PROJECT: I-5978

CONTRACT:

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5978	1	62

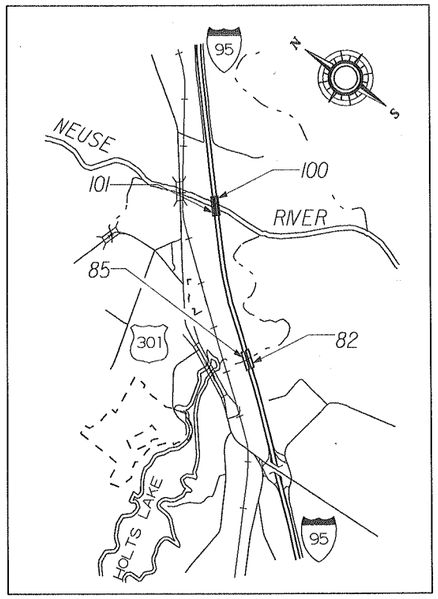
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
53025.1.1		P.E.
44978.3.1		CONST.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JOHNSTON COUNTY

LOCATION: *JOHNSTON COUNTY*
BRIDGE # 82 ON I-95 NBL OVER BLACK CREEK
BRIDGE # 85 ON I-95 SBL OVER BLACK CREEK
BRIDGE # 100 ON I-95 NBL OVER NEUSE RIVER
BRIDGE # 101 ON I-95 SBL OVER NEUSE RIVER

TYPE OF WORK: *BRIDGE PRESERVATION – HYDRO-DEMOLITION, SCARIFICATION, LATEX MODIFIED CONCRETE OVERLAY, CLEANING AND PAINTING OF EXISTING BEARINGS, PAINTING STRUCTURAL STEEL, JOINT DEMOLITION, SUPERSTRUCTURE REPAIRS, AND SUBSTRUCTURE REPAIRS*



VICINITY MAP – JOHNSTON COUNTY

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DESIGN DATA

# 82 ADT 2012	=	19,000
# 85 ADT 2012	=	19,000
# 100 ADT 2012	=	19,000
# 101 ADT 2012	=	19,000

PROJECT LENGTH

BRIDGE #82	=	0.038 MILES
BRIDGE #85	=	0.038 MILES
BRIDGE #100	=	0.076 MILES
BRIDGE #101	=	0.076 MILES

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

ERIC B. NELSON, P.E.
PROJECT ENGINEER

2012 STANDARD SPECIFICATIONS

LETTING DATE:
MARCH 28, 2017

DocuSigned by:
AD50B5D97484CC...
NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL
3/2/2017

TIMOTHY M. SHERRILL, P.E.
PROJECT DESIGN ENGINEER

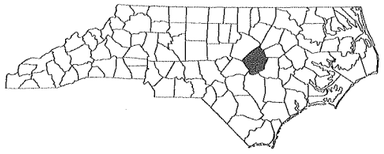
PROJECT: I-5978

CONTRACT:

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5978	1A	62

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
53025.1.1		P.E.
44978.3.1		CONST.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

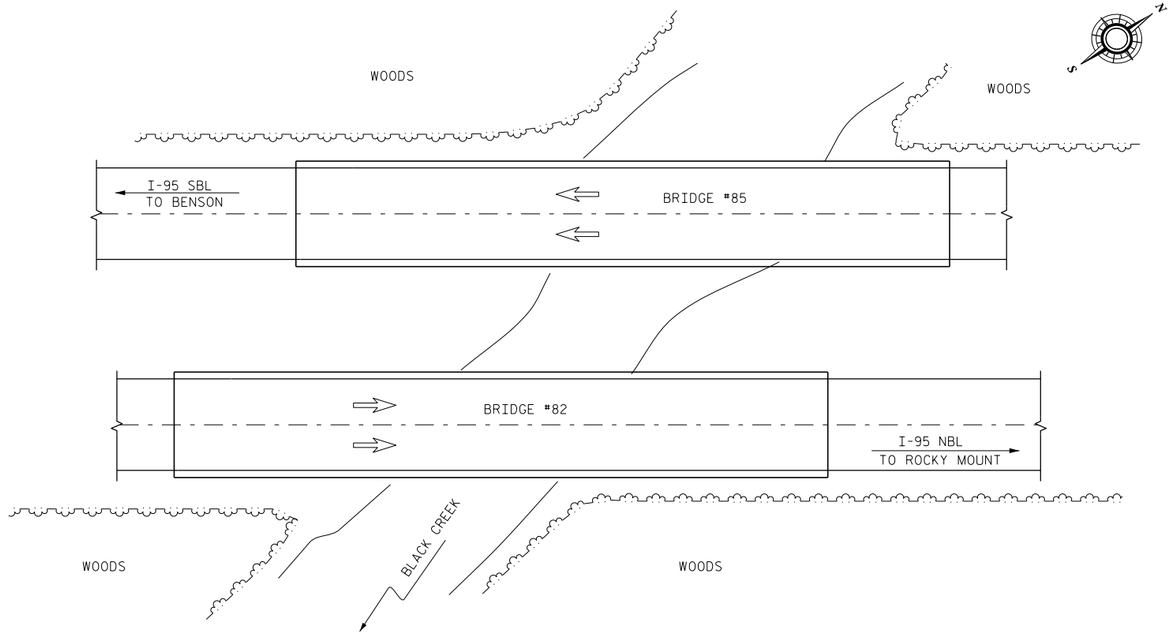


JOHNSTON COUNTY

LOCATION: *JOHNSTON COUNTY*
BRIDGE # 82 ON I-95 NBL OVER BLACK CREEK
BRIDGE # 85 ON I-95 SBL OVER BLACK CREEK
BRIDGE # 100 ON I-95 NBL OVER NEUSE RIVER
BRIDGE # 101 ON I-95 SBL OVER NEUSE RIVER

TYPE OF WORK: *BRIDGE PRESERVATION – HYDRO-DEMOLITION, SCARIFICATION, LATEX MODIFIED CONCRETE OVERLAY, CLEANING AND PAINTING OF EXISTING BEARINGS, PAINTING STRUCTURAL STEEL, JOINT DEMOLITION, SUPERSTRUCTURE REPAIRS, AND SUBSTRUCTURE REPAIRS*

INDEX OF SHEETS



NOTES

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

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. 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.

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

THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE MANAGING HYDRO-DEMOLITION WATER SPECIAL PROVISION.

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

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

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

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

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

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

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR LATEX MODIFIED CONCRETE OVERLAY, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE PROVISIONS.

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 VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIRS, SEE SPECIAL PROVISIONS.

FOR CLEANING AND PAINTING OF EXISTING BEARING PLATES WITH HRCSA, SEE SPECIAL PROVISIONS.

FOR BEAM REPAIR, SEE "BEAM END PLATE REPAIR" SHEET AND SPECIAL PROVISIONS.

FOR POLLUTION CONTROL AND PAINTING EXISTING STRUCTURE, SEE "PAINTING EXISTING STRUCTURAL STEEL AND STEEL PILES" SPECIAL PROVISIONS.

LOCATION SKETCH

TOTAL BILL OF MATERIAL

BRIDGE NO.	GROOVING BRIDGE FLOORS	INCIDENTAL MILLING	POLLUTION CONTROL	✳CLASS II SURFACE PREPARATION	✳CLASS III SURFACE PREPARATION	✳✳ LATEX MODIFIED CONCRETE OVERLAY	PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY	PAINTING EXISTING STRUCTURE	SHOTCRETE REPAIR	CLEANING AND PAINTING EXISTING BEARING WITH HRCSA BRIDGE #__	✳EPOXY RESIN INJECTION	FOAM JOINT SEALS	PAINTING CONTAINMENT FOR BRIDGE #__	✳ VOLUMETRIC MIXER	✳ CONCRETE FOR DECK REPAIR	BRIDGE JOINT DEMOLITION	EPOXY COATING	SCARIFYING BRIDGE DECK	HYDRO-DEMOLITION OF BRIDGE DECK	ELASTOMERIC CONCRETE	BEAM REPAIR
	SQ. FT.	SQ.YDS.	LUMP SUM	SQ.YDS.	SQ.YDS.	C.Y.	SQ.YDS.	LUMP SUM	CU. FT.	EACH	LN. FT.	LUMP SUM	LUMP SUM	LUMP SUM	CU. FT.	SQ. FT.	SQ. FT.	SQ.YDS.	SQ.YDS.	CU. FT.	LBS.
82	6,175	788	LUMP SUM	4.2	4.0	47.6	776	LUMP SUM	19.6	32	10.0	LUMP SUM	LUMP SUM	LUMP SUM	1.0	84.0	367.5	776	776	21.0	393.0
85	6,175	788	LUMP SUM	10.1	4.0	47.6	776	LUMP SUM	54.9	32	10.0	LUMP SUM	LUMP SUM	LUMP SUM	1.0	84.0	367.5	776	776	21.0	0.0
TOTAL	12,350	1,576	LUMP SUM	14.3	8.0	95.2	1,552	LUMP SUM	74.5	64	20.0	LUMP SUM	LUMP SUM	LUMP SUM	2.0	168.0	735.0	1552	1552	42.0	393.0

✳ CLASS II AND CLASS III SURFACE PREPARATION, VOLUMETRIC MIXER, EPOXY RESIN INJECTION AND CONCRETE FOR DECK REPAIR ARE NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

✳✳ THE QUANTITY OF LATEX MODIFIED CONCRETE OVERLAY INCLUDES THE 4" OVERLAP BETWEEN OVERLAYS.

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82 & 85

DocuSigned by:
AD50B1D977A94CC...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL NOTES
LOCATION SKETCHES
&
TOTAL BILL OF MATERIAL

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

DRAWN BY : M.D.PISO / S. T. SANDOR DATE : 11/2016
CHECKED BY : W. C. SMITH DATE : 11/2016

02-MAR-2017 09:49
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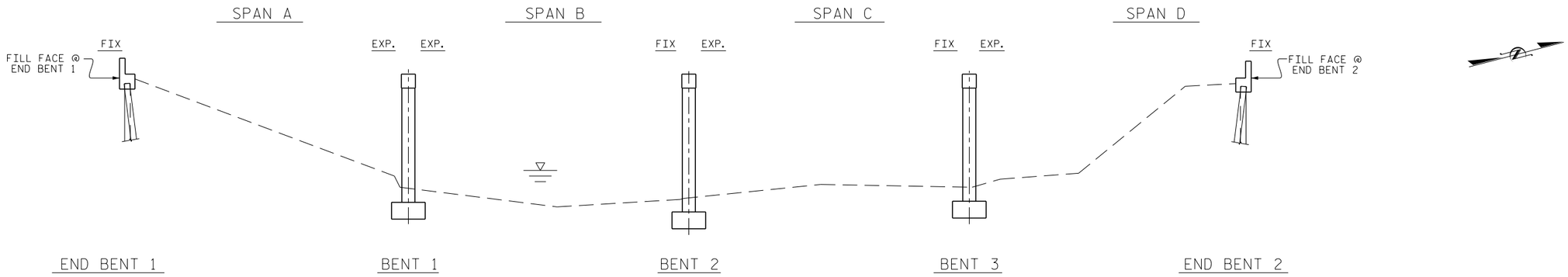
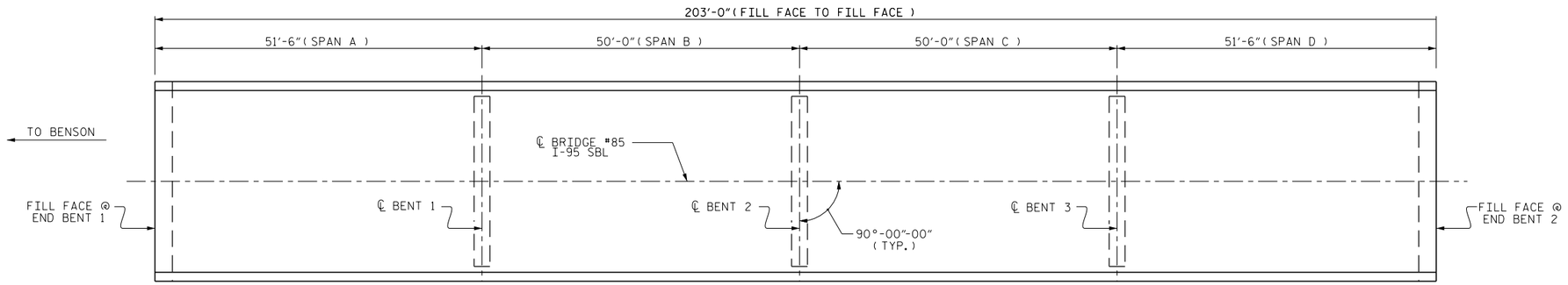
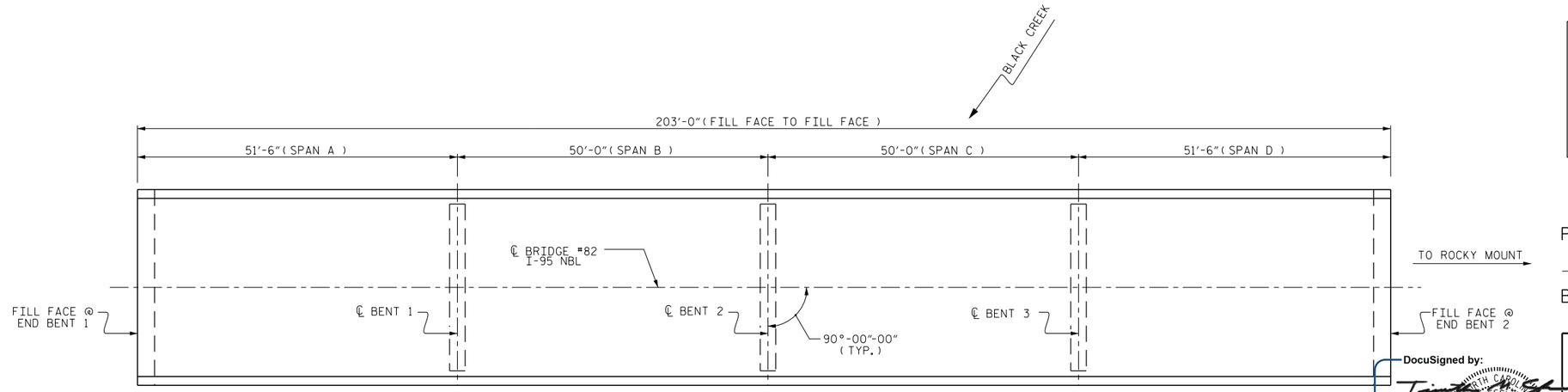
wcsmith



ELEVATION
(SECTION ALONG ℄ ROADWAY)





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

I hereby cerify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer Date

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82 & 85

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGES OVER
BLACK CREEK ON
I-95 BETWEEN
BENSON & ROCKY MOUNT

DocuSigned by:
AD50B1D97749462...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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

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CHECKED BY : W.C.SMITH DATE : 11/2016

02-MAR-2017 09:49
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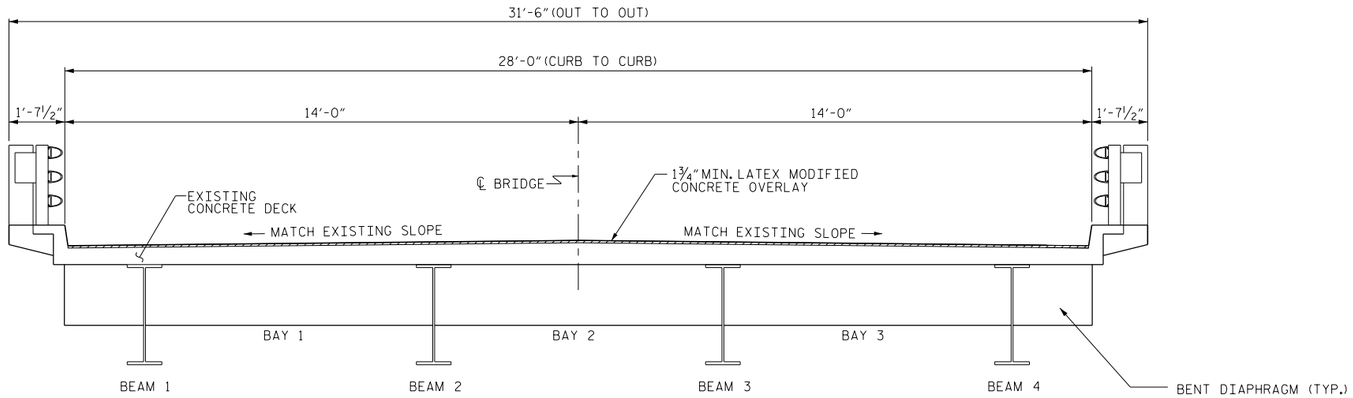
wcsmith

NOTE:

WHEN PREPARING THE SURFACE FOR LMC OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC STAGE, THE PREVIOUSLY PLACED LMC SHALL BE REMOVED FOR A DISTANCE OF 4-INCHES FROM THE LMC EDGE. THE SURFACE OF THE NEW STAGE AREA, ALONG WITH THE 4 INCH OVERLAY AREA, SHALL BE PREPARED AS PER THE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS. NEW LMC SHALL BE PLACE IN THE 4-INCH OVERLAP, AS PART OF NEW LMC STAGE PLACEMENT.

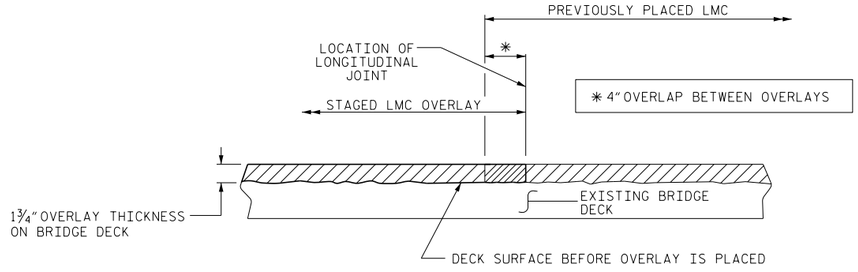
SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND LMC PLACEMENT.

EXISTING BRIDGE DECK AND APPROACH SLABS ARE COVERED WITH ASPHALT OVERLAY, INCIDENTAL MILLING IS REQUIRED.



TYPICAL SECTION

(FOR BEAM END PLATES REPAIR DETAILS, SEE SHEET S-60)
(FOR BENT DIAPHRAGM REPAIR DETAILS, SEE SHEET S-61)



SECTION THRU DECK

STAGED LMC OVERLAY JOINT

(AS NEEDED)

PROJECT NO. I-5978
JOHNSTON COUNTY
BRIDGE NO. 82 & 85

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AD50B1D97749CC...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION
LATEX MODIFIED CONCRETE OVERLAY DETAILS

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

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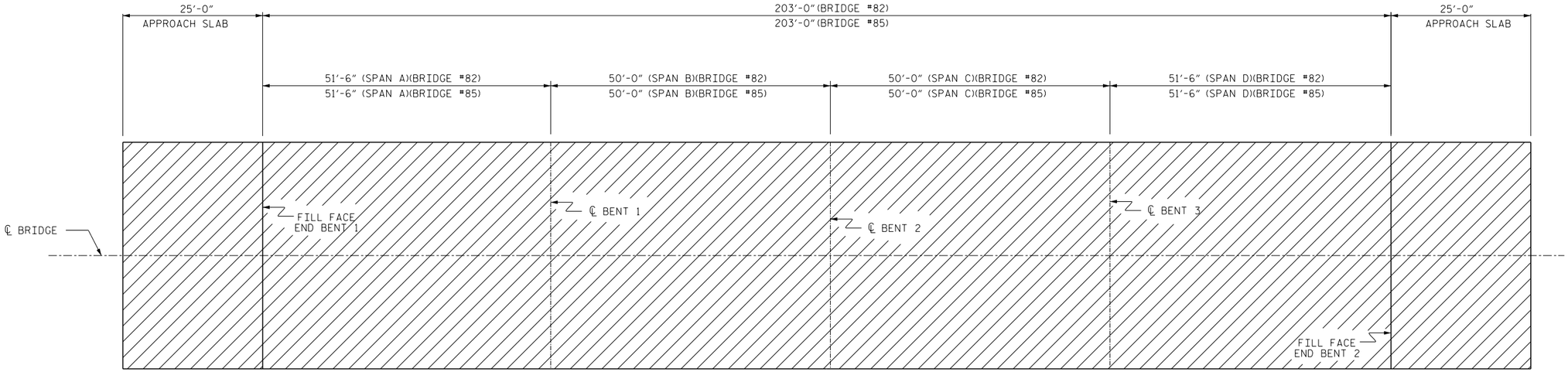
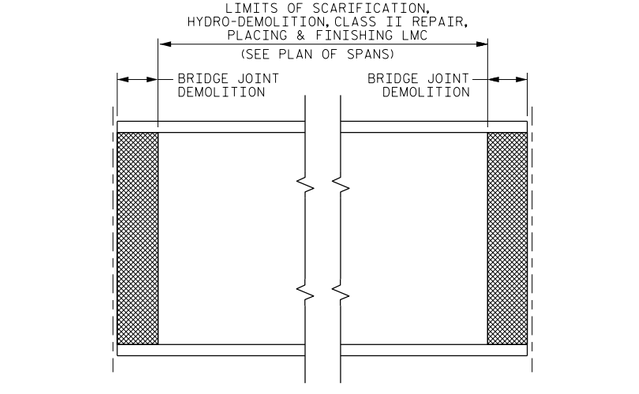
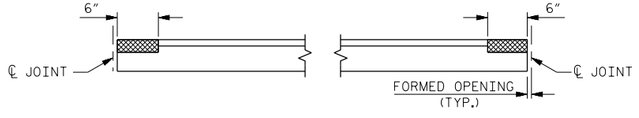


PLAN VIEW OF BRIDGE

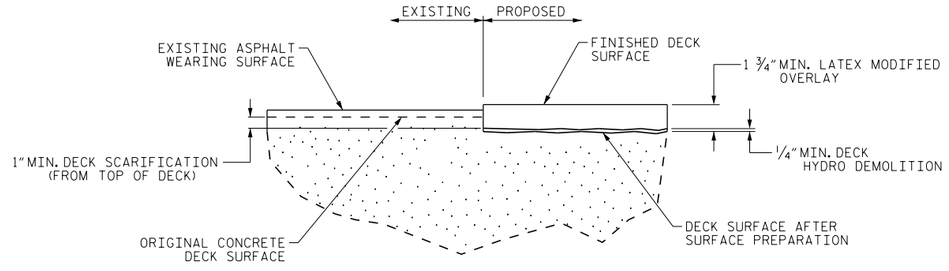
FOR BOTH BRIDGE #82 & #85



PLAN



ELEVATION



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

INCIDENTAL MILLING

DECK SCARIFICATION, HYDRO-DEMOLITION, AND LATEX MODIFIED CONCRETE OVERLAY

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82 & 85

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

SURFACE PREPARATION

REVISIONS					SHEET NO.
NO.	BY:	DATE:	BY:	DATE:	S-4
1					TOTAL SHEETS
2					62

DRAWN BY : M. D. PISO / S. T. SANDOR DATE : 11/2016
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wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER HYDRO-DEMOLITION FOR POTENTIAL CLASS II REPAIRS.

APPROACH SLAB & SPAN A QUANTIES

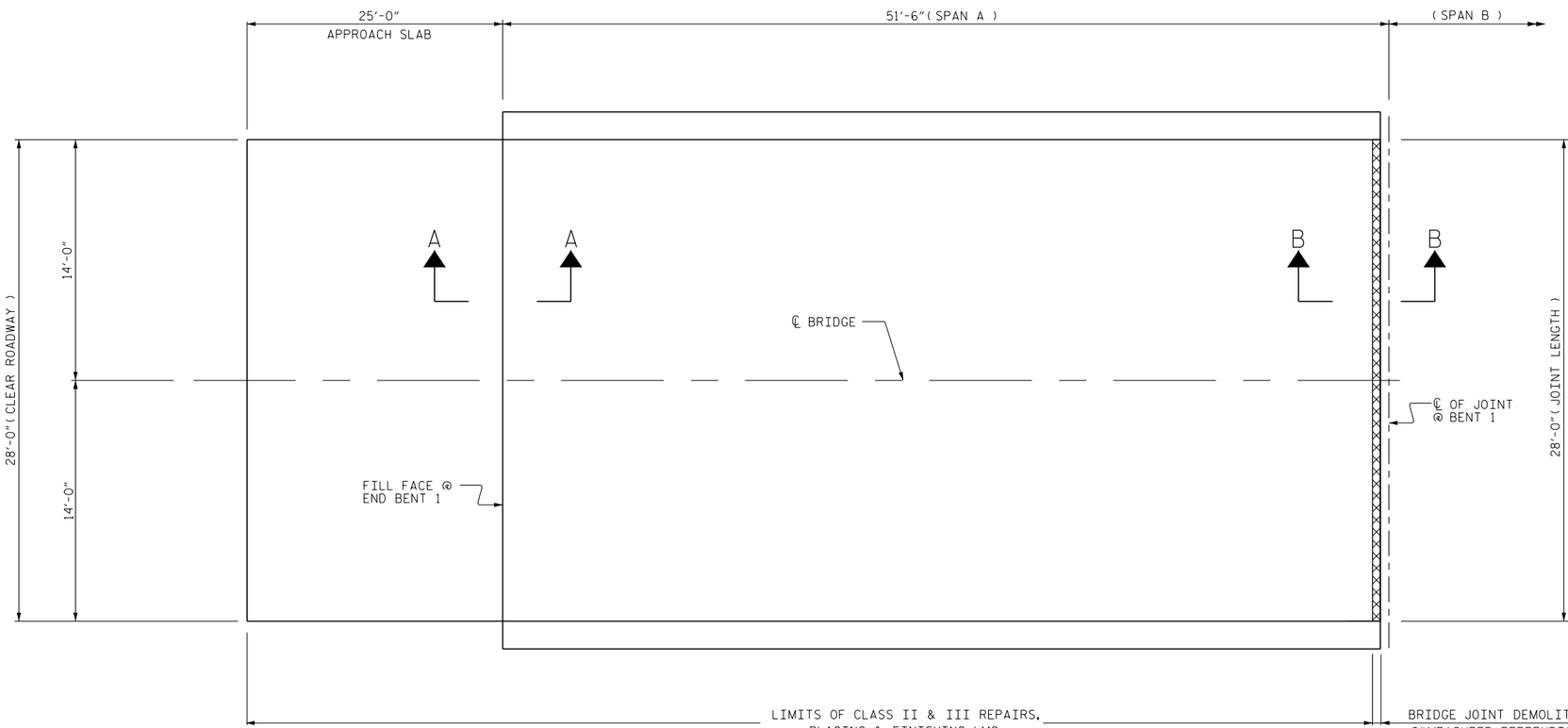
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK & APPR. SLAB	236.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK & APPR. SLAB	236.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	14.0 SQ. FT.	
SHOTCRETE	0.0 SQ. FT.	
INCIDENTAL MILLING	238.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN A

(FOR SECTIONS A-A AND B-B, SEE SHEET NO. S-21)

DocuSigned by:
AD50B1B977494CC...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN A & APPROACH SLAB

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2			4			62

DRAWN BY : M. D. PISO / S. T. SANDOR DATE : 11/2016
CHECKED BY : W. C. SMITH DATE : 11/2016

02-MAR-2017 09:49
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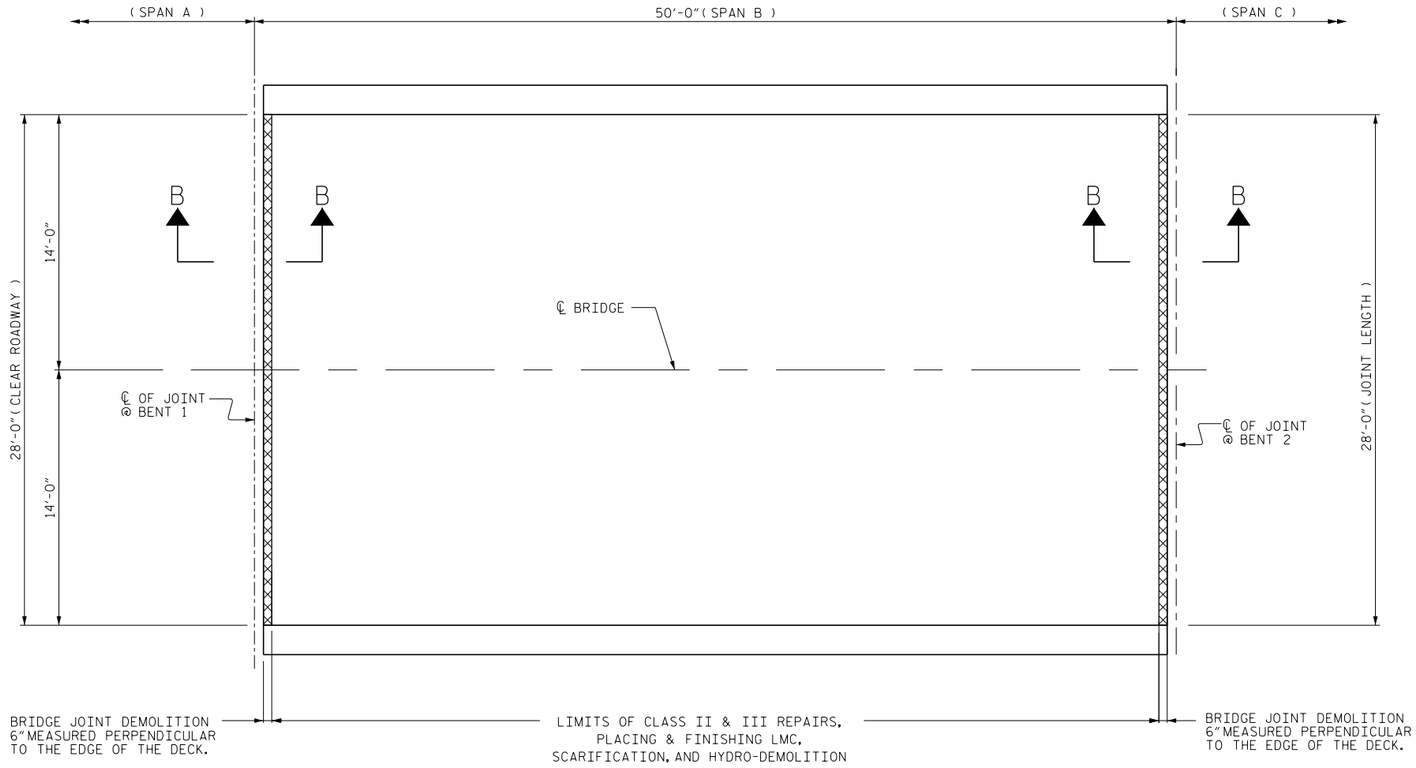
wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER HYDRO-DEMOLITION FOR POTENTIAL CLASS II REPAIRS.



