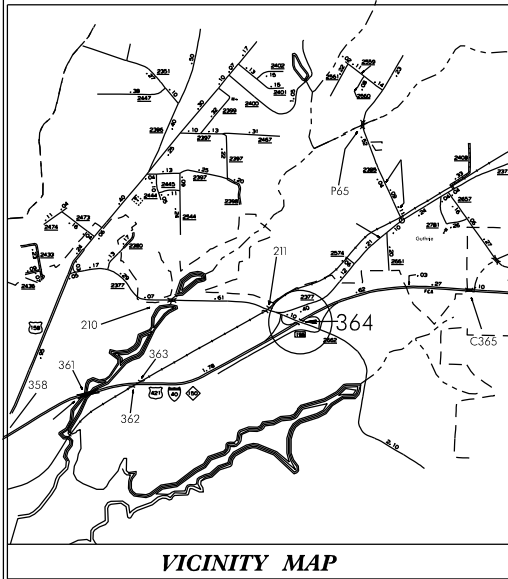


**TIP PROJECT: BP-5300J**

**CONTRACT: DO00104**



**VICINITY MAP**

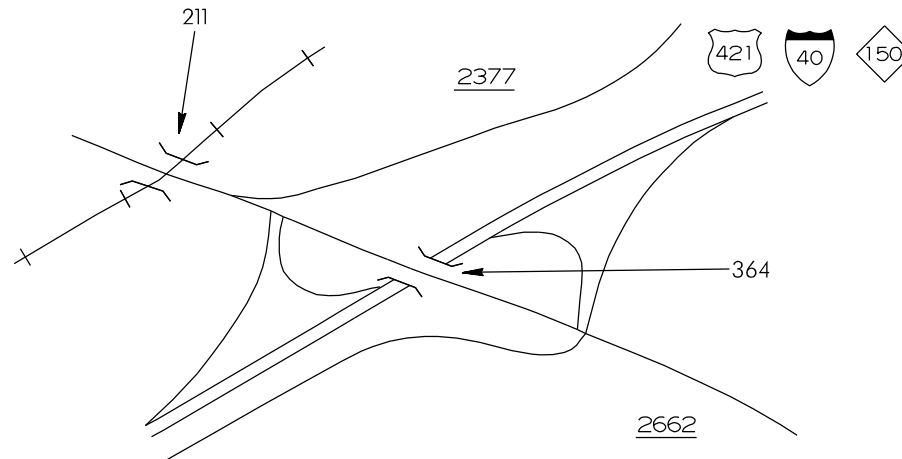
INDEX OF SHEETS	
1	TITLE SHEET
S1 - S7	STRUCTURE PLANS
TMP1 - TMP5	TRAFFIC CONTROL PLANS

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

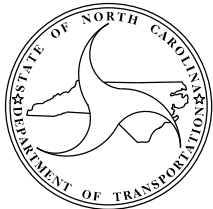
# FORSYTH COUNTY

**LOCATION: BRIDGE #364, ON LINVILLE RD SR 2662, OVER BUISNESS I-40**

**TYPE OF WORK: BRIDGE DECK REHABILITATION WITH LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH AND SUBSTRUCTURE REPAIRS**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	<b>BP-5300J</b>	<b>1</b>	<b>1</b>
STATE PROJ. NO.	S.A. PROJ. NO.	DESCRIPTION	
45438.1.1	BRSTP-1221	P.E.	
45438.3.9	BRSTP-1221	CONST	



**PROJECT LENGTH**

**BRIDGE #364**  
**LENGTH OF STRUCTURE PROJECT= .058 MILE**

2012 STANDARD SPECIFICATIONS

**LETTING DATE:**  
**MARCH 22, 2012**

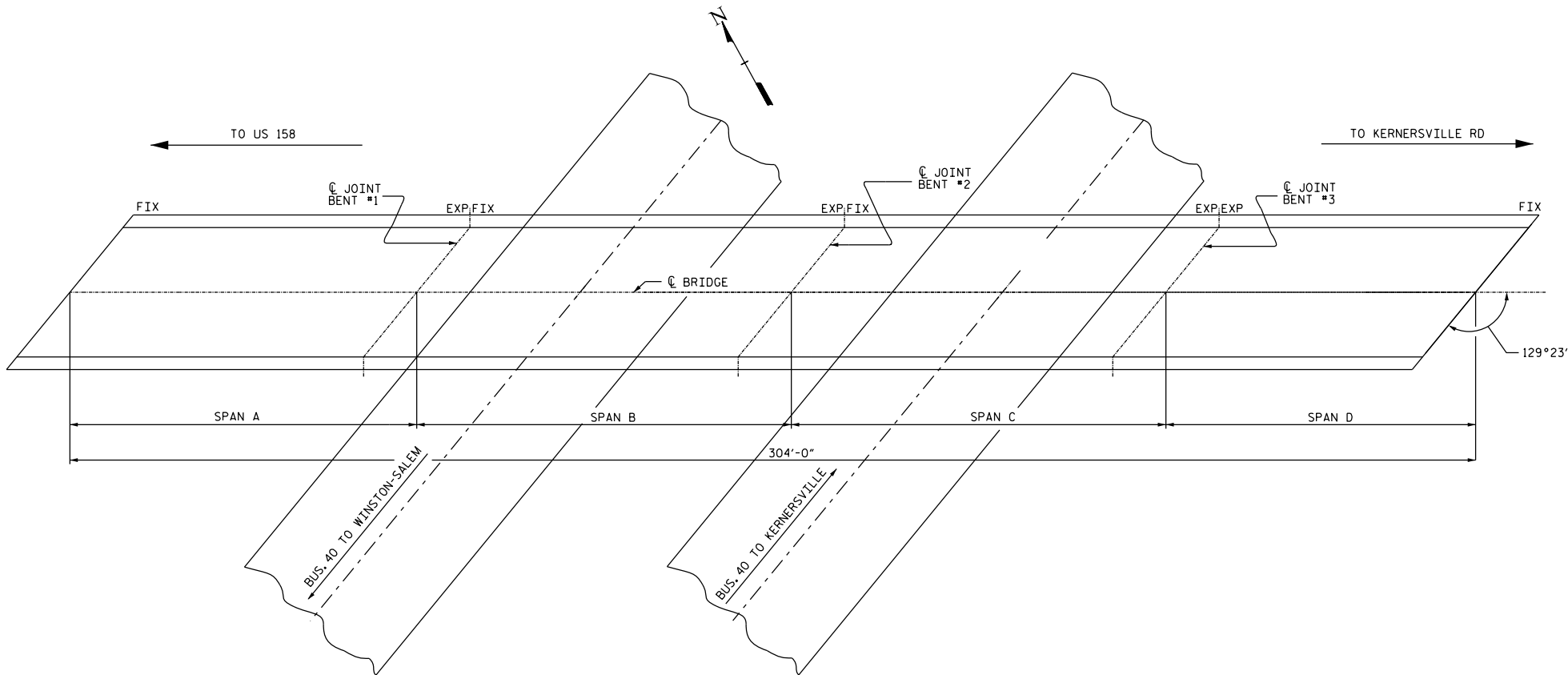
Prepared in the Office of:  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
STRUCTURES MANAGEMENT UNIT - PRESERVATION & REPAIR GROUP  
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

**RICK NELSON, P.E.**  
PROJECT ENGINEER

**ENGINEER**



**DANIEL MULLER, P.E.**  
PROJECT DESIGN ENGINEER



### TOTAL BILL OF MATERIAL

INCIDENTAL MILLING	SCARIFYING BRIDGE DECK	CLASS I* SURFACE PREPARATION	CLASS II* SURFACE PREPARATION	CLASS III* SURFACE PREPARATION	HYDRO-DEMOLITION	LATEX MODIFIED CONCRETE-VES	PLACING & FINISHING LATEX MODIFIED CONCRETE-VES	FOAM JOINT SEALS	GROOVING BRIDGE FLOOR	ASPHALT CONC. SURFACE COURSE TYPE S9.5B	SHOTCRETE REPAIRS	CONCRETE REPAIRS	REINFORCING STEEL	SHOULDER RECONSTRUCTION
SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	C.Y.	SO.YDS.	LUMP SUM	SO. FT.	TON	CU. FT.	CU. FT.	LB	SMI
382	946	0	946	0	946	74	946	LUMP SUM	7480	31	46	41	100	0.05

