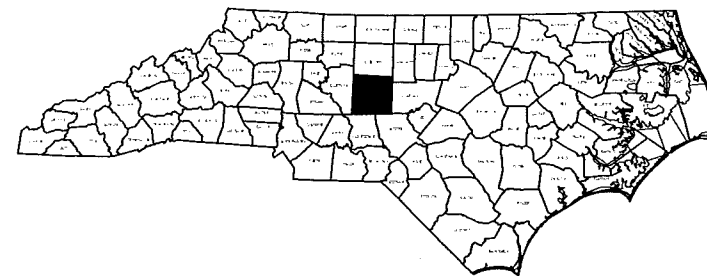


WBS: 8SP.10764.06

CONTRACT NO.:



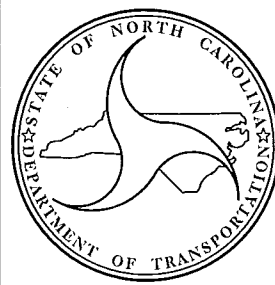
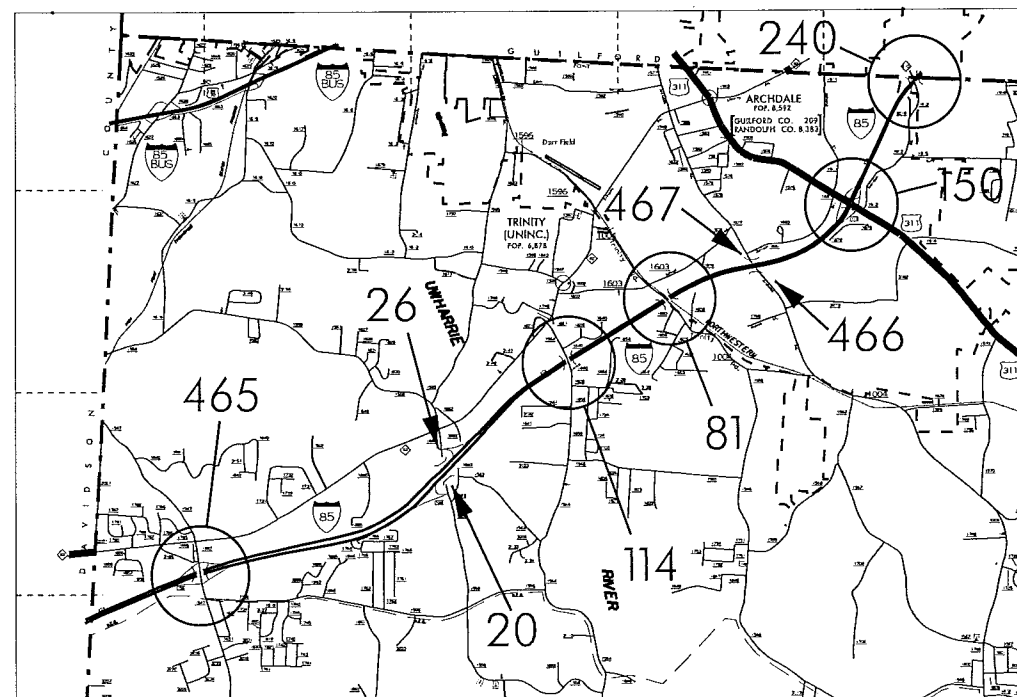
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

RANDOLPH COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	8SP.10764.06	1	
STATE PROJECT NO.	F.A. PROJ. NO.	DESCRIPTION	
8SP.10764.06	N/A	CONSTR.	
8SP.10764.06	N/A	PE	

LOCATION: #20 ON I-85 NORTH OVER SR 3252 (HOPEWELL CHURCH RD.)
 #26 ON I-85 SOUTH OVER SR 3252 (HOPEWELL CHURCH RD.)
 #81 ON SR 1004 (TRINITY RD.) OVER I-85
 #114 ON SR 1564 (MEADOWBROOK DR.) OVER I-85
 #150 ON Old US 311 (S. MAIN ST.) OVER I-85
 #240 ON SR 1912 (ALDRIDGE RD.) OVER I-85
 #465 ON SR 1547 (FINCH FARM RD.) OVER I-85
 #466 ON I-85 NORTH OVER SR 1577 (ARCHDALE RD.)
 #467 ON I-85 SOUTH OVER SR 1577 (ARCHDALE RD.)

TYPE OF WORK: BRIDGE PRESERVATION- BEARING REPAIR AND REPLACEMENT, CLEANING AND PAINTING OF EXISTING BRIDGE STRUCTURES



DESIGN DATA

BR #20	ADT 2010	=	50,500
BR #26	ADT 2010	=	26,500
BR #81	ADT 2009	=	3,600
BR #114	ADT 2011	=	3,200
BR #150	ADT 2009	=	25,000
BR #240	ADT 2012	=	200
BR #465	ADT 2009	=	7,650
BR #466	ADT 2010	=	25,000
BR #467	ADT 2010	=	25,000

PROJECT LENGTH

BR #20	=	0.045 MI.
BR #26	=	0.044 MI.
BR #81	=	0.057 MI.
BR #114	=	0.056 MI.
BR #150	=	0.049 MI.
BR #240	=	0.059 MI.
BR #465	=	0.050 MI.
BR #466	=	0.040 MI.
BR #467	=	0.039 MI.

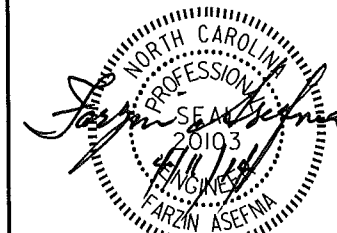
Prepared In the Office of:
STRUCTURES MANAGEMENT UNIT

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2012 STANDARD SPECIFICATIONS

LETTING DATE:
OCTOBER 14, 2014

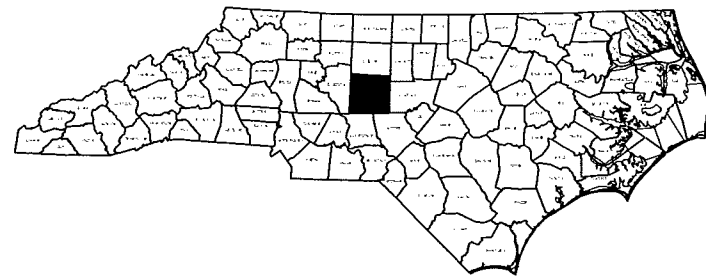
RICK NELSON, PE
PROJECT ENGINEER



FARZIN ASEFNIA P.E.
PROJECT DESIGN ENGINEER

WBS: 8SP.10764.06

CONTRACT NO.:



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

RANDOLPH COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	8SP.10764.06	1A	
STATE PROJECT NO.	F.A. PROJ. NO.	DESCRIPTION	
8SP.10764.06	N/A	CONSTR.	
8SP.10764.06	N/A	PE	

LOCATION: #20 ON I-85 NORTH OVER SR 3252 (HOPEWELL CHURCH RD.)
 #26 ON I-85 SOUTH OVER SR 3252 (HOPEWELL CHURCH RD.)
 #81 ON SR 1004 (TRINITY RD.) OVER I-85
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 #466 ON I-85 NORTH OVER SR 1577 (ARCHDALE RD.)
 #467 ON I-85 SOUTH OVER SR 1577 (ARCHDALE RD.)

TYPE OF WORK: BRIDGE PRESERVATION- BEARING REPAIR AND REPLACEMENT, CLEANING AND PAINTING OF EXISTING BRIDGE STRUCTURES

INDEX OF SHEETS

<u>SHT#</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
1A	INDEX OF SHEETS
S-1 THRU S-10	STRUCTURE PLANS
SN	STANDARD NOTES
TMP-1 THRU TMP-7A	TRAFFIC MANAGEMENT PLANS



DESIGN DATA

BR #20	ADT 2010	=	50,500
BR #26	ADT 2010	=	26,500
BR #81	ADT 2009	=	3,600
BR #114	ADT 2011	=	3,200
BR #150	ADT 2009	=	25,000
BR #240	ADT 2012	=	200
BR #465	ADT 2009	=	7,650
BR #466	ADT 2010	=	25,000
BR #467	ADT 2010	=	25,000

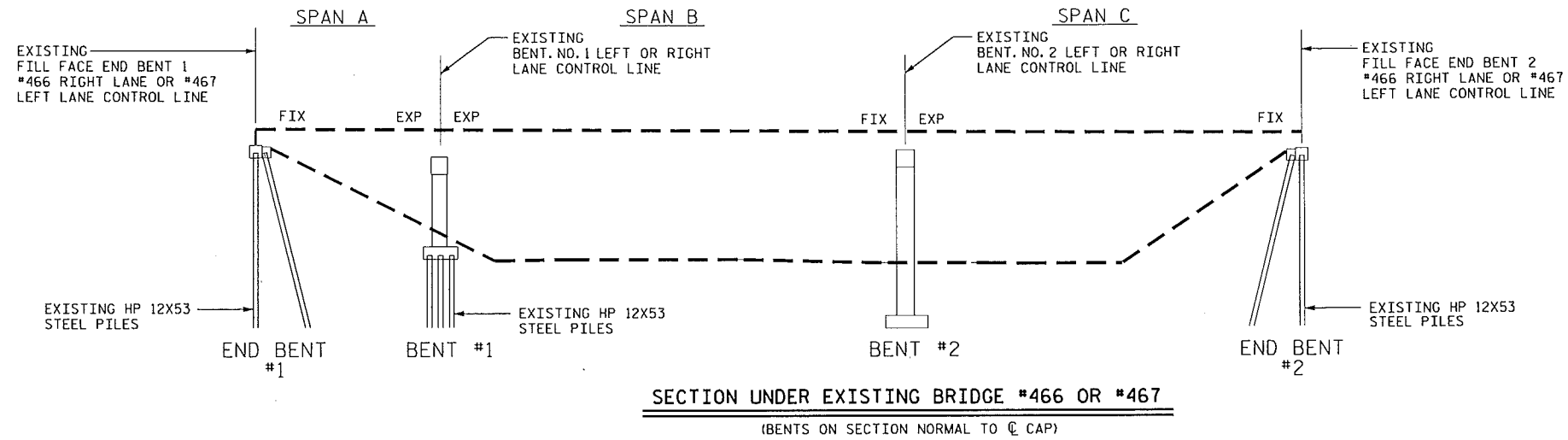
PROJECT LENGTH

BR #20	=	0.045 MI.
BR #26	=	0.044 MI.
BR #81	=	0.057 MI.
BR #114	=	0.056 MI.
BR #150	=	0.049 MI.
BR #240	=	0.059 MI.
BR #465	=	0.050 MI.
BR #466	=	0.040 MI.
BR #467	=	0.039 MI.

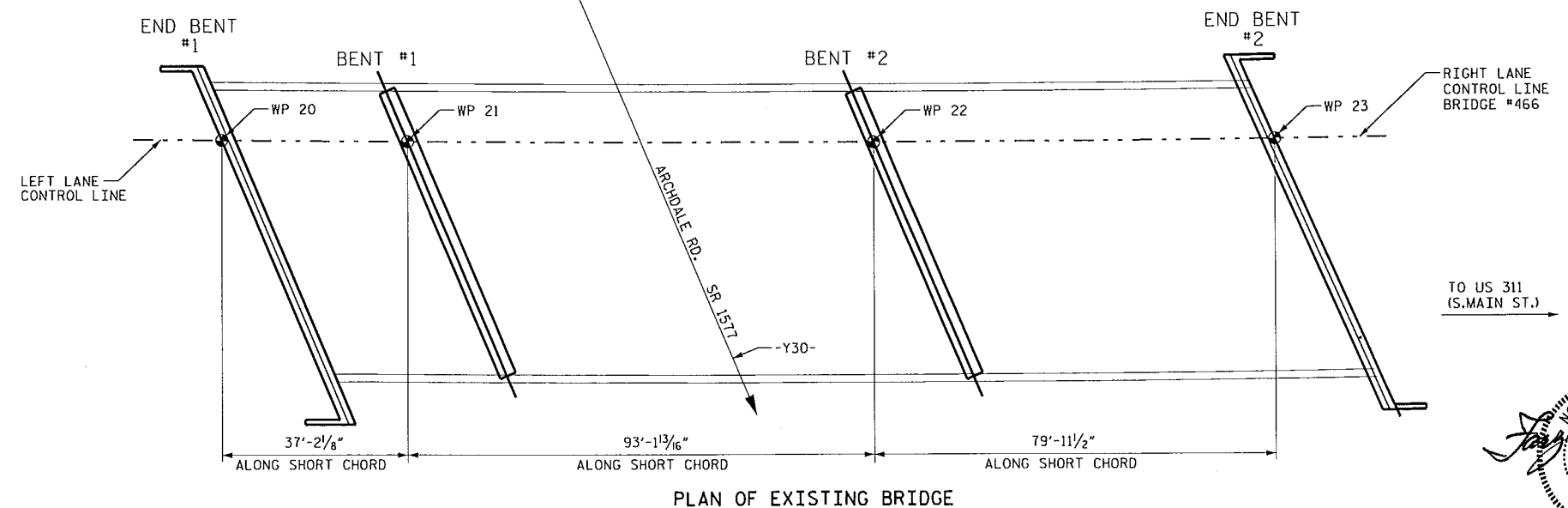
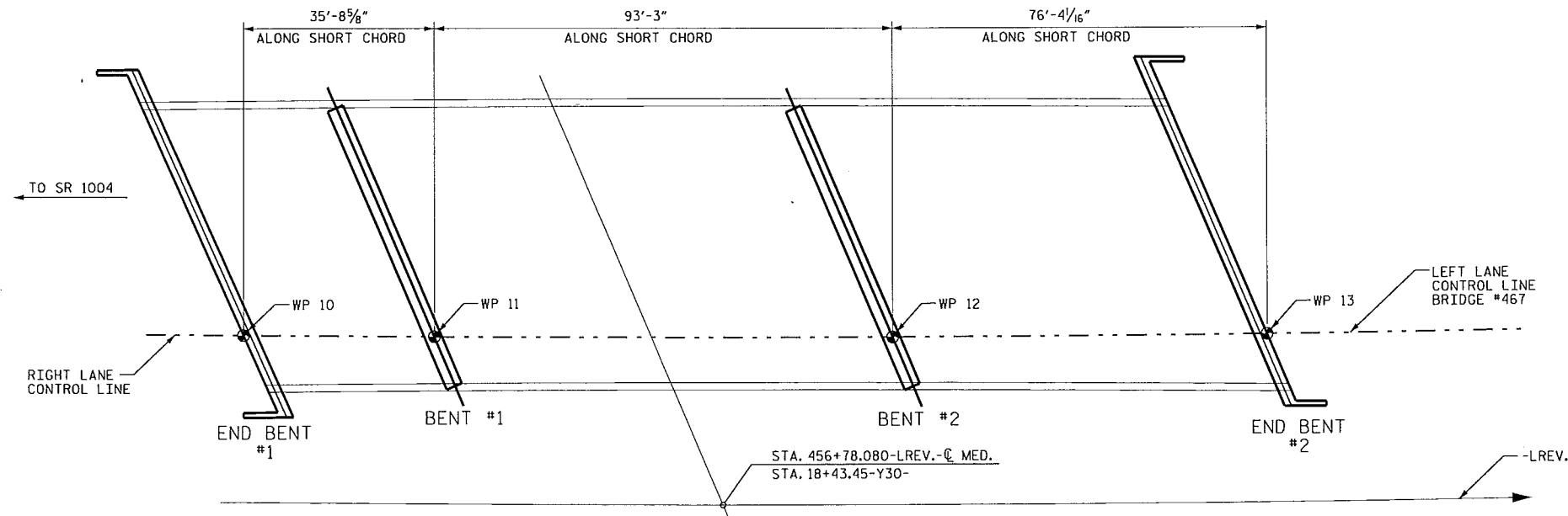
Prepared in the Office of:
STRUCTURES MANAGEMENT UNIT
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2012 STANDARD SPECIFICATIONS	
LETTING DATE: OCTOBER 14, 2014	RICK NELSON, PE PROJECT ENGINEER

