

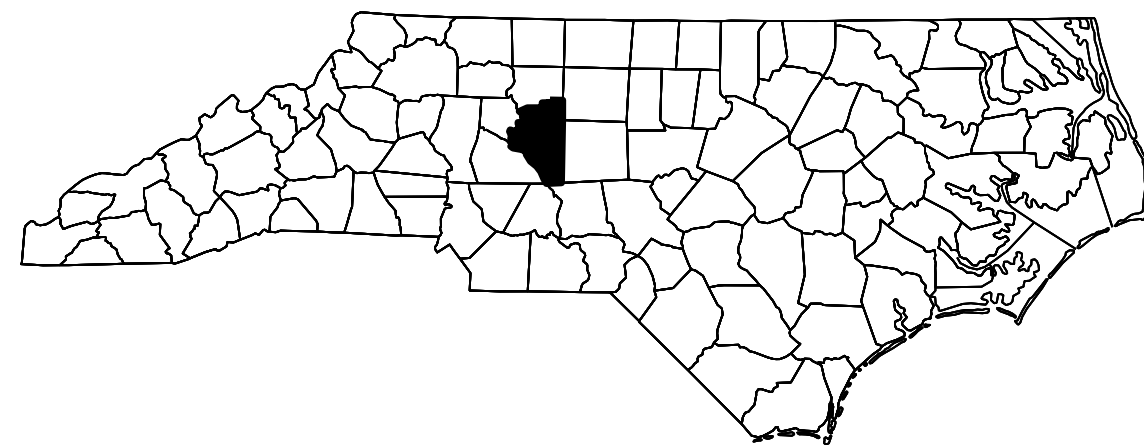
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**This file or an individual page
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PROJECT: I-5793

CONTRACT: C204053



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DAVIDSON COUNTY

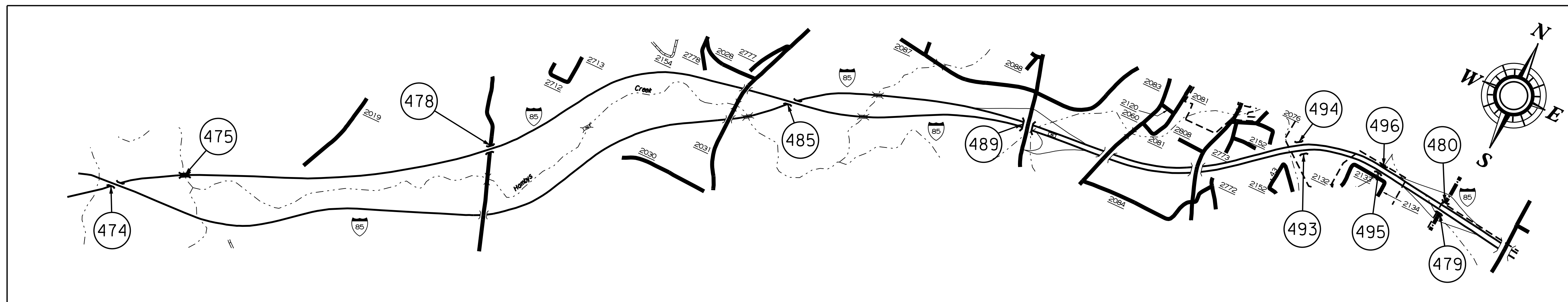
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5793	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53032.1.1	NHPP-0085(017)	P.E.	
53032.3.1	NHPP-0085(017)	CONST.	

LOCATION:

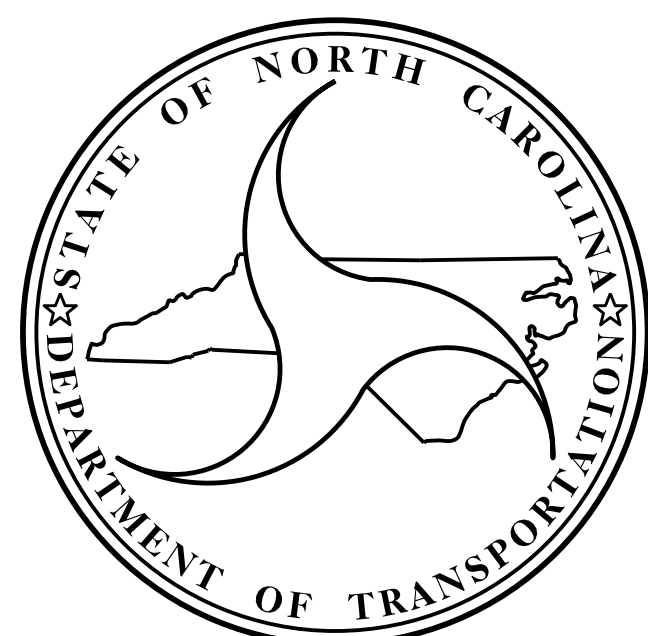
DAVIDSON COUNTY:

- BRIDGE #474 ON INTERSTATE 85 SOUTHBOUND OVER INTERSTATE 85 NORTHBOUND**
- BRIDGE #475 ON INTERSTATE 85 NORTHBOUND OVER HAMBYS CREEK**
- BRIDGE #478 ON INTERSTATE 85 NORTHBOUND OVER SR 2025 (SQUIRE BOWERS ROAD)**
- BRIDGE #479 ON INTERSTATE 85 NORTHBOUND OVER NC 109 (RANDOLPH STREET)**
- BRIDGE #480 ON INTERSTATE 85 SOUTHBOUND OVER NC 109 (RANDOLPH STREET)**
- BRIDGE #485 ON INTERSTATE 85 NORTHBOUND OVER INTERSTATE 85 SOUTHBOUND**
- BRIDGE #489 ON SR 2085 (LAKE ROAD) OVER NORTH & SOUTHBOUND INTERSTATE 85**
- BRIDGE #493 ON INTERSTATE 85 NORTHBOUND OVER FERNDALE DRIVE**
- BRIDGE #494 ON INTERSTATE 85 SOUTHBOUND OVER FERNDALE DRIVE**
- BRIDGE #495 ON INTERSTATE 85 NORTHBOUND OVER CSX RAILROAD**
- BRIDGE #496 ON INTERSTATE 85 SOUTHBOUND OVER CSX RAILROAD**

TYPE OF WORK: BRIDGE PRESERVATION - DECK OVERLAY, SUBSTRUCTURE REPAIR, PAINTING GIRDER ENDS, ZONE PAINTING AND JOINT SEAL REPLACEMENT.



VICINITY MAP - DAVIDSON CO.



DESIGN DATA
DAVIDSON COUNTY

#474 ADT 2013 = 24,000	#489 ADT 2013 = 6,500
#475 ADT 2015 = 26,000	#493 ADT 2015 = 28,500
#478 ADT 2015 = 52,000	#494 ADT 2015 = 28,500
#479 ADT 2015 = 29,000	#495 ADT 2015 = 28,500
#480 ADT 2015 = 29,000	#496 ADT 2015 = 28,500
#485 ADT 2015 = 26,000	

PROJECT LENGTH
DAVIDSON COUNTY

- #474 = 0.060 MILE	- #489 = 0.051 MILE
- #475 = 0.026 MILE	- #493 = 0.029 MILE
- #478 = 0.024 MILE	- #494 = 0.032 MILE
- #479 = 0.032 MILE	- #495 = 0.023 MILE
- #480 = 0.032 MILE	- #496 = 0.026 MILE
- #485 = 0.054 MILE	

Prepared In the Office of:
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURES MANAGEMENT UNIT
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

A. KEITH PASCHAL, P.E.
PROJECT ENGINEER

2018 STANDARD SPECIFICATIONS

LETTING DATE:
JANUARY 16, 2018

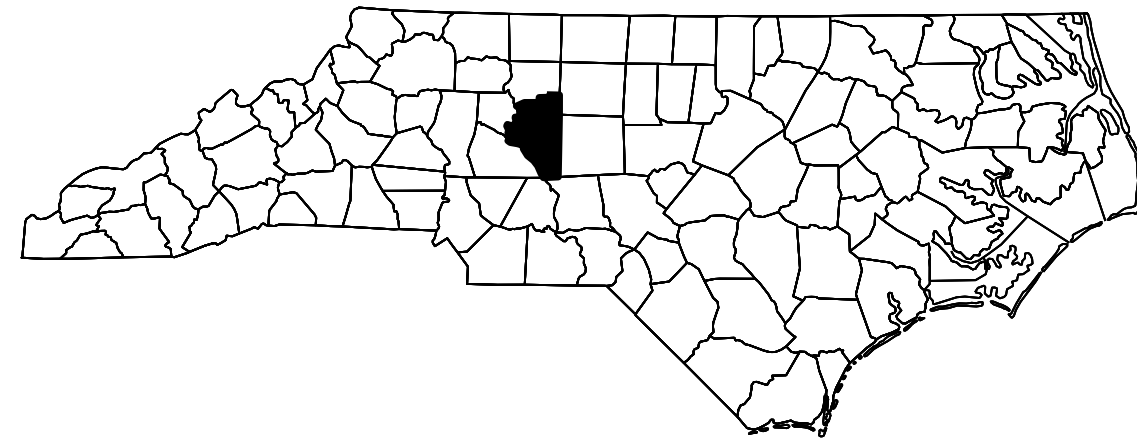


DocuSigned by:
Krishna P. Sedai 11/20/2017
EMSP7941508F457

K. P. SEDAI, P.E.
PROJECT DESIGN ENGINEER

PROJECT: I-5793

CONTRACT: C204053



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DAVIDSON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5793	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53032.1.1	NHPP-0085(017)	P.E.	
53032.3.1	NHPP-0085(017)	CONST.	

LOCATION: DAVIDSON COUNTY:

- BRIDGE #474 ON INTERSTATE 85 SOUTHBOUND OVER INTERSTATE 85 NORTHBOUND**
- BRIDGE #475 ON INTERSTATE 85 NORTHBOUND OVER HAMBYS CREEK**
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TYPE OF WORK: BRIDGE PRESERVATION - DECK OVERLAY, SUBSTRUCTURE REPAIR, PAINTING GIRDER ENDS, ZONE PAINTING AND JOINT SEAL REPLACEMENT.

INDEX OF SHEETS

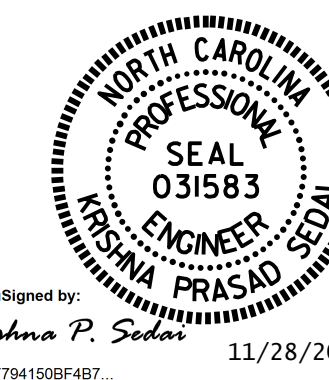
I	TITLE SHEET
1A	INDEX OF SHEETS
S-1	TOTAL BILL OF MATERIAL
S-2 THRU S-7	STRUCTURAL PLANS - BRIDGE NO. 474
S-8 THRU S-12	STRUCTURAL PLANS - BRIDGE NO. 475
S-13 THRU S-17	STRUCTURAL PLANS - BRIDGE NO. 478
S-18 THRU S-24	STRUCTURAL PLANS - BRIDGE NO. 479 AND BRIDGE NO. 480
S-25 THRU S-32	STRUCTURAL PLANS - BRIDGE NO. 485
S-33 THRU S-37	STRUCTURAL PLANS - BRIDGE NO. 489
S-38 THRU S-44	STRUCTURAL PLANS - BRIDGE NO. 493 AND BRIDGE NO. 494
S-45 THRU S-52	STRUCTURAL PLANS - BRIDGE NO. 495 AND BRIDGE NO. 496
SN	STANDARD NOTES

TOTAL BILL OF MATERIAL

BRIDGE NO.	POLLUTION CONTROL	SHOTCRETE REPAIRS	FOAM JOINT SEALS	PAINTING CONTAINMENT FOR BRIDGE NO...	PAINTING CONTAINMENT FOR ZONE PAINTING FOR BRIDGE NO...	PAINTING EXISTING WEATHERING STEEL STRUCTURE FOR BRIDGE NO...	ZONE PAINTING OF EXISTING STRUCTURE FOR BRIDGE NO...	SILICONE JOINT SEALANT	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY SYSTEM	CLEANING AND PAINTING EXISTING BEARINGS WITH HRCSA FOR BRIDGE NO...
	LUMP SUM	CU. FT.	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	CU. FT.	SQ. FT.	SQ. FT.	SQ. FT.	EA.
474	LUMP SUM	---	LUMP SUM	---	LUMP SUM	---	LUMP SUM	195.0	97.6	390.9	* 5.0	22042.0	48
475	---	---	LUMP SUM	---	---	---	---	112.0	56.0	224.0	* 5.0	8488.4	---
478	---	---	LUMP SUM	---	---	---	---	122.0	61.0	244.0	* 5.0	9322.0	---
479	LUMP SUM	---	LUMP SUM	LUMP SUM	---	LUMP SUM	---	112.2	56.0	224.0	* 5.0	10475.0	48
480	LUMP SUM	---	LUMP SUM	LUMP SUM	---	LUMP SUM	---	112.2	56.0	224.0	* 5.0	10350.0	48
485	LUMP SUM	188.7	LUMP SUM	LUMP SUM	---	LUMP SUM	---	192.1	97.0	419.0	* 5.0	20824.0	48
489	LUMP SUM	---	LUMP SUM	LUMP SUM	---	LUMP SUM	---	144.4	90.0	361.0	* 10.0	20662.0	80
493	LUMP SUM	---	LUMP SUM	LUMP SUM	---	LUMP SUM	---	125.0	64.0	256.0	* 5.0	10765.0	48
494	LUMP SUM	---	LUMP SUM	LUMP SUM	---	LUMP SUM	---	124.0	62.0	248.0	* 5.0	11730.0	48
495	---	---	LUMP SUM	---	---	---	---	115.0	57.0	228.0	* 5.0	8123.0	---
496	---	---	LUMP SUM	---	---	---	---	146.0	73.0	289.0	* 5.0	11516.0	---
TOTAL	LUMP SUM	188.7	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	1499.9	769.6	3107.9	* 60.0	144297.4	368

* QUANTITY HAS BEEN INCREASED DUE TO THE POTENTIAL FOR FURTHER DETERIORATION SINCE THE FIELD INSPECTION BY STRUCTURES MANAGEMENT UNIT.

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 474, 475, 478, 479,
480, 485, 489, 493, 494, 495 & 496



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TOTAL BILL OF MATERIAL

DRAWN BY : H. T. BARBOUR DATE : 10-02-17
 CHECKED BY : K. P. SEDA DATE : 10-17

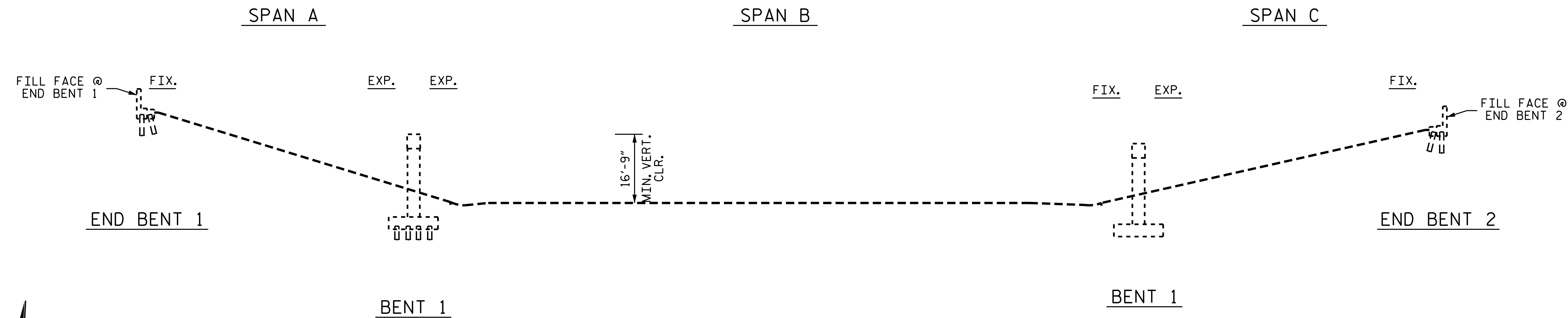
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			52

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 4/21/2016.

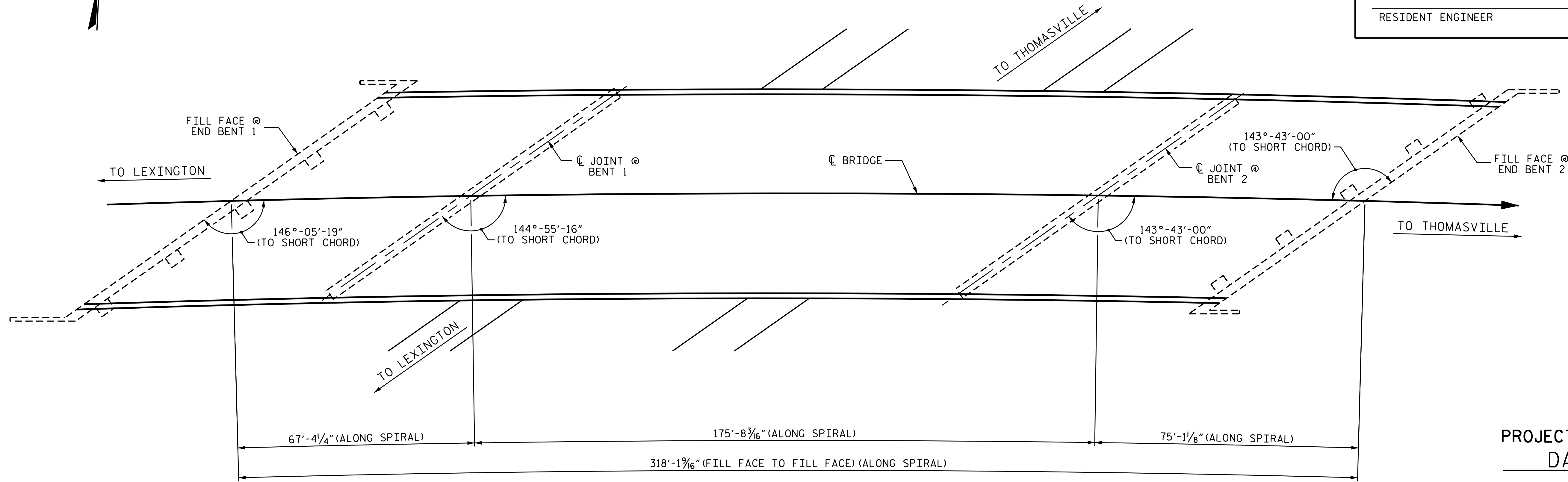
BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.



SECTION ALONG C ROADWAY

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

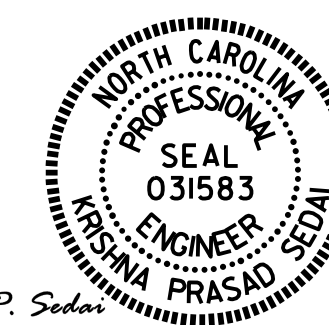
RESIDENT ENGINEER _____ DATE _____



PLAN

SCOPE OF WORK

- SURFACE PREPARATION AND PAINTING OF GIRDERS AND BEARINGS.
- SHOTBLAST EXISTING CONCRETE DECK.
- DEMOLISH EXISTING END BENT AND BENT JOINTS.
- APPLY EPOXY OVERLAY SYSTEM SEALANT.
- RECONSTRUCT END BENT AND BENT JOINTS, INSTALL FOAM JOINT SEALS AT BENTS AND INSTALL SILICONE JOINT SEALER AT END BENTS.



DocuSigned by:
Krishna P. Sedai
E66F7941508F4B7...

11/21/2017

PROJECT NO. I-5793
DAVIDSON COUNTY
BRIDGE NO. 474

SHEET 1 OF 2

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
GENERAL DRAWING FOR BRIDGE ON I-85 SBL OVER I-85 NBL						S-2
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	52
1			3			
2			4			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : A. SORSENGINH DATE : 8/2017
CHECKED BY : B. L. GREEN DATE : 9/2017

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 CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS.

FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ZONE PAINTING, SEE ZONE PAINTING OF EXISTING STRUCTURE 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 SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

BEARINGS, BEARING STIFFENERS, CONNECTOR PLATES AND WEB STIFFENERS CONTAINED INSIDE THE 1.5D GIRDER END LENGTH WILL BE PAINTED AND INCLUDED UNDER THE ZONE PAINTING OF EXISTING STRUCTURE PAY ITEM.

FOR PAINTING CONTAINMENT, POLLUTION CONTROL, AND CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA, SEE CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA SPECIAL PROVISION.



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 NO. 474	POLLUTION CONTROL	FOAM JOINT SEALS	PAINTING CONTAINMENT FOR ZONE PAINTING FOR BRIDGE NO.---	ZONE PAINTING OF EXISTING STRUCTURE FOR BRIDGE NO.---	SILICONE JOINT SEALANT	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	* CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY SYSTEM	CLEANING AND PAINTING EXISTING BEARINGS WITH HRCSA FOR BRIDGE NO.---
	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	CU. FT.	SQ. FT.	SQ. FT.	SO. FT.	EA.
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	195.0	97.6	390.9	5.0	22,042	48

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 474

SHEET 2 OF 2



DocuSigned by:
 Krishna P. Sedai
 E:AF784150BF4B7...

11/21/2017

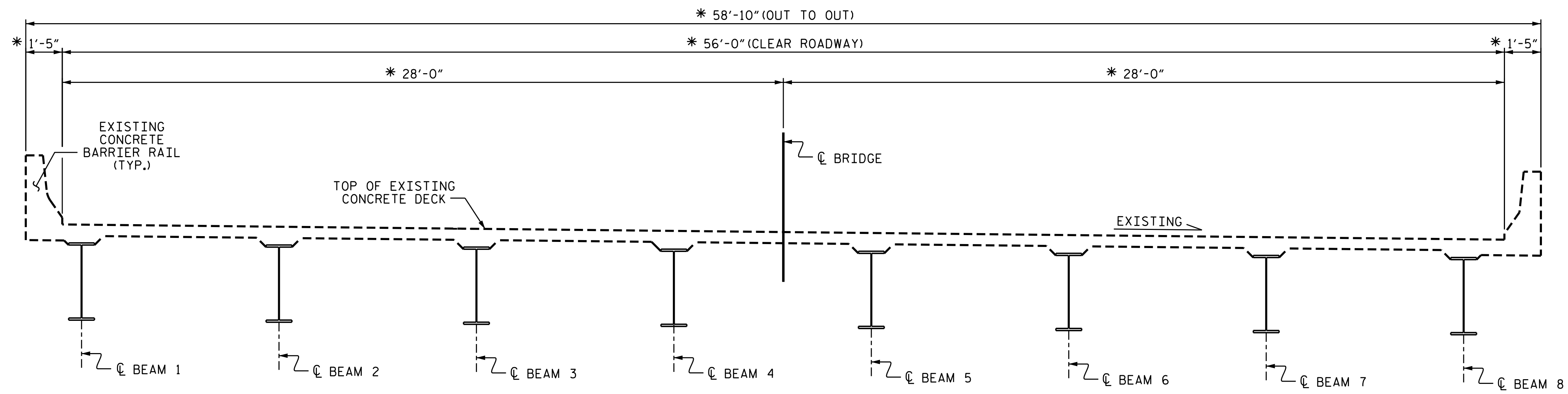
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON I-85 SBL
 OVER I-85 NBL

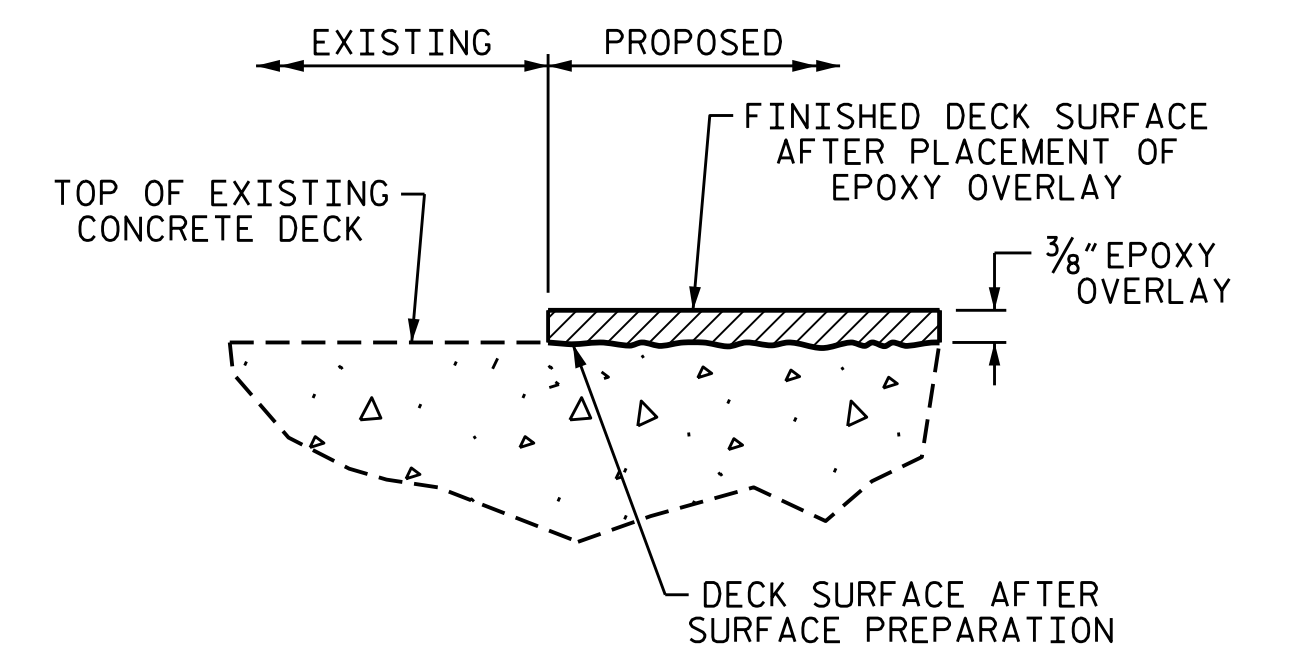
DRAWN BY : A. SORSENGINH DATE : 8/2017
 CHECKED BY : B. L. GREEN DATE : 9/2017

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-3
2			4			52

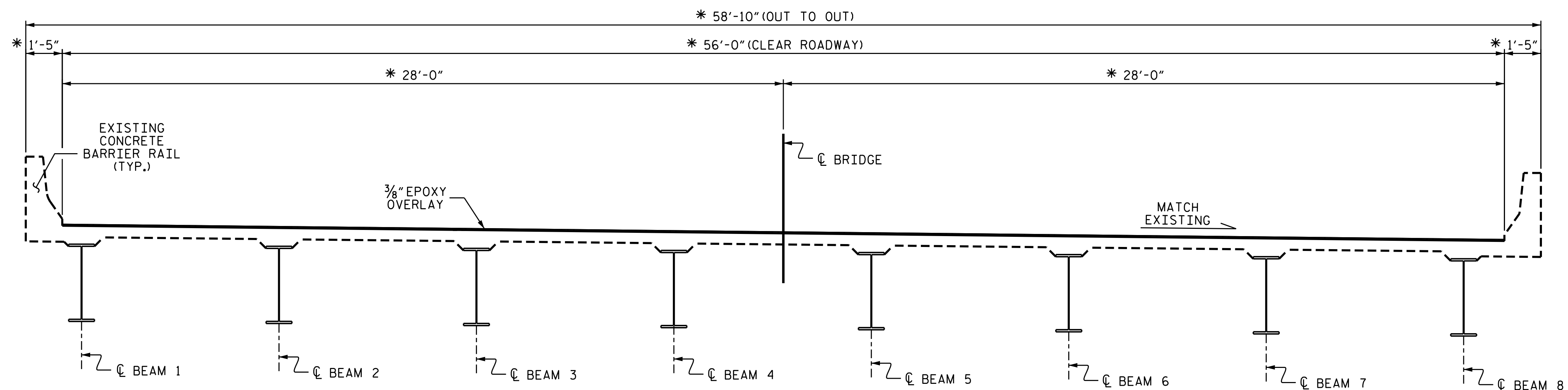
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TYPICAL SECTION
 (EXISTING)
 * RADIAL DIMENSION

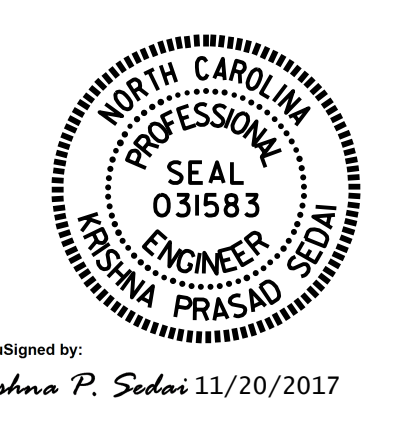


DETAIL FOR EPOXY OVERLAY



TYPICAL SECTION
 (PROPOSED)

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 474



DocuSigned by:
 Krishna P. Sedai 11/20/2017
 EABF7941508F487

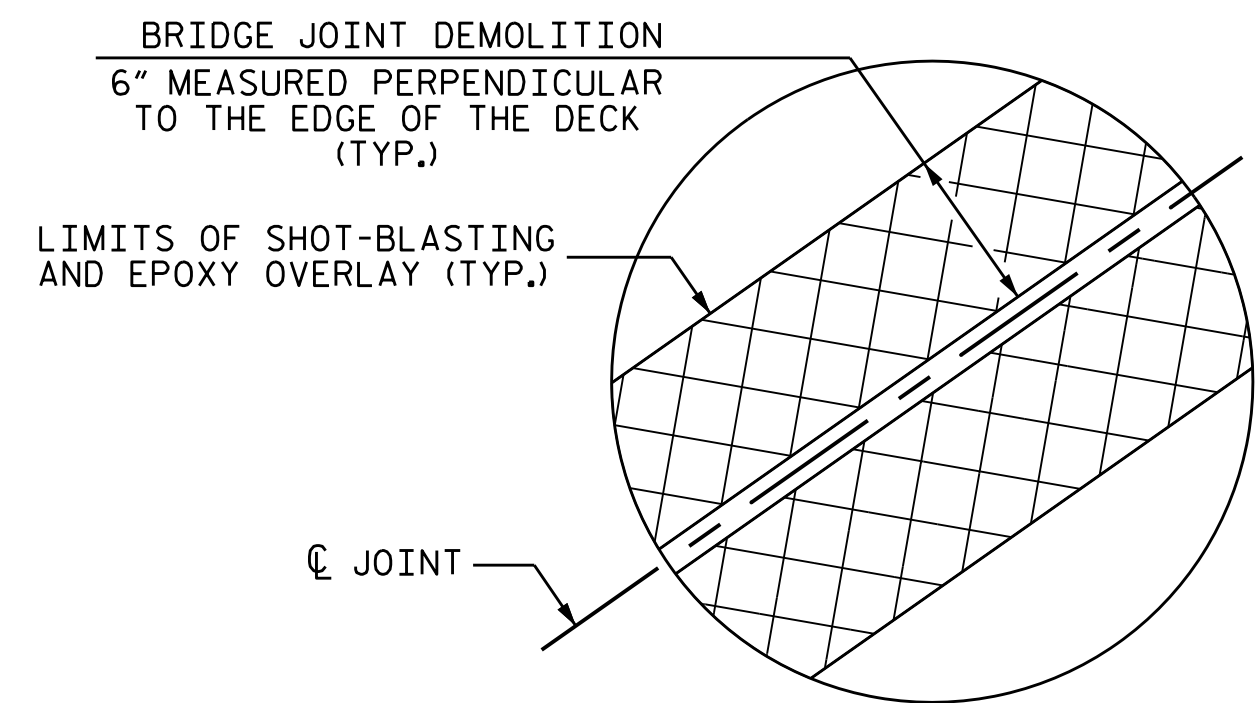
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTIONS
 & EPOXY OVERLAY
 DETAILS

DRAWN BY : A. SORSENGINH DATE : 8/2017
 CHECKED BY : B. L. GREEN DATE : 9/2017

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			52

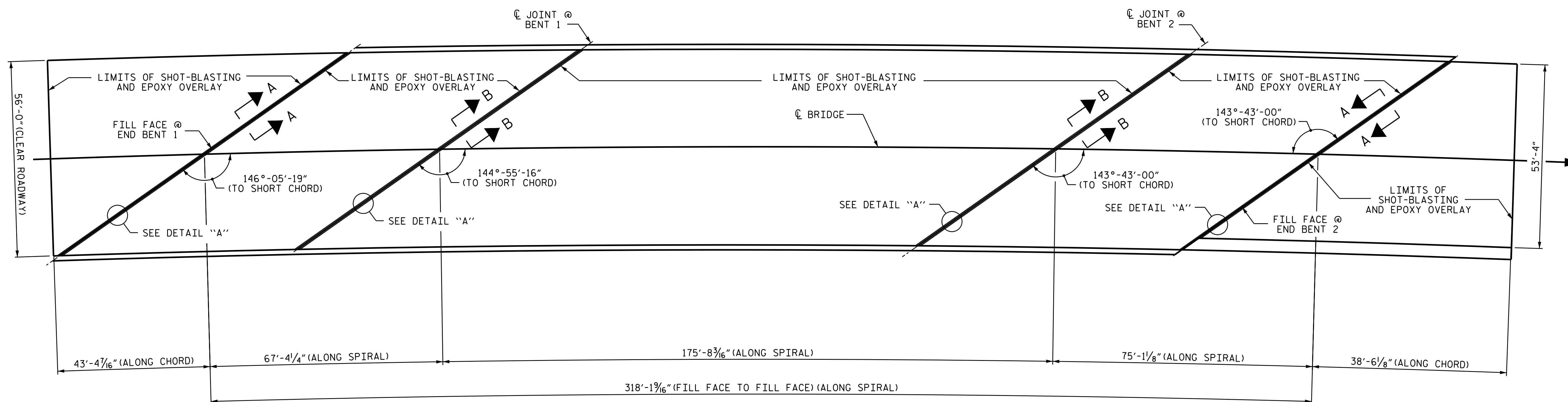
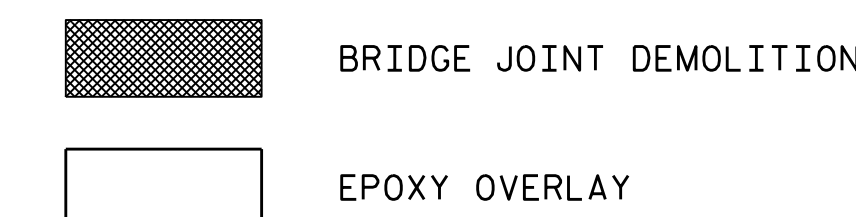
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



DETAIL "A"

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	* 5 SQ. FT.	
EPOXY OVERLAY SYSTEM	22,042 SQ. FT.	
BRIDGE JOINT DEMOLITION	390.9 SQ. FT.	

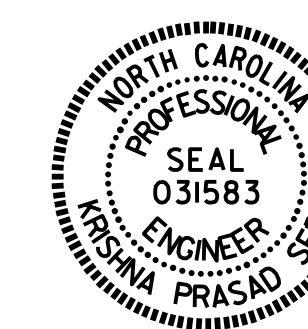
* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PLAN OF SPANS

(FOR SECTIONS A-A & B-B, SEE "JOINT DETAILS" SHEET)

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 474



DocuSigned by:
 Krishna P. Seddi 11/20/2017
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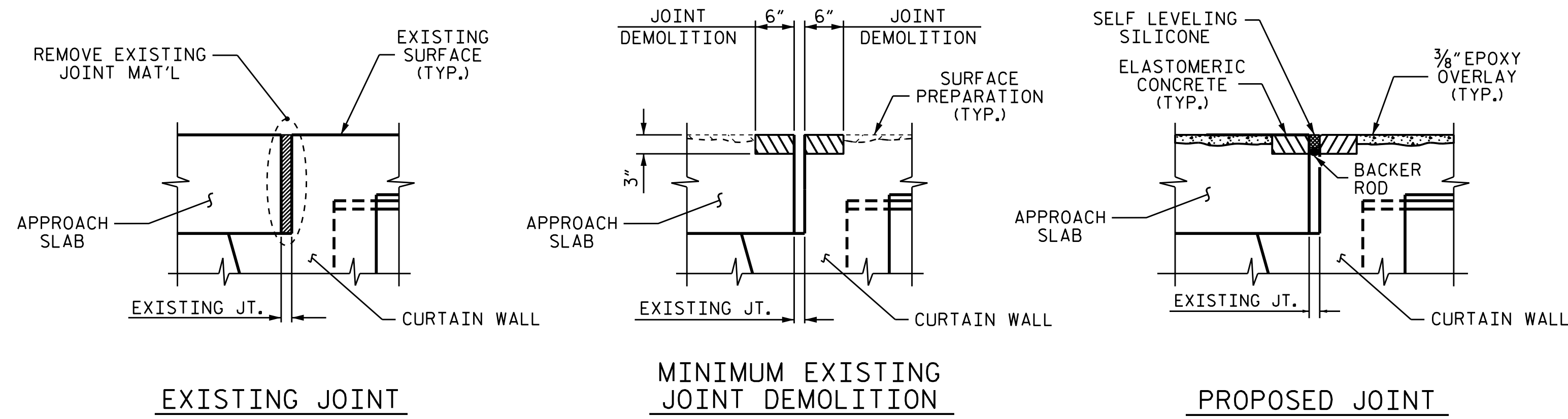
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION AND EPOXY OVERLAY

DRAWN BY : A. SORSENGINH DATE : 8/2017
 CHECKED BY : B. L. GREEN DATE : 9/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2			4			52

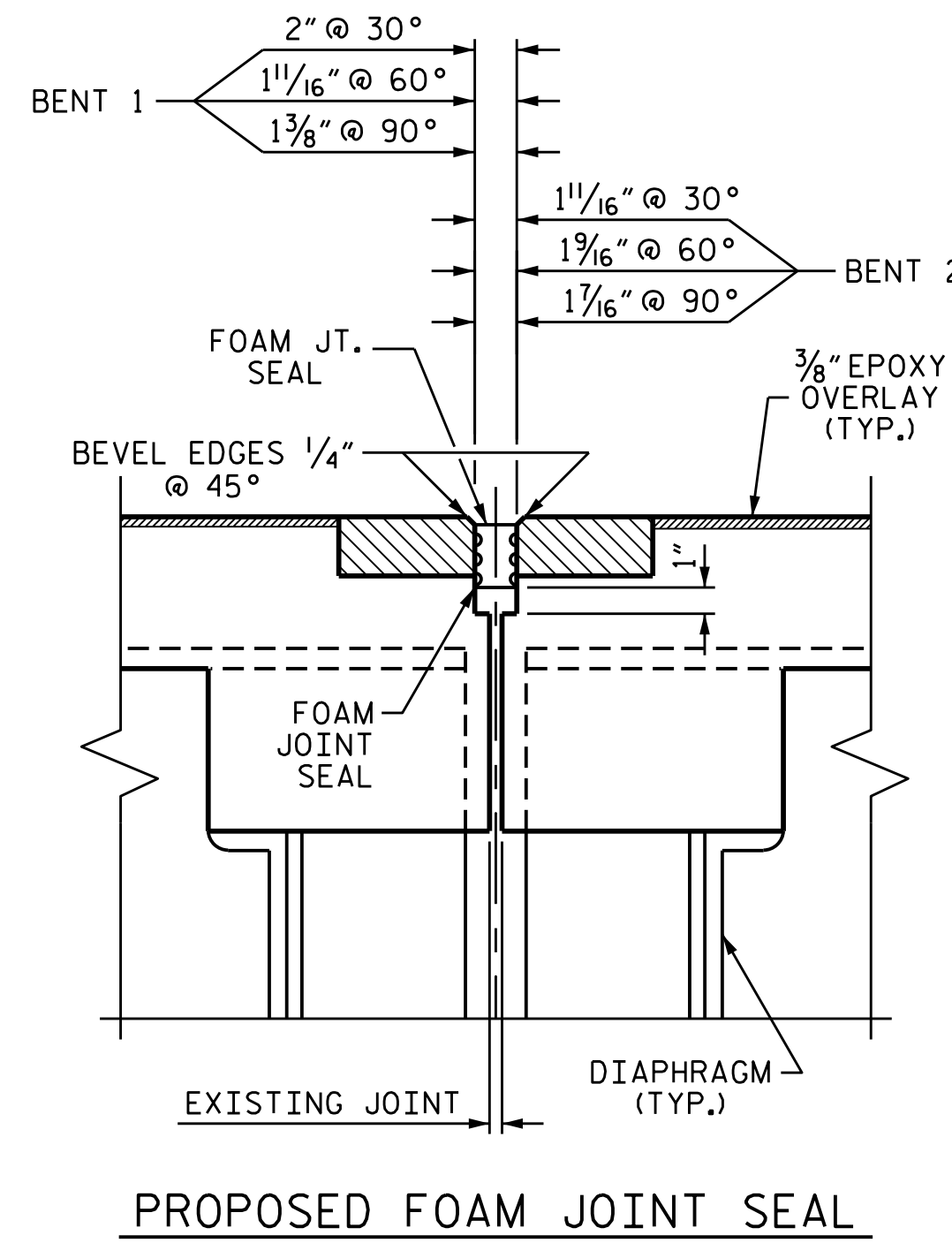


EXISTING JOINT

MINIMUM EXISTING JOINT DEMOLITION

PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS
SECTION A-A



NOTES:

CONTRACTOR SHALL FIELD VERIFY THE EXISTING SAWS OPENING PRIOR TO OBTAINING JOINT MATERIAL.

IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE OR IF UNSOUND CONCRETE IS REMOVED TO WITHIN 2" OF THE WATERSTOP, THE ENTIRE WATERSTOP SHALL BE REMOVED.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

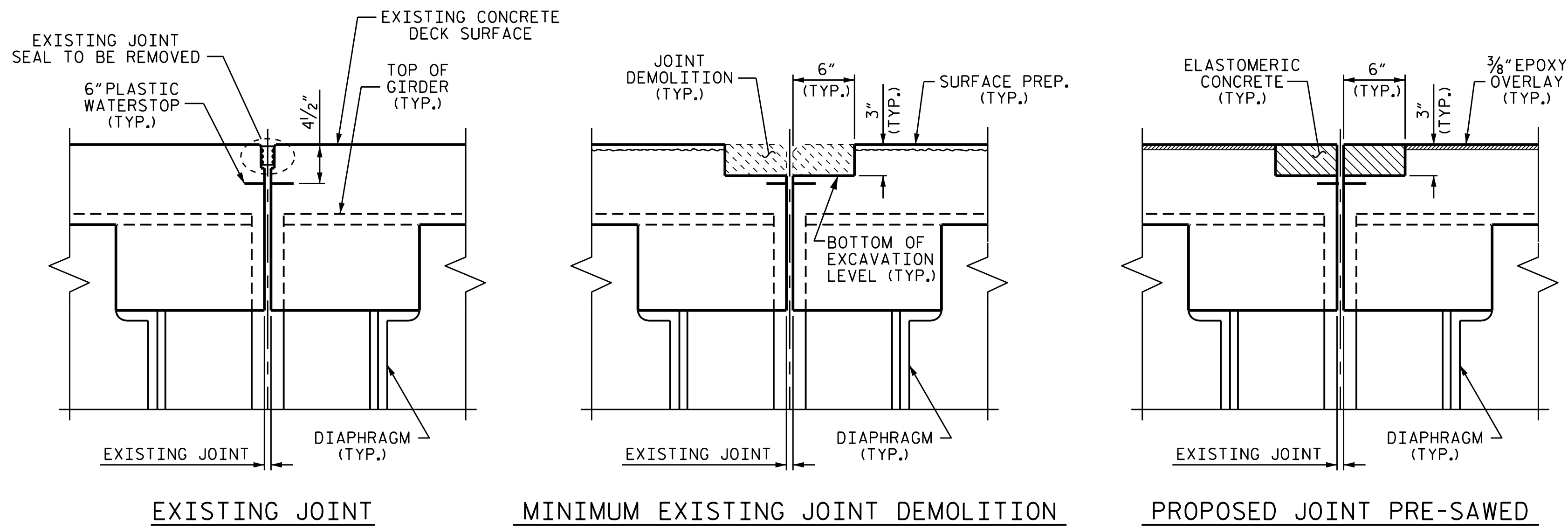
NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2 1/2" AT BENTS.

THE INSTALLED FOAM JOINT SEALS SHALL BE WATERTIGHT.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE FOAM JOINT SEAL IN LIEU OF SAWING THE JOINT.

ELASTOMERIC CONCRETE		
END BENT 1	25.4	(CU. FT.)
BENT 1	24.8	(CU. FT.)
BENT 2	23.8	(CU. FT.)
END BENT 2	23.6	(CU. FT.)
* TOTAL	97.6	(CU. FT.)

* BASED ON THE MINIMUM BLOCKOUT SHOWN.



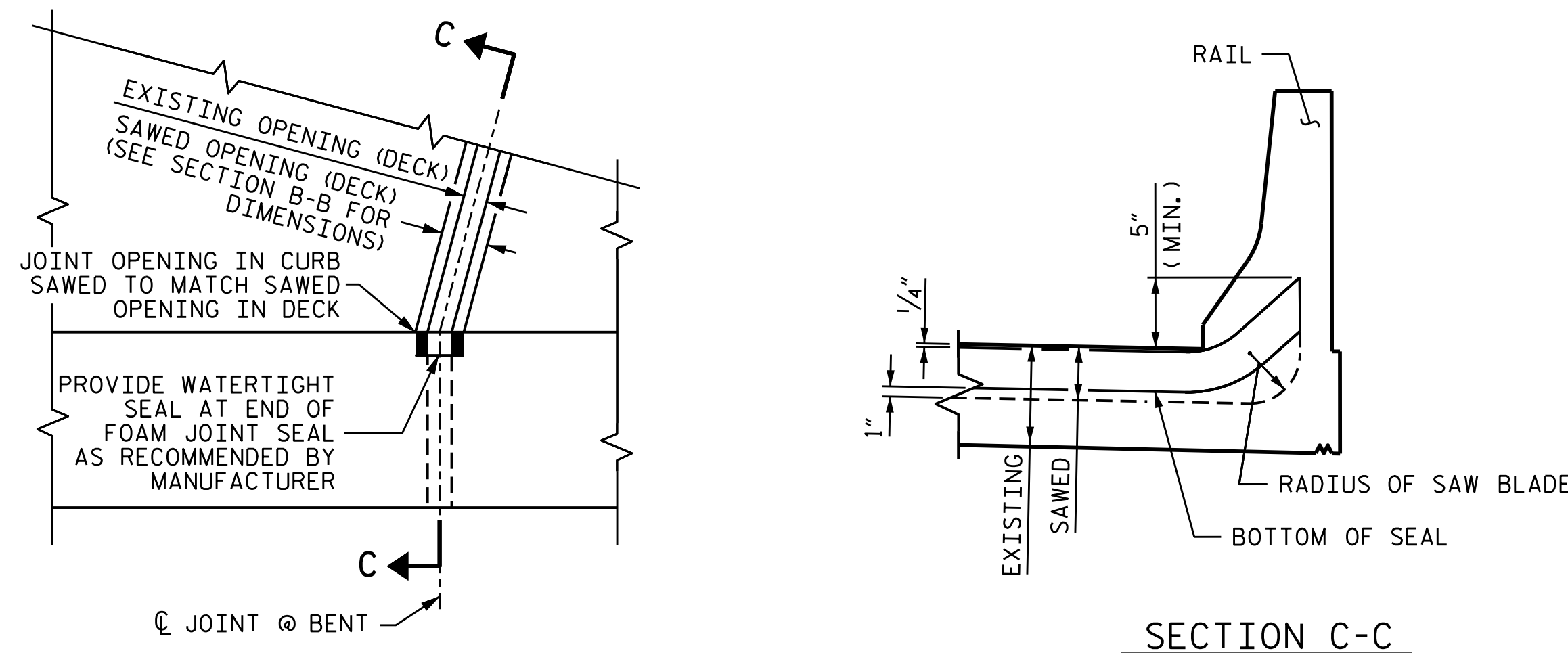
EXISTING JOINT

MINIMUM EXISTING JOINT DEMOLITION

PROPOSED JOINT PRE-SAWED

PROPOSED FOAM JOINT SEAL

JOINT INSTALLATION SEQUENCE AT BENTS
SECTION B-B



SECTION C-C

JOINT SEAL DETAILS AT BENTS

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 474



DocuSigned by:
 Krishna P. Sedai 11/20/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

DRAWN BY : A. SORSENGINH DATE : 9/2017
 CHECKED BY : B. L. GREEN DATE : 9/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-6
2			4			52

NOTES

ZONE PAINTING IS REQUIRED FOR THE GIRDERS OF SPANS A, B AND C.

FOR ZONE PAINTING, SEE ZONE PAINTING OF EXISTING STRUCTURE SPECIAL PROVISION.

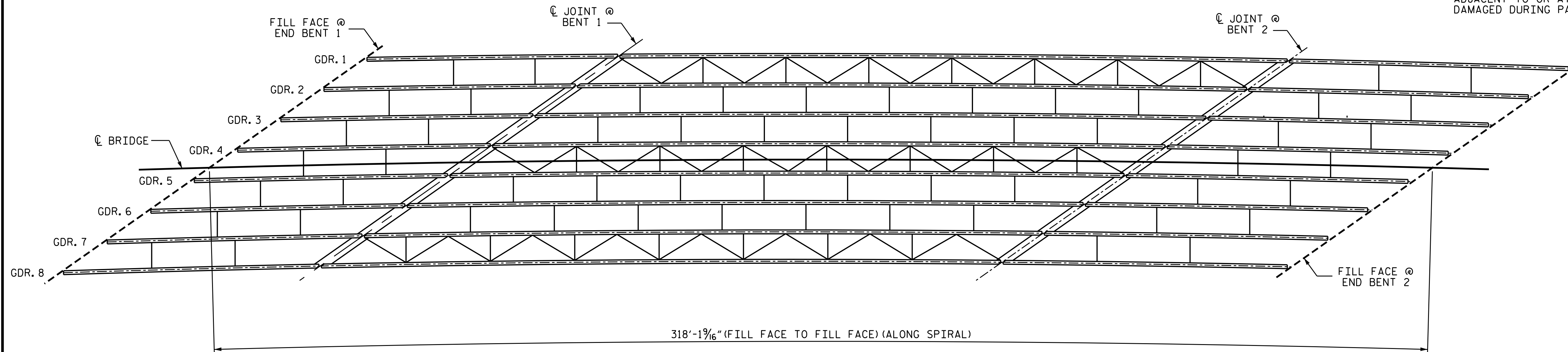
FOR LIMITS OF ZONE PAINTING, SEE DETAILS AND ZONE PAINTING OF EXISTING STRUCTURE SPECIAL PROVISION.

THE EXTENTS OF ANTICIPATED ZONE PAINTING ARE INDICATED IN THE DETAILS OR IN THESE NOTES, BUT THE CONTRACTOR AND THE ENGINEER SHALL INSPECT THE STRUCTURE TO DETERMINE THE ACTUAL EXTENTS OF ZONE PAINTING.

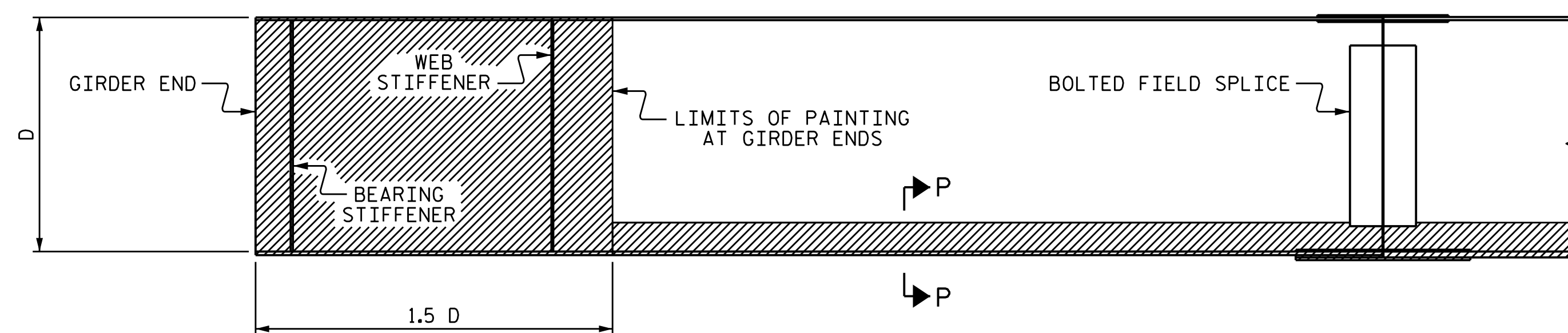
HORIZONTAL EXTENTS OF ZONE PAINTING SHALL EXTEND TO THE LIMITS INDICATED IN THE DETAILS OR 12" BEYOND THE MAXIMUM HORIZONTAL EXTENT OF WEB CORROSION, WHICHEVER IS GREATER.

* VERTICAL EXTENT OF ZONE PAINTING SHALL EXTEND 3" BEYOND THE MAXIMUM VERTICAL EXTENT OF WEB CORROSION OR 6" ABOVE THE TOP OF THE BOTTOM FLANGE, WHICHEVER IS GREATER.

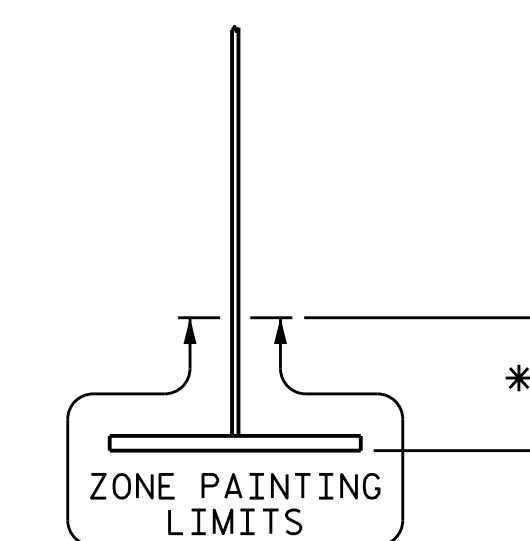
CONTRACTOR SHALL ENSURE THAT EXISTING UTILITIES ADJACENT TO OR ATTACHED TO THE BRIDGE ARE NOT DAMAGED DURING PAINTING OPERATIONS.



