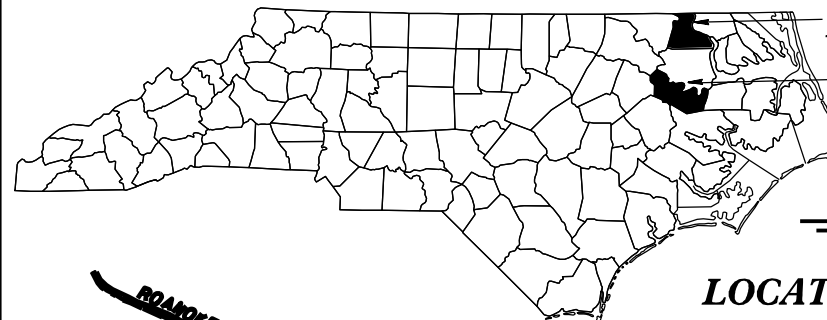


CONTRACT NO. D000100 TIP# BP-53000E



HERTFORD  
MARTIN

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# HERTFORD & MARTIN COUNTIES

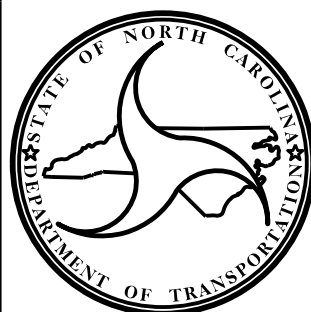
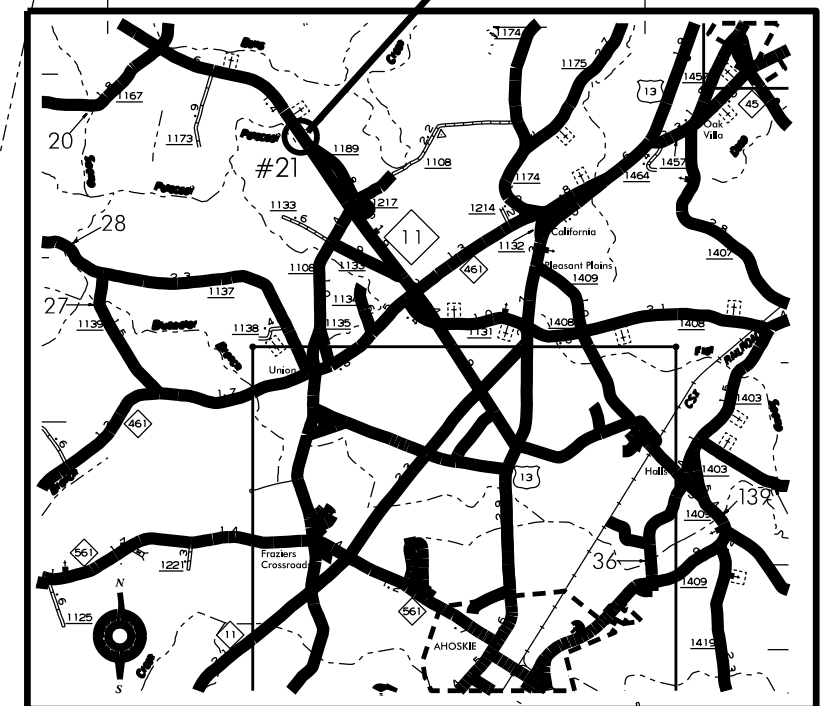
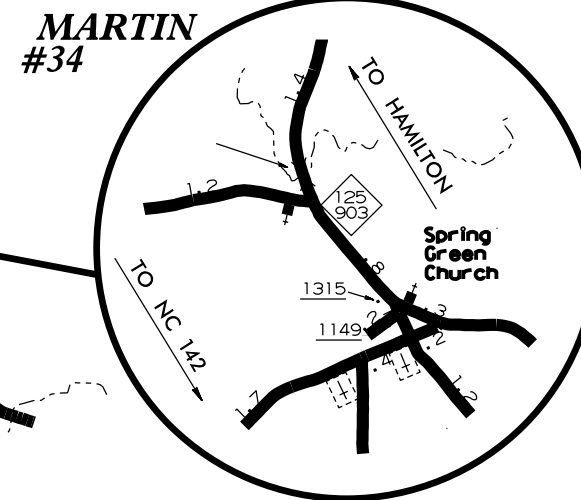
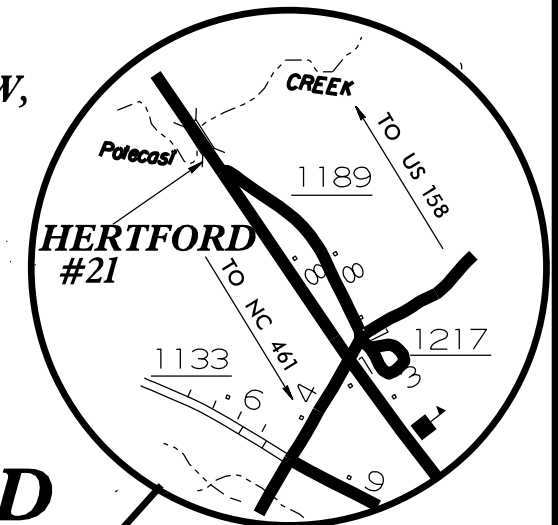
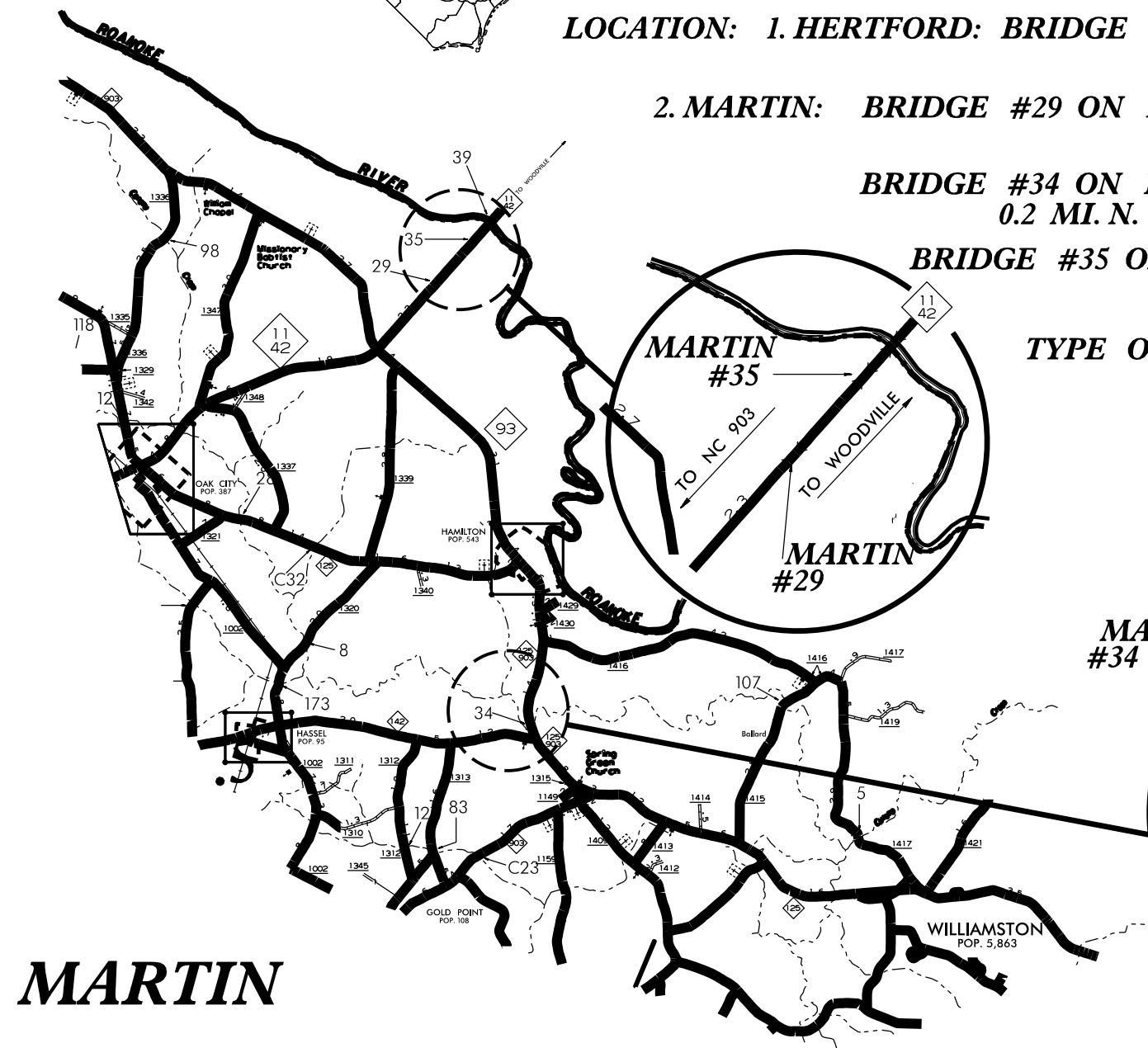
LOCATION: 1.HERTFORD: BRIDGE #21 ON NC 11 ACROSS POTECASI CREEK,  
0.1 MI. N. OF JCT. SR 1189.

2. MARTIN: BRIDGE #29 ON NC 11 ACROSS ROANOKE RIVER OVERFLOW,  
1.2 MI. N. OF JCT. NC903

BRIDGE #34 ON NC 125 ACROSS CONOHO CREEK,  
0.2 MI. N. OF JCT. NC 142

BRIDGE #35 ON NC 11 ACROSS ROANOKE RIVER  
OVERFLOW, 1.6 MI. N. OF NC903

TYPE OF WORK: BRIDGE DECK PRESERVATION



## DESIGN DATA

BRIDGE #21  
ADT 2008 = 5900  
BRIDGE #29  
ADT 2008 = 4100  
BRIDGE #34  
ADT 2008 = 3200  
BRIDGE #35  
ADT 2008 = 4100

## PROJECT LENGTH

BRIDGE #21  
LENGTH STRUCTURE PROJECT = .038 MILE  
BRIDGE #29  
LENGTH STRUCTURE PROJECT = .091 MILE  
BRIDGE #34  
LENGTH STRUCTURE PROJECT = .026 MILE  
BRIDGE #35  
LENGTH STRUCTURE PROJECT = .075 MILE

Prepared in the Office of:  
**DIVISION OF BRIDGE MANAGEMENT**

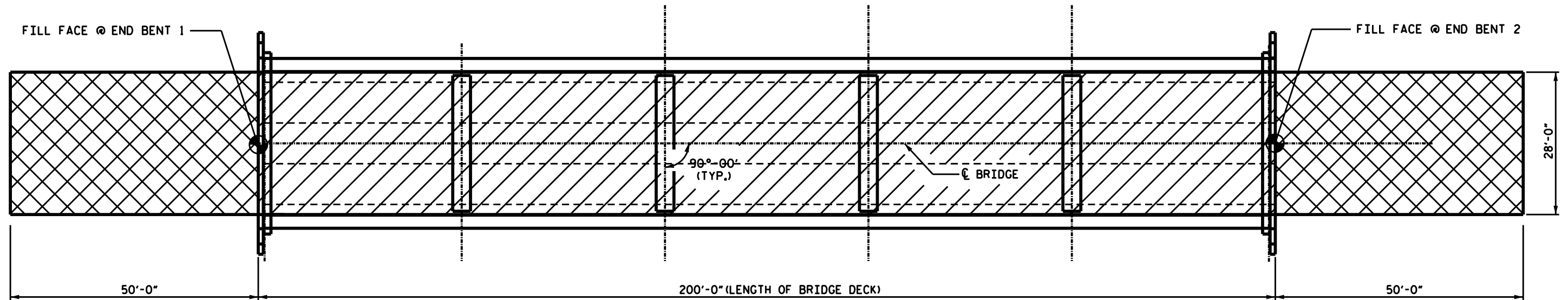
2006 STANDARD SPECIFICATIONS

LETTING DATE:  
**AUGUST 31, 2011**



DAN HOLDERMAN, PE  
PROJECT ENGINEER

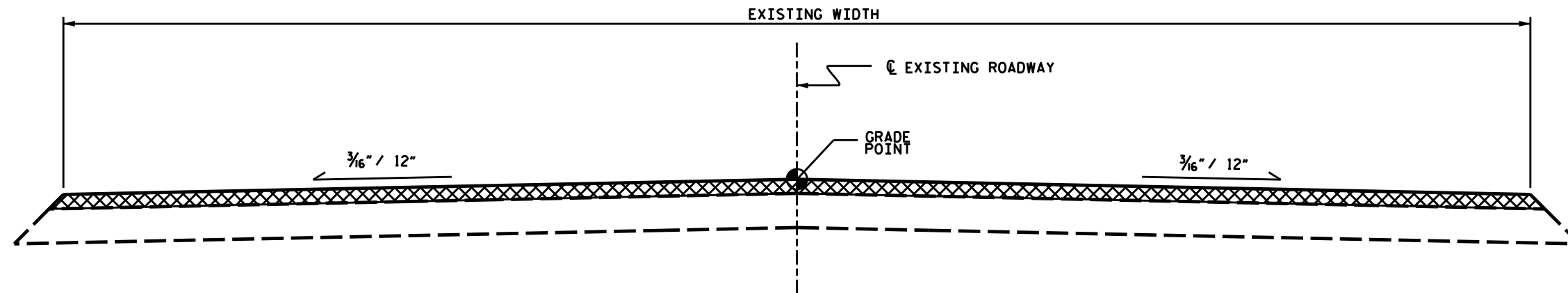






### PLAN

-  DECK SCARIFICATION AND HYDRODEMOLITION
-  APPROACH MILLING



### TYPICAL ROADWAY MILLING SECTION

(MILL TO MIN. 2" DEPTH)

PROJECT NO. BP-5300E  
COUNTY: HERTFORD  
STATION: N/A  
DECK REHAB BRIDGE NO. 21

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

TYPICAL ROADWAY SECTION  
AND MILLING DETAILS

28'-0" CLEAR ROADWAY-(90°-00' SKEW)

