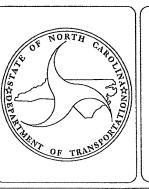
CONTRA





STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

CUMBERLAND AND HARNETT COUNTIES

STATE PROJECT NO.	P. A. PROJ. NO.	DESCRIPTION		
17BP.6.P.5	N/A	PE		
17BP.6.P.5	N/A	CONSTR		
17BP.6.P.6	N/A	PE		
17BP.6.P.6	N/A	CONSTR		
	 			

LOCATION: CUMBERLAND COUNTY:

BRIDGE #5 ON NC 59 (CHICKEN FOOT RD.) OVER I-95

BRIDGE #6 ON SR 1007 (ALL-AMERICAN FWY.) OVER US 401 BUS. (RAEFORD RD.)

BRIDGE #30 ON I-95 SBL OVER I-95 LOOP NBL AND SR 2284 BRIDGE #34 ON NC 53 /NC 210 (CEDAR CREEK RD.) OVER I-95

BRIDGE #51 ON US 401 BUS. OVER NC 210 (MURCHISON RD.)

BRIDGE #84 ON US 401 BUS. OVER CUMBERLAND ST.

BRIDGE #104 ON NC 24 (BRAGG BLVD.) OVER US 401 BUS.

BRIDGE #112 ON US 401 BUS. OVER HILLSBORO ST.

BRIDGE #126 ON NC 24 /NC 210 (GROVE ST.) OVER CAPE FEAR RIVER

BRIDGE #135 ON NC 24 EBL OVER I-95

BRIDGE #136 ON NC 24 WBL OVER I-95

BRIDGE #138 ON NC 24 EBL CONN. OVER I-95

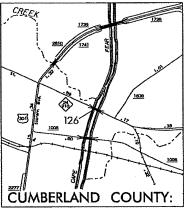
BRIDGE #139 ON NC 24 WBL CONN. OVER I-95

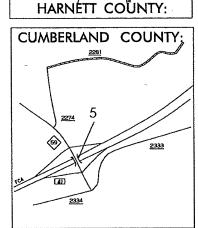
BRIDGE #218 ON SR 1404 (HAY ST.) OVER US 401 BUS.

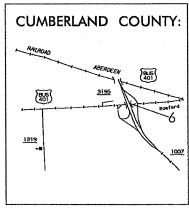


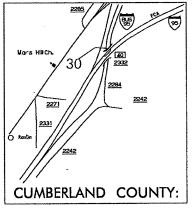
BRIDGE #52 ON NC 217 OVER CAPE FEAR RIVER

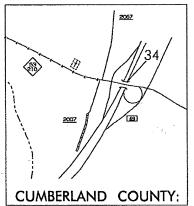
TYPE OF WORK: BRIDGE PRESERVATION - CLEANING & PAINTING OF EXISTING BRIDGE STRUCTURES

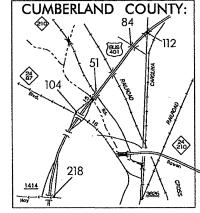


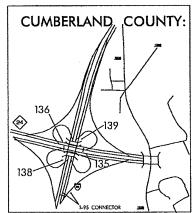




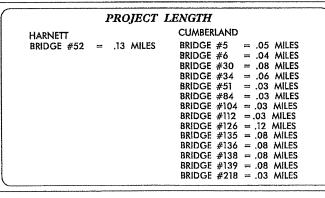


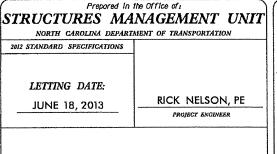




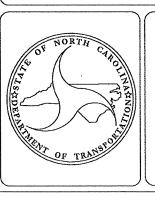


	D	ESIGN	DATA		
HARNETT			CUMBERLAND		
	==	4800	#5 ADT 2011	=	16000
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			#6 ADT 2004	=	51000
			#30 ADT 2011	=	16500
			#34 ADT 2011	=	12000
			#51 ADT 2009	=	20000
			#84 ADT 2009	=	20000
			#104 ADT 2010	==	21000
			#112 ADT 2010	=	22000
			#126 ADT 2010	=	22000
			#135 ADT 2008	=	6500
			#136 ADT 2010	=	6500
			#138 ADT 2010	==	6500
			#139 ADT 2010	===	6500
			#218 ADT 2010	=	25000
	HARNETT #52 ADT 2011	HARNETT	HARNETT	#52 ADT 2011 = 4800 #5 ADT 2011 #6 ADT 2004 #30 ADT 2011 #34 ADT 2011 #51 ADT 2009 #84 ADT 2009 #104 ADT 2010 #112 ADT 2010 #126 ADT 2010 #135 ADT 2010 #136 ADT 2010 #138 ADT 2010 #139 ADT 2010	HARNETT #52 ADT 2011 = 4800 #5 ADT 2011 = #6 ADT 2004 = #30 ADT 2011 = #34 ADT 2011 = #51 ADT 2009 = #104 ADT 2010 = #112 ADT 2010 = #135 ADT 2010 = #136 ADT 2010 = #136 ADT 2010 = #138 ADT 2010 = #138 ADT 2010 = #139 ADT



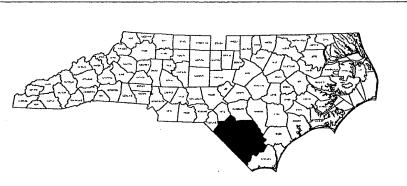






BLADEN COUNTY

COLUMBUS COUNTY



STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

BLADEN, COLUMBUS AND ROBESON **COUNTIES**

N.C. 17BP.6.P.5 / 17BI STATE PROJECT NO. F.A.PROJ 17BP.6.P.5 N/ 17BP.6.P.5 N/	DJ. NO. DESCRIPTION
17BP.6.P.5 N/	
	A PE
1700 (D () N /	
I/Dr.o.r.o	'A CONSTR
17BP,6,P.6 N/	A PE
17BP.6.P.6 N/	A CONSTR

LOCATION: BLADEN COUNTY:

BRIDGE #17 ON US 701/NC 41 OVER CAPE FEAR RIVER

COLUMBUS COUNTY:

BRIDGE #17 ON US 701 BUS OVER US 74 BYPASS /US 76 BYPASS BRIDGE #18 ON US 74 WBL OVER LUMBER RIVER OVERFLOW

BRIDGE #22 ON NC 87 OVER CSX-RR

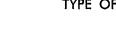
ROBESON COUNTY:

BRIDGE #4 ON NC 130 OVER I-95 BRIDGE #70 ON US 74 EBL OVER NC 41 BRIDGE #72 ON US 74 WBL OVER NC 41

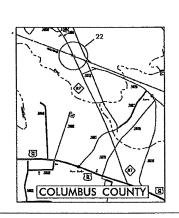
BRIDGE #86 ON SR 2459 OVER I-95 BRIDGE #96 ON SR 1155 OVER I-95

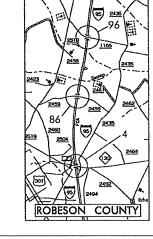
BRIDGE #106 ON I-95 NBL OVER SR 2457 BRIDGE #107 ON I-95 SBL OVER SR 2457

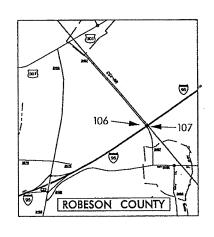
BRIDGE #144 ON I-95 NBL OVER SR 1541 / CSX-RR BRIDGE #145 ON I-95 SBL OVER SR 1541/CSX-RR

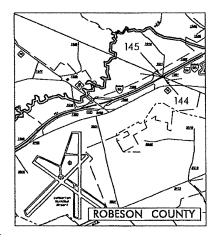


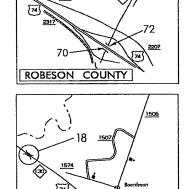










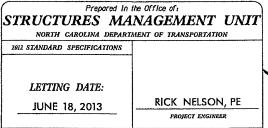


DESIGN DATA

BLADEN			ROBESON		
#17 ADT 2011	==	6500	#4 ADT 2009	=	3600
COLUMBUS			# . O	==	4500
			#72 ADT 2011	=	4500
#17 ADT 2011		4000	#86 ADT 2009	==	580
#18 ADT 2009	=	6500	#96 ADT 2009	=	680
#22 ADT 2007	=	10000	#106 ADT 2009	=	16000
			#107 ADT 2008	==	16000
			#144 ADT 2010	==	27000
			#145 ADT 2010	=	27000

PROJECT LENGTH

BLADEN						ROBESC	N			
BRIDGE	#17	=	.223	3 MILI	ES	BRIDGE	#4	=	.047	MILES
COLLIN	DI IC					BRIDGE	#70	==	.029	MILES
COLUM	RO2					BRIDGE	#72	=	.029	MILES
BRIDGE						BRIDGE	#86	=	.050	MILES
BRIDGE	#18	=	.026	WILES	;	BRIDGE	#96	=	.050	MILES
BRIDGE	#22	=	.037	MILE	S	BRIDGE	#106	=	.043	MILES
						BRIDGE	#107	==	.040	MILE
						BRIDGE	#144	=	.044	MILE
						BRIDGE				





LOCATION: CUMBERLAND COUNTY: BRIDGE #5 ON NC 59 (COUNTY) BRIDGE #6 ON SR 1007 (COUNTY) BRIDGE #6 ON SR 1007 (COUNTY)

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C20326

NO

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

BLADEN, COLUMBUS, CUMBERLAND, HARNETT AND ROBESON COUNTIES

STATE STATE P	STATE STATE PROJECT REFERENCE N								
N.C. 17BP.6.]								
STATE PROJECT NO.	P. A. PROJ. NO.		DESCRIPT	NOI					
17BP.6.P.5	N/A		PE						
17BP.6.P.5	N/A		CONSTR						
17BP.6.P.6	N/A		PE						
17BP.6.P.6	N/A		CONS'	rr					
				*** *** ******************************					

BRIDGE #5 ON NC 59 (CHICKEN FOOT RD.) OVER I-95

BRIDGE #6 ON SR 1007 (ALL-AMERICAN FWY.) OVER US 401 BUS. (RAEFORD RD.)

BRIDGE #30 ON I-95 SBL OVER I-95 LOOP NBL AND SR 2284
BRIDGE #34 ON NC 53 /NC 210 (CEDAR CREEK RD.) OVER I-95
BRIDGE #51 ON US 401 BUS. OVER NC 210 (MURCHISON RD.)

BRIDGE #84 ON US 401 BUS. OVER CUMBERLAND ST. BRIDGE #104 ON NC 24 (BRAGG BLVD.) OVER US 401 BUS.

BRIDGE #112 ON US 401 BUS. OVER HILLSBORO ST.

BRIDGE #126 ON NC 24 / NC 210 (GROVE ST.) OVER CAPE FEAR RIVER

BRIDGE #135 ON NC 24 EBL OVER I-95
BRIDGE #136 ON NC 24 WBL OVER I-95
BRIDGE #138 ON NC 24 EBL CONN. OVER I-95
BRIDGE #139 ON NC 24 WBL CONN. OVER I-95
BRIDGE #218 ON SR 1404 (HAY ST.) OVER US 401 BUS.

HARNETT COUNTY:

BRIDGE #52 ON NC 217 OVER CAPE FEAR RIVER

TITLE SHEET (17BP.6.P.5)

BLADEN COUNTY:

BRIDGE #17 ON US 701/NC 41 OVER CAPE FEAR RIVER

COLUMBUS COUNTY:

BRIDGE #17 ON US 701 BUS OVER US 74 BYPASS /US 76 BYPASS

BRIDGE #18 ON US 74 WBL OVER LUMBER RIVER OVERFLOW

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BRIDGE #72 ON US 74 WBL OVER NC 41

BRIDGE #86 ON SR 2459 OVER I-95

BRIDGE #96 ON SR 1155 OVER I-95

BRIDGE #106 ON I-95 NBL OVER SR 2457

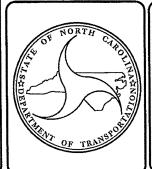
BRIDGE #107 ON I-95 SBL OVER SR 2457

BRIDGE #144 ON I-95 NBL OVER SR 1541/CSX-RR BRIDGE #145 ON I-95 SBL OVER SR 1541/CSX-RR

TYPE OF WORK: BRIDGE PRESERVATION- CLEANING & PAINTING OF EXISTING BRIDGE STRUCTURES

INDEX OF SHEETS

<u>SHT#</u> 1–1A	DESCRIPTION COMBINED TITLE SHEETS	<u>SHT#</u> TMP-1 THRU TMP-11A	DESCRIPTION TRAFFIC MANAGEMENT PLANS (17BP.6.P.5)
1B	INDEX OF SHEETS	4	TITLE SHEET (17BP.6.P.6)
1C	COMBINED TOTAL BILL OF MATERIAL	TMP-1 THRU TMP-7	TRAFFIC MANAGEMENT PLANS (17BP.6.P.6)
2	SUMMARY OF QUANTITIES	5	STRUCTURAL STEEL REPAIR



3

Prepared in the Office of:

STRUCTURES MANAGEMENT UNIT

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2012 STANDARD SPECIFICATIONS

LETTING DATE:

JUNE 18, 2013

RICK NELSON, PE

PROJECT ENGINEER

FARZIN ASEFNIA P.E.
PROJECT DESIGN ENGINEER

				TOT	AL BILL	OF MATE	ERIAL	-				
			17BP.6.P.5						17BP.6.P.6			
COUNTY	BRIDGE	PAINTING CONTAINMENT BRIDGE #	CLEANING & REPAINTING BRIDGE #	PAINTING EXIST. WEATHERING STEEL STRUCTURE BRIDGE *	EPOXY COATING	COUNTY	BRIDGE NO.	PAINTING CONTAINMENT BRIDGE #	CLEANING & REPAINTING BRIDGE *	GIRDER REPAIR*	BRIDGE JACKING*	EPOXY COATING
		LUMP SUM	LUMP SUM	LUMP SUM	SO. FT.			LUMP SUM	LUMP SUM	LBS.	EACH	SO. FT.
	5	LUMP SUM	***************************************	LUMP SUM	567	BLADEN	17	LUMP SUM	LUMP SUM			1481
	6	LUMP SUM	LUMP SUM		1155		17	LUMP SUM	LUMP SUM			452
	30	LUMP SUM	*****************	LUMP SUM	964	COLUMBUS	18	LUMP SUM	LUMP SUM		<u></u>	413
	34	LUMP SUM		LUMP SUM	1183		22	LUMP SUM	LUMP SUM			492
	51	LUMP SUM	LUMP SUM		1220		4	LUMP SUM	LUMP SUM			1104
	84	LUMP SUM .	LUMP SUM		977		70	LUMP SUM	LUMP SUM			598
DIMPEDIAND	104	LUMP SUM	LUMP SUM	4600-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0	876		72	LUMP SUM	LUMP SUM			500
CUMBERLAND	112	LUMP SUM	LUMP SUM		1300	·	86	LUMP SUM	LUMP SUM			482
	126	LUMP SUM	LUMP SUM		1544	ROBESON	96	LUMP SUM	LUMP SUM			479
	135	LUMP SUM		LUMP SUM	623	ROBESON		LUMP SUM	LUMP SUM			571
	136	LUMP SUM		LUMP SUM	623		106		LUMP SUM			571
	138	LUMP SUM		LUMP SUM	590		107	LUMP SUM				534
	139	LUMP SUM		LUMP SUM	590		144	LUMP SUM	LUMP SUM			534
	218	LUMP SUM	LUMP SUM		670		145	LUMP SUM	LUMP SUM			
HARNETT	52	LUMP SUM	LUMP SUM		744	TOTA	AL			5,300	12	8211
TOTAL				***************************************	13626			* FOR INFORM	MATION ONLY. ACTUAL QUAN	TITY WILL BE DETER	RMINED IN THE FIELD	•

