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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

McDOWELL COUNTY



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5833	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53039.1.1	NHPP-0040(026)	P.E.	
53039.3.1	NHPP-0040(026)	CONST.	

LOCATION:

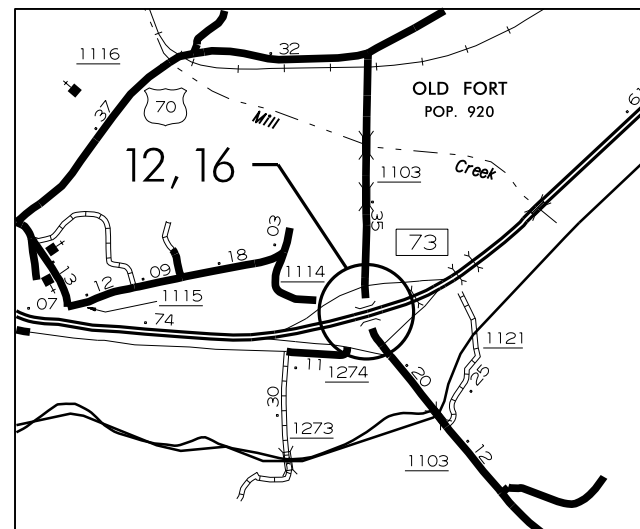
McDOWELL COUNTY:

BRIDGE #12 ON INTERSTATE 40 EASTBOUND OVER SR 1103 (CATAWBA AVENUE)

BRIDGE #16 ON INTERSTATE 40 WESTBOUND OVER SR 1103 (CATAWBA AVENUE)

TYPE OF WORK:

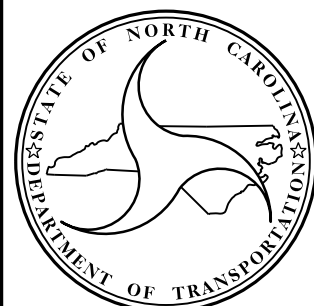
BRIDGE PRESERVATION - DECK REPAIR AND PAINTING OF EXISTING BRIDGE STRUCTURES



VICINITY MAP - McDOWELL CO.

PROJECT: I-5833

CONTRACT: —



DESIGN DATA

McDOWELL COUNTY
#12 ADT 2012 = 13,000
#16 ADT 2012 = 13,000

PROJECT LENGTH

McDOWELL COUNTY
- #12 = 0.033 MILE
- #16 = 0.033 MILE

Prepared In the Office of:
**DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**
STRUCTURES MANAGEMENT UNIT - PRESERVATION & REPAIR GROUP
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

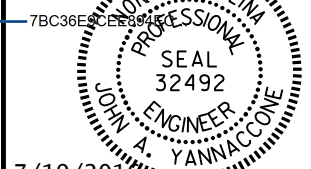
DOUGLAS R. CALHOUN, P.E.
PROJECT ENGINEER

2012 STANDARD SPECIFICATIONS

LETTING DATE:
SEPTEMBER 20, 2016

DocuSigned by:

John A. Yannaccone



7/19/2016

JOHN A. YANNACONE, P.E.
PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



McDOWELL COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5833	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53039.1.1	NHPP-0040(026)	P.E.	
53039.3.1	NHPP-0040(026)	CONST.	

LOCATION:

McDOWELL COUNTY:

BRIDGE #12 ON INTERSTATE 40 EASTBOUND OVER SR 1103 (CATAWBA AVENUE)

BRIDGE #16 ON INTERSTATE 40 WESTBOUND OVER SR 1103 (CATAWBA AVENUE)

TYPE OF WORK:

BRIDGE PRESERVATION - DECK REPAIR AND PAINTING OF EXISTING BRIDGE STRUCTURES

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TITLE SHEET

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GENERAL DRAWINGS

BILL OF MATERIAL AND LOCATION SKETCH

TYPICAL SECTIONS AND EPOXY OVERLAY DETAILS

SURFACE PREPARATION AND EPOXY OVERLAY

JOINT DETAILS

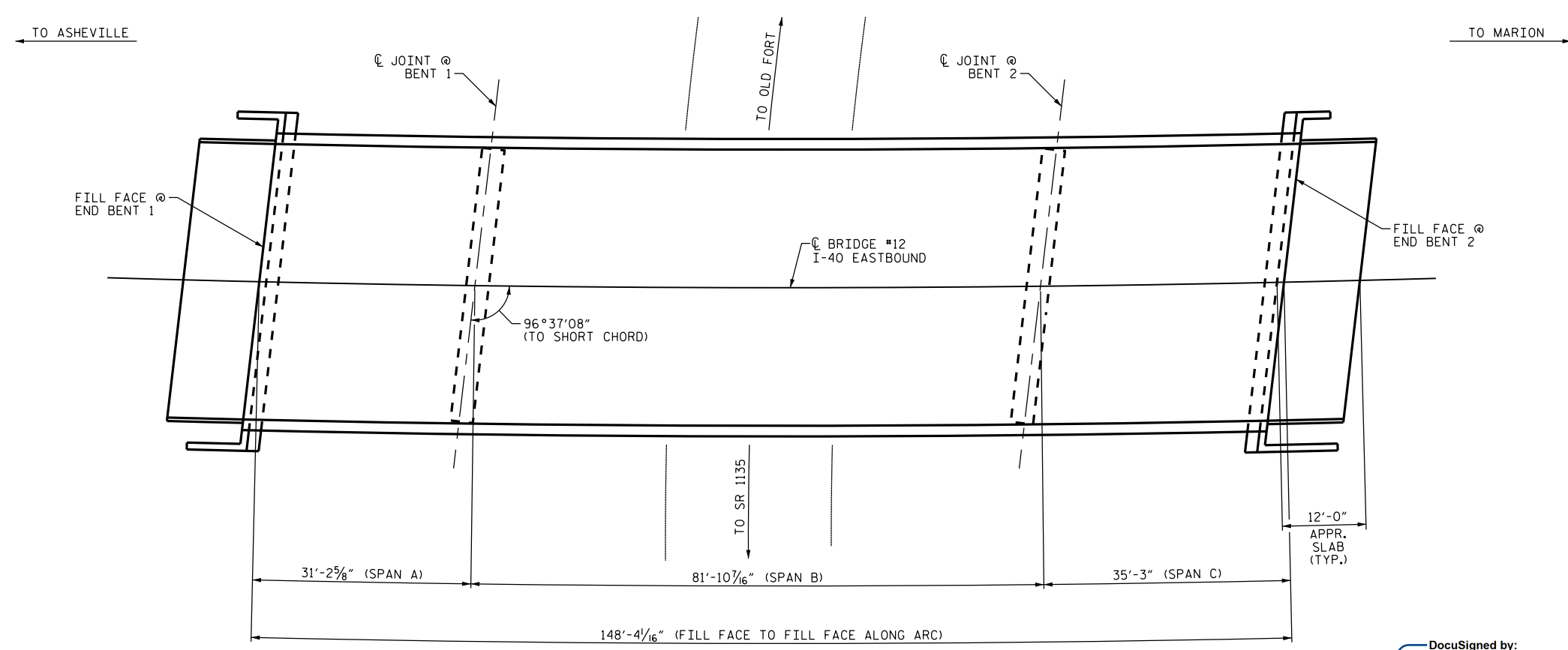
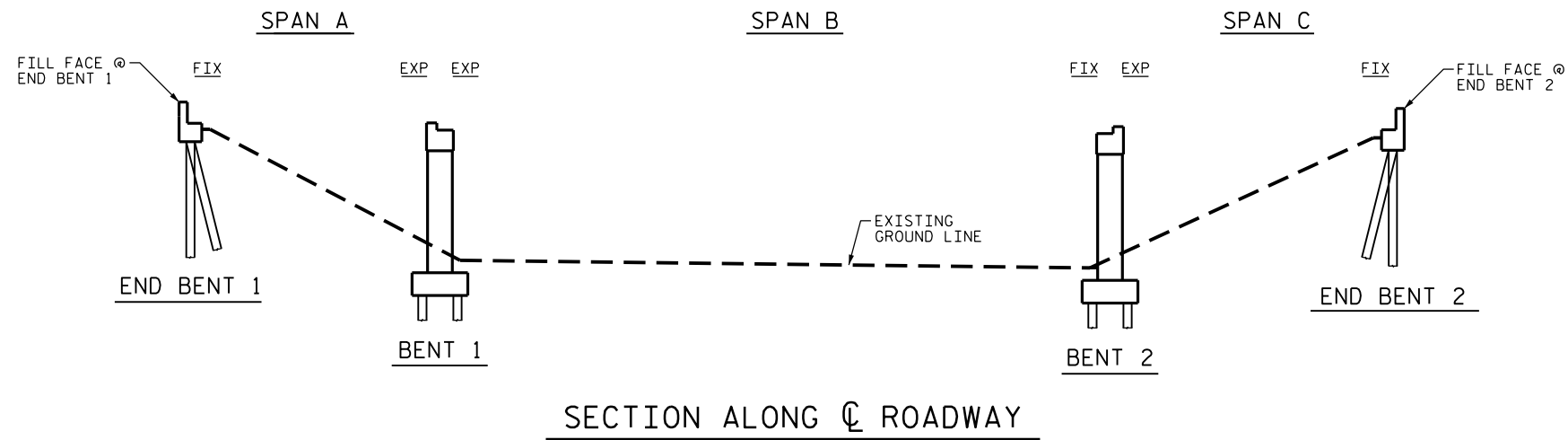
STANDARD NOTES

PROJECT: I-5833

CONTRACT: -

NOTES

PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORTS DATED 03/10/2016.
BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.



SCOPE OF WORK

- CLEAN, PAINT AND REPAIR STEEL I-BEAM ENDS AND BEARINGS.
- PARTIALLY REMOVE BRIDGE DECK CONCRETE USING SHOTBLASTING METHODS.
- DEMOLISH EXISTING BRIDGE DECK JOINTS.
- OVERLAY PREPARED BRIDGE DECK WITH EPOXY OVERLAY SYSTEM.
- RECONSTRUCT BRIDGE JOINTS AND INSTALL FOAM JOINT SEALS.