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			2			3
2			4			22

DRAWN BY : S. T. SANDOR DATE : FEB./2011  
CHECKED BY : R. N. / Z. W. DATE : APRIL/2011

\*\*\*\*\*SYSTIME\*\*\*\*\*

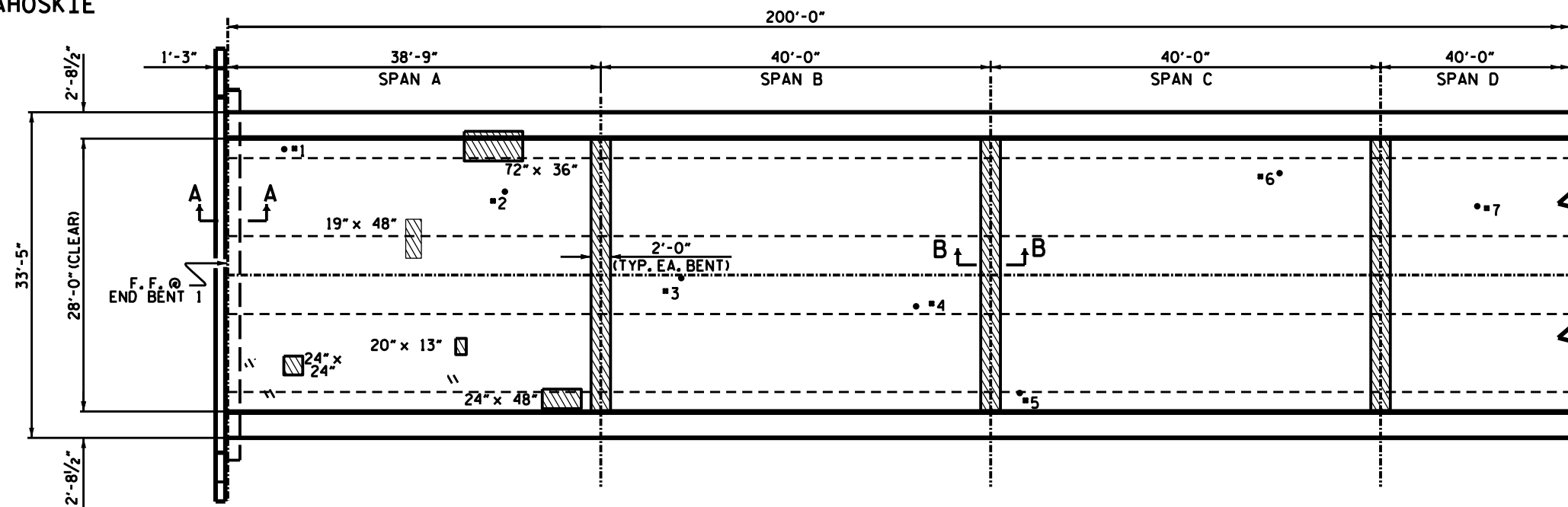
\*\*\*\*\*USERNAME\*\*\*\*\*

\*\*\*\*\*DCN\*\*\*\*\*

S-2

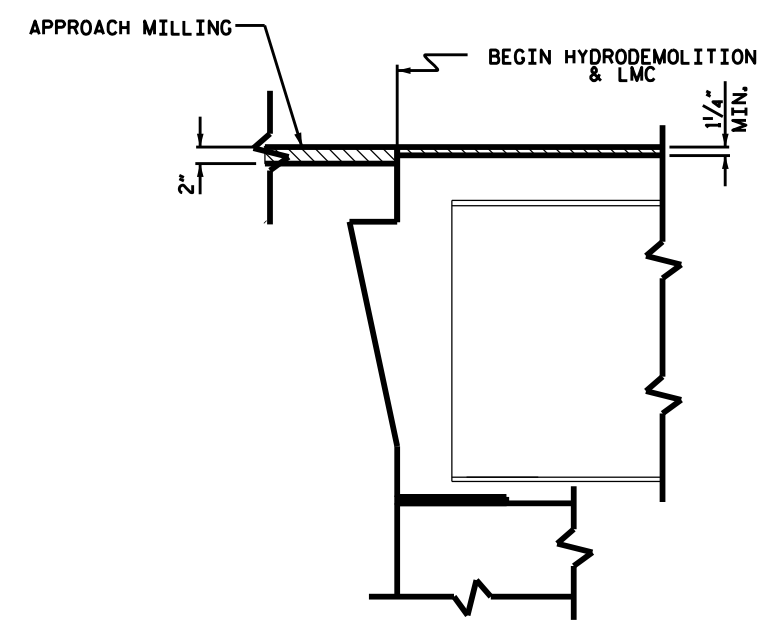
← TO US13  
TO AHOSKIE

TO US158  
MURFREESBORO →

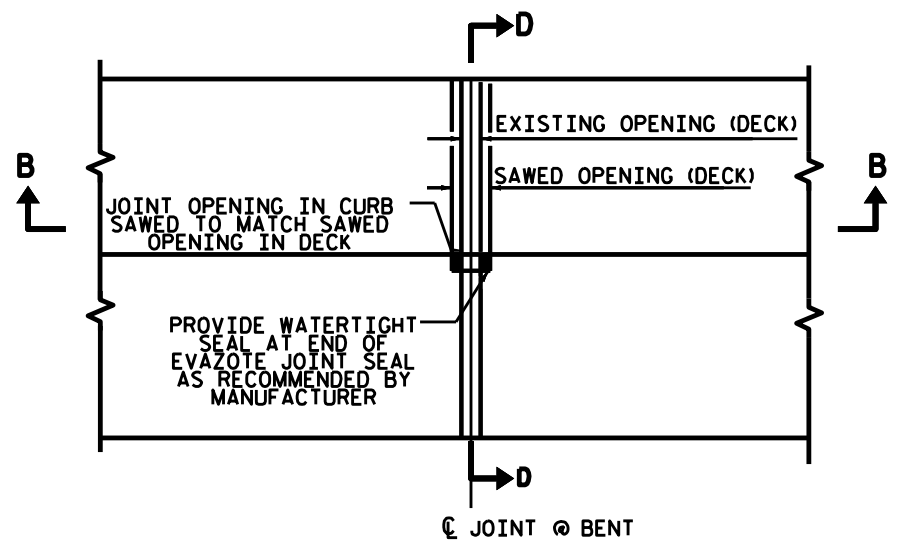


- APPROX. AREA: CLASS II REPAIR
- APPROX. AREA: CLASS III REPAIR
- APPROX. TEST BORING LOCATION

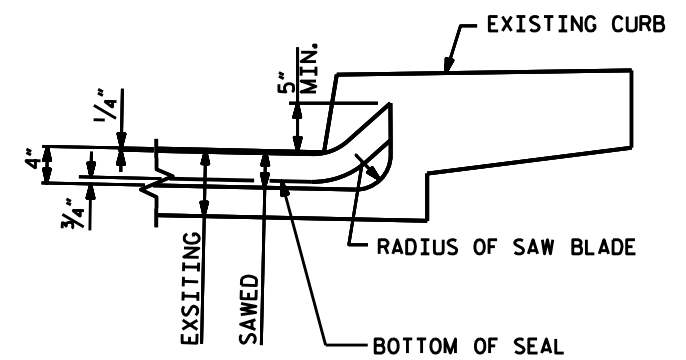
PLAN VIEW OF BRIDGE



SECTION A-A  
E.B. 1 & E.B. 2  
(NOT AT SCALE)



PLAN



SECTION D-D

EVAZOTE JOINT SEAL DETAILS  
(FOR ALL JT. SECTIONS)

FOR SECTION B-B SEE PAGE S-4

PROJECT NO. BP-5300E  
COUNTY: HERTFORD  
STATION: N/A  
DECK REHAB BRIDGE NO. 21

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

PLAN VIEW

DRAWN BY : S. T. SANDOR DATE : FEB./2011  
CHECKED BY : R. N. /Z. W. DATE : APRIL/2011

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			4
2			4			
TOTAL SHEETS						22

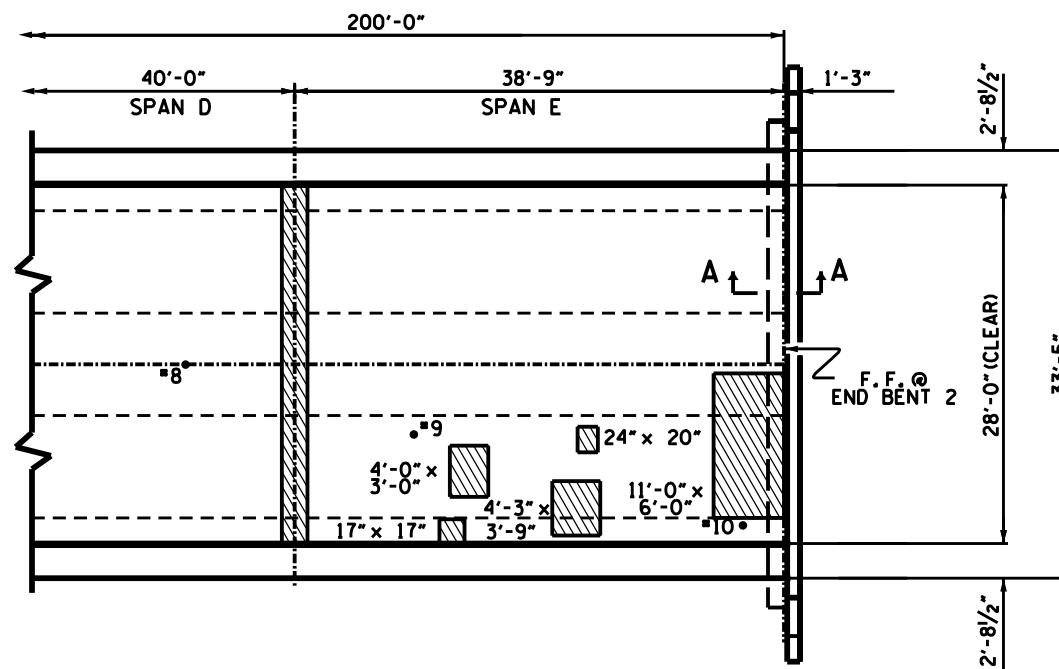
TO US13  
TO AHOSKIE

TO US158  
MURFREESBORO

# NOTES

FOR EVAZOTE JOINT SEAL SEE SPECIAL PROVISIONS.  
THE INSTALLED EVAZOTE JOINT SEAL SHALL BE WATER TIGHT.  
NOMINAL UNCOMPRESSED SEAL WIDTH OF EVAZOTE JOINT SEAL SHALL BE 2 1/2" AT BENTS.

- APPROX. AREA: CLASS II REPAIR
- APPROX. AREA: CLASS III REPAIR
- APPROX. TEST BORING LOCATION

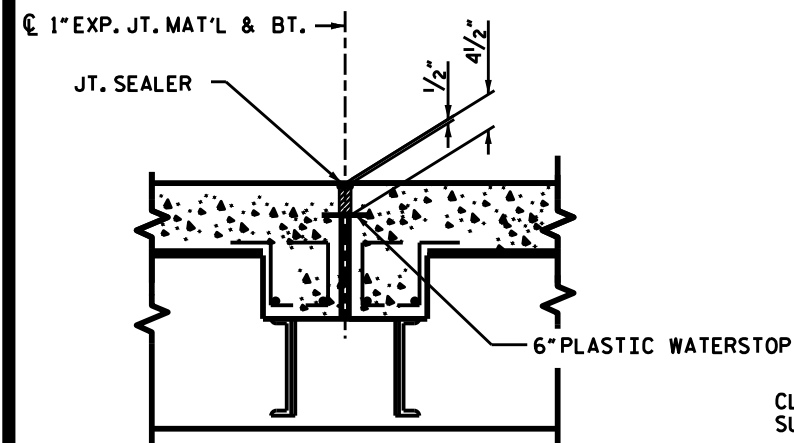


PLAN VIEW OF BRIDGE

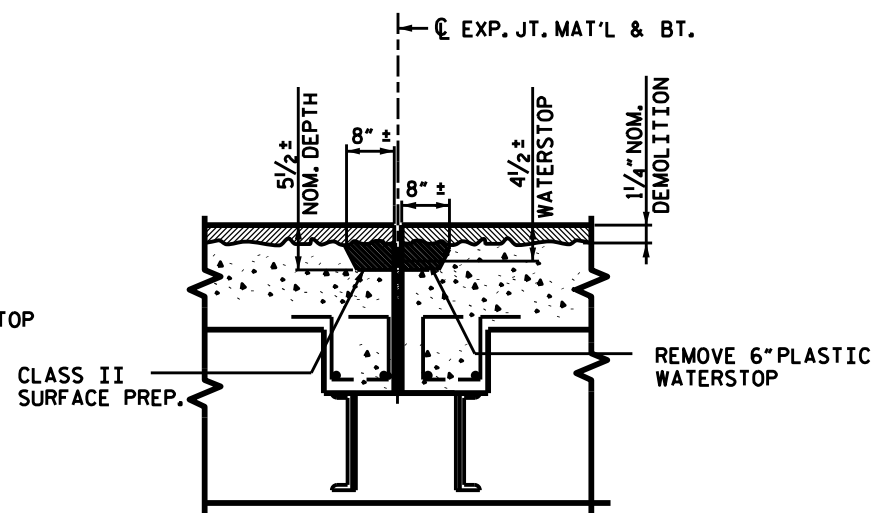
## ELASTOMERIC CONCRETE

BENTS	35 CU. FT.
* TOTAL	1.3 C.Y.

\* BASED ON THE MINIMUM BLOCKOUT SHOWN.  
ALL QUANTITIES ARE FOR INFORMATION ONLY.

