

NOTES

FOR REPAIR OF BRIDGE WITH EPOXY AND STONE OVERLAY. SEE SPECIAL PROVISIONS.

SEE SPECIAL PROVISIONS FOR CLASS II DECK REPAIRS.

FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR SECTIONS A-A, B-B, AND C-C SEE SHT. S017-2.

FOR TRAFFIC CONTROL AND TRAFFIC PHASING DETAILS. SEE TRANSPORTATION MANAGEMENT PLANS.

ALL QUANTITIES SHOWN ARE APPROXIMATE.

TOTAL E	BILL OF MATER	IAL	
EPOXY/STONE OVERLAY	CLASS II SURFACE PREPARATION	EVAZOTE JOINT SEALS	
SQ.FT.	SQ. FT.	LUMP SUM	
10,000	100	LUMP SUM	

PROJECT NO. WBS 17BP.6.P.1 COLUMBUS _ COUNTY

STATION:_

DEPARTMENT OF TRANSPORTATION

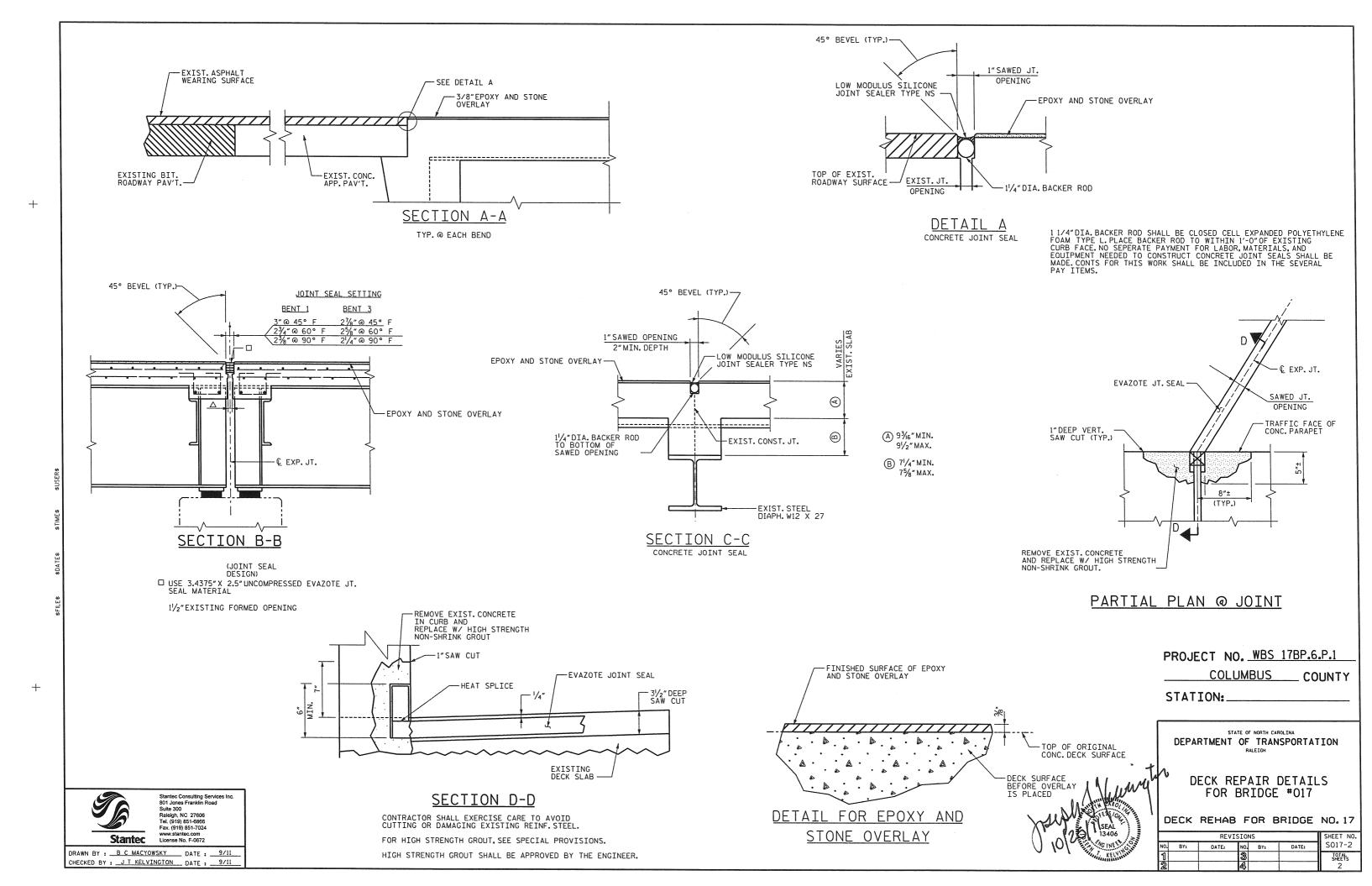
DECK REPAIR DETAILS FOR BRIDGE #017

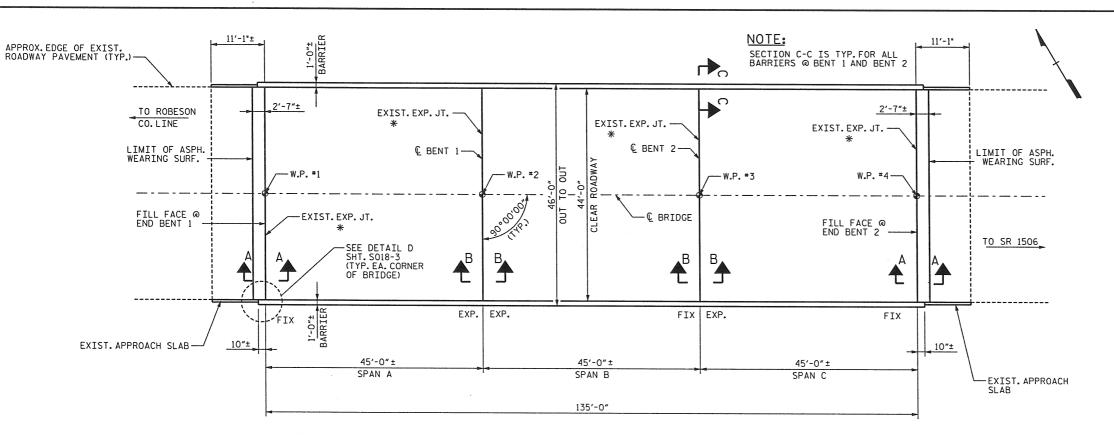
DECK REHAB FOR BRIDGE NO. 17

	REVISIONS						
BY:	DATE:	NO.	BY:	DATE:	S017-1		
		3			TOTAL SHEETS		