\*QUANTITIES SHOWN ARE FOR INFORMATION ONLY

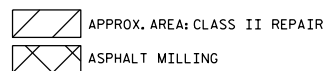
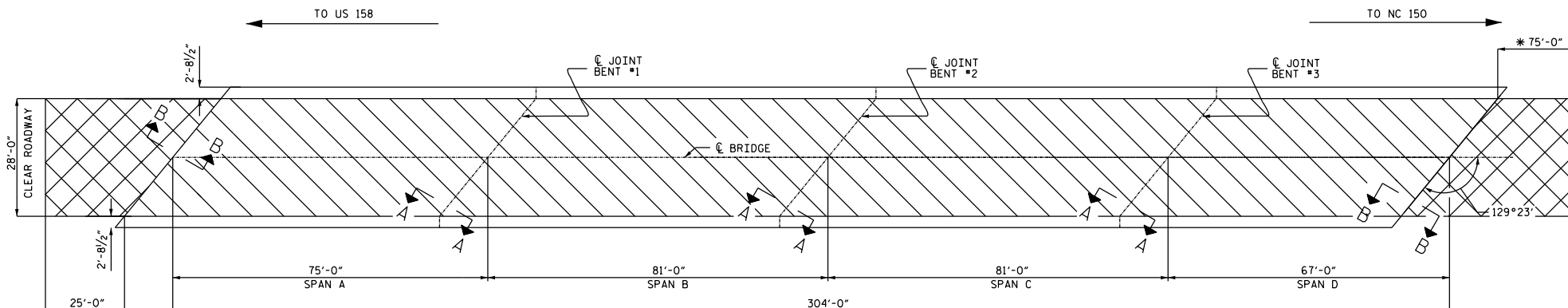
PROJECT NO. BP-5300J  
COUNTY: FORSYTH  
DECK REPAIR BRIDGE NO. 364

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
PLAN VIEW OF BRIDGE  
#364 ON SR 2662 OVER  
BUISINESS I-40  
28' CL. ROADWAY

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

DRAWN BY: R.WEISZ DATE: 03/11  
CHECKED BY: T.BEACH DATE: 02/12

\*\*\*\*\*



\* SOUTHEAST APPROACH HAS 75'-0" OF ASPHALT MILLING

## NOTES

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

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.

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

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS III SURFACE PREPARATION ARE APPROXIMATE. THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK, SEE "TYP. "BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL.

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

FOR "HYDRO-DEMOLITION OF BRIDGE DECK", SEE SPECIAL PROVISIONS.

FOR OVERLAY OF BRIDGE WITH "LATEX MODIFIED CONCRETE-YES", SEE SPECIAL PROVISIONS.

FOR "FOAM JOINT SEALS", SEE SPECIAL PROVISIONS.

FOR "ELASTOMERIC CONCRETE", SEE SPECIAL PROVISIONS.

THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL SHALL BE 2 1/2".

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

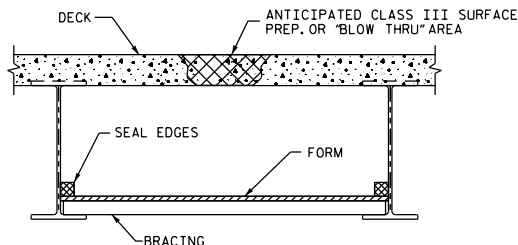
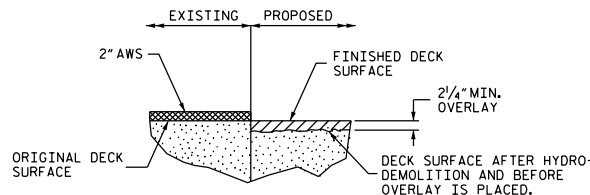
FOR "SCARIFYING BRIDGE DECK", SEE SPECIAL PROVISIONS.

FOR "FALSEWORK AND FORMWORK", SEE SPECIAL PROVISIONS.

FOR "CRANE SAFETY", SEE SPECIAL PROVISIONS.

FOR "GROUT FOR STRUCTURES", SEE SPECIAL PROVISIONS.

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

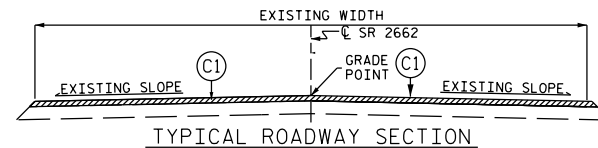
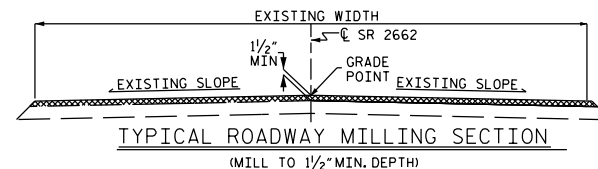


## TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

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 FORM WORK FOR APPROVAL PRIOR TO BEGINNING WORK.

COST FOR INSTALLING AND REMOVING FORM WORK SHALL BE INCIDENTAL TO THE PRICE PER SQ. YARD OF HYDRO-DEMOLITION.



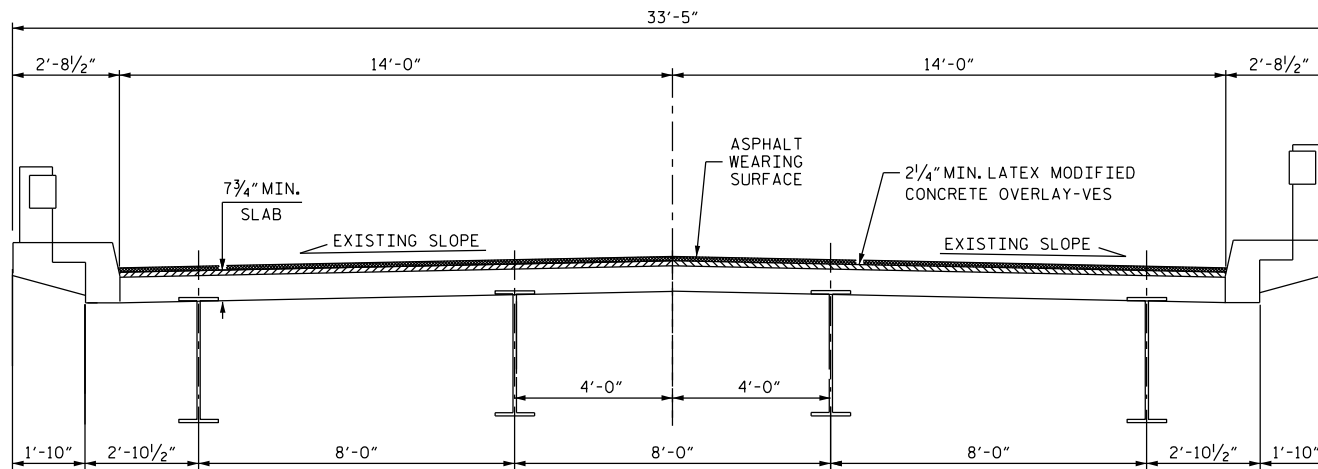
C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1" IN DEPTH OR GREATER THAN 1 1/2" IN DEPTH.

PROJECT NO. BP-5300J  
COUNTY: FORSYTH  
DECK REPAIR BRIDGE NO. 364

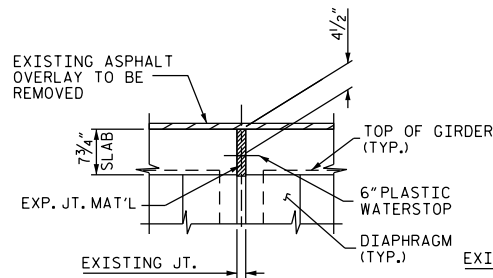
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
PLAN VIEW OF BRIDGE  
#364 ON SR 2662 OVER  
BUSINESS I-40  
28' CL. ROADWAY

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

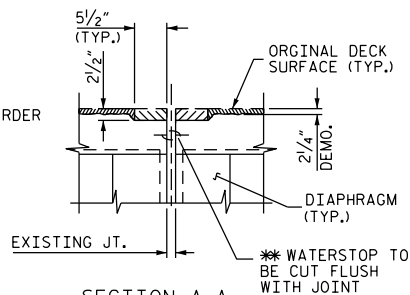
DRAWN BY: R. WEISZ DATE: 03/11  
CHECKED BY: T. BEACH DATE: 02/12



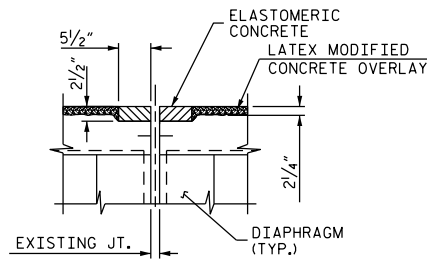
TYPICAL SECTION



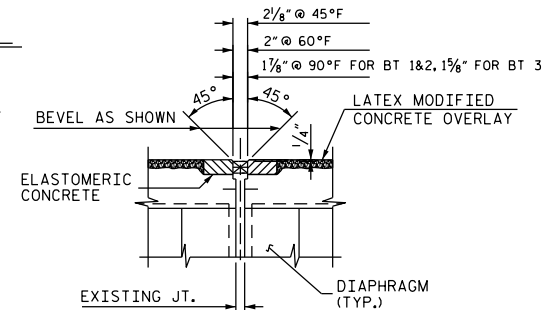
SECTION A-A  
(EXISTING JOINT)



