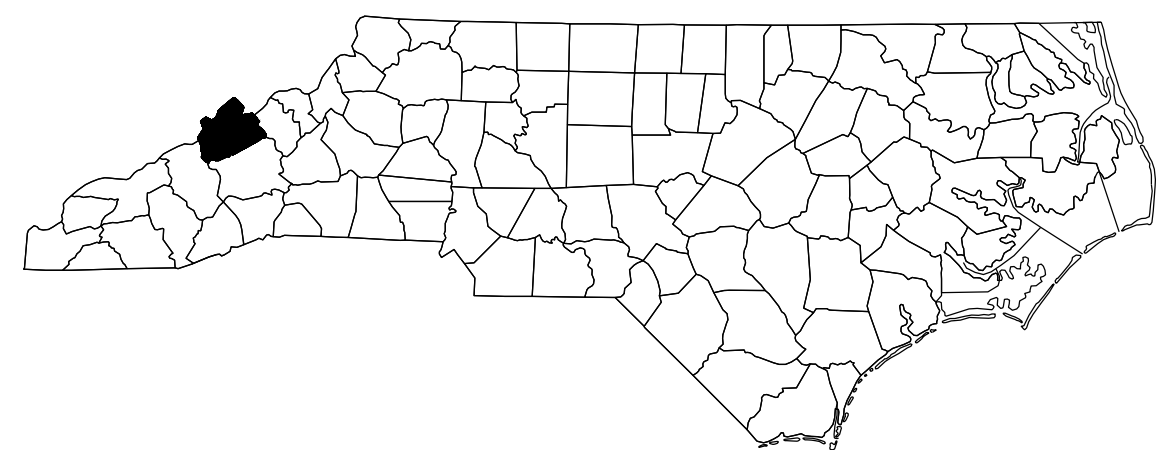


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

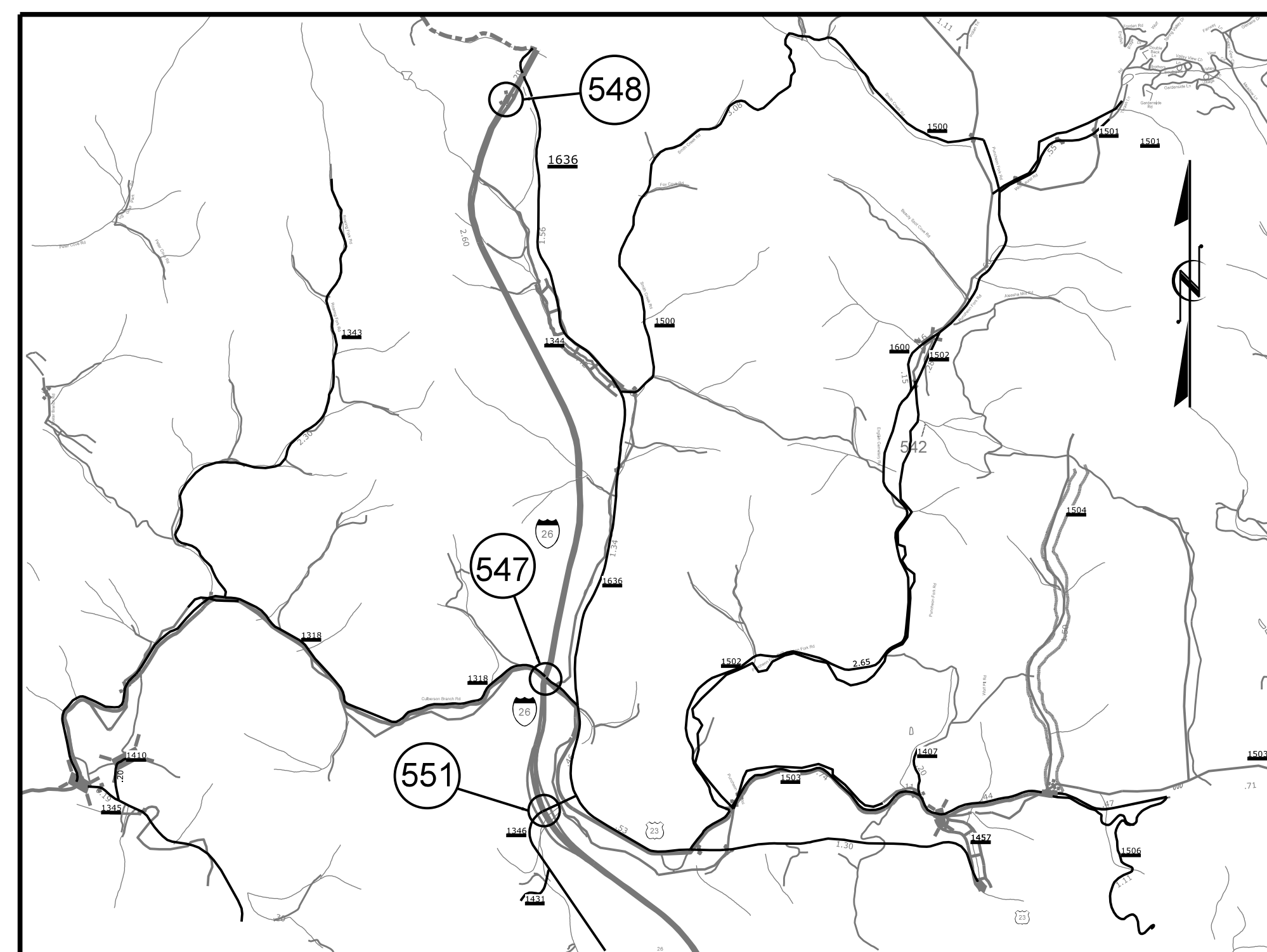
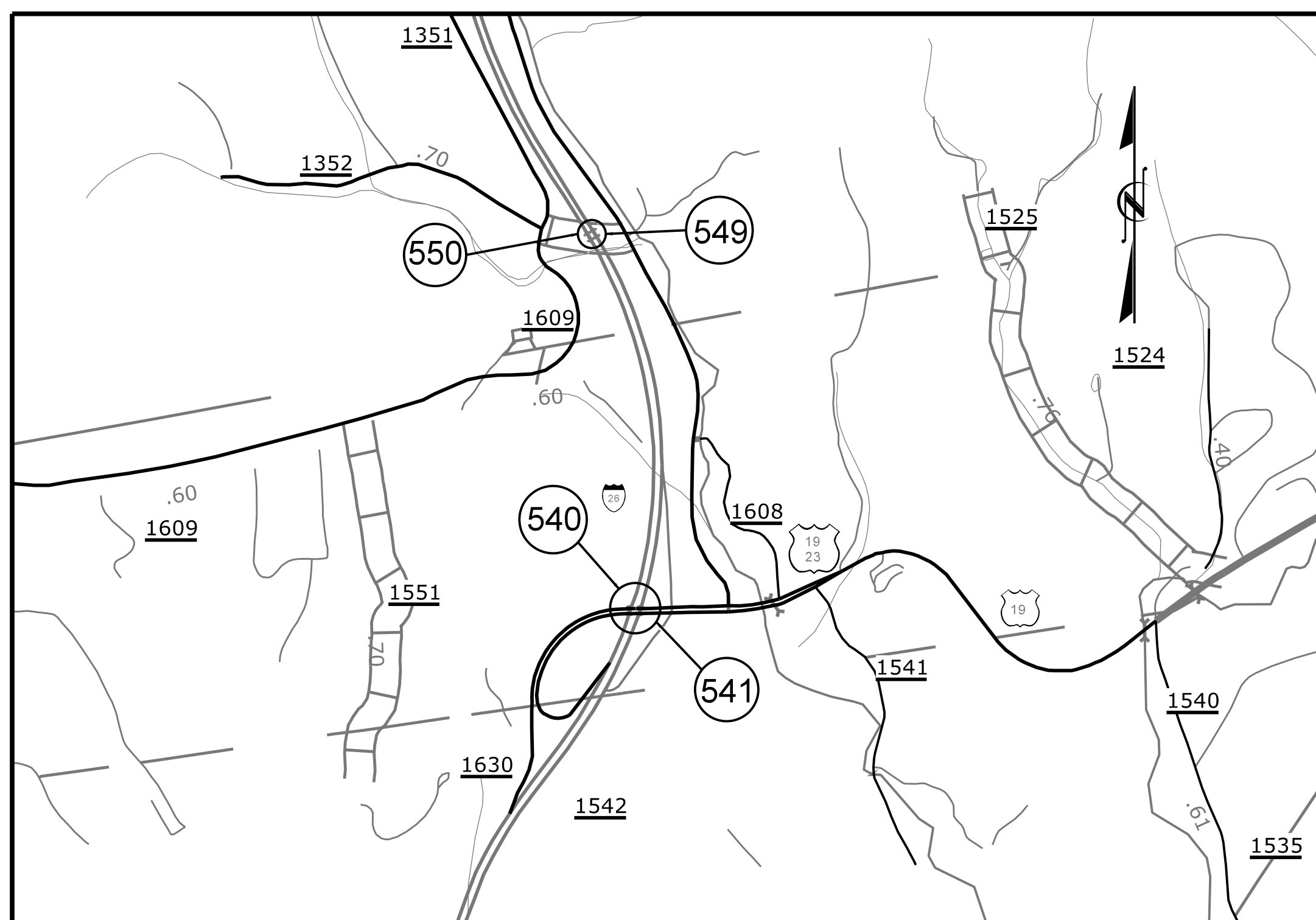
**MADISON COUNTY**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5831A	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53037.1.2	-	P.E.	
53037.3.2	0026020	CONST.	



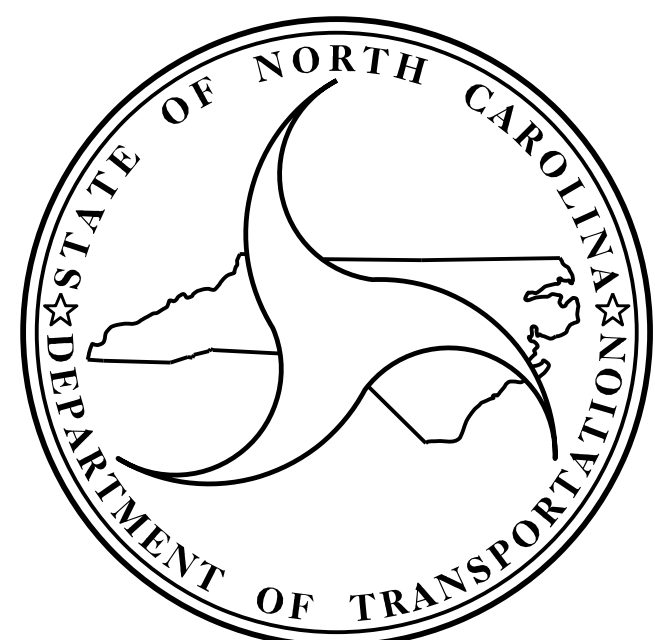
**LOCATION:** BRIDGE No. 560540 ON I-26 EASTBOUND / US-23 OVER US-19  
 BRIDGE No. 560541 ON I-26 WESTBOUND / US-23 OVER US-19  
 BRIDGE No. 560547 ON I-26 OVER SR-1318 (BIG LAUREL RD.) & BIG LAUREL CREEK  
 BRIDGE No. 560548 ON I-26 OVER US-23  
 BRIDGE No. 560549 ON I-26 WESTBOUND OVER SR-1352 (HIGGINS BRANCH RD.)  
 BRIDGE No. 560550 ON I-26 EASTBOUND OVER SR 1352 (HIGGINS BRANCH RD.)  
 BRIDGE No. 560551 ON I-26 OVER SR-1346 (BEAR BRANCH RD.)