SPAN B

(FOR SECTION B-B, SEE SHEET NO. S-21)

SUMMARY OF QUANTIES FOR SPAN B

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	28.0 SQ. FT.	
SHOTCRETE	0.0 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.

SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82

SHEET 2 OF 4

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN B

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
1			3			TOTAL SHEETS
2			4			62

DRAWN BY : M. D. PISO / S. T. SANDOR DATE : 11/2016
CHECKED BY : W. C. SMITH DATE : 11/2016

02-MAR-2017 09:49
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wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER HYDRO-DEMOLITION FOR POTENTIAL CLASS II REPAIRS.

SUMMARY OF QUANTIES FOR SPAN C

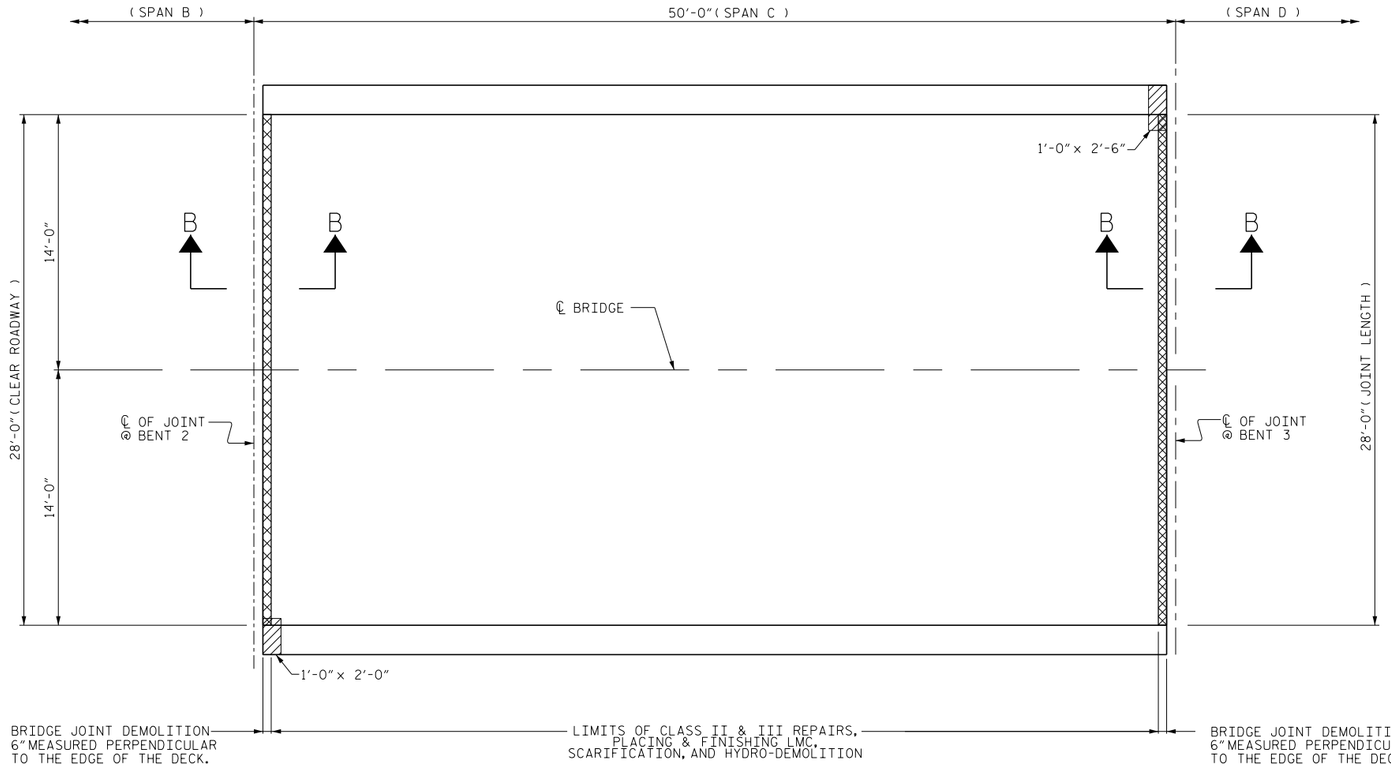
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	28.0 SQ. FT.	
SHOTCRETE	4.5 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN C

(FOR SECTION B-B, SEE SHEET NO. S-21)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82

SHEET 3 OF 4

DocuSigned by:
AD50B1D97484CC...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN C

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS
2			4			62

DRAWN BY : M. D. PISO / S. T. SANDOR DATE : 11/2016
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APPROACH SLAB & SPAN D QUANTIES

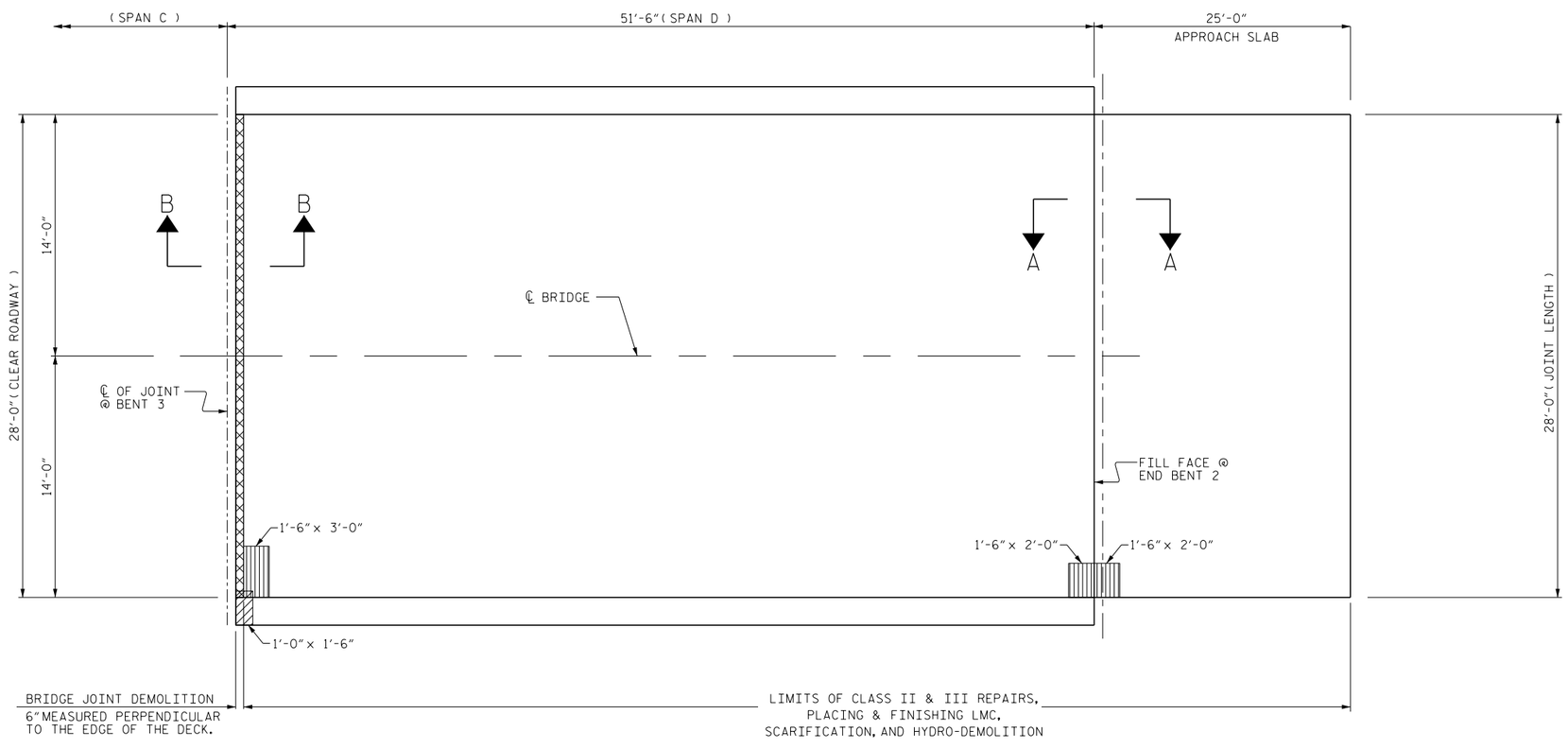
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	236.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	236.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.2 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	14.0 SQ. FT.	
SHOTCRETE	1.5 SQ. FT.	
INCIDENTAL MILLING	238.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN D

(FOR SECTION A-A AND B-B, SEE SHEET NO. S-21)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82

SHEET 4 OF 4

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN D & APPROACH SLAB

REVISIONS						SHEET NO.
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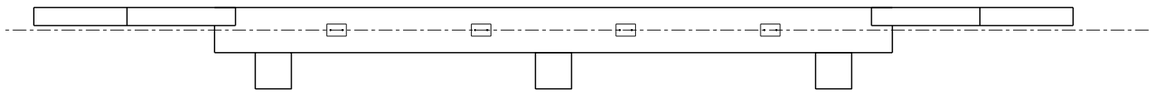
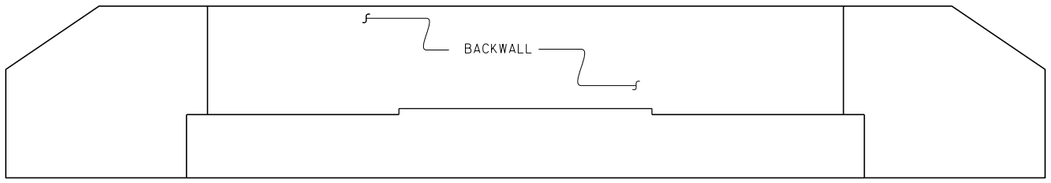


PLAN
END BENT 1



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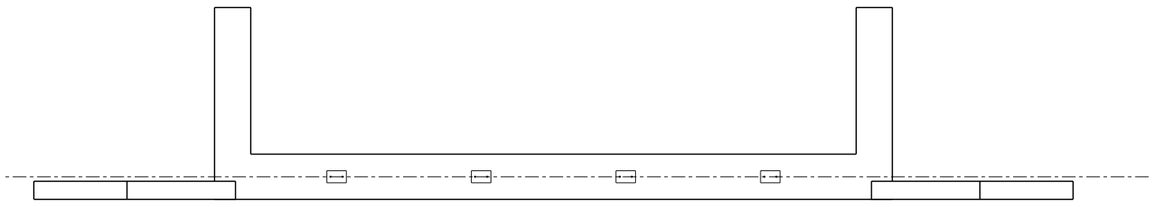
END BENT 1



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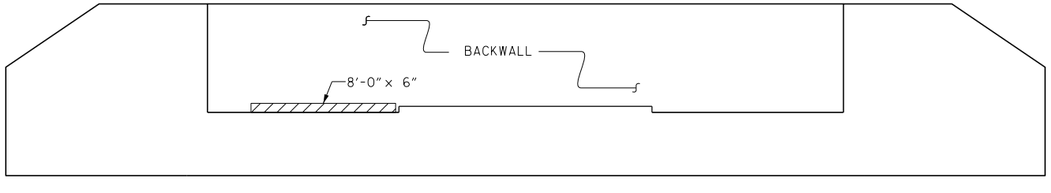

ELEVATION
END BENT 2

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)					
CAP (HORIZONTAL, CORNER)					
EPOXY RESIN INJECTION	LN. FT		LN. FT		
CAP					
EPOXY COATING	AREA SF				
TOP OF CAP	82.5				

END BENT 2	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	4.0	2.0			
CAP (HORIZONTAL, CORNER)					
EPOXY RESIN INJECTION	LN. FT		LN. FT		
CAP					
EPOXY COATING	AREA SF				
TOP OF CAP	82.5				

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

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF 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 CAP AND COLUMN REPAIR DETAILS, SEE TYPICAL CAP AND COULMN REPAIR DETAILS SHEET.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

CONTRACTOR SHALL SAW CUT TO A NOMINAL DEPTH OF ½" BUT REINFORCING STEEL SHALL NOT BE DAMAGED.

CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82

SHEET 1 OF 4

DocuSigned by:
AD50B1D977494CE...

NORTH CAROLINA PROFESSIONAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENTS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
1			3			TOTAL SHEETS
2			4			62

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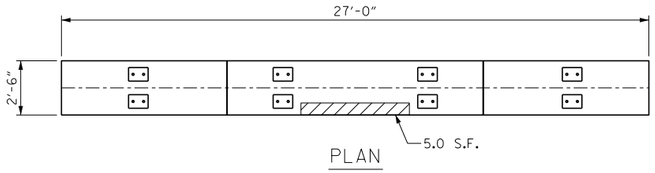

PLAN

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF 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.

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CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

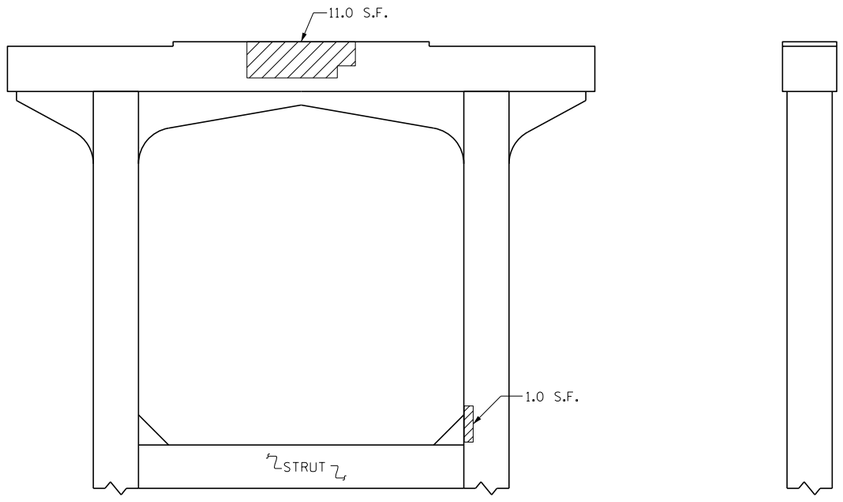
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

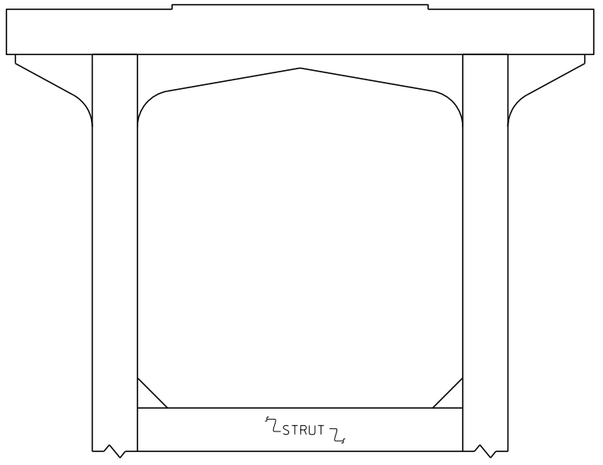
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	11.0	5.5		
CAP (HORIZONTAL, CORNER)	5.0	2.5		
COLUMN	1.0	0.5		
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				
EPOXY COATING	AREA SF			
TOP OF CAP	67.5			

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

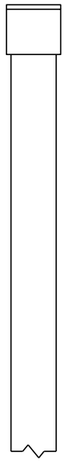


ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82

SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-10
1			3			TOTAL SHEETS
2			4			62

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wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR SHALL REINSPECT AND REPORT TO THE ENGINEER ANY UNNOTICED REPAIRS.

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF 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 CAP AND COLUMN REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.

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CONTRACTOR SHALL SAW CUT TO A NOMINAL DEPTH OF ½" BUT REINFORCING STEEL SHALL NOT BE DAMAGED.

CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

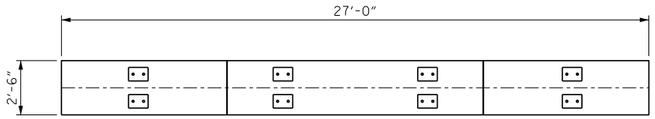
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

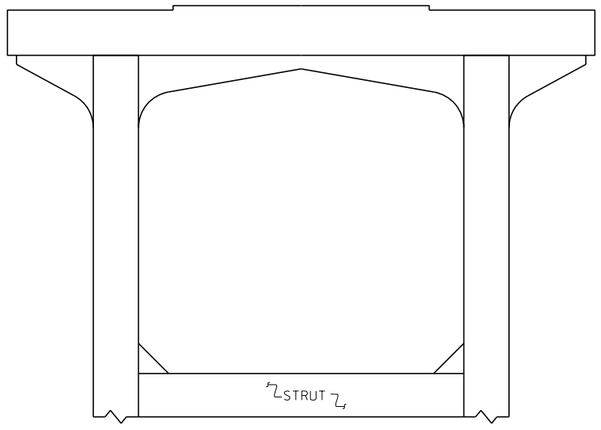
REPAIR QUANTITY TABLE

BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)				
CAP (HORIZONTAL, CORNER)				
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

EPOXY COATING	AREA SF
TOP OF CAP	67.5

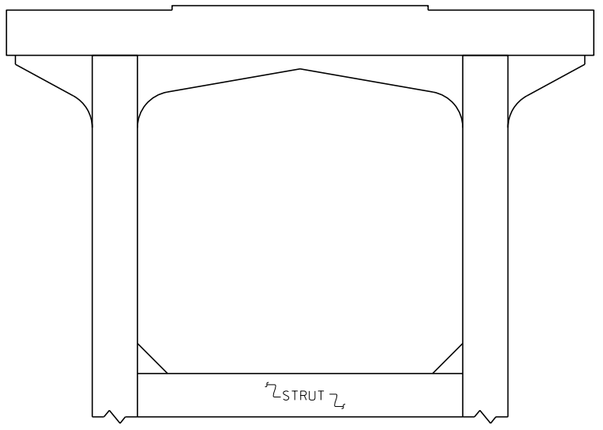


PLAN

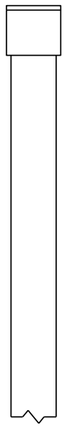


ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 2

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

SHEET NO. S-11

TOTAL SHEETS 62

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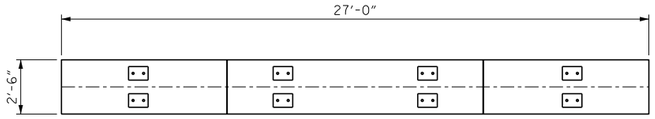


PLAN

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF 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 CAP AND COLUMN REPAIR DETAILS, SEE TYPICAL CAP AND COULMN REPAIR DETAILS SHEET.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

CONTRACTOR SHALL SAW CUT TO A NOMINAL DEPTH OF ½" BUT REINFORCING STEEL SHALL NOT BE DAMAGED.

CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

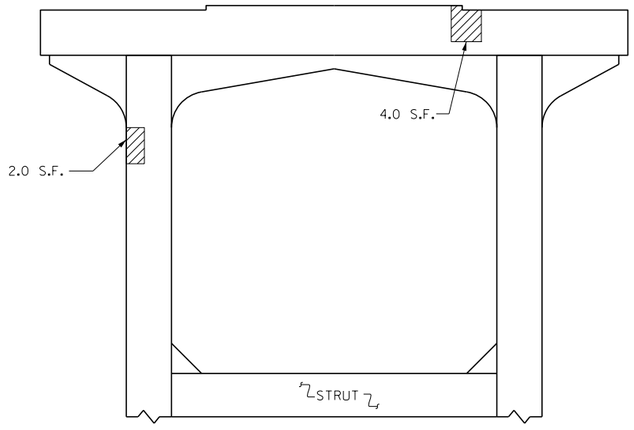
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

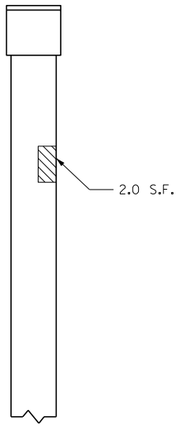
BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	4.0	2.0		
CAP (HORIZONTAL, CORNER)				
COLUMN	4.0	2.0		
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

EPOXY COATING	AREA SF
TOP OF CAP	67.5

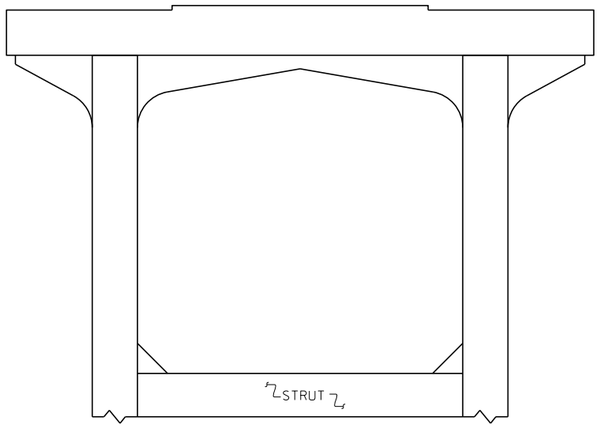
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



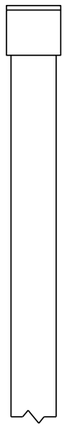
ELEVATION
NORTH SIDE



ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82

SHEET 3 OF 4

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 3

REVISIONS					
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2			4		

SHEET NO. S-12

TOTAL SHEETS 62

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wcsmith

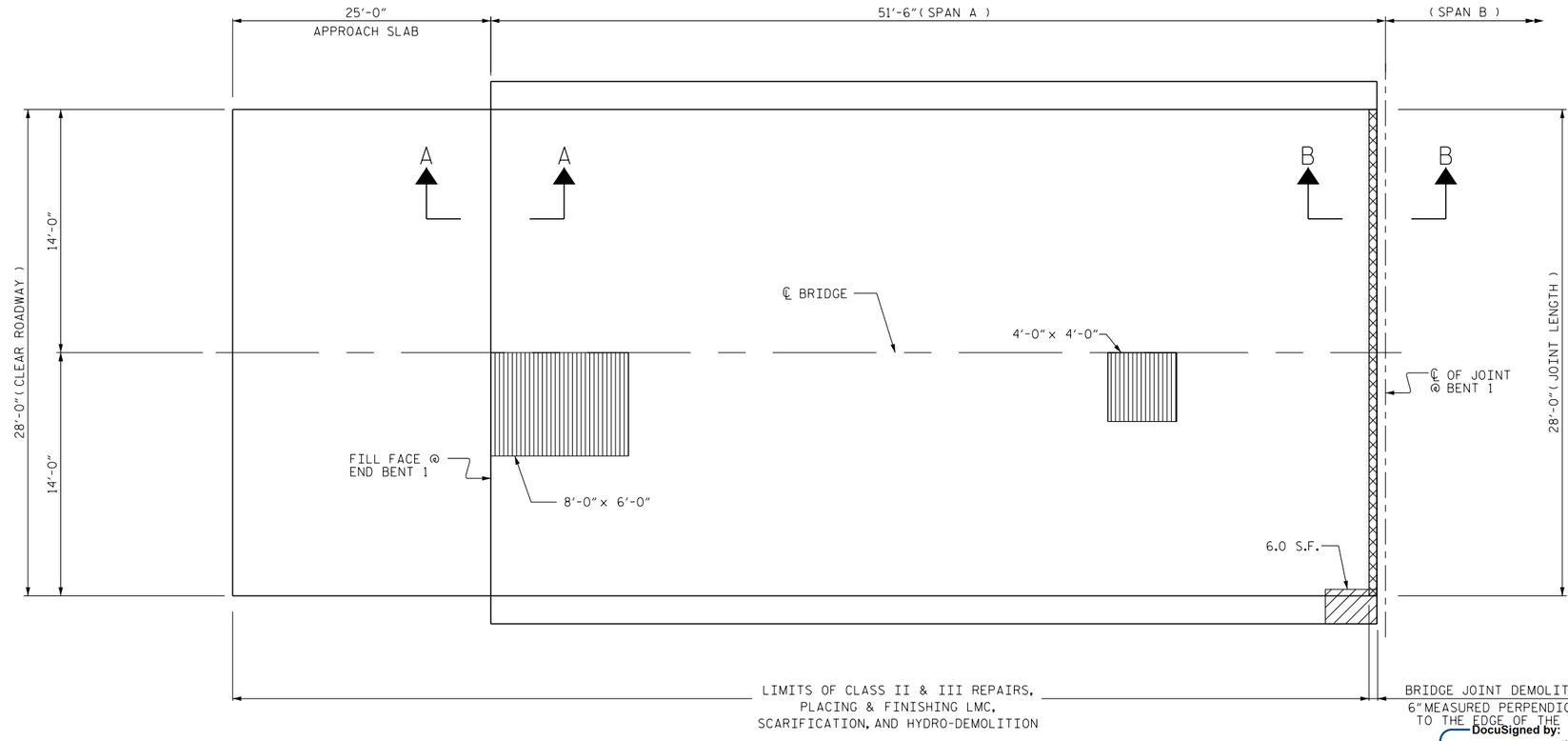
APPROACH SLAB & SPAN A QUANTIES

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	236.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	236.0 SQ. YD.	
CLASS II SURFACE PREPARATION	7.1 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	14.0 SQ. FT.	
SHOTCRETE	6.0 SQ. FT.	
INCIDENTAL MILLING	238 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN A

(FOR SECTIONS A-A AND B-B, SEE SHEET NO. S-21)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 85

SHEET 1 OF 4

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN A & APPROACH SLAB

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-13
1			3			TOTAL SHEETS
2			4			62

DRAWN BY : M. D. PISO / S. T. SANDOR DATE : 11/2016
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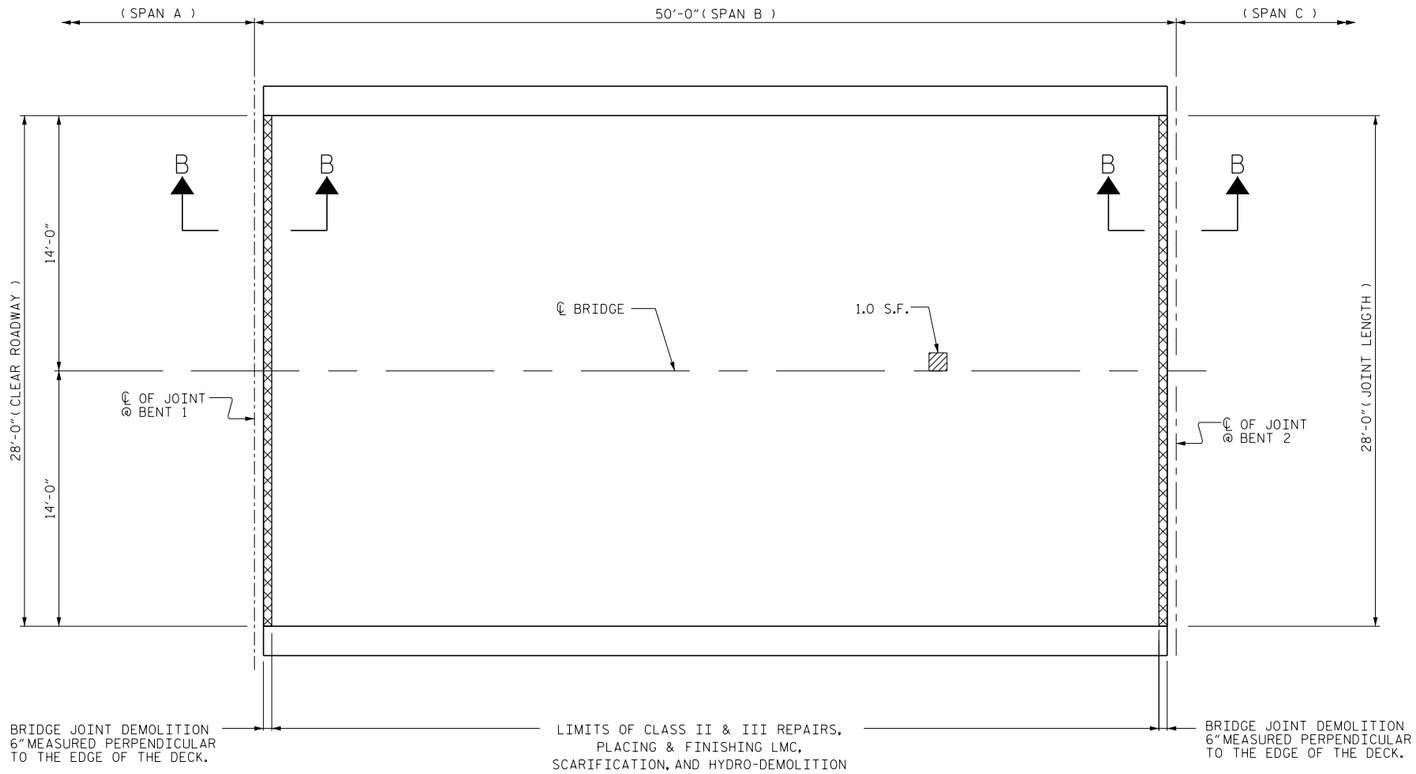
wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER HYDRO-DEMOLITION FOR POTENTIAL CLASS II REPAIRS.



SPAN B

(FOR SECTION B-B, SEE SHEET NO. S-21)

SUMMARY OF QUANTIES FOR SPAN B

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	28.0 SQ. FT.	
SHOTCRETE	1.0 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.

SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 85

SHEET 2 OF 4

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN B

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-14
1			3			TOTAL SHEETS
2			4			62

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SUMMARY OF QUANTIES FOR SPAN C

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	28.0 SQ. FT.	
SHOTCRETE	19.5 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

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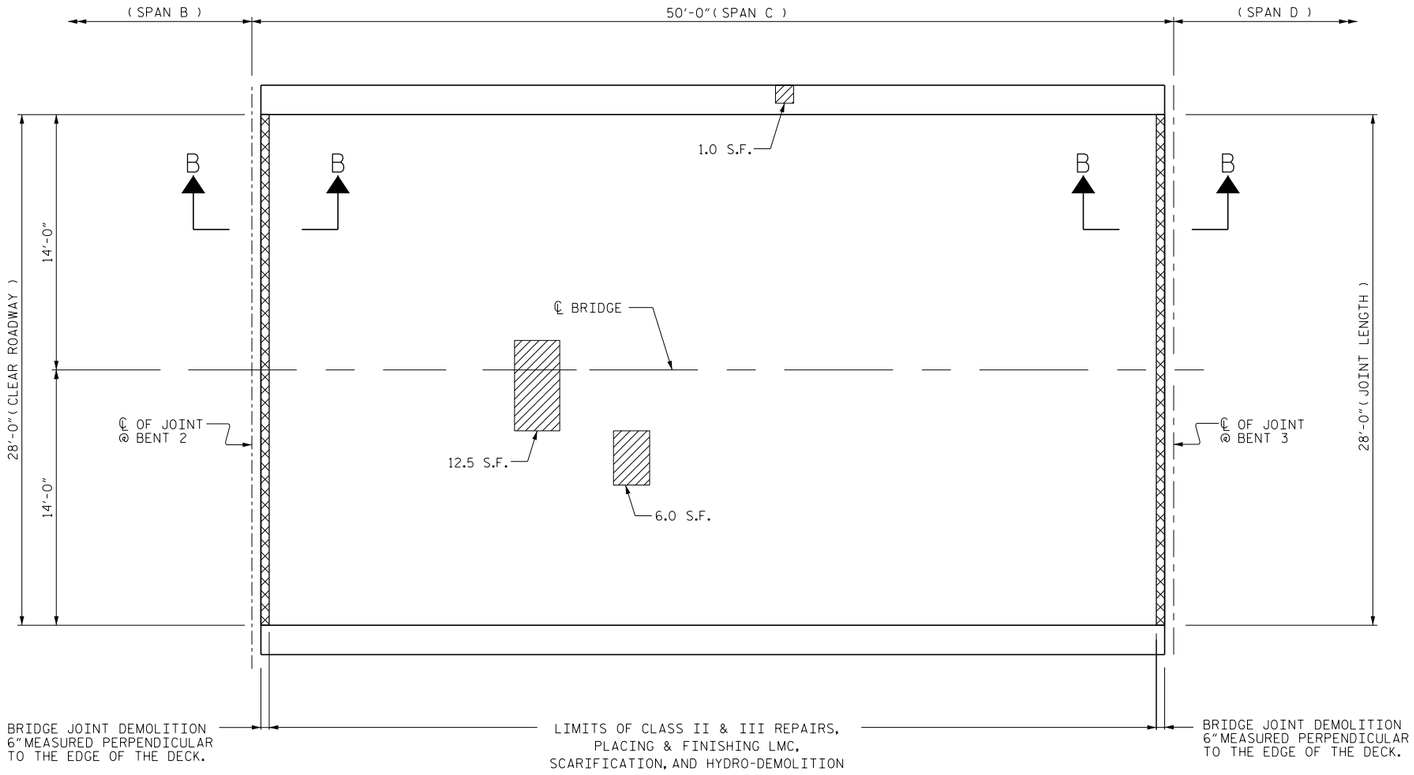
INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN B

(FOR SECTION B-B, SEE SHEET NO. S-21)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 85

SHEET 3 OF 4

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN C

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-15
1			3			TOTAL SHEETS
2			4			62

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APPROACH SLAB & SPAN D QUANTIES

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	236.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	236.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	14.0 SQ. FT.	
SHOTCRETE	1.0 SQ. FT.	
INCIDENTAL MILLING	236.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

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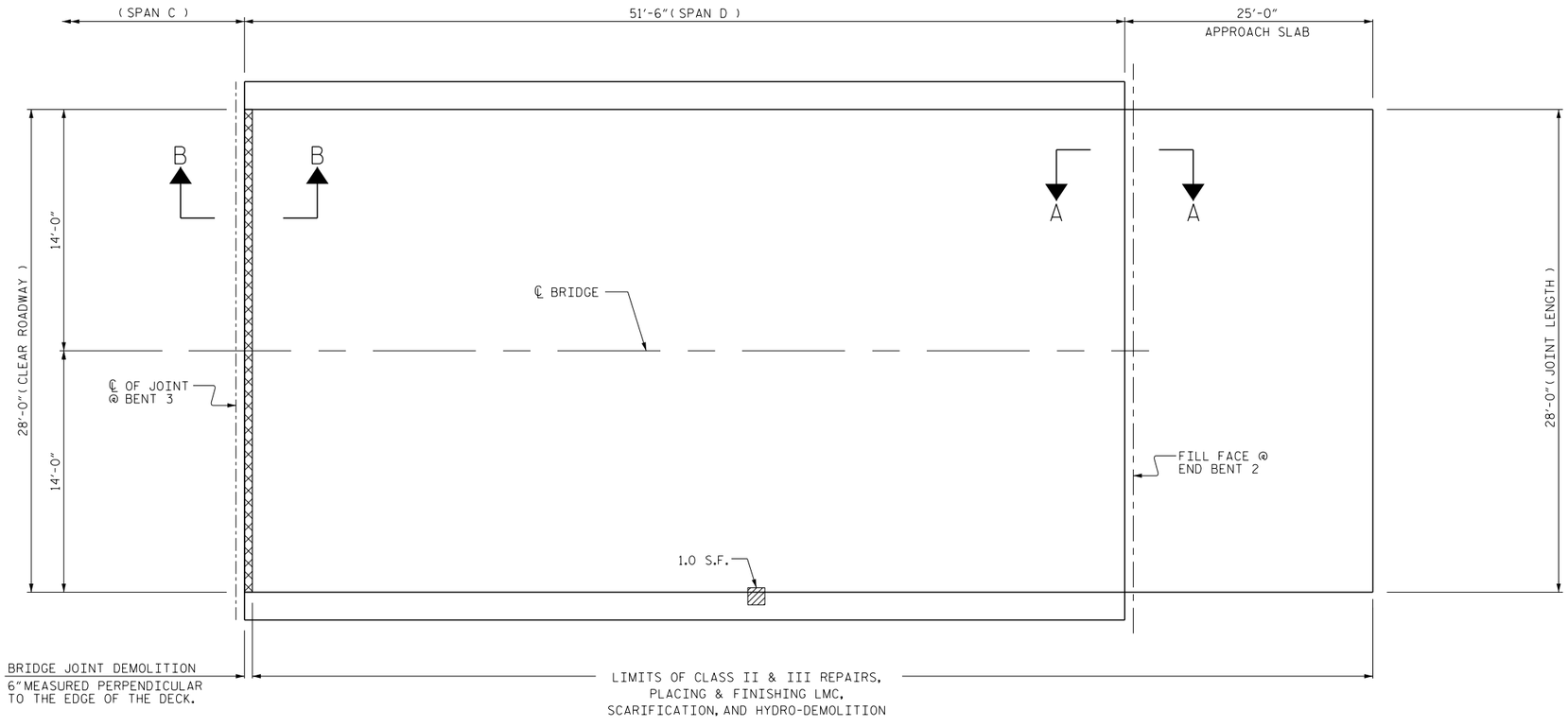
INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN D

(FOR SECTIONS A-A AND B-B, SEE SHEET NO. S-21)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 85

SHEET 4 OF 4

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DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN D & APPROACH SLAB

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-16
1			3			TOTAL SHEETS
2			4			62

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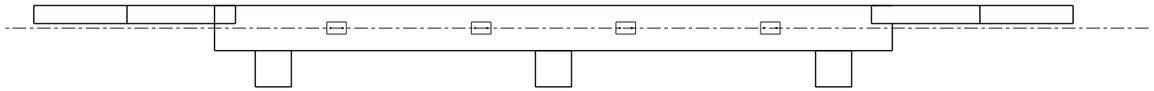
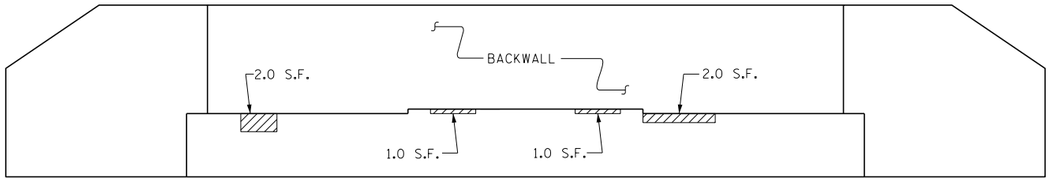


PLAN
END BENT 1



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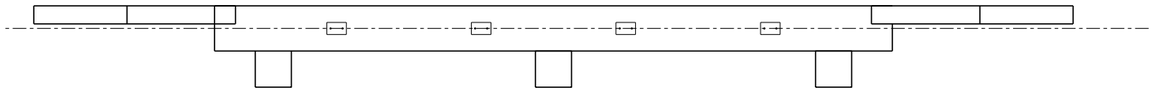
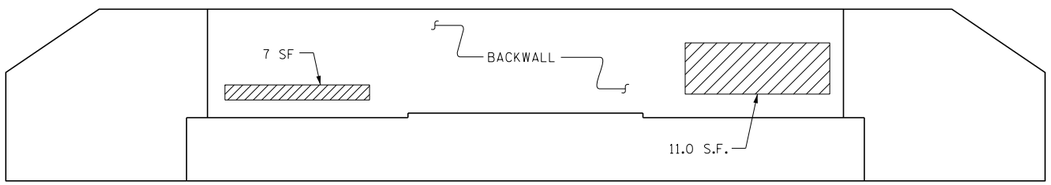
END BENT 1



PLAN
END BENT 2



ELEVATION
END BENT 2

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

REPAIRS END BENT 1	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	6.0	3.0			
CAP (HORIZONTAL, CORNER)					

EPOXY RESIN INJECTION	LN. FT	LN. FT
CAP		

EPOXY COATING	AREA SF
TOP OF CAP	82.5

END BENT 2	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)	18.0	9.0			
CAP (HORIZONTAL, CORNER)					

EPOXY RESIN INJECTION	LN. FT	LN. FT
CAP		

EPOXY COATING	AREA SF
TOP OF CAP	82.5

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

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF 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 CAP AND COLUMN REPAIR DETAILS, SEE TYPICAL CAP AND COULMN REPAIR DETAILS SHEET.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 85

SHEET 1 OF 4

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NORTH CAROLINA PROFESSIONAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENTS

REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			62

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NOTES:

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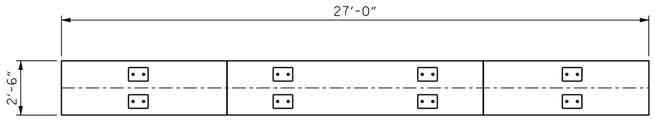
REPAIR QUANTITY TABLE

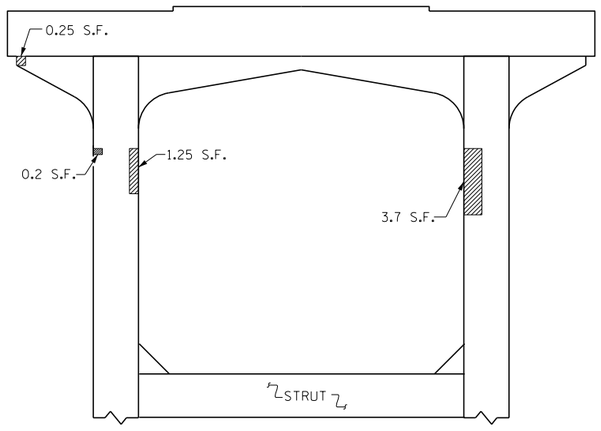
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	2.5	1.3		
CAP (HORIZONTAL, CORNER)	13.9	7.0		
COLUMN	13.4	6.8		
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

EPOXY COATING	AREA SF
TOP OF CAP	67.5

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

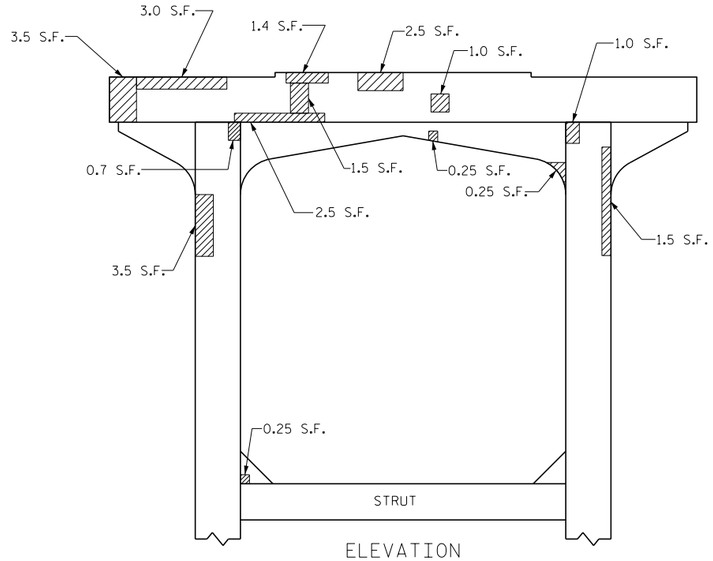


PLAN

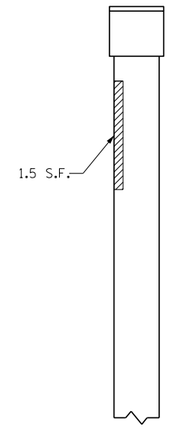


ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 85

SHEET 2 OF 4

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18565 TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-18
1			3			TOTAL SHEETS
2			4			62

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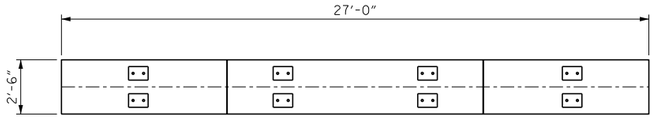

PLAN

NOTES:

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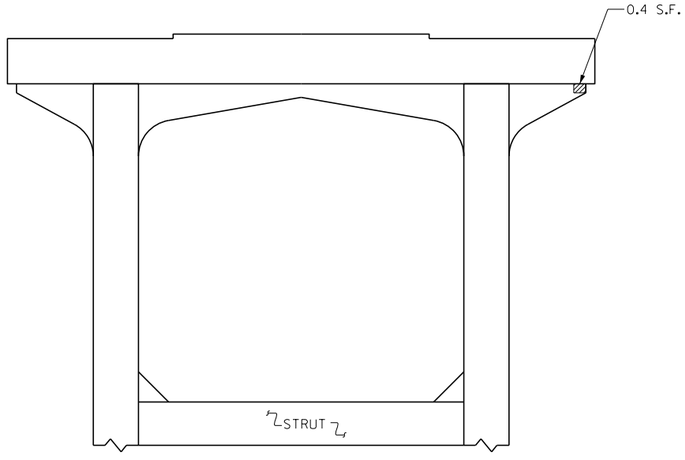
EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

REPAIRS BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	1.6	0.8		
CAP (HORIZONTAL, CORNER)				
COLUMN	0.4	0.2		
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

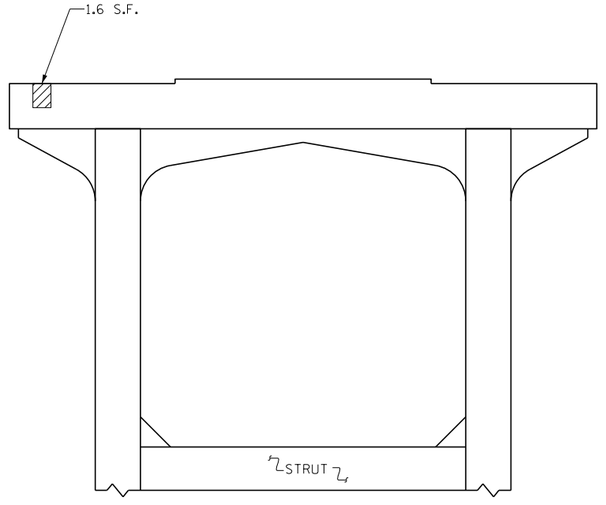
EPOXY COATING	AREA SF
TOP OF CAP	67.5

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

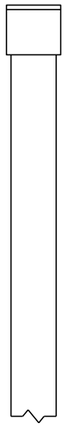


ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

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PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 85

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 2

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

SHEET NO. S-19

TOTAL SHEETS 62

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NOTES:

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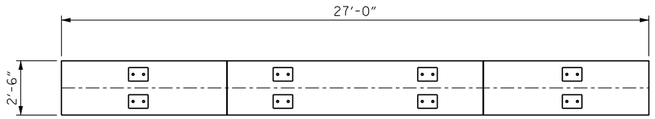
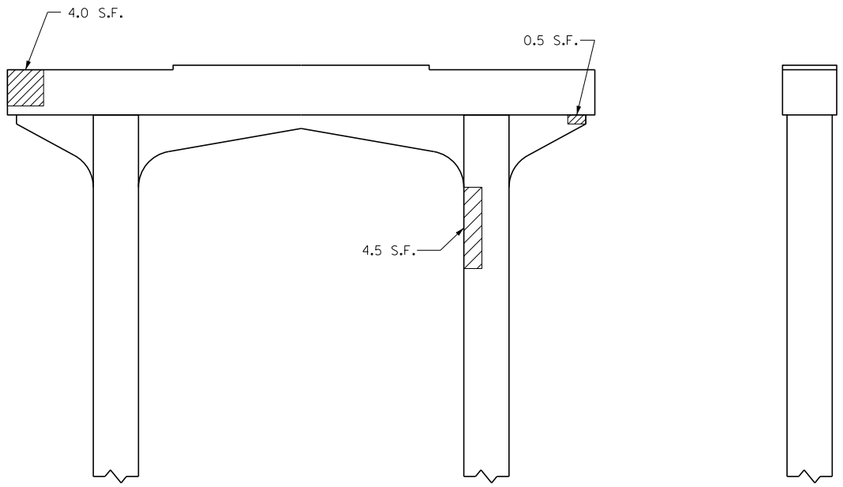
REPAIR QUANTITY TABLE

REPAIRS BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	13.9	7.0		
CAP (HORIZONTAL, CORNER)				
COLUMN	6.0	3.0		
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

EPOXY COATING	AREA SF
TOP OF CAP	67.5

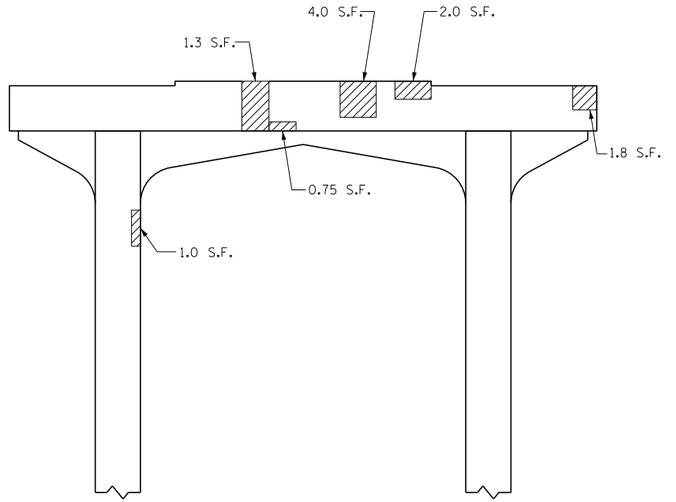
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



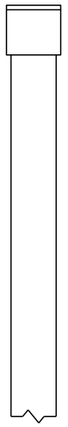


ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

- SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 85

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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BENT 3

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-20
1			3			TOTAL SHEETS
2			4			62

DRAWN BY : M. D. PISO / S. T. SANDOR DATE : 11/2016
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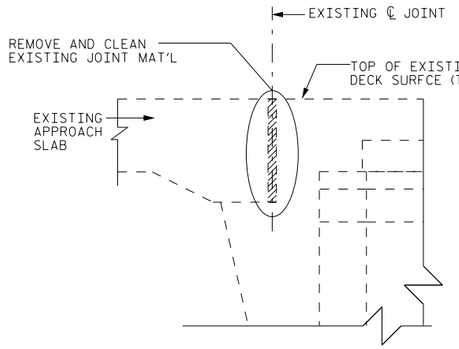
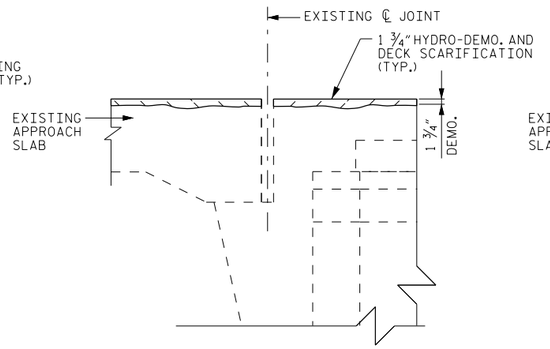
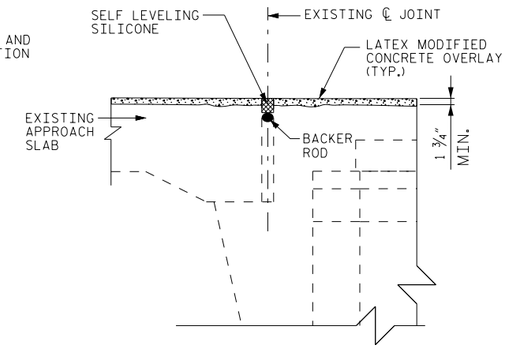


EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT

NOTES:

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

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

EXCAVATE EXISTING JOINT TO SOUND CONCRETE. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN. APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE BOTTOM OF THE ELASTOMERIC CONCRETE. SEE CONCRETE FOR DECK REPAIR, SPECIAL PROVISIONS.

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

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

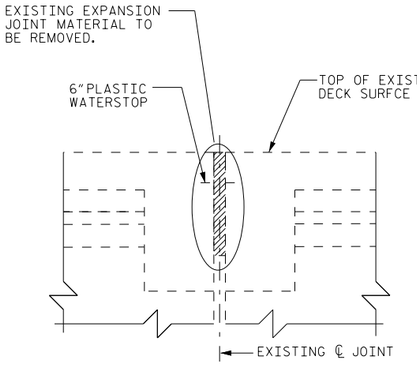
FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

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

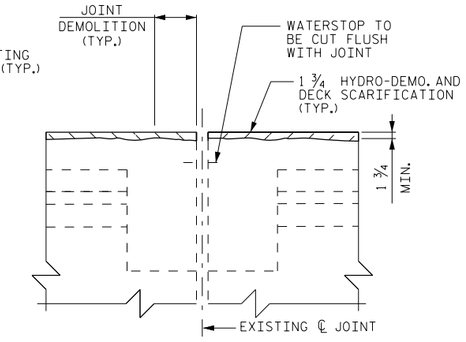
THE WIDTH OF THE UNCOMPRESSED FOAM JOINT MATERIAL SHALL BE 2".

JOINT INSTALLATION SEQUENCE AT END BENTS

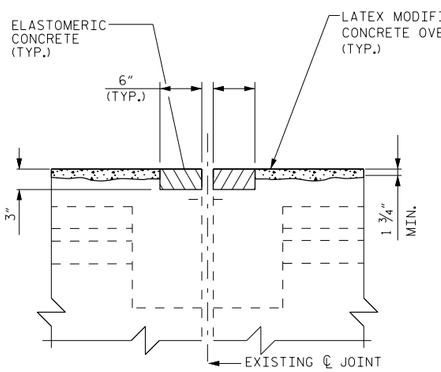
SECTION A-A



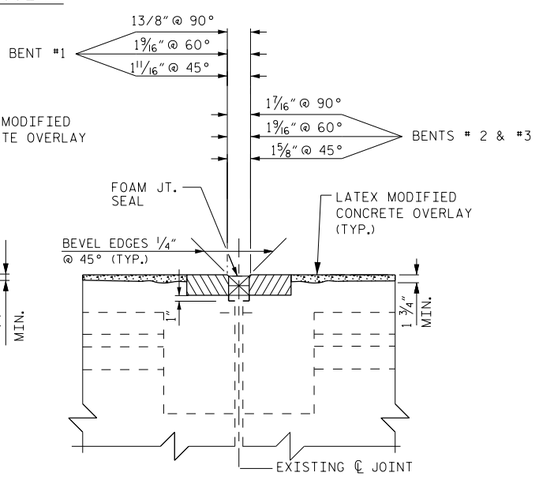
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT PRE-SAWED DIMENSIONS

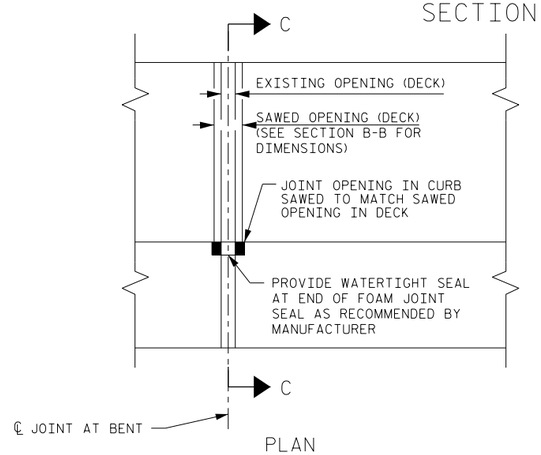


PROPOSED FOAM JOINT SEAL EXPANSION

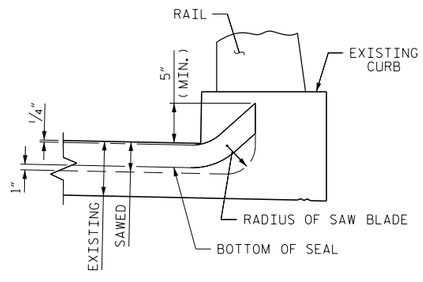
(FOR ALL BENTS)

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B



PLAN



SECTION C-C

JOINT SEAL DETAILS AT BARRIER RAIL

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82 & 85

DocuSigned by:
AD50B1D97749466...

SOUTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-21
1			3			TOTAL SHEETS
2			4			62

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CHECKED BY : W. C. SMITH DATE : 11/2016

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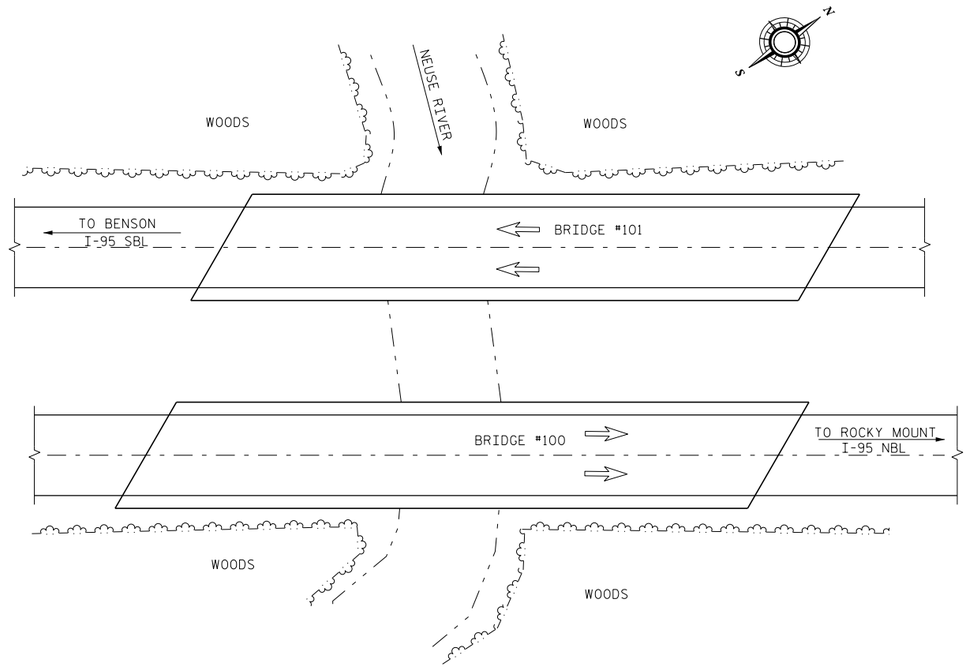
wcsmith



NOTES

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

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.

THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE MANAGING HYDRO-DEMOLITION WATER SPECIAL PROVISION.

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

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

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

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

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

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

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR LATEX MODIFIED CONCRETE OVERLAY, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE PROVISIONS.

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 VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIRS, SEE SPECIAL PROVISIONS.

FOR CLEANING AND PAINTING OF EXISTING BEARING PLATES WITH HRCSA, SEE SPECIAL PROVISIONS.

FOR PAINTING EXISTING STRUCTURAL STEEL AND STEEL PILES, SEE SPECIAL PROVISIONS.

FOR BEAM REPAIRS, SEE "BEAM END PLATES REPAIR" SHEET AND SPECIAL PROVISIONS.

FOR PILE ENCASEMENT REMOVAL, SEE SPECIAL PROVISIONS.

FOR POLLUTION CONTROL, SEE "PAINTING EXISTING STRUCTURAL STEEL AND STEEL PILES" SPECIAL PROVISIONS.

