

CONTRACT: DC00084 PROJECT: BP-5500F



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

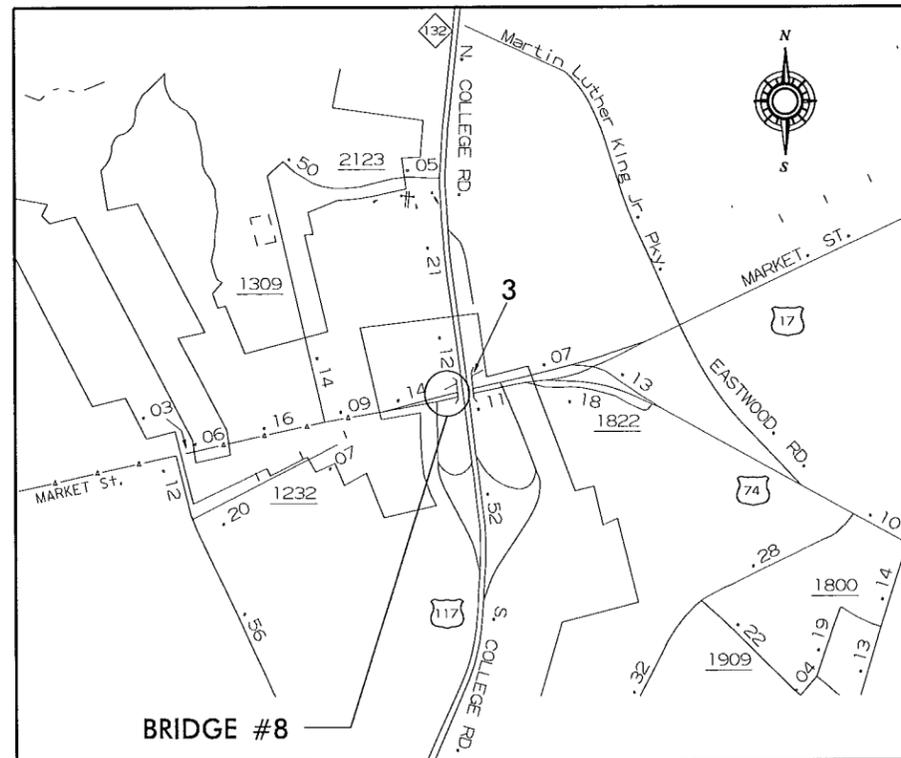
NEW HANOVER COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP-5500F		
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50070.1.1	BRNHS-000S(747)	P.E.	
50070.3.F56	NHPP-0117(30)	CONST.	

LOCATION: NEW HANOVER CO.

BRIDGE #8 ON US117/NC132 SBL (COLLEGE ROAD) ACROSS US17/NCDOT RR RW (MARKET ST.).

TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE PRESERVATION WITH LATEX MODIFIED CONCRETE – VERY EARLY STRENGTH AND JOINT REPLACEMENT.



DESIGN DATA

NEW HANOVER
 #8 ADT 2011 = 21,500

PROJECT LENGTH

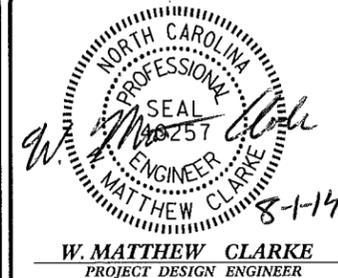
BRIDGE NEW HANOVER #8 = 0.058 MILE

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

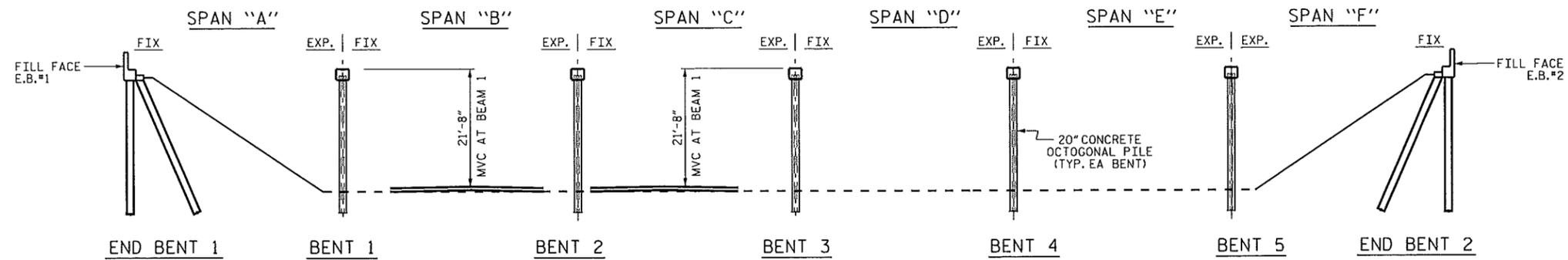
TIMOTHY M. SHERRILL, P.E.
 PROJECT ENGINEER

2012 STANDARD SPECIFICATIONS

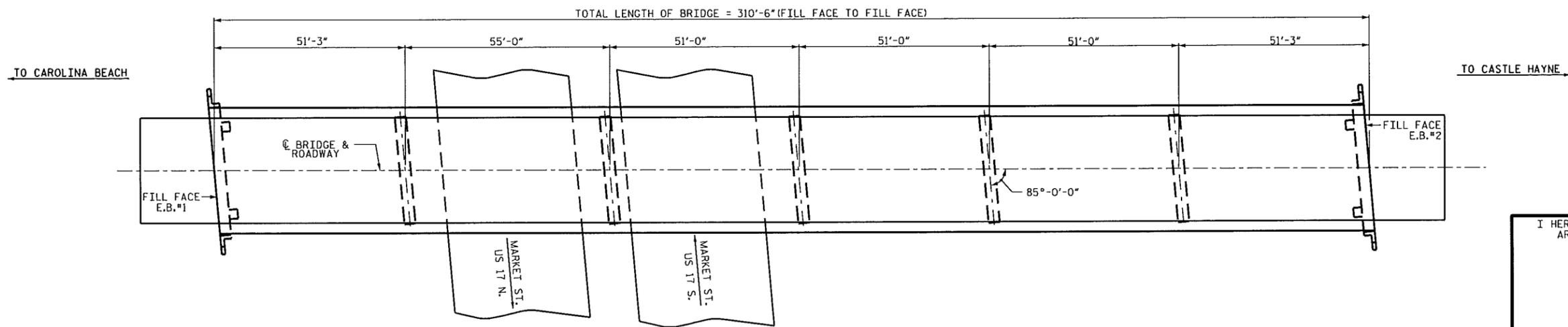
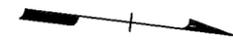
LETTING DATE:
 SEPTEMBER 4, 2014



W. MATTHEW CLARKE
 PROJECT DESIGN ENGINEER



SECTION ALONG Q ROADWAY



PLAN

I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS

SCOPE OF WORK:

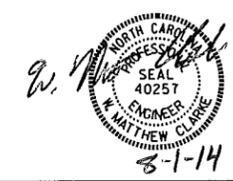
- PARTIALLY REMOVE BRIDGE DECK CONCRETE, USING SCARIFICATION AND HYDRO-DEMOLITION METHODS.
- OVERLAY PREPARED BRIDGE DECK WITH LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH.
- DEMOLISH EXISTING BRIDGE DECK JOINTS.
- RECONSTRUCT BRIDGE DECK JOINTS AND INSTALL NEW FOAM JOINT SEALS.
- MILL AND PAVE ASPHALT APPROACHES.
- GROOVE CONCRETE BRIDGE DECK.

PROJECT NO. BP-5500F
NEW HANOVER COUNTY
 BRIDGE NO. 8

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 BRIDGE #8
 ON US 117/NC132 SOUTH
 OVER US17/NCDOT RR R/W

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



DRAWN BY : S. T. SANDOR DATE : 02/2014
 CHECKED BY : W. M. CLARKE DATE : 02/2014
 DESIGN ENGINEER OF RECORD: W. M. CLARKE DATE : 05/2014



NOTES

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

FOR "SUBMITTAL OF WORKING DRAWINGS", SEE SPECIAL PROVISIONS.

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.

FOR "FALSEWORK AND FORMWORK", SEE SPECIAL PROVISIONS.

FOR "CRANE SAFETY", SEE SPECIAL PROVISIONS.

FOR "GROUT FOR STRUCTURES", SEE SPECIAL PROVISIONS.

ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL MILL AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF BRIDGE.

FOR "BRIDGE JOINT DEMOLITION", SEE SPECIAL PROVISIONS.

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

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

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

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

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

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

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

FOR OVERLAY OF BRIDGE WITH "LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH", SEE SPECIAL PROVISIONS.

FOR "FOAM JOINT SEALS", SEE SPECIAL PROVISIONS.

FOR "ELASTOMERIC CONCRETE", SEE SPECIAL PROVISIONS.