		4			2		

801 Jones Franklin Ko Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672

DRAWN BY : B C MACYOWSKY DATE : 9/11
CHECKED BY : J T KELVINGTON DATE : 9/11

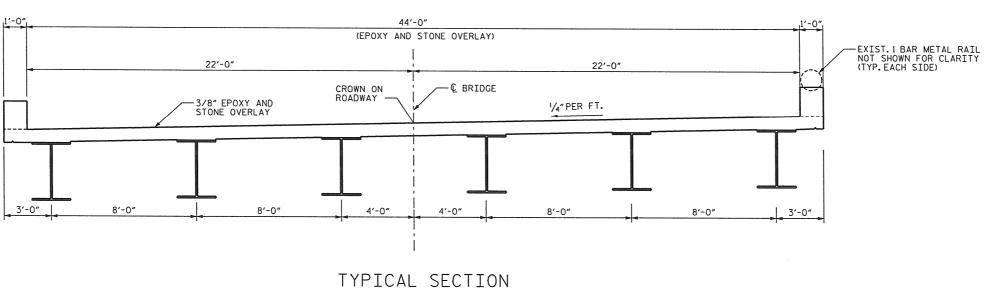




PLAN VIEW

* ALL EXIST. EXPANSION JOINTS ARE TO BE SEALED.

SEE S018-2 FOR DETAILS.



<u>NOTES</u>

FOR REPAIR OF BRIDGE WITH EPOXY AND STONE OVERLAY, SEE SPECIAL PROVISIONS.

SEE SPECIAL PROVISIONS FOR CLASS II DECK REPAIRS.

FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR SECTIONS A-A, B-B, AND C-C SEE SHT. S018-2.

FOR TRAFFIC CONTROL AND TRAFFIC PHASING DETAILS. SEE TRANSPORTATION MANAGEMENT PLANS.

ALL QUANTITIES SHOWN ARE APPROXIMATE.

TOTAL E	BILL OF MATER	IAL
EPOXY/STONE OVERLAY	CLASS II SURFACE PREPARATION	EVAZOTE JOINT SEALS
SO.FT.	SQ.FT.	LUMP SUM
6167	100	LUMP SUM