LOCATION SKETCH

TOTAL BILL OF MATERIAL

BRIDGE NO.	GROOVING BRIDGE FLOORS	INCIDENTAL MILLING	POLLUTION CONTROL	*CLASS II SURFACE PREPARATION	*CLASS III SURFACE PREPARATION	** LATEX MODIFIED CONCRETE OVERLAY	PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY	PAINTING EXISTING STRUCTURE	SHOTCRETE REPAIR	CLEANING AND PAINTING EXISTING BEARING WITH HRCSA BRIDGE #__	*EPOXY RESIN INJECTION	FOAM JOINT SEALS	PAINTING CONTAINMENT FOR BRIDGE #__	* VOLUMETRIC MIXER	* CONCRETE FOR DECK REPAIR	BRIDGE JOINT DEMOLITION	EPOXY COATING	SCARIFYING BRIDGE DECK	HYDRO-DEMOLITION OF BRIDGE DECK	ELASTOMERIC CONCRETE	REMOVAL OF EXISTING PILE ENCASEMENT	BEAM REPAIR	*** STEEL PILE REPAIR	PAINTING STEEL PILES
	SQ. FT.	SQ.YDS.	LUMP SUM	SQ.YDS.	SQ.YDS.	C.Y.	SQ.YDS.	LUMP SUM	CU. FT.	EACH	LN. FT.	LUMP SUM	LUMP SUM	LUMP SUM	CU. FT.	SQ. FT.	SQ. FT.	SQ.YDS.	SQ.YDS.	CU. FT.	LN. FT.	LBS.	LBS.	LUMP SUM
100	10,972	1,404	LUMP SUM	14.1	8.0	59.0	1,376	LUMP SUM	11.8	64	10.0	LUMP SUM	LUMP SUM	LUMP SUM	1.0	230.0	741.0	1,376	1,376	57.5	-	883	-	-
101	10,972	1,404	LUMP SUM	17.8	8.0	59.0	1,376	LUMP SUM	216.4	64	10.0	LUMP SUM	LUMP SUM	LUMP SUM	1.0	230.0	741.0	1,376	1,376	57.5	39.0	262	200.0	LUMP SUM
TOTAL	21,944	2,808	LUMP SUM	31.9	16.0	118.0	2,752	LUMP SUM	228.2	128	20.0	LUMP SUM	LUMP SUM	LUMP SUM	2.0	460.0	1,482	2,752	2,752	115.0	39.0	1,145	200.0	LUMP SUM

* CLASS II AND CLASS III SURFACE PREPARATION, VOLUMETRIC MIXER AND CONCRETE FOR DECK REPAIR ARE NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

** THE QUANTITY OF LATEX MODIFIED CONCRETE OVERLAY INCLUDES THE 4" OVERLAP BETWEEN OVERLAYS.

*** STEEL PILE REPAIRS ARE NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSES. IN CASE UNANTICIPATED STEEL PILE REPAIR AREAS ARE ENCOUNTERED.

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100 & 101

SHEET 2 OF 2

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL NOTES
LOCATION SKETCHES
&
TOTAL BILL OF MATERIAL

REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			62

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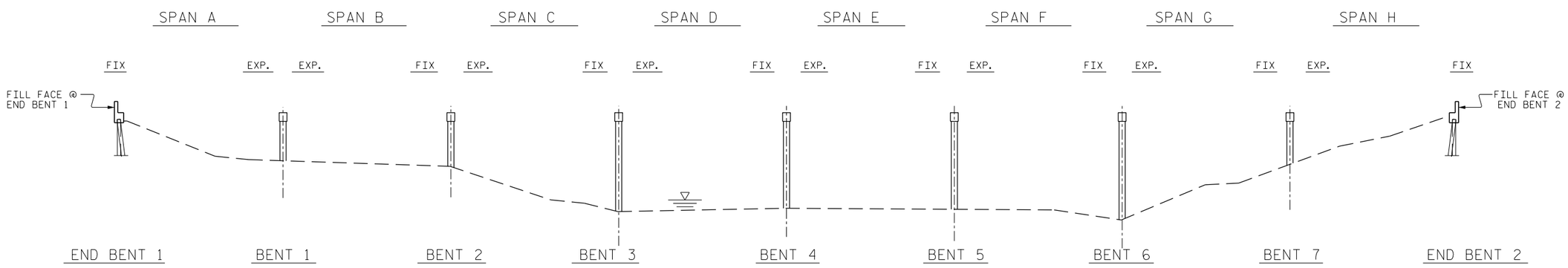
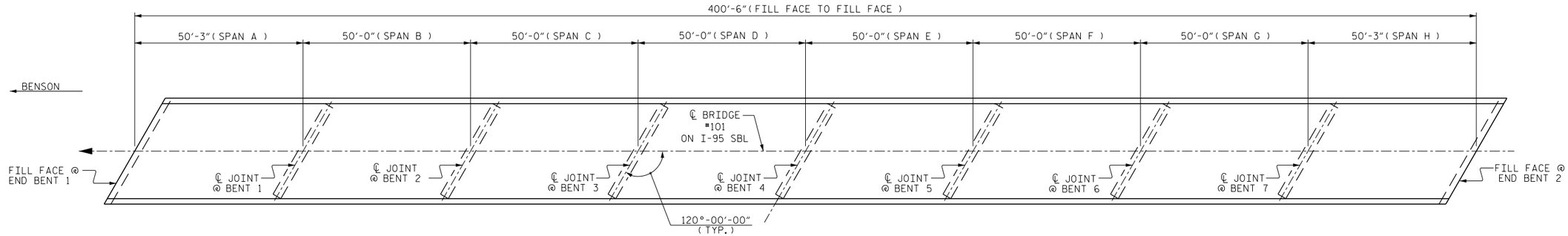
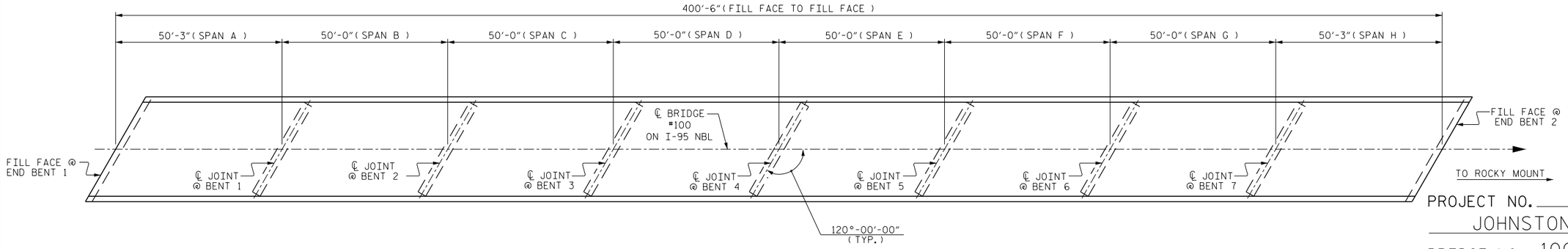


ELEVATION

(SECTION ALONG ℄ ROADWAY)





PLAN

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

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100 & 101

SHEET 1 OF 2

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3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGES OVER NEUSE RIVER ON I-95 BETWEEN BENSON AND ROCKY MOUNT

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-23
1			3			TOTAL SHEETS
2			4			62

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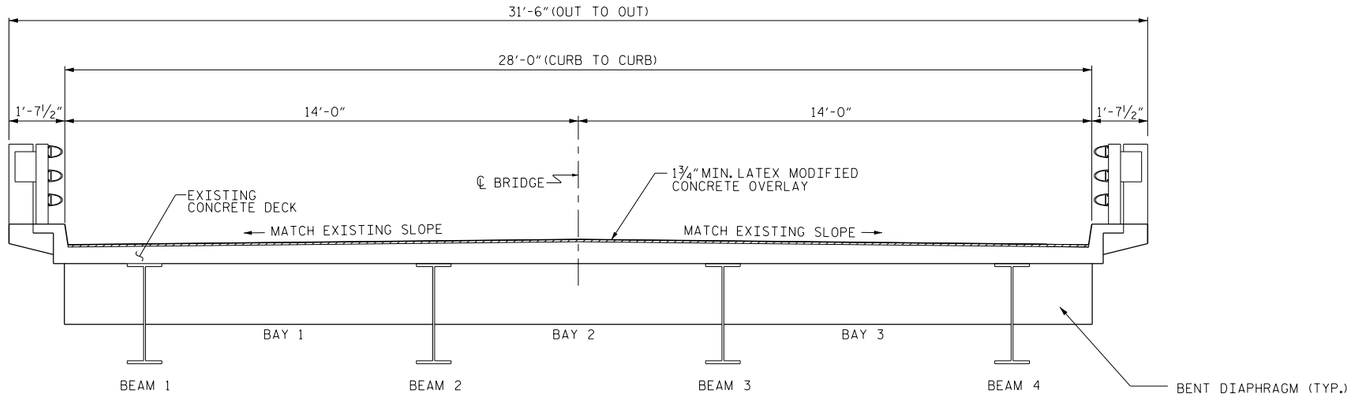
NOTE:

WHEN PREPARING THE SURFACE FOR LMC OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC STAGE, THE PREVIOUSLY PLACED LMC SHALL BE REMOVED FOR A DISTANCE OF 4-INCHES FROM THE LMC EDGE. THE SURFACE OF THE NEW STAGE AREA, ALONG WITH THE 4 INCH OVERLAY AREA, SHALL BE PREPARED AS PER THE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS. NEW LMC SHALL BE PLACE IN THE 4-INCH OVERLAP, AS PART OF NEW LMC STAGE PLACEMENT.

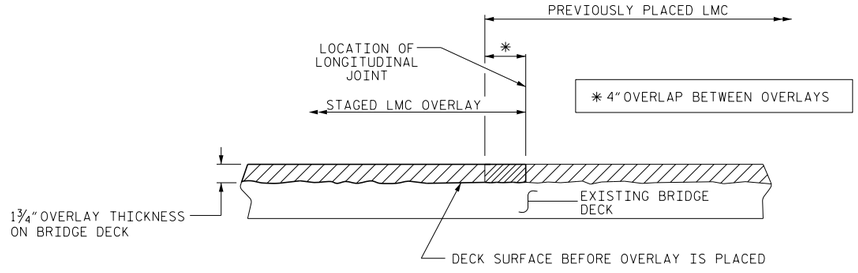
SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND LMC PLACEMENT.

EXISTING BRIDGE DECK AND APPROACH SLABS ARE COVERED WITH ASHALT OVERLAY, INCIDENTAL MILLING IS REQUIRED.



TYPICAL SECTION

(FOR BEAM END PLATES REPAIR DETAILS, SEE SHEET S-60)
(FOR BENT DIAPHRAGM REPAIR DETAILS, SEE SHEET S-61)



SECTION THRU DECK

STAGED LMC OVERLAY JOINT

(AS NEEDED)

PROJECT NO. I-5978
JOHNSTON COUNTY
BRIDGE NO. 100 & 101

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RALEIGH

TYPICAL SECTION

LATEX MODIFIED CONCRETE OVERLAY DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-24
1			3			TOTAL SHEETS
2			4			62

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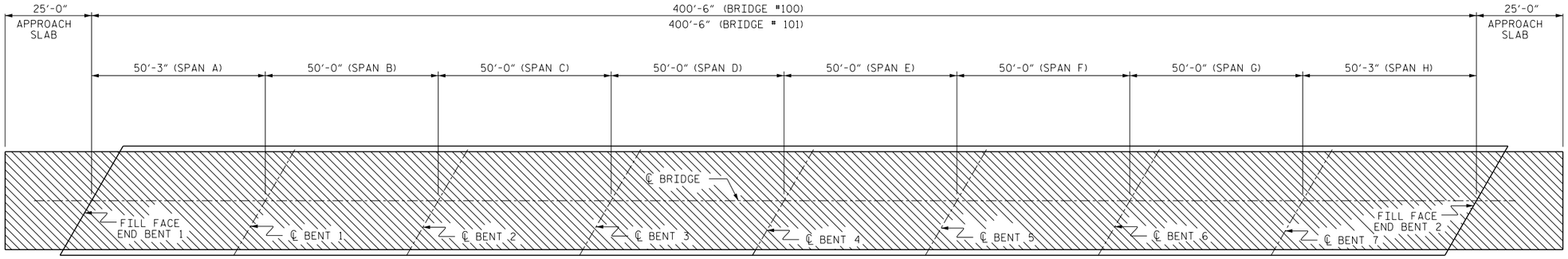
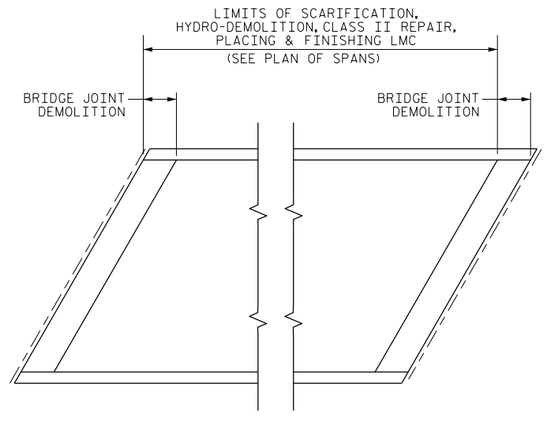


INCIDENTAL MILLING

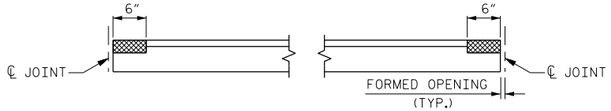
DECK SCARIFICATION, HYDRO-DEMOLITION, AND LATEX MODIFIED CONCRETE OVERLAY

PLAN VIEW OF BRIDGE

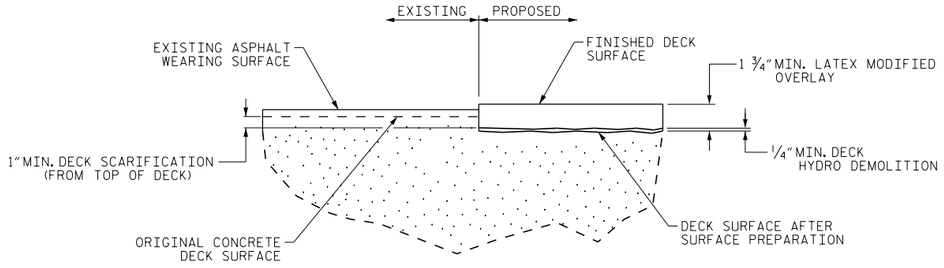
FOR BOTH BRIDGE #100 & #101



PLAN



ELEVATION



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100 & 101

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SUPERSTRUCTURE

SURFACE PREPARATION

REVISIONS					SHEET NO.
NO.	BY:	DATE:	BY:	DATE:	S-25
1					TOTAL SHEETS
2					62

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NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER HYDRO-DEMOLITION FOR POTENTIAL CLASS II REPAIRS.

APPROACH SLAB & SPAN A QUANTIES

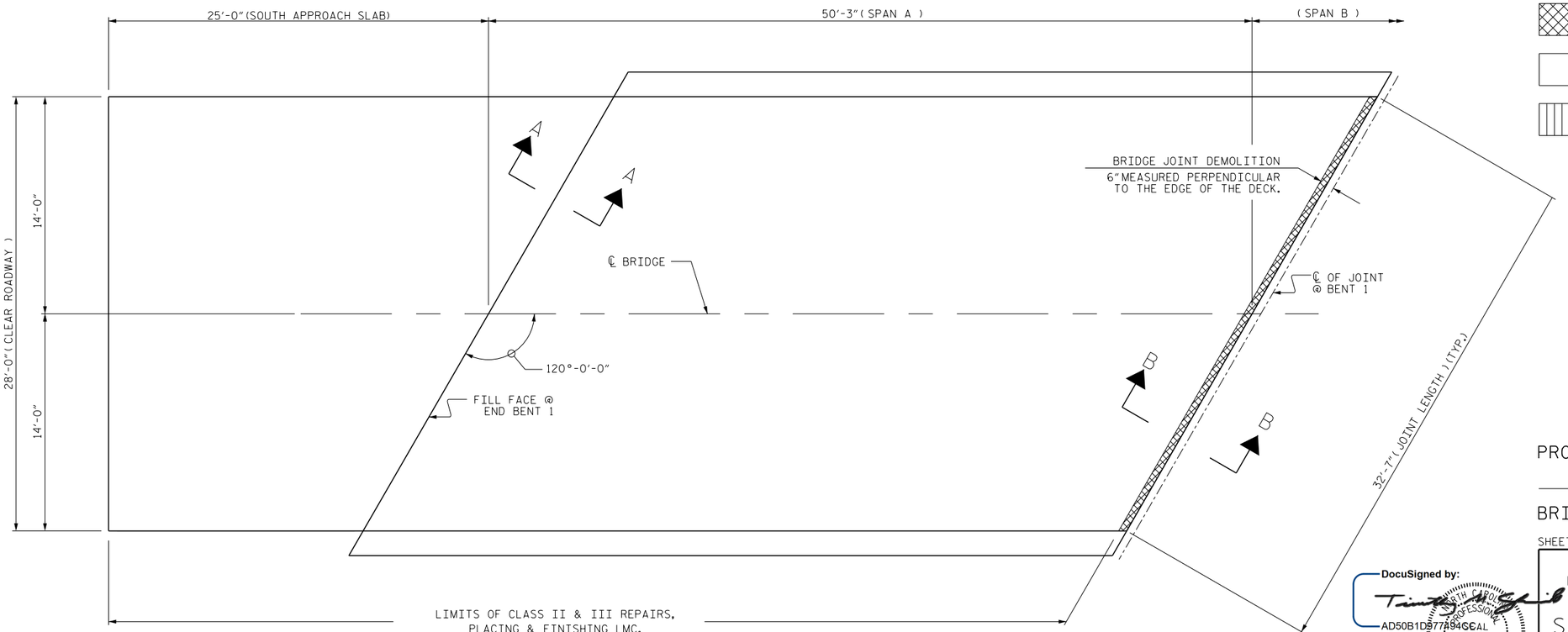
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	232.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	232.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	16.0 SQ. FT.	
SHOTCRETE	0.0 SQ. FT.	
INCIDENTAL MILLING	234.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN A

(FOR SECTIONS A-A AND B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 1 OF 8

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3/2/2017

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SURFACE PREPARATION

APPROACH SLAB & SPAN A

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-26
1			3			TOTAL SHEETS
2			4			62

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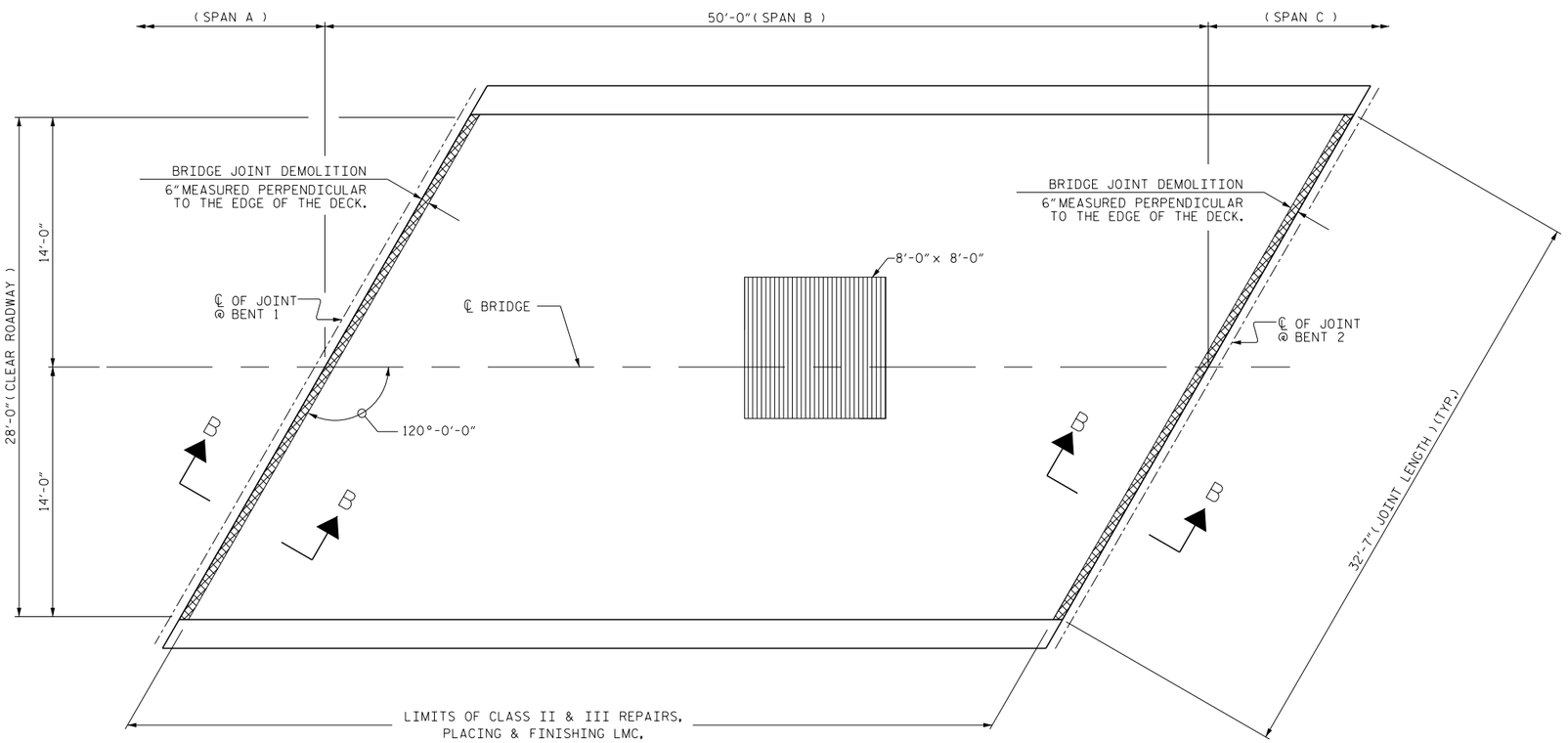
SUMMARY OF QUANTIES FOR SPAN B

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	7.1 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	33.0 SQ. FT.	
SHOTCRETE	0.0 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN B

(FOR SECTION B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 2 OF 8

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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RALEIGH

SURFACE PREPARATION

SPAN B

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-27
1			3			TOTAL SHEETS
2			4			62

DRAWN BY : M. D. PISO / S. T. SANDOR DATE : 11/2016

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wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER HYDRO-DEMOLITION FOR POTENTIAL CLASS II REPAIRS.

SUMMARY OF QUANTIES FOR SPAN C

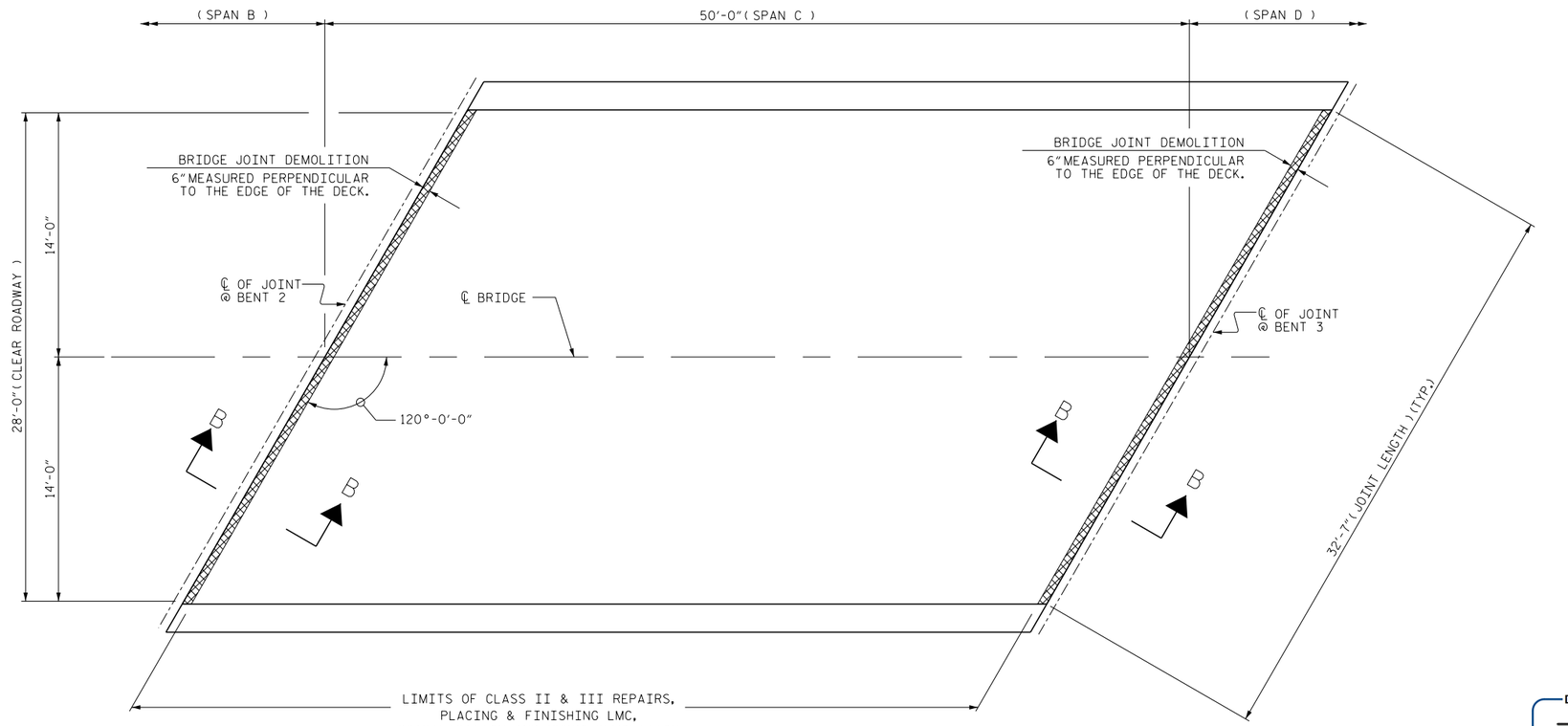
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	33.0 SQ. FT.	
SHOTCRETE	0.0 SQ. FT.	
INCIDENTAL MILLING	156 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN C

(FOR SECTION B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 3 OF 8

DocuSigned by:
AD50B1D97749461...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN C

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-28
1			3			TOTAL SHEETS
2			4			62

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wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER HYDRO-DEMOLITION FOR POTENTIAL CLASS II REPAIRS.

SUMMARY OF QUANTIES FOR SPAN D

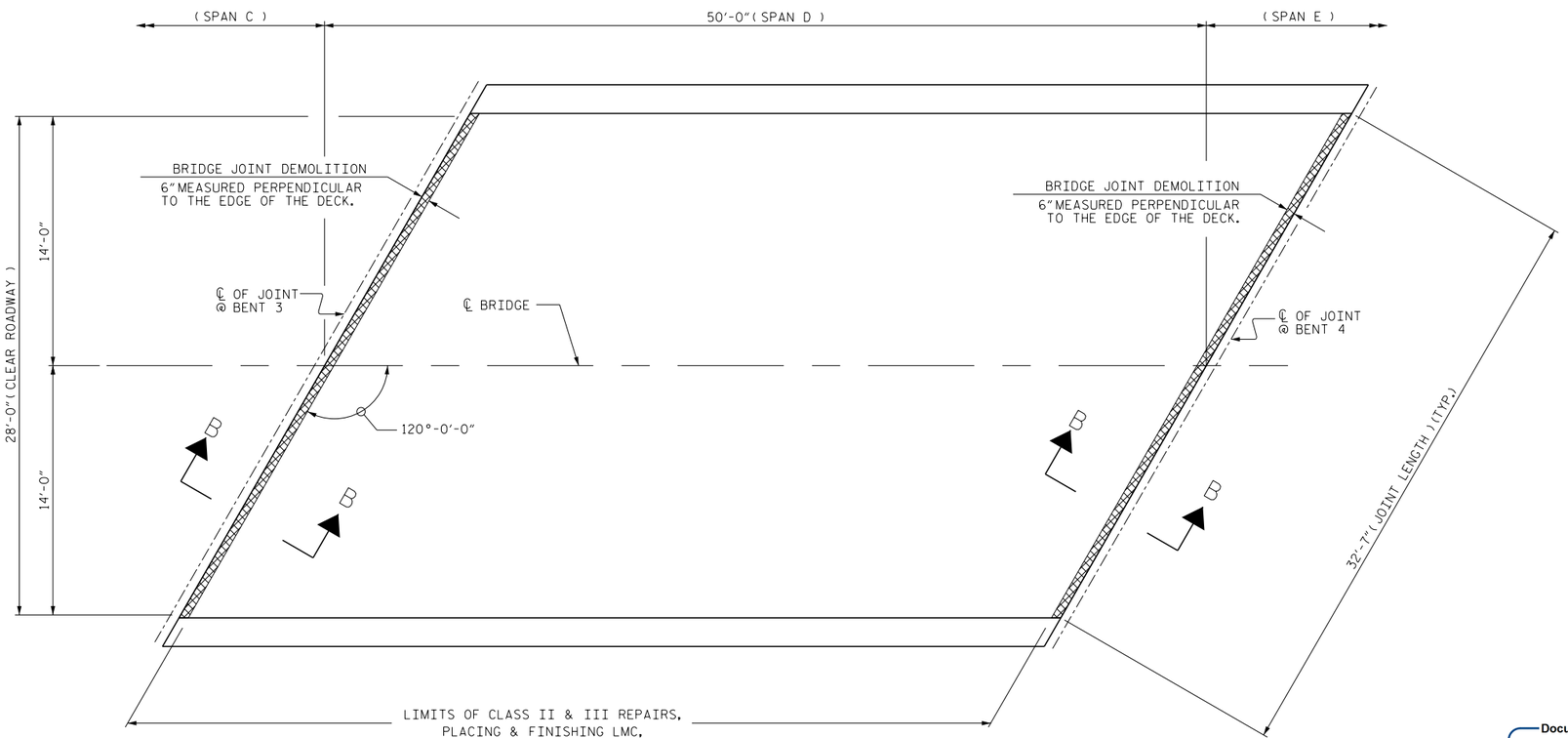
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	33.0 SQ. FT.	
SHOTCRETE	0.0 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN D

(FOR SECTION B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 4 OF 8

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN D

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-29
1			3			TOTAL SHEETS
2			4			62

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wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER HYDRO-DEMOLITION FOR POTENTIAL CLASS II REPAIRS.