SECTION A-A  
(MINIMUM EXISTING  
JOINT DEMOLITION)

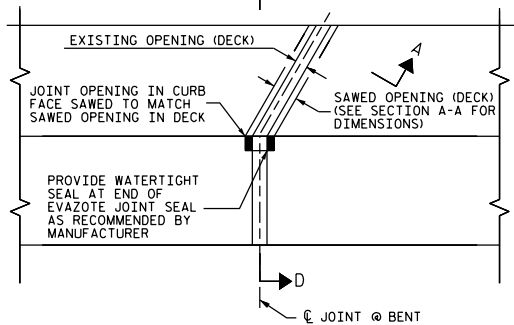


SECTION A-A  
(PROPOSED JOINT  
PRE-SAWED)

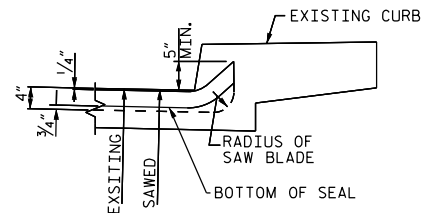


SECTION A-A  
(PROPOSED FOAM  
JOINT SEAL EXPANSION)

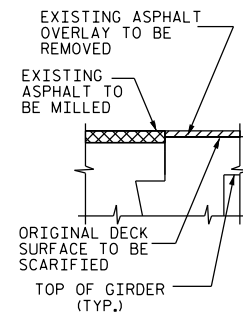
\*\* ALL LOOSE AND UNSOUND CONCRETE SHALL BE REMOVED.  
IF THE EMBEDDED PORTION OF THE EXISTING WATERSTOP  
IS EXPOSED DURING REMOVAL, THE ENTIRE WATERSTOP  
SHALL BE REMOVED.



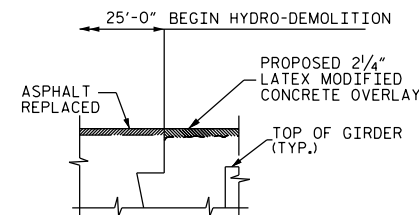
PLAN



SECTION D-D



SECTION B-B  
(EXISTING JOINT)



SECTION B-B  
(PROPOSED JOINT)

PROJECT NO. BP-5300J  
COUNTY: FORSYTH  
DECK REHAB BRIDGE NO. 364

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RAILROAD  
TYPICAL SECTION,  
PLAN VIEW FOR HYDRO-  
DEMO & SCARIFICATION,  
JOINT DETAILS

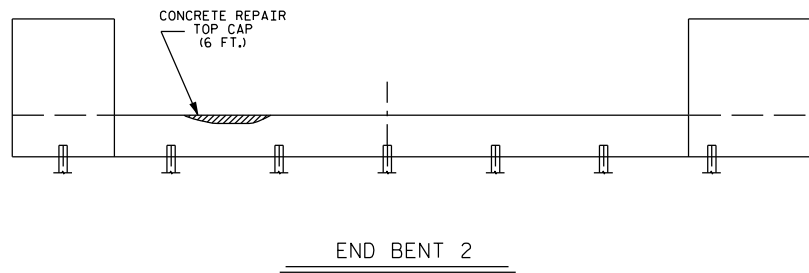
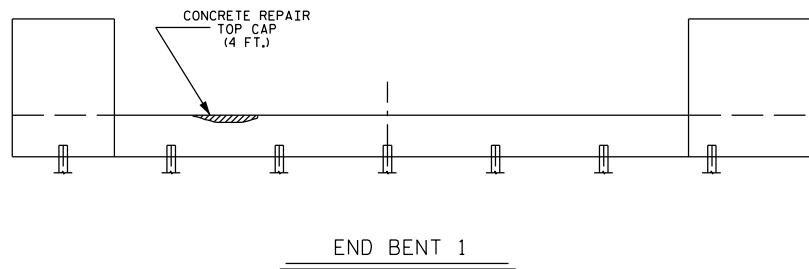
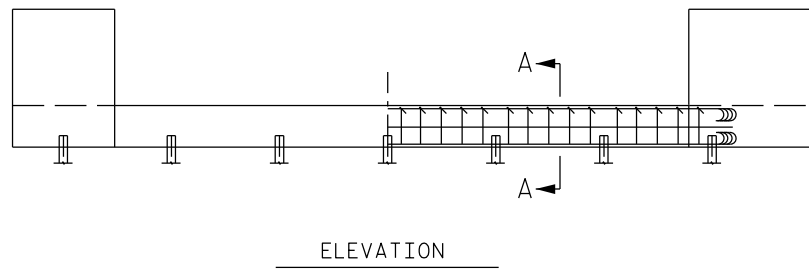
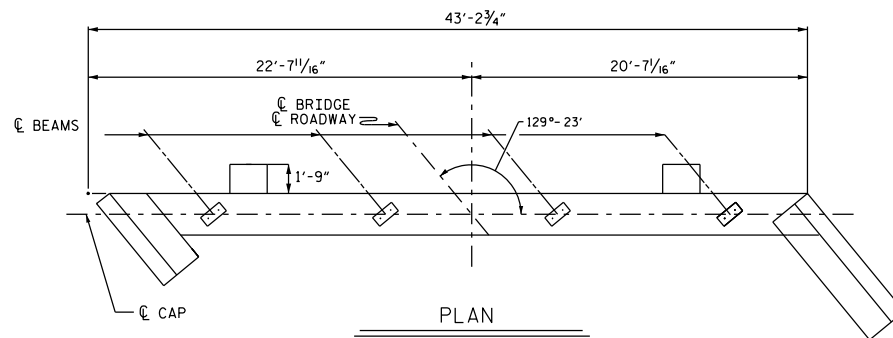
REVISIONS						SHEET NO. S-3
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS 7
2			4			

DRAWN BY : R.WEISZ DATE : 03/11  
CHECKED BY : T.BEACH DATE : 02/12

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

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

\*\*\*\*\*DOGN\*\*\*\*\*



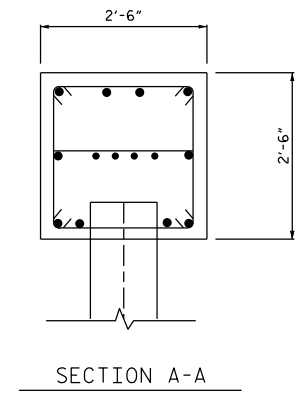
# NOTES:

REPAIR AREAS ARE APPROXIMATE.

PROPOSED MATERIALS AND METHODS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK.

FOR JACKING, SEE JACKING NOTES SHEET S-6.

FOR "CONCRETE REPAIRS", SEE SPECIAL PROVISIONS.



PROJECT NO. BP-5300J  
COUNTY: FORSYTH  
STATION:  
BRIDGE REPAIR NO. 364

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

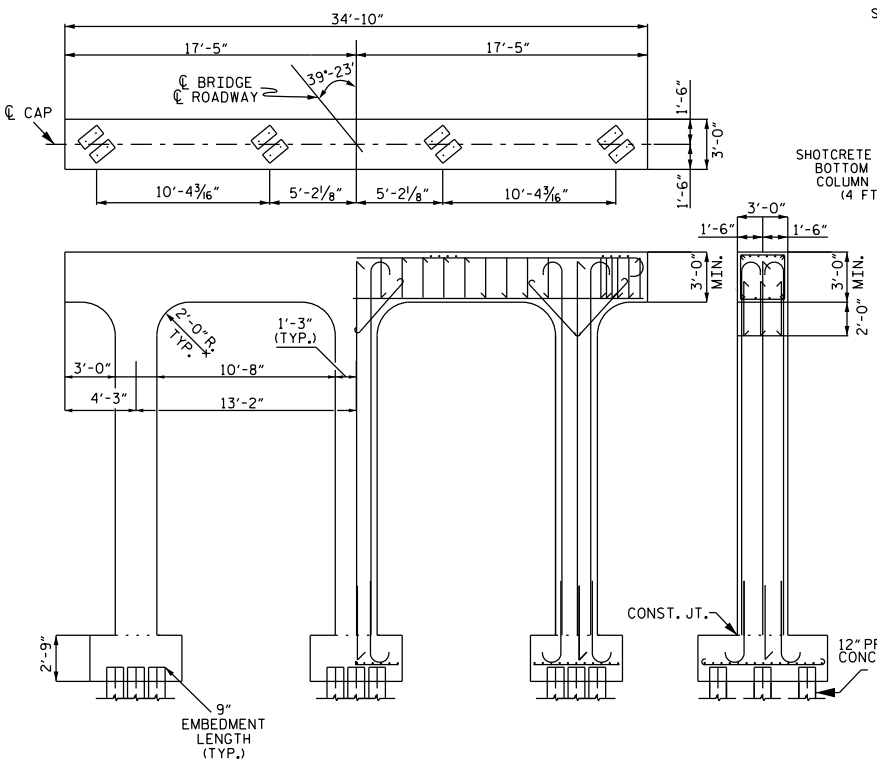
TYPICAL END BENT  
WITH REPAIR LOCATIONS

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

S-4  
TOTAL SHEETS  
7

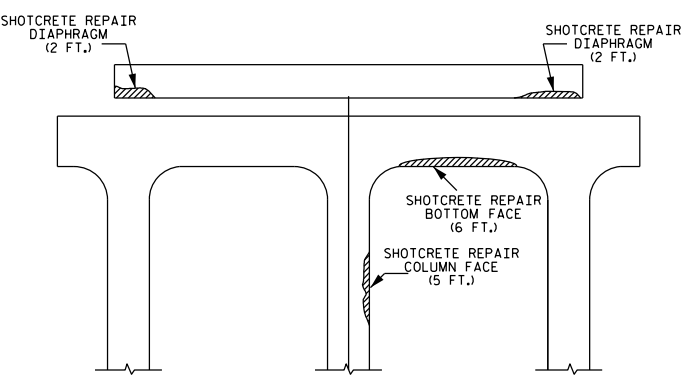
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\*\*\*\*\*SYSTEM\*\*\*\*\* \*\*\*\*\*USER\*\*\*\*\*