**TYPE OF WORK:** BRIDGE PRESERVATION: DECK REPAIR, LATEX MODIFIED CONCRETE- EARLY STRENGTH (LMC-ES) OVERLAY, JOINT REPAIR AND PAINTING OF EXISTING BRIDGE STRUCTURE.



PROJECT: I-5831A

CONTRACT NO.: C204709



**DESIGN DATA**

MADISON COUNTY		
BRIDGE No. 560540	ADT 2018	=10,750
BRIDGE No. 560541	ADT 2018	=10,750
BRIDGE No. 560547	ADT 2013	=10,000
BRIDGE No. 560548	ADT 2013	=10,000
BRIDGE No. 560549	ADT 2018	=10,750
BRIDGE No. 560550	ADT 2013	=10,000
BRIDGE No. 560551	ADT 2013	=10,000

**PROJECT LENGTH**

MADISON COUNTY	
BRIDGE No. 560540	=0.029 MILE
BRIDGE No. 560541	=0.031 MILE
BRIDGE No. 560547	=0.188 MILE
BRIDGE No. 560548	=0.029 MILE
BRIDGE No. 560549	=0.031 MILE
BRIDGE No. 560550	=0.025 MILE
BRIDGE No. 560551	=0.023 MILE

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
 STRUCTURES MANAGEMENT UNIT  
 1000 BIRCH RIDGE DR.  
 RALEIGH, N.C. 27610

2018 STANDARD SPECIFICATIONS

LETTING DATE :

MAY 17, 2022

ADAM COLE, P.E.  
 PROJECT ENGINEER

AMBER LEE, P.E.  
 PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS



**MADISON COUNTY**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5831A	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53037.1.2	-	P.E.	
53037.3.2	0026020	CONST.	

**LOCATION: MADISON COUNTY**

- BRIDGE #560540 ON I-26 EASTBOUND /US-23 OVER US-19**
- BRIDGE #560541 ON I-26 WESTBOUND /US-23 OVER US-19**
- BRIDGE #560547 ON I-26 OVER SR-1318 (BIG LAUREL RD.) & BIG LAUREL CREEK**
- BRIDGE #560548 ON I-26 OVER US-23**
- BRIDGE #560549 ON I-26 WESTBOUND OVER SR-1352 (HIGGINS BRANCH RD.)**
- BRIDGE #560550 ON I-26 EASTBOUND OVER SR-1352 (HIGGINS BRANCH RD.)**
- BRIDGE #560551 ON I-26 OVER SR-1346 (BEAR BRANCH RD.)**

**TYPE OF WORK: BRIDGE PRESERVATION - DECK REPAIR, LATEX MODIFIED CONCRETE-EARLY STRENGTH (LMC-ES) OVERLAY, JOINT REPAIR AND PAINTING OF EXISTING BRIDGE STRUCTURES.**

**INDEX OF SHEETS**

<b>I</b>	<b>TITLE SHEET</b>
<b>1A</b>	<b>INDEX OF SHEETS</b>
<b>S-1</b>	<b>TOTAL BILL OF MATERIAL</b>
<b>S1-01 THRU S1-06</b>	<b>STRUCTURAL PLANS - BRIDGE NO. 560540</b>
<b>S2-01 THRU S2-06</b>	<b>STRUCTURAL PLANS - BRIDGE NO. 560541</b>
<b>S3-01 THRU S3-24</b>	<b>STRUCTURAL PLANS - BRIDGE NO. 560547</b>
<b>S4-01 THRU S4-06</b>	<b>STRUCTURAL PLANS - BRIDGE NO. 560548</b>
<b>S5-01 THRU S5-07</b>	<b>STRUCTURAL PLANS - BRIDGE NO. 560549</b>
<b>S6-01 THRU S6-07</b>	<b>STRUCTURAL PLANS - BRIDGE NO. 560550</b>
<b>S7-01 THRU S7-08</b>	<b>STRUCTURAL PLANS - BRIDGE NO. 560551</b>
<b>SD-01 THRU SD-02</b>	<b>STANDARD REPAIR DETAILS</b>
<b>SN</b>	<b>STANDARD NOTES</b>

**PROJECT: I-5831A**

**PROJECT: C204709**

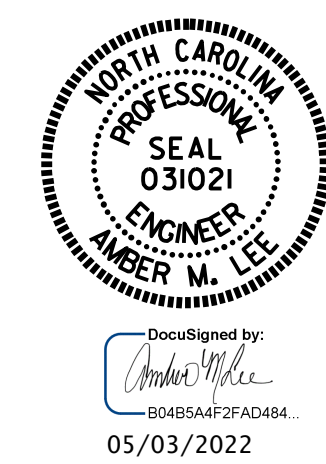
TOTAL BILL OF MATERIALS													
BRIDGE NO.	GROOVING BRIDGE FLOORS	POLLUTION CONTROL	CLASS II SURFACE PREPARATION	CONCRETE REPAIRS	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	FOAM JOINT SEALS FOR PRESERVATION	CURB REPAIR	CLEANING AND PAINTING EXISTING WEATHERING STEEL FOR BRIDGE NO..	PAINTING CONTAINMENT FOR BRIDGE NO..	MOLDED RUBBER SEGMENTAL EXPANSION JOINT	LATEX MODIFIED CONCRETE - EARLY STRENGTH	ELASTOMERIC CONCRETE FOR PRESERVATION
	SQ. FT.	LUMP SUM	SQ. YDS.	CU. FT.	CU. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LUMP SUM	LUMP SUM	LIN. FT.	CU. YDS.	CU. FT.
560540	6,522.0		2.7				87.3	12.0				49.0	21.1
560541	7,401.9						87.1					51.8	21.2
560547	87,464.0	LUMP SUM	98.8	2.5	15.1	50.5			LUMP SUM	LUMP SUM	192.0 <sup>△2</sup>	664.0	
560548	18,422.5		0.1				289.5	50.8				138.3	71.2
560549	7,311.0						100.4					54.8	24.6
560550	6,133.0						101.6					45.0	25.3
560551	13,288.0	LUMP SUM	5.2		2.0	3.5	199.7	17.0	LUMP SUM	LUMP SUM		99.4	47.6
TOTAL	146,542.4	LUMP SUM	106.8	2.5	17.1	54.0	865.6	79.8	LUMP SUM	LUMP SUM	192.0	1,102.3	211.0

TOTAL BILL OF MATERIALS							
BRIDGE NO.	BRIDGE JOINT DEMOLITION	JOINT REPAIR	EPOXY COATING	PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY- EARLY STRENGTH	SCARIFYING BRIDGE DECK	HYDRO-DEMOLITION OF BRIDGE DECK	DECK DRAIN REPAIR
	SQ. FT.	SQ. FT.	SQ. FT.	SQ. YDS.	SQ. YDS.	SQ. YDS.	EA.
560540	84.2			784.2	784.2	784.2	
560541	84.8			828.8	828.8	828.8	
560547		864.0	2,064.5	10,406.3	10,406.3	10,406.3	61
560548	284.8			1,773.7 <sup>△1</sup>	1,773.7 <sup>△1</sup>	1,773.7 <sup>△1</sup>	
560549	98.4			879.0	879.0	879.0	
560550	101.2			738.0	738.0	738.0	
560551	190.4		620.0	1,590.0	1,590.0	1,590.0	
TOTAL	843.8	864.0	2,684.5	17,000.0	17,000.0	17,000.0	61

AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT THE FOLLOWING ITEM(S) LISTED WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THE FOLLOWING ITEM(S) LISTED, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. PROJECT SPECIAL PROVISIONS THAT OUTLINE REQUIREMENTS FOR THESE POTENTIAL ADDITIONAL WORK ITEMS HAVE BEEN PROVIDED IN THE PROJECT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES, AND COSTS WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED. UNANTICIPATED ITEMS:

ITEM DESCRIPTION	UNIT
1. CLASS III SURFACE PREPARATION	SQUARE YARDS
2. VOLUMETRIC MIXER	LUMP SUM
3. CONCRETE FOR DECK REPAIR	CUBIC FEET

PROJECT NO. **I-5831A**  
**MADISON** COUNTY  
 BRIDGE NO. 560540, 560541, 560547  
 560548, 560549, 560550, 560551



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**TOTAL BILL OF MATERIAL**

- <sup>1</sup> UPDATED QUANTITIES, 4/27/2022
- <sup>2</sup> UPDATED QUANTITY, 5/3/2022

DRAWN BY : A. SORSENGINH DATE : 2/2022  
 CHECKED BY : H.A. LOCKLEAR DATE : 2/2022

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

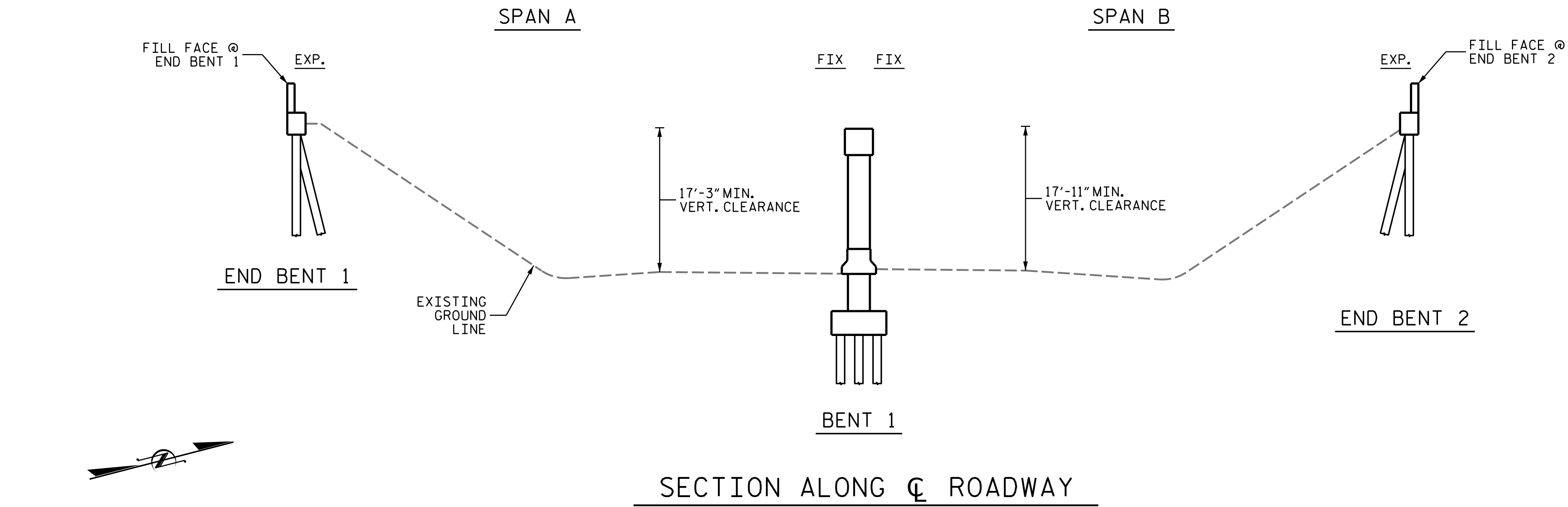
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

**NOTES**

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 06/23/2020.  
BRIDGE ORIENTATION CONFORMS TO THE ORIGINAL BRIDGE PLANS.