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER _____ DATE _____

PROJECT NO. I-5833
McDOWELL COUNTY
BRIDGE NO. 12

DocuSigned by:
John A. Yannaccone
7BC380...
NORTH CAROLINA
PROFESSIONAL
SEAL
32492
JOHN A. YANNACCONE
ENGINEER

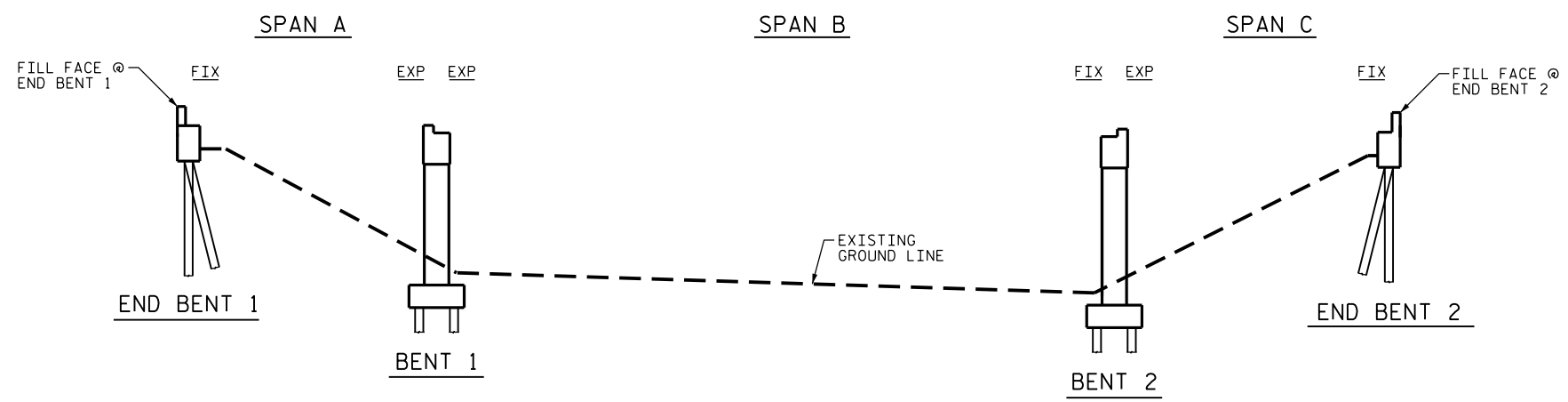
7/19/2016

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
FOR BRIDGE ON I-40 EBL
OVER SR 1103
(CATAWBA AVENUE)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			6

