - EQUAL
- CL - CLEAR
- (G*) - GIRDER NUMBER
- - BARS FROM BEGIN TO END BRIDGE
- - ADDITIONAL BARS OVER PIERS, AND WHERE SERVICE II TENSILE STRESS IS IN DECK SLAB.

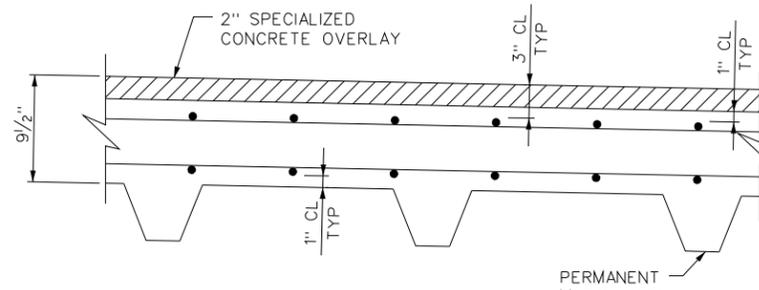
NOTES:

1. WORK THIS SHEET WITH DECK SLAB PLAN - I THROUGH DECK SLAB PLAN - IX SHEETS 40-48, BARRIER DETAILS - I SHEET 51, BARRIER DETAILS - II SHEET 52, CONCRETE END DIAPHRAGM SHEET 50, AND LIGHT BLISTER DETAILS SHEET 49.
2. FACE OF SIDEWALK BARRIER TO BE PLUMB. CAST TYPE F BARRIER PERPENDICULAR TO THE DECK SURFACE.
3. STEEL CROSS FRAMES NOT SHOWN. SEE SHEETS 27 & 28.
4. FOR SCUPPER DETAILS SEE SHEETS 55 TO 57.
5. FOR DECK SLAB BAR SCHEDULE SEE SHEET 54.
6. FOR TYPE F BARRIER RAILING DETAILS SEE SHEET 68. FOR COMBO RAIL DETAILS SEE SHEET 69.
7. THE COST OF 1/2" DIAMETER RIGID GALVANIZED STEEL CONDUIT IS INCLUDED WITH THE ROADWAY PORTION OF THE CONTRACT.



STAY-IN-PLACE FORM HAUNCH DETAIL

NOT TO SCALE



SECTION A-A

NOT TO SCALE

NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
TYPICAL SECTION

DESIGNED KSC	DATE 11/02
DRAWN WBE	11/02
CHECKED PWP	11/02
CHECKED PWP	11/02

Baker Michael Baker Jr., Inc.	SHEET 39 OF 93
	BRIDGE NO. 4919

Charleston, W.Va.

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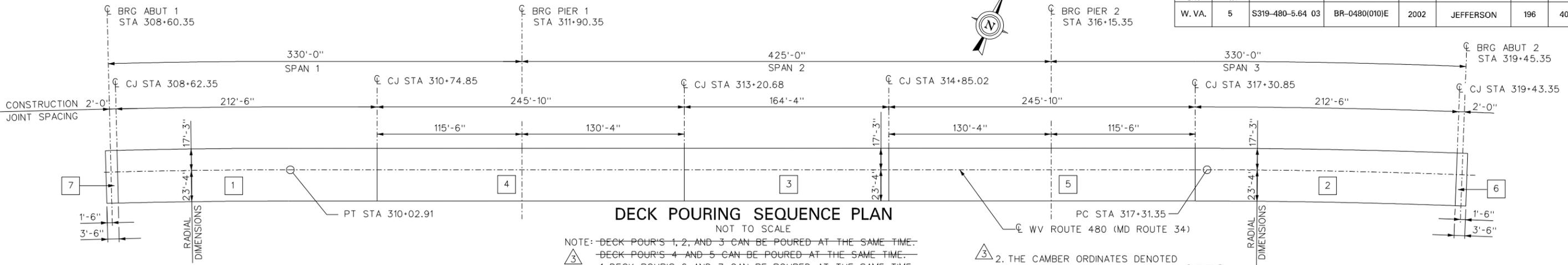
03/31/2003

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J06C29C98 - BRIDGE 1

03/31/2003

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	196	407



DECK POURING SEQUENCE PLAN

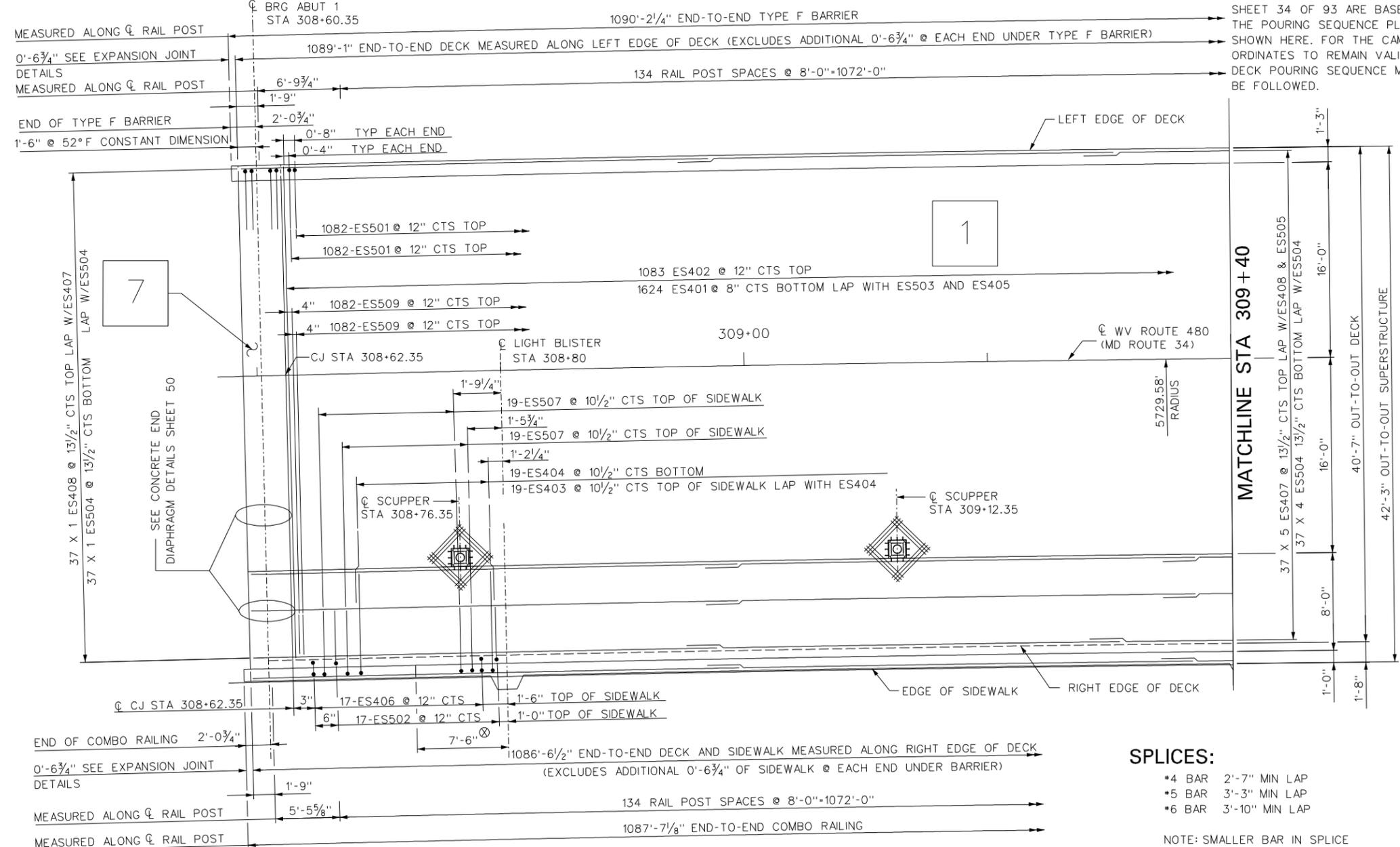
NOT TO SCALE

- NOTE: DECK POUR'S 1, 2, AND 3 CAN BE POURED AT THE SAME TIME.
 DECK POUR'S 4 AND 5 CAN BE POURED AT THE SAME TIME.
 1. DECK POUR'S 6 AND 7 CAN BE POURED AT THE SAME TIME.

2. THE CAMBER ORDINATES DENOTED IN THE CAMBER SCHEDULE ON SHEET 34 OF 93 ARE BASED ON THE POURING SEQUENCE PLAN SHOWN HERE. FOR THE CAMBER ORDINATES TO REMAIN VALID, THIS DECK POURING SEQUENCE MUST BE FOLLOWED.

NOTES:

- UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE MEASURED EITHER PERPENDICULAR TO CENTERLINE WV ROUTE 480 (MD ROUTE 34) OR ALONG THE CENTERLINE WV ROUTE 480 (MD ROUTE 34)
- ALL TRANSVERSE REINFORCING STEEL SHALL BE PLACED PERPENDICULAR TO CENTERLINE WV ROUTE 480 (MD ROUTE 34). ALL LONGITUDINAL STEEL SHALL BE PLACED APPROXIMATELY PARALLEL TO THE ADJACENT GIRDERS.
- FOR SCUPPER DETAILS SEE SHEETS 55, 56 & 57.
- FOR TYPICAL SECTION SEE SHEET 39.
- FOR DECK SLAB BAR SCHEDULE SEE SHEET 54.
- THE DECK POURING SEQUENCE SHOWN DOES NOT INCLUDE THE SIDEWALK. THE SIDEWALK SHALL NOT BE POURED UNTIL THE CONCRETE FOR THE ENTIRE DECK HAS ATTAINED A COMPRESSIVE STRENGTH (f'c) OF 4 KSI.
- FOR EXPANSION JOINT DETAILS SEE SHEETS 58 TO 67.
- FOR CONCRETE END DIAPHRAGM DETAILS SEE SHEET 50.
- FOR TYPE F BARRIER RAILING DETAILS SEE SHEET 68. FOR COMBO RAIL DETAILS SEE SHEET 69.
- WORK THIS SHEET WITH DECK SLAB PLAN-II THROUGH DECK SLAB PLAN-IX SHEETS, BARRIER DETAILS-I SHEET, BARRIER DETAILS-II SHEET, CONCRETE END DIAPHRAGM SHEET, AND LIGHT BLISTER DETAILS SHEET.
- THE TRANSVERSE CONSTRUCTION JOINT BETWEEN DECK POURS SHALL BE VERTICAL. THE CONSTRUCTION JOINT SHALL BE FINISHED WITH A 1/2 INCH EDGING TOOL.
- FOR BARRIER CONTROL JOINT SPACING SEE SHEETS 40, 43, 46 AND 48.



PART DECK SLAB PLAN - SPAN 1

LEGEND:

- T & B - TOP AND BOTTOM
- CTS - CENTERS
- CJ - CONSTRUCTION JOINT
- ⊗ - CONTROL JOINT SPACING MEASURED ALONG INSIDE FACE OF BARRIER.
- # - DECK POURING SEQUENCE NUMBER

NO.	NOTE REVISED & NOTE ADDED REVISION	DATE	PWP BY:
		02/03	

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
DECK SLAB PLAN - I

DESIGNED KAC	DATE 11/02
DRAWN WBE	DATE 11/02
CHECKED PWP	DATE 11/02
CHECKED PWP	DATE 11/02

Baker
Michael Baker Jr., Inc.

SHEET **40** OF **93**
BRIDGE NO. **4919**
Charleston, W.Va.

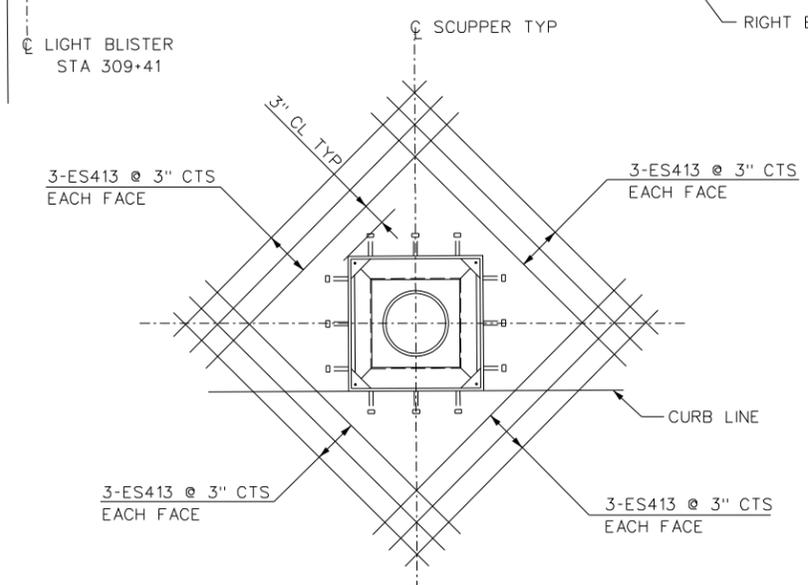
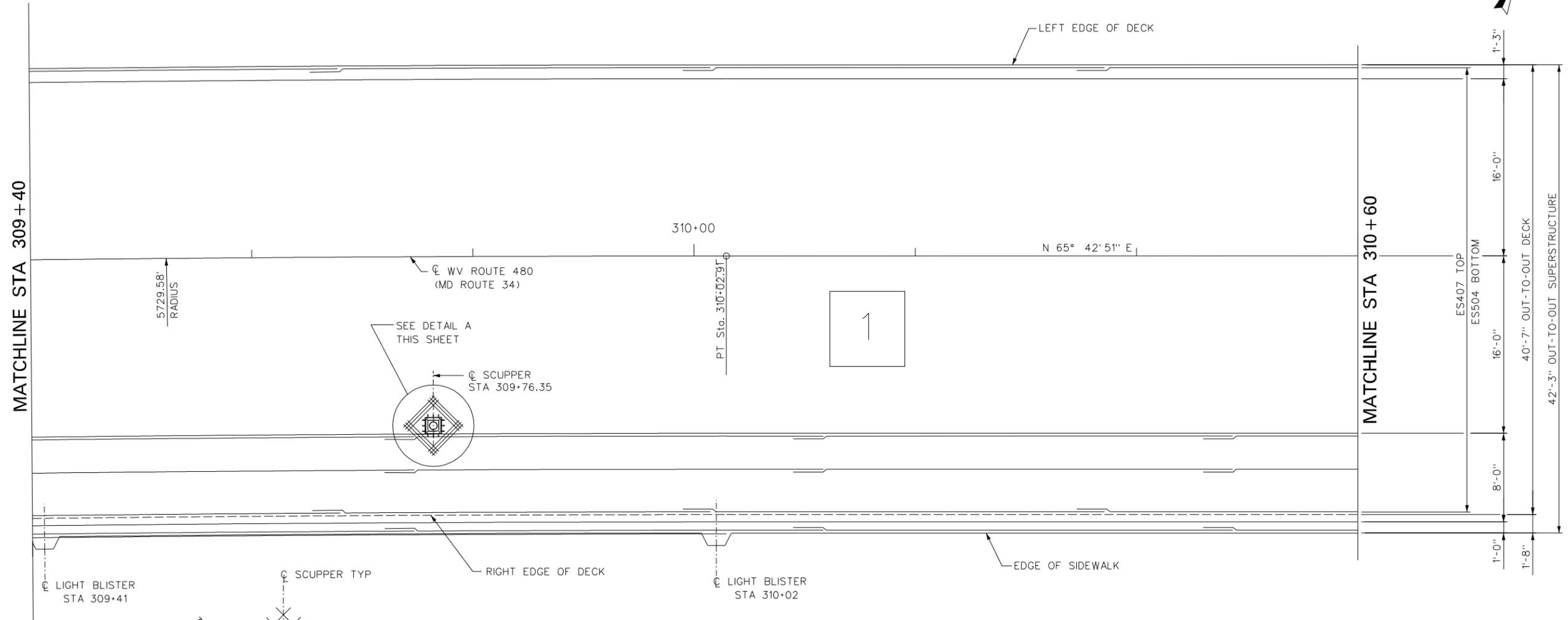
SPLICES:

- *4 BAR 2'-7" MIN LAP
- *5 BAR 3'-3" MIN LAP
- *6 BAR 3'-10" MIN LAP

NOTE: SMALLER BAR IN SPLICE CONTROLS MINIMUM LAP

SCALE : 0 5 ft.

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	197	407



DETAIL A
(10 THUS)

PART DECK SLAB PLAN - SPAN 1

NOTES:

1. SEE DECK SLAB PLAN-I FOR NOTES.

LEGEND:

- T & B - TOP AND BOTTOM
- C J - CONSTRUCTION JOINT
- CTS - CENTERS
- # - DECK POURING SEQUENCE NUMBER

SPLICES:

- 4 BAR 2'-7" MIN LAP
- 5 BAR 3'-3" MIN LAP
- 6 BAR 3'-10" MIN LAP

NOTE: SMALLER BAR IN SPLICE CONTROLS MINIMUM LAP

SCALE : 5 ft.

NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

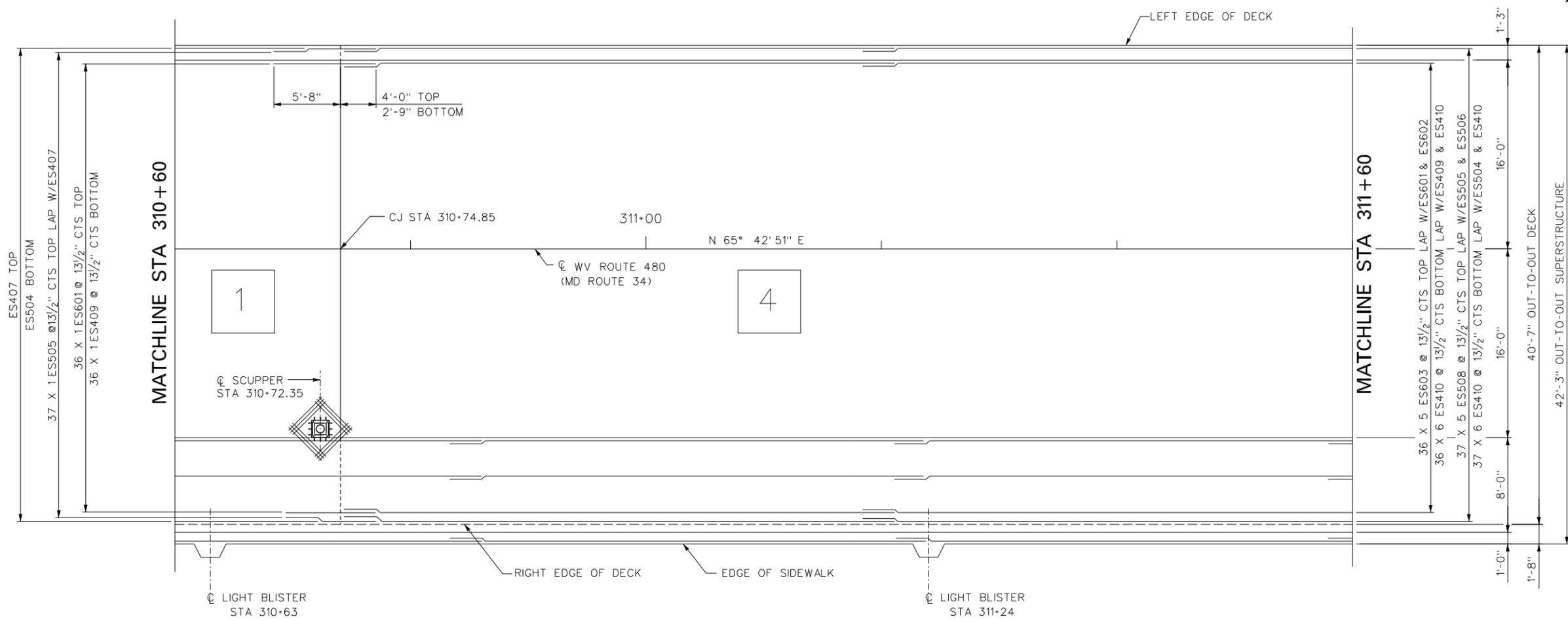
**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
DECK SLAB PLAN - II**

DESIGNED <i>KJC</i>	DATE 11/02
DRAWN <i>WBE</i>	DATE 11/02
CHECKED <i>PWP</i>	DATE 11/02
CHECKED <i>PWP</i>	DATE 11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET **41** OF **93**
BRIDGE NO. **4919**

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	198	407



PART DECK SLAB PLAN - SPAN 1

NOTES:

1. SEE DECK SLAB PLAN-I FOR NOTES.

SPLICES:

- 4 BAR 2'-7" MIN LAP
- 5 BAR 3'-3" MIN LAP
- 6 BAR 3'-10" MIN LAP

NOTE: SMALLER BAR IN SPLICE CONTROLS MINIMUM LAP

LEGEND:

- T & B - TOP AND BOTTOM
- C J - CONSTRUCTION JOINT
- CTS - CENTERS
- # - DECK POURING SEQUENCE NUMBER

NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
DECK SLAB PLAN - III**

DESIGNED <i>KJC</i>	DATE 11/02
DRAWN <i>WBE</i>	11/02
CHECKED <i>PWP</i>	11/02
CHECKED <i>PWP</i>	11/02

Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

SHEET **42** OF **93**
BRIDGE NO. **4919**

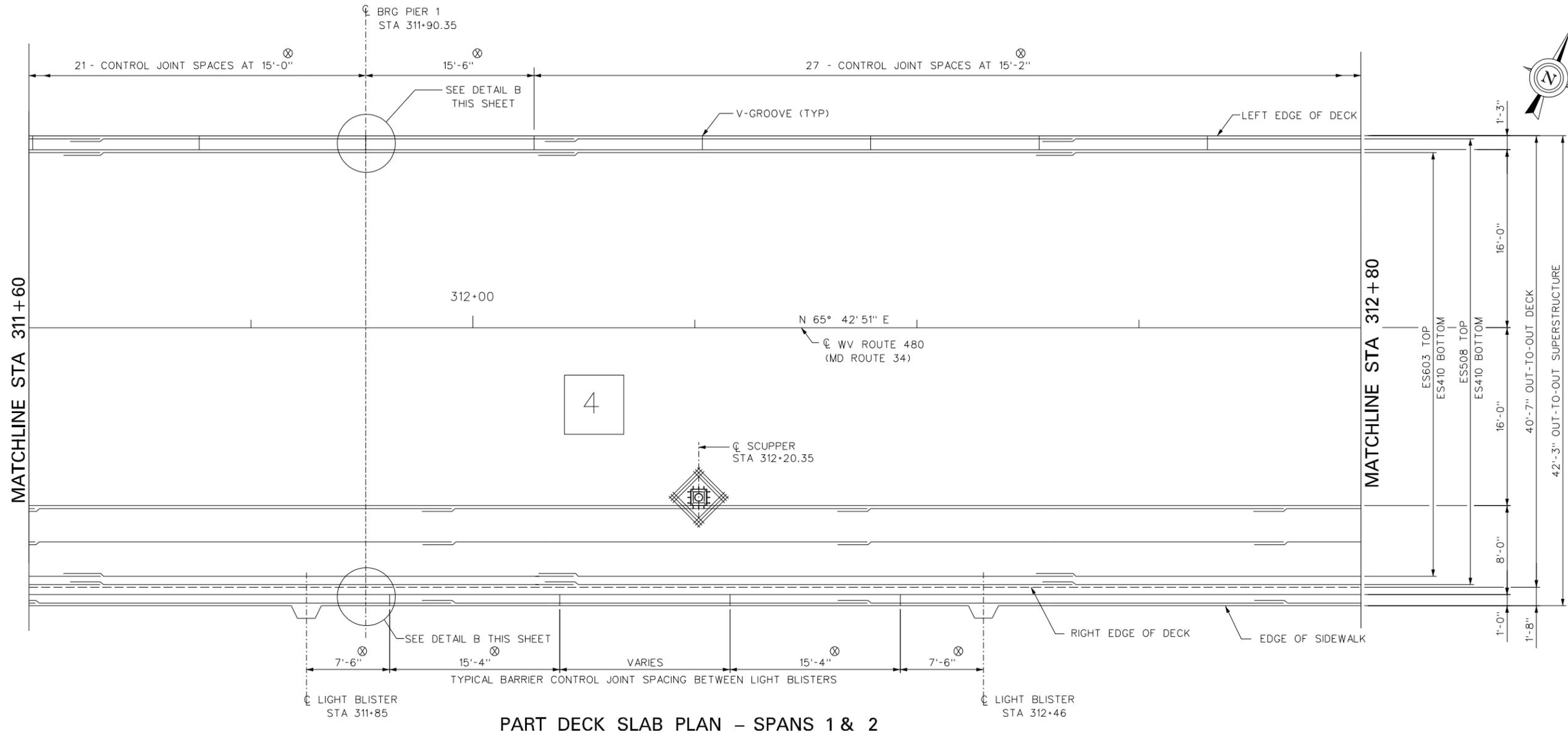
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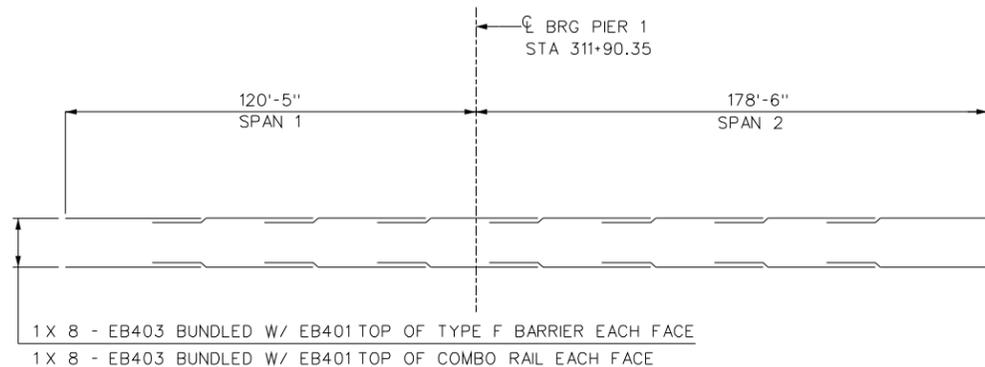
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03/31/2003

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	199	407



PART DECK SLAB PLAN - SPANS 1 & 2



NOTE: SEE BARRIER DETAILS - I AND BARRIER DETAILS - II FOR CLARITY

DETAIL B
NOT TO SCALE

NOTES:

1. SEE DECK SLAB PLAN-I FOR NOTES.

LEGEND:

- T & B - TOP AND BOTTOM
- C J - CONSTRUCTION JOINT
- CTS - CENTERS
- # - DECK POURING SEQUENCE NUMBER
- ⊗ - CONTROL JOINT SPACING MEASURED ALONG INSIDE FACE OF BARRIER.

SPLICES:

- 4 BAR 2'-7" MIN LAP
- 5 BAR 3'-3" MIN LAP
- 6 BAR 3'-10" MIN LAP

NOTE: SMALLER BAR IN SPLICE CONTROLS MINIMUM LAP

SCALE : 0 5 ft.

NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
DECK SLAB PLAN - IV

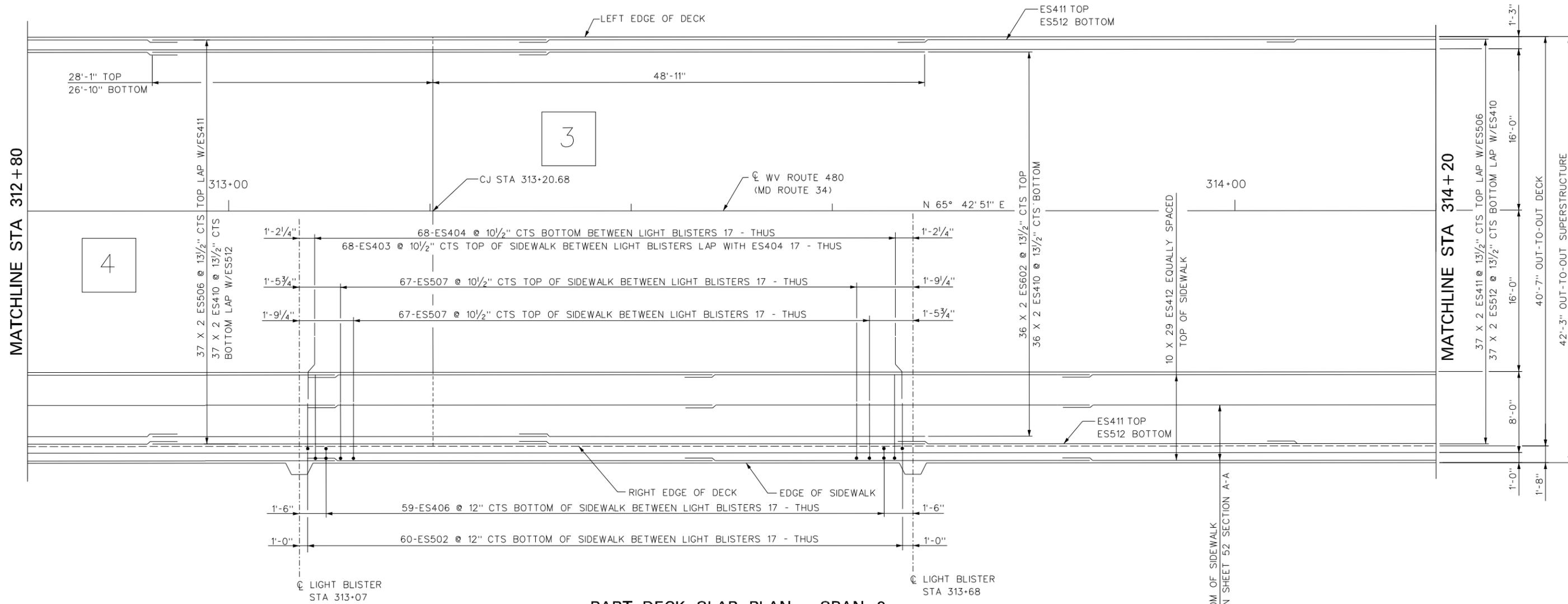
DESIGNED	DATE
KJC	11/02
DRAWN	DATE
WBE	11/02
CHECKED	DATE
PWP	11/02
CHECKED	DATE
PWP	11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET **43** OF **93**
BRIDGE NO. **4919**

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PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	200	407



PART DECK SLAB PLAN - SPAN 2

NOTES:

1. SEE DECK SLAB PLAN-I FOR NOTES.

SPICES:

- 4 BAR 2'-7" MIN LAP
- 5 BAR 3'-3" MIN LAP
- 6 BAR 3'-10" MIN LAP

NOTE: SMALLER BAR IN SPLICE CONTROLS MINIMUM LAP

LEGEND:

- T & B - TOP AND BOTTOM
- C J - CONSTRUCTION JOINT
- CTS - CENTERS
- # - DECK POURING SEQUENCE NUMBER

NO.	REVISION	DATE	BY

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
DECK SLAB PLAN - V

DESIGNED <i>KJC</i>	DATE 11/02
DRAWN <i>WBC</i>	11/02
CHECKED <i>PWP</i>	11/02
CHECKED <i>PWP</i>	11/02

Baker
Michael Baker Jr., Inc.

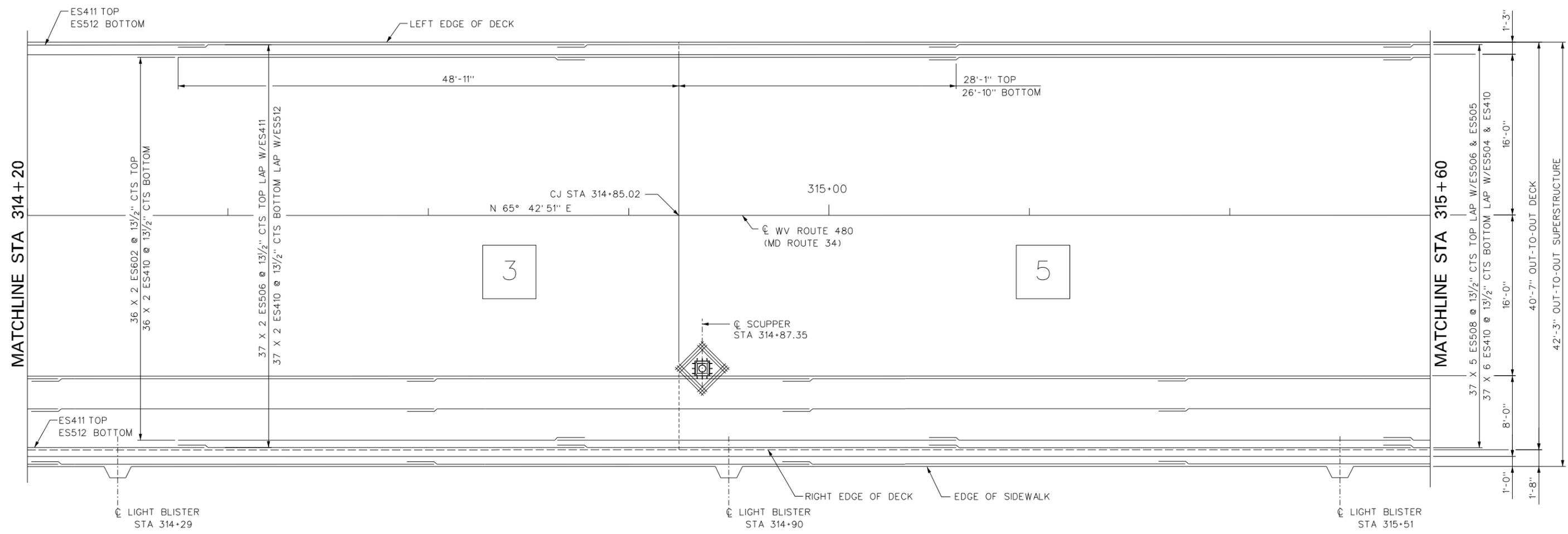
Charleston, W.Va.

SHEET **44** OF **93**
BRIDGE NO. **4919**

SCALE : 0 5 ft.

4 X 29 ES412 BOTTOM OF SIDEWALK
SPACED AS SHOWN ON SHEET 52 SECTION A-A

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	201	407



PART DECK SLAB PLAN - SPAN 2

SPLICES:

- 4 BAR 2'-7" MIN LAP
- 5 BAR 3'-3" MIN LAP
- 6 BAR 3'-10" MIN LAP

NOTE: SMALLER BAR IN SPLICE CONTROLS MINIMUM LAP

NOTES:

1. SEE DECK SLAB PLAN-I FOR NOTES.

LEGEND:

- T & B - TOP AND BOTTOM
- C J - CONSTRUCTION JOINT
- CTS - CENTERS
- # - DECK POURING SEQUENCE NUMBER

NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
DECK SLAB PLAN - VI**

DESIGNED <i>KJC</i>	DATE 11/02
DRAWN <i>WBE</i>	DATE 11/02
CHECKED <i>PWP</i>	DATE 11/02
CHECKED <i>PWP</i>	DATE 11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET **45** OF **93**
BRIDGE NO. **4919**

SCALE : 0 5 ft.

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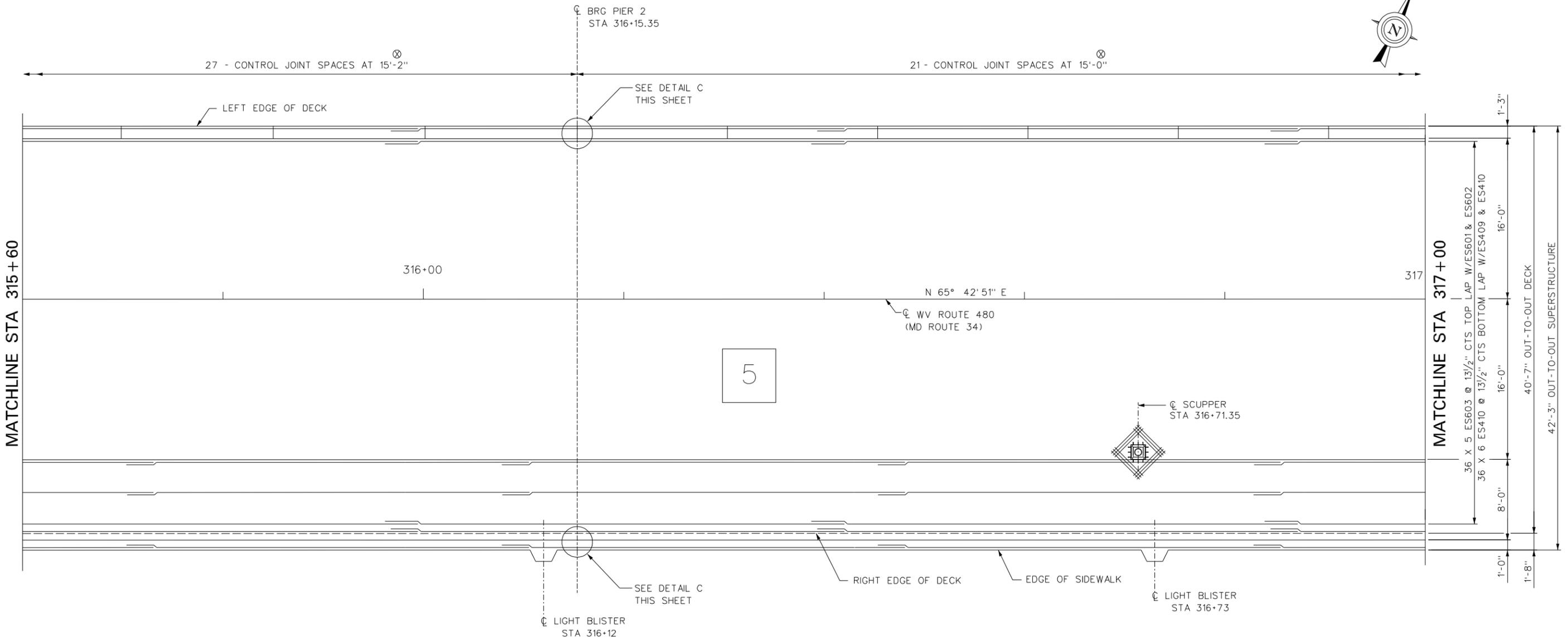
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J0629C98 - BRIDGE 1

03/31/2003

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	202	407



PART DECK SLAB PLAN - SPANS 2 & 3

NOTES:

1. SEE DECK SLAB PLAN-I FOR NOTES.

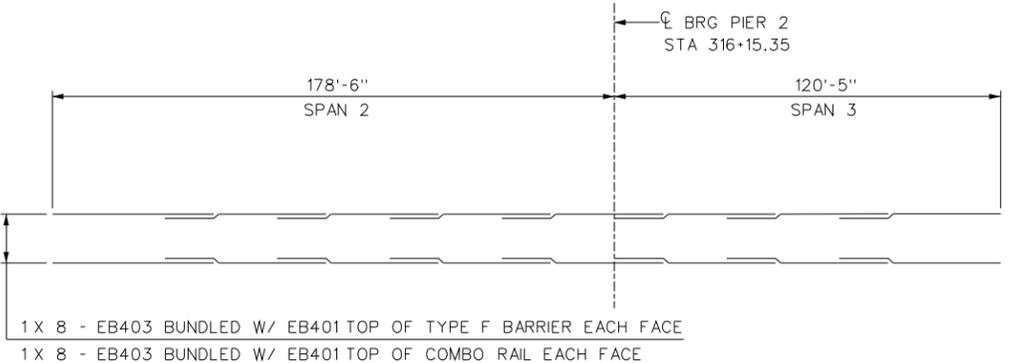
LEGEND:

- T & B - TOP AND BOTTOM
- C J - CONSTRUCTION JOINT
- CTS - CENTERS
- # - DECK POURING SEQUENCE NUMBER
- ⊗ - CONTROL JOINT SPACING MEASURED ALONG GUTTER LINE OF TYPE F BARRIER.

SPLICES:

- 4 BAR 2'-7" MIN LAP
- 5 BAR 3'-3" MIN LAP
- 6 BAR 3'-10" MIN LAP

NOTE: SMALLER BAR IN SPLICE CONTROLS MINIMUM LAP



NOTE: SEE BARRIER DETAILS - I AND BARRIER DETAILS - II FOR CLARITY

DETAIL C
NOT TO SCALE

NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
DECK SLAB PLAN - VII**

DESIGNED <i>KJC</i>	DATE 11/02
DRAWN <i>WBE</i>	DATE 11/02
CHECKED <i>PWP</i>	DATE 11/02
CHECKED <i>PWP</i>	DATE 11/02

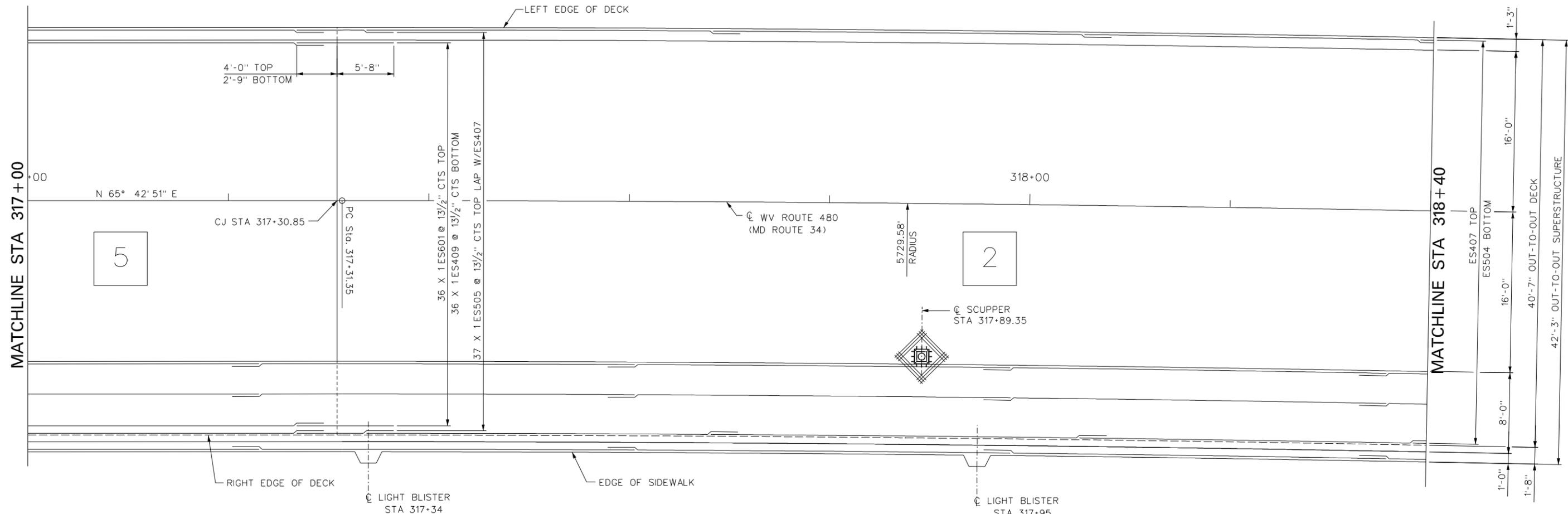
Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

SHEET **46** OF **93**
BRIDGE NO. **4919**

SCALE : 0 5 ft.

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	203	407



PART DECK SLAB PLAN - SPAN 3

SPLICES:

- 4 BAR 2'-7" MIN LAP
- 5 BAR 3'-3" MIN LAP
- 6 BAR 3'-10" MIN LAP

NOTE: SMALLER BAR IN SPLICE CONTROLS MINIMUM LAP

NOTES:

1. SEE DECK SLAB PLAN-I FOR NOTES.

LEGEND:

T & B - TOP AND BOTTOM
 C J - CONSTRUCTION JOINT
 CTS - CENTERS
 # - DECK POURING SEQUENCE NUMBER

NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
DECK SLAB PLAN - VIII**

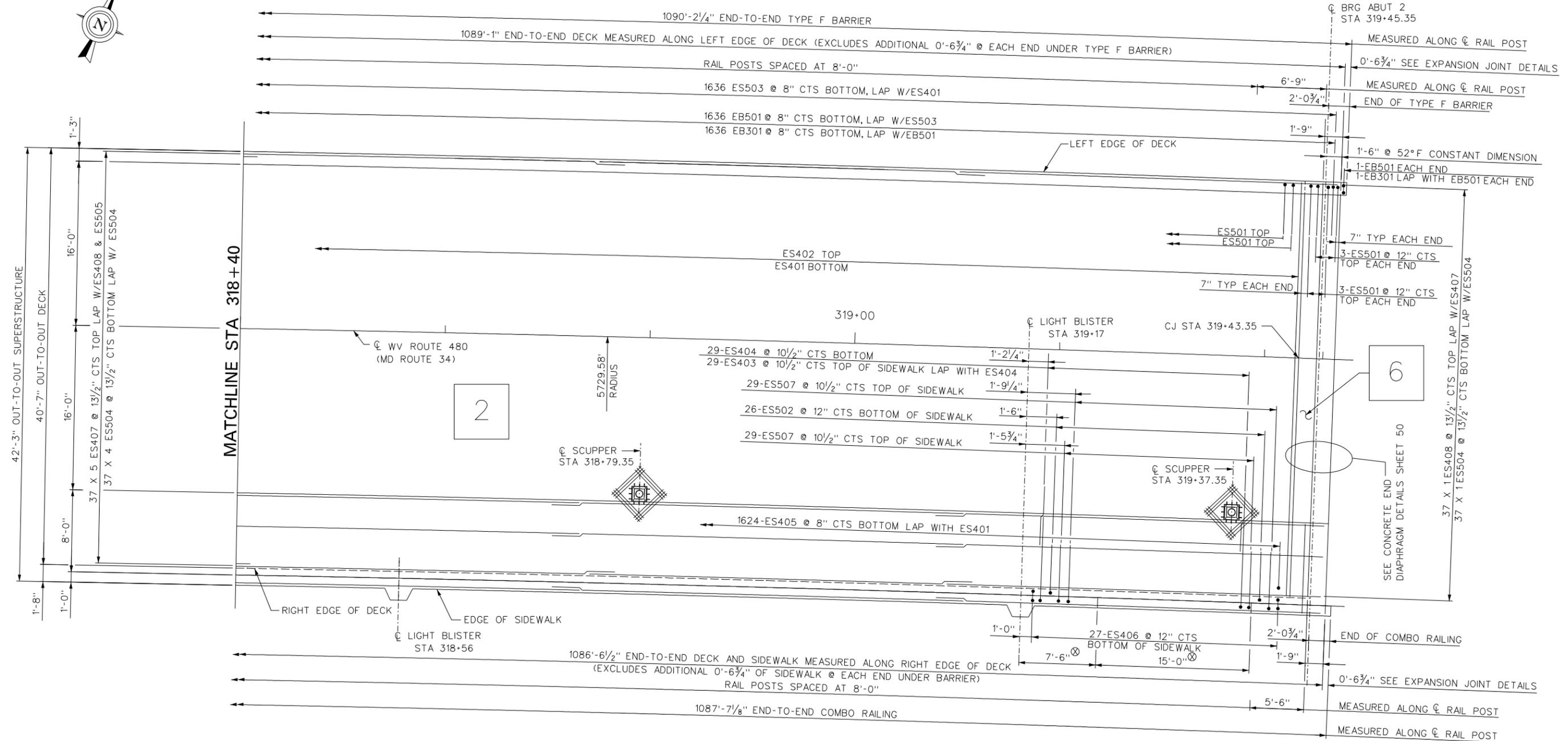
DESIGNED <i>KJC</i>	DATE 11/02
DRAWN <i>WBE</i>	11/02
CHECKED <i>PWP</i>	11/02
CHECKED <i>PWP</i>	11/02

SHEET **47** OF **93**
BRIDGE NO. **4919**

Baker
Michael Baker Jr., Inc. Charleston, W.Va.



PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	204	407



PART DECK SLAB PLAN - SPAN 3

NOTES:

- 1. SEE DECK SLAB PLAN-I FOR NOTES.

LEGEND:

- T & B - TOP AND BOTTOM
- C J - CONSTRUCTION JOINT
- CTS - CENTERS
- # - DECK POURING SEQUENCE NUMBER
- ⊗ - CONTROL JOINT SPACING MEASURED ALONG INSIDE FACE OF BARRIER.

SPLICES:

- 4 BAR 2'-7" MIN LAP
- 5 BAR 3'-3" MIN LAP
- 6 BAR 3'-10" MIN LAP

NOTE: SMALLER BAR IN SPLICE CONTROLS MINIMUM LAP



NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
DECK SLAB PLAN - IX**

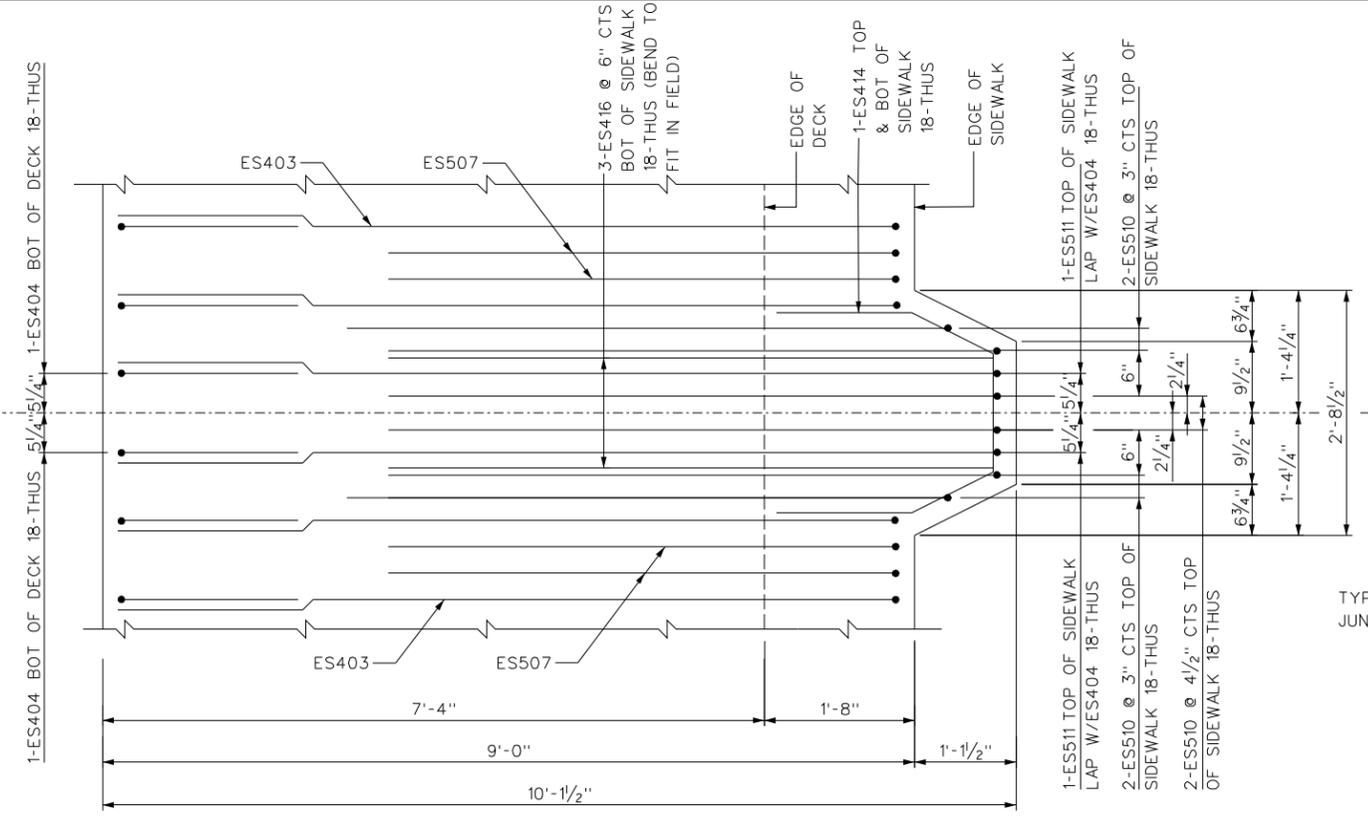
DESIGNED	DATE
KJC	11/02
DRAWN	
WBC	11/02
CHECKED	
PWP	11/02
CHECKED	
PWP	11/02



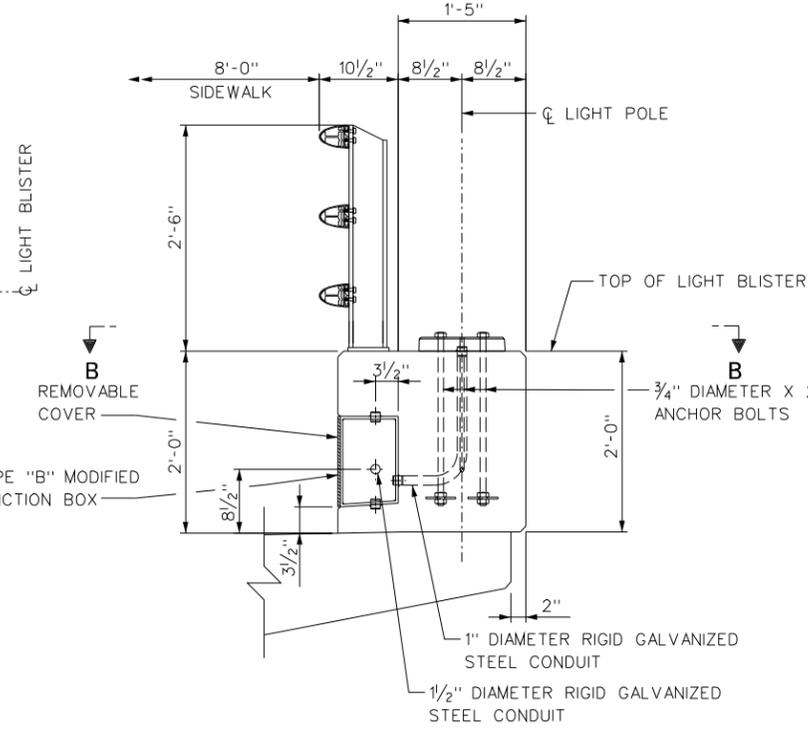
Charleston, W. Va.

SHEET **48** OF **93**
BRIDGE NO. **4919**

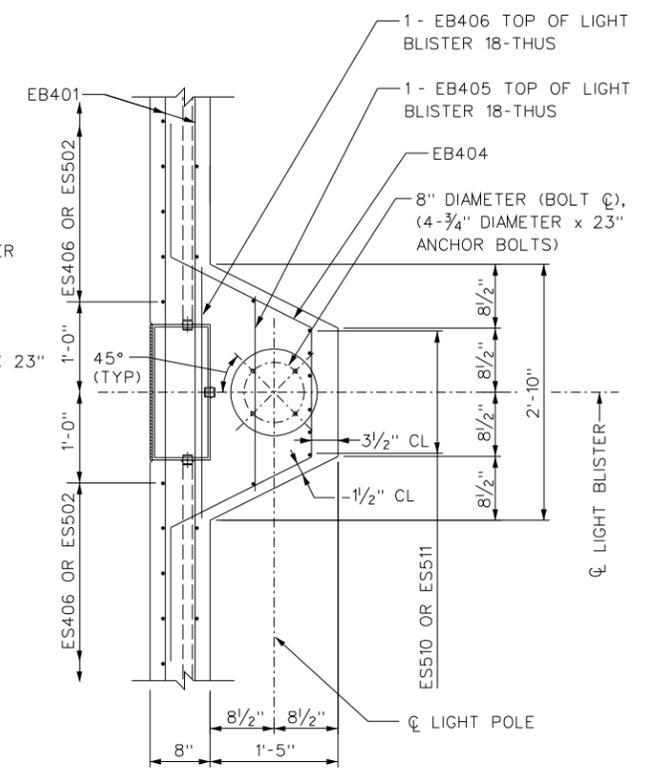
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	205	407



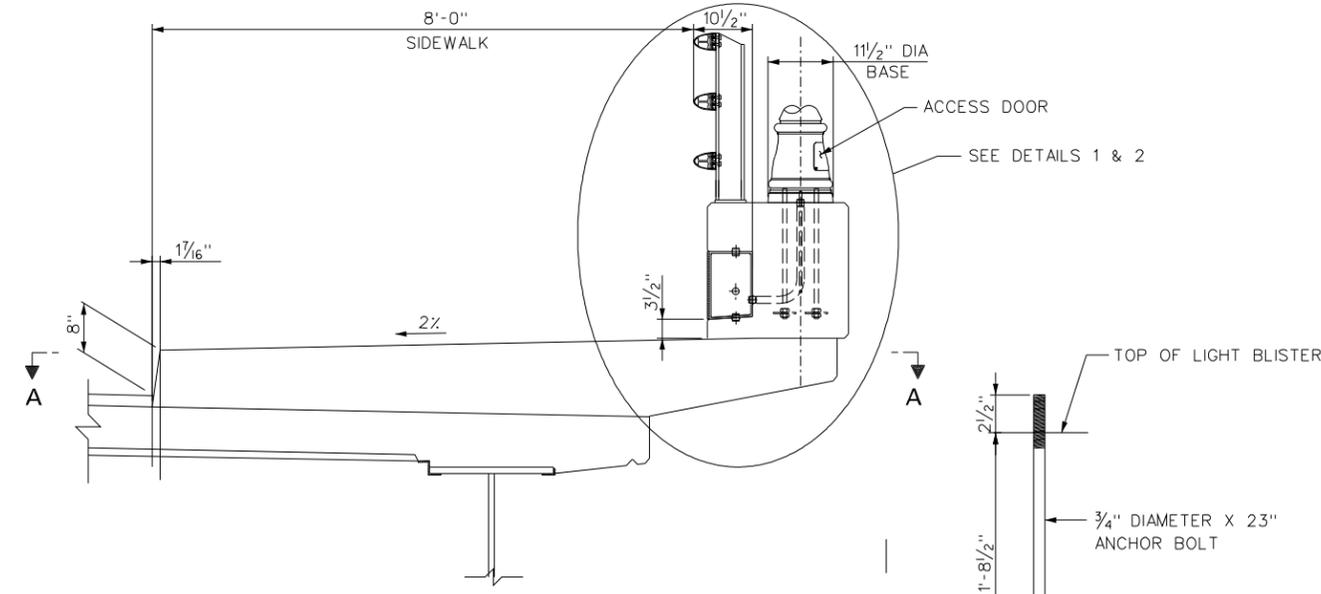
SECTION A-A
6 0 6 12 INCHES



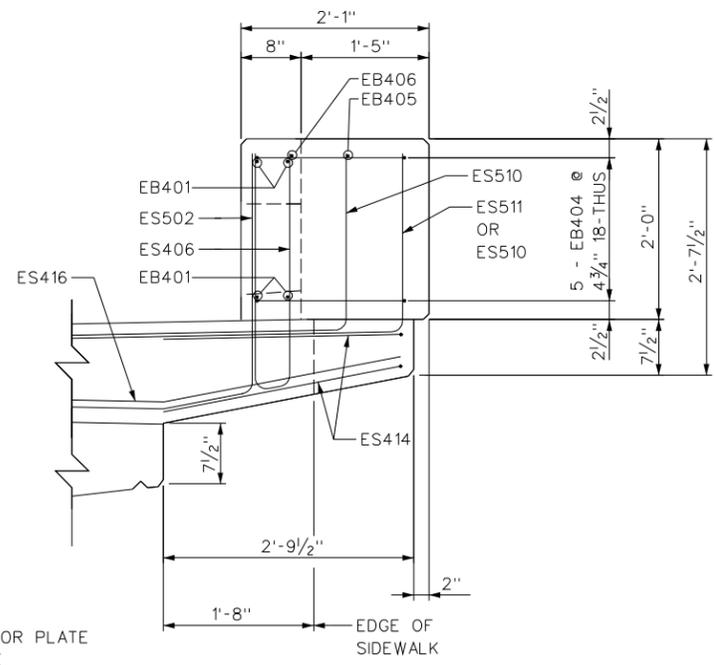
DETAIL 1
6 0 6 12 INCHES



SECTION B-B
6 0 6 12 INCHES



TYPICAL SECTION
(SHOWING LIGHT BLISTER)
12 0 12 INCHES



ANCHOR BOLT DETAIL
(4 - REQUIRED PER LIGHT BLISTER)

DETAIL 2
6 0 6 12 INCHES

NOTES:

1. THE COST OF 1/2" DIAMETER RIGID GALVANIZED STEEL CONDUIT, ANCHOR BOLTS, NUTS, WASHERS, TYPE "B" MODIFIED JUNCTION BOX, LIGHT POLE, LAMP, AND FIXTURE ARE INCLUDED WITH THE HIGHWAY LIGHTING PORTION OF THE CONTRACT.
2. ANCHOR BOLTS, NUTS, AND ANCHOR PLATE SHALL BE HOT-DIPPED GALVANIZED ACCORDING TO AASHTO M232.
3. ANCHOR BOLTS SHALL BE FABRICATED IN ACCORDANCE WITH ASTM F1554 GRADE 105.
4. ANCHOR PLATE SHALL BE FABRICATED IN ACCORDANCE WITH AASHTO M270 GRADE 36.