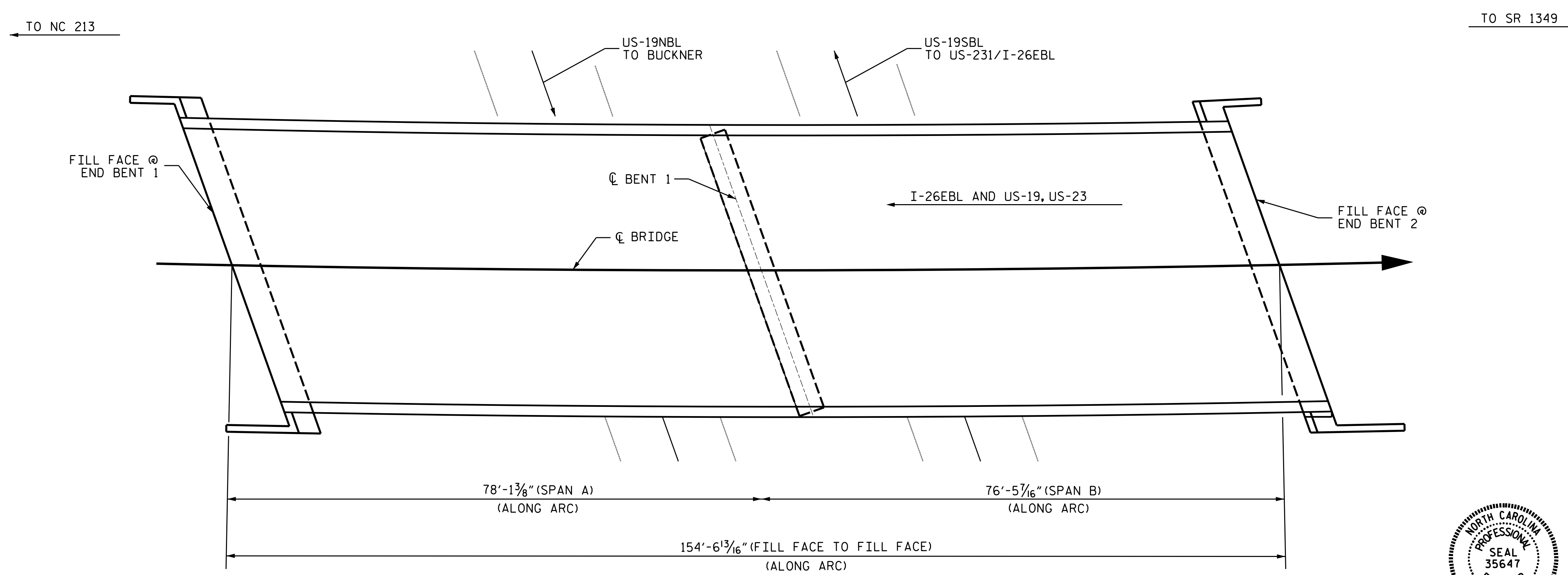
**SCOPE OF WORK**

- PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND HYDRO-DEMOLITION METHODS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH LATEX MODIFIED CONCRETE OVERLAY - EARLY STRENGTH (LMC-ES).
- REMOVE EXISTING JOINT MATERIALS AND INSTALL FOAM JOINTS.
- GROOVE LMC-ES BRIDGE DECK.
- REMOVE UNSOUND CONCRETE AND REBUILD EXISTING APPROACH SLAB CURB.



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

RESIDENT ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

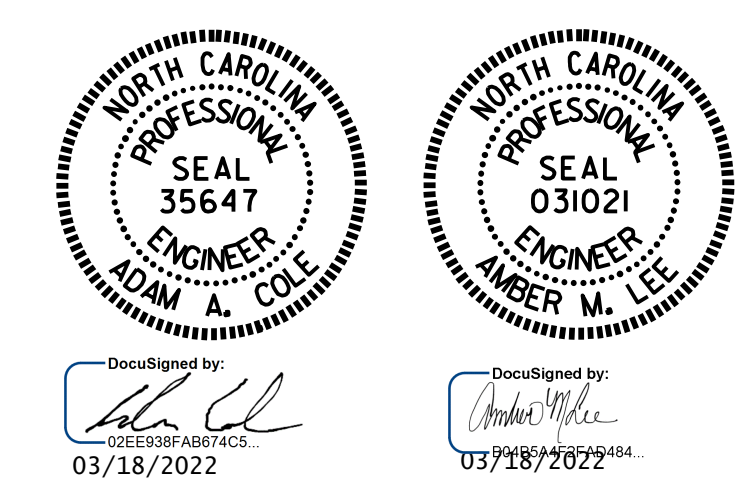


PROJECT NO. I-5831A  
MADISON COUNTY  
BRIDGE NO. 560540

SHEET 1 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**GENERAL DRAWING**  
FOR BRIDGE ON  
I-26/US-23  
OVER US-19  
(EASTBOUND)



DocuSigned by:  
03/18/2022

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-01
1			3			TOTAL SHEETS
2			4			6

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

**PLAN**

DRAWN BY : M.ALNAGHIAN DATE : 06/2019  
CHECKED BY : E.BAYISSA DATE : 02/2022

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.

THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THAT SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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

WORK ON THE BRIDGES SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

ANY DAMAGE TO EXISTING REINFORCING STEEL, DURING CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST TO THE DEPARTMENT.

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASK FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.

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 TRAFFIC CONTROL AND LIMITS OF PHASING OF CONSTRUCTION, SEE TRAFFIC CONTROL SPECIAL PROVISIONS.

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

FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK DURING HYDRO-DEMOLITION.

FOR PLACING AND FINISHING LATEX MODIFIED CONCRETE - EARLY STRENGTH (LMC-ES), SEE LATEX MODIFIED CONCRETE-EARLY STRENGTH SPECIAL PROVISIONS.

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

DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO ENSURE HYDRO-DEMOLITION WATER DOES NOT MIGRATE INTO ACTIVE TRAVEL LANES.

THE CONTRACTOR SHALL COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEAL FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CURB REPAIR, 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.

BRIDGE COORDINATES

LAT: 35°-50'-21.09"  
LONG: -82°-31'-26.14"

PROJ. NO. I-5831A  
MADISON COUNTY  
BRIDGE NO. 560540

SHEET 2 OF 2



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON  
I-26/US-23  
OVER US-19  
(EASTBOUND)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-02
1			3			TOTAL SHEETS
2			4			6

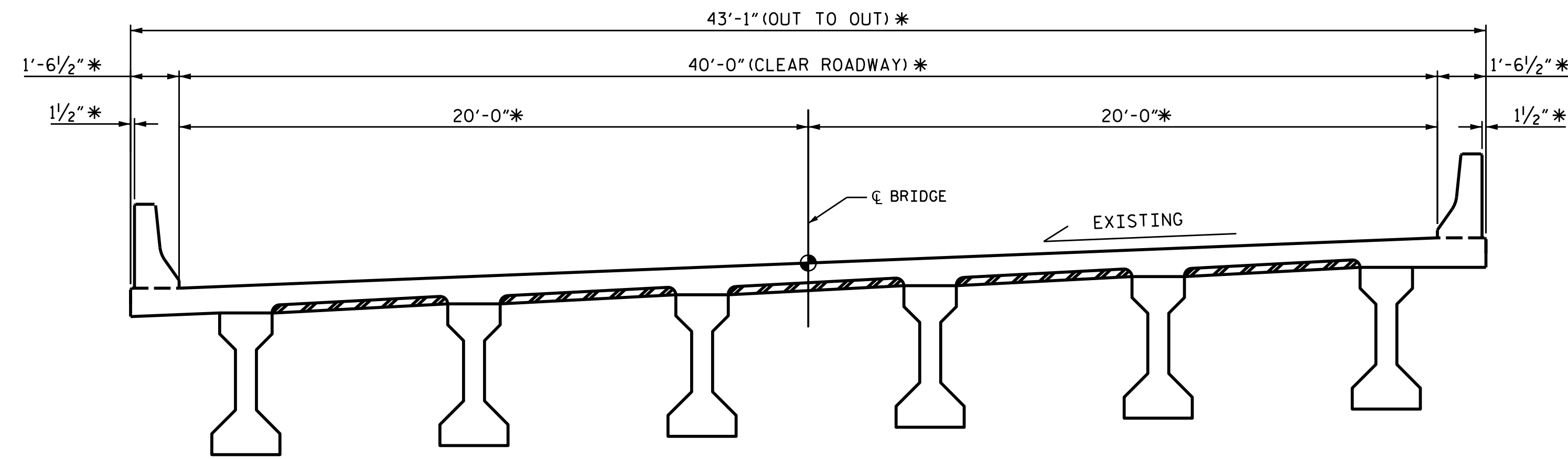
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : M. ALINAGHIAN DATE : 06/2019  
CHECKED BY : E. BAYISSA DATE : 02/2022

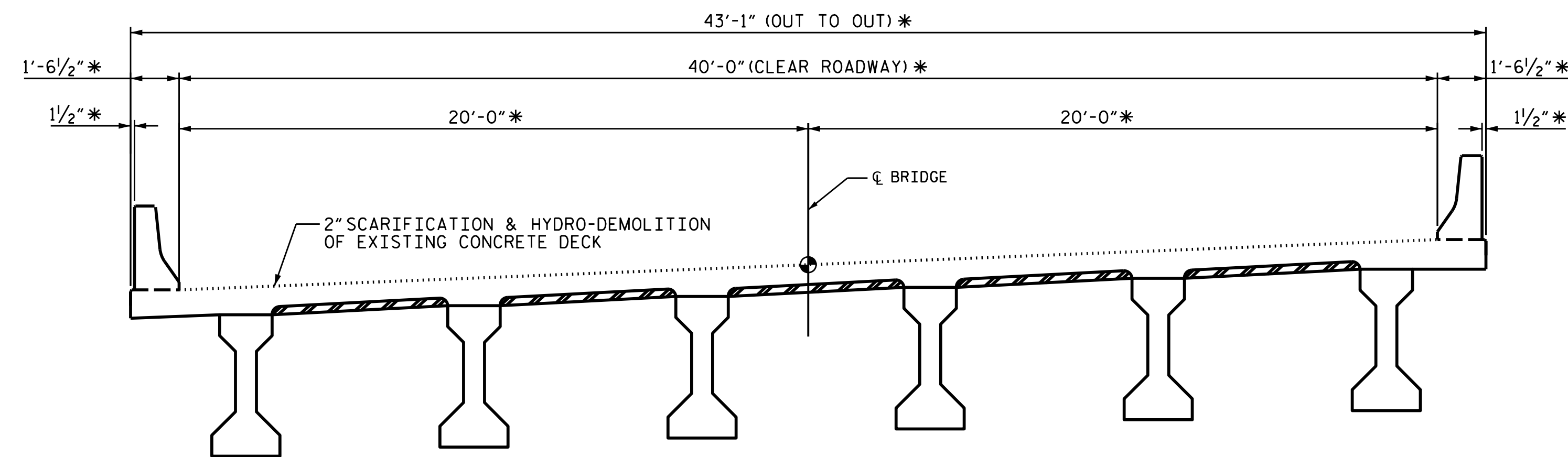
**NOTE**

SEE TRAFFIC CONTROL SPECIAL PROVISIONS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND LMC-ES PLACEMENT.