LOCATION SKETCH

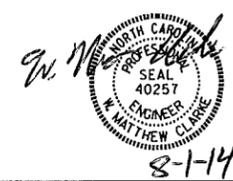
INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION, ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

TOTAL BILL OF MATERIAL										
INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C	ASPHALT BINDER FOR PLANT MIX	GROOVING BRIDGE FLOORS	CLASS II SURFACE PREPARATION	FOAM JOINT SEALS	LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH	BRIDGE JOINT DEMOLITION	HYDRO-DEMOLITION OF BRIDGE DECK	PLACING & FINISHING LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH	SCARIFYING BRIDGE DECK
SO.YDS.	TON	TON	SO. FT.	SO.YDS.	LUMP SUM	C.Y.	SO. FT.	SO.YDS.	SO.YDS.	SO.YDS.
355	30	2	8,732	9.5	LUMP SUM	59.7	181.2	1,075	1,075	1,075

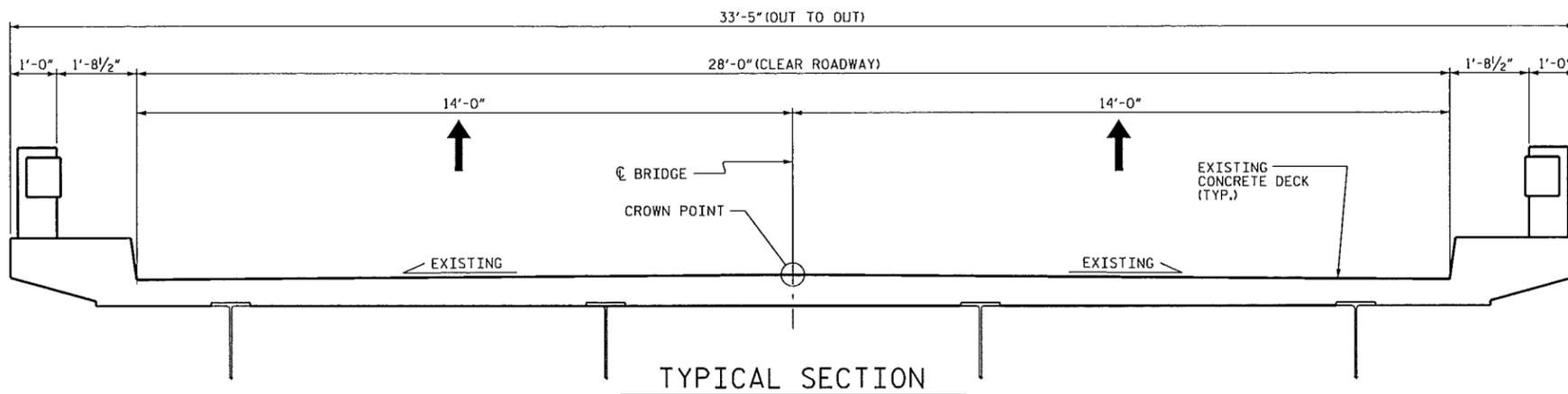
PROJECT NO. BP-5500F
NEW HANOVER COUNTY
 BRIDGE NO. 8

SHEET 2 OF 2

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
GENERAL DRAWING					
BRIDGE #8 ON US 117/NC132 SOUTH OVER US17/NCDOT RR R/W					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					14

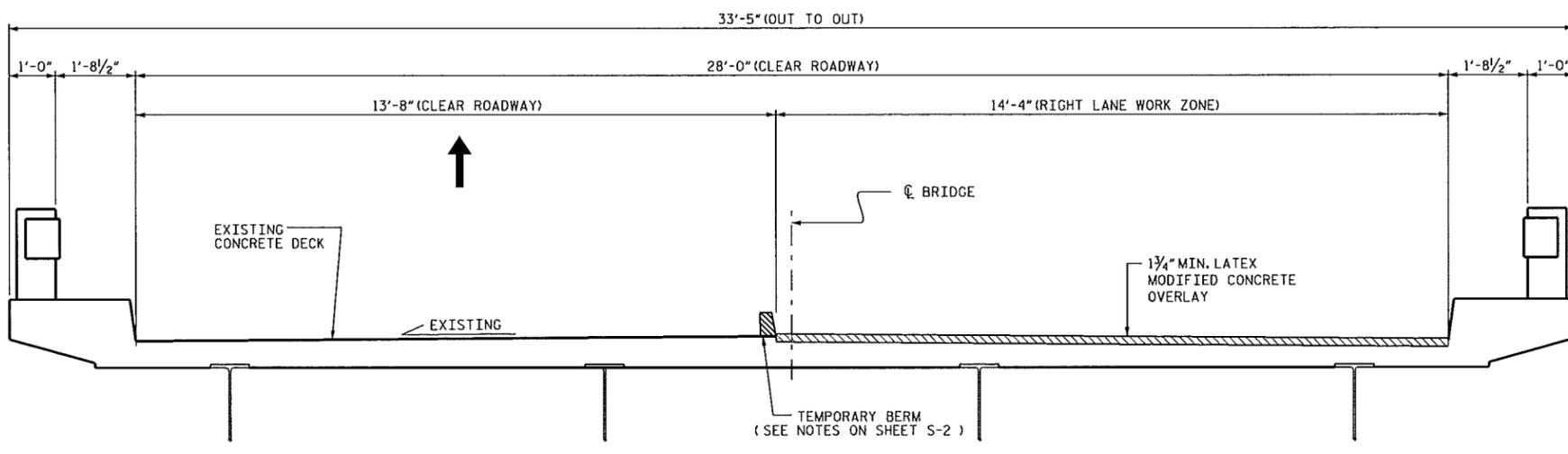


DRAWN BY : S. I. SANDOR DATE : 02/2014
 CHECKED BY : W. M. CLARKE DATE : 02/2014
 DESIGN ENGINEER OF RECORD: W. M. CLARKE DATE : 05/2014



TYPICAL SECTION

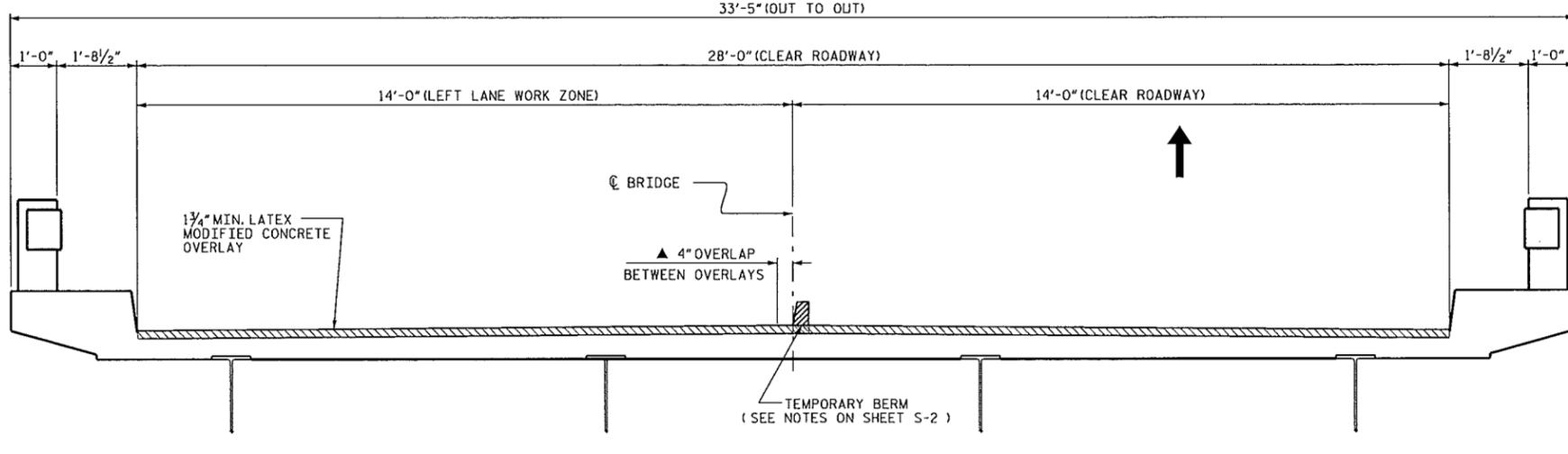
(EXISTING) (LOOKING SOUTH)



TYPICAL SECTION

(RIGHT LANE WORK ZONE) (LOOKING SOUTH)

▲ 4" OVERLAP BETWEEN OVERLAYS
PREVIOUSLY POURED LMC
TO BE HYDRO-DEMOLITIONED
& RECAST WITH LMC

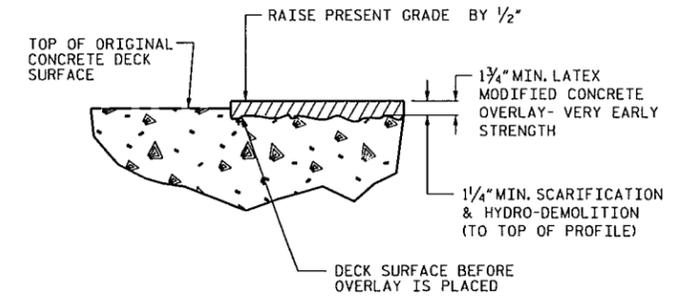


TYPICAL SECTION

(LEFT LANE WORK ZONE) (LOOKING SOUTH)

NOTE:

THE WORK STAGING ON THIS PLAN SHEET INDICATES THAT THE RIGHT LANE LMC WORK IS PERFORMED FIRST, FOLLOWED BY THE LEFT LANE LMC WORK. THE CONTRACTOR MAY ELECT TO SEQUENCE THE WORK DIFFERENTLY, BUT THE DIMENSIONS OF THE WORK ZONE AND CLEAR ROADWAY AREAS SHALL MATCH THAT INDICATED ON THIS PLAN SHEET, RESPECTIVE TO THE LANE WHERE THE LMC WORK IS BEING PERFORMED.