FARZIN ASEFNIA P.E.
PROJECT DESIGN ENGINEER



SECTION UNDER EXISTING BRIDGE #466 OR #467
(BENTS ON SECTION NORMAL TO C CAP)



PLAN OF EXISTING BRIDGE

STEEL KEEPER ANGLE ASSEMBLY BRIDGE #466 & #467		
	NO.	LOCATION
KEEPER ANGLE & STIFFENER	12	END BENT 1 EACH BRIDGE
KEEPER ANGLE & STIFFENER	12	END BENT 2 EACH BRIDGE
ANCHOR BOLTS	24	EACH BRIDGE

ELASTOMERIC BEARING BRIDGE #466 & #467			
TYPE		NO.	LOCATION
P1	ELASTOMERIC PAD AND SOLE PLATE	8	SPAN A BENT 1 EACH BRIDGE
	ANCHOR BOLTS	16	EACH BRIDGE
P2	ELASTOMERIC PAD AND SOLE PLATE	8	SPAN C BENT 2 EACH BRIDGE
	ANCHOR BOLTS	16	EACH BRIDGE

PROJECT NO. 8SP.10764.06
 RANDOLPH COUNTY
 STATION: STA. 456+78.080-LREV.-

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGES 466 AND 467
 OVER ARCHDALE RD. (SR 1577)
 ON I-85 BETWEEN
 SR 1004 AND US 311

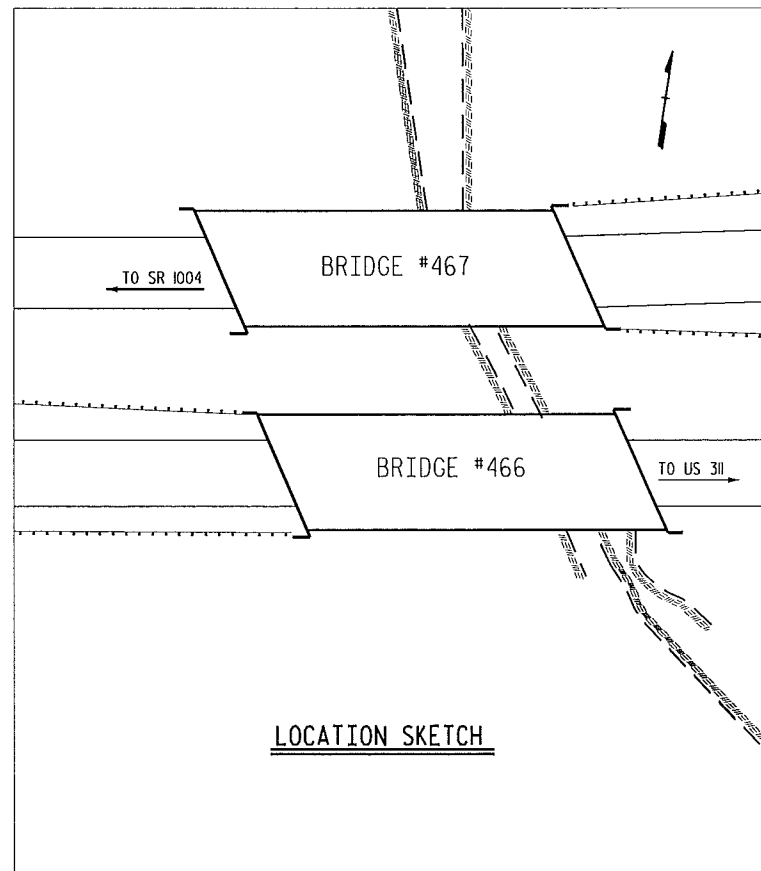
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S-1
 TOTAL SHEETS 10

DRAWN BY: M. WELDON DATE: 1/11
 CHECKED BY: F. ASEFNIA DATE: 9/12

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 S:\PRS\PCV\Squad C\Preservation\Projects\8SP.10764.06\8SP.10764.06-Randolph 466.417.dgn
 fosefnia





GENERAL NOTES:

EXISTING BRIDGE AND REPAIR DETAILS INDICATED ON THE PLANS ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGES AND REPAIR DETAILS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO VERIFY INFORMATION SHOWN ON THESE PLANS AND SHALL OBTAIN ALL OTHER EXISTING BRIDGE DATA NECESSARY FOR THE EXECUTION OF THE WORK.

THE CONTRACTOR SHALL PROVIDE BLOCKING FOR ALL JACKS AS NECESSARY. A JACKING PLAN SHALL BE SUBMITTED FOR ALL SPANS LIFTED FOR APPROVAL BY THE ENGINEER.

THE CONTRACTOR SHALL MONITOR THE PLAN LOCATION OF THE GIRDERS FROM INITIAL JACKING UNTIL GIRDERS ARE SECURED ON THEIR PERMANENT BEARINGS. IF THE PLAN LOCATION OF THESE GIRDERS SHIFT FROM THEIR ORIGINAL POSITION, ALL WORK SHALL CEASE AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

PRIOR TO JACKING THE CONTRACTOR SHALL ENSURE THERE ARE NO OBSTACLES PREVENTING THE SPAN FROM BEING LIFTED.

PRIOR TO JACKING THE SPANS, LOCATE THE APPROXIMATE POSITION OF THE PROPOSED ANCHOR BOLT HOLES ON EACH CAP USING A PACHOMETER, CHECK THE CAP FOR MAIN REINFORCING STEEL INTERFERENCE WITH THE HOLES. IF NECESSARY, ADJUST THE HOLE LOCATIONS SLIGHTLY TO AVOID REINFORCING STEEL AND MARK THE LOCATIONS, DRILL THE HOLES AND CLEAN IN ACCORDANCE WITH SECTION 420-13 OF THE STANDARD SPECIFICATIONS. CLEAN THE CAP OF DEBRIS.

REPLACE BEARINGS AS INDICATED ON THE FRAMING PLAN.

WELDING SOLE PLATES AND ANCHOR BOLT INSTALLATION SHALL BE PERFORMED WITHIN 24 HOURS OF SPAN JACKING.

UPON REMOVAL OF EXISTING BEARINGS, CLEAN THE CAP AND REMOVE ANY EPOXY COATING FROM THE AREA WHERE THE NEW BEARING WILL REST.

GRIND SURFACES OF THE SOLE PLATES THAT HAVE BEEN GALVANIZED IN AND AROUND THE AREA OF THE PLATE THAT IS TO BE WELDED.

SOLE PLATE WELDS SHALL BE MADE IN ONE PASS USING A MAXIMUM 1/8" ELECTRODE, AND THEN ALLOWED TO COOL BEFORE MAKING ANOTHER PASS. APPLY TWO COATS OF ZINC-RICH PAINT TO THE WELDED AREAS AND ANY DAMAGED AREAS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

FOR REPLACEMENT OF BRIDGE BEARINGS, SEE "BRIDGE JACKING" SPECIAL PROVISION.

ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS "BRIDGE WELDING CODE".

INSPECTION OF WELDS WILL BE PERFORMED BY NCDOT.

FOR GIRDER REPAIR, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

STEEL KEEPER PLATE ASSEMBLY NOTES:

STRUCTURAL STEEL SHALL BE AASHTO GRADE 36 OR GREATER.

STRUCTURAL STEEL, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A449. NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. SHOP DRAWINGS ARE NOT REQUIRED FOR ANCHOR BOLTS, NUTS AND WASHERS. SHOP INSPECTION IS REQUIRED.

THE CONTRACTOR SHALL CORE INTO THE EXISTING END BENT CAPS TO INSTALL THE 1" Ø ANCHOR BOLTS USING AN ADHESIVE ANCHORING SYSTEM. THE YIELD LOAD OF THE ANCHOR BOLTS IS 42 KIPS. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE STANDARD SPECIFICATIONS. ADHESIVE FOR THE PROPOSED ANCHOR BOLTS SHALL BE A NCDOT-APPROVED PRODUCT. FIELD TESTING WILL NOT BE REQUIRED FOR INSTALLATION OF ADHESIVELY ANCHORED ANCHOR BOLTS.

TOTAL BILL OF MATERIAL

RANDOLPH COUNTY BRIDGE NO.	POLLUTION CONTROL	*CLEANING & REPAINTING EXISTING WEATHERING STEEL OF BRIDGE #	PAINTING CONTAINMENT FOR BRIDGE #	STRUCTURAL STEEL FOR GIRDER REPAIR ▲	BRIDGE JACKING BRIDGE #466 & #467	REPLACEMENT OF BRIDGE BEARING TYPE P1 BRIDGE #466 & #467	REPLACEMENT OF BRIDGE BEARING TYPE P2 BRIDGE #466 & #467	STEEL KEEPER ANGLE ASSEMBLY BRIDGE #466 & #467	TEMPORARY WORK PLATFORM
	LUMP SUM	LUMP SUM	LUMP SUM	LBS.	EACH	EACH	EACH	EACH	EACH
20	LUMP SUM	LUMP SUM	LUMP SUM	---	---	---	---	---	---
26	LUMP SUM	LUMP SUM	LUMP SUM	---	---	---	---	---	---
81	LUMP SUM	LUMP SUM	LUMP SUM	---	---	---	---	---	---
114	LUMP SUM	LUMP SUM	LUMP SUM	---	---	---	---	---	---
150	LUMP SUM	LUMP SUM	LUMP SUM	---	---	---	---	---	---
240	LUMP SUM	LUMP SUM	LUMP SUM	---	---	---	---	---	---
465	LUMP SUM	LUMP SUM	LUMP SUM	---	---	---	---	---	---
466	LUMP SUM	LUMP SUM	LUMP SUM	---	2	8	8	12	3
467	LUMP SUM	LUMP SUM	LUMP SUM	---	2	8	8	12	3
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	1,500	4	16	16	24	6

* ALL STEEL GIRDERS INCLUDING STEEL CROSS BRACINGS AND BEARINGS SHALL BE CLEANED AND PAINTED AT A 10' DISTANCE FROM EACH END OF GIRDER SPAN IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS.

▲ FOR INFORMATION ONLY. ACTUAL QUANTITY WILL BE DETERMINED IN THE FIELD.

PROJECT NO. 8SP.10764.06
RANDOLPH COUNTY
 STATION: STA. 456+78.080-LREV.-

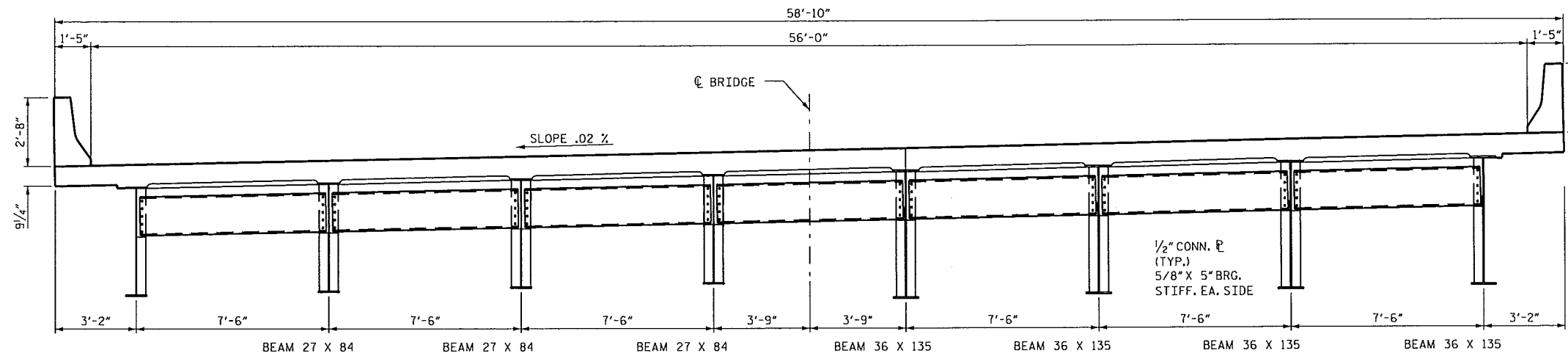


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL NOTES
 LOCATIONS SKETCHES AND
 TOTAL BILL OF MATERIAL
 BRIDGE NO. 466 AND 467

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			5-2
2			4			10

DRAWN BY : M. WELDON DATE : 1/11
 CHECKED BY : F. ASEFNIA DATE : 9/12



EXISTING HALF TYPICAL SECTION SPAN A
(SHOWING BENT DIAPHRAGMS)

EXISTING HALF TYPICAL SECTION SPAN C
(SHOWING BENT DIAPHRAGMS)

