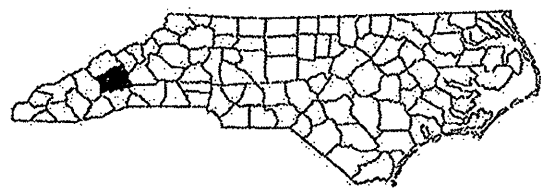


CONTRACT: C203009 TIP PROJECT: WBS 17BP.13.P.2

DIVISION OF HIGHWAYS CONSULTANTS: CIVIL ENGINEERS AND ARCHITECTS

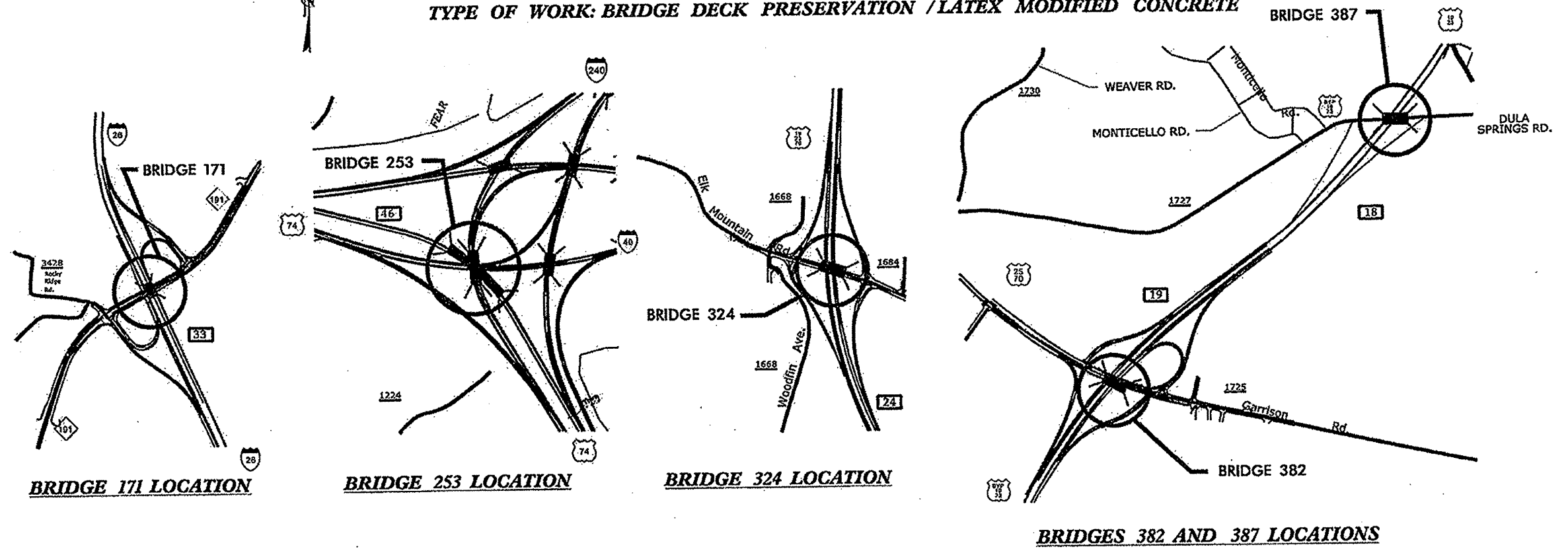
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BUNCOMBE COUNTY



LOCATION:
 BUNCOMBE COUNTY BRIDGE 171 ON NC 191 OVER 126
 BUNCOMBE COUNTY BRIDGE 253 ON I-26 WBLANE OVER I-240 RAMP, I-40 WBLANE
 BUNCOMBE COUNTY BRIDGE 324 ON SR 1684 OVER US 19, US 23, AND US 70
 BUNCOMBE COUNTY BRIDGE 382 ON US 25, US 70 OVER US 19, US 23, BYPASS
 BUNCOMBE COUNTY BRIDGE 387 ON SR 1727 OVER US 19 AND US 23

TYPE OF WORK: BRIDGE DECK PRESERVATION / LATEX MODIFIED CONCRETE



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	WBS 17BP.13.P.2	1	
V.M. NO.	P.A. PROJECT NO.	DESCRIPTION	
17BP.13.P.2		PE	
17BP.13.P.2		CONST.	

		PROJECT LENGTH

PREPARED IN THE OFFICE OF:

 Startec
 CONSULTING ENGINEERS INC.
 201 JAMES FORTNEY ROAD
 SUITE 200
 RALEIGH, NC 27604
 TEL: 919.851.0008
 FAX: 919.851.0204
 WWW.STARTEC.COM
 LICENSE NO. E-00278

FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: N.A.
 LETTING DATE: MAY 15, 2012

JOE KELVINGTON, PE
 PROJECT DESIGN ENGINEER

RICK NELSON, PE
 PROJECT MANAGER

NORTH CAROLINA
 PROFESSIONAL ENGINEER
 FARZIN ASEFNI
 20103
 12/13/11

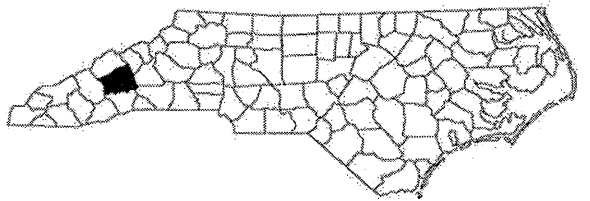
FARZIN ASEFNI, PE
PROJECT ENGINEER

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

CONTRACT: C203009 TIP PROJECT: WBS 17BP.13.P.2

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	WBS 17BP.13.P.2	1A	



BUNCOMBE COUNTY

LOCATION: BUNCOMBE COUNTY BRIDGE 171 ON NC 191 OVER 126
 BUNCOMBE COUNTY BRIDGE 253 ON I-26 WBLANE OVER I-240 RAMP, I-40 WBLANE
 BUNCOMBE COUNTY BRIDGE 324 ON SR 1684 OVER US 19, US 23, AND US 70
 BUNCOMBE COUNTY BRIDGE 382 ON US 25, US 70 OVER US 19, US 23, BYPASS
 BUNCOMBE COUNTY BRIDGE 387 ON SR 1727 OVER US 19 AND US 23

TYPE OF WORK: BRIDGE DECK PRESERVATION / LATEX MODIFIED CONCRETE

INDEX OF SHEETS

DWG.	DESCRIPTION
1	TITLE SHEET
1A	INDEX OF SHEETS
2	SUMMARY OF QUANTITIES
RDY-1 THRU RDY-4	ROADWAY PLANS
S-1 THRU S-10	BUNCOMBE 171
S-11 THRU S-27	BUNCOMBE 253
S-28 THRU S-36	BUNCOMBE 324
S-37 THRU S-49	BUNCOMBE 382
S-50 THRU S-58	BUNCOMBE 387
TMP-1 THRU TMP-12A	TRANSPORTATION MANAGEMENT PLANS

ROADWAY STANDARD DRAWINGS

2012 ROADWAY ENGLISH STANDARD DRAWINGS
 THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS"
 HIGHWAY DESIGN BRANCH -N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C.
 DATED JANUARY 17, 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY
 ARE CONSIDERED A PART OF THESE PLANS:

STD. NO	TITLE
852.01	CONCRETE ISLAND (AS MODIFIED IN PROJECT PLANS)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO	SHEET NO	TOTAL SHEETS
N.C.	WBS 17BP.13.P.2	2	

SUMMARY OF QUANTITIES

TIP PROJECT: 17BP.13.P.2


CONTRACT: C203009

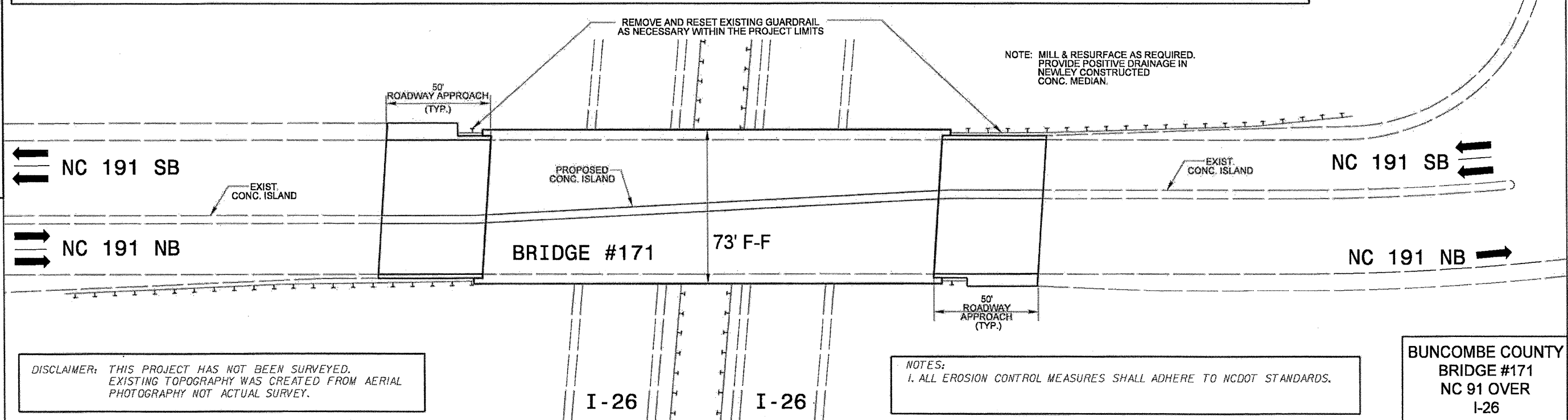
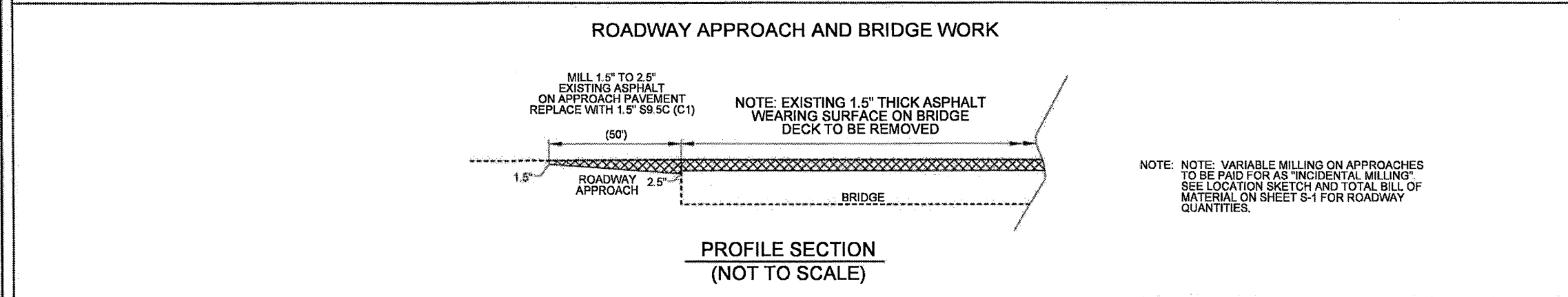
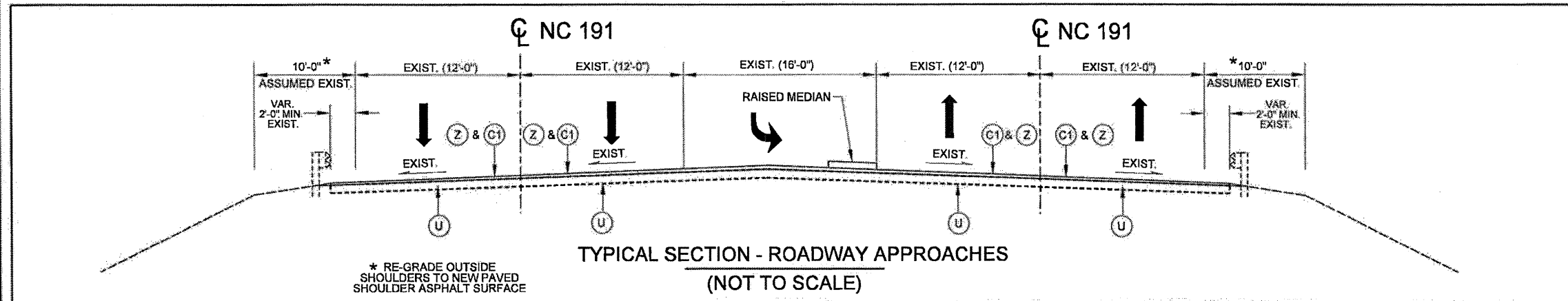
DATE: 03/28/13

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203009					ItemNumber	Sec #	Quantity	Unit	Description
ItemNumber	Sec #	Quantity	Unit	Description					
0000100000-N	800	Lump Sum		MOBILIZATION	4847100000-E	1205	2,250	LF	POLYUREA PAVEMENT MARKING LINES (6", *****) (HIGHLY REFLECTIVE ELEMENTS)
1245000000-E	SP	0.19	SMI	SHOULDER RECONSTRUCTION	4847110000-E	1205	825	LF	POLYUREA PAVEMENT MARKING LINES (8", *****) (STANDARD GLASS BEADS)
1330000000-E	607	3,277	SY	INCIDENTAL MILLING	4900000000-N	1251	27	EA	PERMANENT RAISED PAVEMENT MARKERS
1523000000-E	610	251	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	4905000000-N	1253	96	EA	SNOWPLOWABLE PAVEMENT MARKERS
2647000000-E	852	141	SY	5" MONOLITHIC CONCRETE ISLANDS (SURFACE MOUNTED)	8161000000-E	420	58,509	SF	GROOVING BRIDGE FLOORS
3345000000-E	864	864	LF	REMOVE & RESET EXISTING GUARD-RAIL	8296000000-N	442	Lump Sum		POLLUTION CONTROL
4400000000-E	1110	400	SF	WORK ZONE SIGNS (STATIONARY)	8657000000-N	430	Lump Sum		ELASTOMERIC BEARINGS
4405000000-E	1110	410	SF	WORK ZONE SIGNS (PORTABLE)	8660000000-E	SP	497	CF	CONCRETE REPAIRS
4410000000-E	1110	10	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)	8664000000-E	SP	183	CF	SHOTCRETE REPAIRS
4415000000-N	1115	7	EA	FLASHING ARROW BOARD	8692000000-N	SP	Lump Sum		FOAM JOINT SEALS
4420000000-N	1120	9	EA	PORTABLE CHANGEABLE MESSAGE SIGN	8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM CLEANING & REPAINTING OF BRIDGE # 253
4430000000-N	1130	1,010	EA	DRUMS	8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM TEMP STEEL PLATE COVER FOR DIAPH REPAIR
4445000000-E	1145	40	LF	BARRICADES (TYPE III)	8881000000-E	SP	372	CY	GENERIC STRUCTURE ITEM LATEX MOD CONC OVERLAY - VERY EARLY STRENGTH
4450000000-N	1150	1,248	HR	FLAGGER	8893000000-E	SP	7,225	SY	GENERIC STRUCTURE ITEM HYDRO-DEMOLITION OF BRIDGE DECK
4480000000-N	1165	3	EA	TMA	8893000000-E	SP	7,225	SY	GENERIC STRUCTURE ITEM PLACING & FINISHING LATEX MOD CONC OVERLAY - VERY EARLY STRENGTH
4510000000-N	SP	2,348	HR	LAW ENFORCEMENT	8893000000-E	SP	7,225	SY	GENERIC STRUCTURE ITEM SCARIFYING BRIDGE DECK
4710000000-E	1205	72	LF	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)	8897000000-N	SP	9	EA	GENERIC STRUCTURE ITEM (SPAN JACKING BUNCOMBE CO BRIDGE #253)
4795000000-E	1205	36	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (24") (II)	8897000000-N	SP	3	EA	GENERIC STRUCTURE ITEM (SPAN JACKING BUNCOMBE CO BRIDGE #382)
4800000000-N	1205	16	EA	COLD APPLIED PLASTIC PAVEMENT MARKING CHARACTER, TYPE ** (II)	8897000000-N	SP	3	EA	GENERIC STRUCTURE ITEM (SPAN JACKING BUNCOMBE CO BRIDGE #387)
4805000000-N	1205	27	EA	COLD APPLIED PLASTIC PAVEMENT MARKING SYMBOL, TYPE ** (II)					
4847000000-E	1205	9,431	LF	POLYUREA PAVEMENT MARKING LINES (4", *****) (STANDARD GLASS BEADS)					

8/17/99

PAVEMENT SCHEDULE	
C1	PROP. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
Z	ASPHALT MILLING

PROJECT REFERENCE NO. WBS 17BPJ3.P.2	SHEET NO. RDY-1
ROADWAY DESIGN ENGINEER	
	
3/21/2012	



DISCLAIMER: THIS PROJECT HAS NOT BEEN SURVEYED. EXISTING TOPOGRAPHY WAS CREATED FROM AERIAL PHOTOGRAPHY NOT ACTUAL SURVEY.


NOTES:
1. ALL EROSION CONTROL MEASURES SHALL ADHERE TO NCDOT STANDARDS.

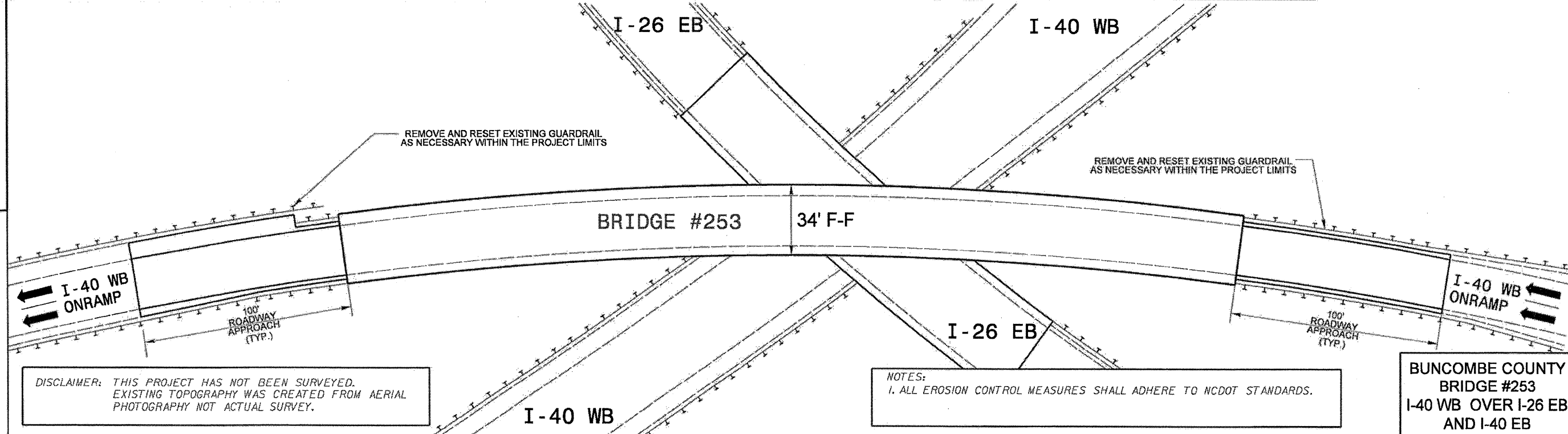
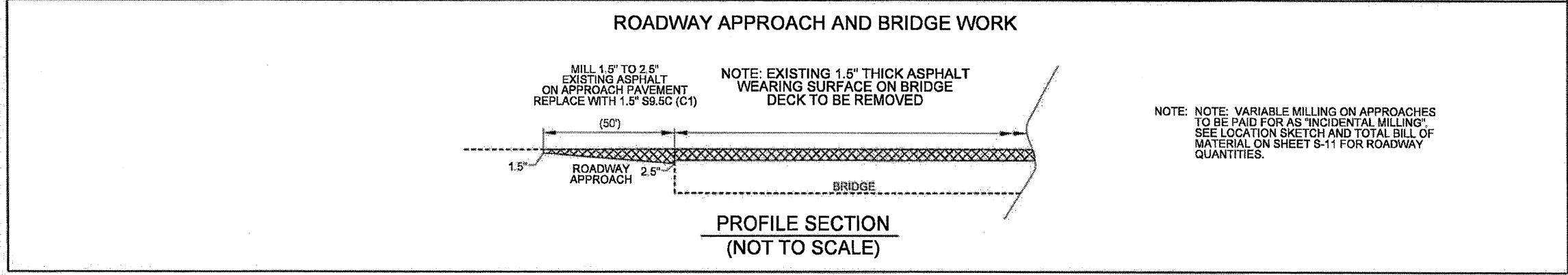
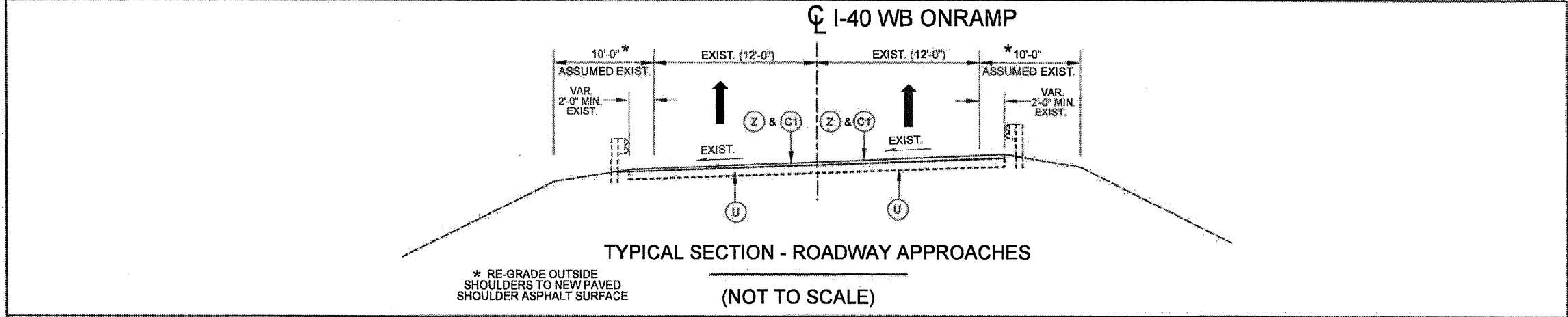
BUNCOMBE COUNTY
BRIDGE #171
NC 91 OVER
I-26

REVISIONS

8/17/99

PAVEMENT SCHEDULE	
C1	PROP. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
Z	ASPHALT MILLING

PROJECT REFERENCE NO. WBS 17BP13.P.2	SHEET NO. RDY-2
ROADWAY DESIGN ENGINEER	
	
3/21/2012	



DISCLAIMER: THIS PROJECT HAS NOT BEEN SURVEYED. EXISTING TOPOGRAPHY WAS CREATED FROM AERIAL PHOTOGRAPHY NOT ACTUAL SURVEY.


NOTES:
1. ALL EROSION CONTROL MEASURES SHALL ADHERE TO NCDOT STANDARDS.

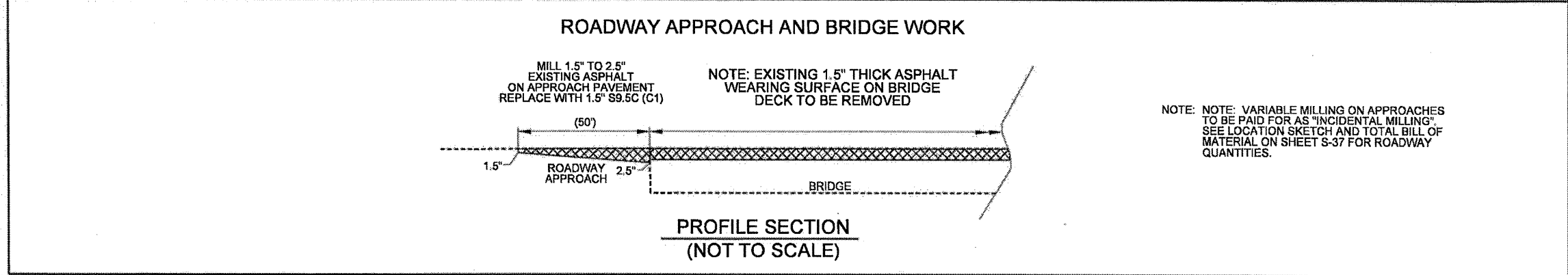
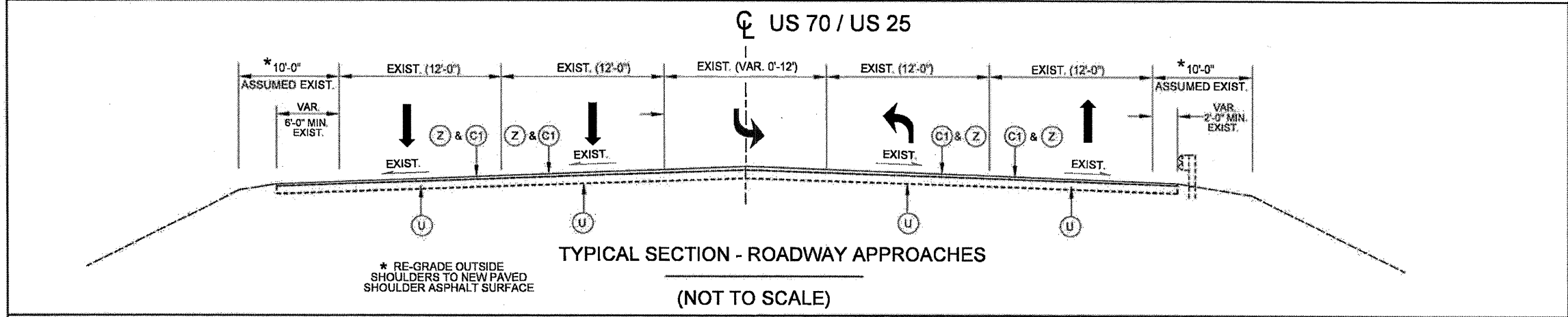
BUNCOMBE COUNTY
BRIDGE #253
I-40 WB OVER I-26 EB
AND I-40 EB

REVISIONS

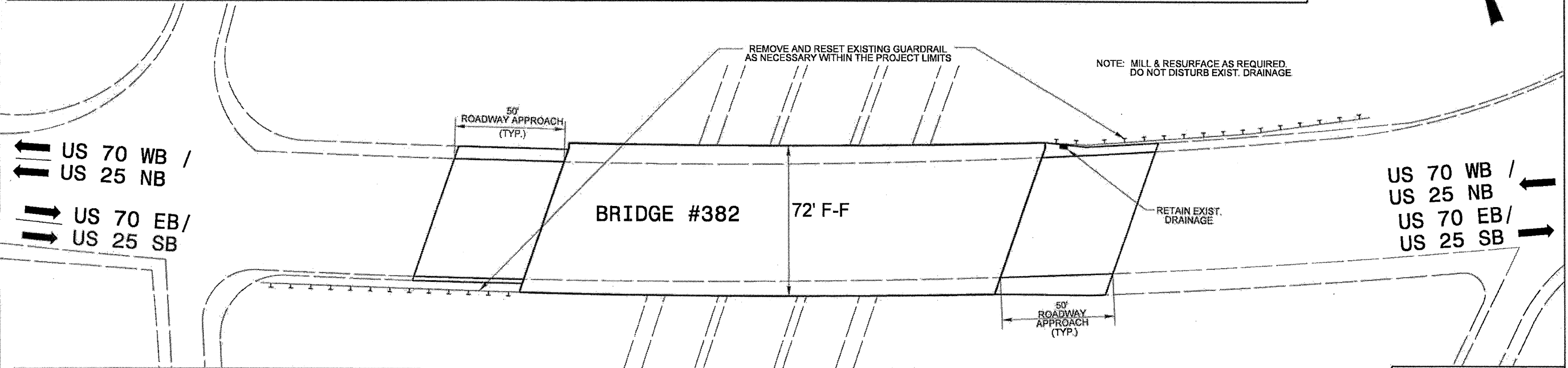
B/17/AS

PAVEMENT SCHEDULE	
C1	PROP. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
Z	ASPHALT MILLING

PROJECT REFERENCE NO. WBS 17BPJ3.P.2	SHEET NO. RDY-3
ROADWAY DESIGN ENGINEER	
	
3/21/2012	



REVISIONS



DISCLAIMER: THIS PROJECT HAS NOT BEEN SURVEYED. EXISTING TOPOGRAPHY WAS CREATED FROM AERIAL PHOTOGRAPHY NOT ACTUAL SURVEY.


NOTES:
1. ALL EROSION CONTROL MEASURES SHALL ADHERE TO NCDOT STANDARDS.

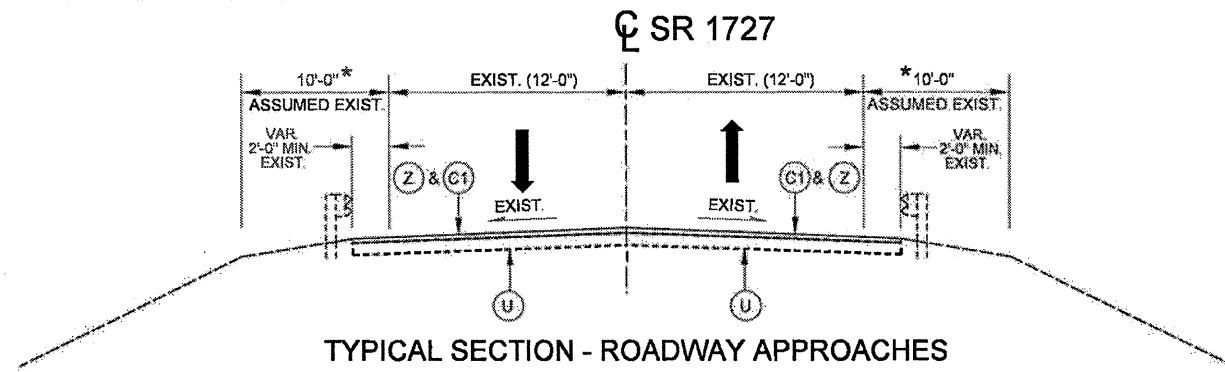
BUNCOMBE COUNTY
BRIDGE #382
US-70/25 OVER I-26

I-26 I-26

8/17/95

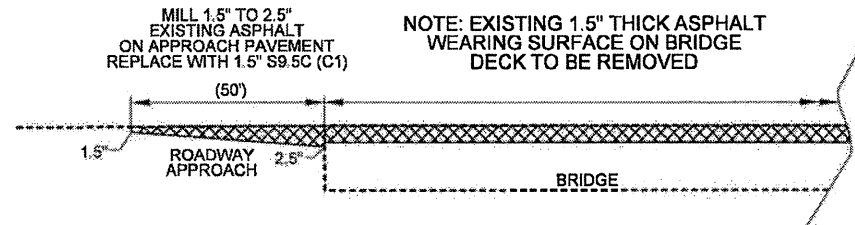
PAVEMENT SCHEDULE	
C1	PROP. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
Z	ASPHALT MILLING

PROJECT REFERENCE NO. WBS 17BPJ3.P.2	SHEET NO. RDY-4
ROADWAY DESIGN ENGINEER	
	
3/21/2012	

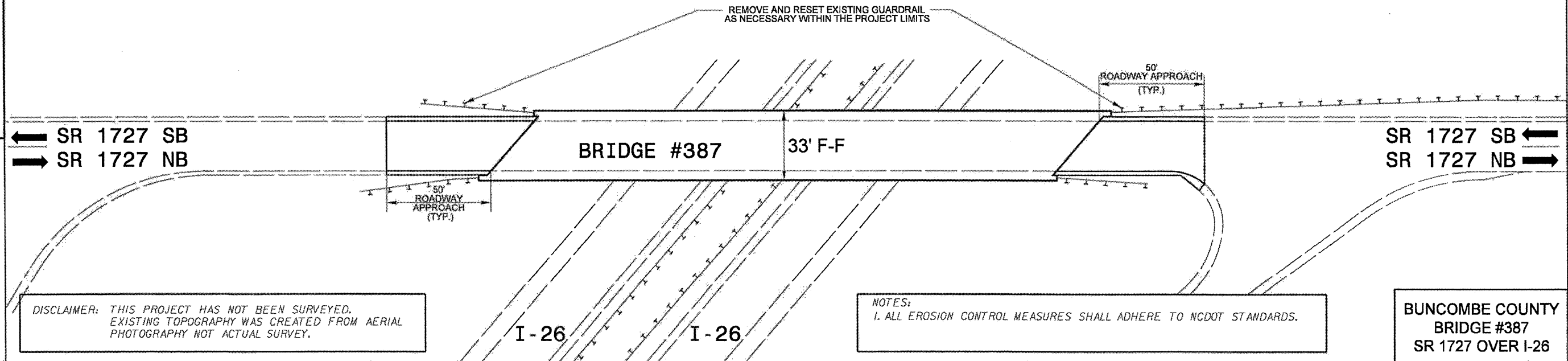
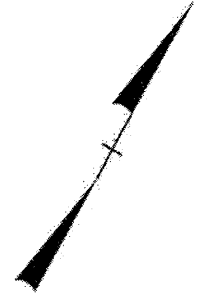


* RE-GRADE OUTSIDE SHOULDERS TO NEW PAVED SHOULDER ASPHALT SURFACE

ROADWAY APPROACH AND BRIDGE WORK



NOTE: NOTE: VARIABLE MILLING ON APPROACHES TO BE PAID FOR AS "INCIDENTAL MILLING". SEE LOCATION SKETCH AND TOTAL BILL OF MATERIAL ON SHEET S-50 FOR ROADWAY QUANTITIES.

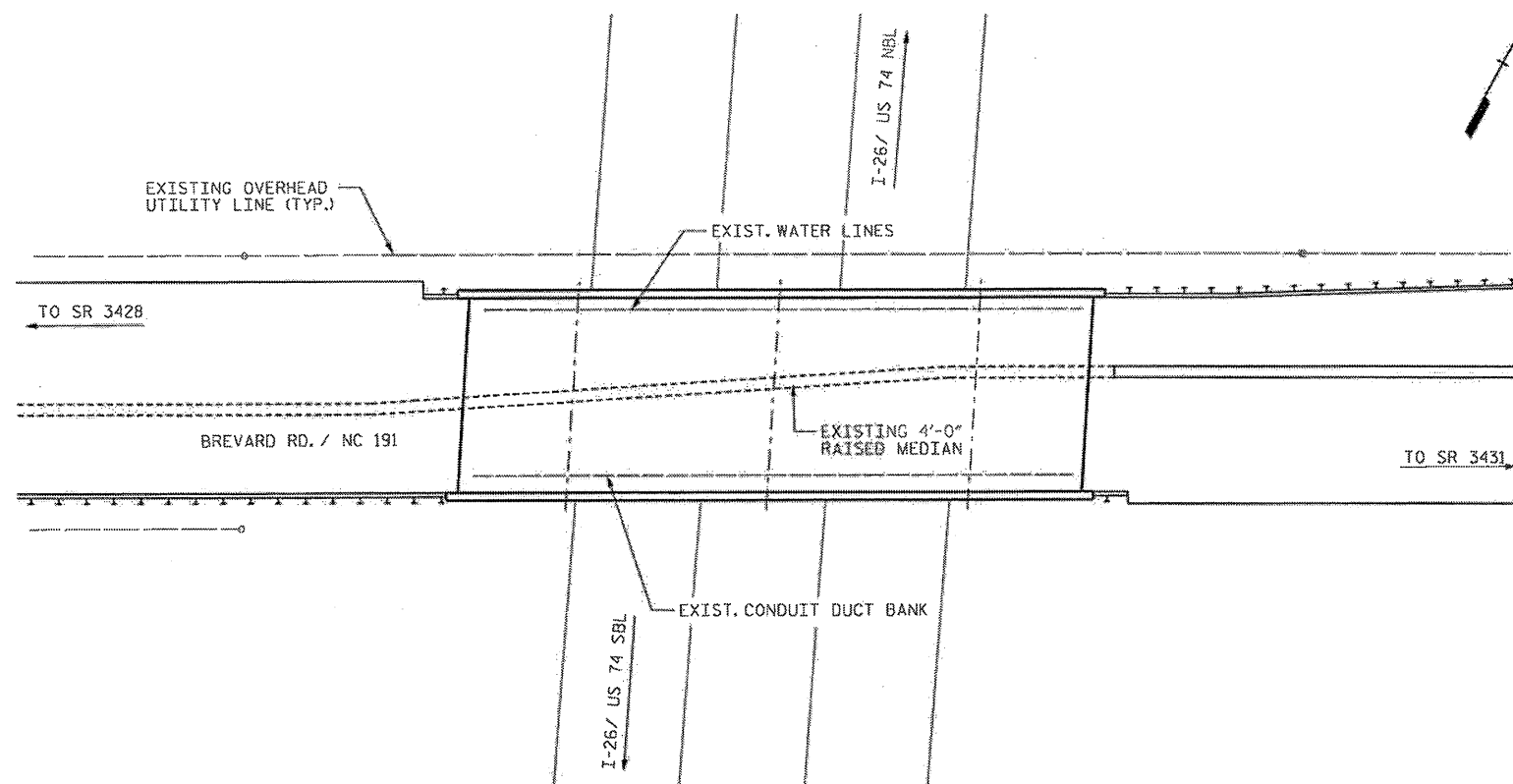


DISCLAIMER: THIS PROJECT HAS NOT BEEN SURVEYED. EXISTING TOPOGRAPHY WAS CREATED FROM AERIAL PHOTOGRAPHY NOT ACTUAL SURVEY.

NOTES:
1. ALL EROSION CONTROL MEASURES SHALL ADHERE TO NCDOT STANDARDS.

BUNCOMBE COUNTY
BRIDGE #387
SR 1727 OVER I-26

REVISIONS



BRIDGE 171 ON NC 191

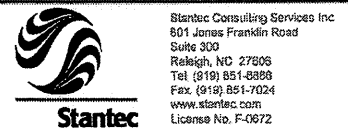
LOCATION: BRIDGE 100171, SR 191 OVER I-26
0.08 MILES NORTH OF JUNCTION WITH SR 3428

TOTAL BILL OF MATERIAL

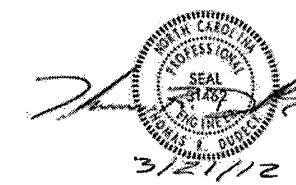
SHOULDER RECONSTRUCTION	INCIDENTAL MILLING	CONCRETE SURFACE COURSE, TYPE S9.5C	5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)	REMOVE AND RESET EXISTING GUARDRAIL	SCARIFYING BRIDGE DECK	CLASS I * SURFACE PREPARATION	CLASS II * SURFACE PREPARATION	CLASS III * SURFACE PREPARATION	HYDRO-DEMOLITION OF BRIDGE DECK	CLASS AA * CONCRETE	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	FOAM JOINT SEALS	GROOVING BRIDGE FLOORS
SMI	SQ.YDS.	TONS	SQ.YDS.	L.F.	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	CU.YDS.	CU.YDS.	SQ.YDS.	LUMP SUM	SQ.FT.
0.038	795	60	141	124	1,635	0	33	0	1,635	0	79	1,635	LUMP SUM	13,546

*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. NO SEPARATE MEASUREMENT OR PAYMENT FOR THESE ITEMS WILL BE MADE. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR HYDRO-DEMOLITION.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____



DRAWN BY: B. C. MACYOWSKY DATE: 1/20/12
CHECKED BY: J. T. KELVINGTON DATE: 1/20/12



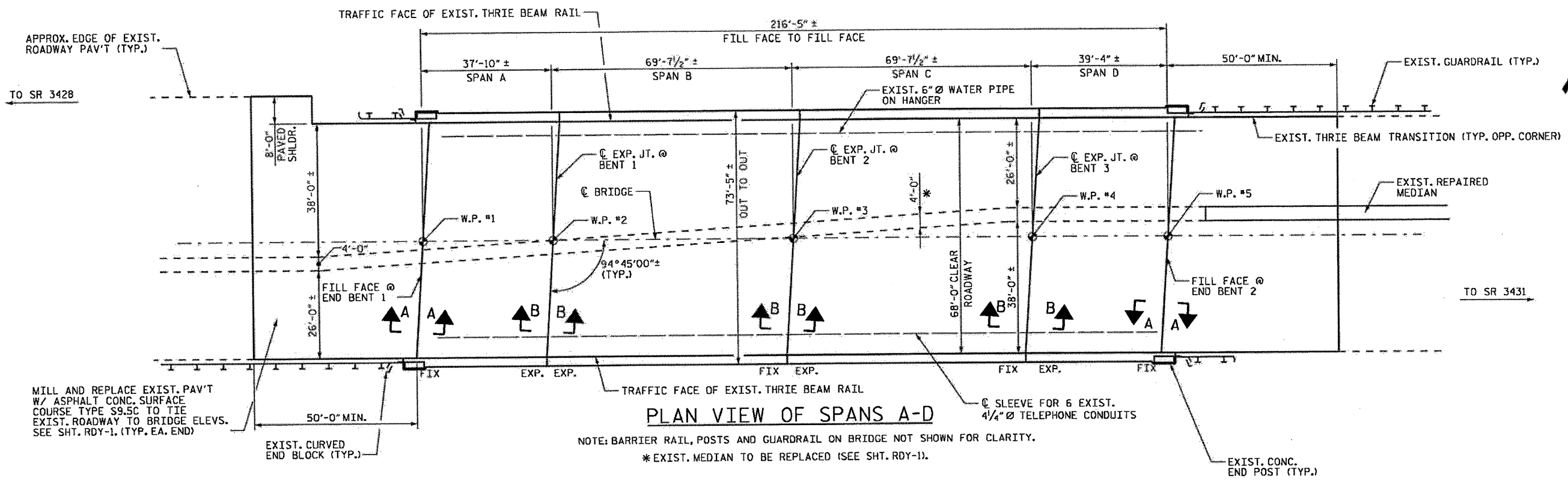
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LOCATION SKETCH AND TOTAL BILL OF MATERIAL

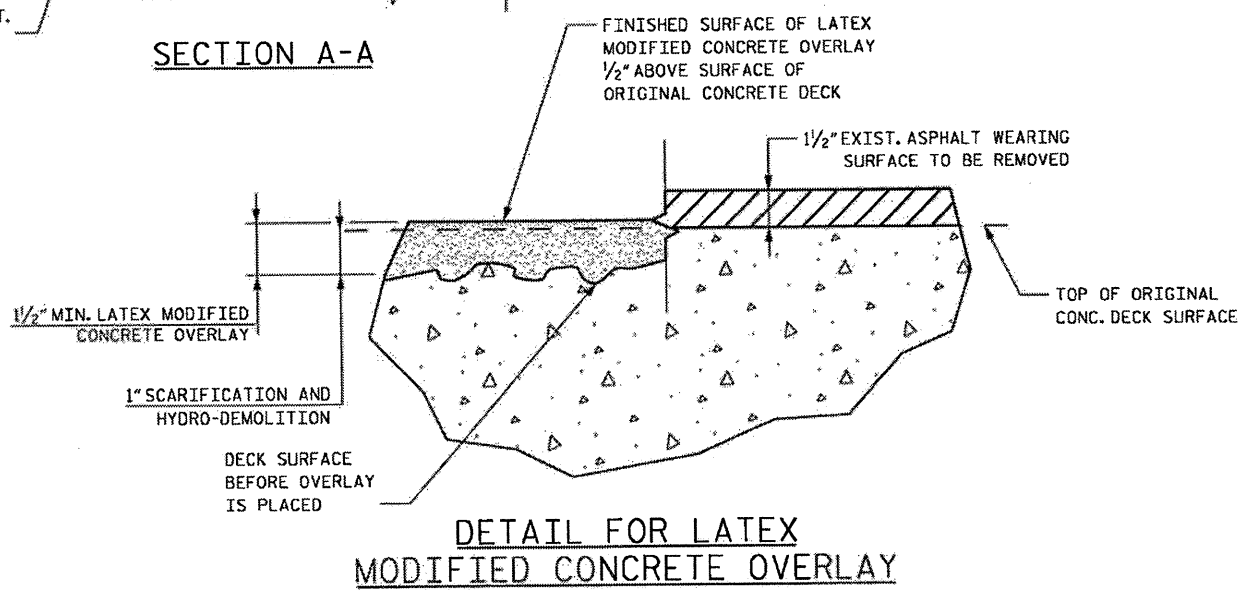
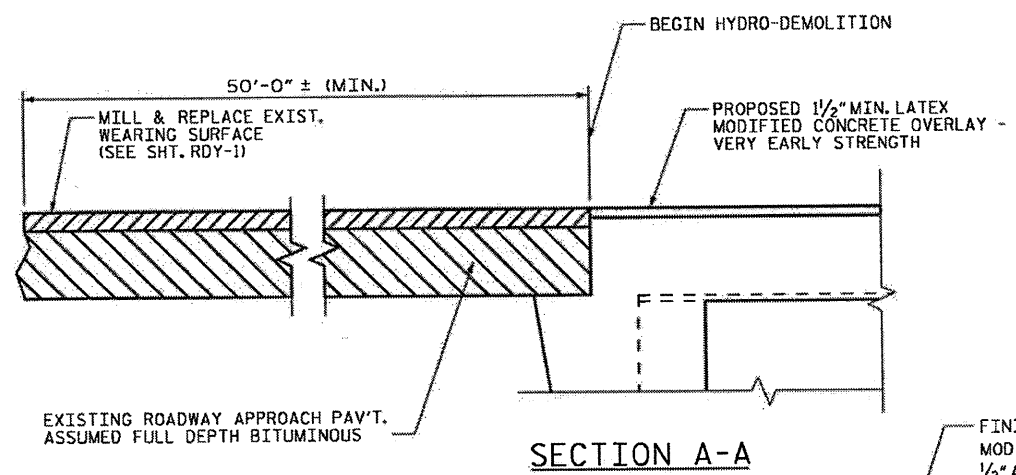
DECK REHAB. FOR BRIDGE NO. 171

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			5-1
2			4			58

3/20/2012 3:58:32 PM fcdusack
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MILL AND REPLACE EXIST. PAV'T W/ ASPHALT CONC. SURFACE COURSE TYPE S9.5C TO TIE EXIST. ROADWAY TO BRIDGE ELEVS. SEE SHT. RDY-1. (TYP. EA. END)



NOTES:

EXISTING DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS WITH LATEX MODIFIED CONCRETE. SEE SPECIAL PROVISIONS.

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

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

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS III SURFACE PREPARATION ARE APPROXIMATE. THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK. SEE DETAIL, SHT. NO. S-4.

LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH.

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

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

SECTION B-B IS TYPICAL AT BENTS 1 THRU 3.

FOR SECTION B-B, SEE SHT. NO. S-8.

FOR MEDIAN JOINT DETAILS, SEE SHT. NO. S-9.

PROJECT NO. WBS 17BP.13.P.2

BUNCOMBE COUNTY

STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF BRIDGE

DECK REHAB. FOR BRIDGE NO. 171

Joseph T. Kelvington

SEAL 13406

REGISTERED PROFESSIONAL ENGINEER

JOSEPH T. KELVINGTON

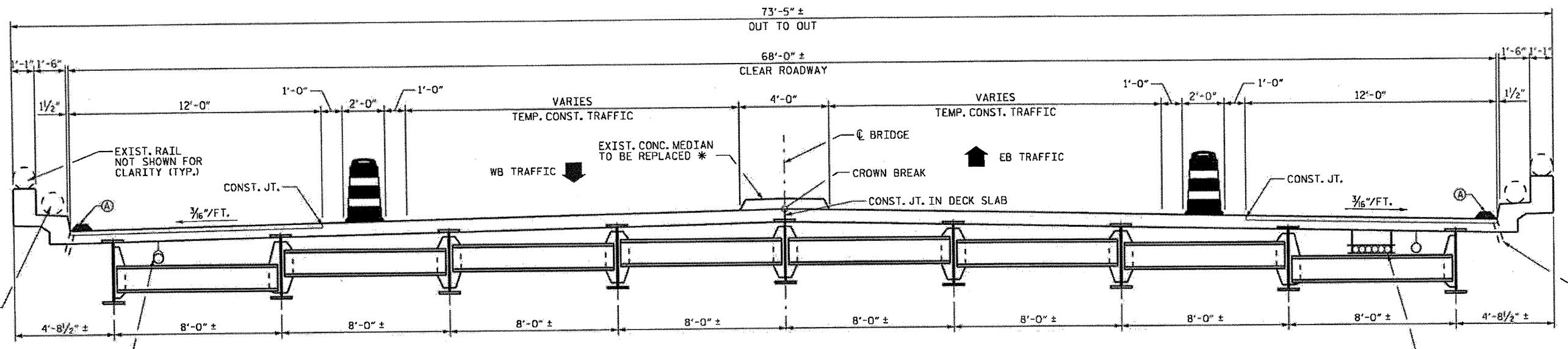
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-2
2			4			TOTAL SHEETS 58



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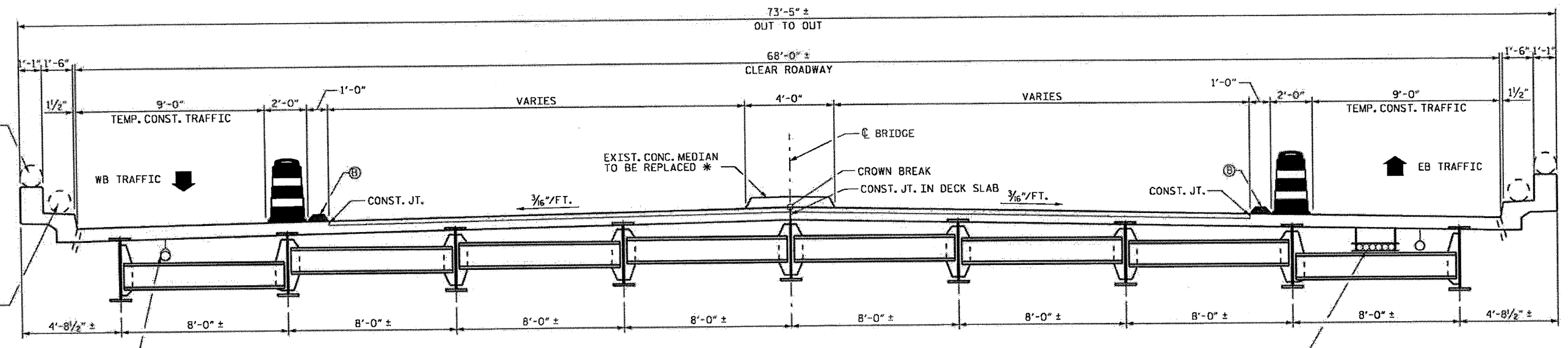
DRAWN BY : B C MACYOWSKY DATE : 1/20/12
 CHECKED BY : J T KELVINGTON DATE : 1/20/12

3/12/2012 12:37:06 PM Jgelie
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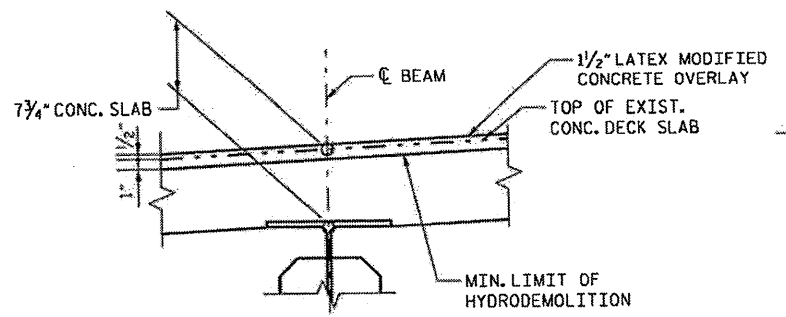
TYPICAL SECTION

SPAN A - D
 * LOCATION VARIES. SEE SHT. RDY-1 FOR DETAILS.

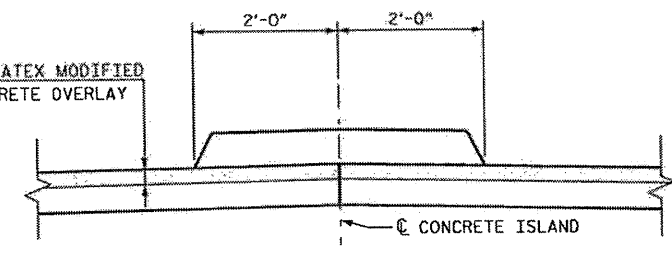


TYPICAL SECTION

SPAN A - D
 * LOCATION VARIES. SEE SHT. RDY-1 FOR DETAILS.