SUMMARY OF QUANTIES FOR SPAN E

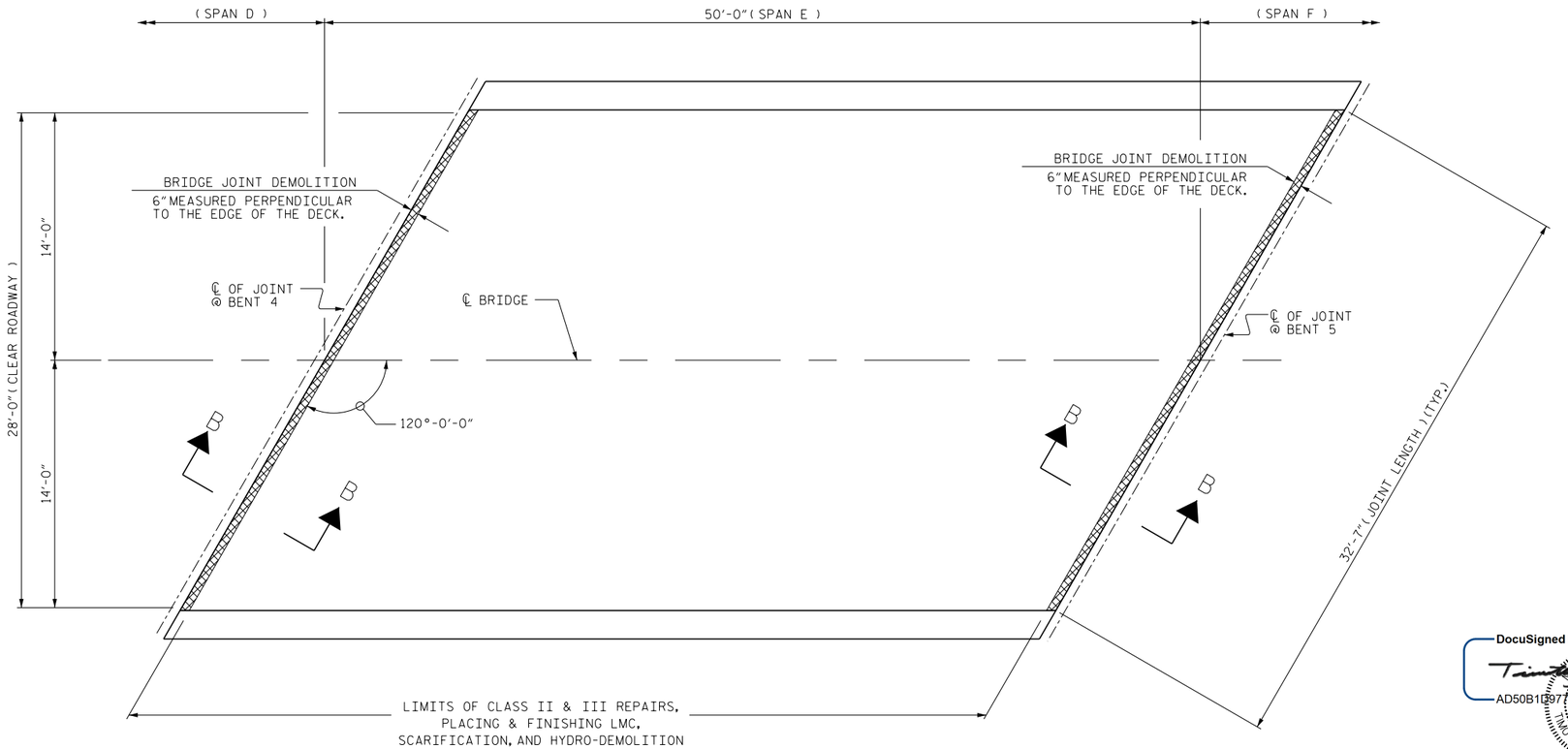
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	33.0 SQ. FT.	
SHOTCRETE	0.0 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN E

(FOR SECTION B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 5 OF 8

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NORTH CAROLINA PROFESSIONAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN E

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-30
1			3			TOTAL SHEETS
2			4			62

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wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER HYDRO-DEMOLITION FOR POTENTIAL CLASS II REPAIRS.

SUMMARY OF QUANTIES FOR SPAN F

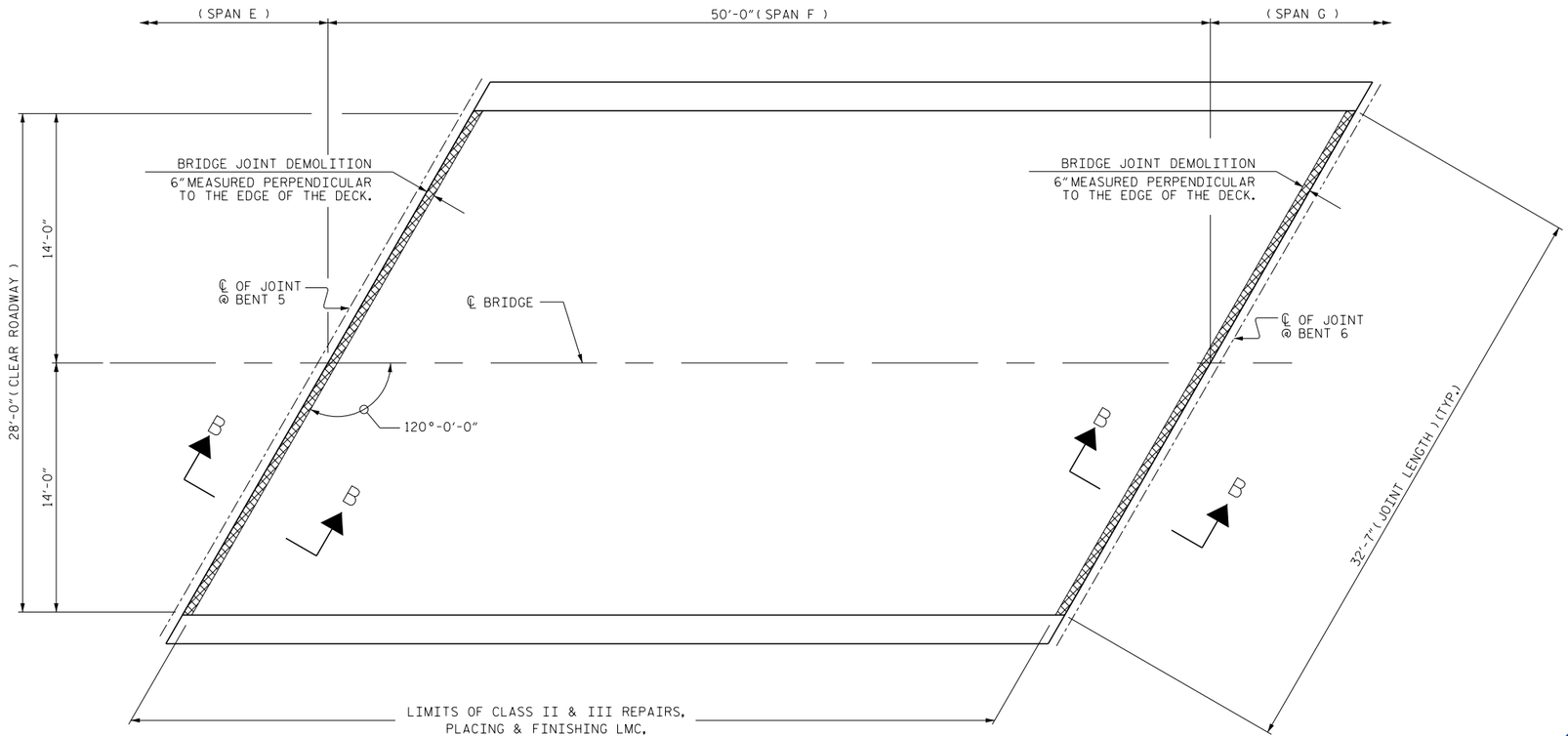
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	33.0 SQ. FT.	
SHOTCRETE	0.0 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN F

(FOR SECTION B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 6 OF 8

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NORTH CAROLINA PROFESSIONAL ENGINEER 18565 TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN F

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-31
1			3			TOTAL SHEETS
2			4			62

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wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER HYDRO-DEMOLITION FOR POTENTIAL CLASS II REPAIRS.

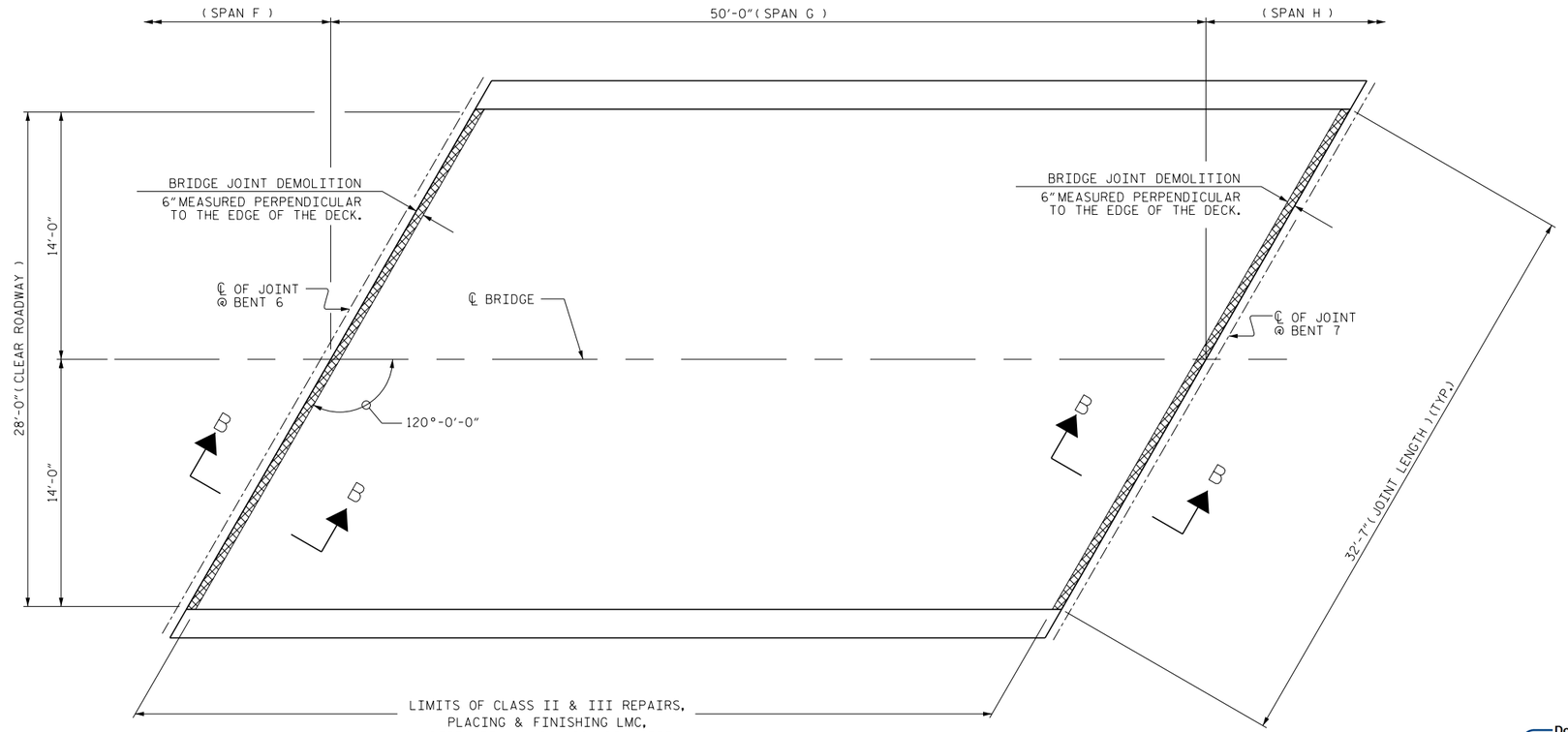
SUMMARY OF QUANTIES FOR SPAN G

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	33.0 SQ. FT.	
SHOTCRETE	0.0 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN G

(FOR SECTION B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 7 OF 8

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN G

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-32
1			3			TOTAL SHEETS
2			4			62

DRAWN BY : M. D. PISO / S. T. SANDOR DATE : 11/2016
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wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER HYDRO-DEMOLITION FOR POTENTIAL CLASS II REPAIRS.

SUMMARY OF QUANTIES FOR SPAN H & APP. SLAB

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	232.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	232.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	16.0 SQ. FT.	
SHOTCRETE	0.0 SQ. FT.	
INCIDENTAL MILLING	234.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

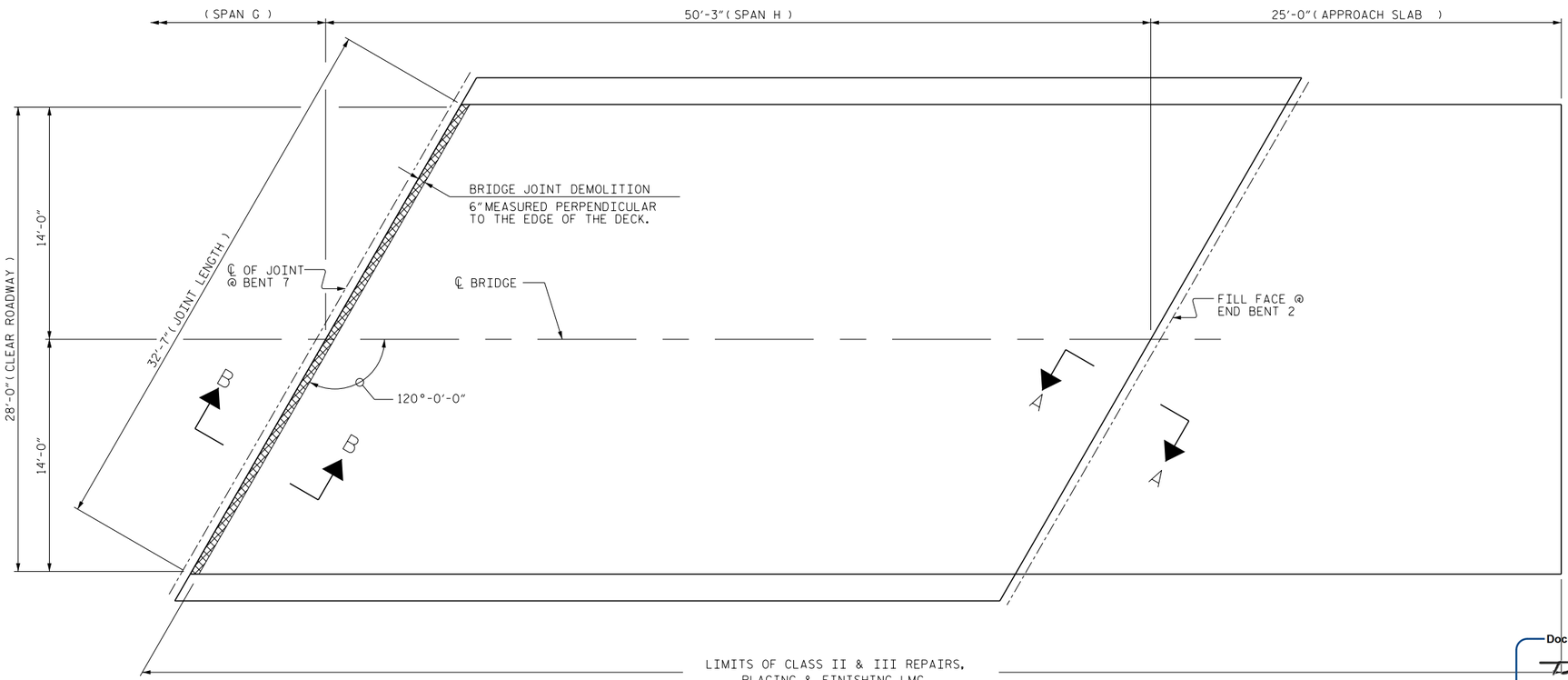
INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.

SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION



SPAN H

(FOR SECTIONS A-A AND B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 8 OF 8

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN H & APPROACH SLAB

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-33
1			3			TOTAL SHEETS
2			4			62

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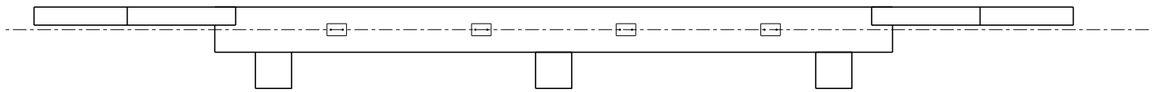
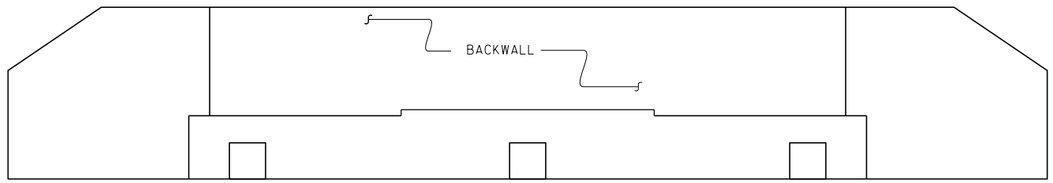
wcsmith

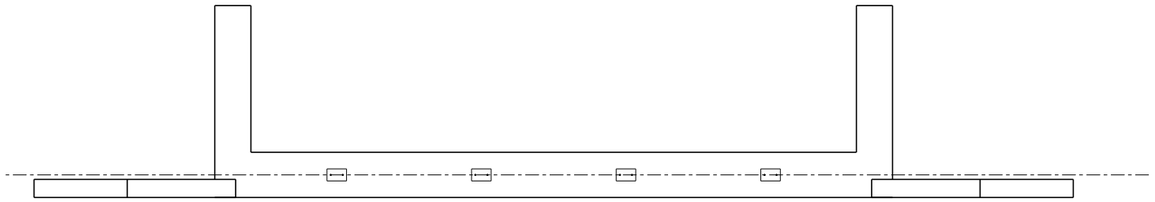
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



PLAN
END BENT 1



ELEVATION
END BENT 1



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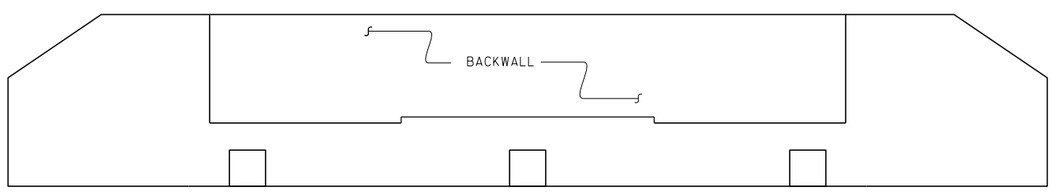
END BENT 2



ELEVATION
END BENT 2

REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)					
CAP (HORIZONTAL, CORNER)					
EPOXY RESIN INJECTION	LN. FT		LN. FT		
CAP					
EPOXY COATING	AREA SF				
TOP OF CAP	97.5				

END BENT 2	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)					
CAP (HORIZONTAL, CORNER)					
EPOXY RESIN INJECTION	LN. FT		LN. FT		
CAP					
EPOXY COATING	AREA SF				
TOP OF CAP	97.5				

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

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF 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 CAP AND COLUMN REPAIR DETAILS, SEE TYPICAL CAP AND COULMN REPAIR DETAILS SHEET.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 1 OF 8

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENTS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-34
1			3			TOTAL SHEETS
2			4			62

DRAWN BY : M. D. PISO / S. T. SANDOR DATE : 11/2016
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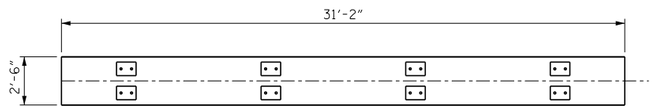
wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



PLAN

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF 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 CAP AND COLUMN REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.

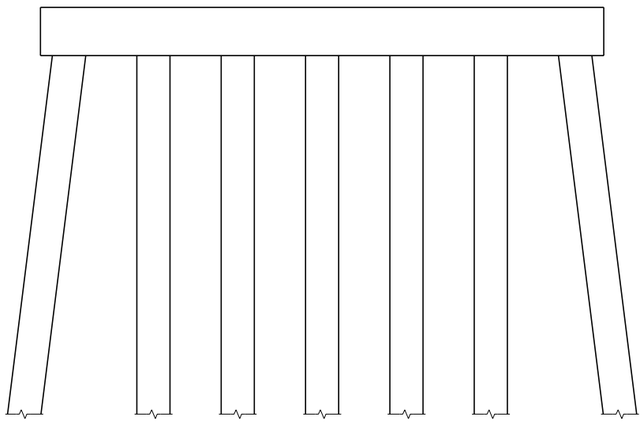
EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)				
CAP (HORIZONTAL, CORNER)				
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

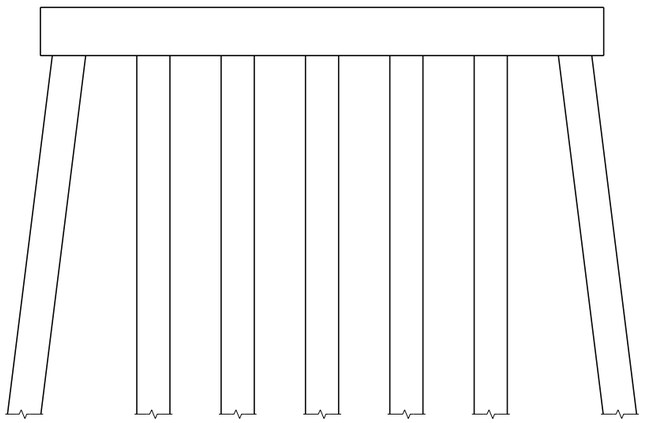
EPOXY COATING	AREA SF
TOP OF CAP	78.0

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



ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE

ELEVATION
WEST SIDE

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 2 OF 8

DocuSigned by:
AD50B1D97494CCA...

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18565 TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-35
1			3			TOTAL SHEETS
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wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF 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 CAP AND COLUMN REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.

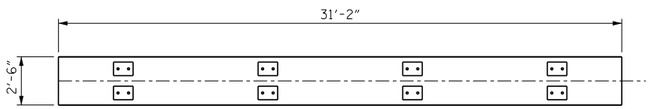
EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)				
CAP (HORIZONTAL, CORNER)				
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

EPOXY COATING	AREA SF
TOP OF CAP	78.0

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



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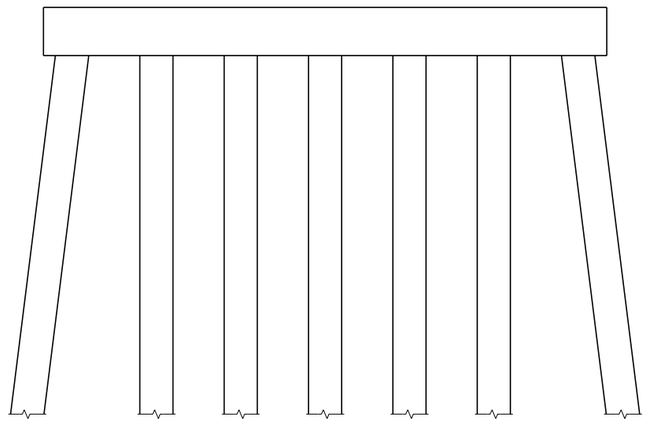
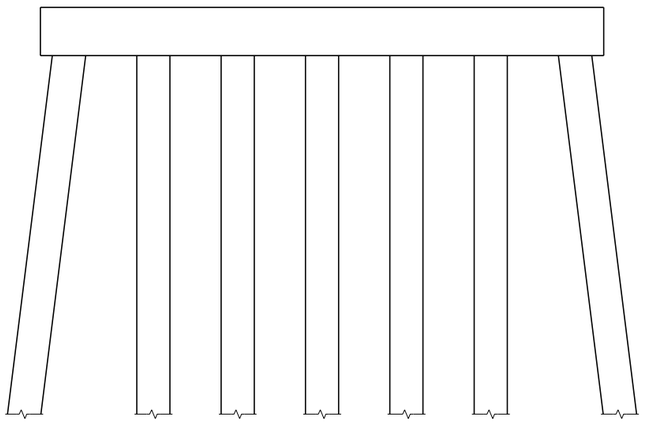


ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE

ELEVATION
WEST SIDE

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 2 OF 8

DocuSigned by:
AD50B1D977894CC...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 2

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NOTES:

REPAIR LOCATIONS AND ESTIMATE OF 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.

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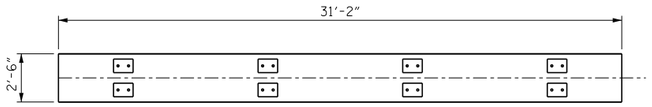
REPAIR QUANTITY TABLE

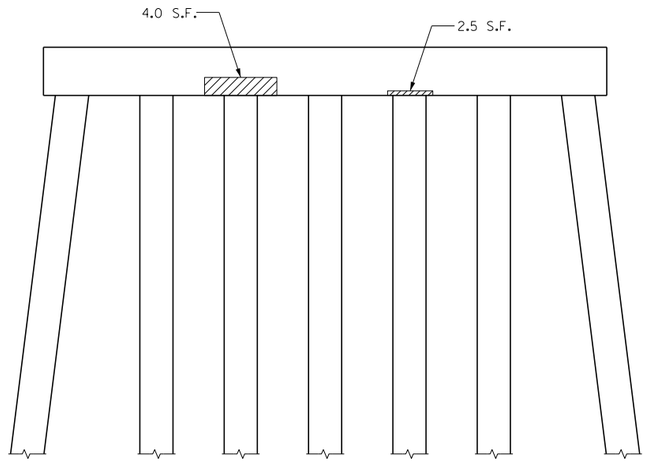
BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)				
CAP (HORIZONTAL, CORNER)	8.0	4.0		
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

EPOXY COATING	AREA SF
TOP OF CAP	78.0

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

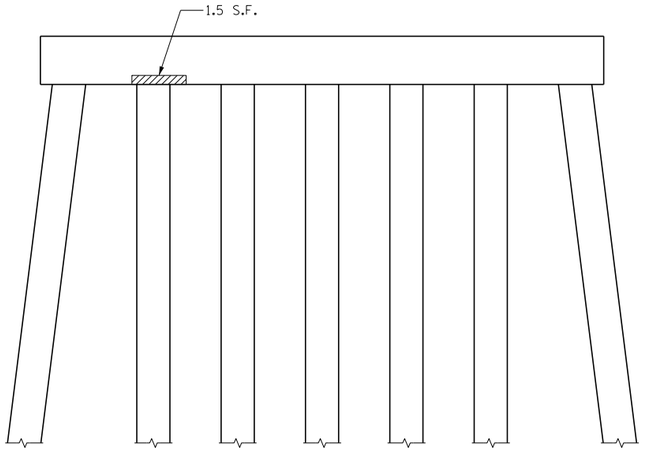


PLAN



ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE

ELEVATION
WEST SIDE

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 4 OF 8

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3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 3

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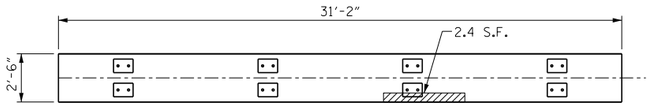

PLAN

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF 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.

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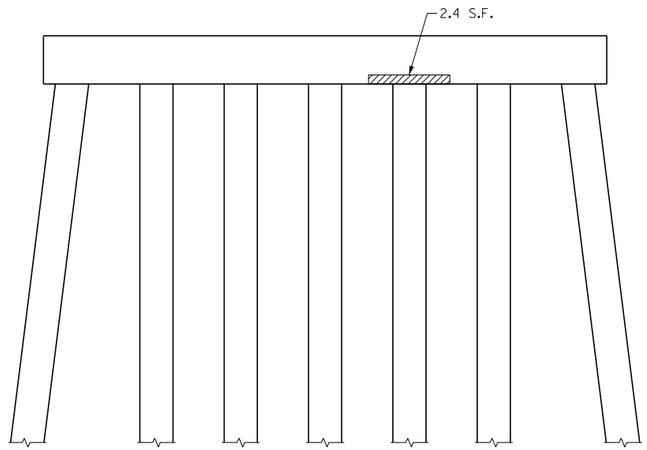
REPAIR QUANTITY TABLE

BENT 4	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	2.4	1.2		
CAP (HORIZONTAL, CORNER)	2.4	1.2		
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

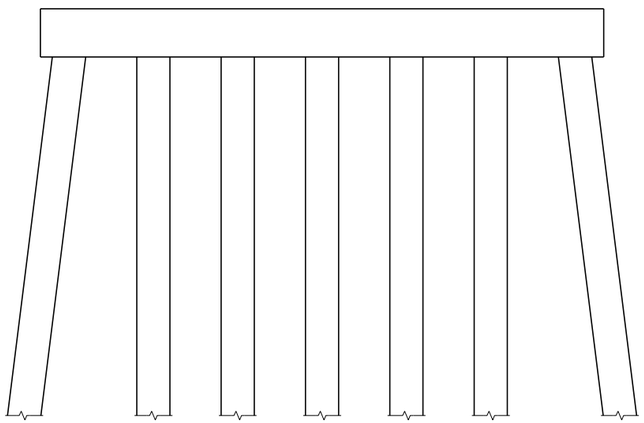
EPOXY COATING	AREA SF
TOP OF CAP	78.0

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



ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE

ELEVATION
WEST SIDE

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 5 OF 8

DocuSigned by:
AD50B1D97494CCA...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 4

REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			62

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wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.