PROJECT NO. 8SP.10764.06
RANDOLPH COUNTY
 STATION: STA. 456+78.080-LREV.-

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

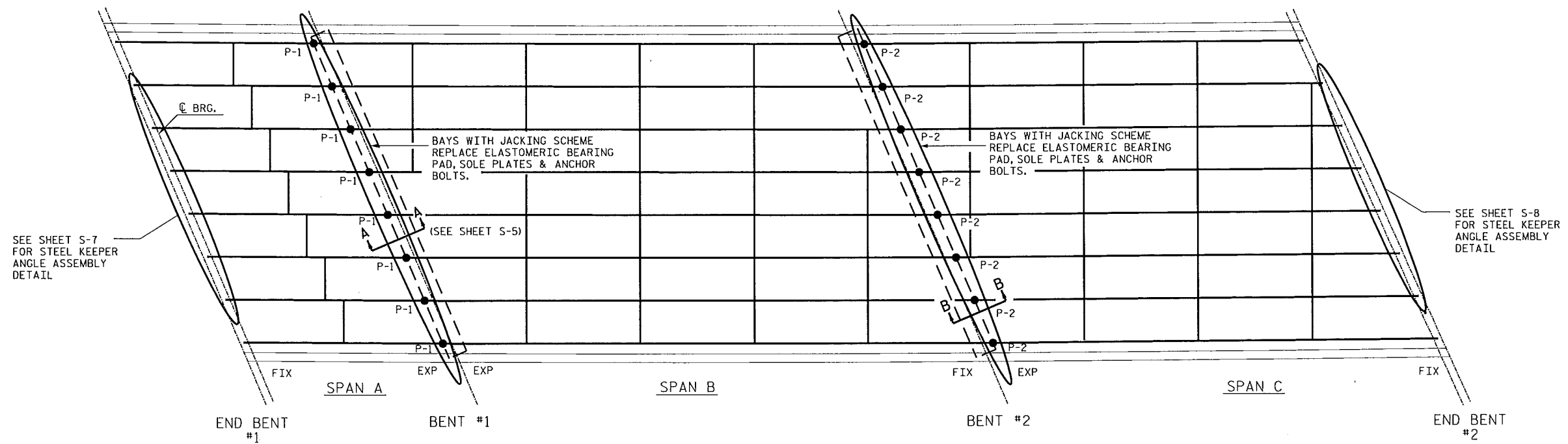
TYPICAL SECTION

BRIDGE NO. 466 AND 467

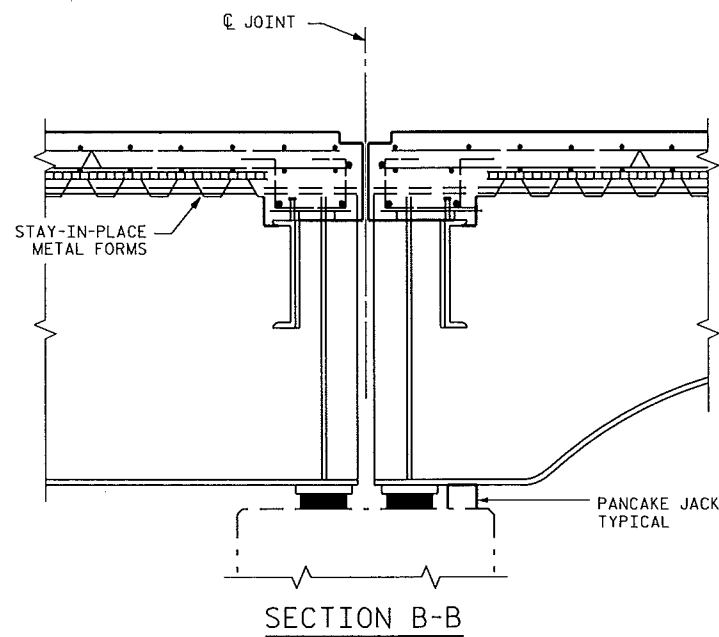
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1			3			5-3
2			4			10



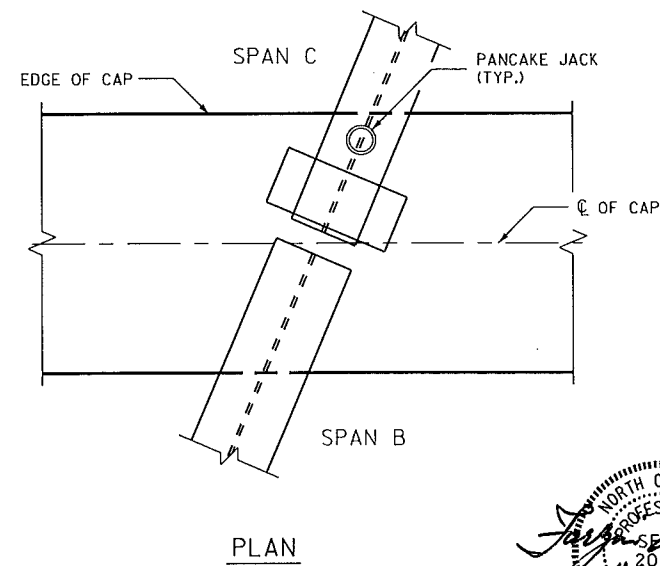
DRAWN BY : M. WELDON DATE : 1/11
 CHECKED BY : F. ASEFNIA DATE : 9/12



EXISTING FRAMING PLAN



BENT JACKING DETAIL



PLAN

PROJECT NO. 8SP.10764.06
 RANDOLPH COUNTY
 STATION: STA. 456+78.080-LREV.-

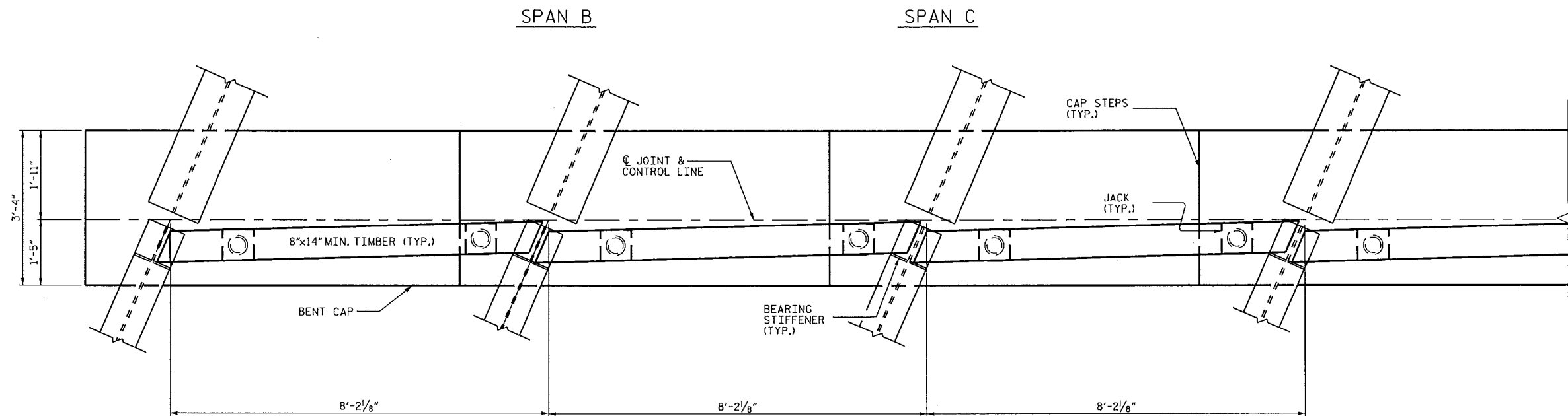
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN
 BRIDGE NO. 466 AND 467



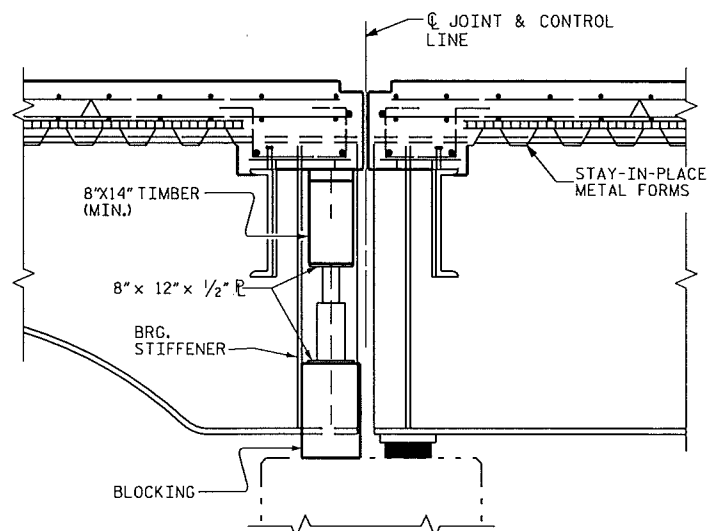
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1			3			TOTAL SHEETS
2			4			10

DRAWN BY : M. WELDON DATE : 1/11
 CHECKED BY : F. ASEFNIA DATE : 9/12

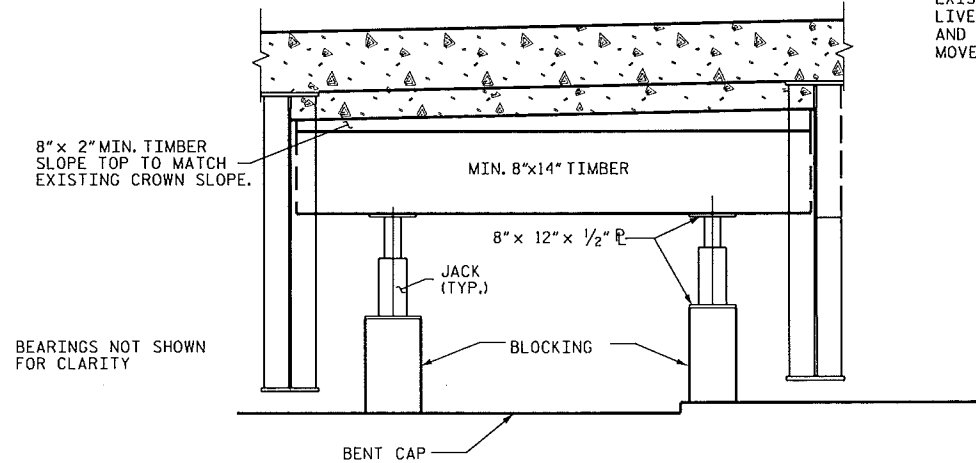


SPAN A
PART PLAN OF BENT #1

SPAN B
PART PLAN OF BENT #2



SECTION A-A



ELEVATION

NOTES:

EXISTING BRIDGE HAS A NOTICEABLE LATERAL MOVEMENT DUE TO LIVE LOAD. CONTRACTOR SHALL ENSURE SAFETY DURING JACKING AND PROVIDE ADEQUATE BLOCKING TO ACCOMMODATE LATERAL MOVEMENT.

PROJECT NO. 8SP.10764.06
 RANDOLPH COUNTY
 STATION: STA. 456+78.080-LREV.-

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT JACKING DETAIL

BRIDGE NO. 466 AND 467

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2			4			10

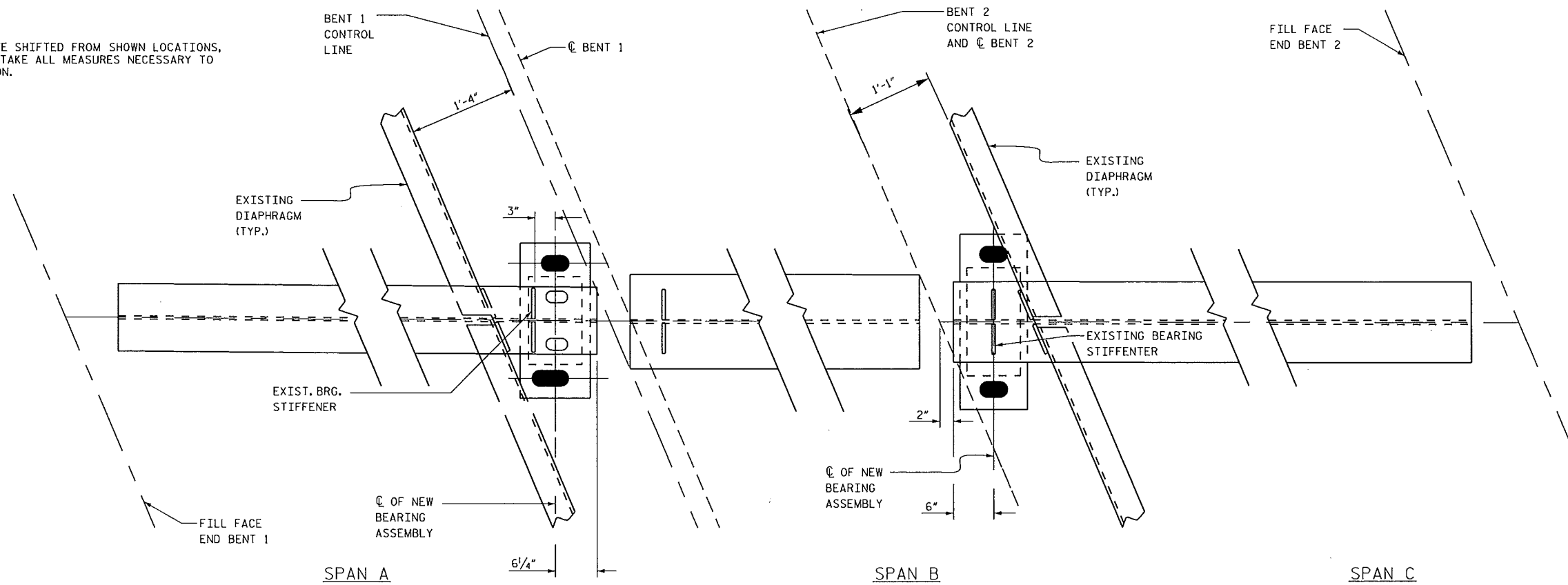
DRAWN BY : M. WELDON DATE : 1/11
 CHECKED BY : F. ASEFNIA DATE : 9/12



BENT JACKING DETAIL

NOTE:

GIRDERS MIGHT HAVE SHIFTED FROM SHOWN LOCATIONS, CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO VERIFY INFORMATION.



