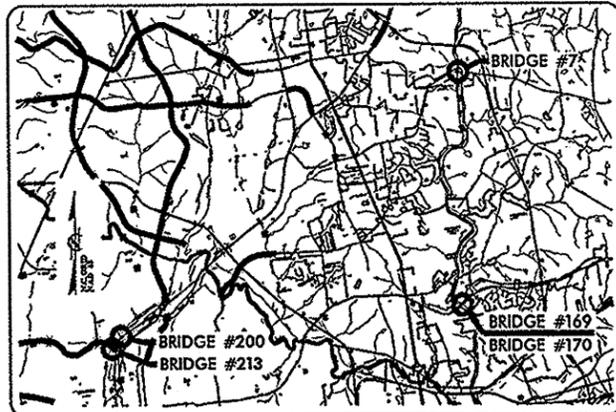


2/13/2012
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PROJECT 17BP.5.H.1

C203106

CONTRACT:



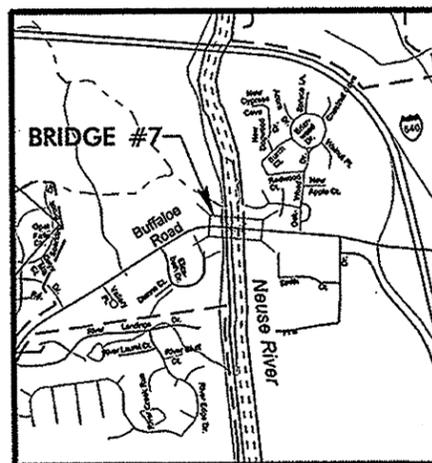
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

WAKE COUNTY

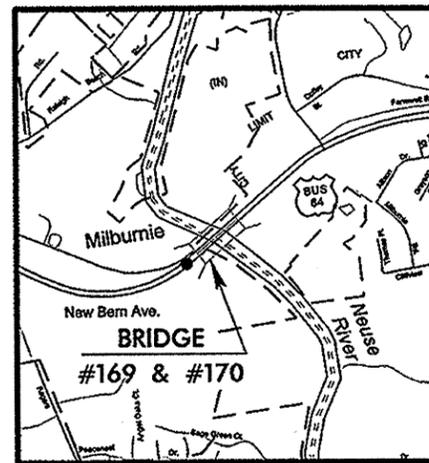
LOCATION: BRIDGE #7 BUFFALO RD. OVER NEUSE RIVER
 BRIDGE #169 US 64 BUSINESS EB OVER NEUSE RIVER
 BRIDGE #170 US 64 BUSINESS WB OVER NEUSE RIVER
 BRIDGE #200 FAIRVIEW ROAD OVER CAPITAL BLVD.
 BRIDGE #213 WADE AVENUE OVER CAPITAL BLVD.

TYPE OF WORK: BRIDGE PRESERVATION:
 HYDRODEMOLITION, LMC OVERLAY,
 SUPERSTRUCTURE AND SUBSTRUCTURE REPAIRS

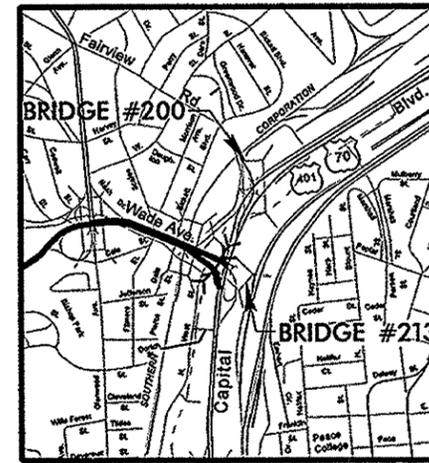
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.5.H.1	1	90
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.5.H.1	N/A	PE	
17BP.5.H.1	N/A	CONST.	



VICINITY MAP
 BRIDGE #7



VICINITY MAP
 BRIDGE #169 & #170



VICINITY MAP
 BRIDGE #200 & #213



DESIGN DATA

BRIDGE #7	ADT 2009 = 12,000
BRIDGE #169	ADT 2007 = 27,000
BRIDGE #170	ADT 2008 = 27,000
BRIDGE #200	ADT 1991 = 3,200
BRIDGE #213	ADT 2003 = 25,000

PROJECT LENGTH

BRIDGE #7	= .066 MILE
BRIDGE #169	= .071 MILE
BRIDGE #170	= .070 MILE
BRIDGE #200	= .034 MILE
BRIDGE #213	= .049 MILE

PLANS PREPARED BY :

RK&K RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE, SUITE 350
 RALEIGH, NORTH CAROLINA 27609
 NC LICENSE NO. F-0112

2012 STANDARD SPECIFICATIONS

LETTING DATE:
 JUNE 19, 2012

RICKY V. KEITH, PE
 DESIGN ENGINEER

ENGINEER
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 19438
 THEO J. BEACH
 2/15/2012
 THEO BEACH, PE
 PROJECT ENGINEER

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 2/15/2012

PROJECT 17BP.5.H.1

CONTRACT:



STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

WAKE COUNTY

LOCATION: BRIDGE #7 BUFFALOE RD. OVER NEUSE RIVER
BRIDGE #169 US 64 BUSINESS EB OVER NEUSE RIVER
BRIDGE #170 US 64 BUSINESS WB OVER NEUSE RIVER
BRIDGE #200 FAIRVIEW ROAD OVER CAPITAL BLVD.
BRIDGE #213 WADE AVENUE OVER CAPITAL BLVD.

TYPE OF WORK: BRIDGE PRESERVATION:
HYDRODEMOLITION, LMC OVERLAY,
SUPERSTRUCTURE AND SUBSTRUCTURE REPAIRS

INDEX OF SHEETS

1	TITLE SHEET
1A	INDEX OF SHEETS
2	SUMMARY OF QUANTITIES
S-1 - S-12	STRUCTURES (BRIDGE #7)
S-13 - S-32	STRUCTURES (BRIDGE #169)
S-33 - S-52	STRUCTURES (BRIDGE #170)
S-53 - S-61	STRUCTURES (BRIDGE #200)
S-62 - S-73	STRUCTURES (BRIDGE #213)
TCP -1 - TCP-17	TRAFFIC MANAGEMENT PLANS
EC-1	EROSION CONTROL PLAN (BRIDGE #213)

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.5.H.1	1A	90
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.5.H.1	N/A	PE	
17BP.5.H.1	N/A	CONST.	

PLANS PREPARED BY :
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE, SUITE 350
 RALEIGH, NORTH CAROLINA 27609
 NC LICENSE NO. F-0112

FOR THE STRUCTURES MANAGEMENT UNIT

2012 STANDARD SPECIFICATIONS

LETTING DATE:
 JUNE 19, 2012

RICKY V. KEITH, PE
 DESIGN ENGINEER

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202989

ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	8161000000-E	420	31,535	SF	GROOVING BRIDGE FLOORS
1330000000-E	607	1,992	SY	INCIDENTAL MILLING	8296000000-N	442	Lump Sum		POLLUTION CONTROL
1503000000-E	610	222	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	8660000000-E	SP	63	CF	CONCRETE REPAIRS
1519000000-E	610	37	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	8664000000-E	SP	1,100	CF	SHOTCRETE REPAIRS
1523000000-E	610	132	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	8678000000-E	SP	38	LF	EPOXY RESIN INJECTION
1575000000-E	620	25	TON	ASPHALT BINDER FOR PLANT MIX	8692000000-N	SP	Lump Sum		FOAM JOINT SEALS
3422000000-N	SP	Lump Sum		GENERIC GUARDRAIL ITEM REMOVAL & REPLACEMENT OF STEEL GUARDRAIL	8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING OF BRIDGE #200
4400000000-E	1110	136	SF	WORK ZONE SIGNS (STATIONARY)	8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM TEMPORARY SUPPORTS
4405000000-E	1110	96	SF	WORK ZONE SIGNS (PORTABLE)	8881000000-E	SP	285	CY	GENERIC STRUCTURE ITEM LATEX MODIFIED CONCRETE OVERLAY - VERY EARLY STRENGTH
4410000000-E	1110	45	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)	8881000000-E	SP	47	CY	GENERIC STRUCTURE ITEM LATEX MODIFIED CONCRETE OVERLAY
4415000000-N	1115	1	EA	FLASHING ARROW BOARD	8893000000-E	SP	4,023	SY	GENERIC STRUCTURE ITEM HYDRO-DEMOLITION OF BRIDGE DECK
4420000000-N	1120	2	EA	PORTABLE CHANGEABLE MESSAGE SIGN	8893000000-E	SP	623	SY	GENERIC STRUCTURE ITEM PLACING & FINISHING LATEX MOD CONC OVERLAY
4430000000-N	1130	50	EA	DRUMS	8893000000-E	SP	3,400	SY	GENERIC STRUCTURE ITEM PLACING & FINISHING LATEX MOD CONC OVERLAY - VERY EARLY STRENGTH
4435000000-N	1135	30	EA	CONES	8893000000-E	SP	4,023	SY	GENERIC STRUCTURE ITEM SCARIFYING BRIDGE DECK
4445000000-E	1145	40	LF	BARRICADES (TYPE III)					
4455000000-N	1150	60	DAY	FLAGGER					
4480000000-N	1165	1	EA	TMA					
4510000000-N	SP	640	HR	LAW ENFORCEMENT					
4516000000-N	1180	50	EA	SKINNY DRUM					
4810000000-E	1205	17,584	LF	PAINT PAVEMENT MARKING LINES (4")					
4900000000-N	1251	33	EA	PERMANENT RAISED PAVEMENT MARKERS					
6000000000-E	1605	215	LF	TEMPORARY SILT FENCE					
6012000000-E	1610	5	TON	SEDIMENT CONTROL STONE					
6030000000-E	1630	6	CY	SILT EXCAVATION					
6042000000-E	1632	70	LF	1/4" HARDWARE CLOTH					

TOTAL BILL OF MATERIALS

	SCARIFYING BRIDGE DECK	HYDRO-DEMOLITION OF BRIDGE DECK	LATEX MODIFIED CONCRETE OVERLAY -VERY EARLY STRENGTH	PLACING AND FINISHING LATEX MODIFIED CONCRETE OVERLAY - VERY EARLY STRENGTH	FOAM JOINT SEALS	GROOVING BRIDGE FLOORS	CLASS I * SURFACE PREPARATION	CLASS II * SURFACE PREPARATION	CLASS III * SURFACE PREPARATION	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B	REMOVAL AND REPLACEMENT OF STEEL GUARDRAIL	INCIDENTAL MILLING
	SQUARE YARDS	SQUARE YARDS	CUBIC YARDS	SQUARE YARDS	LUMP SUM	SQUARE FEET	SQUARE YARDS	SQUARE YARDS	SQUARE YARDS	TONS	LUMP SUM	SQUARE YARDS
SUPERSTRUCTURE	1,092	1,092	65	1,092	LUMP SUM	8,628	0	182	0	37	LUMP SUM	436
TOTAL	1,092	1,092	65	1,092	LUMP SUM	8,628	0	182	0	37	LUMP SUM	436

* QUANTITIES ARE ESTIMATES FROM BEST AVAILABLE DATA, AND SHOULD BE CONSIDERED FOR INFORMATION PURPOSES ONLY, IF ANY CLASS III LOCATIONS ARE ENCOUNTERED PRIOR TO OR DURING HYDRO-DEMOLITION, SEE "TYP. BLOW THRU CONTAINMENT AND FORMWORK DETAIL."

GENERAL NOTES

ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE "2012 STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION.

ALL REINFORCING STEEL SHALL BE GRADE 60.

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

FOR "FALSEWORK AND FORMWORK", SEE SPECIAL PROVISIONS.

FOR "CRANE SAFETY", SEE SPECIAL PROVISIONS.

FOR "GROUT FOR STRUCTURES", SEE SPECIAL PROVISIONS.

FOR "CLEANING AND PAINTING EXISTING BEARING PLATES", SEE SPECIAL PROVISIONS.

ANY DAMAGE TO THE EXISTING STRUCTURE OR SLOPE PROTECTION AS A RESULT OF FALSEWORK OR TEMPORARY SUPPORTS SHALL BE REPAIRED AT THE CONTRACTOR'S COST AND AT THE DIRECTION OF THE ENGINEER.

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

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

FOR "LATEX MODIFIED CONCRETE OVERLAY - VERY EARLY STRENGTH", SEE SPECIAL PROVISIONS.

FOR "FOAM JOINT SEALS", SEE SPECIAL PROVISIONS.

FOR "ELASTOMERIC CONCRETE", SEE SPECIAL PROVISIONS.

EPOXY PROTECTIVE COATING SHALL BE APPLIED TO THE ENTIRE TOP SURFACE AREA OF THE BENT CAPS EXCEPT THE AREA UNDER THE BEARINGS. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE SEVERAL PAY ITEMS. SEE SECTION 420-18 OF THE STANDARD SPECIFICATIONS.

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

FOR "REMOVAL AND REPLACEMENT OF STEEL GUARDRAIL", SEE SPECIAL PROVISIONS.

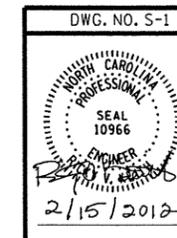
EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 7

SHEET 1 OF 13

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**NOTES
AND
BILL OF MATERIALS**

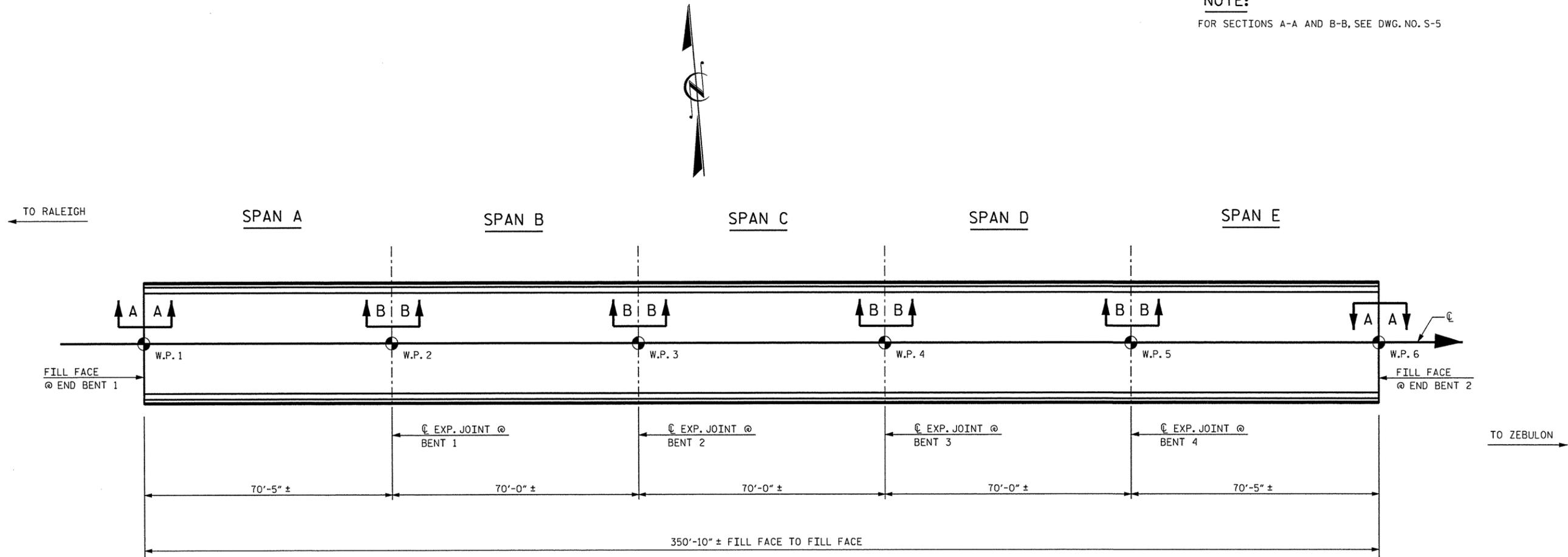


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NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			73

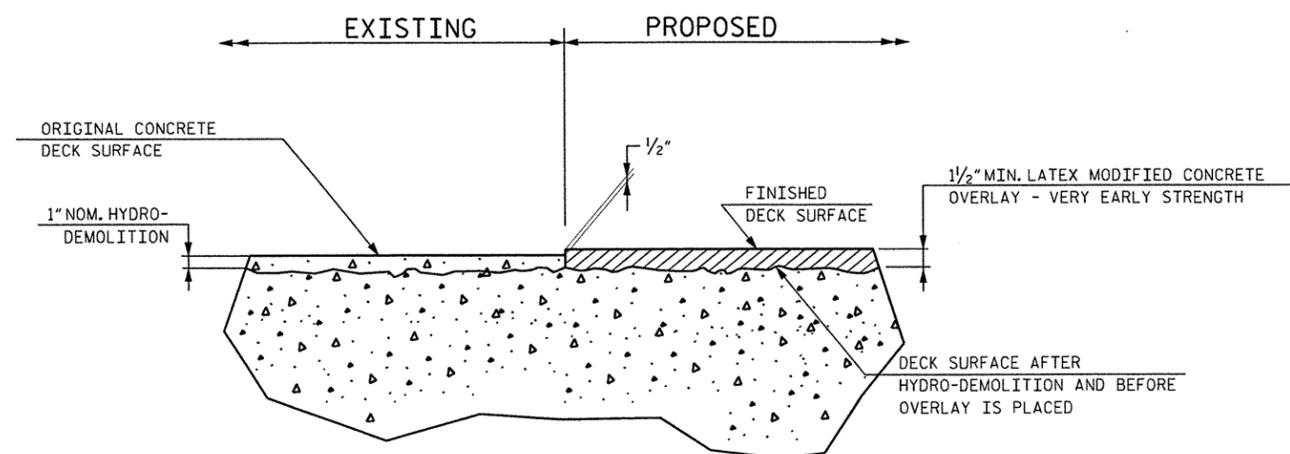
DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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NOTE:
FOR SECTIONS A-A AND B-B, SEE DWG. NO. S-5



BRIDGE PLAN



**DETAIL FOR LATEX
MODIFIED CONCRETE OVERLAY -
VERY EARLY STRENGTH**

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
BRIDGE NO. 7

SHEET 2 OF 13

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE PLAN VIEW

DWG. NO. S-2

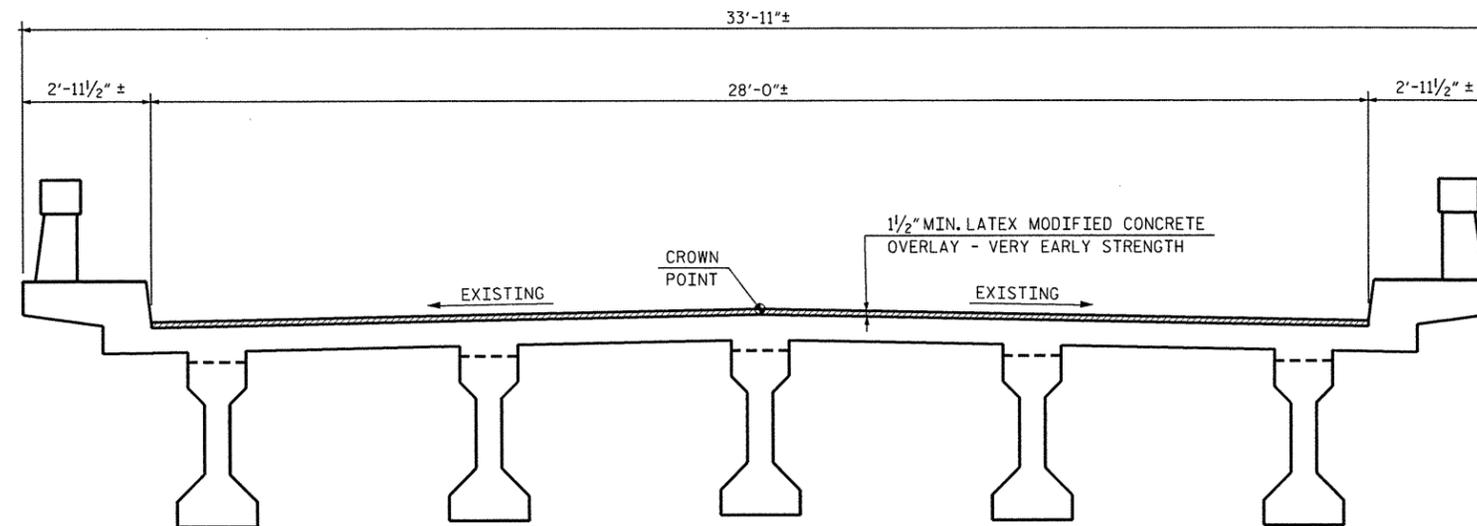
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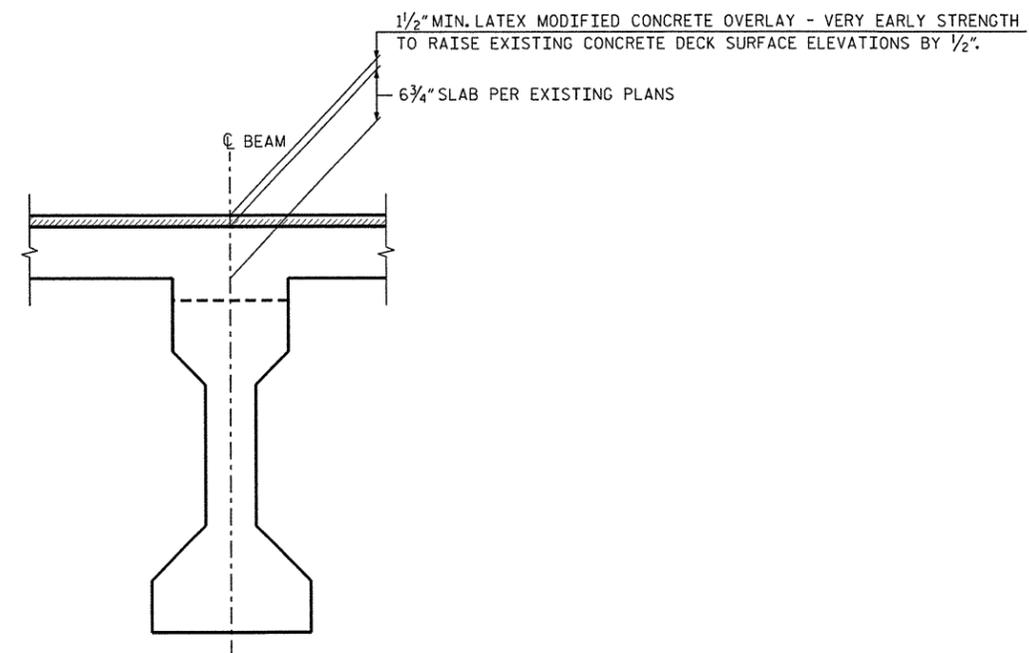
DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
CHECKED BY : R.V. KEITH DATE : JAN. 2012

NOTES:
 FOR MANAGING HYDRO-DEMOLITION WATER AND SEALING
 OF DECK JOINTS, SEE SPECIAL PROVISIONS.

WATER & CONCRETE SLURRY FROM HYDRO-DEMOLITION
 SHALL NOT BE ALLOWED TO DRAIN ACROSS TRAVEL LANES.
 CONTRACTOR SHALL PROVIDE A METHOD TO CONTROL THE
 WATER.



TYPICAL SECTION



EXISTING SLAB BUILDUP

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 7

SHEET 3 OF 13

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

DWG. NO. S-3

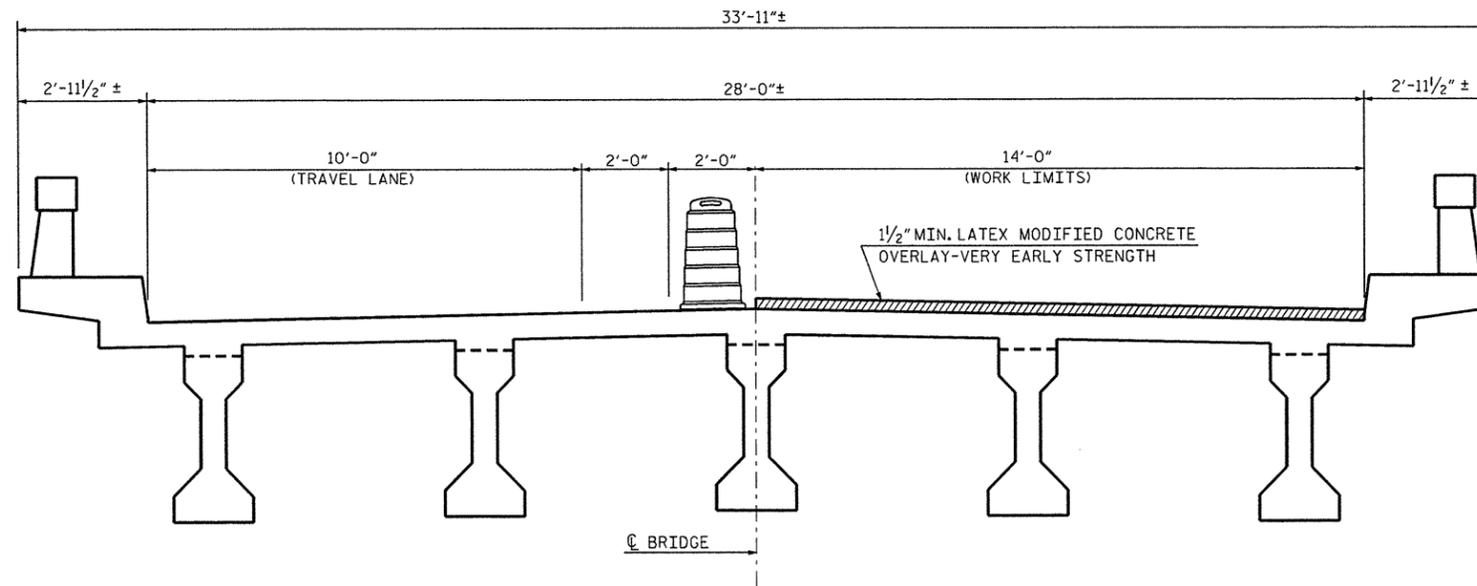
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NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.	S-3
TOTAL SHEETS	73

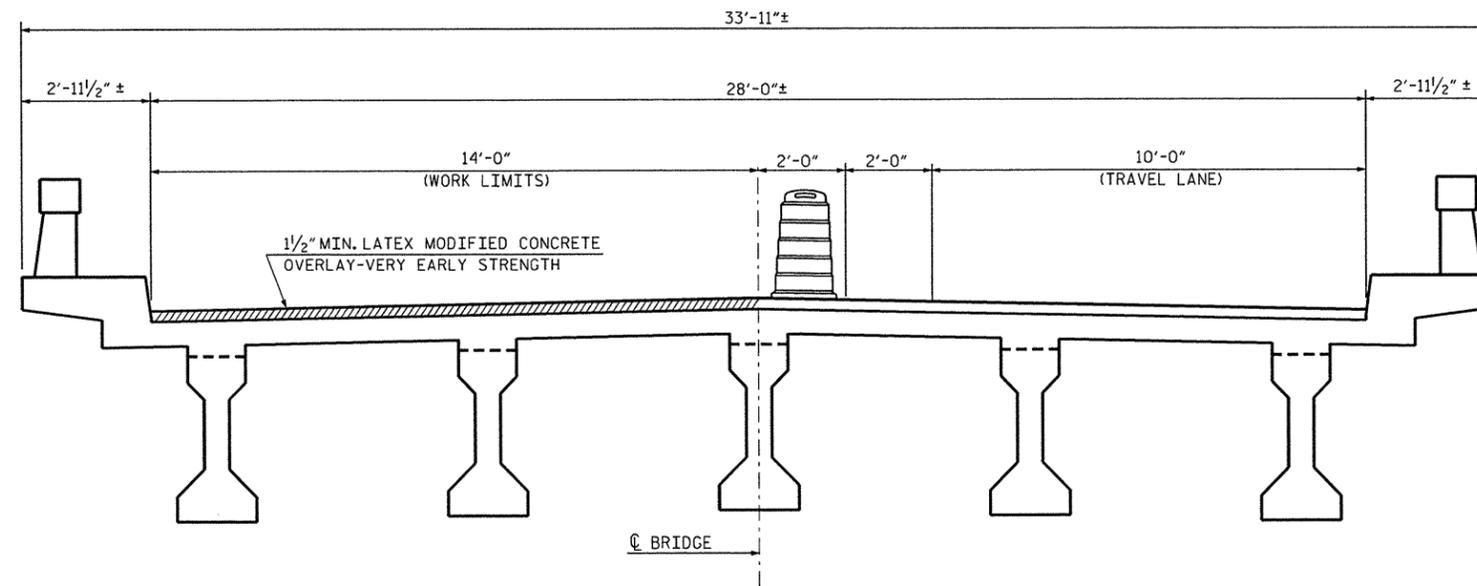
DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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STAGE 1 SECTION



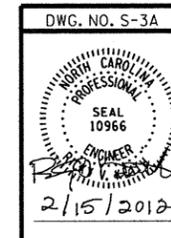
STAGE 2 SECTION

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 7

SHEET 4 OF 13

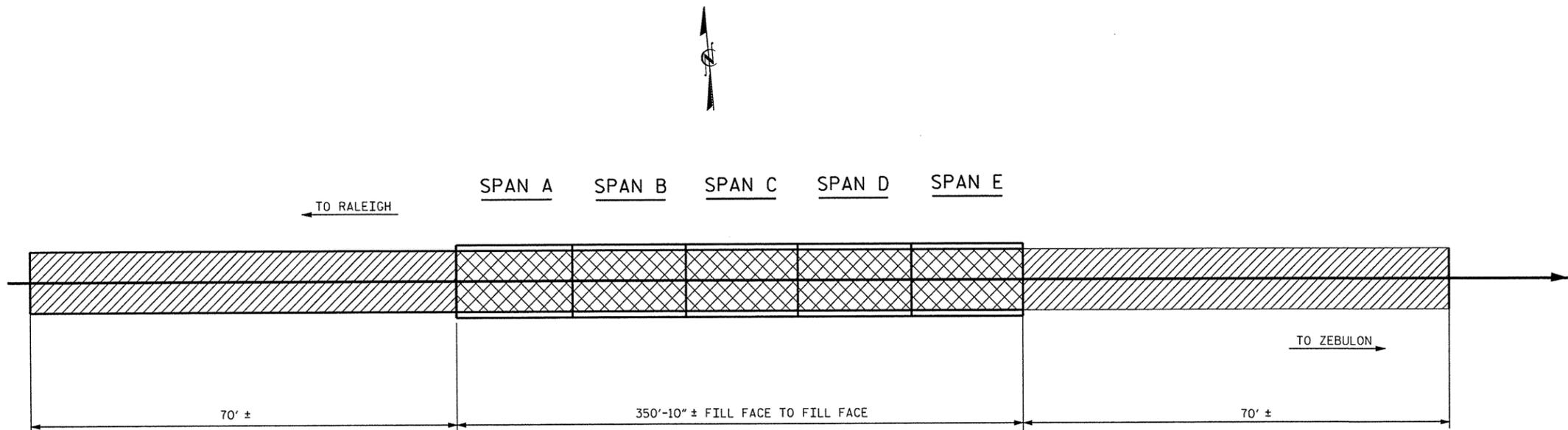
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STAGING SECTIONS

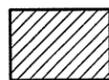


DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

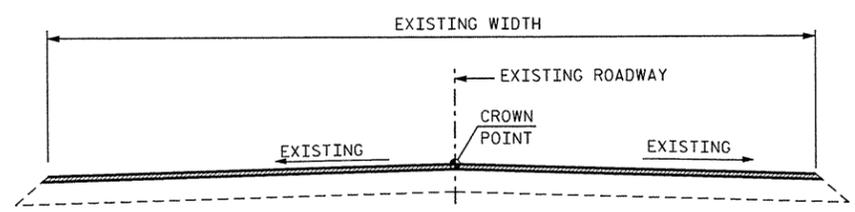
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1			3			TOTAL SHEETS
2			4			73



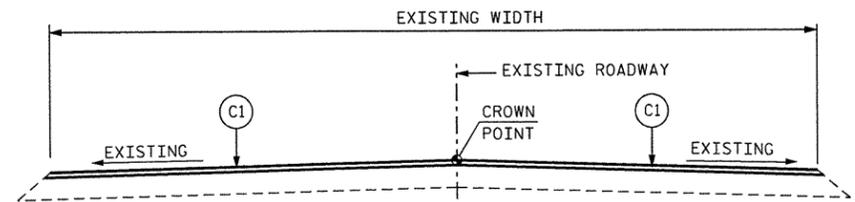
BRIDGE PLAN

-  INCIDENTAL MILLING
-  DECK SCARIFICATION AND HYDRO-DEMOLITION

(C1) PROPOSED APPROX. 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.



TYPICAL ROADWAY MILLING SECTION
(MILL TO 1" DEPTH)



PROPOSED TYPICAL ROADWAY SECTION

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 7

SHEET 5 OF 13

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

ROADWAY TYPICAL SECTION
 AND
 MILLING DETAILS

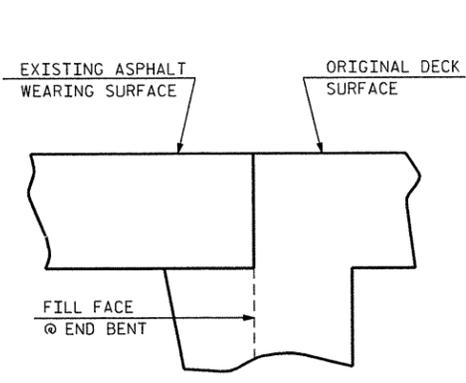
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			

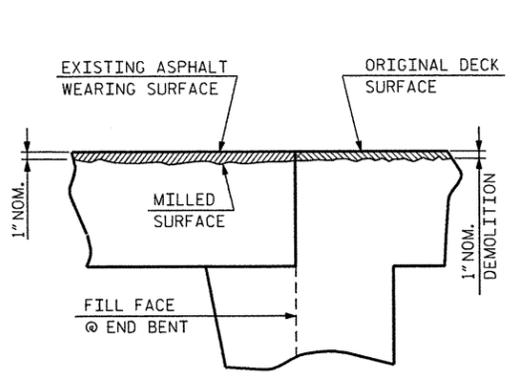
DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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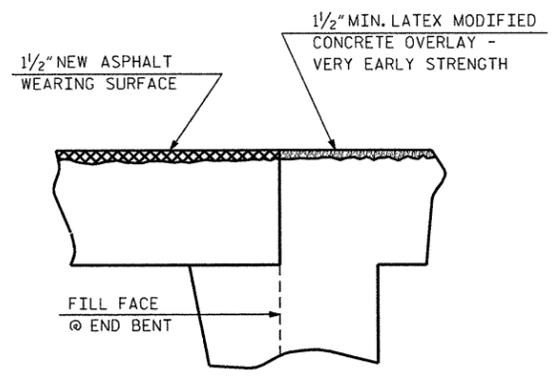
M:\projects\2009\09085_NCDOT_Div_OnCall\J01_Bridge Rehab\Division 5 Bridge Rehab\007\JOINT DETAILS.dgn



SECTION A-A
(EXISTING)



SECTION A-A
(MINIMUM DEMOLITION)
END BENT 1 AND 2

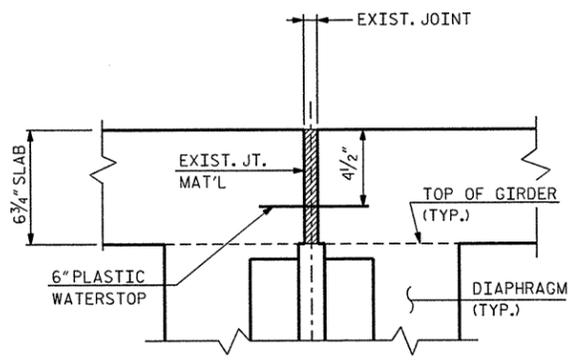


SECTION A-A
(PROPOSED)

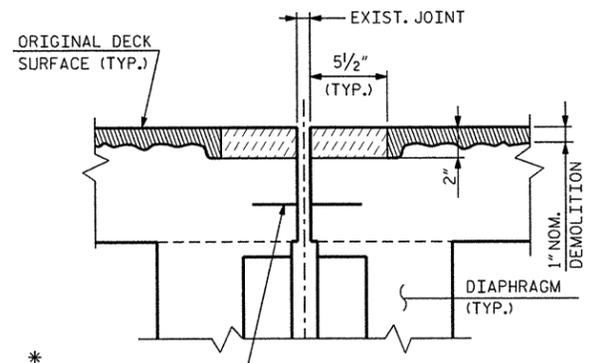
ELASTOMERIC CONCRETE	
BENT NO.	ELASTOMERIC CONCRETE * (CU. FT.)
1	5.4
2	5.4
3	5.4
4	5.4
TOTAL	21.6

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

NOTES:
 RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS REQUIRED.
 REMOVE EXISTING JOINT SEAL MATERIAL.
 CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING STEEL.
 THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.

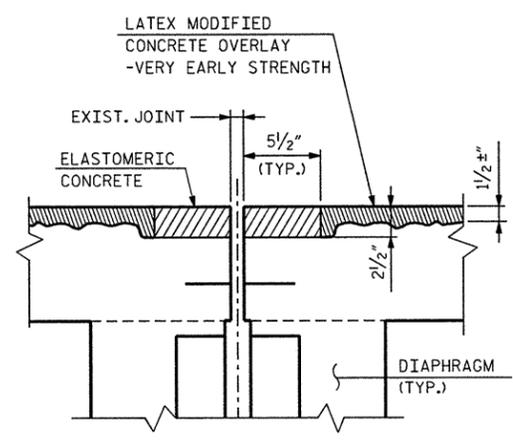


SECTION B-B
(EXISTING JOINT)

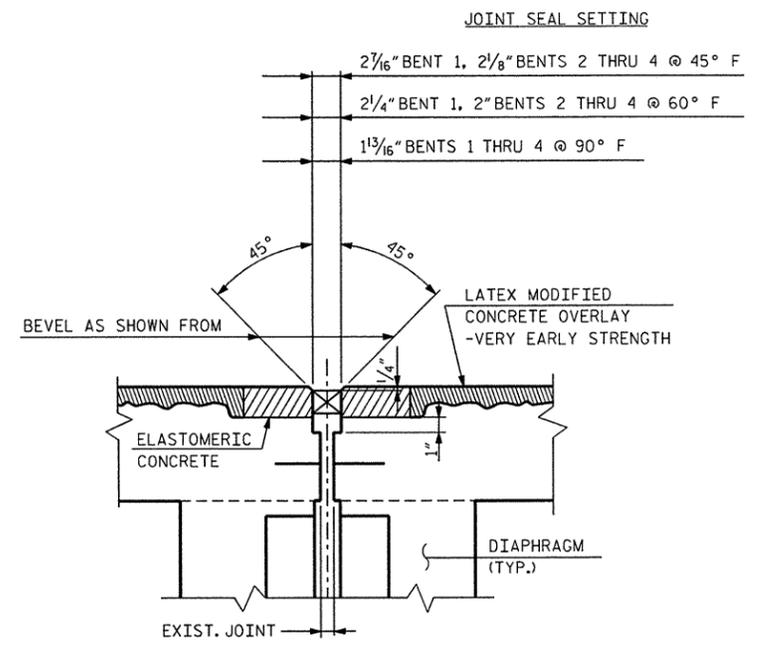


* WATERSTOP TO BE CUT FLUSH WITH JOINT

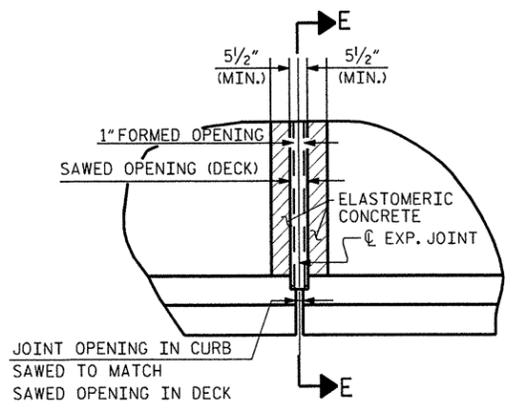
SECTION B-B
(MINIMUM EXISTING JOINT DEMOLITION)



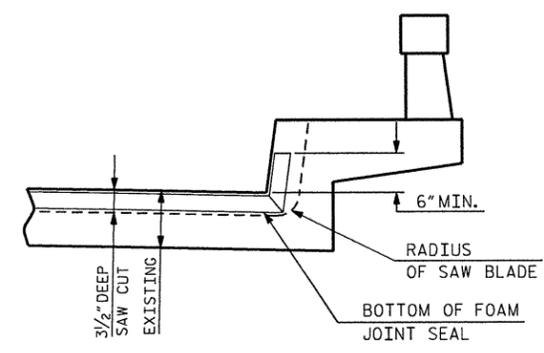
SECTION B-B
(PROPOSED JOINT PRE-SAWED)



SECTION B-B
(PROPOSED FOAM JOINT SEAL EXPANSION)
 USE 2 3/16" WIDTH UNCOMPRESSED FOAM JOINT SEAL MATERIAL FOR BENT 1.
 USE 2 1/2" WIDTH UNCOMPRESSED FOAM JOINT SEAL MATERIAL FOR BENTS 2 THRU 4.



PARTIAL PLAN AT JOINT



SECTION E-E

FOAM JOINT SEAL TO BE CUT, HEAT WELDED AND TURNED UP PARALLEL TO SLOPE FACE OF BARRIER RAIL.

PROJECT NO. 17BP.5.H.1
 WAKE COUNTY
 BRIDGE NO. 7

SHEET 6 OF 13

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

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

TOTAL SHEETS: 73

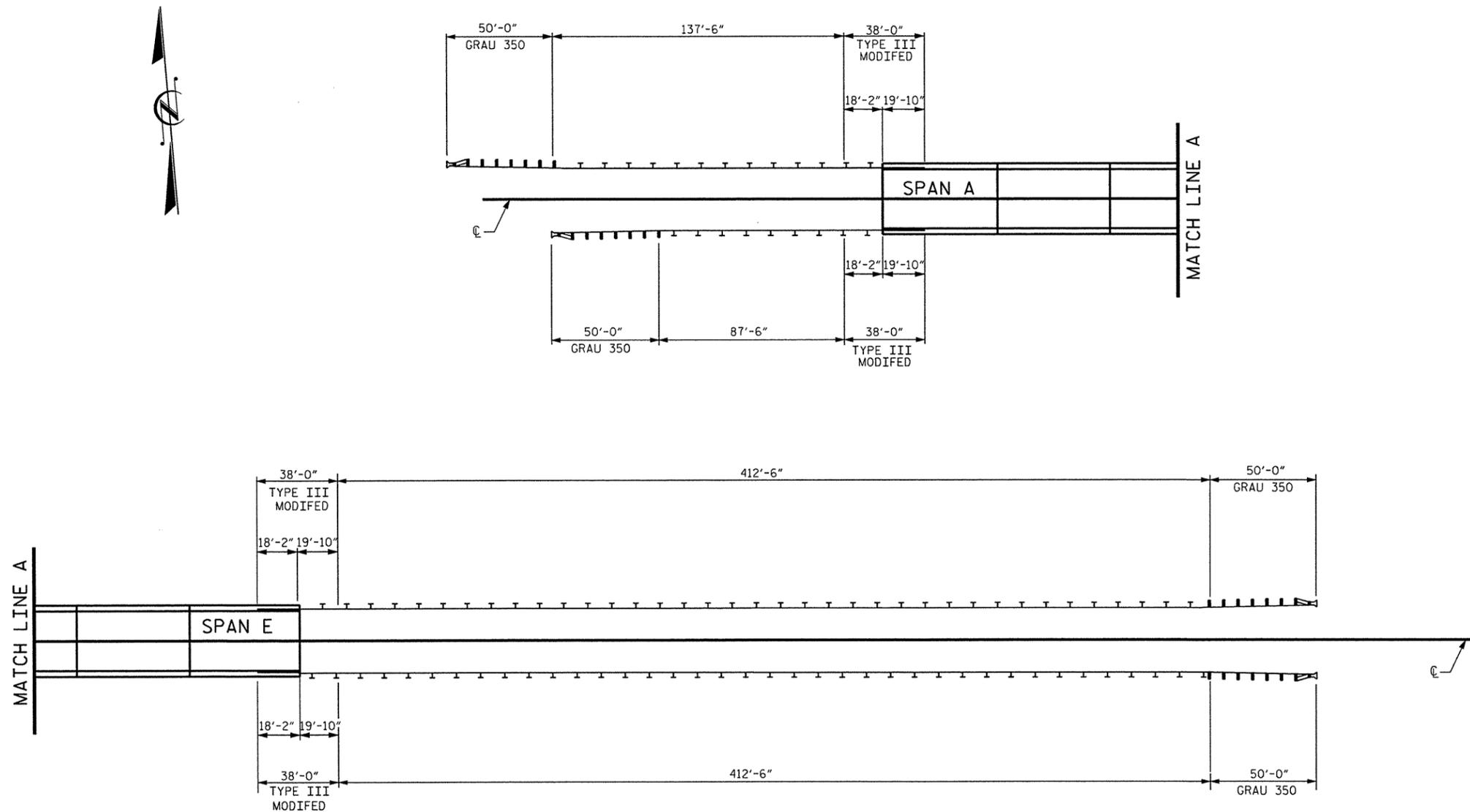
DWG. NO. S-5

2/15/2012

DRAWN BY: F.D. WEEDEN DATE: JAN. 2012
 CHECKED BY: R.V. KEITH DATE: JAN. 2012

NOTES:

REPLACE EXISTING GUARDRAIL TO LIMITS SHOWN ON PLANS.
 SEE SHEET S-12 FOR TYPE III MODIFIED ATTACHMENT DETAILS.
 HORIZONTAL OFFSET TO FACE OF RAIL ALONG ROADWAY SHOULDER TO BE DETERMINED BY THE ENGINEER.



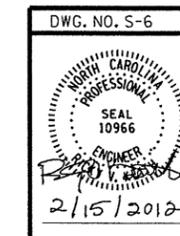
BRIDGE GUARDRAIL PLAN

PROJECT NO. 17BP.5.H.1
 WAKE COUNTY
 BRIDGE NO. 7

SHEET 7 OF 13

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

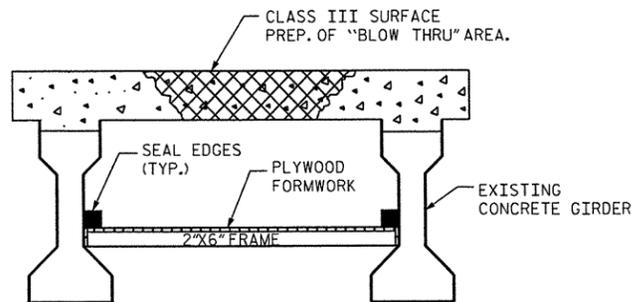
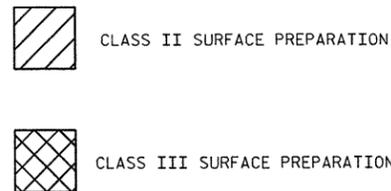
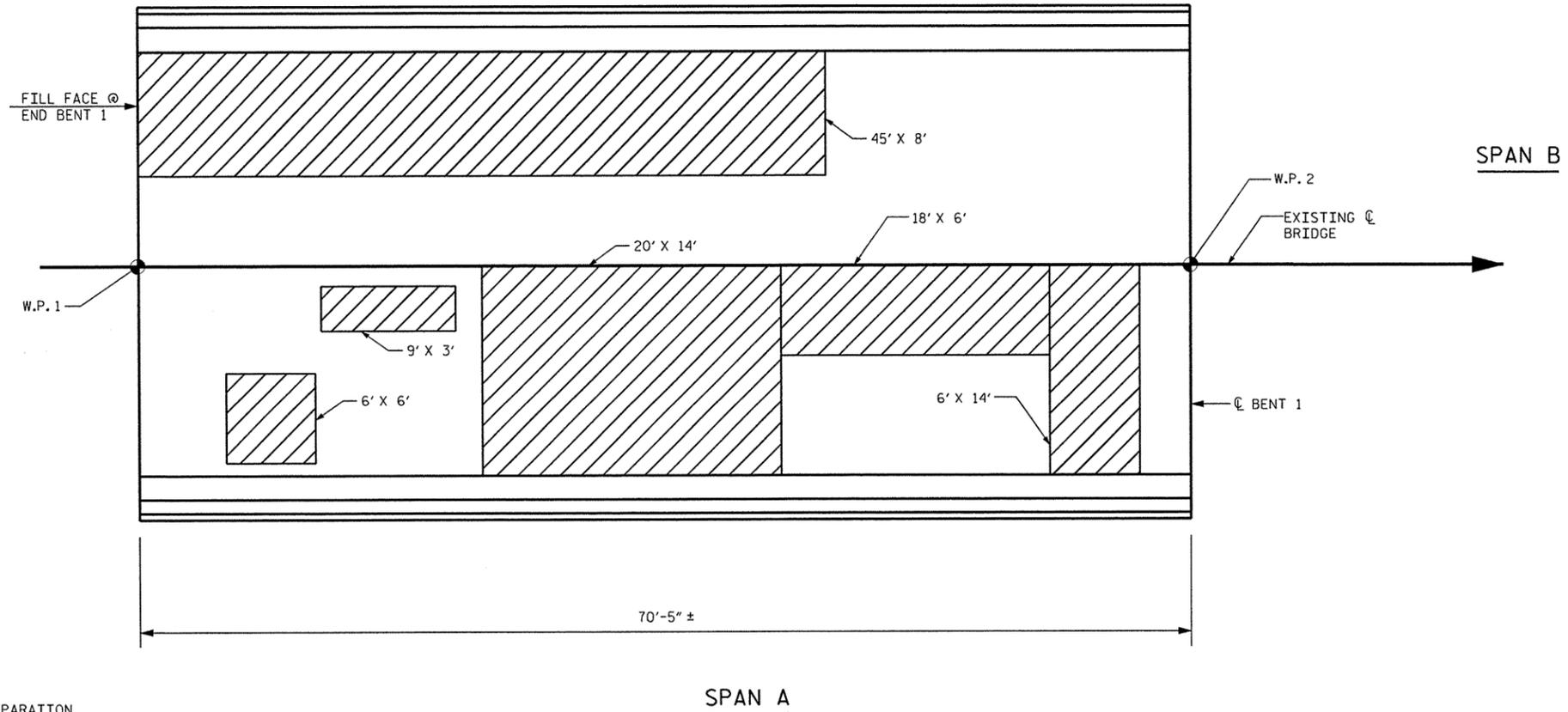
GUARDRAIL PLACEMENT



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
1			3			TOTAL SHEETS
2			4			73

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DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THRU OF THE DECK.

A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.

COST FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE PER SQ. YD. OF HYDRO-DEMOLITION.

NOTES:

CLASS II & III SURFACE PREPARATION SHOWN IS APPROXIMATE AND MAY NOT REFLECT CONDITIONS IN THE FIELD.

CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.

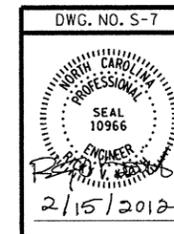
SUBMIT DETAILS OF PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.

PROJECT NO. 17BP.5.H.1
 WAKE COUNTY
 BRIDGE NO. 7

SHEET 8 OF 13

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SPAN "A" PLAN
 SUPERSTRUCTURE REPAIR**



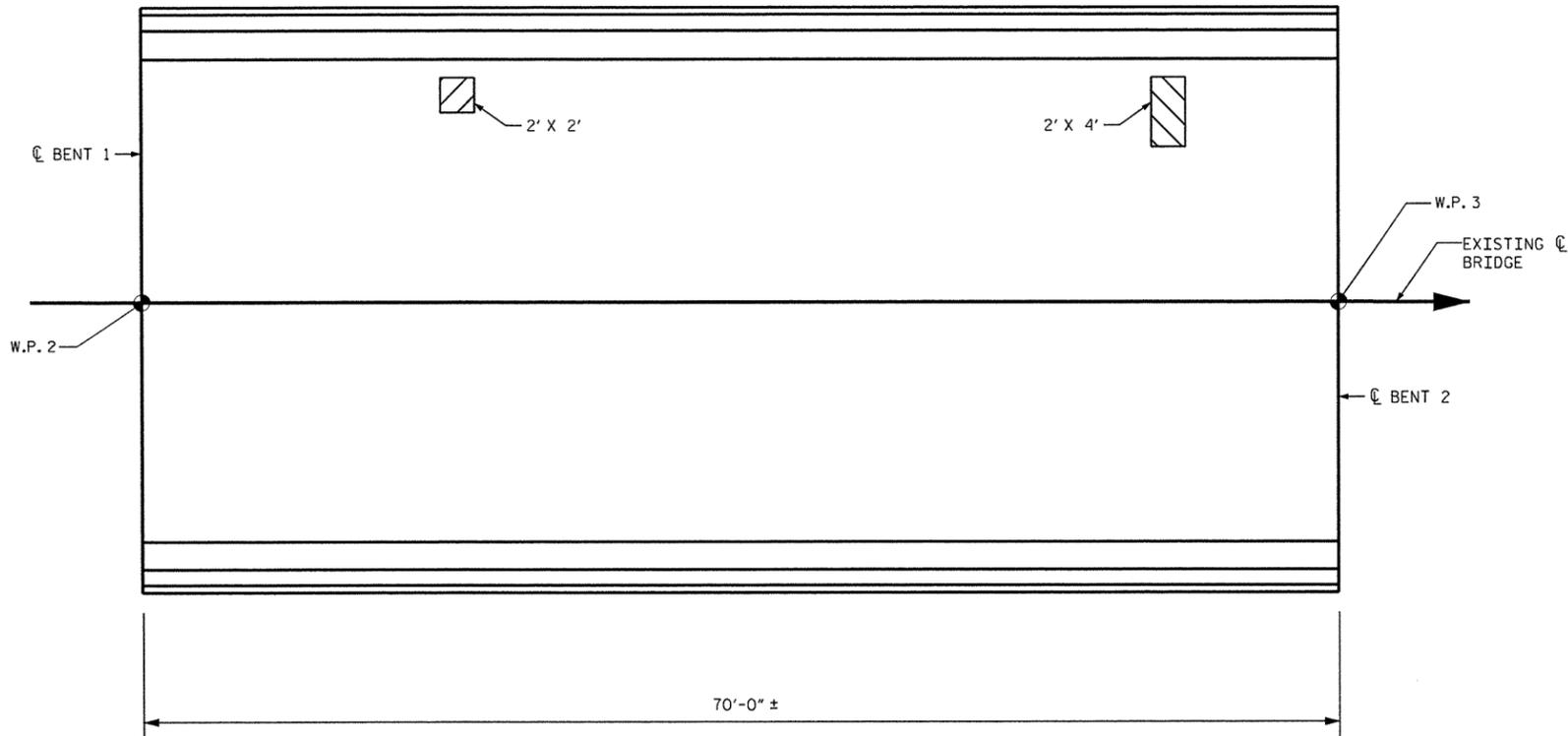
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
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DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012



SPAN A



SPAN C



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

SPAN B

SEE SHEET S-7 FOR NOTES AND TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK.