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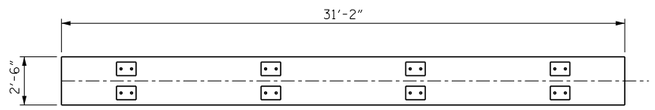
REPAIR QUANTITY TABLE

BENT 5	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)				
CAP (HORIZONTAL, CORNER)				
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

EPOXY COATING	AREA SF
TOP OF CAP	78.0

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



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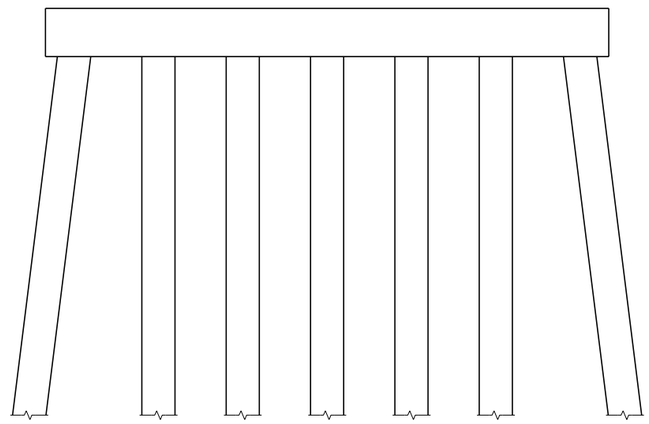
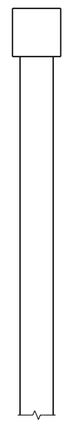
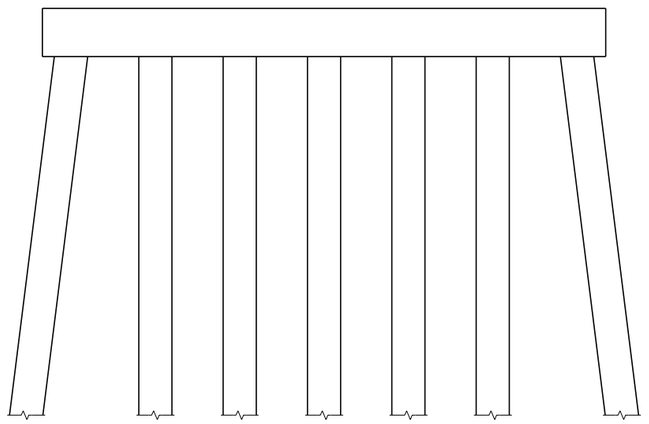


ELEVATION
NORTH SIDE



ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE

ELEVATION
WEST SIDE

- SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 2 OF 8

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3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 5

REVISIONS						SHEET NO.
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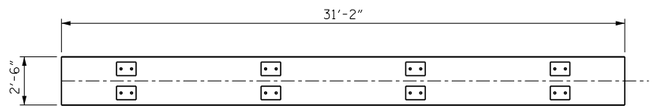
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



PLAN

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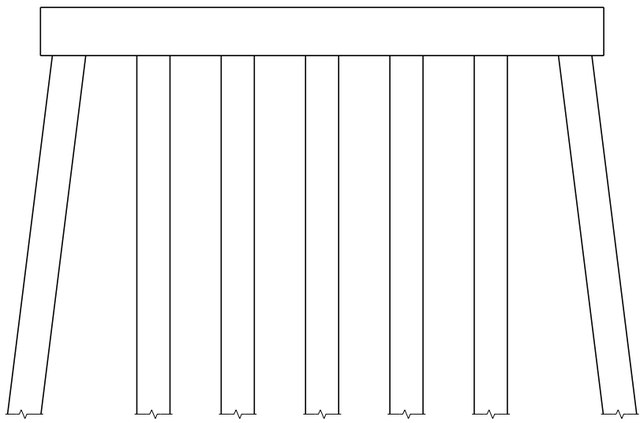
REPAIR QUANTITY TABLE

BENT 6	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)				
CAP (HORIZONTAL, CORNER)				
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

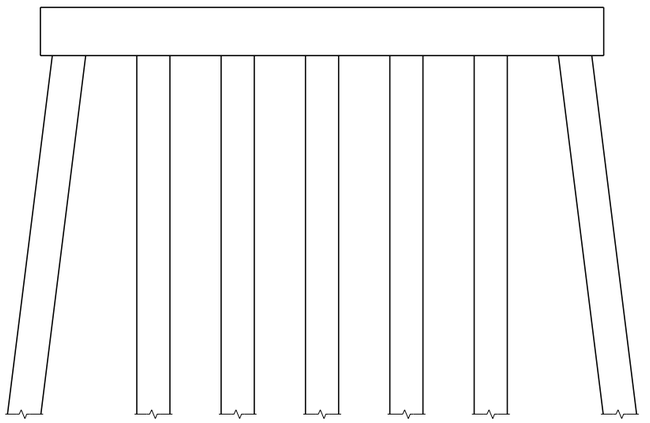
EPOXY COATING	AREA SF
TOP OF CAP	78.0

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



ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE

ELEVATION
WEST SIDE

- SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 2 OF 8

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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RALEIGH

BENT 6

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1			3			TOTAL SHEETS
2			4			62

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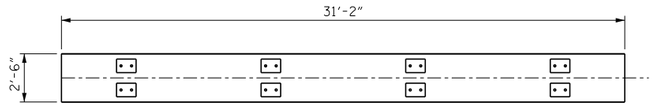

PLAN

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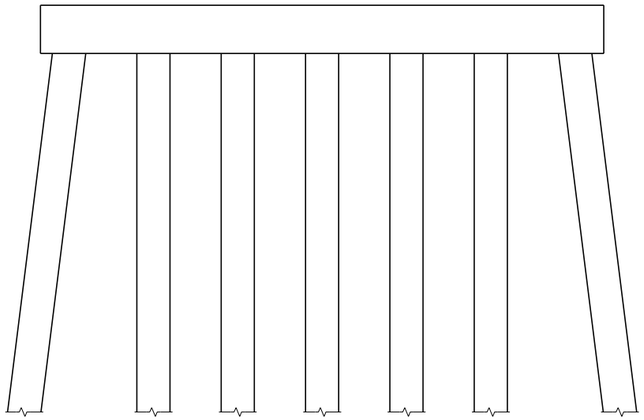
REPAIR QUANTITY TABLE

BENT 7	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	1.5	0.8		
CAP (HORIZONTAL, CORNER)				
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

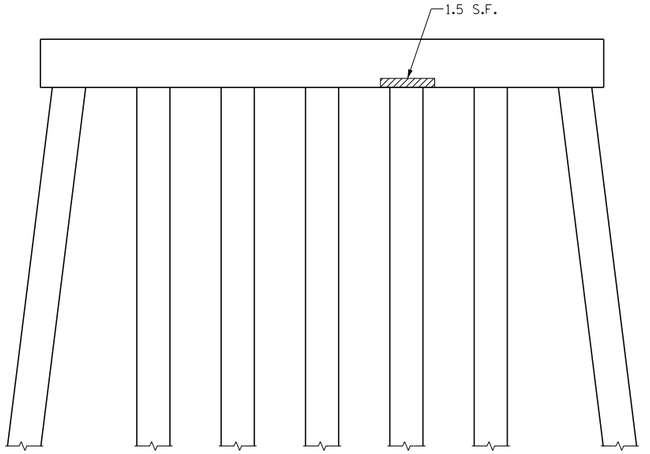
EPOXY COATING	AREA SF
TOP OF CAP	78.0

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



ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE

ELEVATION
WEST SIDE

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100

SHEET 8 OF 8

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 7

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1			3			TOTAL SHEETS
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APPROACH SLAB & SPAN A QUANTIES

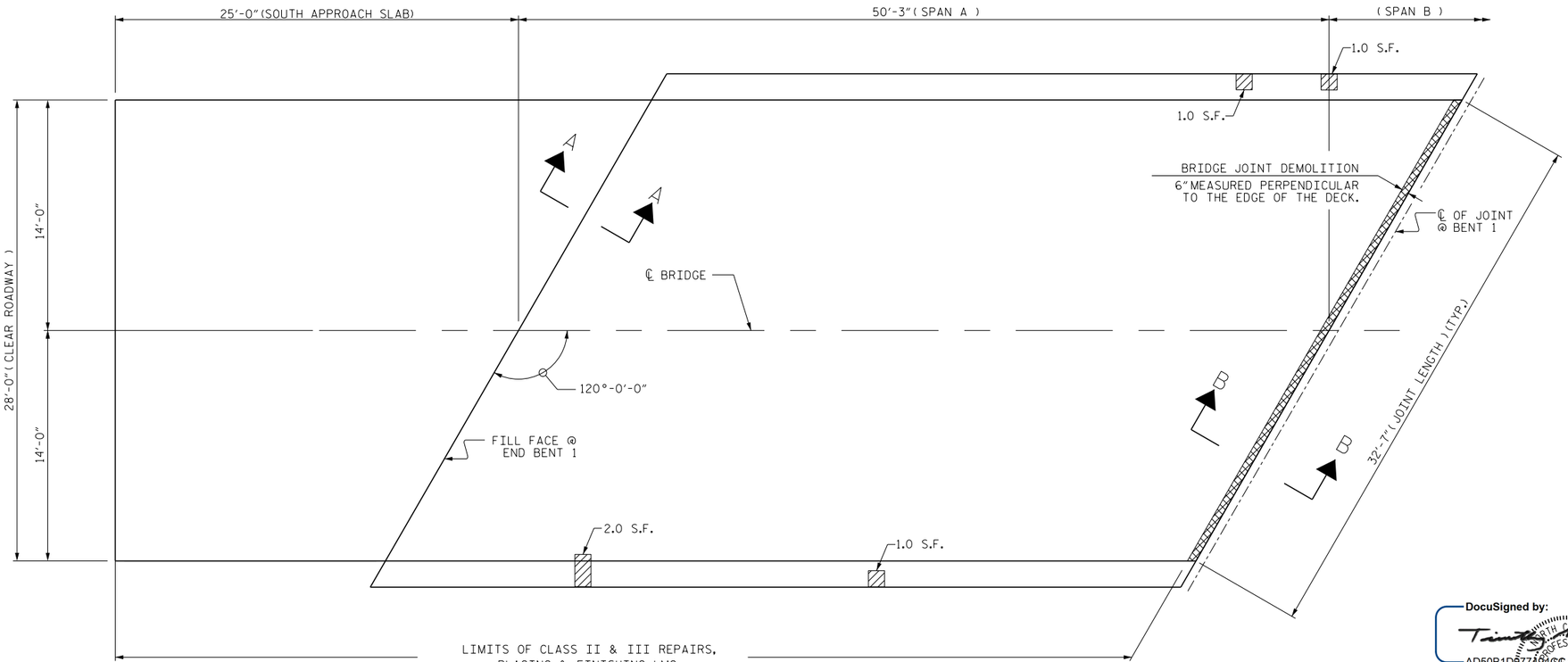
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	232.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	232.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	16.0 SQ. FT.	
SHOTCRETE	5.0 SQ. FT.	
INCIDENTAL MILLING	234.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN A

(FOR SECTIONS A-A AND B-BSEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 1 OF 8

DocuSigned by:
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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

APPROACH SLAB & SPAN A

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-42
1			3			TOTAL SHEETS
2			4			62

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wcsmith

SUMMARY OF QUANTIES FOR SPAN B

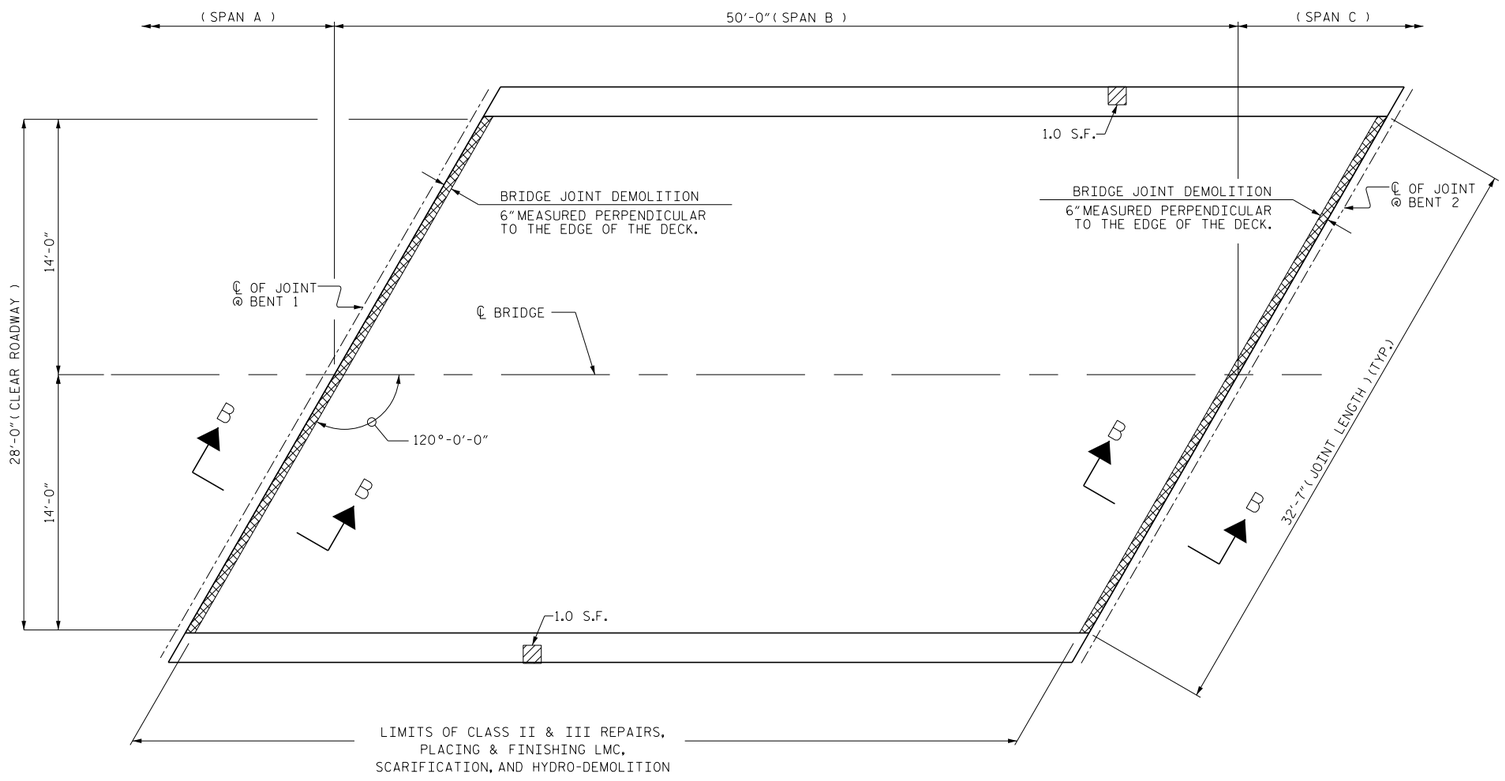
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	33.0 SQ. FT.	
SHOTCRETE	2.0 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN B

(FOR SECTION B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 2 OF 8

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18565 TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN B

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-43
1			3			TOTAL SHEETS
2			4			62

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wcsmith

SUMMARY OF QUANTIES FOR SPAN C

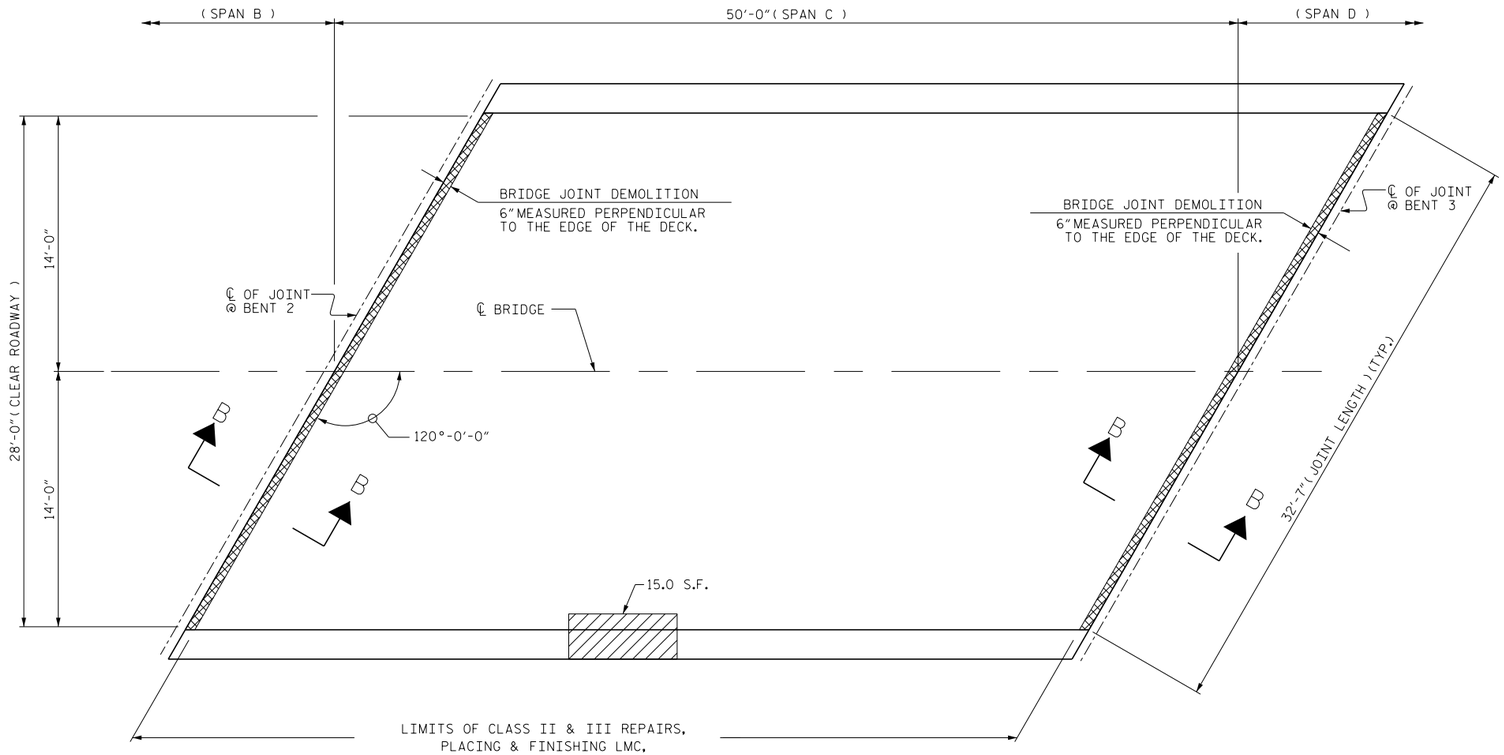
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	33.0 SQ. FT.	
SHOTCRETE	15.0 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN C

(FOR SECTION B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 3 OF 8

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DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN C

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-44
1			3			TOTAL SHEETS
2			4			62

DRAWN BY : M. D. PISO / S. T. SANDOR DATE : 11/2016
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SUMMARY OF QUANTIES FOR SPAN D

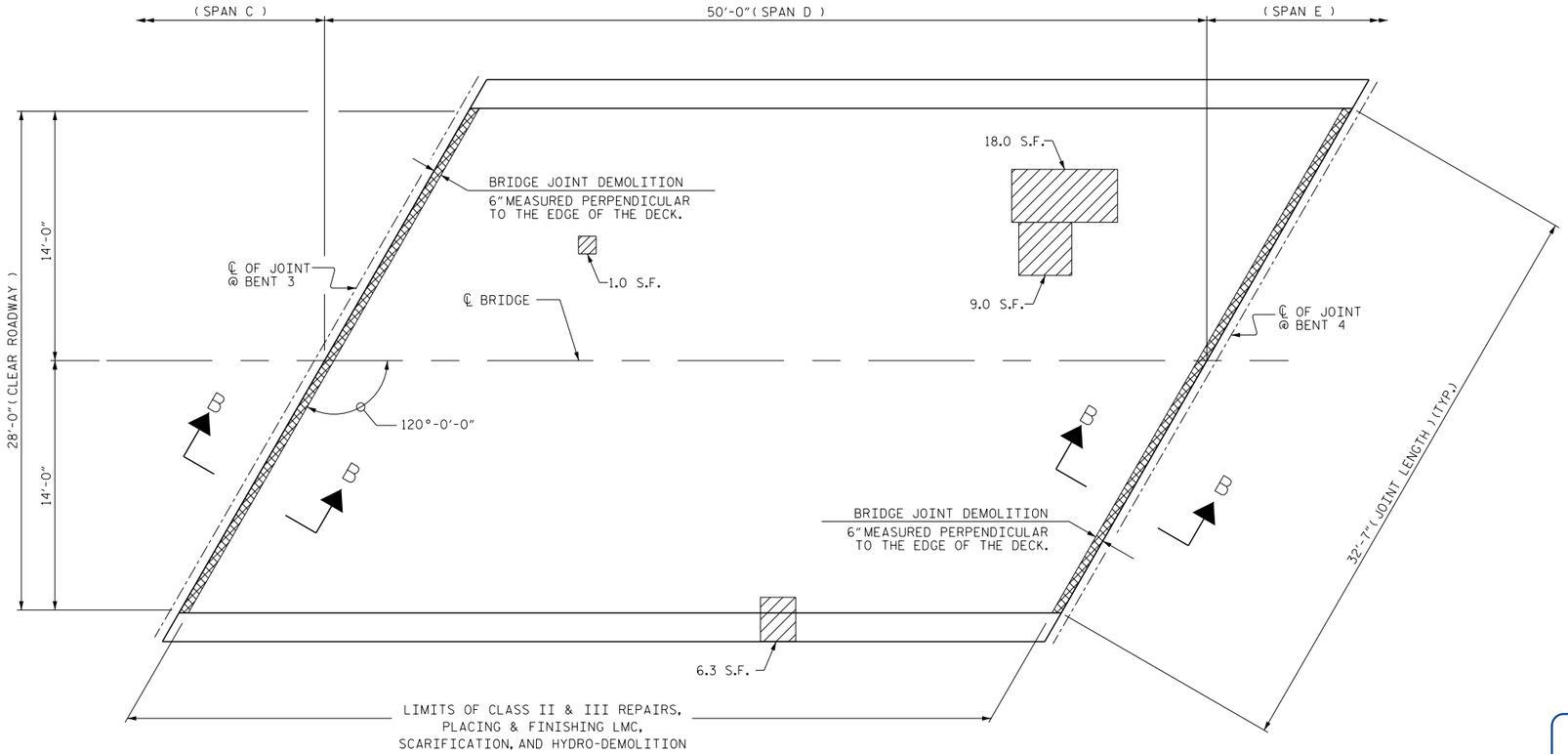
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	33.0 SQ. FT.	
SHOTCRETE	34.3 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN D

(FOR SECTION B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 4 OF 8

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RALEIGH

SURFACE PREPARATION

SPAN D

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-45
1			3			TOTAL SHEETS
2			4			62

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SUMMARY OF QUANTIES FOR SPAN E

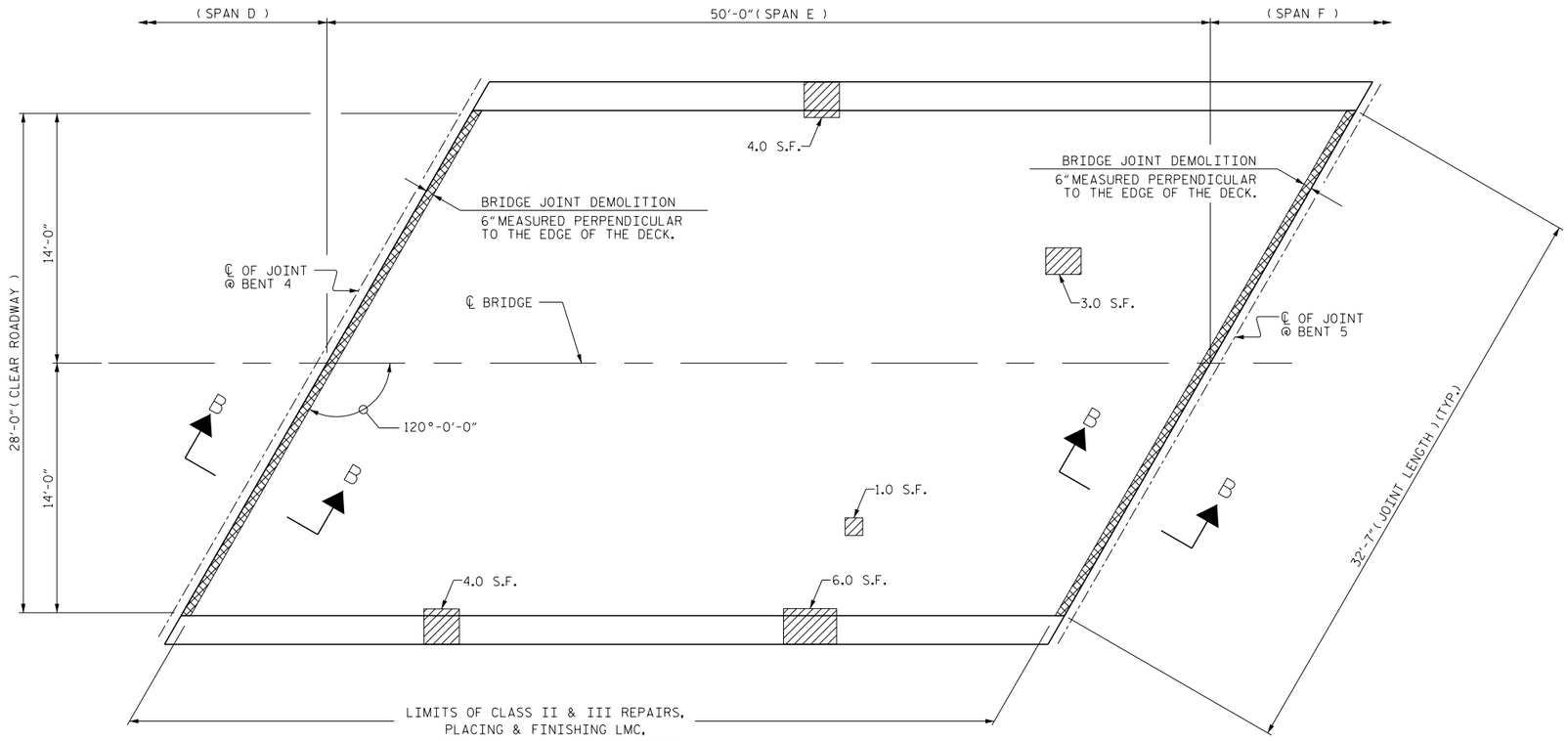
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	33.0 SQ. FT.	
SHOTCRETE	18.0 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN E

(FOR SECTION B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 5 OF 8

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DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN E

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-46
1			3			TOTAL SHEETS
2			4			62

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SUMMARY OF QUANTIES FOR SPAN F

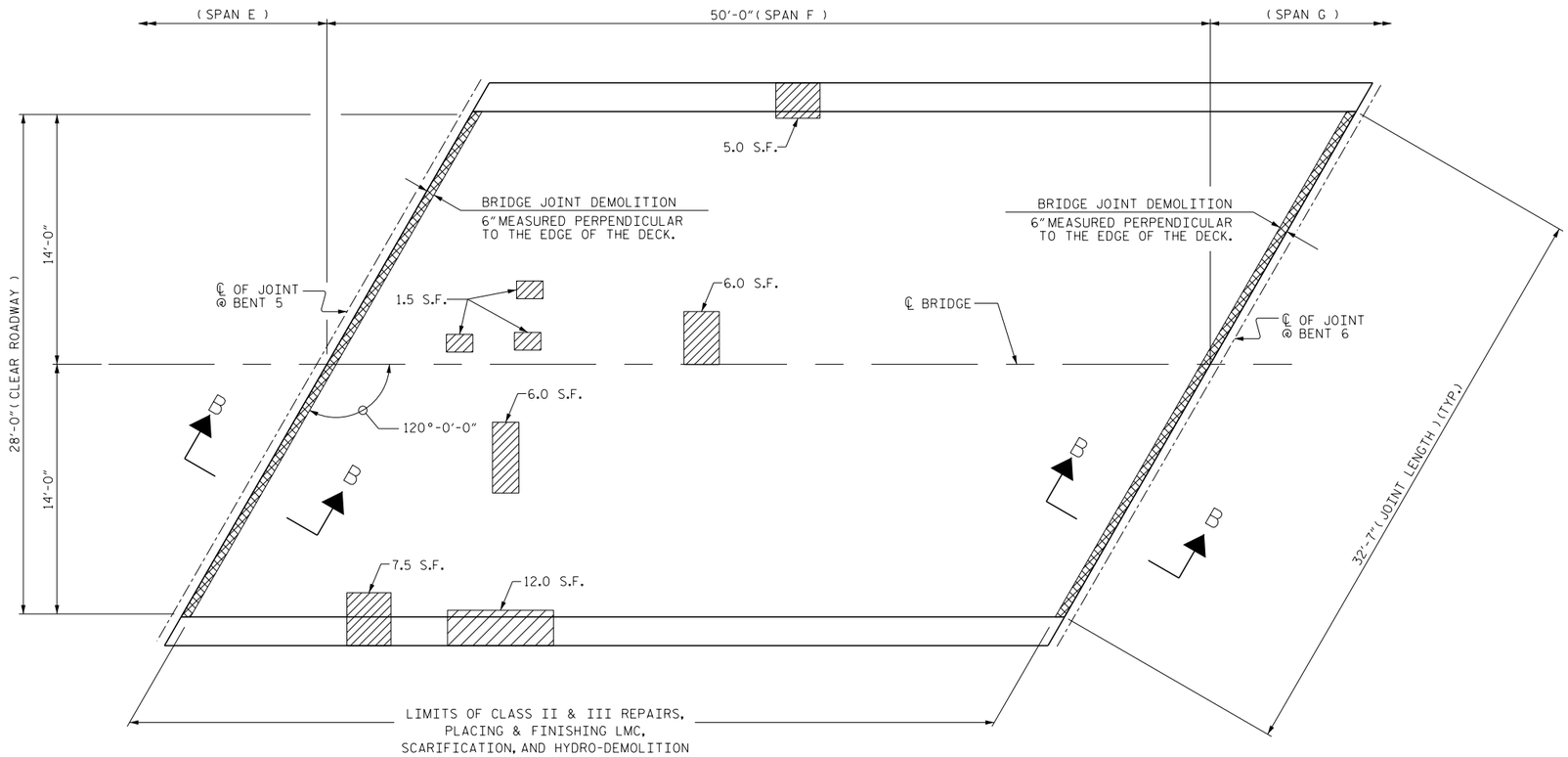
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	33.0 SQ. FT.	
SHOTCRETE	41.0 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN F

(FOR SECTION B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 6 OF 8

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RALEIGH

SURFACE PREPARATION

SPAN F

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-47
1			3			TOTAL SHEETS
2			4			62

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SUMMARY OF QUANTIES FOR SPAN G

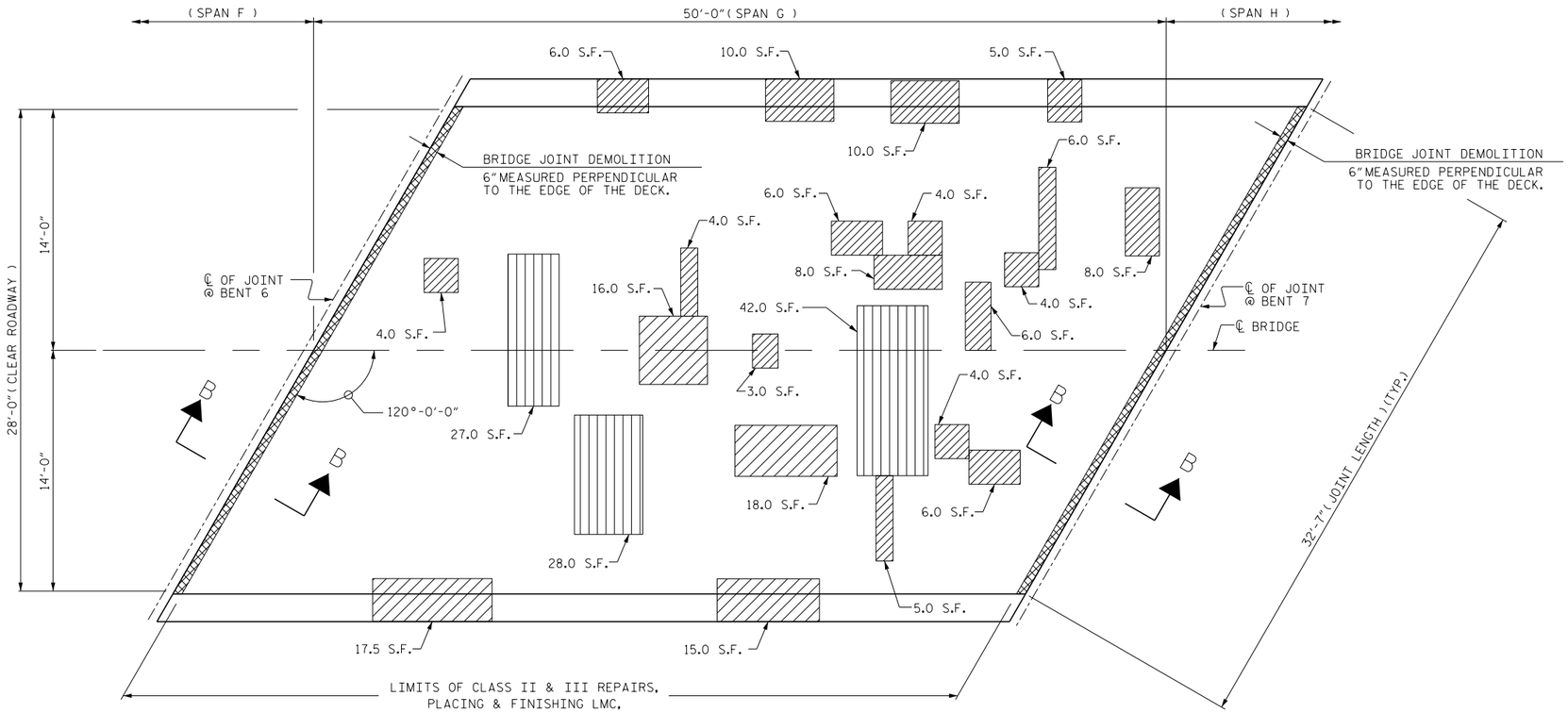
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	152.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	152.0 SQ. YD.	
CLASS II SURFACE PREPARATION	10.8 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	33.0 SQ. FT.	
SHOTCRETE	165.5 SQ. FT.	
INCIDENTAL MILLING	156.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.



SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION

SPAN G

(FOR SECTION B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 7 OF 8

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3/2/2017

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STATE OF NORTH CAROLINA
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SURFACE PREPARATION

SPAN G

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-48
1			3			TOTAL SHEETS
2			4			62

DRAWN BY : M. D. PISO / S. T. SANDOR DATE : 11/2016

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wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER HYDRO-DEMOLITION FOR POTENTIAL CLASS II REPAIRS.

SUMMARY OF QUANTIES FOR SPAN H & APP. SLAB

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	232.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	232.0 SQ. YD.	
CLASS II SURFACE PREPARATION	1.0 SQ. YD.	
CLASS III SURFACE PREPARATION	1.0 SQ. YD.	
JOINT DEMOLITION	16.0 SQ. FT.	
SHOTCRETE	0.0 SQ. FT.	
INCIDENTAL MILLING	234.0 SQ. YD.	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

CLASS II AND III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

ALL SHOTCRETE REPAIRS SHOWN ARE ON UNDERSIDE OF THE DECK. ADDITIONAL REPAIRS MAY BE REQUIRED AFTER REMOVAL OF ASPHALT WEARING SURFACE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE.

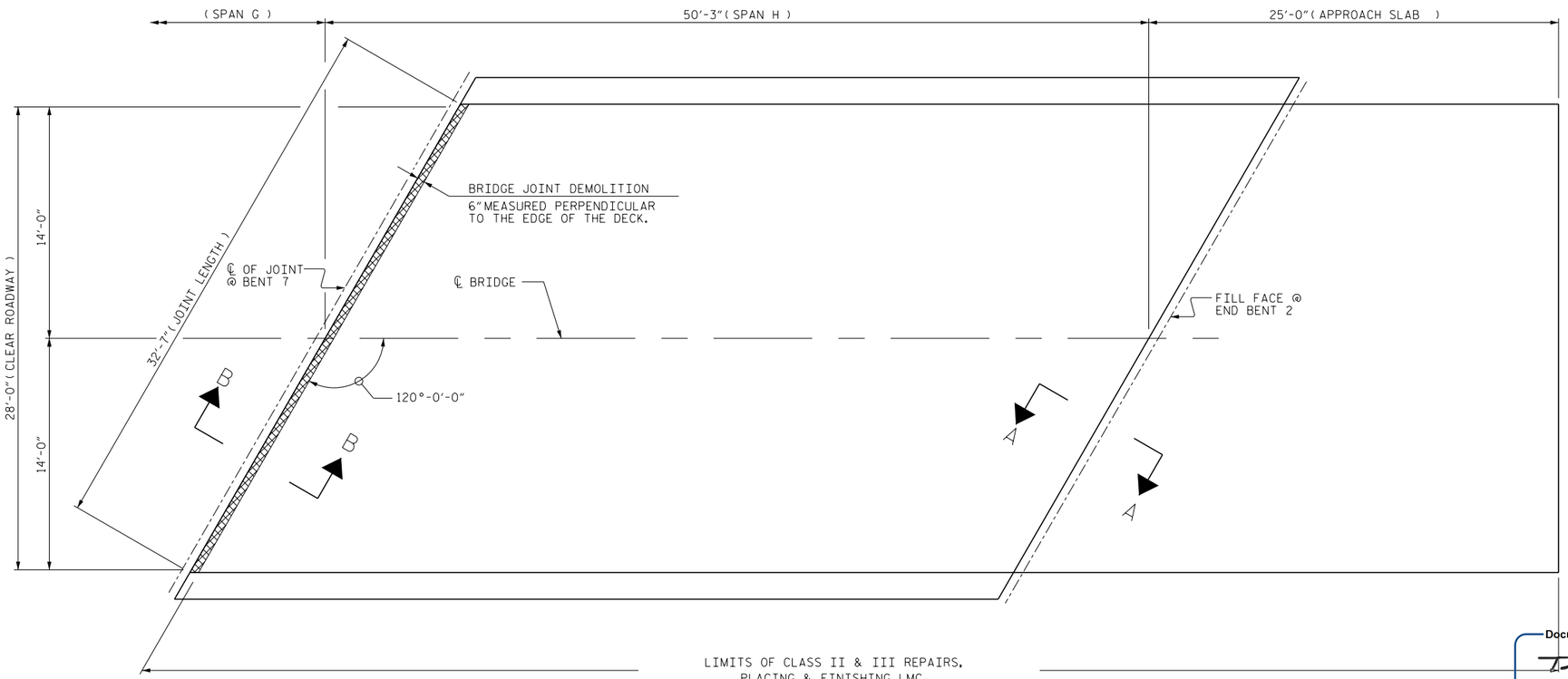
INCIDENTAL MILLING NOT SHOWN ON PLAN VIEW FOR CLARITY.

SHOTCRETE REPAIRS

BRIDGE JOINT DEMOLITION

SCARIFICATION AND HYDRO-DEMOLITION

CLASS II OR III SURFACE PREPARATION



SPAN H

(FOR SECTIONS A-A AND B-B, SEE SHEET NO. S-58)

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 8 OF 8

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN H & APPROACH SLAB

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-49
1			3			TOTAL SHEETS
2			4			62

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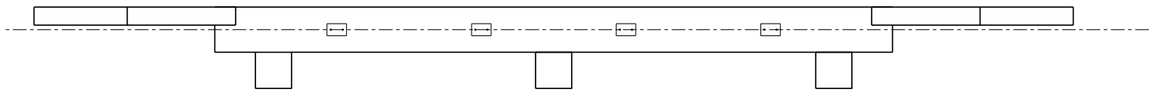
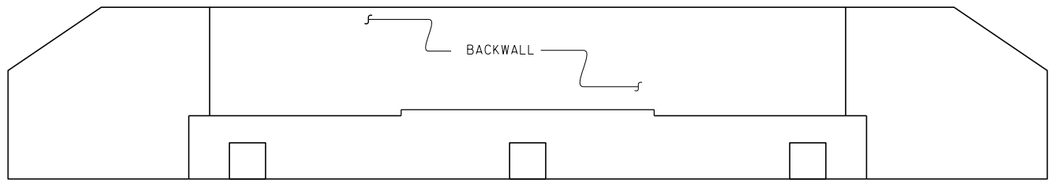
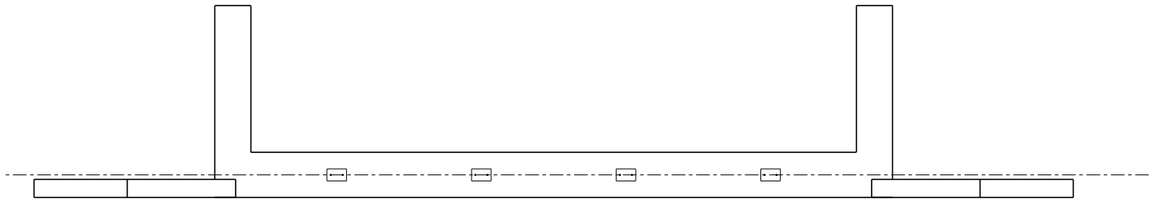
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



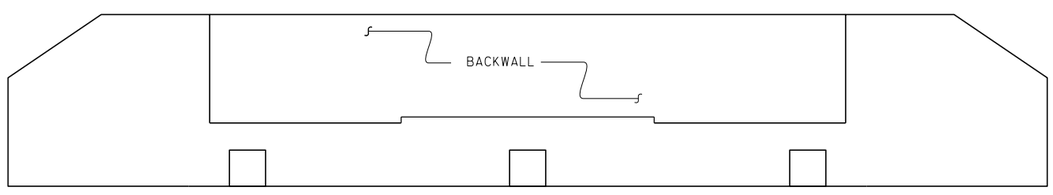
PLAN
END BENT 1



ELEVATION
END BENT 1



PLAN
END BENT 2



ELEVATION
END BENT 2

REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)					
CAP (HORIZONTAL, CORNER)					
EPOXY RESIN INJECTION	LN. FT		LN. FT		
CAP					
EPOXY COATING	AREA SF				
TOP OF CAP	97.5				

END BENT 2	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP (VERTICAL FACE)					
CAP (HORIZONTAL, CORNER)					
EPOXY RESIN INJECTION	LN. FT		LN. FT		
CAP					
EPOXY COATING	AREA SF				
TOP OF CAP	97.5				

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

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF 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 CAP AND COLUMN REPAIR DETAILS, SEE TYPICAL CAP AND COULMN REPAIR DETAILS SHEET.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 1 OF 8

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENTS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-50
1			3			TOTAL SHEETS
2			4			62

DRAWN BY : M. D. PISO / S. T. SANDOR DATE : 11/2016
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wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF 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 CAP AND COLUMN REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.

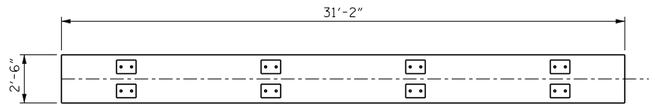
EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

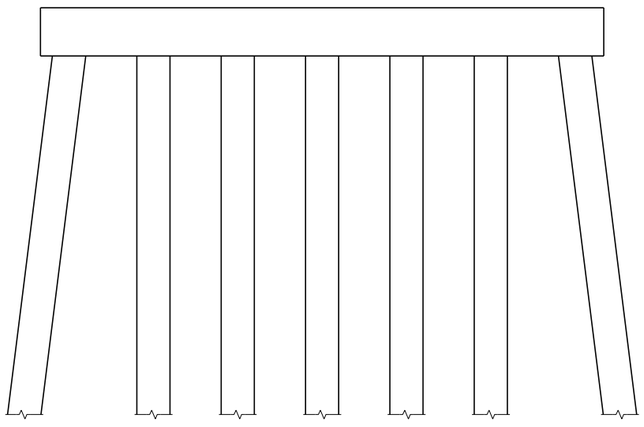
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)				
CAP (HORIZONTAL, CORNER)				
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

EPOXY COATING	AREA SF
TOP OF CAP	78.0

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

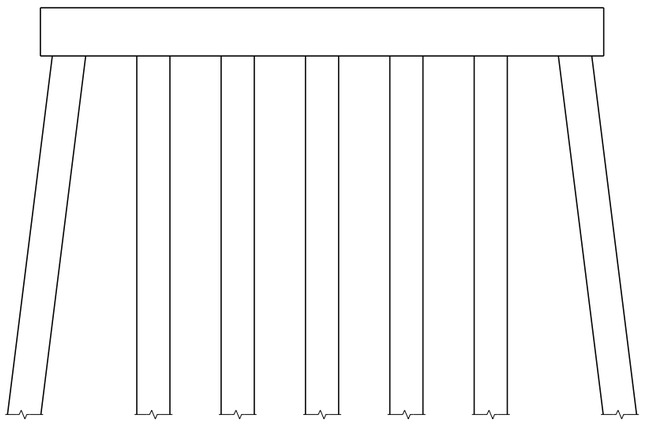


PLAN



ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE

ELEVATION
WEST SIDE

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 2 OF 8

DocuSigned by:
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NORTH CAROLINA PROFESSIONAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1

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REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
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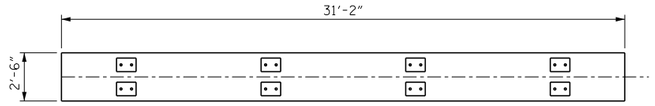
wcsmith

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



PLAN

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF 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 CAP AND COLUMN REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.

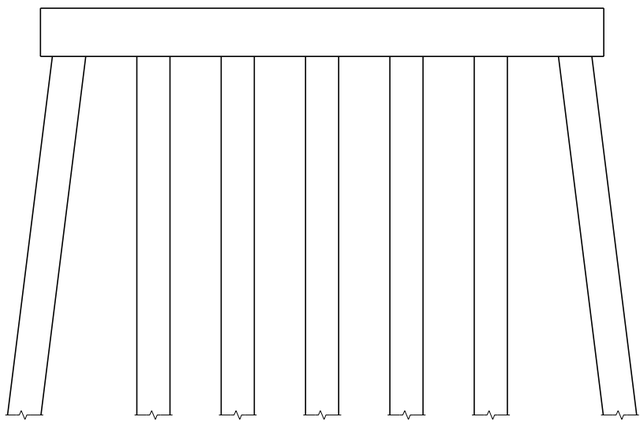
EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)				
CAP (HORIZONTAL, CORNER)				
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

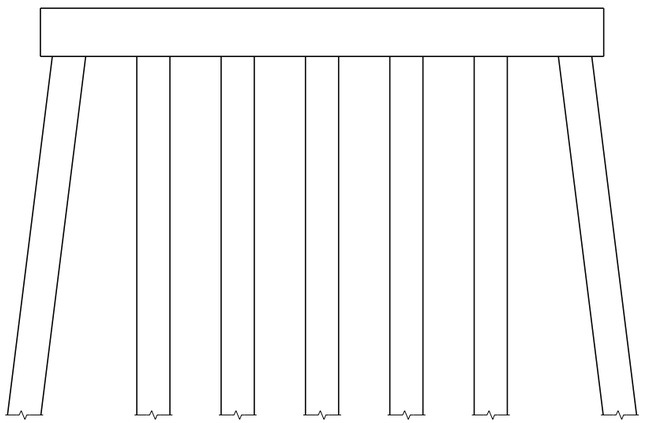
EPOXY COATING	AREA SF
TOP OF CAP	78.0

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



ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE

ELEVATION
WEST SIDE

- SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 3 OF 8

DocuSigned by:
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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

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1			3			TOTAL SHEETS
2			4			62

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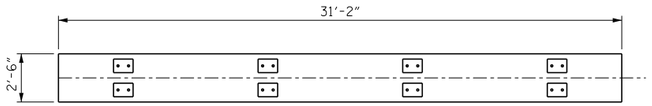
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



PLAN

NOTES:

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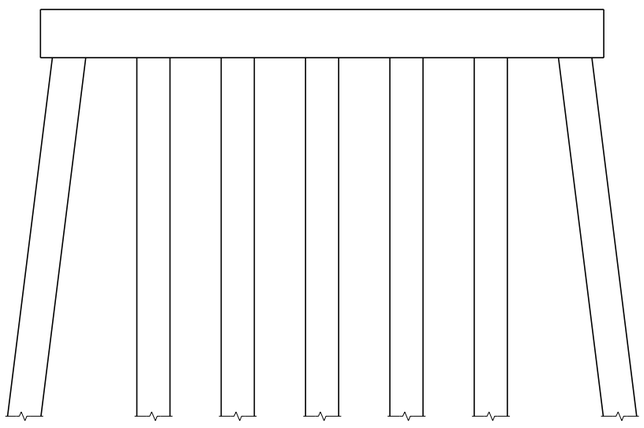
REPAIR QUANTITY TABLE

BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)				
CAP (HORIZONTAL, CORNER)				
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

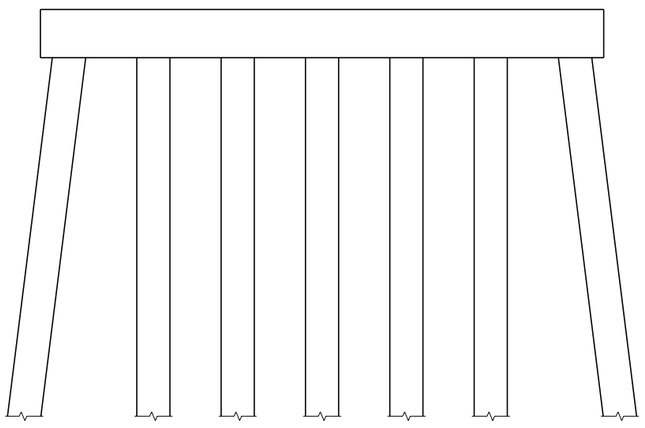
EPOXY COATING	AREA SF
TOP OF CAP	78.0

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

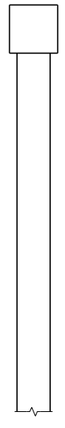


ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

▨ - SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 4 OF 8

DocuSigned by:
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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 3

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1			3			TOTAL SHEETS
2			4			62

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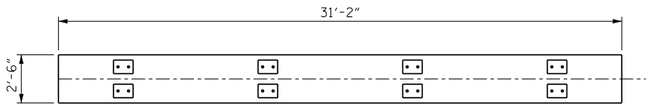

PLAN

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REPAIR LOCATIONS AND ESTIMATE OF 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.

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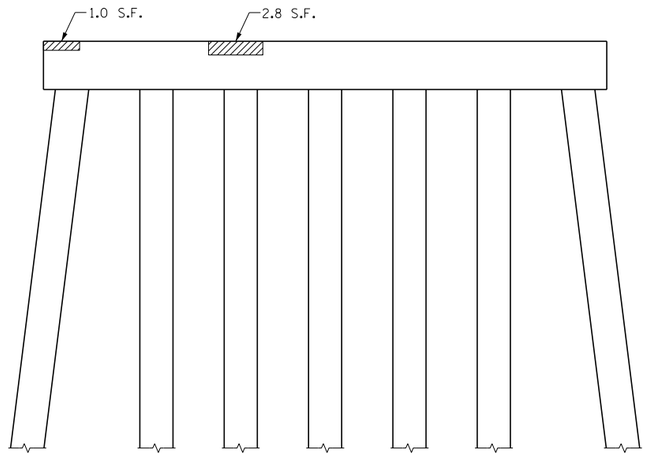
REPAIR QUANTITY TABLE

BENT 4	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	8.0	4.0		
CAP (HORIZONTAL, CORNER)				
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

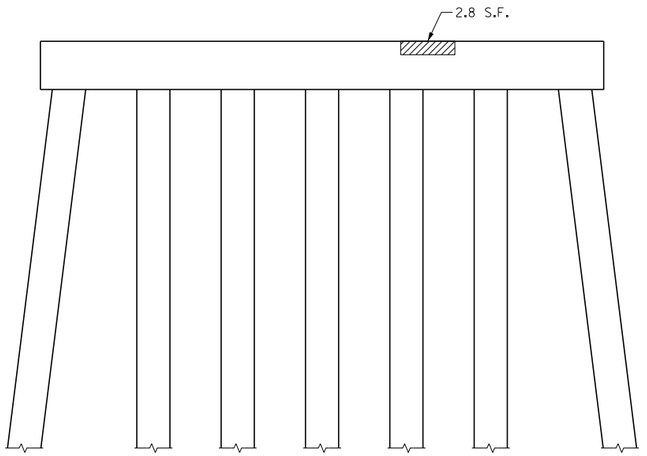
EPOXY COATING	AREA SF
TOP OF CAP	78.0

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

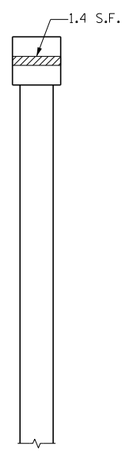


ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 5 OF 8

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 4

- SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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1			3			TOTAL SHEETS
2			4			62

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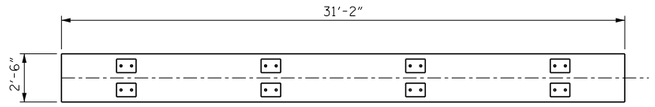

PLAN

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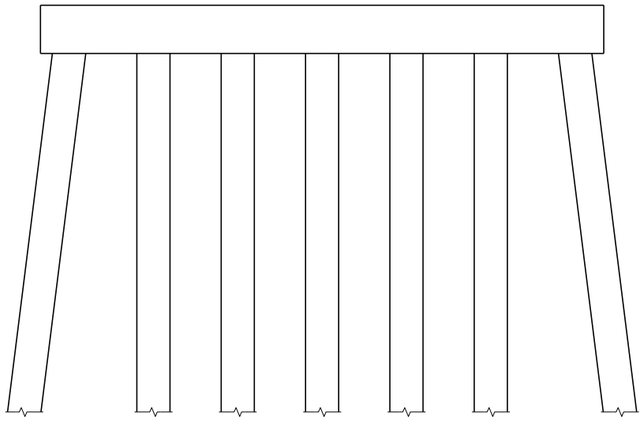
REPAIR QUANTITY TABLE

BENT 5	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	1.7	0.8		
CAP (HORIZONTAL, CORNER)				
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

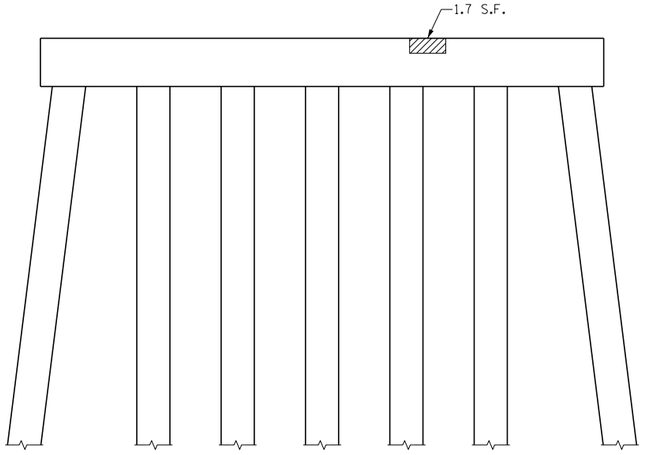
EPOXY COATING	AREA SF
TOP OF CAP	78.0

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



ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE

ELEVATION
WEST SIDE

- SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 6 OF 8

DocuSigned by:
AD50B1B907494CA...

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18565 TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 5

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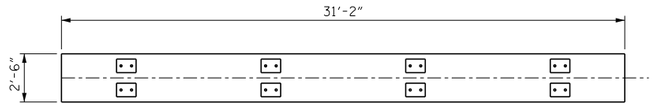
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



PLAN

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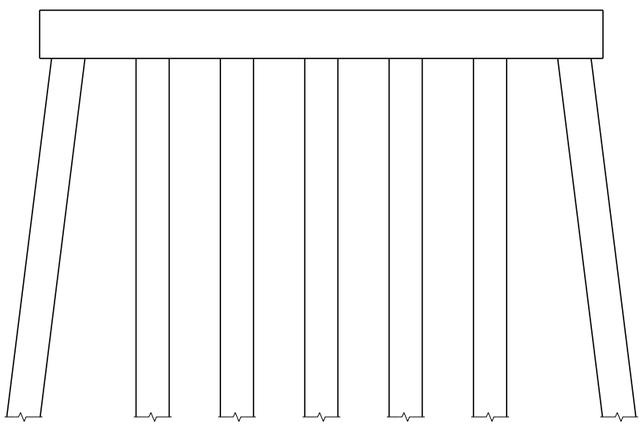
EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

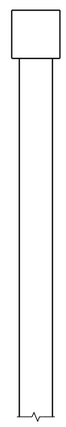
BENT 6	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)				
CAP (HORIZONTAL, CORNER)				
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

EPOXY COATING	AREA SF
TOP OF CAP	78.0

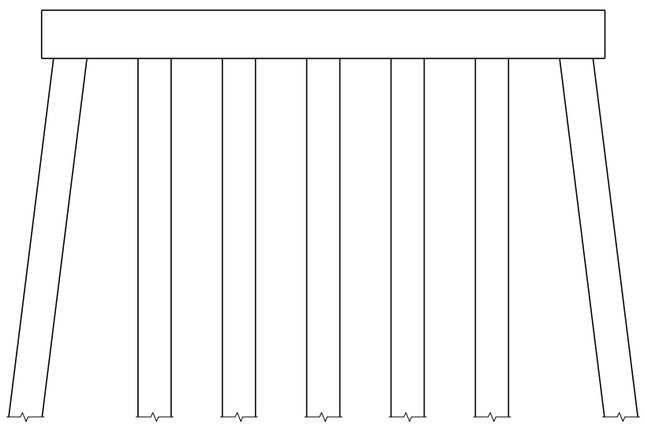
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



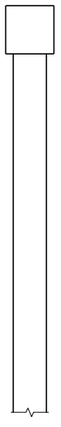
ELEVATION
NORTH SIDE



ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE



ELEVATION
WEST SIDE

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 101

SHEET 7 OF 8

- SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

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3/2/2017

NORTH CAROLINA PROFESSIONAL 18565 ENGINEER TIMOTHY M. SHERRILL

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 6

REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			62

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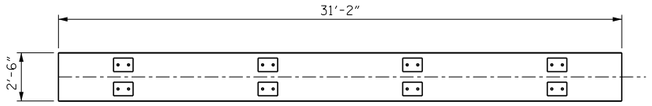
wcsmith



PLAN

NOTES:

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REMOVE EXISTING PILE ENCASEMENT FOR PILES 1,2 AND 4 TO THE LIMITS SHOWN HERE, IN ACCORDANCE WITH SPECIAL PROVISIONS.

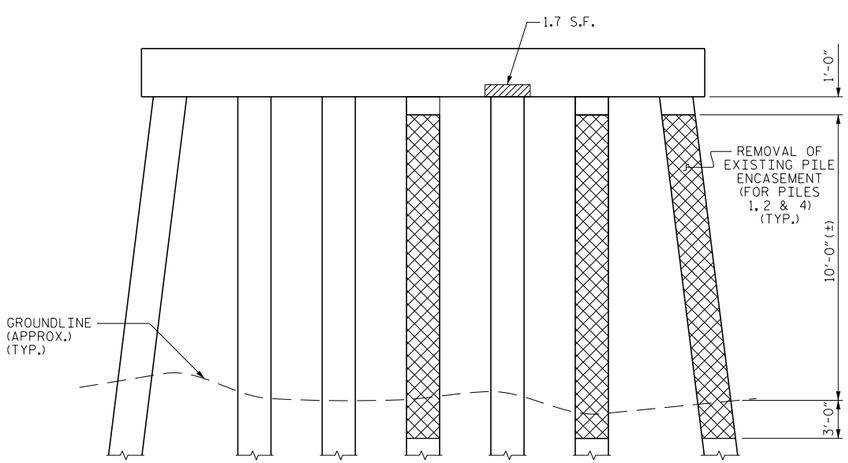
PILE LENGTH SHOWN IS APPROXIMATIVE AND FOR INFORMATIONAL PURPOSES ONLY.