DECK REPAIR DETAILS FOR BRIDGE #018

PROJECT NO. WBS 17BP.6.P.1

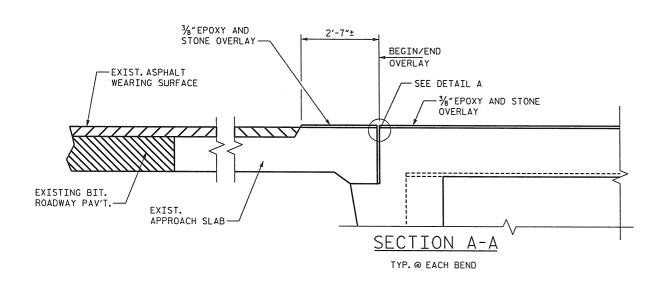
COLUMBUS COUNTY

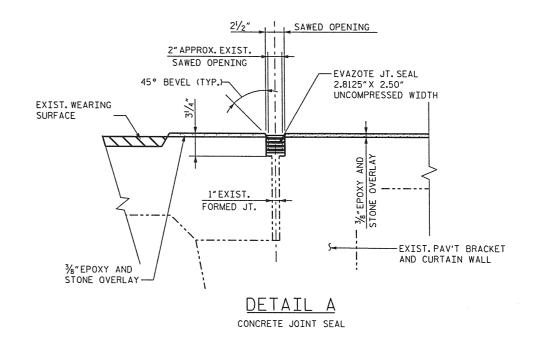
DECK REHAB FOR BRIDGE NO. 18

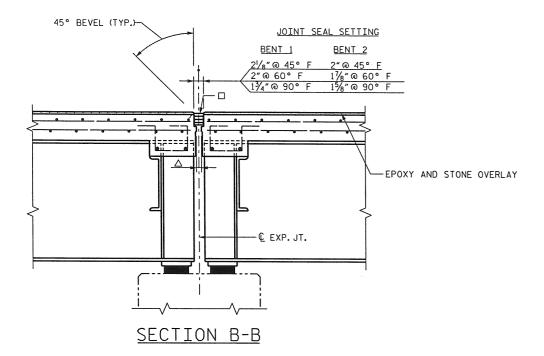
	REV	ISIONS		,	SHEET NO.
BY:	DATE:	NO.	BY:	DATE:	S018-1
		3			TOTAL SHEETS
		4			3

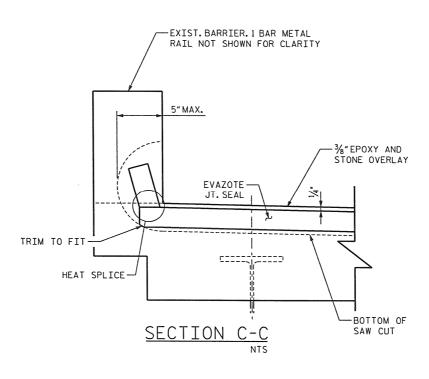
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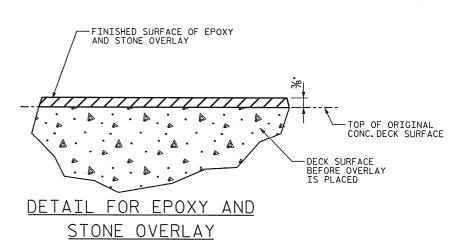
DRAWN BY : B C MACYOWSKY DATE : 9/11 CHECKED BY : __ J T KELVINGTON __ DATE : __ 9/11











PROJECT NO. WBS 17BP.6.P.1

COLUMBUS COUNTY

STATION:_

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK REPAIR DETAILS FOR BRIDGE #018

DECK REHAB FOR BRIDGE NO. 18

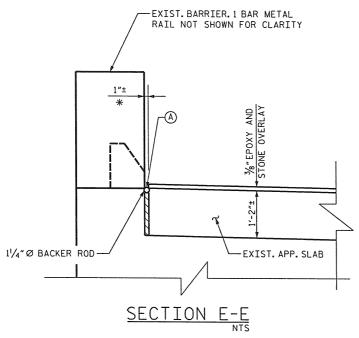
□ USE 2.8125"X 2.5"UNCOMPRESSED EVAZOTE JT. SEAL MATERIAL. SET TOP 1/4"TO 3/8"BELOW EPOXY AND STONE OVERLAY

△ 1"EXIST. FORMED JOINT OPENING.



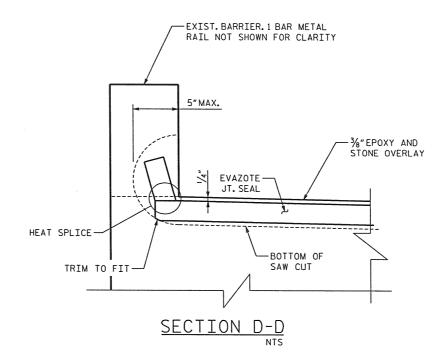
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- * EXISTING JOINT FILLED WITH BITUMINOUS JT. MATL. REMOVE EXP. JT. MATL. AS REQUIRED TO INSTALL BACKER ROD.
- A SEAL JOINTS W/ LOW MODULUS SILICONE JOINT SEALER TYPE NS W/ BACKER ROD IN ALL EXISTING GAPS BETWEEN SLABS, CURBS, AND BARRIERS.