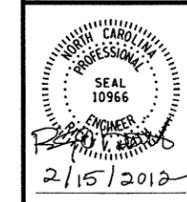
PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 7

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SPAN "B" PLAN
 SUPERSTRUCTURE REPAIR

DWG. NO. S-8



REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
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SHEET NO.
S-8
TOTAL SHEETS
73

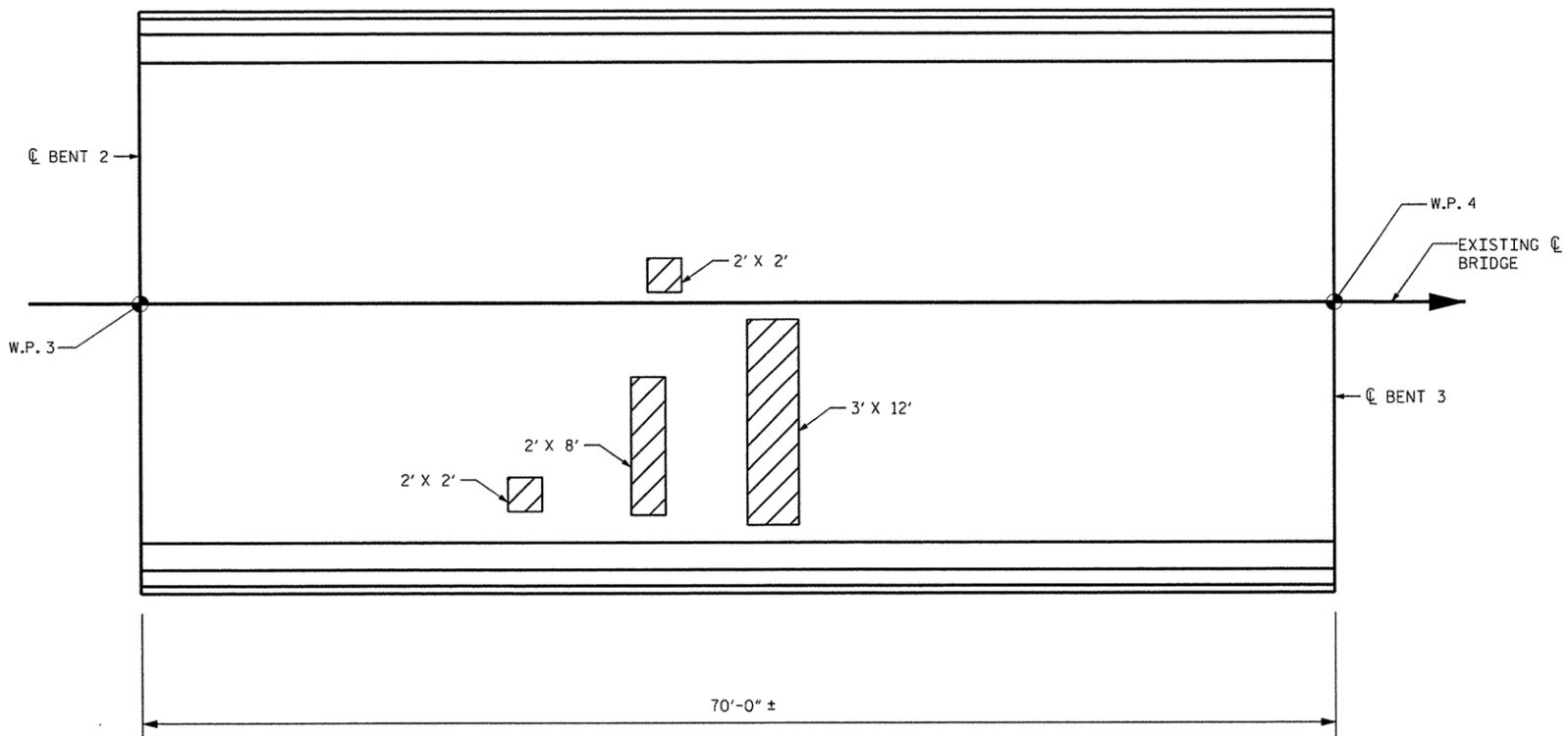
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 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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SPAN B



 CLASS II SURFACE PREPARATION

 CLASS III SURFACE PREPARATION

SPAN C

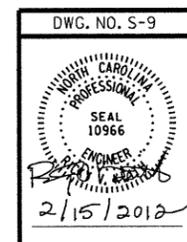
SEE SHEET S-7 FOR NOTES AND TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 7

SHEET 10 OF 13

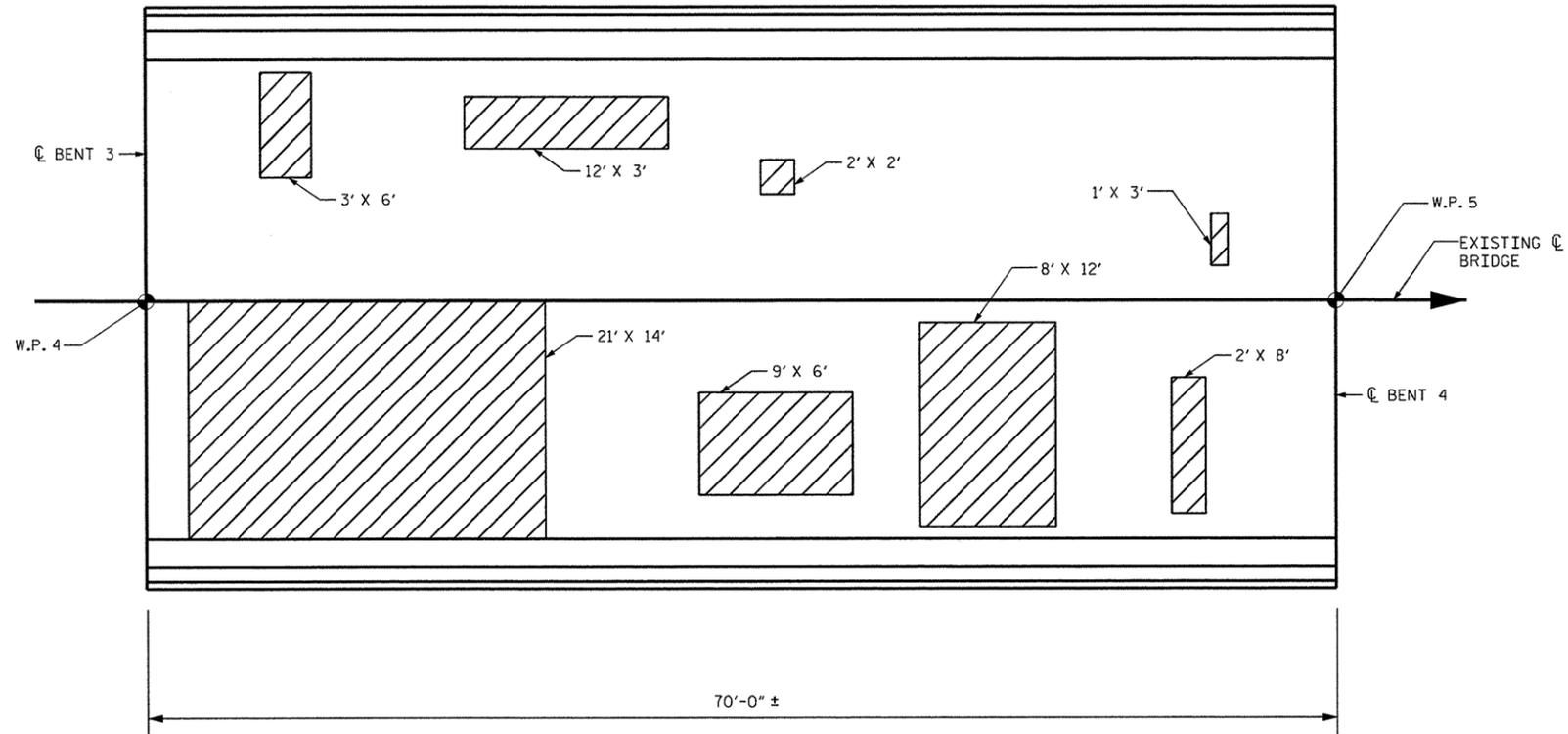
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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SPAN "C" PLAN
 SUPERSTRUCTURE REPAIR



REVISIONS						SHEET NO. S-9
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 73
2			4			

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 CHECKED BY : R.V. KEITH DATE : JAN. 2012



- CLASS II SURFACE PREPARATION
- CLASS III SURFACE PREPARATION

SPAN D

SEE SHEET S-7 FOR NOTES AND TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 7

SHEET 11 OF 13

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SPAN "D" PLAN
 SUPERSTRUCTURE REPAIR**

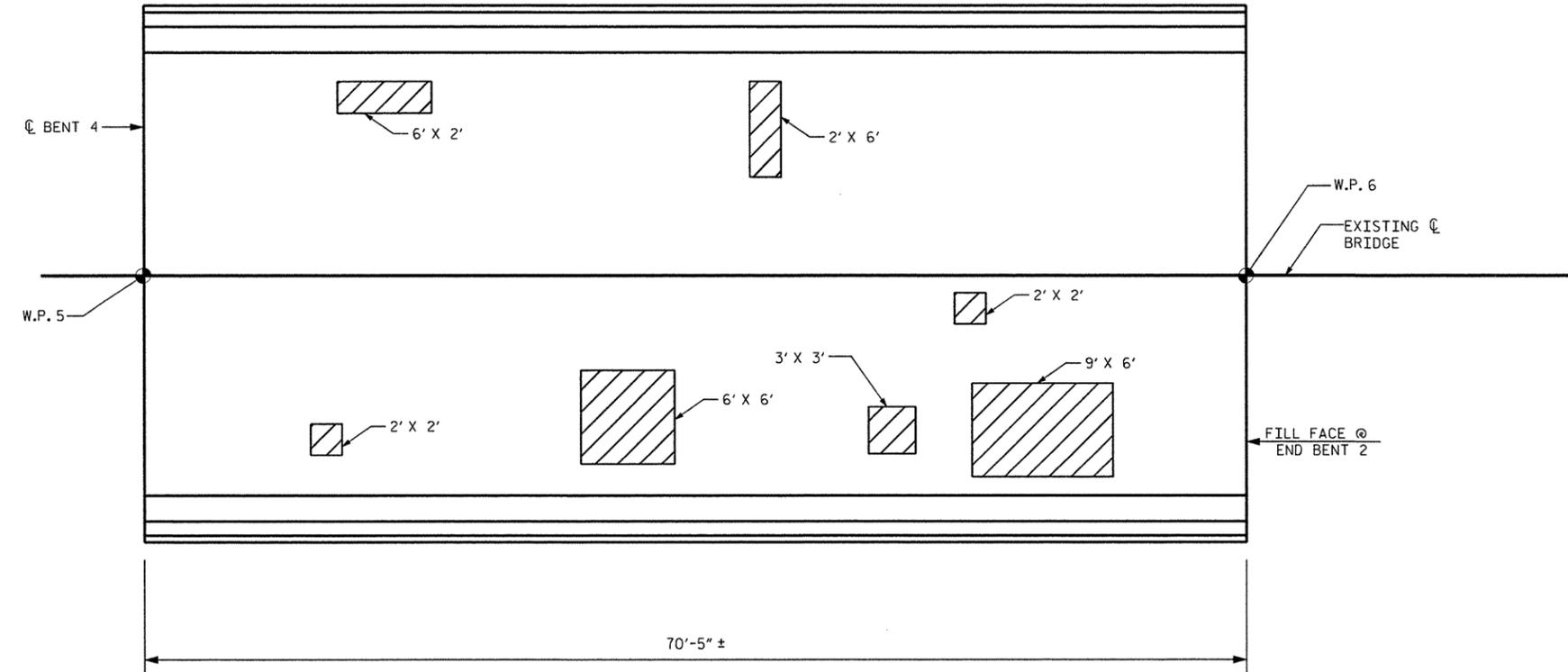
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F.D. Weeden
 2/15/2012

REVISIONS						SHEET NO.
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 CHECKED BY : R.V. KEITH DATE : JAN. 2012



-  CLASS II SURFACE PREPARATION
-  CLASS III SURFACE PREPARATION

SEE SHEET S-7 FOR NOTES AND TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 7

SHEET 12 OF 13

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SPAN "E" PLAN
 SUPERSTRUCTURE REPAIR

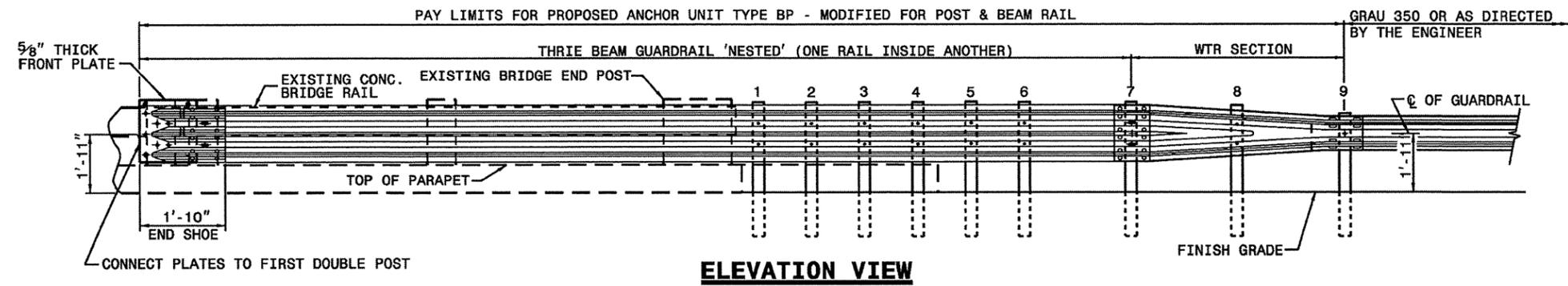
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DWG. NO. S-11

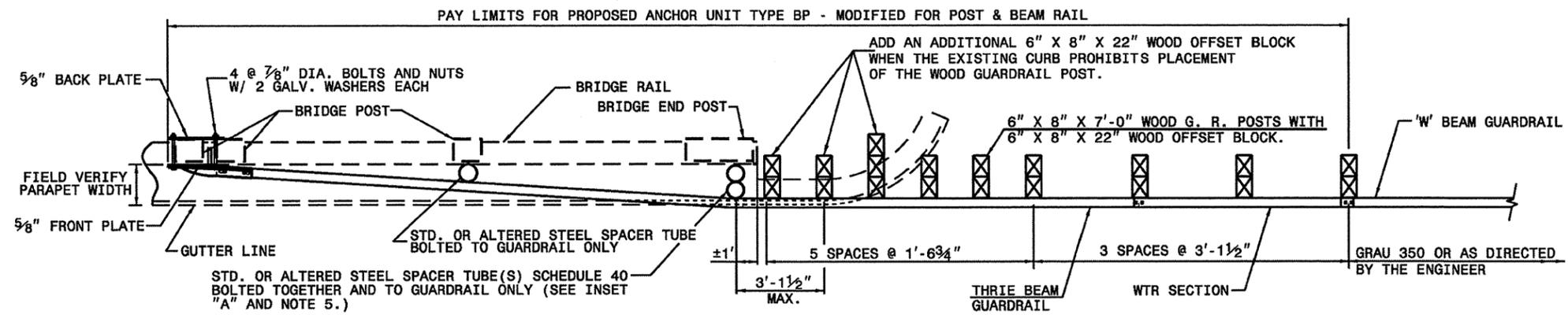


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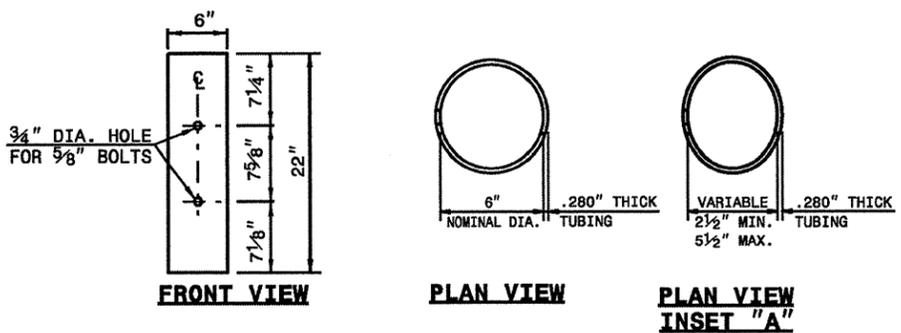
DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012



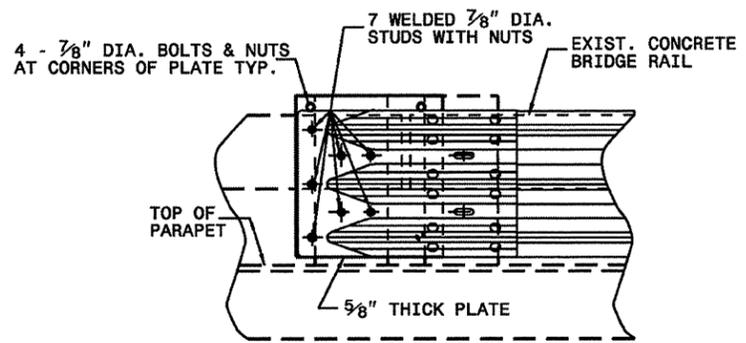
ELEVATION VIEW



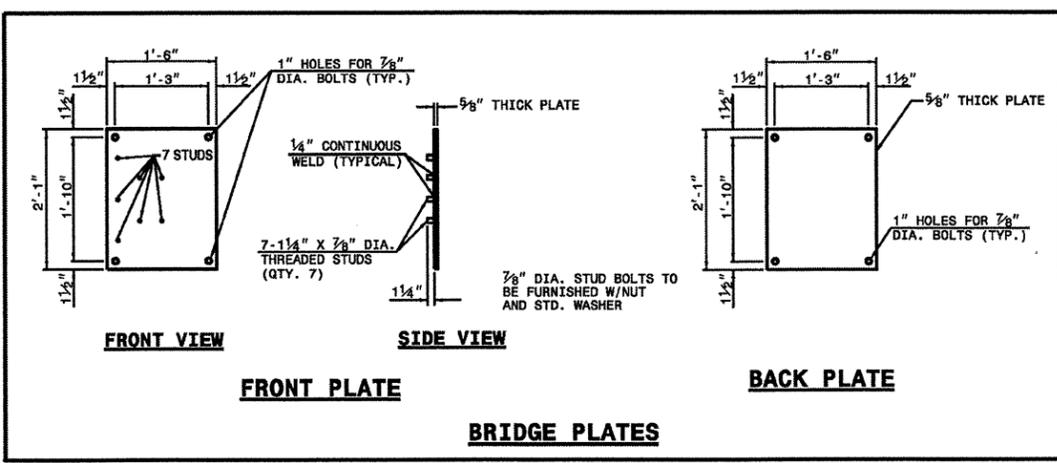
PLAN VIEW



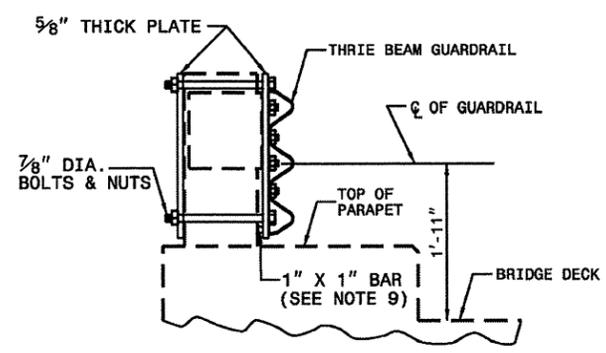
STEEL SPACER TUBE



ELEVATION VIEW



BRIDGE PLATES



SECTION VIEW

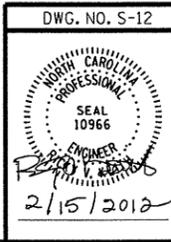
GENERAL NOTES:

- USE NUTS, BOLTS, AND WASHERS CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-307 AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
- TAP NUTS FOR THE 7/8" DIA. STUDS AND BOLTS AFTER GALVANIZING SEE A.S.T.M. A-563.
- USE PLATES AND TUBES CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-36 AND GALVANIZING AFTER FABRICATION IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
- ADDITIONAL FIELD HOLES MAY BE DRILLED IN STEEL RAIL AS DIRECTED BY THE ENGINEER.
- INSTALL FACE OF GUARDRAIL AS NEAR AS POSSIBLE TO PLUMB WITH THE PARAPET FACE AT BRIDGE END POST SPACER TUBE LOCATION BY USING STANDARD OF ALTERED SPACER TUBES OR A COMBINATION THEREOF OR AS DIRECTED BY THE ENGINEER. FOR VERY SMALL PARAPET WIDTHS, GUARDRAIL MAY BE INSTALLED AGAINST BRIDGE RAIL WITHOUT SPACER TUBES.
- DO NOT DRILL BRIDGE RAIL IN ORDER TO INSTALL GUARDRAIL ANCHOR UNIT.
- USE THIS DETAIL ONLY FOR BRIDGE WITH POST AND BEAM TYPE RAIL.
- ATTACH 1"x1" BAR AND THREADED STUDS TO PLATE WITH 1/4" WELDS ALL AROUND.
- 1"x1" BAR MAY NOT BE NEEDED ON BRIDGE RAILS WHERE FACE OF RAIL DOES NOT PROJECT BEYOND FACE OF POST.
- PROVIDE SHOP DRAWINGS OF THE PLATES TO THE ENGINEER FOR APPROVAL BEFORE FABRICATING THE PLATES.
- LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
- SEE ROADWAY STANDARD DRAWING 862.03 SHEET 3 FOR ADDITIONAL INFORMATION ON THE TYPE III ANCHOR UNIT.

PROJECT NO. 17BP.5.H.1
 WAKE COUNTY
 BRIDGE NO. 7

SHEET 13 OF 13

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 TYPE III MODIFIED
 FOR
 POST AND BEAM RAIL

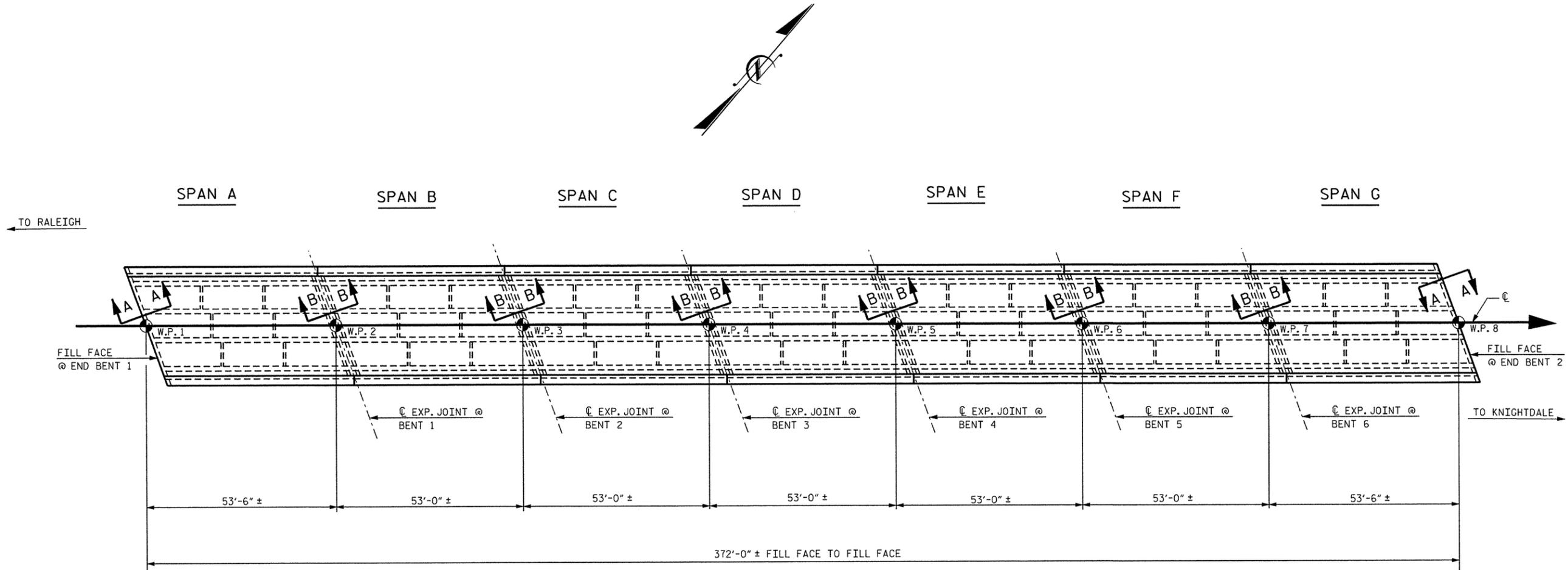


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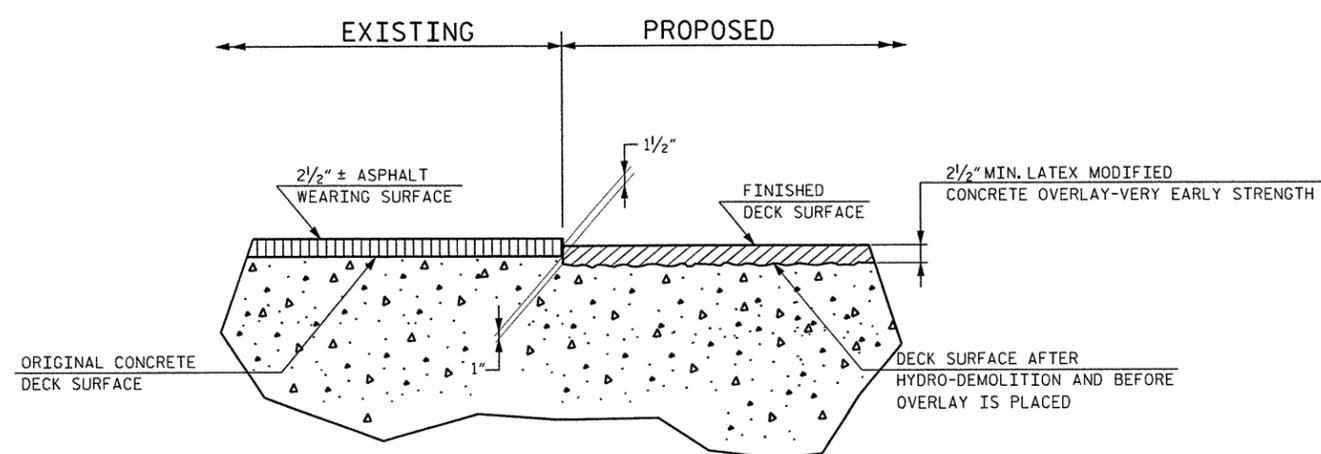
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DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

NOTE:
FOR SECTIONS A-A AND B-B, SEE DWG. NO. S-17



BRIDGE PLAN



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
BRIDGE NO. 169

SHEET 2 OF 21

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE PLAN VIEW

DWG. NO. S-14

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
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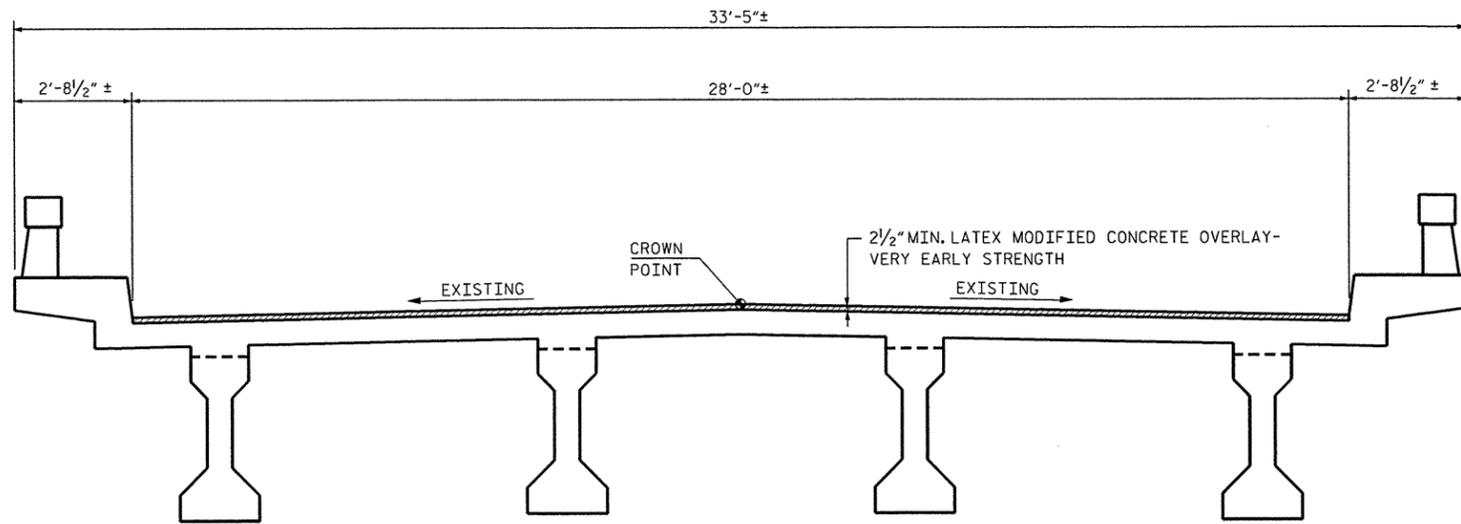
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DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
CHECKED BY : R.V. KEITH DATE : JAN. 2012

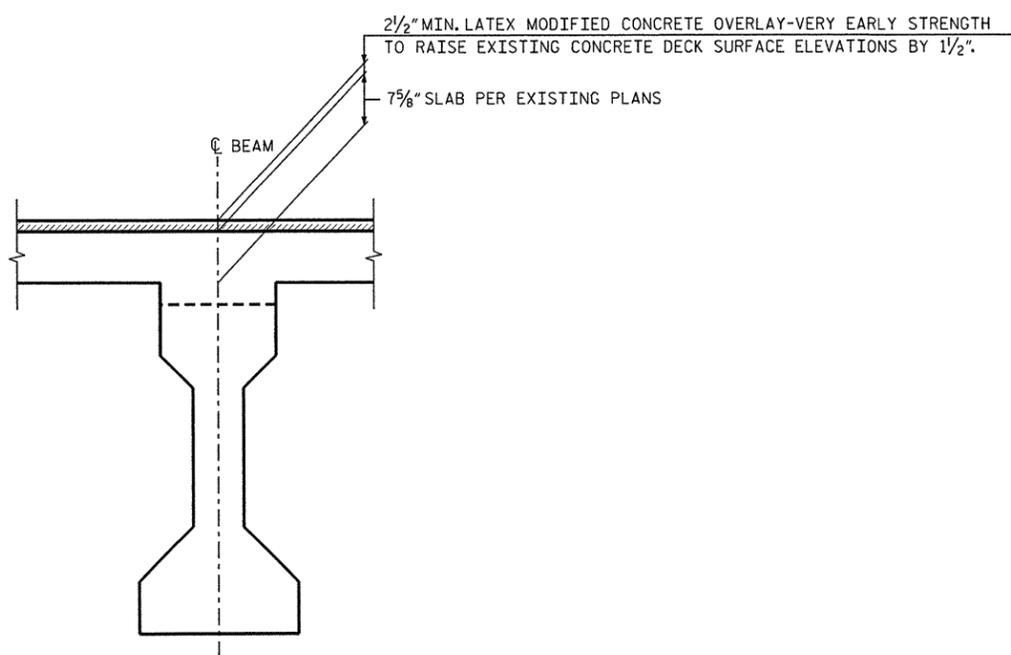
NOTE:

FOR MANAGING HYDRO-DEMOLITION WATER AND SEALING OF DECK JOINTS, SEE SPECIAL PROVISIONS.

WATER & CONCRETE SLURRY FROM HYDRO-DEMOLITION SHALL NOT BE ALLOWED TO DRAIN ACROSS TRAVEL LANES. CONTRACTOR SHALL PROVIDE A METHOD TO CONTROL THE WATER.



TYPICAL SECTION



EXISTING SLAB BUILDUP

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 169

SHEET 3 OF 21

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

DWG. NO. S-15

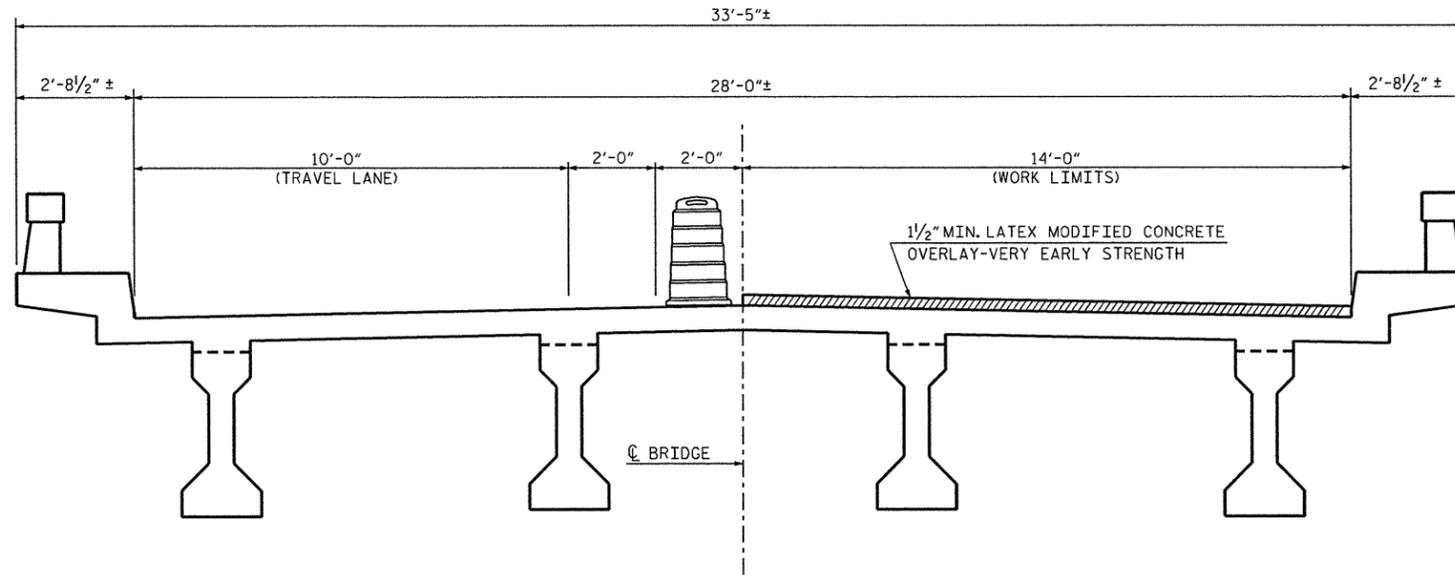
2/15/2012

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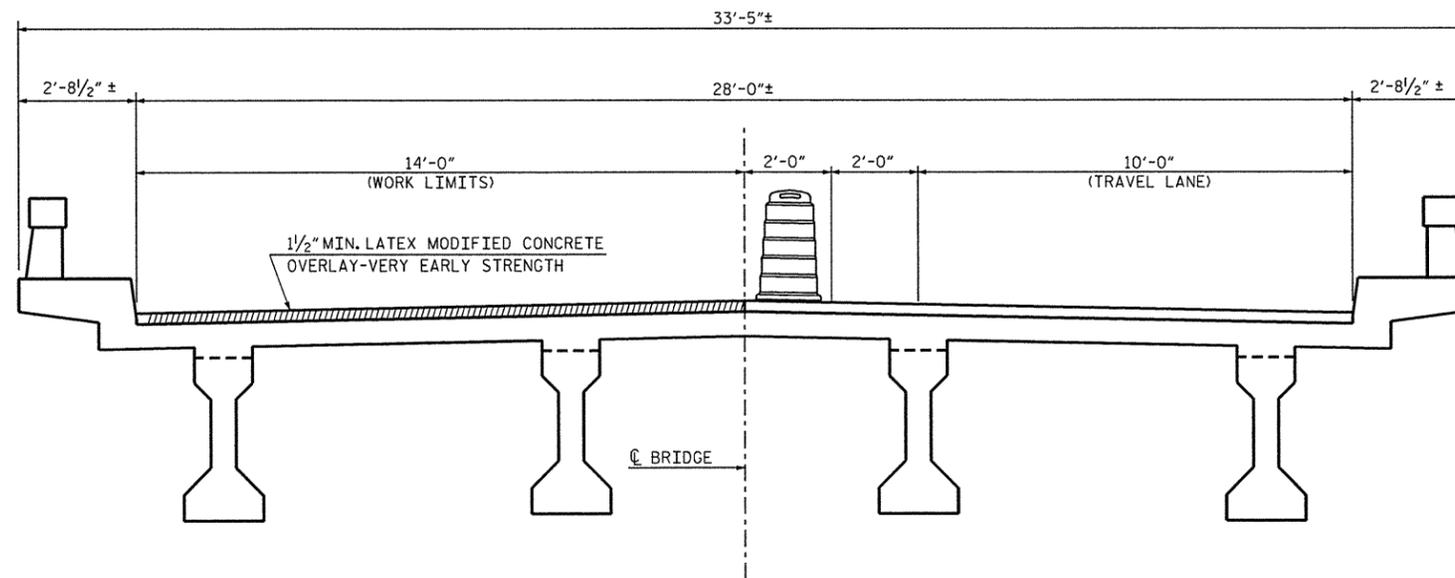
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STAGE 1 SECTION



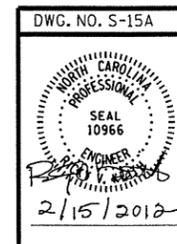
STAGE 2 SECTION

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
BRIDGE NO. 169

SHEET 4 OF 21

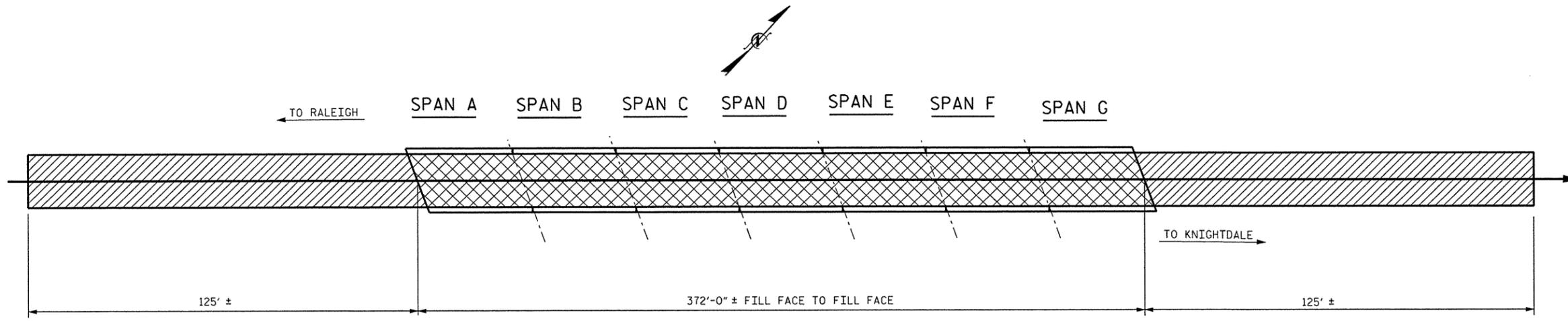
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STAGING SECTIONS



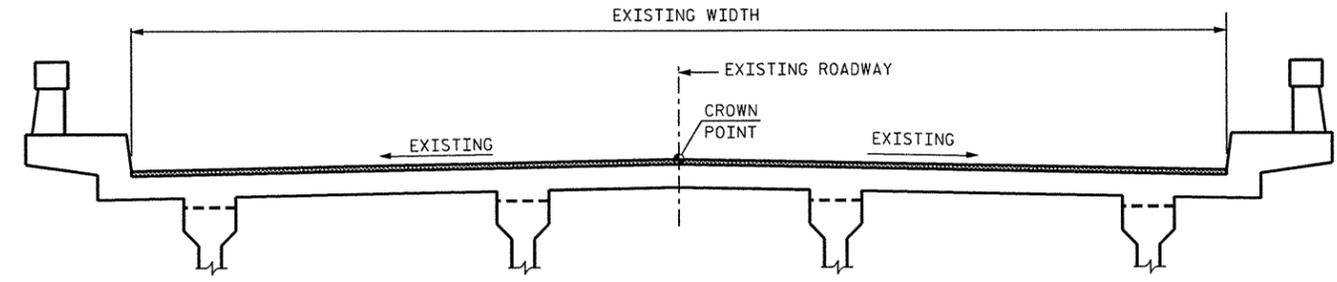
DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
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REVISIONS						SHEET NO.	
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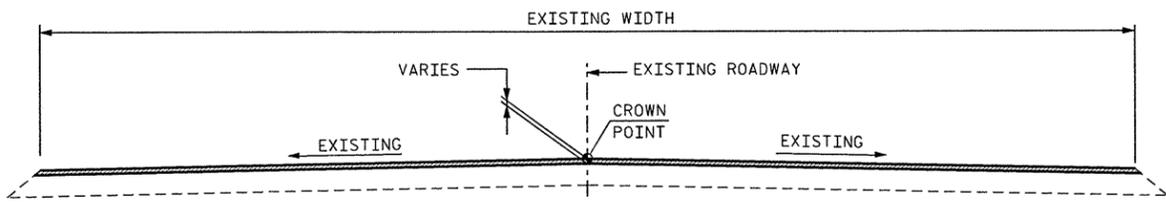
BRIDGE PLAN

- INCIDENTAL MILLING
- ASPHALT MILLING, DECK SCARIFICATION AND HYDRO-DEMOLITION



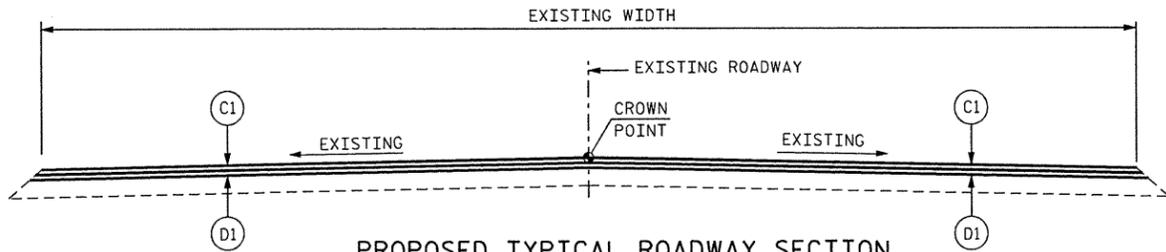
TYPICAL BRIDGE MILLING SECTION

(REMOVE ASPHALT OVERLAY BY MILLING. REMOVE 1" OF DEPTH OF CONCRETE BRIDGE DECK BY HYDRO-DEMOLITION)



TYPICAL ROADWAY MILLING SECTION

(MILL TO 5" DEPTH MAX. AT BRIDGE, TAPER TO 4" MIN. AT EXISTING ROADWAY SURFACE)



PROPOSED TYPICAL ROADWAY SECTION

- (C1) PROPOSED APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
- (D1) PROPOSED APPROX. 2 1/2" INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.

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STATE OF NORTH CAROLINA
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 RALEIGH

ROADWAY TYPICAL SECTION
 AND
 MILLING DETAILS

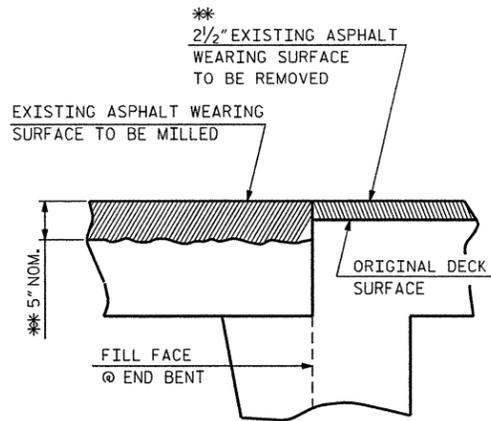
DWG. NO. S-16

REVISIONS						SHEET NO.
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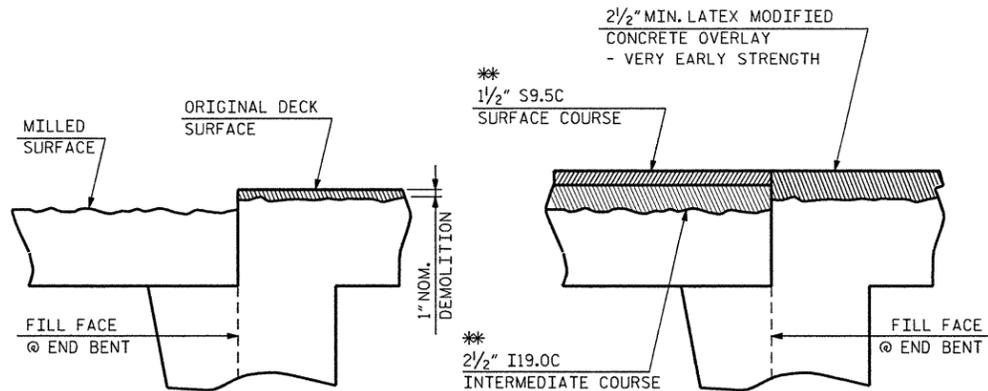
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DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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SECTION A-A
(ASPHALT MILLING OF EXISTING)
** SEE TRAFFIC CONTROL PLANS SHEETS TCP 5, 6, 7 FOR DETAILS



SECTION A-A
(MINIMUM DEMOLITION)
END BENT 1 AND 2

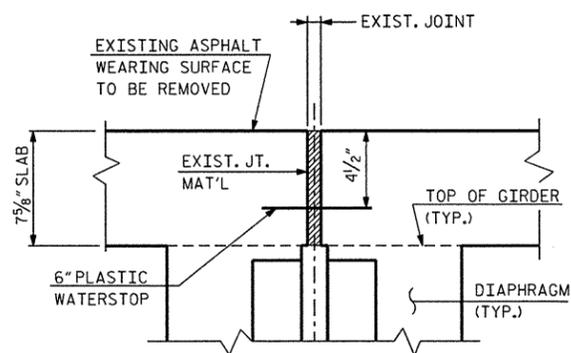
SECTION A-A
(PROPOSED)

ELASTOMERIC CONCRETE	
BENT NO.	ELASTOMERIC CONCRETE *** (CU. FT.)
1	8
2	8
3	8
4	8
5	8
6	8
TOTAL	48

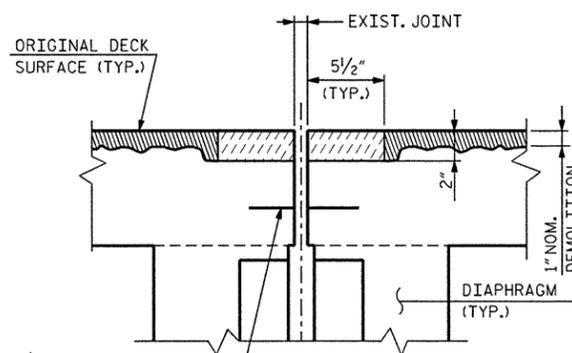
*** BASED ON THE MINIMUM BLOCKOUT SHOWN.

NOTES:

- RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS REQUIRED.
- REMOVE EXISTING JOINT SEAL MATERIAL.
- CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING STEEL.
- THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.

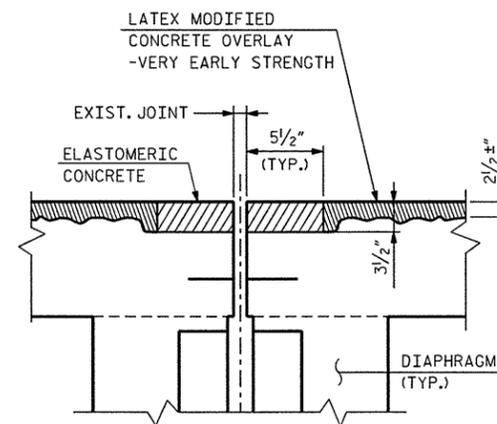


SECTION B-B
(EXISTING JOINT)

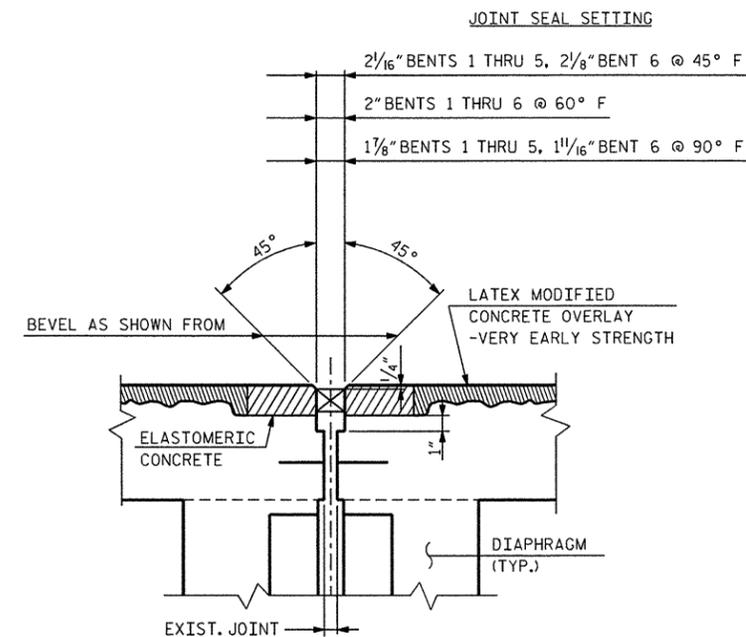


* WATERSTOP TO BE CUT FLUSH WITH JOINT

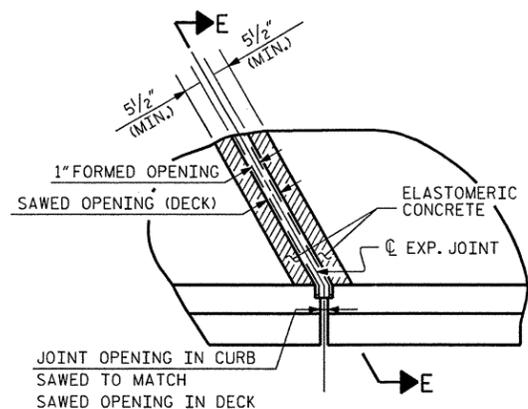
SECTION B-B
(MINIMUM EXISTING JOINT DEMOLITION)



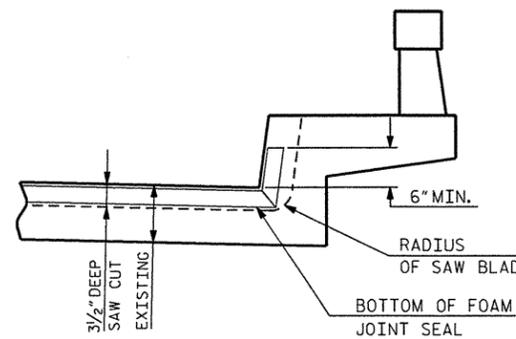
SECTION B-B
(PROPOSED JOINT PRE-SAWED)



SECTION B-B
(PROPOSED FOAM JOINT SEAL EXPANSION)
USE 2 1/2" WIDTH UNCOMPRESSED FOAM JOINT SEAL MATERIAL.



PARTIAL PLAN AT JOINT



SECTION E-E

FOAM JOINT SEAL TO BE CUT, HEAT WELDED AND TURNED UP PARALLEL TO SLOPE FACE OF BARRIER RAIL.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
BRIDGE NO. 169

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STATE OF NORTH CAROLINA
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RALEIGH

JOINT DETAILS

DWG. NO. S-17

DRAWN BY: F.D. WEEDEN DATE: JAN. 2012
CHECKED BY: R.V. KEITH DATE: JAN. 2012

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1			3			TOTAL SHEETS 73	
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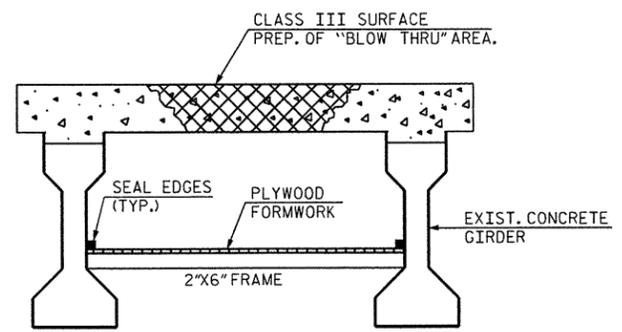
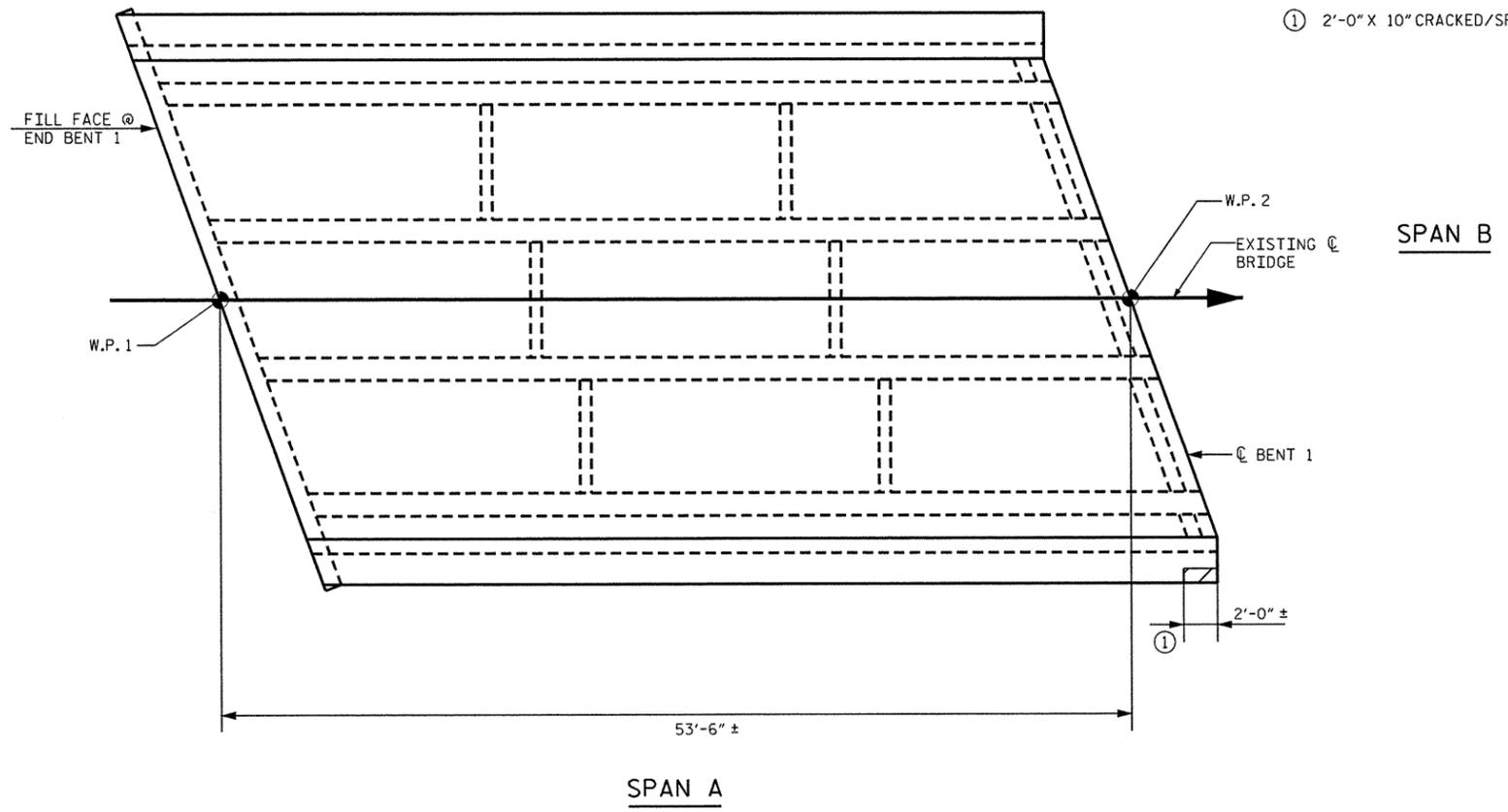


NOTES:

CLASS II & III SURFACE PREPARATION AREAS SHALL BE DETERMINED IN THE FIELD.
 CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.
 SUBMIT DETAILS OF PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.

UNDER-DECK REPAIR NOTES

- ① 2'-0" X 10" CRACKED/SPALLED AREA DUE TO IMPACT, SIDE/BOTTOM OF PARAPET



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

THE CONTRACTOR SHALL PROVIDE A METHOD TO CAPTURE WATER AND DEBRIS FROM UNEXPECTED BLOW THRU OF THE DECK DURING HYDRO-DEMOLITION.

COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE PER SQ. YD. OF HYDRO-DEMOLITION.