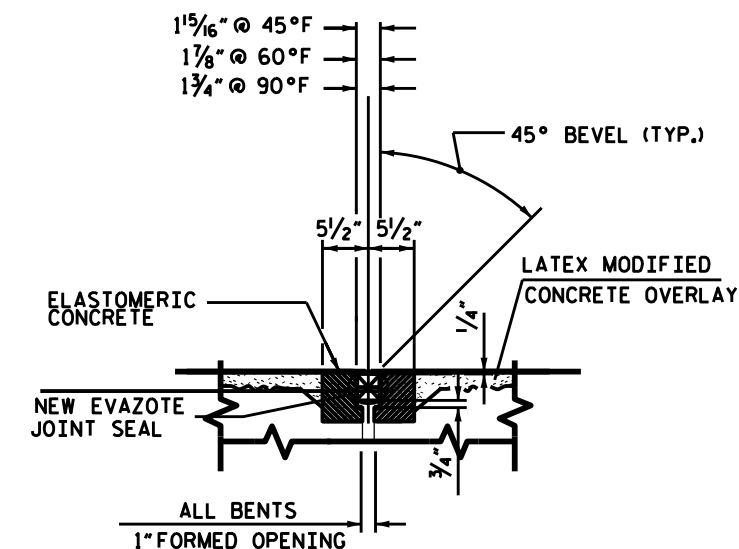


SECTION B-B  
(EXISTING)



SECTION B-B  
MINIMUM EXISTING JOINT DEMOLITION

NOTE: RETAIN ALL EXISTING REINF. STEEL. CLEAN AND REPAIR AS REQ'D.



SECTION B-B  
(PROPOSED EVAZOTE JT. SEAL)

PROJECT NO. BP-5300E  
COUNTY: HERTFORD  
STATION: N/A  
DECK REHAB BRIDGE NO. 21

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

PLAN VIEW

DRAWN BY : S. T. SANDOR DATE : APRIL/2011  
CHECKED BY : R. N. / Z. W. DATE : APRIL/2011

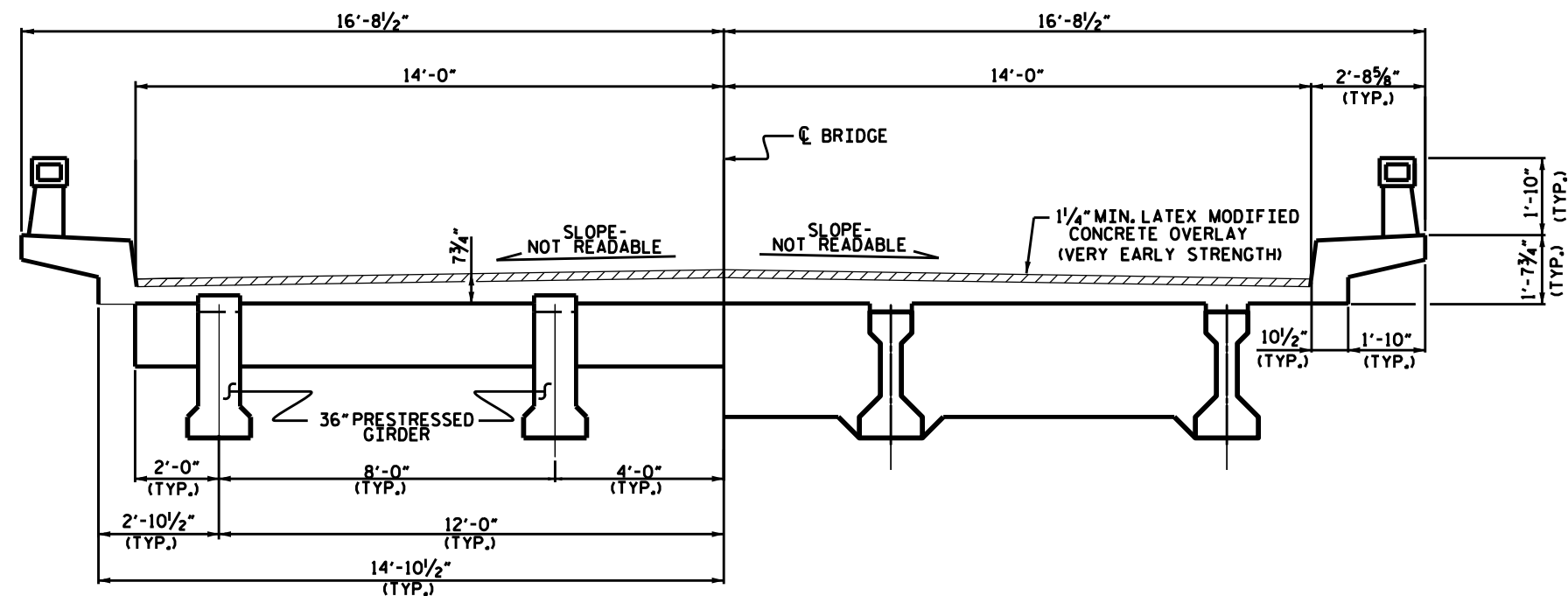
SYSTEM

USERNAME

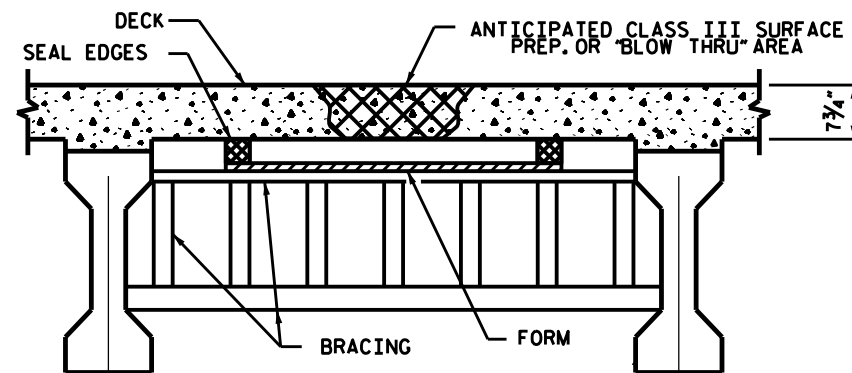
DCN

S-4

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			5
2			4			22

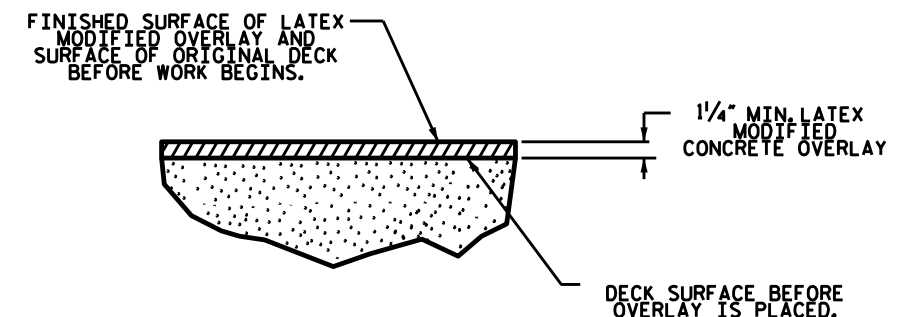


**TYPICAL SECTION**



**TYP. "BLOW THRU" CONTAINMENT AND FORMWORK**

A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.  
 SUBMIT DETAILS OF PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.  
 COST FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE PER SQ. YARD OF HYDRO-DEMOLITION.



**DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY**

**NOTES**

FOR OVERLAY OF BRIDGE DECKS WITH LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.  
 SEE SPECIAL PROVISIONS FOR SURFACE PREPARATION.  
 EXPANSION JOINTS SHALL BE COVERED WITH POLYETHYLENE SHEETING OR OTHER APPROVED DAMDS PRIOR TO BEGINNING CLASS I SURFACE PREPARATION. SEE SPECIAL PROVISIONS.  
 FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS .  
 THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN -OFF WATER FROM THE HYDRO- DEMOLITION PROCESS. SEE SPECIAL PROVISIONS.  
 THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS III SURFACE PREPARATION ARE APPROXIMATE. THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF DECK. SEE DETAIL.  
 THE CONSTRUCTION JOINTS SHALL BE SAWED NO MORE THAN 3 HOURS AFTER THE LATEX MODIFIED OVERLAY IS CAST. THE JOINT SHALL BE CLEANED OF ALL DEBRIS BEFORE THE SEALANT IS APPLIED. THE JOINT SEALER MATERIAL SHALL CONFORM WITH REQUIREMENTS OF TYPE SL LOW MODULUS SILICON SEALER.  
 EXISTING BRIDGE INFORMATION BASED ON BEST AVAILABLE DATA.

**TOTAL BILL OF MATERIAL**

* DECK SCARIFICATION	CLASS I SURFACE PREPARATION	CLASS II SURFACE PREPARATION	CLASS III SURFACE PREPARATION	CLASS AA CONCRETE	HYDRO-DEMOLITION OF BRIDGE DECK	LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH	PLACING & FINISHING LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH	EVAZOTE JOINT SEALS	GROOVING BRIDGE FLOORS
SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	C.Y.	SO.YDS.	C.Y.	SO.YDS.	LUMP SUM	SO. FT.
1664	1420	87	1	0	1508	52	1508	LUMP SUM	12029

ALL QUANTITY SHOWN ARE FOR INFORMATION ONLY.  
 \* INCLUDES APPROACH MILLING.

DRAWN BY : S. T. SANDOR DATE : APRIL/2011  
 CHECKED BY : R. N. / Z. W. DATE : MAY/2011

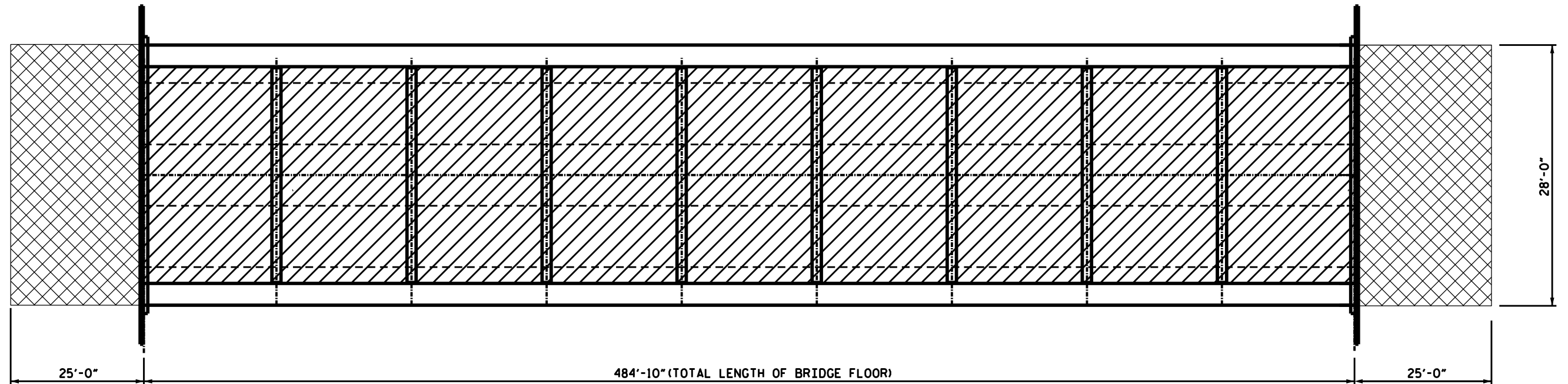
PROJECT NO. BP-5300E  
 COUNTY: MARTIN  
 STATION: N/A  
 BRIDGE NO. 29

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH



**TYPICAL SECTIONS**

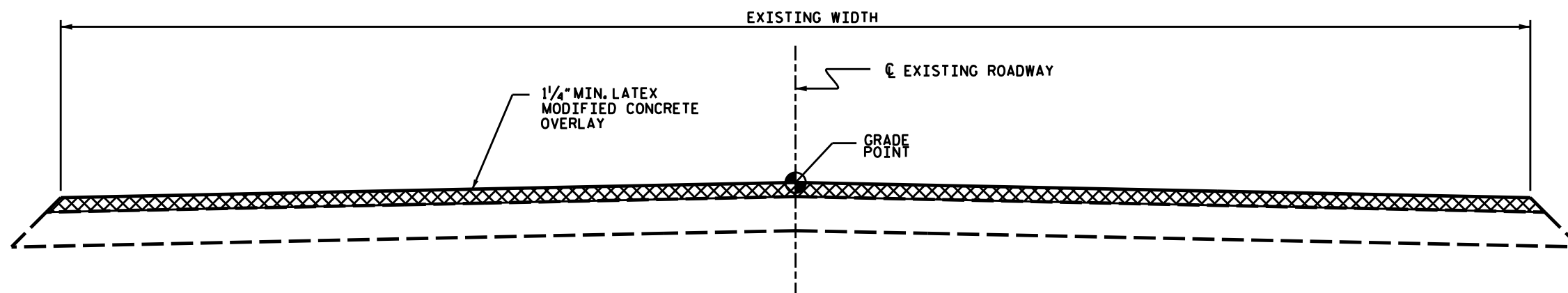
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			6
2			4			22

S-5



**PLAN**  
NOT AT SCALE

-  DECK SCARIFICATION AND HYDRODEMOLITION
-  APPROACH MILLING



**TYPICAL ROADWAY MILLING SECTION**  
(MILL MIN. TO 2 1/4" DEPTH)

PROJECT NO. BP-5300E  
COUNTY: MARTIN  
STATION: N/A  
DECK REHAB BRIDGE NO. 29

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

TYPICAL ROADWAY SECTION  
AND MILLING DETAILS  
28'-0" CLEAR ROADWAY-(90°-00' SKEW)