11/4"DIA. BACKER ROD SHALL BE CLOSED CELL EXPANDED POLYETHYLENE FOAM TYPE L. NO SEPERATE PAYMENT FOR LABOR, MATERIALS, AND EQUIPMENT NEEDED TO CONSTRUCT CONCRETE JOINT SEALS SHALL BE MADE. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE SEVERAL PAY ITEMS.



PROJECT NO. WBS 17BP.6.P.1 COLUMBUS COUNTY

STATION:

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

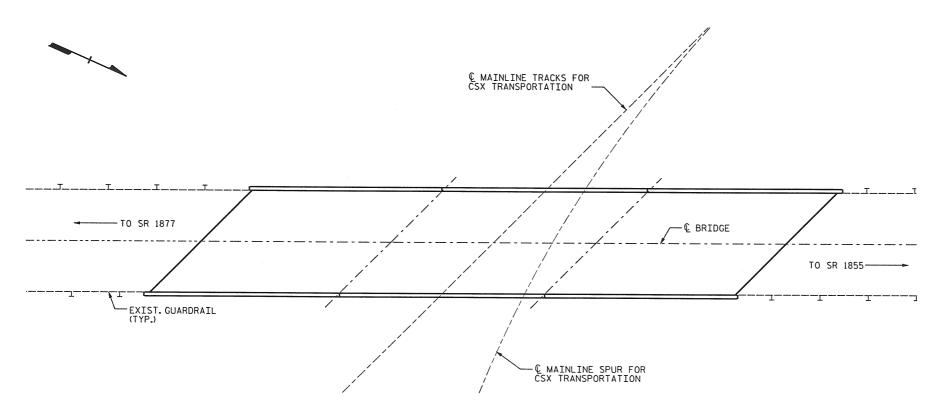
> DECK REPAIR DETAILS FOR BRIDGE #018

DECK REHAB FOR BRIDGE NO. 18

SHEET NO. SO18-3 REVISIONS DATE: NO. BY: DATE: TOTAL SHEETS

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DRAWN BY : B C MACYOWSKY DATE : 9/11 CHECKED BY : __ J T KELVINGTON DATE : __ 9/11



BRIDGE 022 ON NC 87

LOCATION: BRIDGE 230022, NC 87 OVER CSX-RR 0.2 MILES SOUTH OF JUNCTION OF SR 1855

BRIDGE 022 ON NC 87

				TOTAL	BILI	OF MA	ATERIAL			
SCARIFYING ** BRIDGE DECK	CLASS I* SURFACE PREPARATION	CLASS II * SURFACE PREPARATION	CLASS III * SURFACE PREPARATION	HYDRO- DEMOLITION	CLASS AA CONCRETE	LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH	PLACING & FINISHING OF LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH	EVAZOTE JOINT SEAL	GROOVING BRIDGE FLOORS	ASHPHALT CONC. SURF. COURSE TYPE S9.5B
SQ.YDS.	SQ.YDS.	SQ.YDS.	SO.YDS.	SQ.YDS.	CU.YDS.	CU.YDS.	SQ.YDS.	LUMP SUM	SO.FT.	TON
1239	0	31	0	733	0	31	733	LUMP SUM	6308	78

^{*} QUANTITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. NO SEPARATE PAYMENT FOR THESE ITEMS SHALL BE MADE. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR HYDRO-DEMOLITION.

^{**} INCLUDES MILLING OF ROADWAY PAVEMENT.



ntec Consulting Services Inc.
Jones Franklin Road
te 300
leigh, NC 27606
(919) 851-6866
(919) 851-7024
w.stantec.com
ense No. F-0672