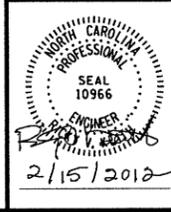
PROJECT NO. 17BP.5.H.1
 WAKE COUNTY
 BRIDGE NO. 169

SHEET 7 OF 21

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SPAN "A" PLAN
 SUPERSTRUCTURE REPAIR**

DWG. NO. S-18



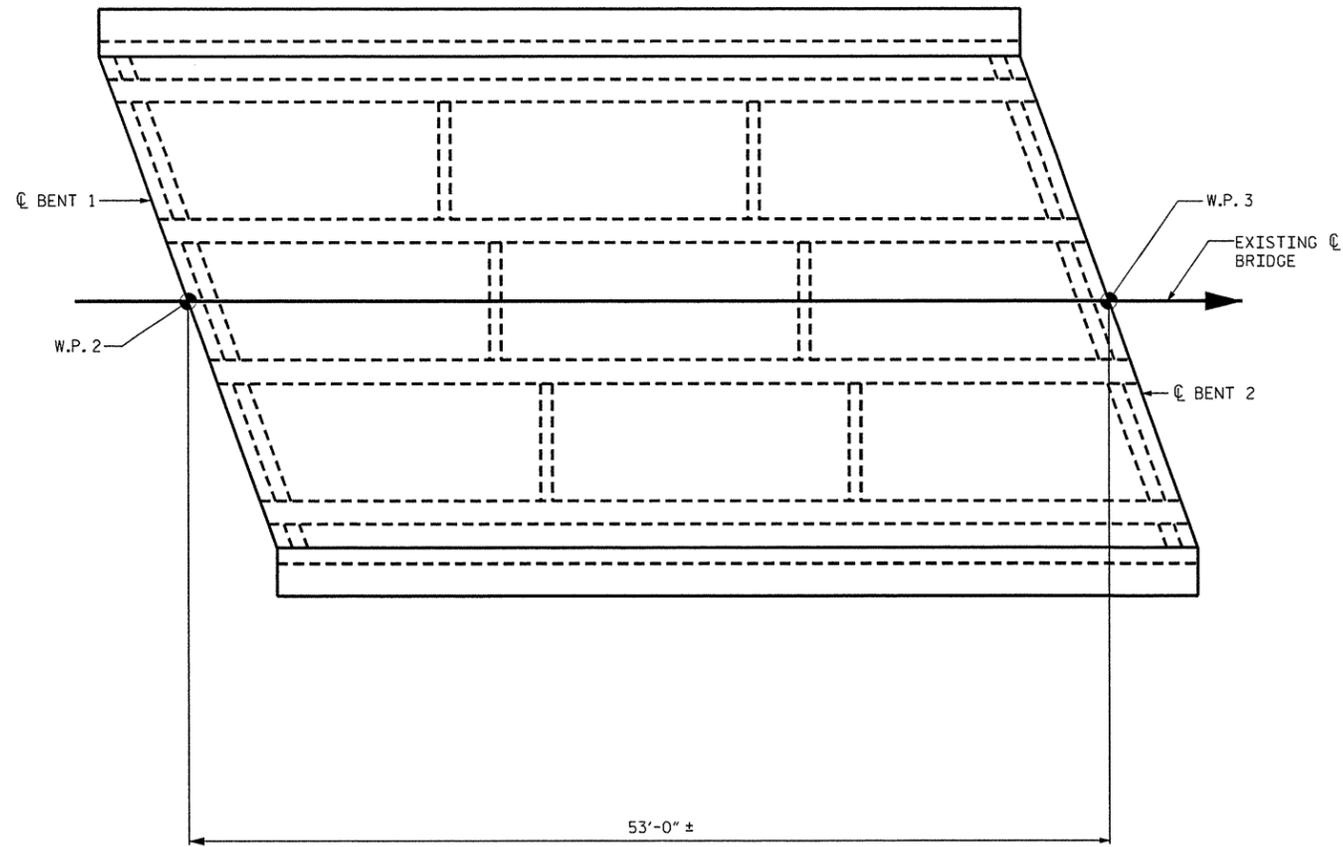
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DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012



SPAN A



SPAN C

SPAN B

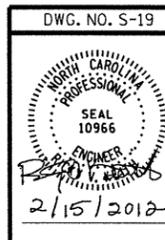
SEE SHEET S-18 FOR NOTES AND TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 169

SHEET 8 OF 21

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SPAN "B" PLAN
 SUPERSTRUCTURE REPAIR

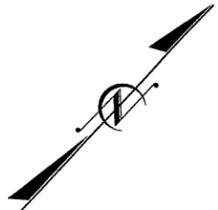


REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-19	
1			3			TOTAL SHEETS	
2			4			73	

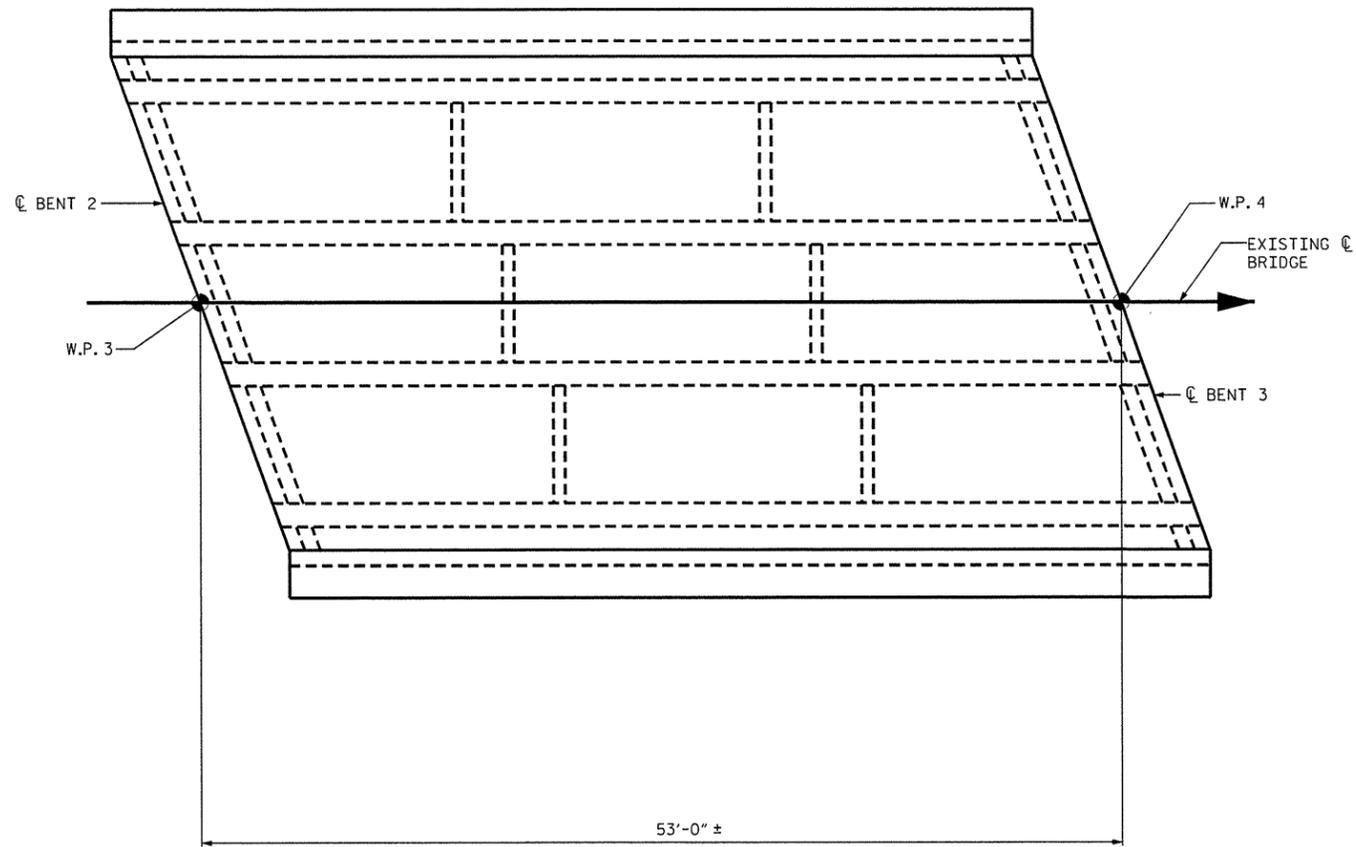
DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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SPAN B



SPAN C

SEE SHEET S-18 FOR NOTES AND TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK.

SPAN D

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 169

SHEET 9 OF 21

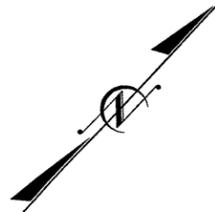
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SPAN "C" PLAN
 SUPERSTRUCTURE REPAIR

DWG. NO. S-20

2/15/2012

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

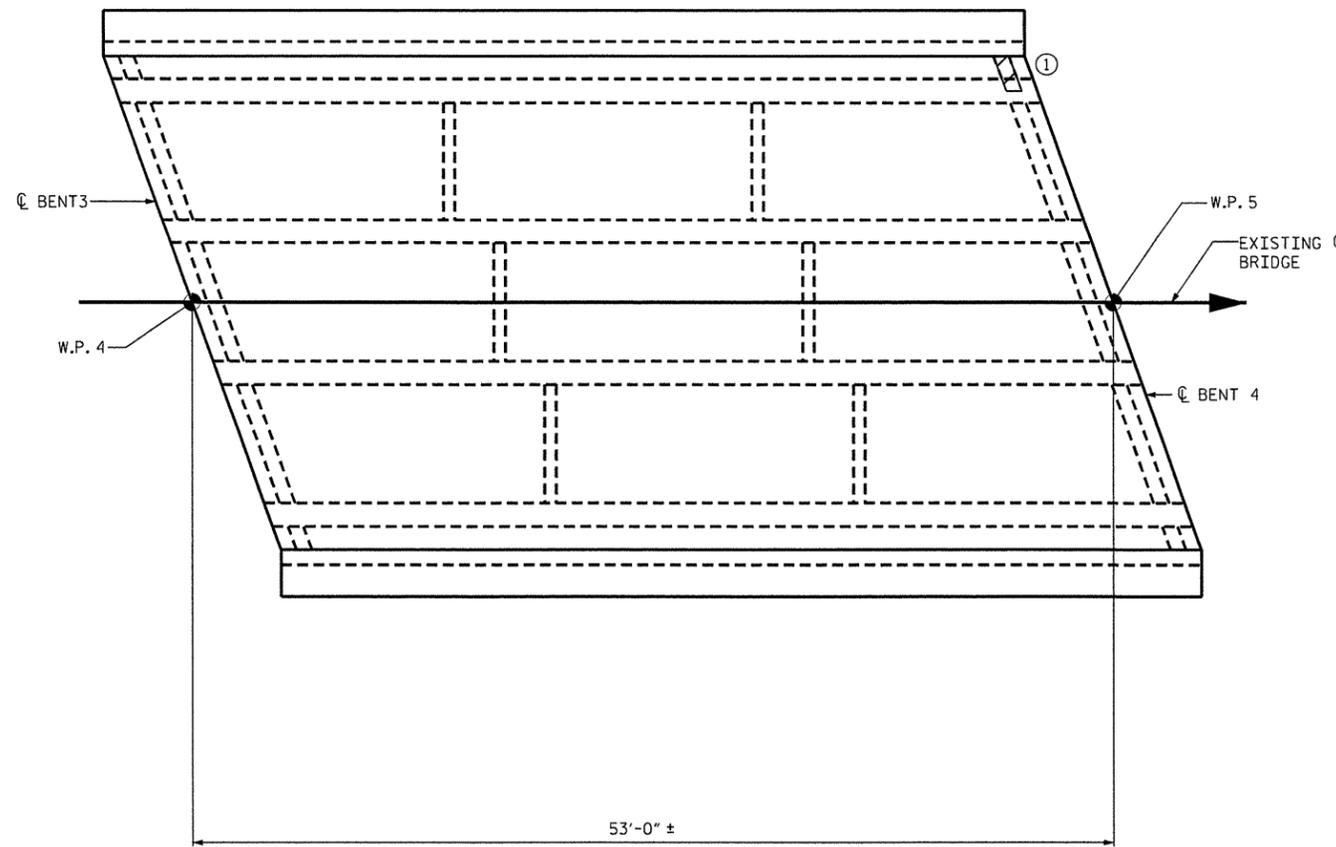
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-20	
1			3			TOTAL SHEETS	73
2			4				



UNDER-DECK REPAIR NOTES

- ① 3'-0" X 10" SPALLED AREA WITH EXPOSED REBAR ON DIAPHRAGM EXTENSION

SPAN C



SPAN E

SPAN D

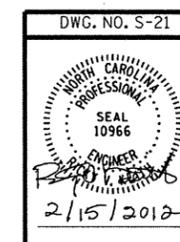
SEE SHEET S-18 FOR NOTES AND TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK.

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PROJECT NO. 17BP.5.H.1
WAKE COUNTY
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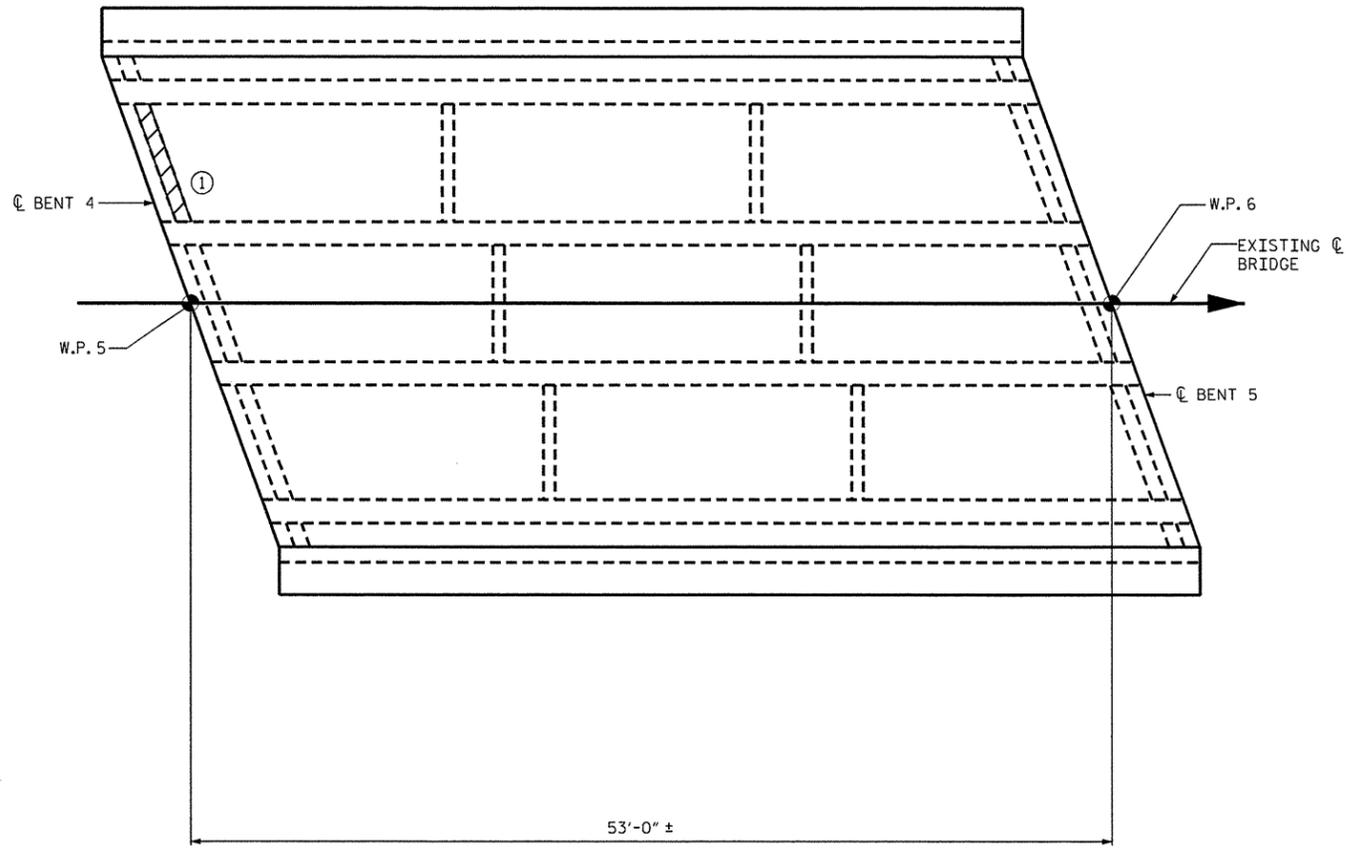
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SPAN "D" PLAN SUPERSTRUCTURE REPAIR					
DWG. NO. S-21					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
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UNDER-DECK REPAIR NOTES

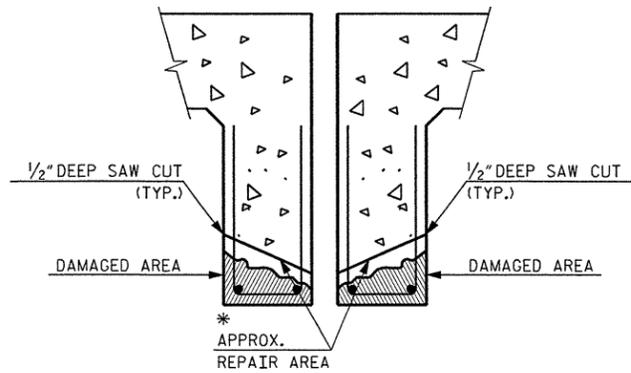
① 1'-0" X 7'-0" DIAPHRAGM SPALLED ALONG BOTTOM EDGE

SPAN D



SPAN E

SEE SHEET S-18 FOR NOTES AND TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK.



INTERIOR DIAPHRAGM REPAIR DETAIL

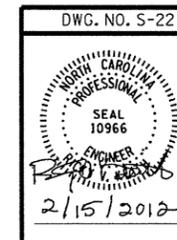
* REMOVE TO SOUND CONCRETE A MINIMUM OF ONE INCH BEHIND REBAR

PROJECT NO. 17BP.5.H.1
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SPAN "E" PLAN
SUPERSTRUCTURE REPAIR

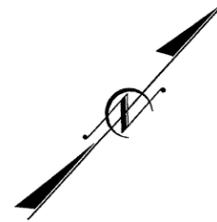


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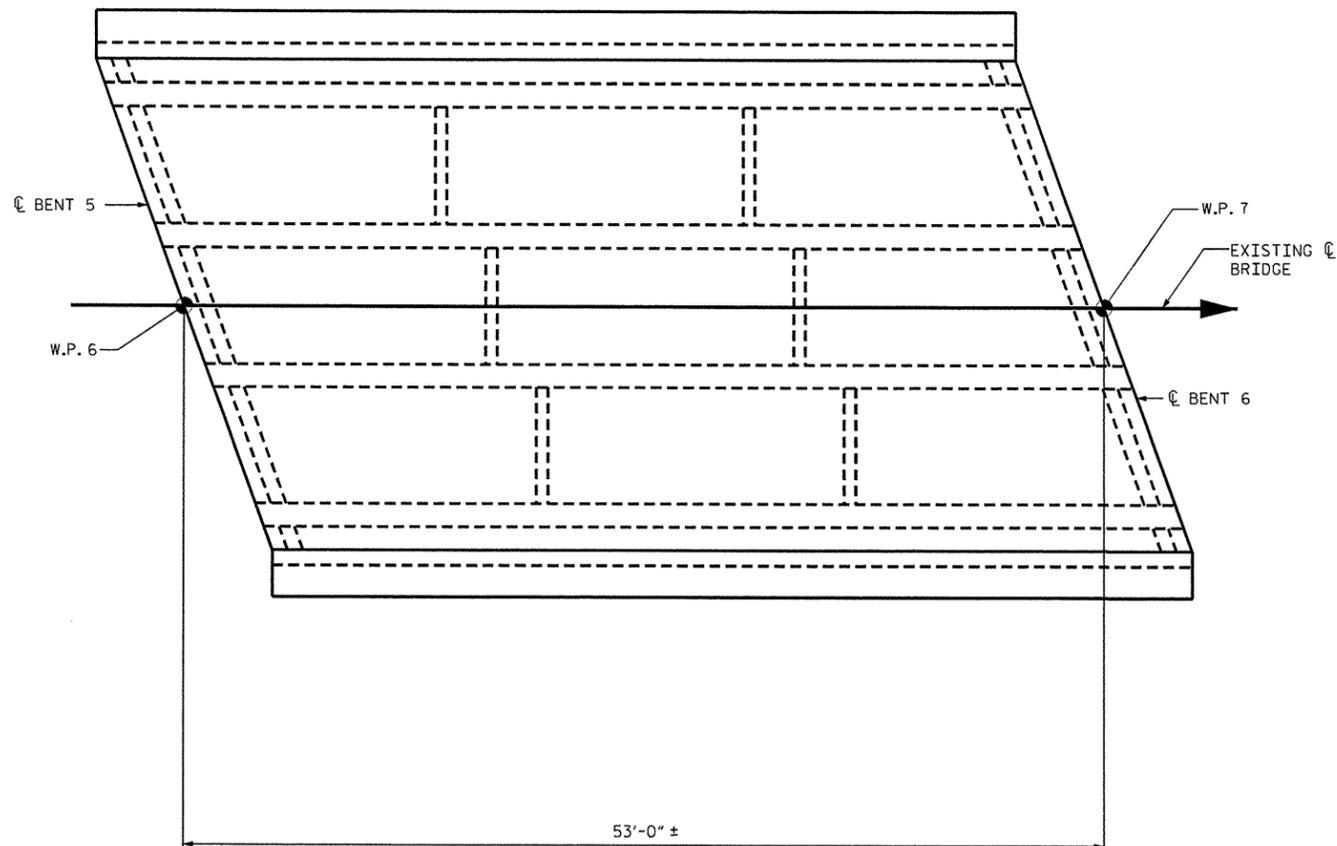
DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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SPAN E



SPAN G

SPAN F

53'-0" ±

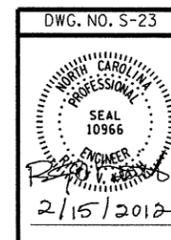
SEE SHEET S-18 FOR NOTES AND TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
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SHEET 12 OF 21

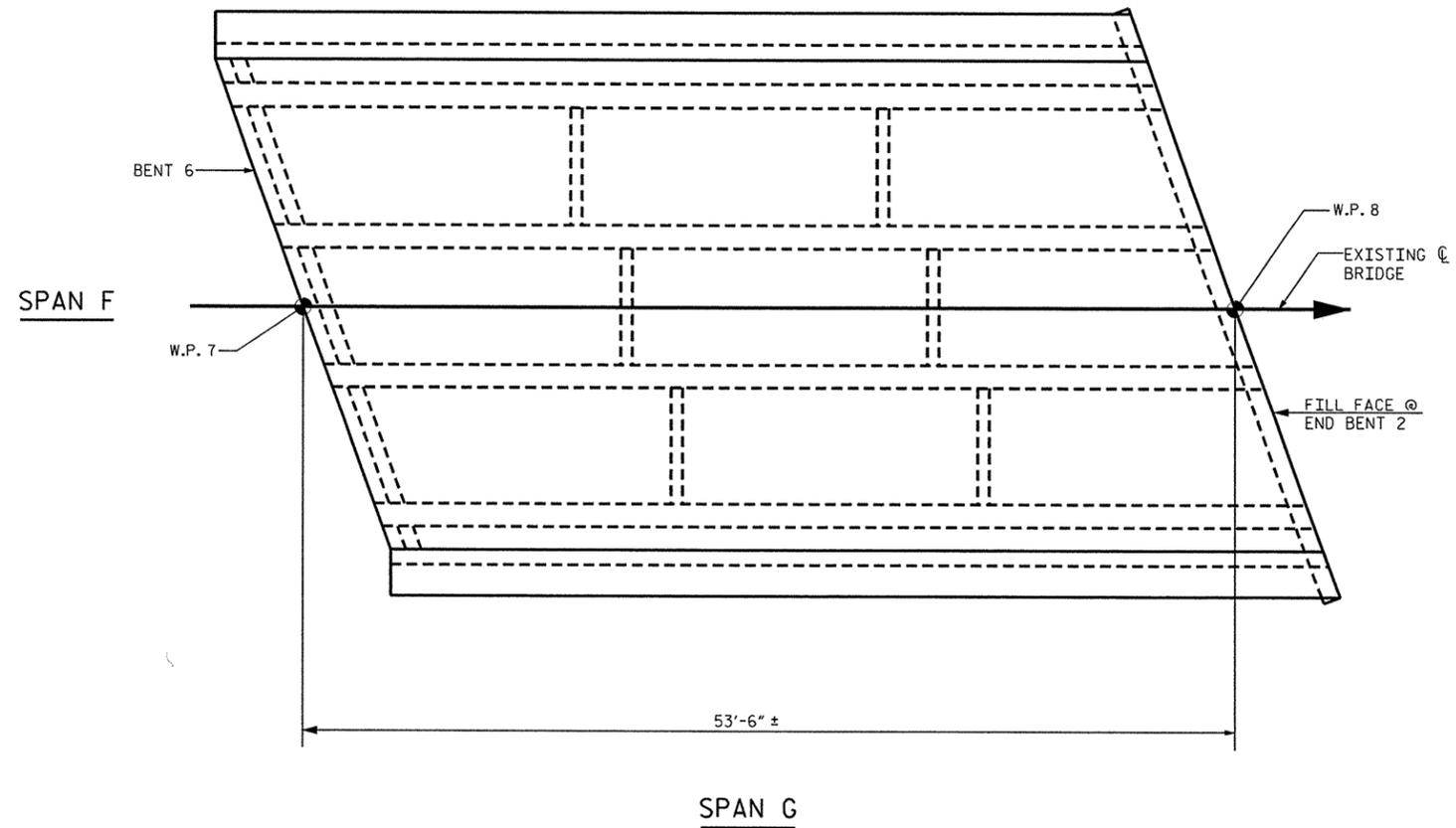
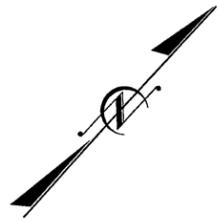
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SPAN "F" PLAN
 SUPERSTRUCTURE REPAIR



DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-23	
1			3			TOTAL SHEETS	
2			4			73	

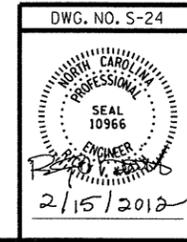


SEE SHEET S-18 FOR NOTES AND TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
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SHEET 13 OF 21

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SPAN "G" PLAN
 SUPERSTRUCTURE REPAIR



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-24
1			3			TOTAL SHEETS
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REPAIR NOTES:

- ① 10'-0" HORIZONTAL CRACK
- ② 10'-0" HORIZONTAL CRACK

GENERAL NOTES:

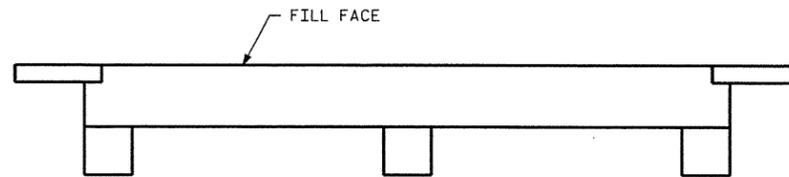
SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

CRACKS IN FACE OF END BENT CAP 5 MILS WIDE OR GREATER SHALL BE REPAIRED USING EPOXY RESIN INJECTION.

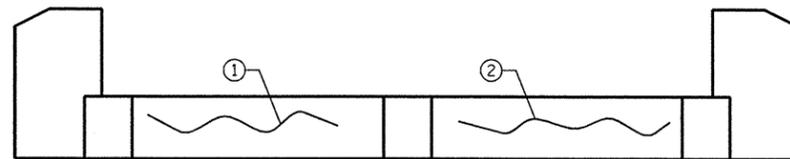
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR ANY CRACK, VOID, HONEYCOMB OR SPALL AREA UNSUITABLE FOR REPAIR BY EPOXY RESIN INJECTION WITH EPOXY MORTAR REPAIR.

FOR "EPOXY MORTAR REPAIR", SEE SPECIAL PROVISIONS.



END BENT 1 REPAIRS - PLAN



END BENT 1 REPAIRS - ELEVATION (SPAN A SIDE)

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WAKE COUNTY
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DWG. NO. S-25

2/15/2012

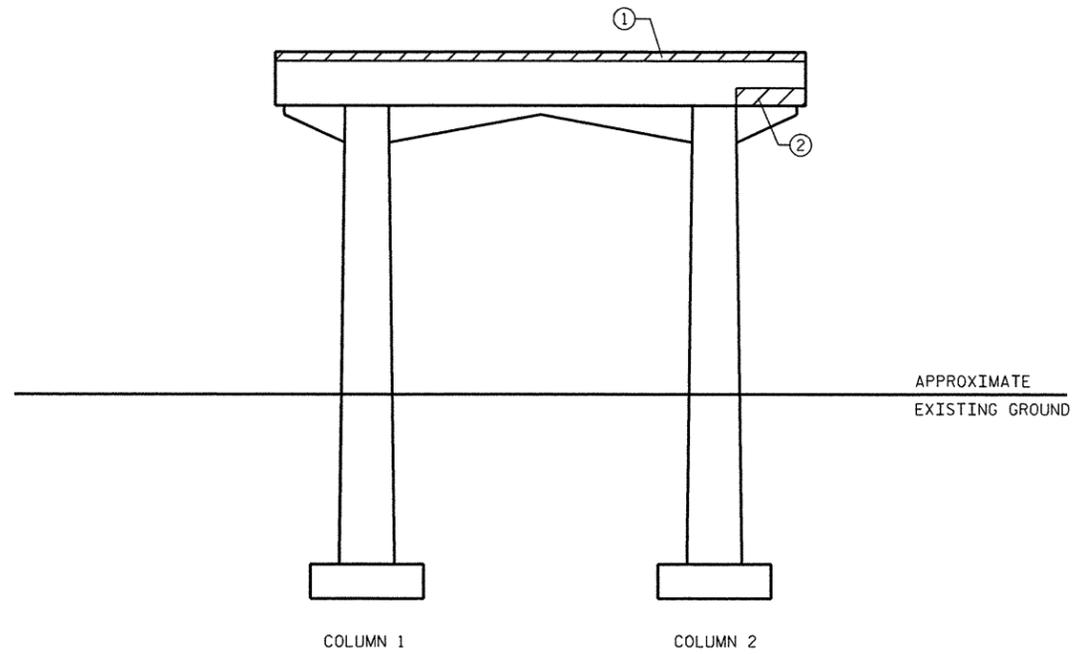
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**END BENT 1 REPAIRS
 ELEVATION**

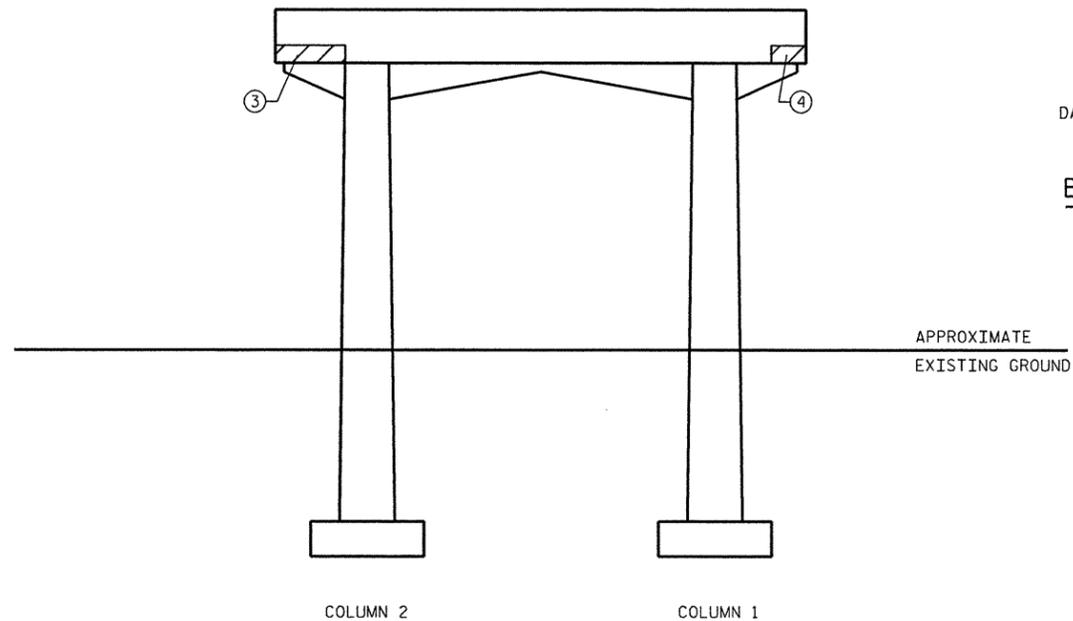
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-25	
1			3			TOTAL SHEETS	73
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DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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BENT 1 REPAIRS - ELEVATION (SPAN A SIDE)



BENT 1 REPAIRS - ELEVATION (SPAN B SIDE)

REPAIR NOTES:

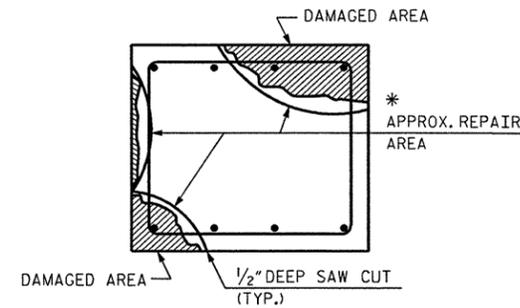
- ① 30'-0" X 3'-0" DELAMINATED AREA WITH SOME SPALLS, TOP OF CAP
- ② 4'-0" X 1'-0" CRACKED AREA, BOTTOM FACE OF CAP
- ③ 4'-0" X 1'-0" CRACKED AREA, BOTTOM FACE OF CAP
- ④ 2'-0" X 1'-0" CRACKED AREA, BOTTOM FACE OF CAP

GENERAL NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISIONS FOR "SHOTCRETE REPAIR" AND CONCRETE REPAIR".

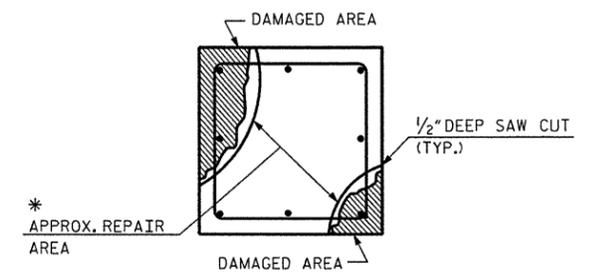
SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. SEE SPECIAL PROVISION FOR "CONCRETE REPAIR".



BENT CAP/STRUT REPAIR DETAIL

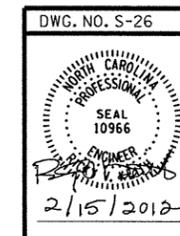
* REMOVE TO SOUND CONCRETE A MINIMUM OF ONE INCH BEHIND REBAR



COLUMN REPAIR DETAIL

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 169

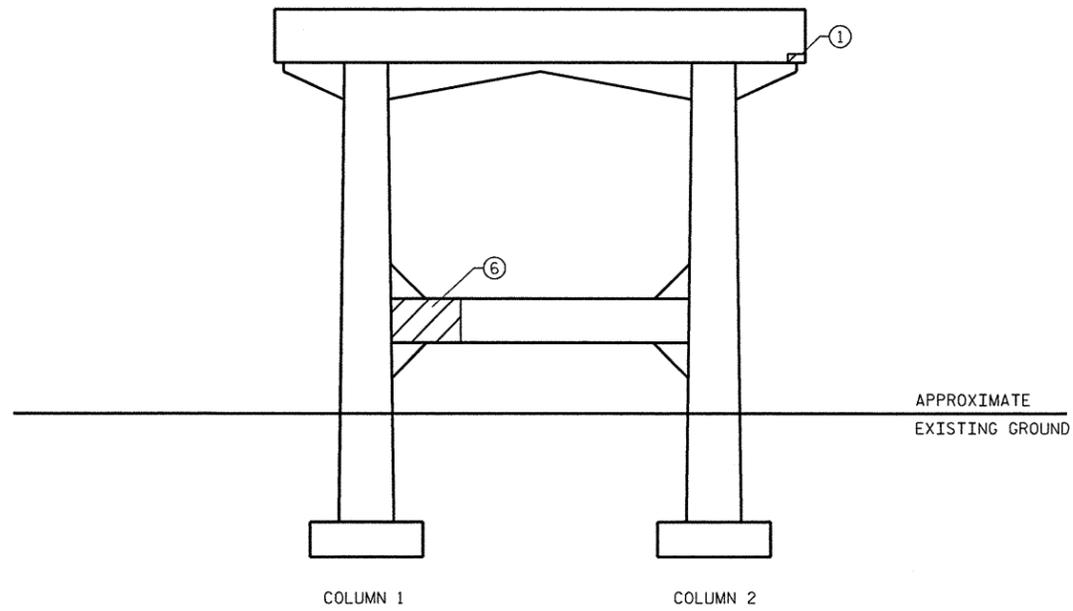
SHEET 15 OF 21



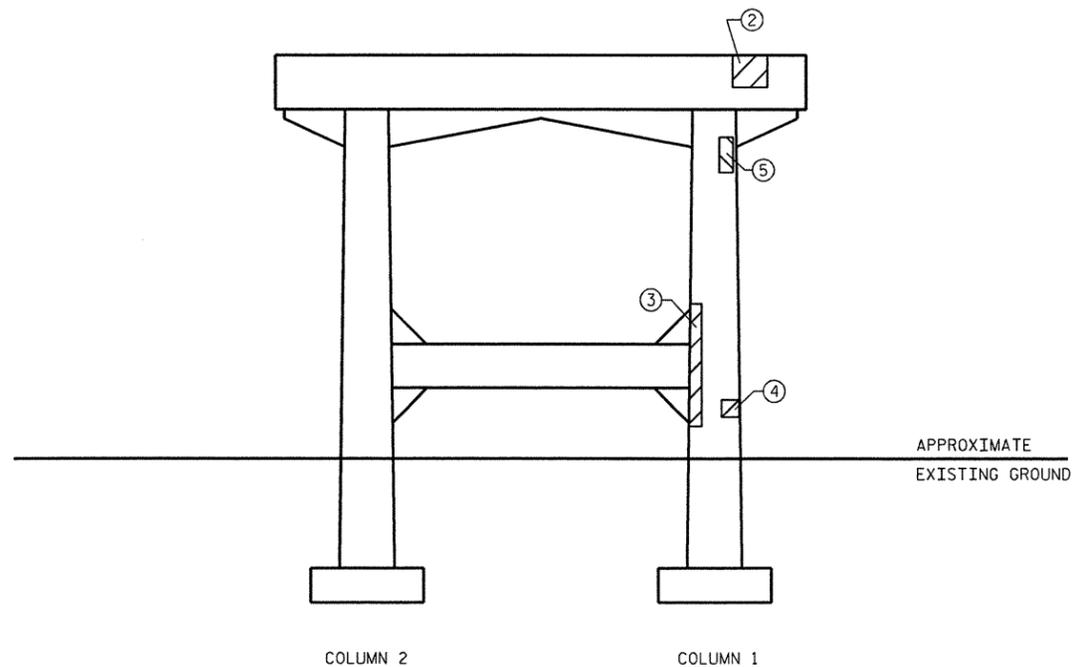
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BENT 1 REPAIRS ELEVATION					
DWG. NO. S-26					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-26
					TOTAL SHEETS 73

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
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BENT 2 REPAIRS - ELEVATION (SPAN B SIDE)



BENT 2 REPAIRS - ELEVATION (SPAN C SIDE)

REPAIR NOTES:

- ① 1'-0" X 1'-0" SPALL WITH EXPOSED REBAR UNDERSIDE OF CAP
- ② 2'-0" X 2'-0" SPALL/DELAMINATED AREA UNDER GIRDER 4, TOP OF CAP
- ③ 1'-0" X 7'-0" CRACK/SPALL IN COLUMN AT STRUT
- ④ 1'-0" X 1'-0" CRACK/SPALL, SIDE FACE OF COLUMN
- ⑤ 1'-0" X 2'-0" CRACK/SPALL
- ⑥ 4'-0" X 2'-0" SPALL WITH EXPOSED REBAR

GENERAL NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISIONS FOR "SHOTCRETE REPAIR" AND CONCRETE REPAIR".

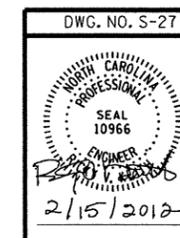
SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. SEE SPECIAL PROVISION FOR "CONCRETE REPAIR".

FOR BENT CAP/ STRUT REPAIR DETAIL AND COLUMN REPAIR DETAIL, SEE SHEET S-26.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
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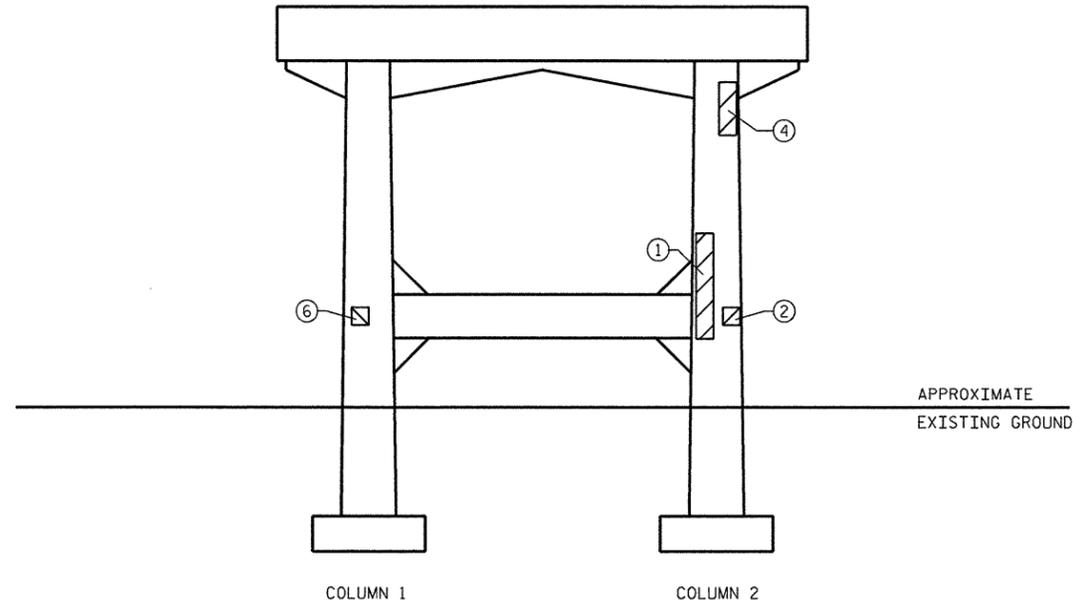
SHEET 16 OF 21



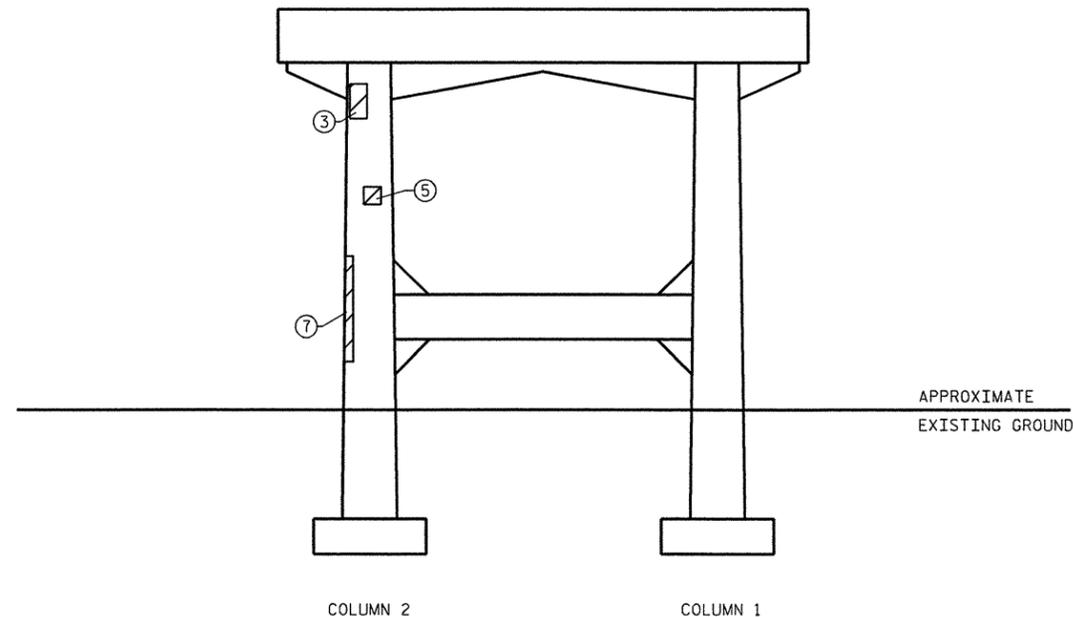
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
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DWG. NO. S-27					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
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DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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BENT 3 REPAIRS - ELEVATION (SPAN C SIDE)



BENT 3 REPAIRS - ELEVATION (SPAN D SIDE)

REPAIR NOTES:

- ① 1'-0" X 6'-0" CRACKED/DELAMINATED AREA, CORNER OF COLUMN
- ② 1'-0" X 1'-0" CRACK/SPALL, SIDE OF COLUMN
- ③ 2'-0 X 1'-0" CRACKED/DELAMINATED AREA, CORNER OF COLUMN
- ④ 3'-0" X 1'-0" CRACKED/DELAMINATED AREA, CORNER OF COLUMN
- ⑤ 1'-0" X 1'-0" SPALL WITH EXPOSED REBAR, IN COLUMN 2 (LOCATE IN FIELD)
- ⑥ 1'-0" X 1'-0" SPALL
- ⑦ DUAL 6'-0" VERTICAL CRACKS AND 1'-0" X 1'-0" SPALL WITH EXPOSED REBAR, SIDE OF COLUMN

GENERAL NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISIONS FOR "SHOTCRETE REPAIR" AND CONCRETE REPAIR".

SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. SEE SPECIAL PROVISION FOR "CONCRETE REPAIR".

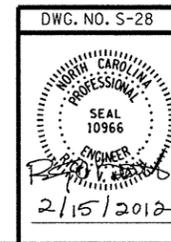
FOR BENT CAP/ STRUT REPAIR DETAIL AND COLUMN REPAIR DETAIL, SEE SHEET S-26.

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WAKE COUNTY
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STATE OF NORTH CAROLINA
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 RALEIGH

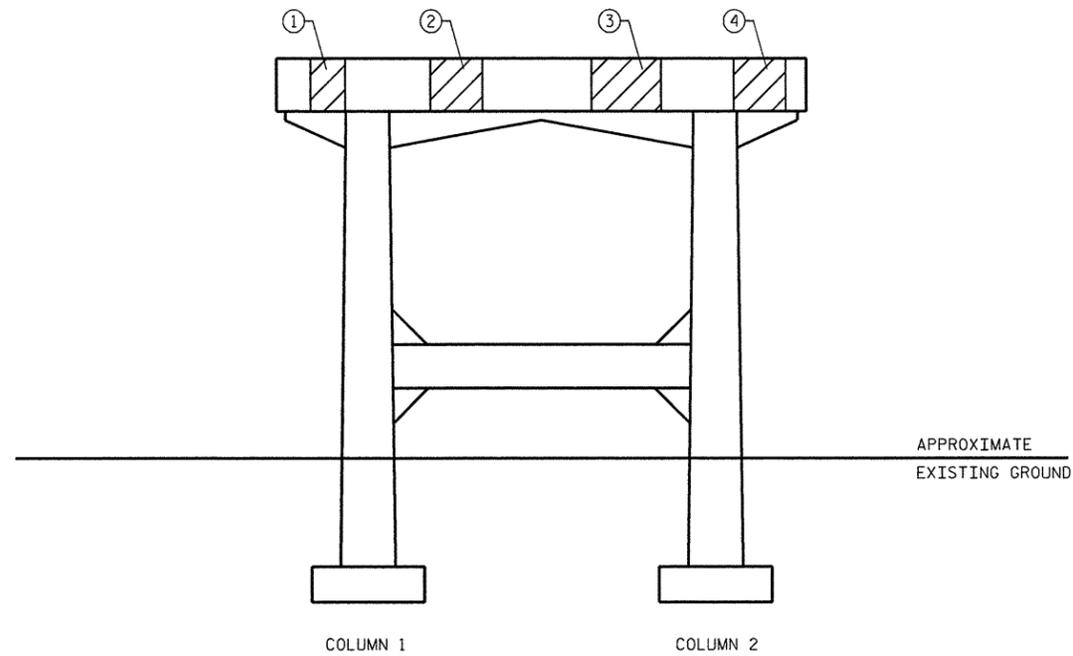
**BENT 3 REPAIRS
 ELEVATION**



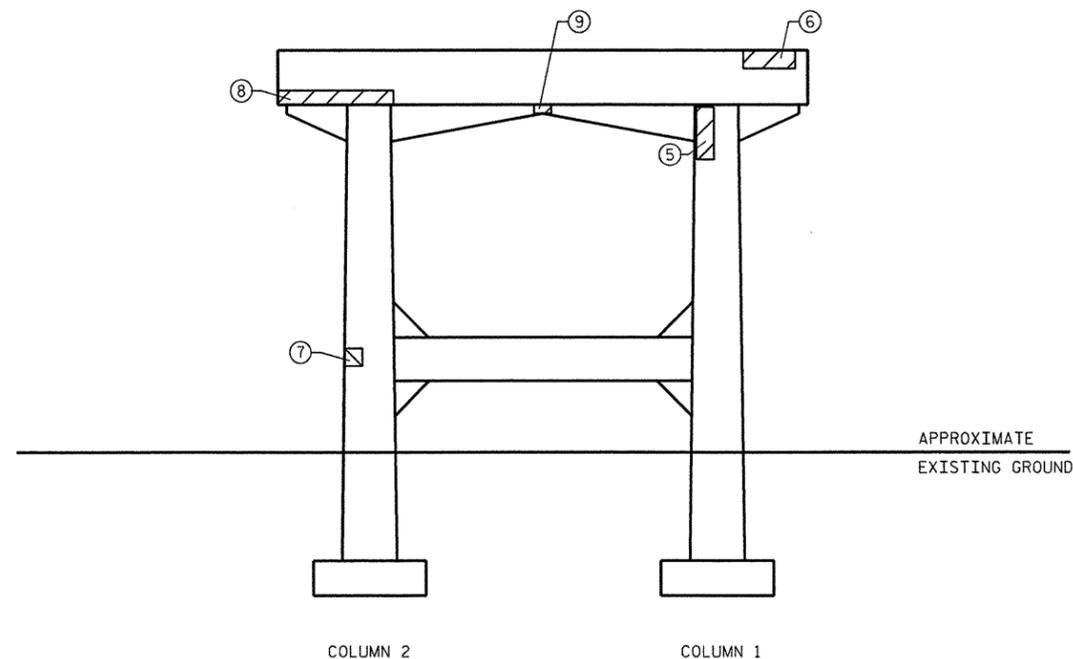
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-28	
1			3			TOTAL SHEETS	73
2			4				

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
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BENT 4 REPAIRS - ELEVATION (SPAN D SIDE)



BENT 4 REPAIRS - ELEVATION (SPAN E SIDE)

REPAIR NOTES:

- ① 2'-0" X 3'-0" CRACKED/DELAMINATED AREA, UNDER GIRDER 1
- ② 3'-0" X 3'-0" CRACKED/DELAMINATED AREA, UNDER GIRDER 2
- ③ 4'-0" X 3'-0" SPALL/DELAMINATED AREA WITH EXPOSED REBAR, UNDER GIRDER 3
- ④ 3'-0" X 3'-0" SPALL/DELAMINATED AREA, UNDER GIRDER 4
- ⑤ 1'-0" X 3'-0" CRACKED/DELAMINATED AREA
- ⑥ 3'-0" X 1'-0" SPALL/DELAMINATED AREA, TOP OF CAP
- ⑦ 1'-0" X 1'-0" SPALL, SIDE OF COLUMN
- ⑧ 4'-0" X 1'-0" SPALL, UNDERSIDE OF CAP
- ⑨ 1'-0" HORIZONTAL CRACK, BOTTOM CORNER OF CAP

GENERAL NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISIONS FOR "SHOTCRETE REPAIR" AND CONCRETE REPAIR".

SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. SEE SPECIAL PROVISION FOR "CONCRETE REPAIR".

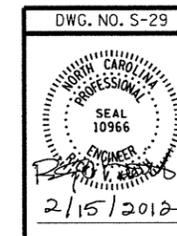
FOR BENT CAP/ STRUT REPAIR DETAIL AND COLUMN REPAIR DETAIL, SEE SHEET S-26.

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 RALEIGH

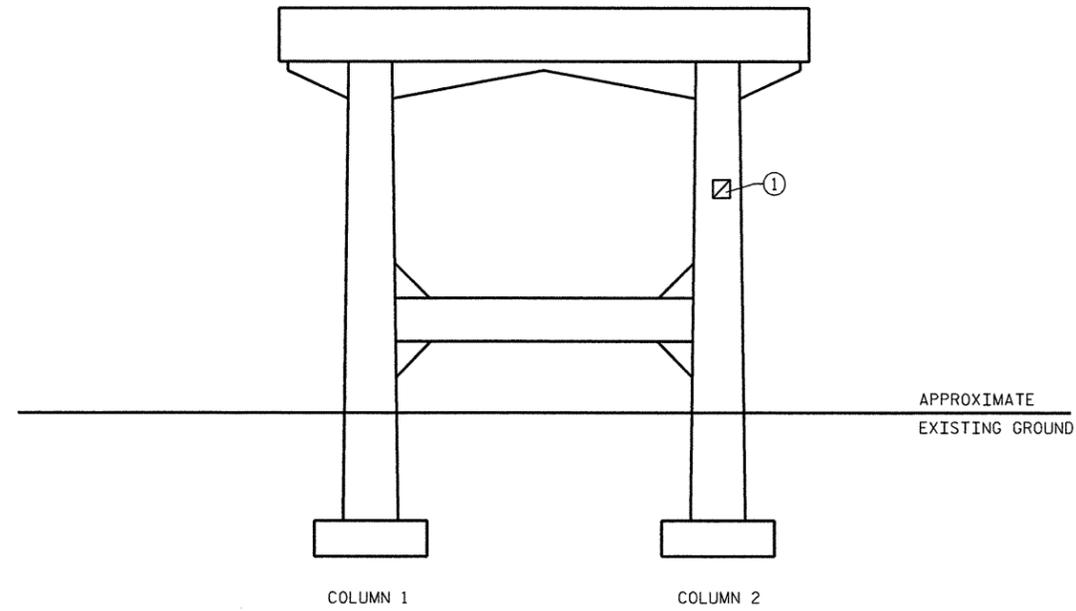
**BENT 4 REPAIRS
 ELEVATION**



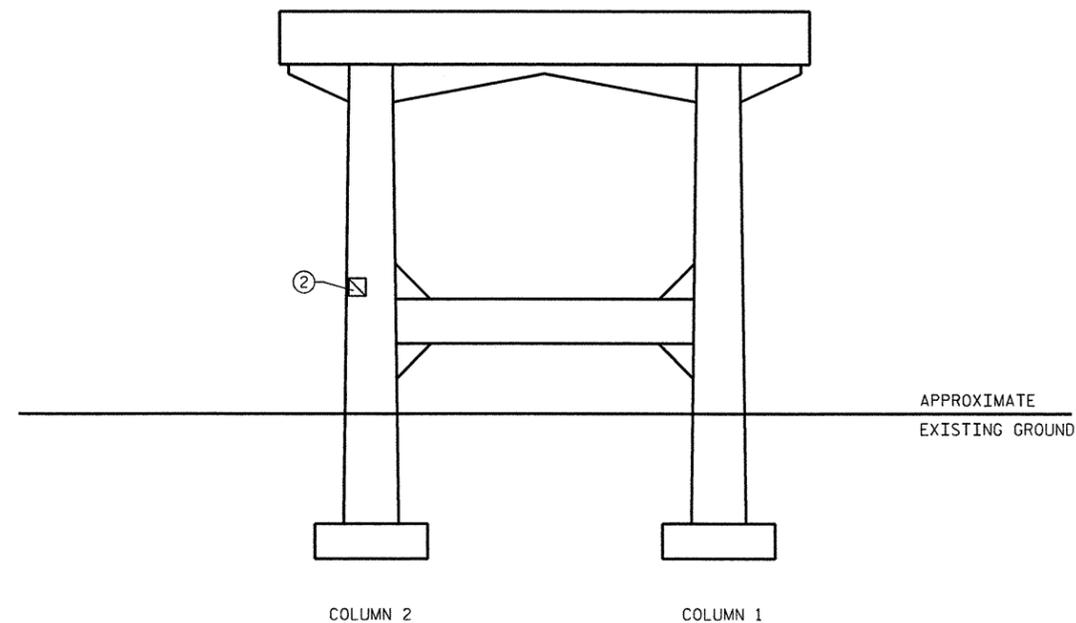
REVISIONS						SHEET NO. S-29
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 73
2			4			

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
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BENT 5 REPAIRS - ELEVATION (SPAN E SIDE)



BENT 5 REPAIRS - ELEVATION (SPAN F SIDE)

REPAIR NOTES:

- ① 1'-0" X 1'-0" SPALL/DELAMINATED AREA WITH EXPOSED REBAR, COLUMN 2 (LOCATE IN FIELD)
- ② 1'-0" X 1'-0" SPALL WITH EXPOSED REBAR, SIDE OF COLUMN

GENERAL NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISIONS FOR "SHOTCRETE REPAIR" AND CONCRETE REPAIR".

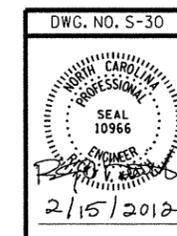
SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. SEE SPECIAL PROVISION FOR "CONCRETE REPAIR".

FOR BENT CAP/ STRUT REPAIR DETAIL AND COLUMN REPAIR DETAIL, SEE SHEET S-26.