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

PROJECT NO. BP-5500F
NEW HANOVER COUNTY
 BRIDGE NO. 8

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-3	
STAGING SEQUENCE						TOTAL SHEETS 14	
REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:		
1			3				
2			4				

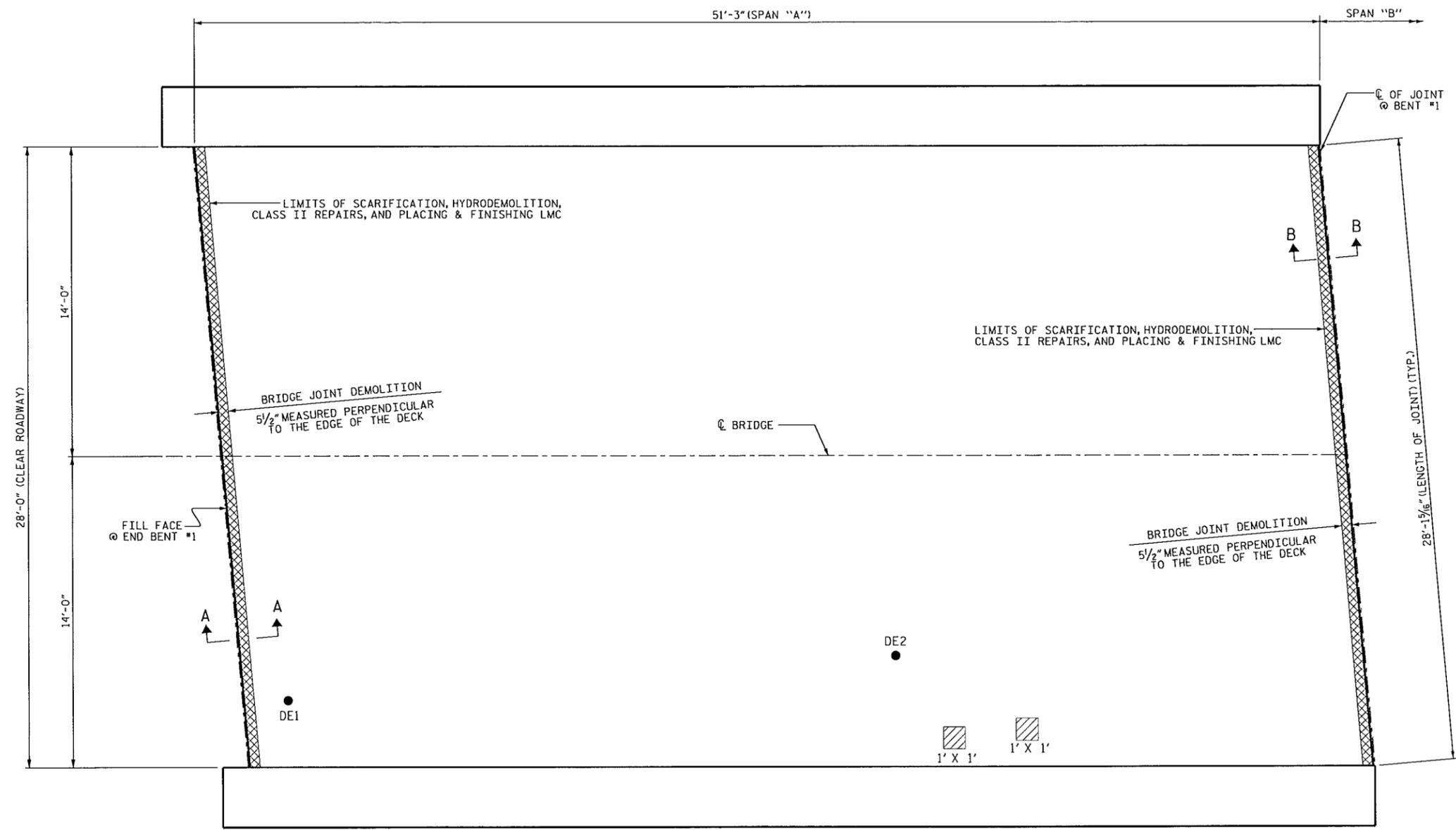


DRAWN BY: S. T. SANDOR DATE: 04/2014
 CHECKED BY: W. M. CLARKE DATE: 04/2014
 DESIGN ENGINEER OF RECORD: W. M. CLARKE DATE: 04/2014

SUMMARY OF QUANTITIES FOR SPAN "A"

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	156.3 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	156.3 SY	
CLASS II SURFACE PREPARATION	0.2 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
JOINT DEMOLITION	25.9 SF	

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.



-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

TEST LOCATION	REBAR COVER	CONCRETE STRENGTH
#1	1"	5,300 PSI
#2	1 3/4"	5,300 PSI

NOTE: BRIDGE DECK EVALUATION SAMPLE DATA PROVIDED BY MI ENGINEERING REPORT, DATED 3/26/2014.

PROJECT NO. BP-5500F
 NEW HANOVER COUNTY
 BRIDGE NO. 8

SHEET 1 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN "A"

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



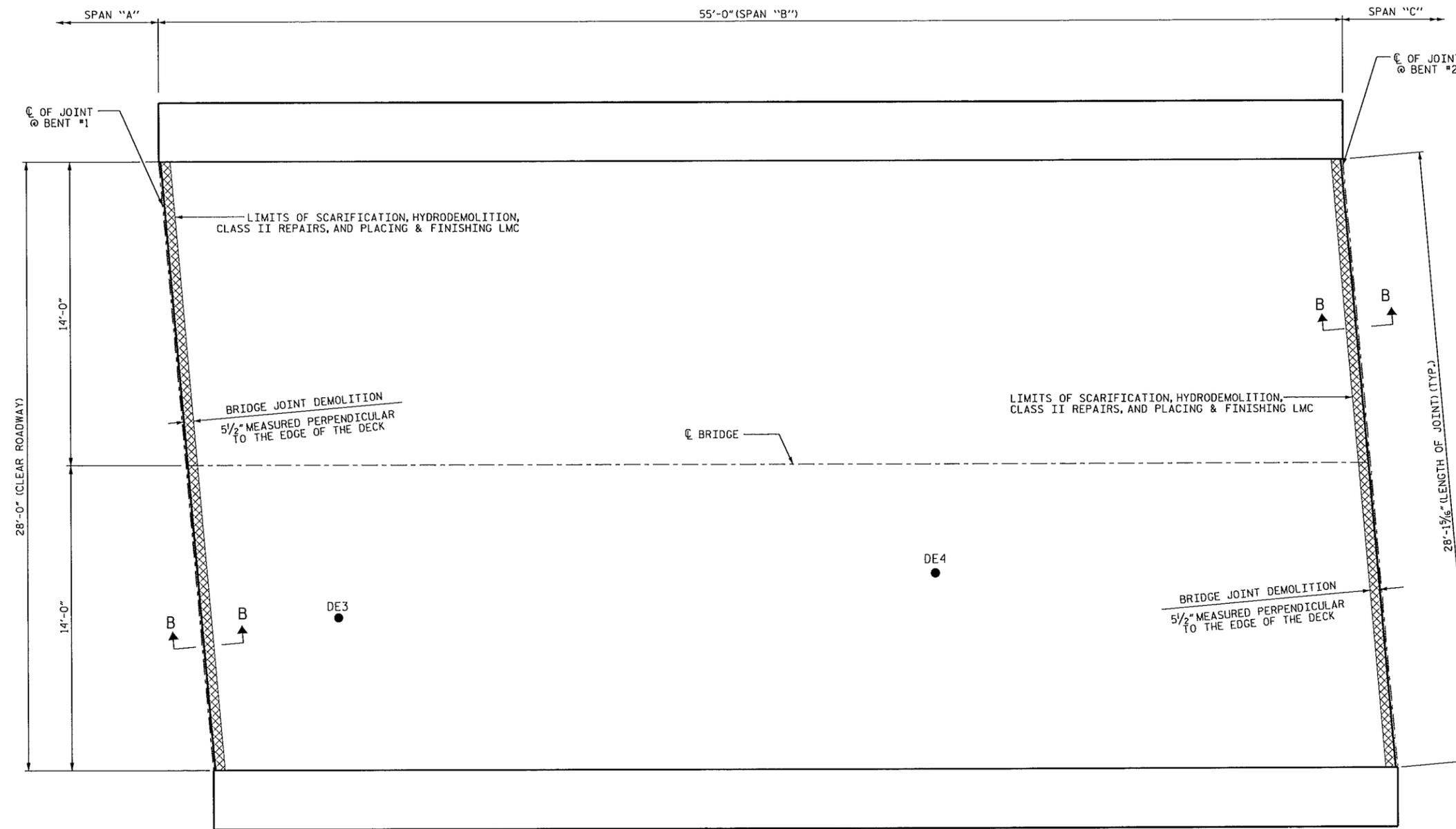
PLAN OF SPAN "A"
 (SEE "JOINT DETAILS" SHEET FOR SECTIONS A-A AND B-B)

DRAWN BY : <u>S. T. SANDOR</u>	DATE : <u>03/2014</u>
CHECKED BY : <u>W. M. CLARKE</u>	DATE : <u>03/2014</u>
DESIGN ENGINEER OF RECORD : <u>W. M. CLARKE</u>	DATE : <u>05/2014</u>

SUMMARY OF QUANTITIES FOR SPAN "B"

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	168.0 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	168.0 SY	
CLASS II SURFACE PREPARATION	0.0 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
JOINT DEMOLITION	25.9 SF	

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.



- SCARIFYING BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

BRIDGE DECK EVALUATION SAMPLES		
TEST LOCATION	REBAR COVER	CONCRETE STRENGTH
#3	1 1/4"	4,100 PSI
#4	1 1/4"	4,300 PSI

NOTE: BRIDGE DECK EVALUATION SAMPLE DATA PROVIDED BY MI ENGINEERING REPORT, DATED 3/26/2014.