DRAWN BY: J. L. HENNEKES DATE: 09-12-11 CHECKED BY: J. T. KELVINGTON DATE: 09-12-11

PROJECT NO. WBS 17BP.6.P.1

COLUMBUS COUNTY

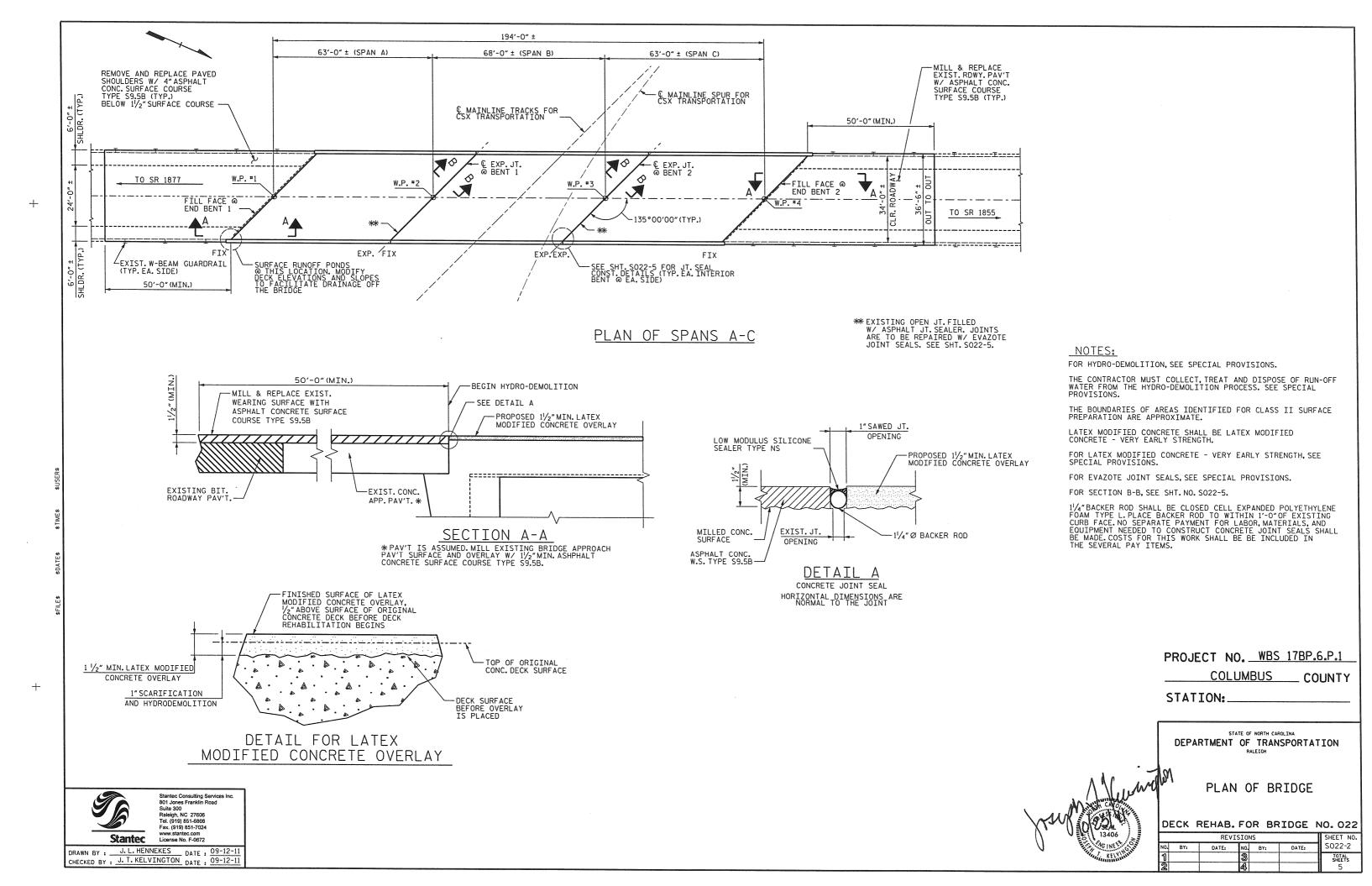
STATION:

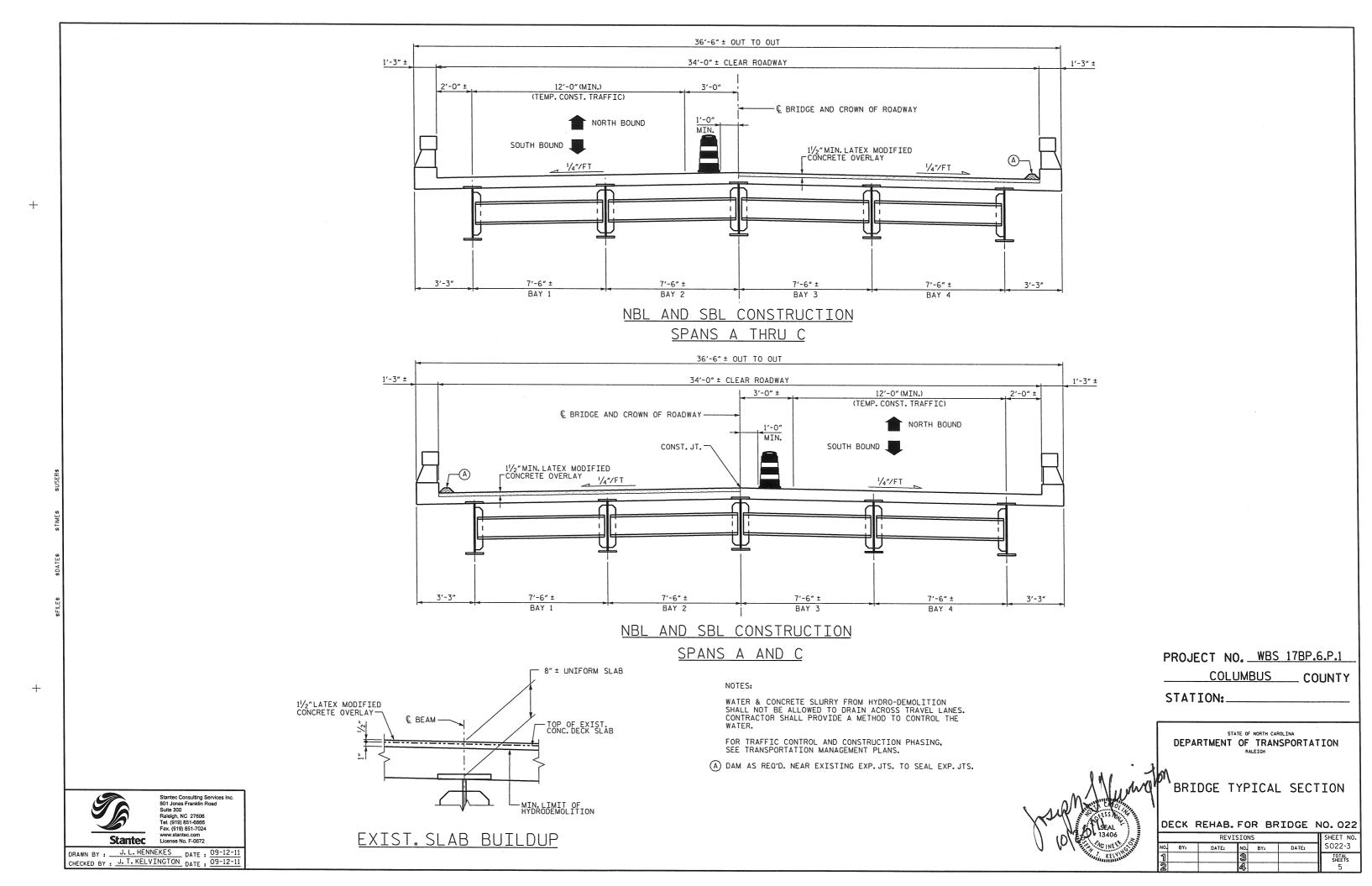
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

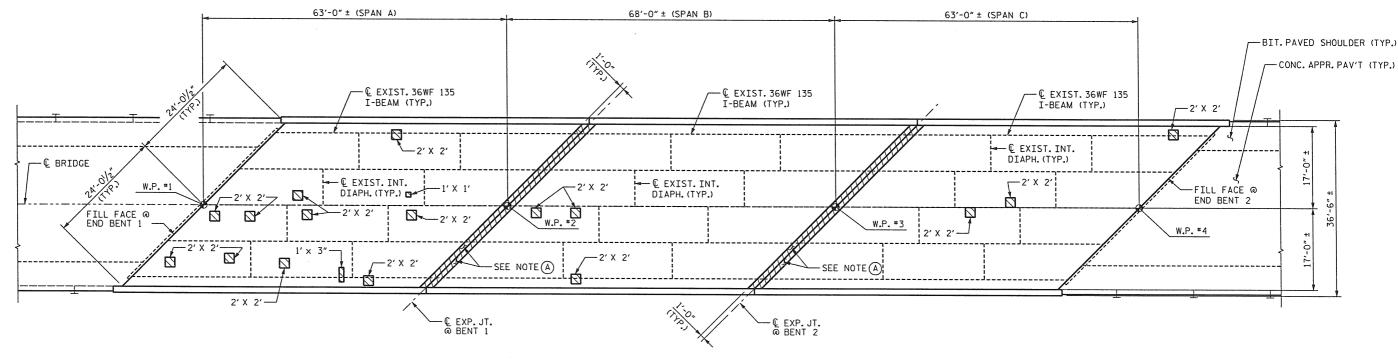
LOCATION SKETCH AND TOTAL BILL OF MATERIAL

DECK REHAB. FOR BRIDGE NO. 022

	REV	ISION	S		SHEET NO.
BY:	DATE:	NO.	BY:	DATE:	S022-1
		3			TOTAL SHEETS
		4			5







PLAN OF SPANS A THRU C - DECK REPAIRS

(A) MAXIMUM ESTIMATED SURFACE PREPARATION REQUIRED FOR JOINT SEAL INSTALLATION. DECK REPAIR WORK IS LIMITED TO REMOVAL OF ALL UNSOUND CONCRETE AND SURFACE PREPARATION FOR JOINT SEAL CONSTRUCTION.