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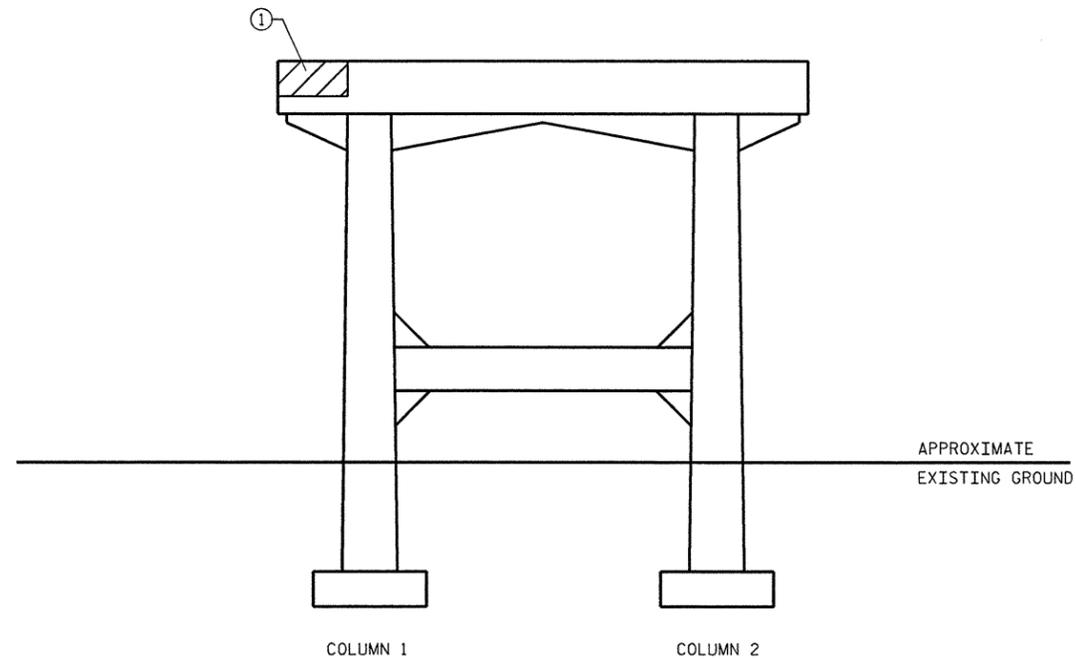
SHEET 19 OF 21



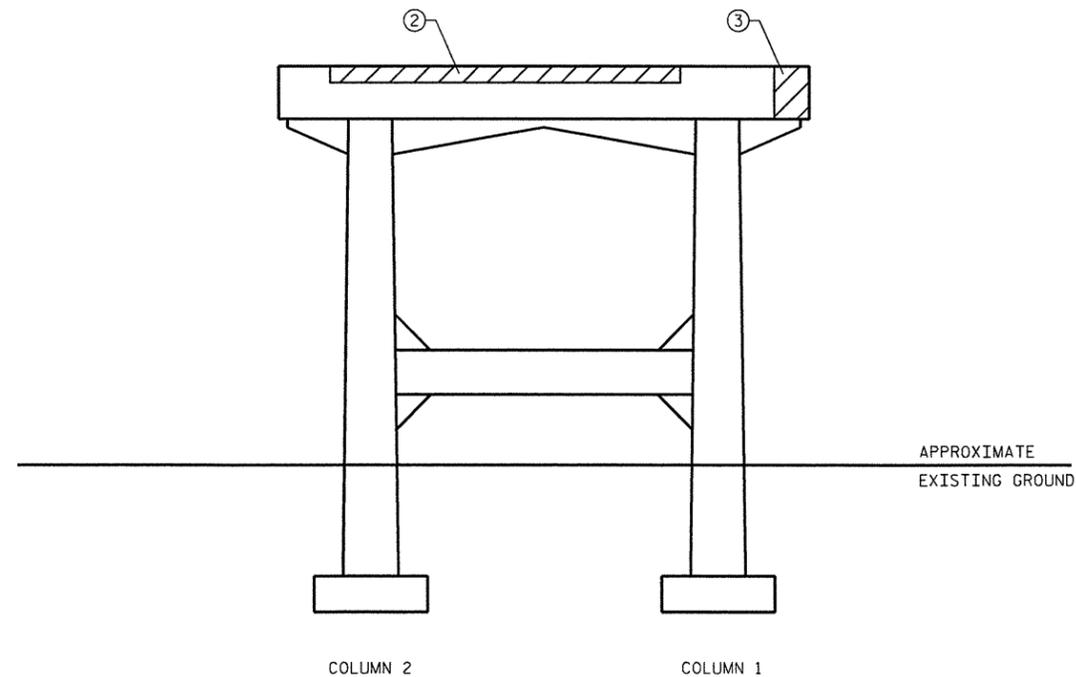
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-30
BENT 5 REPAIRS ELEVATION						
REVISIONS						
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 73
2			4			

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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BENT 6 REPAIRS - ELEVATION (SPAN F SIDE)



BENT 6 REPAIRS - ELEVATION (SPAN G SIDE)

REPAIR NOTES:

- ① 4'-0" X 2'-0" CRACKED/DELAMINATED AREA
- ② 20'-0" X 1'-0" SPALLED/DELAMINATED AREA
- ③ 2'-0" X 2'-0" SPALLED AREA

GENERAL NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISIONS FOR "SHOTCRETE REPAIR" AND CONCRETE REPAIR".

SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. SEE SPECIAL PROVISION FOR "CONCRETE REPAIR".

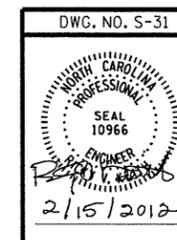
FOR BENT CAP/ STRUT REPAIR DETAIL AND COLUMN REPAIR DETAIL, SEE SHEET S-26.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 169

SHEET 20 OF 21

STATE OF NORTH CAROLINA
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 RALEIGH

**BENT 6 REPAIRS
 ELEVATION**



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

SHEET NO.	
S-31	TOTAL SHEETS 73

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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REPAIR NOTES:

- ① DUAL 6'-0" HORIZONTAL CRACKS
- ② 6'-0" HORIZONTAL CRACK

GENERAL NOTES:

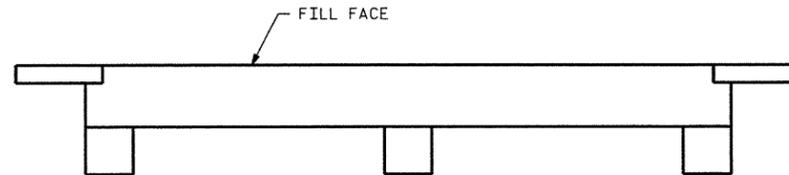
SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

CRACKS IN FACE OF END BENT CAP 5 MILS WIDE OR GREATER SHALL BE REPAIRED USING EPOXY RESIN INJECTION.

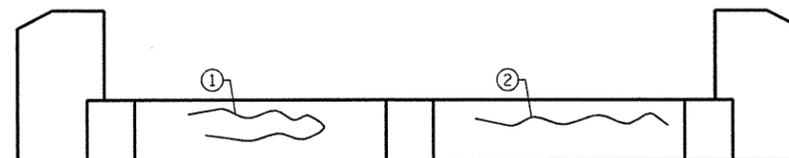
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR ANY CRACK, VOID, HONEYCOMB OR SPALL AREA UNSUITABLE FOR REPAIR BY EPOXY RESIN INJECTION WITH EPOXY MORTAR REPAIR.

FOR "EPOXY MORTAR REPAIR", SEE SPECIAL PROVISIONS.



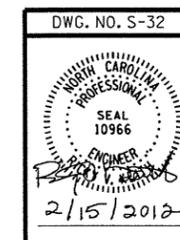
END BENT 2 REPAIRS - PLAN



END BENT 2 REPAIRS - ELEVATION (SPAN G SIDE)

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 169

SHEET 21 OF 21



STATE OF NORTH CAROLINA
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**END BENT 2 REPAIRS
 ELEVATION**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-32
1			3			TOTAL SHEETS
2			4			73

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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TOTAL BILL OF MATERIAL											
	SHOTCRETE REPAIRS	SCARIFYING BRIDGE DECK	HYDRO-DEMOLITION OF BRIDGE DECK	LATEX MODIFIED CONCRETE OVERLAY - VERY EARLY STRENGTH	PLACING AND FINISHING LATEX MODIFIED CONCRETE OVERLAY - VERY EARLY STRENGTH	FOAM JOINT SEALS	GROOVING BRIDGE FLOORS	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C	ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C	CONCRETE REPAIRS	INCIDENTAL MILLING
	CUBIC FEET	SQUARE YARDS	SQUARE YARDS	CUBIC YARDS	SQUARE YARDS	LUMP SUM	SQUARE FEET	TONS	TONS	CUBIC FEET	SQUARE YARDS
SUPERSTRUCTURE	48	1,150	1,150	114	1,150	LUMP SUM	9,167	66	111	---	778
END BENT 1	---	---	---	---	---	---	---	---	---	---	---
BENT 1	15	---	---	---	---	---	---	---	---	---	---
BENT 2	42	---	---	---	---	---	---	---	---	---	---
BENT 3	30	---	---	---	---	---	---	---	---	---	---
BENT 4	1	---	---	---	---	---	---	---	---	1	---
BENT 5	11	---	---	---	---	---	---	---	---	2	---
BENT 6	11	---	---	---	---	---	---	---	---	1	---
BENT 7	11	---	---	---	---	---	---	---	---	---	---
END BENT 2	---	---	---	---	---	---	---	---	---	---	---
TOTAL	169	1,150	1,150	114	1,150	LUMP SUM	9,167	66	111	4	778

GENERAL NOTES

ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE "2012 STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION.

ALL REINFORCING STEEL SHALL BE GRADE 60.

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

FOR "FALSEWORK AND FORMWORK", SEE SPECIAL PROVISIONS.

FOR "CRANE SAFETY", SEE SPECIAL PROVISIONS.

FOR "GROUT FOR STRUCTURES", SEE SPECIAL PROVISIONS.

FOR "CLEANING AND PAINTING EXISTING BEARING PLATES", SEE SPECIAL PROVISIONS.

SPALLED, DELAMINATED, AND CRACKED AREAS SHOWN ON EXISTING CONCRETE GIRDERS, BENT DIAPHRAGMS, AND BENT SUBSTRUCTURE UNITS ARE APPROXIMATE.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "CONCRETE REPAIRS", SEE SPECIAL PROVISIONS.

SHOTCRETE SHALL BE USED FOR ALL VERTICAL OR OVERHEAD REPAIRS AS DETERMINED BY THE ENGINEER AND IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "SHOTCRETE REPAIRS".

CLASS A CONCRETE SHALL BE USED FOR ALL REPAIRS ON FLAT SURFACES SUCH AS THE TOP OF CAP OR BRIDGE SEATS UNDER BEARINGS AS DETERMINED BY THE ENGINEER AND IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "CONCRETE REPAIRS".

ANY DAMAGE TO THE EXISTING STRUCTURE OR SLOPE PROTECTION AS A RESULT OF FALSEWORK OR TEMPORARY SUPPORTS SHALL BE REPAIRED AT THE CONTRACTOR'S COST AND AT THE DIRECTION OF THE ENGINEER.

ALL REINFORCEMENT TO BE PROVIDED IS INCIDENTAL TO SHOTCRETE REPAIRS AND CONCRETE REPAIRS.

THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR REMOVAL OPERATIONS SUCH THAT REPAIRS WILL NOT BE IMPLEMENTED ON MORE THAN ONE FACE OF THE CONCRETE ELEMENT WITHOUT APPROVAL OF THE ENGINEER.

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

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

FOR "LATEX MODIFIED CONCRETE OVERLAY - VERY EARLY STRENGTH", SEE SPECIAL PROVISIONS.

FOR "FOAM JOINT SEALS", SEE SPECIAL PROVISIONS.

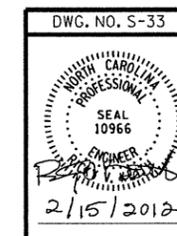
FOR "ELASTOMERIC CONCRETE", SEE SPECIAL PROVISIONS.

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

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

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WAKE COUNTY
 BRIDGE NO. 170

SHEET 1 OF 21



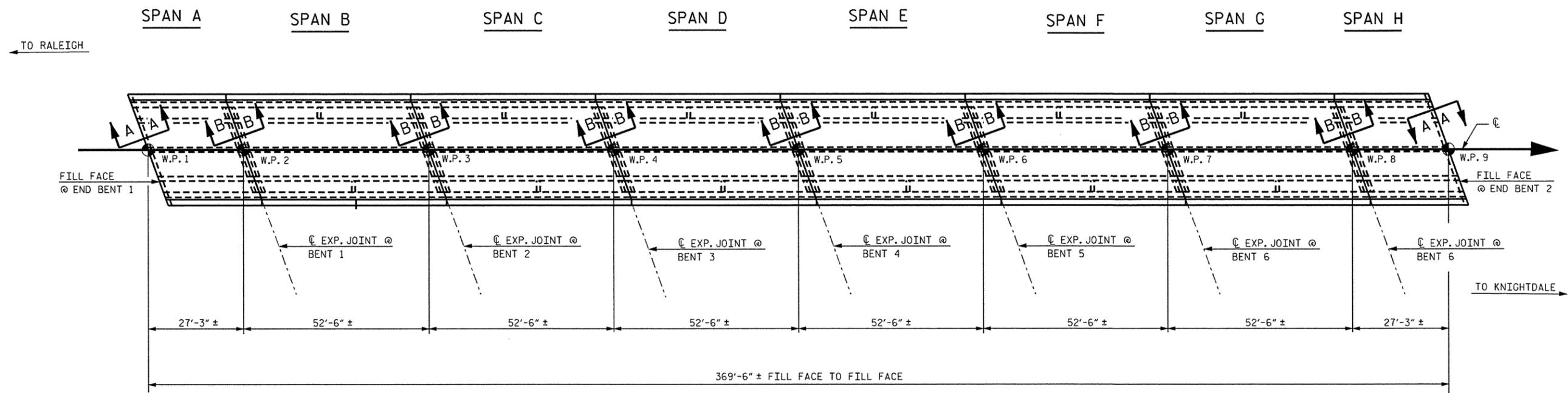
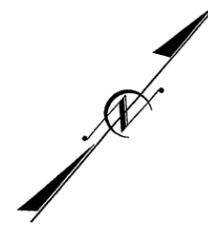
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

NOTES
 AND
 BILL OF MATERIALS

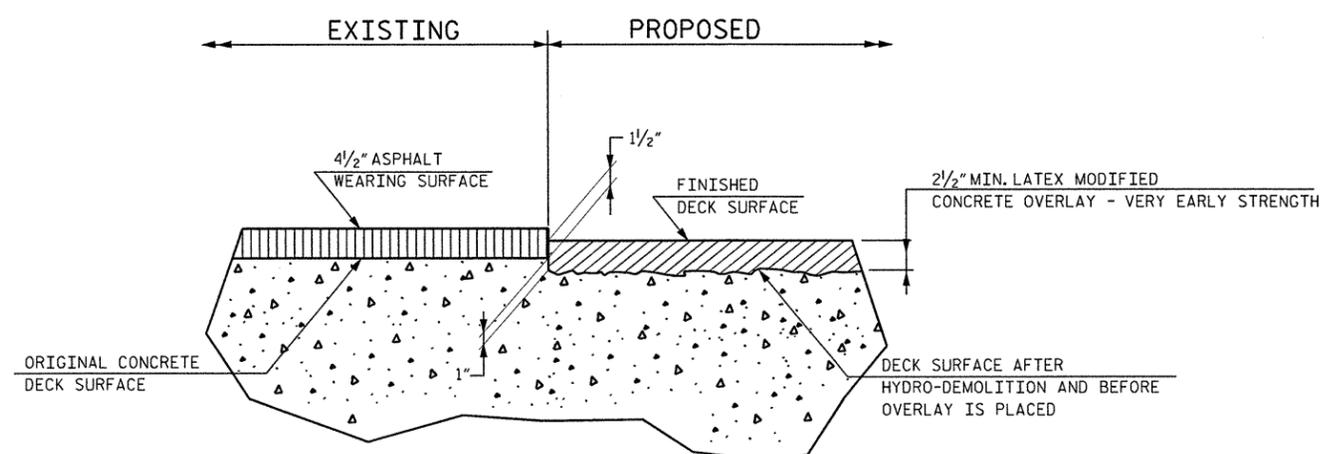
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-33	
1			3			TOTAL SHEETS	
2			4			73	

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

NOTE:
FOR SECTIONS A-A AND B-B, SEE DWG. NO. S-37



BRIDGE PLAN



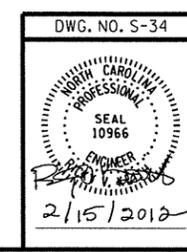
DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY - VERY EARLY STRENGTH

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WAKE COUNTY
 BRIDGE NO. 170

SHEET 2 OF 21

STATE OF NORTH CAROLINA
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 RALEIGH

BRIDGE PLAN VIEW



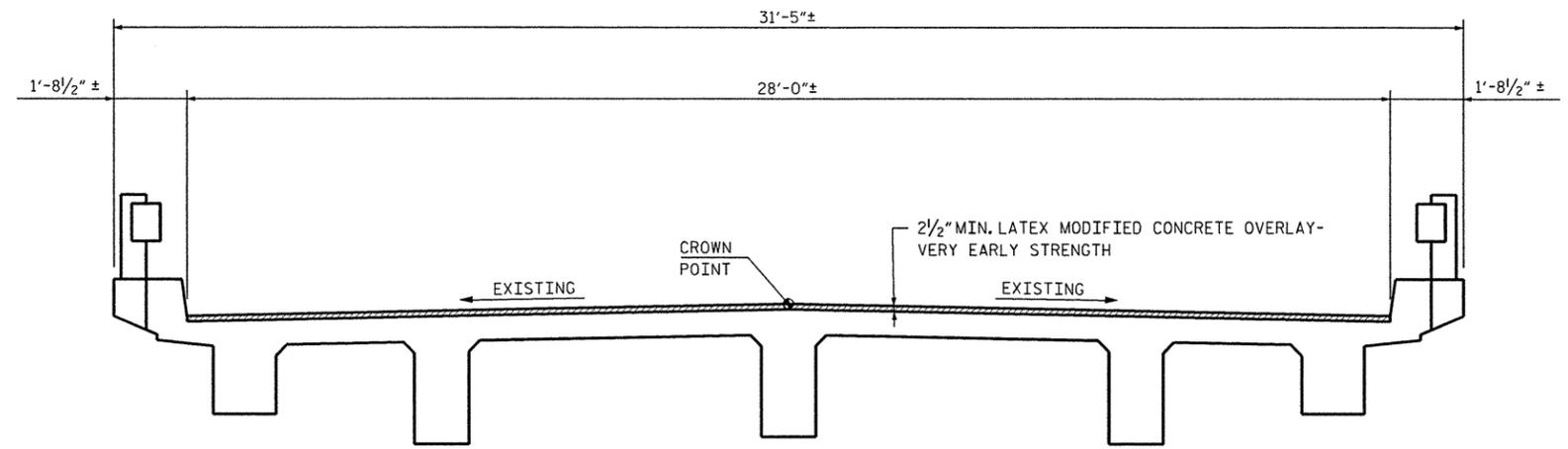
REVISIONS						SHEET NO. S-34
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 73
2			4			

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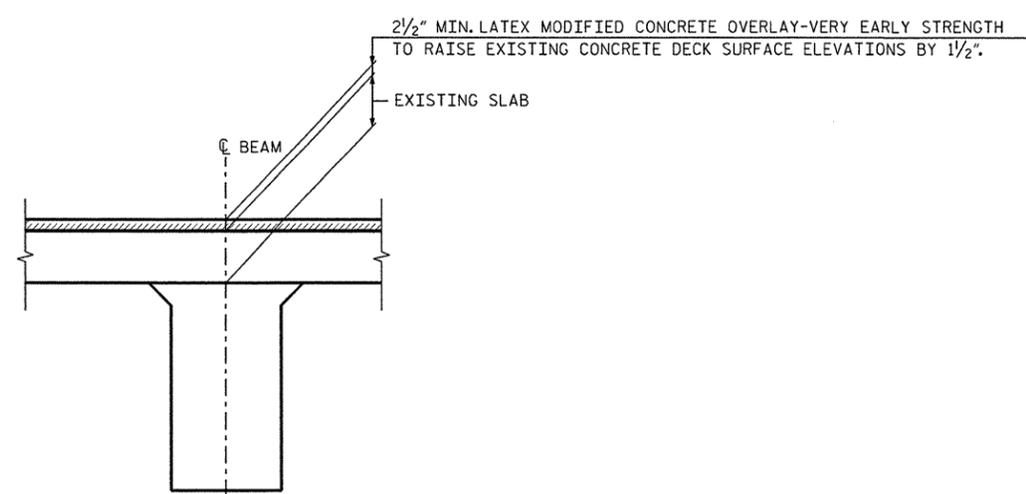
DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

NOTES:
 FOR MANAGING HYDRO-DEMOLITION WATER AND SEALING
 OF DECK JOINTS, SEE SPECIAL PROVISIONS.

WATER & CONCRETE SLURRY FROM HYDRO-DEMOLITION
 SHALL NOT BE ALLOWED TO DRAIN ACROSS TRAVEL LANES.
 CONTRACTOR SHALL PROVIDE A METHOD TO CONTROL THE
 WATER.



TYPICAL SECTION



EXISTING SLAB BUILDUP

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
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SHEET 3 OF 21

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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

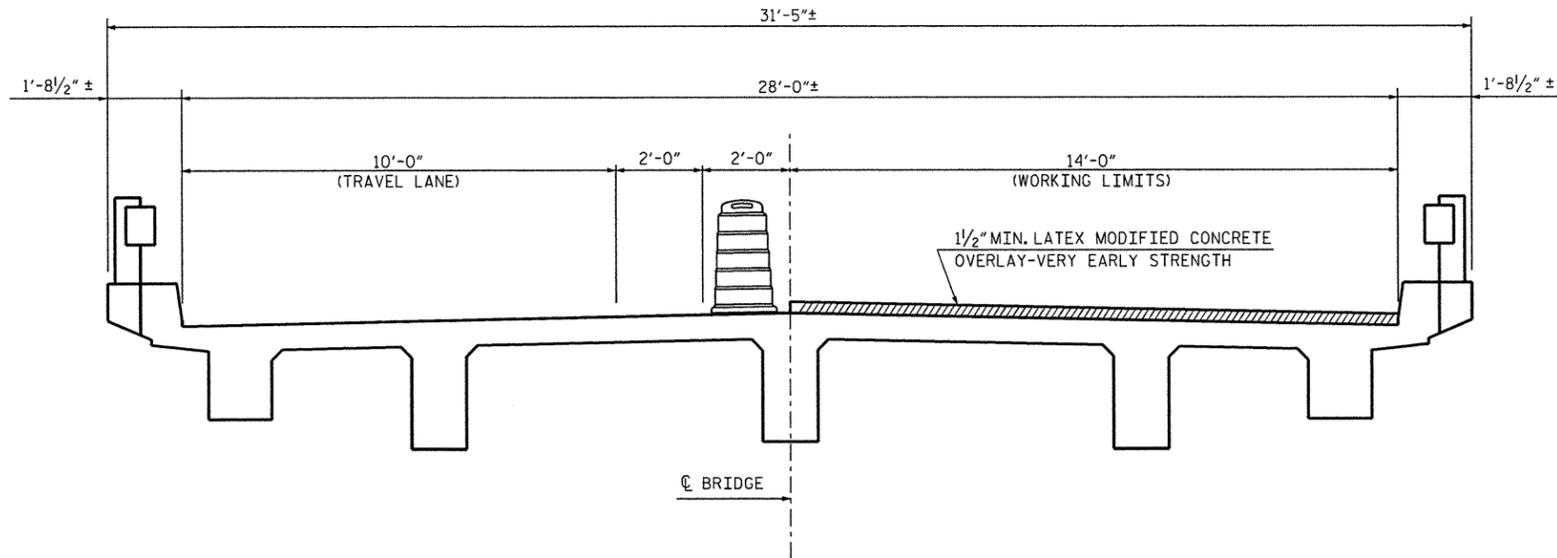
DWG. NO. S-35

Professional Engineer Seal: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10966. Signature: R.V. KEITH. Date: 2/15/2012.

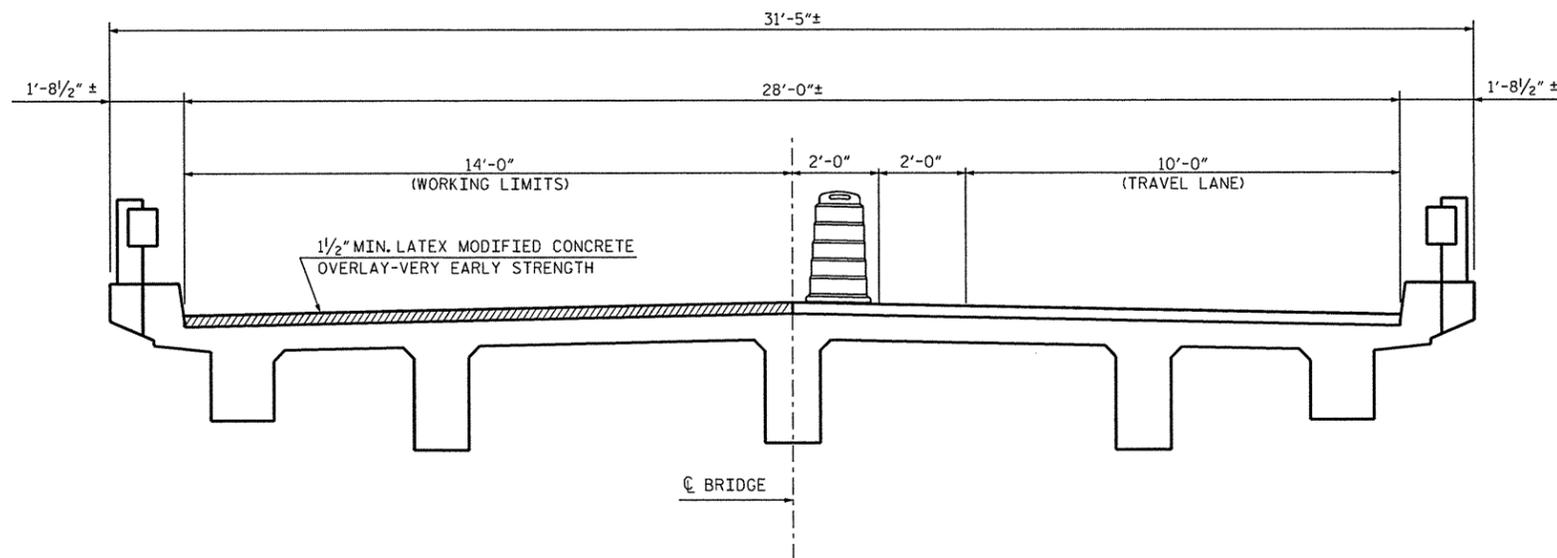
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-35	
1			3			TOTAL SHEETS	
2			4			73	

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STAGE 1 SECTION



STAGE 2I SECTION

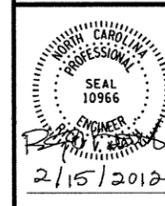
PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 170

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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STAGING SECTIONS

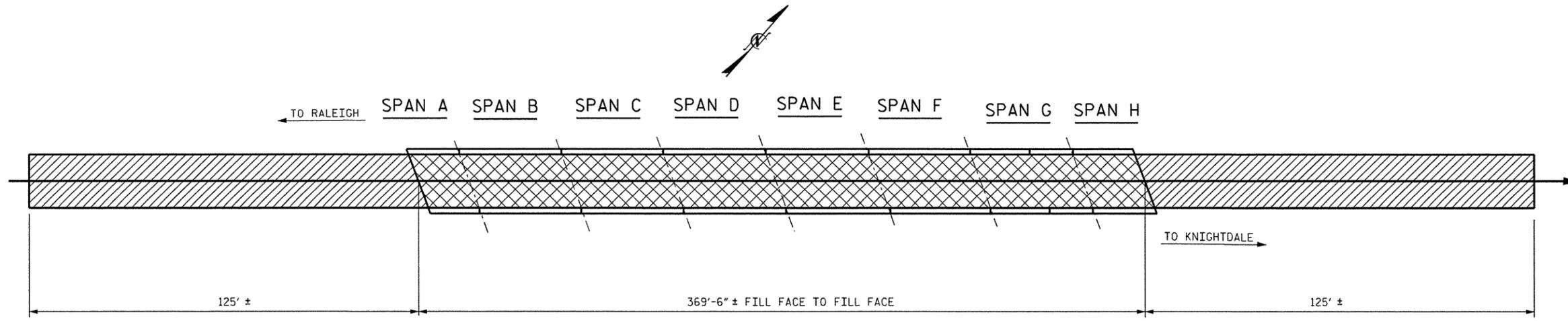
DWG. NO. S-35A



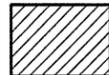
REVISIONS						SHEET NO. S-35A
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 73
2			4			

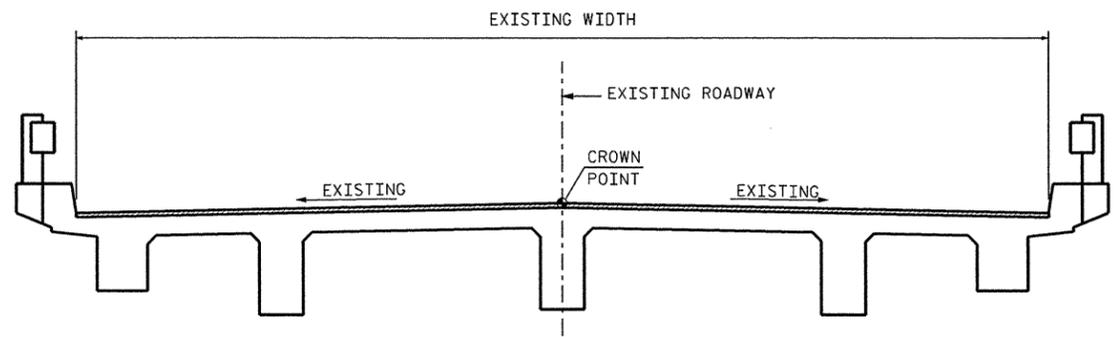
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DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012



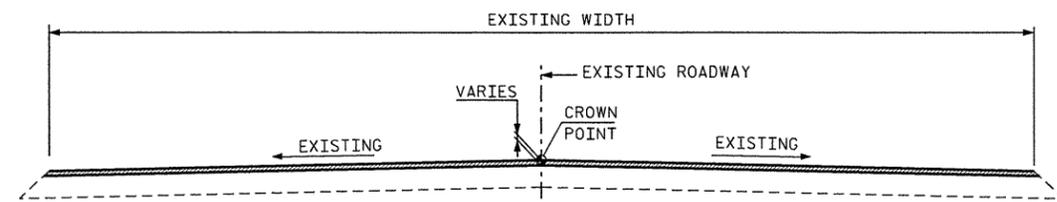
BRIDGE PLAN

-  INCIDENTAL MILLING
-  ASPHALT MILLING, DECK SCARIFICATION AND HYDRO-DEMOLITION



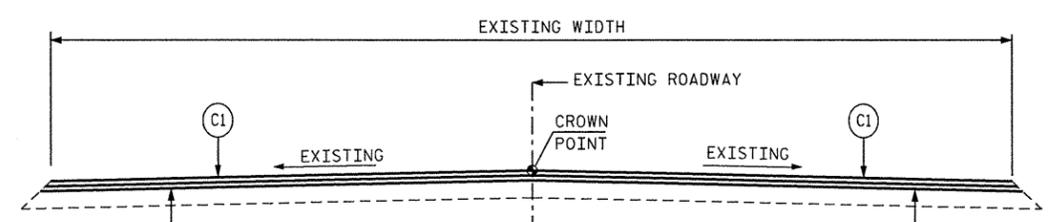
TYPICAL BRIDGE MILLING SECTION

(REMOVE ASPHALT OVERLAY BY MILLING, REMOVE 1" OF DEPTH OF CONCRETE BRIDGE DECK BY HYDRO-DEMOLITION)



TYPICAL ROADWAY MILLING SECTION

(MILL TO 7" DEPTH MAX. AT BRIDGE, TAPER TO 4" MIN. AT EXISTING ROADWAY SURFACE)



PROPOSED TYPICAL ROADWAY SECTION

- (C1) PROPOSED APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
- (D1) PROPOSED APPROX. 2 1/2" INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.

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 RALEIGH

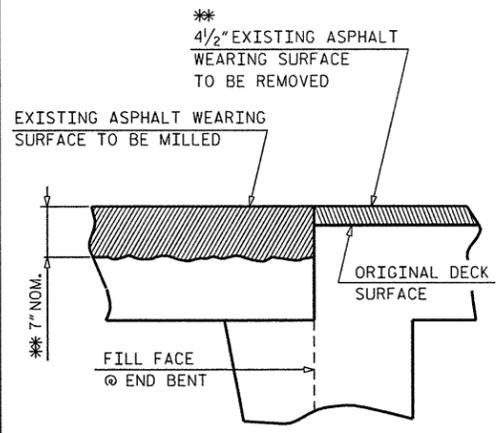
ROADWAY TYPICAL SECTION
 AND
 MILLING DETAILS

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-36	
1			3			TOTAL SHEETS 73	
2			4				

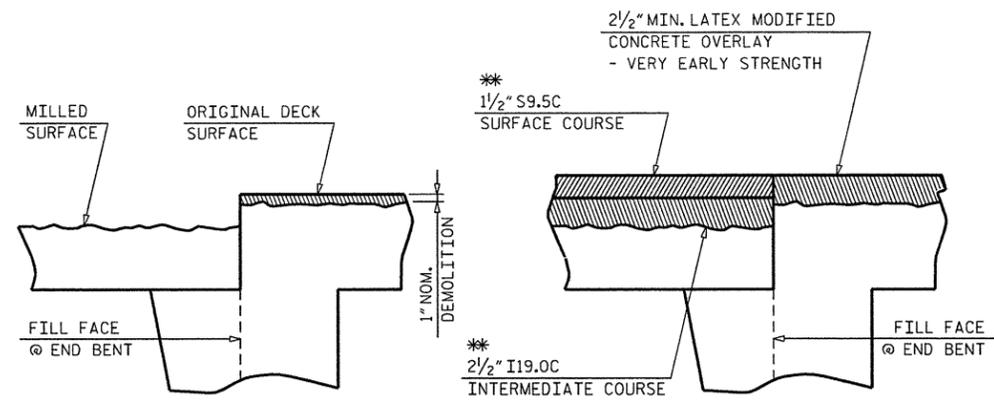
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DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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SECTION A-A
(ASPHALT MILLING OF EXISTING)
** SEE TRAFFIC CONTROL PLANS SHEETS TCP-9, 10, 11 FOR DETAILS

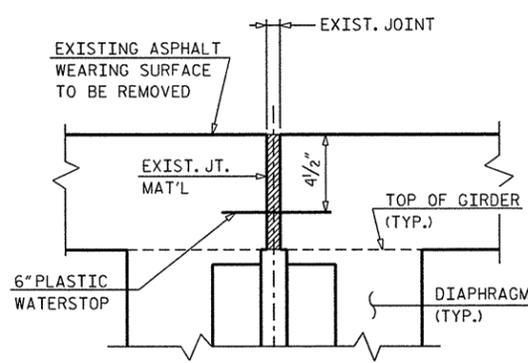


SECTION A-A
(MINIMUM DEMOLITION)
SECTION A-A
(PROPOSED)

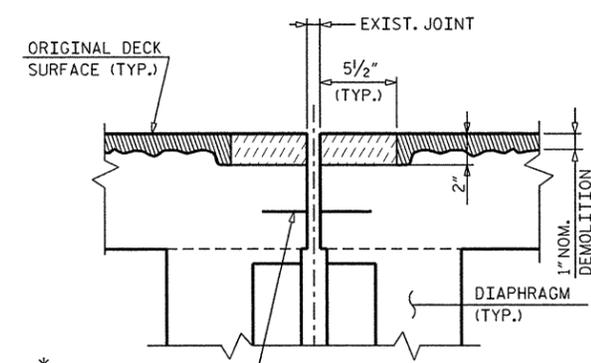
ELASTOMERIC CONCRETE	
BENT NO.	ELASTOMERIC CONCRETE *** (CU. FT.)
1	8
2	8
3	8
4	8
5	8
6	8
7	8
TOTAL	56

*** BASED ON THE MINIMUM BLOCKOUT SHOWN.

NOTES:
RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS REQUIRED.
REMOVE EXISTING JOINT SEAL MATERIAL.
CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING STEEL.
THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.

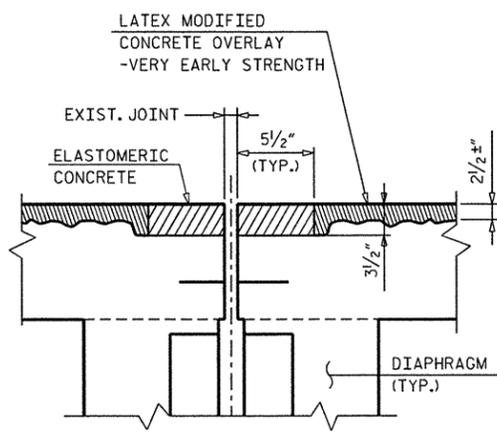


SECTION B-B
(EXISTING JOINT)

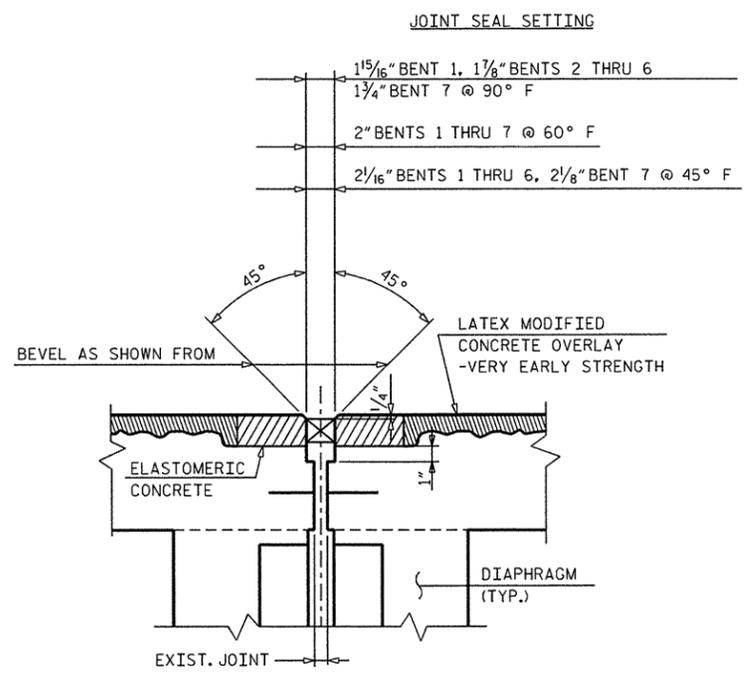


SECTION B-B
(MINIMUM EXISTING JOINT DEMOLITION)

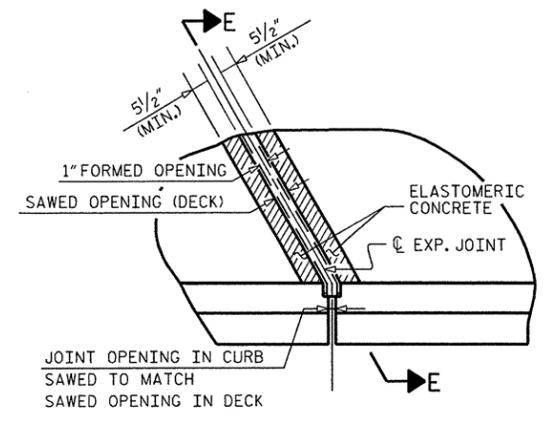
* WATERSTOP TO BE CUT FLUSH WITH JOINT
* ALL LOOSE AND UNSOUND CONCRETE SHALL BE REMOVED. IF THE EMBEDDED PORTION OF THE EXISTING WATERSTOP IS EXPOSED DURING REMOVAL, THE ENTIRE WATERSTOP SHALL BE REMOVED.



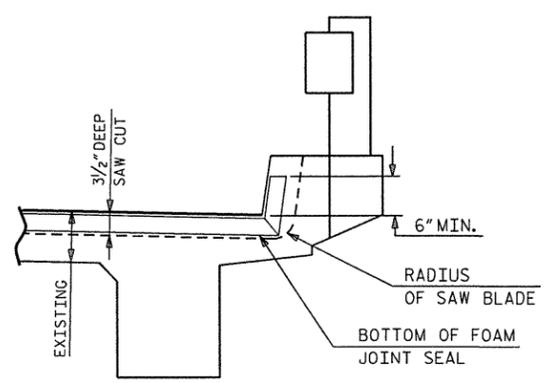
SECTION B-B
(PROPOSED JOINT PRE-SAWED)



SECTION B-B
(PROPOSED FOAM JOINT SEAL EXPANSION)
USE 2.5 INCH WIDTH UNCOMPRESSED FOAM JOINT SEAL MATERIAL.



PARTIAL PLAN AT JOINT



SECTION E-E

FOAM JOINT SEAL TO BE CUT, HEAT WELDED AND TURNED UP PARALLEL TO SLOPE FACE OF BARRIER RAIL.

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SHEET 6 OF 21

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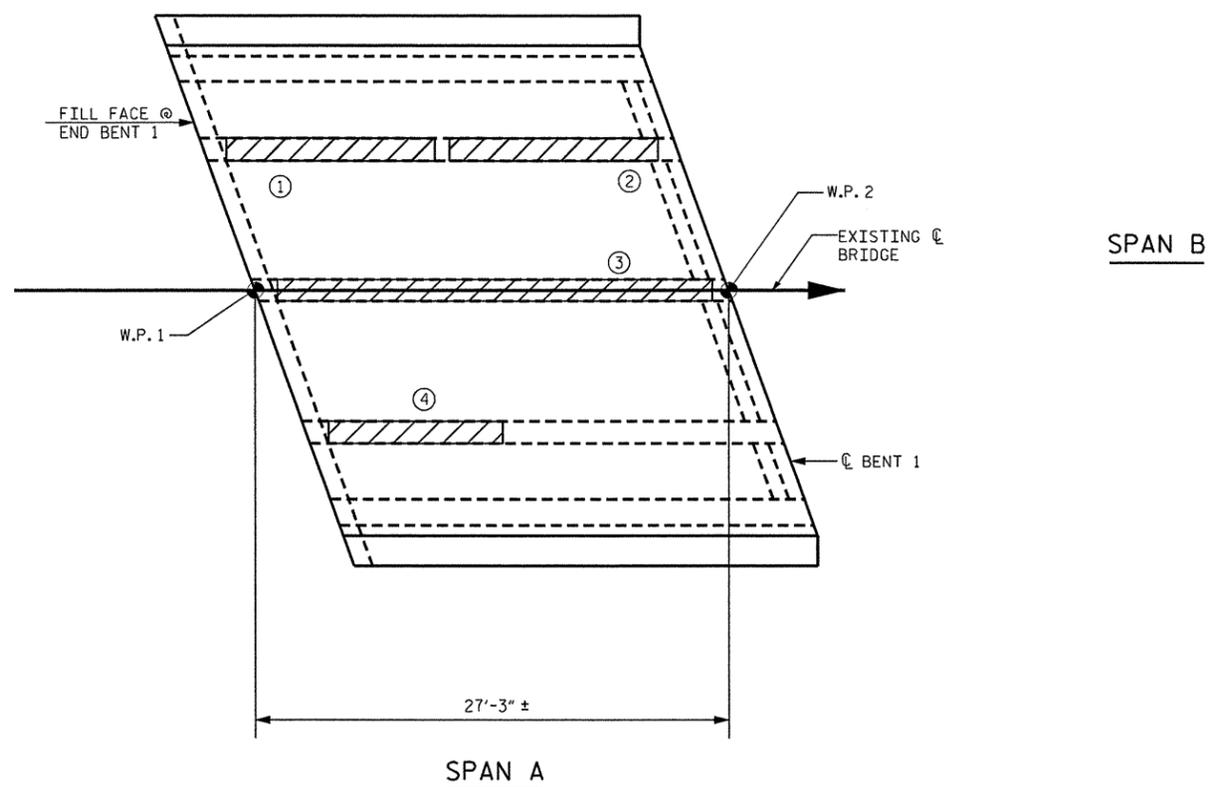
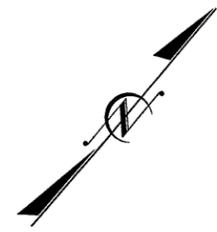
JOINT DETAILS

DWG. NO. S-37
SEAL 10966
2/15/2012

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	DATE:	TOTAL SHEETS
1			3		S-37
2			4		73

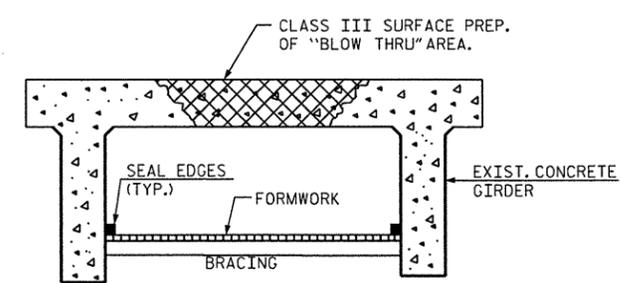
DRAWN BY: F.D. WEEDEN DATE: JAN. 2012
CHECKED BY: R.V. KEITH DATE: JAN. 2012

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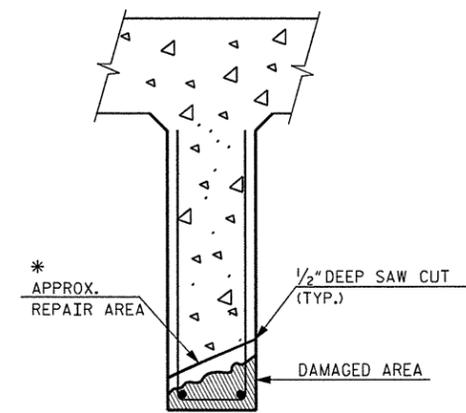
UNDER-DECK REPAIR NOTES

- ① 12'-0" LONGITUDINAL CRACKS WITH EFFLORESCENCE, BOTTOM OF GIRDER 2
- ② 12'-0" LONGITUDINAL CRACKS WITH EFFLORESCENCE, BOTTOM OF GIRDER 2
- ③ LONGITUDINAL CRACKS WITH EFFLORESCENCE, BOTTOM OF GIRDER 3
- ④ 10'-0" LONGITUDINAL CRACKS WITH EFFLORESCENCE, BOTTOM OF GIRDER 4



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

THE CONTRACTOR SHALL PROVIDE A METHOD TO CAPTURE WATER AND DEBRIS FROM UNEXPECTED BLOW THRU OF THE DECK DURING HYDRO-DEMOLITION.
 COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE PER SQ. YD. OF HYDRO-DEMOLITION.



GIRDER REPAIR DETAIL

* REMOVE TO SOUND CONCRETE A MINIMUM OF ONE INCH BEHIND REBAR

NOTES:

CLASS II & III SURFACE PREPARATION AREAS SHALL BE DETERMINED IN THE FIELD.
 CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.
 SUBMIT DETAILS OF PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.

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SHEET 7 OF 21

STATE OF NORTH CAROLINA
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 RALEIGH

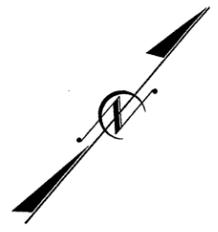
**SPAN "A" PLAN
 SUPERSTRUCTURE REPAIR**

DWG. NO. S-38

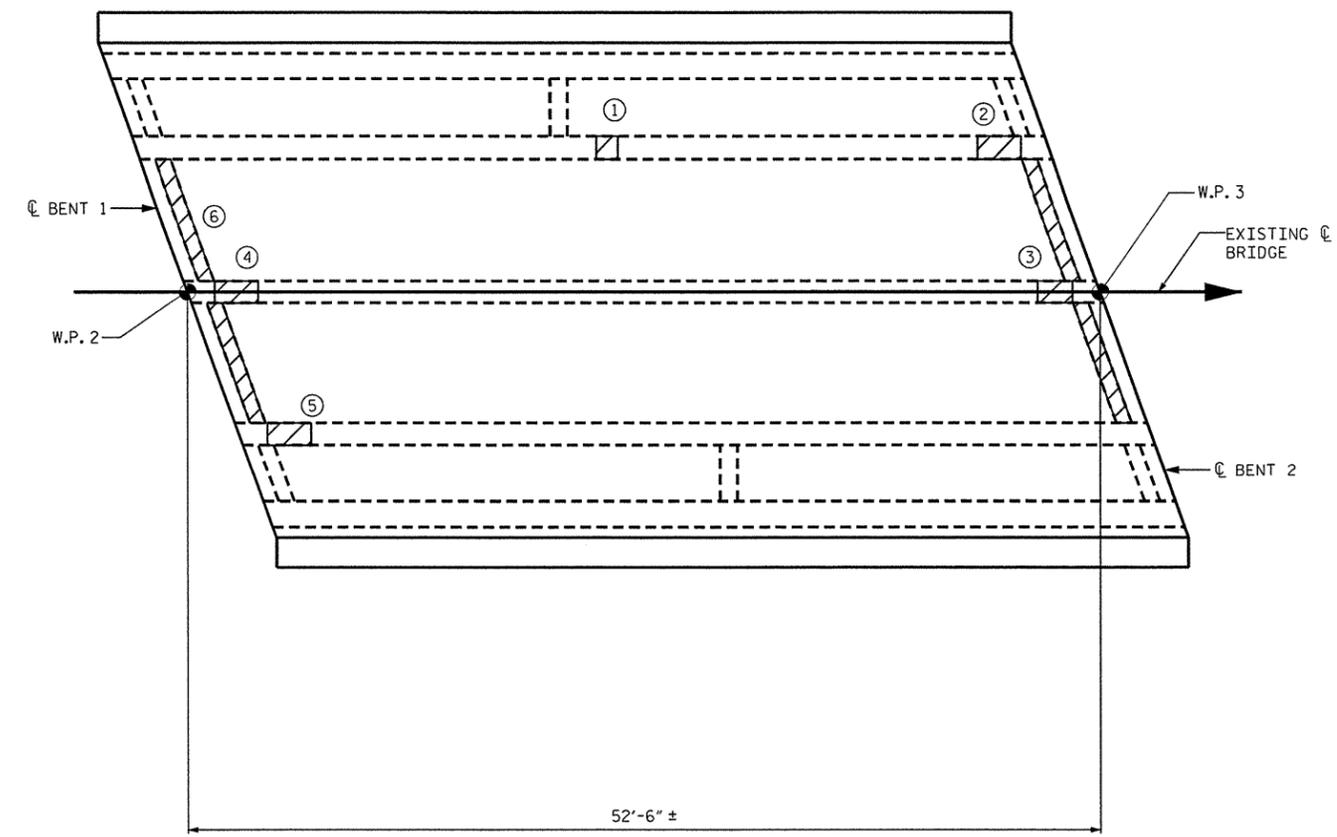
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-38	
1			3			TOTAL SHEETS	73
2			4				

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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SPAN A



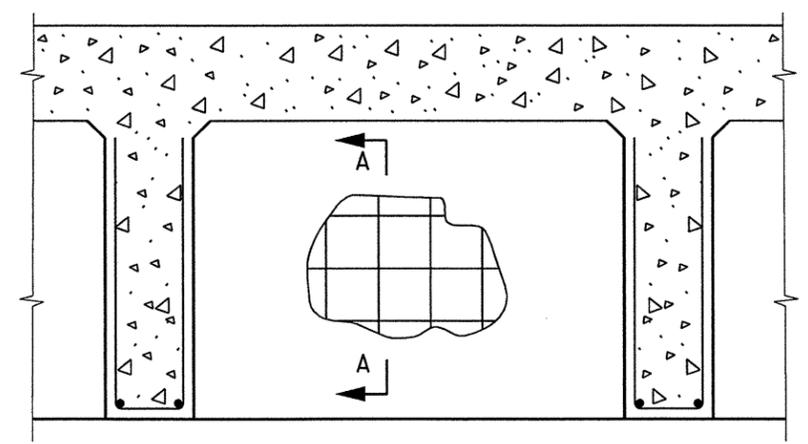
SPAN B

SEE SHEET S-38 FOR NOTES, TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK, AND GIRDER REPAIR DETAIL.