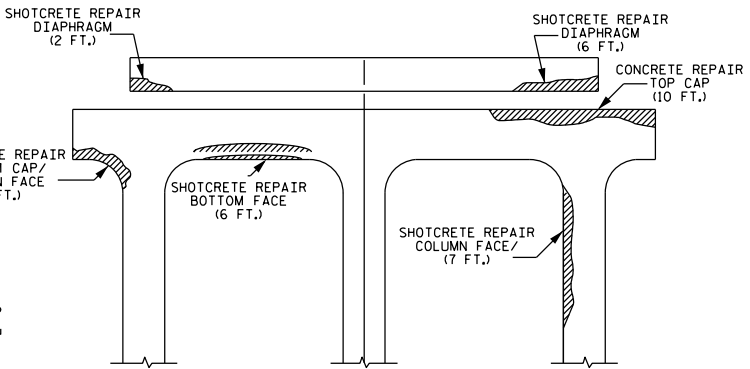


### EXISTING BENTS

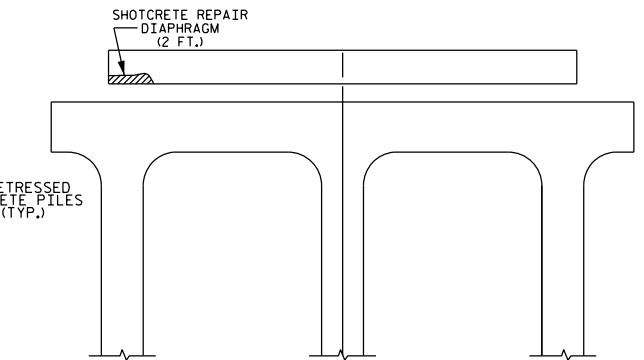
(SHOWING TYPICAL DIMENSIONS AND REINFORCING STEEL)



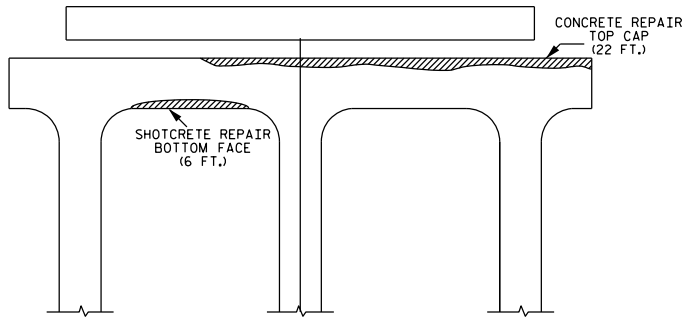
### BENT 2 (NW FACE)



### BENT 1 (NW FACE)



### BENT 1 (SE FACE)



### BENT 2 (SE FACE)

### NOTES:

REPAIR AREAS ARE APPROXIMATE.

PROPOSED MATERIALS AND METHODS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK.

CONTRACTOR TO SUBMIT JACKING & SUPPORT PLANS FOR REPAIRS UNDER BEARING AREAS ON TOP OF CAP.

FOR SHOTCRETE & CONCRETE REPAIRS REFER TO TYPICAL REPAIR DETAILS SHEET S-7 AND SPECIAL PROVISIONS.

PROJECT NO. BP-5300J

COUNTY: FORSYTH

STATION:

BRIDGE REPAIR NO. 364

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

INTERIOR BENT  
AND DIAPHRAGM  
REPAIR LOCATIONS

REVISIONS						SHEET NO. S-5
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS 7
2			4			

DRAWN BY: R. WEISZ DATE: 03/11  
CHECKED BY: T. BEACH DATE: 02/12

\*\*\*\*\*SYTIME\*\*\*\*\* \*\*\*\*\*USERNAME\*\*\*\*\*

# NOTES:

REPAIR AREAS ARE APPROXIMATE

PROPOSED MATERIALS AND METHODS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK.

FOR SHOTCRETE & CONCRETE REPAIRS REFER TO TYPICAL REPAIR DETAILS SHEET S-7 AND SPECIAL PROVISIONS

## JACKING NOTES:

JACKING SHALL BE CONDUCTED IN A MANNER SUCH THAT THE SUPERSTRUCTURE WILL NOT BE DAMAGED AND THERE ARE NO OBSTACLES PREVENTING THE SPAN FROM BEING LIFTED.

THE MAXIMUM ALLOWABLE VERTICAL JACKING DISPLACEMENT SHALL BE 1/2 INCH WITH RESPECT TO THE BEARINGS OF ADJACENT PIERS.

BEARING NUTS SHALL BE LOOSENED TO PROVIDE A MINIMUM OF 59/64 INCH GAP TO ALLOW FOR JACKING.

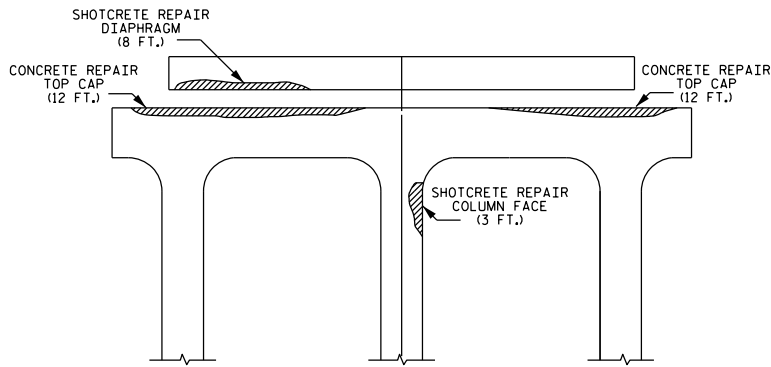
JACK ALL GIRDERS SIMULTANEOUSLY THE SAME AMOUNT AND AT THE SAME RATE. AFTER JACKING MAKE SURE ALL JACKS ARE LOCKED.

IF DURING THE JACKING PROCESS OR WHILE SPAN IS BEING SUPPORTED THE BEAMS SHIFT FROM THEIR ORIGINAL POSITION, ALL WORK WILL CEASE AND THE ENGINEER SHALL BE NOTIFIED.

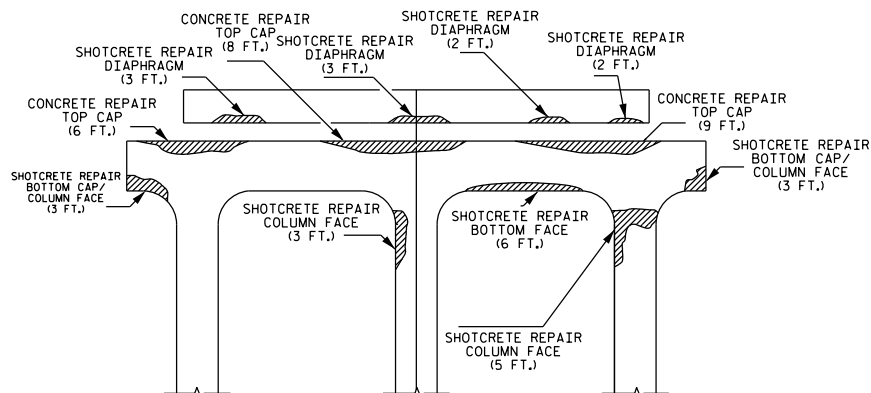
EFFECT OF VIBRATIONS FROM TRAFFIC SHOULD BE CONSIDERED DURING JACKING AND WHEN JACKS ARE LOCKED.

PROVISIONS SHALL BE MADE TO ACCOUNT FOR THERMAL MOVEMENTS DURING THE PERIOD THAT THE STRUCTURE IS RESTING ON TEMPORARY SUPPORTS.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING THE JACKING TO DETERMINE A JACKING LOCATION AT EACH BEARING AND PROVIDE A DESIGN FOR THE JACKING LOADS. JACKS SHALL HAVE A MINIMUM SAFE LOAD CAPACITY OF 125% OF THE CALCULATED LOADING PER AASHTO SPECIFICATIONS.