PLAN VIEW



GIRDER ELEVATION



SECTION P-P

ZONE PAINTING DETAILS
(LEFT HALF LENGTH OF GIRDER SHOWN, RIGHT HALF LENGTH OF GIRDER SIMILAR BY ROTATION)

PROJECT NO. I-5793
DAVIDSON COUNTY
BRIDGE NO. 474



DocuSigned by:
Krishna P. Sedai 11/20/2017
EABF794150BF487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ZONE PAINTING LOCATION

DRAWN BY : A. SORSENGINH DATE : 9/2017
CHECKED BY : B. L. GREEN DATE : 9/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-7
2			4			52

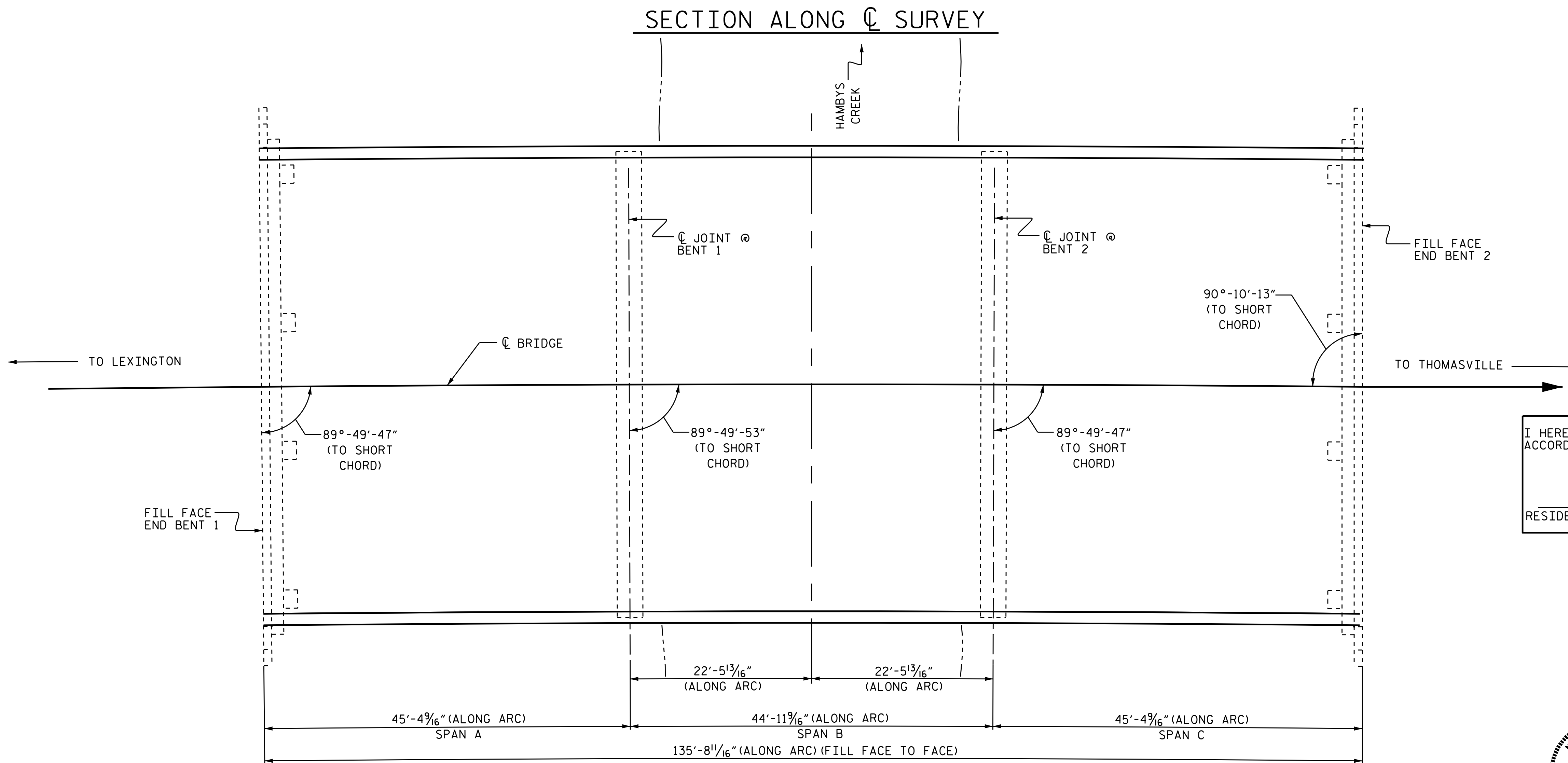
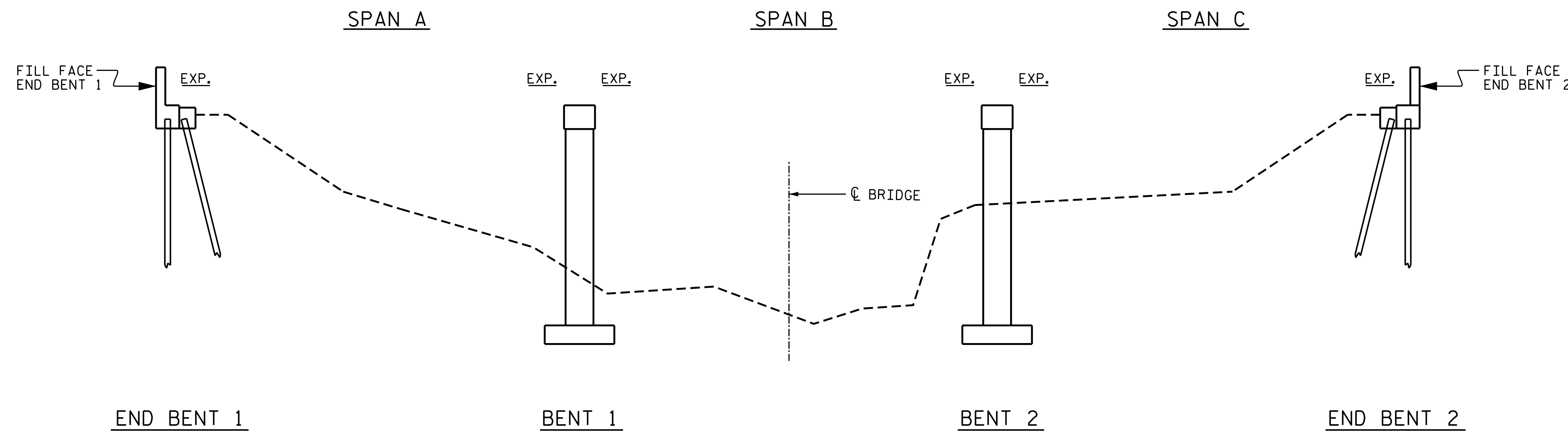
NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 04-21-2016.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SCOPE OF WORK

- SURFACE PREPERATION
- DEMOLISH EXISTING END BENT AND BENT JOINTS.
- SHOTBLAST EXISTING CONCRETE DECK.
- APPLY EPOXY OVERLAY SYSTEM SEALANT.
- RECONSTRUCT END BENT AND BENT JOINTS, INSTALL FOAM JOINT SEALS AT BENTS AND INSTALL SILICONE JOINT SEALER AT END BENTS



PLAN

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

RESIDENT ENGINEER _____ DATE _____

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 475

SHEET 1 OF 2



DocuSigned by:
 Krishna P. Sedai 11/20/2017
 EABF794150BF4B7...

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**GENERAL DRAWING
 FOR BRIDGE
 ON I-85 NORTHBOUND
 OVER HAMBY'S CREEK**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8
1			3			TOTAL SHEETS
2			4			52

DRAWN BY : D.V. JOYNER DATE : 08/2017
 CHECKED BY : H.T. BARBOUR DATE : 09/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



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 CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.
- FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.
- FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.
- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.
- 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.
- FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

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 NO. 475	FOAM JOINT SEALS	SILICONE JOINT SEALANT	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	* CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY SYSTEM
	LUMP SUM	LIN. FT.	CU. FT.	SQ. FT.	SQ. FT.	SQ. FT.
TOTAL	LUMP SUM	112.0	56.0	224.0	5.0	8488.4

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 475

SHEET 2 OF 2



DocuSigned by:
 Krishna P. Sedai 11/20/2017
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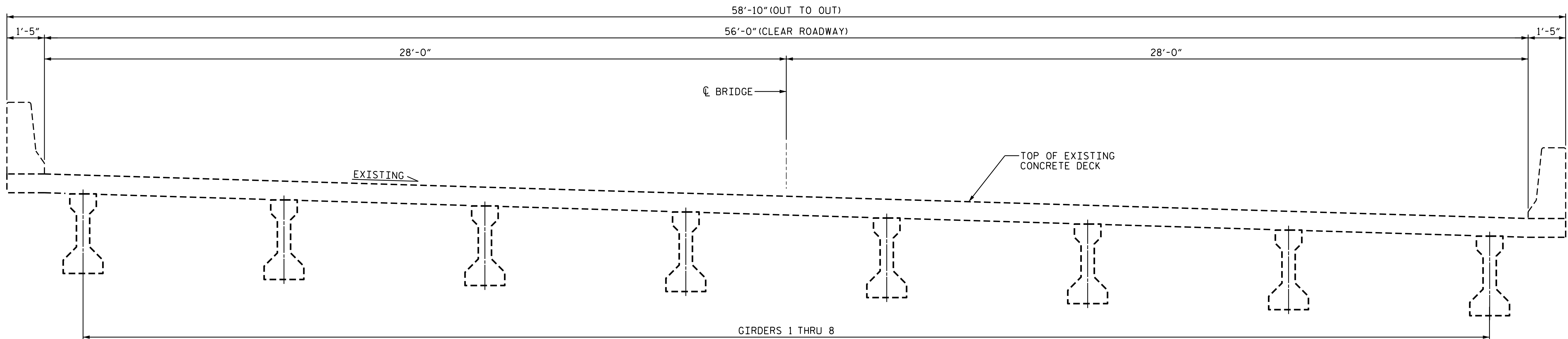
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**GENERAL DRAWING
 FOR BRIDGE
 ON I-85 NORTHBOUND
 OVER HAMBYS CREEK**

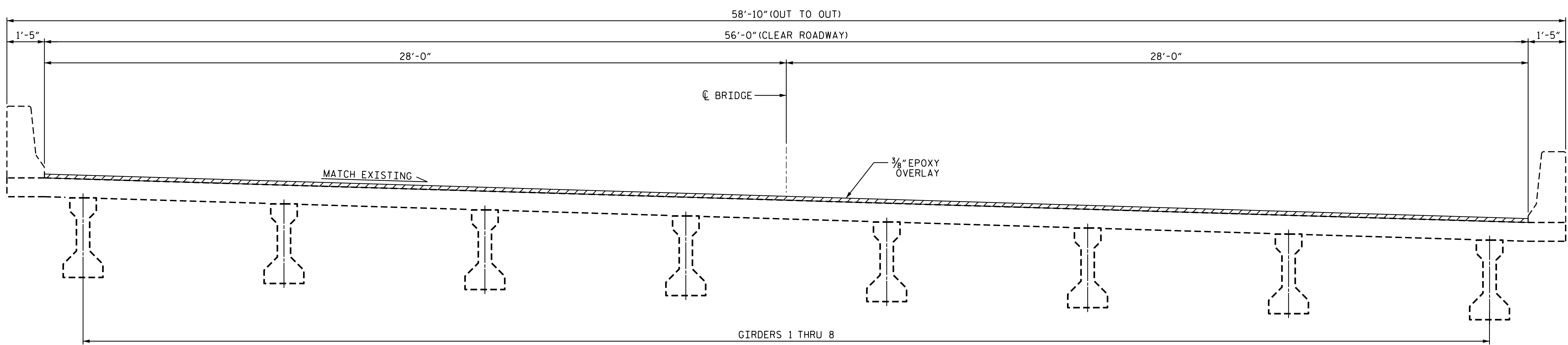
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			52

DRAWN BY : D.V. JOYNER DATE : 08/2017
 CHECKED BY : H.T. BARBOUR DATE : 09/2017

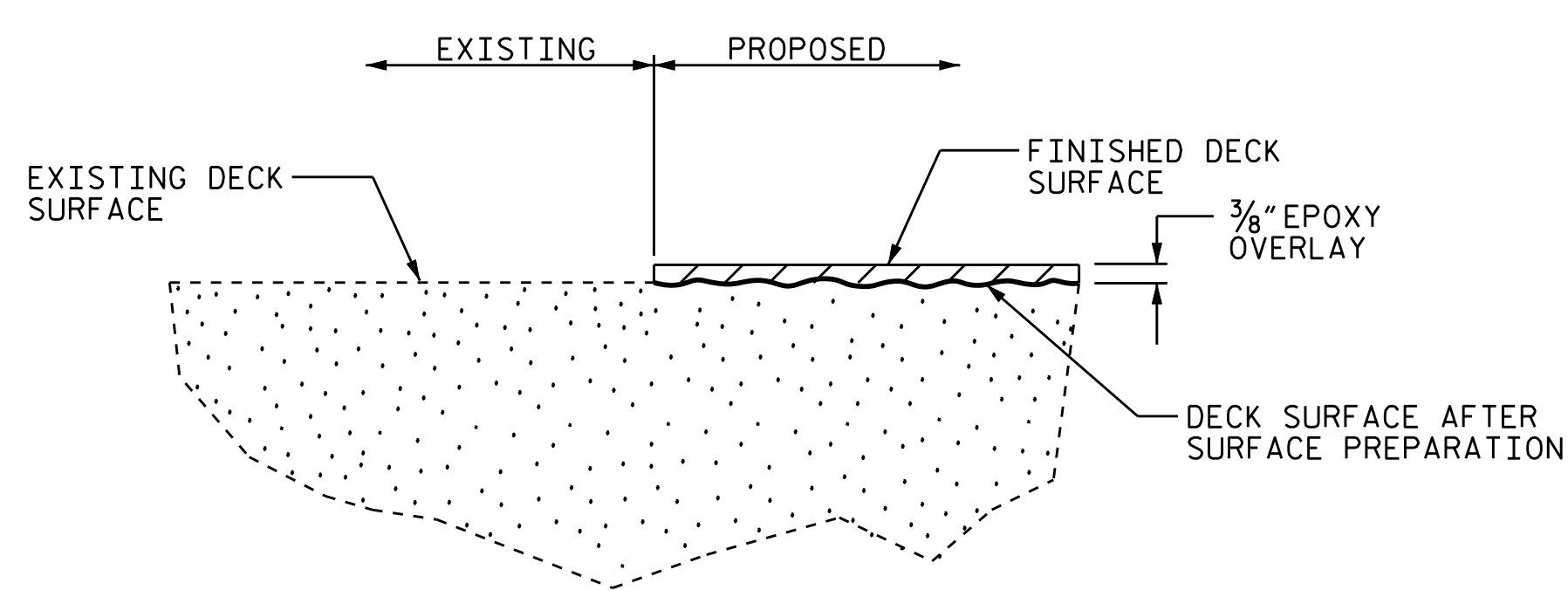
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 FINAL UNLESS ALL
 SIGNATURES COMPLETED



TYPICAL SECTION
(EXISTING BRIDGE 475 EBL)

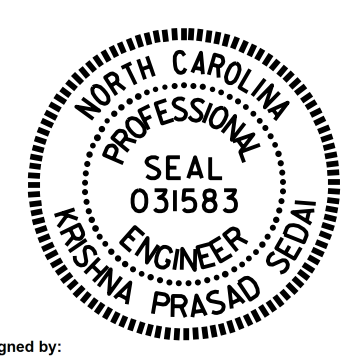


TYPICAL SECTION
(EPOXY OVERLAY)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5973
DAVIDSON COUNTY
 BRIDGE NO. 475



DocuSigned by:
 Krishna P. Sedoi 11/20/2017
 EA8F7941508F4B7...

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE
 TYPICAL SECTION
 & EPOXY OVERLAY
 DETAILS

DRAWN BY : D.V. JOYNER DATE : 08/2017
 CHECKED BY : H.T. BARBOUR DATE : 09/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

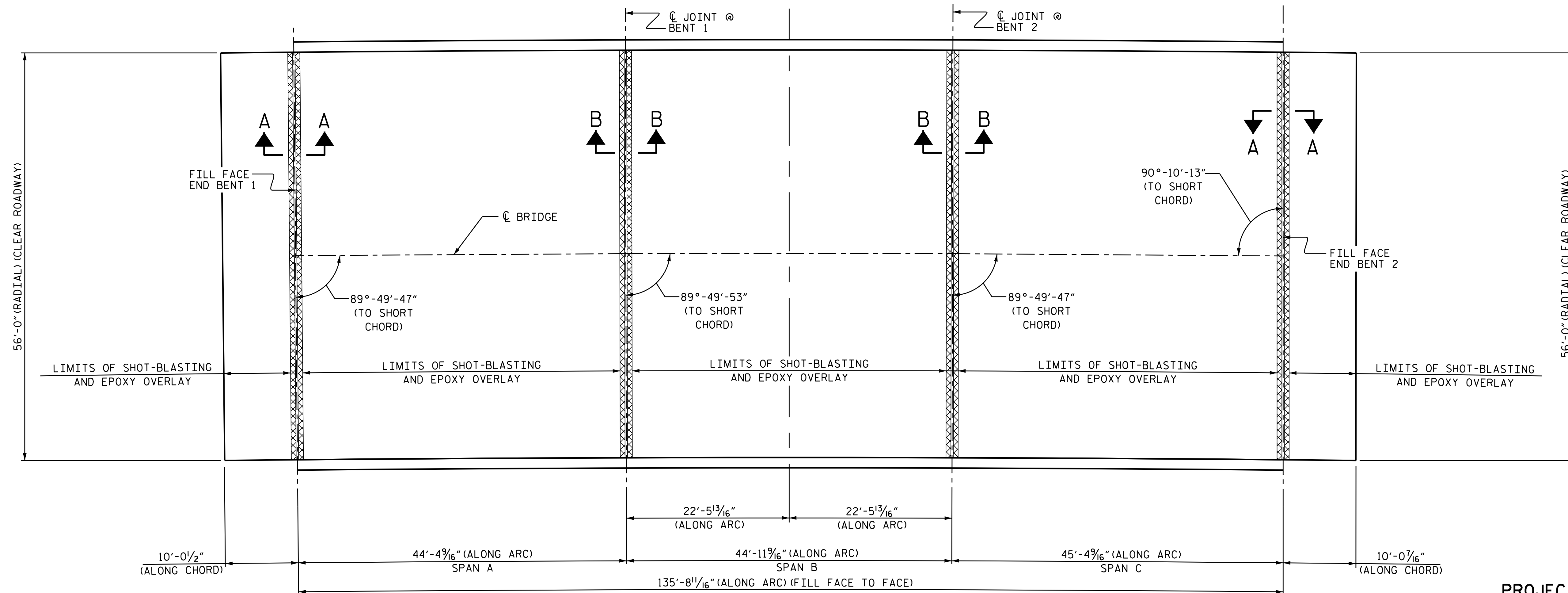
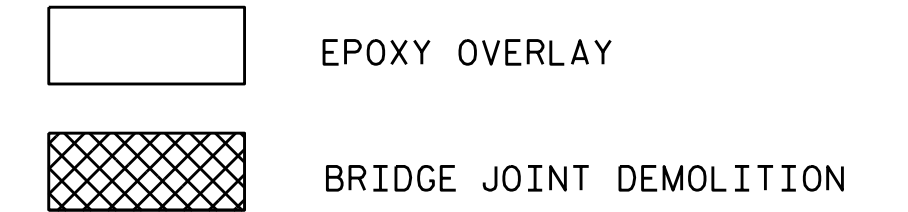
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-10
1			3			TOTAL SHEETS
2			4			52

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	*5 SQ. FT.	
EPOXY OVERLAY SYSTEM	8488.4 SQ. FT.	
BRIDGE JOINT DEMOLITION	224.0 SQ. FT.	

NOTE:

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 475

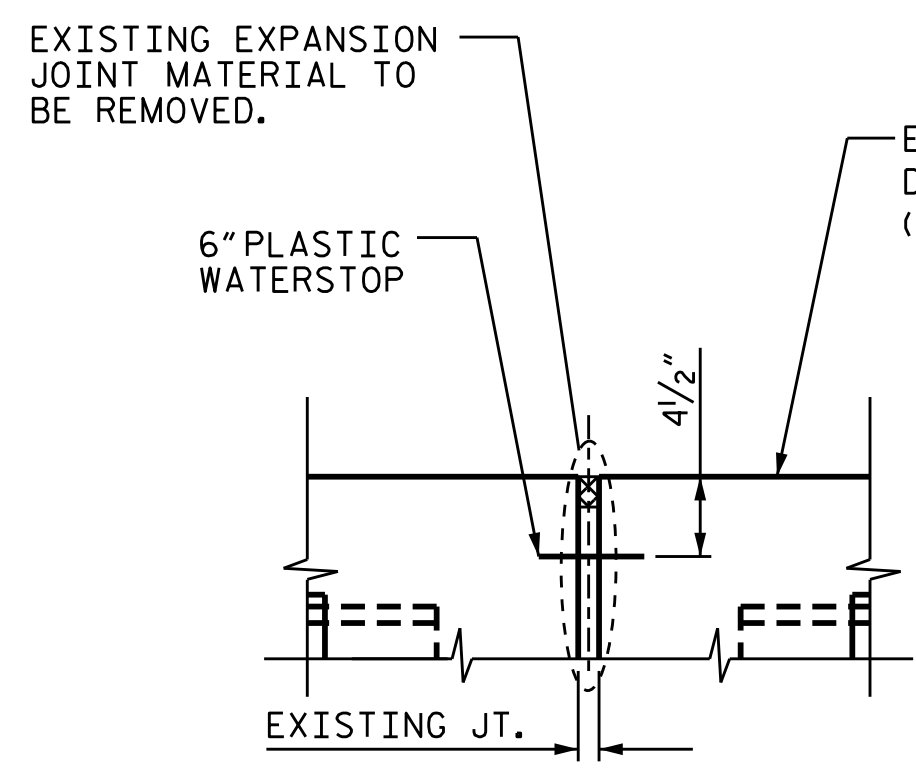


Drawn by: Krishna P. Sedai 11/20/2017
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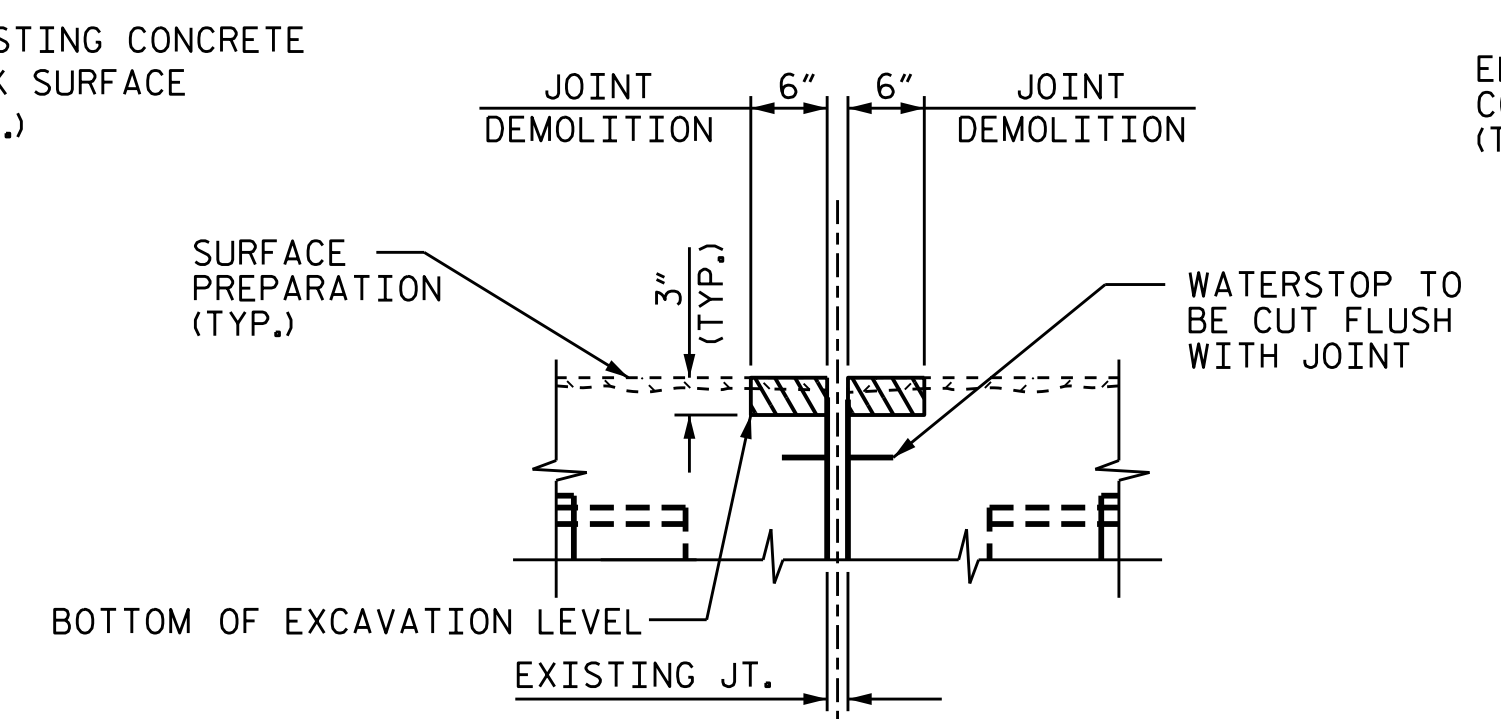
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-11
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DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

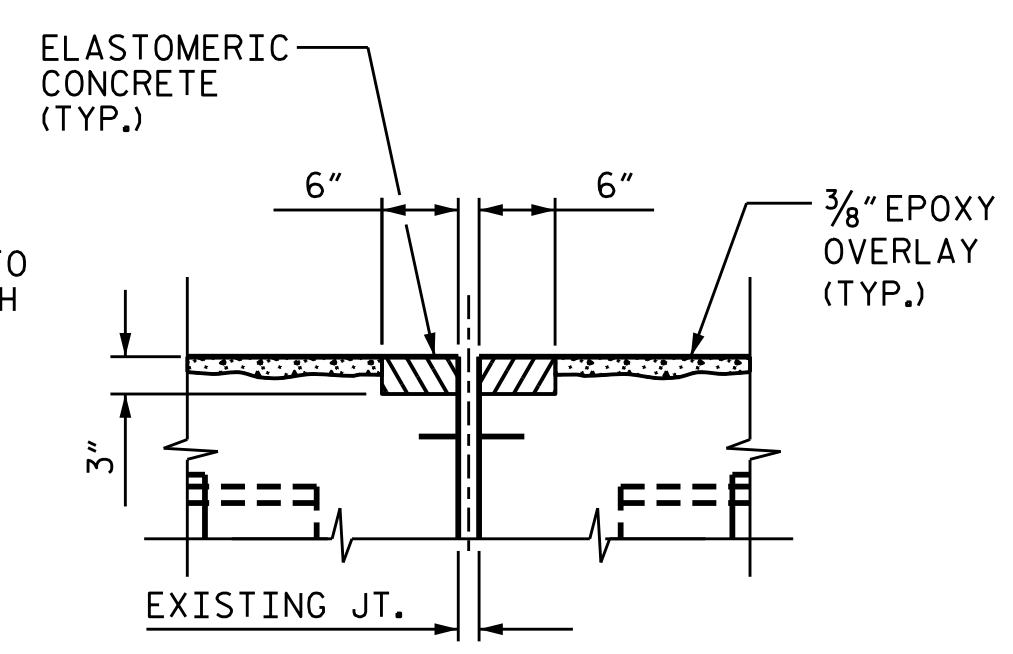
DRAWN BY : D.V. JOYNER DATE : 08/2017
 CHECKED BY : H.T. BARBOUR DATE : 09/2017



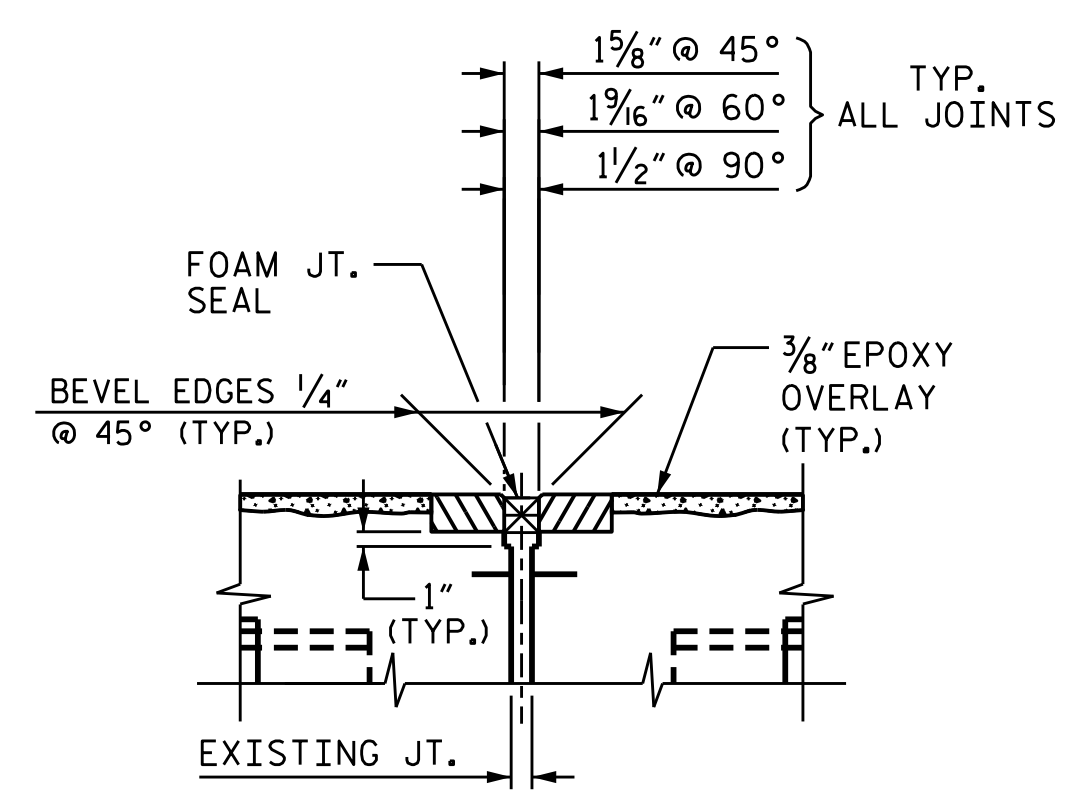
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



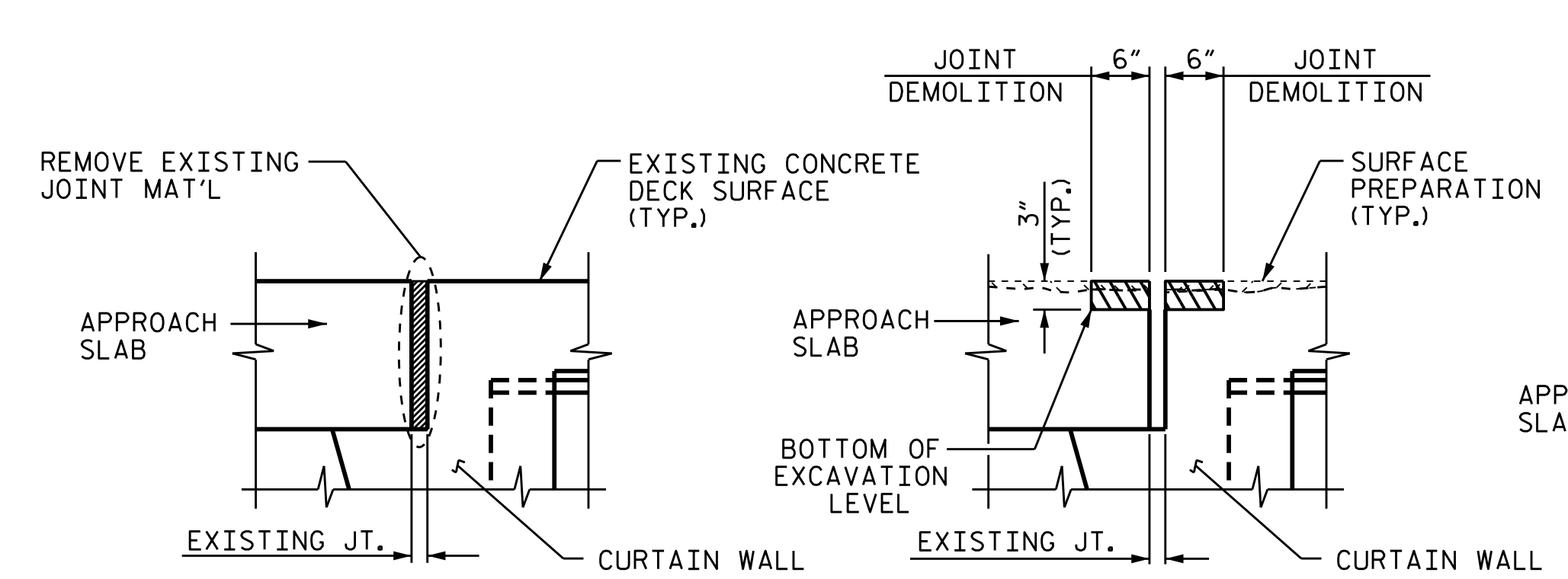
PROPOSED JOINT PRE-SAWED DIMENSIONS



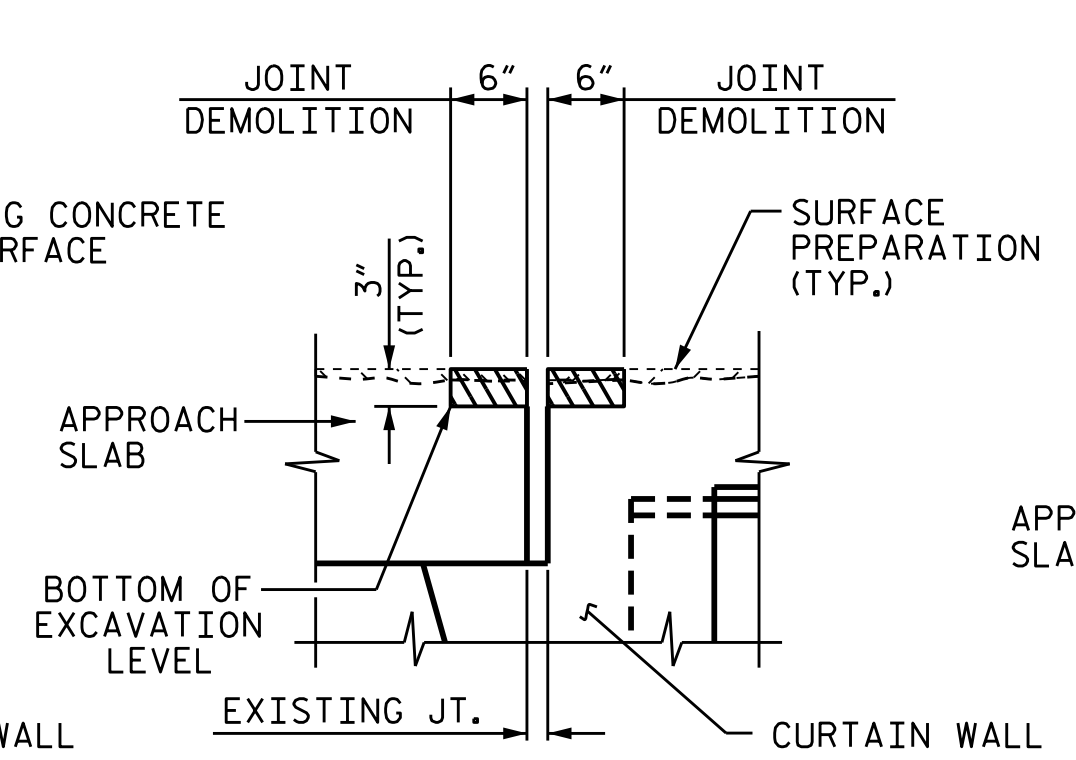
PROPOSED FOAM JOINT SEAL EXPANSION
ALL BENTS

NOTES:
 IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE OR IF UNSOUND CONCRETE IS REMOVED TO WITHIN 2" OF THE WATERSTOP, THE ENTIRE WATERSTOP SHALL BE REMOVED.
 FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.
 THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.
 NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".
 THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS @ BENTS 1 & 2 IN LIEU OF SAWING THE JOINT.
 FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
 CONTRACTOR SHALL FIELD VERIFY THE EXISTING SAWED OPENINGS PRIOR TO OBTAINING JOINT MATERIAL.
 RETAIN ALL EXISTING REINFORCING STEEL.
 CLEAN AND REPAIR AS NEEDED.

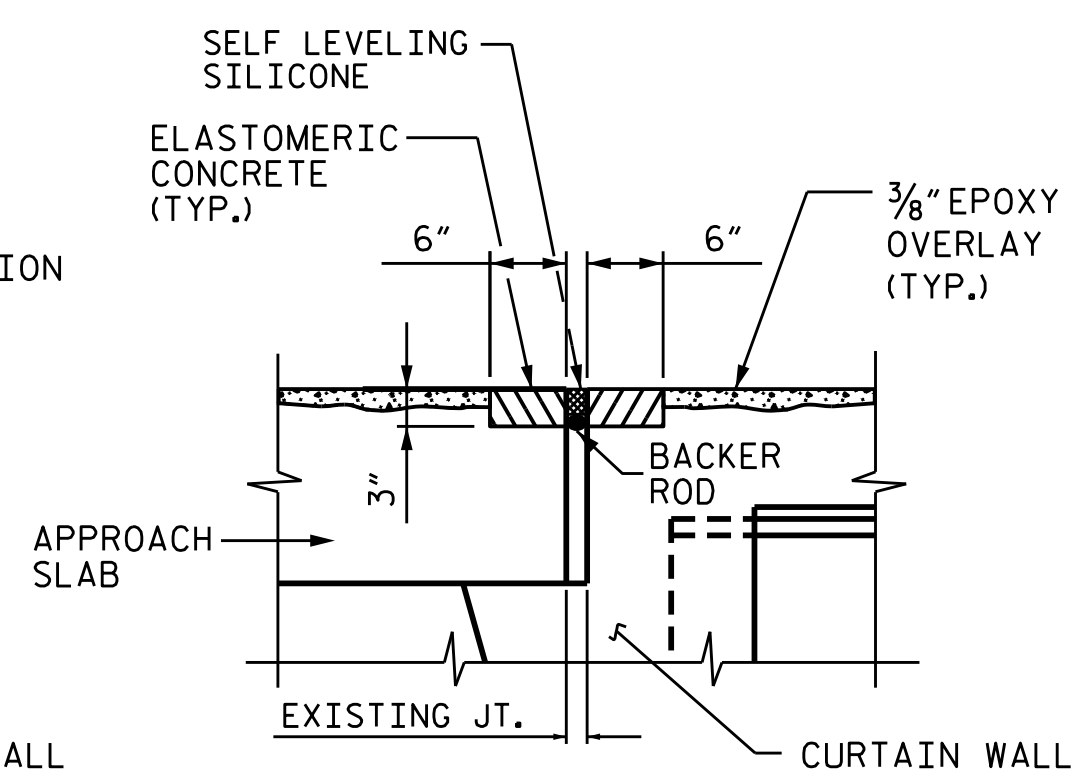
JOINT INSTALLATION SEQUENCE AT BENTS
SECTION B-B



EXISTING JOINT

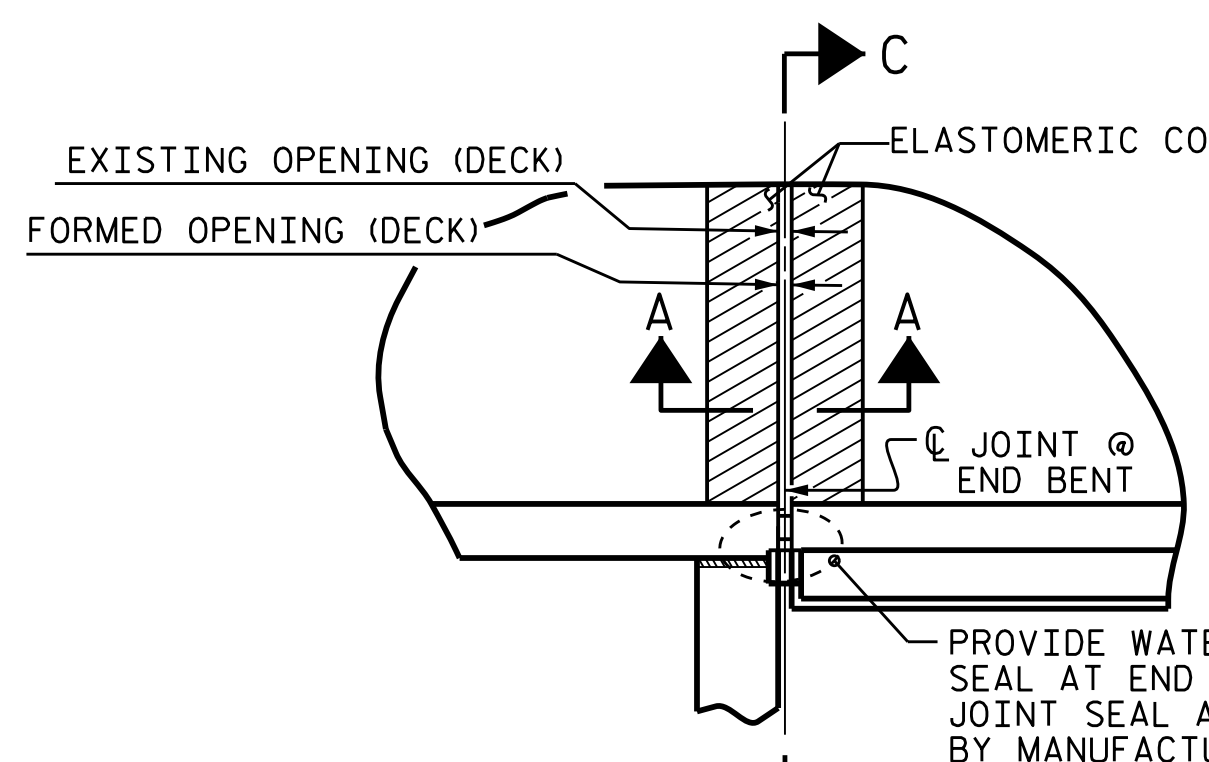


MINIMUM EXISTING JOINT DEMOLITION

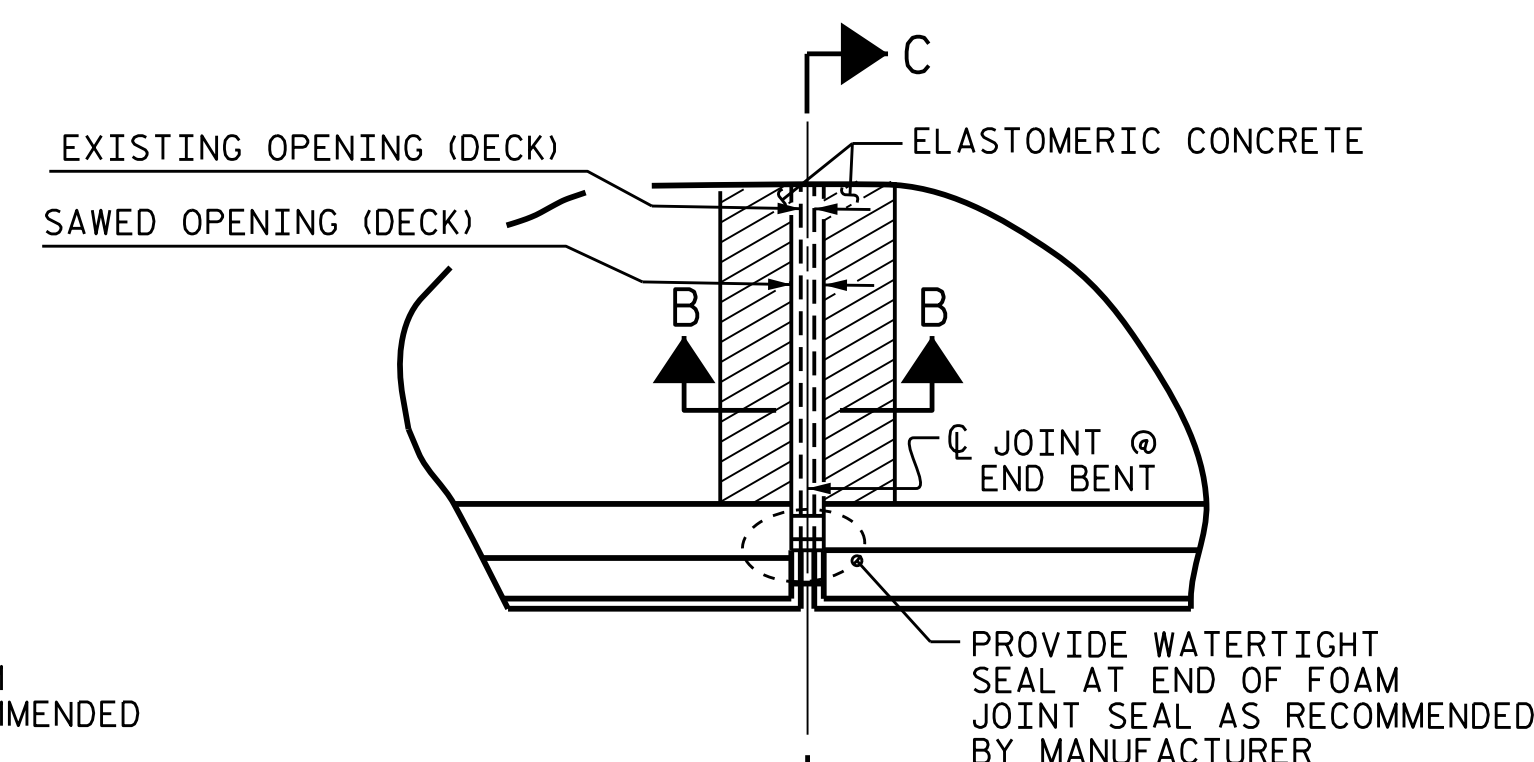


PROPOSED JOINT

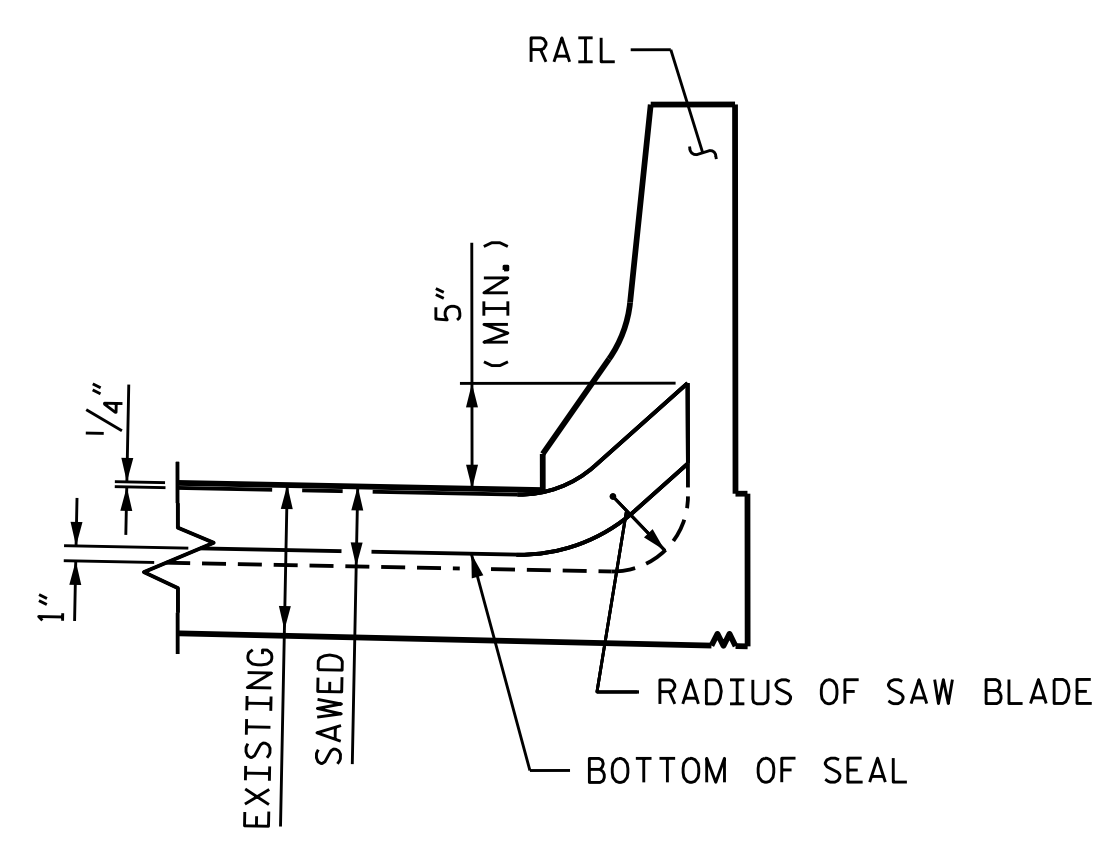
JOINT INSTALLATION SEQUENCE AT END BENTS
SECTION B-B



PLAN
(@ END BENT)



PLAN
(@ BENT)



SECTION C-C

JOINT SEAL DETAILS

ELASTOMERIC CONCRETE	
BRIDGE 475	56.0 CU. FT.

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 475



DocuSigned by:
 Krishna P. Sedai 11/20/2017
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

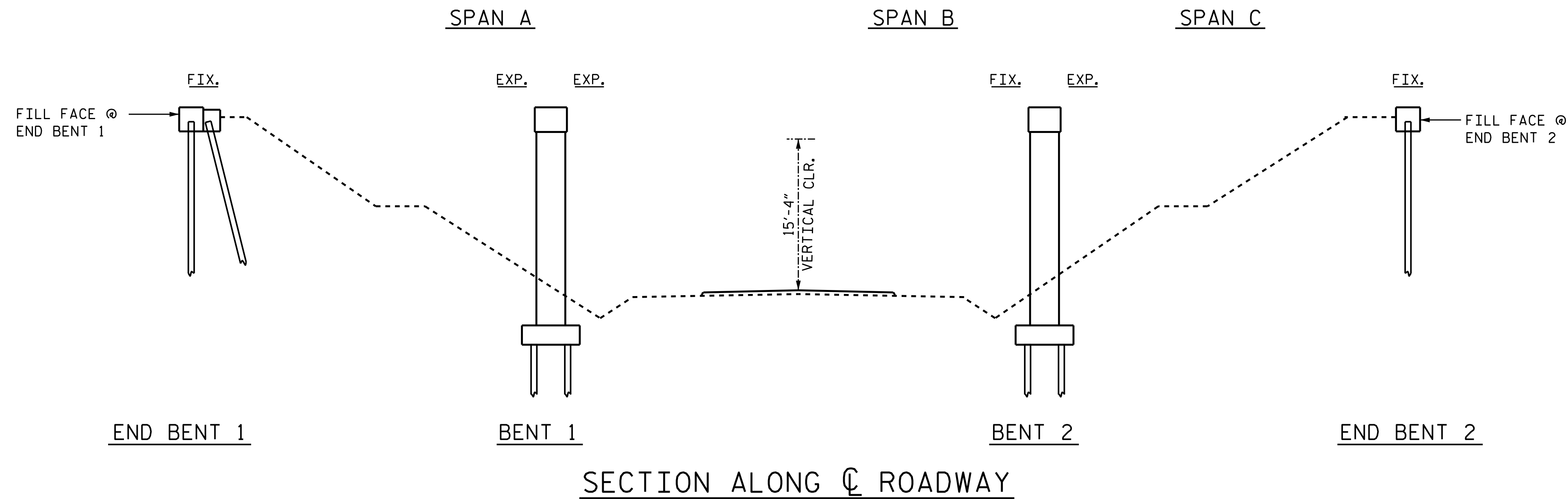
**SUPERSTRUCTURE
 JOINT DETAILS**

DRAWN BY : D.V. JOYNER DATE : 08/2017
 CHECKED BY : H.T. BARBOUR DATE : 09/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

S-12
 TOTAL SHEETS
 52

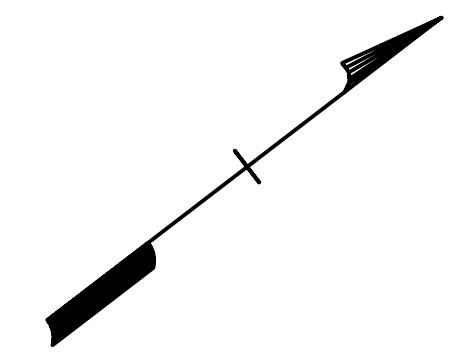


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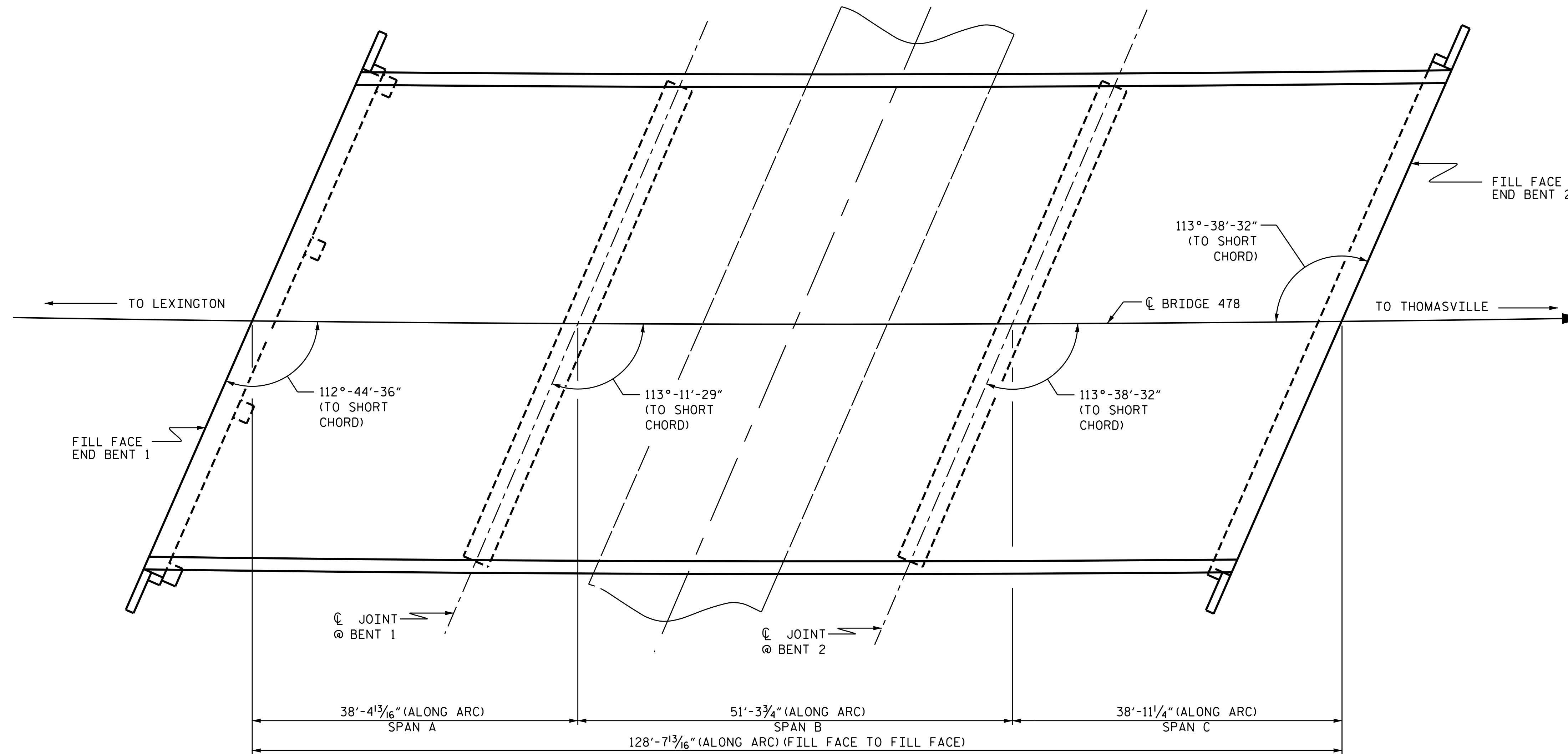
PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 04/21/2016.
 BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SCOPE OF WORK

- SURFACE PREPARATION.
- DEMOLISH EXISTING END BENT AND BENT JOINTS.
- SHOTBLAST EXISTING CONCRETE DECK.
- APPLY EPOXY OVERLAY SYSTEM SEALANT.
- RECONSTRUCT END BENT AND BENT JOINTS, INSTALL FOAM JOINT SEALS AT BENTS AND INSTALL SILICONE JOINT SEALER AT END BENTS.



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



PLAN

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 478
 SHEET 1 OF 2

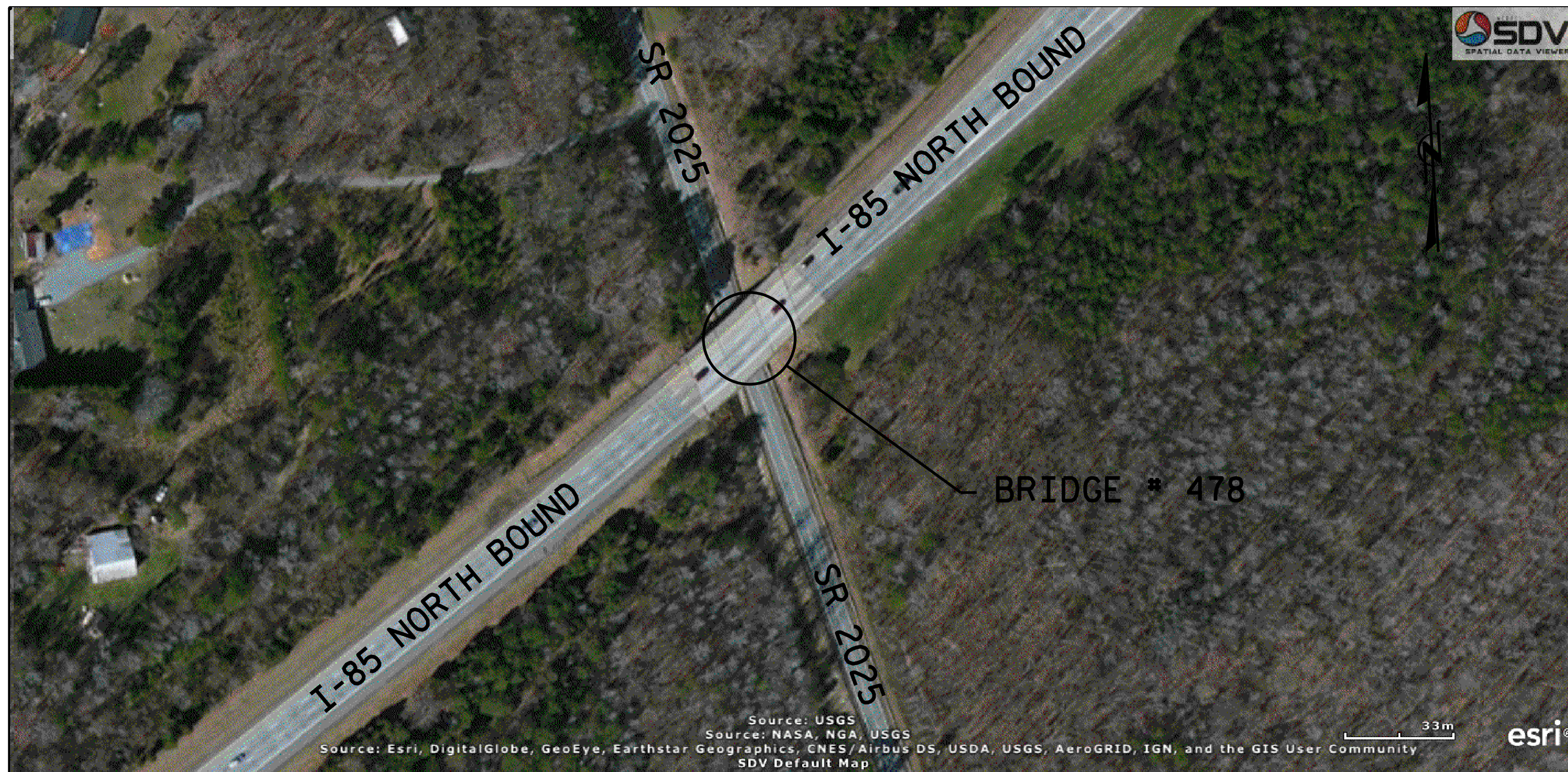


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**GENERAL DRAWING
 FOR BRIDGE
 ON I-85 NBL
 OVER SR 2025**

DRAWN BY : M. WELDON DATE : 08/2017
 CHECKED BY : A. SORSENGINH DATE : 09/2017

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-13
1			3			TOTAL SHEETS
2			4			52

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



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 NO. 478	FOAM JOINT SEALS	SILICONE JOINT SEALANT	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	*CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY SYSTEM
	LUMP SUM	LIN. FT.	CU. FT.	SO. FT.	SO. FT.	SO. FT.
TOTAL	LUMP SUM	122.0	61.0	244.0	5.0	9322.0

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED, TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

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 CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

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.

FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5793
DAVIDSON COUNTY

BRIDGE NO. 478

SHEET 2 OF 2



DocuSigned by:
Krishna P. Sedai 11/20/2017
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

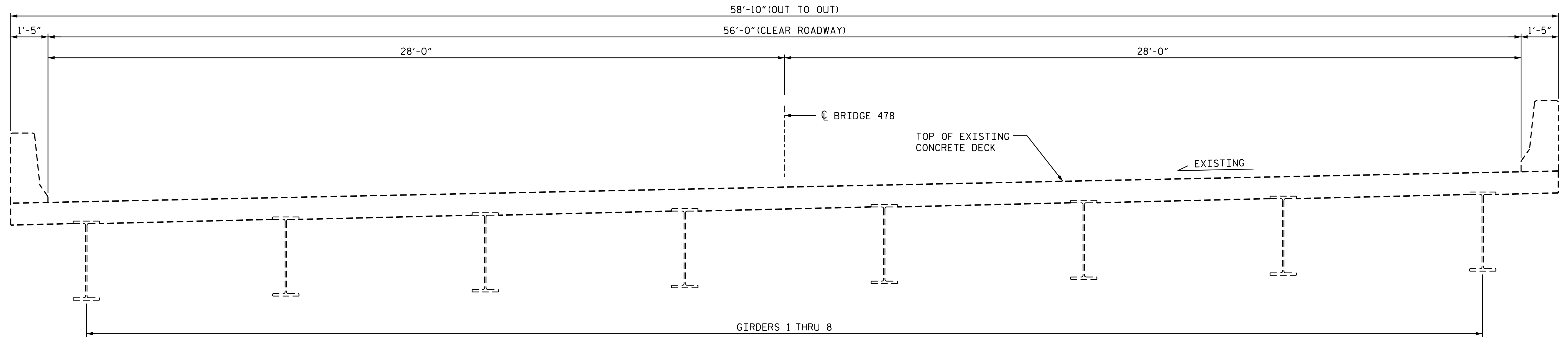
GENERAL DRAWING
FOR BRIDGE ON I-85
NBL OVER SR 2025

DRAWN BY : M. WELDON DATE : 08/2017
CHECKED BY : A. SORSENGINH DATE : 09/2017

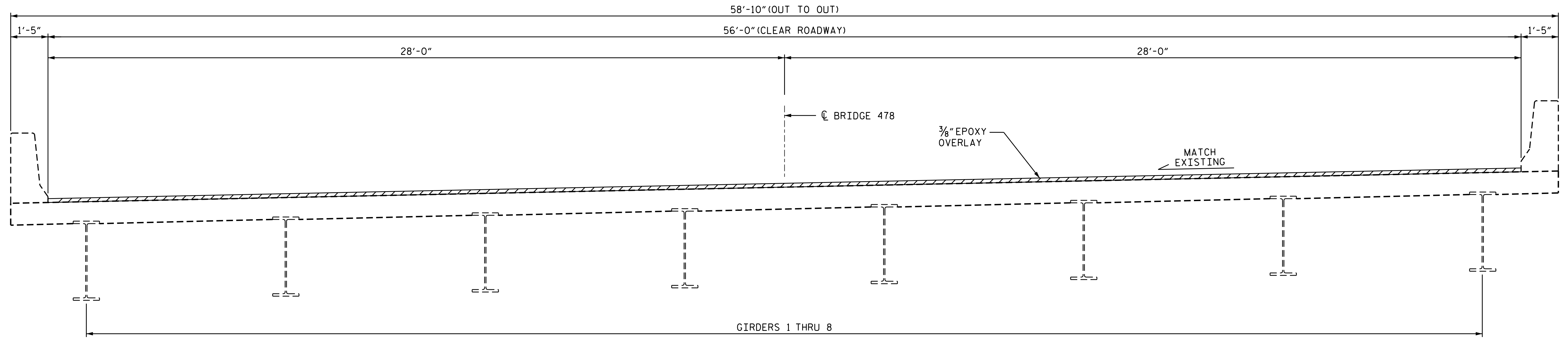
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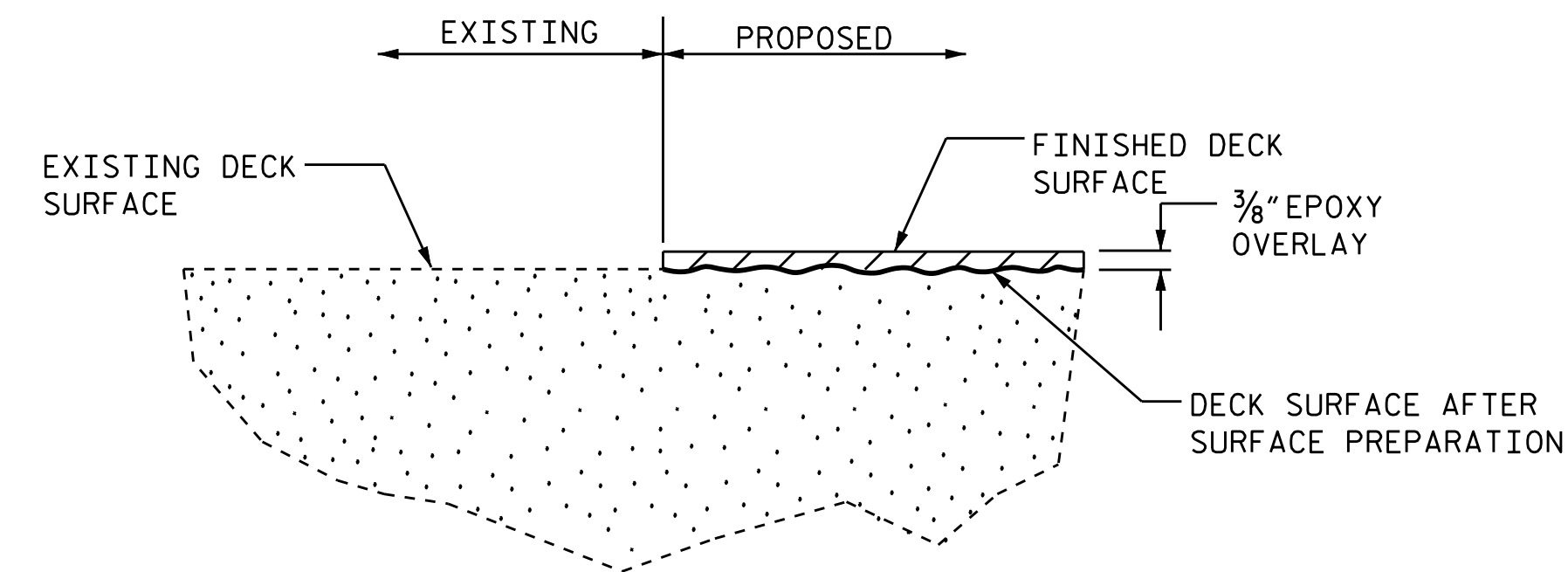
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-14
1			3			TOTAL SHEETS
2			4			52



TYPICAL SECTION
(EXISTING BRIDGE 478 NBL)
(RADIAL DIMENSIONS)



TYPICAL SECTION
(PROPOSED)
(RADIAL DIMENSIONS)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5793
DAVIDSON COUNTY
BRIDGE NO. 478



DocuSigned by:
Krishna P. Sedai 11/20/2017
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & EPOXY OVERLAY DETAILS

DRAWN BY : M.WELDON DATE : 08/2017
CHECKED BY : A. SORSENGINH DATE : 09/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

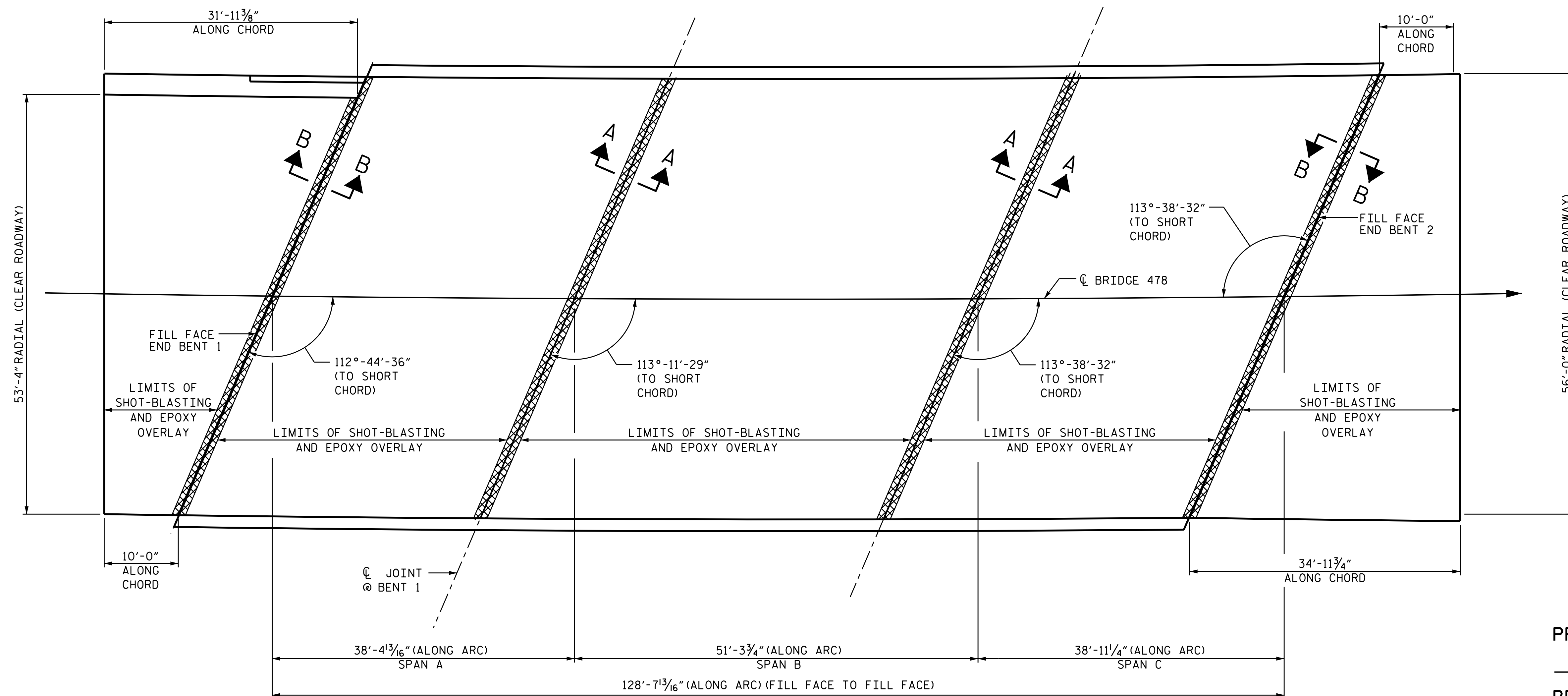
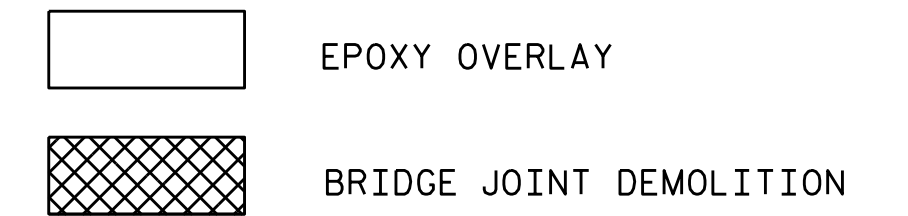
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-15
1			3			TOTAL SHEETS
2			4			52

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	*5 SQ. FT.	
EPOXY OVERLAY SYSTEM	9322.0 SQ. FT.	
BRIDGE JOINT DEMOLITION	242.0 SQ. FT.	

NOTE:

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 478

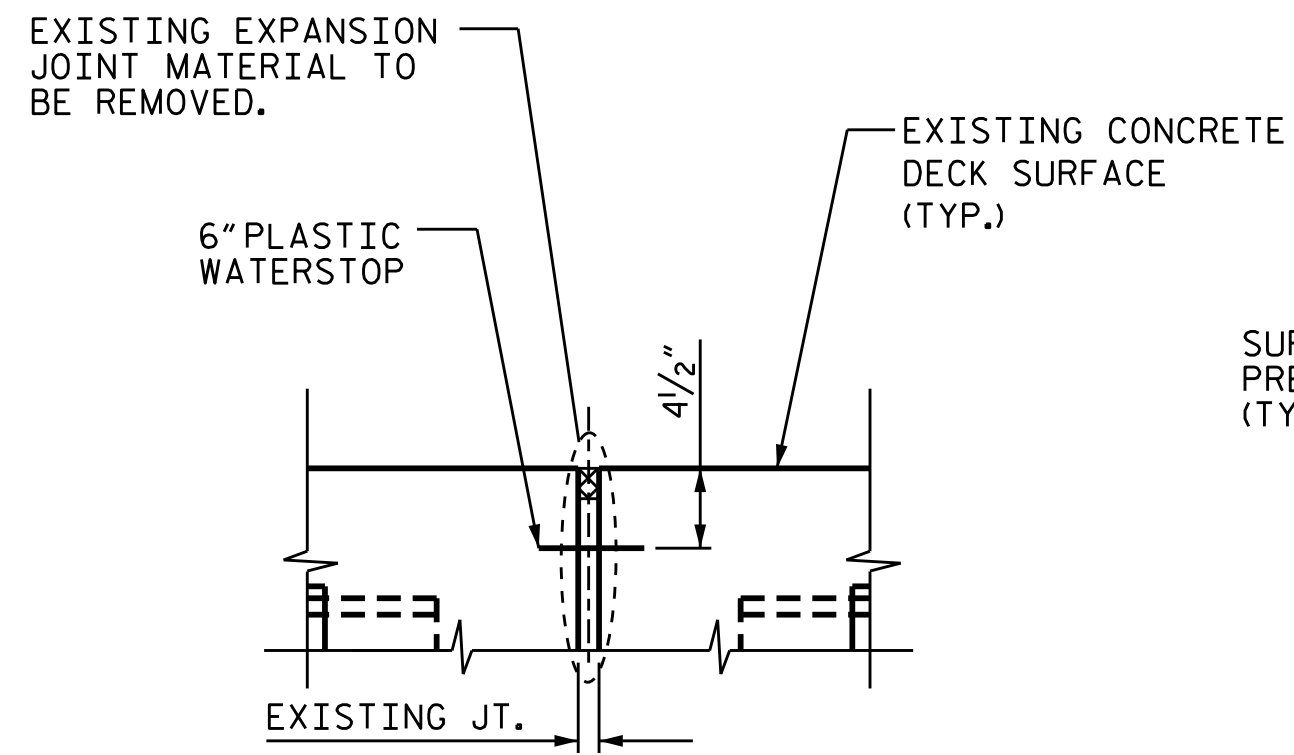


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 & EPOXY OVERLAY
 ON I-85 NBL
 OVER SR 2025**

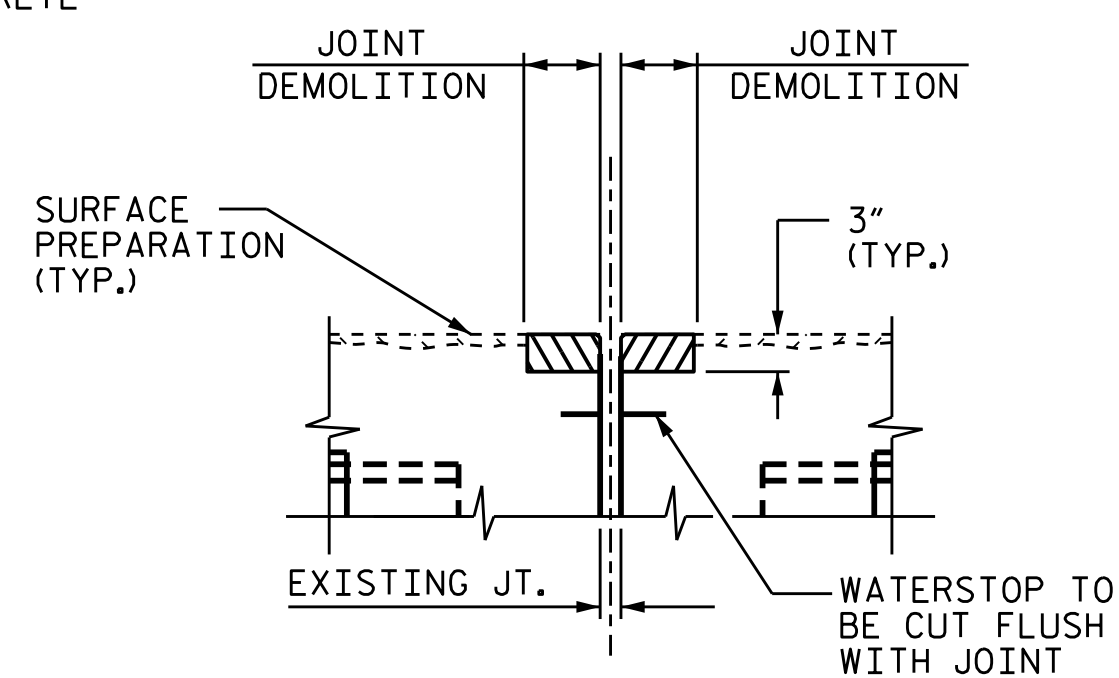
DRAWN BY : M. WELDON DATE : 08/2017
 CHECKED BY : A. SORSENGINH DATE : 09/2017

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			52
2			4			

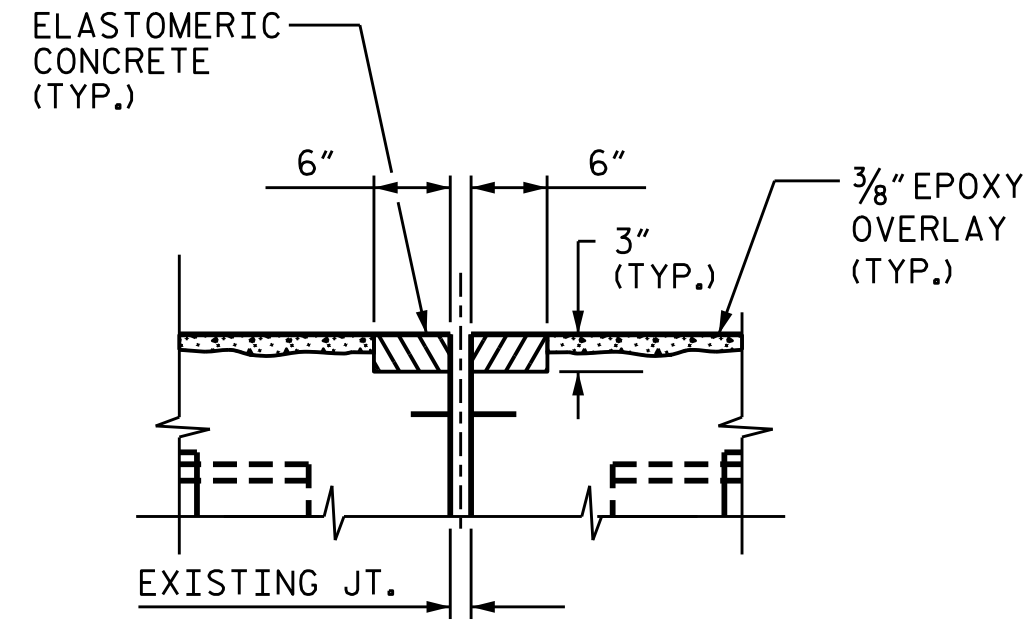
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



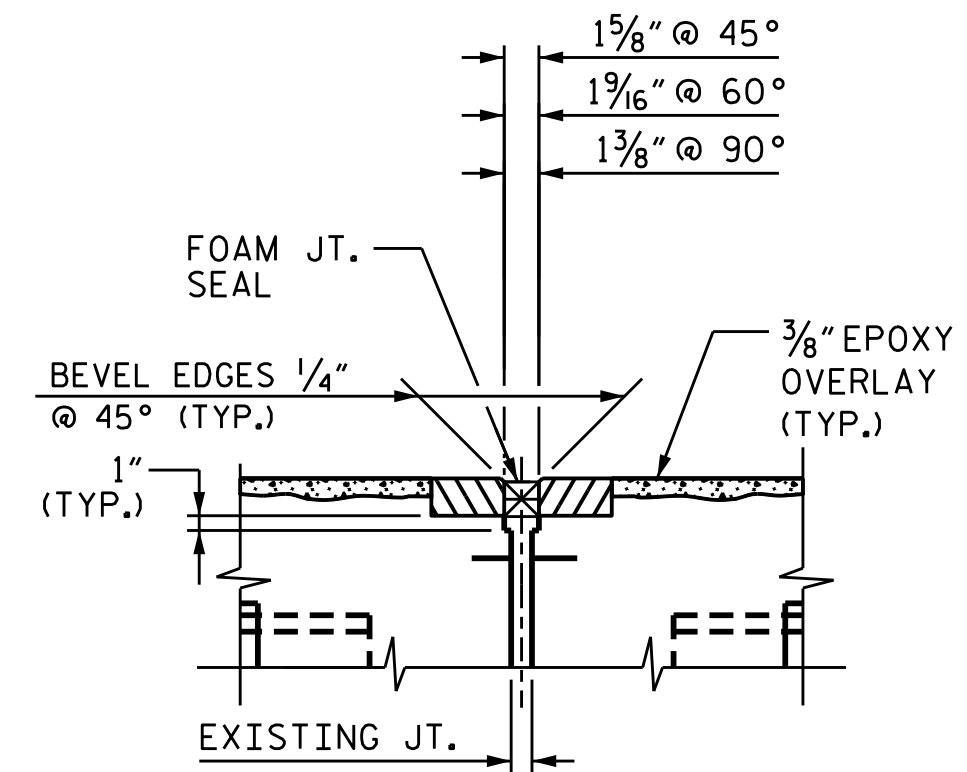
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT PRE-SAWED DIMENSIONS



PROPOSED FOAM JOINT SEAL EXPANSION
ALL BENTS

NOTES:

CONTRACTOR SHALL FIELD VERIFY THE EXISTING SAWED OPENING PRIOR TO OBTAINING JOINT MATERIAL.

IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE OR IF UNSOUND CONCRETE IS REMOVED TO WITHIN 2" OF THE WATERSTOP, THE ENTIRE WATERSTOP SHALL BE REMOVED.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

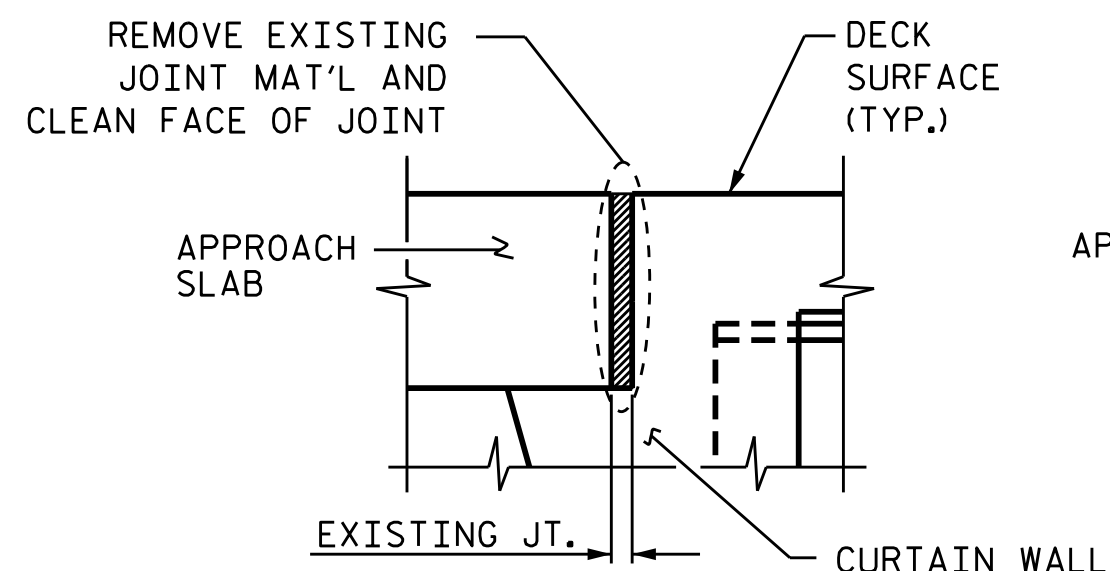
THE WIDTH OF THE UNCOMPRESSED FOAM JOINT MATERIAL SHALL BE 2".

ELASTOMERIC CONCRETE	
END BENT 1	14.8 CU. FT.
BENT 1	15.2 CU. FT.
BENT 2	15.3 CU. FT.
END BENT 2	15.3 CU. FT.
* TOTAL	60.6 CU. FT.

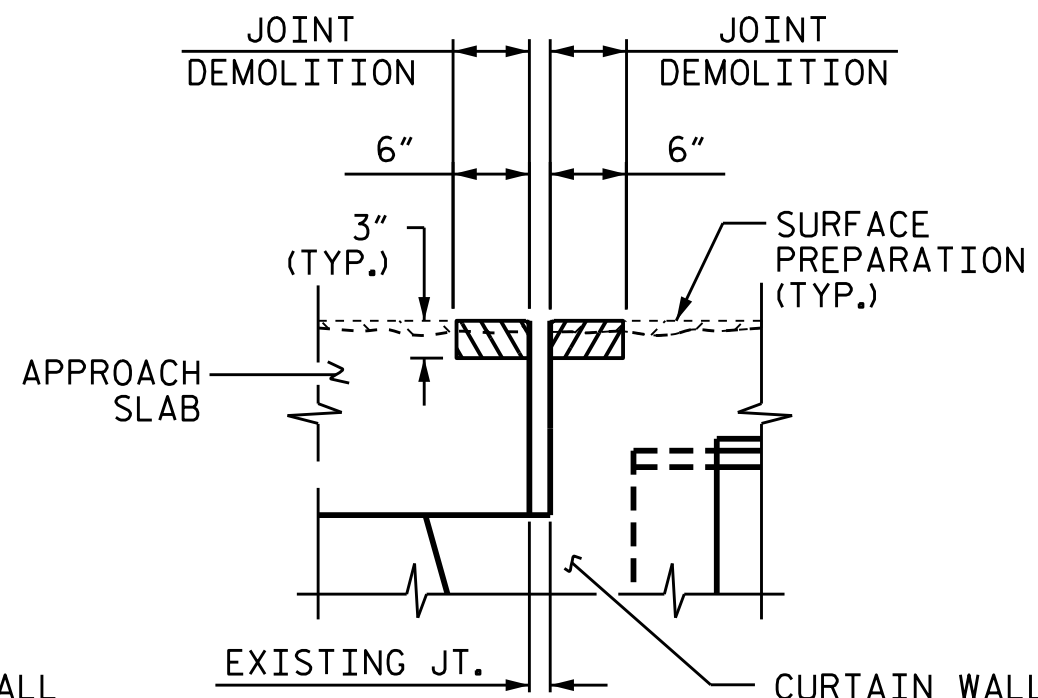
* BASED ON THE MINIMUM BLOCKOUT SHOWN.

JOINT INSTALLATION SEQUENCE AT BENTS

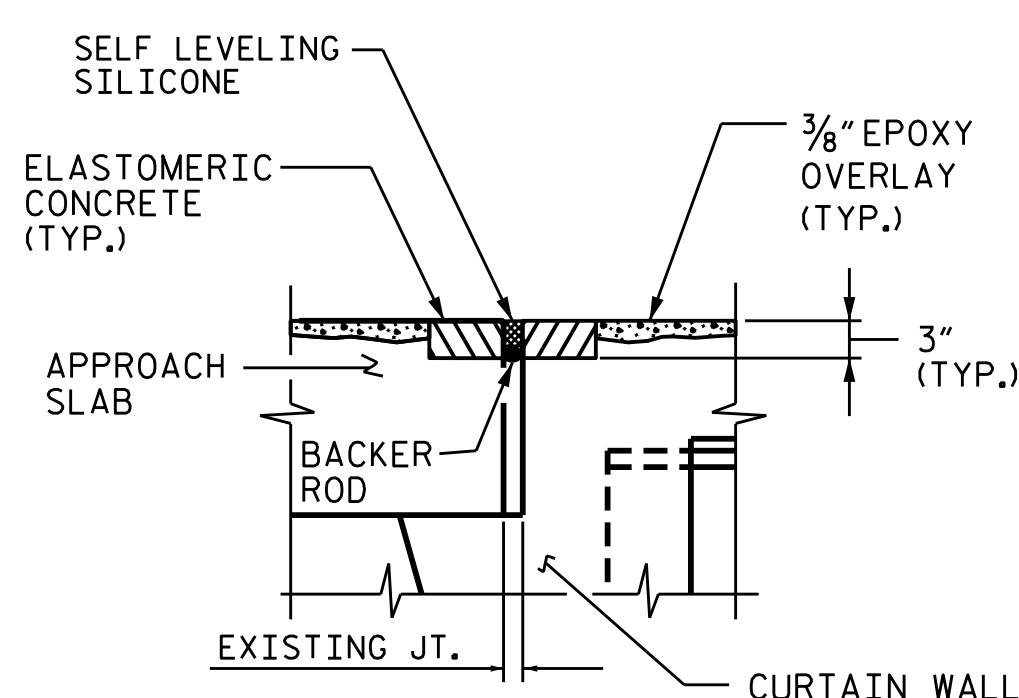
SECTION A-A



EXISTING JOINT



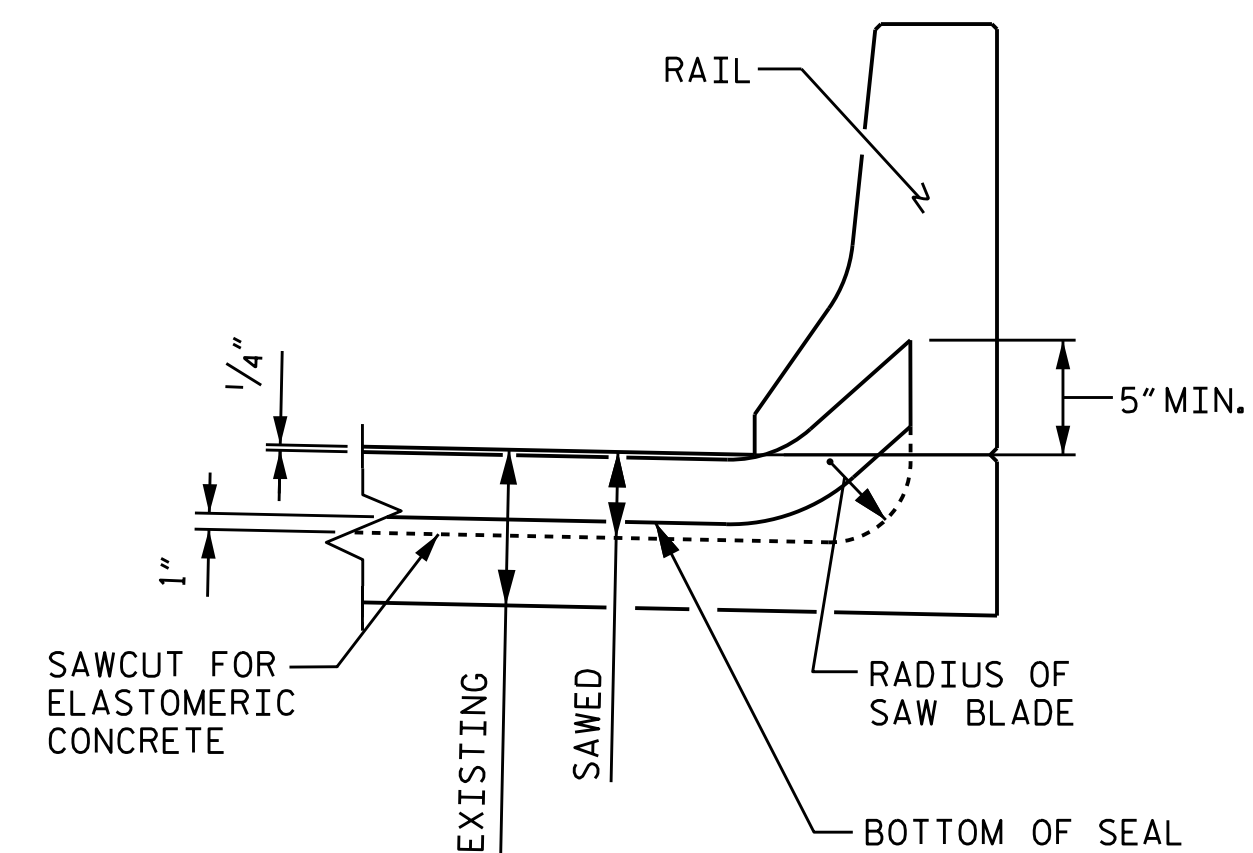
MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT

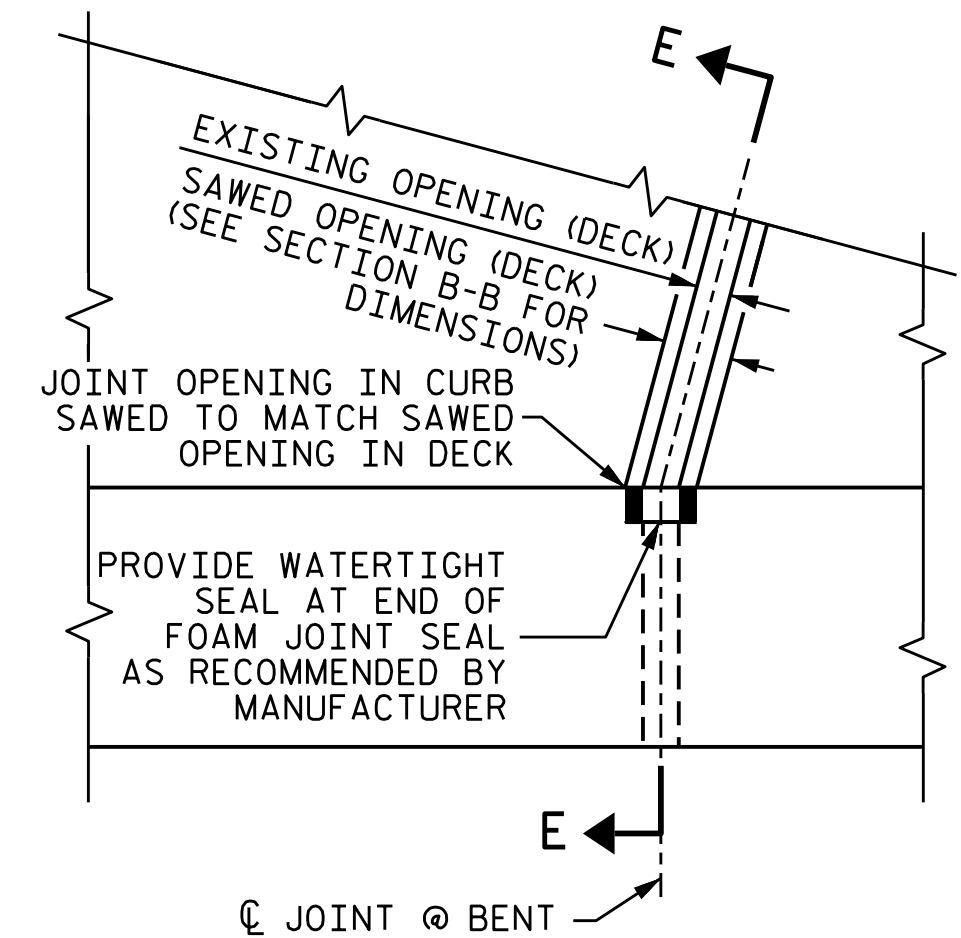
JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION B-B



SECTION E-E

JOINT SEAL DETAILS AT BENTS



SECTION B-B

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO.: 478



DocuSigned by:
 Krishna P. Sedoi 11/20/2017
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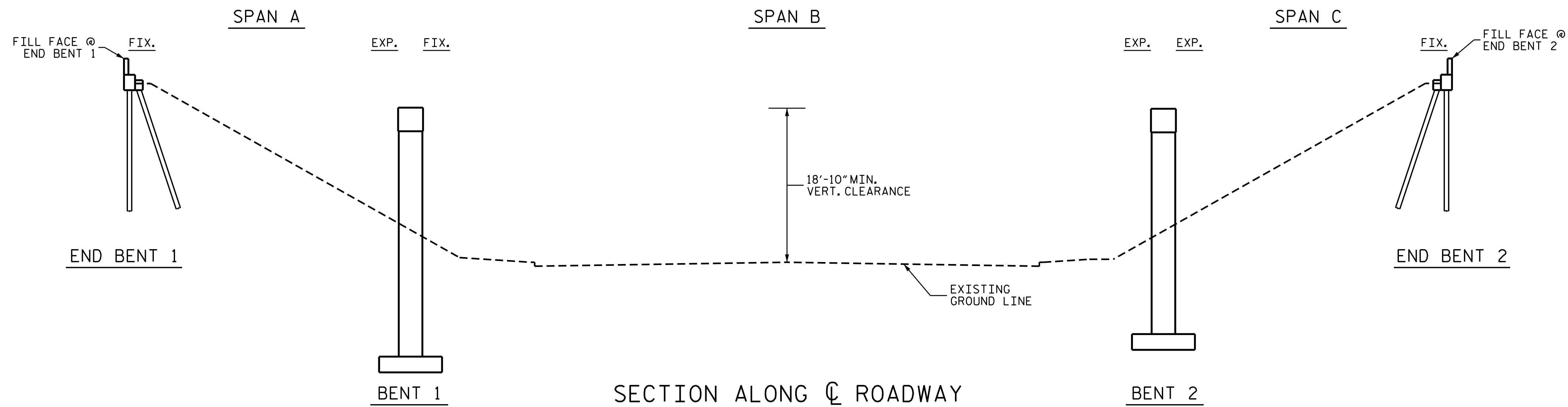
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUPERSTRUCTURE
 JOINT DETAILS**

DRAWN BY : M. WELDON DATE : 8/2017
 CHECKED BY : A. SORSENGINH DATE : 09/2017

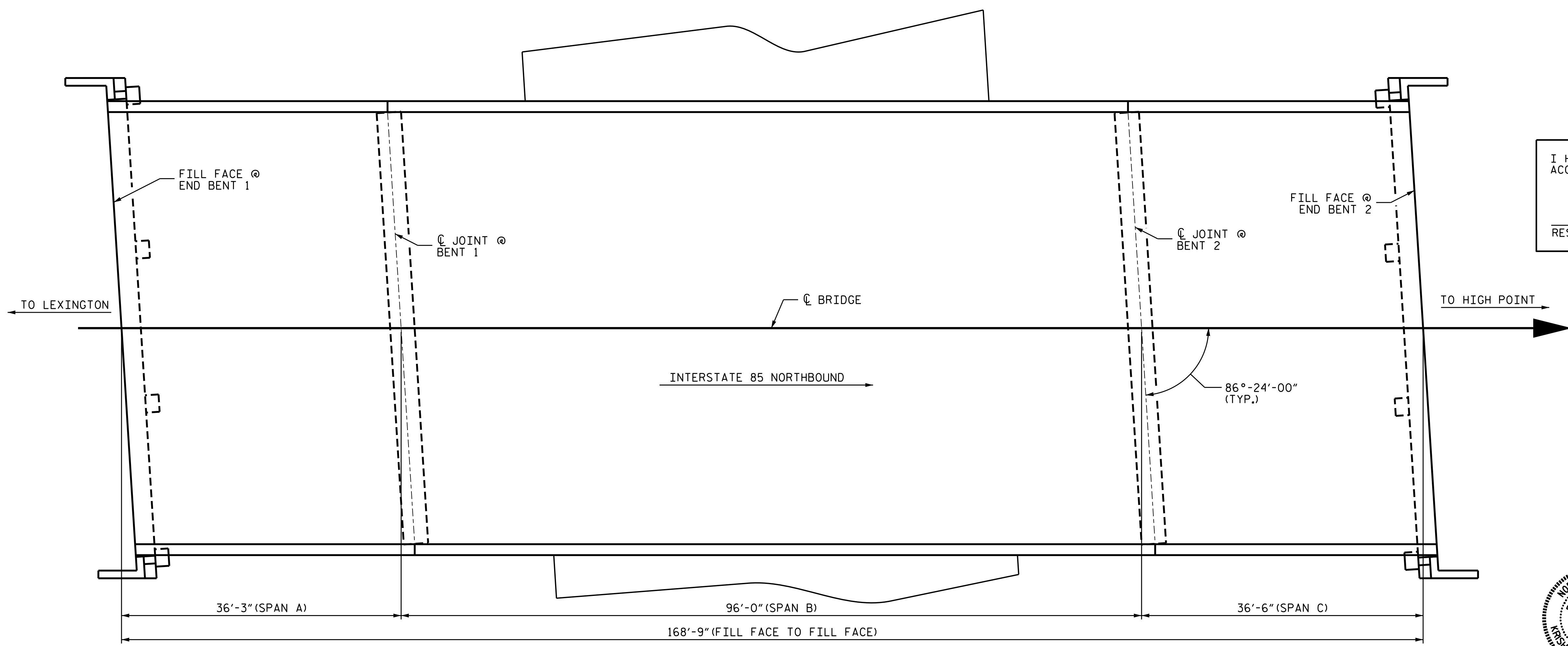
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-17
1			3			TOTAL SHEETS
2			4			52



NOTES
 PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 03/08/2016.
 BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

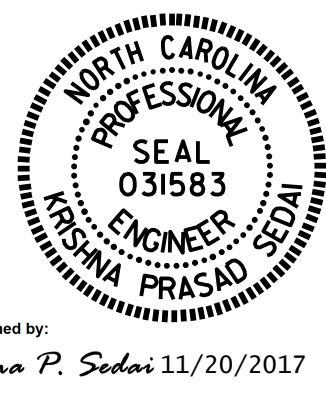
SCOPE OF WORK
 SURFACE PREPARATION AND PAINTING OF GIRDER ENDS.
 DEMOLISH EXISTING END BENT AND BENT JOINTS.
 SHOTBLAST EXISTING CONCRETE DECK.
 APPLY EPOXY OVERLAY SYSTEM SEALANT.
 RECONSTRUCT END BENT AND BENT JOINTS, INSTALL FOAM JOINT SEALS AT BENTS AND INSTALL SILICONE JOINT SEALER AT END BENTS.



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

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 479

SHEET 1 OF 3
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE
 ON INTERSTATE 85
 NORTHBOUND OVER
 NC 109



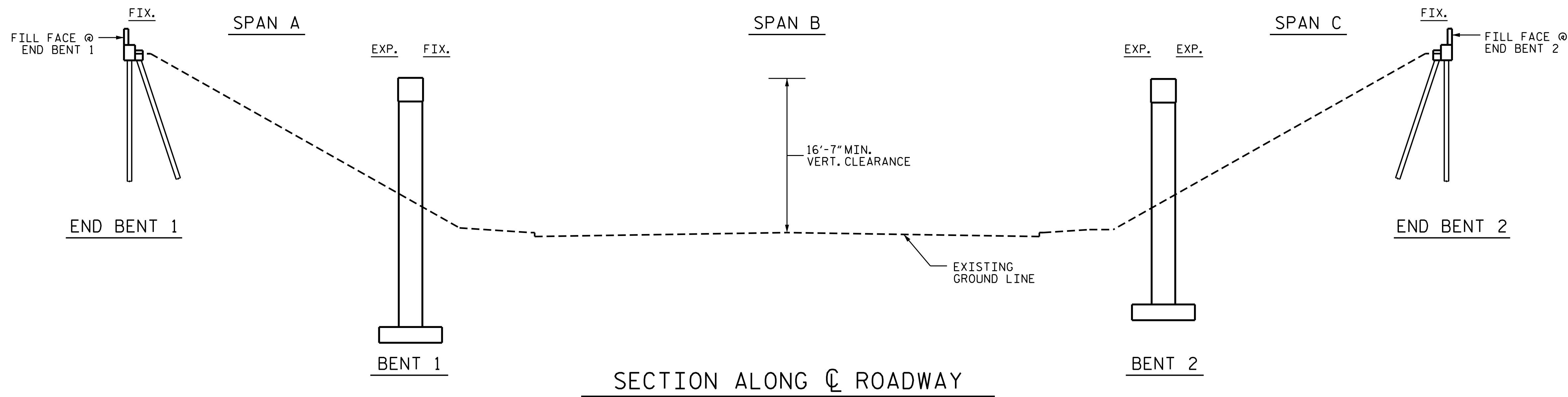
DocuSigned by:
 Krishna P. Sedai 11/20/2017
 EABF794150BF487...

DRAWN BY : M. WELDON DATE : 09/2017
 CHECKED BY : R.L. PUTEK DATE : 09/2017

PLAN
 NORTHBOUND LANE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-18
2			4			52



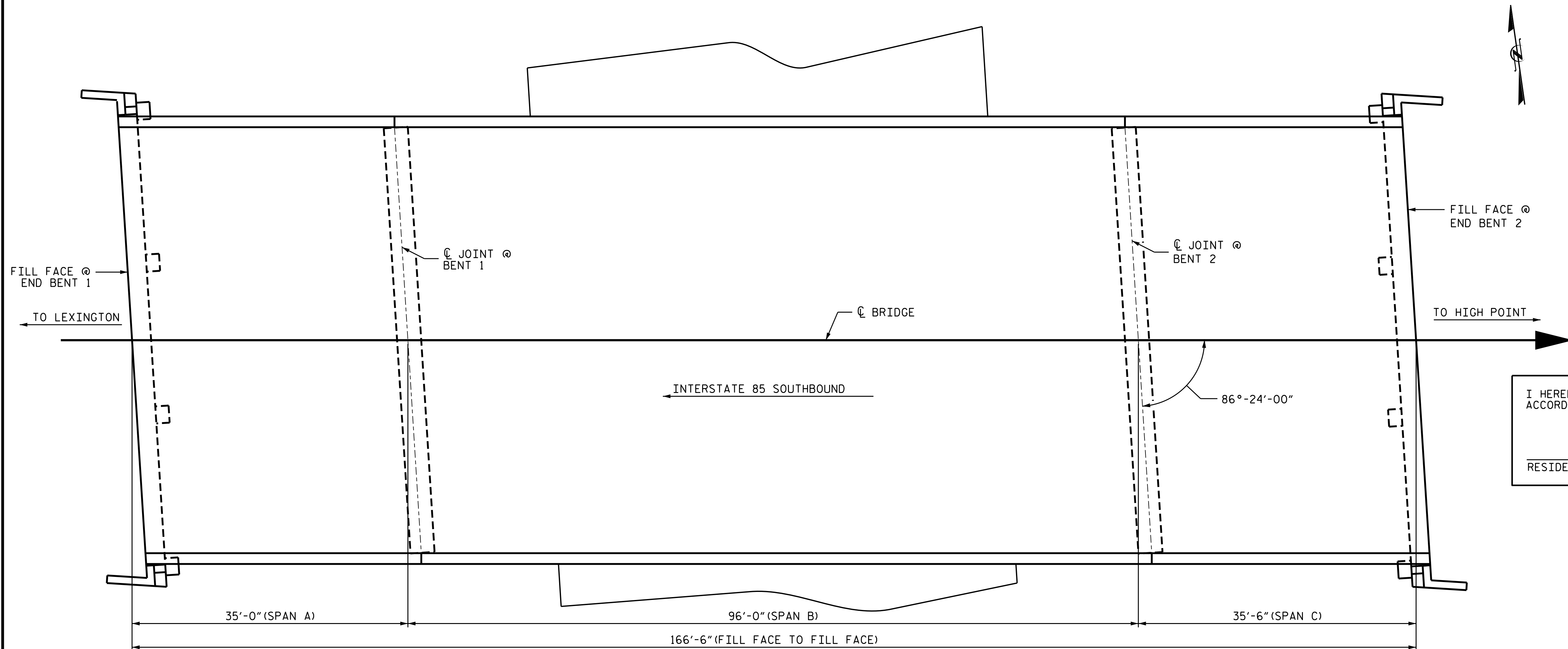
NOTES

PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 03/08/2016.
 BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SCOPE OF WORK

- SURFACE PREPARATION AND PAINTING OF GIRDER ENDS.
- DEMOLISH EXISTING END BENT AND BENT JOINTS.
- SHOTBLAST EXISTING CONCRETE DECK.
- APPLY EPOXY OVERLAY SYSTEM SEALANT.
- RECONSTRUCT END BENT AND BENT JOINTS, INSTALL FOAM JOINT SEALS AT BENTS AND INSTALL SILICONE JOINT SEALER AT END BENTS.

SECTION ALONG ϕ ROADWAY



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

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 480

SHEET 2 OF 3



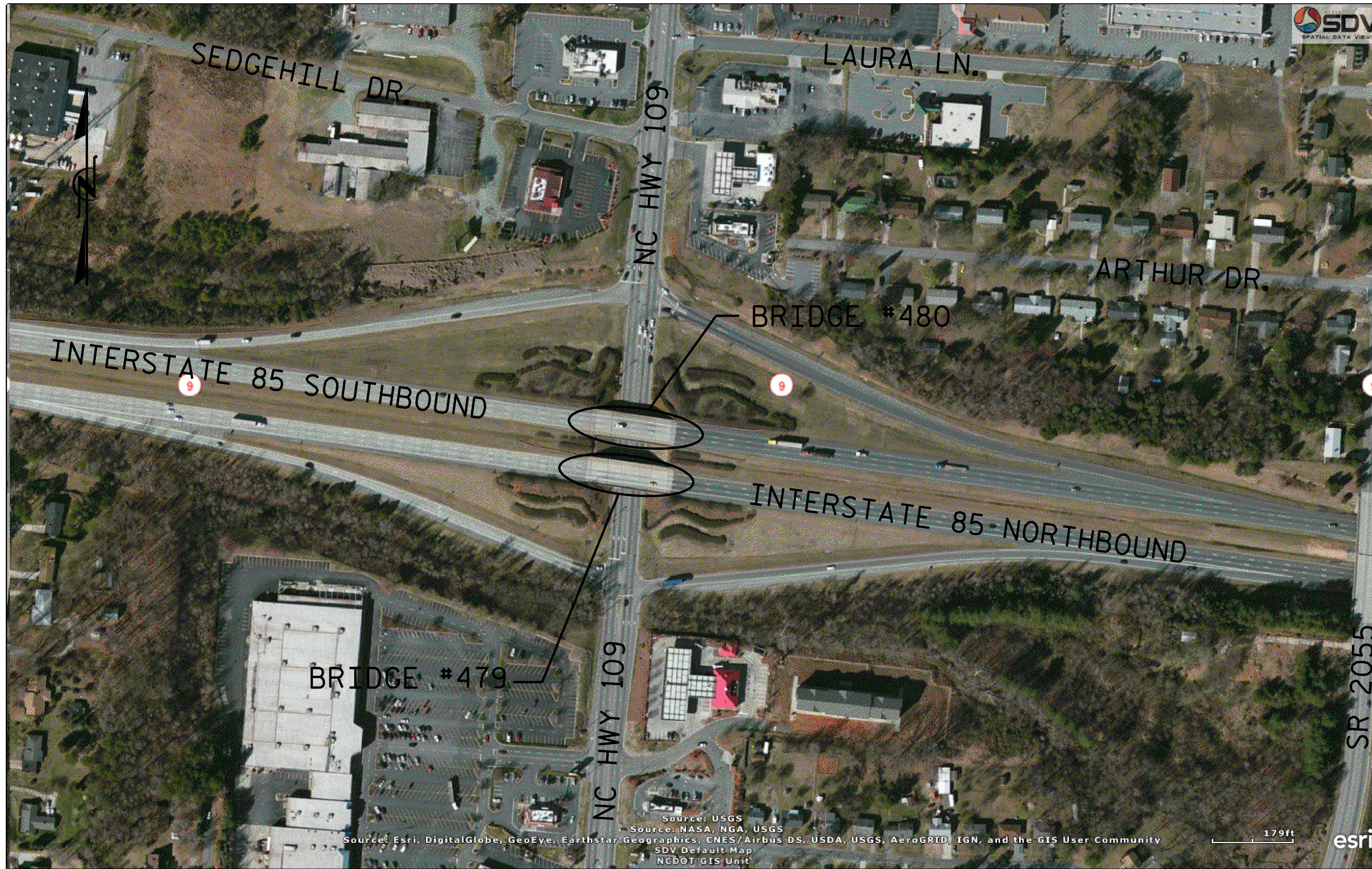
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE
 ON INTERSTATE 85
 SOUTHBOUND OVER
 NC 109

PLAN
 SOUTHBOUND LANE

DRAWN BY : M. WELDON DATE : 08/17
 CHECKED BY : R. PUTEK DATE : 09/17

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-19
1			3			TOTAL SHEETS
2			4			52



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 NO.	POLLUTION CONTROL	FOAM JOINT SEALS	PAINTING CONTAINMENT FOR BRIDGE NOS...	PAINTING EXISTING WEATHERING STEEL STRUCTURE FOR BRIDGE NOS...	SILICONE JOINT SEALANT	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	* CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY SYSTEM	CLEANING AND PAINTING EXISTING BEARINGS WITH HRCSA FOR BRIDGE NOS...
	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	CU. FT.	SO. FT.	SO. FT.	SO. FT.	EA.
479	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	112.2	56.0	224.0	5.0	10475.0	48
480	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	112.2	56.0	224.0	5.0	10350.0	48
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	224.4	112.0	448.0	10.0	20825.0	96

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED, TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

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 CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

FOR PAINTING OF EXISTING WEATHERING STEEL STRUCTURE, SEE SPECIAL PROVISIONS.

FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

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.

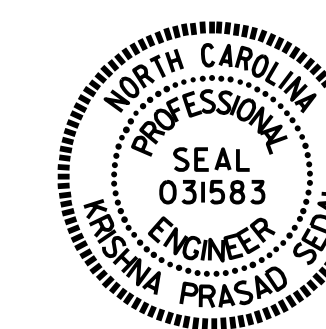
FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR PAINTING CONTAINMENT, POLLUTION CONTROL, AND CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA, SEE CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA SPECIAL PROVISION.