PLAN OF SPAN "B"
(SEE "JOINT DETAILS" SHEET FOR SECTION B-B)

PROJECT NO. BP-5500F
NEW HANOVER COUNTY
 BRIDGE NO. 8

SHEET 2 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "B"

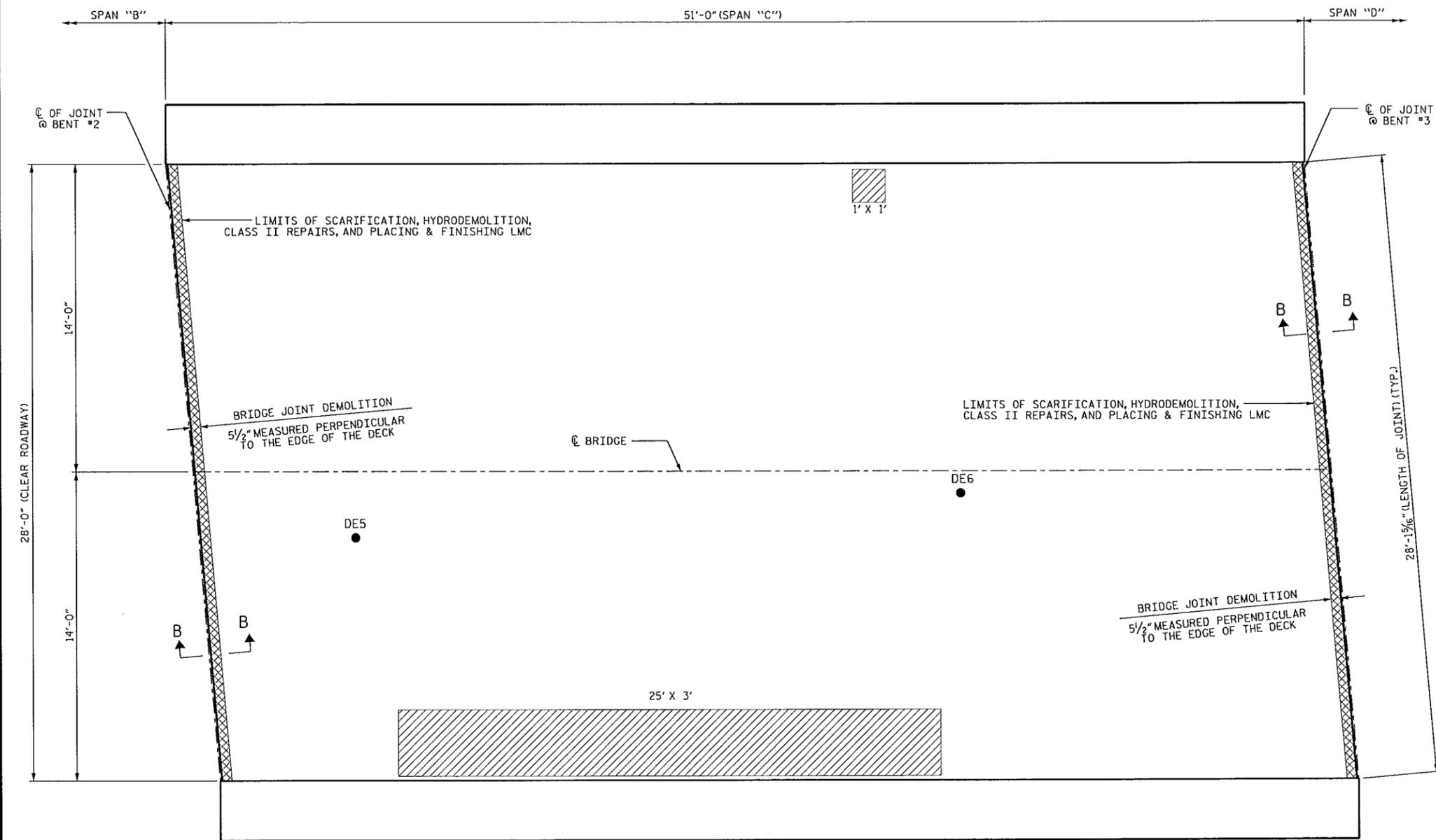
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2			4			14

DRAWN BY : S. T. SANDOR DATE : 03/2014
 CHECKED BY : W. M. CLARKE DATE : 03/2014
 DESIGN ENGINEER OF RECORD: W. M. CLARKE DATE : 05/2014



SUMMARY OF QUANTITIES FOR SPAN "C"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	155.6 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	155.6 SY	
CLASS II SURFACE PREPARATION	8.4 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
JOINT DEMOLITION	25.9 SF	

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.



- SCARIFYING BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

BRIDGE DECK EVALUATION SAMPLES		
TEST LOCATION	REBAR COVER	CONCRETE STRENGTH
#5	1"	3,500 PSI
#6	1 1/4"	4,300 PSI

NOTE: BRIDGE DECK EVALUATION SAMPLE DATA PROVIDED BY MI ENGINEERING REPORT, DATED 3/26/2014.

PLAN OF SPAN "C"
(SEE "JOINT DETAILS" SHEET FOR SECTION B-B)

PROJECT NO. BP-5500F
NEW HANOVER COUNTY
 BRIDGE NO. 8

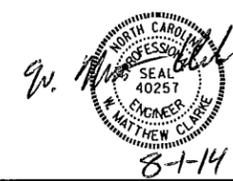
SHEET 3 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "C"

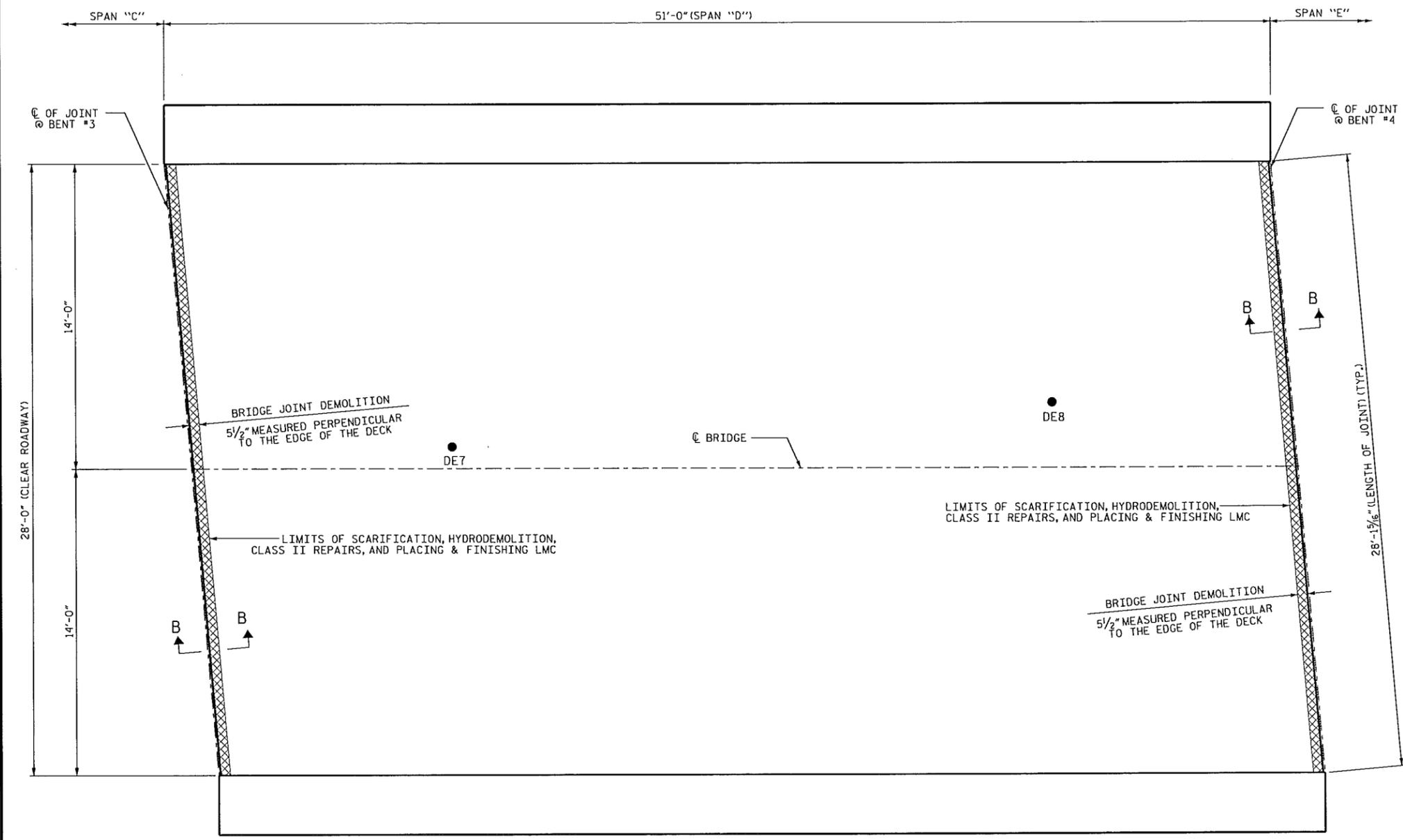
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
1			3			TOTAL SHEETS
2			4			14

DRAWN BY : S. T. SANDOR DATE : 03/2014
 CHECKED BY : W. M. CLARKE DATE : 03/2014
 DESIGN ENGINEER OF RECORD: W. M. CLARKE DATE : 05/2014



SUMMARY OF QUANTITIES FOR SPAN "D"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	155.6 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	155.6 SY	
CLASS II SURFACE PREPARATION	0.0 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
JOINT DEMOLITION	25.9 SF	

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.



-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

BRIDGE DECK EVALUATION SAMPLES		
TEST LOCATION	REBAR COVER	CONCRETE STRENGTH
#7	1 1/8"	5,500 PSI
#8	1 1/2"	4,900 PSI

NOTE: BRIDGE DECK EVALUATION SAMPLE DATA PROVIDED BY MI ENGINEERING REPORT, DATED 3/26/2014.