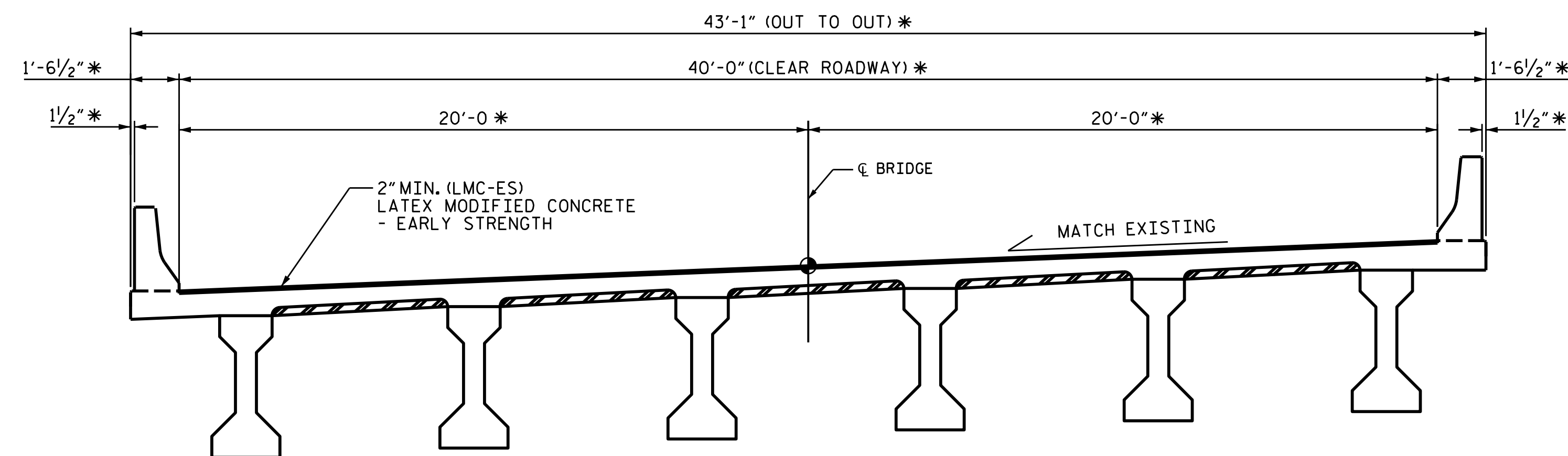
WHEN PREPARING THE SURFACE FOR LMC-ES OVERLAY ADJACENT TO THE PREVIOUSLY PLACED LMC-ES STAGE, THE PREVIOUSLY PLACED LMC-ES SHALL BE SAW-CUT TO THE FILL DEPTH OF THE LMC-ES AT THE CENTERLINE OF THE BRIDGE AND ALL LMC-ES IN THE 4" OVERLAP SHALL BE REMOVED WITH HAND TOOLS PRIOR TO PLACEMENT OF LMC-ES IN THE SECOND STAGE.



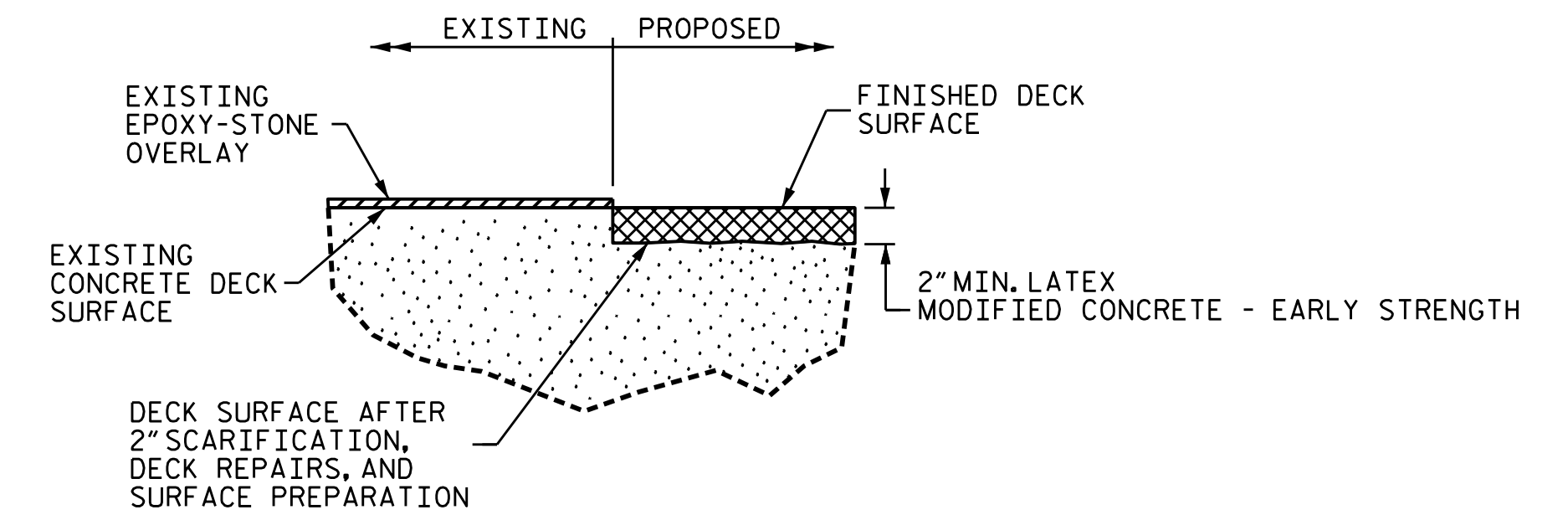
**EXISTING TYPICAL SECTION**  
\* RADIAL DIMENSION



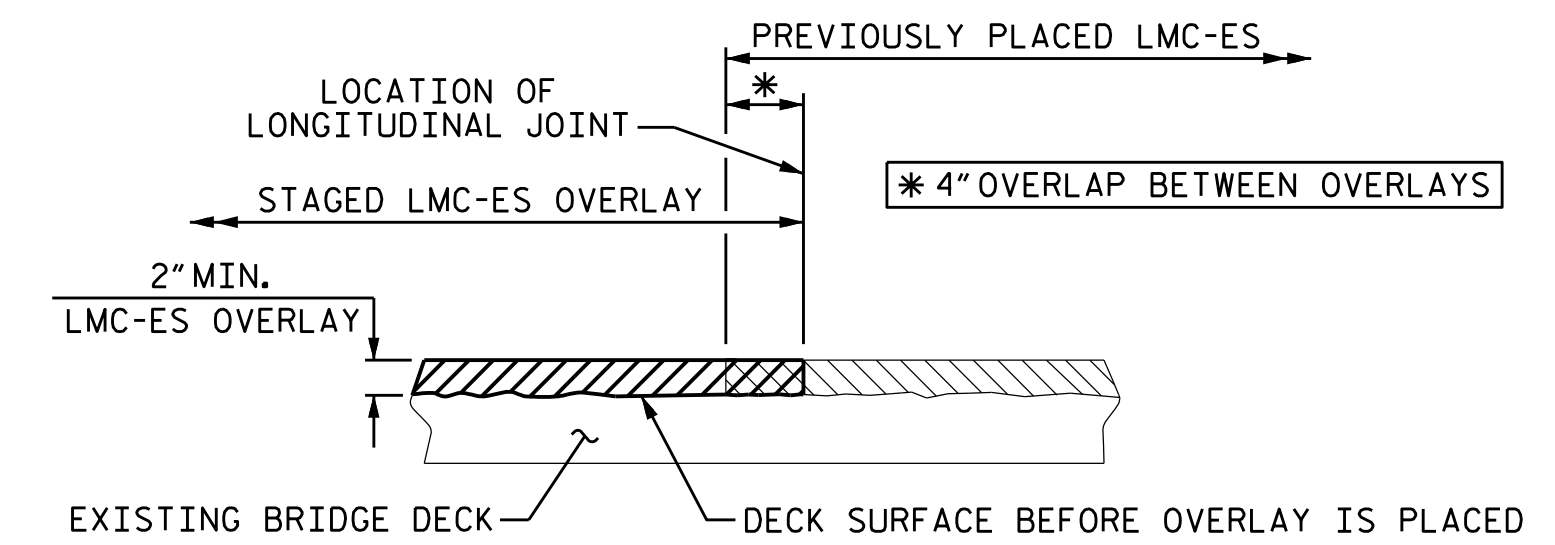
**PROPOSED TYPICAL SECTION**  
\* RADIAL DIMENSION



**PROPOSED TYPICAL SECTION**  
\* RADIAL DIMENSION



**DETAIL FOR LMC-ES OVERLAY**  
(FINISHED SURFACE OF THE LATEX MODIFIED CONCRETE - EARLY STRENGTH IS APPROXIMATE)



**SECTION THRU DECK**  
**STAGED LMC-ES OVERLAY JOINT**  
(AS NEEDED)

PROJECT NO. I-5831A  
MADISON COUNTY  
BRIDGE NO. 560540



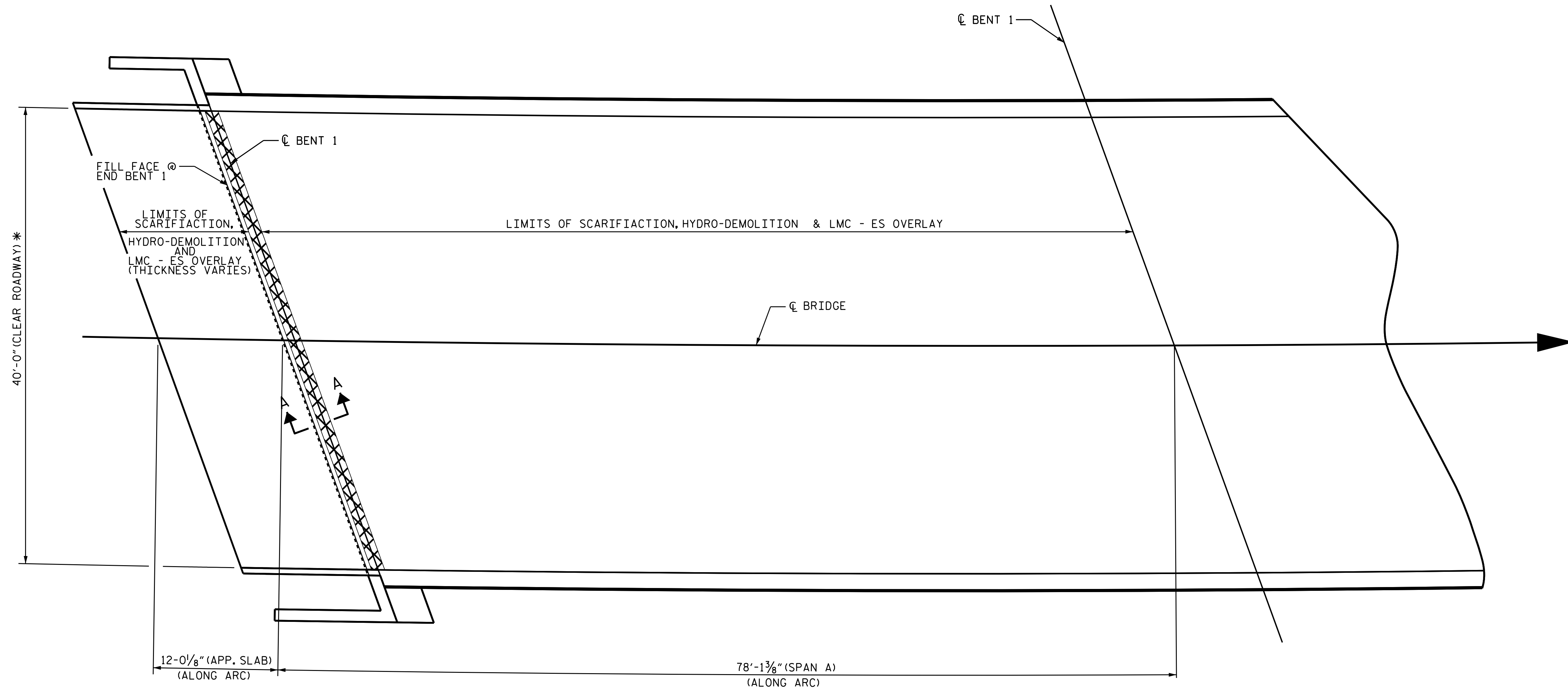
DocuSigned by:  
Amber M. Lee  
05/02/2022

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
**SUPERSTRUCTURE**  
TYPICAL SECTION  
AND  
LMC-ES DETAIL

DRAWN BY : C. RUIZ DATE : 01/2019  
CHECKED BY : E. BAYISSA DATE : 02/2022

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-03
1			3			TOTAL SHEETS
2			4			6



**SPAN A**  
\* RADIAL DIMENSION

**NOTES**

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.