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 479/480

SHEET 3 OF 3



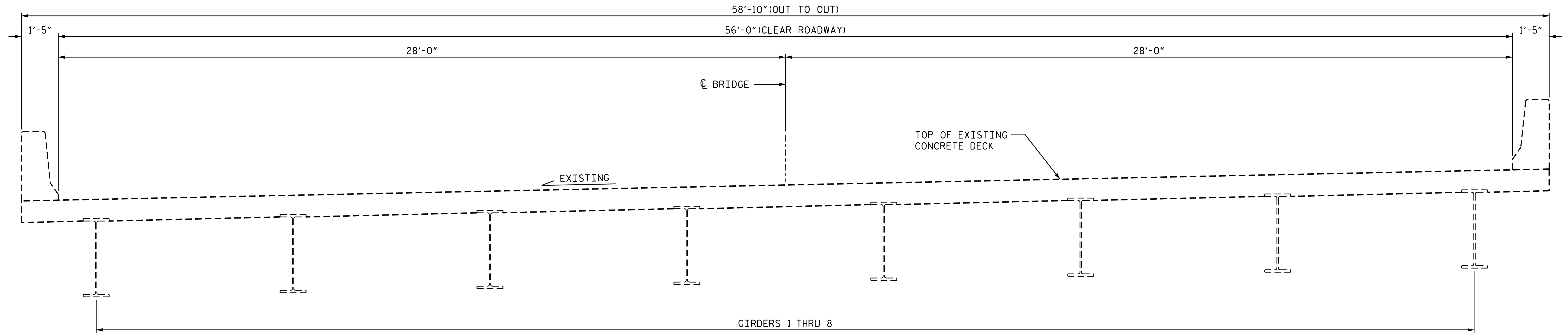
DocuSigned by:
 Krishna P. Sedai 11/20/2017
 EABF794150BF4B7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR BRIDGE
 ON INTERSTATE 85
 NBL & SBL OVER
 NC 109

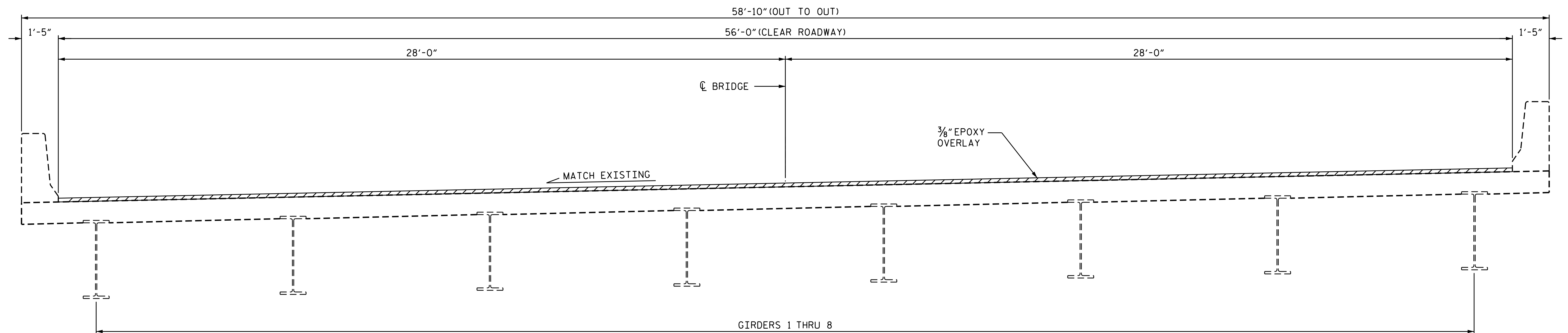
DRAWN BY : M. WELDON DATE : 08/17
 CHECKED BY : R.L. PUTEK DATE : 09/17

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-20
1			3			TOTAL SHEETS
2			4			52



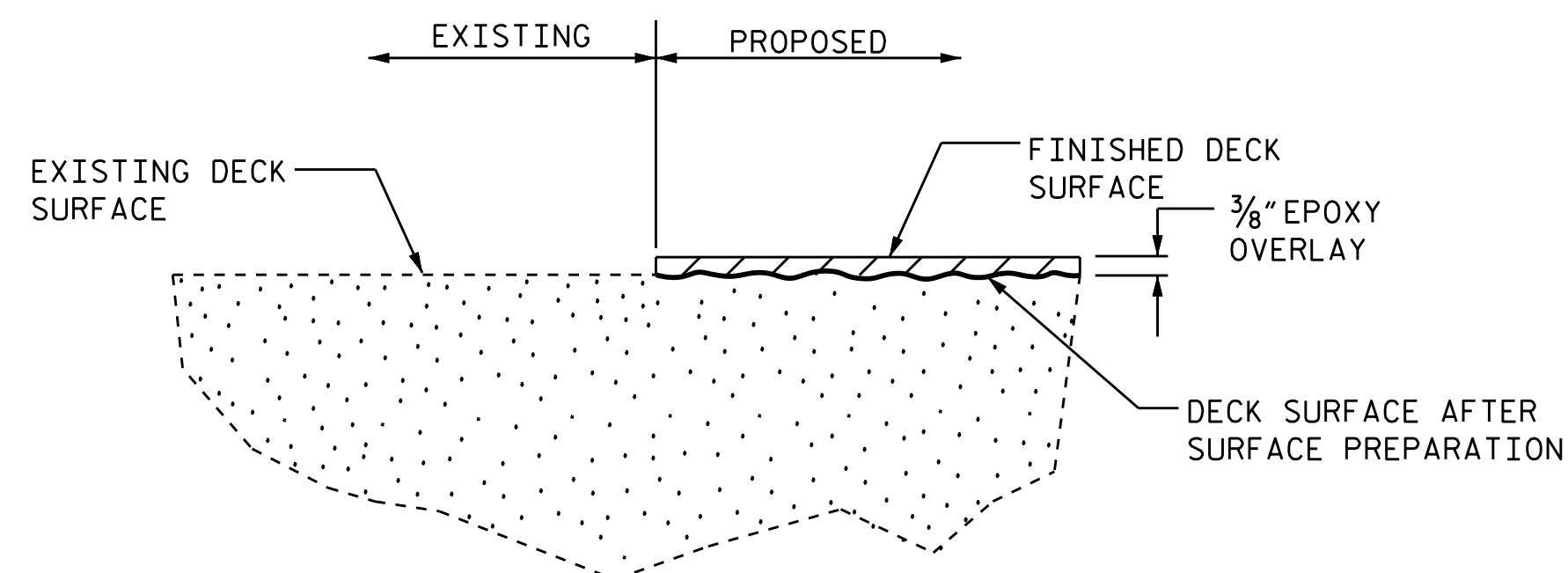
TYPICAL SECTION
(EXISTING BRIDGE)



TYPICAL SECTION
(PROPOSED)

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 479/480

NOTE:
 STRUCTURE 480 SHOWN,
 STRUCTURE 479 SIMILAR BY ROTATION



DETAIL OF EPOXY OVERLAY



DocuSigned by:
 Krishna P. Sedai 11/20/2017
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SUPERSTRUCTURE
 TYPICAL SECTION
 & EPOXY OVERLAY
 DETAILS**

DRAWN BY : M.WELDON DATE : 08/2017
 CHECKED BY : R.PUTEK DATE : 09/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

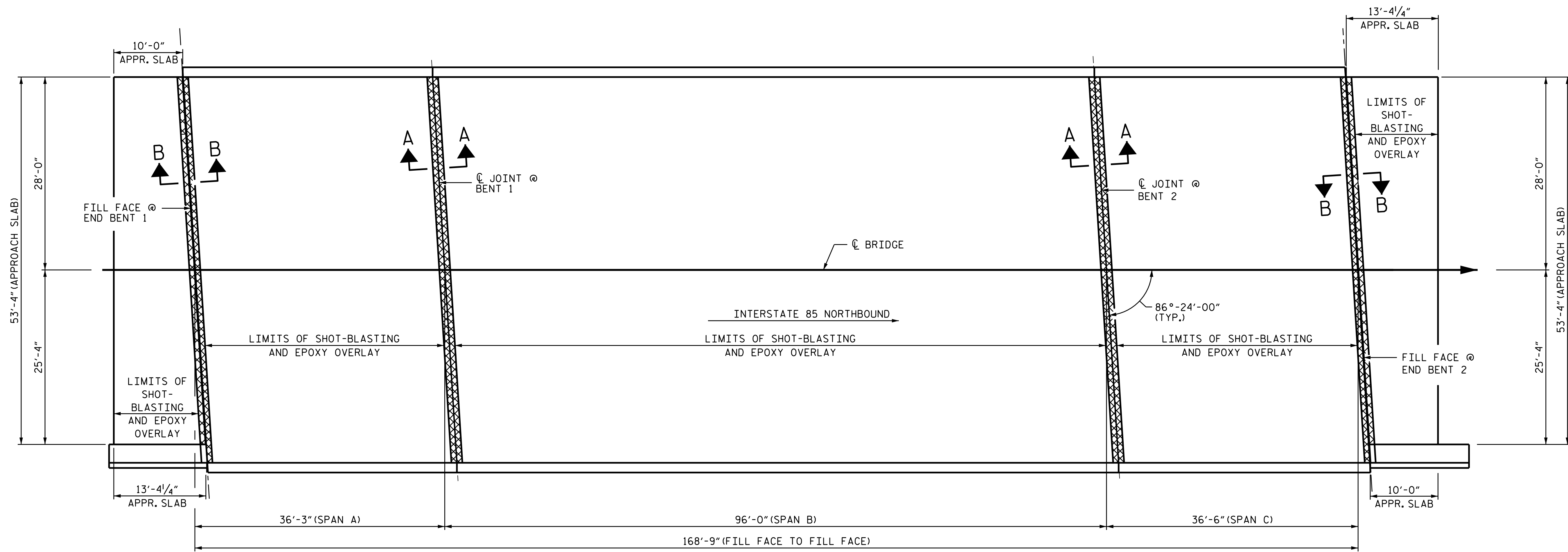
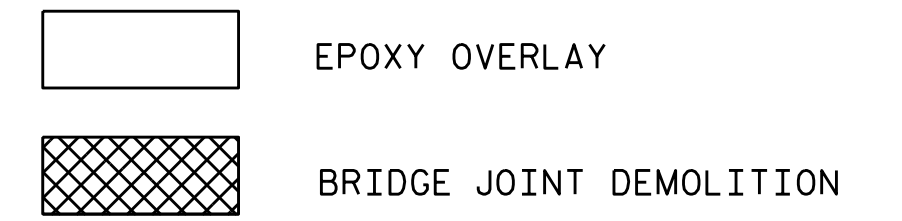
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-21
1			3			TOTAL SHEETS
2			4			52

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	*5 SQ. FT.	
EPOXY OVERLAY SYSTEM	10475.0 SQ. FT.	
BRIDGE JOINT DEMOLITION	224.0 SQ. FT.	

NOTE:

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PLAN OF SPANS

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

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 479



Drawn by: Krishna P. Sedai 11/20/2017
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 ksedai

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION & EPOXY OVERLAY

DRAWN BY : M. WELDON DATE : 08/17
 CHECKED BY : R. PUTEK DATE : 09/17

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

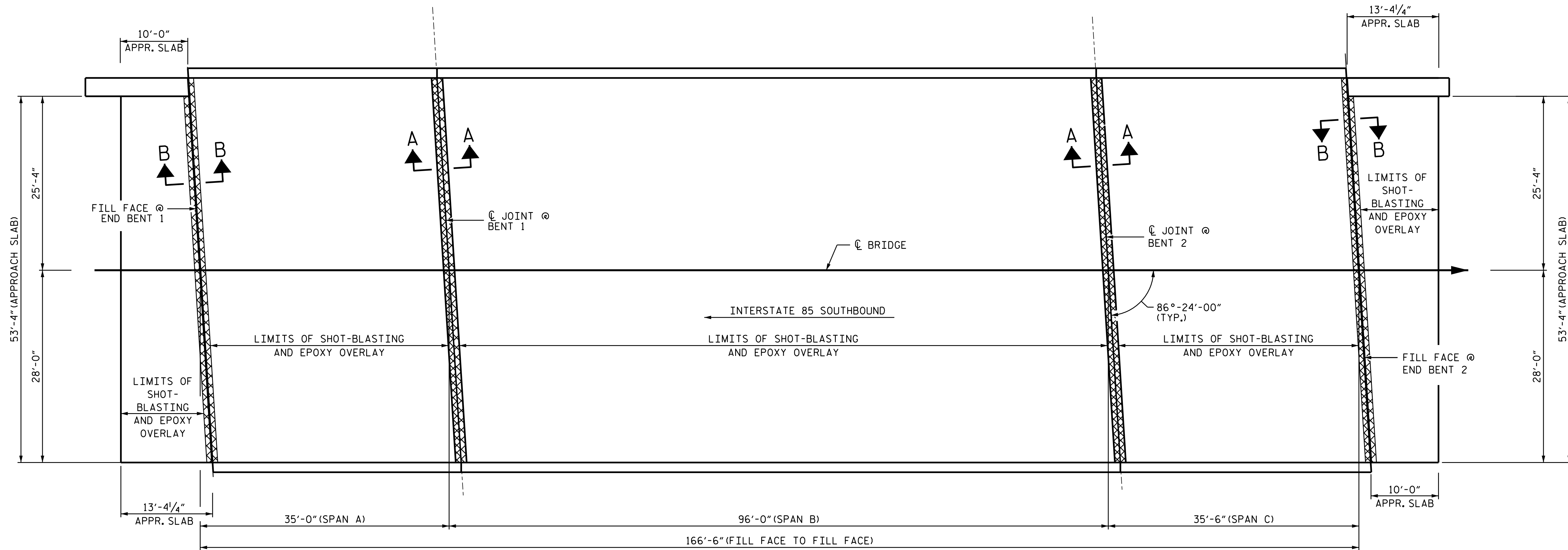
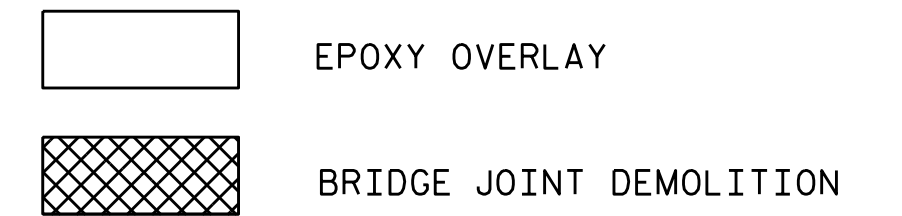
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-22
1			3			TOTAL SHEETS
2			4			52

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	*5 SQ. FT.	
EPOXY OVERLAY SYSTEM	10350.0 SQ. FT.	
BRIDGE JOINT DEMOLITION	224.0 SQ. FT.	

NOTE:

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PLAN OF SPANS

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

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 480



Drawn by: Krishna P. Prasad 11/20/2017
 E:\TIP\Projects-I\I5793\Structures\finalplans\401.047.I5793.SMU.SP.23.280479.480.dgn
 ksedot

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION & EPOXY OVERLAY

DRAWN BY : M. WELDON DATE : 08/17
 CHECKED BY : R. PUTEK DATE : 09/17

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-23
1			3			TOTAL SHEETS
2			4			52

NOTES:

CONTRACTOR SHALL FIELD VERIFY THE EXISTING SAWED OPENINGS PRIOR TO OBTAINING JOINT MATERIAL.

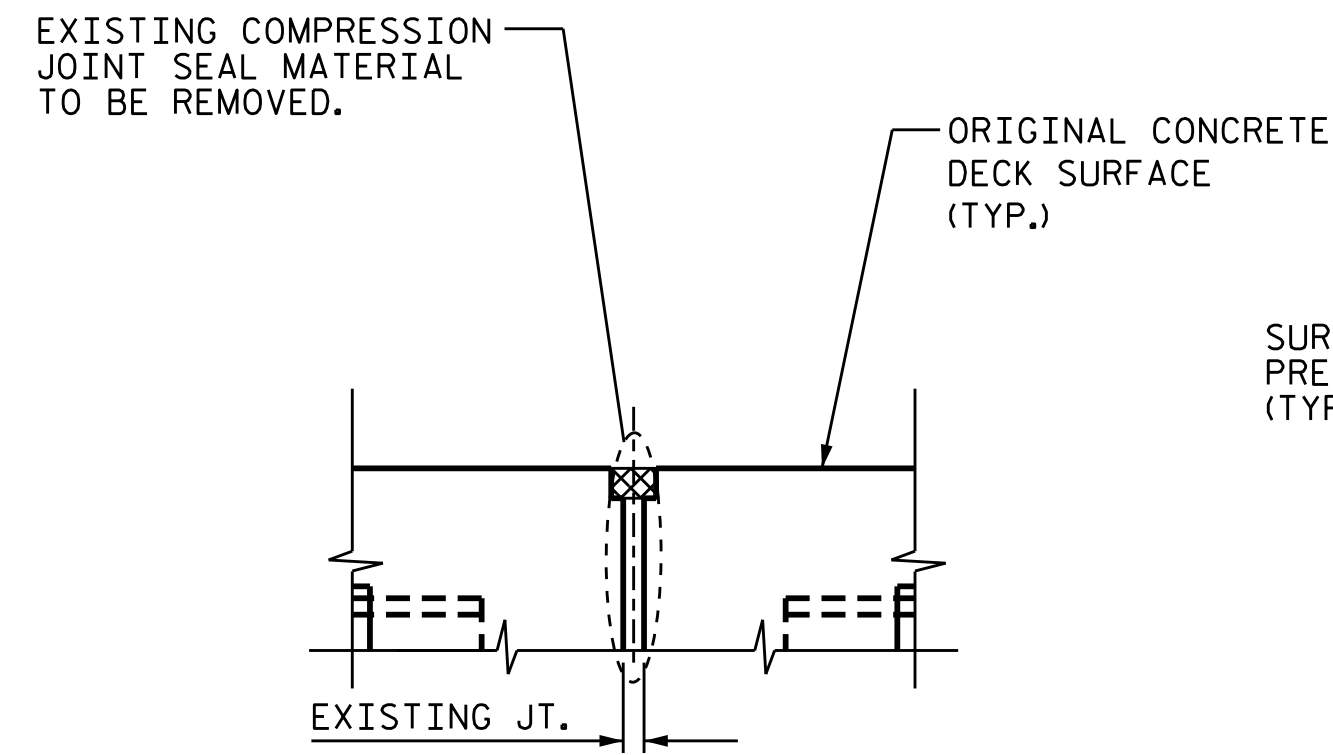
IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE OR IF UNSOUND CONCRETE IS REMOVED TO WITHIN 2" OF THE WATERSTOP, THE ENTIRE WATERSTOP SHALL BE REMOVED.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

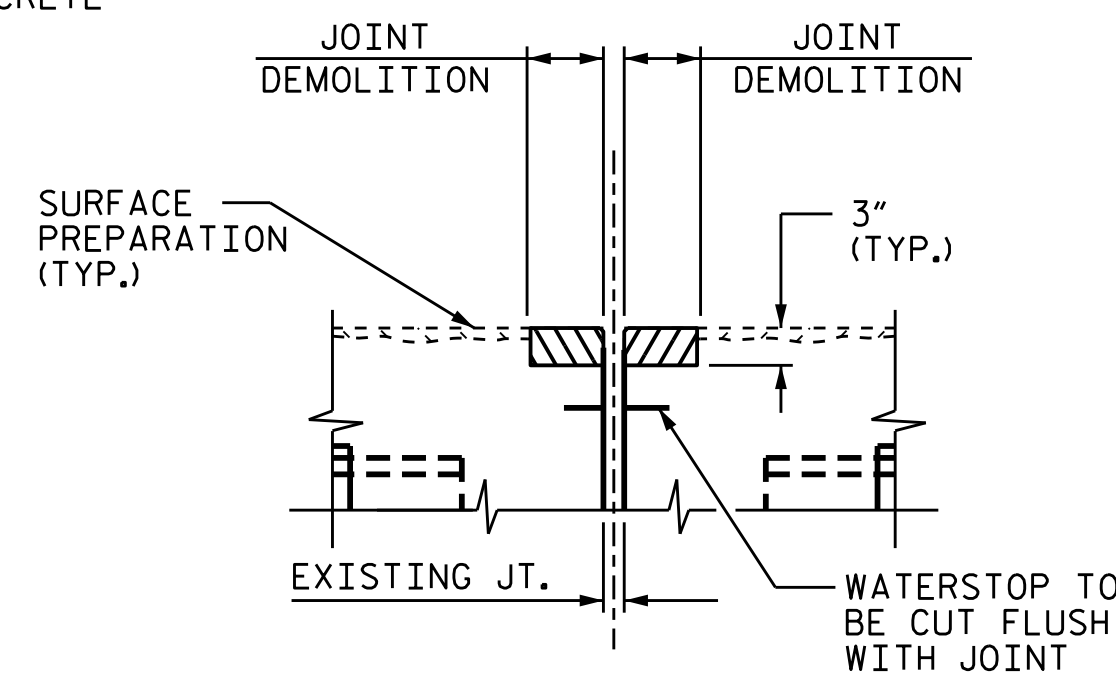
FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

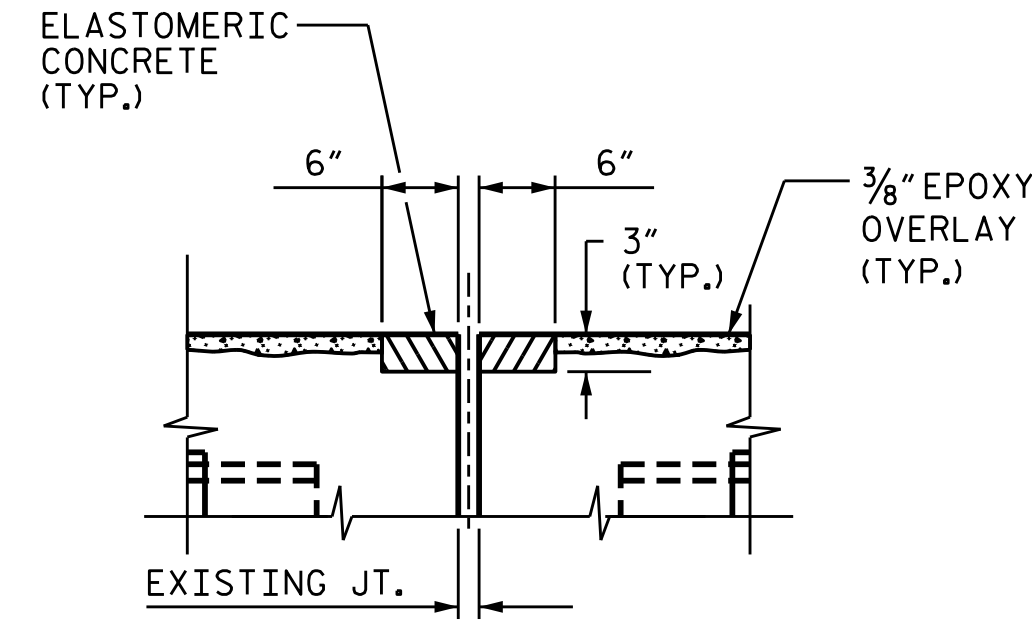
THE WIDTH OF THE UNCOMPRESSED FOAM JOINT MATERIAL SHALL BE 2" AT BENT #1 AND 3" AT BENT #2.



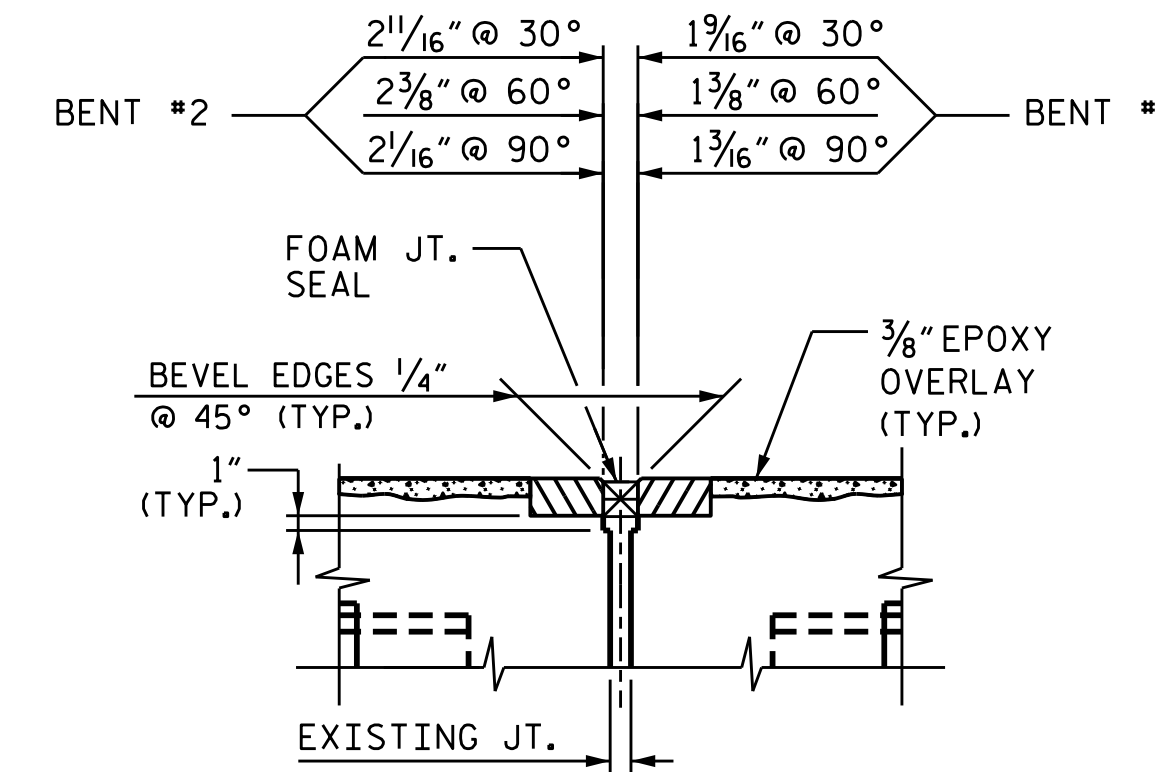
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



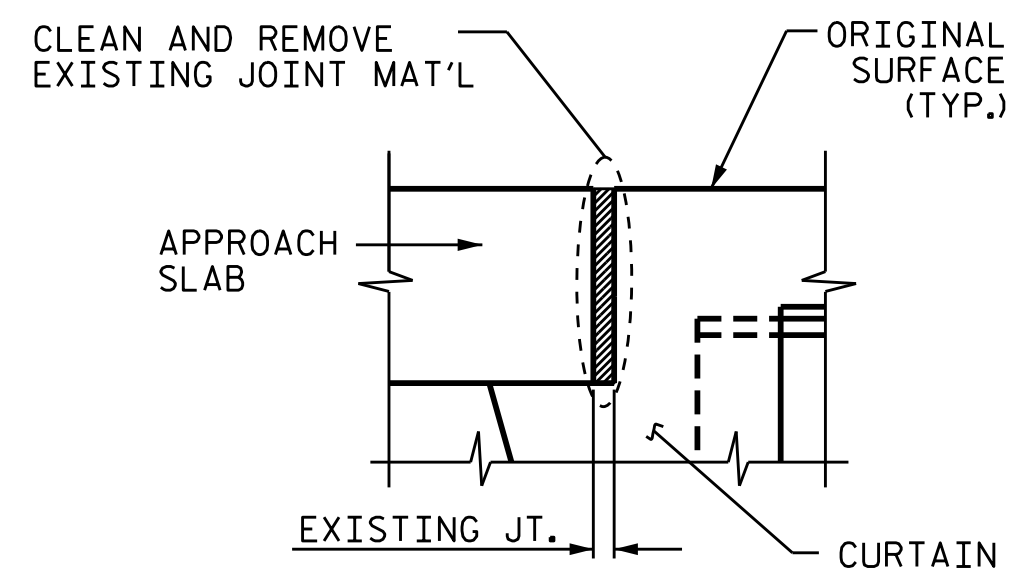
PROPOSED JOINT PRE-SAWED DIMENSIONS



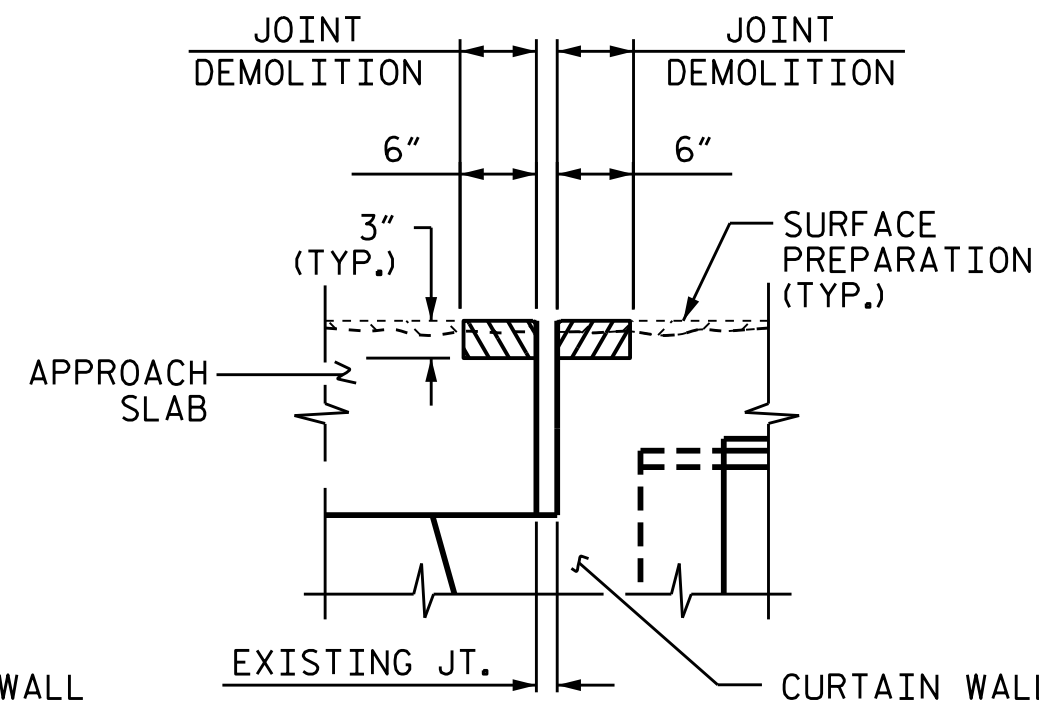
PROPOSED FOAM JOINT SEAL EXPANSION

JOINT INSTALLATION SEQUENCE AT BENTS

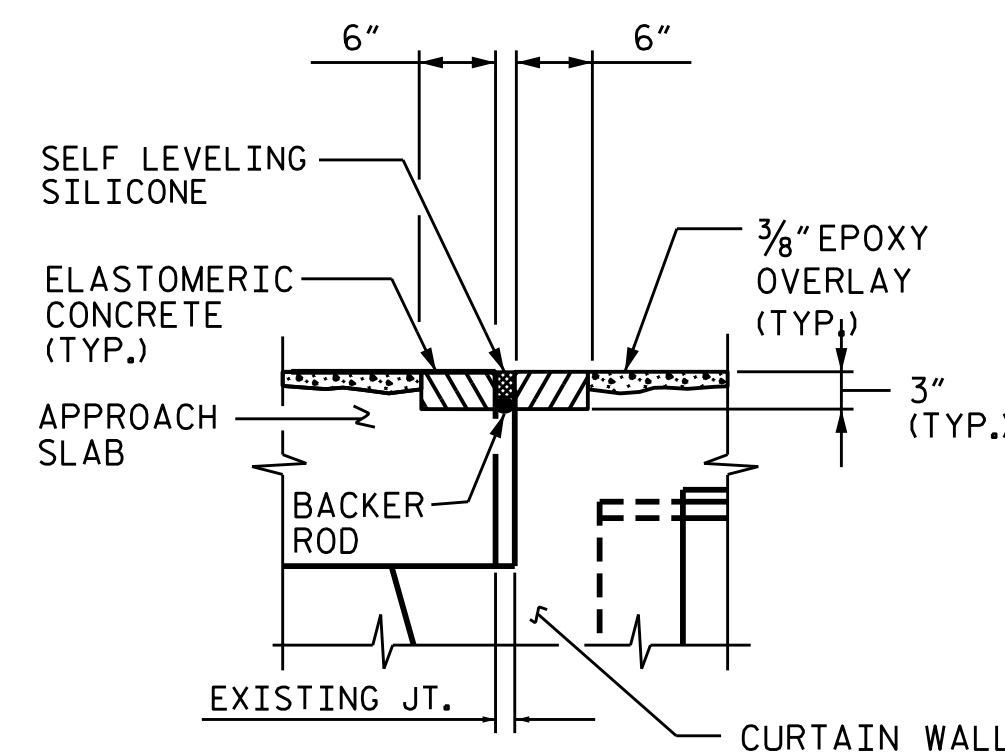
SECTION A-A



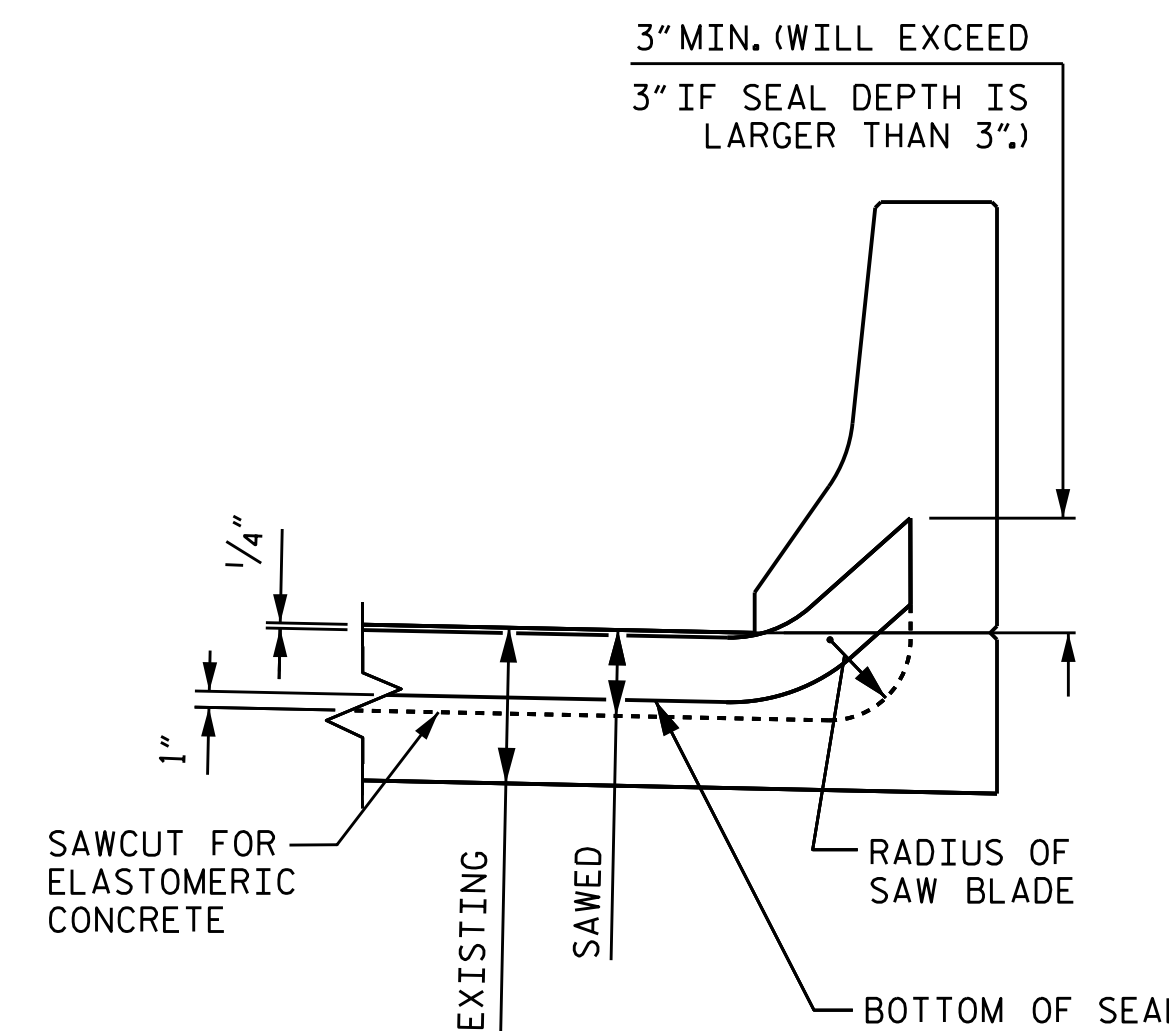
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION

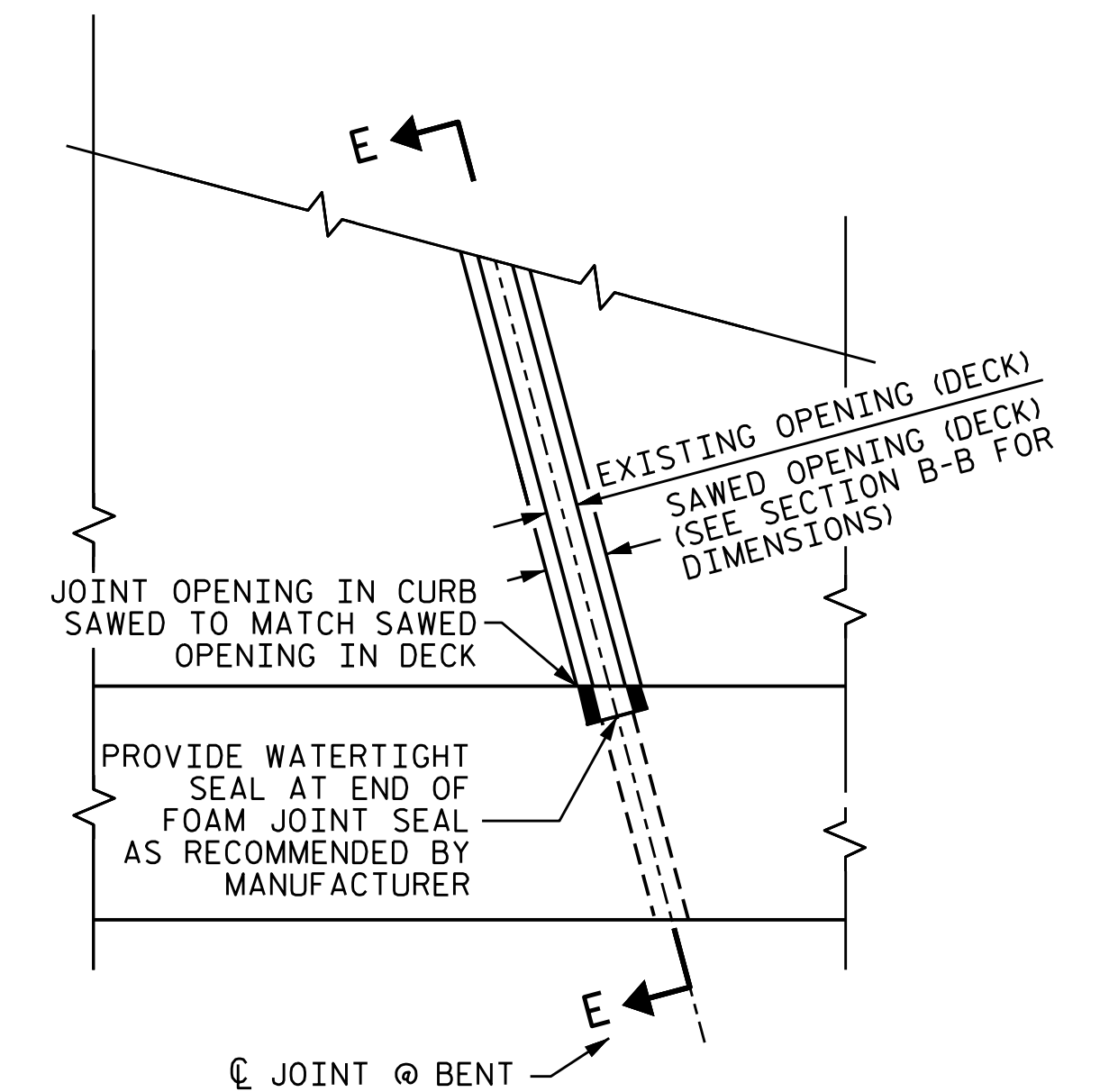


PROPOSED JOINT



SECTION E-E

JOINT SEAL DETAILS AT BENTS



JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION B-B

ELASTOMERIC CONCRETE	
BRIDGE 479	56 CU. FT.
BRIDGE 480	56 CU. FT.
* TOTAL	112 CU. FT.

* BASED ON THE MINIMUM BLOCKOUT SHOWN.



DocuSigned by: Krishna P. Sedai 11/20/2017

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO.: 479/480

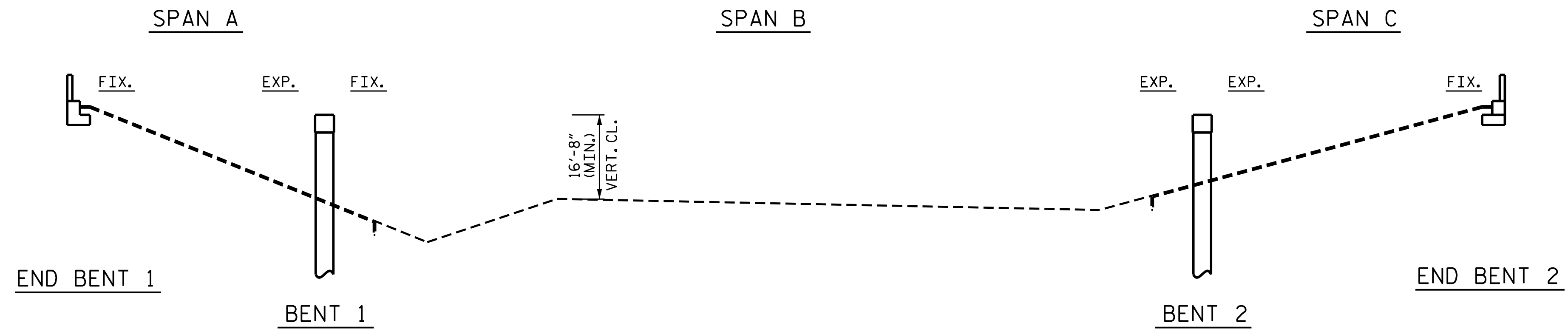
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE JOINT DETAILS

DRAWN BY : M. WELDON DATE : 8/2017
 CHECKED BY : R. PUTEK DATE : 09/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

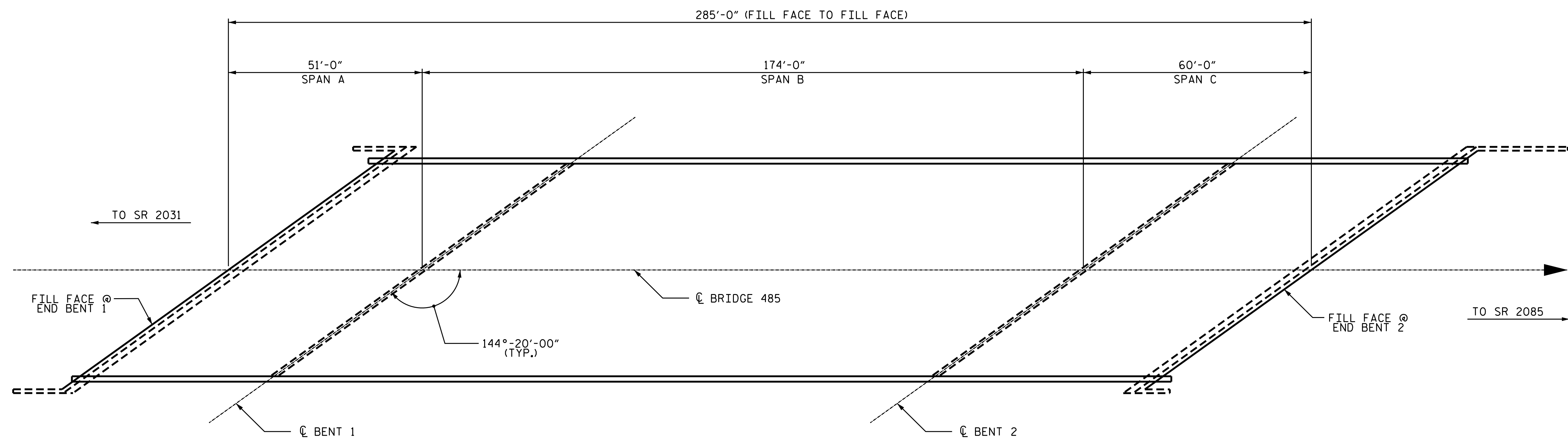
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-24
1			3			TOTAL SHEETS 52
2			4			



ELEVATION
(SECTION ALONG $\text{\textcircled{C}}$ ROADWAY)

NOTES
GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 04-27-2016.
BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

- SCOPE OF WORK**
- SURFACE PREPARATION AND PAINTING OF GIRDER ENDS.
 - DEMOLISH EXISTING END BENT AND BENT JOINTS.
 - SHOTBLAST EXISTING CONCRETE DECK.
 - APPLY EPOXY OVERLAY SYSTEM SEALANT.
 - RECONSTRUCT END BENT AND BENT JOINTS. INSTALL FOAM JOINT SEALS AT BENTS AND INSTALL SILICONE JOINT SEALER AT END BENTS.
 - PERFORM SHOTCRETE REPAIRS IN PREPARED AREAS.



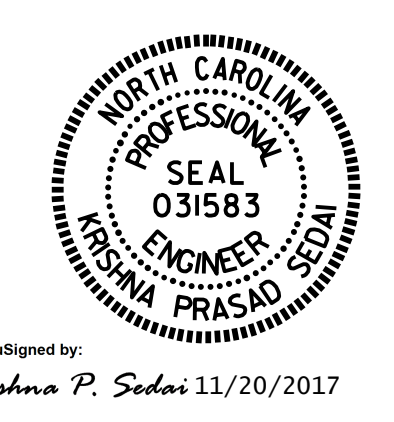
PLAN
(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

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

RESIDENT ENGINEER _____ DATE _____

PROJECT NO. I-5793
DAVIDSON COUNTY
BRIDGE NO. 485

SHEET 1 OF 2



DocuSigned by:
Krishna P. Sedai 11/20/2017
EABF794150BF487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE OVER I-85 SBL
ON I-85 NBL BETWEEN
SR 2031 AND SR 2085

DRAWN BY : H.A. LOCKLEAR DATE : 8-17
CHECKED BY : E.K. POPE DATE : 9-26-17

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-25
1			3			TOTAL SHEETS
2			4			52



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 NO. 485	POLLUTION CONTROL	SHOTCRETE REPAIRS	FOAM JOINT SEALS	PAINTING CONTAINMENT FOR BRIDGE NO...	PAINTING EXISTING WEATHERING STEEL STRUCTURE FOR BRIDGE NO...	SILICONE JOINT SEALANT	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	*CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY SYSTEM	CLEANING AND PAINTING EXISTING BEARINGS WITH HRCSA FOR BRIDGE NO...
	LUMP SUM	CU. FT.	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	CU. FT.	SO. FT.	CU. FT.	SO. FT.	EA.
TOTAL	LUMP SUM	188.7	LUMP SUM	LUMP SUM	LUMP SUM	192.1	97.0	419.0	5.0	20,824.0	48

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

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 CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, 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.

FOR PAINTING EXISTING WEATHERING STEEL STRUCTURE, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

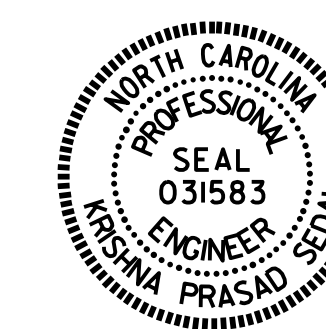
EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS.

FOR PAINTING CONTAINMENT, POLLUTION CONTROL, AND CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA, SEE CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA SPECIAL PROVISION.

PROJECT NO. I-5793
DAVIDSON COUNTY

BRIDGE NO. 485

SHEET 2 OF 2



DocuSigned by:
Krishna P. Sedai 11/20/2017
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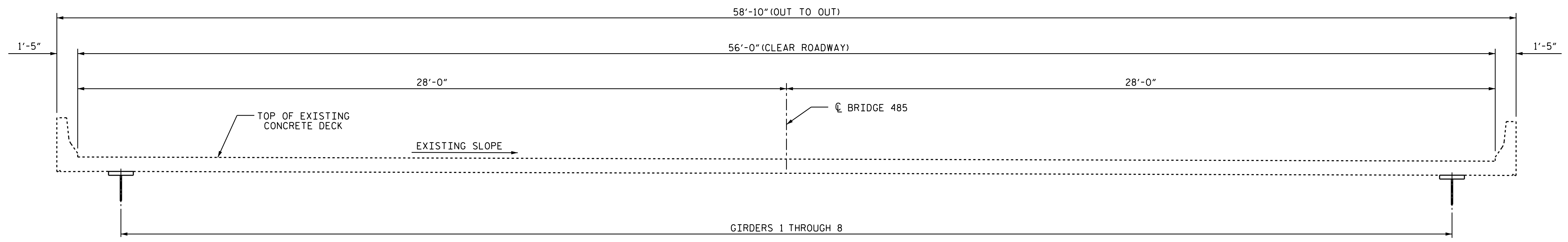
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
FOR BRIDGE OVER I-85 SBL
ON I-85 NBL BETWEEN
SR 2031 AND SR 2085

DRAWN BY : H.A. LOCKLEAR DATE : 8-17
CHECKED BY : E. K. POPE DATE : 9-26-17

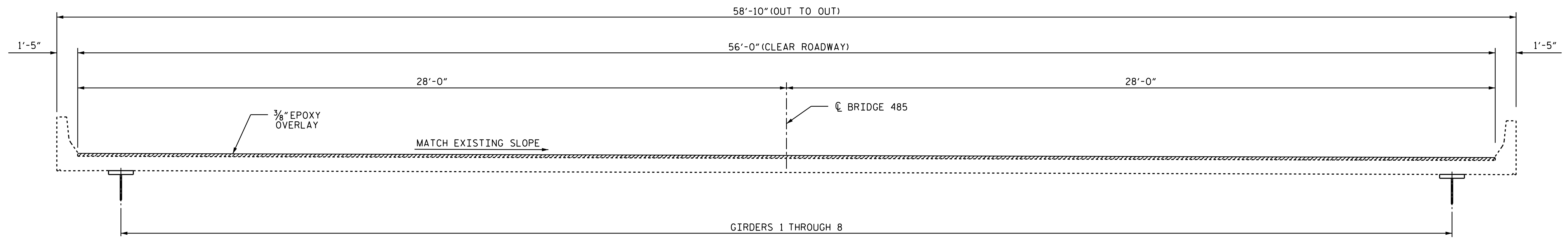
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1			3			TOTAL SHEETS
2			4			52

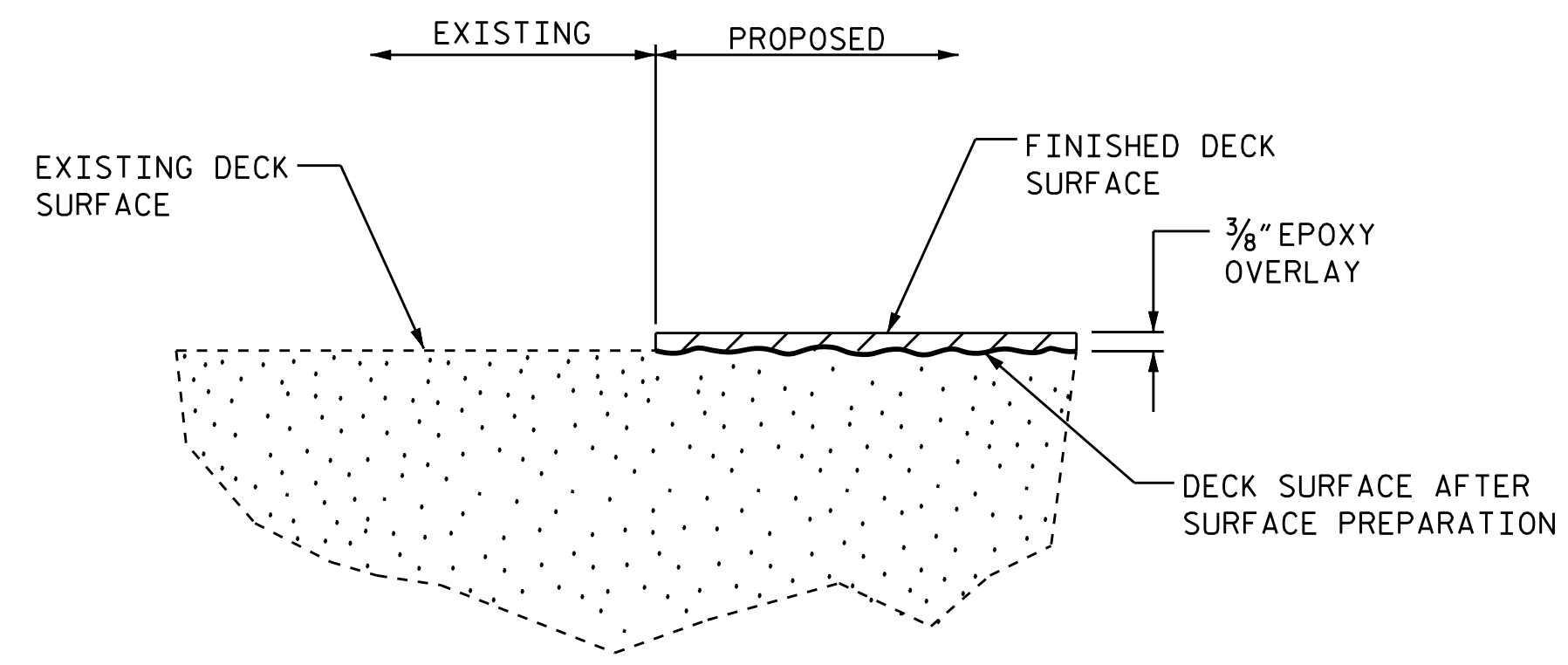
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TYPICAL SECTION
 (EXISTING BRIDGE 485 LANES SHOWN)

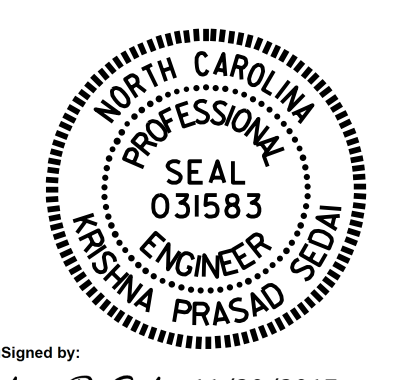


TYPICAL SECTION
 (EPOXY OVERLAY)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 485



DocuSigned by:
 Krishna P. Sedoi 11/20/2017
 EAMF7941508F487...

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**TYPICAL SECTIONS
 &
 EPOXY OVERLAY
 DETAILS**

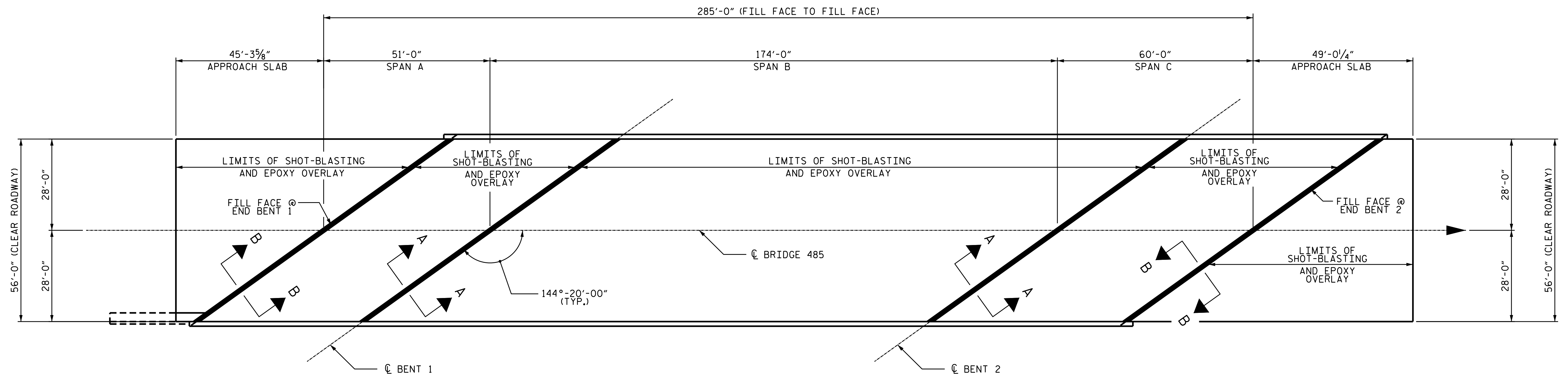
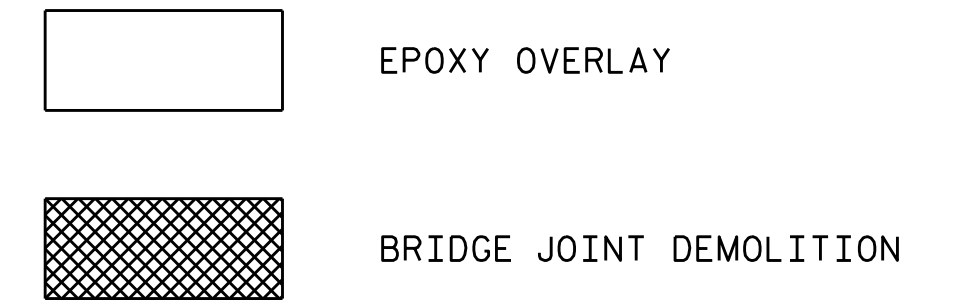
DRAWN BY : H.A. LOCKLEAR DATE : 8-17
 CHECKED BY : E.K. POPE DATE : 9-26-17

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2			4			52

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	* 5 SQ. FT.	
EPOXY OVERLAY SYSTEM	20,824 SQ. FT.	
BRIDGE JOINT DEMOLITION	419 SQ. FT.	