EXIST. SLAB DETAIL



CONC. ISLAND DETAIL

SEE ROADWAY STANDARD 852.01

NOTES:
 WATER & CONCRETE SLURRY FROM HYDRO-DEMOLITION SHALL NOT BE ALLOWED TO DRAIN ACROSS TRAVEL LANES. CONTRACTOR SHALL PROVIDE A METHOD TO CONTROL THE WATER.
 FOR TRAFFIC CONTROL AND CONSTRUCTION PHASING, SEE TRANSPORTATION MANAGEMENT PLANS.
 (A) DAM @ EXP. JOINTS AS REQUIRED TO SEAL JOINTS.
 (B) DAM SHALL BE CONTINUOUS ALONG EDGE OF WORK ZONE TO CAPTURE CONCRETE SLURRY.
 ALL DIMENSIONS SHOWN ARE APPROXIMATE.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

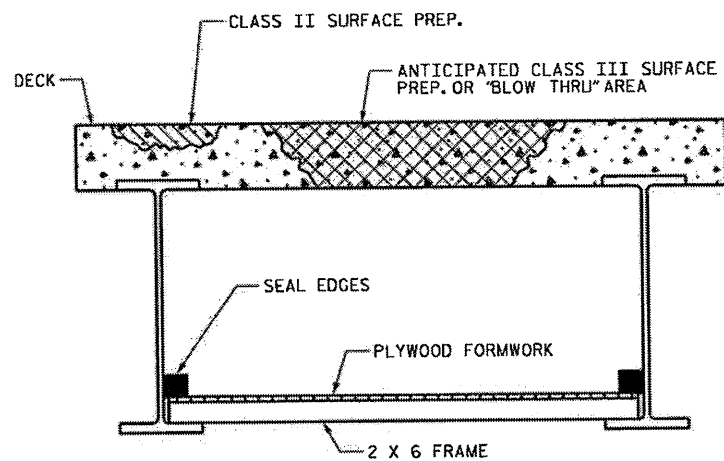
DECK REHAB. FOR BRIDGE NO. 171

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

Stantec Consulting Services Inc.
 801 Jones Franklin Road
 Suite 300
 Raleigh, NC 27606
 Tel: (919) 651-8866
 Fax: (919) 651-7024
 www.stantec.com
 License No. F-0672

DRAWN BY: B.C. MACYOWSKY DATE: 1/20/12
 CHECKED BY: J.T. KELVINGTON DATE: 1/20/12

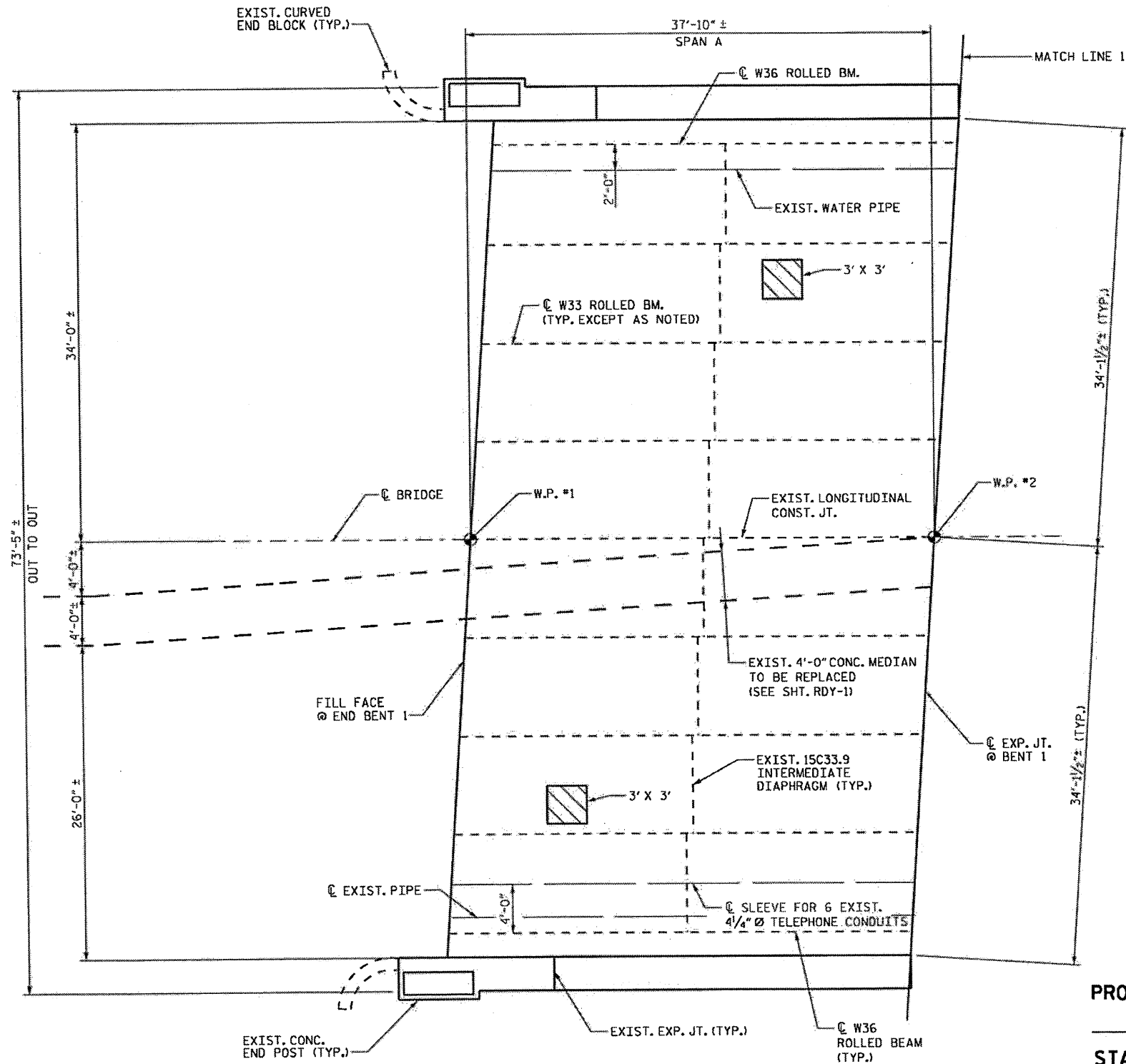
Joseph Kelvington
 1/20/12
 23406
 ENGINEER
 STATE OF NORTH CAROLINA



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

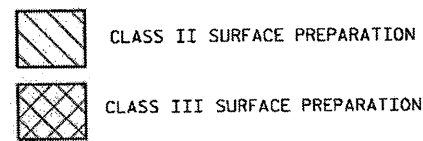
NOTES:

- CONTRACTOR SHALL FURNISH FORM WORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.
- A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.
- SUBMIT DETAILS OF PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.
- COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE PER SQ. YARD OF HYDRO-DEMOLITION.
- CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.
- CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.



PLAN OF SPAN A - DECK REPAIRS

NOTE: EXIST. CONC. BARRIER AND POSTS ARE NOT SHOWN FOR CLARITY.



L X W = LENGTH OF AREA PARALLEL TO C BRIDGE X WIDTH OF AREA PERPENDICULAR TO C BRIDGE.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK REPAIR DETAILS
 SPAN A

DECK REHAB. FOR BRIDGE NO. 171

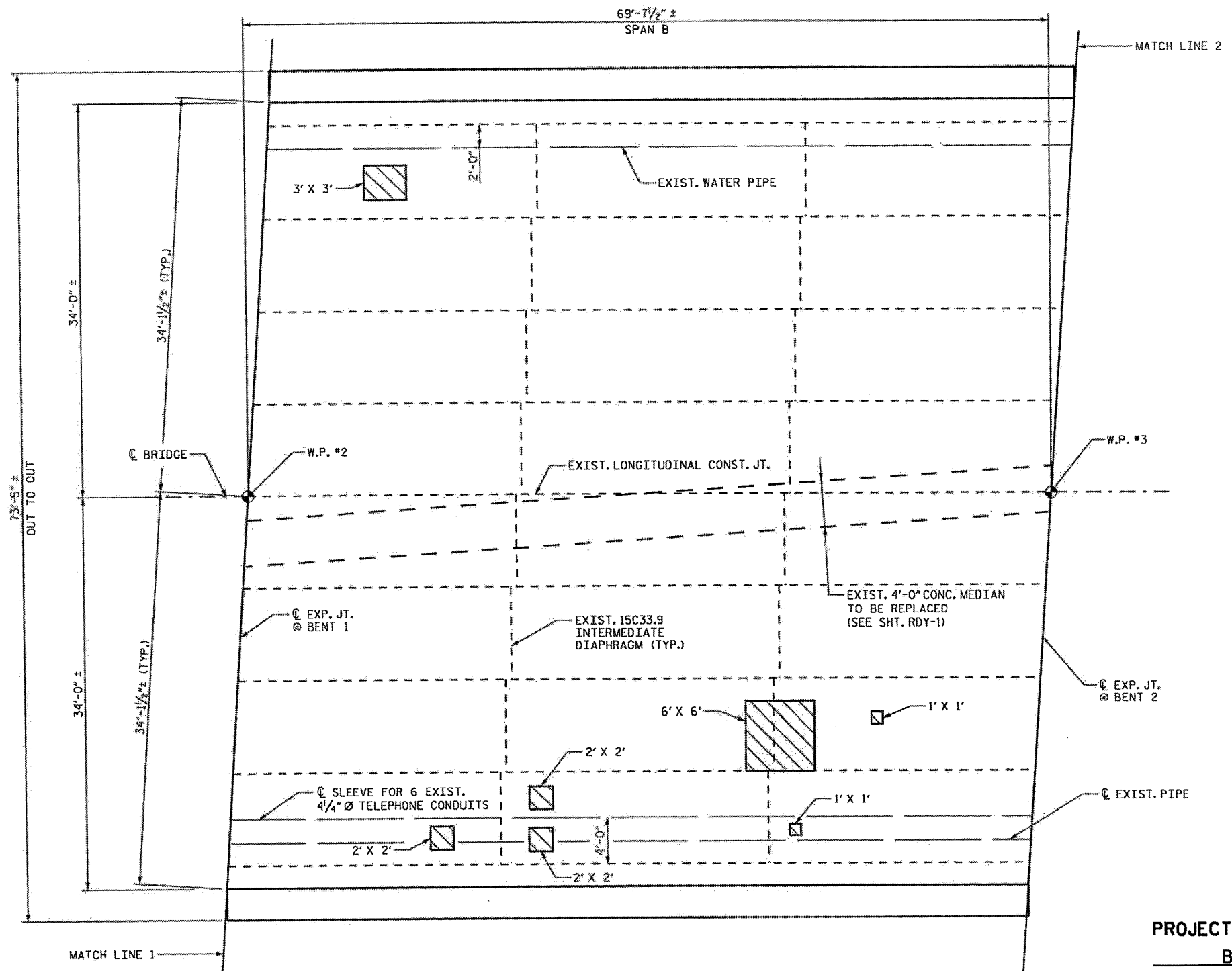
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			58

Joseph T. Kelvington
 SEAL 13406
 ENGINEER
 JOSEPH T. KELVINGTON

17BP.13.P.2_Buncombe Co. Bridge Repair/Plan.dgn 3/12/2012 12:31:08 PM jpele

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DRAWN BY : B.C. MACYOWSKY DATE : 1/20/12
 CHECKED BY : J.T. KELVINGTON DATE : 1/20/12



NOTES:

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

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

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

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

PLAN OF SPAN B - DECK REPAIRS

NOTE: EXIST. CONC. BARRIER AND POSTS ARE NOT SHOWN FOR CLARITY.

- CLASS II SURFACE PREPARATION
- CLASS III SURFACE PREPARATION

L X W = LENGTH OF AREA PARALLEL TO C BRIDGE X WIDTH OF AREA PERPENDICULAR TO C BRIDGE.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 DECK REPAIR DETAILS
 SPAN B
 DECK REHAB. FOR BRIDGE NO. 171

Joseph Kelvington
 J. KELVINGTON
 SEAL
 13406
 ENGINEER

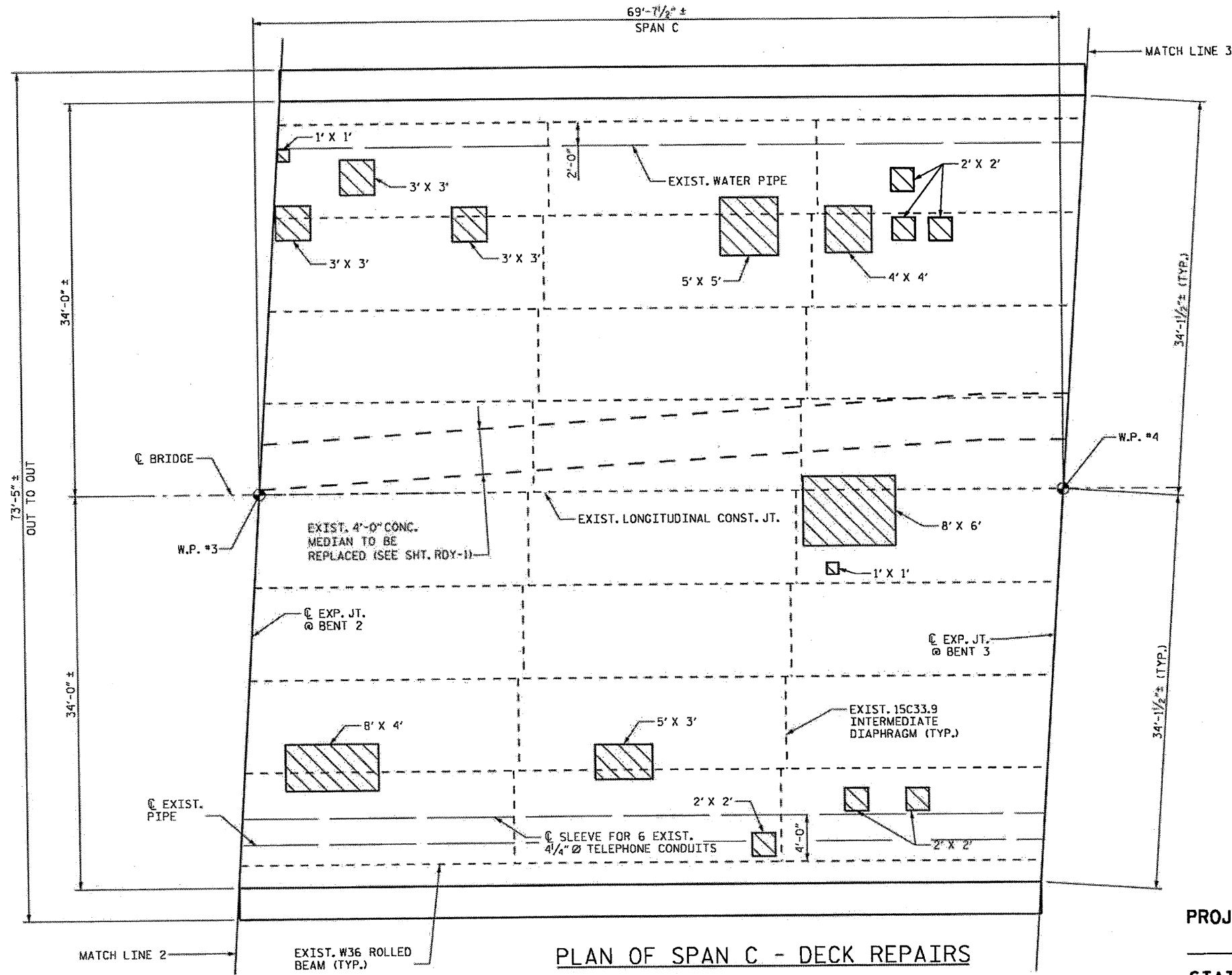
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-5
1			3			TOTAL SHEETS 58
2			4			

17BP.13.P.2_Buncombe_Co_Bridges_ITA_Drawing\BPI00071_RepairPlan2.dgn 3/12/2012 12:37:00 PM jgelle

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DRAWN BY : B. C. MACYOWSKY DATE : 1/20/12
 CHECKED BY : J. T. KELVINGTON DATE : 1/20/12

17BP.13.P.2, Buncombe Co., Bridge (11A) Drawing, BPI00071, RepointPlan3.dgn 3/12/2012 12:31:12 PM Joelle



NOTES:

CONTRACTOR SHALL FURNISH FORM WORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.
 A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.
 SUBMIT DETAILS OF PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.
 COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE PER SQ. YARD OF HYDRO-DEMOLITION.
 CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.
 CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

PLAN OF SPAN C - DECK REPAIRS

NOTE: EXIST. CONC. BARRIER AND POSTS ARE NOT SHOWN FOR CLARITY.

- CLASS II SURFACE PREPARATION
- CLASS III SURFACE PREPARATION

L X W = LENGTH OF AREA PARALLEL TO @ BRIDGE X WIDTH OF AREA PERPENDICULAR TO @ BRIDGE.

Joseph T. Kelvington
 3/12/12

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 DECK REPAIR DETAILS
 SPAN C
 DECK REHAB. FOR BRIDGE NO. 171

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
1			3			TOTAL SHEETS
2			4			58

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DRAWN BY: B. C. MACYOWSKY DATE: 1/20/12
 CHECKED BY: J. T. KELVINGTON DATE: 1/20/12

17BP.13.P.2 Buncombe Co. Bridge (N.Dr-ewings)BR10011-RepairPlan.dgn 3/2/2012 12:37:15 PM jgelle

NOTES:

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

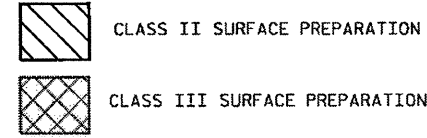
A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.

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

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.

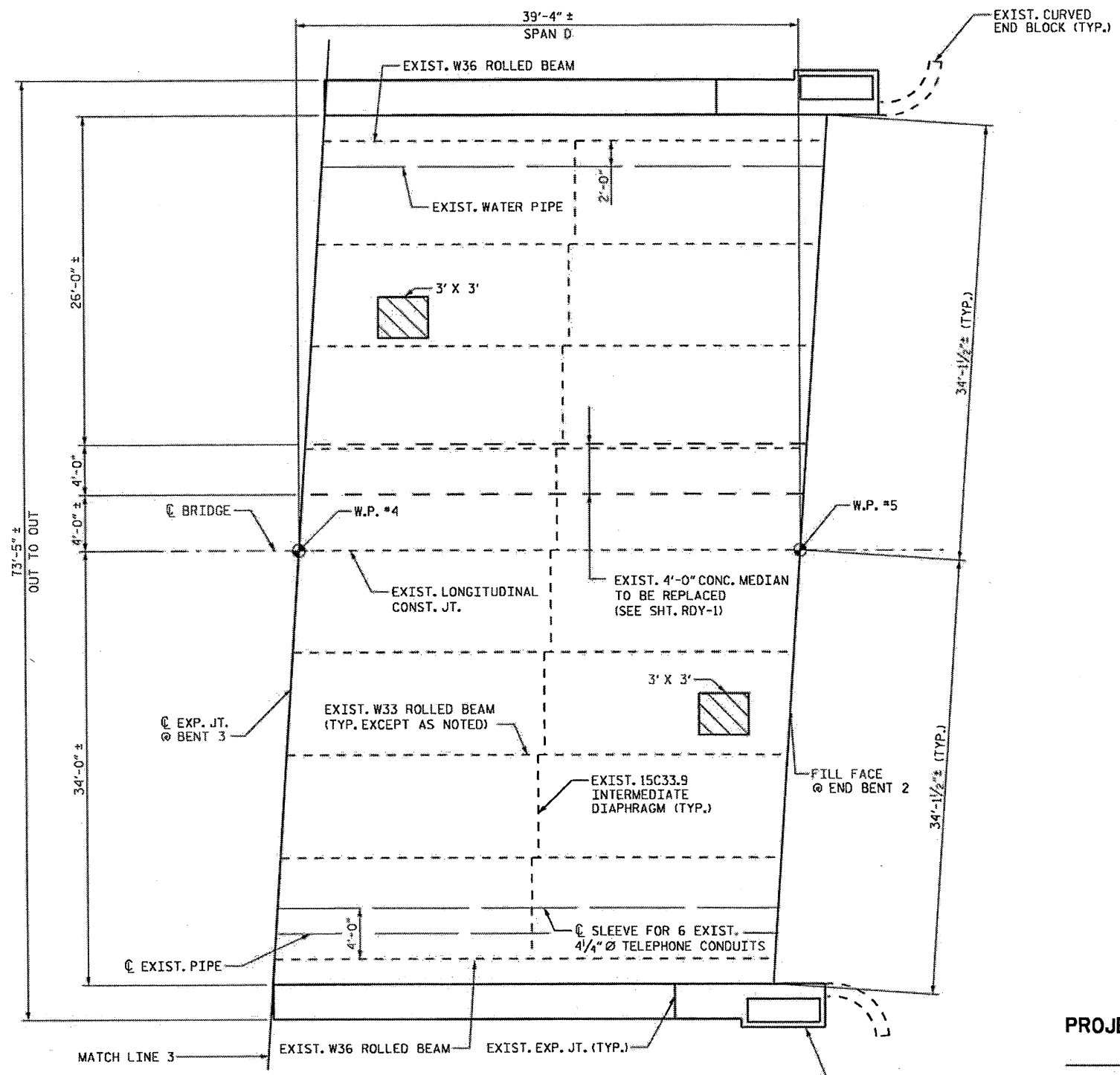
CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.



L X W = LENGTH OF AREA PARALLEL TO $\text{\textcircled{C}}$ BRIDGE X WIDTH OF AREA PERPENDICULAR TO $\text{\textcircled{C}}$ BRIDGE.

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CHECKED BY: J. T. KELVINGTON DATE: 1/20/12



PLAN OF SPAN D - DECK REPAIRS

NOTE: EXIST. CONC. BARRIER AND POSTS ARE NOT SHOWN FOR CLARITY.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

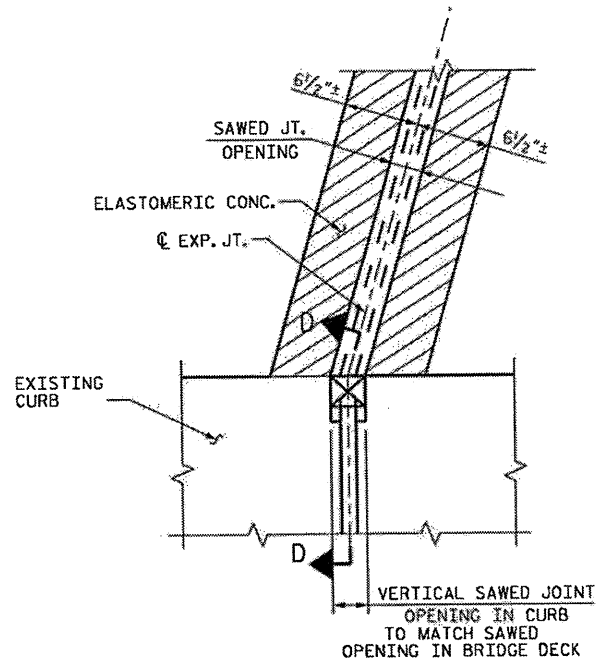
Joseph Kelvington
3/2/12

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

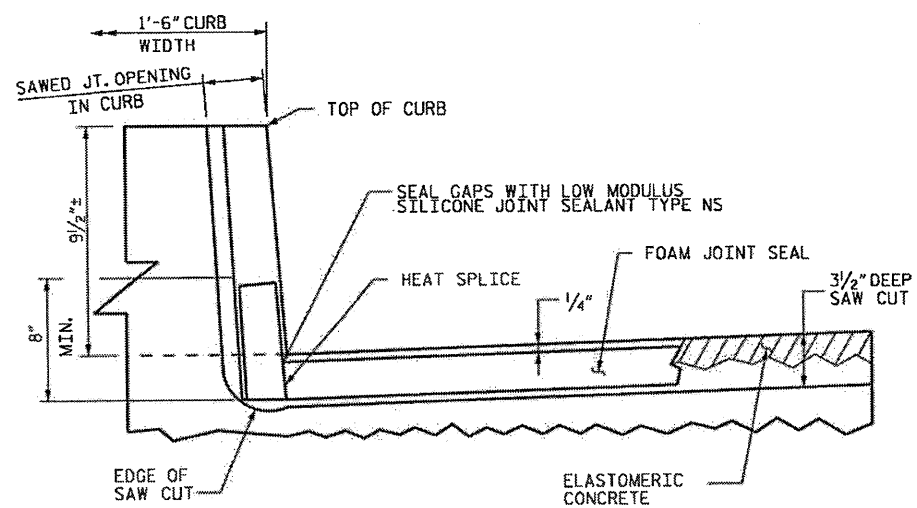
**DECK REPAIR DETAILS
SPAN D**

DECK REHAB. FOR BRIDGE NO. 171

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS
2			4			58



PARTIAL PLAN @ JOINT

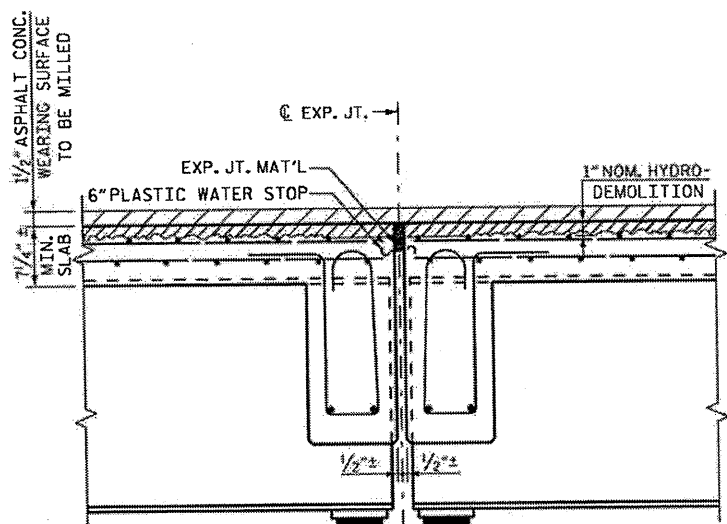


SECTION D-D

CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.

ELASTOMERIC CONCRETE	
LOCATION	QTY
BENT 1	14.2 C.F.
BENT 2	14.2 C.F.
BENT 3	14.2 C.F.

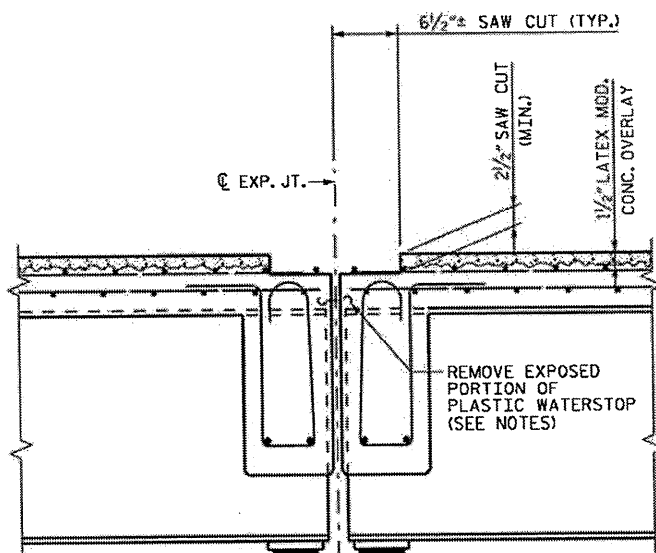
TOTAL ELASTOMERIC CONC. = 42.6 C.F.
TOTAL ELASTOMERIC CONC. = 1.6 C.Y.



SECTION B-B

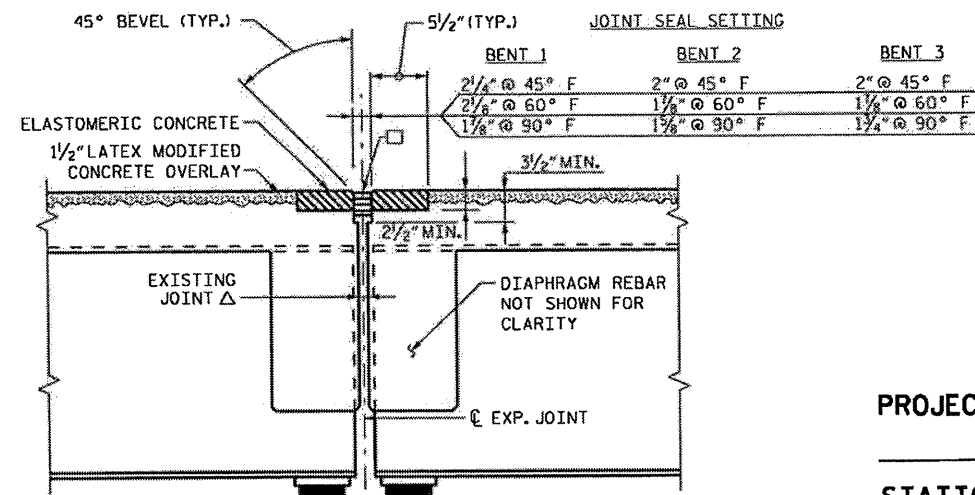
(CONCRETE REMOVAL AT EXISTING JOINT)

*FROM BEST AVAILABLE INFORMATION.



SECTION B-B

(LATEX MOD. CONC. OVERLAY AND CONCRETE REMOVAL FOR ELASTOMERIC CONCRETE)



SECTION B-B

(PLACEMENT OF ELASTOMERIC CONCRETE AND SAW CUT FOR FOAM JOINT SEAL)

NOTE: FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

THE INSTALLED FOAM JOINT SEALS SHALL BE WATERTIGHT.

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

□ USE 2.8125" x 2.50" UNCOMPRESSED SEAL @ BENTS 1, 2 & 3.

△ 1" EXIST. JOINT OPENING @ BENTS 1, 2 & 3.

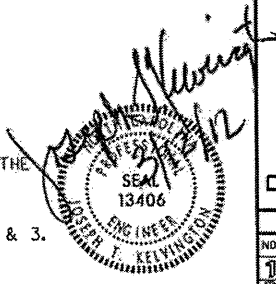
PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

EXPANSION JOINT DETAILS

DECK REHAB. FOR BRIDGE NO. 171

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-8 58
2			4			



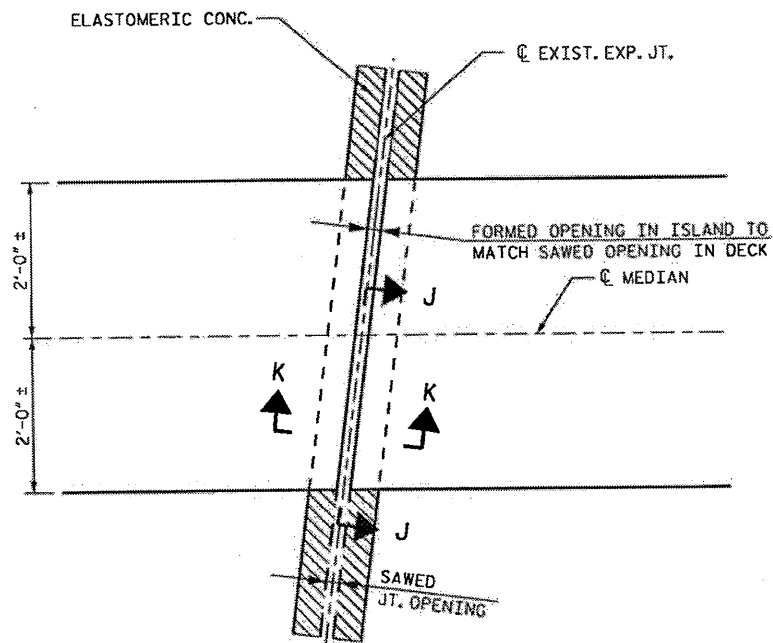
3/12/2012 12:31:11 PM jgelle
 C:\Users\jgelle\Documents\17BP.13.P.2\Buncombe Co. Bridge 171\Drawings\17BP.13.P.2\Det.dgn



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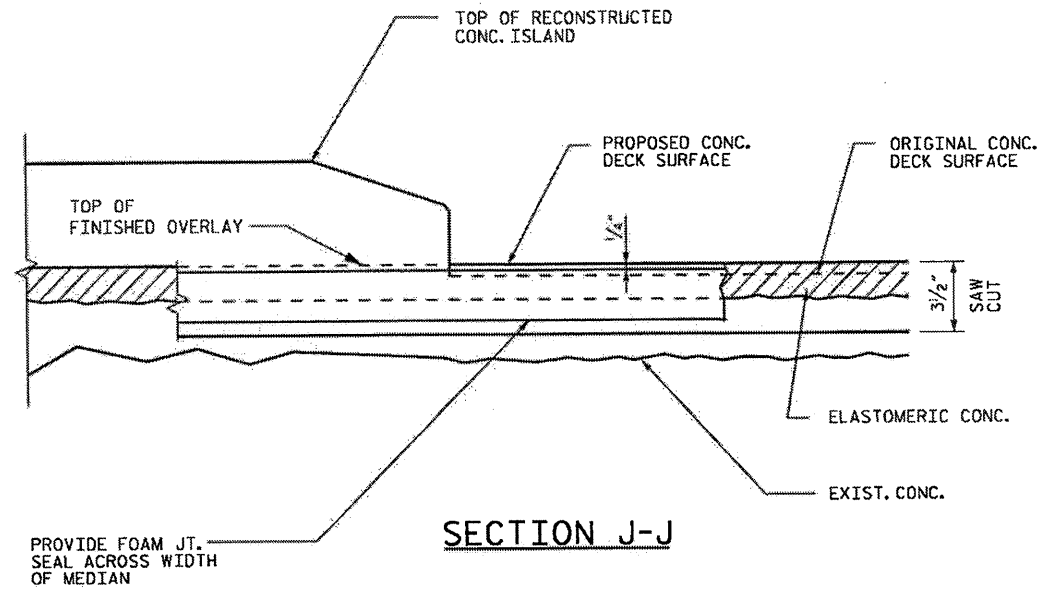
NOTE:
RETAIN ALL EXIST. REINF. STEEL.
CLEAN AND REPAIR AS REQ'D.
ALL EXPOSED EXISTING JOINT
SEAL MATERIALS ARE TO BE
COMPLETELY REMOVED.

DRAWN BY: B.C. MACYOWSKY DATE: 1/20/12
CHECKED BY: J.T. KELVINGTON DATE: 1/20/12

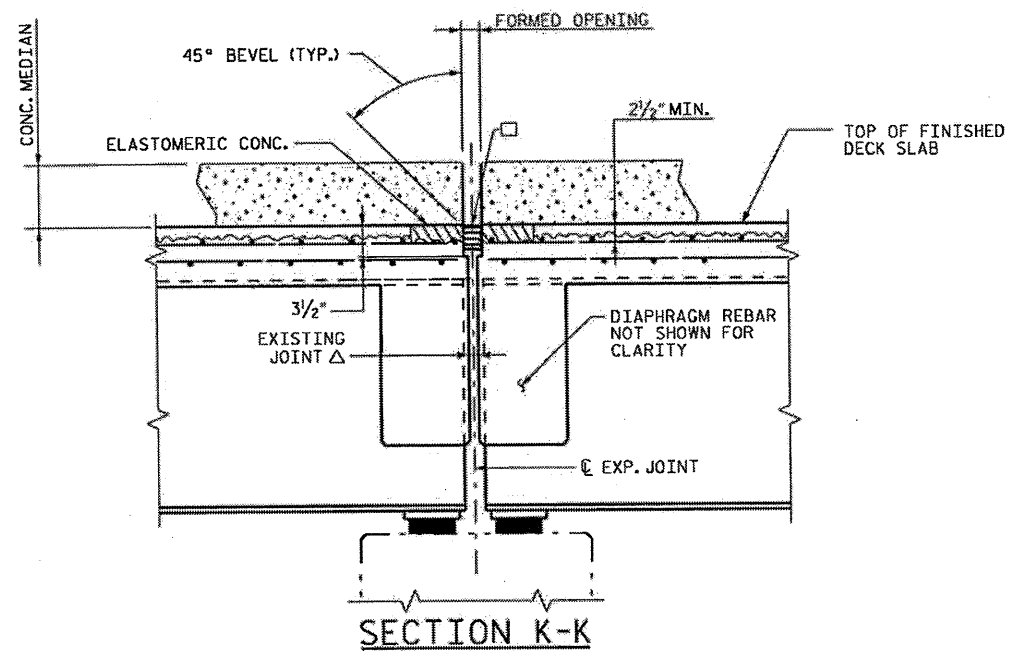


PARTIAL PLAN @ CONC. MEDIAN

NOTE: MEDIAN SHALL BE CONSTRUCTED AFTER JOINT SEALS ARE INSTALLED.



SECTION J-J



SECTION K-K

- USE 2.8125" X 2.5" UNCOMPRESSED FOAM JT. SEAL MATERIAL FOR BENT 1, 2 & 3.
- △ EXISTING 1" FORMED OPENING

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**MEDIAN
 JOINT DETAILS**
 DECK REHAB. FOR BRIDGE NO. 171

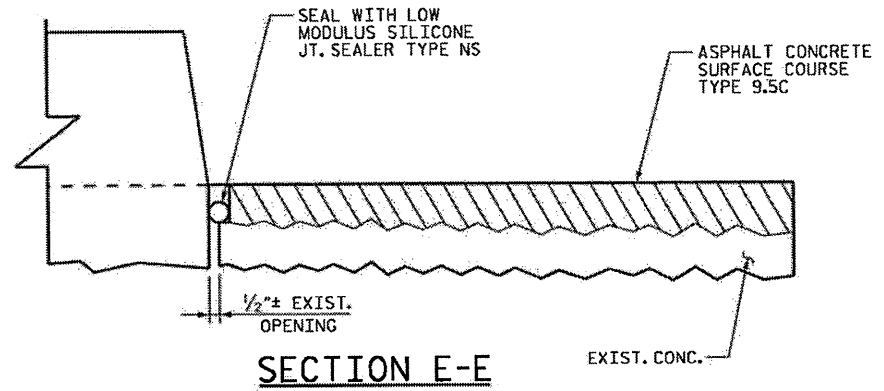
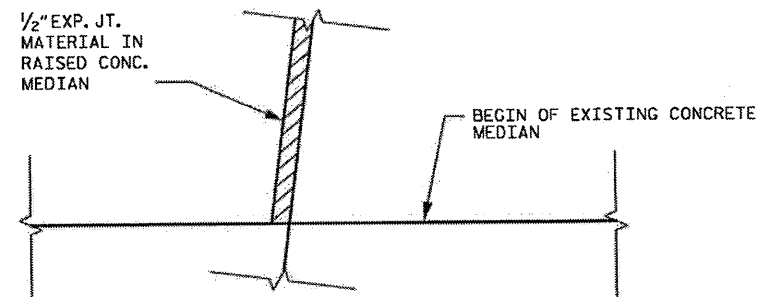
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-9
1			3			TOTAL SHEETS 58
2			4			

Joseph J. Kelvington
 SEAL 13406
 ENGINEER
 JOSEPH T. KELVINGTON, INC.

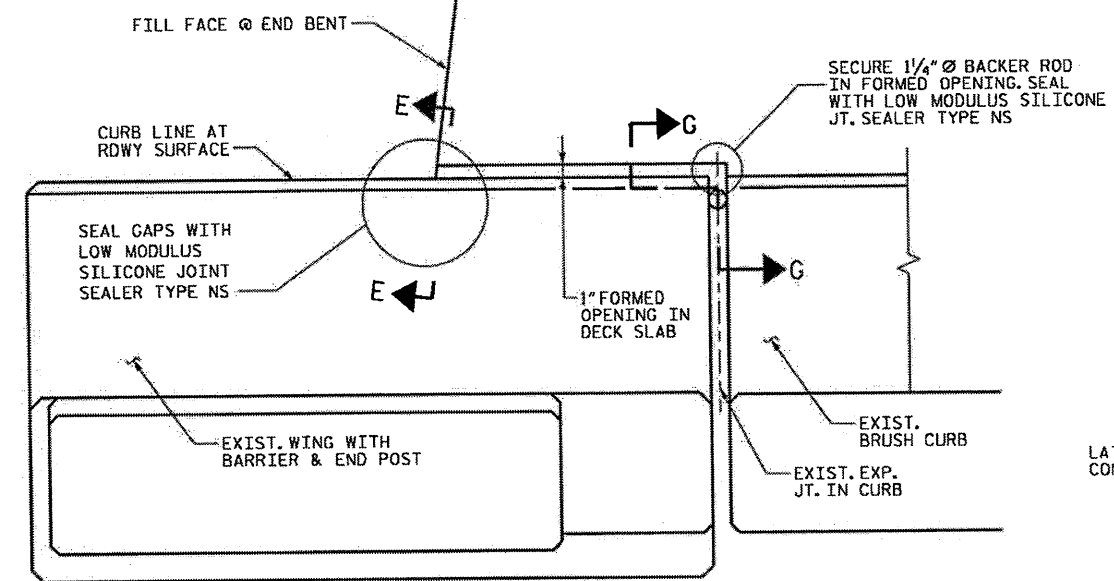
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 CHECKED BY: J. T. KELVINGTON DATE: 1/20/12

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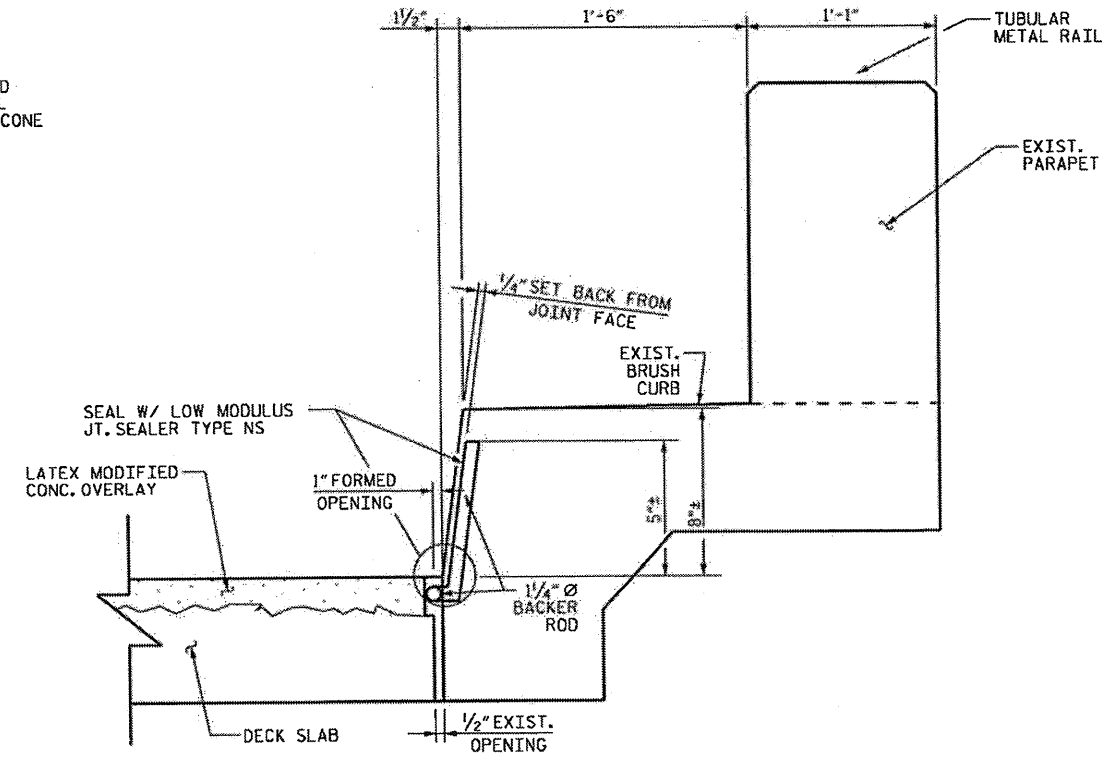


NOTES:
 1/4" Ø BACKER ROD SHALL BE CLOSED CELL EXPANDED POLYETHYLENE FOAM TYPE L. NO SEPARATE PAYMENT FOR LABOR, MATERIALS, AND EQUIPMENT NEEDED TO CONSTRUCT CONCRETE JOINT SEALS SHALL BE MADE. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE SEVERAL PAY ITEMS.



PARTIAL PLAN @ END BENT #1
 (END BENT #2 SIMILAR)

NOTE: METAL RAIL, END POSTS AND BARRIER PARAPET WALL DETAILS NOT SHOWN FOR CLARITY.



SECTION G-G

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
END BENT JOINT SEAL DETAILS
 DECK REHAB. FOR BRIDGE NO. 171

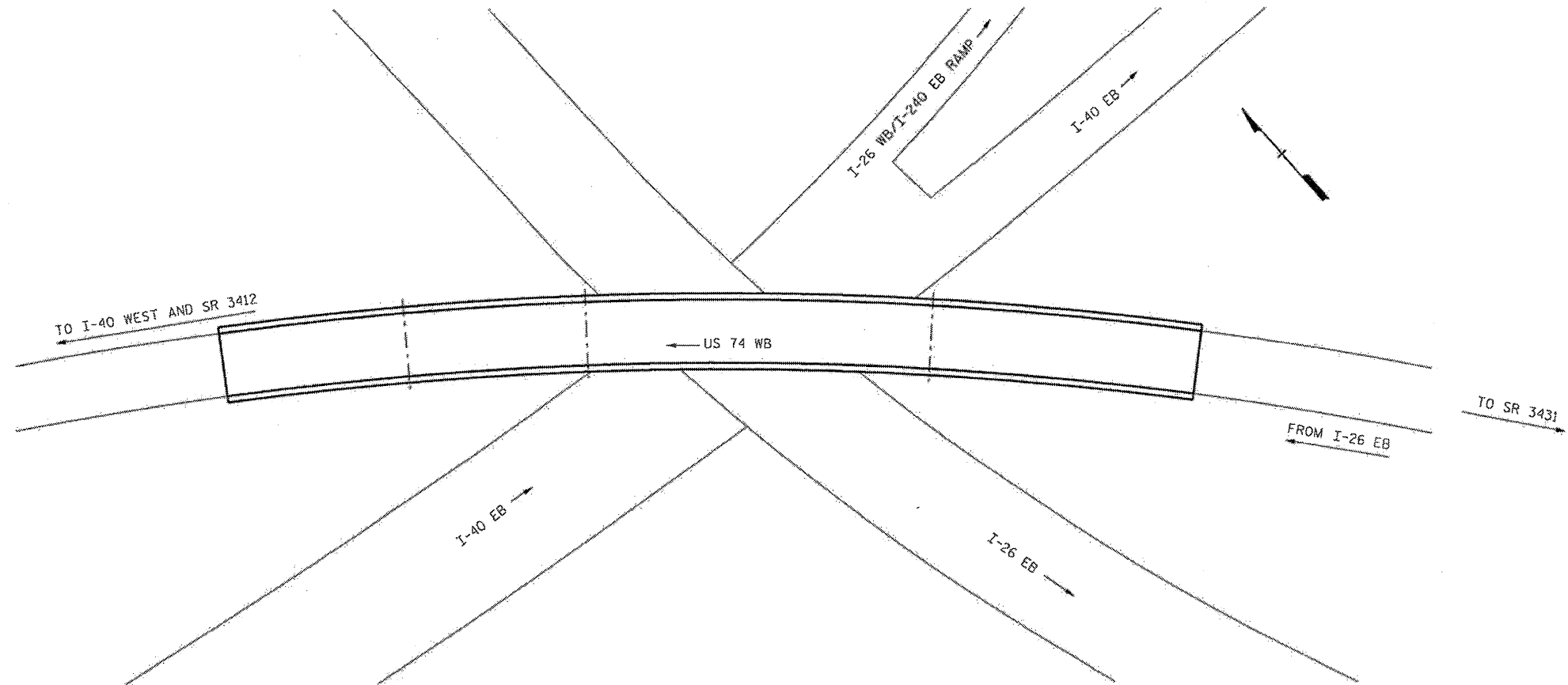
Joseph J. Kelvington
 3/12/12
 13406
 ENGINEER
 JOSEPH J. KELVINGTON

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-10
1			3			TOTAL SHEETS 58
2			4			

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 CHECKED BY : J. T. KELVINGTON DATE : 1/20/12

WBS 17BP.13.P.2_Buncombe_Co.Bridge_171N.dwg 3/12/12 12:31:12 PM Jgelle



BRIDGE 253 ON US 74 (WB)

LOCATION: BRIDGE 100253, US 74 ACROSS I-26 EBL RAMP AND I-40 EBL AT I-26, I-40 INTERCHANGE

TOTAL BILL OF MATERIAL								
SHOULDER RECONSTRUCTION	INCIDENTAL MILLING	CONCRETE SURFACE COURSE, TYPE S9.5C	REMOVE AND RESET EXISTING GUARDRAIL	SCARIFYING BRIDGE DECK	CLASS I * SURFACE PREPARATION	CLASS II * SURFACE PREPARATION	CLASS III * SURFACE PREPARATION	HYDRO-DEMOLITION OF BRIDGE DECK
SMI	SO.YDS.	TONS	L.F.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.
0.076	670	46	440	1,341	0	18	0	1,341

TOTAL BILL OF MATERIAL											
CLASS AA * CONCRETE	ELASTOMERIC BEARINGS	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	FOAM JOINT SEALS	GROOVING BRIDGE FLOORS	CONCRETE REPAIRS	SHOTCRETE REPAIRS	SPAN JACKING BUNCOMBE CO. BRIDGE #253	CLEANING AND PAINTING BUNCOMBE CO. BRIDGE #253	POLLUTION CONTROL	TEMP. STEEL COVER PLATE FOR DIAPH. REPAIR
CU.YDS.	LUMP SUM	CU.YDS.	SO.YDS.	LUMP SUM	SO.FT.	CU.FT.	CU.FT.	EA.	LUMP SUM	LUMP SUM	LUMP SUM
0	LUMP SUM	65	1,341	LUMP SUM	10,571	155	75	9	LUMP SUM	LUMP SUM	LUMP SUM

* 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. NO SEPARATE MEASUREMENT OR PAYMENT FOR THESE ITEMS WILL BE MADE. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR HYDRO-DEMOLITION.

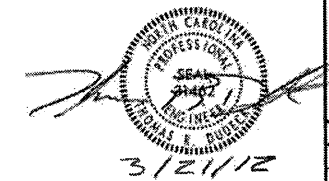
PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

LOCATION SKETCH AND TOTAL BILL OF MATERIAL

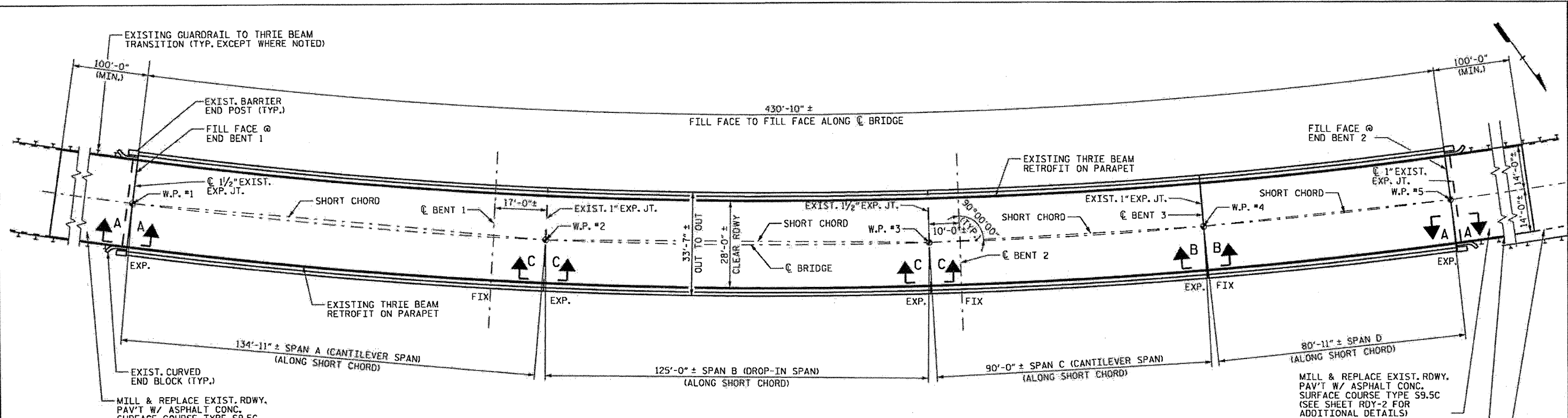
DECK REHAB. FOR BRIDGE NO. 253

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-11
1			3			TOTAL SHEETS 58
2			4			



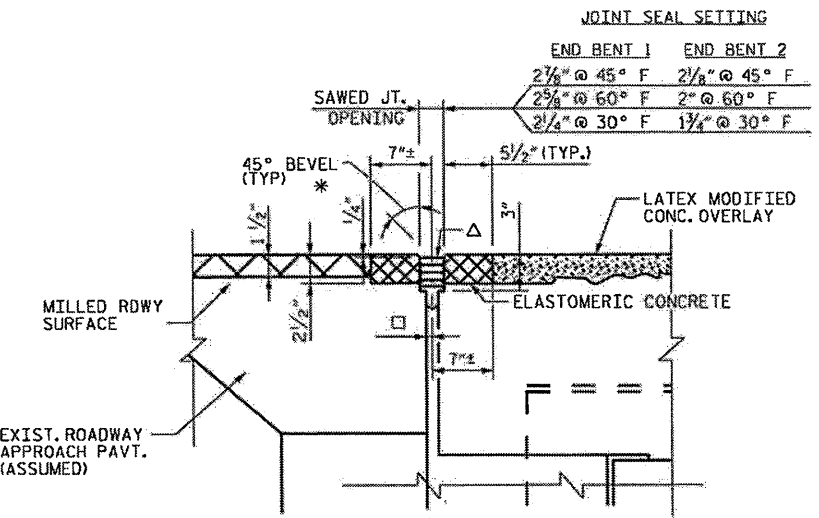
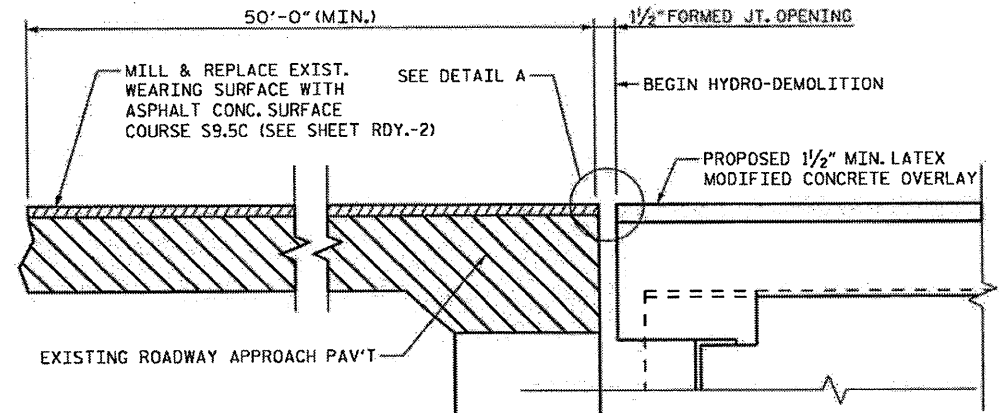
DRAWN BY: B. C. MACYOWSKY DATE: 01-20-12
 CHECKED BY: J. T. KELVINGTON DATE: 01-20-12

3/20/2012 4:58:11 PM tefedack
 WBS 17BP.13.P.2 Buncombe Co. Bridge 253 Drawing BPI00253.I.S..BIM.dgn



PLAN VIEW OF SPANS A-D

NOTE: ALL DIMENSIONS ARE RADIAL OR ON ARC UNLESS NOTED OTHERWISE.
BARRIER RAIL AND POSTS NOT SHOWN FOR CLARITY.



