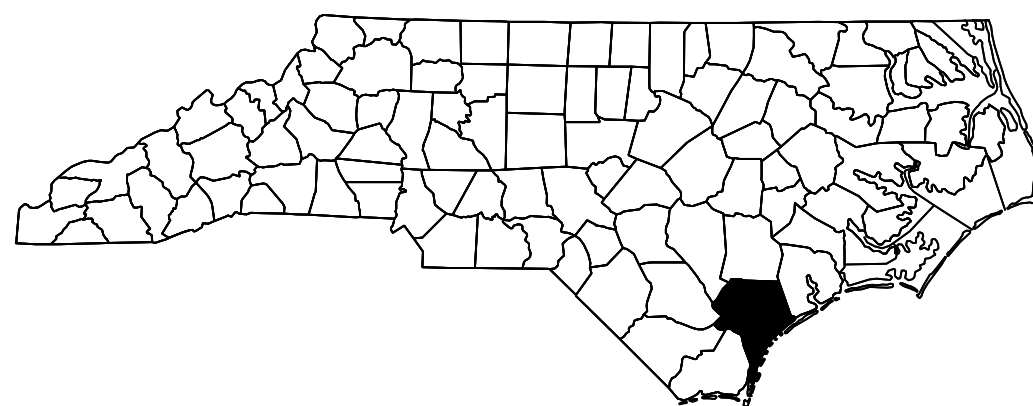


PROJECT: 15BPR.26

CONTRACT NO: C204301



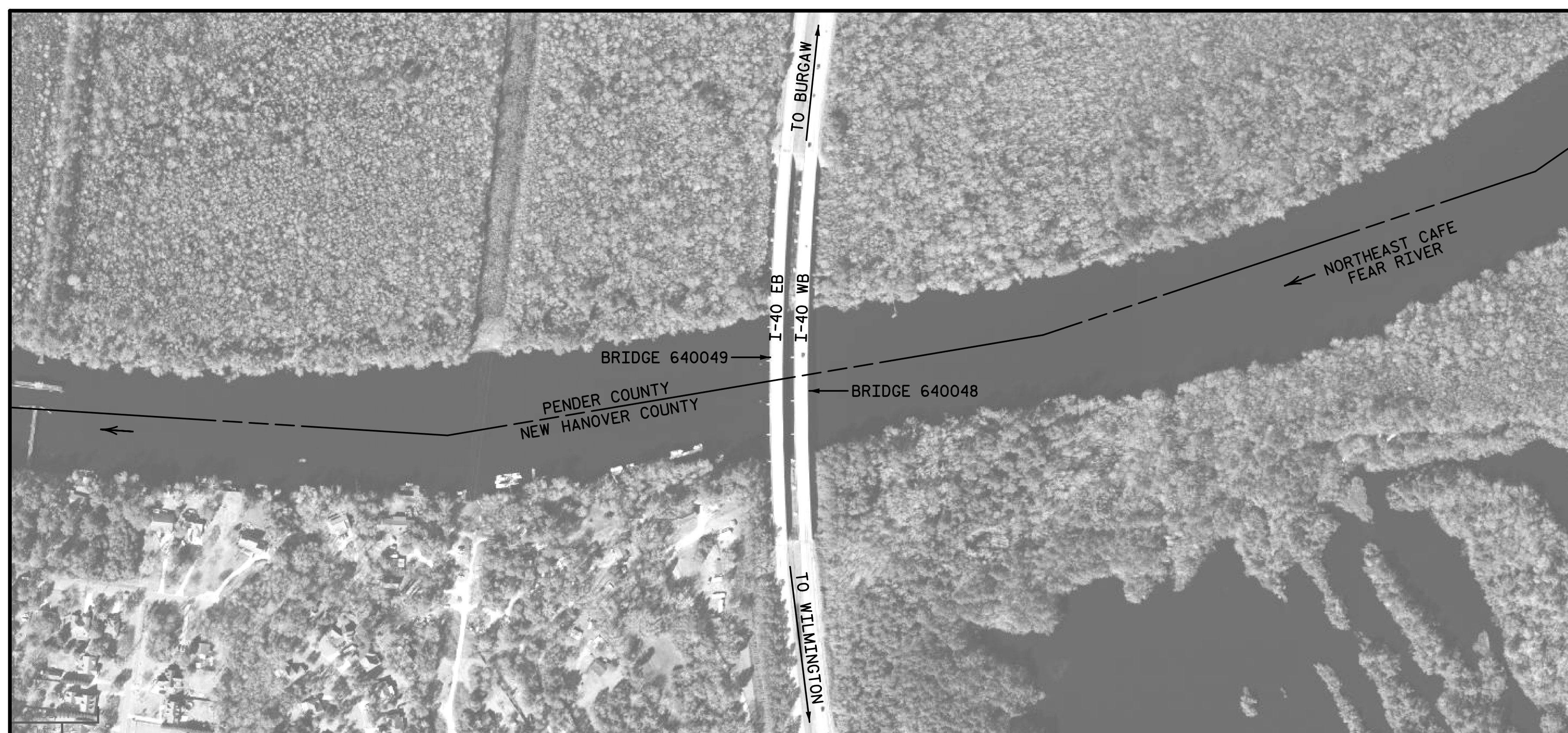
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NEW HANOVER / PENDER COUNTY

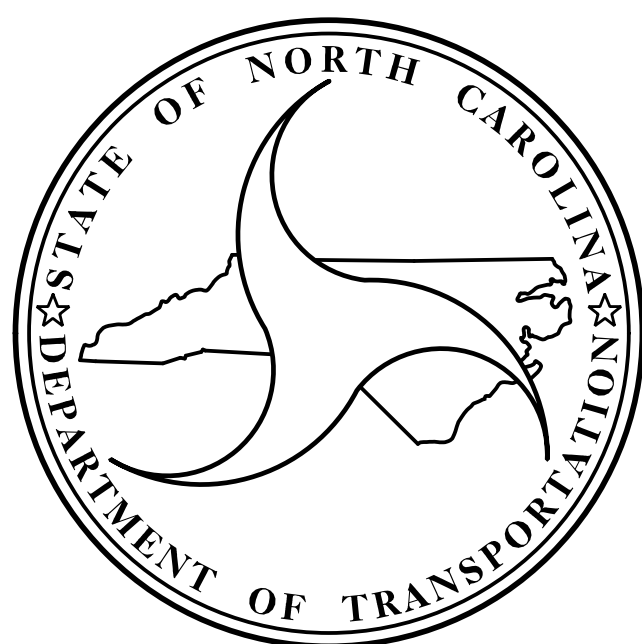
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15BPR.26	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
15BPR.26		P.E.	
15BPR.26		CONST.	

LOCATION: BRIDGE #48 ON I-40 WBL OVER NORTHEAST CAPE FEAR RIVER.
BRIDGE #49 ON I-40 EBL OVER NORTHEAST CAPE FEAR RIVER.

TYPE OF WORK: CONCRETE BRIDGE DECK AND BARRIER RAIL REHABILITATION BY SCARIFICATION, SHOTBLASTING, PLACEMENT OF POLYMER CONCRETE OVERLAY, RECONSTRUCTION OF BRIDGE DECK JOINTS, SHOTCRETE, EPOXY RESIN INJECTION AND SILANE BARRIER RAIL TREATMENT. SUPERSTRUCTURE REHABILITATION BY REPAIRS TO PRESTRESSED CONCRETE GIRDERS, SHOTCRETE, EPOXY RESIN INJECTION, FRP GIRDER STRENGTHENING. SUBSTRUCTURE REHABILITATION BY SHOTCRETE, EPOXY RESIN INJECTION AND EPOXY COATING TOP OF END BENT AND BENT CAPS.



VICINITY MAP



DESIGN DATA

BRIDGE #48 ADT 2015 = 13,000
BRIDGE #49 ADT 2015 = 16,000

PROJECT LENGTH

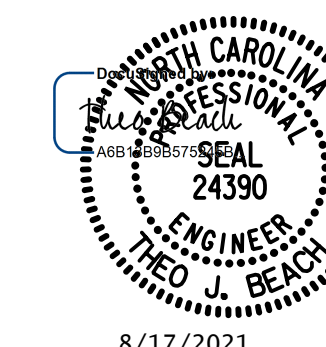
BRIDGE #48 = 0.217 MILES
BRIDGE #49 = 0.219 MILES

2018 STANDARD SPECIFICATIONS

LETTING DATE :
JANUARY 18, 2022

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

SIMPSON ENGINEERS & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

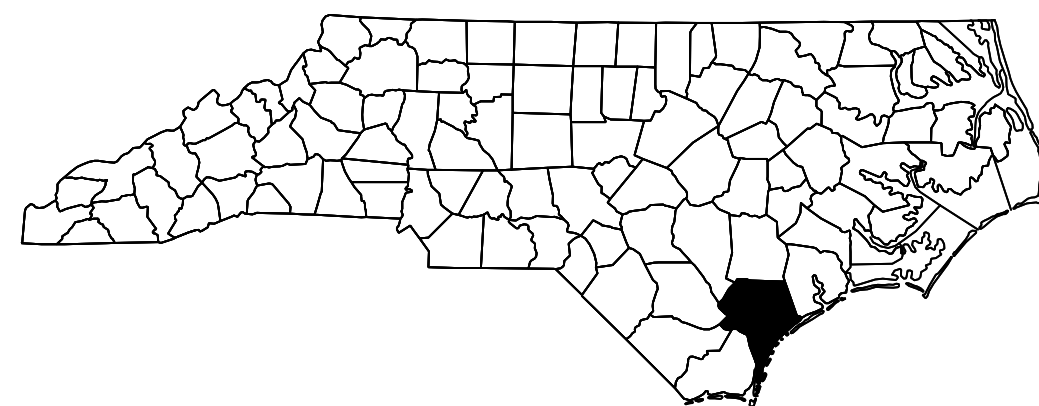


T.J. BEACH P.E.
PROJECT ENGINEER

N.J. MABRY
PROJECT DESIGN ENGINEER

PROJECT: 15BPR.26

CONTRACT NO: C204301



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NEW HANOVER / PENDER COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15BPR.26	1B	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
15BPR.26		P.E.	
15BPR.26		CONST.	

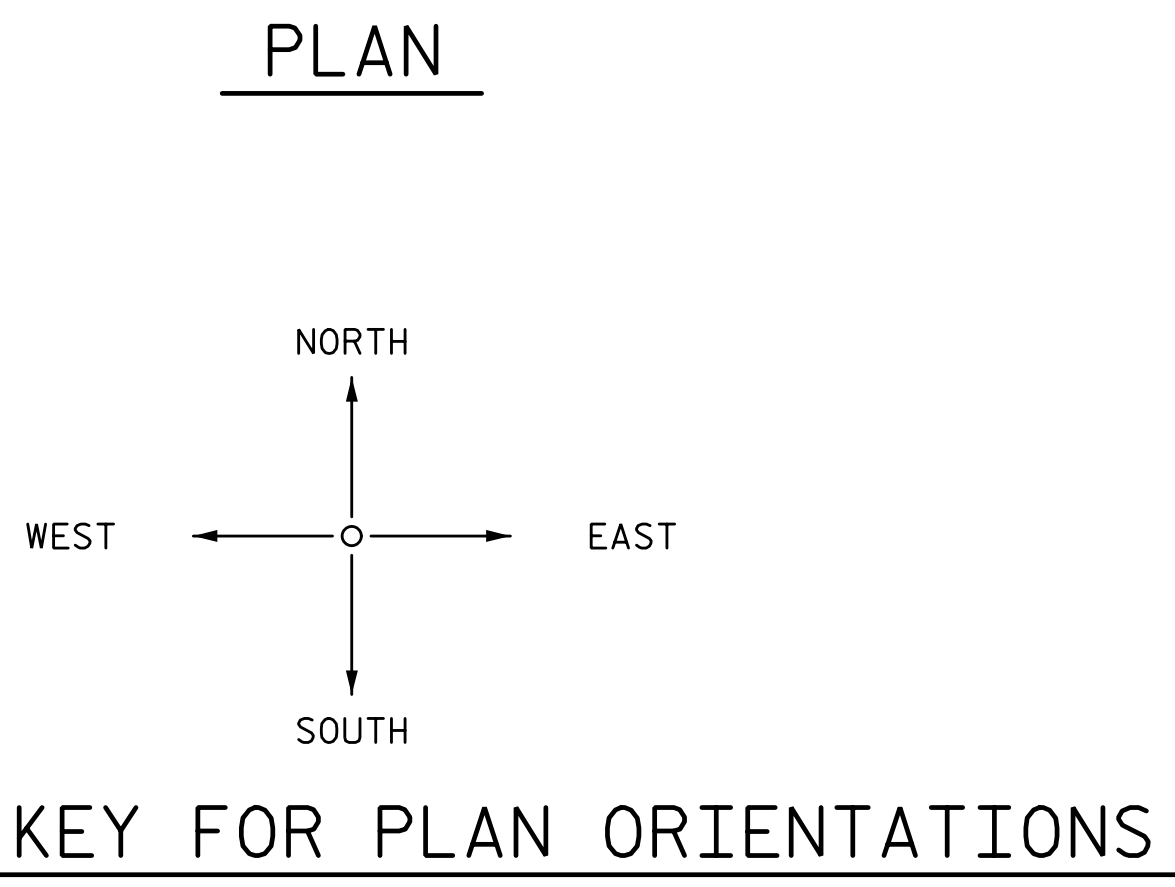
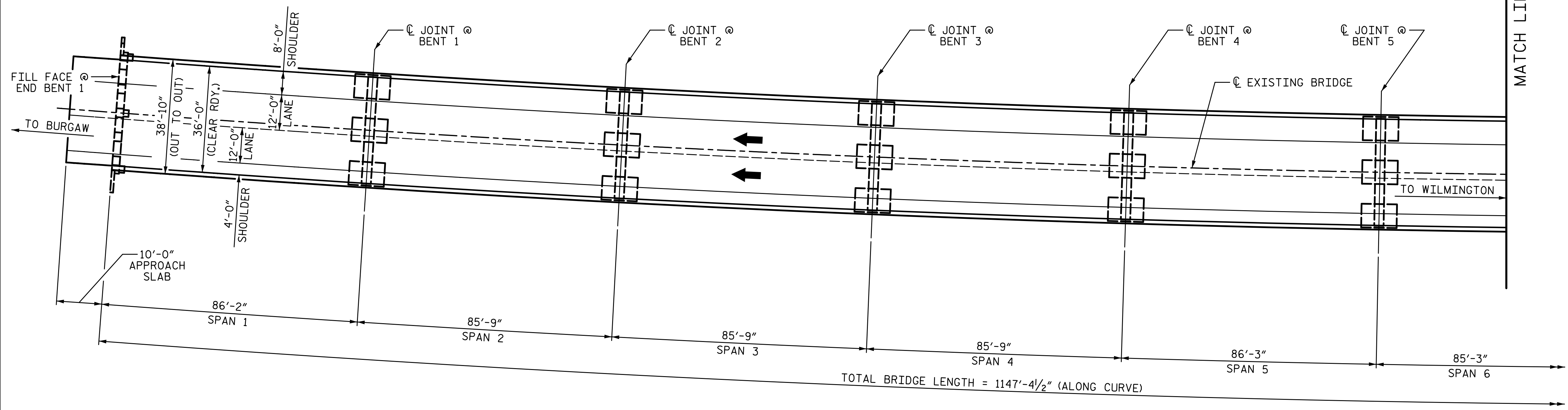
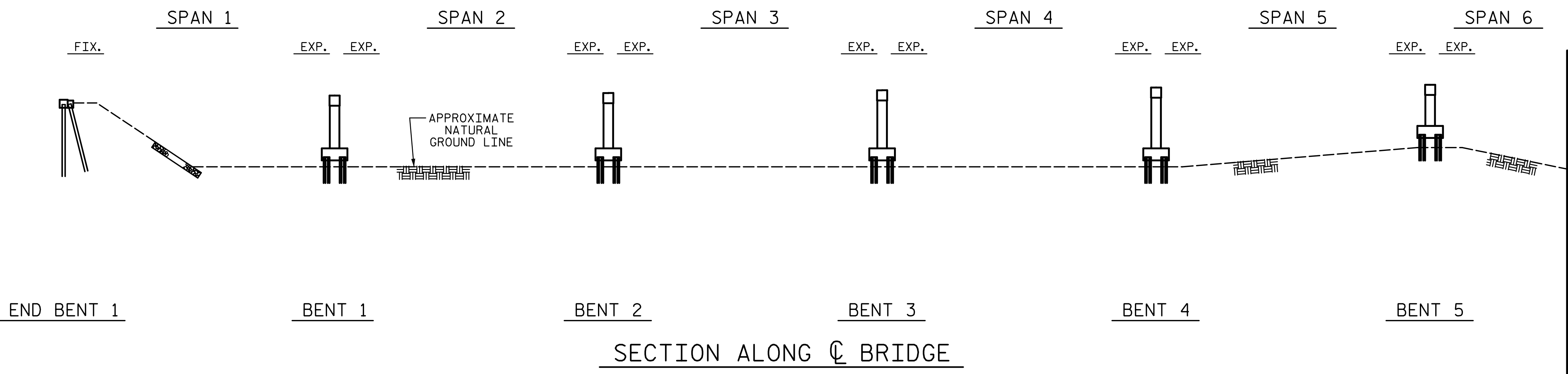
LOCATION: BRIDGE #48 ON I-40 WBL OVER NORTHEAST CAPE FEAR RIVER.
BRIDGE #49 ON I-40 EBL OVER NORTHEAST CAPE FEAR RIVER.

TYPE OF WORK: CONCRETE BRIDGE DECK AND BARRIER RAIL REHABILITATION BY SCARIFICATION, SHOTBLASTING, PLACEMENT OF POLYMER CONCRETE OVERLAY, RECONSTRUCTION OF BRIDGE DECK JOINTS, SHOTCRETE, EPOXY RESIN INJECTION AND SILANE BARRIER RAIL TREATMENT. SUPERSTRUCTURE REHABILITATION BY REPAIRS TO PRESTRESSED CONCRETE GIRDERS, SHOTCRETE, EPOXY RESIN INJECTION, FRP GIRDER STRENGTHENING. SUBSTRUCTURE REHABILITATION BY SHOTCRETE, EPOXY RESIN INJECTION AND EPOXY COATING TOP OF END BENT AND BENT CAPS.

INDEX OF SHEETS

1A	TITLE SHEET
1B	INDEX SHEETS
S1-1 THRU S1-163	640048 STRUCTURAL PLANS
S2-1 THRU S2-163	640049 STRUCTURAL PLANS
SN	STANDARD NOTES
TMP-1 THRU TMP-8	TRAFFIC MANAGEMENT PLANS

8/17/2021 12:11:25 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge_48 (Westbound Lane)\401_15BPR26_SMU_CD_640048.dgn



- SCOPE OF WORK:**
- PARTIALLY REMOVE BRIDGE DECK AND APPROACH SLABS BY SCARIFICATION AND SHOTBLASTING AS SHOWN IN THE PLANS.
 - PERFORM DECK REPAIRS PRIOR TO OVERLAYING THE BRIDGE DECK AND APPROACH SLABS.
 - OVERLAY PREPARED BRIDGE DECK AND APPROACH SLAB WITH POLYMER CONCRETE.
 - REMOVE EXISTING BRIDGE EXP. JOINT MATERIAL AND REPLACE WITH SILICONE JOINT SEALS. INSTALL SILICONE JOINT SEALS AT ALL EXISTING OPEN JOINTS.
 - GROOVE THE POLYMER CONCRETE.
 - PERFORM SUPERSTRUCTURE AND SUBSTRUCTURE REPAIRS USING EPOXY RESIN INJECTION OR SHOTCRETE AS SHOWN IN THE PLANS.
 - CLEAN AND EPOXY COAT THE TOP OF THE BENT CAPS.
 - FRP STRENGTHENING.
 - APPLY SILANE RAIL TREATMENT
- NOTES:**
- PROFILE INFORMATION IS TAKEN FROM THE EXISTING BRIDGE PLANS.
 - BRIDGE ORIENTATION CONFORMS TO "DIRECTION KEY FOR PLANS ORIENTATIONS."

MATCH LINE (SHEET 2 OF 4)

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

RESIDENT ENGINEER _____ DATE _____

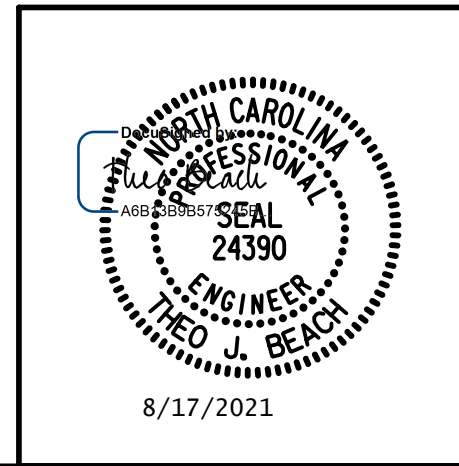
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 1 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 GENERAL DRAWING
 FOR BRIDGE ON I-40 WBL
 OVER NORTHEAST CAFE FEAR RIVER
 BETWEEN BURGAW AND WILMINGTON

DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

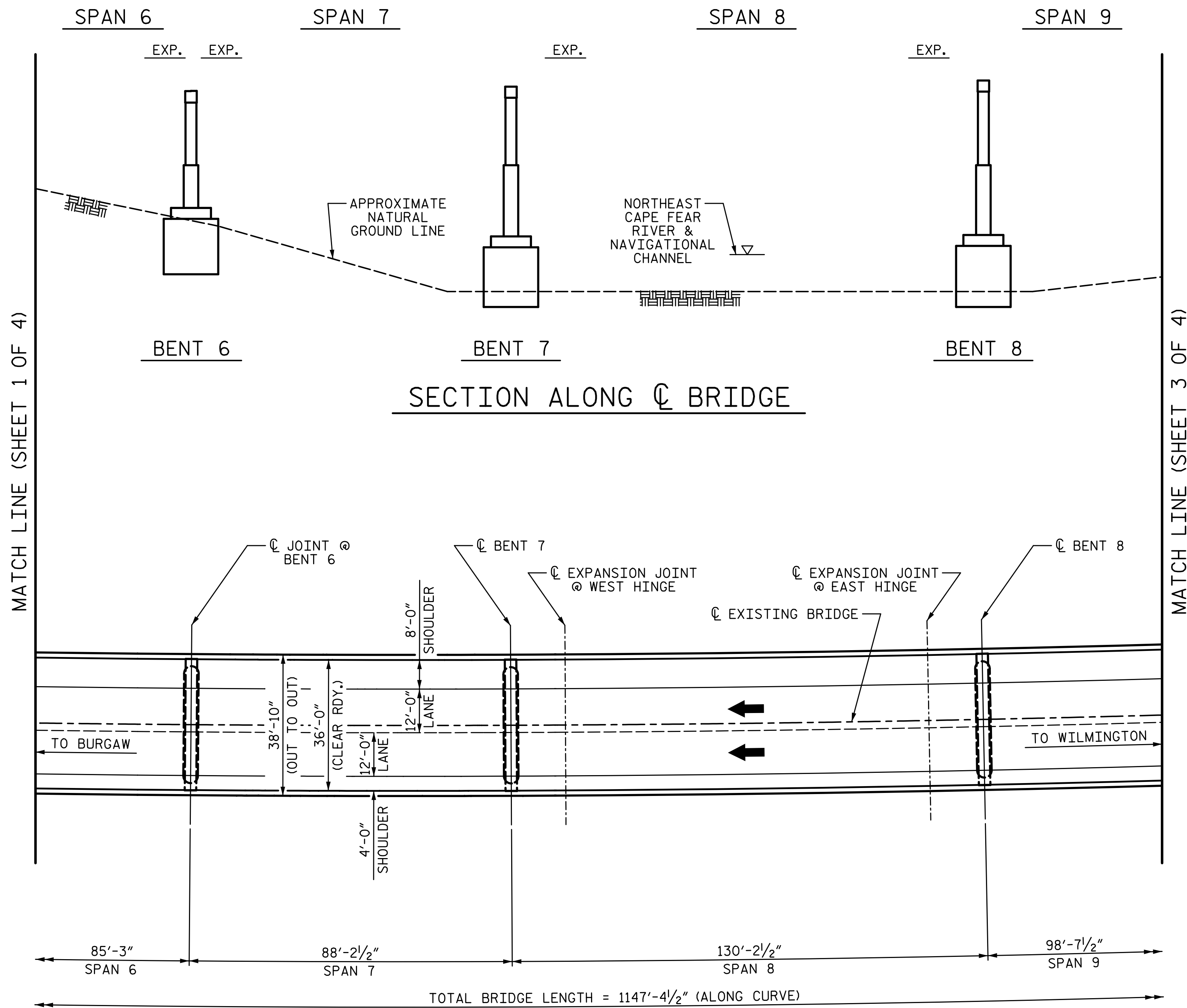
PLANS PREPARED BY:
SEA
 SIMPSON ENGINEERS ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521



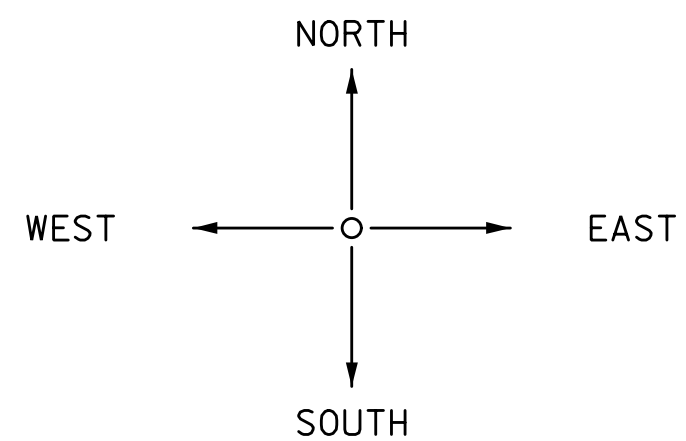
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-1
1			3			TOTAL SHEETS
2			4			163

9/28/2020 12:00:38 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_CD_640048.dgn



PLAN

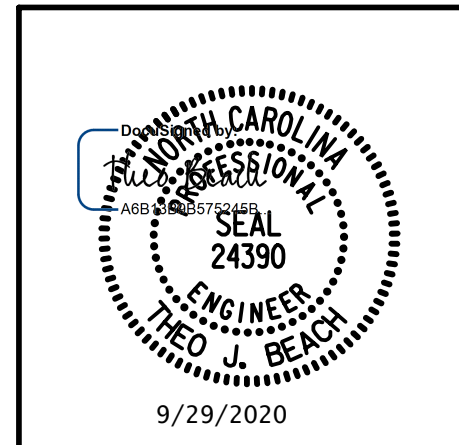


PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 2 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 GENERAL DRAWING
 FOR BRIDGE ON I-40 WBL
 OVER NORTHEAST CAPE FEAR RIVER
 BETWEEN BURGAW AND WILMINGTON

PLANS PREPARED BY:
SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

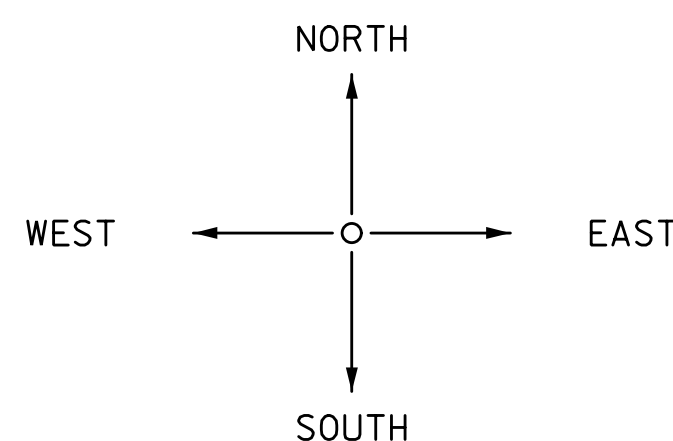
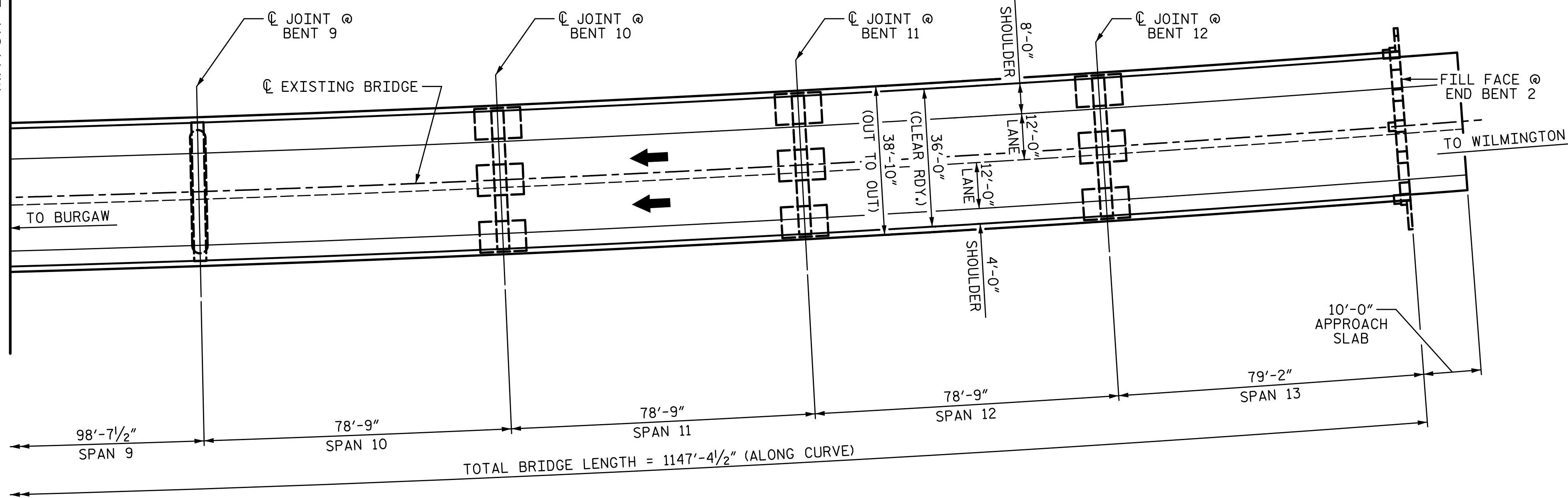
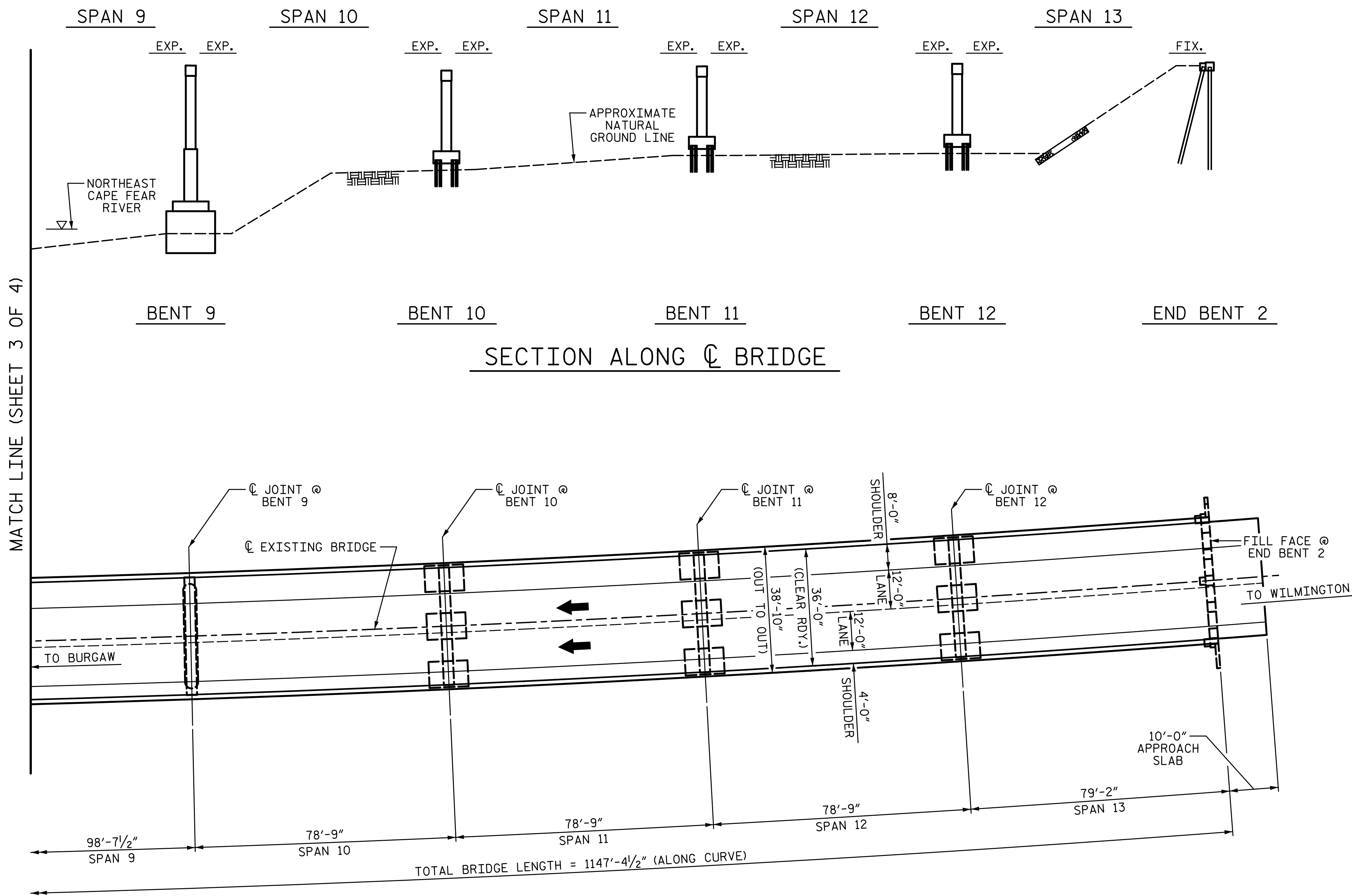


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-2
1			3			TOTAL SHEETS
2			4			163

DRAWN BY: <u>T. BANKOVICH</u>	DATE: <u>9-20</u>
CHECKED BY: <u>T.J. BEACH</u>	DATE: <u>9-20</u>
DESIGN ENGINEER OF RECORD: <u>T.J. BEACH</u>	DATE: <u>9-20</u>

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:38 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge_48 (Westbound Lane)\401_15BPR26_SMU_CD_640048.dgn



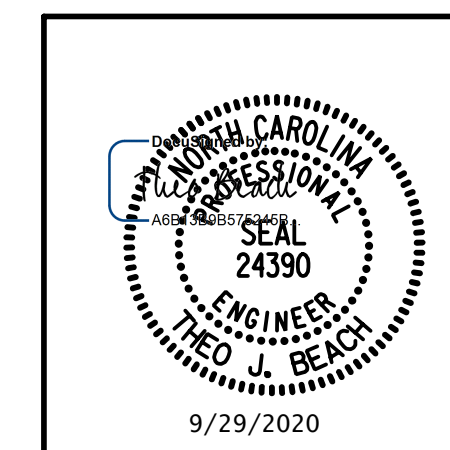
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 3 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
GENERAL DRAWING
 FOR BRIDGE ON I-40 WBL
 OVER NORTHEAST CAPE FEAR RIVER
 BETWEEN BURGAW AND WILMINGTON

PLANS PREPARED BY:

SEA & A
 SIMPSON
 ENGINEERS
 ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

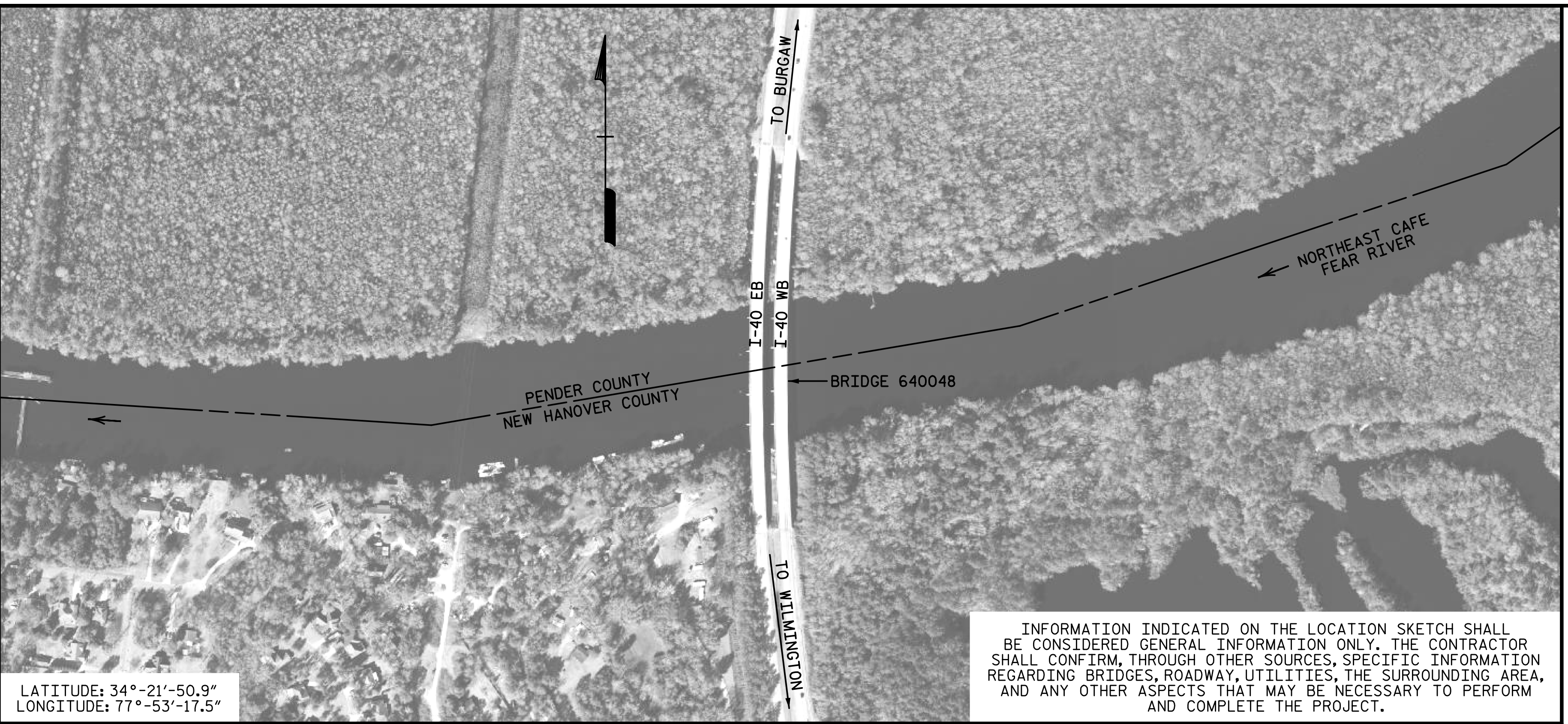


DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-3
1			3			TOTAL SHEETS
2			4			163

8/17/2021 12:11:25 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SML_CD_640048.dgn



LATITUDE: 34°-21'-50.9"
LONGITUDE: 77°-53'-17.5"

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

LOCATION SKETCH

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.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT TYPE I BRIDGE JACKING WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT TYPE I BRIDGE JACKING, 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 COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.
- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLAN.
- 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 CONCRETE DECK REPAIR FOR PC OVERLAY, PC MATERIALS, PLACING AND FINISHING PC OVERLAY, SEE "POLYMER CONCRETE BRIDGE DECK OVERLAY" SPECIAL PROVISION.
- FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK, AND CLASS II SURFACE PROTECTION, SEE "OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE" SPECIAL PROVISION.
- FOR POURABLE SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
- FOR EPOXY COATING, SEE SPECIAL PROVISIONS.
- FOR REPAIRS TO PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
- FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
- FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
- FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.
- FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.
- FOR SECURING VESSELS, SEE SPECIAL PROVISIONS.
- FOR MAINTENANCE OF WATER TRAFFIC, SEE SPECIAL PROVISIONS.
- FOR WORK IN, OVER, OR ADJACENT TO NAVIGABLE WATERS, SEE SPECIAL PROVISIONS.
- FOR FRP REPAIRS, SEE "FIBER REINFORCED POLYMER (FRP) STRENGTHENING" SPECIAL PROVISION.
- NORTH, SOUTH, EAST AND WEST INDICATED ON THE PLANS ARE BASED ON I-40 HIGHWAY BEING AN EAST-WEST INTERSTATE AND NOT NECESSARILY ON GEODETIC DIRECTIONS
- FOR OTHER DESIGN DATA AND GENERAL NOTES. SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL

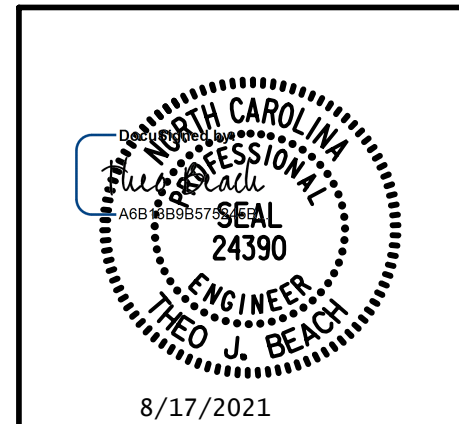
BRIDGE NO.	GROOVING BRIDGE FLOORS	CLASS II SURFACE PREPARATION	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	POURABLE SILICONE JOINT SEALANT	POLYESTER POLYMER CONCRETE MATERIALS	EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	REPAIRS TO PRESTRESSED CONCRETE GIRDERS	EPOXY COATING	FIBER REINFORCED POLYMER STRENGTHENING SYSTEM	SURFACE PREPARATION FOR CONCRETE BARRIER	SILANE BARRIER RAIL TREATMENT	CONCRETE DECK REPAIR FOR POLYMER CONCRETE OVERLAY	PLACING AND FINISHING POLYMER CONCRETE OVERLAY	SCARIFYING BRIDGE DECK	SHOTBLASTING BRIDGE DECK
	SF	SY	CF	LF	LF	CY	CY	CF	SF	SF	SF	SF	SY	SY	SY	SY
640048	38,292.5	56.00	21.80	560.80	518.00	128.90	128.90	13.60	1,320.00	1,469	14,160.2	14,160.2	56.00	4,669.50	4,669.50	4,669.50
TOTAL	38,292.5	56.00	21.80	560.80	518.00	128.90	128.90	13.60	1,320.00	1,469	14,160.2	14,160.2	56.00	4,669.50	4,669.50	4,669.50

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 4 OF 4

DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

PLANS PREPARED BY:
SE & A
 SIMPSON ENGINEERS ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

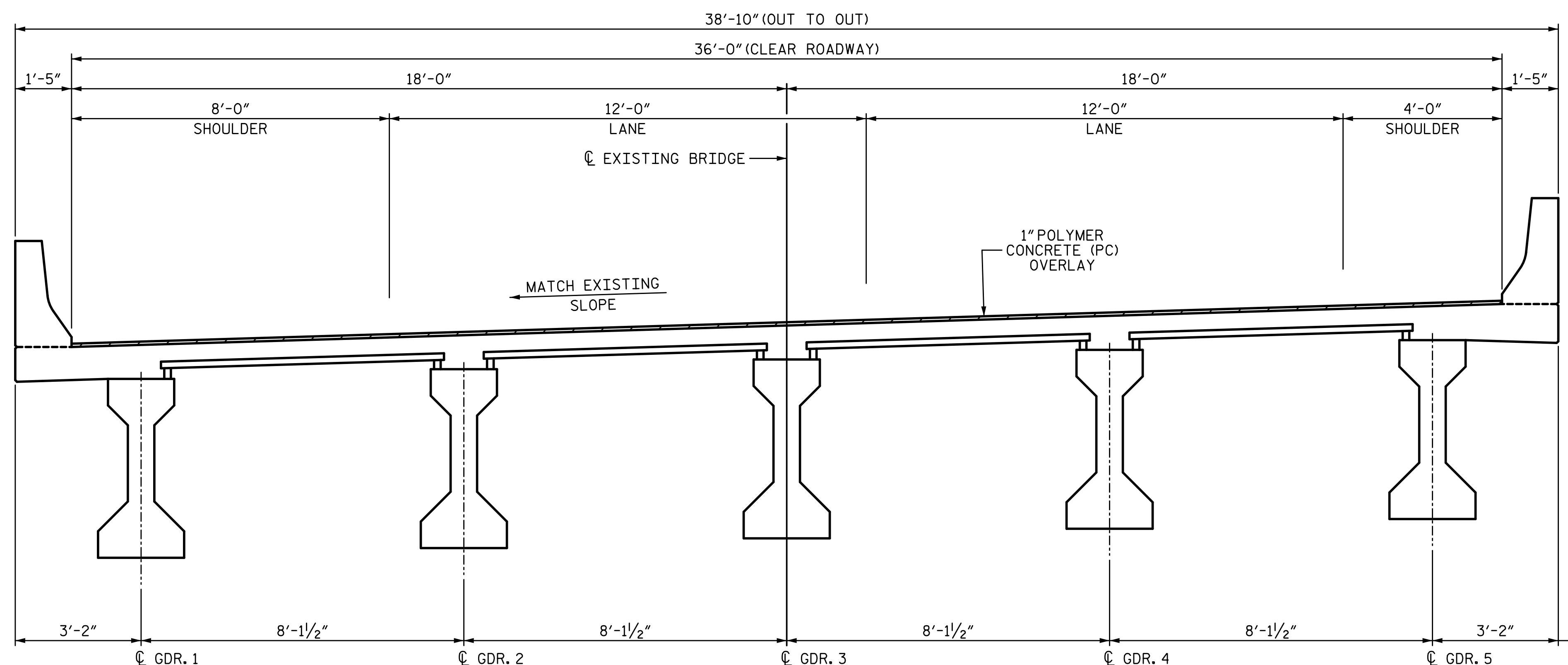


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
GENERAL DRAWING
 FOR BRIDGE ON I-40 WBL
 OVER NORTHEAST CAPE FEAR RIVER
 BETWEEN BURGAW AND WILMINGTON

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-4
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

8/17/2021 12:11:39 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_TS_640048.dgn

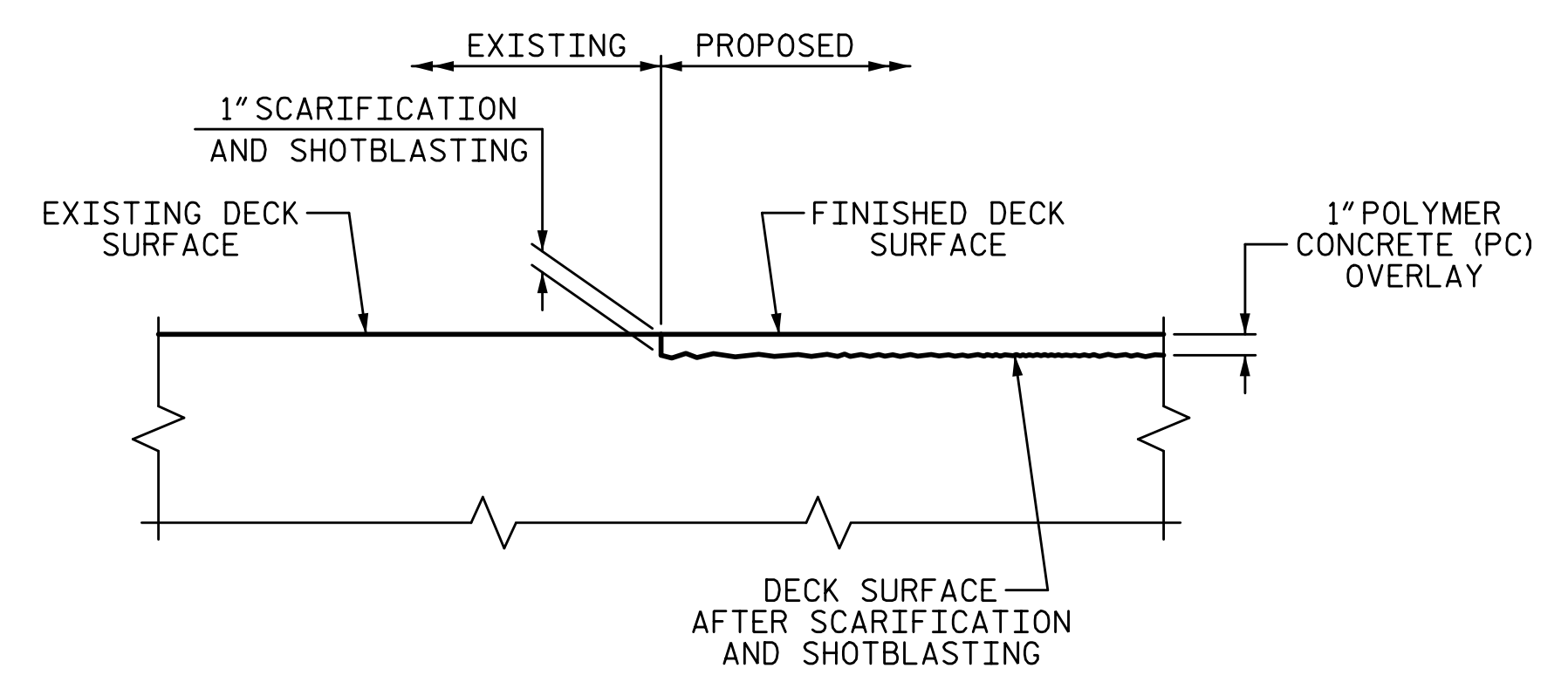


TYPICAL SECTION
LOOKING EAST

NOTES:

SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF POLYESTER POLYMER CONCRETE (PPC) SYSTEM AND SURFACE PREPARATION.
FOR LIMITS OF SCARIFICATION, SHOTBLASTING, CLASS II REPAIR AND PC OVERLAY, SEE SURFACE PREPARATION SHEETS.

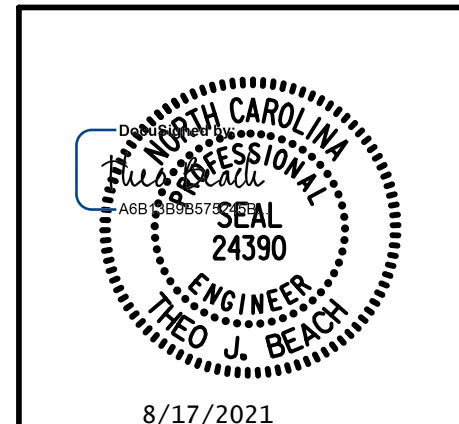
5 GIRDERS SHOWN, 7 GIRDERS IN SPANS 7, 8 AND 9



DETAIL OF POLYMER CONCRETE OVERLAY

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION
**SURFACE PREPARATION
TYPICAL SECTION
& DETAILS**



PLANS PREPARED BY:
SE & A
SIMPSON ENGINEERS & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

DRAWN BY: T. BANKOVICH DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-5
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

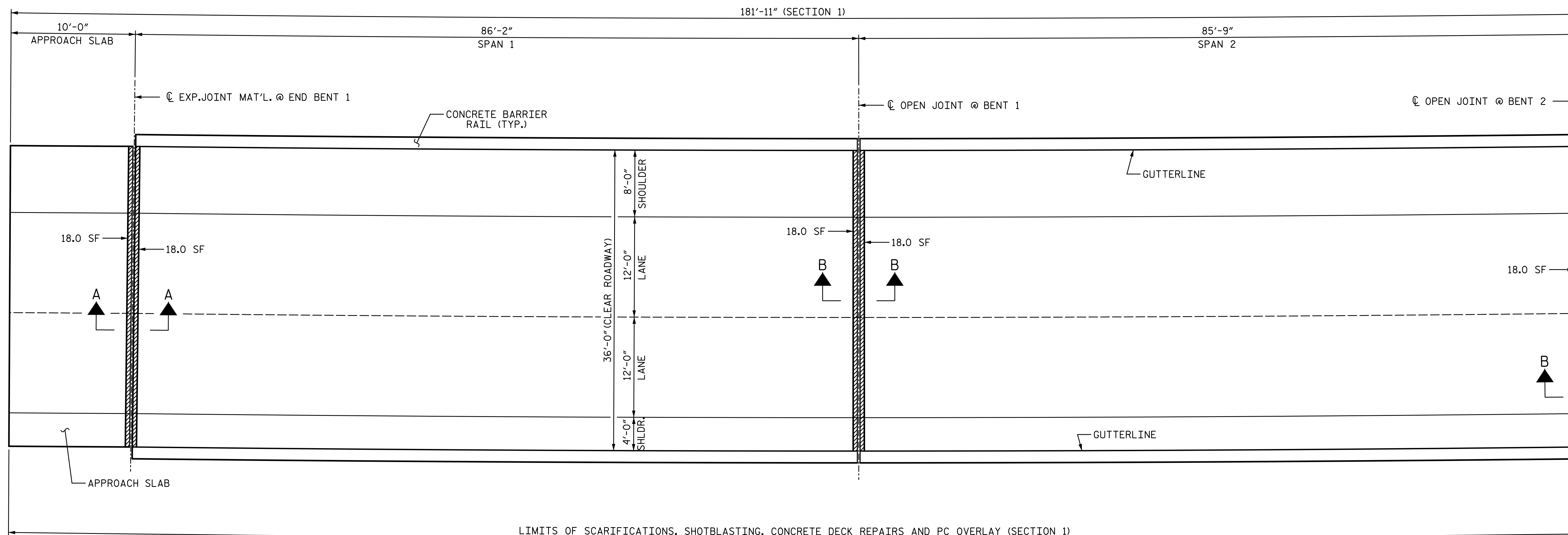
8/17/2021 12:11:40 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\SMU_S_640048.dgn

SECTION 1 QUANTITIES

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	727.7 SY	
CLASS II SURFACE PREPARATION	10.0 SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	10.0 SY	
SHOTBLASTING BRIDGE DECK	727.7 SY	
PC MATERIALS	20.2 CY	
PLACING AND FINISHING PC OVERLAY	727.7 SY	
GROOVING BRIDGE FLOORS	5962.0 SF	

- SCARIFICATION, SHOTBLASTING, AND POLYMER CONCRETE OVERLAY
- CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY

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



LIMITS OF SCARIFICATIONS, SHOTBLASTING, CONCRETE DECK REPAIRS AND PC OVERLAY (SECTION 1)

SPAN 1

SPAN 2

PLAN OF SPANS

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

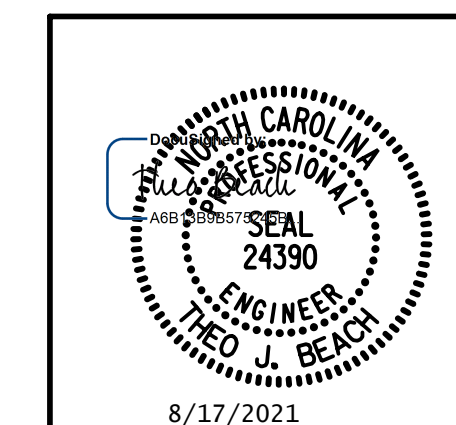
SHEET 1 OF 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

SURFACE PREPARATION
 (SPANS 1 AND 2)

PLANS PREPARED BY:

SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521



REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S1-6
2			4			TOTAL SHEETS 163

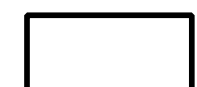
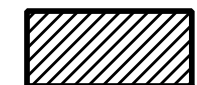
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

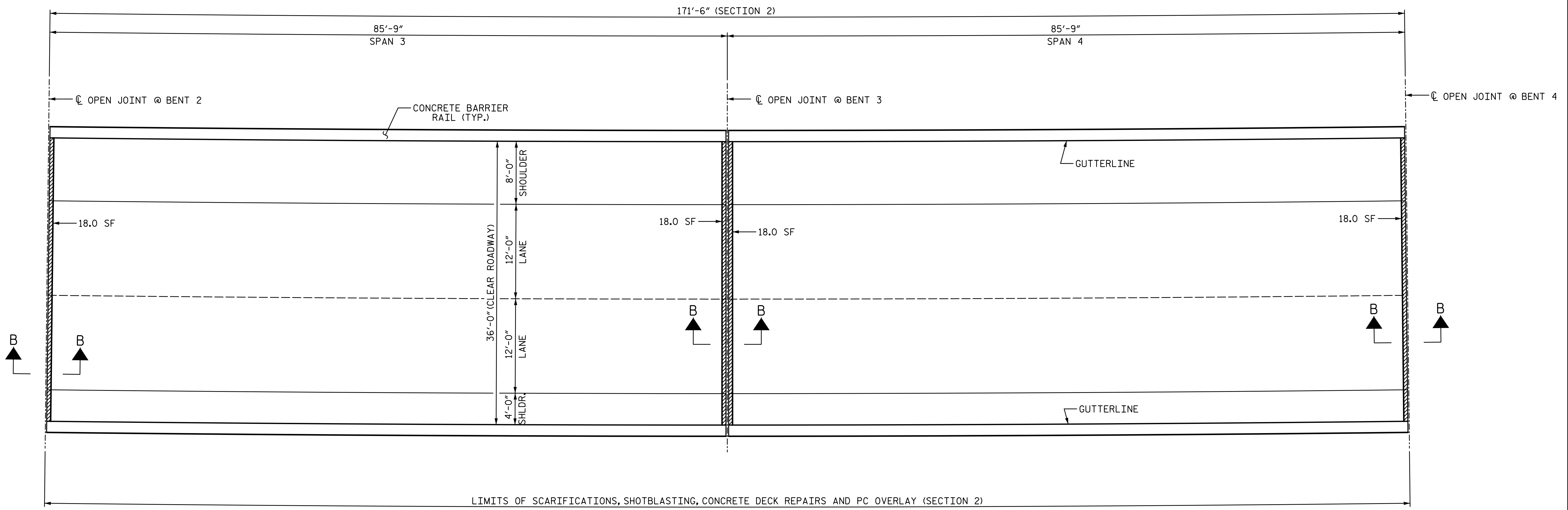
8/17/2021 12:11:40 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_S_640048.dgn

SECTION 2 QUANTITIES

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	686.0 SY	
CLASS II SURFACE PREPARATION	8.0 SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	8.0 SY	
SHOTBLASTING BRIDGE DECK	686.0 SY	
PC MATERIALS	19.1 CY	
PLACING AND FINISHING PC OVERLAY	686.0 SY	
GROOVING BRIDGE FLOORS	5626.5 SF	

-  SCARIFICATION, SHOTBLASTING, AND POLYMER CONCRETE OVERLAY
-  CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY

NOTES:
FOR SECTIONS B-B, SEE "JOINT REPAIR DETAILS" SHEET.



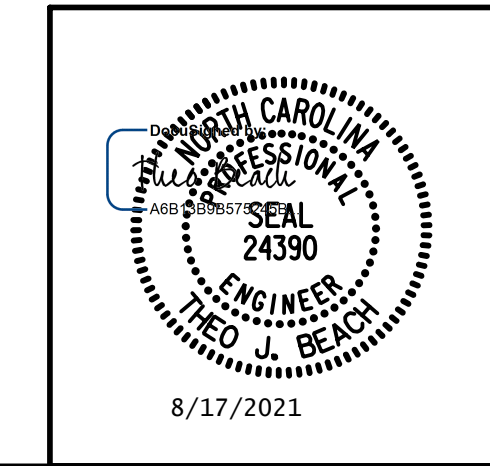
PLAN OF SPANS

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 2 OF 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SURFACE PREPARATION
 (SPANS 3 AND 4)

PLANS PREPARED BY:
SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521



DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-7
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

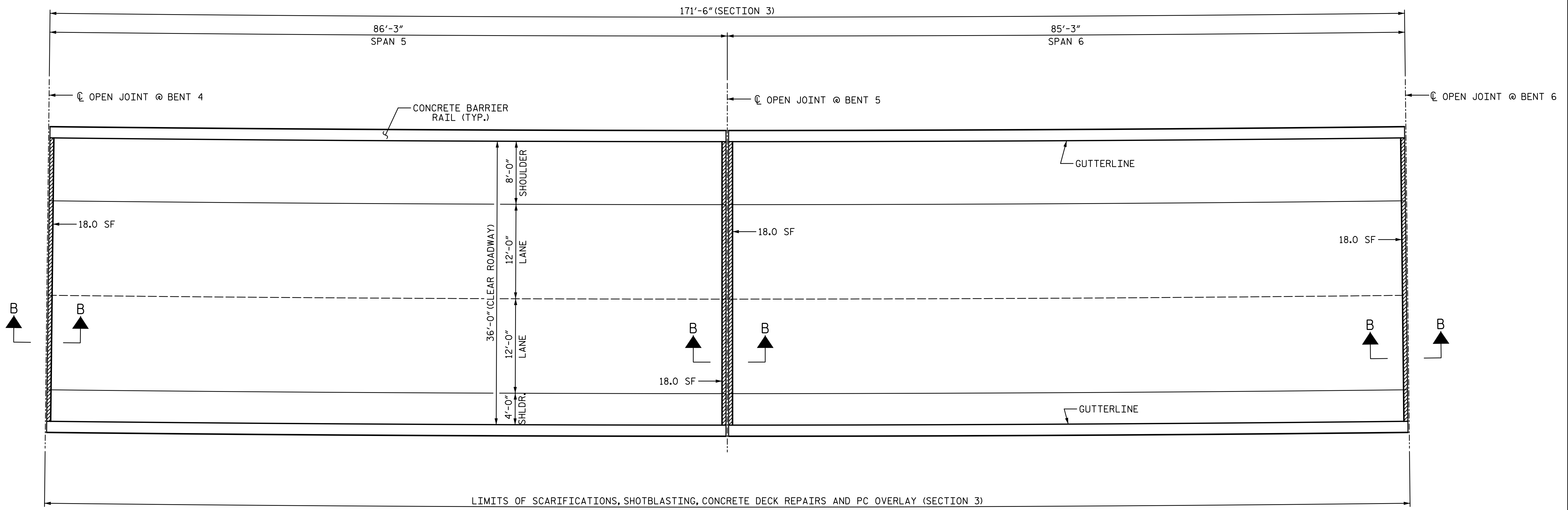
8/17/2021 12:11:40 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_S_640048.dgn

SECTION 3 QUANTITIES

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	686.0 SY	
CLASS II SURFACE PREPARATION	8.0 SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	8.0 SY	
SHOTBLASTING BRIDGE DECK	686.0 SY	
PC MATERIALS	19.1 CY	
PLACING AND FINISHING PC OVERLAY	686.0 SY	
GROOVING BRIDGE FLOORS	5626.5 SF	

- SCARIFICATION, SHOTBLASTING, AND POLYMER CONCRETE OVERLAY
- CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY

NOTES:
FOR SECTIONS B-B, SEE "JOINT REPAIR DETAILS" SHEET.



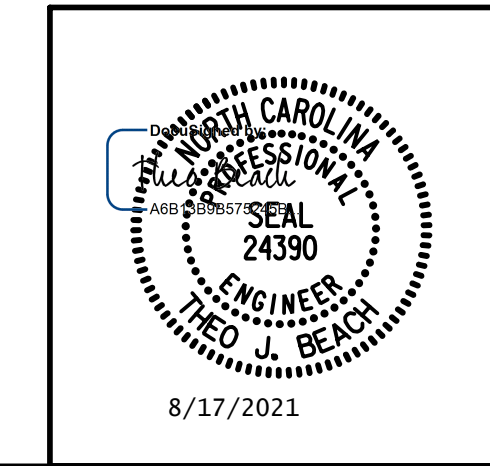
PLAN OF SPANS

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 3 OF 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
**SURFACE PREPARATION
 (SPANS 5 AND 6)**

PLANS PREPARED BY:
SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521



DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-8
1			3			TOTAL SHEETS
2			4			163

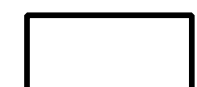
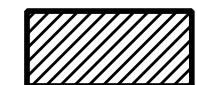
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

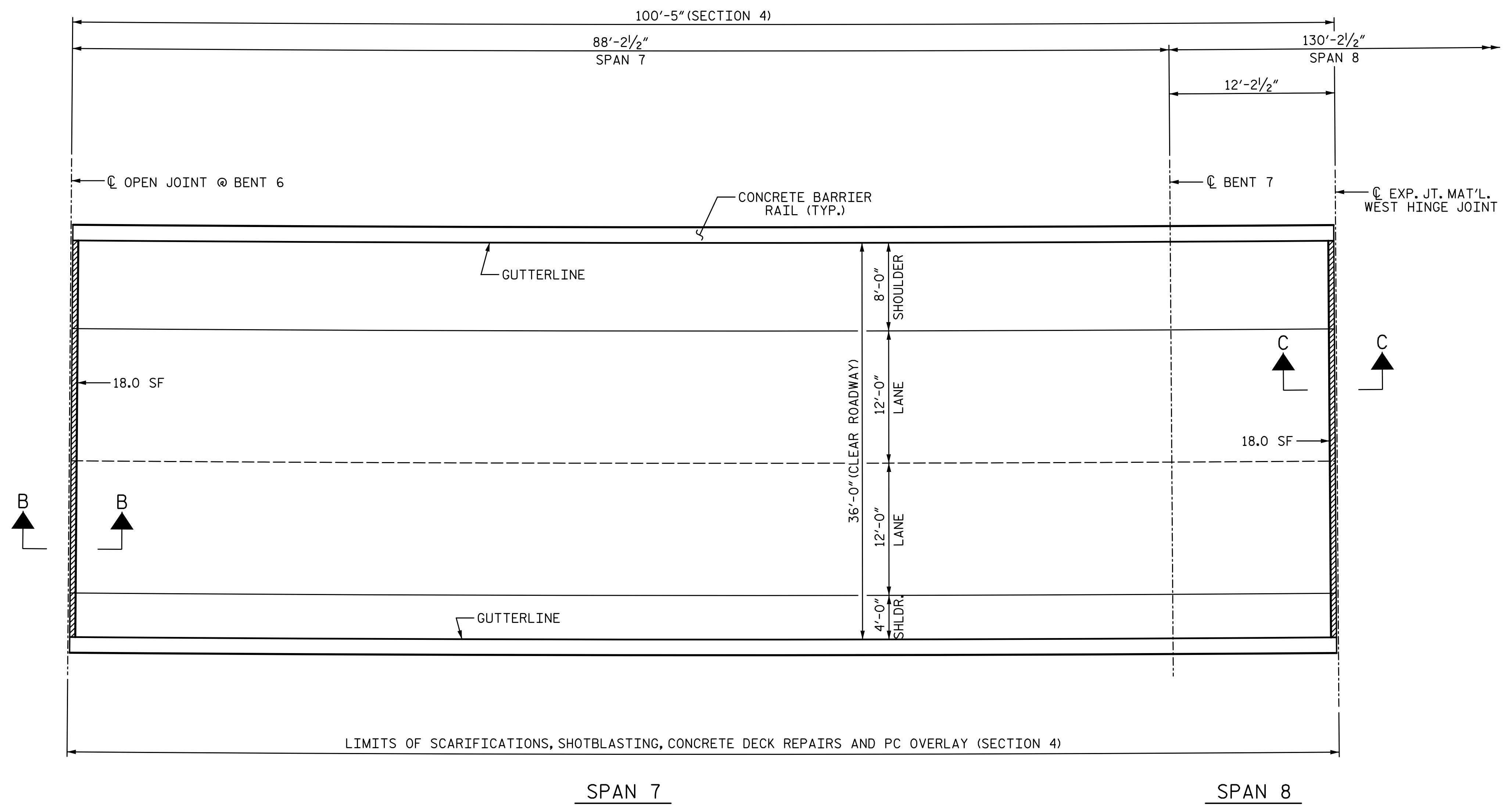
8/17/2021 12:11:40 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_S_640048.dgn

SECTION 4 QUANTITIES

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	401.7 SY	
CLASS II SURFACE PREPARATION	4.0 SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	4.0 SY	
SHOTBLASTING BRIDGE DECK	401.7 SY	
PC MATERIALS	11.2 CY	
PLACING AND FINISHING PC OVERLAY	401.7 SY	
GROOVING BRIDGE FLOORS	3297.3 SF	

NOTES:
FOR SECTIONS B-B AND C-C, SEE "JOINT REPAIR DETAILS" SHEET.

 SCARIFICATION, SHOTBLASTING, AND POLYMER CONCRETE OVERLAY
 CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY



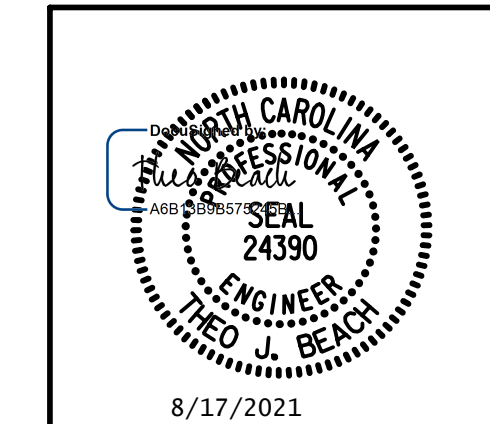
PLAN OF SPAN

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 4 OF 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
**SURFACE PREPARATION
 (SPANS 7 AND 8)**

PLANS PREPARED BY:
SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-9
1			3			TOTAL SHEETS
2			4			163

DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

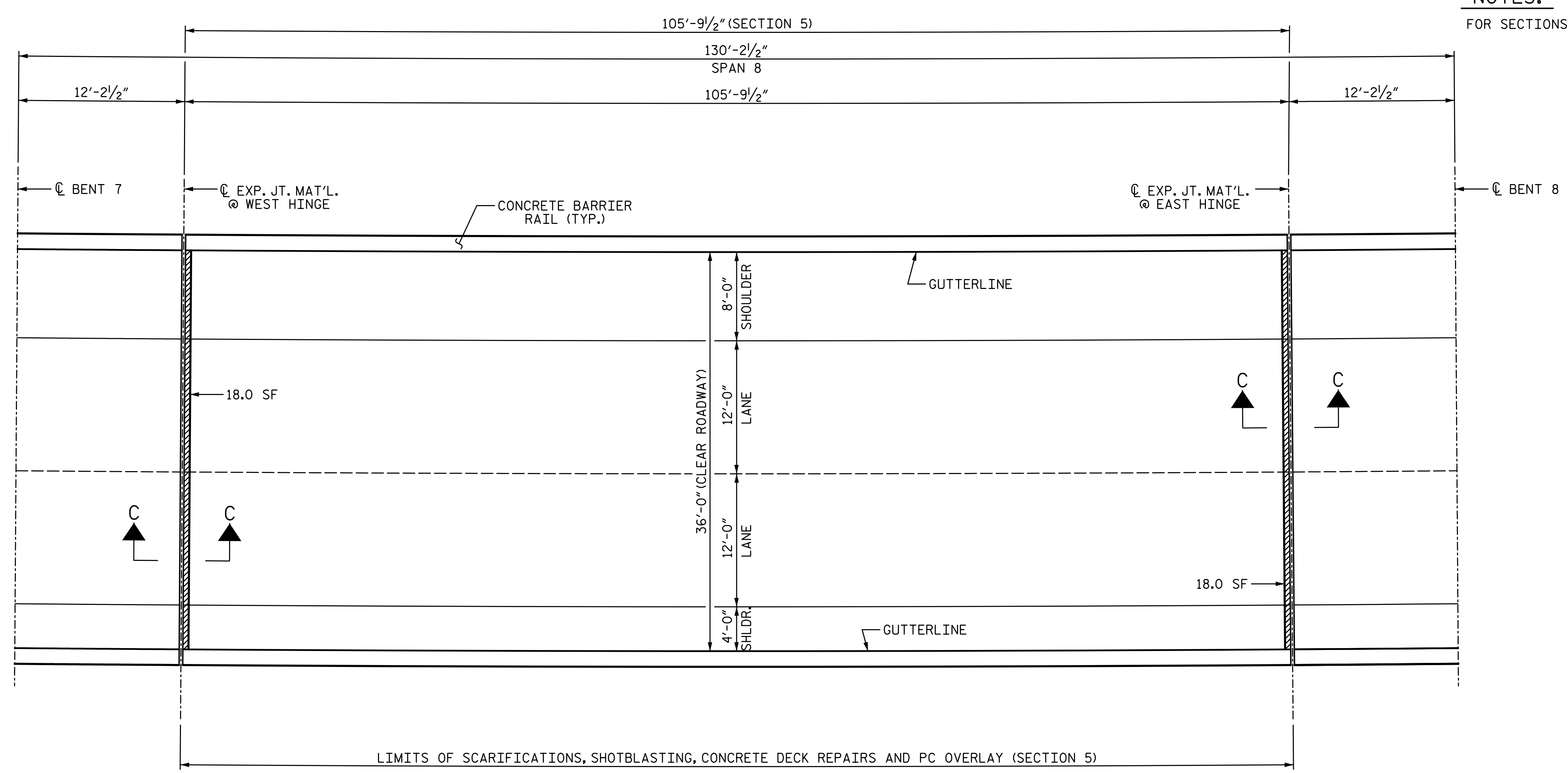
8/17/2021 12:11:40 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_S_640048.dgn

SECTION 5 QUANTITIES

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	423.2 SY	
CLASS II SURFACE PREPARATION	4.0 SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	4.0 SY	
SHOTBLASTING BRIDGE DECK	423.2 SY	
PC MATERIALS	11.8 CY	
PLACING AND FINISHING PC OVERLAY	423.2 SY	
GROOVING BRIDGE FLOORS	3474.6 SF	

- SCARIFICATION, SHOTBLASTING, AND POLYMER CONCRETE OVERLAY
- CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY

NOTES:
FOR SECTIONS C-C, SEE "JOINT REPAIR DETAILS" SHEET.



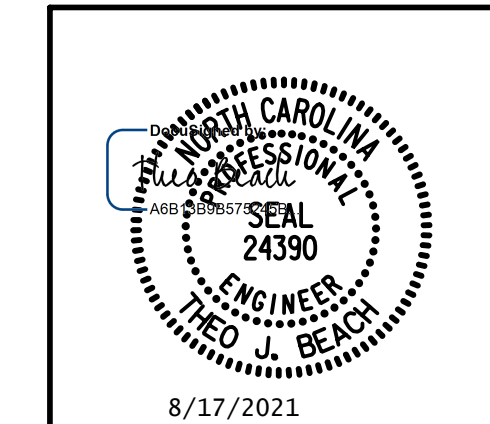
SPAN 8
PLAN OF SPAN

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 5 OF 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
**SURFACE PREPARATION
 (SPAN 8)**

PLANS PREPARED BY:
SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-10
1			3			TOTAL SHEETS
2			4			163

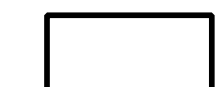

DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

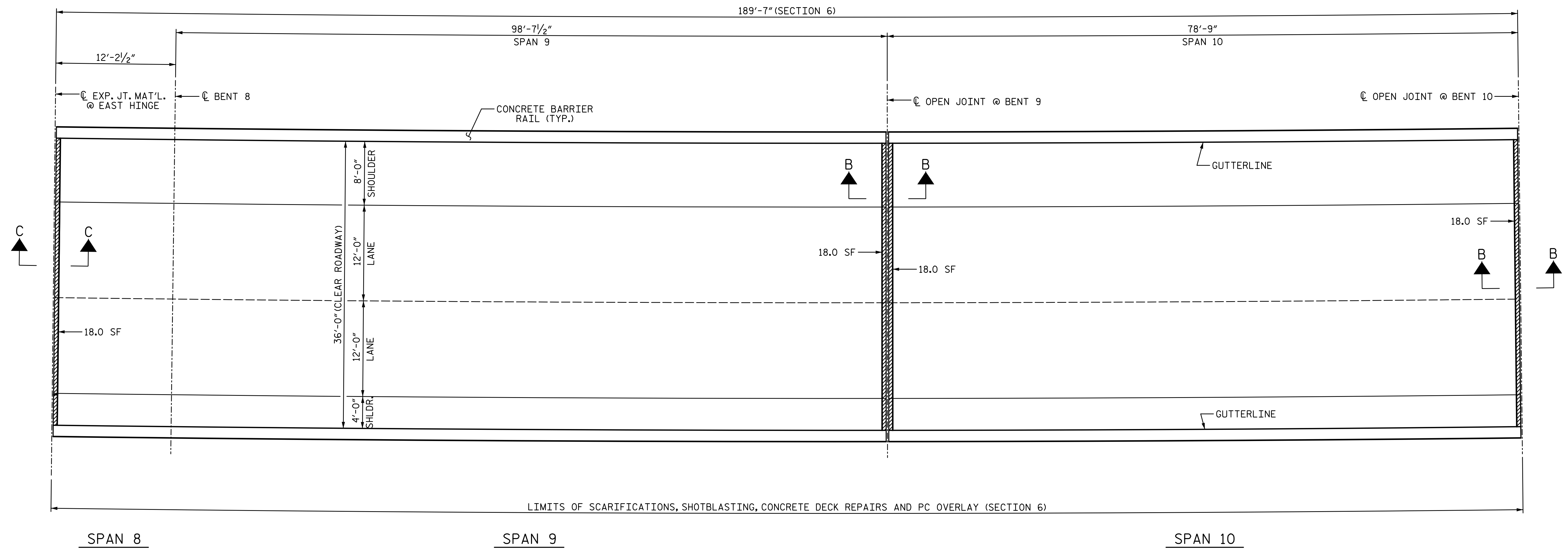
8/17/2021 12:11:41 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\SMU_S_640048.dgn

SECTION 6 QUANTITIES

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	758.3 SY	
CLASS II SURFACE PREPARATION	8.0 SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	8.0 SY	
SHOTBLASTING BRIDGE DECK	758.3 SY	
PC MATERIALS	20.1 CY	
PLACING AND FINISHING PC OVERLAY	758.3 SY	
GROOVING BRIDGE FLOORS	6223.3 SF	

-  SCARIFICATION, SHOTBLASTING, AND POLYMER CONCRETE OVERLAY
-  CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY

NOTES:
FOR SECTIONS B-B AND C-C, SEE "JOINT REPAIR DETAILS" SHEET.



LIMITS OF SCARIFICATIONS, SHOTBLASTING, CONCRETE DECK REPAIRS AND PC OVERLAY (SECTION 6)

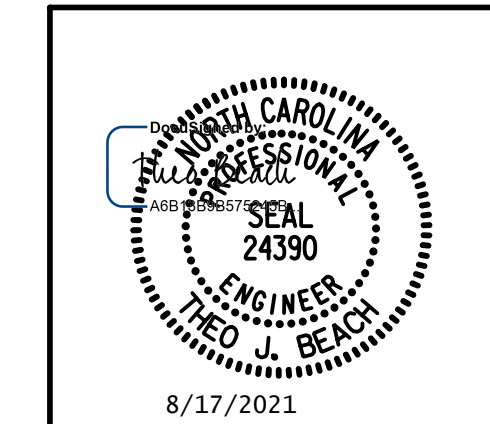
PLAN OF SPANS

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 6 OF 8

PLANS PREPARED BY:

SEA & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SURFACE PREPARATION
 (SPANS 8, 9 AND 10)

DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-11
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

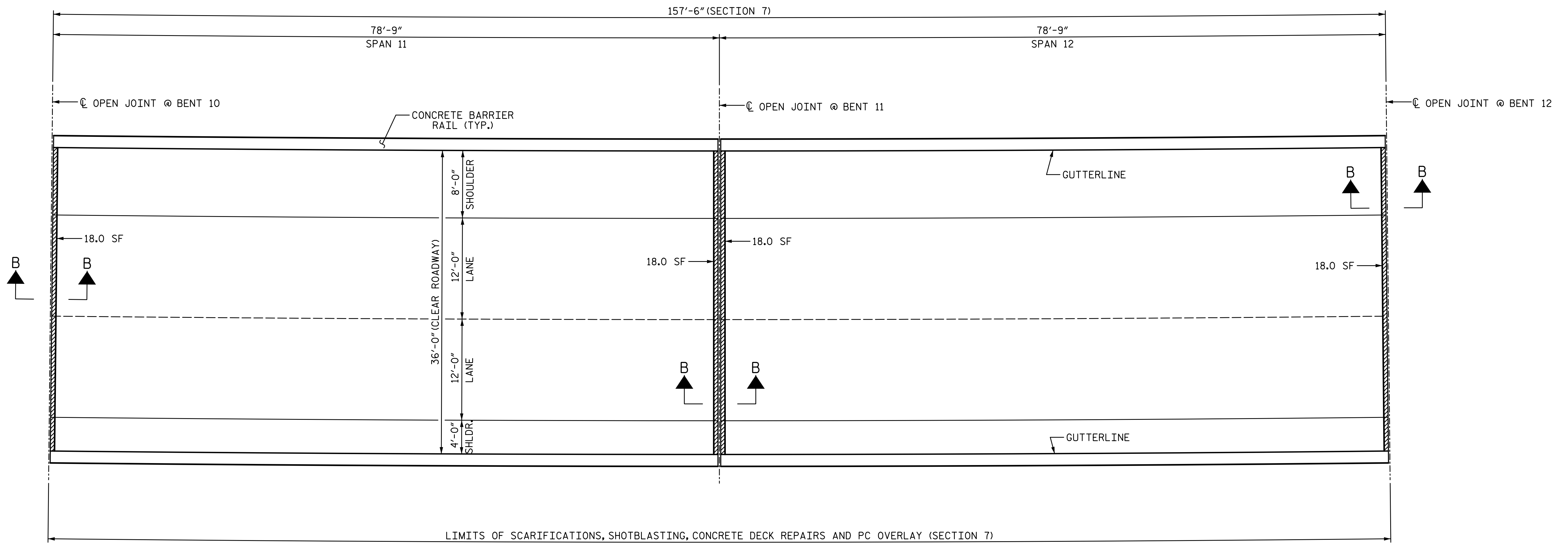
8/17/2021 12:11:41 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_S_640048.dgn

SECTION 7 QUANTITIES

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	630.0 SY	
CLASS II SURFACE PREPARATION	8.0 SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	8.0 SY	
SHOTBLASTING BRIDGE DECK	630.0 SY	
PC MATERIALS	17.5 CY	
PLACING AND FINISHING PC OVERLAY	630.0 SY	
GROOVING BRIDGE FLOORS	5164.5 SF	

- SCARIFYING, SHOTBLASTING, AND POLYMER CONCRETE OVERLAY
- CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY

NOTES:
FOR SECTIONS B-B, SEE "JOINT REPAIR DETAILS" SHEET.



