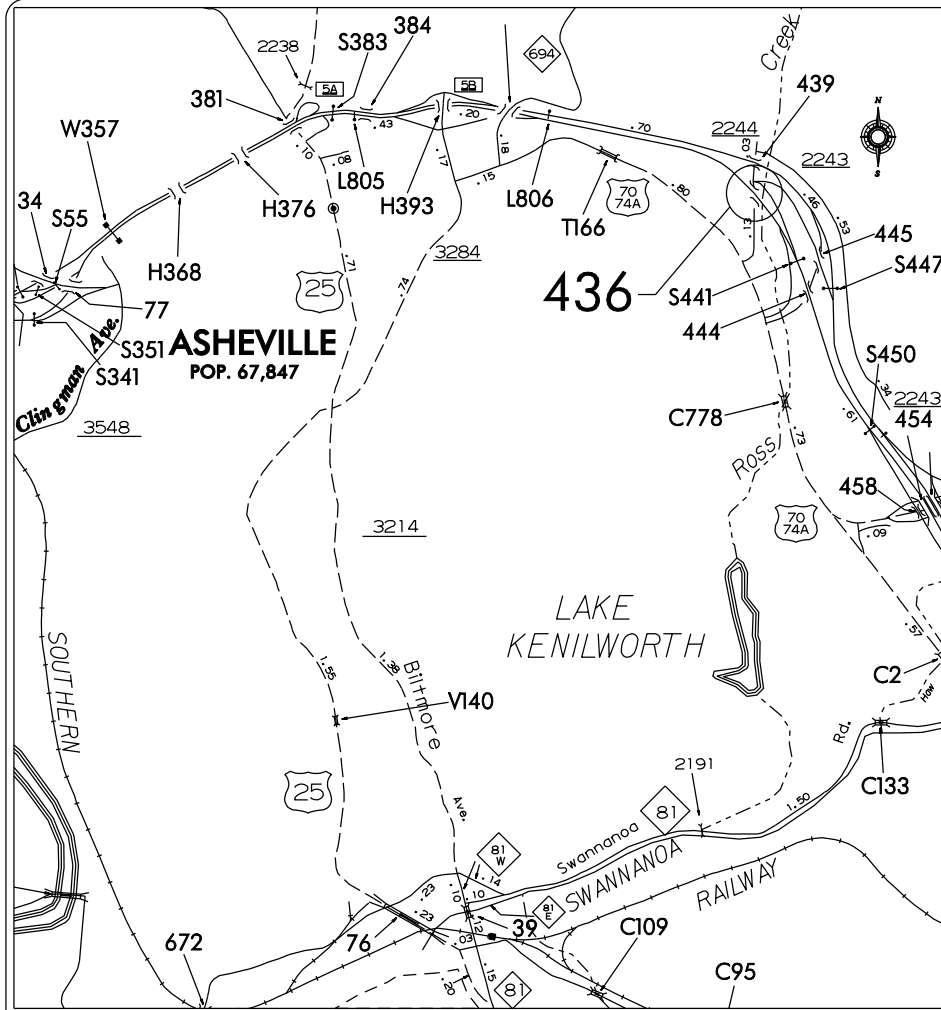


BP-5300L

CONTRACT #D000106



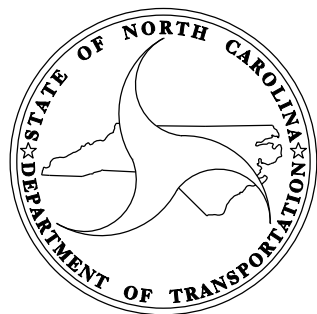
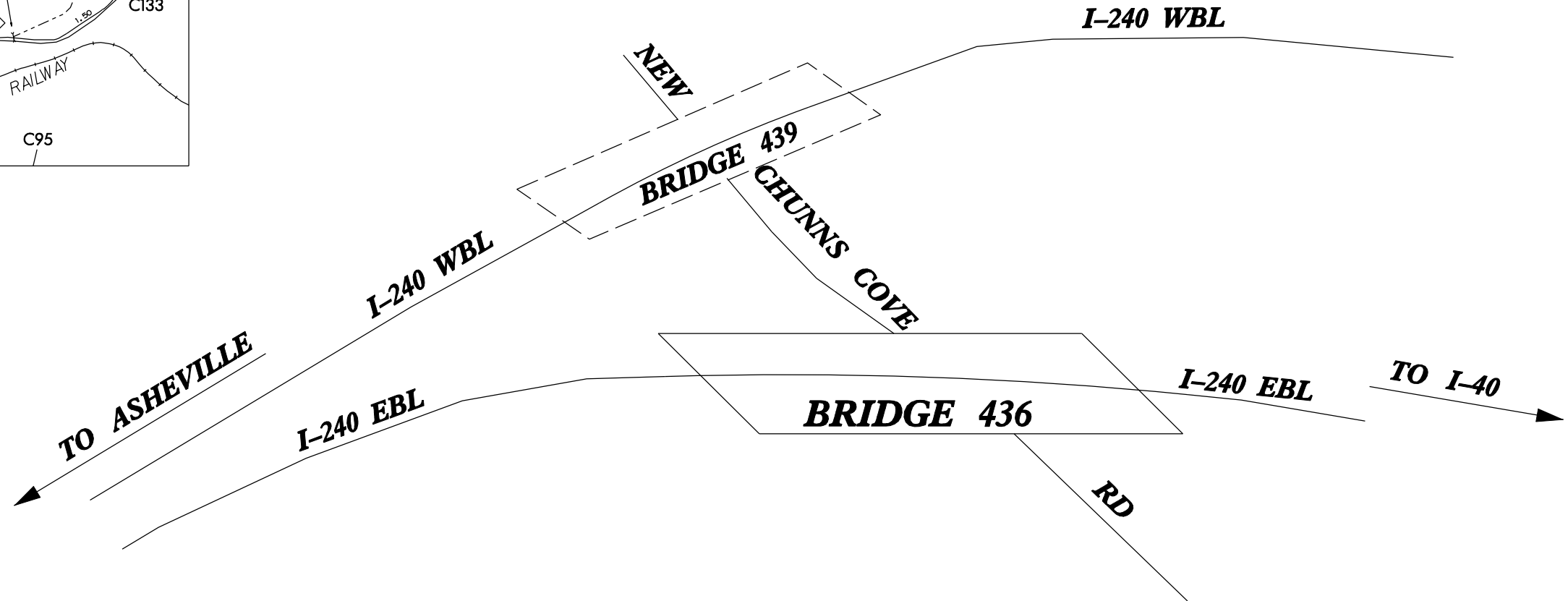
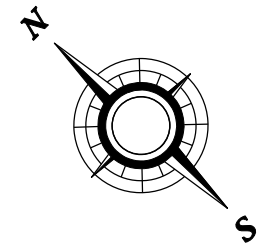
INDEX OF SHEETS	
1	TITLE SHEET
S1 - S4	STRUCTURE PLANS
TCP1 - TCP9	TRAFFIC CONTROL PLANS

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

BUNCOMBE COUNTY

LOCATION: BRIDGE #436, ON I-240 EBL OVER,  
NEW CHUNNS COVE RD  
TYPE OF WORK: BRIDGE DECK REHABILITATION WITH  
LATEX MODIFIED CONCRETE,  
PAVEMENT MARKING

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP-5300L	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45438.1.1		PE	
45438.3.11		CONST	



DESIGN DATA  
ADT 2007 = 39000

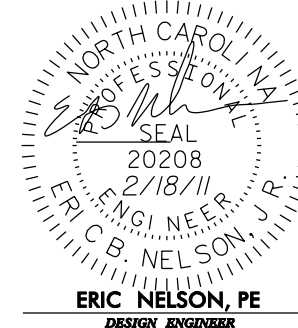
PROJECT LENGTH

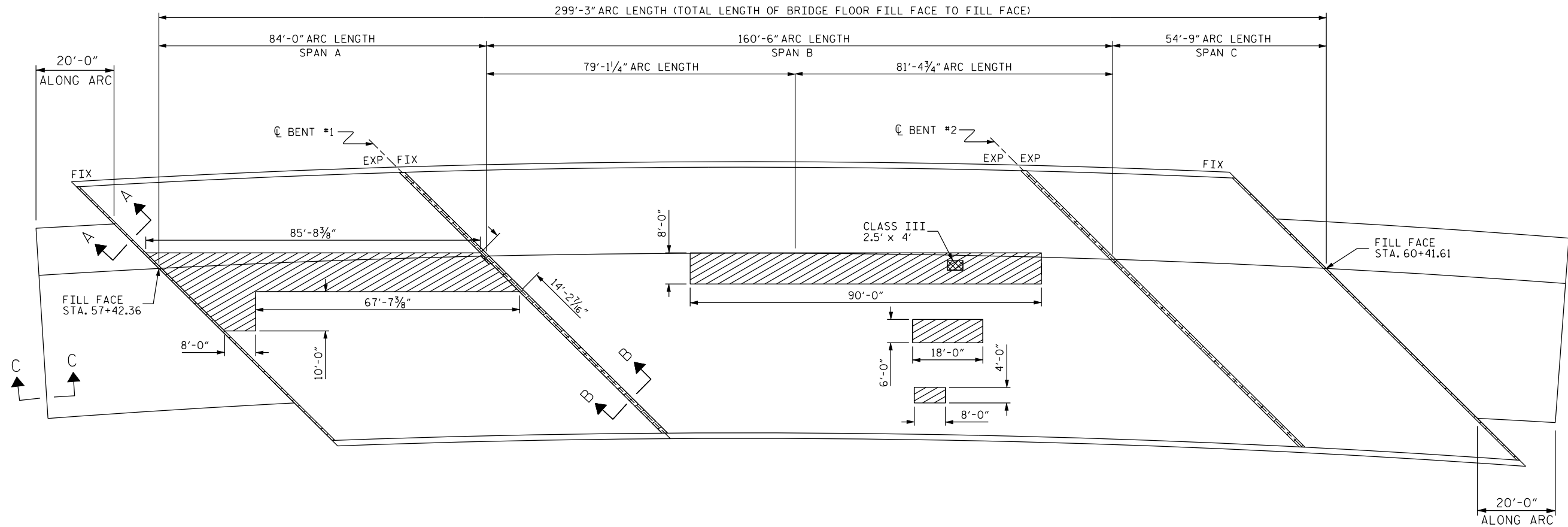
LENGTH STRUCTURE PROJECT = .057 MILE

Prepared in the Office of:  
DIVISION OF BRIDGE MANAGEMENT  
2006 STANDARD SPECIFICATIONS

LETTING DATE:  
~~MARCH 24, 2011~~  
March 30, 2011

DAN HOLDERMAN, PE  
PROJECT ENGINEER





PLAN

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

NOTES

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

SEE SPECIAL PROVISIONS FOR SURFACE PREPARATION.

FOR HYDRO-DEMOLITION,SEE SPECIAL PROVISIONS .

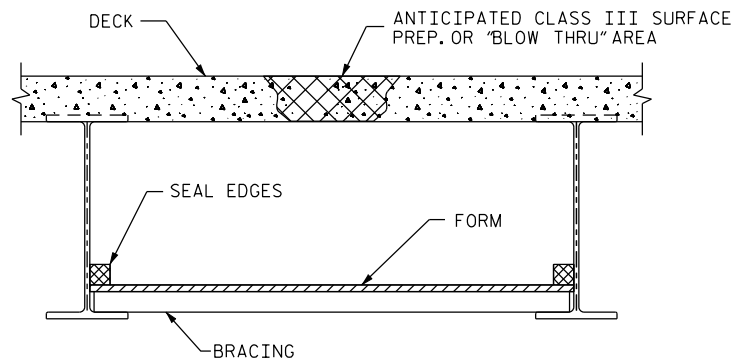
FOR UNDER DECK CONTAINMENT SEE SPECIAL PROVISIONS.

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

FOR EVAZOTE JOINT SEALS,SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE,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 THE DECK, SEE "TYP. "BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL.