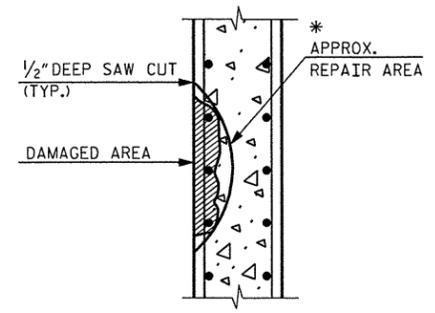
UNDER-DECK REPAIR NOTES

- ① 1'-3" X 1'-3" SPALL WITH EXPOSED REBAR, BOTTOM OF GIRDER
- ② 2'-6" X 1'-6" SPALL WITH EXPOSED REBAR, BOTTOM OF GIRDER
- ③ 2'-0" X 1'-6" SPALL WITH EXPOSED REBAR, BOTTOM OF GIRDER
- ④ 2'-0" X 1'-6" SPALL WITH EXPOSED REBAR, BOTTOM OF GIRDER
- ⑤ 2'-0" X 1'-6" SPALL WITH EXPOSED REBAR, BOTTOM OF GIRDER
- ⑥ CRACKED AREA, VERTICAL DIAPHRAGM FACES

SPAN C



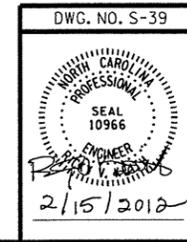
DIAPHRAGM REPAIR DETAIL



SECTION A-A

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 170

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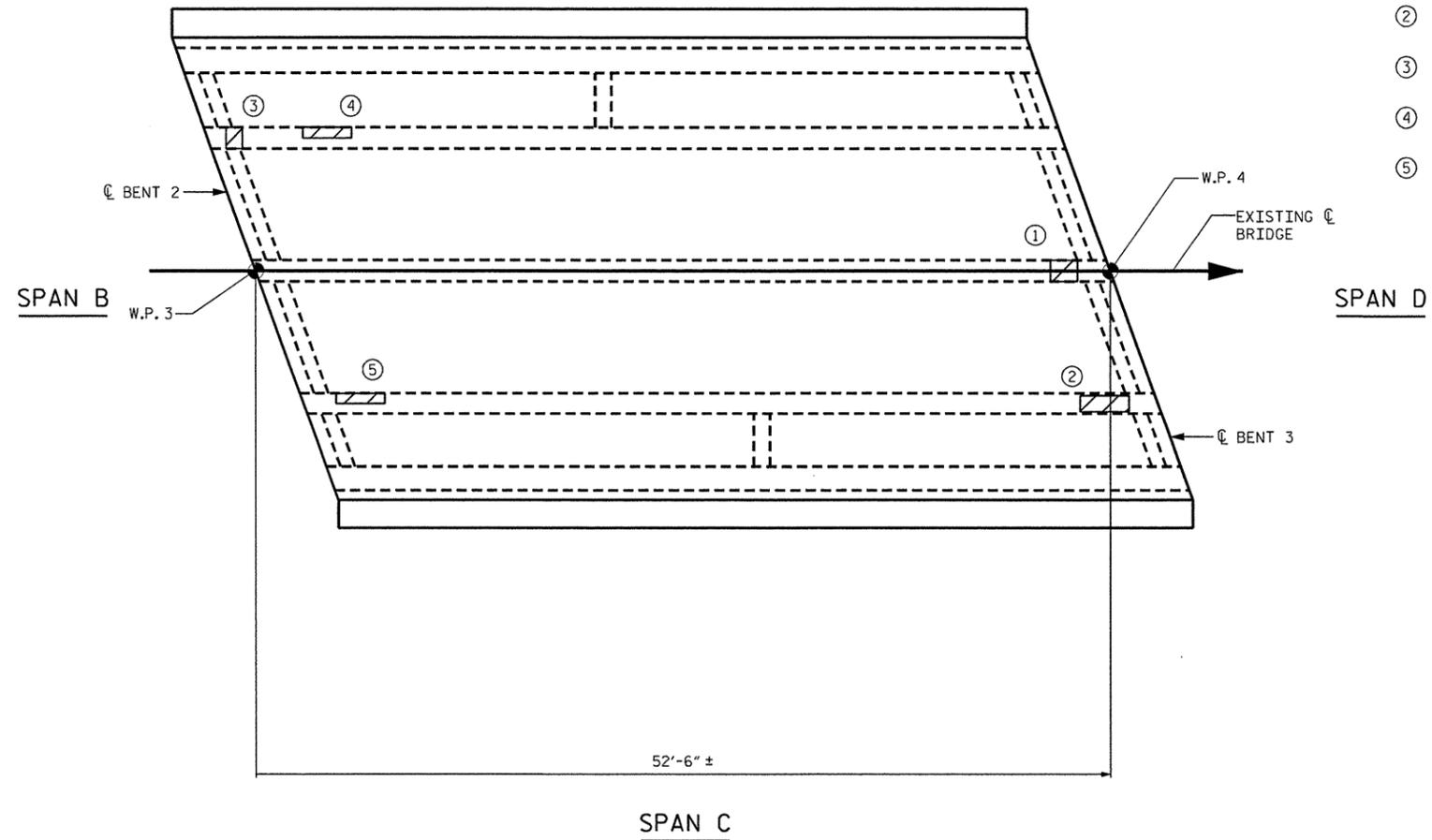


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SPAN "B" PLAN
 SUPERSTRUCTURE REPAIR

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-39	
1			3			TOTAL SHEETS	
2			4			73	

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012



UNDER-DECK REPAIR NOTES

- ① 1'-8" X 1'-3" SPALL WITH EXPOSED REBAR, BOTTOM OF GIRDER
- ② 3'-0" X 1'-0" SPALL/DELAMINATED AREA, BOTTOM OF GIRDER
- ③ 1'-0" X 1'-0" SPALL, SIDE OF GIRDER
- ④ 3'-0" X 1'-0" SPALL WITH EXPOSED REBAR, SIDE OF GIRDER
- ⑤ 3'-0" X 1'-0" SPALL, SIDE OF GIRDER

SEE SHEET S-38 FOR NOTES, TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK, AND GIRDER REPAIR DETAIL.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 170

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SPAN "C" PLAN
 SUPERSTRUCTURE REPAIR**

DWG. NO. S-40

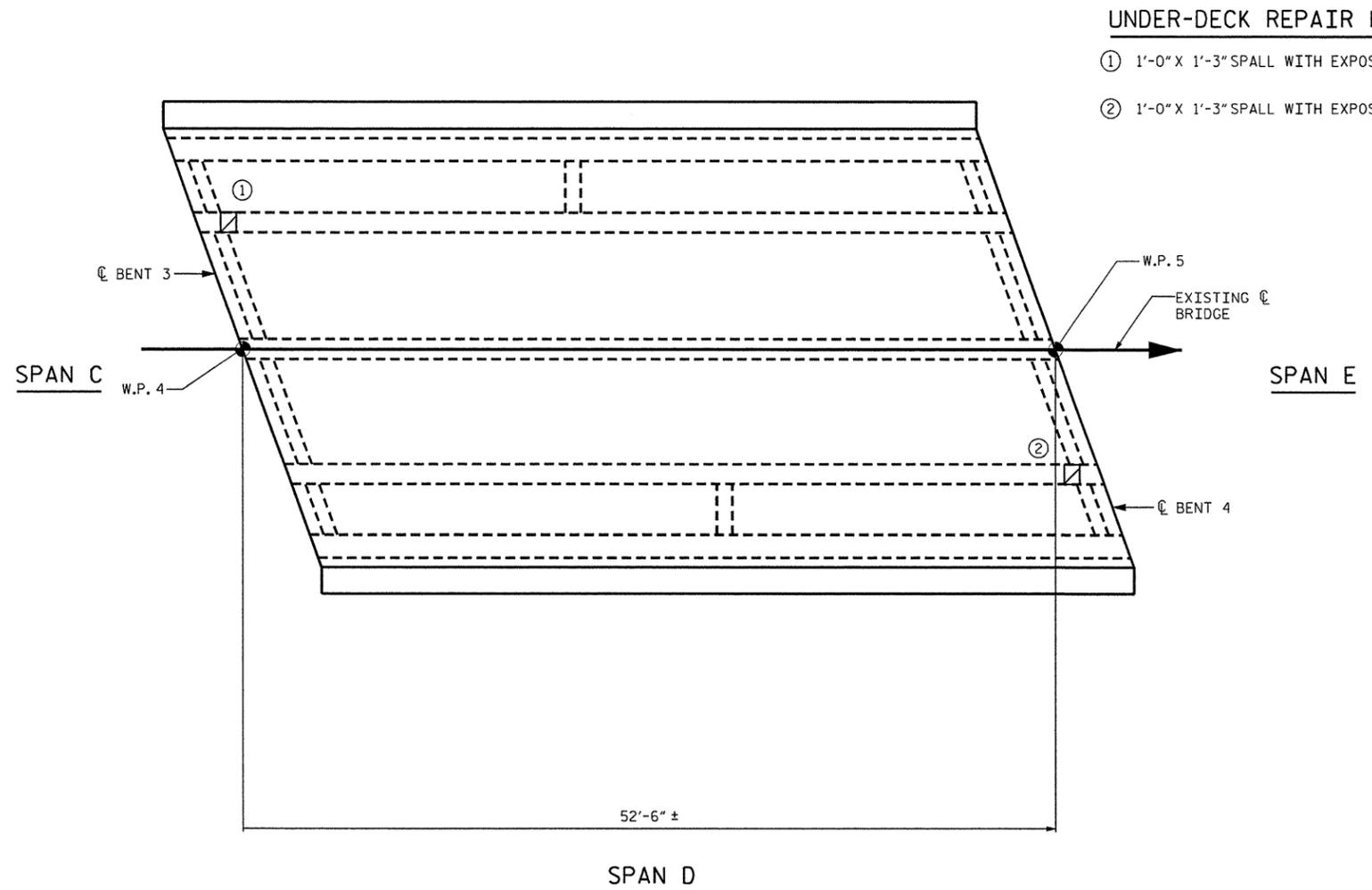
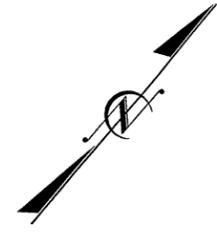
2/15/2012

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-40
1			3			TOTAL SHEETS
2			4			73

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DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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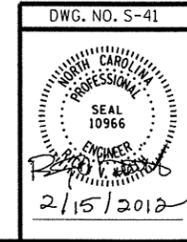
UNDER-DECK REPAIR NOTES

- ① 1'-0" X 1'-3" SPALL WITH EXPOSED REBAR, BOTTOM OF GIRDER
- ② 1'-0" X 1'-3" SPALL WITH EXPOSED REBAR, BOTTOM OF GIRDER

SEE SHEET S-38 FOR NOTES, TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK, AND GIRDER REPAIR DETAIL.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 170

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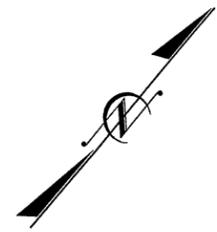


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SPAN "D" PLAN
 SUPERSTRUCTURE REPAIR**

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

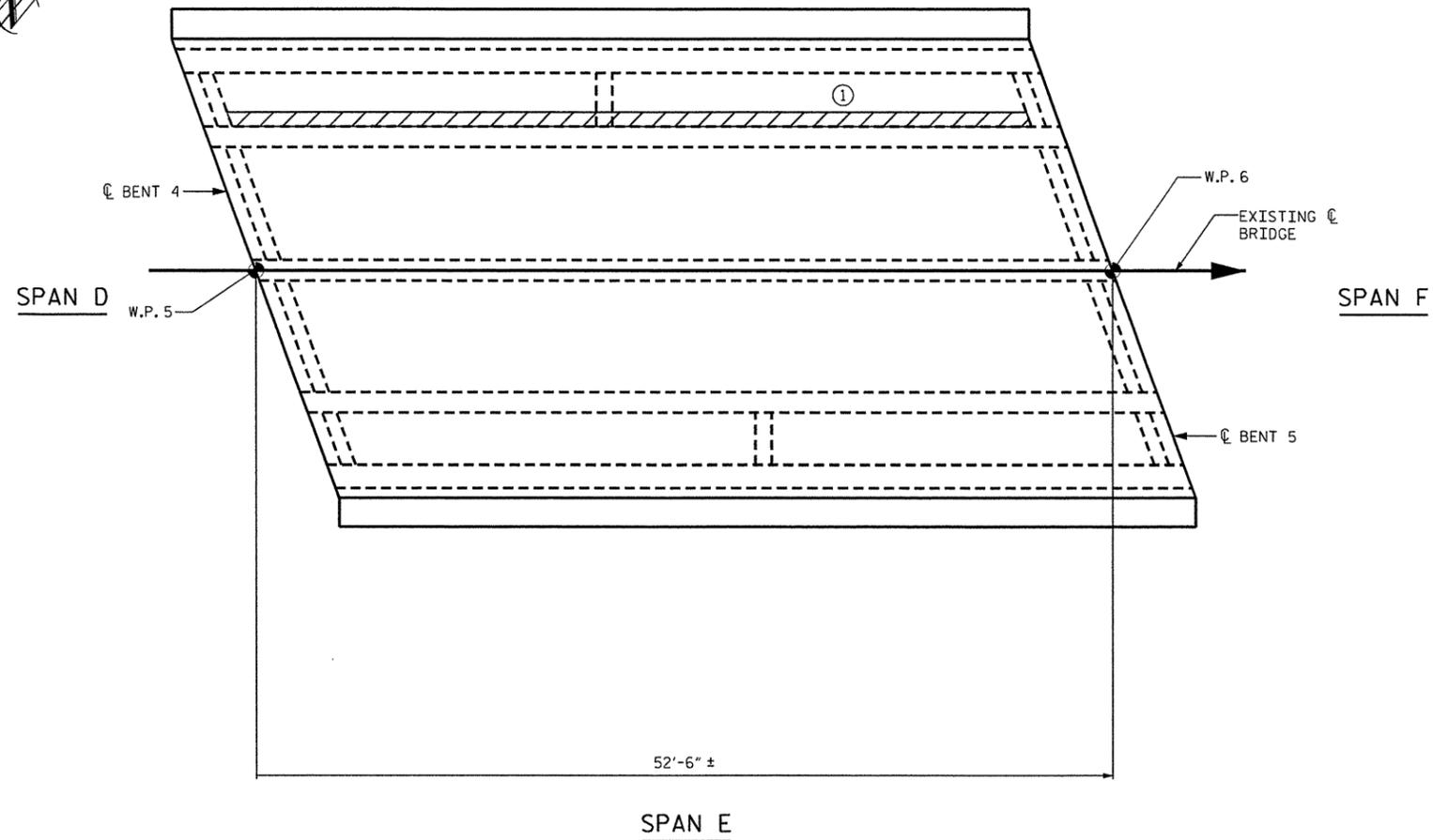
REVISIONS						SHEET NO. S-41
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 73
2			4			

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UNDER-DECK REPAIR NOTES

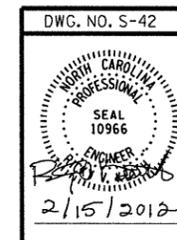
① 50'-0" X 6" LONGITUDINAL CRACKING WITH EFFLORESCENCE AT DECK/TOP OF GIRDER



SEE SHEET S-38 FOR NOTES, TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK, AND GIRDER REPAIR DETAIL.

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WAKE COUNTY
 BRIDGE NO. 170

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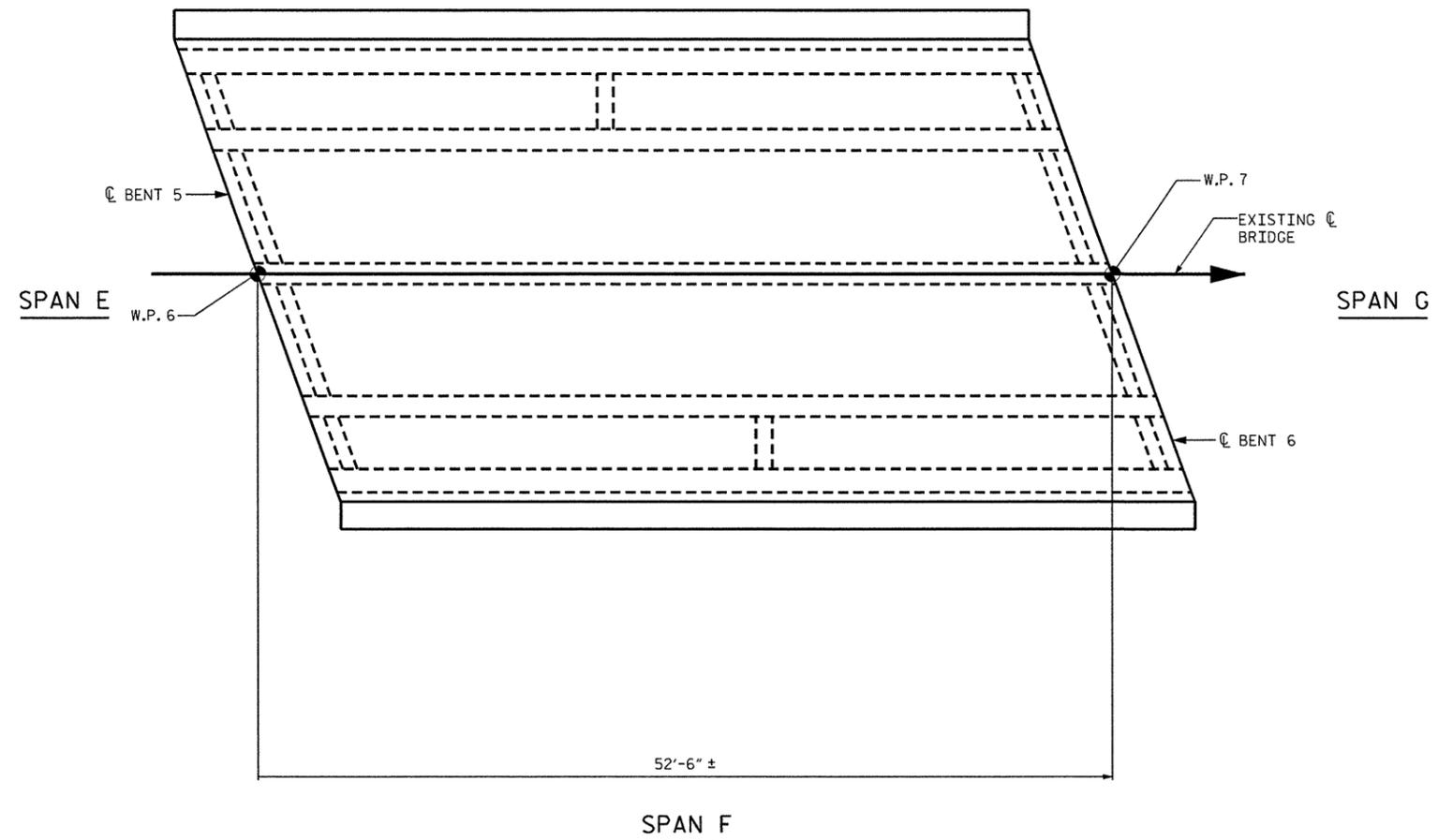
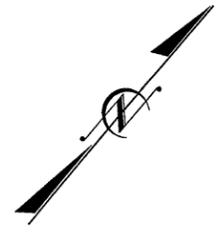
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SPAN "E" PLAN
 SUPERSTRUCTURE REPAIR**

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-42	
1			3			TOTAL SHEETS	
2			4			73	

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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SEE SHEET S-38 FOR NOTES AND TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK.

PROJECT NO. 17BP.5.H.1
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 BRIDGE NO. 170

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SPAN "F" PLAN
 SUPERSTRUCTURE REPAIR

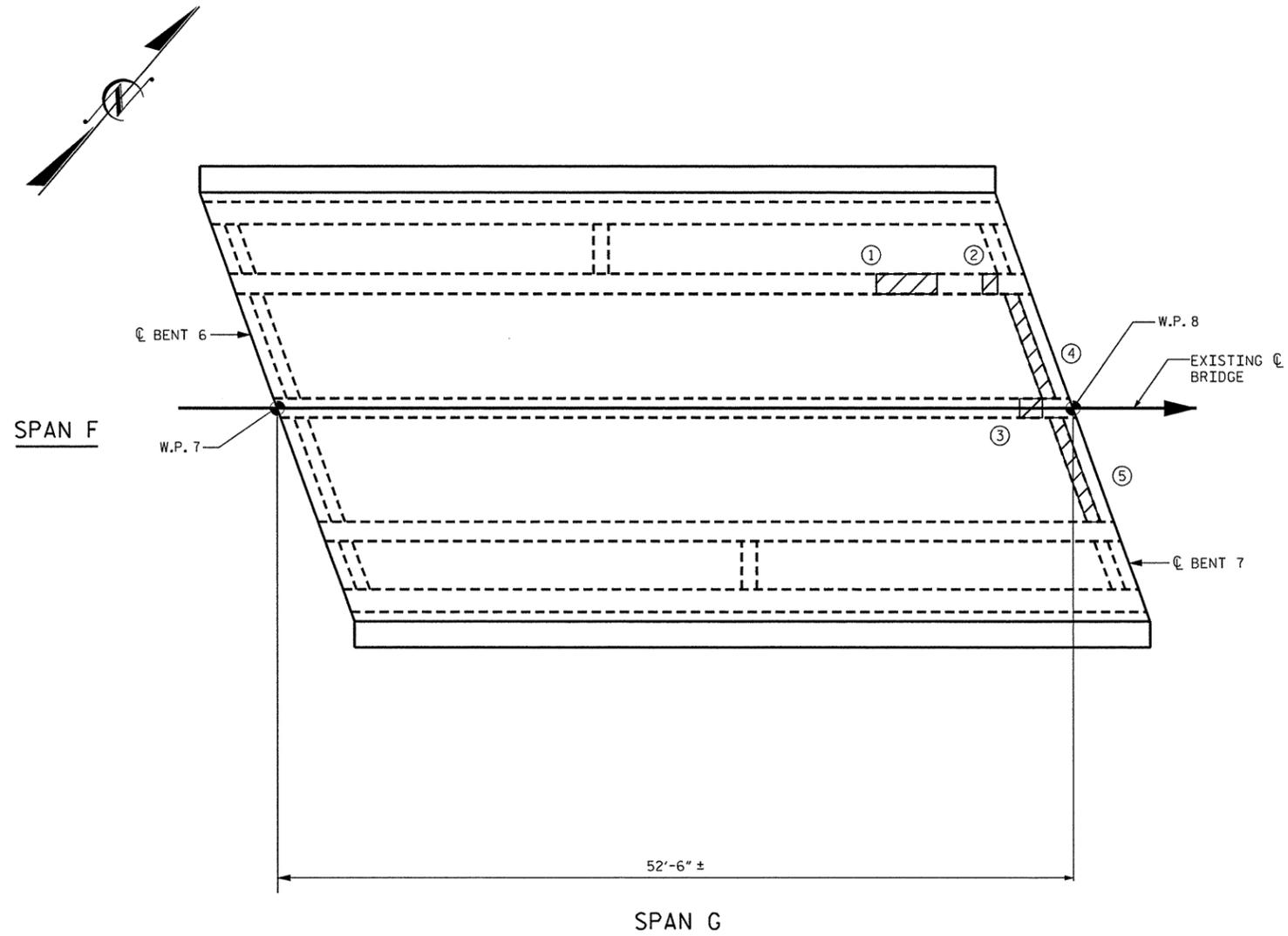
DWG. NO. S-43

2/15/2012

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-43
1			3			TOTAL SHEETS
2			4			73

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UNDER-DECK REPAIR NOTES

- ① 4'-0" x 1'-3" SPALL WITH EXPOSED REBAR, BOTTOM OF GIRDER
- ② 1'-0" x 1'-3" SPALL WITH EXPOSED REBAR, BOTTOM OF GIRDER
- ③ 1'-6" x 1'-3" SPALL WITH EXPOSED REBAR, BOTTOM OF GIRDER
- ④ 7'-0" x 1'-0" SPALL WITH EXPOSED REBAR, BOTTOM OF DIAPHRAGM
- ⑤ 7'-0" x 1'-0" SPALL WITH EXPOSED REBAR, BOTTOM OF DIAPHRAGM

SEE SHEET S-38 FOR NOTES, TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK, AND GIRDER REPAIR DETAIL.
SEE SHEET S-39 FOR DIAPHRAGM REPAIR DETAIL.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 170

SHEET 13 OF 21

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

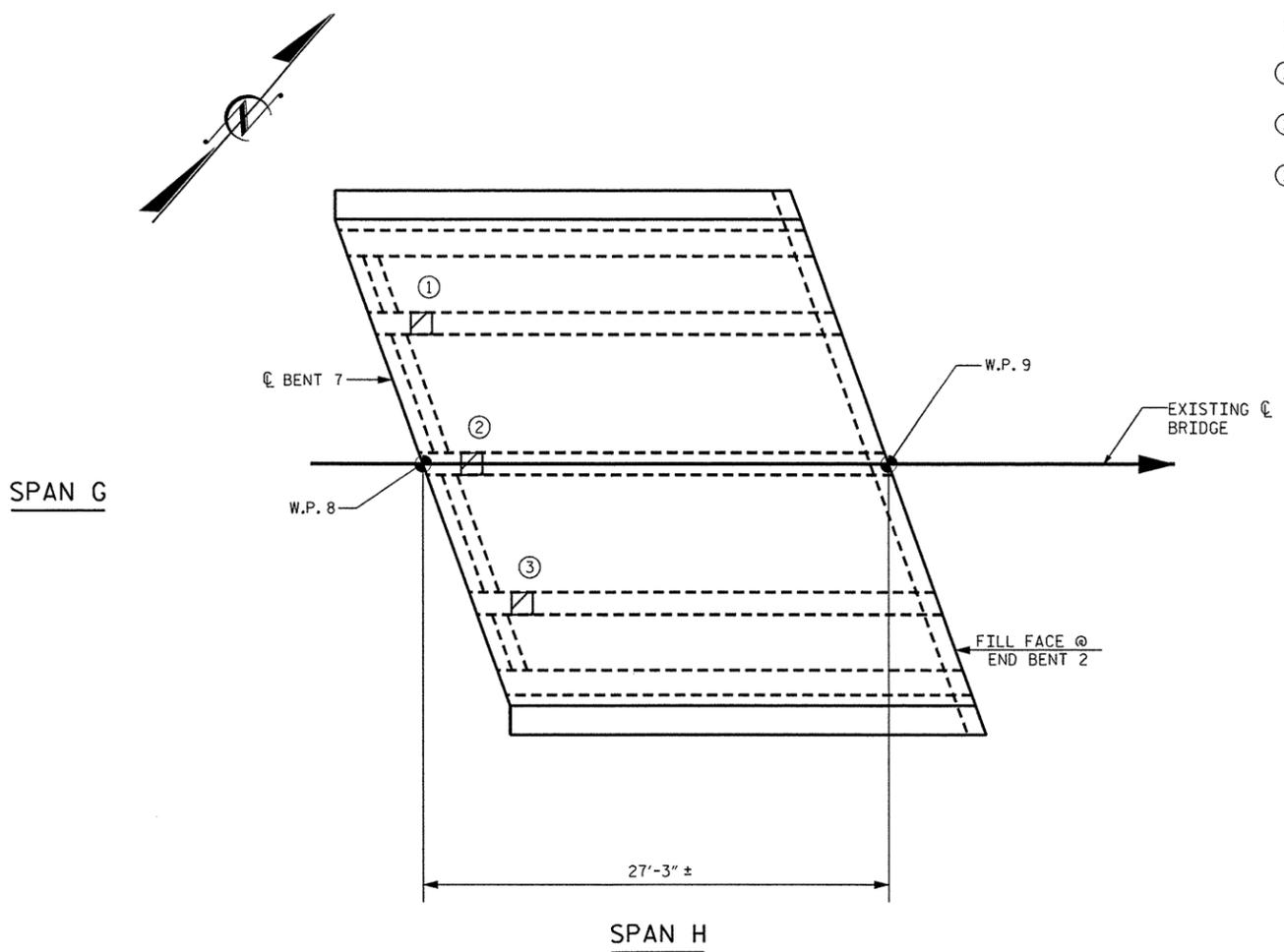
**SPAN "G" PLAN
 SUPERSTRUCTURE REPAIR**

DWG. NO. S-44

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-44
1			3			TOTAL SHEETS
2			4			73

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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UNDER-DECK REPAIR NOTES

- ① 1'-6" X 1'-3" SPALL, BOTTOM OF GIRDER 2 AT BEARING
- ① 1'-6" X 1'-3" SPALL, BOTTOM OF GIRDER 3 AT BEARING
- ① 1'-6" X 1'-3" SPALL, BOTTOM OF GIRDER 4 AT BEARING

SEE SHEET S-38 FOR NOTES, TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK, AND GIRDER REPAIR DETAIL.

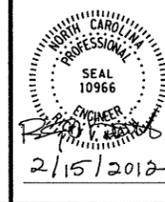
PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 170

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SPAN "H" PLAN
 SUPERSTRUCTURE REPAIR

DWG. NO. S-45



DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

REVISIONS						SHEET NO. S-45
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 73
2			4			

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REPAIR NOTES:

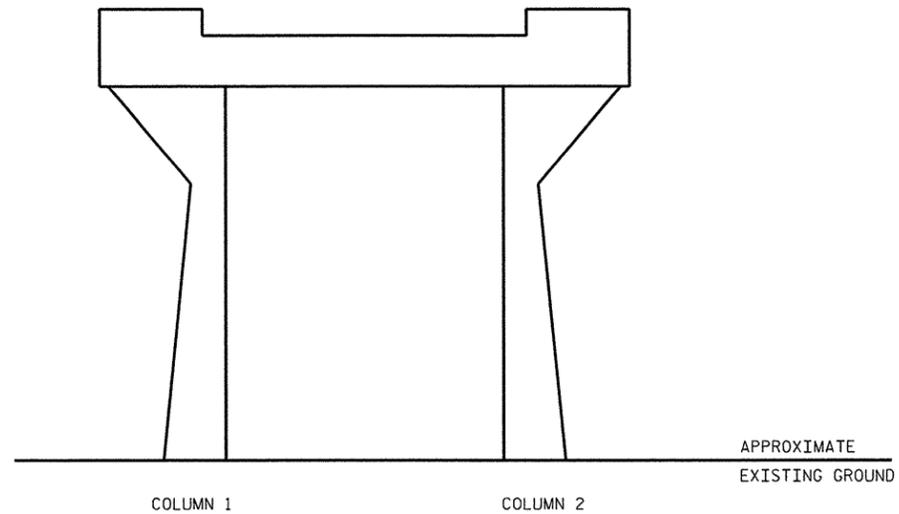
- ① 30'-0" X 1'-0" SPALLED ARE WITH EXPOSED REBAR, BOTTOM OF CAP
- ② 5'-0" X 2'-0" SPALL/DELAMINATED AREA
- ③ 2'-0" X 2'-0" CRACKED AREA

GENERAL NOTES:

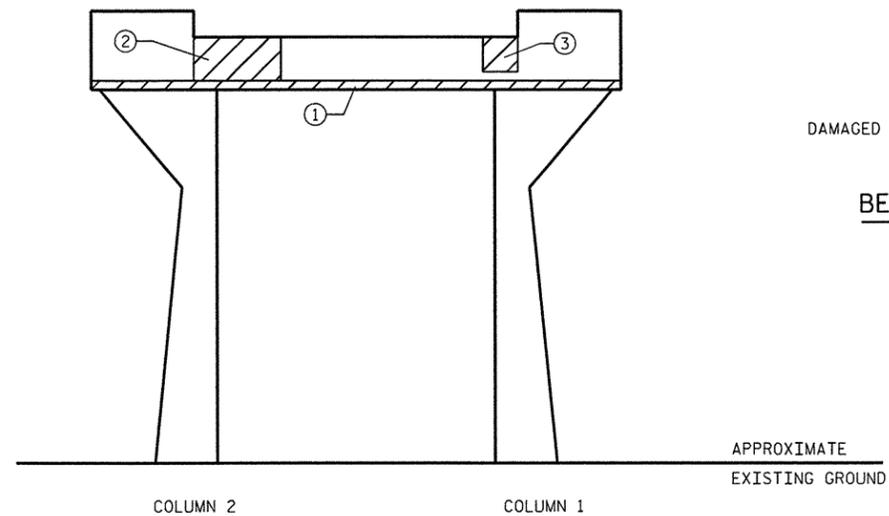
FOR SURFACE PREPARATION, SEE SPECIAL PROVISIONS FOR "SHOTCRETE REPAIR" AND "CONCRETE REPAIR".

SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

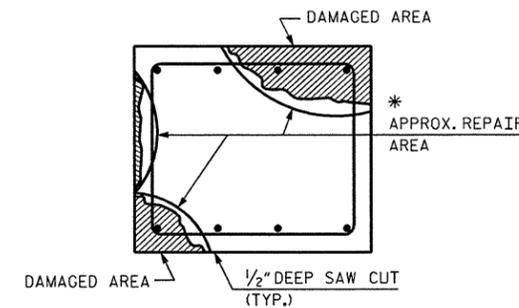
SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. SEE SPECIAL PROVISION FOR "CONCRETE REPAIR".



BENT 1 REPAIRS - ELEVATION (SPAN A SIDE)

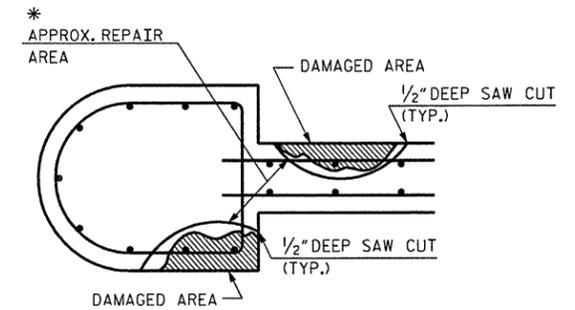


BENT 1 REPAIRS - ELEVATION (SPAN B SIDE)



BENT CAP REPAIR DETAIL

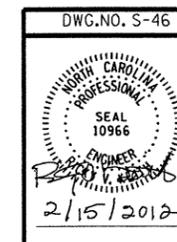
* REMOVE TO SOUND CONCRETE A MINIMUM OF ONE INCH BEHIND REBAR



COLUMN REPAIR DETAIL

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 170

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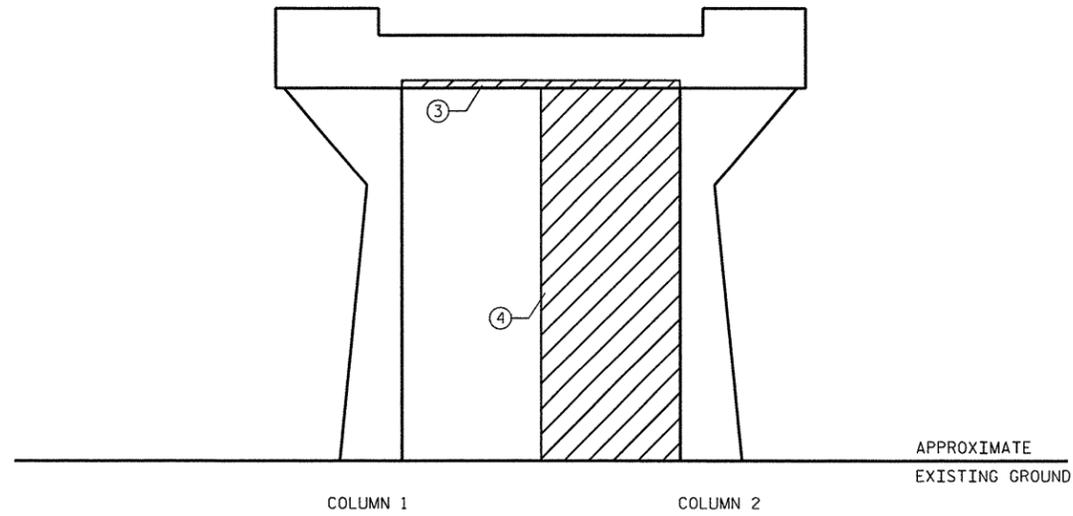
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1 REPAIRS
 ELEVATION**

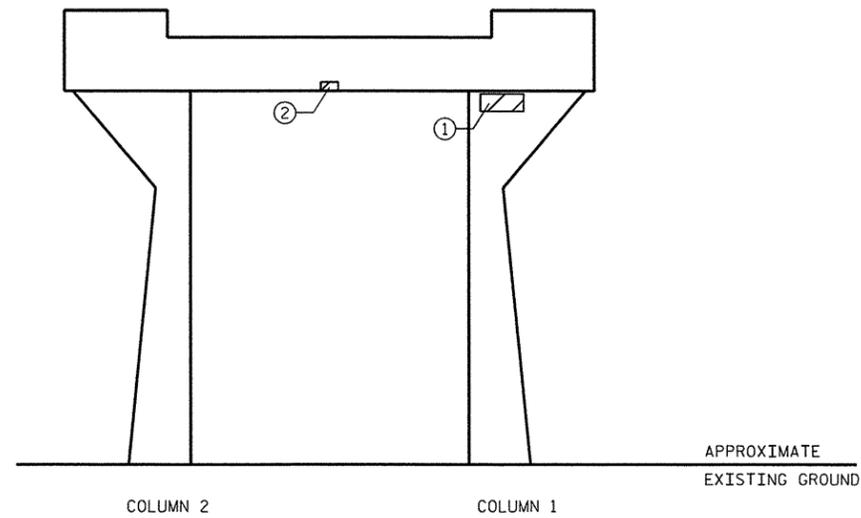
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-46
1			3			TOTAL SHEETS
2			4			73

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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BENT 2 REPAIRS - ELEVATION (SPAN B SIDE)



BENT 2 REPAIRS - ELEVATION (SPAN C SIDE)

REPAIR NOTES:

- ① 2'-6" X 1'-0" SPALL WITH EXPOSED REBAR
- ② 1'-0" X 1'-0" SPALL/DELAMINATED AREA, UNDERSIDE OF CAP
- ③ 20'-0" X 1'-0" CRACKED AREA, UNDERSIDE OF CAP
- ④ 10'-0" X 20'-0" CRACKED/DELAMINATED AREA

GENERAL NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISIONS FOR "SHOTCRETE REPAIR" AND "CONCRETE REPAIR".

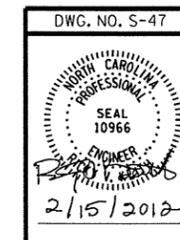
SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. SEE SPECIAL PROVISION FOR "CONCRETE REPAIR".

FOR BENT CAP REPAIR DETAIL, AND COLUMN REPAIR DETAIL SEE SHEET S-46.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 170

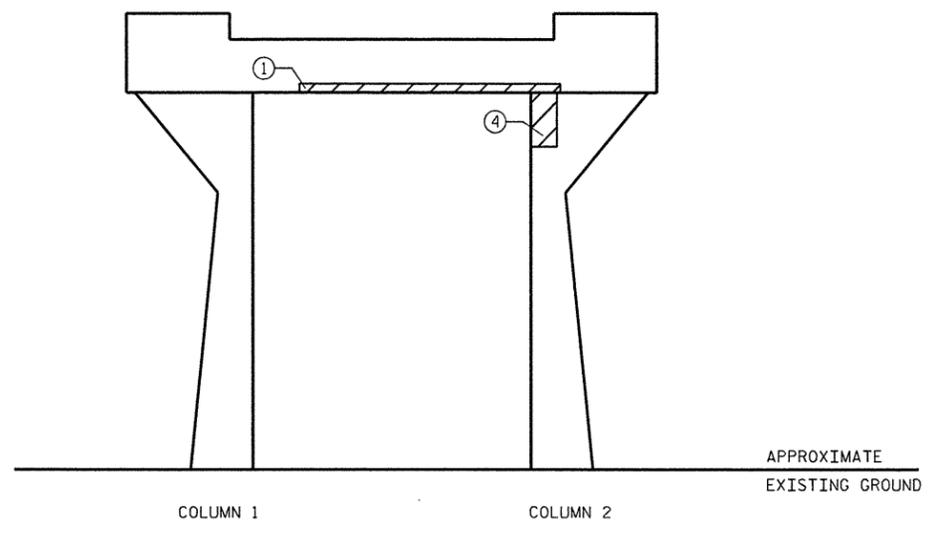
SHEET 16 OF 21



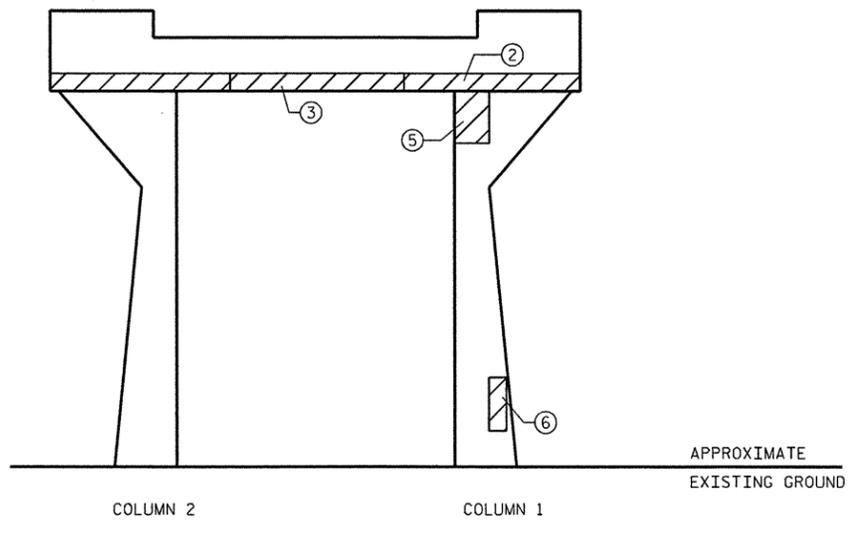
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BENT 2 REPAIRS ELEVATION					
DWG. NO. S-47					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-47
					TOTAL SHEETS 73

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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BENT 3 REPAIRS - ELEVATION (SPAN C SIDE)



BENT 3 REPAIRS - ELEVATION (SPAN D SIDE)

REPAIR NOTES:

- ① 15'-0" X 1'-0" SPALL WITH EXPOSED REBAR, BOTTOM OF CAP
- ② ENTIRE BOTTOM OF CAP CRACKED/DELAMINATED, BOTTOM OF CAP
- ③ 10'-0" X 2'-0" SPALL WITH EXPOSED REBAR, BOTTOM OF CAP
- ④ 1'-6" X 3'-0" SPALL WITH EXPOSED REBAR
- ⑤ 2'-0" X 3'-0" SPALL
- ⑥ 1'-0" X 3'-0" IMPACT SPALL

GENERAL NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISIONS FOR "SHOTCRETE REPAIR" AND "CONCRETE REPAIR".

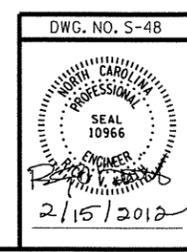
SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. SEE SPECIAL PROVISION FOR "CONCRETE REPAIR".

FOR BENT CAP REPAIR DETAIL, AND COLUMN REPAIR DETAIL SEE SHEET S-46.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

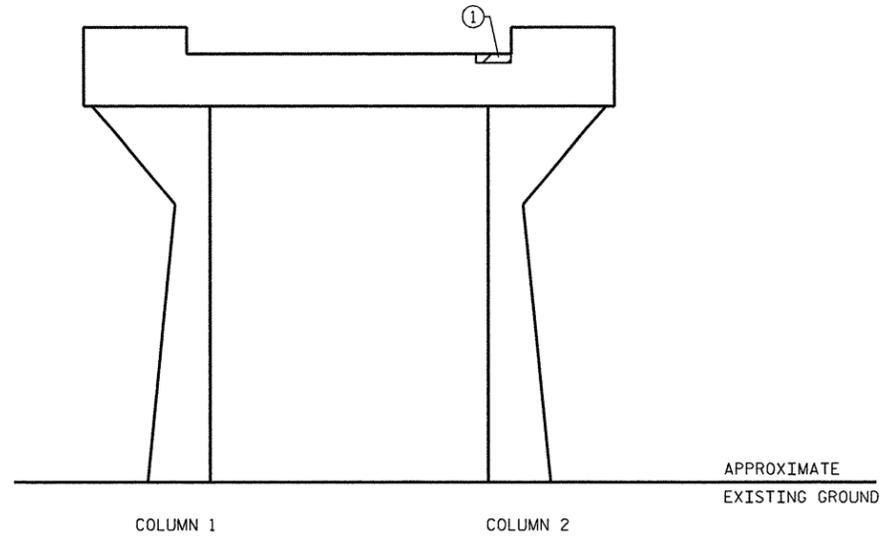
**BENT 3 REPAIRS
 ELEVATION**

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

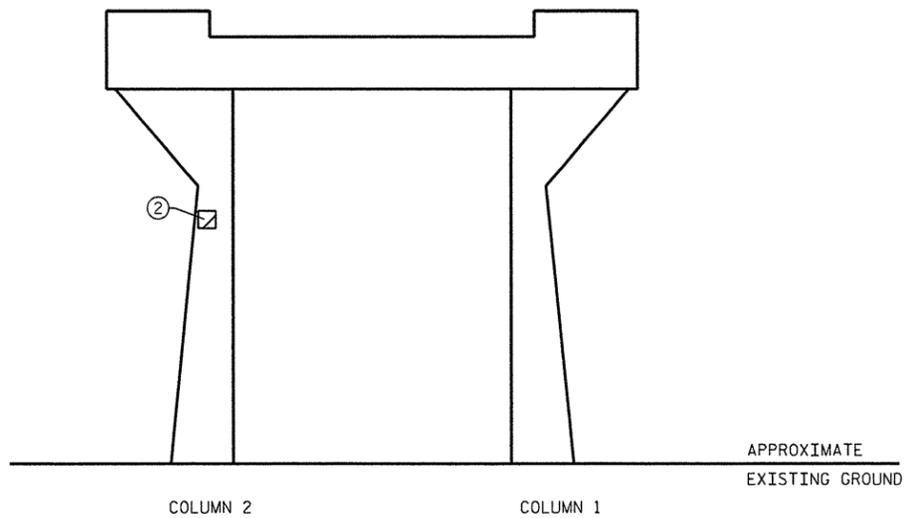
S-48
TOTAL SHEETS 73

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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BENT 4 REPAIRS - ELEVATION (SPAN D SIDE)



BENT 4 REPAIRS - ELEVATION (SPAN E SIDE)

REPAIR NOTES:

- ① DIAGONAL HAIRLINE CRACK AT BEARING SEAT OF GIRDER 4
- ② 1'-0" X 1'-0" SPALL, SIDE FACE OF COLUMN

GENERAL NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISIONS FOR "SHOTCRETE REPAIR" AND "CONCRETE REPAIR".

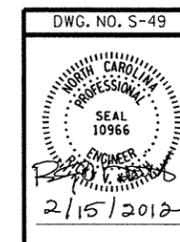
SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. SEE SPECIAL PROVISION FOR "CONCRETE REPAIR".

FOR BENT CAP REPAIR DETAIL, AND COLUMN REPAIR DETAIL SEE SHEET S-46.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 170

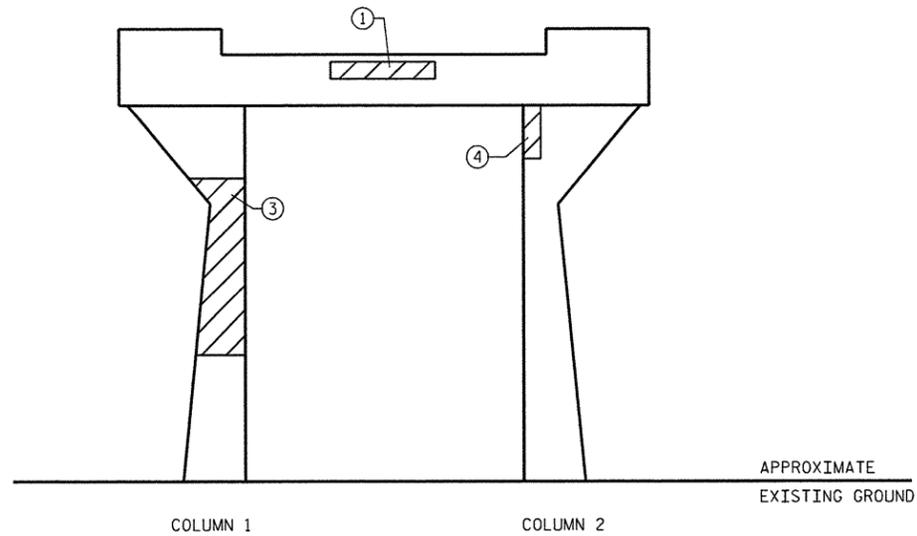
SHEET 18 OF 21



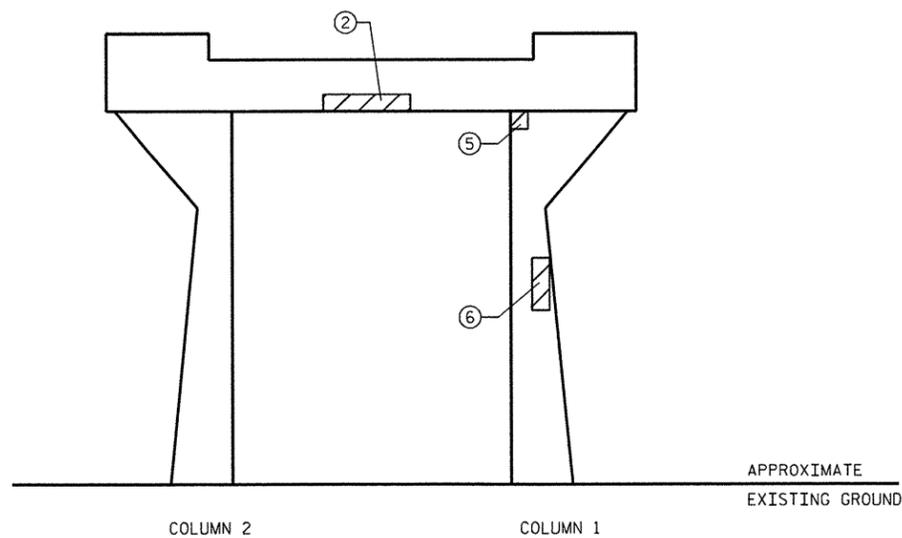
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BENT 4 REPAIRS ELEVATION					
DWG. NO. S-49					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-49
					TOTAL SHEETS 73

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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BENT 5 REPAIRS - ELEVATION (SPAN E SIDE)



BENT 5 REPAIRS - ELEVATION (SPAN F SIDE)

REPAIR NOTES:

- ① 6'-0" X 1'-0" SPALL WITH EXPOSED REBAR, UNDER GIRDER 3
- ② 5'-0" X 1'-0" SPALL
- ③ 2'-0 X 10'-0" SPALL
- ④ 1'-0" X 3'-0" SPALL WITH EXPOSED REBAR
- ⑤ 1'-0 X 1'-0" SPALL WITH EXPOSED REBAR
- ⑥ 1'-0 X 3'-0" SPALL

GENERAL NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISION FOR "SHOTCRETE REPAIR" AND "CONCRETE REPAIR".

SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. SEE SPECIAL PROVISION FOR "CONCRETE REPAIR".

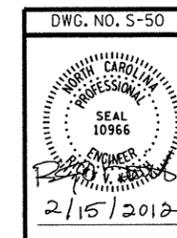
FOR BENT CAP REPAIR DETAIL AND COLUMN REPAIR DETAIL, SEE SHEET S-46.

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

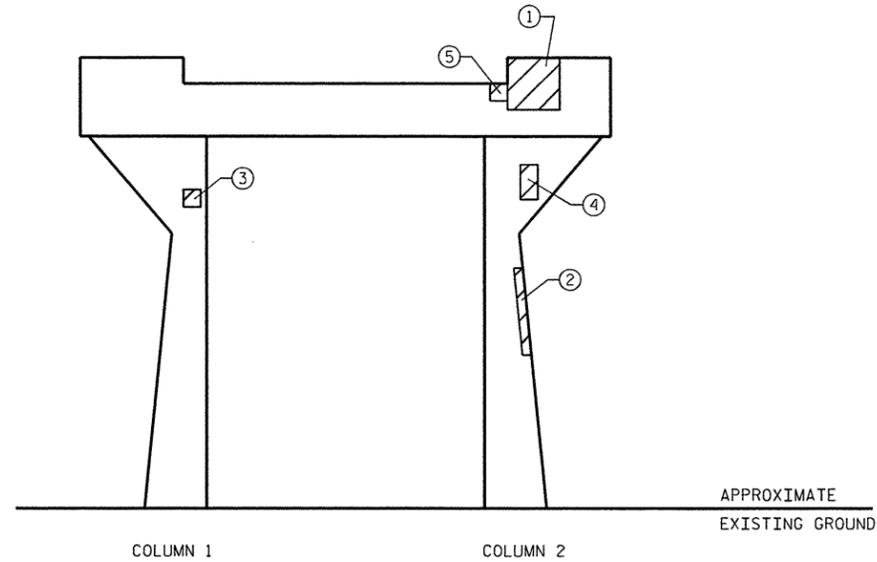
**BENT 5 REPAIRS
 ELEVATION**



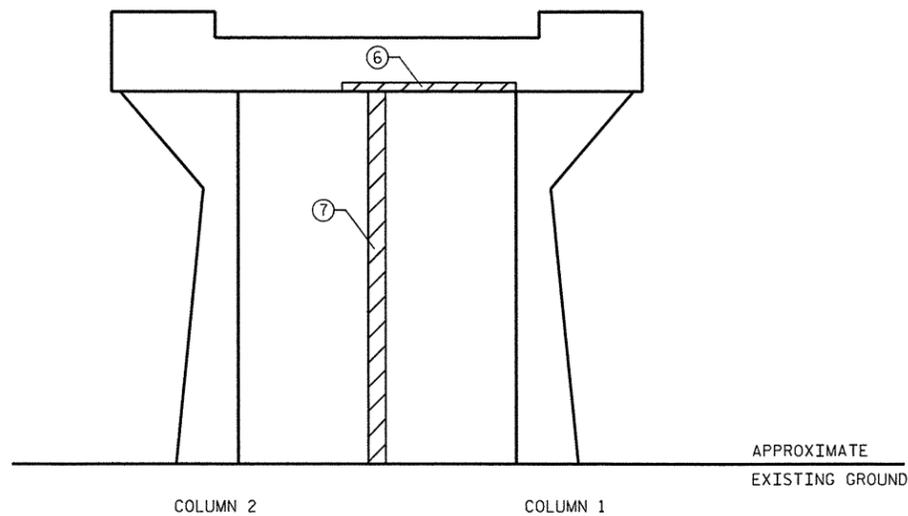
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-50
1			3			TOTAL SHEETS
2			4			73

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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BENT 6 REPAIRS - ELEVATION (SPAN F SIDE)



BENT 6 REPAIRS - ELEVATION (SPAN G SIDE)

REPAIR NOTES:

- ① 3'-0" X 3'-0" SPALL WITH EXPOSED REBAR
- ② 1'-0" X 5'-0" SPALL WITH EXPOSED REBAR, SIDE FACE OF COLUMN
- ③ 1'-0" X 1'-0" SPALL WITH EXPOSED REBAR
- ④ 1'-0" X 2'-0" SPALL WITH EXPOSED REBAR
- ⑤ 1'-0" X 1'-0" SPALL WITH EXPOSED REBAR
- ⑥ 10'-0" X 1'-0" CRACKED/SPALLED AREA WITH EXPOSED REBAR, UNDERSIDE OF CAP
- ⑦ 20'-0" VERTICAL CRACK

GENERAL NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISIONS FOR "SHOTCRETE REPAIR" AND "CONCRETE REPAIR".

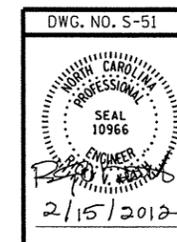
SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. SEE SPECIAL PROVISION FOR "CONCRETE REPAIR".

FOR BENT CAP REPAIR DETAIL, AND COLUMN REPAIR DETAIL SEE SHEET S-46.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 170

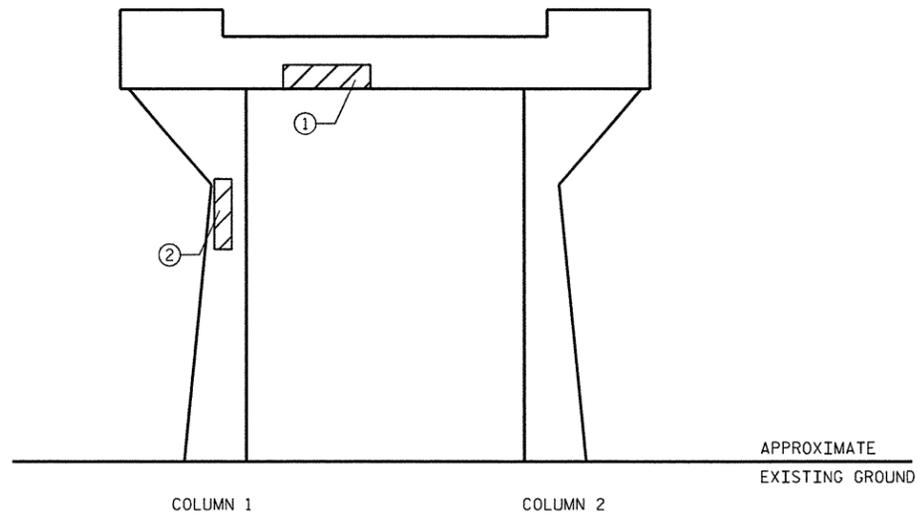
SHEET 20 OF 21



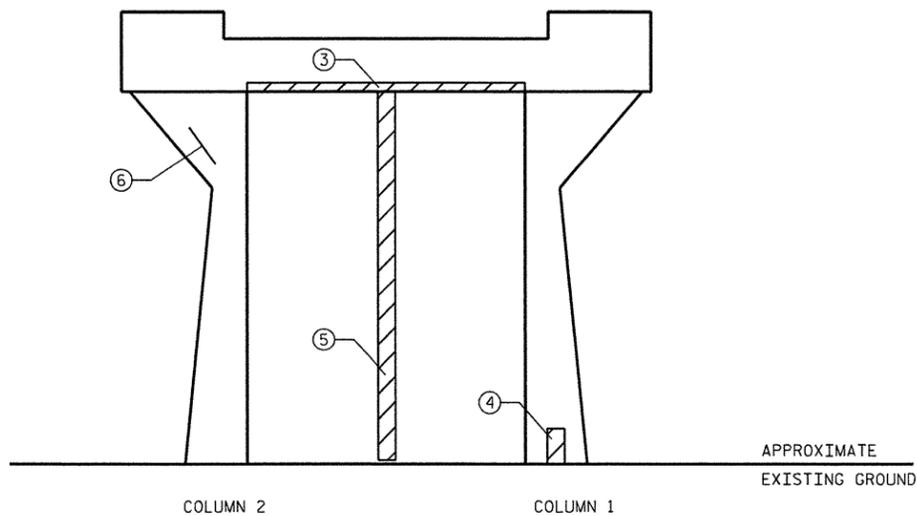
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-51
BENT 6 REPAIRS ELEVATION						TOTAL SHEETS 73
REVISIONS						
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

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BENT 7 REPAIRS - ELEVATION (SPAN G SIDE)



BENT 7 REPAIRS - ELEVATION (SPAN H SIDE)

REPAIR NOTES:

- ① 5'-0" X 1'-0" SPALL
- ② 1'-0" X 4'-0" SPALL WITH EXPOSED REBAR
- ③ 15'-0" X 1'-0" SPALL/DELAMINATED AREA, UNDERSIDE OF CAP
- ④ 1'-0" X 2'-0" SPALL WITH EXPOSED REBAR
- ⑤ 1'-0" X 9'-0" CRACKED AREA
- ⑥ 3'-0" HAIRLINE CRACK

GENERAL NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISIONS FOR "SHOTCRETE REPAIR" AND "CONCRETE REPAIR".

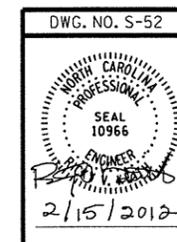
SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE. LOCATIONS SHOULD BE FIELD VERIFIED.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. SEE SPECIAL PROVISION FOR "CONCRETE REPAIR".

FOR BENT CAP REPAIR DETAIL, AND COLUMN REPAIR DETAIL SEE SHEET S-46.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 170

SHEET 21 OF 21



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BENT 7 REPAIRS ELEVATION					
DWG. NO. S-52					
SHEET NO. S-52					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS 73

DRAWN BY : F.D. WEEDEN DATE : JAN. 2012
 CHECKED BY : R.V. KEITH DATE : JAN. 2012

TOTAL BILL OF MATERIALS

	SHOTCRETE REPAIRS	CONCRETE REPAIRS	SCARIFYING BRIDGE DECK	HYDRO-DEMOLITION OF BRIDGE DECK	LATEX MODIFIED CONCRETE OVERLAY	PLACING AND FINISHING LATEX MODIFIED CONCRETE OVERLAY	FOAM JOINT SEALS	GROOVING BRIDGE FLOORS	* CLASS I SURFACE PREPARATION	* CLASS II SURFACE PREPARATION	* CLASS III SURFACE PREPARATION	CLEANING AND REPAINTING OF BRIDGE * 200	POLLUTION CONTROL
	CUBIC FEET	CUBIC FEET	SQUARE YARDS	SQUARE YARDS	CUBIC YARDS	SQUARE YARDS	LUMP SUM	SQUARE FEET	SQUARE YARDS	SQUARE YARDS	SQUARE YARDS	LUMP SUM	LUMP SUM
SUPERSTRUCTURE	25	—	623	623	47	623	LUMP SUM	4,502	0	148	1	LUMP SUM	LUMP SUM
END BENT 1	—	—	—	—	—	—	—	—	—	—	—	—	—
BENT 1	114	10	—	—	—	—	—	—	—	—	—	—	—
BENT 2	145	6	—	—	—	—	—	—	—	—	—	—	—
END BENT 2	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL	284	16	623	623	47	623	LUMP SUM	4,502	0	148	1	LUMP SUM	LUMP SUM

* QUANTITIES ARE ESTIMATES FROM BEST AVAILABLE DATA, AND SHOULD BE CONSIDERED FOR INFORMATION PURPOSES ONLY. PAYMENT FOR THESE ITEMS SHALL BE INCLUDED IN THE PRICE BID FOR HYDRO-DEMOLITION. IF ANY CLASS III LOCATIONS ARE ENCOUNTERED PRIOR TO OR DURING HYDRO-DEMOLITION, SEE "TYP. BLOW THRU CONTAINMENT AND FORMWORK DETAIL."

GENERAL NOTES

ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE "2012 STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION.

ALL REINFORCING STEEL SHALL BE GRADE 60.