PROJECT NO. 178P.6.P.5 & 178P.6.P.6

BLADEN, HARNETT, ROBESON,
COUNTIES: COLUMBUS, CUMBERLAND
BRIDGE NO.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

COMBINED TOTAL BILL OF MATERIAL

DRAWN BY: J. YANNACCONE DATE: 04/13 CHECKED BY: F. ASEFNIA DATE: 04/13

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203267

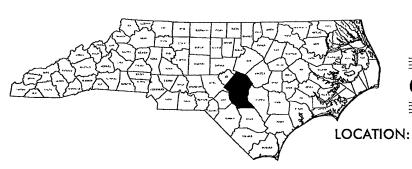
	ROA	ADWAY SUMMAR	Y OF QUANT	ITIES FOR CONTRACT - C203267				
ımber	Sec	Quantity	Unit	Description	ItemNumber	Sec	Quantity	
·····	##					##		
00-N	800	Lump Sum		MOBILIZATION	886000000-N	SP	Lump Sum	
0000000-E	1110	512	SF	WORK ZONE SIGNS (STATIONARY)			Zamp Zam	
000000-Е	1110	1,302	SF	WORK ZONE SIGNS (PORTABLE)	8860000000-N	SP	Lump Sum	
000000-E	1110	26	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)	00.70000000 N	0.00		
000000-N	1115	4	EA	FLASHING ARROW BOARD	8860000000-N	SP	Lump Sum	
0000000-N	1120	4	EA	PORTABLE CHANGEABLE MESSAGE SIGN	8860000000-N	SP	Lump Sum	
000000-N	1130	950	EA	DRUMS				
0000-N	1135	50	EA	CONES	8860000000-N	SP	Lump Sum	
00000-E	1145	48	LF	BARRICADES (TYPE III)	8860000000-N	SP	Lump Sum	
00000-N	1150	896	HR	FLAGGER			•	
00000-N	1165	2	EA	TMA	886000000-N	SP	Lump Sum	
0000-N	SP	672	HR	ŁAW ENFORCEMENT				
000000-N	442	Lump Sum		POLLUTION CONTROL	886000000-N	SP	Lump Sum	
0000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE	20502000			
0000-N	SP	Lump Sum	٠	#104 CUMBERLAND GENERIC STRUCTURE ITEM	886000000-N	SP	Lump Sum	
	52	samp our		CLEANING & REPAINTING BRIDGE #106 ROBESON	886000000-N	SP	Lump Sum	
000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM		~~	Samp Guil	
				CLEANING & REPAINTING BRIDGE #107 ROBESON	N-000000088	SP	Lump Sum	
000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE				
				#112 CUMBERLAND	886000000-N	SP	Lump Sum	
0000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE				
50000000-N	SP	Lumn Cum		#126 CUMBERLAND	886000000-N	SP	Lump Sum	
00000000-IV	or	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING BRIDGE #144 ROBESON	886000000-N	SP	I nome Come	
0000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM	00000000-14	SI.	Lump Sum	
				CLEANING & REPAINTING BRIDGE #145 ROBESON	886000000-N	SP	Lump Sum	
50000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM			-	
				CLEANING & REPAINTING BRIDGE #17 BLADEN				

SUMMARY OF QUANTITIES - 17BP.6.P.5/17BP.6.P.6

temNumber	Sec #	Quantity	Unit	Description	Iten	nNumber	Sec #	Quantity	Unit	Description
86000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #107 ROBESON	8860	0000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #34 CUMBERLAND
6000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #112 CUMBERLAND	8860	0000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #4 ROBESON
6000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #126 CUMBERLAND	8860	000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #5 CUMBERLAND
6000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #135 CUMBERLAND	8860	0000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #51 CUMBERLAND
60000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #136 CUMBERLAND	8860	000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #52 HARNETT
360000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #138 CUMBERLAND	8860	N-000000	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #6 CUMBERLAND
86000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #139 CUMBERLAND	8860	N-0000000	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #70 ROBESON
860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #144 ROBESON	8860	N-000000	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #72 ROBESON
N-00000008	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #145 ROBESON	8860	N-000000	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #84 CUMBERLAND
60000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #17 BLADEN	8860	N-0000000	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #86 ROBESON
36000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #17 COLUMBUS	8860	000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #96 ROBESON
86000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #18 COLUMBUS	8860	N-0000000	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING EXIST. WEATHERING STEEL STRUCTURE OF BRIDGE #135
860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #218 CUMBERLAND	8860	0000000-N	SP	Lump Sum		CUMBERLAND GENERIC STRUCTURE ITEM
36000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #22 COLUMBUS						PAINTING EXIST. WEATHERING STEEL STRUCTURE OF BRIDGE #136 CUMBERLAND
N-000000098	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING CONTAINMENT BRIDGE #30 CUMBERLAND	8860	N-000000	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING EXIST. WEATHERING STEEL STRUCTURE OF BRIDGE #138 CUMBERLAND

SUMMARY OF QUANTITIES - 17BP.6.P.5/17BP.6.P.6

ItemNumber	Sec #	Quantity	Unit	Description
886000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING EXIST. WEATHERING STEEL STRUCTURE OF BRIDGE #139 CUMBERLAND
N-000000088	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING EXIST. WEATHERING STEEL STRUCTURE OF BRIDGE #30 CUMBERLAND
886000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING EXIST. WEATHERING STEEL STRUCTURE OF BRIDGE #34 CUMBERLAND
886000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PAINTING EXIST. WEATHERING STEEL STRUCTURE OF BRIDGE #5 CUMBERLAND
8889000000-E	SP	5,300	LB	GENERIC STRUCTURE ITEM GIRDER REPAIR
8892000000-E	SP	21,837	SF	GENERIC STRUCTURE ITEM EPOXY COATING
8897000000-N	SP	12	EA	GENERIC STRUCTURE ITEM BRIDGE JACKING



STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

CUMBERLAND AND HARNETT COUNTIES

STATE	STATE P	ROJECT REFERENC	E NO.	SHEET NO.	AHERTE
N.C.	17	BP.6.P.5		3	
STATE PRO	DJECT NO.	F. A. PROJ. NO.	T	DESCRIPT	NOI
17BP.6.	P.5	N/A PE			
17BP.6.	P.5	N/A		CONS'	rr
			\perp		



BRIDGE #5 ON NC 59 (CHICKEN FOOT RD.) OVER I-95

BRIDGE #6 ON SR 1007 (ALL-AMERICAN FWY.) OVER US 401 BUS. (RAEFORD RD.)

BRIDGE #30 ON I-95 SBL OVER I-95 LOOP NBL AND SR 2284 BRIDGE #34 ON NC 53 /NC 210 (CEDAR CREEK RD.) OVER I-95 BRIDGE #51 ON US 401 BUS. OVER NC 210 (MURCHISON RD.)

BRIDGE #84 ON US 401 BUS. OVER CUMBERLAND ST. BRIDGE #104 ON NC 24 (BRAGG BLVD.) OVER US 401 BUS.

BRIDGE #112 ON US 401 BUS. OVER HILLSBORO ST.

BRIDGE #126 ON NC 24 / NC 210 (GROVE ST.) OVER CAPE FEAR RIVER

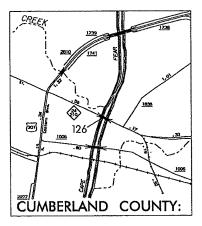
BRIDGE #135 ON NC 24 EBL OVER I-95
BRIDGE #136 ON NC 24 WBL OVER I-95
BRIDGE #138 ON NC 24 EBL CONN. OVER I-95
BRIDGE #139 ON NC 24 WBL CONN. OVER I-95

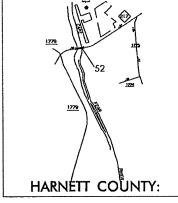
BRIDGE #218 ON SR 1404 (HAY ST.) OVER US 401 BUS.

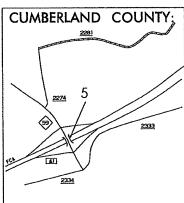
HARNETT COUNTY:

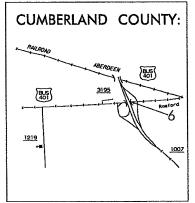
BRIDGE #52 ON NC 217 OVER CAPE FEAR RIVER

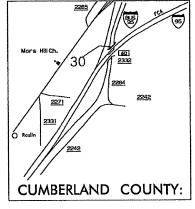
TYPE OF WORK: BRIDGE PRESERVATION - CLEANING & PAINTING OF EXISTING BRIDGE STRUCTURES

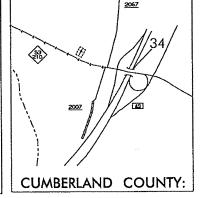


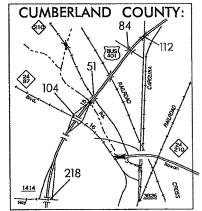


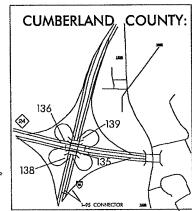


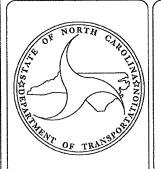




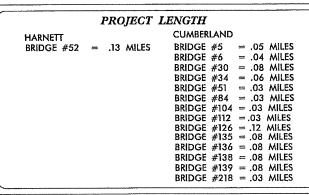


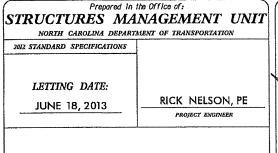






	D.	ESIGN	DATA
HARNETT #52 ADT 2011	=	4800	CUMBERLAND #5 ADT 2011 = 16000 #6 ADT 2004 = 51000 #30 ADT 2011 = 16500 #34 ADT 2011 = 12000 #51 ADT 2009 = 20000 #84 ADT 2010 = 21000 #104 ADT 2010 = 22000 #112 ADT 2010 = 22000 #126 ADT 2010 = 22000 #135 ADT 2010 = 6500 #138 ADT 2010 = 6500







STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

CUMBERLAND AND HARNETT COUNTIES **DIVISION** 6



BRIDGE PAINTING

CUMBERLAND COUNTY

BRIDGE #5 - NC 59 over I-95

BRIDGE #6 - SR 1007 over US 401 Business (Raeford Rd)

BRIDGE #30 - I-95 South over I-95 North Loop/SR 2284

BRIDGE #34 - NC 53/NC 210 over I-95

BRIDGE #51 - US 401 Business over NC 210

BRIDGE #84 - US 401 Business over Cumberland St

BRIDGE #104 - NC 24/NC 210/Grove St over US 401 Business

BRIDGE #112 - US 401 Business over Hillsboro St

BRIDGE #126 - NC 24 over Cape Fear River

BRIDGE #135 - NC 24 East over I-95

BRIDGE #136 - NC 24 West over I-95

BRIDGE #138 - NC 24 East Connector over I-95

BRIDGE #139 - NC 24 West Connector over I-95

BRIDGE #218 - SR 1404 (Hay St) over US 401 Business/NC 87

HARNETT COUNTY

BRIDGE #52 - NC 217 over Cape Fear River



PLAN PREPARED FOR NCDOT BRIDGE MANAGEMENT UNIT RALEIGH, NC



INDEX OF SHEETS

SHEET NO. TITLE TITLE SHEET AND INDEX OF SHEETS TMP-1 LEGEND AND LIST OF ROADWAY STANDARD DRAWINGS GENERAL NOTES TMP-2 TMP-3 PHASING CUMBERLAND CO. BRIDGE #6 US 401 BUS/RAEFORD RD INSIDE TMP-4 LANES WORK AREA TMP-4A CUMBERLAND CO. BRIDGE #6 US 401 BUS/RAEFORD RD RIGHT LANE WORK AREA TMP-5 CUMBERLAND CO. BRIDGE #34 I-95 NBL RIGHT LANE WORK AREA CUMBERLAND CO. BRIDGE #51 NC 210 (MURCHISON BLVD) LEFT TMP-6 AND RIGHT LANE WORK AREAS CUMBERLAND CO. BRIDGE #84 CUMBERLAND ST FLAGGING OPERATION TMP-7 CUMBERLAND CO. BRIDGE #104 US 401 BUS NBL CENTER AND TMP-8 RIGHT LANE WORK AREAS CUMBERLAND CO. BRIDGE #104 US 401 BUS SBL LEFT AND RIGHT TMP-8A LANE WORK AREAS CUMBERLAND CO. BRIDGE #126 NC 24/NC 210/GROVE ST RIGHT TMP-9 LANE WORK AREA TMP-10 CUMBERLAND CO. BRIDGES #135, #136, #138, #139 I-95 NBL ENTRANCE RAMP RIGHT LANE WORK AREA TMP-11,11A CUMBERLAND CO. BRIDGE #218 US 401 BUS LEFT AND RIGHT

TRAFFIC MANAGEMENT STRATEGY

BRIDGE PAINTING OPERATIONS WILL BE ACCOMPLISHED USING TIME RESTRICTED LANE CLOSURES. REFER TO SHEET TMP-3 FOR PHASING.

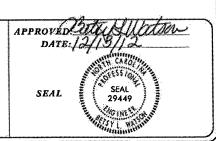


PLAN PREPARED BY:

BETSY L. WATSON, P.E.

TRAFFIC ENGINEER

GEORGE KARAGEORGE SR TRANSPORTATION DESIGNER



TMP-1

ં 4 B

LEGEND

DIRECTION OF TRAFFIC FLOW DIRECTION OF PEDESTRIAN TRAFFIC FLOW

NORTH ARROW

TYPE III BARRICADE

WORK AREA

SKINNY DRUM @ TUBULAR MARKER DRUM

CHANGEABLE MESSAGE SIGN (CMS)

AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

PAVEMENT REMOVAL

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







TEMPORARY

PAVEMENT MARKINGS

EXISTING PAVEMENT MARKING (GRAY)

- SKIP LINES

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

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

AND EXISTING PAVEMENT MARKING SYMBOLS (HOLLOW)

PAVEMENT MARKING ALPHANUMERIC CHARACTERS

PAVEMENT MARKERS

CRYSTAL/CRYSTAL

CRYSTAL/RED

YELLOW/YELLOW

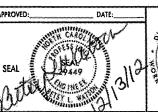
PROJ. REFERENCE NO. SHEET NO. WBS 17BP.6.P.5 TMP-1A

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:

TITLE STD. NO. 1101.01 WORK ZONE ADVANCE WARNING SIGNS 1101.02 TEMPORARY LANE CLOSURES TEMPORARY SHOULDER CLOSURES 1101.04 1101.11 TRAFFIC CONTROL DESIGN TABLES STATIONARY WORK ZONE SIGNS 1110,01 PORTABLE WORK ZONE SIGNS 1110.02 1115.01 FLASHING ARROW BOARDS 1130.01 1135.01 FLAGGING DEVICES 1150.01 WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION 1165.01







LEGEND ROADWAY STANDARD DRAWINGS THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF

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 A LANE OF TRAFFIC DURING THE FOLLOWING TIME RESTRICTIONS:

	and the second of the second o	The second secon
ROAD NAME	COUNTY	BRIDGE NUMBER
I≠95	CUMBERLAND	5
I-95	CUMBERLAND	34
I-95	CUMBERLAND	135/136/138/139
I-95	CUMBERLAND	30
DAY AND TIME RESTRI	CTIONS	
6:00 A.M7:00 P.M. 6:00 A.M. FRIDAY -	MONDAY THRU THURSDAY 7:00 P.M. SUNDAY	

ROAD NAME	COUNTY	BRIDGE NUMBER
US 401 BUSINESS	CUMBERLAND	6
US 301	CUMBERLAND	30
US 401 BUSINESS	CUMBERLAND	104
US 401 BUSINESS	CUMBERLAND	218
DAY AND TIME RESTRICTION	IS	
6:00 A.M7:00 P.M. MONE	DAY THRU SUNDAY (EVERY DAY)	

ROAD NAME	COUNTY	BRIDGE NUMBER
NC 210 (MURCHISON BLVD)	CUMBERLAND	51
NC 217	HARNETT	52
CUMBERLAND ST	CUMBERLAND	84
HILLSBORO ST	CUMBERLAND	112
NC 24/NC 210/GROVE ST	CUMBERLAND	126
DAY AND TIME RESTRICTIONS		
6:00 A.M9:00 A.M. MONDAY	THRU FRIDAY	
4:00 P.M7:00 P.M. MONDAY	THRU FRIDAY	

B) DO NOT CLOSE OR NARROW A LANE OF TRAFFIC, DETAIN AND/OR ALTER THE TRAFFIC FLOW ON OR DURING HOLIDAYS, HOLIDAY WEEKENDS, OR ANY OTHER TIME WHEN TRAFFIC IS UNUSUALLY HEAVY, INCLUDING THE FOLLOWING SCHEDULES:

ROAD NAME ALL ROADS

HOLIDAY & HOLIDAY WEEKEND LANE CLOSURE TIME RESTRICTIONS

- 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.