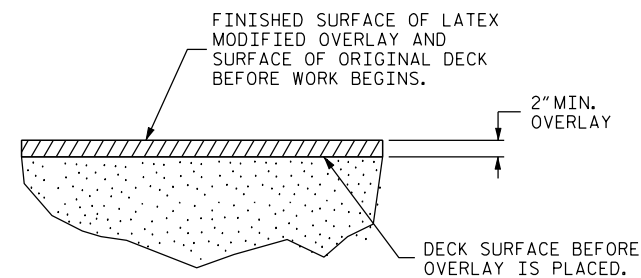


TYP. "BLOW THRU"CONTAINMENT AND FORMWORK

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.



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

PROJECT NO. BP-5300L  
COUNTY: BUNCOMBE  
DECK REPAIR BRIDGE NO. 436

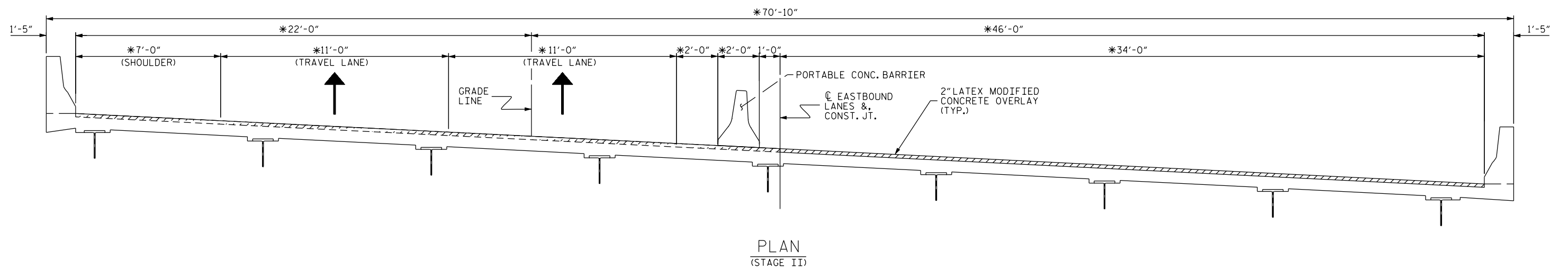
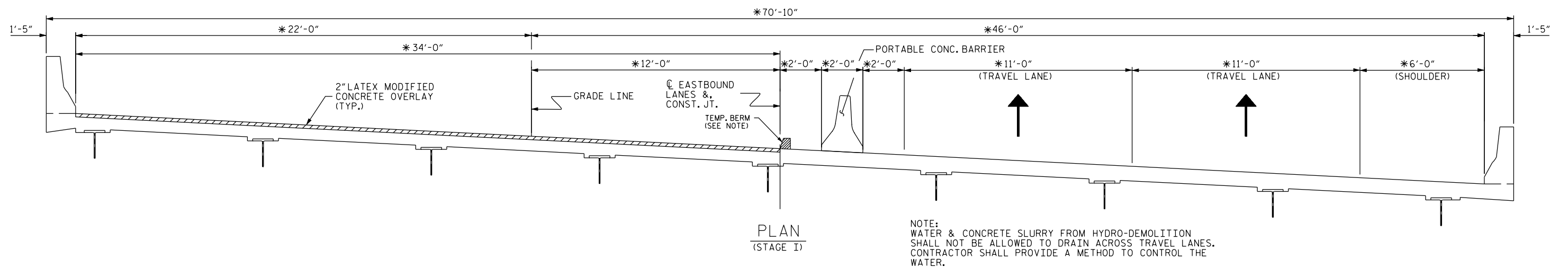
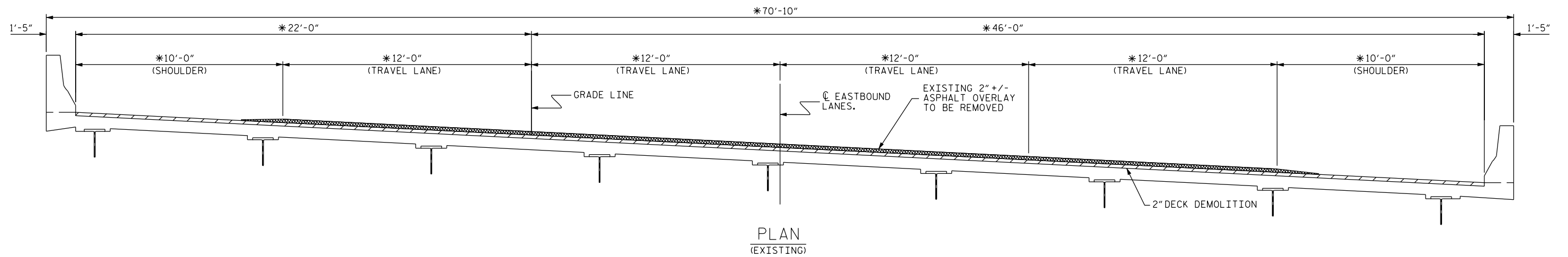
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
PLAN VIEW OF  
BRIDGE #436 ON  
I-240 EBL OVER  
NEW CHUNNS COVE RD

TOTAL BILL OF MATERIAL								
** SCARIFYING BRIDGE DECK	* CLASS I SURFACE PREPARATION	* CLASS II SURFACE PREPARATION	* CLASS III SURFACE PREPARATION	HYDRO- DEMOLITION	LATEX MODIFIED CONCRETE VERY EARLY STRENGTH	PLACING & FINISHING LATEX MODIFIED CONCRETE VERY EARLY STRENGTH	EVAZOTE JOINT SEALS	GROOVING BRIDGE FLOOR
SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	C.Y.	SQ.YDS.	LUMP SUM	SQ. FT.
3067	2538	205	1	2743	178	2743	LUMP SUM	24687

\* QUANTITY SHOWN IS FOR INFORMATION ONLY. \*\* INCLUDES APPROACH MILLING.

DRAWN BY: CLB DATE: 02/11  
CHECKED BY: EBN DATE: 02/11

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



\* RADIAL DIMENSIONS

PROJECT NO. BP-5300L  
COUNTY: BUNCOMBE  
DECK REPAIR BRIDGE NO. 436

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
TYPICAL SECTIONS  
&  
STAGING

DRAWN BY: CLB DATE: 01/11  
CHECKED BY: EBN DATE: 01/11

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

NOTES

FOR EVAZOTE JOINT SEAL, SEE SPECIAL PROVISIONS.

THE INSTALLED EVAZOTE JOINT SEALS SHALL BE WATERTIGHT.

NOMINAL UNCOMPRESSED SEAL WIDTH OF EVAZOTE JOINT SEAL SHALL BE 2 1/2" AT BENT #1 AND 3 1/8" @ BENT #2.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE EVAZOTE JOINT SEAL IN LIEU OF SAWING THE JOINT.

JOINT OPENING			
TEMP	45°	60°	90°
BENT #1	2 1/16"	1 7/8"	1 9/16"
BENT #2	1 15/16"	2 3/8"	2 5/8"