EXISTING TYPICAL BOTTOM FLANGE DETAIL

PROJECT NO. 8SP.10764.06
 RANDOLPH COUNTY
 STATION: STA. 456+78.080-LREV.-

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BOTTOM OF FLANGE AND
 BEARING DETAIL

BRIDGE NO. 466 AND 467

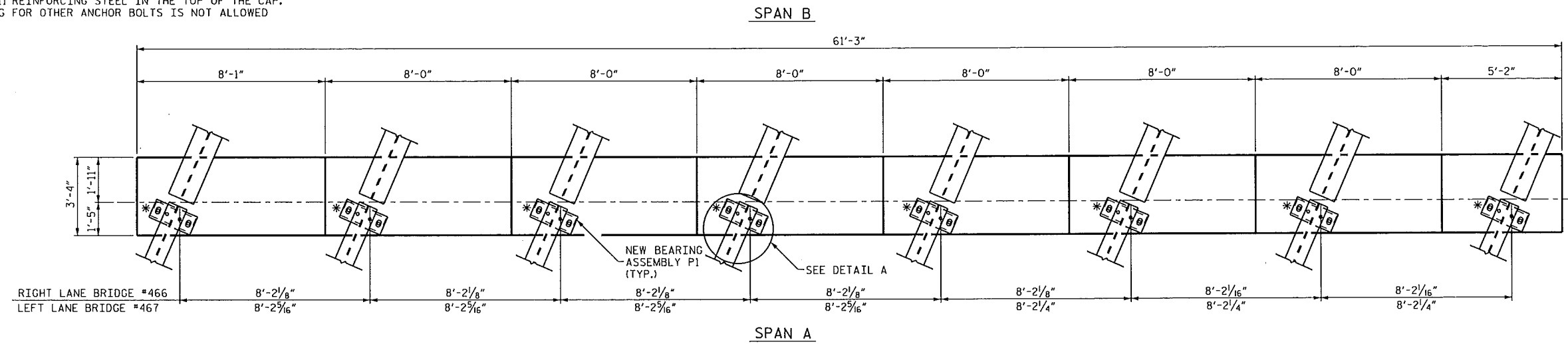


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 CHECKED BY : F. ASEFNIA DATE : 9/12

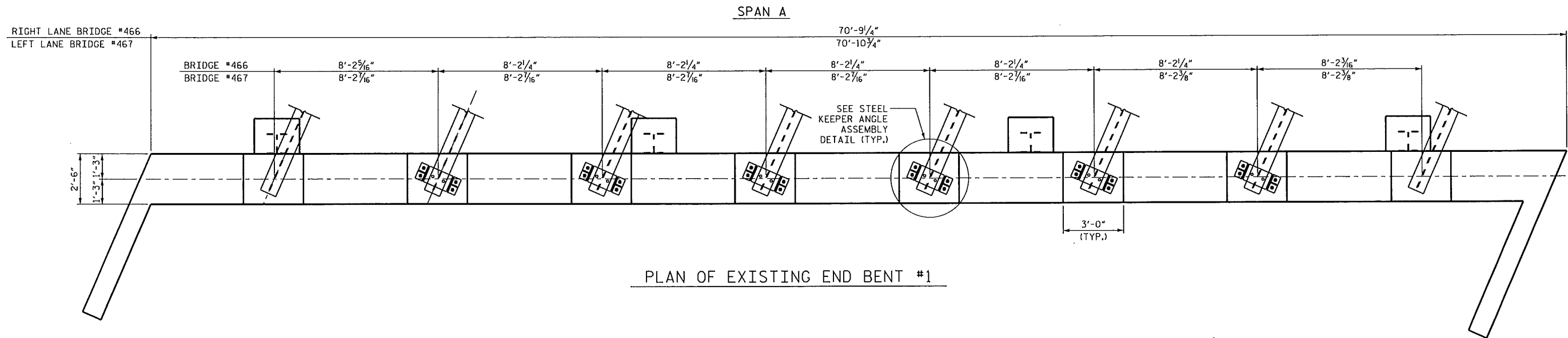
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
1			3			TOTAL SHEETS
2			4			10

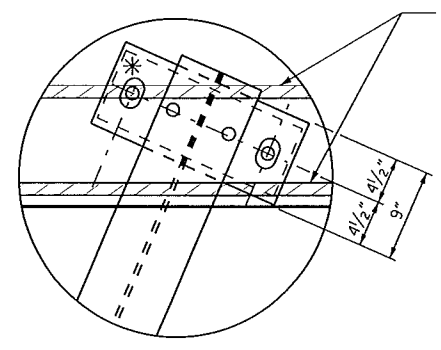
NOTE: FOR THE ANCHOR BOLTS MARKED BY AN ASTERISK (*), THE CONTRACTOR IS ALLOWED TO CORE INTO THE #4 AND #11 REINFORCING STEEL IN THE TOP OF THE CAP. CORING FOR OTHER ANCHOR BOLTS IS NOT ALLOWED



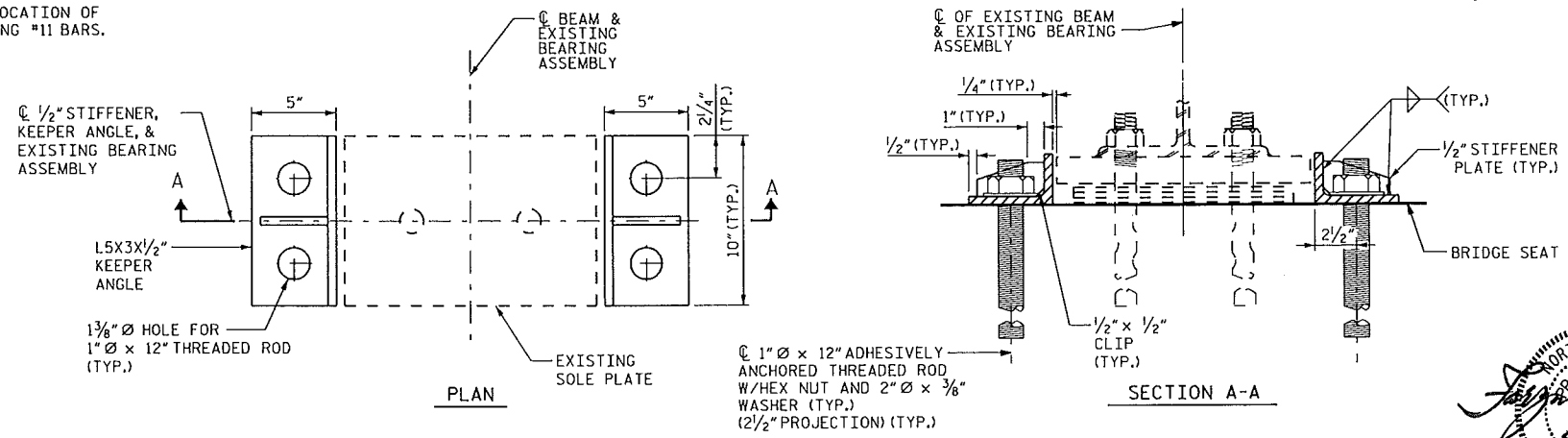
PLAN OF EXISTING BENT #1



PLAN OF EXISTING END BENT #1



DETAIL A



STEEL KEEPER ANGLE ASSEMBLY DETAILS

(6 PAIR REQUIRED END BENT #1 OF EACH BRIDGE)

PROJECT NO. 8SP.10764.06
RANDOLPH COUNTY
STATION: STA. 456+78.080-LREV.-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT 1 & BENT 1

BRIDGE NO. 466 AND 467



DRAWN BY: M. WELDON DATE: 1/11
CHECKED BY: F. ASEFNIA DATE: 9/12

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					10

NOTES

AT ALL FIXED POINTS OF SUPPORT, NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT AND THEN BACKED OFF 1 TURN. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL.

THE 1 1/4" Ø PIPE SLEEVE SHALL BE CUT FROM SCHEDULE 40 PVC PLASTIC PIPE. THE PVC PLASTIC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785.

THE PAYMENT FOR THE PIPE SLEEVES SHALL BE INCLUDED IN THE SEVERAL PAY ITEMS.

ANCHOR BOLT LENGTHS HAVE BEEN ASSUMED ON THE BASIS OF A 18" MINIMUM EMBEDMENT IN EXISTING CONCRETE CAPS. THIS EMBEDMENT REQUIREMENT MAY BE REDUCED TO BE IN COMPLIANCE WITH MINIMUM EMBEDMENT SPECIFIED BY THE MANUFACTURER OF THE EPOXY ADHESIVE BONDING SYSTEM.

THE CONTRACTOR SHALL CORE INTO THE EXISTING BENT CAPS TO INSTALL THE 1 1/4" Ø ANCHOR BOLTS USING AN ADHESIVE ANCHORING SYSTEM. THE YIELD LOAD OF THE ANCHOR BOLTS IS 42 KIPS. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE STANDARD SPECIFICATIONS. ADHESIVE FOR PROPOSED ANCHOR BOLTS SHALL BE A NCDOT-APPROVED PRODUCT. FIELD TEST WILL NOT BE REQUIRED FOR INSTALLATION OF ADHESIVELY ANCHORED ANCHOR BOLTS.

SOLE PLATES, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

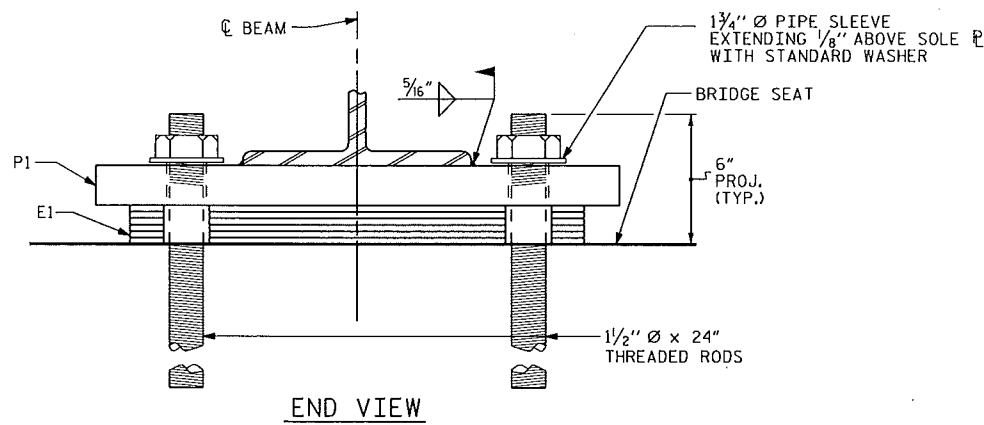
ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A449. NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. SHOP DRAWINGS ARE NOT REQUIRED FOR ANCHOR BOLTS, NUTS AND WASHERS. SHOP INSPECTION IS REQUIRED.

WHEN FIELD WELDING THE SOLE PLATE TO THE GIRDER FLANGE, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE SOLE PLATE DOES NOT EXCEED 300°F. TEMPERATURES ABOVE THIS MAY DAMAGE THE ELASTOMER.

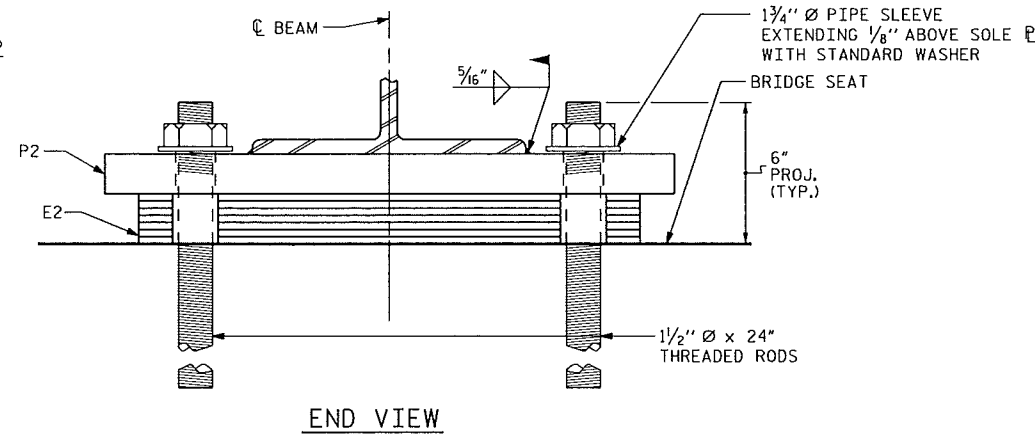
REPAIR GALVANIZED SURFACES THAT ARE ABRADED OR DAMAGED IN ACCORDANCE WITH ARTICLE 1072-3.

ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.

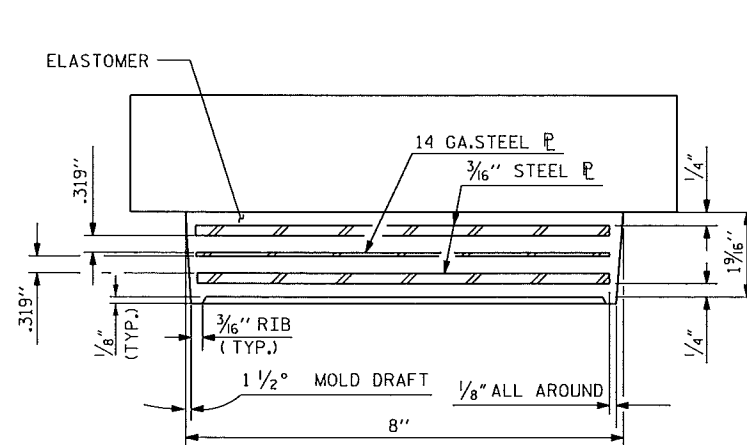
ELASTOMER IN BEARING SHALL BE 60 DUROMETER HARDNESS.



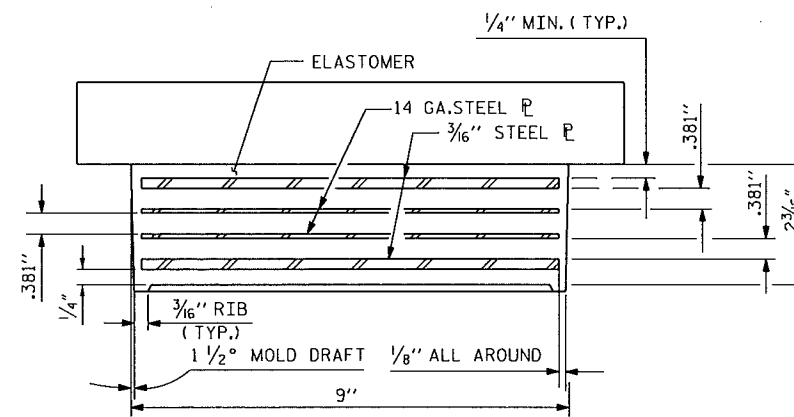
END VIEW



END VIEW

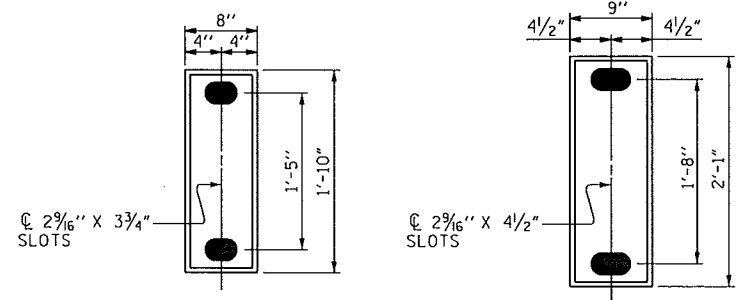


TYPICAL SECTION OF ELASTOMERIC BEARINGS (E1)
BENT 1 SPAN A



TYPICAL SECTION OF ELASTOMERIC BEARINGS (E2)
BENT 2 SPAN C

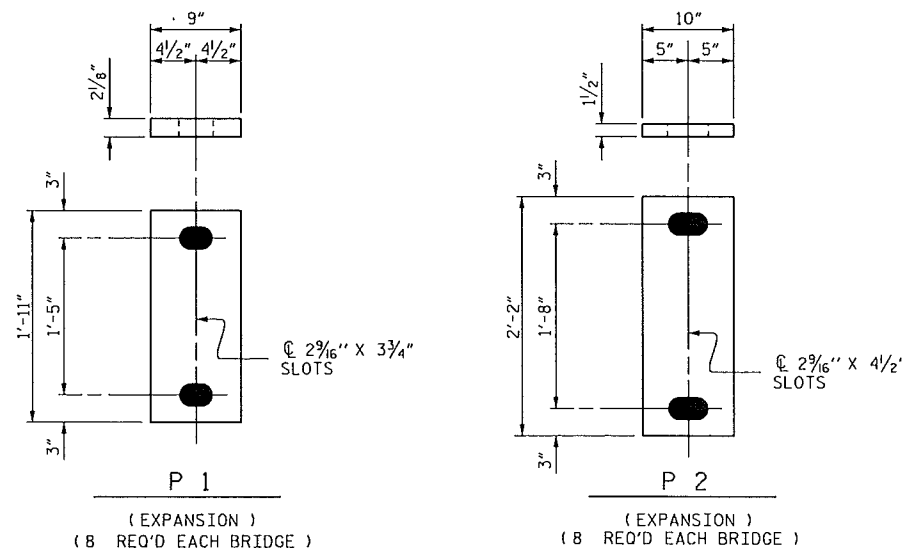
MAXIMUM ALLOWABLE SERVICE LOADS	
D.L.+L.L. (NO IMPACT)	
TYPE I	140 k
TYPE III	255 k