NOTES:

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

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

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS III SURFACE PREPARATION ARE APPROXIMATE. THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK. SEE DETAIL, SHT. NO. S-14.

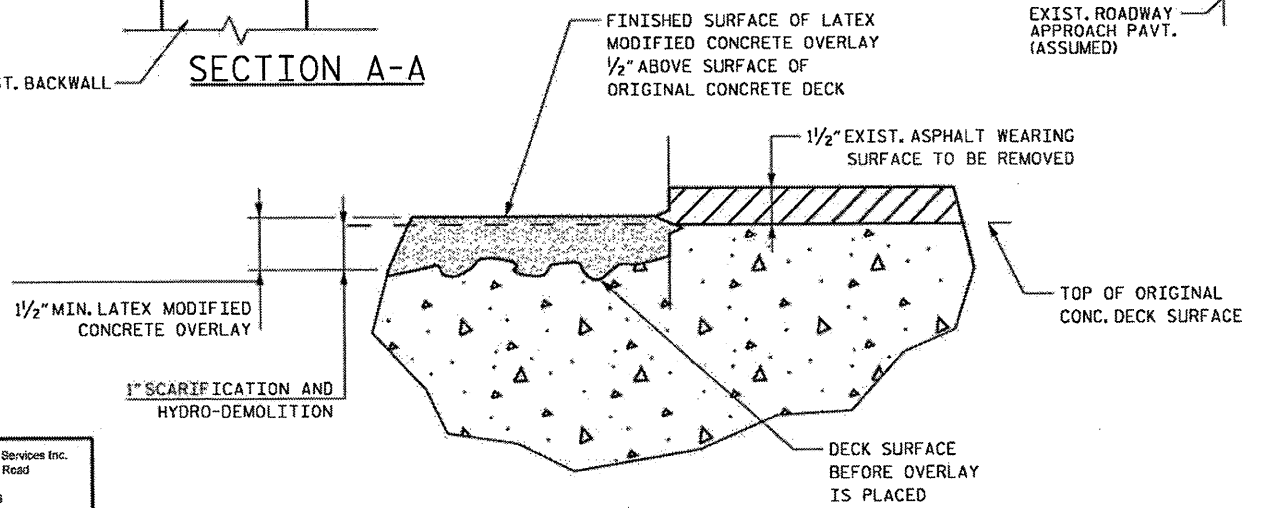
LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH.

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

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR SECTION B-B, SEE SHEET NO. S-18.

FOR SECTION C-C, SEE SHEET NO. S-19.



- △ USE 2.8125" X 2.50" UNCOMPRESSED SEAL MATERIAL @ END BENT 2
- USE 3.4375" X 2.50" UNCOMPRESSED SEAL MATERIAL @ END BENT 1
- FORMED JT. OPENING: 1/2" @ END BENT 1
1" @ END BENT 2
- * NOMINAL DIMENSION. REMOVE ALL LOOSE, DETERIORATED MATERIAL, INCLUDING EXISTING SEAL DEVICES AND HARDWARE TO SOUND CONCRETE. PRESERVE AND RETAIN ALL EXPOSED REINFORCING STEEL. ADJUST SAW CUT DEPTH AS REQUIRED TO PREVENT CUTS INTO EXISTING REINFORCING STEEL.
- SEE SHT. S-20 FOR ADDITIONAL JT. SEAL DETAILS @ END BENTS.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF BRIDGE

DECK REHAB. FOR BRIDGE NO. 253

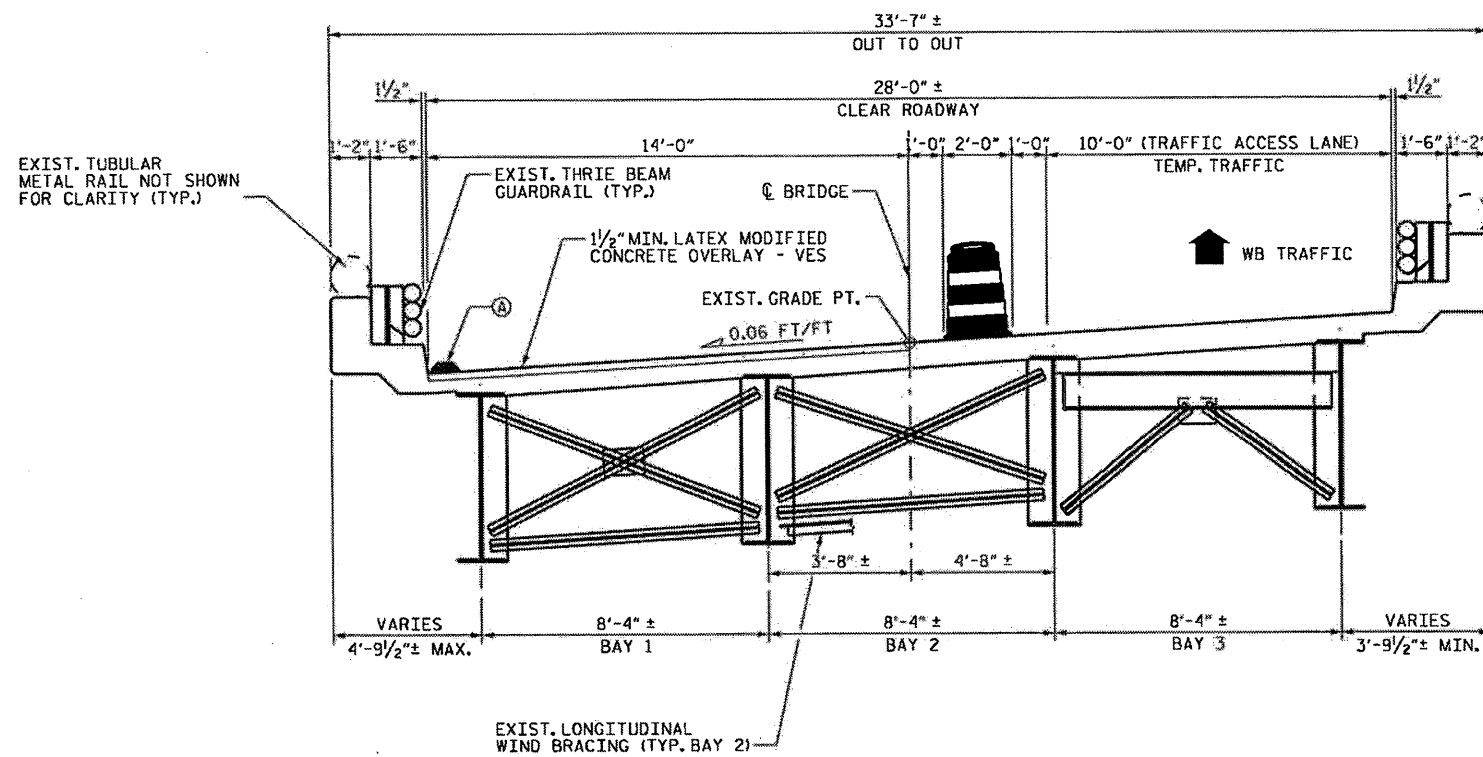
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-12
1			3			TOTAL SHEETS
2			4			58

Joseph J. Kelvington
Professional Engineer
No. 13406
Seal

17BP.13.P.2 Buncombe Co. Bridge 253 Drawing 17BP.13.P.2 Deck Rehab. 01/20/12 12:31:25 PM 19916

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DRAWN BY: B. C. MACYOWSKY DATE: 01-20-12
CHECKED BY: J. T. KELVINGTON DATE: 01-20-12



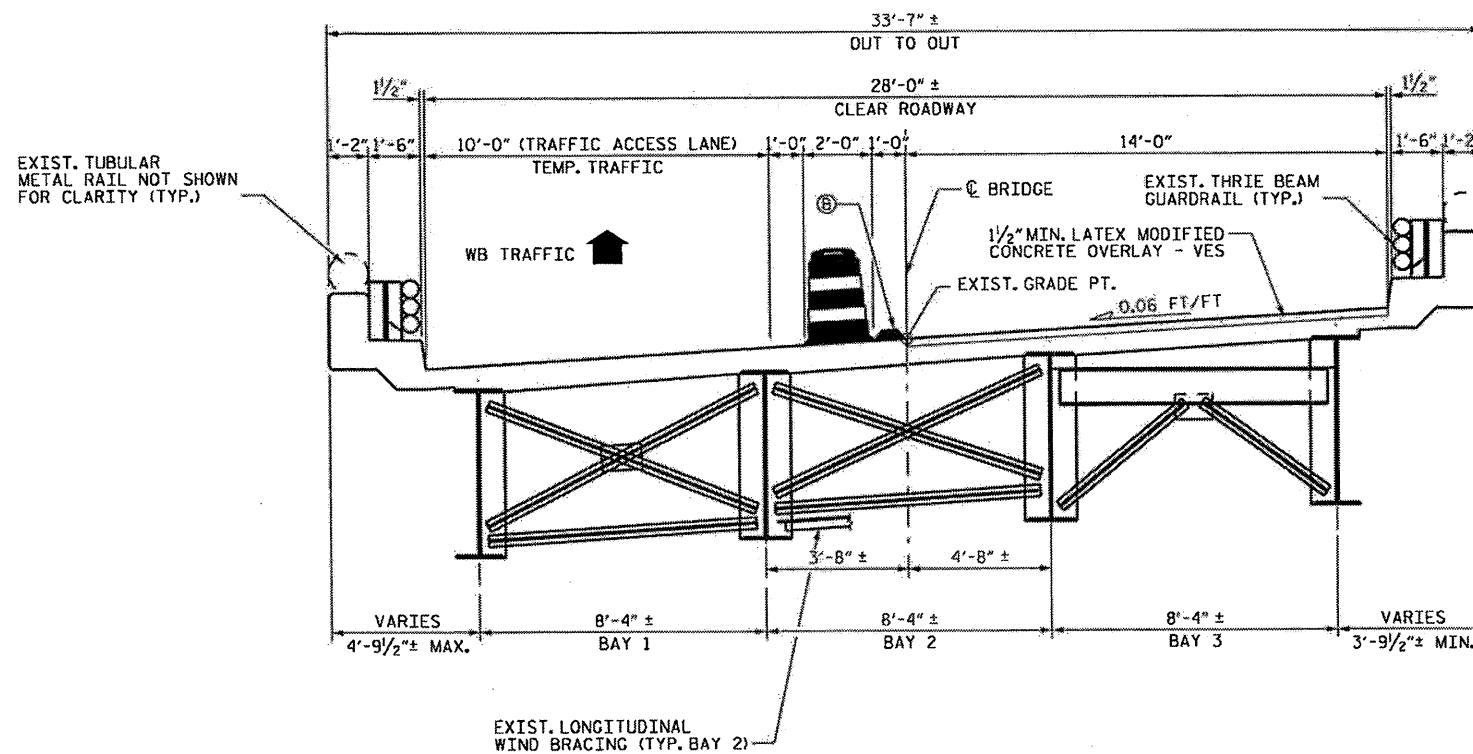
TYPICAL PART SECTION

SHOWING INTERMEDIATE DIAPHRAGMS

TYPICAL PART SECTION

SHOWING BENT DIAPHRAGMS

NOTE: HORIZONTAL DIMENSIONS ARE RADIAL.

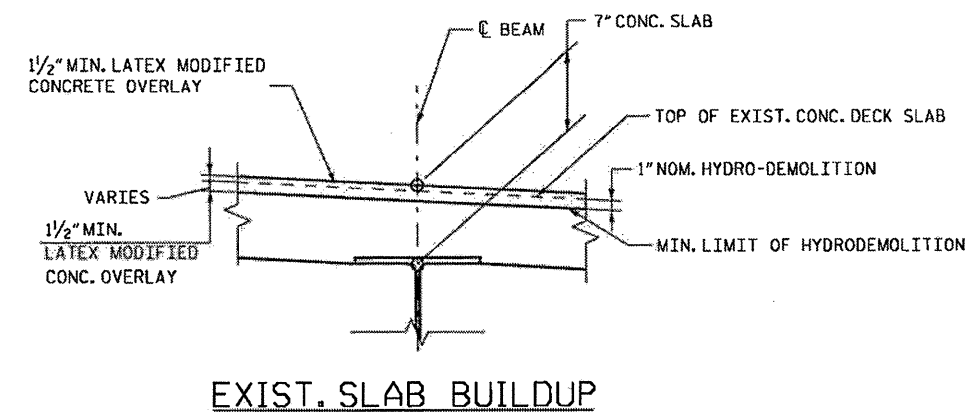


TYPICAL PART SECTION

SHOWING INTERMEDIATE DIAPHRAGMS

TYPICAL PART SECTION

SHOWING BENT DIAPHRAGMS



NOTES:

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

FOR TRAFFIC CONTROL AND CONSTRUCTION PHASING, SEE TRANSPORTATION MANAGEMENT PLANS.

Ⓐ DAM AS REQUIRED TO CAPTURE CONCRETE SLURRY @ EXPANSION JOINTS.

Ⓑ DAM CONTINUOUSLY THROUGH WORK ZONE TO CAPTURE RUNOFF.

VES - DENOTES VERY EARLY STRENGTH.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

DECK REHAB. FOR BRIDGE NO. 253

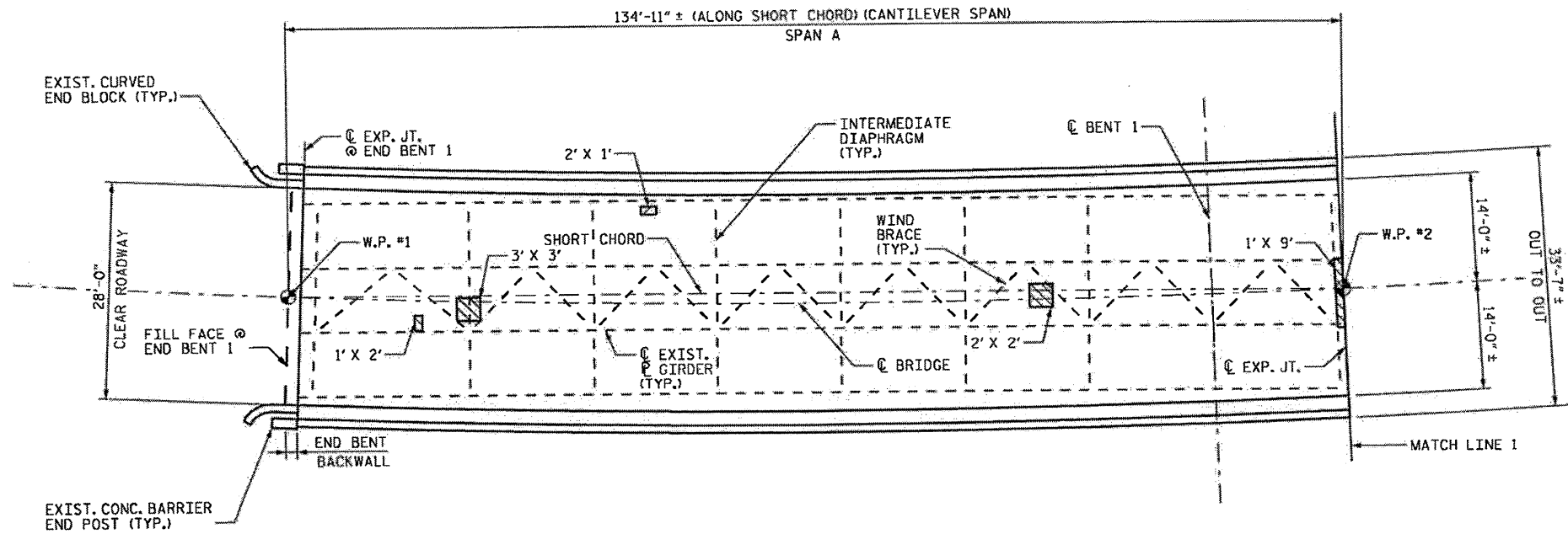
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-13
1			3			TOTAL SHEETS
2			4			58

Joseph Kelvington
 3/12/12
 SEAL 13406
 ENGINEER



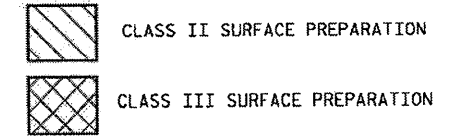
DRAWN BY: B. C. MACYOWSKY DATE: 01-20-12
 CHECKED BY: J. T. KELVINGTON DATE: 01-20-12

17BP.13.P.2_Buncombe Co. Bridge 253.DrainingS&P100253_TypSection.dgn 3/12/2012 10:31:28 PM igelle



PLAN OF SPAN A - DECK REPAIRS

NOTE: EXISTING CONCRETE BARRIER AND POSTS ARE NOT SHOWN FOR CLARITY.
 ALL HORIZ. DIMENSIONS ARE ON ARCS OR RADIALS UNLESS NOTED OTHERWISE.
 CONTRACTOR MAY SUPPORT PLYWOOD FORMWORK ON WIND BRACING FOR "BLOW THRU" CONTAINMENT IN CENTER BAY. EDGES AT GIRDER WEB MUST BE SEALED.



L X W = LENGTH OF AREA PARALLEL TO $\text{\textcircled{C}}$ BRIDGE X WIDTH OF AREA IS PERPENDICULAR TO $\text{\textcircled{C}}$ BRIDGE.

NOTES:

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

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

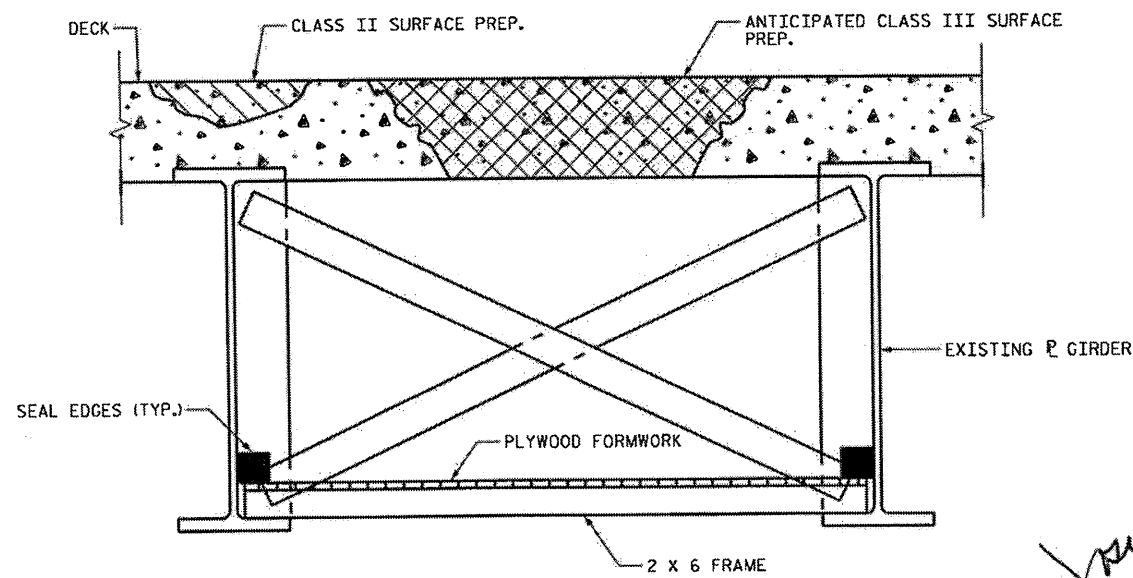
SEE HYDRO-DEMOLITION SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

TYPICAL INTERIOR BAY

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 DECK REPAIR DETAILS
 SPAN A
 DECK REHAB. FOR BRIDGE NO. 253

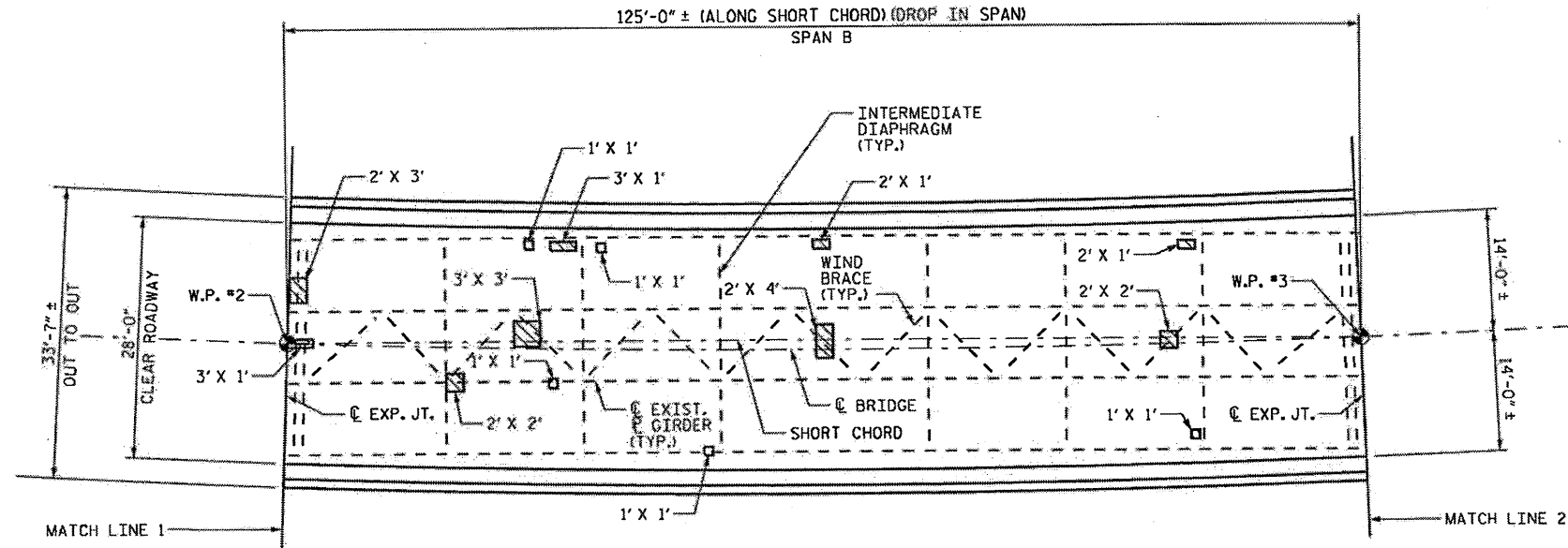
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS	
1			3			S-14	
2			4			58	

Joseph T. Kelvington
 SEAL 13406
 REGISTERED PROFESSIONAL ENGINEER
 JOSEPH T. KELVINGTON



DRAWN BY : B. C. MACYOWSKY DATE : 01-20-12
 CHECKED BY : J. T. KELVINGTON DATE : 01-20-12

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 3/12/2012 12:51:30 PM Joelle
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PLAN OF SPAN B - DECK REPAIRS

NOTE: EXISTING CONCRETE BARRIER AND POSTS ARE NOT SHOWN FOR CLARITY.
 ALL HORIZ. DIMENSIONS ARE ON ARCS OR RADIALS UNLESS NOTED OTHERWISE.
 CONTRACTOR MAY SUPPORT PLYWOOD FORMWORK ON WIND BRACING FOR "BLOW THRU" CONTAINMENT IN CENTER BAY. EDGES AT GIRDER WEB MUST BE SEALED.

NOTES:

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

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



SEE HYDRO-DEMOLITION SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.

-  CLASS II SURFACE PREPARATION
-  CLASS III SURFACE PREPARATION

L X W = LENGTH OF AREA PARALLEL TO C BRIDGE X WIDTH OF AREA IS PERPENDICULAR TO C BRIDGE.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 DECK REPAIR DETAILS
 SPAN B

DECK REHAB. FOR BRIDGE NO. 253

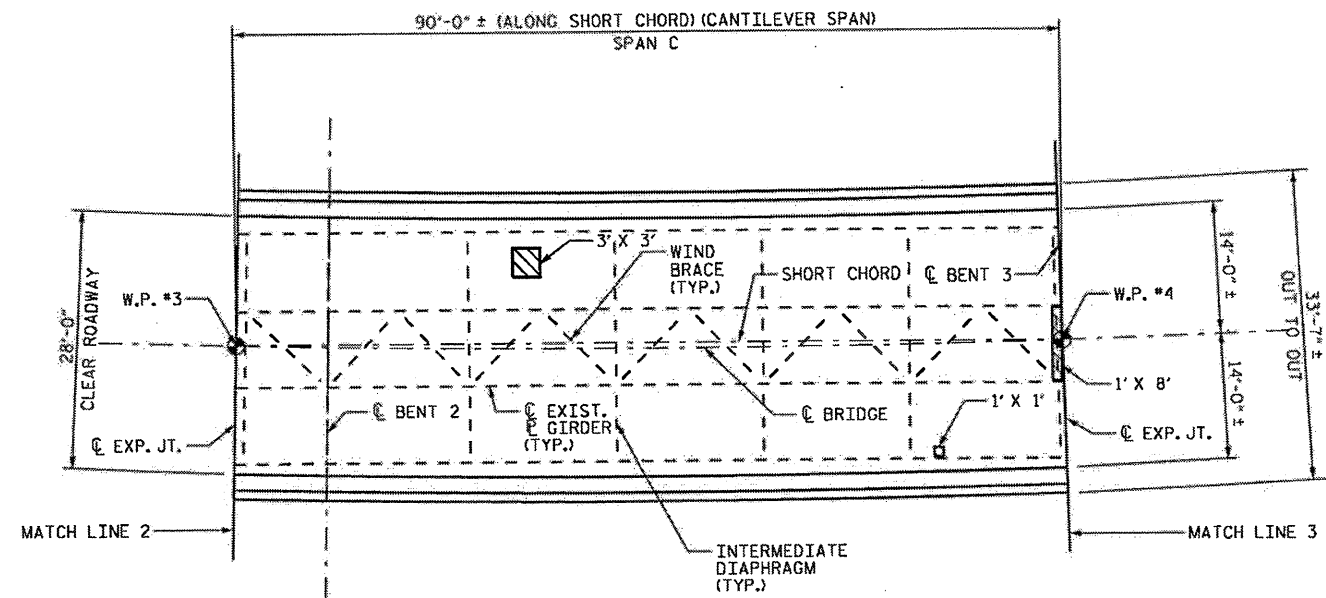
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-15
1			3			TOTAL SHEETS
2			4			58

Joseph Kelvington
 3/12/12
 ENGINEER
 13406



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 www.stantec.com
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DRAWN BY : B. C. MACYOWSKY DATE : 01-20-12
 CHECKED BY : J. T. KELVINGTON DATE : 01-20-12



PLAN OF SPAN C - DECK REPAIRS

NOTE: EXISTING CONCRETE BARRIER AND POSTS ARE NOT SHOWN FOR CLARITY.
 ALL HORIZ. DIMENSIONS ARE ON ARCS OR RADIALS UNLESS NOTED OTHERWISE.
 CONTRACTOR MAY SUPPORT PLYWOOD FORMWORK ON WIND BRACING FOR "BLOW THRU" CONTAINMENT IN CENTER BAY. EDGES AT GIRDER WEB MUST BE SEALED.

NOTES:

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

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



SEE HYDRO-DEMOLITION SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.

-  CLASS II SURFACE PREPARATION
-  CLASS III SURFACE PREPARATION

L X W = LENGTH OF AREA PARALLEL TO C BRIDGE X WIDTH OF AREA IS PERPENDICULAR TO C BRIDGE.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK REPAIR DETAILS
 SPAN C

DECK REHAB. FOR BRIDGE NO. 253

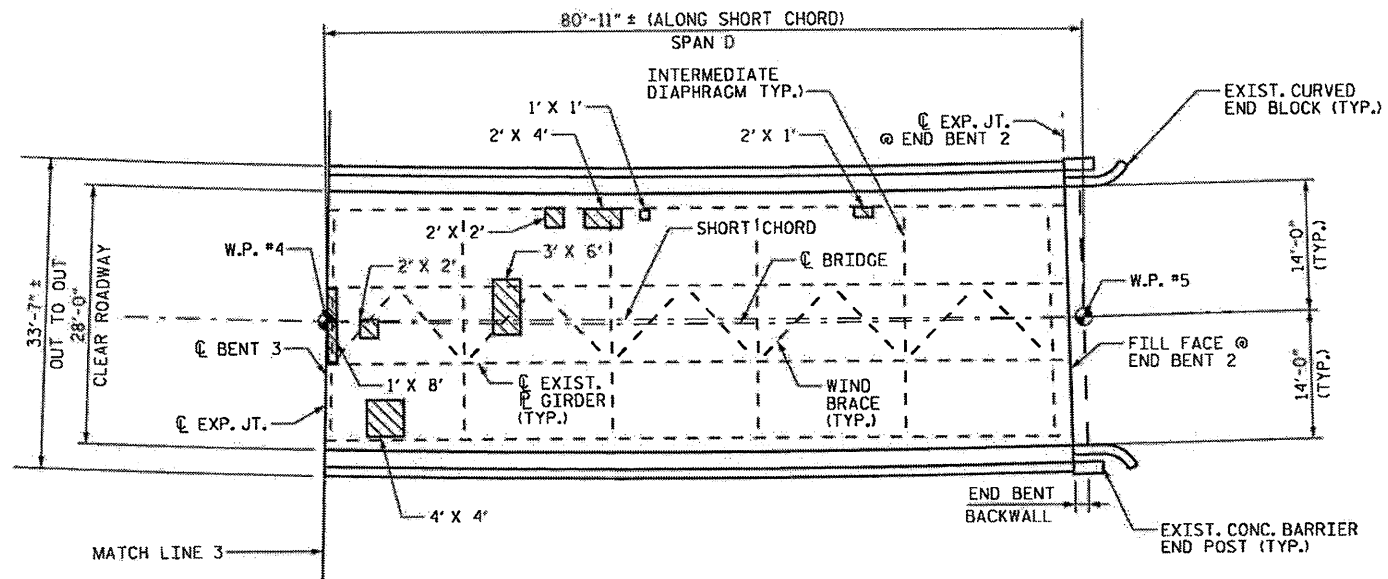
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			58

Joseph T. Kelvington
 J. T. KELVINGTON
 ENGINEER
 13406

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 www.stantec.com
 License No. F-0672

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DRAWN BY: B. C. MACYOWSKY DATE: 01-20-12
 CHECKED BY: J. T. KELVINGTON DATE: 01-20-12





PLAN OF SPAN D - DECK REPAIRS

NOTE: EXISTING CONCRETE BARRIER AND POSTS ARE NOT SHOWN FOR CLARITY.
 ALL HORIZ. DIMENSIONS ARE ON ARCS OR RADIALS UNLESS NOTED OTHERWISE.
 CONTRACTOR MAY SUPPORT PLYWOOD FORMWORK ON WIND BRACING FOR "BLOW THRU" CONTAINMENT IN CENTER BAY. EDGES AT GIRDER WEB MUST BE SEALED.

NOTES:

CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.
 COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE BID PER SQ. YD. OF HYDRO-DEMOLITION.
 SEE HYDRO-DEMOLITION SPECIAL PROVISIONS.
 CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.
 A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.
 SUBMIT DETAILS OF PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.
 CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.

-  CLASS II SURFACE PREPARATION
-  CLASS III SURFACE PREPARATION

L X W = LENGTH OF AREA PARALLEL TO © BRIDGE X WIDTH OF AREA IS PERPENDICULAR TO © BRIDGE.



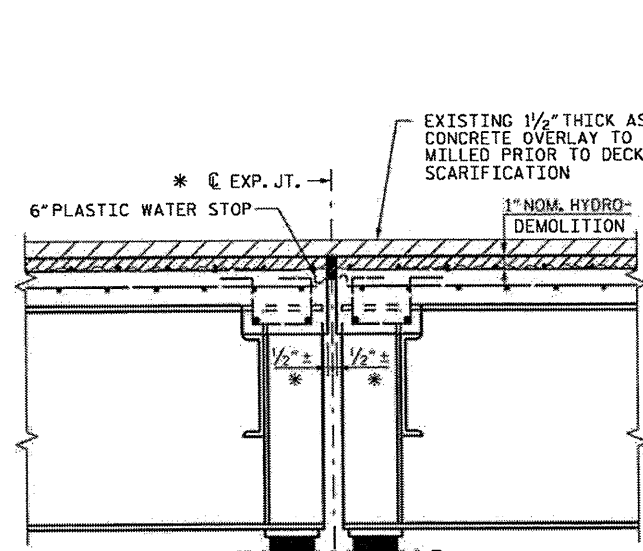
DRAWN BY : B. C. MACYOWSKY DATE : 01-20-12
 CHECKED BY : J. T. KELVINGTON DATE : 01-20-12

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

J. T. Kelvington
 SEAL
 13406
 ENGINEER

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DECK REPAIR DETAILS SPAN D					
DECK REHAB. FOR BRIDGE NO. 253					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
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					TOTAL SHEETS 58

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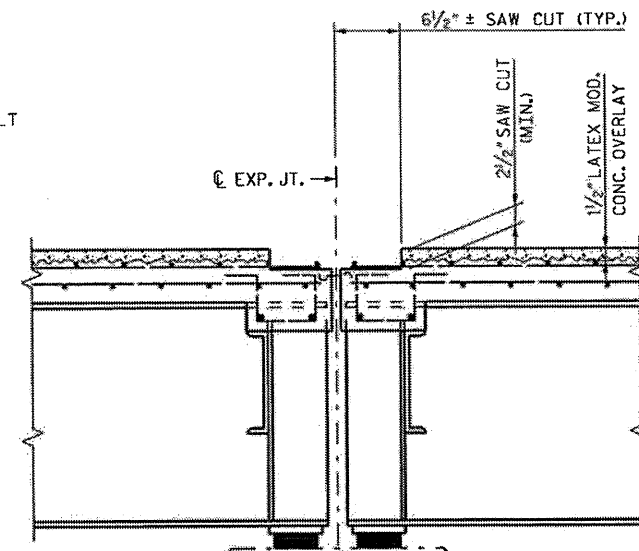


SECTION B-B

(CONCRETE REMOVAL AT EXISTING JOINT)

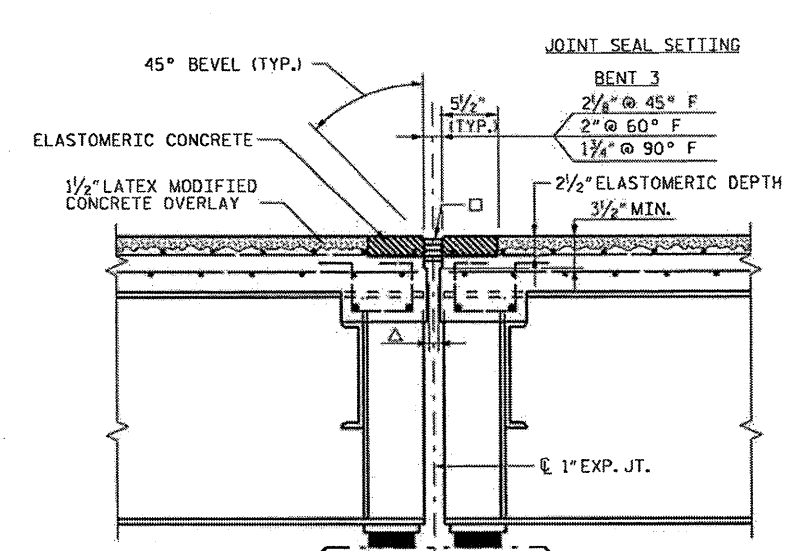
* FROM BEST AVAILABLE INFORMATION.
NOTE: RETAIN ALL EXIST. REINF. STEEL. CLEAN AND REPAIR AS REQ'D.

ALL EXPOSED EXISTING JOINT SEAL MATERIALS ARE TO BE COMPLETELY REMOVED.



SECTION B-B

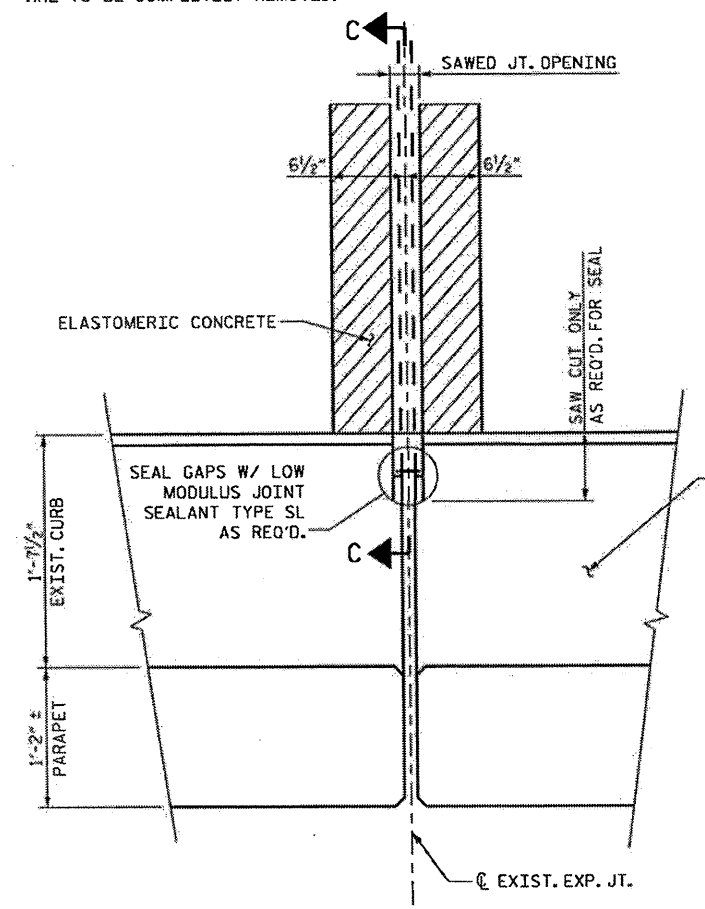
(LATEX MOD. CONC. OVERLAY AND CONCRETE REMOVAL FOR ELASTOMERIC CONCRETE)



SECTION B-B

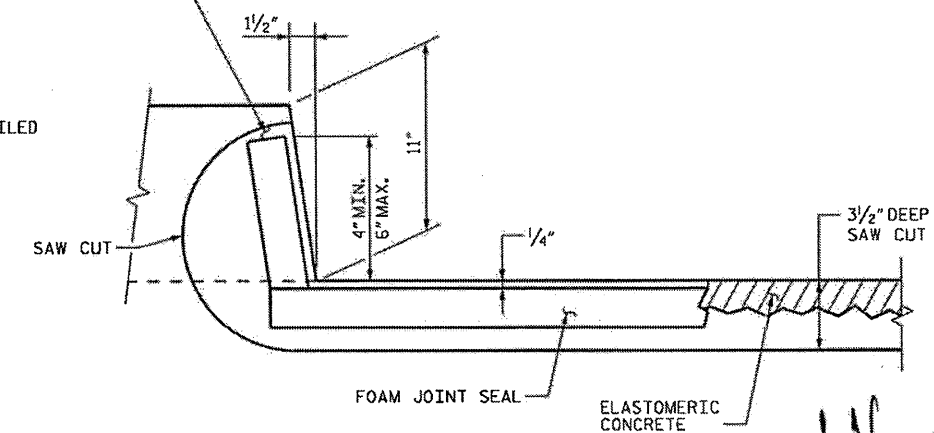
(PLACEMENT OF ELASTOMERIC CONCRETE AND SAW CUT FOR FOAM JOINT SEAL)

□ USE 2.8125" X 2.50" UNCOMPRESSED FOAM JT. SEAL MATERIAL @ BENT 3.
△ EXISTING OPENING @ BENT 3.



PARTIAL PLAN @ INTERIOR BENT

NOTE: EXISTING THREE BEAM RAIL SHALL BE REMOVED, STOCKPILED AND REINSTALLED AS REQUIRED TO CONSTRUCT JOINT SEALS



SECTION C-C

ELASTOMERIC CONCRETE	
LOCATION	QTY
BENT 3	5.8 C.F.

TOTAL ELASTOMERIC CONC. = 5.8 C.F.
TOTAL ELASTOMERIC CONC. = 0.2 C.Y.

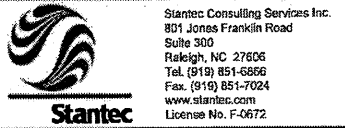
PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

INTERIOR BENT JOINT SEAL DETAILS
DECK REHAB. FOR BRIDGE NO. 253

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-18
1			3			TOTAL SHEETS
2			4			5B

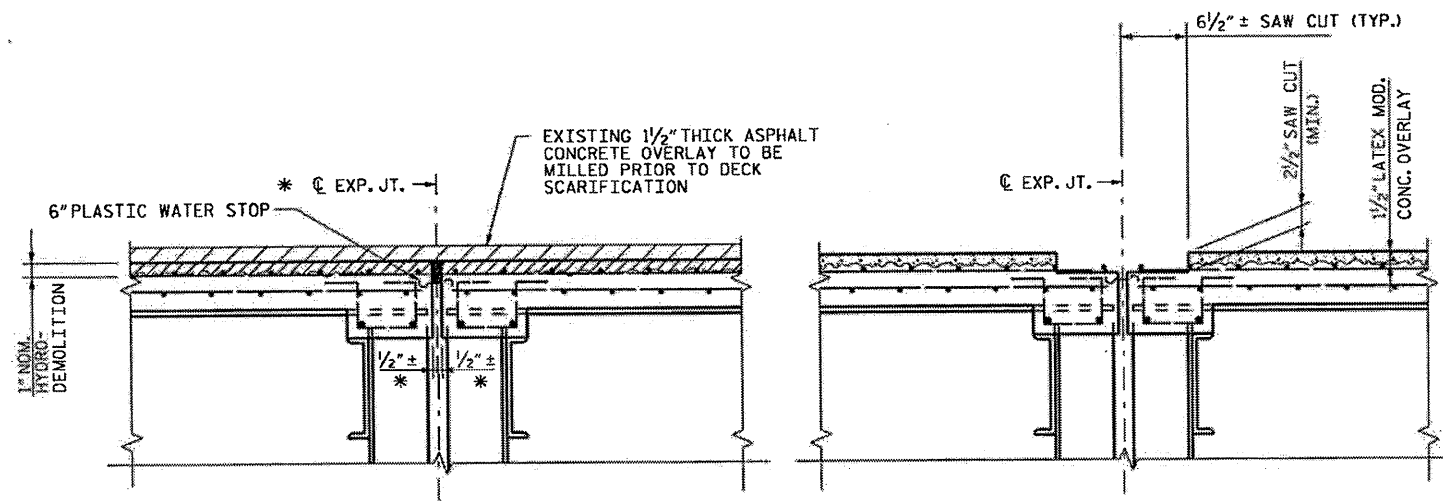
Joseph T. Kelvington
Professional Engineer
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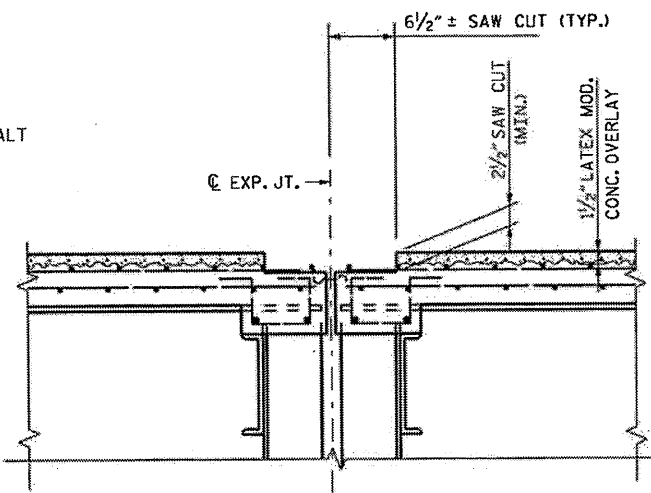
SECTION C-C

(CONCRETE REMOVAL AT EXISTING JOINT)

* FROM BEST AVAILABLE INFORMATION.

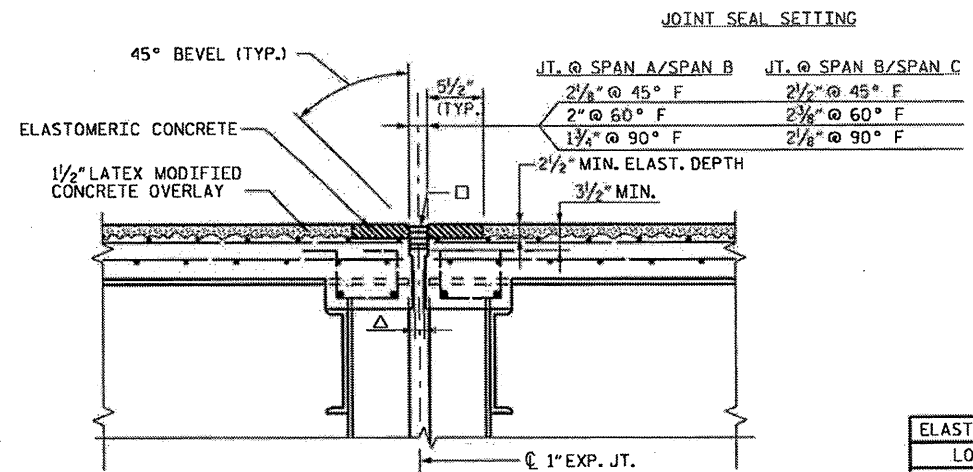
NOTE: RETAIN ALL EXIST. REINF. STEEL. CLEAN AND REPAIR AS REQ'D.

ALL EXPOSED EXISTING JOINT SEAL MATERIALS ARE TO BE COMPLETELY REMOVED.



SECTION C-C

(LATEX MOD. CONC. OVERLAY AND CONCRETE REMOVAL FOR ELASTOMERIC CONCRETE)



SECTION C-C

(PLACEMENT OF ELASTOMERIC CONCRETE AND SAW CUT FOR FOAM JOINT SEAL)

- USE 2.8125" X 2.50" UNCOMPRESSED FOAM JT. SEAL MATERIAL @ JOINT BETWEEN SPAN A AND SPAN B.
- USE 3.4375" X 2.50" UNCOMPRESSED FOAM JT. SEAL MATERIAL @ JOINT BETWEEN SPAN B AND SPAN C.
- Δ EXISTING OPENING @ JOINT.

JOINT SEAL SETTING

JT. @ SPAN A/SPAN B	JT. @ SPAN B/SPAN C
2 1/8" @ 45° F	2 1/2" @ 45° F
2" @ 60° F	2 3/8" @ 60° F
1 3/4" @ 90° F	2 1/8" @ 90° F

ELASTOMERIC CONCRETE	
LOCATION	QTY
SPAN A/SPAN B JT.	5.8 C.F.
SPAN B/SPAN C JT.	5.8 C.F.

TOTAL ELASTOMERIC CONC. = 11.6 C.F.
TOTAL ELASTOMERIC CONC. = 0.4 C.Y.

PROJECT NO. WBS 17BP.13.P.2

BUNCOMBE COUNTY

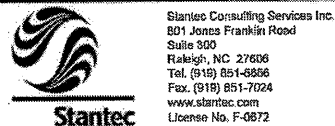
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUSPENDED SPAN JOINT
SEAL DETAILS

DECK REHAB. FOR BRIDGE NO. 253

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-19
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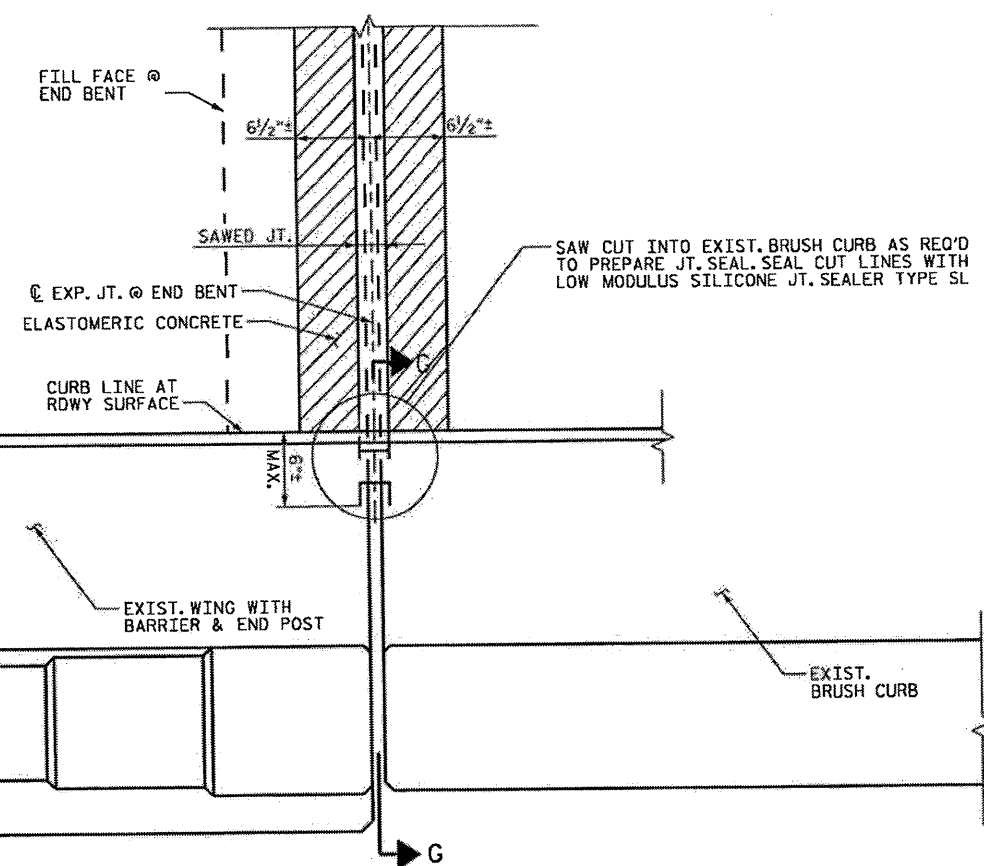


DRAWN BY : B. C. MACYOWSKY DATE : 01-20-12
CHECKED BY : J. T. KELVINGTON DATE : 01-20-12

Joseph T. Kelvington
Professional Engineer Seal 13406

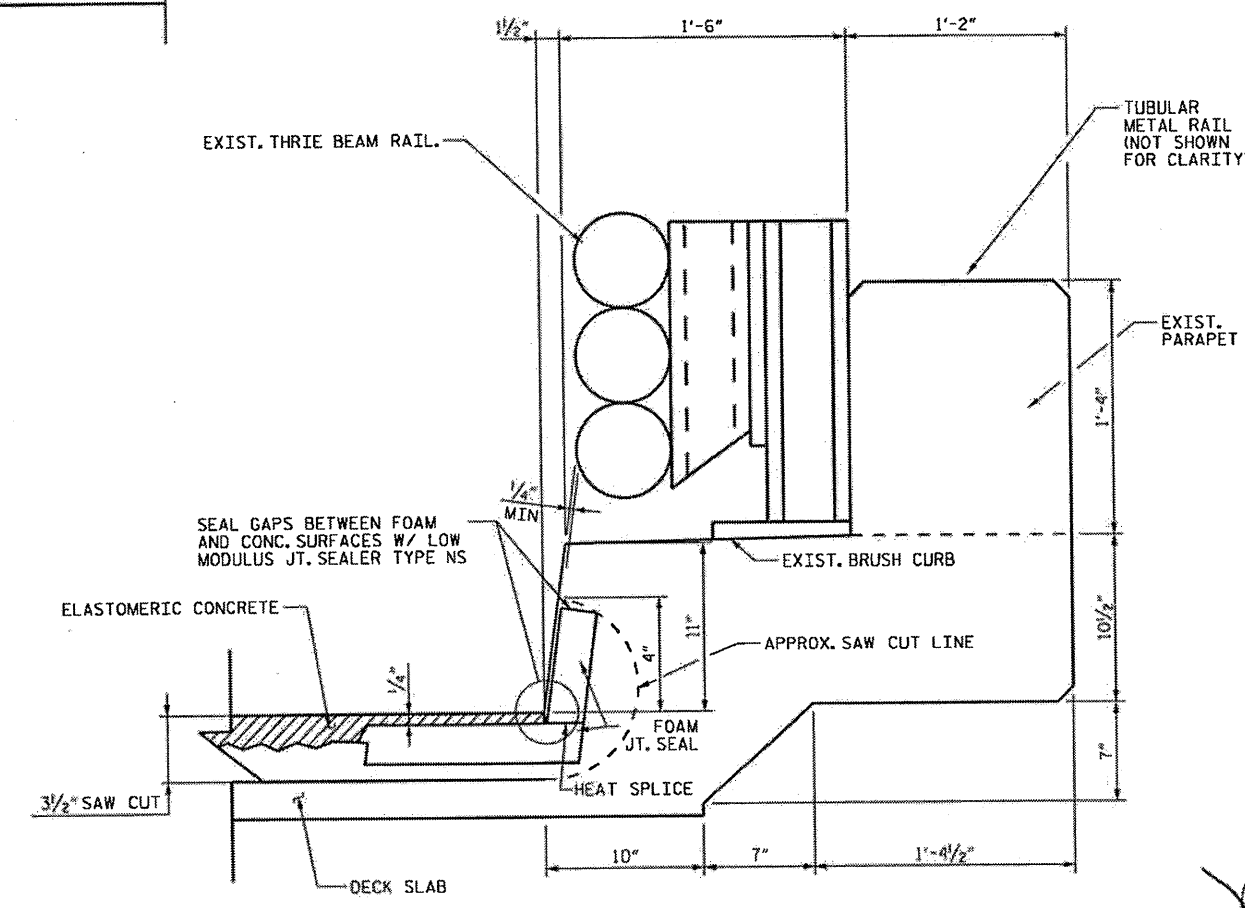
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PARTIAL PLAN @ END BENT #1
(END BENT #2 SIMILAR)

NOTE: METAL RAIL, END POSTS AND BARRIER PARAPET WALL DETAILS NOT SHOWN FOR CLARITY.
EXISTING THRIE BEAM RAIL SHALL BE REMOVED, STOCKPILED AND REINSTALLED AS REQUIRED TO CONSTRUCT JOINT SEALS



SECTION G-G

ELASTOMERIC CONCRETE	
LOCATION	QTY
END BENT 1	5.8 C.F.
END BENT 2	5.8 C.F.