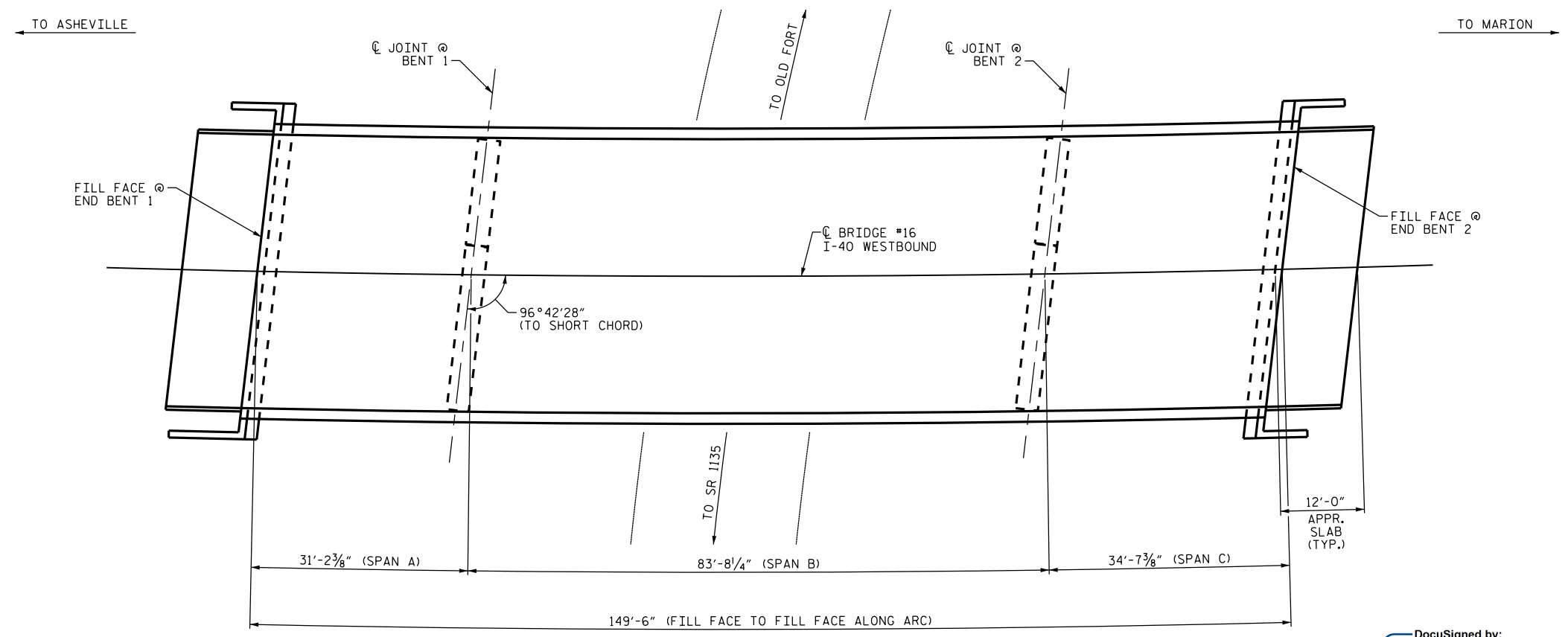
DRAWN BY : S. WANG@PE DATE : 06/16
CHECKED BY : J. YANNACCONE DATE : 06/16

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



NOTES
 PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 03/10/2016.
 BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SECTION ALONG \bar{C} ROADWAY



PLAN

SCOPE OF WORK

- CLEAN, PAINT AND REPAIR STEEL I-BEAM ENDS AND BEARINGS.
- PARTIALLY REMOVE BRIDGE DECK CONCRETE USING SHOTBLASTING METHODS.
- DEMOLISH EXISTING BRIDGE DECK JOINTS.
- OVERLAY PREPARED BRIDGE DECK WITH EPOXY OVERLAY SYSTEM.
- RECONSTRUCT BRIDGE JOINTS AND INSTALL FOAM JOINT SEALS.

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER _____ DATE _____

PROJECT NO. I-5833
McDOWELL COUNTY
 BRIDGE NO. 16

DocuSigned by:
John A. Yannaccone
 7BC36...
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 32492
 ENGINEER
 JOHN A. YANNACCONE

7/19/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR BRIDGE ON I-40 WBL
 OVER SR 1103
 (CATAWBA AVENUE)

DRAWN BY : S. WANG@PE DATE : 06/16
 CHECKED BY : J. YANNACCONE DATE : 06/16

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1			3			6
2			4			



LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

TOTAL BILL OF MATERIAL

BRIDGE	CLEANING AND PAINTING EXISTING WEATHERING STEEL FOR BRIDGE #_	PAINTING CONTAINMENT FOR BRIDGE #_	POLLUTION CONTROL	CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY SYSTEM - MECHANICALLY DISTRIBUTED	BRIDGE JOINT DEMOLITION	ELASTOMERIC CONCRETE	FOAM JOINT SEALS
	LUMP SUM	LUMP SUM	LUMP SUM	SQ. FT.	SQ. FT.	SQ. FT.	CU. FT.	LUMP SUM
McDOWELL #12	LUMP SUM	LUMP SUM	LUMP SUM	—	6,719	162	40.4	LUMP SUM
McDOWELL #16	LUMP SUM	LUMP SUM	LUMP SUM	6	6,789	162	40.4	LUMP SUM
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	6	13,508	324	80.8	LUMP SUM

NOTES

- EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.
- FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY, SEE SPECIAL PROVISIONS.
- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.
- FOR CLEANING AND PAINTING OF BRIDGE, SEE PAINTING EXISTING WEATHERING STEEL STRUCTURE SPECIAL PROVISION.
- FOR POLLUTION CONTROL, SEE PAINTING EXISTING WEATHERING STEEL STRUCTURE SPECIAL PROVISION.
- FOR PAINTING CONTAINMENT, SEE PAINTING EXISTING WEATHERING STEEL STRUCTURE SPECIAL PROVISION.
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
- FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5833
McDOWELL COUNTY
 BRIDGE NO. 12 & 16

DocuSigned by:
John A. Yannaccone
 7BC3680
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 32492
 JOHN A. YANNACCONE
 ENGINEER
 7/19/2016

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGES ON I-40
 OVER SR 1103
 (CATAWBA AVENUE)