GENERAL NOTES

6) FOR LAB	OR DAY,	BETWEEN	THE	HOURS	0F	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.
- C) DO NOT CLOSE OR NARROW TRAVEL LANES DURING SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

I-95

1) FOR THE BIKE WEEK SPECIAL EVENTS AT MYRTLE BEACH AND DAYTONA 500, BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE THE EVENT AND 7:00 P.M. THE TUESDAY AFTER THE EVENT.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) 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.
- E) INSTALL ALL LANE CLOSURES ACCORDING TO THE PLANS, ROADWAY STANDARD DRAWINGS (1101.02), OR AS DIRECTED BY THE ENGINEER.
- F) 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 BOARDS AND MESSAGE SIGNS.
- G) 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.
- H) 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.
- I) 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.
- J) 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.
- K) 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).

PROJ. REFERENCE NO. SHEET NO. WBS 17BP.6.P.5 TMP-2

- L) 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.
- M) WHENEVER TAPERS ARE TO BE USED IN CLOSE PROXIMITY TO AN INTERCHANGE RAMP, CROSSROADS, CURVES, OR OTHER INFLUENCING FACTORS, THE LENGTH OF STANDARD TAPERS MAY BE ADJUSTED.

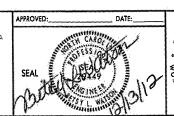
MISCELLANEOUS

- N) USE LAW ENFORCEMENT TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS SHOWN IN THE PLAN OR AS DIRECTED BY THE ENGINEER. LOCATIONS SHOWN IN THE PLANS ARE APPROXIMATE AND MAY BE REVISED AS THE OFFICER OR THE ENGINEER DEEM NECESSARY.
- O) ALL DIMENSIONS AND STATIONS IN THE TRAFFIC MANAGEMENT PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- P) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.
- Q) 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.
- R) DO NOT PERFORM WORK FROM THE ROADWAY ON TOP OF ANY BRIDGE, EXCEPT CUMBERLAND 126 AND HARNETT 52, UNLESS SPECIFICALLY ALLOWED IN THE PLAN OR BY THE ENGINEER.

TRAFFIC SIGNALS

S) IF TRAFFIC SIGNALS ARE TO BE PLACED IN FLASH MODE COORDINATE WITH LAW ENFORCEMENT AND CONTACT FAYETTEVILLE TRAFFIC SERVICES AT 910-433-1660 IN ADVANCE.

Stantec Consulting Services Inc. 801 Jones Franklin Road Sulte 300 Raleigh, NC 27608 Tel. (919) 851-8686 Fax. (919) 851-7024 www.stantec.com License No. F-6072





GENERAL NOTES

PHASING

USE THE FOLLOWING TRAFFIC CONTROL METHODS DURING BRIDGE PAINTING:

CUMBERLAND COUNTY

BRIDGE #5 - NC 59 OVER I-95 (PAINT BEAM ENDS)
USE LEFT AND RIGHT LANE CLOSURES ON I-95 PER ROADWAY STANDARD
DRAWING 1101.02 SHEET 4. FOR LANE CLOSURE SWITCH ON I-95, SEE
ROADWAY STANDARD DRAWING 1101.02 SHEET 5.

BRIDGE #6 - SR 1007 OVER US 401 BUSINESS (RAEFORD RD) (PAINT STR. STEEL)

USE LANE CLOSURES PER SHEETS TMP-4 AND TMP-4A.

BRIDGE #30 - I-95 SOUTH OVER I-95 NORTH LOOP/SR 2284 (PAINT BEAM ENDS)

USE LEFT AND RIGHT LANE CLOSURES ON I-95 BYPASS PER ROADWAY STANDARD DRAWING 1101.02 SHEET 3. FOR LANE CLOSURE SWITCH ON I-95 BYPASS, SEE ROADWAY STANDARD DRAWING 1101.02 SHEET 5.

USE FLAGGING OPERATION ON US 301 SERVICE ROAD PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1.

BRIDGE #34 - NC 53/NC 210 OVER I-95 (PAINT BEAM ENDS)
USE RIGHT LANE CLOSURE WITH SWITCH ON I-95 NBL PER SHEET TMP-5.

USE LEFT AND RIGHT LANE CLOSURES ON I-95 PER ROADWAY STANDARD DRAWING 1101.02 SHEET 4. FOR LANE CLOSURE SWITCH ON I-95 SBL, SEE ROADWAY STANDARD DRAWING 1101.02 SHEET 5.

BRIDGE #51 - US 401 BUSINESS OVER NC 210 (PAINT STR. STEEL)
USE LANE CLOSURES PER SHEET TMP-6.

BRIDGE #84 - US 401 BUSINESS OVER CUMBERLAND ST (PAINT STR. STEEL)
USE LANE CLOSURES PER SHEET TMP-7.

BRIDGE #104 - NC 24 OVER US 401 BUSINESS (PAINT STR. STEEL)
USE RIGHT LANE CLOSURE ON US 401 BUS NBL PER SHEET TMP-8. USE
LEFT LANE CLOSURE ON US 401 BUS NBL PER ROADWAY STANDARD DRAWING
1101.02 SHEET 4.

USE LANE CLOSURES ON US 401 BUS SBL PER SHEET TMP-8A.

BRIDGE #112 - US 401 BUSINESS OVER HILLSBORO ST (PAINT STR. STEEL)

USE FLAGGING OPERATION ON HILLSBORO STREET PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1.

BRIDGE #126 - NC 24 OVER CAPE FEAR RIVER (PAINT STR. STEEL) USE RIGHT LANE CLOSURE PER SHEET TMP-9.

BRIDGES #135, 136, 138 AND 139 - NC 24 EAST OVER I-95 (PAINT BEAM ENDS)

I-95 NB AND I-95 SB, IF NEEDED: USE LEFT LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02 SHEET 4.

I-95 NB COLLECTOR/DISTRIBUTOR: USE RIGHT LANE CLOSURE PER SHEET TMP-10.

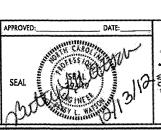
I-95 SB COLLECTOR/DISTRIBUTOR: USE RIGHT LANE CLOSURE PER SHEET TMP-10.

BRIDGE #218 - SR 1404 (HAY ST) OVER US 401 BUSINESS/NC 87 (PAINT STR. STEEL)
USE LANE CLOSURES PER SHEET TMP-11 AND TMP-11A.

HARNETT COUNTY

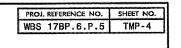
BRIDGE #52 - NC 217 OVER CAPE FEAR RIVER (PAINT STR. STEEL)
USE FLAGGING OPERATION ON NC 217 PER ROADWAY STANDARD DRAWING
1101.02 SHEET 1.

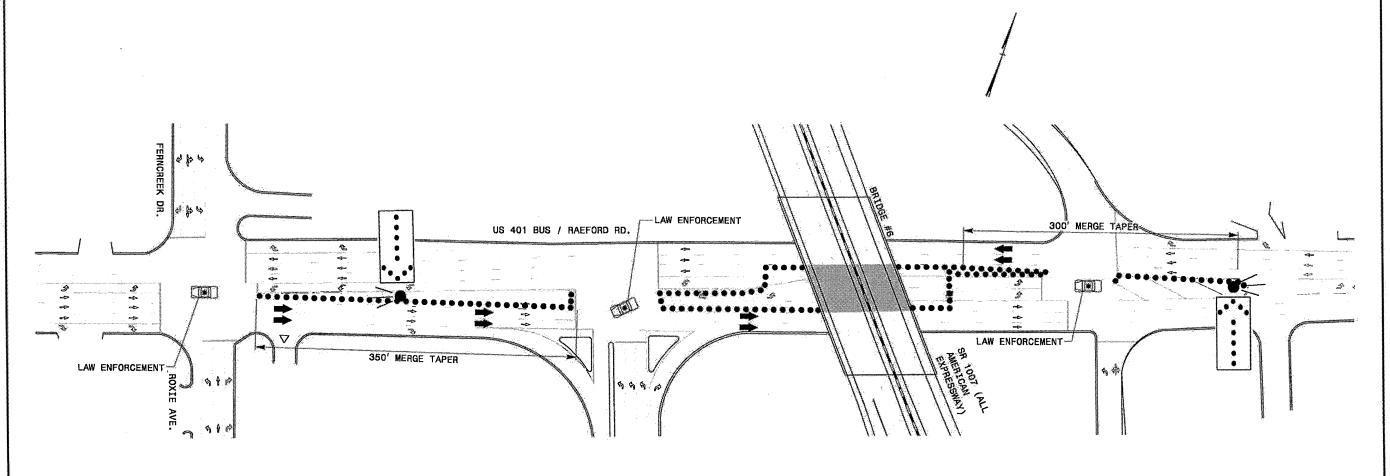
Stantec Consulting Services Inc. 801 Jones Franklin Road Sulte 300 Ratelath, NC 27605 Tel. (919) 851-8686 Fax. (919) 851-7024 www.stantec.com