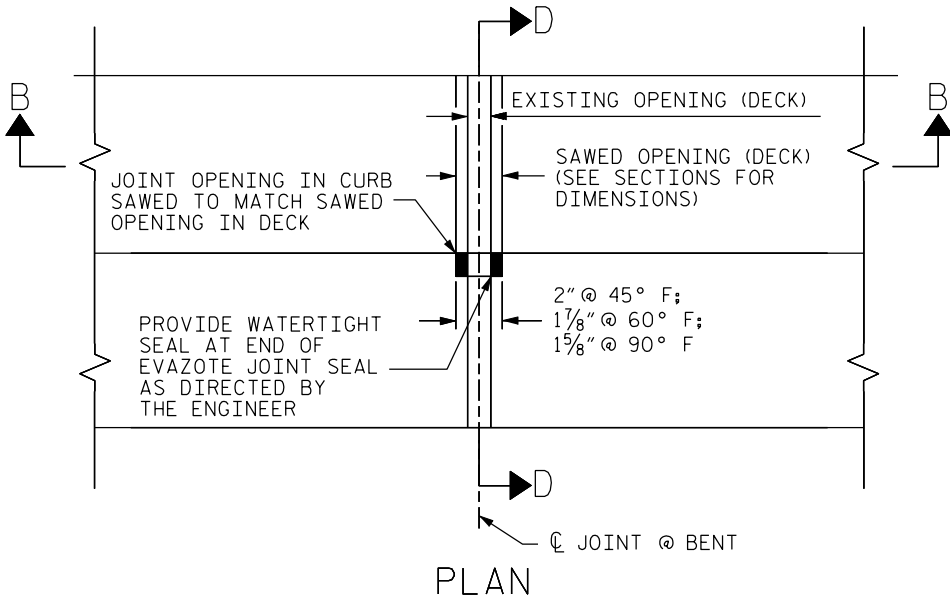
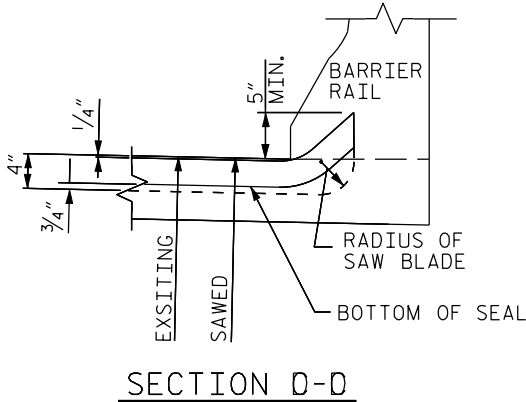
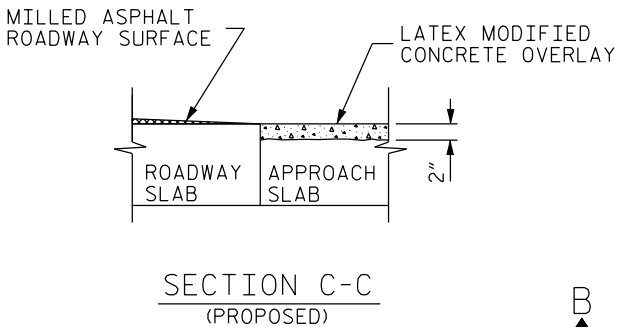
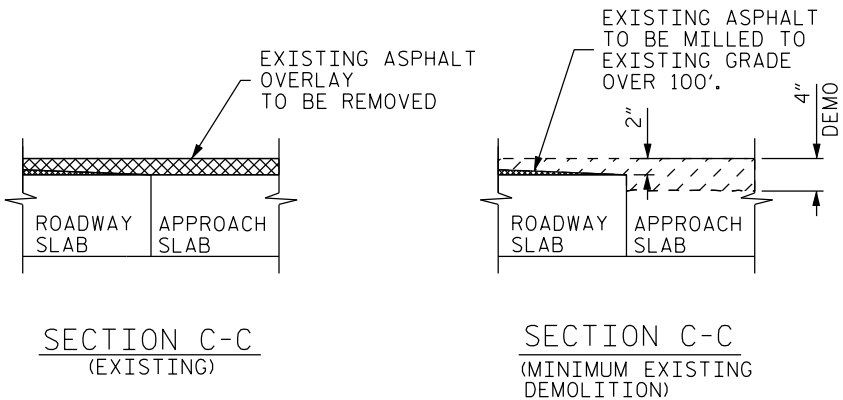
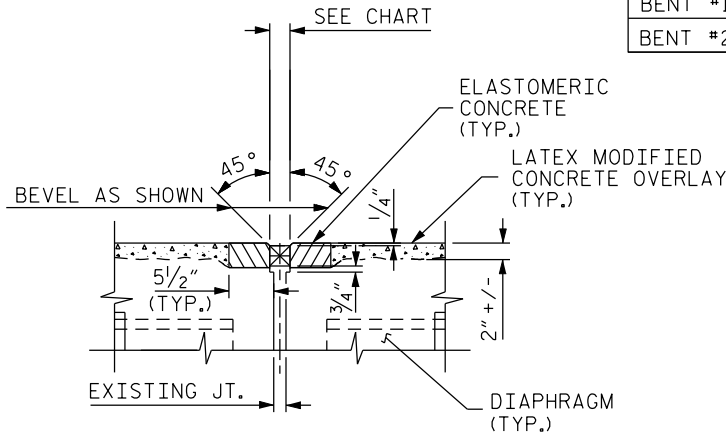
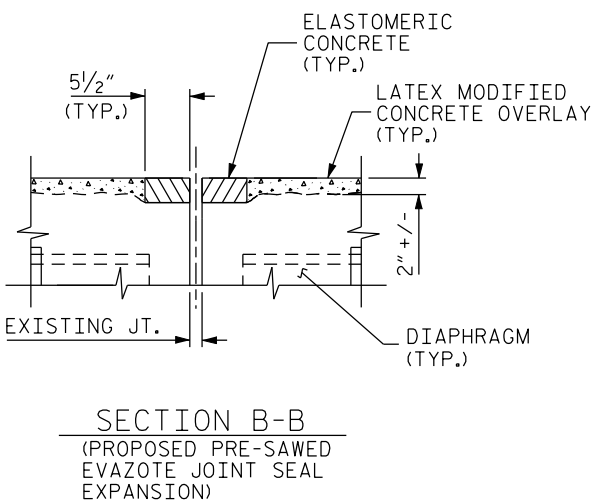
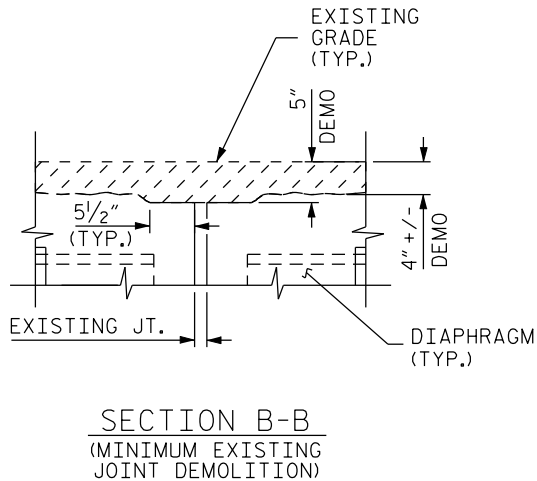
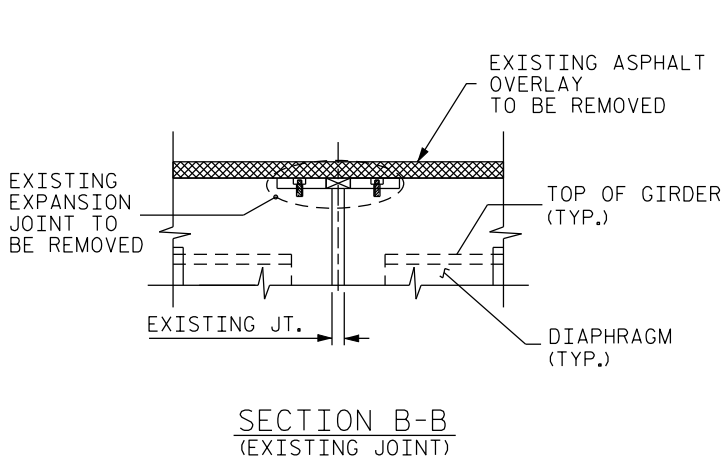
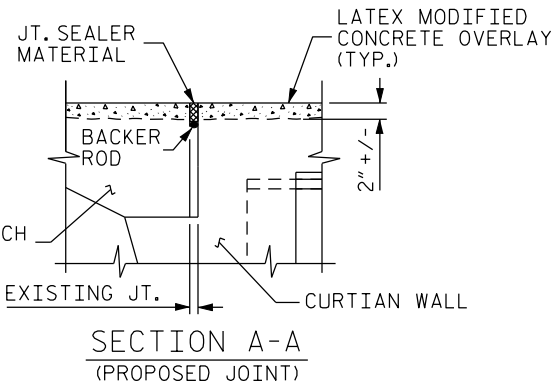
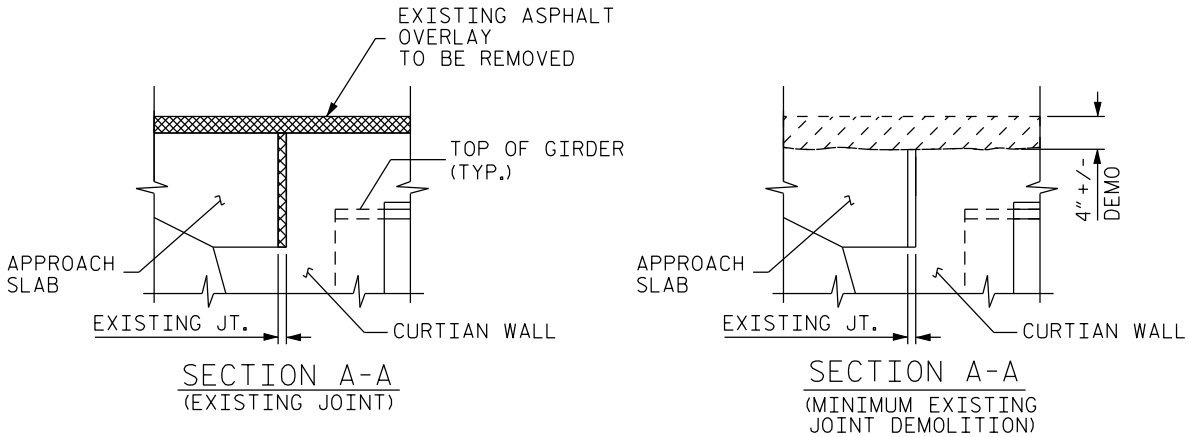
ELASTOMERIC CONCRETE	
BENTS	52.3 (CU. FT.)
* TOTAL	52.3 (CU. FT.)
* BASED ON THE MINIMUM BLOCKOUT SHOWN.	

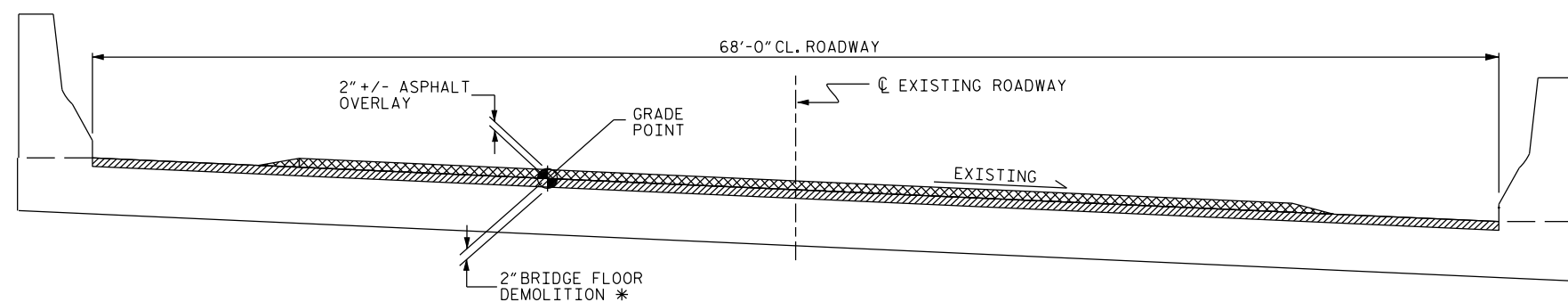
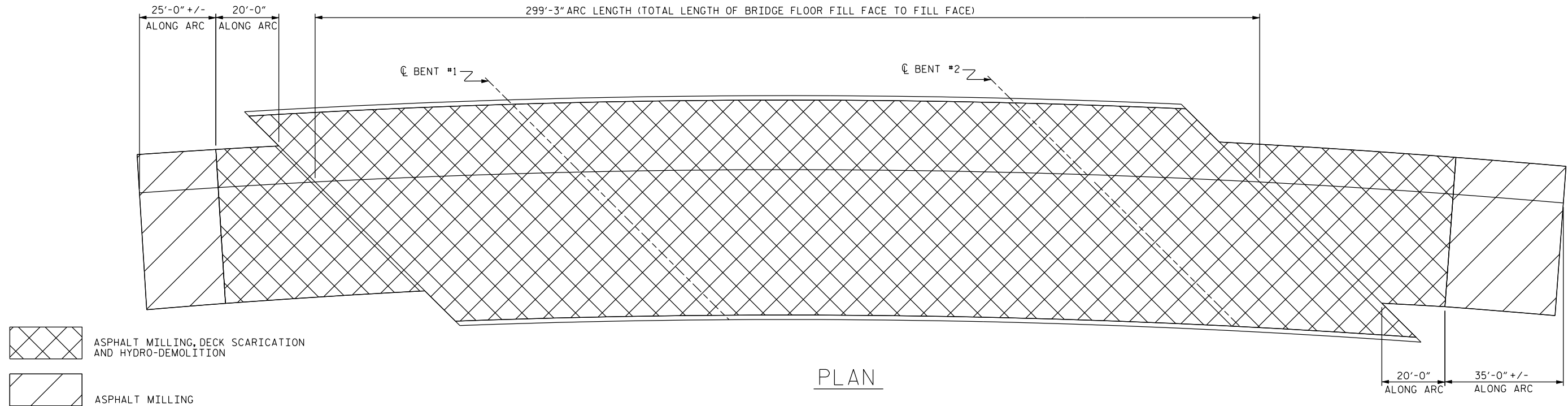
PROJECT NO. BP-5300L  
COUNTY: BUNCOMBE  
DECK REPAIR BRIDGE NO. 436

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

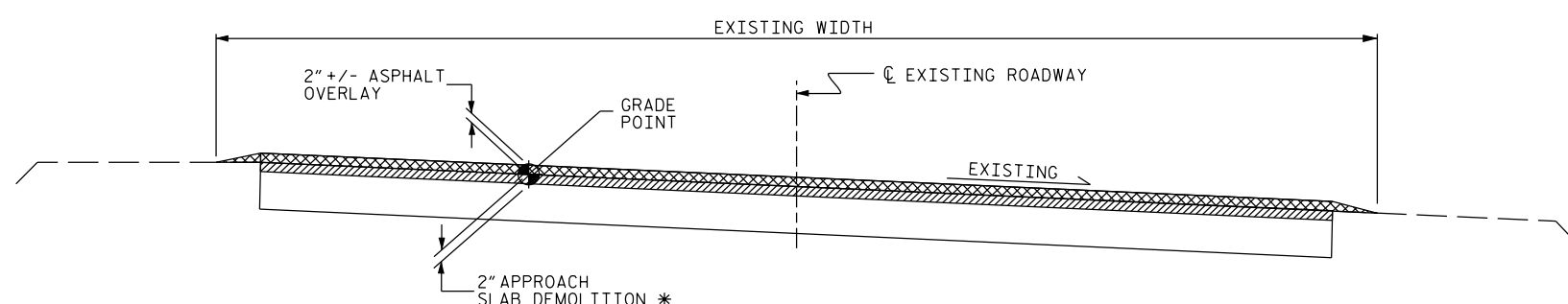
JOINT DETAILS

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

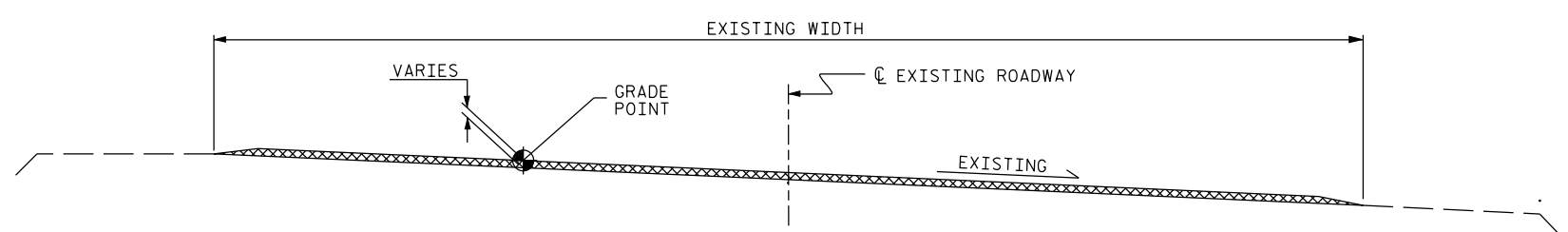




TYPICAL BRIDGE FLOOR MILLING SECTION  
 \*(DEMOLITION INCLUDES DECK SCARIFICATION AND HYDRO-DEMOLITION)