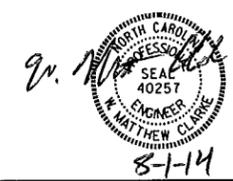
PROJECT NO. BP-5500F
NEW HANOVER COUNTY
 BRIDGE NO. 8

SHEET 4 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "D"

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS
2			4			14

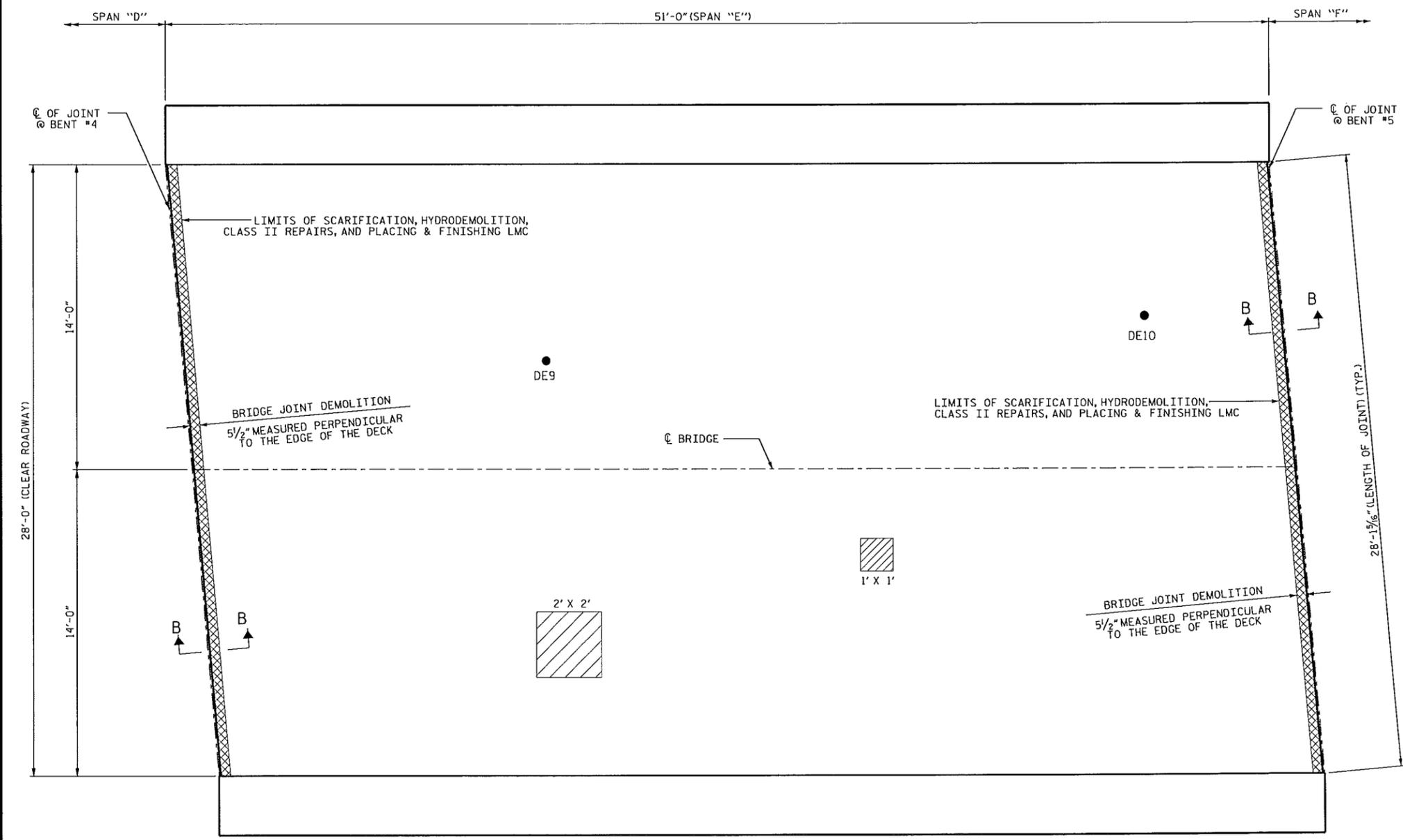


DRAWN BY: S. T. SANDOR DATE: 03/2014
 CHECKED BY: W. M. CLARKE DATE: 03/2014
 DESIGN ENGINEER OF RECORD: W. M. CLARKE DATE: 05/2014

PLAN OF SPAN "D"
 (SEE "JOINT DETAILS" SHEET FOR SECTION B-B)

SUMMARY OF QUANTITIES FOR SPAN "E"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	155.6 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	155.6 SY	
CLASS II SURFACE PREPARATION	0.6 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
JOINT DEMOLITION	25.9 SF	

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.



- SCARIFYING BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

BRIDGE DECK EVALUATION SAMPLES		
TEST LOCATION	REBAR COVER	CONCRETE STRENGTH
#9	1 1/8"	4,500 PSI
#10	1 5/8"	3,700 PSI

NOTE: BRIDGE DECK EVALUATION SAMPLE DATA PROVIDED BY MI ENGINEERING REPORT, DATED 3/26/2014.

PROJECT NO. BP-5500F
NEW HANOVER COUNTY
 BRIDGE NO. 8

SHEET 5 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "E"

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8
1			3			TOTAL SHEETS
2			4			14

8-1-14

PLAN OF SPAN "E"
 (SEE "JOINT DETAILS" SHEET FOR SECTION B-B)

DRAWN BY : S. T. SANDOR DATE : 03/2014
 CHECKED BY : W. M. CLARKE DATE : 03/2014
 DESIGN ENGINEER OF RECORD: W. M. CLARKE DATE : 05/2014

SUMMARY OF QUANTITIES FOR SPAN "F"

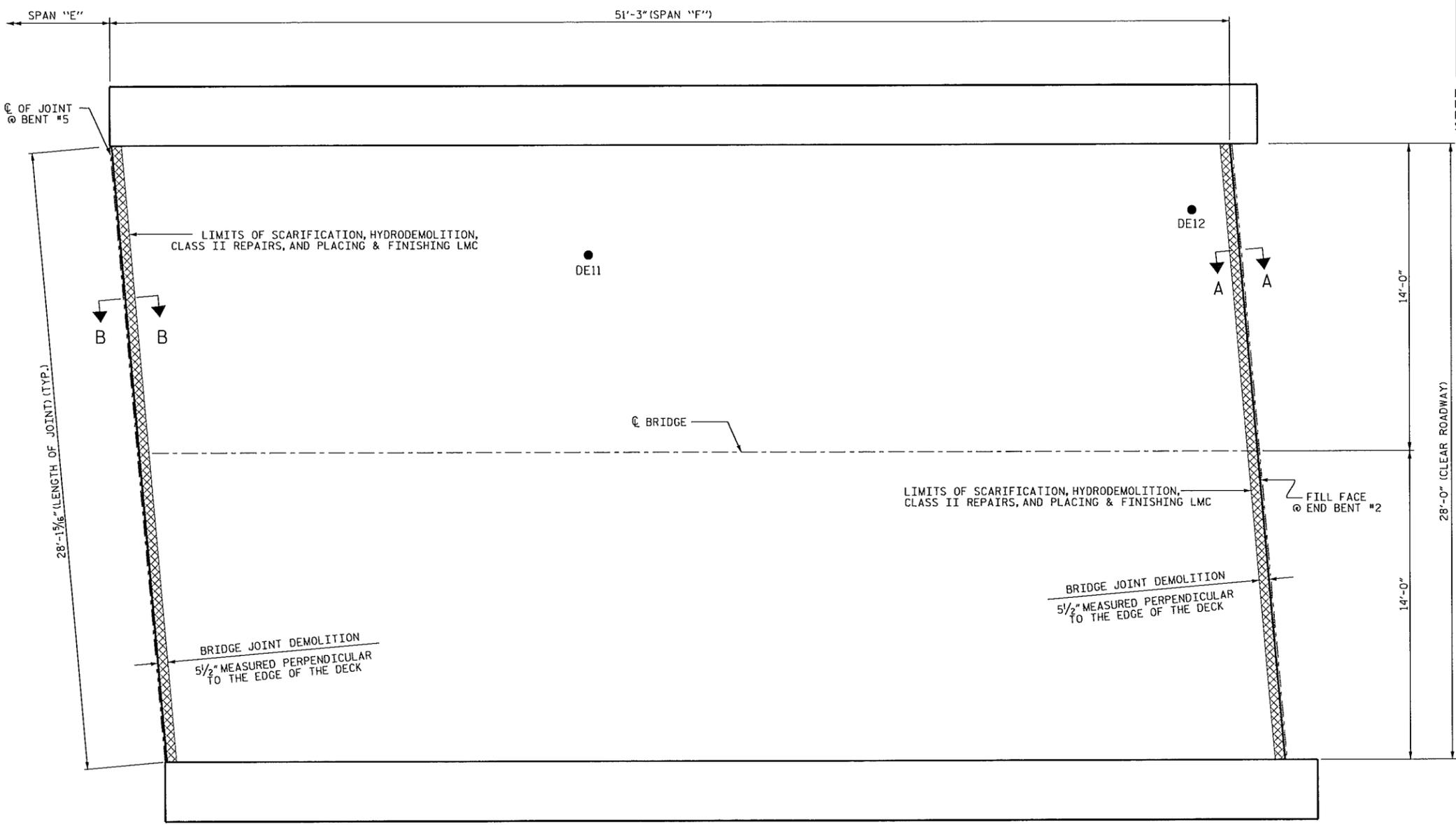
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	156.3 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	156.3 SY	
CLASS II SURFACE PREPARATION	0.0 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
JOINT DEMOLITION	25.9 SF	

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.

-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

BRIDGE DECK EVALUATION SAMPLES		
TEST LOCATION	REBAR COVER	CONCRETE STRENGTH
#11	2 1/8"	5,700 PSI
#12	1 1/2"	4,500 PSI

NOTE: BRIDGE DECK EVALUATION SAMPLE DATA PROVIDED BY MI ENGINEERING REPORT, DATED 3/26/2014.