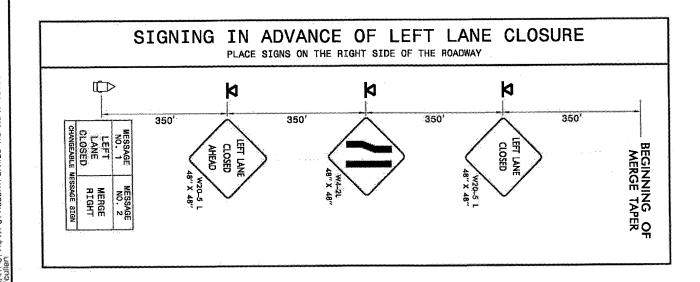




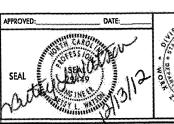
PHASING







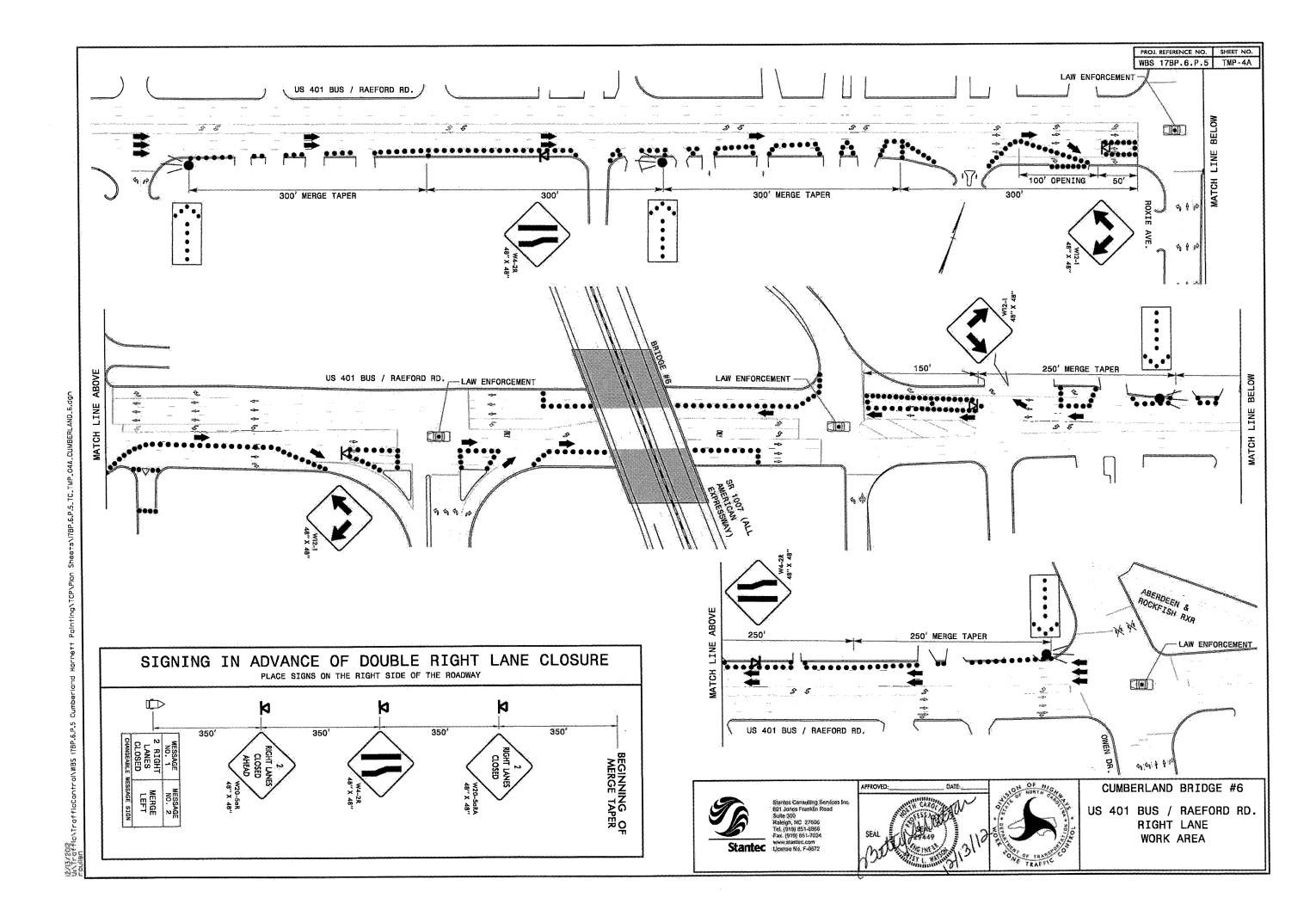


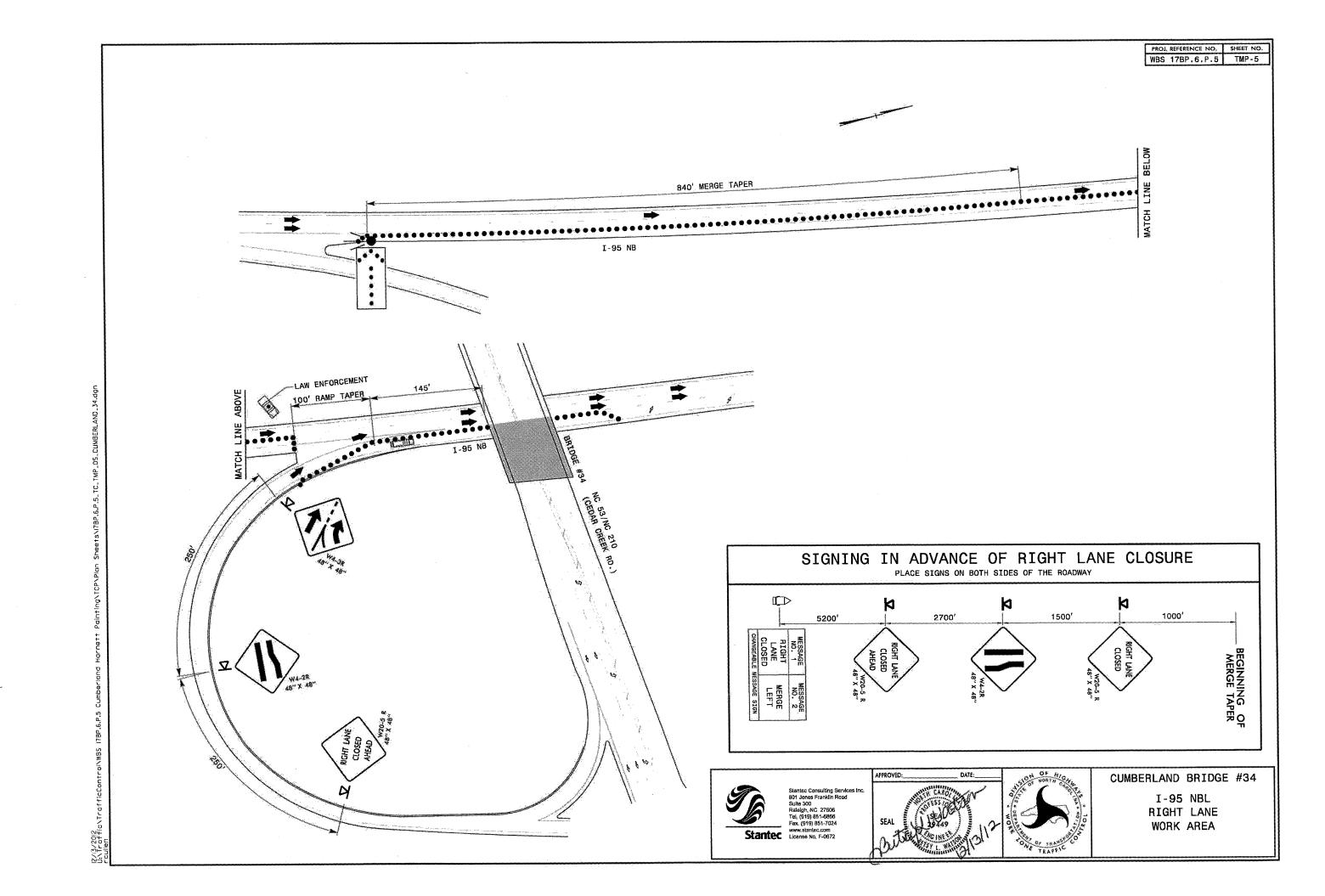


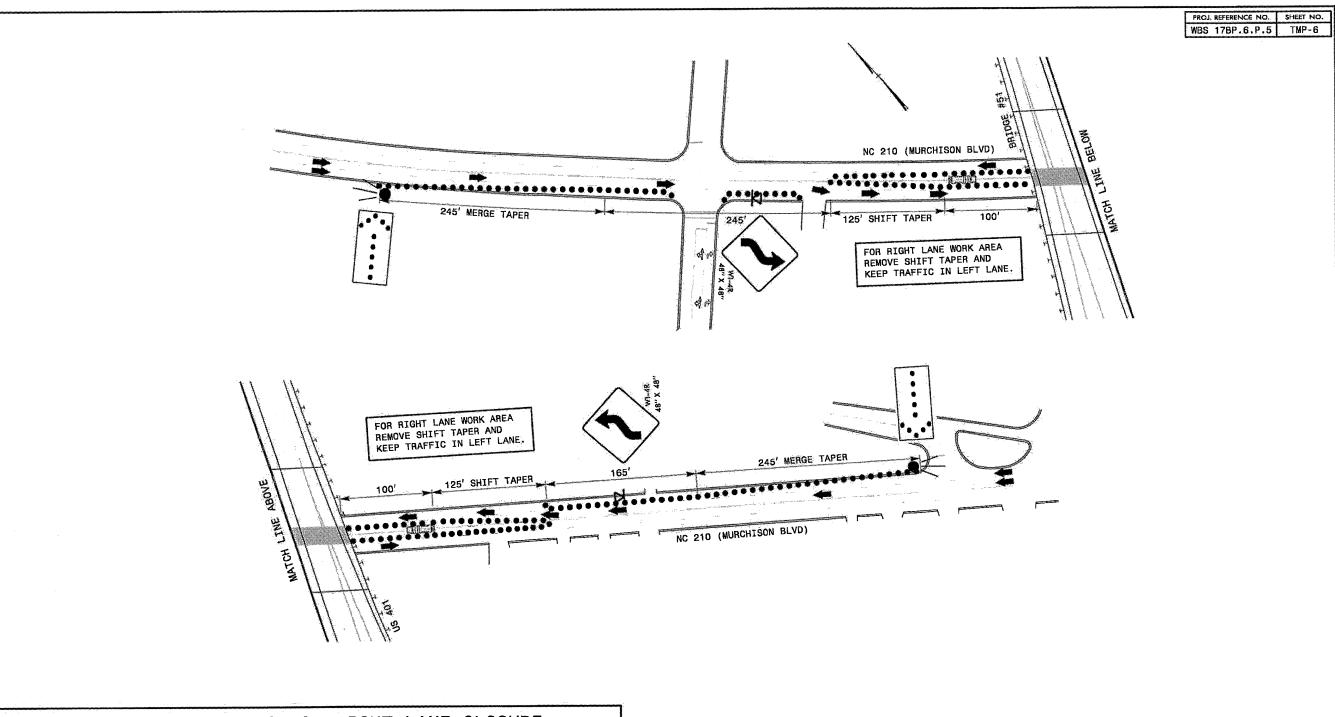
CUMI US 40

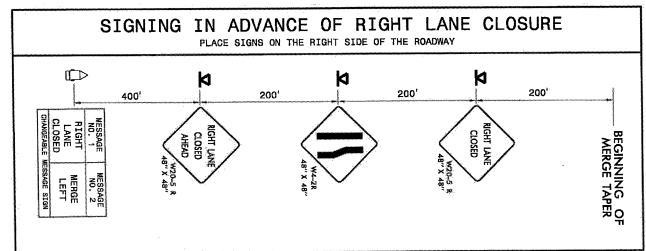
CUMBERLAND BRIDGE #6
US 401 BUS / RAEFORD RD.
INSIDE LANES
WORK AREA

1737202 Treffic.TrafficControl/WBS 178P.5.P.5. Cumberland Harnett Pointing/ICP/Plan Sheets/NTBP















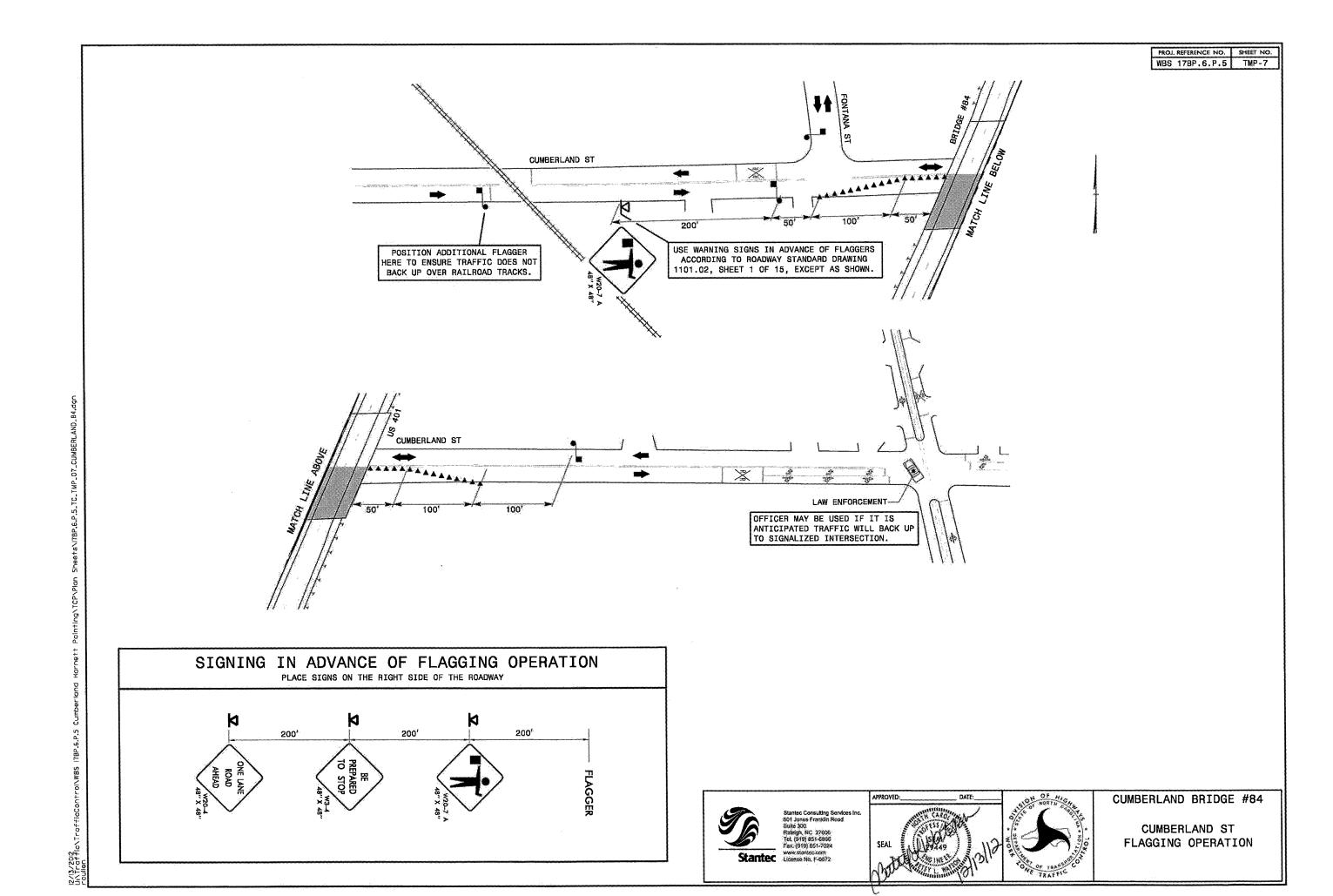
CUMBERLAND BRIDGE #51

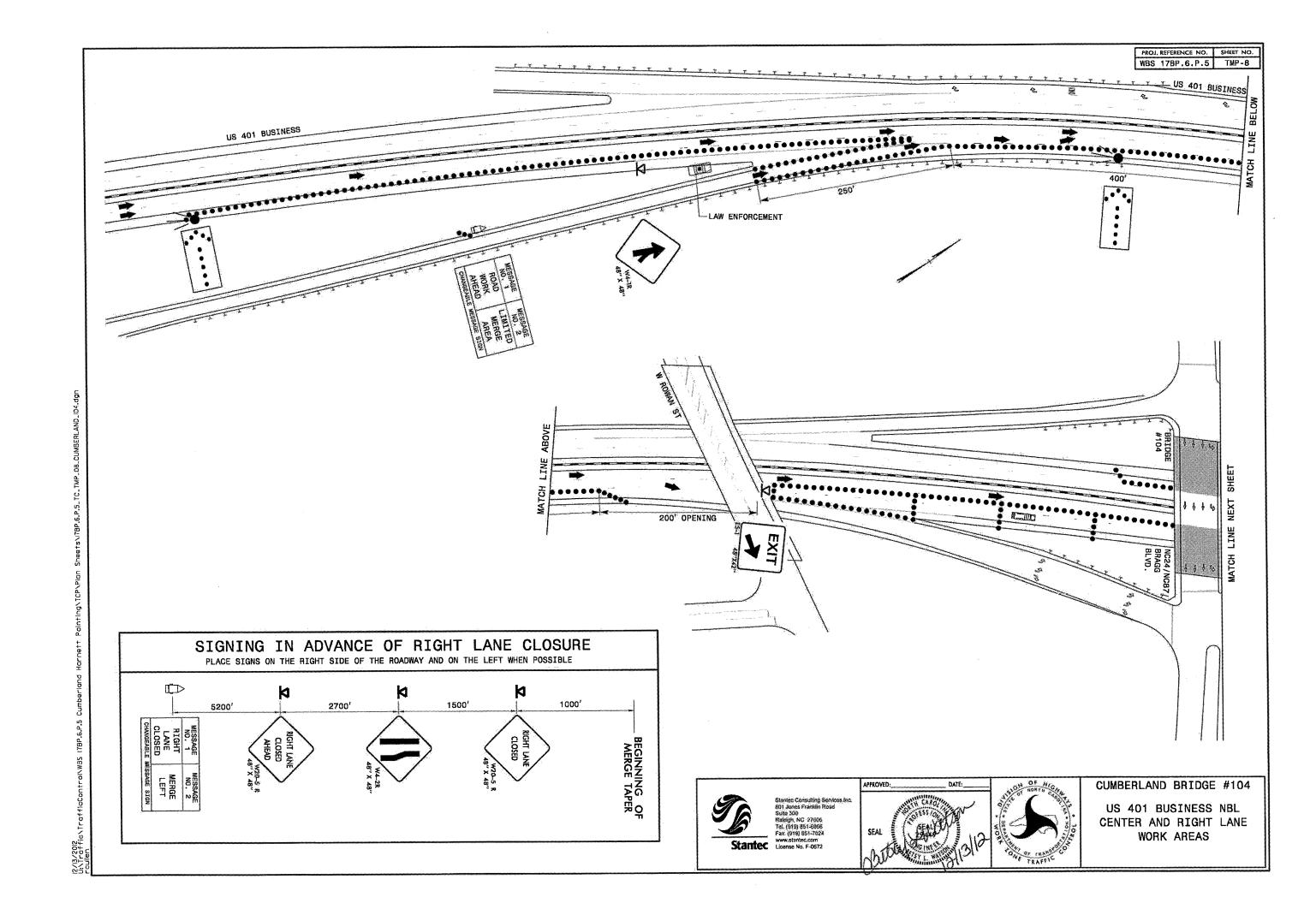
NC 210 (MURCHISON BLVD.)