PLAN OF SPANS

(FOR SECTIONS A-A & B-B, SEE "JOINT DETAILS" SHEET)

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 485



Drawn by: Krishna P. Sedai 11/20/2017
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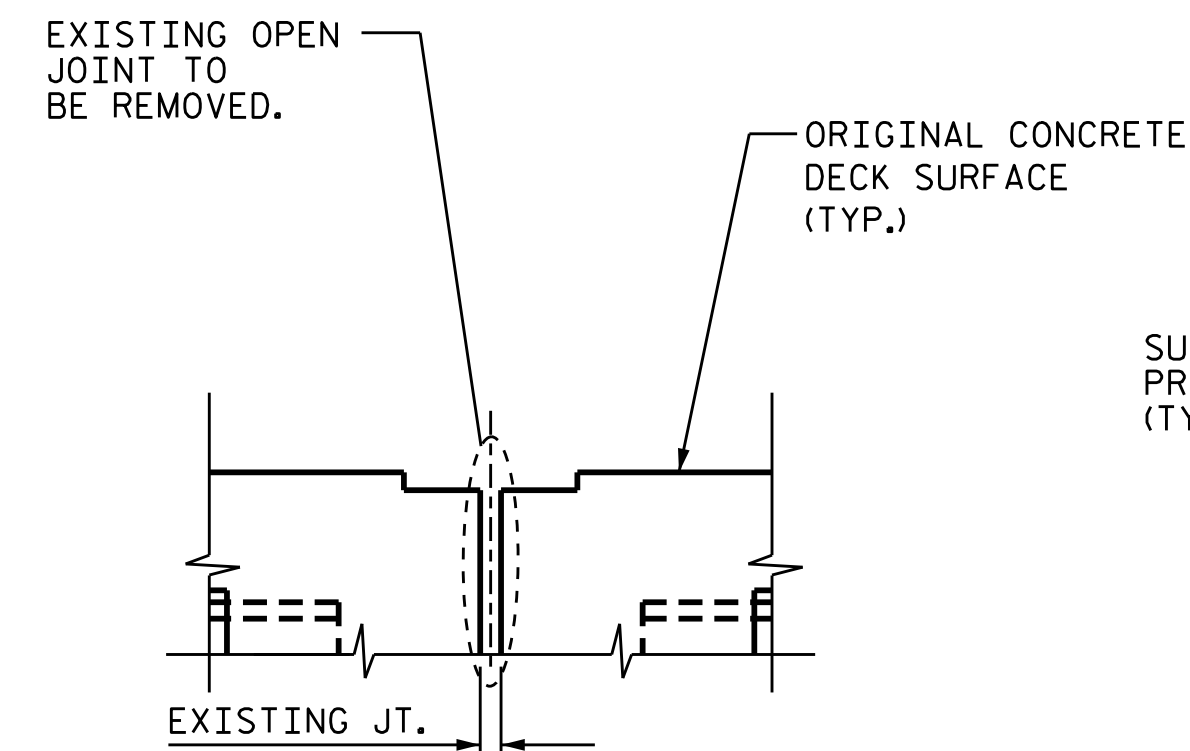
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION & EPOXY OVERLAY

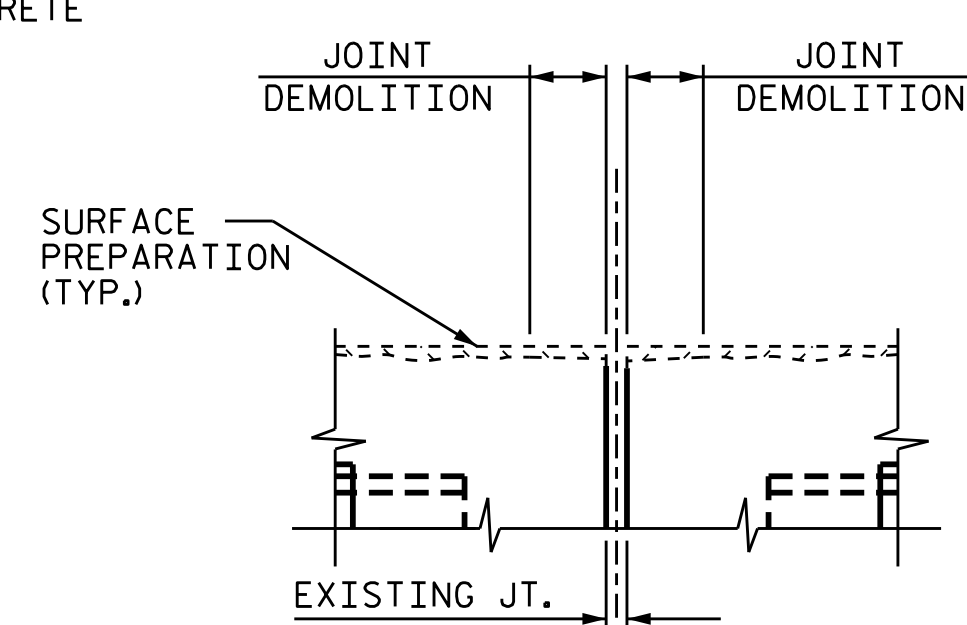
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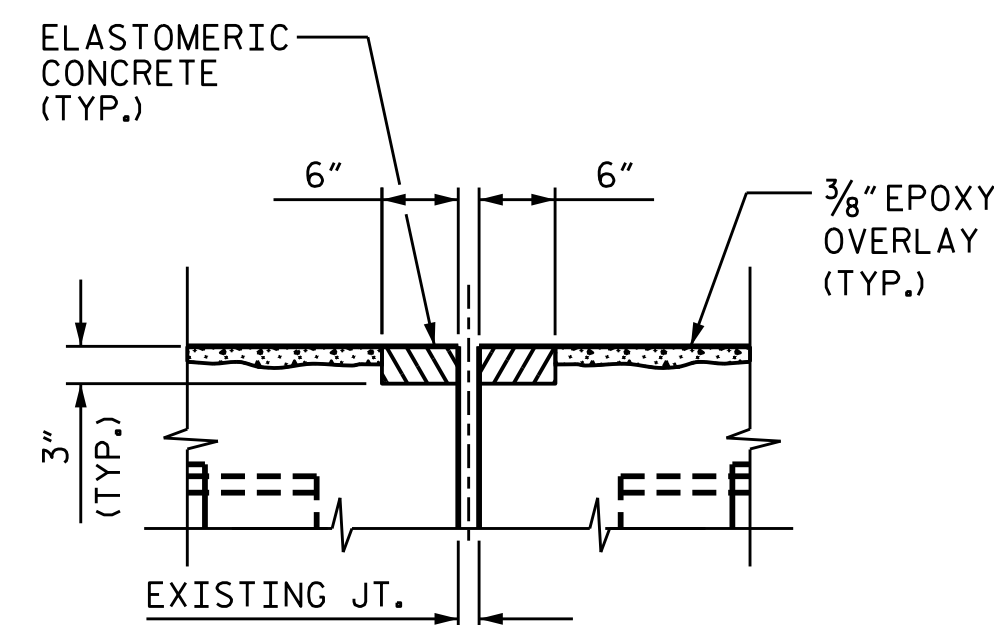
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 CHECKED BY : E.K. POPE DATE : 9-26-17



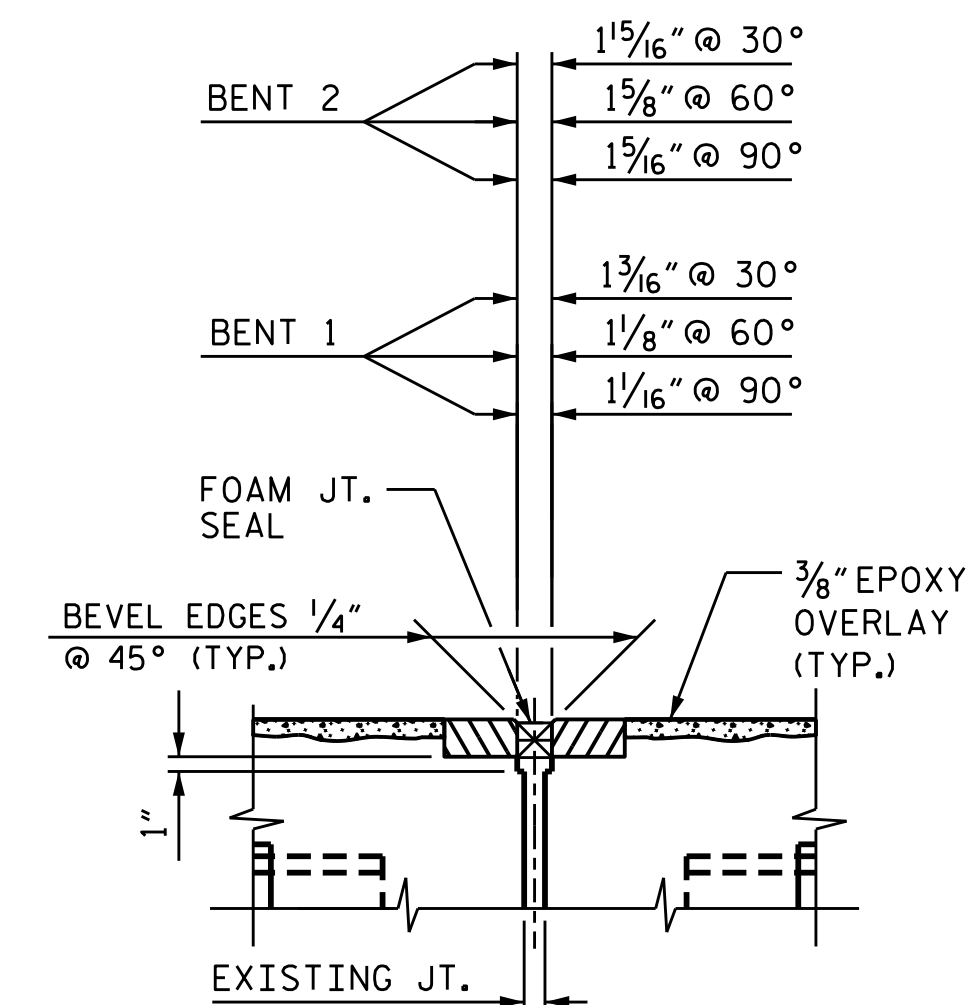
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT PRE-SAWED DIMENSIONS



PROPOSED FOAM JOINT SEAL EXPANSION
ALL BENTS

NOTES:

CONTRACTOR SHALL FIELD VERIFY THE EXISTING SAWED OPENINGS PRIOR TO OBTAINING JOINT MATERIAL.

HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC CONCRETE.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

THE WIDTH OF THE UNCOMPRESSED FOAM JOINT MATERIAL SHALL BE 2 1/2" AT BENTS.

THE INSTALLED FOAM JOINT SEALS SHALL BE WATERTIGHT.

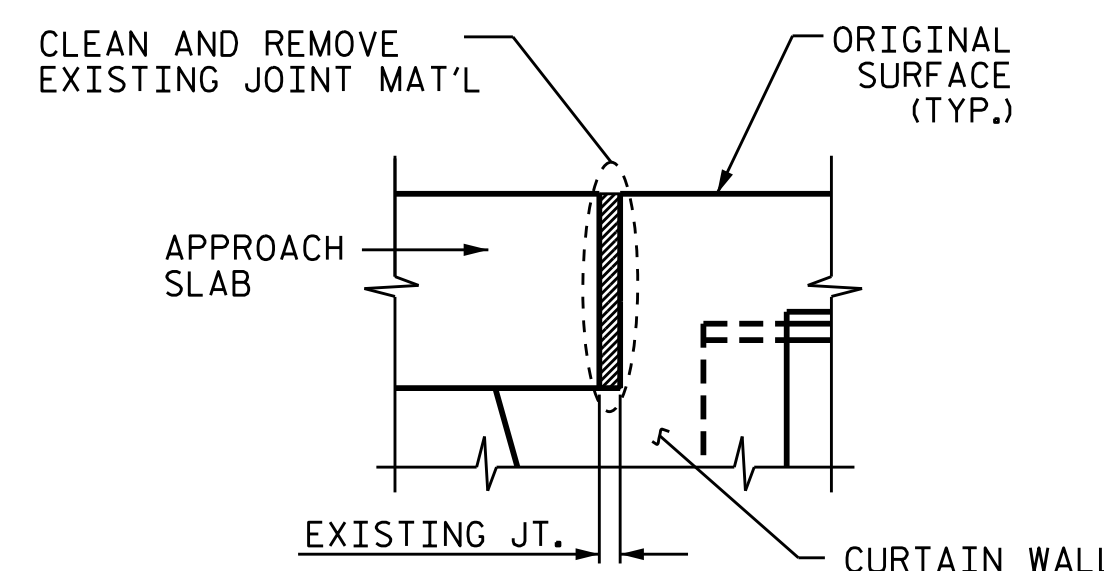
THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE FOAM JOINT SEAL IN LIEU OF SAWING THE JOINT.

ELASTOMERIC CONCRETE	
* TOTAL BRIDGE 485	97.0 CU. FT.

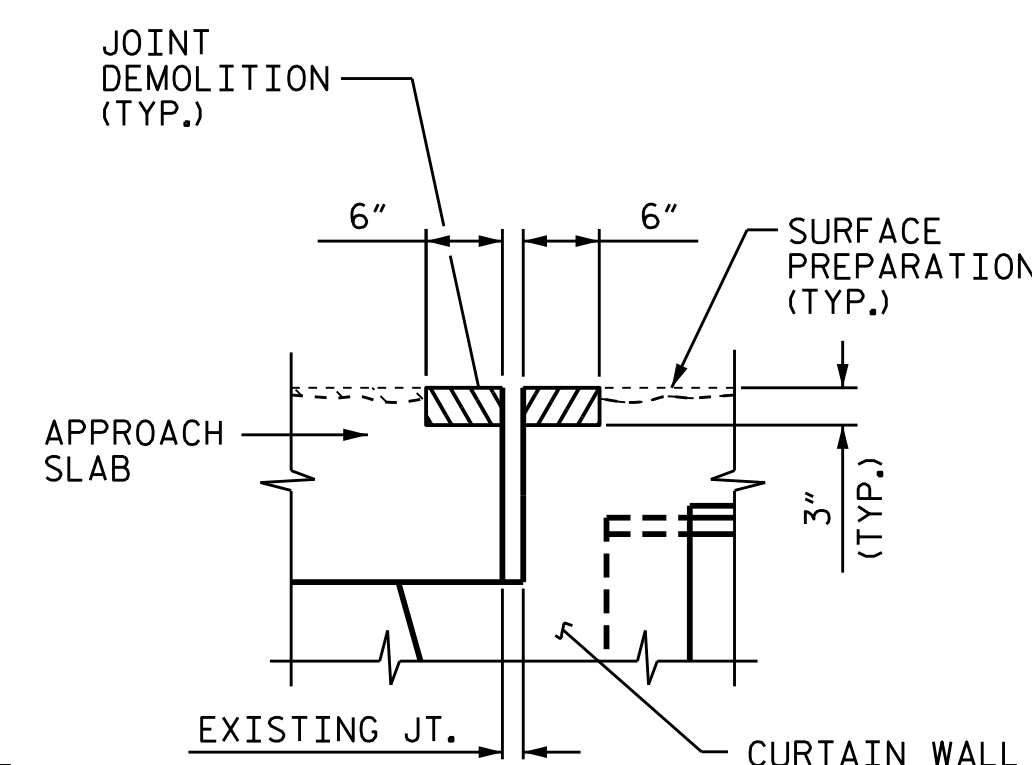
* BASED ON THE MINIMUM BLOCKOUT SHOWN.

JOINT INSTALLATION SEQUENCE AT BENTS

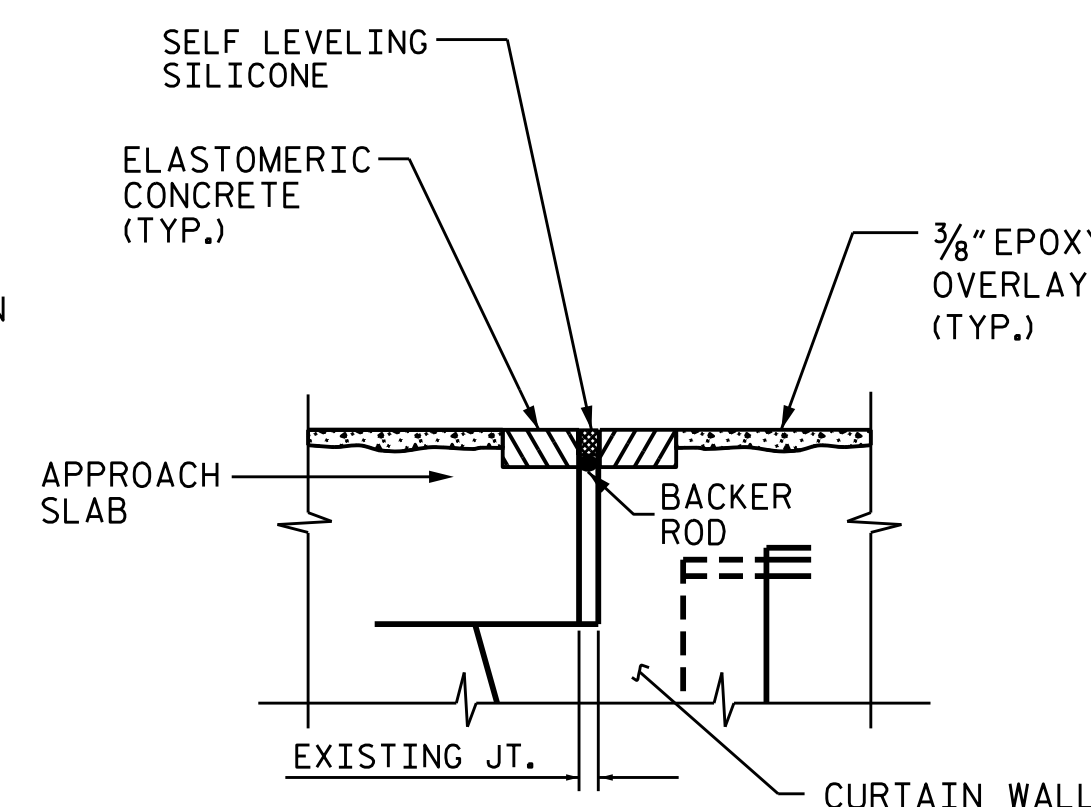
SECTION A-A



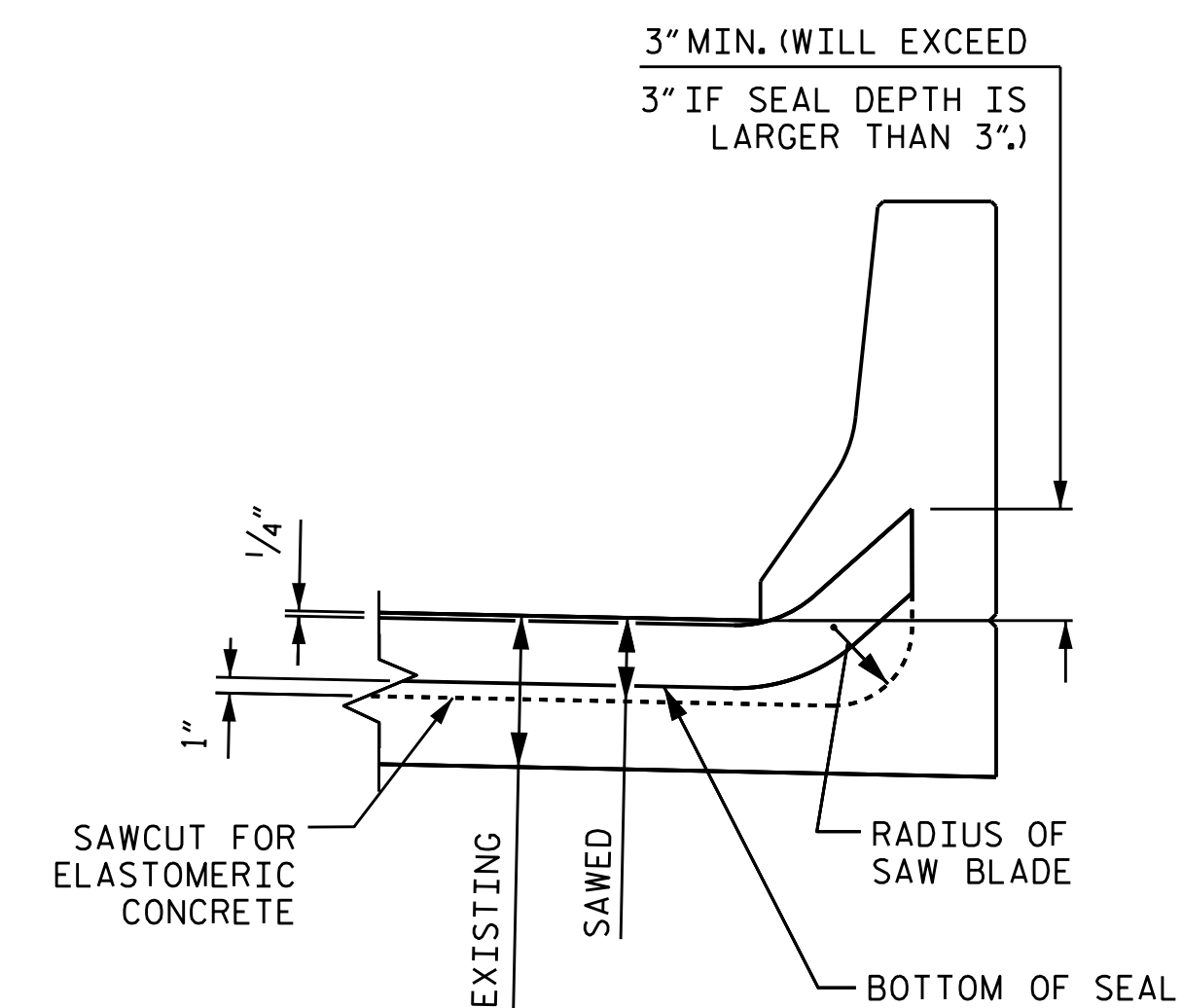
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION

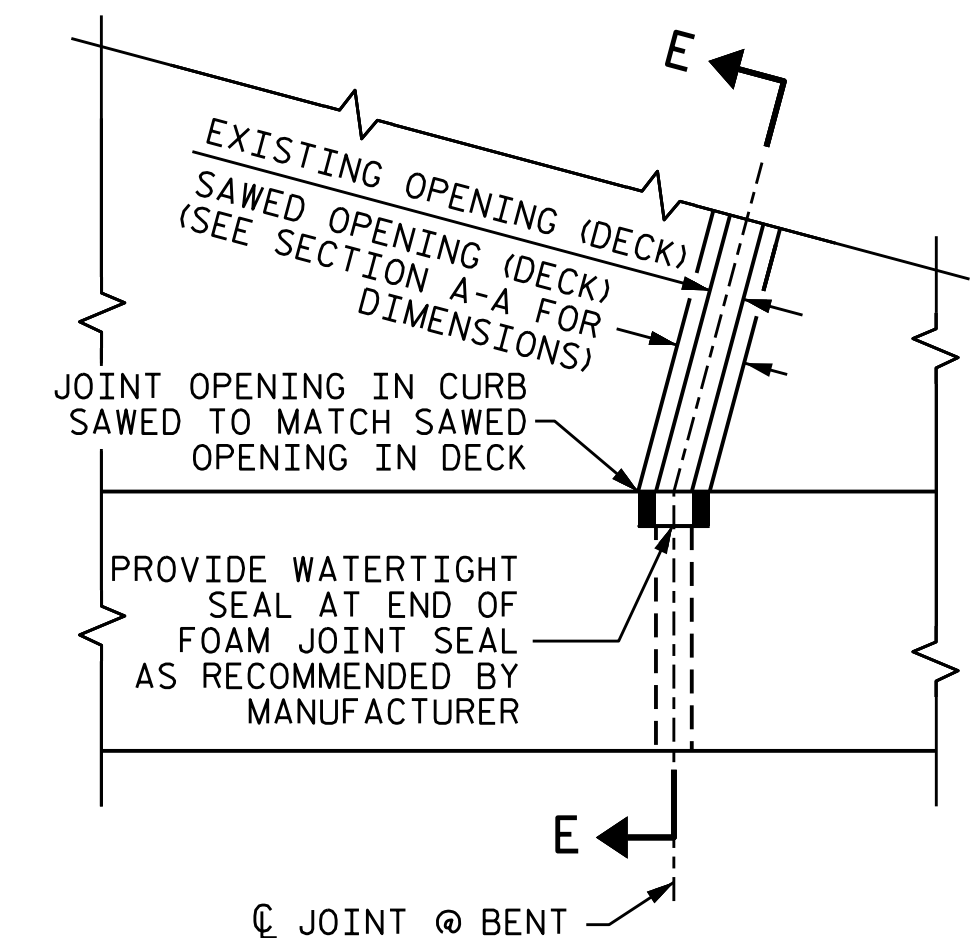


PROPOSED JOINT



SECTION E-E

JOINT SEAL DETAILS AT BENTS



SECTION E-E

JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION B-B

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO.: 485



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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE
 JOINT DETAILS

DRAWN BY : H.A. LOCKLEAR DATE : 8-17
 CHECKED BY : E.K. POPE DATE : 9-26-17

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2			4			52




AS-BUILT REPAIR QUANTITY TABLE

BENT 1 REPAIRS	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	56.0	28.0		
COLUMNS	17.1	8.6		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMNS		0.0		
EPOXY COATING		LIN. FT.		LIN. FT.
TOP OF CAP		0.0		

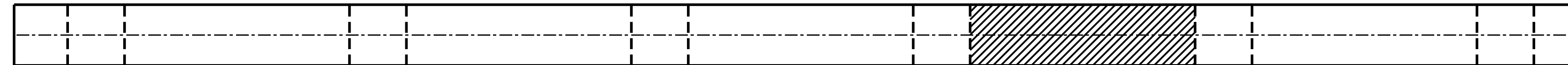
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTE

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE BASED ON 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 ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  ERI - EPOXY RESIN INJECTION

SPAN B
SPAN A



51.9 SF
SHOTCRETE
REPAIR

BOTTOM OF CAP

SPAN B
SPAN A

1.4 SF
SHOTCRETE
REPAIR

2.7 SF
SHOTCRETE
REPAIR

APPROXIMATE
GROUND LINE

4.5 SF
SHOTCRETE
REPAIR

4.5 SF
SHOTCRETE
REPAIR

8.1 SF
SHOTCRETE
REPAIR

END VIEW

ELEVATION

BENT 1

PROJECT NO. I-5793
DAVIDSON COUNTY
BRIDGE NO. 485



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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**BENT 1
SPAN B FACE**

DRAWN BY : H.A. LOCKLEAR DATE : 8-17
CHECKED BY : E.K. POPE DATE : 9-26-17

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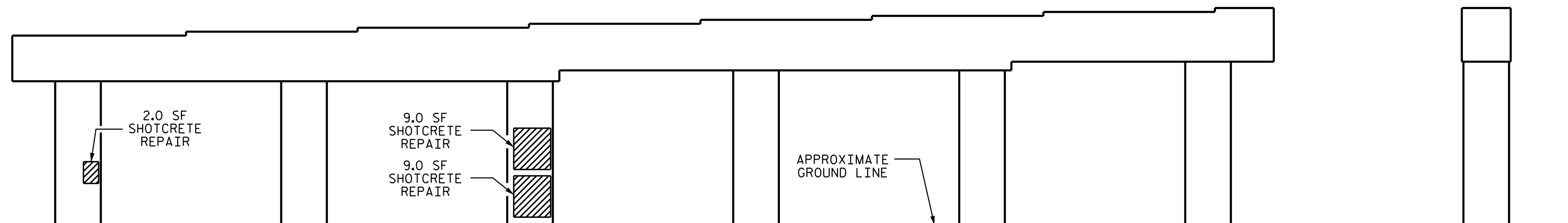
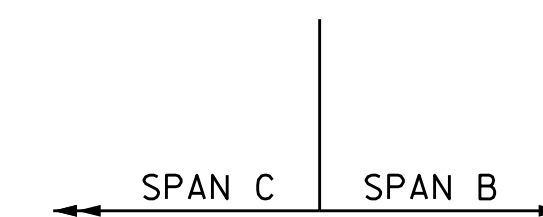
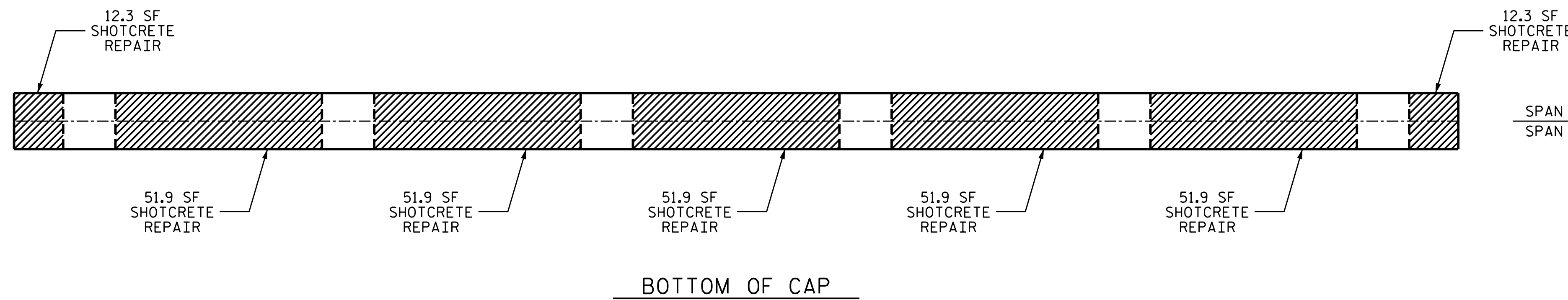
AS-BUILT REPAIR QUANTITY TABLE

BENT 2 REPAIRS	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	284.1	142.1		
COLUMNS	20.0	10.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMNS		0.0		
EPOXY COATING		LIN. FT.		LIN. FT.
TOP OF CAP		0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTE

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE BASED ON 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 ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.



- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- ERI - EPOXY RESIN INJECTION

ELEVATION

END VIEW

BENT 2

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 485



DocuSigned by:
 Krishna P. Sedoi 11/20/2017
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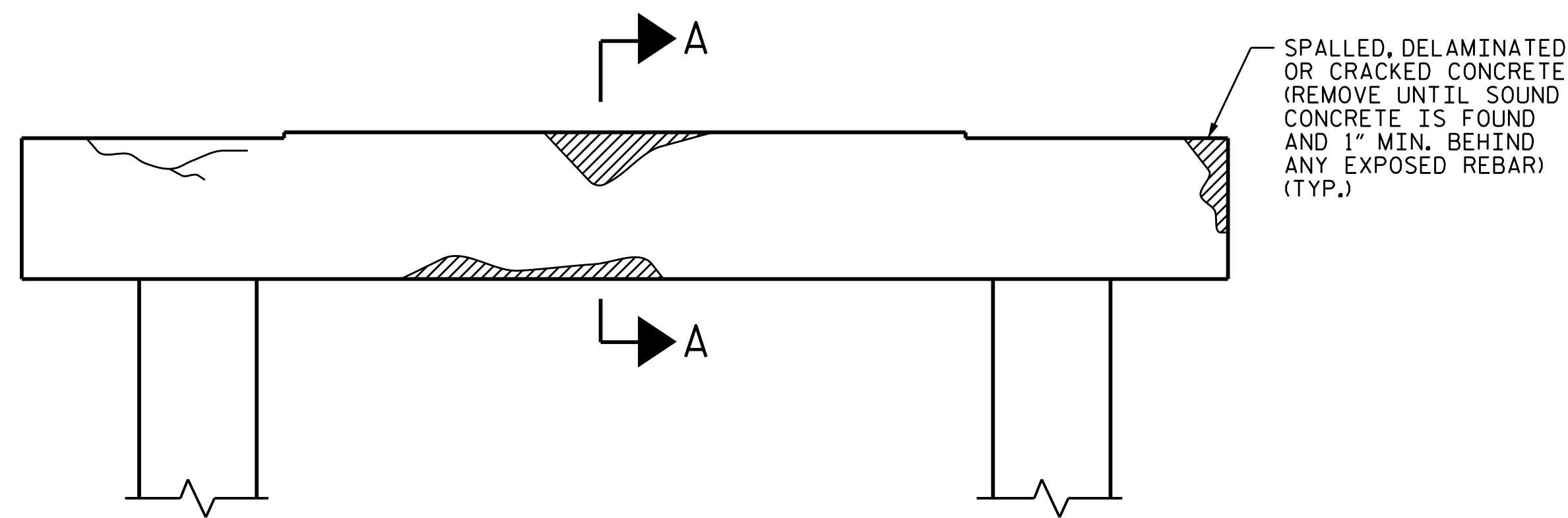
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2 SPAN C FACE

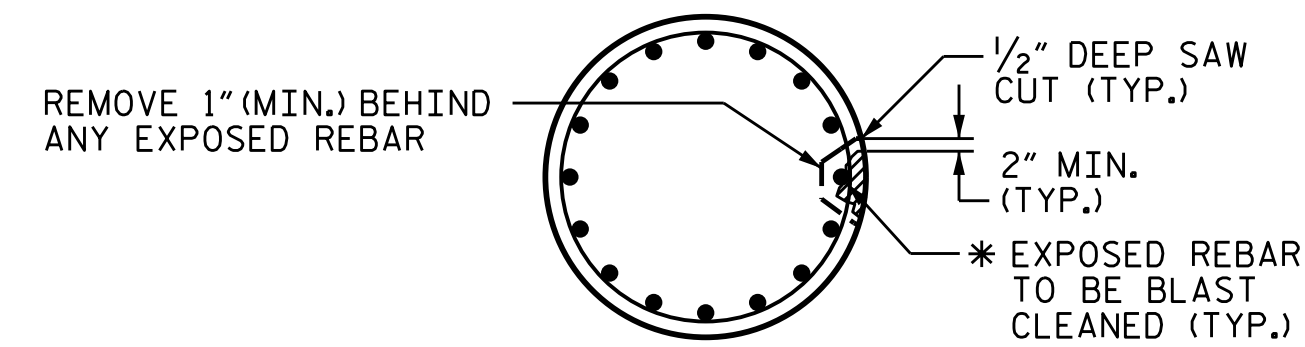
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 CHECKED BY : E.K. POPE DATE : 9-26-17

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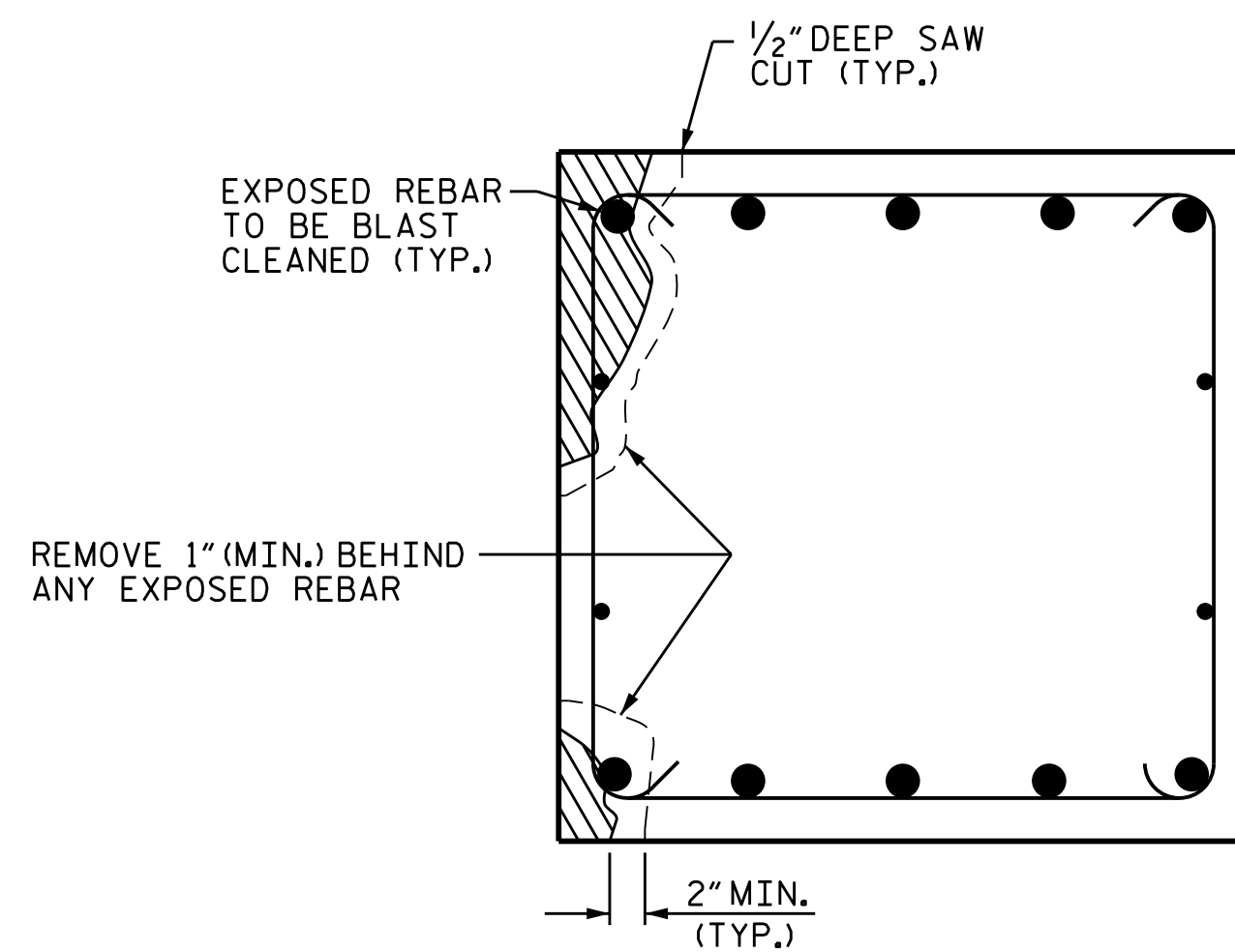
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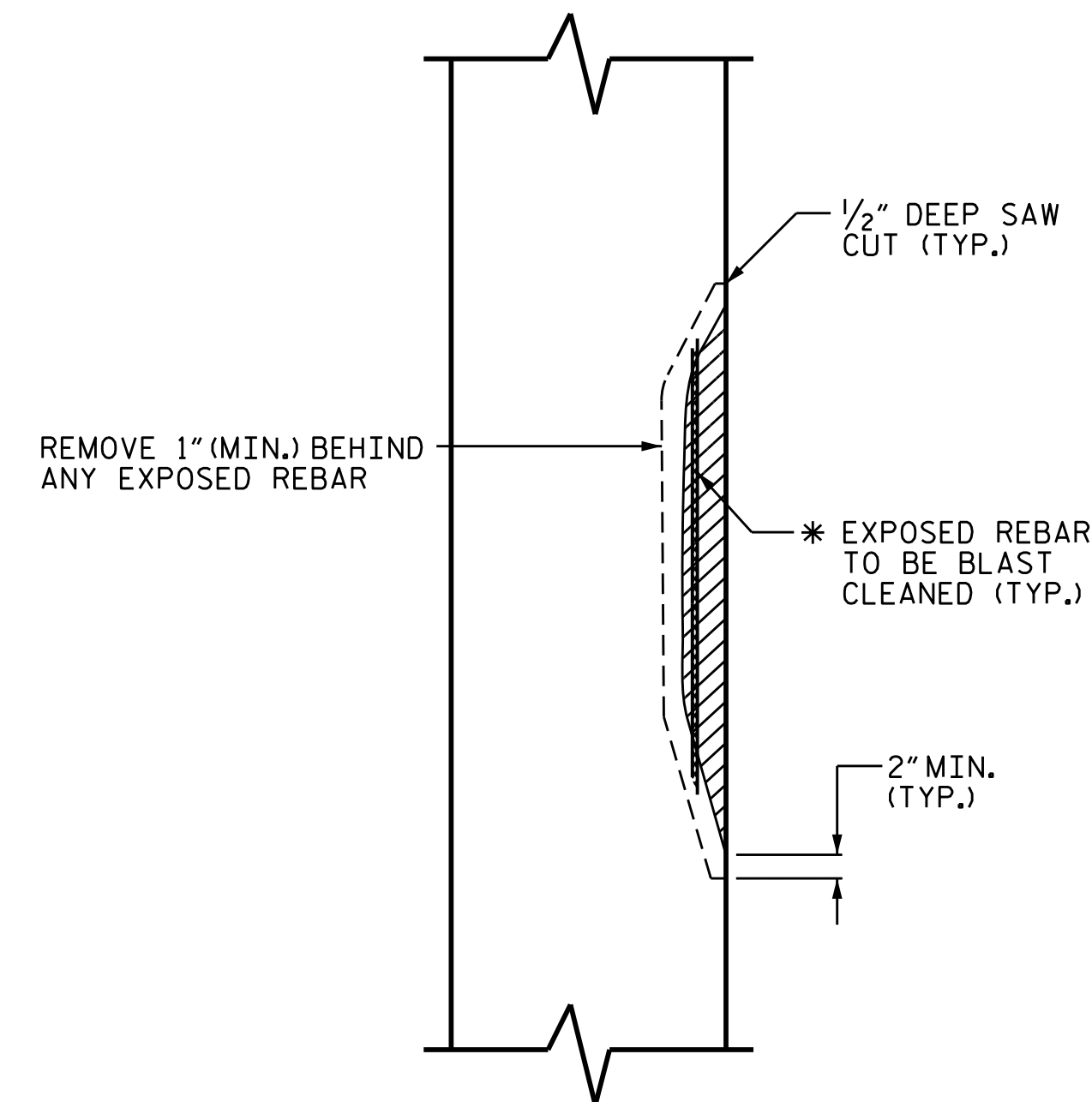
BENT CAP REPAIRS



PLAN OF COLUMN



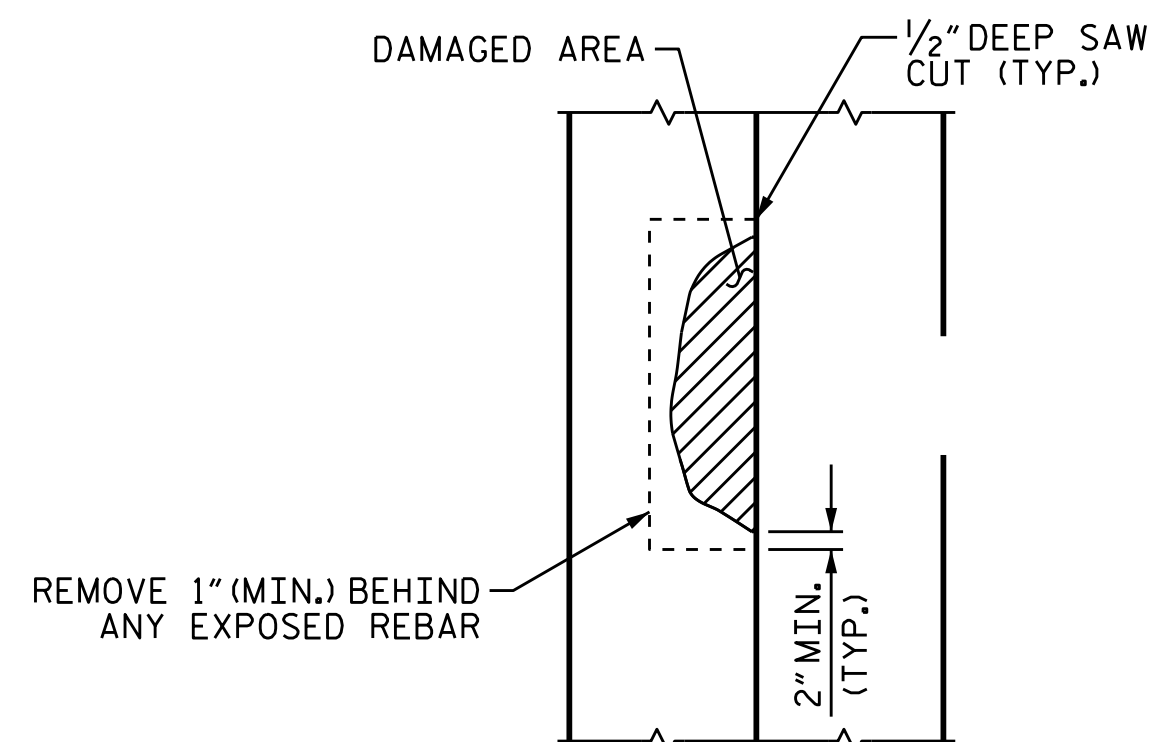
SECTION A-A
CAP REPAIR



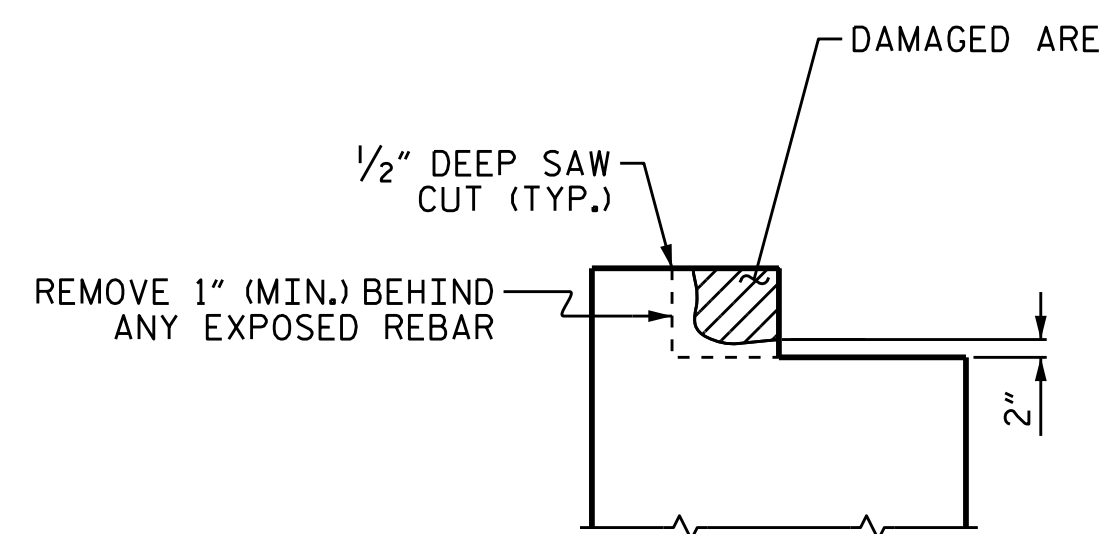
* REPAIR LENGTH SHALL NOT EXCEED 10 FEET.

ELEVATION OF COLUMN

COLUMN REPAIR



PLAN



ELEVATION

PEDESTAL WALL REPAIR

NOTES

TYPICAL BENT CAP REPAIRS ARE SHOWN. REPAIR DETAILS SIMILAR FOR END BENT CAPS AND STRUTS.

THE #4 "U" DOWELS ARE REQUIRED ONLY AROUND THE ANCHOR BOLTS. THE EXISTING REINFORCING STEEL IN THE PEDESTAL WALL SHALL BE CLEANED, STRAIGHTENED AND REMAIN IN PLACE.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE STANDARD SPECIFICATIONS.

PROJ. NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 485



DocuSigned by:
 Krishna P. Sedai 11/20/2017
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL CAP
 AND COLUMN
 REPAIR DETAILS

DRAWN BY : H.A. LOCKLEAR DATE : 8-17
 CHECKED BY : K. P. SEDA DATE : 10-17

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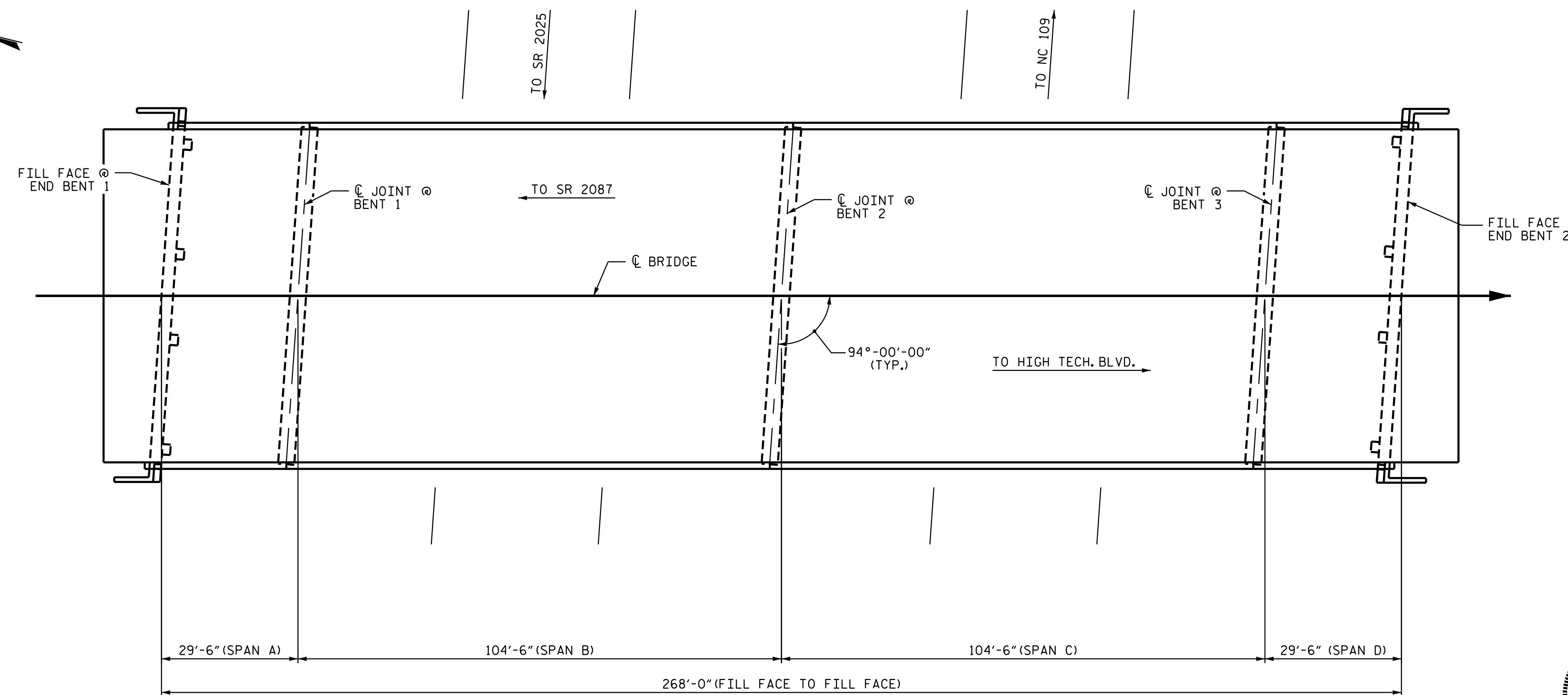
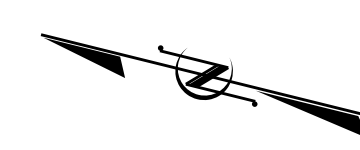
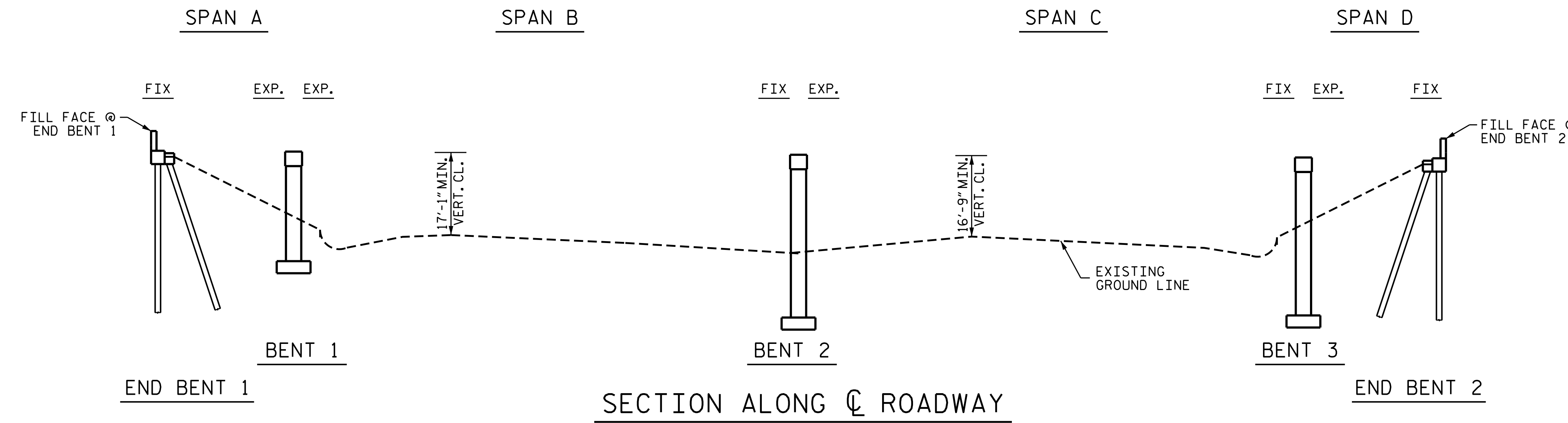
NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 03-09-2016.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SCOPE OF WORK

- SURFACE PREPERATION AND PAINTING OF GIRDER ENDS
- DEMOLISH EXISTING END BENT AND BENT JOINTS.
- SHOTBLAST EXISTING CONCRETE DECK.
- APPLY EPOXY OVERLAY SYSTEM SEALANT.
- RECONSTRUCT END BENT AND BENT JOINTS, INSTALL FOAM JOINT SEALS AT BENTS AND INSTALL SILICONE JOINT SEALER AT END BENTS



PLAN

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

RESIDENT ENGINEER _____ DATE _____



DocuSigned by: Krishna P. Sedai 11/20/2017

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 489

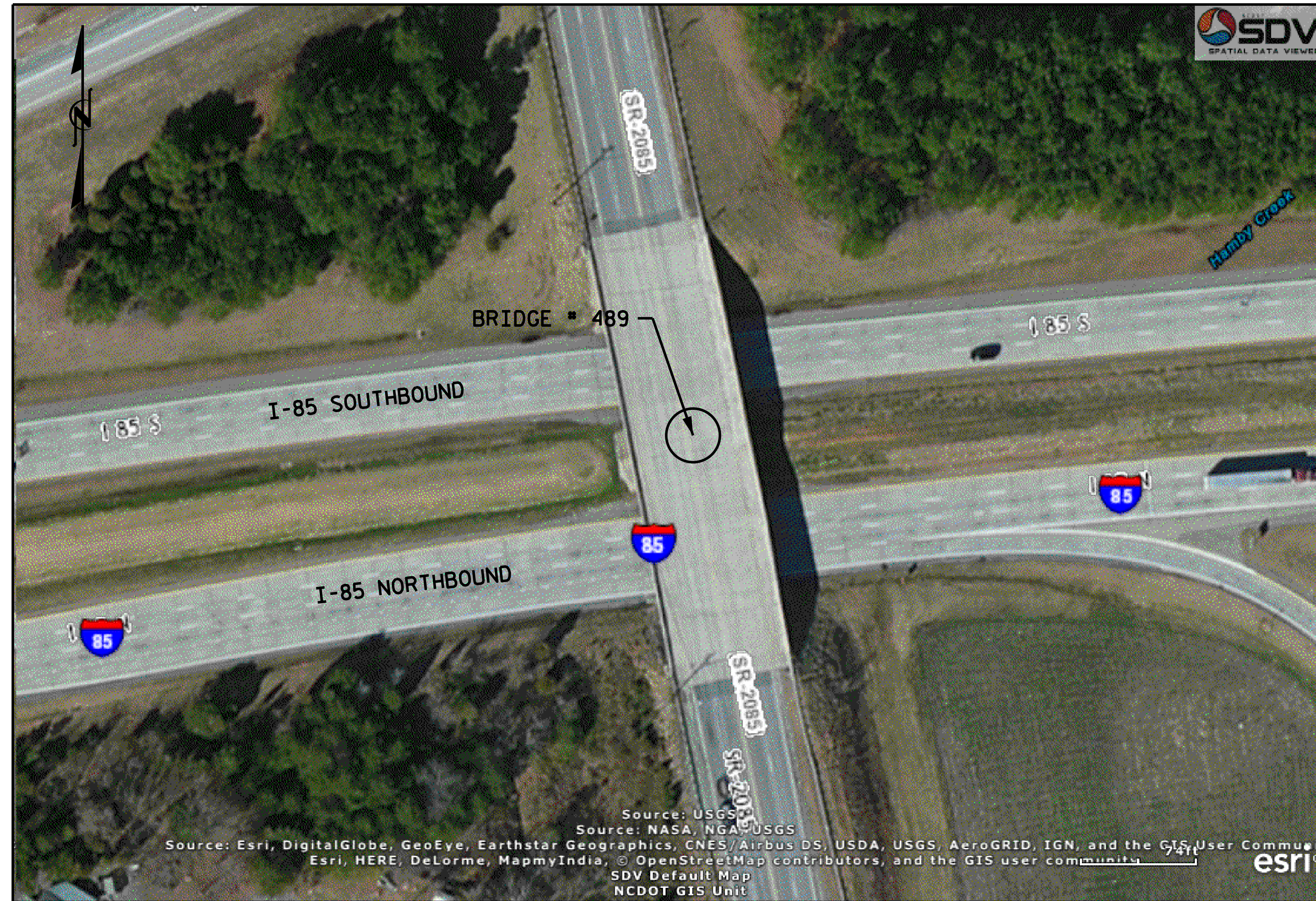
SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING FOR BRIDGE OVER I-85 ON SR 2085 (LAKE ROAD) BETWEEN SR 2087 AND HIGH TECH BLVD.

DRAWN BY : H. T. BARBOUR DATE : 8-7-17
 CHECKED BY : E. K. POPE DATE : 8-23-17

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-33
1			3			TOTAL SHEETS
2			4			52



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 NO. 489	POLLUTION CONTROL	FOAM JOINT SEALS	PAINTING CONTAINMENT FOR BRIDGE NO...	PAINTING EXISTING WEATHERING STEEL STRUCTURE FOR BRIDGE NO...	SILICONE JOINT SEALANT	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY SYSTEM	CLEANING AND PAINTING EXISTING BEARINGS WITH HRCSA FOR BRIDGE NO...
	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	CU. FT.	SO. FT.	SO. FT.	SO. FT.	EA.
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	144.4	90.0	361.0	10.0	20662.0	80

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 CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.
- FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.
- FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.
- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.
- 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.
- FOR PAINTING EXISTING WEATHERING STEEL STRUCTURE, SEE SPECIAL PROVISIONS.
- FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
- FOR PAINTING CONTAINMENT, POLLUTION CONTROL, AND CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA, SEE CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA SPECIAL PROVISION.

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 489

SHEET 2 OF 2



DocuSigned by: Krishna P. Sedai 11/20/2017

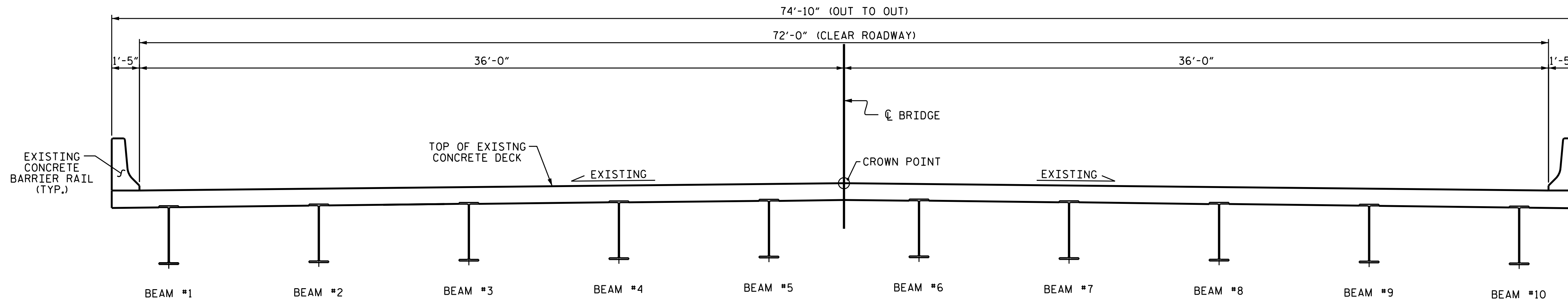
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR BRIDGE OVER I-85
 ON SR 2085 (LAKE ROAD)
 BETWEEN SR 2087 AND
 HIGH TECH BLVD.