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
LIGHT BLISTER DETAILS**

DESIGNED <i>JDM</i>	DATE 11/02
DRAWN <i>WBC</i>	11/02
CHECKED <i>PWP</i>	11/02
CHECKED <i>PWP</i>	11/02

Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

SHEET
49 OF 93
BRIDGE NO.
4919

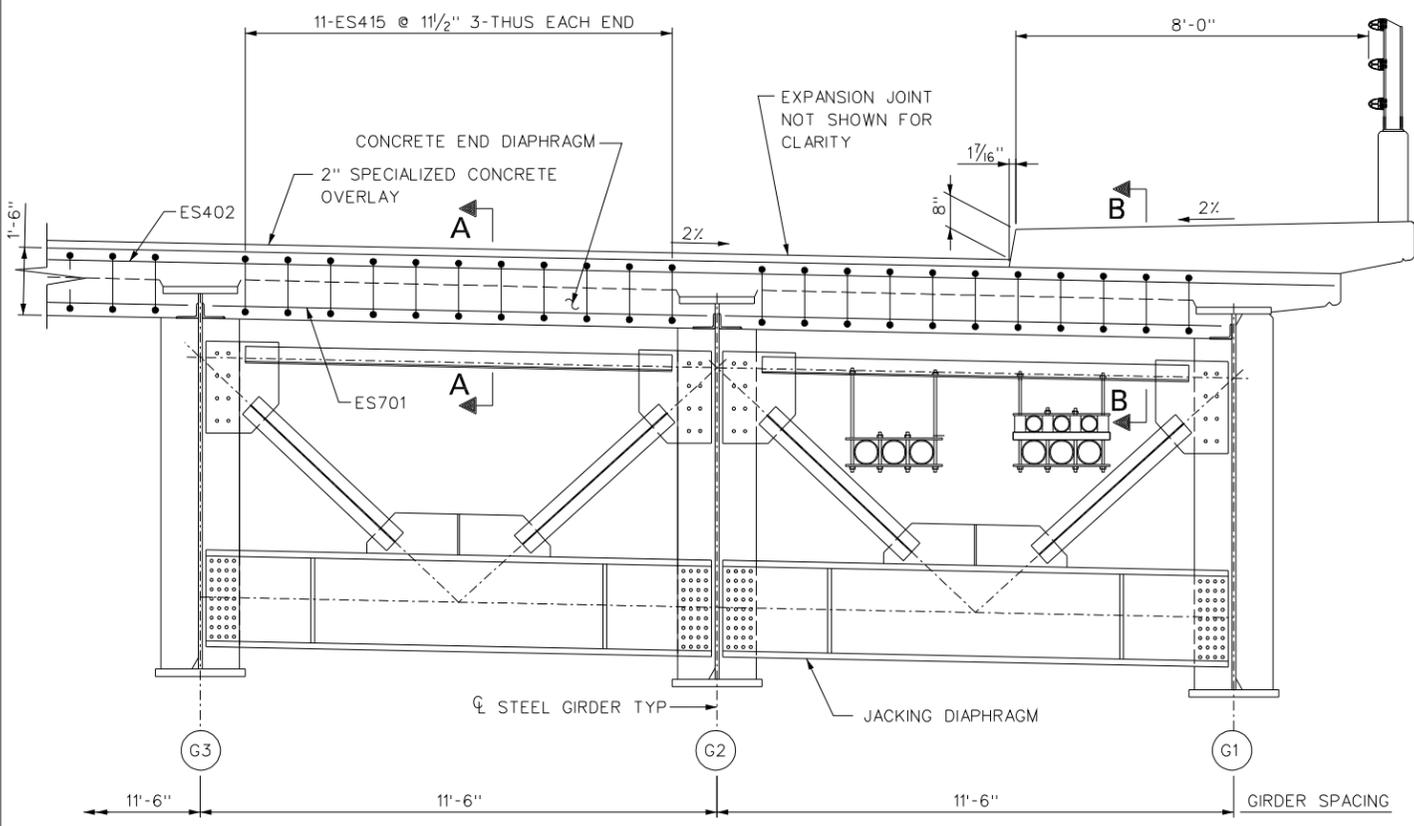
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03/31/2003

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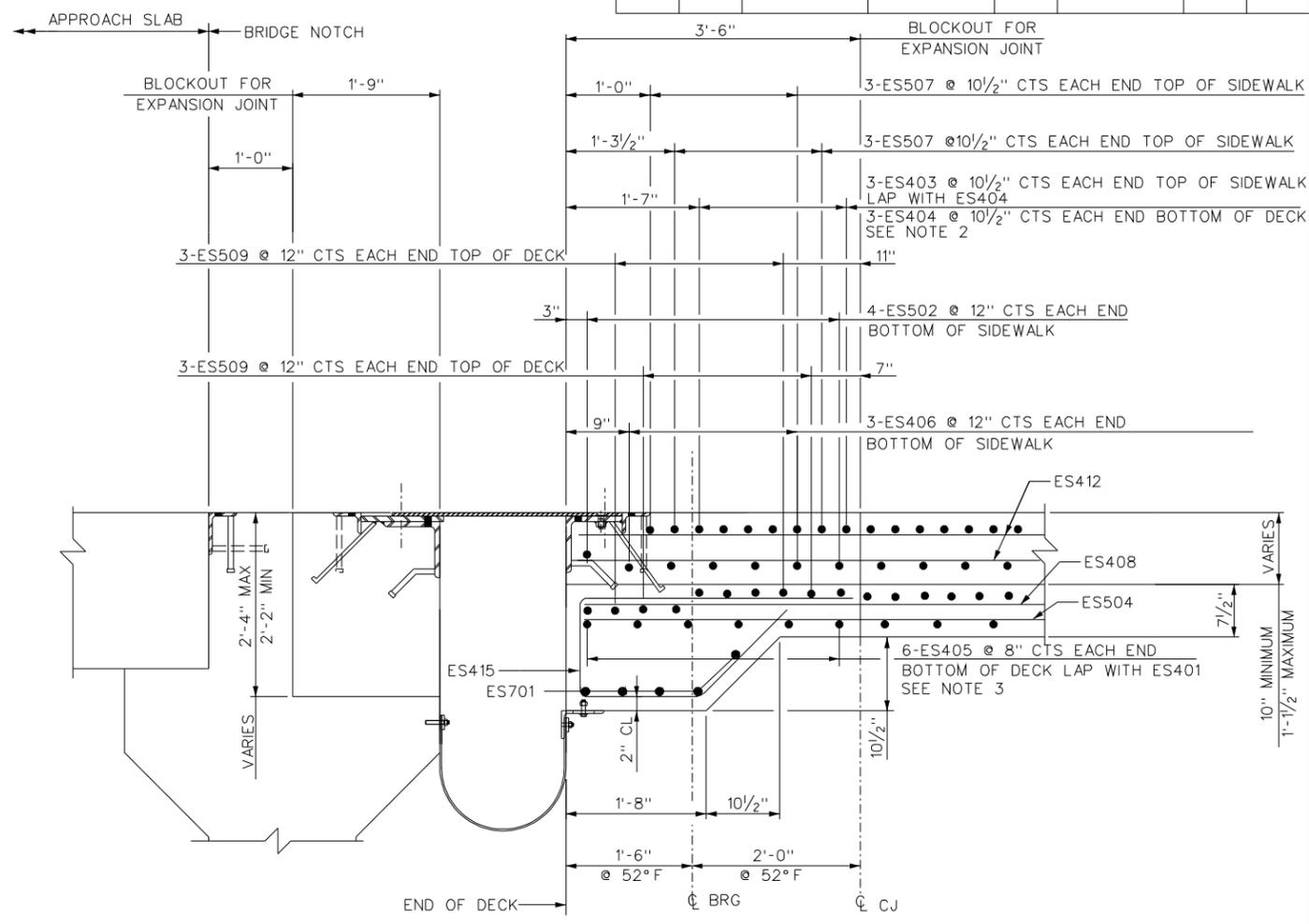
J06C29C98 - BRIDGE 1

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	206	407



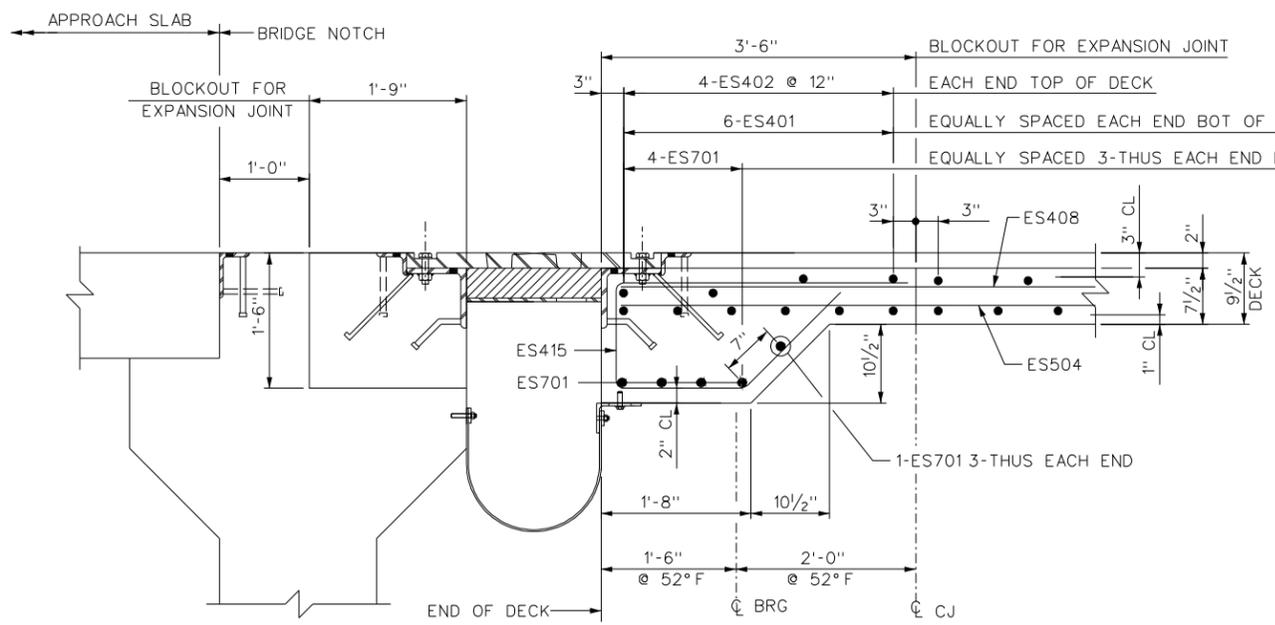
PART END ELEVATION
(SHOWING TYPICAL CONCRETE END DIAPHRAGM)

0 1 2 FEET



SECTION B-B

6 0 6 12 INCHES



SECTION A-A

6 0 6 12 INCHES

NOTES:

1. FOR JACKING DIAPHRAGM DETAILS SEE SHEET 27.
2. ES404 NOT SHOWN FOR CLARITY. SEE SECTION A-A SHEET 52.
3. SEE SECTION A-A FOR ES401 BARS.

LEGEND:

- CJ - CONSTRUCTION JOINT
- BOT - DENOTES BOTTOM
- CTS - CENTERS

NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
CONCRETE END DIAPHRAGM DETAILS**

DESIGNED <i>JDM</i>	DATE 11/02
DRAWN <i>RQH</i>	11/02
CHECKED <i>PWP</i>	11/02
CHECKED <i>PWP</i>	11/02

Baker
Michael Baker Jr., Inc.

Charleston, W. Va.

SHEET **50** OF **93**
BRIDGE NO. **4919**

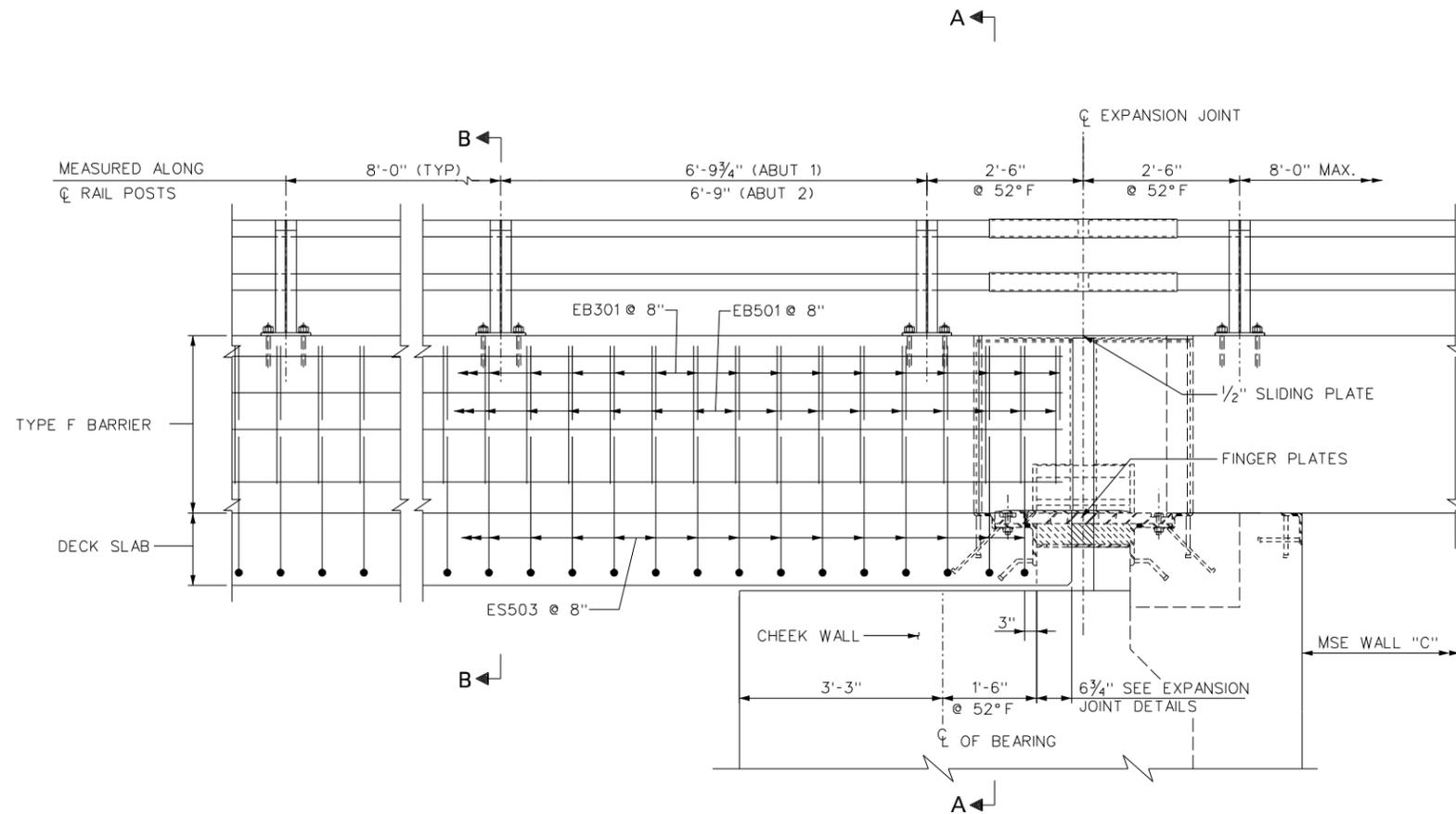
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03/31/2003

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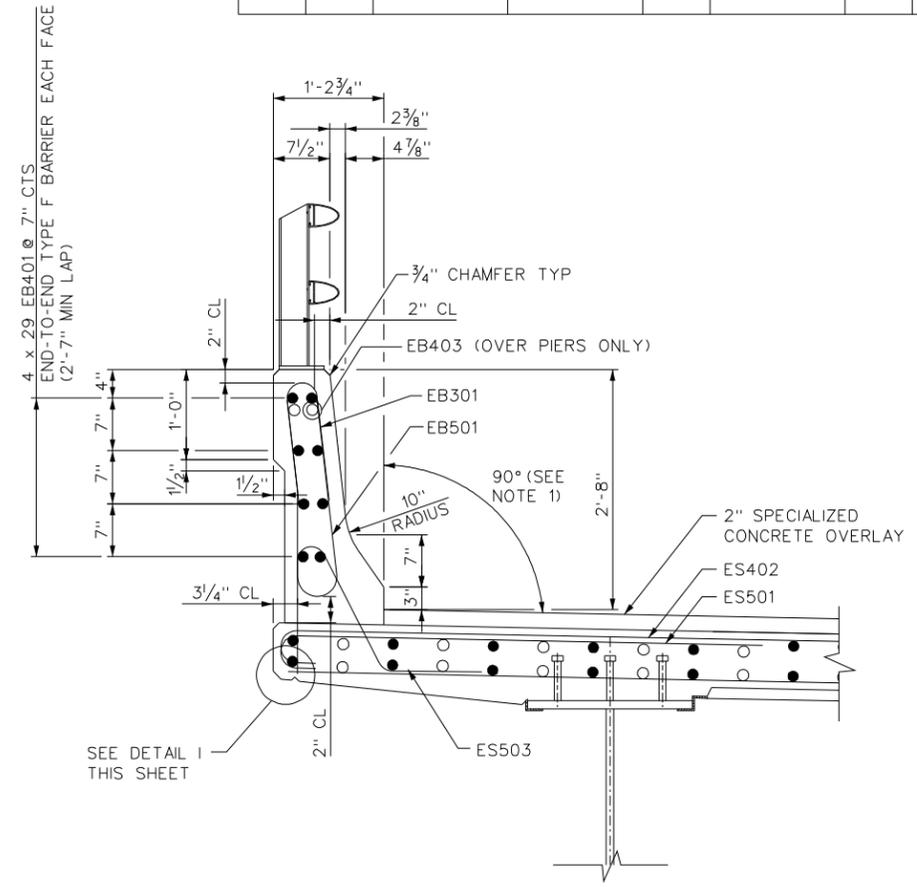
J0629C98 - BRIDGE 1

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	207	407



TYPE F BARRIER PARTIAL ELEVATION AT ABUTMENT

(ABUT 1 SHOWN, ABUT 2 OPPOSITE HAND EXCEPT AS NOTED)

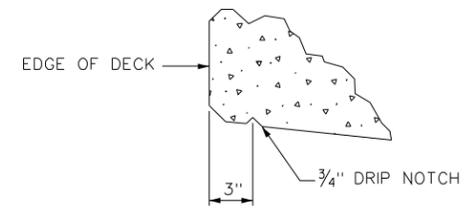


SECTION B-B

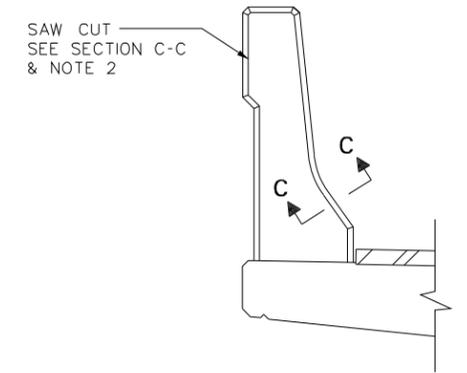


NOTES:

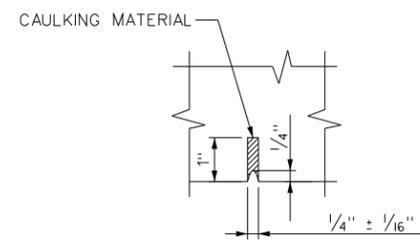
- CAST TYPE F BARRIER PERPENDICULAR TO THE DECK SURFACE.
- AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 1 INCH DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE TYPE F BARRIER. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE TYPE F BARRIER, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. THE SAWCUTS SHALL BE PLACED AS DENOTED ON THE DECK SLAB PLANS. THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE TYPE F BARRIER. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL CONFORMING TO WEST VIRGINIA STANDARD SPECIFICATIONS SECTION 501.16.1-SILICONE SEALANT TO A MINIMUM OF 1 INCH. THE BOTTOM 1/2 INCH OF THE INSIDE AND OUTSIDE FACE SHOULD BE LEFT UNSEALED TO ALLOW WATER TO ESCAPE.



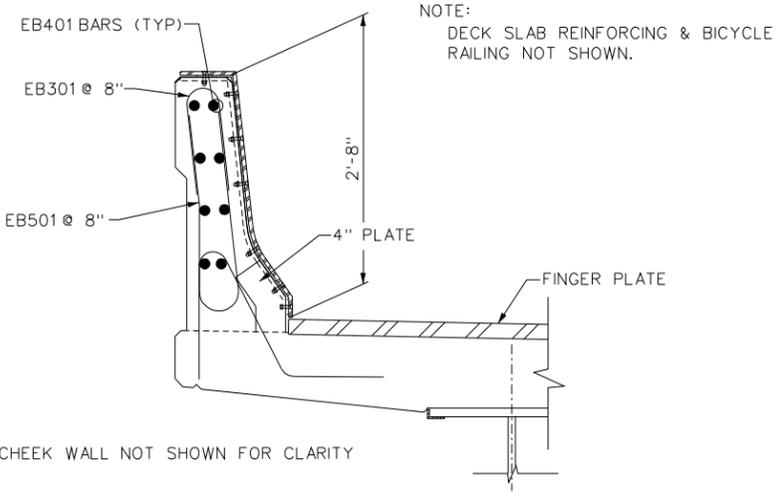
DETAIL I
(NOT TO SCALE)



TYPE F BARRIER CONTROL JOINT DETAIL



SECTION C-C
(NOT TO SCALE)



SECTION A-A



NO.	REVISION	DATE	BY

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
BARRIER DETAILS - I

DESIGNED <i>JDM</i>	DATE 11/02
DRAWN <i>RQH</i>	11/02
CHECKED <i>PWP</i>	11/02
CHECKED <i>PWP</i>	11/02

Baker
Michael Baker Jr., Inc.

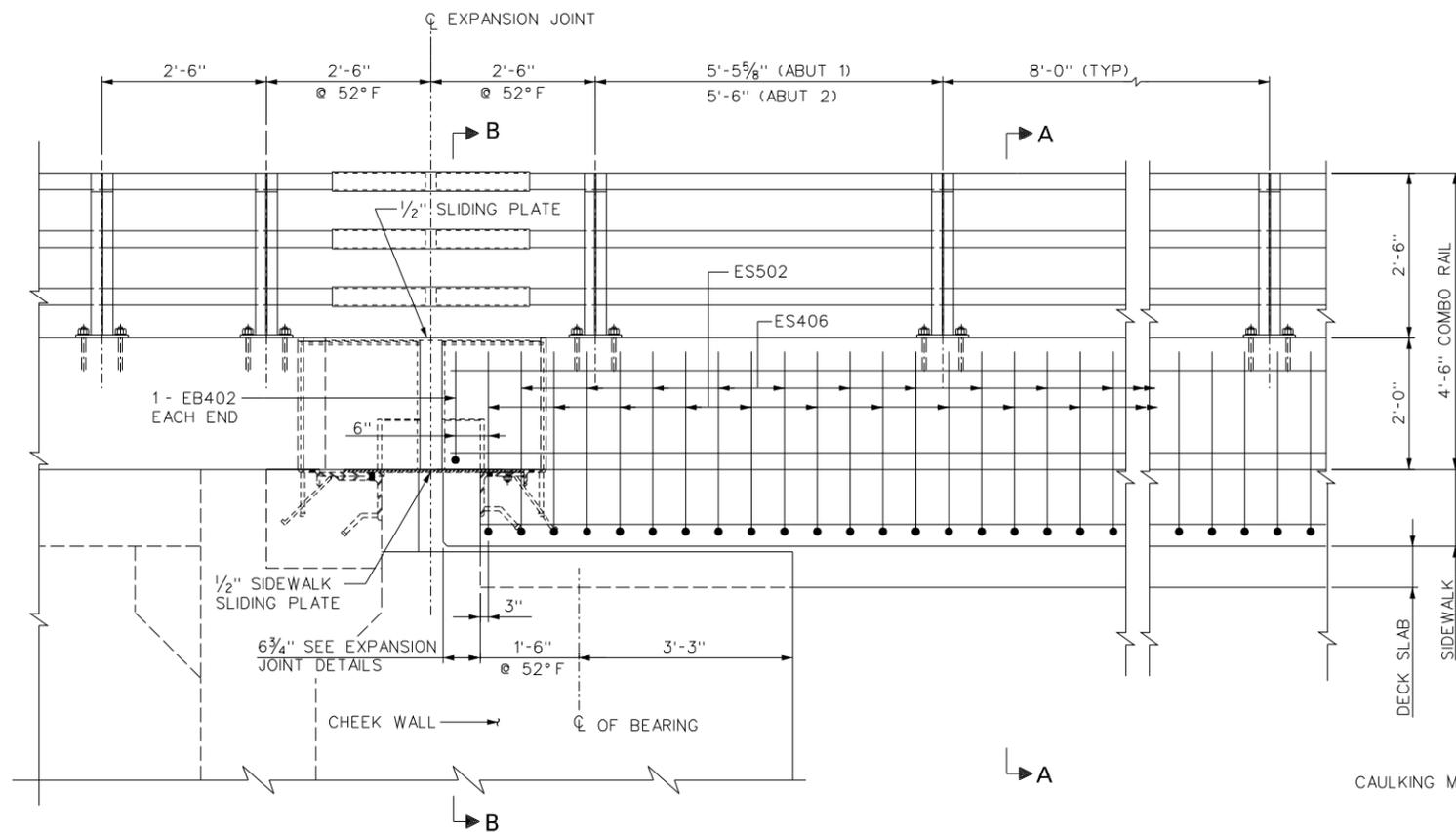
Charleston, W.Va.

SHEET **51** OF **93**
BRIDGE NO. **4919**

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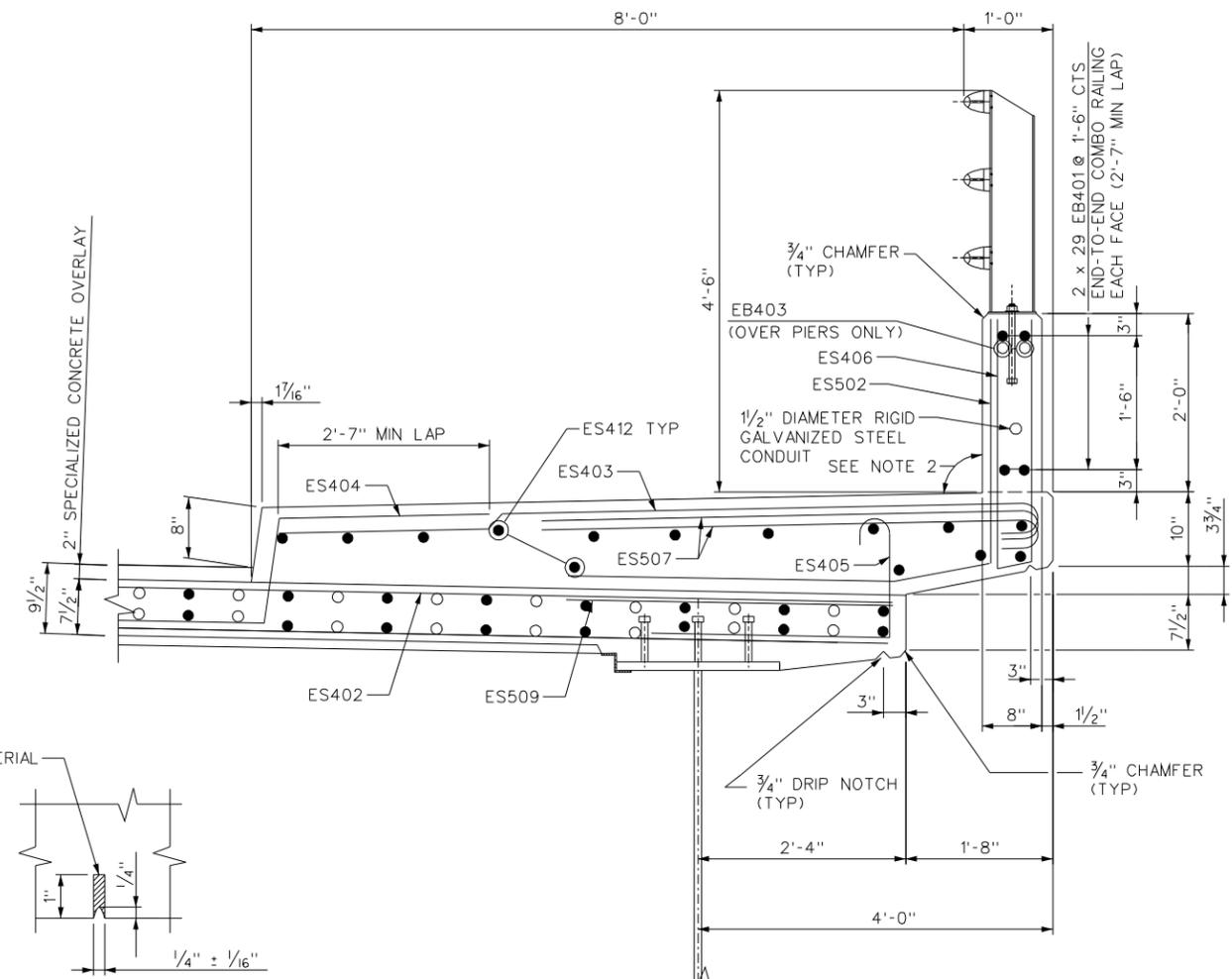
03/31/2003

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	208	407

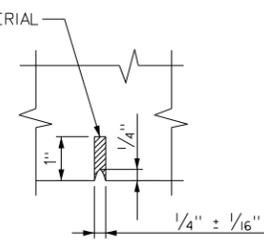


COMBO RAIL PARTIAL ELEVATION AT ABUTMENT

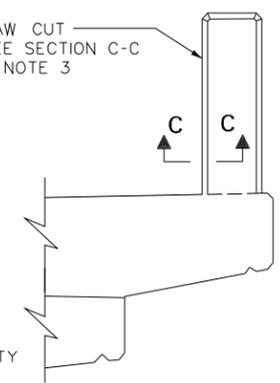
(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR EXCEPT AS NOTED)



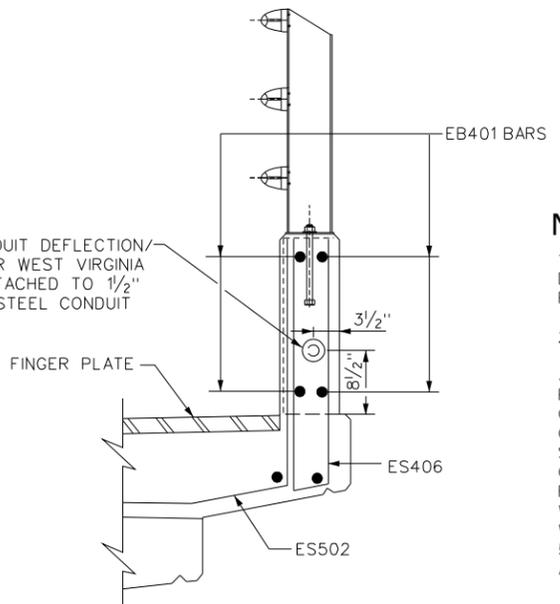
SECTION A-A
6 0 6 12 INCHES



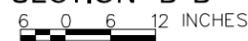
SECTION C-C
(NOT TO SCALE)



BARRIER CONTROL JOINT DETAIL



SECTION B-B



NOTES:

1. THE COST OF THE 1/2" DIAMETER RIGID GALVANIZED STEEL CONDUIT AND CONDUIT DEFLECTION/EXPANSION JOINT FITTING ARE INCLUDED WITH THE HIGHWAY LIGHTING PORTION OF THE CONTRACT.
2. FACE OF SIDEWALK BARRIER TO BE PLUMB.
3. AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 1 INCH DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE BARRIER. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE BARRIER, STARTING AND ENDING AT THE ELEVATION OF THE SIDEWALK. THE SAWCUTS SHALL BE PLACED AS DENOTED ON THE DECK SLAB PLANS. THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE BARRIER. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL CONFORMING TO WEST VIRGINIA STANDARD SPECIFICATIONS SECTION 501.16.1-SILICONE SEALANT TO A MINIMUM OF 1 INCH. THE BOTTOM 1/2 INCH OF THE INSIDE AND OUTSIDE FACE SHOULD BE LEFT UNSEALED TO ALLOW WATER TO ESCAPE.

NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
BARRIER DETAILS - II**

DESIGNED <i>JDM</i>	DATE 11/02
DRAWN <i>RQH</i>	11/02
CHECKED <i>PWP</i>	11/02
CHECKED <i>PWP</i>	11/02

Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

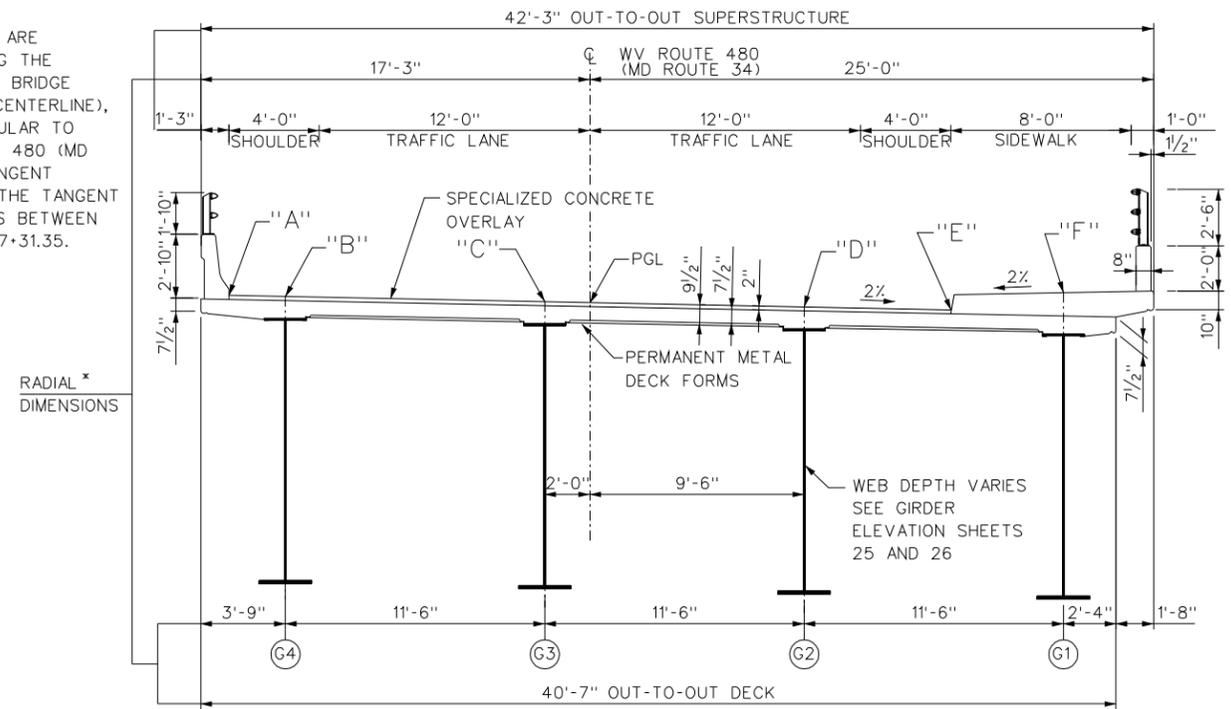
SHEET **52** OF **93**
BRIDGE NO. **4919**

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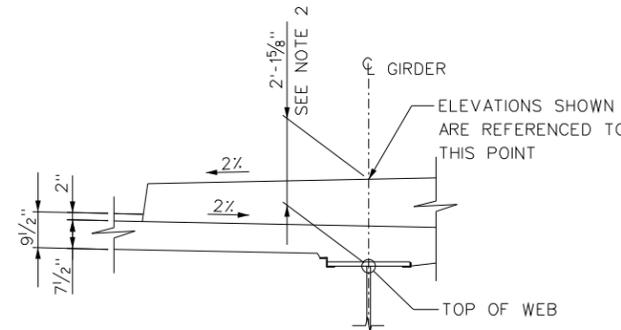
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	209	407

LOCATION	LEFT GUTTER ELEVATION "A"	G4	G3	PGL ELEVATION	G2	RIGHT GUTTER ELEVATION "E"	G1
		ELEVATION "B"	ELEVATION "C"		ELEVATION "D"		ELEVATION "F"
CL BRG ABUT 1	378.95	378.90	378.67	378.63	378.44	378.31	379.08
.05 SPAN	379.03	378.98	378.75	378.71	378.52	378.39	379.16
.1 SPAN	379.13	379.08	378.85	378.81	378.62	378.49	379.26
.15 SPAN	379.26	379.21	378.98	378.94	378.75	378.62	379.38
.2 SPAN	379.40	379.35	379.12	379.08	378.89	378.76	379.53
.25 SPAN	379.57	379.52	379.29	379.25	379.06	378.93	379.70
.3 SPAN	379.76	379.71	379.48	379.44	379.25	379.12	379.89
.35 SPAN	379.97	379.92	379.69	379.65	379.46	379.33	380.10
.4 SPAN	380.18	380.13	379.90	379.86	379.67	379.54	380.31
.45 SPAN	380.40	380.35	380.12	380.08	379.89	379.76	380.52
.5 SPAN	380.61	380.56	380.33	380.29	380.10	379.97	380.74
.55 SPAN	380.83	380.78	380.55	380.51	380.32	380.19	380.95
.6 SPAN	381.04	380.99	380.76	380.72	380.53	380.40	381.17
.65 SPAN	381.26	381.21	380.98	380.94	380.75	380.62	381.38
.7 SPAN	381.47	381.42	381.19	381.15	380.96	380.83	381.60
.75 SPAN	381.69	381.64	381.41	381.37	381.18	381.05	381.81
.8 SPAN	381.90	381.85	381.62	381.58	381.39	381.26	382.03
.85 SPAN	382.11	382.06	381.83	381.79	381.60	381.47	382.24
.9 SPAN	382.33	382.28	382.05	382.01	381.82	381.69	382.46
.95 SPAN	382.54	382.49	382.26	382.22	382.03	381.90	382.67
CL PIER 1	382.76	382.71	382.48	382.44	382.25	382.12	382.88
.05 SPAN	383.02	382.97	382.74	382.70	382.51	382.38	383.14
.1 SPAN	383.24	383.19	382.96	382.92	382.73	382.60	383.36
.15 SPAN	383.42	383.37	383.14	383.10	382.91	382.78	383.55
.2 SPAN	383.58	383.53	383.30	383.26	383.07	382.94	383.70
.25 SPAN	383.69	383.64	383.41	383.37	383.18	383.05	383.82
.3 SPAN	383.77	383.72	383.49	383.45	383.26	383.13	383.90
.35 SPAN	383.81	383.76	383.53	383.49	383.30	383.17	383.94
.4 SPAN	383.82	383.77	383.54	383.50	383.31	383.18	383.94
.45 SPAN	383.79	383.74	383.51	383.47	383.28	383.15	383.92
.5 SPAN	383.72	383.67	383.44	383.40	383.21	383.08	383.85
.55 SPAN	383.62	383.57	383.34	383.30	383.11	382.98	383.75
.6 SPAN	383.49	383.44	383.21	383.17	382.98	382.85	383.61
.65 SPAN	383.31	383.26	383.03	382.99	382.80	382.67	383.44
.7 SPAN	383.11	383.06	382.83	382.79	382.60	382.47	383.23
.75 SPAN	382.86	382.81	382.58	382.54	382.35	382.22	382.99
.8 SPAN	382.58	382.53	382.30	382.26	382.07	381.94	382.71
.85 SPAN	382.26	382.21	381.98	381.94	381.75	381.62	382.39
.9 SPAN	381.91	381.86	381.63	381.59	381.40	381.27	382.04
.95 SPAN	381.52	381.47	381.24	381.20	381.01	380.88	381.65
CL PIER 2	381.10	381.05	380.82	380.78	380.59	380.46	381.23
.05 SPAN	380.76	380.71	380.48	380.44	380.25	380.12	380.88
.1 SPAN	380.41	380.36	380.13	380.09	379.90	379.77	380.54
.15 SPAN	380.07	380.02	379.79	379.75	379.56	379.43	380.20
.2 SPAN	379.73	379.68	379.45	379.41	379.22	379.09	379.85
.25 SPAN	379.38	379.33	379.10	379.06	378.87	378.74	379.51
.3 SPAN	379.04	378.99	378.76	378.72	378.53	378.40	379.17
.35 SPAN	378.70	378.65	378.42	378.38	378.19	378.06	378.82
.4 SPAN	378.35	378.30	378.07	378.03	377.84	377.71	378.48
.45 SPAN	378.01	377.96	377.73	377.69	377.50	377.37	378.14
.5 SPAN	377.67	377.62	377.39	377.35	377.16	377.03	377.79
.55 SPAN	377.32	377.27	377.04	377.00	376.81	376.68	377.45
.6 SPAN	376.98	376.93	376.70	376.66	376.47	376.34	377.11
.65 SPAN	376.64	376.59	376.36	376.32	376.13	376.00	376.77
.7 SPAN	376.30	376.25	376.02	375.98	375.79	375.66	376.42
.75 SPAN	375.95	375.90	375.67	375.63	375.44	375.31	376.08
.8 SPAN	375.65	375.60	375.37	375.33	375.14	375.01	375.77
.85 SPAN	375.38	375.33	375.10	375.06	374.87	374.74	375.51
.9 SPAN	375.16	375.11	374.88	374.84	374.65	374.52	375.29
.95 SPAN	374.98	374.93	374.70	374.66	374.47	374.34	375.11
CL BRG ABUT 2	374.84	374.79	374.56	374.52	374.33	374.20	374.97

* DIMENSIONS LISTED ABOVE ARE MEASURED RADIALLY ALONG THE CURVED PORTIONS OF THE BRIDGE (PERPENDICULAR TO THE CENTERLINE), AND MEASURED PERPENDICULAR TO CENTERLINE OF WV ROUTE 480 (MD ROUTE 34) ALONG THE TANGENT PORTION OF THE BRIDGE. THE TANGENT PORTION OF THE BRIDGE IS BETWEEN STA 310+02.91 AND STA 317+31.35.

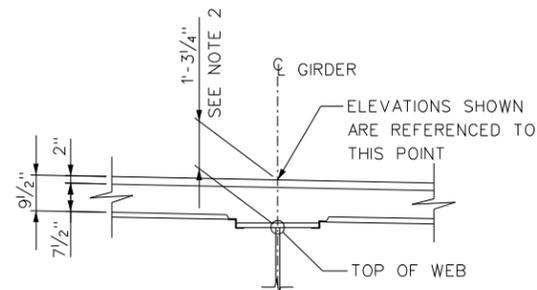


TYPICAL SECTION



HAUNCH DETAIL GIRDER G1

NOT TO SCALE



HAUNCH DETAIL GIRDER G2, G3, & G4

NOT TO SCALE

NOTES:

1. THE PARAPETS AND SIDEWALK MUST BE POURED AFTER THE ENTIRE CONCRETE DECK HAS ATTAINED A COMPRESSIVE STRENGTH (f'c) OF 4 KSI.
2. AFTER ALL GIRDERS HAVE BEEN ERECTED AND FALSEWORK REMOVED, THE CONTRACTOR SHALL TAKE ELEVATIONS ALONG THE TOPS OF GIRDERS AT POINTS WHERE THE ELEVATIONS ARE SHOWN IN THE TABLE. THE DIFFERENCE BETWEEN THESE ELEVATIONS AND THE GIVEN TOP OF DECK OR SIDEWALK ELEVATIONS PLUS THE AMOUNT OF DEFLECTION DUE TO DEAD LOAD OF CONCRETE DECK, PERMANENT METAL DECK FORMS, AND SUPERIMPOSED DEAD LOADS, WILL BE THE THICKNESS OF DECK OVER THE GIRDERS AT THESE POINTS. THE MINIMUM TOTAL DECK THICKNESS OVER THE CENTERLINE OF GIRDERS G2, G3, AND G4 INCLUDING TOP FLANGE THICKNESS, SHALL NOT BE LESS THAN 1'-3/4" FROM THE TOP OF THE WEB, AND 2'-15/8" FROM THE TOP OF THE WEB OVER THE CENTERLINE OF GIRDER G1 INCLUDING TOP FLANGE THICKNESS MEASURED TO THE TOP OF SIDEWALK. IF THE GIRDERS HAVE EXCESSIVE CAMBER AND THIS MINIMUM CAN NOT BE OBTAINED, THE GRADE LINE SHALL BE ADJUSTED TO OBTAIN THE MINIMUM DECK THICKNESS.
3. ELEVATIONS IN TABLE ARE LOCATED AT TOP OF 2" SPECIALIZED CONCRETE OVERLAY WITH THE EXCEPTION OF ELEVATION "F" WHICH IS LOCATED AT THE TOP OF SIDEWALK. ELEVATIONS B, C, D, AND F ARE AT THE CENTERLINE OF THEIR RESPECTIVE GIRDER.
4. ELEVATIONS ARE GIVEN IN FEET.

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
TOP OF DECK ELEVATIONS

DESIGNED	DATE
JDM	11/02
DRAWN	
WBC	11/02
CHECKED	
PWP	11/02
CHECKED	
PWP	11/02

Baker
Michael Baker Jr., Inc.

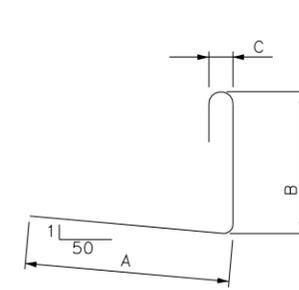
Charleston, W.Va.

SHEET
53 OF 93
BRIDGE NO.
4919

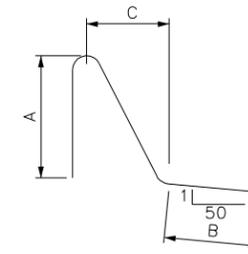
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	210	407

DECK SLAB REINFORCEMENT BAR SCHEDULE

MARK	TYPE	SIZE	NO	LENGTH	LOCATION	A	B	C	D	E	REMARK
ES401	STR	*4	1636	40'-3"							
ES402	19	*4	1091	40'-9"		40'-3"	0'-4"				
ES403	19	*4	1210	9'-0"	SIDEWALK	8'-6"	0'-4"				
ES404	33	*4	1246	6'-5"		2'-7"	1'-2 1/2"	2'-7"	0'-2 1/2"		
ES405	1	*4	1636	4'-7"		2'-7"	1'-6"	0'-4"			
ES406	41	*4	1053	5'-6"	SIDEWALK	0'-5"	0'-1"	2'-6"			
ES407	STR	*4	370	37'-7"							
ES408	STR	*4	74	38'-2"							
ES409	STR	*4	72	8'-5"							
ES410	STR	*4	1168	39'-2"							
ES411	STR	*4	74	37'-2"							
ES412	STR	*4	406	40'-0"	SIDEWALK						
ES413	STR	*4	240	4'-0"							
ES414	43	*4	36	6'-4"	SIDEWALK	1'-3 3/4"	1'-0 1/8"	1'-6"			AT LIGHT BLISTER
ES415	40	*4	66	7'-4"		3'-2"	1'-2 1/2"	1'-5"	1'-6 1/2"		
ES416	STR	*4	54	6'-2"	SIDEWALK						AT LIGHT BLISTER (BEND IN FIELD)
ES501	19	*5	2176	5'-8"		5'-1"	0'-5"				
ES502	34	*5	1071	7'-4"	SIDEWALK	3'-8"	1'-1"	0'-2 1/2"	2'-7"		
ES503	10	*5	1636	6'-7"		1'-6"	3'-3"	0'-11 5/8"			
ES504	STR	*5	370	46'-7"							
ES505	STR	*5	74	9'-8"							
ES506	STR	*5	148	40'-2"							
ES507	19	*5	2386	5'-11"	SIDEWALK	5'-4"	0'-5"				
ES508	STR	*5	370	46'-11"							
ES509	STR	*5	2176	3'-8"							
ES510	44	*5	108	8'-7"	SIDEWALK	6'-7"	2'-0"				AT LIGHT BLISTER
ES511	44	*5	36	11'-8"	SIDEWALK	9'-8"	2'-0"				AT LIGHT BLISTER
ES512	STR	*5	74	37'-2"							
ES601	STR	*6	72	9'-8"							
ES602	STR	*6	144	40'-5"							
ES603	STR	*6	360	47'-5"							
ES701	STR		30	11'-0"							
EB301	21	*3	1638	2'-10"		0'-4"	1'-4"				
EB401	STR	*4	348	40'-1"							
EB402	42	*4	2	3'-9"		0'-5"	1'-8"				END OF COMBO RAIL
EB403	STR	*4	64	39'-8"							
EB404	45	*4	90	8'-0"	LIGHT BLISTER	1'-5"	1'-9 1/2"	1'-6"			
EB405	STR	*4	18	2'-0"	LIGHT BLISTER						
EB406	STR	*4	18	2'-7"	LIGHT BLISTER						
EB501	39	*5	1638	4'-8"		1'-2"	1'-0"	0'-4"	0'-5 1/4"		



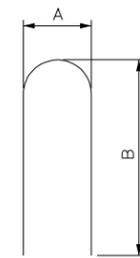
TYPE 1



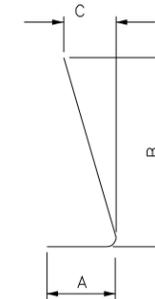
TYPE 10



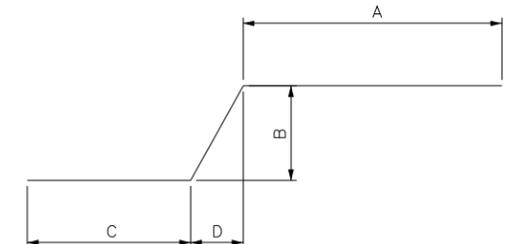
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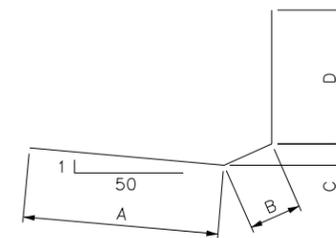
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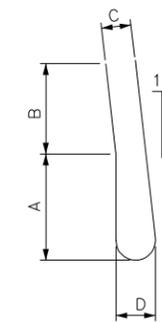
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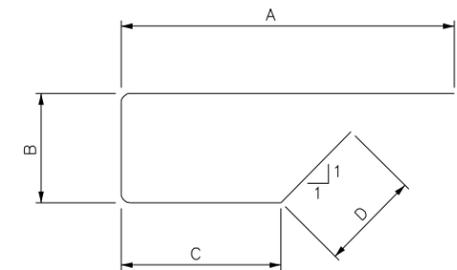
TYPE 33



TYPE 34



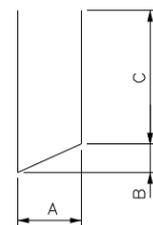
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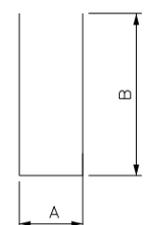
TYPE 40

NOTES:

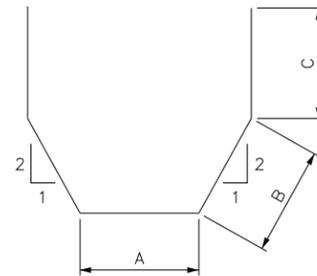
1. BARS WITH AND "E" IN THE PREFIX SHALL BE EPOXY COATED.
2. ALL BAR DIMENSIONS ARE MEASURED OUT TO OUT.



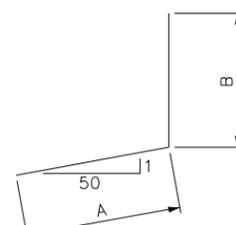
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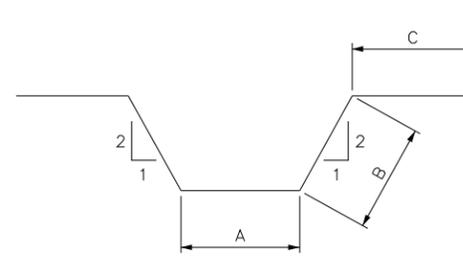
TYPE 42



TYPE 43



TYPE 44



TYPE 45

NO.	REVISION	DATE:	BY:
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W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
DECK SLAB BAR SCHEDULE

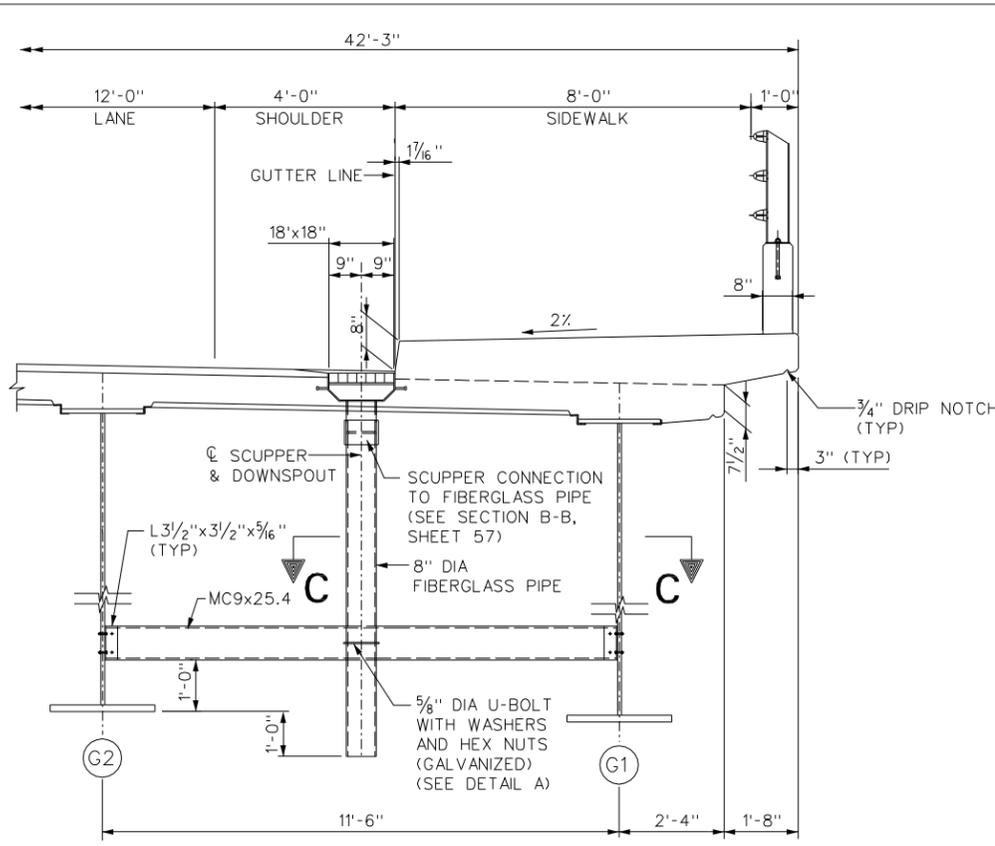
DESIGNED JDM	DATE 11/02
DRAWN WBE	DATE 11/02
CHECKED PWP	DATE 11/02
CHECKED PWP	DATE 11/02

Baker
Michael Baker Jr., Inc.

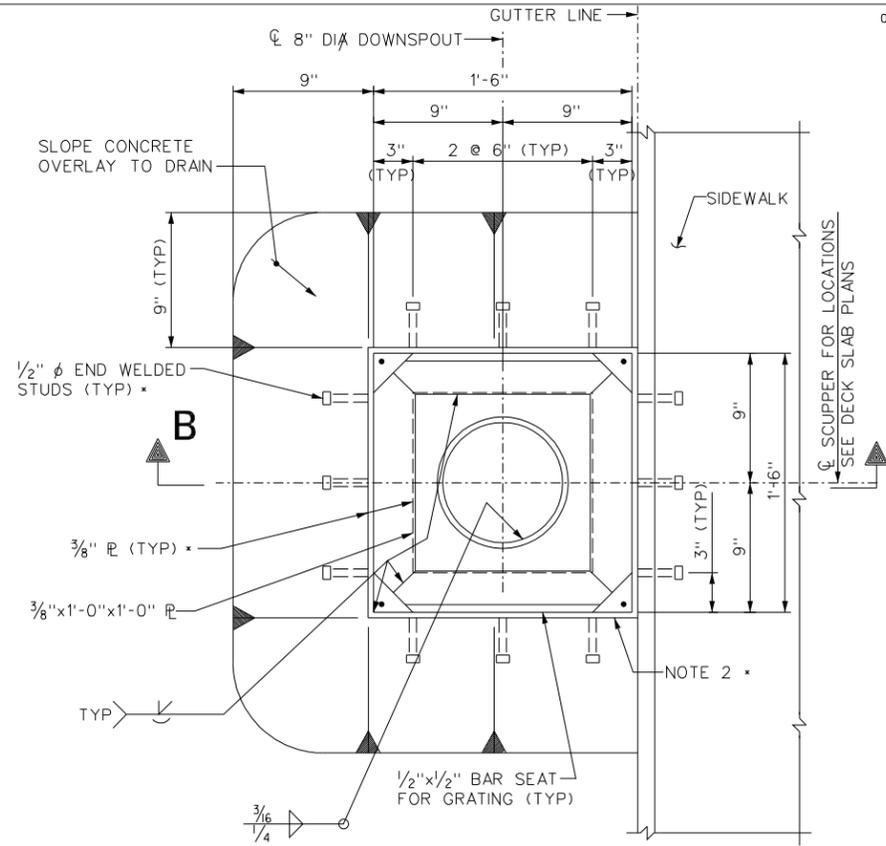
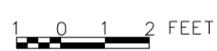
Charleston, W.Va.

SHEET
54 OF 93
BRIDGE NO.
4919

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03/31/2003



SECTION B-B AT GIRDER 1 & 2

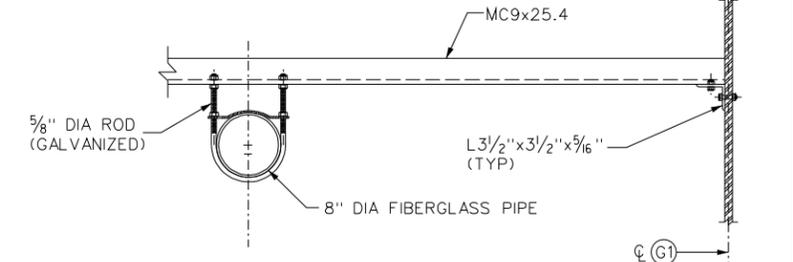


SCUPPER PLAN

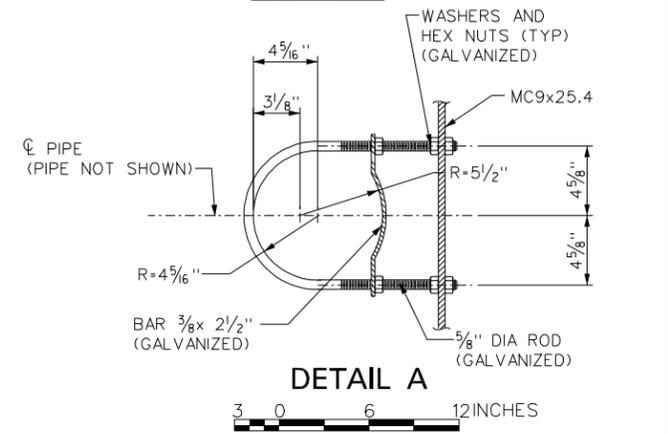
(GRATING NOT SHOWN FOR CLARITY)



PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	211	407



SECTION C-C

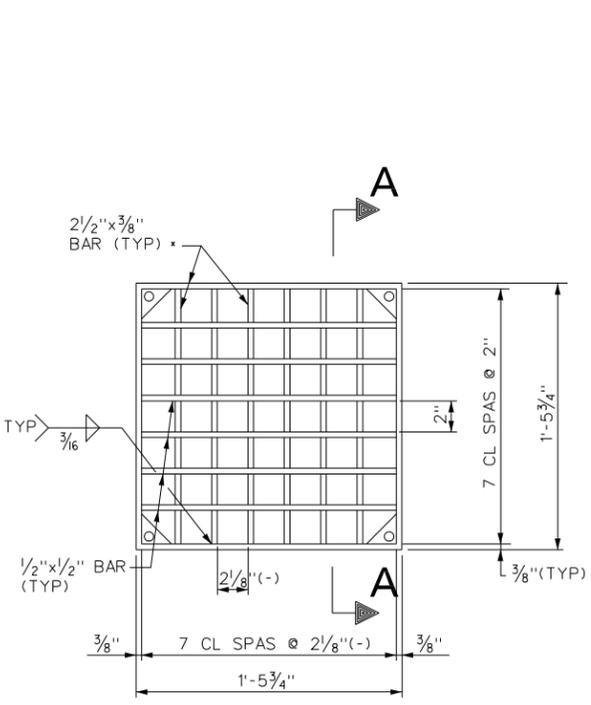


DETAIL A

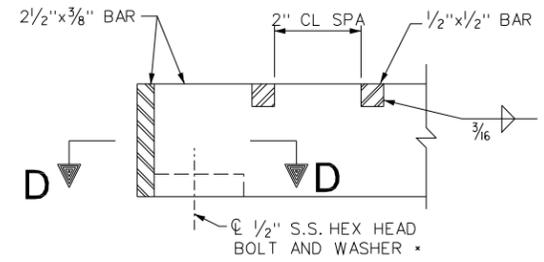


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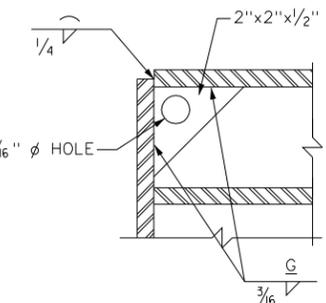
1. SEAL WELD FAR SIDE. CHIP AND GRIND SEAT SURFACE TO ENSURE SOLID SEATING OF GRATING.
2. 2"x2"x1/2" TRIANGULAR BAR. DRILL HOLES IN BARS WHILE ASSEMBLED WITH GRATINGS. TAP FOR 1/2" STAINLESS STEEL HEX HEAD BOLTS. MATCH MARK SCUPPER GRATING TO ENSURE PROPER FIT OR SHIP SCUPPER AND GRATING ASSEMBLED.
3. ALL COMPONENTS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M11 OR M232, AS APPLICABLE. ALL COMPONENTS VISIBLE BELOW THE DECK SHALL BE PAINTED AFTER GALVANIZING. GALVANIZED SURFACES WHICH ARE TO BE PAINTED SHALL BE SOLVENT CLEANED AND PRIMED ACCORDING TO THE PAINT MANUFACTURER'S SPECIFICATIONS. PAINT SYSTEM AND COLOR SHALL BE THE SAME AS USED ON THE STRUCTURAL STEEL.
4. THE COST OF ALL DECK DRAINAGE COMPONENTS, INCLUDING GALVANIZING AND PAINTING, SHALL BE INCLUDED UNDER ITEM 615001-001, STEEL SUPERSTRUCTURE.
5. SEE SHEETS 56 AND 57 FOR ADDITIONAL DRAINAGE DETAILS. SEE DECK SLAB PLANS FOR SCUPPER LOCATIONS.