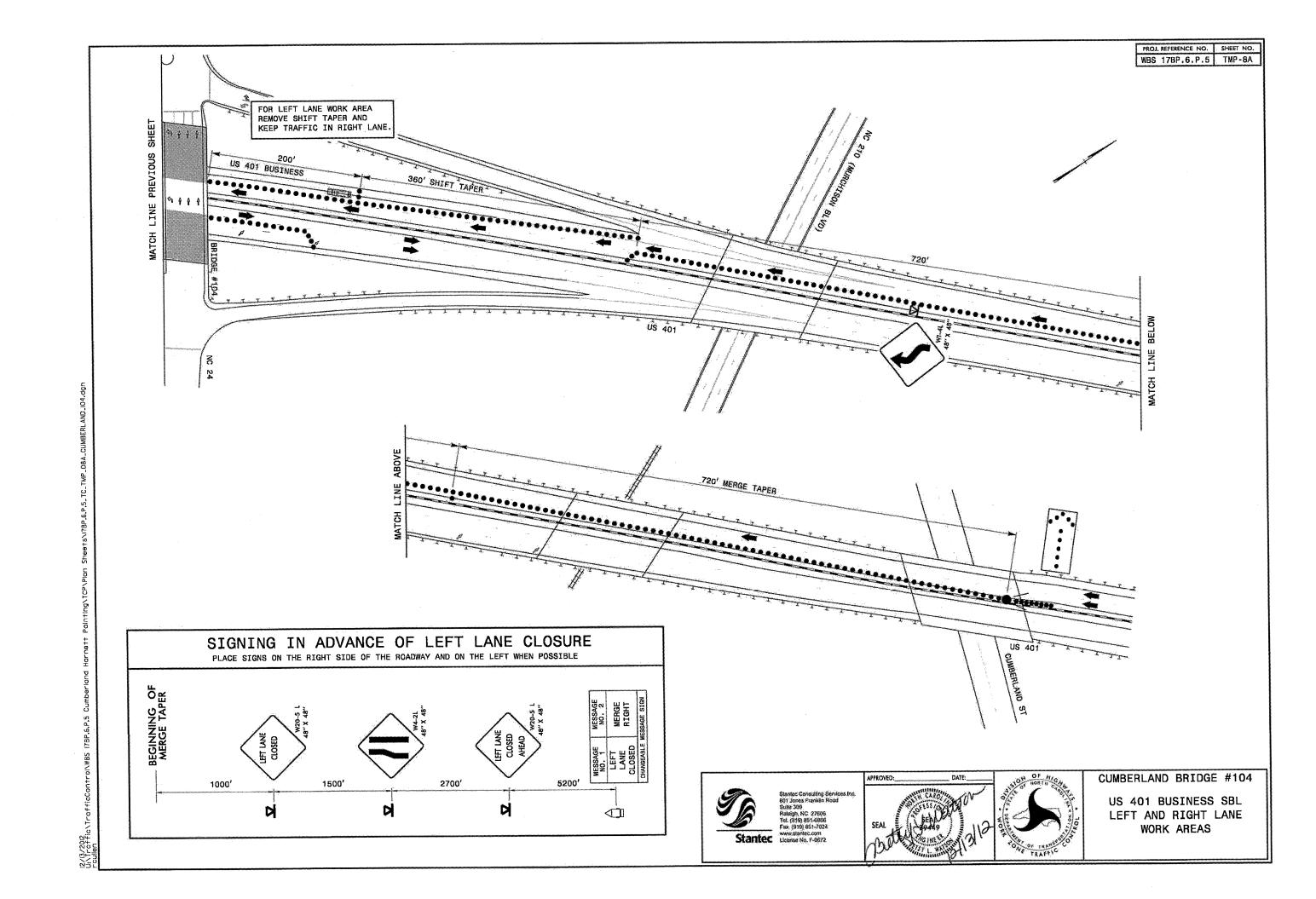
LEFT AND RIGHT LANE

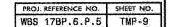
WORK AREAS

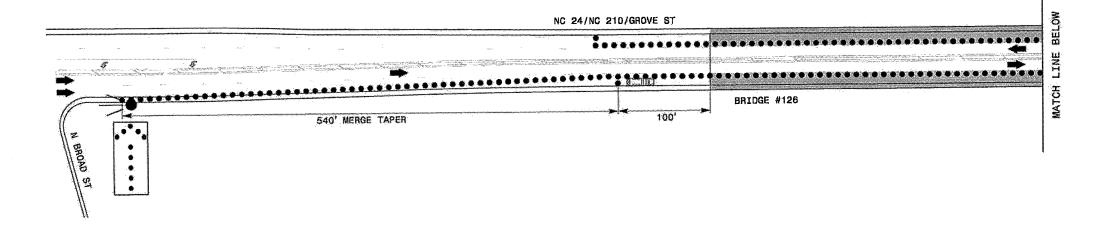
002 jffic\TrafficControl\#85 178P.6.P.5 Cumberiand Harnett Painting\TCP\Pian Sheets\178P.6.P.5.TC.T

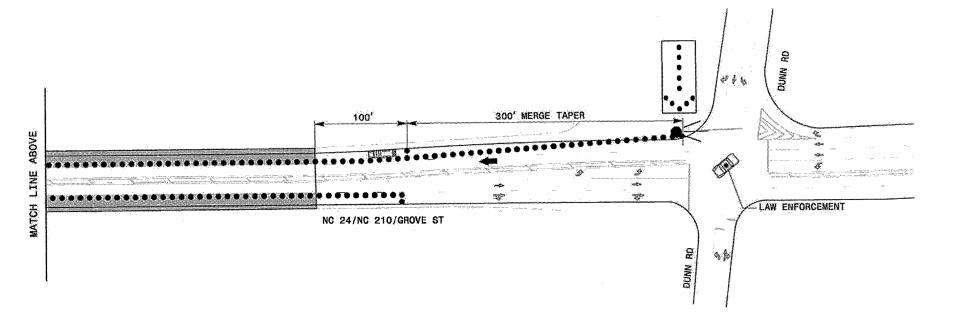


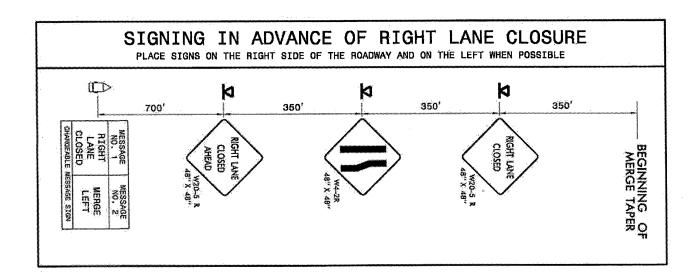




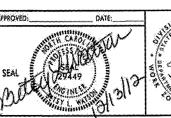










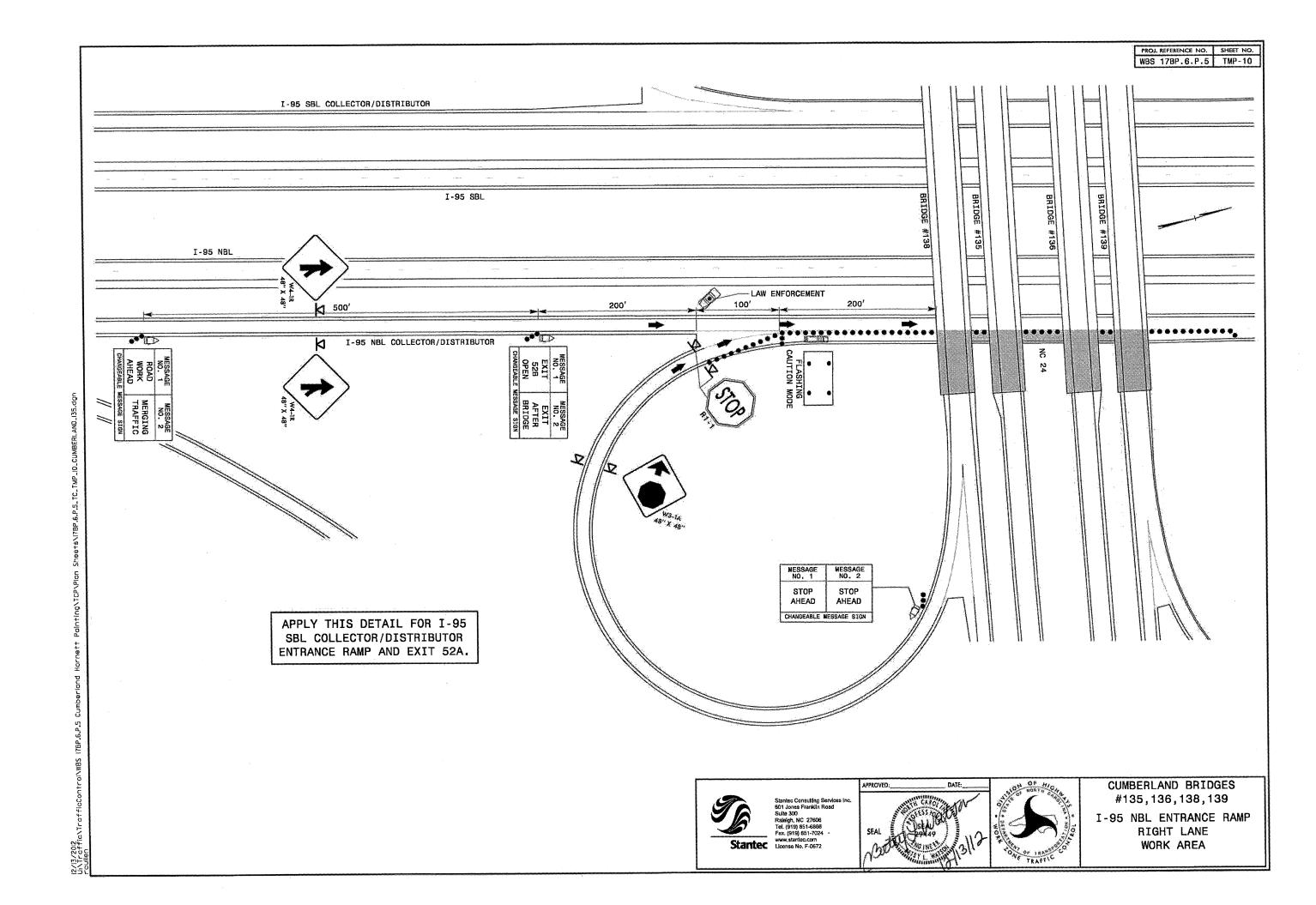


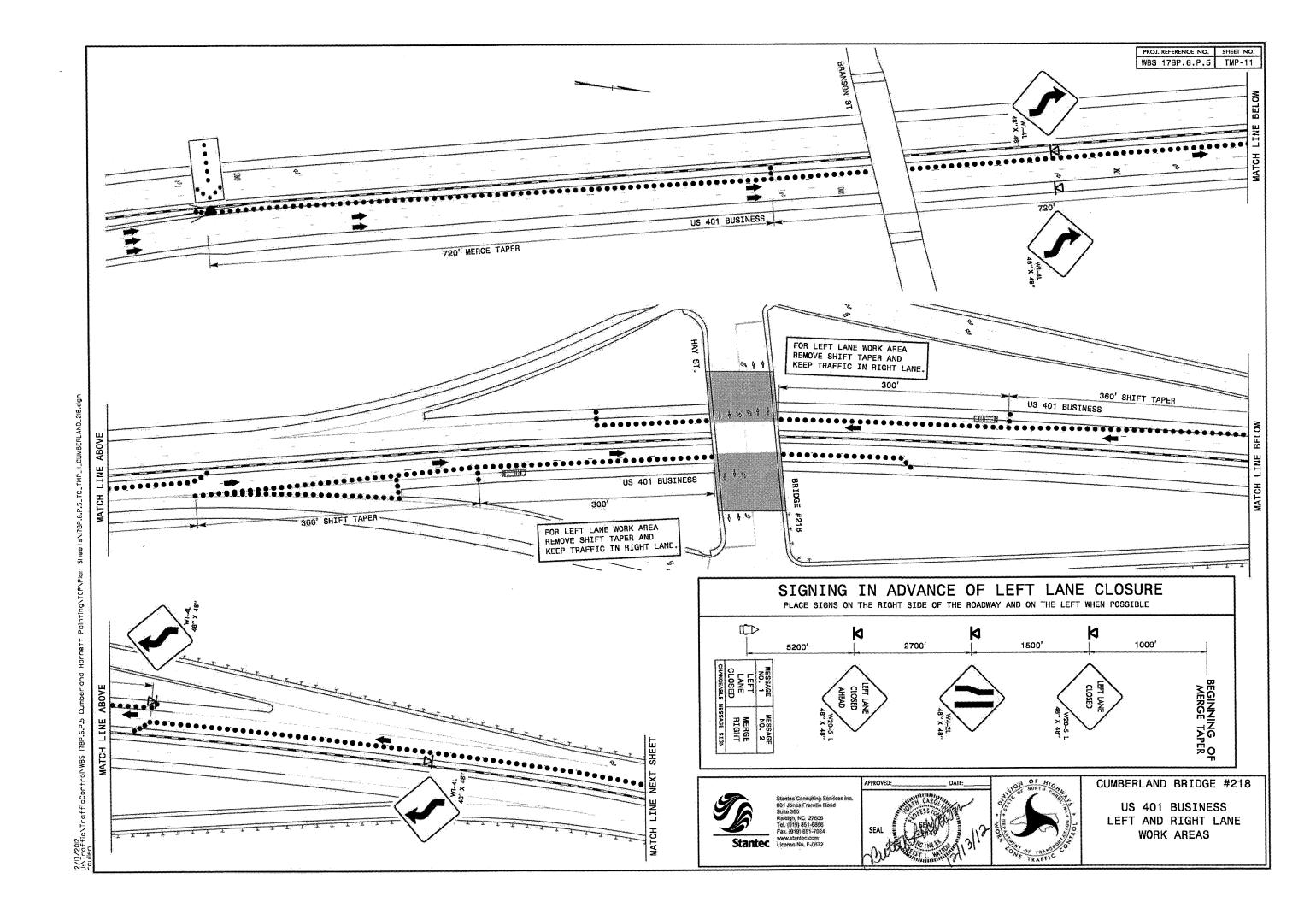
CUMBERLA NC 24/N R: W

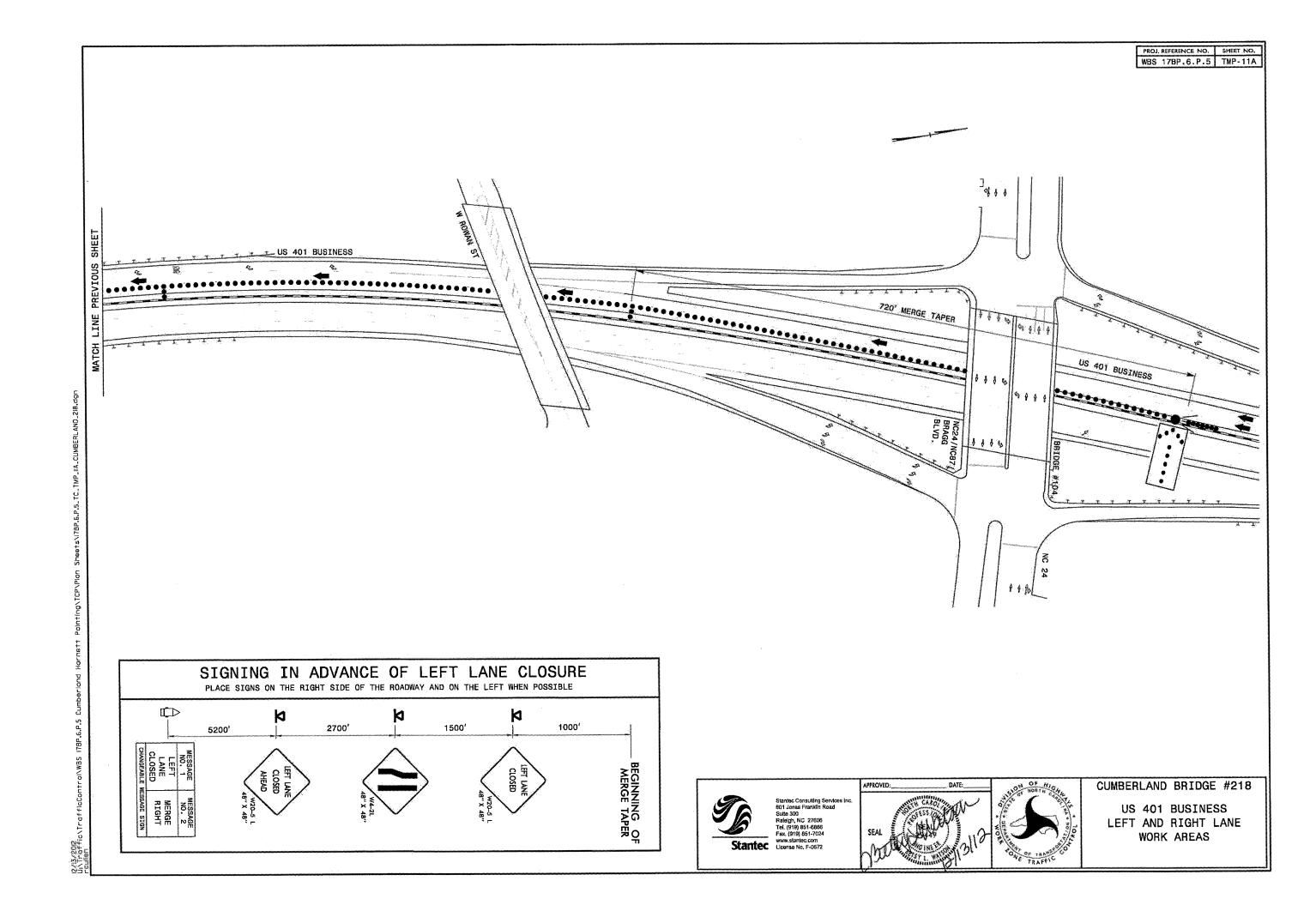
CUMBERLAND BRIDGE #126

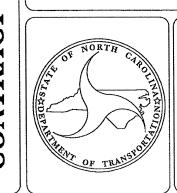
NC 24/NC 210/GROVE ST
RIGHT LANE
WORK AREA

CONTROL WORLD'S CLADONION TOTAL TOTAL CONTROL OF STATE OF STATES O











STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

BLADEN, COLUMBUS AND ROBESON COUNTIES

LOCATION: BLADEN COUNTY:

BRIDGE #17 ON US 701/NC 41 OVER CAPE FEAR RIVER

COLUMBUS COUNTY:

BRIDGE #17 ON US 701 BUS OVER US 74 BYPASS /US 76 BYPASS BRIDGE #18 ON US 74 WBL OVER LUMBER RIVER OVERFLOW

BRIDGE #22 ON NC 87 OVER CSX-RR

ROBESON COUNTY:

BRIDGE #4 ON NC 130 OVER I-95

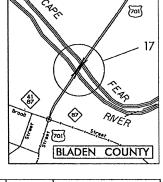
BRIDGE #70 ON US 74 EBL OVER NC 41 BRIDGE #72 ON US 74 WBL OVER NC 41

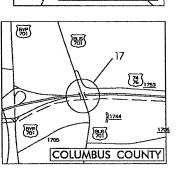
BRIDGE #86 ON SR 2459 OVER I-95 BRIDGE #96 ON SR 1155 OVER I-95 BRIDGE #106 ON I-95 NBL OVER SR 2457 BRIDGE #107 ON I-95 SBL OVER SR 2457

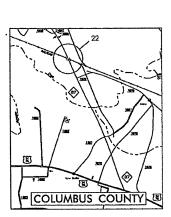
BRIDGE #144 ON I-95 NBL OVER SR 1541/CSX-RR

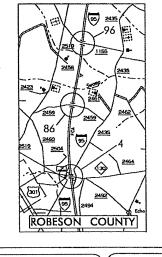
BRIDGE #145 ON I-95 SBL OVER SR 1541 / CSX-RR

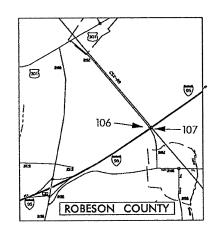
TYPE OF WORK: BRIDGE PRESERVATION- CLEANING & PAINTING OF EXISTING BRIDGE STRUCTURES

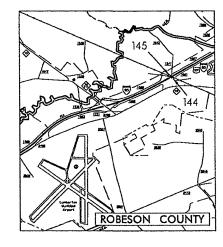


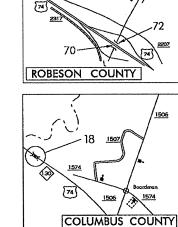


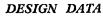








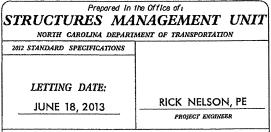




BLADEN			ROBESON		
#17 ADT 2011	==	6500	#4 ADT 2009	=	3600
COLUMBUS			#70 ADT 2011	=	4500
			#72 ADT 2011	=	4500
" · · · · · · · · · · · · · · · · · · ·	===	4000	#86 ADT 2009	=	580
#18 ADT 2009	==	6500	#96 ADT 2009	==	680
#22 ADT 2007	=	10000	#106 ADT 2009	==	16000
			#107 ADT 2008	=	16000
			#144 ADT 2010	=	27000
			#145 ADT 2010	=	27000

PROJECT LENGTH

LADEN		ROBESON	
RIDGE #17	= .223 MILES	BRIDGE #4	= .047 MILES
COLL DI LIBERO		BRIDGE #70	= .029 MILES
COLUMBUS		BRIDGE #72	= .029 MILES
RIDGE #17	= .048 MILES	BRIDGE #86	= .050 MILES
RIDGE #18	= .026 MILES	BRIDGE #96	= .050 MILES
RIDGE #22	= .037 MILES	BRIDGE #106	= .043 MILES
		BRIDGE #107	= .040 MILES
		BRIDGE #144	= .044 MILES
		DDIDGE #1/5	- OAA MILES







DESCRIPTION

PE CONSTR

STATE PROJECT REFERENCE NO. SHEET TOTAL SHEETS

17BP.6.P.6

N/A N/A

STATE PROJECT NO. P. A. PROJ. NO.

STATE

N.C.

17BP.6.P.6 17BP.6.P.6

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

BLADEN, COLUMBUS, & ROBESON COUNTIES **DIVISION** 6



BLADEN COUNTY

BRIDGE #17 - US 701 SBL/NC 41/NC 242 over Cape Fear River

COLUMBUS COUNTY

BRIDGE #17 - US 701 Business over US 74/76

BRIDGE #18 - US 74/NC 130 WBL over Lumber River

BRIDGE #22 - NC 87 over Railroad

ROBESON COUNTY

BRIDGE #4 - NC 130 over I-95

BRIDGE #70 - US 74 EBL over NC 41

BRIDGE #72 - US 74 WBL over NC 41

BRIDGE #86 - SR 2459 (Home Rd) over I-95

BRIDGE #96 - SR 1155 (Dew Rd) over I-95

BRIDGE #106 - I-95 NBL over SR 2457 (Boyce Rd)

BRIDGE #107 - I-95 SBL over SR 2457 (Boyce Rd)

BRIDGE #144 - I-95 NBL over SR 1541 (VFW Rd) and Railroad

BRIDGE #145 - I-95 SBL over SR 1541 (VFW Rd) and Railroad



PLAN PREPARED FOR NCDOT STRUCTURES MANAGEMENT UNIT RALEIGH, NC



INDEX OF SHEETS

TMP-1

SHEET NO.

TITLE

TITLE SHEET AND INDEX OF SHEETS

LEGEND AND LIST OF ROADWAY STANDARD DRAWINGS

GENERAL NOTES

VICINITY MAPS & PHASING

ROBESON #4 - I-95 NB RIGHT LANE/RAMP LANE WORK AREA

ROBESON #4 - I-95 NB DETOUR ROUTE

ROBESON #4 - I-95 SB RIGHT LANE/RAMP LANE WORK AREA

ROBESON #4 - I-95 SB DETOUR ROUTE

ROBESON #144/145 - FLAGGING OPERATION SR 1541 EASTBOUND WORK AREA

ROBESON #144/145 - FLAGGING OPERATION SR 1541 WESTBOUND WORK AREA

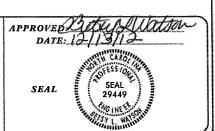
TRAFFIC MANAGEMENT STRATEGY

PROPOSED BRIDGE PAINTING WILL BE PERFORMED USING DAY AND TIME RESTRICTED LANE CLOSURES, RAMP CLOSURES AND OFF-SITE DETOURS. REFER TO SHEET TMP-3 FOR PHASING.



BETSY L. WATSON, P.E.

GEORGE KARAGEORGE



100

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







TEMPORARY

PAVEMENT MARKINGS

EXISTING PAVEMENT MARKING (GRAY)

— SKIP LINES MINI-SKIP LINES

PAVEMENT MARKING SYMBOLS

- SOLID LINES

↑ ↑ ↑ PAVEMENT MARKING SYMBOLS

EXISTING PAVEMENT MARKING SYMBOLS (HOLLOW)

(NLY PAVEMENT MARKING ALPHANUMERIC CHARACTERS

PAVEMENT MARKERS

CRYSTAL/CRYSTAL

CRYSTAL/RED

YELLOW/YELLOW

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

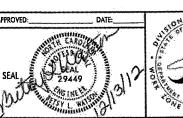
ROADWAY STANDARD DRAWINGS

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.	
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD 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 BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION



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Licensa No. F-0872





LEGEND ROADWAY STANDARD DRAWINGS

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.

DAY AND TIME RESTRICTIONS

LANE CLOSURE TIME RESTRICTIONS

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

BLADEN CO. US 701/NC 41	6:00 A.M 7:00 P.M. MONDAY THRU SUNDAY (EVERY DAY)
COLUMBUS CO. US 701 BUSINESS	6:00 A.M 9:00 A.M. MONDAY THRU FRIDAY
US 701 BUSINESS	4:00 P.M 7:00 P.M. MONDAY THRU FRIDAY
US 74 NC 87	6:00 A.M 7:00 P.M. MONDAY THRU SUNDAY (EVERY DAY)
ROBESON CO.	
I-95	6:00 A.M 7:00 P.M. MONDAY THRU THURSDAY 6:00 A.M FRIDAY - 7:00 P.M. SUNDAY

B) DO NOT CLOSE OR NARROW A LANE OF TRAFFIC, DETAIN AND/OR ALTER THE TRAFFIC FLOW ON OR DURING HOLIDAYS, HOLIDAY WEEKENDS, OR ANY OTHER TIME WHEN TRAFFIC IS UNUSUALLY HEAVY, INCLUDING THE FOLLOWING SCHEDULES:

6:00 A.M. - 7:00 P.M. MONDAY THRU SUNDAY (EVERY DAY)

ROAD NAME ALL BOADS

NC 41

ROAD NAME

HOLIDAY & HOLIDAY WEEKEND LANE CLOSURE TIME RESTRICTIONS

- 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.
- 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.
- 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.

C) DO NOT CLOSE OR NARROW TRAVEL LANES DURING SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

1) FOR THE BIKE WEEK SPECIAL EVENTS AT MYRTLE BEACH AND DAYTONA 500, BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE THE EVENT AND 7:00 P.M. THE TUESDAY AFTER THE EVENT.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) 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
- 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 BOARDS 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.

ROAD CLOSURES

- I) FURNISH AND INSTALL OFFSITE-DETOUR ROUTE SIGNING AS SHOWN IN THE TRANSPORTATION MANAGEMENT PLAN. COVER OR REMOVE OFFSITE-DETOUR SIGNING WHEN THE DETOUR IS NOT IN OPERATION. ALL DETOUR ROUTES MUST BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTING.
- J) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- K) 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. IF LOCAL TRAFFIC IS TO BE MAINTAINED STAGGER THE BARRICADES TO ALLOW ACCESS.
- L) 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.

FLAGGER OPERATIONS

- M) DURING FLAGGER OPERATIONS DO NOT STOP TRAFFIC FOR MORE THAN 5 MINUTES AT A TIME.
- N) 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.
- O) FLAGGERS SHALL NOT STAND IN THE ROADWAY.
- P) USE FLAGGERS TO CONTROL VEHICLES AT INTERSECTIONS OR RAILROAD GRADE CROSSINGS AFFECTED BY THE LANE CLOSURE. USE FLAGGER SIGN W20-7A IN ADVANCE OF ALL FLAGGER STATIONS. WHEN AN INTERSECTION IS SIGNALIZED HAVE AUTHORIZED PERSONNEL PLACE THE SIGNAL IN FLASH MODE WHEN DIRECTED BY THE ENGINEER.
- Q) PROVIDE ILLUMINATION FOR FLAGGER STATIONS DURING NIGHT HOURS. ILLUMINATION FOR FLAGGER STATIONS WILL NOT BE PAID FOR SEPARATELY AND WILL BE CONSIDERED INCIDENTAL TO OTHER ITEMS IN THE CONTRACT.
- R) PLACE CHANNELIZING DEVICES FOR FLAGGER OPERATION LANE CLOSURES AT A MAXIMUM SPACING OF 20 FEET IN TAPERS AND AT A MAXIMUM SPACING OF 80 FEET ALONG THE BUFFER SPACE AND WORK AREA.
- S) DRUMS OR SKINNY DRUMS MAY BE USED INSTEAD OF CONES AT NO ADDITIONAL COST.
- T) ADVISE RESIDENTS AND BUSINESSES AFFECTED BY THE LANE CLOSURE ABOUT METHODS OF SAFE INGRESS AND EGRESS FROM DRIVEWAYS DURING FLAGGING AND PILOT CAR OPERATIONS.

MISCELLANEOUS

- U) ALL DIMENSIONS AND STATIONS IN THE TRANSPORTATION MANAGEMENT PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- V) PLACE ALL CHANGEABLE MESSAGE SIGNS AS NEEDED IN THE LOCATIONS AND WITH THE WORD MESSAGES AS SHOWN IN THE PLAN OR AS DIRECTED BY THE ENGINEER TO PROVIDE ADVANCE WARNING TO THE PUBLIC DURING CONSTRUCTION.
- W) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.
- X) 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.
- Y) DO NOT PERFORM WORK FROM THE ROADWAY ON TOP OF ANY BRIDGE, UNLESS SPECIFICALLY ALLOWED IN THE PLAN OR BY THE ENGINEER.

Stantec License No. F-0672

Stantec Consulting Services Inc 601 Jones Franklin Road Sulte 300 Raleigh, NC 27606 Tel (919) 851-6866 Fax. (919) 851-702





GENERAL NOTES

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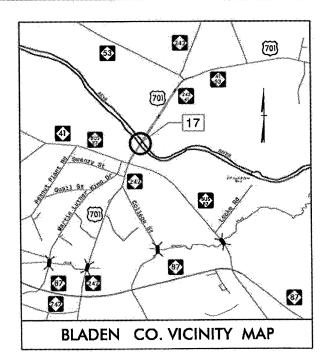
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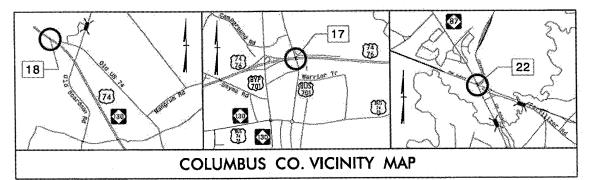
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PROJ. REFERENCE NO. SHEET NO. 17BP.6.P.6

PHASING

DO NOT SIMULTANEOUSLY CLOSE MORE THAN ONE DIRECTION OF I-95. DO NOT SIMULTANEOUSLY IMPLEMENT MORE THAN ONE LANE CLOSURE IN THE SAME DIRECTION OF I-95.

USE THE FOLLOWING TRAFFIC CONTROL METHODS DURING BRIDGE PAINTING:

BLADEN COUNTY

BRIDGE #17 - US 701 SBL/NC 41 OVER CAPE FEAR RIVER
USE LEFT AND RIGHT LANE CLOSURES, PER ROADWAY STANDARD DRAWING 1101.02.

COLUMBUS COUNTY

BRIDGE #17 - US 701 BUSINESS OVER US 74/76 USE LEFT AND RIGHT LANE CLOSURES, PER ROADWAY STANDARD DRAWING

BRIDGE #18 - US 74/NC 130 WBL OVER LUMBER RIVER USE LEFT AND RIGHT LANE CLOSURES, PER ROADWAY STANDARD DRAWING 1101.02.

BRIDGE #22 - NC 87 OVER RAILROAD USE FLAGGING OPERATION, PER ROADWAY STANDARD DRAWING 1101.02, SHEET 1.