SPAN 11

SPAN 12

PLAN OF SPANS

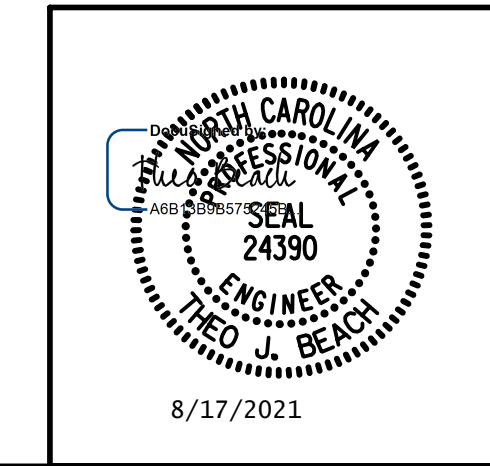
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 7 OF 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SURFACE PREPARATION
 (SPANS 11 AND 12)

PLANS PREPARED BY:

SEA & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521



DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-12
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

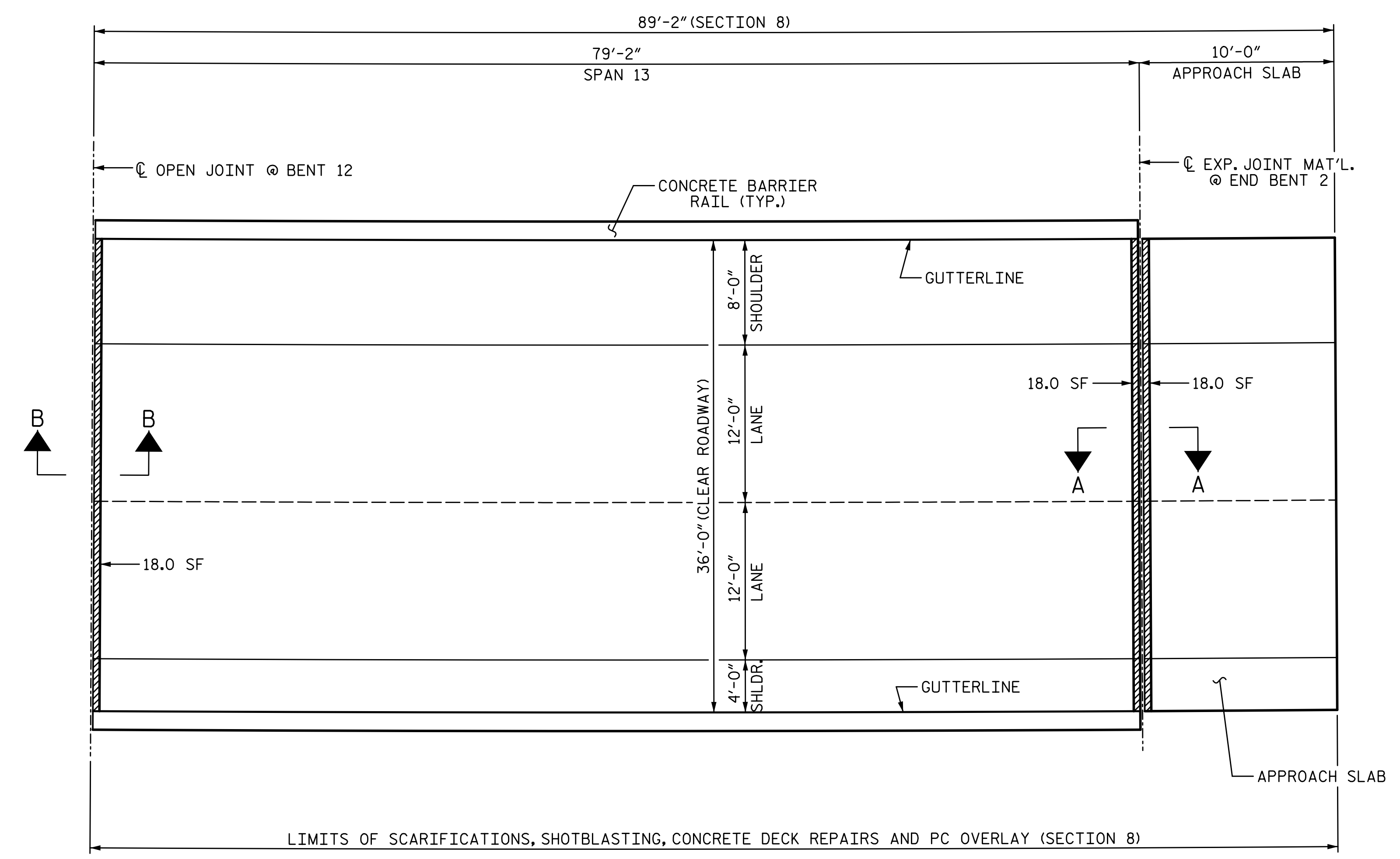
8/17/2021 12:11:41 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_S_640048.dgn

SECTION 8 QUANTITIES

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	356.7 SY	
CLASS II SURFACE PREPARATION	6.0 SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	6.0 SY	
SHOTBLASTING BRIDGE DECK	356.7 SY	
PC MATERIALS	9.9 CY	
PLACING AND FINISHING PC OVERLAY	356.7 SY	
GROOVING BRIDGE FLOORS	2917.8 SF	

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

- SCARIFICATION, SHOTBLASTING, AND POLYMER CONCRETE OVERLAY
- CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY

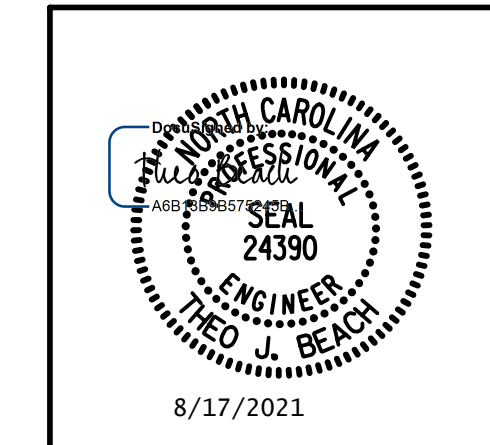


SPAN 13
PLAN OF SPAN

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048
 SHEET 8 OF 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
**SURFACE PREPARATION
 (SPAN 13)**

PLANS PREPARED BY:
SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

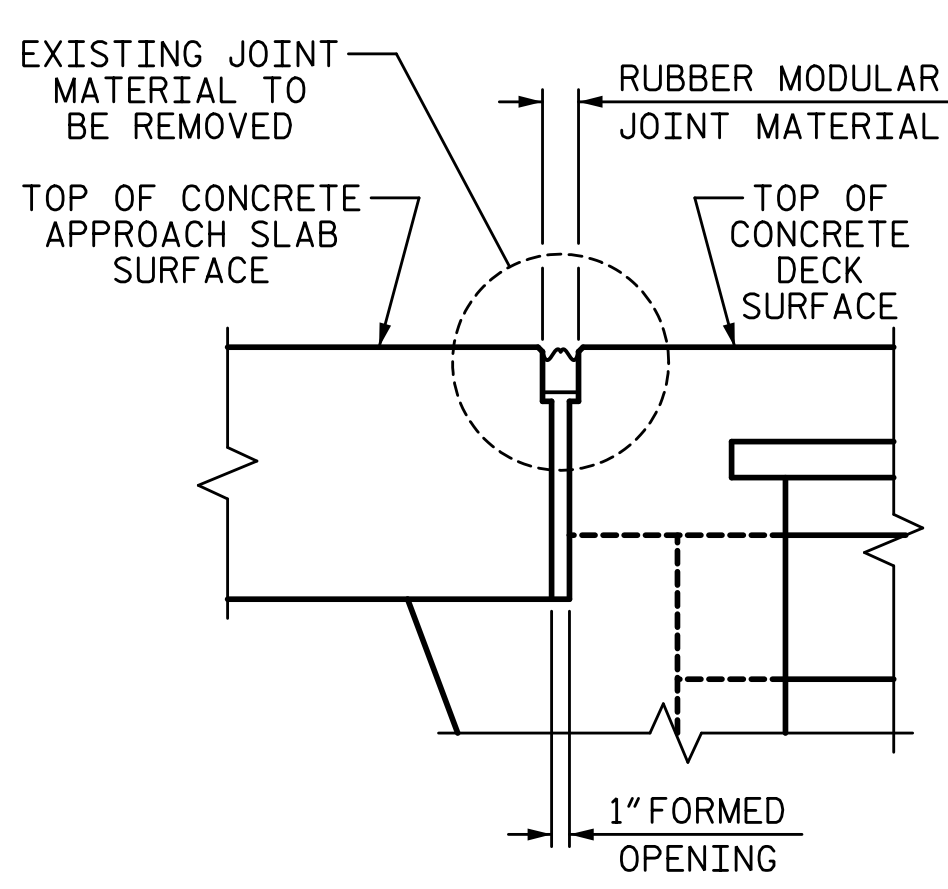


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-13
1			3			TOTAL SHEETS
2			4			163

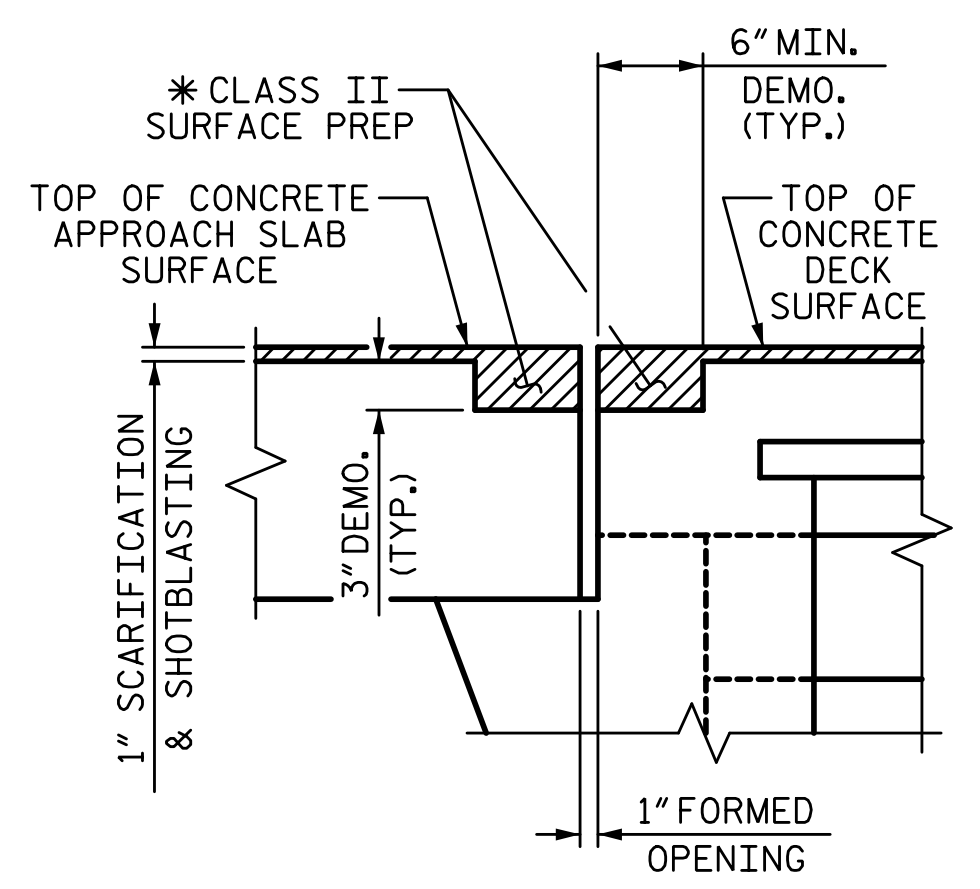
DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

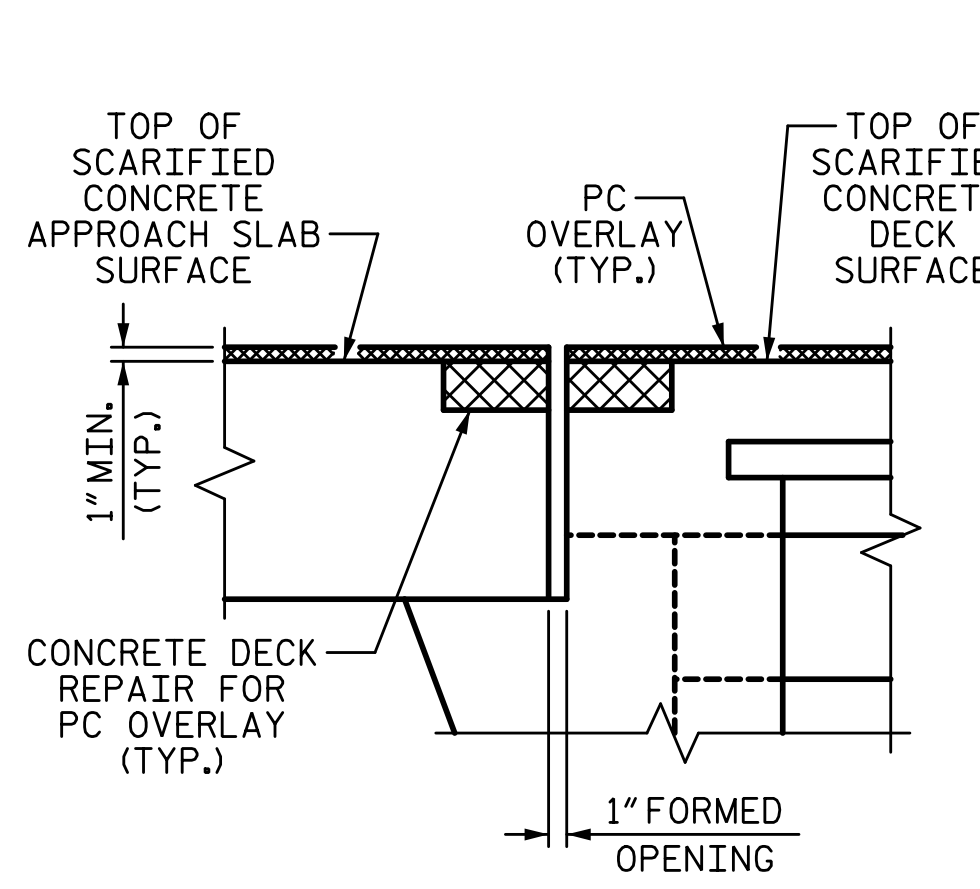
8/17/2021 12:11:42 PM G:\Projects\2018\15BPR26 New Hanover_Preservation_Structures\Drawings\Final\Drawings\48 (Westbound Lane)\15BPR26_SMU_JTR_640048.dgn



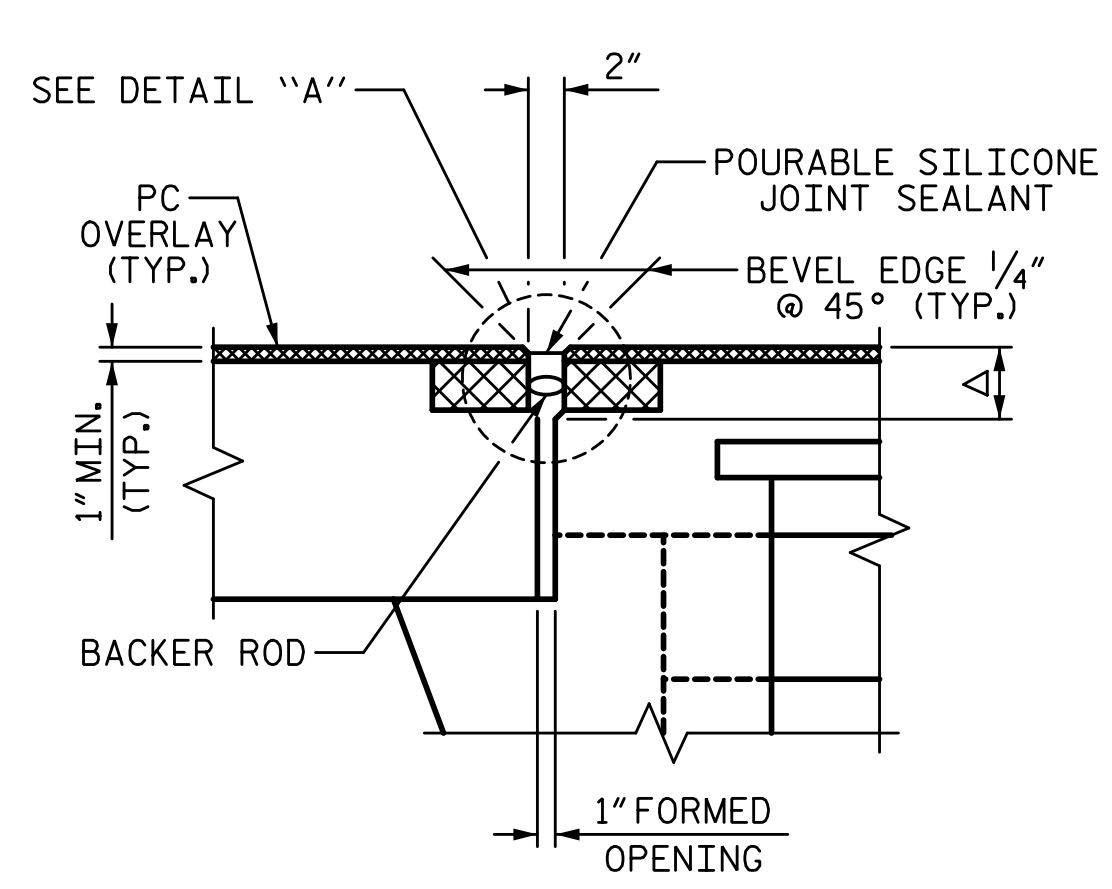
EXISTING



MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATION



PROPOSED JOINT PRE-SAWED & PPC OVERLAY

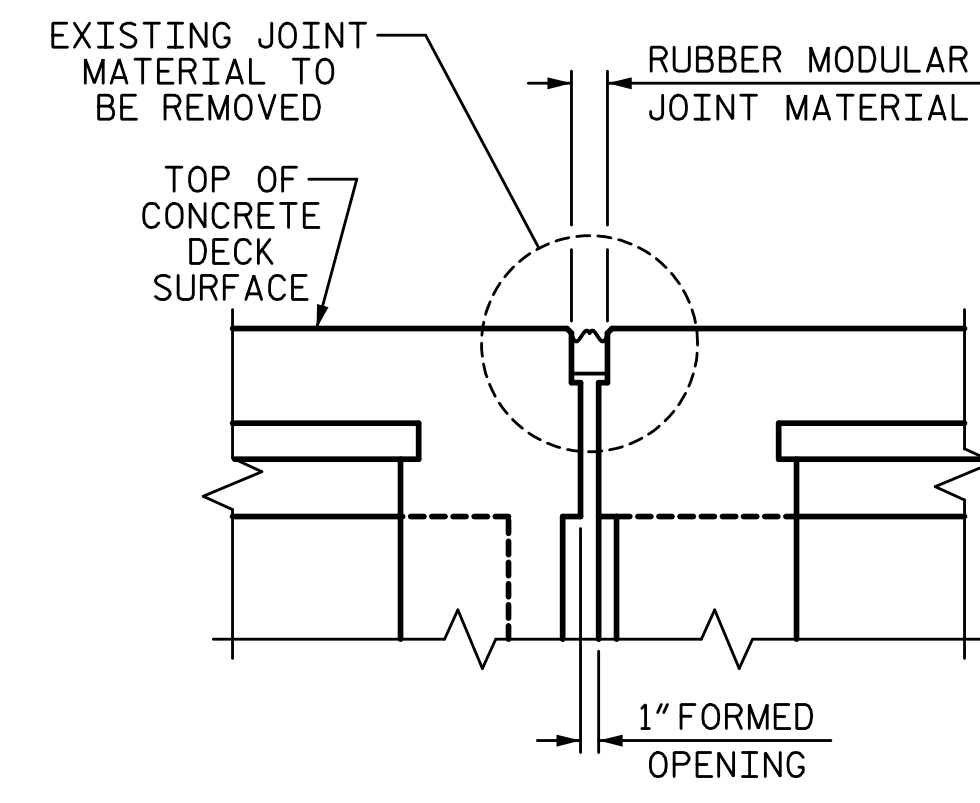


PROPOSED JOINT WITH SAWED DIMENSIONS

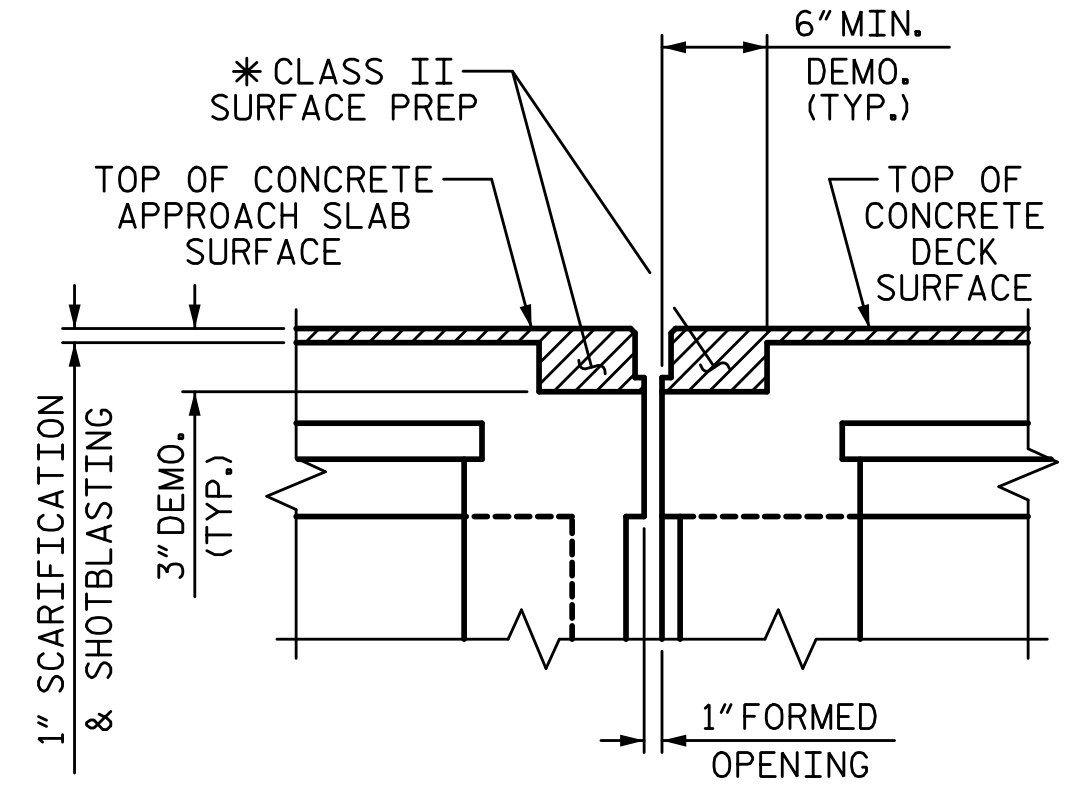
Δ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL

JOINT INSTALLATION SEQUENCE AT END BENTS

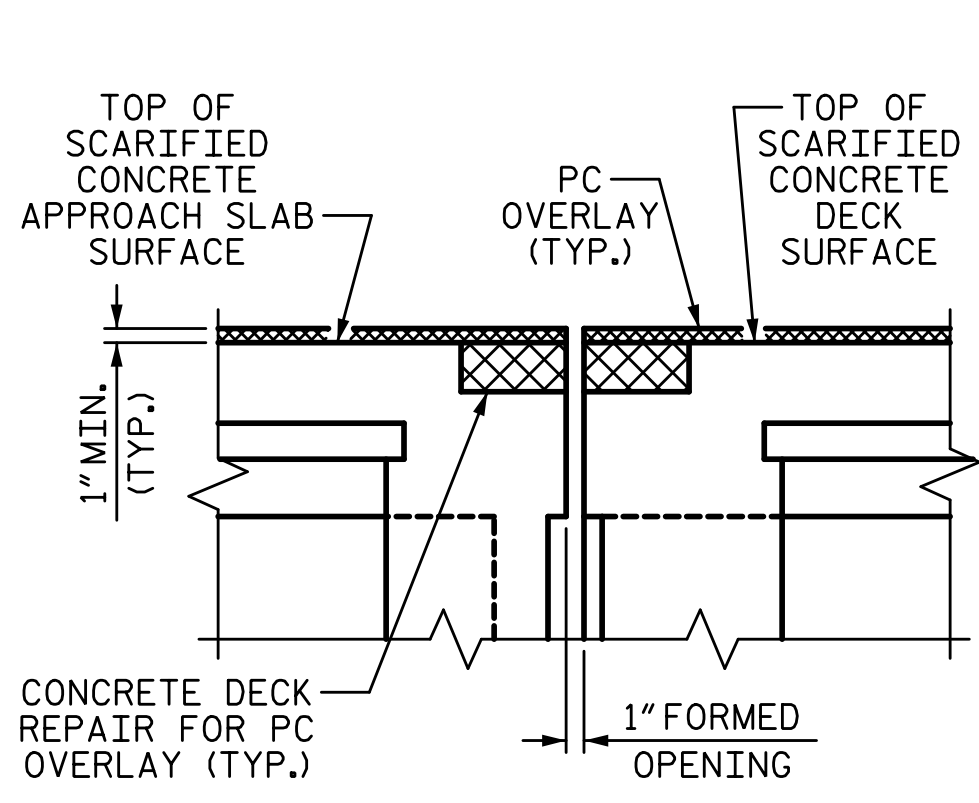
SECTION A-A (END BENT 1 SHOWN, END BENT 2 SIMILAR)



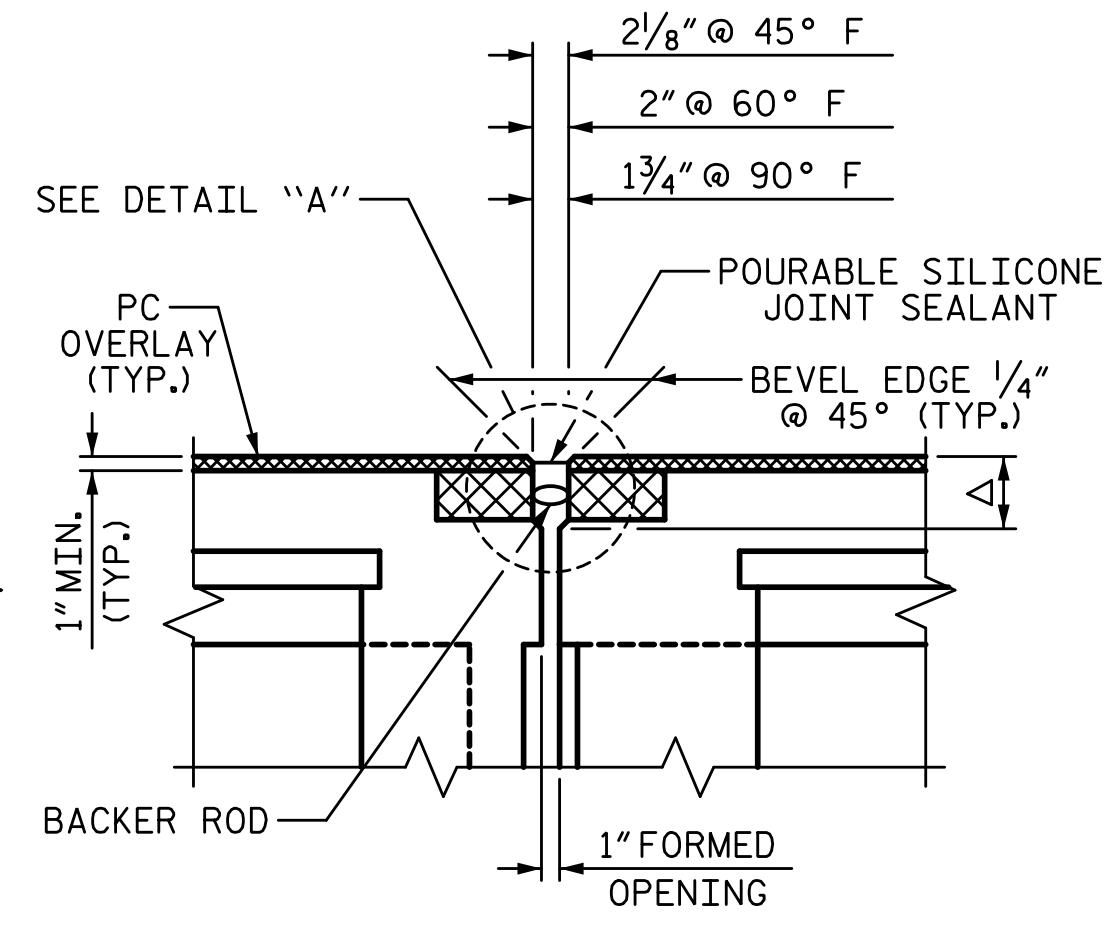
EXISTING



MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATION



PROPOSED JOINT PRE-SAWED & PPC OVERLAY

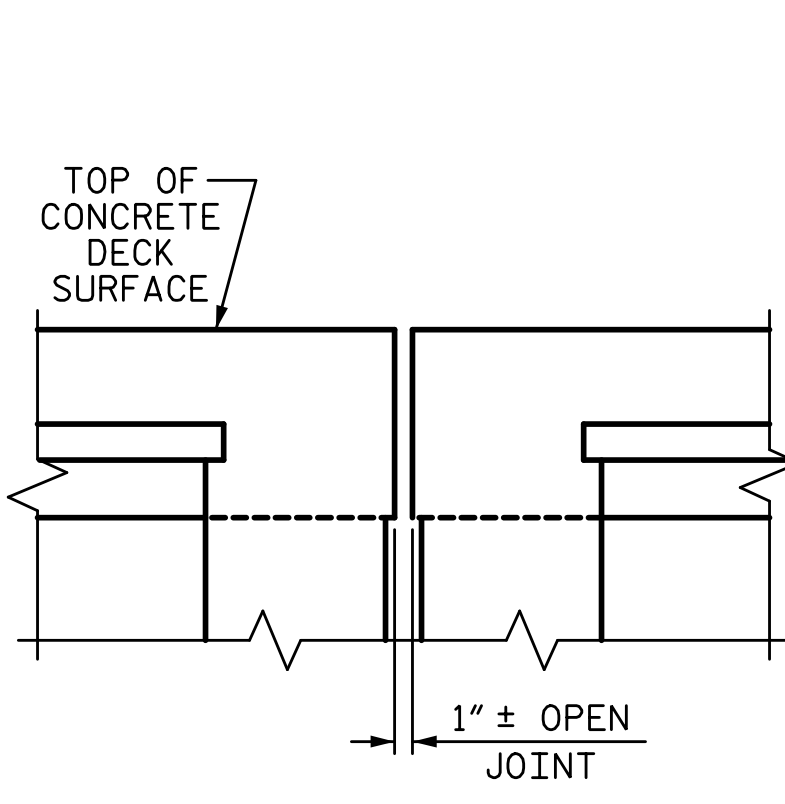


PROPOSED JOINT WITH SAWED DIMENSIONS

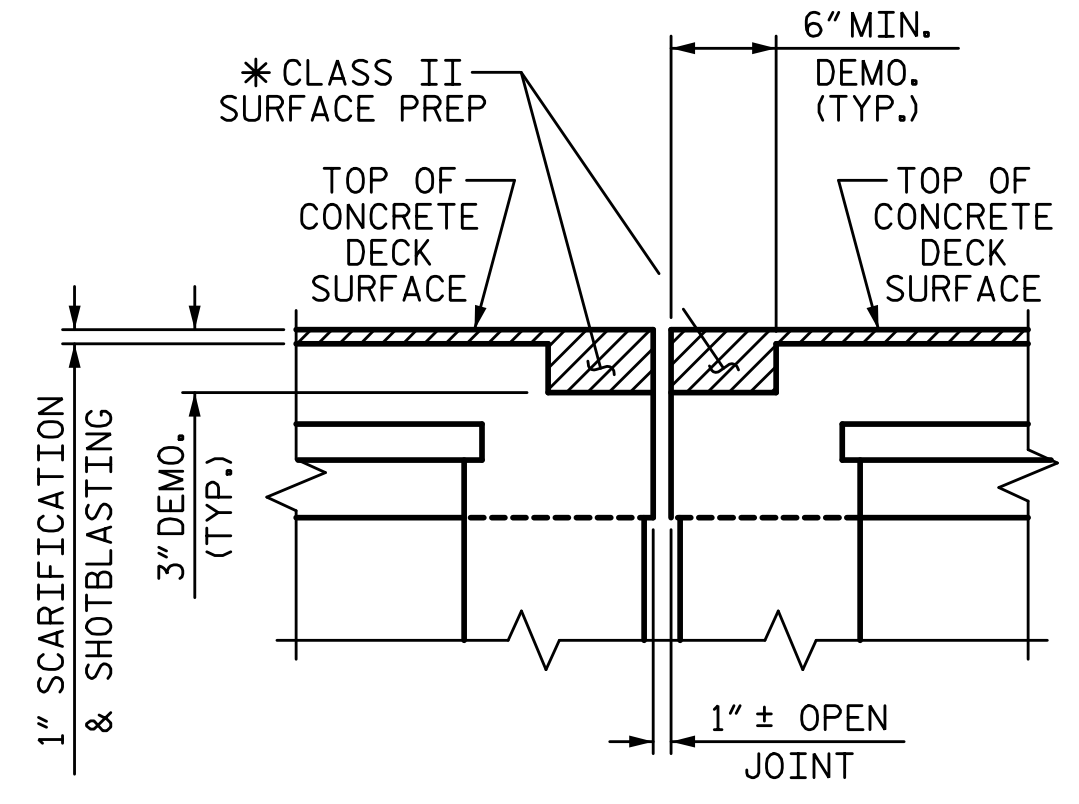
Δ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL

JOINT INSTALLATION SEQUENCE AT BENTS

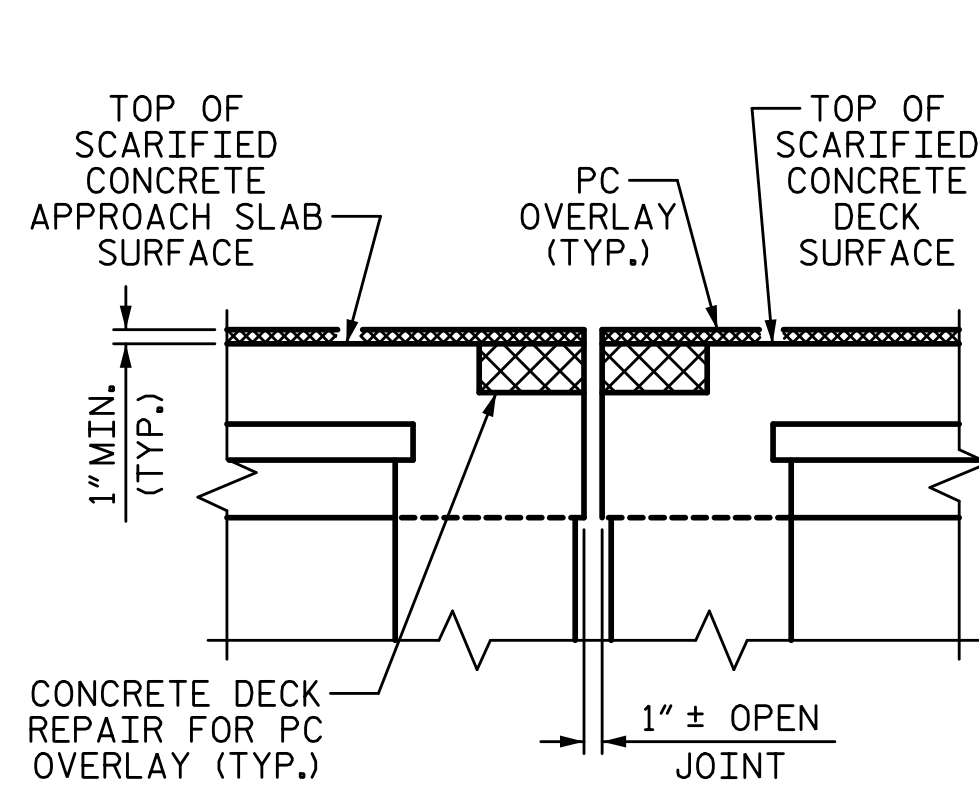
SECTION C-C (WEST HINGE SHOWN, EAST HINGE SIMILAR)



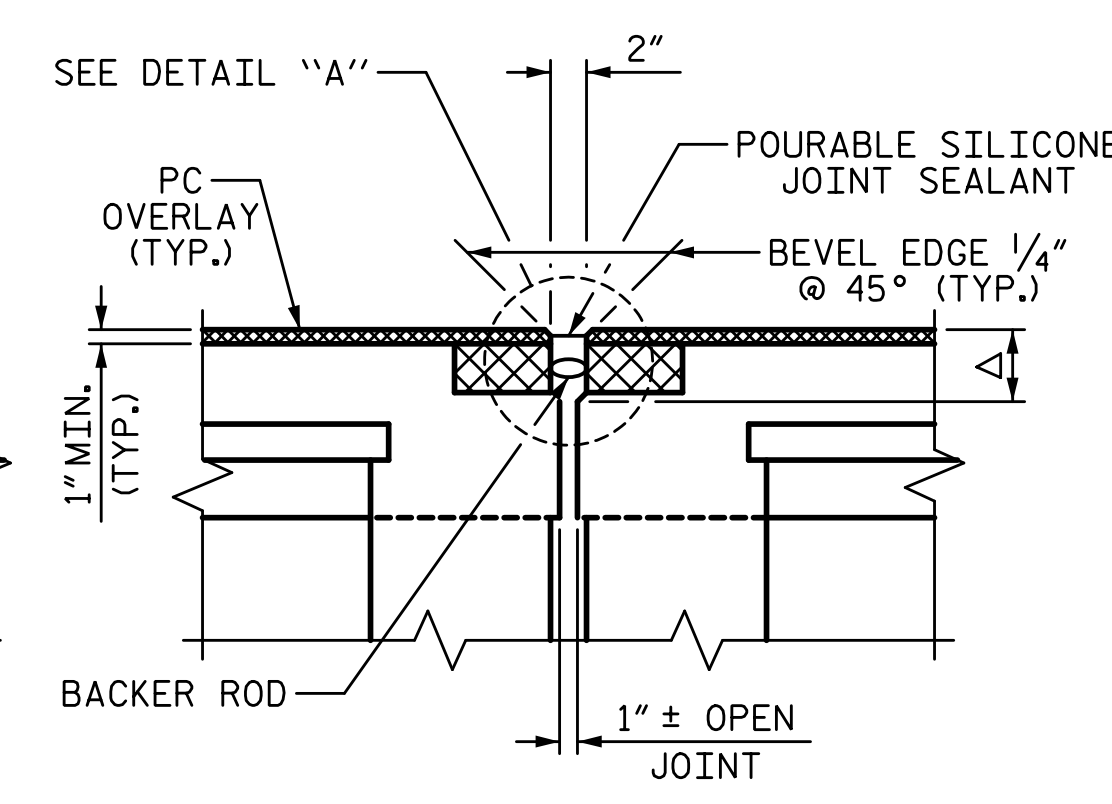
EXISTING



MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATION



PROPOSED JOINT PRE-SAWED & PPC OVERLAY

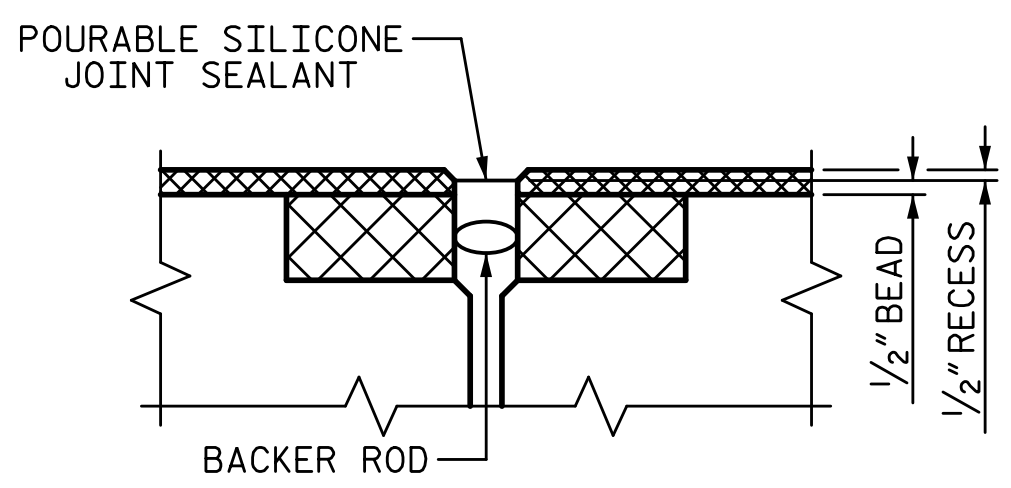


PROPOSED JOINT WITH SAWED DIMENSIONS

Δ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B (OPEN JOINTS)



DETAIL "A"

NOTES:

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

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

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.

DURING THE JOINT INSTALLATION PROCEDURE, THE JOINT AND SURROUNDING AREA SHALL BE KEPT CLEAN AND FREE OF DEBRIS.

FOR POURABLE SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE BACKER ROD FOR THE EXISTING JOINT SIZE AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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

* FOR CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY QUANTITIES SEE SURFACE PREPARATION SHEETS 1 THROUGH 8.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

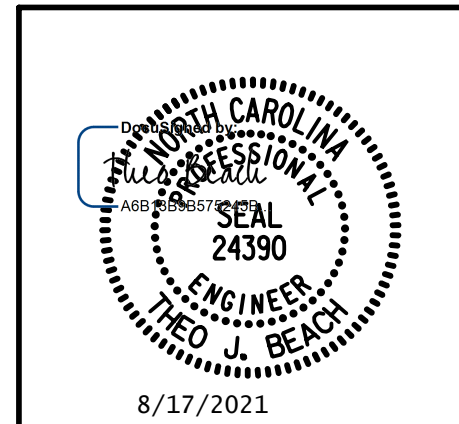
SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION

JOINT REPAIR DETAILS

PLANS PREPARED BY:

S&A SIMPSON ENGINEERS ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0538 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521



8/17/2021

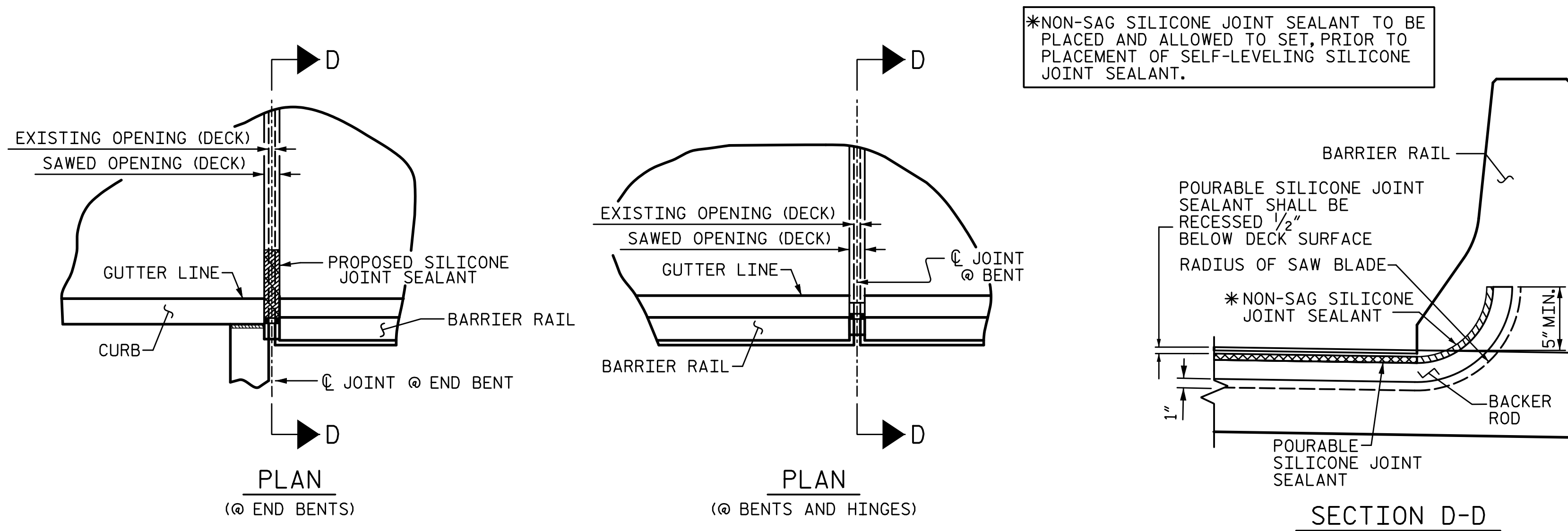
DRAWN BY: T. BANKOVICH DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-14
1			3			TOTAL SHEETS
2			4			163

9/28/2020 12:00:54 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_JTR_640048.dgn

JOINT REPAIR QUANTITY TABLE		
POURABLE SILICONE JOINT SEALANT	ESTIMATE	ACTUAL
	LF	LF
END BENT 1	37.0	
BENT 1	37.0	
BENT 2	37.0	
BENT 3	37.0	
BENT 4	37.0	
BENT 5	37.0	
BENT 6	37.0	
BENT 7	37.0	
BENT 8	37.0	
BENT 9	37.0	
BENT 10	37.0	
BENT 11	37.0	
BENT 12	37.0	
END BENT 2	37.0	



JOINT DETAIL AT BARRIER RAIL

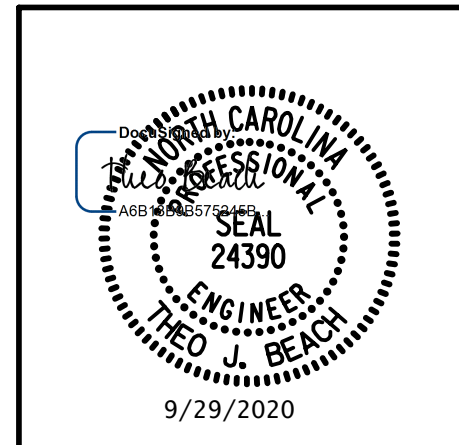
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

JOINT REPAIR DETAILS

PLANS PREPARED BY:
SE & A
 IMPSON ENGINEERS ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

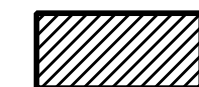


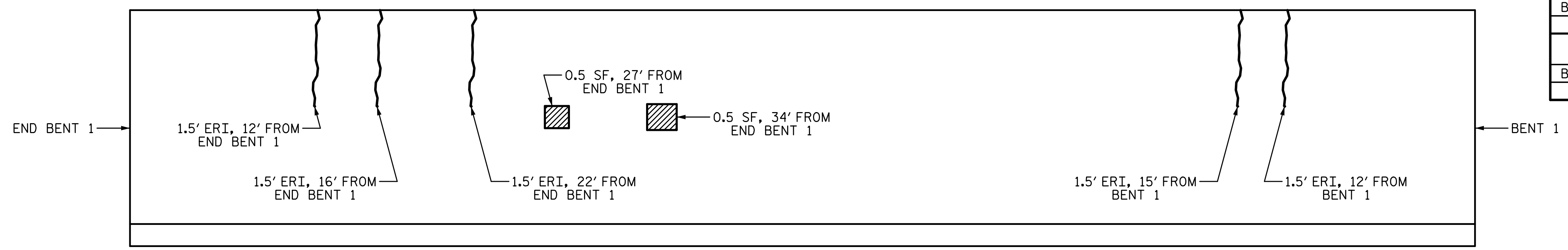
DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-15
1			3			TOTAL SHEETS
2			4			163

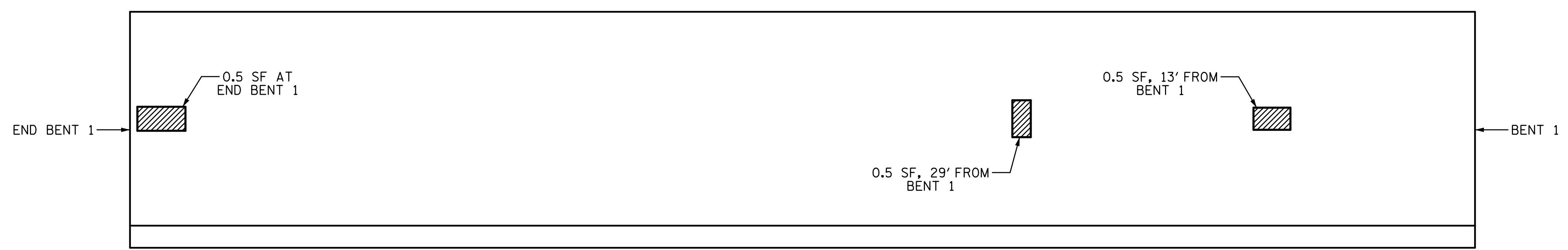
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

9/28/2020 12:00:55 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_BR_640048.dgn

 SHOTCRETE REPAIR
ERI — EPOXY RESIN INJECTION

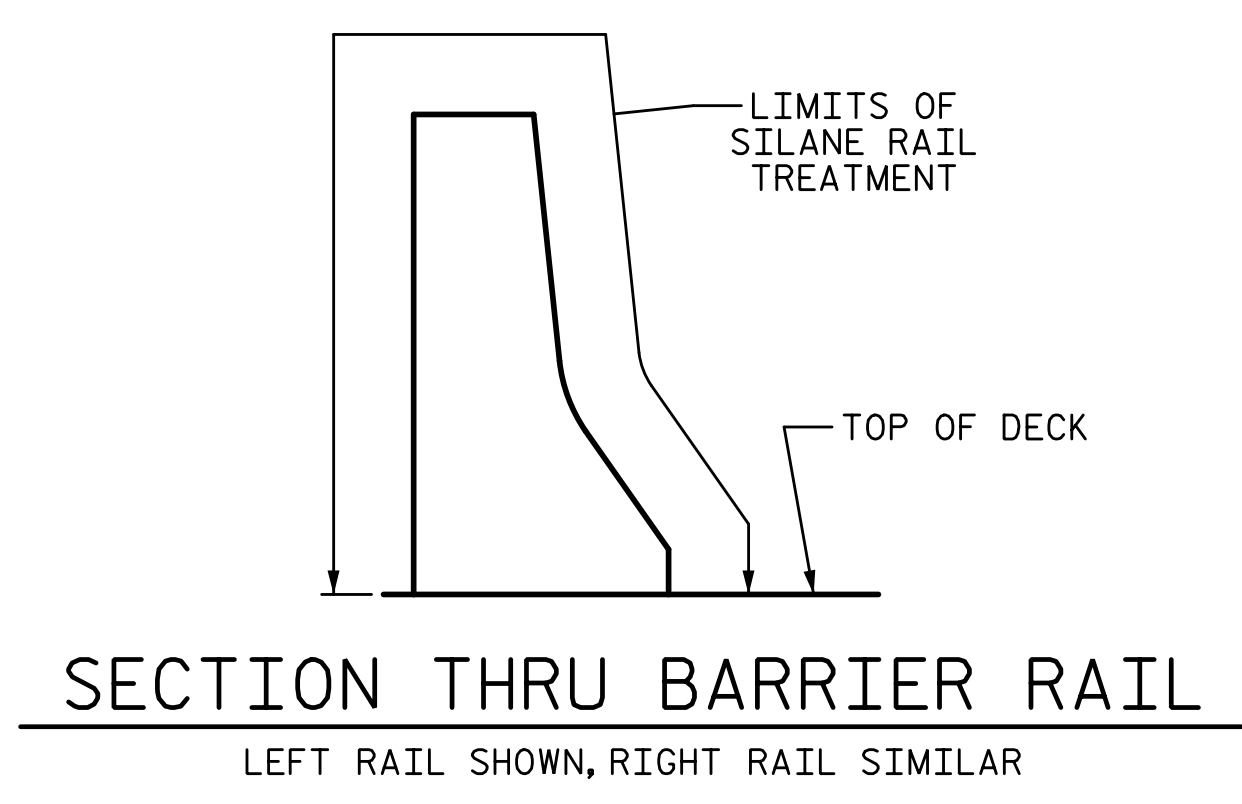


LEFT RAIL



RIGHT RAIL

SPAN 1



REPAIR QUANTITY TABLE

REPAIRS SPAN 1	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
BARRIER RAIL	2.5	0.3			
EPOXY RESIN INJECTION		LF			LF
BARRIER RAIL		7.5			
SURFACE PREPARATION		SF			SF
BARRIER RAIL		1063.4			
SILANE RAIL TREATMENT		SF			SF
BARRIER RAIL		1063.4			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.

AFTER ALL REPAIRS ARE MADE TO THE BARRIER RAILS, ADD SILANE RAIL TREATMENT TO THE LIMITS SHOWN ON THE PLANS.

FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 1 OF 13

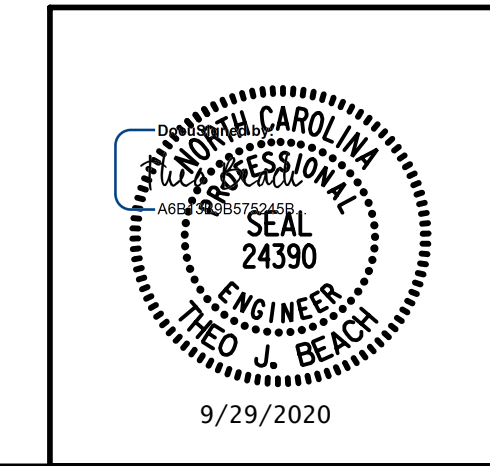
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 1
 BARRIER RAIL**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-16
1			3			TOTAL SHEETS
2			4			163

PLANS PREPARED BY:

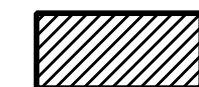
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

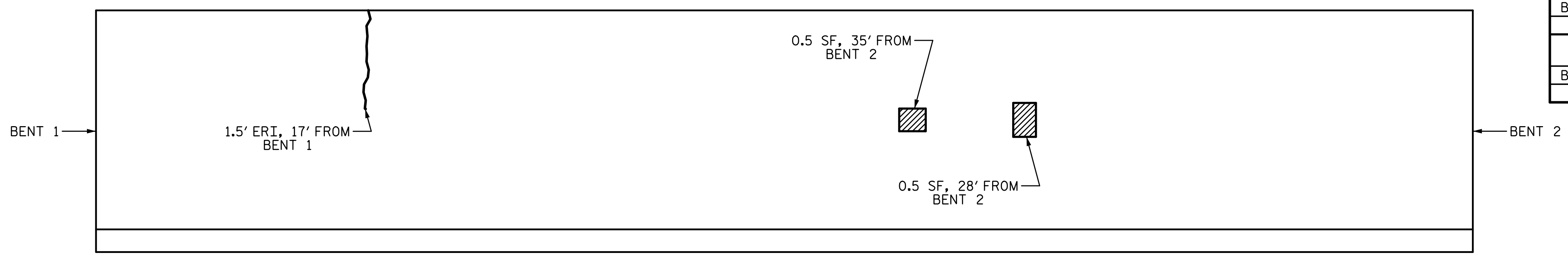


DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

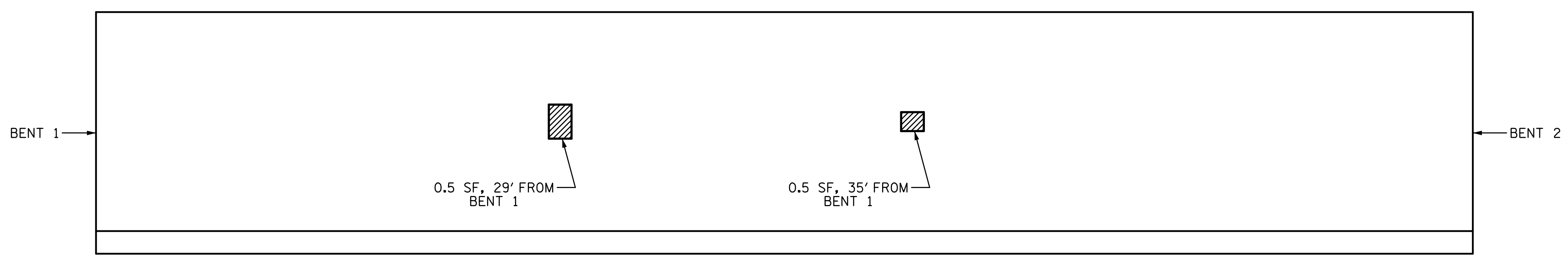
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:55 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_BR_640048.dgn

 SHOTCRETE REPAIR
ERI — EPOXY RESIN INJECTION

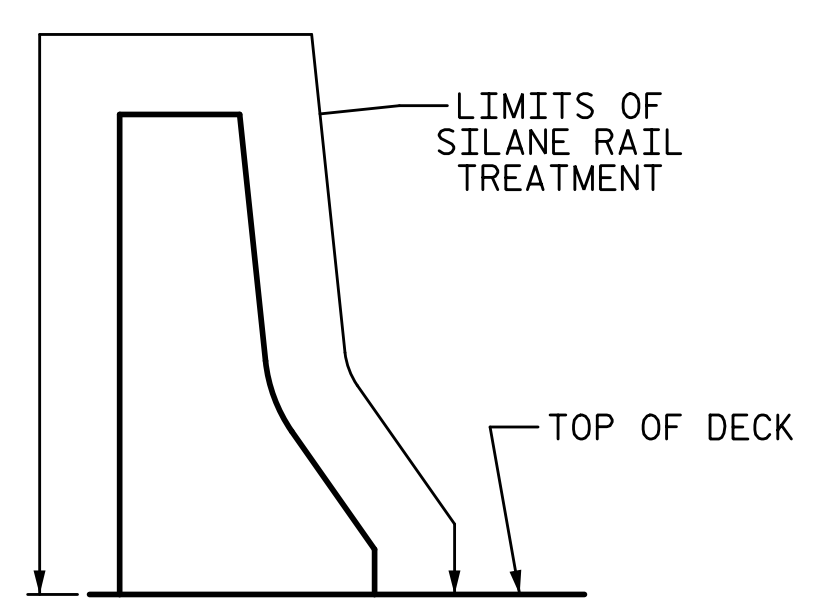


LEFT RAIL



RIGHT RAIL

SPAN 2



SECTION THRU BARRIER RAIL
LEFT RAIL SHOWN, RIGHT RAIL SIMILAR

REPAIR QUANTITY TABLE					
REPAIRS SPAN 2	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
BARRIER RAIL	2.0	0.3			
EPOXY RESIN INJECTION		LF			LF
BARRIER RAIL		1.5			
SURFACE PREPARATION		LF			SF
BARRIER RAIL		1058.2			
SILANE RAIL TREATMENT		LF			SF
BARRIER RAIL		1058.2			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.

AFTER ALL REPAIRS ARE MADE TO THE BARRIER RAILS, ADD SILANE RAIL TREATMENT TO THE LIMITS SHOWN ON THE PLANS.

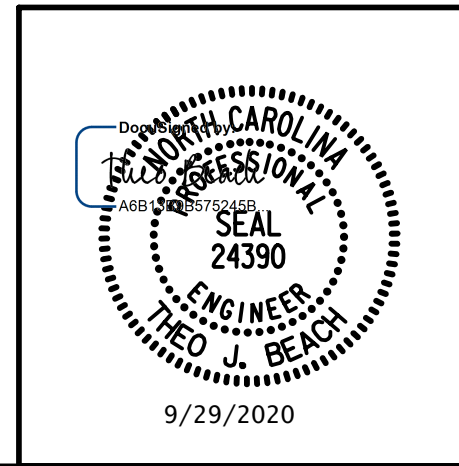
FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

SHEET 2 OF 13

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION

**SPAN 2
BARRIER RAIL**



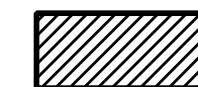
PLANS PREPARED BY:
SEA & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

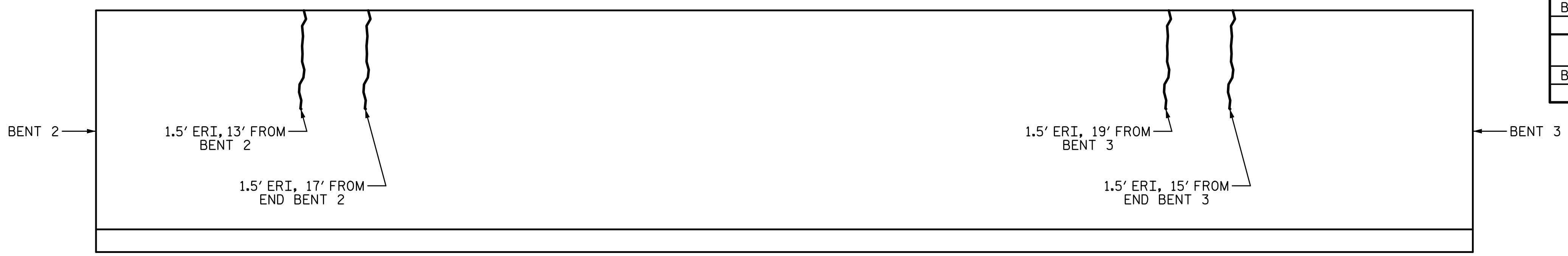
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-17
1			3			TOTAL SHEETS
2			4			163

DRAWN BY: T. BANKOVICH DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

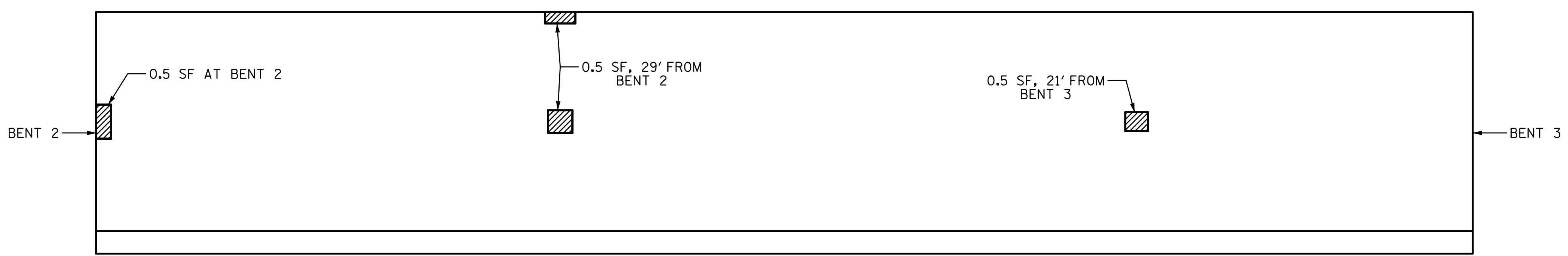
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:55 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_BR_640048.dgn

 SHOTCRETE REPAIR
ERI — EPOXY RESIN INJECTION

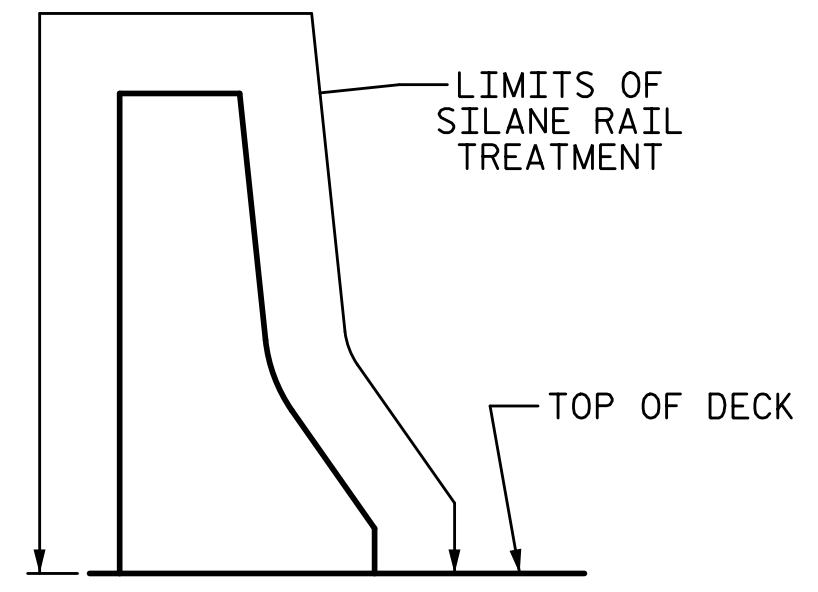


LEFT RAIL



RIGHT RAIL

SPAN 3



SECTION THRU BARRIER RAIL
LEFT RAIL SHOWN, RIGHT RAIL SIMILAR

REPAIR QUANTITY TABLE					
REPAIRS SPAN 3	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
BARRIER RAIL	2.0	0.3			
EPOXY RESIN INJECTION		LF			LF
BARRIER RAIL		6.0			
SURFACE PREPARATION		LF			SF
BARRIER RAIL		1058.2			
SILANE RAIL TREATMENT		LF			SF
BARRIER RAIL		1058.2			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.

AFTER ALL REPAIRS ARE MADE TO THE BARRIER RAILS, ADD SILANE RAIL TREATMENT TO THE LIMITS SHOWN ON THE PLANS.

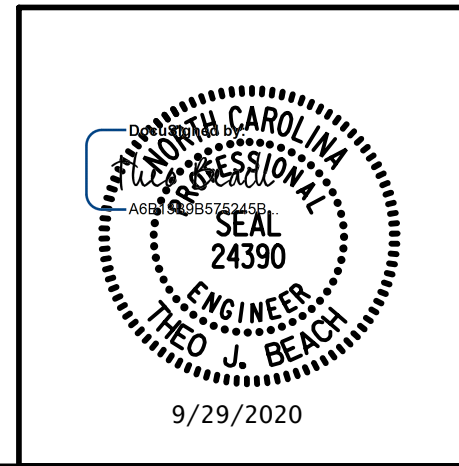
FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

SHEET 3 OF 13

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION

**SPAN 3
BARRIER RAIL**



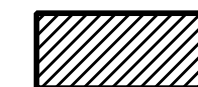
PLANS PREPARED BY:
SE & A
SIMPSON ENGINEERS & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

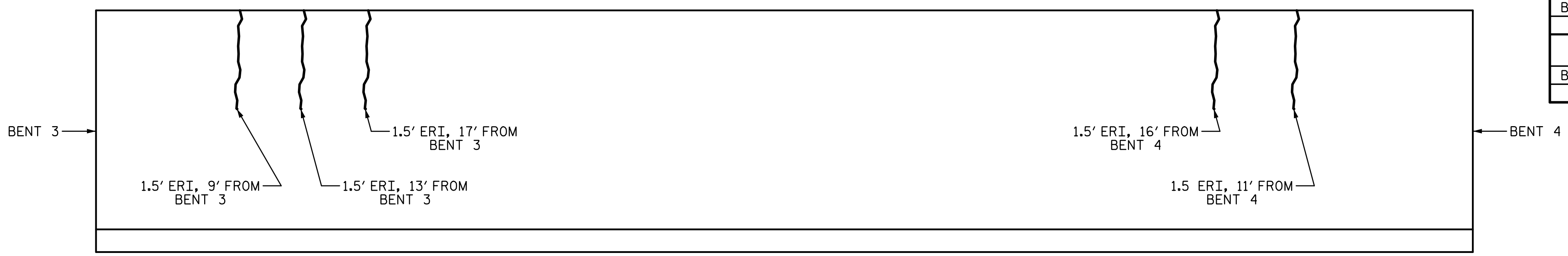
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-18
1			3			TOTAL SHEETS
2			4			163

DRAWN BY: T. BANKOVICH DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

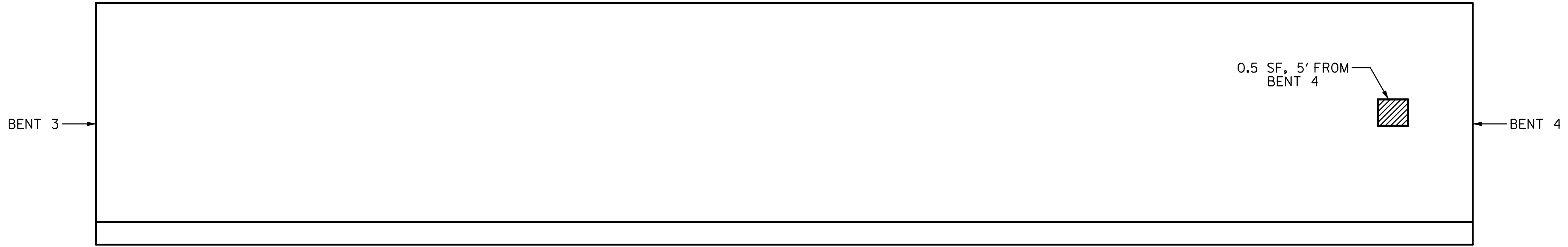
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:55 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_BR_640048.dgn

 SHOTCRETE REPAIR
ERI — EPOXY RESIN INJECTION

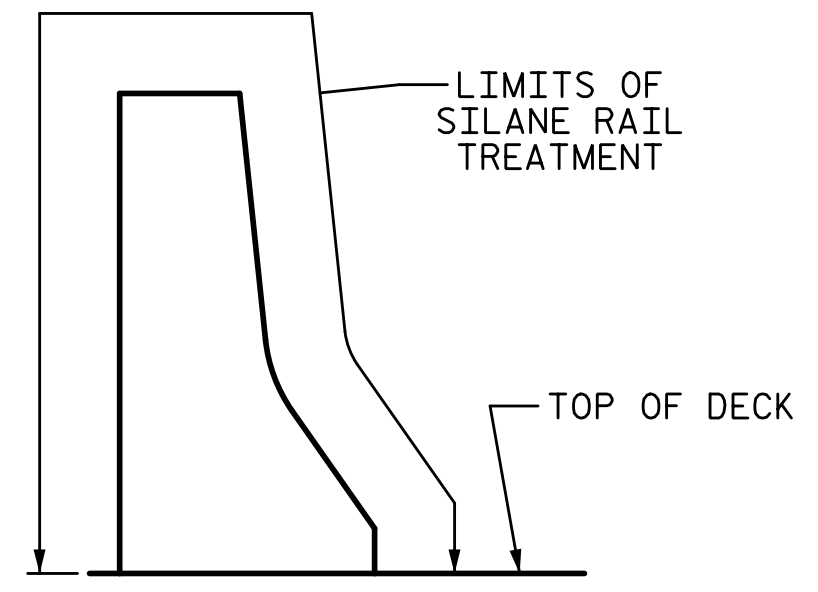


LEFT RAIL



RIGHT RAIL

SPAN 4



SECTION THRU BARRIER RAIL
LEFT RAIL SHOWN, RIGHT RAIL SIMILAR

REPAIR QUANTITY TABLE					
REPAIRS SPAN 4	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
BARRIER RAIL	0.5	0.1			
EPOXY RESIN INJECTION		LF			LF
BARRIER RAIL		7.5			
SURFACE PREPARATION		SF			SF
BARRIER RAIL		1058.2			
SILANE RAIL TREATMENT		SF			SF
BARRIER RAIL		1058.2			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.

AFTER ALL REPAIRS ARE MADE TO THE BARRIER RAILS, ADD SILANE RAIL TREATMENT TO THE LIMITS SHOWN ON THE PLANS.

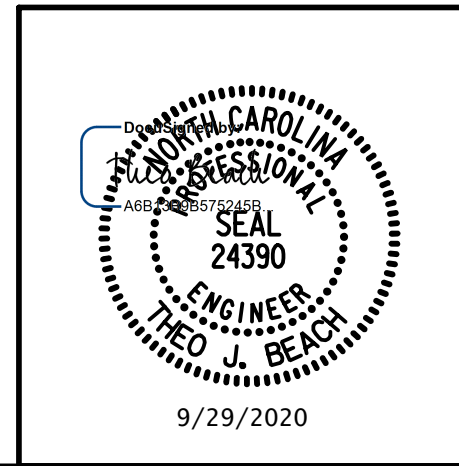
FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

SHEET 4 OF 13

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION

**SPAN 4
BARRIER RAIL**



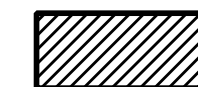
PLANS PREPARED BY:
SEA & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

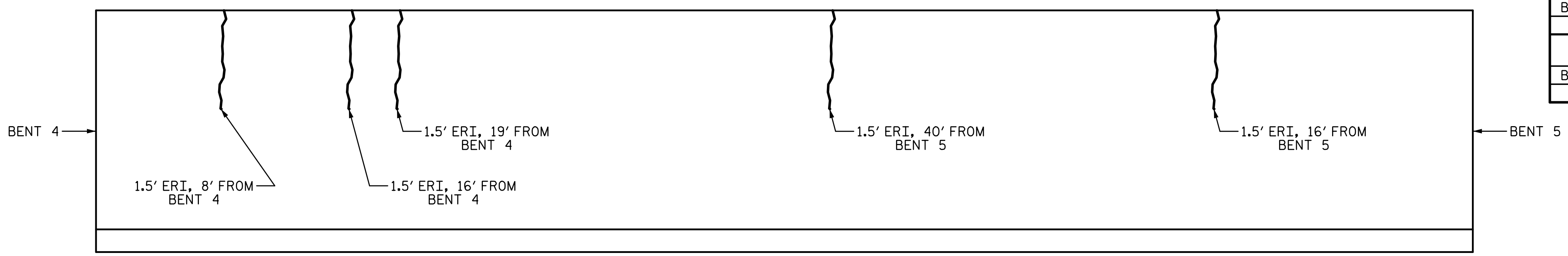
DRAWN BY: T. BANKOVICH DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-19
1			3			TOTAL SHEETS
2			4			163

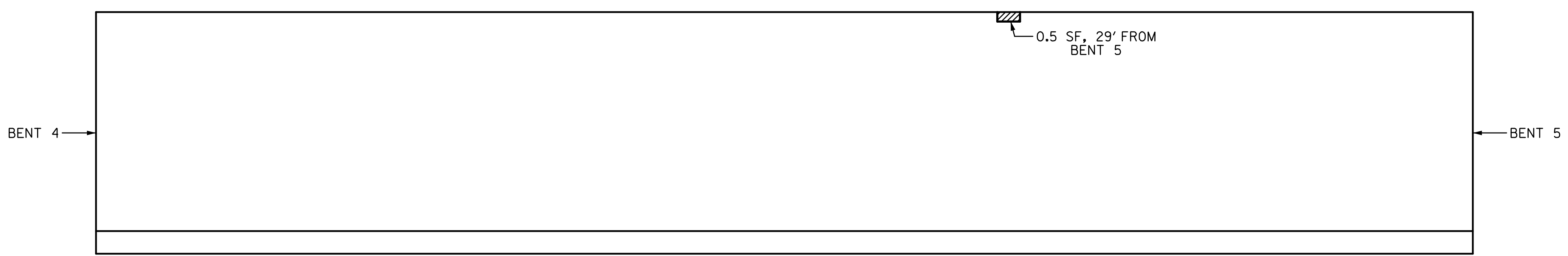
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:56 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_BR_640048.dgn

 SHOTCRETE REPAIR
 ERI — EPOXY RESIN INJECTION

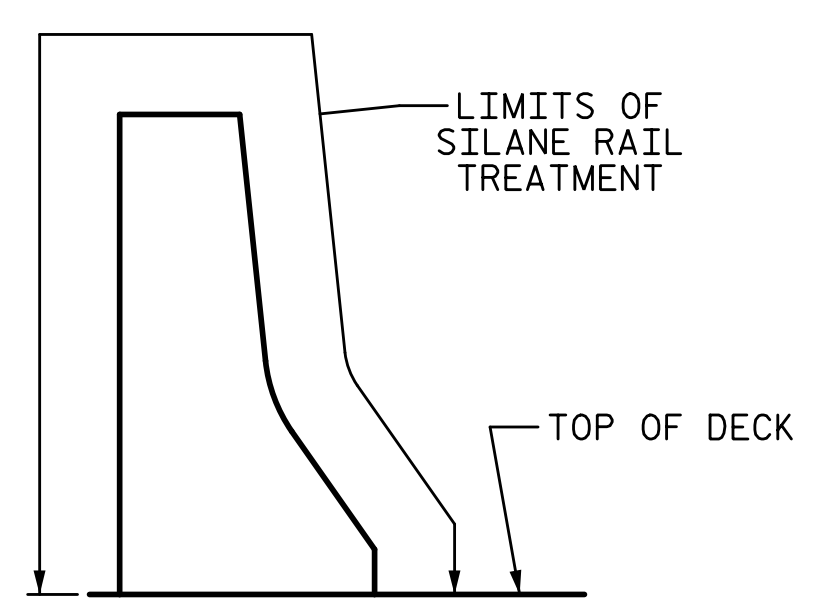


LEFT RAIL



RIGHT RAIL

SPAN 5



SECTION THRU BARRIER RAIL
 LEFT RAIL SHOWN, RIGHT RAIL SIMILAR

REPAIR QUANTITY TABLE					
REPAIRS SPAN 5	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
BARRIER RAIL	0.5	0.1			
EPOXY RESIN INJECTION		LF			LF
BARRIER RAIL		7.5			
SURFACE PREPARATION		SF			SF
BARRIER RAIL		1064.4			
SILANE RAIL TREATMENT		SF			SF
BARRIER RAIL		1064.4			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.

AFTER ALL REPAIRS ARE MADE TO THE BARRIER RAILS, ADD SILANE RAIL TREATMENT TO THE LIMITS SHOWN ON THE PLANS.

FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 5 OF 13

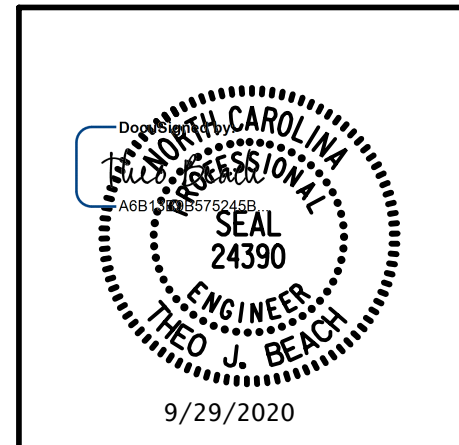
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 5
 BARRIER RAIL**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-20
1			3			TOTAL SHEETS
2			4			163

PLANS PREPARED BY:

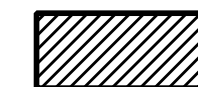
SEA & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

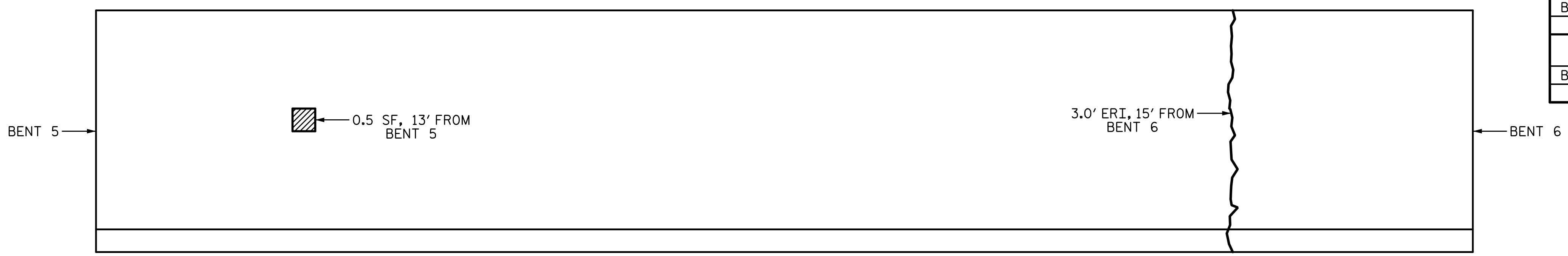


DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

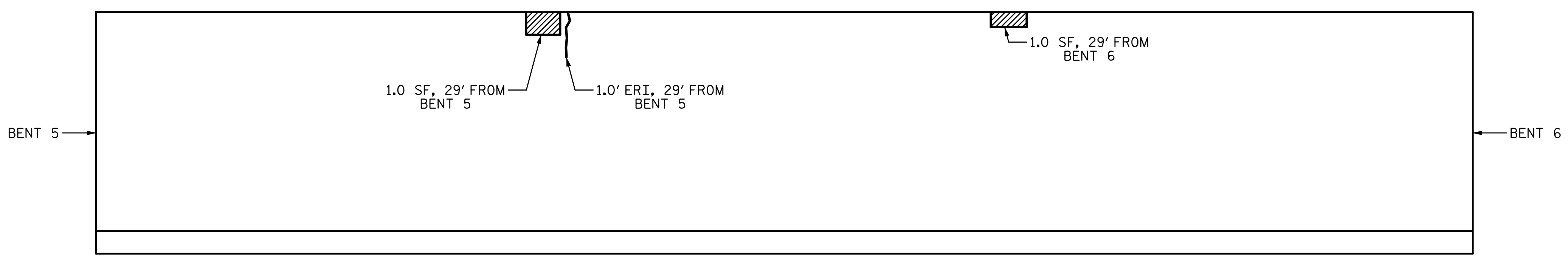
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:56 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_BR_640048.dgn

 SHOTCRETE REPAIR
ERI — EPOXY RESIN INJECTION

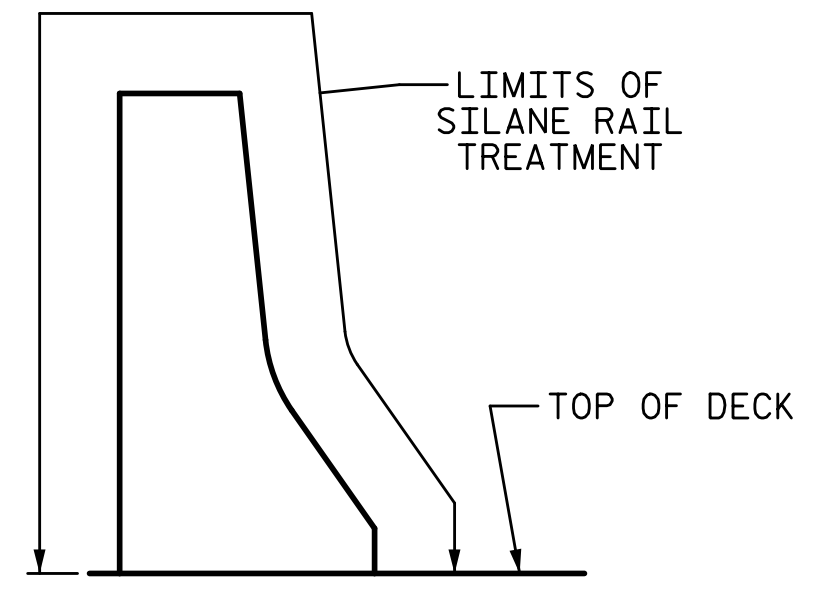


LEFT RAIL



RIGHT RAIL

SPAN 6



SECTION THRU BARRIER RAIL
LEFT RAIL SHOWN, RIGHT RAIL SIMILAR

REPAIR QUANTITY TABLE					
REPAIRS SPAN 6	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
BARRIER RAIL	2.5	0.8			
EPOXY RESIN INJECTION		LF			LF
BARRIER RAIL		4.0			
SURFACE PREPARATION		SF			SF
BARRIER RAIL		1052.0			
SILANE RAIL TREATMENT		SF			SF
BARRIER RAIL		1052.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.