E1 (TYPE I)
(8 REQ'D EACH BRIDGE)

E2 (TYPE III)
(8 REQ'D EACH BRIDGE)

PLAN VIEW OF ELASTOMERIC BEARING



P 1
(EXPANSION)
(8 REQ'D EACH BRIDGE)

P 2
(EXPANSION)
(8 REQ'D EACH BRIDGE)

SOLE PLATE DETAILS ("P")

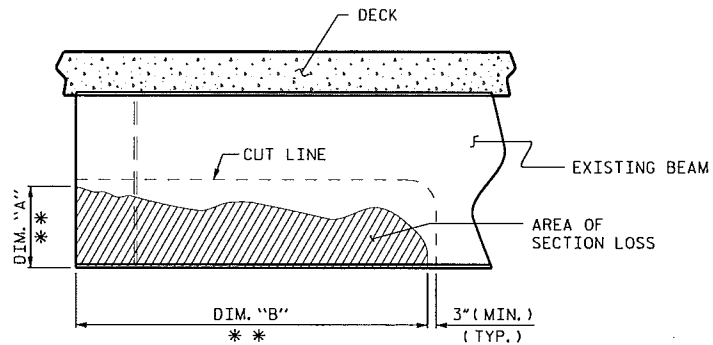
PROJECT NO. 8SP.10764.06
RANDOLPH COUNTY
STATION: STA. 456+78.080-LREV.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
REPLACEMENT
ELASTOMERIC BEARING
DETAILS
BRIDGE NO. 466 AND 467

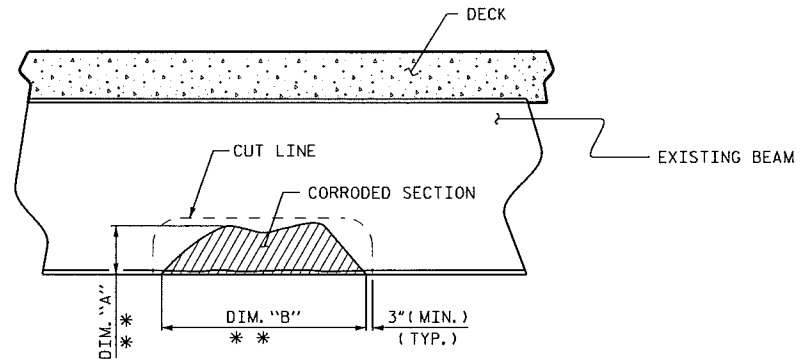
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
1			3			TOTAL SHEETS
2			4			10

DRAWN BY: M. WELDON DATE: 1/11
CHECKED BY: F. ASEFNIA DATE: 9/12

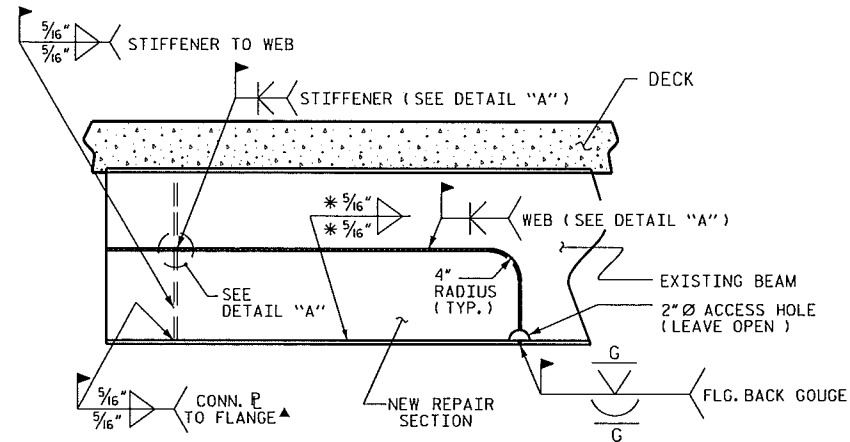




SECTION LOSS
BEAM END REPAIR



SECTION LOSS
INTERMEDIATE BEAM REPAIR

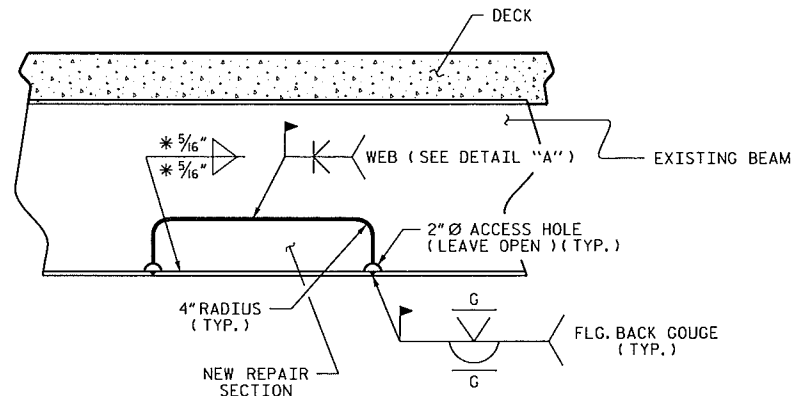


SECTION LOSS BEAM
END REPAIR SECTION

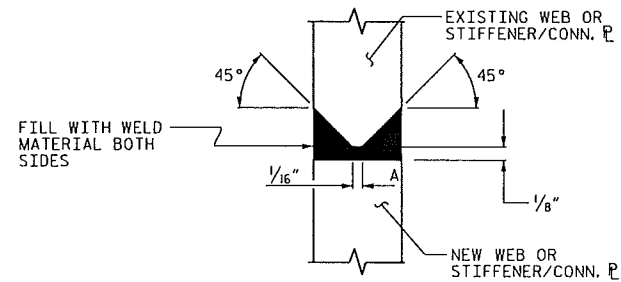
▲ FOR STIFFENERS, MILL TO BEAR AND DO NOT WELD

* NOT NEEDED IF REPAIRED SECTION IS CUT FROM A ROLLED BEAM

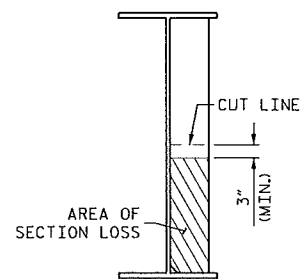
** DIMENSION TO BE DETERMINED IN THE FIELD



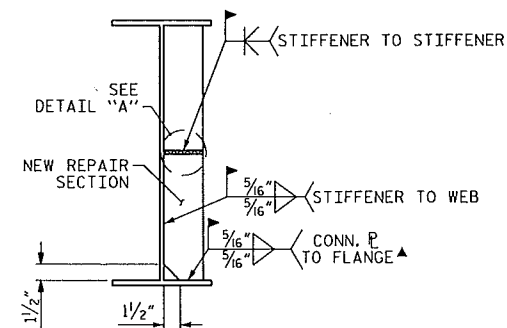
SECTION LOSS INTERMEDIATE
BEAM REPAIR SECTION



DETAIL "A"



SECTION LOSS
STIFFENER/CONN. P
REPAIR



SECTION LOSS
STIFFENER/CONN. P
REPAIR SECTION

▲ FOR STIFFENERS, MILL TO BEAR AND DO NOT WELD

BEAM REPAIR

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 SEQUENCE:

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 MEMBERS AND LATERAL BRACING MAY BE TEMPORARILY REMOVED, IF NECESSARY, AND REPLACED AFTER BEAM REPAIR.

BOLT HOLES FOR THE NEW STIFFENER/CONNECTOR PLATES AND GUSSET PLATES SHALL BE FIELD DRILLED AND MATCH THE BOLT PATTERN OF THE EXISTING DIAPHRAGM MEMBERS AND LATERAL BRACING.

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 STIFFENER.

MECHANICALLY CLEAN RUST, SCALE, AND EXISTING PAINT TO AT LEAST 3" 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 SIMILAR 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. 8SP.10764.06

COUNTY: RANDOLPH

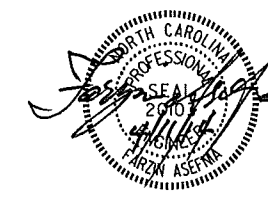
BRIDGE NO.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STRUCTURAL STEEL
REPAIR DETAILS

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

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	5-10	
1			3			TOTAL SHEETS	10
2			4				



STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF		
STRUCTURAL STEEL - AASHTO M270 GRADE 36	-	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	-	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	-	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION		
GRADE 60	--	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	-----	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR		
UNTREATED - EXTREME FIBER STRESS	-----	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	-----	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N.C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE. ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990

STD. NO. SN

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

RANDOLPH COUNTY

DIVISION 8



BRIDGE PRESERVATION

BRIDGE #20 – I-85 North over SR 3252 (Hopewell Church Rd.)

BRIDGE #26 – I-85 South over SR 3252 (Hopewell Church Rd.)

BRIDGE #81 – SR 1004 (Trinity Rd.) over I-85

BRIDGE #114 – SR 1564 (Meadowbrook Dr.) over I-85

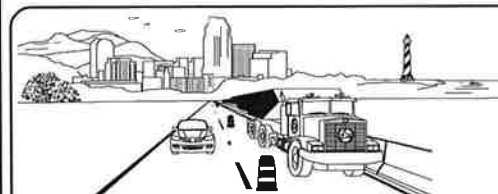
BRIDGE #150 – US 311 (S. Main St.) over I-85

BRIDGE #240 – SR 2019 (Aldridge Rd.) over I-85

BRIDGE #465 – SR 1547 (Finch Farm Rd.) over I-85

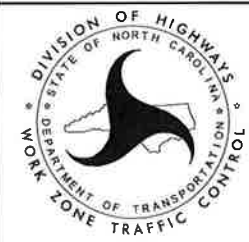
BRIDGE #466 – I-85 North over SR 1577 (Archdale Rd.)

BRIDGE #467 – I-85 South over SR 1577 (Archdale Rd.)



WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

PLAN PREPARED FOR NCDOT STRUCTURES MANAGEMENT UNIT
RALEIGH, NC



SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-2	LEGEND AND LIST OF ROADWAY STANDARD DRAWINGS
TMP-3	GENERAL NOTES & PHASING
TMP 4, 4A	RANDOLPH CO. #150 - I-85 NORTHBOUND LEFT LANE CLOSURE W/ SWITCH
TMP 5, 5A	RANDOLPH CO. #150 - I-85 SOUTHBOUND LEFT LANE CLOSURE W/ SWITCH
TMP 6, 6A	RANDOLPH CO. #465 - I-85 NORTHBOUND LEFT LANE CLOSURE W/ SWITCH
TMP 7, 7A	RANDOLPH CO. #465 - I-85 SOUTHBOUND LEFT LANE CLOSURE W/ SWITCH

TRAFFIC MANAGEMENT STRATEGY

PROPOSED PAINTING OPERATIONS, AS WELL AS BEARING REPLACEMENT OF BRIDGES 466 AND 467, WILL BE PERFORMED USING DAY AND TIME RESTRICTED LANE CLOSURES. REFER TO SHEET TMP-3 FOR PHASING.



PLAN PREPARED BY:
Stantec Consulting Services Inc.
801 Jones Franklin Road-Suite 300
Raleigh, NC 27606
Tel. 919.951.6866
Fax. 919.951.7024
www.stantec.com

BETSY L. WATSON, P.E.

TRAFFIC ENGINEER

GEORGE KARAGEORGE

SR. TRANSPORTATION DESIGNER

APPROVED: *Betsy Watson*
DATE: *January 4, 2013*

SEAL



WBS 8SP.10764.06

SHEET NO.
TMP-1

I:\4\2013\TrafficControl\BSP.10764.06_Randolph_Plan_Sheets\BSP.10764.06_TC_TMP_01_TITLE.dgn

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)
- WORK ZONE SIGN-PORTABLE
- WORK ZONE SIGN-STATIONARY
- WORK ZONE SIGN-STATIONARY OR PORTABLE
- TEMPORARY SHORING
- TEMPORARY CRASH CUSHION

TEMPORARY BARRIERS

- ABBREVIATIONS: PORTABLE CONCRETE BARRIER (PCB) WATER-FILLED BARRIER (WFB)
- UN-ANCHORED PORTABLE CONCRETE BARRIER
 - ANCHORED PORTABLE CONCRETE BARRIER
 - WATER-FILLED BARRIER

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING PAVEMENT MARKING (GRAY)
- SKIP LINES
- MINI-SKIP LINES
- SOLID LINES

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS
- EXISTING PAVEMENT MARKING SYMBOLS (HOLLOW)
- ONLY PAVEMENT MARKING ALPHANUMERIC CHARACTERS

PAVEMENT MARKERS

- CRYSTAL / CRYSTAL
- CRYSTAL / RED
- YELLOW / YELLOW

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1150.01	FLAGGING DEVICES
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION

I:\4\2013\14\TrafficControl\8SP.10764.06_Randolph_Painting\TCP\Plan_Sheets\8SP.10764.06_TC_TMP_02_RDWYSTDSLEGEND.dgn

<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>	APPROVED: _____ DATE: _____ 	<p>DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL</p>	<h3>LEGEND & ROADWAY STANDARD DRAWINGS</h3>
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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) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
SR 3252	6:00 A.M. - 9:00 A.M. MONDAY THRU FRIDAY
SR 1004	4:00 P.M. - 7:00 P.M. MONDAY THRU FRIDAY
SR 1564	
US 311	
SR 2019	
SR 1547	
SR 1577	
I-85 (ONE LANE CLOSURE)	6:00 A.M. - 7:00 P.M. MONDAY THRU SUNDAY
I-85 (TWO LANE CLOSURE)	5:00 A.M. - 9:00 P.M. MONDAY THRU 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:

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.
- 6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
- 7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.
- 8) FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- B) LANE CLOSURES ARE REQUIRED WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN ANY PORTION OF A TRAVEL LANE. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- C) INSTALL ALL LANE CLOSURES ACCORDING TO THE PLANS, ROADWAY STANDARD DRAWINGS (1101.02), OR AS DIRECTED BY THE ENGINEER.
- D) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER. COVER OR LAY DOWN SIGNS, AND TURN OFF ARROW BOARDS AND MESSAGE BOARDS.
- E) 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.
- F) 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.
- G) 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.