ROBESON COUNTY

BRIDGE #4 - NC 130 OVER I-95 USE RIGHT LANE CLOSURE AND RAMP CLOSURE WITH DETOUR ALONG I-95 NORTHBOUND, PER TMP-4 AND TMP-4A. USE LEFT LANE CLOSURE ALONG

I-95 NORTHBOUND, PER ROADWAY STANDARD DRAWING 1101.02.

USE RIGHT LANE CLOSURE AND RAMP CLOSURE WITH DETOUR, ALONG I-95 SOUTHBOUND, PER TMP-5 AND TMP-5A. USE LEFT LANE CLOSURE ALONG I-95 SOUTHBOUND, PER ROADWAY STANDARD DRAWING 1101.02.

BRIDGE #70/72 - US 74 OVER NC 41
USE LEFT AND RIGHT LANE CLOSURES, PER ROADWAY STANDARD DRAWING 1101.02.

BRIDGE #86 - SR 2459 (HOME RD) OVER I-95 USE LEFT AND RIGHT LANE CLOSURES, PER ROADWAY STANDARD DRAWING 1101.02.

BRIDGE #96 - SR 1155 (DEW RD) OVER I-95 USE LEFT AND RIGHT LANE CLOSURES, PER ROADWAY STANDARD DRAWING 1101.02.

BRIDGE #106 - I-95 NBL OVER SR 2457 (BOYCE RD) USE FLAGGING OPERATIONS, PER ROADWAY STANDARD DRAWING 1101.02,

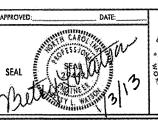
BRIDGE #107 - I-95 SBL OVER SR 2457 (BOYCE RD) USE FLAGGING OPERATIONS, PER ROADWAY STANDARD DRAWING 1101.02,

BRIDGE #144 - I-95 NBL OVER SR 1541 (VFW RD) AND RAILROAD USE FLAGGING OPERATIONS, PER TMP-6 AND TMP-7.

BRIDGE #145 - I-95 SBL OVER SR 1541 (VFW RD) AND RAILROAD USE FLAGGING OPERATIONS, PER TMP-6 AND TMP-7.



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VICINITY MAPS & PHASING

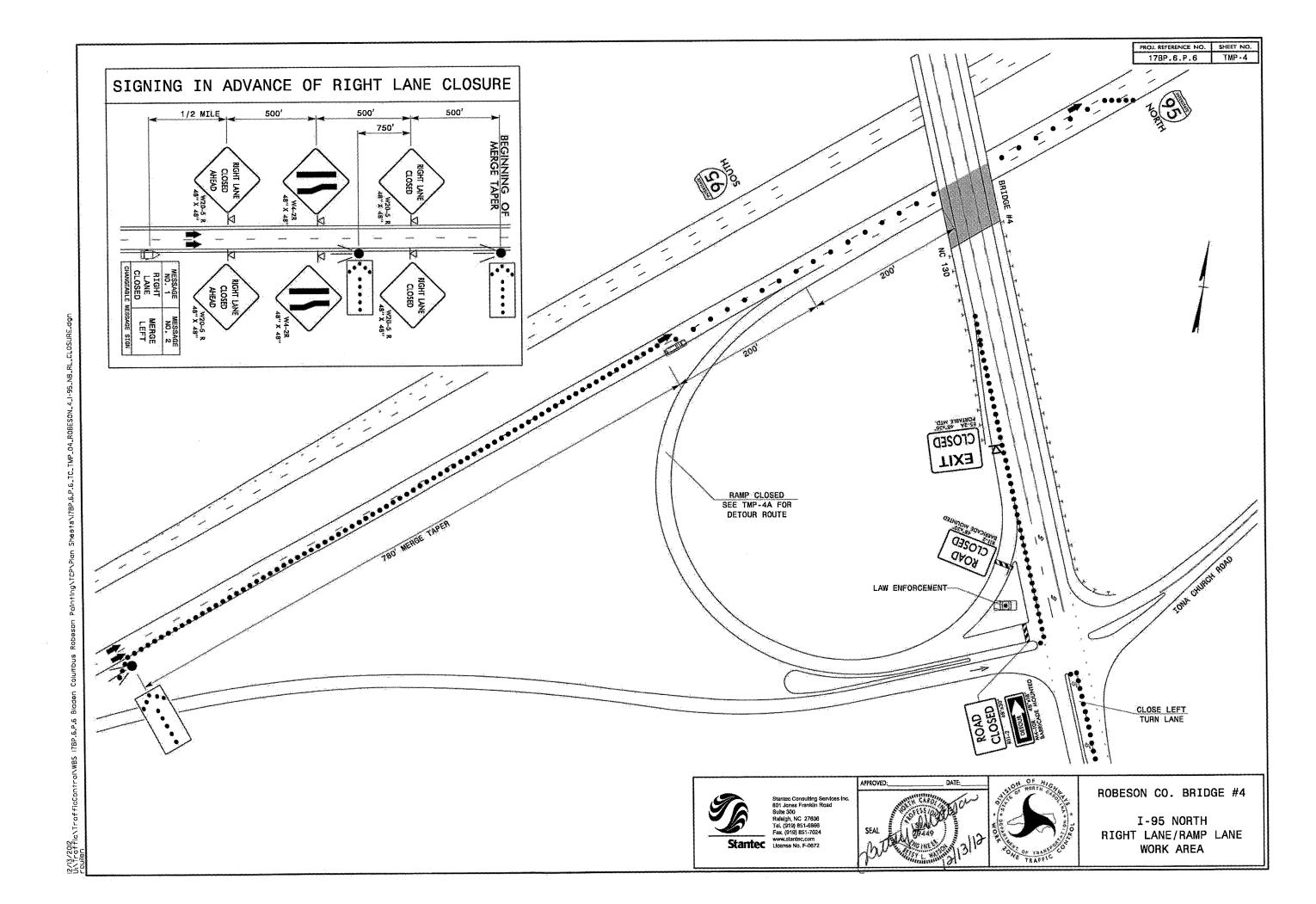
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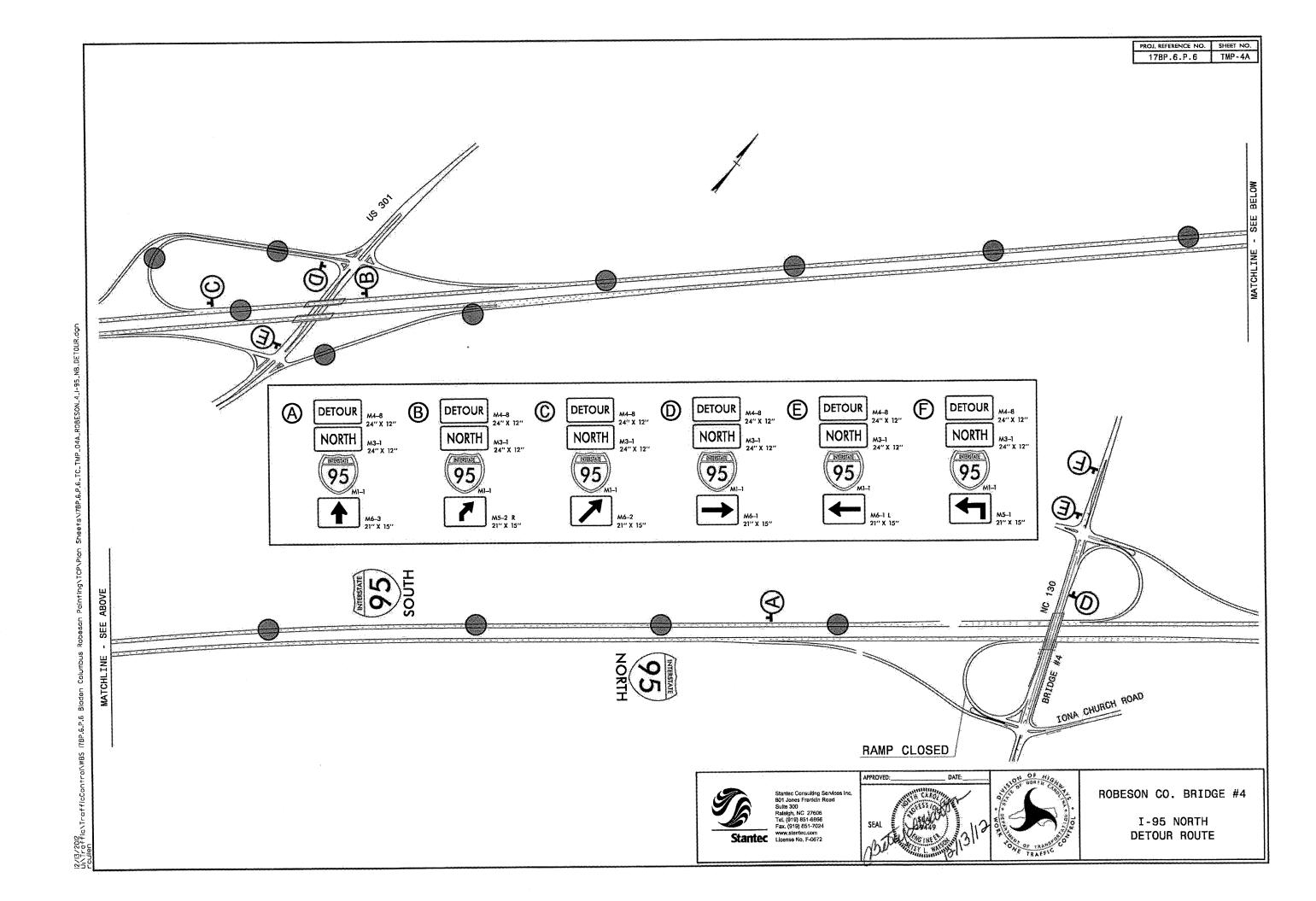
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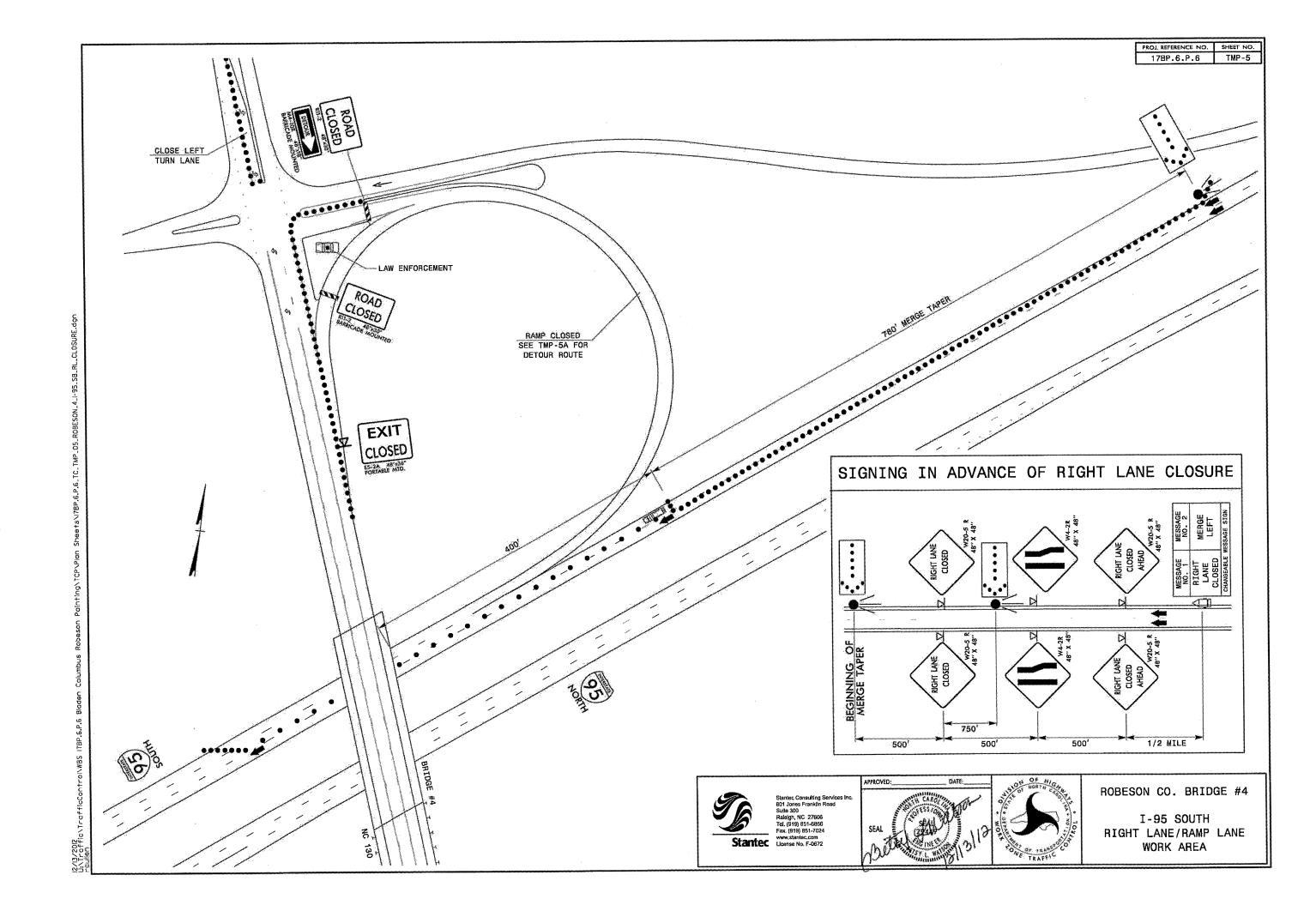
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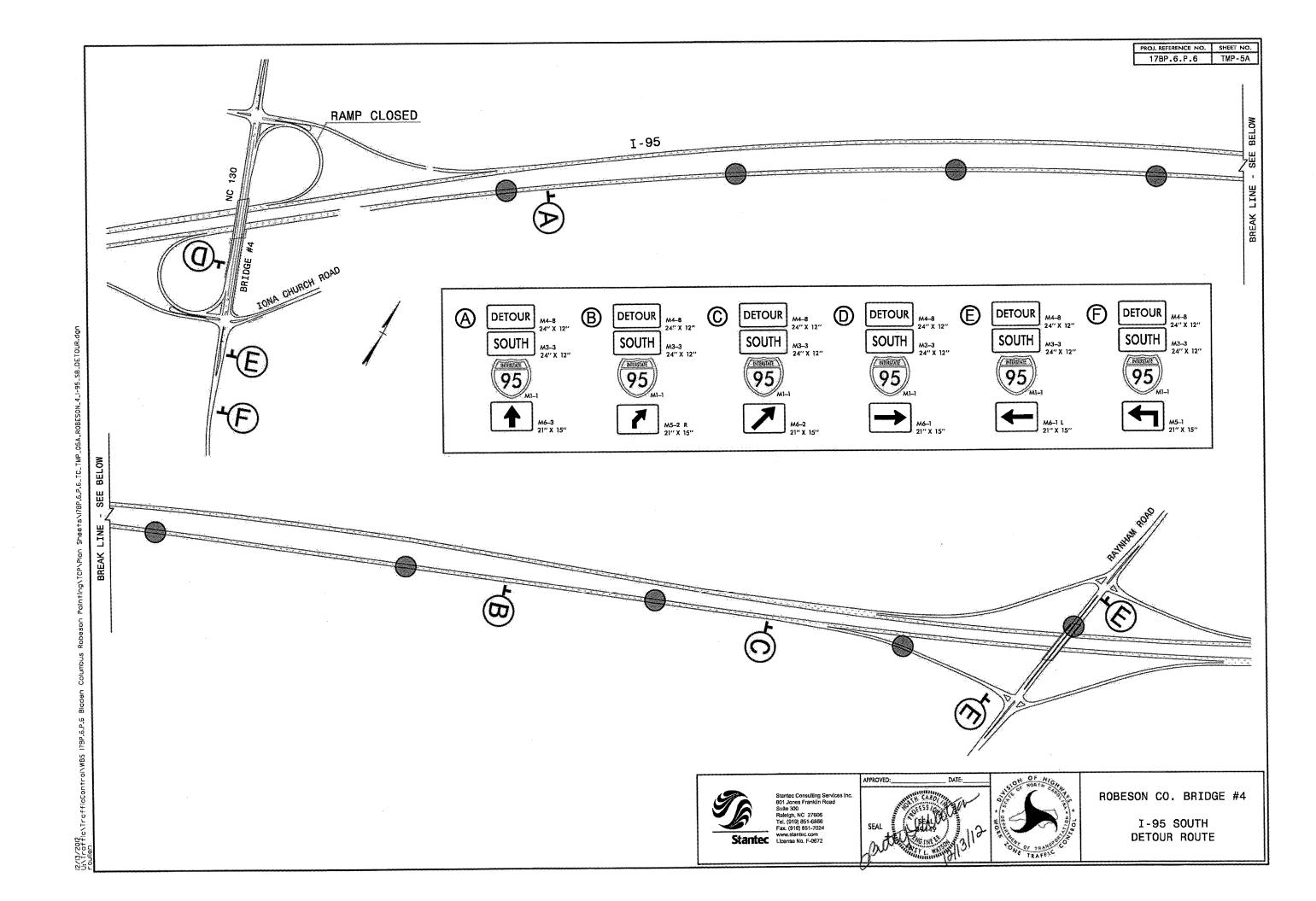
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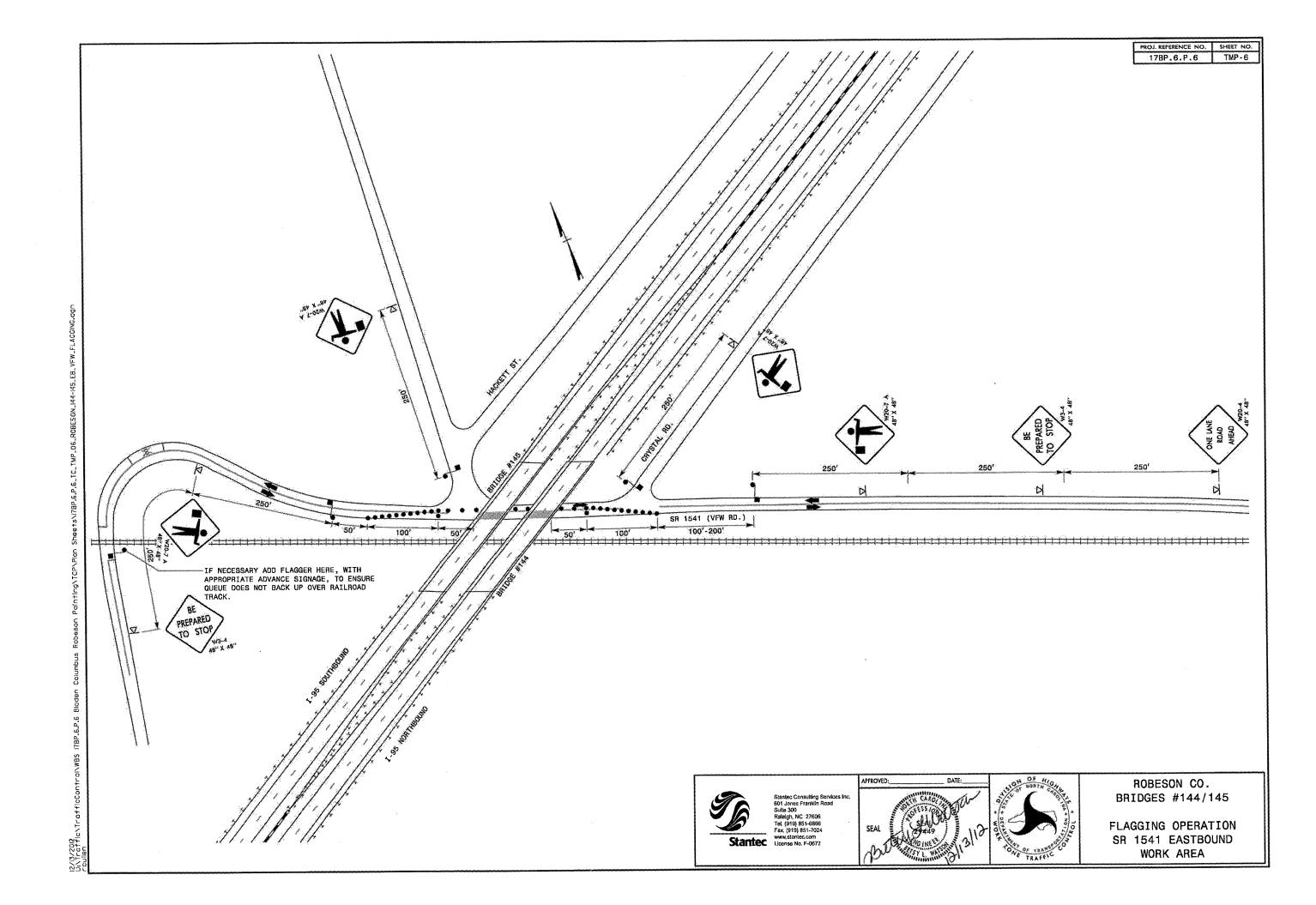
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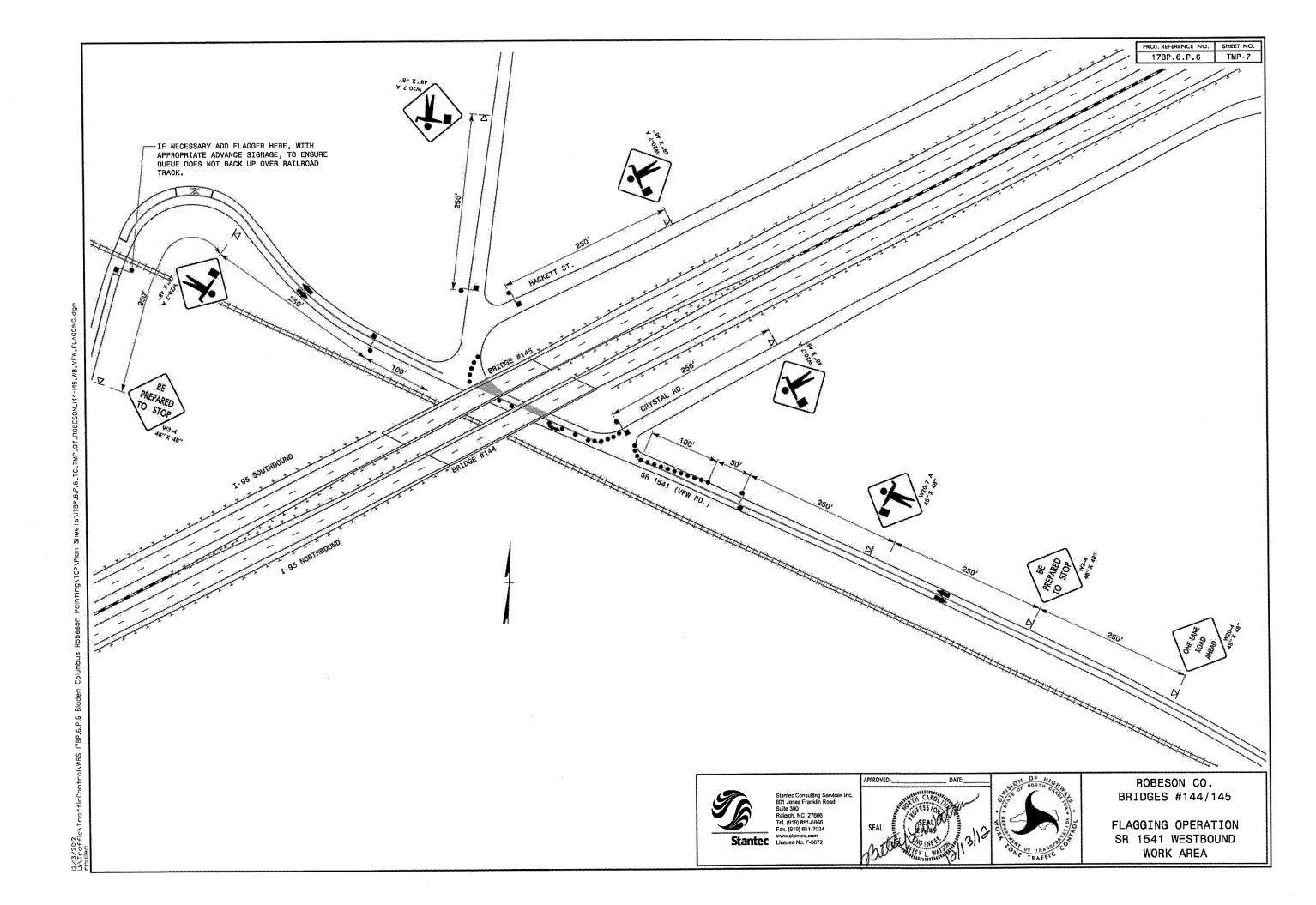