PLAN OF SPAN "F"

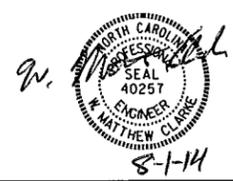
(SEE "JOINT DETAILS" SHEET FOR SECTIONS A-A AND B-B)

PROJECT NO. BP-5500F
NEW HANOVER COUNTY
 BRIDGE NO. 8

SHEET 6 OF 6

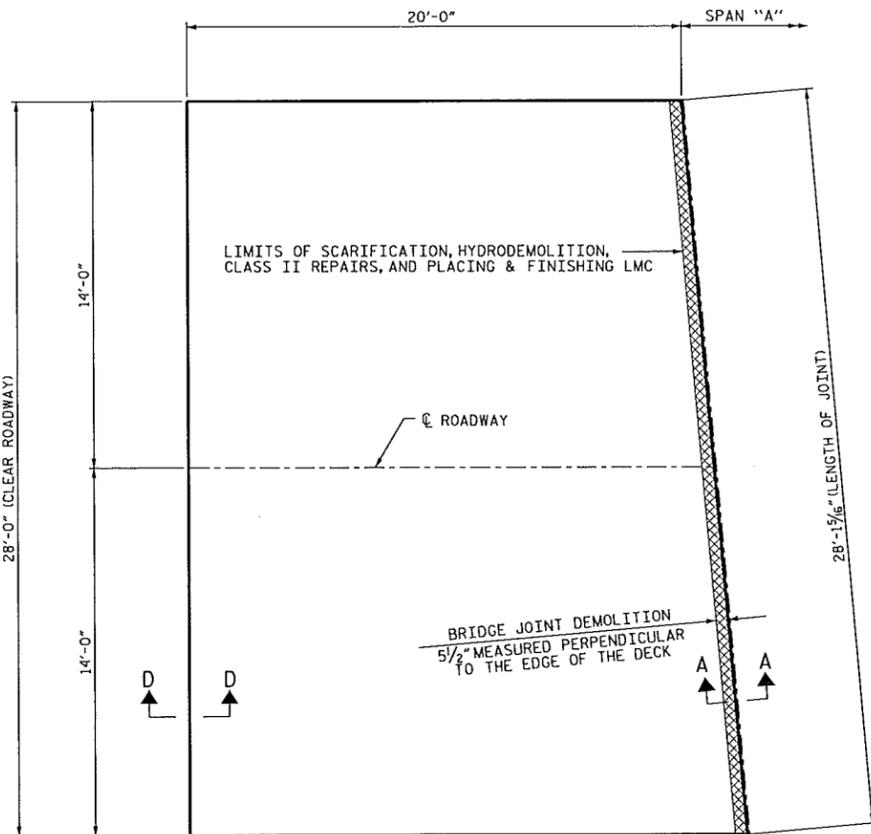
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN "F"



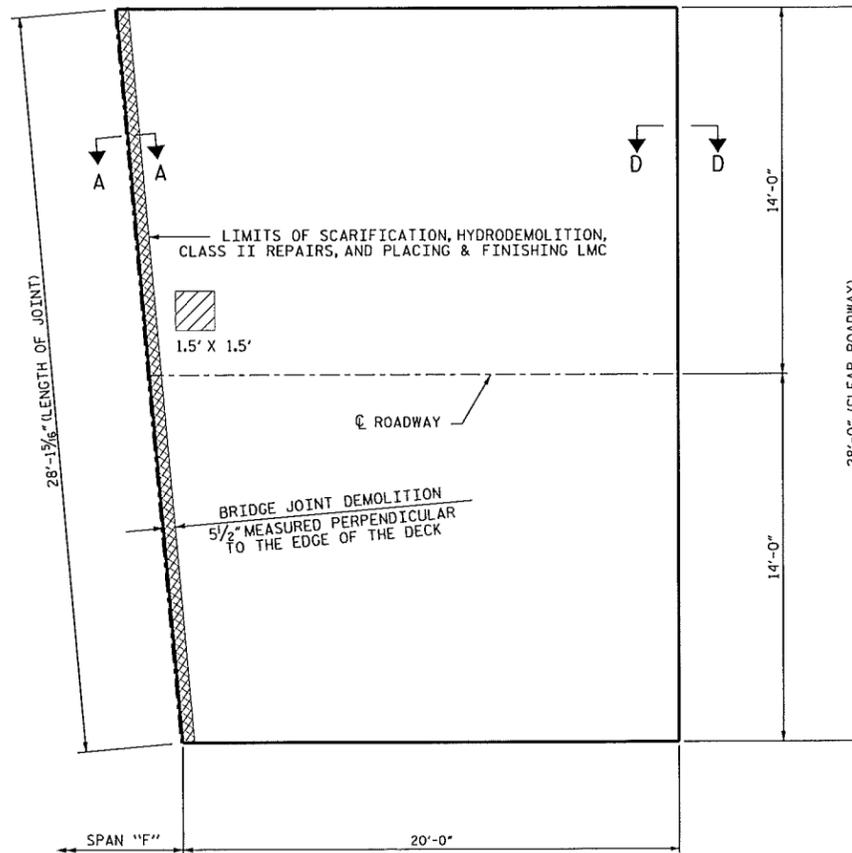
DRAWN BY : S. T. SANDOR DATE : 03/2014
 CHECKED BY : W. M. CLARKE DATE : 03/2014
 DESIGN ENGINEER OF RECORD : W. M. CLARKE DATE : 05/2014

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
1			3			TOTAL SHEETS
2			4			14



ROADWAY SLAB @ END BENT 1

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



ROADWAY SLAB @ END BENT 2

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

SUMMARY OF QUANTITIES FOR ROADWAY SLAB @ END BENT 1

	ESTIMATE	ACTUAL
SCARIFYING ROADWAY SLAB	62.6 SY	
HYDRO-DEMOLITION OF SLAB	62.6 SY	
CLASS II SURFACE PREPARATION	0.0 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
JOINT DEMOLITION	12.9 SF	

SUMMARY OF QUANTITIES FOR ROADWAY SLAB @ END BENT 2

	ESTIMATE	ACTUAL
SCARIFYING ROADWAY SLAB	62.6 SY	
HYDRO-DEMOLITION OF SLAB	62.6 SY	
CLASS II SURFACE PREPARATION	0.3 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
JOINT DEMOLITION	12.9 SF	

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.

-  SCARIFYING ROADWAY SLAB
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

PROJECT NO. BP-5500F

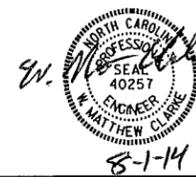
NEW NANOVER COUNTY

BRIDGE NO. 8

SHEET 1 OF 1

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SURFACE PREPARATION
ROADWAY SLABS**

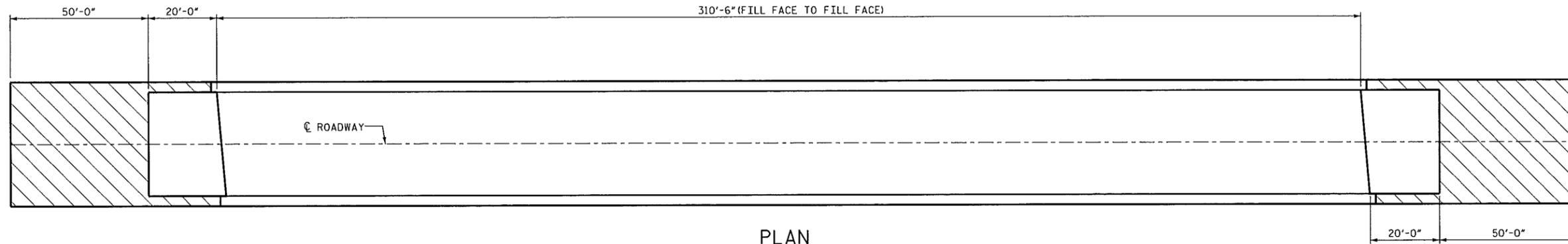


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-10
1			3			TOTAL SHEETS
2			4			14

DRAWN BY : S. T. SANDOR DATE : 03/2014
 CHECKED BY : W. M. CLARKE DATE : 03/2014
 DESIGN ENGINEER OF RECORD : W. M. CLARKE DATE : 05/2014

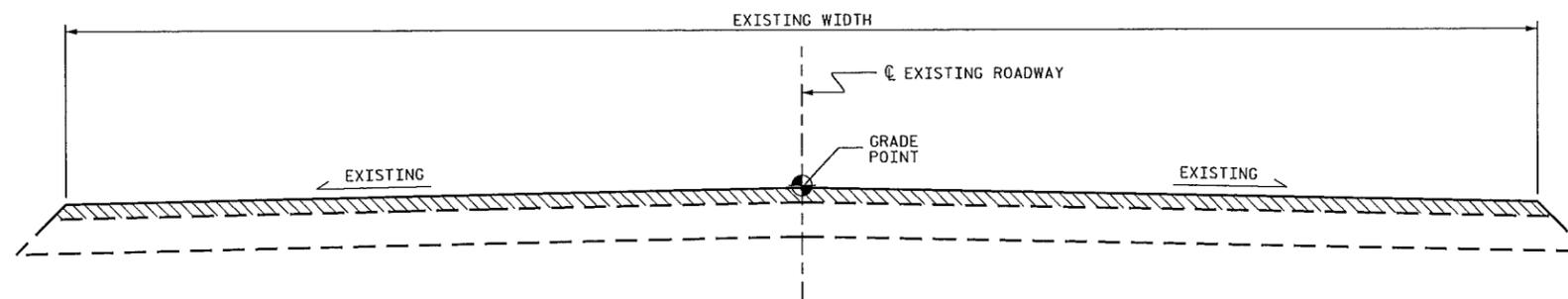
NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1/2" DEPTH OF NEW ASPHALT PAVING. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1/2" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVING.



PLAN

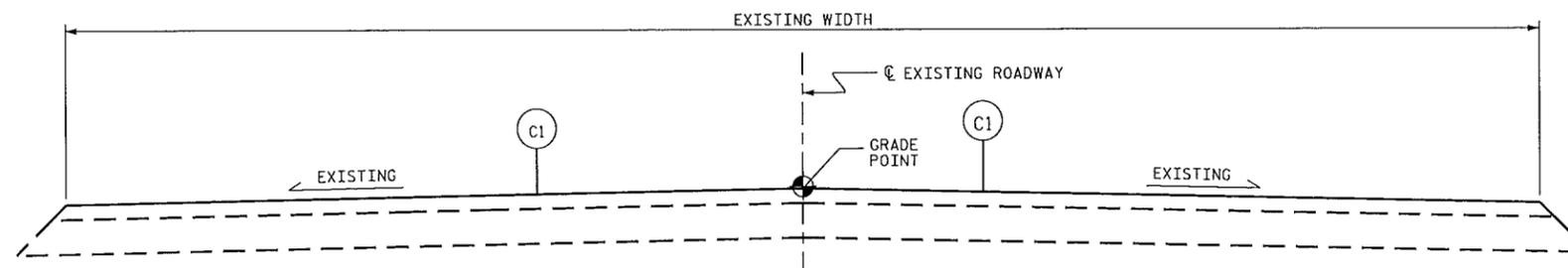
 INCIDENTAL MILLING



TYPICAL ROADWAY MILLING SECTION

(MILL TO APPROX. 1" DEPTH)

C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.