AFTER ALL REPAIRS ARE MADE TO THE BARRIER RAILS, ADD SILANE RAIL TREATMENT TO THE LIMITS SHOWN ON THE PLANS.

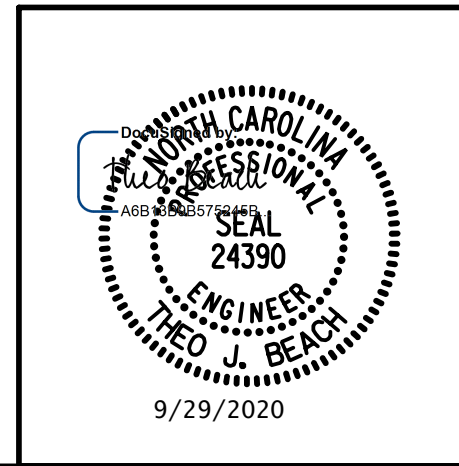
FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

SHEET 6 OF 13

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION

**SPAN 6
BARRIER RAIL**



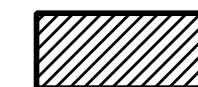
PLANS PREPARED BY:
SE & A
SIMPSON ENGINEERS & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

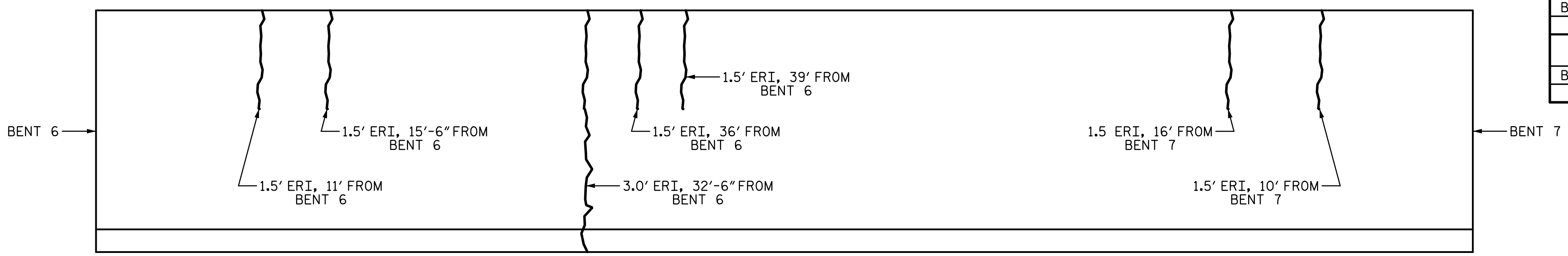
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-21
1			3			TOTAL SHEETS
2			4			163

DRAWN BY: T. BANKOVICH DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

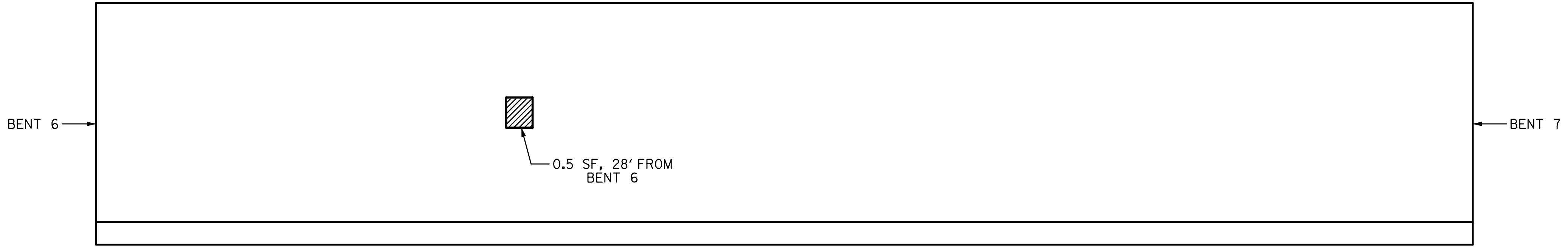
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:56 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_BR_640048.dgn

 SHOTCRETE REPAIR
ERI — EPOXY RESIN INJECTION

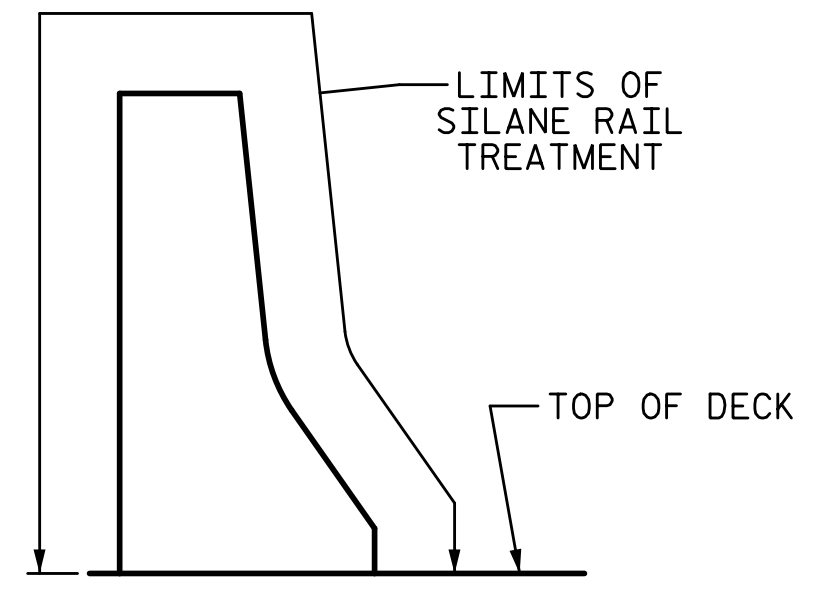


LEFT RAIL



RIGHT RAIL

SPAN 7



SECTION THRU BARRIER RAIL
LEFT RAIL SHOWN, RIGHT RAIL SIMILAR

REPAIR QUANTITY TABLE					
REPAIRS SPAN 7	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
BARRIER RAIL	0.5	0.1			
EPOXY RESIN INJECTION		LF			LF
BARRIER RAIL		12.0			
SURFACE PREPARATION		SF			SF
BARRIER RAIL		1088.6			
SILANE RAIL TREATMENT		SF			SF
BARRIER RAIL		1088.6			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.

AFTER ALL REPAIRS ARE MADE TO THE BARRIER RAILS, ADD SILANE RAIL TREATMENT TO THE LIMITS SHOWN ON THE PLANS.

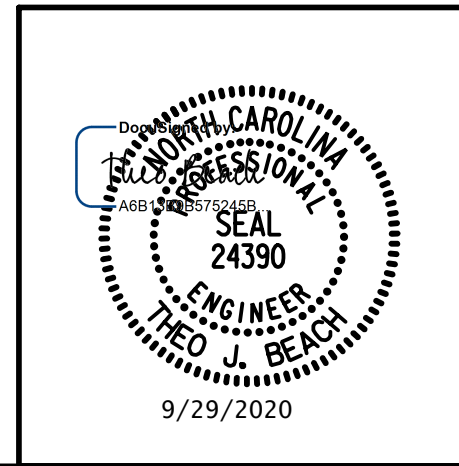
FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 7 OF 13

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 7
 BARRIER RAIL**



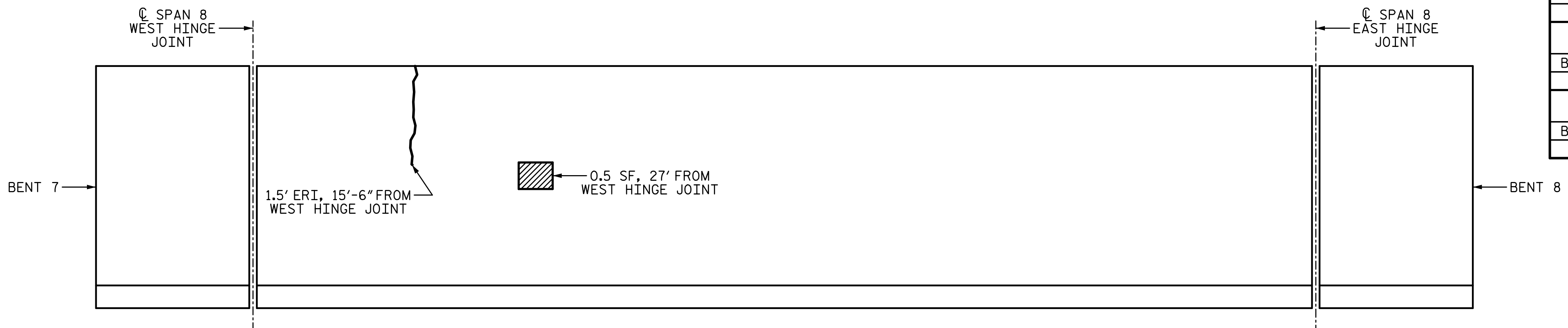
PLANS PREPARED BY:
SEA & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-22
1			3			TOTAL SHEETS
2			4			163

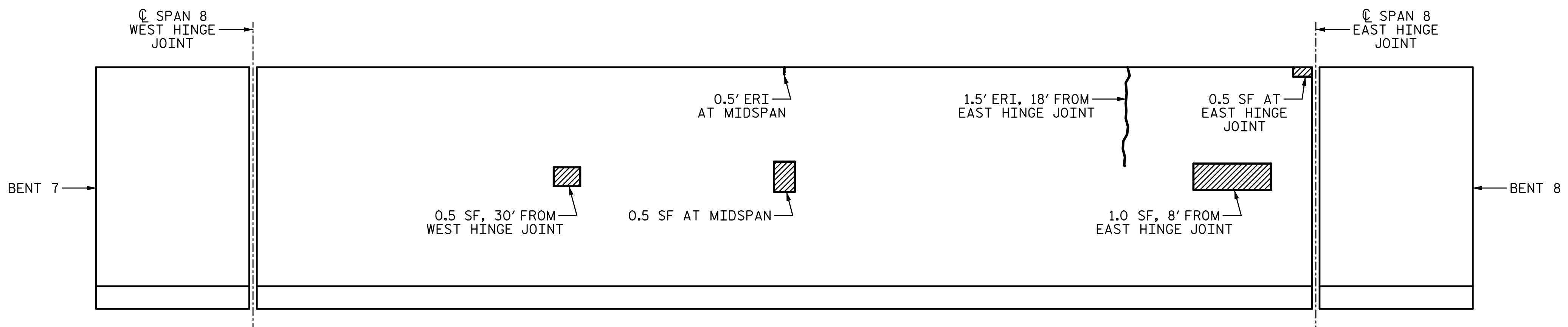
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:56 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_BR_640048.dgn

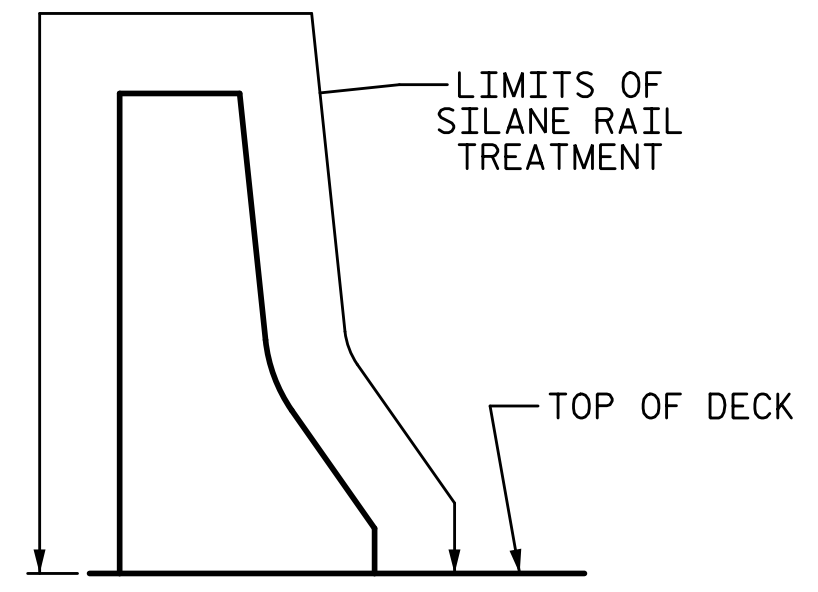


LEFT RAIL



RIGHT RAIL

SPAN 8



SECTION THRU BARRIER RAIL
LEFT RAIL SHOWN, RIGHT RAIL SIMILAR

SHOTCRETE REPAIR
ERI — EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE					
REPAIRS SPAN 8	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
BARRIER RAIL	3.0	0.4			
EPOXY RESIN INJECTION		LF			LF
BARRIER RAIL		3.5			
SURFACE PREPARATION		SF			SF
BARRIER RAIL		1607.9			
SILANE RAIL TREATMENT		SF			SF
BARRIER RAIL		1607.9			

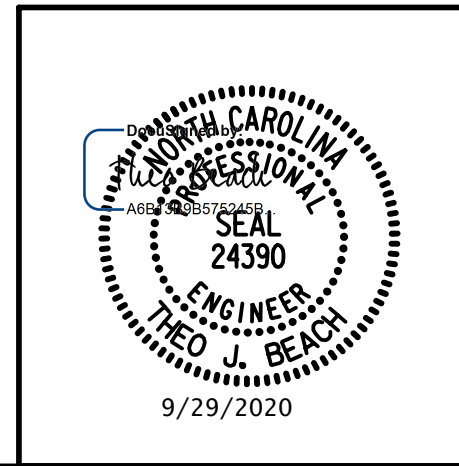
NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.
 FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.
 AFTER ALL REPAIRS ARE MADE TO THE BARRIER RAILS, ADD SILANE RAIL TREATMENT TO THE LIMITS SHOWN ON THE PLANS.
 FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 8 OF 13

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 8
 BARRIER RAIL**



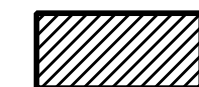
PLANS PREPARED BY:
SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

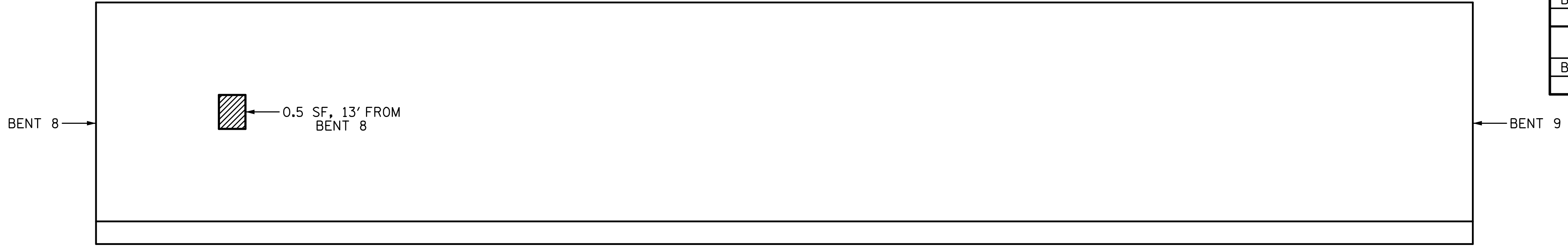
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-23
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

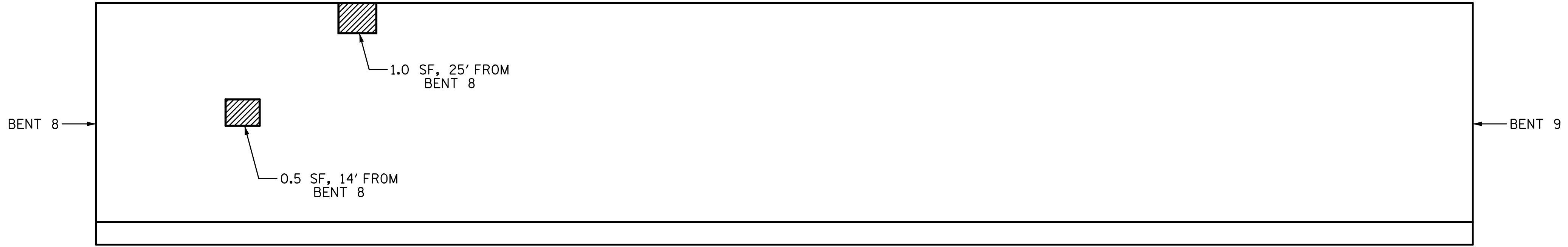
9/28/2020 12:00:56 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_BR_640048.dgn

 SHOTCRETE REPAIR
ERI — EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE					
REPAIRS SPAN 9	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
BARRIER RAIL	2.0	0.3			
EPOXY RESIN INJECTION		LF			LF
BARRIER RAIL		0.0			
SURFACE PREPARATION		SF			SF
BARRIER RAIL		1217.4			
SILANE RAIL TREATMENT		SF			SF
BARRIER RAIL		1217.4			

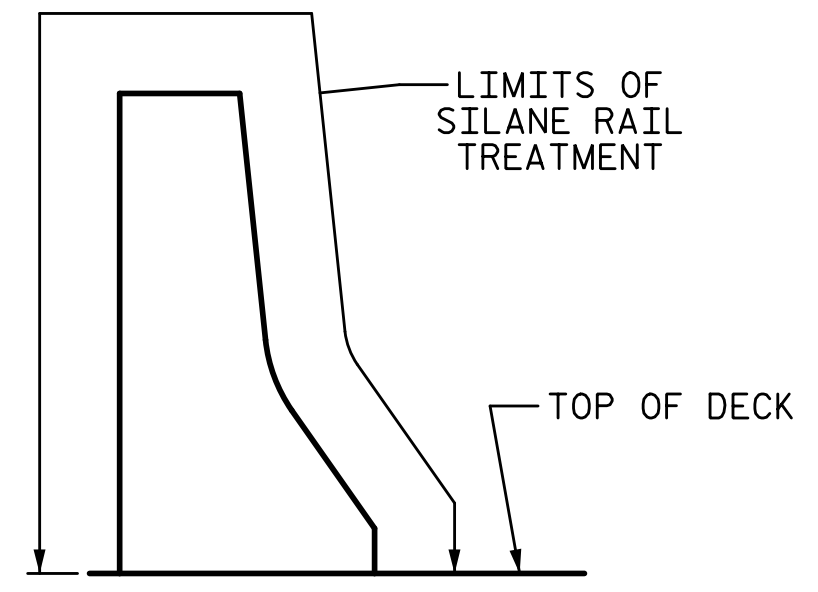


LEFT RAIL



RIGHT RAIL

SPAN 9



SECTION THRU BARRIER RAIL
LEFT RAIL SHOWN, RIGHT RAIL SIMILAR

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.

AFTER ALL REPAIRS ARE MADE TO THE BARRIER RAILS, ADD SILANE RAIL TREATMENT TO THE LIMITS SHOWN ON THE PLANS.

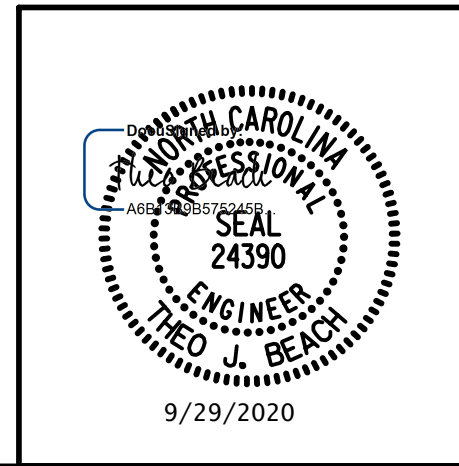
FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

SHEET 9 OF 13

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION

**SPAN 9
BARRIER RAIL**



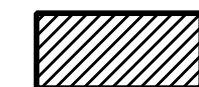
PLANS PREPARED BY:
SE & A
SIMPSON ENGINEERS & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

DRAWN BY: T. BANKOVICH DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-24
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

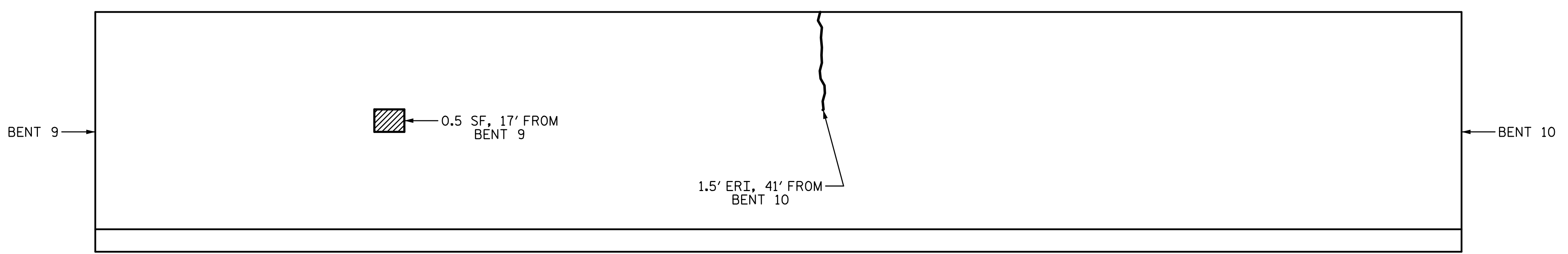
9/28/2020 12:00:56 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_BR_640048.dgn

 SHOTCRETE REPAIR
ERI — EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE					
REPAIRS SPAN 10	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
BARRIER RAIL	1.0	0.1			
EPOXY RESIN INJECTION		LF			LF
BARRIER RAIL		3.0			
SURFACE PREPARATION		SF			SF
BARRIER RAIL		971.7			
SILANE RAIL TREATMENT		SF			SF
BARRIER RAIL		971.7			

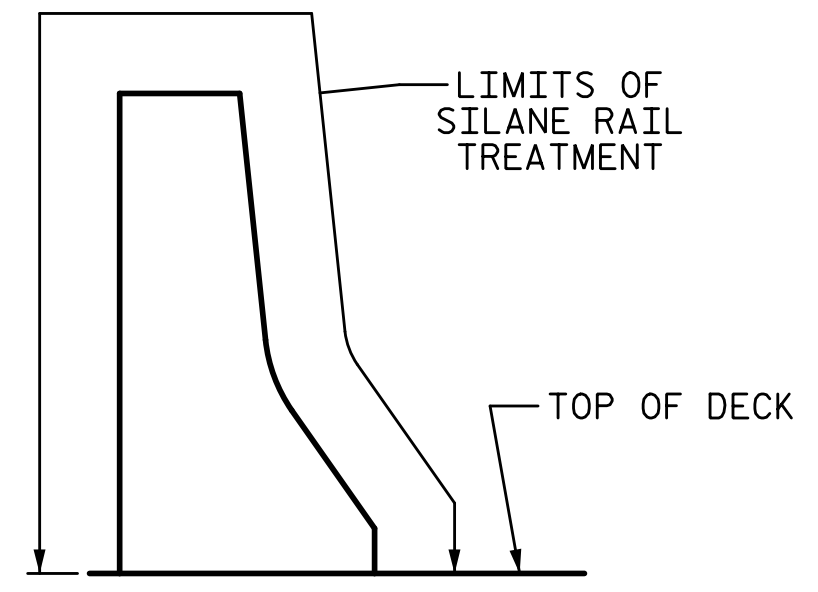


LEFT RAIL



RIGHT RAIL

SPAN 10



SECTION THRU BARRIER RAIL
LEFT RAIL SHOWN, RIGHT RAIL SIMILAR

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.

AFTER ALL REPAIRS ARE MADE TO THE BARRIER RAILS, ADD SILANE RAIL TREATMENT TO THE LIMITS SHOWN ON THE PLANS.

FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

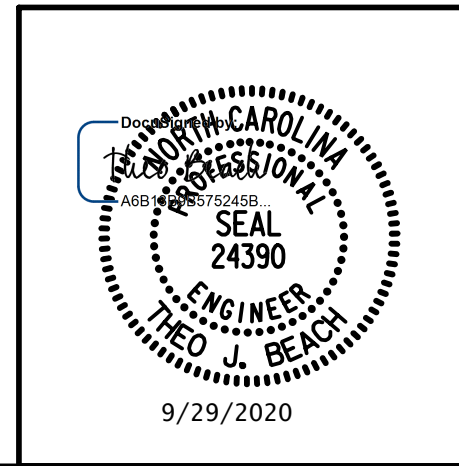
SHEET 10 OF 13

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION

**SPAN 10
BARRIER RAIL**

DRAWN BY: T. BANKOVICH DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

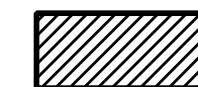
PLANS PREPARED BY:
SEA & A
SEMPSON ENGINEERS & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

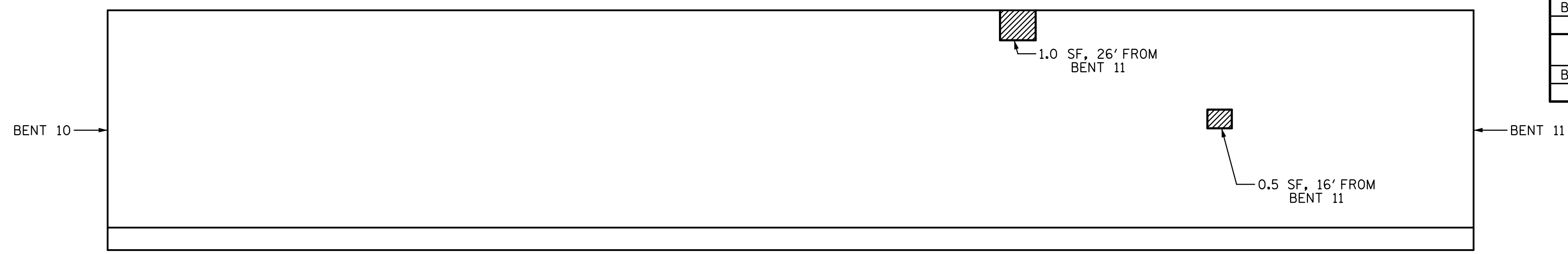


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-25
1			3			TOTAL SHEETS
2			4			163

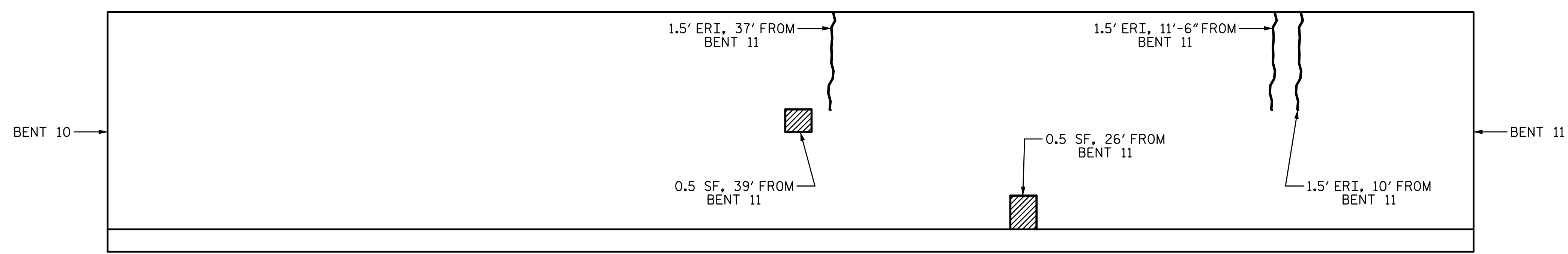
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:57 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_BR_640048.dgn

 SHOTCRETE REPAIR
ERI — EPOXY RESIN INJECTION

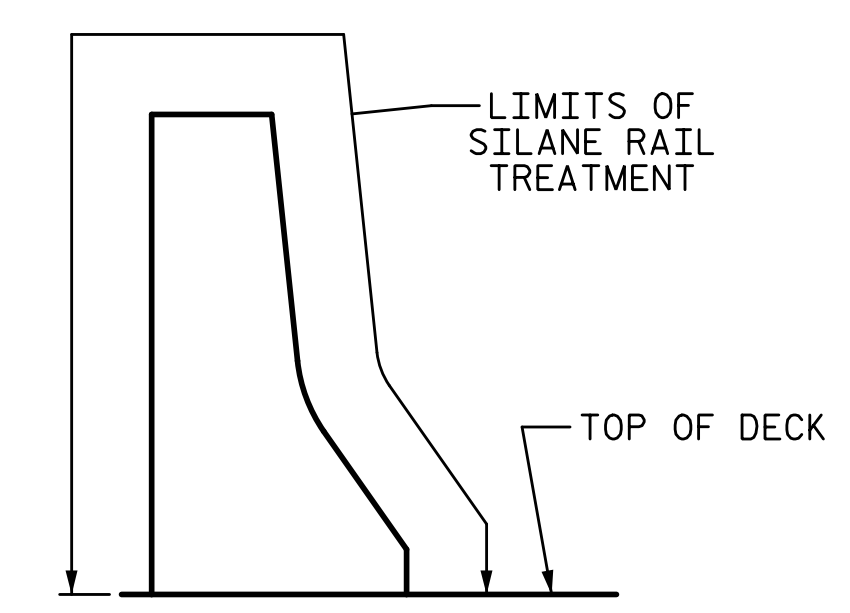


LEFT RAIL



RIGHT RAIL

SPAN 11



SECTION THRU BARRIER RAIL
LEFT RAIL SHOWN, RIGHT RAIL SIMILAR

REPAIR QUANTITY TABLE					
REPAIRS SPAN 11	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
BARRIER RAIL	2.5	0.8			
EPOXY RESIN INJECTION		LF			LF
BARRIER RAIL		4.5			
SURFACE PREPARATION		SF			SF
BARRIER RAIL		971.7			
SILANE RAIL TREATMENT		SF			SF
BARRIER RAIL		971.7			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.

AFTER ALL REPAIRS ARE MADE TO THE BARRIER RAILS, ADD SILANE RAIL TREATMENT TO THE LIMITS SHOWN ON THE PLANS.

FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 11 OF 13

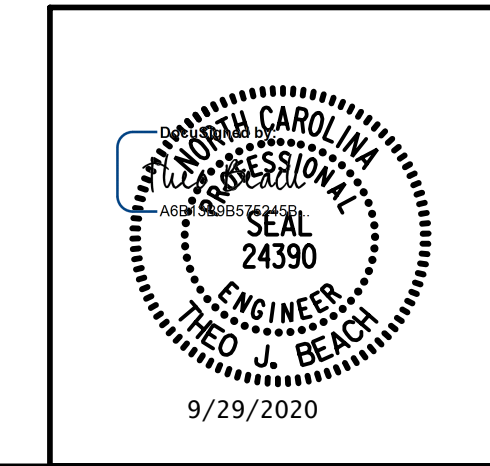
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 11
 BARRIER RAIL**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-26
1			3			TOTAL SHEETS
2			4			163

PLANS PREPARED BY:

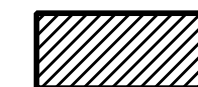
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

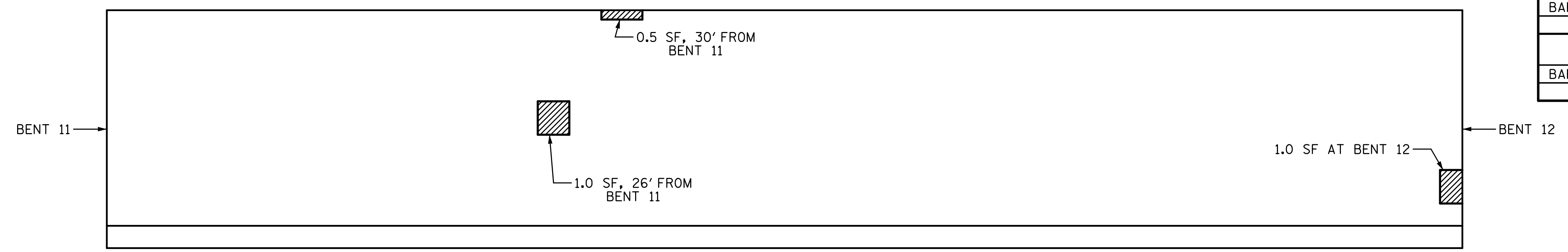


DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

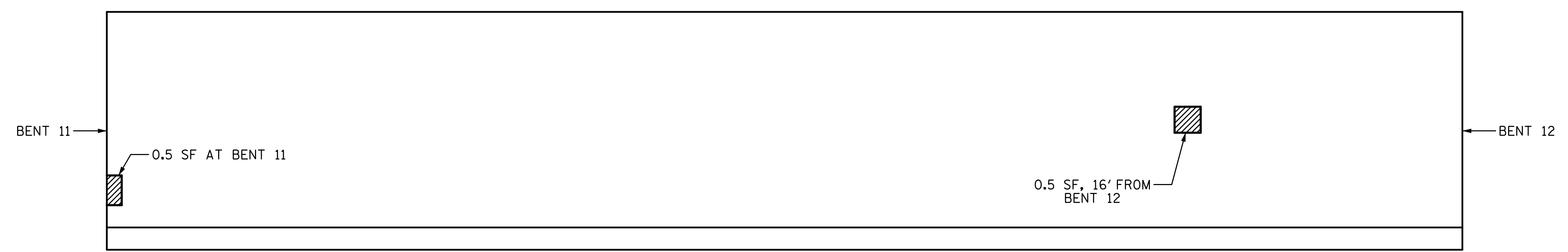
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:57 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_BR_640048.dgn

 SHOTCRETE REPAIR
ERI — EPOXY RESIN INJECTION

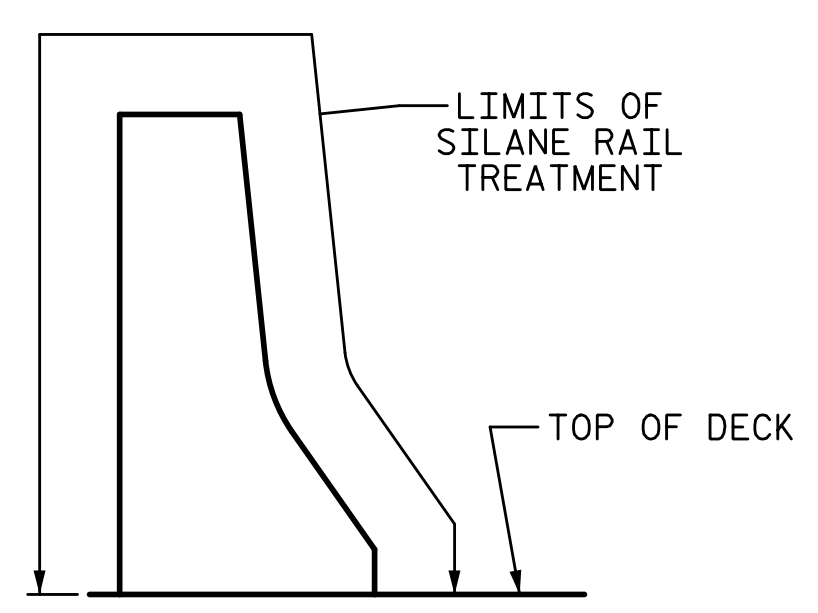


LEFT RAIL



RIGHT RAIL

SPAN 12



SECTION THRU BARRIER RAIL
LEFT RAIL SHOWN, RIGHT RAIL SIMILAR

REPAIR QUANTITY TABLE					
REPAIRS SPAN 12	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
BARRIER RAIL	3.5	0.8			
EPOXY RESIN INJECTION		LF			LF
BARRIER RAIL		0.0			
SURFACE PREPARATION		SF			SF
BARRIER RAIL		971.7			
SILANE RAIL TREATMENT		SF			SF
BARRIER RAIL		971.7			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.

AFTER ALL REPAIRS ARE MADE TO THE BARRIER RAILS, ADD SILANE RAIL TREATMENT TO THE LIMITS SHOWN ON THE PLANS.

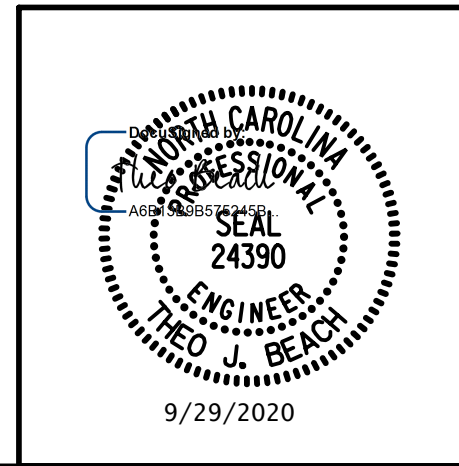
FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 12 OF 13

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 12
 BARRIER RAIL**



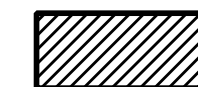
PLANS PREPARED BY:
SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

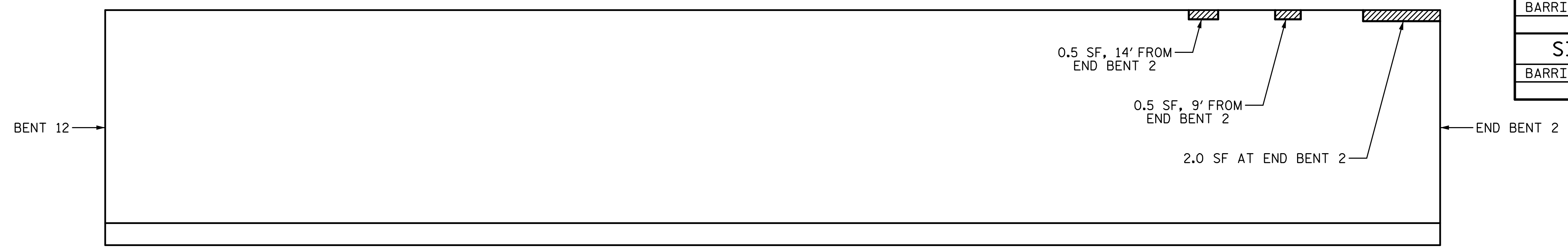
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-27
1			3			TOTAL SHEETS
2			4			163

DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

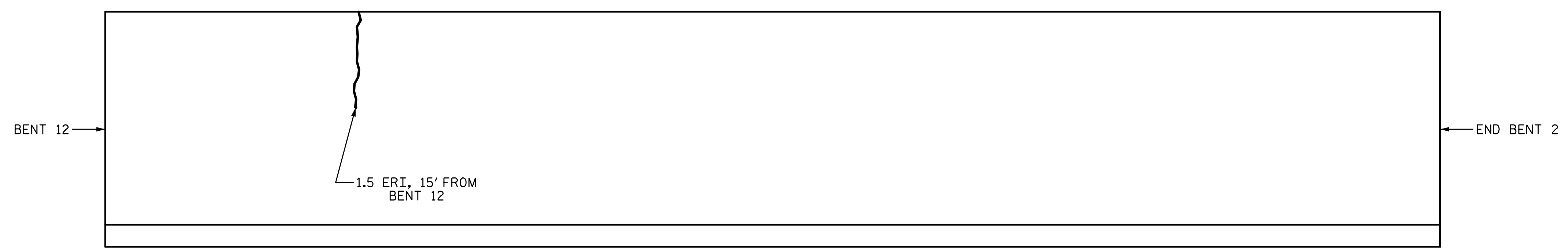
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:57 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_BR_640048.dgn

 SHOTCRETE REPAIR
ERI — EPOXY RESIN INJECTION

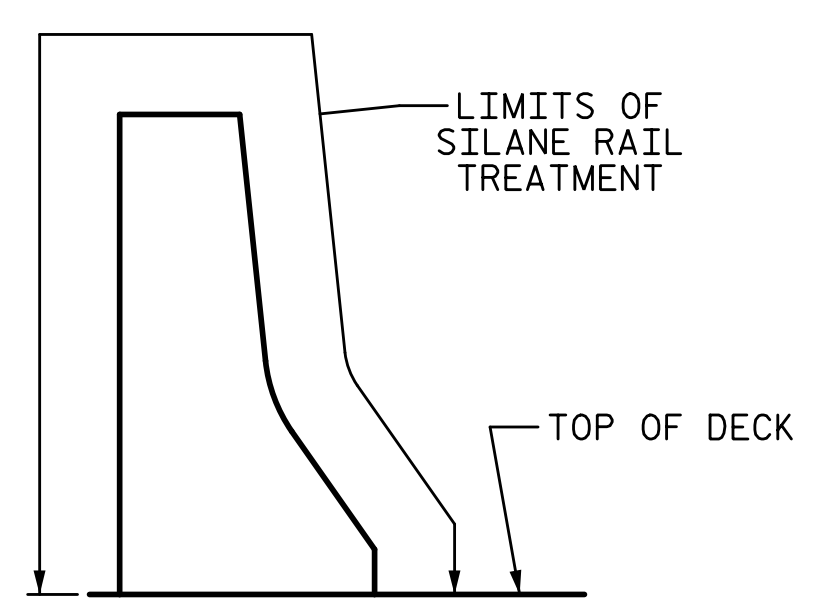


LEFT RAIL



RIGHT RAIL

SPAN 13



SECTION THRU BARRIER RAIL
LEFT RAIL SHOWN, RIGHT RAIL SIMILAR

REPAIR QUANTITY TABLE					
REPAIRS SPAN 13	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
BARRIER RAIL	3.0	0.5			
EPOXY RESIN INJECTION			LF		LF
BARRIER RAIL		1.5			
SURFACE PREPARATION			SF		SF
BARRIER RAIL		976.8			
SILANE RAIL TREATMENT			SF		SF
BARRIER RAIL		976.8			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.

AFTER ALL REPAIRS ARE MADE TO THE BARRIER RAILS, ADD SILANE RAIL TREATMENT TO THE LIMITS SHOWN ON THE PLANS.

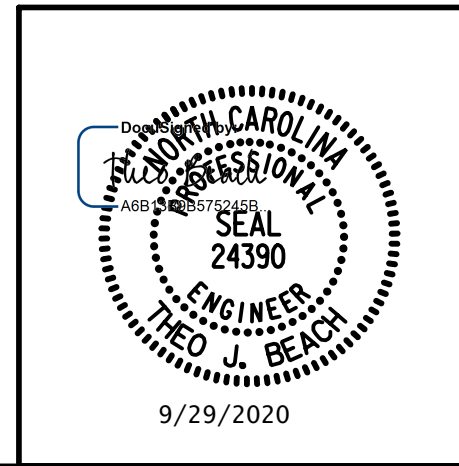
FOR SILANE RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 13 OF 13

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 13
 BARRIER RAIL**



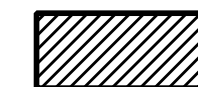
PLANS PREPARED BY:
SEA & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

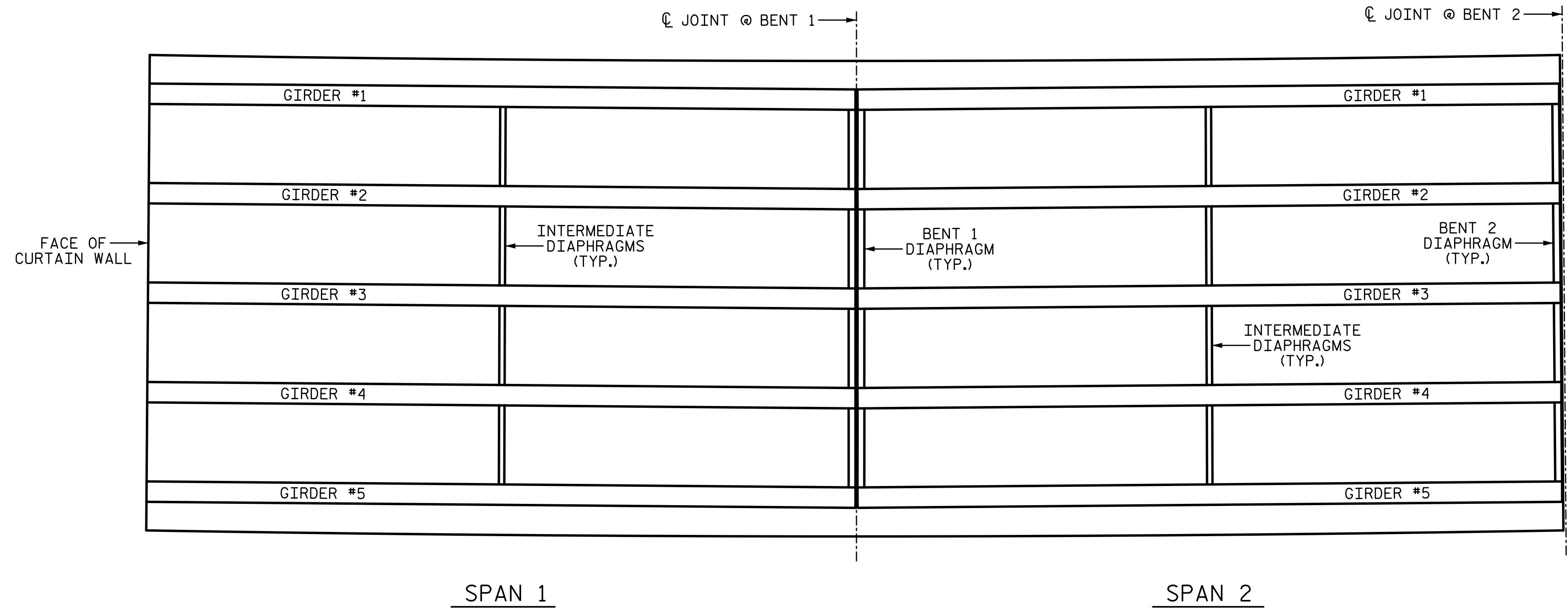
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-28
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

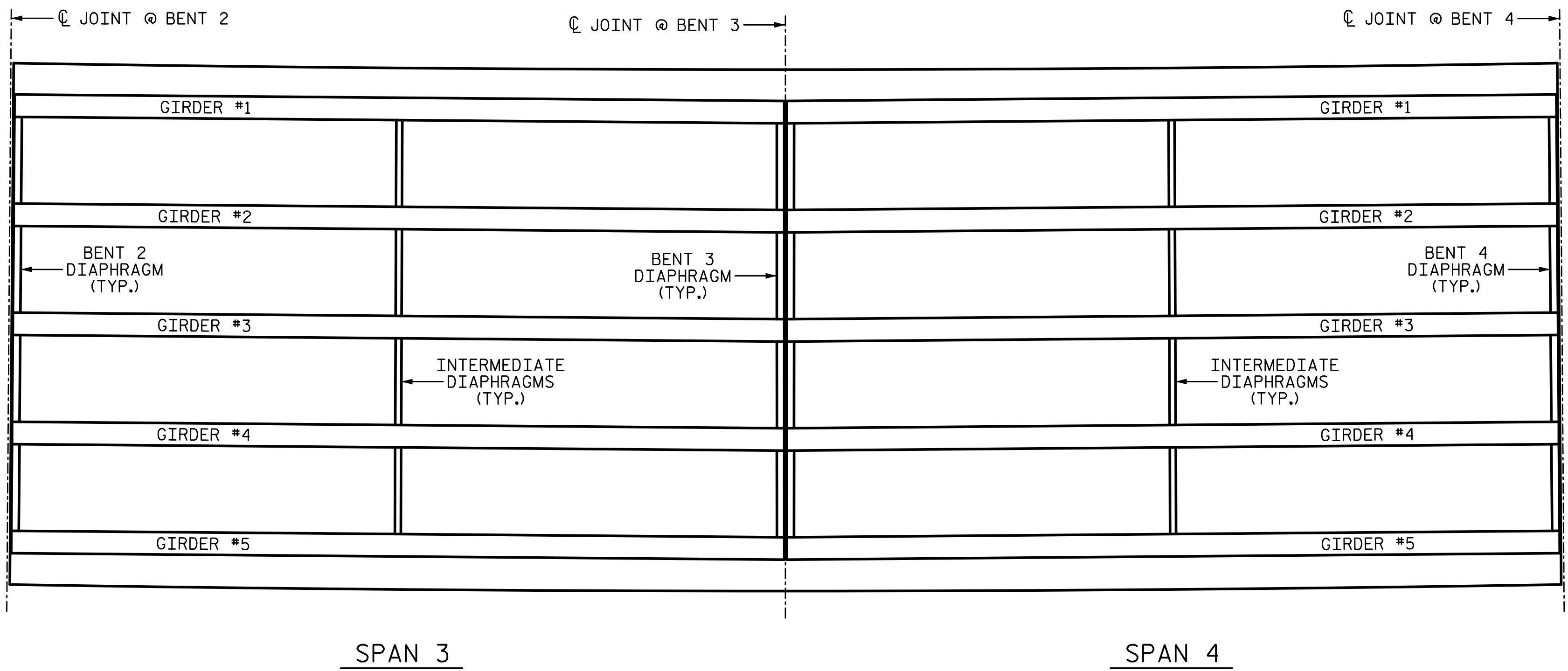
9/28/2020 12:00:58 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\15BPR26_SMU_BOS_640048.dgn

 SHOTCRETE REPAIR
 ERI — EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE					
REPAIRS SPANS 1 - 4	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
SPAN 1	0.0	0.0			
SPAN 2	0.0	0.0			
SPAN 3	0.0	0.0			
SPAN 4	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
SPAN 1		0.0			
SPAN 2		0.0			
SPAN 3		0.0			
SPAN 4		0.0			



NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.
 FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.



UNDERSIDE OF DECK SLAB
 FOR GIRDER REPAIRS SEE GIRDER SHEETS

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 1 OF 4

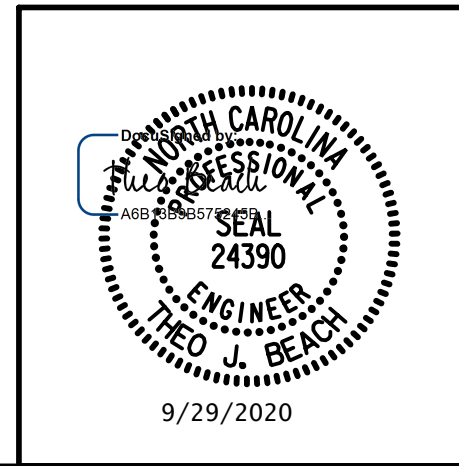
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

UNDERSIDE OF DECK SLAB
 SPANS 1 - 4

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-29
1			3			TOTAL SHEETS
2			4			163

PLANS PREPARED BY:

 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521



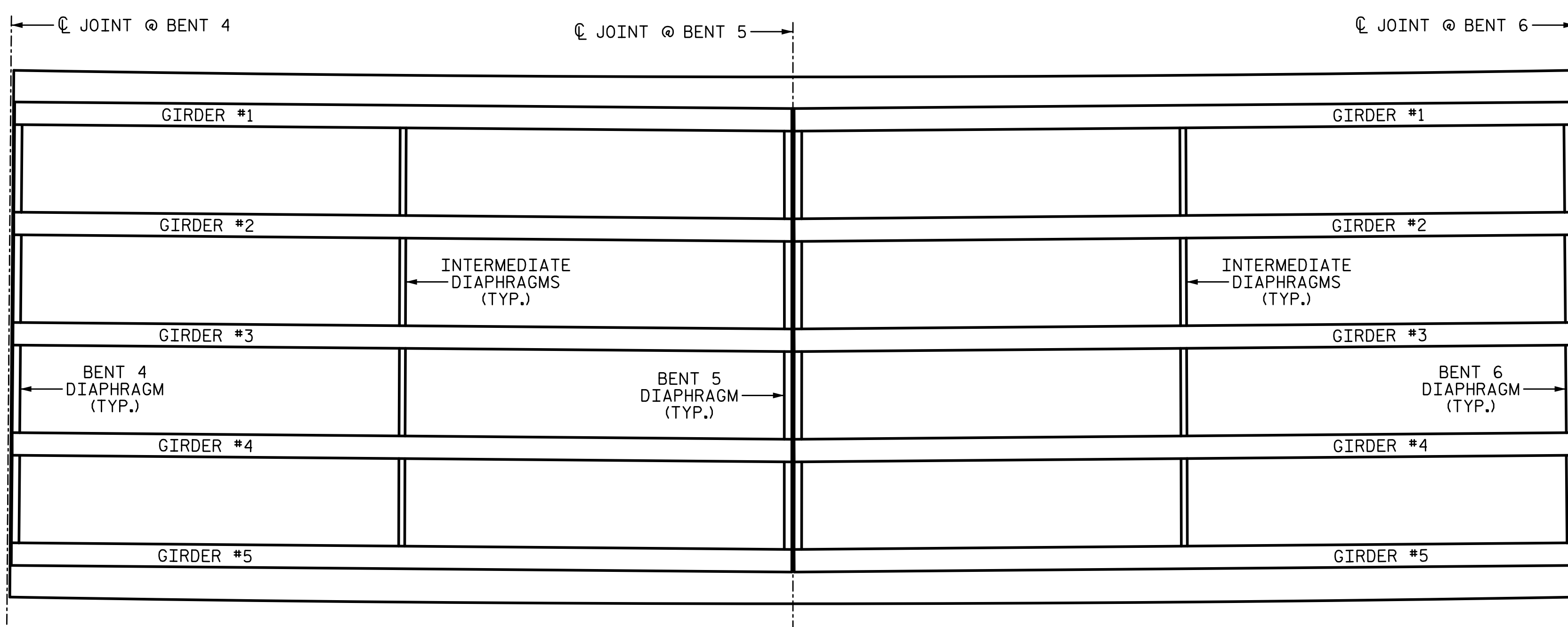
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:58 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_BOS_640048.dgn

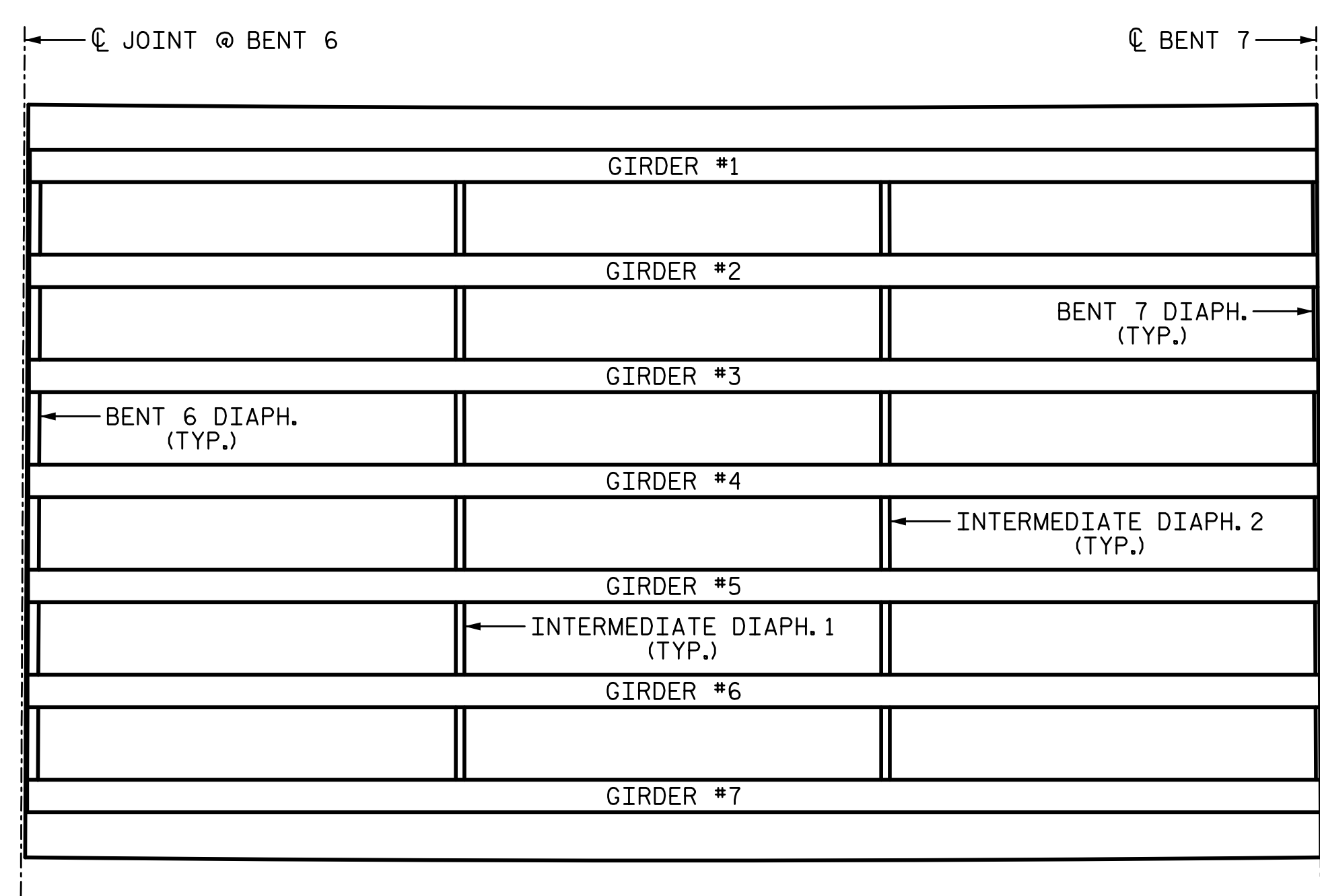
 SHOTCRETE REPAIR

ERI — EPOXY RESIN INJECTION



SPAN 5

SPAN 6



SPAN 7

UNDERSIDE OF DECK SLAB

FOR GIRDER REPAIRS SEE GIRDER SHEETS

REPAIR QUANTITY TABLE

REPAIRS SPANS 5 - 7	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
SPAN 5	0.0	0.0			
SPAN 6	0.0	0.0			
SPAN 7	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
SPAN 5		0.0			
SPAN 6		0.0			
SPAN 7		0.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.

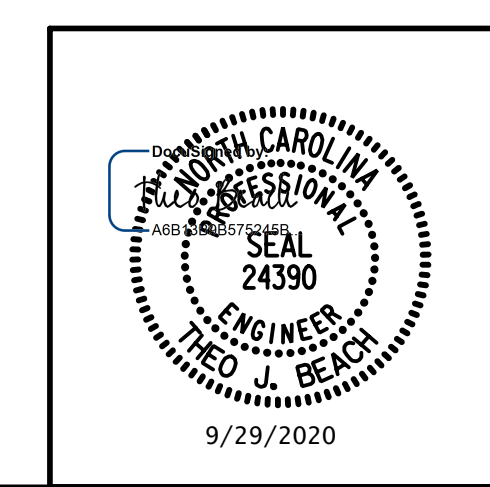
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 2 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
UNDERSIDE OF DECK SLAB
 SPANS 5 - 7

PLANS PREPARED BY:

SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

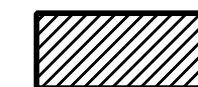


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-30
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

9/28/2020 12:00:58 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_BOS_640048.dgn

 SHOTCRETE REPAIR
 ERI — EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

REPAIRS SPANS 8 & 9	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
SPAN 8	0.0	0.0			
SPAN 9	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
SPAN 8			0.0		
SPAN 9			0.0		

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

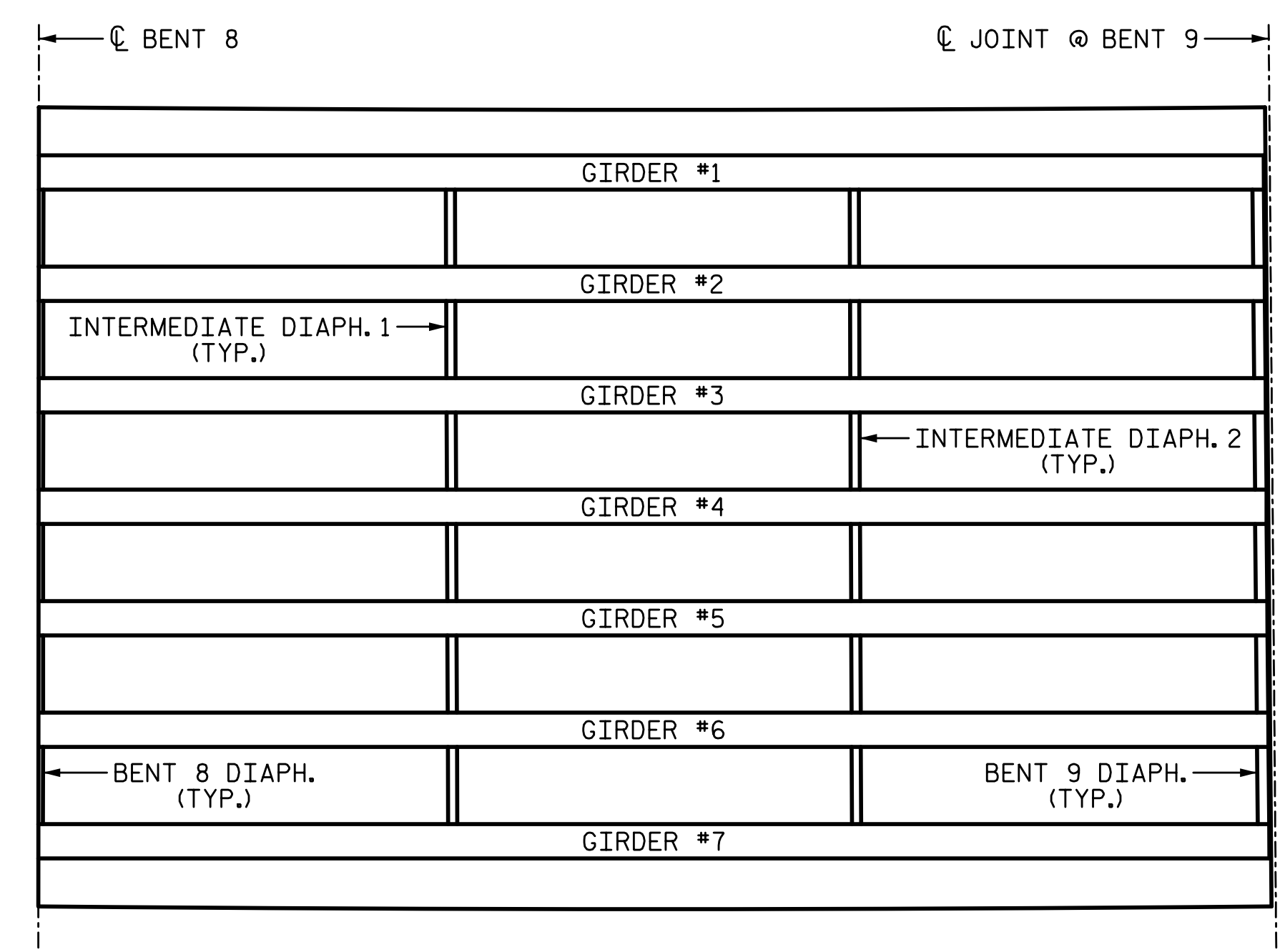
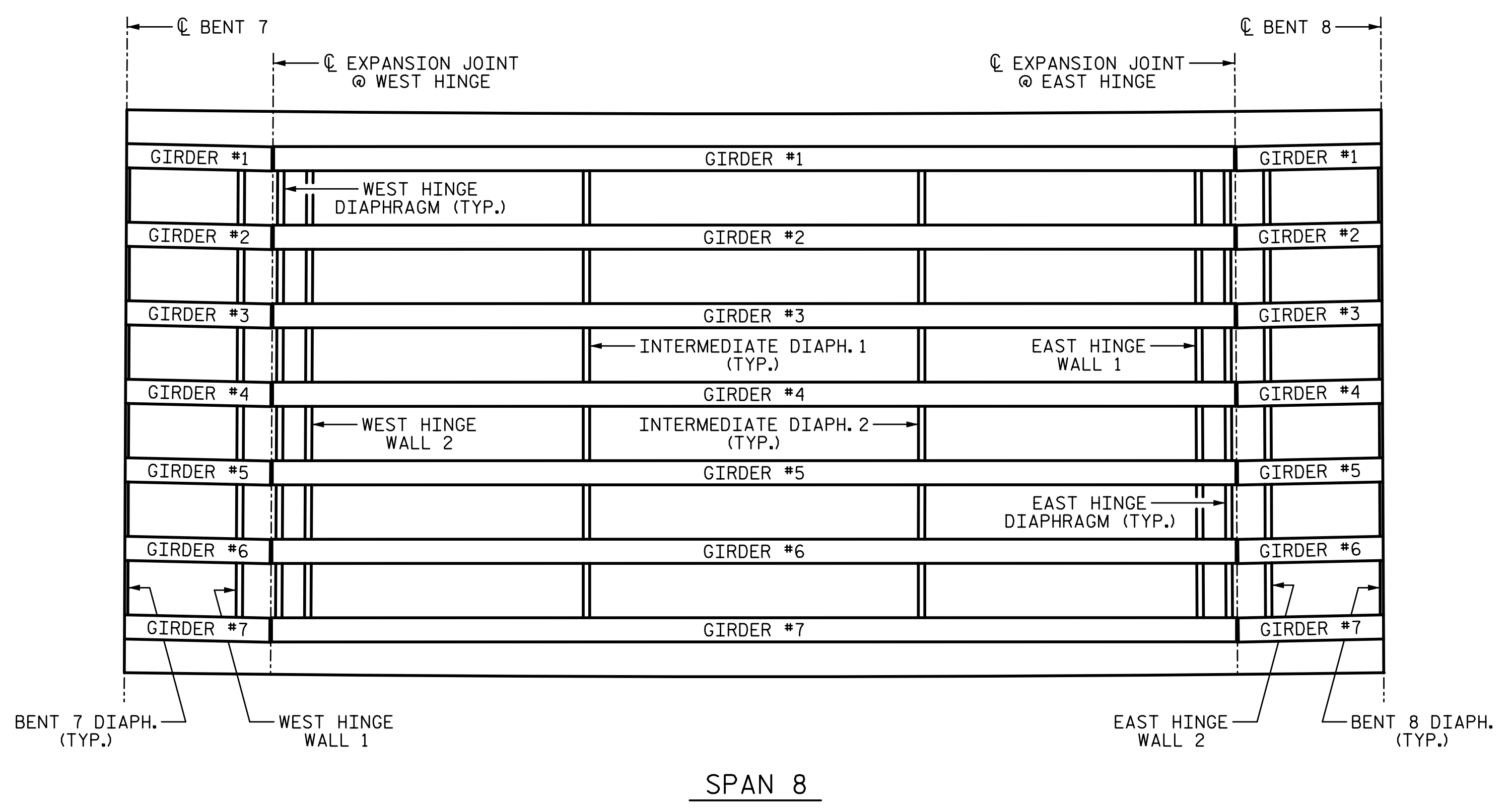
VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE REPAIR DETAILS, SEE "SUPERSTRUCTURE REPAIR DETAIL" SHEET.