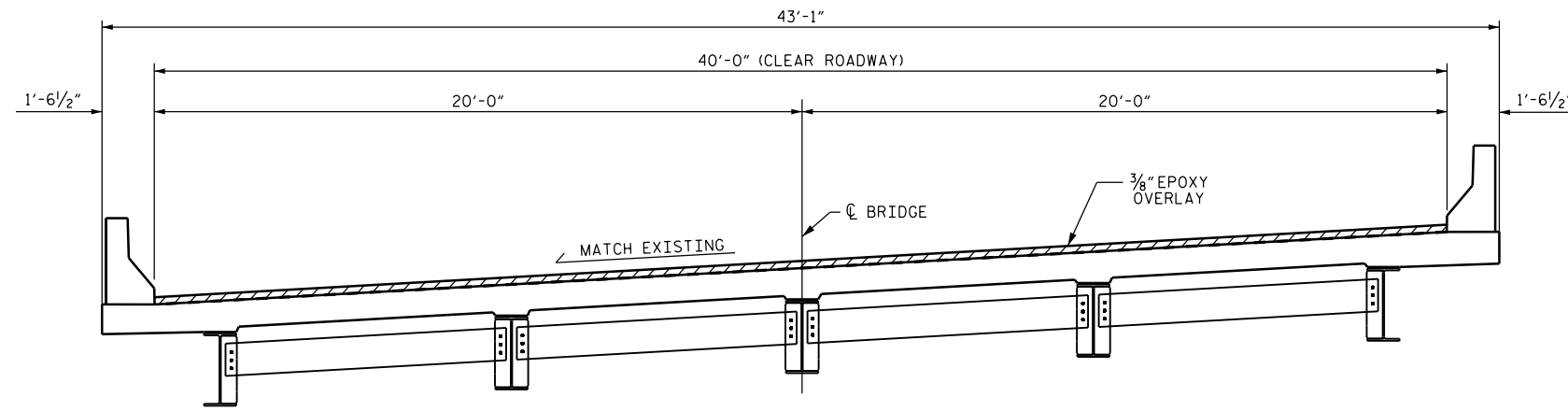
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2			4			6

DRAWN BY : S. WANCPPE DATE : 06/16
 CHECKED BY : J. YANNACCONE DATE : 06/16

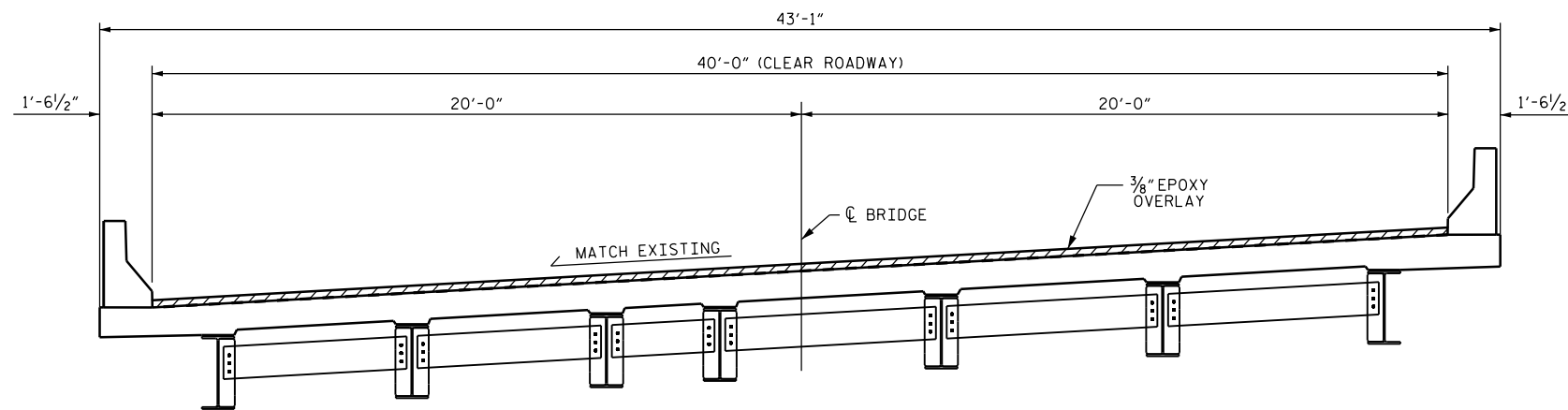
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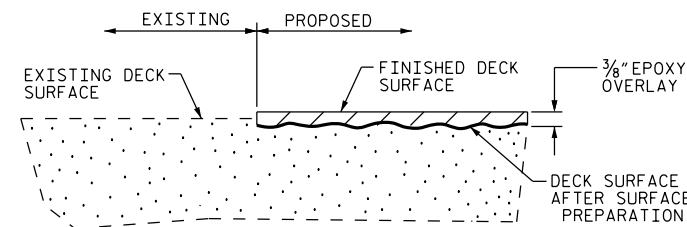
SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF SURFACE PREPARATION AND EPOXY OVERLAY SYSTEM.



TYPICAL SECTION
(EASTBOUND BRIDGE #12)



TYPICAL SECTION
(WESTBOUND BRIDGE #16)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5833
McDOWELL COUNTY
 BRIDGE NO. 12 & 16

DocuSigned by:
John A. Yannaccone
 7BC380161E894

 JOHN A. YANNACCONE
 ENGINEER
 7/19/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**TYPICAL SECTIONS
 AND EPOXY
 OVERLAY DETAILS**