PAYMENT FOR CLASS II SURFACE PREPARATION IS BASED ON THE SQUARE YARDS OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF THE BRIDGE DECK. SEE SPECIAL PROVISIONS.

FOR SECTION A-A, SEE FOAM JOINT DETAILS SHEET.

FOR LMC-ES, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION QUANTITIES, SEE FOAM JOINT DETAILS SHEET.

- CLASS II SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

AS-BUILT REPAIR QUANTITY TABLE					
DECK SURFACE REPAIRS APPROCH - SLAB 1			DECK SURFACE REPAIRS - SPAN A		
	ESTIMATE	ACTUAL		ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.		CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
LATEX MODIFIED CONCRETE - ES	3.2 CU. YDS.		LATEX MODIFIED CONCRETE - ES	21.5 CU. YDS.	
PLACING AND FINISHING LMC-ES OVERLAY	50.7 SQ. YDS.		PLACING AND FINISHING LMC-ES OVERLAY	345.0 SQ. YDS.	
SCARIFYING BRIDGE DECK	50.7 SQ. YDS.		SCARIFYING BRIDGE DECK	345.0 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	50.7 SQ. YDS.		HYDRO-DEMOLITION OF BRIDGE DECK	345.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	423.0 SQ. FT.		GROOVING BRIDGE FLOORS	2869.0 SQ. FT.	

PROJECT NO. I-5831A  
MADISON COUNTY  
 BRIDGE NO. 560540

SHEET 1 OF 2



DocuSigned by:  
Amber M. Lee  
03/18/2022

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**DECK SURFACE REPAIR  
 APPROACH SLAB 1  
 & SPAN A**

DRAWN BY : C. RUIZ DATE : 05/2019  
 CHECKED BY : E. BAYISSA DATE : 02/2022

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-04
1			3			TOTAL SHEETS
2			4			6

# BILL OF MATERIAL

FOR ONE CURB ON APPROACH SLAB 2

BAR	NO.	SIZE	TYPE	LENGHT	WEIGHT
*B1	1	4	STR	10'-7"	7
*D1	8	4	STR	0'-10"	5
*EPOXY COATED REINFORCING STEEL				LBS.	12
CLASS AA CONCRETE				CU. YDS.	0.2

## NOTES

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.



PAYMENT FOR CLASS II SURFACE PREPARATION IS BASED ON THE SQUARE YARDS OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF THE BRIDGE DECK. SEE SPECIAL PROVISIONS.

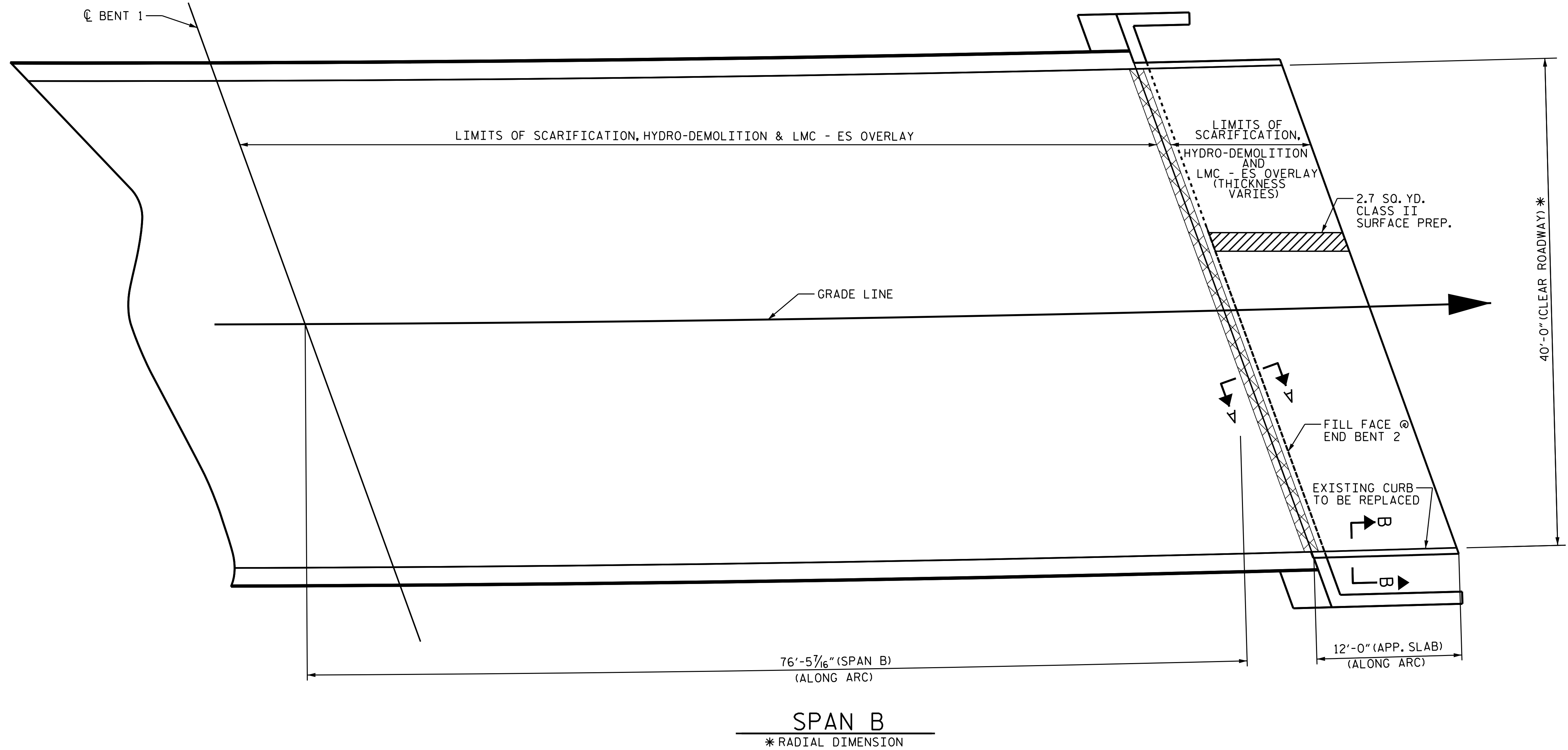
FOR SECTION A-A, SEE FOAM JOINT DETAIL SHEET.

FOR LMC-ES OVERLAY, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

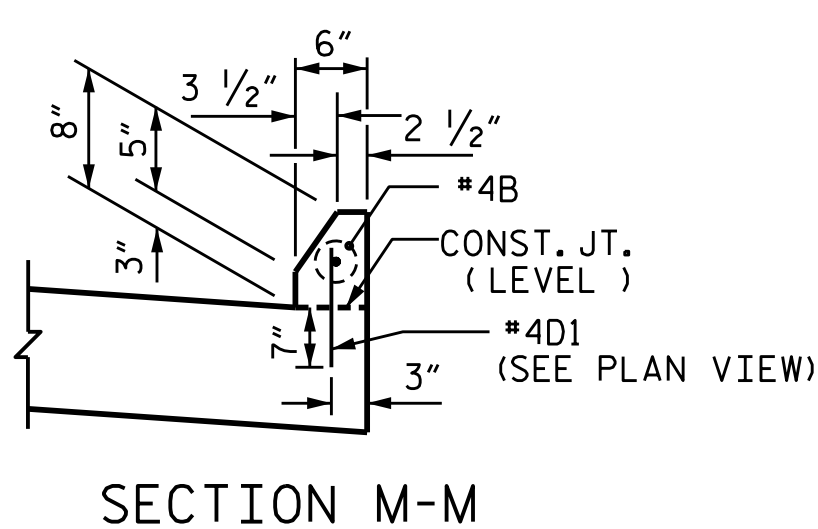
FOR CURB REPAIR, SEE SPECIAL PROVISIONS.