TOTAL ELASTOMERIC CONC. = 11.6 C.F.
TOTAL ELASTOMERIC CONC. = 0.4 C.Y.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
END BENT JOINT SEAL DETAILS
DECK REHAB. FOR BRIDGE NO. 253

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

SHEET NO. S-20
TOTAL SHEETS 58

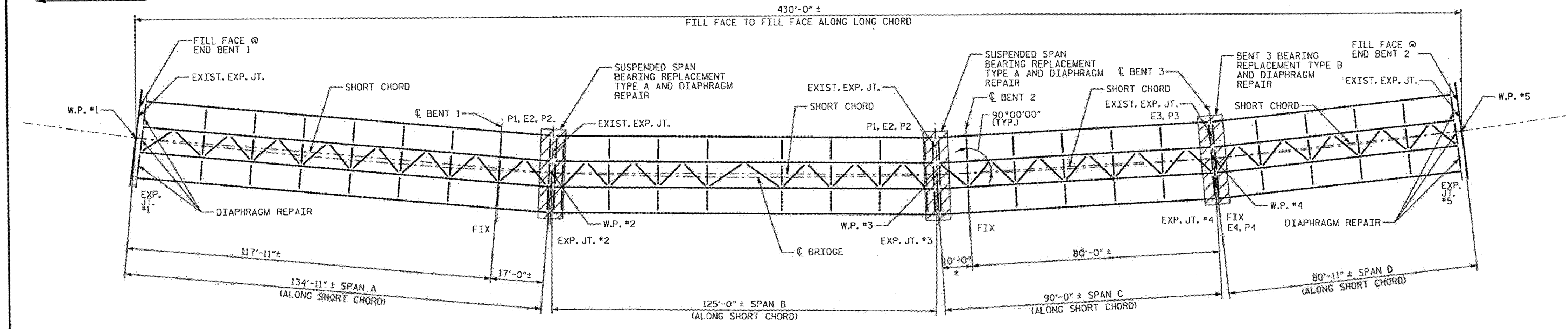
Joseph Kelvington

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License No. F-0672

DRAWN BY : B. C. MACYOWSKY DATE : 01-20-12
CHECKED BY : J. T. KELVINGTON DATE : 01-20-12

TO I-40 WEST AND SR 3412

TO SR 3431



PLAN VIEW OF SPANS A-D

NOTE: ALL DIMENSIONS SHOWN ARE APPROXIMATE.

GENERAL NOTES

- WORK ON THIS BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION ACCESS IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL OSHA AND STATE SAFETY REQUIREMENTS.
- EXISTING BRIDGE AND REPAIR DETAILS INDICATED ON THE PLANS ARE FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAY OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE AND REPAIR DETAILS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE SITE.
- DIMENSIONS IN THESE PLANS ARE BASED ON ORIGINAL PLANS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- ALL VISUAL AND NON-DESTRUCTIVE TESTING WILL BE PERFORMED BY NCDOT.
- THE CONTRACTOR SHALL COORDINATE WITH INSPECTION PERSONNEL OF THE ENGINEER TO CAREFULLY EXAMINE HEAVILY RUSTED AREAS, AFTER SURFACE PREPARATION, TO DETERMINE IF ANY SUBSTANTIAL SECTION LOSS HAS OCCURRED. THE ENGINEER WILL DETERMINE THE COURSE OF ACTION TAKEN FOR CASES OF EXCESSIVE SECTION LOSS.
- ALL THE COST ASSOCIATED WITH PREPARING ENGINEERING SUBMITTALS FOR JACKING, ANY ASSOCIATED TEMPORARY SUPPORTS, EQUIPMENT AND MISCELLANEOUS COMPONENTS SHALL BE CONSIDERED INCIDENTAL TO THE PAY ITEM FOR "SPAN JACKING BUNCOMBE BRIDGE 253." NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE.
- THE COST OF LABOR, MATERIALS, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY FOR REMOVAL AND DISPOSAL OF EXISTING STRUCTURE COMPONENTS SHALL BE INCLUDED IN THE BID PRICE FOR THE VARIOUS CONTRACT PAY ITEMS.
- ALL WELDING SHALL BE DONE IN ACCORDANCE WITH CORRECT AWS SPECIFICATIONS.
- FOR BRIDGE JACKING AT EXP. JT. 2, 3, AND BENT 3, SEE SPECIAL PROVISIONS.
- FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS.
- FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS. NO FIELD TESTING OF ANCHOR BOLTS IS REQUIRED.
- DEBRIS SHALL BE REMOVED FROM EXISTING BENT CAPS. ALL COST ASSOCIATED WITH DEBRIS REMOVAL SHALL BE CONSIDERED INCIDENTAL TO "SPAN JACKING BUNCOMBE BRIDGE 253" PAY ITEM.

JACKING REQUIREMENTS AT BENT 3

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

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

BEARING NUTS SHALL BE LOOSENEED TO PROVIDE A MINIMUM OF 5/8 INCH GAP TO ALLOW FOR JACKING.

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

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

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

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

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

PROJECT NO. WBS 178P.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FRAMING PLAN

DECK REHAB. FOR BRIDGE NO. 253

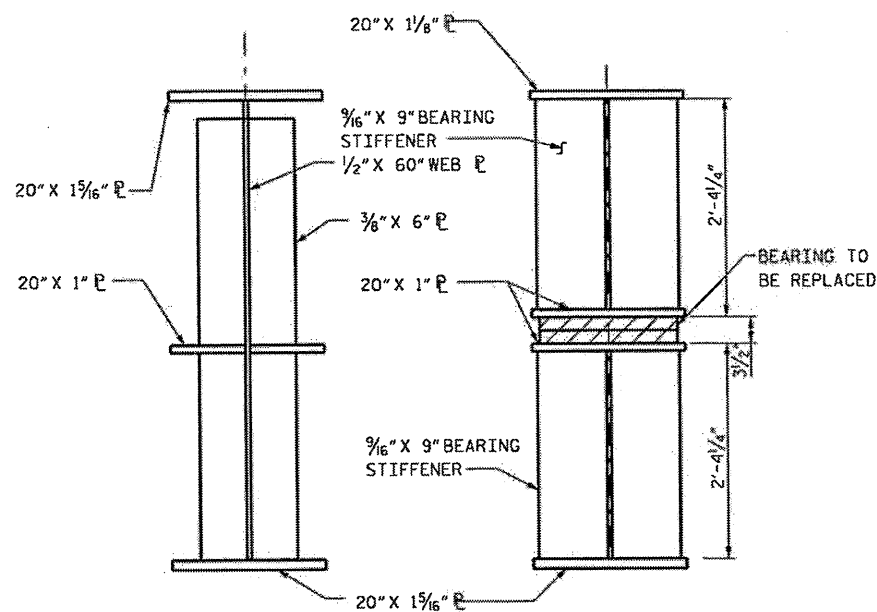
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-21
1			3			TOTAL SHEETS
2			4			58

J. T. Kelvington

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 Fax (919) 851-7024
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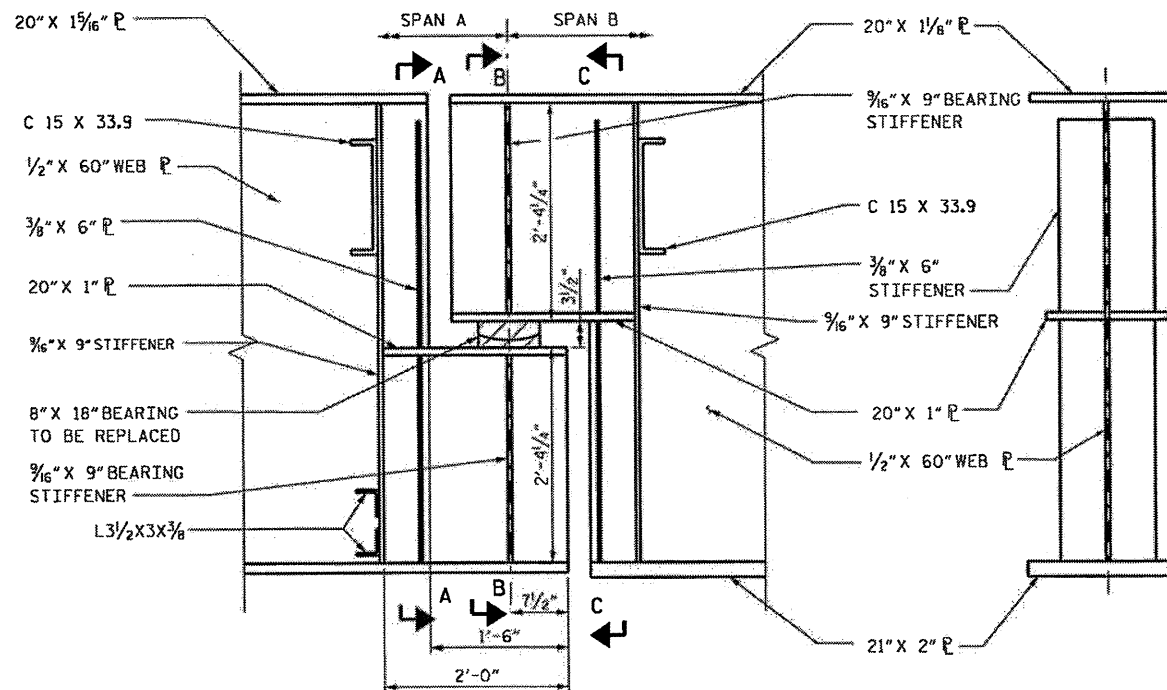
DRAWN BY : B. C. MACYOWSKY DATE : 01-20-12
 CHECKED BY : J. T. KELVINGTON DATE : 01-20-12

18p.13.P.2_Buncombe Co.\Drawing\BID00253.FramingPlan.dgn 3/12/2012 12:21:53 PM Jgelie



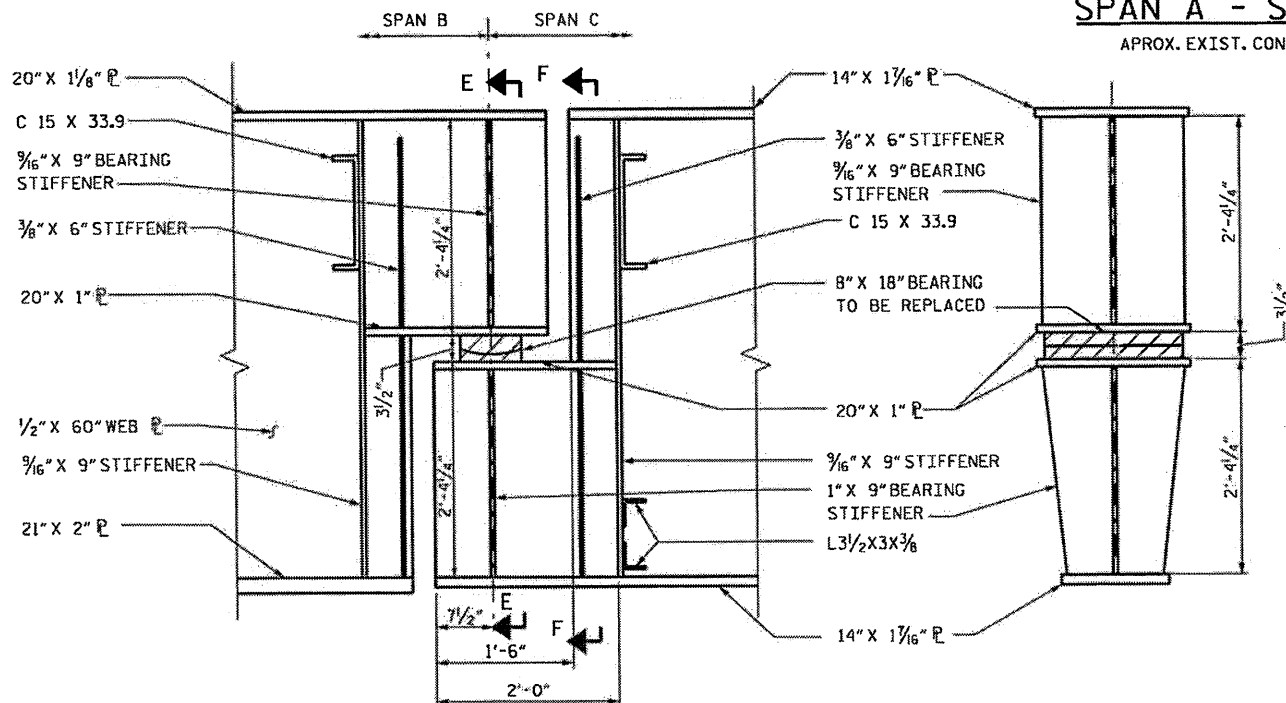
SECTION A-A
APROX. EXIST.
CONDITIONS

SECTION B-B
APROX. EXIST.
CONDITIONS



**SECTION THRU JOINT
SPAN A - SPAN B**
APROX. EXIST. CONDITIONS

SECTION C-C
APROX. EXIST. CONDITIONS



**SECTION THRU JOINT
SPAN B - SPAN C**
APROX. EXIST. CONDITIONS

SECTION E-E
APROX. EXIST. CONDITIONS

SECTION F-F
APROX. EXIST. CONDITIONS

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
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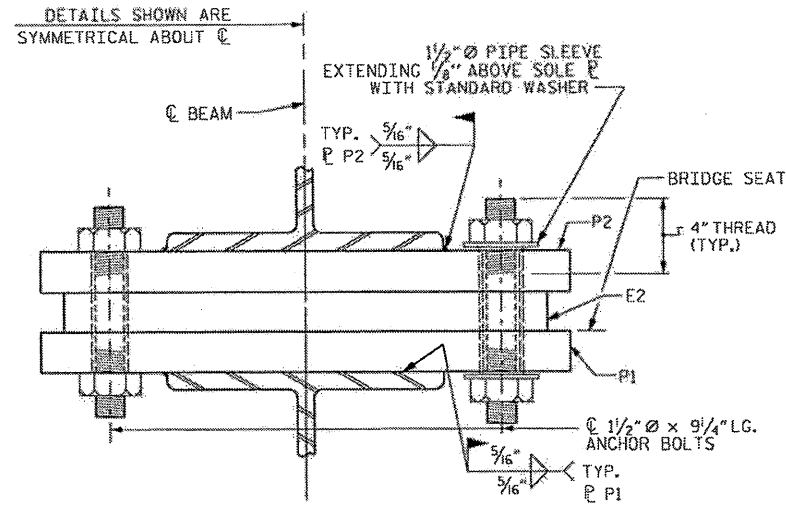
Joseph T. Kelvington
3/2/12
SEAL
13406
ENGINEER
JOSEPH T. KELVINGTON

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

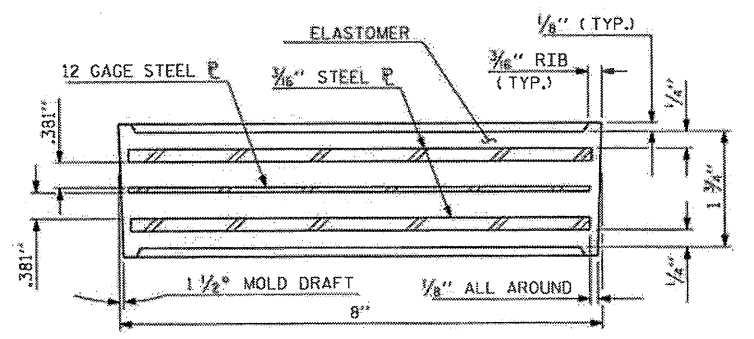
**SUSPENDED SPAN
EXISTING BEARING
SUPPORT**

DECK REHAB. FOR BRIDGE NO. 253

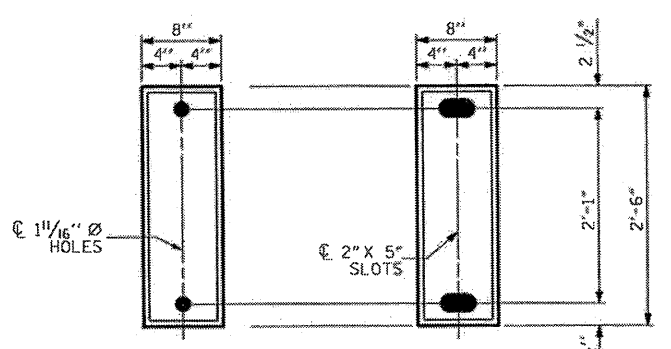
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-22
1			3			TOTAL SHEETS 58
2			4			



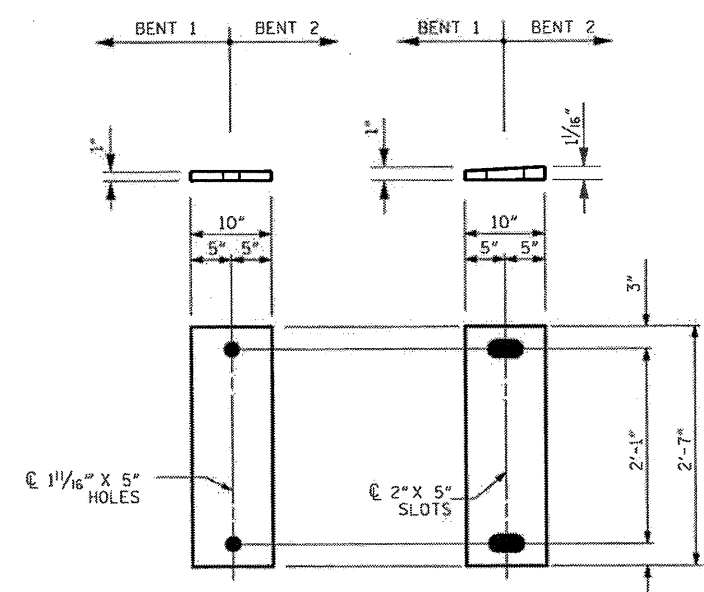
EXPANSION
END VIEW - HALF SECTION @ BRG.



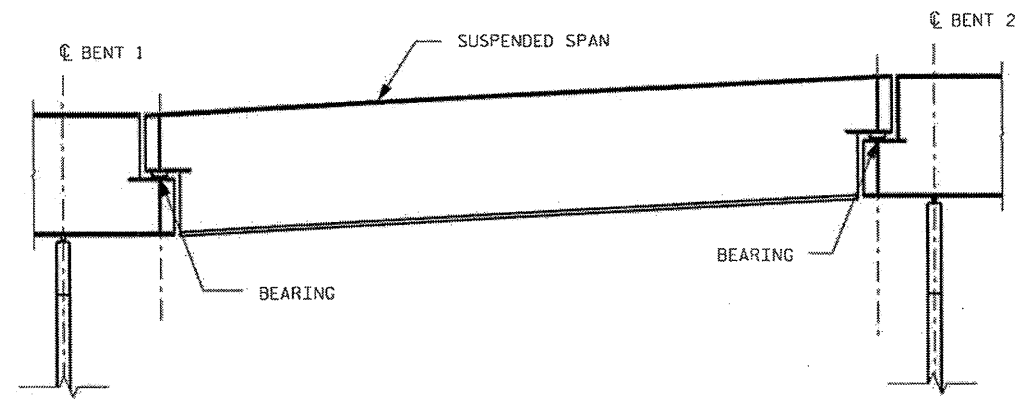
TYPICAL SECTION OF ELASTOMERIC BEARINGS



E1 (0 REQ'D) E2 (8 REQ'D)
PLAN VIEW OF ELASTOMERIC BEARING
TYPE A



P1 (8 REQ'D) P2 (8 REQ'D)
PLAN VIEW OF PLATES
TYPE A



ELEVATION

NOTES

- AT ALL POINTS OF SUPPORT, NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL.
- THE 1/2" Ø PIPE SLEEVE SHALL BE CUT FROM SCHEDULE 40 PVC PLASTIC PIPE. THE PVC PLASTIC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785.
- THE PAYMENT FOR THE PIPE SLEEVES SHALL BE INCLUDED IN THE SEVERAL PAY ITEMS.
- SOLE PLATES, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A449. NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. SHOP DRAWINGS ARE NOT REQUIRED FOR ANCHOR BOLTS, NUTS AND WASHERS. SHOP INSPECTION IS REQUIRED.
- WHEN FIELD WELDING THE SOLE PLATE TO THE GIRDER FLANGE, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE SOLE PLATE DOES NOT EXCEED 300°F. TEMPERATURES ABOVE THIS MAY DAMAGE THE ELASTOMER.
- ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.
- ALL ELASTOMERS ARE TO BE 60 DUROMETER HARDNESS.

LOAD RATINGS	
TYPE A	MAX.D.L.+L.L.
	190 K

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BEARING - TYPE A
SUSPENDED SPAN

DECK REHAB. FOR BRIDGE NO. 253

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

S-23
TOTAL SHEETS: 58

Joseph Kelvington
Professional Engineer
No. 13406
State of North Carolina

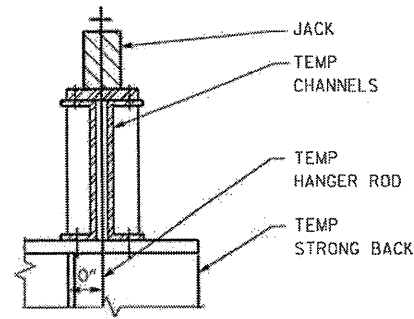
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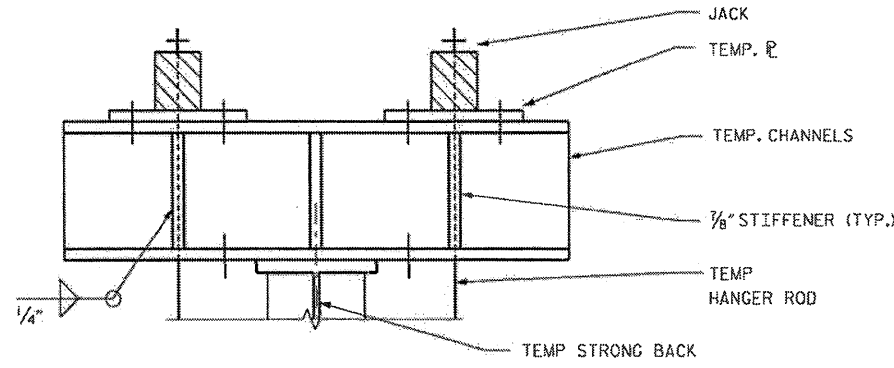
DRAWN BY: B. C. MACYOWSKY DATE: 01-20-12
CHECKED BY: J. T. KELVINGTON DATE: 01-20-12

NOTE:

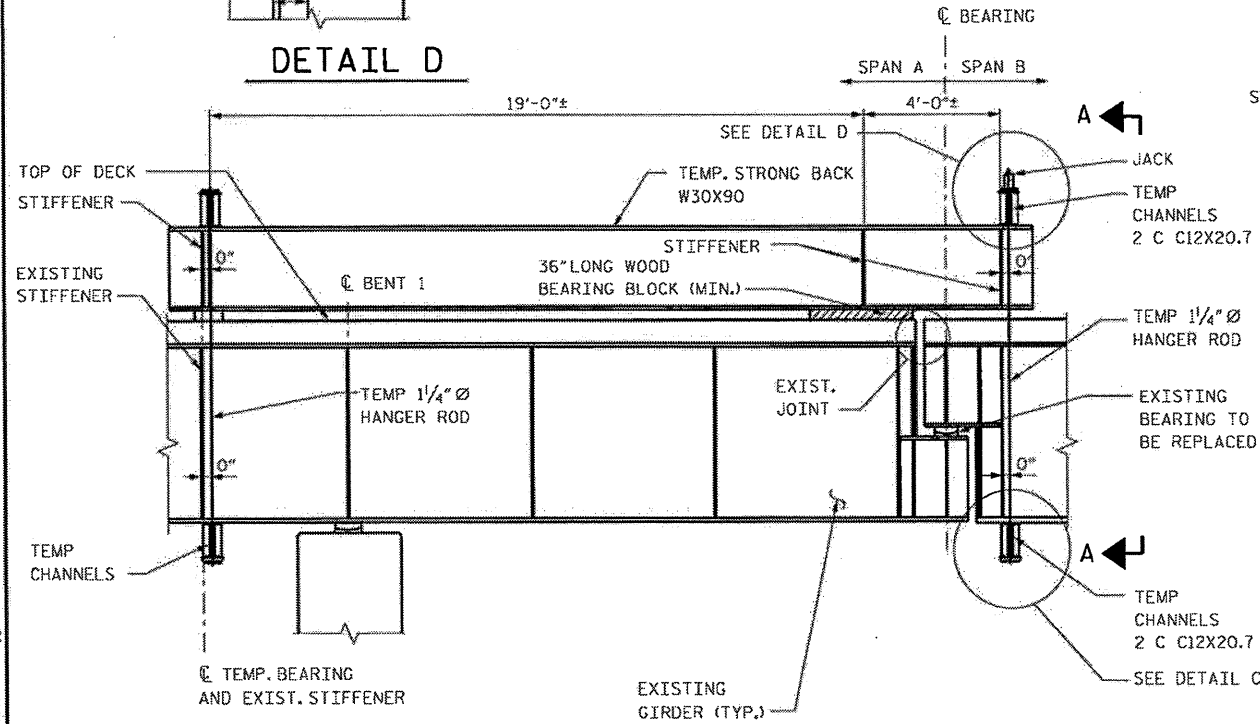
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN A TEMPORARY SUPPORT SYSTEM WHICH WILL ALLOW FOR THE BEARING REMOVAL. THE TEMPORARY SUPPORT SYSTEM SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER EMPLOYED BY THE CONTRACTOR AND LICENSED IN THE STATE OF NORTH CAROLINA. DESIGN AND DETAILS TO BE APPROVED BY THE ENGINEER PRIOR TO ANY INSTALLATION.
2. THE SCHEMATIC TEMPORARY SUPPORT SYSTEM SHOWN IS FOR ILLUSTRATION PURPOSES ONLY. THE CONTRACTOR IS TO DESIGN THE SYSTEM. ALL WORK FOR TEMPORARY SUPPORT SYSTEM TO BE PAID UNDER PAY ITEM "SPAN JACKING BRIDGE 253".
3. ONLY ONE EXISTING BEARING WILL BE REMOVED AT ANY GIVEN TIME.
4. HANGER RODS TO BE ASTM F1554 GRADE 105.
5. HOLES IN DECK TO BE REPAIRED BEFORE BRIDGE IS OPEN TO TRAFFIC AND BEFORE INSTALLATION OF WEARING SURFACE.



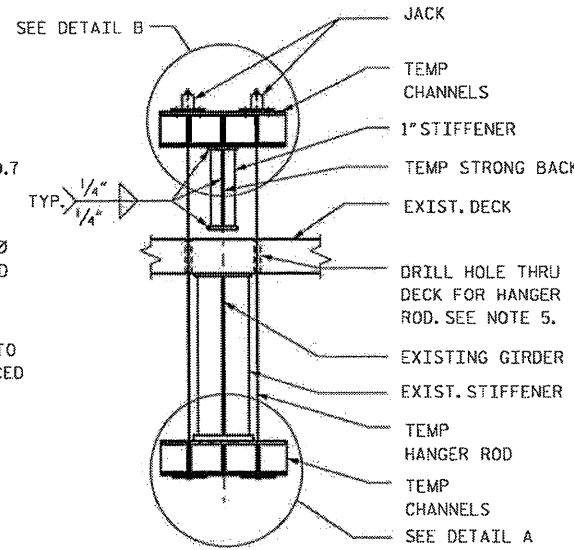
DETAIL D



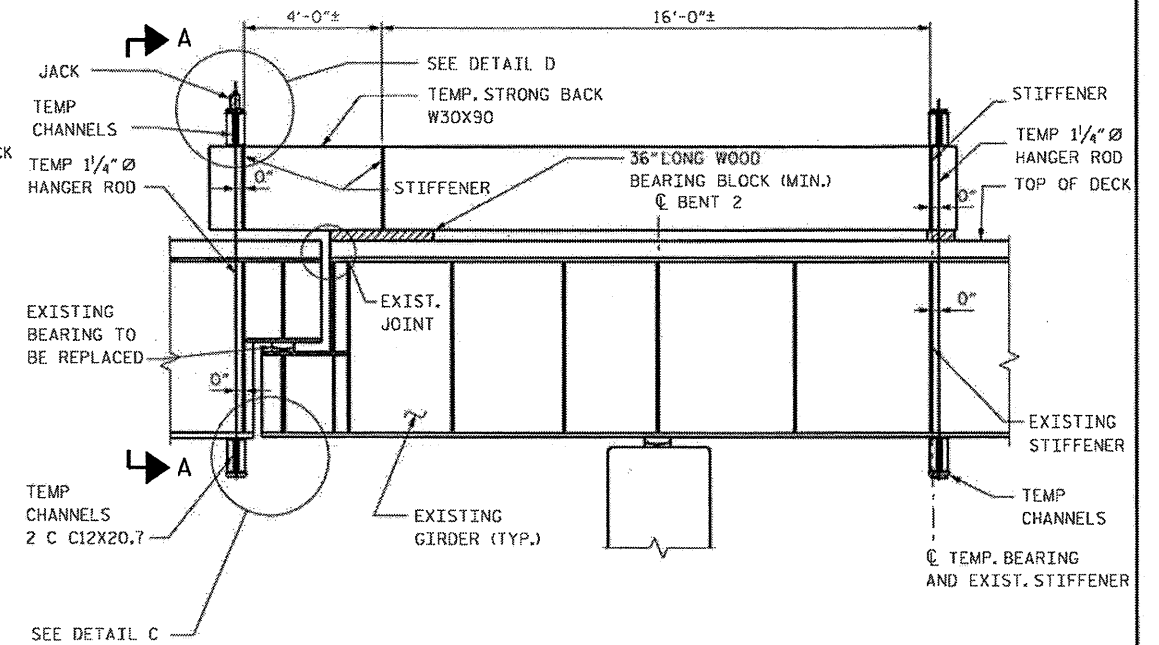
DETAIL B



ELEVATION

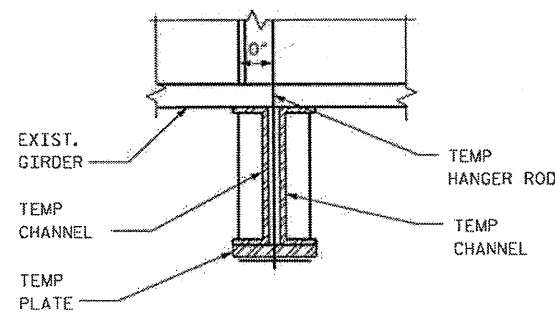


SECTION A-A

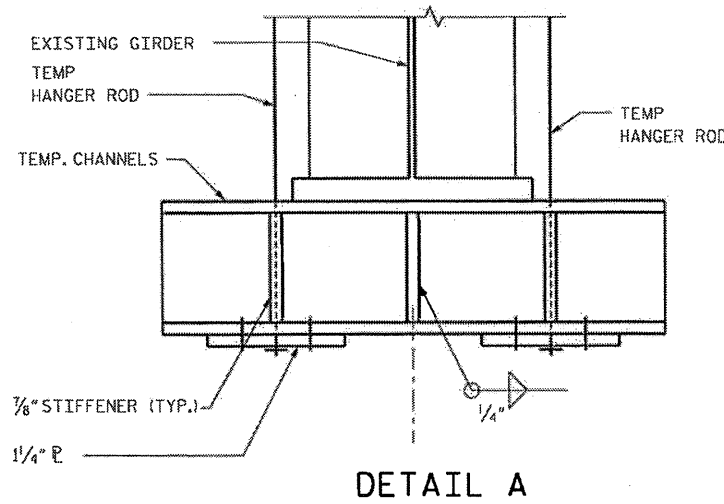


ELEVATION

SEE SPECIAL PROVISIONS



DETAIL C

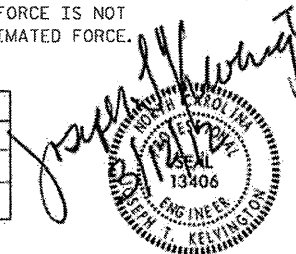


DETAIL A

JACKING NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR FINAL JACKING LOAD. AT A MINIMUM, JACKS TO SUPPORT BEARING LOADS ESTIMATED IN TABLE BELOW.
2. ALLOWABLE CAPACITY OF THE JACKS SHALL BE AT LEAST TWO TIMES WHAT IS REQUIRED BY CALCULATIONS.
3. THE JACKING FORCE DURING CONSTRUCTION SHALL BE THE MINIMUM FORCE REQUIRED TO ALLOW FOR REMOVAL AND INSTALLATION OF THE BEARINGS. THE JACKING FORCE IS NOT TO EXCEED 150% OF THE ESTIMATED FORCE.

ESTIMATED BEARING LOAD	
DL	125 KIP
LL	0 KIP
TOTAL	125 KIP



PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUSPENDED SPAN SUGGESTED TEMPORARY BEARING SUPPORT					
DECK REHAB. FOR BRIDGE NO. 253					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS: 58



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NOTES

AT ALL FIXED POINTS OF SUPPORT, NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT AND THEN BACKED OFF 1/2 TURN. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL.

THE 2" Ø PIPE SLEEVE SHALL BE CUT FROM SCHEDULE 40 PVC PLASTIC PIPE. THE PVC PLASTIC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785.

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

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

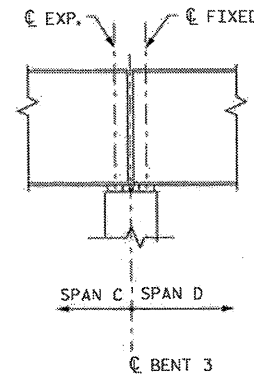
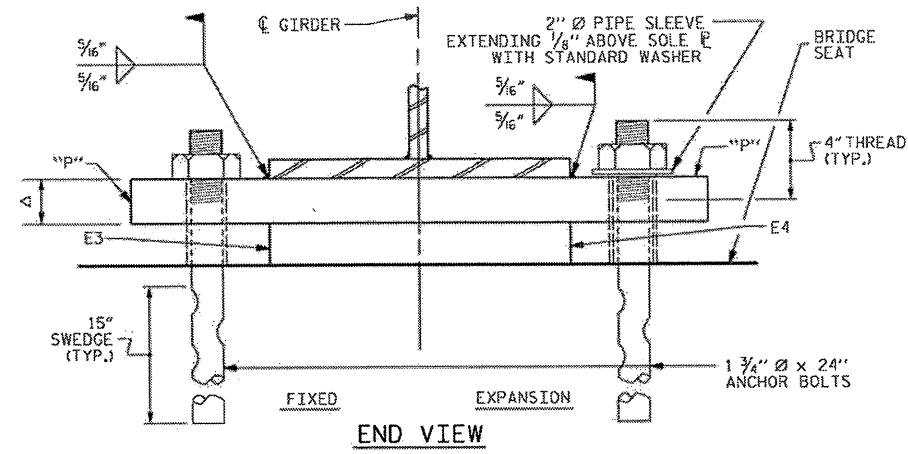
ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A449. NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. SHOP DRAWINGS ARE NOT REQUIRED FOR ANCHOR BOLTS, NUTS AND WASHERS. SHOP INSPECTION IS REQUIRED.

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

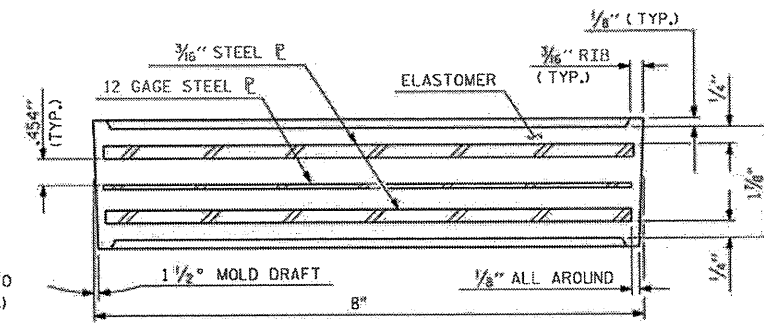
ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.

CONTRACTOR SHALL CORE INTO EXISTING BENT CAP TO INSTALL 1 1/4" Ø ANCHOR BOLTS. BOLTS SHALL BE ADHESIVELY ANCHORED, SEE SPECIAL PROVISIONS.

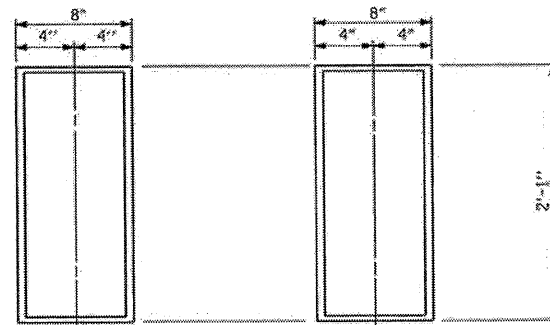
ALL ELASTOMERS ARE TO BE 60 DUROMETER HARDNESS.



ELEVATION

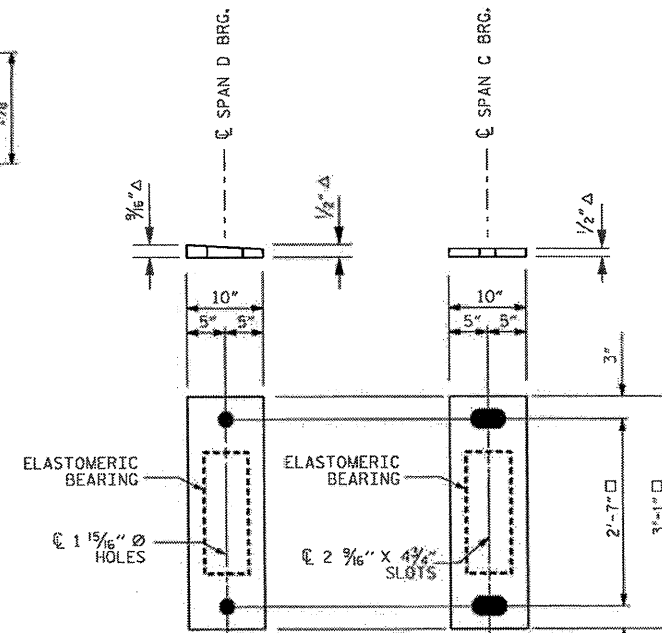


TYPICAL SECTION OF ELASTOMERIC BEARING



**E3 (4 REQ'D) E4 (4 REQ'D)
PLAN VIEW OF ELASTOMERIC BEARING**

TYPE B



P3 (4 REQ'D) P4 (4 REQ'D)

PLAN VIEW OF PLATES

TYPE B

- ▲ PLATE THICKNESS SHOWN ARE MINIMUM VALUES. ACTUAL PLATE THICKNESS SHALL BE ADJUSTED BASED ON REPLACED STEEL BEARINGS.
- BOLT SPACING AND PLATE WIDTH TO BE ADJUSTED AS NECESSARY TO AVOID EXISTING ANCHOR RODS, CONCRETE EDGE, ETC. CONTRACTOR TO FIELD VERIFY BEFORE FABRICATION.

-LOAD RATINGS-	
	MAX.D.L.+ L.L.
TYPE B	120 K

PROJECT NO. WBS 17BP.13.P.2

BUNCOMBE COUNTY

STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

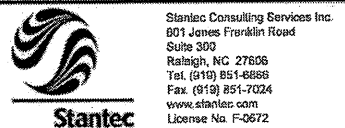
**BEARING - TYPE B
BENT 3**

DECK REHAB. FOR BRIDGE NO. 253

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

TOTAL SHEETS	58
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James J. Kelvington
Professional Engineer
No. 13406



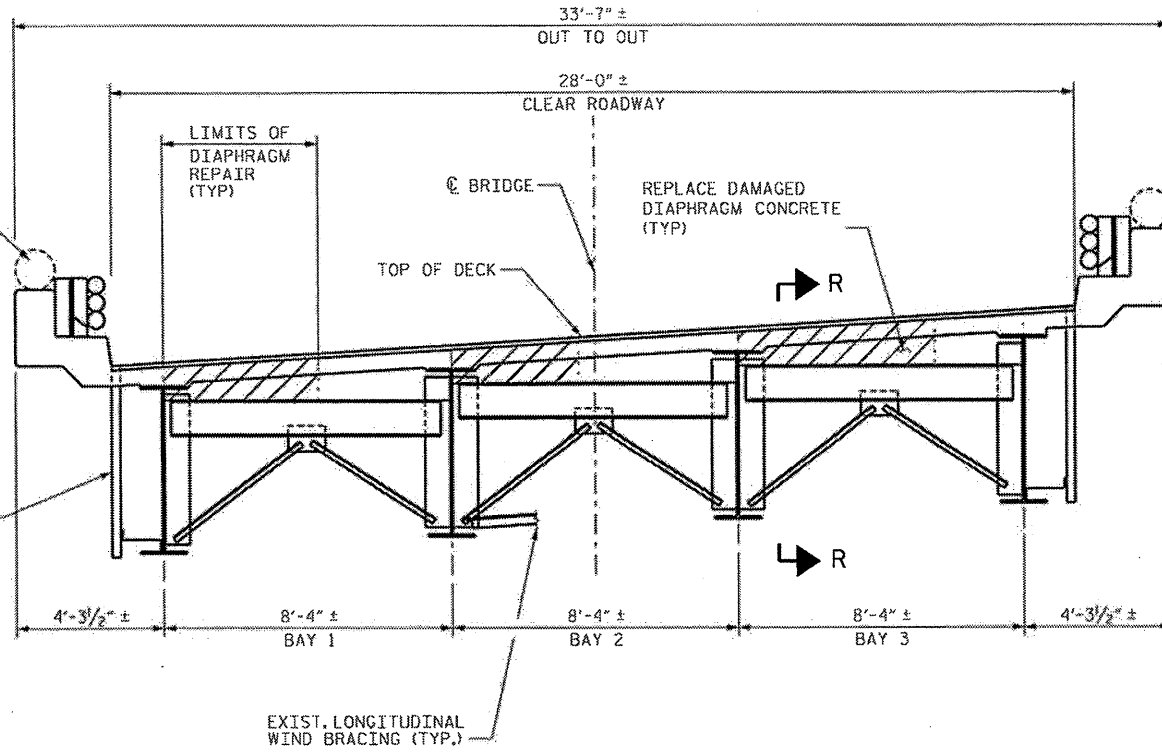
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CHECKED BY : J. T. KELVINGTON DATE : 01-20-12

I:\WBS_17BP.13.P.2_Buncombe Co. Bridge 253\Drawings\Bent0253.Dwg 3/12/2012 10:27:41 PM jgelle

EXIST. TUBULAR METAL RAIL NOT SHOWN FOR CLARITY (TYP.)

EXIST. DRAIN PIPES (TYP.)



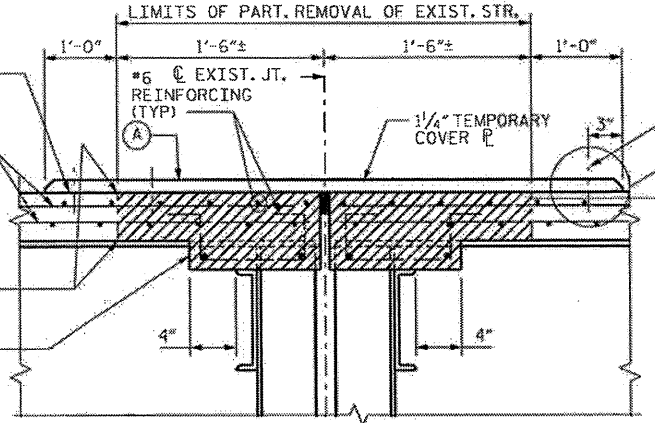
TYPICAL DIAPHRAGM SECTION

1/4" THICK x 5" ELASTOMERIC BEARING STRIP (TYP. EA. SIDE)

ALL EXISTING REINF. STEEL EXPOSED BY DEMOLITION SHALL BE RETAINED AND REPAIRED AS DIRECTED BY THE ENGINEER.

1" DEEP VERT. SAW CUT (TYP.)

DECK AND DIAPHRAGM CONSTRUCTION TO BE MEASURED AND PAID FOR AS CONCRETE REPAIR



SECTION R-R

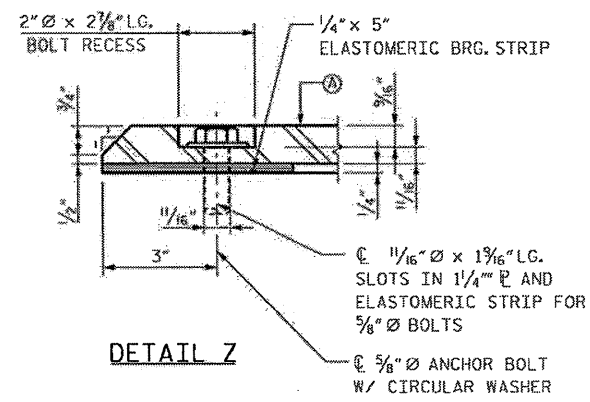
FOR TEMPORARY STEEL COVER P SEE SPECIAL PROVISIONS.

Ⓐ PROVIDE SURFACE TREATMENT FOR SKID RESISTANCE BONDED TO P

REQUIRED ULTIMATE ANCHOR BOLT RESISTANCE:

TENSION = 10.5k
SHEAR = 1.0k

FORM AND POUR DIAPHRAGM REPAIR

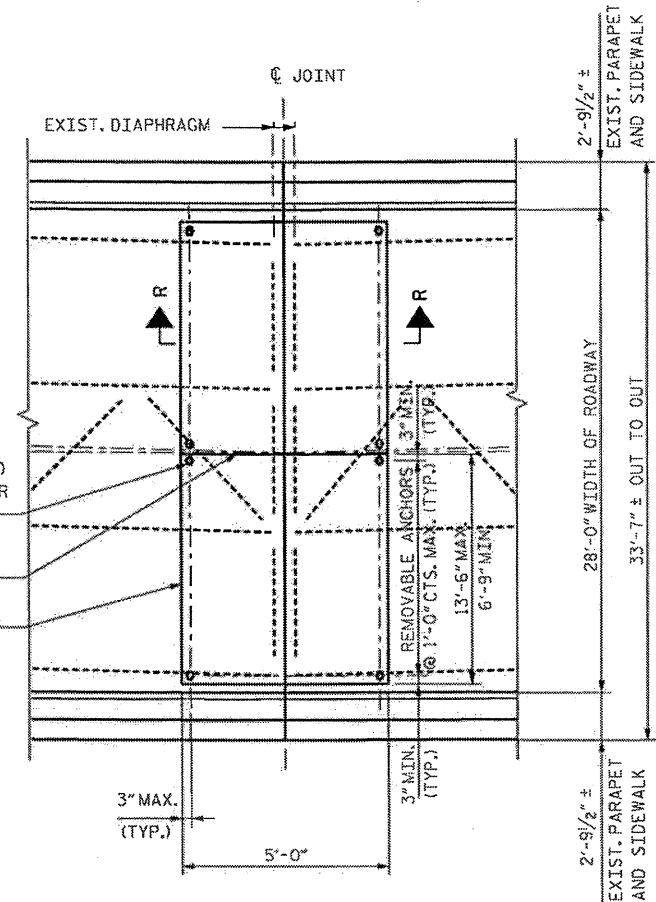


DETAIL Z

1/16" x 1 3/16" SLOTTED HOLES W/ RECESS FOR 5/8" BOLTS (TYP.)

BUTT JT. (NO WELD)

1/4" STEEL P



TEMPORARY COVER P DETAIL PLAN

NOTES:

ALL DIAPHRAGM REPAIR WORK AND EDGE BEAM CONSTRUCTION SHALL BE COMPLETE PRIOR TO DECK SCARIFICATION AND HYDR-DEMOLITION.

TEMP. COVER P IS REQ'D FOR TRAFFIC DURING CONSTRUCTION.

ALL PROPOSED REINFORCING STEEL SHALL BE EPOXY COATED.

DIAPHRAGM SHALL BE RECONSTRUCTED TO MATCH EXISTING SURFACES AS SHOWN. COSTS FOR ALL MATERIALS, LABOR AND INCIDENTALS REQUIRED FOR THIS WORK WILL BE PAID FOR AT THE UNIT PRICE BID FOR CONCRETE REPAIR.

REPLACE CONCRETE REMOVED IN DIAPHRAGM AND BUILD-UPS W/ CLASS AA CONC.

PLACE CLASS AA TO MATCH FINISHED SURFACE AFTER DEMOLITION.