DRAWN BY : S. WANCEPE DATE : 06/2016
 CHECKED BY : J. YANNACCONE DATE : 06/2016

DOCUMENT NOT CONSIDERED
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

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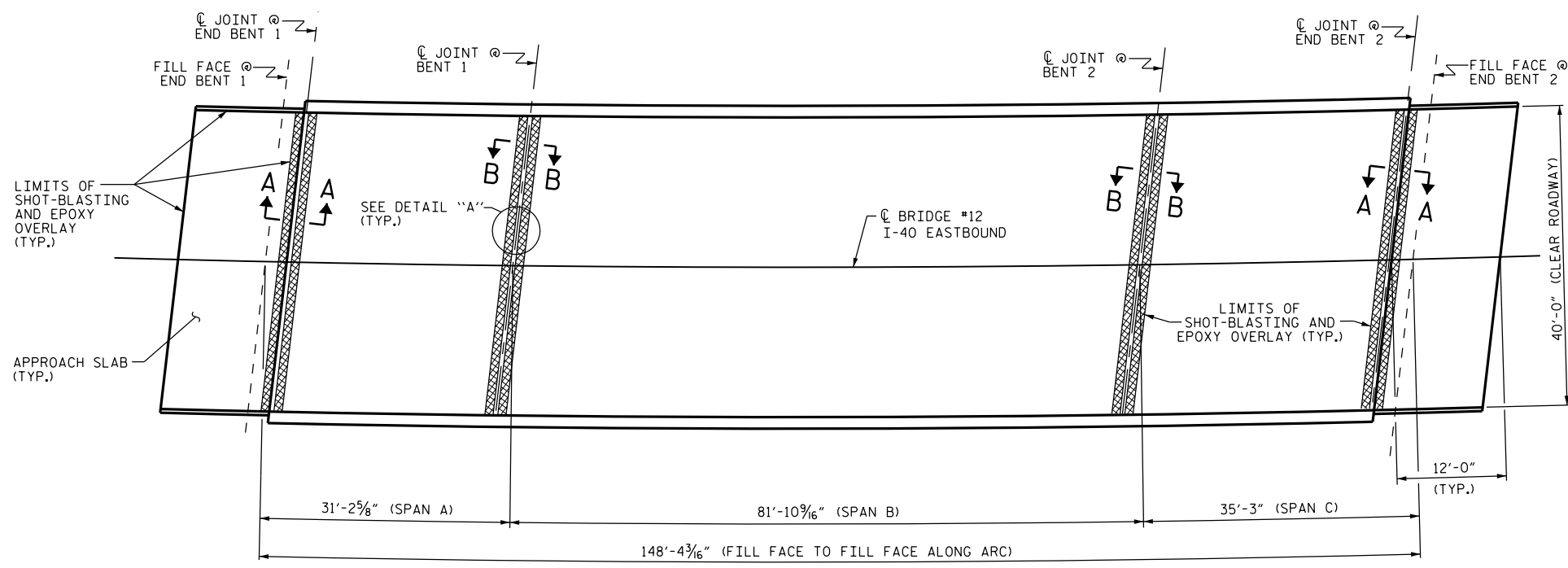
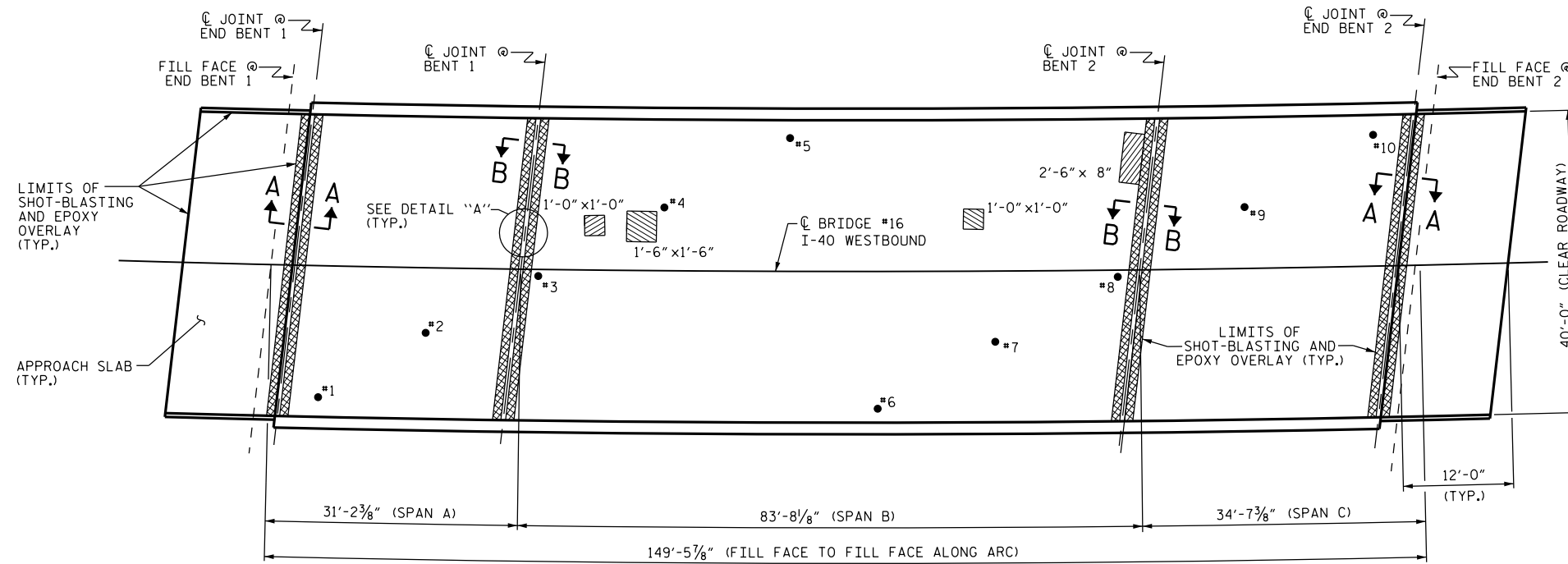
NOTE:

FOR BRIDGE JOINT DEMOLITION, SEE "JOINT DETAILS" SHEET.

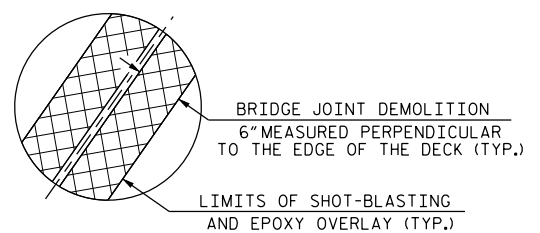
FOR SECTIONS A-A AND B-B, SEE "JOINT DETAILS" SHEET.

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE TOTAL BILL OF MATERIAL.

-  BRIDGE JOINT DEMOLITION
-  CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  EPOXY OVERLAY
-  #1 TEST LOCATION




PLAN



DETAIL "A"

PROJECT NO. I-5833
McDOWELL COUNTY
 BRIDGE NO. 12 & 16

DocuSigned by:
John A. Yannaccone
 7BC36...

 7/19/2016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 AND
 EPOXY OVERLAY**

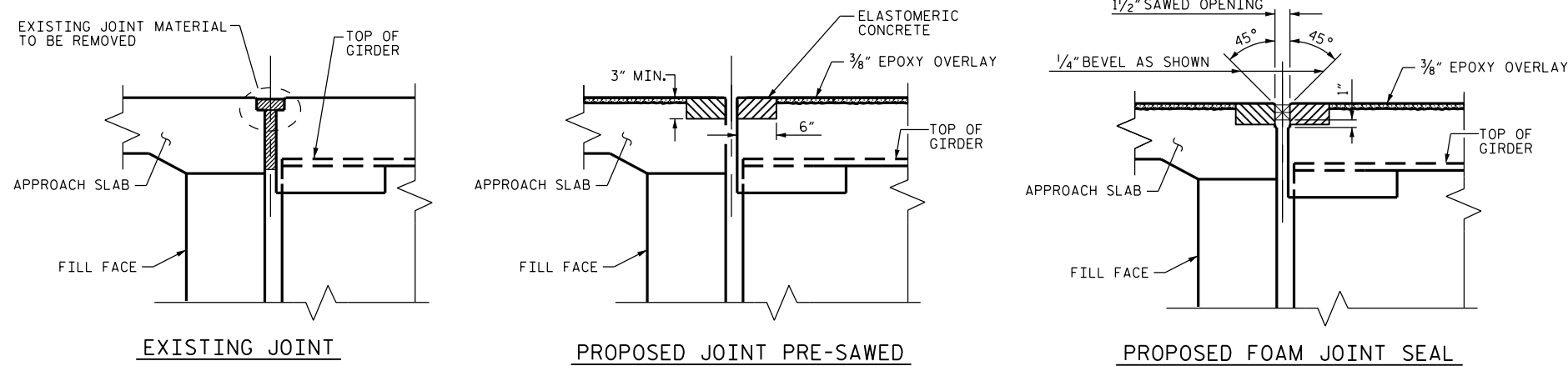
DRAWN BY : S. WANCE DATE : 5/16
 CHECKED BY : J. A. YANNACCONI DATE : 5/16

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
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1			3			S-5
2			4			6