BENT 3 (NW FACE)



BENT 3 (SE FACE)

PROJECT NO. BP-5300J  
COUNTY: FORSYTH  
STATION:   
BRIDGE REPAIR NO. 364

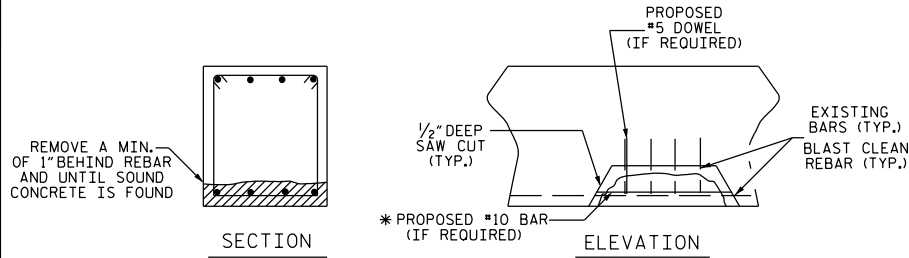
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

INTERIOR BENT  
AND DIAPHRAGM  
REPAIR LOCATIONS

REVISIONS						SHEET NO. S-6 TOTAL SHEETS 7
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

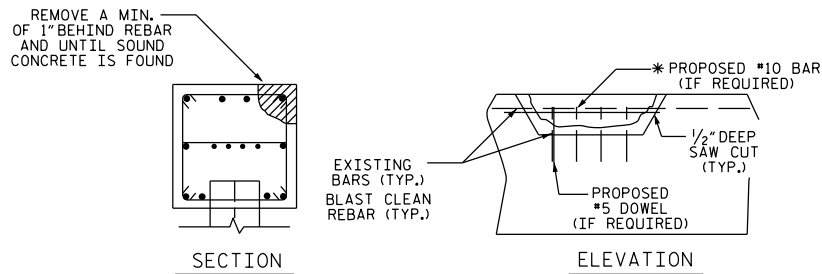
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CHECKED BY: T. BEACH DATE: 02/12

\*\*\*\*\*SYSTEM\*\*\*\*\* \*\*\*\*\*USER\*\*\*\*\*

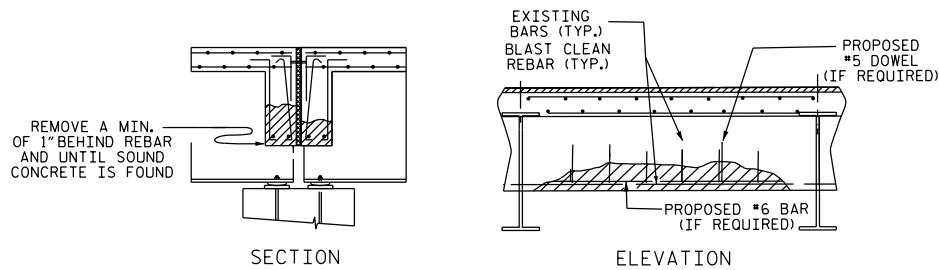


TYPICAL SHOTCRETE REPAIR DETAIL

\* SEE "SPlice DETAIL"



TYPICAL END BENT CONCRETE REPAIR DETAIL



TYPICAL SHOTCRETE DIAPHRAGM REPAIR DETAIL

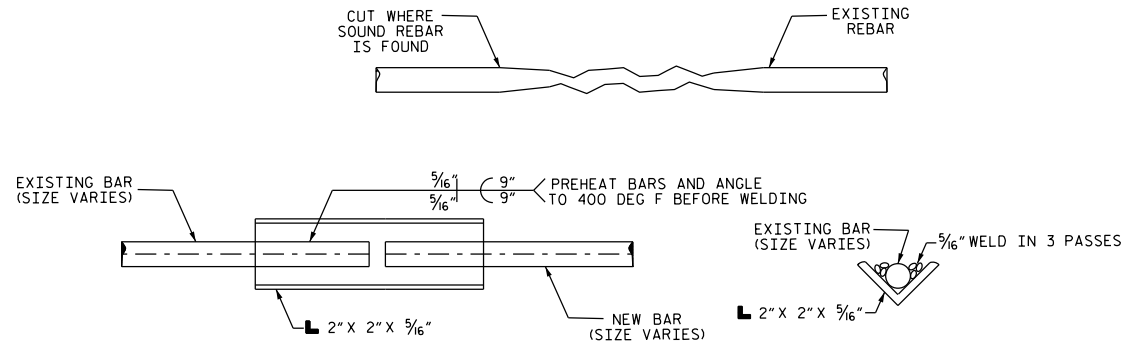
# NOTES:

REPAIR AREAS ARE APPROXIMATE

PROPOSED MATERIALS AND METHODS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK.

FOR SHOTCRETE & CONCRETE REPAIRS REFER TO SPECIAL PROVISIONS

DAMAGED REBAR TO BE REMOVED AND REPLACED SEE "SPlice DETAILS" AND SPECIAL PROVISIONS FOR SHOTCRETE AND CONCRETE REPAIRS.



SPlice DETAIL

(IF REQUIRED)

PROJECT NO. BP-5300J  
COUNTY: FORSYTH  
STATION:  
BRIDGE REPAIR NO. 364

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

CONCRETE REPAIR DETAILS

NOT TO SCALE

DRAWN BY: R. WEISZ DATE: 03/11  
CHECKED BY: T. BEACH DATE: 02/12

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

\*\*\*\*\*SYTIME\*\*\*\*\* \*\*\*\*\*USERNAME\*\*\*\*\* \*\*\*\*\*DCN\*\*\*\*\*

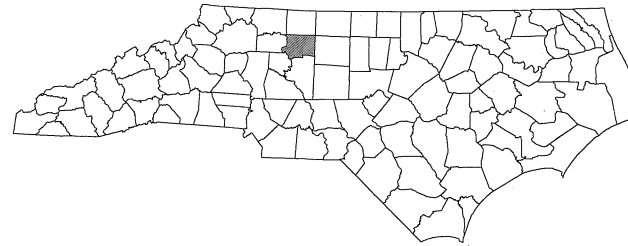


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

FORSYTH COUNTY

DIVISION 9



BRIDGE REHABILITATION

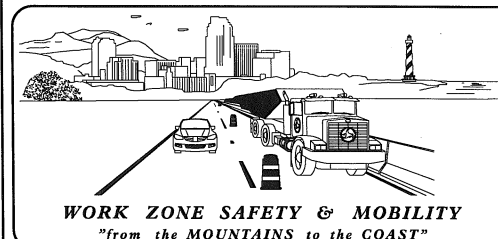
BRIDGE #364 – LINVILLE RD. OVER US 421

INDEX OF SHEETS

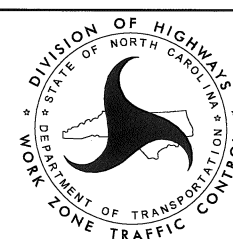
SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-1A	LEGEND AND LIST OF ROADWAY STANDARD DRAWINGS
TMP-2	GENERAL NOTES AND PHASING
TMP 3-3A	BRIDGE #364 - LINVILLE RD. ROAD CLOSURE
TMP-4	BRIDGE #364 - LINVILLE RD. DETOUR ROUTE
TMP-5	BRIDGE #364 - RIGHT LANE CLOSURES AT EXIT RAMPS

TRAFFIC MANAGEMENT STRATEGY

PROPOSED REPAIRS TO BRIDGE #364 WILL BE PERFORMED USING A COMBINATION OF DAY AND TIME RESTRICTED LANE CLOSURES, AND ROAD CLOSURE WITH DETOUR ROUTE. REFER TO SHEET TMP-2 FOR PHASING.



PLAN PREPARED FOR NCDOT BRIDGE MANAGEMENT UNIT  
RALEIGH, NC



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

BETSY L. WATSON, P.E.  
TRAFFIC ENGINEER  
GEORGE KARAGEORGE  
SR. TRANSPORTATION DESIGNER

APPROVED: *Betsy L. Watson*  
DATE: 2/14/12  
SEAL  
NORTH CAROLINA  
PROFESSIONAL  
ENGINEER  
SEAL  
29449  
BETSY L. WATSON

2/14/2012  
U:\TrafficControl\BP-5300J\_Forsyth\TCP\Plan\_Sheets\BP-5300J\_TC\_TMP\_01.TITLE.dgn  
gkarageorge

SHEET NO.