-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

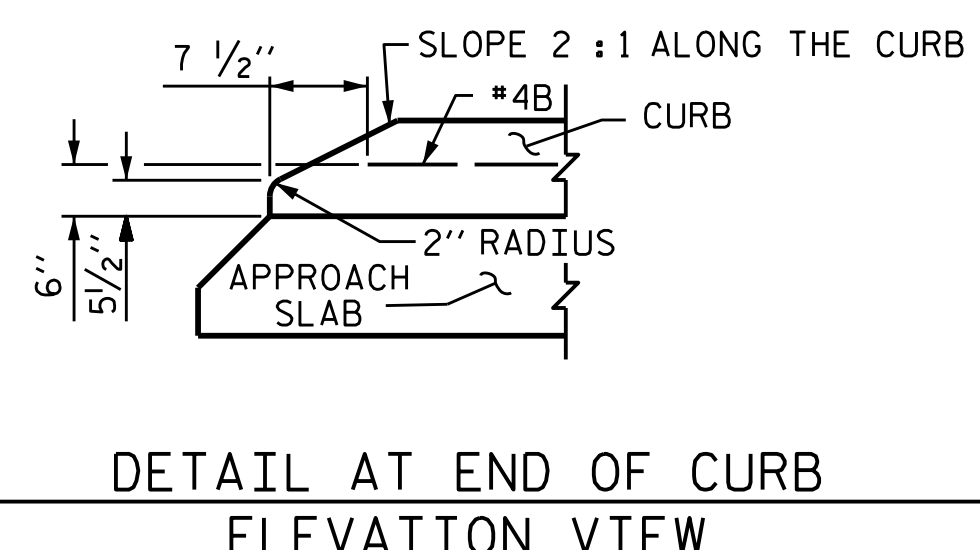


### SPAN B

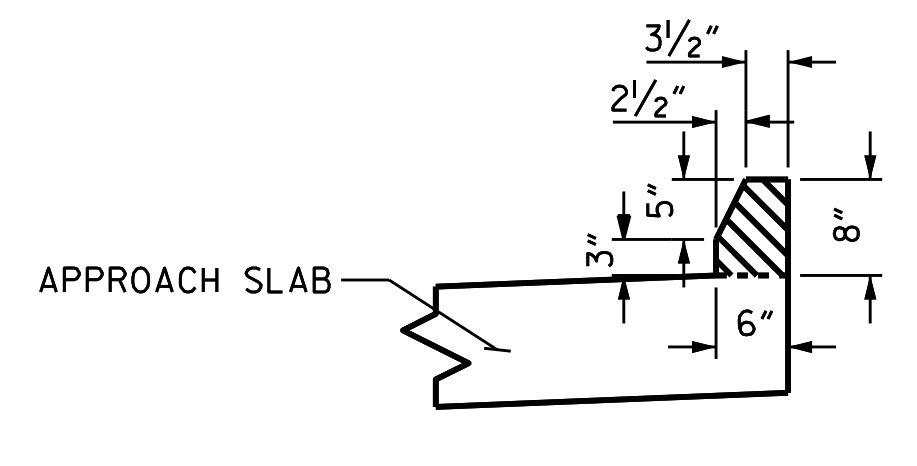
\* RADIAL DIMENSION



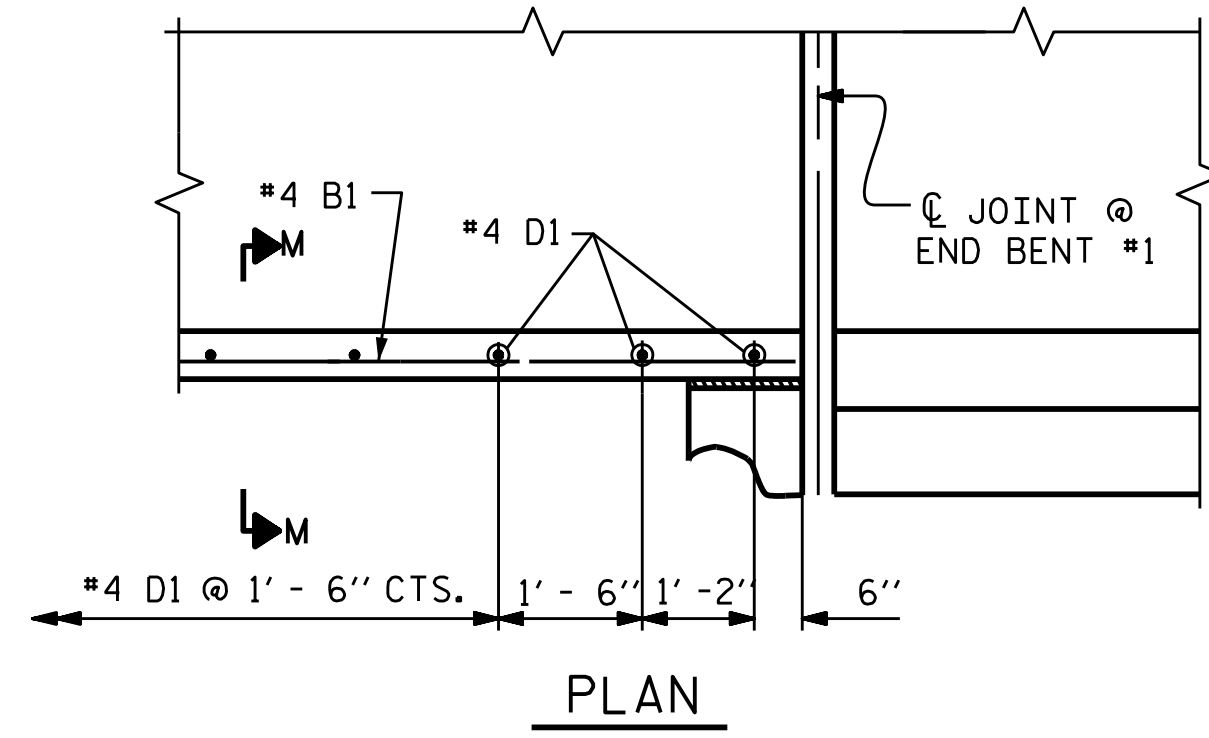
SECTION M-M



DETAIL AT END OF CURB ELEVATION VIEW



SECTION B-B  
CURB ON APPROACH SLAB



PLAN

THE JOINT REPLACEMENT SHALL BE COMPLETED PRIOR TO THE PLACING OF DOWELS OR CASTING OF THE CONCRETE CURB.

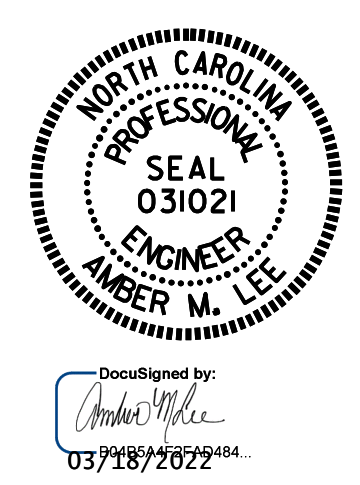
## CURB REPAIR

### AS-BUILT REPAIR QUANTITY TABLE

DECK SURFACE REPAIRS - APPROACH SLAB 2			DECK SURFACE REPAIRS - SPAN B		
	ESTIMATE	ACTUAL		ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	2.7 SQ. YDS.		CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
LATEX MODIFIED CONCRETE - ES	3.2 CU. YDS.		LATEX MODIFIED CONCRETE - ES	21.1 CU. YDS.	
PLACING AND FINISHING LMC OVERLAY	50.5 SQ. YDS.		PLACING AND FINISHING LMC OVERLAY	338.0 SQ. YDS.	
SCARIFYING BRIDGE DECK	50.5 SQ. YDS.		SCARIFYING BRIDGE DECK	338.0 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	50.5 SQ. YDS.		HYDRO-DEMOLITION OF BRIDGE DECK	338.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	423.0 SQ. FT.		GROOVING BRIDGE FLOORS	2807.0 SQ. FT.	
CURB REPAIR	12.0 LN. FT.				

PROJECT NO. I-5831A  
MADISON COUNTY  
 BRIDGE NO. 560540

SHEET 2 OF 2



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

DECK SURFACE REPAIR  
 APPROACH SLAB 2  
 & SPAN B

DRAWN BY : C. RUIZ DATE : 05/2019  
 CHECKED BY : E. BAYISSA DATE : 02/2022

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-05
1			3			TOTAL SHEETS
2			4			6



**NOTES**

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY OR SEALANT WORK IS COMPLETE.

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF THE ACTUAL JOINT OPENING VARIES FROM THE OPENING INDICATED IN THE DETAILS BY MORE THAN 1/4", NOTIFY THE ENGINEER.

THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND ACCOMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

FOAM JOINTS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

THE CONTRACTOR SHALL TAKE CARE DURING JOINT REHAB OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE, WITHOUT PROTECTIVE DEVICES BELOW TO CATCH THE MATERIAL. ANY MATERIAL THAT FALLS BELOW THE BRIDGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT. IF THE ENGINEER DETERMINES THAT THE PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

THE CONTRACTOR SHALL SAW CUT TO A NOMINAL DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED. CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

QUANTITIES SHOWN IN THE ELASTOMERIC CONCRETE FOR PRESERVATION TABLE ARE BASED ON THE MINIMUM JOINT DEMOLITION SHOWN.

FOR EXCAVATION BELOW THE BOTTOM OF PLANNED JOINT DEMOLITION, CONCRETE FOR DECK REPAIR SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE PROPOSED ELASTOMERIC CONCRETE FOR PRESERVATION HEADERS SHOWN.

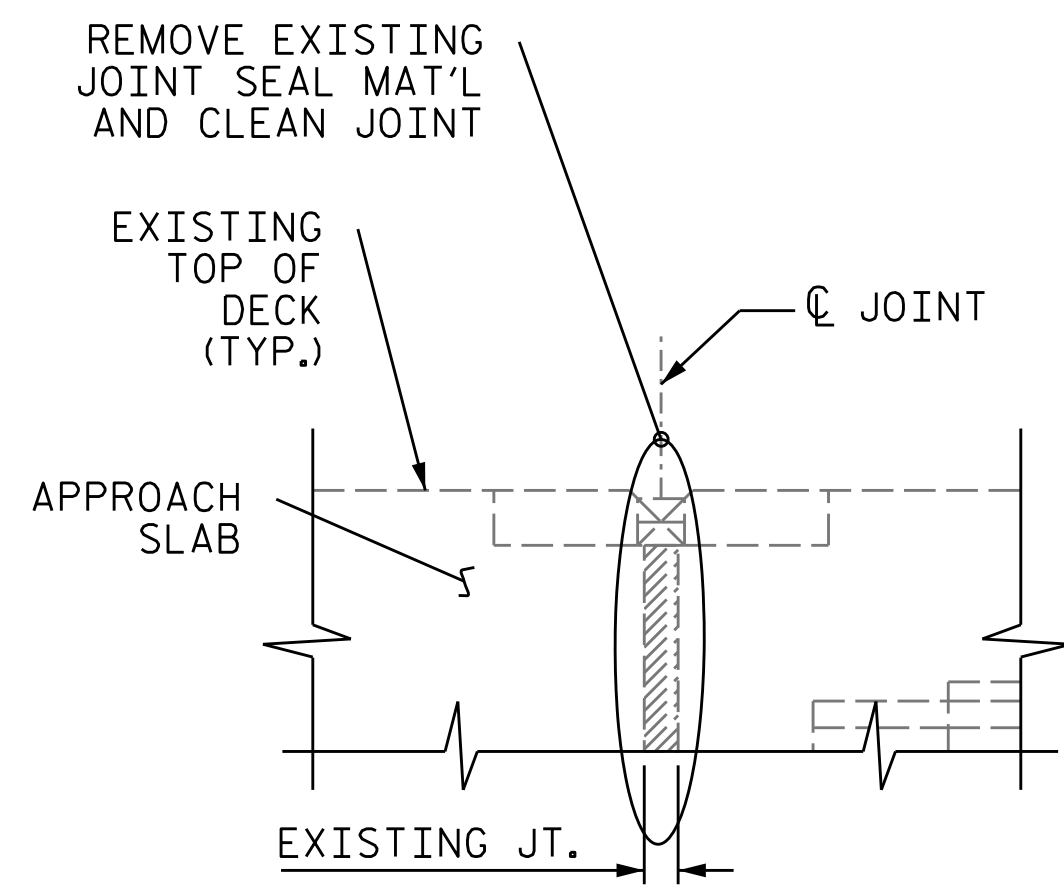
FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL OR ELASTOMERIC CONCRETE SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

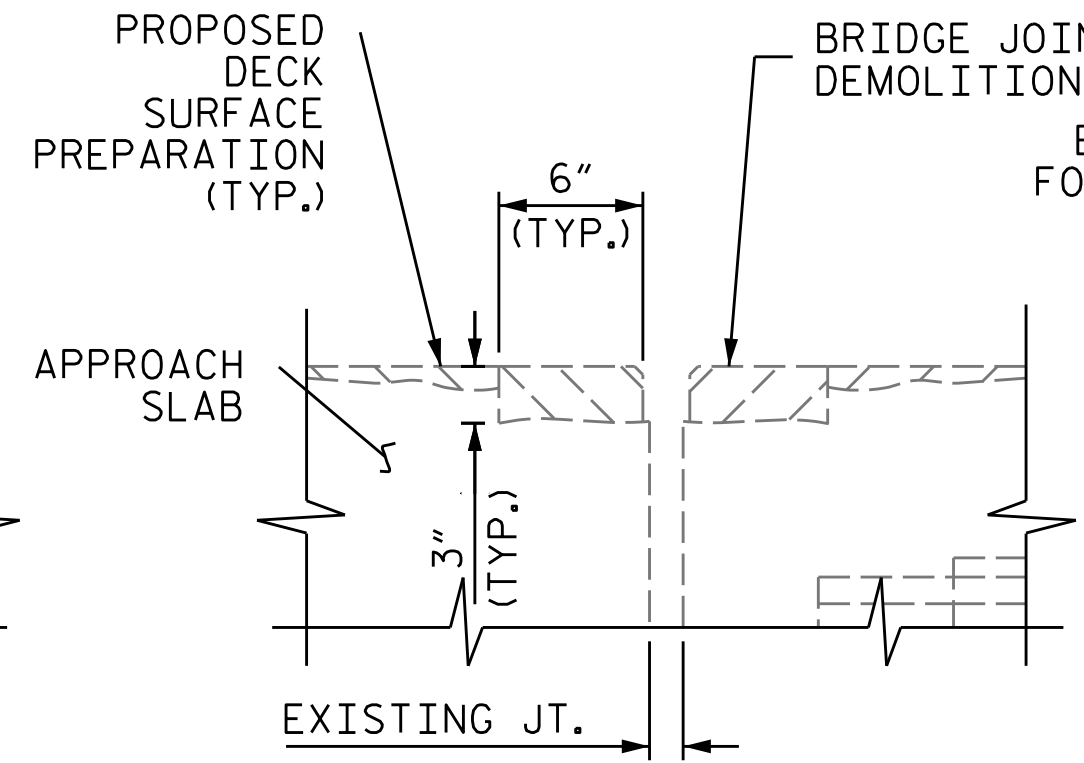
FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