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

L'X W' = LENGTH OF AREA ALONG & BRIDGE X
WIDTH OF AREA NORMAL TO & BRIDGE

PROJECT NO. WBS 17BP.6.P.1

COLUMBUS COUNTY

NOTE:

CLASS II SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STATION:_

DECK REPAIR DETAILS SPANS A THRU C

DECK REHAB. FOR BRIDGE NO. 022

	REV	ISION	S		SHEET NO.
BY:	DATE:	NO.	BY:	DATE:	S022-4
		3			TOTAL SHEETS
		4			5

Stanton

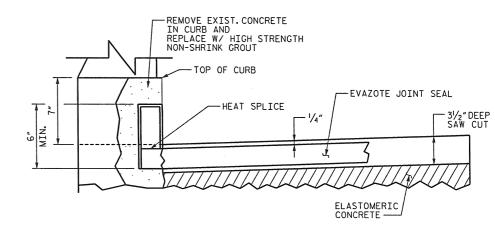
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DRAWN BY: J.L.HENNEKES DATE: 09-12-11 CHECKED BY: J.T.KELVINGTON DATE: 09-12-11

S SDATES

\$FILE\$

PARTIAL PLAN @ JOINT

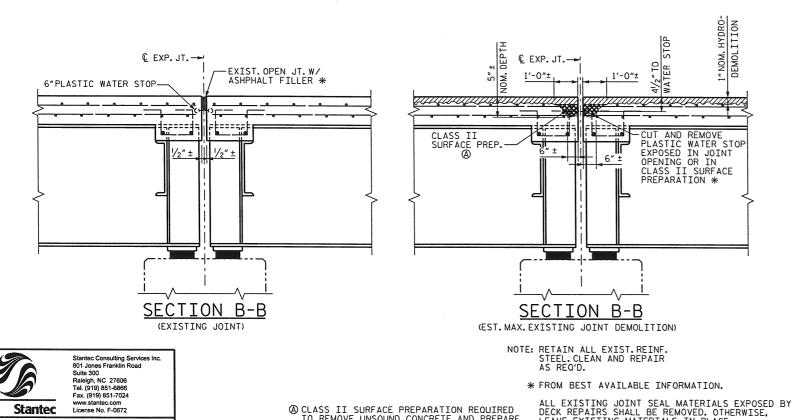


SECTION D-D

CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.

FOR HIGH STRENGTH GROUT, SEE SPECIAL PROVISION "GROUT FOR STRUCTURES." $\ensuremath{\text{"GROUT}}$

HIGH STRENGTH GROUT SHALL BE APPROVED BY THE ENGINEER.

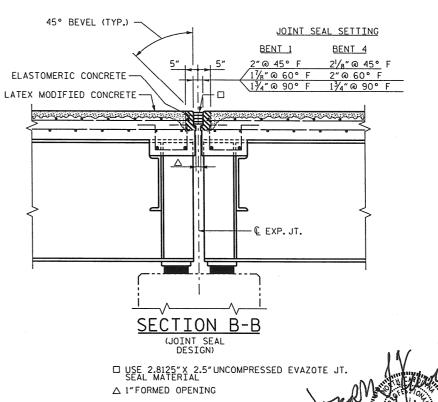


(A) CLASS II SURFACE PREPARATION REQUIRED TO REMOVE UNSOUND CONCRETE AND PREPARE SURFACE FOR ELASTOMERIC CONCRETE.

DRAWN BY: J. L. HENNEKES DATE: 09-12-11
CHECKED BY: J. T. KELVINGTON DATE: 09-12-11

 $*$ FROM BEST AVAILABLE INFORMATION.

ALL EXISTING JOINT SEAL MATERIALS EXPOSED BY DECK REPAIRS SHALL BE REMOVED. OTHERWISE, LEAVE EXISTING MATERIALS IN PLACE.



ELASTOMERIC CONCRETE QTY 14.6 C.F. 14.6 C.F.

TOTAL ELASTOMERIC CONC. = 29.2 C.F. TOTAL ELASTOMERIC CONC. = 1.1 C.Y.

PROJECT NO. WBS 17BP.6.P.1 COLUMBUS COUNTY STATION:

DEPARTMENT OF TRANSPORTATION
RALEIGH

EXPANSION JOINT DETAILS

DECK REHAB. FOR BRIDGE NO. 022

	REV	ISION	S		SHEET N
BY:	DATE:	NO.	BY:	DATE:	S022-5
		3			TOTAL SHEETS
		4			5

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

COLUMBUS COUNTY **DIVISION** 6



COLUMBUS BRIDGE #17 - US 701 BUS. OVER US 74/US 76 BYPASS COLUMBUS BRIDGE #18 - US 74/NC 130 WBL OVER LUMBER RIVER OVERFLOW COLUMBUS BRIDGE #22 - NC 87 OVER CSX RAILROAD

INDEX OF SHEETS

SHEET NO.