DRAWN BY : H. T. BARBOUR DATE : 8-5-17
 CHECKED BY : E. K. POPE DATE : 8-23-17

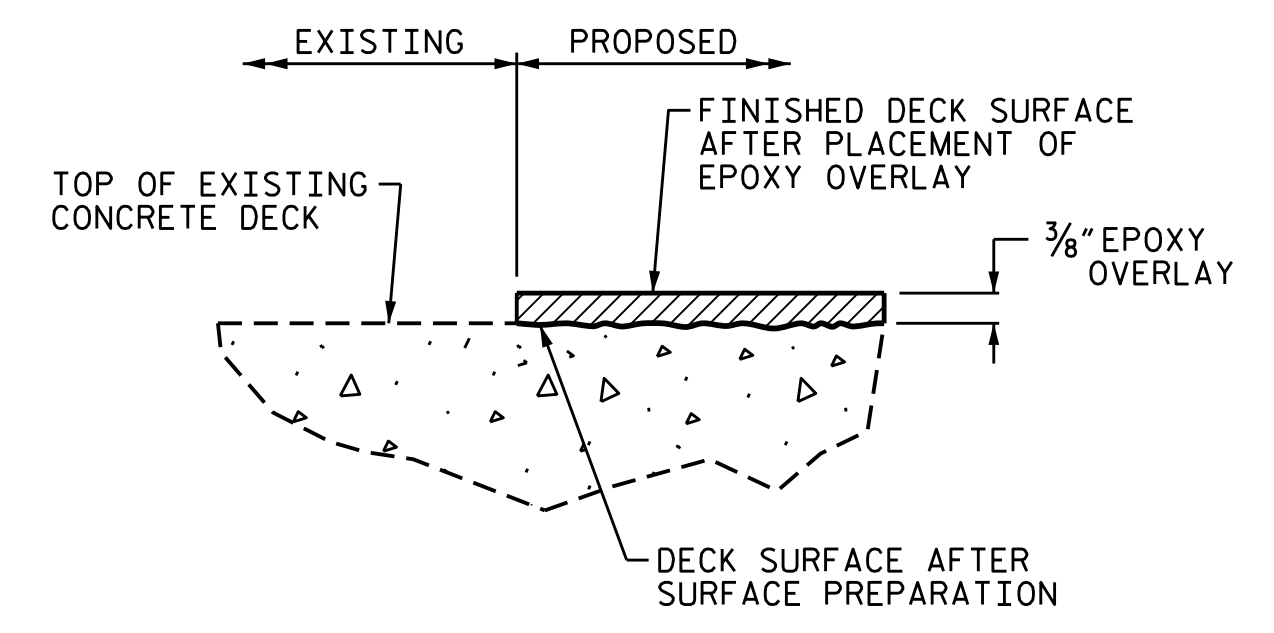
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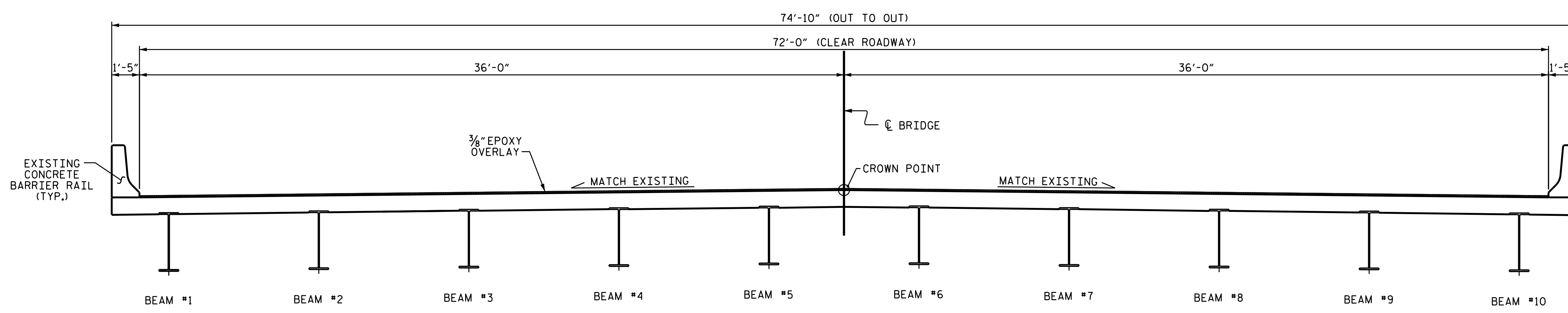
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-34
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TYPICAL SECTION
(EXISTING)



DETAIL FOR EPOXY OVERLAY



TYPICAL SECTION
(PROPOSED)

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 489



DocuSigned by:
 Krishna P. Sedai 11/20/2017
 EABF794150BF487...

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**TYPICAL SECTION
 AND
 EPOXY OVERLAY
 DETAILS**

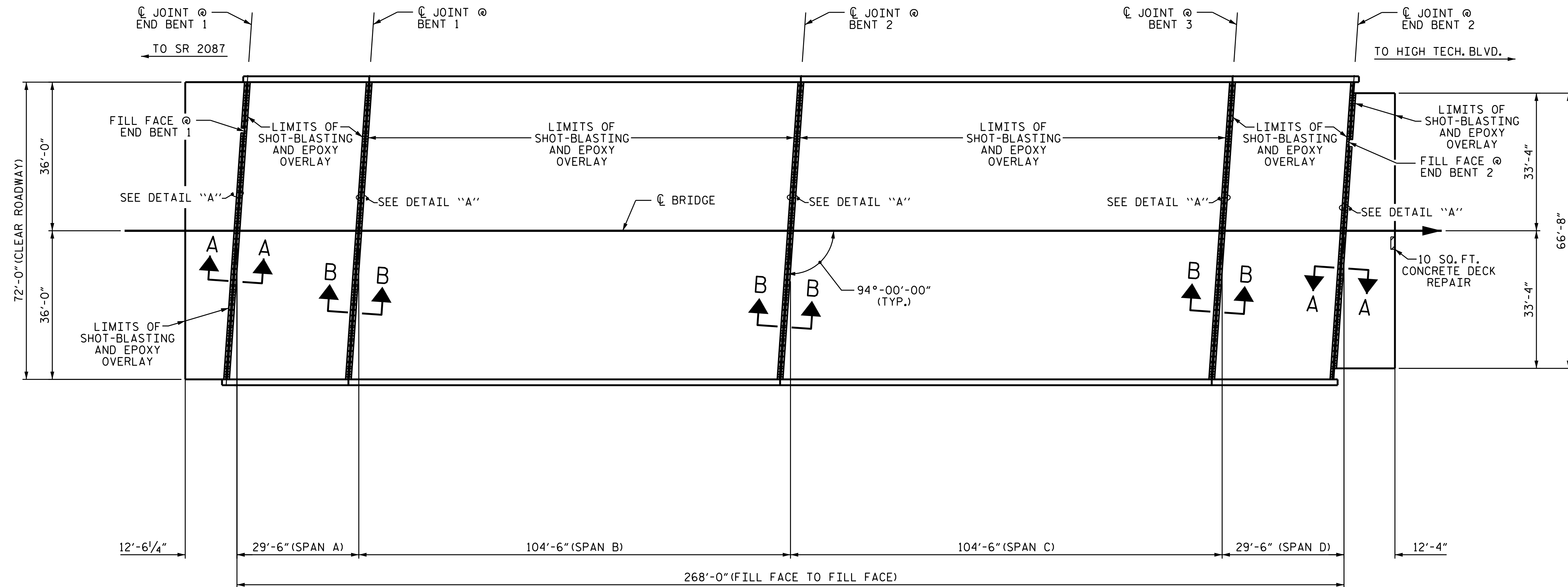
DRAWN BY : H. T. BARBOUR DATE : 8-6-17
 CHECKED BY : E. K. POPE DATE : 8-23-17

DOCUMENT NOT CONSIDERED
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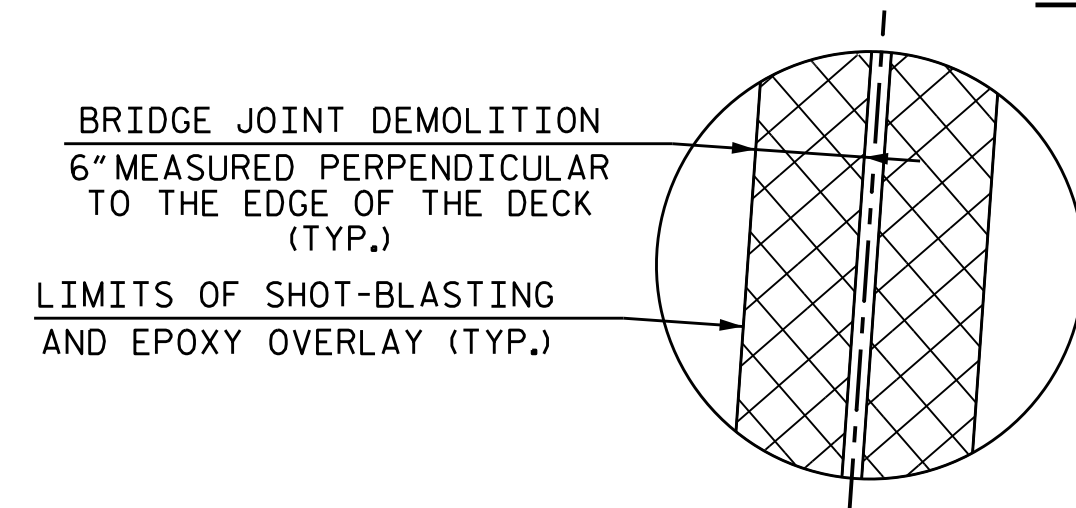
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-35
1			3			TOTAL SHEETS
2			4			52

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	10.0 SQ. FT.	
BRIDGE JOINT DEMOLITION	361 SQ. FT.	
EPOXY OVERLAY SYSTEM	20662 SQ. FT.	


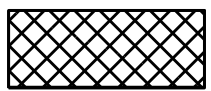

NOTE:
FOR SECTIONS A-A AND B-B, SEE "JOINT DETAILS" SHEET.



PLAN OF SPANS



DETAIL "A"

-  CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  BRIDGE JOINT DEMOLITION
-  EPOXY OVERLAY

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 489



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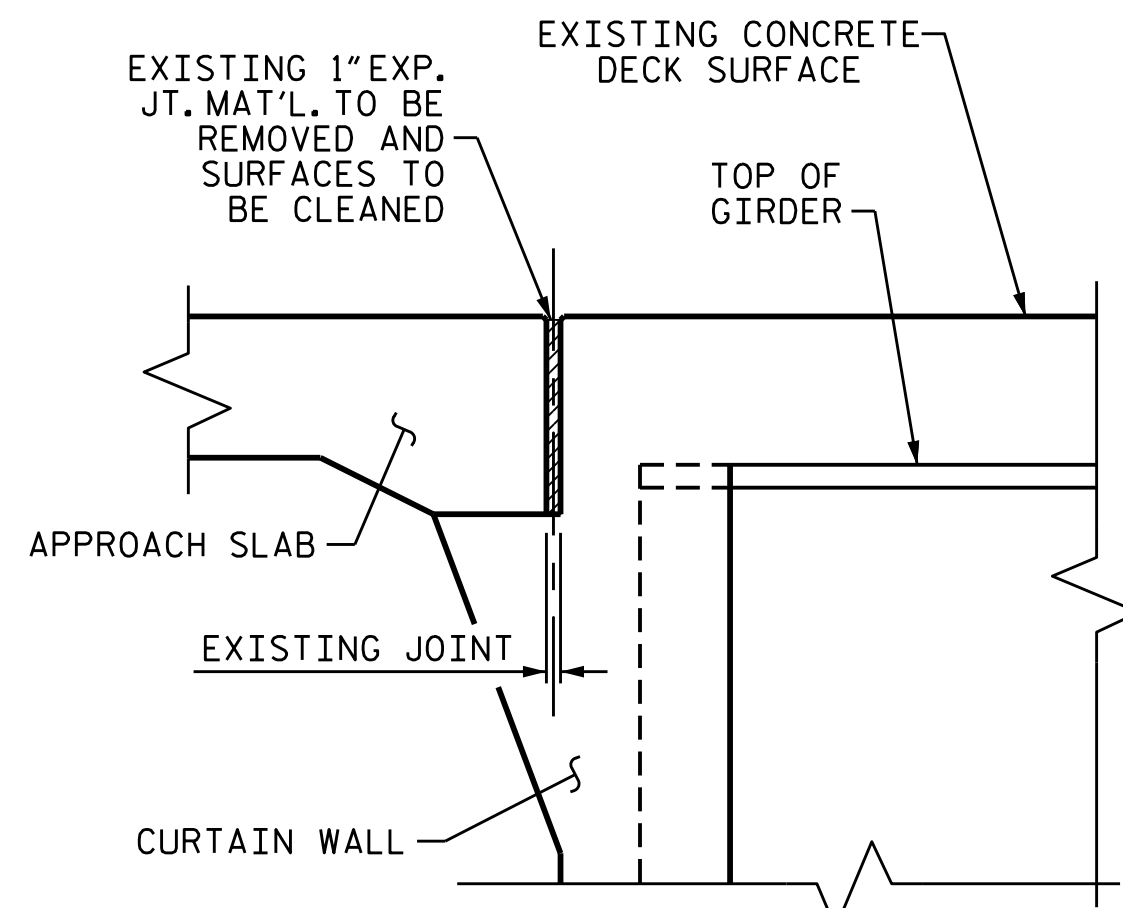
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION AND EPOXY OVERLAY

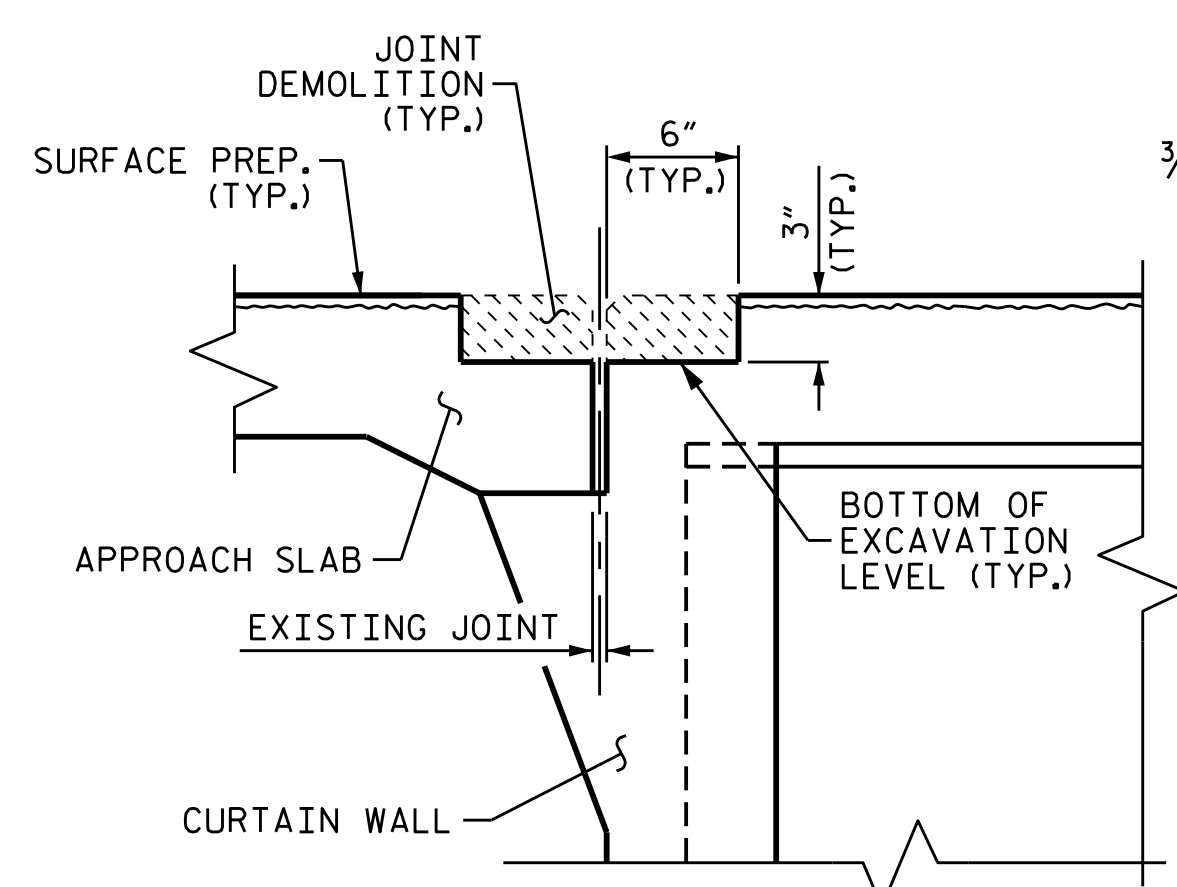
DRAWN BY : H. T. BARBOUR DATE : 8-7-17
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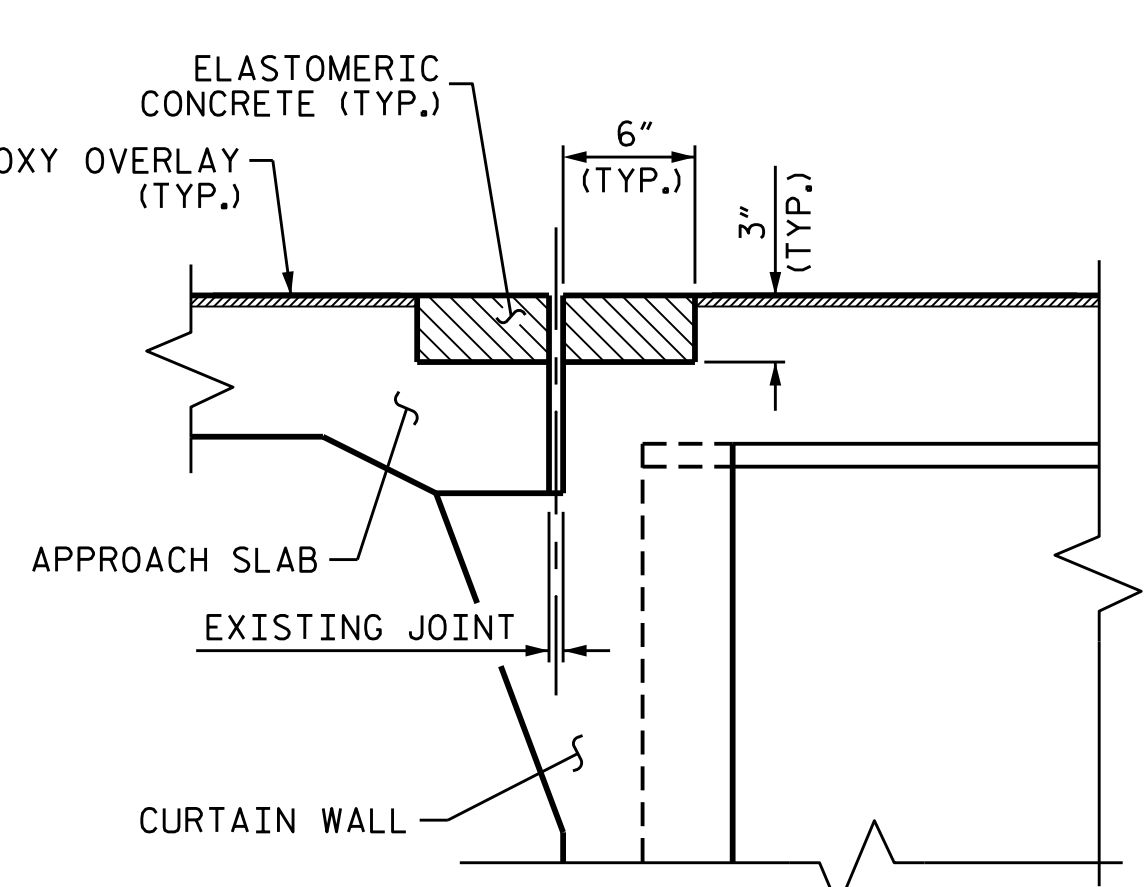
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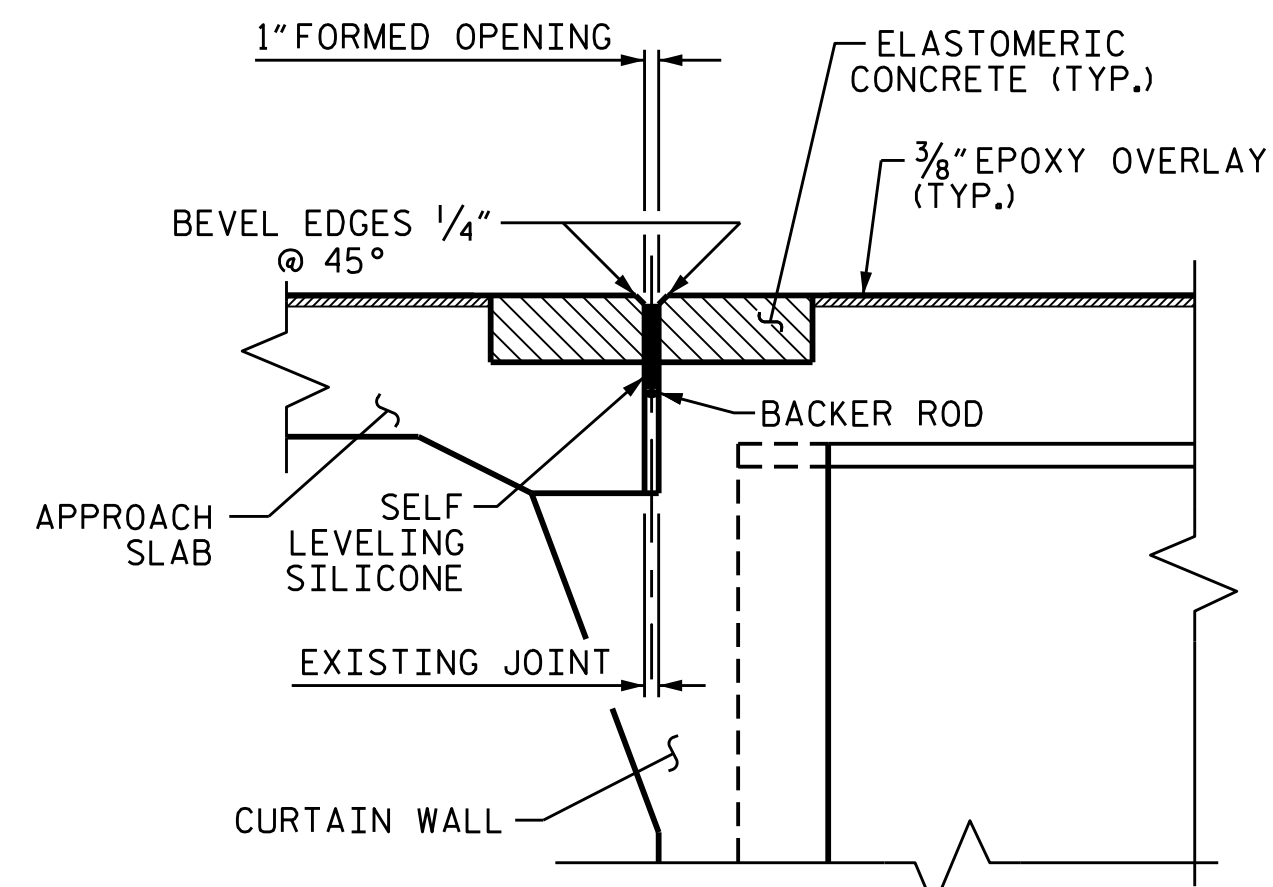
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



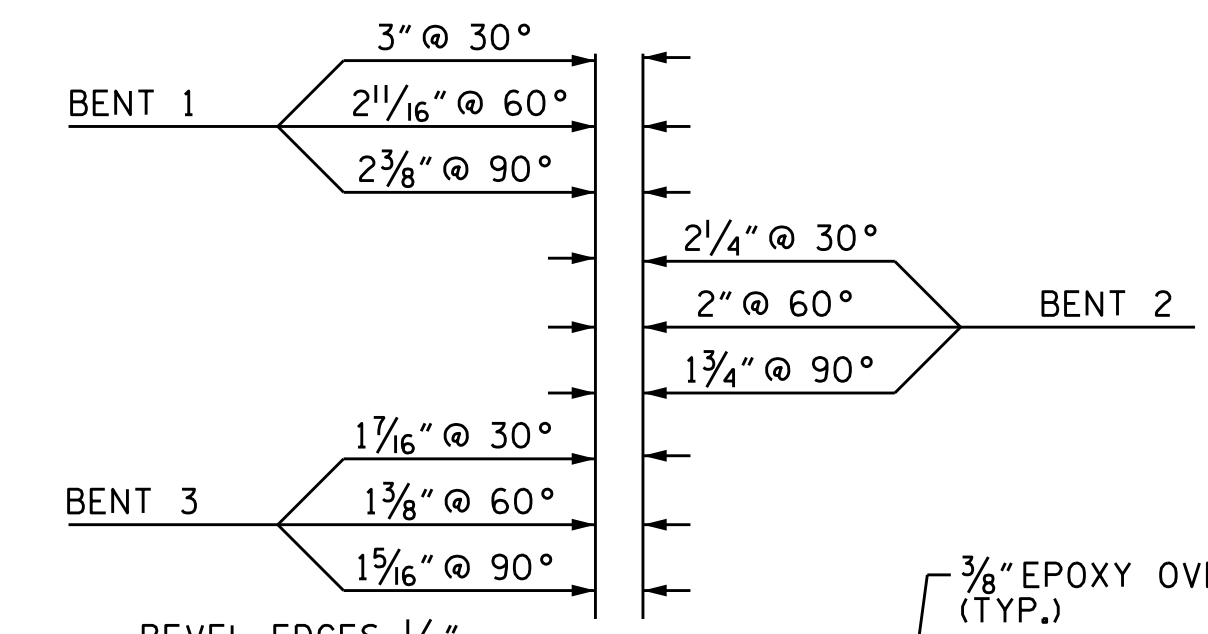
PROPOSED JOINT



PROPOSED SILICONE JOINT SEAL

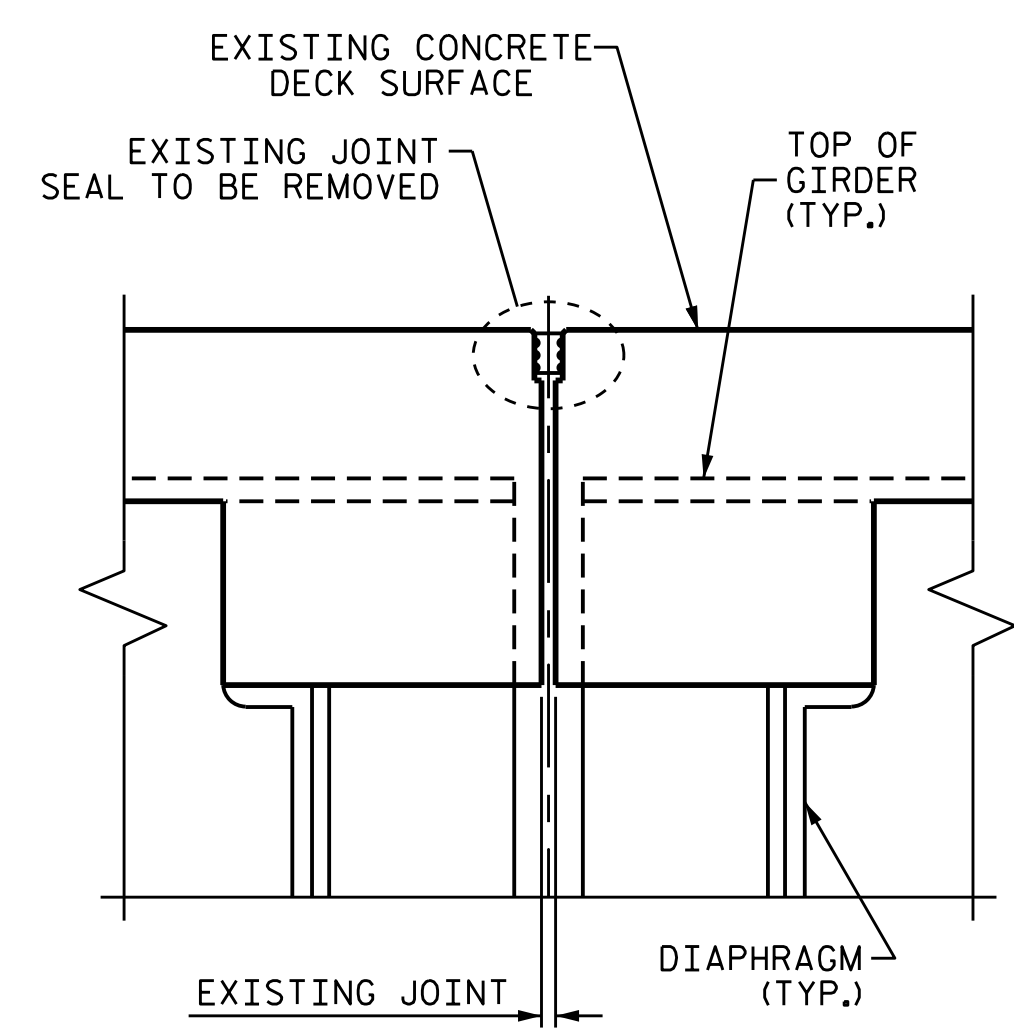
JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A

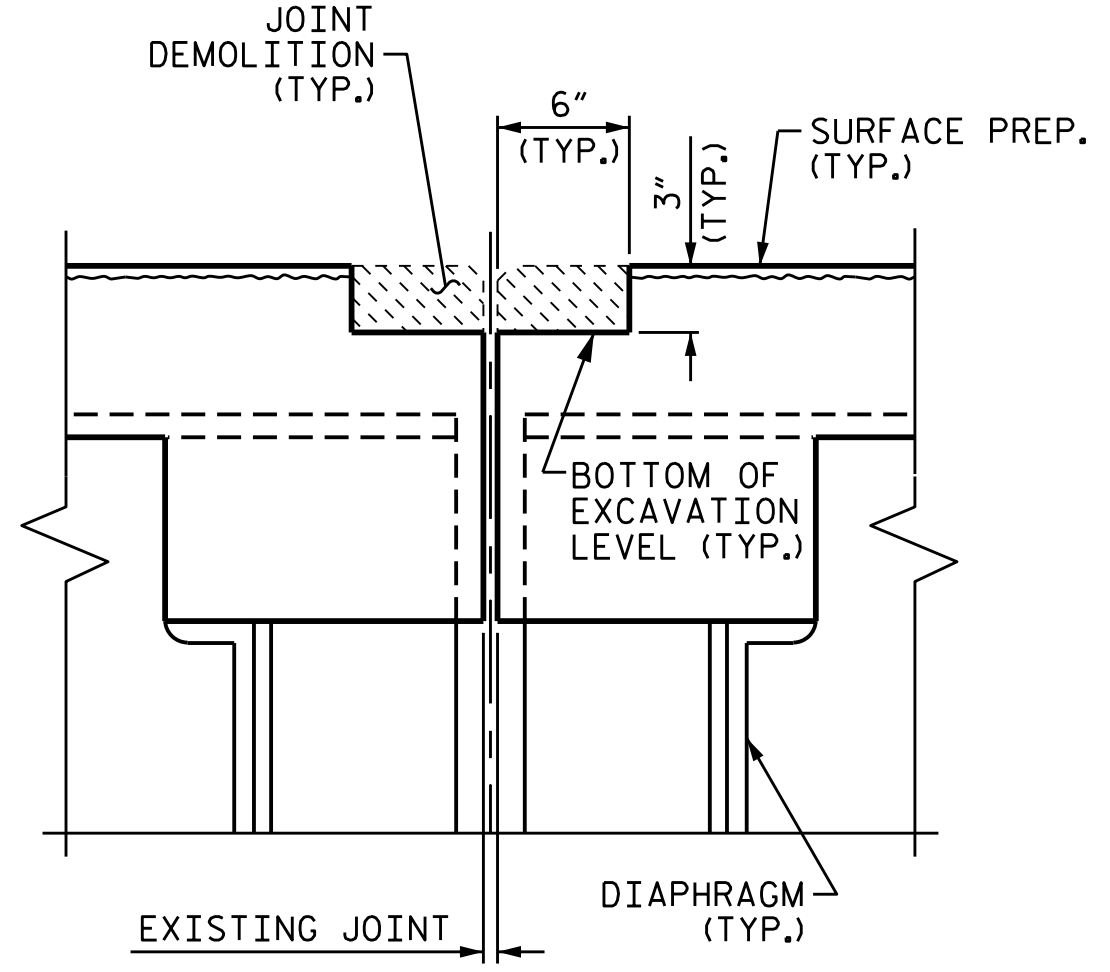


ELASTOMERIC CONCRETE		
END BENT 1	18.0	(CU. FT.)
BENT 1	18.0	(CU. FT.)
BENT 2	18.0	(CU. FT.)
BENT 3	18.0	(CU. FT.)
END BENT 2	18.0	(CU. FT.)
* TOTAL	90.0	(CU. FT.)

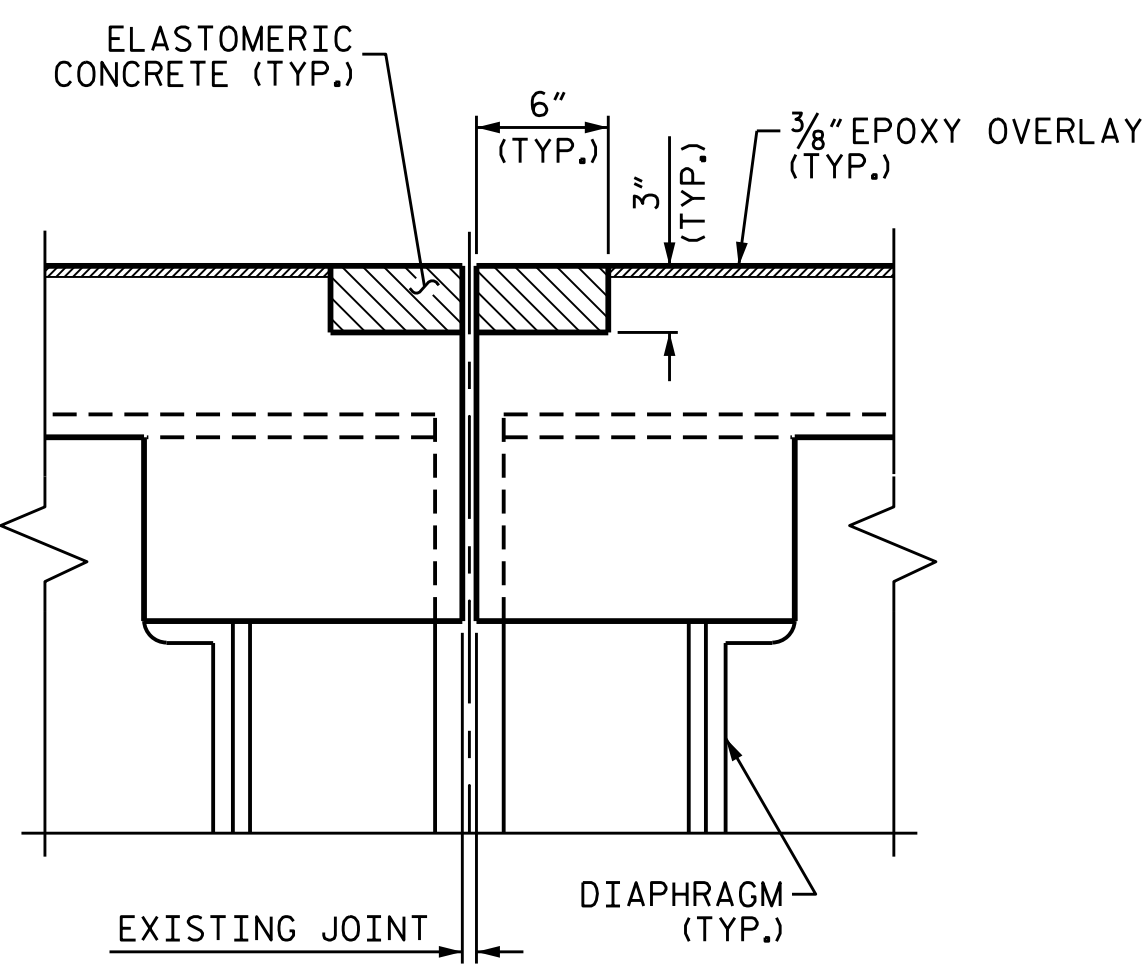
* BASED ON THE MINIMUM BLOCKOUT SHOWN.



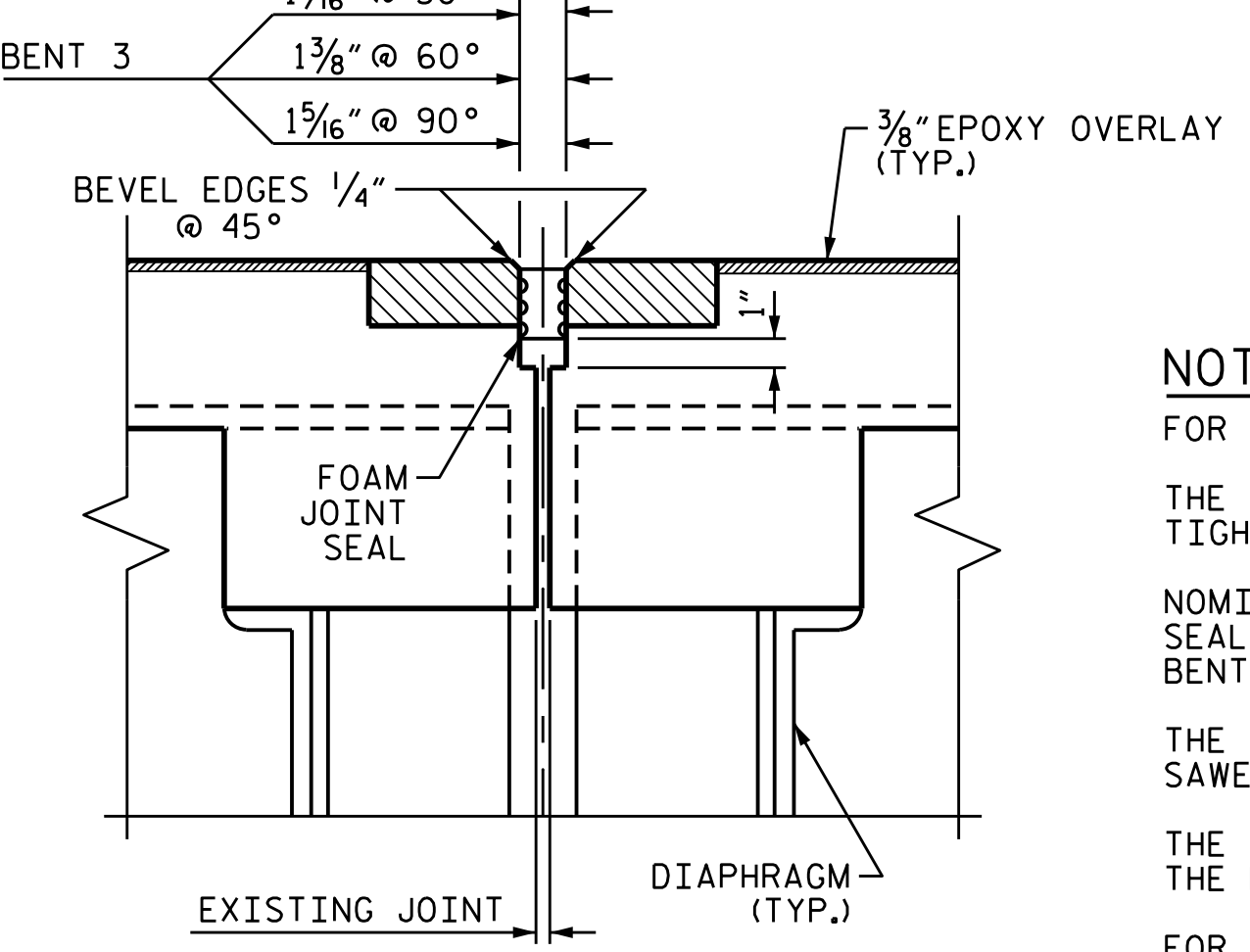
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



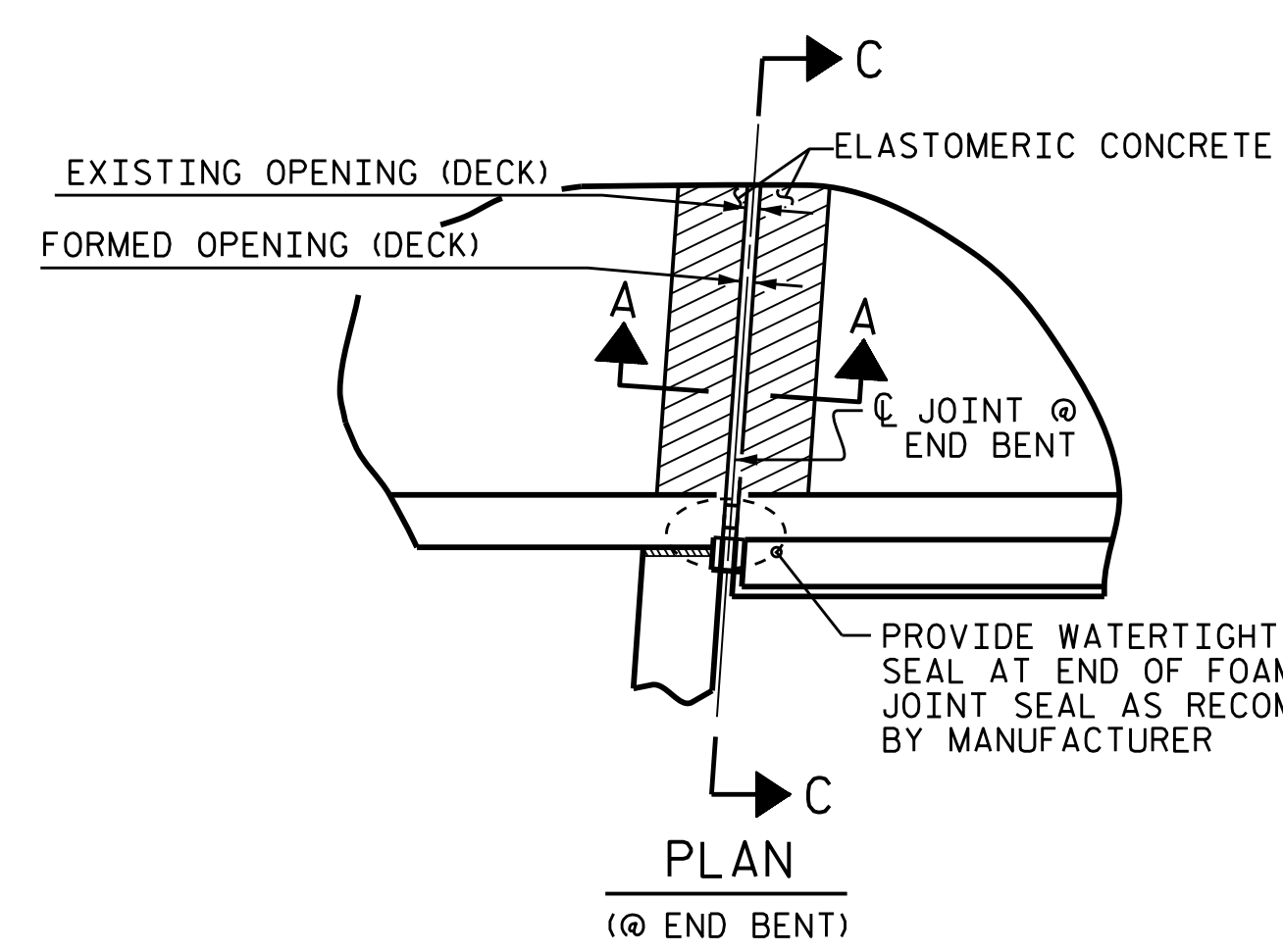
PROPOSED JOINT PRE-SAWED



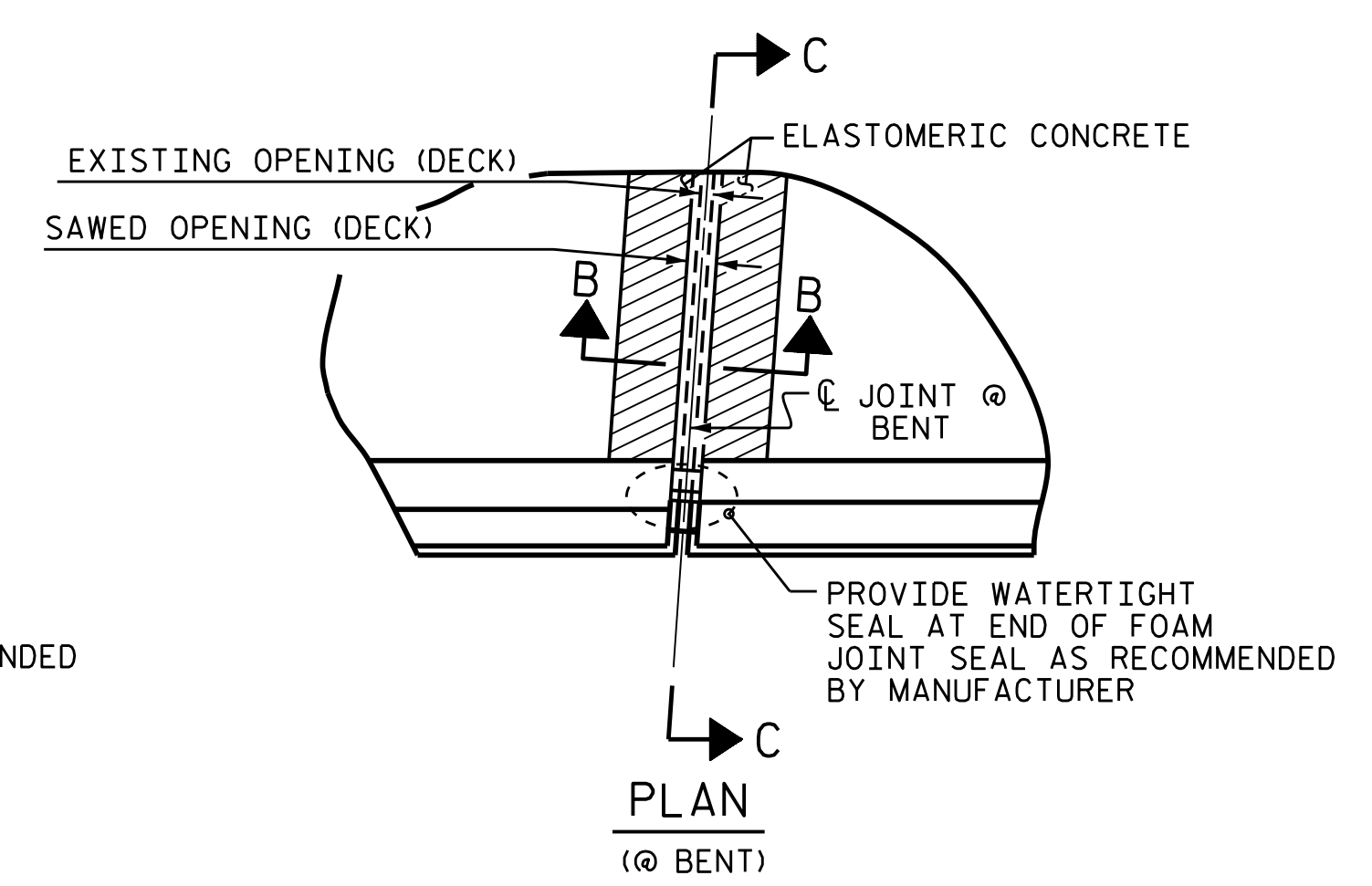
PROPOSED FOAM JOINT SEAL

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B

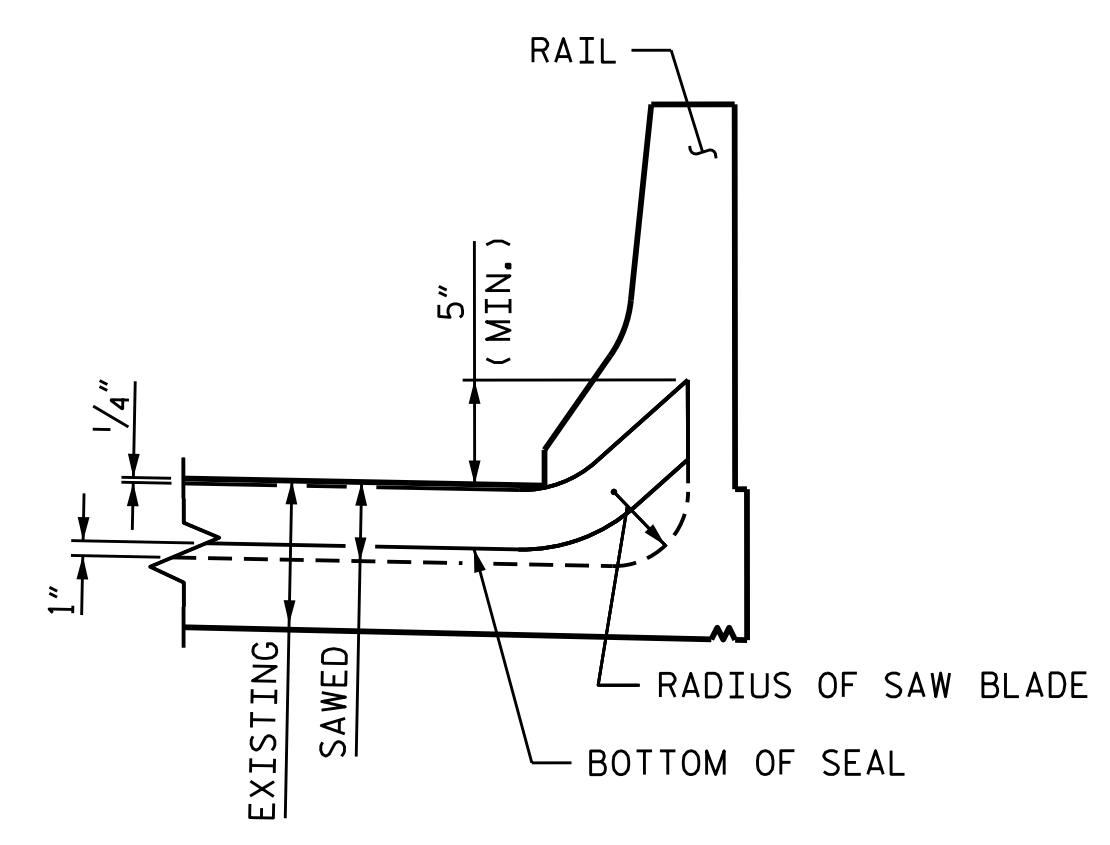


PLAN (@ END BENT)



PLAN (@ BENT)

JOINT SEAL DETAILS

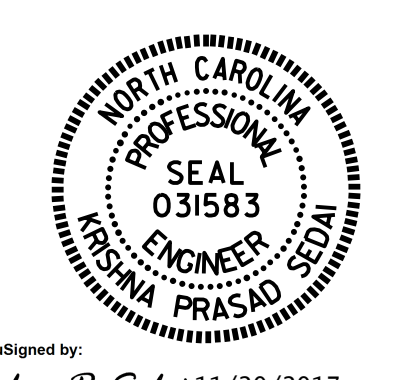


SECTION C-C

NOTES:

- FOR FOAM JOINT SEALS SEE SPECIAL PROVISIONS.
- THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.
- NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEALS SHALL BE 3 1/2" AT BENTS 1 & 2 AND 2" AT BENT 3.
- THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING SAWED OPENING PRIOR TO OBTAINING JOINT MATERIAL.
- THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE BENT JOINTS IN LIEU OF SAWING THE JOINT.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 489



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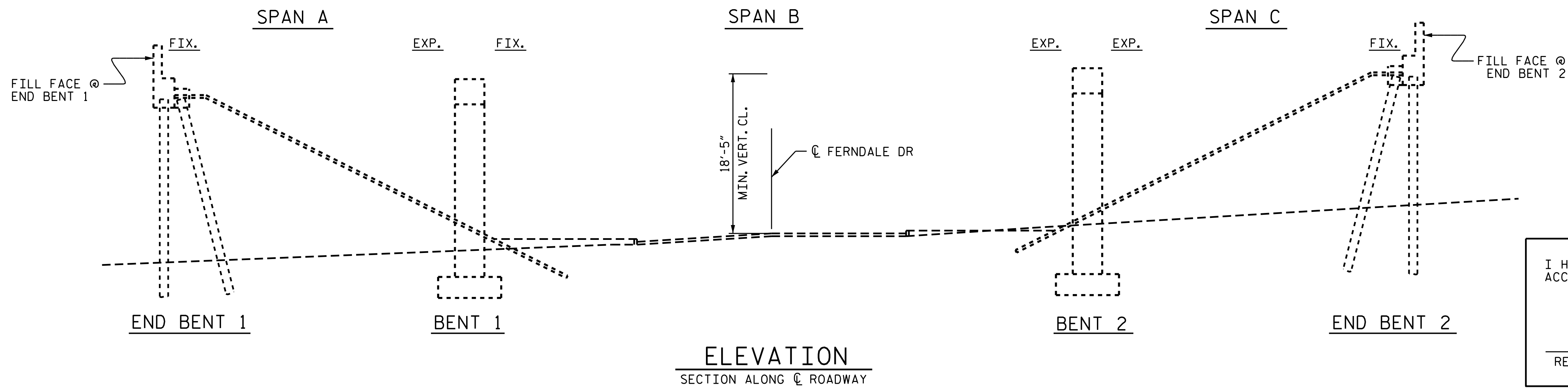
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

DRAWN BY : H. T. BARBOUR DATE : 8-5-17
 CHECKED BY : B. K. POPE DATE : 8-23-17

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-37
1			3			TOTAL SHEETS
2			4			52



NOTES

PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 4/12/2016.

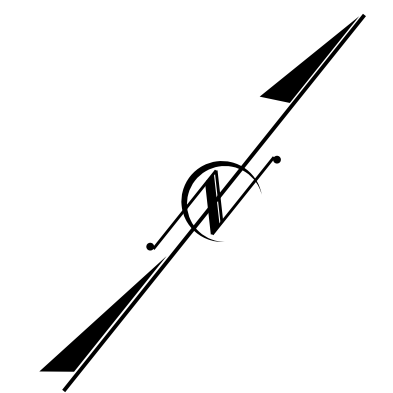
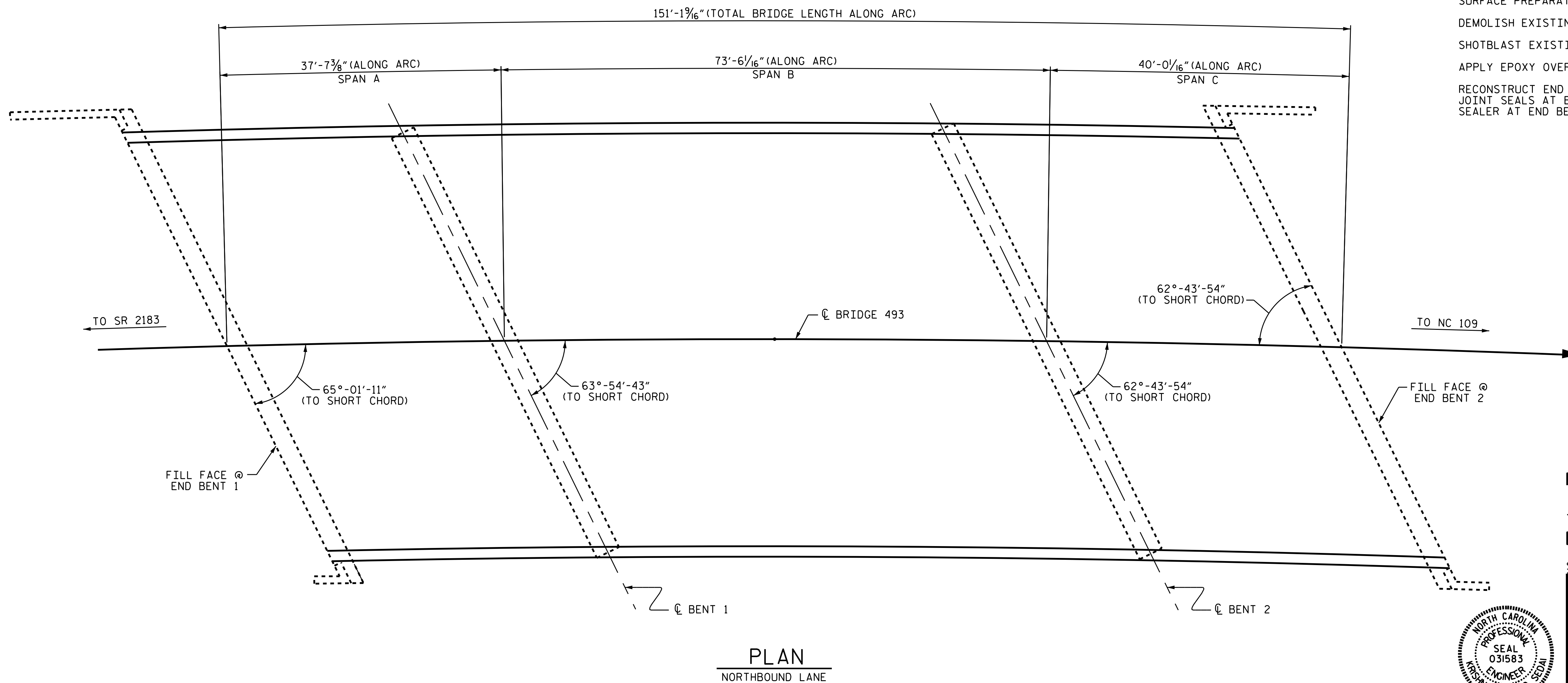
BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

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

RESIDENT ENGINEER _____ DATE _____

SCOPE OF WORK

- SURFACE PREPARATION AND PAINTING OF BEAM ENDS.
- DEMOLISH EXISTING END BENT AND BENT JOINTS.
- SHOTBLAST EXISTING CONCRETE DECK.
- APPLY EPOXY OVERLAY SYSTEM SEALANT.
- RECONSTRUCT END BENT AND BENT JOINTS. INSTALL FOAM JOINT SEALS AT BENTS AND INSTALL SILICONE JOINT SEALER AT END BENTS.



PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 493
 SHEET 1 OF 3

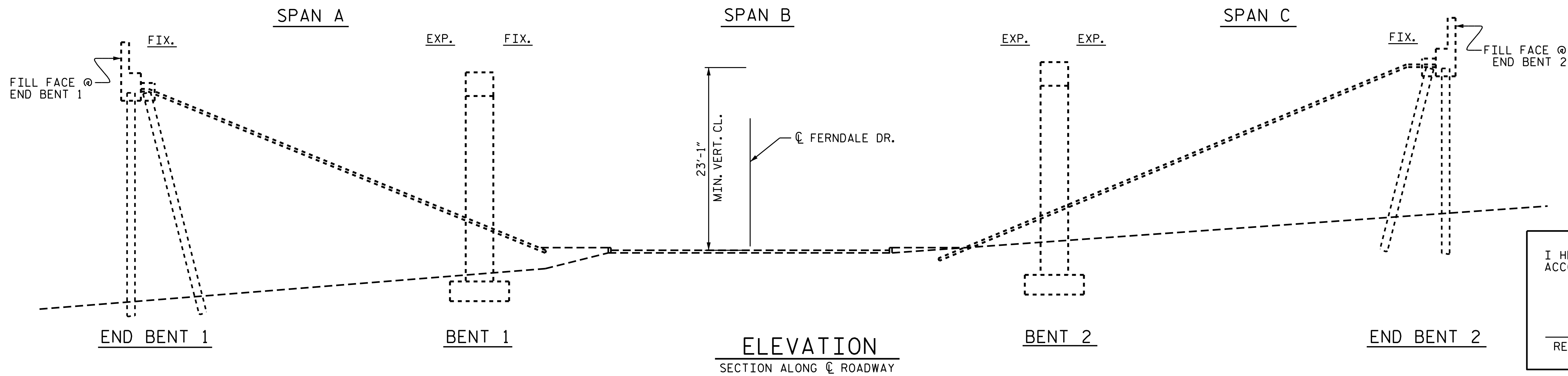


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 BRIDGE #493 (NORTHBOUND)
 ON I-85 OVER
 FERNDAL DRIVE

DRAWN BY : B. L. GREEN DATE : 8/10/17
 CHECKED BY : E. K. POPE DATE : 8/23/17

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-38
1			3			TOTAL SHEETS
2			4			52



NOTES

PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 4/12/2016.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

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

RESIDENT ENGINEER _____

DATE _____

SCOPE OF WORK

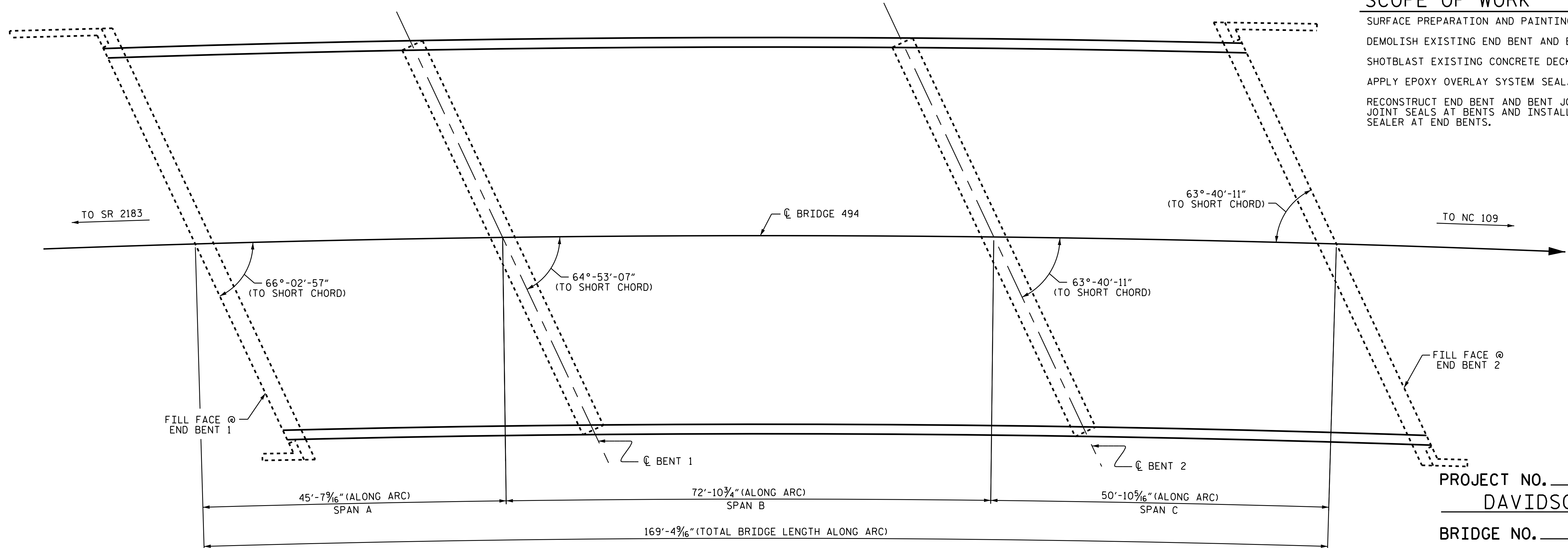
SURFACE PREPARATION AND PAINTING OF BEAM ENDS.

DEMOLISH EXISTING END BENT AND BENT JOINTS.

SHOTBLAST EXISTING CONCRETE DECK.

APPLY EPOXY OVERLAY SYSTEM SEALANT.

RECONSTRUCT END BENT AND BENT JOINTS, INSTALL FOAM JOINT SEALS AT BENTS AND INSTALL SILICONE JOINT SEALER AT END BENTS.



PROJECT NO. I-5793

DAVIDSON COUNTY

BRIDGE NO. 494

SHEET 2 OF 3



DocuSigned by: Krishna P. Sedai 11/20/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

BRIDGE #494 (SOUTHBOUND)
ON I-85 OVER
FERNDALE DRIVE

REVISIONS

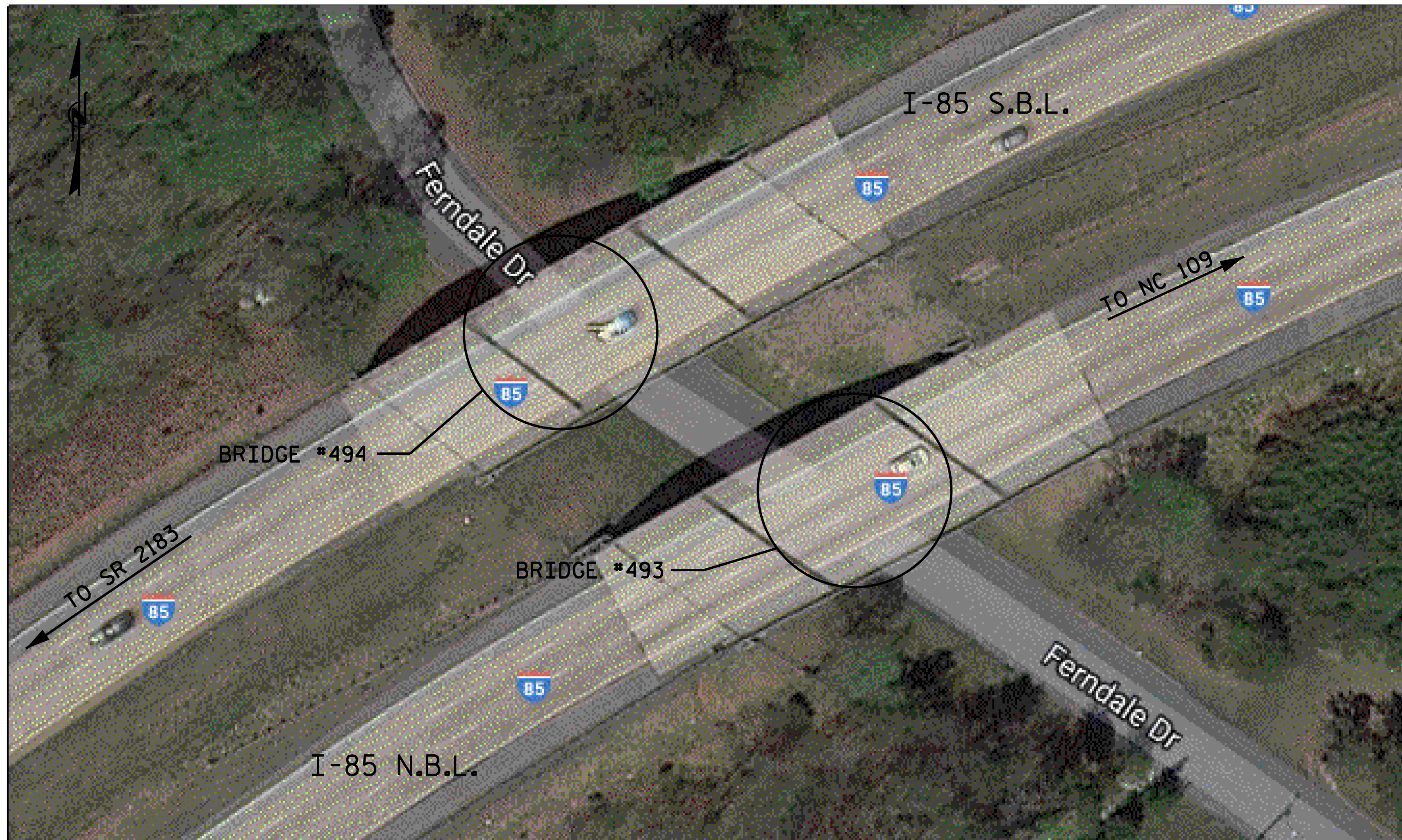
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SHEET NO.

S-39
TOTAL SHEETS
52

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DRAWN BY : B. L. GREEN DATE : 8/10/17
CHECKED BY : E. K. POPE DATE : 8/23/17



NOTES

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

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.

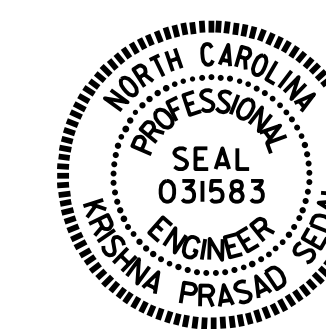
TOTAL BILL OF MATERIAL

DAVIDSON COUNTY BRIDGE NO.	POLLUTION CONTROL	FOAM JOINT SEALS	PAINTING CONTAINMENT FOR BRIDGE NOS...	PAINTING EXISTING WEATHERING STEEL STRUCTURE FOR BRIDGE NOS...	SILICONE JOINT SEALANT	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	*CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY SYSTEM	CLEANING AND PAINTING EXISTING BEARINGS WITH HRCSA FOR BRIDGE NOS...
	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	CU. FT.	SO. FT.	SO. FT.	SO. FT.	EA.
493	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	125	64	256	5	10,765	48
494	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	124	62	248	5	11,730	48
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	249	126	504	10	22,495	96

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED, TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 493 & 494

SHEET 3 OF 3



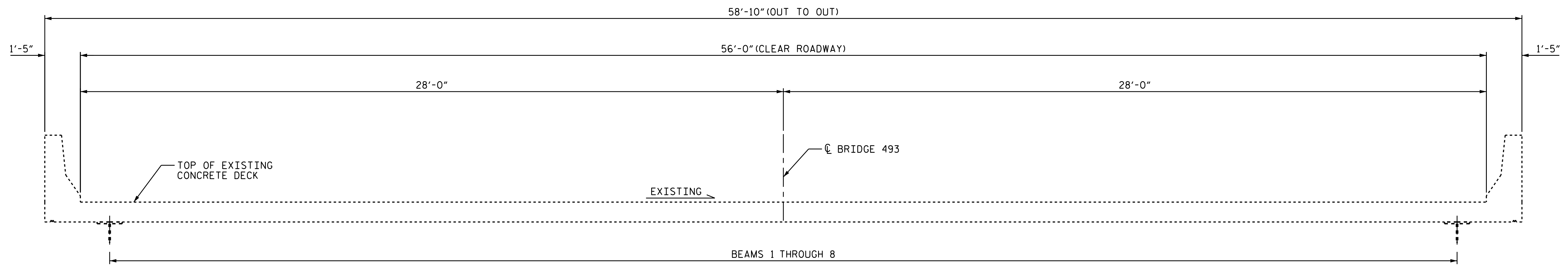
DocuSigned by:
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 BRIDGE NO. 493 & 494
 ON I-85 OVER
 FERNDAL DR.

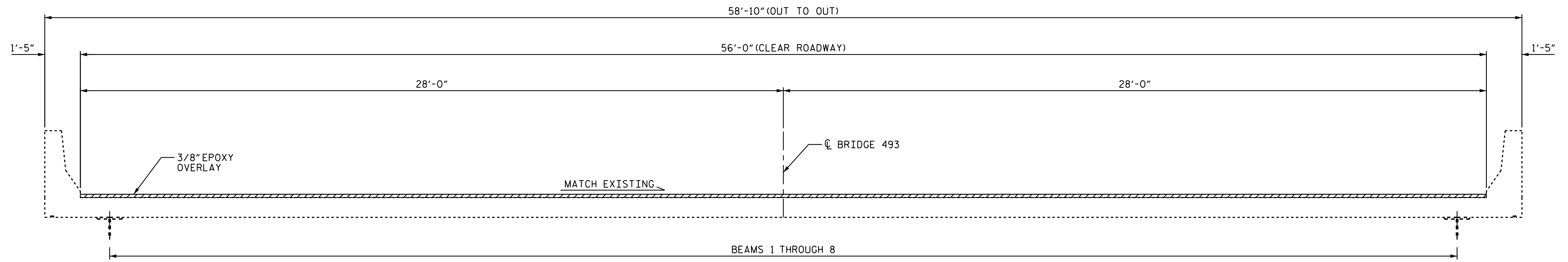
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-40
1			3			TOTAL SHEETS 52
2			4			

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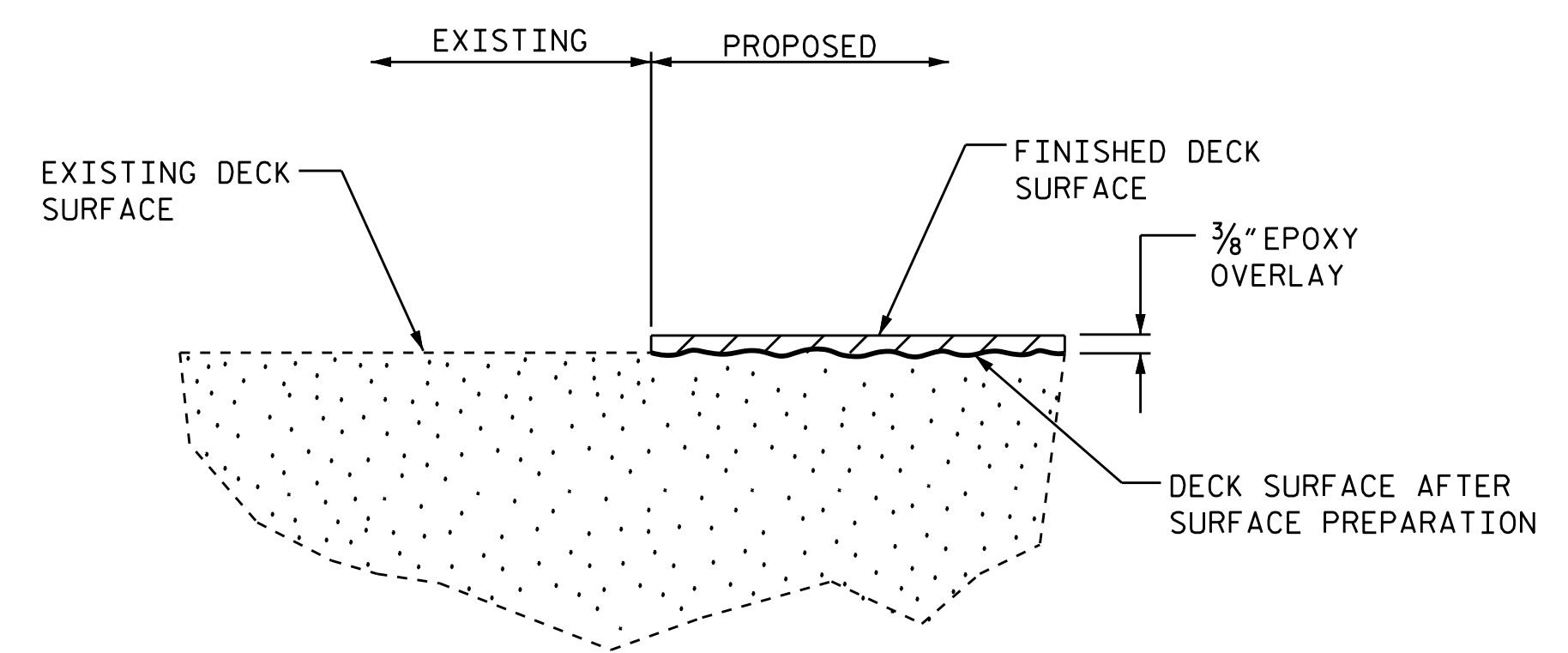
DRAWN BY : B. L. GREEN DATE : 8/10/17
 CHECKED BY : E. K. POPE DATE : 8/23/17



TYPICAL SECTION
(EXISTING BRIDGE 493 NORTHBOUND LANES)



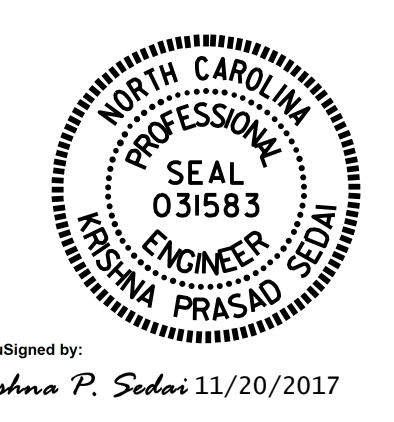
TYPICAL SECTION
(PROPOSED EPOXY OVERLAY)



DETAIL OF EPOXY OVERLAY

NOTE:
STR. #493 SHOWN, STR. #494 SIMILAR BY ROTATION

PROJECT NO. I-5793
DAVIDSON COUNTY
BRIDGE NO. 493 & 494



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**TYPICAL SECTIONS
&
EPOXY OVERLAY
DETAILS**

DRAWN BY : B. L. GREEN DATE : 8/10/17
CHECKED BY : E. K. POPE DATE : 8/23/17

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-41
1			3			TOTAL SHEETS
2			4			52

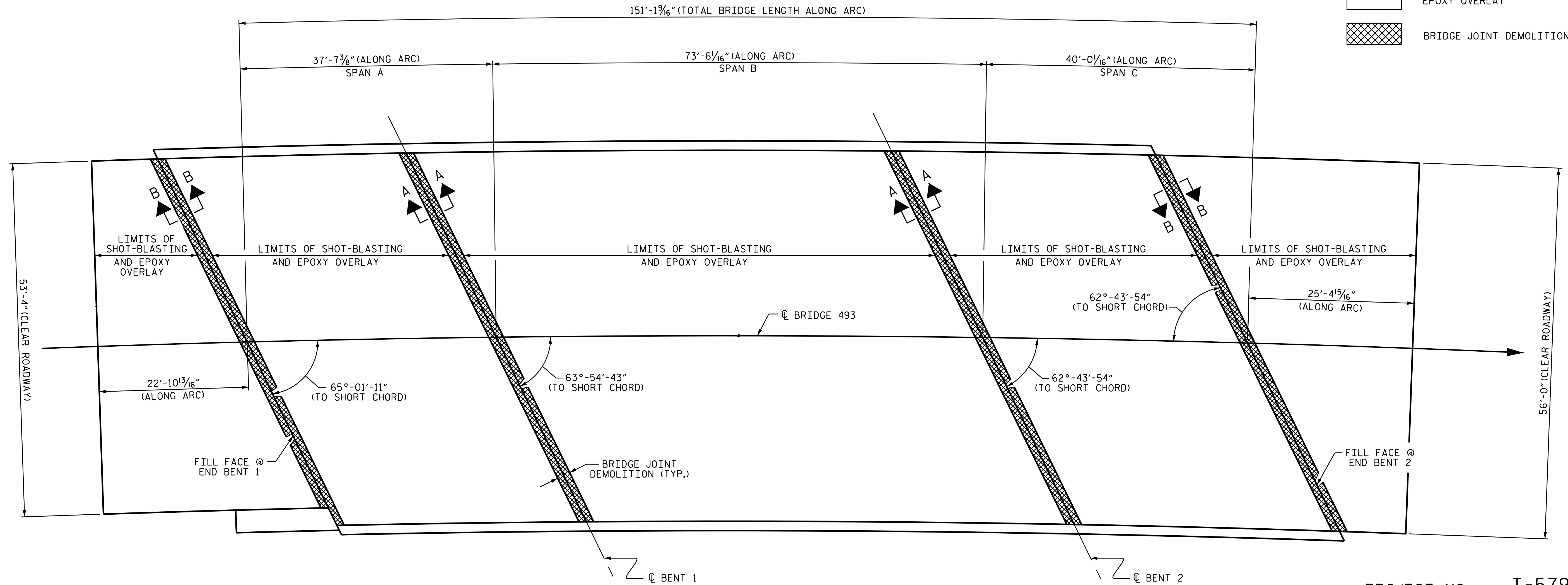
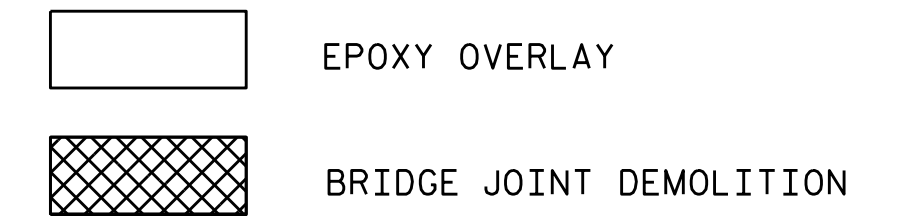
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	*5 SQ. FT.	
EPOXY OVERLAY SYSTEM	10,765 SQ. FT.	
BRIDGE JOINT DEMOLITION	256 SQ. FT.	

NOTE:

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PLAN

(FOR SECTIONS A-A & B-B, SEE "JOINT DETAILS" SHEET)

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 493

SHEET 1 OF 2



Drawn by: Krishna P. Sedai 11/20/2017
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 & EPOXY OVERLAY
 (NORTHBOUND)

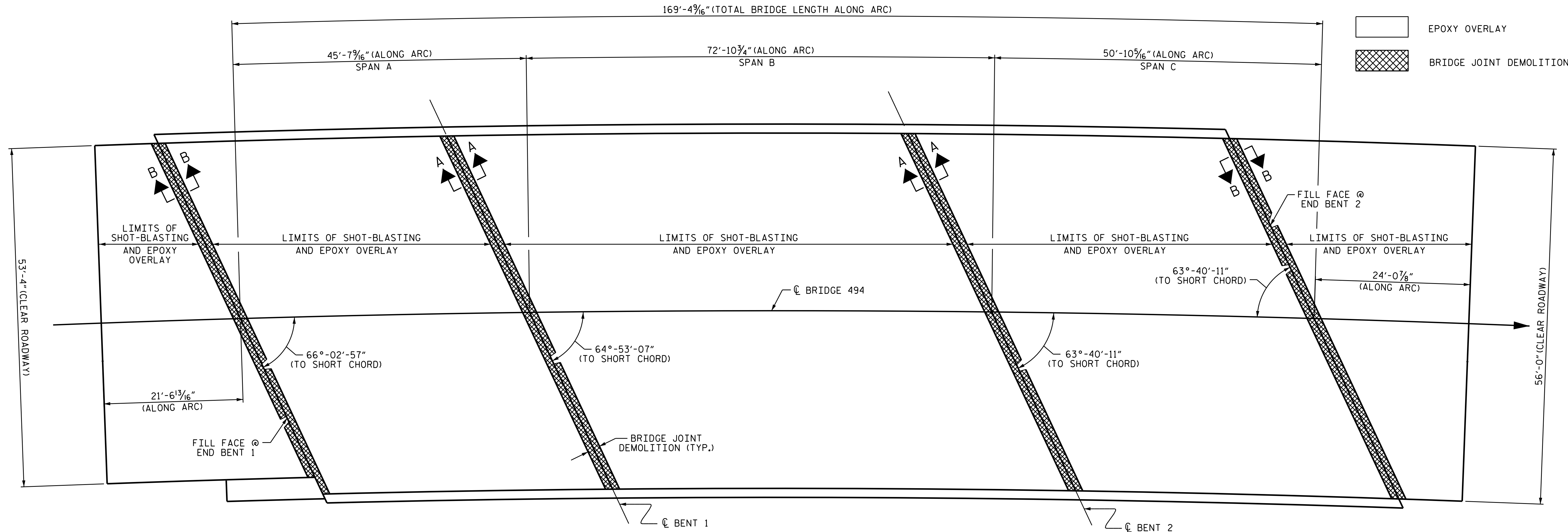
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DRAWN BY : B. L. GREEN DATE : 8/10/17
 CHECKED BY : E. K. POPE DATE : 8/23/17

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	*5 SQ. FT.	
EPOXY OVERLAY SYSTEM	11,730 SQ. FT.	
BRIDGE JOINT DEMOLITION	248 SQ. FT.	

NOTE:
 * CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PLAN
 (FOR SECTIONS A-A & B-B, SEE "JOINT DETAILS SHEET")

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 494

SHEET 2 OF 2



DocuSigned by:
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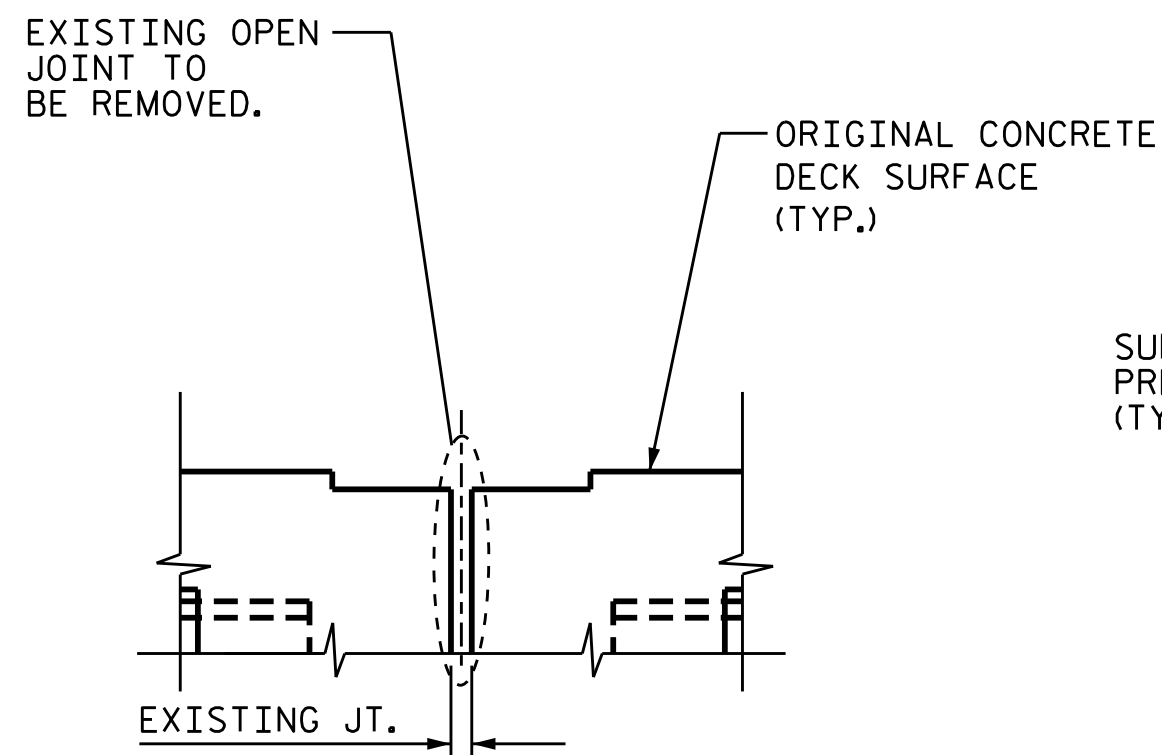
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 & EPOXY OVERLAY**
 (SOUTHBOUND)

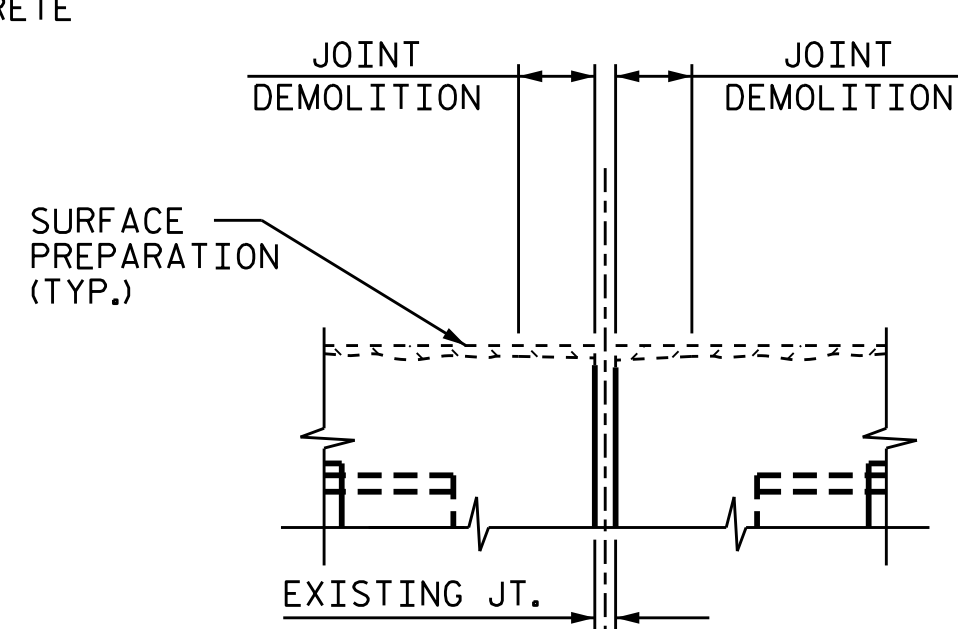
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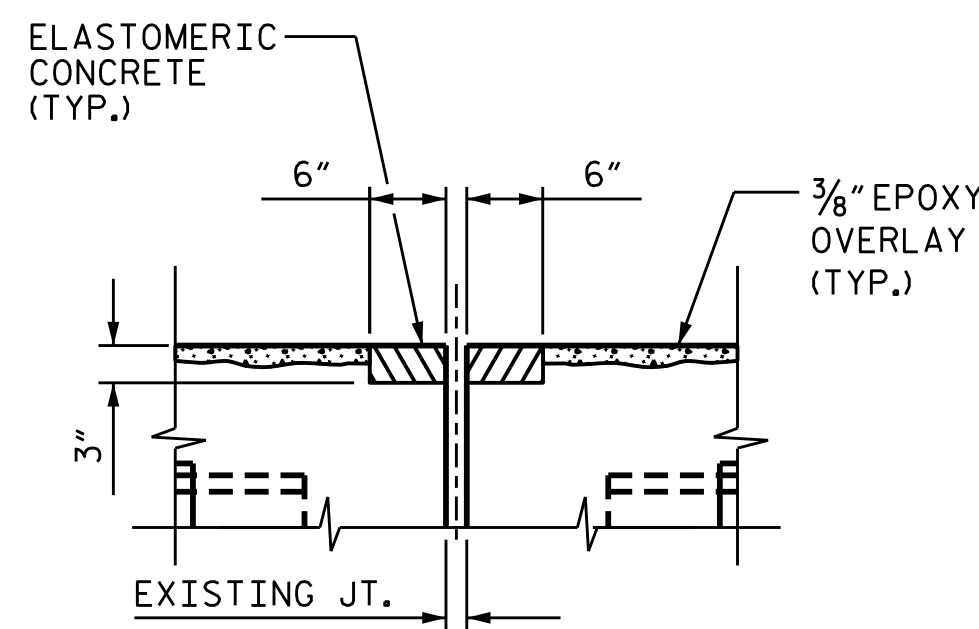
DRAWN BY : B. L. GREEN DATE : 8/10/17
 CHECKED BY : E. K. POPE DATE : 8/23/17



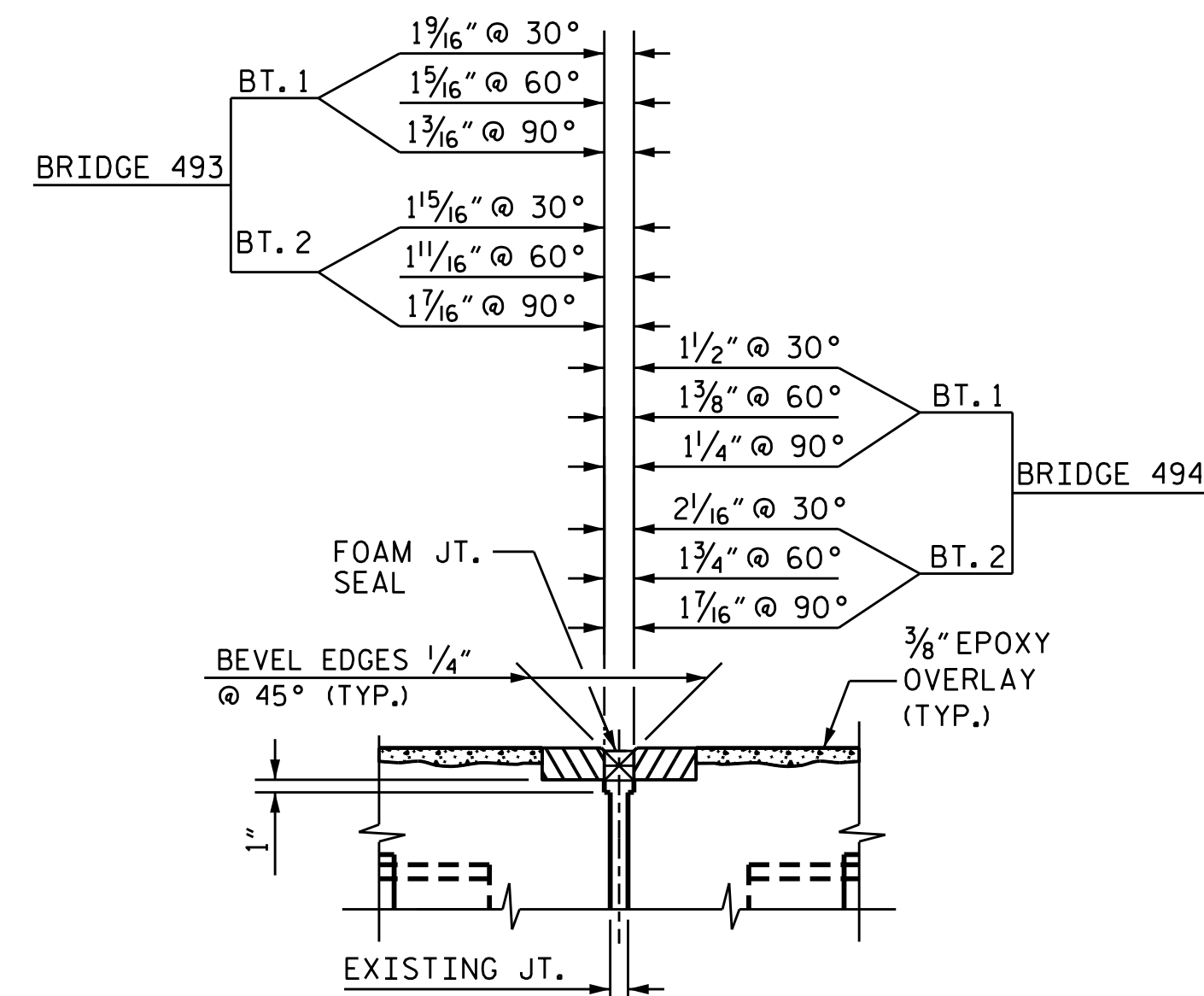
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT PRE-SAWED DIMENSIONS



PROPOSED FOAM JOINT SEAL EXPANSION
ALL BENTS

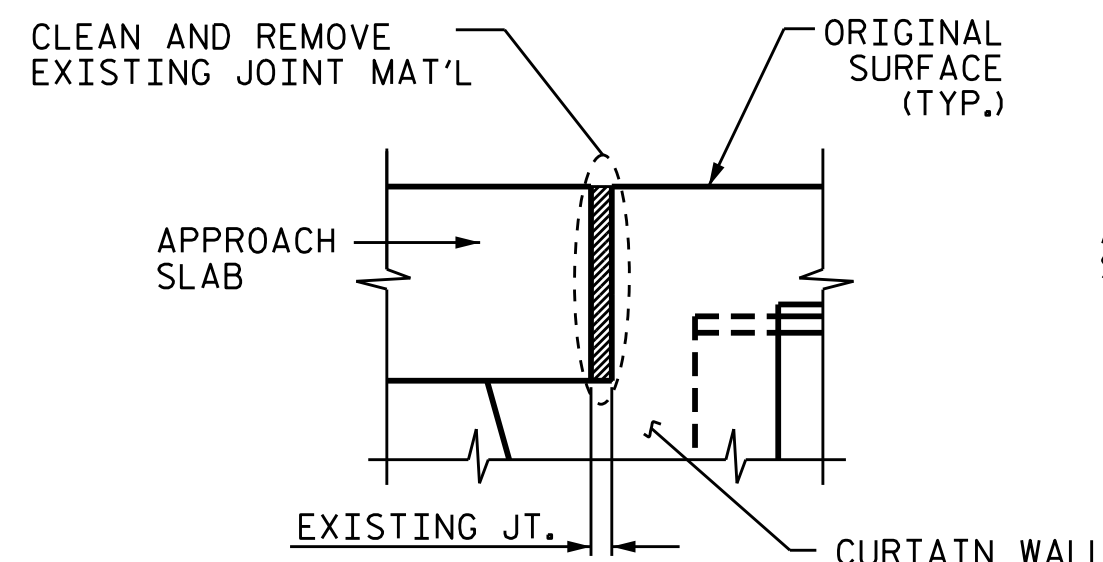
NOTES:

- CONTRACTOR SHALL FIELD VERIFY THE EXISTING SAWS OPENING PRIOR TO OBTAINING JOINT MATERIAL.
- HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC CONCRETE.
- FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
- RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.
- THE WIDTH OF THE UNCOMPRESSED FOAM JOINT MATERIAL SHALL BE 2" AT BENT 1 & 2 1/2" AT BENT 2. THE INSTALLED FOAM JOINT SEALS SHALL BE WATERTIGHT.
- THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE FOAM JOINT SEAL IN LIEU OF SAWING THE JOINT.

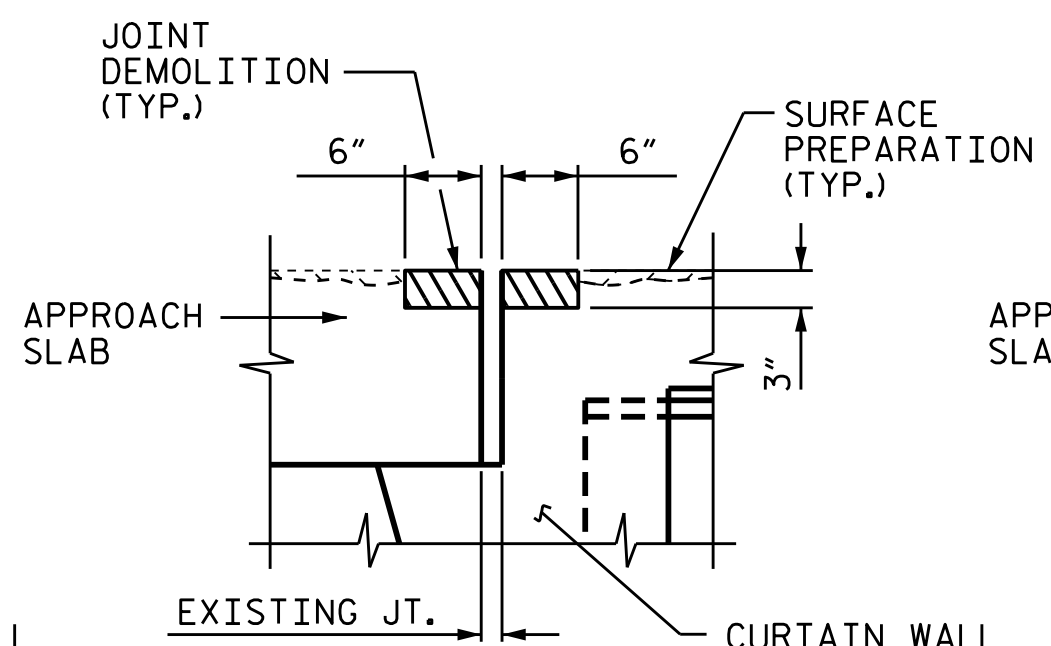
JOINT INSTALLATION SEQUENCE AT BENTS
SECTION A-A

ELASTOMERIC CONCRETE	
BRIDGE 493	64.0 CU. FT.
BRIDGE 494	62.0 CU. FT.
* TOTAL	126.0 CU. FT.

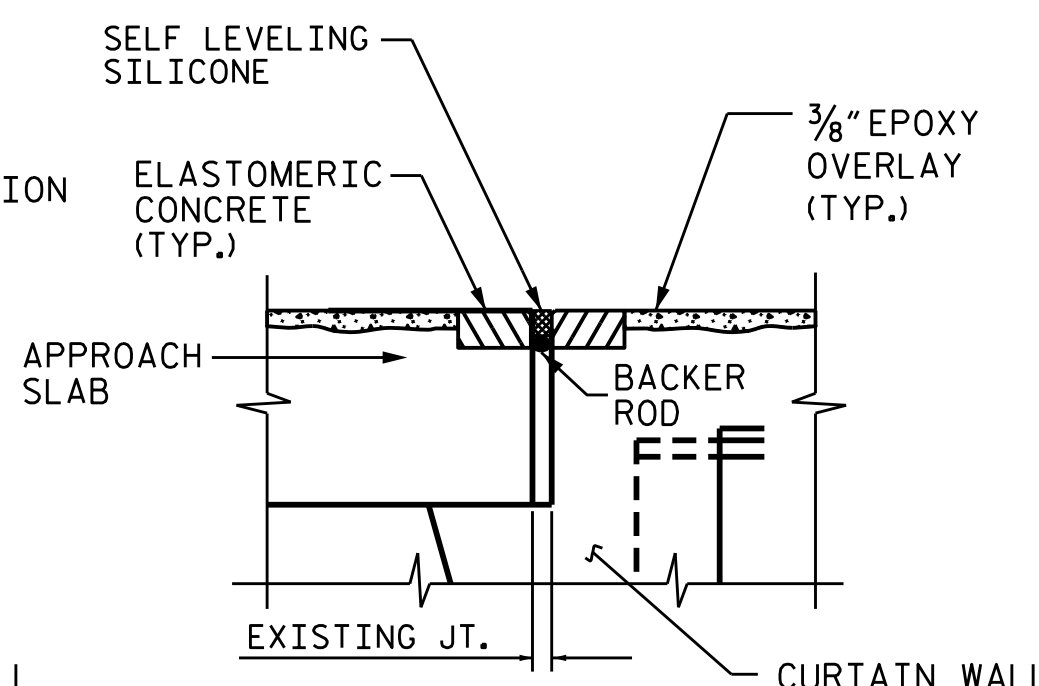
* BASED ON THE MINIMUM BLOCKOUT SHOWN.



EXISTING JOINT

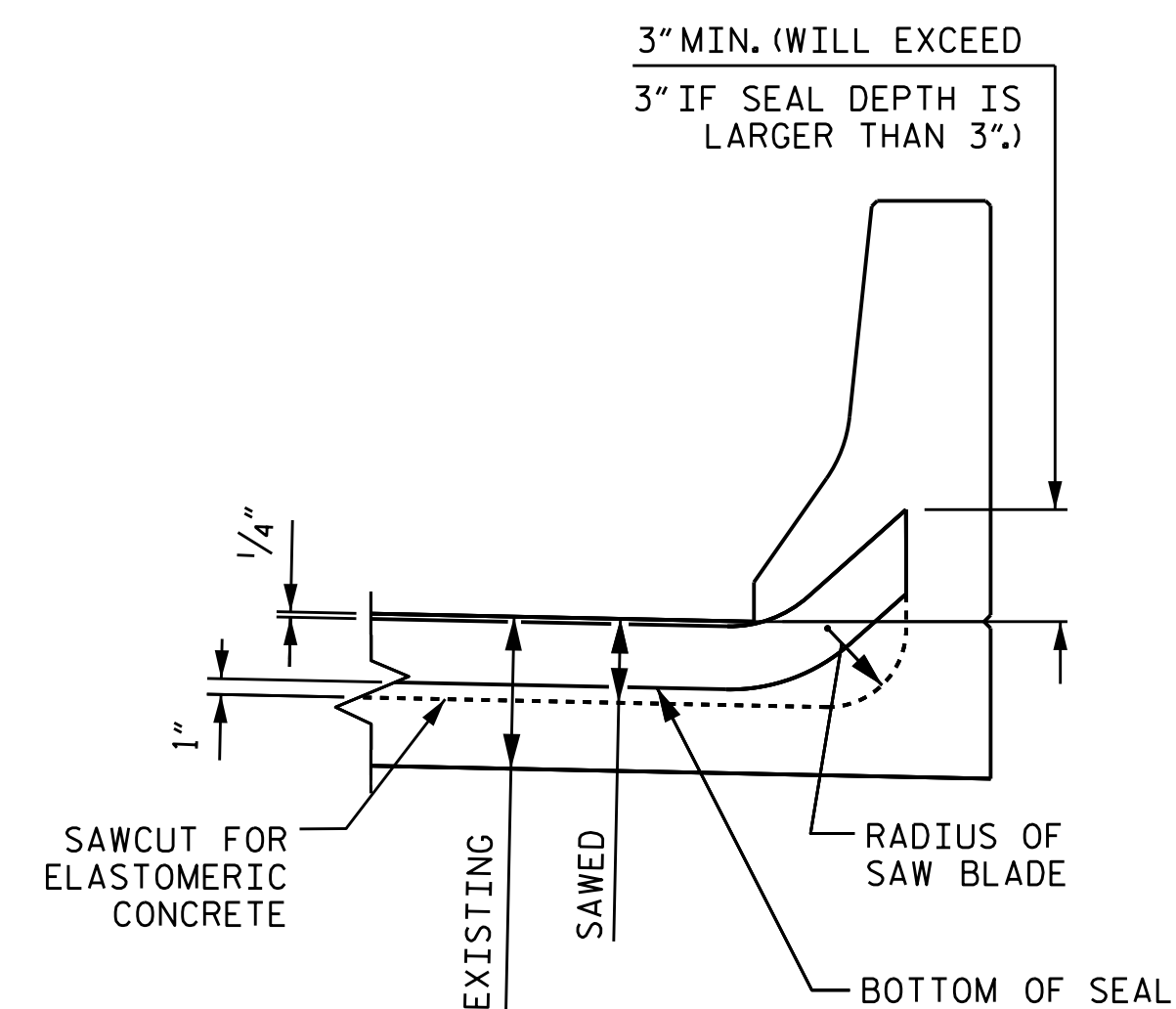


MINIMUM EXISTING JOINT DEMOLITION

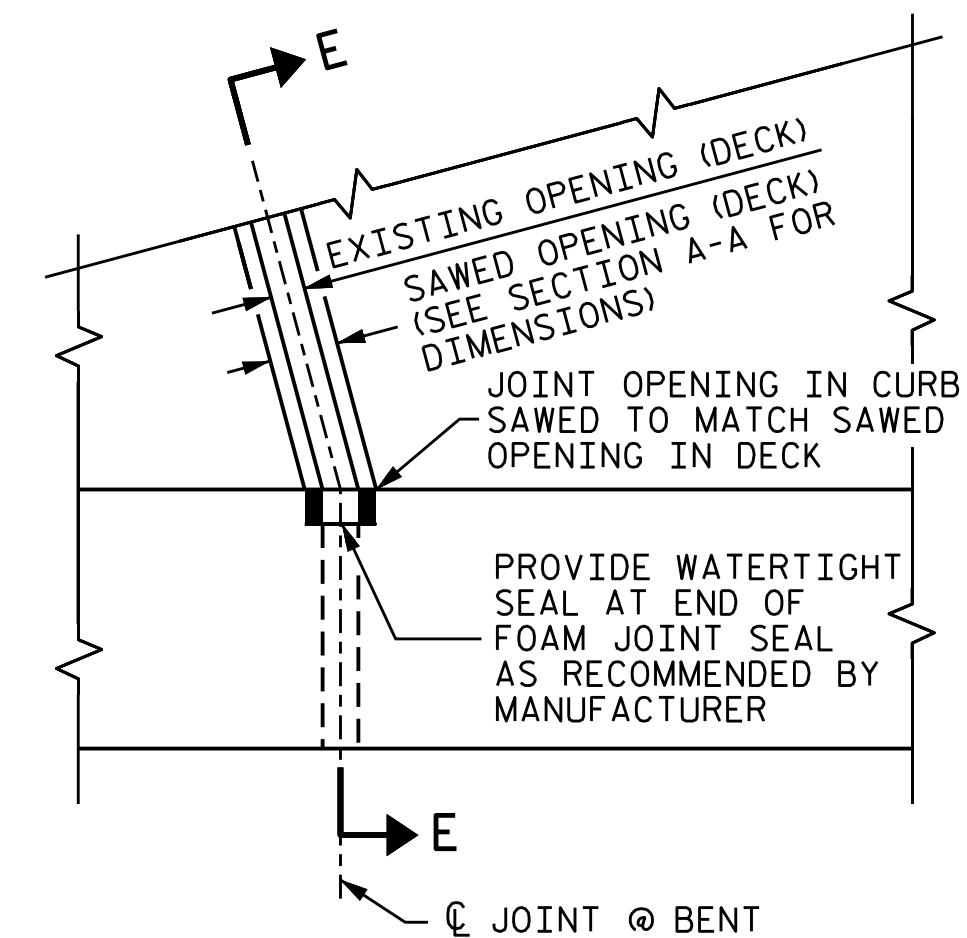


PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS
SECTION B-B



SECTION E-E
JOINT SEAL DETAILS AT BENTS



PROJECT NO. I-5793
DAVIDSON COUNTY
BRIDGE NO. 493 & 494



DocuSigned by:
Krishna P. Sedai 11/20/2017
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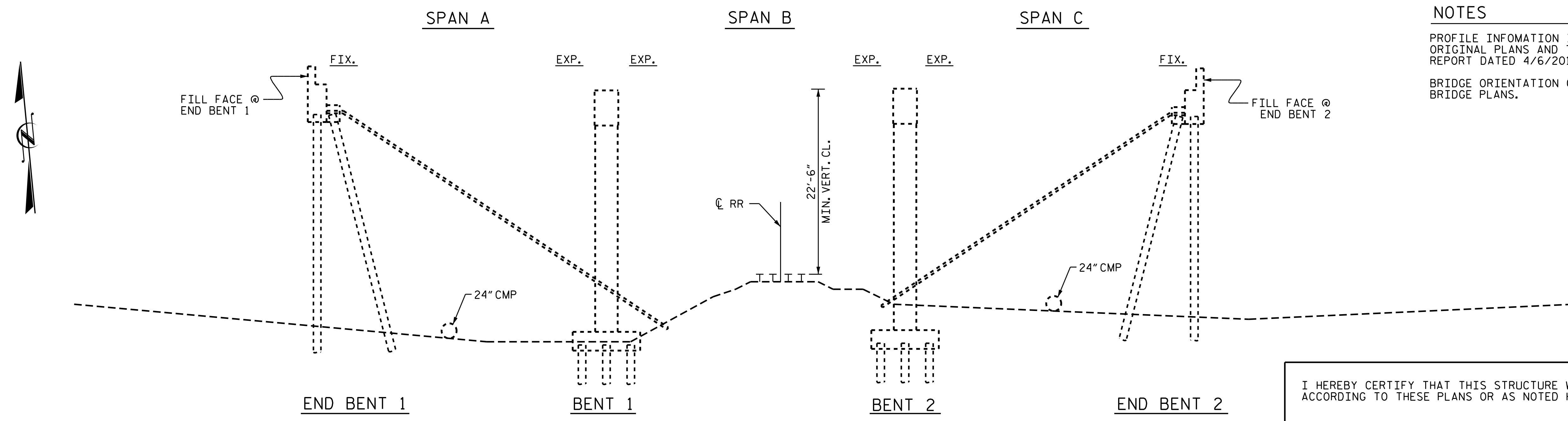
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
JOINT DETAILS

DRAWN BY : B.L. GREEN DATE : 8/10/17
CHECKED BY : E.K. POPE DATE : 8/23/17

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-44
1			3			TOTAL SHEETS
2			4			52



NOTES
 PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 4/6/2016.
 BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

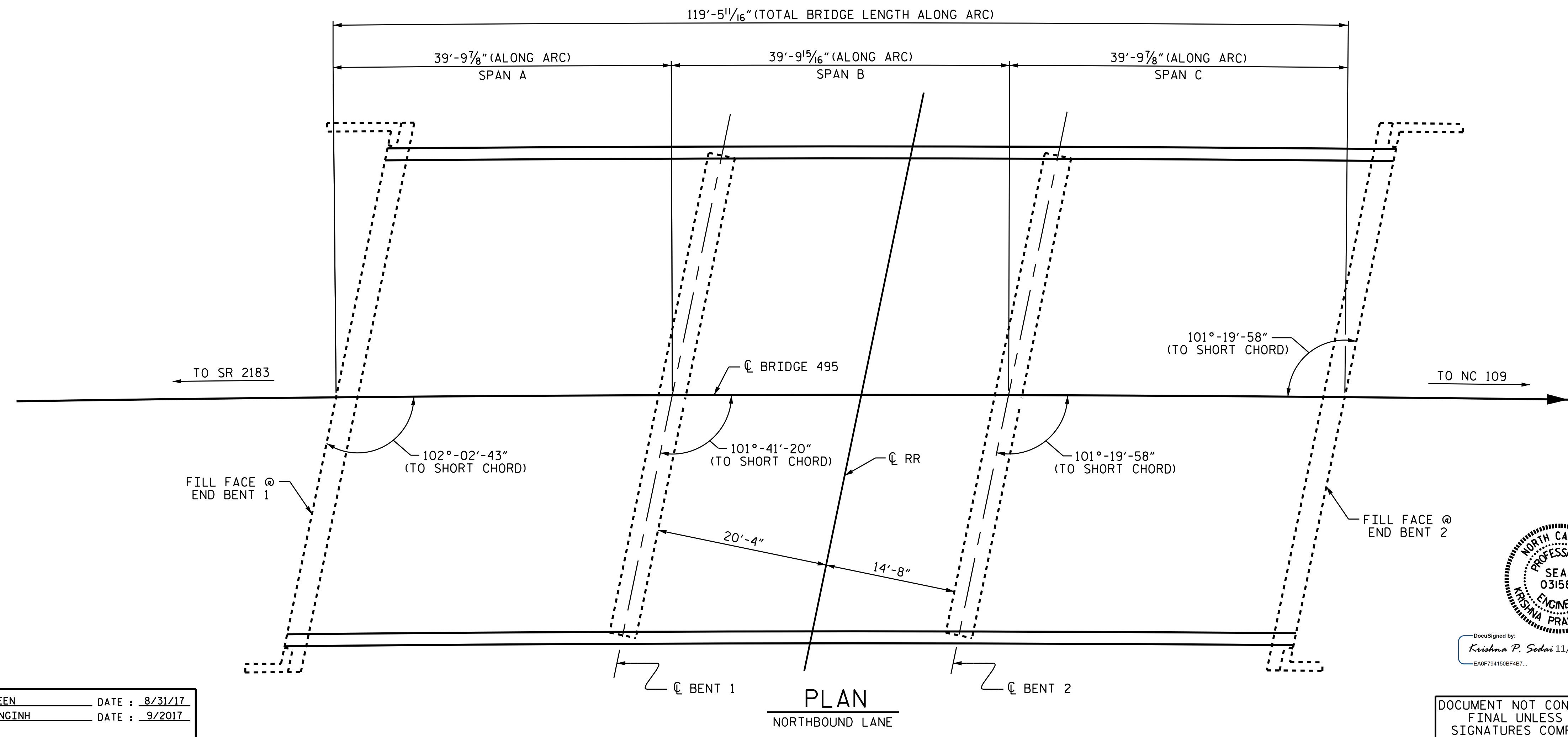
I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER _____ DATE _____

SCOPE OF WORK

- DEMOLISH EXISTING END BENT AND BENT JOINTS.
- SHOTBLAST EXISTING CONCRETE DECK.
- APPLY EPOXY OVERLAY SYSTEM SEALANT.
- RECONSTRUCT END BENT AND BENT JOINTS. INSTALL FOAM JOINT SEALS AT BENTS AND INSTALL SILICONE JOINT SEALER AT END BENTS.