TYPICAL PROPOSED ROADWAY SECTION

PROJECT NO. BP-5500F
NEW HANOVER COUNTY
 BRIDGE NO. 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

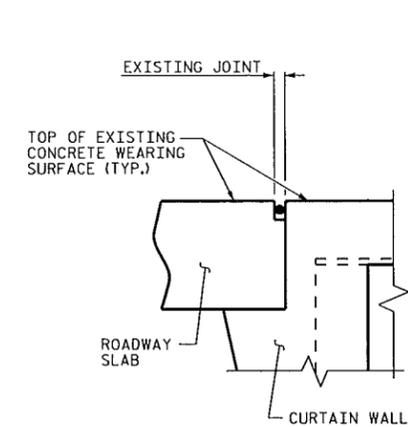
**APPROACH MILLING
 AND TYPICAL ROADWAY
 SECTIONS**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-11
1			3			TOTAL SHEETS
2			4			14

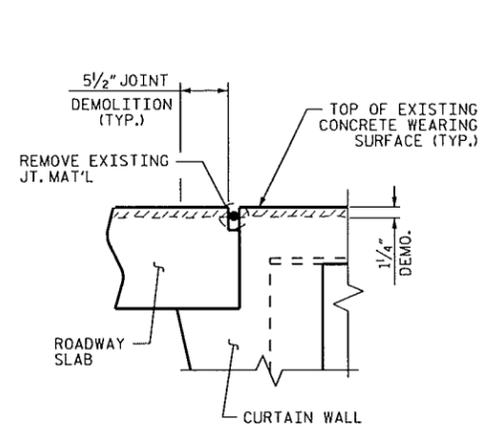
9/1

 8-1-14

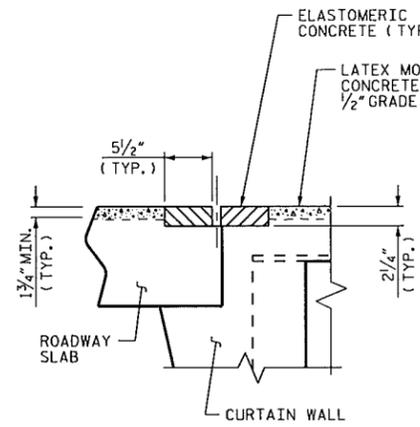
DRAWN BY : S. T. SANDOR DATE : 03/2014
 CHECKED BY : W. M. CLARKE DATE : 03/2014
 DESIGN ENGINEER OF RECORD: W. M. CLARKE DATE : 04/2014



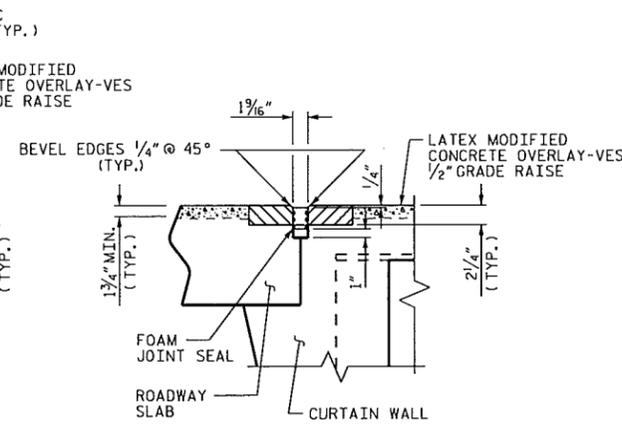
SECTION A-A
(EXISTING)



SECTION A-A
(MINIMUM EXISTING JOINT DEMOLITION)

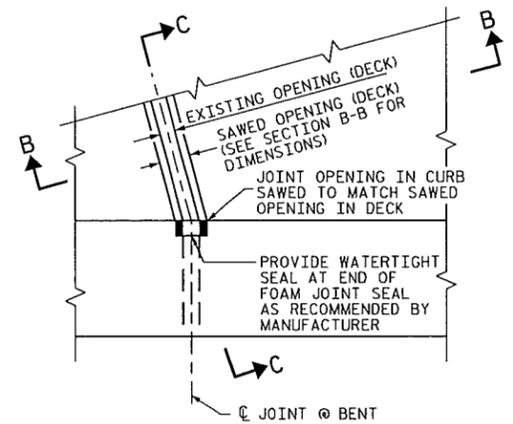


SECTION A-A
(PROPOSED JOINT PRE-SAWED DIMENSIONS)

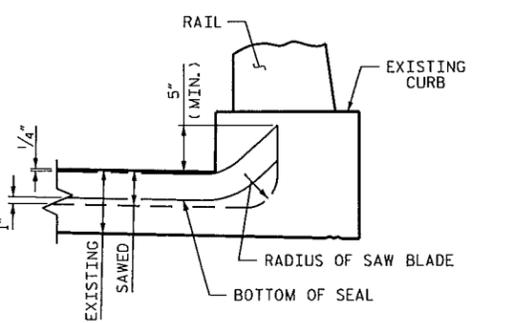


SECTION A-A
(PROPOSED JOINT SEAL - FIXED)

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



PLAN



SECTION C-C

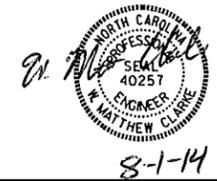
JOINT SEAL DETAILS AT BENT

PROJECT NO. BP-5500F
NEW HANOVER COUNTY
BRIDGE NO. 08

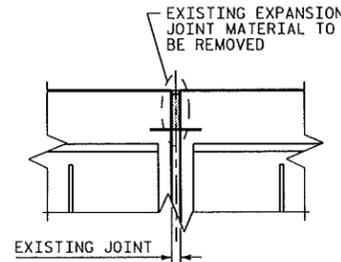
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

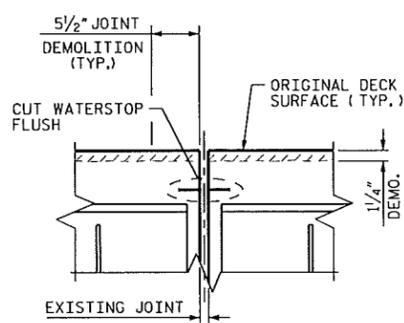
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS	
1			3			S-12	
2			4			14	



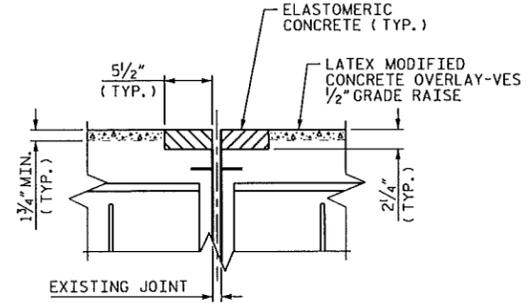
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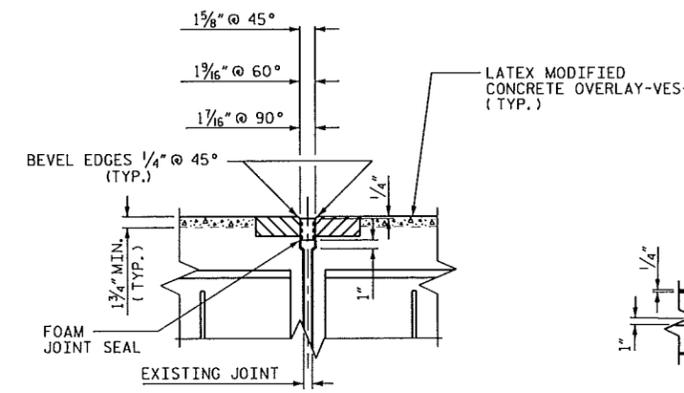
SECTION B-B
(EXISTING)



SECTION B-B
(MINIMUM EXISTING JOINT DEMOLITION)



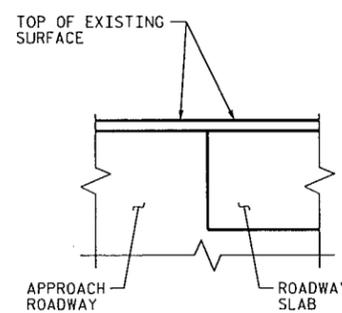
SECTION B-B
(PROPOSED JOINT PRE-SAWED DIMENSIONS)



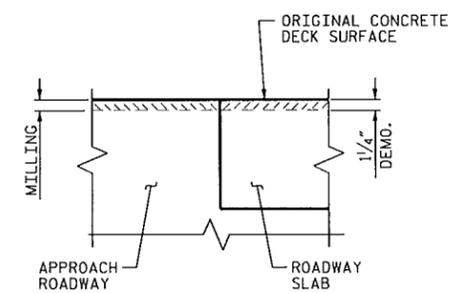
SECTION B-B
(PROPOSED JOINT SEAL)

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

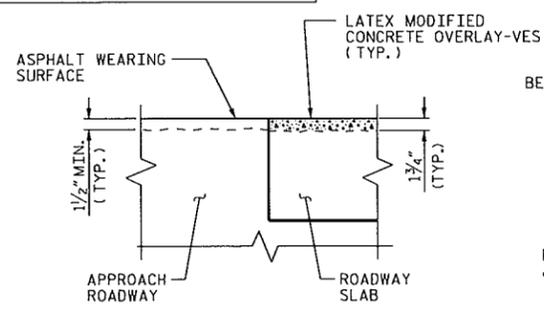
HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC OR REPAIR CONCRETE. DEMOLISH BRIDGE JOINT TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE, NOT LATEX MODIFIED CONCRETE.