REVISIONS						SHEET NO. 7
NO.	BY	DATE	NO.	BY	DATE	
1			2			TOTAL SHEETS 22
2			4			

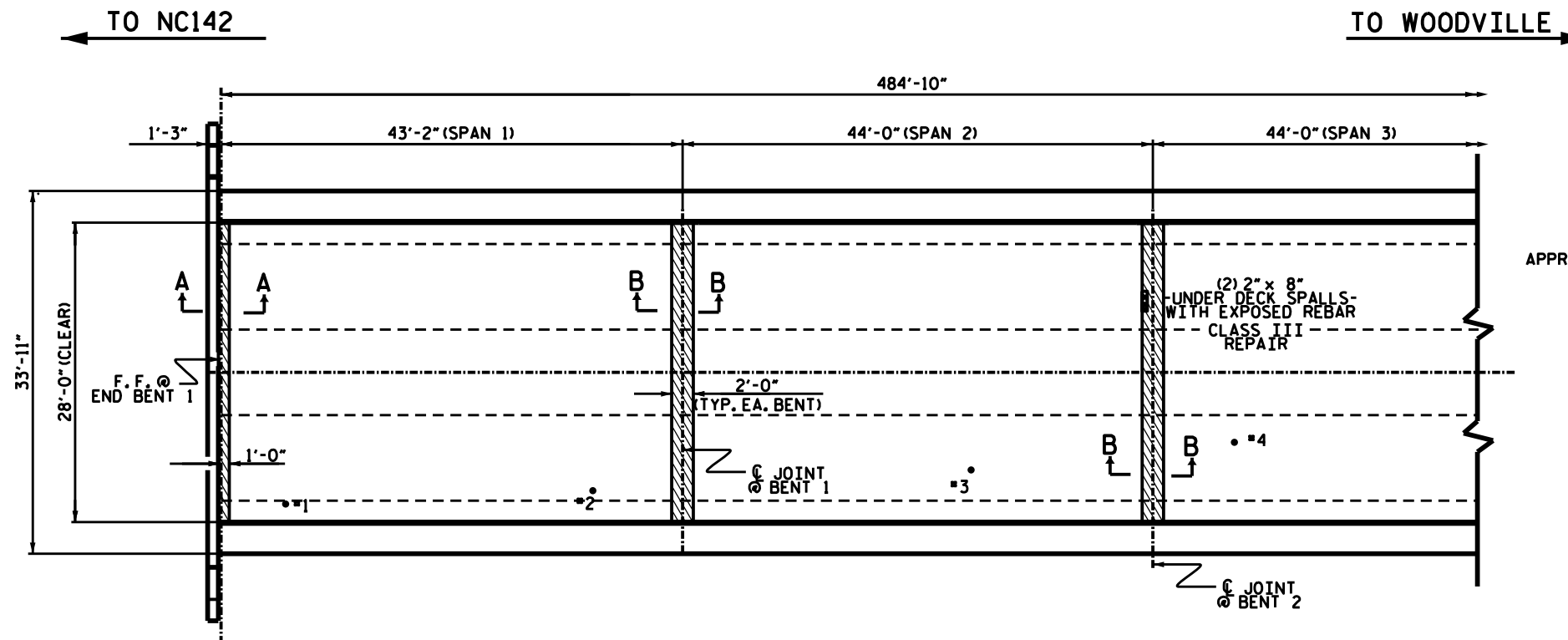
DRAWN BY : S. T. SANDOR DATE : APRIL/2011  
CHECKED BY : R. N. / Z. W. DATE : APRIL/2011

S-6

\*\*\*\*\*SYSTIME\*\*\*\*\*

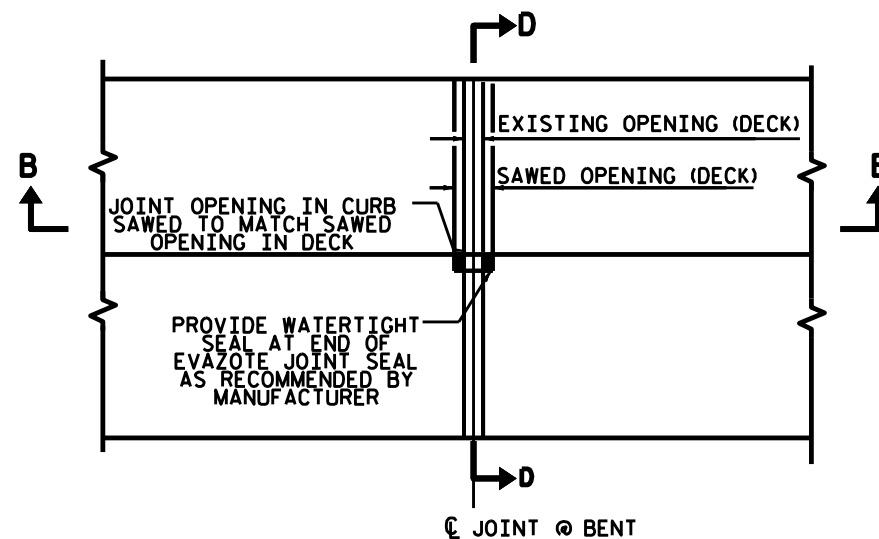
\*\*\*\*\*USERNAME\*\*\*\*\*

\*\*\*\*\*DGN\*\*\*\*\*

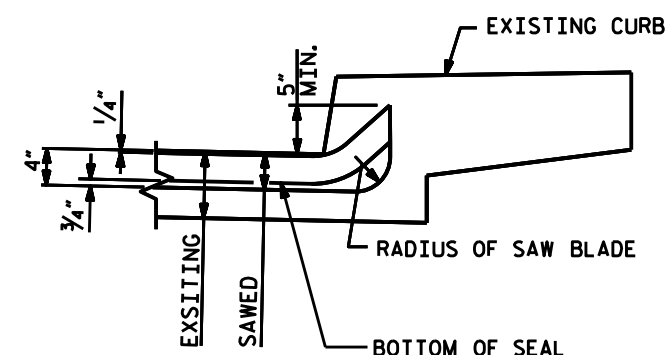


- APPROX. AREA: CLASS II REPAIR -SPALLS & PATCHES-  
 APPROX. AREA: CLASS III REPAIR  
 APPROX. TEST BORING LOCATION

**PARTIAL PLAN OF SPANS- DECK REPAIRS**



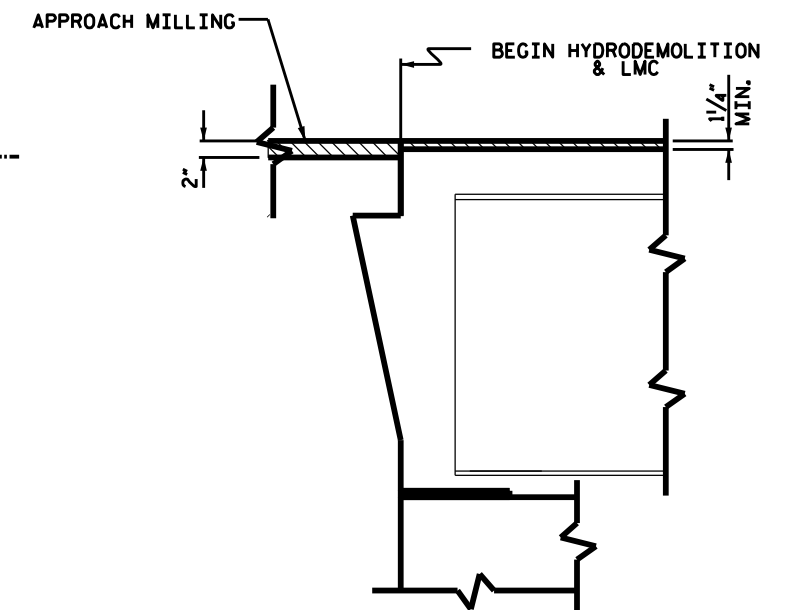
**PLAN**



**SECTION D-D**

**EVAZOTE JOINT SEAL DETAILS**

(FOR ALL JT. SECTIONS)  
FOR SECTION B-B SEE PAGE S-8.



**SECTION A-A**

E.B. 1 & E.B. 2  
(NOT AT SCALE)

PROJECT NO. BP-5300E  
 COUNTY: MARTIN  
 STATION: N/A  
 DECK REHAB BRIDGE NO. 29

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PLAN VIEW OF BRIDGE & JOINT DETAIL 28'-0" CLEAR ROADWAY (90°-00' SKEW)					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
S-7					8
					22

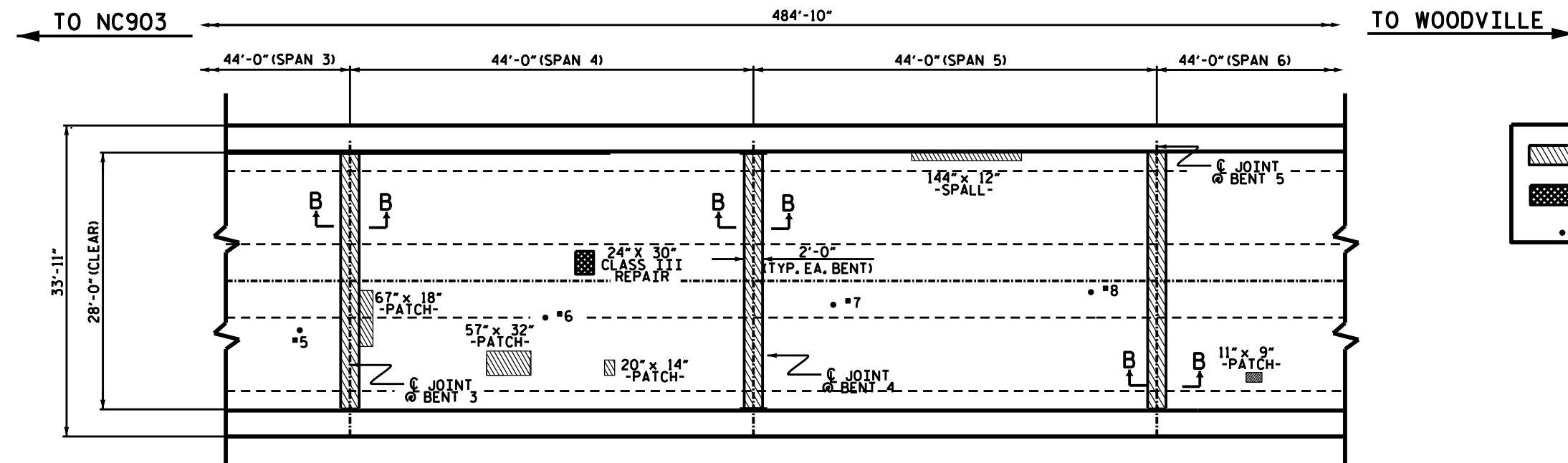
DRAWN BY : S. T. SANDOR DATE : APRIL/2011  
 CHECKED BY : R. N. / Z. W. DATE : MAY/2011

\*\*\*\*\*SYSTEM\*\*\*\*\*

\*\*\*\*\*USERNAME\*\*\*\*\*

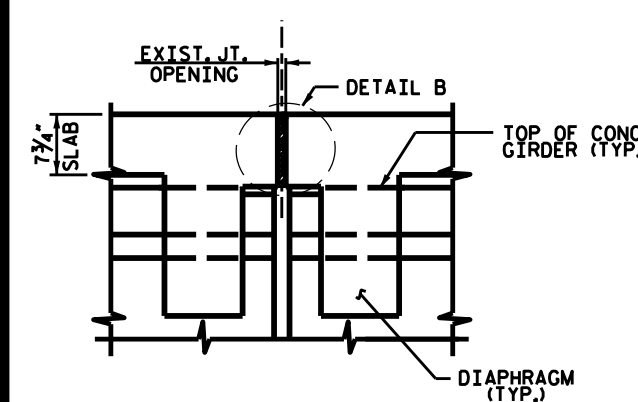
\*\*\*\*\*DCN\*\*\*\*\*



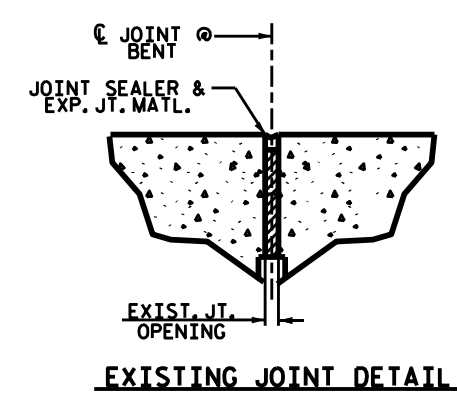


APPROX. AREA: CLASS II REPAIR  
 APPROX. AREA: CLASS III REPAIR  
 APPROX. TEST BORING LOCATION

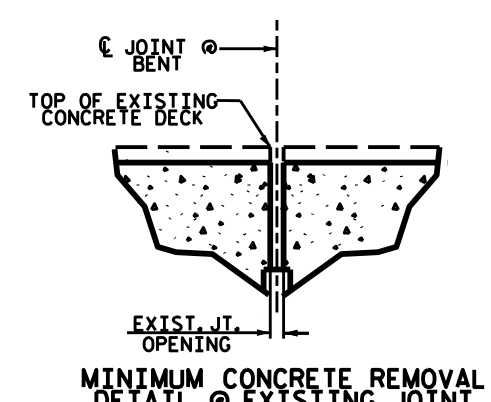
**PARTIAL PLAN OF SPANS- DECK REPAIRS**



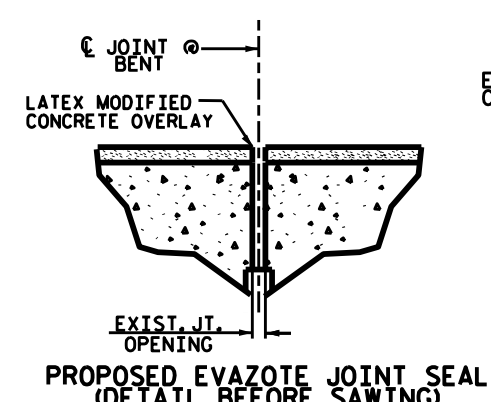
**SECTION B-B**  
(EXISTING JOINT)



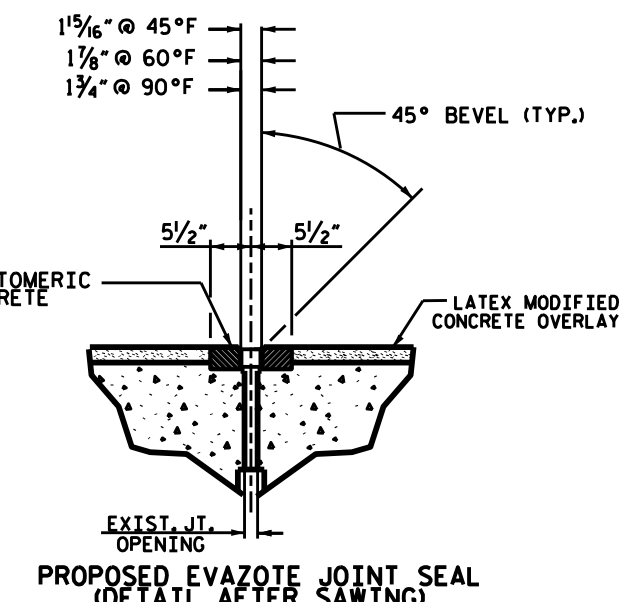
**EXISTING JOINT DETAIL**



**MINIMUM CONCRETE REMOVAL  
DETAIL @ EXISTING JOINT**



**PROPOSED EVAZOTE JOINT SEAL  
(DETAIL BEFORE SAWING)**



**PROPOSED EVAZOTE JOINT SEAL  
(DETAIL AFTER SAWING)**

**DETAIL B**

**NOTES**

FOR EVAZOTE JOINT SEAL SEE SPECIAL PROVISIONS.  
 THE INSTALLED EVAZOTE JOINT SEAL SHALL BE WATER TIGHT.  
 NOMINAL UNCOMPRESSED SEAL WIDTH OF EVAZOTE JOINT  
 SEAL SHALL BE 2 1/2" AT BENTS.