TYPICAL APPROCH SLAB MILLING SECTION  
 \*(DEMOLITION INCLUDES DECK SCARIFICATION AND HYDRO-DEMOLITION)



TYPICAL ROADWAY MILLING SECTION

PROJECT NO. BP-5300L  
 COUNTY: BUNCOMBE  
 DECK REPAIR BRIDGE NO. 436

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 PLAN VIEW OF  
 BRIDGE #436 ON  
 I-240 EBL OVER  
 NEW CHUNNS COVE RD

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

DRAWN BY: CLB    DATE: 02/11  
 CHECKED BY: EBN    DATE: 02/11

NOT TO SCALE

3/3/2011  
U:\Traffic\TrafficControl\BP-5300L BUNCOMBE 436\TCP\Plan\_Sheets\BP-5300L\_tcp.psh01.dgn  
gkarageorge

PROJECT: BP-5300L

WBS 45438.1.1

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED  
TRAFFIC CONTROL

BUNCOMBE COUNTY

LOCATION: BRIDGE NO. 436

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
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
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
TCP-3	TRAFFIC CONTROL PHASING
TCP-4, 4A-4C	TRAFFIC CONTROL FOR STAGE 1 BRIDGE REHABILITATION
TCP-5, 5A, 5B	TRAFFIC CONTROL FOR STAGE 2 BRIDGE REHABILITATION
TCP-6	CLOSURE OF ENTRANCE RAMP FROM CHARLOTTE ST. TO I-240E
TCP-7	DOUBLE LEFT LANE CLOSURE
TCP-8	SINGLE LANE CLOSURES

STATE PROJECT REFERENCE NO.




BP-5300L

SHEET NO.
















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 (PCB)
-  TEMPORARY CRASH CUSHION
-  CHANGEABLE MESSAGE SIGN (CMS)
-  TRUCK MOUNTED  
IMPACT ATTENUATOR (TMIA)
-  LAW ENFORCEMENT (LAW)
-  FLAGGER

APPROVED:   
DATE: 3/3/11



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

I:\FileControl\BP-5300L\2011\BUNCOMBE 435\TCP\Plan\_Sheets\BP-5300L.tc.pst02.dgn  
gkarageorge

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

GENERAL NOTES

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) FOR ANY INCIDENTAL LANE CLOSURES OTHER THAN DURING PHASES I-III DO NOT CLOSE OR NARROW TRAVEL LANES DURING THE FOLLOWING TIMES OR DURING ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES.

ROAD NAME	DAY AND TIME RESTRICTIONS
I-240 & RAMPS	6:00 A.M. - 7:00 P.M. EVERY DAY (EXCEPT DURING THE INTERMEDIATE CONTRACT TIMES IN PHASE I, II and III, WHERE LANE CLOSURES WILL BE ALLOWED AS SHOWN IN THE PLAN)

HOLIDAY, HOLIDAY WEEKEND & SPECIAL EVENT LANE CLOSURE RESTRICTIONS

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

- | ROAD NAME | ALL ROADS   |
|-----------|---|
| 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 THE BELE CHERE FESTIVAL, BETWEEN THE HOURS OF 6:30 P.M. THE WEDNESDAY BEFORE THE FESTIVAL AND 6:30 A.M. THE WEDNESDAY AFTER THE FESTIVAL.   |

- C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
CHARLOTTE ST. TO I-240E ENTRANCE RAMP	5:00 A.M.-11:00 P.M. EVERY DAY

- D) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
I-240	5:00 A.M.-11:00 P.M. EVERY DAY	20 MINUTES FOR REVISING TRAFFIC CONTROL DEVICES

LANE AND SHOULDER CLOSURE REQUIREMENTS

- E) 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.
- F) INSTALL ALL LANE CLOSURES ACCORDING TO THE TRAFFIC CONTROL PLAN, ROADWAY STANDARD DRAWINGS (1101.02), OR AS DIRECTED BY THE ENGINEER.
- G) 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.
- H) 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.
- I) 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.
- J) 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.
- K) 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.
- L) UNLESS OTHERWISE SHOWN IN THE PLANS, PLACE ARROW PANELS ON THE ROADWAY SHOULDER. IF SHOULDERS DO NOT EXIST, PLACE ARROW PANELS 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 PANEL (REFER TO ROADWAY STANDARD DRAWING 1101.11 SHEET 2).
- M) 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.

TEMPORARY PORTABLE CONCRETE BARRIER


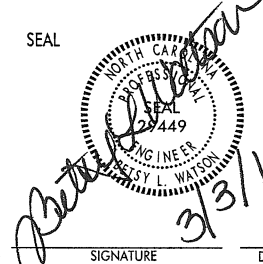

- N) INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.
- O) INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.
- P) PROTECT THE APPROACH END OF TEMPORARY PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED IMPACT ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PAVEMENT MARKINGS

- Q) FOR FINAL MARKINGS USE 2 APPLICATIONS OF PAINT AND REPLACE MARKINGS IN THEIR ORIGINAL EXISTING LOCATIONS.
- R) FOR INTERIM MARKINGS THAT WILL REQUIRE SUBSEQUENT REMOVAL USE WATERBOURNE PAINT OR COLD APPLIED PLASTIC TYPE IV OR OTHER PRODUCTS ON THE APPROVED PRODUCTS LIST AND AS APPROVED BY THE ENGINEER.

MISCELLANEOUS

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

 <b>Stantec</b> 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  3/3/11	GENERAL NOTES	
	SCALE: NONE DATE: FEB. 2011 DWG. BY: GK DESIGN BY: GK REVIEWED BY: BLW		REVISIONS

INTERMEDIATE CONTRACT TIME SPECIAL PROVISION

COMPLETE THE WORK REQUIRED OF PHASES I, II AND III IN A CONTINUOUS OPERATION WITHIN A PERIOD OF APPROXIMATELY 19 (NINETEEN) CALENDAR DAYS AND 11 HOURS CONSECUTIVELY BEGINNING ON A FRIDAY AT 7:00 P.M. AND ENDING ON THURSDAY AT 6:00 A.M. 19 CALENDAR DAYS AND 11 HOURS LATER.

PHASE I

STAGE 1 BRIDGE 436 SEE SHEETS TCP-4, 4A-4C, TCP-6, TCP-7, TCP-8

STEP 1:

SWITCH TRAFFIC FROM THE EXISTING PATTERN TO THE PHASE I PATTERN SHOWN ON SHEETS TCP 4, 4A-4C AS FOLLOWS IN STEPS 1A-1E:

COMPLETE STEPS 1A-1E IN A CONTINUOUS OPERATION.

1A)  
CLOSE THE ENTRANCE RAMP FROM CHARLOTTE ST. TO I-240E AS SHOWN ON SHEET TCP-6. REFER TO GENERAL NOTE C FOR TIME RESTRICTIONS.

1B)  
INSTALL A RIGHT LANE CLOSURE ON I-240E AND DIRECT I-240E TRAFFIC TO THE FAR LEFT LANE IN A SINGLE LANE (SEE TCP-8).

1C)  
WITH I-240E TRAFFIC IN ONE LANE AND ENTRANCE RAMP FROM CHARLOTTE ST. CLOSED, COMPLETE PLACEMENT OF PAVEMENT MARKINGS, REMOVAL OF CONFLICTING MARKINGS AND COMPLETE INSTALLATION OF PCB AND CRASH CUSHION.

COMPLETE INSTALLATION OF TRAFFIC CONTROL DEVICES FOR THE PHASE I PATTERN AS SHOWN ON SHEETS TCP-4, 4A-4C.

1D)  
STOP TRAFFIC TEMPORARILY ON I-240E USING A ROLLING ROAD BLOCK OPERATION AS SHOWN ON RDWY. STD. DWG. 1101.03, SHEET 9. REFER TO GENERAL NOTE D FOR TIME RESTRICTIONS. WITH TRAFFIC STOPPED ON I-240E REMOVE THE RIGHT LANE CLOSURE AND INSTALL A DOUBLE LEFT LANE CLOSURE AND INSTALL DEVICES DIRECTING I-240E TRAFFIC TO THE RIGHT TWO LANES AS SHOWN ON SHEETS TCP-4, 4A-4C.

1E)  
REMOVE THE CHARLOTTE ST. ENTRANCE RAMP ROAD CLOSURE AND OPEN LANES TO THE PHASE I TRAFFIC PATTERN AS SHOWN ON SHEETS TCP-4, 4A-4C.

STEP 2:

BEHIND PORTABLE CONCRETE BARRIER REMOVE ASPHALT OVERLAY AND CONSTRUCT STAGE 1 OF THE BRIDGE REHABILITATION.

UPON COMPLETION OF STAGE 1 BEGIN THE INSTALLATION OF PAVEMENT MARKINGS AWAY FROM TRAFFIC IN PREPARATION FOR THE TRAFFIC SWITCH IN PHASE II.

PHASE II

STAGE 2 BRIDGE 436 SEE SHEETS TCP-5, 5A-5B, TCP-6, TCP-6

STEP 1:

UPON COMPLETION OF PHASE I-STAGE 1 BRIDGE REHABILITATION AND WITH TRAFFIC STILL OPERATING IN THE PHASE I PATTERN, SWITCH TRAFFIC TO THE PHASE II PATTERN AS FOLLOWS IN STEPS 1A-1E:

1A)  
BEHIND THE PREVIOUSLY PLACED DOUBLE LEFT LANE CLOSURE STILL OPERATING FROM PHASE I, BEGIN REMOVING AND RESETTNG THE PCB TO THE PHASE II LOCATION AS MUCH AS POSSIBLE AWAY FROM TRAFFIC.

COMPLETE STEPS 1B-1E IN A CONTINUOUS OPERATION.

1B)  
CLOSE THE ENTRANCE RAMP FROM CHARLOTTE ST. TO I-240E AS SHOWN ON SHEET TCP-6. REFER TO GENERAL NOTE C FOR TIME RESTRICTIONS.

1C)  
STOP TRAFFIC TEMPORARILY ON I-240E USING A ROLLING ROAD BLOCK OPERATION AS SHOWN ON RDWY. STD. DWG. 1101.03, SHEET 9. REFER TO GENERAL NOTE D FOR TIME RESTRICTIONS. WITH TRAFFIC STOPPED ON I-240E REMOVE THE PREVIOUSLY INSTALLED DOUBLE LEFT LANE CLOSURE AND INSTALL A SINGLE RIGHT LANE CLOSURE AND DIRECT I-240E TRAFFIC TO THE FAR LEFT LANE (SEE TCP-8).

WITH I-240E TRAFFIC IN ONE LANE AND ENTRANCE RAMP FROM CHARLOTTE ST. CLOSED, COMPLETE PLACEMENT OF PAVEMENT MARKINGS, REMOVAL OF CONFLICTING MARKINGS AND COMPLETE RESETTNG THE PCB AND CRASH CUSHION.

COMPLETE INSTALLATION OF TRAFFIC CONTROL DEVICES FOR THE PHASE II PATTERN AS SHOWN ON SHEETS TCP 5, 5A-5B.

1D)  
REMOVE THE RIGHT LANE CLOSURE FROM I-240E.

1E)  
REMOVE THE CHARLOTTE ST. ENTRANCE RAMP ROAD CLOSURE OPENING LANES TO THE PHASE II TRAFFIC PATTERN AS SHOWN ON SHEETS TCP 5, 5A-5B.

STEP 2:

BEHIND PORTABLE CONCRETE BARRIER REMOVE ASPHALT OVERLAY AND CONSTRUCT STAGE 2 OF THE BRIDGE REHABILITATION.

UPON COMPLETION OF STAGE 2 BEGIN THE INSTALLATION OF PAVEMENT MARKINGS AWAY FROM TRAFFIC IN PREPARATION FOR RETURNING TRAFFIC TO THE ORIGINAL EXISTING TRAFFIC PATTERN.