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

FOR "FALSEWORK AND FORMWORK", SEE SPECIAL PROVISIONS.

FOR "CRANE SAFETY", SEE SPECIAL PROVISIONS.

FOR "GROUT FOR STRUCTURES", SEE SPECIAL PROVISIONS.

FOR "MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH WAKE COUNTY BRIDGE NO. 200", SEE SPECIAL PROVISIONS.

SPALLED, DELAMINATED, AND CRACKED AREAS SHOWN ON EXISTING CONCRETE GIRDERS, BENT DIAPHRAGMS, AND BENT SUBSTRUCTURE UNITS ARE APPROXIMATE.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "CONCRETE REPAIRS", SEE SPECIAL PROVISIONS.

SHOTCRETE SHALL BE USED FOR ALL VERTICAL OR OVERHEAD REPAIRS AS DETERMINED BY THE ENGINEER AND IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "SHOTCRETE REPAIRS".

CLASS A CONCRETE SHALL BE USED FOR ALL REPAIRS ON FLAT SURFACES SUCH AS THE TOP OF CAP OR BRIDGE SEATS UNDER BEARINGS AS DETERMINED BY THE ENGINEER AND IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "CONCRETE REPAIRS".

ANY DAMAGE TO THE EXISTING STRUCTURE OR SLOPE PROTECTION AS A RESULT OF FALSEWORK OR TEMPORARY SUPPORTS SHALL BE REPAIRED AT THE CONTRACTOR'S COST AND AT THE DIRECTION OF THE ENGINEER.

ALL REINFORCEMENT TO BE PROVIDED IS INCIDENTAL TO SHOTCRETE REPAIRS AND CONCRETE REPAIRS.

THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR REMOVAL OPERATIONS SUCH THAT REPAIRS WILL NOT BE IMPLEMENTED ON MORE THAN ONE FACE OF THE CONCRETE ELEMENT WITHOUT APPROVAL OF THE ENGINEER.

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

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

FOR "LATEX MODIFIED CONCRETE OVERLAY", SEE SPECIAL PROVISIONS.

FOR "FOAM JOINT SEALS", SEE SPECIAL PROVISIONS.

FOR "ELASTOMERIC CONCRETE", SEE SPECIAL PROVISIONS.

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

FOR "PAINTING EXISTING STRUCTURES", SEE SPECIAL PROVISION.

FOR "CLEANING AND PAINTING EXISTING BEARING PLATES", SEE SPECIAL PROVISIONS.

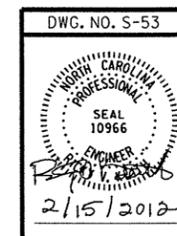
EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

PROJECT NO. 17BP.5.H.1
 WAKE COUNTY
 BRIDGE NO. 200

SHEET 1 OF 9

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**NOTES
 AND
 BILL OF MATERIALS**



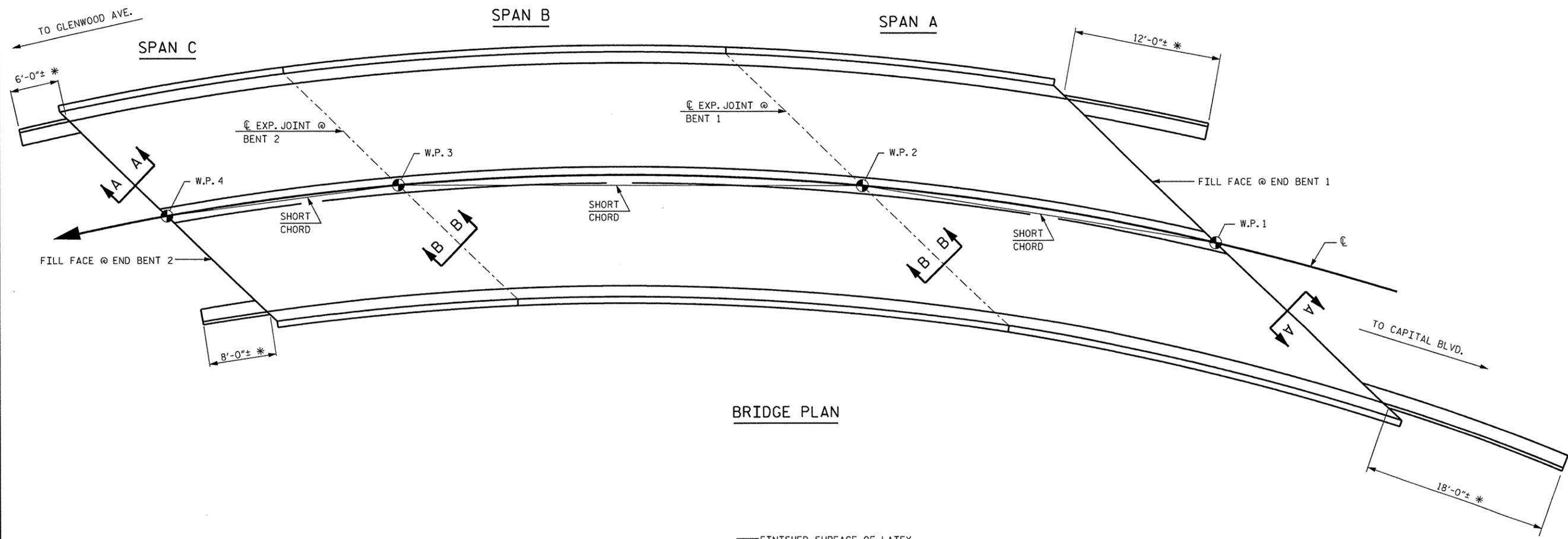
REVISIONS						SHEET NO. S-53
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 73
2			4			

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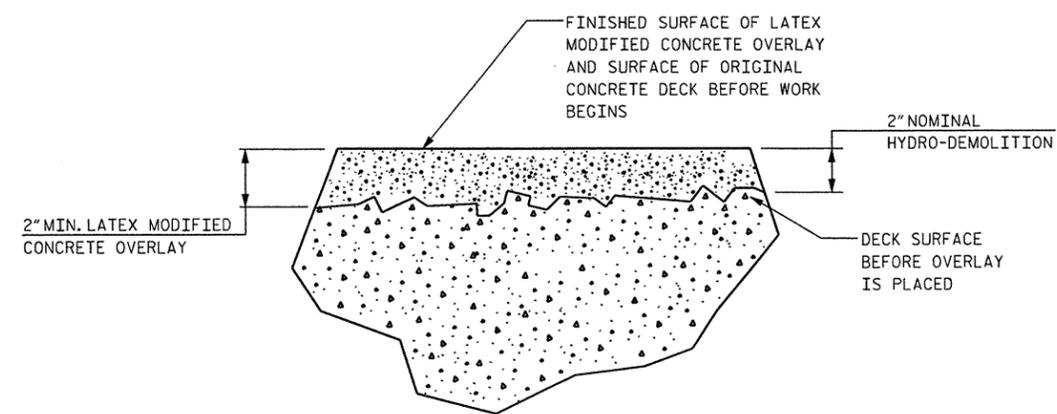
DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011



NOTES:
 FOR SECTIONS A-A AND B-B, SEE DWG. NO. S-59
 * REMOVE AND REPLACE EXISTING CURB AND GUTTER TO LIMITS SHOWN ON PLANS. COST SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS.



BRIDGE PLAN



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

PROJECT NO. 17BP.5.H.1
 WAKE COUNTY
 BRIDGE NO. 200

SHEET 2 OF 9

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BRIDGE PLAN

DWG. NO. S-54

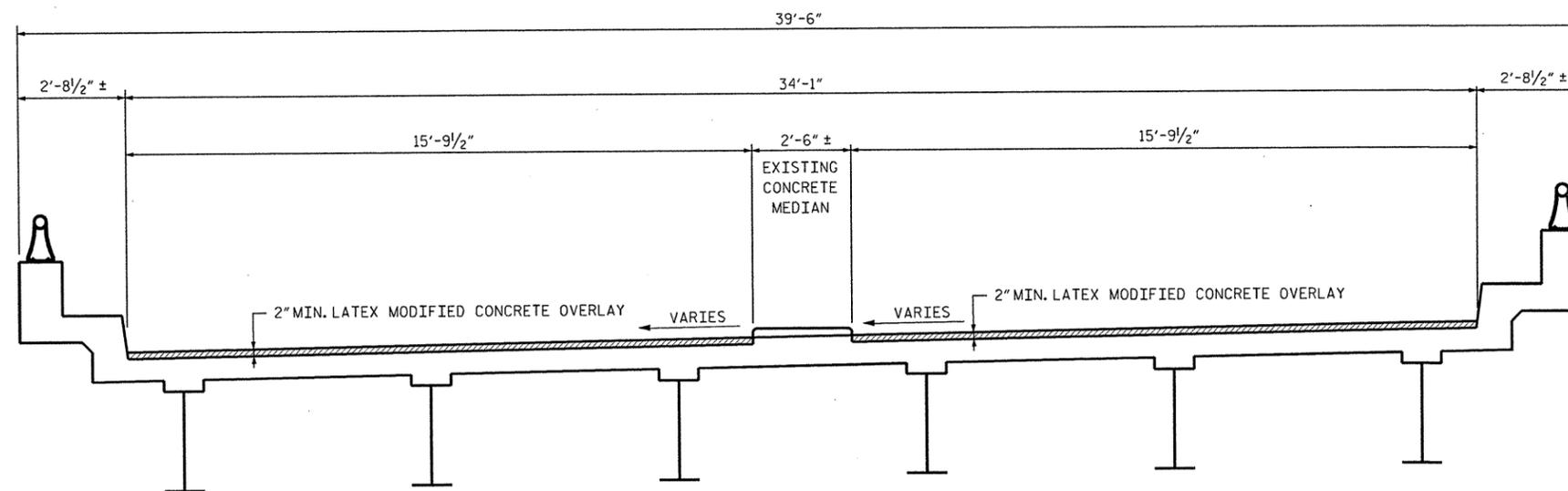
REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

TOTAL SHEETS: 73

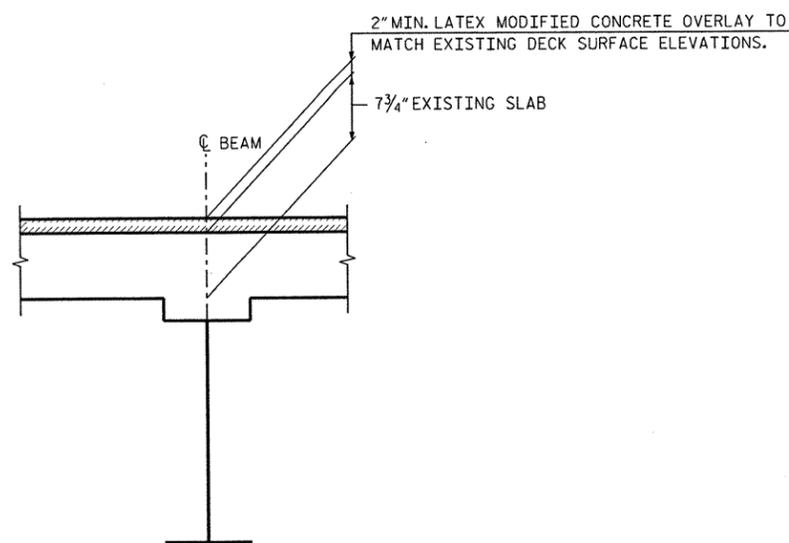
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DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

NOTES:
 FOR MANAGING HYDRO-DEMOLITION WATER AND SEALING
 OF DECK JOINTS, SEE SPECIAL PROVISIONS.
 ALL HORIZONTAL DIMENSIONS SHOWN ARE RADIAL.



TYPICAL SECTION



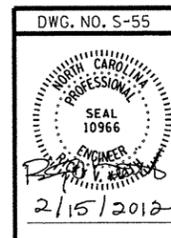
EXISTING SLAB BUILDUP

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 200

SHEET 3 OF 9

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

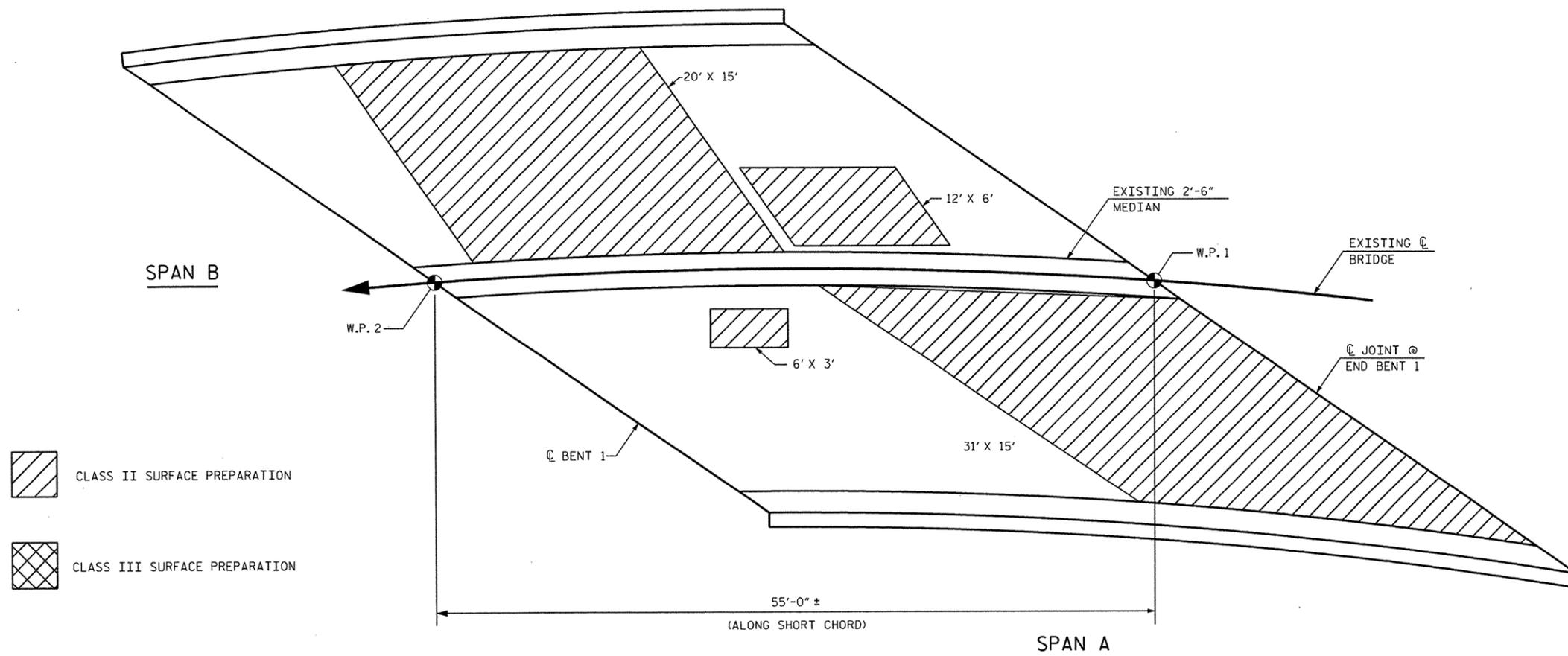


REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-55	
1			3			TOTAL SHEETS	
2			4			73	

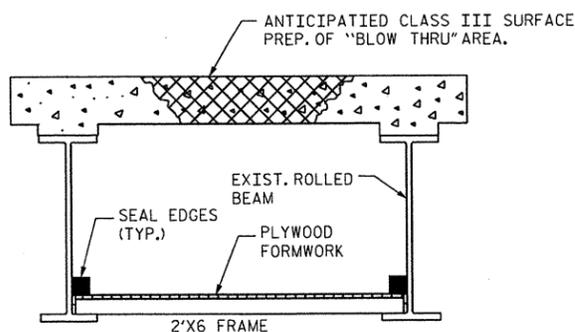
DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

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 CLASS II SURFACE PREPARATION
 CLASS III SURFACE PREPARATION



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THRU OF THE DECK.

A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.

COST FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE BID PER SQ. YD. OF HYDRO-DEMOLITION.

NOTES:

CLASS II & III SURFACE PREPARATION SHOWN IS APPROXIMATE AND MAY NOT REFLECT CONDITIONS IN THE FIELD.

CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.

SUBMIT DETAILS OF PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.

PROJECT NO. 17BP.5.H.1
 WAKE COUNTY
 BRIDGE NO. 200

SHEET 4 OF 9

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SPAN "A" PLAN
 DECK REPAIR**

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

SHEET NO. S-56
 TOTAL SHEETS 73

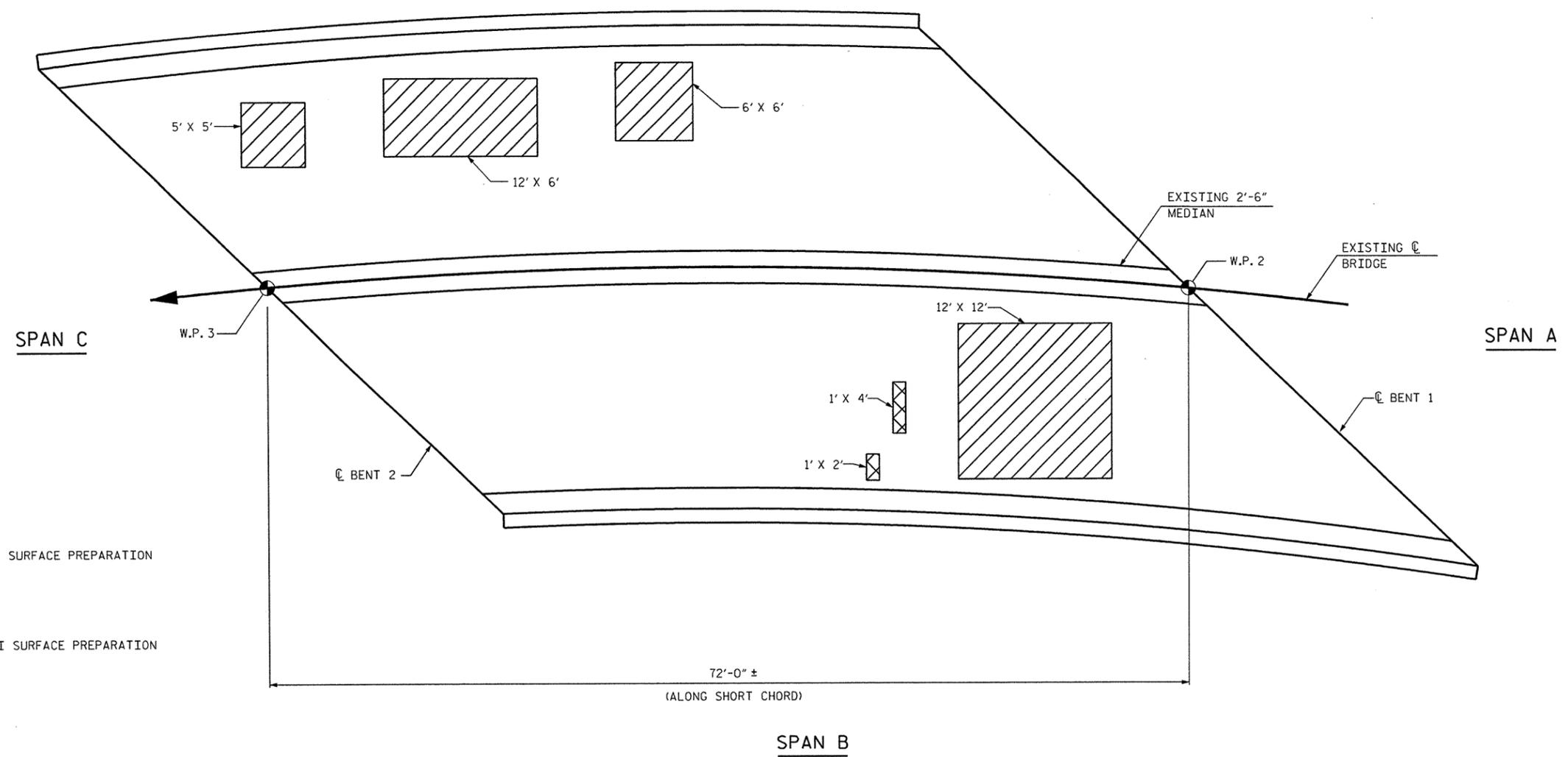
DWG. NO. S-56

PROFESSIONAL SEAL
 10966
 2/15/2012

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

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 CLASS II SURFACE PREPARATION
 CLASS III SURFACE PREPARATION



SEE SHEET S-56 FOR NOTES AND TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 200

SHEET 5 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SPAN "B" PLAN
DECK REPAIR

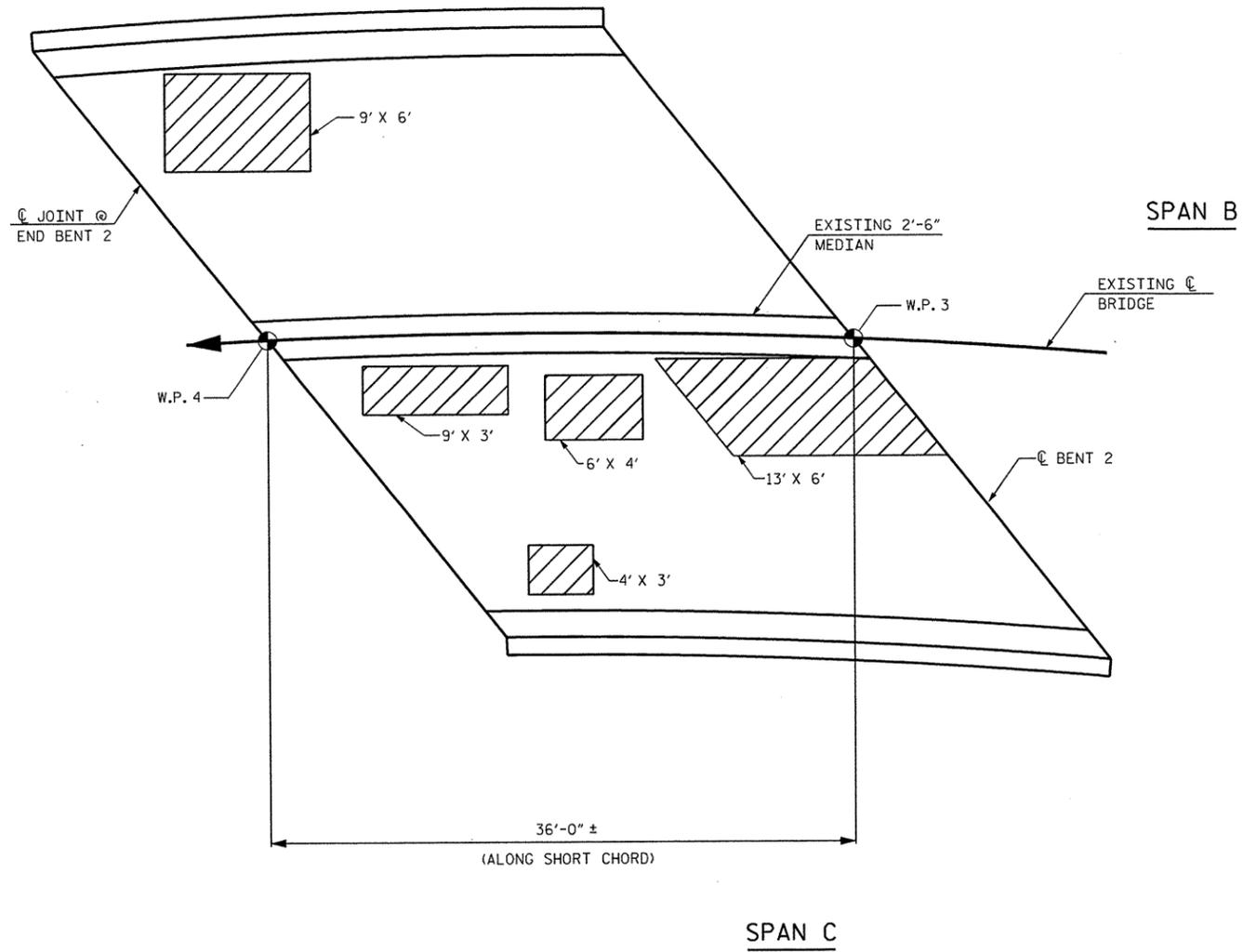
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-57
1			3			TOTAL SHEETS
2			4			73

DWG. NO. S-57

2/15/2012

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

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 CLASS II SURFACE PREPARATION
 CLASS III SURFACE PREPARATION

SEE SHEET S-56 FOR NOTES AND TYPICAL "BLOW THRU" CONTAINMENT AND FORMWORK.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 200

SHEET 6 OF 9

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

 SPAN "C" PLAN
 DECK REPAIR

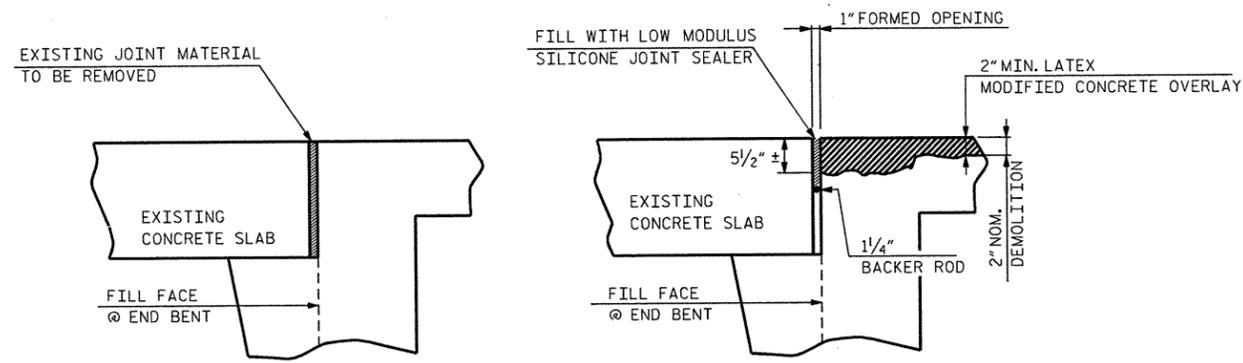
DWG. NO. S-58

 2/15/2012

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-58	
1			3			TOTAL SHEETS	73
2			4				

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SECTION A-A
(EXISTING)

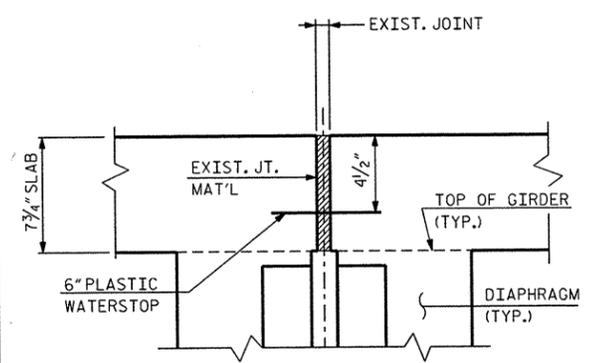
SECTION A-A
(PROPOSED)

END BENT 1 AND 2

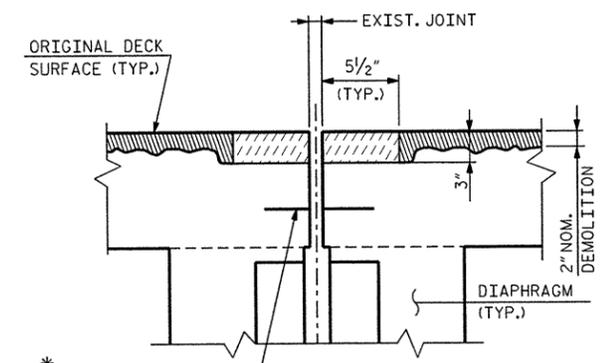
ELASTOMERIC CONCRETE	
BENT NO.	ELASTOMERIC CONCRETE * (CU. FT.)
1	14
2	12
TOTAL	26

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

NOTES:
 RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS REQUIRED.
 REMOVE EXISTING JOINT SEAL MATERIAL.
 CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING STEEL.
 THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.

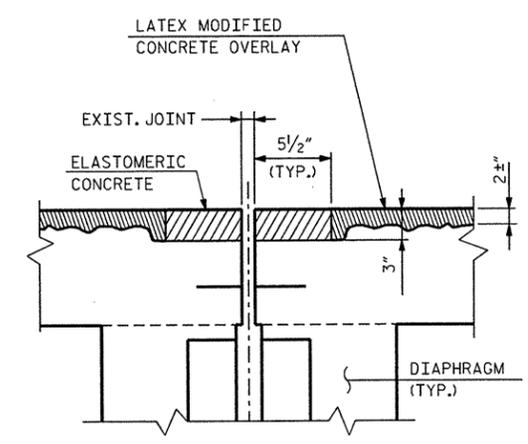


SECTION B-B
(EXISTING JOINT)

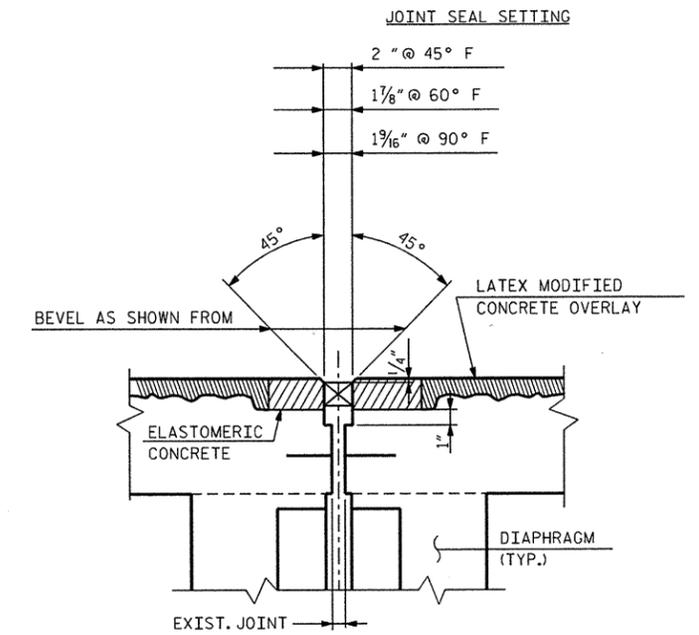


SECTION B-B
(MINIMUM EXISTING JOINT DEMOLITION)

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

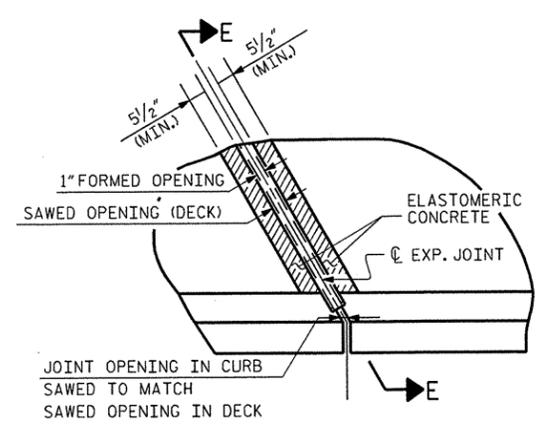


SECTION B-B
(PROPOSED JOINT PRE-SAWED)

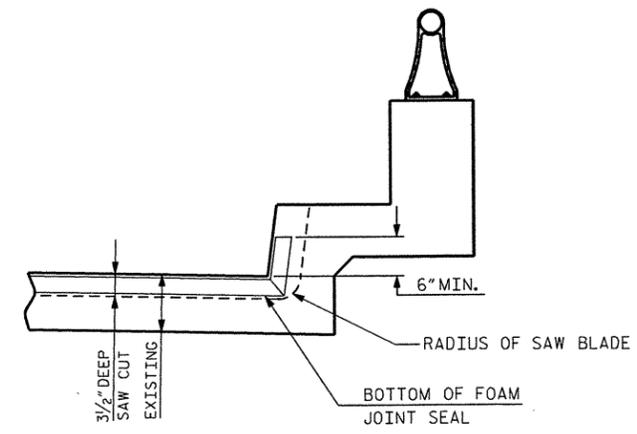


SECTION B-B

(PROPOSED FOAM JOINT SEAL EXPANSION)
 USE 2 1/2" WIDTH UNCOMPRESSED FOAM JOINT SEAL MATERIAL.



PARTIAL PLAN AT JOINT



SECTION E-E

FOAM JOINT SEAL TO BE CUT, HEAT WELDED AND TURNED UP PARALLEL TO SLOPE FACE OF BARRIER RAIL.

PROJECT NO. 17BP.5.H.1
 WAKE COUNTY
 BRIDGE NO. 200

SHEET 7 OF 9

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

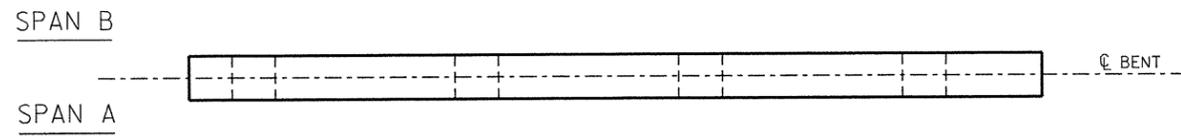
JOINT DETAILS

DWG. NO. S-59

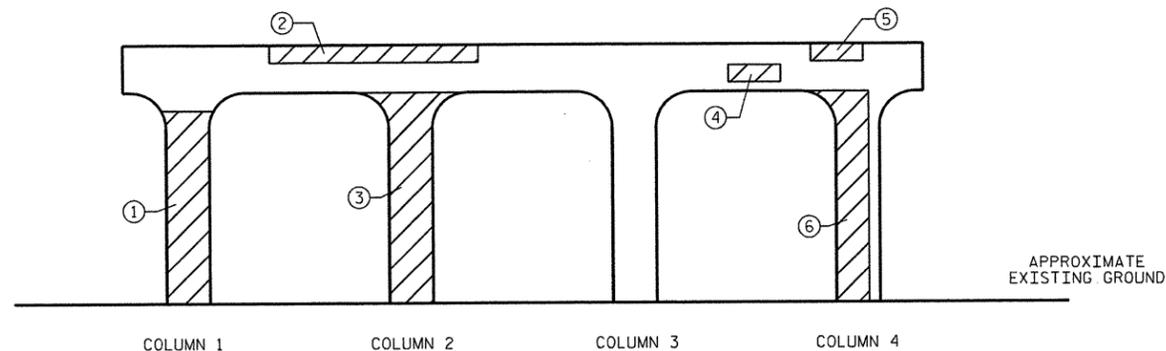
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-59
1			3			TOTAL SHEETS
2			4			73

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

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BENT 1 - PLAN

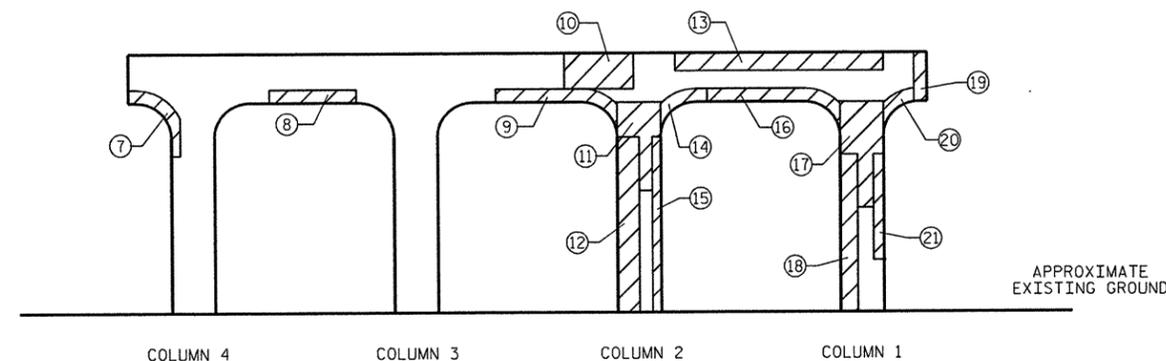


BENT 1 REPAIRS - ELEVATION (SPAN A SIDE)

SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE FOR "SURFACE PREPARATION", SEE SPECIAL PROVISION FOR SHOTCRETE REPAIRS AND CONCRETE REPAIRS.

SPALLED, CRACKED OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE, SEE SPECIAL PROVISIONS FOR "CONCRETE REPAIRS".

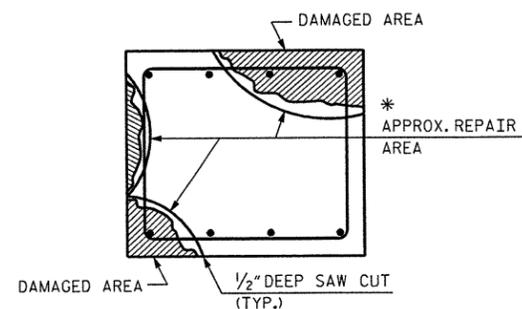
CRACKED, SPALLED, OR DELAMINATED AREAS ON BENT DIAPHRAGMS ABOVE BENT SHALL BE REPAIRED WITH SHOTCRETE. QUANTITIES FOR DIAPHRAGM REPAIR ARE INCLUDED IN THE PAY ITEM "SHOTCRETE REPAIRS" SUPERSTRUCTURE IN THE TOTAL BILL OF MATERIALS.



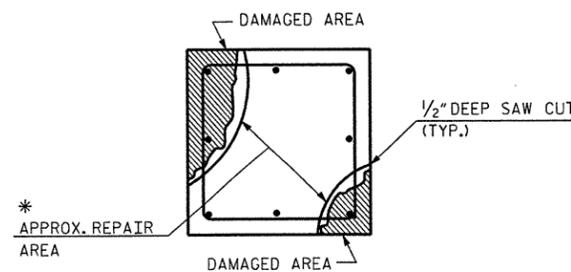
BENT 1 REPAIRS - ELEVATION (SPAN B SIDE)

REPAIR NOTES:

- ① 2'-6" X 11'-0" SPALL/CRACKED OLD PATCH
- ② 12'-0" X 1'-0" CRACKED AREA
- ③ 2'-6" X 12'-0" SPALL/CRACKED OLD PATCH
- ④ 2'-0" X 1'-0" CRACKED AREA
- ⑤ 3'-0" X 1'-6" CRACKED AREA UNDER EXTERIOR BEARING
- ⑥ 3'-3" X 12'-0" SPALL/CRACKED OLD PATCH, WRAPS AROUND CORNER OF COLUMN
- ⑦ 1'-3" X 3'-0" CRACKED AREA, SIDE FACE OF COLUMN
- ⑧ 5'-0" X 2'-6" SPALL/OLD PATCH, UNDERSIDE OF CAP
- ⑨ 7'-0" X 2'-6" SPALL/OLD DELAMINATED PATCH, UNDERSIDE OF CAP
- ⑩ 4'-0" X 2'-0" CRACKED AREA
- ⑪ 2'-6" X 5'-0" CRACKED AREA
- ⑫ 3'-9" X 12'-0" SPALL/OLD PATCH, WRAPS FROM SIDE FACE OF COLUMN TO SPAN B SIDE
- ⑬ 12'-0" X 1'-0" CRACKED AREA
- ⑭ 2'-0" X 2'-6" CRACKED/DELAMINATED AREA
- ⑮ 2'-6" X 10'-0" CRACKED AREA, SIDE FACE OF COLUMN
- ⑯ 8'-0" X 2'-6" SPALL/OLD PATCH, UNDERSIDE OF CAP
- ⑰ 2'-6" X 6'-0" CRACKED AREA
- ⑱ 2'-6" X 12'-0" CRACKED/DELAMINATED AREA
- ⑲ 2'-6" X 2'-6" CRACKED/DELAMINATED AREA, END OF CAP
- ⑳ 2'-0" X 2'-6" CRACKED/SCALED CONCRETE AREA
- ㉑ 2'-6" X 9'-0" CRACKED CONCRETE AREA



BENT CAP REPAIR DETAIL



COLUMN REPAIR DETAIL

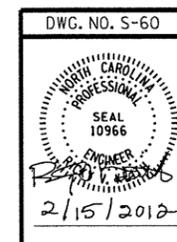
* REMOVE TO SOUND CONCRETE A MINIMUM OF ONE INCH BEHIND REBAR

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
BRIDGE NO. 200

SHEET 8 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

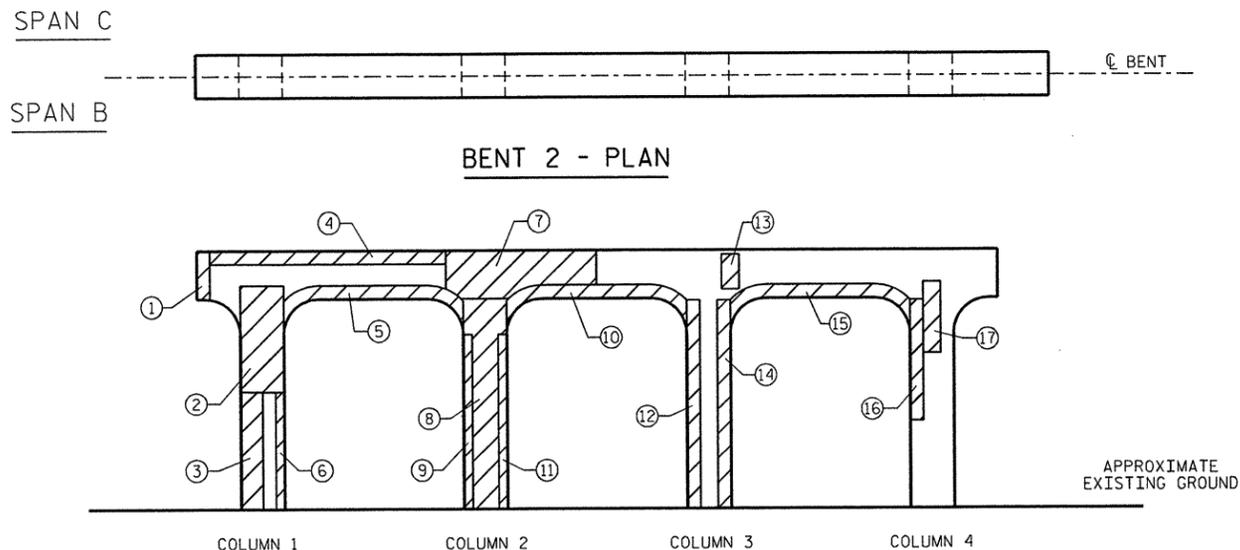
**BENT 1 REPAIRS
PLAN AND ELEVATION**



REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-60	
1			3			TOTAL SHEETS	73
2			4				

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
CHECKED BY : R.V. KEITH DATE : NOV. 2011

M:\projects\2009\09085_NCDOT_Div_OnCall\01_Bridge Rehab\Division 5 Bridge Rehab\Bent2\BENT2.dgn



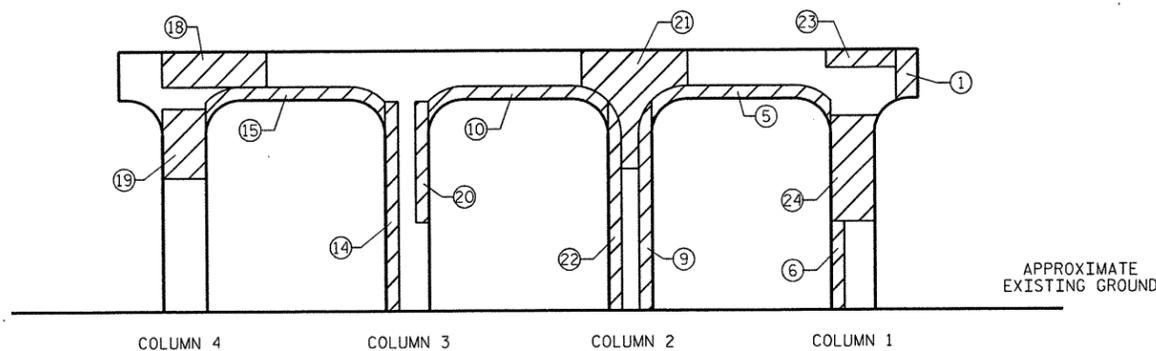
BENT 2 REPAIRS - ELEVATION (SPAN B SIDE)

SPALLED, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE FOR "SURFACE PREPARATION", SEE SPECIAL PROVISION FOR SHOTCRETE REPAIRS AND CONCRETE REPAIRS.

SPALLED, CRACKED OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE, SEE SPECIAL PROVISIONS FOR "CONCRETE REPAIRS".

CRACKED, SPALLED, OR DELAMINATED AREAS ON BENT DIAPHRAGMS ABOVE BENT SHALL BE REPAIRED WITH SHOTCRETE. QUANTITIES FOR DIAPHRAGM REPAIR ARE INCLUDED IN THE PAY ITEM "SHOTCRETE REPAIRS" SUPERSTRUCTURE IN THE TOTAL BILL OF MATERIALS.

FOR BENT CAP REPAIR DETAIL SEE SHEET S-60.



BENT 2 REPAIRS - ELEVATION (SPAN C SIDE)

REPAIR NOTES:

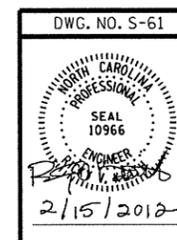
- ① 2'-6" X 3'-0" CRACKED/DELAMINATED AREA, END OF CAP
- ② 2'-6" X 6'-0" CRACKED/DELAMINATED AREA
- ③ 2'-0 X 12'-0" CRACKED AREA, CORNER OF COLUMN
- ④ 14'-0" X 1'-0" CRACKED/DELAMINATED AREA
- ⑤ 2'-6" X 10'-6" CRACKED/DELAMINATED AREA, UNDERSIDE OF CAP
- ⑥ 2'-6" X 12'-0" CRACKED/DELAMINATED AREA, SIDE FACE OF COLUMN
- ⑦ 9'-0" X 2'-0" CRACKED/DELAMINATED AREA
- ⑧ 2'-6" X 12'-0" CRACKED/DELAMINATED AREA
- ⑨ 2'-6" X 12'-0" CRACKED AREA, SIDE FACE OF COLUMN
- ⑩ 2'-6" X 10'-6" CRACKED/DELAMINATED AREA, UNDERSIDE OF CAP
- ⑪ 1'-0" X 12'-0" CRACKED AREA, CORNER OF COLUMN
- ⑫ 2'-0" X 12'-0" CRACKED AREA, CORNER OF COLUMN, 1'-0" ON EACH FACE
- ⑬ 1'-0" X 2'-0" CRACKED/DELAMINATED AREA
- ⑭ 2'-6" X 12'-0" CRACKED/DELAMINATED AREA, SIDE FACE OF COLUMN
- ⑮ 2'-6" X 10'-6" CRACKED/DELAMINATED AREA, UNDERSIDE OF CAP
- ⑯ 2'-6" X 7'-0" CRACKED/DELAMINATED AREA, SIDE FACE OF COLUMN
- ⑰ 1'-0" X 4'-0" CRACKED/DELAMINATED AREA
- ⑱ 6'-0" X 2'-0" CRACKED/DELAMINATED AREA
- ⑲ 2'-6" X 4'-0" CRACKED AREA
- ⑳ 2'-0" X 7'-0" CRACKED AREA, CORNER OF COLUMN, 1'-0" ON EACH FACE
- ㉑ 10'-0" X 2'-6" CRACKED/DELAMINATED AREA, CONTINUES 4'-0" DOWN COLUMN
- ㉒ 2'-0" X 12'-0" CRACKED AREA, CORNER OF COLUMN, 1'-0" ON EACH FACE
- ㉓ 4'-0" X 1'-0" CRACKED AREA
- ㉔ 2'-6" X 6'-0" CRACKED AREA

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 200

SHEET 9 OF 9

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 2 REPAIRS
 PLAN AND ELEVATION**



REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-61	
1			3			TOTAL SHEETS	
2			4			73	

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

GENERAL NOTES

ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE "2012 STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION.

ALL REINFORCING STEEL SHALL BE GRADE 60.

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

FOR "FALSEWORK AND FORMWORK", SEE SPECIAL PROVISIONS.

FOR "CRANE SAFETY", SEE SPECIAL PROVISIONS.

FOR "GROUT FOR STRUCTURES", SEE SPECIAL PROVISIONS.

FOR "MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH WAKE COUNTY BRIDGE NO. 213", SEE SPECIAL PROVISIONS.

SPALLED, DELAMINATED, AND CRACKED AREAS SHOWN ON EXISTING CONCRETE GIRDERS, BENT DIAPHRAGMS, AND BENT SUBSTRUCTURE UNITS ARE APPROXIMATE.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "CONCRETE REPAIRS", SEE SPECIAL PROVISIONS.

SHOTCRETE SHALL BE USED FOR ALL VERTICAL OR OVERHEAD REPAIRS AS DETERMINED BY THE ENGINEER AND IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "SHOTCRETE REPAIRS".

CLASS A CONCRETE SHALL BE USED FOR ALL REPAIRS ON FLAT SURFACES SUCH AS THE TOP OF CAP OR BRIDGE SEATS UNDER BEARINGS AS DETERMINED BY THE ENGINEER AND IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "CONCRETE REPAIRS".

ANY DAMAGE TO THE EXISTING STRUCTURE OR SLOPE PROTECTION AS A RESULT OF FALSEWORK OR TEMPORARY SUPPORTS SHALL BE REPAIRED AT THE CONTRACTOR'S COST AND AT THE DIRECTION OF THE ENGINEER.

ALL REINFORCEMENT TO BE PROVIDED IS INCIDENTAL TO SHOTCRETE REPAIRS AND CONCRETE REPAIRS.

THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR REMOVAL OPERATIONS SUCH THAT REPAIRS WILL NOT BE IMPLEMENTED ON MORE THAN ONE FACE OF THE CONCRETE ELEMENT WITHOUT APPROVAL OF THE ENGINEER.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

FOR "EROSION CONTROL PLAN", SEE EC-1.

TOTAL BILL OF MATERIALS							
	SHOTCRETE REPAIRS	CONCRETE REPAIRS	TEMPORARY SUPPORTS	TEMPORARY SILT FENCE	SEDIMENT CONTROL STONE	SILT EXCAVATION	1/4" HARDWARE CLOTH
	CUBIC FEET	CUBIC FEET	LUMP SUM	LINEAR FEET	TON	CUBIC YARDS	LINEAR FEET
SUPERSTRUCTURE	340	—	LUMP SUM	215	5	6	70
BENT 1	20	3	—	—	—	—	—
BENT 2	84	—	—	—	—	—	—
BENT 3	57	—	—	—	—	—	—
BENT 4	21	2	—	—	—	—	—
BENT 5	81	—	—	—	—	—	—
TOTAL	603	5	LUMP SUM	215	5	6	70

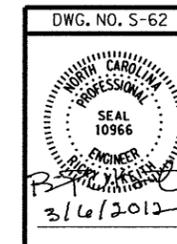
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PROJECT NO. 17BP.5.H.1
 WAKE COUNTY
 BRIDGE NO. 213

SHEET 1 OF 12

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

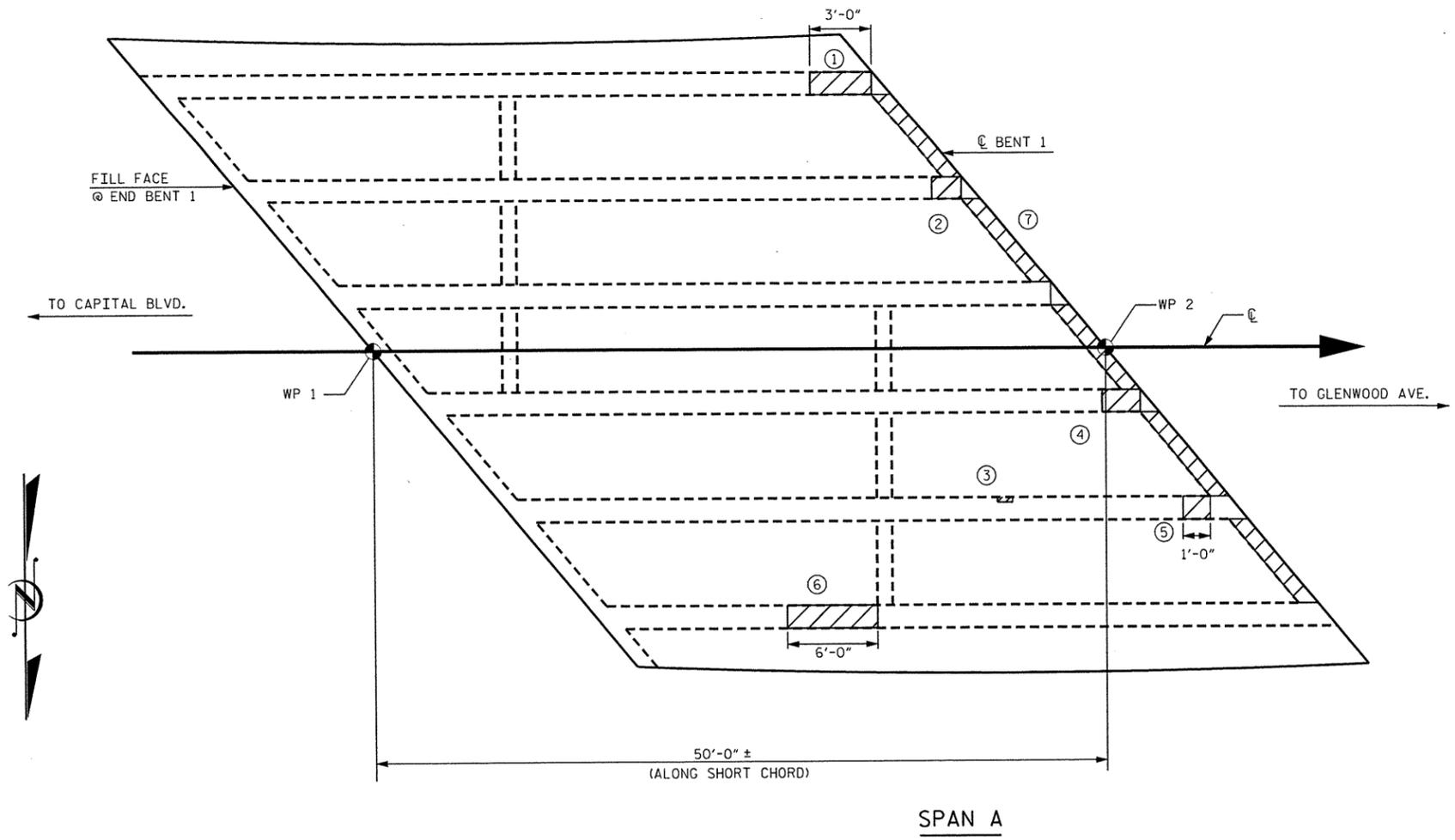
NOTES
 AND
 BILL OF MATERIALS



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-62
1			3			TOTAL SHEETS
2			4			73

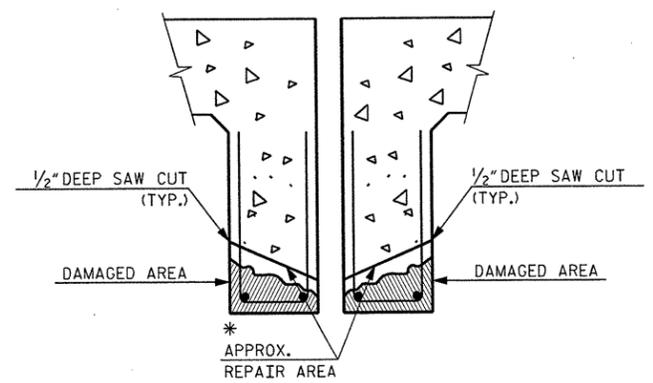
DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

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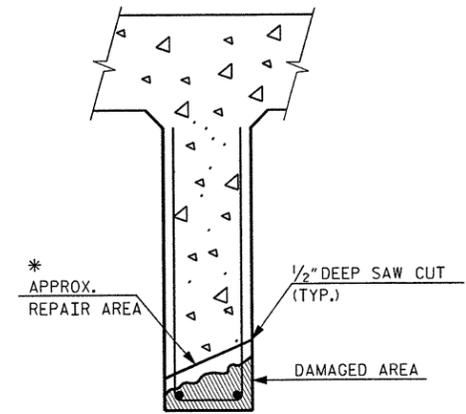
- REPAIR NOTES:**
- ① 3'-0" X 1'-6" SPALL UNDERSIDE OF GIRDER WITH EXPOSED REBAR
 - ② 1'-6" X 1'-6" SPALL UNDERSIDE OF GIRDER AT BEARING WITH EXPOSED REBAR
 - ③ 1'-0" X 1'-0" SPALL SIDE FACE OF GIRDER
 - ④ 1'-6" X 1'-6" SPALL UNDERSIDE OF GIRDER AT BEARING WITH EXPOSED REBAR
 - ⑤ 1'-0" X FULL DEPTH OF GIRDER SPALL
 - ⑥ 6'-0" X 1'-6" SPALL UNDERSIDE OF GIRDER WITH EXPOSED REBAR
 - ⑦ ALL INTERIOR BENT DIAPHRAGMS SPALLED/DELAMINATED

NOTES:
 FOR SURFACE PREPARATION, SEE SPECIAL PROVISION FOR SHOTCRETE REPAIR.
 SPALL, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE.