ELASTOMERIC CONCRETE	
BENTS	58 CU. FT.
* TOTAL	2.2 C.Y.

\* BASED ON THE MINIMUM BLOCKOUT SHOWN.  
 ALL QUANTITIES ARE FOR INFORMATION ONLY.

PROJECT NO. BP-5300E  
 COUNTY: MARTIN  
 STATION: N/A  
 DECK REHAB BRIDGE NO. 29

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 PLAN VIEW OF BRIDGE  
 & JOINT DETAIL  
 28'-0" CLEAR ROADWAY (90°-00' SKEW)

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			9
2			4			22

DRAWN BY : S. T. SANDOR DATE : APRIL/2011  
 CHECKED BY : R. N. / Z. W. DATE : MAY/2011

S-8

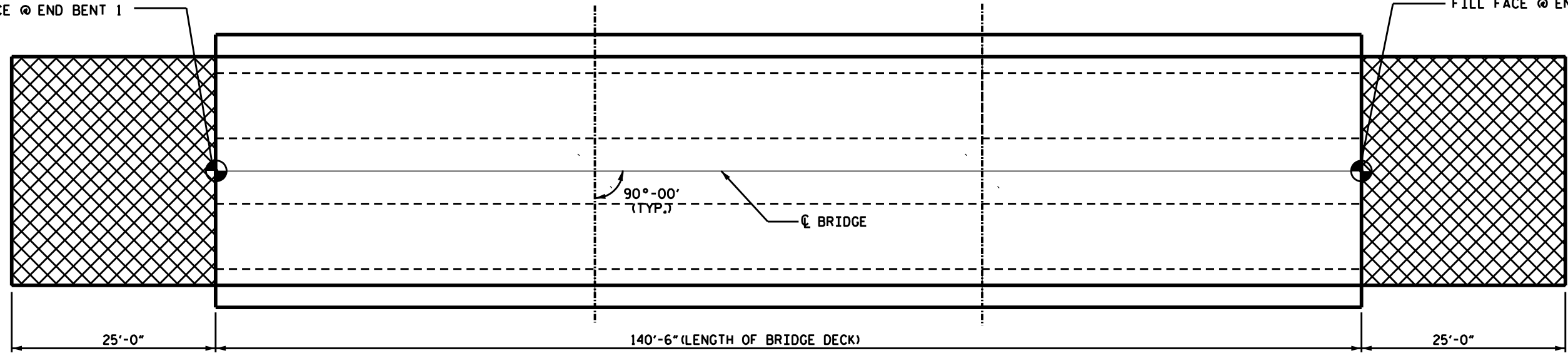


REVISIONS						CURTIS NO.
NO.	BY	DATE	NO.	BY	DATE	10
1			3			TOTAL CURTIS
2			4			22

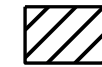


FILL FACE @ END BENT 1

FILL FACE @ END BENT 2



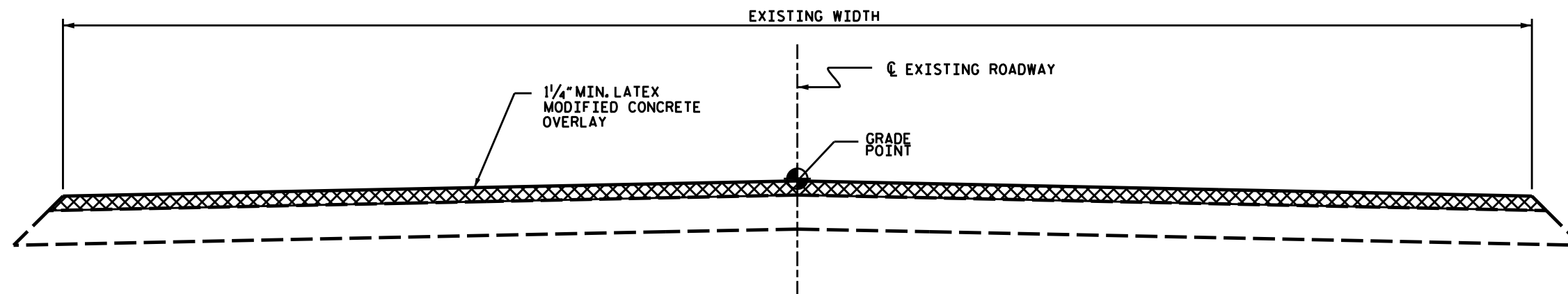
### PLAN



DECK SCARIFICATION AND HYDRODEMOLITION



APPROACH MILLING



### TYPICAL ROADWAY MILLING SECTION

(MILL TO 2" DEPTH)

PROJECT NO. BP-5300E  
COUNTY: MARTIN  
STATION: N/A  
DECK REHAB BRIDGE NO. 34

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

TYPICAL ROADWAY SECTION  
AND MILLING DETAILS

28'-0" CLEAR ROADWAY-(90°-00' SKEW)

REVISIONS						SHEET NO. 12
NO.	BY	DATE	NO.	BY	DATE	
1			2			TOTAL SHEETS 22
2			4			

DRAWN BY : S. T. SANDOR DATE : FEB./2011  
CHECKED BY : R. N. / Z. W. DATE : MAY/2011

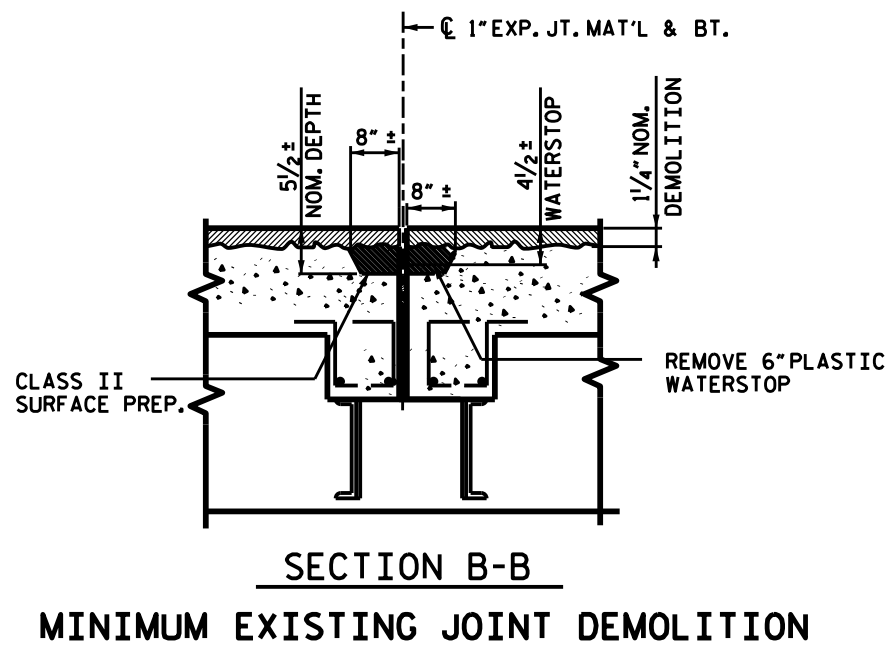
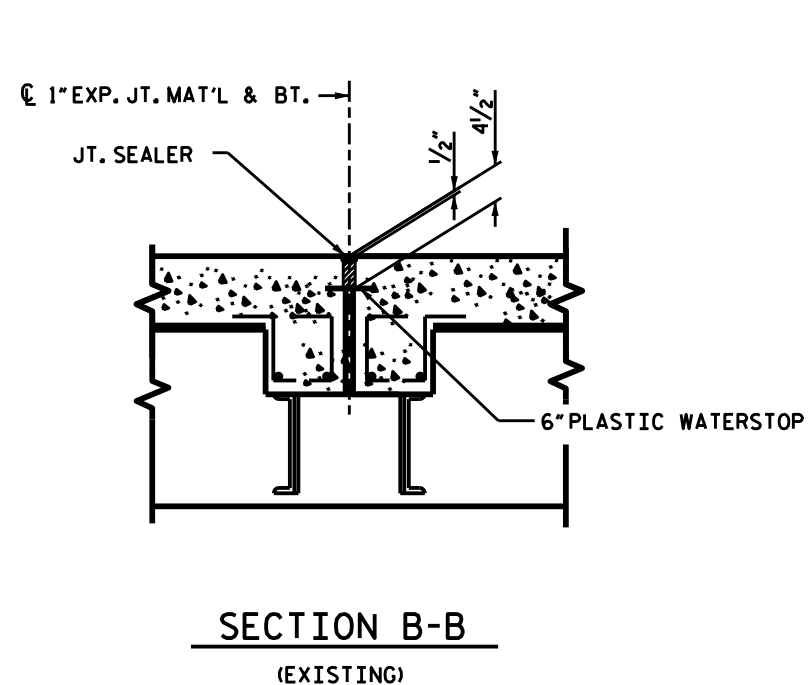
\*\*\*\*\*SYSTIME\*\*\*\*\*

\*\*\*\*\*USERNAME\*\*\*\*\*

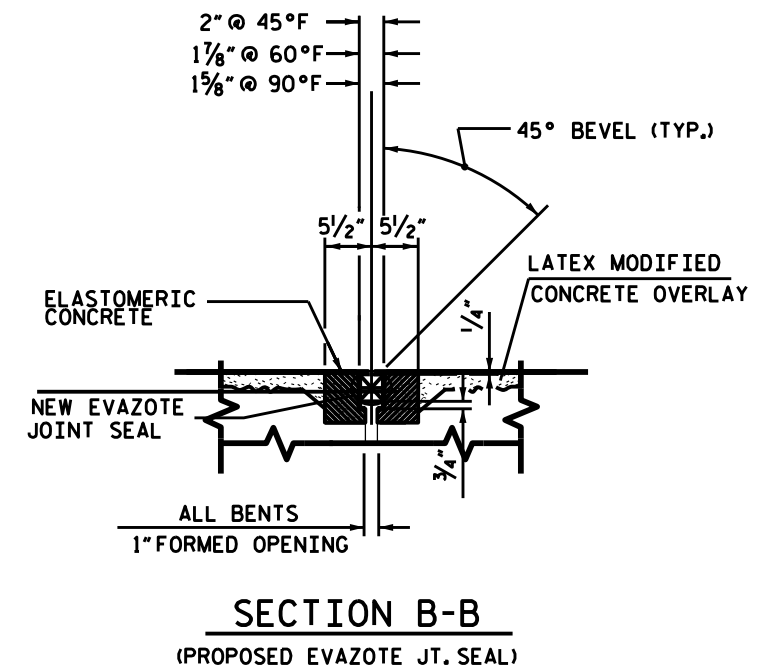
\*\*\*\*\*DCN\*\*\*\*\*

S-11





NOTE:  
RETAIN ALL EXISTING REINF. STEEL.  
CLEAN AND REPAIR AS REQ'D.



ELASTOMERIC CONCRETE	
BENTS	18 CU. FT.
* TOTAL	0.7 C.Y.

\* BASED ON THE MINIMUM BLOCKOUT SHOWN.  
ALL QUANTITIES ARE FOR INFORMATION ONLY.

## NOTES

FOR EVAZOTE JOINT SEAL SEE SPECIAL PROVISIONS.  
THE INSTALLED EVAZOTE JOINT SEAL SHALL BE WATER TIGHT.  
NOMINAL UNCOMPRESSED SEAL WIDTH OF EVAZOTE JOINT  
SEAL SHALL BE 2 1/2" AT BENTS.