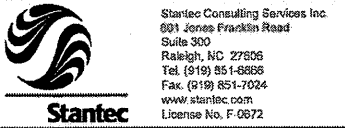
WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL NOT BE PERMITTED.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

ESTIMATED QUANTITIES

CONCRETE REPAIR
(1 DIAPHRAGM) = 15 CF
TOTAL 8 DIAPHRAGMS = 120 CF

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____



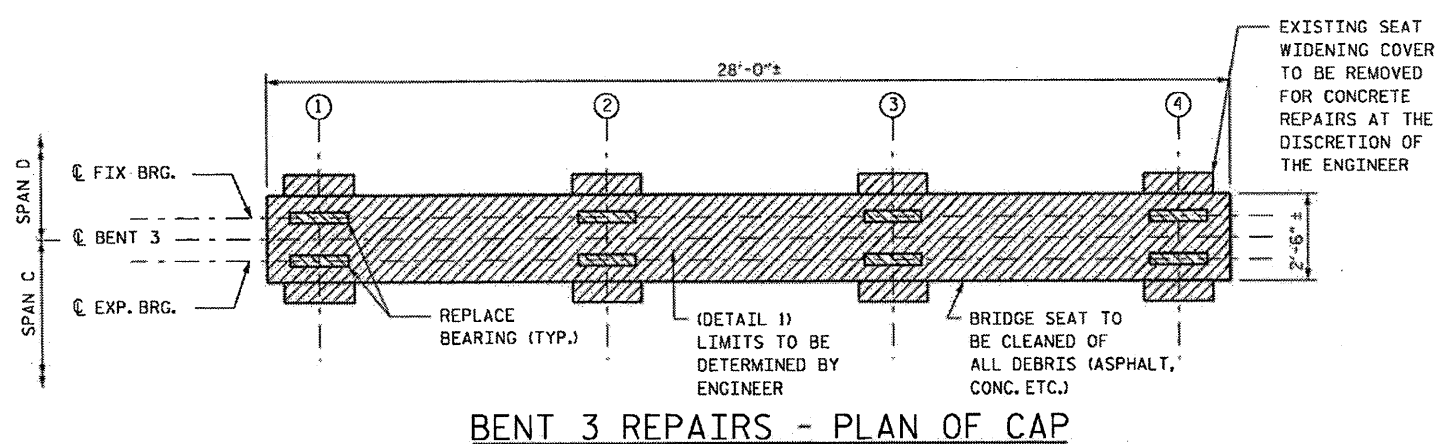
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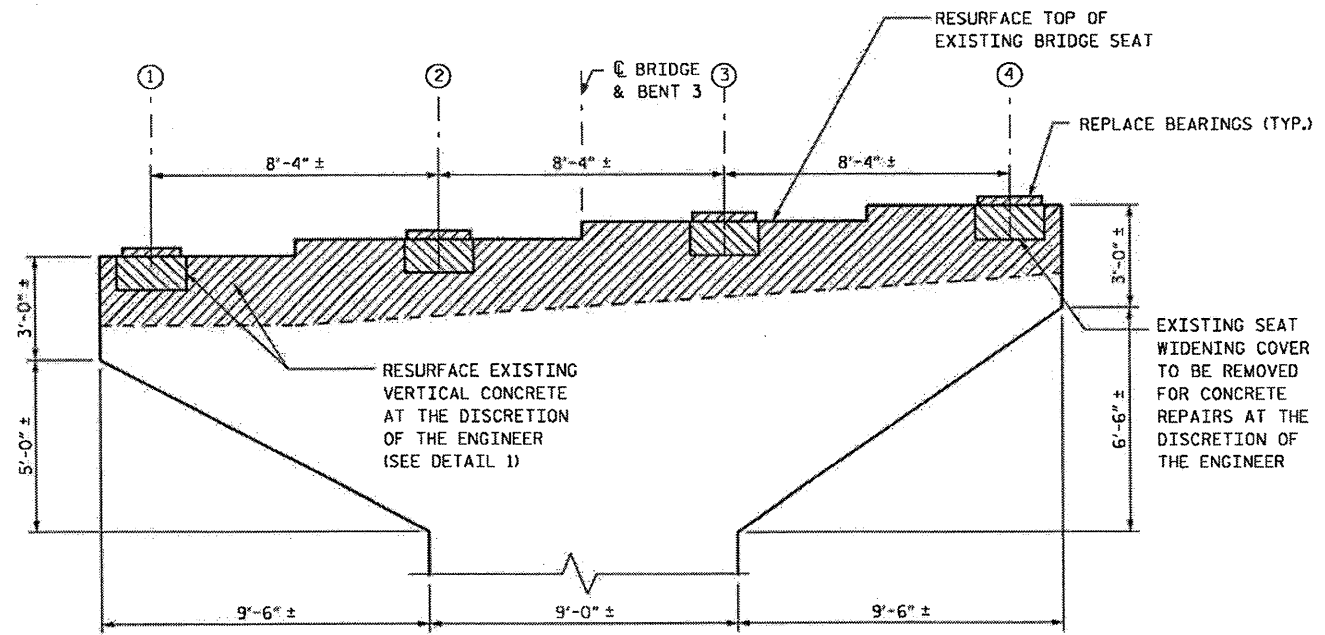


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH			
DIAPHRAGM REPAIR			
DECK REHAB. FOR BRIDGE NO. 253			
REVISIONS			
NO.	BY:	DATE:	NO.
1			3
2			4
SHEET NO.			5-26
TOTAL SHEETS			58

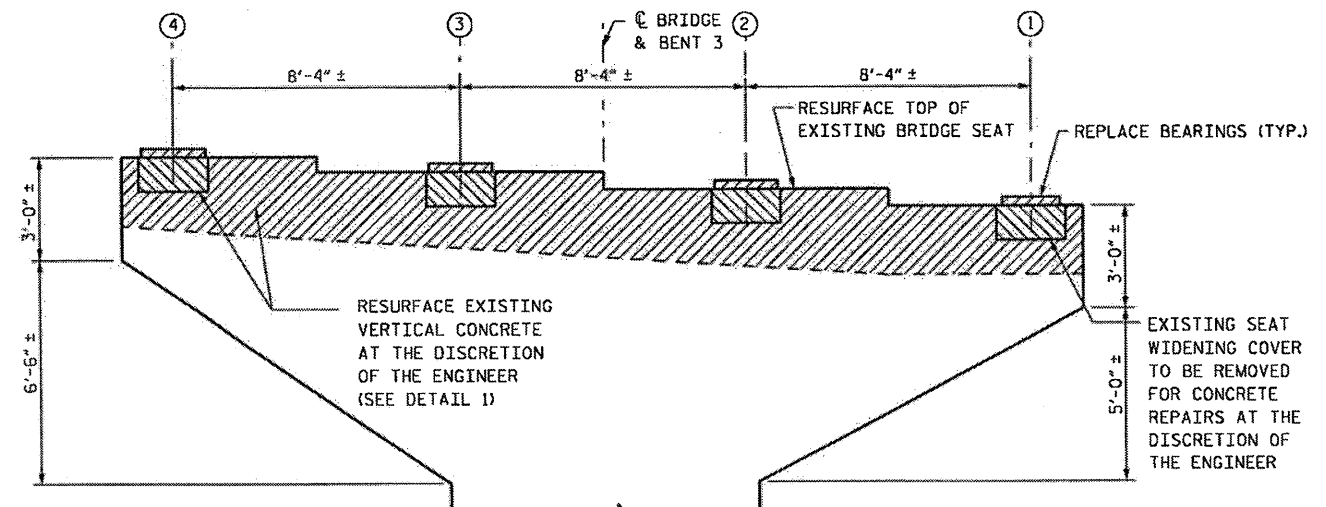
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BENT 3 REPAIRS - PLAN OF CAP

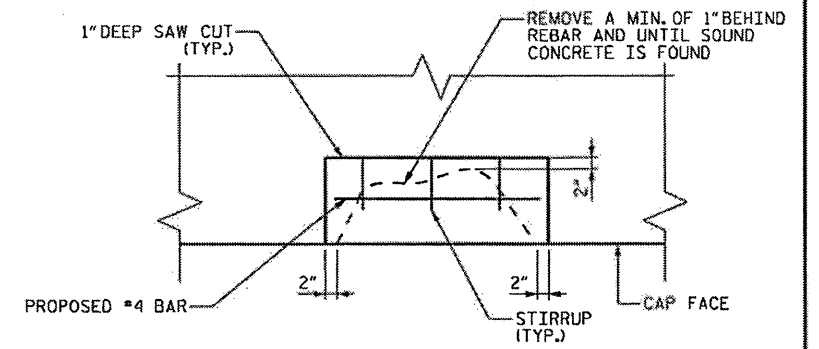


BENT 3 REPAIRS - ELEVATION (SPAN C SIDE)

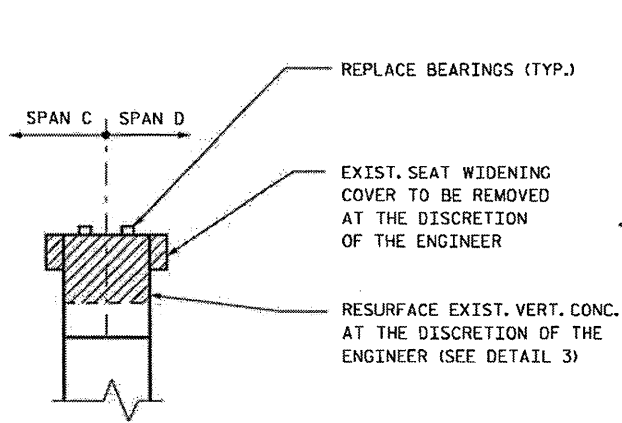


BENT 3 REPAIRS - ELEVATION (SPAN D SIDE)

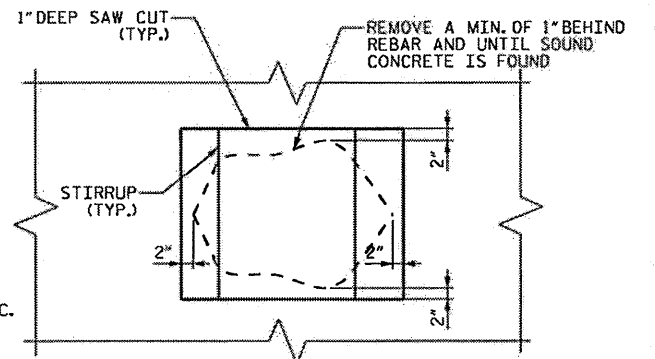
NOTES:
 SPALL AND DELAMINATED AREA DIMENSIONS SHOWN ARE APPROXIMATE.
 ALL REINFORCEMENT TO BE PROVIDED IS INCIDENTAL TO SUBSTR. REPAIR AND SHALL BE GRADE 60.
 FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 AREAS NOT OTHERWISE SPECIFIED FOR CONCRETE REPAIR MAY BE REPAIRED WITH SHOTCRETE, CLASS A CONCRETE, OR POLYMER CONCRETE AT THE CONTRACTOR'S OPTION.



TYPICAL REPAIR DETAIL 1

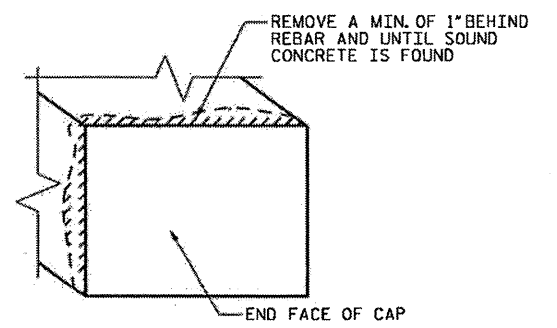


BENT 3 REPAIRS - END VIEW

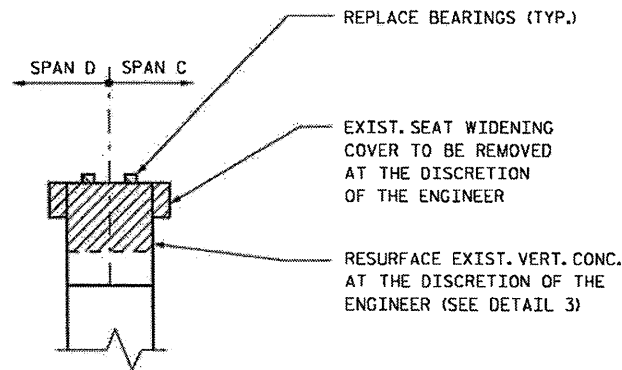


TYPICAL REPAIR DETAIL 2

TOTAL ESTIMATED QUANTITIES
 CONCRETE REPAIR 35 C.F.
 SHOTCRETE REPAIR 75 C.F.



TYPICAL REPAIR DETAIL 3



BENT 3 REPAIRS - END VIEW

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

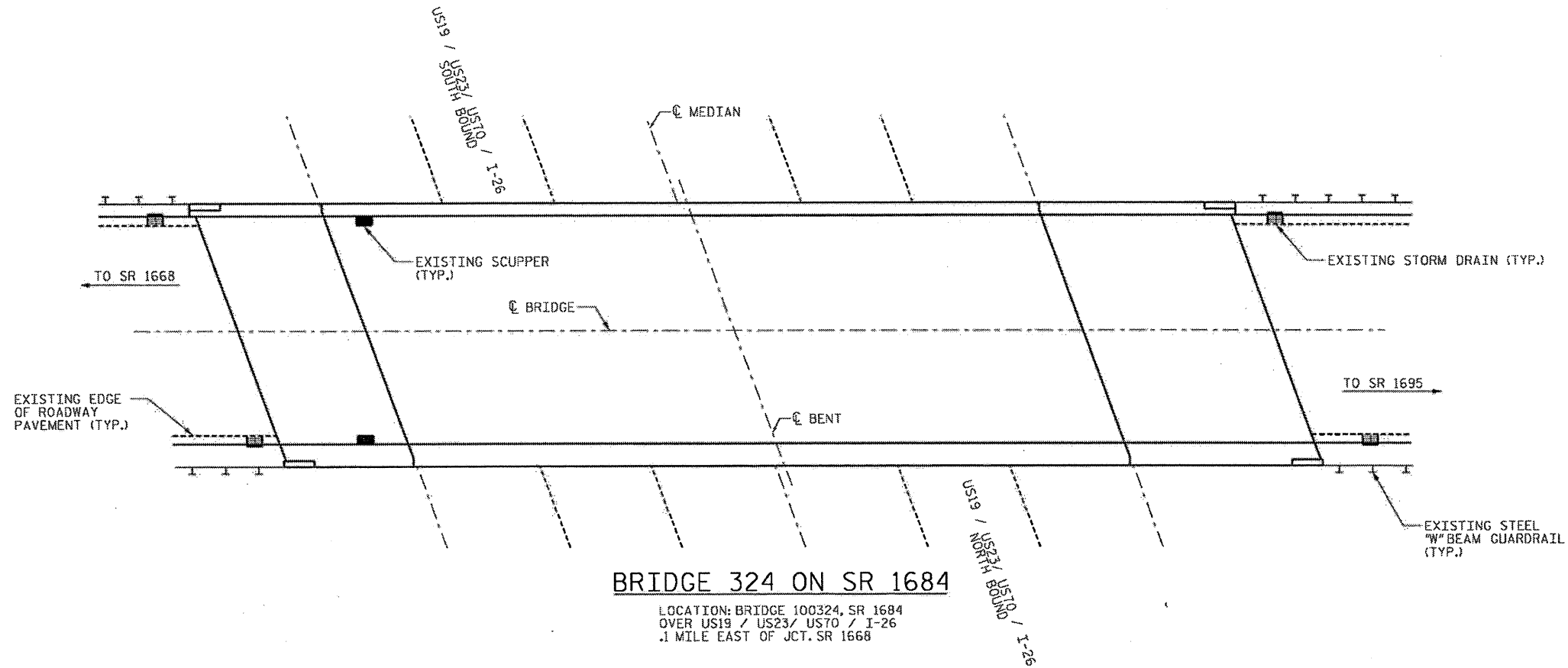
Joseph Kelvington
 SEAL 13406
 ENGINEER
 JOSEPH T. KELVINGTON

STATE OF NORTH CAROLINA		DEPARTMENT OF TRANSPORTATION		RALEIGH	
BENT 3 CONC. REPAIRS					
DECK REHAB. FOR BRIDGE NO. 253					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-27
TOTAL SHEETS					58

WBS 17BP.13.P.2 Buncombe Co. Bridge 253 Drawing 18P00253.Dwg 3/12/2012 12:38:04 PM jgelie

Stantec
 Stantec Consulting Services Inc.
 801 Jones Franklin Road
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 www.stantec.com
 License No. F-0672

DRAWN BY: B. C. MACYOWSKY DATE: 01-20-12
 CHECKED BY: J. T. KELVINGTON DATE: 01-20-12



BRIDGE 324 ON SR 1684

LOCATION: BRIDGE 100324, SR 1684
OVER US19 / US23 / US70 / I-26
.1 MILE EAST OF JCT. SR 1668

**BRIDGE 324 SR 1684
OVER US19 / US23 / US70 / I-26**

TOTAL BILL OF MATERIAL

INCIDENTAL MILLING	SCARIFYING BRIDGE DECK	PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY- VERY EARLY STRENGTH	LATEX MODIFIED CONCRETE OVERLAY- VERY EARLY STRENGTH	CLASS AA CONCRETE *	CLASS III SURFACE PREPARATION *	CLASS II SURFACE PREPARATION *	CLASS I SURFACE PREPARATION *	HYDRO-DEMOLITION OF BRIDGE DECK	FOAM JOINT SEALS	GROOVING BRIDGE FLOORS	ASHPHALT CONC. SURF. COURSE TYPE S9.5C
SO.YDS.	SO.YDS.	SO.YDS.	CU.YDS.	CU.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	LUMP SUM	SO.FT.	TON
627	1,365	1,365	87	0	0	86	0	1,365	LUMP SUM	11,160	62

* 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. NO SEPARATE MEASUREMENT OR PAYMENT FOR THESE ITEMS WILL BE MADE. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR HYDRO-DEMOLITION.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**LOCATION SKETCH
AND TOTAL
BILL OF MATERIAL**

DECK REHAB FOR BRIDGE NO. 324

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-28
1			3			TOTAL SHEETS
2			4			58

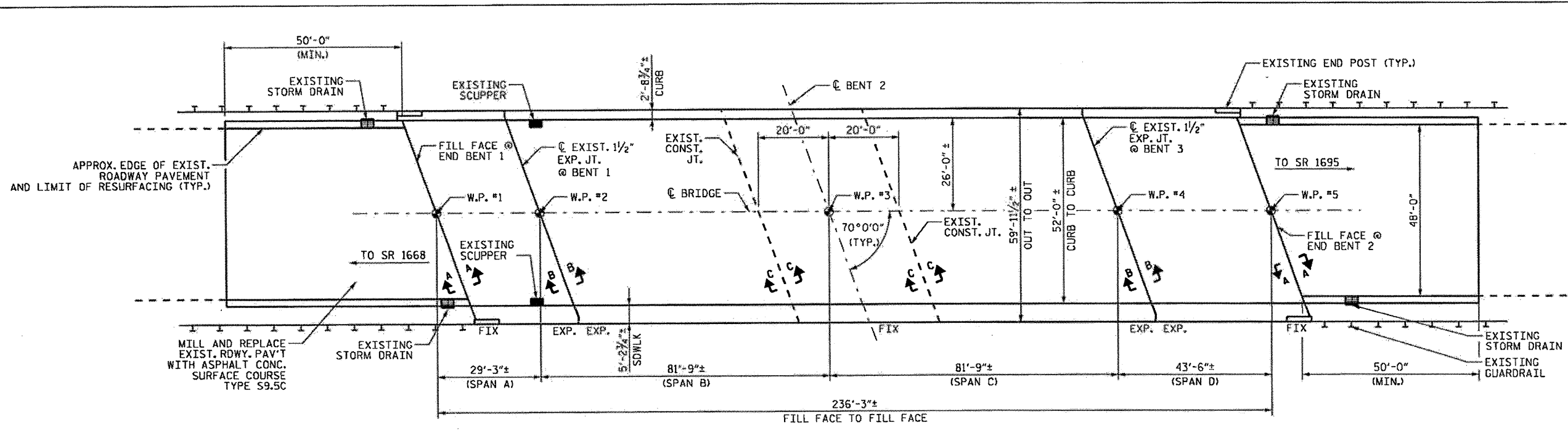
Joseph Y. Kelvington
SEAL
13406
ENGINEER
JOSEPH Y. KELVINGTON

WBS 17BP.13.P.2 Buncombe Co. Bridge 324 Drawing BP 324.L.S. BOM.dgn 3/12/2012 2:54:51 PM bellot



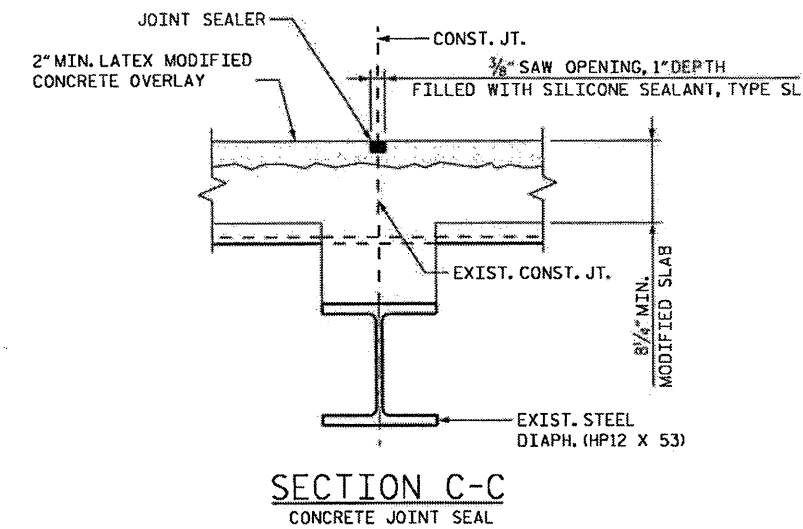
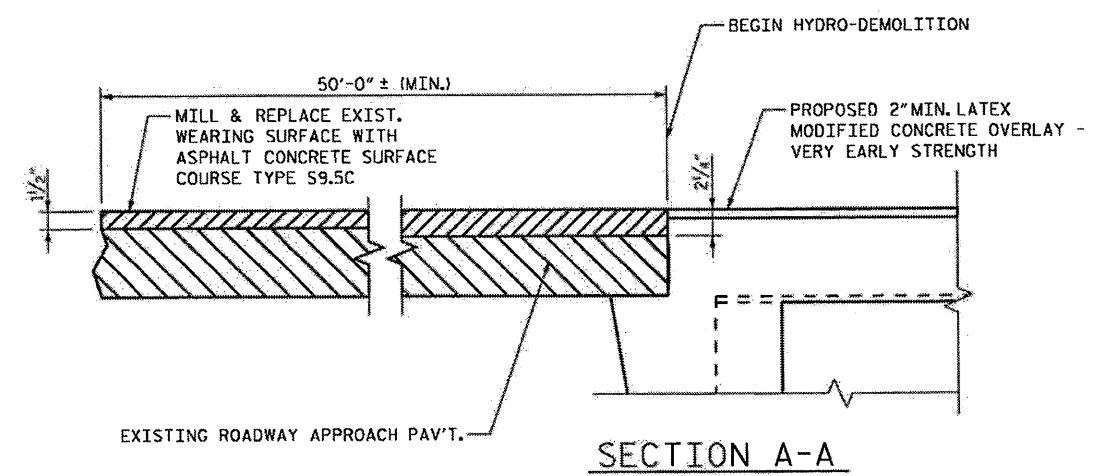
Stantec Consulting Services Inc
801 Jones Franklin Road
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Raleigh, NC 27606
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Fax. (919) 851-7024
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License No. F-0672

DRAWN BY : K.R. TYLER DATE : 11/11
CHECKED BY : J.T. KELVINGTON DATE : 11/11



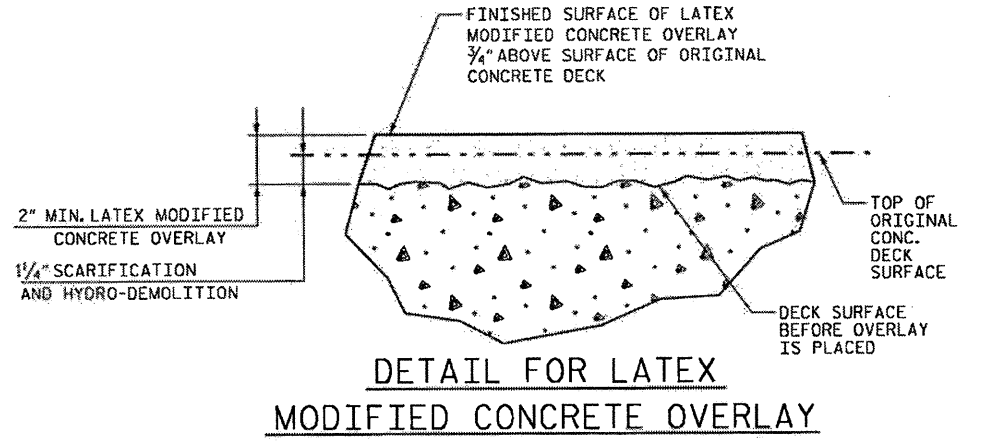
PLAN VIEW

SPANS A-D
NOTE: METAL RAILS AND POSTS ARE NOT SHOWN FOR CLARITY



NOTES:

- FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.
- THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS. SEE SPECIAL PROVISIONS.
- THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS III SURFACE PREPARATION ARE APPROXIMATE. THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK. SEE DETAIL, SHT. NO. S-31.
- LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH.
- FOR LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.
- FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.
- FOR SECTION B-B, SEE SHT. NO. S-35.



PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF BRIDGE

DECK REHAB FOR BRIDGE NO. 324

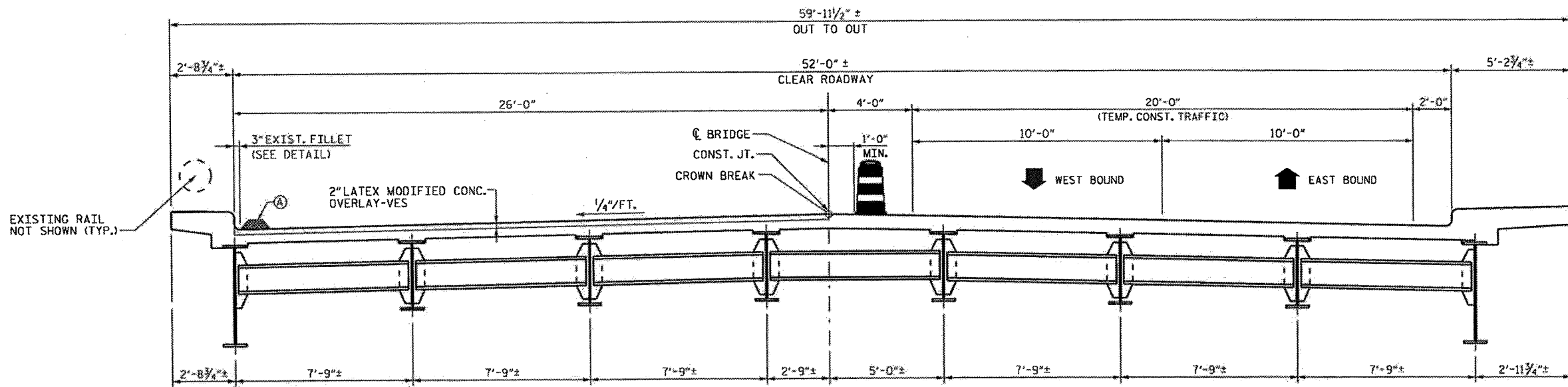
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-29	
1			3			TOTAL SHEETS	
2			4			58	

Joseph T. Kelvington
SEAL
13406
ENGINEER
JOSEPH T. KELVINGTON

12:38:03 PM Jgelle 3/12/2012 I:\17BP.13.P.2_Buncombe Co.BrIDGE 324\Drawing\BP.13.P.2_DeckPlan.dgn

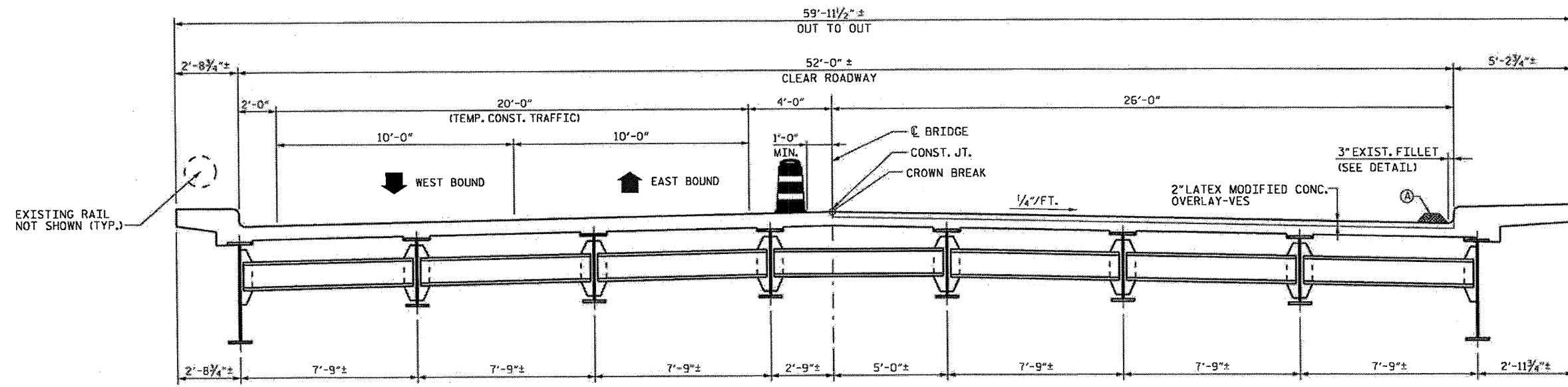


DRAWN BY: K R TYLER DATE: 11/11
CHECKED BY: J T KELVINGTON DATE: 11/11



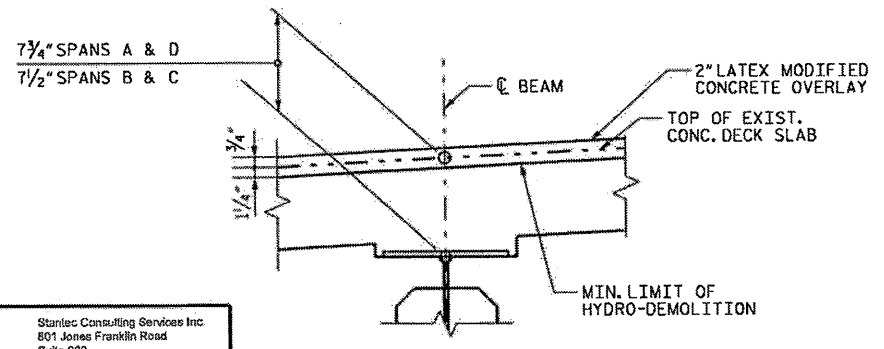
TYPICAL SECTION

NOTE: ALL DIMENSIONS SHOWN ARE APPROXIMATE.
SPAN A & D SECTION SHOWN. SPANS B & C ARE SIMILAR.

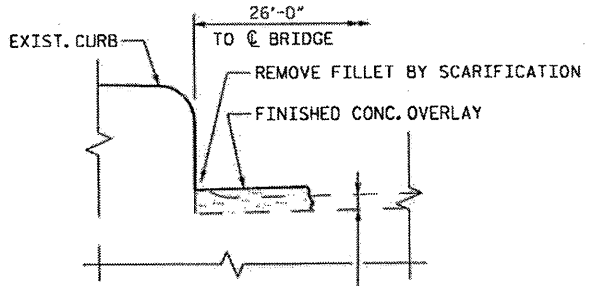


TYPICAL SECTION

NOTE: ALL DIMENSIONS SHOWN ARE APPROXIMATE.
SPAN A & D SECTION SHOWN. SPANS B & C ARE SIMILAR.



EXIST. SLAB DETAIL



1/4" HYDRO-DEMOLITION CURB DETAIL

NOTES:
WATER & CONCRETE SLURRY FROM HYDRO-DEMOLITION SHALL NOT BE ALLOWED TO DRAIN ACROSS TRAVEL LANES. CONTRACTOR SHALL PROVIDE A METHOD TO CONTROL THE WATER.
FOR TRAFFIC CONTROL AND CONSTRUCTION PHASING, SEE TRANSPORTATION MANAGEMENT PLANS.
Ⓐ DAM AS REQUIRED TO CAPTURE SLURRY AT SCUPPER AND EXPANSION JOINTS.
VES DENOTES VERY EARLY STRENGTH.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION:

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION
DECK REHAB FOR BRIDGE NO. 324

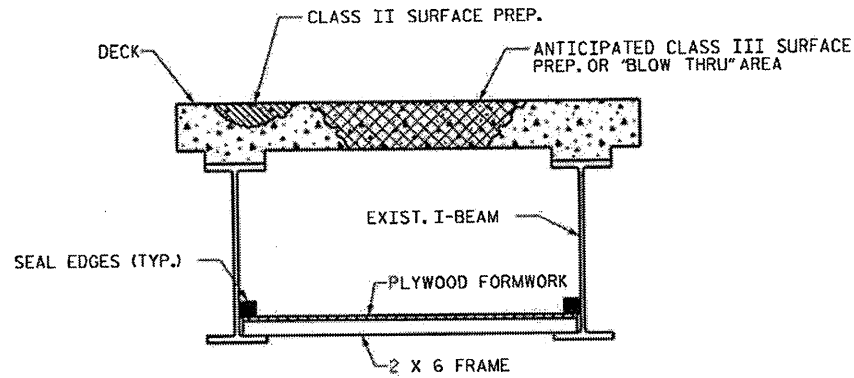
REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					58

James Kelvington
Professional Engineer
No. 13406
State of North Carolina



DRAWN BY: **K. R. TYLER** DATE: **11/11**
CHECKED BY: **J. T. KELVINGTON** DATE: **11/11**

12:38:11 PM 3/12/2012 324\Drawing\BP324_TypeSect.dgn



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

INTERIOR BAY SHOWN.
PROVIDE BLOCKING TO SET 2X6 FRAME & PLYWOOD FORMWORK LEVEL IN EXTERIOR BAYS.

NOTES:

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

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

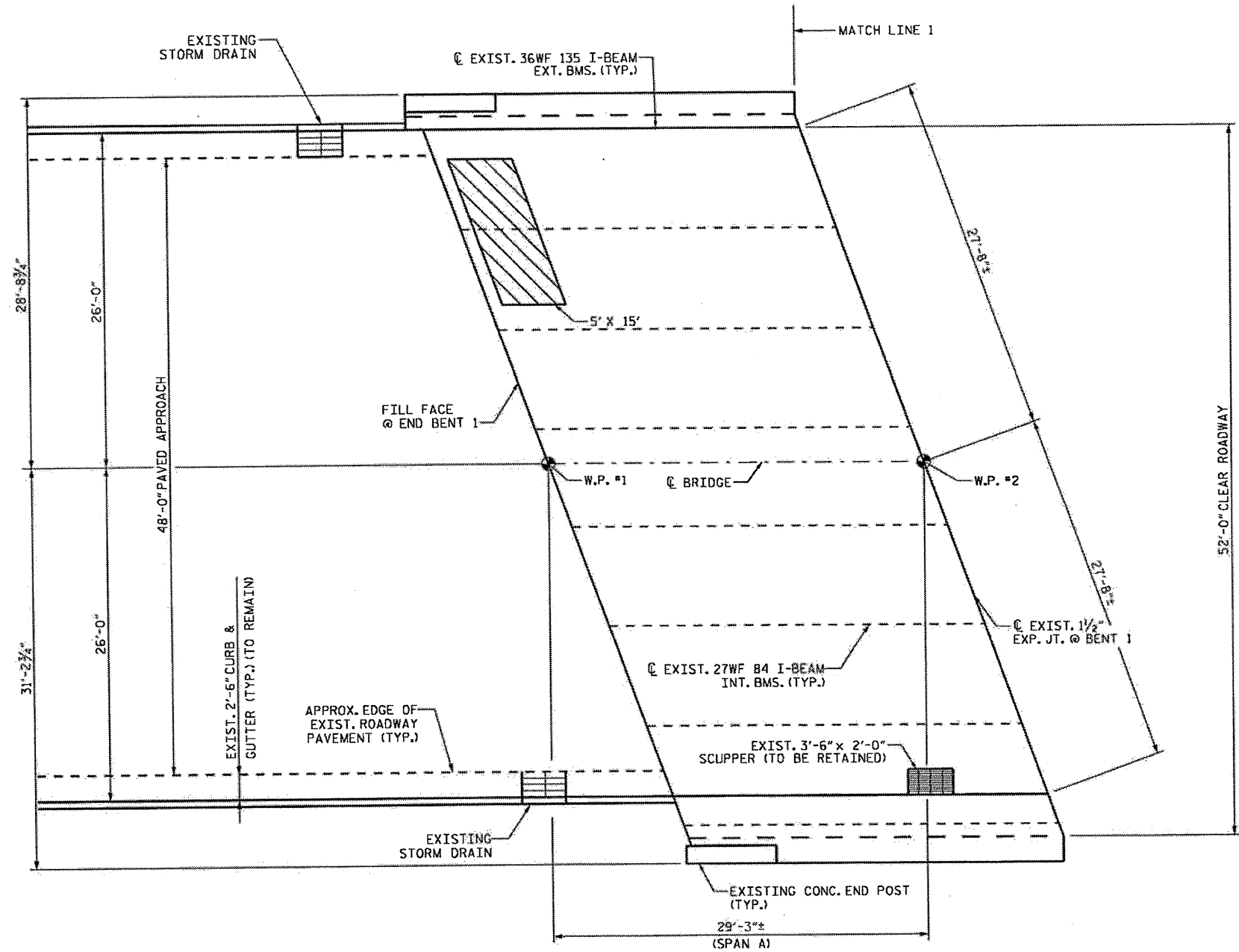
FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.

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

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW THROUGH CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLAN.



PLAN OF SPAN A - DECK REPAIRS

NOTE: EXIST. METAL RAILS AND POSTS ARE NOT SHOWN FOR CLARITY.

- CLASS II SURFACE PREPARATION
- CLASS III SURFACE PREPARATION

L X W = LENGTH OF AREA PARALLEL TO @ BRIDGE X WIDTH OF AREA PERPENDICULAR TO @ BRIDGE.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**DECK REPAIR DETAILS
SPAN A**

DECK REHAB FOR BRIDGE NO. 324

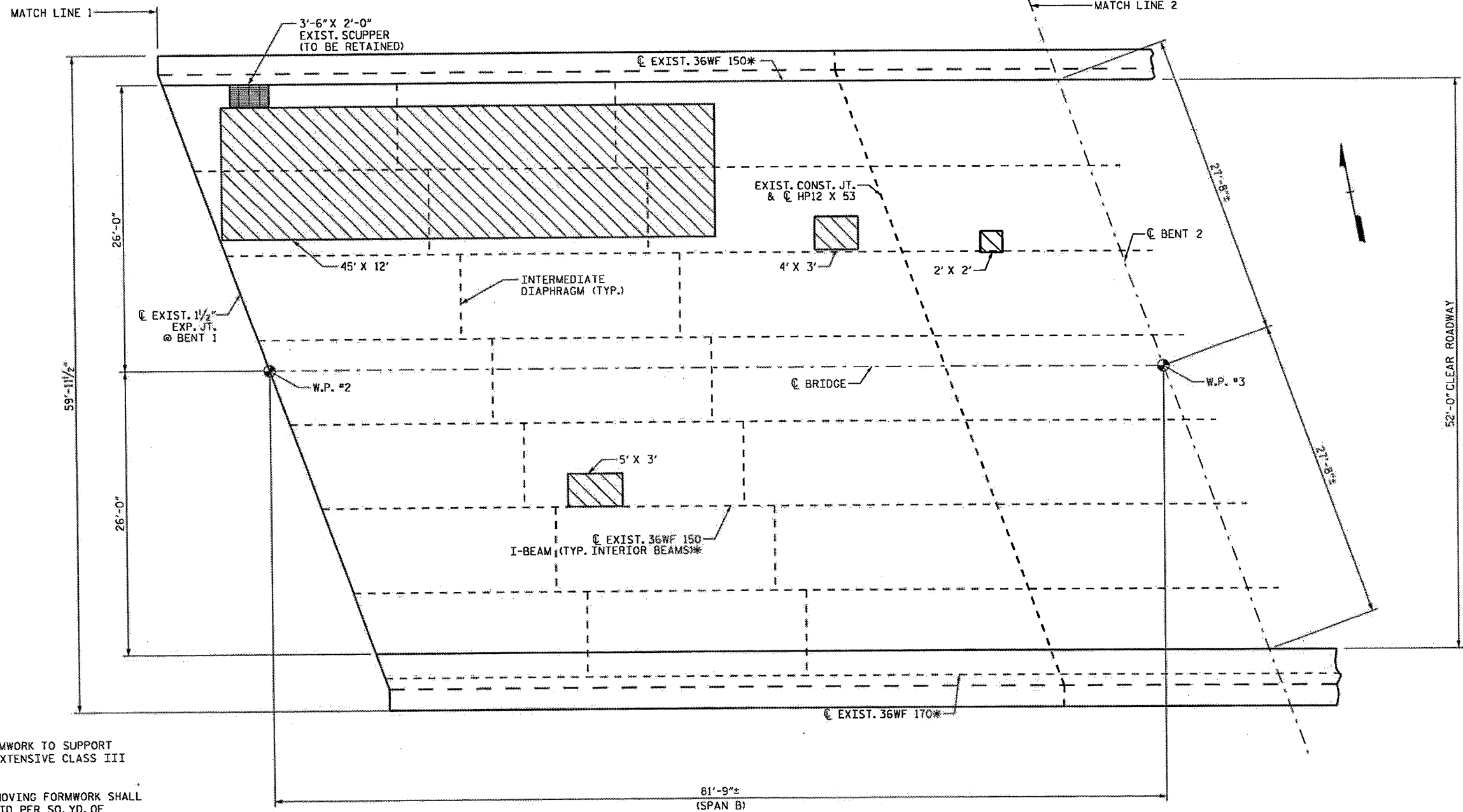
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			58
2			4			

Joseph J. Kelvington
Professional Engineer
SEAL 13406
EXPIRES 12/31/12

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DRAWN BY : K.R. TYLER DATE : 11/11
CHECKED BY : J.T. KELVINGTON DATE : 11/11

12:38:13 PM jgelle 3/12/2012 324A.Drawing\BP324.Repair\Plan.dgn



NOTES:

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

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

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.



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

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW THROUGH CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLAN.

PLAN OF SPAN B - DECK REPAIRS

NOTE: EXIST. METAL RAILS AND POSTS ARE NOT SHOWN FOR CLARITY.
 * EXISTING BEAMS ARE CONTINUOUS OVER SPANS B & C

-  CLASS II SURFACE PREPARATION
-  CLASS III SURFACE PREPARATION

L X W = LENGTH OF AREA PARALLEL TO © BRIDGE X WIDTH OF AREA PERPENDICULAR TO © BRIDGE.

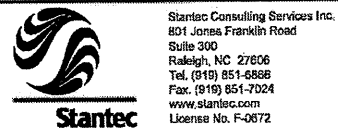
PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**DECK REPAIR DETAILS
 SPAN B**

DECK REHAB FOR BRIDGE NO. 324

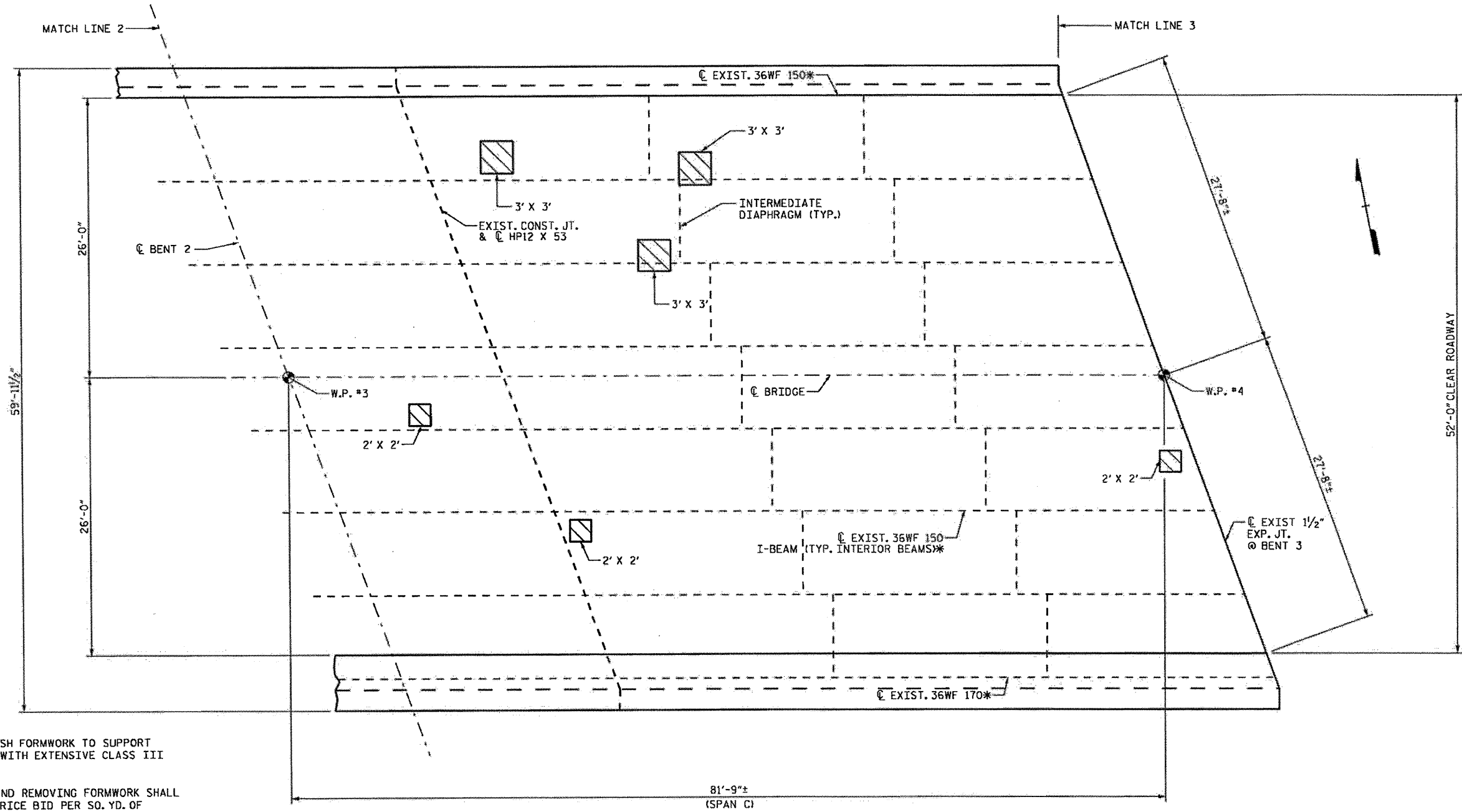
REVISIONS						SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE	S-32	
1			3			TOTAL SHEETS 58	
2			4				

Joseph I. Kelvington
 SEAL
 13406
 ENGINEER



DRAWN BY: K R TYLER DATE: 11/11
 CHECKED BY: J T KELVINGTON DATE: 11/11

17BP.13.P.2_Buncombe_Co_Bridge_324_Drawing.dwg 3/12/2012 12:38:15 PM igelle



NOTES:

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

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

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.



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

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW THROUGH CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLAN.

PLAN OF SPAN C - DECK REPAIRS

NOTE: EXIST. METAL RAILS AND POSTS ARE NOT SHOWN FOR CLARITY.
 *EXISTING BEAMS ARE CONTINUOUS OVER SPANS B & C

-  CLASS II SURFACE PREPARATION
-  CLASS III SURFACE PREPARATION

L X W = LENGTH OF AREA PARALLEL TO C BRIDGE X WIDTH OF AREA PERPENDICULAR TO C BRIDGE.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**DECK REPAIR DETAILS
 SPAN C**

DECK REHAB FOR BRIDGE NO. 324

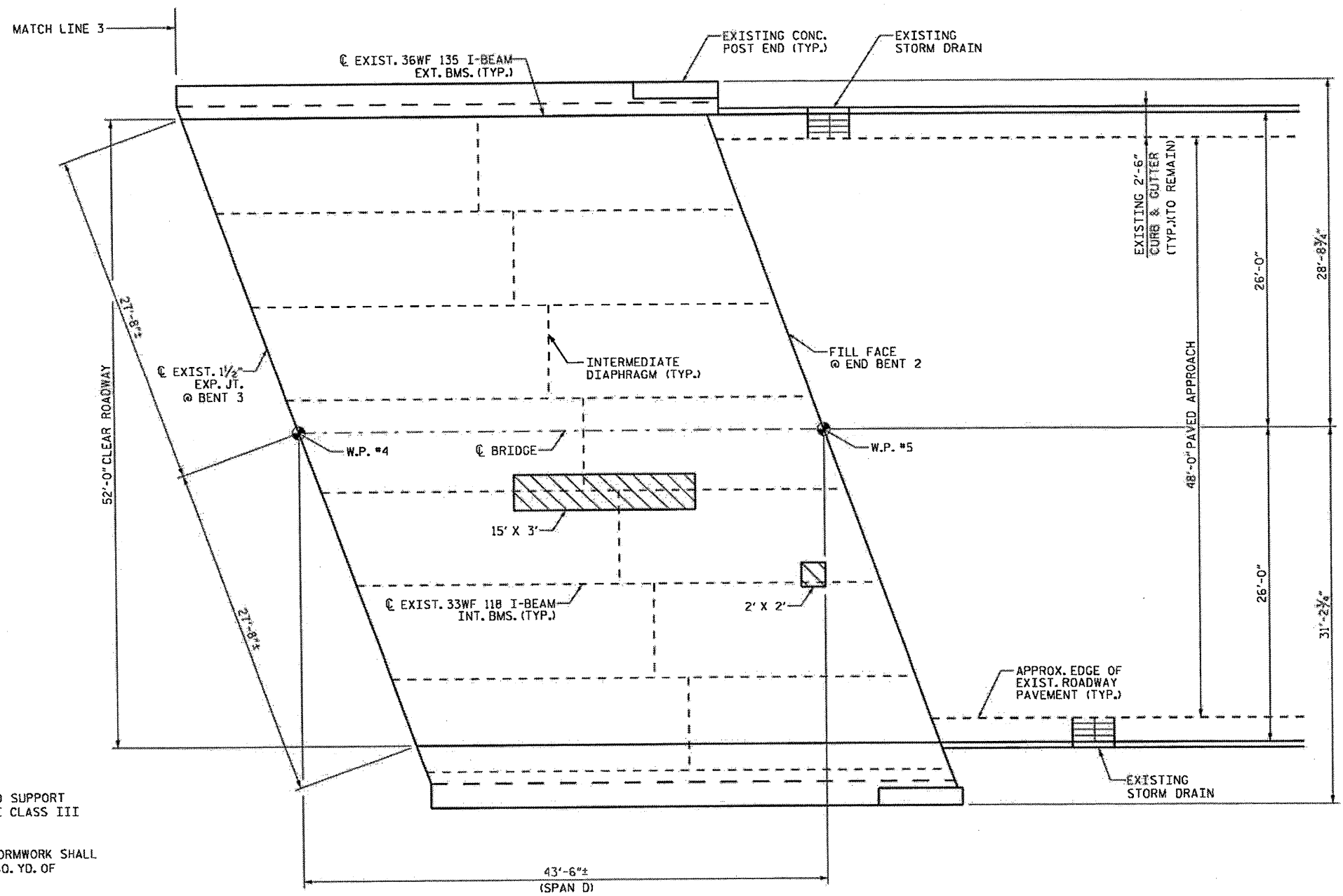
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-33	
1			3			TOTAL SHEETS	
2			4			58	

Joseph Kelvington
 SEAL 13406
 ENGINEER
 JOSEPH T. KELVINGTON

17BP.13.P.2_Buncombe Co. Bridge 324 Drawing 17BP.13.P.24_Repairs_Plan3.dgn 3/12/2012 12:38:17 PM jpette

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 www.stantec.com
 License No. F-0672

DRAWN BY : K R TYLER DATE : 11/11
 CHECKED BY : J T KELVINGTON DATE : 11/11



NOTES:

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

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

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.

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

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW THROUGH CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLAN.

PLAN OF SPAN D - DECK REPAIRS

NOTE: EXIST. METAL RAILS AND POSTS ARE NOT SHOWN FOR CLARITY.

- CLASS II SURFACE PREPARATION
- CLASS III SURFACE PREPARATION

L X W = LENGTH OF AREA PARALLEL TO @ BRIDGE X WIDTH OF AREA PERPENDICULAR TO @ BRIDGE.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 DECK REPAIR DETAILS
 SPAN D
 DECK REHAB FOR BRIDGE NO. 324

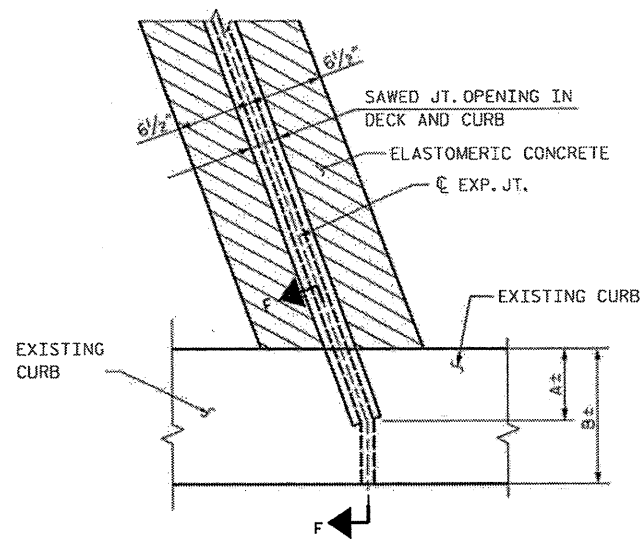
Joseph T. Kelvington
 SEAL
 13406
 ENGINEER
 JOSEPH T. KELVINGTON

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-34	
1			3			TOTAL SHEETS 58	
2			4				

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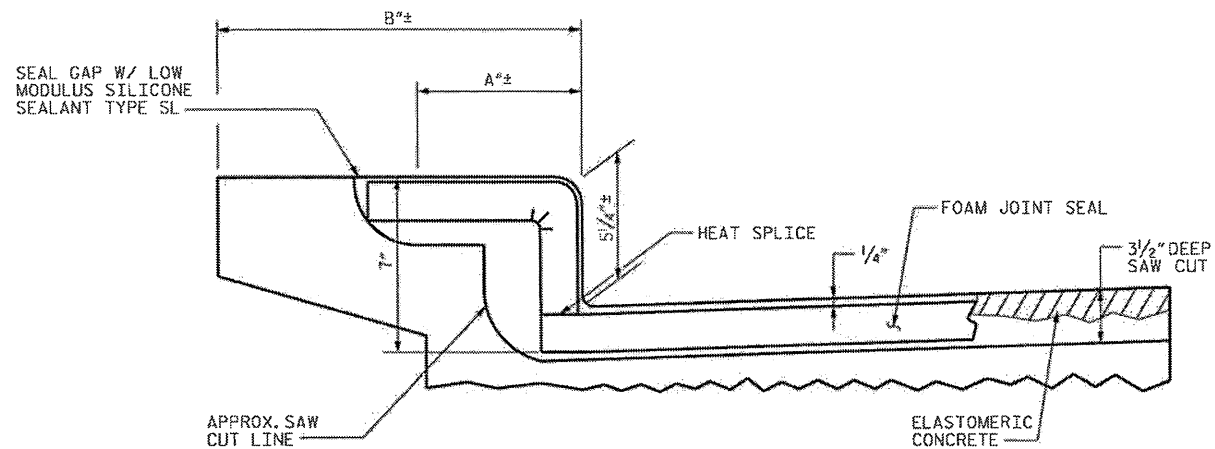
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 601 Jonas Franklin Road
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 Raleigh, NC 27606
 Tel. (919) 951-6868
 Fax. (919) 951-7024
 www.stantec.com
 License No. F-0572

DRAWN BY : K R TYLER DATE : 11/11
 CHECKED BY : J T KELVINGTON DATE : 11/11



PARTIAL PLAN @ JOINT

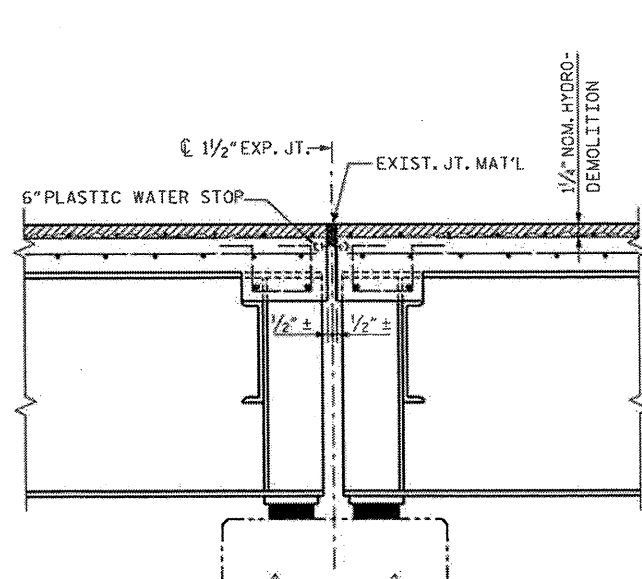
(TYP. @ BENTS 1 & 3)
EXISTING METAL RAILS AND POSTS NOT SHOWN FOR CLARITY.