TMP-1

WBS #45438.1.1

BP-5300J

2/10/2012  
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rcullen

LEGEND

DIRECTION OF TRAFFIC FLOW

DIRECTION OF PEDESTRIAN TRAFFIC FLOW

WORK AREA

PAVEMENT REMOVAL

NORTH ARROW

TYPE III BARRICADE

CONE

DRUM

SKINNY DRUM

TUBULAR MARKER

CHANGEABLE MESSAGE SIGN (CMS)

FLAGGER

AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

FLASHING ARROW BOARD(TYPE C)

LAW ENFORCEMENT

TRUCK MOUNTED ATTENUATOR (TMA)

PORTABLE CONCRETE BARRIER (PCB)

TEMPORARY CRASH CUSHION

TEMPORARY SHORING

WORK ZONE SIGN-PORTABLE

WORK ZONE SIGN-STATIONARY

WORK ZONE SIGN-STATIONARY OR PORTABLE

SIGNALS

EXISTING

PROPOSED

TEMPORARY

PAVEMENT MARKINGS

EXISTING PAVEMENT MARKING (GRAY)

SKIP LINES

MINI-SKIP LINES

SOLID LINES

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

EXISTING PAVEMENT MARKING SYMBOLS (HOLLOW)

ONLY PAVEMENT MARKING ALPHANUMERIC CHARACTERS

PAVEMENT MARKERS

CRYSTAL /CRYSTAL

CRYSTAL /RED

YELLOW/YELLOW

PROJ. REFERENCE NO.	SHEET NO.
BP - 5300J	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 JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS



Stantec Consulting Services Inc.  
801 Jones Franklin Road  
Suite 300  
Raleigh, NC 27808  
Tel. (919) 851-6866  
Fax. (919) 851-7024  
www.stantec.com  
License No. F-0672

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

SEAL

2/14/12



LEGEND  
&  
ROADWAY STANDARD DRAWINGS

GENERAL NOTES

PROJ. REFERENCE NO.	SHEET NO.
BP-5300J	TMP-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 AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-40 BUS, US 421	6:00 A.M.- 9:00 A.M. MONDAY THRU THURSDAY 3:00 P.M.- 7:00 P.M. MONDAY THRU THURSDAY 6:00 A.M.- 7:00 P.M. FRIDAY
LINVILLE RD.	6:00 A.M.- 9:00 A.M. MONDAY THRU FRIDAY 3:00 P.M.- 7:00 P.M. MONDAY THRU FRIDAY

B) 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

- 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 TRAFFIC CONTROL PLAN, 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.
  - F) 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.
  - G) 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.
  - H) 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.
  - I) 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.
  - J) UNLESS OTHERWISE SHOWN IN THE PLANS, PLACE ARROW BOARDS ON THE ROADWAY SHOULDER. IF SHOULDERS DO NOT EXIST, PLACE ARROW BOARDS WITHIN THE MERGE TAPER BEHIND THE CHANNELIZING DEVICES OF THE LANE CLOSURE. IF NEEDED, EXTEND LANE CLOSURES TO PROVIDE STOPPING SIGHT DISTANCE TO THE ARROW BOARD (REFER TO ROADWAY STANDARD DRAWING 1101.11 SHEET 2).
  - K) PLACE LANE CLOSURE DRUMS IN TAPERS AT A MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT (MPH). ALONG BUFFER SPACES AND WORK AREAS SPACE DRUMS AT A MAXIMUM SPACING EQUAL IN FEET TO TWICE THE POSTED SPEED LIMIT (MPH). IN ALL CASES, CHANNELIZING DEVICES ARE TO BE SPACED IN SUCH A MANNER AS TO POSITIVELY ACHIEVE THE INTENDED VISUAL CHANNELIZATION. CHANNELIZING DEVICES SHOULD BE Laterally OFFSET 3 FT INSIDE THE CLOSED LANE AS ROOM PERMITS.
- ROAD CLOSURES
- L) PROVIDE SIGNING AND DEVICES FOR ROAD CLOSURES ACCORDING TO THE TRAFFIC CONTROL PLAN. COVER OR REMOVE ALL SIGNS AND DEVICES FOR ROAD CLOSURES WHEN NOT IN EFFECT.
  - M) PROVIDE OFFSITE DETOUR ROUTE SIGNING AS SHOWN IN THE TRAFFIC CONTROL PLANS. COVER OR REMOVE OFFSITE DETOUR SIGNING WHEN THE DETOUR IS NOT IN OPERATION.
  - N) WHEN CLOSING A ROADWAY OR DRIVEWAY PLACE TYPE III BARRICADES COMPLETELY ACROSS THE ROADWAY OR FROM CURB TO CURB. ATTACH BARRICADE MOUNTED "ROAD CLOSED" SIGN R11-2 AT ALL CLOSURE LOCATIONS.
  - O) INSTALL SIGNS BEFORE BARRICADES WHEN CLOSING A ROADWAY TO TRAFFIC. REMOVE BARRICADES BEFORE SIGNS WHEN OPENING A ROADWAY TO TRAFFIC. INSTALL/REMOVE ROAD CLOSURE SIGNS AND BARRICADES IN A CONTINUOUS OPERATION AND WITHIN THE SAME CALENDAR DAY.

PAVEMENT MARKINGS AND MARKERS

P) REPLACE EXISTING PAVEMENT MARKINGS WITH 2 APPLICATIONS OF PAINT.

MISCELLANEOUS

- Q) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.
- R) ALL DIMENSIONS AND STATIONS IN THE TRAFFIC CONTROL PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- S) MAINTAIN DRIVEWAY ACCESS AT ALL TIMES, UNLESS OTHERWISE DIRECTED BY ENGINEER.
- T) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.
- U) CHANGEABLE MESSAGE SIGN MESSAGES SHOWN ARE EXAMPLES. OTHER MESSAGES MAY BE USED AS CONDITIONS WARRANT. ALL MESSAGES AND LOCATIONS MUST BE APPROVED BY THE ENGINEER PRIOR TO INCORPORATING.

PHASING

FORSYTH CO. BRIDGE NO. 364

STEP 1:  
INSTALL DETOUR ROUTING SIGNS AND CHANGEABLE MESSAGE SIGNS FOR DETOUR ROUTE AS SHOWN ON SHEET TMP-4.


STEP 2:  
CLOSE LINVILLE RD. AS SHOWN ON SHEETS TMP-3 AND TMP-3A.

STEP 3:  
PERFORM BRIDGE REHABILITATION AND REPLACE PAVEMENT MARKINGS WITH PAINT. FOR LANE CLOSURES ON I-40BUS/US 421, UNDER BRIDGE NO. 364, USE SHEET TMP-5.

STEP 4:  
REMOVE ROAD CLOSURE FOR LINVILLE RD.

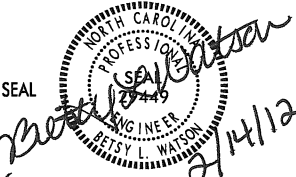
STEP 5:  
REMOVE DETOUR ROUTE SIGNS AND CHANGEABLE MESSAGE SIGNS.


2/10/2012  
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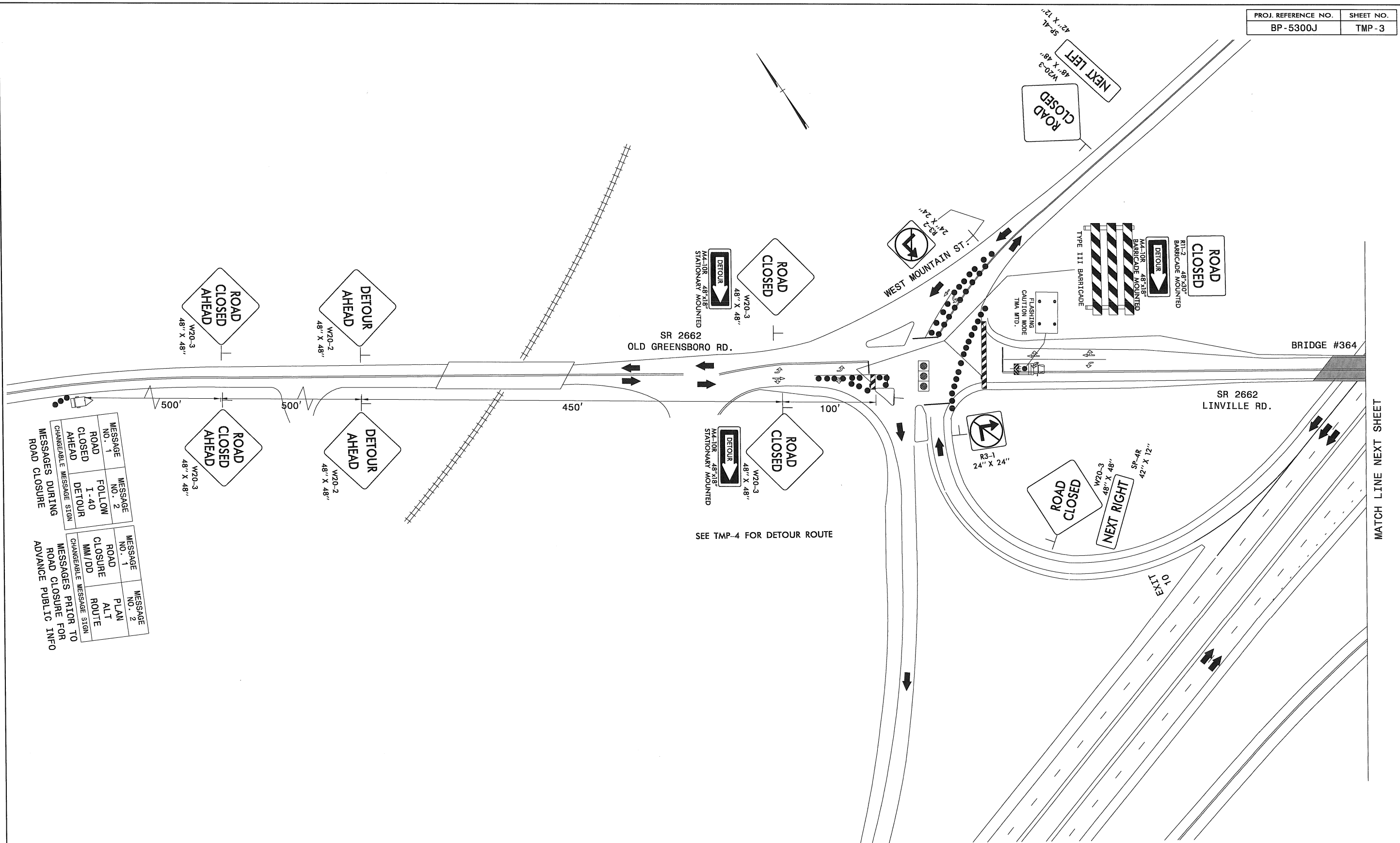
Stantec Consulting Services Inc.  
801 Jones Franklin Road  
Suite 300  
Raleigh, NC 27606  
Tel. (919) 851-8888  
Fax. (919) 851-7024  
www.stantec.com  
License No. F-0672