NOTES

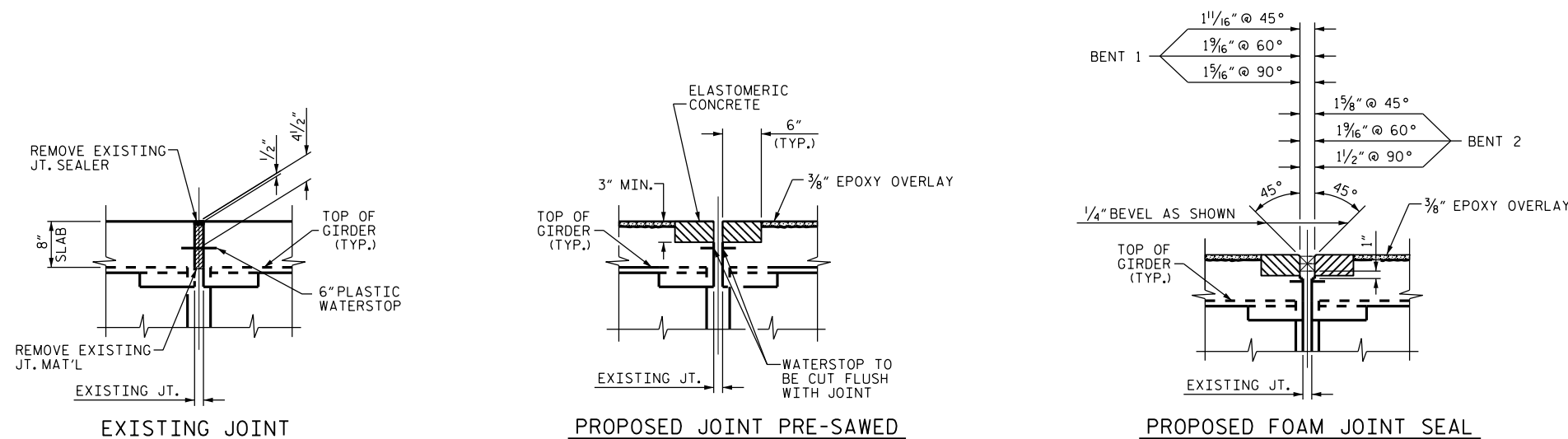
FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.
 THE INSTALLED FOAM JOINT SEALS SHALL BE WATERTIGHT.
 NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".
 THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS FOR THE JOINT SEALS IN LIEU OF SAWING THE JOINTS.



SECTION A-A

ELASTOMERIC CONCRETE FOR EACH BRIDGE		
END BENT 1	10.1	(CU. FT.)
BENT 1	10.1	(CU. FT.)
BENT 2	10.1	(CU. FT.)
END BENT 2	10.1	(CU. FT.)
* TOTAL	40.4	(CU. FT.)

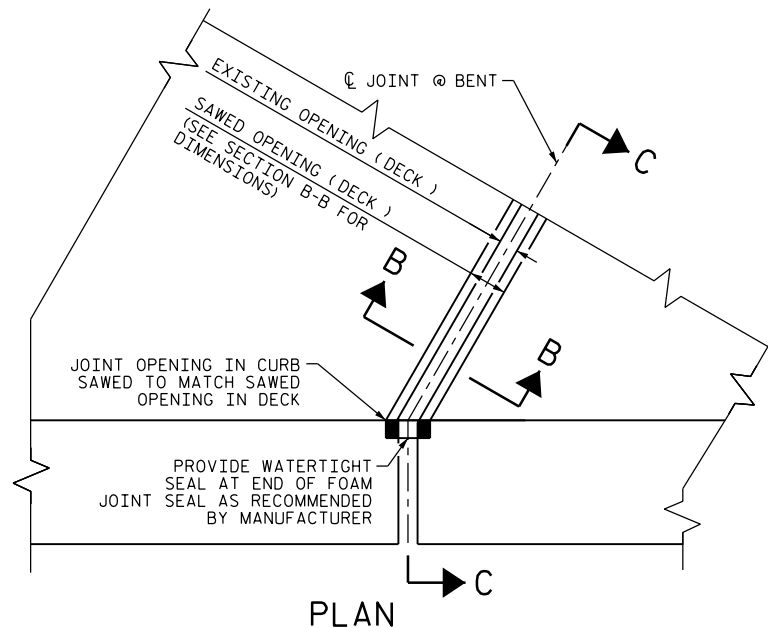
* BASED ON THE MINIMUM BLOCKOUT SHOWN.



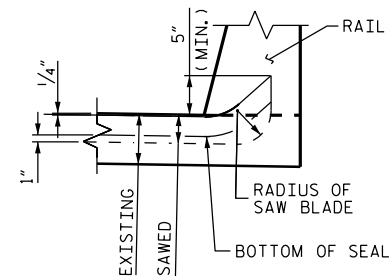
SECTION B-B

DEMOLISH BRIDGE JOINT AREA TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE.

IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE CONCRETE DEPTH TO THE WATERSTOP SHALL BE REMOVED. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE.



PLAN



SECTION C-C

FOAM JOINT SEAL SHALL BE FACTORY FORMED OR CUT, HEAT WELDED AND TURNED UP PARALLEL TO FACE OF RAIL.

DocuSigned by:
John A. Yannaccone
 7BC36868E884C
 NORTH CAROLINA PROFESSIONAL SEAL 32492 ENGINEER JOHN A. YANNACCONE
 7/19/2016

PROJECT NO. I-5833
McDOWELL COUNTY
 BRIDGE NO. 12 & 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-6
2			4			6

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. WAN@PE DATE : 06/16
 CHECKED BY : J. YANNACCONE DATE : 06/16

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF		
STRUCTURAL STEEL - AASHTO M270 GRADE 36	-	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	-	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	-	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION		
GRADE 60	--	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	-----	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR		
UNTREATED - EXTREME FIBER STRESS	-----	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	-----	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.
ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.
IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.
DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.
WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".
EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.
WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16" INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.
METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990

STD. NO. SN