INTERIOR DIAPHRAGM REPAIR DETAIL

* REMOVE TO SOUND CONCRETE A MINIMUM OF ONE INCH BEHIND REBAR



GIRDER REPAIR DETAIL

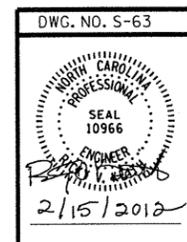
* REMOVE TO SOUND CONCRETE A MINIMUM OF ONE INCH BEHIND REBAR

PROJECT NO. 17BP.5.H.1
 WAKE COUNTY
 BRIDGE NO. 213

SHEET 2 OF 12

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

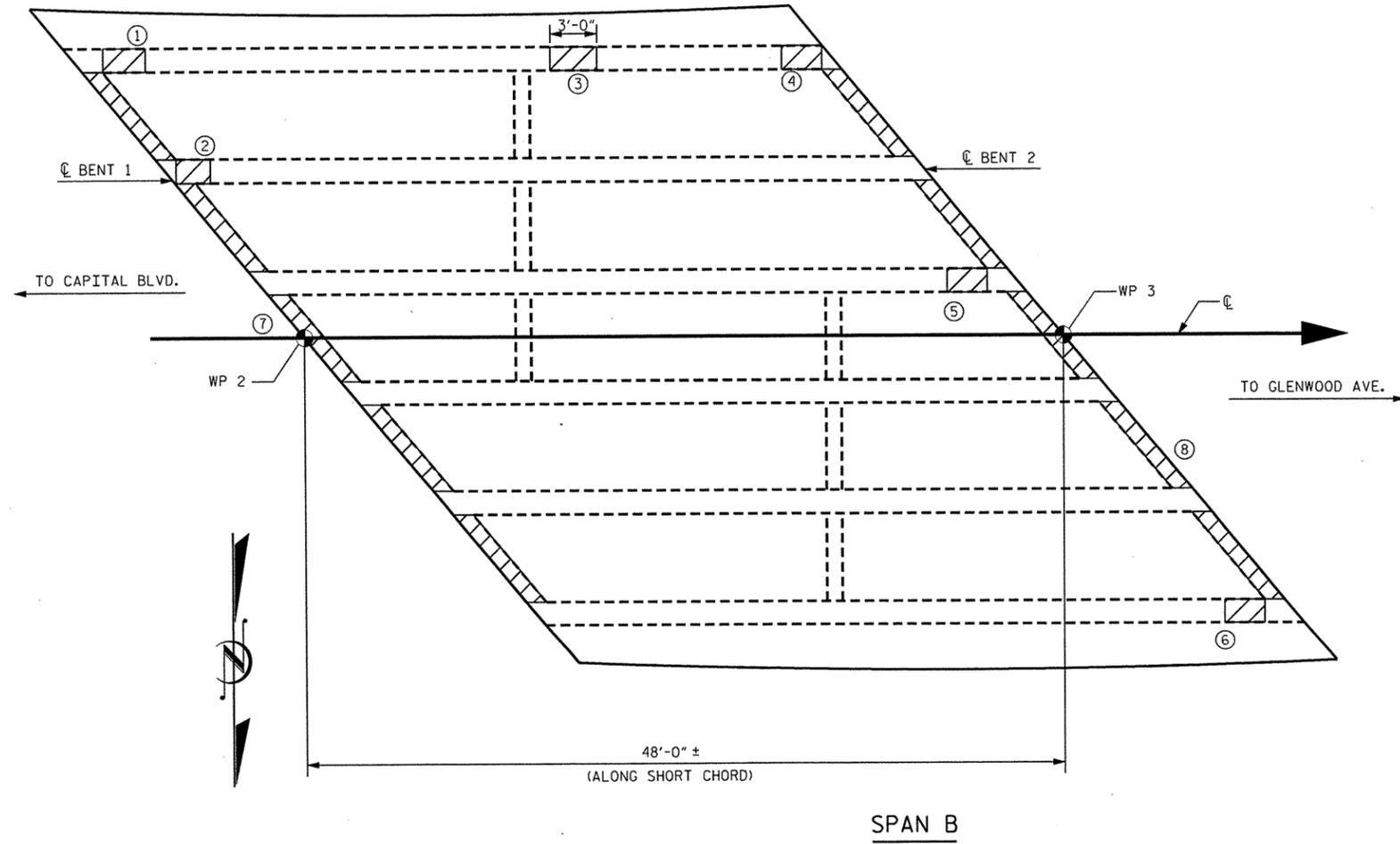
**SPAN "A" PLAN
 GIRDER AND BENT
 DIAPHRAGM REPAIR**



REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-63	
1			3			TOTAL SHEETS 73	
2			4				

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

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REPAIR NOTES:

- ① 1'-6" X 1'-6" CRACKED AREA BOTTOM OF GIRDER AT BEARING
- ② 1'-6" X 1'-6" CRACKED AREA BOTTOM OF GIRDER AT BEARING
- ③ 3'-0" X 1'-6" CRACK/SPALL BOTTOM OF GIRDER
- ④ 1'-6" X 1'-6" SPALL BOTTOM OF GIRDER AT BEARING
- ⑤ 1'-6" X 1'-6" CRACKED AREA BOTTOM OF GIRDER AT BEARING
- ⑥ 1'-6" X 1'-6" SPALL BOTTOM OF GIRDER AT BEARING
- ⑦ ALL INTERIOR BENT DIAPHRAGMS SPALLED/DELAMINATED
- ⑧ ALL INTERIOR BENT DIAPHRAGMS SPALLED/DELAMINATED

NOTES:
 FOR SURFACE PREPARATION, SEE SPECIAL PROVISION FOR SHOTCRETE REPAIR.
 SPALL, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE.
 FOR GIRDER REPAIR DETAIL AND INTERIOR BENT DIAPHRAGM DETAIL SEE SHEET S-63.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 213

SHEET 3 OF 12

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

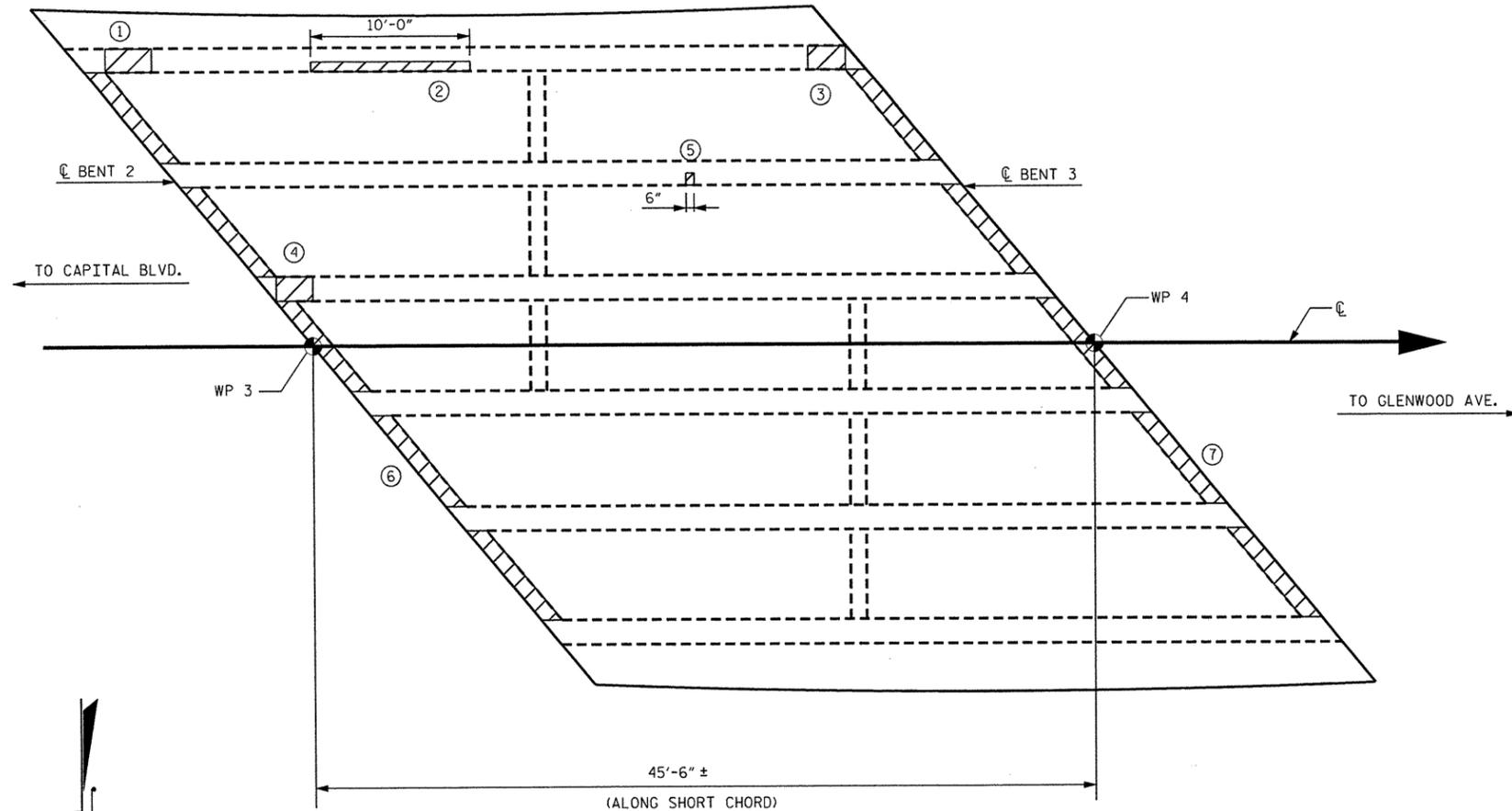
**SPAN "B" PLAN
 GIRDER AND BENT
 DIAPHRAGM REPAIR**

DWG. NO. S-64

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-64	
1			3			TOTAL SHEETS	73
2			4				

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

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SPAN C

NOTES:
 FOR SURFACE PREPARATION, SEE SPECIAL PROVISION FOR SHOTCRETE REPAIR.
 SPALL, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE.
 FOR GIRDER REPAIR DETAIL AND INTERIOR BENT DIAPHRAGM DETAIL SEE SHEET S-63.

REPAIR NOTES:

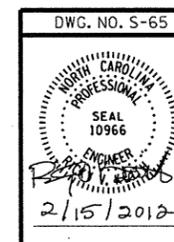
- ① 1'-6" X 1'-6" CRACK/SPALL BOTTOM OF GIRDER AT BEARING
- ② 10'-0" X 2'-0" CRACK/SPALL INSIDE FACE OF GIRDER
- ③ 1'-6" X 1'-6" CRACK/SPALL BOTTOM OF GIRDER AT BEARING
- ④ 1'-6" X 1'-6" CRACK/SPALL BOTTOM OF GIRDER AT BEARING
- ⑤ 6" X 9" IMPACT SPALL
- ⑥ ALL INTERIOR BENT DIAPHRAGMS SPALLED/ DELAMINATED
- ⑦ ALL INTERIOR BENT DIAPHRAGMS SPALLED/ DELAMINATED

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 213

SHEET 4 OF 12

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

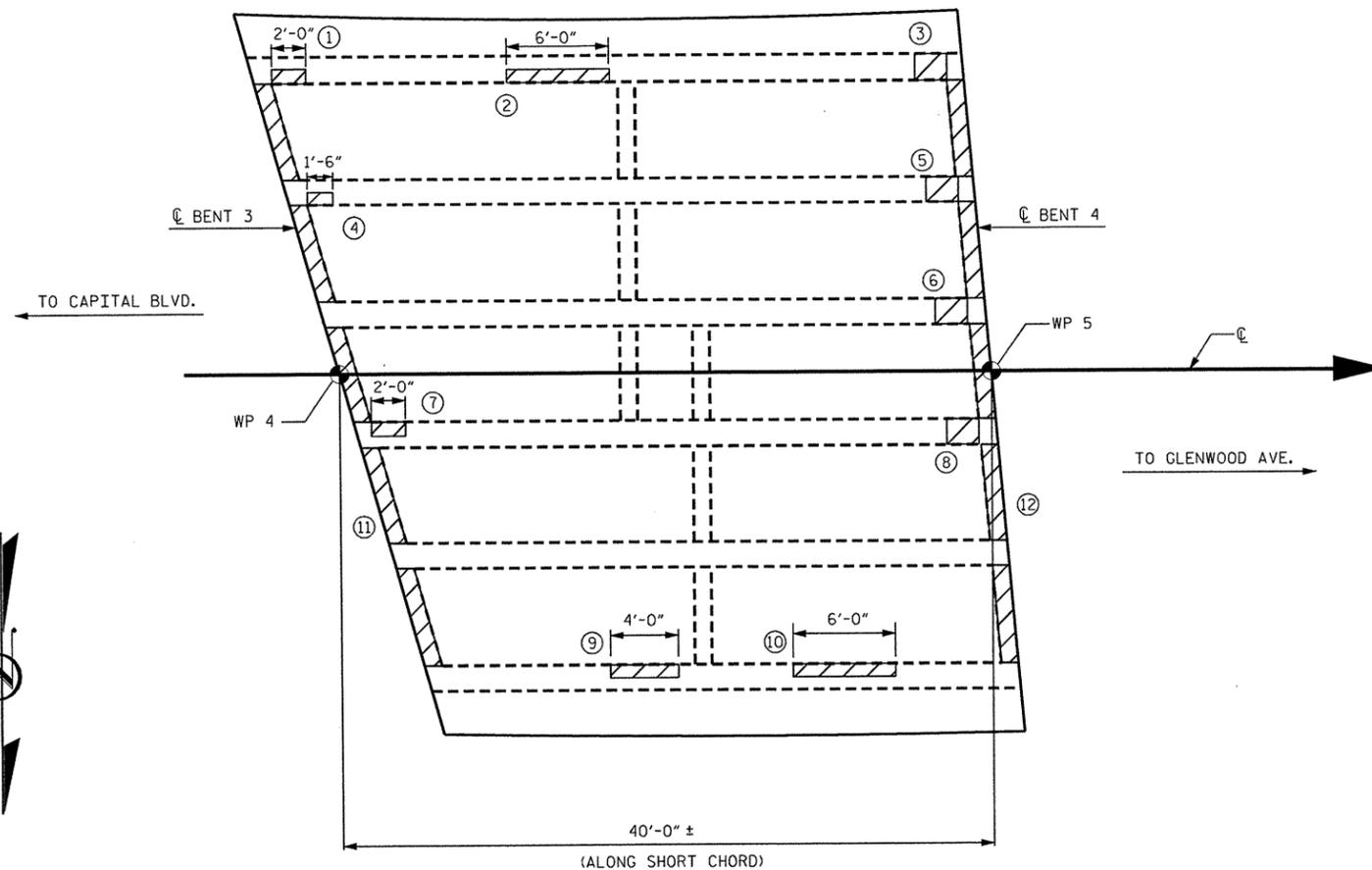
**SPAN "C" PLAN
 GIRDER AND BENT
 DIAPHRAGM REPAIR**



REVISIONS						SHEET NO. S-65
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 73
2			4			

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

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SPAN D

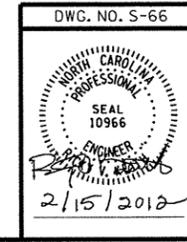
NOTES:
 FOR SURFACE PREPARATION, SEE SPECIAL PROVISION FOR SHOTCRETE REPAIR.
 SPALL, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE.
 FOR GIRDER REPAIR DETAIL AND INTERIOR BENT DIAPHRAGM DETAIL SEE SHEET S-63.

REPAIR NOTES:

- ① 2'-0" X 1'-0" CRACKED ON INSIDE FACE OF GIRDER
- ② 6'-0" X 6" CRACK/SPALL UNDERSIDE OF GIRDER
- ③ 1'-6" X 1'-6" CRACK/SPALL UNDER GIRDER AT BEARING
- ④ 1'-6" X 1'-0" SPALL NEAR BENT DIAPHRAGM TOP OF GIRDER
- ⑤ 1'-6" X 1'-0" SPALL NEAR BENT DIAPHRAGM TOP OF GIRDER
- ⑥ 1'-6" X 1'-6" CRACK/SPALL UNDER GIRDER AT BEARING WITH EXPOSED REBAR
- ⑦ 2'-0" X 1'-0" CRACK ON INSIDE FACE OF GIRDER
- ⑧ 1'-6" X 1'-6" CRACK/SPALL UNDER GIRDER AT BEARING WITH EXPOSED REBAR
- ⑨ 4'-0" X 6" CRACK/SPALL UNDERSIDE OF GIRDER
- ⑩ 6'-0" X 8" CRACK/SPALL UNDERSIDE OF GIRDER
- ⑪ ALL INTERIOR BENT DIAPHRAGMS SPALLED/DELAMINATED
- ⑫ ALL INTERIOR BENT DIAPHRAGMS SPALLED/DELAMINATED

PROJECT NO. 17BP.5.H.1
 WAKE COUNTY
 BRIDGE NO. 213

SHEET 5 OF 12



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SPAN "D" PLAN
 GIRDER AND BENT
 DIAPHRAGM REPAIR**

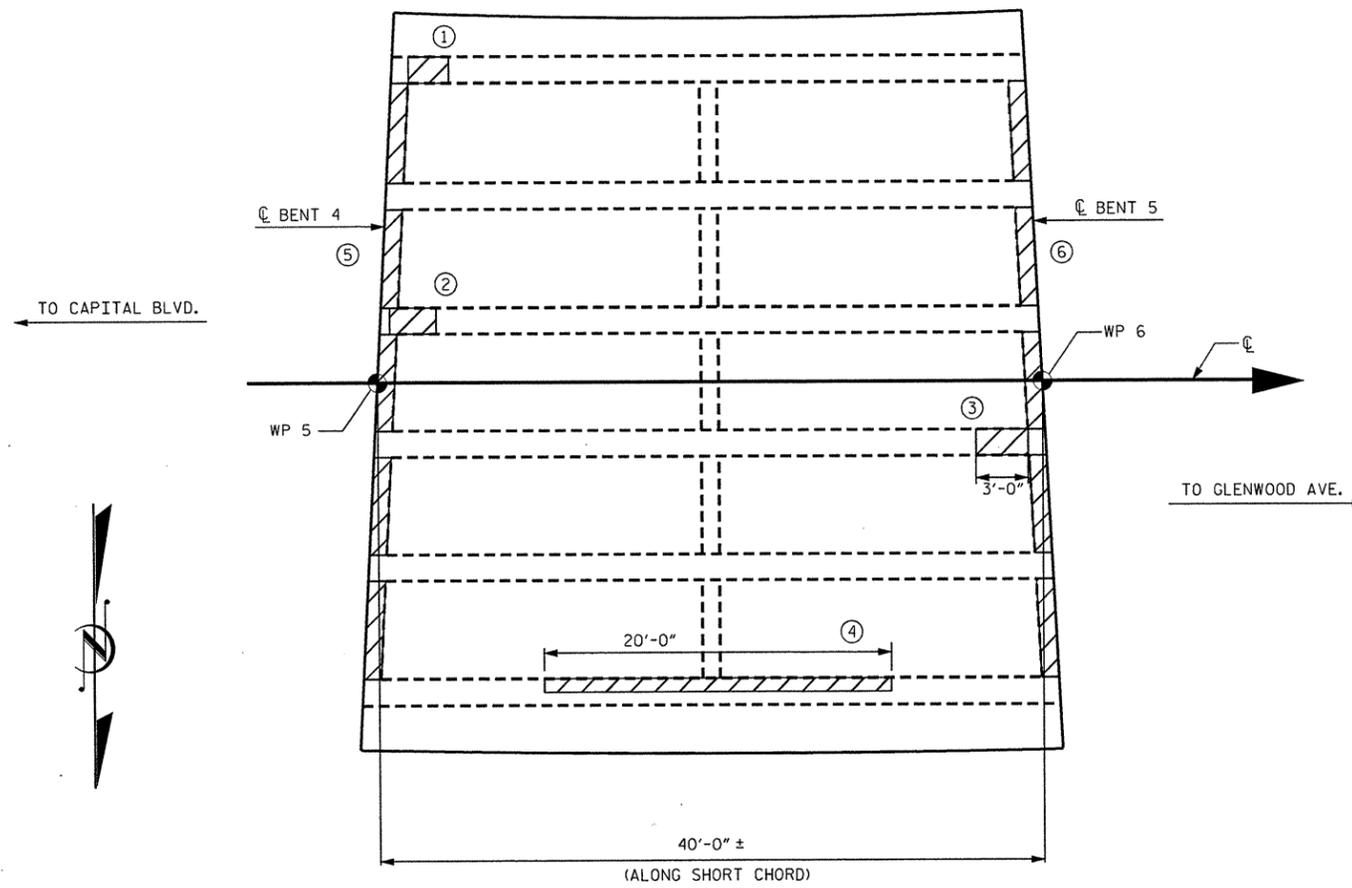
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-66	
1			3			TOTAL	73
2			4			SHEETS	

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

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REPAIR NOTES:

- ① 1'-6" X 1'-6" CRACK/SPALL BOTTOM OF GIRDER
- ② 1'-6" X 1'-6" SPALL WITH EXPOSED REBAR BOTTOM OF GIRDER
- ③ 3'-0" X 1'-6" CRACKED AREA BOTTOM OF GIRDER
- ④ 20'-0" X 8" CRACK/SPALL UNDERSIDE OF GIRDER
- ⑤ ALL INTERIOR BENT DIAPHRAGMS SPALLED/DELAMINATED
- ⑥ ALL INTERIOR BENT DIAPHRAGMS SPALLED/DELAMINATED

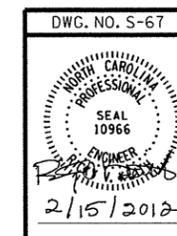


SPAN E

NOTES:
 FOR SURFACE PREPARATION, SEE SPECIAL PROVISION FOR SHOTCRETE REPAIR.
 SPALL, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE.
 FOR GIRDER REPAIR DETAIL AND INTERIOR BENT DIAPHRAGM DETAIL SEE SHEET S-63.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 213

SHEET 6 OF 12



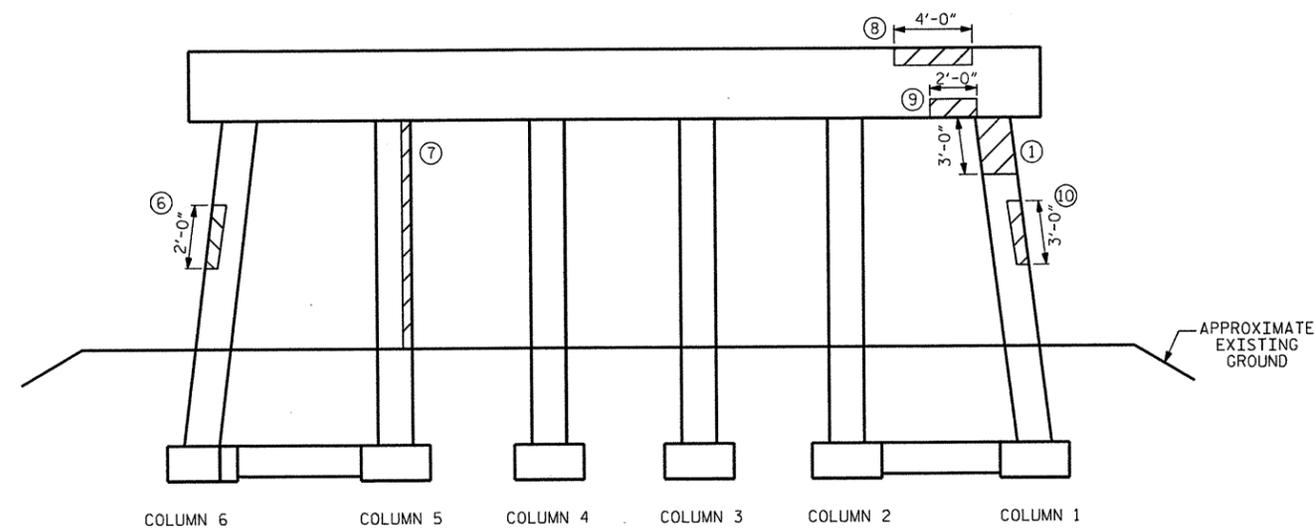
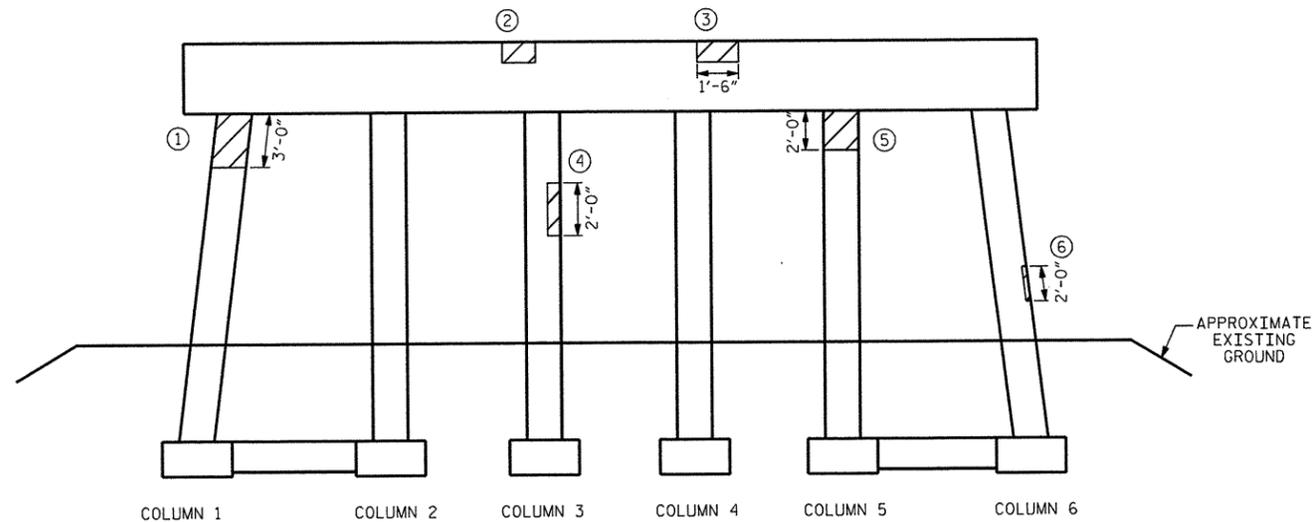
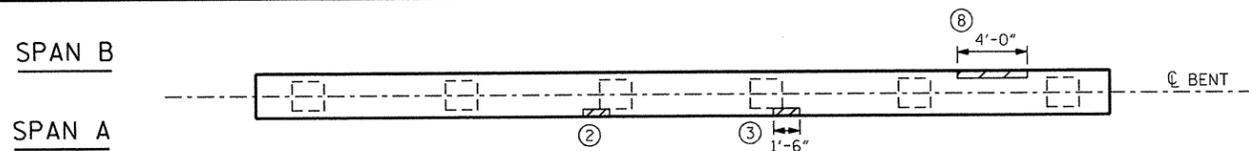
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SPAN "E" PLAN
 GIRDER AND BENT
 DIAPHRAGM REPAIR**

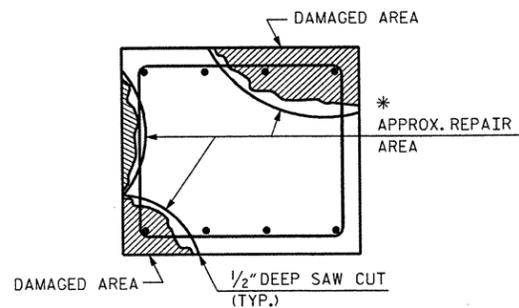
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-67	
1			3			TOTAL SHEETS	
2			4			73	

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

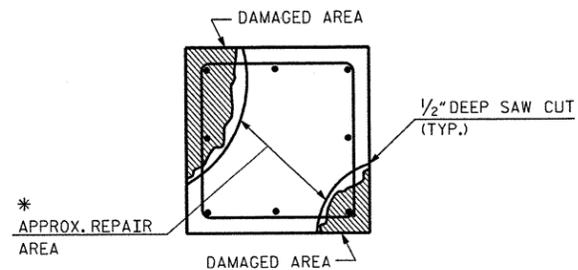
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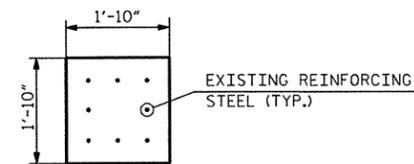
BENT 1 REPAIRS - ELEVATION (SPAN B SIDE)



BENT CAP REPAIR DETAIL



COLUMN REPAIR DETAIL



EXISTING COLUMN SECTION

REPAIR NOTES:

- ① 3'-0" LONG CRACKED/DELAMINATED AREA AROUND FULL CIRCUMFERENCE OF COLUMN
- ② 1'-0" X 1'-0" SPALL
- ③ 1'-6" X 1'-0" SPALL
- ④ 1'-0" X 2'-0" CRACKED/DELAMINATED AREA
- ⑤ 1'-10" X 2'-0" CRACK/SPALL
- ⑥ 6" X 2'-0" SPALL, SIDE FACE OF COLUMN
- ⑦ 10" X 10" X FULL HEIGHT OF COLUMN CORNER SPALL
- ⑧ 4'-0" X 1'-0" SPALL TOP CORNER OF CAP
- ⑨ 2'-0" X 1'-0" CRACKED/DELAMINATED AREA
- ⑩ 1'-0" X 3'-0" SPALL IN CORNER OF COLUMN

NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISION FOR SHOTCRETE REPAIR AND CONCRETE REPAIR.

SPALL, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. FOR "CONCRETE REPAIRS", SEE SPECIAL PROVISIONS.

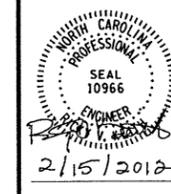
PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 213

SHEET 8 OF 12

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 1 REPAIR
 PLAN AND ELEVATION

DWG. NO. S-69

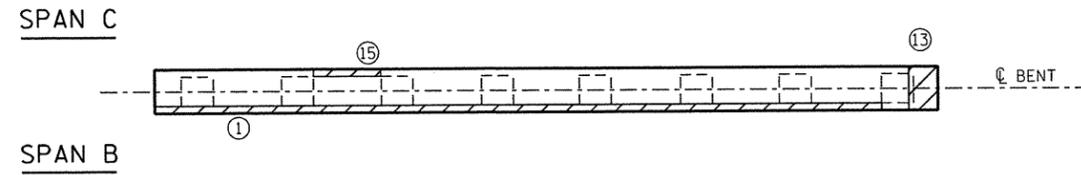


REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-69	
1			3			TOTAL SHEETS	73
2			4				

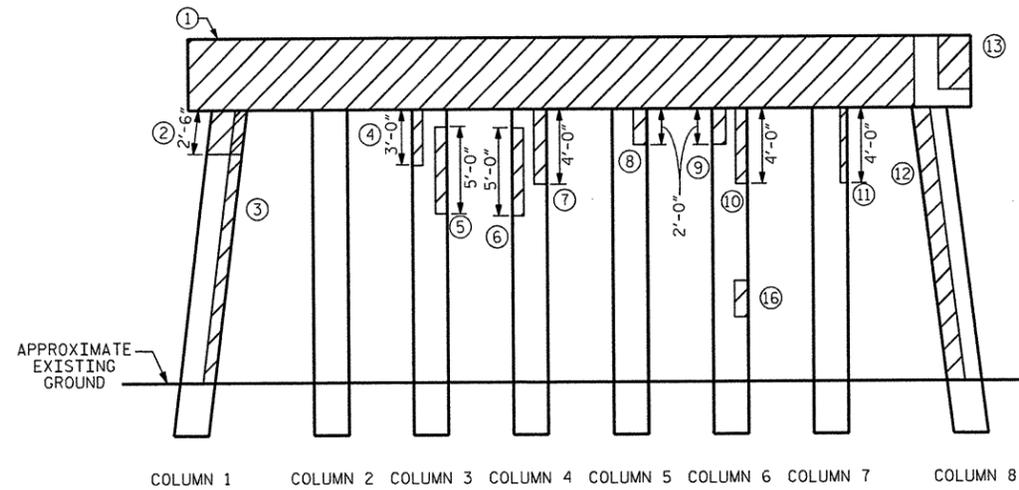
DRAWN BY: F.D. WEEDEN DATE: NOV. 2011
 CHECKED BY: R.V. KEITH DATE: NOV. 2011

* REMOVE TO SOUND CONCRETE A MINIMUM OF ONE INCH BEHIND REBAR

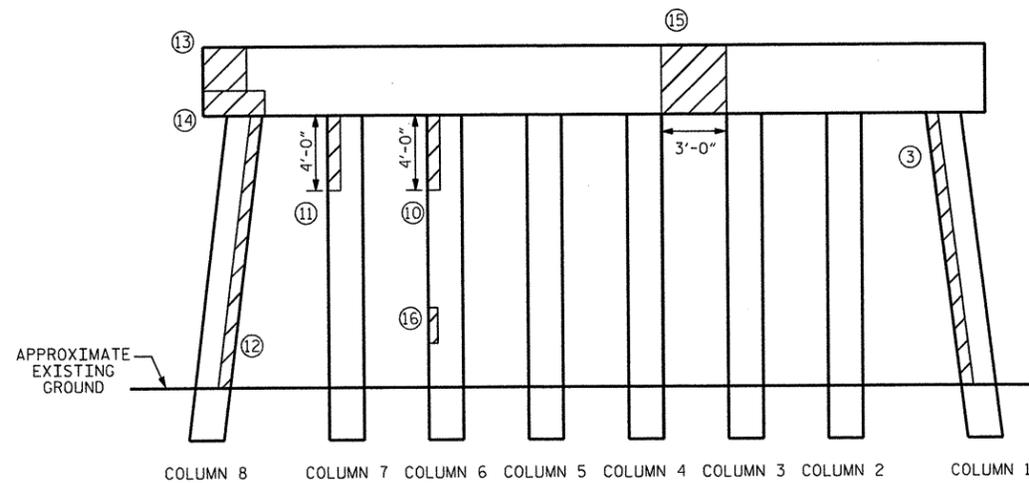
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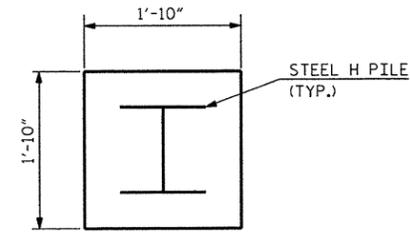
BENT 2 REPAIRS - PLAN



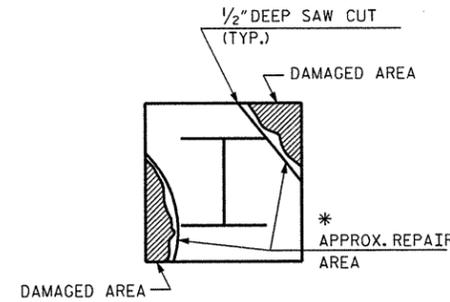
BENT 2 REPAIRS - ELEVATION (SPAN B SIDE)



BENT 2 REPAIRS - ELEVATION (SPAN C SIDE)



EXISTING COLUMN SECTION



COLUMN REPAIR DETAIL

* REMOVE TO SOUND CONCRETE OR TO FACE OF PILE. REPLACE WIRE MESH WITH WELDED WIRE FABRIC IN ACCORDANCE WITH THE SPECIAL PROVISIONS FOR "SHOTCRETE REPAIRS".

NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISION FOR SHOTCRETE REPAIR AND CONCRETE REPAIR.

SPALL, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. FOR "CONCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR BENT CAP REPAIR DETAILS SEE SHEET S-69.

REPAIR NOTES:

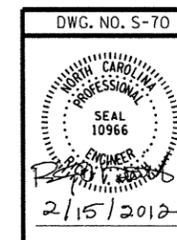
- ① ENTIRE SPAN B FACE OF CAP IS CRACKED/DELAMINATED (45'-0" X 2'-9")
- ② 1'-10" X 2'-6" DELAMINATED AREA
- ③ 1'-10" X 14'-0" CRACKS/SPALL SIDEFACE OF COLUMN
- ④ 6" X 3'-0" CRACKED AREA IN CORNER
- ⑤ 6" X 5'-0" CRACKED AREA IN CORNER
- ⑥ 6" X 5'-0" CRACKED AREA IN CORNER
- ⑦ 6" X 4'-0" SPALL IN CORNER OF COLUMN
- ⑧ 6" X 2'-0" CRACKED AREA IN CORNER
- ⑨ 6" X 2'-0" CRACKED AREA IN CORNER
- ⑩ 1'-10" X 4'-0" CRACKS/SPALL SIDE FACE OF COLUMN
- ⑪ 1'-10" X 4'-0" CRACKED/DELAMINATED AREA SIDE FACE OF COLUMN
- ⑫ 1'-10" X 14'-0" CRACKS/SPALL SIDE FACE OF COLUMN
- ⑬ 2'-0" X 2'-0" CRACK THROUGH CAP
- ⑭ 3'-0" X 1'-0" SPALL IN BOTTOM OF CAP
- ⑮ 3'-0" X 2'-9" CRACKED/DELAMINATED AREA
- ⑯ 4" X 4" SPALL SIDE FACE OF COLUMN

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 213

SHEET 9 OF 12

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 2 REPAIR
 PLAN AND ELEVATION**



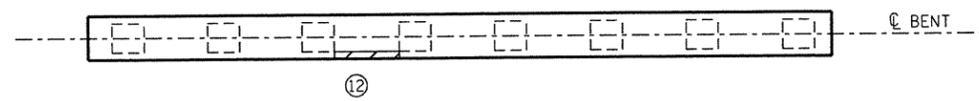
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

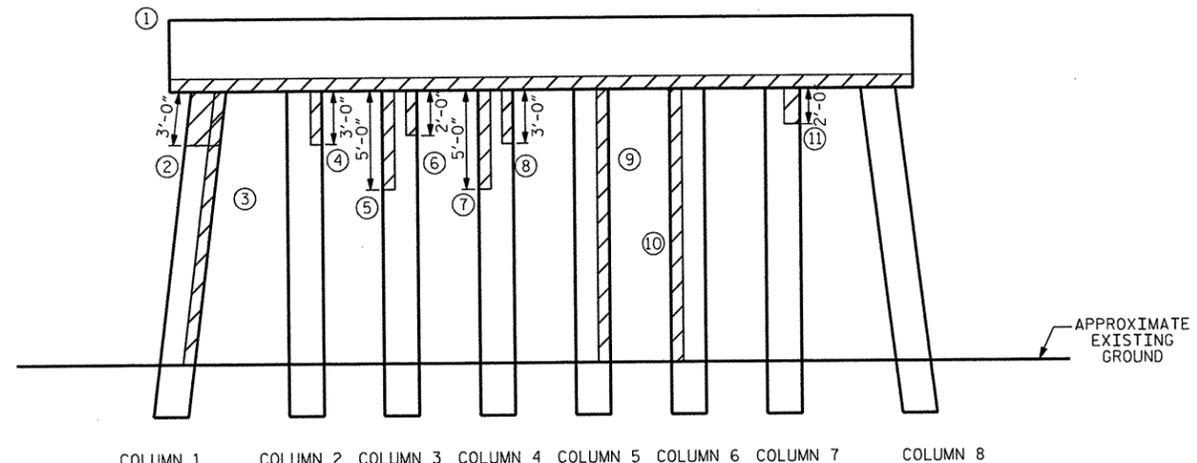
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SPAN D

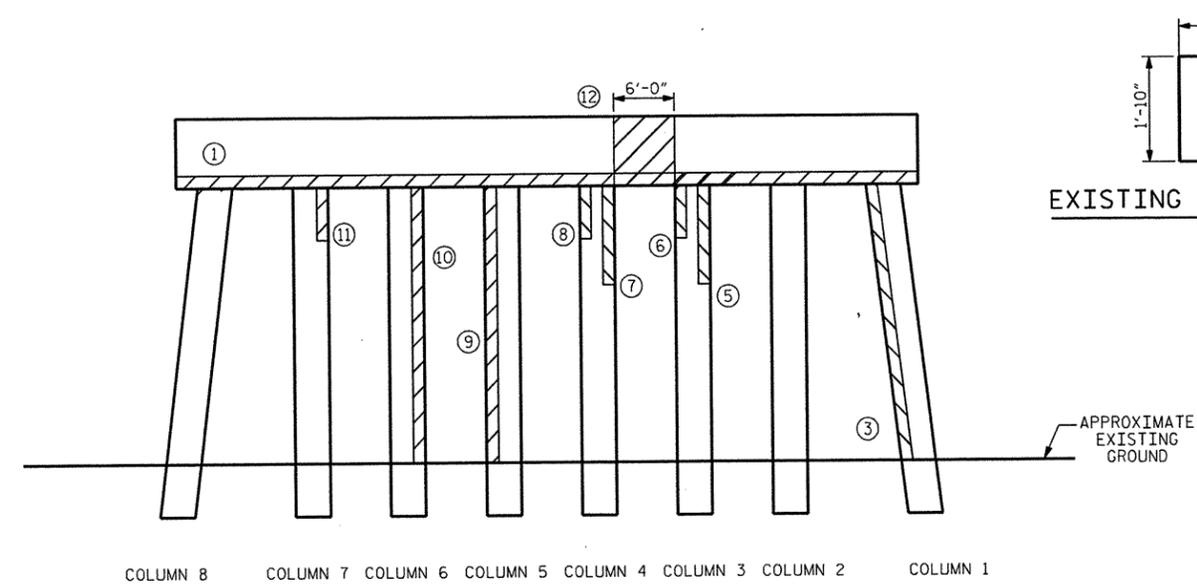
SPAN C



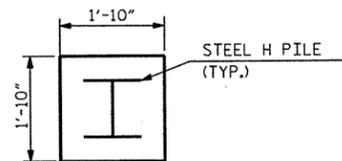
BENT 3 REPAIRS - PLAN



BENT 3 REPAIRS - ELEVATION (SPAN C SIDE)



BENT 3 REPAIRS - ELEVATION (SPAN D SIDE)



EXISTING COLUMN SECTION

REPAIR NOTES:

- ① ENTIRE UNDERSIDE OF CAP MAP CRACKED (45'-0" X 2'-6")
- ② 1'-10" X 3'-0" CRACKS/SPALL
- ③ 1'-10" X 14'-0" CRACKS/SPALL SIDE FACE OF COLUMN
- ④ 6" X 3'-0" CRACKS/SPALL SIDE FACE OF COLUMN
- ⑤ 1'-10" X 5'-0" CRACKS/SPALL SIDE FACE OF COLUMN
- ⑥ 6" X 2'-0" CRACKED AREA SIDE FACE OF COLUMN
- ⑦ 1'-10" X 5'-0" CRACKS/SPALL SIDE FACE OF COLUMN
- ⑧ 6" X 3'-0" CRACKED AREA SIDE FACE OF COLUMN
- ⑨ 1'-10" X 14'-0" CRACKS/SPALL SIDE FACE OF COLUMN
- ⑩ 1'-10" X 14'-0" CRACKS/SPALL SIDE FACE OF COLUMN
- ⑪ 6" X 2'-0" CRACKED AREA SIDE FACE OF COLUMN
- ⑫ 6" X 2'-9" CRACKED/DELAMINATED AREA

NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISION FOR SHOTCRETE REPAIR AND CONCRETE REPAIR.

SPALL, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. FOR "CONCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR BENT CAP REPAIR DETAILS SEE SHEET S-69.

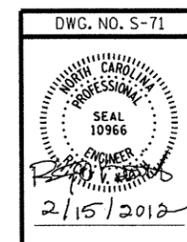
FOR COLUMN REPAIR DETAILS SEE SHEET S-70.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 213

SHEET 10 OF 12

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 3 REPAIR
 PLAN AND ELEVATION



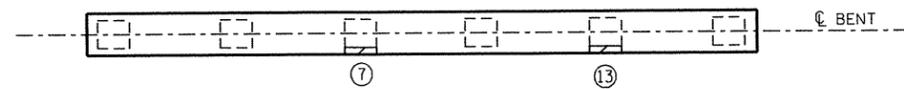
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

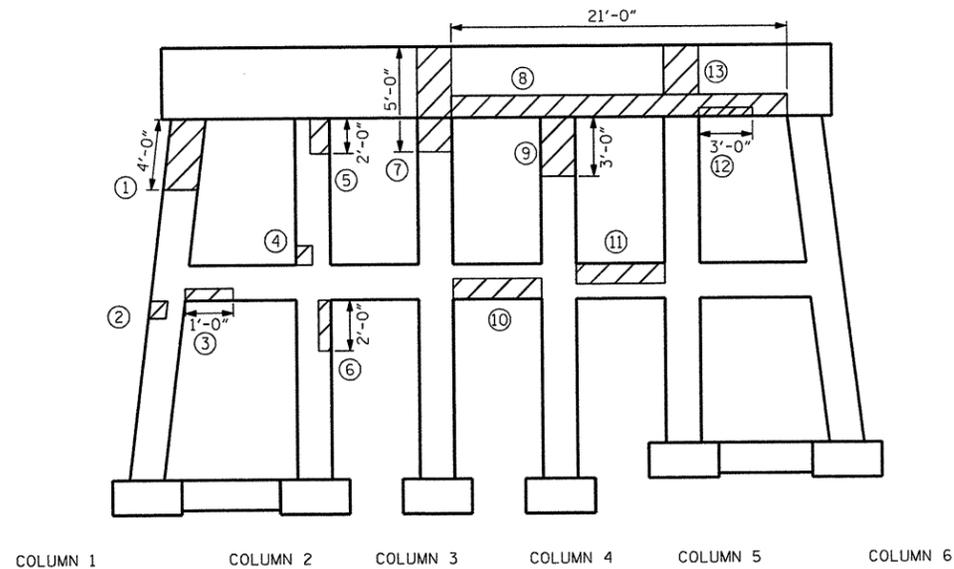
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SPAN E

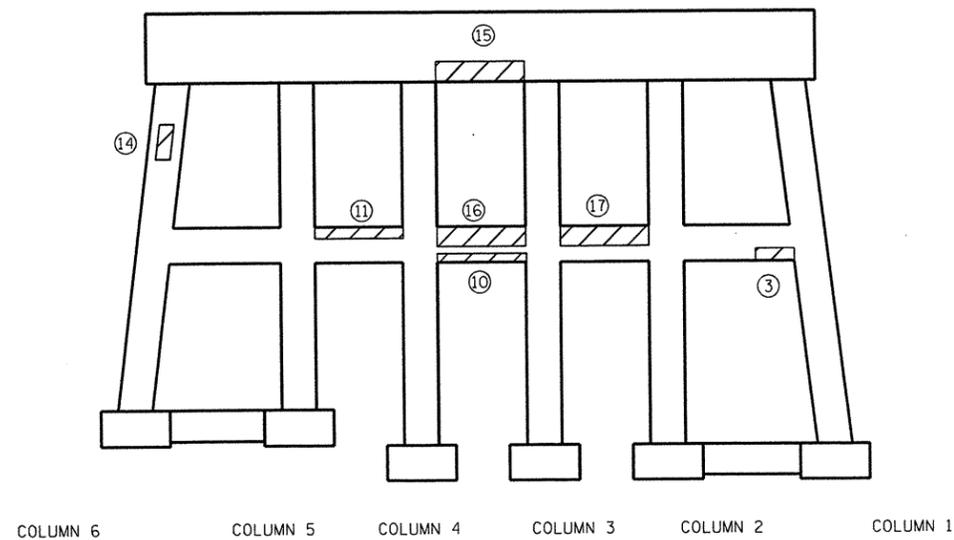
SPAN D



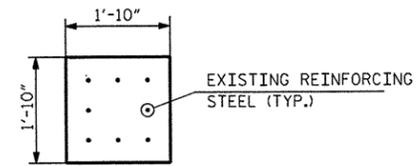
BENT 4 REPAIRS - PLAN



BENT 4 REPAIRS - ELEVATION (SPAN D SIDE)



BENT 4 REPAIRS - ELEVATION (SPAN E SIDE)



EXISTING COLUMN SECTION

REPAIR NOTES:

- ① 1'-10" X 4'-0" CRACKED/DELAMINATED AREA
- ② 1'-0" X 1'-0" CRACKED/DELAMINATED AREA
- ③ 1'-0" X 1'-10" CRACKED/DELAMINATED AREA UNDERSIDE OF STRUT
- ④ 1'-0" X 1'-0" CRACKED/DELAMINATED AREA
- ⑤ 1'-0" X 2'-0" CRACKED/DELAMINATED AREA
- ⑥ 6" X 2'-0" CRACKED AREA IN CORNER
- ⑦ 2'-0" X 5'-0" CRACKED/DELAMINATED AREA
- ⑧ 21'-0" X 2'-0" CRACKED/DELAMINATED AREA EXTENDS TO UNDERSIDE OF CAP
- ⑨ 1'-10" X 3'-0" CRACKED/DELAMINATED AREA
- ⑩ 5'-6" X 1'-10" SPALL UNDERSIDE OF STRUT, CONTINUES 1'-0" UP SPAN D FACE
- ⑪ 5'-6" X 1'-10" SPALL TOP SIDE OF STRUT
- ⑫ 3'-6" X 1'-0" SPALL
- ⑬ 2'-0" X 2'-0" DELAMINATED AREA
- ⑭ 6" X 2'-0" SPALL
- ⑮ 7'-0" X 1'-0" DELAMINATED AREA
- ⑯ 7'-0" X 1'-0" DELAMINATED AREA
- ⑰ 7'-0" X 2'-0" CRACKED AREA

NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISION FOR SHOTCRETE REPAIR AND CONCRETE REPAIR.

SPALL, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. FOR "CONCRETE REPAIRS", SEE SPECIAL PROVISIONS.

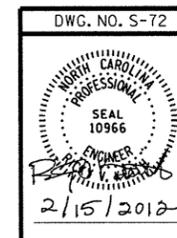
FOR BENT CAP REPAIR DETAILS SEE SHEET S-69.

FOR COLUMN REPAIR DETAILS SEE SHEET S-69.

STRUT REPAIR SHALL BE SIMILAR TO BENT CAP REPAIR DETAIL.

PROJECT NO. 17BP.5.H.1
WAKE COUNTY
 BRIDGE NO. 213

SHEET 11 OF 12



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 4 REPAIR
 PLAN AND ELEVATION**

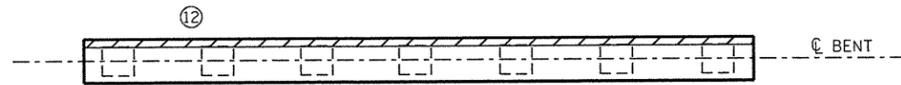
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-72	
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2			4				

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
 CHECKED BY : R.V. KEITH DATE : NOV. 2011

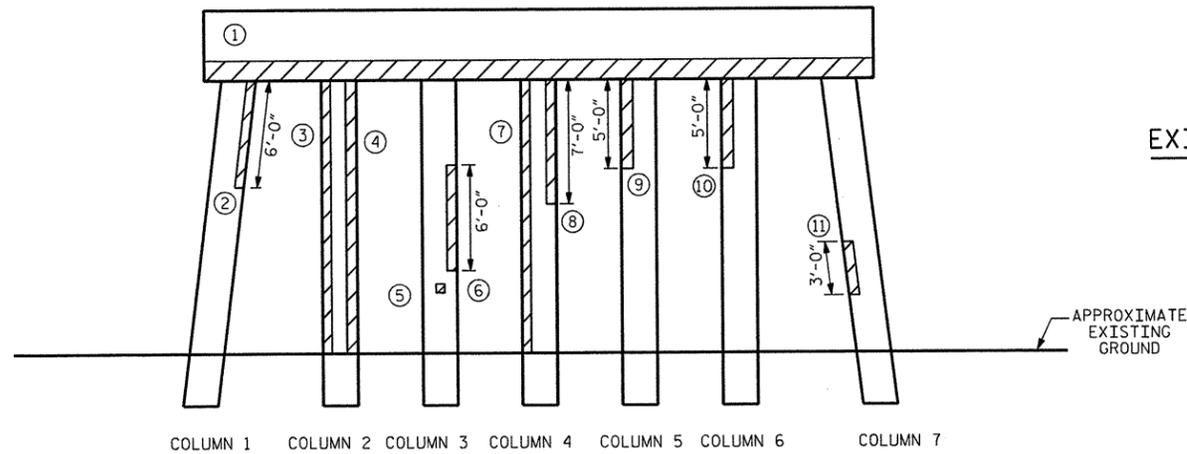
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SPAN F

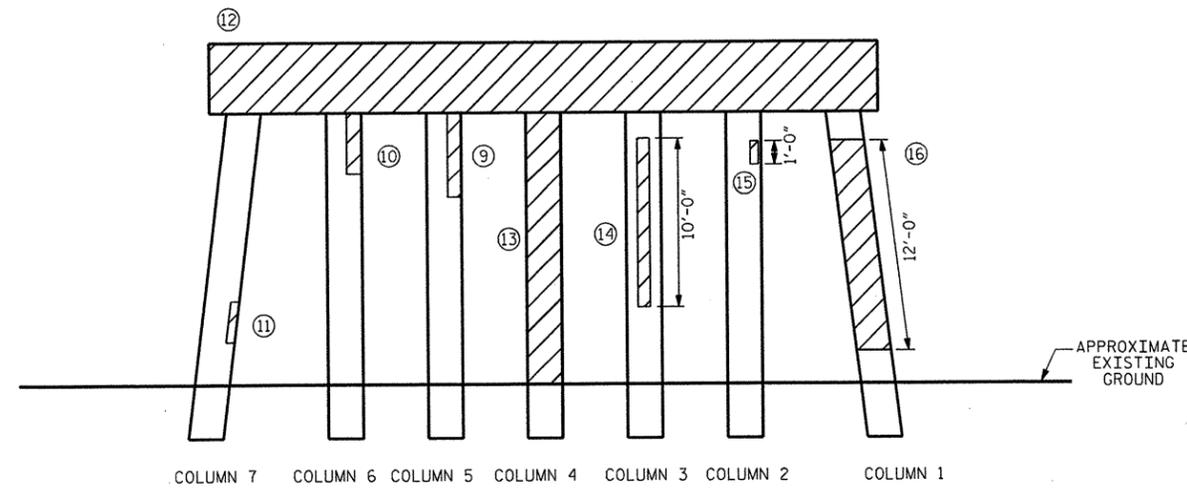
SPAN E



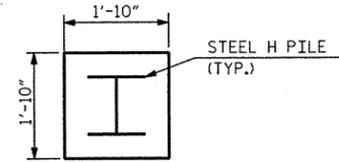
BENT 5 REPAIRS - PLAN



BENT 5 REPAIRS - ELEVATION (SPAN E SIDE)



BENT 5 REPAIRS - ELEVATION (SPAN F SIDE)



EXISTING COLUMN SECTION

REPAIR NOTES:

- ① 38'-6" X 2'-6" MAP CRACKED/SPALL AREA UNDERSIDE OF CAP
- ② 1'-0" X 6'-0" CRACKED AREA SIDE FACE OF COLUMN
- ③ 1'-10" X 14'-0" CRACKED AREA SPAN E FACE
- ④ 1'-10" X 14'-0" CRACKED AREA SIDE FACE OF COLUMN
- ⑤ 6"-6" SPALL
- ⑥ 1'-10" X 6'-0" SPALL SIDE FACE OF COLUMN
- ⑦ 1'-10" X 14'-0" CRACKED/SPALL AREA WITH EXPOSED REBAR
- ⑧ 1'-0" X 7'-0" CRACKED AREA SIDE FACE OF COLUMN
- ⑨ 1'-10" X 5'-0" SPALL SIDE FACE OF COLUMN
- ⑩ 1'-10" X 5'-0" SPALL SIDE FACE OF COLUMN
- ⑪ 1'-10" X 3'-0" SPALL SIDE FACE OF COLUMN
- ⑫ SPALLS UNDER EVERY BEARING, ENTIRE FACE OF CAP MAP CRACKED (38'-6" X 3'-0")
- ⑬ 1'-10" X 14'-0" CRACKED/DELAMINATED AREA
- ⑭ 6" X 10'-0" CRACKED AREA
- ⑮ 6" X 1'-0" SPALL
- ⑯ 1'-10" X 12'-0" CRACKED/SPALL AREA WITH EXPOSED REBAR

NOTES:

FOR SURFACE PREPARATION, SEE SPECIAL PROVISION FOR SHOTCRETE REPAIR AND CONCRETE REPAIR.

SPALL, DELAMINATED, AND CRACKED AREA DIMENSIONS SHOWN ARE APPROXIMATE.

SPALLED, CRACKED, OR DELAMINATED AREAS UNDER BEARINGS SHALL BE REPAIRED WITH CLASS A CONCRETE. FOR "CONCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR BENT CAP REPAIR DETAILS SEE SHEET S-69.

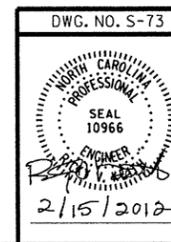
FOR COLUMN REPAIR DETAILS SEE SHEET S-70.