SECTION F-F

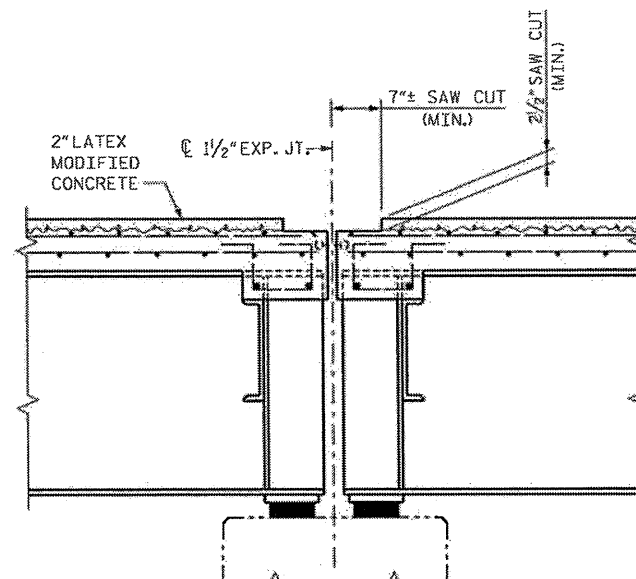
AT NORT SIDE CURB SECTION, A=1'-0", B=2'-8 3/4"
AT SOUTH SIDE CURB SECTION, A=3'-3", B=5'-2 3/4"

CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.
EXISTING METAL RAIL AND POSTS NOT SHOWN FOR CLARITY.



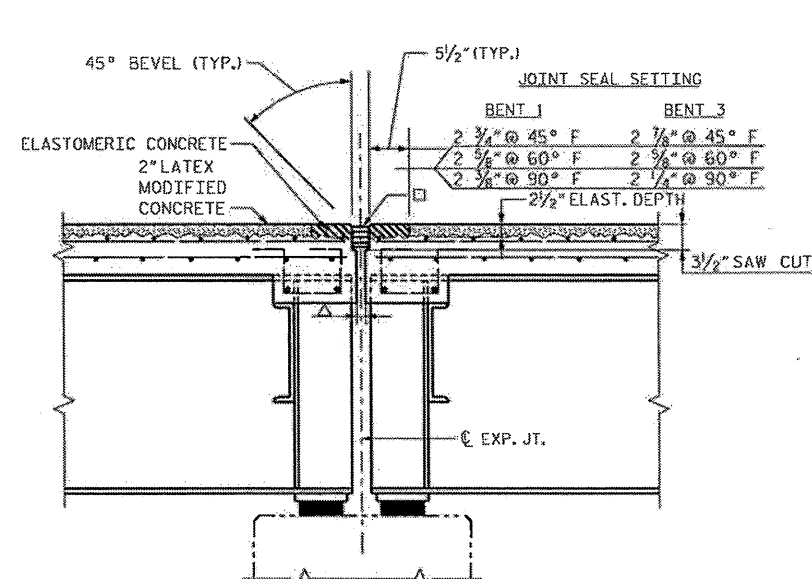
SECTION B-B

(CONCRETE REMOVAL AT EXISTING JOINT)



SECTION B-B

(LATEX MOD. CONC. OVERLAY AND CONCRETE REMOVAL FOR ELASTOMERIC CONCRETE)



SECTION B-B

(PLACEMENT OF ELASTOMERIC CONCRETE AND SAW CUT FOR FOAM JOINT SEAL)

ELASTOMERIC CONCRETE	
LOCATION	QTY
BENT 1	12.0 C.F.
BENT 3	12.0 C.F.

TOTAL ELASTOMERIC CONC. = 24.0 C.F.
TOTAL ELASTOMERIC CONC. = 0.9 C.Y.

PROJECT NO. WBS 17BP.13.P.2

BUNCOMBE COUNTY

STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

INTERIOR BENT JOINT SEAL DETAILS

DECK REHAB FOR BRIDGE NO. 324

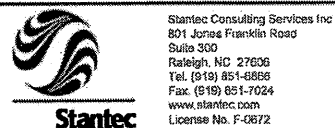
REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	

S-35
1514 SHEETS
58

*FROM BEST AVAILABLE INFORMATION.
NOTE: RETAIN ALL EXIST. REINF. STEEL. CLEAN AND REPAIR AS REQ'D.
ALL EXPOSED EXISTING JOINT SEAL MATERIALS ARE TO BE COMPLETELY REMOVED.

□ USE 3.4375" X 2.5" UNCOMPRESSED FOAM JT. SEAL MATERIAL.
△ 1/2" EXISTING OPENING @ BENT 1 & BENT 3.

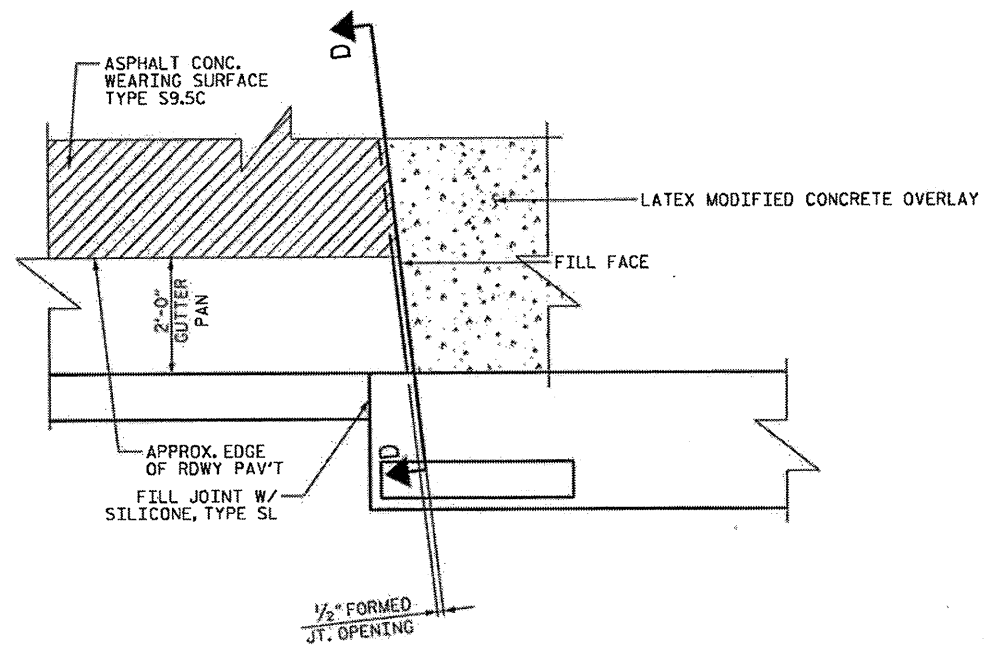
Joseph T. Kelvington
Professional Engineer
No. 313406
State of North Carolina



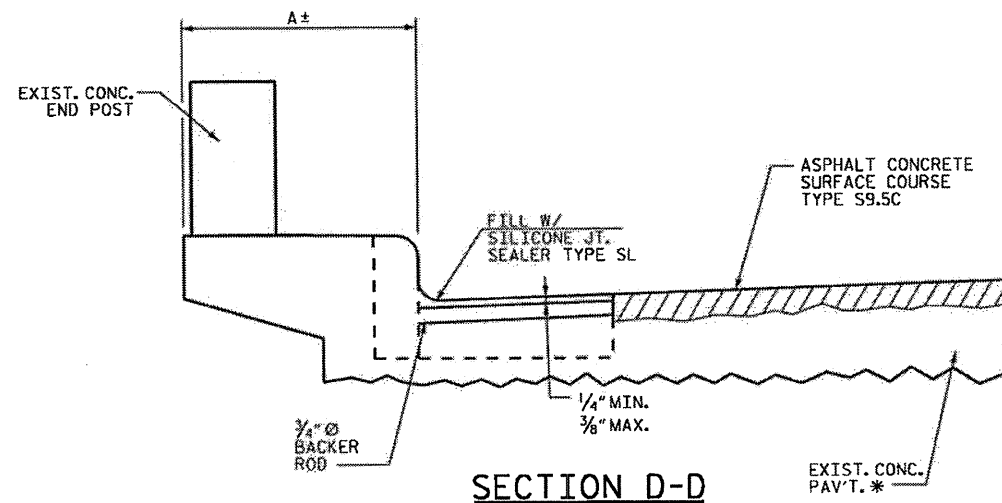
DRAWN BY: K R TYLER DATE: 11/11
CHECKED BY: J T KELVINGTON DATE: 11/11

2011WBS 17BP.13.P.2_Buncombe Co. Bridge 324_Drawing BR324_Det.dgn 3/12/2012 1:28:54 PM jgelle

12/30/24 PM Jgd/ie
 3/12/2012
 324.Drawing\324.Det2.dgn
 WBS 17BP.13.P.2 Buncombe Co\Buncombe Co\Bridges 324.Det2.dgn



DETAIL D
 PLAN AT END BENT 1
 (END BENT 2 SIMILAR)
 GUARDRAILS NOT SHOWN FOR CLARITY.



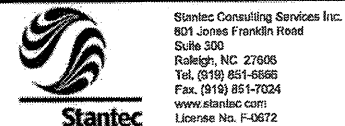
SECTION D-D

CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.
 * BITUMINOUS PAV'T. IS ASSUMED.
 AT NORTH SIDE CURB SECTION, A=2'-8 3/4"
 AT SOUTH SIDE CURB SECTION, A=5'-2 3/4"

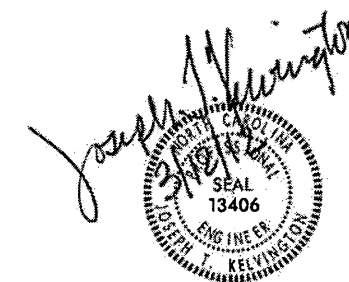
NOTES:

3/4" Ø BACKER ROD SHALL BE CLOSED CELL EXPANDED POLYETHYLENE FOAM TYPE L. NO SEPARATE PAYMENT FOR LABOR, MATERIALS, AND EQUIPMENT NEEDED TO CONSTRUCT CONCRETE JOINT SEALS SHALL BE MADE. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE SEVERAL PAY ITEMS.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____



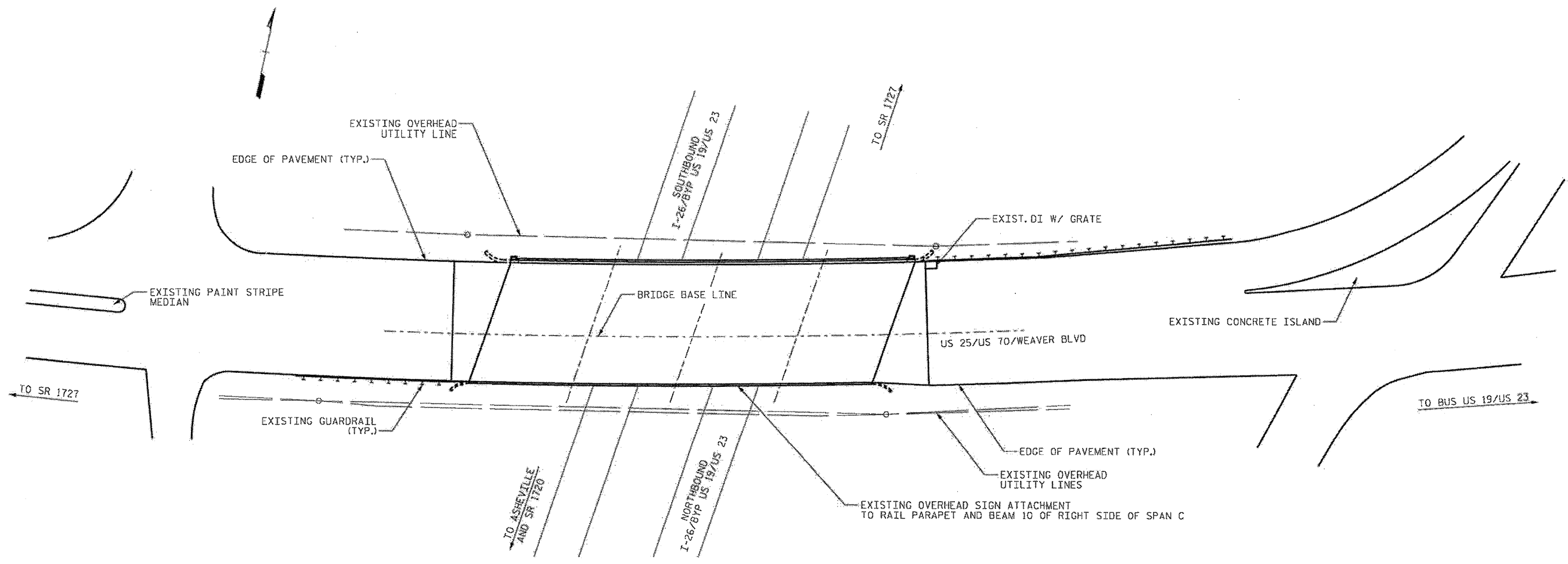
DRAWN BY : K.R. TYLER DATE : 11/11
 CHECKED BY : J.T. KELVINGTON DATE : 11/11



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
END BENT JOINT SEAL DETAILS

DECK REHAB FOR BRIDGE NO. 324

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-36
1			3			TOTAL SHEETS
2			4			58



BRIDGE 382 ON WEAVER BLVD

LOCATION: BRIDGE 100382, US 25/US 70 OVER BYPASS US 19/US 23
0.4 MILES SOUTH OF JUNCTION SR 1727

TOTAL BILL OF MATERIAL

SHOULDER RECONSTRUCTION	INCIDENTAL MILLING	CONCRETE SURFACE COURSE, TYPE S9.5C	REMOVE AND RESET GUARDRAIL	SCARIFYING BRIDGE DECK	CLASS I * SURFACE PREPARATION	CLASS II * SURFACE PREPARATION	CLASS III * SURFACE PREPARATION	HYDRO-DEMOLITION OF BRIDGE DECK	CLASS AA CONCRETE	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	FOAM JOINT SEALS	GROOVING BRIDGE FLOORS	CONCRETE REPAIRS	SHOTCRETE REPAIRS	SPAN JACKING BUNCOMBE CO. BRIDGE #382
SMI	SO.YDS.	TONS	L.F.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	CU.YDS.	CU.YDS.	SO.YDS.	LUMP SUM	SO.FT.	CU.FT.	CU.FT.	EA.
0.038	800	56	100	2,025	0	85	4	2,025	1	99	2,025	LUMP SUM	16,597	273	98	3

* QUANTITIES ARE ESTIMATES FROM BEST AVAILABLE DATA, AND SHOULD BE CONSIDERED FOR INFORMATIONAL PURPOSES ONLY. IF ANY CLASS III LOCATIONS ARE ENCOUNTERED PRIOR TO OR DURING HYDRO-DEMOLITION, SEE "TYP. BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL. NO SEPARATE MEASUREMENT OR PAYMENT FOR THESE ITEMS WILL BE MADE. ALL COSTS FOR THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID FOR HYDRO-DEMOLITION.

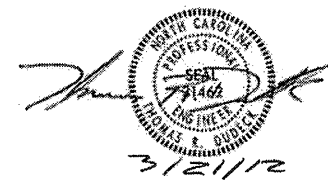
PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LOCATION SKETCH AND
TOTAL BILL OF MATERIAL

DECK REHAB. FOR BRIDGE NO. 382

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			5-37
2			4			58

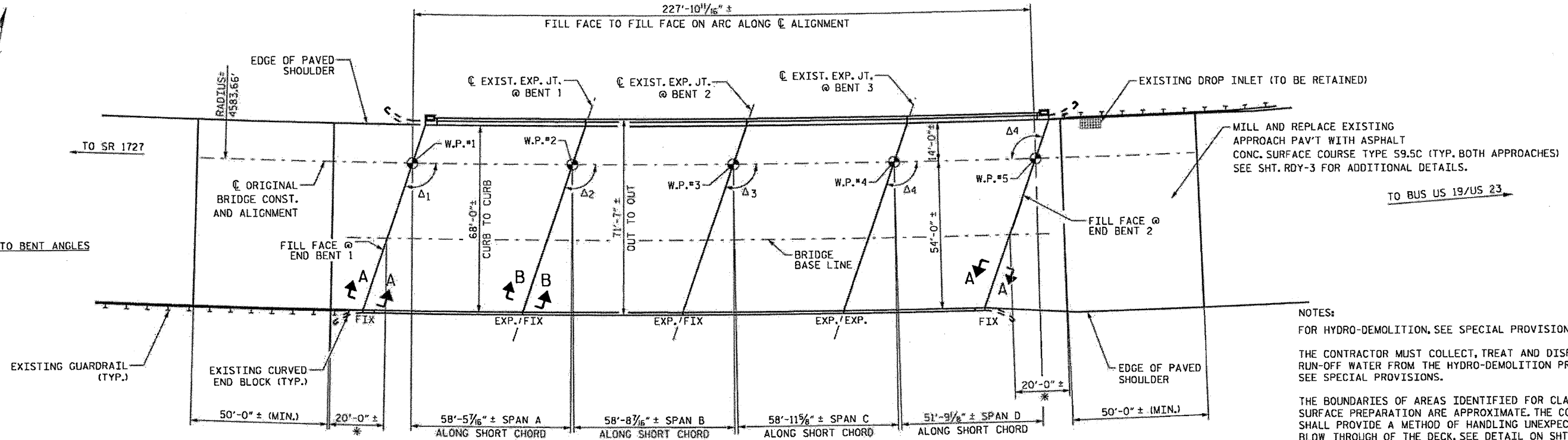


WBS 17BP.13.P.2 Buncombe Co. Bridge 382 Drawing BPO0382.LS.30M.dgn 3/20/2012 4:22:07 PM foudtech



DRAWN BY : S L BRISCOE DATE : 11/11
CHECKED BY : J I KELVINGTON DATE : -/11

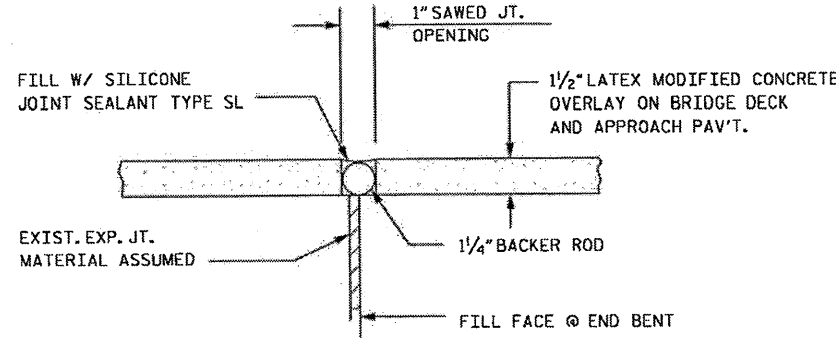
SHORT CHORD TO BENT ANGLES
 Δ_1 108°17'03"
 Δ_2 109°00'59"
 Δ_3 109°45'07"
 Δ_4 110°26'38"



PLAN VIEW OF SPANS A, B, C & D

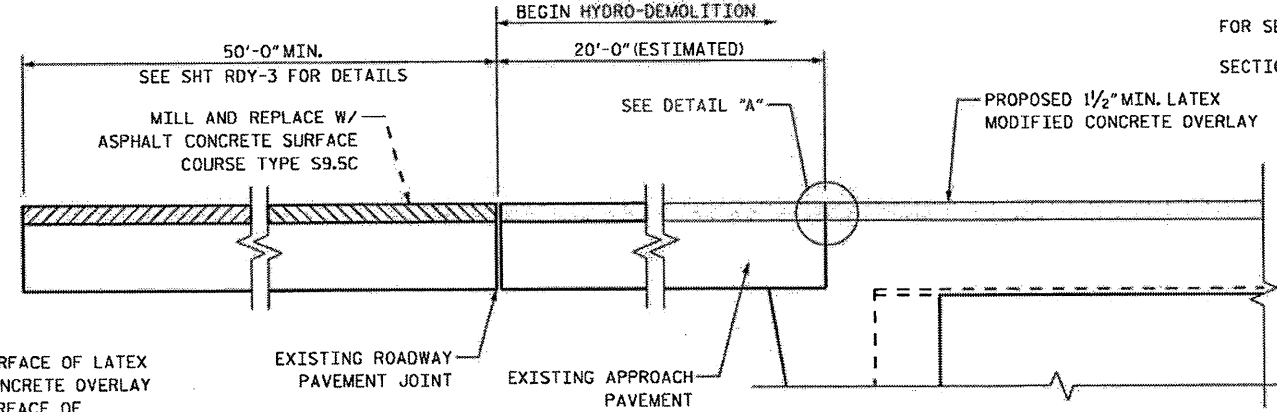
*EXISTING CONC. APPROACH PAVEMENT. LENGTH IS APPROXIMATE.
 NOTE: ALL HORIZONTAL DIMENSIONS ARE RADIAL OR ARC DIMENSIONS UNLESS NOTED OTHERWISE.

NOTES:
 FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.
 THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS. SEE SPECIAL PROVISIONS.
 THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS III SURFACE PREPARATION ARE APPROXIMATE. THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK. SEE DETAIL ON SHT. S-40.
 LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH.
 FOR LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.
 FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.
 FOR SECTION B-B, SEE SHT. NO. S-44.
 SECTION B-B IS TYPICAL AT BENTS 1, 2 & 3.

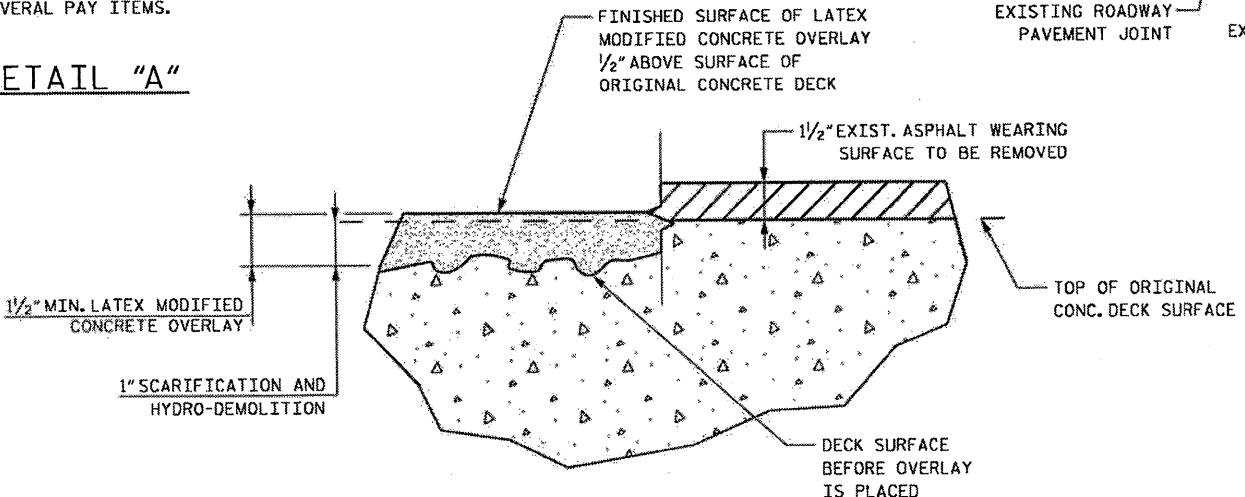


NOTES:
 1/4" \odot BACKER ROD SHALL BE CLOSED CELL EXPANDED POLYETHYLENE FOAM TYPE L. NO SEPARATE PAYMENT FOR LABOR, MATERIALS, AND EQUIPMENT NEEDED TO CONSTRUCT CONCRETE JOINT SEALS SHALL BE MADE. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE SEVERAL PAY ITEMS.

DETAIL "A"



SECTION A-A



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

PROJECT NO. WBS 17BP.13.P.2
 BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS

DECK REHAB. FOR BRIDGE NO. 382

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-38	
1			3			TOTAL SHEETS 58	
2			4				

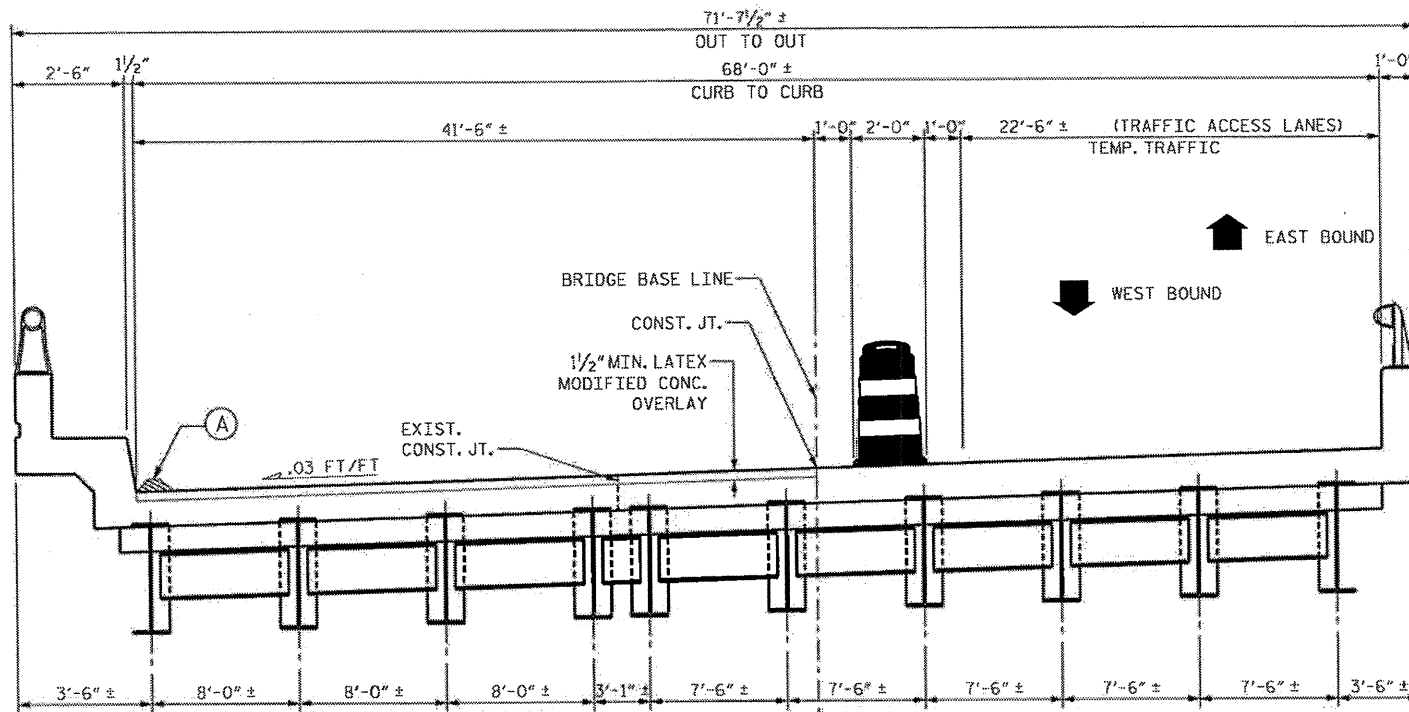
Joseph T. Kelvington

Professional Engineer Seal
 13406
 JOSEPH T. KELVINGTON

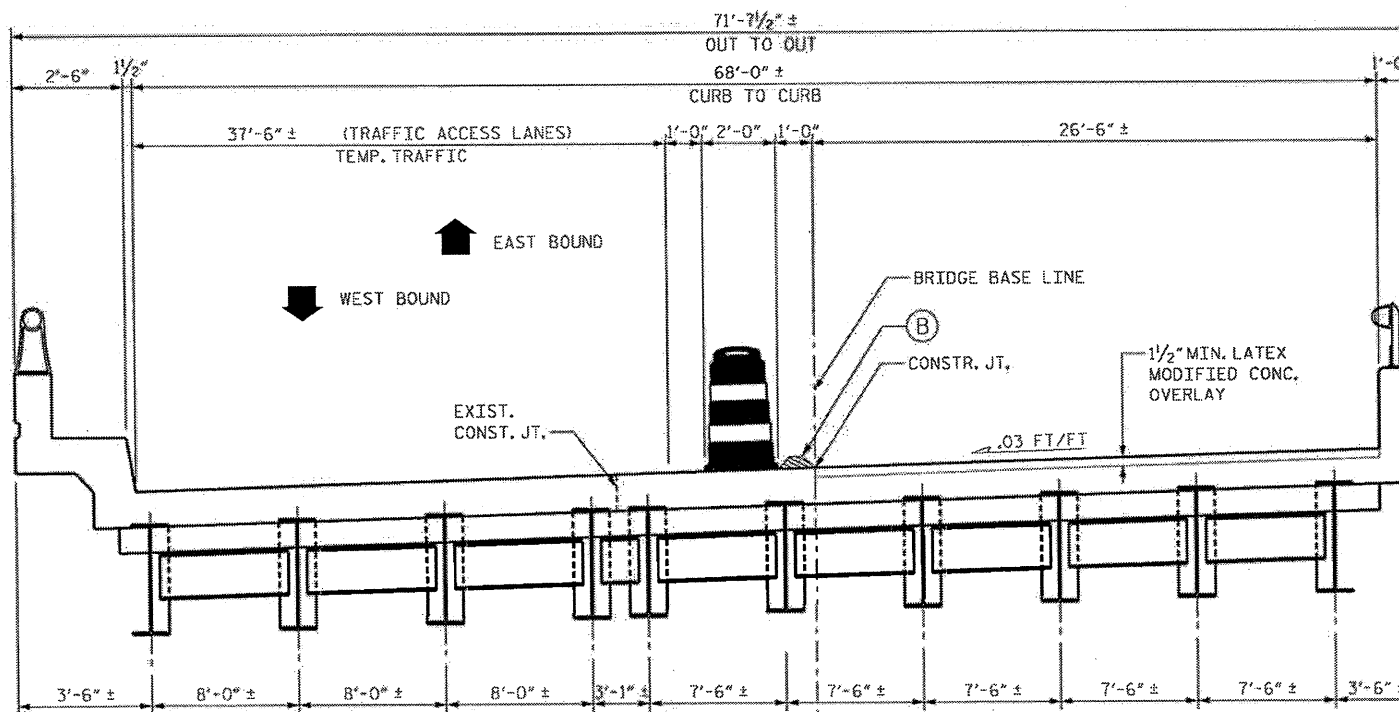
17BP.13.P.2_Buncombe Co. Bridge 382_Drawing\BPP100382_DeckPlan.dgn 3/27/2012 12:38:28 PM igelle



DRAWN BY: S. I. BRISCOE DATE: 11/11
 CHECKED BY: J. T. KELVINGTON DATE: -/11



TYPICAL SECTION
SPANS A-D



TYPICAL SECTION
SPANS A-D

NOTES:

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

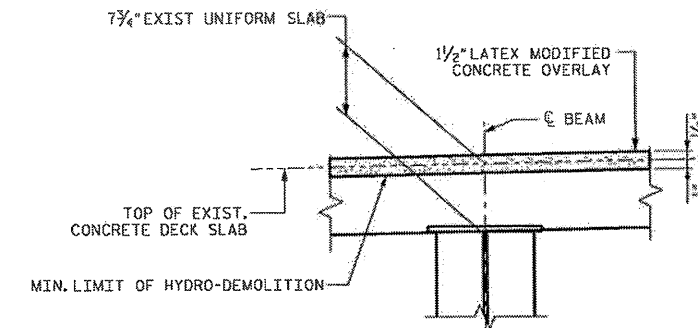
FOR TRAFFIC CONTROL AND CONSTRUCTION PHASING, SEE TRANSPORTATION MANAGEMENT PLANS.

- (A) DAM AS REQUIRED TO CAPTURE CONCRETE SLURRY @ DRAINS AND EXPANSION JOINTS.
- (B) DAM CONTINUOUSLY THROUGH WORK ZONE TO CAPTURE RUNOFF.

ALL DIMENSIONS ARE RADIAL UNLESS NOTED OTHERWISE.

ALL DIMENSIONS SHOWN ARE APPROXIMATE.

LATEX MODIFIED CONCRETE SHALL BE VERY EARLY STRENGTH.



EXIST. SLAB BUILDUP

PROJECT NO. WBS 17BP.13.P.2

BUNCOMBE COUNTY

STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION

DECK REHAB. FOR BRIDGE NO. 382

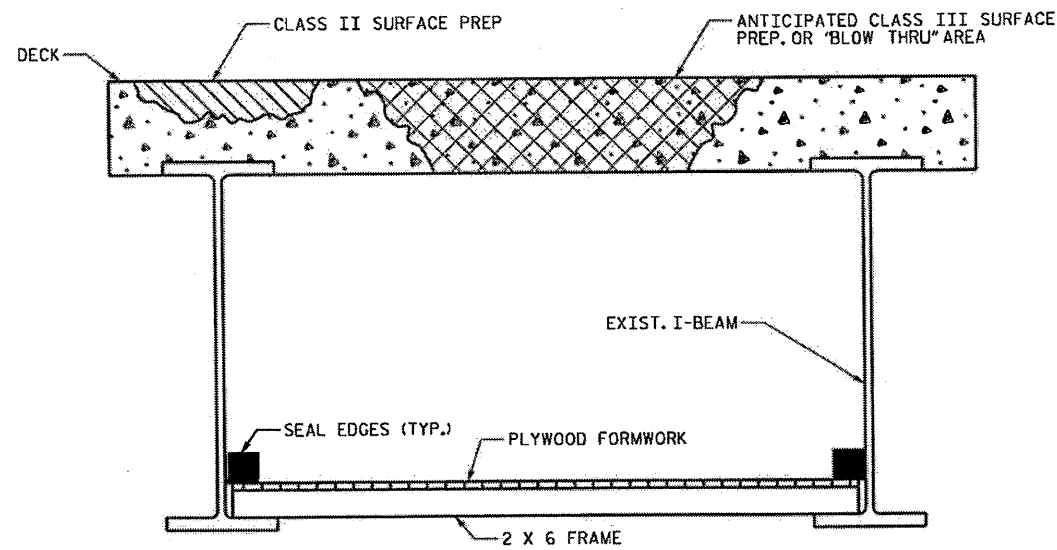
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-39
1			3			TOTAL SHEETS
2			4			58

Joseph T. Kelvington
Professional Engineer
No. 13406

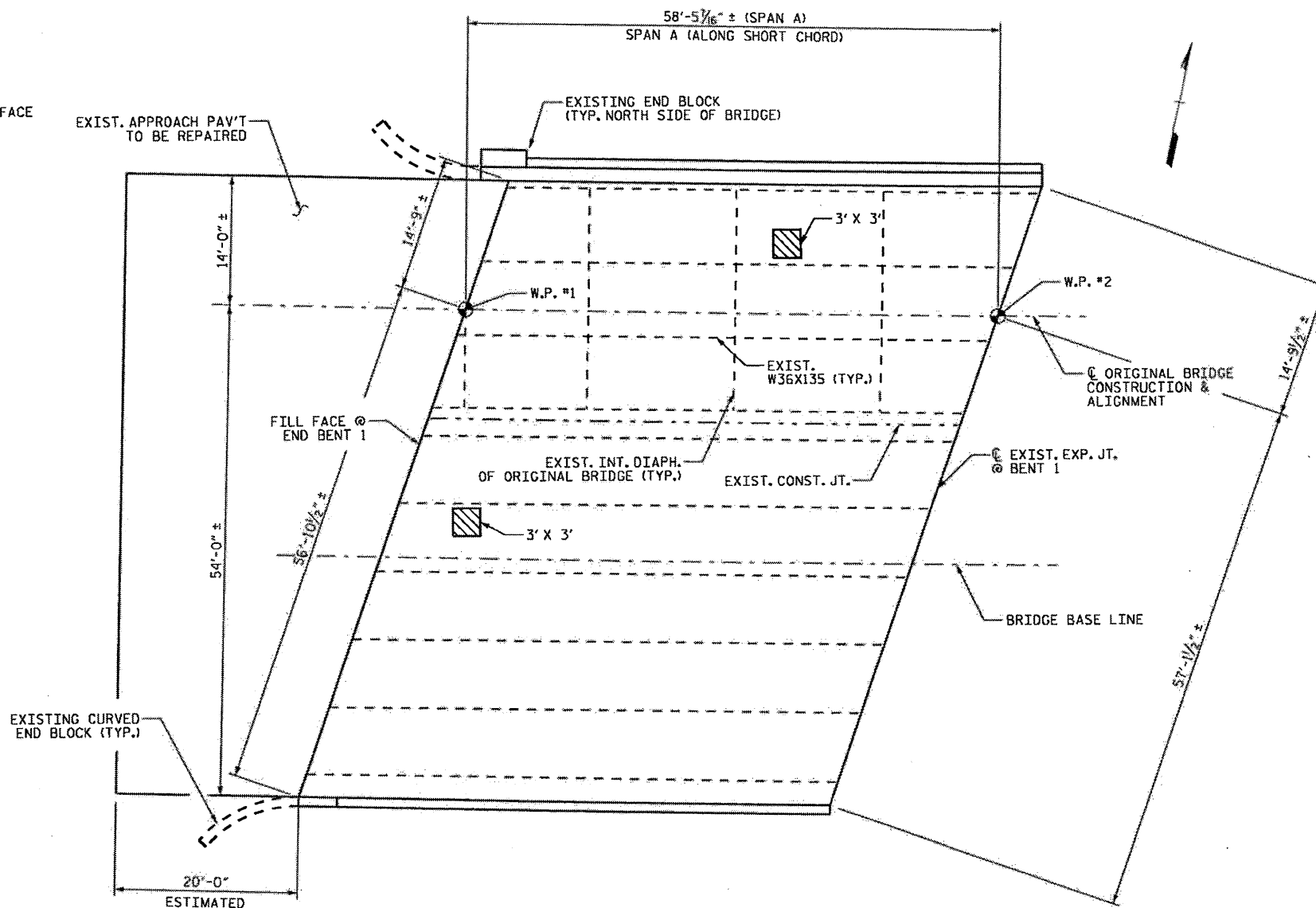


DRAWN BY: S. I. BRISCOE DATE: 11/11
CHECKED BY: J. T. KELVINGTON DATE: -/11

15 17BP.13.P.2_Buncombe Co.Buncombe Co. Bridge_382.Drwing_8/10/03.dgn 3/12/2012 11:29:56 PM jgelle



TYP. "BLOW-THRU" CONTAINMENT AND FORMWORK



PLAN OF SPAN A - DECK REPAIRS

NOTE: ALL DIMENSIONS ARE RADIAL OR ON ARC UNLESS NOTED OTHERWISE.

NOTES:

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

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

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

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK IN LIEU OF BLOW-THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.

- CLASS II SURFACE PREPARATION
- CLASS III SURFACE PREPARATION

L' X W' = LENGTH OF AREA PARALLEL TO C BRIDGE.
WIDTH OF AREA PERPENDICULAR TO BRIDGE.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**DECK REPAIR DETAILS
SPAN A**

DECK REHAB. FOR BRIDGE NO. 382

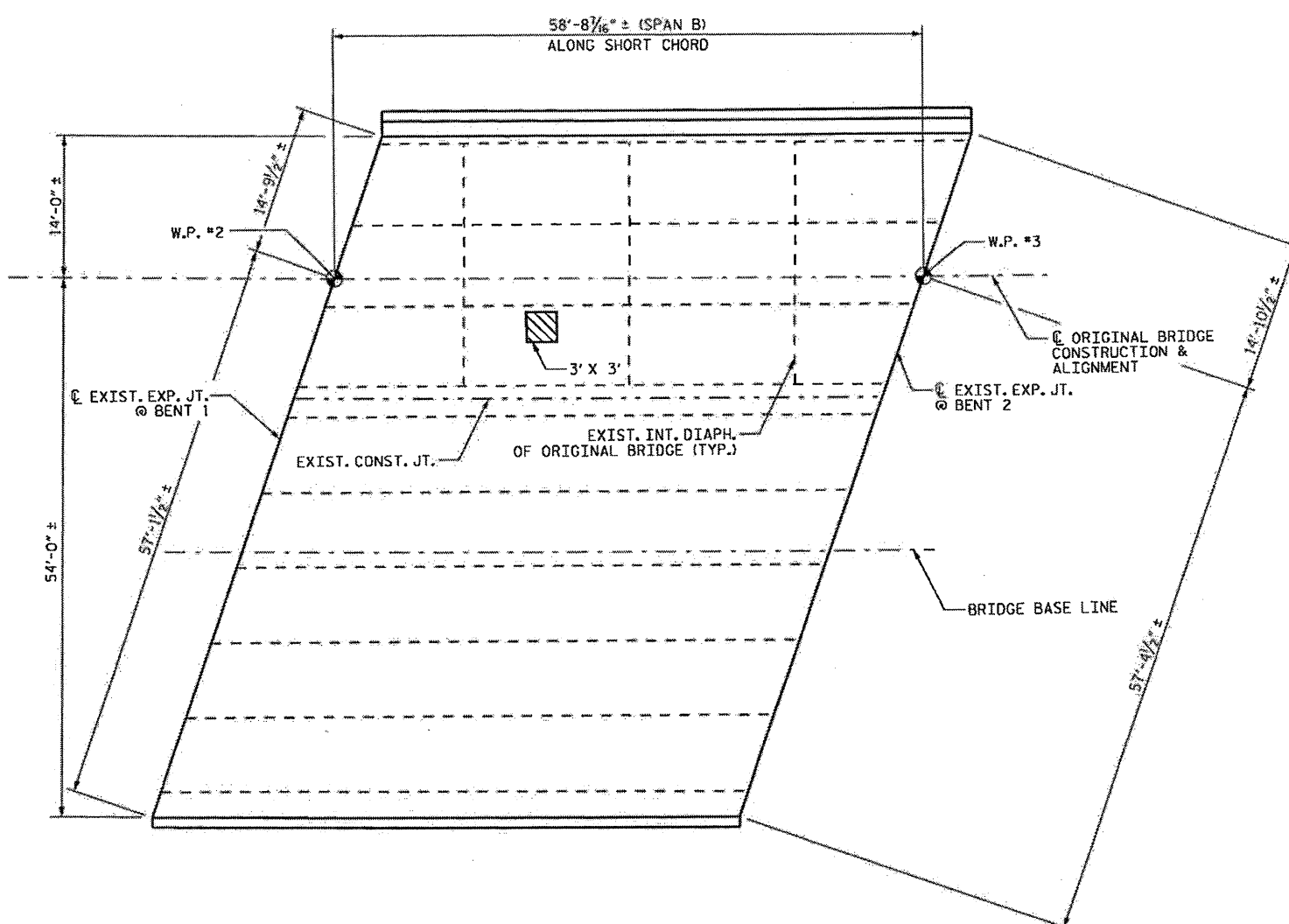
REVISIONS						SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE	S-40	
1			3			TOTAL SHEETS	58
2			4				

Joseph T. Kelvington
SEAL
13406
ENGINEER
JOSEPH T. KELVINGTON

3/12/2012 12:38:33 PM jpolle 382A.Drawing.BP100382.RepairPlan.dgn C:\Buncombe Co\Buncombe Co\Bridges\382A.Drawing.BP100382.RepairPlan.dgn



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CHECKED BY : J T KELVINGTON DATE : -/11



PLAN OF SPAN B - DECK REPAIRS

NOTE: ALL DIMENSIONS ARE RADIAL OR ON ARC UNLESS NOTED OTHERWISE.

 CLASS II SURFACE PREPARATION
 CLASS III SURFACE PREPARATION
 L' X W' = LENGTH OF AREA PARALLEL TO C BRIDGE.
 WIDTH OF AREA PERPENDICULAR TO BRIDGE.

NOTES:

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

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

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

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK IN LIEU OF BLOW-THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.


PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**DECK REPAIR DETAILS
 SPAN B**

DECK REHAB. FOR BRIDGE NO. 382

Joseph J. Kellyington



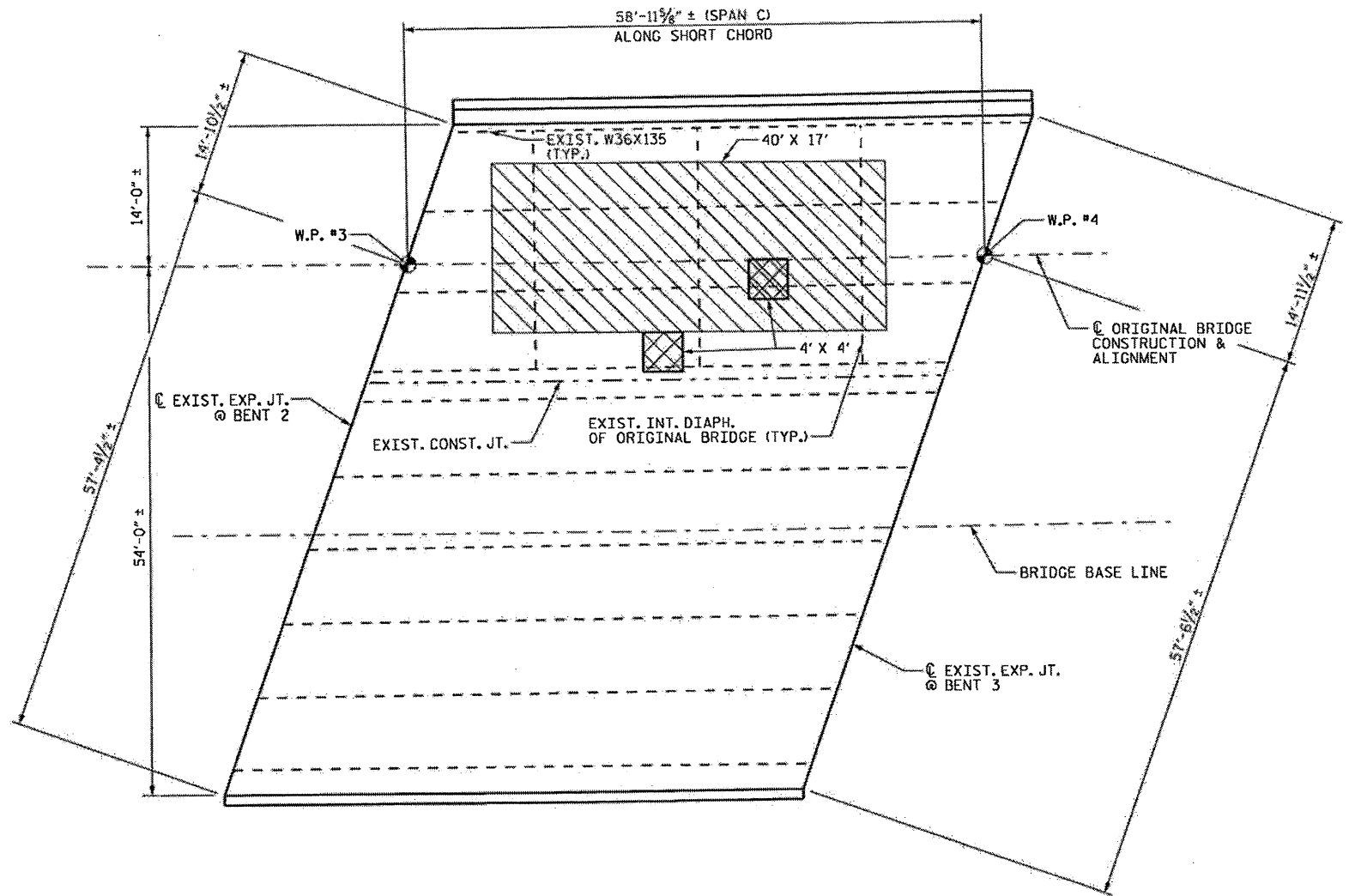
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-41
1			3			TOTAL SHEETS
2			4			58



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DRAWN BY: S. J. BRISCOE DATE: 11/11
 CHECKED BY: J. T. KELLYINGTON DATE: -/11

P:\13.P.2 Buncombe Co. Bridge 382\Drawings\BP00382.Repair\Plan2.dgn 3/12/2012 12:35:35 PM jgelle



 CLASS II SURFACE PREPARATION
 CLASS III SURFACE PREPARATION
 L' X W' = LENGTH OF AREA PARALLEL TO C BRIDGE,
 WIDTH OF AREA PERPENDICULAR TO BRIDGE.

NOTES:

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

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

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

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK IN LIEU OF BLOW-THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.

PLAN OF SPAN C - DECK REPAIRS

NOTE: ALL DIMENSIONS ARE RADIAL OR ON ARC UNLESS NOTED OTHERWISE.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**DECK REPAIR DETAILS
 SPAN C**

DECK REHAB. FOR BRIDGE NO. 382

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-42
1			3			TOTAL SHEETS
2			4			58

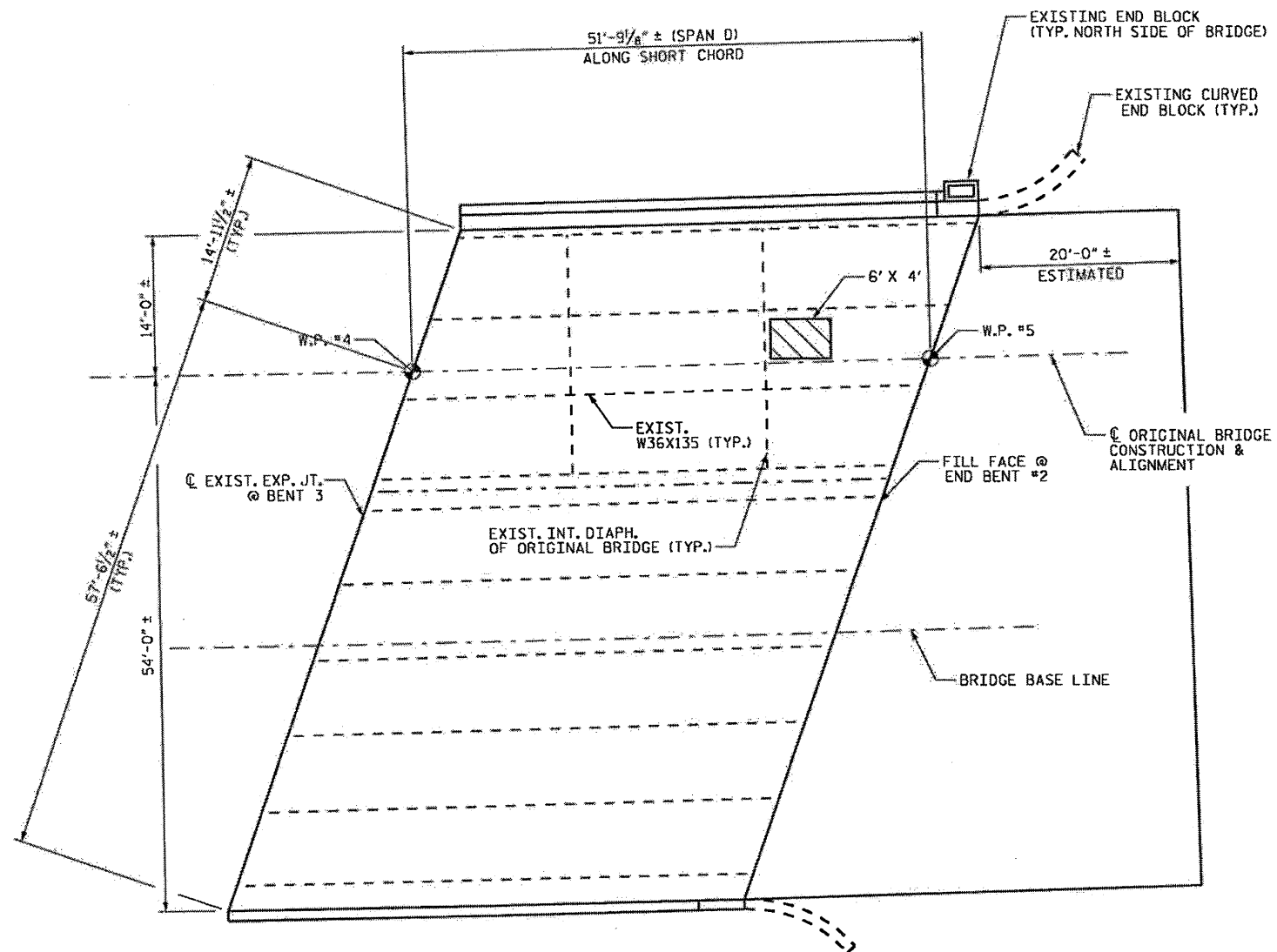
Joseph J. Kelvington






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P.13.P.2 Buncombe Co. Bridge 382 Drawings\BP0382_RepairPlan3.dgn 3/2/2012 12:38:37 PM ipelle

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 CLASS II SURFACE PREPARATION
 CLASS III SURFACE PREPARATION
 L' X W' = LENGTH OF AREA PARALLEL TO © BRIDGE,
 WIDTH OF AREA PERPENDICULAR TO BRIDGE.

NOTES:
 CONTRACTOR SHALL FURNISH FORMWORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.
 SUBMIT DETAILS OF ALL PROPOSED FORMWORK FOR APPROVAL PRIOR TO BEGINNING WORK.
 COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE BID PER SQ. YD. OF HYDRO-DEMOLITION.
 FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.
 CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.
 A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.
 CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK IN LIEU OF BLOW-THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.