PHASE III

RETURN TRAFFIC TO THE ORIGINAL TRAFFIC PATTERN AS FOLLOWS:

STEP 1:

UPON COMPLETION OF PHASE II-STAGE 2 BRIDGE REHABILITATION AND WITH TRAFFIC STILL OPERATING IN THE PHASE II PATTERN, SWITCH TRAFFIC BACK TO THE ORIGINAL EXISTING PATTERN AS FOLLOWS IN STEPS 1A-1E:

1A)  
BEHIND THE PREVIOUSLY PLACED DOUBLE RIGHT LANE CLOSURE STILL OPERATING FROM PHASE II REMOVE THE PCB AND CRASH CUSHION. REPLACE THE PCB WITH DRUMS.

COMPLETE STEPS 1B-1E IN A CONTINUOUS OPERATION.

1B)  
CLOSE THE ENTRANCE RAMP FROM CHARLOTTE ST. TO I-240E AS SHOWN ON SHEET TCP-6. REFER TO GENERAL NOTE C FOR TIME RESTRICTIONS.

1C)  
INSTALL A SINGLE RIGHT LANE CLOSURE ON I-240 AND INSTALL DEVICES DIRECTING I-240E TRAFFIC TO THE FAR LEFT LANE IN A SINGLE LANE. (SEE TCP-8).

WITH I-240E TRAFFIC IN ONE LANE AND ENTRANCE RAMP FROM CHARLOTTE ST. CLOSED, COMPLETE PLACEMENT OF PAVEMENT MARKINGS AND REMOVAL OF CONFLICTING MARKINGS.

1D)  
REMOVE THE RIGHT LANE CLOSURE FROM I-240E.

1E)  
REMOVE THE CHARLOTTE ST. ENTRANCE RAMP ROAD CLOSURE OPENING ALL LANES TO THE ORIGINAL EXISTING TRAFFIC PATTERN.

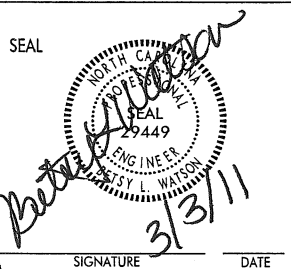
STEP 2:

USING A LEFT LANE CLOSURE ON I-240E REMOVE THE PREVIOUSLY PLACED YELLOW EDGELINE THAT WAS USED TO SHIFT TRAFFIC ONTO THE MEDIAN SHOULDER IN PHASE II AND REPLACE THE EXISTING YELLOW EDGELINE.

STEP 3:

REMOVE ALL TRAFFIC CONTROL DEVICES FROM PROJECT.

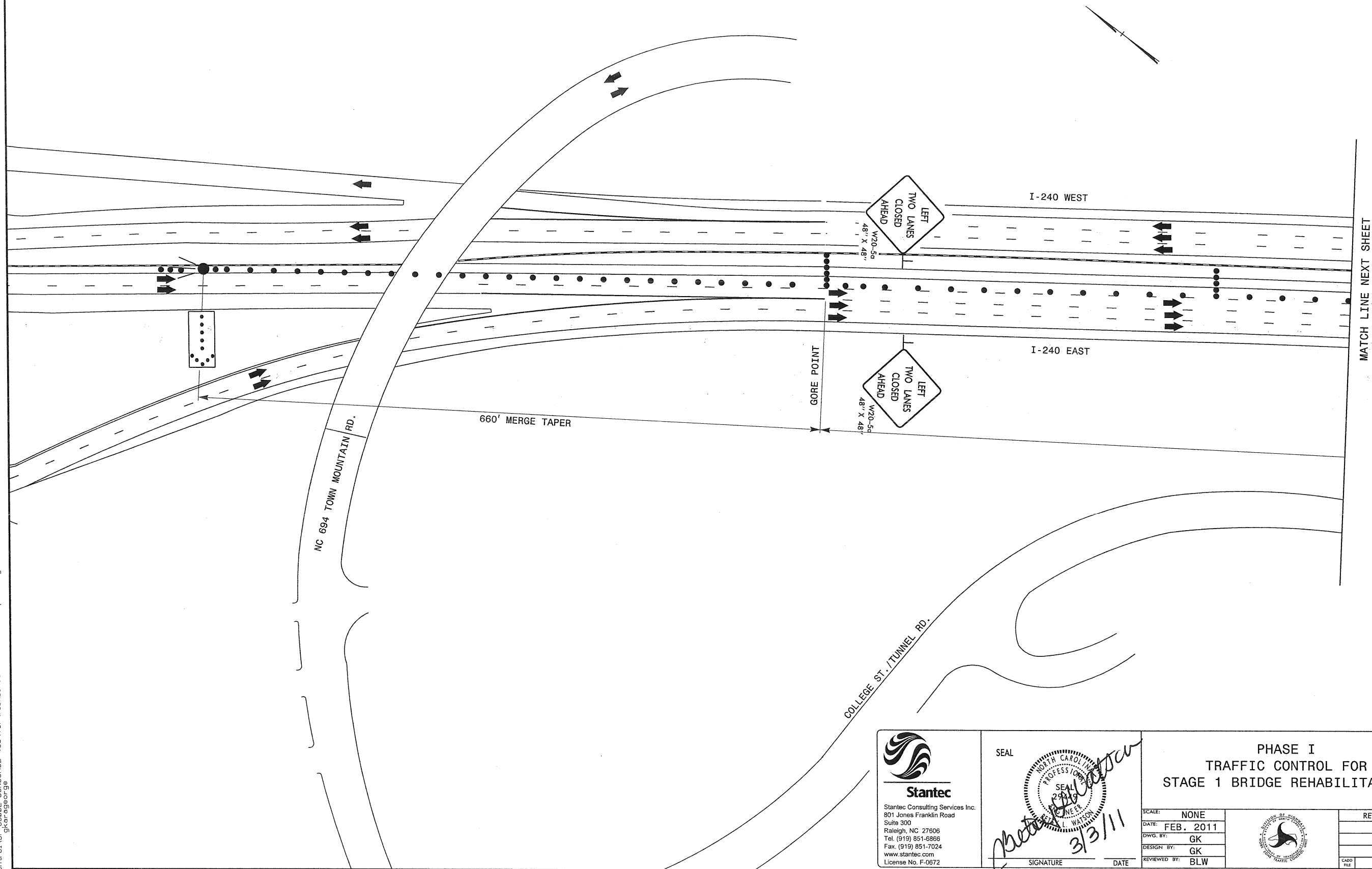
I:\Control\BP-5300L\BUNCOMBE 436\TCP\Plan\_Sheets\BP-5300L\_tcpst03.dgn  
gkaregeorge



TRAFFIC CONTROL PHASING

SCALE: NONE		REVISIONS	
DATE: FEB. 2011			
DWG. BY: GK			
DESIGN BY: GK			
REVIEWED BY: BLW			
CADD FILE			

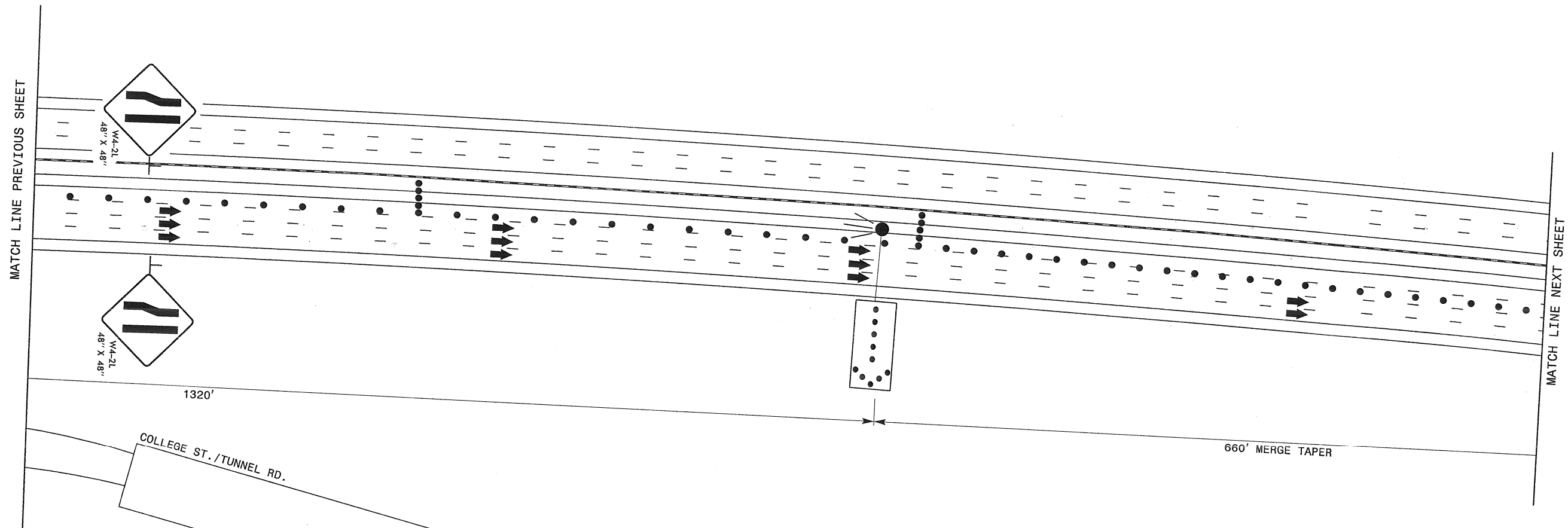





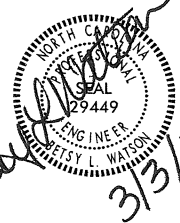

MATCH LINE NEXT SHEET

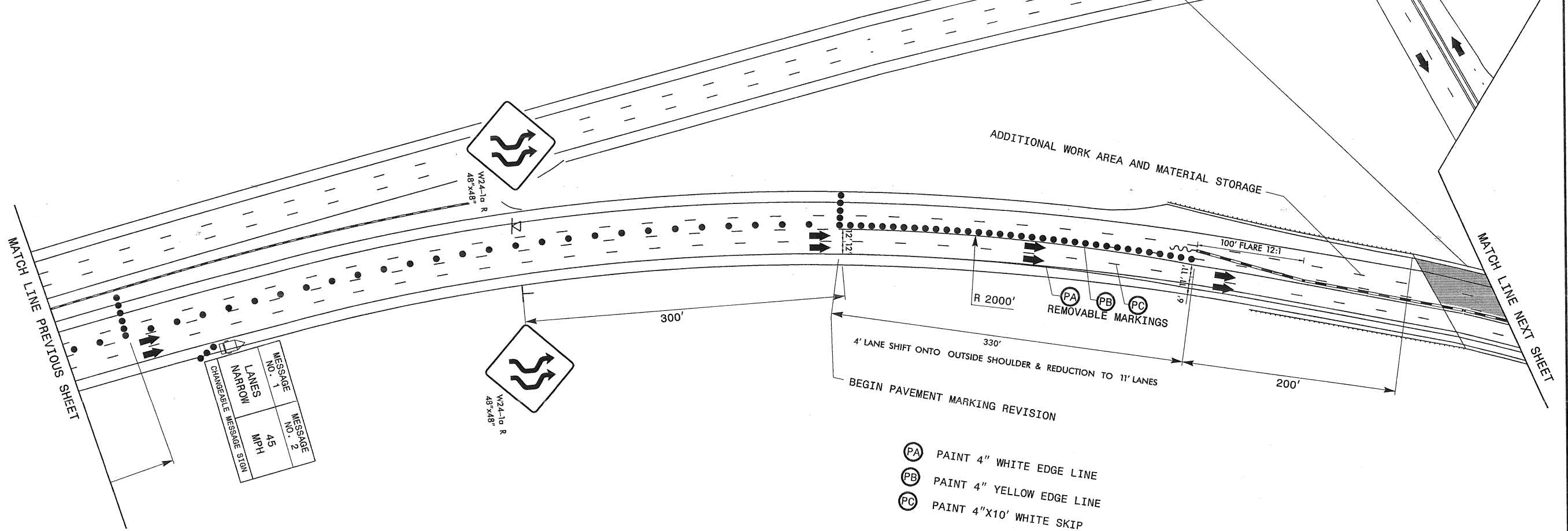
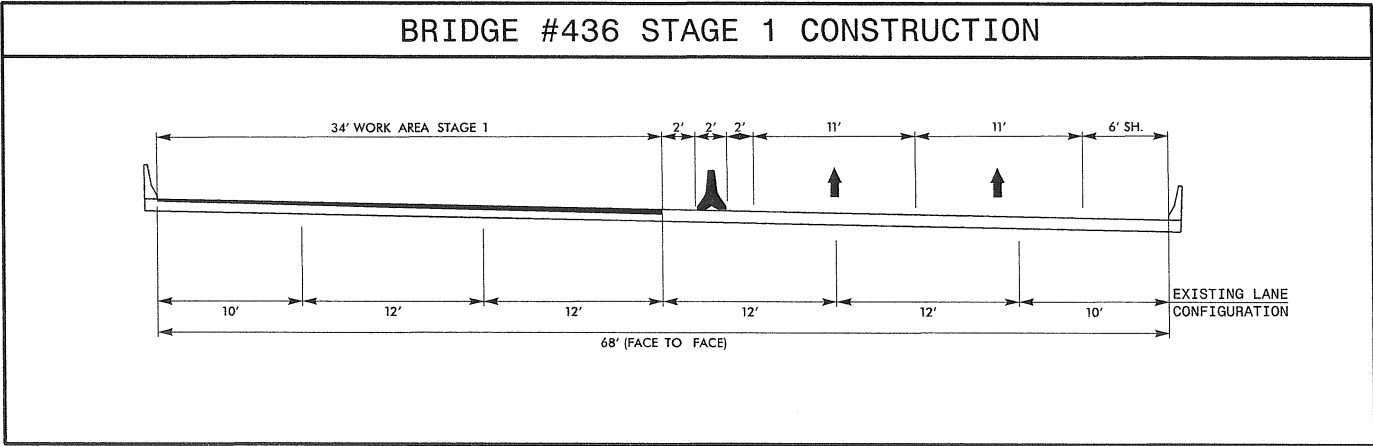
I:\FicControl\BP-5300L\2011\INCOMBE 436\TCP\Plan\_Sheets\BP-5300L\_tcp.shd04.dgn  
gk:ageorge