SPAN 5

UNDERSIDE OF DECK SLAB

FOR GIRDER REPAIRS SEE GIRDER SHEETS

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 3 OF 4

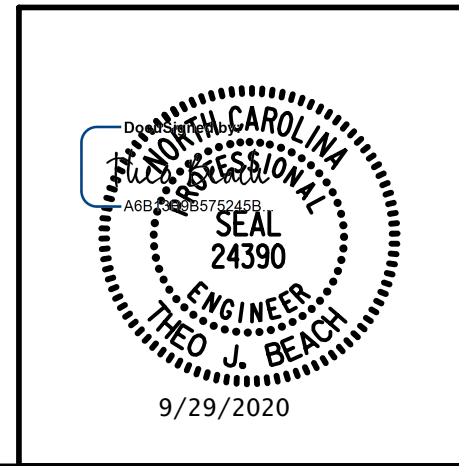
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

UNDERSIDE OF DECK SLAB

SPANS 8 & 9

PLANS PREPARED BY:

 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.slmpsonengr.com
 LICENSURE NO. C-2521

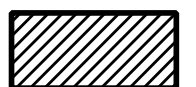


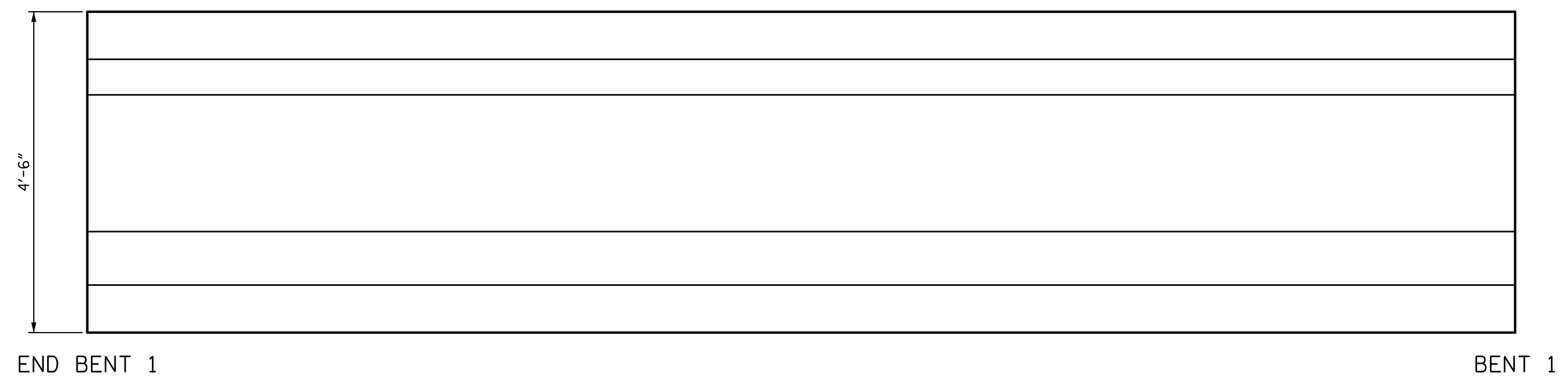
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-31
1			3			TOTAL SHEETS
2			4			163

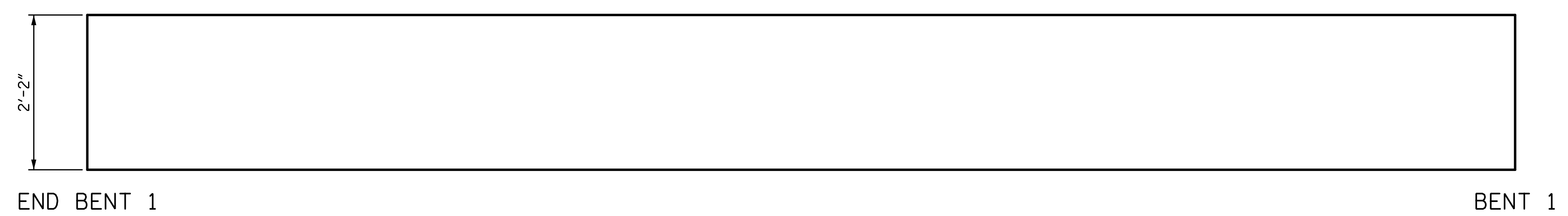
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:59 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_1_640048.dgn

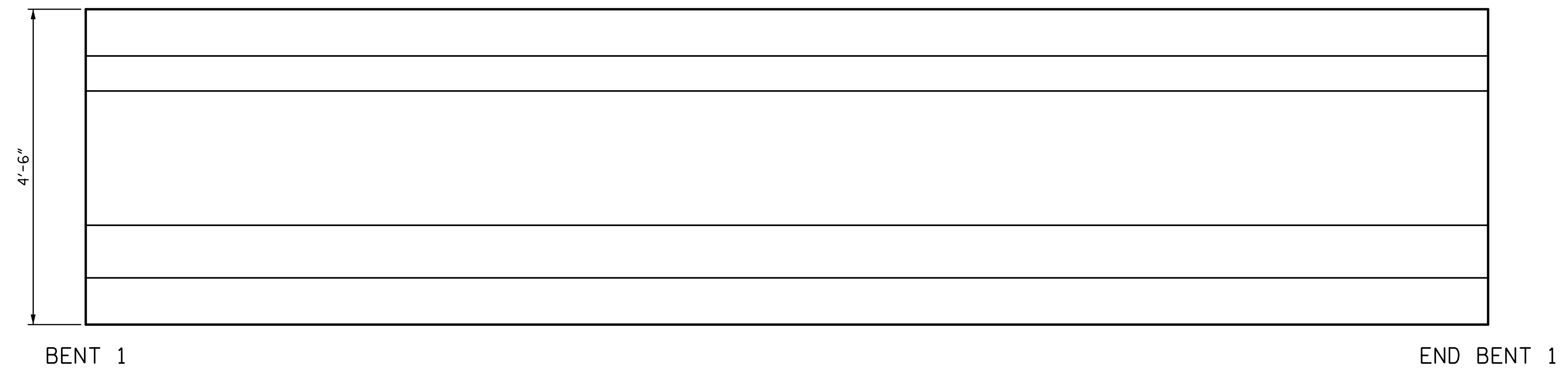
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 1 GRD. 1	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

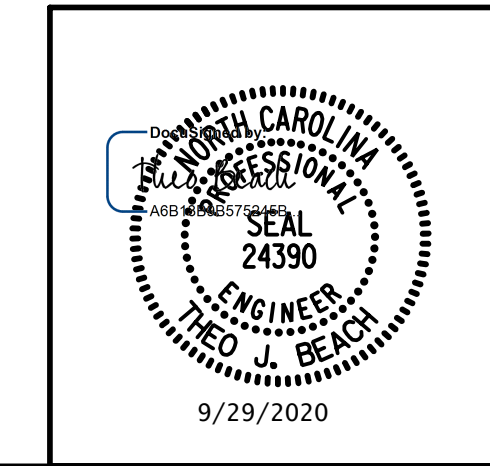
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 1 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 1
 GIRDER 1

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




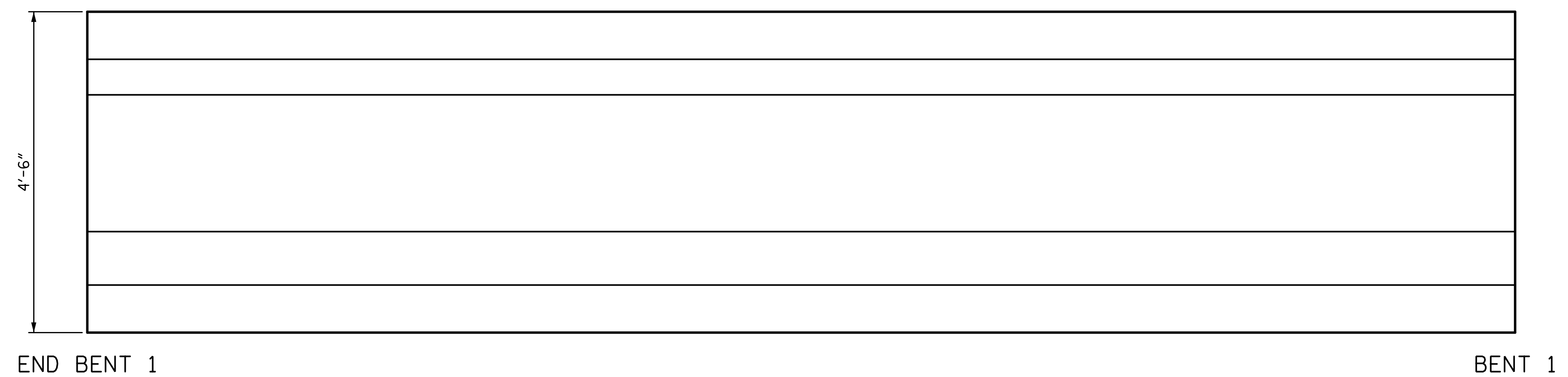
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-33
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:59 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_1_640048.dgn

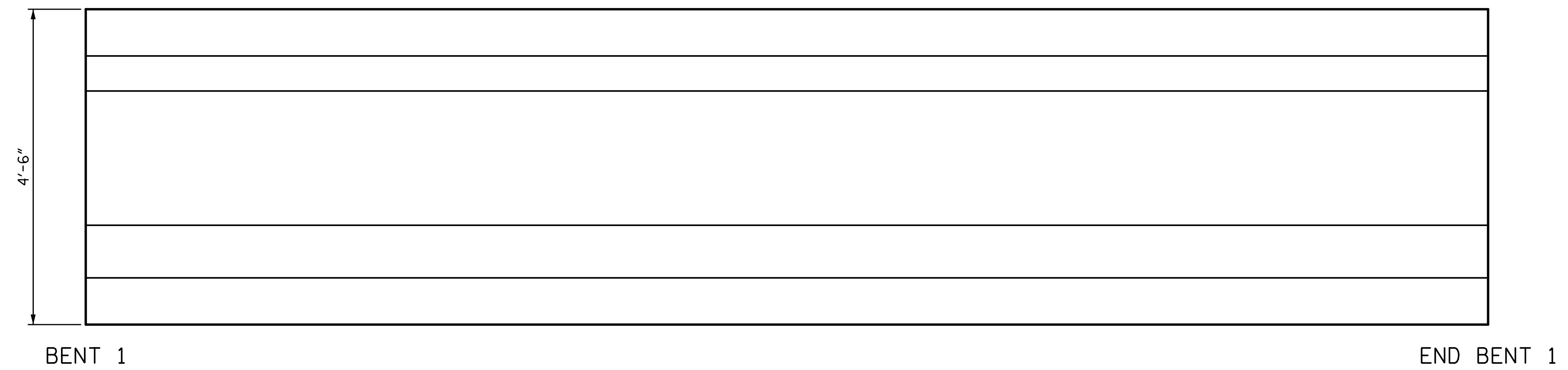
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 1 GRD. 2	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIR OF PREST. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

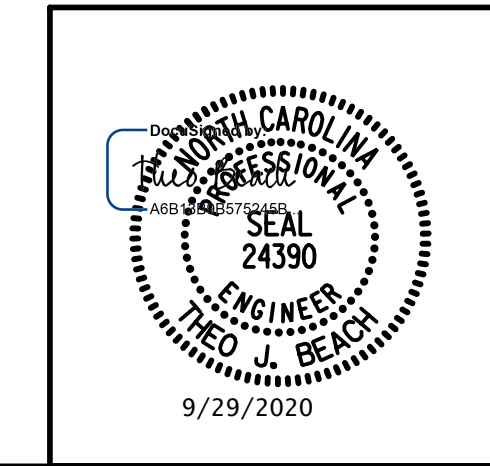
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 2 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 1
 GIRDER 2

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

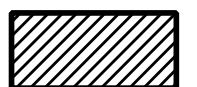


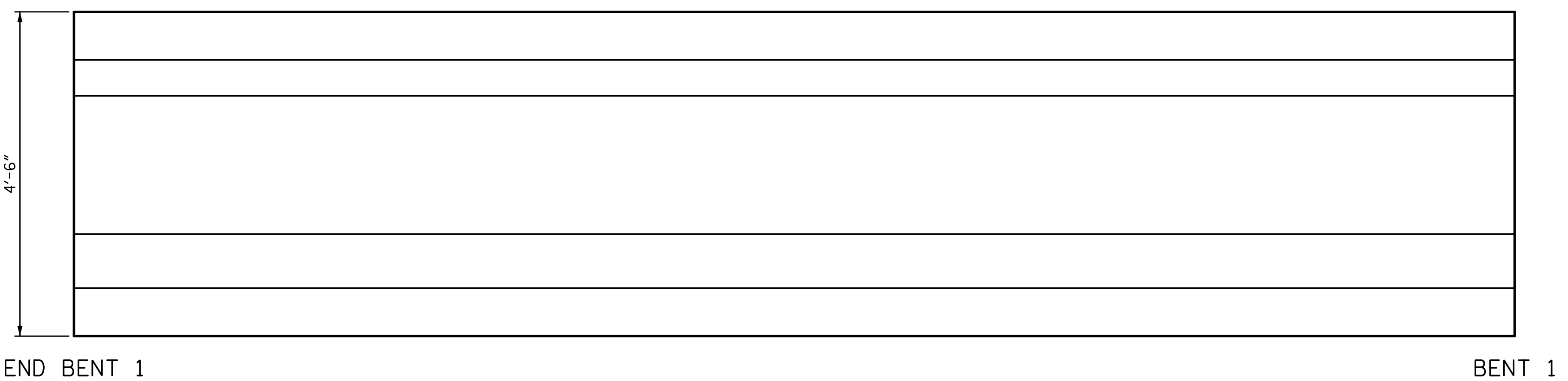
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-34
1			3			TOTAL SHEETS
2			4			163

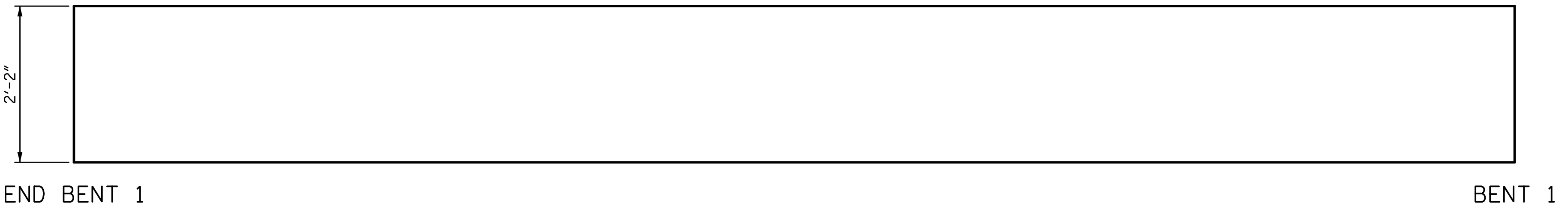
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:59 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 1_640048.dgn

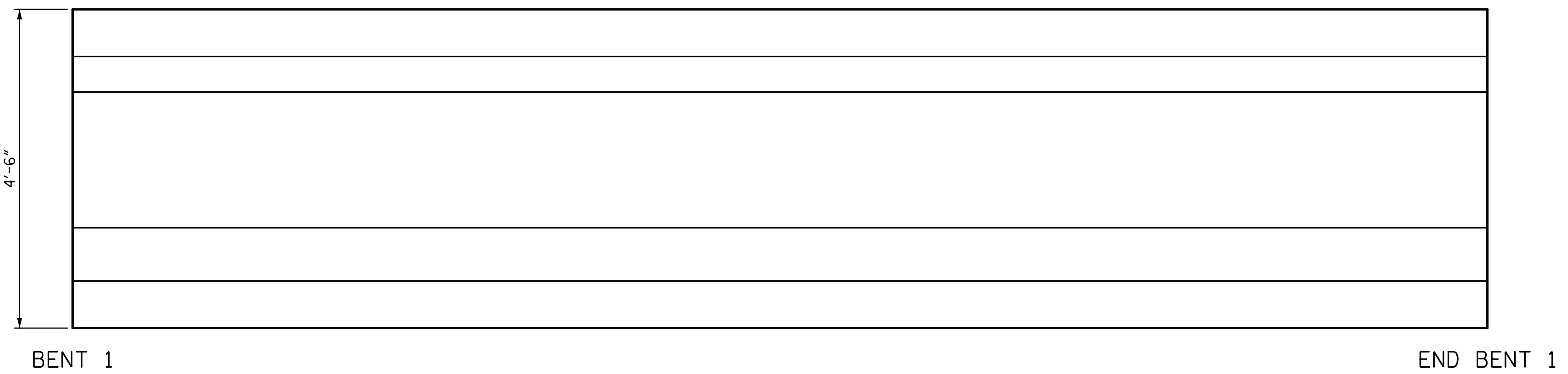
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 1 GRD. 3	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

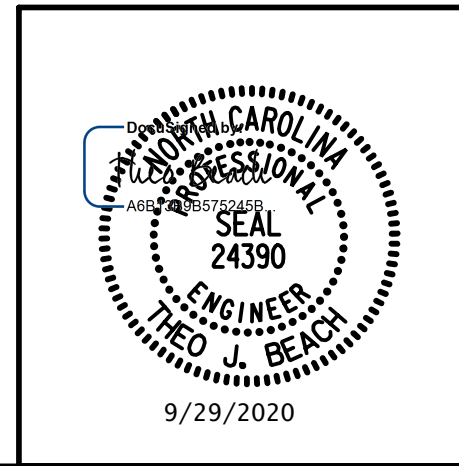
AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 3 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 1
 GIRDER 3**



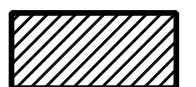
PLANS PREPARED BY:
SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

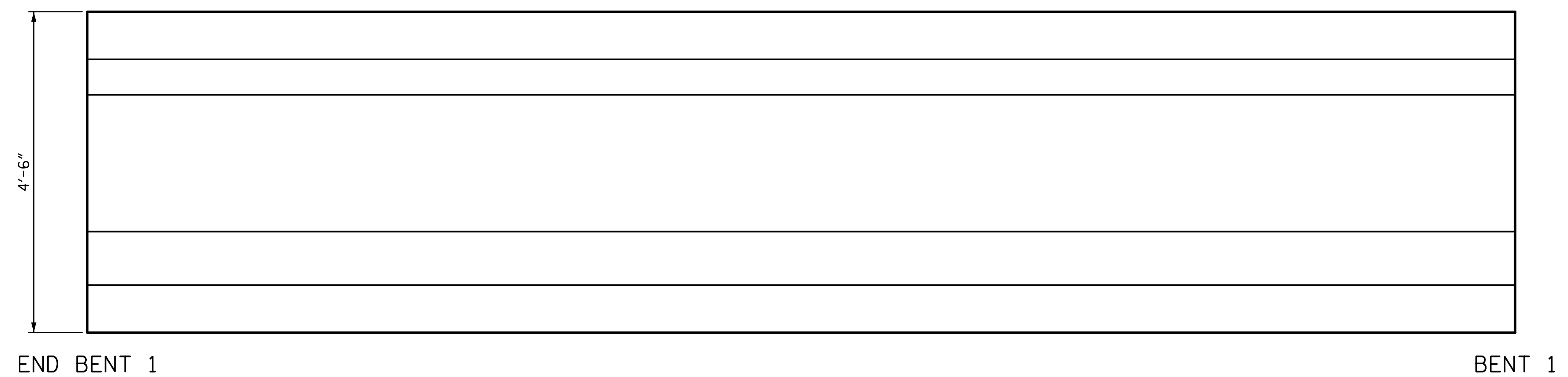
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-35
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:59 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_1_640048.dgn

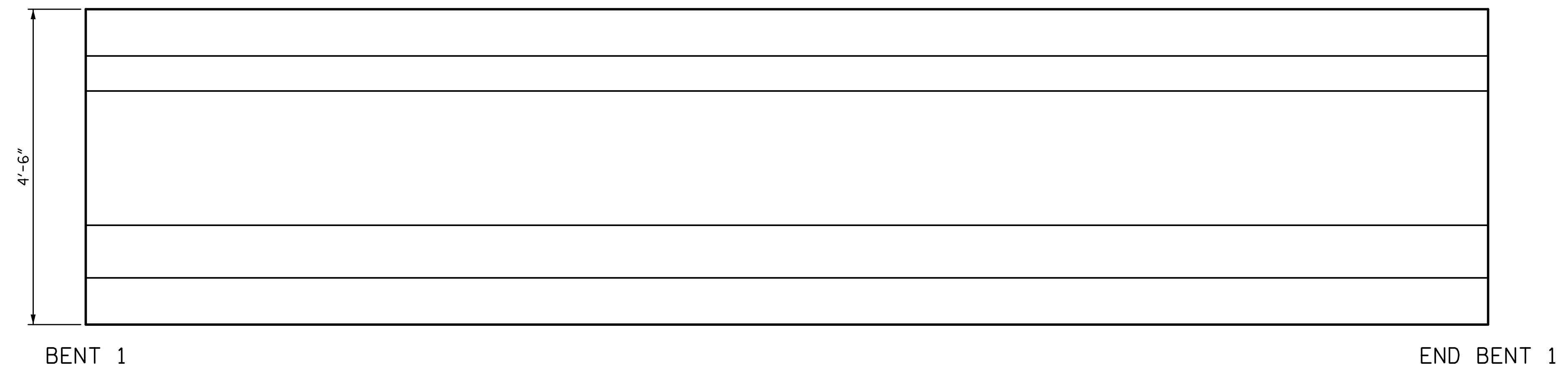
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 1 GRD. 4	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

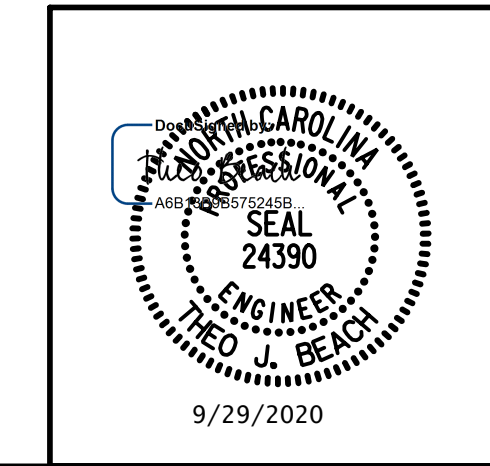
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 4 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 1
 GIRDER 4

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

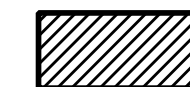


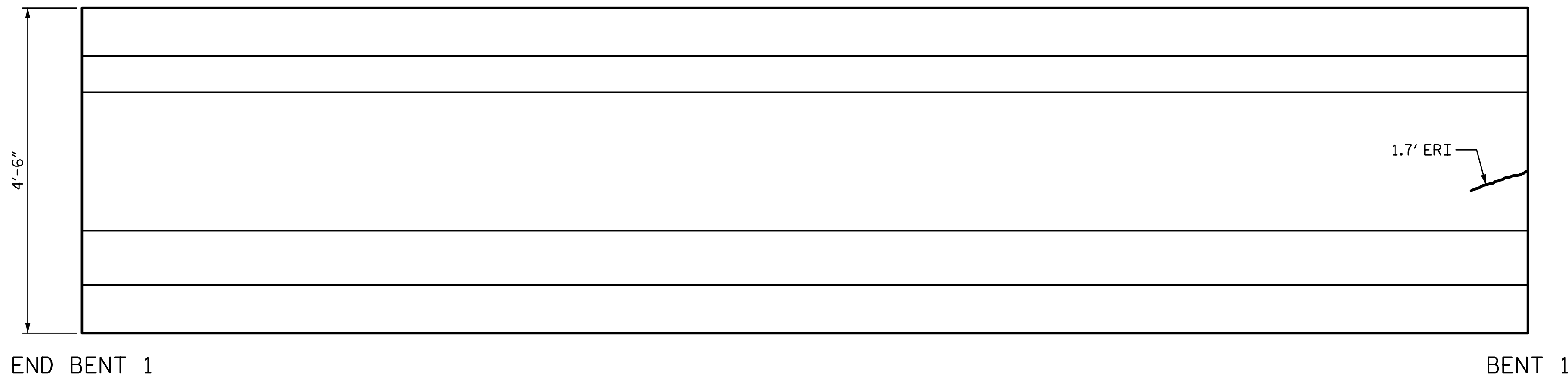
DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-36
1			3			TOTAL SHEETS
2			4			163

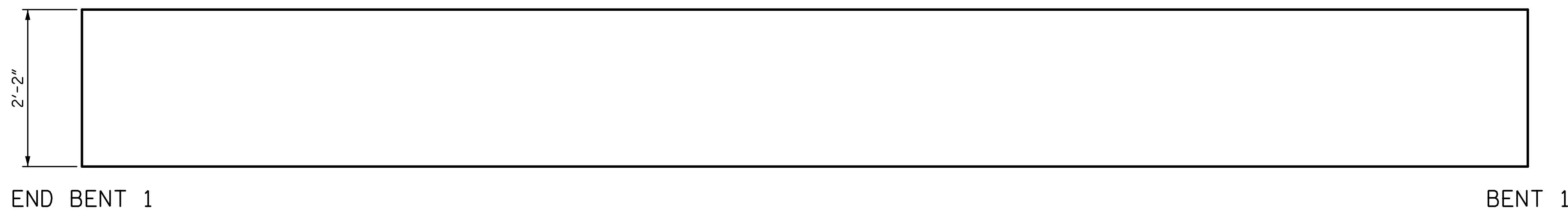
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:00:59 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN 1_640048.dgn

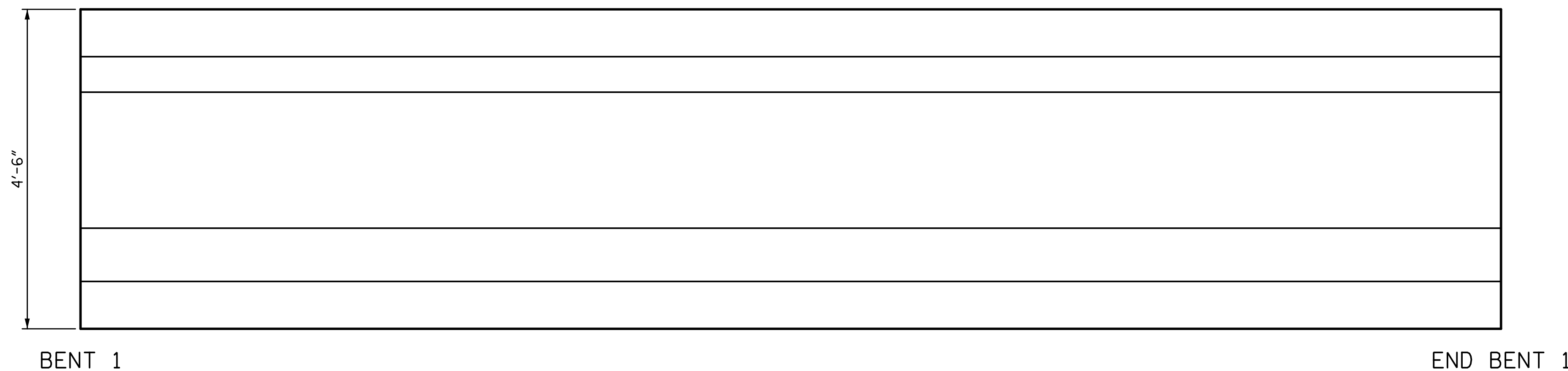
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 1 GRD. 5	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		1.7			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 5 OF 5

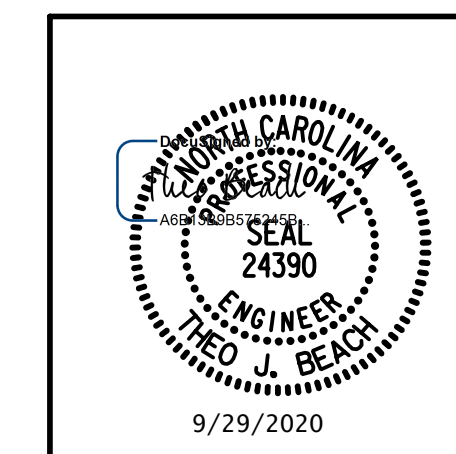
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 1
 GIRDER 5**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-37
1			3			TOTAL SHEETS
2			4			163

PLANS PREPARED BY:

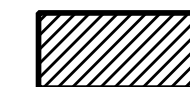
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

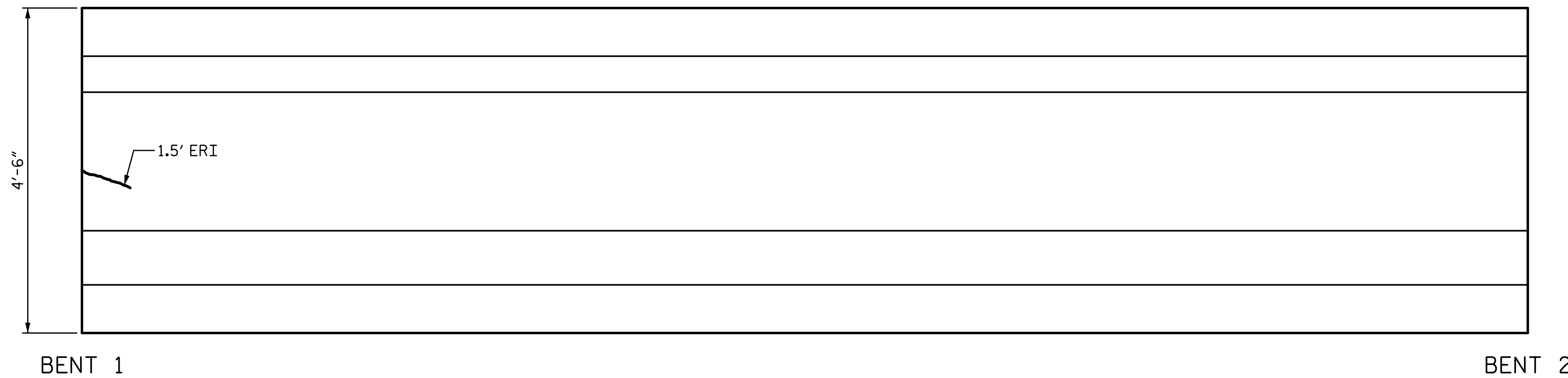


DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

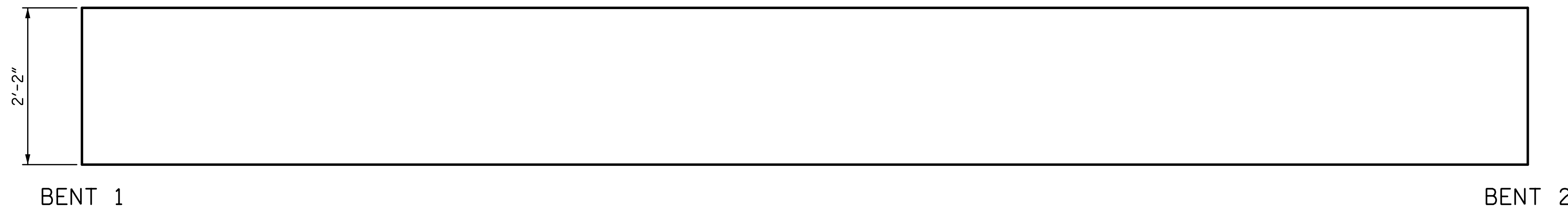
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:00 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN 2_640048.dgn

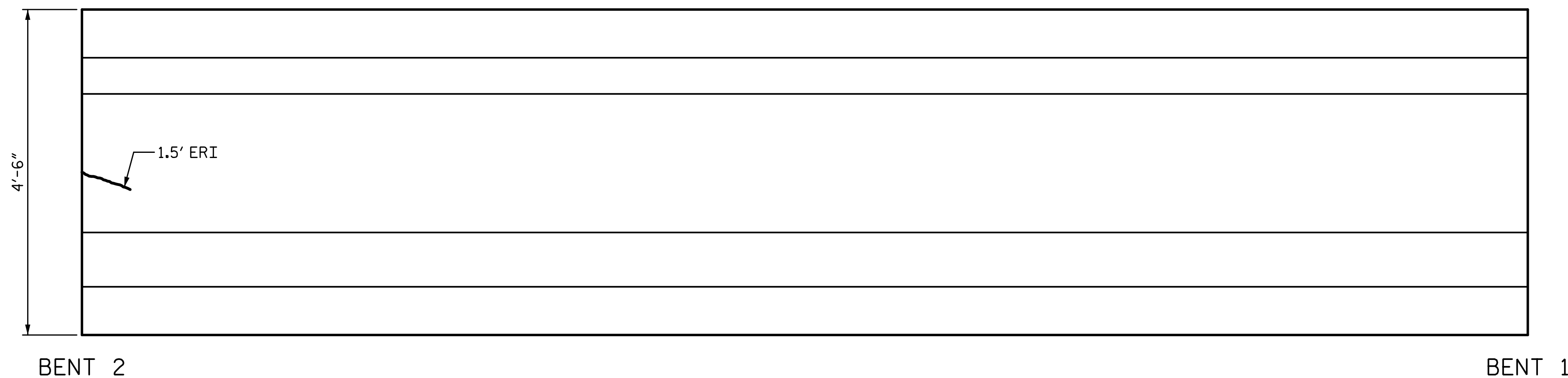
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 2 GRD. 1	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		3.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 1 OF 5

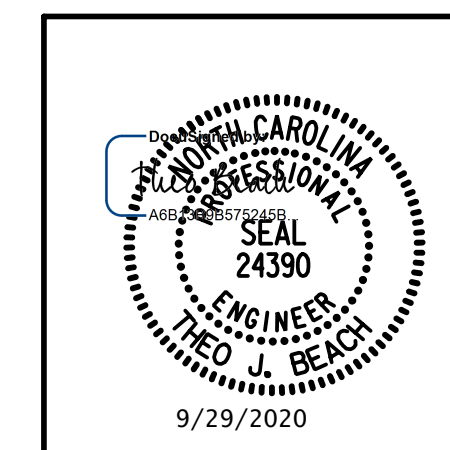
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 2
 GIRDER 1**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			163

PLANS PREPARED BY:

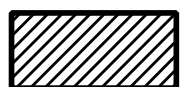
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

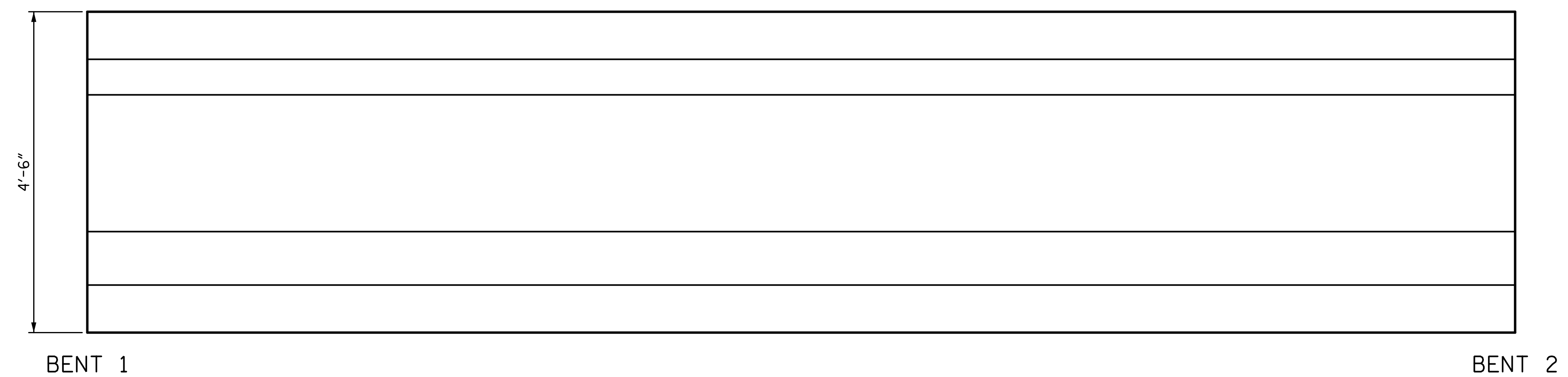


DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

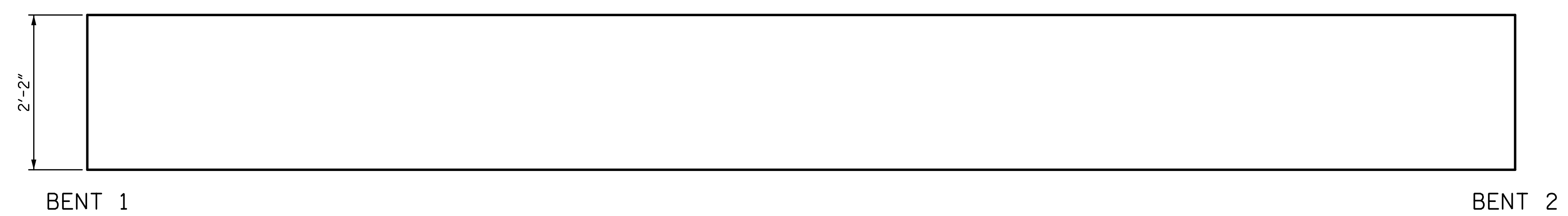
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:00 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_2_640048.dgn

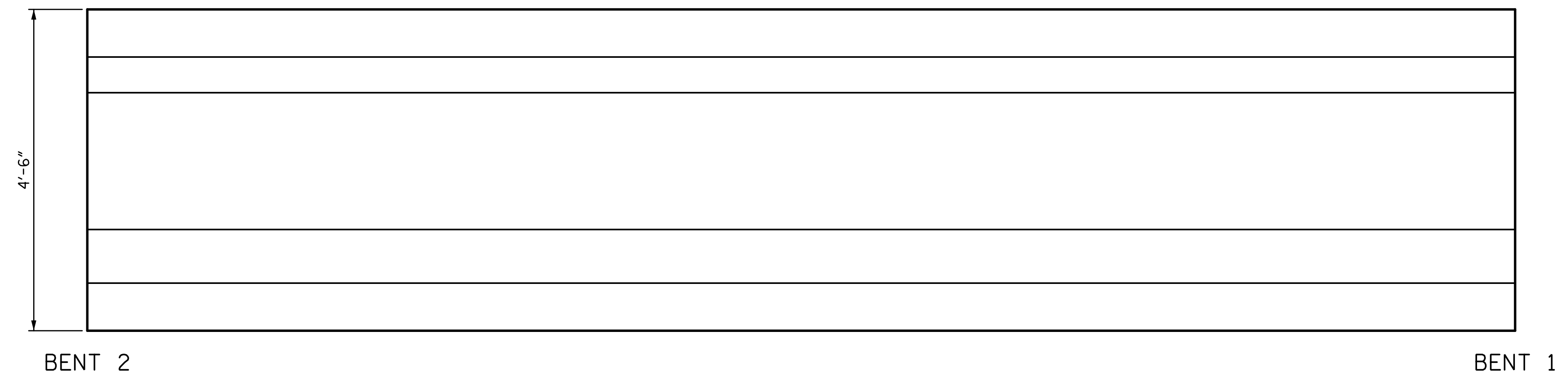
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 2 GRD. 2	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

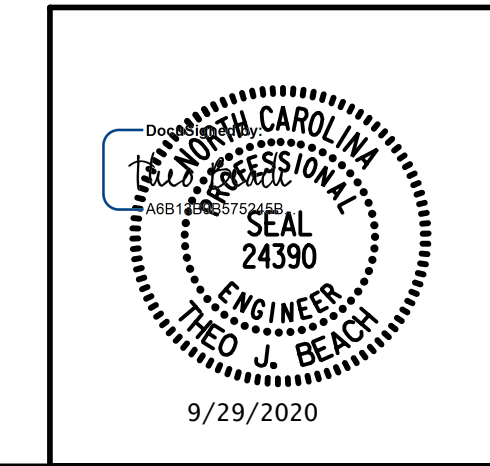
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 2 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 2
 GIRDER 2

PLANS PREPARED BY:

 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

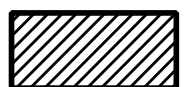


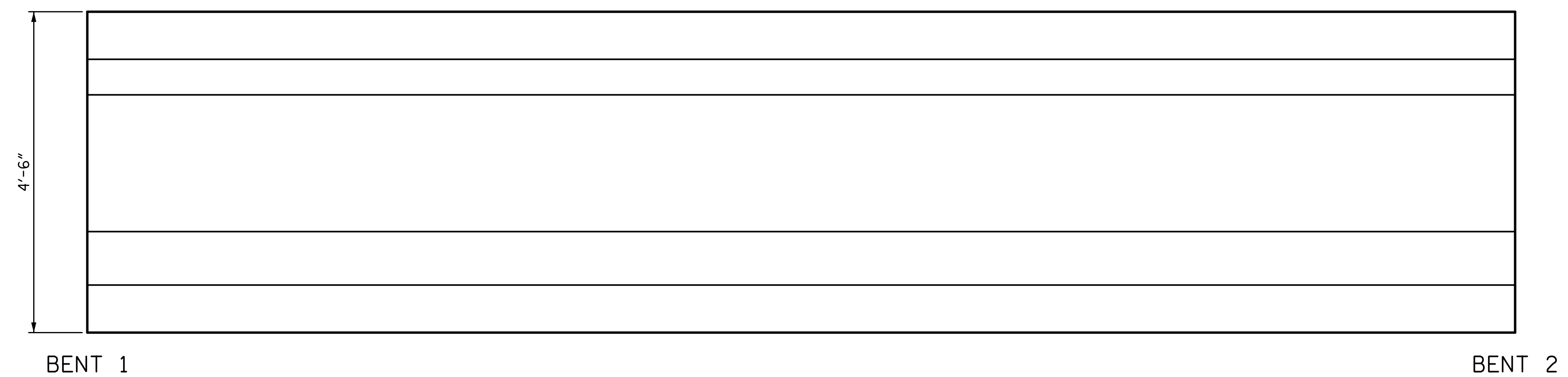
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-39
1			3			TOTAL SHEETS
2			4			163

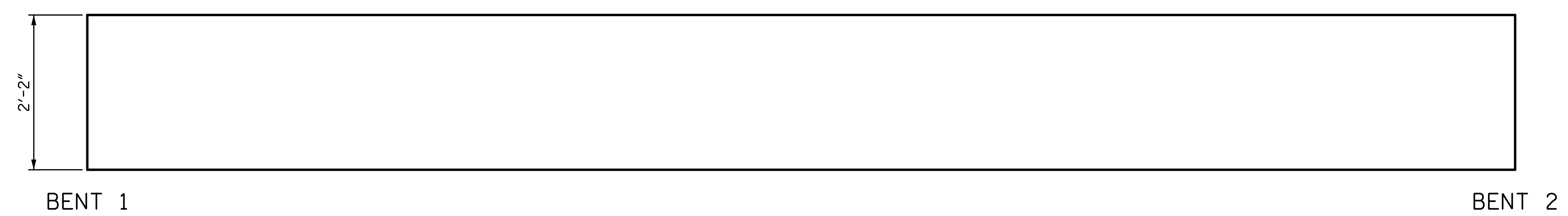
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:00 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN 2_640048.dgn

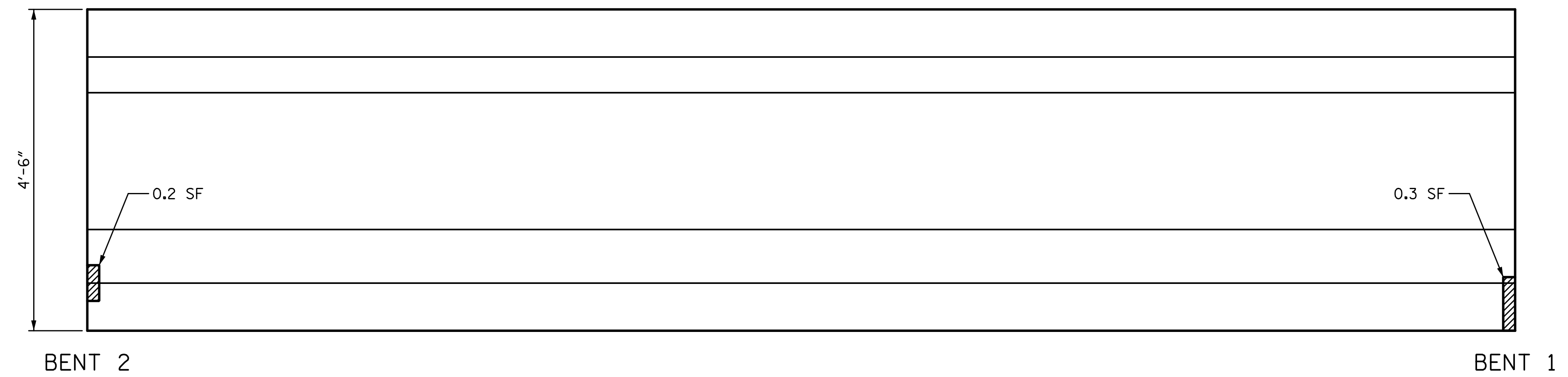
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 2 GRD. 3	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.5	0.2			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 3 OF 5

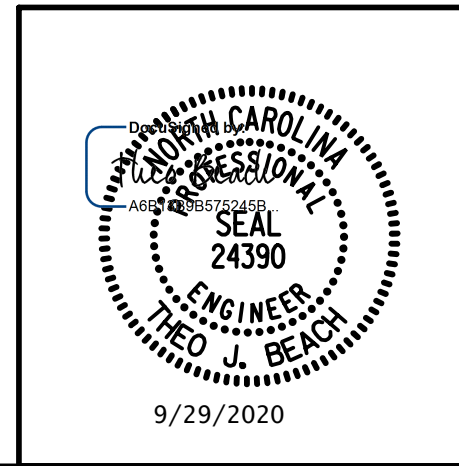
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 2
 GIRDER 3**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-40
1			3			TOTAL SHEETS
2			4			163

PLANS PREPARED BY:

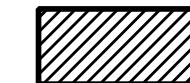
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

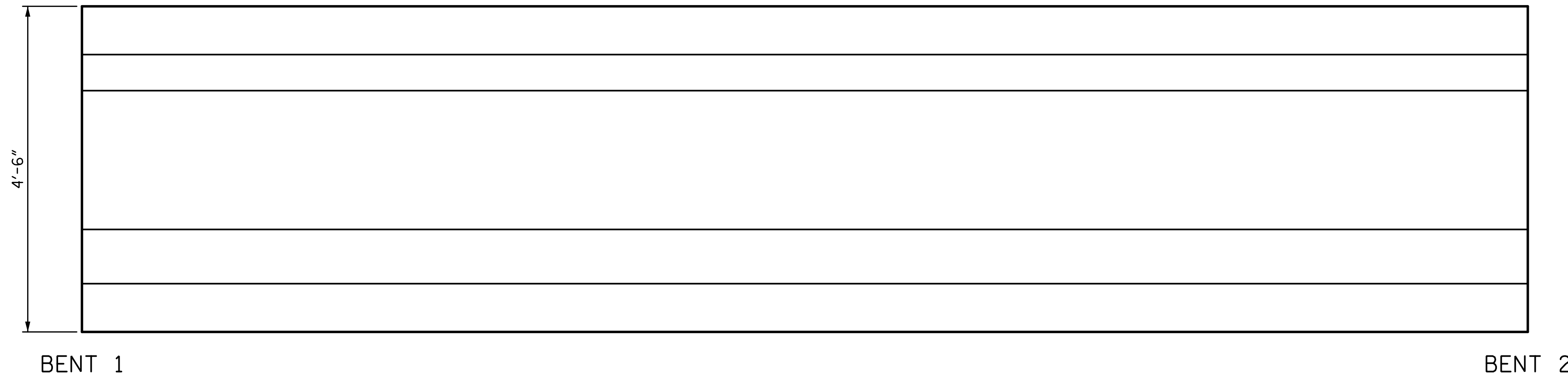


DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

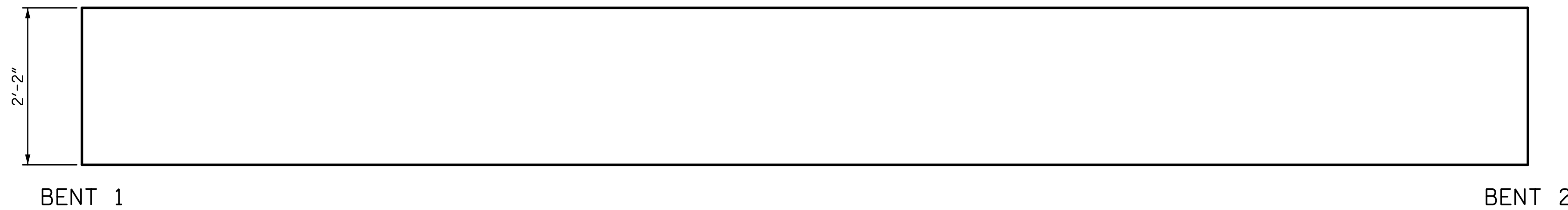
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:00 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_2_640048.dgn

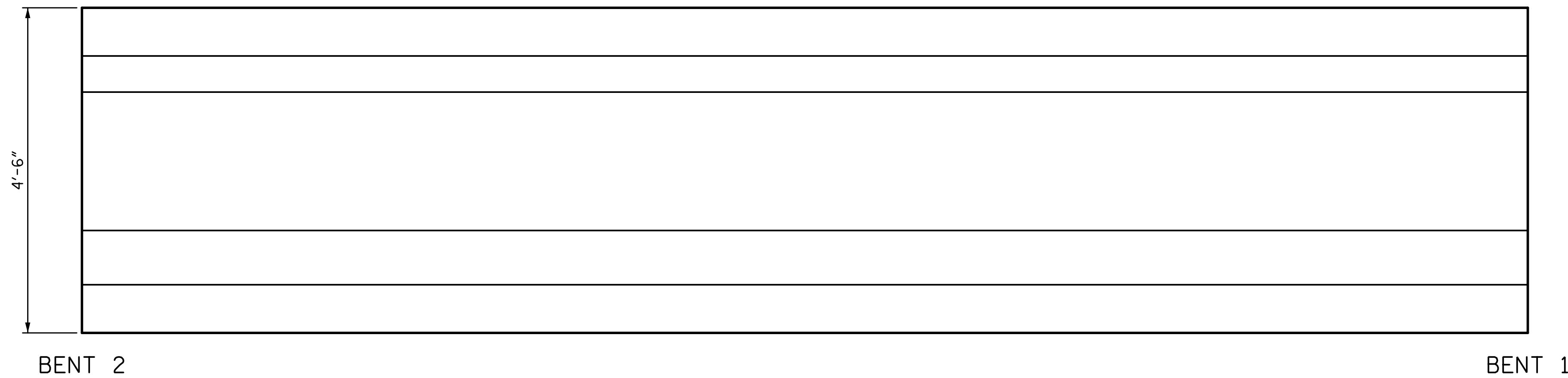
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 2 GRD. 4	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 4 OF 5

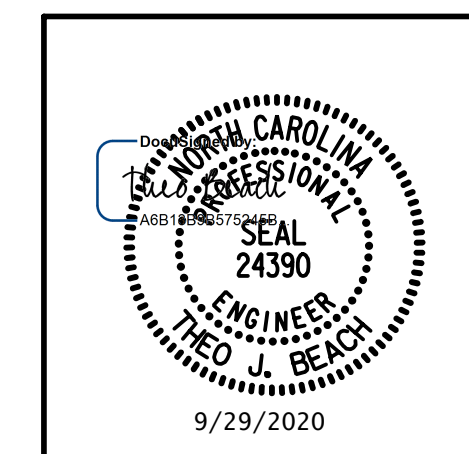
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 2
 GIRDER 4**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-41
1			3			TOTAL SHEETS
2			4			163

PLANS PREPARED BY:


 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

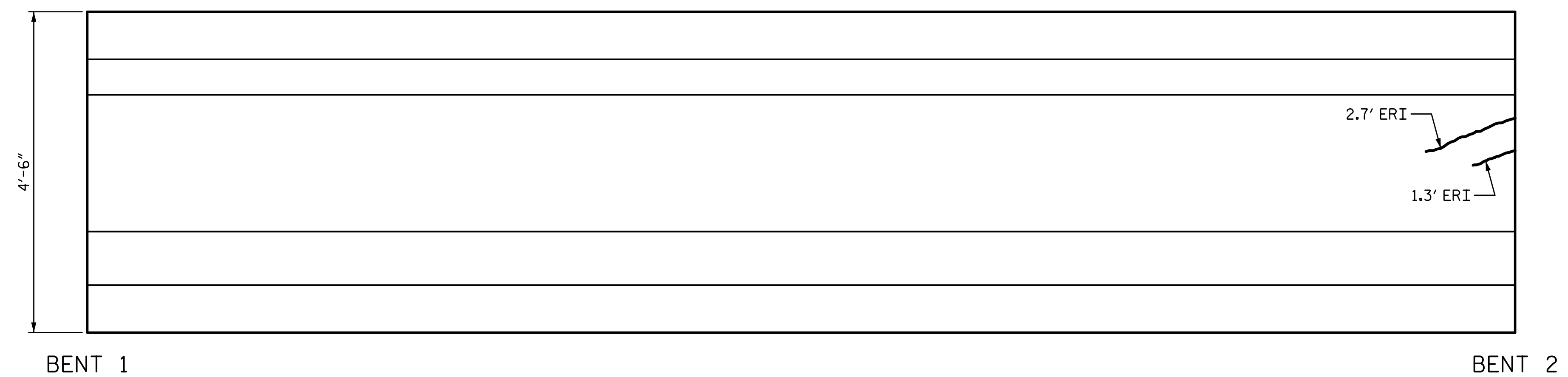


DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

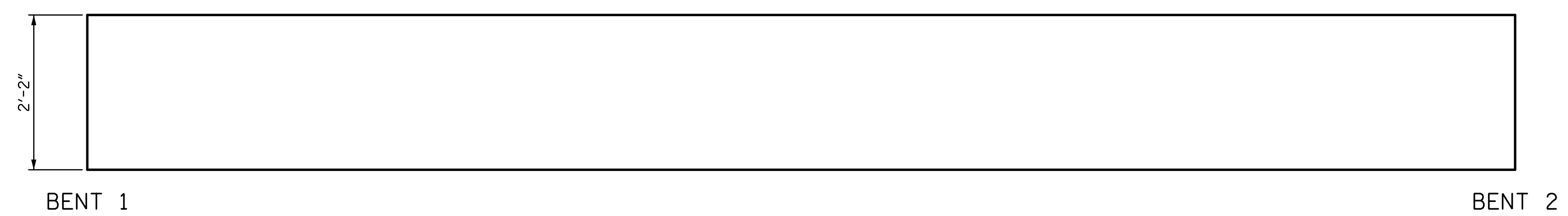
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:01 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_2_640048.dgn

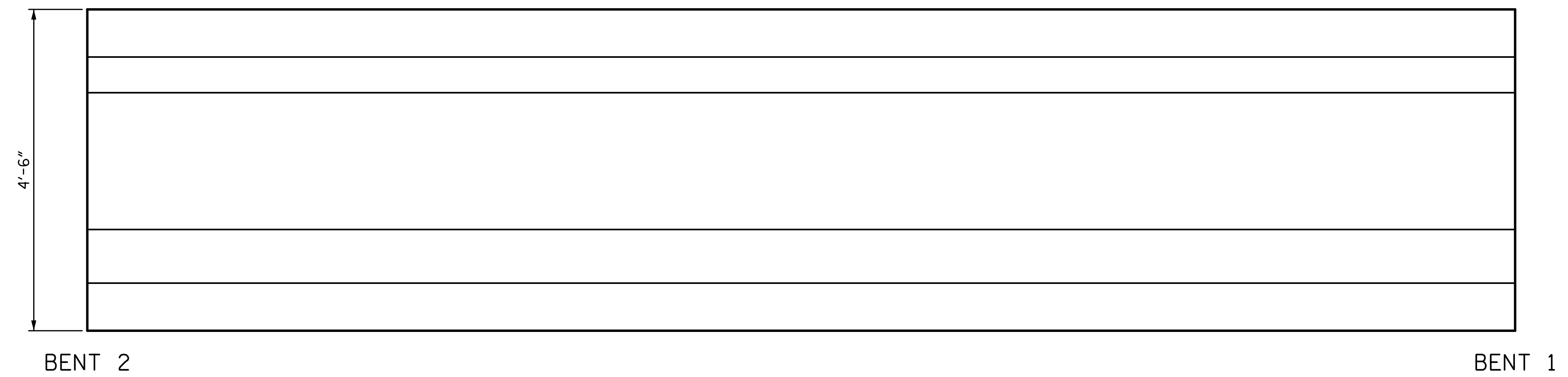
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 2 GRD. 5	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		4.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 5 OF 5

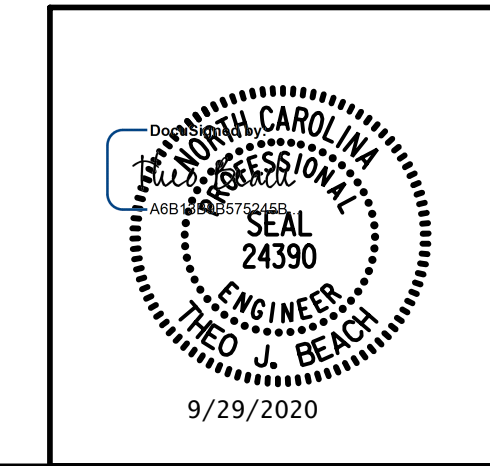
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 2
 GIRDER 5**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-42
1			3			TOTAL SHEETS
2			4			163

PLANS PREPARED BY:

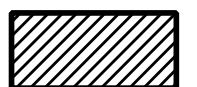
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

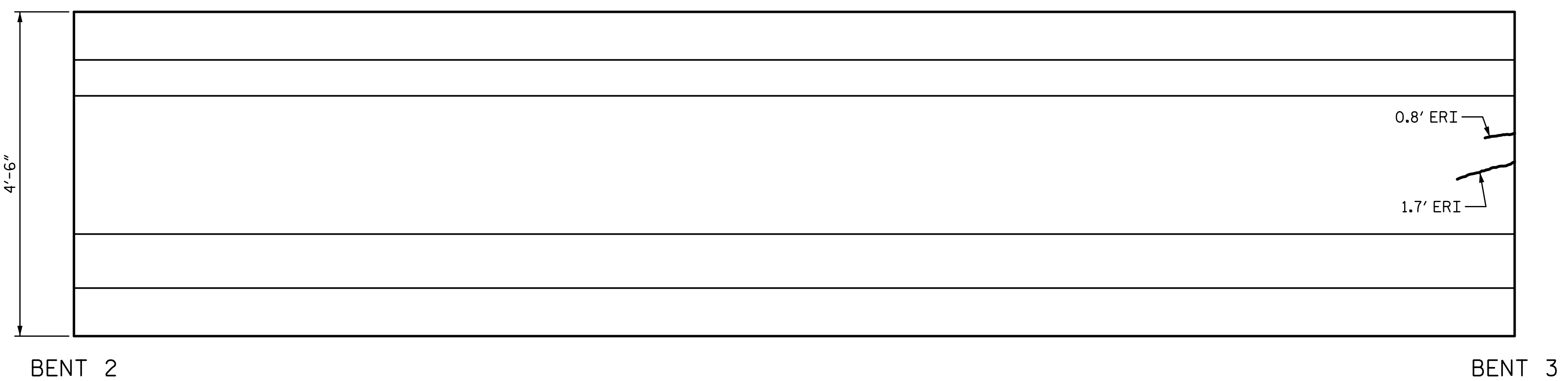


DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

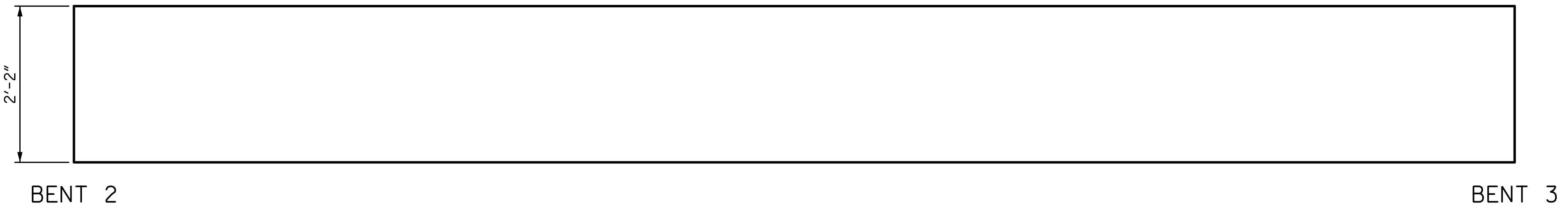
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:01 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_3_640048.dgn

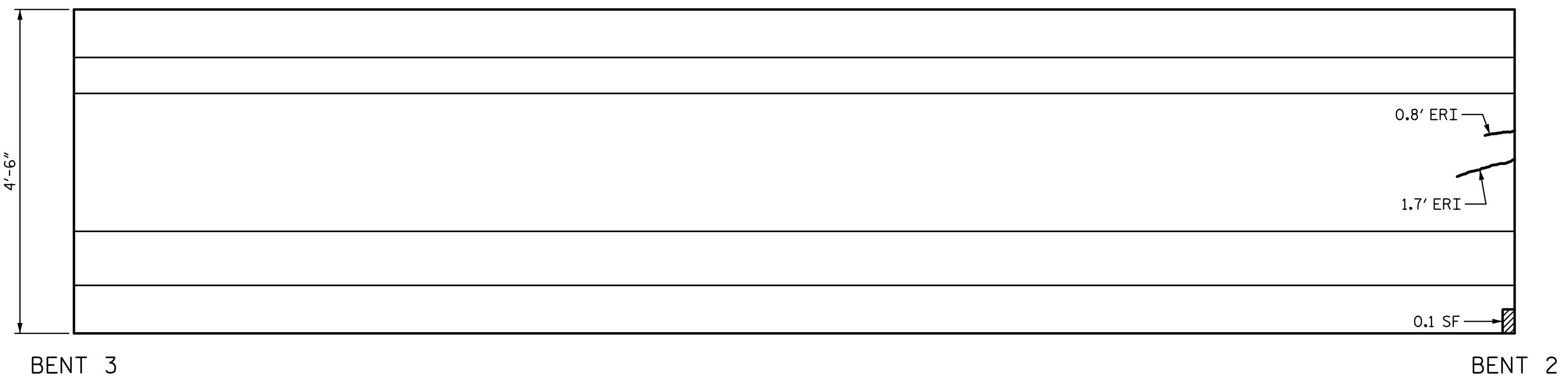
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 3 GRD. 1	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.1	0.05			
EPOXY RESIN INJECTION		LF			LF
GIRDER		5.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

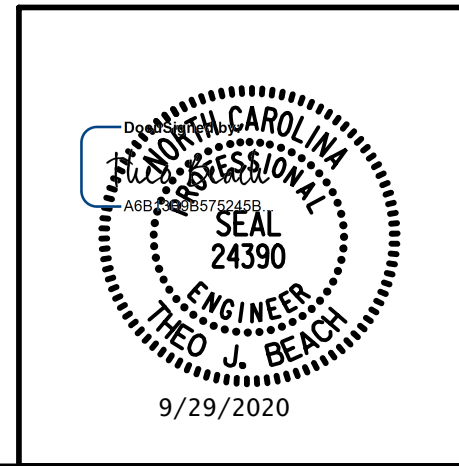
AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 1 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 3
GIRDER 1**



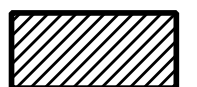
PLANS PREPARED BY:
SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

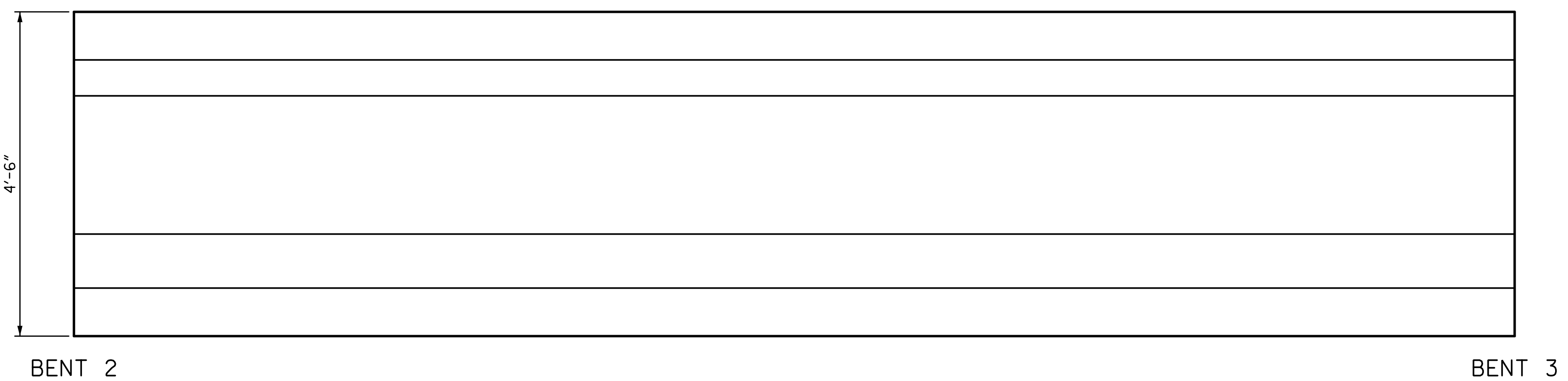
DRAWN BY: <u>T. BANKOVICH</u>	DATE: <u>9-20</u>
CHECKED BY: <u>T.J. BEACH</u>	DATE: <u>9-20</u>
DESIGN ENGINEER OF RECORD: <u>T.J. BEACH</u>	DATE: <u>9-20</u>

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-43
1			3			TOTAL SHEETS
2			4			163

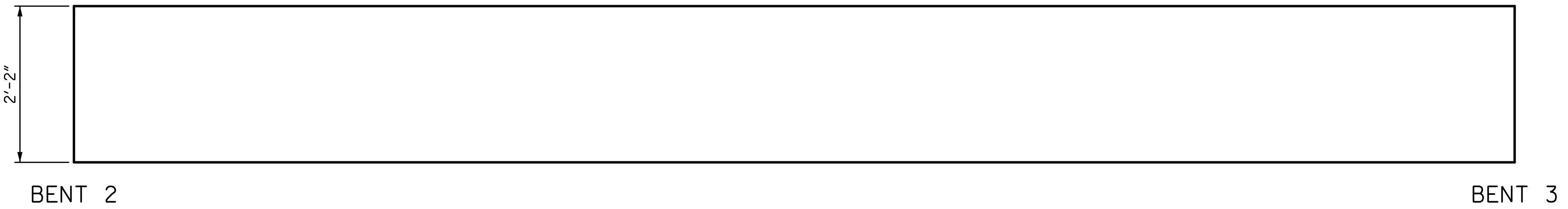
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:01 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_3_640048.dgn

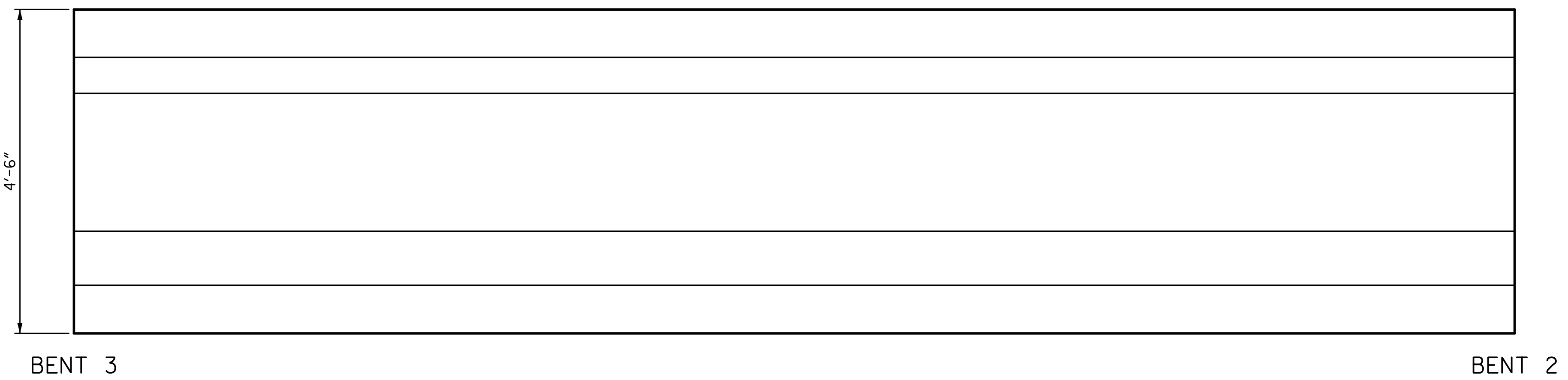
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 3 GRD. 2	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

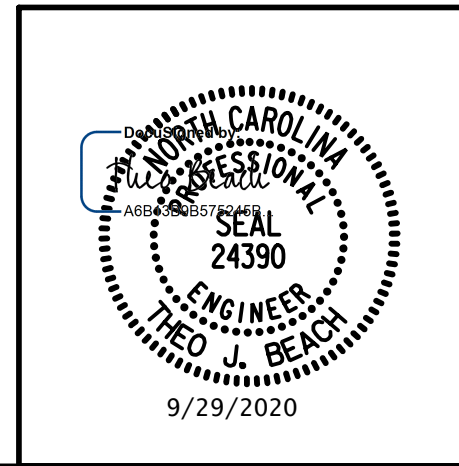
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 2 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 3
 GIRDER 2

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




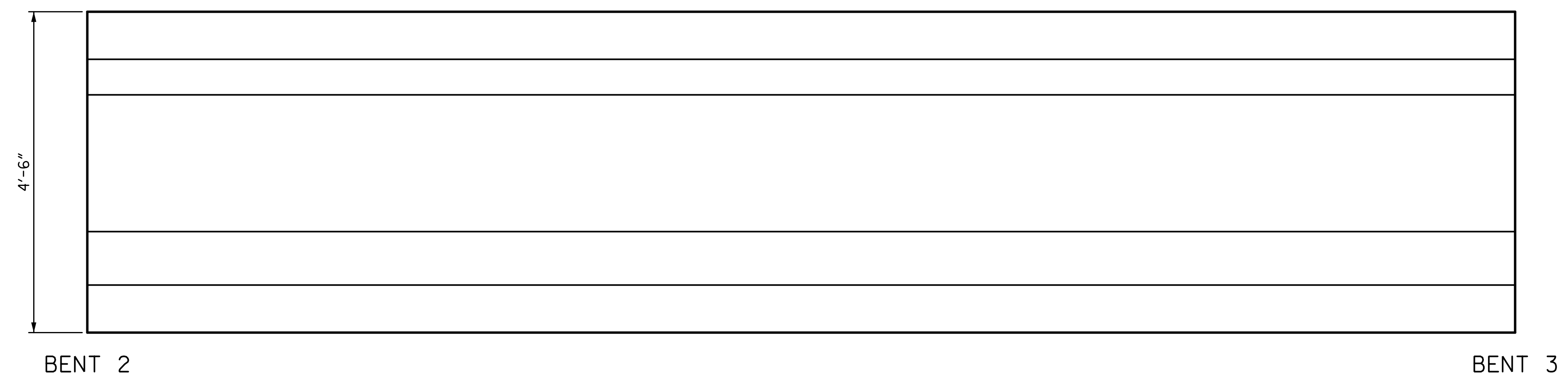
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-44
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:01 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_3_640048.dgn

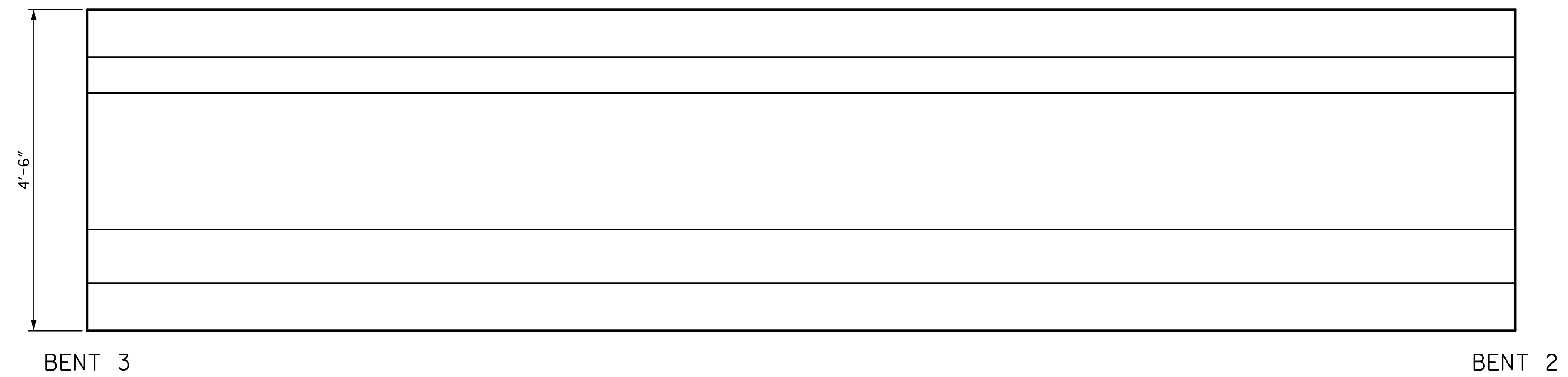
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 3 GRD. 3	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

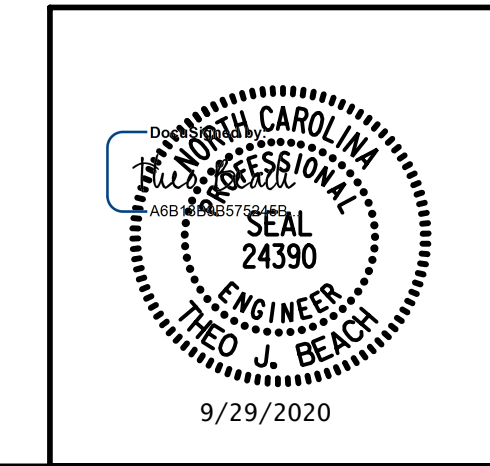
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 3 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 3
 GIRDER 3

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

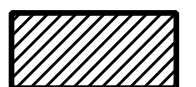


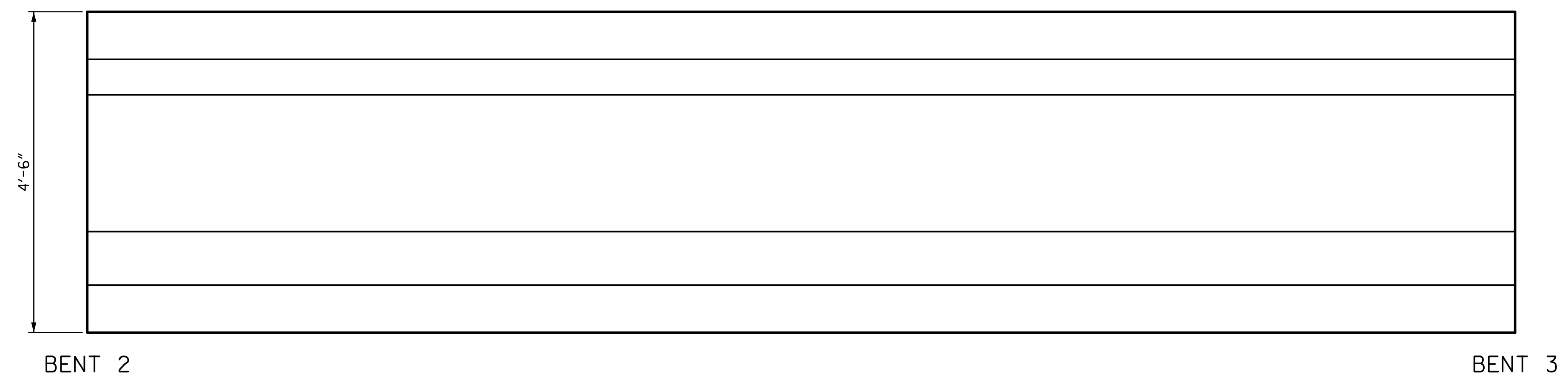
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-45
1			3			TOTAL SHEETS
2			4			163

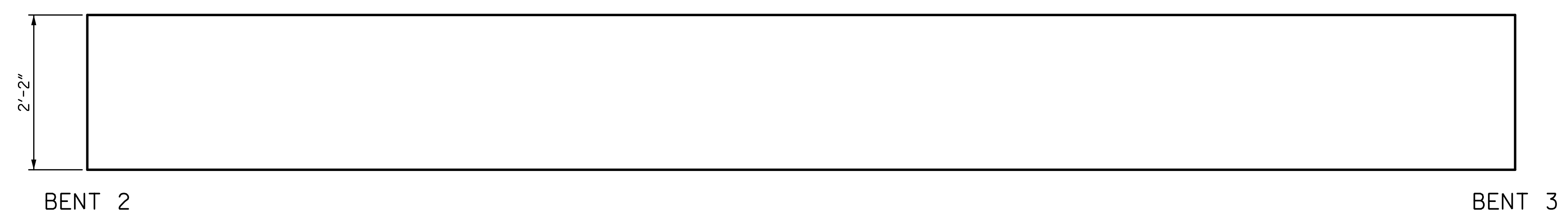
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:02 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_3_640048.dgn

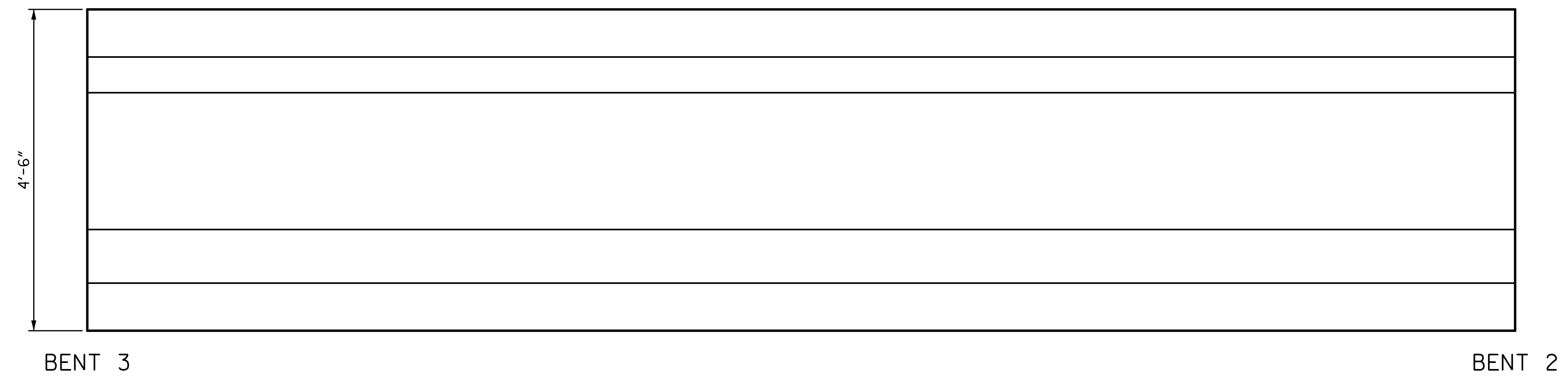
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 3 GRD. 4	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

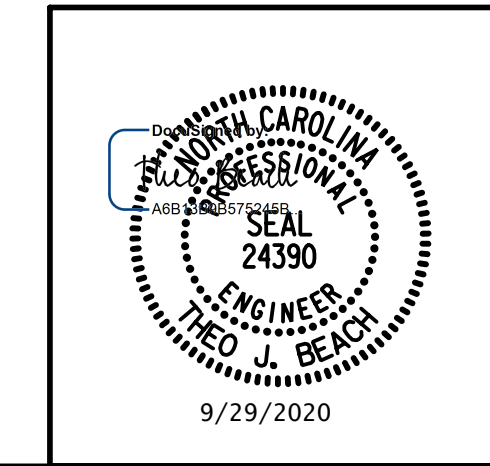
SHEET 4 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 3
 GIRDER 4**

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




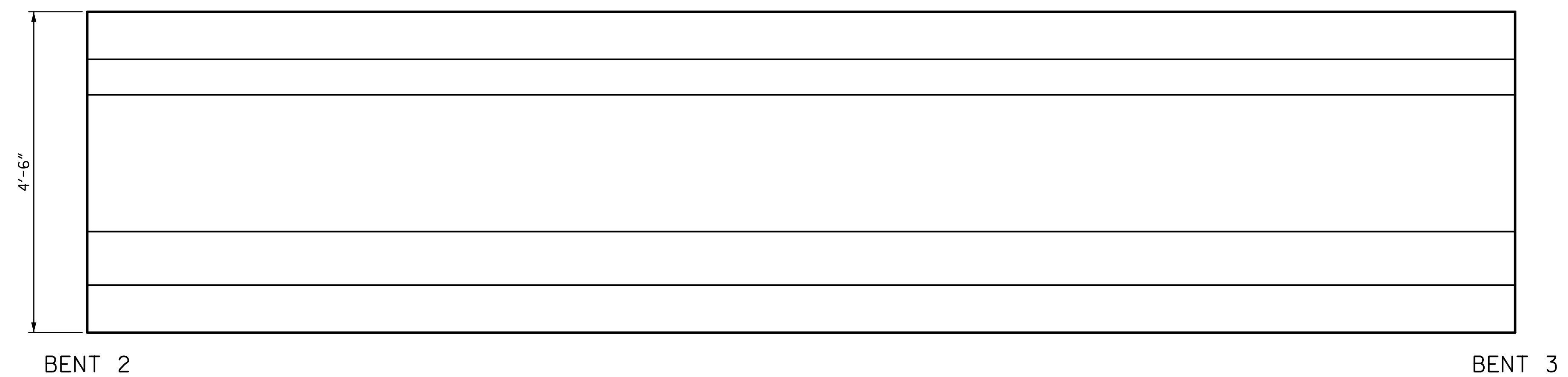
DRAWN BY: <u>T. BANKOVICH</u>	DATE: <u>9-20</u>
CHECKED BY: <u>T.J. BEACH</u>	DATE: <u>9-20</u>
DESIGN ENGINEER OF RECORD: <u>T.J. BEACH</u>	DATE: <u>9-20</u>

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:02 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_3_640048.dgn

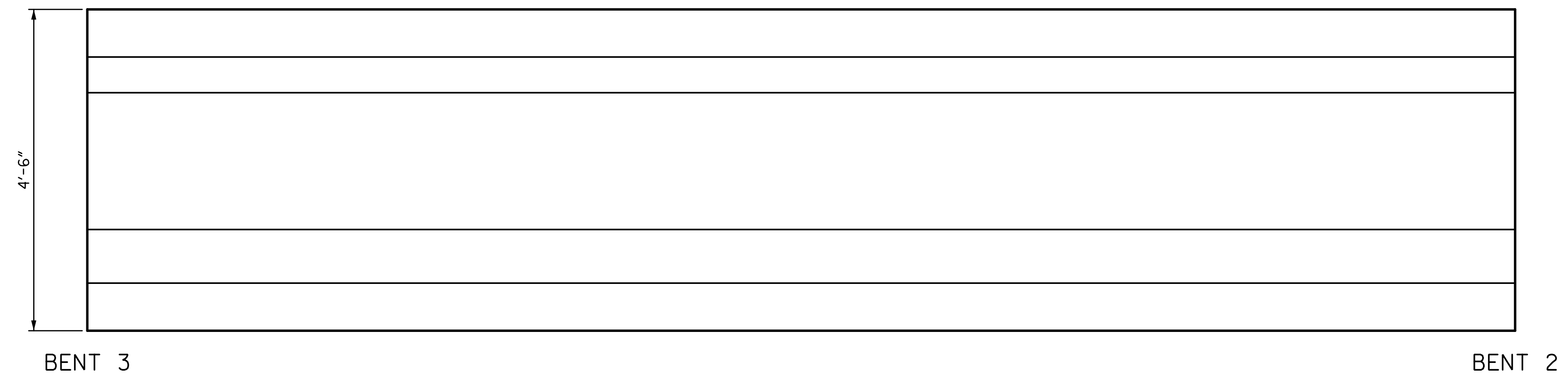
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 3 GRD. 5	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

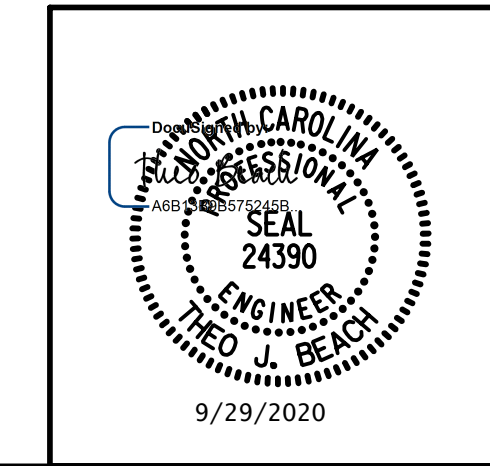
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 5 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 3
 GIRDER 5

PLANS PREPARED BY:

 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

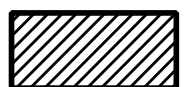


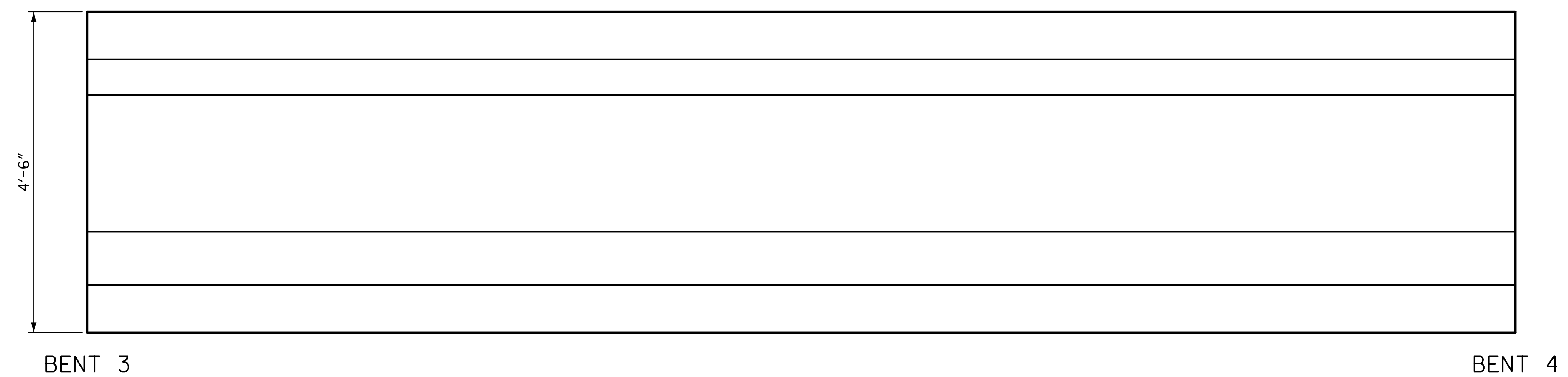
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-47
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:02 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_4_640048.dgn

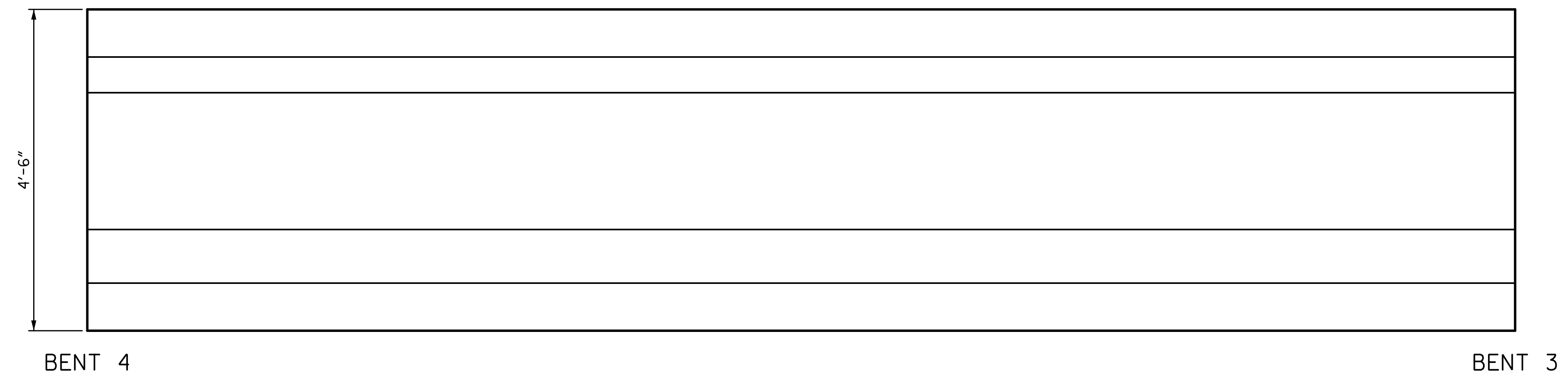
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 4 GRD. 1	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

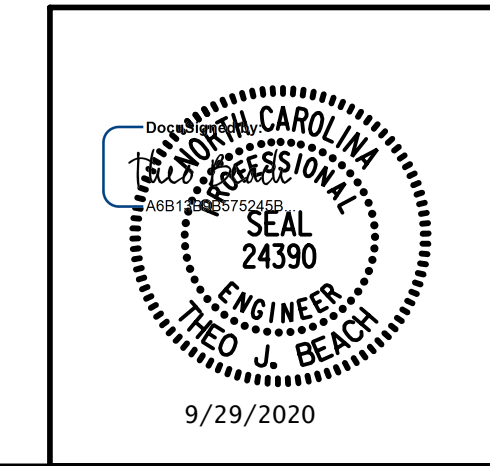
SHEET 1 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 4
 GIRDER 1**

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

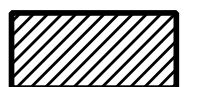


DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

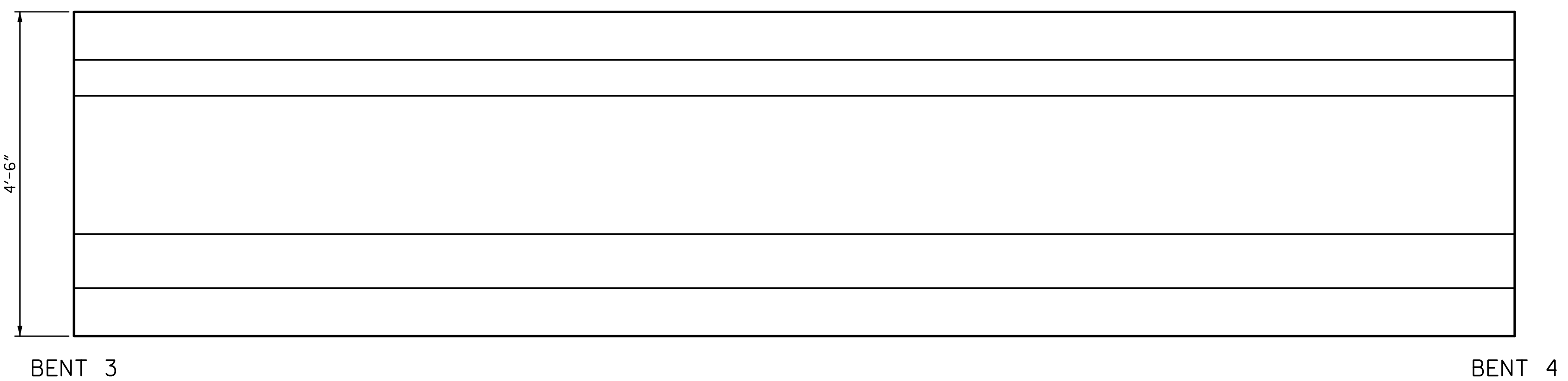
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-48
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

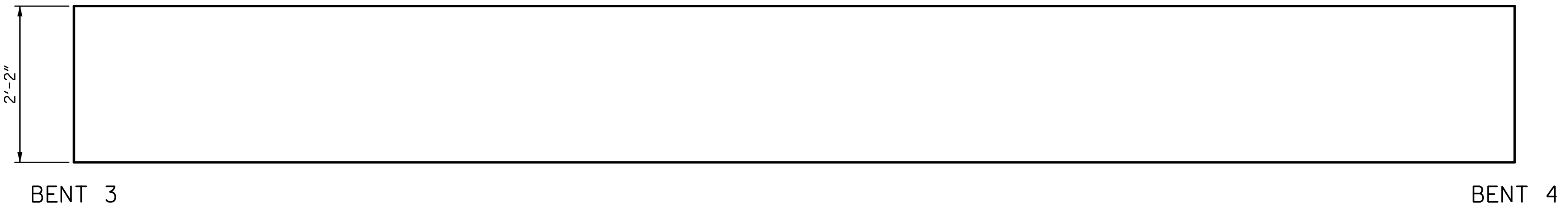
9/28/2020 12:01:02 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN 4_640048.dgn