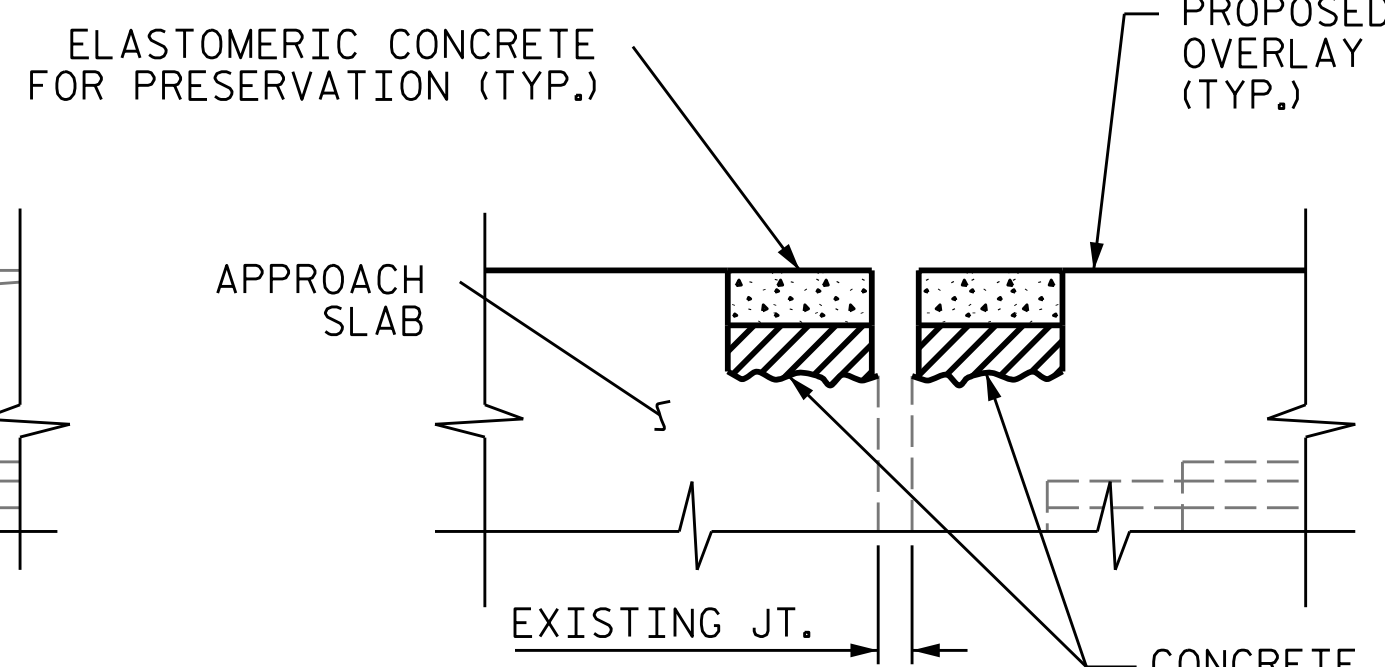
PROJECT NO. I-5831A  
MADISON COUNTY  
 BRIDGE NO. 560540