MISCELLANEOUS

- H) ALL DIMENSIONS AND STATIONS IN THE TRANSPORTATION MANAGEMENT PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- I) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.
- J) DO NOT PERFORM WORK FROM THE ROADWAY ON TOP OF ANY BRIDGE, UNLESS SPECIFICALLY ALLOWED IN THE PLAN OR BY THE ENGINEER.

PHASING

RANDOLPH COUNTY

BRIDGES #20 / #26 I-85 OVER SR 3252 (HOPEWELL CHURCH RD.) FOR PAINTING OF BRIDGES #20 AND #26, USE LEFT AND RIGHT LANE CLOSURES ALONG SR 3252 (HOPEWELL CHURCH RD.), PER ROADWAY STANDARD DRAWING 1101.02 SHEET 7.

BRIDGE #81 - SR 1004 (TRINITY RD.) OVER I-85 FOR PAINTING OF BRIDGE #81, USE DUAL LEFT LANE CLOSURES ALONG I-85, PER ROADWAY STANDARD DRAWING 1101.02 SHEET 8, AND RIGHT LANE CLOSURES ALONG I-85, PER ROADWAY STANDARD DRAWING 1101.02 SHEET 4.

BRIDGE #114 - SR 1564 (MEADOWBROOK DR.) OVER I-85 FOR PAINTING OF BRIDGE #114, USE DUAL LEFT LANE CLOSURES ALONG I-85, PER ROADWAY STANDARD DRAWING 1101.02 SHEET 8, AND RIGHT LANE CLOSURES ALONG I-85, PER ROADWAY STANDARD DRAWING 1101.02 SHEET 4.

BRIDGE #150 - US 311 (S. MAIN ST.) OVER I-85 FOR PAINTING OF BRIDGE #150 ABOVE I-85 NORTHBOUND, USE LEFT LANE CLOSURES WITH SWITCH, PER SHEETS TMP-4, AND TMP-4A.

FOR PAINTING OF BRIDGE #150 ABOVE I-85 SOUTHBOUND, USE LEFT LANE CLOSURES WITH SWITCH, PER SHEETS TMP-5 AND TMP-5A.

BRIDGE #240 - SR 2019 (ALDRIDGE RD.) OVER I-85 FOR PAINTING OF BRIDGE #240, USE DUAL LEFT LANE CLOSURES ALONG I-85, PER ROADWAY STANDARD DRAWING 1101.02 SHEET 8, AND RIGHT LANE CLOSURES ALONG I-85, PER ROADWAY STANDARD DRAWING 1101.02 SHEET 4.


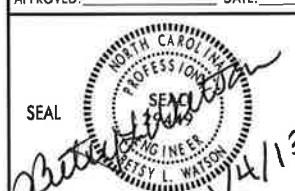
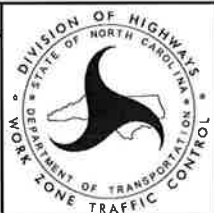
BRIDGE #465 - SR 1547 (FINCH FARM RD.) OVER I-85 FOR PAINTING OF BRIDGE #465 ABOVE I-85 NORTHBOUND, USE LEFT LANE CLOSURES WITH SWITCH, PER SHEETS TMP-6, AND TMP-6A.

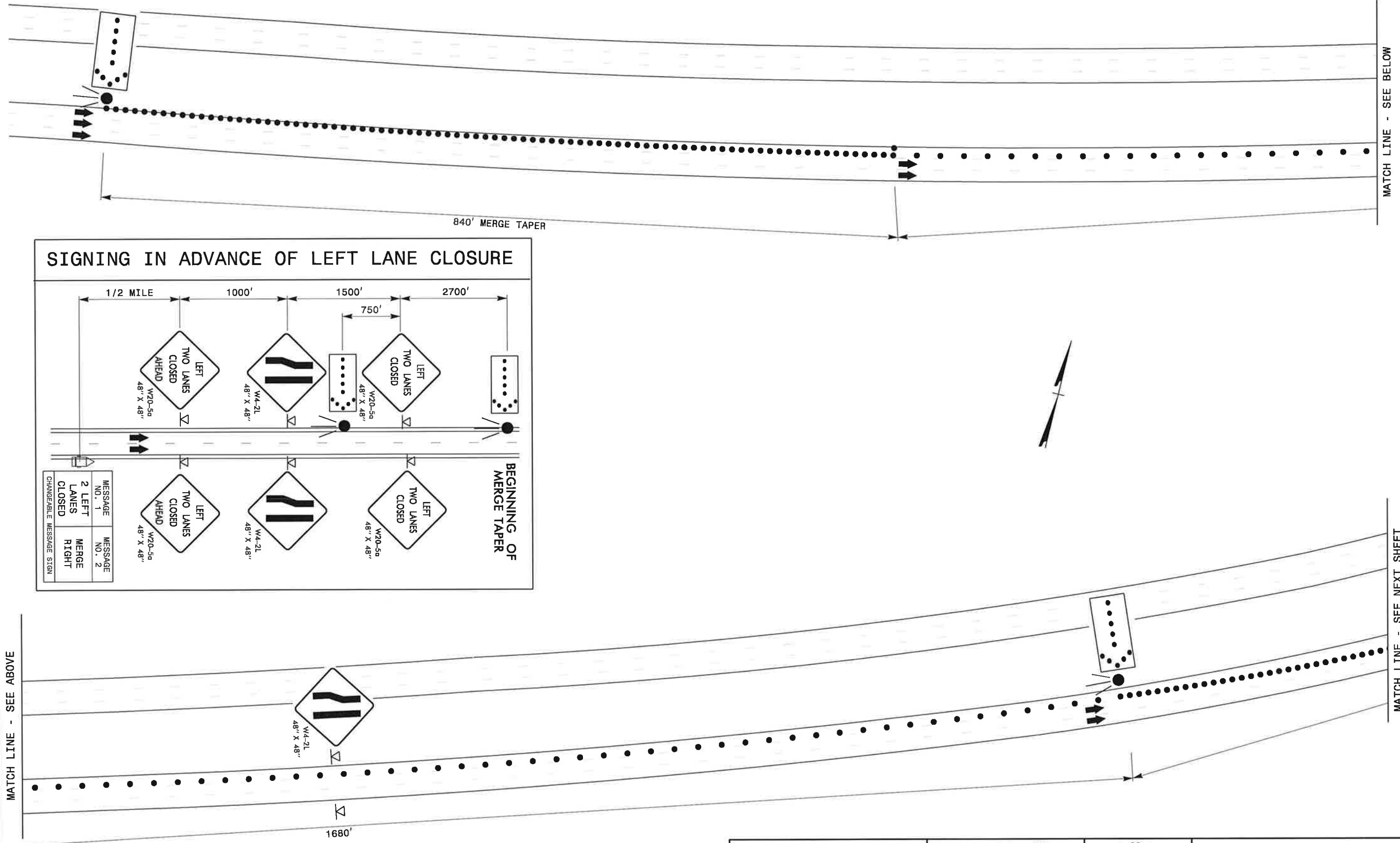
FOR PAINTING OF BRIDGE #465 ABOVE I-85 SOUTHBOUND, USE LEFT LANE CLOSURES WITH SWITCH, PER SHEETS TMP-7 AND TMP-7A.

BRIDGES #466 / #467 - SR 1577 (ARCHDALE RD.) OVER I-85 FOR JACKING OF BRIDGES #466 AND #467 FOR BEARING REPLACEMENT, USE DUAL LEFT OR RIGHT LANE CLOSURES ALONG I-85, PER ROADWAY STANDARD DRAWING 1101.02 SHEET 8.

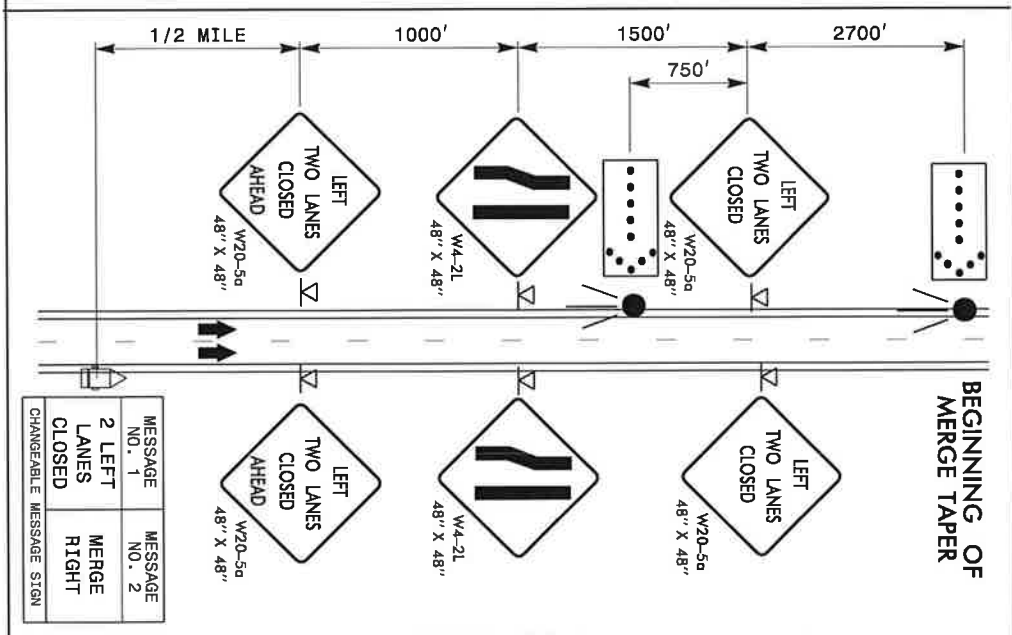
FOR PAINTING OF BRIDGES #466 / #467, USE FLAGGING OPERATION, ON ARCHDALE RD. AS NEEDED, PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1.

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 <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>APPROVED: _____ DATE: _____</p> <div style="text-align: center;">  <p>SEAL</p> </div>	 <p>DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL</p>	<p>GENERAL NOTES & PHASING</p>
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SIGNING IN ADVANCE OF LEFT LANE CLOSURE

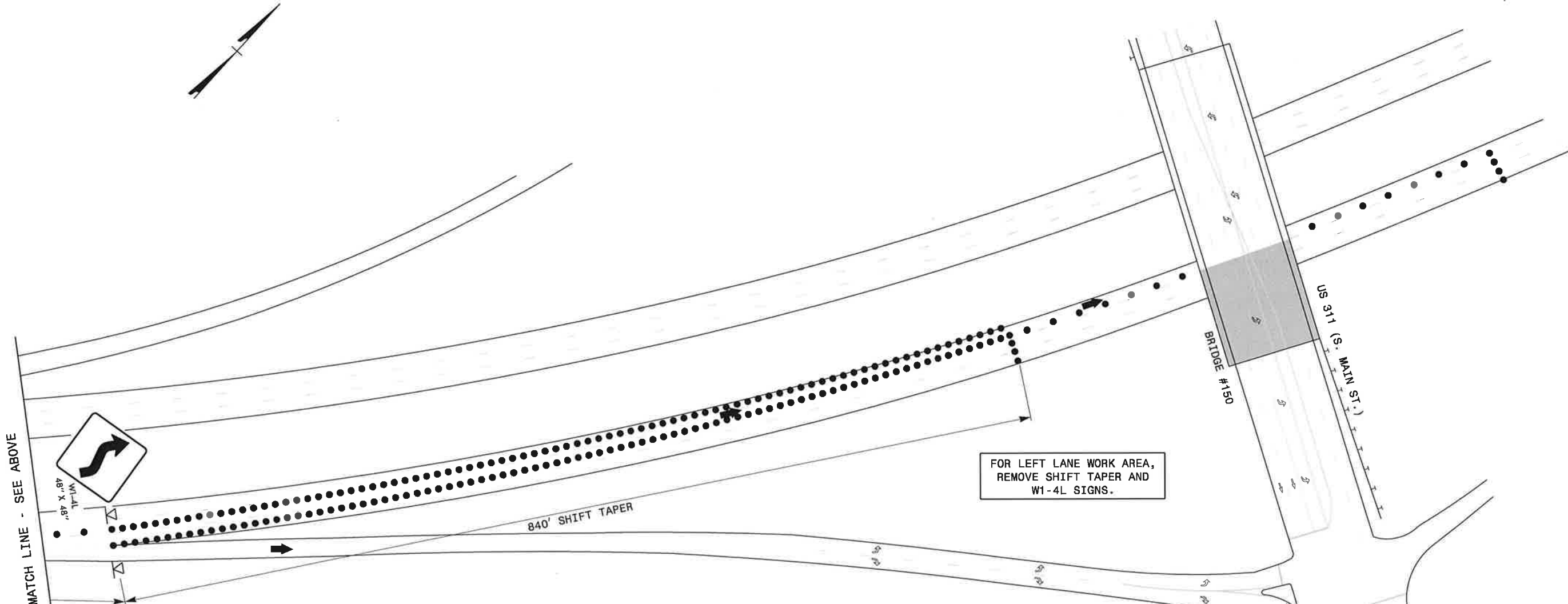
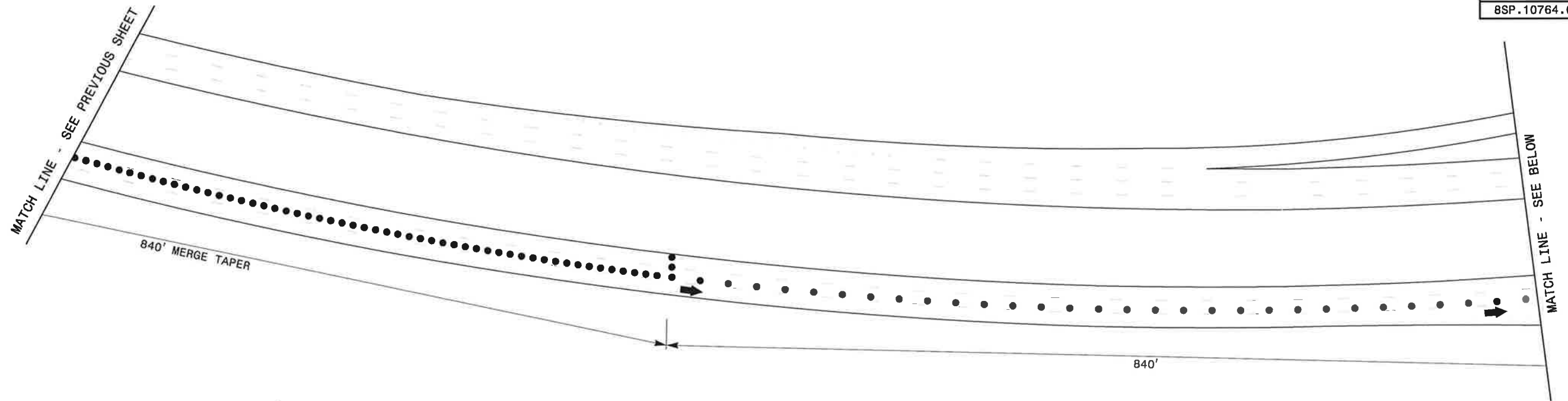