GRATING PLAN



SECTION A-A

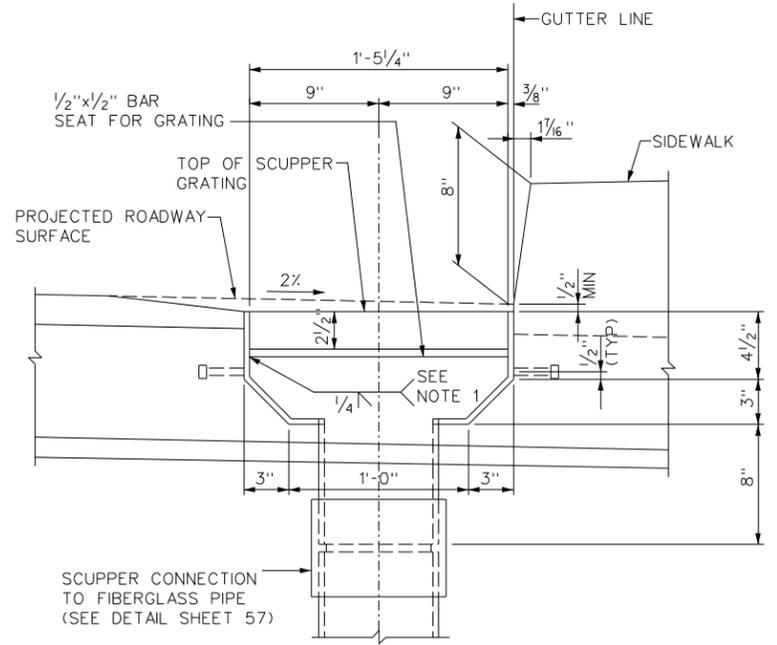


VIEW D-D



LEGEND

- T & B = TOP & BOTTOM
- COST IS INCIDENTAL TO FIBERGLASS PIPE



SECTION B-B

(GRATING NOT SHOWN FOR CLARITY)



DESIGNED	DATE
JDM	11/02
DRAWN	
RQH	11/02
CHECKED	
KAC	11/02
CHECKED	
AJF	11/02

NO.	REVISION	DATE	BY

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
SCUPPER DETAILS

Baker
Michael Baker Jr., Inc.

Charleston, W. Va.
SHEET 55 OF 93
BRIDGE NO. 4919

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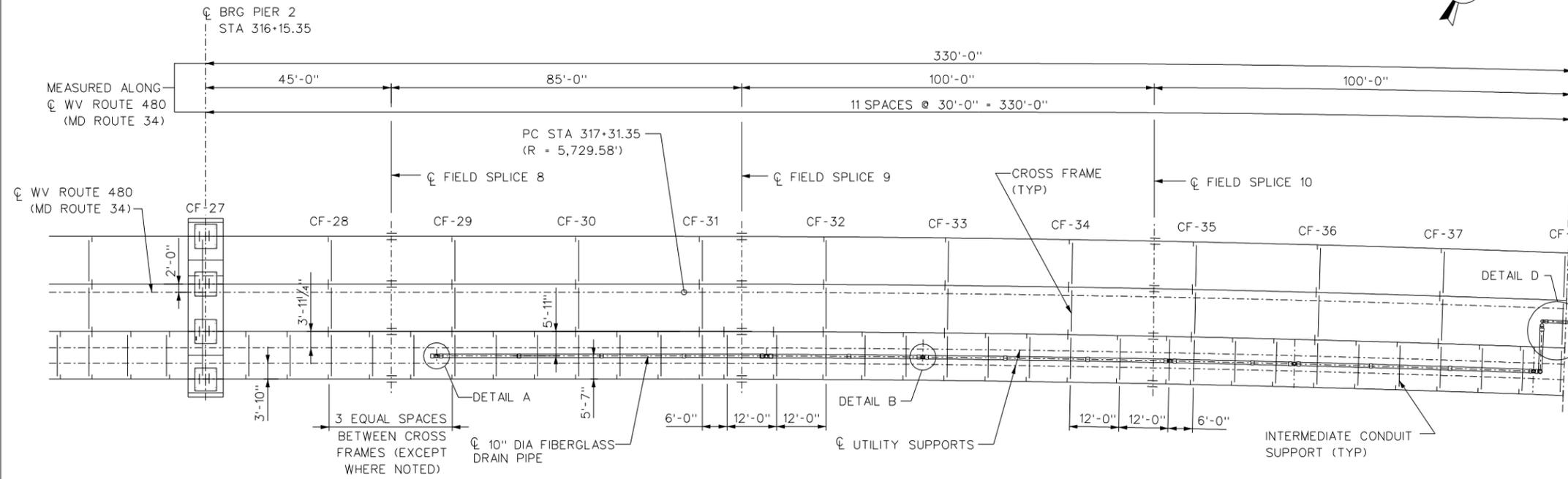
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03/31/2003

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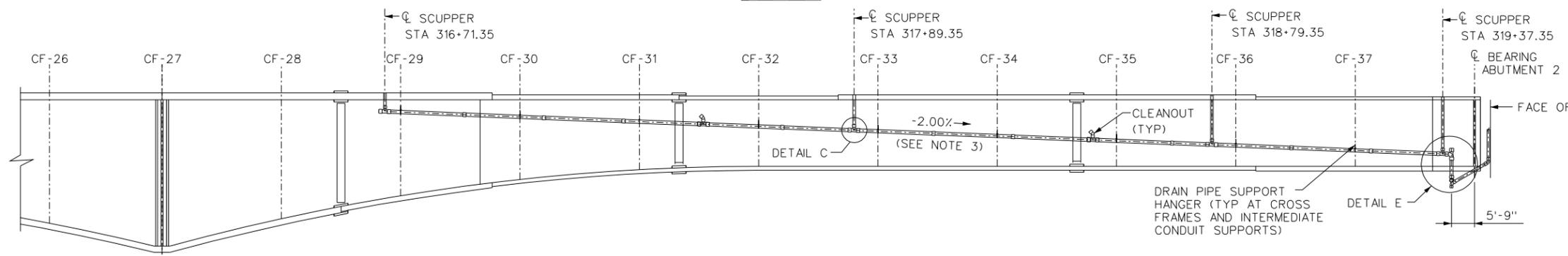
J06C2938 - BRIDGE b

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	212	407



SCUPPER DRAINAGE SYSTEM PLAN

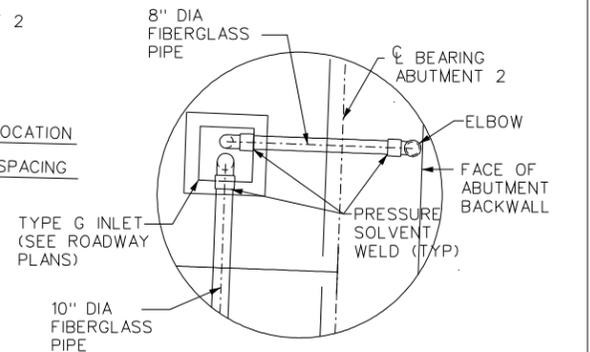
4 0 8 16 FEET



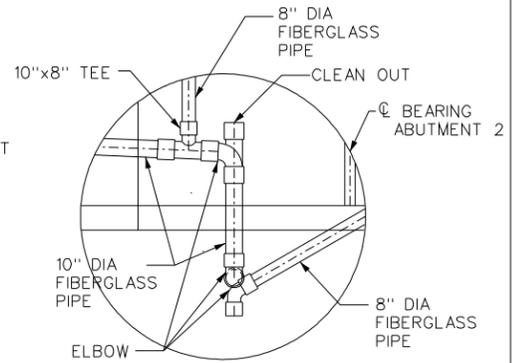
SCUPPER DRAINAGE SYSTEM ELEVATION

8 FEET
4
0
2
4 0 8 16 FEET

LEGEND:
CF = CROSS FRAME



DETAIL D
(SEE SHEET 66 FOR DRAINAGE AT ABUTMENT 2)



DETAIL E
(SEE SHEET 66 FOR DRAINAGE AT ABUTMENT 2)

NOTES:

- DIMENSIONS LISTED ABOVE ARE MEASURED RADIALLY ALONG THE CURVED PORTIONS OF THE BRIDGE, AND MEASURED NORMAL TO CENTERLINE OF WV ROUTE 480 (MD ROUTE 34) ALONG THE TANGENT PORTION OF THE BRIDGE (BETWEEN STA 310+02.91 AND STA 317+31.35).
- ALL FIBERGLASS PIPE, TEES & ELBOWS SHALL BE PAID FOR UNDER PAY ITEM 643010-024, 10" FIBERGLASS PIPE AND SHALL BE GRAY IN COLOR.
- 2.00% SLOPE MEASURED RELATIVE TO THE TOP FLANGE. ACTUAL DRAINAGE SLOPE VARIES FROM -4.08% TO -2.76% RELATIVE TO THE HORIZONTAL.
- SEE SHEETS 55 AND 57 FOR ADDITIONAL DRAINAGE NOTES.

NO.	REVISION	DATE	BY

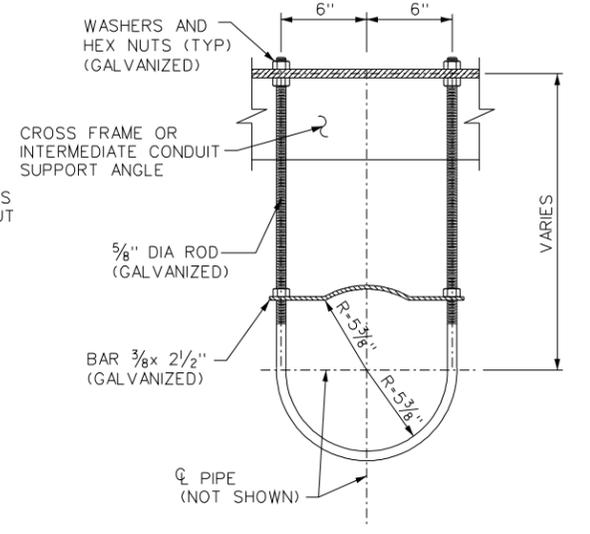
W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
SCUPPER DRAINAGE SYSTEM
PLAN AND ELEVATION SPAN 3

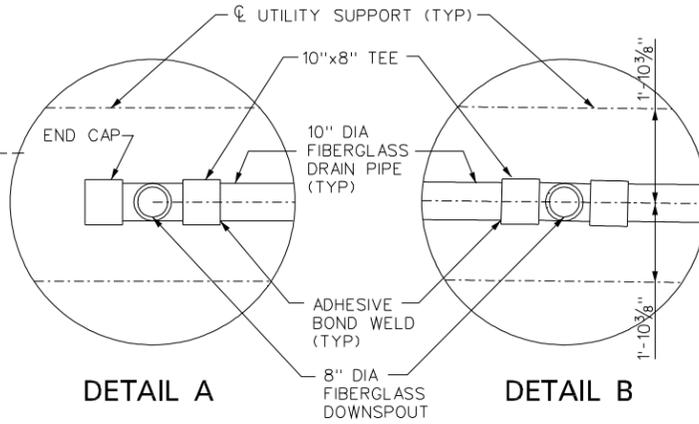
DESIGNED	DATE
DRAWN	DATE
CHECKED	DATE
CHECKED	DATE

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

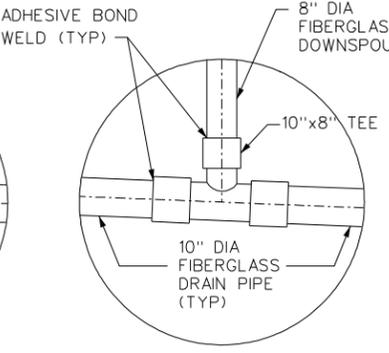
SHEET 56 OF 93
BRIDGE NO. 4919



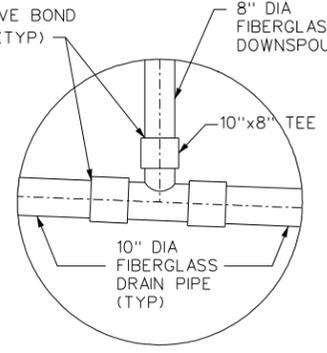
DRAIN PIPE SUPPORT HANGER



DETAIL A



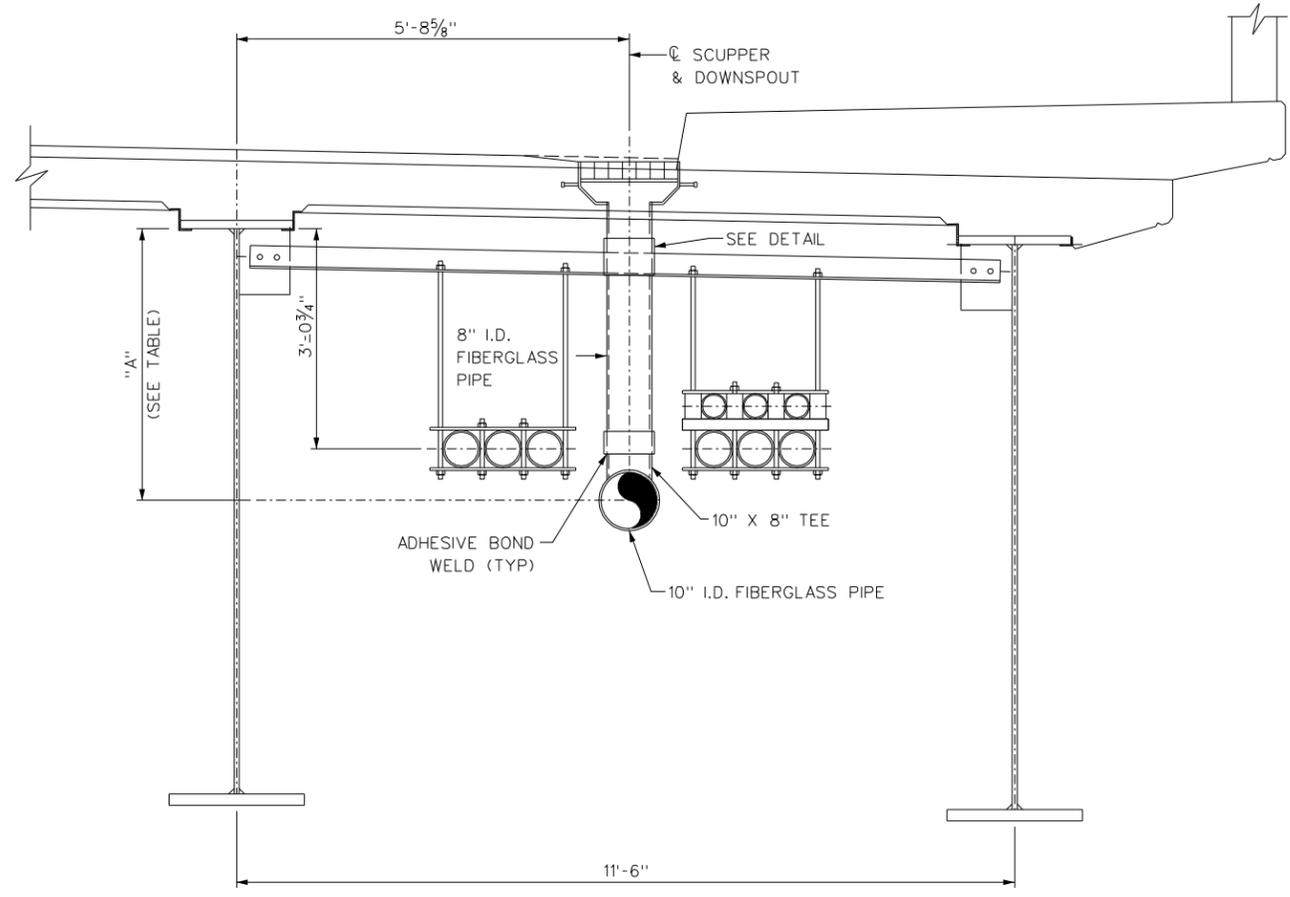
DETAIL B



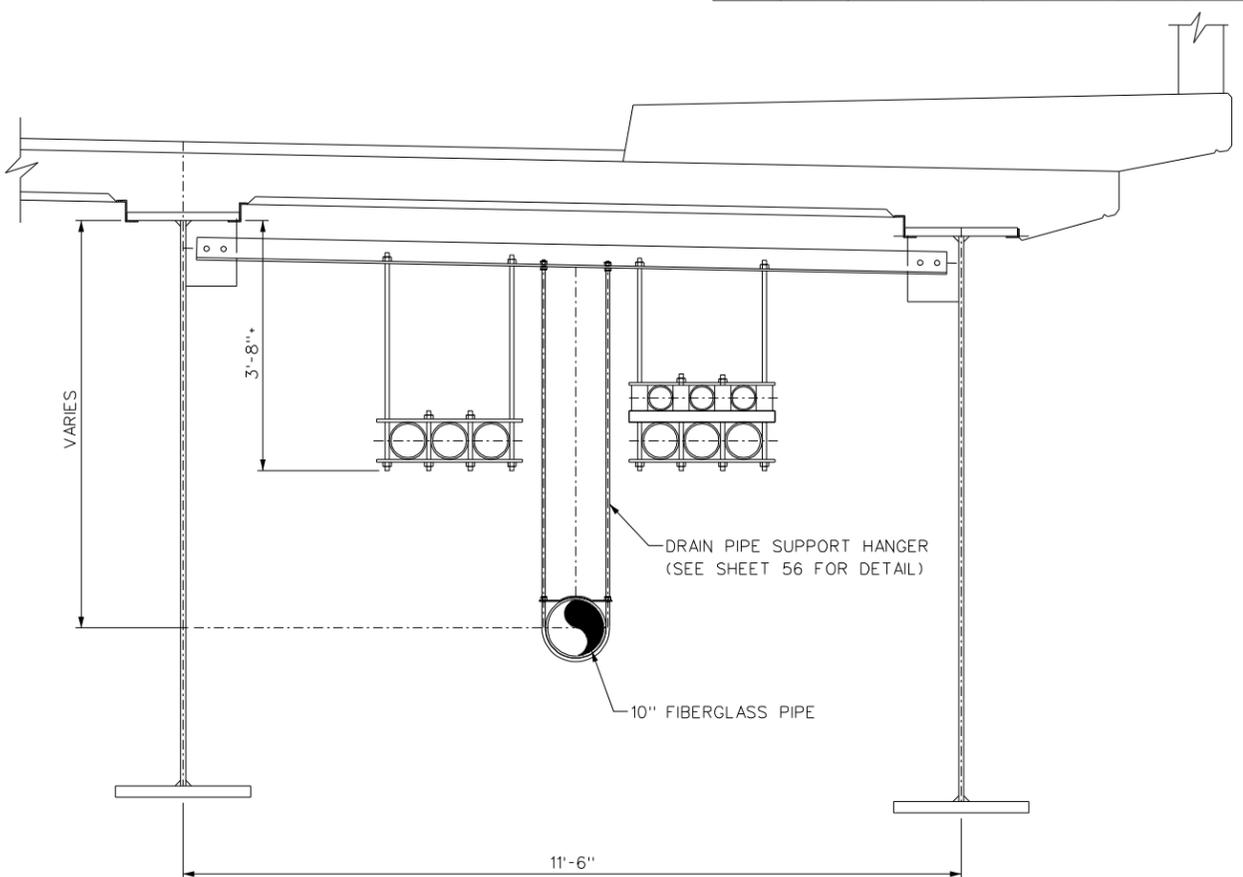
DETAIL C

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04/01/2003

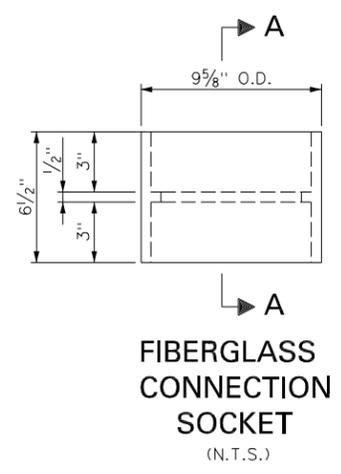
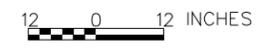
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	213	407



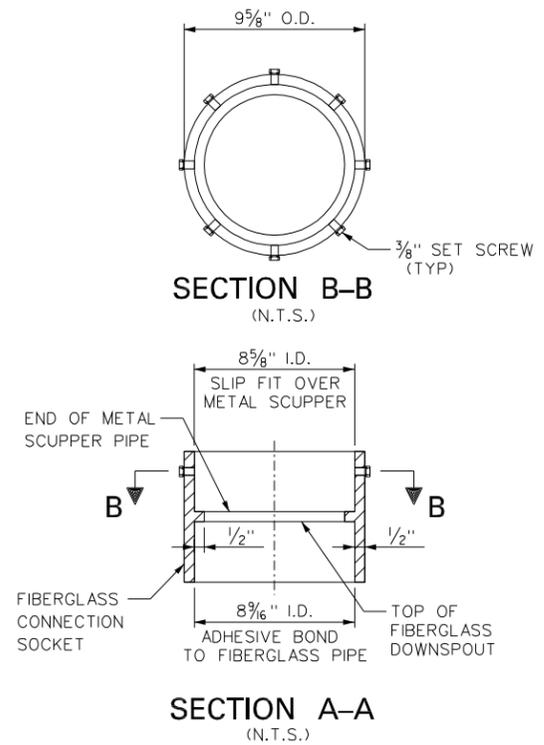
SCUPPER DRAINAGE SYSTEM DETAILS
AT SCUPPER DOWNSPOUTS



SCUPPER DRAINAGE SYSTEM DETAILS
AT INTERMEDIATE CONDUIT SUPPORTS
(CROSS FRAME LOCATIONS SIMILAR)



FIBERGLASS
CONNECTION
SOCKET
(N.T.S.)



SECTION A-A
(N.T.S.)

DRAIN PIPE LOCATIONS	
STATION	"A"
316+71.35	1'-5 1/16"
317+89.35	3'-9 3/4"
318+79.35	5'-7 3/8"
319+37.35	6'-9 1/4"

FIBERGLASS DRAIN PIPE DIMENSIONAL DATA		
NOMINAL SIZE	AVG WALL THICKNESS	NOMINAL WEIGHT
8"	0.115"	2.7 LB/FT
10"	0.125"	3.6 LB/FT

NOTES:

- ALL FIBERGLASS PIPE, TEES & ELBOWS SHALL BE PAID FOR UNDER PAY ITEM 643010-024, 10" FIBERGLASS PIPE AND SHALL BE GRAY IN COLOR.
- SEE SHEETS 55 AND 56 FOR ADDITIONAL DRAINAGE NOTES.

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER

SCUPPER DRAINAGE SYSTEM DETAILS

DESIGNED JDM	DATE 11/02
DRAWN RQH	11/02
CHECKED KJC	11/02
CHECKED AJF	11/02

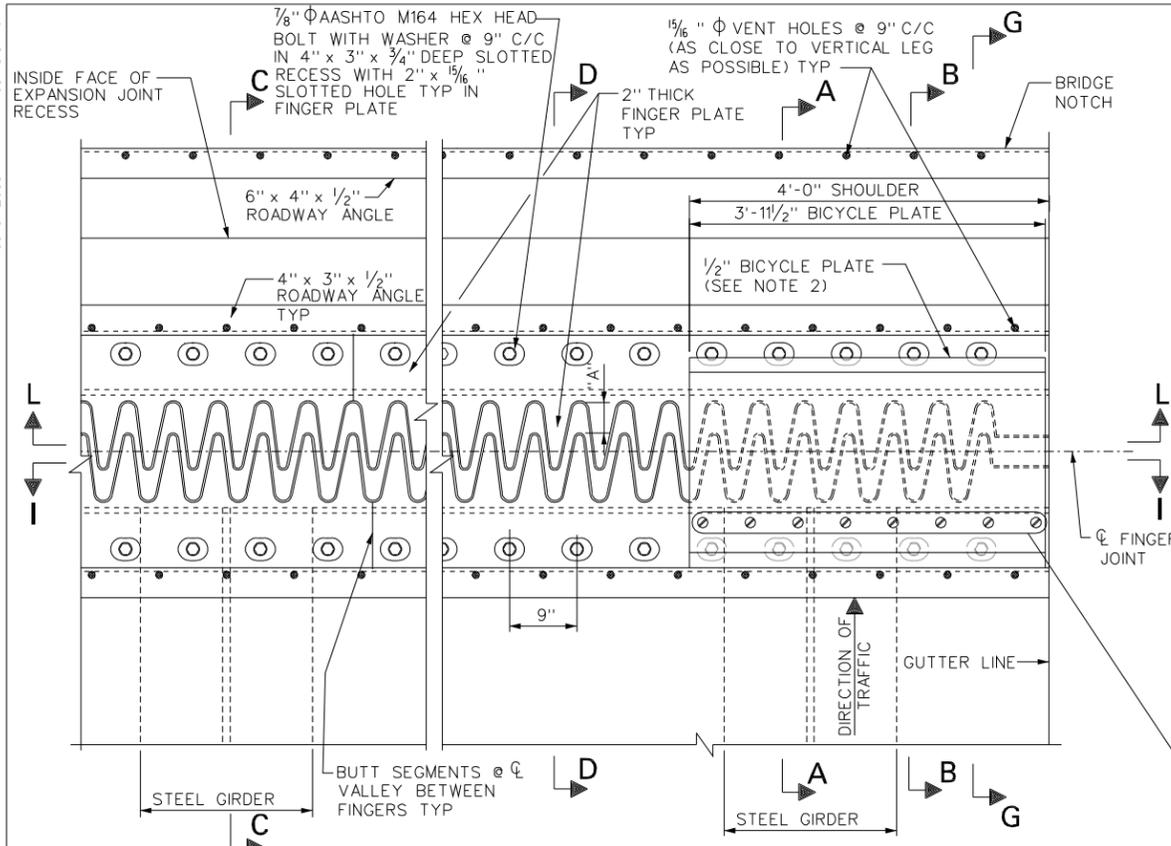
Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET
57 OF 93
BRIDGE NO.
4919

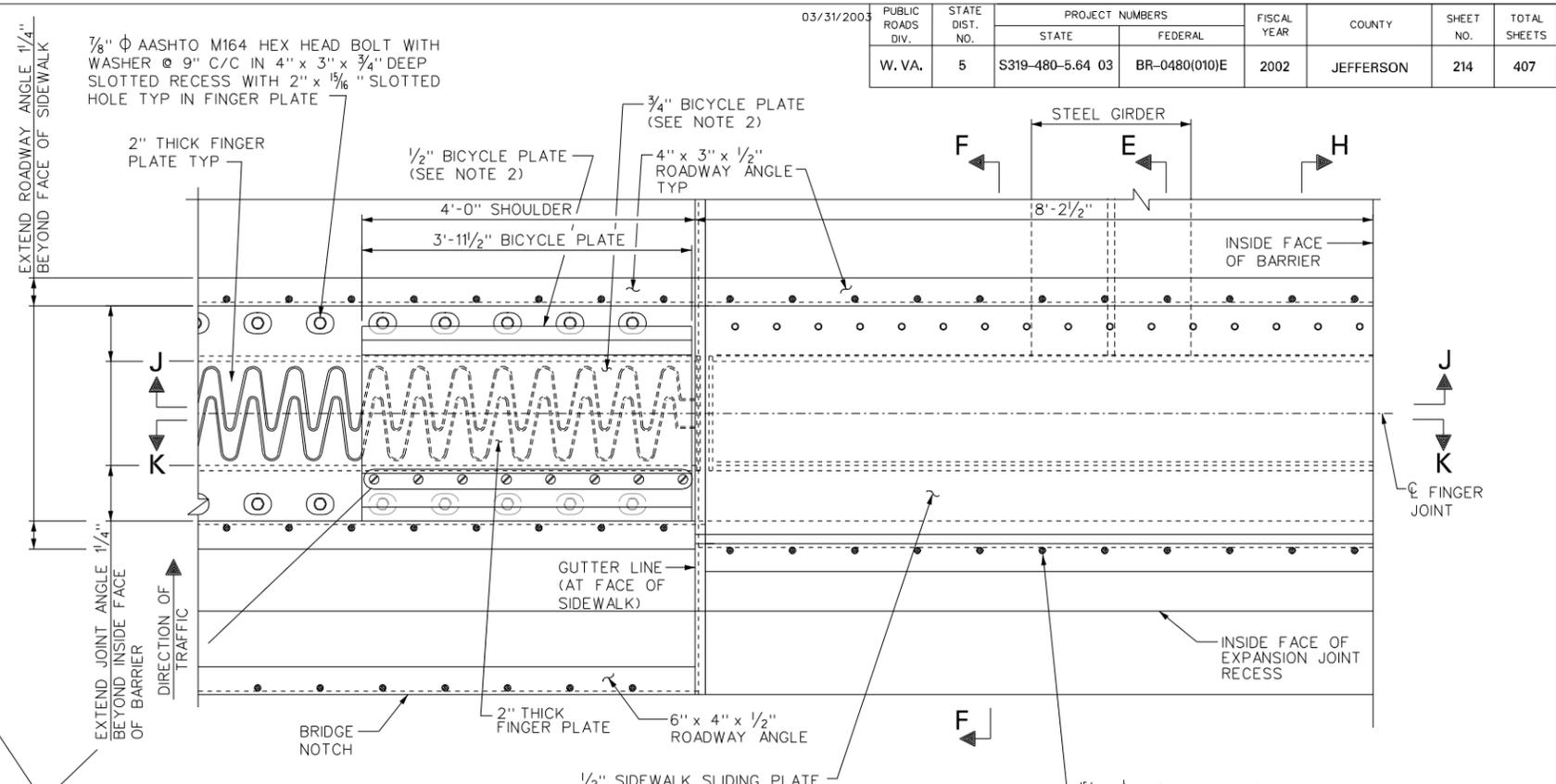
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03/31/2003

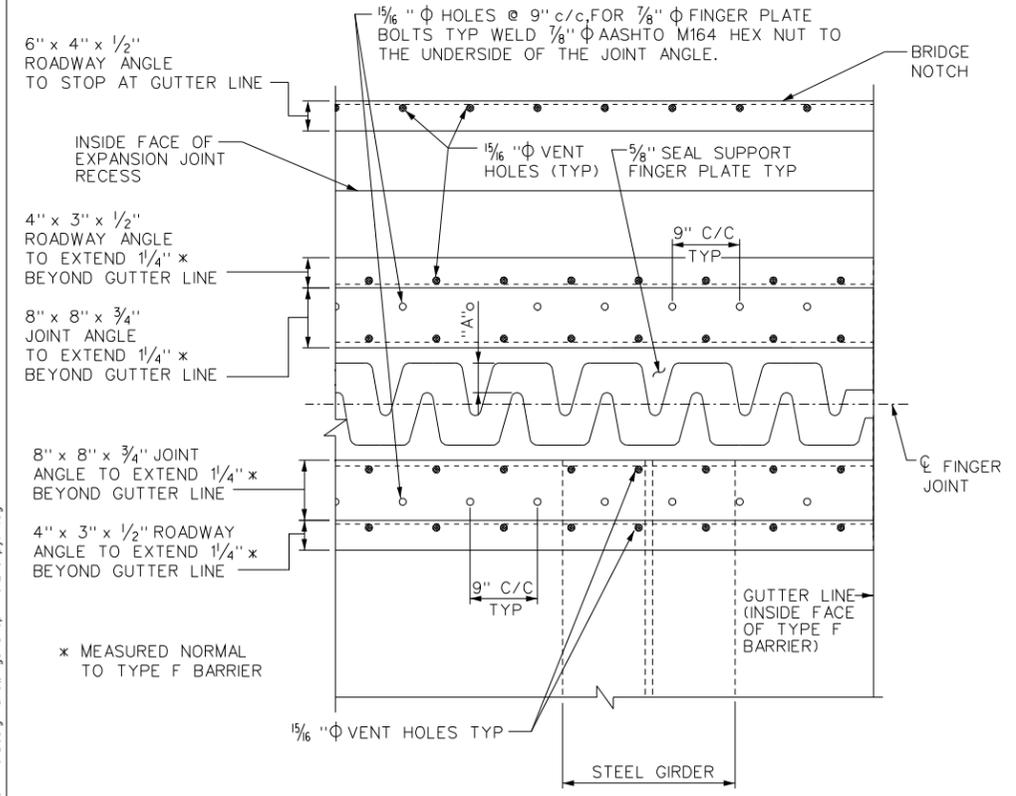
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	214	407



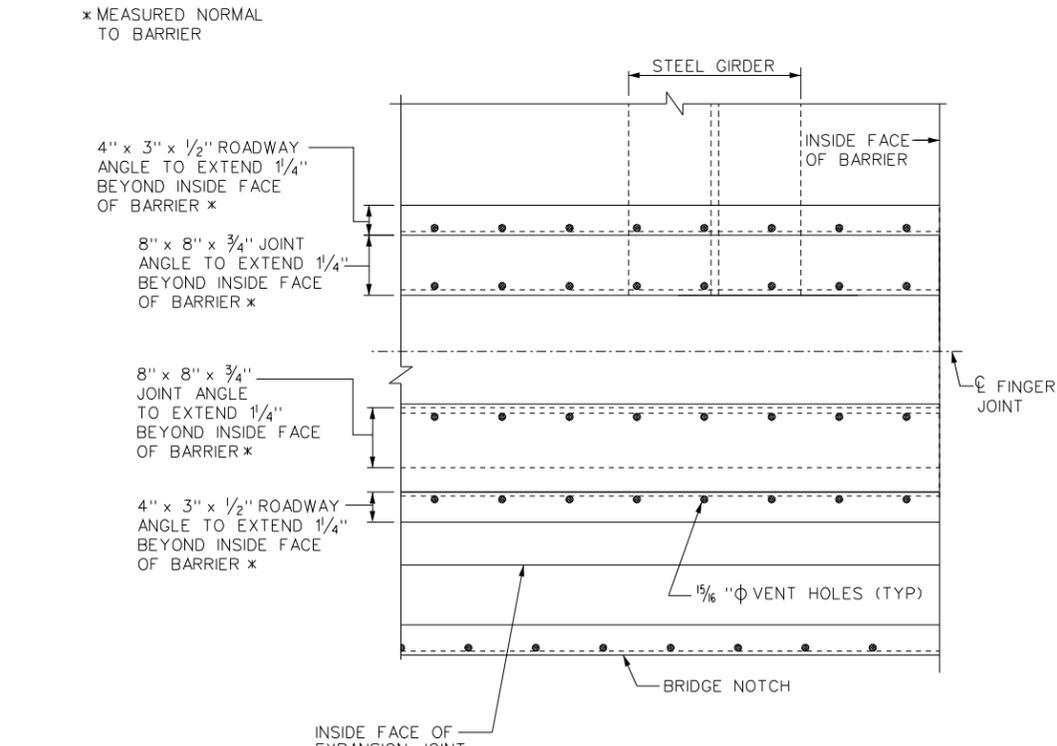
PLAN AT ROADWAY LEVEL WITH TYPE F BARRIER REMOVED
(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)



PLAN AT SIDEWALK LEVEL WITH BARRIER REMOVED
(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)



PLAN WITH ROADWAY FINGER PLATES, TYPE F BARRIER AND FOAM SEAL REMOVED
(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)



PLAN WITH SIDEWALK SLIDING PLATE, AND BARRIER REMOVED
(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)

NOTES:

- ANCHOR STUDS, ANCHOR STRAPS, ANTI-SKID CYLINDER STUDS AND CONDUITS NOT SHOWN FOR CLARITY.
- THE BICYCLE PLATE AND SIDEWALK SLIDING SHALL HAVE THE SAME ANTI-SKID CYLINDER STUD PATTERN AS SHOWN FOR THE FINGER PLATE DETAIL ON SHEET 65.
- FOR SECTIONS A-A THROUGH D-D, SEE SHEET 59.
- FOR SECTIONS E-E THROUGH H-H, SEE SHEET 60.
- FOR SECTIONS I-I THROUGH L-L, SEE SHEET 61.
- FOR DIMENSIONS A & B, SEE THE JOINT OPENING TABLE ON SHEET 65.
- THE COST OF ALL EXPANSION DAM MATERIALS, FABRICATION, DELIVERY AND COMPLETE INSTALLATION TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED UNDER THE ITEM 627023-001, EXPANSION DAM, STEEL FINGER JOINT. MATERIALS INCLUDE STRUCTURAL STEEL (INCLUDING GALVANIZING AND PAINTING AS REQUIRED), ANCHOR STUDS, ANCHOR STRAPS, ANTI-SKID CYLINDER STUDS, THREADED RODS, ATTACHMENT HARDWARE, FOAM SEAL, AND NEOPRENE TROUGH.

NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
EXPANSION JOINT DETAILS - I**

DESIGNED JDM	DATE 11/02
DRAWN RQH	11/02
CHECKED MEC	11/02
CHECKED PWP	11/02

Baker
Michael Baker Jr., Inc.

SHEET **58** OF **93**
BRIDGE NO. **4919**
Charleston, W. Va.



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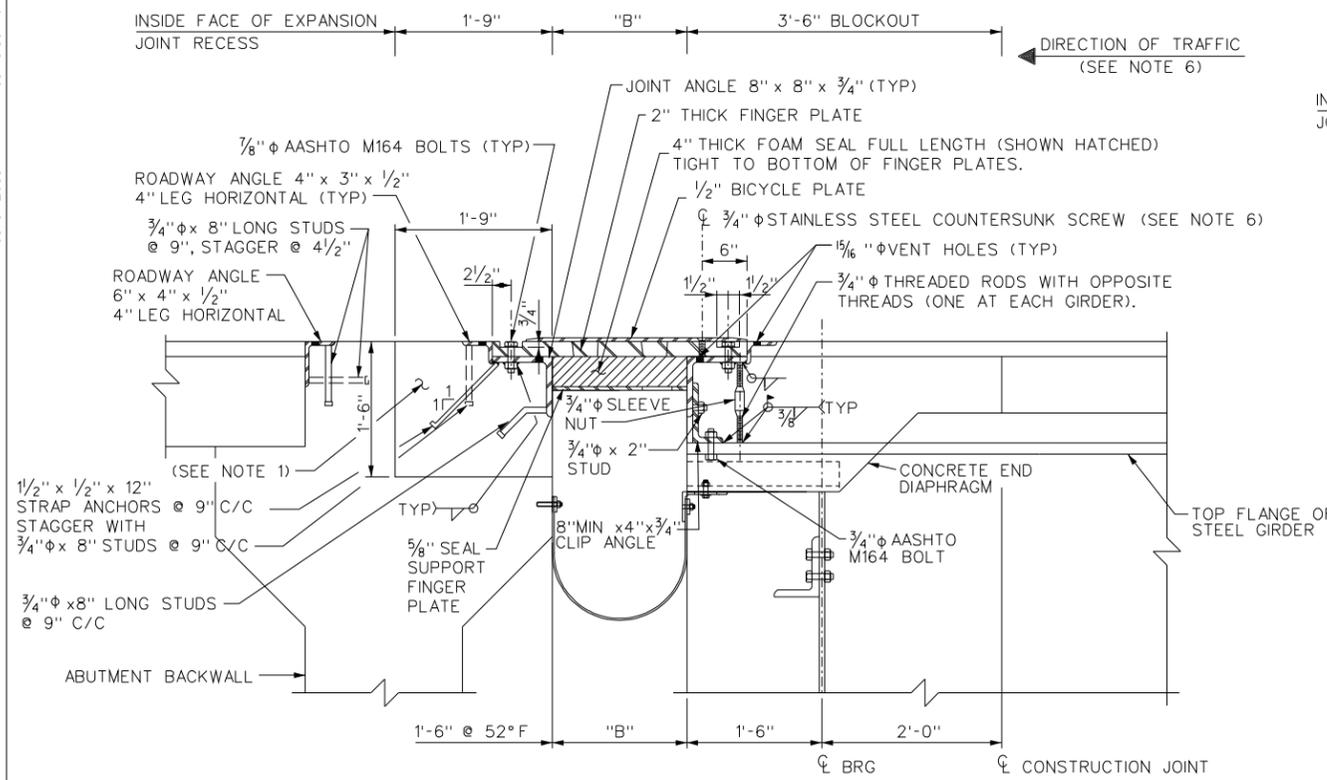
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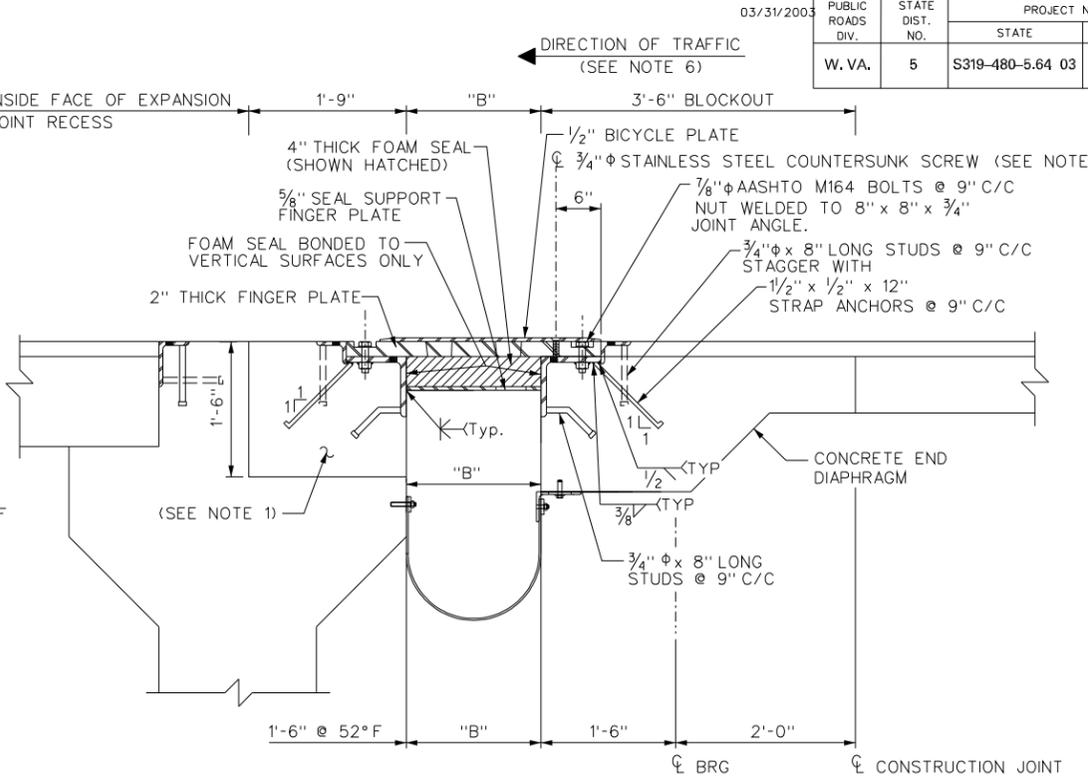
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J0629C98 - BRIDGE b

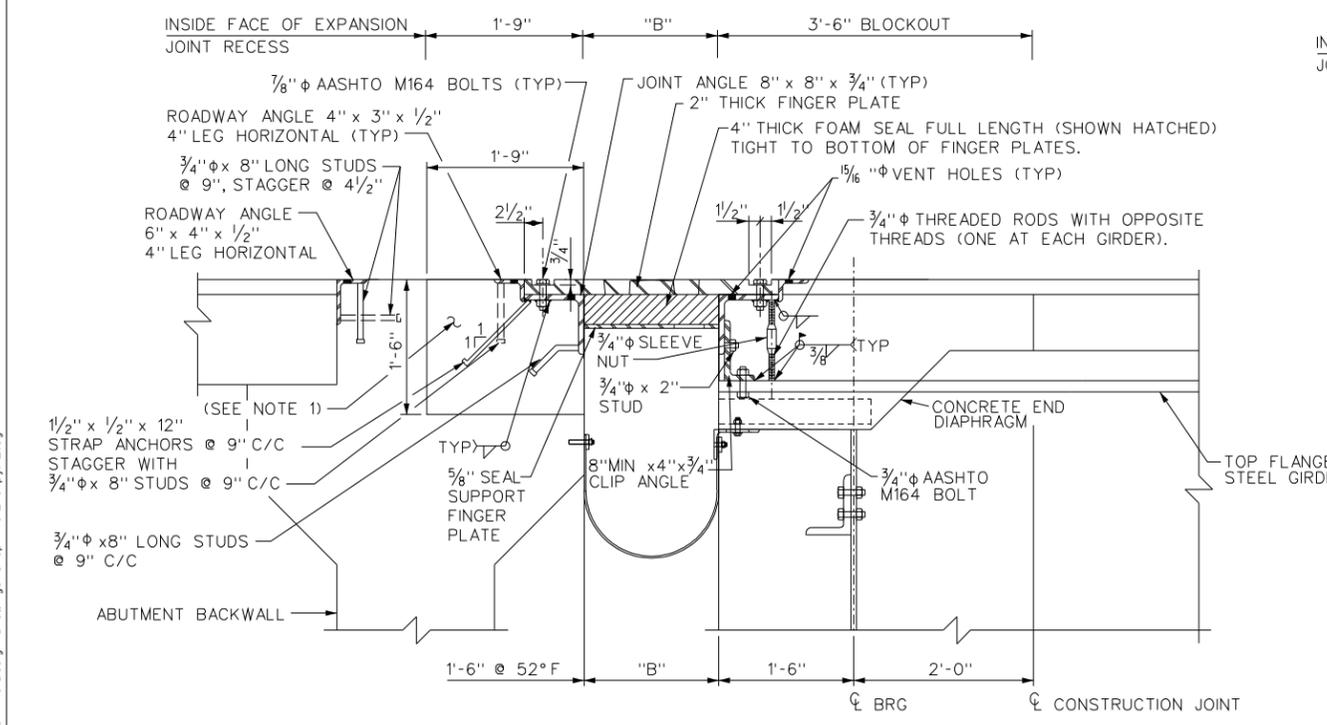
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	215	407



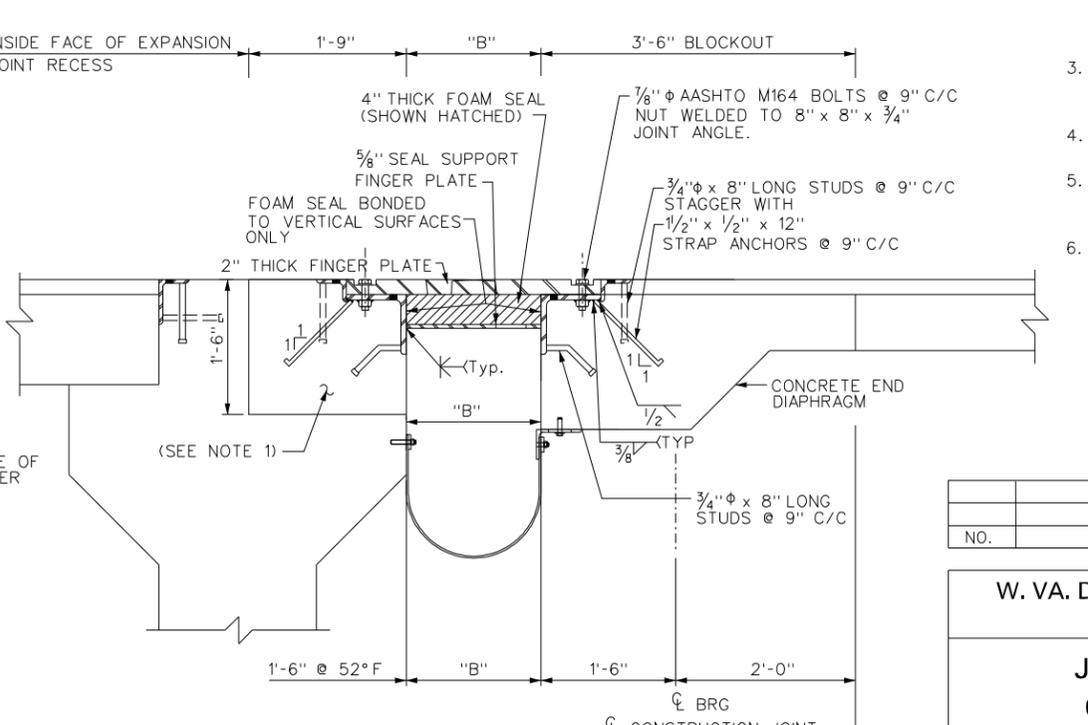
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:

1. THIS PORTION OF BACKWALL TO BE PLACED AFTER THE ADJACENT DECK CONCRETE HAS BEEN PLACED.
2. FOR EXPANSION JOINT NOTES, CLIP ANGLE DETAILS, FINGER PLATE DETAILS & SEAL SUPPORT FINGER PLATE DETAILS SEE SHEET 65.
3. FOR NEOPRENE TROUGH DETAILS SEE SHEETS 66 & 67.
4. FOR BICYCLE PLATE DETAIL SEE SHEET 65.
5. FOR DIMENSIONS A & B, SEE THE JOINT OPENING TABLE ON SHEET 65.
6. WHEN THE DIRECTION OF TRAFFIC IS AS SHOWN, THE 3/4" STAINLESS STEEL COUNTERSUNK SCREWS SHALL BE INSTALLED ON THE BRIDGE SIDE OF THE EXPANSION JOINT AS SHOWN. WHEN THE DIRECTION OF TRAFFIC IS OPPOSITE TO WHAT IS SHOWN HERE, THE 3/4" STAINLESS STEEL COUNTERSUNK SCREWS SHALL BE INSTALLED ON THE ABUTMENT SIDE OF THE EXPANSION JOINT.

NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
EXPANSION JOINT DETAILS - II

DESIGNED JDM	DATE 11/02
DRAWN RQU	DATE 11/02
CHECKED MJC	DATE 11/02
CHECKED PWP	DATE 11/02

6 0 6 12 INCHES

Baker
Michael Baker Jr., Inc.

SHEET 59 OF 93
BRIDGE NO. 4919
Charleston, W.Va.

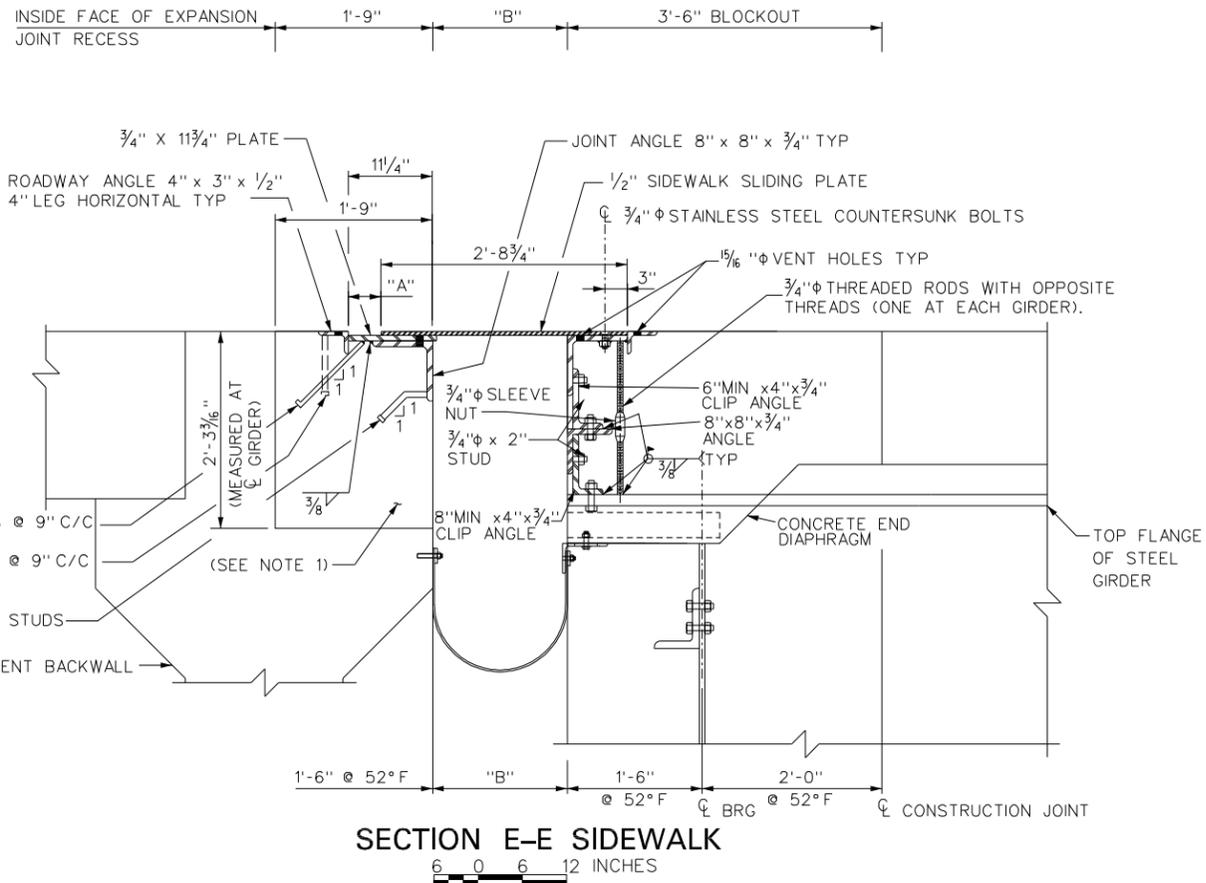
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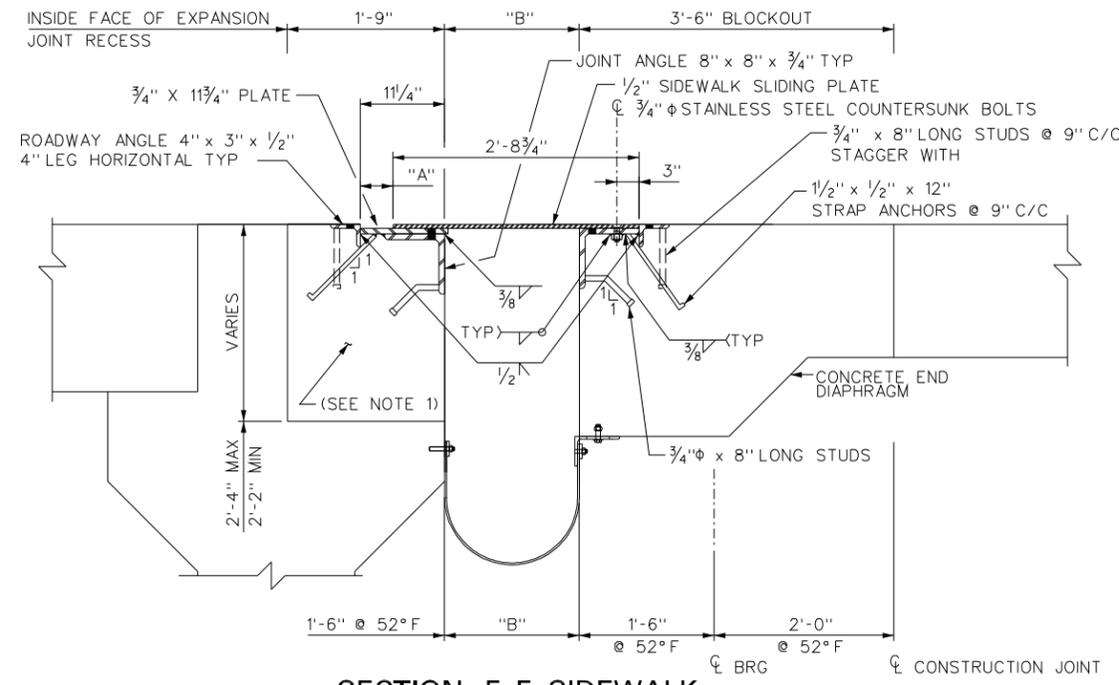
J0629C98 - BRIDGE b

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	216	407



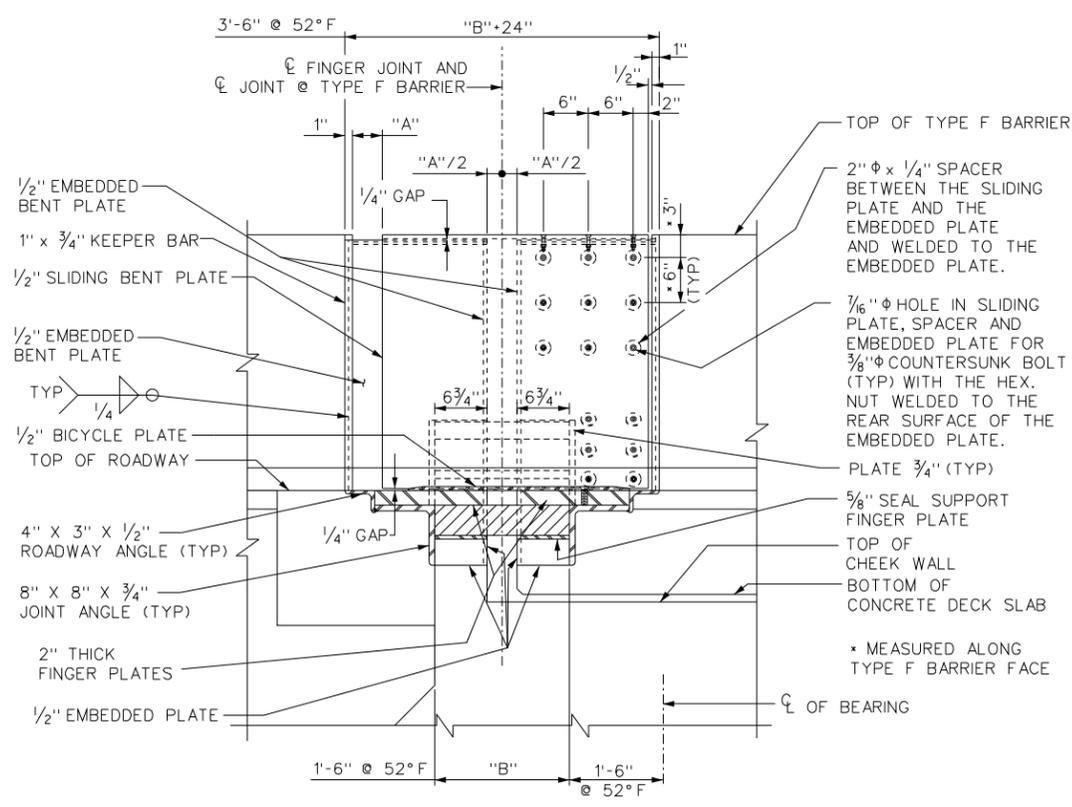
SECTION E-E SIDEWALK

6 0 6 12 INCHES



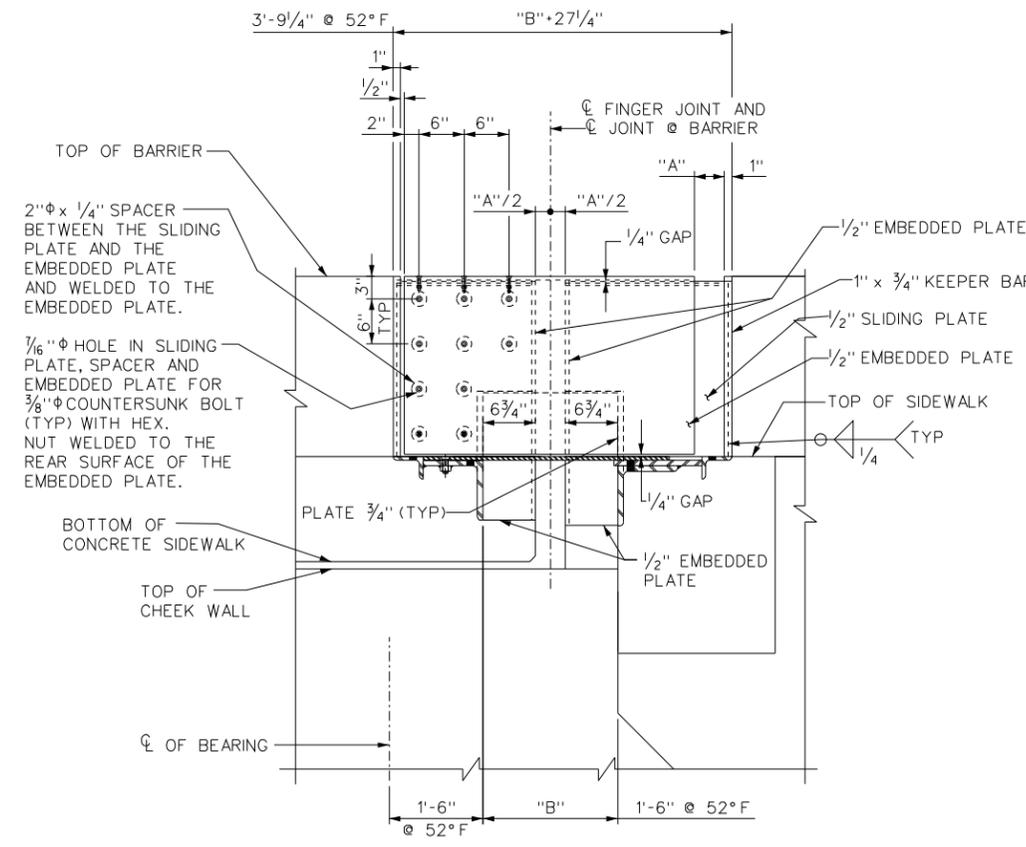
SECTION F-F SIDEWALK

6 0 6 12 INCHES



SECTION G-G TYPE F BARRIER

6 0 6 12 INCHES



SECTION H-H SIDEWALK BARRIER

6 0 6 12 INCHES

- NOTES:**
1. THIS PORTION OF BACKWALL TO BE PLACED AFTER THE ADJACENT DECK SLAB CONCRETE HAS BEEN PLACED.
 2. FOR EXPANSION JOINT NOTES, CLIP ANGLE DETAILS, FINGER PLATE DETAILS & SEAL SUPPORT FINGER PLATE DETAILS, AND ANGLE DETAILS SEE SHEET 65.
 3. FOR NEOPRENE TROUGH DETAILS SEE SHEETS 66 & 67.
 4. FOR DIMENSIONS A & B, SEE THE JOINT OPENING TABLE ON SHEET 65.