PLAN OF SPAN D - DECK REPAIRS
 NOTE: ALL DIMENSIONS ARE RADIAL OR ON ARC UNLESS NOTED OTHERWISE.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

Joseph Kelvington


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**DECK REPAIR DETAILS
 SPAN D**

DECK REHAB. FOR BRIDGE NO. 382

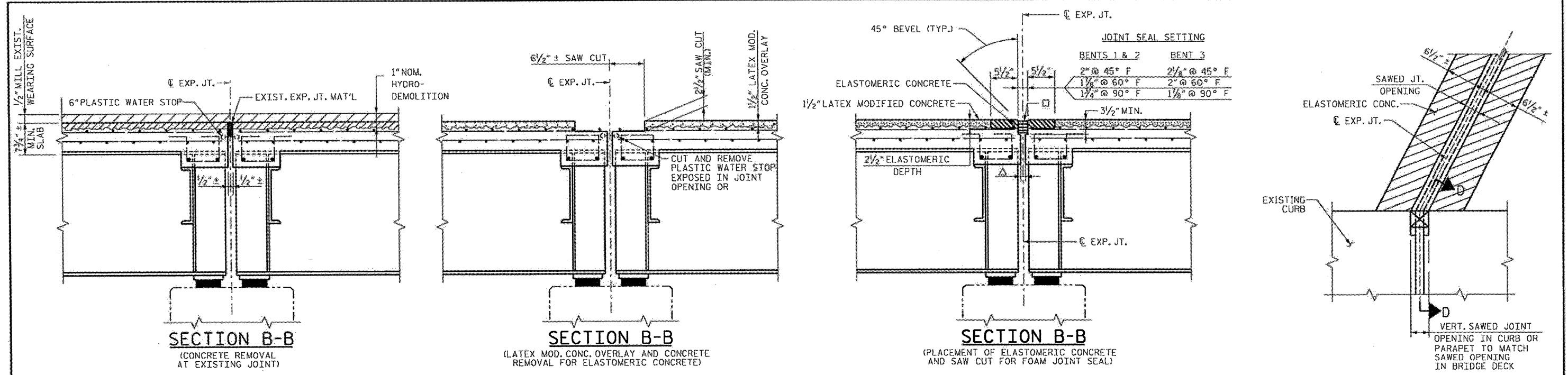
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1			3			TOTAL SHEETS
2			4			58

12:36:39 PM jgettle 3/12/2012 C:\Buncombe Co. Bridge_382\Drawings\BPP00382_RepairPlan4.dgn


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DRAWN BY : S L BRISCOE DATE : 11/11
 CHECKED BY : J T KELVINGTON DATE : -/11

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 C:\Buncombe Co\Bridges\382\Drawings\Bridges\382.Dwg



SECTION B-B
 (CONCRETE REMOVAL AT EXISTING JOINT)

SECTION B-B
 (LATEX MOD. CONC. OVERLAY AND CONCRETE REMOVAL FOR ELASTOMERIC CONCRETE)

SECTION B-B
 (PLACEMENT OF ELASTOMERIC CONCRETE AND SAW CUT FOR FOAM JOINT SEAL)

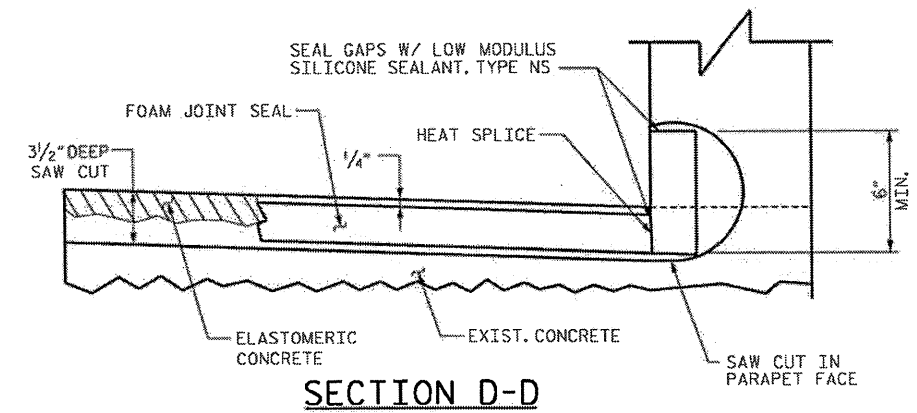
NOTE: FROM BEST AVAILABLE INFORMATION.
 RETAIN ALL EXIST. REINF. STEEL. CLEAN AND REPAIR AS REQ'D.
 ALL EXPOSED EXISTING JOINT SEAL MATERIALS ARE TO BE COMPLETELY REMOVED.

NOTE: FOR FOAM JOINT SEAL, SEE SPECIAL PROVISIONS.
 THE INSTALLED FOAM JOINT SEALS SHALL BE WATERTIGHT.
 THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE FOAM JOINT SEAL IN LIEU OF SAWING THE JOINT.
 □ USE 2.8125" X 2.50" UNCOMPRESSED FOAM JT. SEAL MATERIAL @ BENTS 1, 2, AND 3.
 △ 1" EXISTING OPENING @ BENTS 1, 2, AND 3.

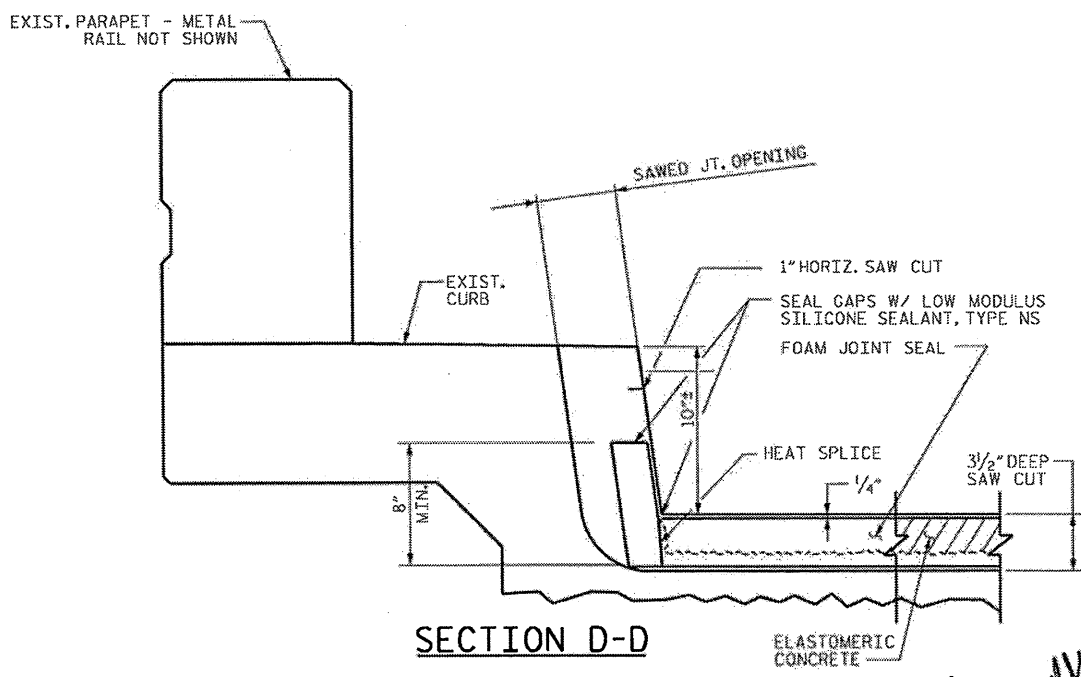
PARTIAL PLAN @ JOINT

ELASTOMERIC CONCRETE	
LOCATION	DTY
BENT 1	15.0 C.F.
BENT 2	15.1 C.F.
BENT 3	15.1 C.F.

TOTAL ELASTOMERIC CONC. = 45.2 C.F.
 TOTAL ELASTOMERIC CONC. = 1.7 C.Y.



SECTION D-D
 TYPICAL AT SOUTH SIDE OF BRIDGE.
 CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.



SECTION D-D
 TYPICAL AT NORTH SIDE OF BRIDGE.
 CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.

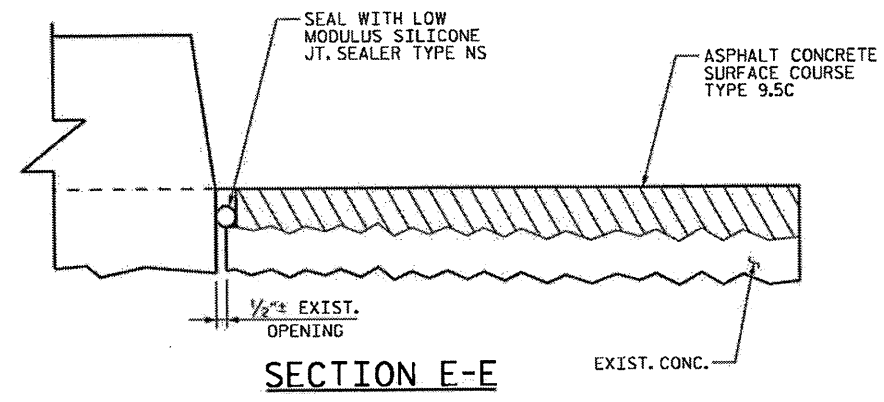
Joseph Kelvington
 13406
 ENGINEER
 JOSEPH T. KELVINGTON

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

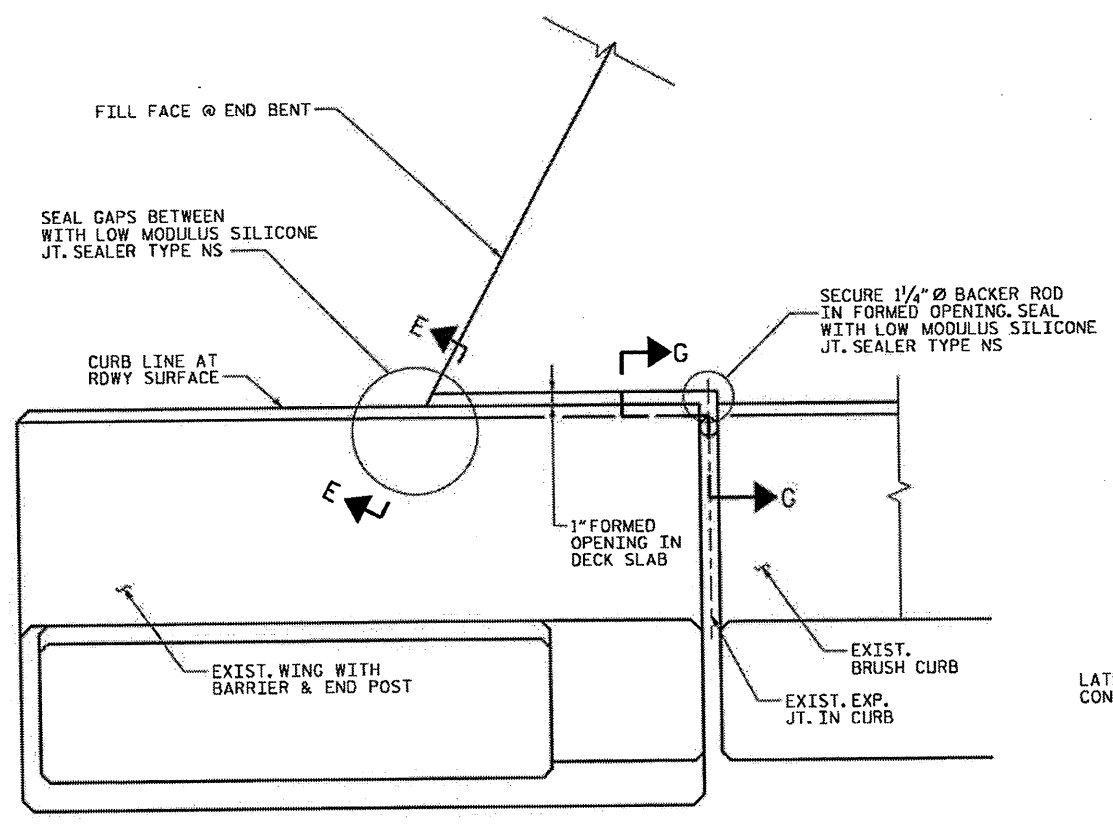
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH				
INTERIOR BENT JOINT SEAL DETAILS				
DECK REHAB. FOR BRIDGE NO. 382				
REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	
				S-44
				TOTAL SHEETS
				58



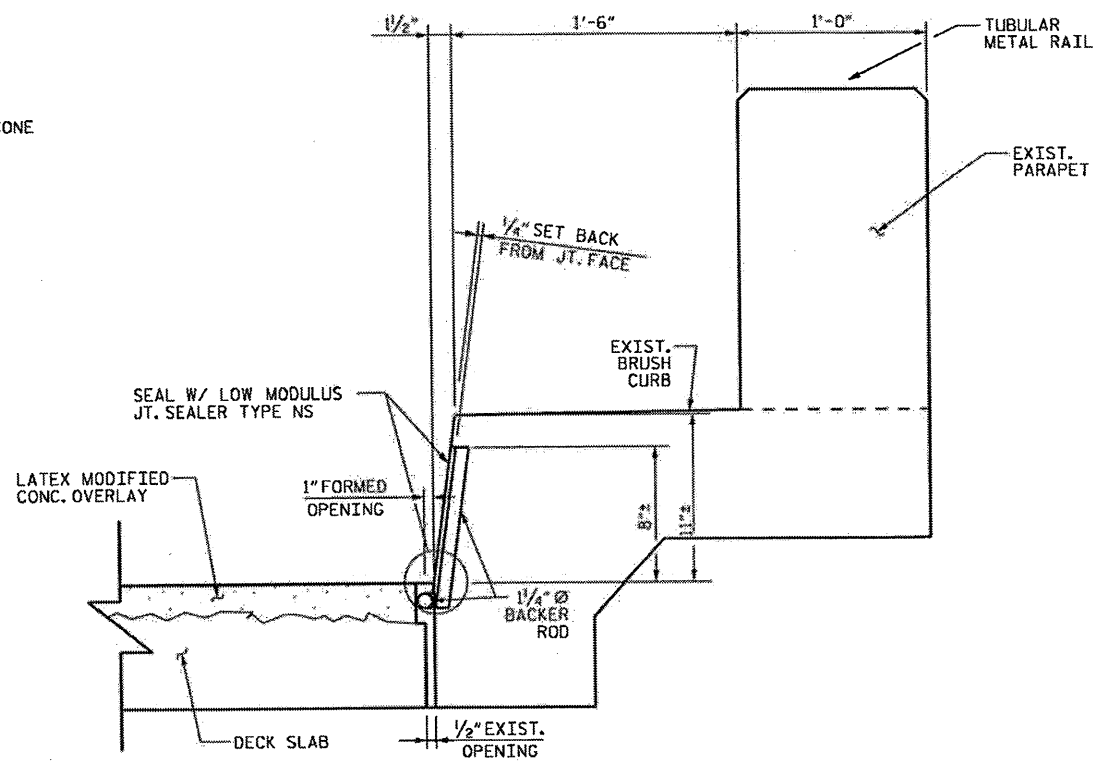
DRAWN BY : S. I. BRISCOE DATE : 11/11
 CHECKED BY : J. T. KELVINGTON DATE : -/11



NOTES:
 1/4" Ø BACKER ROD SHALL BE CLOSED CELL EXPANDED POLYETHYLENE FOAM TYPE L. NO SEPARATE PAYMENT FOR LABOR, MATERIALS, AND EQUIPMENT NEEDED TO CONSTRUCT CONCRETE JOINT SEALS SHALL BE MADE. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE SEVERAL PAY ITEMS.



PARTIAL PLAN @ END BENT #1
 (END BENT #2 SIMILAR)
 NOTE: METAL RAIL, END POSTS AND BARRIER PARAPET WALL DETAILS NOT SHOWN FOR CLARITY.



SECTION G-G

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

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 www.stantec.com
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DRAWN BY: S.J. BRISCOE DATE: 11/11
 CHECKED BY: J.T. KELVINGTON DATE: -/11

Joseph J. Kelvington
 SEAL 13406
 ENGINEER
 J. KELVINGTON

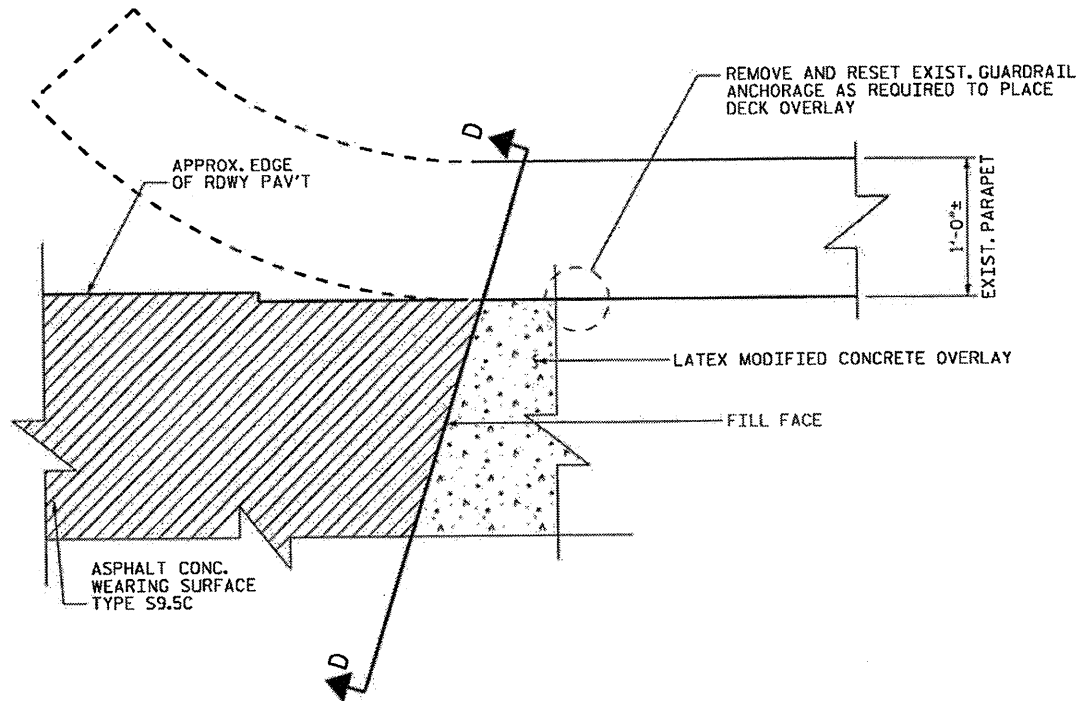
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT JOINT SEAL DETAILS
NORTH SIDE OF BRIDGE

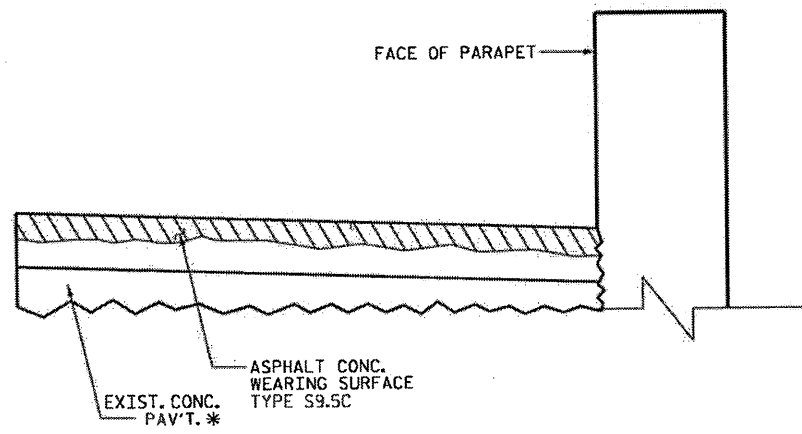
DECK REHAB. FOR BRIDGE NO. 382

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-45	
1			3			TOTAL SHEETS 58	
2			4				

WBS 17BP.13.P.2 - Buncombe Co. Bridge 382 Drawing: BPD00382_De12.dgn 3/12/2012 12:38:43 PM Jgella



PARTIAL PLAN @ END BENT #2 (SOUTHEAST CORNER)
 (END BENT #1 SIMILAR AT SOUTHWEST CORNER)
 NOTE: METAL RAIL AND GUARDRAIL NOT SHOWN FOR CLARITY.



SECTION D-D
 CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.
 * CONC. PAV'T. IS ASSUMED.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 END BENT JOINT
 SEAL DETAILS
 SOUTH SIDE OF BRIDGE
 DECK REHAB. FOR BRIDGE NO. 382

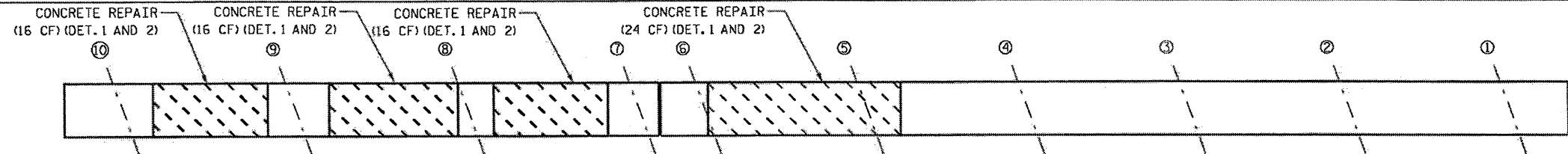
Joseph J. Kelvington
 SEAL 13406
 ENGINEER
 NORTH CAROLINA
 JOSEPH J. KELVINGTON

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-46
1			3			TOTAL SHEETS 58
2			4			

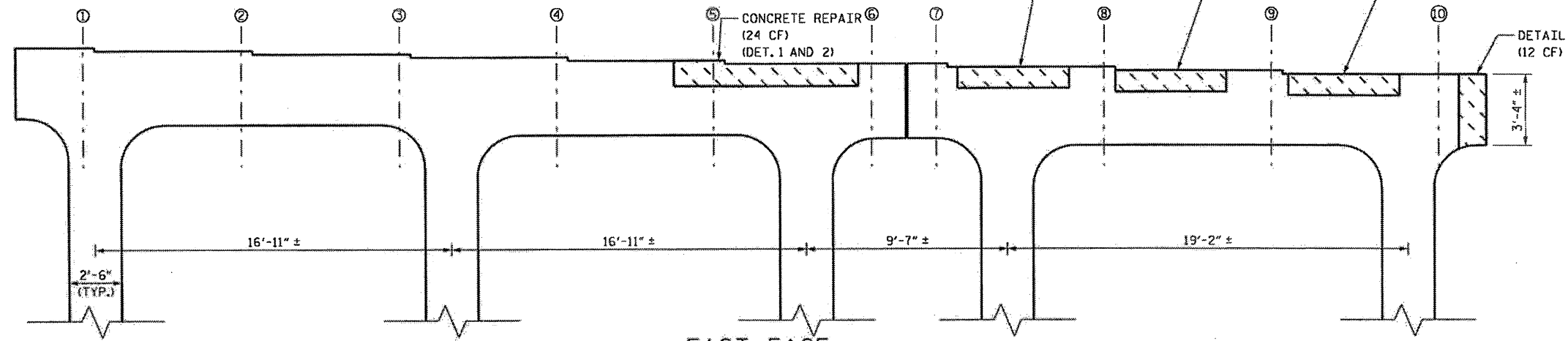
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WBS 17BP.13.P.2 Buncombe Co. Bridge 382 Drawing BPP0382.Det3.dgn 3/12/2012 12:38:46 PM jgelle

DRAWN BY : S. L. BRISCOE DATE : 11/11
 CHECKED BY : J. T. KELVINGTON DATE : -/11

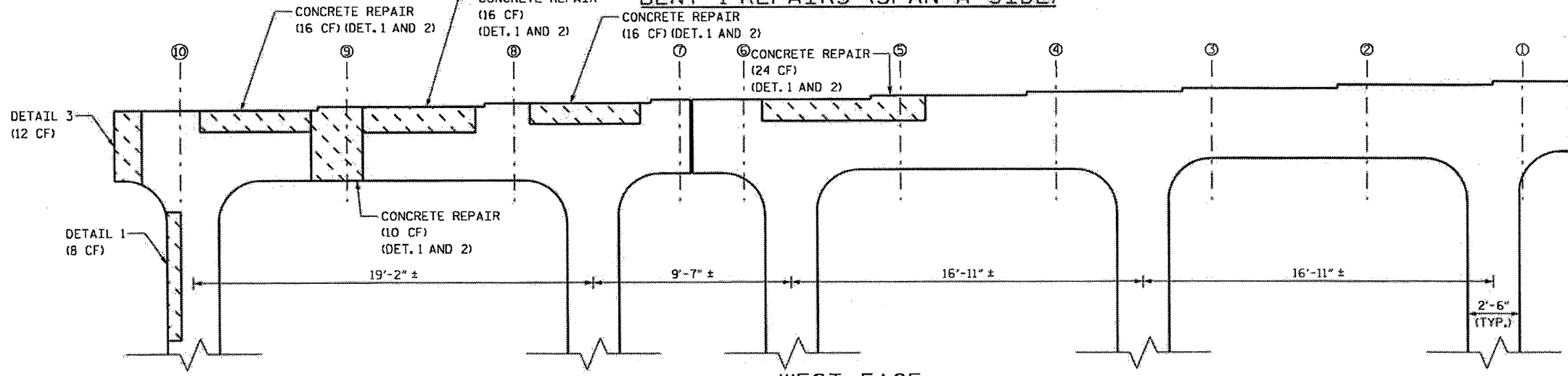


BENT 1 REPAIRS - PLAN



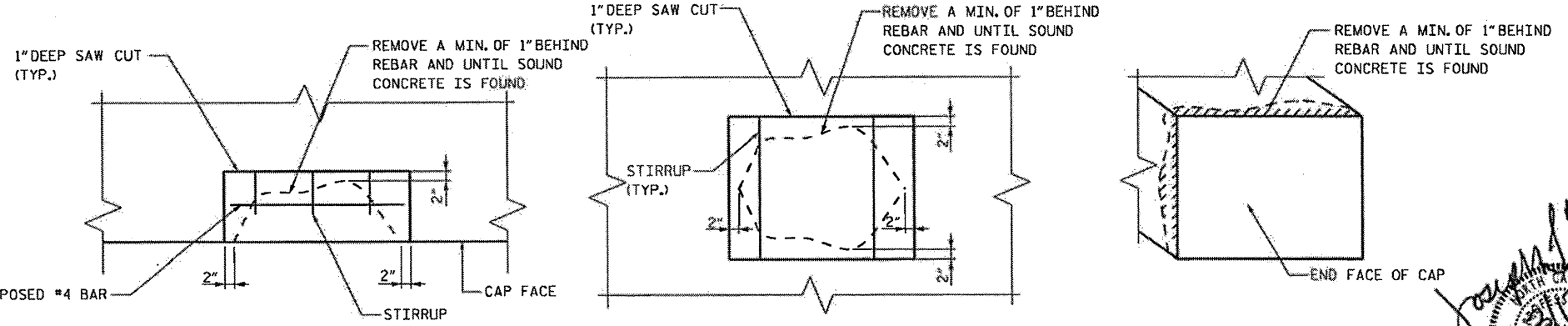
EAST FACE

BENT 1 REPAIRS (SPAN A SIDE)



WEST FACE

BENT 1 REPAIRS (SPAN B SIDE)



TYPICAL REPAIR DETAIL 1

TYPICAL REPAIR DETAIL 2

TYPICAL REPAIR DETAIL 3

TOTAL ESTIMATED QUANTITIES:
 CONCRETE REPAIR = 82 CF
 SHOTCRETE REPAIR = 20 CF

NOTES:

REPAIR AREA DIMENSIONS SHOWN ARE APPROXIMATE BASED ON BEST AVAILABLE INFORMATION.

ALL REINFORCEMENT TO BE PROVIDED IS INCIDENTAL TO THE SUBSTR. REPAIR AND SHALL BE GRADE 60.

AREAS NOT OTHERWISE SPECIFIED FOR CONCRETE REPAIR MAY BE REPAIRED WITH SHOTCRETE, CLASS A CONC. OR POLYMER CONC. AT THE CONTRACTORS' OPTION.

⊕ BEAM NUMBER AND © LOCATION

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

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

BEARING NUTS SHALL BE LOOSENEED TO PROVIDE A MINIMUM OF 5/8 INCH GAP TO ALLOW FOR JACKING.

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

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

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

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

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

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE REPAIRS
 BENT 1**

DECK REHAB. FOR BRIDGE NO. 382

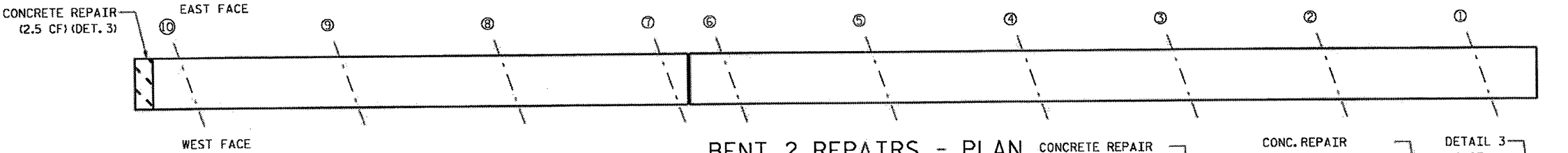
REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

TOTAL SHEETS: 58

3/2/2012 10:38:48 AM jpolla
 17BP.13.P.2 Buncombe Co. Bridge 382 Drawing BR00382_RepairsBent1.dgn

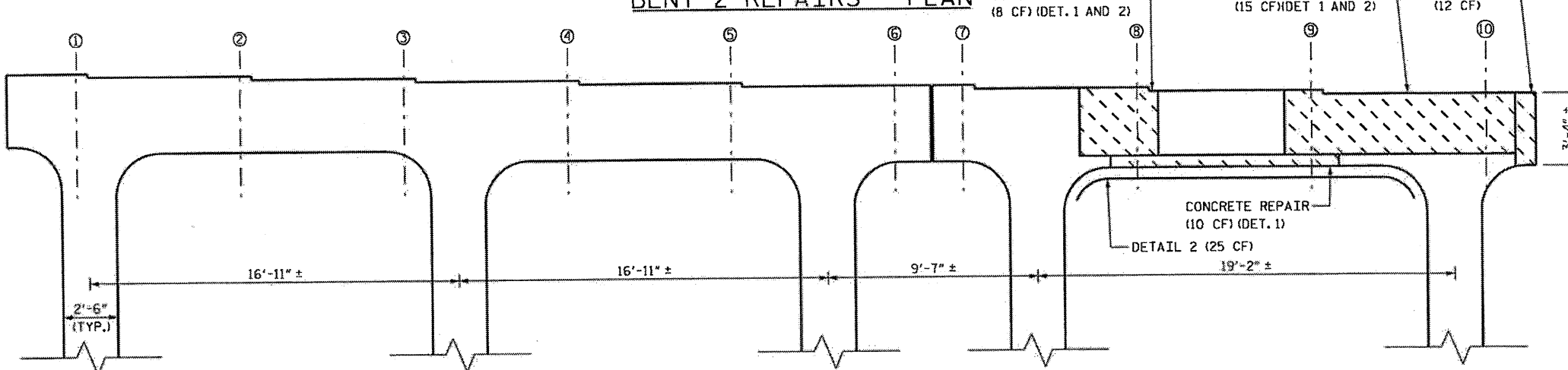


DRAWN BY: S. L. BRISCOE DATE: 11/11
 CHECKED BY: J. T. KELVINGTON DATE: -/11

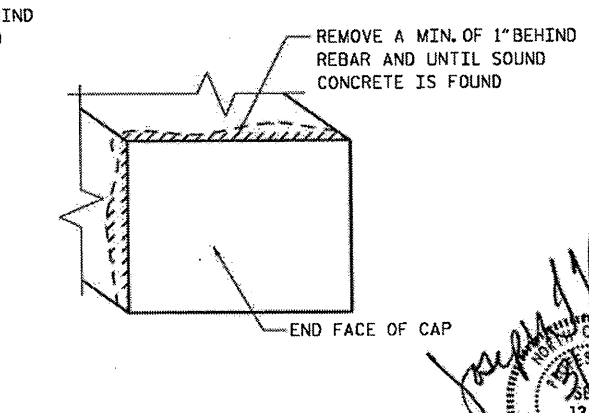
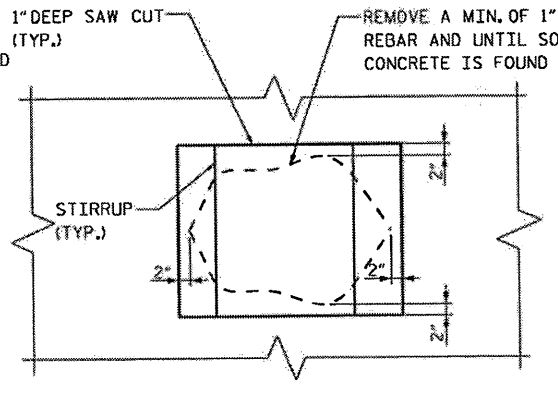
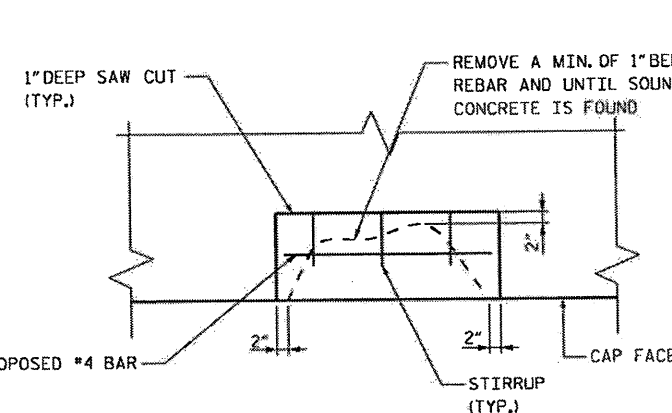
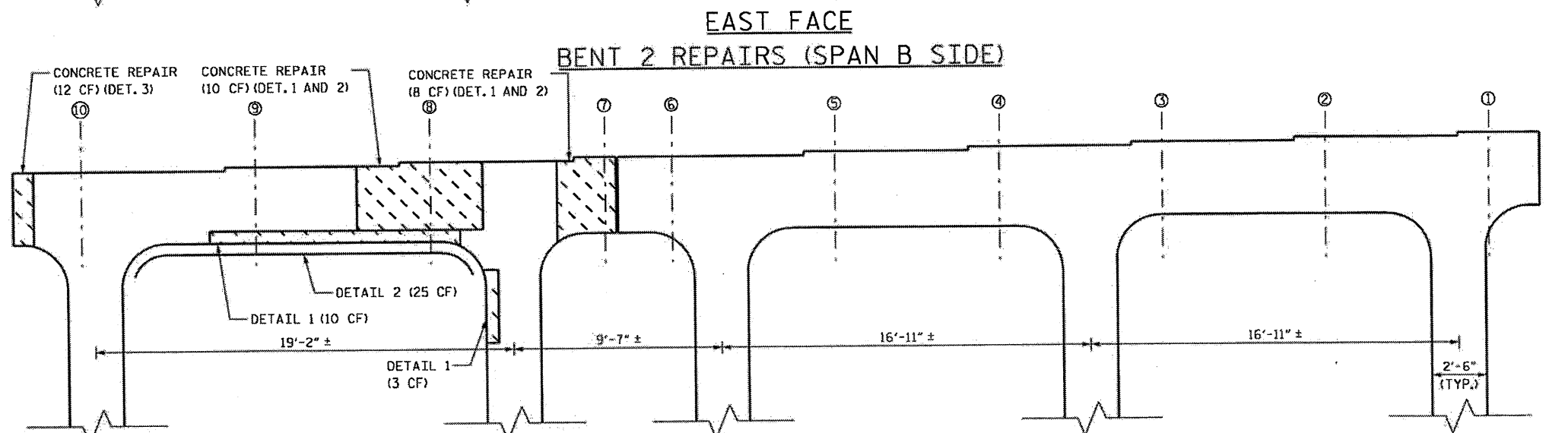


TOTAL ESTIMATED QUANTITIES:
 CONCRETE REPAIR = 41 CF
 SHOTCRETE REPAIR = 60 CF

NOTES:
 REPAIR AREA DIMENSIONS SHOWN ARE APPROXIMATE BASED ON BEST AVAILABLE INFORMATION.
 ALL REINFORCEMENT TO BE PROVIDED IS INCIDENTAL TO THE SUBSTR. REPAIR AND SHALL BE GRADE 60.
 AREAS NOT OTHERWISE SPECIFIED FOR CONCRETE REPAIR MAY BE REPAIRED WITH SHOTCRETE, CLASS A CONC. OR POLYMER CONC. AT THE CONTRACTORS' OPTION.



ⓐ BEAM NUMBER AND © LOCATION



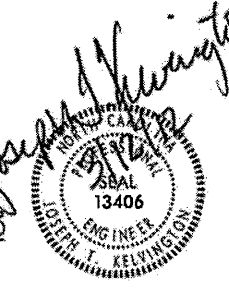
TYPICAL REPAIR DETAIL 1 TYPICAL REPAIR DETAIL 2 TYPICAL REPAIR DETAIL 3

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SUBSTRUCTURE REPAIRS
 BENT 2**

DECK REHAB. FOR BRIDGE NO. 382

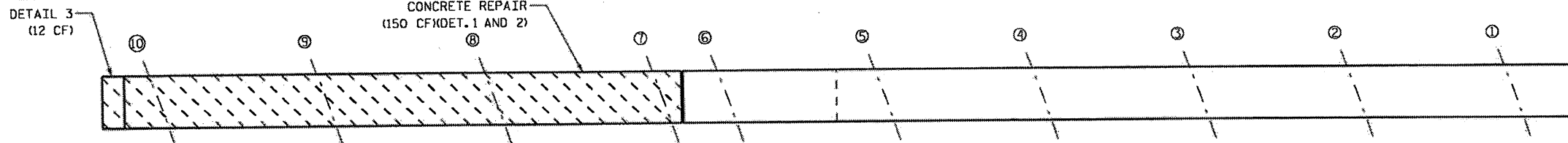
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			58
2			4			58



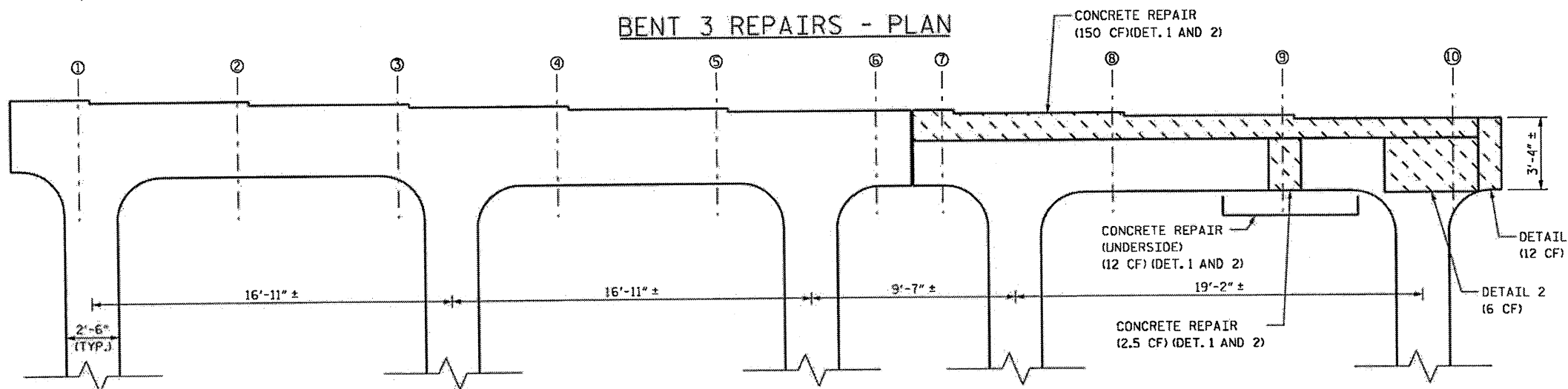
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DRAWN BY: S. L. BRISCOE DATE: 11/11
 CHECKED BY: J. T. KELVINGTON DATE: -/11

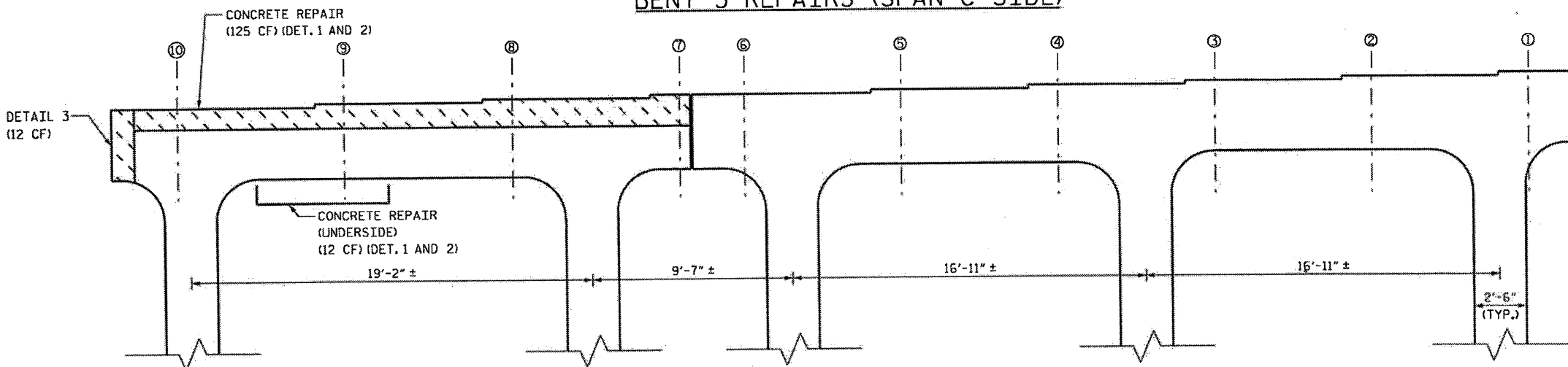
13.P.2_Buncombe Co/Buncombe Co Bridge 382 Drawing WBS17BP13P2.Repair-Bent2.dgn 3/12/2012 12:38:50 PM jgnelle



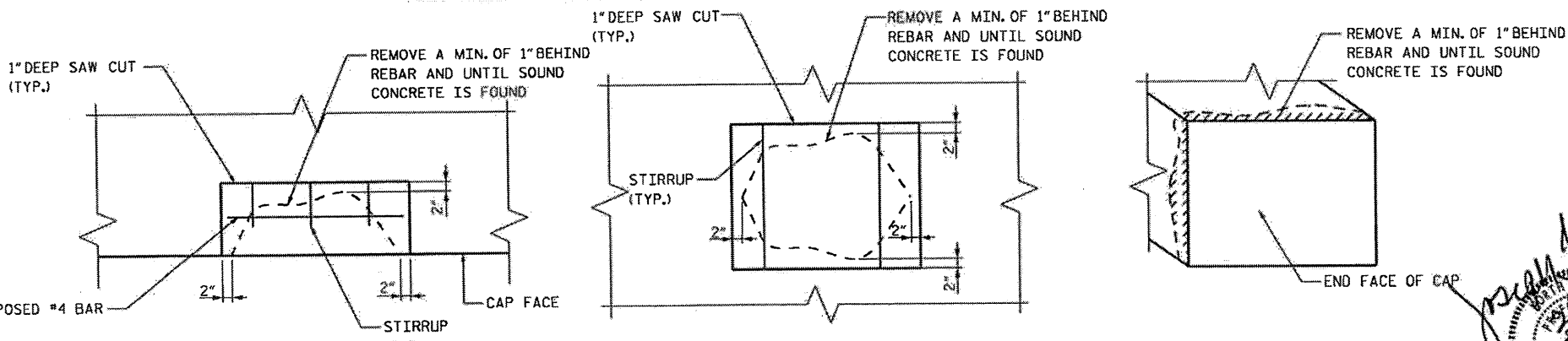
BENT 3 REPAIRS - PLAN



**EAST FACE
BENT 3 REPAIRS (SPAN C SIDE)**



**WEST FACE
BENT 3 REPAIRS (SPAN D SIDE)**



TYPICAL REPAIR DETAIL 1

TYPICAL REPAIR DETAIL 2

TYPICAL REPAIR DETAIL 3

TOTAL ESTIMATED QUANTITIES:

CONCRETE REPAIR = 150 CF
SHOTCRETE REPAIR = 18 CF

NOTES:

REPAIR AREA DIMENSIONS SHOWN ARE APPROXIMATE BASED ON BEST AVAILABLE INFORMATION.

ALL REINFORCEMENT TO BE PROVIDED IS INCIDENTAL TO THE SUBSTR. REPAIR AND SHALL BE GRADE 60.

AREAS NOT OTHERWISE SPECIFIED FOR CONCRETE REPAIR MAY BE REPAIRED WITH SHOTCRETE, CLASS A CONC. OR POLYMER CONC. AT THE CONTRACTORS' OPTION.

Ⓢ BEAM NUMBER AND C LOCATION

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE REPAIRS
BENT 3**

DECK REHAB. FOR BRIDGE NO. 382

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-49	
1			3			TOTAL SHEETS	
2			4			58	

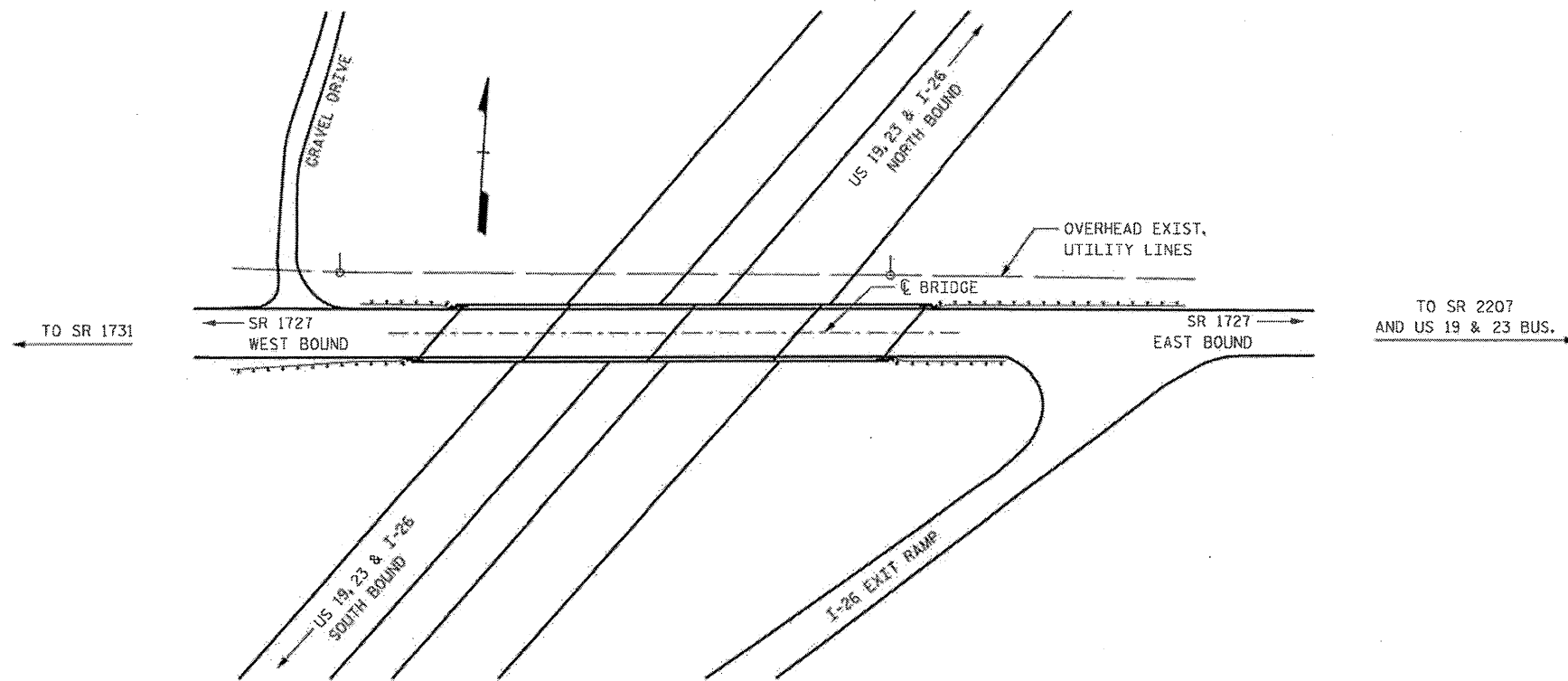
Joseph T. Kelvington
Professional Engineer
No. 13406
State of North Carolina



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CHECKED BY: J. T. KELVINGTON DATE: -/11

13.P.2 - Buncombe Co. Bridge 382 Drawing VBP00382_Repair Bent 3.dgn 3/12/2012 12:38:52 PM jgelle



**BRIDGE 387 ON SR 1727
OVER US 19, 23**

LOCATION: BRIDGE 100387, ON SR 1727,
0.15 MILES WEST OF JUNCTION US 19 BUS.

BRIDGE 387

TOTAL BILL OF MATERIAL

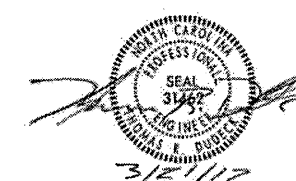
SHOULDER RECONSTRUCTION	INCIDENTAL MILLING	CONCRETE SURFACE COURSE TYPE S9.5C	REMOVE AND RESET GUARDRAIL	GROOVING BRIDGE FLOORS	FOAM JOINT SEALS	HYDRO-DEMOLITION OF BRIDGE DECK	CLASS I* SURFACE PREPARATION	CLASS II* SURFACE PREPARATION	CLASS III* SURFACE PREPARATION	CLASS AA* CONCRETE	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	SCARIFYING BRIDGE DECK	CONCRETE REPAIRS	SHOTCRETE REPAIRS	SPAN JACKING BUNCOMBE CO. BRIDGE #387
SMI	SQ.YDS.	TONS	L.F.	SQ.FT.	LUMP SUM	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	CU.YDS.	CU.YDS.	SQ.YDS.	SQ.YDS.	CU.FT.	CU.FT.	EA.
0.038	385	27	200	6,635	LUMP SUM	859	0	36	1	1	42	859	859	69	10	3

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. NO SEPARATE MEASUREMENT OR PAYMENT FOR THESE ITEMS WILL BE MADE. ALL COSTS FOR THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID FOR HYDRO-DEMOLITION.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____



DRAWN BY: C.B. BAKER DATE: 1/12
 CHECKED BY: J.T. KELVINGTON DATE: 1/12



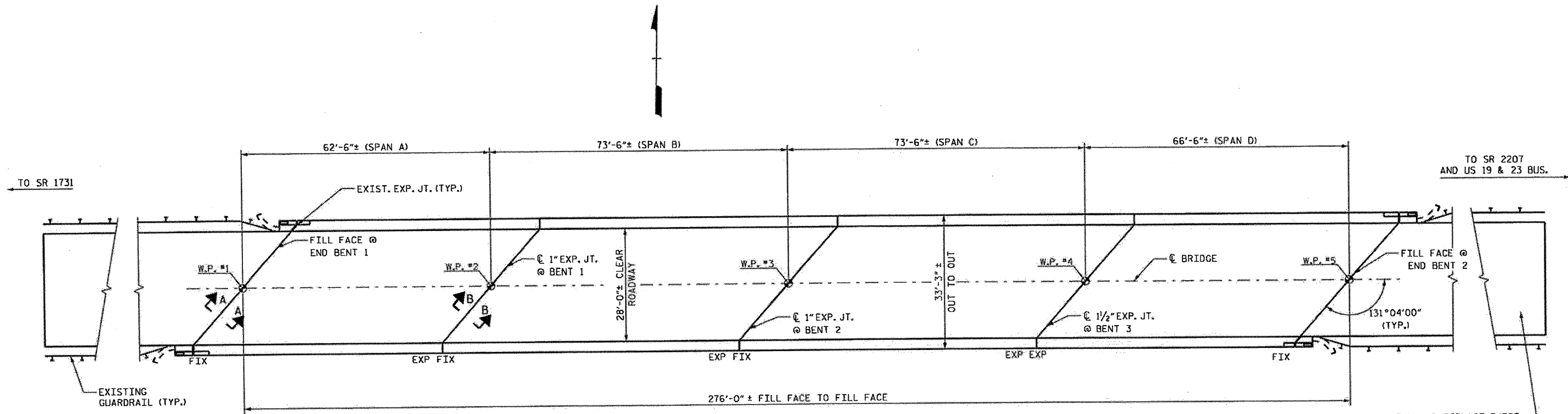
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**LOCATION SKETCH
 AND TOTAL
 BILL OF MATERIALS**

DECK REHAB. FOR BRIDGE NO. 387

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-50
1			3			TOTAL SHEETS
2			4			58

78P.13.P.2 Buncombe Co. Buncombe Co. Bridge 387 Drawing Buncombe387.13.80w.dgn 3/20/2012 4:23:33 PM tcdvdrck

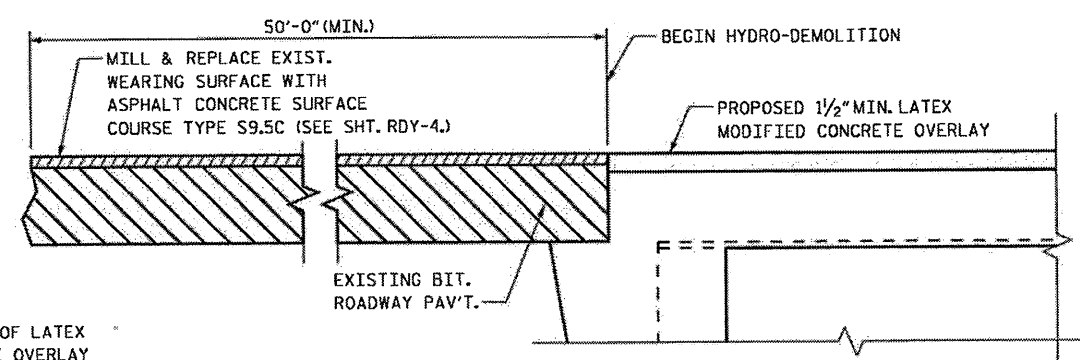


MILL AND REPLACE EXIST. ROADWAY TO TIE ROADWAY TO BRIDGE ELEVATIONS SEE SHT. RDY-4. (TYP.)