PROJECT NO. 17BP.5.H.1

WAKE COUNTY

BRIDGE NO. 213

SHEET 12 OF 12



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**BENT 5 REPAIR
PLAN AND ELEVATION**

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-73	
1			3			TOTAL SHEETS	
2			4			73	

DRAWN BY : F.D. WEEDEN DATE : NOV. 2011
CHECKED BY : R.V. KEITH DATE : NOV. 2011

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.
17BP.5.H.1	TCP-1

PLAN FOR PROPOSED TRAFFIC CONTROL

WAKE COUNTY

LOCATIONS AND TYPES OF WORK

LOCATION: BRIDGE NO. 007 ON SR 2215, (BUFFALOE RD) OVER THE NEUSE RIVER
 TYPE OF WORK: BRIDGE SUPERSTRUCTURE REPAIR AND SUBSTRUCTURE REPAIR
 LOCATION: BRIDGE NO. 169 US-64 BUS. EB OVER NEUSE RIVER
 TYPE OF WORK: BRIDGE SUPERSTRUCTURE REPAIR AND SUBSTRUCTURE REPAIR
 LOCATION: BRIDGE NO. 170 US-64 BUS. WB OVER NEUSE RIVER
 TYPE OF WORK: BRIDGE SUPERSTRUCTURE REPAIR AND SUBSTRUCTURE REPAIR

LOCATION: BRIDGE NO. 200 FAIRVIEW ROAD OVER CAPITAL BLVD.
 TYPE OF WORK: SUPERSTRUCTURE REPAIR AND SUBSTRUCTURE REPAIR
 LOCATION: BRIDGE NO. 213 WADE AVENUE OVER CAPITAL BLVD.
 TYPE OF WORK: UNDER BRIDGE SUPERSTRUCTURE REPAIR AND SUBSTRUCTURE REPAIR

WBS# 17BP.5.H.1

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS"-ROADWAY DESIGN 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
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL PLAN DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES TYPE III
1150.01	FLAGGING DEVICES
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE & MULTI-LANE ROADWAYS
1250.01	RAISED PAVEMENT MARKERS INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS PERMANENT AND TEMPORARY

INDEX OF SHEETS

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND INDEX OF SHEETS
TCP-2	BRIDGE # 007 PROJECT GENERAL NOTES
TCP-3	BRIDGE # 007 PROJECT PHASING
TCP-4	BRIDGE # 169 PROJECT GENERAL NOTES
TCP-5	BRIDGE # 169 PROJECT PHASING
TCP-6 & 7	BRIDGE # 169 DETAIL DRAWINGS
TCP-8	BRIDGE # 170 PROJECT GENERAL NOTES
TCP-9	BRIDGE # 170 PROJECT PHASING
TCP-10 & 11	BRIDGE # 170 DETAIL DRAWINGS
TCP-12	BRIDGE # 200 PROJECT GENERAL NOTES
TCP-13	BRIDGE # 200 PROJECT PHASING
TCP-14	BRIDGE # 200 OFFSITE DETOUR ROUTE
TCP-15	BRIDGE # 200 SIGN DESIGN
TCP-16	BRIDGE # 213 PROJECT GENERAL NOTES
TCP-17	BRIDGE # 213 PROJECT PHASING

LEGEND

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
 - NORTH ARROW
 - PROPOSED PVMT. EXIST. PVMT.
 - WORK AREA
- TRAFFIC CONTROL DEVICES**
- TYPE III BARRICADE
 - CONE
 - DRUM
 - FLASHING ARROW PANEL (TYPE C)
 - STATIONARY SIGN
 - PORTABLE SIGN
 - TEMPORARY CRASH CUSHION
 - PORTABLE CONCRETE BARRIER
 - TEMPORARY SHORING, (SHEET PILE)
 - SKINNY-DRUM
 - CHANGEABLE MESSAGE SIGN
 - TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
 - POLICE
 - FLAGGER
- PAVEMENT MARKINGS**
- PAVEMENT MARKING SYMBOLS

CONTRACT:

2/14/2012 17BP.5.H.1.001_tcp01.dgn

<p>PLANS PREPARED BY :</p> <p>RK&K</p> <p>RUMMEL, KLEPPER & KAHL, LLP 900 RIDGEFIELD DRIVE SUITE 350 RALEIGH, NORTH CAROLINA 27609-3960 NC LICENSE NO. F-0112 • (919) 878-9560</p> <p>FOR NCDOT - DIVISION OF BRIDGE MAINTENANCE</p>	<p>SEAL</p>	<p><u>K. BISBY, P.E.</u> PROJECT ENGINEER</p> <p><u>M. A. COLE</u> PROJECT DESIGNER</p> <p><u>N. HARRIS</u> PROJECT TECHNICIAN</p>
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GENERAL NOTES

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.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR AS DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
SR 2215, (BUFFALOE RD.)	MONDAY THROUGH FRIDAY 6:00 A.M. TO 8:00 P.M.

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

- | ROAD NAME | HOLIDAY |
|-------------------------|---------|
| SR 2215, (BUFFALOE RD.) | HOLIDAY |
- FOR UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
 - FOR NEW YEAR'S BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31ST AND 8:00 P.M. JANUARY 2ND.

IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY.
 - FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 8:00 P.M. MONDAY.
 - FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.
 - FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 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 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
 - FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.
 - FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY 8:00 P.M. MONDAY.
 - FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS DAY.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
SR 2215, (BUFFALOE RD.)	SUNDAY 12:00 A.M. THROUGH SATURDAY 11:59 P.M.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- 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.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FEET OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING NCDOT 2012 ROADWAY STANDARD DRAWING NO. 1101.04, UNLESS THE WORK AREA IS PROTECTED BY AN APPROVED TEMPORARY TRAFFIC BARRIER OR GUARDRAIL.
- INSTALL DUAL WARNING SIGNS W8-1, (BUMP SIGN) OR W8-2, (DIP SIGN) 500' PRIOR TO THE BEGIN STATION FOR ASPHALT MILLING ON SR 2215, (BUFFALOE RD.) AS DIRECTED BY THE ENGINEER.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FEET OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING NCDOT 2012 ROADWAY STANDARD DRAWING NO. 1101.02, UNLESS THE WORK AREA IS PROTECTED BY AN APPROVED TEMPORARY TRAFFIC BARRIER OR GUARDRAIL.
- DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT MARKING

- REPLACE ANY PAVEMENT MARKING OBLITERATED FROM CONSTRUCTION OPERATIONS WITH 2 APPLICATIONS OF 4" WIDE PAINT.

MISCELLANEOUS

- LAW ENFORCEMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR POSITIONED WITHIN THE CLOSED LANE OF TRAVEL DURING ALL LANE CLOSURES ON US 64 AS DIRECTED BY THE ENGINEER.
- INSTALL DUAL WARNING SIGNS W8-11, (UNEVEN LANES SIGN) 1000' PRIOR TO THE BEGIN STATION FOR ASPHALT MILLING ON SR 2215, (BUFFALOE RD.) AS DIRECTED BY THE ENGINEER.

2/28/2012 10:41:00 AM C:\Users\johnc\Documents\17BP.5.H.1.TCP-2.dgn

PLANS PREPARED BY :  RUMMEL, KLEPPER & KAHL, LLP 900 RIDGEFIELD DRIVE SUITE 350 RALEIGH, NORTH CAROLINA 27609-3960 NC LICENSE NO. F-0112 (919) 878-9560 FOR THE DIVISION OF HIGHWAYS	 SEAL FEB 28, 2012	BRIDGE # 007 PROJECT NOTES					
		SCALE: NONE DATE: 1/2012 DWG. BY: NH DESIGN BY: MAC REVIEWED BY: KWB	<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS			
REVISIONS							

TRAFFIC CONTROL PHASING

PROJ. REFERENCE NO. 17BP.5.H.1	SHEET NO. TCP-3
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PHASE I

LAW ENFORCEMENT SHALL BE PRESENT DURING WORK OPERATIONS REQUIRING ANY LANE CLOSURES ON SR 2215, (BUFFALOE RD.), (SEE TCP-2).

STEP 1:

ERECT ADVANCED WORK ZONE WARNING SIGNS IN ACCORDANCE WITH RDWY STD DRAWING NO. 1101.01.

STEP 2:

USING RDWY STD 1101.02 SHEET 3 OF 15 TO MAINTAIN SR 2215, (BUFFALOE RD.) TRAFFIC, PERFORM BRIDGE NO. 007 SUPERSTRUCTURE AND SUBSTRUCTURE REPAIR WORK EXCLUDING DECK REPAIR WORK AS SHOWN IN THE STRUCTURE PLANS.

AT THE END OF EACH DAY'S CONSTRUCTION OPERATION REMOVE ANY TRAFFIC CONTROL DEVICES REMAINING IN THE TRAVEL LANES AND RESTORE SR 2215, (BUFFALOE RD.) TO THE ORIGINAL TRAFFIC PATTERN, (SEE TCP-2).

STEP 3:

USING RDWY STD 1101.02 SHEET 3 OF 15, TO MAINTAIN TRAFFIC WHILE REMOVING THE EXISTING ASPHALT FROM THE BRIDGE DECK OF SR 2215, (BUFFALOE RD.) TRAVEL LANES AND MILLING THE BRIDGE APPROACHES. AT THE END OF EACH NIGHTS WORK PERIOD REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN OBLITERATED BY WORK OPERATIONS. BOTH TRAVEL LANES SHALL HAVE NO MORE THAN 1.5" DIFFERENCE IN PAVEMENT ELEVATION BEFORE OPENING SR 2215, (BUFFALOE RD.) TRAVEL LANES TO TRAFFIC, (SEE TCP-2).

REMOVE ANY TRAFFIC CONTROL DEVICES REMAINING IN THE TRAVEL LANES AND RESTORE SR 2215, (BUFFALOE RD.) TO THEIR ORIGINAL TRAFFIC PATTERN, (SEE TCP-2).

NOTE: THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED IN STEPS 4 AND 5 IN A CONTINUOUS OPERATION. WORK SHALL BEGIN ON A FRIDAY AT 8:00 P.M. AND SHALL BE COMPLETED BEFORE THE FOLLOWING MONDAY AT 6:00 A.M.

STEP 4:

USING RDWY STD 1101.02 SHEET 3 OF 15, TO MAINTAIN TRAFFIC WHILE PLACING THE LATEX MODIFIED CONCRETE ON HALF OF THE BRIDGE DECK AND PAVE THE SAME LANE OF THE BRIDGE APPROACHES, (SEE TCP-2).

STEP 5:

USING RDWY STD 1101.02 SHEET 3 OF 15, TO MAINTAIN TRAFFIC PLACE LATEX MODIFIED CONCRETE ON THE OTHER HALF OF THE BRIDGE DECK AND PAVE THE REMAINING BRIDGE APPROACHES, (SEE TCP-2).

2/14/2012
17BP.5.H.1.007_tcp03.dgn

<p>PLANS PREPARED BY : RUMMEL, KLEPPER & KAHL, LLP 900 RIDGEFIELD DRIVE SUITE 350 RALEIGH, NORTH CAROLINA 27609-3960 NC LICENSE NO. F-0112 (919) 878-9560 FOR THE DIVISION OF HIGHWAYS</p>	<p>SEAL</p> Feb 28, 2012	<p>BRIDGE # 007 TRAFFIC CONTROL PHASING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">SCALE: NONE</td> <td style="width: 50%; text-align: center;"> REVISIONS </td> </tr> <tr> <td>DATE: 1/2012</td> <td></td> </tr> <tr> <td>DWG. BY: NH</td> <td></td> </tr> <tr> <td>DESIGN BY: MAC</td> <td></td> </tr> <tr> <td>REVIEWED BY: KWB</td> <td></td> </tr> </table>	SCALE: NONE	 REVISIONS	DATE: 1/2012		DWG. BY: NH		DESIGN BY: MAC		REVIEWED BY: KWB	
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GENERAL NOTES

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 UNDESIRE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE; MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR AS DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
US 64, (NEW BERN AVE.)	MONDAY THROUGH FRIDAY 6:00 A.M. TO 8:00 P.M.

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

- | ROAD NAME | HOLIDAY |
|------------------------|---------|
| US 64, (NEW BERN AVE.) | |
- FOR UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
 - FOR NEW YEAR'S BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31ST AND 8:00 P.M. JANUARY 2ND.
IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY.
 - FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 8:00 P.M. MONDAY.
 - FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.
 - FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 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 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
 - FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.
 - FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY 8:00 P.M. MONDAY.
 - FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS DAY.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
US 64, (NEW BERN AVE.)	SUNDAY 12:00 A.M. THROUGH SATURDAY 11:59 P.M.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- 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.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FEET OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING NCDOT 2012 ROADWAY STANDARD DRAWING NO. 1101.04, UNLESS THE WORK AREA IS PROTECTED BY AN APPROVED TEMPORARY TRAFFIC BARRIER OR GUARDRAIL.
- INSTALL DUAL WARNING SIGNS W8-1, (BUMP SIGN) OR W8-2, (DIP SIGN) 500' PRIOR TO THE BEGIN STATION FOR ASPHALT MILLING ON US 64 EB AS DIRECTED BY THE ENGINEER.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FEET OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING NCDOT 2012 ROADWAY STANDARD DRAWING NO. 1101.02, UNLESS THE WORK AREA IS PROTECTED BY AN APPROVED TEMPORARY TRAFFIC BARRIER OR GUARDRAIL.
- DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT MARKING

- REPLACE ANY PAVEMENT MARKING OBLITERATED FROM CONSTRUCTION OPERATIONS WITH 2 APPLICATIONS OF 4" WIDE PAINT.

MISCELLANEOUS

- LAW ENFORCEMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR POSITIONED WITHIN THE CLOSED LANE OF TRAVEL DURING ALL LANE CLOSURES ON US 64 AS DIRECTED BY THE ENGINEER.
- INSTALL DUAL WARNING SIGNS W8-11, (UNEVEN LANES SIGN) 1000' PRIOR TO THE BEGIN STATION FOR ASPHALT MILLING ON US 64 EB AS DIRECTED BY THE ENGINEER.

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PLANS PREPARED BY :  RUMMEL, KLEPPER & KAHL, LLP 900 RIDGEFIELD DRIVE SUITE 350 RALEIGH, NORTH CAROLINA 27609-3960 NC LICENSE NO. F-0112 (919) 878-9560 FOR THE DIVISION OF HIGHWAYS	SEAL 	PROJECT NOTES					
		SCALE: NONE DATE: 1/2012 DWG. BY: NH DESIGN BY: MAC REVIEWED BY: KWB	<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS			
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PROJ. REFERENCE NO.	SHEET NO.
17BP.5.H.1	TCP-5

TRAFFIC CONTROL PHASING

PHASE I

LAW ENFORCEMENT SHALL BE PRESENT DURING WORK OPERATIONS REQUIRING ANY LANE CLOSURES ON US 64, (NEW BERN AVE.), (SEE TCP-4).

STEP 1:

ERECT ADVANCED WORK ZONE WARNING SIGNS IN ACCORDANCE WITH RDWY STD DRAWING NO. 1101.01.

STEP 2:

USING RDWY STD 1101.02 SHEET 3 OF 15 TO MAINTAIN US 64 EB TRAFFIC, PERFORM BRIDGE NO. 169 SUPERSTRUCTURE AND SUBSTRUCTURE REPAIR WORK EXCLUDING DECK REPAIR WORK AS SHOWN IN THE STRUCTURE PLANS.

AT THE END OF EACH DAY'S CONSTRUCTION OPERATION REMOVE ANY TRAFFIC CONTROL DEVICES REMAINING IN THE TRAVEL LANES AND RESTORE US 64 EB, (NEW BERN AVE.) TO THE ORIGINAL TRAFFIC PATTERN, (SEE TCP-4).

NOTE: THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED IN STEP 3 IN A CONTINUOUS OPERATION.

STEP 3:

USE RDWY STD 1101.02 SHEET 3 OF 15 (ALTERNATING LEFT AND RIGHT LANE CLOSURES) TO MAINTAIN TRAFFIC WHILE REMOVING THE EXISTING ASPHALT FROM THE BRIDGE DECK OF ONE OF THE US 64 EB TRAVEL LANES AND MILLING THE SAME LANE OF THE BRIDGE APPROACHES. PAVE THE INTERMEDIATE COURSE ON THE BRIDGE APPROACHES THEN REDIRECT TRAFFIC INTO THAT LANE. REMOVE THE EXISTING ASPHALT FROM THE OTHER LANE ON THE BRIDGE DECK AND MILL THE OTHER LANE OF THE BRIDGE APPROACHES. PAVE THE INTERMEDIATE COURSE ON THE REMAINING BRIDGE APPROACHES. AT THE END OF THE OPERATION REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN OBLITERATED BY WORK OPERATIONS, (SEE TCP-4 and 6).

REMOVE ANY TRAFFIC CONTROL DEVICES REMAINING IN THE TRAVEL LANES AND RESTORE US 64, (NEW BERN AVE.) TO THEIR ORIGINAL TRAFFIC PATTERN, (SEE TCP-4).

NOTE: THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED IN STEP 4 IN A CONTINUOUS OPERATION.

STEP 4:

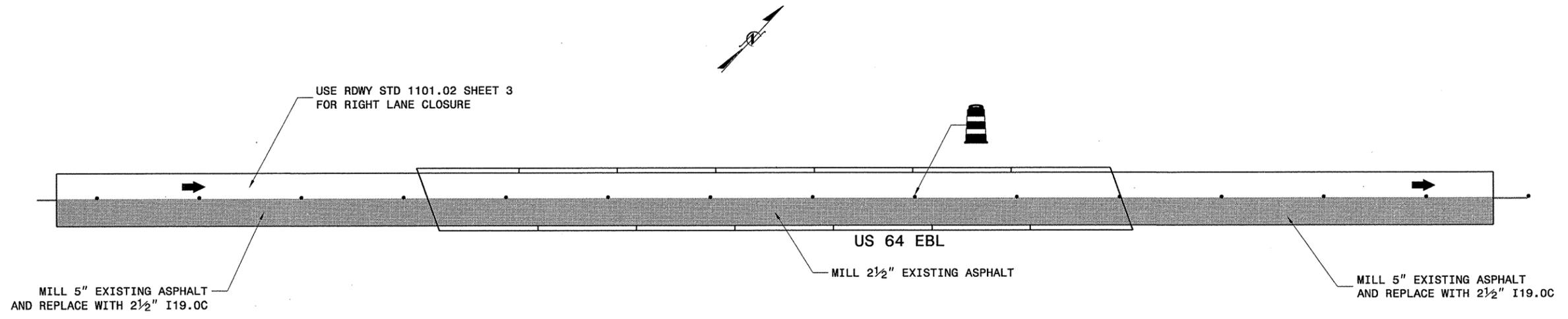
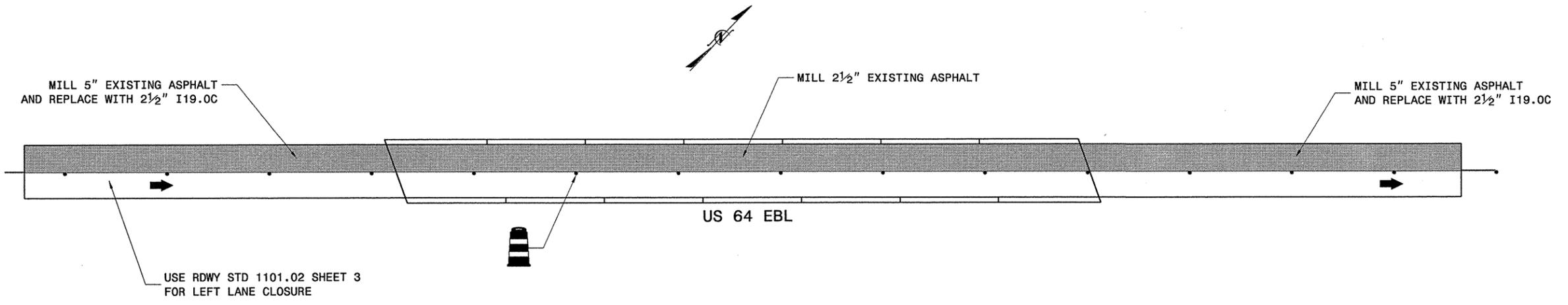
USE RDWY STD 1101.02 SHEET 3 OF 15 TO MAINTAIN TRAFFIC WHILE PERFORMING HYDRO-DEMOLITION ON THE BRIDGE DECK OF ONE OF THE US 64 EB TRAVEL LANES. PLACE THE LATEX MODIFIED CONCRETE ON THE SAME LANE AND PAVE THE SURFACE COURSE ON THE SAME LANE OF THE BRIDGE APPROACHES. REDIRECT TRAFFIC INTO THE COMPLETED TRAVEL LANE, AND PERFORM HYDRO-DEMOLITION ON THE BRIDGE DECK OF THE REMAINING LANE. PLACE THE LATEX MODIFIED CONCRETE ON THE SAME LANE AND PAVE THE SURFACE COURSE ON THE SAME LANE OF THE BRIDGE APPROACHES. AT THE END OF THE OPERATION PLACE FINAL PAVEMENT MARKINGS AND PAVEMENT MARKERS. (SEE TCP-4 and 7).

REMOVE ANY TRAFFIC CONTROL DEVICES REMAINING IN THE TRAVEL LANES AND RESTORE US 64, (NEW BERN AVE.) TO THEIR ORIGINAL TRAFFIC PATTERN, (SEE TCP-4).

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<p>PLANS PREPARED BY : RUMMEL, KLEPPER & KAHL, LLP 900 RIDGEFIELD DRIVE SUITE 350 RALEIGH, NORTH CAROLINA 27609-3960 NC LICENSE NO. F-0112 (919) 878-9560 FOR THE DIVISION OF HIGHWAYS</p>		<p style="text-align: center;">TRAFFIC CONTROL PHASING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">SCALE: NONE</td> <td style="width: 50%; padding: 2px;">REVISIONS</td> </tr> <tr> <td style="padding: 2px;">DATE: 1/2012</td> <td style="padding: 2px;"> </td> </tr> <tr> <td style="padding: 2px;">DWG. BY: NH</td> <td style="padding: 2px;"> </td> </tr> <tr> <td style="padding: 2px;">DESIGN BY: MAC</td> <td style="padding: 2px;"> </td> </tr> <tr> <td style="padding: 2px;">REVIEWED BY: KWB</td> <td style="padding: 2px;"> </td> </tr> </table> <div style="text-align: right; font-size: small;"> </div>	SCALE: NONE	REVISIONS	DATE: 1/2012		DWG. BY: NH		DESIGN BY: MAC		REVIEWED BY: KWB	
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PROJ. REFERENCE NO.	SHEET NO.
17BP.5.H.1	TCP-6



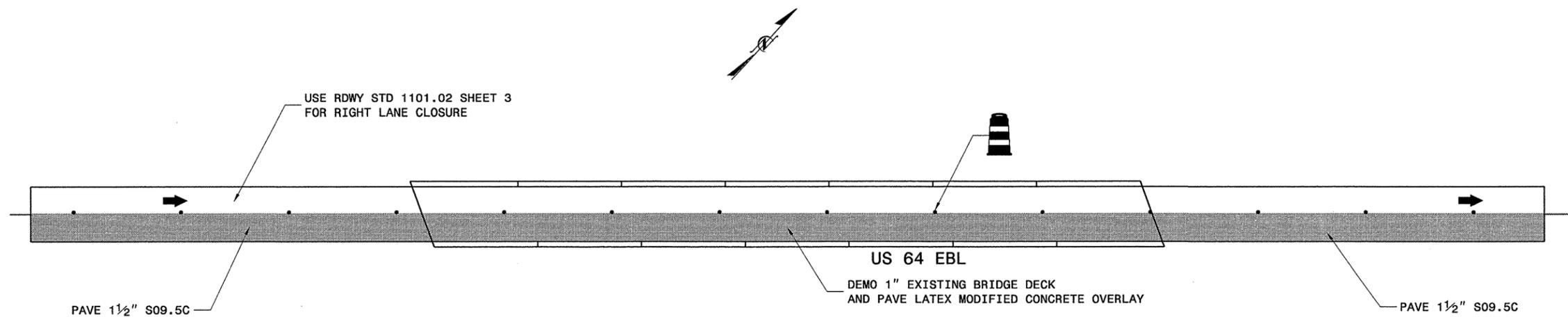
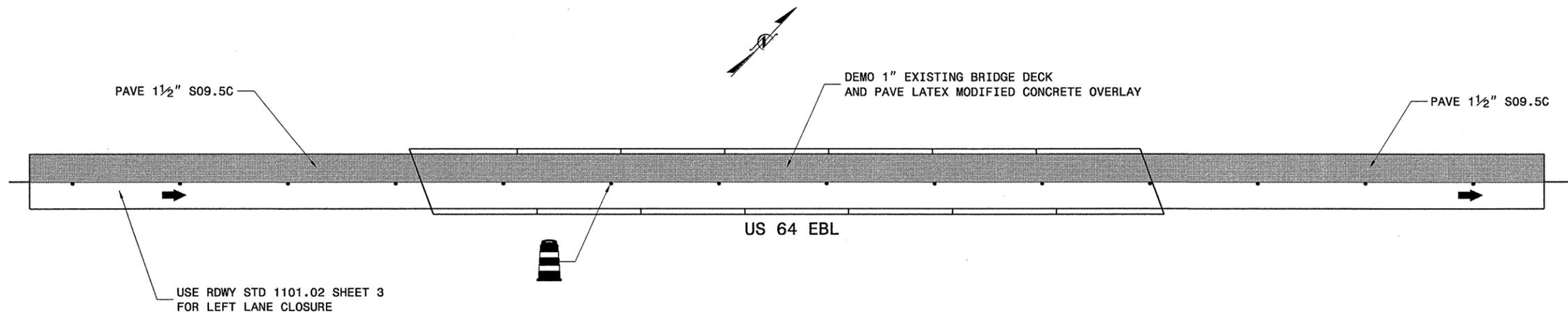
2/14/2012
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PLANS PREPARED BY:
RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 (919) 878-9560
 FOR
THE DIVISION OF HIGHWAYS

SEAL
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 20047
 KWB
 FEB 28, 2012

STEP 3 DETAIL DRAWING		REVISIONS	
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DATE:	1/2012		
DWG. BY:	NH		
DESIGN BY:	MAC		
REVIEWED BY:	KWB		

PROJ. REFERENCE NO.	SHEET NO.
17BP.5.H.1	TCP-7



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PLANS PREPARED BY :
RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 (919) 878-9560
 FOR
 THE DIVISION OF HIGHWAYS

SEAL
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 21047
 FEB 28, 2012

STEP 4 DETAIL DRAWING

SCALE: NONE
 DATE: 1/2012
 DWG. BY: NH
 DESIGN BY: MAC
 REVIEWED BY: KWB



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GENERAL NOTES

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.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR AS DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
US 64, (NEW BERN AVE.)	MONDAY THROUGH FRIDAY 6:00 A.M. TO 8:00 P.M.

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME	HOLIDAY
US 64, (NEW BERN AVE.)	<p>1) FOR UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.</p> <p>2) FOR NEW YEAR'S BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31ST AND 8:00 P.M. JANUARY 2ND.</p> <p>IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY.</p> <p>3) FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 8:00 P.M. MONDAY.</p> <p>4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.</p> <p>5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE DAY AFTER INDEPENDENCE DAY.</p> <p>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 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.</p> <p>6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.</p> <p>7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY 8:00 P.M. MONDAY.</p> <p>8) FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS DAY.</p>

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
US 64, (NEW BERN AVE.)	SUNDAY 12:00 A.M. THROUGH SATURDAY 11:59 P.M.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- 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.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FEET OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING NCDOT 2012 ROADWAY STANDARD DRAWING NO. 1101.04, UNLESS THE WORK AREA IS PROTECTED BY AN APPROVED TEMPORARY TRAFFIC BARRIER OR GUARDRAIL.
- G) INSTALL DUAL WARNING SIGNS W8-1, (BUMP SIGN) OR W8-2, (DIP SIGN) 500' PRIOR TO THE BEGIN STATION FOR ASPHALT MILLING ON US 64 EB AS DIRECTED BY THE ENGINEER.
- H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FEET OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING NCDOT 2012 ROADWAY STANDARD DRAWING NO. 1101.02, UNLESS THE WORK AREA IS PROTECTED BY AN APPROVED TEMPORARY TRAFFIC BARRIER OR GUARDRAIL.
- I) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT MARKING

- J) REPLACE ANY PAVEMENT MARKING OBLITERATED FROM CONSTRUCTION OPERATIONS WITH 2 APPLICATIONS OF 4" WIDE PAINT.

MISCELLANEOUS

- K) LAW ENFORCEMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR POSITIONED WITHIN THE CLOSED LANE OF TRAVEL DURING ALL LANE CLOSURES ON US 64 AS DIRECTED BY THE ENGINEER.
- L) INSTALL DUAL WARNING SIGNS W8-11, (UNEVEN LANES SIGN) 1000' PRIOR TO THE BEGIN STATION FOR ASPHALT MILLING ON US 64 EB AS DIRECTED BY THE ENGINEER.

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PLANS PREPARED BY :  RUMMEL, KLEPPER & KAHL, LLP 900 RIDGEFIELD DRIVE SUITE 350 RALEIGH, NORTH CAROLINA 27609-3960 NC LICENSE NO. F-0112 (919) 878-9560 FOR THE DIVISION OF HIGHWAYS	 SEAL Feb 28, 2012	PROJECT NOTES					
		SCALE: NONE DATE: 1/2012 DWG. BY: NH DESIGN BY: MAC REVIEWED BY: KWB	<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS			
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PROJ. REFERENCE NO.	SHEET NO.
17BP.5.H.1	TCP-9

TRAFFIC CONTROL PHASING

PHASE I

LAW ENFORCEMENT SHALL BE PRESENT DURING WORK OPERATIONS REQUIRING ANY LANE CLOSURES ON US 64, (NEW BERN AVE.), (SEE TCP-8).

STEP 1:

ERECT ADVANCED WORK ZONE WARNING SIGNS IN ACCORDANCE WITH RDWY STD DRAWING NO. 1101.01.

STEP 2:

USING RDWY STD 1101.02 SHEET 3 OF 15 TO MAINTAIN US 64 WB TRAFFIC, PERFORM BRIDGE NO. 170 SUPERSTRUCTURE AND SUBSTRUCTURE REPAIR WORK EXCLUDING DECK REPAIR WORK AS SHOWN IN THE STRUCTURE PLANS.

AT THE END OF EACH DAY'S CONSTRUCTION OPERATION REMOVE ANY TRAFFIC CONTROL DEVICES REMAINING IN THE TRAVEL LANES AND RESTORE US 64 WB, (NEW BERN AVE.) TO THE ORIGINAL TRAFFIC PATTERN, (SEE TCP-8).

NOTE: THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED IN STEP 3 IN A CONTINUOUS OPERATION.

STEP 3:

USE RDWY STD 1101.02 SHEET 3 OF 15 (ALTERNATING LEFT AND RIGHT LANE CLOSURES) TO MAINTAIN TRAFFIC WHILE REMOVING THE EXISTING ASPHALT FROM THE BRIDGE DECK OF ONE OF THE US 64 WB TRAVEL LANES AND MILLING THE SAME LANE OF THE BRIDGE APPROACHES. PAVE THE INTERMEDIATE COURSE ON THE BRIDGE APPROACHES THEN REDIRECT TRAFFIC INTO THAT LANE. REMOVE THE EXISTING ASPHALT FROM THE OTHER LANE ON THE BRIDGE DECK AND MILL THE OTHER LANE OF THE BRIDGE APPROACHES. PAVE THE INTERMEDIATE COURSE ON THE REMAINING BRIDGE APPROACHES. AT THE END OF THE OPERATION REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN OBLITERATED BY WORK OPERATIONS, (SEE TCP-8 and 10).

REMOVE ANY TRAFFIC CONTROL DEVICES REMAINING IN THE TRAVEL LANES AND RESTORE US 64, (NEW BERN AVE.) TO THEIR ORIGINAL TRAFFIC PATTERN, (SEE TCP-8).

NOTE: THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED IN STEP 4 IN A CONTINUOUS OPERATION.

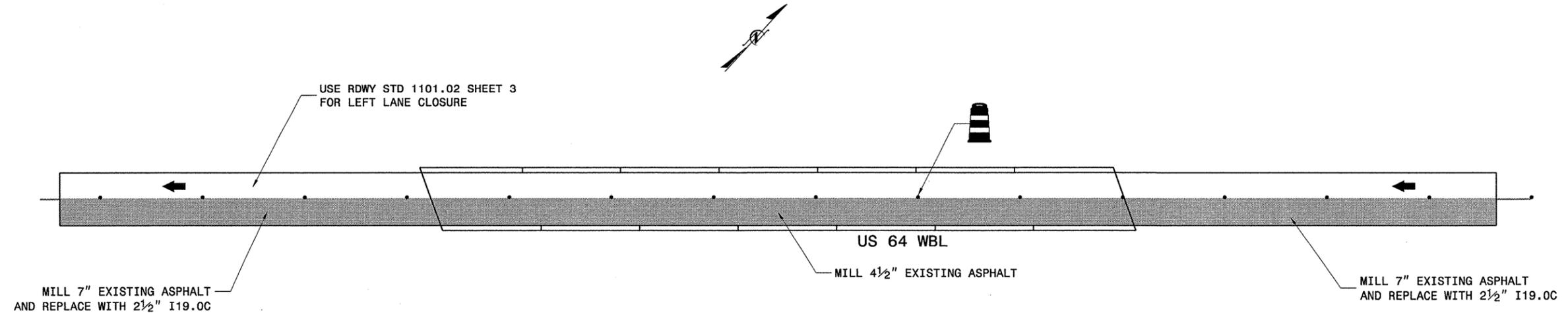
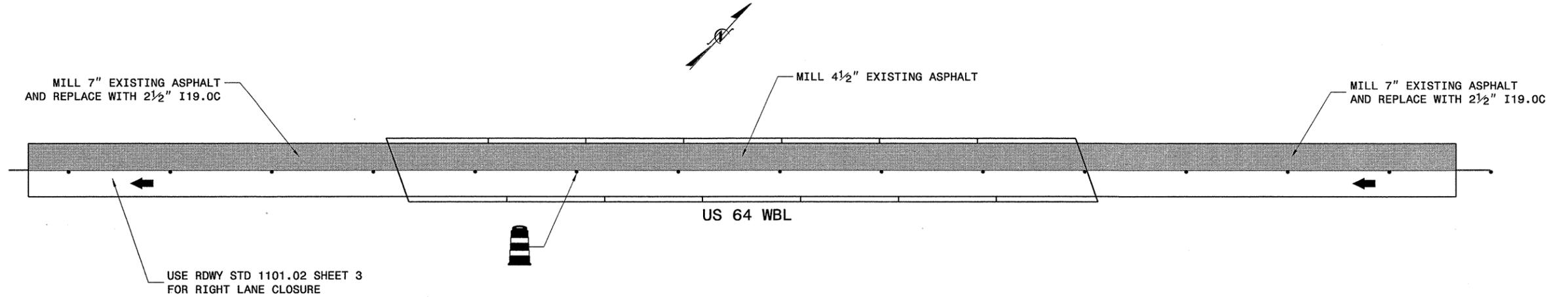
STEP 4:

USE RDWY STD 1101.02 SHEET 3 OF 15 TO MAINTAIN TRAFFIC WHILE PERFORMING HYDRO-DEMOLITION ON THE BRIDGE DECK OF ONE OF THE US 64 WB TRAVEL LANES. PLACE THE LATEX MODIFIED CONCRETE ON THE SAME LANE AND PAVE THE SURFACE COURSE ON THE SAME LANE OF THE BRIDGE APPROACHES. REDIRECT TRAFFIC INTO THE COMPLETED TRAVEL LANE, AND PERFORM HYDRO-DEMOLITION ON THE BRIDGE DECK OF THE REMAINING LANE. PLACE THE LATEX MODIFIED CONCRETE ON THE SAME LANE AND PAVE THE SURFACE COURSE ON THE SAME LANE OF THE BRIDGE APPROACHES. AT THE END OF THE OPERATION PLACE FINAL PAVEMENT MARKINGS AND PAVEMENT MARKERS. (SEE TCP-8 and 11).

REMOVE ANY TRAFFIC CONTROL DEVICES REMAINING IN THE TRAVEL LANES AND RESTORE US 64, (NEW BERN AVE.) TO THEIR ORIGINAL TRAFFIC PATTERN, (SEE TCP-8).

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<p>PLANS PREPARED BY : RUMMEL, KLEPPER & KAHL, LLP 900 RIDGEFIELD DRIVE SUITE 350 RALEIGH, NORTH CAROLINA 27609-3960 NC LICENSE NO. F-0112 (919) 878-9560 FOR THE DIVISION OF HIGHWAYS</p>		<p style="text-align: center;">TRAFFIC CONTROL PHASING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">SCALE: NONE</td> <td style="width: 50%; padding: 2px;">REVISIONS</td> </tr> <tr> <td style="padding: 2px;">DATE: 1/2012</td> <td style="padding: 2px;"> </td> </tr> <tr> <td style="padding: 2px;">DWG. BY: NH</td> <td style="padding: 2px;"> </td> </tr> <tr> <td style="padding: 2px;">DESIGN BY: MAC</td> <td style="padding: 2px;"> </td> </tr> <tr> <td style="padding: 2px;">REVIEWED BY: KWB</td> <td style="padding: 2px;"> </td> </tr> </table> <div style="text-align: center; margin-top: 10px;"> </div>	SCALE: NONE	REVISIONS	DATE: 1/2012		DWG. BY: NH		DESIGN BY: MAC		REVIEWED BY: KWB	
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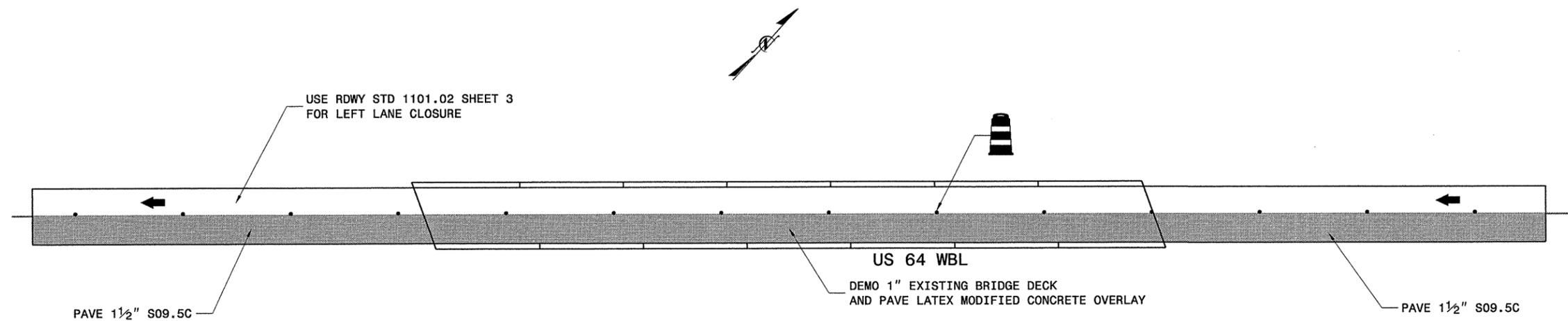
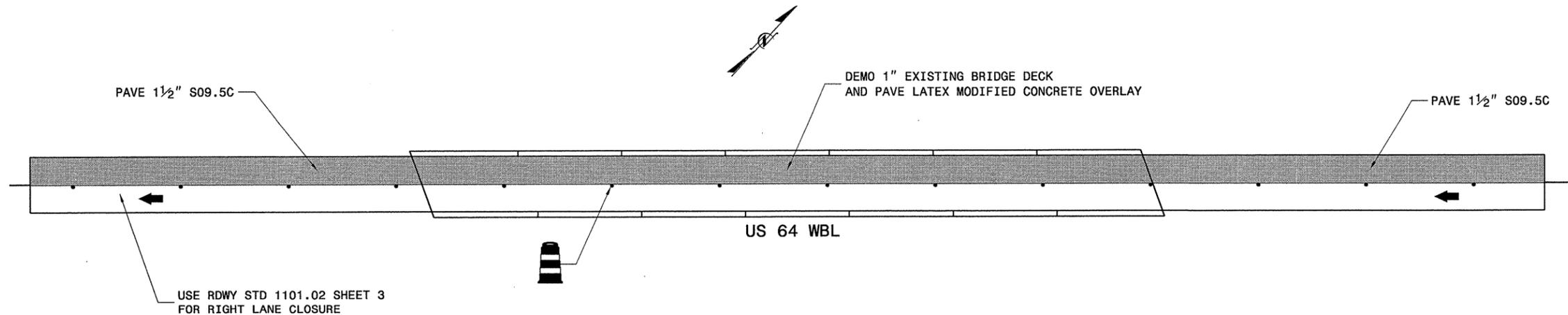


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kbabu

PLANS PREPARED BY :
RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 (919) 878-9560
 FOR
 THE DIVISION OF HIGHWAYS

SEAL
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 21047
 FEB 28, 2012

STEP 3 DETAIL DRAWING			REVISIONS	
SCALE:	NONE			
DATE:	1/2012			
DWG. BY:	NH			
DESIGN BY:	MAC			
REVIEWED BY:	KWB			



2/14/2012
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PLANS PREPARED BY :
RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 (919) 878-9560
 FOR
THE DIVISION OF HIGHWAYS

SEAL
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 21047
 ENGINEER
 KEVIN W. BRYAN
 Feb 28, 2012

STEP 4 DETAIL DRAWING									
SCALE: NONE									
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DWG. BY: NH									
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GENERAL NOTES

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.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR AS DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
US 1, (CAPITAL BLVD.)	MONDAY THROUGH FRIDAY 6:00 A.M. TO 9:00 P.M. SATURDAY 9:00 A.M. TO 9:00 P.M. SUNDAY 10:00 A.M. TO 9:00 P.M.

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

- | ROAD NAME | HOLIDAY |
|-----------------------|---|
| US 1, (CAPITAL BLVD.) | <p>1) FOR UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.</p> <p>2) FOR NEW YEAR'S BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31ST AND 9:00 P.M. JANUARY 2ND.</p> <p>IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN UNTIL 9:00 P.M. THE FOLLOWING TUESDAY.</p> <p>3) FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.</p> <p>4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.</p> <p>5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE DAY AFTER INDEPENDENCE DAY.</p> <p>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 9:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.</p> <p>6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.</p> <p>7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY 9:00 P.M. MONDAY.</p> <p>8) FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS DAY.</p> <p>9) FOR ANY EVENT, OCCURRING AT THE RALEIGH CONVENTION CENTER AND/OR PROGRESS ENERGY CENTER BETWEEN TWO (2) HOURS BEFORE THE START AND TWO (2) HOURS AFTER THE END OF THE EVENT.</p> |

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
US 1, (CAPITAL BLVD.)	SUNDAY 12:00 A.M. TO SATURDAY 11:59 P.M.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- 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.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FEET OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING NCDOT 2012 ROADWAY STANDARD DRAWING NO. 1101.04, UNLESS THE WORK AREA IS PROTECTED BY AN APPROVED TEMPORARY TRAFFIC BARRIER OR GUARDRAIL.
- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FEET OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING NCDOT 2012 ROADWAY STANDARD DRAWING NO. 1101.02, UNLESS THE WORK AREA IS PROTECTED BY AN APPROVED TEMPORARY TRAFFIC BARRIER OR GUARDRAIL.
- H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FEET OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING NCDOT 2012 ROADWAY STANDARD DRAWING NO. 1101.02, UNLESS THE WORK AREA IS PROTECTED BY AN APPROVED TEMPORARY TRAFFIC BARRIER OR GUARDRAIL.

PAVEMENT MARKING

- I) REPLACE ANY PAVEMENT MARKING OBLITERATED FROM CONSTRUCTION OPERATIONS WITH 2 APPLICATIONS OF 4" WIDE PAINT.

MISCELLANEOUS

- J) LAW ENFORCEMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR POSITIONED WITHIN THE CLOSED LANE OF TRAVEL DURING ALL LANE CLOSURES ON US 1 AND/OR WADE AVENUE STREET AS DIRECTED BY THE ENGINEER.

2/28/2012 11:51:00 AM C:\projects\2009\09085_NCDOT_Div_0nCell\01_Bridge_Rehab\TCP_Combined\17BP.5.H.1.200_tcp12.dgn

PLANS PREPARED BY :  RUMMEL, KLEPPER & KAHL, LLP 900 RIDGEFIELD DRIVE SUITE 350 RALEIGH, NORTH CAROLINA 27609-3960 NC LICENSE NO. F-0112 (919) 878-9560 FOR THE DIVISION OF HIGHWAYS	SEAL  FEB 28, 2012	PROJECT NOTES							
		SCALE: NONE DATE: 11/2011 DWG. BY: NH DESIGN BY: MAC REVIEWED BY: KWB	<table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REVISIONS					
REVISIONS									

PROJ. REFERENCE NO.	SHEET NO.
17BP.5.H.1	TCP-13

TRAFFIC CONTROL PHASING

PHASE I

STEP 1:
 ERECT ADVANCED WORK ZONE WARNING SIGNS IN ACCORDANCE WITH RDWY STD DRAWING NO. 1101.01 AND CLOSE FAIRVIEW ROAD IN ACCORDANCE WITH RDWY STD DRAWING NO. 1101.04 AND SHEET TCP-14.

STEP 2:
 USING RDWY STD 1101.02 SHEETS 5 OF 9, 6 OF 9 AND 7 OF 9, PERFORM BRIDGE NO. 200 SUPERSTRUCTURE AND SUBSTRUCTURE REPAIR WORK AS SHOWN IN THE STRUCTURE PLANS. LAW ENFORCEMENT SHALL BE PRESENT DURING WORK OPERATIONS REQUIRING LANE CLOSURES OF US 1, (CAPITAL BLVD.), (SEE TCP-12).

STEP 3:
 USING RDWY STD 1101.02 SHEETS 5 OF 9, 6 OF 9 AND 7 OF 9, AT THE END OF EACH NIGHTS WORK PERIOD REPLACE ANY PAVEMENT MARKINGS THAT HAS BEEN OBLITERATED BY WORK OPERATIONS. REMOVE ANY TRAFFIC CONTROL DEVICES REMAINING IN THE TRAVEL LANES AND RESTORE US 1, (CAPITAL BLVD.) TO ITS ORIGINAL TRAFFIC PATTERN, (SEE TCP-12).

2/14/2012 17BP.5.H.1_200_tcp13.dgn

<p>PLANS PREPARED BY : RUMMEL, KLEPPER & KAHL, LLP 900 RIDGEFIELD DRIVE SUITE 350 RALEIGH, NORTH CAROLINA 27609-3960 NC LICENSE NO. F-0112 (919) 878-9560 FOR THE DIVISION OF HIGHWAYS</p>	<p>SEAL</p>	<p style="text-align: center;">TRAFFIC CONTROL PHASING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">SCALE: NONE</td> <td style="width: 50%; padding: 2px;">REVISIONS</td> </tr> <tr> <td style="padding: 2px;">DATE: 1/2012</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">DWG. BY: NH</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">DESIGN BY: MAC</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">REVIEWED BY: KWB</td> <td style="padding: 2px;"></td> </tr> </table> <div style="text-align: center; margin-top: 5px;"> </div>	SCALE: NONE	REVISIONS	DATE: 1/2012		DWG. BY: NH		DESIGN BY: MAC		REVIEWED BY: KWB	
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GENERAL NOTES

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.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR AS DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
US 1, (CAPITAL BLVD.)	MONDAY THROUGH FRIDAY 6:00 A.M. TO 9:00 P.M. SATURDAY 9:00 A.M. TO 9:00 P.M. SUNDAY 10:00 A.M. TO 9:00 P.M.
WADE AVENUE	MONDAY THROUGH FRIDAY 7:00 A.M. TO 9:00 A.M. AND 2:00 P.M. TO 6:00 P.M.

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

- | ROAD NAME | HOLIDAY |
|--------------------------------------|---|
| US 1, (CAPITAL BLVD.)
WADE AVENUE | <p>1) FOR UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.</p> <p>2) FOR NEW YEAR'S BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31ST AND 9:00 P.M. JANUARY 2ND.

IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN UNTIL 9:00 P.M. THE FOLLOWING TUESDAY.</p> <p>3) FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.</p> <p>4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.</p> <p>5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 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 9:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.</p> <p>6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.</p> <p>7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY 9:00 P.M. MONDAY.</p> <p>8) FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS DAY.</p> <p>9) FOR ANY EVENT, OCCURRING AT THE RALEIGH CONVENTION CENTER AND/OR PROGRESS ENERGY CENTER BETWEEN TWO (2) HOURS BEFORE THE START AND TWO (2) HOURS AFTER THE END OF THE EVENT.</p> |

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
US 1, (CAPITAL BLVD.) WADE AVENUE	SUNDAY TO SATURDAY SUNDAY TO SATURDAY

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- 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.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FEET OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING NCDOT 2012 ROADWAY STANDARD DRAWING NO. 1101.04, UNLESS THE WORK AREA IS PROTECTED BY AN APPROVED TEMPORARY TRAFFIC BARRIER OR GUARDRAIL.
- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FEET OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING NCDOT 2012 ROADWAY STANDARD DRAWING NO. 1101.02, UNLESS THE WORK AREA IS PROTECTED BY AN APPROVED TEMPORARY TRAFFIC BARRIER OR GUARDRAIL.

MISCELLANEOUS

- H) LAW ENFORCEMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR POSITIONED WITHIN THE CLOSED LANE OF TRAVEL DURING ALL LANE CLOSURES ON US 1 AND/OR WADE AVENUE AS DIRECTED BY THE ENGINEER.

2/14/2012 10:51:23 AM 17BP.5.H.1_tcp02.dgn

PLANS PREPARED BY :  RUMMEL, KLEPPER & KAHL, LLP 900 RIDGEFIELD DRIVE SUITE 350 RALEIGH, NORTH CAROLINA 27609-3960 NC LICENSE NO. F-0112 (919) 878-9560 FOR THE DIVISION OF HIGHWAYS	SEAL  KEVIN W. BRYAN FEB 28, 2012	<h2>PROJECT NOTES</h2>					
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PROJ. REFERENCE NO.	SHEET NO.
17BP.5.H.1	TCP-17

TRAFFIC CONTROL PHASING

PHASE I

STEP 1:
ERECT ADVANCED WORK ZONE WARNING SIGNS IN ACCORDANCE WITH RDWY STD DRAWING NO. 1101.01.

STEP 2:
USING RDWY STD 1101.02 SHEETS 8 OF 15, 9 OF 15 AND 10 OF 15, PERFORM BRIDGE NO. 213 SUPERSTRUCTURE AND SUBSTRUCTURE REPAIR WORK AS SHOWN IN THE STRUCTURE PLANS. LAW ENFORCEMENT SHALL BE PRESENT DURING WORK OPERATIONS REQUIRING LANE CLOSURES OF US 1, (CAPITAL BLVD.) AND/OR WADE AVENUE, (SEE TCP-16).

REMOVE ANY TRAFFIC CONTROL DEVICES REMAINING IN THE TRAVEL LANES AND RESTORE US 1, (CAPITAL BLVD.) AND/OR WADE AVENUE TO THE ORIGINAL TRAFFIC PATTERN, (SEE TCP-16).

2/28/2012 17BP.5.H.1_213_tcp017.dgn kbah

<p>PLANS PREPARED BY : RUMMEL, KLEPPER & KAHL, LLP 900 RIDGEFIELD DRIVE SUITE 350 RALEIGH, NORTH CAROLINA 27609-3960 NC LICENSE NO. F-0112 (919) 878-9560 FOR THE DIVISION OF HIGHWAYS</p>	<p>SEAL</p> <p><i>Kevin W. Blaylock</i> FEB 28, 2012</p>	<p style="text-align: center;">TRAFFIC CONTROL PHASING</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">SCALE: NONE</td> <td rowspan="4" style="width: 20%; text-align: center;"> </td> <td style="width: 50%; text-align: center;">REVISIONS</td> </tr> <tr> <td>DATE: 12/2011</td> <td style="width: 50%;"></td> </tr> <tr> <td>DWG. BY: NH</td> <td style="width: 50%;"></td> </tr> <tr> <td>DESIGN BY: MAC</td> <td style="width: 50%;"></td> </tr> <tr> <td>REVIEWED BY: KWB</td> <td></td> <td></td> </tr> </table>	SCALE: NONE		REVISIONS	DATE: 12/2011		DWG. BY: NH		DESIGN BY: MAC		REVIEWED BY: KWB		
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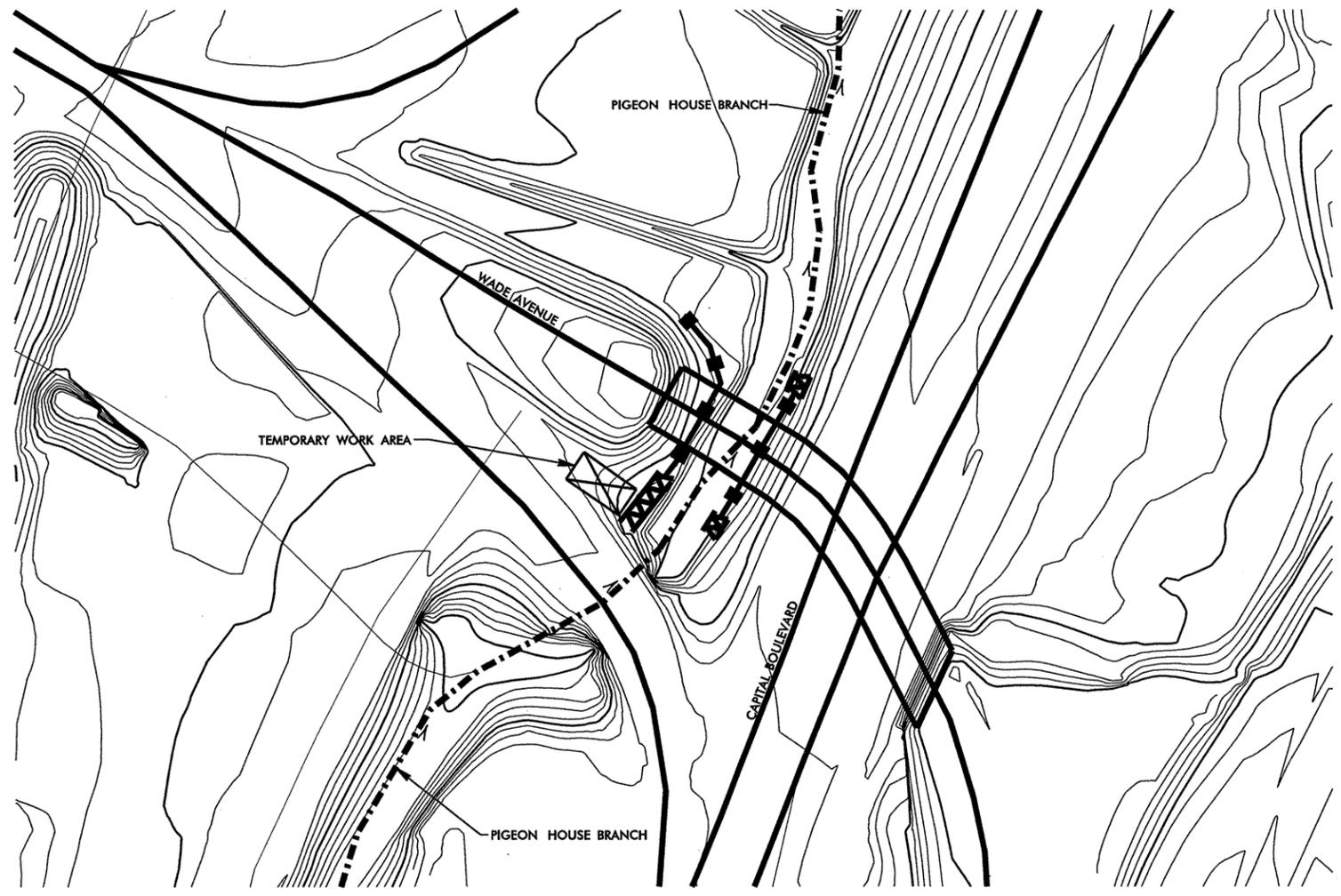
EROSION CONTROL PLAN

WAKE COUNTY BRIDGE #213

PROJECT REFERENCE NO.	SHEET NO.
17BP.5.HJ	EC-1
RW SHEET NO.	
EROSION CONTROL DESIGN ENGINEER	

GRAPHIC SCALES

NAD 83/NSRS 2007



EROSION AND SEDIMENT CONTROL MEASURES

Sid. #	Description	Symbol
1605.01	Temporary Silt Fence	--- --- ---
1606.01	Special Sediment Control Fence	---X---X---X

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO STARTING ANY CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.

JEFF MEADOR
 EROSION CONTROL DESIGN ENGINEER

356
 LEVEL IIIA CERTIFICATION NUMBER

RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE, SUITE 350
 RALEIGH, NORTH CAROLINA 27609
 NC LICENSE NO. F-0112
 1-888-521-4455 OR 919-878-9560

FOR
DIVISION OF HIGHWAYS
 2012 STANDARD SPECIFICATIONS

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence
 1606.01 Special Sediment Control Fence

PLANS PREPARED BY :

RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 • (919) 878-9560

17BP.5.HJ EC-1 1/2012