REPAIR QUANTITY TABLE

BENT 7	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	10.5	5.2		
CAP (HORIZONTAL, CORNER)				
COLUMN				
STRUT				
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP				
COLUMN				
STRUT				

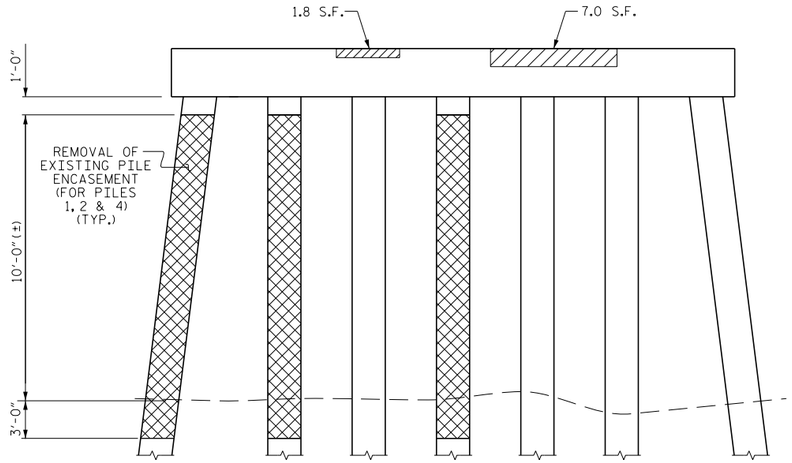
EPOXY COATING	AREA SF
TOP OF CAP	78.0

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



ELEVATION
NORTH SIDE

ELEVATION
EAST SIDE



ELEVATION
SOUTH SIDE

ELEVATION
WEST SIDE

- REMOVAL OF EXISTING PILE ENCASEMENT
- SHOTCRETE REPAIRS

ERI - EPOXY RESIN INJECTION

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3/2/2017

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PROJECT NO. I-5978
JOHNSTON COUNTY
BRIDGE NO. 101
SHEET 8 OF 8

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 7

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-57
1			3			TOTAL SHEETS
2			4			62

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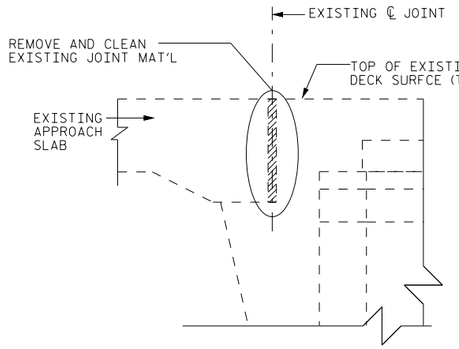
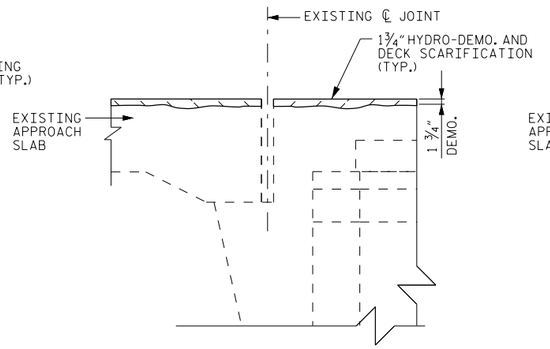
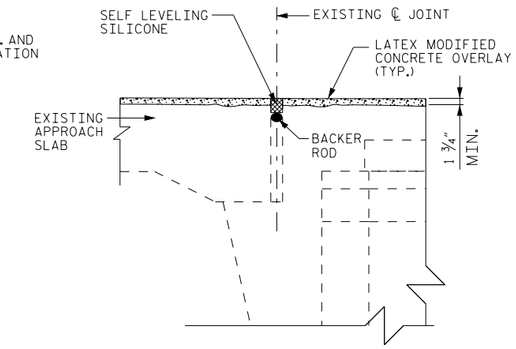


EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT

NOTES:

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

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

EXCAVATE EXISTING JOINT TO SOUND CONCRETE. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN. APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE BOTTOM OF THE ELASTOMERIC CONCRETE. SEE CONCRETE FOR DECK REPAIR, SPECIAL PROVISIONS.

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

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

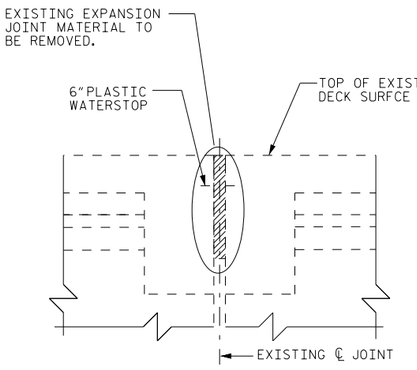
FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

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

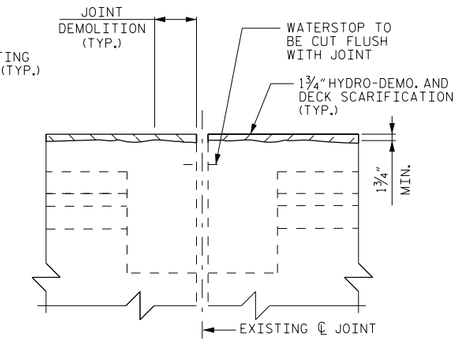
THE WIDTH OF THE UNCOMPRESSED FOAM JOINT MATERIAL SHALL BE 2".

JOINT INSTALLATION SEQUENCE AT END BENTS

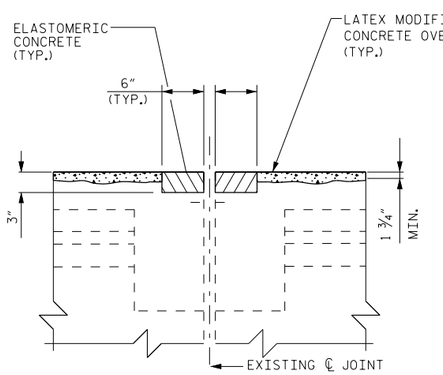
SECTION A-A



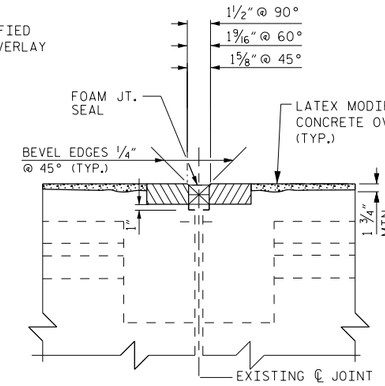
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT PRE-SAWED DIMENSIONS

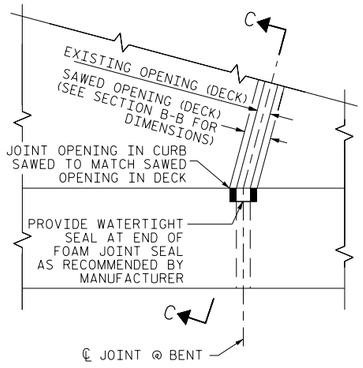


PROPOSED FOAM JOINT SEAL EXPANSION

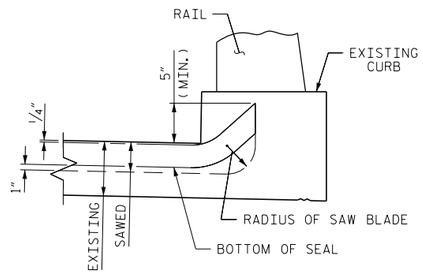
(FOR ALL BENTS)

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B



PLAN



SECTION C-C

JOINT SEAL DETAILS AT BARRIER RAIL

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 100 & 101

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
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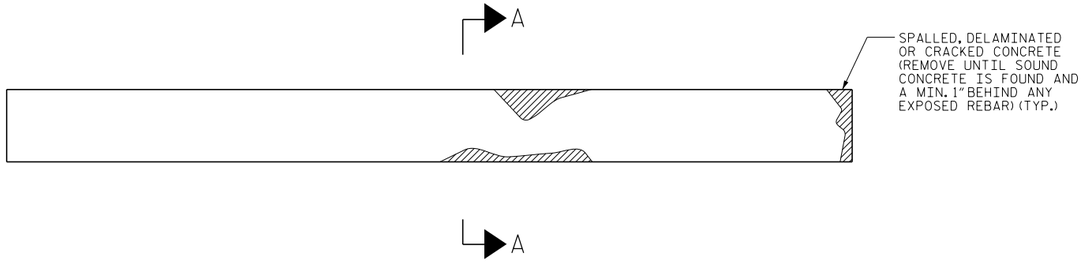
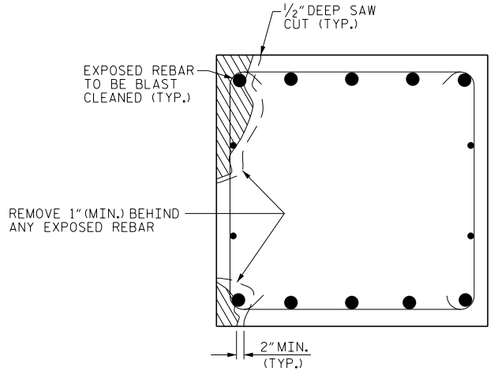


PLAN OF CAP



SECTION A-A

NOTES:

CONTRACTOR SHALL SAW CUT TO A NOMINAL DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED.

CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

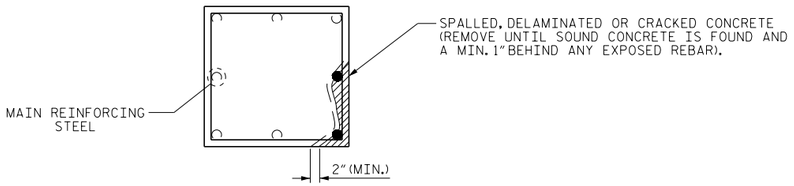
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

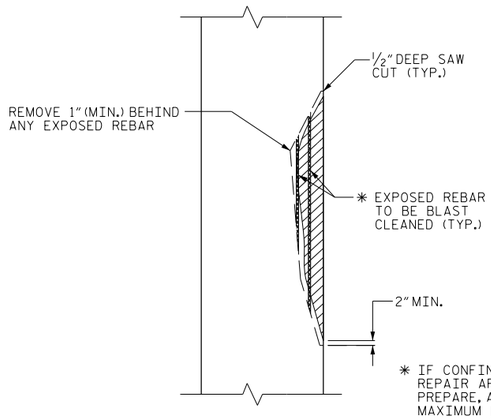
- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

BENT CAP REPAIRS



PLAN OF COLUMN



* IF CONFINEMENT STEEL IS NOT PRESENT AND REPAIR AREA EXCEEDS 10'-0" IN LENGTH, EXCAVATE, PREPARE, AND COMPLETE REPAIR SEGMENTS OF A MAXIMUM LENGTH OF 10 FEET, PRIOR TO REPAIRING REMAINING PORTION OF REPAIR AREA.

ELEVATION OF COLUMN

COLUMN REPAIR
(BRIDGES #82 & #85)

PROJECT NO. I-5784

JOHNSTON COUNTY

BRIDGE NO. 82, 85, 100, 101

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL CAP AND COLUMN REPAIR DETAILS

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2			4			62

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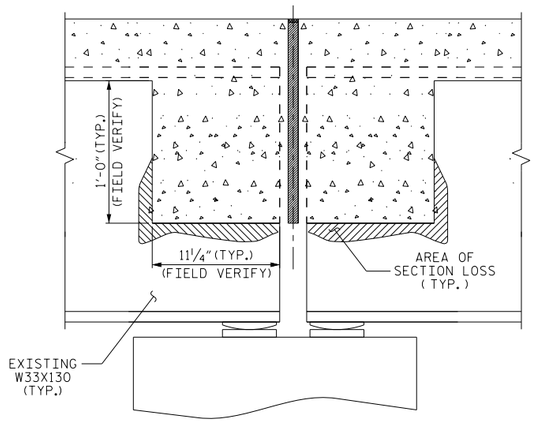
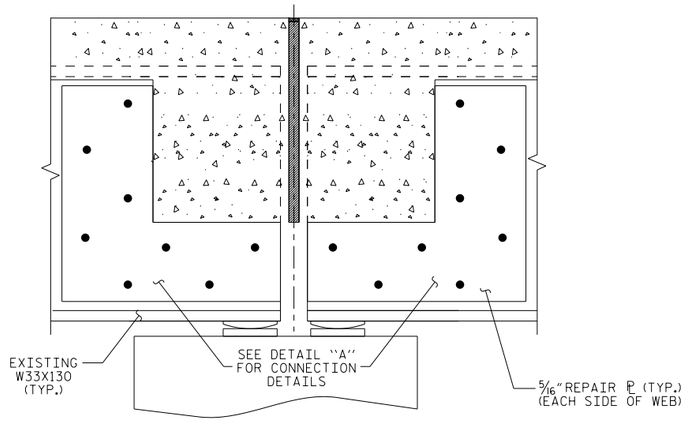


SECTION LOSS
BEAM END REPAIR

(EXISTING)



SECTION LOSS BEAM
END REPAIR PLATES

(PROPOSED)

BRIDGE 82

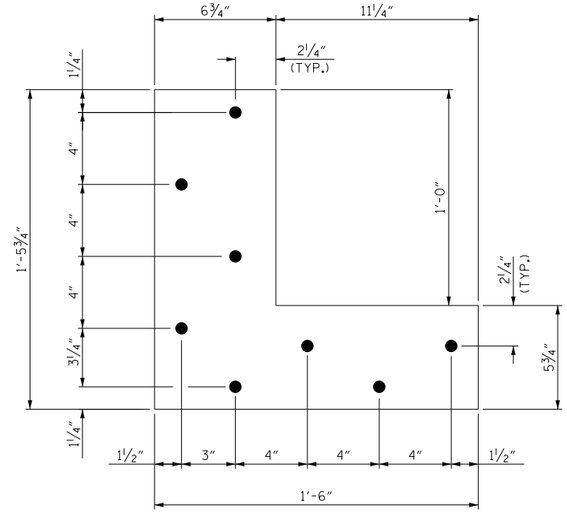
ANTICIPATED REPAIR LOCATIONS		
LOCATION	SPAN	BEAM
BENT 1	A	4
	B	4
BENT 2	B	4
	B	2
	C	3
	C	4
BENT 3	C	1
	C	2
	D	1
	D	2
	D	3
	D	4

BRIDGE 100

ANTICIPATED REPAIR LOCATIONS		
LOCATION	SPAN	BEAM
BENT 1	A	1
	A	2
	A	3
	B	1
BENT 2	B	3
	B	4
	C	3
BENT 3	C	2
	C	3
	D	3
BENT 4	D	2
	D	3
	E	3
BENT 5	E	2
BENT 6	F	1
	F	2
	G	1
	G	2
	G	3
	G	4
BENT 7	G	1
	G	2
	G	3
	H	1
	H	2
	H	3
	H	4

BRIDGE 101

ANTICIPATED REPAIR LOCATIONS		
LOCATION	SPAN	BEAM
BENT 1	A	2
	A	3
	A	4
BENT 2	B	1
BENT 3	C	1
	C	2
	C	3
	C	4



DETAIL "A"

(ALL HOLES TO BE 11/16" Ø
FOR 7/8" Ø BOLTS)

NOTES:

DIMENSIONS INDICATED ARE BASED ON THE BEST INFORMATION AVAILABLE. FOR EACH BEAM BEING REPAIRED, CONTRACTOR SHALL BE FIELD VERIFY DIMENSIONS. PLATE DIMENSIONS SHALL BE ADJUSTED TO FIT IN THE SPACE FROM BOTTOM OF CONCRETE DIAPHRAGM TO TOP OF BOTTOM FLANGE.

AFTER THE STRUCTURAL STEEL HAS BEEN BLASTED AND PRIMED, THE STRUCTURAL STEEL AND BEARING SHALL BE INSPECTED FOR EXCESSIVE SECTION LOSS. AREAS THAT EXHIBIT AN EXCESS OF 35% LOSS SHALL BE REVIEWED BY THE ENGINEER TO DETERMINE IF AREA OF SECTION LOSS SHOULD BE REPAIRED.

AT LOCATIONS INDICATED FOR REPAIR, REMOVE CONCRETE ON BENT DIAPHRAGMS TO DETERMINE THE EXTENT OF STEEL BEAM SECTION LOSS BEHIND THE BENT DIAPHRAGM CONCRETE. REPAIR PLATE SHALL EXTEND A MINIMUM 1/2" BEYOND WHERE ACCEPTABLE BEAM SECTION IS ENCOUNTERED. REMOVE BENT DIAPHRAGM CONCRETE AS NECESSARY.

MECHANICALLY CLEAN RUST, SCALE, AND EXISTING PAINT AND PREPARE THE STEEL BEAM SURFACE BEHIND THE EXCAVATED BENT DIAPHRAGM CONCRETE. AFTER PREPARATION, PAINT THE BEAM AREAS EXPOSED BEHIND CONCRETE BENT DIAPHRAGMS WITH TWO COATS OF ORGANIC ZINC RICH PAINT MEETING ARTICLE 1080-9 OF THE STANDARD SPECIFICATIONS.

AFTER THE BEAMS HAVE BEEN REPAIRED, ANY CONCRETE REMOVED FROM THE BENT DIAPHRAGMS SHALL BE CAST BACK. ANY REINFORCING STEEL CUT OR DAMAGED DURING THE REMOVAL PROCESS SHALL BE REPLACED WITH A SIMILAR SIZE BAR, WITH AT LEAST ONE FOOT SPLICE TO THE EXISTING STEEL. NO SEPARATE PAVEMENT WILL BE MADE FOR CONCRETE AND REINFORCING STEEL, AS THIS IS CONSIDERED INCIDENTAL TO THE PAY ITEM "BEAM REPAIR".

ONE PLATE SHALL BE PLACED, AS INDICATED, ON EACH SIDE OF THE BEAM ENDS.

PLATES SHALL BE NEW, AASHTO M270, GRADE 36 OR BETTER.

PLATES SHALL BE SHOP PRIMED WITH AN NCDOT APPROVED INORGANIC ZINC PRIMER PRIOR TO DELIVERY.

ALL BOLTS SHALL MEET ASTM A325.

ALL NUTS SHALL MEET ASTM A194.

ALL FLAT WASHERS SHALL MEET ASTM F436.

TENSION ON THE BOLTS SHALL BE CALIBRATED USING DIRECT TENSION INDICATOR WASHERS (DTIS) IN ACCORDANCE WITH ARTICLE 440-8 OF THE NCDOT STANDARD SPECIFICATIONS. DTIS SHALL MEET ASTM F959.

PRIOR TO PLACEMENT OF THE PLATES, APPLY WET EPOXY MASTIC AROUND THE TOP AND SIDE PERIMETERS ON THE PLATE FACE THAT IS TO BE IN CONTACT WITH THE BEAM. AMOUNT OF EPOXY MASTIC SHALL BE SUFFICIENT TO SEAL THE INTERFACE OF THE PLATE AND THE BEAM AFTER BOLTS ARE TIGHTENED. NO EPOXY MASTIC SHALL BE PLACED ALONG THE BOTTOM PERIMETER OF THE PLATE. WHILE THE MASTIC IS STILL WET, PLATES SHALL BE PUT IN PLACE AND BOLTS PROPERLY TIGHTENED.

THE EPOXY MASTIC USED FOR THIS WORK SHALL BE COMPATIBLE WITH THE PAINT SYSTEM USED FOR THE PAINTING OF EXISTING STEEL AND SHALL BE APPROVED BY THE NCDOT MATERIALS AND TEST UNIT. THE EPOXY MASTIC WILL BE ACCEPTED ON THE BASIS OF THE MANUFACTURER'S WRITTEN CERTIFICATION THAT THE BATCH PRODUCED MEETS THEIR PRODUCT SPECIFICATION.

AFTER PLACEMENT OF THE PLATES AND TIGHTENING OF THE BOLTS, PLATES, BOLTS, AND SURROUNDING AREA SHALL BE PAINTED OR PAINT SHALL BE REPAIRED AS PER PROJECT REQUIREMENTS AND NCDOT STANDARD SPECIFICATIONS.

PAYMENT WILL BE MADE AT CONTRACT PRICE BID PER POUNDS STRUCTURAL STEEL USED FOR "BEAM REPAIR". SUCH PAYMENTS WILL BE FULL COMPENSATION FOR ALL MATERIALS, EQUIPMENT, TOOLS, LABOR, MISCELLANEOUS STEEL, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82, 100, 101

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
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RALEIGH

BEAM END PLATE REPAIR

REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
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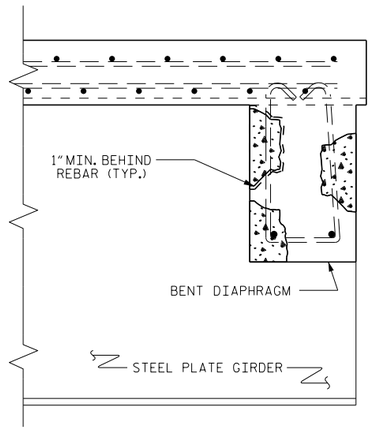

SHOTCRETE REPAIR DETAILS

IF REMOVAL OF UNSOUND CONCRETE RESULTS IN EXPOSING MORE THAN HALF THE DEPTH OF A REINFORCING BAR, REMOVE ADDITIONAL CONCRETE TO 1" BEHIND THE BAR WITHOUT DAMAGE TO REINFORCING BAR.

BRIDGE 82

ANTICIPATED REPAIR LOCATIONS			
LOCATION	SPAN	BAY	DIMENSION
BENT 3	C	3	2'-0" X 1'-6"
	C	2	1'-0" X 1'-0"

BRIDGE 85

ANTICIPATED REPAIR LOCATIONS			
LOCATION	SPAN	BAY	DIMENSION
BENT 3	C	3	1'-6" X 2'-6"
	D	2	2'-0" X 1'-0"

BRIDGE 100

ANTICIPATED REPAIR LOCATIONS			
LOCATION	SPAN	BAY	DIMENSION
BENT 2	C	2	3'-0" X 1'-0"
BENT 3	C	3	3'-0" X 1'-0"
	D	2	3'-0" X 1'-0"

BRIDGE 101

ANTICIPATED REPAIR LOCATIONS			
LOCATION	SPAN	BAY	DIMENSION
BENT 1	A	2	5'-0" X 1'-0"
	A	3	5'-6" X 1'-0"
	B	1	6'-0" X 1'-0"
	B	3	2'-6" X 1'-0"
BENT 2	B	1	2'-0" X 1'-0"
	B	2	1'-0" X 1'-0"
	B	3	2'-6" X 1'-0"
	C	1	2'-6" X 1'-0"
	C	2	7'-0" X 1'-0"
	C	3	7'-6" X 1'-0"
BENT 3	C	1	3'-6" X 1'-0"
	C	2	2'-6" X 1'-0"
	C	3	5'-6" X 1'-0"
	D	1	2'-6" X 1'-0"
	D	2	3'-0" X 1'-0"
	D	3	5'-0" X 1'-0"
BENT 4	D	1	9'-0" X 1'-0"
	D	2	3'-0" X 1'-0"
	D	3	1'-0" X 1'-0"
	E	2	9'-0" X 1'-0"
BENT 5	E	1	1'-6" X 1'-0"
	E	2	9'-0" X 1'-0"
	E	3	2'-0" X 1'-0"
	F	1	1'-0" X 1'-0"
	F	2	3'-6" X 1'-0"
BENT 6	F	1	6'-0" X 1'-0"
	F	2	2'-0" X 1'-0"
	F	3	3'-6" X 1'-0"
	G	3	6'-0" X 1'-0"
BENT 7	G	3	3'-0" X 1'-0"
	H	1	9'-0" X 1'-0"

PROJECT NO. I-5978

JOHNSTON COUNTY

BRIDGE NO. 82, 85, 100, 101

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RALEIGH

BENT DIAPHRAGM REPAIR

REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
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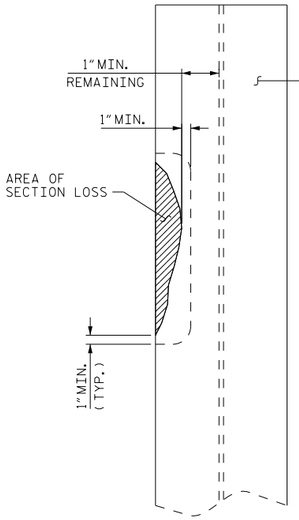
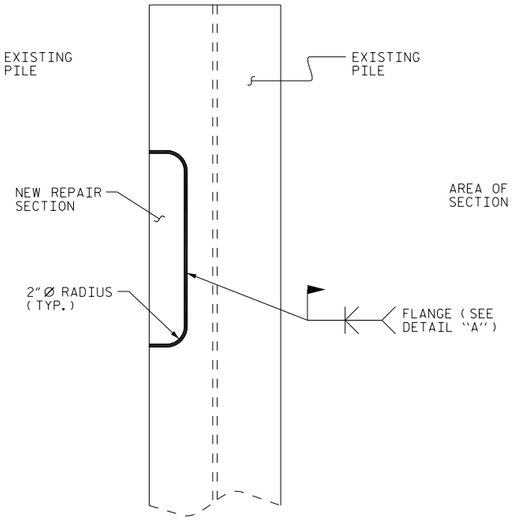
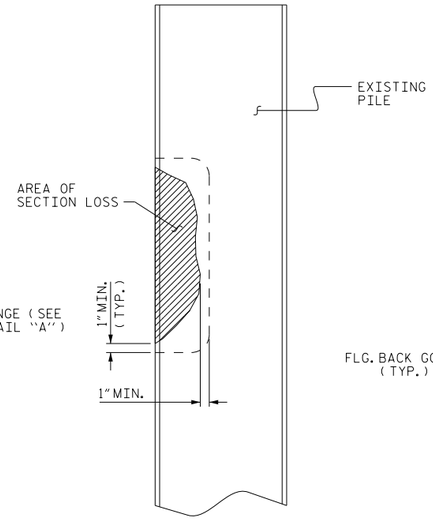


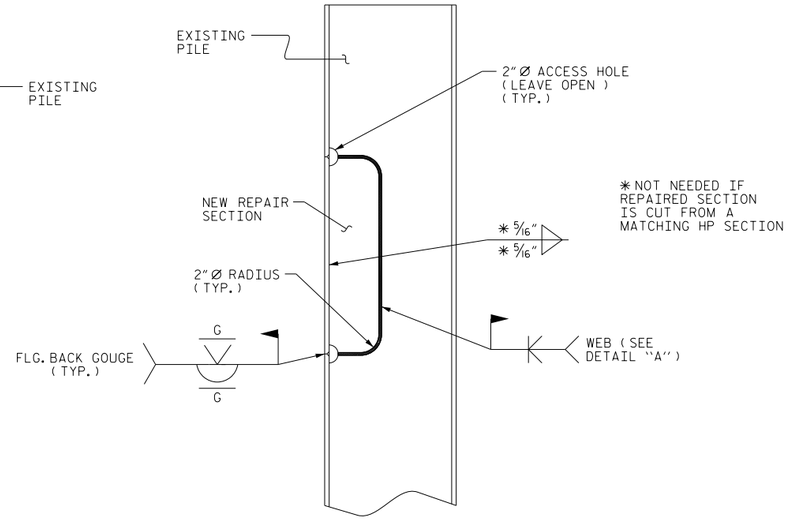
SECTION LOSS
PILE FLANGE REPAIR



FLANGE REPAIR SECTION



FLANGE/WEB REPAIR SECTION



SECTION LOSS PILE
FLANGE/WEB REPAIR

PILE REPAIR NOTES:

AFTER THE STEEL PILE HAS BEEN BLASTED AND PRIMED, THE STEEL PILE SHALL BE INSPECTED FOR EXCESSIVE SECTION LOSS. AREAS THAT EXHIBIT AN EXCESS OF 35% LOCALIZED SECTION LOSS SHALL BE REVIEWED BY THE ENGINEER TO DETERMINE IF AREA OF SECTION LOSS SHOULD BE REPAIRED.

AS DETERMINED BY THE ENGINEER, AREAS WITH EXCESSIVE SECTION LOSS OR AREAS WITH TEMPORARY REPAIRS SHALL BE REMOVED AND THE PILES SHALL BE REPAIRED AS INDICATED ON THIS PLAN SHEET. CONTRACTOR AND ENGINEER TO DETERMINE ACTUAL DIMENSIONS OF AREA TO BE REMOVED AND REPLACED.

PAYMENT FOR THE SECTION REPAIR SHALL BE BASED ON THAT AMOUNT OF REPAIR ACTUALLY PERFORMED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

GOUGES AND INDENTIONS FROM IMPACT ON THE PILES SHALL BE GROUND SMOOTH PRIOR TO BLASTING AND PAINTING OPERATION.

REPAIR SEQUENCE:

COMPLETELY REMOVE EXISTING PILE ENCASEMENT PRIOR TO PERFORMING ANY REPAIRS ON THAT PILE.

REMOVE LIVE LOAD FROM REPAIR AREA BY EITHER CLOSING BRIDGE TO TRAFFIC OR SHIFTING TRAFFIC AWAY FROM REPAIR AREA.

REMOVE DEAD LOAD FROM PILE BY JACKING AND BLOCKING.

MECHANICALLY CLEAN RUST, SCALE, AND EXISTING PAINT TO AT LEAST 1" BEYOND REPAIR AREA.

REPLACEMENT CUT-TO-FIT PILE SECTION SHALL BE NEW AND FROM SIMILAR SIZE HP SECTION OR APPROVED EQUIVALENT PLATES. THE GRADE OF STEEL SHALL BE AASHTO M270, GRADE 36 OR BETTER.

INSTALL THE CUT-TO-FIT SECTION, FULLY WELD ALONG TOP AND SIDES OF PLATE USING FULL PENETRATION WELDS.

ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT APPLICABLE AWS AND NCDOT STANDARD SPECIFICATIONS.

ALL WELDS WILL BE INSPECTED AND TESTED BY THE NCDOT MATERIALS AND TEST UNIT IN ACCORDANCE WITH THE CURRENT AWS BRIDGE WELDING CODE AND STANDARD SPECIFICATIONS.

IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, AFTER REPAIR, GRIND ALL WELDS FLUSH, THOROUGHLY CLEAN AREA TO REMOVE DEBRIS AND OILS FROM REPAIR PROCESS.

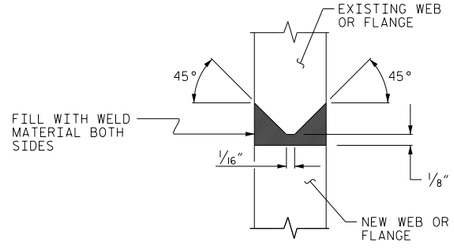
CLEANING AND PAINTING OF REPAIRED STEEL PILES SHALL BE PERFORMED AS PART OF THE OVERALL CLEANING AND PAINTING CONTRACT.

FOR CLEANING AND PAINTING, SEE PROJECT SPECIAL PROVISIONS.

LOWER SPAN TO BEAR; CHECK FOR DISTRESS.

REMOVE JACKING EQUIPMENT AND TEMPORARY SUPPORTS.

REMOVE ALL TRAFFIC CONTROL DEVICES.



DETAIL "A"

PROJECT NO. I-5784

JOHNSTON COUNTY

BRIDGE NO. 100 & 101

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SEAL
18565
ENGINEER
TIMOTHY M. SHERRILL

3/2/2017

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PILE REPAIR

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : W. C. SMITH DATE : 01/2017
CHECKED BY : T. M. SHERRIL DATE : 02/2017

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STANDARD NOTES

DESIGN DATA:

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

MATERIAL AND WORKMANSHIP:

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

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

CONCRETE:

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

CONCRETE CHAMFERS:

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

DOWELS:

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

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

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8"Ø SHEAR STUDS FOR THE 3/4"Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8"Ø STUDS FOR 4 - 3/4"Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8"Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4"Ø STUDS BASED ON THE RATIO OF 3 - 7/8"Ø STUDS FOR 4 - 3/4"Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

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

ENGLISH

JANUARY, 1990

STD. NO. SN

REV. 6-16-95 EEM (/) RGW REV. 5-7-03 RWW (/) JTE REV. 10-1-11 MAA (/) GM
REV. 8-16-99 RWW (/) LES REV. 5-1-06 TLA (/) GM

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