ELEVATION
 SECTION ALONG $\text{\textcircled{C}}$ ROADWAY

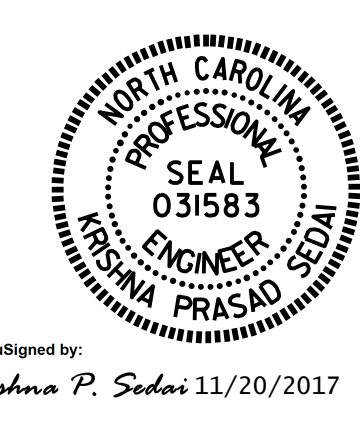


PLAN
 NORTHBOUND LANE

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 495

SHEET 1 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 BRIDGE #495 (NORTHBOUND)
 ON I-85 OVER
 CSX RAILROAD

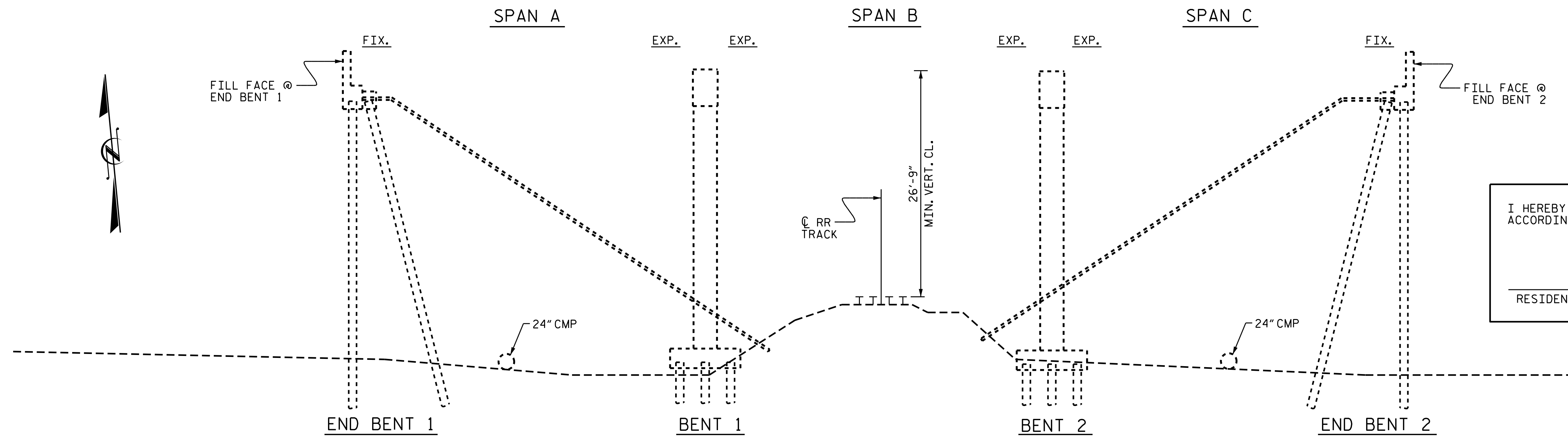


DocuSigned by:
 Krishna P. Sedai 11/20/2017
 EABF794150BF487...

DRAWN BY : B.L. GREEN DATE : 8/31/17
 CHECKED BY : A. SORSENGINH DATE : 9/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-45
2			4			52



NOTES
 PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 8/22/2017.
 BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

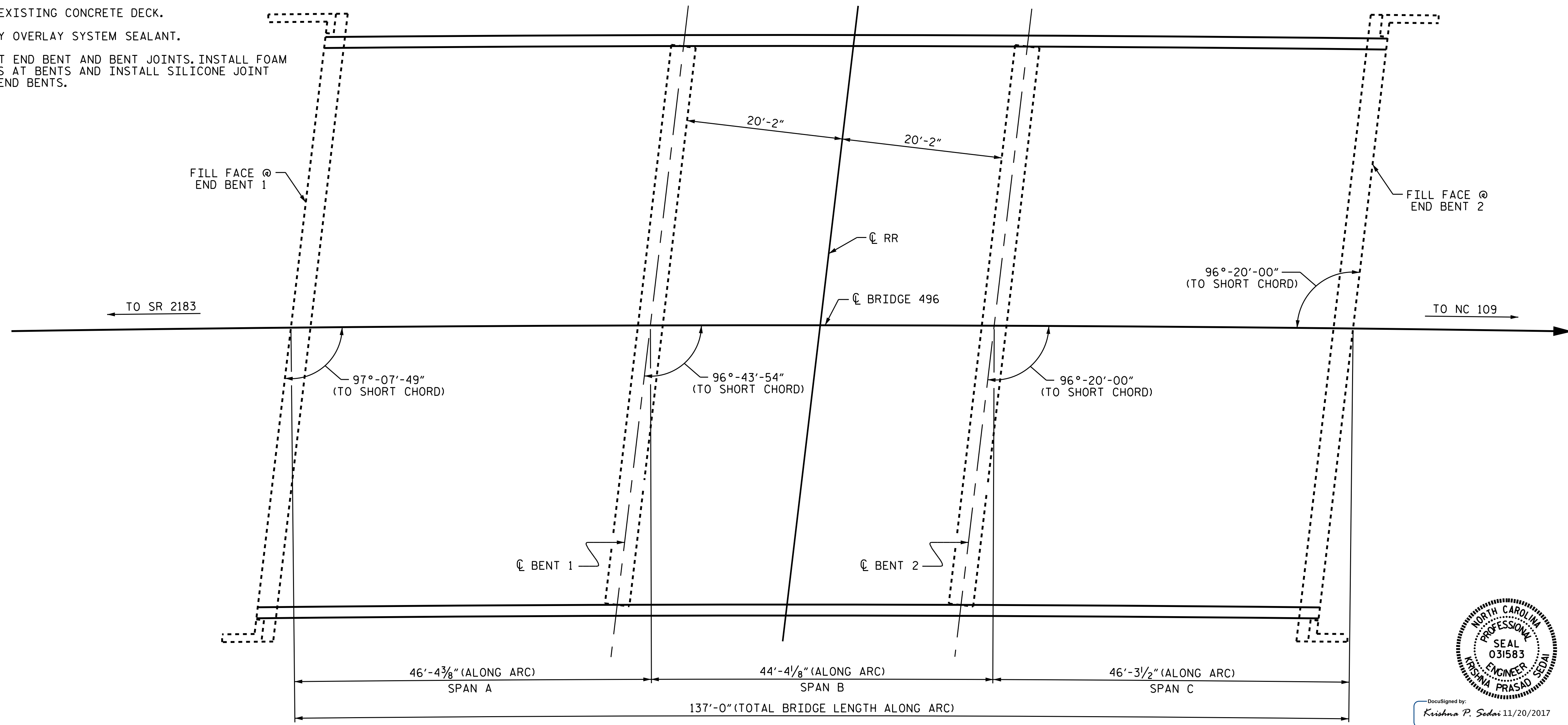
I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

 RESIDENT ENGINEER DATE

SCOPE OF WORK

- DEMOLISH EXISTING END BENT AND BENT JOINTS.
- SHOTBLAST EXISTING CONCRETE DECK.
- APPLY EPOXY OVERLAY SYSTEM SEALANT.
- RECONSTRUCT END BENT AND BENT JOINTS. INSTALL FOAM JOINT SEALS AT BENTS AND INSTALL SILICONE JOINT SEALER AT END BENTS.

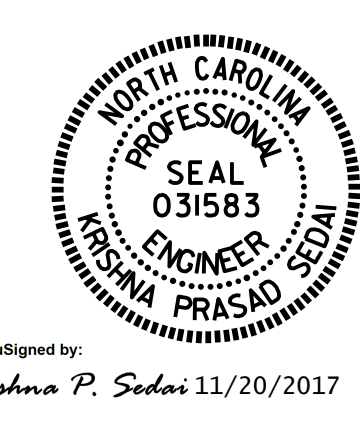
ELEVATION
 SECTION ALONG ϕ ROADWAY



PLAN
 SOUTHBOUND LANE

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 496

SHEET 2 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 BRIDGE #496 (SOUTHBOUND)
 ON I-85 OVER
 CSX RAILROAD

DRAWN BY : B.L. GREEN DATE : 8/31/17
 CHECKED BY : A. SORSENGINH DATE : 9/2017

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-46
1			3			TOTAL SHEETS
2			4			52



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

DAVIDSON COUNTY BRIDGE NO.	FOAM JOINT SEALS	SILICONE JOINT SEALANT	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	*CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY SYSTEM
	LUMP SUM	LIN. FT.	CU. FT.	SQ. FT.	SQ. FT.	SQ. FT.
495	LUMP SUM	115	57	228	5	8,123
496	LUMP SUM	146	73	289	5	11,516
TOTAL	LUMP SUM	261	130	517	10	19,639

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED, TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLAN SHEETS.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR RAILROAD GENERAL SPECIAL PROVISIONS - CSX TRANSPORTATION, INC., SEE SPECIAL PROVISIONS.

FOR SPECIAL PROVISIONS FOR PROTECTION OF RAILROAD INTEREST, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 495 & 496

SHEET 3 OF 3



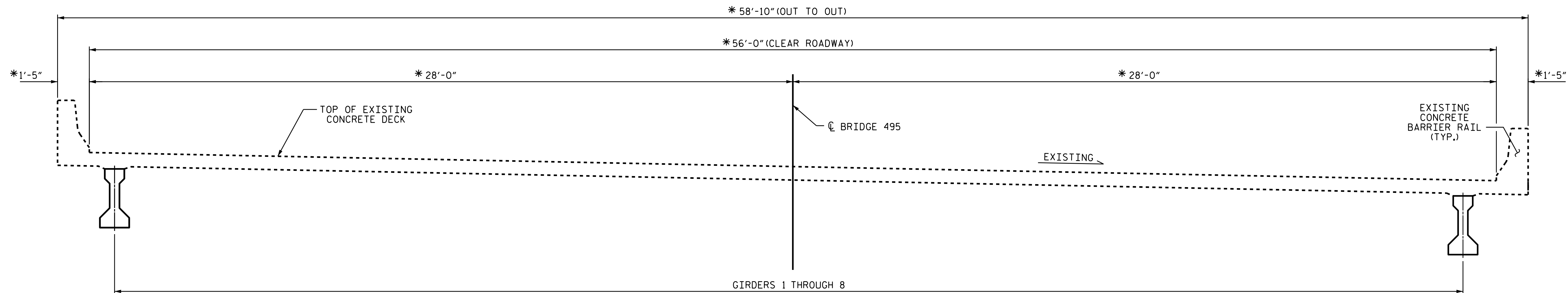
DocuSigned by:
 Krishna P. Sedai 11/20/2017
 EABF7941508F487

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 BRIDGE #495 & 496
 ON I-85 OVER
 CSX RAILROAD

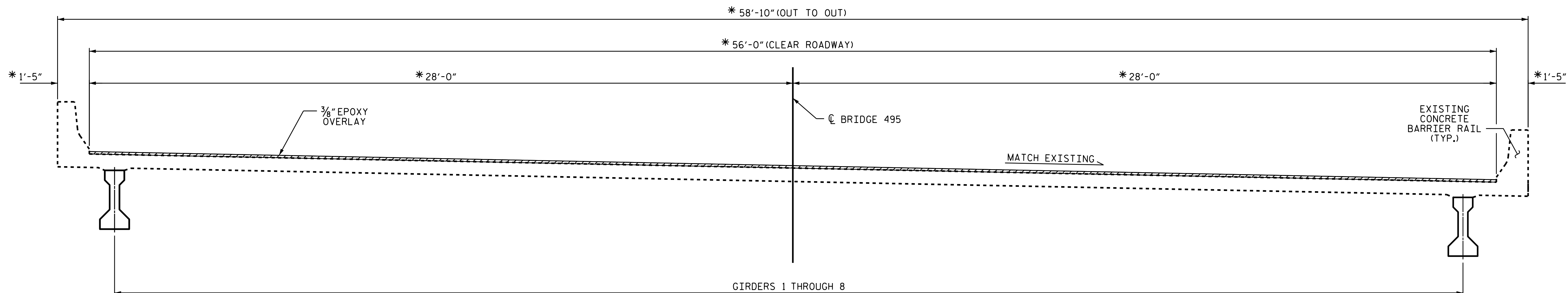
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-47
1			3			TOTAL SHEETS 52
2			4			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

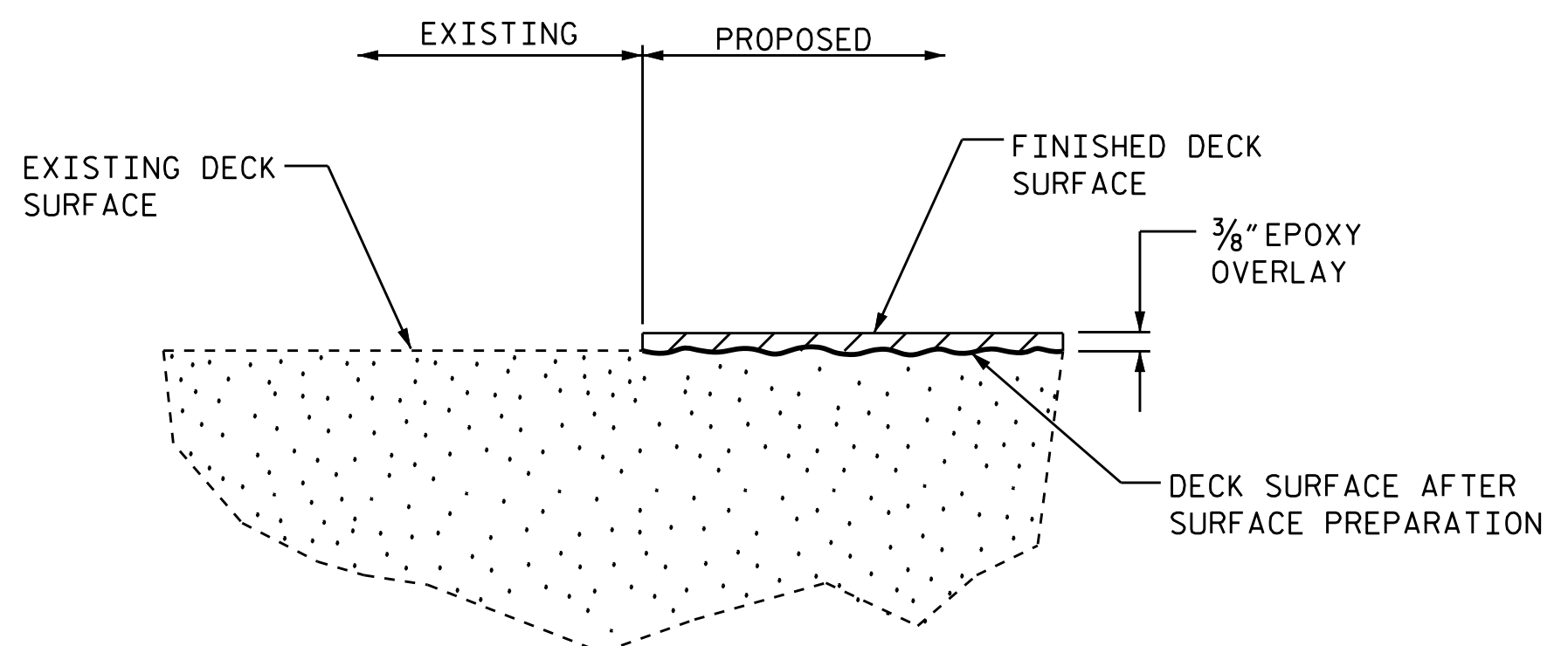
DRAWN BY : B. L. GREEN DATE : 8/31/17
 CHECKED BY : A. SORSENGIH DATE : 9/2017



TYPICAL SECTION
 (EXISTING BRIDGE 495 NORTHBOUND LANES SHOWN)
 * RADIAL DIMENSION



TYPICAL SECTION
 (PROPOSED EPOXY OVERLAY)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 495

SHEET 1 OF 2



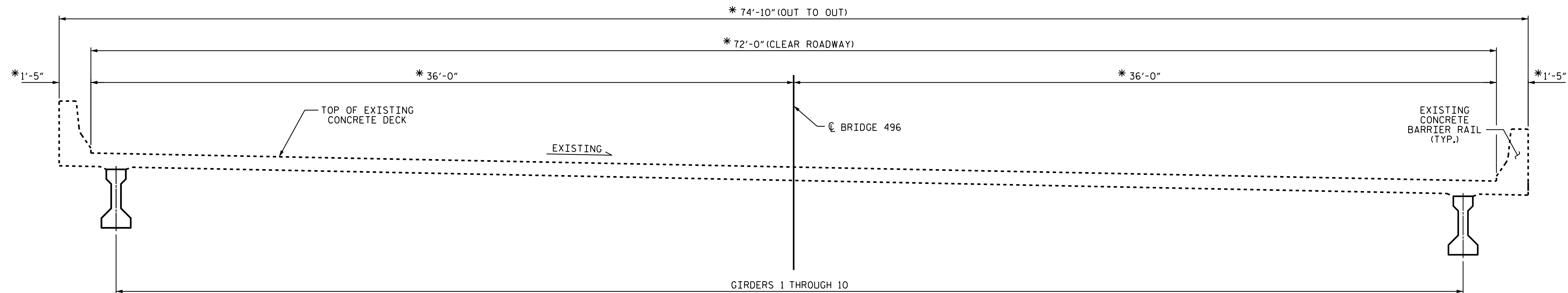
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**TYPICAL SECTIONS
 &
 EPOXY OVERLAY
 DETAILS**

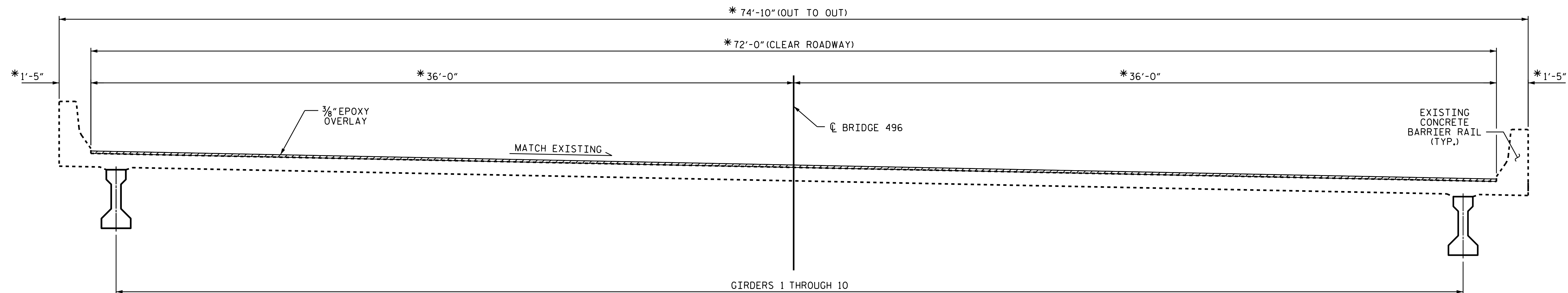
DRAWN BY : B.L. GREEN DATE : 8/31/17
 CHECKED BY : A. SORSENGINH DATE : 9/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

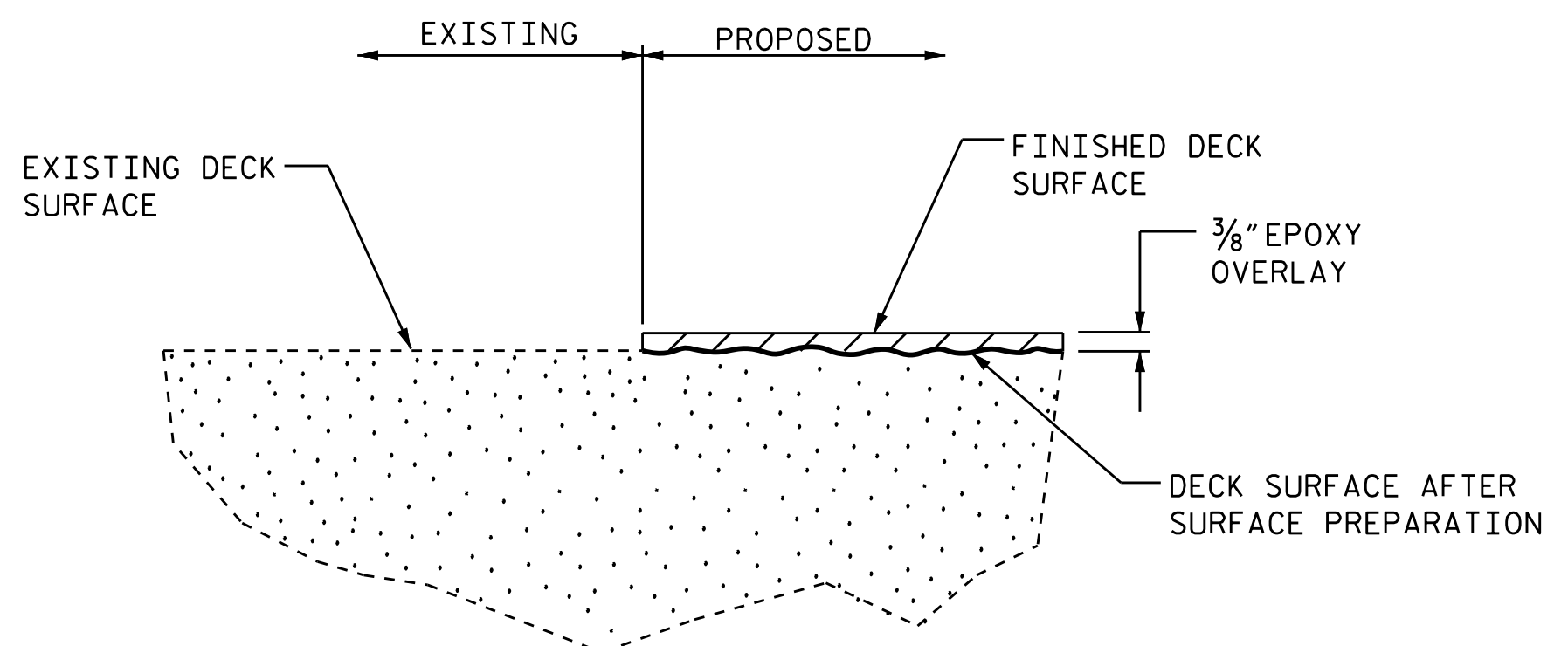
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-48
1			3			TOTAL SHEETS
2			4			52



TYPICAL SECTION
 (EXISTING BRIDGE 496 SOUTHBOUND LANES SHOWN)
 * RADIAL DIMENSION



TYPICAL SECTION
 (PROPOSED EPOXY OVERLAY)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 496

SHEET 2 OF 2



DocuSigned by:
 Krishna P. Sedai 11/20/2017
 EABF7941508F487

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**TYPICAL SECTIONS
 &
 EPOXY OVERLAY
 DETAILS**

DRAWN BY : B. L. GREEN DATE : 8/31/17
 CHECKED BY : A. SORSENGINH DATE : 9/2017

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-49
1			3			TOTAL SHEETS
2			4			52

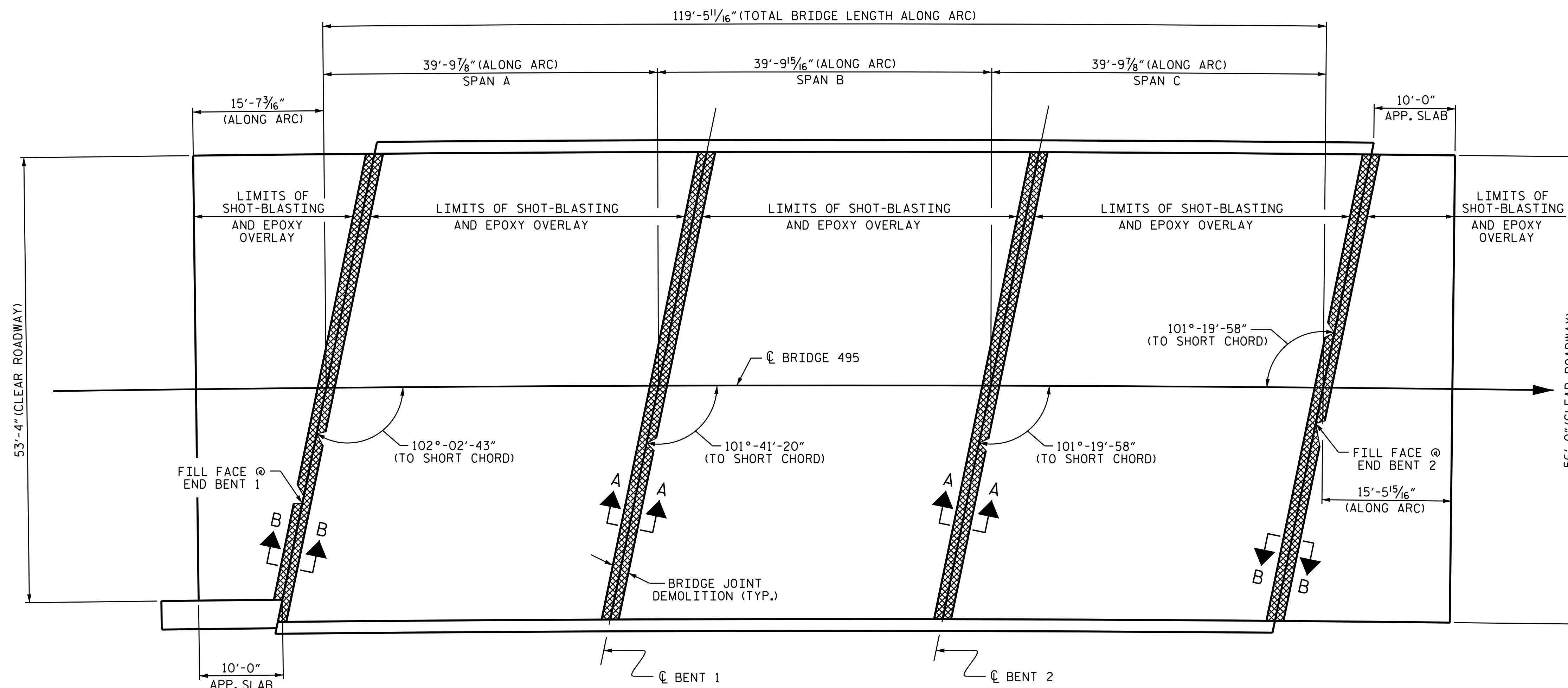
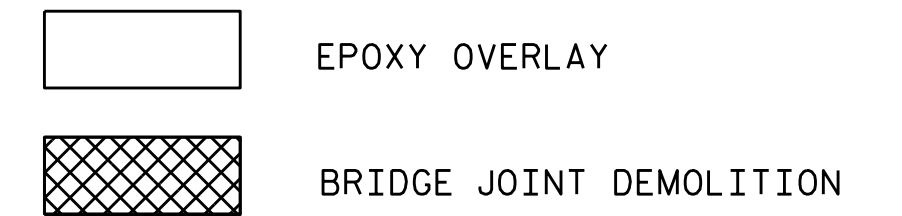
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	*5 SQ. FT.	
EPOXY OVERLAY SYSTEM	8,123 SQ. FT.	
BRIDGE JOINT DEMOLITION	228 SQ. FT.	

NOTE:

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PLAN

(FOR SECTIONS A-A & B-B, SEE "JOINT DETAILS" SHEET)

PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 495

SHEET 1 OF 2



Drawn by: Krishna P. Sedai 11/20/2017
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 & EPOXY OVERLAY**
 (NORTHBOUND)

DRAWN BY : B. L. GREEN DATE : 8/31/17
 CHECKED BY : A. SORSENGINH DATE : 9/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

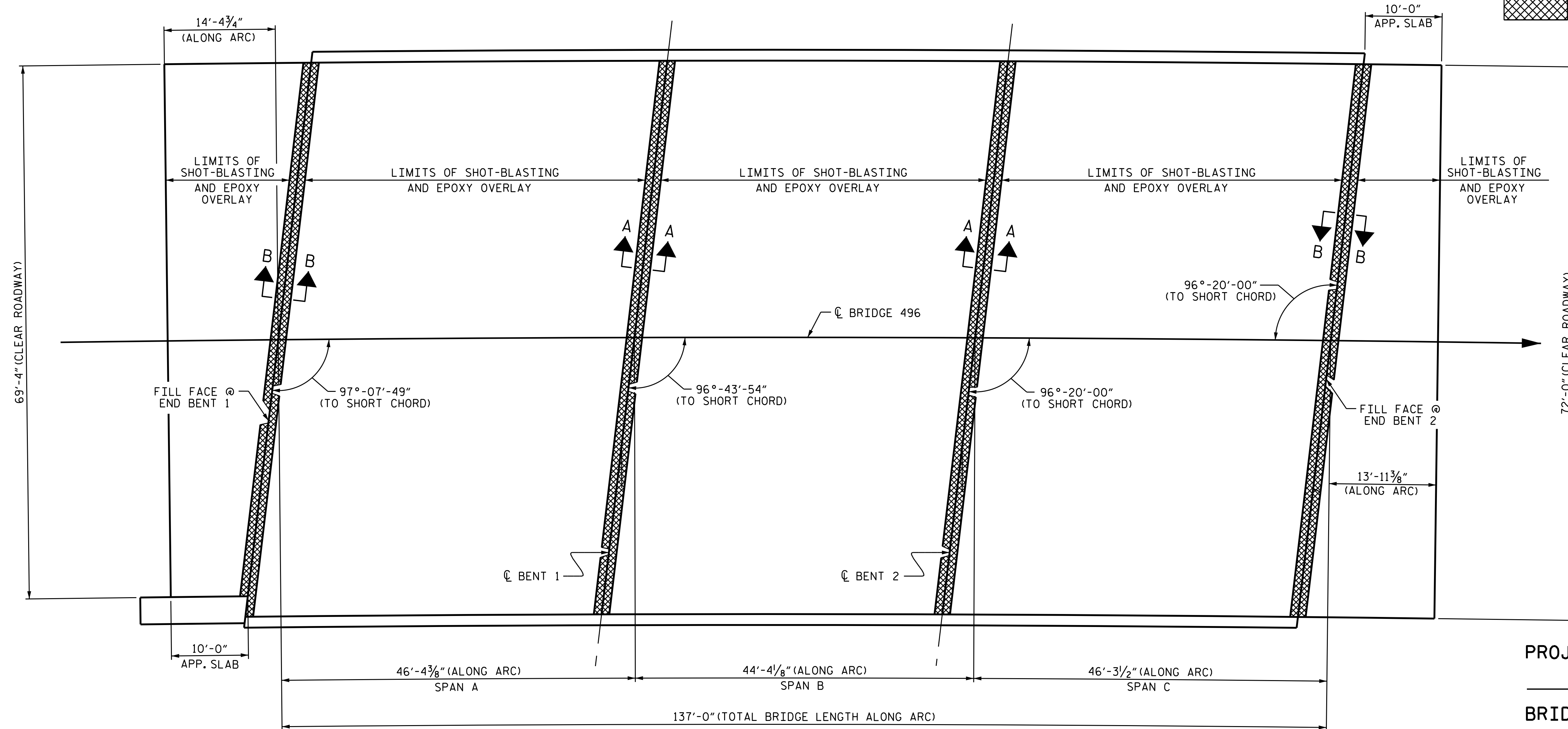
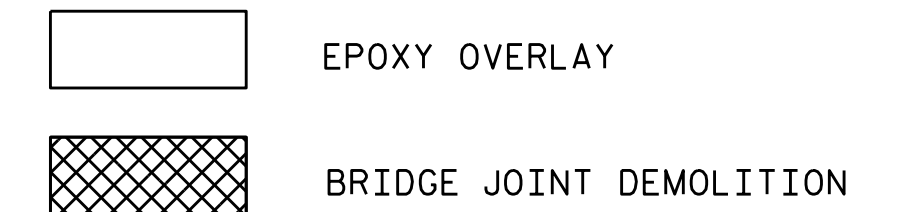
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-50
1			3			TOTAL SHEETS
2			4			52

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	*5 SQ. FT.	
EPOXY OVERLAY SYSTEM	11,516 SQ. FT.	
BRIDGE JOINT DEMOLITION	289 SQ. FT.	

NOTE:

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PROJECT NO. I-5793
DAVIDSON COUNTY
 BRIDGE NO. 496

SHEET 2 OF 2



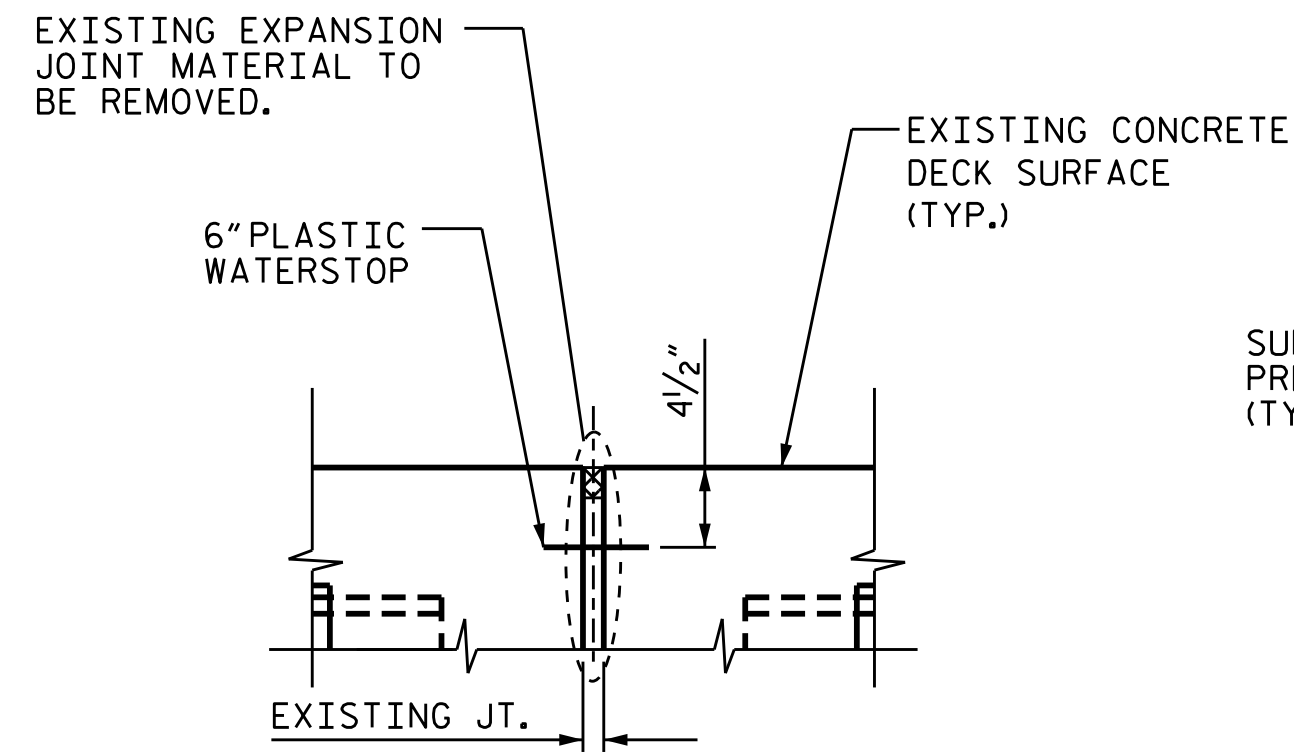
DocuSigned by:
 Krishna P. Sedai 11/20/2017
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 & EPOXY OVERLAY**
 (SOUTHBOUND)

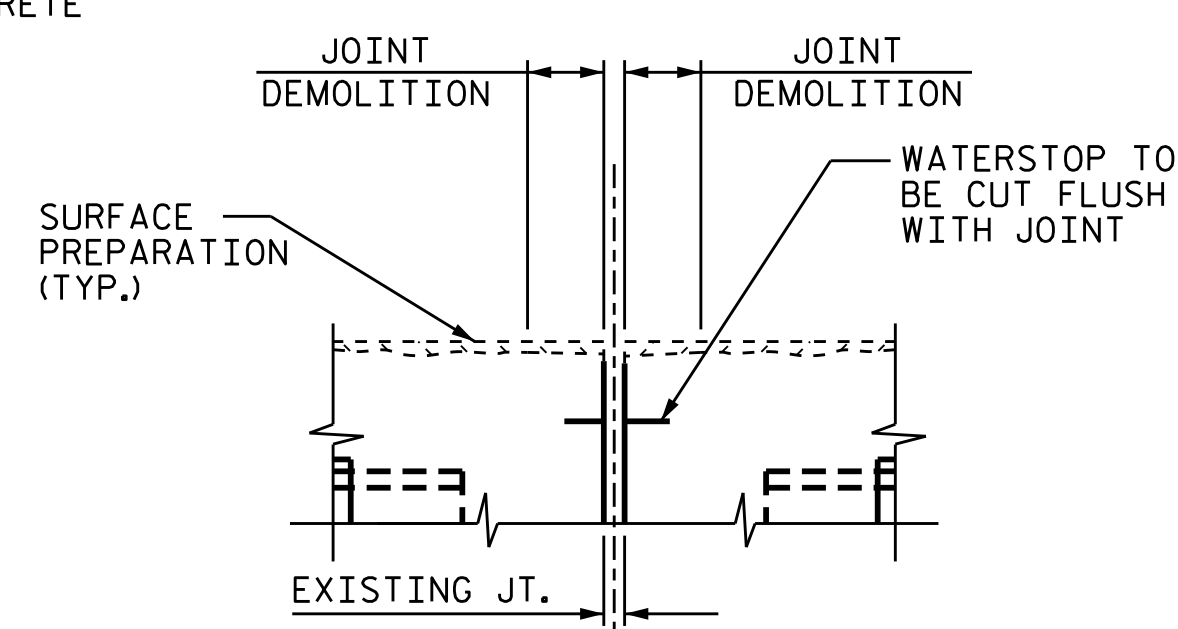
DRAWN BY : B. L. GREEN DATE : 8/31/17
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DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

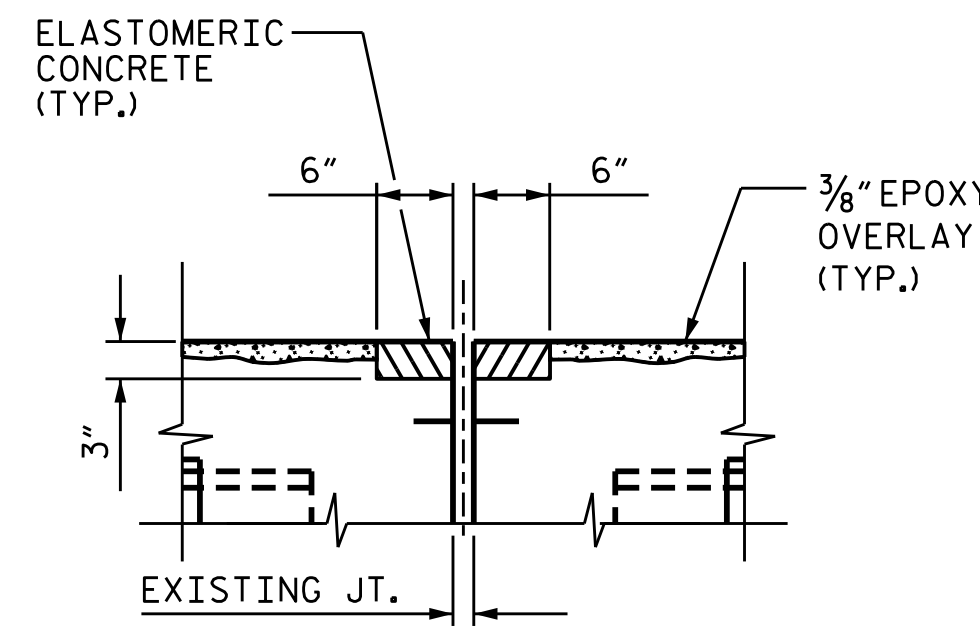
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-51
2			4			52



EXISTING JOINT

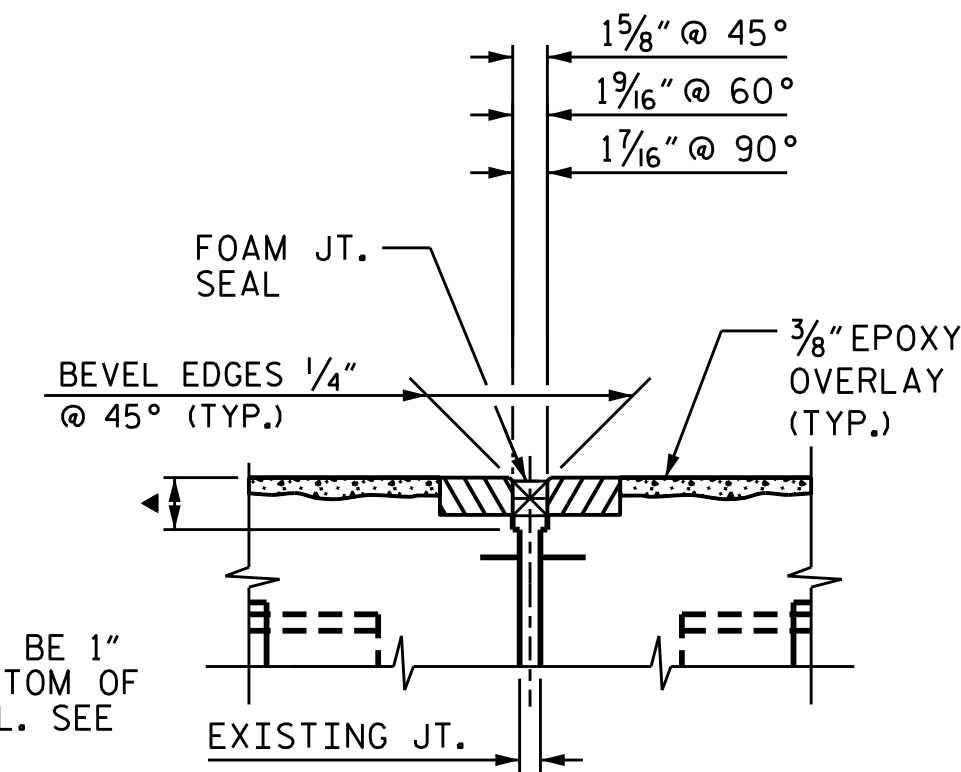


MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT PRE-SAWED DIMENSIONS

▲ SAW CUT SHALL BE 1" BELOW THE BOTTOM OF THE JOINT SEAL. SEE MANUFACTURER RECOMMENDATIONS



PROPOSED FOAM JOINT SEAL EXPANSION
ALL BENTS

NOTES:

CONTRACTOR SHALL FIELD VERIFY THE EXISTING SAWED OPENING PRIOR TO OBTAINING JOINT MATERIAL.

IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE OR IF UNSOUND CONCRETE IS REMOVED TO WITHIN 2" OF THE WATERSTOP, THE ENTIRE WATERSTOP SHALL BE REMOVED.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

THE WIDTH OF THE UNCOMPRESSED FOAM JOINT MATERIAL SHALL BE 2".

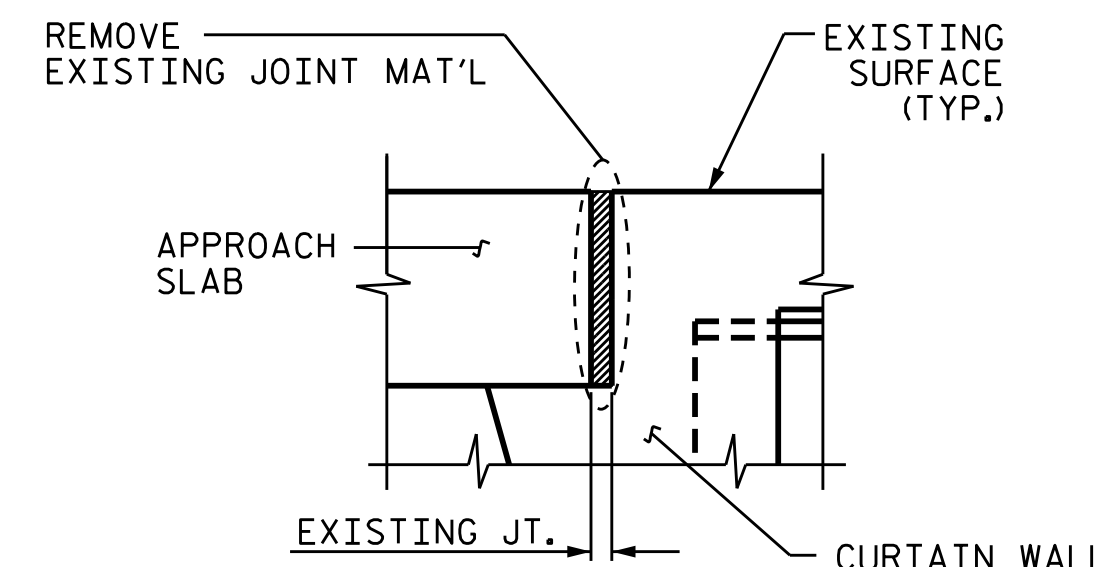
THE INSTALLED FOAM JOINT SEALS SHALL BE WATERTIGHT.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE FOAM JOINT SEAL IN LIEU OF SAWING THE JOINT.

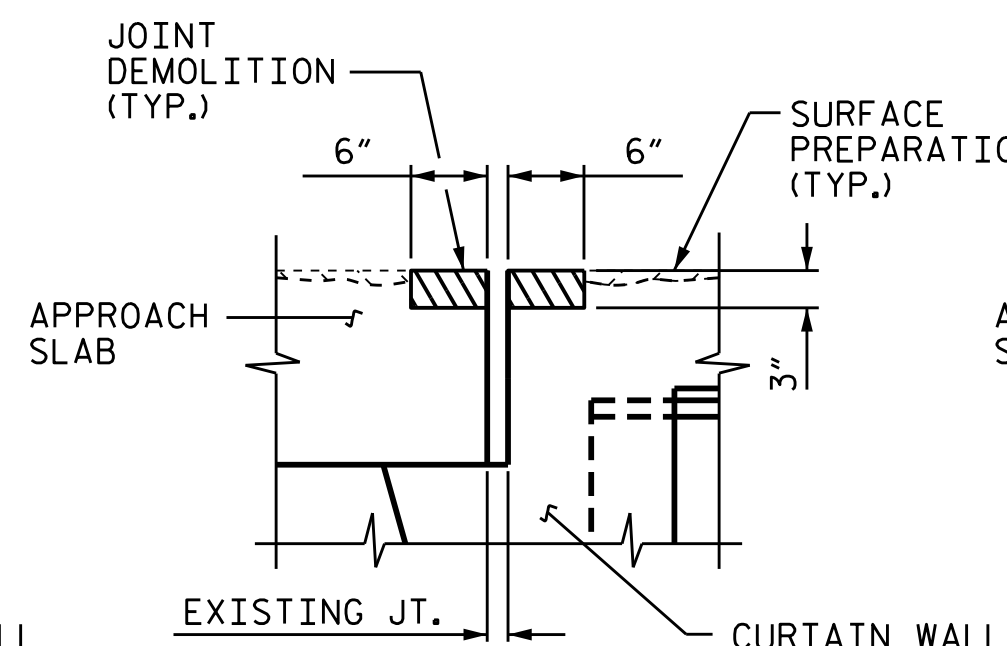
JOINT INSTALLATION SEQUENCE AT BENTS
SECTION A-A

ELASTOMERIC CONCRETE	
BRIDGE 495	57.0 CU. FT.
BRIDGE 496	73.0 CU. FT.
* TOTAL	130.0 CU. FT.

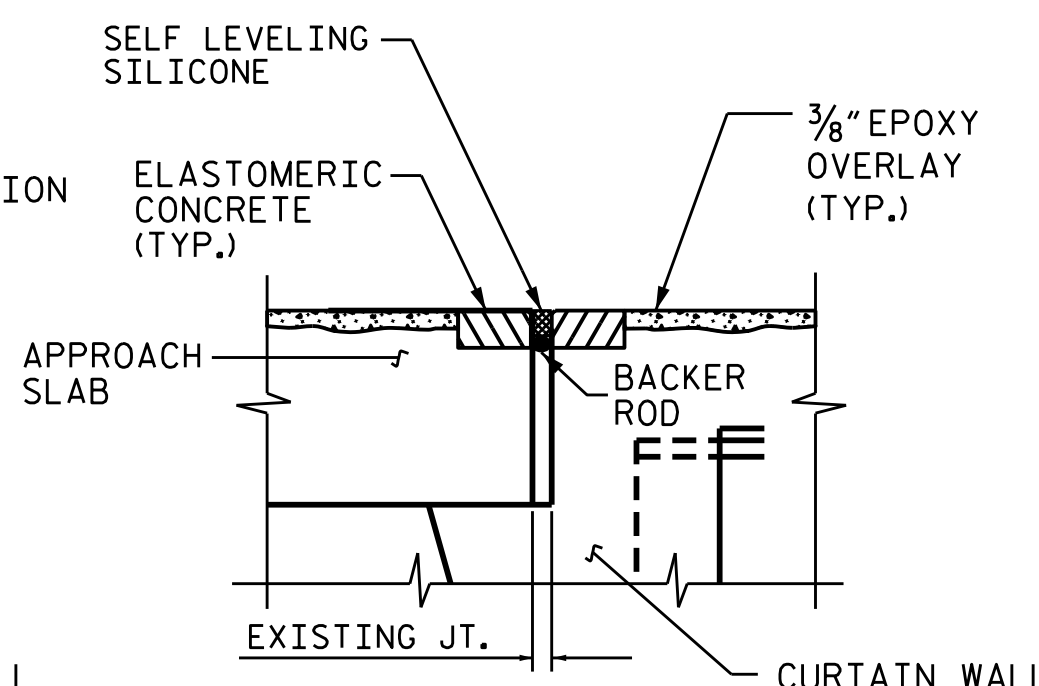
* BASED ON THE MINIMUM BLOCKOUT SHOWN.



EXISTING JOINT

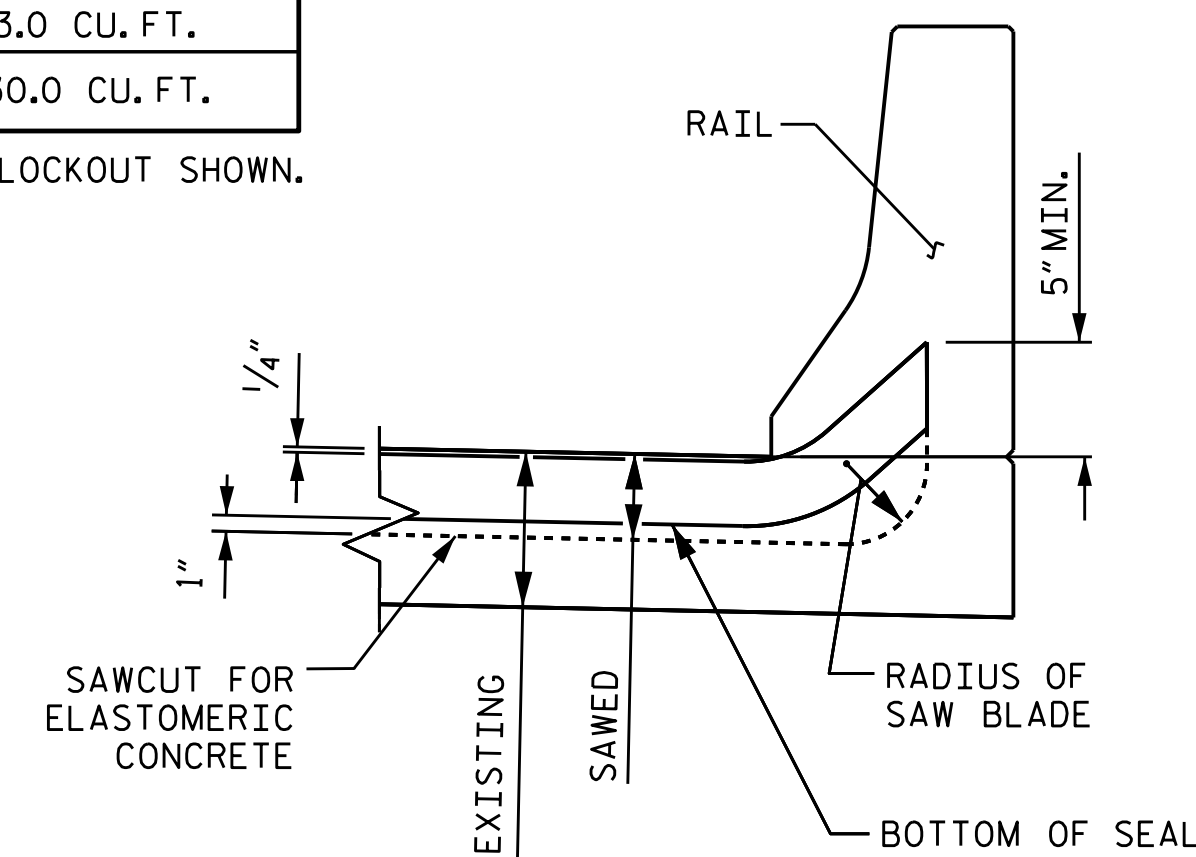


MINIMUM EXISTING JOINT DEMOLITION



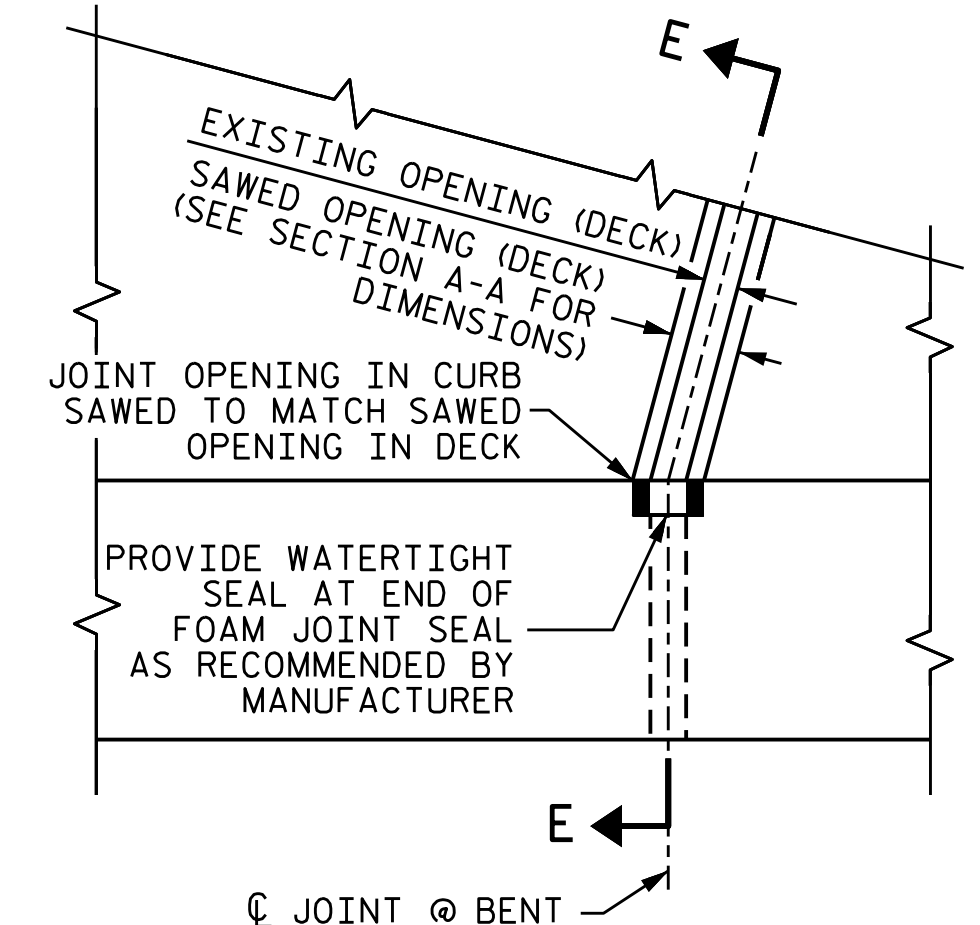
PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS
SECTION B-B



SECTION E-E

JOINT SEAL DETAILS AT BENTS



PROJECT NO. I-5793
DAVIDSON COUNTY
BRIDGE NO. 495 & 496



DocuSigned by:
Krishna P. Sedai 11/20/2017
EABF7941508F487

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
JOINT DETAILS

DRAWN BY : B.L. GREEN DATE : 8/31/17
CHECKED BY : A. SORSENGIH DATE : 9/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-52
2			4			52

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 2018 "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

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