NO.	REVISION	DATE	BY

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
EXPANSION JOINT DETAILS - III**

DESIGNED JDM	DATE 11/02
DRAWN RQH	11/02
CHECKED MJC	11/02
CHECKED PWP	11/02

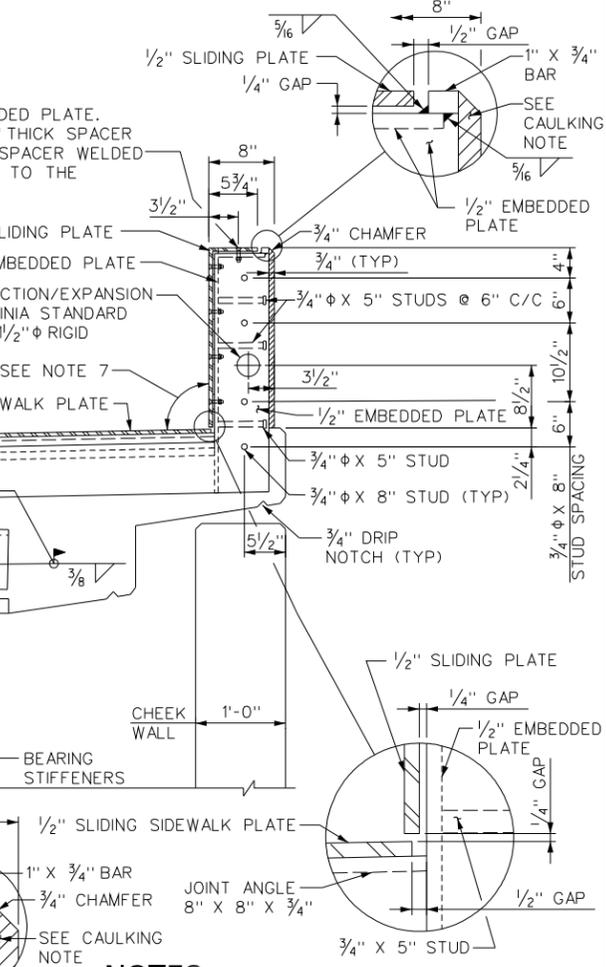
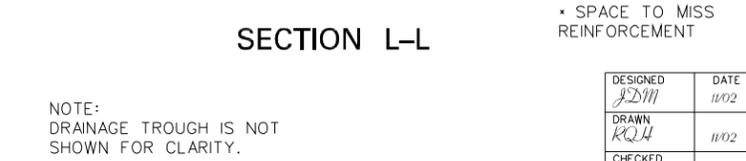
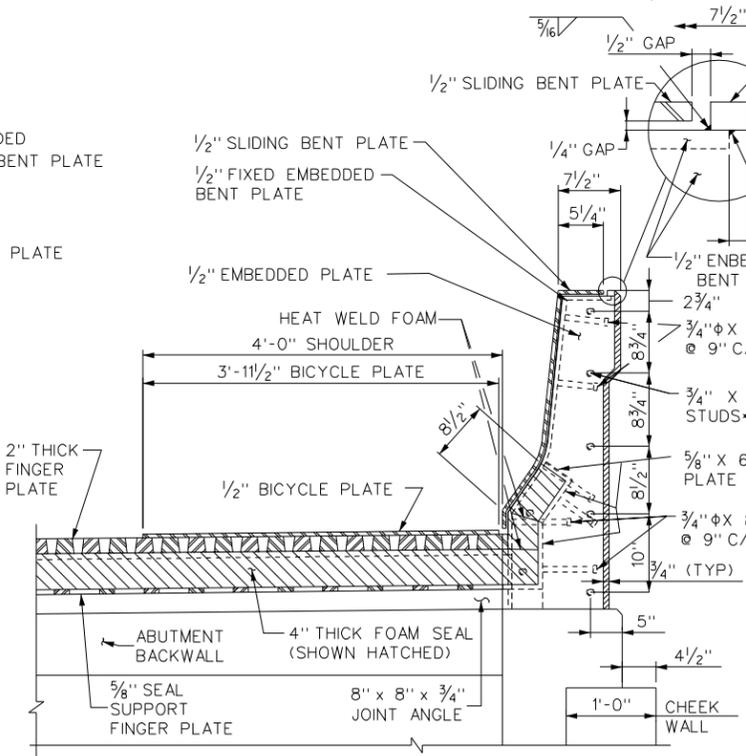
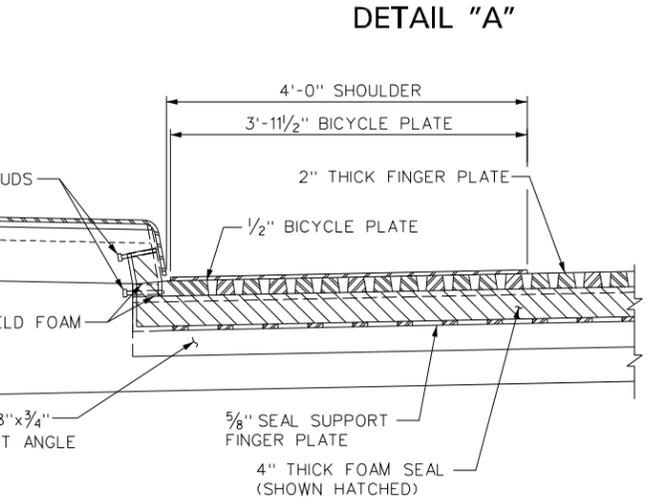
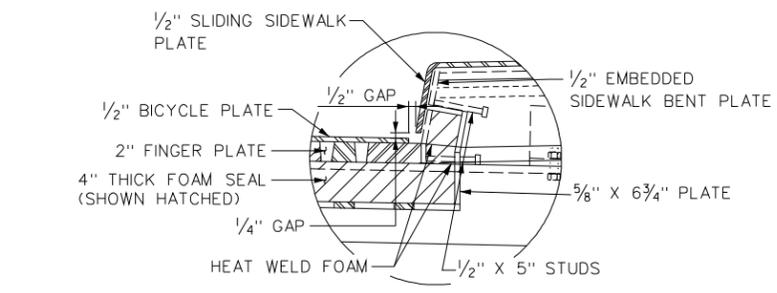
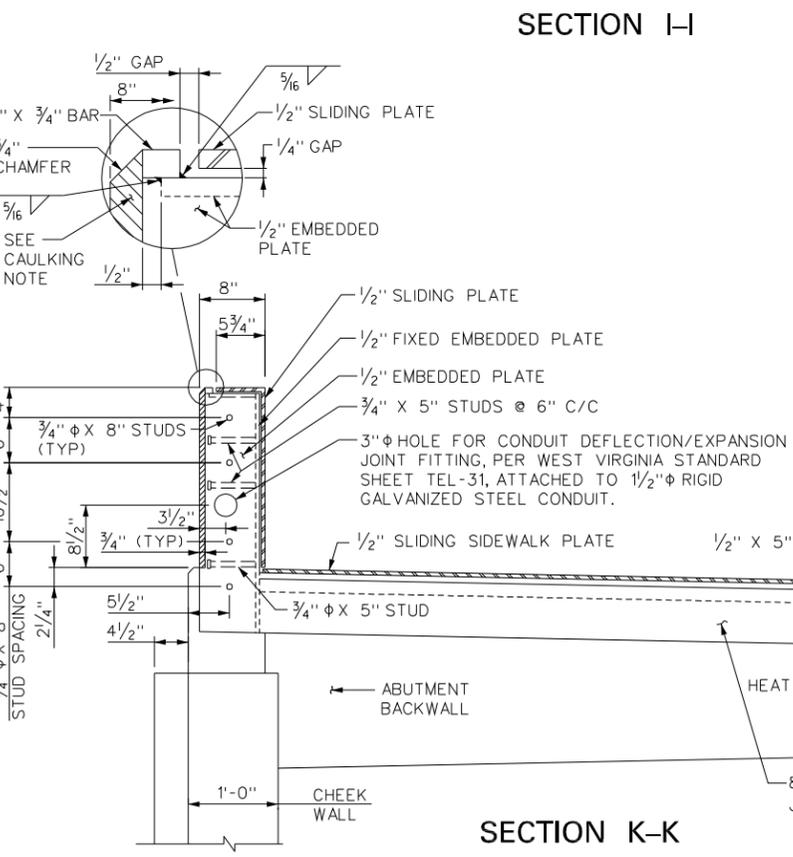
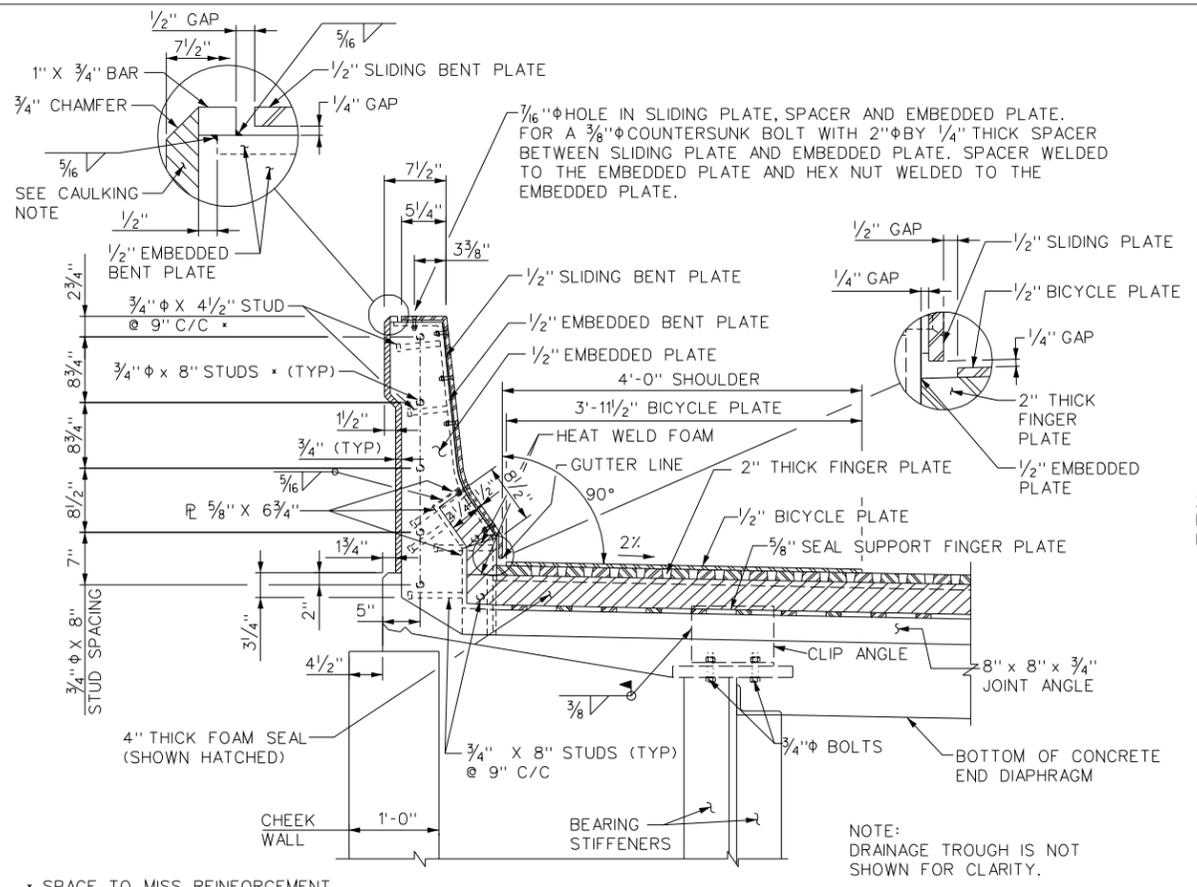
Baker
Michael Baker Jr., Inc. Charleston, W. Va.

SHEET **60** OF **93**
BRIDGE NO. **4919**

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PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	217	407

CAULKING NOTE:
 TRANSVERSE SIDE OF 1/2" PLATE SHALL BE CAULKED AT TYPE F BARRIER AND SIDEWALK BARRIER WITH LIGHT GRAY CAULKING TO CONCEAL THE 1/2" PLATE FROM AN OUTSIDE VIEW. INCLUDE COST IN ITEM 627023-001 EXPANSION DAM, STEEL FINGER JOINT.



- NOTES:**
- FOR EXPANSION JOINT NOTES, CLIP ANGLE DETAILS, FINGER PLATE DETAILS & SEAL AND SUPPORT FINGER PLATE DETAILS SEE SHEET 65.
 - FOR NEOPRENE TROUGH DETAILS SEE SHEETS 66 & 67.
 - FOR LOCATION OF SECTIONS I-I, J-J, K-K, AND L-L, SEE SHEET 58.
 - FOR DIMENSIONS A & B, SEE THE JOINT OPENING TABLE ON SHEET 65.
 - FOR TYPE F BARRIER DIMENSIONS SEE SHEET 51.
 - FOR SIDEWALK BARRIER DIMENSIONS SEE SHEET 52.
 - FACE OF SIDEWALK BARRIER TO BE PLUMB. TYPE F BARRIER IS PERPENDICULAR TO THE DECK SURFACE.

NO.	REVISION	DATE	BY:

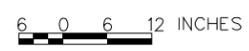
W. VA. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
 OVER POTOMAC RIVER
 EXPANSION JOINT DETAILS - IV**

DESIGNED <i>JDM</i>	DATE 11/02
DRAWN <i>RQU</i>	DATE 11/02
CHECKED <i>MJC</i>	DATE 11/02
CHECKED <i>PWP</i>	DATE 11/02

Baker
 Michael Baker Jr., Inc. Charleston, W. Va.

SHEET **61** OF **93**
 BRIDGE NO. **4919**

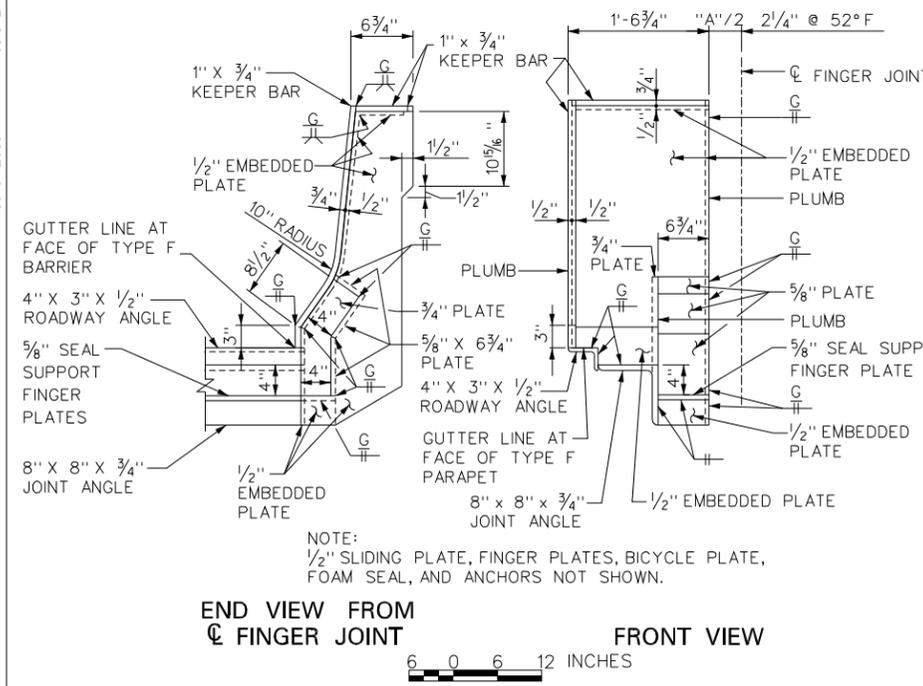


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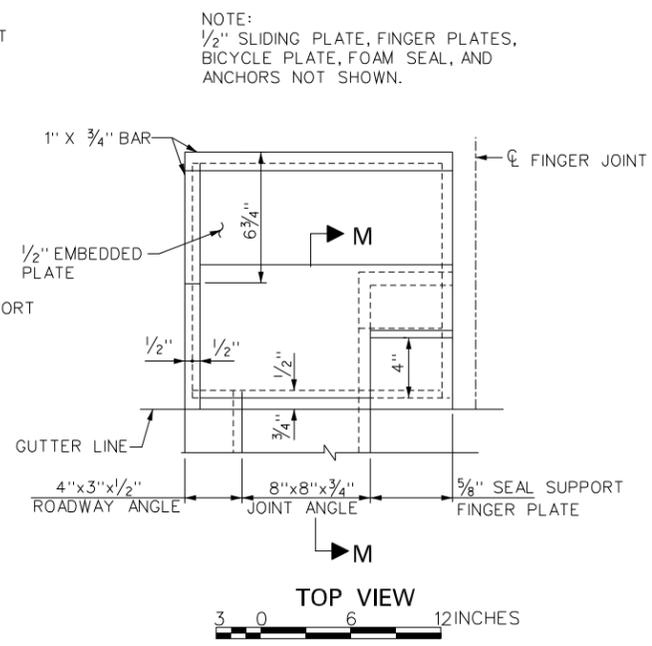
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PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	218	407



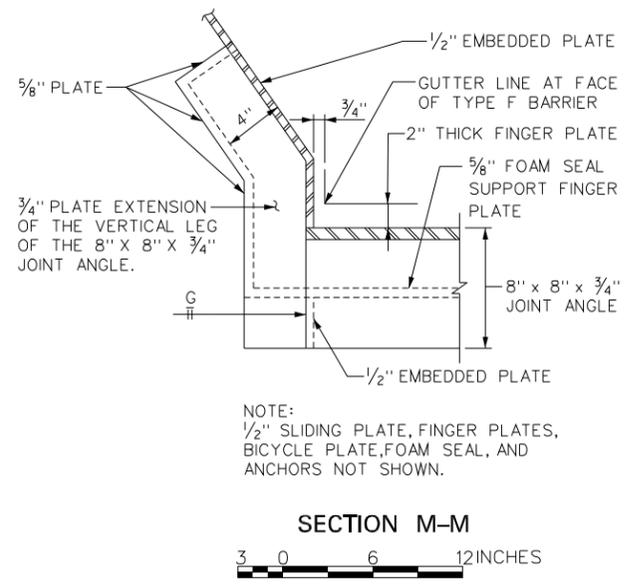
END VIEW FROM
FINGER JOINT FRONT VIEW

6 0 6 12 INCHES



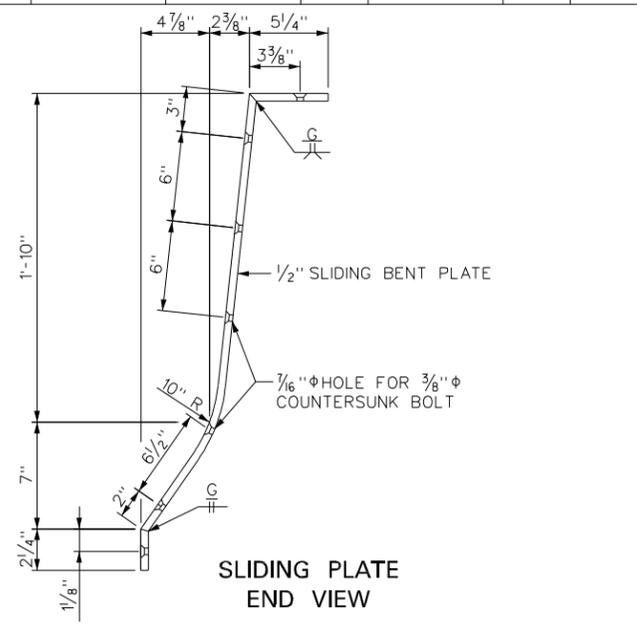
TOP VIEW

3 0 6 12 INCHES



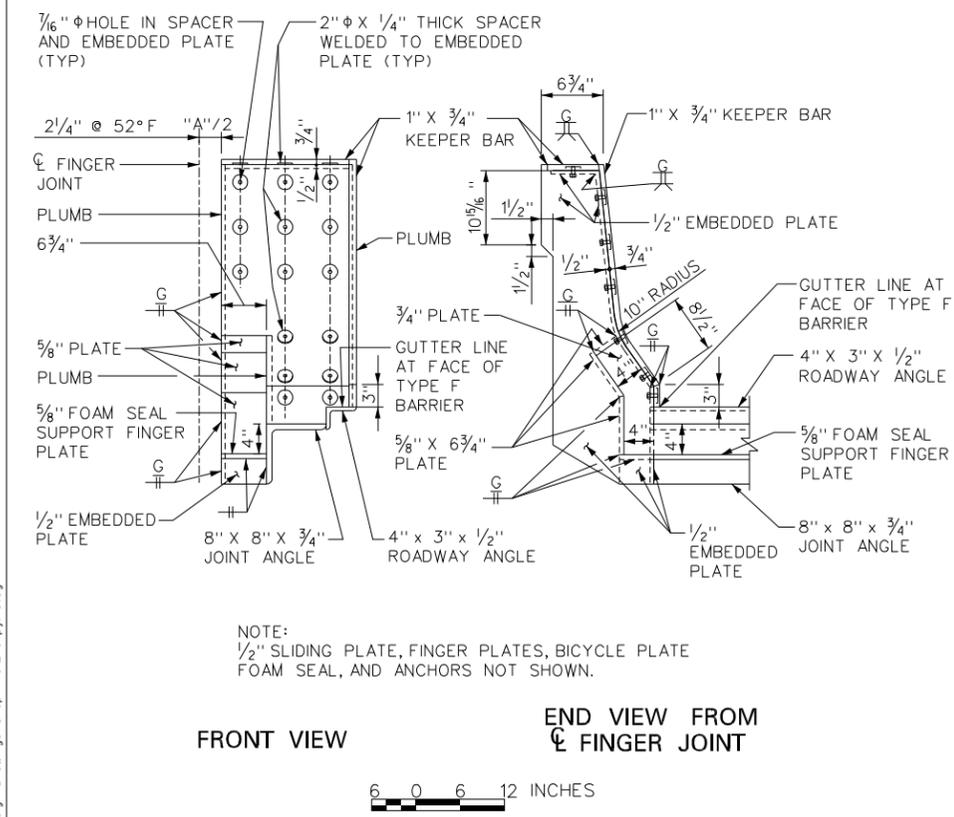
SECTION M-M

3 0 6 12 INCHES



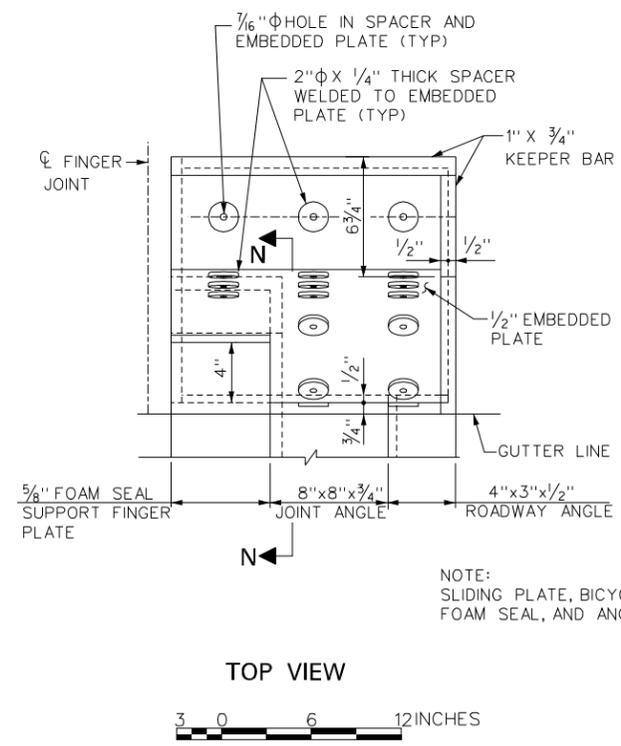
SLIDING PLATE
END VIEW

EMBEDDED PLATE EMBEDDED PLATE FOR TYPE F BARRIER – EXPANSION END ON THE ABUTMENT



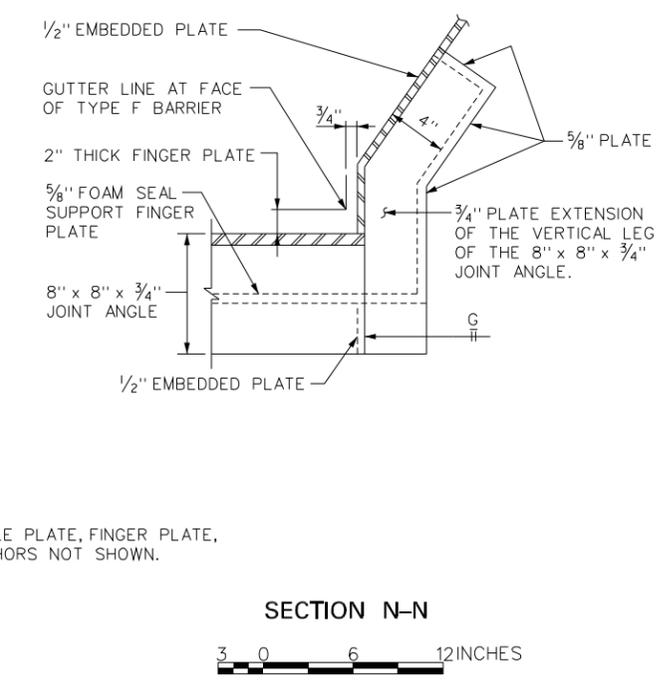
FRONT VIEW END VIEW FROM
FINGER JOINT

6 0 6 12 INCHES



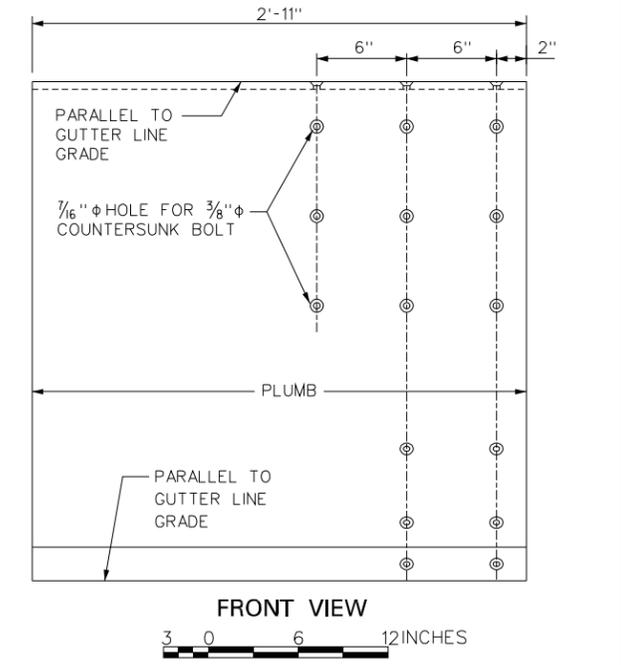
TOP VIEW

3 0 6 12 INCHES



SECTION N-N

3 0 6 12 INCHES



FRONT VIEW

3 0 6 12 INCHES

SLIDING PLATE FOR TYPE F BARRIER

EMBEDDED PLATE FOR TYPE F BARRIER – FIXED END ON THE BRIDGE

NOTES:
1. FOR DIMENSIONS A & B, SEE THE JOINT OPENING TABLE ON SHEET 65.

DESIGNED JDM	DATE 11/02
DRAWN RQ4	DATE 11/02
CHECKED MJC	DATE 11/02
CHECKED PWP	DATE 11/02

NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
EXPANSION JOINT DETAILS – V

Baker
Michael Baker Jr., Inc.

CHARLESTON, W. VA.

SHEET 62 OF 93
BRIDGE NO. 4919

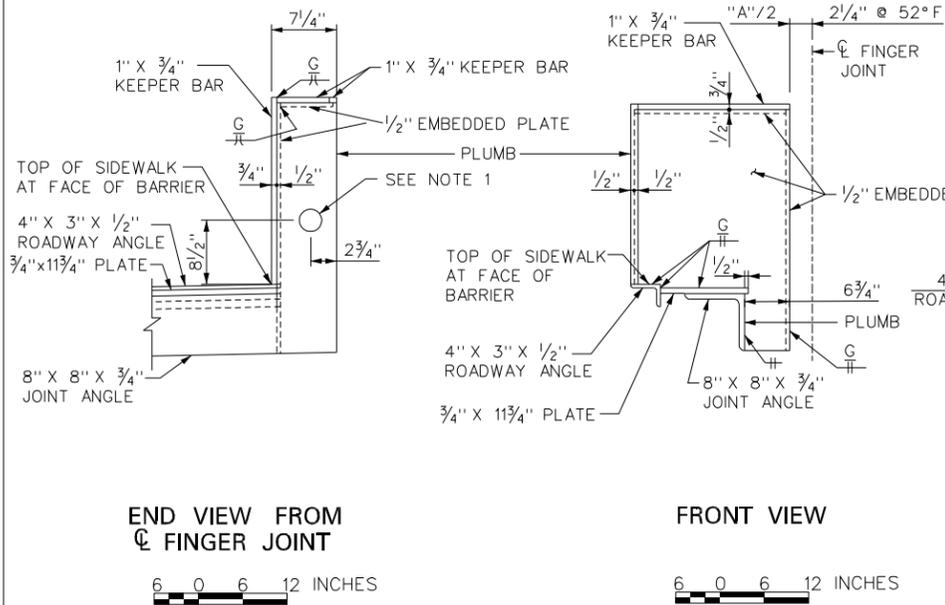
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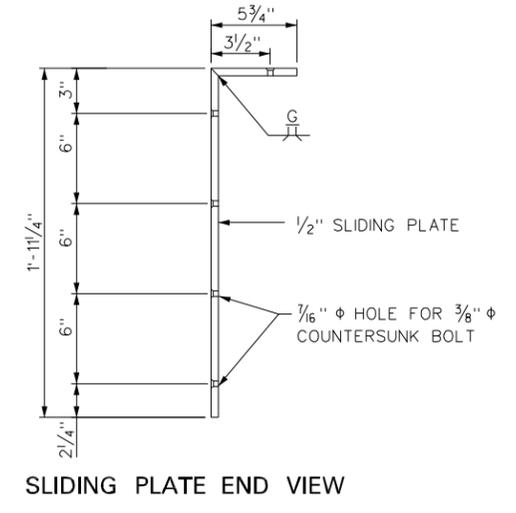
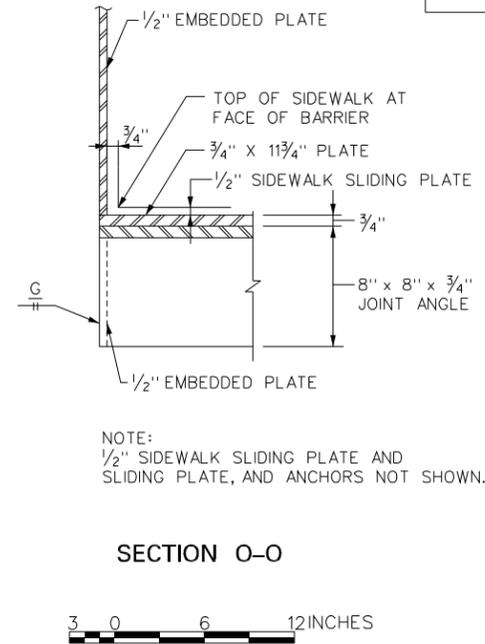
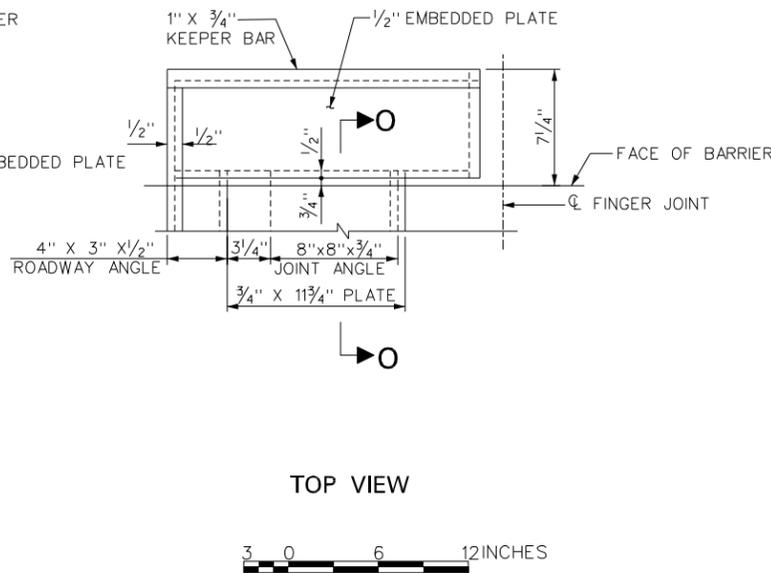
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J0629C98 - BRIDGE b

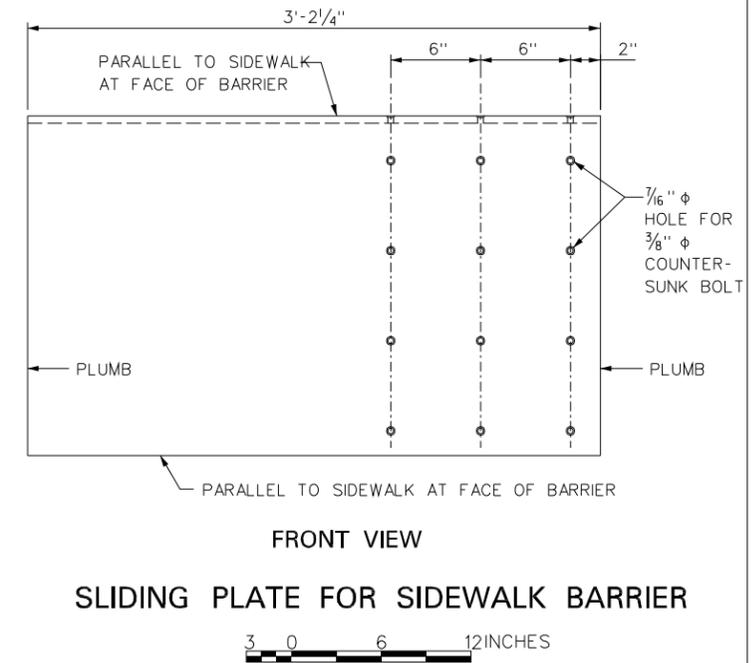
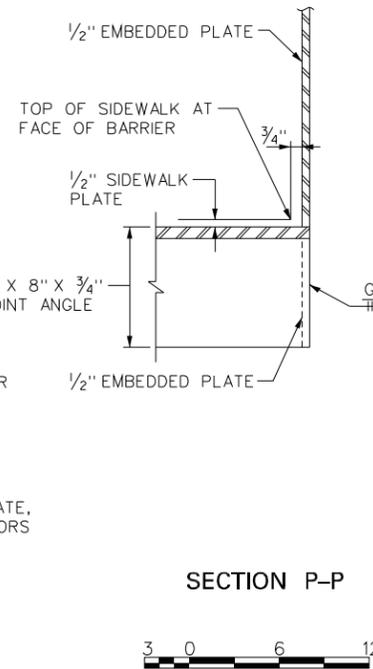
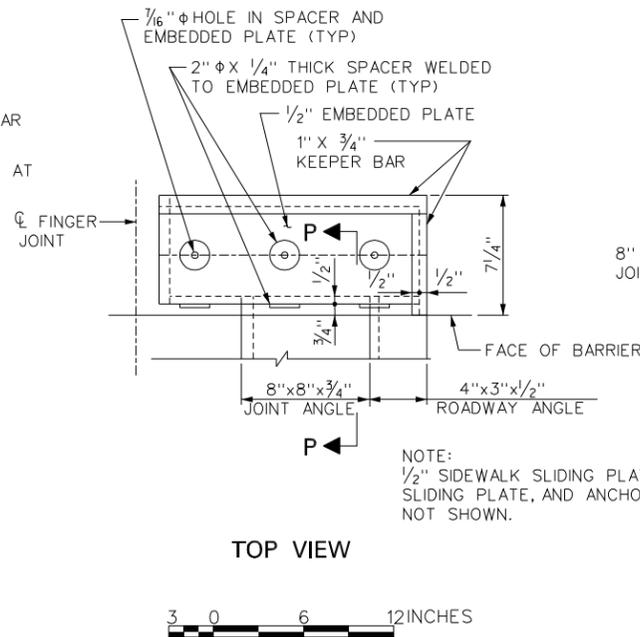
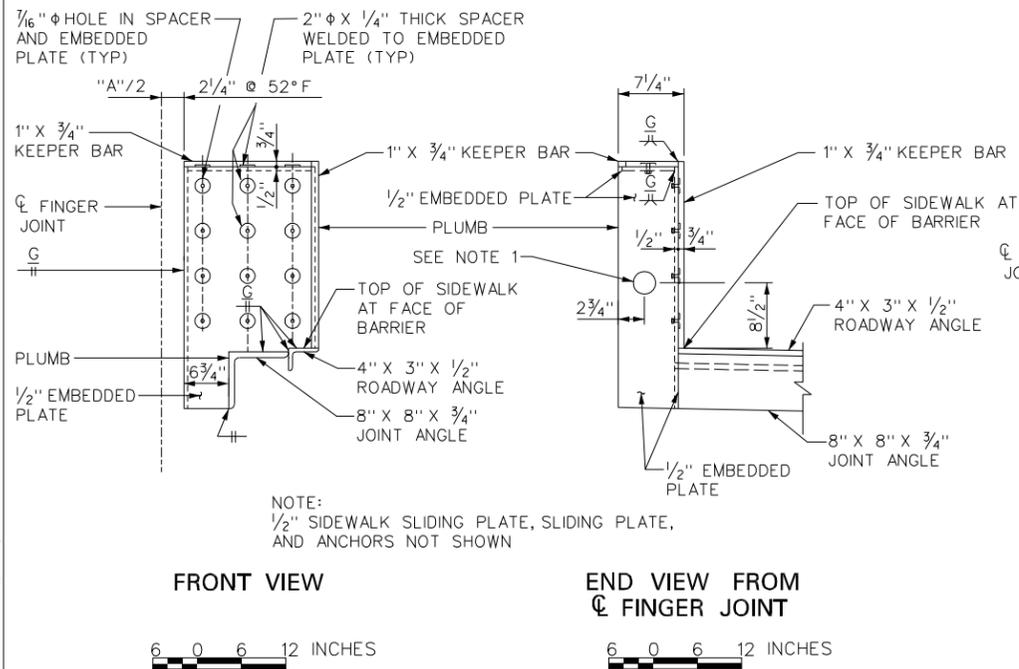
NOTE:
1/2" SIDEWALK SLIDING PLATE,
SLIDING PLATE, AND ANCHORS
NOT SHOWN.



NOTE:
1/2" SIDEWALK SLIDING PLATE,
SLIDING PLATE, AND ANCHORS
NOT SHOWN.



EMBEDDED PLATE FOR SIDEWALK BARRIER – EXPANSION END ON THE ABUTMENT



EMBEDDED PLATE FOR SIDEWALK BARRIER – FIXED END ON THE BRIDGE

NOTES:

1. 3" ϕ HOLE FOR CONDUIT DEFLECTION/EXPANSION JOINT FITTING, PER WEST VIRGINIA STANDARD SHEET TEL-31, ATTACHED TO 1/2" ϕ RIGID GALVANIZED STEEL CONDUIT.
2. FOR DIMENSIONS A & B, SEE THE JOINT OPENING TABLE ON SHEET 65.

DESIGNED	DATE
JDM	11/02
DRAWN	
RQ4	11/02
CHECKED	
MJC	11/02
CHECKED	
PWP	11/02

NO.	REVISION	DATE	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
EXPANSION JOINT DETAILS – VI

Baker
Michael Baker Jr., Inc.

Charleston, W. Va.

SHEET 63 OF 93
BRIDGE NO. 4919

03/31/2003

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
W. VA.	5	STATE	FEDERAL	2002	JEFFERSON	219	407
		S319-480-5.64	03	BR-0480(010)E			

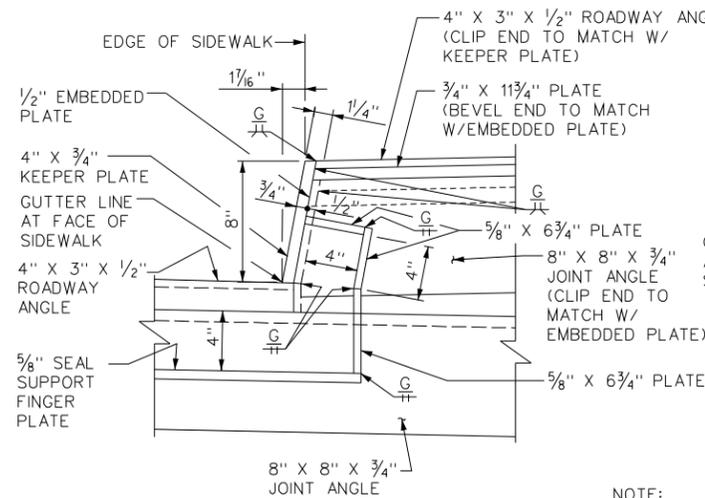
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03/31/2003

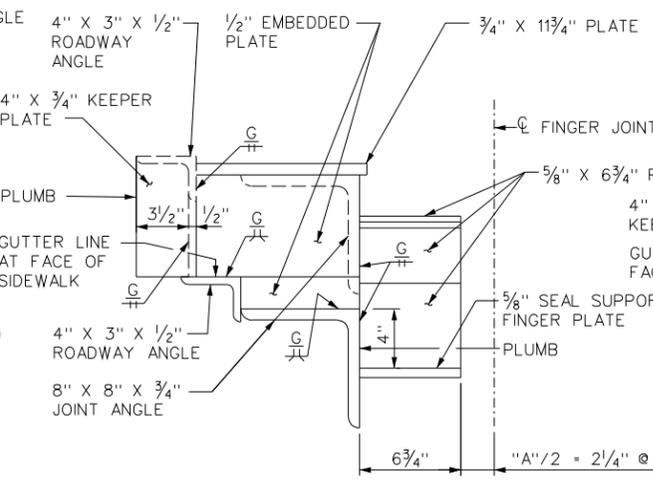
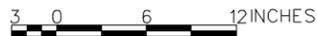
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J0629C98 - BRIDGE b

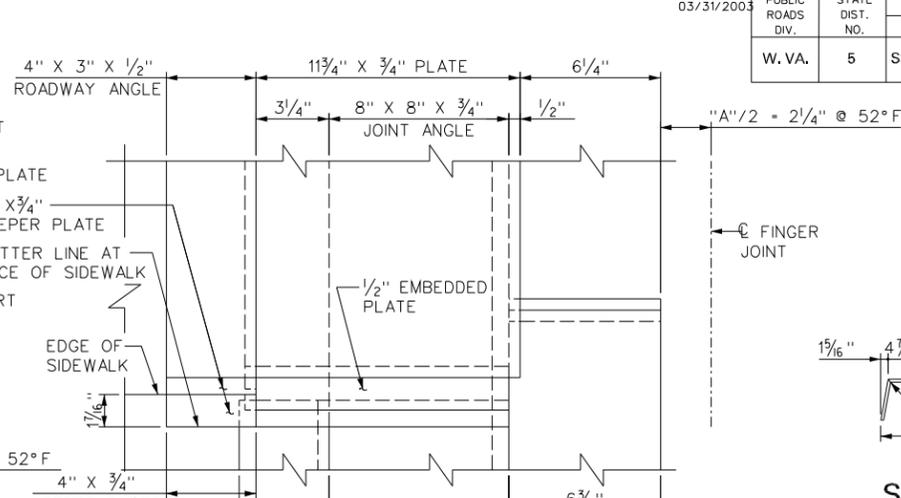
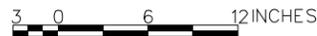
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	220	407



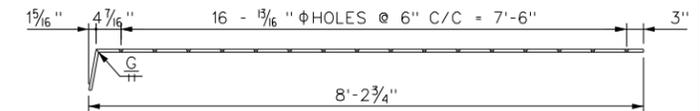
END VIEW FROM
CL FINGER JOINT



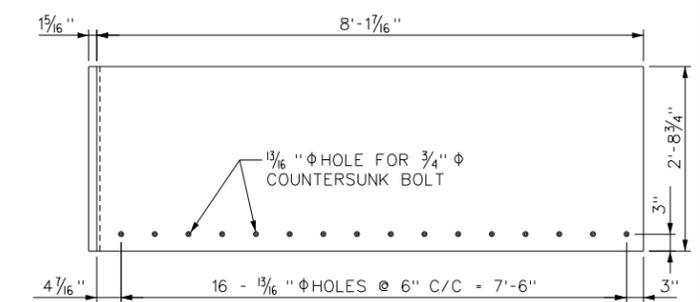
FRONT VIEW



TOP VIEW



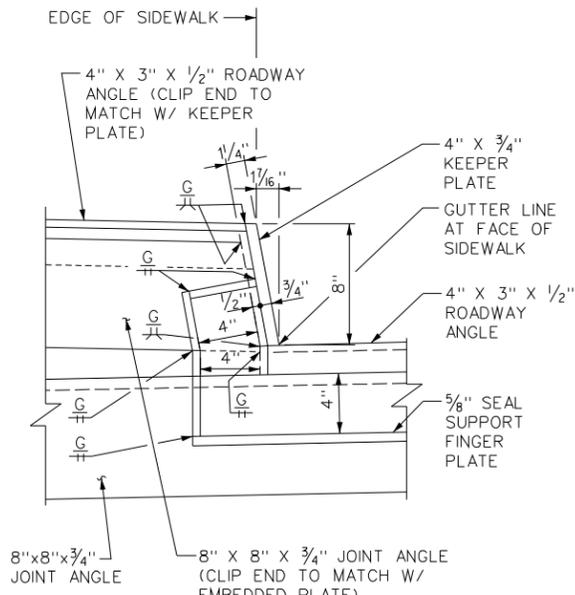
SIDEWALK SLIDING PLATE END VIEW



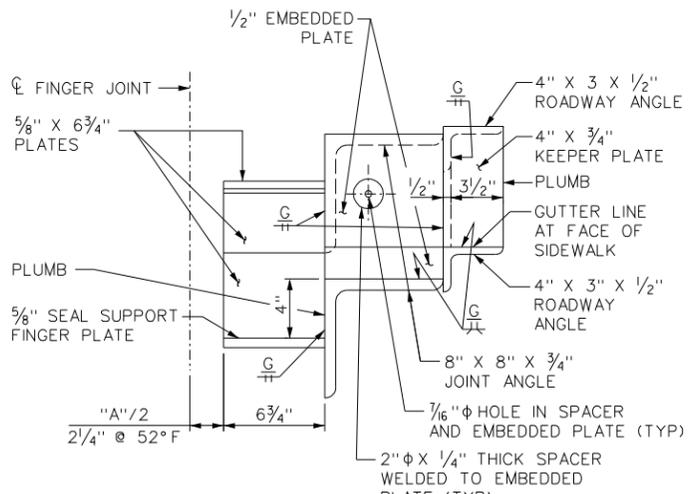
SIDEWALK SLIDING PLATE TOP VIEW



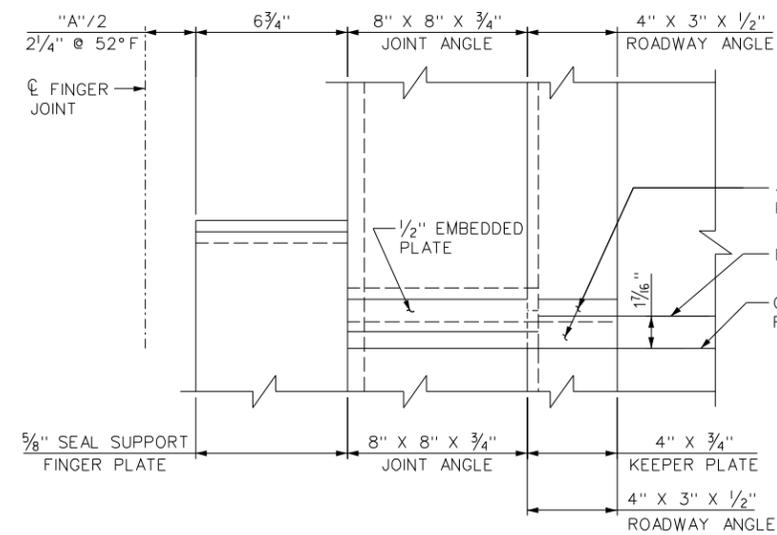
EMBEDDED PLATE FOR STEP AT SIDEWALK – EXPANSION END ON THE ABUTMENT



END VIEW FROM
CL FINGER JOINT



FRONT VIEW



TOP VIEW



EMBEDDED PLATE FOR STEP AT SIDEWALK – FIXED END ON THE BRIDGE

NOTE:
1/2" SLIDING SIDEWALK PLATE, BICYCLE PLATE,
FINGER PLATE, FOAM SEAL, AND ANCHORS NOT
SHOWN.

NO.	REVISION	DATE	BY

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
EXPANSION JOINT DETAILS – VII

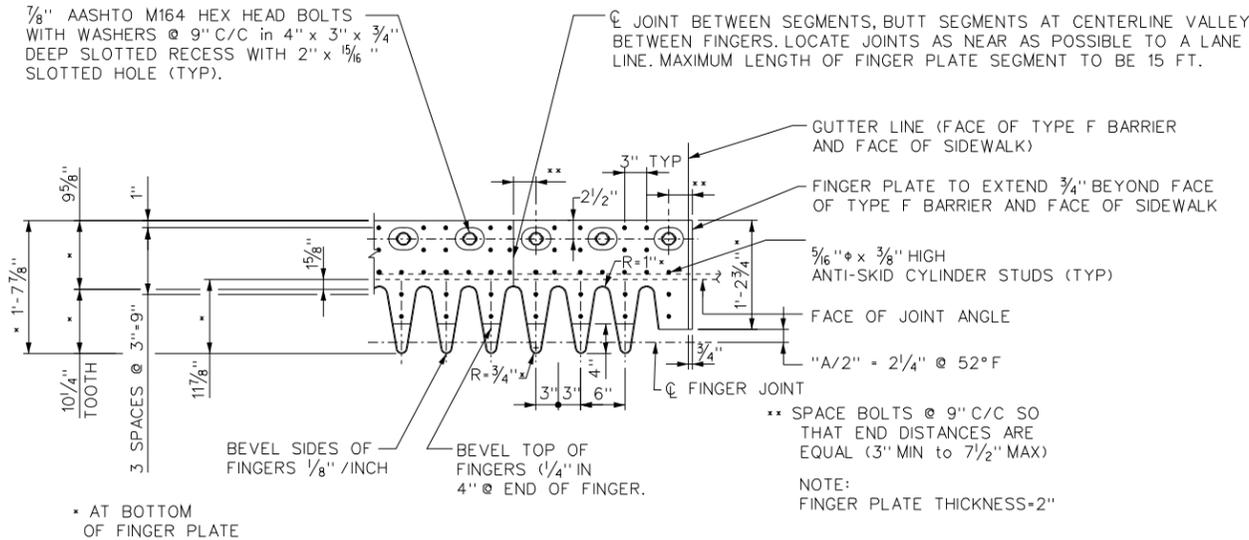
DESIGNED <i>JDM</i>	DATE 11/02
DRAWN <i>RQH</i>	11/02
CHECKED <i>MJC</i>	11/02
CHECKED <i>PWP</i>	11/02

Baker
Michael Baker Jr., Inc.

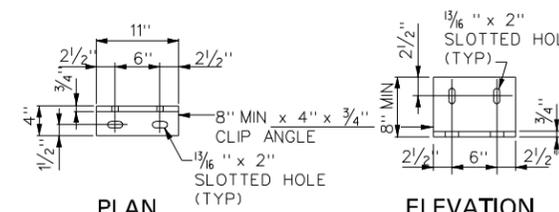
Charleston, W. Va.

SHEET
64 OF **93**
BRIDGE NO.
4919

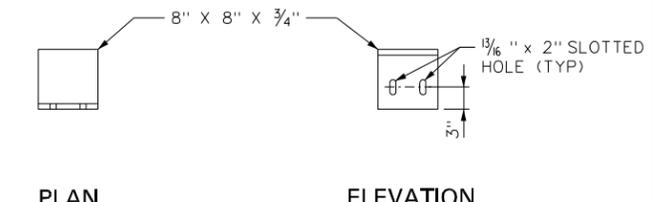
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	221	407



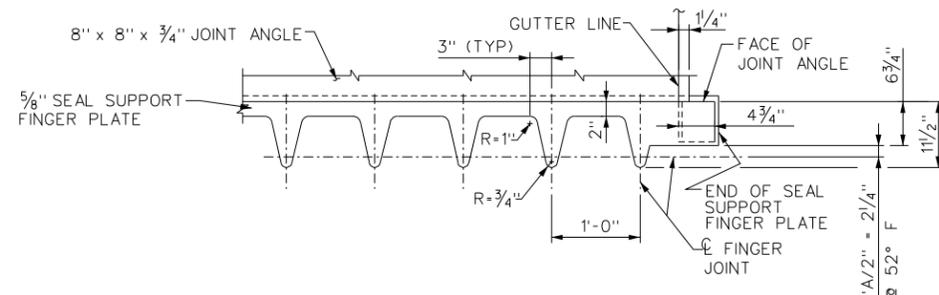
FINGER PLATE DETAIL



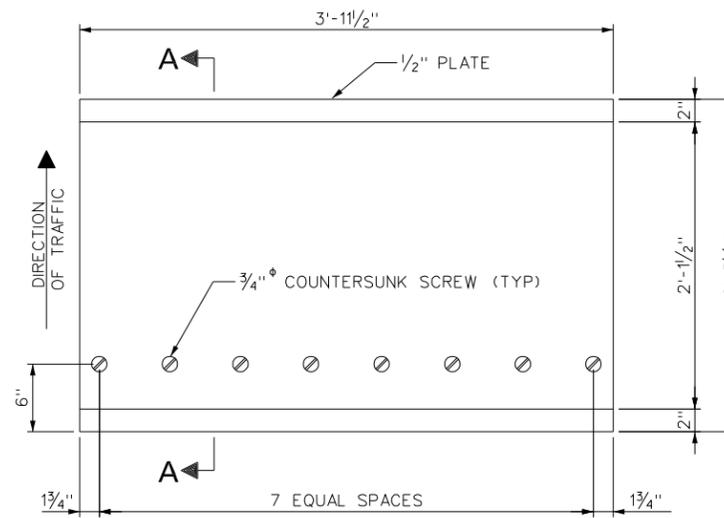
CLIP ANGLE DETAILS



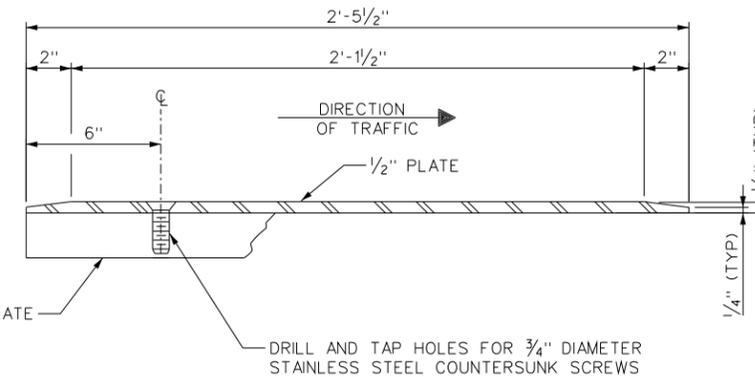
ANGLE DETAILS



SEAL SUPPORT FINGER PLATE DETAIL



BICYCLE PLATE DETAIL



SECTION A-A



NOTES:

1. FINGER JOINT TO BE FABRICATED, ASSEMBLED AND SHIPPED TO THE JOB SITE FULLY ASSEMBLED.
2. THE FULLY ASSEMBLED JOINT SHALL BE INSTALLED AND BOLTED AND WELDED INTO ITS FINAL POSITION..
3. IN ORDER FOR THE VENT HOLES BENEATH THE FINGER PLATES TO FUNCTION DURING CONCRETE PLACEMENT, REMOVE THE FINGER PLATES, PLACE THE FINGER PLATE ANCHOR BOLTS IN PLACE AND PROTECT THE FOAM SEAL PRIOR TO CONCRETE PLACEMENT.
4. AFTER CONCRETE IS COMPLETELY IN PLACE THE JOINT SHALL BE THOROUGHLY CLEANED AND THE FINGER PLATES SHALL BE REINSTALLED.
5. ANY PORTION TO THE FOAM SEAL THAT IS DAMAGED WHILE THE FINGER PLATES ARE OFF SHALL BE REPAIRED AT NO ADDITIONAL COST BY THE CONTRACTOR.
6. FOR MATERIAL SPECIFICATIONS AND REQUIREMENTS, SEE THE STANDARD SPECIFICATIONS.
7. FOR DETAILS OF DRAINAGE TROUGH, SEE SHEETS 66 & 67.

LOCATION OF JOINT		DIMENSION	JOINT OPENING AT						
			40° F.	50° F.	52° F.	60° F.	70° F.	80° F.	90° F.
ABUTMENT 1 AND ABUTMENT 2	A	5"	4 9/16"	4 1/2"	4 3/8"	3 3/4"	3 5/16"	2 7/8"	
	B	1'-6 1/2"	1'-6 1/16"	1'-6"	1'-5 11/16"	1'-5 1/4"	1'-4 9/16"	1'-4 3/8"	

"A" = FINGER PLATE OPENING ALONG CENTERLINE OF FINGER = FINGER PLATE OPENING NORMAL TO CENTERLINE OF JOINT.
 "B" = JOINT OPENING BETWEEN JOINT ANGLES NORMAL TO CENTERLINE OF JOINT.

NO.	REVISION	DATE	BY:
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W. VA. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
 OVER POTOMAC RIVER
 EXPANSION JOINT DETAILS – VIII**

DESIGNED <i>JDM</i>	DATE 11/02
DRAWN <i>RQU</i>	DATE 11/02
CHECKED <i>MJC</i>	DATE 11/02
CHECKED <i>PWP</i>	DATE 11/02

Baker
 Michael Baker Jr., Inc. Charleston, W. Va.