PROJECT NO. BP-5300E  
COUNTY: MARTIN  
STATION: N/A  
DECK REHAB BRIDGE NO. 34

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

## BENT JOINT DETAILS

28'-0" CLEAR ROADWAY (90°-00' SKEW)

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			2			14
2			4			22

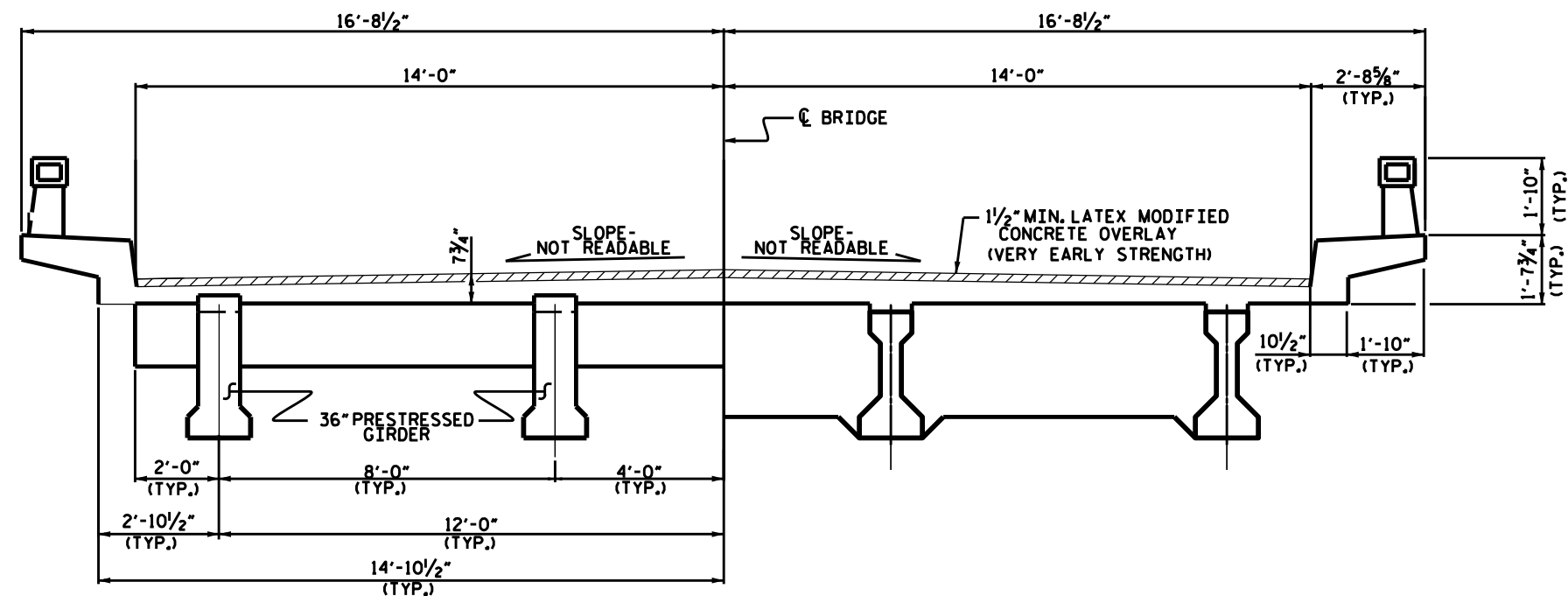
DRAWN BY : S. T. SANDOR DATE : FEB./2011  
CHECKED BY : R. N. / Z. W. DATE : MAY/2011

\*\*\*\*\*SYTIME\*\*\*\*\*

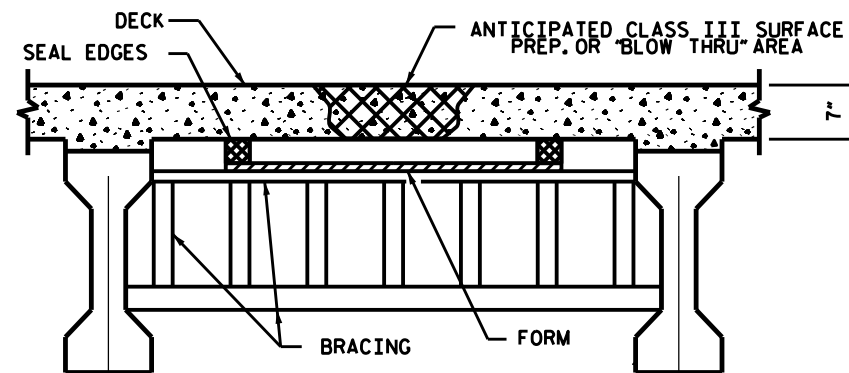
\*\*\*\*\*USERNAME\*\*\*\*\*

\*\*\*\*\*DGN\*\*\*\*\*

S-13

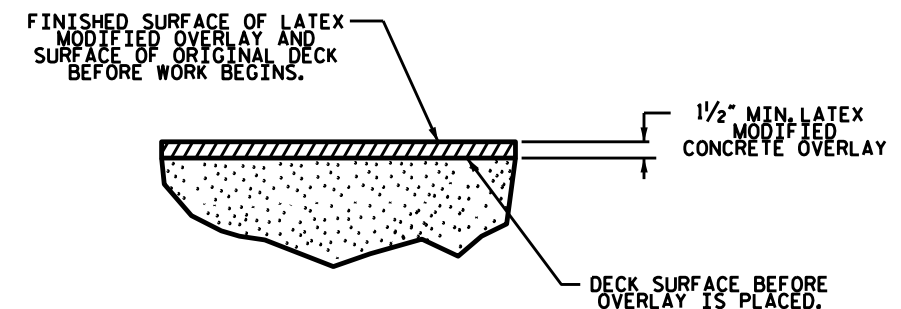


**TYPICAL SECTION**



**TYP. "BLOW THRU" CONTAINMENT AND FORMWORK**

A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.  
 SUBMIT DETAILS OF PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.  
 COST FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE PER SQ. YARD OF HYDRO-DEMOLITION.



**DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY**

**NOTES**

FOR OVERLAY OF BRIDGE DECKS WITH LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.  
 SEE SPECIAL PROVISIONS FOR SURFACE PREPARATION.  
 EXPANSION JOINTS SHALL BE COVERED WITH POLYETHYLENE SHEETING OR OTHER APPROVED DAMS PRIOR TO BEGINNING CLASS I SURFACE PREPARATION. SEE SPECIAL PROVISIONS.  
 FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS .  
 THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN -OFF WATER FROM THE HYDRO- DEMOLITION PROCESS. SEE SPECIAL PROVISIONS.  
 THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS III SURFACE PREPARATION ARE APPROXIMATE. THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF DECK. SEE DETAIL.  
 THE CONSTRUCTION JOINTS SHALL BE SAWED NO MORE THAN 3 HOURS AFTER THE LATEX MODIFIED OVERLAY IS CAST. THE JOINT SHALL BE CLEANED OF ALL DEBRIS BEFORE THE SEALANT IS APPLIED. THE JOINT SEALER MATERIAL SHALL CONFORM WITH REQUIREMENTS OF TYPE SL LOW MODULUS SILICON SEALER.  
 FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.  
 EXISTING BRIDGE INFORMATION BASED ON BEST AVAILABLE DATA.

**TOTAL BILL OF MATERIAL**

*DECK SCARIFICATION	*CLASS I SURFACE PREPARATION	*CLASS II SURFACE PREPARATION	*CLASS III SURFACE PREPARATION	*CLASS AA CONCRETE	HYDRO-DEMOLITION OF BRIDGE DECK	LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH	PLACING & FINISHING LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH	EVAZOTE JOINT SEALS	GROOVING BRIDGE FLOORS
SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	C.Y.	SO.YDS.	C.Y.	SO.YDS.	LUMP SUM	SO. FT.
1390	1169	64	1	0	1234	52	1234	LUMP SUM	9846

ALL QUANTITY SHOWN ARE FOR INFORMATION ONLY.  
 \* INCLUDES APPROACH MILLING.

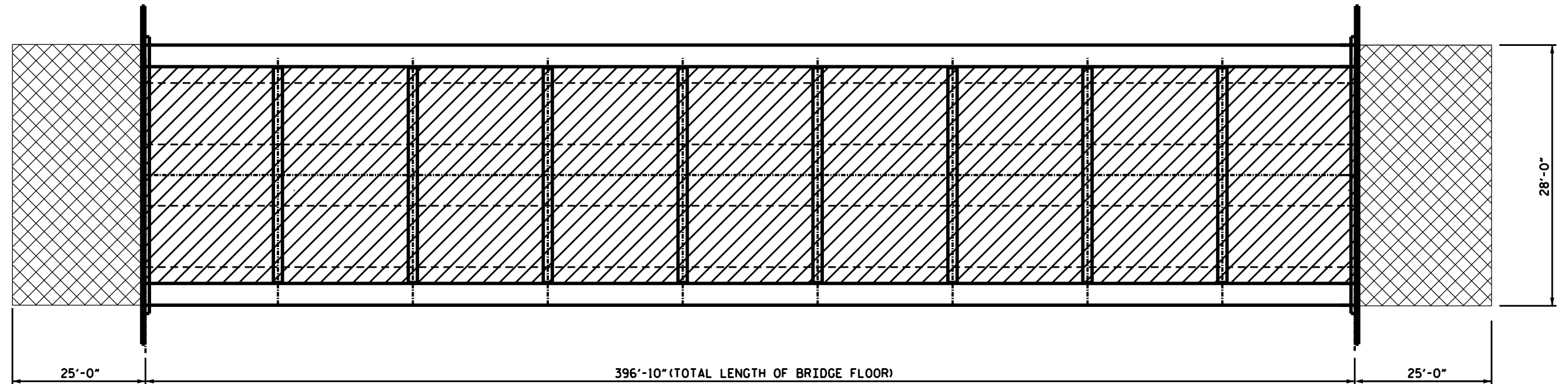
DRAWN BY : S. T. SANDOR DATE : APRIL/2011  
 CHECKED BY : R. N. / Z. W. DATE : MAY/2011

PROJECT NO. BP-5300E  
 COUNTY: MARTIN  
 STATION: N/A  
 BRIDGE NO. 35



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 TYPICAL SECTIONS OF  
 BRIDGE No. 29 ON  
 NC 11 OVER ROANOKE  
 RIVER OVERFLOW

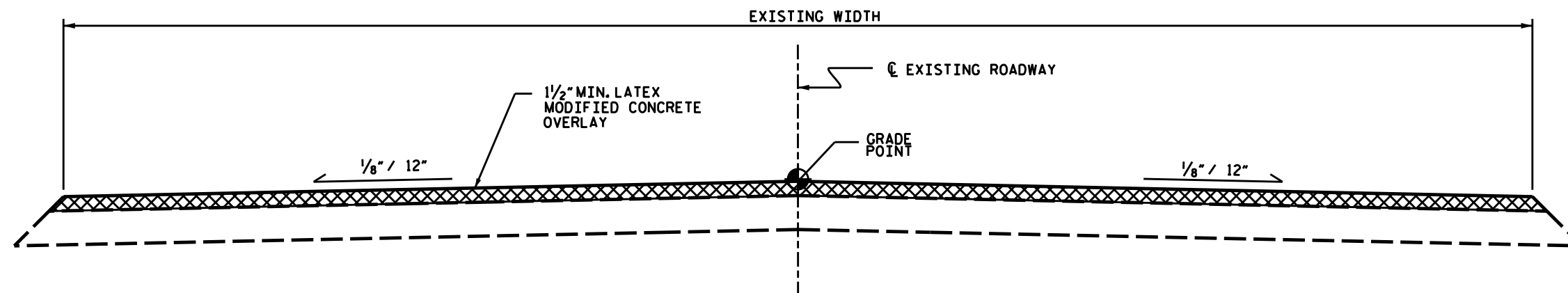
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	TOTAL SHEETS
1			3			15
2			4			22

S-14



**PLAN**  
NOT AT SCALE

-  DECK SCARICATION AND HYDRODEMOLITION
-  APPROACH MILLING



**TYPICAL ROADWAY MILLING SECTION**  
(MILL TO MIN. 2 1/4" DEPTH)

PROJECT NO. BP-5300E  
COUNTY: MARTIN  
STATION: N/A  
DECK REHAB BRIDGE NO. 35

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

TYPICAL ROADWAY SECTION  
AND MILLING DETAILS  
28'-0" CLEAR ROADWAY-(90°-00' SKEW)

REVISIONS						SHEET NO. 16 TOTAL SHEETS 22
NO.	BY	DATE	NO.	BY	DATE	
1			2			
2			4			

DRAWN BY : S. T. SANDOR DATE : FEB./2011  
CHECKED BY : R. N. / Z. W. DATE : APRIL/2011

\*\*\*\*\*SYSTIME\*\*\*\*\*

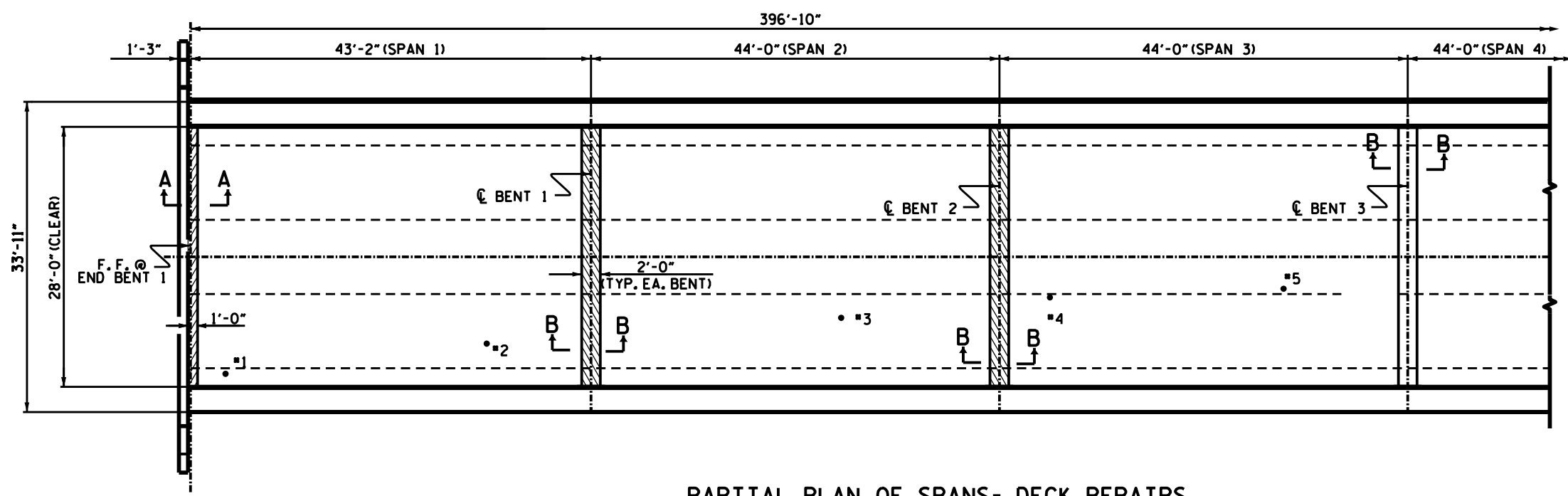
\*\*\*\*\*USERNAME\*\*\*\*\*

\*\*\*\*\*DCN\*\*\*\*\*

S-15



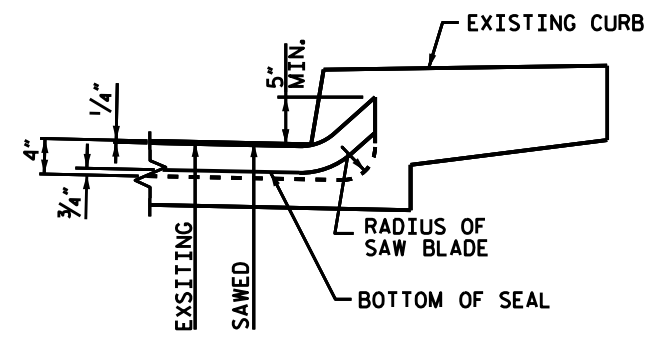
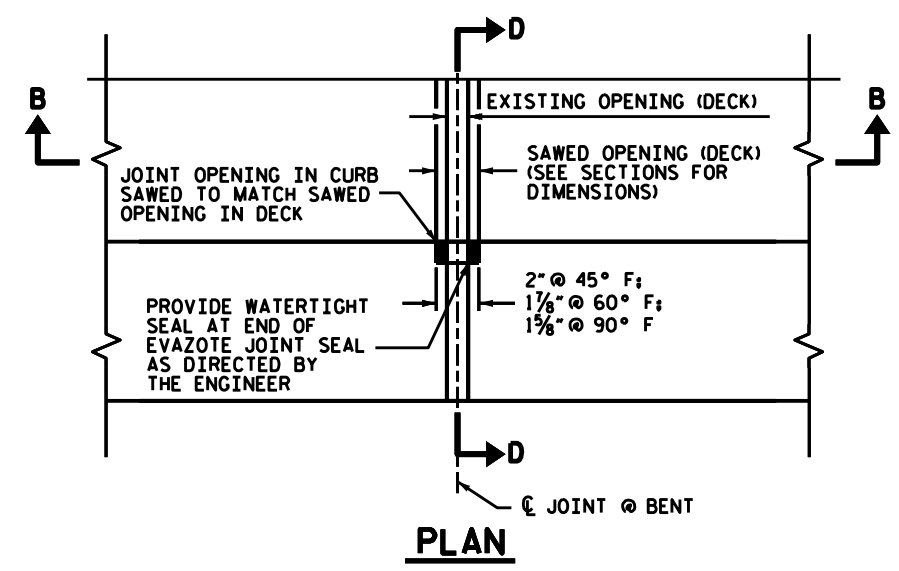
← TO NC93 TO WOODVILLE →