 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION

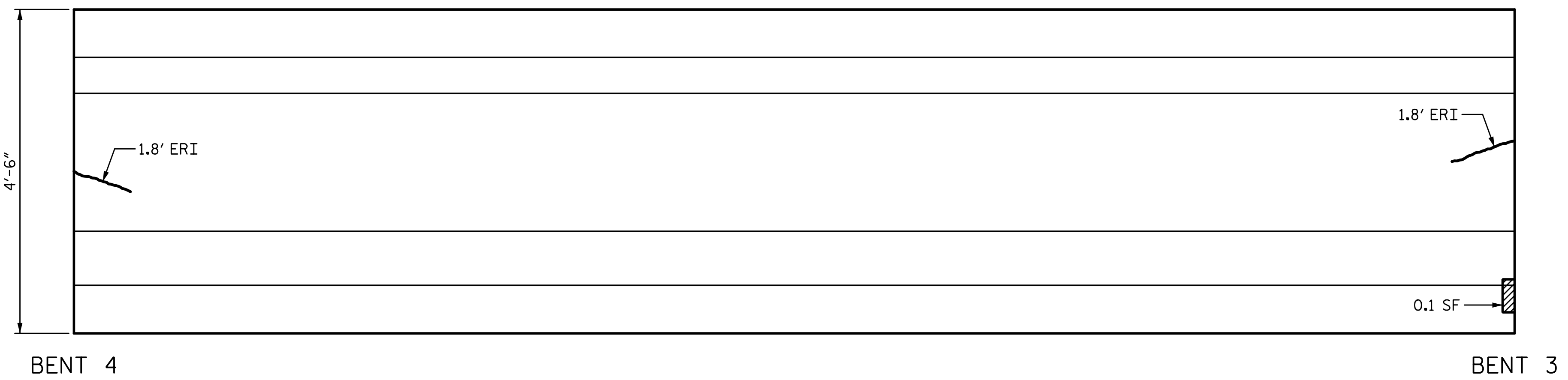
REPAIR QUANTITY TABLE					
REPAIRS SPAN 4 GRD. 2	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.1	0.05			
EPOXY RESIN INJECTION			LF		LF
GIRDER		3.6			



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

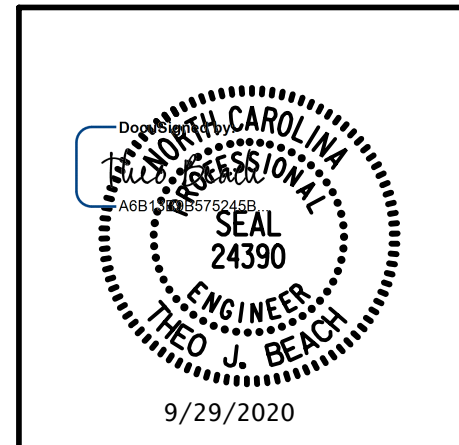
SHEET 2 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 4
 GIRDER 2**

PLANS PREPARED BY:

 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

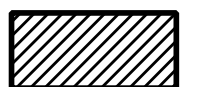


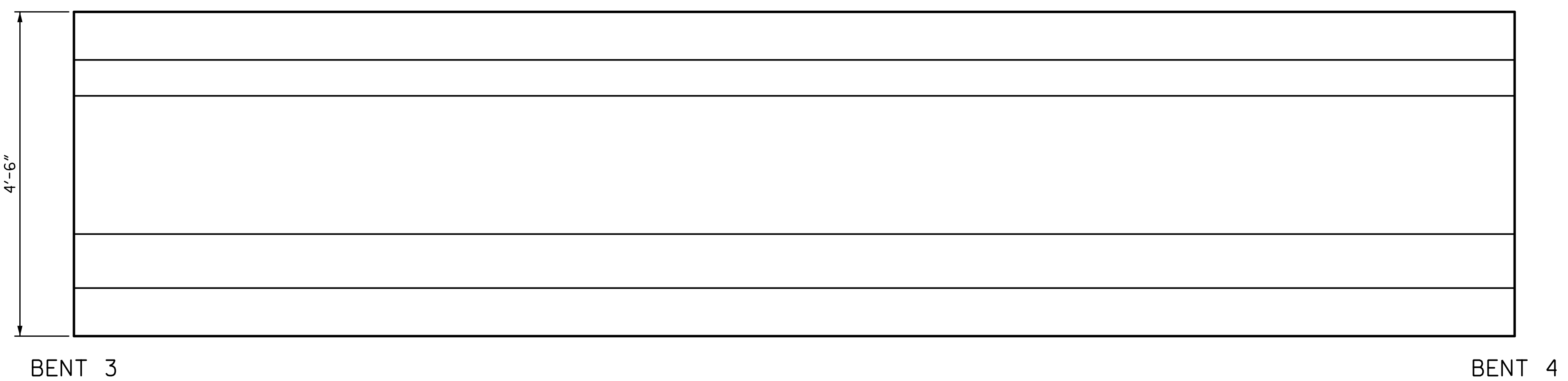
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-49
1			3			TOTAL SHEETS
2			4			163

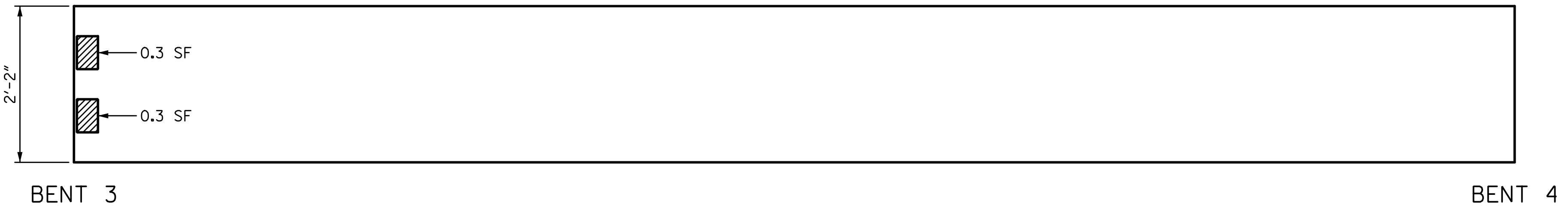
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:03 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 4_640048.dgn

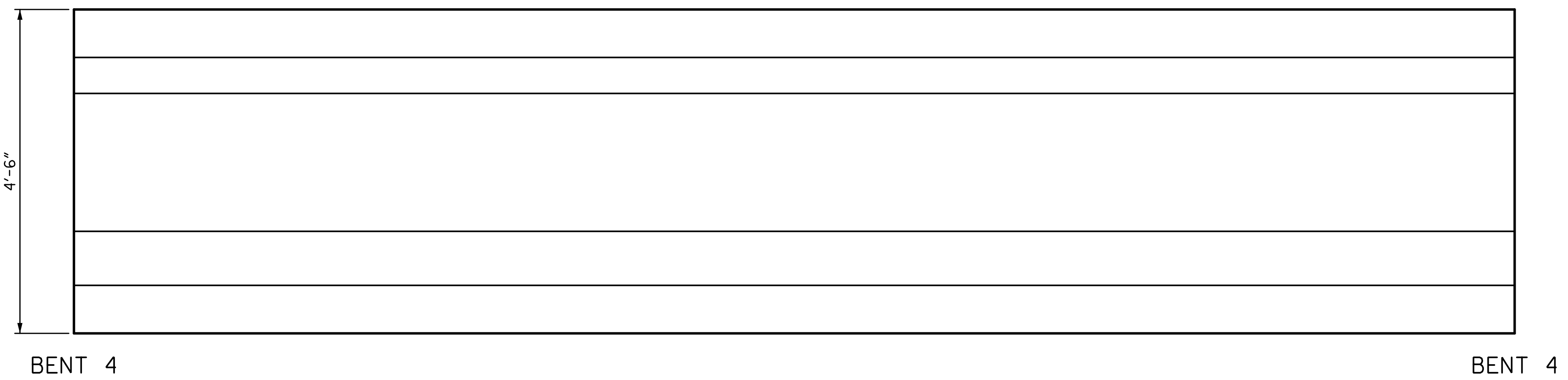
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 4 GRD. 3	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.6	0.2			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

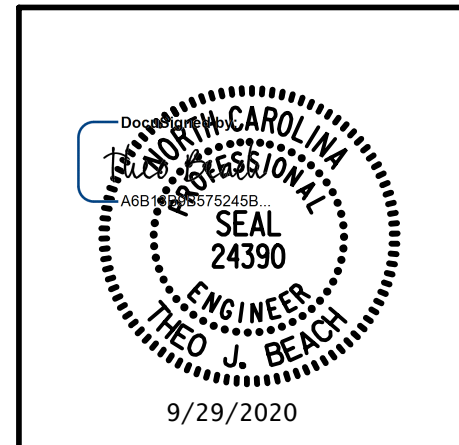
SHEET 3 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 4
 GIRDER 3**

PLANS PREPARED BY:

SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

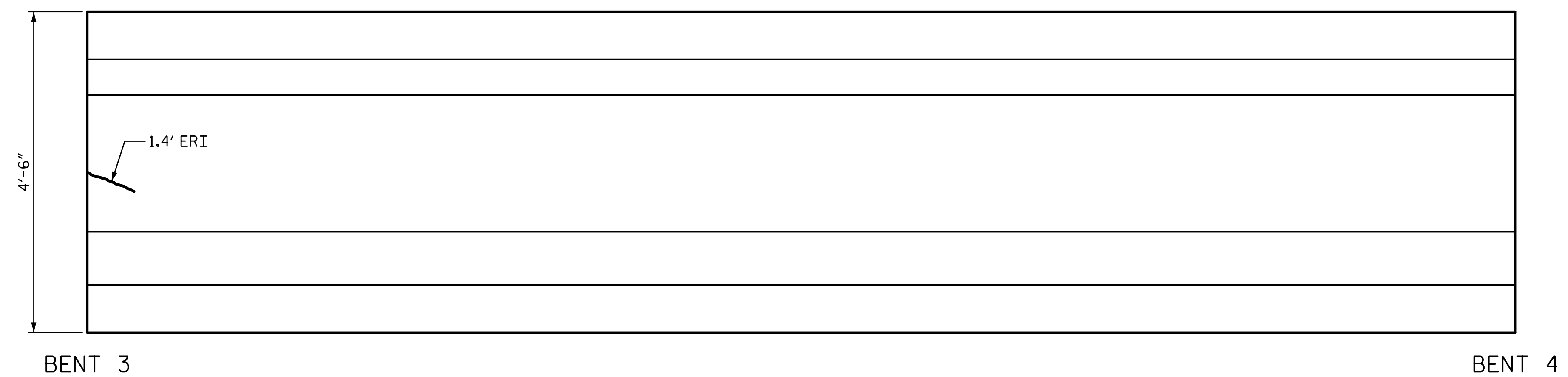
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-50
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:03 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN 4_640048.dgn

 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION

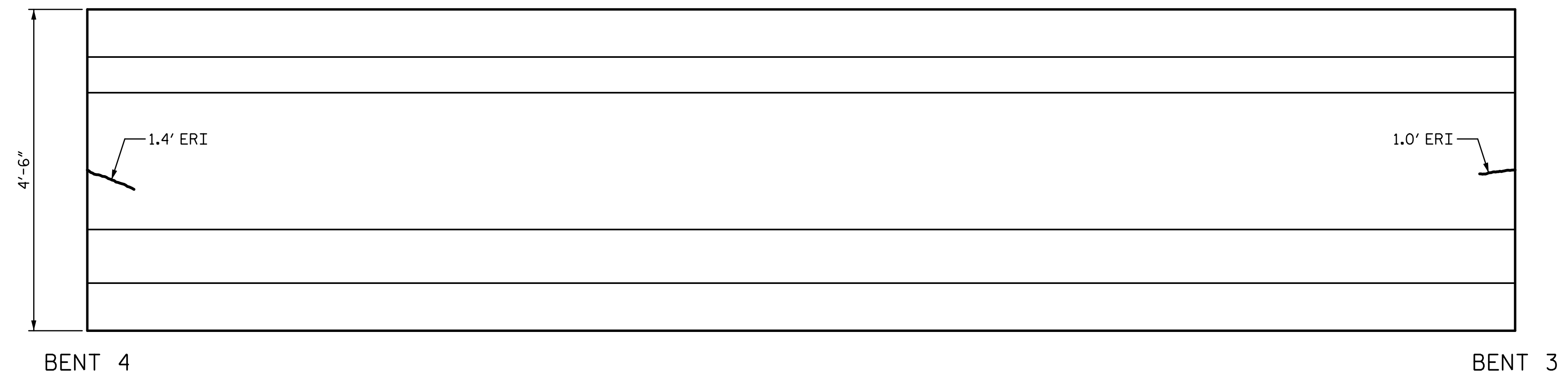
REPAIR QUANTITY TABLE					
REPAIRS SPAN 4 GRD. 4	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		3.8			



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

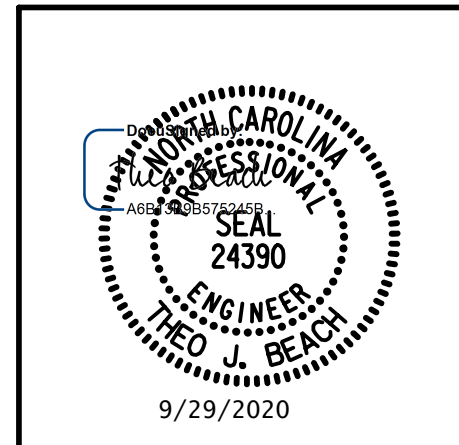
SHEET 4 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 4
 GIRDER 4**

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

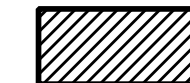


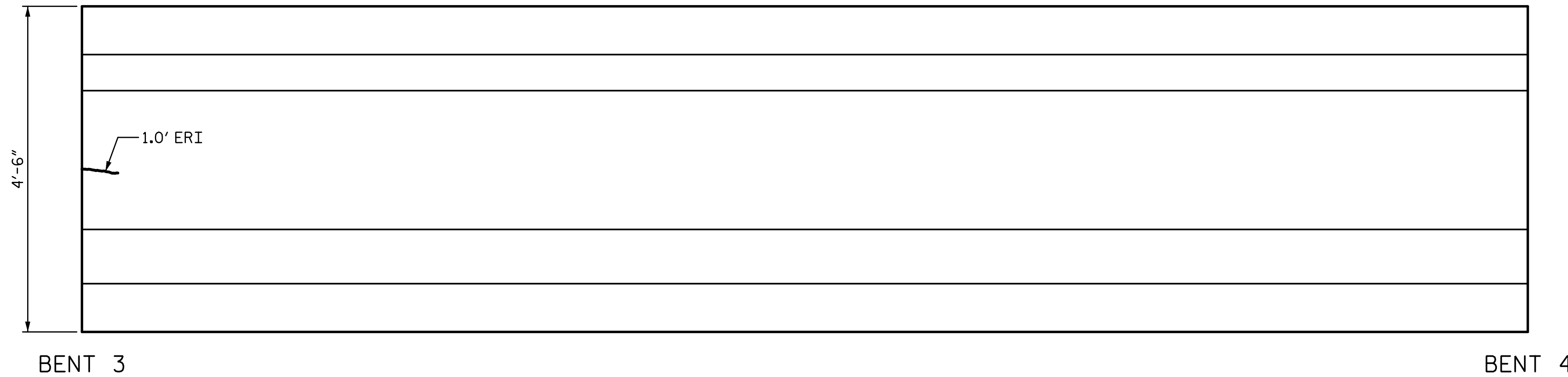
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-51
1			3			TOTAL SHEETS
2			4			163

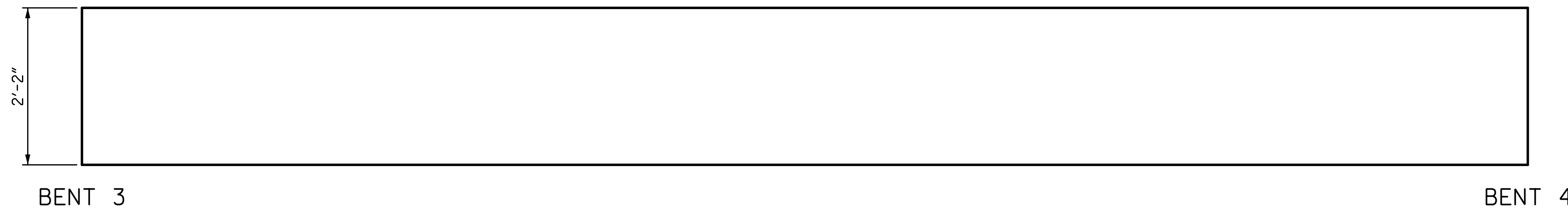
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:03 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN 4_640048.dgn

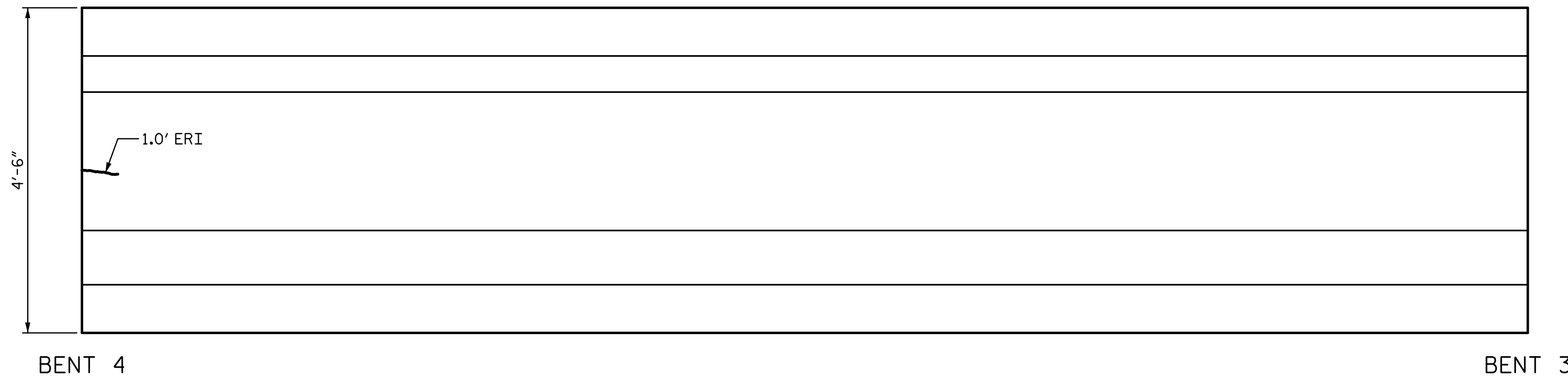
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 4 GRD. 5	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		2.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

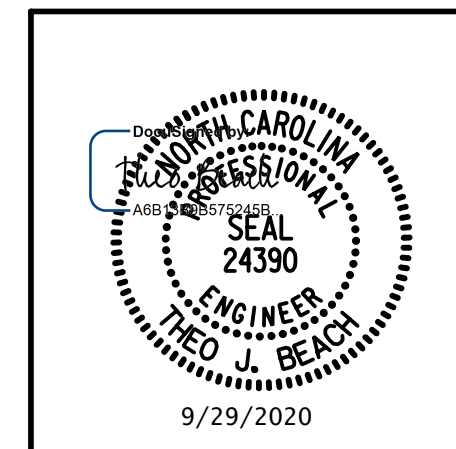
SHEET 5 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

SPAN 4
 GIRDER 5

PLANS PREPARED BY:

SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

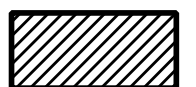


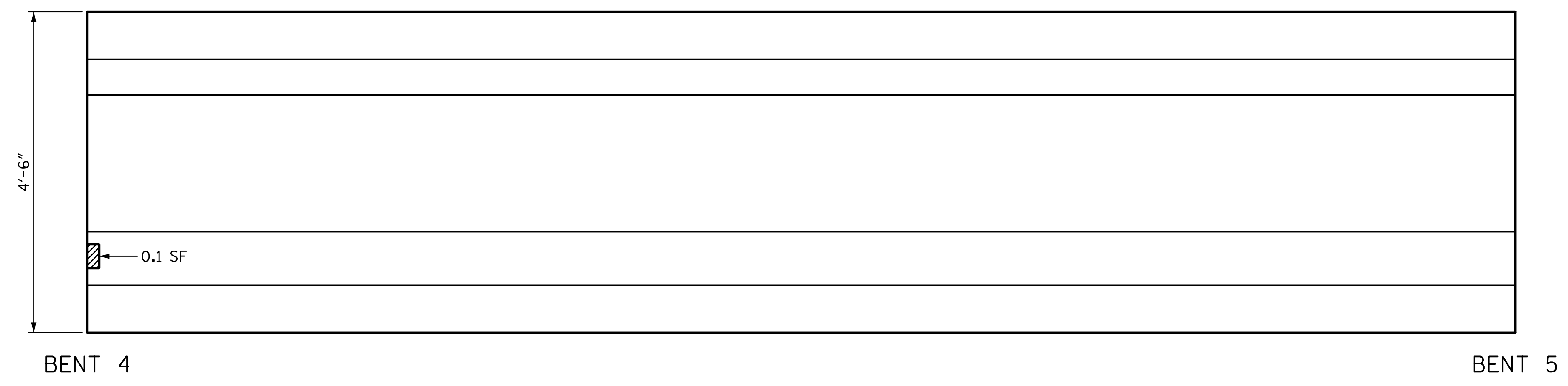
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-52
1			3			TOTAL SHEETS
2			4			163

9/28/2020 12:01:03 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN 5_640048.dgn

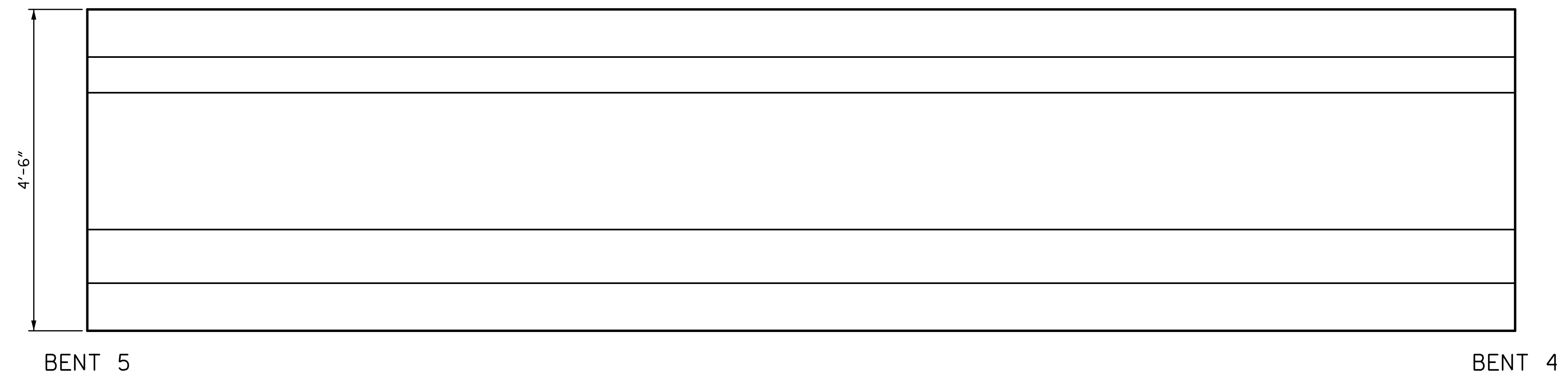
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 5 GRD. 1	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.1	0.05			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

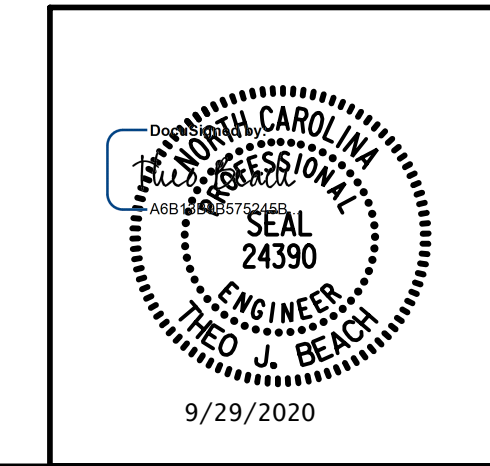
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 1 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 5
 GIRDER 1

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

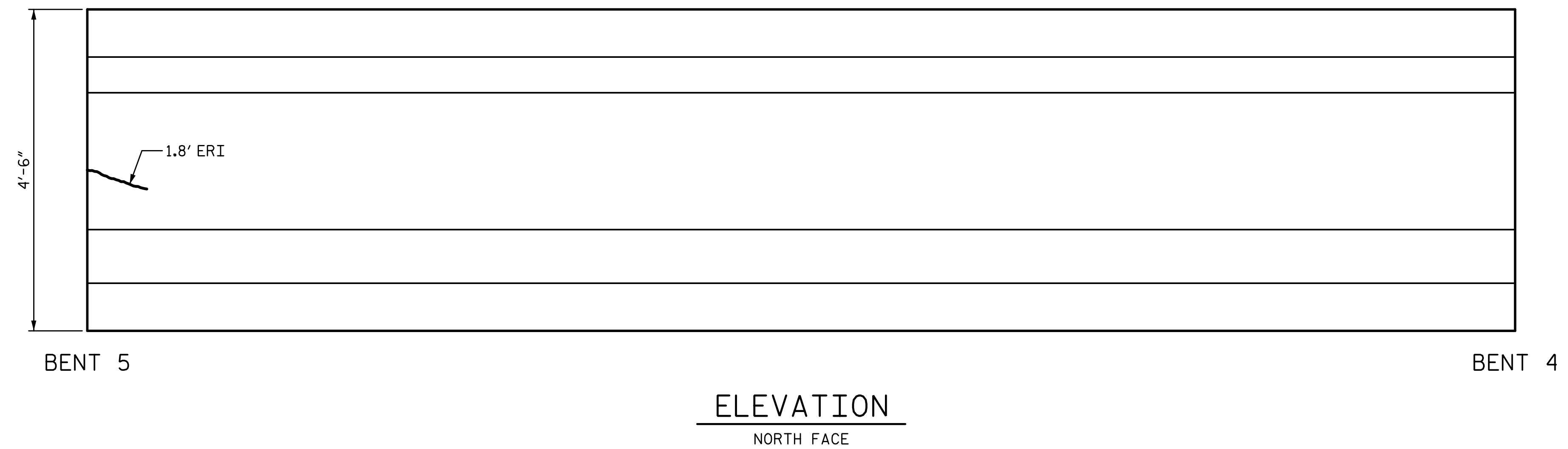
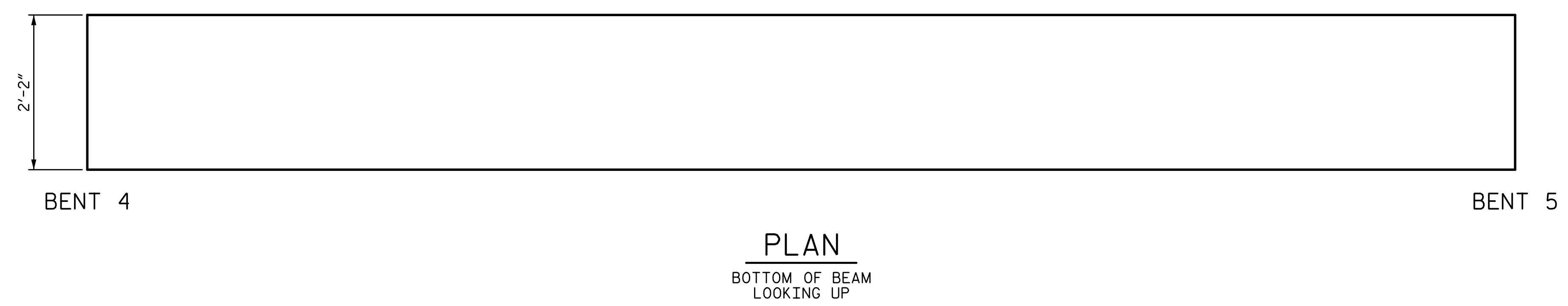
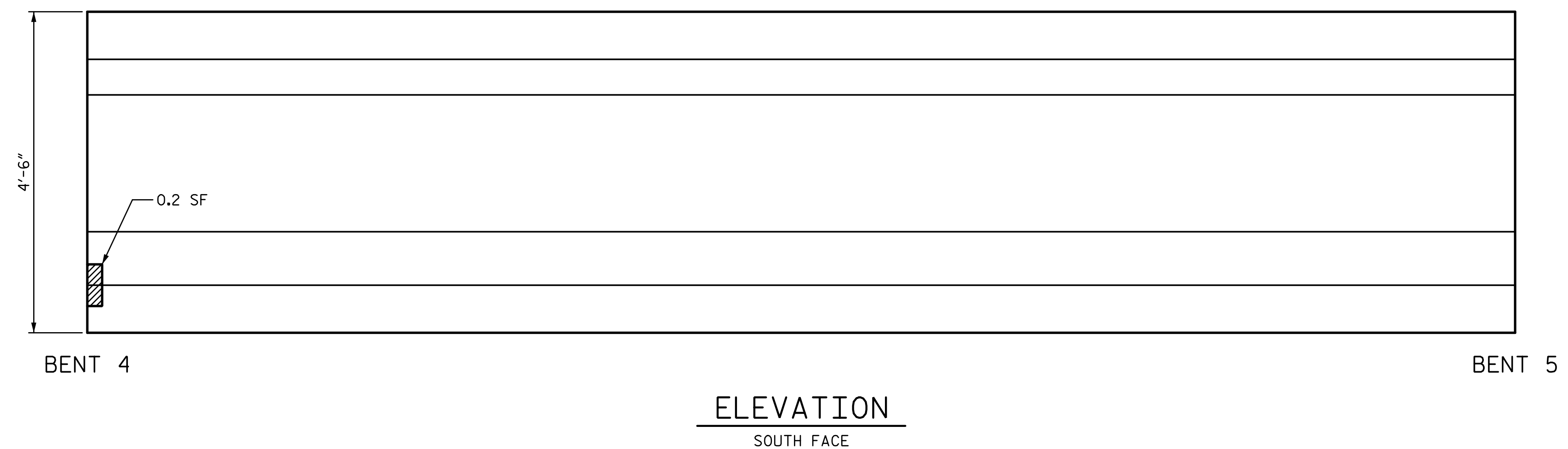
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-53
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:04 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN 5_640048.dgn

 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE					
REPAIRS SPAN 5 GRD. 2	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.2	0.05			
EPOXY RESIN INJECTION			LF		LF
GIRDER		1.8			



NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

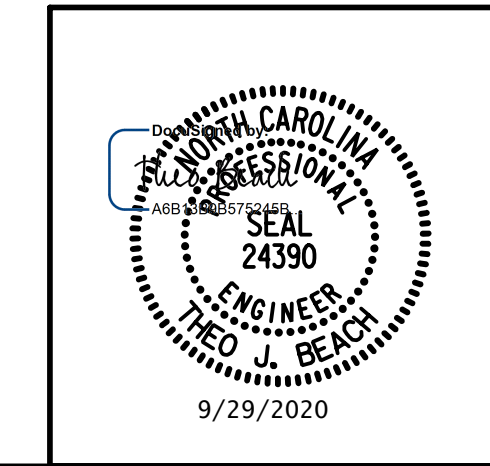
SHEET 2 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 5
 GIRDER 2**

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

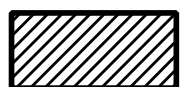


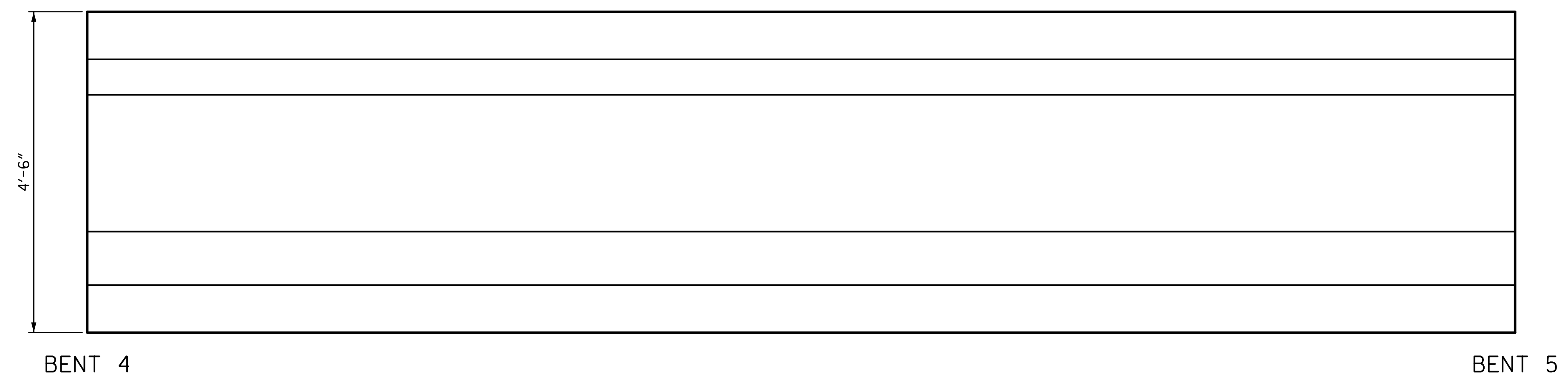
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO. S1-54
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 163
2			4			

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:04 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN 5_640048.dgn

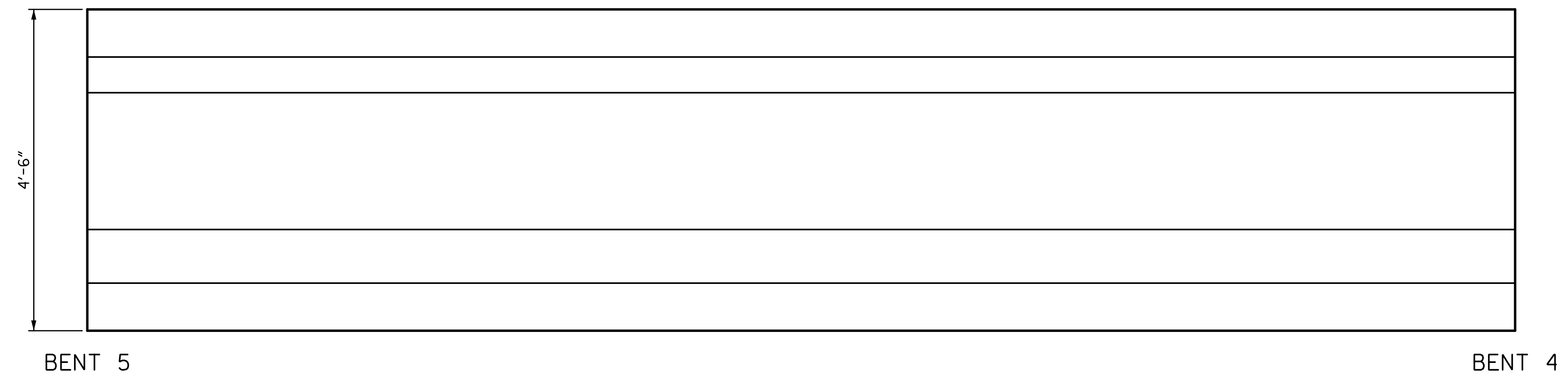
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 5 GRD. 3	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

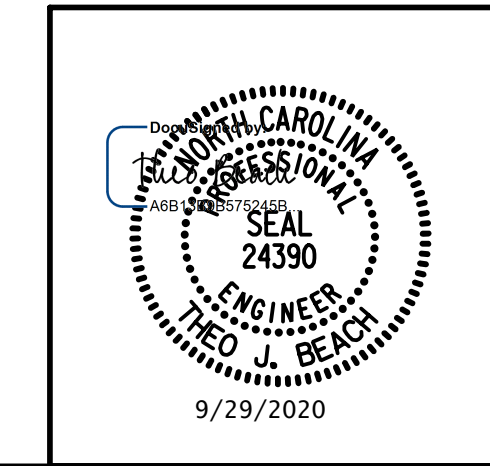
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 3 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 5
 GIRDER 3

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

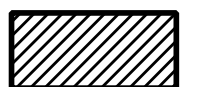


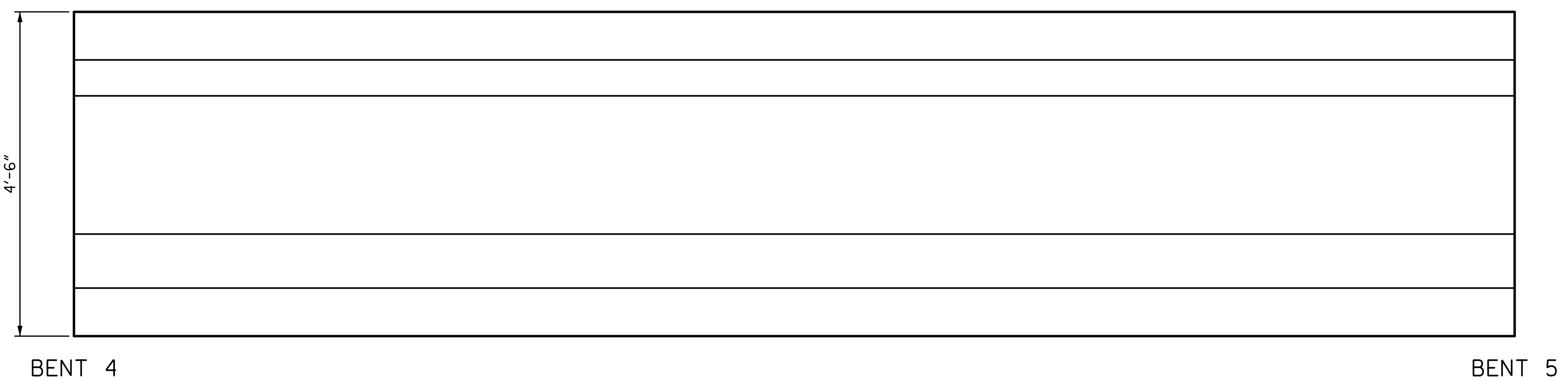
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-55
1			3			TOTAL SHEETS
2			4			163

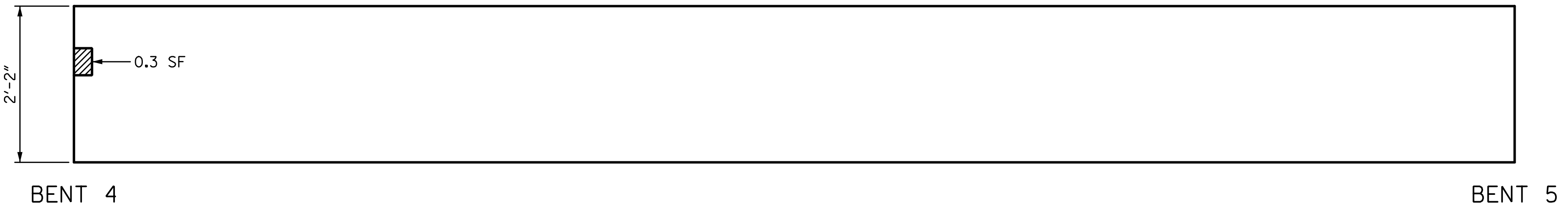
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:04 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_5_640048.dgn

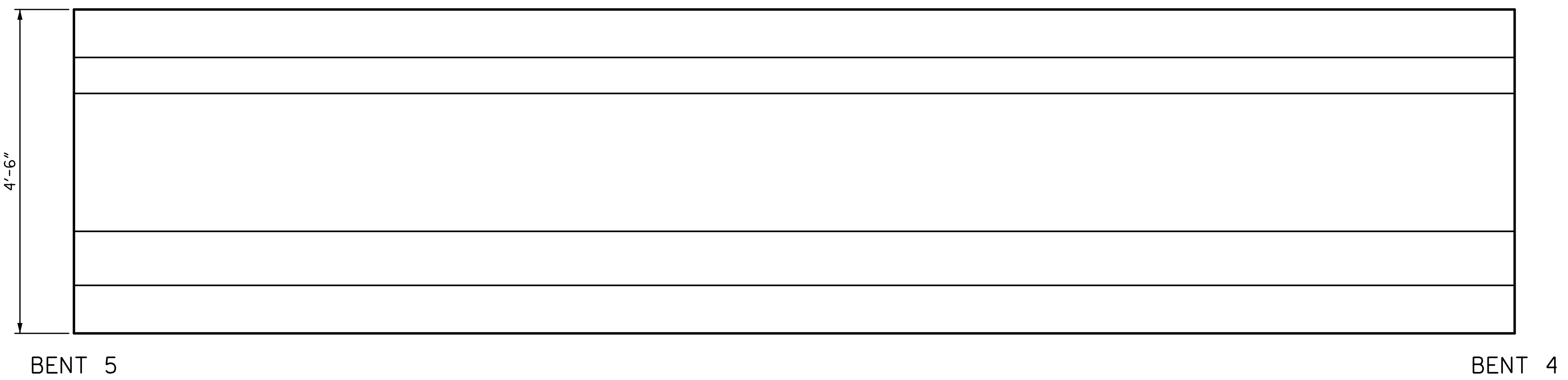
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 5 GRD. 4	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.3	0.1			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

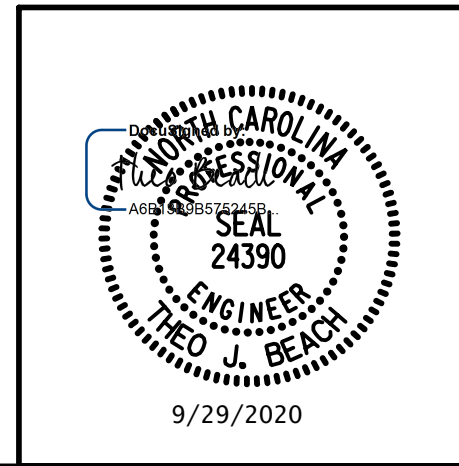
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 4 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
**SPAN 5
 GIRDER 4**

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

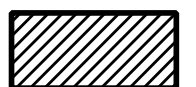


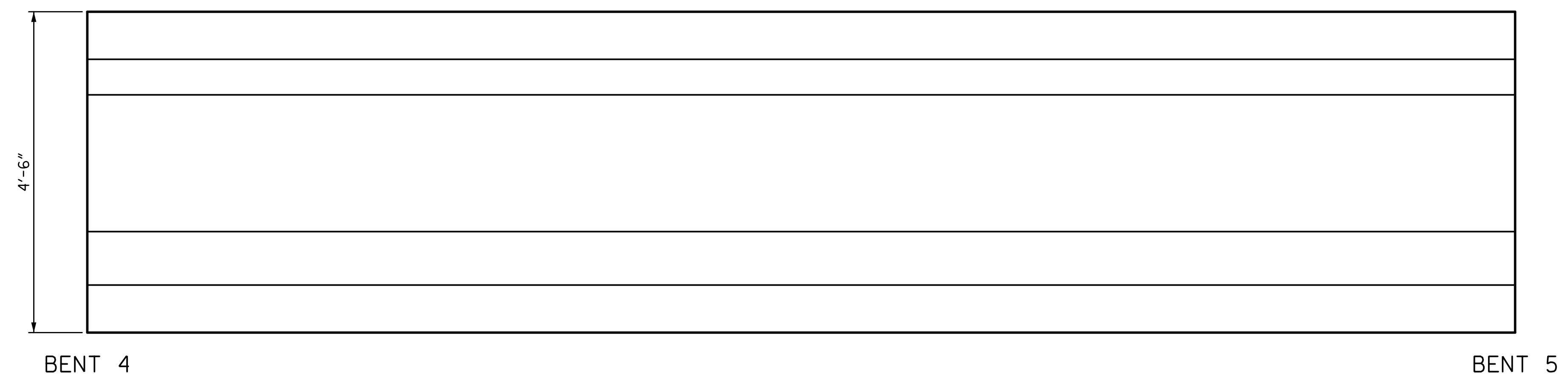
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-56
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:04 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_5_640048.dgn

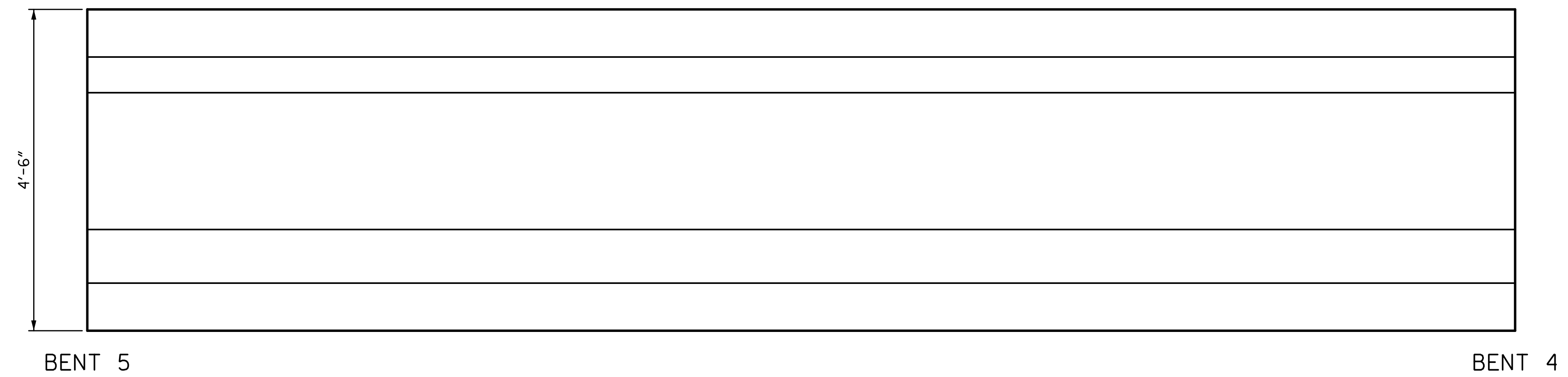
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 5 GRD. 5	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

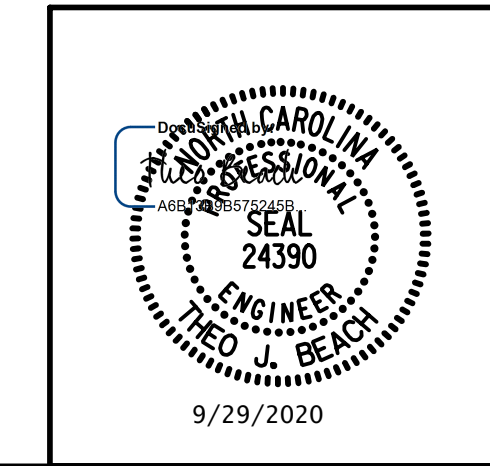
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 5 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 5
 GIRDER 5

PLANS PREPARED BY:

 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

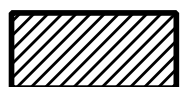


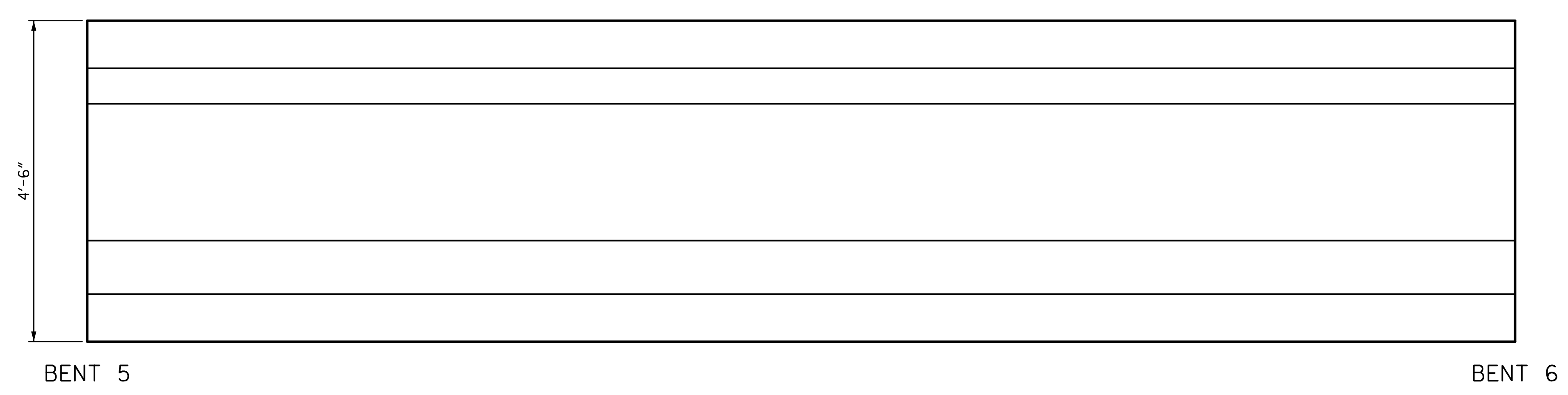
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-57
1			3			TOTAL SHEETS
2			4			163

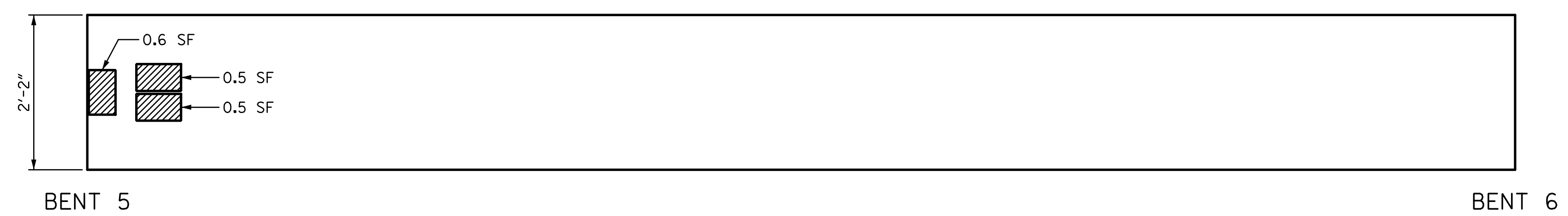
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:05 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_6_640048.dgn

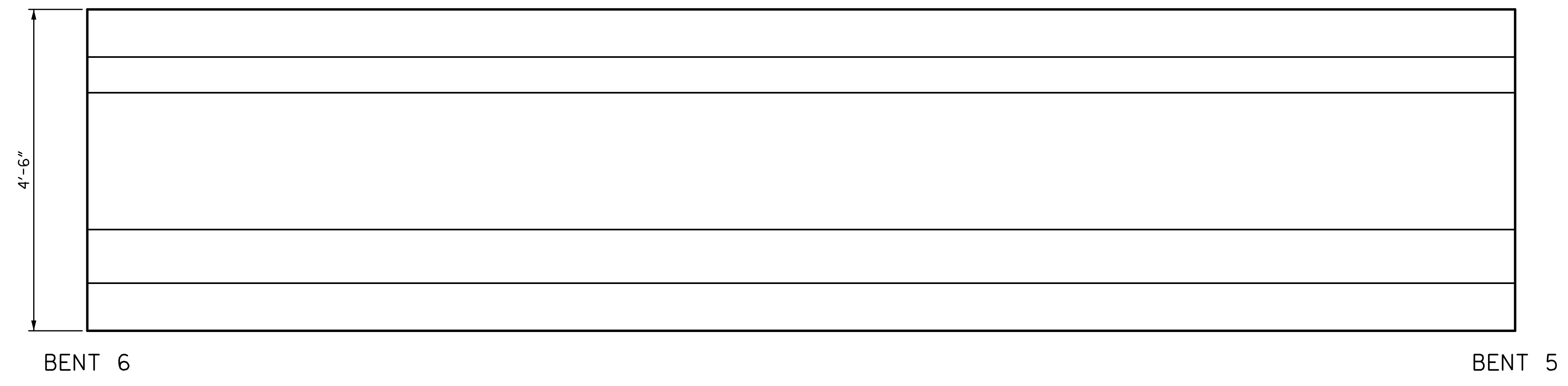
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 6 GRD. 1	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	1.6	0.8			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

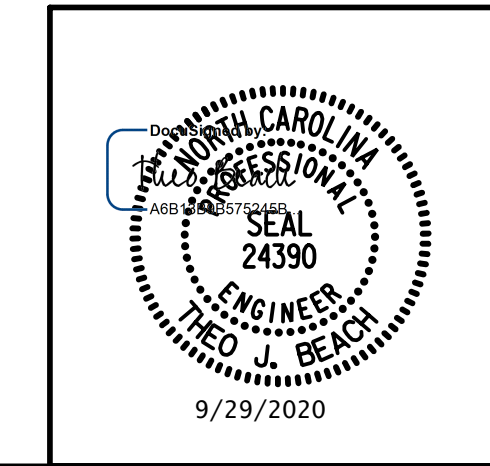
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 1 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
**SPAN 6
 GIRDER 1**

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




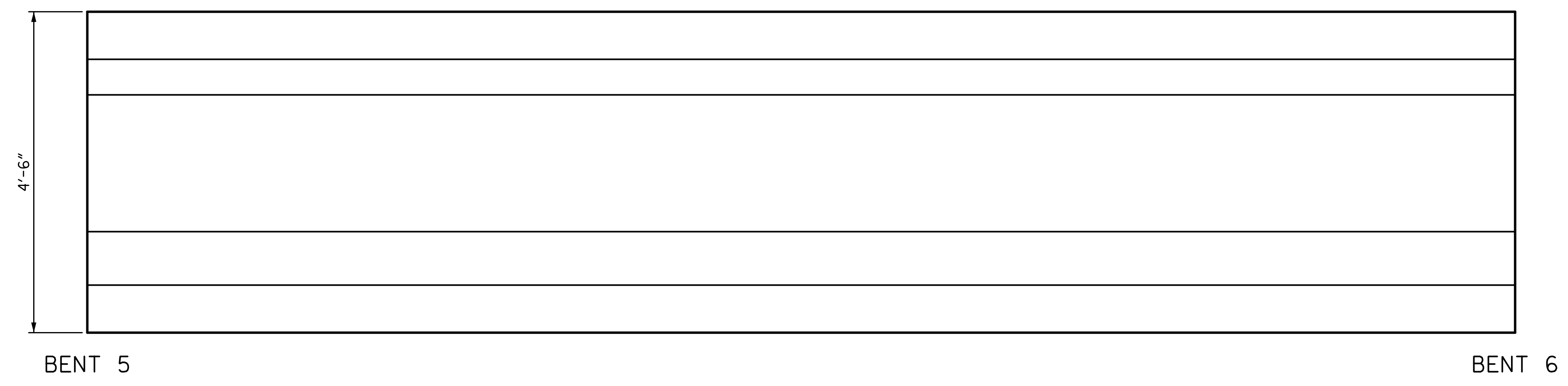
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-58
1			3			TOTAL SHEETS
2			4			163

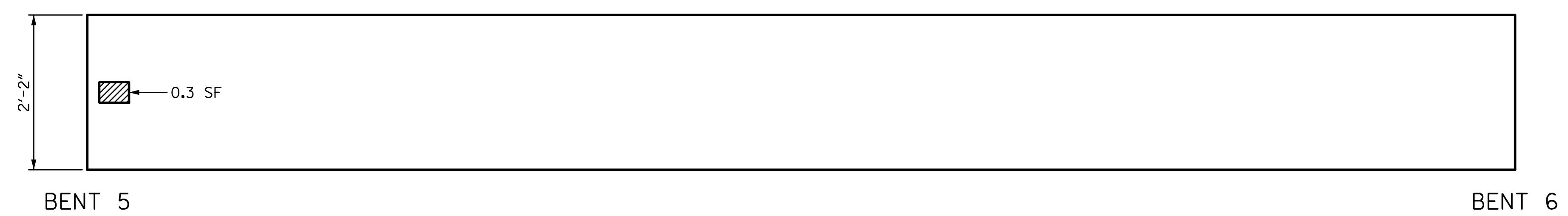
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:05 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN 6_640048.dgn

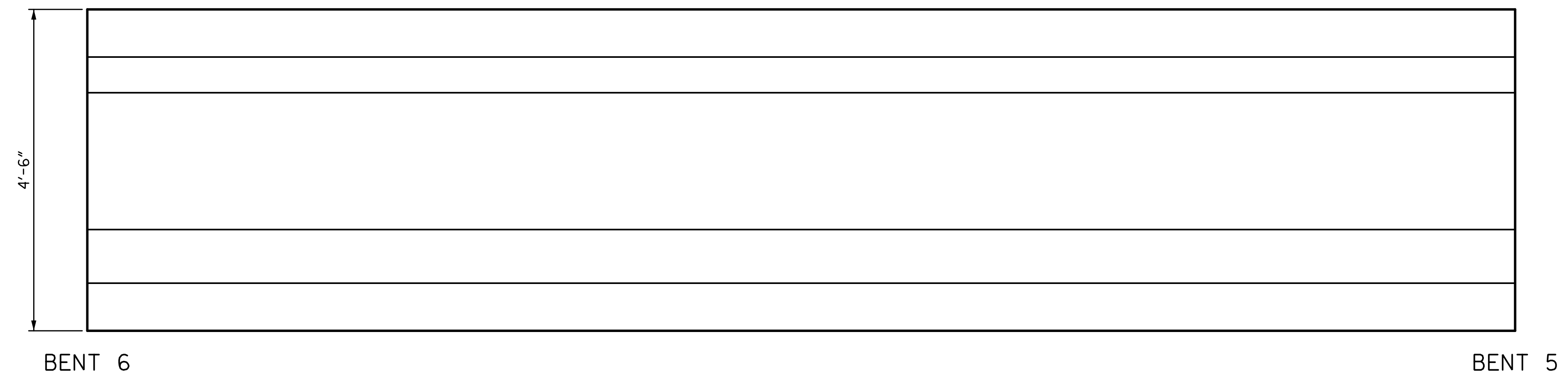
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 6 GRD. 2	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.3	0.15			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

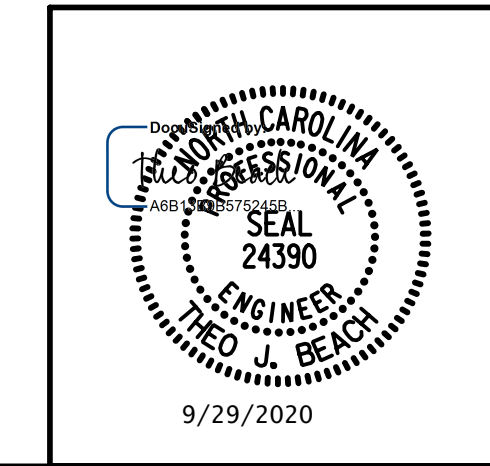
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 2 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 6
 GIRDER 2

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




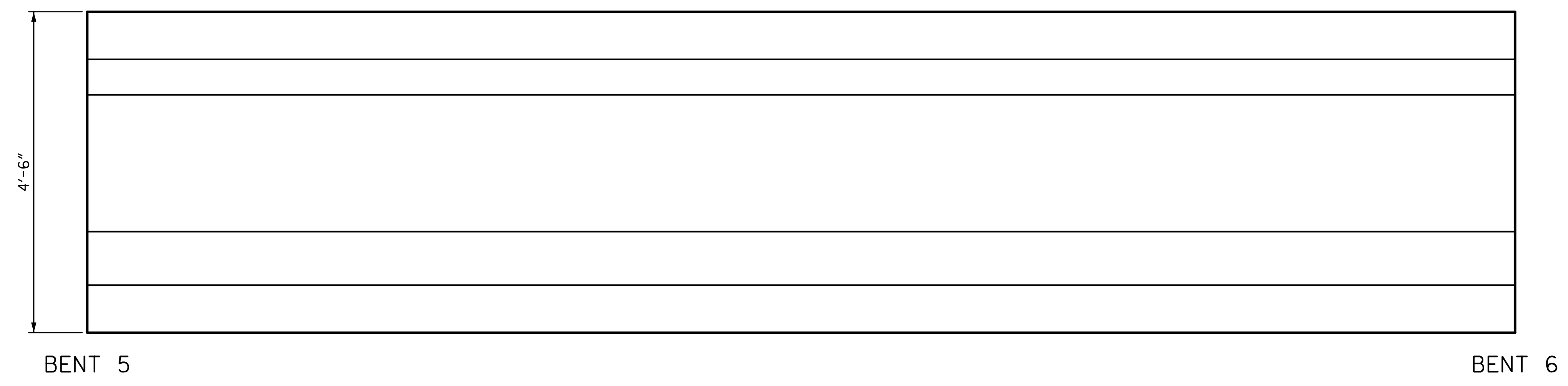
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-59
1			3			TOTAL SHEETS
2			4			163

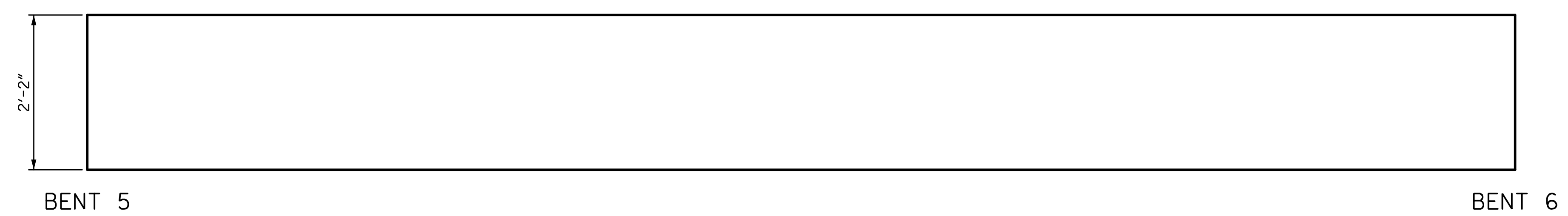
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:05 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_6_640048.dgn

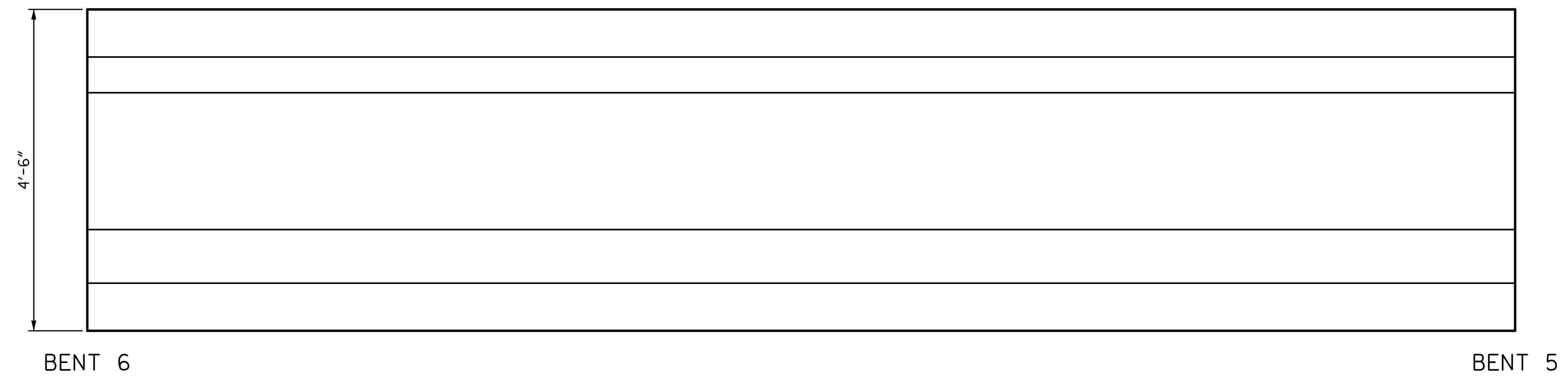
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 6 GRD. 3	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

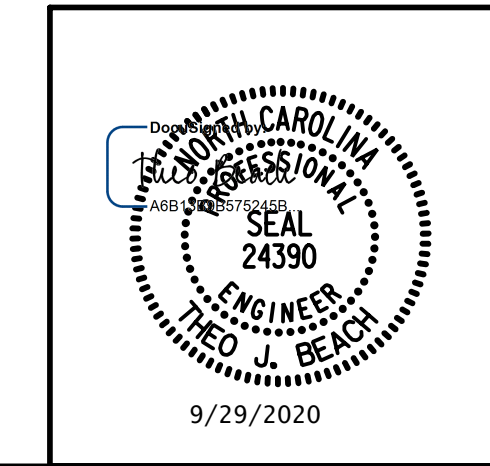
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 3 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 6
 GIRDER 3

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

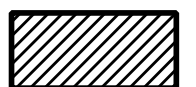


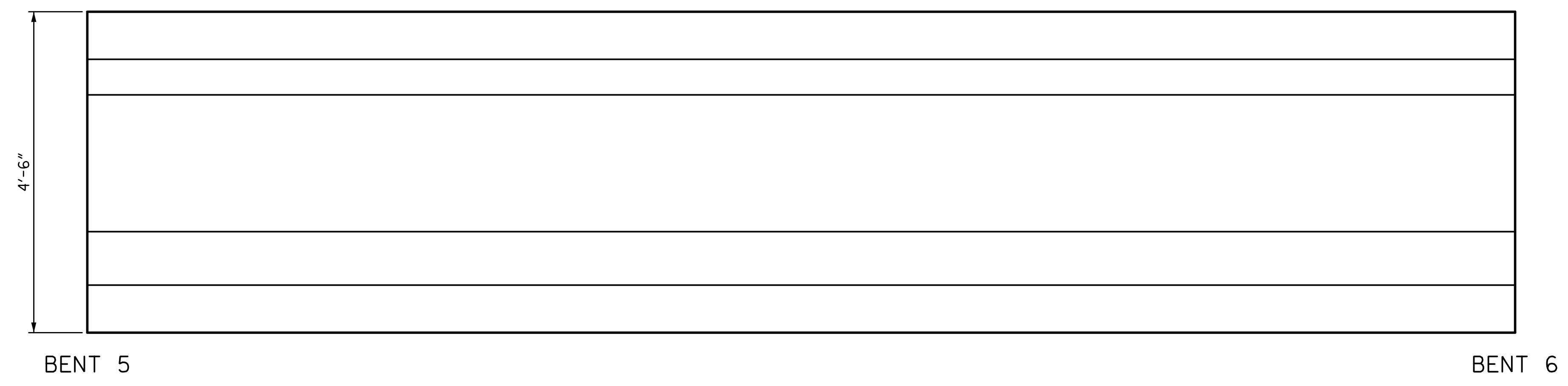
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-60
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:05 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_6_640048.dgn

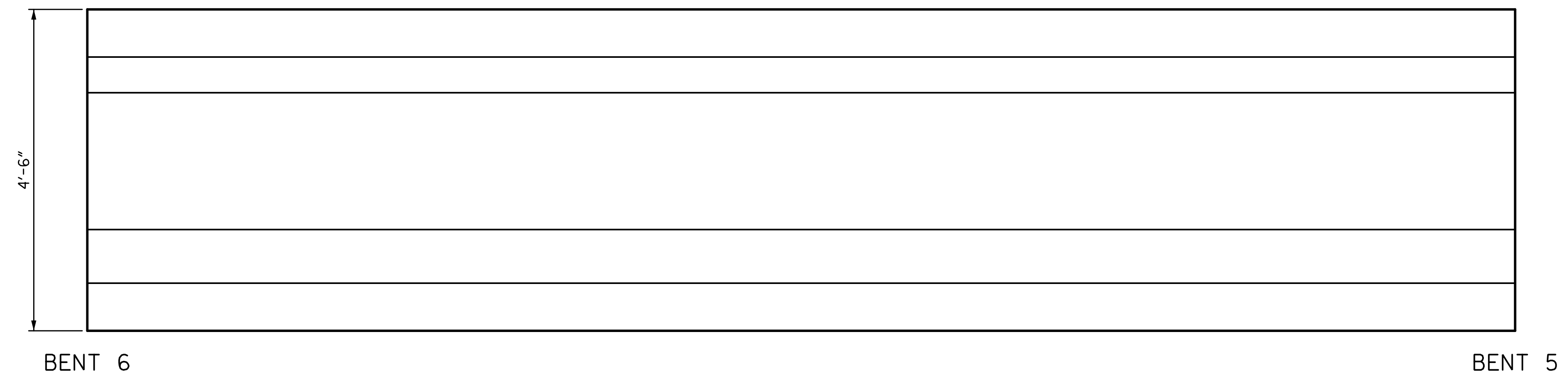
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 6 GRD. 4	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

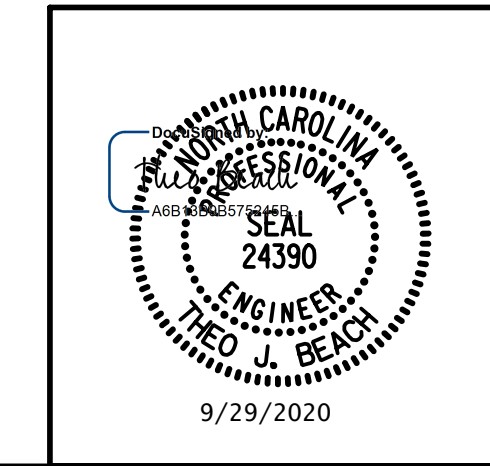
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 4 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 6
 GIRDER 4

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




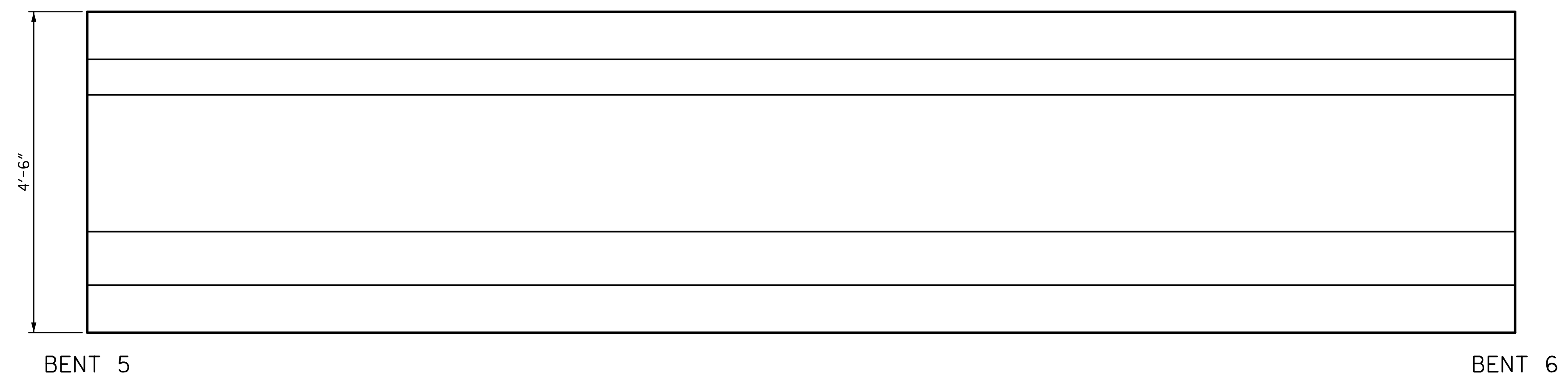
DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-61
1			3			TOTAL SHEETS
2			4			163

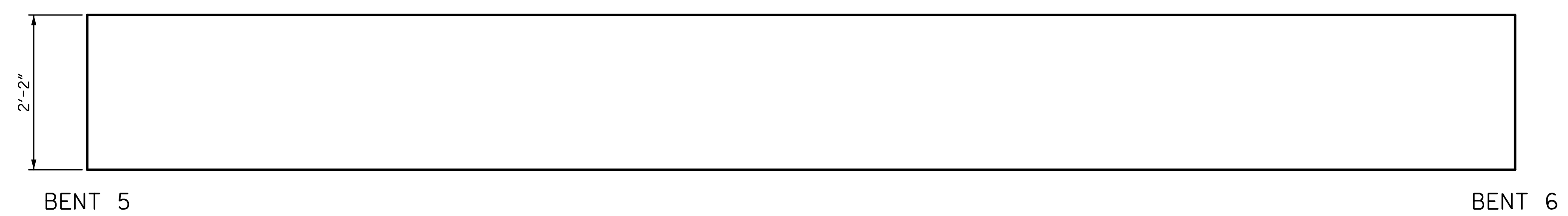
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:06 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN_6_640048.dgn

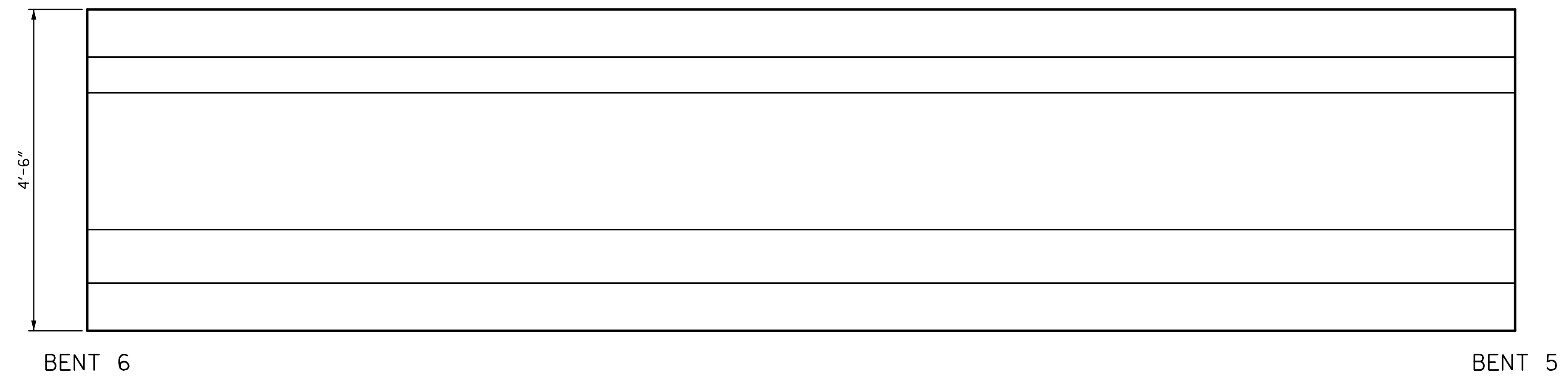
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 6 GRD. 5	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

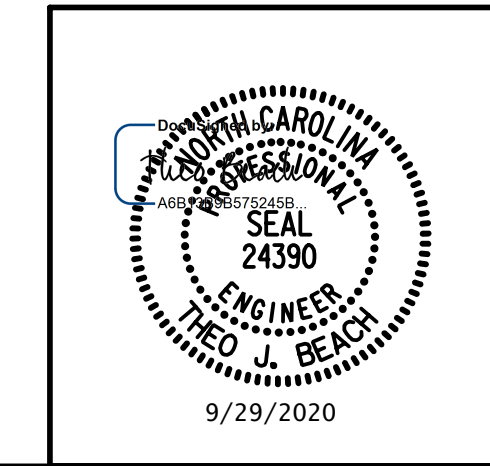
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 5 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 6
 GIRDER 5

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

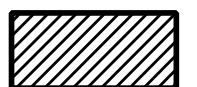


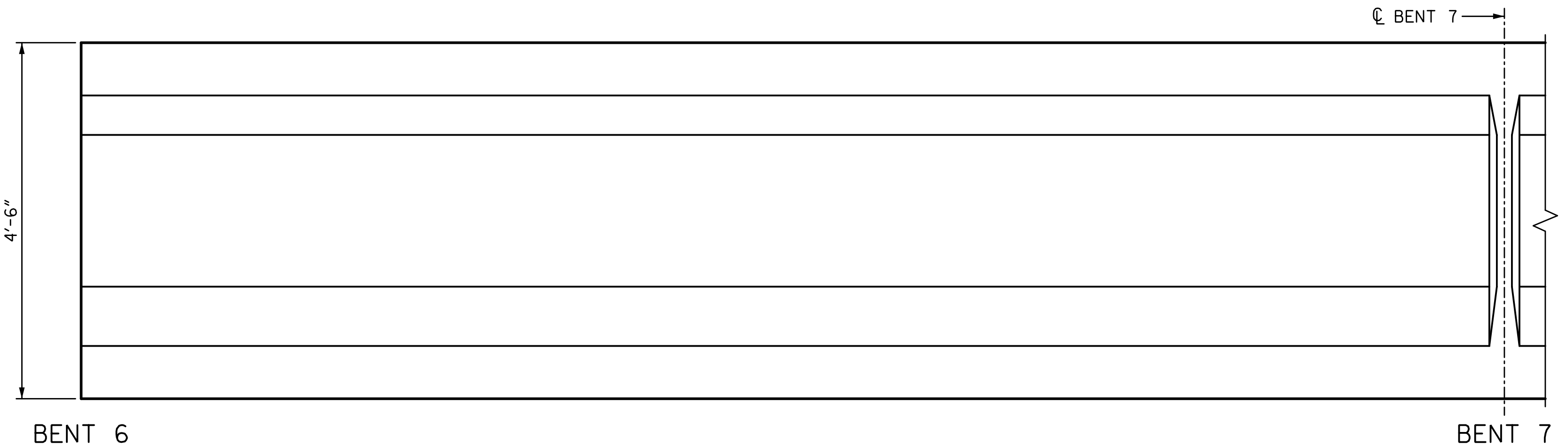
DRAWN BY: <u>T. BANKOVICH</u>	DATE: <u>9-20</u>
CHECKED BY: <u>T.J. BEACH</u>	DATE: <u>9-20</u>
DESIGN ENGINEER OF RECORD: <u>T.J. BEACH</u>	DATE: <u>9-20</u>

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-62
1			3			TOTAL SHEETS
2			4			163

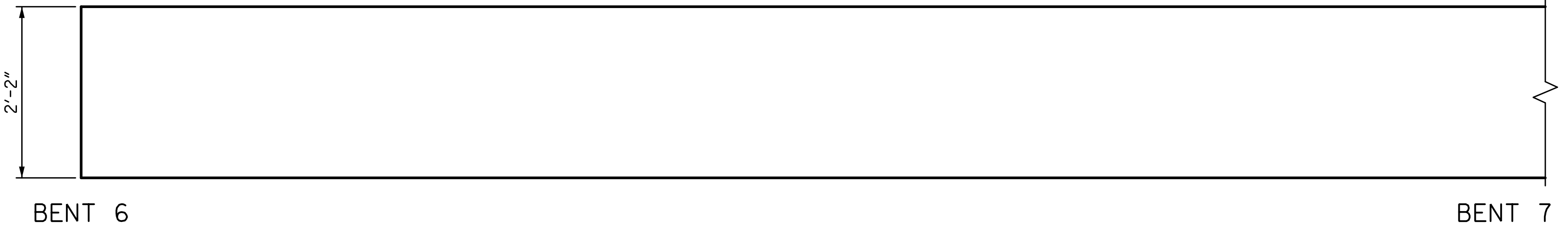
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:06 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 7_640048.dgn

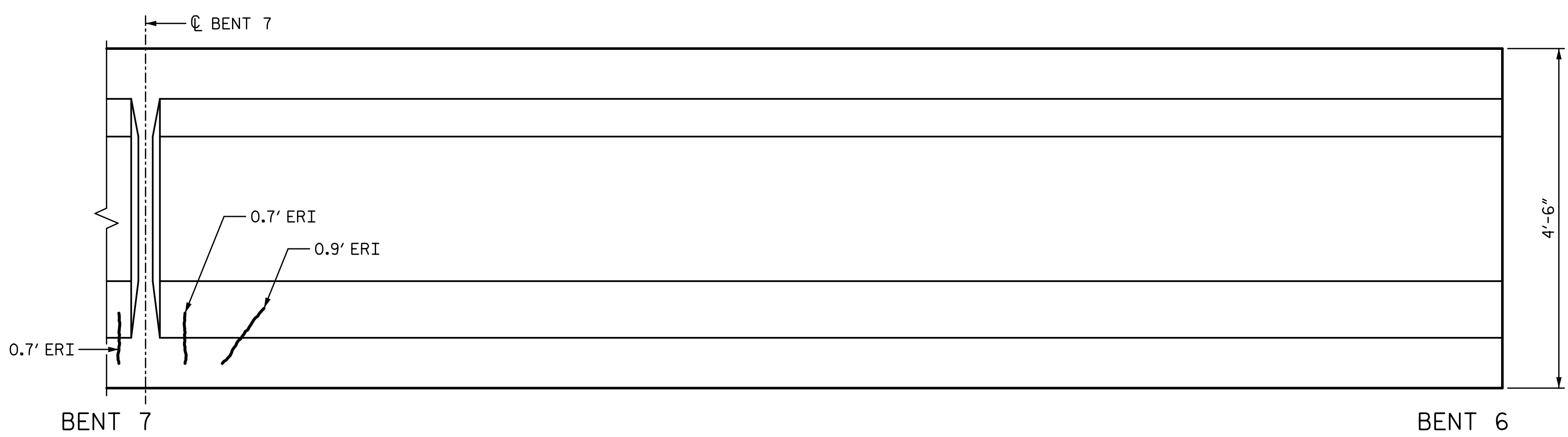
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 7 GRD. 1	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		2.3			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

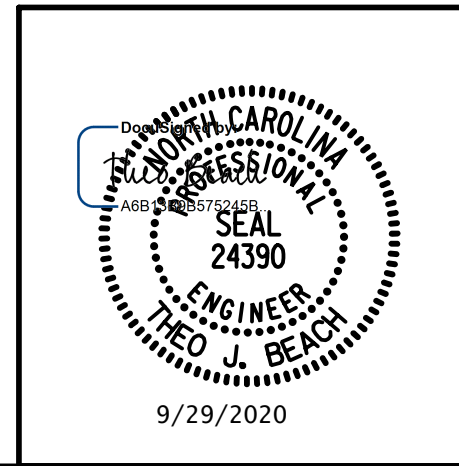
AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 1 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 7
GIRDER 1**



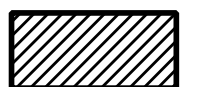
PLANS PREPARED BY:
SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