SHEET **65** OF **93**
 BRIDGE NO. **4919**

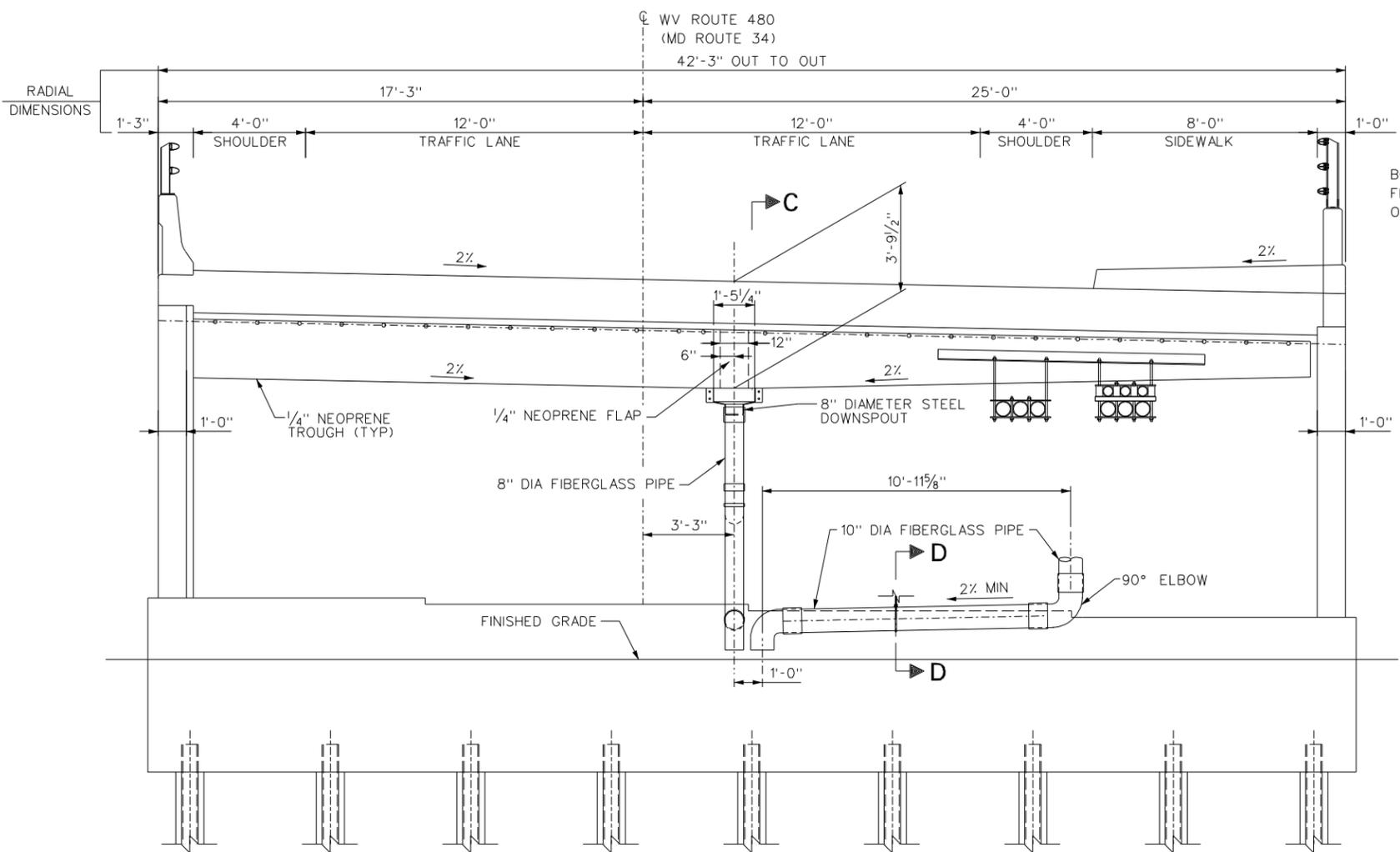
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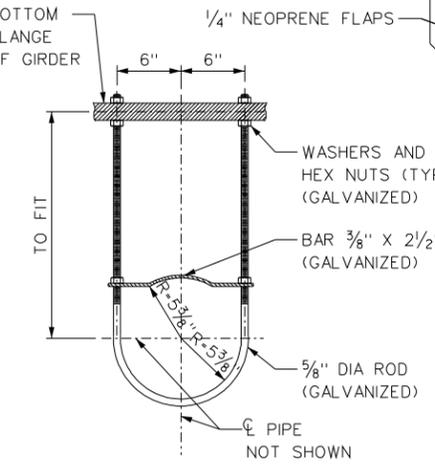
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J06C29C98 - BRIDGE b

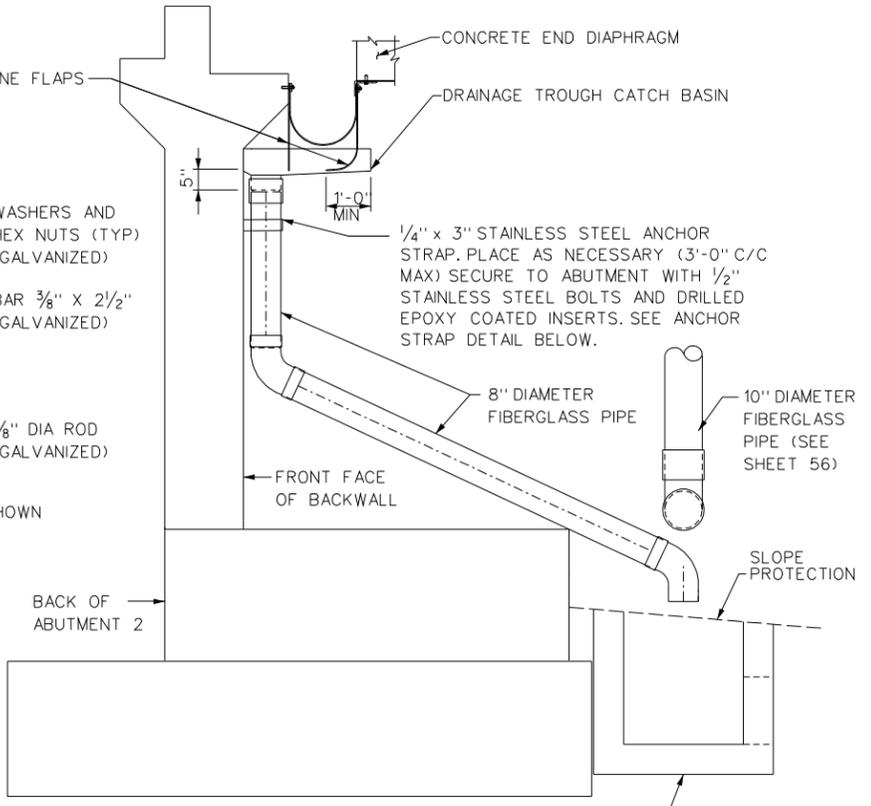
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	222	407



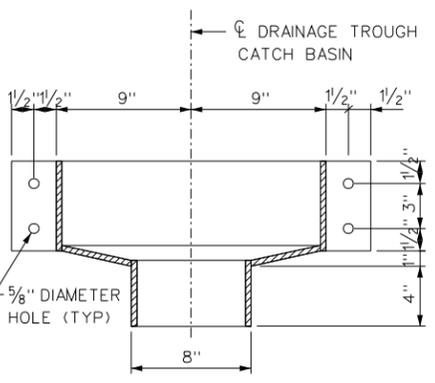
ELEVATION



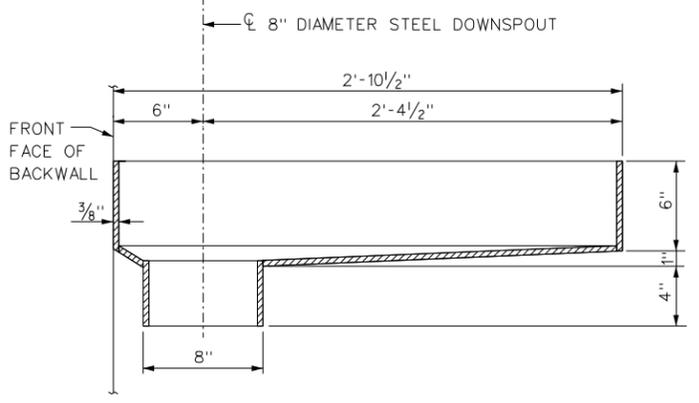
ANCHOR STRAP DETAIL



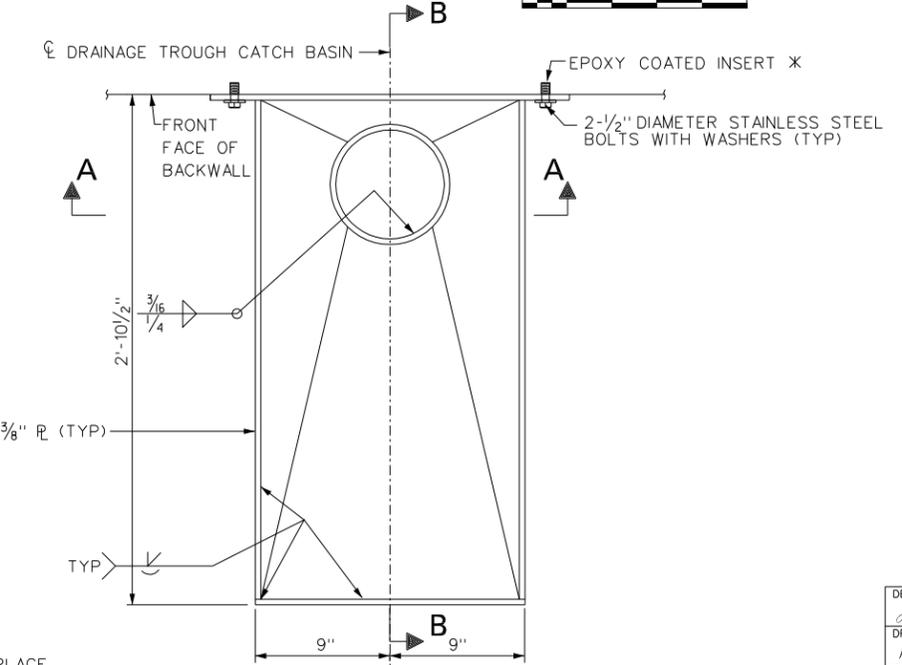
SECTION C-C



SECTION A-A



SECTION B-B



DRAINAGE TROUGH CATCH BASIN



NOTES:

1. ALL STEEL COMPONENTS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M11 OR M232, AS APPLICABLE. ALL COMPONENTS SHALL BE PAINTED AFTER GALVANIZING. GALVANIZED SURFACES WHICH ARE TO BE PAINTED SHALL BE SOLVENT CLEANED AND PRIMED ACCORDING TO THE PAINT MANUFACTURER'S SPECIFICATIONS. PAINT SYSTEM AND COLOR SHALL BE THE SAME AS USED ON THE STRUCTURAL STEEL.
2. THE COST OF ALL EXPANSION JOINT DRAIN COMPONENTS, INCLUDING GALVANIZING AND PAINTING, SHALL BE INCLUDED UNDER ITEM 627023-001, EXPANSION DAM, STEEL FINGER JOINT, EXCEPT AS NOTED.
3. ALL FIBERGLASS PIPE, TEES AND ELBOWS SHALL BE PAID FOR UNDER ITEM 670007-022, 10" FIBERGLASS PIPE AND SHALL BE GRAY IN COLOR.
4. STAINLESS STEEL BOLTS SHALL CONFORM TO ASTM A276.

NO.	REVISION	DATE	BY

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

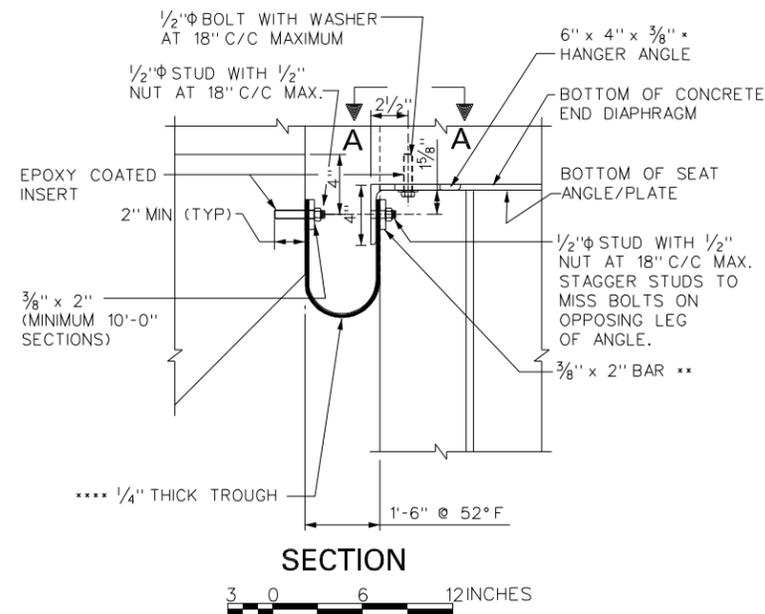
JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
EXPANSION JOINT DETAILS - IX

DESIGNED	JDM	DATE	11/02
DRAWN	RQH	DATE	11/02
CHECKED	KJC	DATE	11/02
CHECKED	PWP	DATE	11/02

Baker
Michael Baker Jr., Inc.

CHARLESTON, W. VA.
SHEET 66 OF 93
BRIDGE NO. 4919

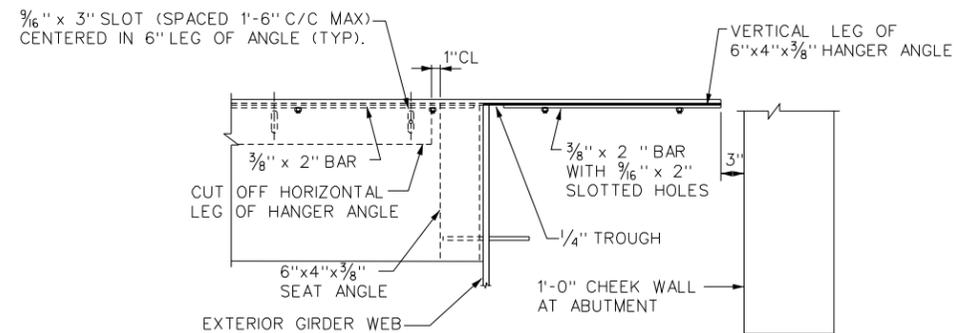
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	223	407



- * 6"x4"x 3/8" HANGER ANGLE EXTENDS FROM SEAT ANGLE/PLATE TO SEAT ANGLE/PLATE OF ADJACENT STRINGER. EXTEND VERTICAL LEG OF ANGLE BEYOND EXTERIOR TO SUPPORT TROUGH. SEE SECTION A-A.
- ** BAR DISCONTINUOUS AT STRINGER WEB. SEE SECTION A-A.
- *** AT THE CONTRACTORS OPTION DRILLED ANCHOR INSERTS OR CAST-IN-PLACE STUDS MAY BE USED. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR EITHER OF THESE ITEMS.
- **** NEOPRENE TROUGH SHALL BE FABRICATED SUCH THAT A 2% DOWNWARD SLOPE IS MAINTAINED ALONG THE BOTTOM OF THE TROUGH AS SHOWN IN THE ELEVATION VIEW ON SHEET 66.

NOTE:

AFTER TROUGH IS IN PLACE MOVE 6" x 4" HANGER ANGLES BACK TO TIGHTEN TROUGH AGAINST STRINGER WEB.



NOTES:

1. TROUGH MATERIAL SHALL CONFORM TO SECTION 715.39 OF THE STANDARD SPECIFICATIONS.
2. HOLES IN TROUGH MATERIAL SHALL BE DRILLED IN THE FIELD.

SECTION A-A



NEOPRENE TROUGH DETAILS

NO.	REVISION	DATE	BY:
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W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
EXPANSION JOINT DETAILS - X**

DESIGNED <i>JDM</i>	DATE 11/02
DRAWN <i>RQH</i>	11/02
CHECKED <i>MJC</i>	11/02
CHECKED <i>PWP</i>	11/02

Baker
Michael Baker Jr., Inc.

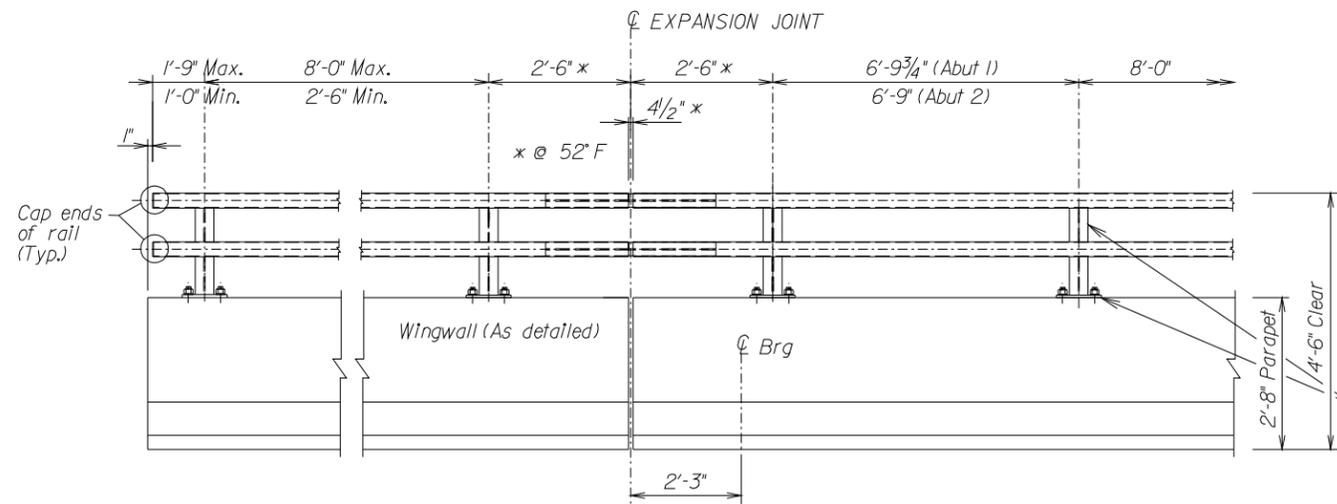
Charleston, W.Va.

SHEET **67** OF **93**
BRIDGE NO. **4919**

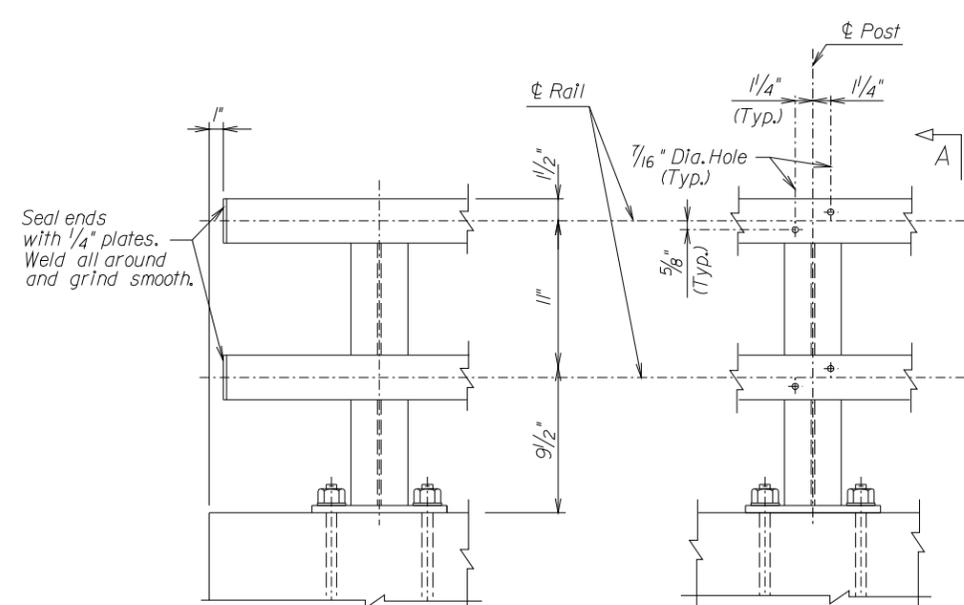
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03/31/2003

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	224	407



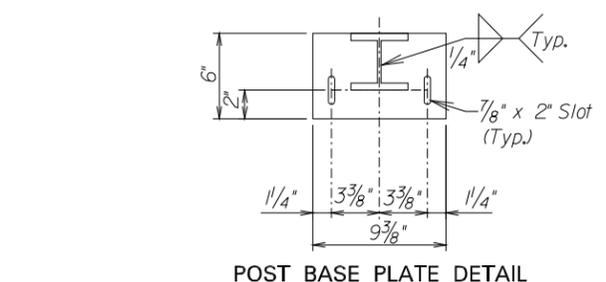
TYPICAL ELEVATION
Abut 1 shown, Abut 2 opposite hand except as noted



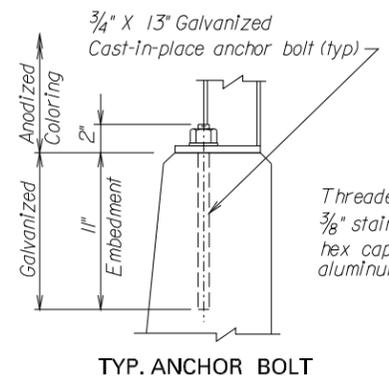
RAIL TERMINATION

POST AND RAIL CONNECTIONS

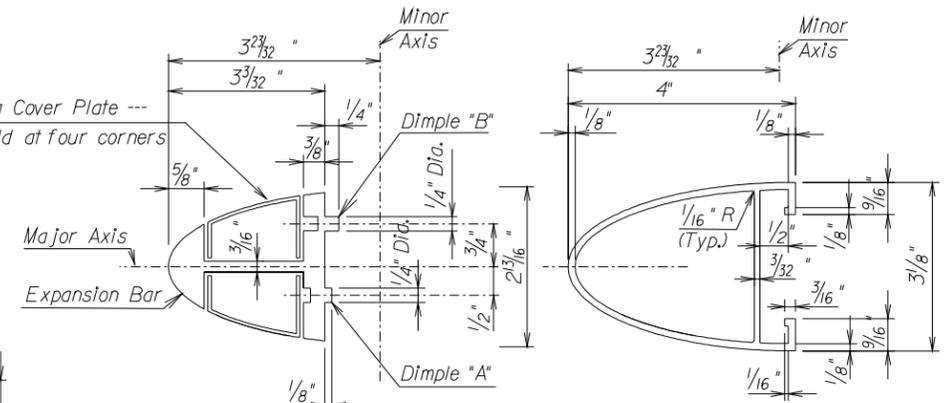
SECTION A-A



POST BASE PLATE DETAIL

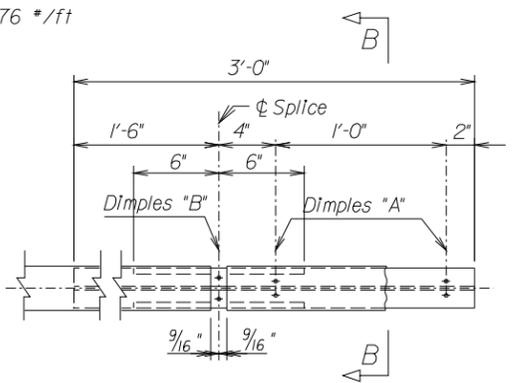


TYP. ANCHOR BOLT

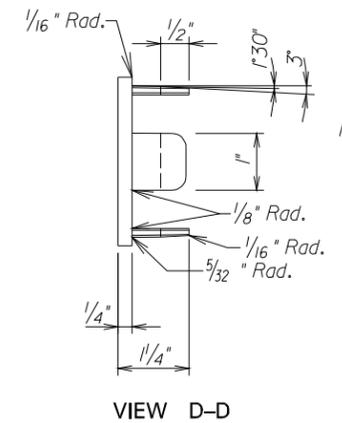


SECTION B-B (RAIL SPLICE)

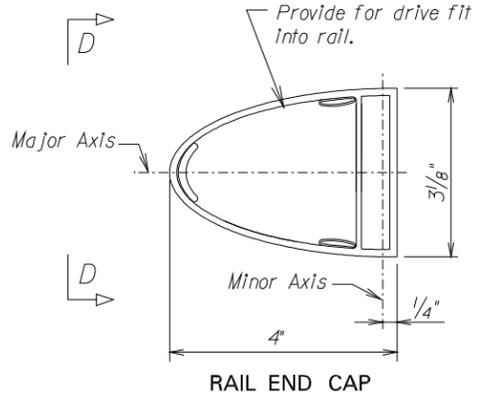
RAIL SECTION



SPLICE SLEEVE



VIEW D-D



RAIL END CAP

NOTES:

Aluminum material shall be in accordance with Sections 709.31 through 709.41 of the Standard Specifications.

Stainless steel bolts shall be in accordance with ASTM F593. Stainless steel nuts shall be in accordance with ASTM F594. Stainless steel washers shall be the same alloy as the bolts & nuts.

Anchor bolt assemblies shall be cast in place. All parts of the anchor bolt assembly shall be w/anodized coloring to match weathering steel except the bottom 11-inch of the Anchor Bolts, which shall be galvanized in accordance with AASHTO M232.

All exposed sharp edges shall be rounded. All rough-cut ends and edges shall be ground or filed smooth.

Rail posts shall be set normal to the roadway grade.

Curved rails shall be shop fabricated to the radius.

Elastomeric bearing pads shall be placed under each post. The pad shall cover the entire contact area between the post and concrete and shall be neatly trimmed. The pads shall meet the requirements of Section 715.5.

Cost of anchor bolt assemblies, railposts, rails, hardware, anodized coloring, and elastomeric bearing pads shall be included in the unit price bid for Item 617003-001, Aluminum Railing, 2 Rail, per 11 linear foot.

NO.	REVISION	DATE:	BY:
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**W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
RAILING DETAILS - I**

DESIGNED PWP	DATE 11/02
DRAWN MLAS	11/02
CHECKED PWP	11/02
CHECKED KJC	11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

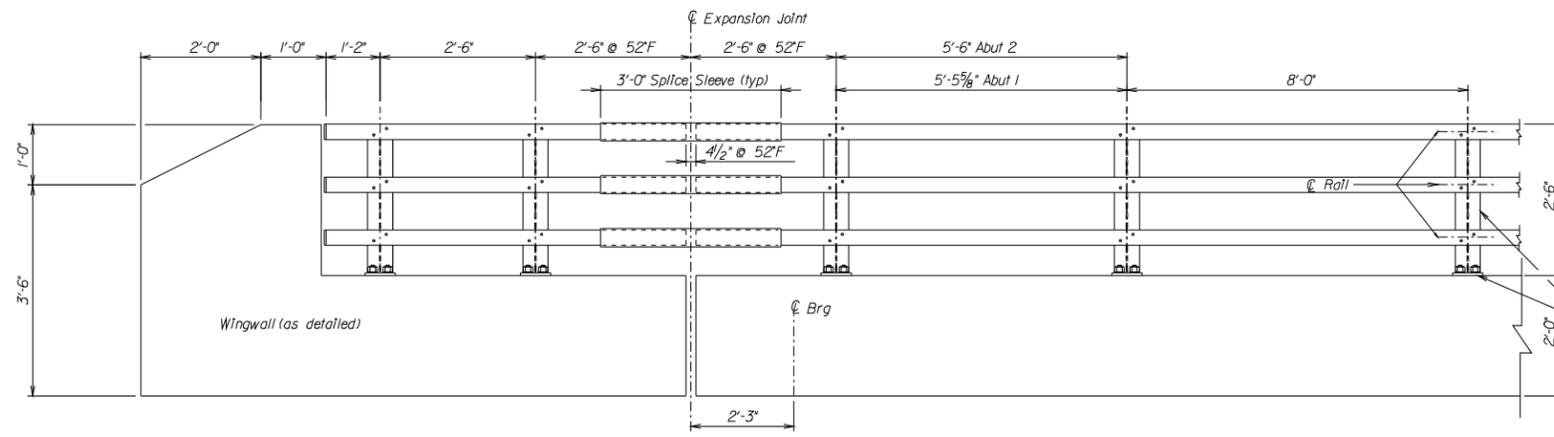
SHEET
68 OF 93
BRIDGE NO.
4919

SCALE : NOT TO SCALE

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06C29C98 - BRIDGE b

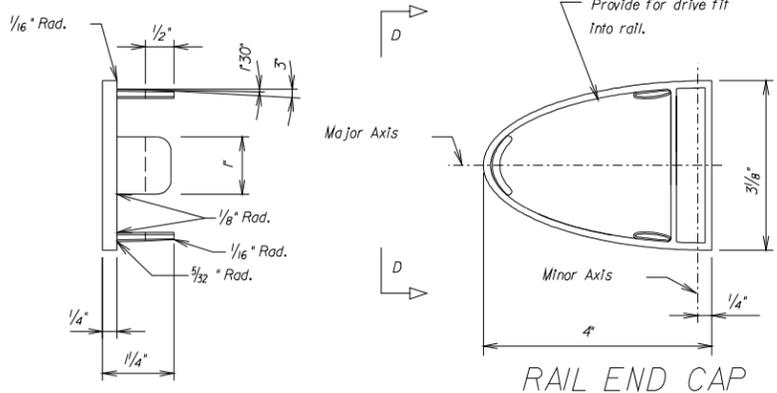
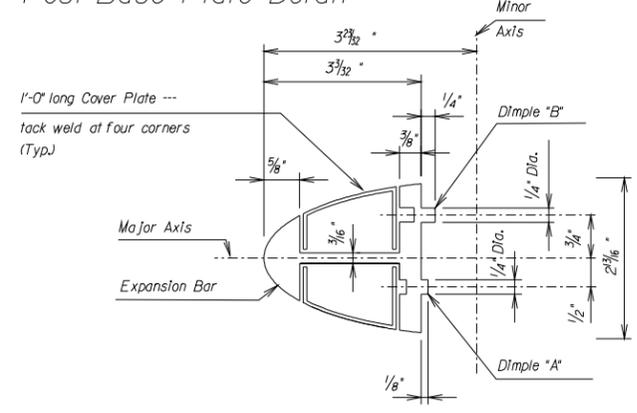
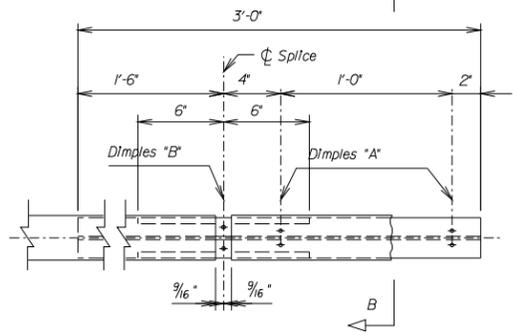
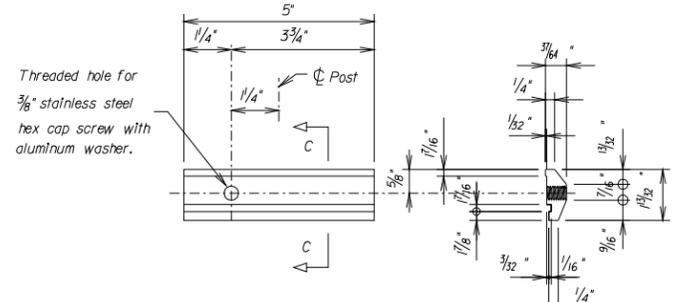
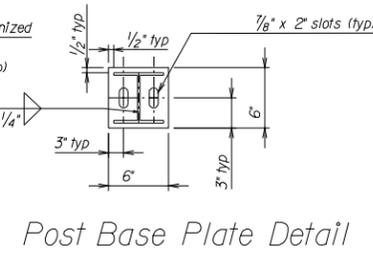
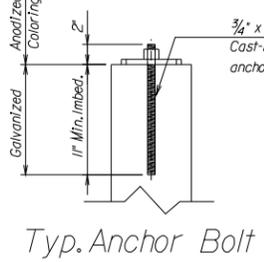
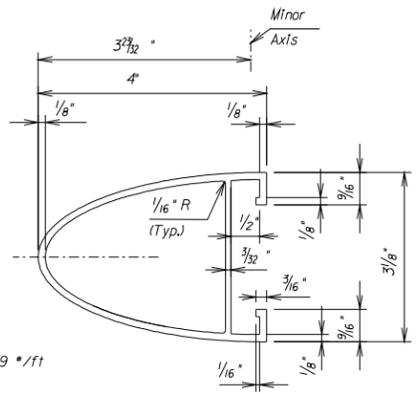
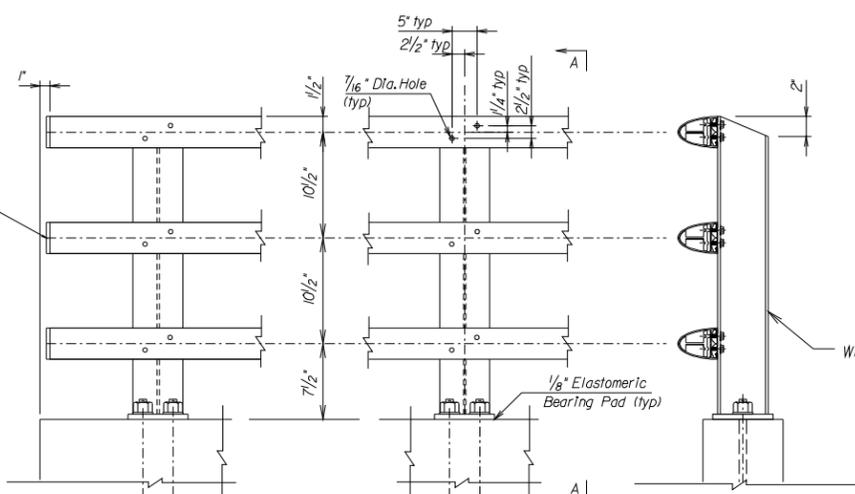
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	225	407



Aluminum Railing, Posts, and Base Plates w/Anodized coloring to match Weathering Steel

NOTES:

- Aluminum material shall be in accordance with Sections 709.31 through 709.41 of the Standard Specifications.
- Stainless steel bolts shall be in accordance with ASTM F593. Stainless steel nuts shall be in accordance with ASTM F594. Stainless steel washers shall be the same alloy as the bolts & nuts.
- Anchor bolt assemblies shall be cast in place. All parts of the anchor bolt assembly shall be w/anodized coloring to match weathering steel except the bottom 11-inch of the Anchor Bolts, which shall be galvanized in accordance with AASHTO M232.
- All exposed sharp edges shall be rounded. All rough-cut ends and edges shall be ground or filed smooth.
- Rail posts shall be set normal to the roadway grade.
- Curved rails shall be shop fabricated to the radius.
- Elastomeric bearing pads shall be placed under each post. The pad shall cover the entire contact area between the post and concrete and shall be neatly trimmed. The pads shall meet the requirements of Section 715J5.
- Cost of anchor bolt assemblies, rail posts, rails, hardware, anodized coloring, and elastomeric bearing pads shall be included in the unit price bid for Item 617003-001, Aluminum Railing, 3 Rail, per linear foot.



RAIL END CAP

NO.	REVISION	DATE:	BY:
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W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
RAILING DETAILS - II

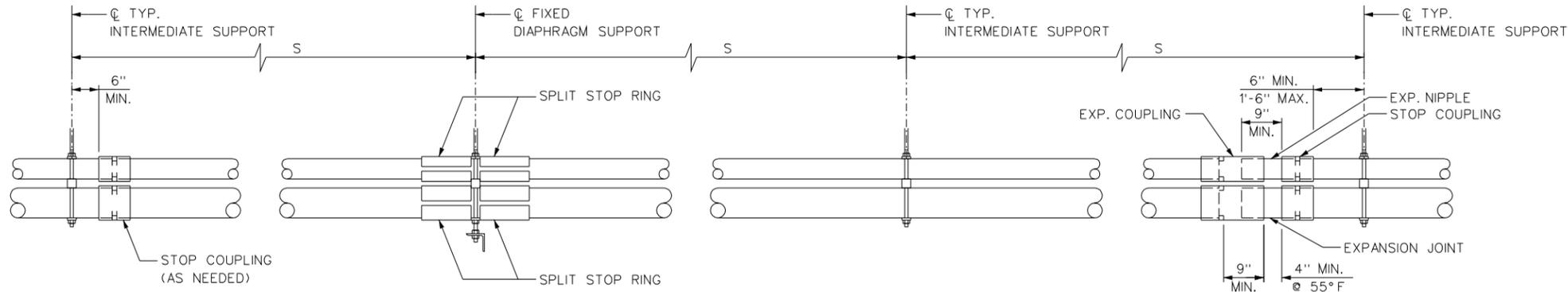
DESIGNED PWP	DATE 11/02
DRAWN MLAD	DATE 11/02
CHECKED PWP	DATE 11/02
CHECKED KJC	DATE 11/02

Baker
Michael Baker Jr., Inc.

Charleston, W.Va.
SHEET 69 OF 93
BRIDGE NO. 4919

SCALE : NOT TO SCALE

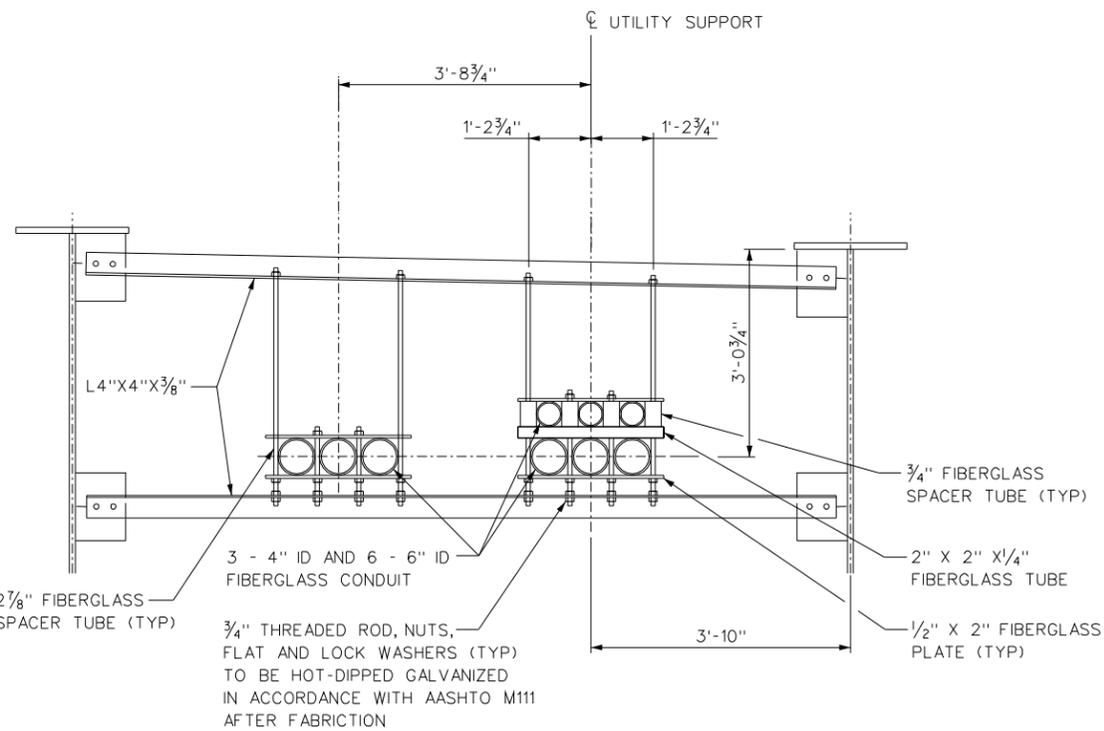
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	226	407



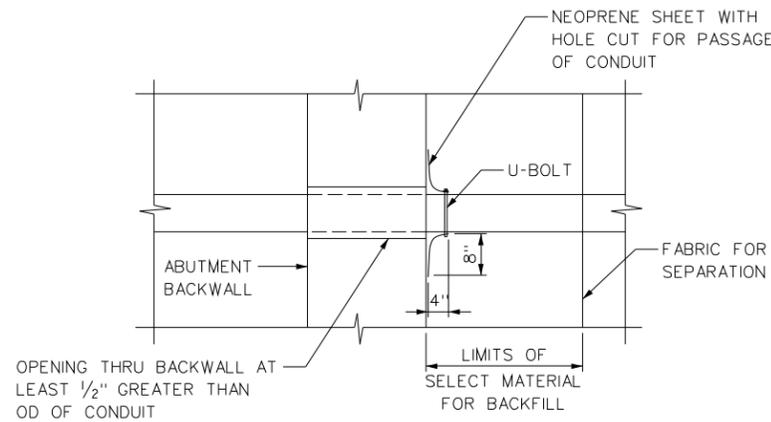
NOMINAL SIZE	AVG WALL THICKNESS	NOMINAL WEIGHT
4"	0.090"	1.26 LB/FT
6"	0.110"	2.43 LB/FT

S = SUPPORT SPACING 12'-0" MAXIMUM.
SEE FRAMING PLAN FOR LOCATIONS OF
SUPPORTS, FIXED POINTS EXPANSION JOINTS.

UTILITY CONDUIT ELEVATION



FIXED POINT CONDUIT SUPPORT



INSTALLATION AT ABUTMENT



NOTES:

1. THE COST OF PROVIDING AND INSTALLING MATERIALS FOR THE COMMUNICATION CONDUIT SYSTEM INCLUDING CONDUIT, HANGERS, FITTINGS AND GRADE 50W STEEL ELEMENTS (INTERMEDIATE CONDUIT SUPPORTS AND GIRDER ATTACHMENTS) ARE INCLUDED IN ITEM NO. 673001, INSTALLATION OF UTILITY CONDUIT SYSTEM. SEE SUMMARY OF BRIDGE QUANTITIES, SHEET 6, FOR BREAKDOWN OF MATERIALS FOR ELECTRIC AND TELEPHONE CONDUIT SYSTEMS.
2. FIBERGLASS CONDUIT SHALL MEET THE REQUIREMENTS OF ASTM D 2996. INNER SURFACE SHALL BE SMOOTH.
3. FOR CONDUIT SUPPORT AT PIERS AND ABUTMENTS SEE JACKING FRAME AT ABUTMENT AND PIERS, SHEET 27.
4. FOR ADDITIONAL CONDUIT DETAILS SEE SHEET 28.

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
CONDUIT DETAILS

DESIGNED	DATE
<i>AFJ</i>	11/02
DRAWN	
<i>JLH</i>	11/02
CHECKED	
<i>AFJ</i>	11/02
CHECKED	
<i>JKS</i>	11/02

Baker
Michael Baker Jr., Inc.

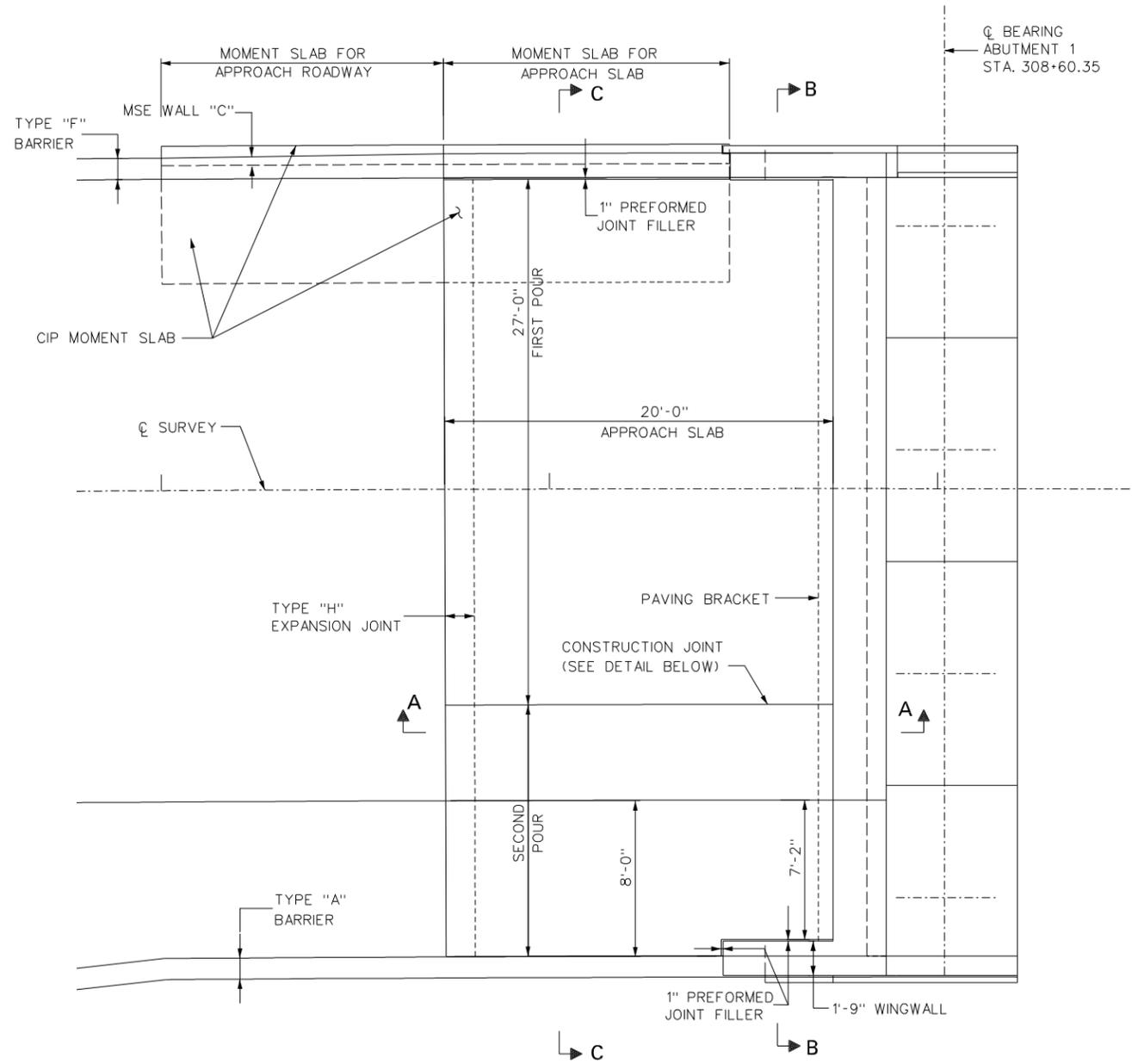
Charleston, W.Va.

SHEET
70 OF 93
BRIDGE NO.
4919

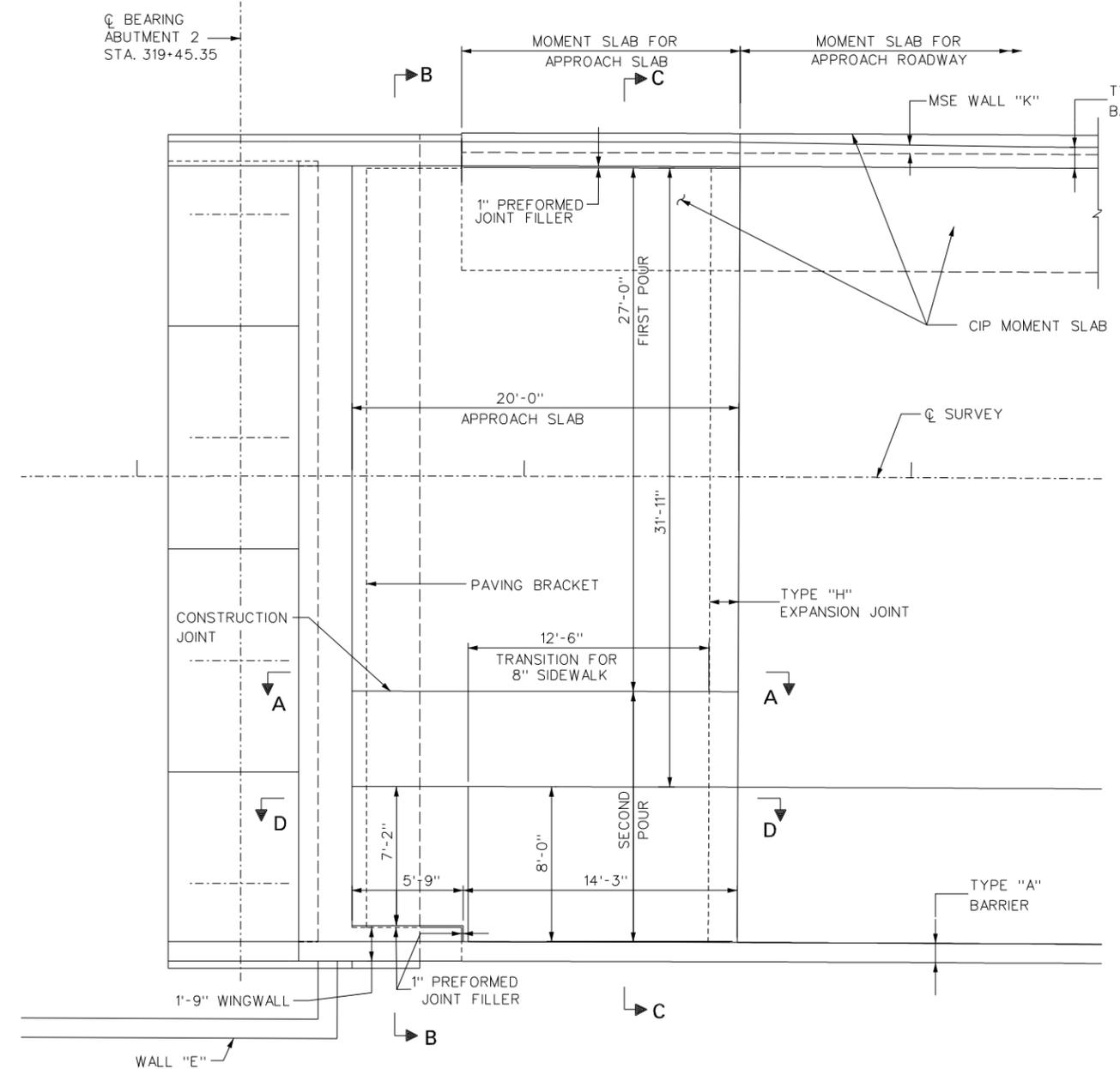
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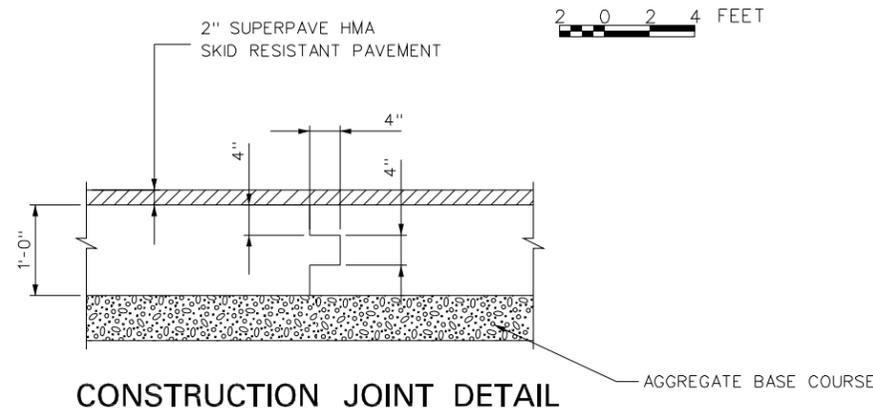
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	227	407



APPROACH SLAB PLAN - ABUTMENT



APPROACH SLAB PLAN - ABUTMENT 2



CONSTRUCTION JOINT DETAIL

NOTES:

1. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET 72.
2. FOR SECTION D-D, SEE SHEET 73.
3. FOR REINFORCING REQUIREMENTS SEE SHEET 72.
4. FOR REINFORCING SCHEDULE AND APPROACH SLAB QUANTITIES, SEE SHEET 73.
5. FOR ADDITIONAL APPROACH SLAB NOTES, SEE SHEET 73.

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
APPROACH SLAB DETAILS - I

DESIGNED <i>KJC</i>	DATE 11/02
DRAWN <i>WRE</i>	11/02
CHECKED <i>KRJ</i>	11/02
CHECKED <i>AJJ</i>	11/02

Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

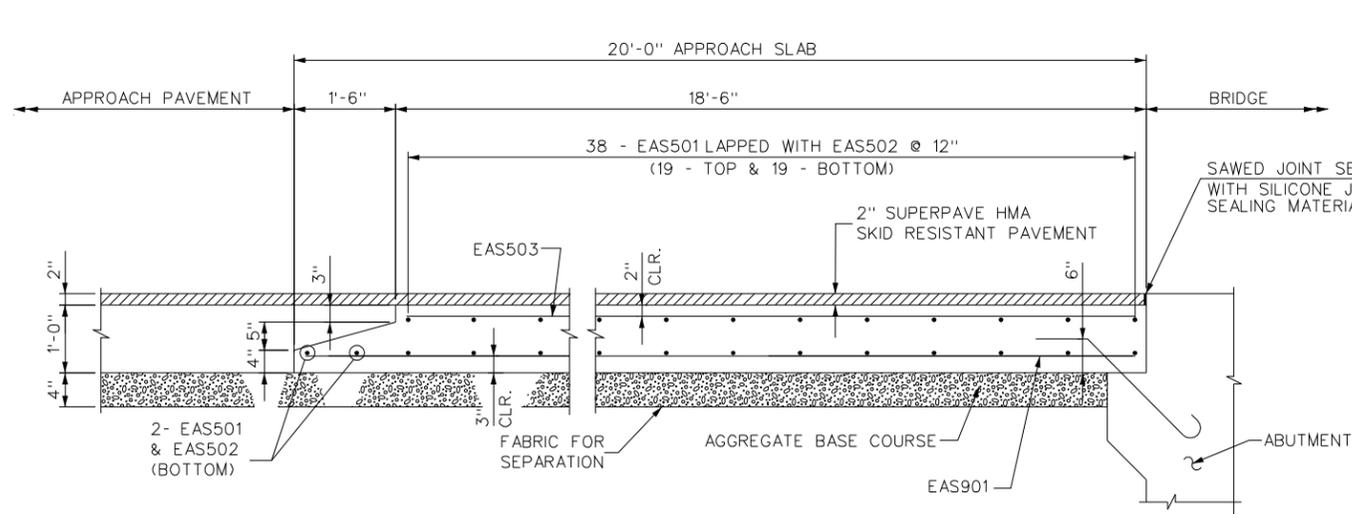
SHEET
71 OF **93**
BRIDGE NO.
4919

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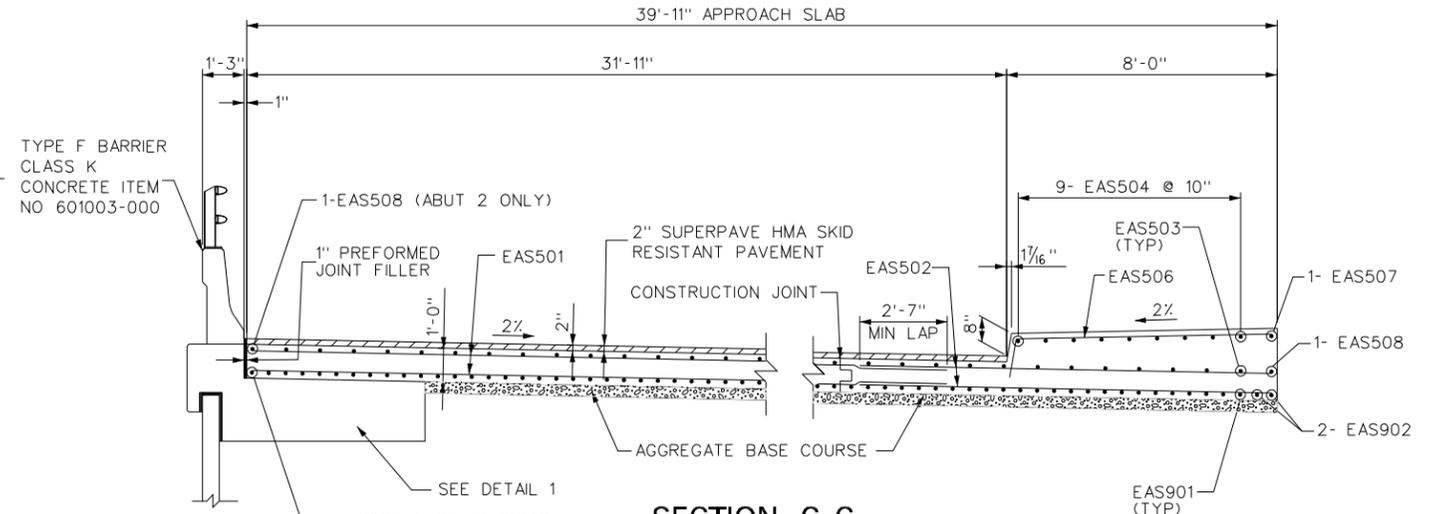
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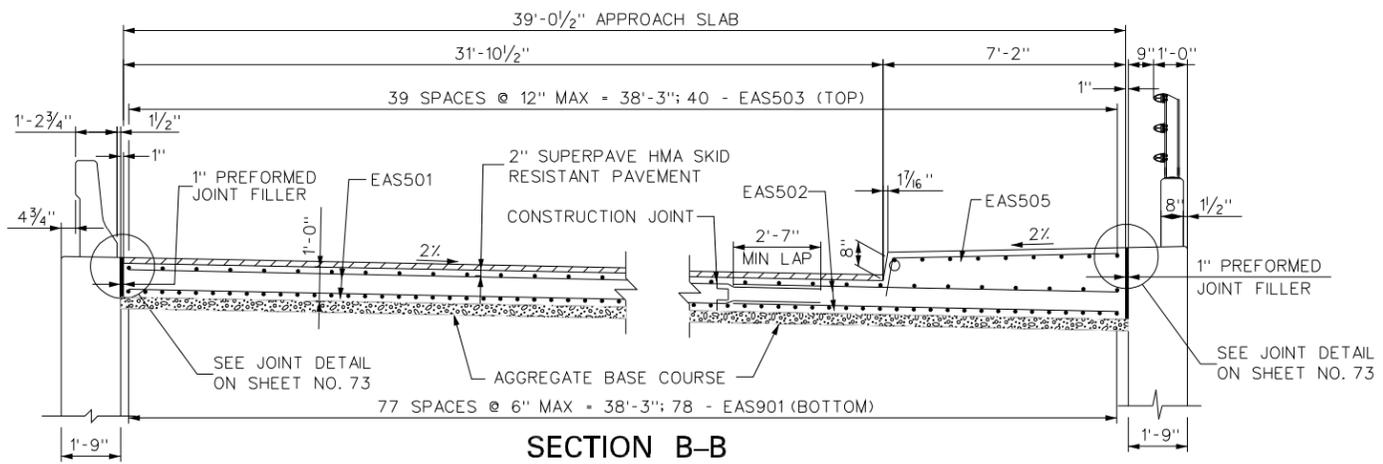
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	228	407



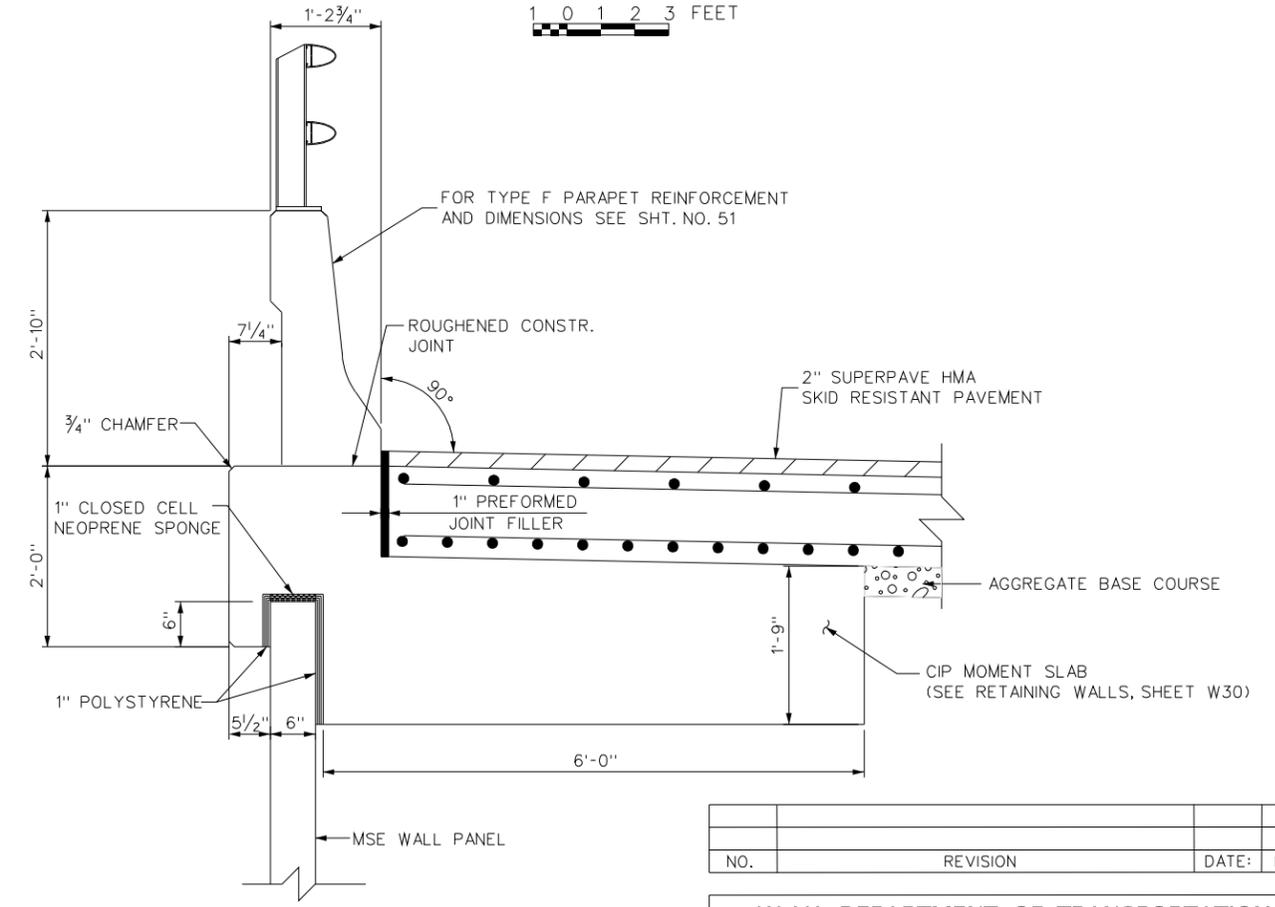
SECTION A-A
12 0 12 INCHES



SECTION C-C
1 0 1 2 3 FEET



SECTION B-B
1 0 1 2 3 FEET



DETAIL 1
6 0 6 12 INCHES

- NOTES:
- FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET 71.
 - FOR REINFORCING BAR SCHEDULE, APPROACH SLAB QUANTITIES AND ADDITIONAL NOTES, SEE SHEET 73.
 - MOMENT SLAB INCIDENTAL TO MSE WALL.

DESIGNED <i>KJC</i>	DATE 11/02
DRAWN <i>WRE</i>	DATE 11/02
CHECKED <i>JRT</i>	DATE 11/02
CHECKED <i>AJJ</i>	DATE 11/02

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
APPROACH SLAB DETAILS - II**

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET **72** OF **93**
BRIDGE NO. **4919**

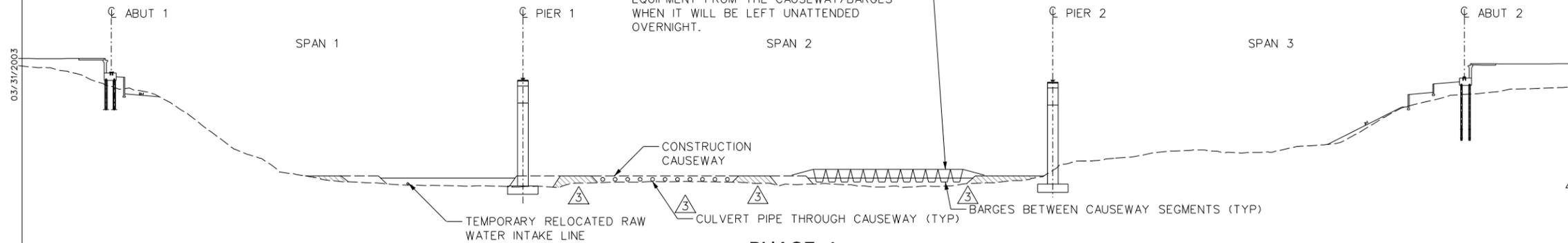
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03/31/2003

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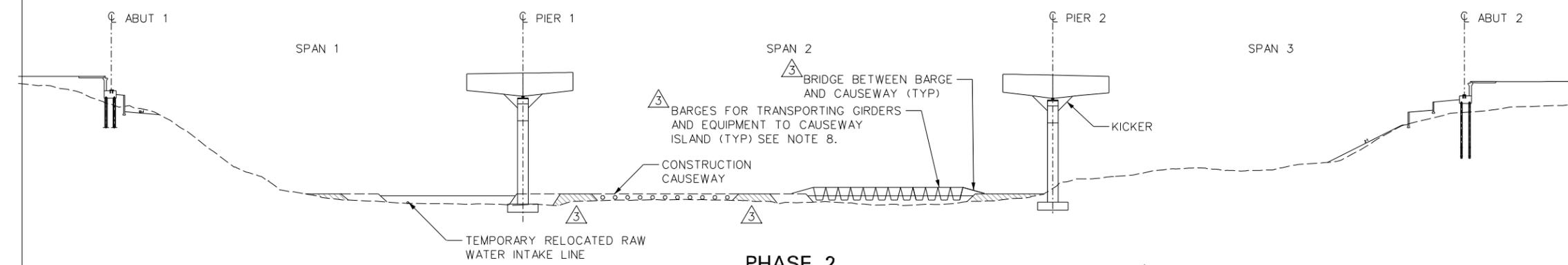
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	230	407



PHASE 1

PHASE 1

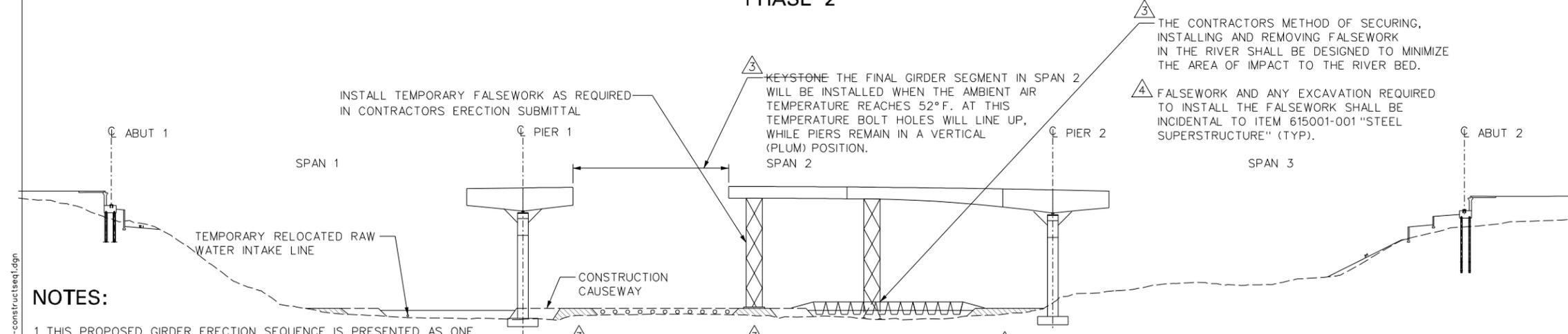
- BUILD TEMPORARY CAUSEWAY AND ACCESS ROADS IN ACCORDANCE WITH ROADWAY PLANS. NOTE SEASONAL RESTRICTIONS.
- BUILD SUBSTRUCTURE UNITS. (COFFERDAM)
- INSTALL BEARINGS AND GROUT ANCHOR BOLTS AT ALL LOCATIONS.
- 4 - TO PREVENT EXCESSIVE BEARING ROTATION DURING CONSTRUCTION, SET TIMBER BLOCKING 1/4" BELOW THE BOTTOM FLANGE OF THE PLATE GIRDER AND BEVELED AT THE SAME SLOPE AS THE BEVELED SOLE PLATE. SET THE BLOCKING IN FRONT AND IN BACK OF ALL EXPANSION BEARINGS AT ABUTMENTS. THIS WORK SHALL BE INCIDENTAL TO ITEM 615001-001 "STEEL SUPERSTRUCTURE"



PHASE 2

PHASE 2

- ERECT GIRDER SECTION AT PIERS FOR ALL GIRDERS.
- USE KICKERS TO SUPPORT FIELD SECTIONS AS REQUIRED.
- ERECT CROSS FRAMES.
- ERECT TEMPORARY BRACING TO STABILIZE ALL ERECTED SEGMENTS.
- ERECT SECTIONS WITH BEARING STIFFENER AT CENTERLINE OF BEARING. WELD GIRDER BOTTOM FLANGE TO BEVELED SOLE PLATE (TYP).