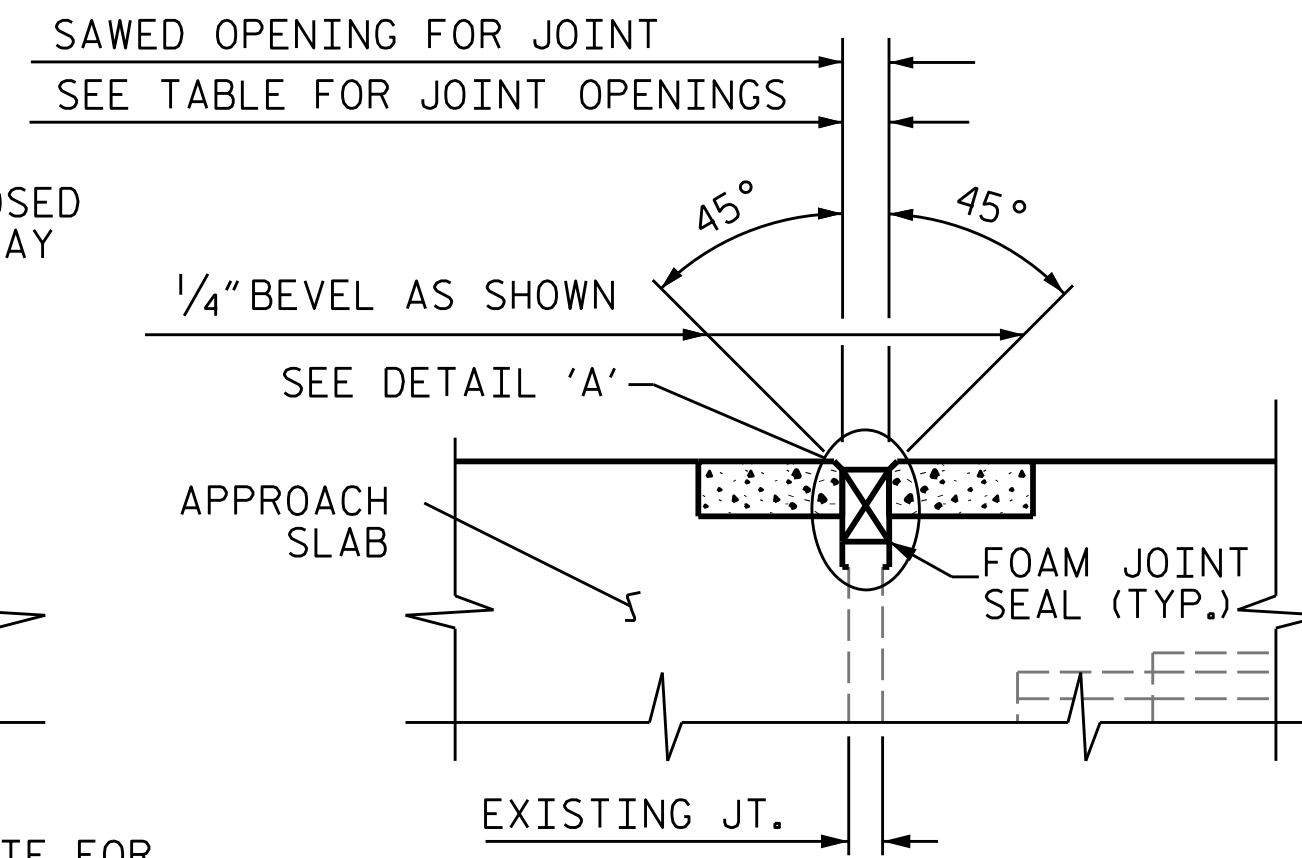
**EXISTING JOINT SEAL**



**EXISTING JOINT AFTER JOINT DEMOLITION**

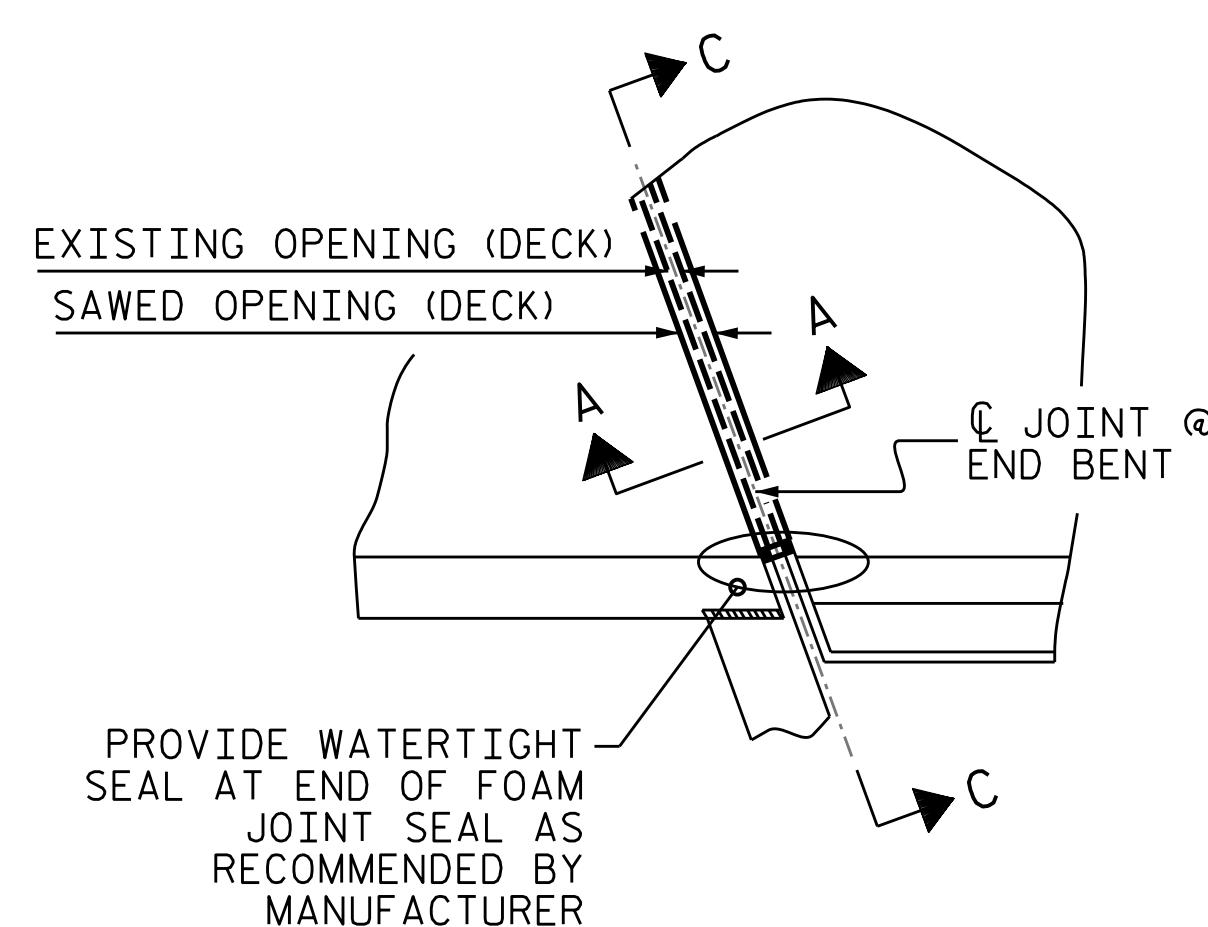


**PROPOSED JOINT PRIOR TO SAWING**

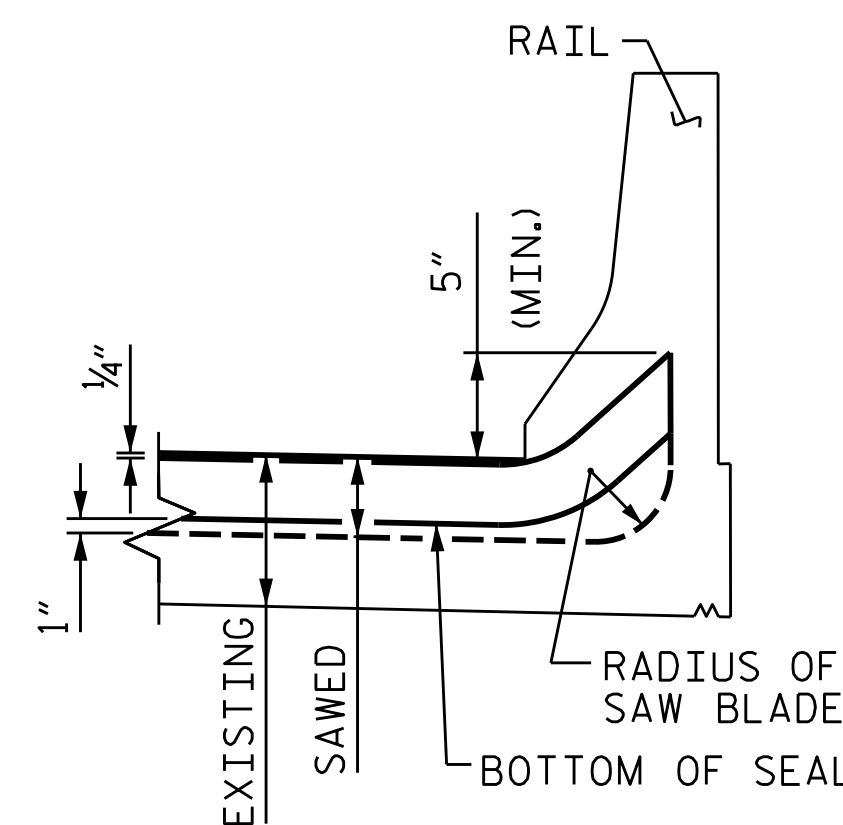


**PROPOSED FOAM JOINT SEAL**

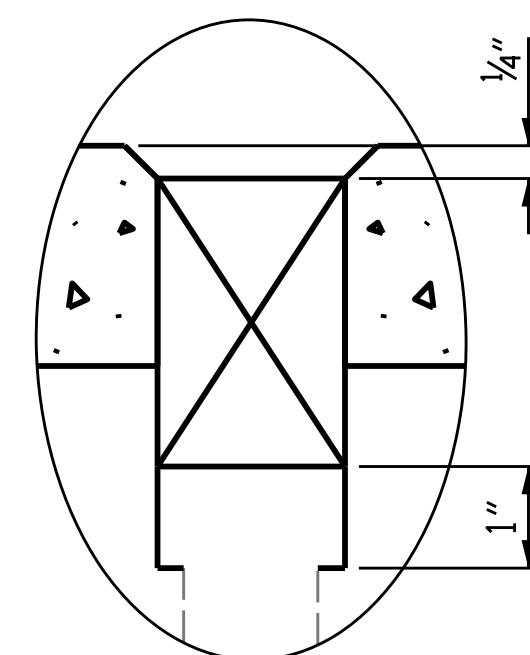
**SECTION A-A**  
(TYP. @ END BENTS)



**PLAN**  
(@ END BENTS)



**SECTION C-C**



**DETAIL 'A'**

**SAWED JOINT OPENING TABLE**

LOCATION	SAWED JT. OPENING (PERPENDICULAR TO JT.)		
	AT 45°	AT 60°	AT 90°
END BENT 1	1 5/8"	1 1/16"	1 3/8"
END BENT 2	1 5/8"	1 1/16"	1 3/8"

**ELASTOMERIC CONCRETE FOR PRESERVATION**

LOCATION	ESTIMATED (CU.FT.)	ACTUAL (CU.FT.)
END BENT 1	10.6	
END BENT 2	10.5	
TOTAL	21.1	

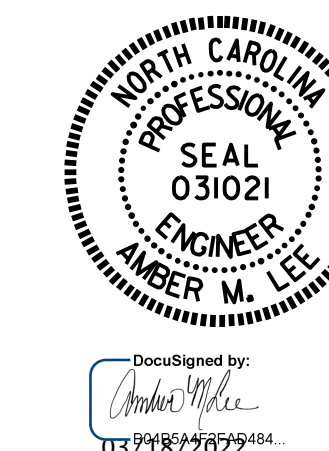
**JOINT REPAIR QUANTITY TABLE**

	ESTIMATED	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION	87.3 FT.	

**BRIDGE JOINT DEMOLITION**

LOCATION	ESTIMATED (SQ.FT.)	ACTUAL (SQ.FT.)
END BENT 1	42.4	
END BENT 2	42.0	
TOTAL	84.2	

ASSEMBLED BY : A.M. LEE      DATE : 2/2022  
 CHECKED BY : E. BAYISSA      DATE : 2/2022  
 DRAWN BY : NAP 08/2018  
 CHECKED BY : -

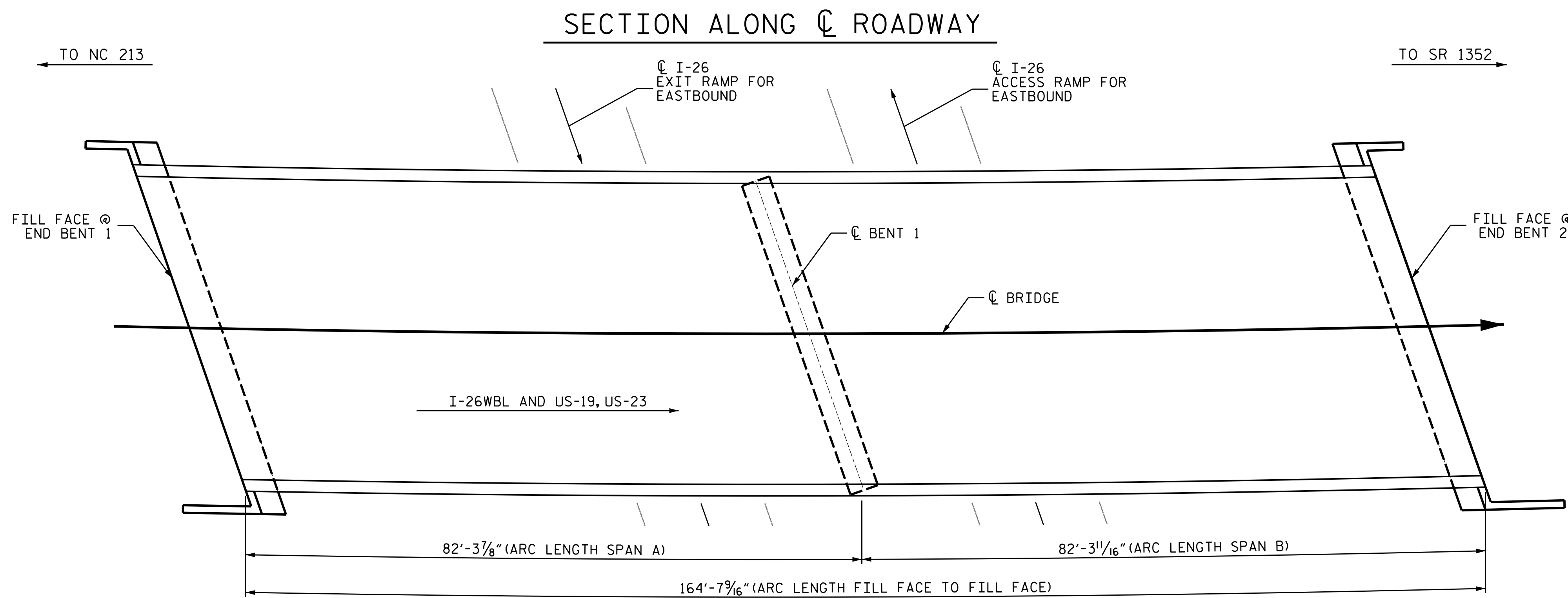
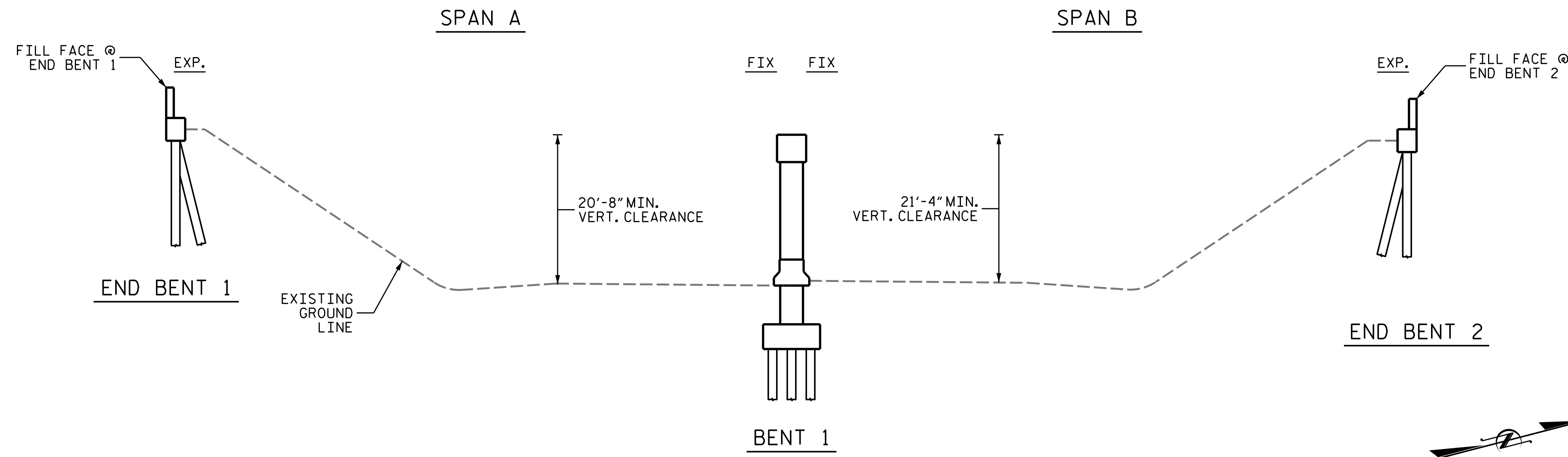


STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH STANDARDS  
**FOAM JOINT SEALS FOR PRESERVATION DETAILS**

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3				S1-06 TOTAL SHEETS 6
2				4				

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NOTES  
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 06/23/2020.  
 BRIDGE ORIENTATION CONFORMS TO THE ORIGINAL BRIDGE PLANS.



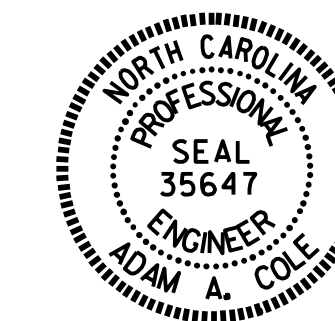
PLAN

SCOPE OF WORK

- PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND HYDRO-DEMOLITION METHODS.
- OVERLAY PREPARED BRIDGE DECK WITH LATEX MODIFIED CONCRETE - EARLY STRENGTH (LMC-ES).
- REMOVE EXISTING JOINT MATERIALS AND INSTALL FOAM JOINTS.
- GROOVE LMC-ES BRIDGE DECK.

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

RESIDENT ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



DocuSigned by:  
 Adam A. Cole  
 03/18/2022

DocuSigned by:  
 Amber M. Lee  
 03/18/2022

PROJECT NO. I-5831A  
MADISON COUNTY  
 BRIDGE NO. 560541

SHEET 1 OF 2

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

GENERAL DRAWING  
 FOR BRIDGE ON  
 I-26/US-23  
 OVER US-19  
 (WESTBOUND)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-01
1			3			TOTAL SHEETS
2			4			6

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : E. CABELL DATE : 02/2022  
 CHECKED BY : H. A. LOCKLEAR DATE : 02/2022