MATCH LINE - SEE ABOVE

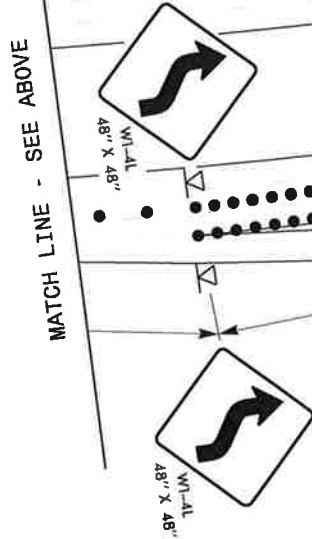
MATCH LINE - SEE NEXT SHEET

1/4/2013
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 Cullen

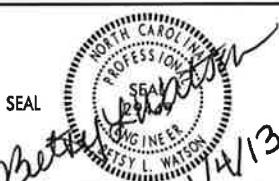
<p>Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672</p>	APPROVED: _____ DATE: _____ 	<p>DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL</p>	<p>RANDOLPH CO. BRIDGE #150</p> <p>I-85 NORTHBOUND LEFT LANE CLOSURE WITH SWITCH</p>

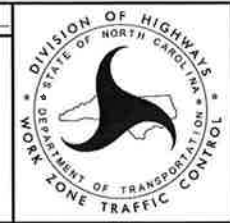


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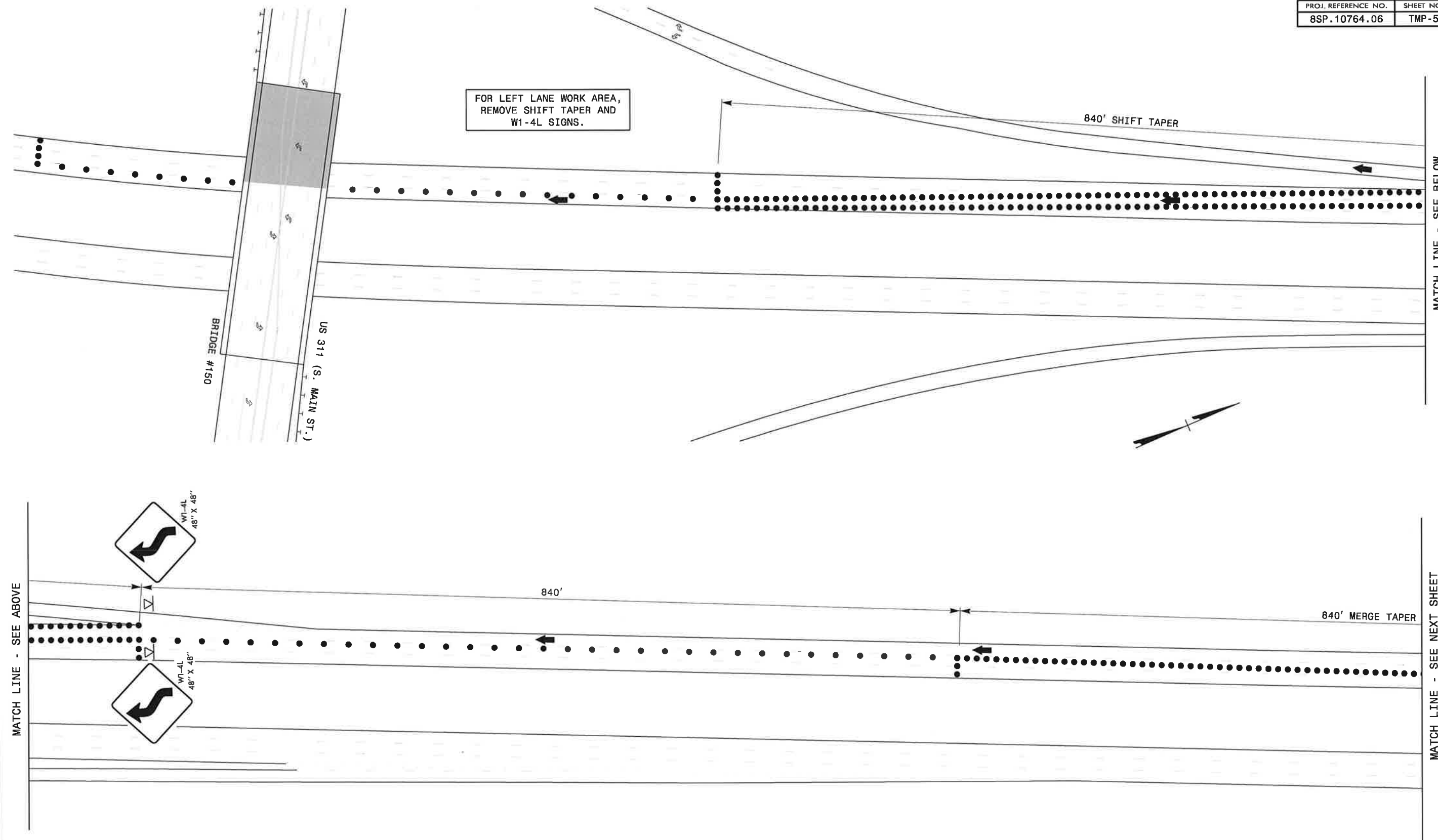

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RANDOLPH CO. BRIDGE #150

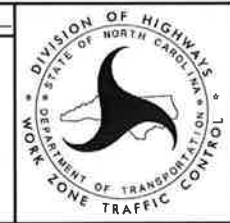
I-85 NORTHBOUND
LEFT LANE CLOSURE
WITH SWITCH



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APPROVED: _____ DATE: _____

 SEAL
 G. Watson
 1/4/13



RANDOLPH CO. BRIDGE #150
I-85 SOUTHBOUND
LEFT LANE CLOSURE
WITH SWITCH

MATCH LINE - SEE ABOVE

MATCH LINE - SEE NEXT SHEET

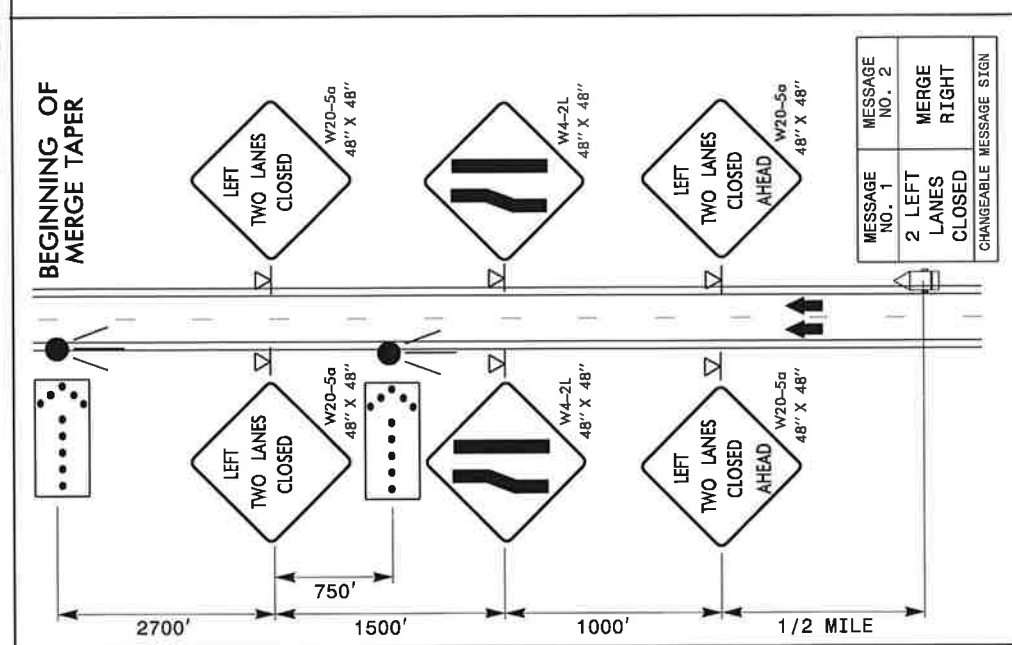
MATCH LINE - SEE BELOW

MATCH LINE - SEE PREVIOUS SHEET

MATCH LINE - SEE BELOW

MATCH LINE - SEE ABOVE

SIGNING IN ADVANCE OF LEFT LANE CLOSURE



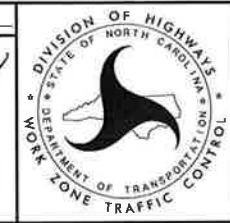
840'

840'

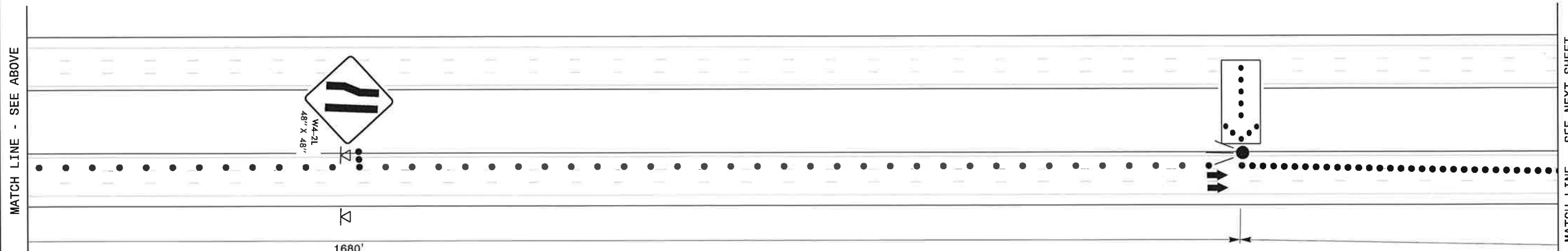
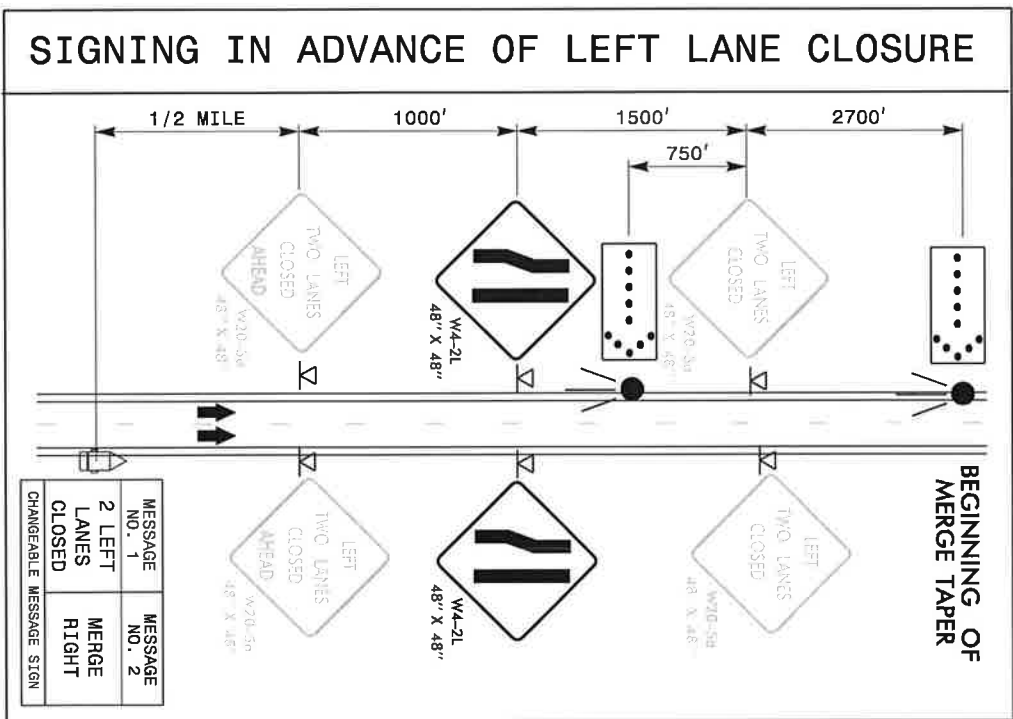
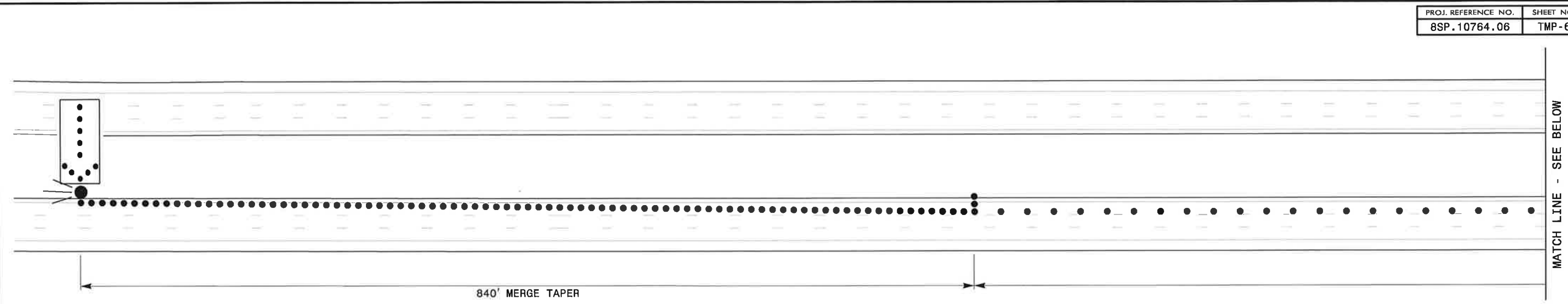
840' MERGE TAPER

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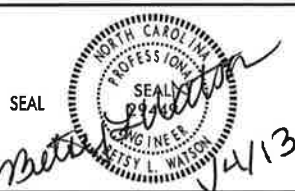