 <b>Stantec</b> 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  <i>L. Watson</i> 3/3/11	<b>PHASE I</b> <b>TRAFFIC CONTROL FOR</b> <b>STAGE 1 BRIDGE REHABILITATION</b>							
	SCALE: NONE DATE: FEB. 2011 DWG. BY: GK DESIGN BY: GK REVIEWED BY: BLW	 DIVISION OF HIGHWAYS TRAFFIC CONTROL	REVISIONS <table border="1"> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>						



F:\Control\BP-5300L\30\COMB8E 436\TCP\Plan\_Sheets\BP-5300L-to-ph04A.dgn  
jgarageorge

 <b>Stantec</b> 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	SEAL  Patsy L. Watson 3/3/11 SIGNATURE	PHASE I TRAFFIC CONTROL FOR STAGE 1 BRIDGE REHABILITATION							
	SCALE: NONE DATE: FEB. 2011 DWG. BY: GK DESIGN BY: GK REVIEWED BY: BLW	 DIVISION OF HIGHWAY TRAFFIC CONTROL	REVISIONS <table border="1"> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>						



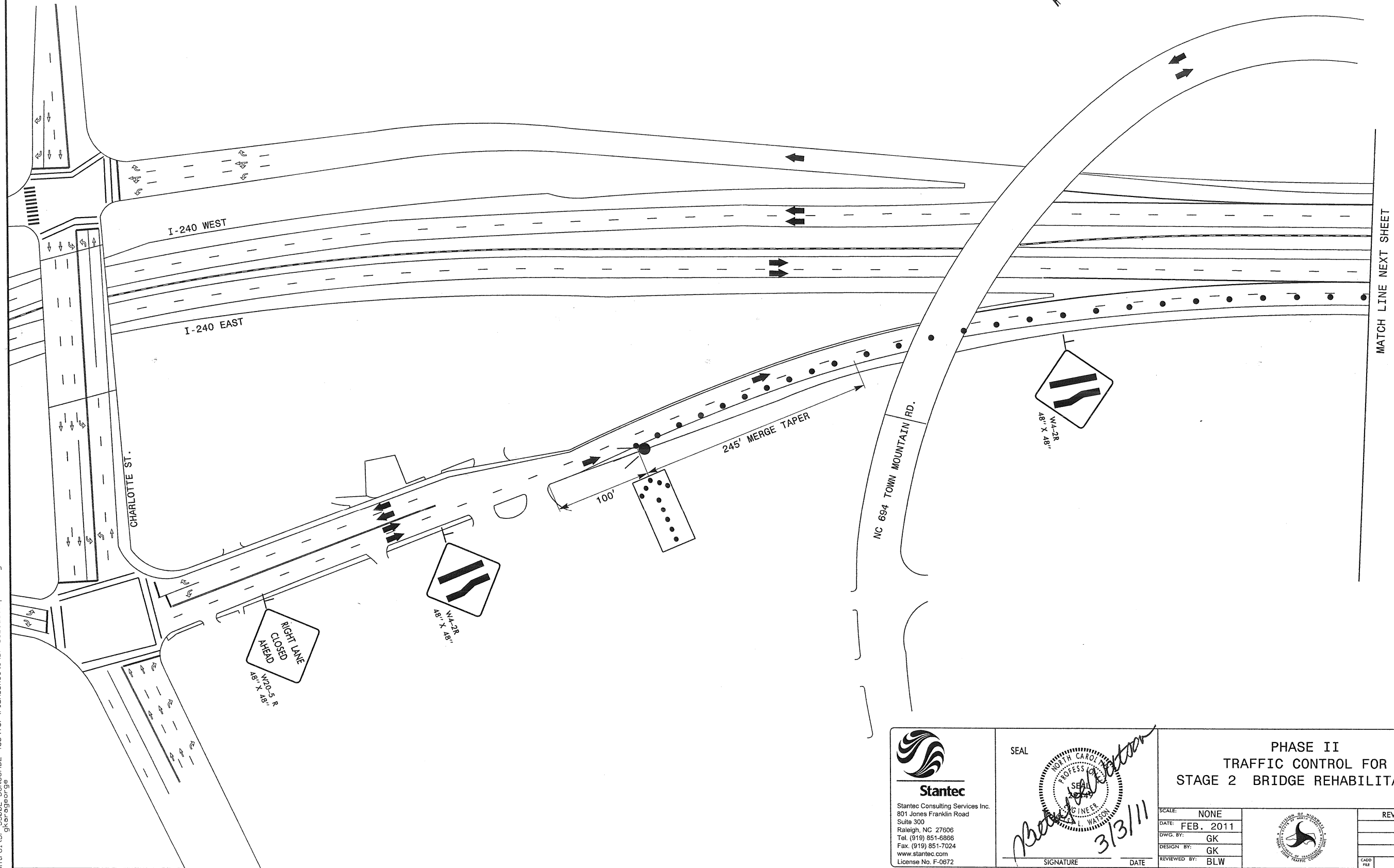
CHANGEABLE MESSAGE SIGN	
MESSAGE NO. 1	MESSAGE NO. 2
LANES NARROW	45 MPH

- (PA) PAINT 4" WHITE EDGE LINE
- (PB) PAINT 4" YELLOW EDGE LINE
- (PC) PAINT 4"x10' WHITE SKIP

f:\c\control\BP-5300L\BUNCOMBE 436\TCP\Plan\_Sheets\BP-5300L-to-psf04B.dgn gkrgdorge

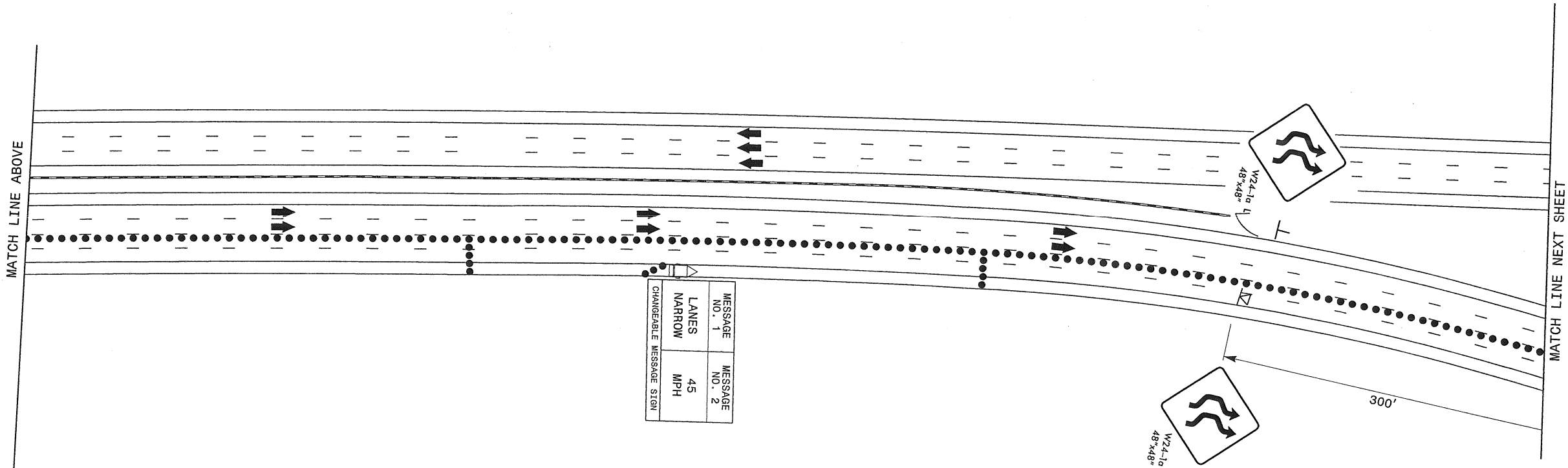
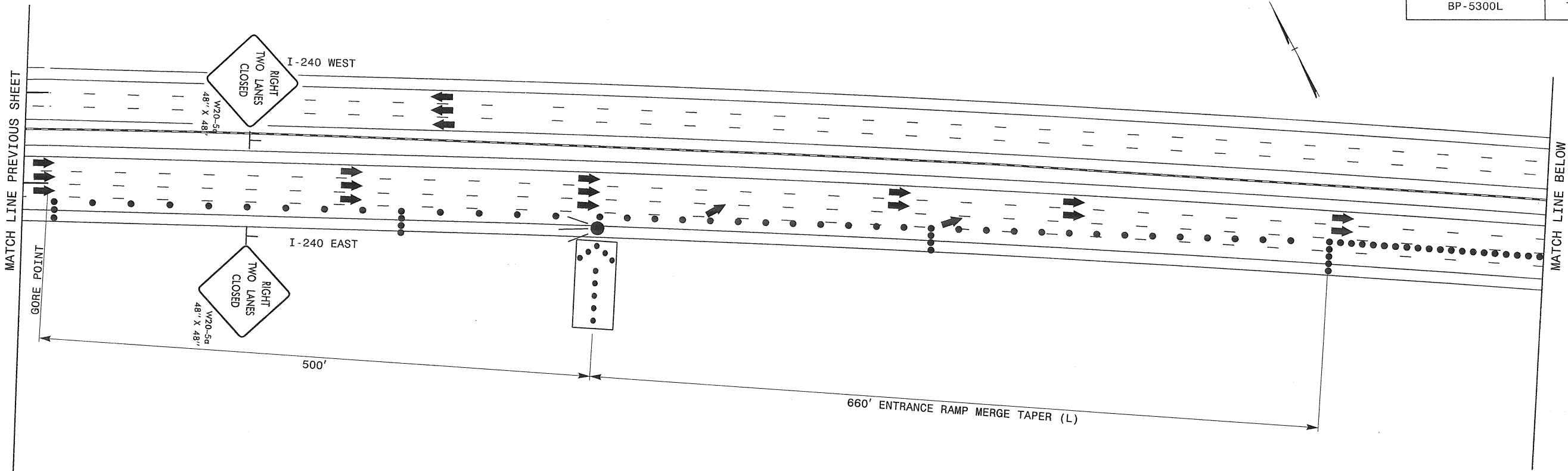
<p><b>Stantec</b> Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672</p>	<p>SEAL</p> <p><i>Gregory L. Watson</i> 3/3/11</p>	<p style="text-align: center;"><b>PHASE I</b> <b>TRAFFIC CONTROL FOR</b> <b>STAGE 1 BRIDGE REHABILITATION</b></p>									
	<p>SCALE: NONE</p>	<p>REVISIONS</p> <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>									
<p>DATE: FEB. 2011</p>	<p>DESIGN BY: GK</p>										
<p>DESIGN BY: GK</p>	<p>REVIEWED BY: BLW</p>										
<p>SIGNATURE</p>	<p>DATE</p>	<p>CADD FILE</p>									