TITLE

TMP - 1

TITLE SHEET, AND INDEX OF SHEETS

TMP-1A

LIST OF ROADWAY STANDARD DRAWINGS AND LEGEND

GENERAL NOTES & TRAFFIC CONTROL PHASING

1

TMP-1

TRAFFIC MANAGEMENT STRATEGY

PROPOSED BRIDGE WORK WILL BE PERFORMED USING TIME RESTRICTED LANE CLOSURES. REFER TO SHEET TMP-2 FOR TRAFFIC CONTROL PHASING.



PLAN PREPARED FOR NCDOT BRIDGE MANAGEMENT UNIT RALEIGH, NC

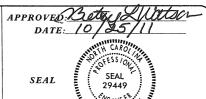




BETSY L. WATSON, P.E.

GEORGE KARAGEORGE

TRANSPORTATION DESIGNER



LEGEND

GENERAL

DIRECTION OF TRAFFIC FLOW

NORTH ARROW

TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

DRUM

SKINNY DRUM

TUBULAR MARKER

TEMPORARY CRASH CUSHION FLASHING ARROW PANEL (TYPE C)

FLAGGER

* LAW ENFORCEMENT

TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)

CHANGEABLE MESSAGE SIGN (CMS)

PORTABLE CONCRETE BARRIER (PCB)

TEMPORARY SIGNING

PORTABLE SIGN

- STATIONARY SIGN

STATIONARY OR PORTABLE SIGN

SIGNALS







PAVEMENT MARKINGS

EXISTING PAVEMENT MARKING (GRAY)

— SKIP LINES

- - - - - MINI-SKIP LINES ---- SOLID LINES

PAVEMENT MARKING SYMBOLS

↑ ↑ ↑ PAVEMENT MARKING SYMBOLS

EXISTING PAVEMENT MARKING SYMBOLS (HOLLOW)

MY PAVEMENT MARKING ALPHANUMERIC CHARACTERS

PAVEMENT MARKERS

CRYSTAL/CRYSTAL

CRYSTAL/RED

♦ YELLOW/YELLOW

PROJ. REFERENCE NO. SHEET NO. WBS 17BP.6.P.1 TMP-1A

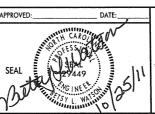
ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS 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
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1180.01	SKINNY DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS



Stantec Consulting Servic 801 Jones Franklin Road Suite 300
Raleigh, N.C. 27606
Tel. (919) 851-6886
Fax. (919) 851-7024
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ROADWAY STANDARD DRAWINGS LEGEND

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 FNGINFER.

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 AS FOLLOWS:

ROAD NAME

DAY AND TIME RESTRICTIONS

ALL ROADS

6:00 A.M.-9:00 A.M. MONDAY THRU FRIDAY 4:00 P.M.-7:00 P.M. MONDAY THRU FRIDAY

HOLIDAY & HOLIDAY WEEKEND LANE CLOSURE TIME RESTRICTIONS

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND HOLIDAY WEEKENDS AS FOLLOWS:

ROAD NAME ALL ROADS

- 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.
- 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.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- C) 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.
- D) INSTALL ALL LANE CLOSURES ACCORDING TO THE PLANS, ROADWAY STANDARD DRAWINGS (1101.02), OR AS DIRECTED BY THE ENGINEER.
- E) 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. COVER OR LAY DOWN SIGNS, AND TURN OFF ARROW PANEL AND MESSAGE BOARDS.
- 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

- RECORD ALL LOCATIONS AND TYPES OF EXISTING PAVEMENT MARKINGS AS THEY WILL BE REPLACED IN THE SAME LOCATION ON THE NEW SURFACE.
- J) REPLACE PAVEMENT MARKINGS BEFORE OPENING LANES TO TRAFFIC.
- K) UPON COMPLETION OF ALL OTHER CONSTRUCTION OPERATIONS INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME

MARKING POLYUREA PAVEMENT MARKER PERMANENT RAISED

MISCELLANEOUS

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

TRAFFIC CONTROL PHASING

DURING WORK ON BRIDGES #17 AND #22 USE FLAGGER CONTROLLED LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9.

DURING WORK ON BRIDGE #18 USE LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02, SHEET 3 OF 9.

Stantec Consulting S 801 Jones Franklin F Suite 300 Raleigh, NC 27606 Fax. (919) 851-8866 Fax. (919) 851-7024 www.stantec.com

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GENERAL NOTES & TRAFFIC CONTROL PHASING