**PARTIAL PLAN OF SPANS- DECK REPAIRS**

FOR SECTION A-A SEE SHEET S-18

	APPROX. AREA: CLASS II REPAIR
	APPROX. AREA: CLASS III REPAIR
•	APPROX. TEST BORING LOCATION



**SECTION D-D**

**EVAZOTE JOINT SEAL DETAILS**

(FOR ALL JT. SECTIONS)  
FOR SECTION B-B SEE PAGE S-17

PROJECT NO. BP-5300E  
 COUNTY: MARTIN  
 STATION: N/A  
 DECK REHAB BRIDGE NO. 35

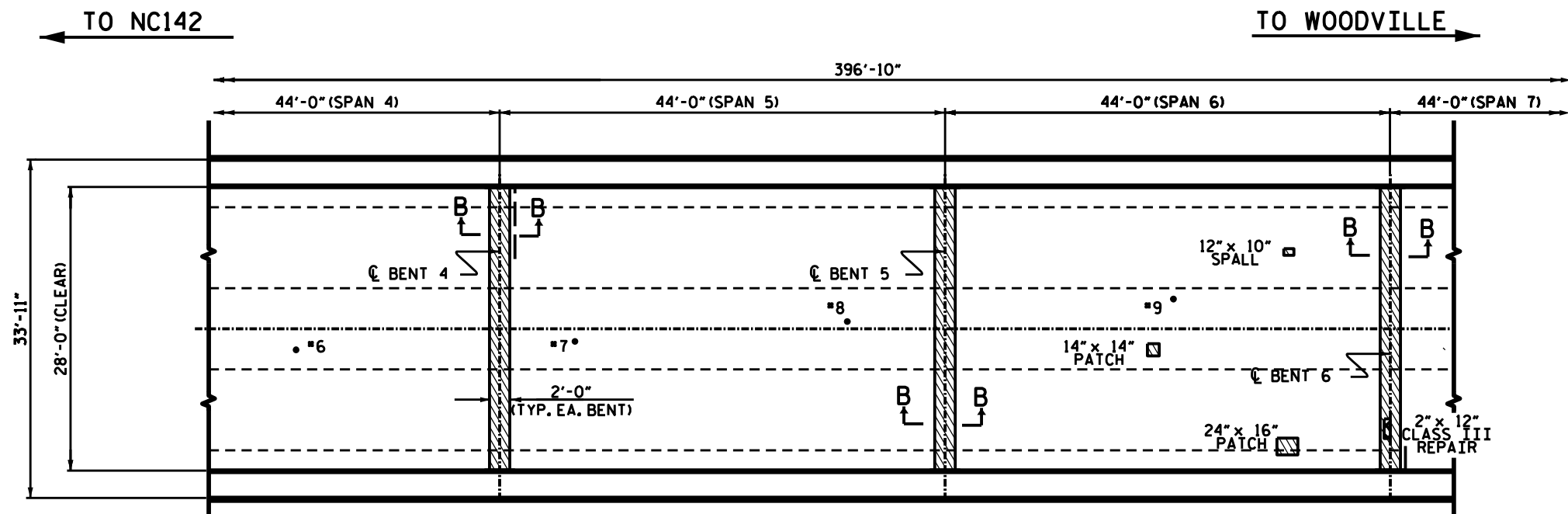
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

PLAN VIEW OF BRIDGE  
 & JOINT DETAIL  
 28'-0" CLEAR ROADWAY (90°-00' SKEW)

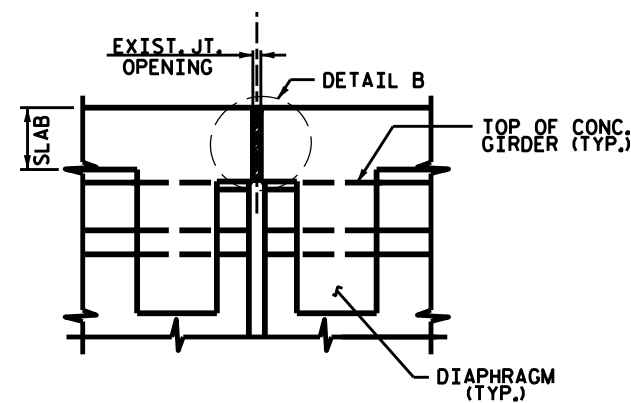
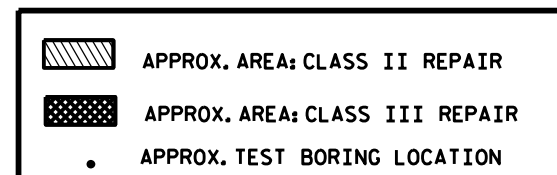
REVISIONS						SHEET NO. 17
NO.	BY	DATE	NO.	BY	DATE	
1			2			TOTAL SHEETS 22
2			4			

DRAWN BY : S. T. SANDOR DATE : APRIL/2011  
 CHECKED BY : E. B. N. /Z.W. DATE : MAY/2011

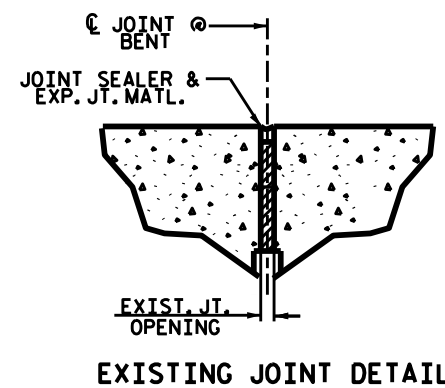
S-16



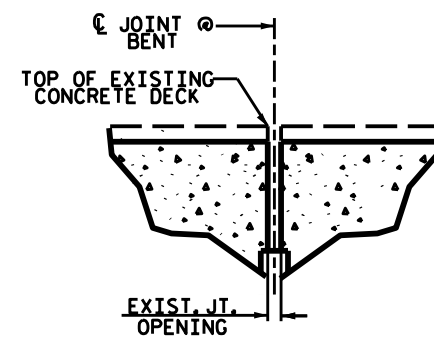
**PARTIAL PLAN OF SPANS- DECK REPAIRS**



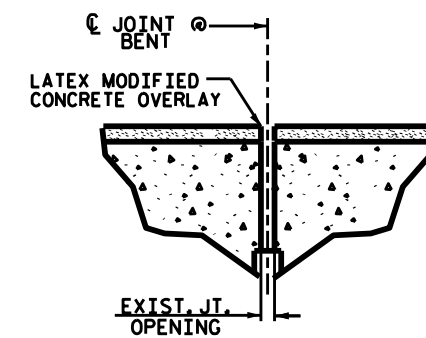
**SECTION B-B**  
(EXISTING JOINT)



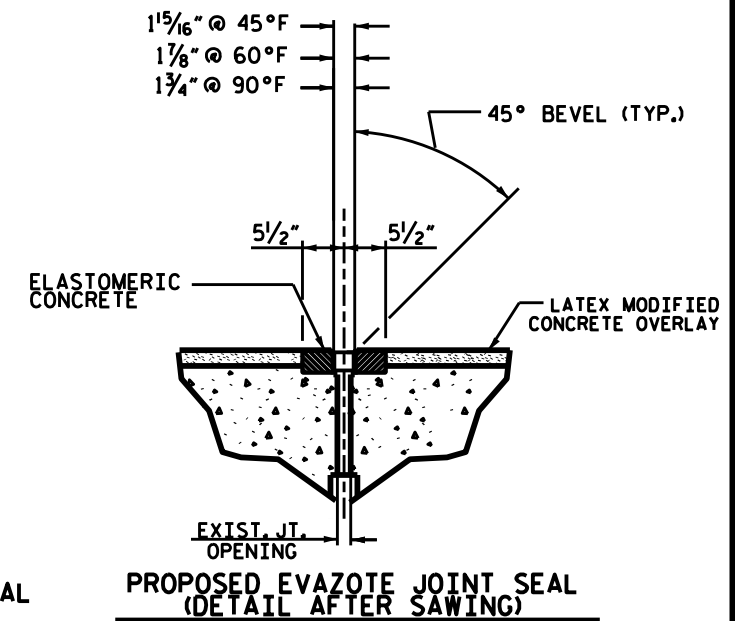
**EXISTING JOINT DETAIL**



**MINIMUM CONCRETE REMOVAL  
DETAIL @ EXISTING JOINT**



**PROPOSED EVAZOTE JOINT SEAL  
(DETAIL BEFORE SAWING)**



**PROPOSED EVAZOTE JOINT SEAL  
(DETAIL AFTER SAWING)**

**DETAIL B**

**NOTES**

FOR EVAZOTE JOINT SEAL SEE SPECIAL PROVISIONS.  
THE INSTALLED EVAZOTE JOINT SEAL SHALL BE WATER TIGHT.  
NOMINAL UNCOMPRESSED SEAL WIDTH OF EVAZOTE JOINT  
SEAL SHALL BE 2 1/2" AT BENTS.

**ELASTOMERIC CONCRETE**

BENTS	47 CU. FT.
* TOTAL	1.8 C.Y.

\* BASED ON THE MINIMUM BLOCKOUT SHOWN.  
ALL QUANTITIES ARE FOR INFORMATION ONLY.

PROJECT NO. **BP-5300E**  
COUNTY: **MARTIN**  
STATION: **N/A**  
DECK REHAB BRIDGE NO. **35**

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

PLAN VIEW OF BRIDGE  
& JOINT DETAIL

28'-0" CLEAR ROADWAY (90°-00' SKEW)