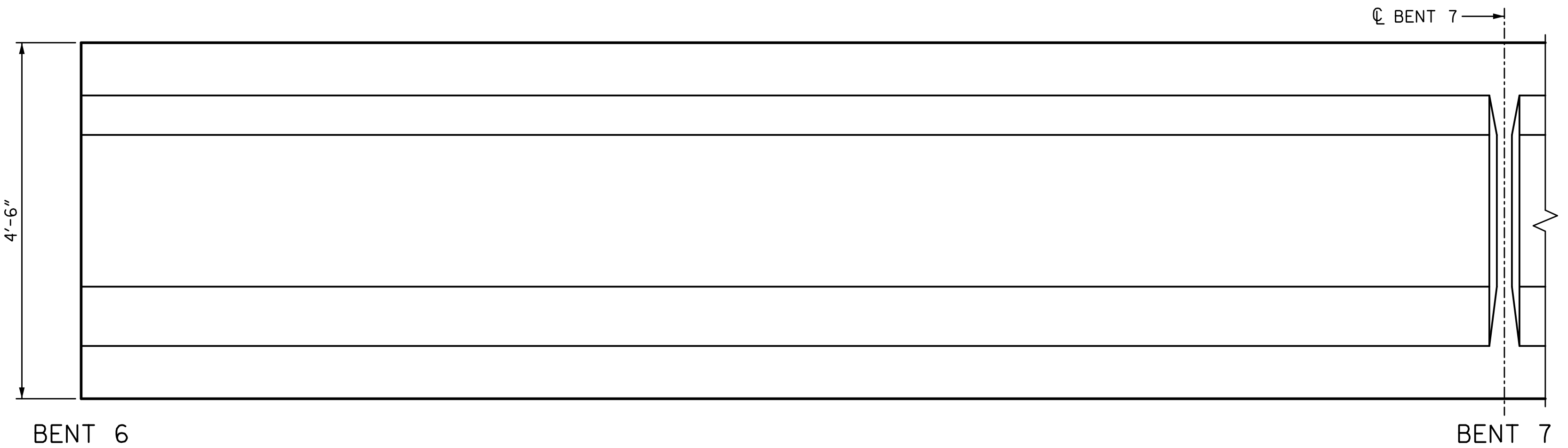
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-63
1			3			TOTAL SHEETS
2			4			163

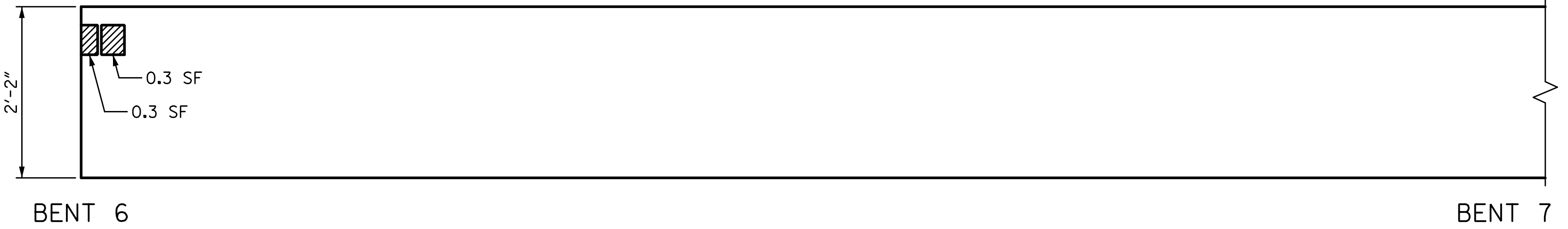
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:06 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 7_640048.dgn

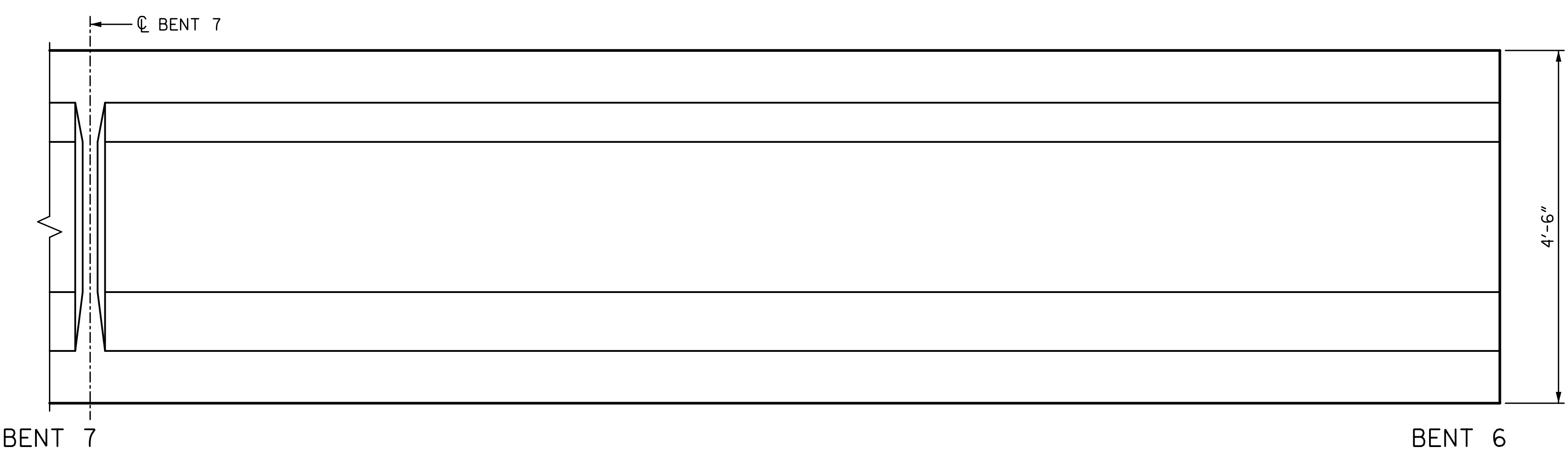
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 7 GRD. 2	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.6	0.2			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

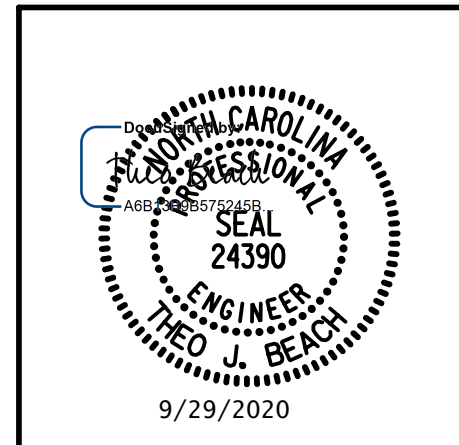
SHEET 2 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 7
 GIRDER 2**

PLANS PREPARED BY:

SEA & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

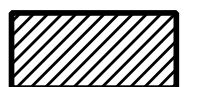


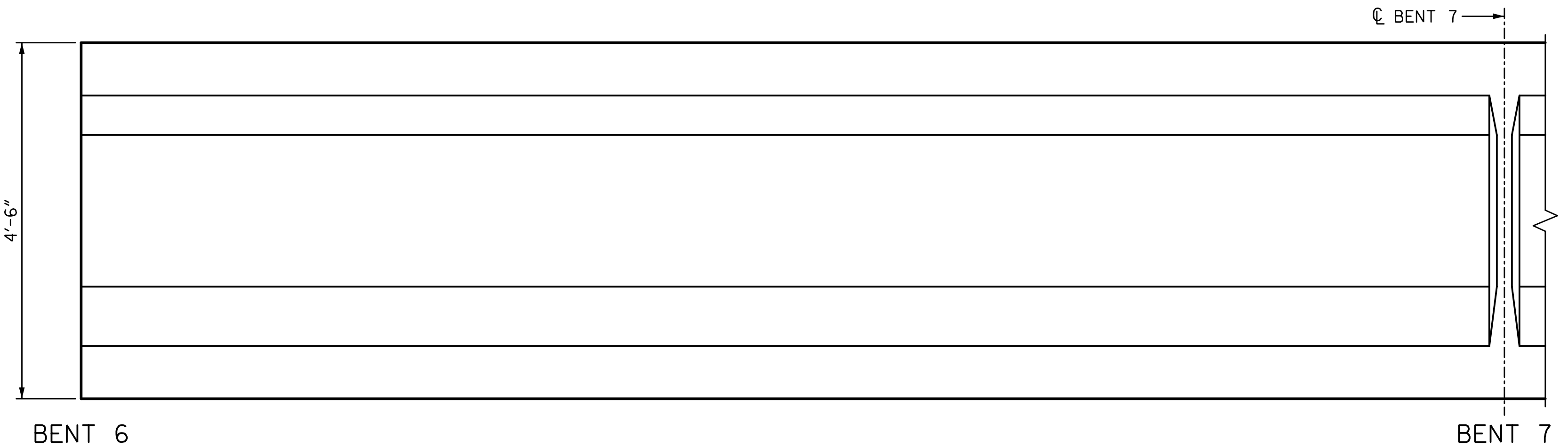
DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

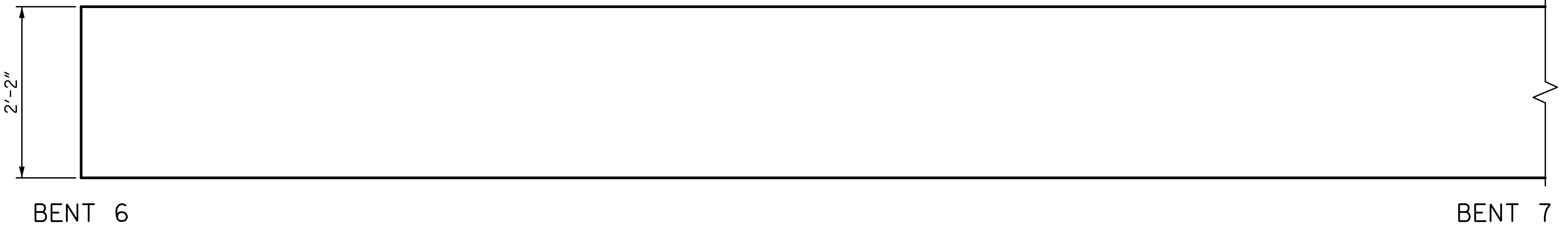
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			TOTAL SHEETS
2			4			163

9/28/2020 12:01:06 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 7_640048.dgn

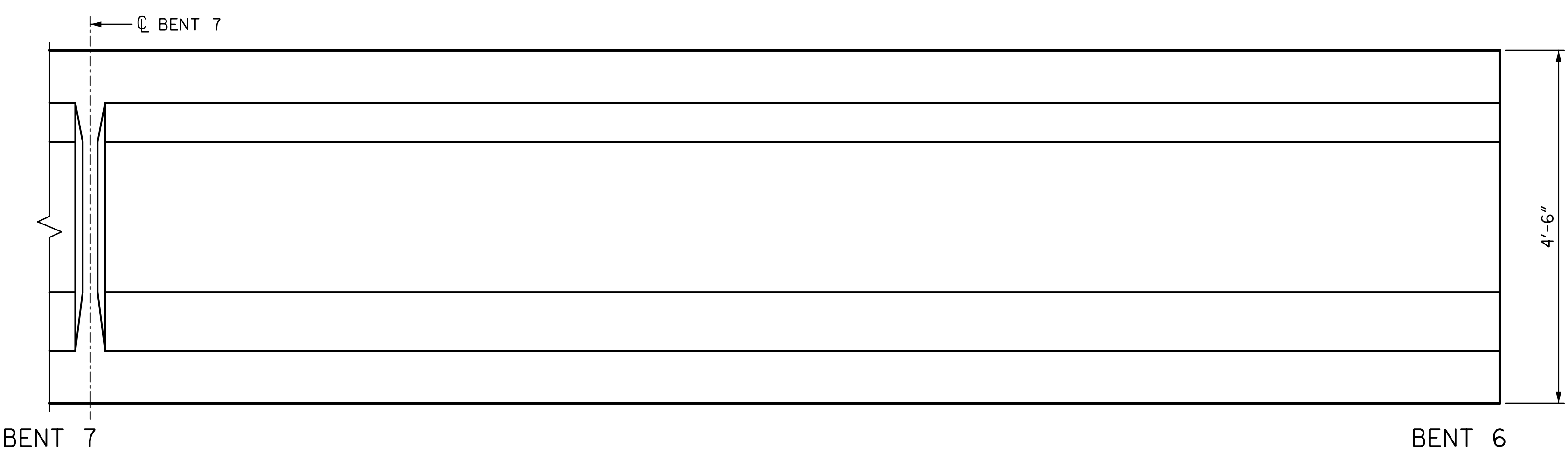
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 7 GRD. 3	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

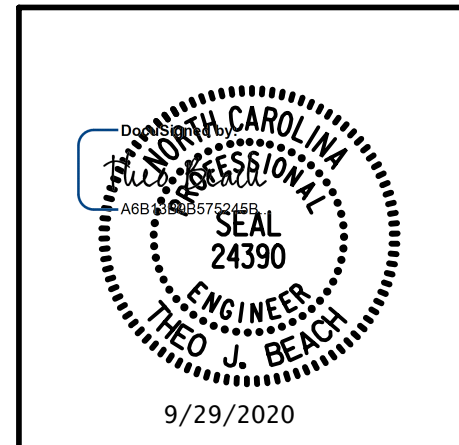
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 3 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 7
 GIRDER 3

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

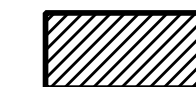


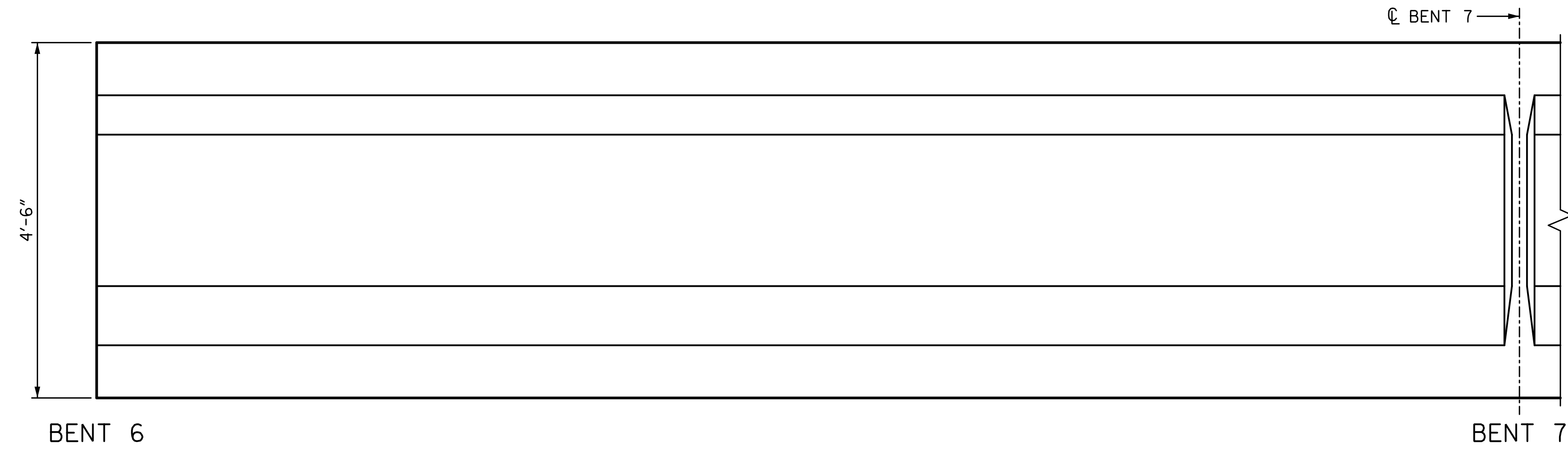
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-65
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

9/28/2020 12:01:07 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 7_640048.dgn

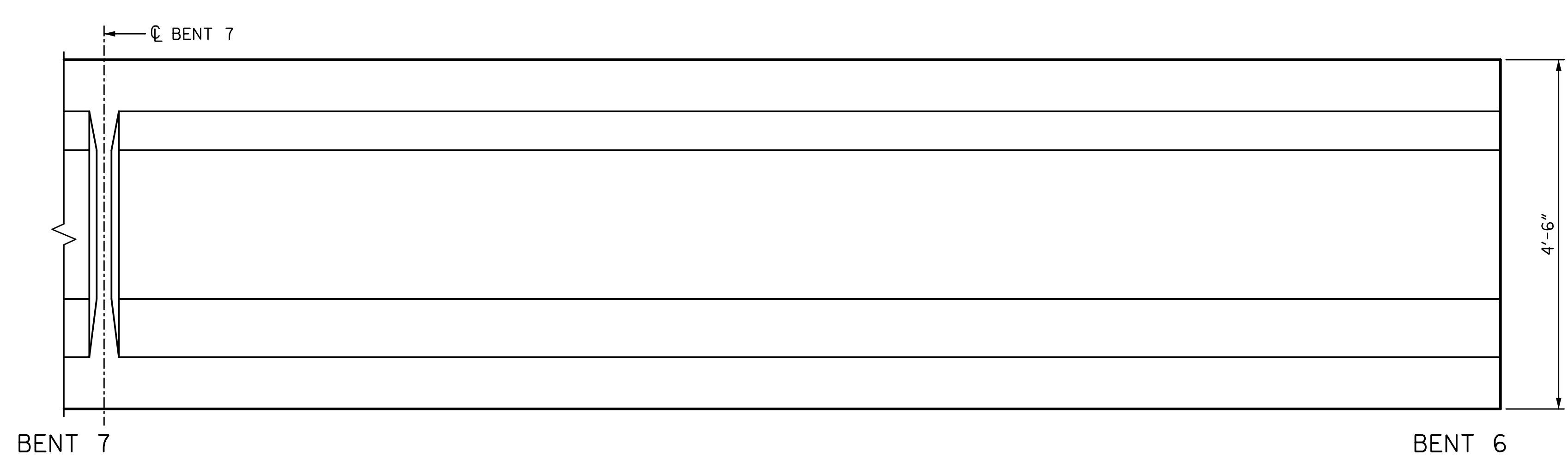
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 7 GRD. 4	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	1.4	0.5			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

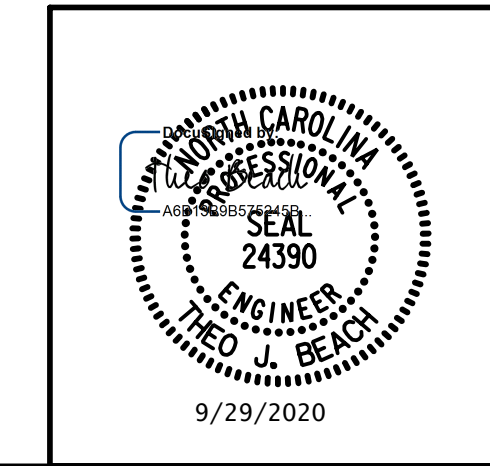
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 4 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 7
 GIRDER 4

PLANS PREPARED BY:

 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

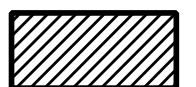


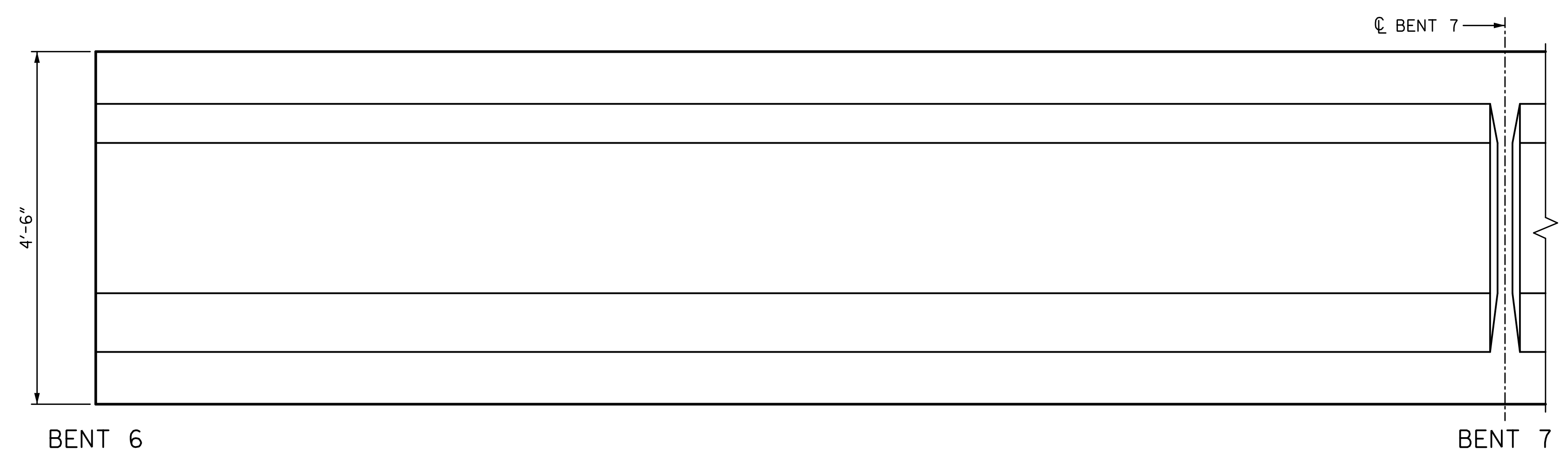
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-66
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

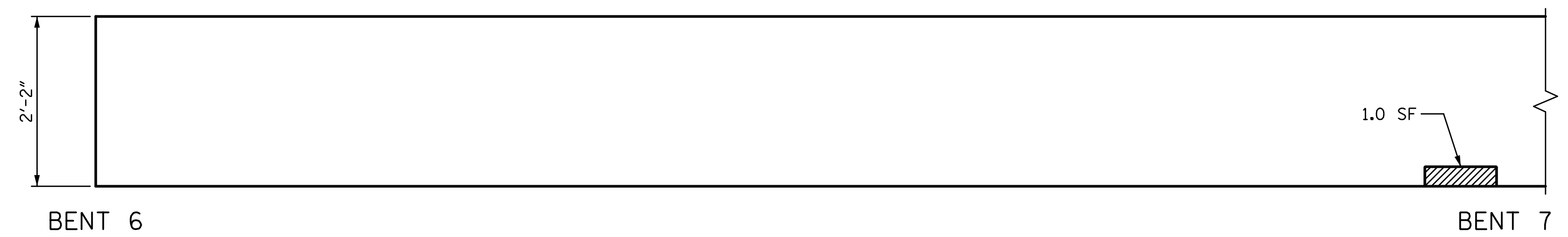
DRAWN BY: <u>T. BANKOVICH</u>	DATE: <u>9-20</u>
CHECKED BY: <u>T.J. BEACH</u>	DATE: <u>9-20</u>
DESIGN ENGINEER OF RECORD: <u>T.J. BEACH</u>	DATE: <u>9-20</u>

9/28/2020 12:01:07 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 7_640048.dgn

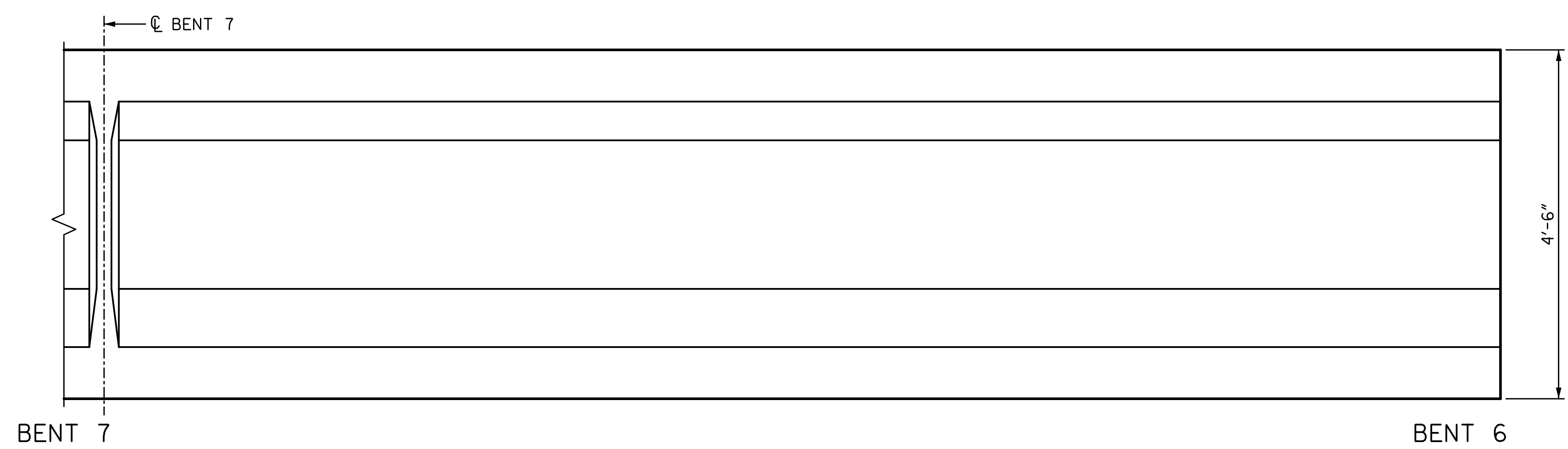
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 7 GRD. 5	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	1.0	0.3			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

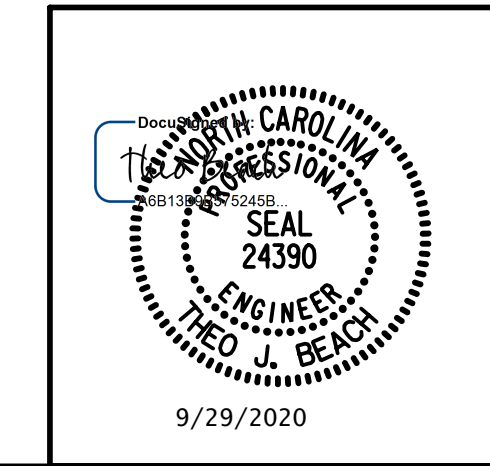
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 5 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 7
 GIRDER 5

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

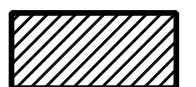


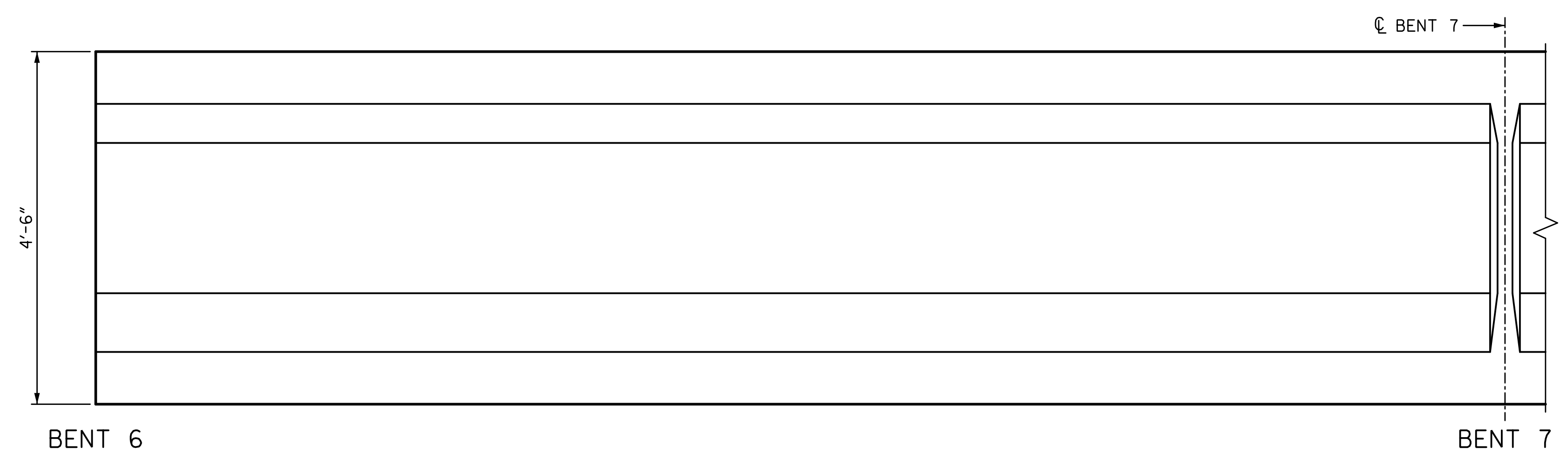
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-67
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

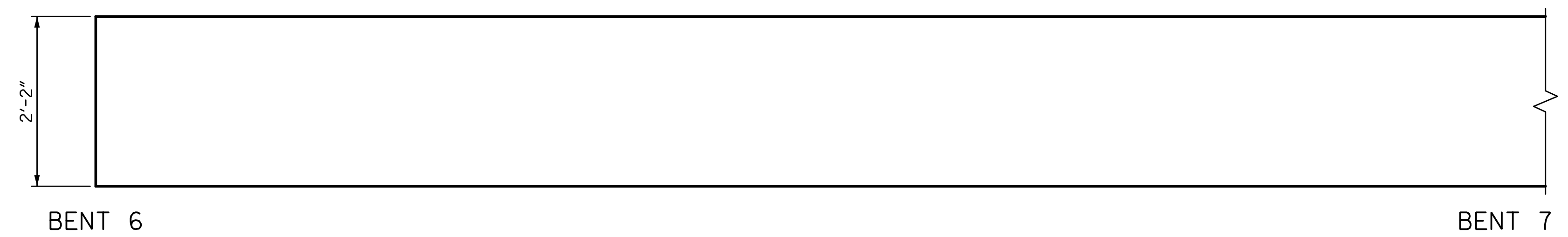
DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

9/28/2020 12:01:07 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 7_640048.dgn

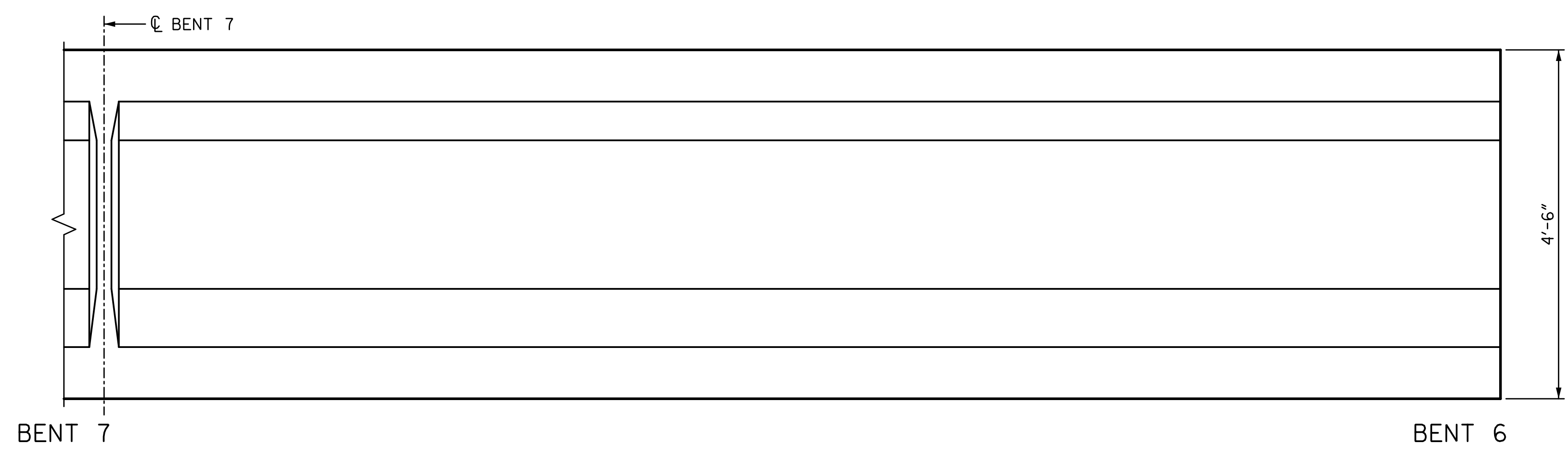
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 7 GRD. 6	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

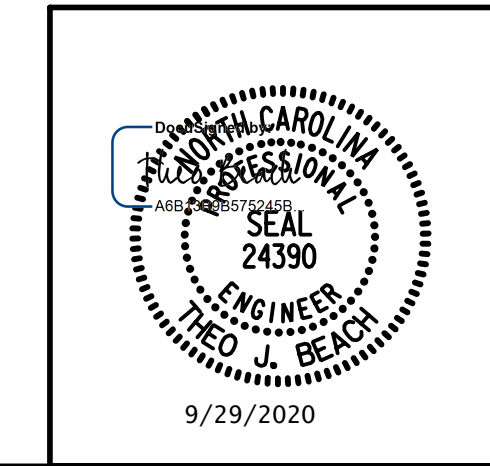
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 6 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 7
 GIRDER 6

PLANS PREPARED BY:

 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

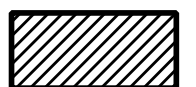


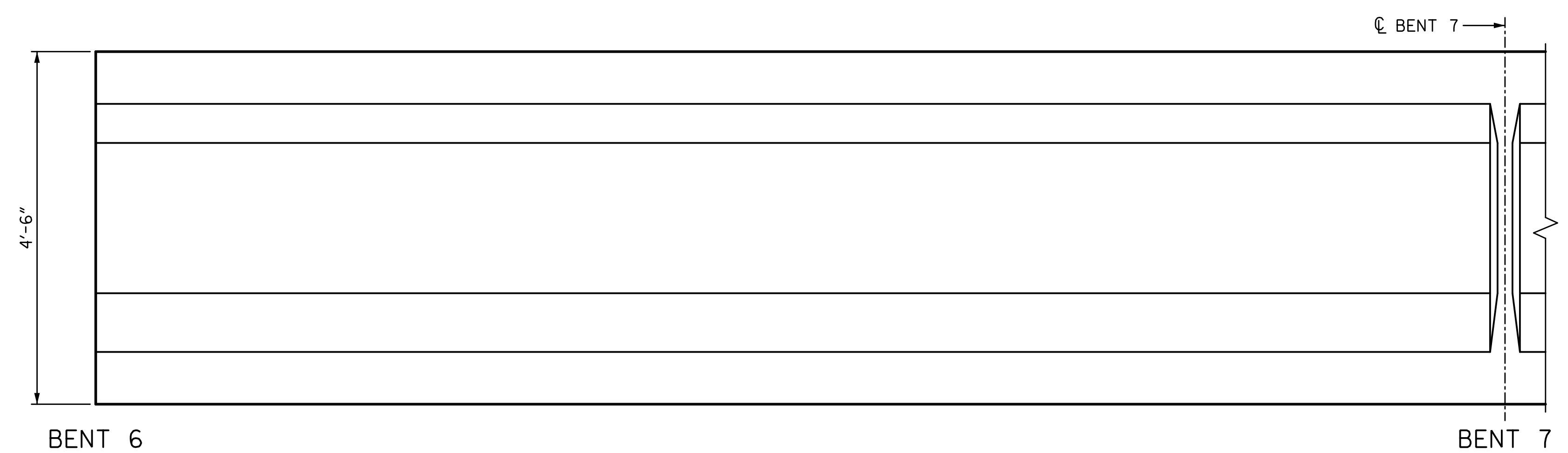
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-68
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

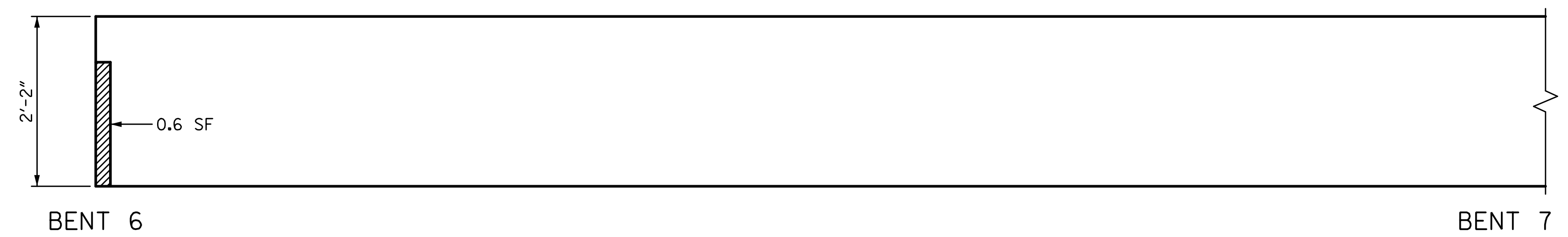
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

9/28/2020 12:01:07 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 7_640048.dgn

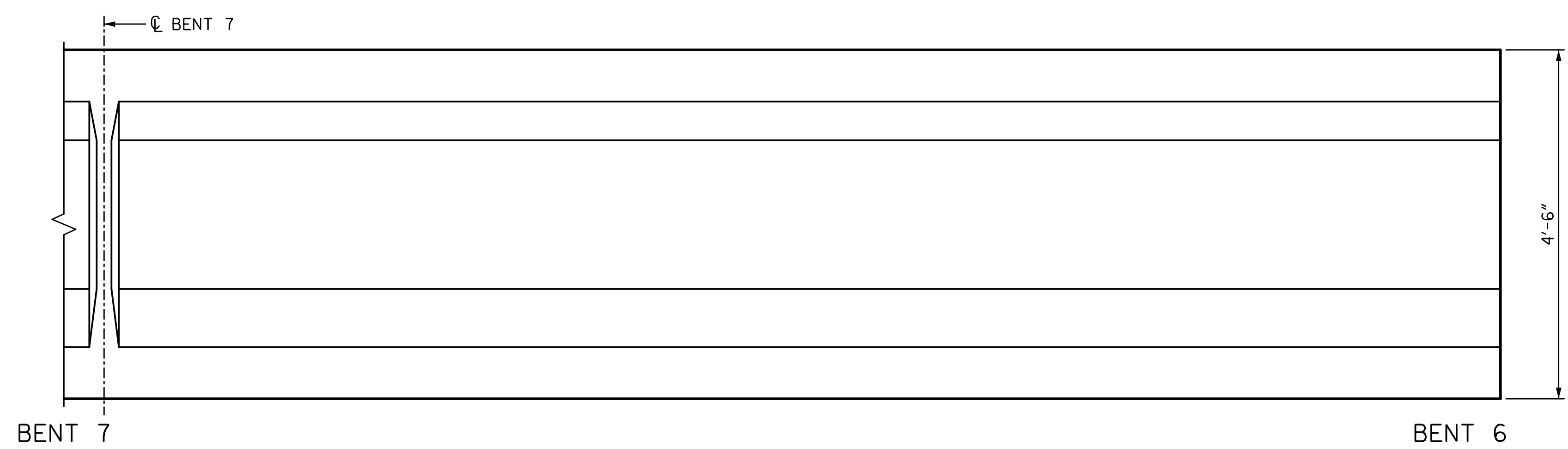
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 7 GRD. 7	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.6	0.2			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

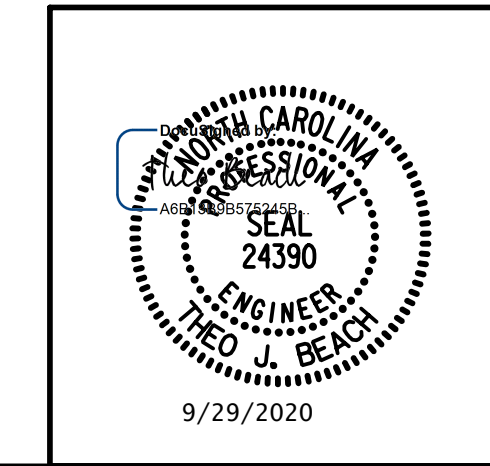
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 7 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 7
 GIRDER 7

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

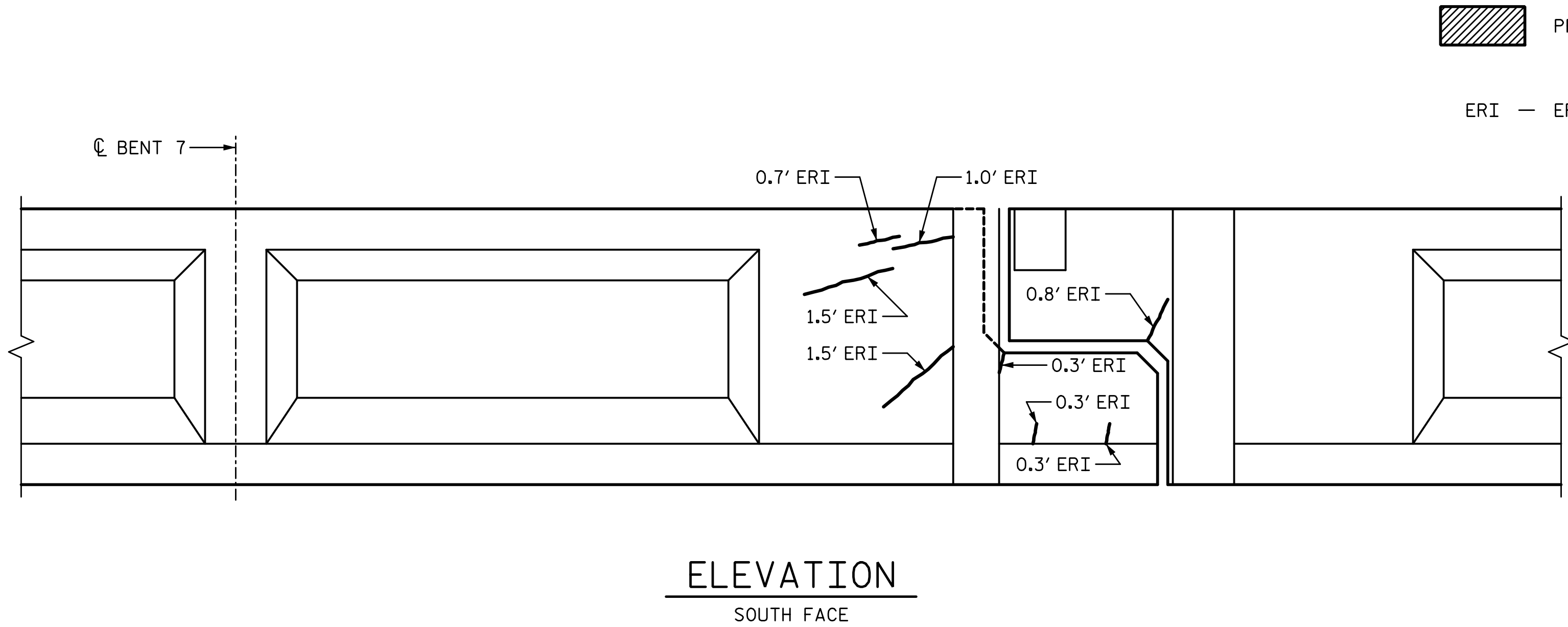


DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

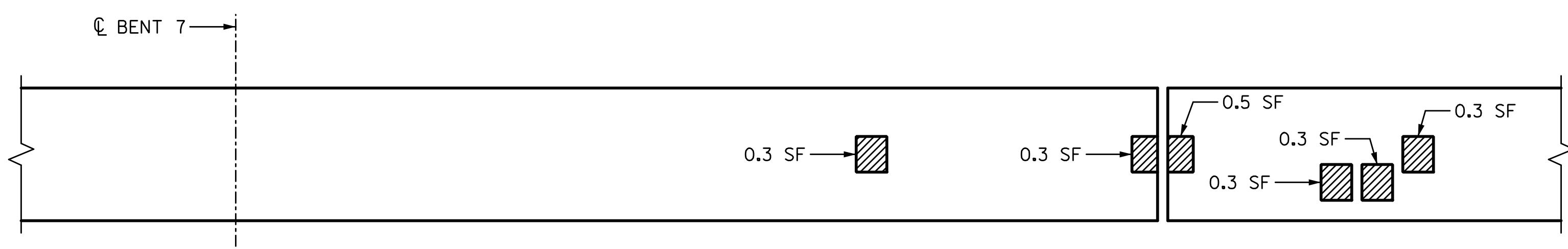
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-69
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

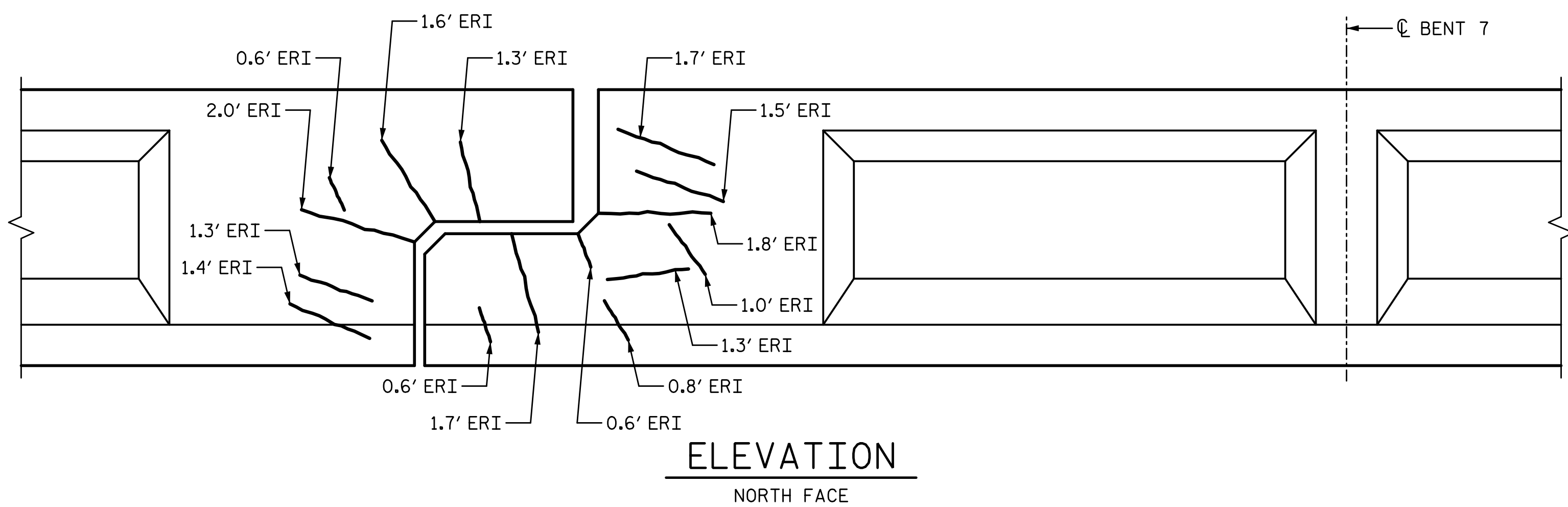
9/28/2020 12:01:08 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8WH_640048.dgn



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

PRESTRESSED CONCRETE GIRDER REPAIR
ERI — EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE					
REPAIRS EAST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	2.0	0.5			
EPOXY RESIN INJECTION		LF			LF
GIRDER		25.3			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

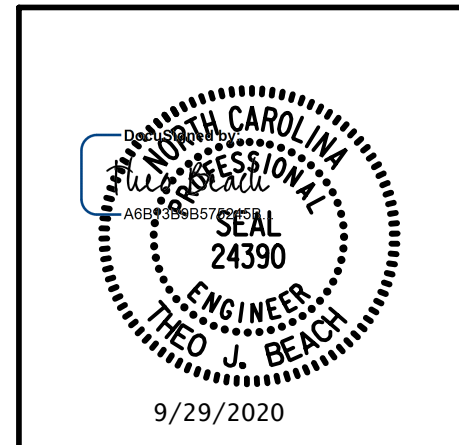
PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

SHEET 1 OF 7

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION
**WEST HINGE DETAILS
FOR GIRDER 1**

PLANS PREPARED BY:

SEA & A
SIMPSON ENGINEERS & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

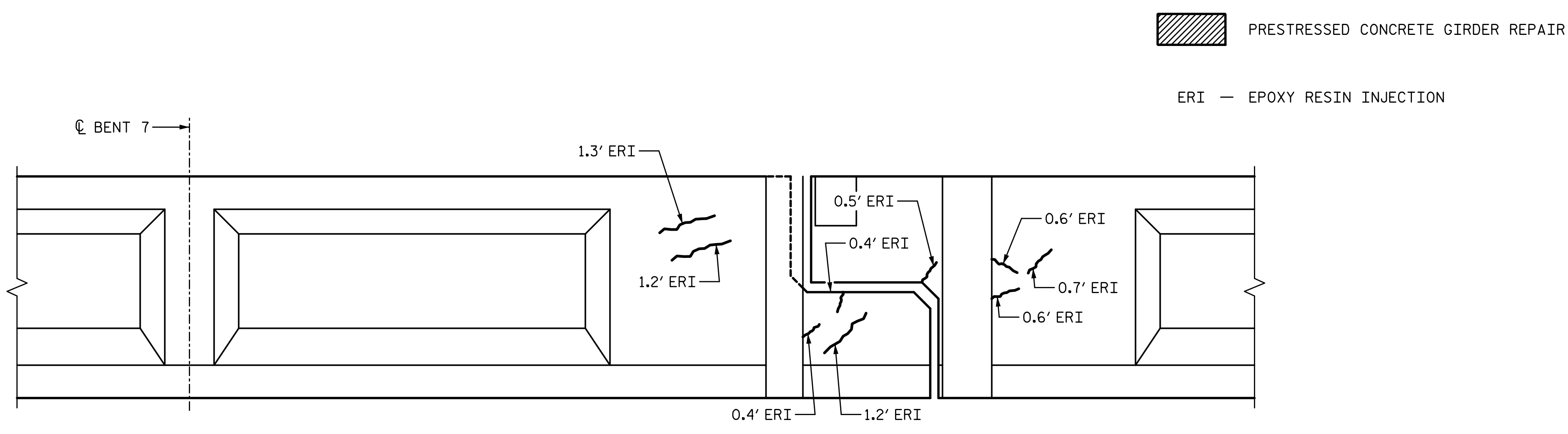


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-70
1			3			TOTAL SHEETS
2			4			163

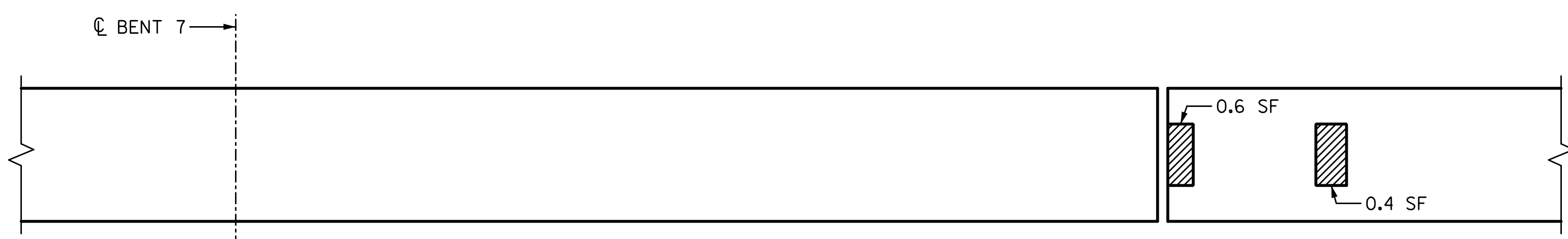
DRAWN BY: _____ DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

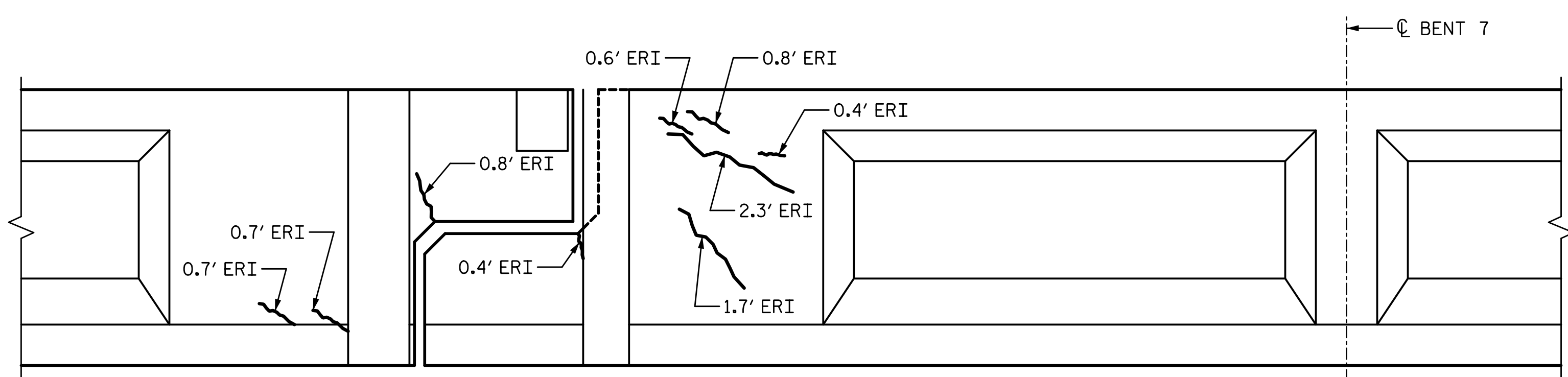
9/28/2020 12:01:08 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8WH_640048.dgn



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS EAST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	1.0	0.5			
EPOXY RESIN INJECTION		LF			LF
GIRDER		15.3			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

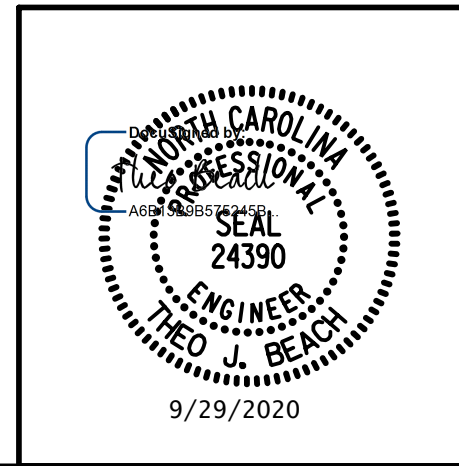
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 2 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**WEST HINGE DETAILS
 FOR GIRDER 2**

PLANS PREPARED BY:
SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

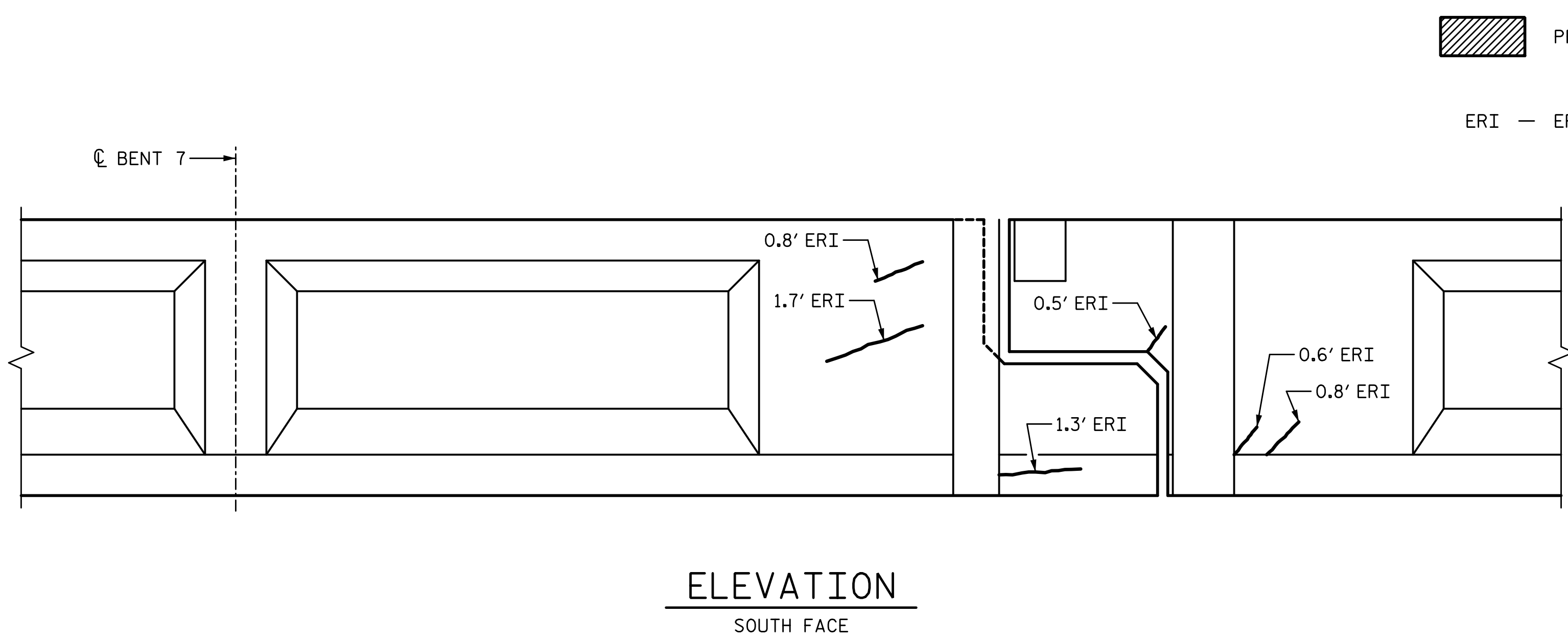


DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

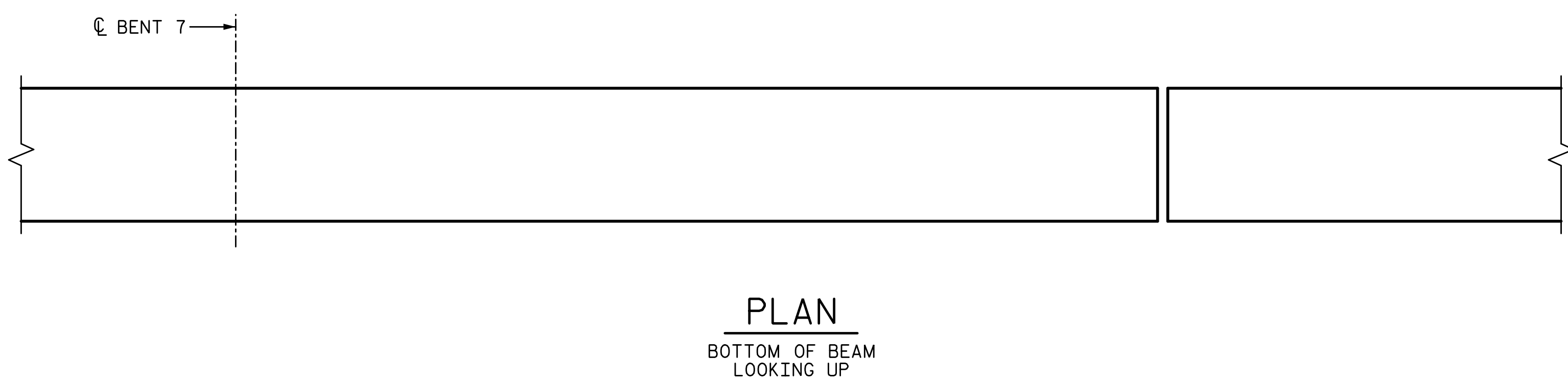
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-71
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

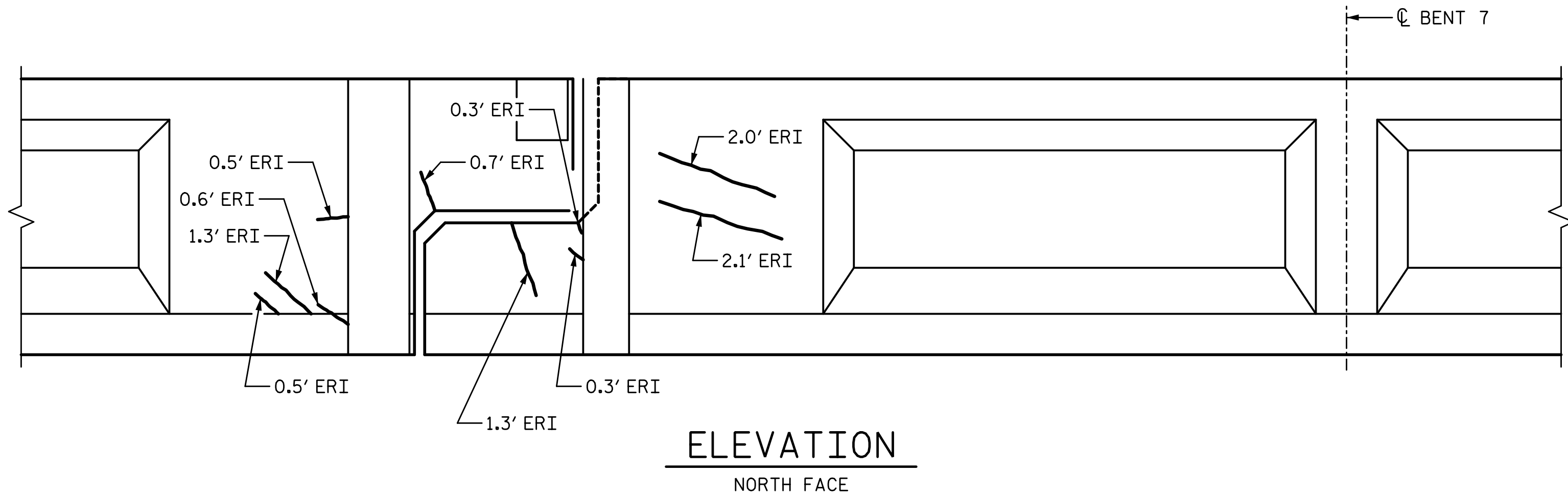
9/28/2020 12:01:08 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8WH_640048.dgn



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

PRESTRESSED CONCRETE GIRDER REPAIR
ERI — EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE					
REPAIRS EAST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		15.3			

NOTES:
REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

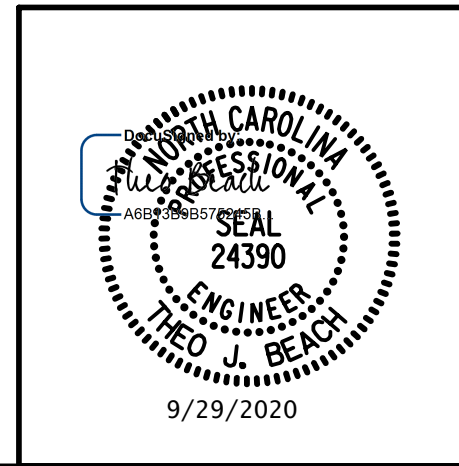
PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

SHEET 3 OF 7

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION

**WEST HINGE DETAILS
FOR GIRDER 3**

PLANS PREPARED BY:
SE & A
SIMPSON ENGINEERS & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

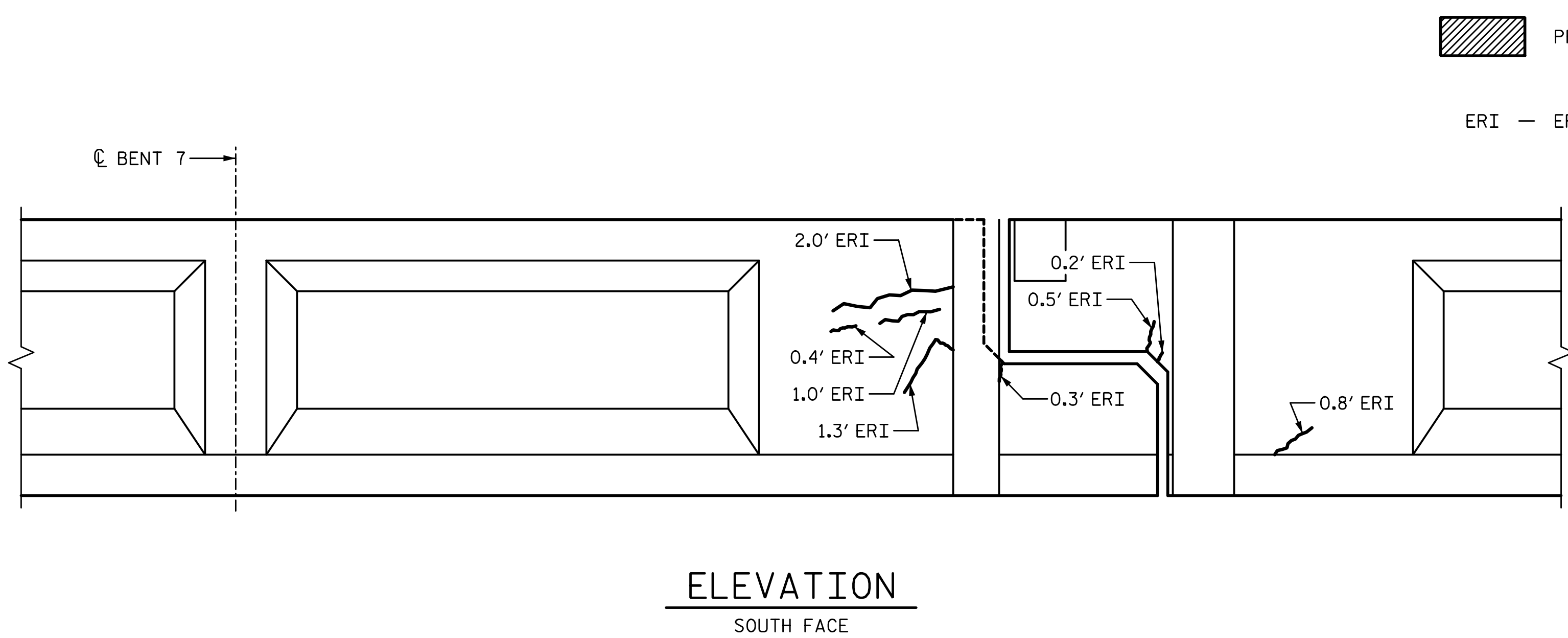


DRAWN BY: T. BANKOVICH DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

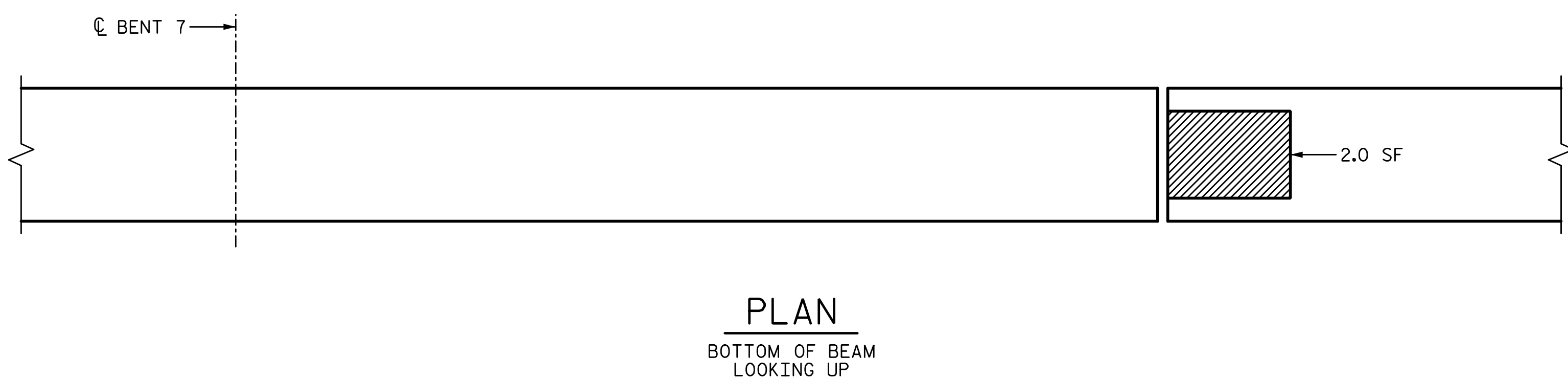
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-72
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

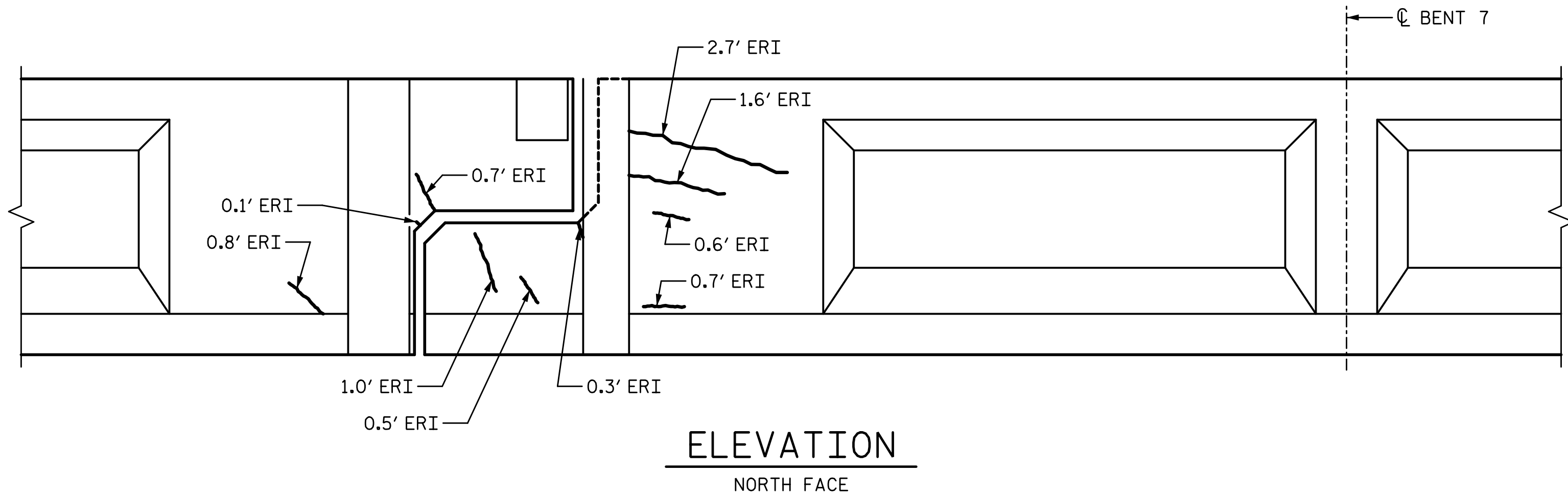
9/28/2020 12:01:08 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8WH_640048.dgn



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS EAST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	2.0	0.8			
EPOXY RESIN INJECTION		LF			LF
GIRDER		15.5			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

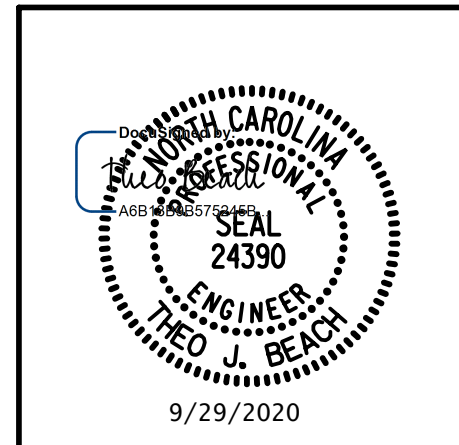
SHEET 4 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**WEST HINGE DETAILS
 FOR GIRDER 4**

PLANS PREPARED BY:

SEA & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




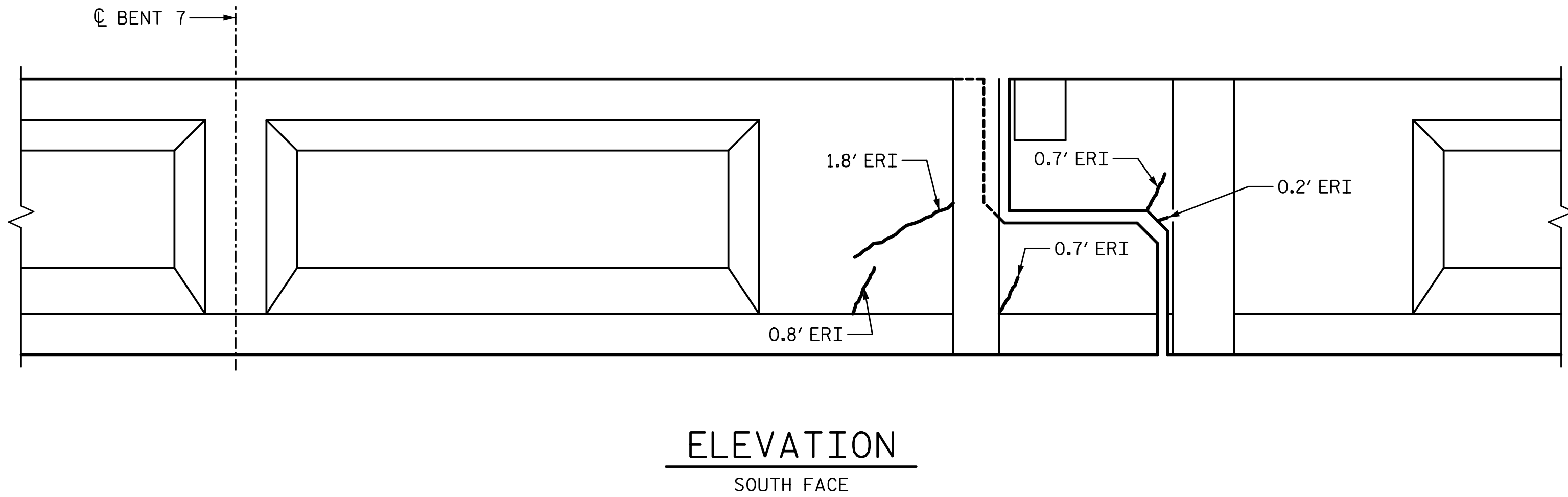
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-73
1			3			TOTAL SHEETS
2			4			163

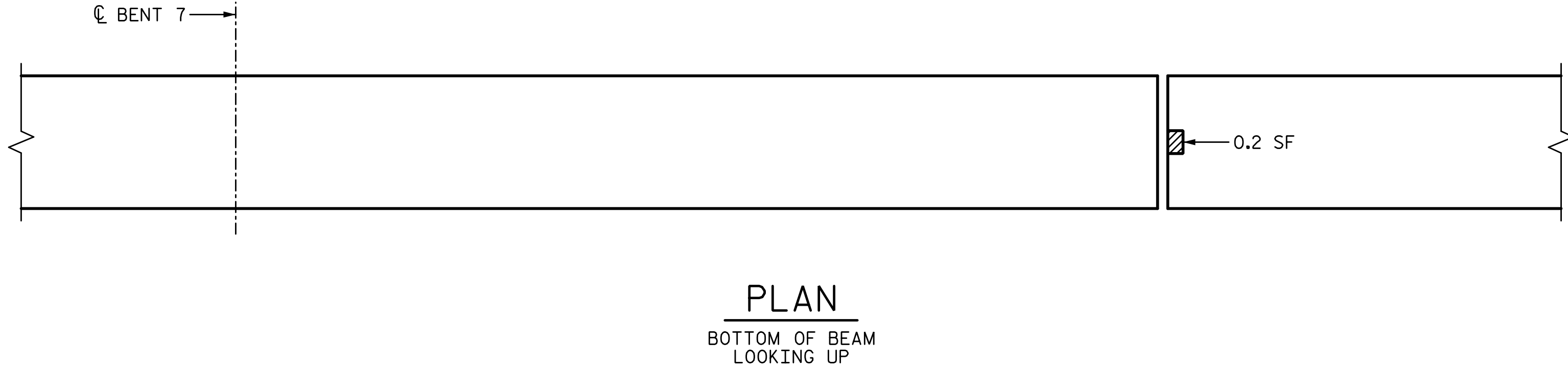
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:08 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8WH_640048.dgn

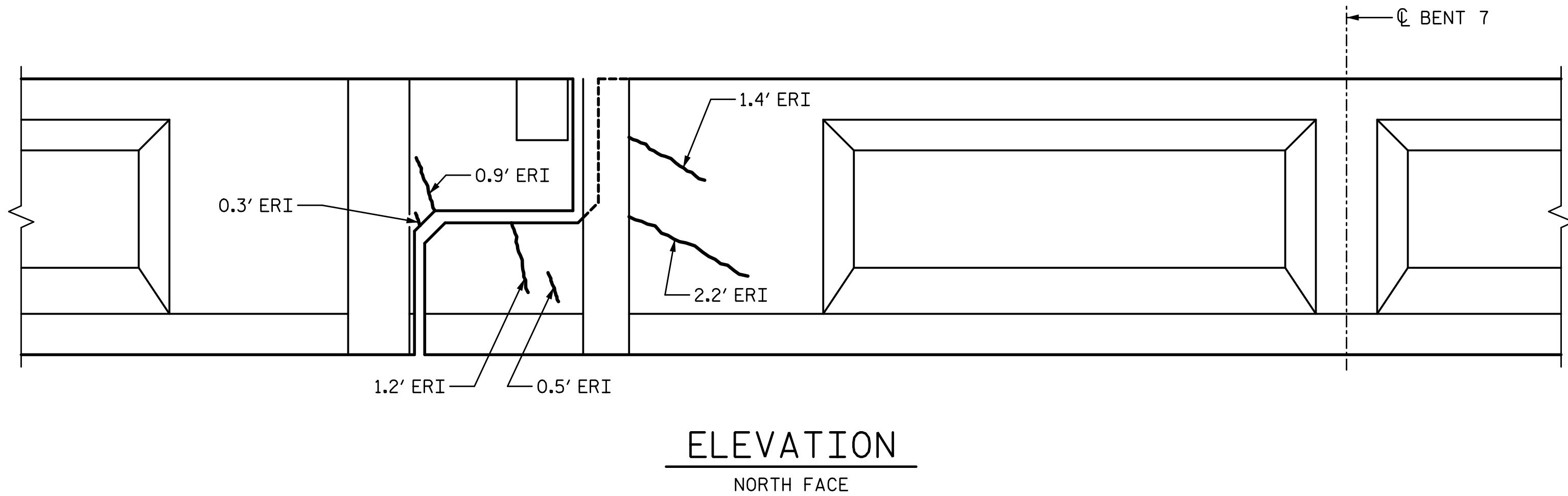
 PRESTRESSED CONCRETE GIRDER REPAIR
ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS EAST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.2	0.1			
EPOXY RESIN INJECTION		LF			LF
GIRDER		10.7			

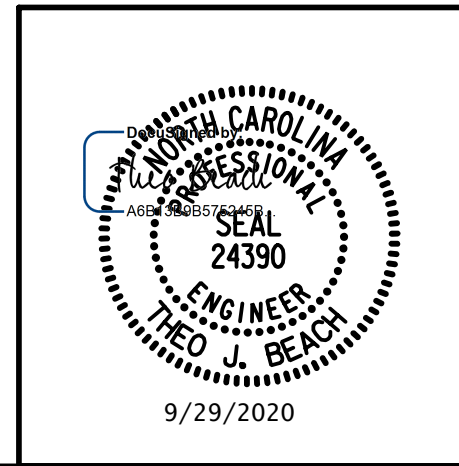
NOTES:
REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

SHEET 5 OF 7

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION
**WEST HINGE DETAILS
FOR GIRDER 5**

PLANS PREPARED BY:
SE & A
SIMPSON ENGINEERS & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

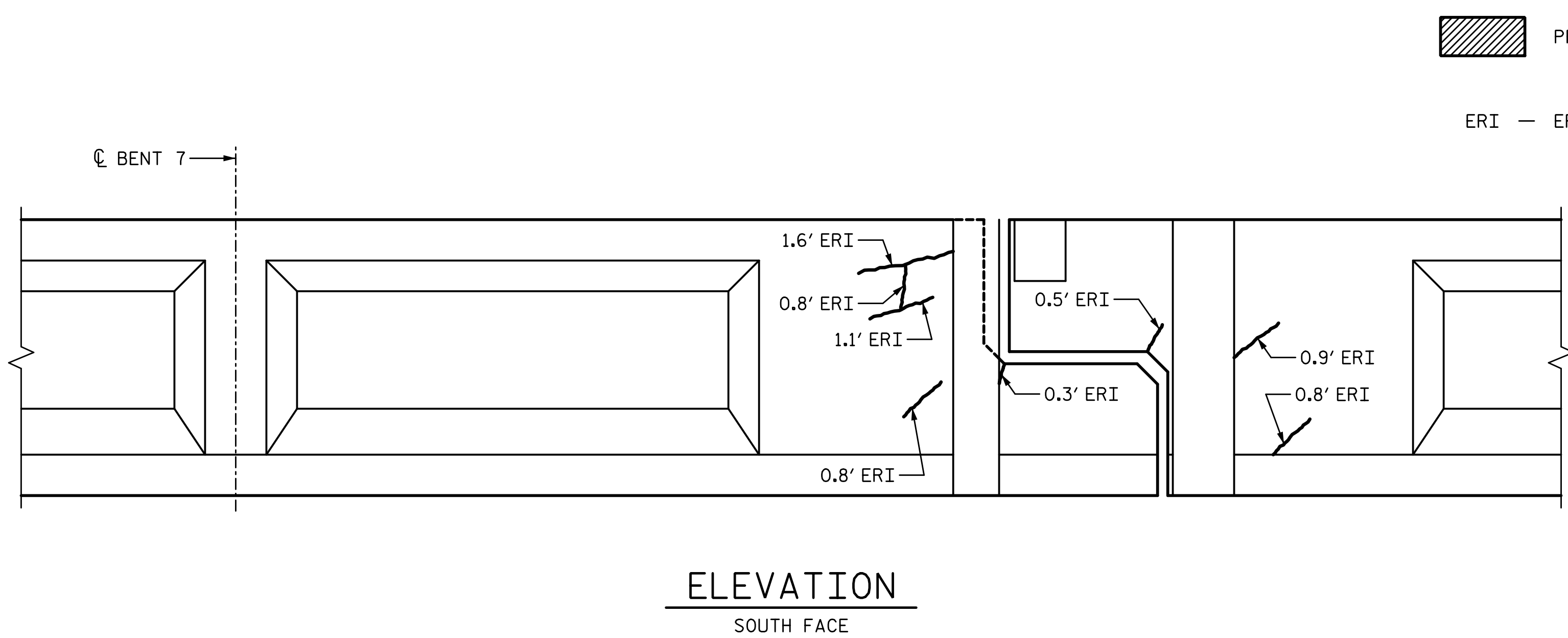


DRAWN BY: T. BANKOVICH DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

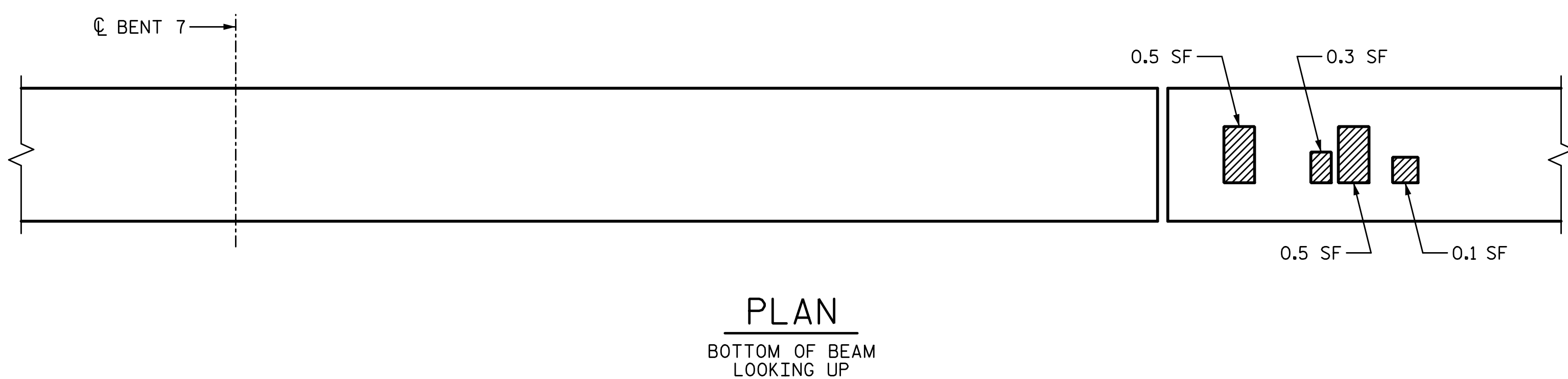
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-74
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