I:\Control\BP-5300L\BUNCOMBE 43E\TCP\Plan\_Sheets\BP-5300L\_tcp.sh05.dgn  
gkarageorge

 <b>Stantec</b> 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		<b>PHASE II TRAFFIC CONTROL FOR STAGE 2 BRIDGE REHABILITATION</b>																	
		<table border="1"><tr><td>SCALE:</td><td>NONE</td></tr><tr><td>DATE:</td><td>FEB. 2011</td></tr><tr><td>DWG. BY:</td><td>GK</td></tr><tr><td>DESIGN BY:</td><td>GK</td></tr><tr><td>REVIEWED BY:</td><td>BLW</td></tr></table>	SCALE:	NONE	DATE:	FEB. 2011	DWG. BY:	GK	DESIGN BY:	GK	REVIEWED BY:	BLW	<table border="1"><tr><td colspan="2">REVISIONS</td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>	REVISIONS					
SCALE:	NONE																		
DATE:	FEB. 2011																		
DWG. BY:	GK																		
DESIGN BY:	GK																		
REVIEWED BY:	BLW																		
REVISIONS																			



MESSAGE NO. 1	MESSAGE NO. 2
LANES NARROW	45 MPH
CHANGEABLE MESSAGE SIGN	

**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

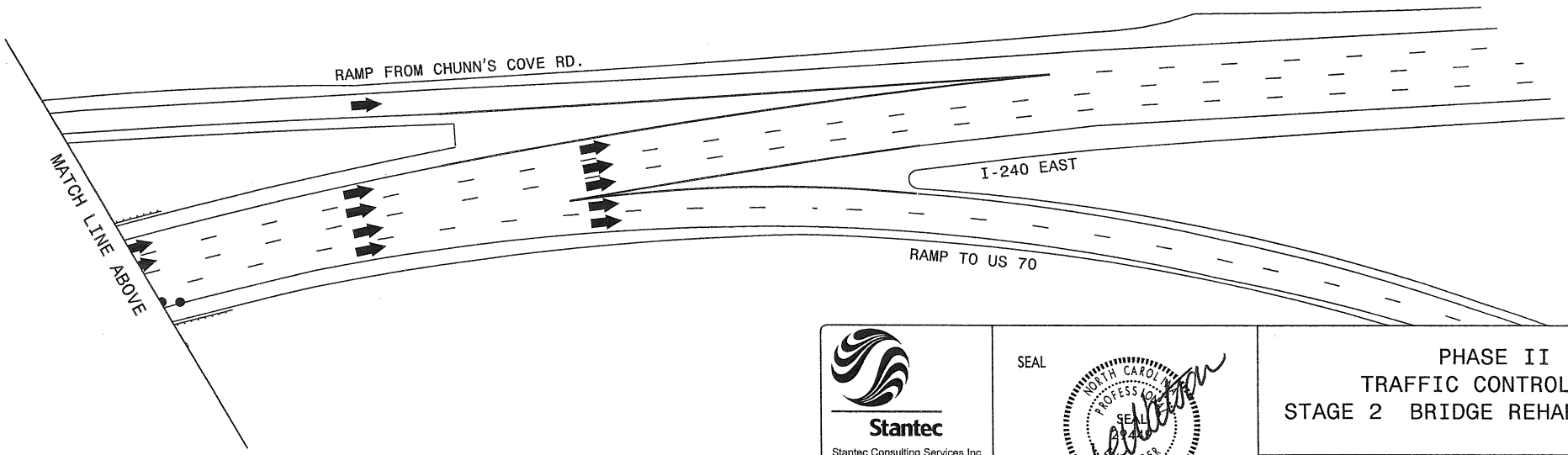
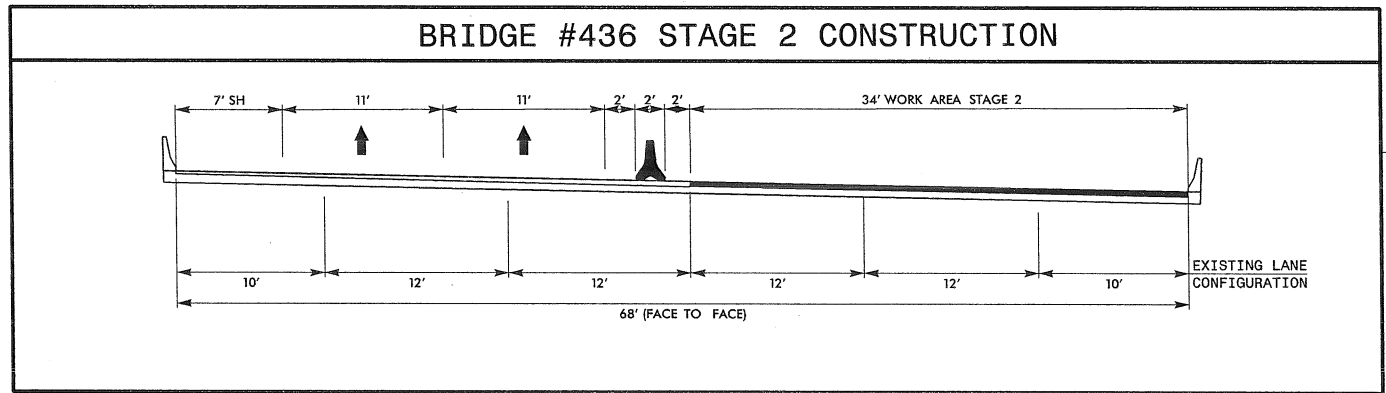
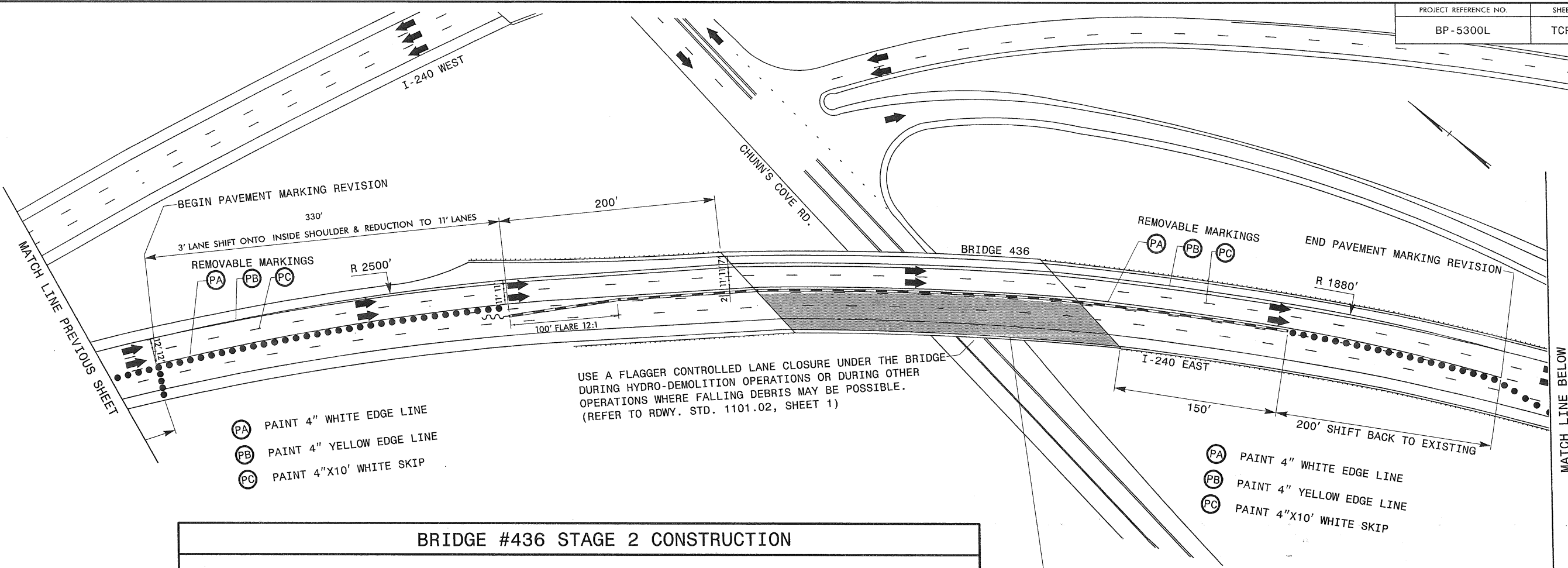
SEAL  
 NORTH CAROLINA  
 PROFESSIONAL ENGINEER  
 2046  
 L. WATSON  
 3/3/11  
 SIGNATURE DATE

PHASE II  
 TRAFFIC CONTROL FOR  
 STAGE 2 BRIDGE REHABILITATION

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

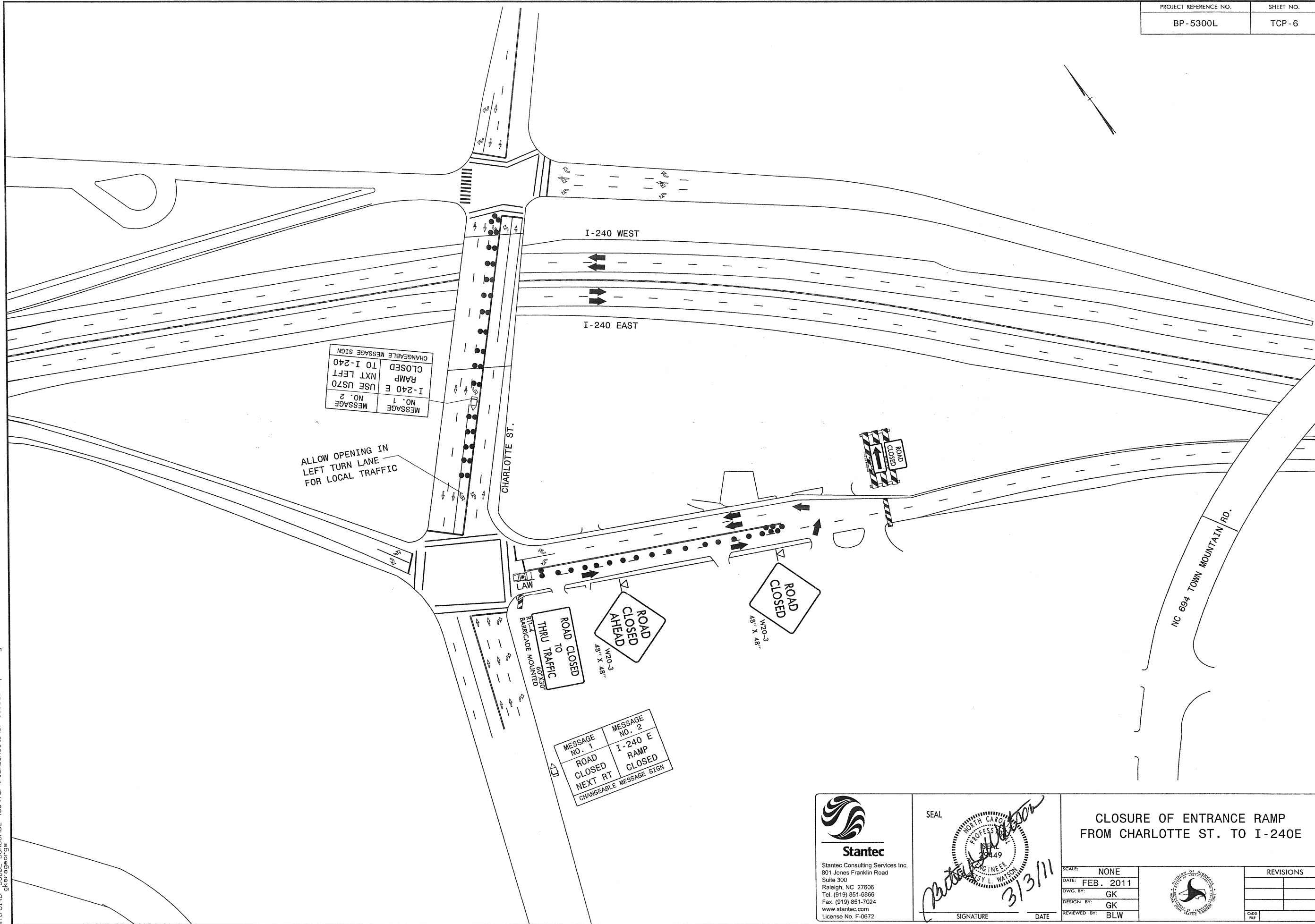


REVISIONS



f:\c\control\BP-5300L\2011\COMB 436\TCP\Plan-Sheets\BP-5300L-TC-Psh05B.dgn  
 gk\gk\gk