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			2			18
2			4			22

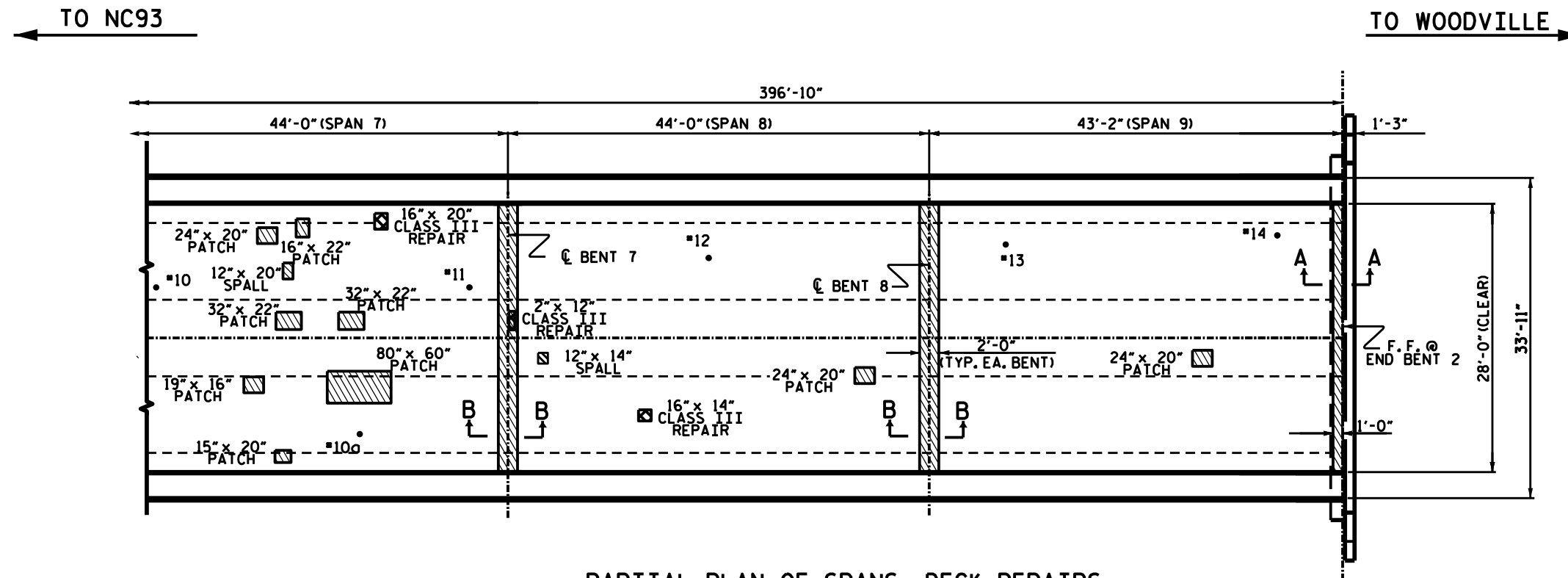
S-17

DRAWN BY : S. T. SANDOR DATE : APRIL/2011  
CHECKED BY : E. B. N. /Z.W. DATE : MAY/2011

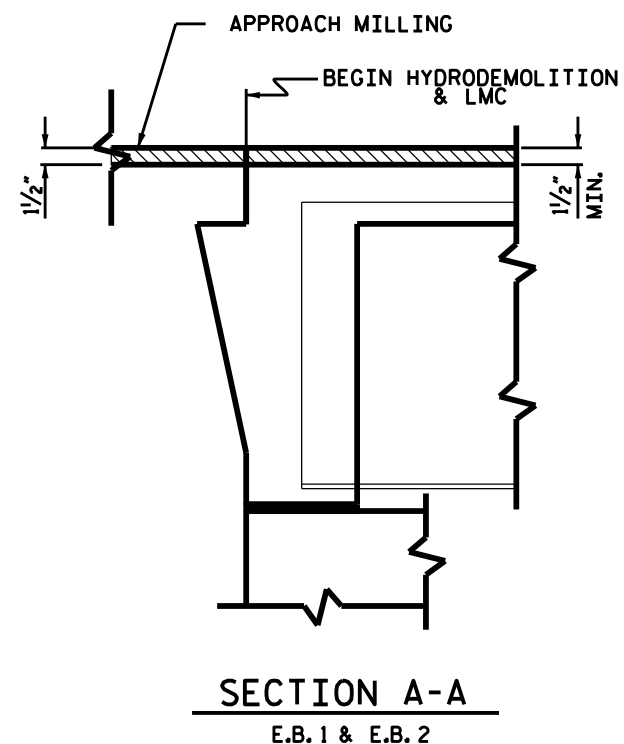
\*\*\*\*\*SYTIME\*\*\*\*\*

\*\*\*\*\*USERNAME\*\*\*\*\*

\*\*\*\*\*DGN\*\*\*\*\*



PARTIAL PLAN OF SPANS- DECK REPAIRS



PROJECT NO. BP-53000E  
COUNTY: MARTIN  
STATION: N/A  
DECK REHAB BRIDGE NO. 35

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

PLAN VIEW OF BRIDGE  
& JOINT DETAIL

28'-0" CLEAR ROADWAY (90°-00' SKEW)

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			2			19
2			4			22

DRAWN BY : S. T. SANDOR DATE : APRIL/2011  
CHECKED BY : E. B. N. / Z. W. DATE : MAY/2011

S-18

3/22/2011  
U:\TrafficControl\BP-5300E HERTFORD MARTIN\TCP\Plan\_Sheets\BP-5300E\_tc.psh01.dgn  
gkarageorge

PROJECT: BP-5300E

WBS 45438.1.1

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED  
TRAFFIC CONTROL

HERTFORD-MARTIN

LOCATION: BRIDGE NO.S HERTFORD 21, MARTIN 29, 34, 35

TYPE OF WORK: TRAFFIC CONTROL FOR BRIDGE REHABILITATION

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARD DRAWINGS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" -  
PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C.,  
DATED JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE  
CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1150.01	FLAGGING DEVICES
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS

INDEX OF SHEETS

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, & INDEX OF SHEETS
TCP-2	GENERAL NOTES AND TRAFFIC CONTROL PHASING
TCP-3	FLAGGER CONTROLLED LANE CLOSURE

STATE PROJECT REFERENCE NO.	SHEET NO.
BP-5300E	TCP-1

LEGEND

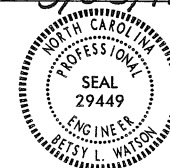
GENERAL

- DIRECTION OF TRAFFIC FLOW
- NORTH ARROW
- WORK AREA

TRAFFIC CONTROL DEVICES

- TYPE III BARRICADE
- CONE
- DRUM SKINNY DRUM
- FLASHING ARROW PANEL (TYPE C)
- STATIONARY SIGN
- PORTABLE SIGN
- STATIONARY OR PORTABLE SIGN
- PORTABLE CONCRETE BARRIER
- TEMPORARY CRASH CUSHION
- CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- LAW ENFORCEMENT
- FLAGGER

APPROVED: DATE: 3/23/11



PLAN PREPARED BY:



Stantec Consulting Services Inc.  
Suite 300, 801 Jones Franklin Road  
Raleigh, NC  
27606  
Tel. 919.851.6866  
Fax. 919.851.7024  
www.stantec.com

BETSY L. WATSON, PE

TRAFFIC CONTROL ENGINEER

GEORGE KARAGEORGE

TRAFFIC CONTROL DESIGNER

GENERAL NOTES

PROJECT REFERENCE NO.	SHEET NO.
BP -5300E	TCP -2

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

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 UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

LANE CLOSURE TIME RESTRICTIONS

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

ROAD NAME  
ALL ROADS

HOLIDAY

- 1) FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2) FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 7:00 P.M. JANUARY 2nd. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.
- 3) FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
- 4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.
- 5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY. IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY; THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- 6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
- 7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.
- 8) FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- 9) FOR ANY SPECIAL EVENTS SUCH AS SPORTING EVENTS, FESTIVALS, ETC., AS DIRECTED BY THE ENGINEER. ALL LANE CLOSURES AND LANE CLOSURE TIME SCHEDULES MUST BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTING.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- B) LANE CLOSURES ARE REQUIRED WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN ANY PORTION OF A TRAVEL LANE. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- C) INSTALL ALL LANE CLOSURES ACCORDING TO THE TRAFFIC CONTROL PLAN, ROADWAY STANDARD DRAWINGS (1101.02), OR AS DIRECTED BY THE ENGINEER.
- D) 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.
- E) INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- F) 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.
- G) 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 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- H) 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 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

PAVEMENT MARKINGS AND MARKERS

- I) REPLACE EXISTING PAVEMENT MARKINGS WITH 2 APPLICATIONS OF PAINT.

MISCELLANEOUS

- J) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.
- K) ALL DIMENSIONS AND STATIONS IN THE TRAFFIC CONTROL PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- L) MAINTAIN DRIVEWAY ACCESS AT ALL TIMES, UNLESS OTHERWISE DIRECTED BY ENGINEER.
- M) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.

TRAFFIC CONTROL PHASING

UNLESS OTHERWISE ALLOWED BY THE ENGINEER, WORK AT ONLY ONE BRIDGE LOCATION AT A TIME, EXCEPT WHERE NOTED.

HERTFORD CO. BRIDGE #21

PERFORM BRIDGE REHABILITATION USING FLAGGER CONTROLLED LANE CLOSURES AS SHOWN ON SHEET TCP-3.

MARTIN CO. BRIDGE #29 AND #35

PERFORM BRIDGE REHABILITATION USING FLAGGER CONTROLLED LANE CLOSURES AS SHOWN ON SHEET TCP-3. THESE 2 BRIDGES MAY BE WORKED ON SIMULTANEOUSLY UNDER ONE FLAGGER OPERATION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

MARTIN CO. BRIDGE #34

PERFORM BRIDGE REHABILITATION USING FLAGGER CONTROLLED LANE CLOSURES AS SHOWN ON SHEET TCP-3.


NOTE:  
PERFORM ONLY THE AMOUNT OF DECK REHABILITATION THAT CAN BE OVERLAYED TO FINAL ELEVATION BEFORE LANES ARE RE-OPENED TO TRAFFIC.

I:\Control\BP-5300E\HERTFORD MARTIN\TCP\Plan\_Sheets\BP-5300E-to-psd\02.dgn  
5/19/2011  
gkarageorge



**Stantec**  
Stantec Consulting Services Inc.  
801 Jones Franklin Road  
Suite 300  
Raleigh, NC 27606  
Tel. (919) 851-6866  
Fax. (919) 851-7024  
www.stantec.com  
License No. F-0672


SEAL



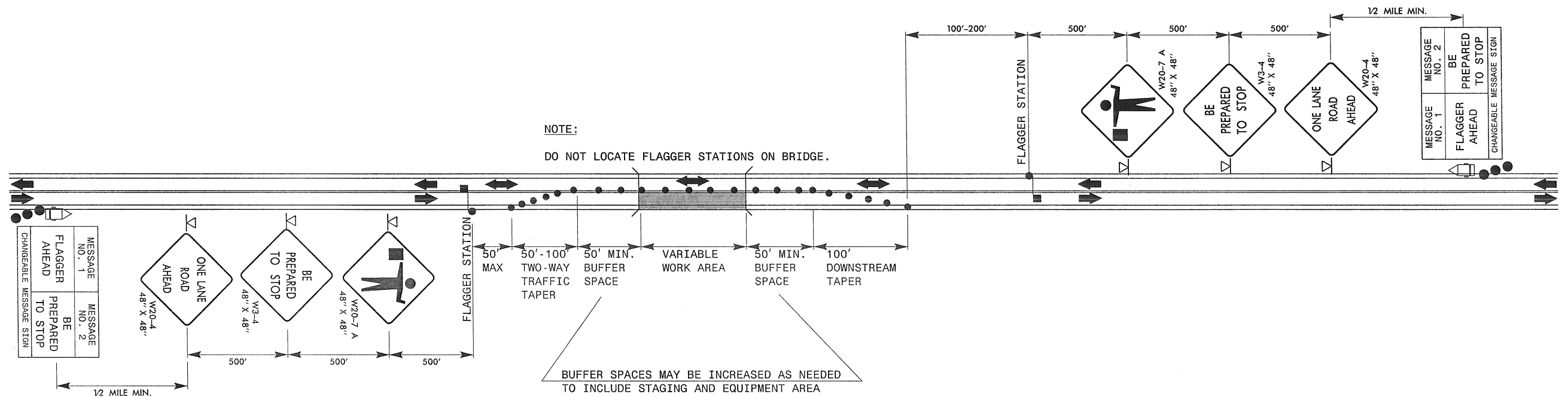
5/20/11

SIGNATURE DATE

GENERAL NOTES  
&  
TRAFFIC CONTROL PHASING

SCALE: NONE		REVISIONS
DATE: MAR. 2011		
DWG. BY: GK		
DESIGN BY: GK		
REVIEWED BY: BLW		

CADD FILE



NOTES

1. INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
2. PLACE DRUMS THRU THE WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
3. DO NOT INSTALL MORE THAN ONE (1) MILE OF LANE CLOSURE, MEASURED FROM THE BEGINNING OF THE TWO-WAY TRAFFIC TAPER TO THE END OF THE LANE CLOSURE.
4. EXTEND LANE CLOSURES AT THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE IS PROVIDED TO THE FLAGGER. (REFER TO MINIMUM STOPPING SIGHT DISTANCE TABLE ON ROADWAY STD. DWG. 1101.11, SHEET 2)
5. DO NOT STOP TRAFFIC IN ANY ONE DIRECTION FOR MORE THAN 5 MINUTES AT A TIME.
6. LOCATE FLAGGER STATIONS SUCH THAT APPROACHING TRAFFIC WILL HAVE SUFFICIENT DISTANCE TO STOP AT THE INTENDED STOPPING POINT. IF NEEDED, EXTEND THE LANE CLOSURE SUCH THAT THE FLAGGER STATION IS POSITIONED BEFORE A HORIZONTAL OR CREST VERTICAL CURVE WHERE ADEQUATE STOPPING SIGHT DISTANCE TO THE FLAGGER IS PROVIDED. REFER TO ROADWAY STANDARD DRAWING 1101.11 SHEET 2.
7. FLAGGERS SHALL NOT STAND IN A LANE USED BY MOVING TRAFFIC. FLAGGERS SHALL STAND ON THE SHOULDER, WITHIN A CLOSED LANE, OR IN A LANE ONLY ONCE TRAFFIC IS STOPPED. FLAGGERS MUST BE PRESENT AT ALL TIMES DURING THE LANE CLOSURE. IF A FLAGGER IS NOT PRESENT AND FLAGGING TRAFFIC, THE LANE CLOSURE MUST BE REMOVED.
8. ILLUMINATE FLAGGER STATIONS AT NIGHT USING FLOOD LIGHTS OR OTHER METHODS APPROVED BY THE ENGINEER.
9. USE PILOT VEHICLES IN CONJUNCTION WITH FLAGGERS WHEN SHOWN IN THE PLAN OR WHEN DIRECTED BY THE ENGINEER. MOUNT SIGN G20-4 "PILOT CAR FOLLOW ME" AT A VISIBLE LOCATION ON THE REAR OF PILOT VEHICLES.
10. ADVISE RESIDENTS AND BUSINESSES WITHIN OR NEAR THE LANE CLOSURE LIMITS ABOUT METHODS OF SAFE EGRESS AND INGRESS FROM DRIVEWAYS DURING LANE CLOSURE OPERATIONS.
11. CHANGEABLE MESSAGE SIGN WORD MESSAGES AND LOCATIONS ARE TO BE APPROVED BY THE ENGINEER. ADDITIONAL MESSAGES MAY BE REQUIRED SUCH AS FOR PUBLIC INFORMATION OR DURING SPECIAL EVENTS.

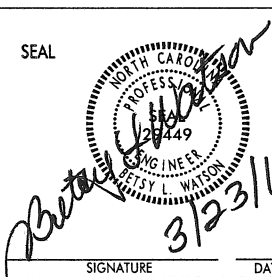
NOTE:

DURING PERIODS WHEN LANE CLOSURES ARE NOT IN EFFECT USE THE CHANGEABLE MESSAGE SIGNS TO INFORM THE PUBLIC OF UPCOMING TRAFFIC CONDITIONS. SOME EXAMPLE MESSAGES ARE SHOWN BELOW. ALL MESSAGES ARE TO BE APPROVED BY THE ENGINEER.

MESSAGE NO. 1	MESSAGE NO. 2
LANE CLOSURES TUESDAY	PLAN FOR DELAYS
CHANGEABLE MESSAGE SIGN	



SEAL



FLAGGER CONTROLLED  
LANE CLOSURE

SCALE: NONE  
DATE: MAR. 2011  
DWG. BY: GK  
DESIGN BY: GK  
REVIEWED BY: BLW



REVISIONS	
CADD FILE	