PHASE 3

PHASE 3

- 3 - ADD GIRDER SECTIONS FOR SPAN 2 FOR ALL GIRDERS AND SUPPORT THEM BY FALSEWORK AS REQUIRED, EXCEPT FOR THE KEYSTONE FINAL GIRDER SEGMENT IN SPAN 2. KEYSTONE THE FINAL GIRDER SEGMENT IN SPAN 2 WILL BE INSTALLED WHEN THE AMBIENT AIR TEMPERATURE REACHES 52°F. CONSTRUCTION WILL CONTINUE ON OTHER SPANS UNTIL THE CORRECT TEMPERATURE IS REACHED.
- ERECT CROSS FRAMES.
- ERECT TEMPORARY BRACING TO STABILIZE ALL ERECTED SEGMENTS.
- DO NOT TIGHTEN CROSSFRAME CONNECTIONS IN SPAN 2 UNLESS ERECTION SUBMITTAL STATES OTHERWISE.

NOTES:

1. THIS PROPOSED GIRDER ERECTION SEQUENCE IS PRESENTED AS ONE METHOD THAT THE CONTRACTOR MAY USE TO INSTALL THE GIRDERS. IT HAS BEEN DEVELOPED TO ACCOMMODATE THE CONDITION OF PIERS 1 & 2 HAVING FIXED BEARINGS. ALL FALSEWORK SHOWN IS SCHEMATIC AND ALL FALSEWORK REQUIRED IS NOT SHOWN. ACCORDINGLY, THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATIONS, QUANTITY AND DURATION OF PLACEMENT OF THE FALSEWORK. ALTERNATE ERECTION SCHEMES MAY BE DEVELOPED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR REVIEW.
2. THE CONTRACTOR SHALL SUBMIT THE MEANS AND METHODS OF ERECTING THE GIRDERS IN ACCORDANCE WITH SPECIFICATION SECTION 615.8.5. ALL LOADS, INCLUDING WIND IN ANY DIRECTION AND UPLIFT ON THE GIRDER SEGMENTS, SHALL BE INCLUDED IN PREPARING THE ERECTION SUBMITTAL.
3. THE CONTRACTOR IS RESPONSIBLE TO ANALYSE AND DESIGN ALL TEMPORARY BRACING REQUIRED BETWEEN GIRDERS, EITHER BASED ON SUGGESTED ERECTION SCHEME OR ANY OTHER TO BE DEVELOPED BY THE CONTRACTOR. ALL TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL DECK SLAB, SIDEWALK AND PARAPET CONCRETE HAS CURED.
4. CONSTRUCTION PHASES SHOWN ARE SUB-PHASES OF THE STAGE 1 CONSTRUCTION DETAILED IN THE ROADWAY PLANS.
5. BRIDGE CONSTRUCTION WILL BEGIN AFTER THE WATER INTAKE HAS BEEN RELOCATED (BY OTHERS). THE PEDESTRIAN FOOT BRIDGE AND PARKING LOT SHALL BE CONSTRUCTED BEFORE BRIDGE CONSTRUCTION BEGINS.
6. THE CONTRACTOR IS ALERTED TO THE FACT THAT THE TEMPORARY RELOCATED RAW WATER INTAKE LINE WILL BE IN THE RIVER DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAKING SURE THAT NO DAMAGE TO THE WATER LINE OCCURS DUE TO IMPACT. THE METHOD CHOSEN BY THE CONTRACTOR TO BRIDGE/CROSS THE WATER LINE SHALL BE APPROVED BY THE ENGINEER AND SUBMITTED IN THE CONTRACTORS RIVER OPERATIONS PLAN.
7. DURING OVERHEAD WORK ABOVE THE CANAL ACCESS TRAIL, THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE SAFETY OF VISITORS TO THE PARK THROUGHOUT THE CONSTRUCTION AREA. THE NATIONAL PARK SERVICE WILL ISSUE A SPECIAL USE PERMIT THAT WILL OUTLINE CONDITIONS UNDER WHICH THE TOWPATH CAN BE TEMPORARILY CLOSED TO VISITOR USE.
8. BARGE AND RIVER OPERATIONS SHOWN ON THESE PLANS ARE SCHEMATIC THE CONTRACTOR SHALL SUBMIT A DETAILED PLAN TO THE ENGINEER SHOWING ALL RIVER OPERATIONS.
9. THE ISLAND CAUSEWAY PROVIDES 2 CHANNELS FOR RECREATIONAL BOATER ACCESS THROUGH THE CONSTRUCTION AREA. THE CONTRACTOR IS PROHIBITED FROM CLOSING BOTH CHANNELS AT THE SAME TIME UNLESS APPROVAL IS GRANTED BY THE ENGINEER 7 DAYS IN ADVANCE. THE METHOD OR SIGNING REQUIRED TO INDICATE A CHANNEL CLOSURE SHALL BE DOCUMENTED IN THE CONTRACTORS RIVER OPERATIONS PLAN

NO.	ADDED NOTES	DATE:	BY:
1	CAUSEWAY, RIVER OPERATIONS, NOTE CHANGES	3/24/03	JDD
2		2/3/03	JDD

**W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
CONSTRUCTION SEQUENCE - I**

DESIGNED <i>JDD</i>	DATE 11/02
DRAWN <i>MAS</i>	11/02
CHECKED <i>MR</i>	11/02
CHECKED <i>PA</i>	11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET
74 OF **93**
BRIDGE NO. **4919**

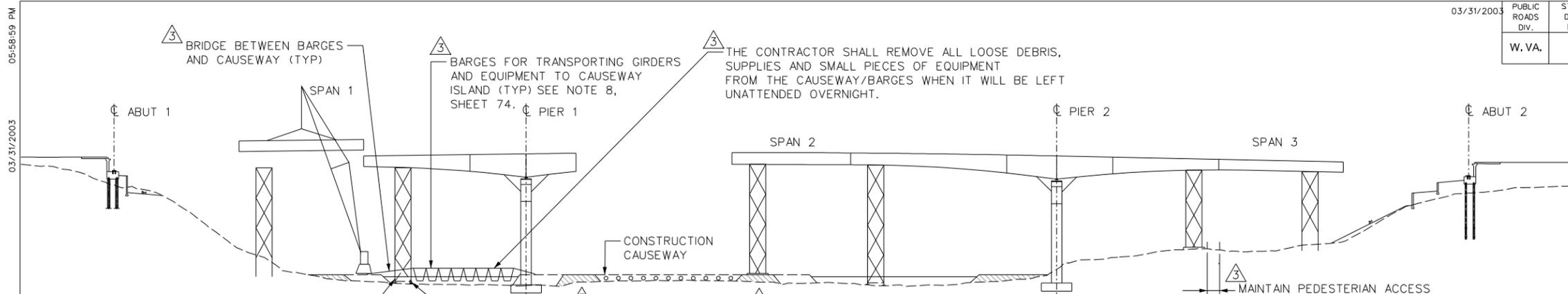
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PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	231	407

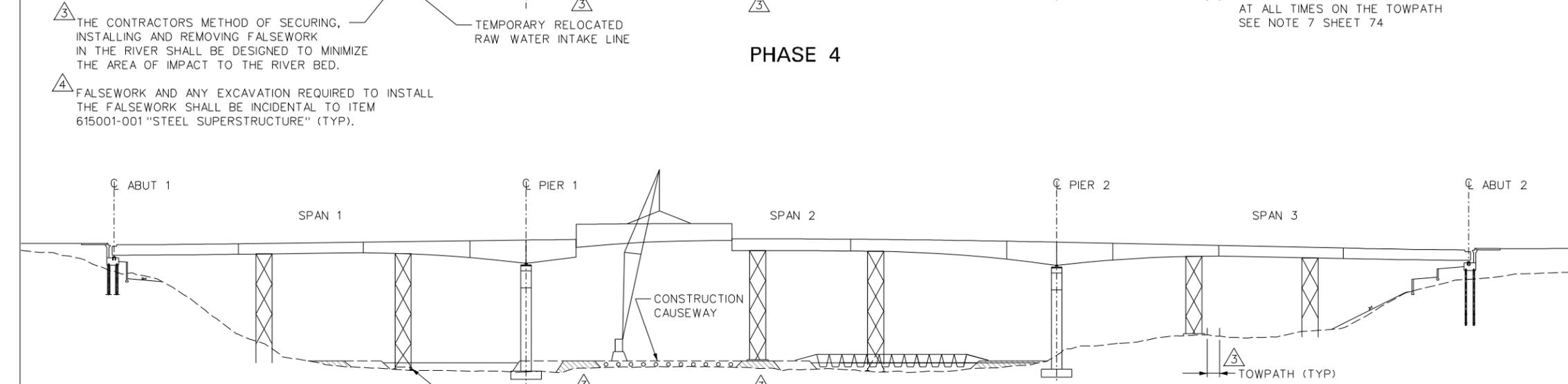


PHASE 4

- 3 THE CONTRACTOR SHALL REMOVE ALL LOOSE DEBRIS, SUPPLIES AND SMALL PIECES OF EQUIPMENT FROM THE CAUSEWAY/BARGES WHEN IT WILL BE LEFT UNATTENDED OVERNIGHT.
- 3 THE CONTRACTORS METHOD OF SECURING, INSTALLING AND REMOVING FALSEWORK IN THE RIVER SHALL BE DESIGNED TO MINIMIZE THE AREA OF IMPACT TO THE RIVER BED.
- 4 FALSEWORK AND ANY EXCAVATION REQUIRED TO INSTALL THE FALSEWORK SHALL BE INCIDENTAL TO ITEM 615001-001 "STEEL SUPERSTRUCTURE" (TYP).

PHASE 4

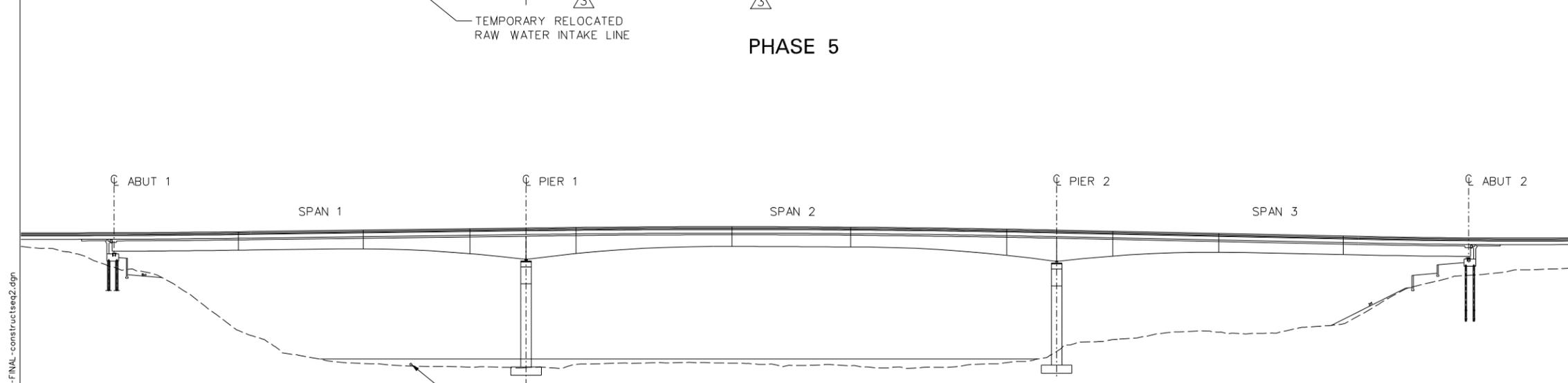
- CONTINUE ERECTING GIRDERS IN THE END SPANS AND SUPPORTING THEM BY FALSEWORK AS REQUIRED.
- ERECT CROSS FRAMES.
- ERECT TEMPORARY BRACING TO STABILIZE ALL ERECTED SEGMENTS.



PHASE 5

PHASE 5

- CONTINUE ERECTING GIRDERS IN END SPANS AND SUPPORTING THEM ON FALSEWORK AS REQUIRED.
- ERECT CROSS FRAMES.
- ERECT TEMPORARY BRACING TO STABILIZE ALL ERECTED SEGMENTS.
- 3 WHEN THE CORRECT TEMPERATURE IS REACHED (52°F) INSTALL THE KEYSTONE FINAL GIRDER SEGMENT IN SPAN 2 AND TIGHTEN UP SPLICE BOLTS.
- TIGHTEN CROSS FRAME CONNECTIONS AFTER ALL GIRDERS ARE BOLTED AND ALL TEMPORARY SUPPORTS ARE REMOVED.
- WELD SOLE PLATES TO GIRDERS AT ABUTMENT EXPANSION BEARINGS. C OF THE BEARING STIFFENER ON THE GIRDER WILL BE DIRECTLY OVER THE C OF THE EXPANSION BEARING AT 52°F. AT OTHER TEMPERATURES, THE STIFFENER WILL BE OFFSET FROM THE C OF BEARING AS SHOWN IN THE TABLE.



PHASE 6

PHASE 6

- 3 -REMOVE FALSEWORK
- REPAIR PIER CONCRETE AT SUPPORT LOCATIONS FOR TEMPORARY ERECTION APPARATUS AS REQUIRED.
- 3 -INSTALL DECK, SIDEWALK, PARAPETS AND OVERLAY. THEN REMOVE TIMBER BLOCKING AT EXPANSION BEARINGS.
- 3 -ELASTOMERIC BEARINGS AT BOTH ABUTMENTS SHALL BE VERTICAL UNDER FULL DEAD LOAD. IF NECESSARY, CONTRACTOR SHALL JACK THE SUPERSTRUCTURE UP 1/16" ABOVE BEARINGS AT BOTH ABUTMENTS TO ALLOW THE BEARINGS TO ROTATE BACK INTO A PLUM POSITION. ALL GIRDERS AT AN ABUTMENT SHALL BE JACKED SIMULTANEOUSLY THIS WORK SHALL BE INCIDENTAL TO ITEM 615001-001 "STEEL SUPERSTRUCTURE" (TYP).
- 3 -REMOVE TEMPORARY BRACING BETWEEN GIRDERS
- 3 -WELD SOLE PLATES TO GIRDERS AT ABUTMENT EXPANSION BEARINGS. C OF THE BEARING STIFFENER ON THE GIRDER WILL BE DIRECTLY OVER THE C OF THE EXPANSION BEARING AT 52°F. AT OTHER TEMPERATURES, THE STIFFENER WILL BE OFFSET FROM THE C OF BEARING AS SHOWN IN THE TABLE.

3	NOTE REVISED OR ADDED	3/24/03	JDD
3	CAUSEWAY, RIVER OPERATIONS, NOTE CHANGES	2/3/03	JDD
NO.	REVISION	DATE:	BY:

ABUTMENT	OFFSET AT						
	40°F	50°F	52°F	60°F	70°F	80°F	90°F
1 AND 2	-1/2"	-1/16"	0	5/16"	3/4"	13/16"	15/8"

* (+) OFFSET INDICATES DIRECTION OF OFFSET OF THE BEARING STIFFENER IS BEYOND THE C OF BEARING (TOWARDS BACKWALL). (-) OFFSET IS IN OPPOSITE DIRECTION.

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
CONSTRUCTION SEQUENCE - II**

DESIGNED	JDD	DATE	11/02
DRAWN	MAD	DATE	11/02
CHECKED	MR	DATE	11/02
CHECKED	PA	DATE	11/02

Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

SHEET
75 OF 93
BRIDGE NO.
4919

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03/31/2003

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J0629C98 - BRIDGE b

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	232	407

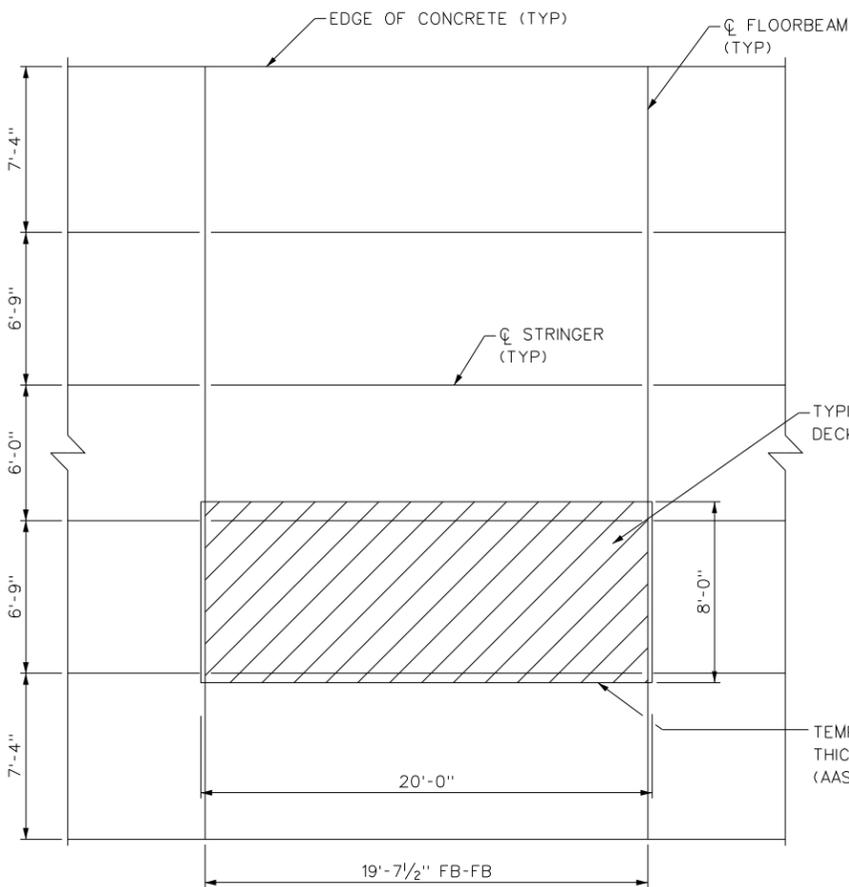
CONCEPTUAL CONSTRUCTION SEQUENCE FOR DECK REPAIR:

TEMPORARY REPAIR:

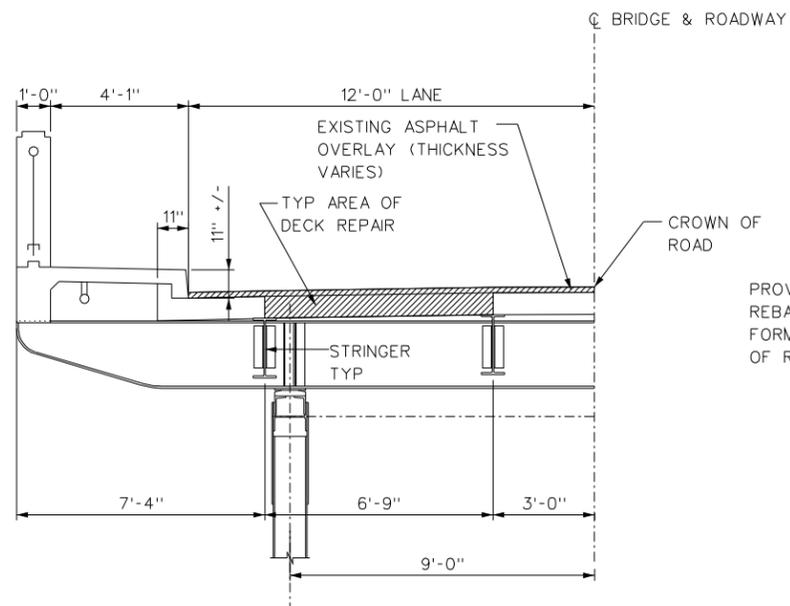
1. SET UP TRAFFIC CONTROL (FLAGMEN AND ALTERNATING ONE WAY TRAFFIC WILL BE PERMITTED FOR TRAFFIC CONTROL).
2. INSTALL A 8"x20"x1" THICK STEEL PLATE OVER THE DETERIORATED PORTION OF THE EXISTING DECK. THE CONTRACTOR SHALL PROVIDE THE STEEL PLATE.
3. PLACE COLD PATCH ASPHALT EXTENDING 6" AROUND THE ENTIRE PERIMETER OF THE PLATE AND TAPERED TO MEET EXISTING GRADE AND CROSS SLOPE FOR DRIVEABILITY. OPEN THE ROADWAY TO TRAFFIC UNTIL A PERMANENT REPAIR CAN BE MADE.

PERMANENT REPAIR:

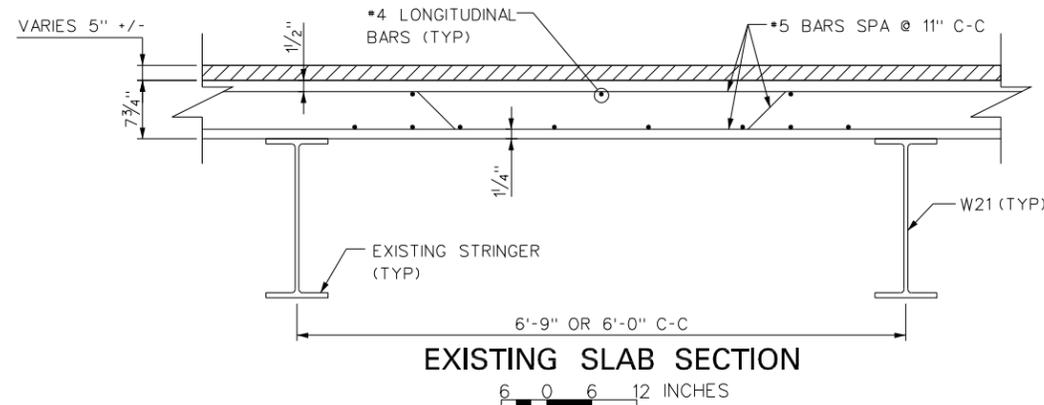
1. INSTALL SHORING UNDER THE BRIDGE DECK REPAIR AREA TO PREVENT DEBRIS FROM FALLING TO THE GROUND OR RIVER.
2. SET UP TRAFFIC CONTROL (FLAGMEN AND ALTERNATING ONE WAY TRAFFIC).
3. REMOVE THE TEMPORARY STEEL PLATE.
4. REMOVE THE EXISTING ASPHALT OVER THE REPAIR AREA.
5. MINIMUM REPAIR WIDTH SHALL BE \bar{C} - \bar{C} STRINGER AND LENGTH AS DESIGNATED BY THE ENGINEER OR AS SHOWN ON THIS SHEET.
6. CONCRETE REMOVAL SHALL BE WITH STANDARD PAVEMENT BREAKERS OR WITH HYDRAULIC HAMMERS RATED UP TO 500 LBS. OR LESS. REMOVE THE EXISTING CONCRETE OVER THE REPAIR AREA. LEAVE EXISTING REBAR IN PLACE.
7. CLEAN AND/OR REPLACE, OR SPLICE DETERIORATED REBAR AS DIRECTED BY THE ENGINEER. (MINIMUM SPLICE LENGTH=18")
8. WELD THE SUPPORT ANGLE TO THE TOP FLANGE OF THE STRINGER AFTER REMOVING RUST, DEBRIS AND DELETERIOUS MATERIALS FROM THE STRINGER. INSTALL PERMANENT METAL DECK FORM.
9. POUR CLASS K CONCRETE WITH ACCELERATORS UP TO THE TOP OF THE EXISTING ASPHALT.
10. REMOVE ANY LOOSE DEBRIS THAT COLLECTED ON STEEL MEMBERS. REMOVE SHORING.
11. INSTALL THE TEMPORARY STEEL PLATE OVER THE REPAIRED AREA AFTER THE INITIAL SET (1 HR +/-). WHEN THE CLASS K CONCRETE HAS CURED TO A MINIMUM STRENGTH OF 2000 PSI, REMOVE THE PLATE.
12. REMOVE TEMPORARY STEEL PLATE.
13. OPEN TO TRAFFIC.
14. ASSUME EACH REPAIR AREA = 132.5 SQ FT.



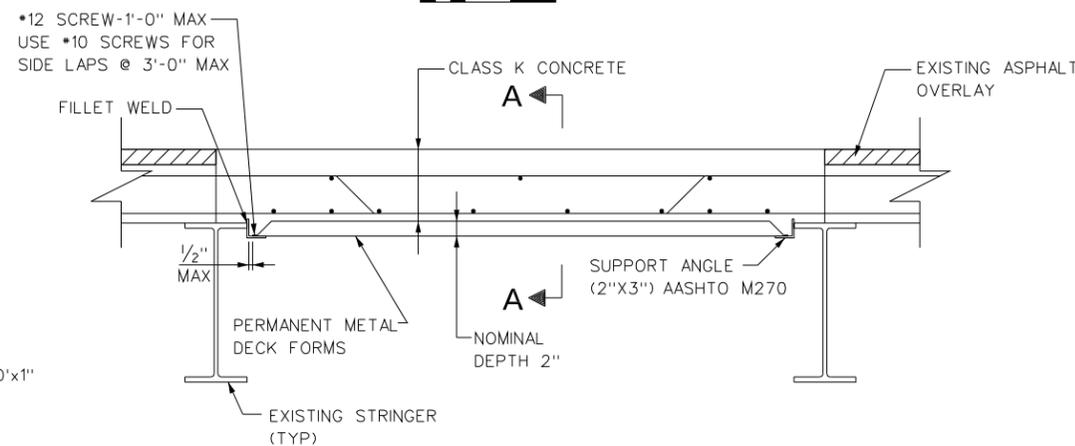
EXISTING FLOOR PLAN



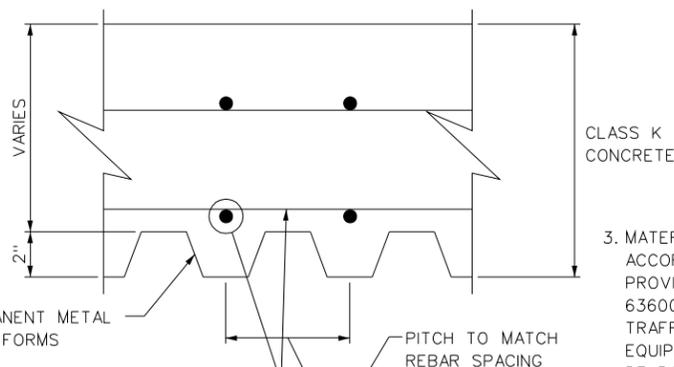
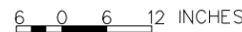
EXISTING BRIDGE HALF CROSS SECTION



EXISTING SLAB SECTION



COMPLETED CONCEPTUAL REPAIR



SECTION A-A



PROVIDE MINIMUM OF 1" CLEAR BETWEEN REBAR AND PERMANENT METAL DECK FORMS. ALIGN VALLEYS W/BOTTOM LAYER OF REINFORCING STEEL.

NOTES:

1. UPON DEMOLITION OF THE EXISTING BRIDGE ANY EXISTING STEEL PLATES FOUND ON THE DECK SHALL BE RETURNED BY THE CONTRACTOR TO THE DISTRICT 5 BRIDGE ENGINEER IN JEFFERSON COUNTY.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE EXISTING BRIDGE DECK UNTIL THE NEW BRIDGE IS OPEN TO TRAFFIC. THIS SHEET PROVIDES A CONCEPTUAL CONSTRUCTION SEQUENCE FOR DECK REPAIR. DECK REPAIRS WILL BE REQUIRED ON DETERIORATED AREAS OF THE EXISTING BRIDGE DECK AS DETERMINED BY THE ENGINEER.

3. MATERIALS REQUIRED FOR THIS ITEM SHALL BE IN ACCORDANCE WITH THIS PLAN AND THE SPECIAL PROVISIONS AND SHALL BE PAID FOR UNDER ITEM 636005-001 "TEMPORARY STRUCTURE FOR MAINTAINING TRAFFIC, EXISTING BRIDGE DECK REPAIR". LABOR AND EQUIPMENT REQUIRED TO COMPLETE THIS WORK WILL BE PAID FOR BY FORCE ACCOUNT.
4. CALCULATIONS IN ACCORDANCE WITH SECTION 601.8 ARE REQUIRED TO DETERMINE THE SIZE OF SIP DECK FORM REQUIRED.
5. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE TO PARK PROPERTY, INCLUDING HISTORICAL PROPERTIES, TO THE SATISFACTION OF THE NATIONAL PARK SERVICE AT NO COST TO WVDOH. NO MATERIAL FROM THE EXISTING BRIDGE SHALL BE DROPPED ON TO PARK PROPERTY DURING DECK REPAIR OPERATIONS.
6. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE SAFETY OF VISITORS TO THE C&O CANAL NATIONAL HISTORIC PARK THROUGH THE WORK AREA DURING BRIDGE DECK REPAIR OPERATIONS. THE NATIONAL PARK SERVICE WILL ISSUE A SPECIAL USE PERMIT THAT WILL OUTLINE CONDITIONS UNDER WHICH THE TOWPATH CAN BE TEMPORARILY CLOSED TO VISITOR USE.

NO.	ADDED NOTES	DATE:	JDD
	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
EXISTING BRIDGE DECK REPAIR PLAN

DESIGNED	JDD	DATE	11/02
DRAWN	JLH	DATE	11/02
CHECKED	JDD	DATE	11/02
CHECKED	PA	DATE	11/02

Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

SHEET
76 OF 93
BRIDGE NO.
4919

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	234	407

SECTION LOC	GIRDER 1 - SECTION PROPERTIES						NON-COMPOSITE (GIRDER ONLY)		COMPOSITE FOR NEG MOMENT (GIRDER & REINF)		3n COMP FOR POS MOMENT (GIRDER & SLAB)		1n COMP FOR POS MOMENT (GIRDER & SLAB)		DEAD LOAD DESIGN MOMENT AND SHEAR				HS-20 LIVE LOAD DESIGN M AND V		HS-20 CONVERSION FACTORS		H-20 LIVE LOAD DESIGN M AND V		H-20 CONVERSION FACTORS		TYPE 3 LIVE LOAD DESIGN M AND V		TYPE 3 CONVERSION FACTORS		TYPE 3-S2 LIVE LOAD DESIGN M AND V		TYPE 3-S2 CONVERSION FACTORS		
	tf TOP FLG (IN)	Fy TOP FLG (KSI)	tf BOT FLG (IN)	Fy BOT FLG (KSI)	Dw WEB (IN)	tw WEB (IN)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	DL1 MOMENT (K-FT)	DL1 SHEAR (K-FT)	DL2 MOMENT (K-FT)	DL2 SHEAR (K-FT)	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR	SHEAR DISTR. FACTOR	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR	SHEAR DISTR. FACTOR	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR	SHEAR DISTR. FACTOR	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR
A	1.750	50	2.125	50	100.00	0.875	5179	6176	6051	6463	8847	7089	16872	7874	0	167	0	84	0	76	0.000	0.495	0	76	0.000	0.495	0	45	0.000	0.595	0	53	0.000	0.532	
B	1.750	50	2.125	50	100.00	0.875	5179	6176	6433	5978	9590	7206	19413	8002	6832	80	3335	40	3270	49	0.509	0.464	3270	49	0.509	0.464	1971	30	0.617	0.546	2355	34	0.586	0.481	
FS1	2.250	50	2.000	70	100.00	0.875	5941	6160	6359	6803	10308	7015	19993	7724	8851	9	4303	5	4657	30	0.496	0.417	4657	30	0.496	0.417	2739	20	0.604	0.499	3248	42	0.575	0.825	
FS1	2.250	50	2.000	70	100.00	0.875	5941	6160	6359	6803	10308	7015	19993	7724	8851	9	4303	5	4657	30	0.496	0.417	4657	30	0.496	0.417	2739	20	0.604	0.499	3248	42	0.575	0.825	
C	2.250	50	2.000	70	100.00	0.875	5941	6161	6805	6391	9574	6915	17488	7607	8344	-41	4059	-20	4938	-35	0.481	0.455	4938	-35	0.481	0.455	2859	-22	0.592	0.571	3364	-49	0.564	1.013	
D	2.000	50	2.000	70	100.00	0.875	5539	6057	6292	6387	9921	6979	19681	7718	6521	-88	3182	-43	4708	-47	0.461	0.500	4708	-47	0.461	0.500	2713	-29	0.578	0.610	3187	-56	0.552	0.935	
FS2	2.000	50	2.000	70	102.31	0.875	5712	6230	6469	6564	10148	7172	20013	7933	1599	-157	789	-77	3552	-64	0.402	0.525	3552	-64	0.402	0.525	2098	-39	0.524	0.667	2452	-56	0.502	0.745	
FS2	2.250	50	2.000	50	102.31	1.000	6337	6543	6756	7190	10693	7471	20282	8277	1599	-157	789	-77	3552	-64	0.402	0.525	3552	-64	0.402	0.525	2098	-39	0.524	0.667	2452	-56	0.502	0.745	
E	2.250	50	2.000	50	125.34	1.000	8158	8488	8748	9232	13227	9627	23907	10686	-8501	-248	-4136	-120	-4251	-91	0.481	0.569	-4251	-91	0.481	0.569	-2031	-53	0.605	0.740	-2307	-62	0.552	0.679	
FS3	2.750	70	2.500	70	161.00	1.375	14859	15249	15592	15946	20605	16891	32645	18782	-18495	-322	-8884	-149	-7171	-109	0.566	0.578	-7171	-109	0.566	0.578	-3240	-62	0.767	0.785	-3635	-73	0.705	0.722	
FS3	2.750	70	3.000	70	161.00	1.500	15820	17180	17599	16854	21599	18984	33672	21115	-18495	-322	-8884	-149	-7171	-109	0.566	0.578	-7171	-109	0.566	0.578	-3240	-62	0.767	0.785	-3635	-73	0.705	0.722	
F	2.750	70	3.000	70	220.00	1.500	24810	26650	26325	27229	31045	28789	43687	31725	-35259	417	-17084	180	-13677	147	0.663	0.620	-13677	147	0.663	0.620	-6340	81	1.068	0.896	-7076	92	0.999	0.821	
FS4	2.750	70	3.000	70	172.00	1.500	17202	18815	19261	18474	23457	20745	36106	23069	-20288	325	-10086	147	-8646	123	0.662	0.610	-8646	123	0.662	0.610	-4225	65	0.967	0.813	-4846	76	0.903	0.757	
FS4	2.250	70	2.750	70	172.00	1.250	14464	16430	16882	15689	20803	18379	33735	20546	-20288	325	-10086	147	-8646	123	0.662	0.610	-8646	123	0.662	0.610	-4225	65	0.967	0.813	-4846	76	0.903	0.757	
G	1.500	50	1.750	50	129.22	0.875	6456	7444	7780	7548	11734	8755	22952	9832	-6683	217	-3158	104	-4553	93	0.621	0.577	-4553	93	0.621	0.577	-2273	50	0.749	0.731	-2708	58	0.703	0.689	
FS5	1.500	50	1.750	50	114.00	0.875	5529	6326	6627	6425	10287	7481	20811	8383	4553	81	2308	40	5945	57	0.644	0.524	5945	57	0.644	0.524	3151	32	0.707	0.645	3739	49	0.678	1.303	
FS5	1.500	50	2.000	70	114.00	0.875	5640	6845	7139	6491	10435	8073	20972	9033	4553	81	2308	40	5945	57	0.644	0.524	5945	57	0.644	0.524	3151	32	0.707	0.645	3739	49	0.678	1.303	
H	1.500	50	2.000	70	114.00	0.875	5640	6845	6593	7186	9631	7933	18265	8877	6517	1	3262	0	6590	42	0.642	0.512	6590	42	0.642	0.512	3464	24	0.716	0.632	4085	45	0.685	0.986	
FS6	1.500	50	2.000	70	114.00	0.875	5640	6845	7139	6491	10435	8073	20972	9033	4549	-85	2294	-41	5880	-61	0.637	0.554	5880	-61	0.637	0.554	3120	-34	0.700	0.688	3702	-52	0.672	0.853	
FS6	1.500	50	1.750	50	114.00	0.875	5529	6326	6627	6425	10287	7481	20811	8383	4549	-85	2294	-41	5880	-61	0.637	0.554	5880	-61	0.637	0.554	3120	-34	0.700	0.688	3702	-52	0.672	0.853	
I	1.500	50	1.750	50	129.82	0.875	6544	7490	7827	7593	11792	8806	23038	9891	-6698	-223	-3213	-105	-4517	-103	0.616	0.638	-4517	-103	0.616	0.638	-2255	-53	0.743	0.777	-2682	-62	0.697	0.733	
FS7	2.250	70	2.750	70	173.11	1.250	14745	16575	17029	15831	20969	18536	33959	20723	-20328	-325	-9779	-147	-8175	-120	0.626	0.595	-8175	-120	0.626	0.595	-3918	-65	0.897	0.810	-4467	-76	0.832	0.756	
FS7	2.750	70	3.000	70	173.11	1.500	17537	18983	19432	18641	23648	20926	36355	23270	-20328	-325	-9779	-147	-8175	-120	0.626	0.595	-8175	-120	0.626	0.595	-3918	-65	0.897	0.810	-4467	-76	0.832	0.756	
J	2.750	70	3.000	70	220.00	1.500	24810	26650	26325	27229	31045	28789	43687	31725	-34891	426	-16919	184	-13598	139	0.659	0.610	-13598	139	0.659	0.610	-6259	80	1.054	0.897	-6972	91	0.984	0.809	
FS8	2.750	70	3.000	70	159.80	1.500	15474	17006	17422	16681	21400	18796	33410	20906	-17987	316	-8889	146	-7576	110	0.598	0.584	-7576	110	0.598	0.584	-3450	60	0.817	0.765	-3859	70	0.748	0.701	
FS8	2.750	70	2.500	70	159.80	1.375	14532	15092	15432	15784	20418	16721	32396	18592	-17987	316	-8889	146	-7576	110	0.598	0.584	-7576	110	0.598	0.584	-3450	60	0.817	0.765	-3859	70	0.748	0.701	
K	2.250	50	2.000	50	124.55	1.000	8010	8418	8677	9159	13137	9550	23779	10600	-8196	242	-4051	117	-4418	93	0.500	0.585	-4418	93	0.500	0.585	-2156	51	0.642	0.724	-2459	60	0.588	0.663	
FS9	2.250	50	2.000	50	102.08	1.000	6296	6524	6737	7171	10669	7450	20247	8254	1604	151	820	74	3581	65	0.405	0.534	3581	65	0.405	0.534	2124	38	0.531	0.650	2474	55	0.506	0.794	
FS9	2.000	50	2.000	70	102.08	0.875	5676	6213	6452	6546	10126	7153	19980	7911	1604	151	820	74	3581	65	0.405	0.534	3581	65	0.405	0.534	2124	38	0.531	0.650	2474	55	0.506	0.794	
L	2.000	50	2.000	70	100.00	0.875	5539	6057	6292	6387	9921	6979	19681	7718	6342	86	3128	42	4633	46	0.454	0.492	4633	46	0.454	0.492	2684	28	0.571	0.601	3146	46	0.544	0.773	
M	2.250	50	2.000	70	100.00	0.875	5941	6161	6805	6391	9574	6915	17488	7607	8080	43	3962	21	4859	35	0.473	0.456	4859	35	0.473	0.456	2831	22	0.586	0.574	3320	44	0.557	0.908	
FS10	2.250	50	2.000	70	100.00	0.875	5941	6160	6359	6803	10308	7015	19993	7724	8634	-9	4212	-5	4557	-31	0.485	0.427	4557	-31	0.485	0.427	2701	-20	0.596	0.508	3198	-45	0.566	0.873	
FS10	2.250	50	2.000	70	100.00	0.875	5941	6160	6359	6803	10308	7015	19993	7724	8634	-9	4212	-5	4557	-31	0.485	0.427	4557	-31	0.485	0.427	2701	-20	0.596	0.508	3198	-45	0.566	0.873	
N	1.750	50	2.125	50	100.00	0.875	5179	6176	6433	5978	9590	7206	19413	8002	6610	-80	3213	-40	3133	-48	0.487	0.457	3133	-48	0.487	0.457	1904	-30	0.596	0.544	2272	-40	0.566	0.578	
O	1.750	50	2.125	50	1																														

SECTION LOC	GIRDER 2 - SECTION PROPERTIES						NON-COMPOSITE (GIRDER ONLY)		COMPOSITE FOR NEG MOMENT (GIRDER & REINF)		3n COMP FOR POS MOMENT (GIRDER & SLAB)		1n COMP FOR POS MOMENT (GIRDER & SLAB)		DEAD LOAD DESIGN MOMENT AND SHEAR				HS-20 LIVE LOAD DESIGN M AND V		HS-20 CONVERSION FACTORS		H-20 LIVE LOAD DESIGN M AND V		H-20 CONVERSION FACTORS		TYPE 3 LIVE LOAD DESIGN M AND V		TYPE 3 CONVERSION FACTORS		TYPE 3-S2 LIVE LOAD DESIGN M AND V		TYPE 3-S2 CONVERSION FACTORS		
	tf TOP FLG (IN)	Fy TOP FLG (KSI)	tf BOT FLG (IN)	Fy BOT FLG (KSI)	Dw WEB (IN)	tw WEB (IN)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	DL1 MOMENT (K-FT)	DL1 SHEAR (K-FT)	DL2 MOMENT (K-FT)	DL2 SHEAR (K-FT)	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR	SHEAR DISTR. FACTOR	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR	SHEAR DISTR. FACTOR	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR	SHEAR DISTR. FACTOR	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR
A	1.750	50	2.125	50	100.00	0.875	5179	6176	6365	6552	10207	7292	21582	8090	0	189	0	91	0	93	0.000	0.601	0	93	0.000	0.601	0	57	0.000	0.749	0	69	0.000	0.685	
B	1.750	50	2.125	50	100.00	0.875	5179	6176	6523	6291	9590	7206	19413	8002	7542	90	3631	43	3111	63	0.484	0.599	3111	59	0.484	0.561	1894	41	0.593	0.746	2297	52	0.572	0.740	
FS1	2.250	50	2.000	70	100.00	0.875	5941	6160	6432	7114	10308	7015	19993	7724	9749	12	4673	5	4232	45	0.451	0.623	4232	41	0.451	0.574	2494	30	0.550	0.753	3003	47	0.531	0.923	
FS1	2.250	50	2.000	70	100.00	0.875	5941	6160	6432	7114	10308	7015	19993	7724	9749	12	4673	5	4232	45	0.451	0.623	4232	41	0.451	0.574	2494	30	0.550	0.753	3003	47	0.531	0.923	
C	2.250	50	2.000	70	100.00	0.875	5941	6161	7117	6464	10919	7089	22120	7805	9198	-44	4396	-22	4415	41	0.430	0.535	4415	-43	0.430	0.554	2567	26	0.532	0.672	3065	43	0.514	0.890	
D	2.000	50	2.000	70	100.00	0.875	5539	6057	6371	6698	9921	6979	19681	7718	7251	-94	3450	-46	4173	-45	0.409	0.478	4173	-52	0.409	0.554	2420	-24	0.515	0.516	2887	-38	0.500	0.639	
FS2	2.000	50	2.000	70	102.24	0.875	5703	6225	6545	6874	10141	7166	20003	7926	2079	-165	932	-81	3171	-69	0.358	0.567	3171	-69	0.358	0.567	1919	-37	0.480	0.635	2260	-56	0.463	0.742	
FS2	2.250	50	2.000	50	102.24	1.000	6328	6537	6829	7496	10686	7465	20271	8270	2079	-165	932	-81	3171	-69	0.358	0.567	3171	-69	0.358	0.567	1919	-37	0.480	0.635	2260	-56	0.463	0.742	
E	2.250	50	2.000	50	125.12	1.000	8125	8468	8823	9569	13202	9605	23872	10662	-8476	-261	-4190	-125	-3533	-94	0.400	0.591	-3533	-94	0.400	0.591	-1305	-47	0.389	0.669	-1551	-69	0.371	0.756	
FS3	2.750	70	2.500	70	160.67	1.375	14788	15206	15680	16322	20554	16845	32576	18730	-18973	-342	-9133	-156	-6068	-110	0.479	0.585	-6068	-110	0.479	0.585	-2183	-53	0.517	0.677	-2578	-68	0.500	0.675	
FS3	2.750	70	3.000	70	160.67	1.500	15744	17132	17695	17230	21545	18932	33600	21057	-18973	-342	-9133	-156	-6068	-110	0.479	0.585	-6068	-110	0.479	0.585	-2183	-53	0.517	0.677	-2578	-68	0.500	0.675	
F	2.750	70	3.000	70	220.00	1.500	24810	26650	26866	27426	33279	29422	50542	32839	-36900	446	-17764	187	-11929	165	0.578	0.696	-11929	165	0.578	0.696	-4134	74	0.696	0.823	-4898	91	0.692	0.816	
FS4	2.750	70	3.000	70	172.31	1.500	17276	18862	19463	18967	23510	20795	36176	23125	-21197	338	-10532	151	-7283	122	0.558	0.604	-7283	122	0.558	0.604	-2909	58	0.666	0.727	-3527	74	0.657	0.741	
FS4	2.250	70	2.750	70	172.31	1.250	14526	16470	17082	16182	20849	18423	33797	20595	-21197	338	-10532	151	-7283	122	0.558	0.604	-7283	122	0.558	0.604	-2909	58	0.666	0.727	-3527	74	0.657	0.741	
G	1.500	50	1.750	50	129.39	0.875	6476	7457	7906	7930	11750	8769	22976	9849	-7166	224	-3343	107	-3779	92	0.515	0.573	-3779	92	0.515	0.573	-1707	47	0.562	0.685	-2120	59	0.551	0.697	
FS5	1.500	50	1.750	50	114.00	0.875	5529	6326	6728	6763	10287	7481	20811	8383	4301	83	2254	41	5299	61	0.574	0.558	5299	61	0.574	0.558	2807	34	0.630	0.684	3386	44	0.614	1.165	
FS5	1.500	50	2.000	70	114.00	0.875	5640	6845	7247	6832	10435	8073	20972	9033	4301	83	2254	41	5299	61	0.574	0.558	5299	61	0.574	0.558	2807	34	0.630	0.684	3386	44	0.614	1.165	
H	1.500	50	2.000	70	114.00	0.875	5640	6845	6936	7292	11104	8177	23274	9139	6327	0	3235	0	5879	51	0.572	0.614	5879	51	0.572	0.614	3071	29	0.635	0.771	3696	44	0.620	0.972	
FS6	1.500	50	2.000	70	114.00	0.875	5640	6845	7247	6832	10435	8073	20972	9033	4276	-87	2242	-42	5270	-65	0.571	0.592	5270	-65	0.571	0.592	2792	-30	0.627	0.617	3369	-46	0.611	0.746	
FS6	1.500	50	1.750	50	114.00	0.875	5529	6326	6728	6763	10287	7481	20811	8383	4276	-87	2242	-42	5270	-65	0.571	0.592	5270	-65	0.571	0.592	2792	-30	0.627	0.617	3369	-46	0.611	0.746	
I	1.500	50	1.750	50	129.66	0.875	6525	7478	7928	7951	11777	8793	23015	9875	-7230	-228	-3397	-108	-3764	-96	0.513	0.592	-3764	-96	0.513	0.592	-1696	-43	0.559	0.630	-2109	-61	0.548	0.719	
FS7	2.250	70	2.750	70	172.80	1.250	14682	16534	17148	16245	20922	18492	33896	20673	-21290	-339	-10173	-151	-6949	-116	0.532	0.575	-6949	-116	0.532	0.575	-2689	-51	0.615	0.634	-3247	-62	0.605	0.616	
FS7	2.750	70	3.000	70	172.80	1.500	17462	18936	19539	19042	23594	20875	36286	23213	-21290	-339	-10173	-151	-6949	-116	0.532	0.575	-6949	-116	0.532	0.575	-2689	-51	0.615	0.634	-3247	-62	0.605	0.616	
J	2.750	70	3.000	70	220.00	1.500	24810	26650	26866	27426	33279	29422	50542	32839	-36839	462	-17725	196	-11906	160	0.577	0.705	-11906	160	0.577	0.705	-4101	73	0.691	0.824	-4858	92	0.686	0.816	
FS8	2.750	70	3.000	70	160.13	1.375	14603	15135	15608	16249	20470	16768	32464	18644	-18779	339	-9282	155	-6446	112	0.509	0.597	-6446	112	0.509	0.597	-2259	60	0.535	0.755	-2653	75	0.515	0.751	
FS8	2.750	70	2.500	70	160.13	1.375	14603	15135	15608	16249	20470	16768	32464	18644	-18779	339	-9282	155	-6446	112	0.509	0.597	-6446	112	0.509	0.597	-2259	60	0.535	0.755	-2653	75	0.515	0.751	
K	2.250	50	2.000	50	124.77	1.000	8042	8437	8792	9536	13162	9571	23815	10624	-8369	259	-4199	124	-3690	95	0.418	0.597	-3690	95	0.418	0.597	-1400	53	0.417	0.752	-1670	67	0.399	0.739	
FS9	2.250	50	2.000	50	102.14	1.000	6305	6529	6821	7487	10675	7456	20256	8260	2077	164	960	80	3231	71	0.365	0.583	3231	71	0.365	0.583	1963	44	0.491	0.745	2308	55	0.472	0.790	
FS9	2.000	50	2.000	70	102.14	0.875	5684	6217	6537	6867	10131	7158	19988	7917	2077	164	960	80	3231	71	0.365	0.583	3231	71	0.365	0.583	1963	44	0.491	0.745	2308	55	0.472	0.790	
L	2.000	50	2.000	70	100.00	0.875	5539	6057	6371	6698	9921	6979	19681	7718	7192	92	3454	45	4187	53	0.410	0.568	4187	53	0.410	0.568	2439	35	0.519	0.734	2904	48	0.503	0.809	
M	2.250	50	2.000	70	100.00	0.875	5941	6161	7117	6464	10919	7089	22120	7805	9091	45	4373	22	4409	43	0.430	0.562	4409	43	0.430	0.559	2573	29	0.533	0.742	3068	44	0.515	0.909	
FS10	2.250	50	2.000	70	100.00	0.875	5941	6160	6432	7114	10308	7015	19993	7724	9653	-12	4634	-5	4193	-41	0.446	0.567	4193	-41	0.446	0.567	2481	24	0.547	0.610	2984	-39	0.528	0.755	
FS10	2.250	50	2.000	70	100.00	0.875	5941	6160	6432	7114	10308	7015	19993	7724	9647	-13	4631	-6	4186	-42	0.446	0.577	4186	-42	0.446	0.577	2477	24	0.546	0.599	2984	-39	0.528	0.755	
N	1.750	50	2.125	50	100.00	0.875	5179	6176	6523	6291	9590	7206	19413	8002	7444	-90	3560	-43	3039	-58	0.473	0.545	3039	-58	0.473	0.545	1860	-37	0.582	0.677	2253	-49	0.561	0.705	
O	1.750	50	2.125	50	100.01	0.875	5																												

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	236	407

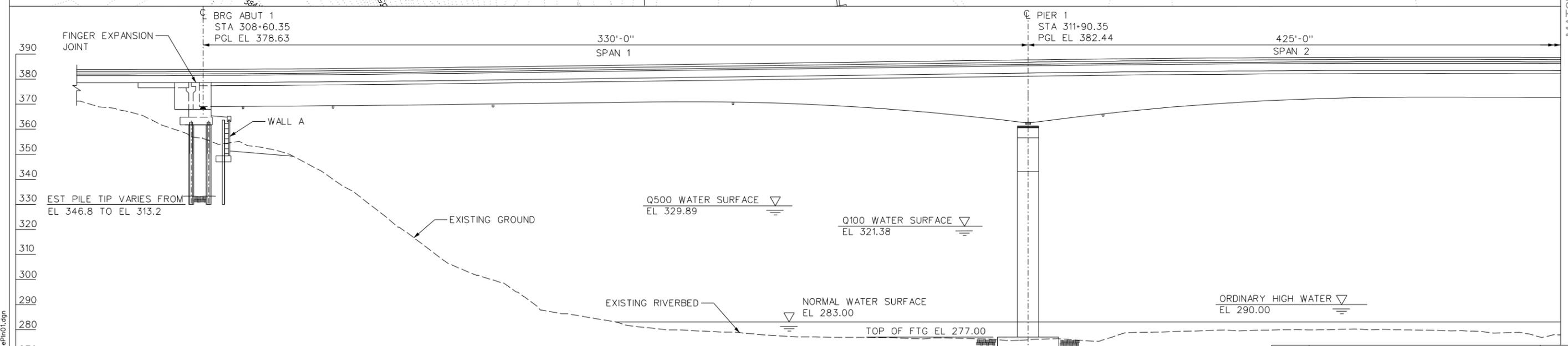
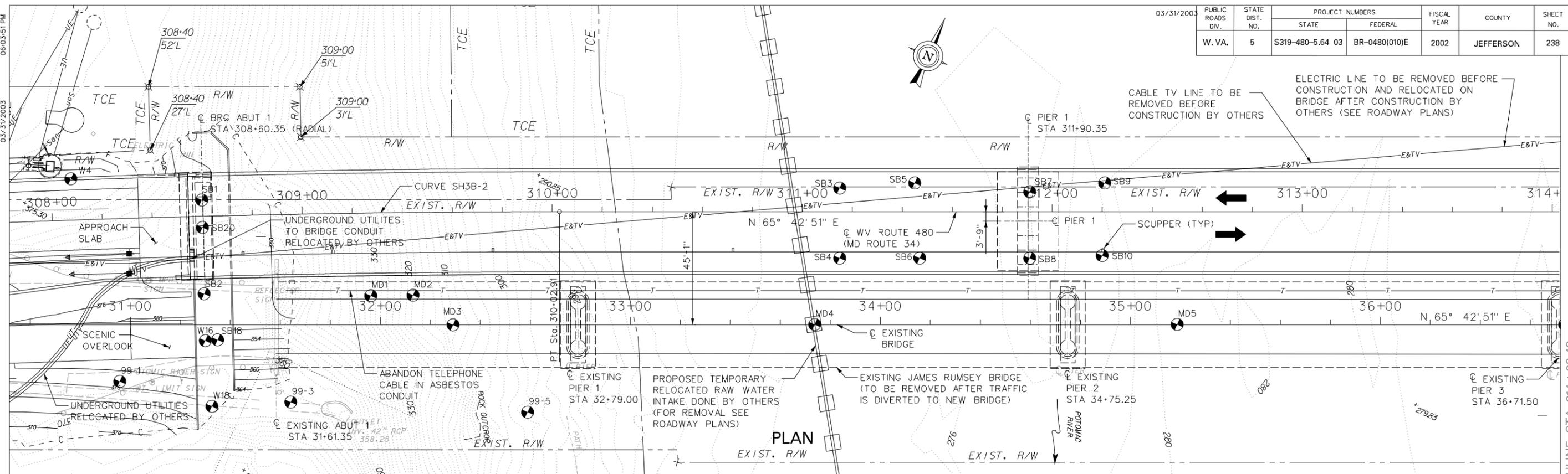
SECTION LOC	GIRDER 3 - SECTION PROPERTIES						NON-COMPOSITE (GIRDER ONLY)		COMPOSITE FOR NEG MOMENT (GIRDER & REINF)		3n COMP FOR POS MOMENT (GIRDER & SLAB)		1n COMP FOR POS MOMENT (GIRDER & SLAB)		DEAD LOAD DESIGN MOMENT AND SHEAR				HS-20 LIVE LOAD DESIGN M AND V		HS-20 CONVERSION FACTORS		H-20 LIVE LOAD DESIGN M AND V		H-20 CONVERSION FACTORS		TYPE 3 LIVE LOAD DESIGN M AND V		TYPE 3 CONVERSION FACTORS		TYPE 3-S2 LIVE LOAD DESIGN M AND V		TYPE 3-S2 CONVERSION FACTORS		
	tf TOP FLG (IN)	Fy TOP FLG (KSI)	tf BOT FLG (IN)	Fy BOT FLG (KSI)	Dw WEB (IN)	tw WEB (IN)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	DL1 MOMENT (K-FT)	DL1 SHEAR (K-FT)	DL2 MOMENT (K-FT)	DL2 SHEAR (K-FT)	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR	SHEAR DISTR. FACTOR	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR	SHEAR DISTR. FACTOR	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR	SHEAR DISTR. FACTOR	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR
A	1.750	50	2.125	50	100.00	0.875	5179	6176	6365	6552	10207	7292	21582	8090	0	201	0	96	0	100	0.000	0.648	0	100	0.000	0.648	0	56	0.000	0.742	0	71	0.000	0.704	
B	1.750	50	2.125	50	100.00	0.875	5179	6176	6523	6291	9590	7206	19413	8002	8167	97	385.3	46	3211	66	0.500	0.627	3211	65	0.500	0.616	1716	43	0.537	0.774	2189	52	0.545	0.750	
FS1	2.250	50	2.000	70	100.00	0.875	5941	6160	6432	7114	10308	7015	19993	7724	10601	12	497.2	5	4373	46	0.466	0.636	4373	45	0.466	0.624	2239	31	0.494	0.784	2844	40	0.503	0.799	
FS1	2.250	50	2.000	70	100.00	0.875	5941	6160	6432	7114	10308	7015	19993	7724	10601	12	497.2	5	4373	46	0.466	0.636	4373	45	0.466	0.624	2239	31	0.494	0.784	2844	40	0.503	0.799	
C	2.250	50	2.000	70	100.00	0.875	5941	6161	7117	6464	10919	7089	22120	7805	10024	-47	4681	-23	4552	-44	0.443	0.567	4552	-44	0.443	0.567	2275	26	0.471	0.658	2862	33	0.480	0.678	
D	2.000	50	2.000	70	100.00	0.875	5539	6057	6371	6698	9921	6979	19681	7718	7967	-99	369.3	-48	4291	-54	0.420	0.578	4291	-54	0.420	0.578	2123	-22	0.452	0.472	2676	-34	0.463	0.569	
FS2	2.000	50	2.000	70	102.18	0.875	5696	6220	6540	6870	10135	7161	19994	7921	2522	-173	1068	-84	3242	-72	0.367	0.591	3242	-72	0.367	0.591	1678	-34	0.419	0.580	2076	-50	0.425	0.665	
FS2	2.250	50	2.000	50	102.18	1.000	6319	6532	6824	7490	10679	7459	20262	8264	2522	-173	1068	-84	3242	-72	0.367	0.591	3242	-72	0.367	0.591	1678	-34	0.419	0.580	2076	-50	0.425	0.665	
E	2.250	50	2.000	50	124.90	1.000	8093	8449	8803	9548	13177	9584	23836	10638	-8472	-271	-4219	-128	-3480	-97	0.394	0.610	-3480	-97	0.394	0.610	-842	-42	0.251	0.591	-1134	-60	0.271	0.661	
FS3	2.750	70	2.500	70	160.34	1.375	14716	15163	15636	16277	20502	16798	32508	18677	-19312	-352	-9281	-160	-6006	-115	0.474	0.609	-6006	-115	0.474	0.609	-1398	-46	0.331	0.581	-1867	-65	0.362	0.649	
FS3	2.750	70	3.000	70	160.34	1.500	15668	17084	17646	17182	21490	18881	33528	21000	-19312	-352	-9281	-160	-6006	-115	0.474	0.609	-6006	-115	0.474	0.609	-1398	-46	0.331	0.581	-1867	-65	0.362	0.649	
F	2.750	70	3.000	70	220.00	1.500	24810	26650	26866	27426	33279	29422	50542	32839	-37858	452	-1828	189	-11853	170	0.574	0.719	-11853	170	0.574	0.719	-2599	64	0.438	0.708	-3485	83	0.492	0.745	
FS4	2.750	70	3.000	70	172.61	1.500	17347	18907	19510	19013	23562	20844	36243	23179	-21996	346	-10839	153	-7365	123	0.564	0.612	-7365	123	0.564	0.612	-2095	49	0.479	0.606	-2816	66	0.525	0.664	
FS4	2.250	70	2.750	70	172.61	1.250	14586	16509	17122	16220	20894	18465	33858	20643	-21996	346	-10839	153	-7365	123	0.564	0.612	-7365	123	0.564	0.612	-2095	49	0.479	0.606	-2816	66	0.525	0.664	
G	1.500	50	1.750	50	129.55	0.875	6494	7469	7919	7942	11766	8783	22999	9864	-7659	229	-3513	108	-3831	93	0.522	0.574	-3831	93	0.522	0.574	-1463	39	0.482	0.566	-1944	52	0.505	0.613	
FS5	1.500	50	1.750	50	114.00	0.875	5529	6326	6728	6763	10287	7481	20811	8383	4056	85	2164	41	5291	63	0.573	0.573	5291	63	0.573	0.573	2459	30	0.552	0.608	3115	41	0.565	1.084	
FS5	1.500	50	2.000	70	114.00	0.875	5640	6845	7247	6832	10435	8073	20972	9033	4056	85	2164	41	5291	63	0.573	0.573	5291	63	0.573	0.573	2459	30	0.552	0.608	3115	41	0.565	1.084	
H	1.500	50	2.000	70	114.00	0.875	5640	6845	6936	7292	11104	8177	23274	9139	6115	0	3157	0	5905	52	0.575	0.628	5905	52	0.575	0.628	2692	27	0.557	0.721	3404	37	0.571	0.820	
FS6	1.500	50	2.000	70	114.00	0.875	5640	6845	7247	6832	10435	8073	20972	9033	4019	-88	2158	-42	5298	-66	0.574	0.602	5298	-66	0.574	0.602	2461	-26	0.552	0.522	3117	-39	0.566	0.645	
FS6	1.500	50	1.750	50	114.00	0.875	5529	6326	6728	6763	10287	7481	20811	8383	4019	-88	2158	-42	5298	-66	0.574	0.602	5298	-66	0.574	0.602	2461	-26	0.552	0.522	3117	-39	0.566	0.645	
I	1.500	50	1.750	50	129.49	0.875	6506	7465	7914	7938	11760	8778	22991	9858	-7759	-232	-3559	-109	-3884	-97	0.529	0.601	-3884	-97	0.529	0.601	-1483	-36	0.489	0.531	-1975	-53	0.513	0.625	
FS7	2.250	70	2.750	70	172.50	1.250	14621	16495	17107	16206	20878	18449	33836	20626	-22115	-345	-10435	-153	-6983	-120	0.534	0.594	-6983	-120	0.534	0.594	-1916	-40	0.438	0.497	-2580	-57	0.481	0.569	
FS7	2.750	70	3.000	70	172.50	1.500	17390	18890	19493	18996	23543	20826	36218	23159	-22115	-345	-10435	-153	-6983	-120	0.534	0.594	-6983	-120	0.534	0.594	-1916	-40	0.438	0.497	-2580	-57	0.481	0.569	
J	2.750	70	3.000	70	220.00	1.500	24810	26650	26866	27426	33279	29422	50542	32839	-38081	476	-18203	201	-11887	167	0.576	0.734	-11887	167	0.576	0.734	-2629	63	0.443	0.710	-3530	84	0.498	0.747	
FS8	2.750	70	3.000	70	160.46	1.500	15625	17102	17664	17200	21510	18899	33554	21021	-19488	354	-9588	161	-6472	116	0.511	0.617	-6472	116	0.511	0.617	-1427	54	0.338	0.678	-1909	71	0.370	0.707	
FS8	2.750	70	2.500	70	160.46	1.375	14674	15178	15652	16294	20521	16815	32533	18696	-19488	354	-9588	161	-6472	116	0.511	0.617	-6472	116	0.511	0.617	-1427	54	0.338	0.678	-1909	71	0.370	0.707	
K	2.250	50	2.000	50	124.98	1.000	8073	8456	8811	9556	13186	9592	23849	10647	-8570	272	-4313	129	-3671	100	0.415	0.625	-3671	100	0.415	0.625	-910	50	0.271	0.700	-1231	65	0.294	0.719	
FS9	2.250	50	2.000	50	102.20	1.000	6313	6534	6826	7492	10682	7461	20265	8266	2506	175	1088	85	3305	75	0.374	0.618	3305	75	0.374	0.618	1725	43	0.431	0.727	2131	56	0.436	0.799	
FS9	2.000	50	2.000	70	102.20	0.875	5691	6222	6542	6871	10137	7163	19997	7923	2506	175	1088	85	3305	75	0.374	0.618	3305	75	0.374	0.618	1725	43	0.431	0.727	2131	56	0.436	0.799	
L	2.000	50	2.000	70	100.00	0.875	5539	6057	6371	6698	9921	6979	19681	7718	7995	100	3731	49	4344	57	0.426	0.604	4344	57	0.426	0.604	2161	35	0.460	0.733	2719	46	0.470	0.764	
M	2.250	50	2.000	70	100.00	0.875	5941	6161	7117	6464	10919	7089	22120	7805	10069	47	4725	23	4604	46	0.449	0.592	4604	46	0.449	0.592	2308	29	0.478	0.742	2901	38	0.487	0.779	
FS10	2.250	50	2.000	70	100.00	0.875	5941	6160	6432	7114	10308	7015	19993	7724	10644	-12	4996	-5	4397	-42	0.468	0.581	4397	-42	0.468	0.581	2253	23	0.497	0.585	2860	-33	0.506	0.639	
FS10	2.250	50	2.000	70	100.00	0.875	5941	6160	6432	7114	10308	7015	19993	7724	10629	-14	4989	-6	4380	-44	0.466	0.606	4380	-44	0.466	0.606	2246	22	0.495	0.561	2860	-33	0.506	0.639	
N	1.750	50	2.125	50	100.00	0.875	5179	6176	6523	6291	9590	7206	19413	8002	8208	-97	3845	-46	3194	-62	0.497	0.586	3194	-62	0.497	0.586	1708	-35	0.535	0.645	2177	-46	0.542	0.659	
O	1.750	5																																	