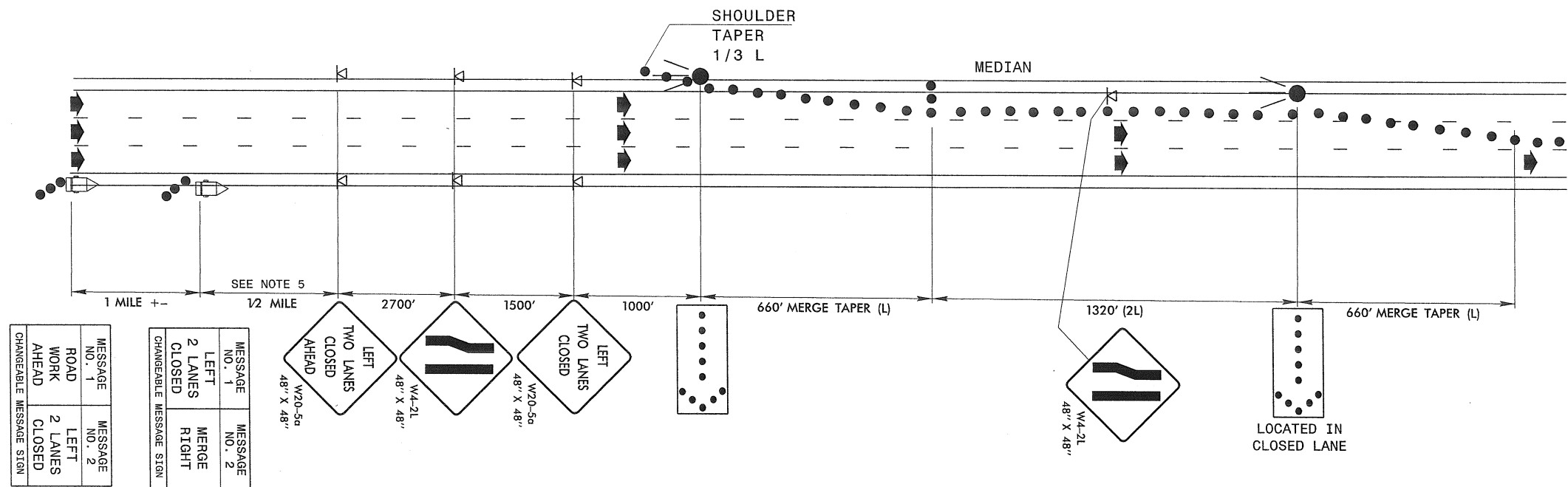
<p><b>Stantec</b></p> <p>Stantec Consulting Services Inc.        801 Jones Franklin Road        Suite 300        Raleigh, NC 27606        Tel. (919) 851-6866        Fax. (919) 851-7024        www.stantec.com        License No. F-0672</p>	<p>SEAL</p> <p><i>[Signature]</i></p> <p>3/3/11</p> <p>SIGNATURE DATE</p>	<p><b>PHASE II</b></p> <p><b>TRAFFIC CONTROL FOR</b></p> <p><b>STAGE 2 BRIDGE REHABILITATION</b></p>					
	<p>SCALE: NONE</p> <p>DATE: FEB. 2011</p> <p>DWG. BY: GK</p> <p>DESIGN BY: GK</p> <p>REVIEWED BY: BLW</p>	<p>REVISIONS</p> <table border="1"> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>					



I:\Control\BP-5300L\INCOMBE 436\TCP\Plan\_Sheets\BP-5300L\_tcpsh06.dgn  
gkharageorge

<p><b>Stantec</b> 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</p>	<p>SEAL</p> <p><i>Gregory L. Watson</i> 3/3/11</p>	<p><b>CLOSURE OF ENTRANCE RAMP FROM CHARLOTTE ST. TO I-240E</b></p>						
	<p>SCALE: NONE DATE: FEB. 2011 DWG. BY: GK DESIGN BY: GK REVIEWED BY: BLW</p>		<p>REVISIONS</p> <table border="1"> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>					





**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. 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.
3. PLACE ARROW PANELS ON THE ROADWAY SHOULDER. IF SHOULDERS DO NOT EXIST, PLACE ARROW PANELS 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 PANEL (REFER TO ROADWAY STANDARD DRAWING 1101.11 SHEET 2).
4. 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.
5. PLACE CHANGEABLE MESSAGE SIGN (CMS) ON THE OUTSIDE OF THE TRAVELWAY AS DIRECTED BY THE ENGINEER. PLACE CMS APPROXIMATELY 1/2 MILE IN ADVANCE OF THE W20-5 SIGNS. IF TRAFFIC BACKS UP TO WHERE THE CMS IS INITIALLY PLACED, RELOCATE CMS 1/2 MILE FROM ANTICIPATED BACKUP. CONTINUE TO MONITOR TRAFFIC AND MOVE CMS APPROXIMATELY 1/2 MILE IN CONJUNCTION WITH ANTICIPATED BACKUP.

I:\Control\BP-5300L\BUNCOMBE 435\TCP\Plan\_Sheets\BP-5300L\_tcp\st07.dgn  
gkcarageorge

**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

*Butler*  
3/3/11  
SIGNATURE      DATE

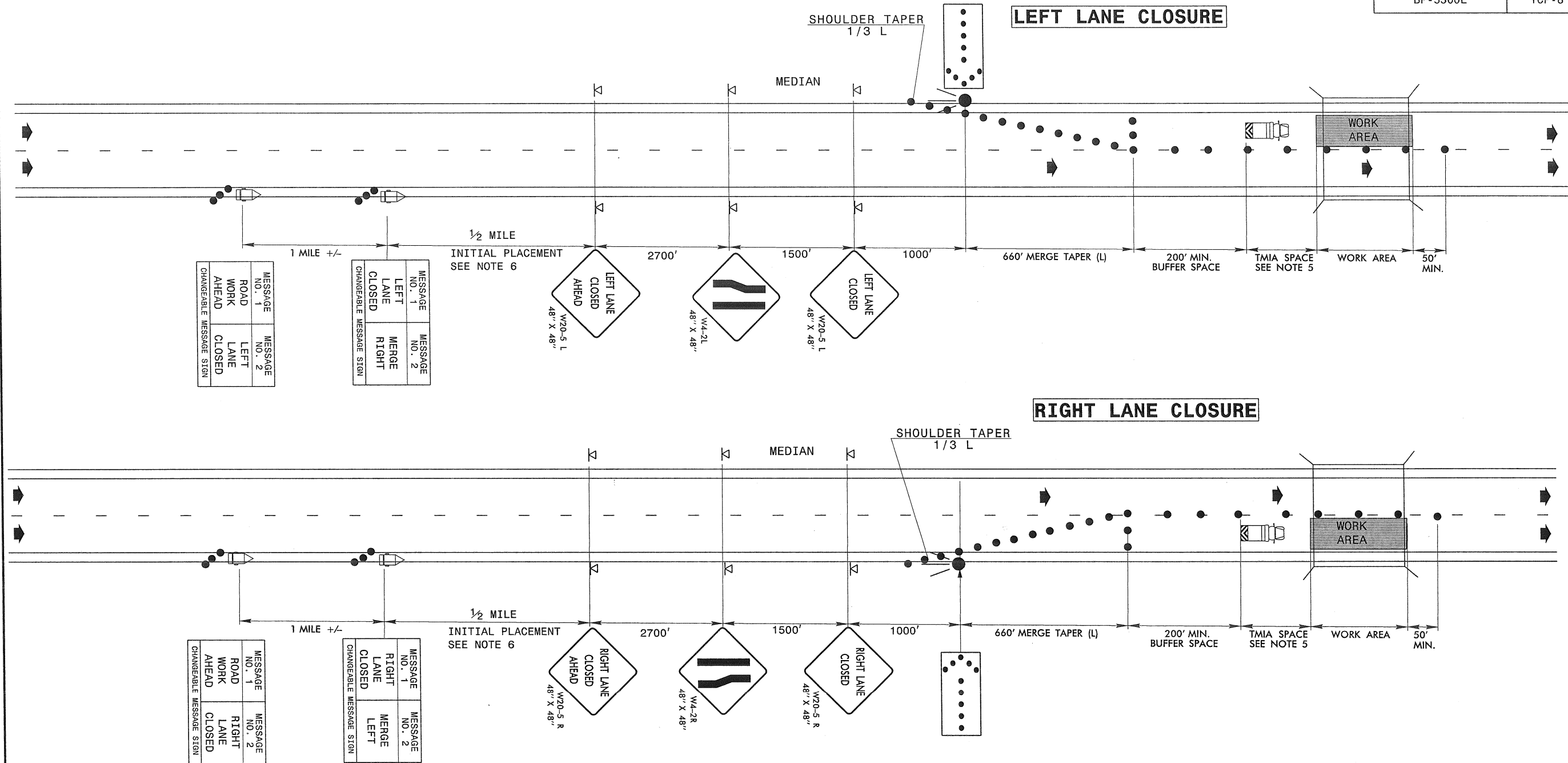
**DOUBLE LEFT LANE CLOSURE**

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



REVISIONS	

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. 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.
3. PLACE ARROW PANELS ON THE ROADWAY SHOULDER. IF SHOULDERS DO NOT EXIST, PLACE ARROW PANELS 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 PANEL (REFER TO ROADWAY STANDARD DRAWING 1101.11 SHEET 2).
4. 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.
5. TMIA'S ARE REQUIRED ONLY WHEN A BUFFER SPACE CANNOT BE ATTAINED, OR WHEN DIRECTED BY THE ENGINEER OR THE PLANS. WHEN USED, POSITION THE TMIA TO MAINTAIN A ROLL-AHEAD DISTANCE AS RECOMMENDED BY THE MANUFACTURER.
6. PLACE CHANGEABLE MESSAGE SIGN (CMS) ON THE OUTSIDE OF THE TRAVELWAY AS DIRECTED BY THE ENGINEER. PLACE CMS APPROXIMATELY 1/2 MILE IN ADVANCE OF THE W20-5 SIGNS. IF TRAFFIC BACKS UP TO WHERE THE CMS IS INITIALLY PLACED, RELOCATE CMS 1/2 MILE FROM ANTICIPATED BACKUP. CONTINUE TO MONITOR TRAFFIC AND MOVE CMS APPROXIMATELY 1/2 MILE IN CONJUNCTION WITH ANTICIPATED BACKUP.

 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	SEAL  3/3/11	SINGLE LANE CLOSURES	
	SIGNATURE DATE	SCALE: NONE DATE: FEB. 2011 DWG. BY: GK DESIGN BY: GK REVIEWED BY: BLW	REVISIONS CADD FILE