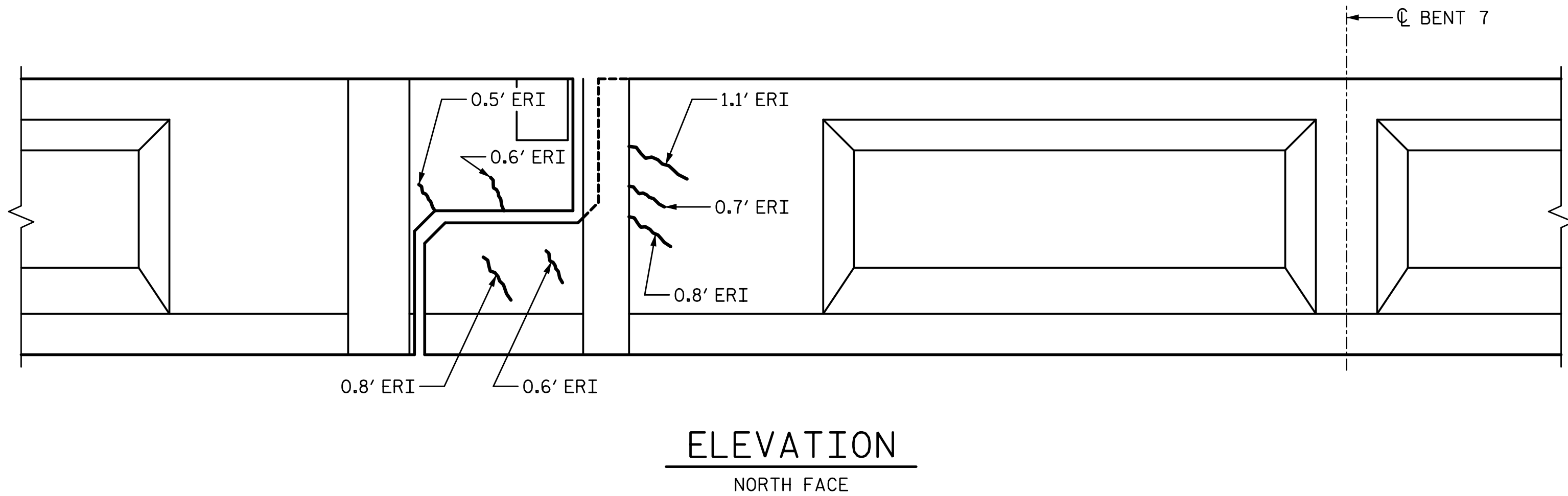
9/28/2020 12:01:08 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8WH_640048.dgn



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

PRESTRESSED CONCRETE GIRDER REPAIR
ERI — EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE					
REPAIRS EAST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	1.4	0.4			
EPOXY RESIN INJECTION		LF			LF
GIRDER		11.9			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

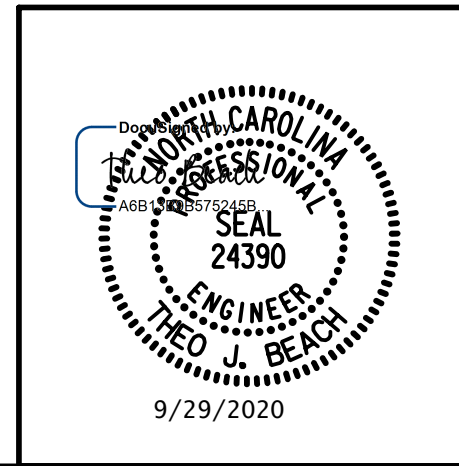
AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

SHEET 6 OF 7

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION

**WEST HINGE DETAILS
FOR GIRDER 6**



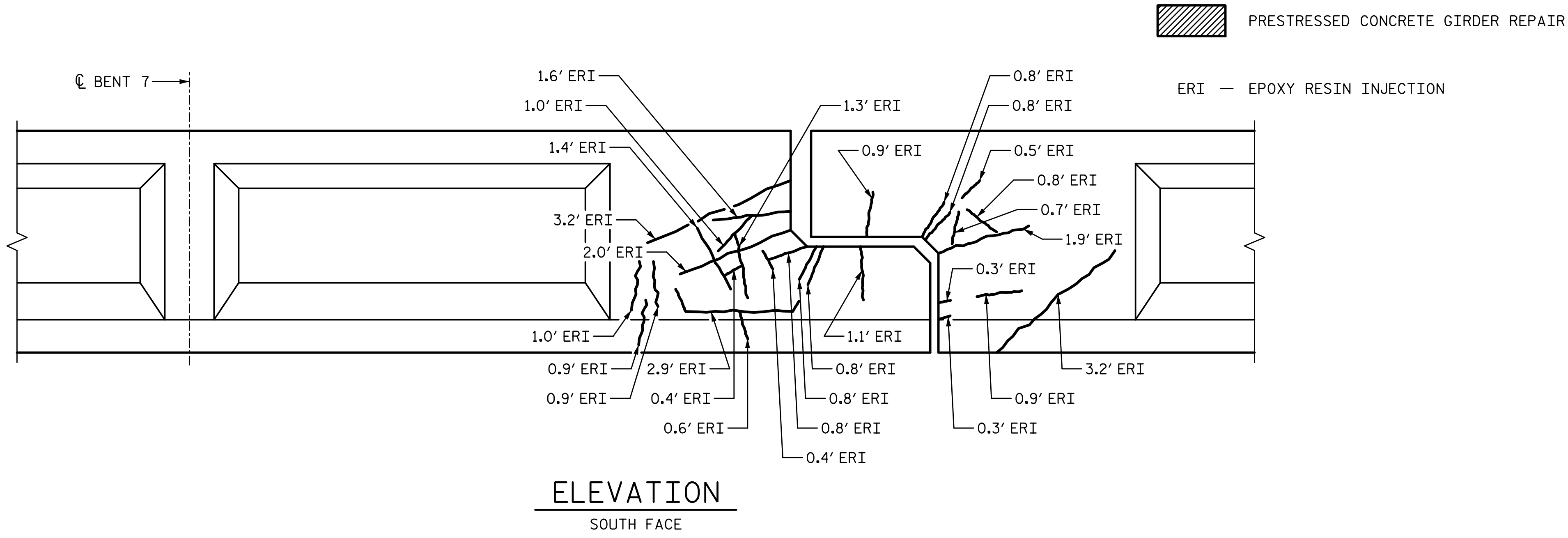
PLANS PREPARED BY:
SIMPSON ENGINEERS & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

DRAWN BY: T. BANKOVICH DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

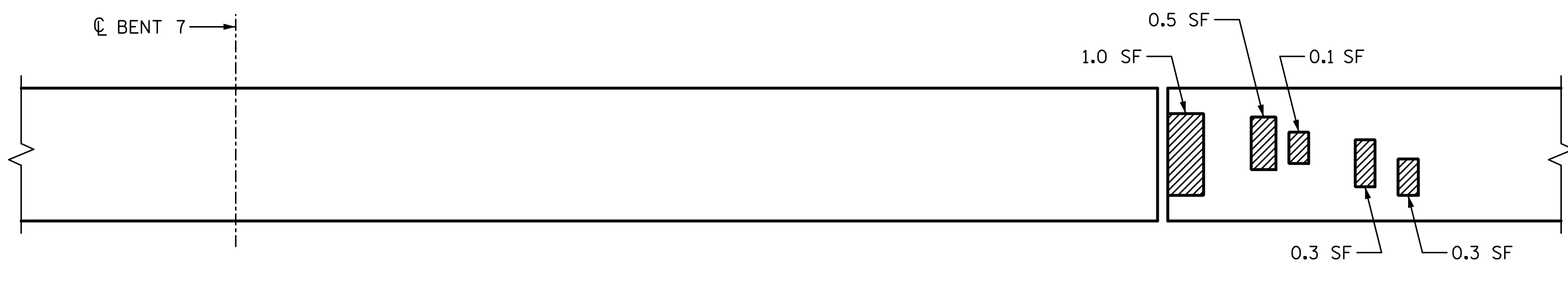
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-75
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

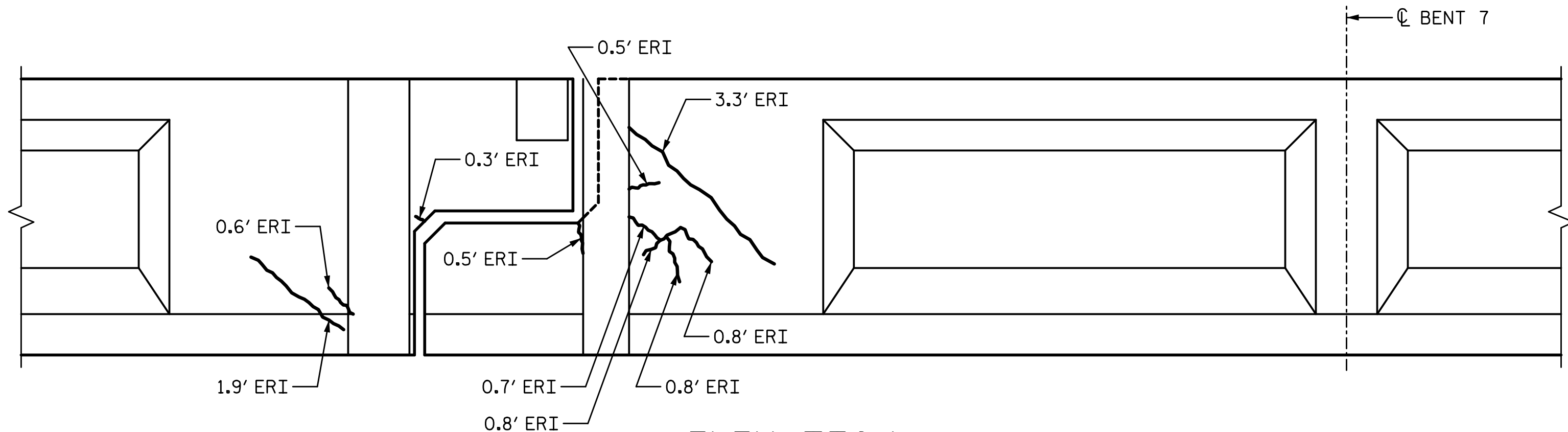
9/28/2020 12:01:09 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8WH_640048.dgn



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE

REPAIRS WEST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	2.2	1.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		42.4			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

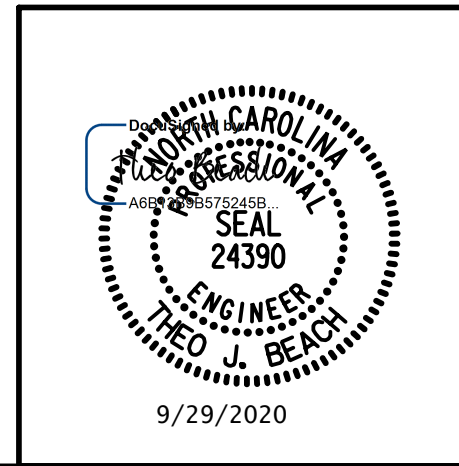
AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 7 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**WEST HINGE DETAILS
 FOR GIRDER 7**




PLANS PREPARED BY:
SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

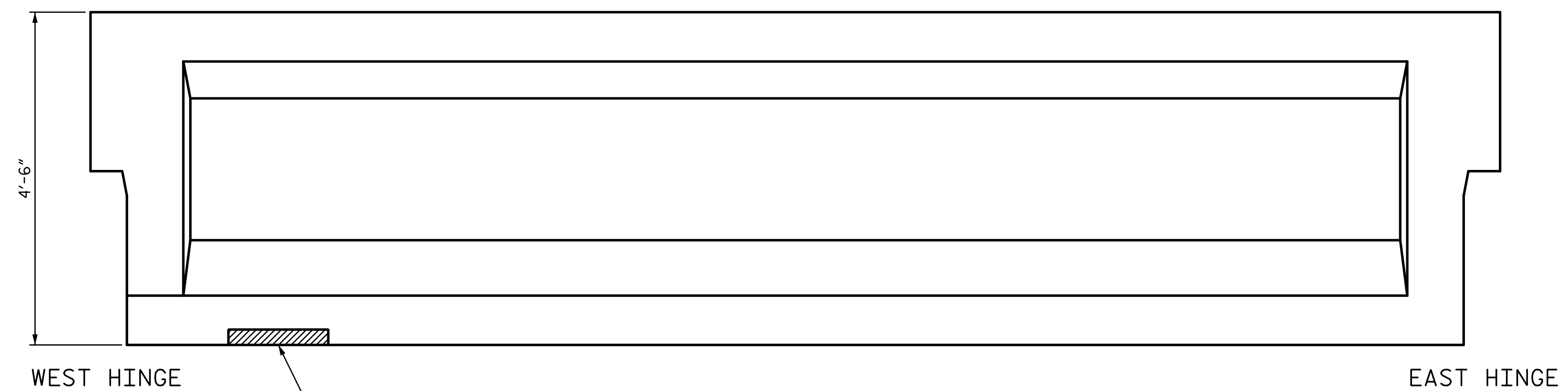
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-76
1			3			TOTAL SHEETS
2			4			163

DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

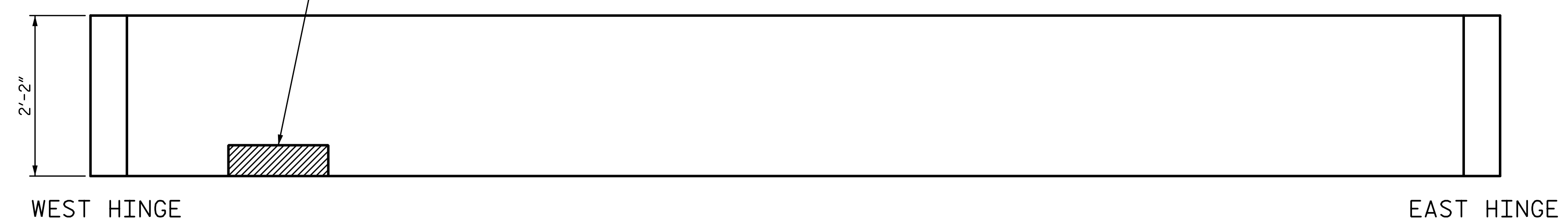
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:09 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 8_640048.dgn

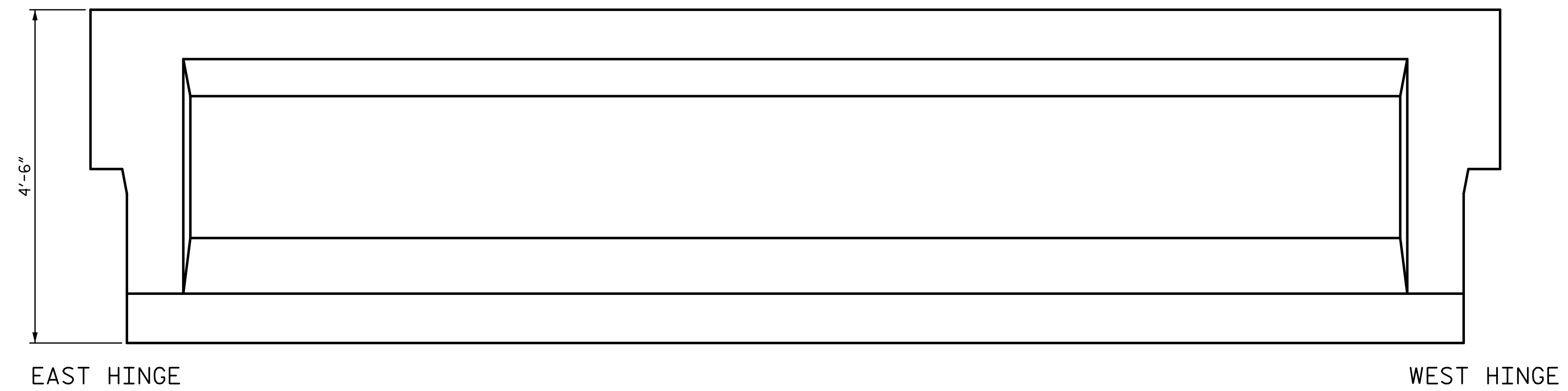
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 8 GRD. 1	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	7.5	2.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

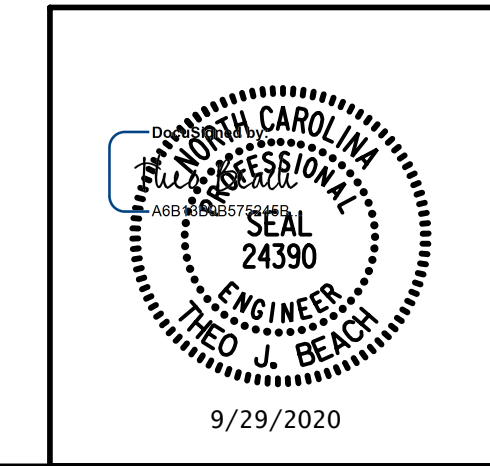
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 1 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
**SPAN 8
 GIRDER 1**

PLANS PREPARED BY:

 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




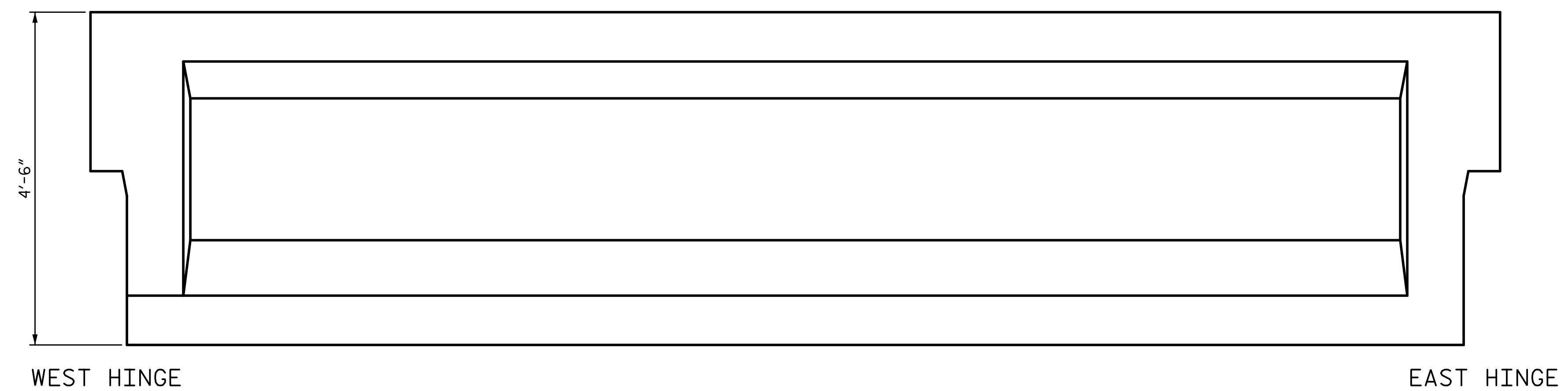
DRAWN BY: <u>T. BANKOVICH</u>	DATE: <u>9-20</u>
CHECKED BY: <u>T.J. BEACH</u>	DATE: <u>9-20</u>
DESIGN ENGINEER OF RECORD: <u>T.J. BEACH</u>	DATE: <u>9-20</u>

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-77
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:09 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8_640048.dgn

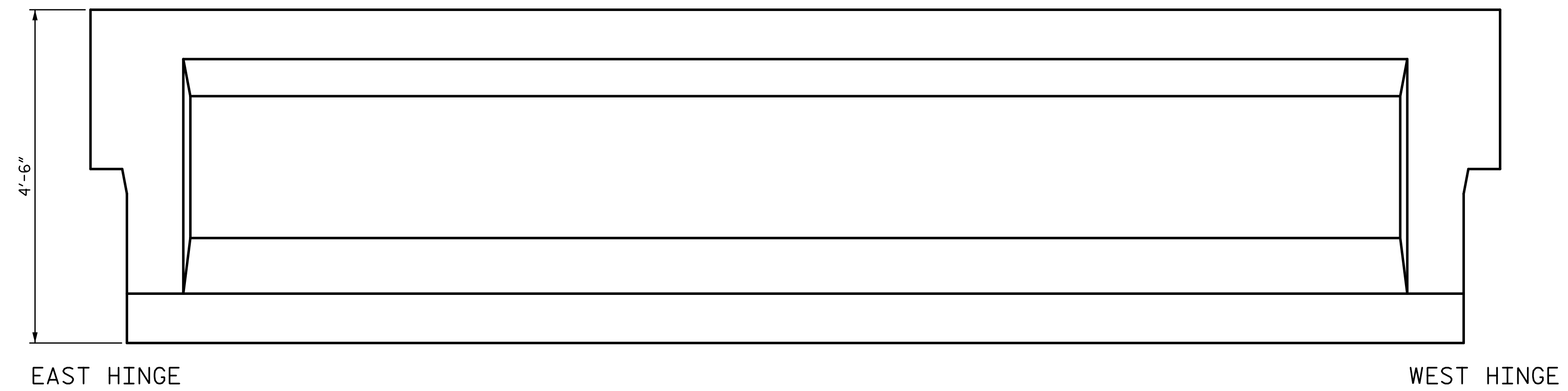
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 8 GRD. 2	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

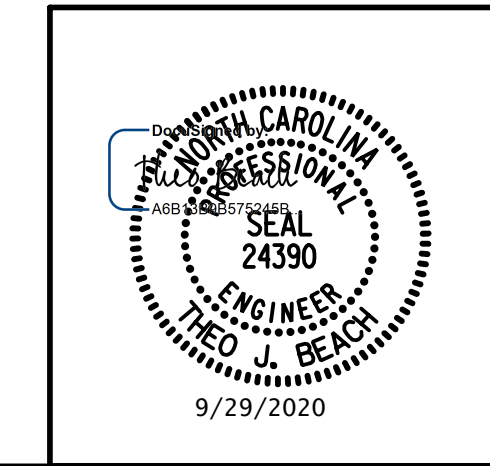
SHEET 2 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 8
 GIRDER 2**

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




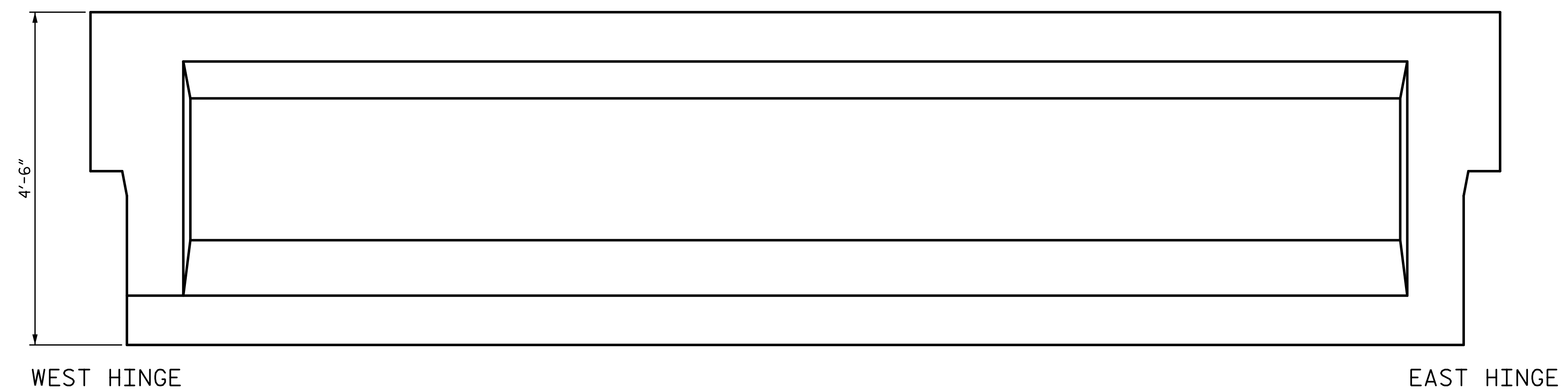
DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-78
1			3			TOTAL SHEETS
2			4			163

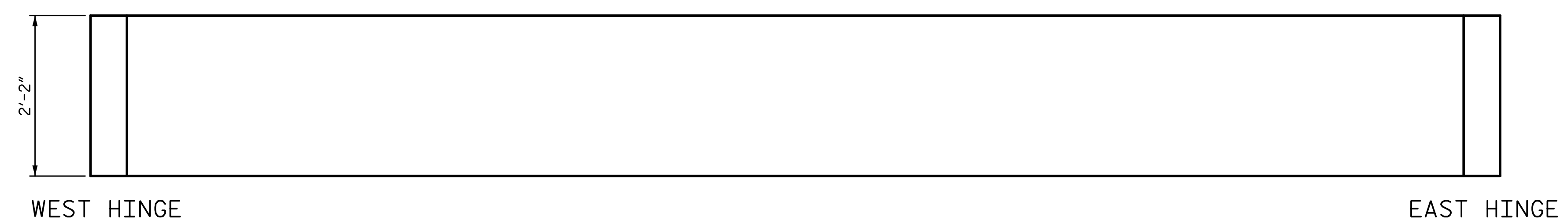
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:09 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 8_640048.dgn

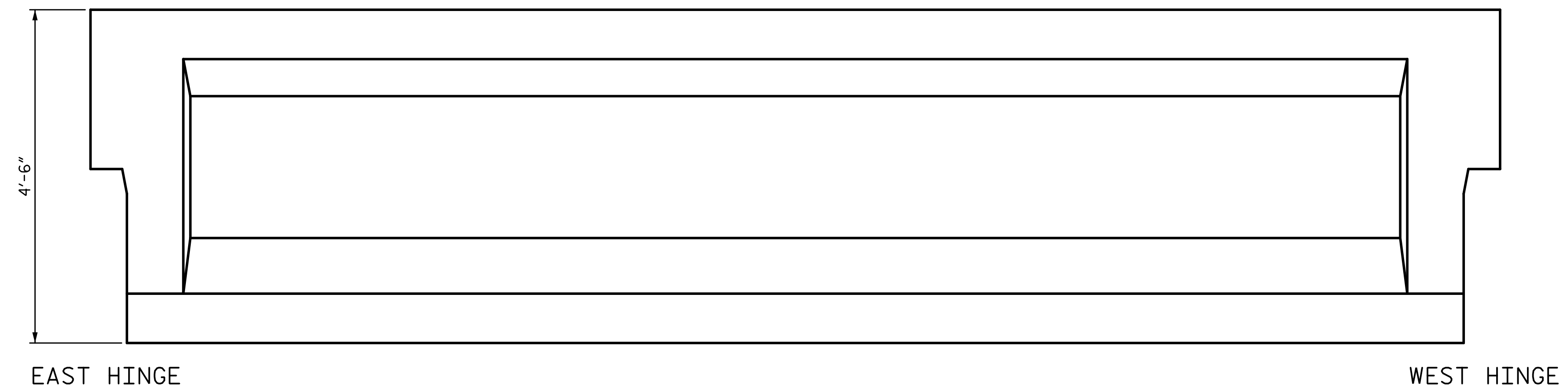
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 8 GRD. 3	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

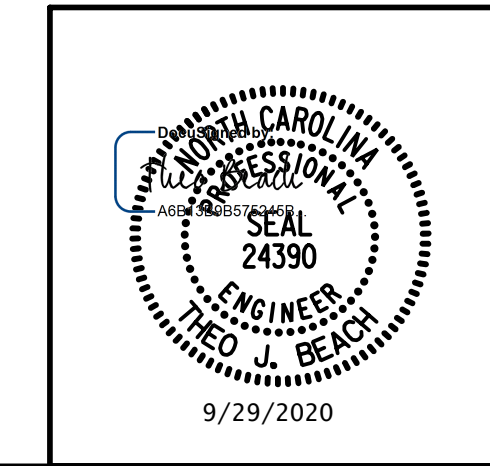
SHEET 3 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 8
 GIRDER 3**

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

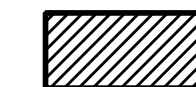


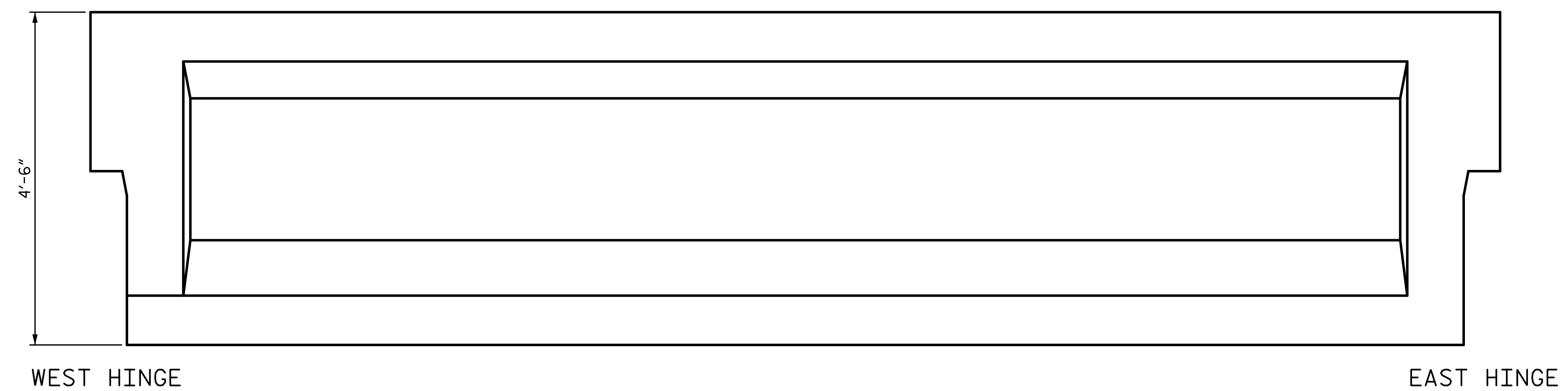
DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-79
1			3			TOTAL SHEETS
2			4			163

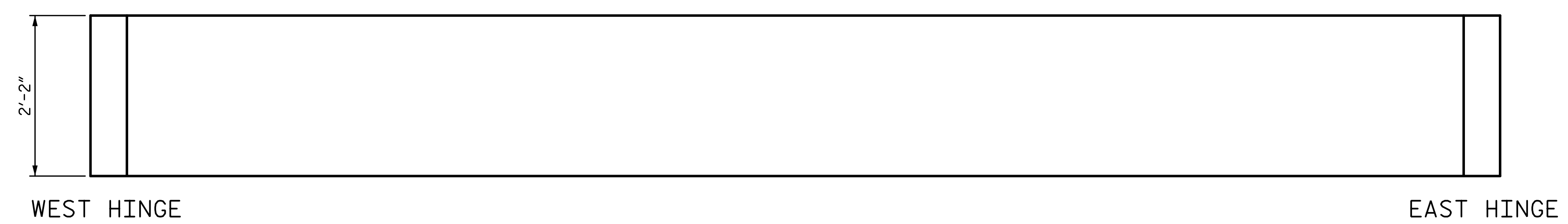
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:10 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 8_640048.dgn

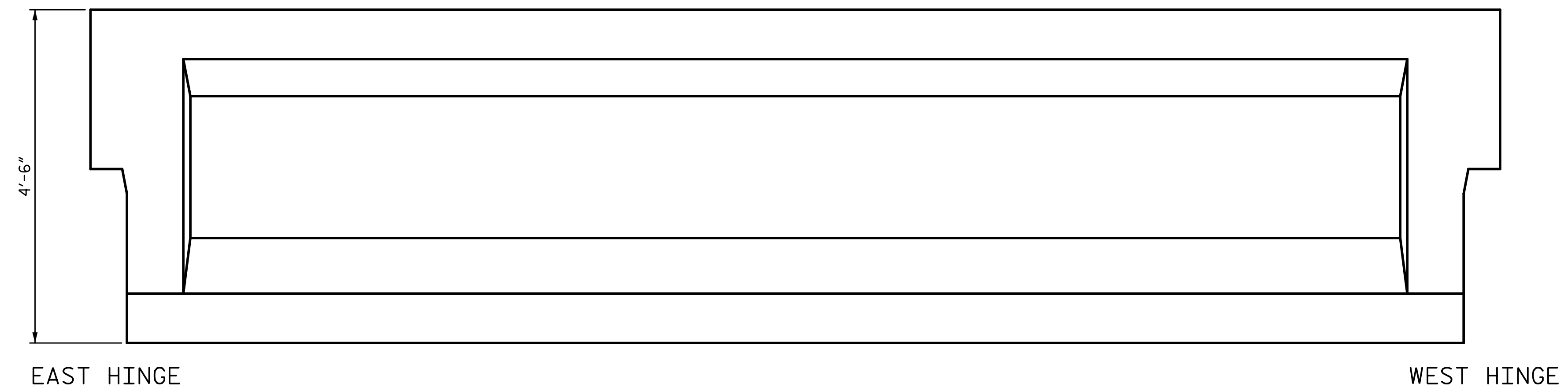
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 8 GRD. 4	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

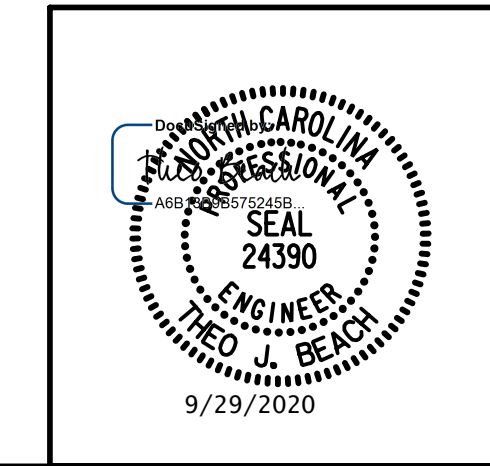
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 4 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 8
 GIRDER 4

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




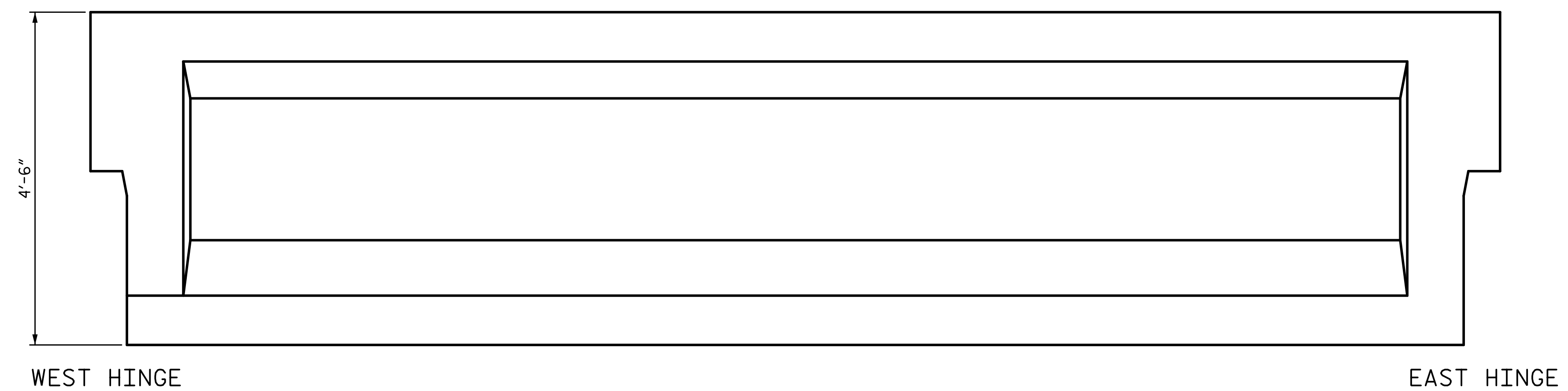
DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-80
1			3			TOTAL SHEETS
2			4			163

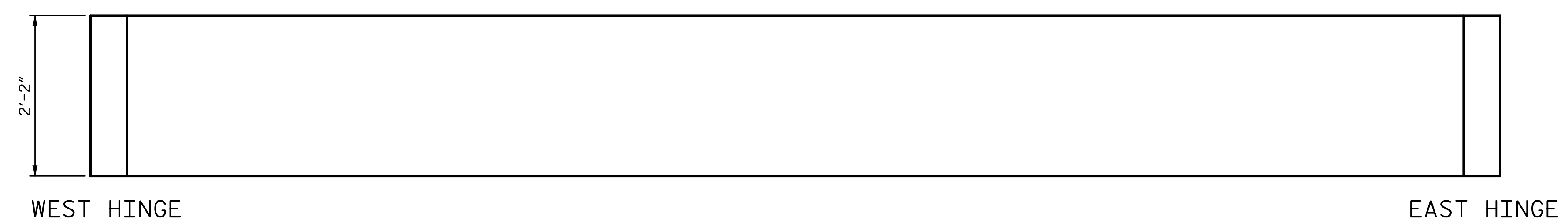
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:10 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 8_640048.dgn

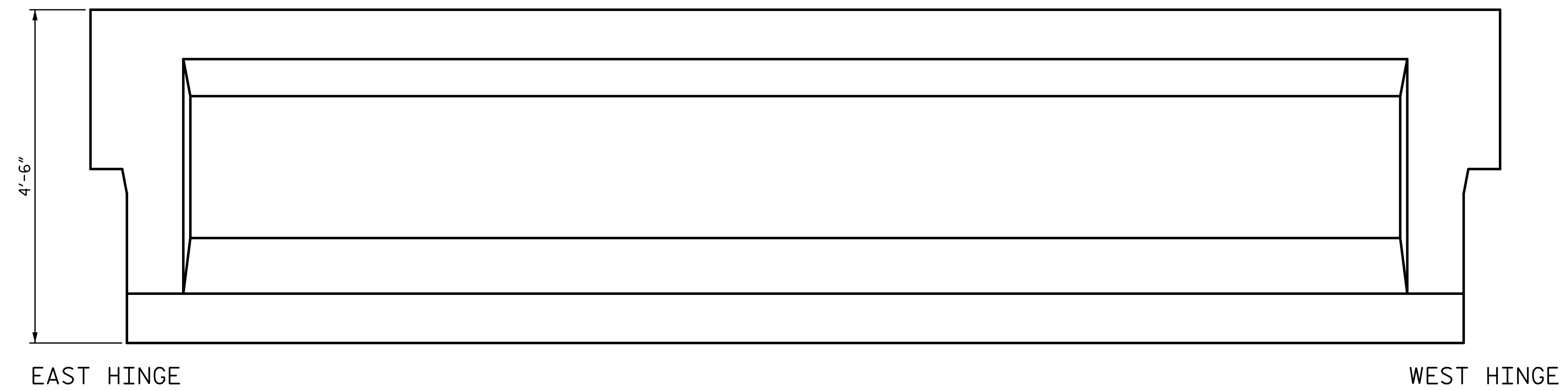
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 8 GRD. 5	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

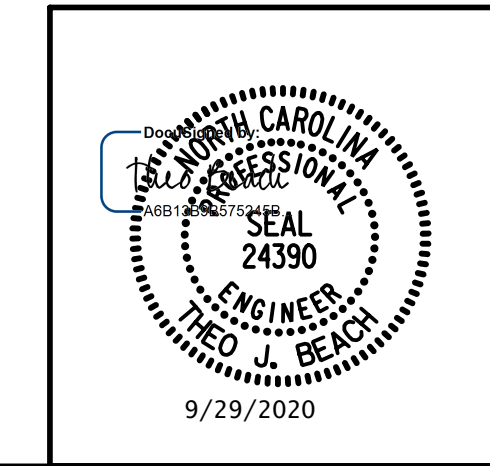
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 5 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 8
 GIRDER 5

PLANS PREPARED BY:

 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




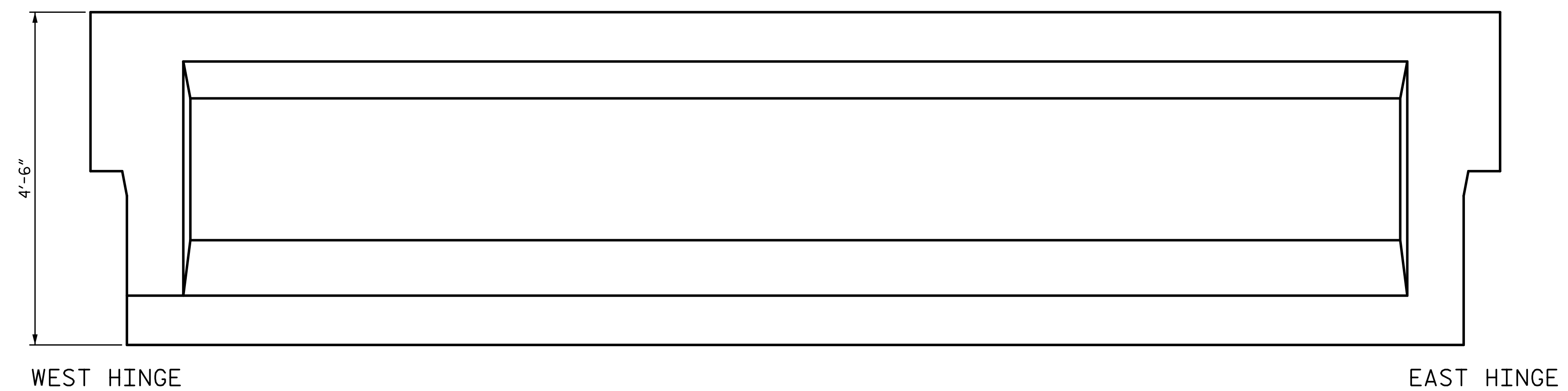
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-81
1			3			TOTAL SHEETS
2			4			163

DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

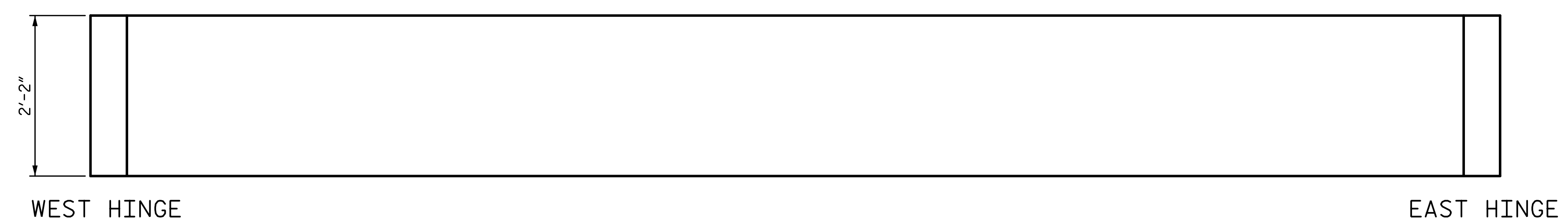
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:10 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN 8_640048.dgn

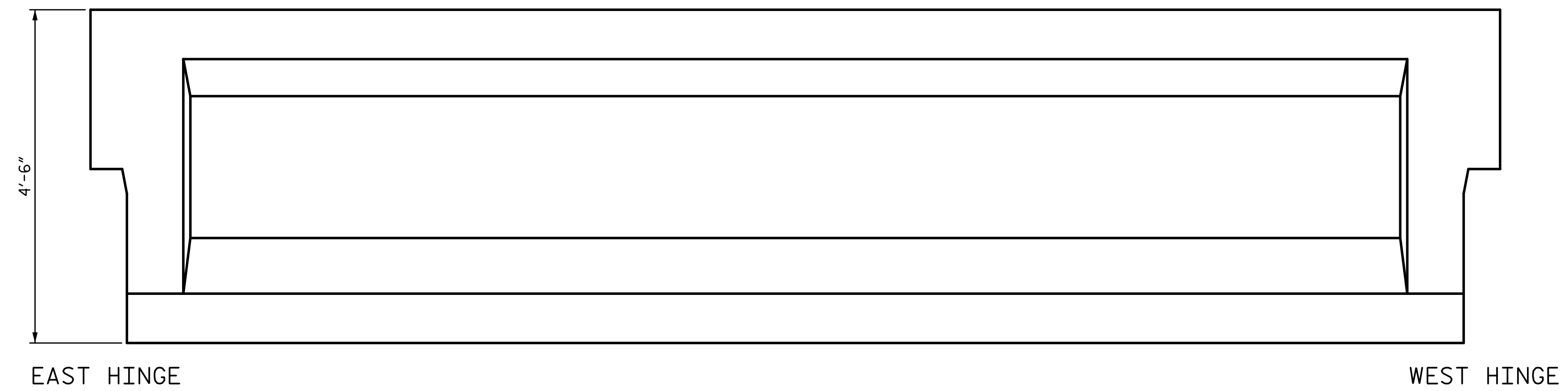
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 8 GRD. 6	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

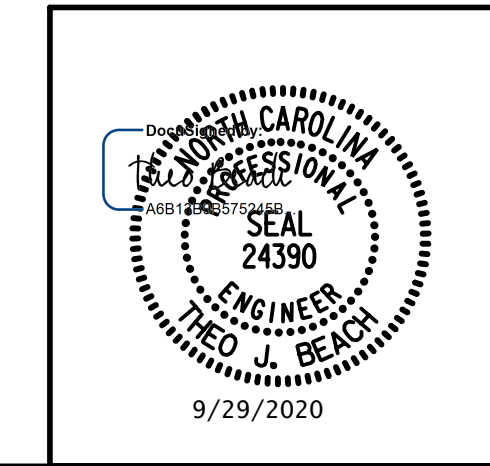
SHEET 6 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 8
 GIRDER 6**

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

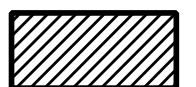


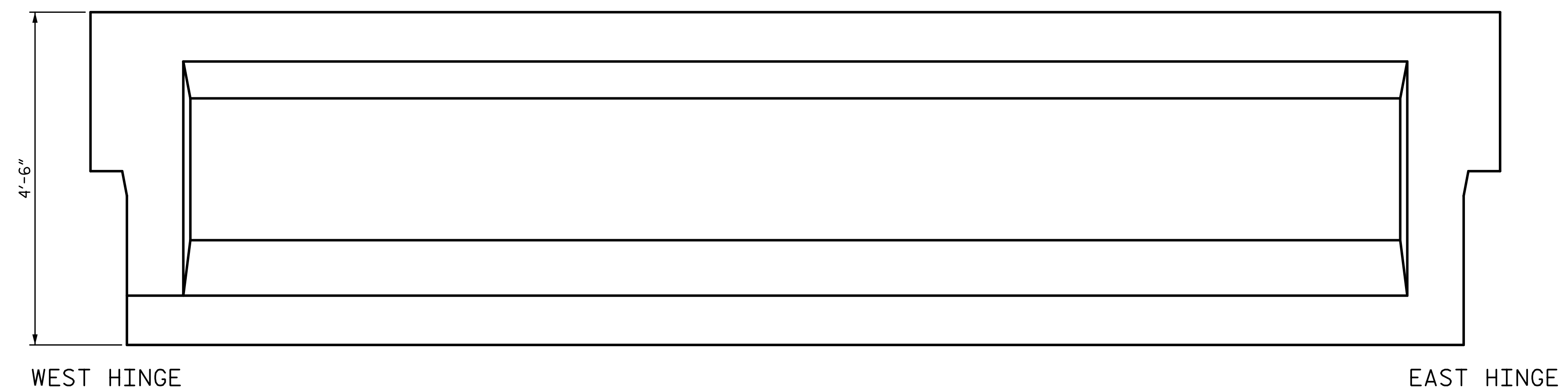
DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-82
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:10 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8_640048.dgn

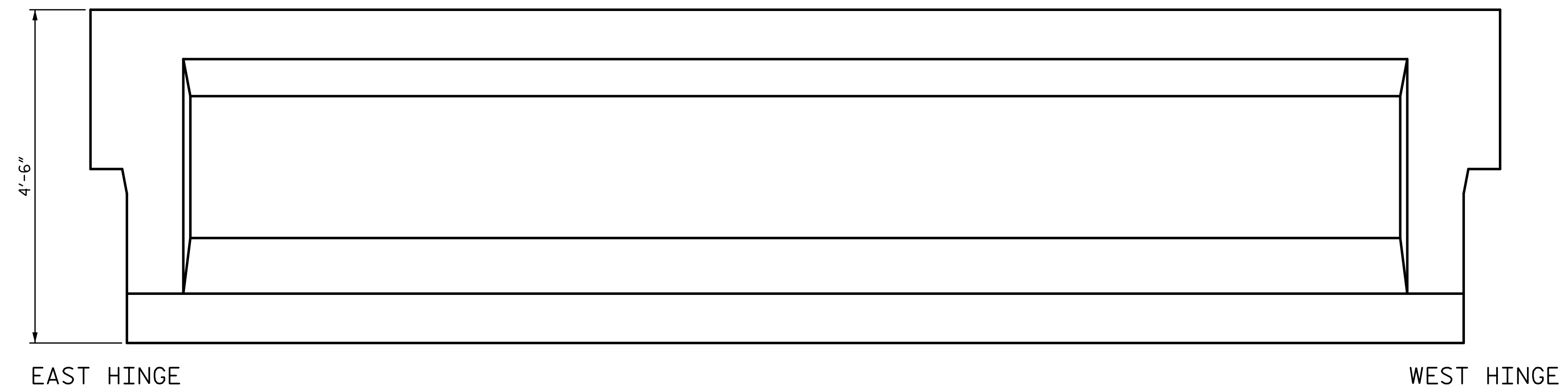
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE

REPAIRS SPAN 8 GRD. 7	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

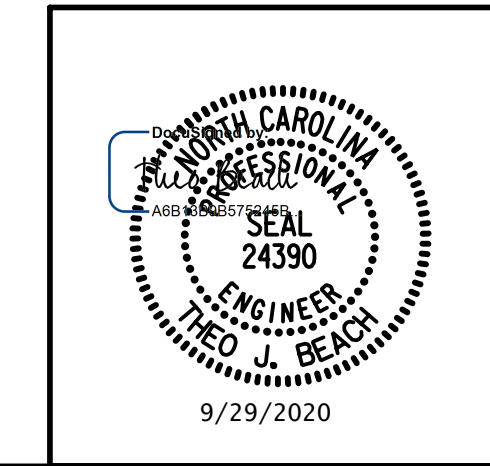
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 7 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 8
 GIRDER 7

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

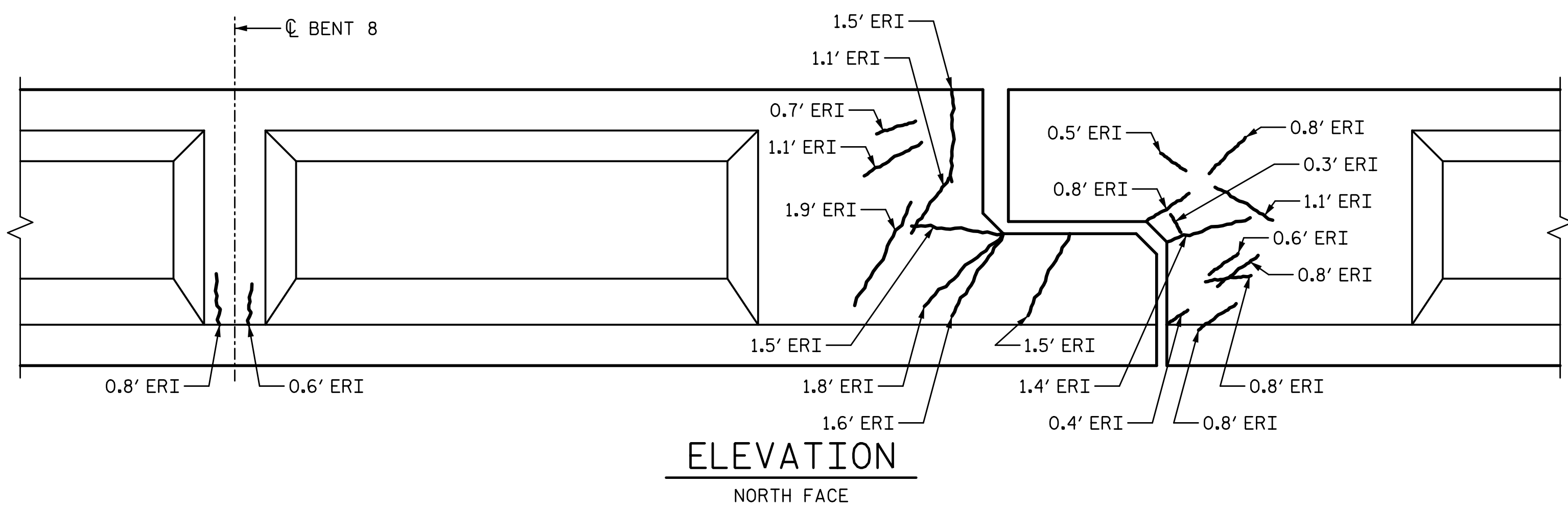
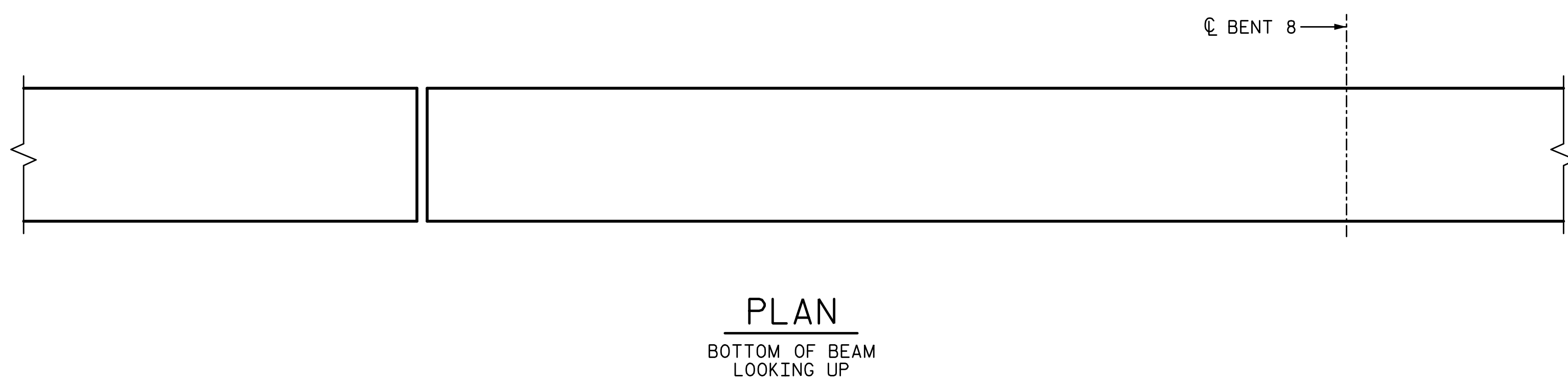
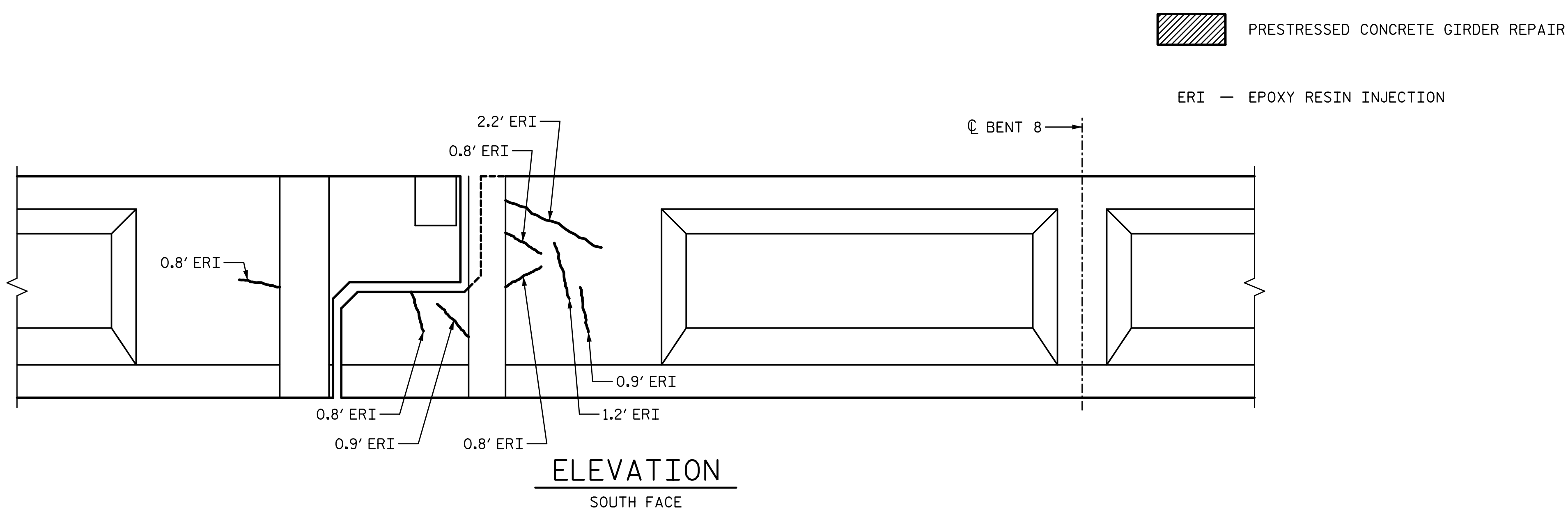


DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-83
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:11 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8EH_640048.dgn



REPAIR QUANTITY TABLE					
REPAIRS EAST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		30.8			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

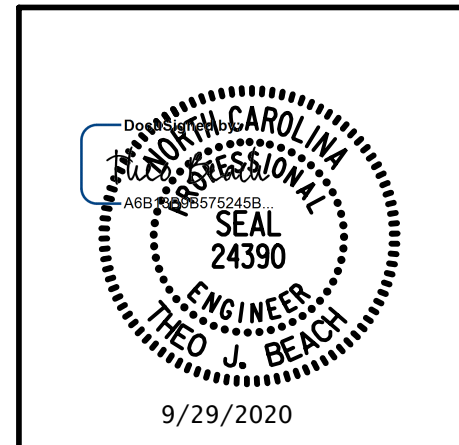
FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048
 SHEET 1 OF 7

DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

PLANS PREPARED BY:
SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521



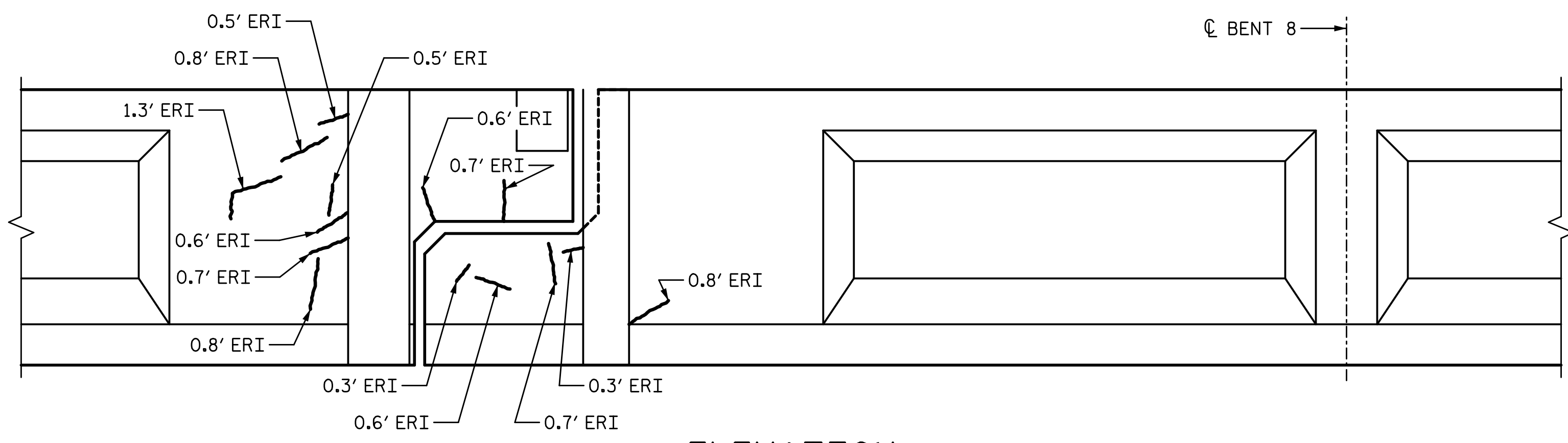
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

EAST HINGE DETAILS FOR GIRDER 1

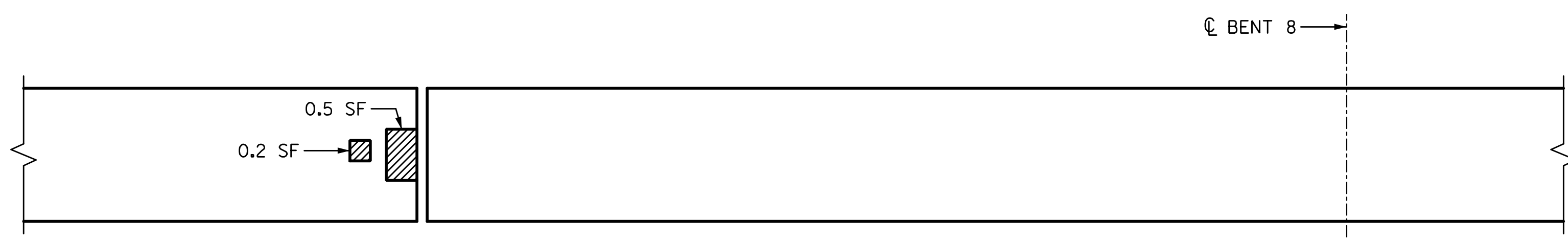
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-84
1			3			TOTAL SHEETS
2			4			163

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

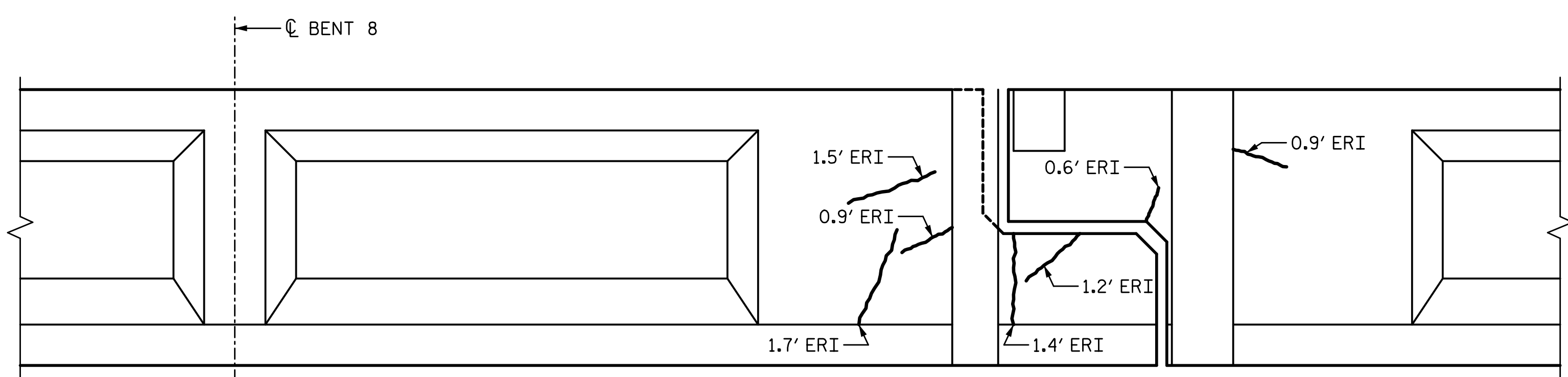
9/28/2020 12:01:11 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8EH_640048.dgn



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

PRESTRESSED CONCRETE GIRDER REPAIR
ERI — EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE					
REPAIRS EAST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.7	0.2			
EPOXY RESIN INJECTION		LF			LF
GIRDER		17.4			

NOTES:
REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

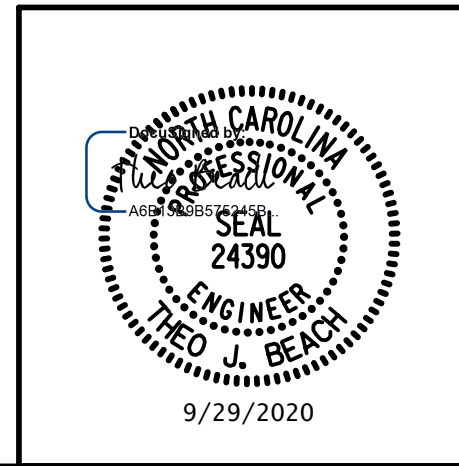
PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

SHEET 2 OF 7

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION

**EAST HINGE DETAILS
FOR GIRDER 2**

PLANS PREPARED BY:
SE & A
SIMPSON ENGINEERS & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0538 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

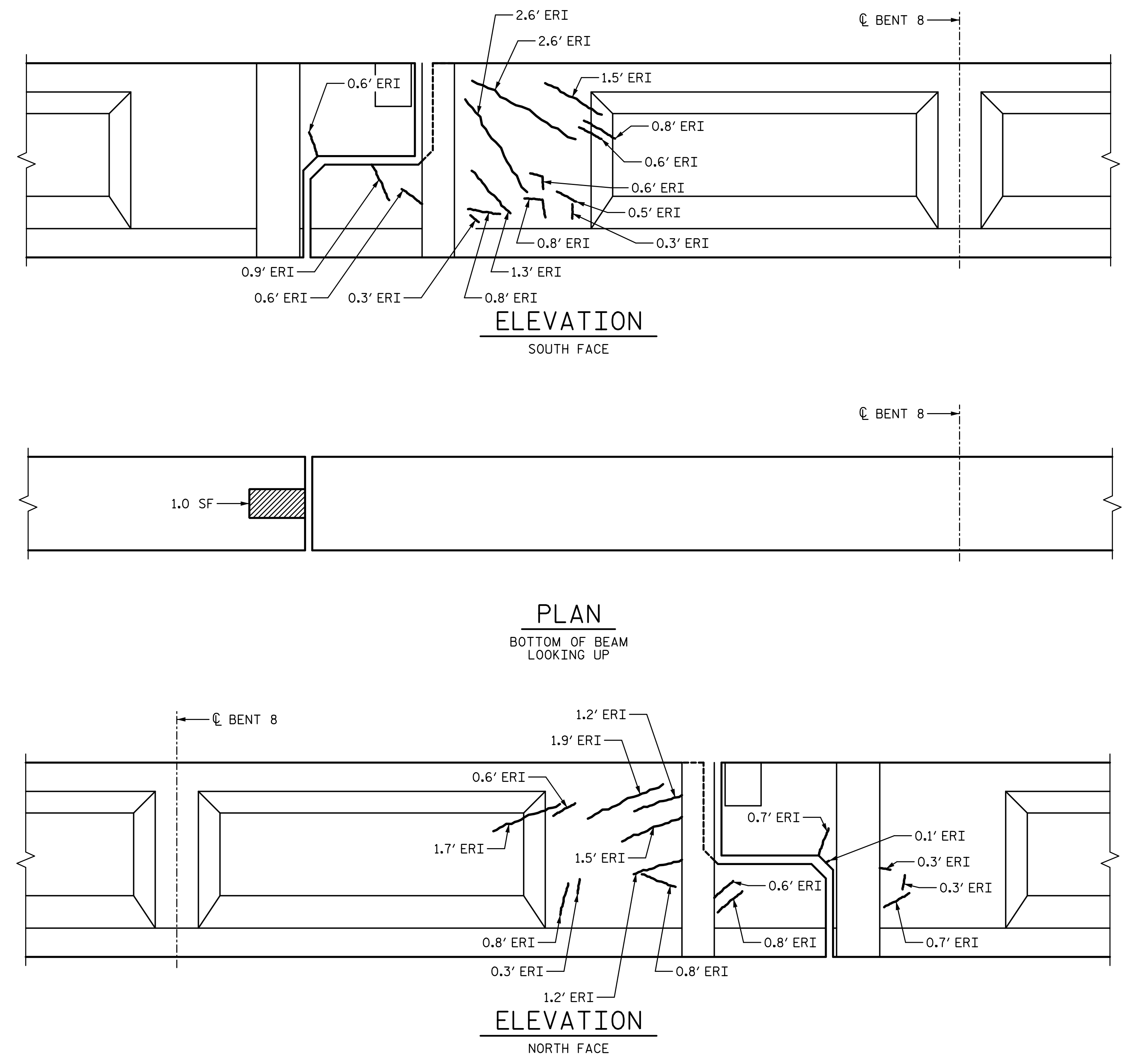


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-85
1			3			TOTAL SHEETS
2			4			163

DRAWN BY: T. BANKOVICH DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:11 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8EH_640048.dgn



REPAIR QUANTITY TABLE					
REPAIRS EAST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	1.0	0.3			
EPOXY RESIN INJECTION		LF			LF
GIRDER		28.3			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

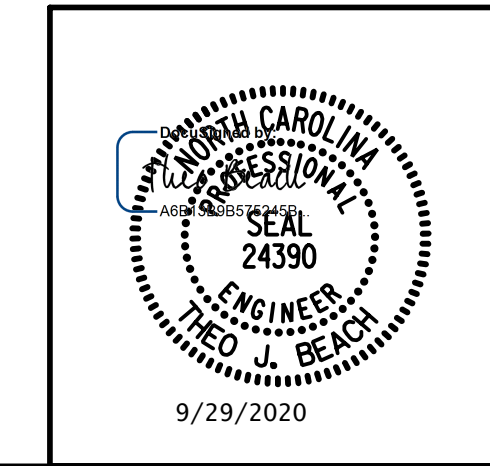
SHEET 3 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**EAST HINGE DETAILS
 FOR GIRDER 3**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-86
1			3			TOTAL SHEETS
2			4			163

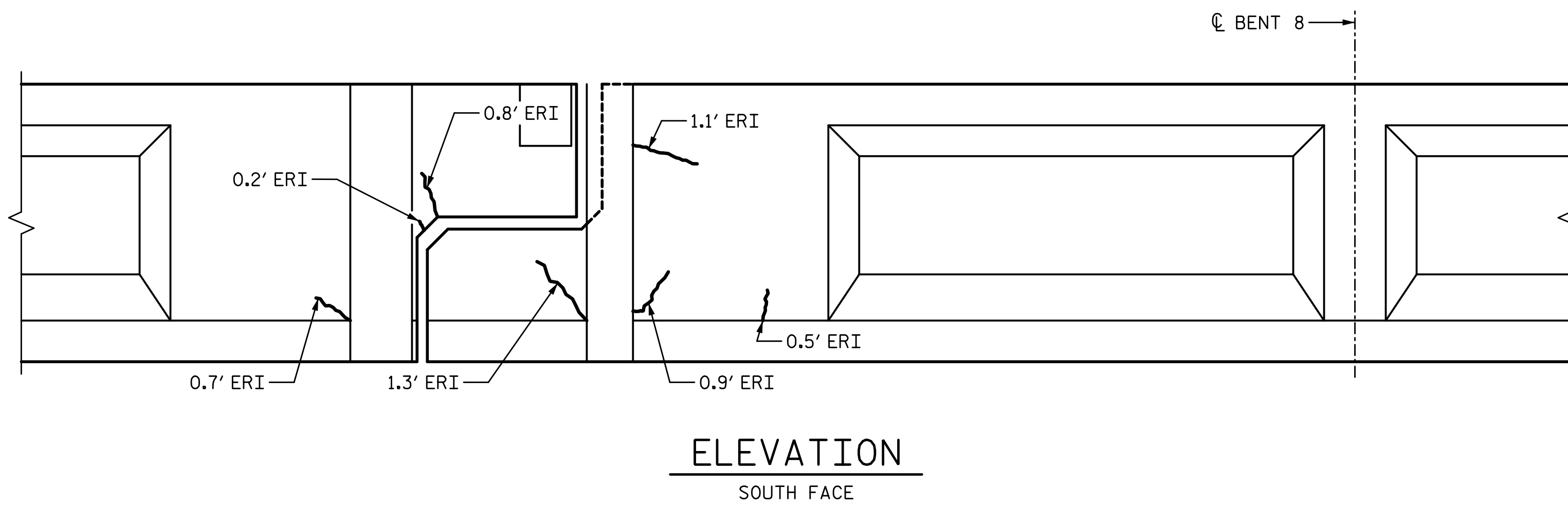
PLANS PREPARED BY:
SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521



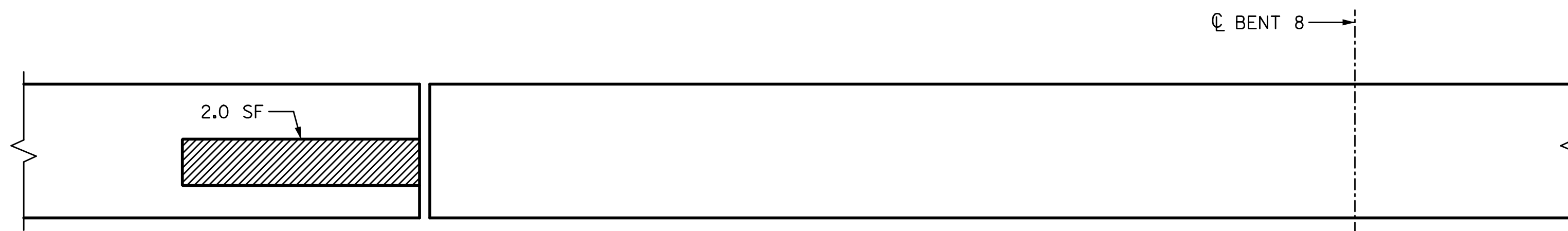
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

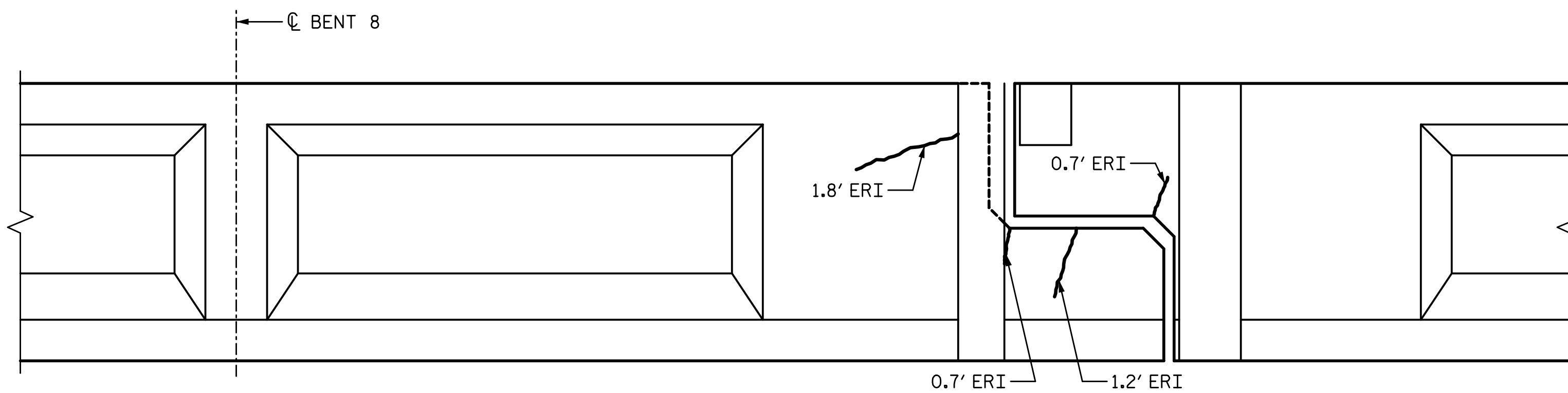
9/28/2020 12:01:11 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8EH_640048.dgn



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

PRESTRESSED CONCRETE GIRDER REPAIR
ERI — EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE					
REPAIRS EAST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	2.0	0.6			
EPOXY RESIN INJECTION		LF			LF
GIRDER		9.9			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
NEW HANOVER/PENDER COUNTY
BRIDGE NO.: 640048

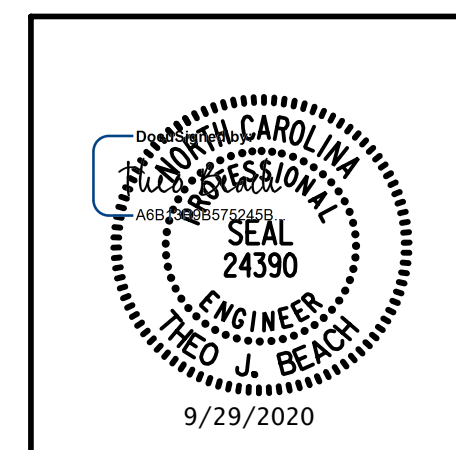
SHEET 4 OF 7

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESERVATION

EAST HINGE DETAILS
FOR GIRDER 4

PLANS PREPARED BY:

SE & A
SIMPSON ENGINEERS & ASSOCIATES
5640 Dillard Drive
Suite 200
Cary, NC 27518
(919) 852-0468
(919) 852-0538 (Fax)
www.simpsonenr.com
LICENSURE NO. C-2521



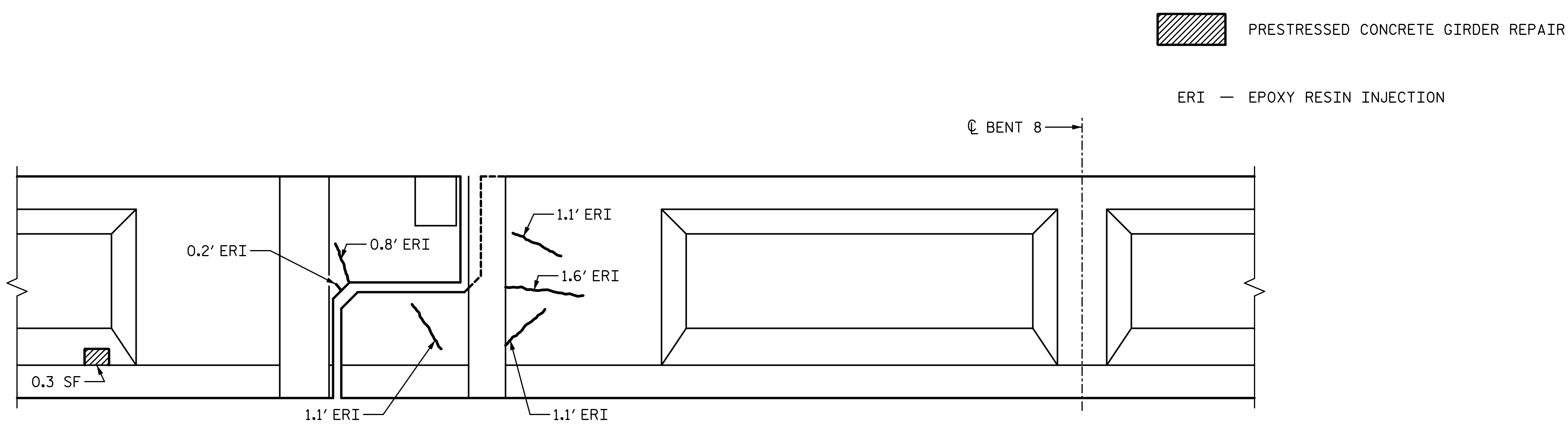
REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S1-87
2			4			TOTAL SHEETS 163