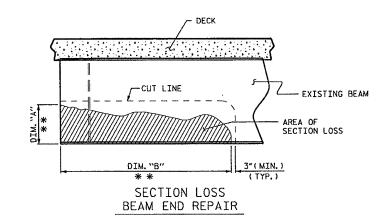


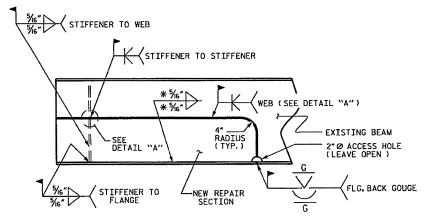




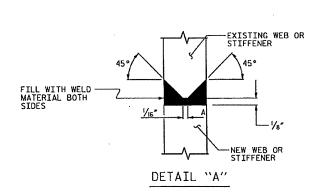


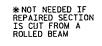


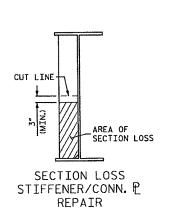


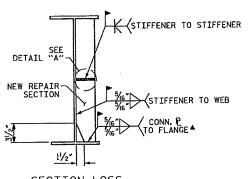


SECTION LOSS BEAM END REPAIR SECTION









SECTION LOSS
STIFFENER/CONN. P
REPAIR

AFOR STIFFENERS, MILL TO
BEAR AND DO NOT WELD

BEAM REPAIR

EXISTING BEAM

AFTER THE STRUCTURAL STEEL HAS BEEN BLASTED AND PRIMED, THE STRUCTURAL STEEL AND BEARING SHALL BE INSPECTED FOR EXCESSIVE SECTION LOSS, AREAS THAT EXHIBIT AN EXCESS OF 35% SECTION LOSS SHALL BE REVIEWED BY THE ENGINEER TO DETERMINE IF AREA OF SECTION LOSS SHOULD BE REPAIRED.

AS DETERMINED BY THE ENGINEER, AREAS WITH EXCESSIVE SECTION LOSS OR AREAS WITH TEMPORARY REPAIRS SHALL BE REMOVED AND THE BEAMS SHALL BE REPAIRED AS INDICATED ON THIS PLAN SHEET. CONTRACTOR AND ENGINEER TO DETERMINE ACTUAL DIMENSIONS OF AREA TO BE REMOVED AND REPLACED. REMOVE CONCRETE BENT DIAPHRAGMS AS NEEDED TO EVALUATE LIMITS OF REPAIR.

PAYMENT FOR THE SECTION REPAIR SHALL BE BASED ON THAT AMOUNT OF REPAIR ACTUALLY PERFORMED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

GOUGES AND INDENTIONS FROM IMPACT ON GIRDERS SHALL BE GROUND SMOOTH PRIOR TO BLASTING AND PAINTING OPERATION.

REPAIR SEOUENCE:

REMOVE LIVE LOAD FROM REPAIR AREA BY EITHER CLOSING BRIDGE TO TRAFFIC OR SHIFTING TRAFFIC AWAY FROM REPAIR AREA.

REMOVE DEAD LOAD FROM BEAM BY JACKING AND BLOCKING.

STEEL DIAPHRAGM CHANNELS AND/OR STIFFENERS MAY BE TEMPORARILY REMOVED, IF NECESSARY, AND REPLACED AFTER BEAM REPAIR.

IF BEAM DETERIORATION EXTENDS INTO THE CONCRETE DIAPHRAGM THEN CHIP AWAY CONCRETE TO DETERMINE THE EXTENT OF THE DAMAGE.CUT OUT BY APPROPRIATE MEANS THE DAMAGED BEAM AREA AND/OR BEARING STREEFIED

MECHANICALLY CLEAN RUST, SCALE, AND EXISTING PAINT TO AT LEAST $3^{\prime\prime}$ BEYOND REPAIR AREA.

REPLACEMENT CUT-TO-FIT BEAM SECTION SHALL BE NEW AND FROM SIMILAR SIZE ROLLED BEAM OR APPROVED EQUIVALENT PLATES. THE GRADE OF STEEL SHALL BE AASHTO M270, GRADE 36 OR BETTER.

INSTALL THE CUT-TO-FIT SECTION, FULLY WELD ALONG TOP AND SIDES OF PLATE USING FULL PENETRATION WELDS.

ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT APPLICABLE AWS AND NCDOT STANDARD SPECIFICATIONS.

ALL WELDS WILL BE INSPECTED AND TESTED BY THE NCDOT MATERIALS AND TEST UNIT IN ACCORDANCE WITH THE CURRENT AWS BRIDGE WELDING CODE AND STANDARD SPECIFICATIONS.

IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, AFTER REPAIR, GRIND ALL WELDS FLUSH, THOROUGHLY CLEAN AREA TO REMOVE DEBRIS AND OILS FROM REPAIR PROCESS,

CLEANING AND PAINTING OF REPAIRED STRUCTURAL STEEL SHALL BE PERFORMED AS PART OF THE OVERALL CLEANING AND PAINTING CONTRACT.

FOR CLEANING AND PAINTING, SEE PROJECT SPECIAL PROVISIONS.

AFTER GIRDERS ARE REPAIRED AND PAINTED, ANY CONCRETE REMOVED FROM THE BENT DIAPHRAGMS SHALL BE CAST BACK. ANY REINFORCING STEEL CUT DURING THE REMOVAL PROCESS SHALL BE SPLICED WITH A SIMLAR SIZE BAR WITH AT LEAST A ONE FOOT SPLICE TO THE EXISTING STEEL. NO SEPARATE PAYMENT SHALL BE MADE FOR CONCRETE AND REINFORCING STEEL AS THIS IS CONSIDERED INCIDENTAL TO THE PAY ITEM "GIRDER REPAIR."

LOWER SPAN TO BEAR; CHECK FOR DISTRESS.

REMOVE JACKING EQUIPMENT AND TEMPORARY SUPPORTS.

REMOVE ALL TRAFFIC CONTROL DEVICES.

PROJECT NO. 178P.6.P.5 & 178P.6.P.6

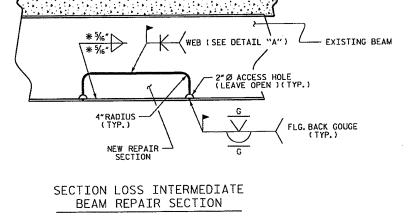
BLADEN, HARNETT, ROBESON,

COUNTIES: COLUMBUS, CUMBERLAND BRIDGE NO.

DEPARTMENT OF TRANSPORTATION
RALEIGH

STRUCTURAL STEEL REPAIR DETAILS

DRAWN BY : M. WELDON DATE : 01/13
CHECKED BY : J. YANNACCONE DATE : 01/13



DECK

-CUT LINE

DIM. "B"

SECTION LOSS

INTERMEDIATE BEAM REPAIR

- CORRODED SECTION

3"(MIN.)

(TYP.)