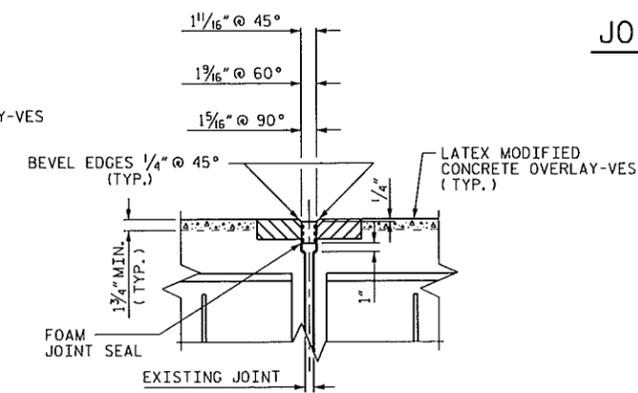
SECTION D-D
(EXISTING)



SECTION D-D
(MINIMUM EXISTING DEMOLITION & APPROACH MILLING)



SECTION D-D
(PROPOSED)

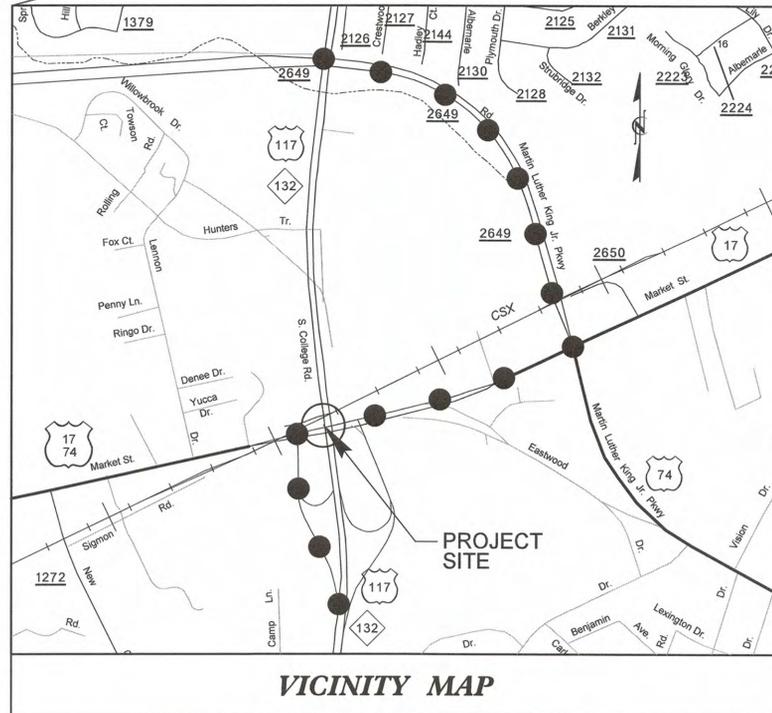


SECTION B-B
(PROPOSED JOINT SEAL) (BENT 5)

DRAWN BY : S. T. SANDOR DATE : 03/2014
CHECKED BY : W. M. CLARKE DATE : 03/2014
DESIGN ENGINEER OF RECORD : W. M. CLARKE DATE : 05/2014

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN
NEW HANOVER COUNTY



THIS PROJECT IS WITHIN THE WILMINGTON MUNICIPAL BOUNDARIES.

LOCATION: Bridge #8 on US 117 / NC 132 SBL (College Rd)
across US 17 / NCDOT RR R/W (Market St)
TYPE OF WORK: Bridge Preservation - Bridge Preservation with
Latex Modified Concrete and Joint Replacement



N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2145

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
J. S. KITE, P.E. EASTERN TRAFFIC CONTROL ENGINEER
D. W. BISSETTE, PE TRAFFIC CONTROL PROJECT DESIGN ENGINEER



INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-1B & TMP 1C	TRANSPORTATION OPERATIONS PLAN (MANAGEMENT STRATEGIES, GENERAL NOTES, LOCAL NOTES AND PHASING)
TMP-2	DETOUR SIGNING
TMP-3 & TMP-4	PHASE 1 DETAILS

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

R. B. EARLY, PE TRAFFIC CONTROL PROJECT ENGINEER
R. B. EARLY, PE TRAFFIC CONTROL PROJECT DESIGN ENGINEER
J. A. PHILLIPS TRAFFIC CONTROL DESIGN ENGINEER

APPROVED: *Phonda B. Early*
DATE: 4/29/14

SEAL



SHEET NO.
TMP-1

BP-5500F

TIP PROJECT:

4:32:48 PM BP-5500F-te-TMP_01.dgn
PLEASE BRING TO THE OFFICE TO SIGN AND DATE
QA/QC STAGE:
REVIEW:
CONCUR:
REVISE:
VERIFY:

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS, OR RESULT IN DUPLICATE, OR UNDESIRABLE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES, AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
US 117 / NC 132 MARTIN LUTHER KING JR PKWY	5:00 AM TO 11:00 PM

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME
US 117 / NC 132 MARTIN LUTHER KING JR PKWY

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 5:00 AM DECEMBER 31st TO 11:00 PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 11:00 PM THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 5:00 AM THURSDAY AND 11:00 PM MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 5:00 AM FRIDAY TO 11:00 PM TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 5:00 AM THE DAY BEFORE INDEPENDENCE DAY AND 11:00 PM THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 5:00 AM THE THURSDAY BEFORE INDEPENDENCE DAY AND 11:00 PM THE TUESDAY AFTER INDEPENDENCE DAY.

- FOR LABOR DAY, BETWEEN THE HOURS OF 5:00 AM FRIDAY AND 11:00 PM TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 5:00 AM TUESDAY TO 11:00 PM MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 5:00 AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 11:00 PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
US 117 / NC 132	5:00 AM TO 11:00 PM

LANE AND SHOULDER CLOSURE REQUIREMENTS

- REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

- DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE OF THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

- NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

- WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

- INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
US 117 / NC 132 (COLLEGE RD)	PAINT	TEMPORARY RAISED

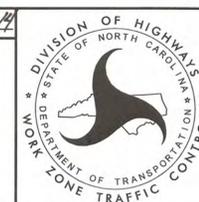
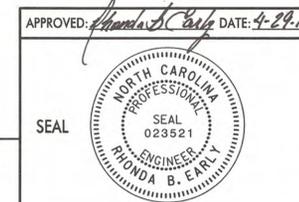
- PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

4:32:37 PM
BP-5500F
BP-5500F.dwg
\$\$\$\$\$USERNAME\$\$\$\$\$

REVISIONS

REVIEW:
CONCUR:
REVISE:
VERIFY:

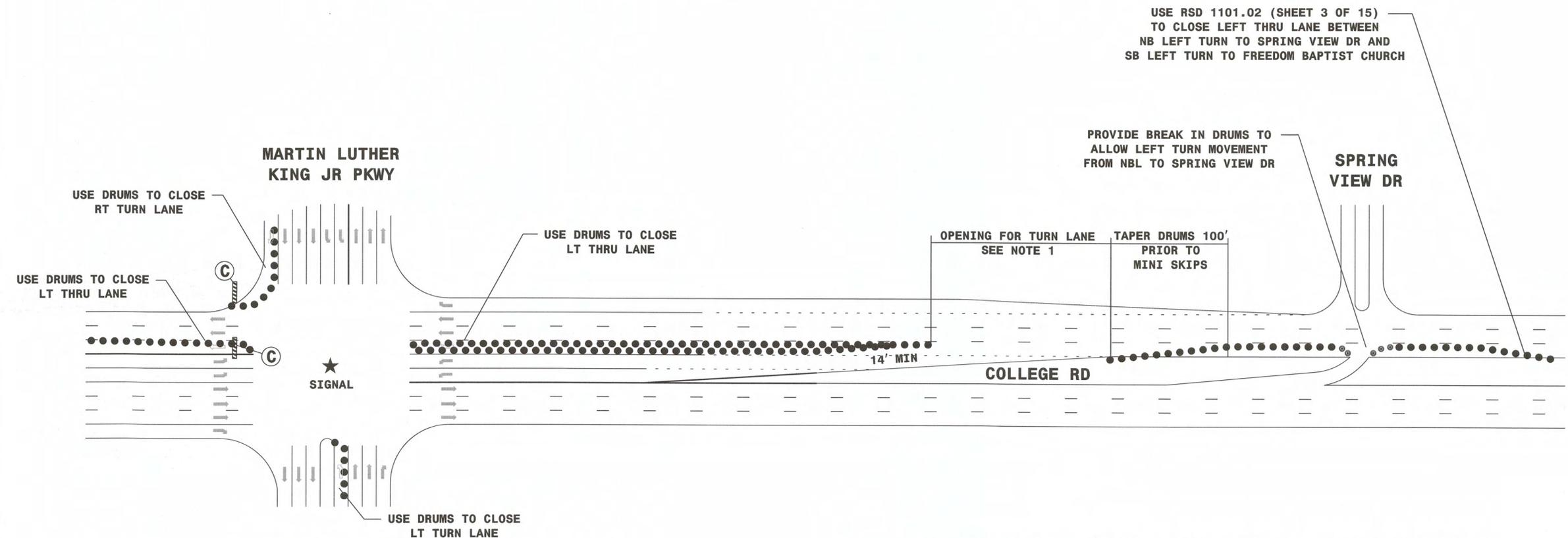
HNTB HNTB NORTH CAROLINA, P.C.
343 E. SIX FORKS ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27609
NC LICENSE NO: C-1554



TRANSPORTATION
MANAGEMENT PLAN

OPERATIONS PLAN:
GENERAL NOTES

8/17/99



NOTE 1: USE EXISTING TURN LANE OPENING, BUT NO LESS THAN 1/2 THE ORIGINAL LENGTH, OR AS DIRECTED BY THE ENGINEER.

NOTE:
* USE SKINNY DRUMS AT TURN RADII AS NEEDED TO PROVIDE BETTER SIGHT DISTANCE

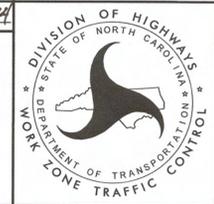
REVISIONS

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\$\$\$\$\$SUBNAME\$\$\$\$\$

QA/QC STAGE:
REVIEW:
CONCUR:
REVISE:
VERIFY:

HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

APPROVED: *Phonda B. Ealy* DATE: 4-29-14
SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
023521
PHONDA B. EALY



TRANSPORTATION
MANAGEMENT PLAN

PHASE I
DETAIL