APPROVED: _____ DATE: _____
 SEAL
Robert Watson
 PROFESSIONAL ENGINEER
 L. WATSON
 4/13

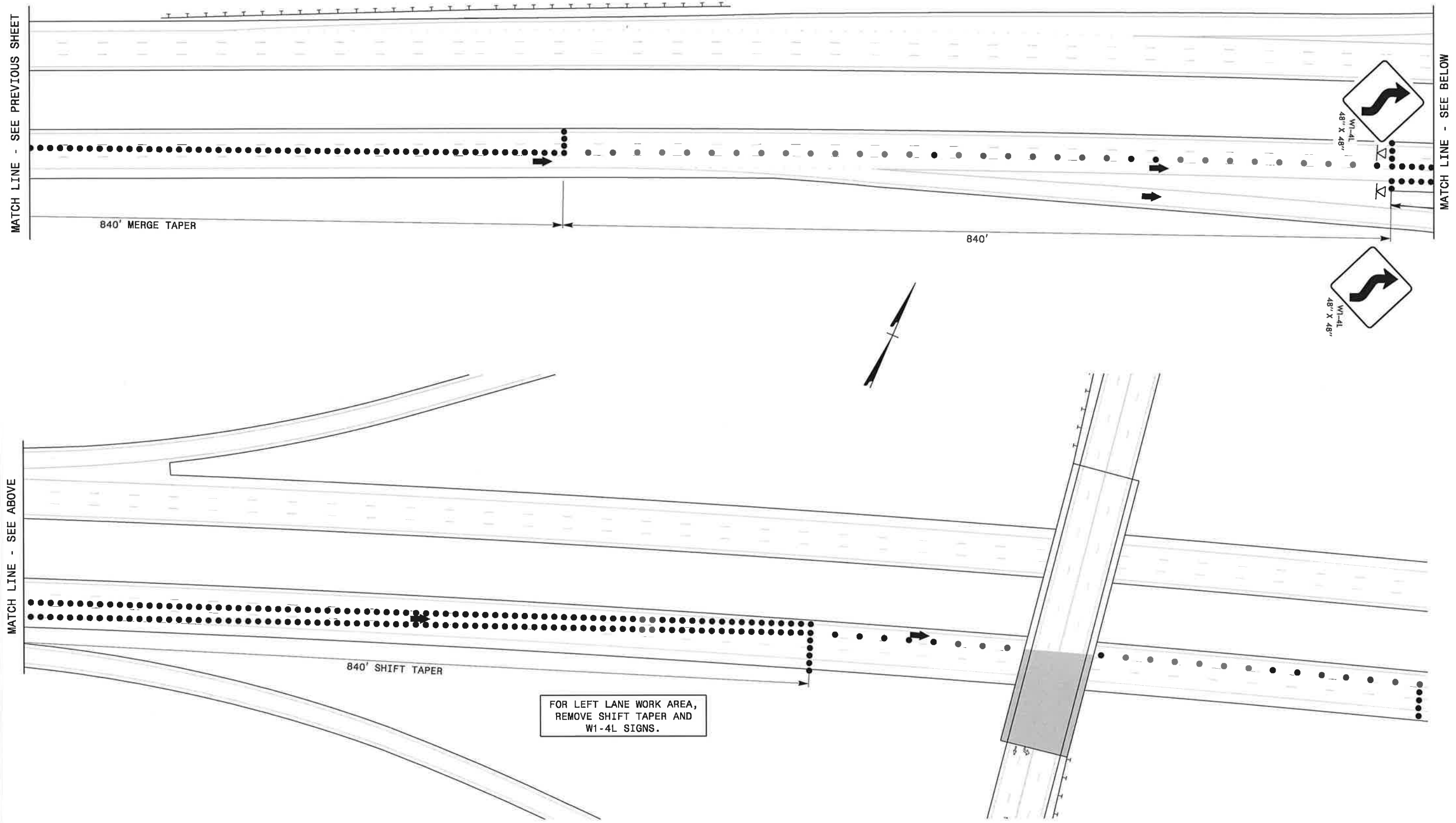


RANDOLPH CO. BRIDGE #150
I-85 SOUTHBOUND
LEFT LANE CLOSURE
WITH SWITCH






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 User: jcollin

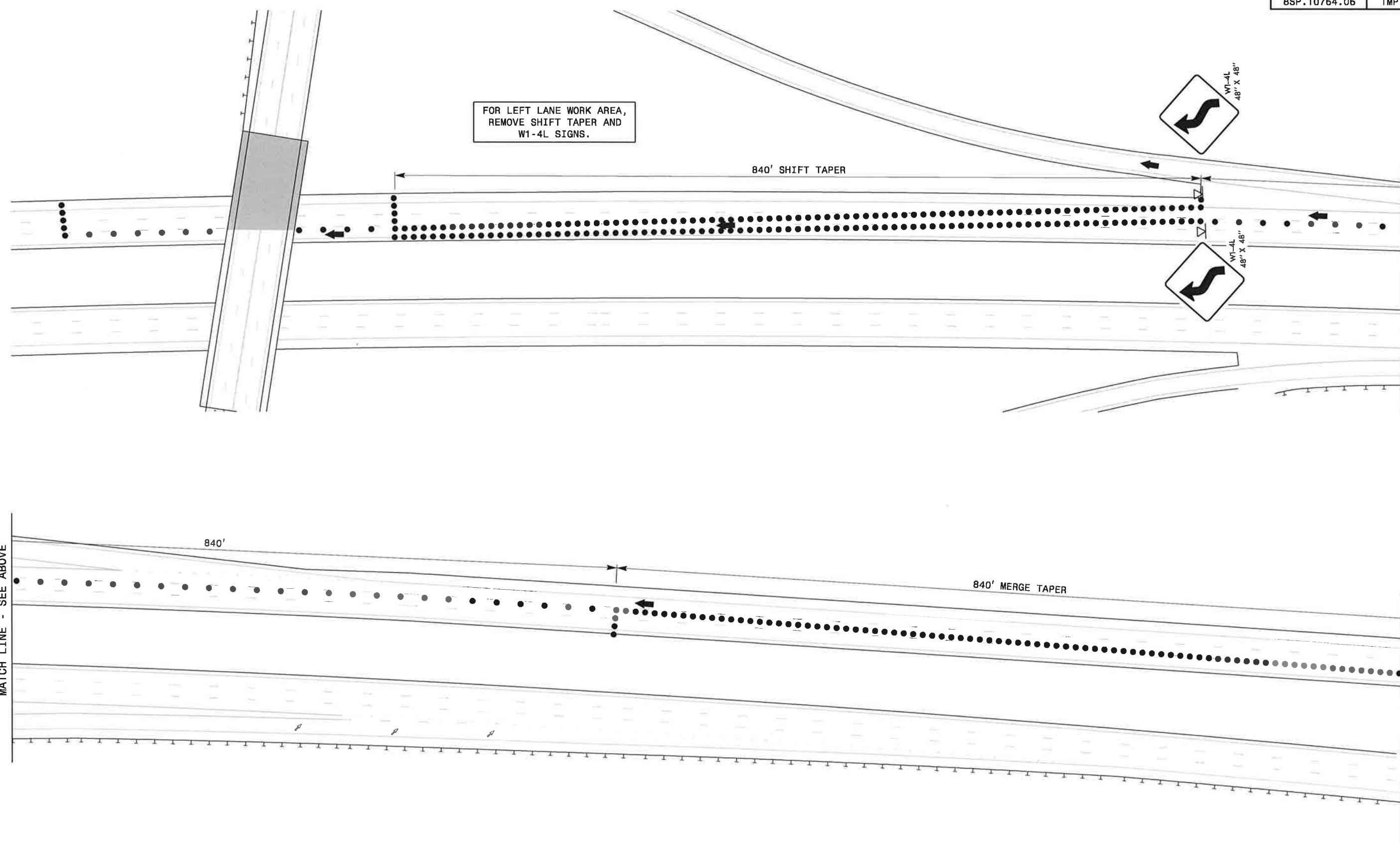
 Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672	APPROVED: _____ DATE: _____ 		RANDOLPH CO. BRIDGE #465 I-85 NORTHBOUND LEFT LANE CLOSURE WITH SWITCH
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FOR LEFT LANE WORK AREA,
REMOVE SHIFT TAPER AND
W1-4L SIGNS.

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	SEAL <i>Bob Watson</i> 4/13		



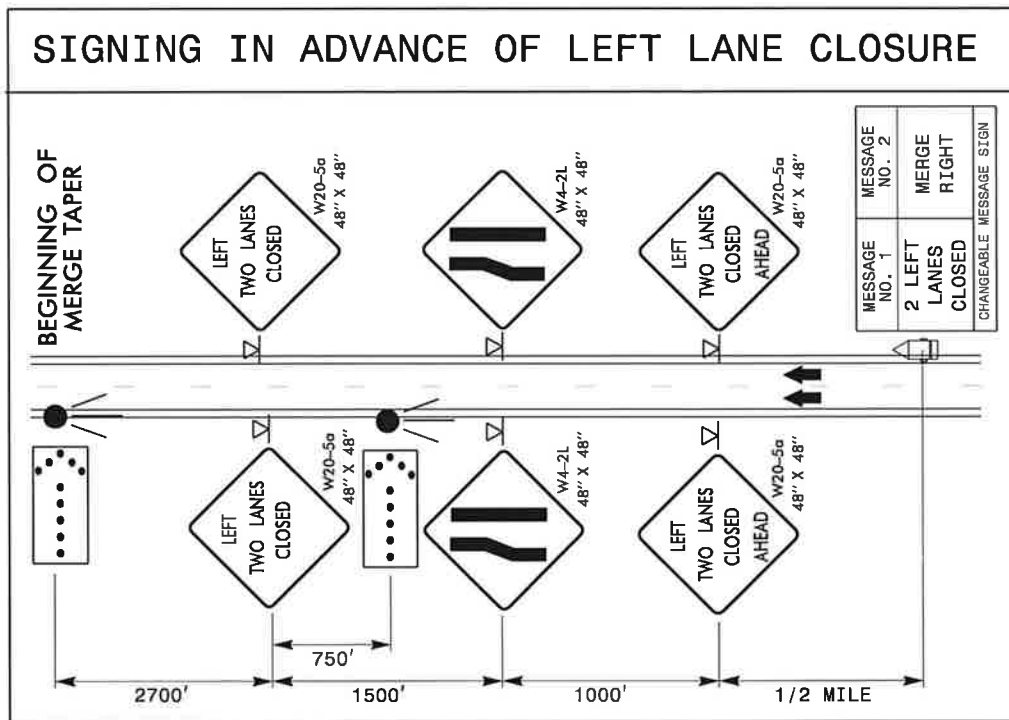
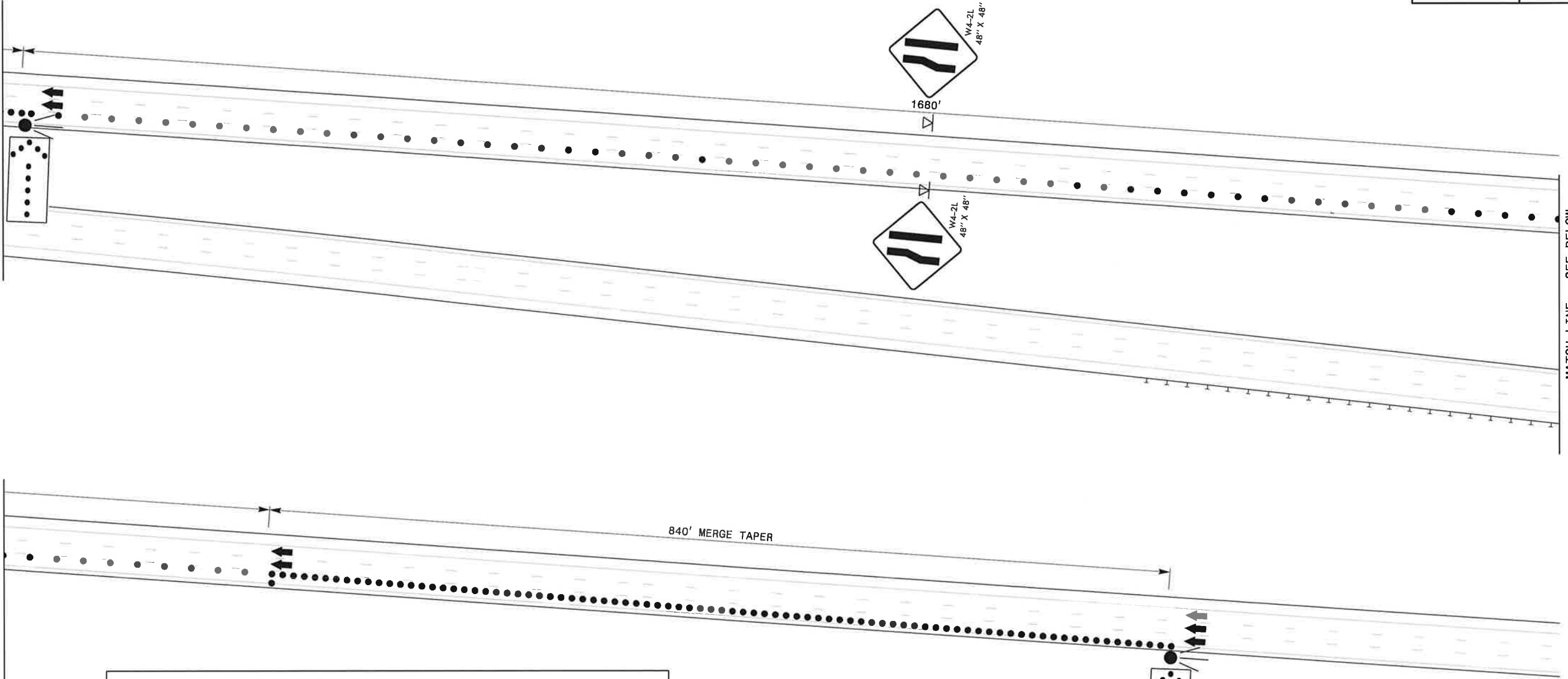
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 <p>Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672</p>	APPROVED: _____ DATE: _____ 		RANDOLPH CO. BRIDGE #465 I-85 SOUTHBOUND LEFT LANE CLOSURE WITH SWITCH
	SEAL <i>Tansy L. Watson</i> 1/4/13		

MATCH LINE - SEE PREVIOUS SHEET

MATCH LINE - SEE ABOVE

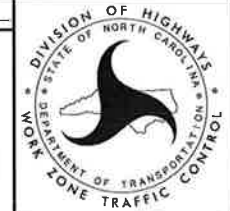
MATCH LINE - SEE BELOW



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APPROVED: _____ DATE: _____

SEAL



RANDOLPH CO. BRIDGE #465

I-85 SOUTHBOUND
LEFT LANE CLOSURE
WITH SWITCH