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_





GENERAL NOTES  
&  
PHASING



MESSAGE NO. 1	MESSAGE NO. 2
ROAD CLOSED AHEAD	FOLLOW I-40 DETOUR
CHANGEABLE MESSAGE SIGN	

MESSAGES DURING ROAD CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
ROAD CLOSURE MM/DD	PLAN ALT ROUTE
CHANGEABLE MESSAGE SIGN	

MESSAGES PRIOR TO ROAD CLOSURE FOR ADVANCE PUBLIC INFO

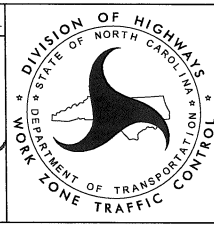


Stantec Consulting Services Inc.  
801 Jones Franklin Road  
Suite 300  
Raleigh, NC 27606  
Tel. (919) 851-6866  
Fax. (919) 851-7024  
[www.stantec.com](http://www.stantec.com)  
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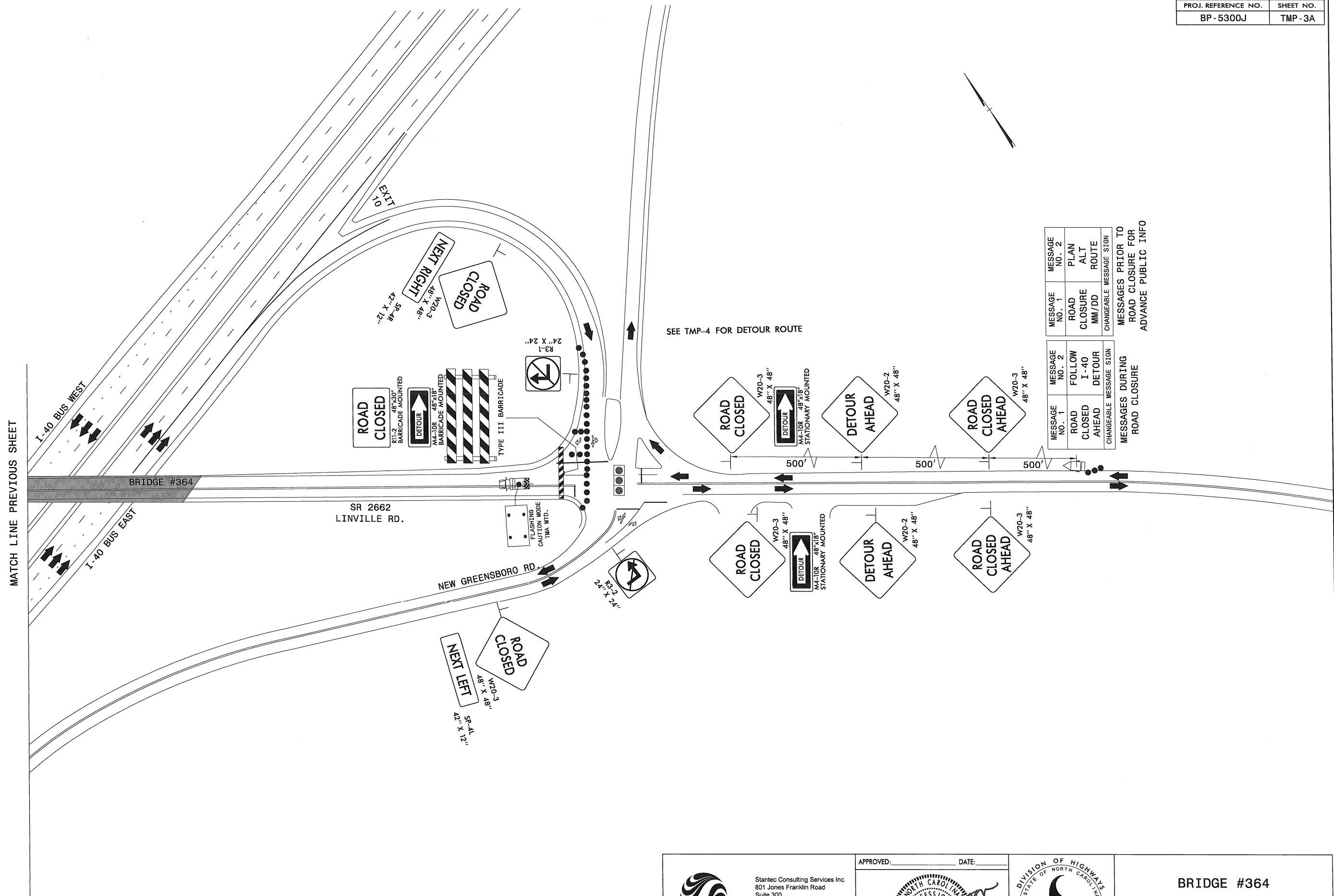
SEAL