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	237	407

SECTION LOC	GIRDER 4 - SECTION PROPERTIES						NON-COMPOSITE (GIRDER ONLY)		COMPOSITE FOR NEG MOMENT (GIRDER & REINF)		3n COMP FOR POS MOMENT (GIRDER & SLAB)		1n COMP FOR POS MOMENT (GIRDER & SLAB)		DEAD LOAD DESIGN MOMENT AND SHEAR				HS-20 LIVE LOAD DESIGN M AND V		HS-20 CONVERSION FACTORS		H-20 LIVE LOAD DESIGN M AND V		H-20 CONVERSION FACTORS		TYPE 3 LIVE LOAD DESIGN M AND V		TYPE 3 CONVERSION FACTORS		TYPE 3-S2 LIVE LOAD DESIGN M AND V		TYPE 3-S2 CONVERSION FACTORS		
	tf TOP FLG (IN)	Fy TOP FLG (KSI)	tf BOT FLG (IN)	Fy BOT FLG (KSI)	Dw WEB (IN)	tw WEB (IN)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	Sx TOP FLG (IN ³)	Sx BOT FLG (IN ³)	DL1 MOMENT (K-FT)	DL1 SHEAR (K-FT)	DL2 MOMENT (K-FT)	DL2 SHEAR (K-FT)	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR	SHEAR DISTR. FACTOR	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR	SHEAR DISTR. FACTOR	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR	SHEAR DISTR. FACTOR	LL+I MOMENT (K-FT)	LL+I SHEAR (K-FT)	MOMENT DISTR. FACTOR
A	1.750	50	2.125	50	100.00	0.875	5179	6176	6223	6513	10207	7292	21582	8090	0	208	0	99	0	113	0.000	0.736	0	113	0.000	0.736	0	52	0.000	0.680	0	70	0.000	0.700	
B	1.750	50	2.125	50	100.00	0.875	5179	6176	6484	6150	9590	7206	19413	8002	8739	103	405.3	48	4495	73	0.699	0.692	4495	73	0.699	0.692	2046	37	0.641	0.676	2776	53	0.691	0.757	
FS1	2.250	50	2.000	70	100.00	0.875	5941	6160	6400	6974	10308	7015	19993	7724	11453	12	5258	5	6313	46	0.672	0.644	6313	46	0.672	0.644	2755	27	0.607	0.684	3708	42	0.656	0.827	
FS1	2.250	50	2.000	70	100.00	0.875	5941	6160	6400	6974	10308	7015	19993	7724	11453	12	5258	5	6313	46	0.672	0.644	6313	46	0.672	0.644	2755	27	0.607	0.684	3708	42	0.656	0.827	
C	2.250	50	2.000	70	100.00	0.875	5941	6161	6976	6432	11482	7152	22778	7827	10851	-53	4946	-26	6636	-54	0.646	0.704	6636	-54	0.646	0.704	2818	-25	0.584	0.649	3741	-39	0.628	0.817	
D	2.000	50	2.000	70	100.00	0.875	5539	6057	6336	6558	9921	6979	19681	7718	8640	-106	3896	-51	6287	-68	0.616	0.726	6287	-68	0.616	0.726	2645	-31	0.563	0.656	3507	-47	0.607	0.790	
FS2	2.000	50	2.000	70	102.12	0.875	5689	6216	6500	6723	10130	7156	19985	7915	2909	-180	1174	-86	4856	-92	0.549	0.757	4856	-92	0.549	0.757	2157	-39	0.539	0.659	2783	-52	0.570	0.689	
FS2	2.250	50	2.000	50	102.12	1.000	6311	6527	6784	7345	10673	7454	20253	8258	2909	-180	1174	-86	4856	-92	0.549	0.757	4856	-92	0.549	0.757	2157	-39	0.539	0.659	2783	-52	0.570	0.689	
E	2.250	50	2.000	50	124.69	1.000	8062	8430	8742	9368	13153	9563	23802	10615	-8464	-276	-4225	-130	-5399	-124	0.611	0.779	-5399	-124	0.611	0.779	-1332	-46	0.397	0.653	-1819	-63	0.435	0.695	
FS3	2.750	70	2.500	70	160.01	1.375	14644	15119	15533	16044	20451	16751	32440	18625	-19541	-356	-9359	-161	-9010	-146	0.711	0.778	-9010	-146	0.711	0.778	-1826	-51	0.432	0.644	-2535	-69	0.492	0.691	
FS3	2.750	70	3.000	70	160.01	1.500	15592	17036	17533	16944	21435	18829	33456	20942	-19541	-356	-9359	-161	-9010	-146	0.711	0.778	-9010	-146	0.711	0.778	-1826	-51	0.432	0.644	-2535	-69	0.492	0.691	
F	2.750	70	3.000	70	220.00	1.500	24810	26650	26623	27338	34208	29667	51499	32973	-38236	443	-18229	187	-17462	191	0.846	0.809	-17462	191	0.846	0.809	-3337	56	0.562	0.618	-4653	78	0.657	0.696	
FS4	2.750	70	3.000	70	172.92	1.500	17422	18954	19489	18859	23615	20895	36313	23235	-22658	345	-11028	152	-11045	157	0.845	0.779	-11045	157	0.845	0.779	-2703	50	0.619	0.626	-3771	70	0.702	0.704	
FS4	2.250	70	2.750	70	172.92	1.250	14648	16550	17093	16056	20940	18509	33920	20692	-22658	345	-11028	152	-11045	157	0.845	0.779	-11045	157	0.845	0.779	-2703	50	0.619	0.626	-3771	70	0.702	0.704	
G	1.500	50	1.750	50	131.62	0.875	6739	7627	8032	7937	11968	8962	23299	10068	-8155	237	-3667	109	-5464	127	0.745	0.786	-5464	127	0.745	0.786	-1789	43	0.589	0.635	-2499	61	0.649	0.715	
FS5	1.500	50	1.750	50	114.00	0.875	5529	6326	6683	6611	10287	7481	20811	8383	3814	91	2048	42	6866	81	0.743	0.738	6866	81	0.743	0.738	2701	32	0.606	0.650	3640	45	0.660	1.186	
FS5	1.500	50	2.000	70	114.00	0.875	5640	6845	7199	6679	10435	8073	20972	9033	3814	91	2048	42	6866	81	0.743	0.738	6866	81	0.743	0.738	2701	32	0.606	0.650	3640	45	0.660	1.186	
H	1.500	50	2.000	70	114.00	0.875	5640	6845	6782	7245	11719	8264	23987	9168	5889	-1	3044	0	7612	59	0.741	0.722	7612	59	0.741	0.722	2858	25	0.591	0.670	3866	45	0.648	0.981	
FS6	1.500	50	2.000	70	114.00	0.875	5640	6845	7199	6679	10435	8073	20972	9033	3757	-87	2042	-42	6898	-80	0.747	0.736	6898	-80	0.747	0.736	2708	-29	0.608	0.577	3650	-44	0.662	0.720	
FS6	1.500	50	1.750	50	114.00	0.875	5529	6326	6683	6611	10287	7481	20811	8383	3757	-87	2042	-42	6898	-80	0.747	0.736	6898	-80	0.747	0.736	2708	-29	0.608	0.577	3650	-44	0.662	0.720	
I	1.500	50	1.750	50	129.33	0.875	6487	7453	7852	7759	11745	8764	22968	9843	-8300	-233	-3709	-108	-5561	-122	0.758	0.754	-5561	-122	0.758	0.754	-1841	-40	0.607	0.585	-2572	-53	0.668	0.630	
FS7	2.250	70	2.750	70	172.20	1.250	14561	16456	16997	15964	20833	18407	33775	20578	-22824	-347	-10605	-152	-10384	-157	0.795	0.779	-10384	-157	0.795	0.779	-2484	-47	0.568	0.590	-3469	-64	0.646	0.645	
FS7	2.750	70	3.000	70	172.20	1.500	17318	18845	19378	18750	23491	20777	36151	23105	-22824	-347	-10605	-152	-10384	-157	0.795	0.779	-10384	-157	0.795	0.779	-2484	-47	0.568	0.590	-3469	-64	0.646	0.645	
J	2.750	70	3.000	70	220.00	1.500	24810	26650	26623	27338	34208	29667	51499	32973	-38679	473	-18402	202	-17534	189	0.850	0.832	-17534	189	0.850	0.832	-3428	58	0.577	0.647	-4778	82	0.675	0.728	
FS8	2.750	70	3.000	70	160.79	1.500	15701	17150	17648	17057	21564	18951	33626	21078	-20073	361	-9804	163	-9913	147	0.782	0.780	-9913	147	0.782	0.780	-1923	53	0.455	0.674	-2651	75	0.514	0.742	
FS8	2.750	70	2.500	70	160.79	1.375	14745	15222	15637	16149	20572	16862	32601	18749	-20073	361	-9804	163	-9913	147	0.782	0.780	-9913	147	0.782	0.780	-1923	53	0.455	0.674	-2651	75	0.514	0.742	
K	2.250	50	2.000	50	125.20	1.000	8106	8475	8788	9416	13211	9613	23885	10671	-8813	282	-4430	133	-5816	125	0.658	0.785	-5816	125	0.658	0.785	-1488	49	0.443	0.695	-2031	69	0.486	0.759	
FS9	2.250	50	2.000	50	102.27	1.000	6322	6539	6797	7358	10689	7467	20276	8273	2856	185	1176	89	4957	93	0.560	0.766	4957	93	0.560	0.766	2206	42	0.551	0.721	2850	59	0.583	0.842	
FS9	2.000	50	2.000	70	102.27	0.875	5700	6227	6511	6735	10144	7169	20007	7929	2856	185	1176	89	4957	93	0.560	0.766	4957	93	0.560	0.766	2206	42	0.551	0.721	2850	59	0.583	0.842	
L	2.000	50	2.000	70	100.00	0.875	5539	6057	6336	6558	9921	6979	19681	7718	8765	109	3981	53	6392	69	0.626	0.731	6392	69	0.626	0.731	2683	35	0.571	0.732	3562	50	0.616	0.843	
M	2.250	50	2.000	70	100.00	0.875	5941	6161	6976	6432	11482	7152	22778	7827	11057	52	5067	25	6736	54	0.656	0.700	6736	54	0.656	0.700	2850	28	0.590	0.727	3789	46	0.636	0.961	
FS10	2.250	50	2.000	70	100.00	0.875	5941	6160	6400	6974	10308	7015	19993	7724	11628	-12	5341	-5	6364	-47	0.678	0.655	6364	-47	0.678	0.655	2763	-23	0.609	0.589	3725	-40	0.659	0.774	
FS10	2.250	50	2.000	70	100.00	0.875	5941	6160	6400	6974	10308	7015	19993	7724	11601	-15	5329	-7	6323	-50	0.673	0.700	6323	-50	0.673	0.700	2749	-25	0.606	0.629	3707	-40	0.656	0.774	
N	1.750	50	2.125	50	100.00	0.875	5179	6176	6484	6150	9590	7206	19413	8002	8915	-103	4102	-48	4503	-74	0.700	0.697	4503	-74	0.700	0.697	2043	-33	0.639	0.609	2772	-47	0.690	0.677	

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03/31/2003
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06C29C98 - BRIDGE b

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	238	407



PROFILE GRADE LINE
(EXISTING BRIDGE)



LEGEND:

- DENOTES BORING LOCATION
- 99-XX DENOTES TEST BORINGS DRILLED BY AWK CONSULTING ENGINEERS, INC. IN 1999 (FOR TEMPORARY BRIDGE STUDY).
- MD DENOTES TEST BORINGS DRILLED IN 1937 FOR THE EXISTING JAMES RUMSEY BRIDGE.

ELEVATION

DESIGN TRAFFIC DATA

ADT (2001) = 6900
ADT (2021) = 10800
DESIGN SPEED = 40 mph
PERCENT TRUCKS = 5%

SCALE : 0 20 ft.

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
SITUATION PLAN - I**

DESIGNED	DATE
JSD	11/02
DRAWN	DATE
JME	11/02
CHECKED	DATE
JSD	11/02
CHECKED	DATE
PWP	11/02

Baker
Michael Baker Jr., Inc.

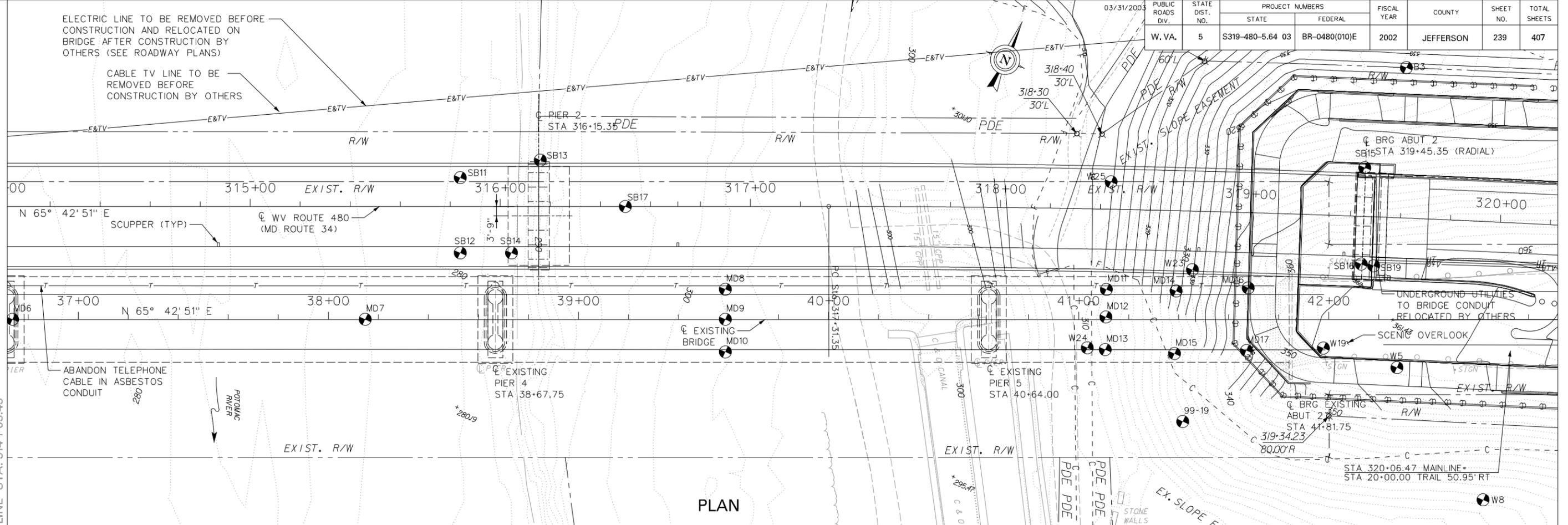
Charleston, W.Va.

SHEET
82 OF 93
BRIDGE NO.
4919

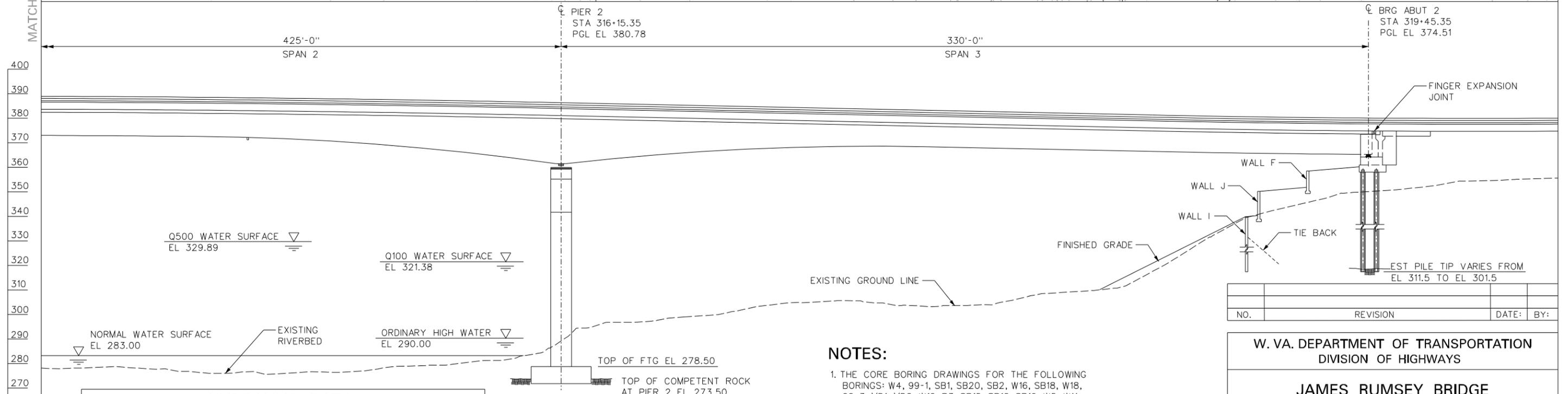
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PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	239	407



PLAN



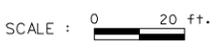
ELEVATION

HYDRAULIC DATA			
DRAINAGE AREA = 5936 SQ MILES			
	MAGNITUDE	VELOCITY	ELEVATION
10 YEAR FLOOD	150,800 CFS	7.2 FT/SEC	309.9
50 YEAR FLOOD	255,000 CFS	9.2 FT/SEC	317.89
DESIGN FLOOD-100 YEARS	315,000 CFS	10.2 FT/SEC	321.38
500 YEAR FLOOD	475,000 CFS	12.2 FT/SEC	329.89

SCOUR HOLE ELEV	
PIER 1	270.00
PIER 2	273.50

NOTES:

- THE CORE BORING DRAWINGS FOR THE FOLLOWING BORINGS: W4, 99-1, SB1, SB20, SB2, W16, SB18, W18, 99-3, MD1, MD2, W19, B3, SB15, SB16, SB19, W5, W11, W6, 99-23, AND W12 ARE INCLUDED WITH THIS SET OF THE JAMES RUMSEY BRIDGE DRAWINGS.
- SEE SET OF RETAINING WALL DRAWINGS FOR THE REMAINING CORE BORING DRAWINGS.
- FOR FINISHED GRADING IN THE VICINITY OF ABUTMENT 1 AND ABUTMENT 2 SEE THE SITUATION PLAN DRAWINGS OF THE RETAINING WALLS.



NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
OVER POTOMAC RIVER
SITUATION PLAN - II**

DESIGNED <i>JSD</i>	DATE 11/02
DRAWN <i>JME</i>	11/02
CHECKED <i>JSD</i>	11/02
CHECKED <i>PMP</i>	11/02

Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET
83 OF 93
BRIDGE NO.
4919

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03/31/2003

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64 03	BR-0480(010)E	2002	JEFFERSON	268	407

GENERAL NOTES:

GOVERNING SPECIFICATIONS

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, STANDARD SPECIFICATIONS ROADS AND BRIDGES, ADOPTED 2000, AS AMENDED BY THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS; SUPPLEMENTAL SPECIFICATIONS, DATED JANUARY 1, 2003, AND THE CONTRACT PLANS AND DOCUMENTS ARE THE GOVERNING PROVISIONS APPLICABLE TO THIS PROJECT.

DESIGN SPECIFICATIONS

THE DESIGN IS IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS CUSTOMARY U.S. UNITS, SECOND EDITION 1998, WITH INTERIMS UP TO AND INCLUDING THE YEAR 2002. WOOD CONNECTION DESIGN IS IN ACCORDANCE WITH THE AMERICAN FOREST & PAPER ASSOCIATION (AF&PA) AND AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD FOR LOAD AND RESISTANCE FACTOR DESIGN (LRFD) FOR ENGINEERED WOOD CONSTRUCTION AF&PA/ASCE 16-95
 THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING LIVE LOADS:
 - PEDESTRIAN 85 LBS. PER SQUARE FOOT
 - TWO-AXLE VEHICLE (3500 LBS. PER AXLE, AXLE SPACING BETWEEN 9'-0" AND 11'-6")

REINFORCED CONCRETE

ALL CONCRETE USED TO CONSTRUCT THE ABUTMENTS, FOOTING PADS, WINGWALLS, AND PILE CAPS SHALL BE CLASS B CONCRETE PAID FOR UNDER ITEM 601002-001.

ALL EXPOSED EDGES SHALL HAVE A 3/4" x 3/4" CHAMFER, UNLESS NOTED OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF 1.0 FT BELOW FINISHED GROUND LINE.

THE COVERING FOR REINFORCING STEEL MEASURED AS THE SHORTEST DISTANCE FROM THE CONCRETE SURFACE TO THE FACE OF THE REBAR, UNLESS NOTED OTHERWISE ON THE PLANS, SHALL BE AS FOLLOWS:
 - FOR BOTTOM FACE OF: ABUTMENT FOOTINGS, FOOTING PADS, WINGWALL FOOTINGS, AND PILE CAPS 3"
 - ALL OTHER LOCATIONS 2"

ALL REINFORCING BARS SHALL BE NEW BILLET STEEL MEETING THE REQUIREMENTS OF AASHTO M 31, GRADE 60 AND THE REQUIREMENTS OF SECTION 709.1 OF THE SPECIFICATIONS. REINFORCING STEEL SHALL BE PAID FOR UNDER ITEM 602001-000.

FIELD BENDING OR WELDING OF REINFORCING STEEL IS NOT PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

EXCAVATION AND BACKFILLING

ALL EXCAVATION SHALL BE CLASSIFIED AS STRUCTURE EXCAVATION PAID FOR UNDER ITEM 212001-000, WITH PAY LIMITS AS SHOWN ON THE PLANS.

THE COST OF TEMPORARY SHORING, IF NEEDED, SHALL BE INCLUDED IN THE UNIT BID PRICE OF ITEM 212001-000, STRUCTURE EXCAVATION. THE TEMPORARY SHORING SHOP DRAWINGS AND CALCULATIONS SHALL BE REVIEWED PRIOR TO PROCEEDING WITH SHORING INSTALLATION.

THE CONTRACTOR SHALL BACKFILL AROUND THE SUBSTRUCTURE AS SOON AS POSSIBLE AFTER REMOVAL OF FORMS AND FALSEWORK. ALL BACKFILLING SHALL BE IN ACCORDANCE WITH SECTION 212.10 OF THE SPECIFICATION.

PILES

ALL PILING SHALL BE HP 10x42 AASHTO M270 GRADE 50 AND SHALL BE INSTALLED TO WITHIN A 3" DRIVING CONSTRUCTION TOLERANCE. THE RESISTANCE FACTORED CAPACITY FOR HP10x42 UNDER STRENGTH LIMIT STATE IS 175 KIPS.

ALL PILES SHALL BE PREDRILLED AND DRIVEN. MINIMUM PILE EMBEDMENT INTO ROCK SHALL BE 2'-0". ALL PILES SHALL BE DRIVEN TO REFUSAL. REFUSAL IS DEFINED AS THE EQUIVALENT OF 20 BLOWS FOR 1" OR LESS OF PENETRATION WITH A POWER HAMMER DEVELOPING A MINIMUM RATED ENERGY OF 12 FT-KIPS PER BLOW. IF A LARGER HAMMER IS USED, THE NUMBER OF BLOWS IN THE LAST INCH OF PENETRATION MAY BE REDUCED IN DIRECT PROPORTION TO THE ENERGY RATING OF HAMMER BUT NOT LESS THAN 12. BEFORE PILE DRIVING IS STARTED, THE CONTRACTOR SHALL PROVIDE A WRITTEN CERTIFICATE TO THE ENGINEER THAT THE PILE HAMMERS, AIR COMPRESSORS AND AIR VALVES HAVE BEEN INSPECTED AND FOUND TO BE IN GOOD WORKING CONDITION.

ELEVATION

ELEVATIONS SHOWN REFER TO THE U.S. COAST AND GEODETIC SURVEYS BASED ON SEA LEVEL DATUM, 1929, 1957 ADJUSTMENTS.

ANCHOR BOLTS AND EYE BAR

ANCHOR BOLTS AND EYE BAR SHALL CONFORM TO THE REQUIREMENTS OF AASHTO F1554 AND SHALL BE HOT-DIP GALVANIZED ACCORDING TO AASHTO M232.

UNLESS NOTED OTHERWISE, THE CONTRACTOR HAS THE OPTION OF SETTING ANCHOR BOLTS AND EYE BAR WITH THE CONCRETE PLACEMENT, OR SETTING SLEEVES WITH THE CONCRETE PLACEMENT. DRILLING AND SETTING OF ANCHOR BOLTS WILL NOT BE ALLOWED.

CONTRACTOR SHALL SUBMIT HIS PROPOSED METHOD AND MATERIAL TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. THE ANCHOR BOLT HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AFTER SETTING THE BOLTS. NON-SHRINK GROUT SHALL CONFORM TO SECTION 715.5, COST OF GROUTING AND ANCHOR BOLTS SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 601002-001, CLASS B CONCRETE

WOOD

ALL LUMBER AND TIMBER SHALL BE VISUALLY GRADED SOUTHERN PINE AND SHALL BE CONSTRUCTED TO THE FINISHED DIMENSIONS. THE FINISHED DIMENSIONS AND GRADES SHALL BE AS FOLLOWS:

NOMINAL SIZE	FINISHED DIMENSIONS	SOUTHERN PINE GRADE
2" x 2"	1 1/2" x 1 1/2"	GRADE NO.2
2" x 6"	1 1/2" x 5 1/2"	GRADE NO.2
3" x 10"	2 1/2" x 9 1/4"	GRADE NO.2
3" x 8"	2 1/2" x 7 1/4"	GRADE NO.1
4" x 8"	3 1/2" x 7 1/4"	GRADE NO.1
4" x 12"	3 1/2" x 11 1/4"	GRADE NO.1
5" x 5"	4 1/2" x 4 1/2"	GRADE NO.1
6" x 12"	5 1/2" x 11 1/2"	GRADE NO.1
8" x 8"	7 1/2" x 7 1/2"	GRADE NO.1

~~SAWN LUMBER AND TIMBER SHALL CONFORM TO THE SPECIFICATIONS FOR WOOD PRODUCTS, AASHTO M168 AND SHALL BE PRESSURE IMPREGNATED WITH WOOD PRESERVATIVE, TESTED AND INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO M133.~~

STEEL COMPONENTS AND HARDWARE

STEEL PLATES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 270, GRADE 36 AND SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 111.

HEX HEAD BOLTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO F1554. NUTS SHALL BE HEX OR HEAVY HEX MEETING AASHTO M 291 OR M 292. ROUND WASHER SHALL MEET THE REQUIREMENT OF AASHTO M 293. ALL HARDWARE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 232.

RESTRAINING CABLE

STRAND TENDONS SHALL CONSIST OF 1/2" SEVEN WIRE LOW RELAXATION STRANDS, AASHTO M203, GRADE 270.

DESIGN ALTERATION

DESIGN ALTERATION SHALL NOT BE MADE WITHOUT THE ENGINEER'S APPROVAL. BID QUANTITIES SHALL BE AS SHOWN IN THIS SET OF DRAWINGS AND SHALL NOT BE AFFECTED BY THE ALTERATION.

SHOP DRAWINGS

ALL SHOP DRAWINGS WILL BE SUBJECT TO THE REQUIREMENTS OF SECTION 105.2. SUBMIT SHOP DRAWINGS TO:
 MICHAEL BAKER JR, INC.
 5088 WEST WASHINGTON STREET
 CHARLESTON, WV 25313.

INDEX OF SHEETS	
SHEET NUMBER	SHEET TITLE
1	GENERAL PLAN AND ELEVATION
2	GENERAL NOTES AND SHEET INDEX
3	TYPICAL SECTIONS AND SUMMARY OF QUANTITIES
4	STAKE OUT PLAN AND FRAMING PLAN
5	ABUTMENT 1 AND WINGWALLS - PLAN, ELEVATION AND SECTIONS
6	ABUTMENT 1 AND WINGWALLS - REINFORCEMENT DETAILS
7	PIER 1 AND PIER 2
8	PIER 3 AND PILE CAP DETAILS
9	ABUTMENT 2 AND WINGWALLS - PLAN, ELEVATION AND SECTIONS
10	ABUTMENT 2 AND WINGWALLS - REINFORCEMENT DETAILS
11	RAILING DETAILS AND CONNECTION DETAILS - 1
12	CONNECTION DETAILS - 2
13	BORING LOGS

SAWN LUMBER AND TIMBER SHALL CONFORM TO THE SPECIFICATIONS FOR WOOD PRODUCTS, AASHTO M168 AND SHALL BE PRESSURE IMPREGNATED WITH WOOD PRESERVATIVE, TESTED AND INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO M133-95 (1999) WITH THE FOLLOWING LIMITATION: THE ONLY ACCEPTABLE NAMED PRESERVATIVE IS CROMATED COPPER ARSENATE, TYPE C-P5 (NOTE THAT THIS LIMITATION OVERRIDES THE WEST VIRGINIA STANDARD SPECIFICATION SECTION 622.2.4, WHICH ONLY ALLOWS CREOSOTE-P1).

MODIFICATION TO NOTES	1/20/03	PWP
CORRECTION TO FINISHED DIMENSION	2/5/03	AP
NO. REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

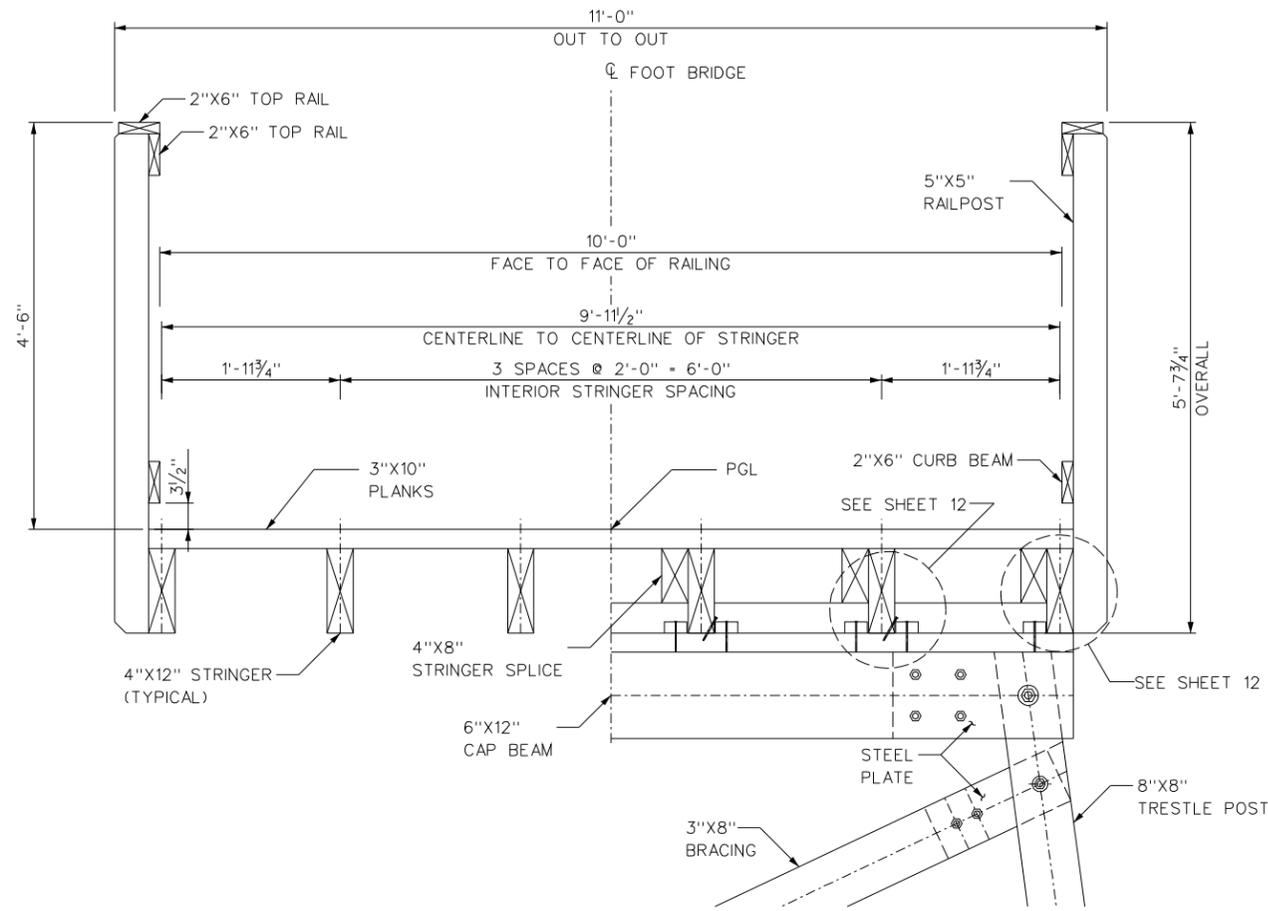
JAMES RUMSEY BRIDGE
WOODEN FOOT BRIDGE
GENERAL NOTES AND
INDEX OF SHEETS

DESIGNED	AP	DATE	11/02
DRAWN	MAD	DATE	11/02
CHECKED	FJ	DATE	11/02
CHECKED	AP	DATE	11/02

Baker Michael Baker Jr., Inc.	Charleston, W.Va.	SHEET	2 OF 13
		BRIDGE NO.	

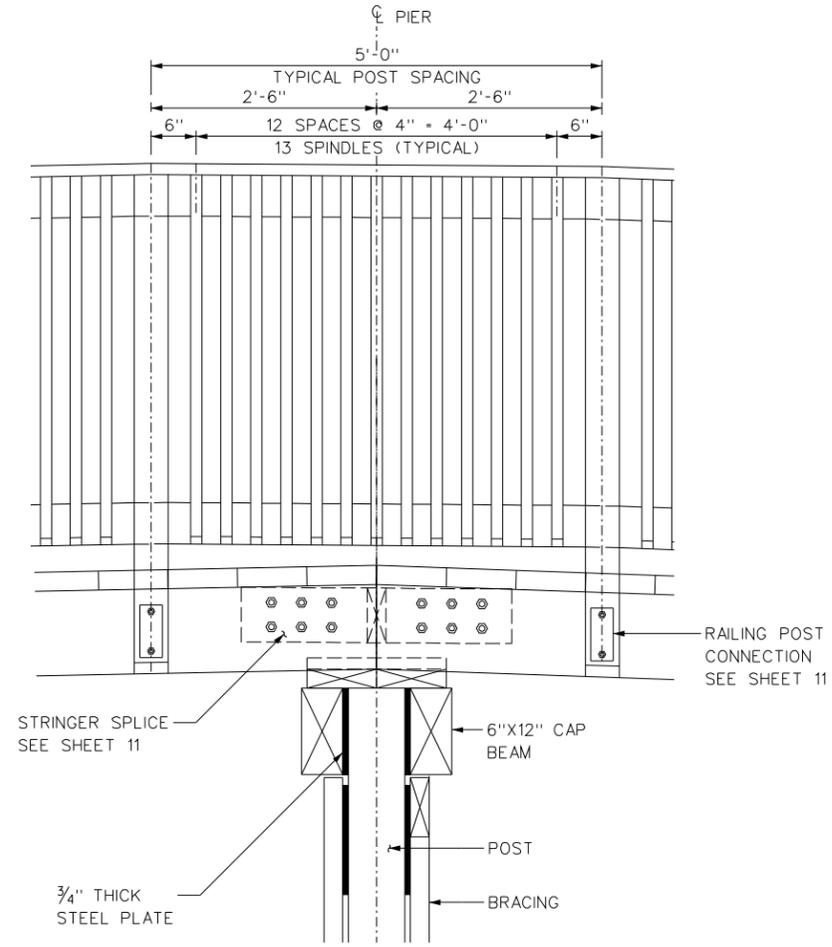
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PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	269	407



HALF TYPICAL SECTION
(LOOKING UPSTATION)

HALF TYPICAL SECTION
(LOOKING UPSTATION AT PIER LOCATION)



ELEVATION VIEW
(AT PIER LOCATION)

SUMMARY OF ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY						
			ABUTMENT	PIER	PIER	PIER	ABUTMENT	SUPER	TOTAL
			1	1	2	3	2	STRUCTURE	
212001-000	STRUCTURE EXCAVATION	CY	54	8	8	8	48	-	126
212005-000	SELECT MATERIAL FOR BACKFILLING	CY	4	-	-	-	6	-	10
601002-001	CLASS B CONCRETE	CY	16	2	2	2	17	-	39
602001-001	REINFORCING STEEL BARS	LB	1297	814	814	814	1370	-	5109
616005-003	HP10x42 STEEL BEARING PILE, PREDRILLED AND DRIVEN	LF	-	29	29	31	-	-	89
622002-001	TREATED LUMBER AND TIMBER	TBF	0.062	0.290	0.297	0.279	0.062	4.390	5.380
639001-001	CONSTRUCTION STAKE LAYOUT, PEDESTRIAN FOOTBRIDGE	LS	-	-	-	-	-	-	1

TBF = THOUSAND BOARD FOOT

NO.	REVISION	DATE:	BY:
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W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
WOODEN FOOT BRIDGE
TYPICAL SECTIONS AND
SUMMARY OF QUANTITIES

DESIGNED	AP	DATE	11/02
DRAWN	ME	DATE	11/02
CHECKED	JF	DATE	11/02
CHECKED	AP	DATE	11/02

Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

SHEET
3 OF 13
BRIDGE NO.

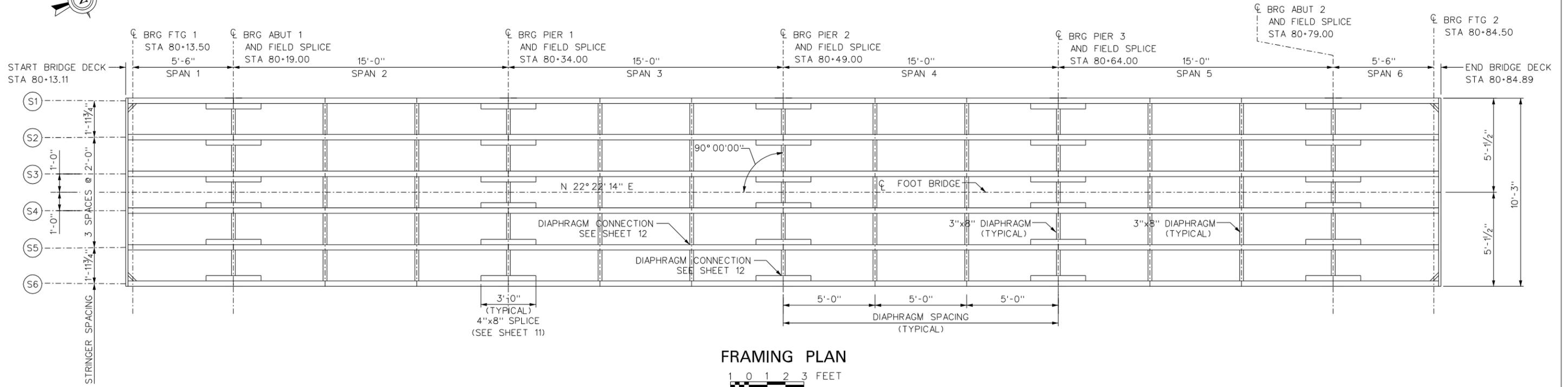
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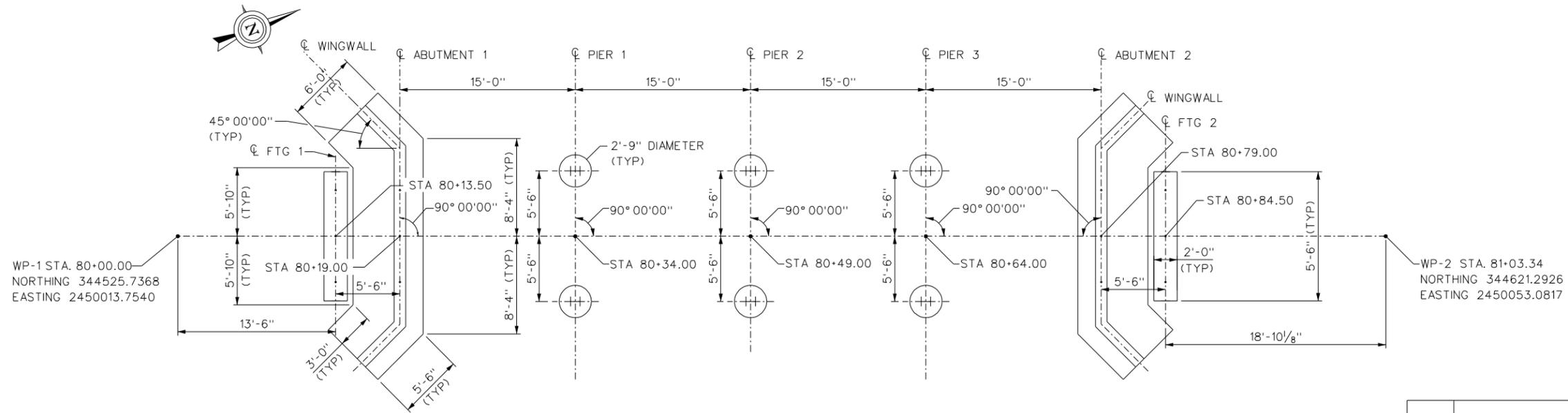
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PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	270	407



FRAMING PLAN

1 0 1 2 3 FEET



FOUNDATION LAYOUT

2 0 2 4 6 FEET

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
WOODEN FOOT BRIDGE
FOUNDATION LAYOUT AND
FRAMING PLAN

DESIGNED	AP	DATE	11/02
DRAWN	MZ	DATE	11/02
CHECKED	JJ	DATE	11/02
CHECKED	AP	DATE	11/02

Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

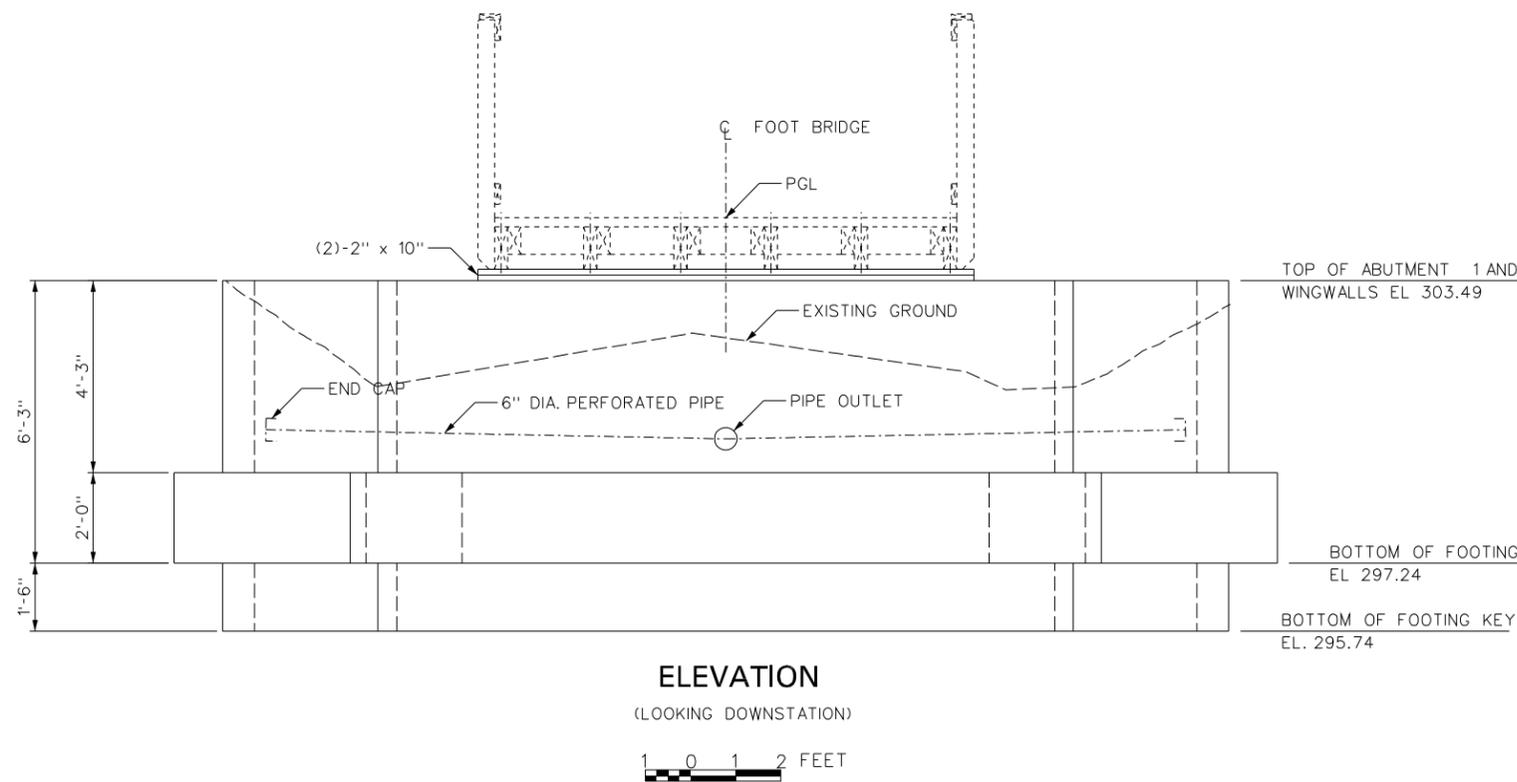
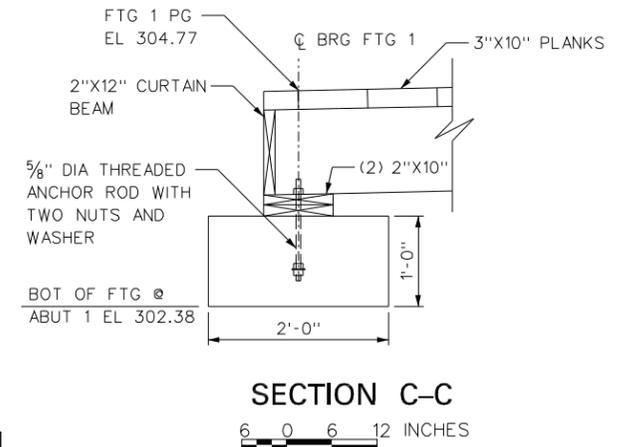
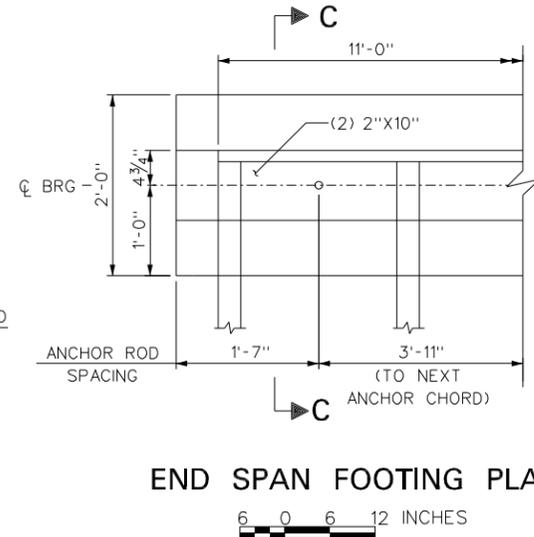
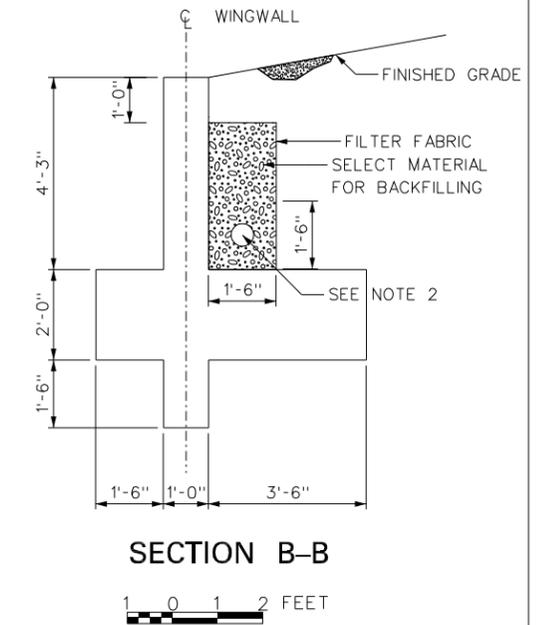
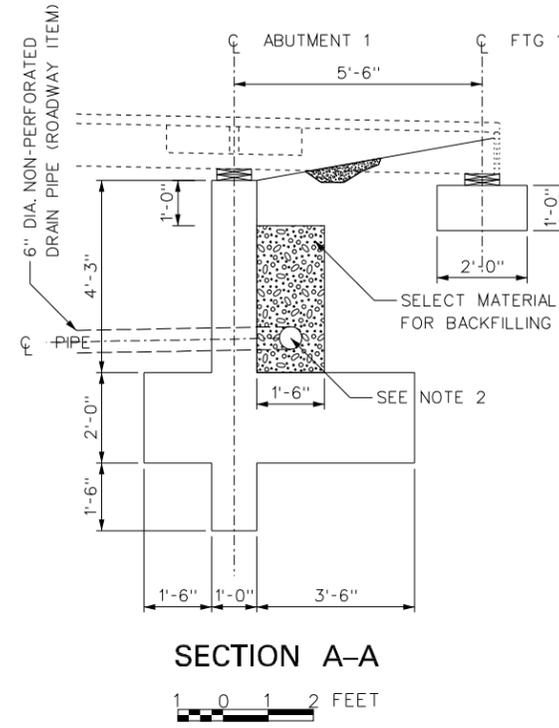
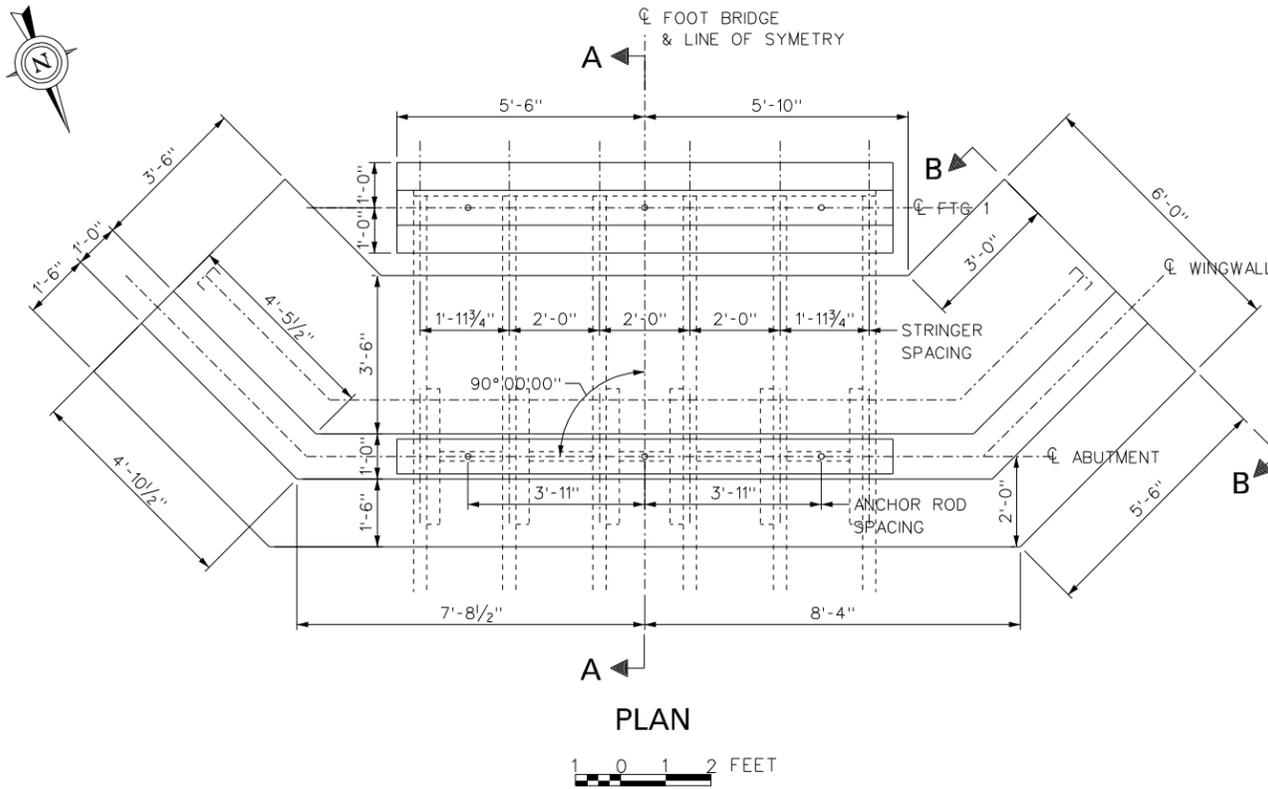
SHEET
4 OF 13
BRIDGE NO.

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03/31/2003

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	271	407



NOTES:

- FOR REINFORCEMENT DETAILS, SEE SHEET 6.
- PLACE #57 CRUSHED STONE AROUND 6" DIA. PERFORATED DRAIN PIPE AND WRAP WITH FILTER FABRIC. THE COSTS OF DRAIN PIPE, FILTER FABRIC AND #57 CRUSHED STONE ARE INCIDENTAL TO ITEM 212005-000, SELECT MATERIAL FOR BACKFILLING.
- ALL SELECT MATERIAL FOR BACKFILLING SHALL BE #57 CRUSHED STONE.

DESIGNED	AP	DATE	11/02
DRAWN	JML	DATE	11/02
CHECKED	FJ	DATE	11/02
CHECKED	AP	DATE	11/02

NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
WOODEN FOOT BRIDGE
ABUTMENT 1 AND WINGWALLS
PLAN, ELEVATION, AND SECTION**

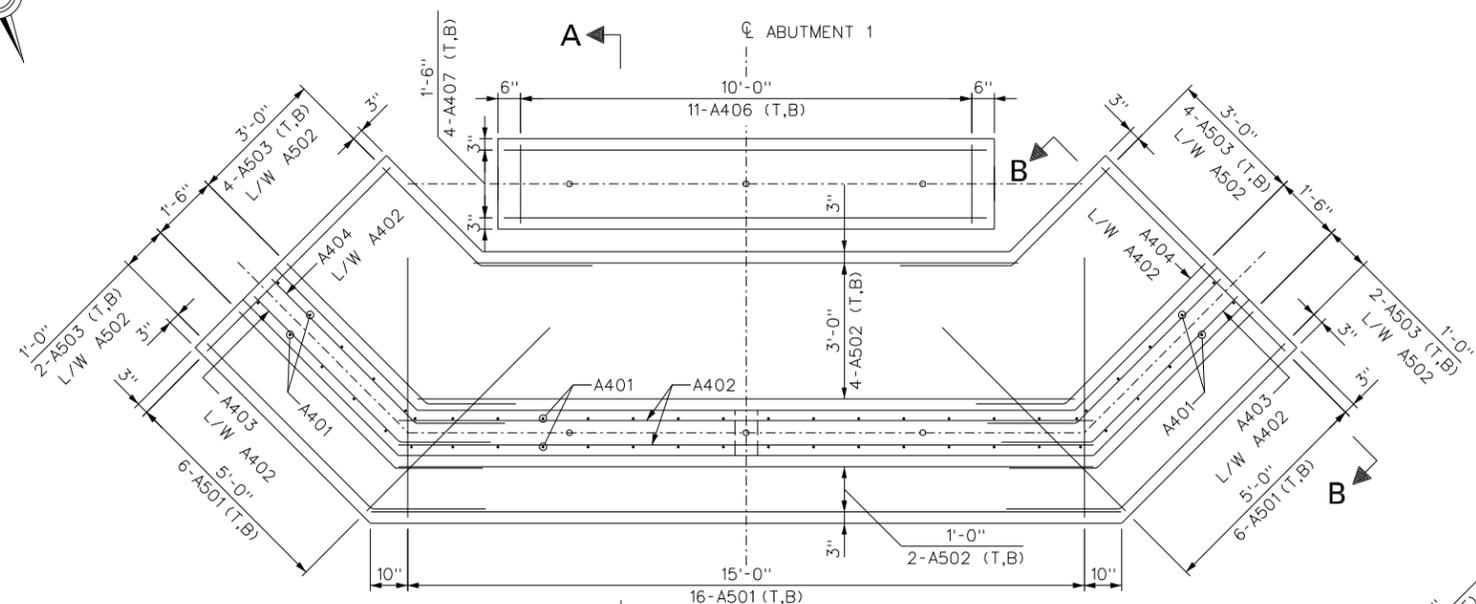
Baker
Michael Baker Jr., Inc.

SHEET **5 OF 13**
BRIDGE NO.

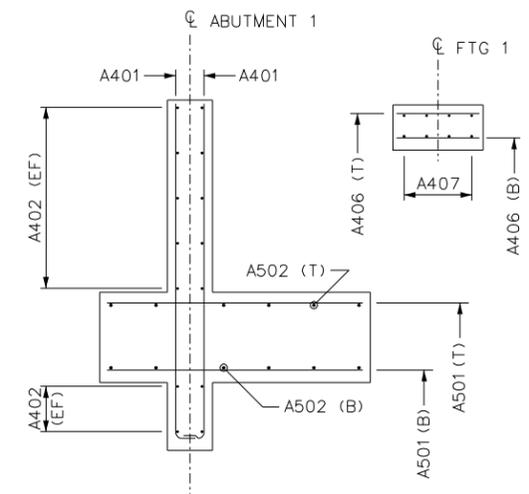
Charleston, W.Va.