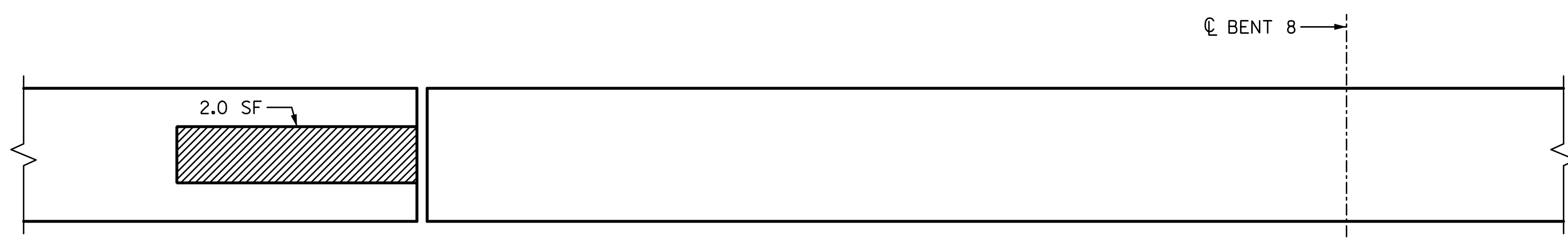
DRAWN BY: T. BANKOVICH DATE: 9-20
CHECKED BY: T.J. BEACH DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

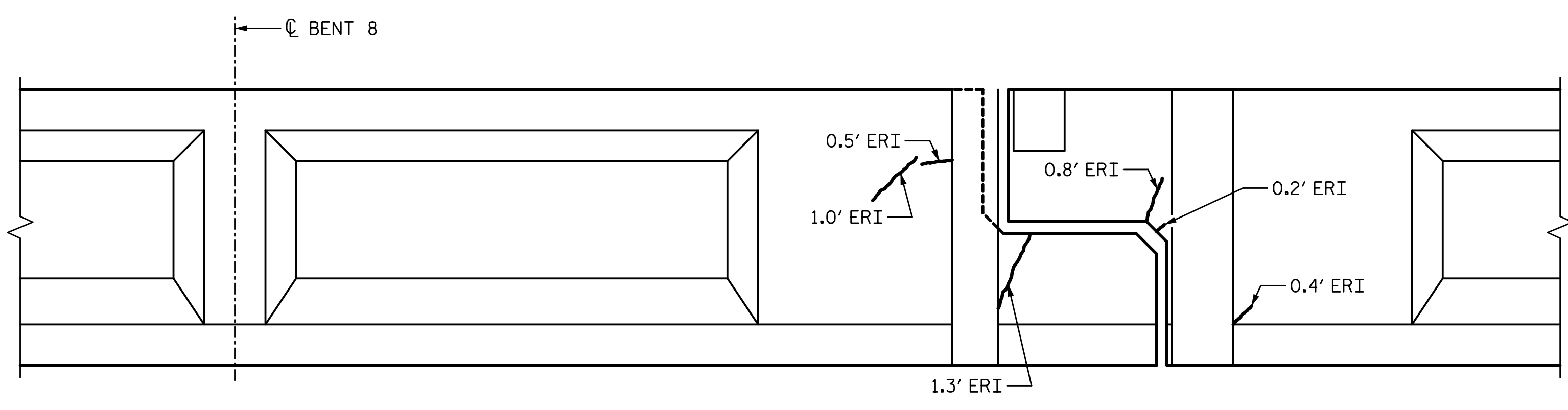
9/28/2020 12:01:11 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8EH_640048.dgn



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS EAST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	2.3	1.3			
EPOXY RESIN INJECTION		LF			LF
GIRDER		10.1			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

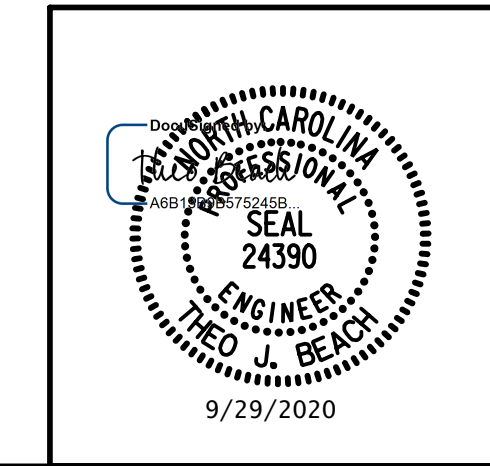
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 5 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**EAST HINGE DETAILS
 FOR GIRDER 5**

PLANS PREPARED BY:
SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

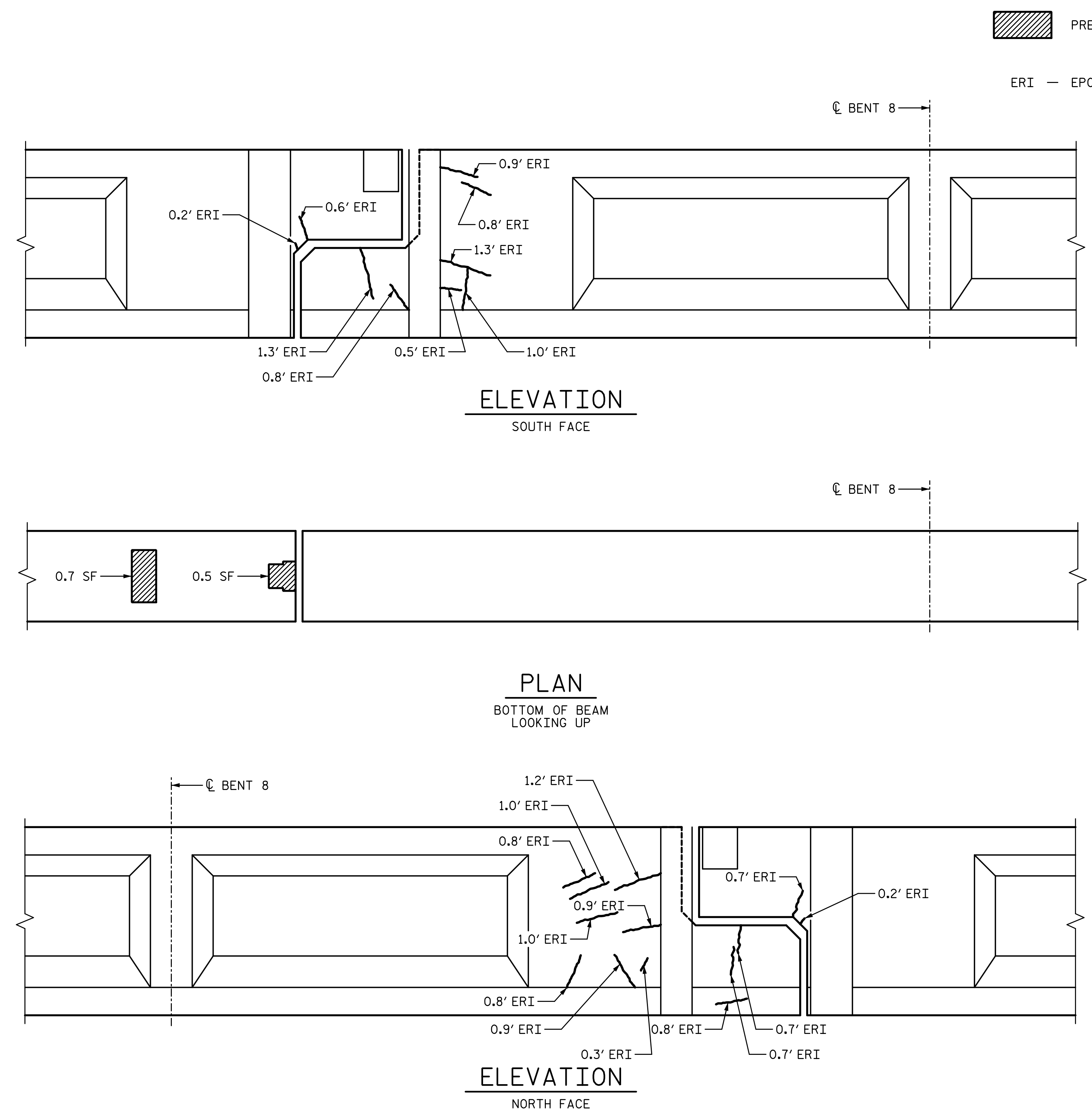


DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-88
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:11 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridge 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8EH_640048.dgn



PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE					
REPAIRS EAST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	1.2	0.4			
EPOXY RESIN INJECTION		LF			LF
GIRDER		17.4			

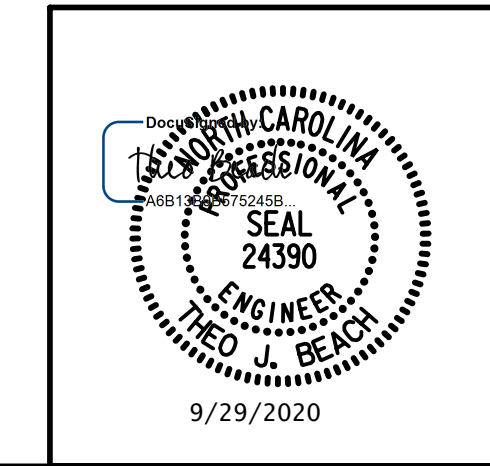
NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048
 SHEET 6 OF 7

DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521



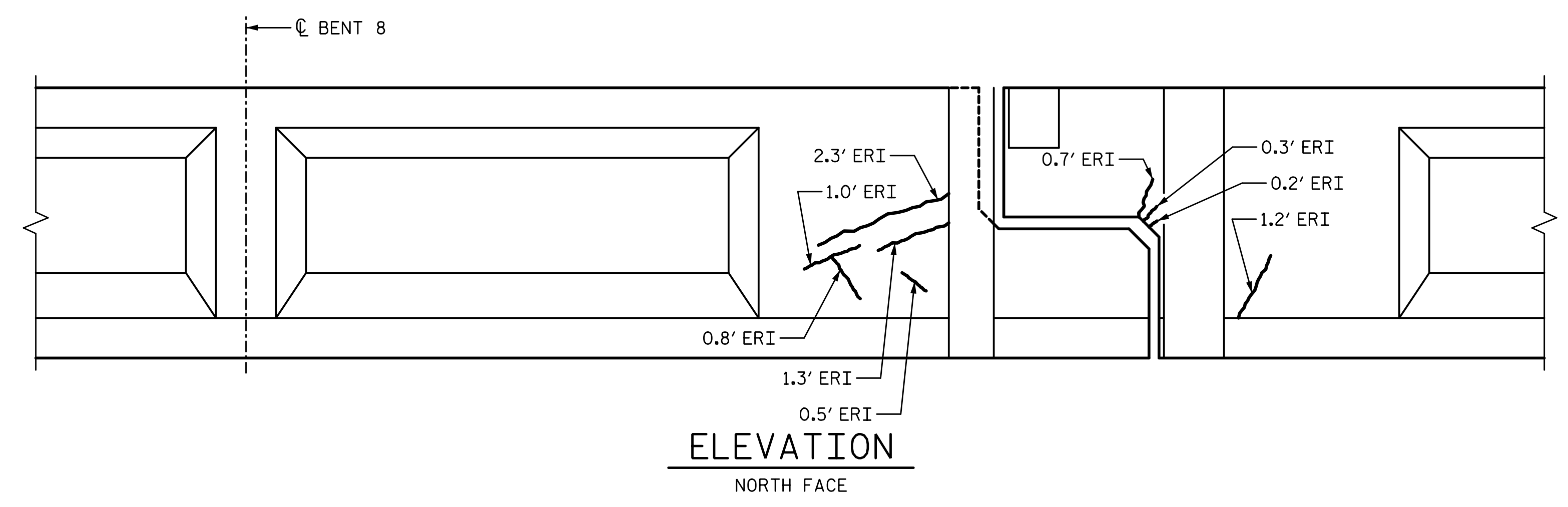
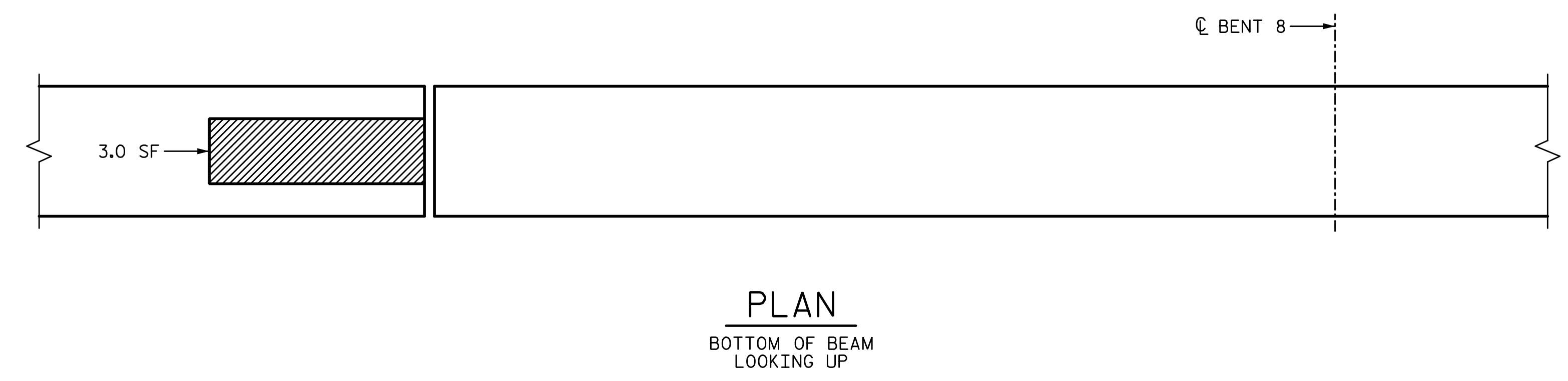
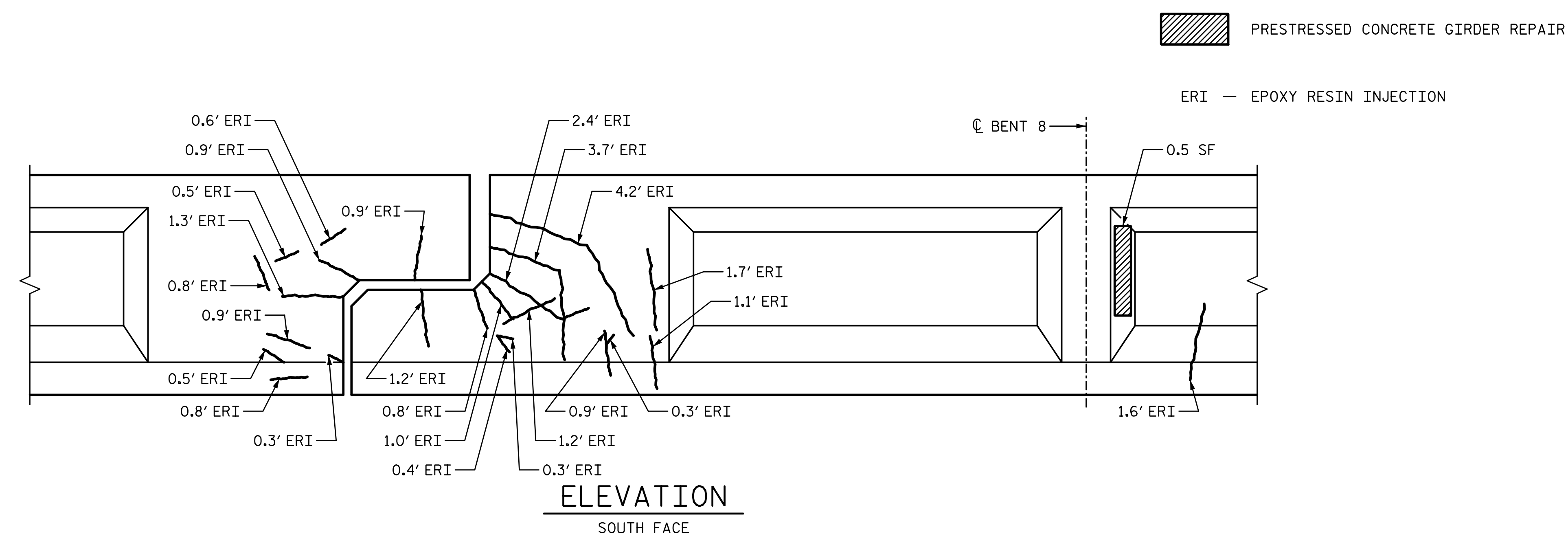
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

EAST HINGE DETAILS FOR GIRDER 6

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-89
1			3			TOTAL SHEETS
2			4			163

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

9/28/2020 12:01:12 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_8EH_640048.dgn



PRESTRESSED CONCRETE GIRDER REPAIR

ERI — EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

REPAIRS EAST HINGE	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	3.5	1.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		35.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

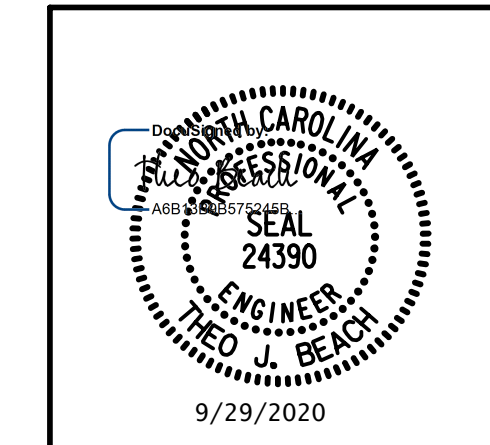
SHEET 7 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**EAST HINGE DETAILS
 FOR GIRDER 7**

PLANS PREPARED BY:

SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0598 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

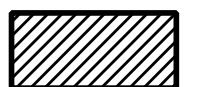


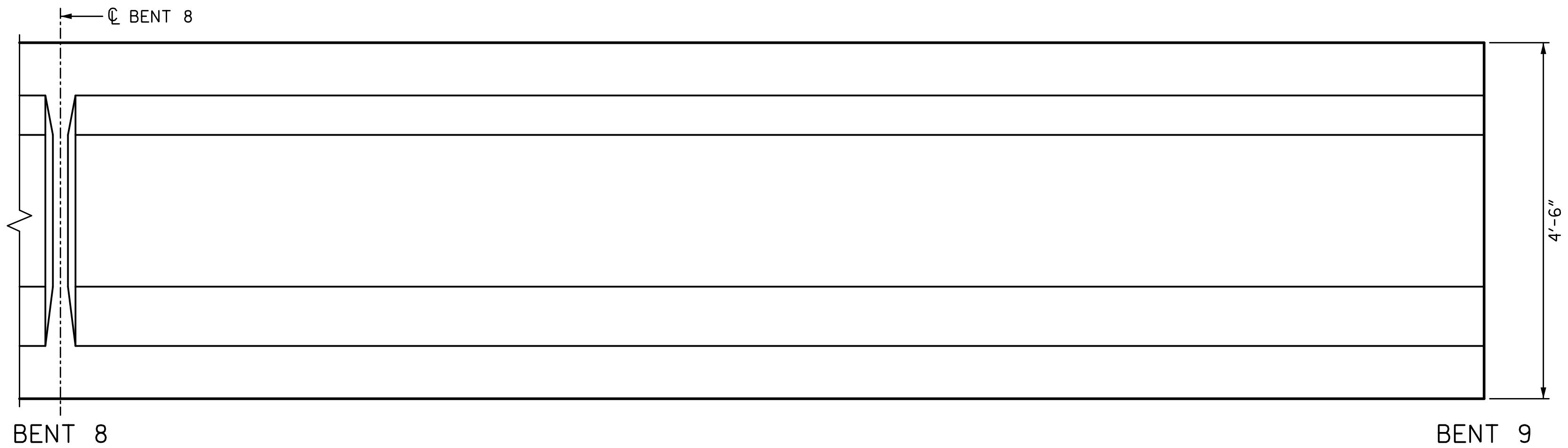
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-90
1			3			TOTAL SHEETS
2			4			163

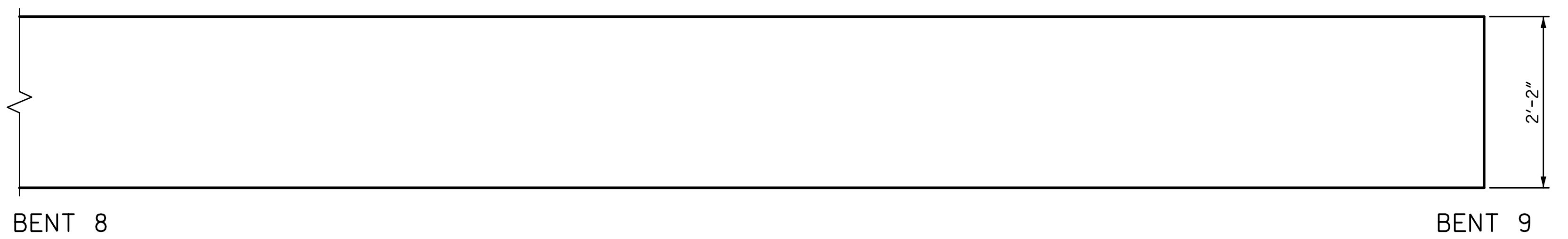
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:12 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_9_640048.dgn

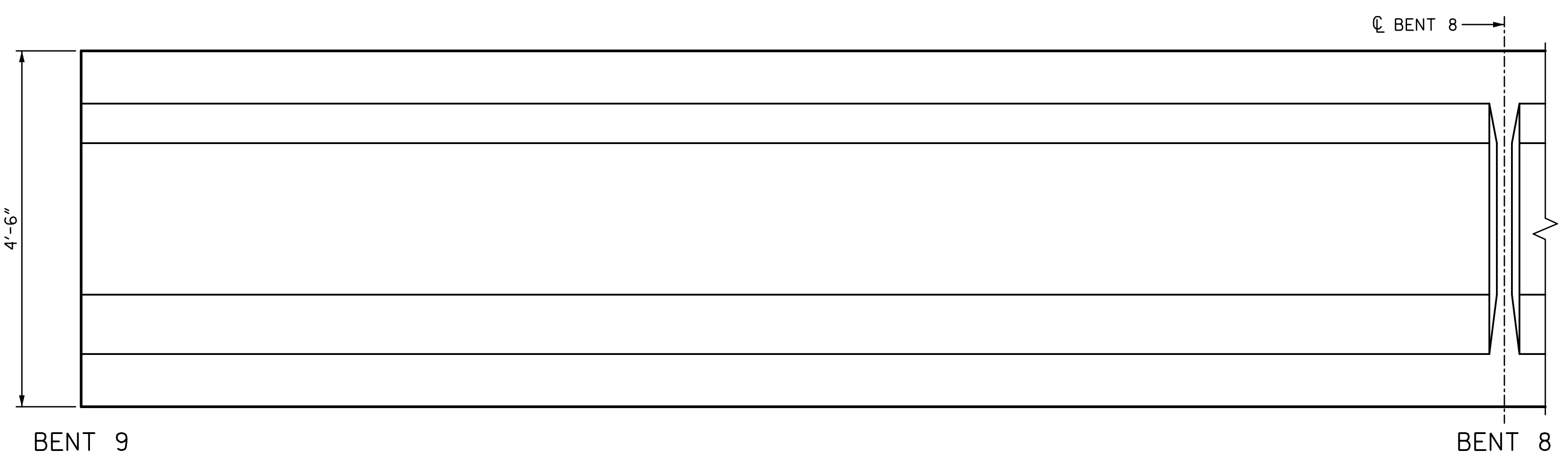
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 9 GRD. 1	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

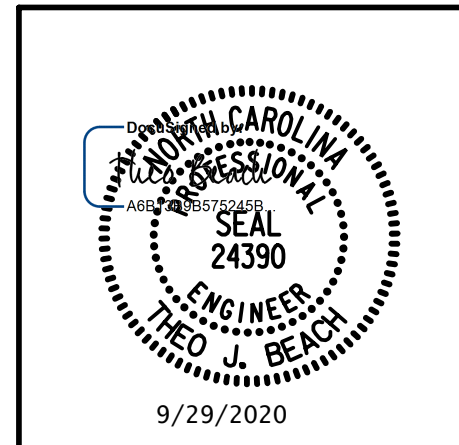
SHEET 1 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 9
 GIRDER 1**

PLANS PREPARED BY:

SEA & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

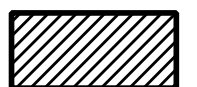


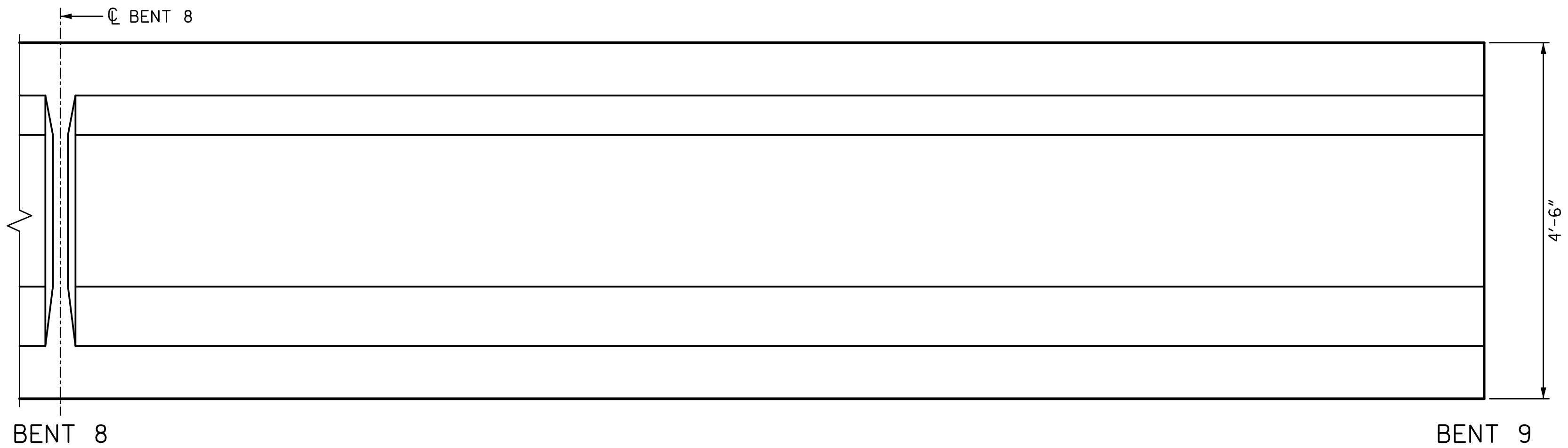
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-91
1			3			TOTAL SHEETS
2			4			163

9/28/2020 12:01:12 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_9_640048.dgn

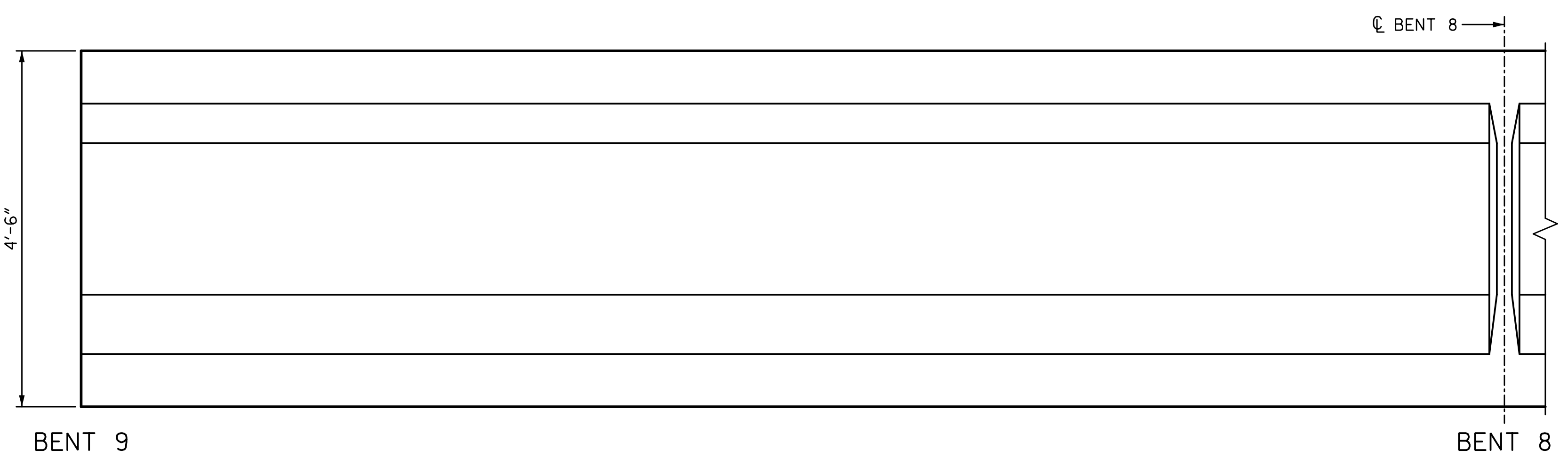
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 9 GRD. 2	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

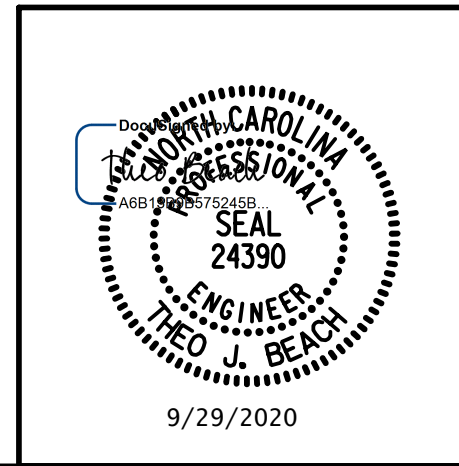
SHEET 2 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 9
 GIRDER 2**

PLANS PREPARED BY:

SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




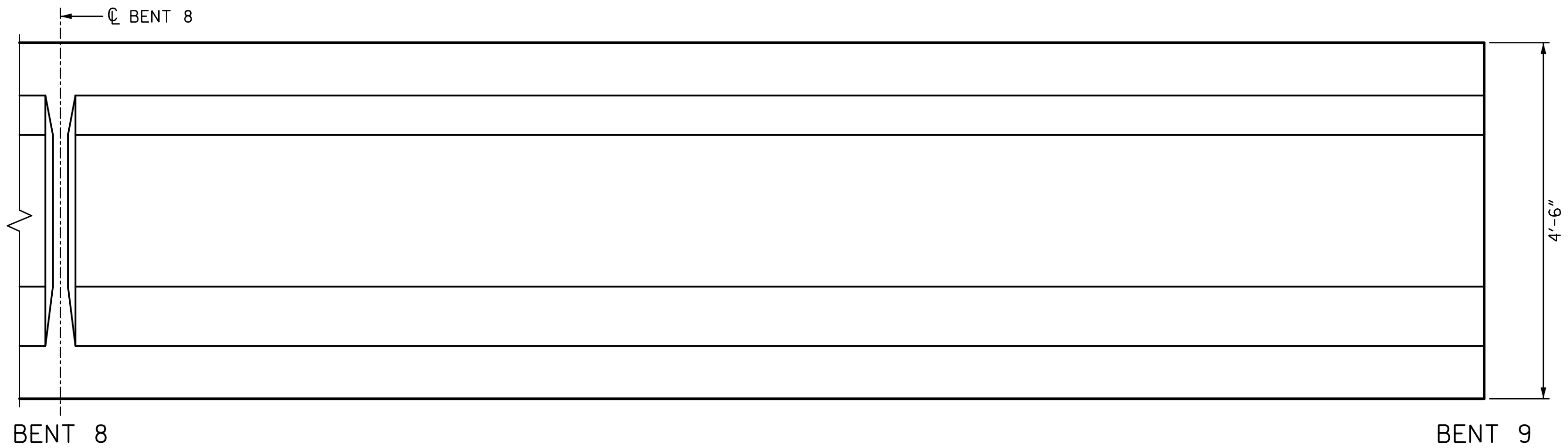
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			TOTAL SHEETS
2			4			163

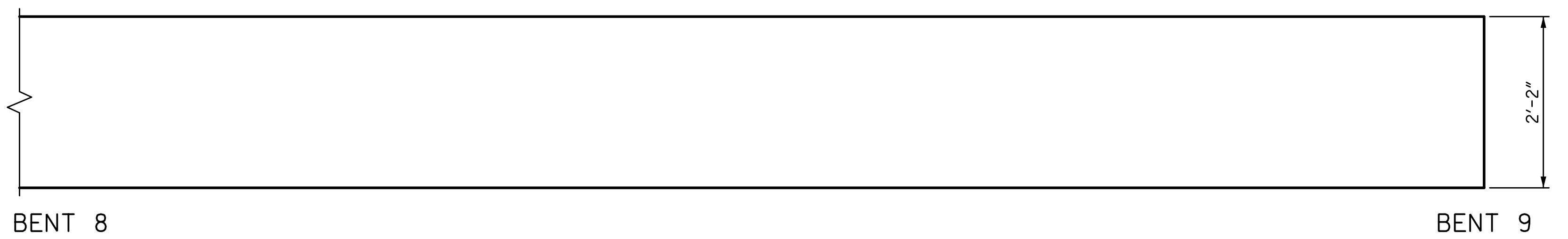
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:12 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_9_640048.dgn

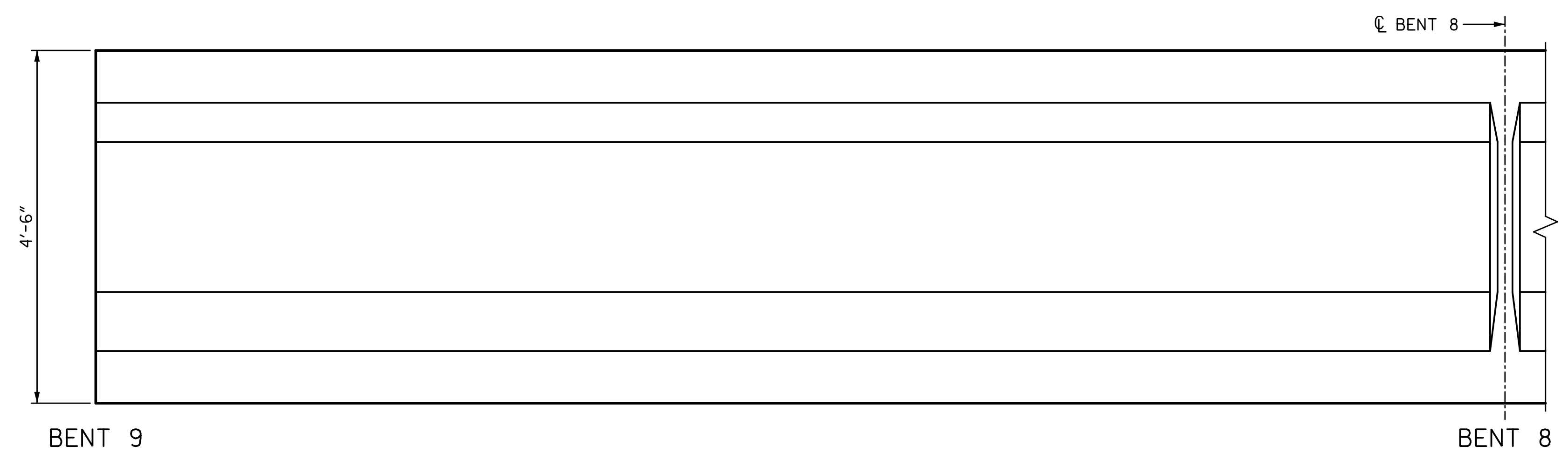
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 9 GRD. 3	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

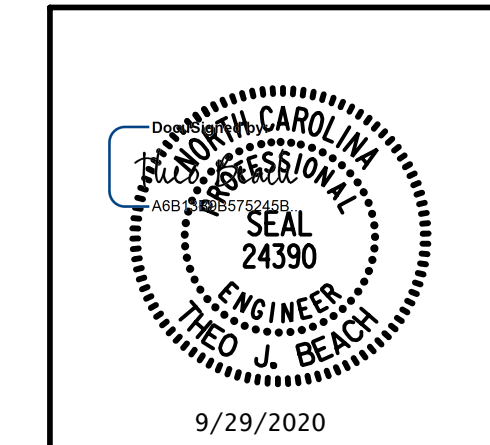
SHEET 3 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 9
 GIRDER 3**

PLANS PREPARED BY:

SE & A
 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

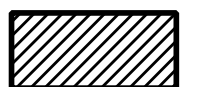


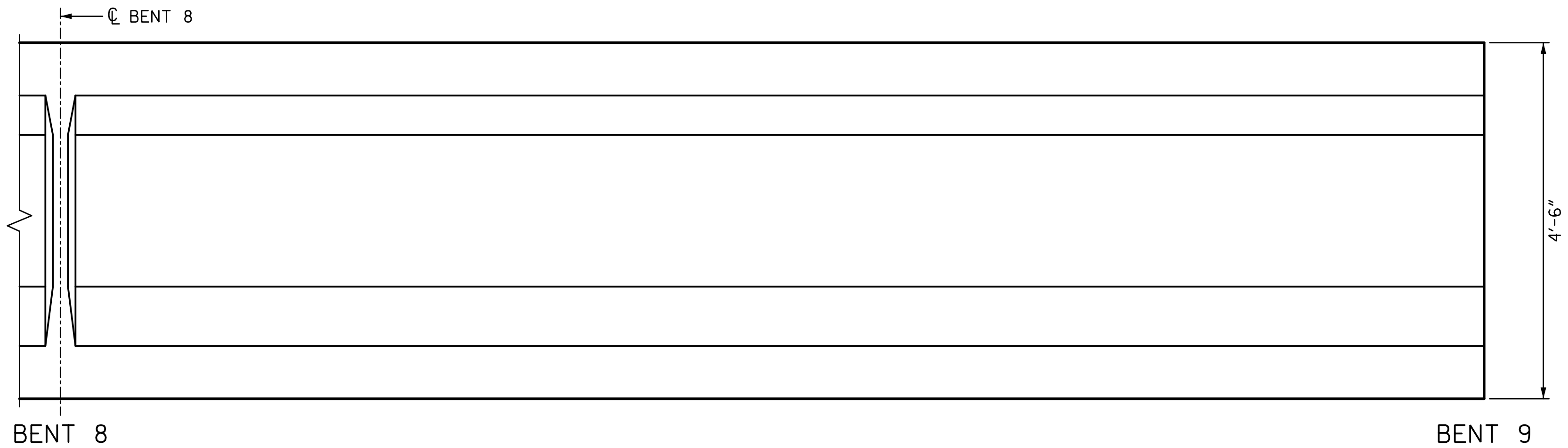
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-93
1			3			TOTAL SHEETS
2			4			163

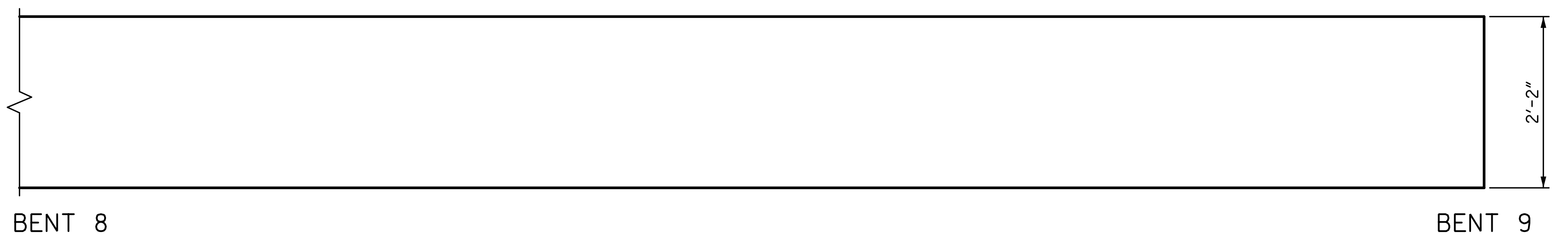
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:13 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridg 48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_9_640048.dgn

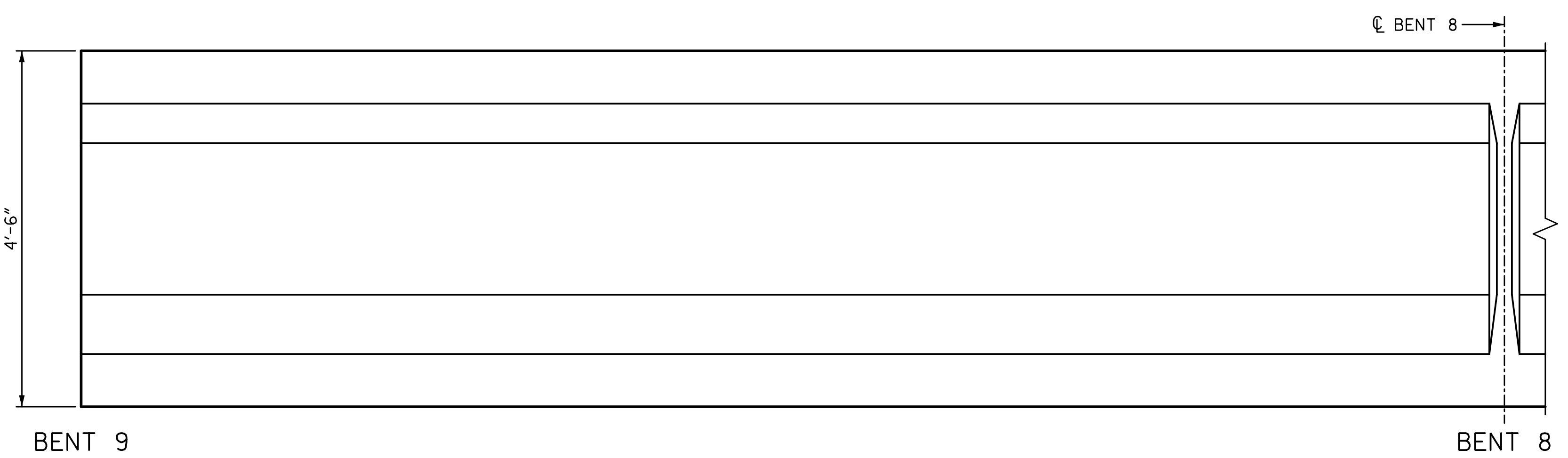
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 9 GRD. 4	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		0.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

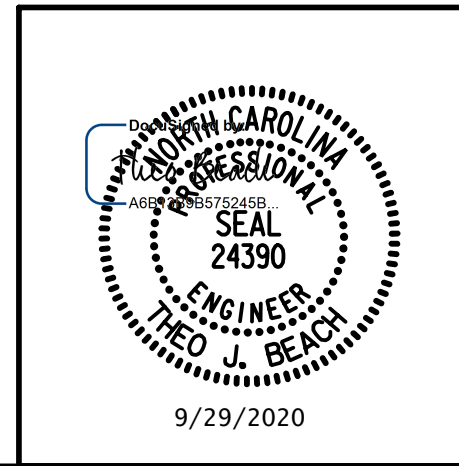
AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 4 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 9
 GIRDER 4**



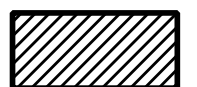
PLANS PREPARED BY:
SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

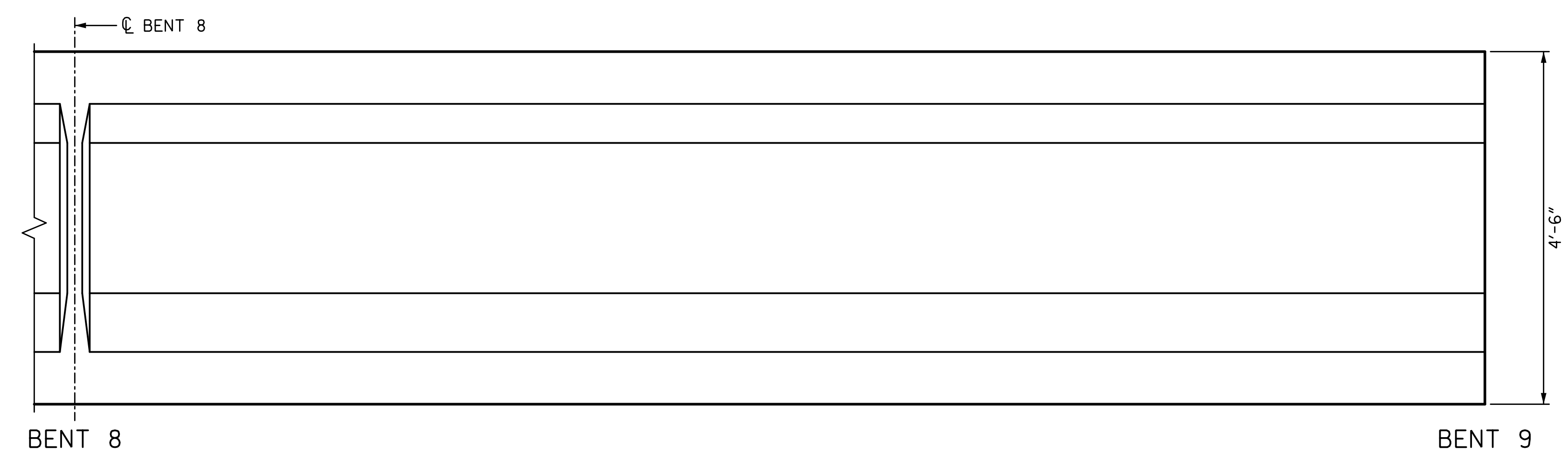
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-94
1			3			TOTAL SHEETS
2			4			163

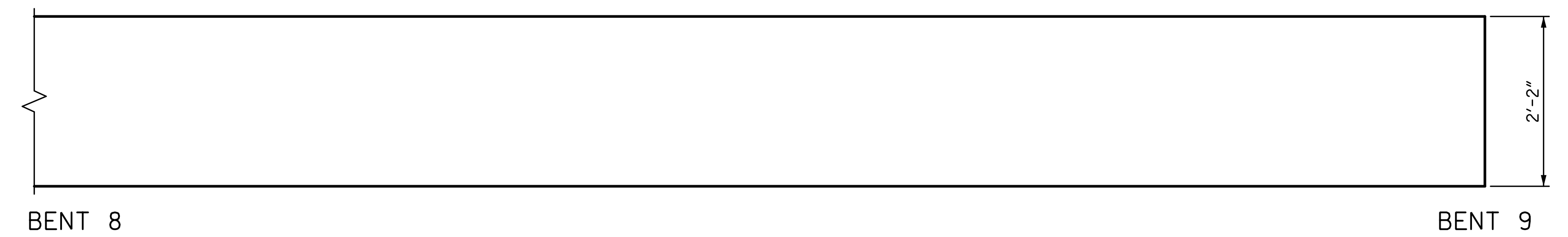
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:13 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_9_640048.dgn

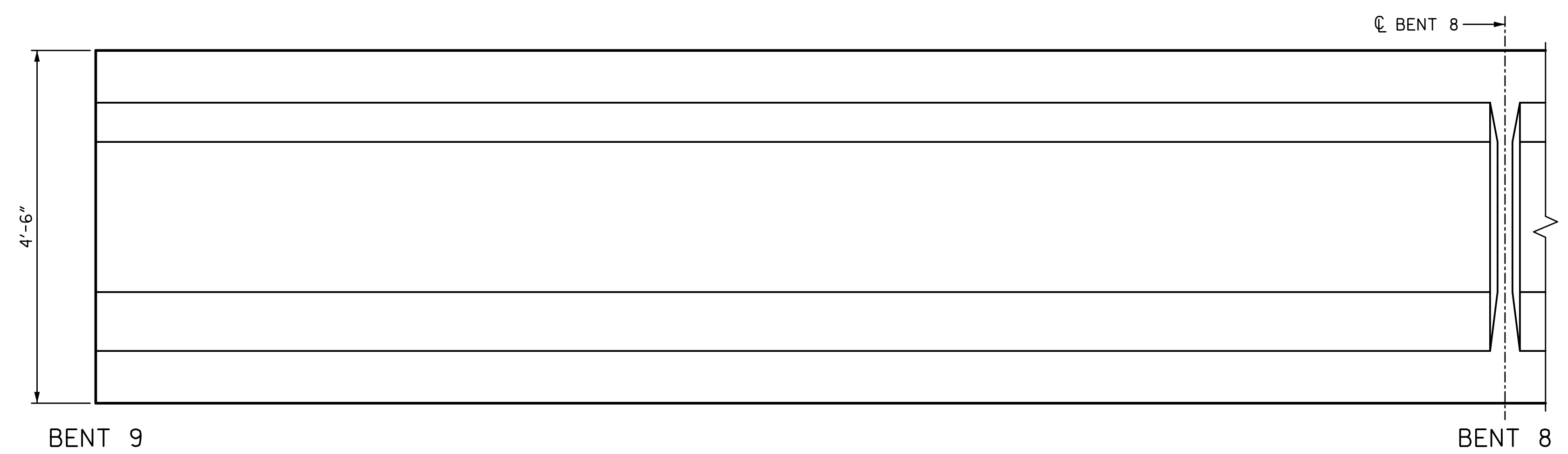
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 9 GRD. 5	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

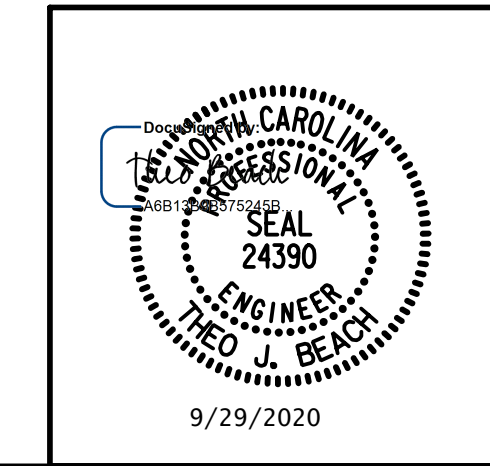
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 5 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 9
 GIRDER 5

PLANS PREPARED BY:

 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

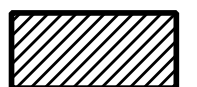


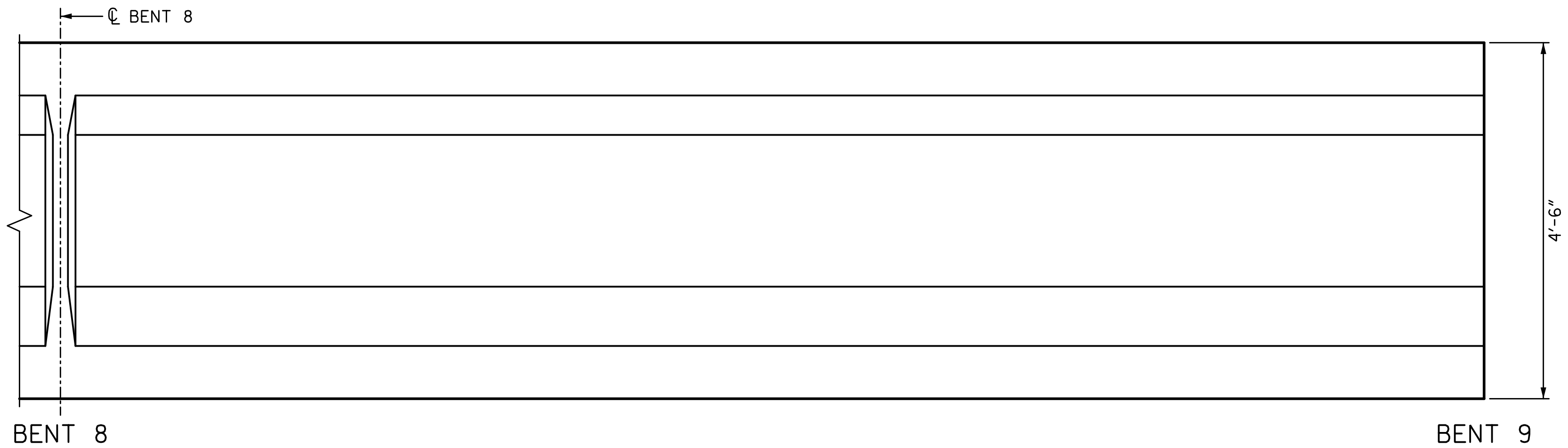
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-95
1			3			TOTAL SHEETS
2			4			163

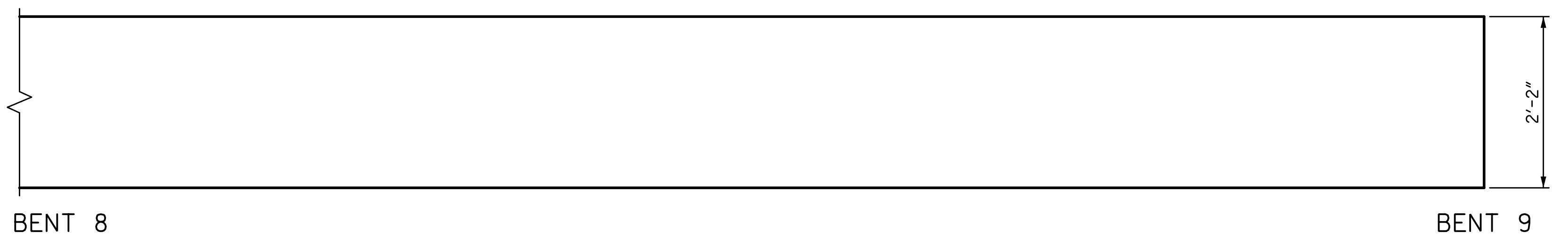
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:13 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_9_640048.dgn

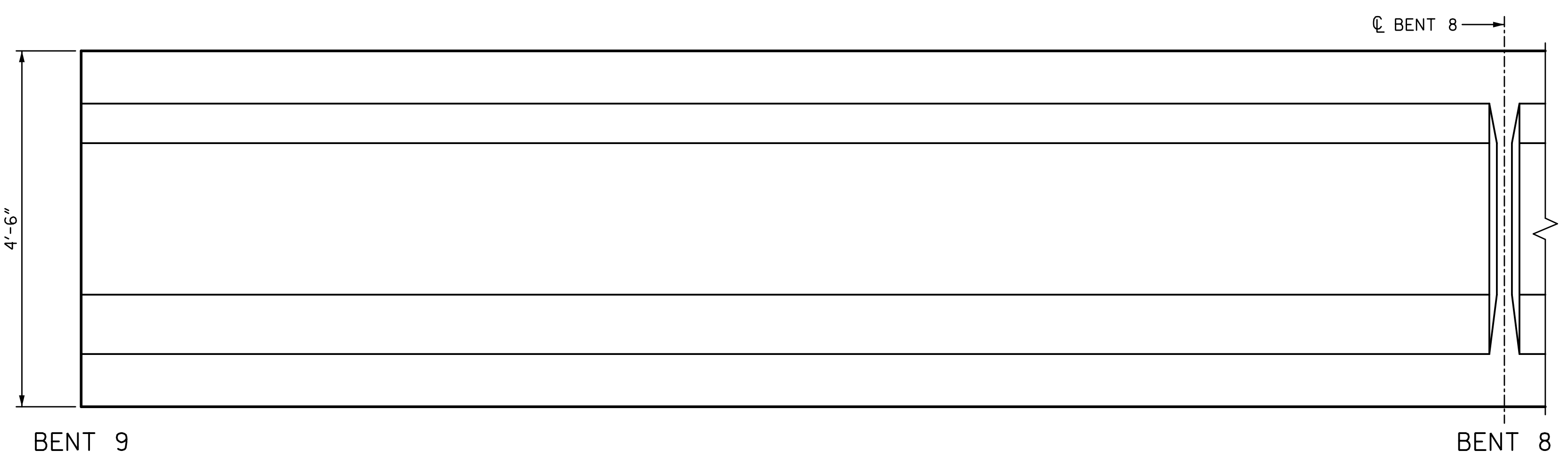
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 9 GRD. 6	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

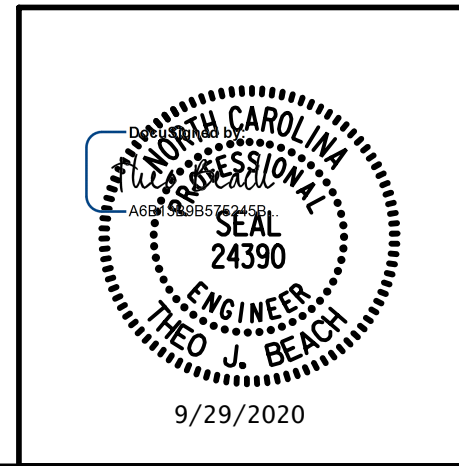
AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 6 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 9
 GIRDER 6**



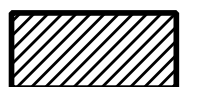
PLANS PREPARED BY:
SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521

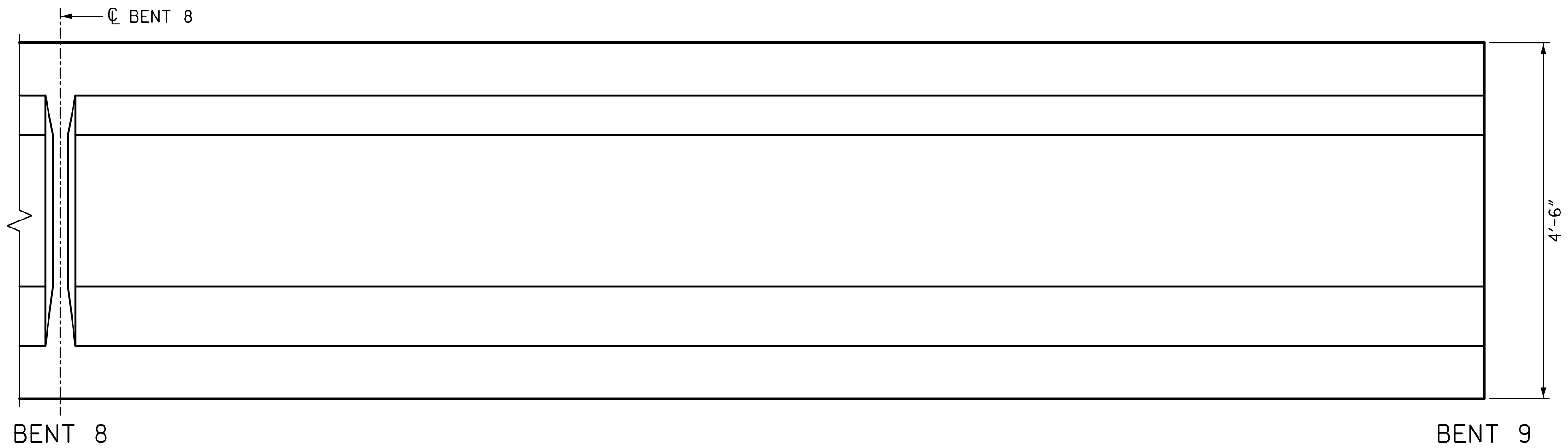
DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

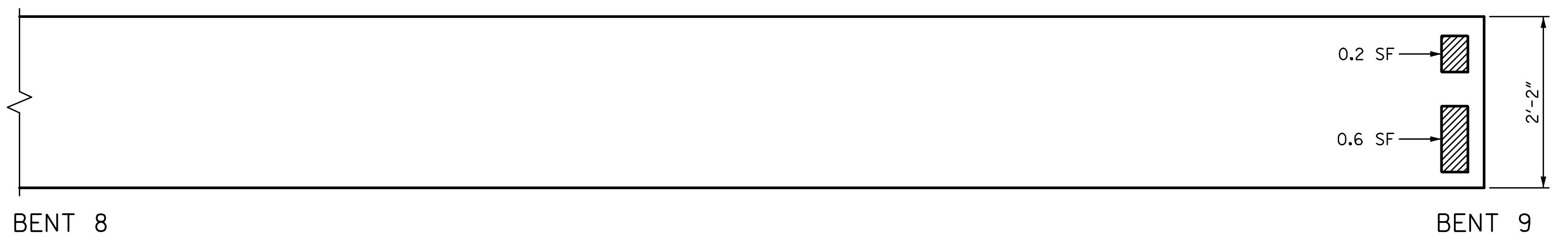
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-96
1			3			TOTAL SHEETS
2			4			163

9/28/2020 12:01:13 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_C_SPAN_9_640048.dgn

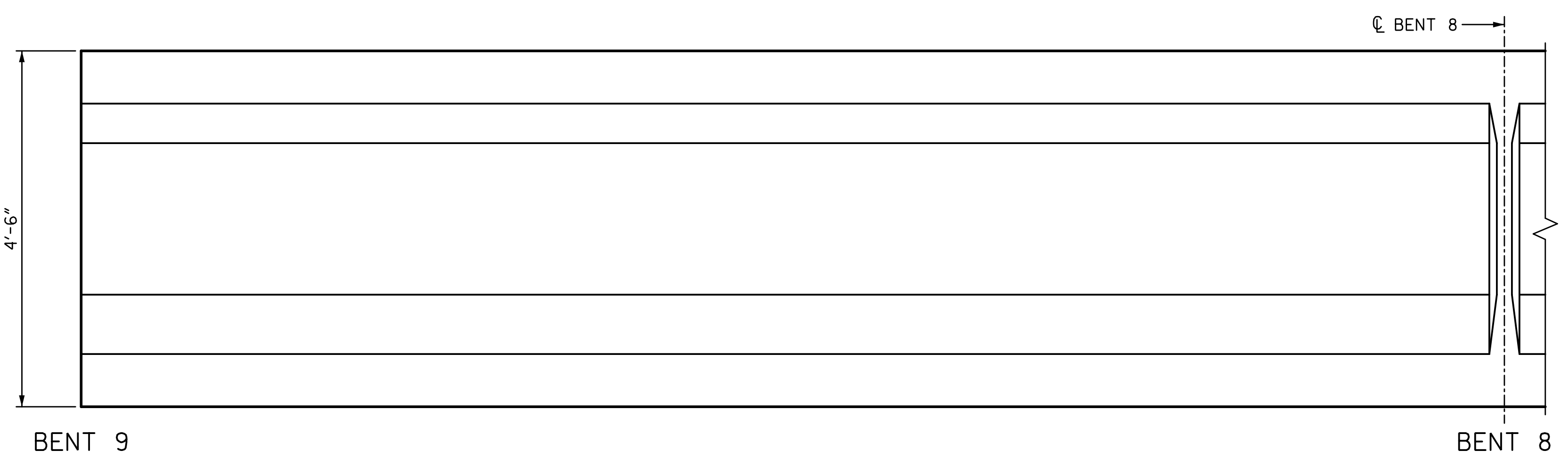
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 9 GRD. 7	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.8	0.4			
EPOXY RESIN INJECTION		LF			LF
GIRDER		0.0			

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.

AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

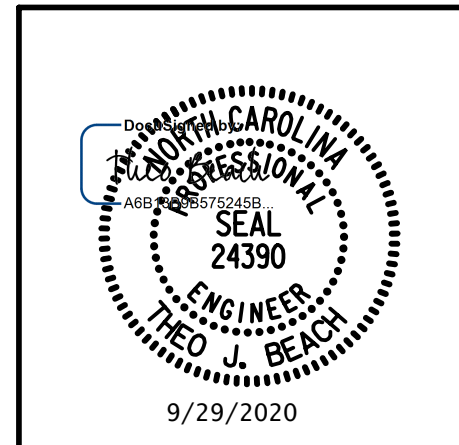
SHEET 7 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION

**SPAN 9
 GIRDER 7**

PLANS PREPARED BY:

SIMPSON
ENGINEERS
& ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

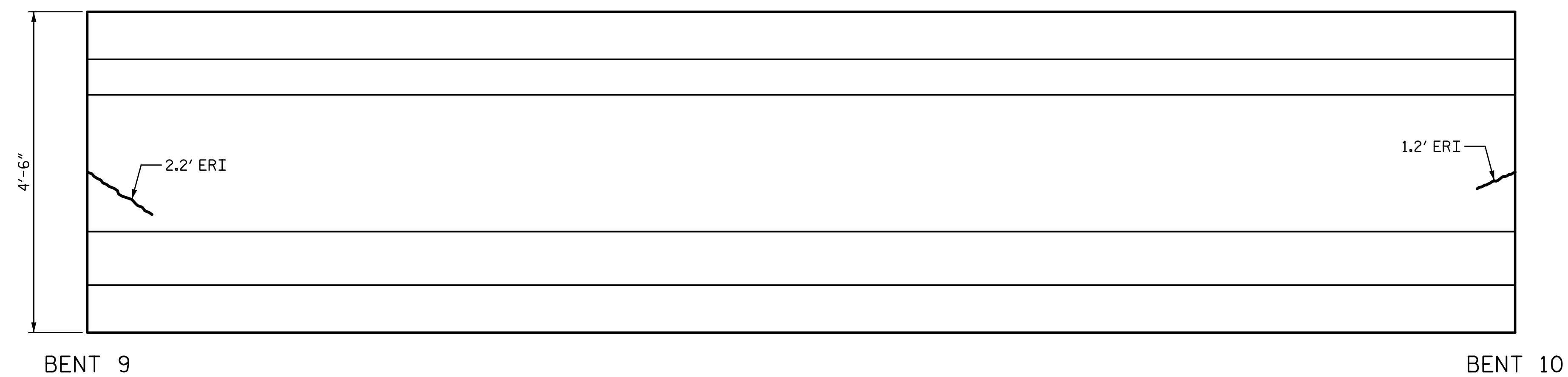
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-97
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

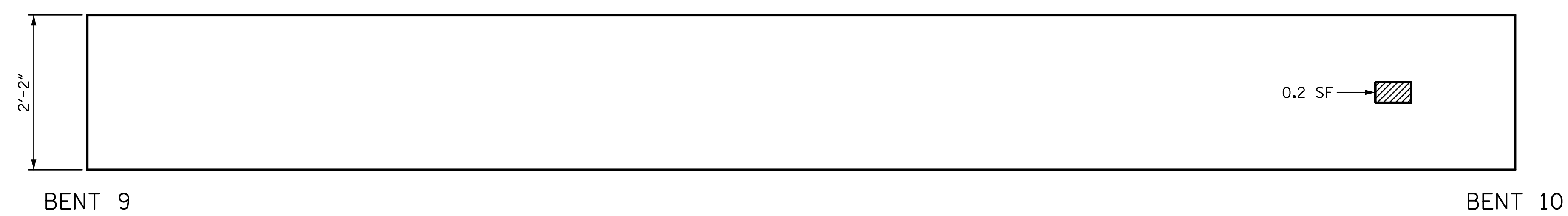
9/28/2020 12:01:14 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN 10_640048.dgn

 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION

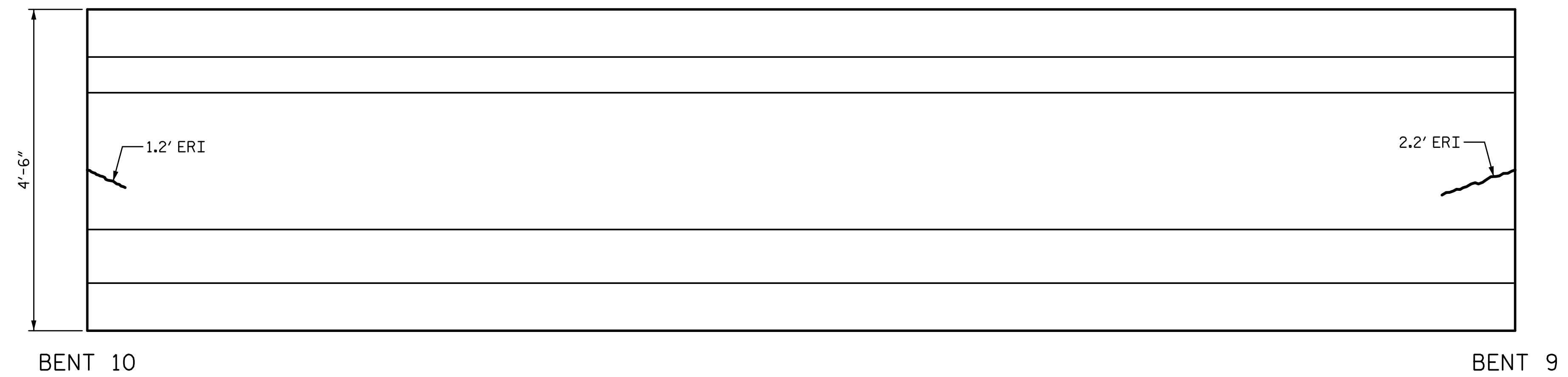
REPAIR QUANTITY TABLE					
REPAIRS SPAN 10 GRD. 1	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.2	0.1			
EPOXY RESIN INJECTION			LF		LF
GIRDER		6.8			



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

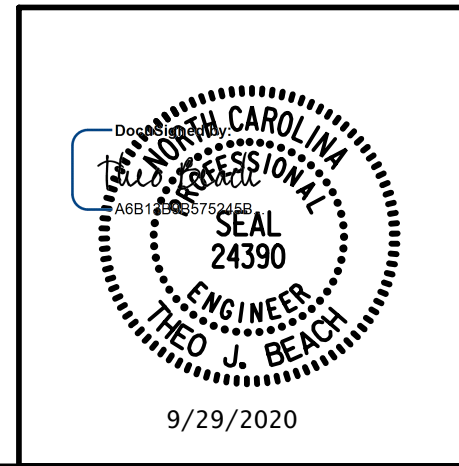
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 1 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 10
 GIRDER 1

PLANS PREPARED BY:

 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




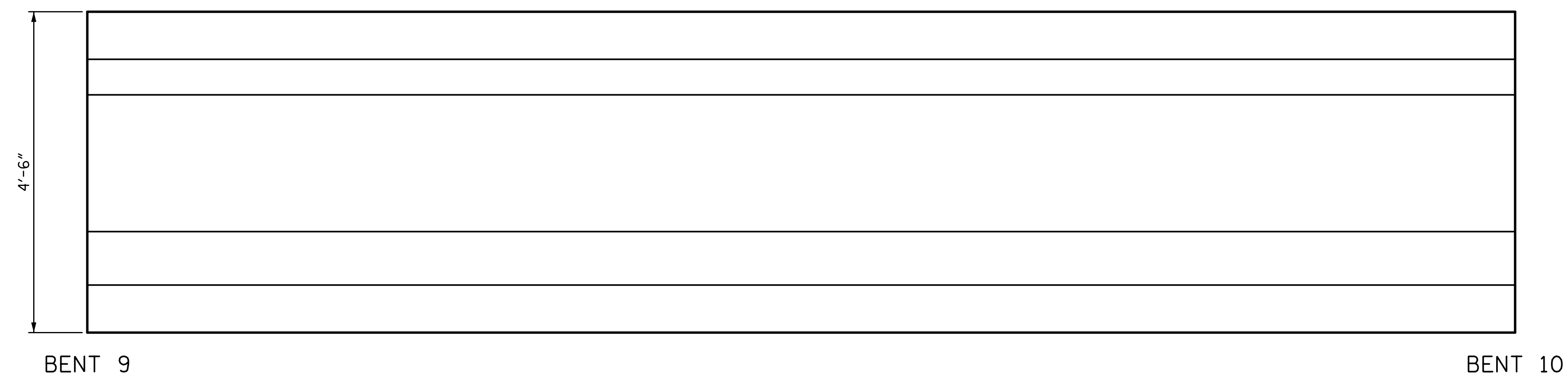
DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:22 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN 10_640048.dgn

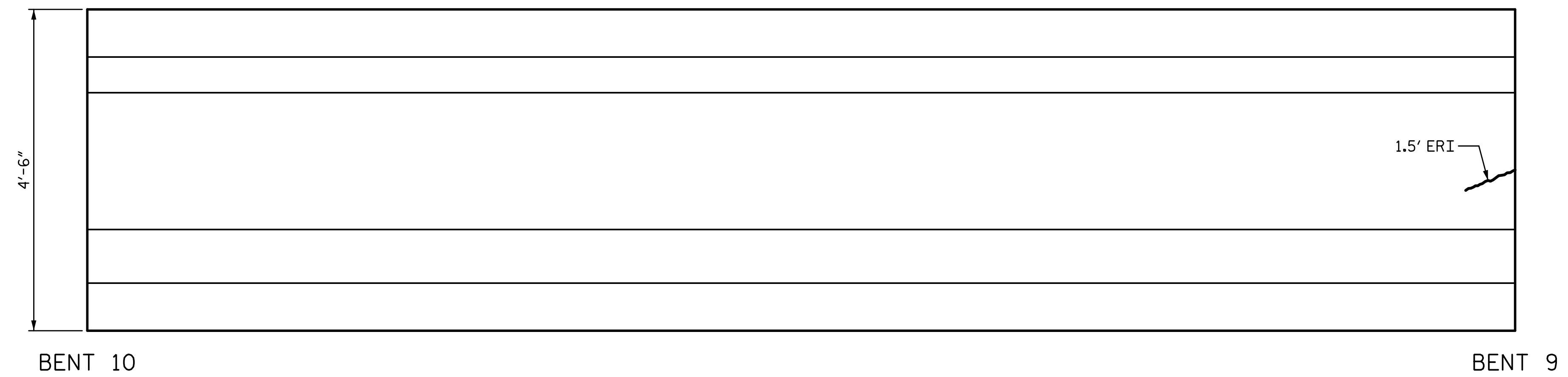
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 10 GRD. 2	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		1.5			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

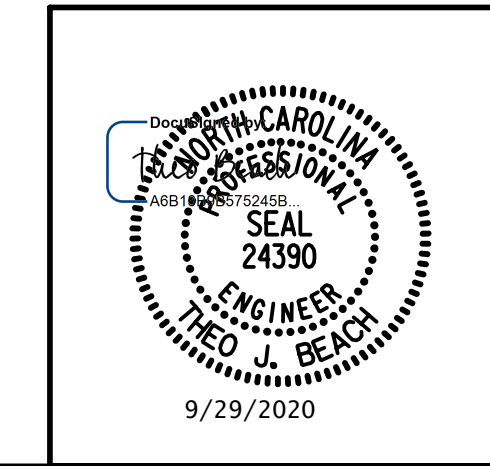
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 2 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 10
 GIRDER 2

PLANS PREPARED BY:

 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521




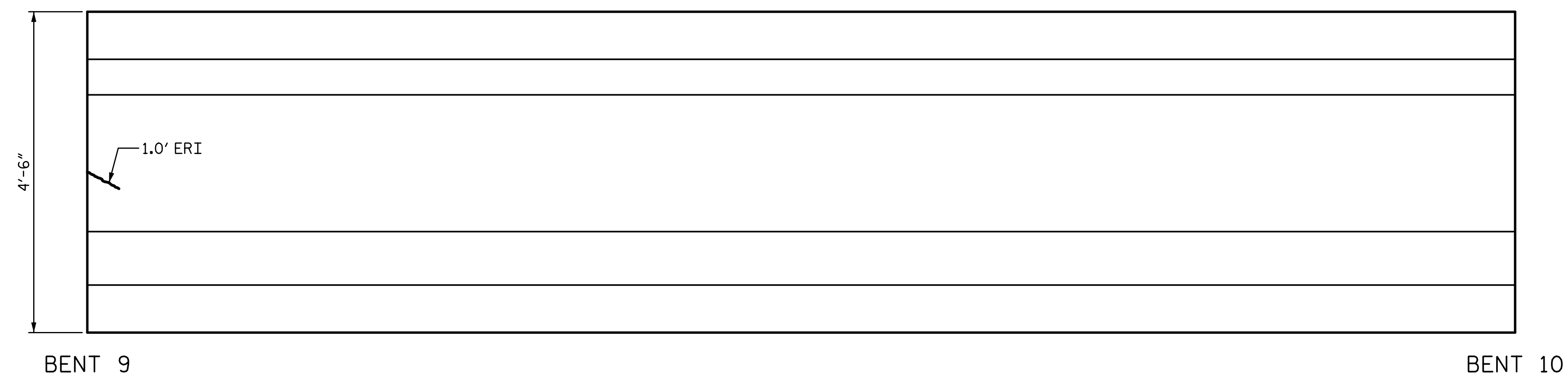
DRAWN BY: T. BANKOVICH	DATE: 9-20
CHECKED BY: T.J. BEACH	DATE: 9-20
DESIGN ENGINEER OF RECORD: T.J. BEACH	DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-99
1			3			TOTAL SHEETS
2			4			163

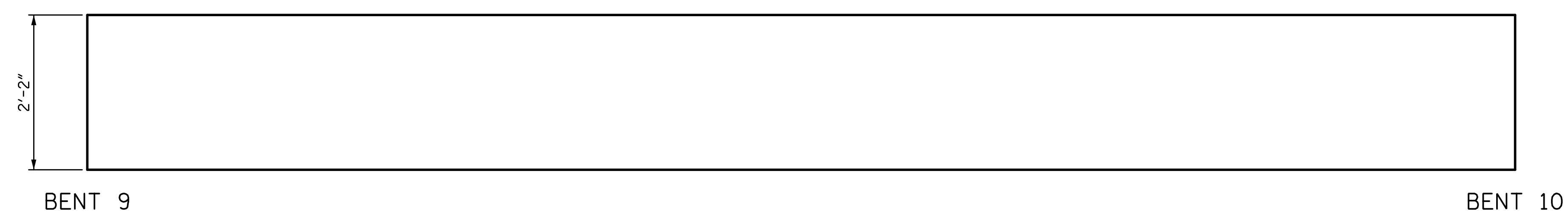
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

9/28/2020 12:01:22 PM G:\Projects\2018\15BPR26 New Hanover_Preservation\Structures\Drawings\Final\Bridges\48 (Westbound Lane)\401_15BPR26_SMU_G_SPAN 10_640048.dgn

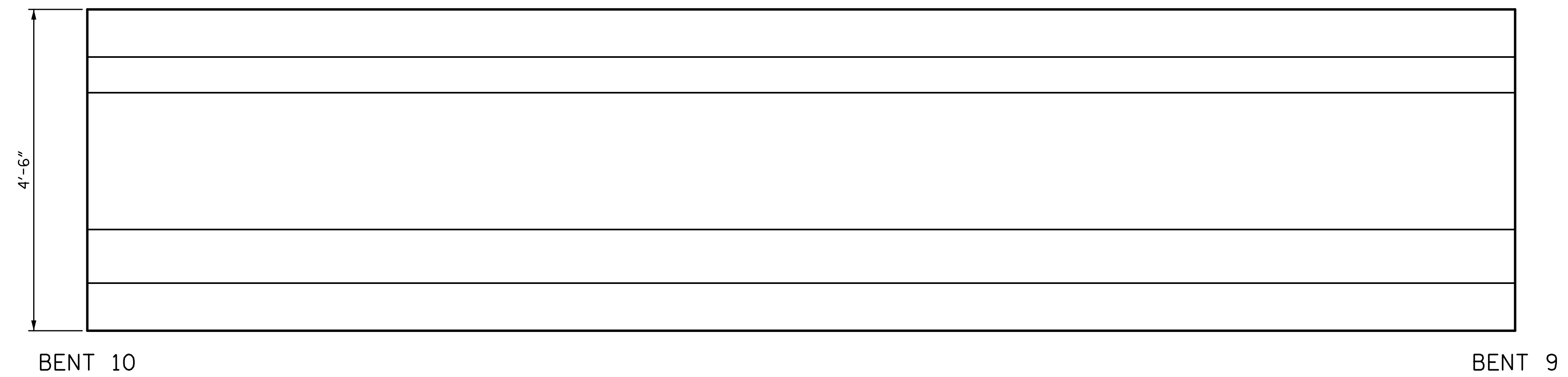
 PRESTRESSED CONCRETE GIRDER REPAIR
 ERI — EPOXY RESIN INJECTION



ELEVATION
SOUTH FACE



PLAN
BOTTOM OF BEAM
LOOKING UP



ELEVATION
NORTH FACE

REPAIR QUANTITY TABLE					
REPAIRS SPAN 10 GRD. 3	QUANTITIES				
	ESTIMATE		ACTUAL		
REPAIRS OF PRESTR. CONCRETE GIRDERS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
GIRDER	0.0	0.0			
EPOXY RESIN INJECTION			LF		LF
GIRDER		1.0			

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF THE QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 VALUES IN CHART REPRESENT ESTIMATE REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.
 FOR REPAIRS OF PRESTRESSED CONCRETE GIRDERS DETAILS, SEE "PRESTRESSED CONCRETE GIRDER REPAIR DETAILS" SHEET.
 AT THE TIME OF PREPARATION OF PLANS, IT WAS NOT ANTICIPATED SPLICING OF PRESTRESSING STRAND, 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. WORK ITEMS HAVE BEEN PROVIDED IN THE CONTRACT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES AND COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

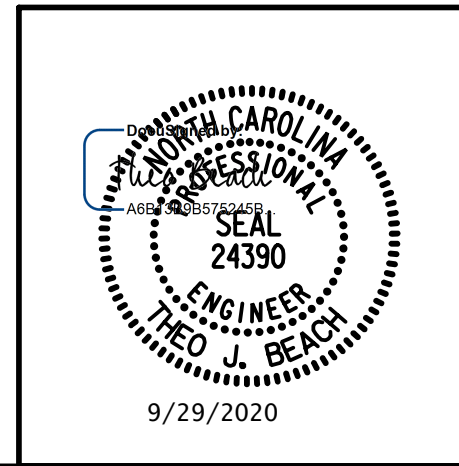
PROJECT NO. 15BPR.26
 NEW HANOVER/PENDER COUNTY
 BRIDGE NO.: 640048

SHEET 3 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PRESERVATION
 SPAN 10
 GIRDER 3

PLANS PREPARED BY:

 SIMPSON ENGINEERS & ASSOCIATES
 5640 Dillard Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0468
 (919) 852-0538 (Fax)
 www.simpsonengr.com
 LICENSURE NO. C-2521



DRAWN BY: T. BANKOVICH DATE: 9-20
 CHECKED BY: T.J. BEACH DATE: 9-20
 DESIGN ENGINEER OF RECORD: T.J. BEACH DATE: 9-20

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			TOTAL SHEETS
2			4			163

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**