NORTH CAROLINA  
PROFESSIONAL  
SEAL  
2044  
ENGINEER  
JESSY L. WATSON  
2/14/12



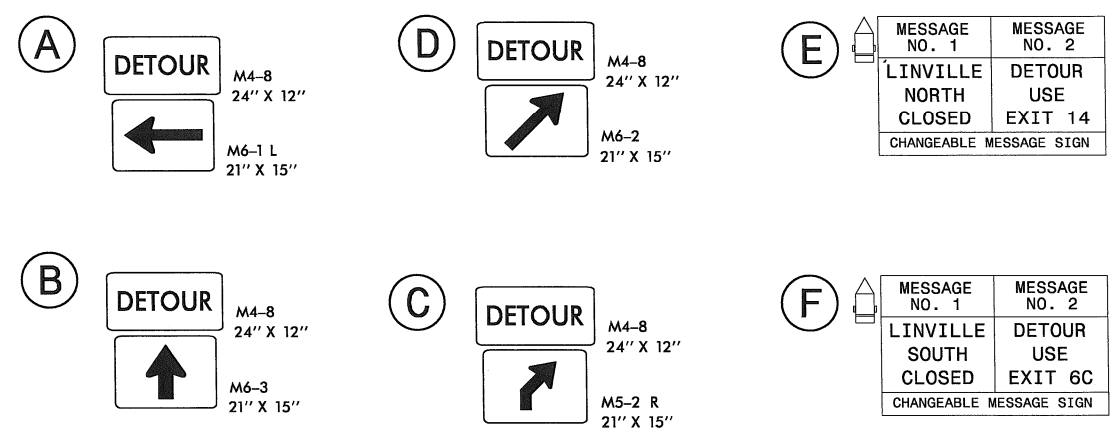
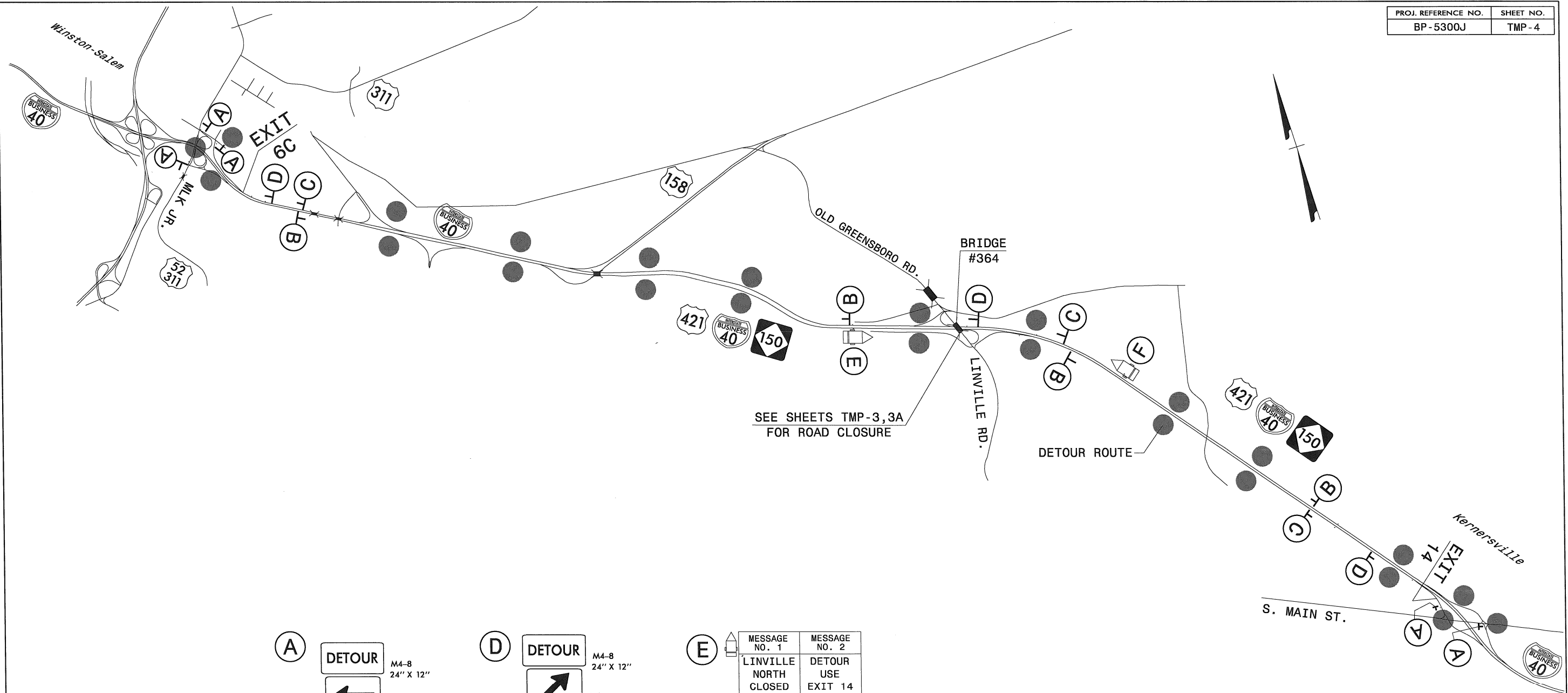
BRIDGE #364

LINVILLE RD.  
ROAD CLOSURE






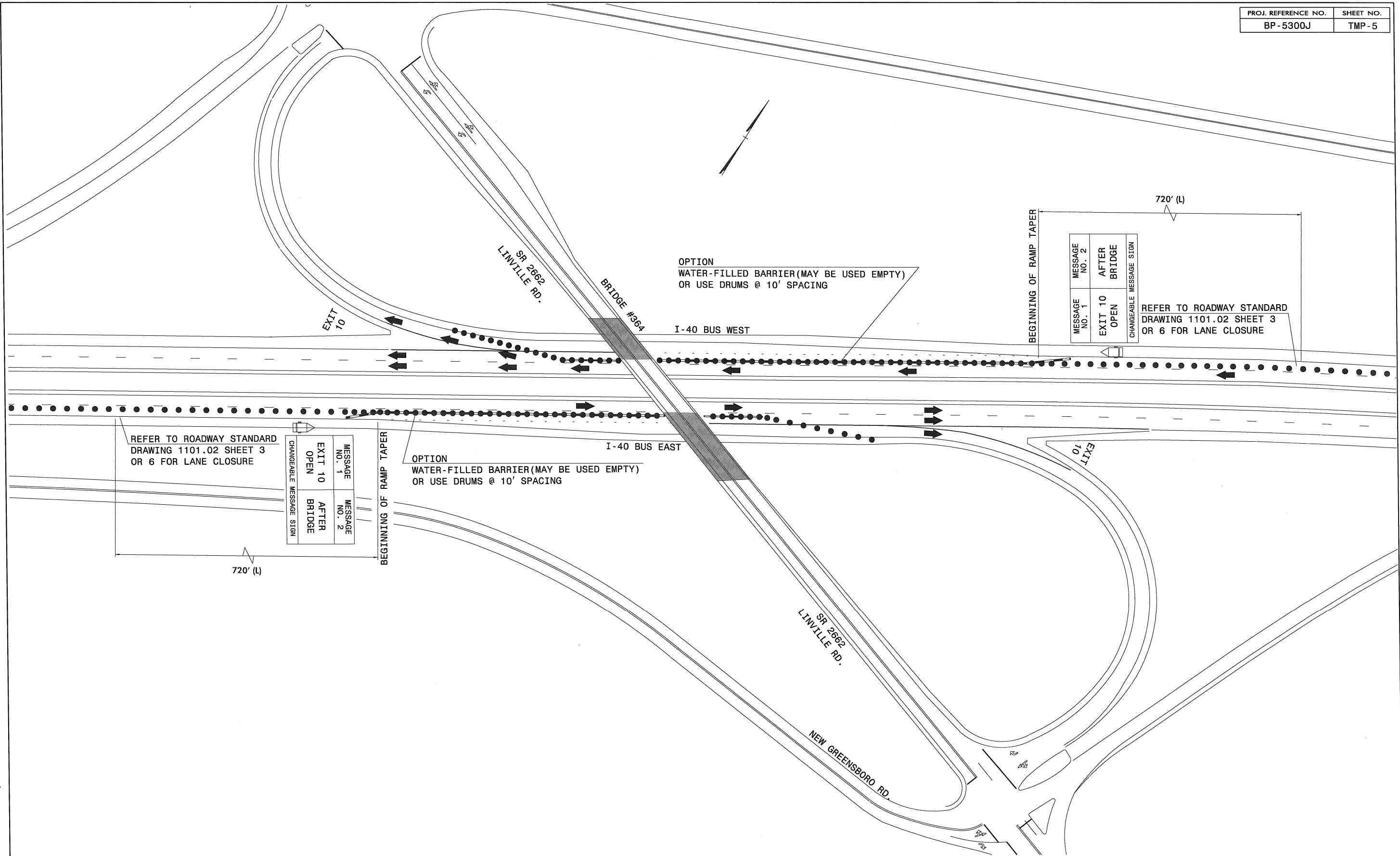
MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2
ROAD CLOSED AHEAD	FOLLOW I - 40 DETOUR	ROAD CLOSURE MM/DD	PLAN ALT ROUTE
CHANGEABLE	MESSAGE SIGN	CHANGEABLE	MESSAGE SIGN

MESSAGES DURING ROAD CLOSURE	MESSAGES PRIOR TO ROAD CLOSURE FOR ADVANCE PUBLIC INFO



2/10/2012  
\\ntc\office\TrafficControl\BP-5300J\_Forsyth\TCP\Plan\_Sheets\BP-5300J.fc\_TMP\_04\_LINVILLE\_RD\_DETOUR.dgn  
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 Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-8866 Fax. (919) 851-7024 www.stantec.com License No. F-0672	APPROVED: _____ DATE: _____ 		BRIDGE #364  LINVILLE RD. DETOUR ROUTE



REFER TO ROADWAY STANDARD  
DRAWING 1101.02 SHEET 3  
OR 6 FOR LANE CLOSURE

CHANGEABLE MESSAGE SIGN	MESSAGE NO. 1	MESSAGE NO. 2
	EXIT 10 OPEN	AFTER BRIDGE

OPTION  
WATER-FILLED BARRIER(MAY BE USED EMPTY)  
OR USE DRUMS @ 10' SPACING

OPTION  
WATER-FILLED BARRIER(MAY BE USED EMPTY)  
OR USE DRUMS @ 10' SPACING

REFER TO ROADWAY STANDARD  
DRAWING 1101.02 SHEET 3  
OR 6 FOR LANE CLOSURE

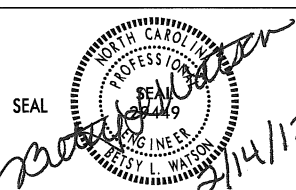
2/10/2012  
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Suite 300  
Raleigh, NC 27806  
Tel. (919) 851-8866  
Fax. (919) 851-7024  
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APPROVED:

DATE:



BRIDGE #364  
RIGHT LANE CLOSURES AT  
EXIT RAMPS