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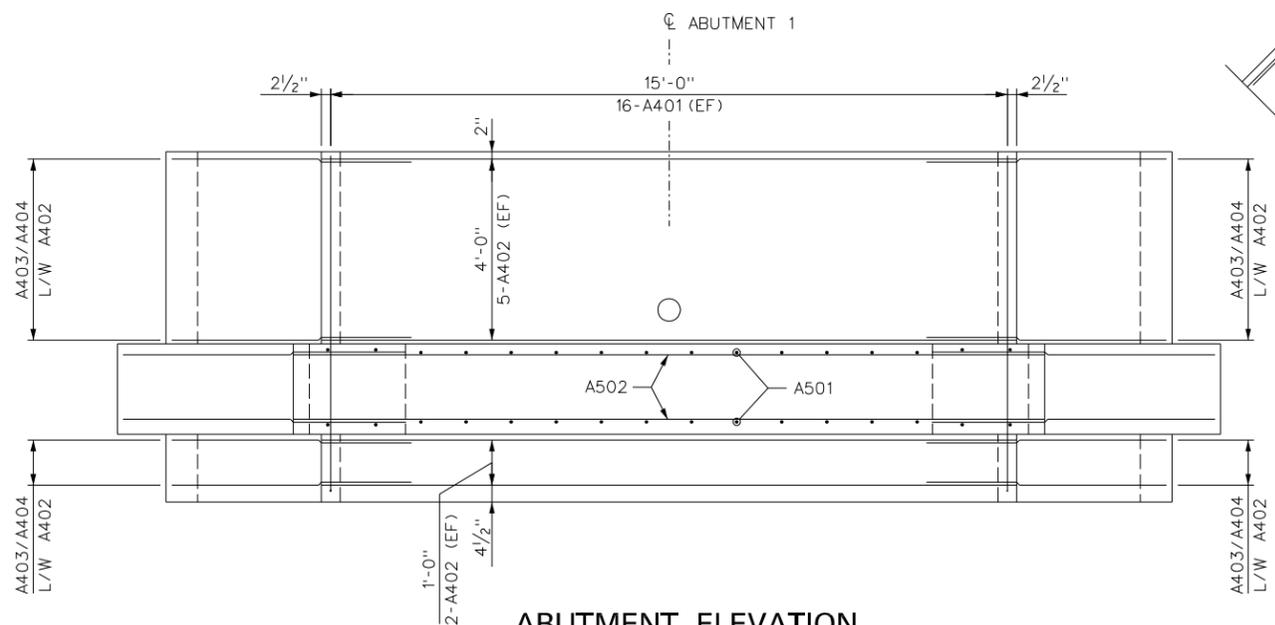
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	272	407



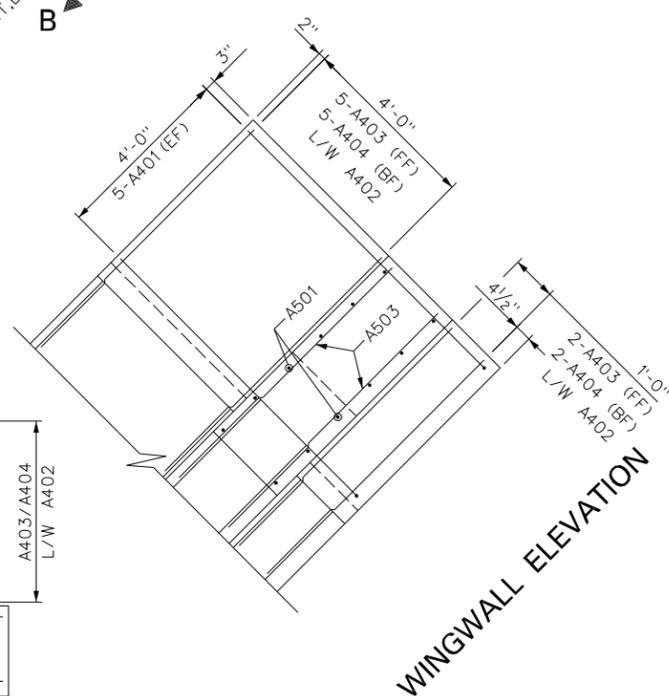
PLAN



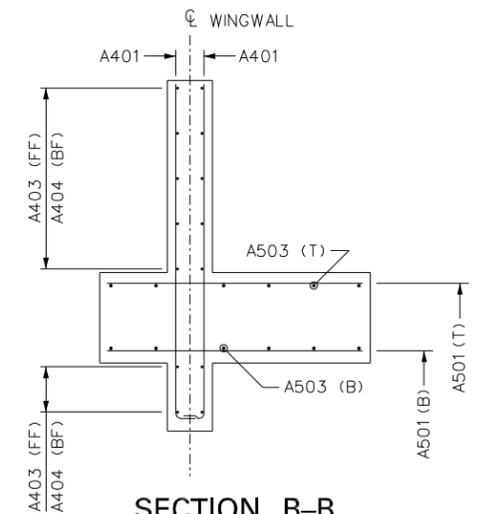
SECTION A-A



ABUTMENT ELEVATION



WINGWALL ELEVATION



SECTION B-B

NOTES:

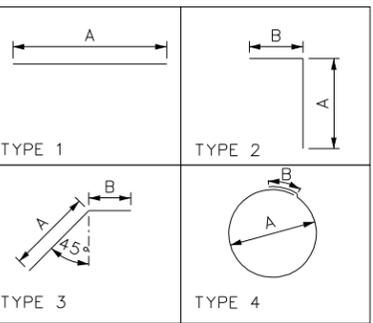
1. FOR DIMENSIONS NOT SHOWN ON THIS DRAWINGS, SEE SHEET 5.
2. UNLESS STATED OTHERWISE, BARS SHALL BE EQUALLY SPACED AT 12".

LEGEND:

- T = TOP FACE
- B = BOTTOM FACE
- FF = FRONT FACE
- BF = BACK FACE
- EF = EACH FACE
- L/W = LAP WITH

NO.	REVISION	DATE:	BY:

MARK	TYPE	SIZE	NO	LENGTH	LOCATION	A	B	REMARK
A401	2	4	52	7'-11"	STEM/KEY	7'-11"		
A402	1	4	14	15'-5"	STEM/KEY	15'-5"		
A403	3	4	14	6'-6"	WINGWALL	4'-6"	2'-0"	
A404	3	4	14	6'-5 1/2"	WINGWALL	4'-5 1/2"	2'-0"	
A406	1	4	11	1'-10"	FOOTING PAD	1'-10"		
A407	1	4	8	10'-8 1/2"	FOOTING PAD	10'-8 1/2"		
A501	1	5	56	5'-9"	FOOTING	5'-9"		
A502	1	5	12	VARIES	FOOTING	VARIES		A: 12'-0" TO 17'-7 1/2" BY 1'-1 1/2"
A503	3	5	24	VARIES	WALL FOOTING	VARIES		A: 3'-0 1/2" TO 5'-1 1/2" BY 5"



W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

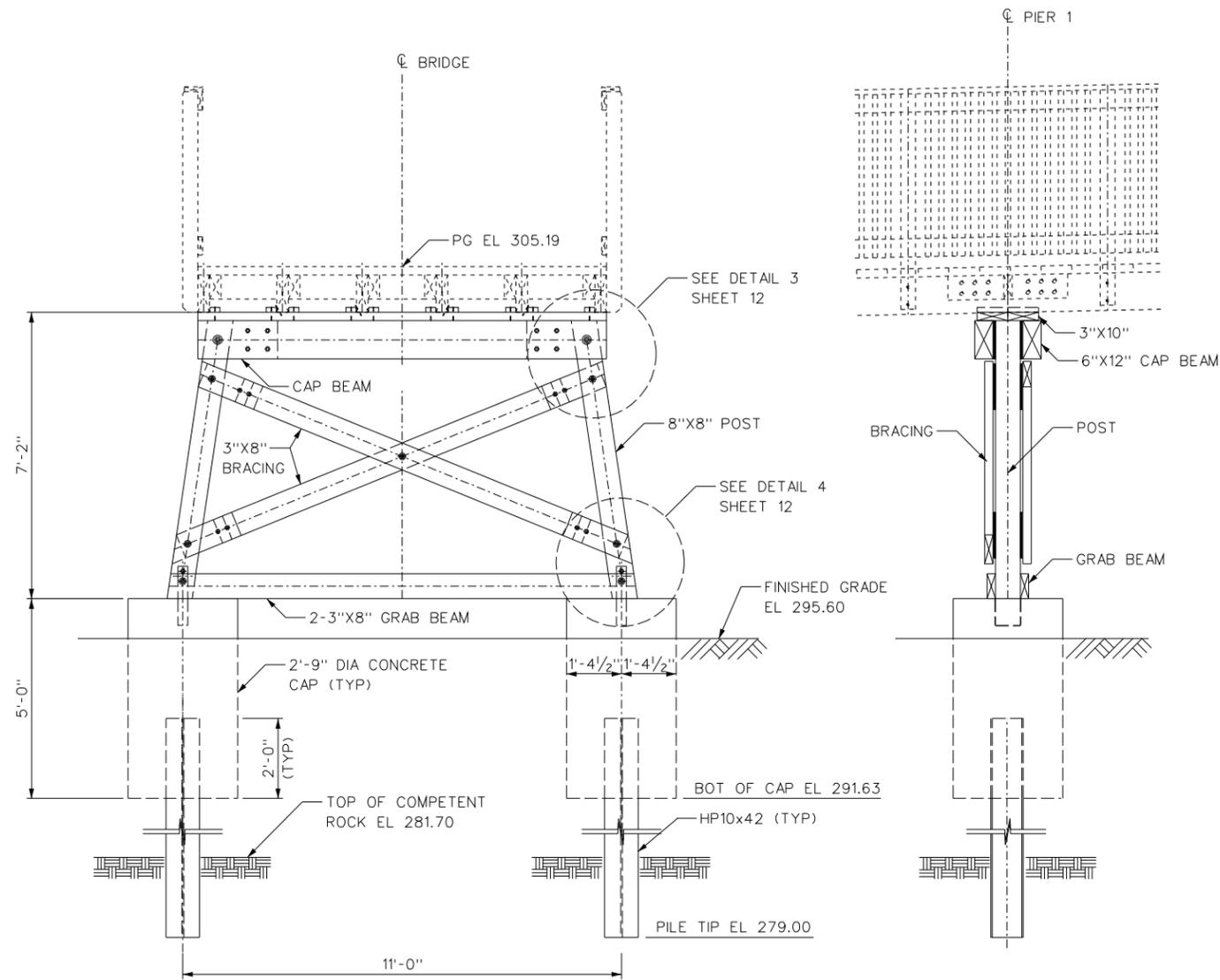
**JAMES RUMSEY BRIDGE
WOODEN FOOT BRIDGE
ABUTMENT 1 AND WINGWALLS
REINFORCEMENT DETAILS**

DESIGNED <i>AP</i>	DATE 11/02
DRAWN <i>JME</i>	DATE 11/02
CHECKED <i>JF</i>	DATE 11/02
CHECKED <i>AP</i>	DATE 11/02

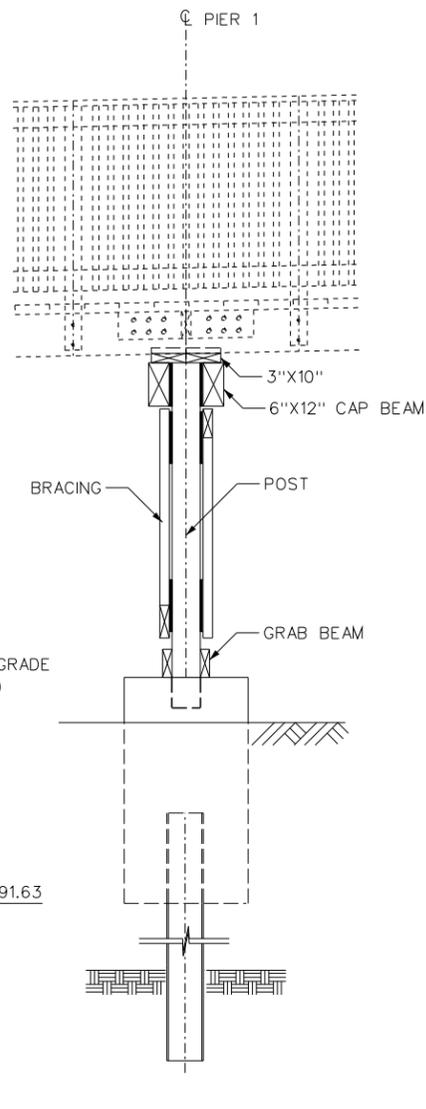
Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET **6** OF **13**
BRIDGE NO.

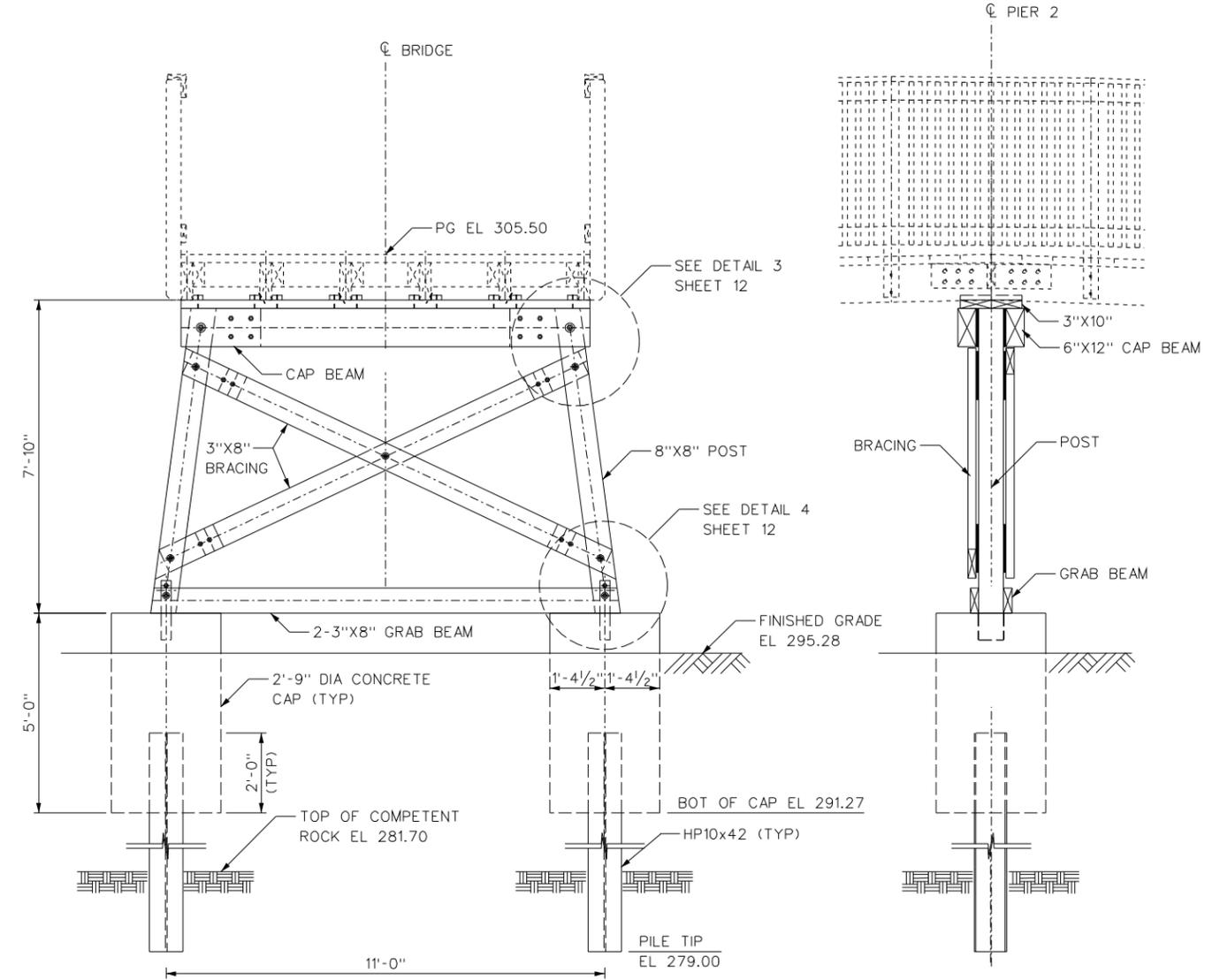
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	273	407



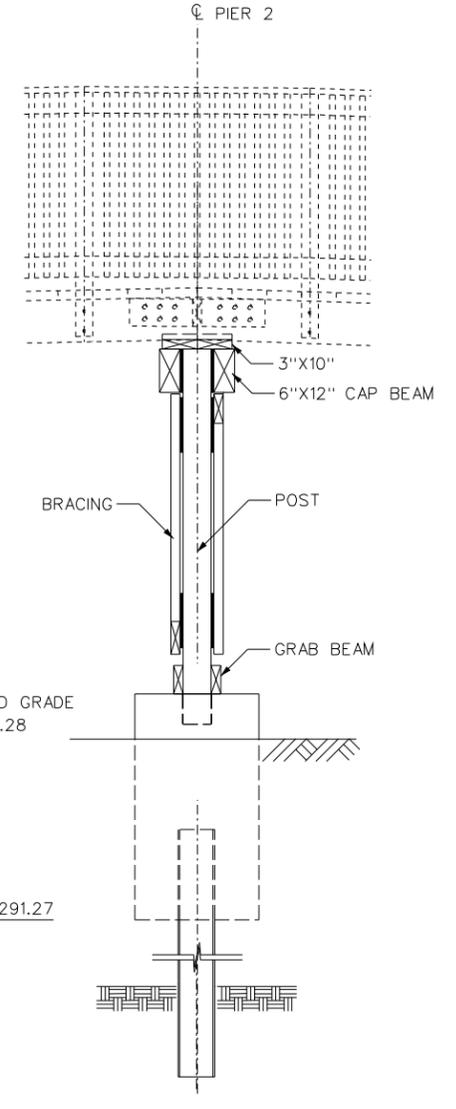
ELEVATION
(PIER 1 - LOOKING UPSTATION)



END VIEW
(LOOKING UPSTREAM)



ELEVATION
(PIER 2 - LOOKING UPSTATION)



END VIEW
(LOOKING UPSTREAM)

NOTES:

- SEE SHEET 8 FOR FOUNDATION DETAIL.
- THE COST OF RESTRAINING CABLE, ANCHOR RODS, BOLTS, NUTS AND WASHERS, COLUMN ANCHORAGE, AND NAILS SHALL BE INCIDENTAL TO ITEM NO 622002-001, TREATED LUMBER AND TIMBER.



NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
WOODEN FOOT BRIDGE
PIER 1 AND PIER 2
ELEVATION AND END VIEWS**

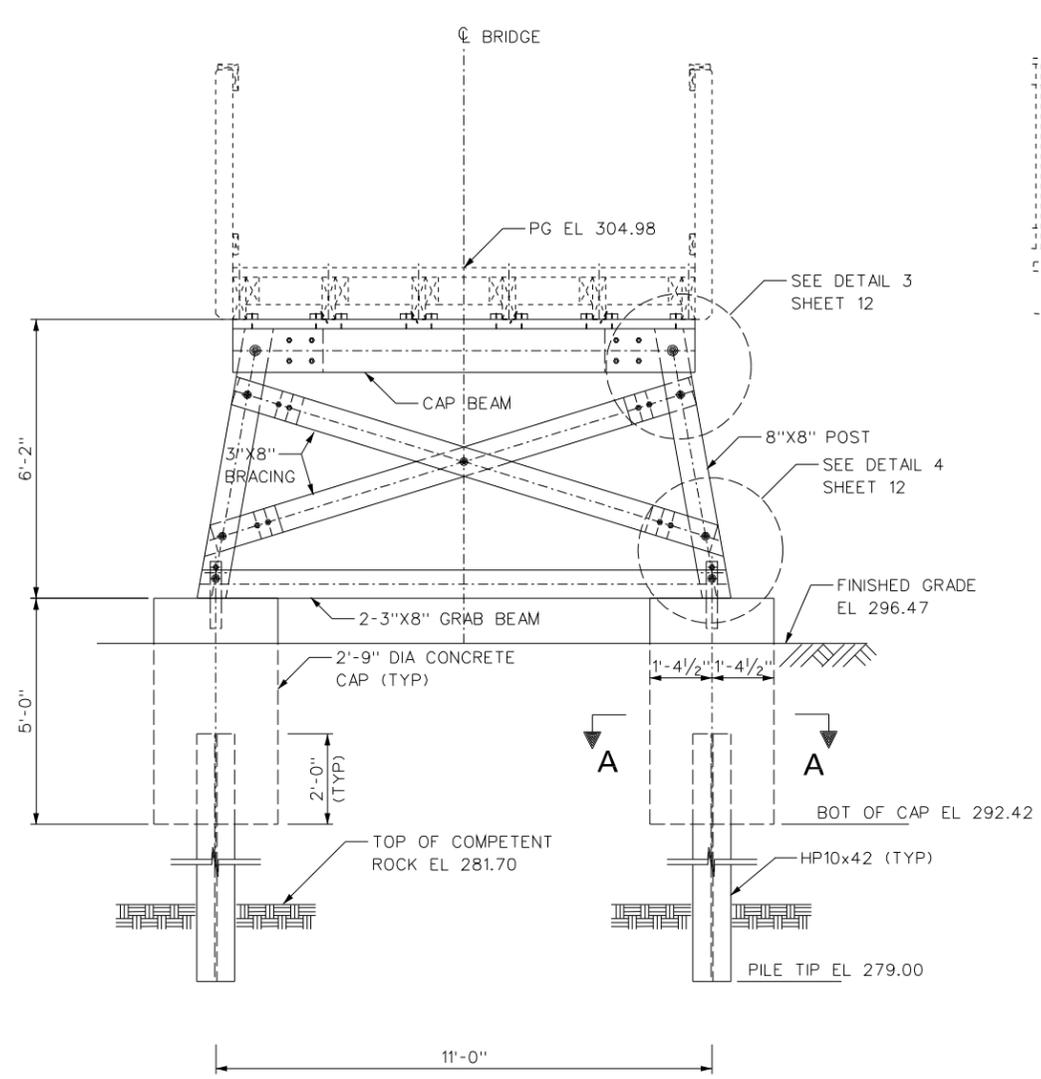
DESIGNED	AP	DATE	11/02
DRAWN	MAD	DATE	11/02
CHECKED	JF	DATE	11/02
CHECKED	AP	DATE	11/02

Baker
Michael Baker Jr., Inc.

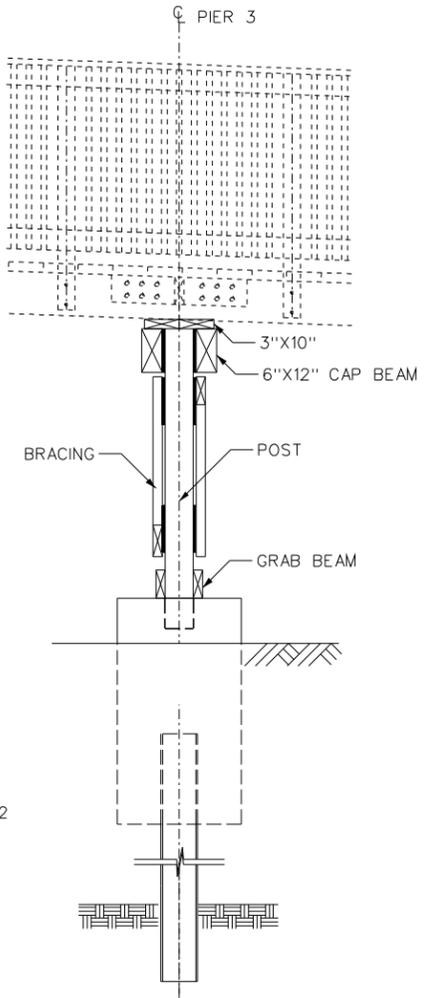
Charleston, W.Va.

SHEET **7** OF **13**
BRIDGE NO.

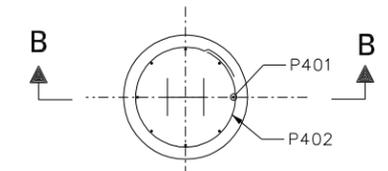
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	274	407



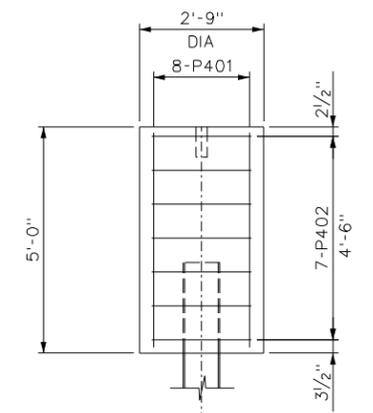
ELEVATION
(PIER 3 - LOOKING UPSTATION)



END VIEW
(LOOKING UPSTREAM)

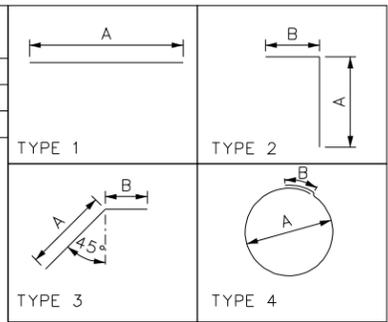


SECTION A-A



SECTION B-B

MARK	TYPE	SIZE	NO	LENGTH	LOCATION	A	B	REMARK
P401	1	4	48	4'-9"	PILE CAP	4'-9"		
P402	4	4	42	9'-1"	PILE CAP	2'-3"	2'-0"	



NO.	REVISION	DATE:	BY:
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W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

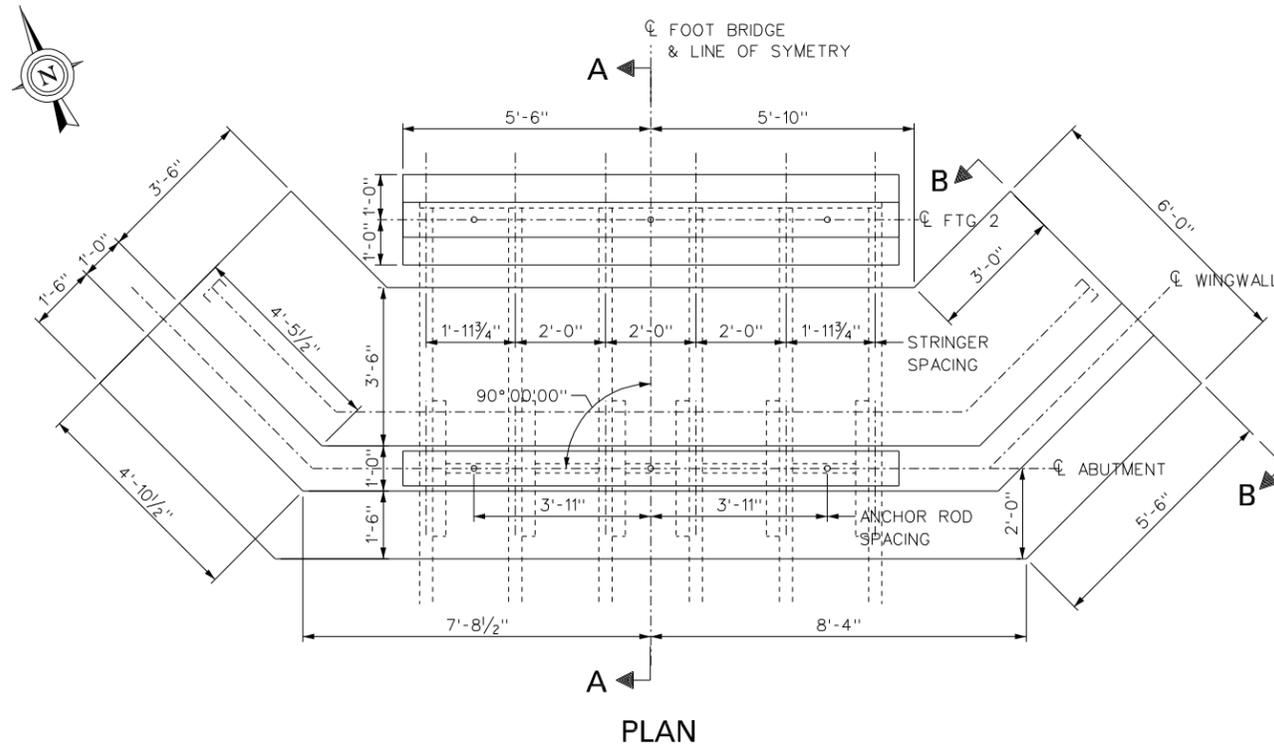
**JAMES RUMSEY BRIDGE
WOODEN FOOT BRIDGE
PIER 3 AND
PILE FOUNDATION**

DESIGNED	AP	DATE	11/02
DRAWN	MLAD	DATE	11/02
CHECKED	FJ	DATE	11/02
CHECKED	AP	DATE	11/02

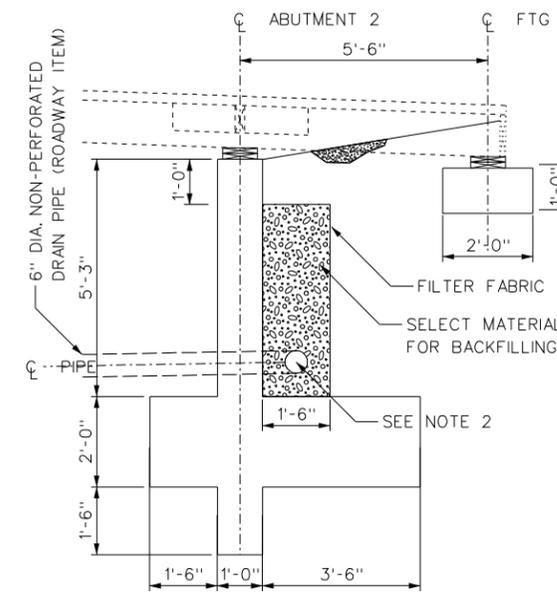
Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET **8** OF **13**
BRIDGE NO.

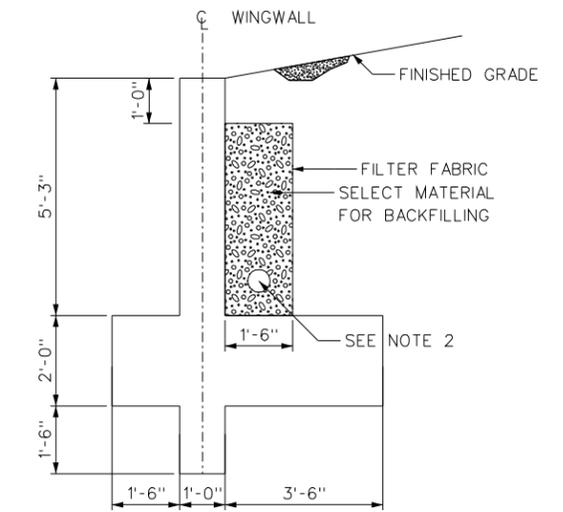
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	275	407



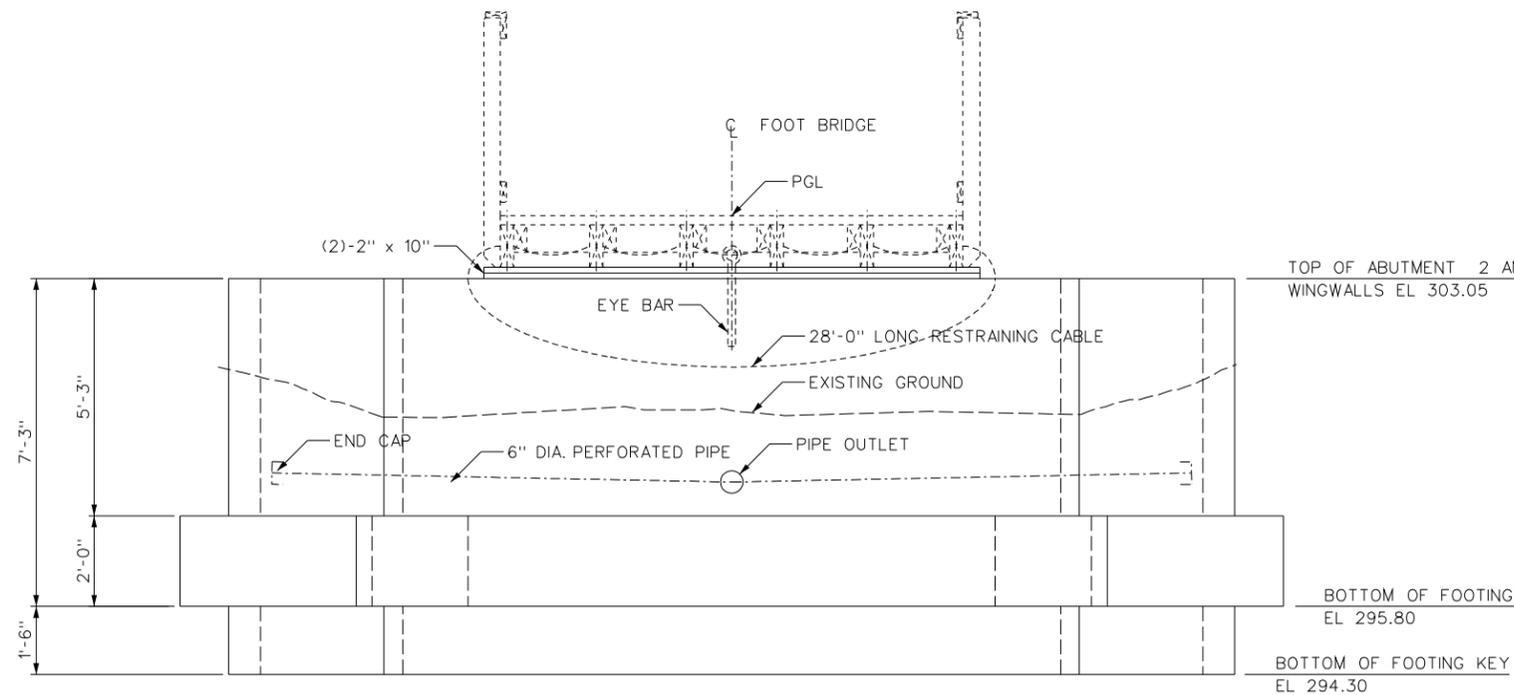
PLAN
1 0 1 2 FEET



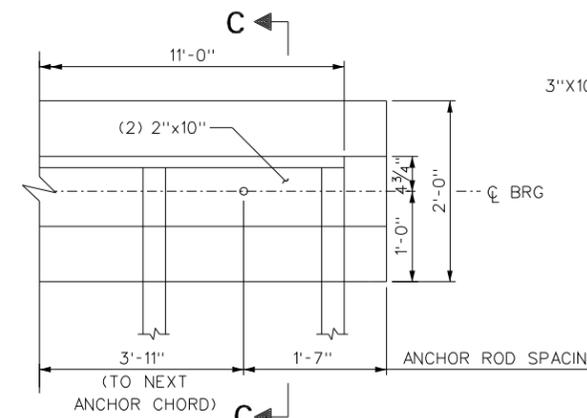
SECTION A-A
1 0 1 2 FEET



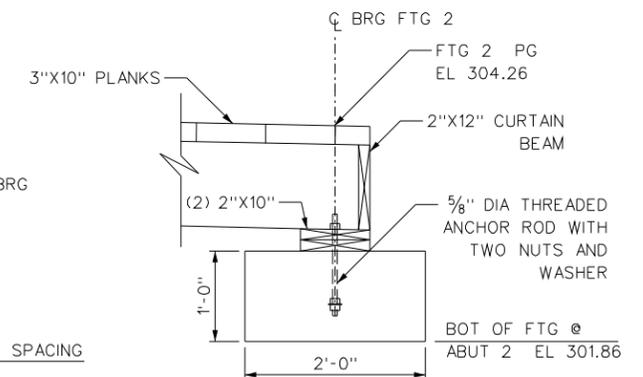
SECTION B-B
1 0 1 2 FEET



ELEVATION
(LOOKING DOWNSTATION)
1 0 1 2 FEET



END SPAN FOOTING PLAN
6 0 6 12 INCHES



SECTION C-C
6 0 6 12 INCHES

NOTES:

- FOR REINFORCEMENT DETAILS, SEE SHEET 10.
- PLACE #57 CRUSHED STONE AROUND 6" DIA. PERFORATED DRAIN PIPE AND WRAP WITH FILTER FABRIC. THE COSTS OF DRAIN PIPE, FILTER FABRIC AND #57 CRUSHED STONE ARE INCIDENTAL TO ITEM 212005-000, SELECT MATERIAL FOR BACKFILLING.
- ALL SELECT MATERIAL FOR BACKFILLING SHALL BE #57 CRUSHED STONE.
- THE COSTS OF RESTRAINING CABLE AND EYE BAR ARE INCIDENTAL TO ITEM 601002-001, CLASS B CONCRETE.

DESIGNED	AP	DATE	11/02
DRAWN	JME	DATE	11/02
CHECKED	FJ	DATE	11/02
CHECKED	AP	DATE	11/02

NO.	REVISION	DATE:	BY:

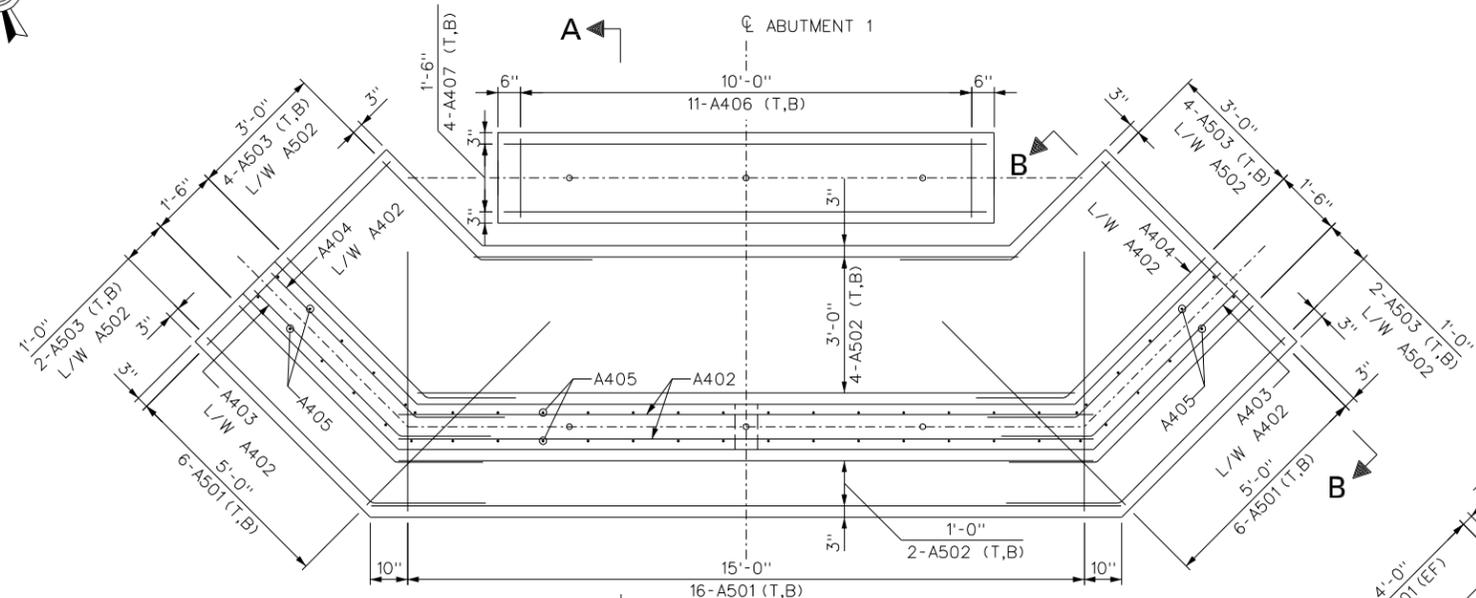
W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
WOODEN FOOT BRIDGE
ABUTMENT 2 AND WINGWALLS
PLAN, ELEVATION, AND SECTION

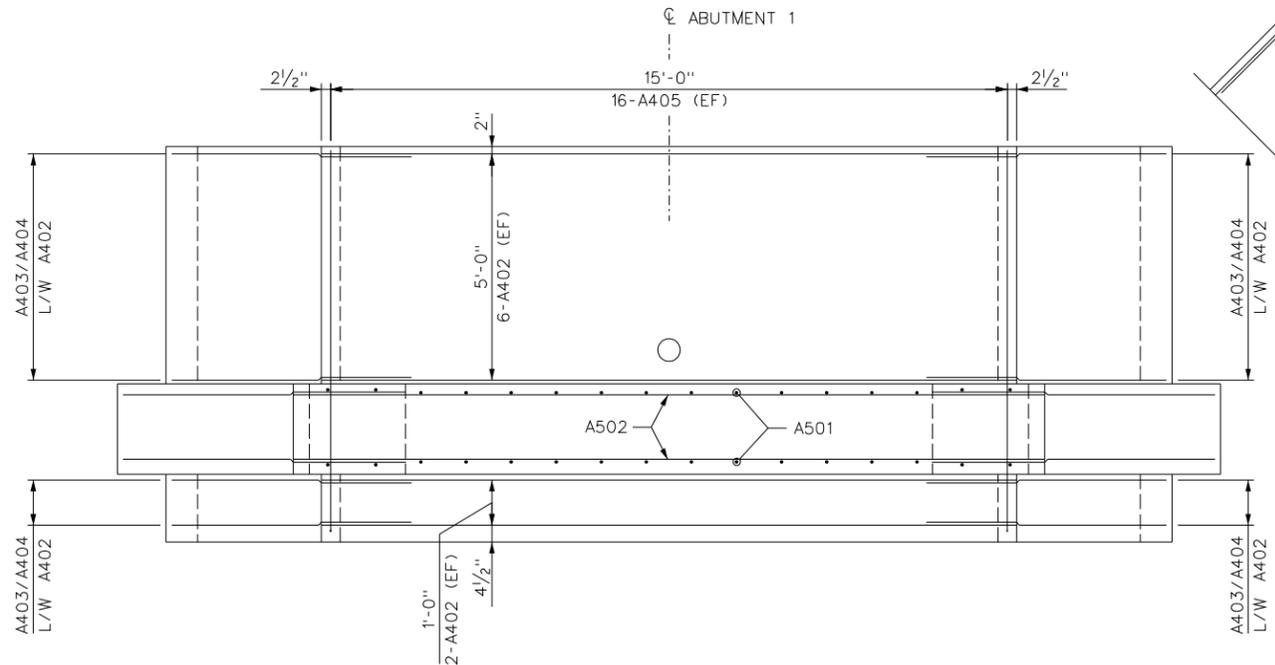
Baker
Michael Baker Jr., Inc.

SHEET
9 OF 13
BRIDGE NO.

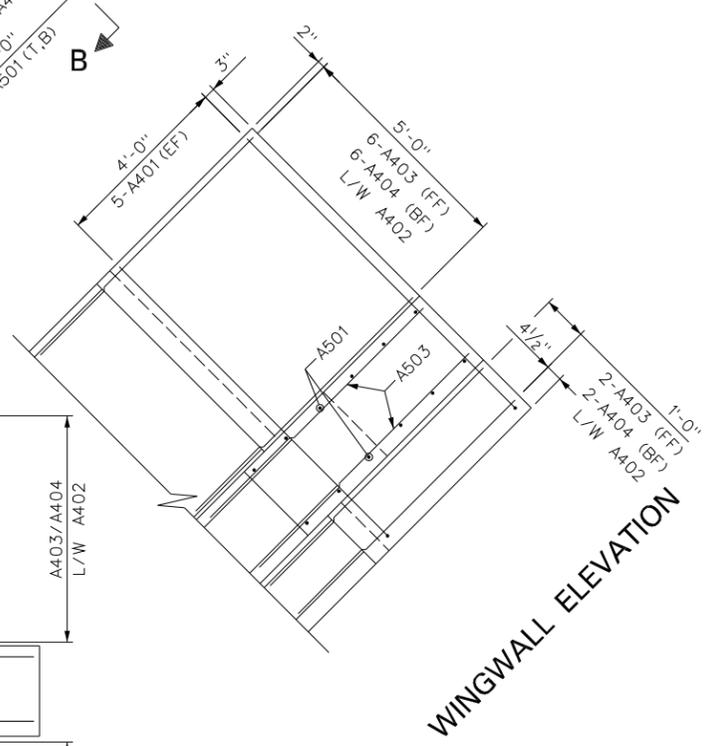
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	276	407



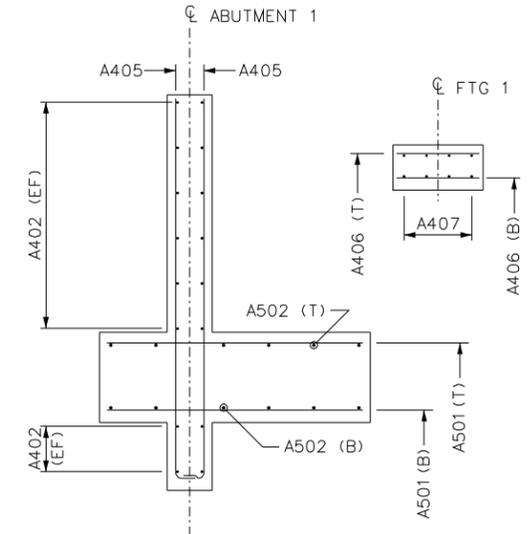
PLAN



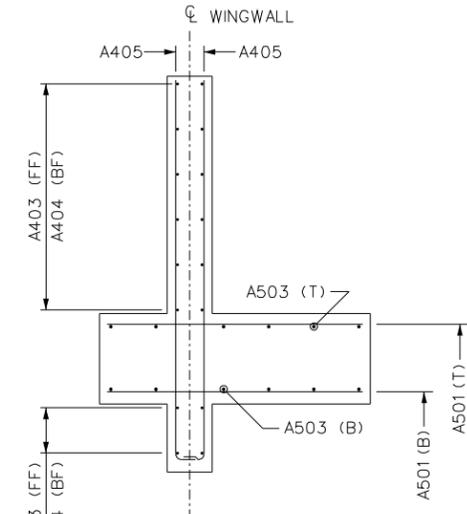
ABUTMENT ELEVATION



WINGWALL ELEVATION



SECTION A-A



SECTION B-B

NOTES:

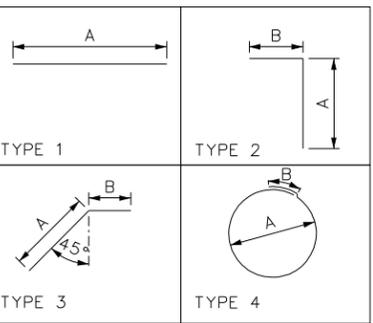
- 1. FOR DIMENSIONS NOT SHOWN ON THIS DRAWINGS, SEE SHEET 9.
- 2. UNLESS STATED OTHERWISE, BARS SHALL BE EQUALLY SPACED AT 12".

LEGEND:

- T = TOP FACE
- B = BOTTOM FACE
- FF = FRONT FACE
- BF = BACK FACE
- EF = EACH FACE
- L/W = LAP WITH

NO.	REVISION	DATE:	BY:

MARK	TYPE	SIZE	NO	LENGTH	LOCATION	A	B	REMARK
A402	1	4	16	15'-5"	STEM/KEY	15'-5"		
A403	3	4	16	6'-6"	WINGWALL	4'-6"	2'-0"	
A404	3	4	16	6'-5 1/2"	WINGWALL	4'-5 1/2"	2'-0"	
A405	2	4	52	8'-11"	STEM/KEY	8'-11"		
A406	1	4	11	1'-10"	FOOTING PAD	1'-10"		
A407	1	4	8	10'-8 1/2"	FOOTING PAD	10'-8 1/2"		
A501	1	5	56	5'-9"	FOOTING	5'-9"		
A502	1	5	12	VARIES	FOOTING	VARIES		A: 12'-0" TO 17'-7 1/2" BY 1'-1 1/2"
A503	3	5	24	VARIES	WALL FOOTING	VARIES		A: 3'-0 1/2" TO 5'-1 1/2" BY 5"



DESIGNED	AP	DATE	11/02
DRAWN	JME	DATE	11/02
CHECKED	TJ	DATE	11/02
CHECKED	AP	DATE	11/02

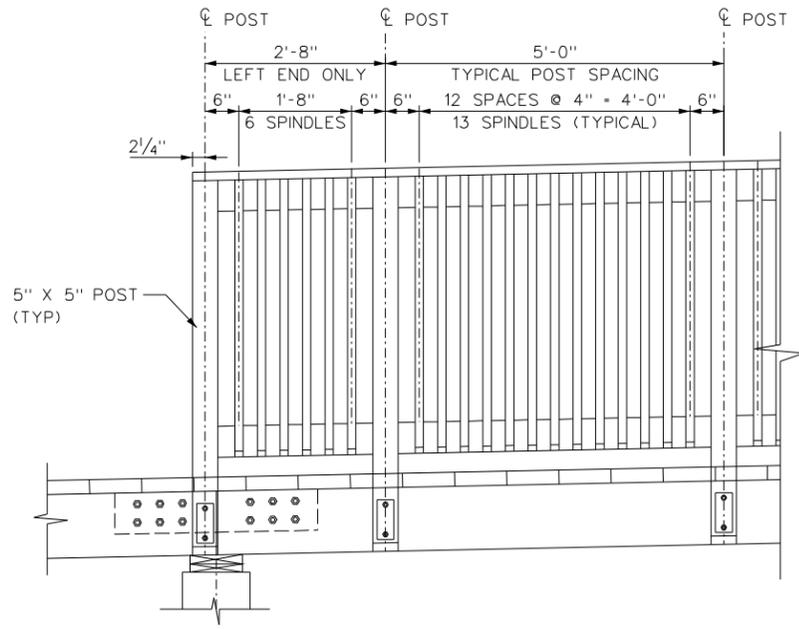
W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**JAMES RUMSEY BRIDGE
WOODEN FOOT BRIDGE
ABUTMENT 2 AND WINGWALLS
REINFORCEMENT DETAILS**

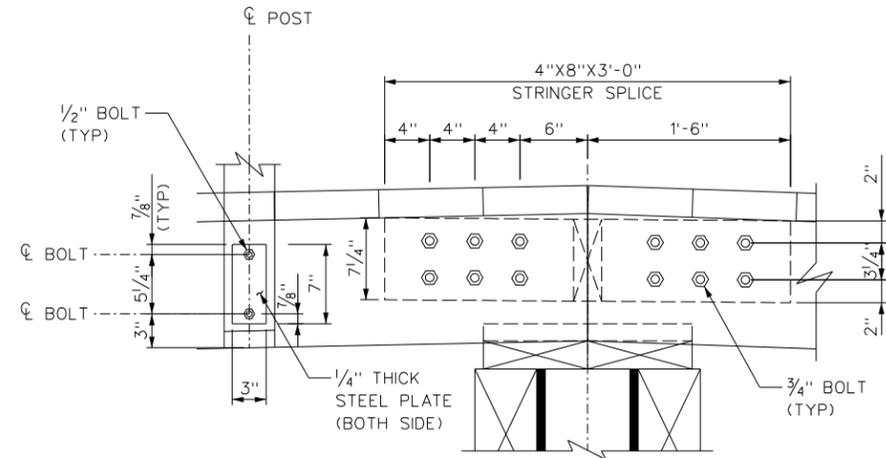
Baker
Michael Baker Jr., Inc. Charleston, W.Va.

SHEET **10** OF **13**
BRIDGE NO.

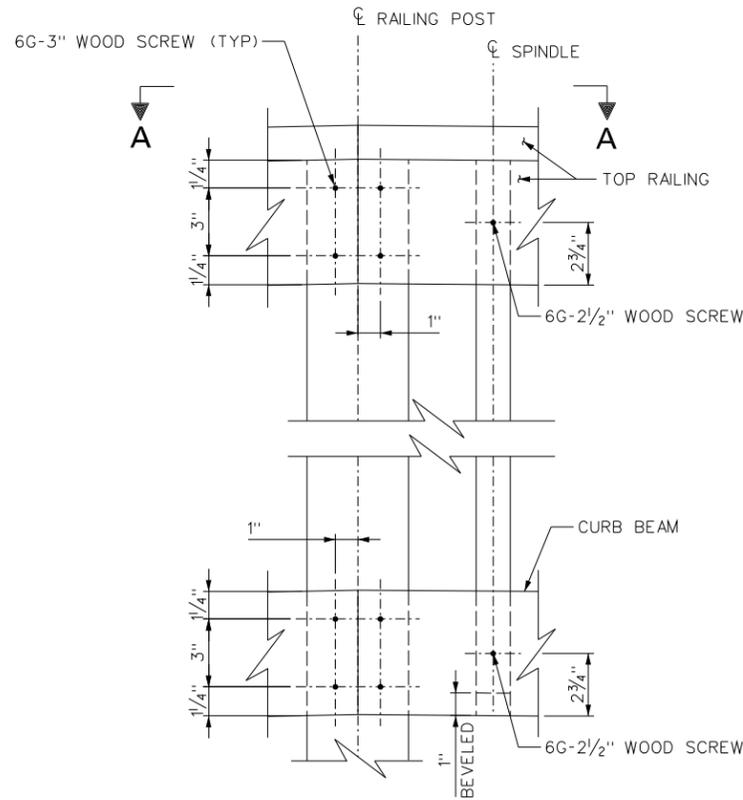
PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5,64 03	BR-0480(010)E	2002	JEFFERSON	277	407



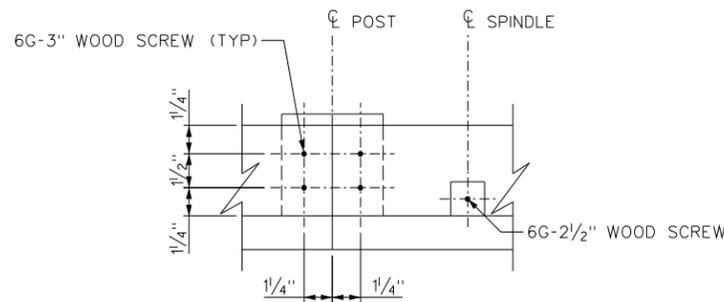
SPINDLE SPACING LAYOUT



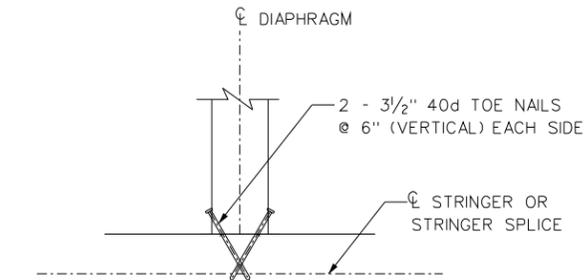
DETAIL 1



RAILING CONNECTION DETAIL



SECTION A-A



DIAPHRAGM CONNECTION DETAIL



NO.	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
WOODEN FOOT BRIDGE
RAILING DETAILS AND
CONNECTION DETAILS 1

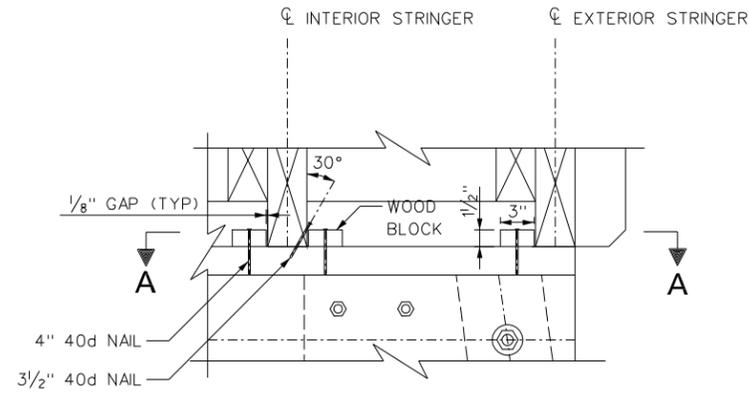
DESIGNED	AP	DATE	11/02
DRAWN	JME	DATE	11/02
CHECKED	FJ	DATE	11/02
CHECKED	AP	DATE	11/02

Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

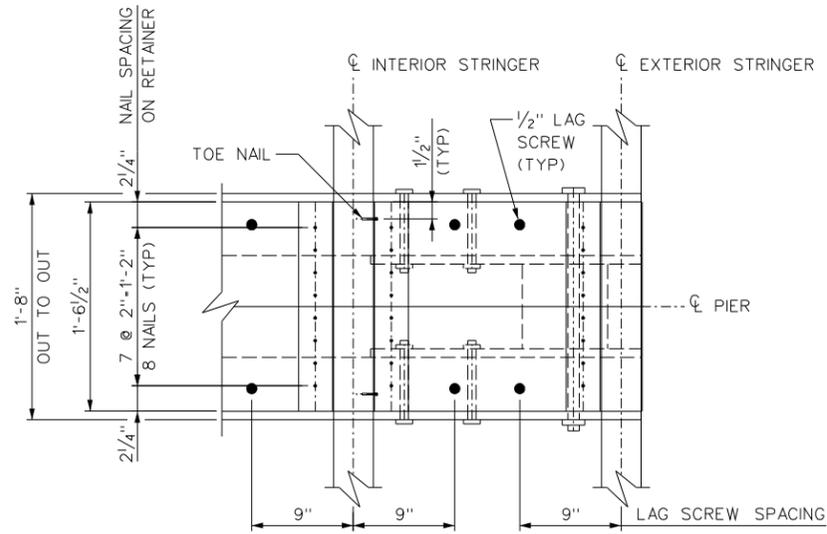
SHEET 11 OF 13
BRIDGE NO.

PUBLIC ROADS DIV.	STATE DIST. NO.	PROJECT NUMBERS		FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL				
W. VA.	5	S319-480-5.64	03 BR-0480(010)E	2002	JEFFERSON	278	407



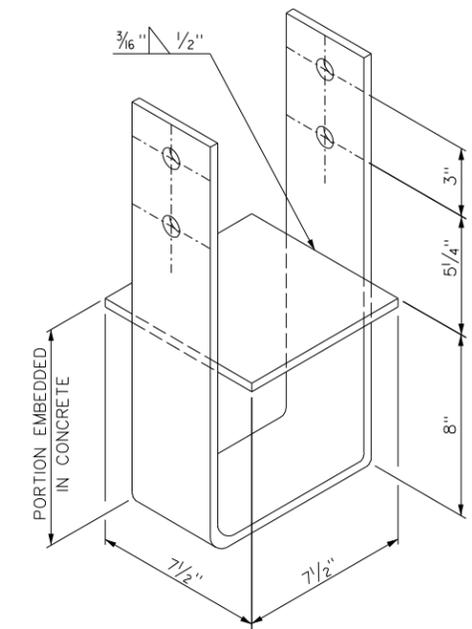
DETAIL 2

6 0 6 INCHES

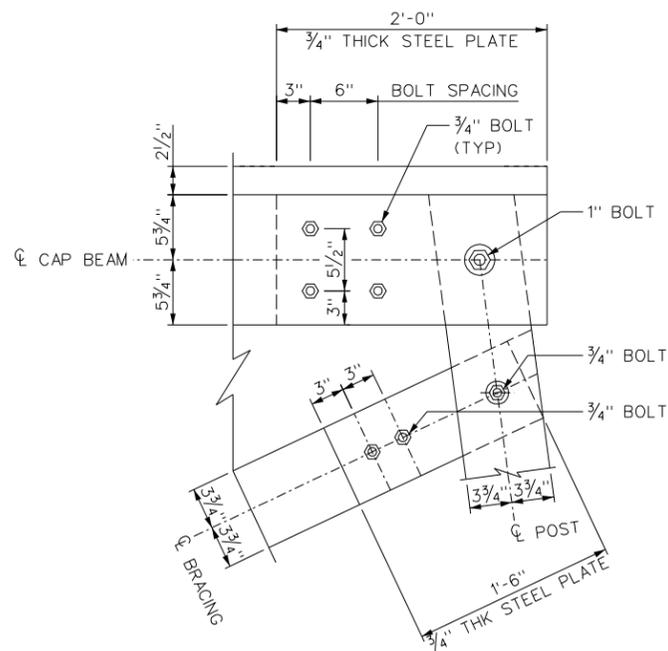


SECTION A-A

6 0 6 INCHES

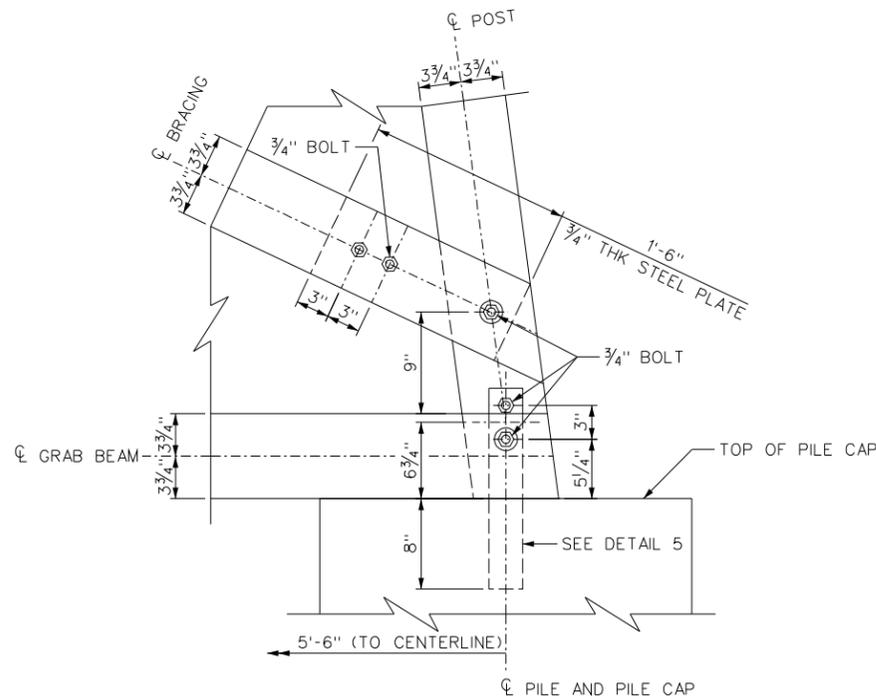


DETAIL 5



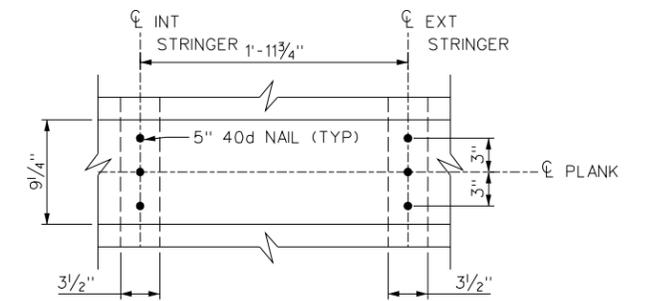
DETAIL 3

6 0 6 INCHES



DETAIL 4

6 0 6 INCHES



DETAIL 6 (PLANK TO STRINGER CONNECTION)

6 0 6 INCHES

NO.	ADDED DETAIL 6	2/5/03	AP
	REVISION	DATE:	BY:

W. VA. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

JAMES RUMSEY BRIDGE
WOODEN FOOT BRIDGE
CONNECTION DETAILS 2

DESIGNED	AP	DATE	11/02
DRAWN	MZ	DATE	11/02
CHECKED	FJ	DATE	11/02
CHECKED	AP	DATE	11/02

Baker
Michael Baker Jr., Inc.

Charleston, W.Va.

SHEET 12 OF 13
BRIDGE NO.