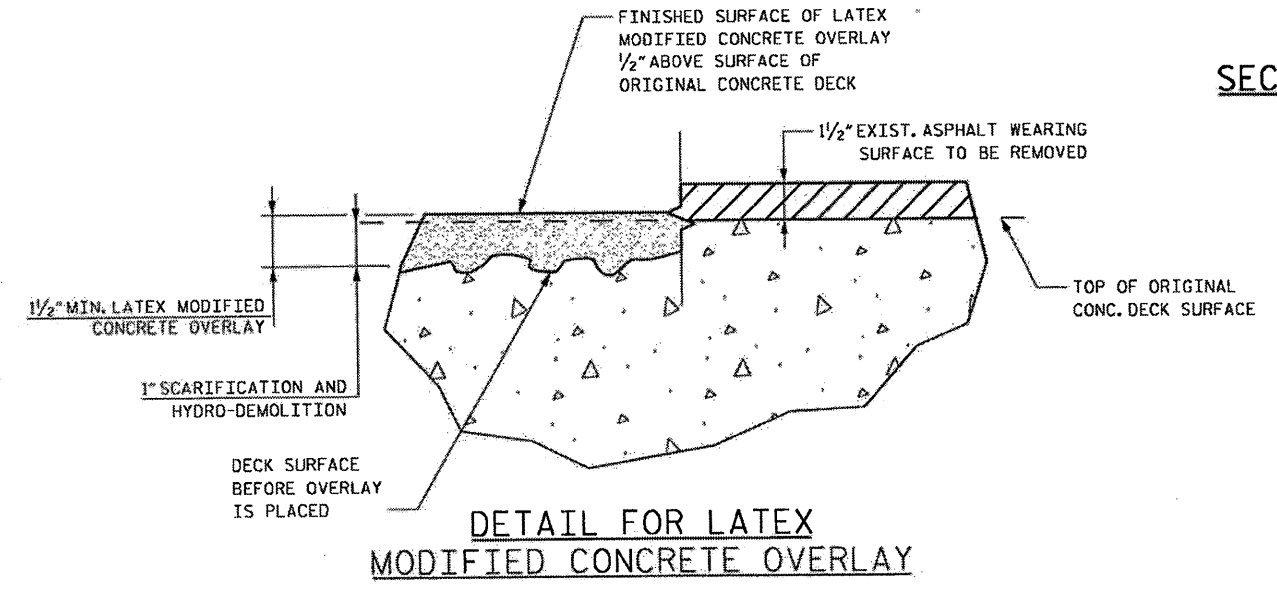
NOTES:
 EXISTING DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS WITH LATEX MODIFIED CONCRETE. SEE SPECIAL PROVISIONS.
 FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.
 THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS. SEE SPECIAL PROVISIONS.
 THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS III SURFACE PREPARATION ARE APPROXIMATE. THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK. SEE DETAIL, SHT. NO. S-53.
 LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH.
 FOR LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.
 FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.
 SECTION B-B IS TYPICAL AT BENTS 1-3.
 FOR SECTION B-B, SEE SHT. NO. S-55.

PLAN OF SPANS A-D

NOTE: CONCRETE PARAPETS AND METAL RAILS ARE NOT SHOWN FOR CLARITY.



SECTION A-A



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
PLAN OF BRIDGE
 DECK REHAB. FOR BRIDGE NO. 387

Joseph J. Kelvington
 REGISTERED PROFESSIONAL ENGINEER
 NO. 13406
 JOSEPH J. KELVINGTON

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-51
2			4			58

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13.P.2 Buncombe Co. Bridge 387 Drawing Buncombe.BT_DeckPlan.dgn 5/12/2012 12:38:56 PM jgelle

NOTES:

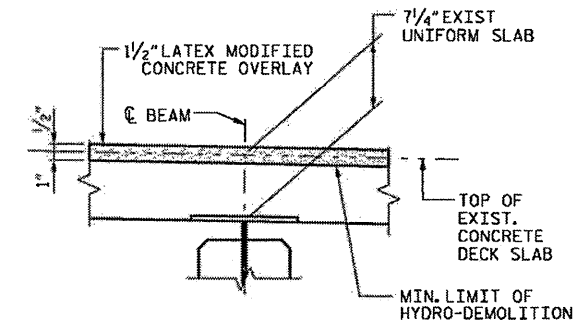
SPANS A-D (W36 ROLLED BEAM) SHOWN.

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

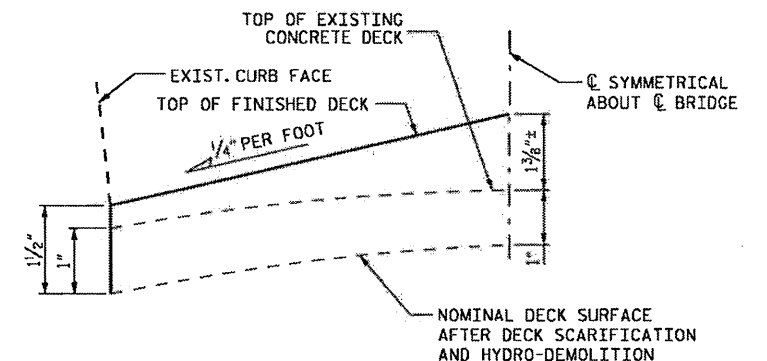
FOR TRAFFIC CONTROL AND CONSTRUCTION PHASING, SEE TRANSPORTATION MANAGEMENT PLANS.

(A) DAM AS REQ'D. NEAR EXISTING EXP. JTS. TO SEAL EXP. JTS.

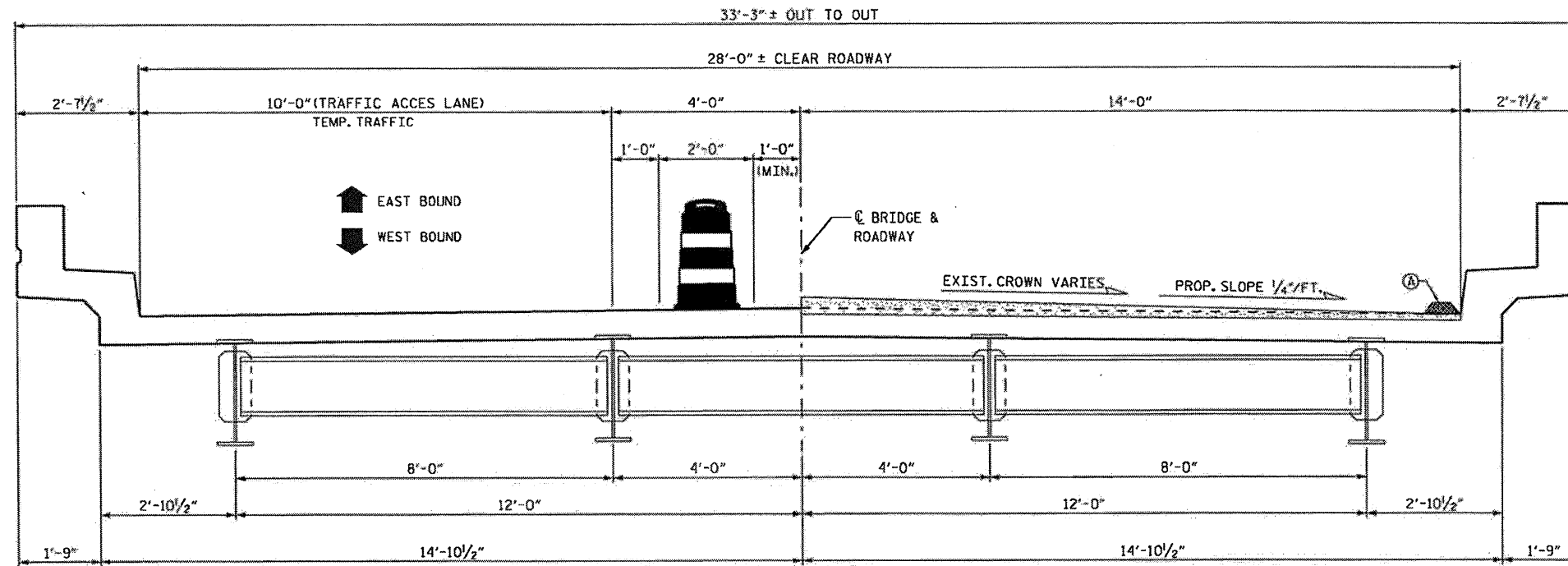
ALL DIMENSIONS SHOWN ARE APPROXIMATE.



EXIST. SLAB BUILDUP

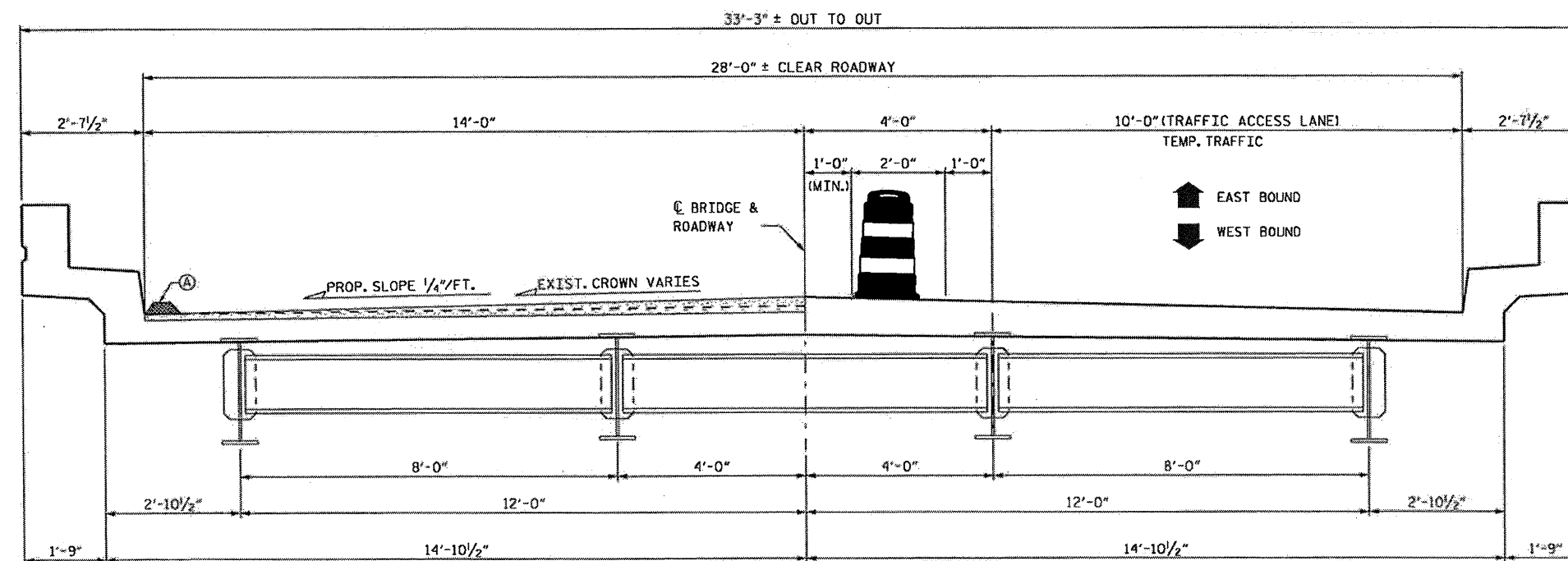


BRIDGE CROSS SLOPE SCHEMATIC FOR DECK OVERLAY



TYPICAL SECTION

SPANS A-D



TYPICAL SECTION

SPANS A-D

PROJECT NO. WBS 17BP.13.P.2

BUNCOMBE COUNTY

STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE TYPICAL SECTION
SPANS A-D

DECK REHAB. FOR BRIDGE NO. 387

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-52	
1			3			TOTAL SHEETS	
2			4			58	

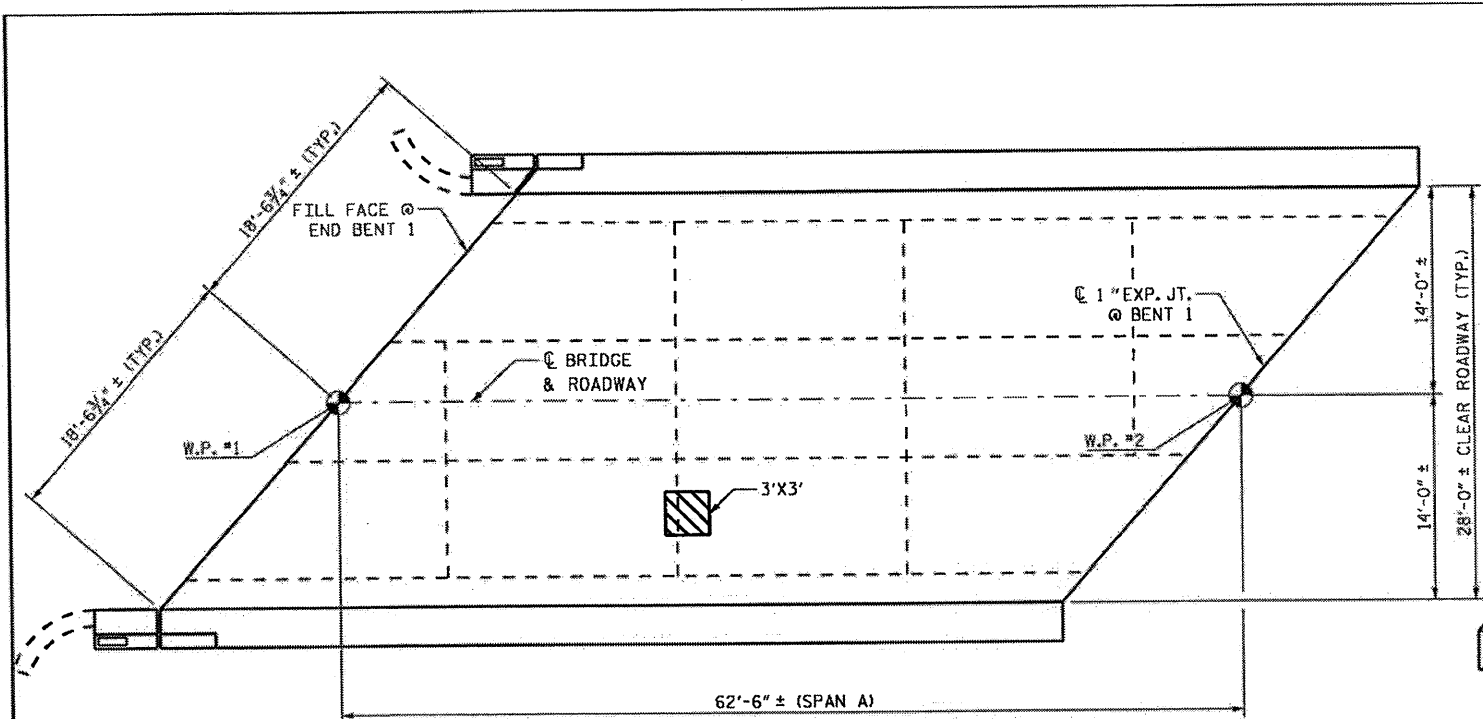
Joseph L. Kelvington
Professional Engineer
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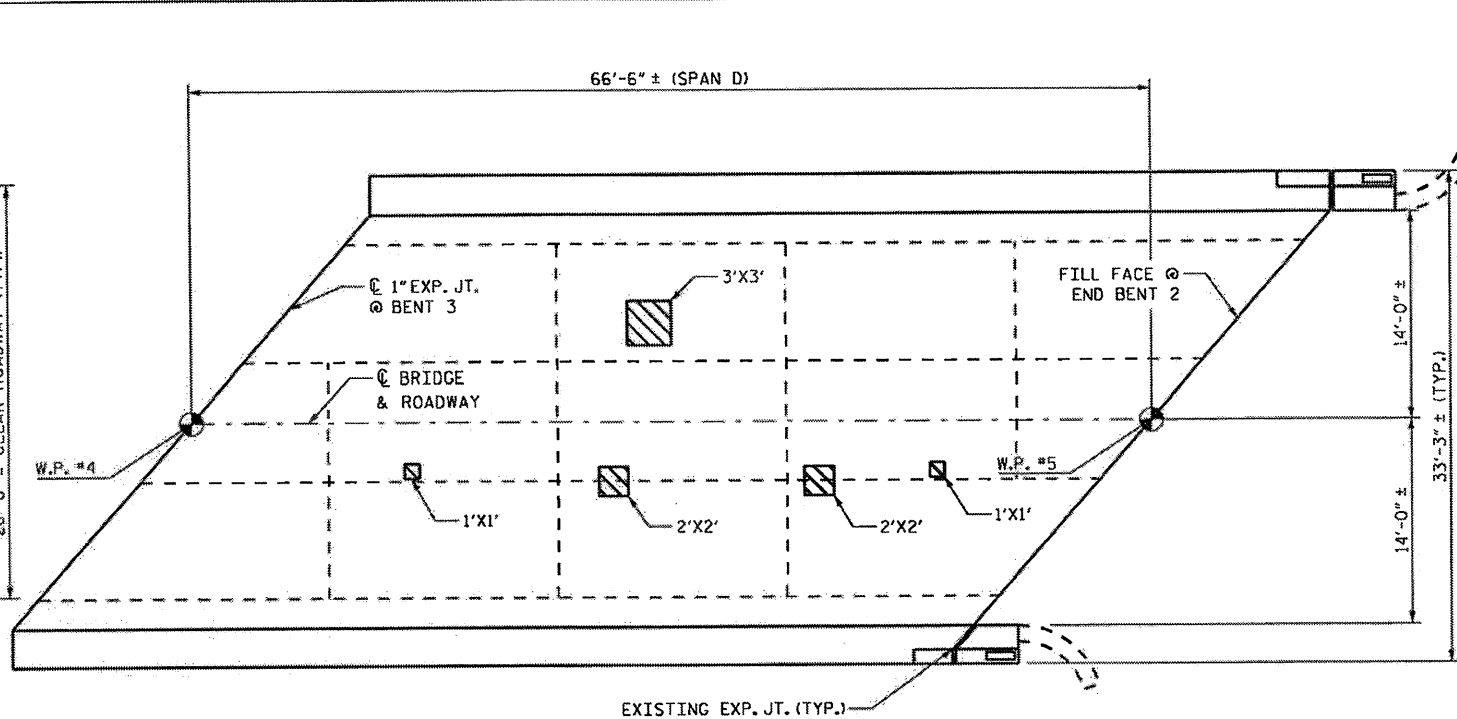
DRAWN BY : C. B. BAKER DATE : 1/12
CHECKED BY : J. T. KELVINGTON DATE : 1/12

387.P.2 Buncombe Co. Bridge 387 Drawing Buncombe387 Typ Sect.dgn 3/12/2012 12:38:56 PM Igella



PLAN OF SPAN A - DECK REPAIRS

NOTE: PARAPET AND METAL RAILS NOT SHOWN FOR CLARITY



PLAN OF SPAN D - DECK REPAIRS

NOTE: PARAPET AND METAL RAILS NOT SHOWN FOR CLARITY

NOTES:

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

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

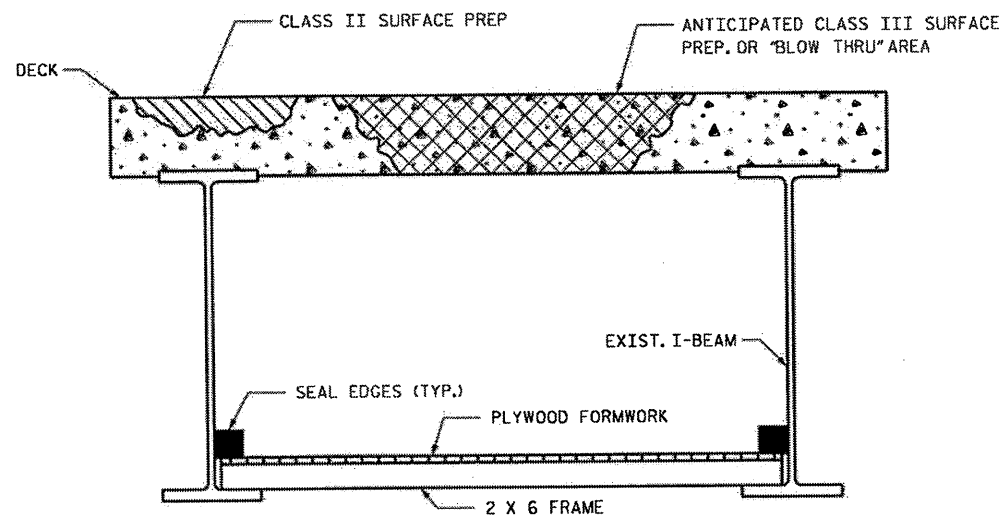
COSTS FOR INSTALLING AND REMOVING FORM WORK SHALL BE INCIDENTAL TO THE PRICE BID PER SQ. YD. OF HYDRO-DEMOLITION.

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

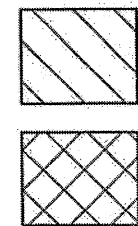
CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW-THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.



TYP. "BLOW-THRU" CONTAINMENT AND FORMWORK



CLASS II SURFACE PREPARATION
CLASS III SURFACE PREPARATION

NOTES:

L' X W' = LENGTH OF AREA ALONG C BRIDGE X WIDTH OF AREA NORMAL TO C BRIDGE

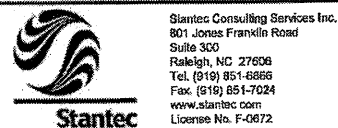
PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
DECK REPAIR DETAILS
SPANS A & D

DECK REHAB. FOR BRIDGE NO. 387

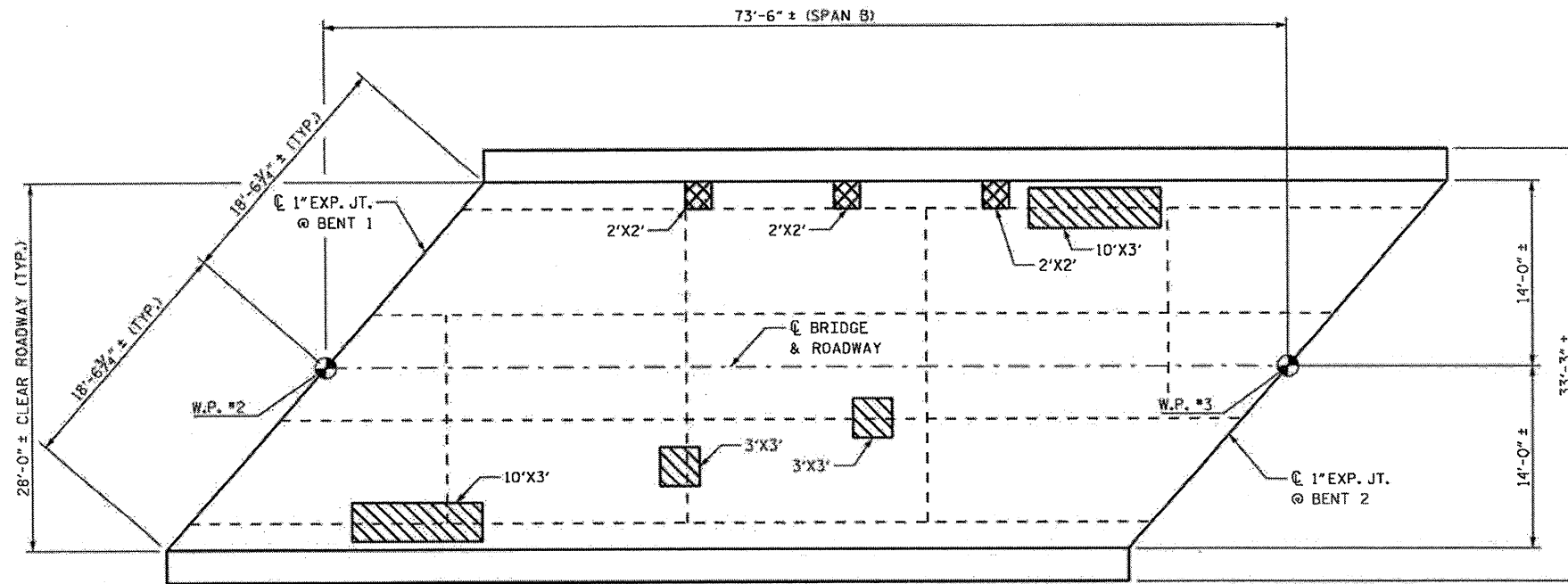
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-53
2			4			TOTAL SHEETS 58

Joseph T. Kelvington
SEAL 13406
ENGINEER
JOSEPH T. KELVINGTON

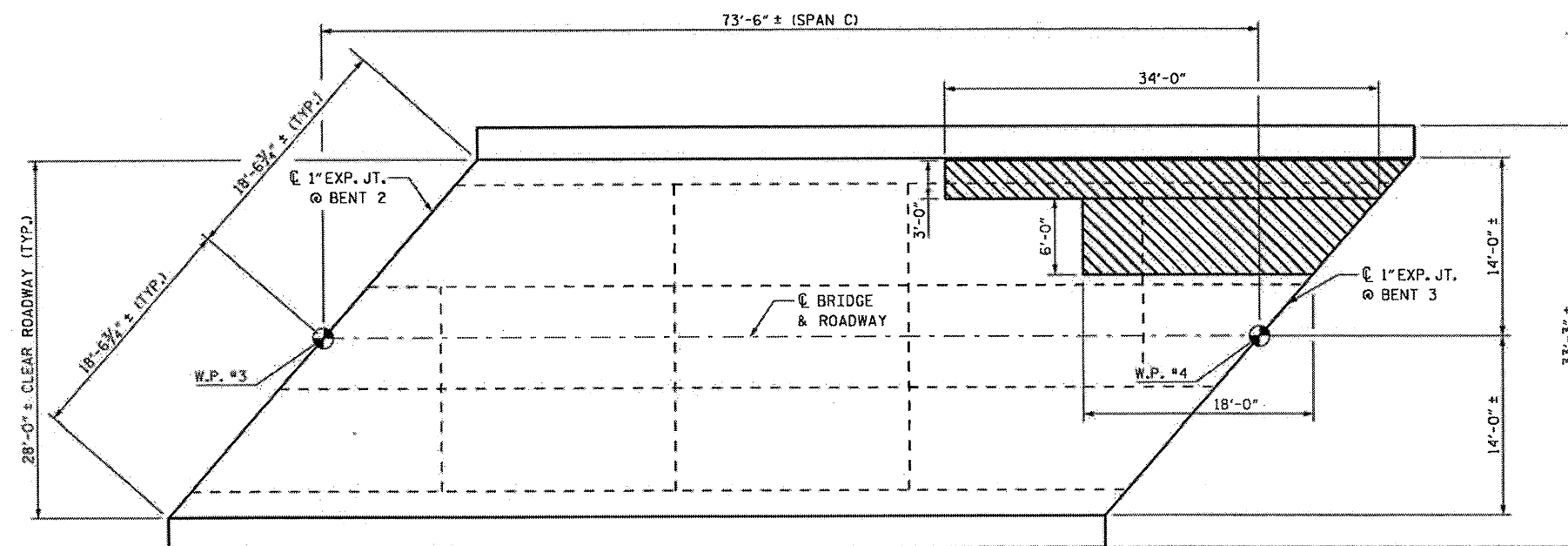


DRAWN BY: C. B. BAKER DATE: 1/12
CHECKED BY: J. T. KELVINGTON DATE: 1/12

Buncombe Co. Bridge 387 Drawing Buncombe387_RepairPlanA0.dgn 3/12/2012 12:35:01 PM jgelle



PLAN OF SPAN B - DECK REPAIRS



PLAN OF SPAN C - DECK REPAIRS

NOTES:

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

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

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

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL TRAFFIC UNDER THE BRIDGE IN LIEU OF BLOW-THRU CONTAINMENT. SEE TRANSPORTATION MANAGEMENT PLANS.



CLASS II SURFACE PREPARATION

CLASS III SURFACE PREPARATION

NOTES:

L' X W' = LENGTH OF AREA ALONG C BRIDGE X WIDTH OF AREA NORMAL TO C BRIDGE

PROJECT NO. WBS 17BP.13.P.2

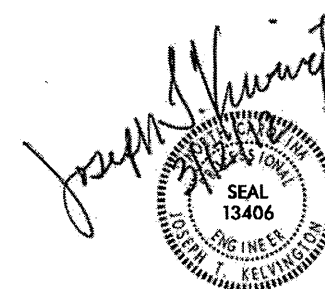
BUNCOMBE COUNTY

STATION: _____



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DRAWN BY : C B BAKER DATE : 1/12
CHECKED BY : J T KELVINGTON DATE : 1/12

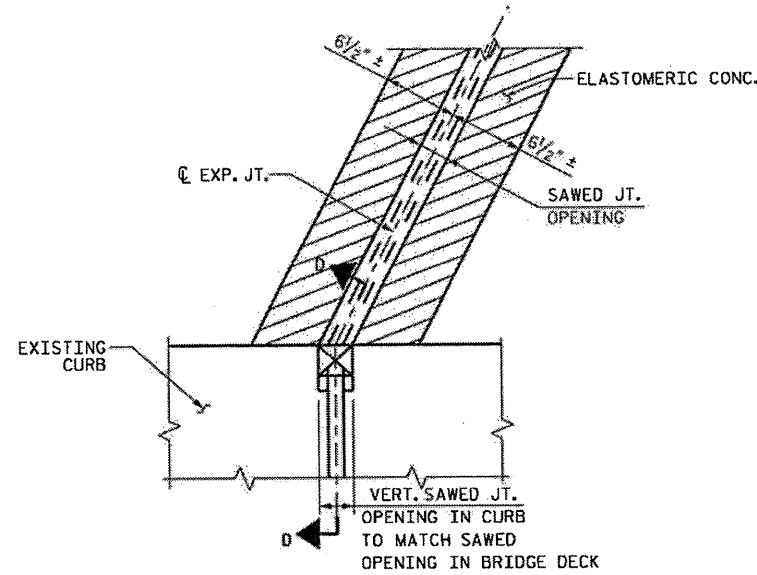


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

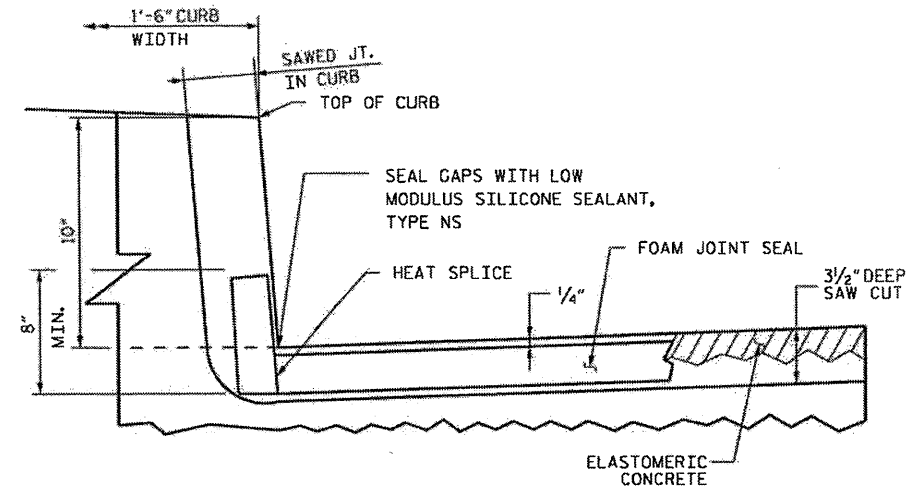
DECK REPAIR DETAILS
SPANS B & C

DECK REHAB. FOR BRIDGE NO. 387

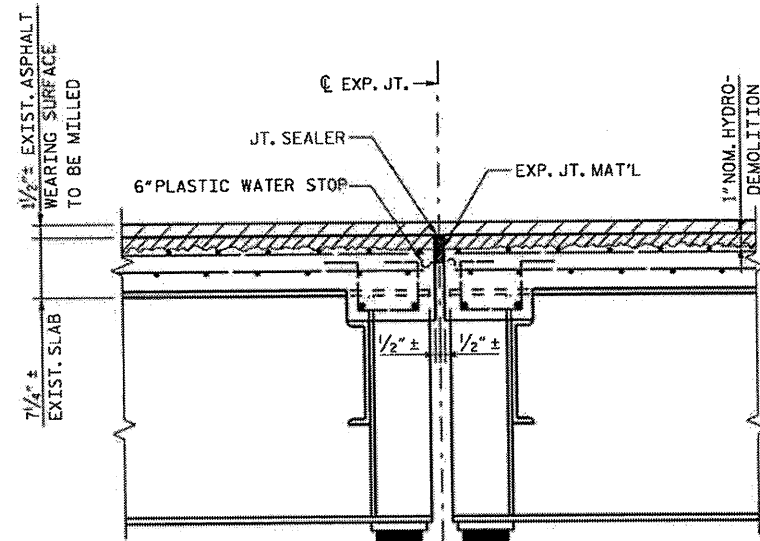
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-54
1			3			TOTAL SHEETS
2			4			58



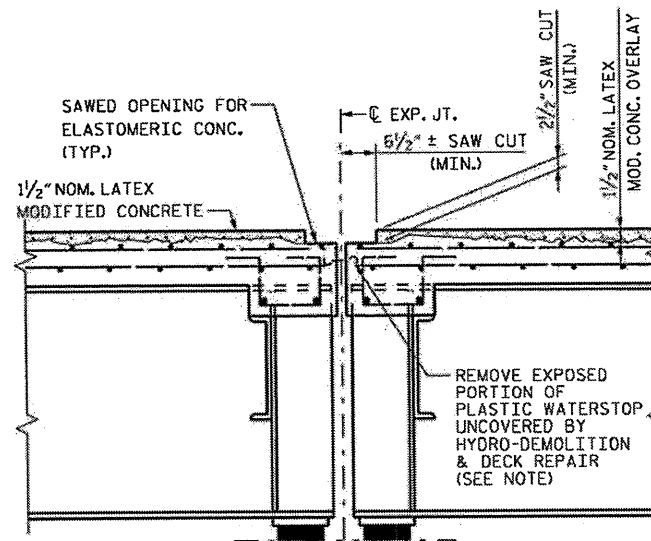
PARTIAL PLAN @ JOINT
(TYP. @ INTERIOR BENTS)



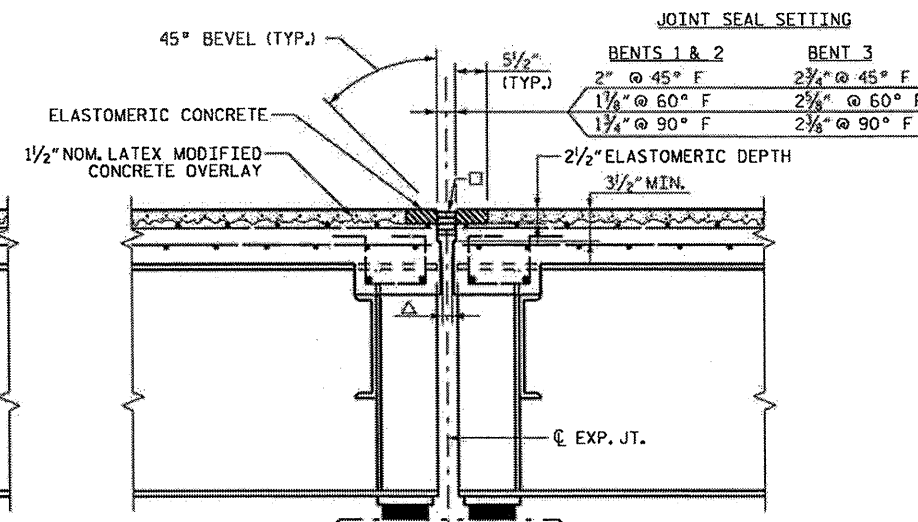
SECTION D-D
CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.



SECTION B-B
(CONCRETE REMOVAL AT EXISTING JOINT)



SECTION B-B
(LATEX MOD. CONC. OVERLAY AND CONCRETE REMOVAL FOR ELASTOMERIC CONCRETE)



SECTION B-B
(PLACEMENT OF ELASTOMERIC CONCRETE AND SAW CUT FOR FOAM JOINT SEAL)

JOINT SEAL SETTING

	BENTS 1 & 2	BENT 3
2" @ 45° F	2 3/4" @ 45° F	
1 7/8" @ 60° F	2 3/4" @ 60° F	
1 1/4" @ 90° F	2 1/8" @ 90° F	

ELASTOMERIC CONCRETE	
LOCATION	QTY
BENT 1	7.7 C.F.
BENT 2	7.7 C.F.
BENT 3	7.7 C.F.

TOTAL ELASTOMERIC CONC. = 23.1 C.F.
TOTAL ELASTOMERIC CONC. = 0.9 C.Y.

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

* FROM BEST AVAILABLE INFORMATION.
NOTE: RETAIN ALL EXIST. REINF. STEEL. CLEAN AND REPAIR AS REQ'D.
ALL EXPOSED EXISTING JOINT SEAL MATERIALS ARE TO BE COMPLETELY REMOVED.

- USE 2.8125" X 2.50" UNCOMPRESSED FOAM JT. SEAL MATERIAL @ BENTS 1 & 2.
- USE 3.4375" X 2.50" UNCOMPRESSED FOAM JT. SEAL MATERIAL @ BENT 3.
- 1" EXISTING JOINT OPENING @ BENTS 1 & 2.
- 1 1/2" EXISTING JOINT OPENING @ BENT 3.

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Fax: (919) 851-7024
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DRAWN BY: C. B. BAKER DATE: 1/12
CHECKED BY: J. T. KELVINGTON DATE: 1/12

Joseph T. Kelvington
Professional Engineer
No. 13406
State of North Carolina

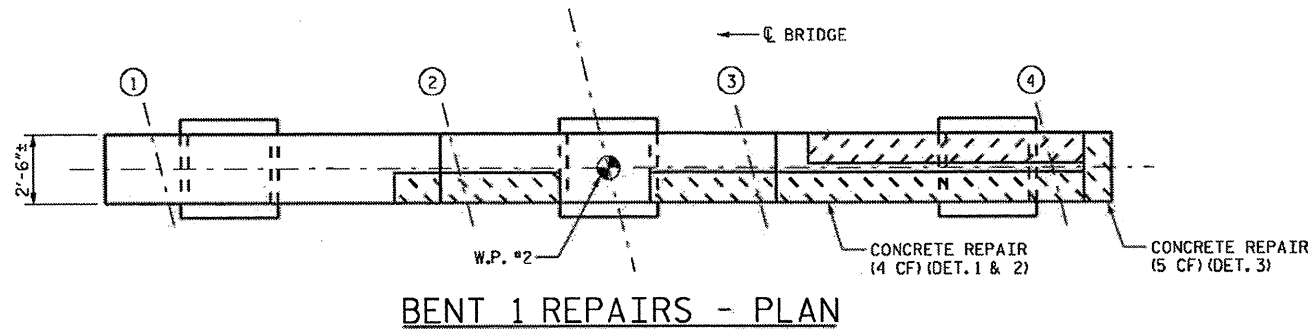
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

EXPANSION JOINT DETAILS

DECK REHAB. FOR BRIDGE NO. 387

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-55
1			3			TOTAL SHEETS
2			4			58

2. Buncombe Co. Bridge 387 Drawing Buncombe 387 Repair Bent 1.dgn 3/12/2012 12:39:08 PM jbellis



TOTAL ESTIMATED QUANTITIES:
 CONCRETE REPAIR = 34 CF
 SHOTCRETE REPAIR = 10 CF

NOTES:
 REPAIR AREA DIMENSIONS SHOWN ARE APPROXIMATE BASED ON BEST AVAILABLE INFORMATION.
 ALL REINFORCEMENT TO BE PROVIDED IS INCIDENTAL TO THE SUBSTR. REPAIR AND SHALL BE GRADE 60.
 AREAS NOT OTHERWISE SPECIFIED FOR CONCRETE REPAIR MAY BE REPAIRED WITH SHOTCRETE, CLASS A CONC. OR POLYMER CONC. AT THE CONTRACTORS' OPTION.

BEAM # AND APPROXIMATE LOCATION

NOTES:
 JACKING SHALL BE CONDUCTED IN A MANNER SUCH THAT THE SUPERSTRUCTURE WILL NOT BE DAMAGED AND THERE ARE NO OBSTACLES PREVENTING THE SPAN FROM BEING LIFTED.
 THE MAXIMUM ALLOWABLE VERTICAL DISPLACEMENT SHALL BE 1/2 INCH WITH RESPECT TO THE BEARINGS OF ADJACENT PIERS.
 BEARING NUTS SHALL BE LOOSENED TO PROVIDE A MINIMUM OF 5/8 INCH GAP TO ALLOW FOR JACKING.

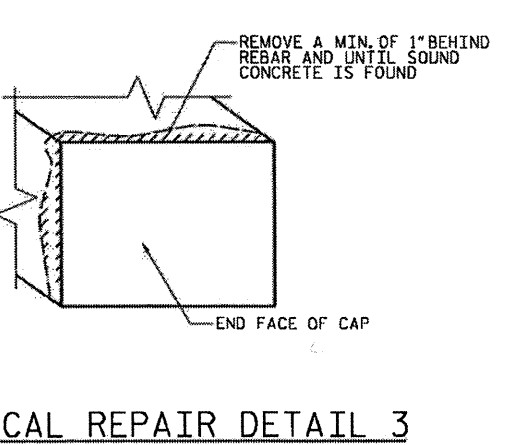
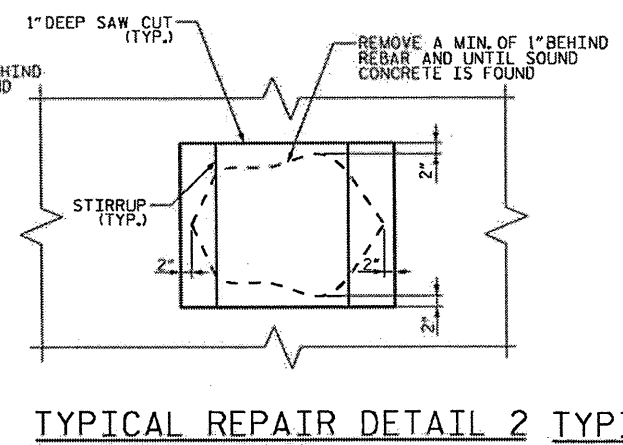
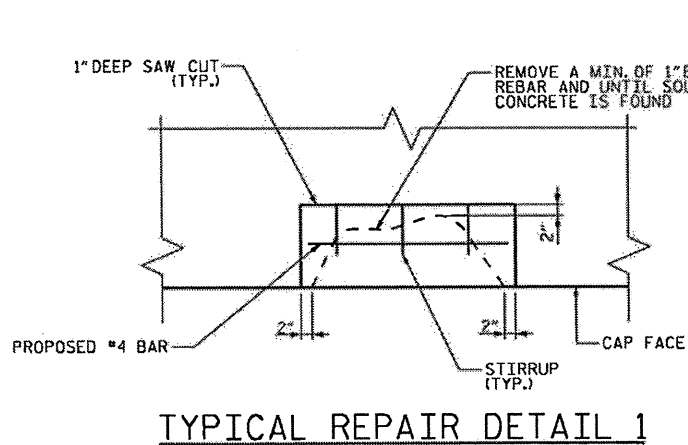
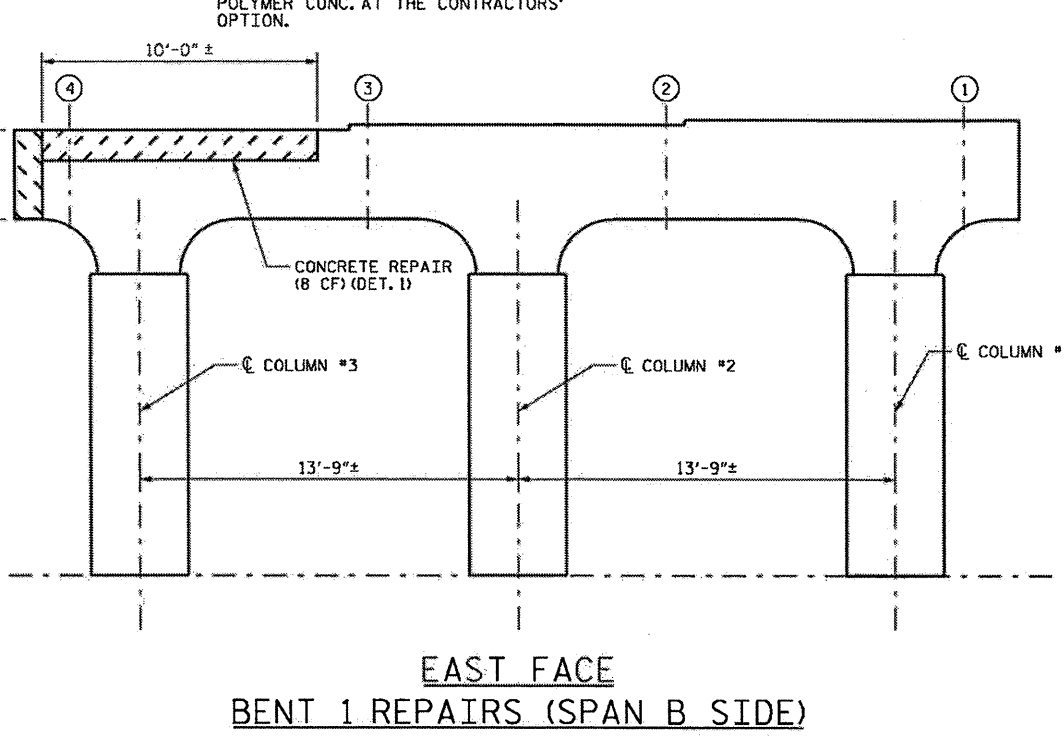
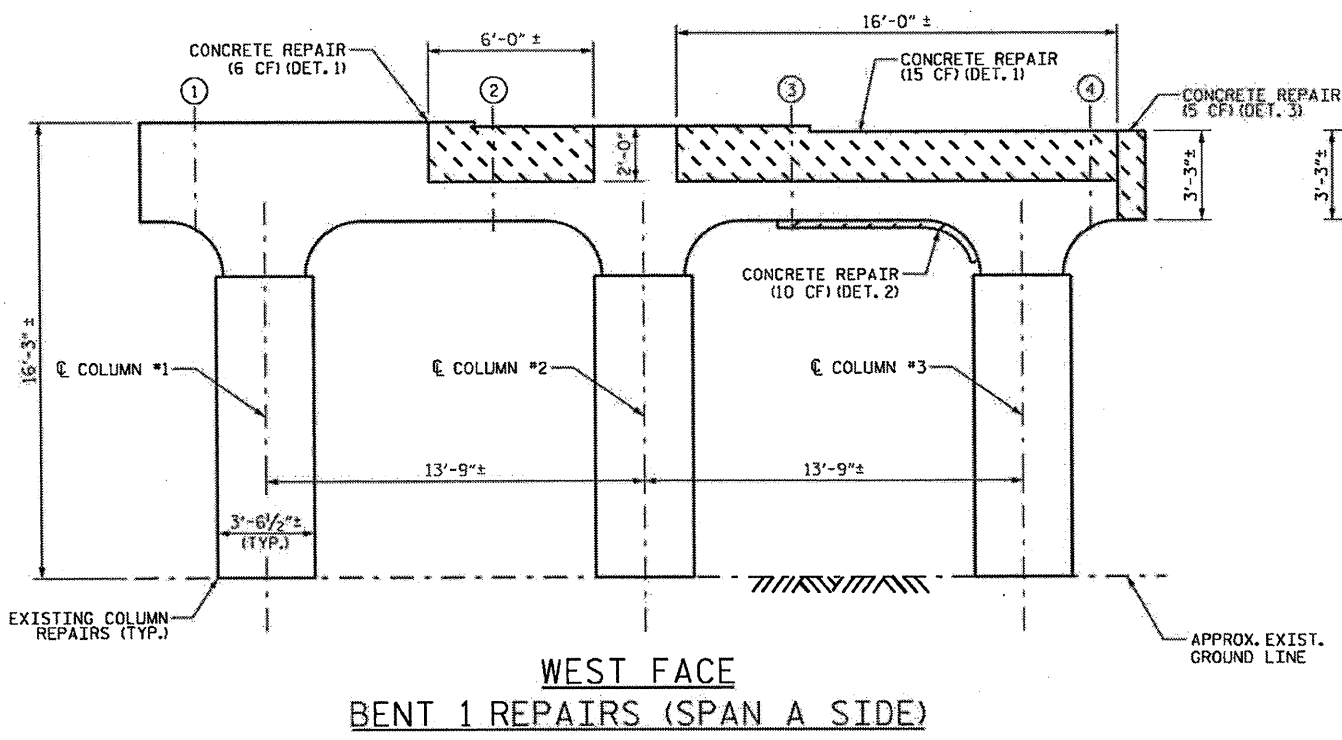
JACK ALL GIRDER SIMULTANEOUSLY THE SAME AMOUNT AND AT THE SAME RATE. AFTER JACKING MAKE SURE ALL JACKS ARE LOCKED.

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

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

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

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



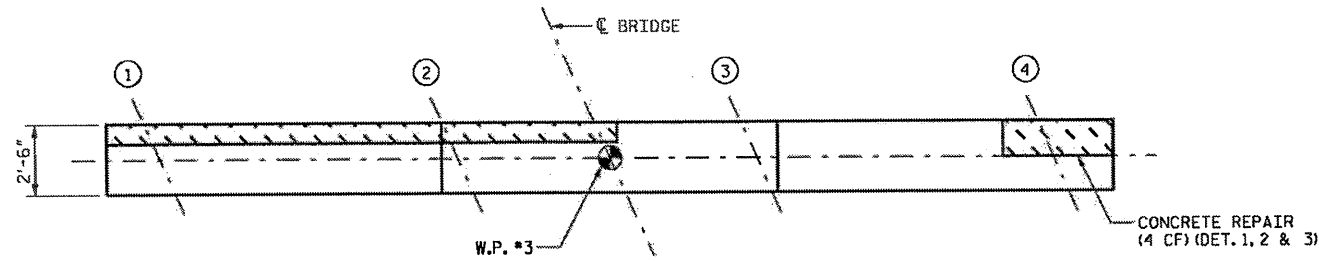
PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH				
SUBSTRUCTURE REPAIRS BENT 1				
DECK REHAB. FOR BRIDGE NO. 387				
REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	
				TOTAL SHEETS 58

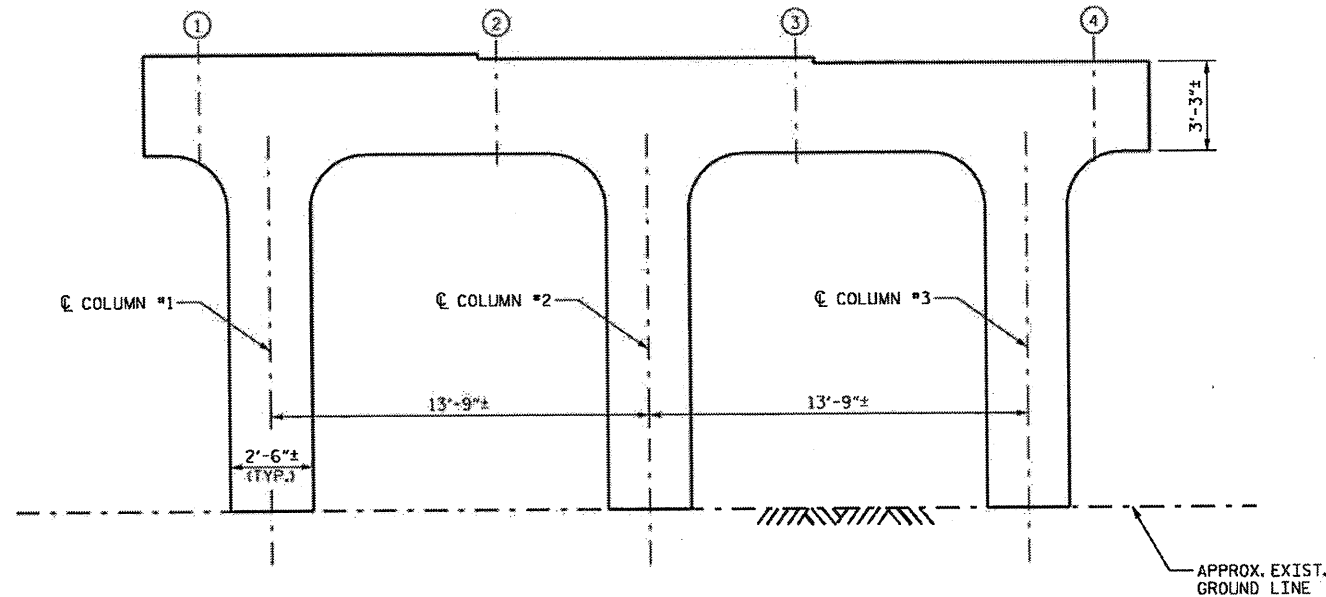
Joseph T. Kelvington
 SEAL 13406
 ENGINEER
 JOSEPH T. KELVINGTON

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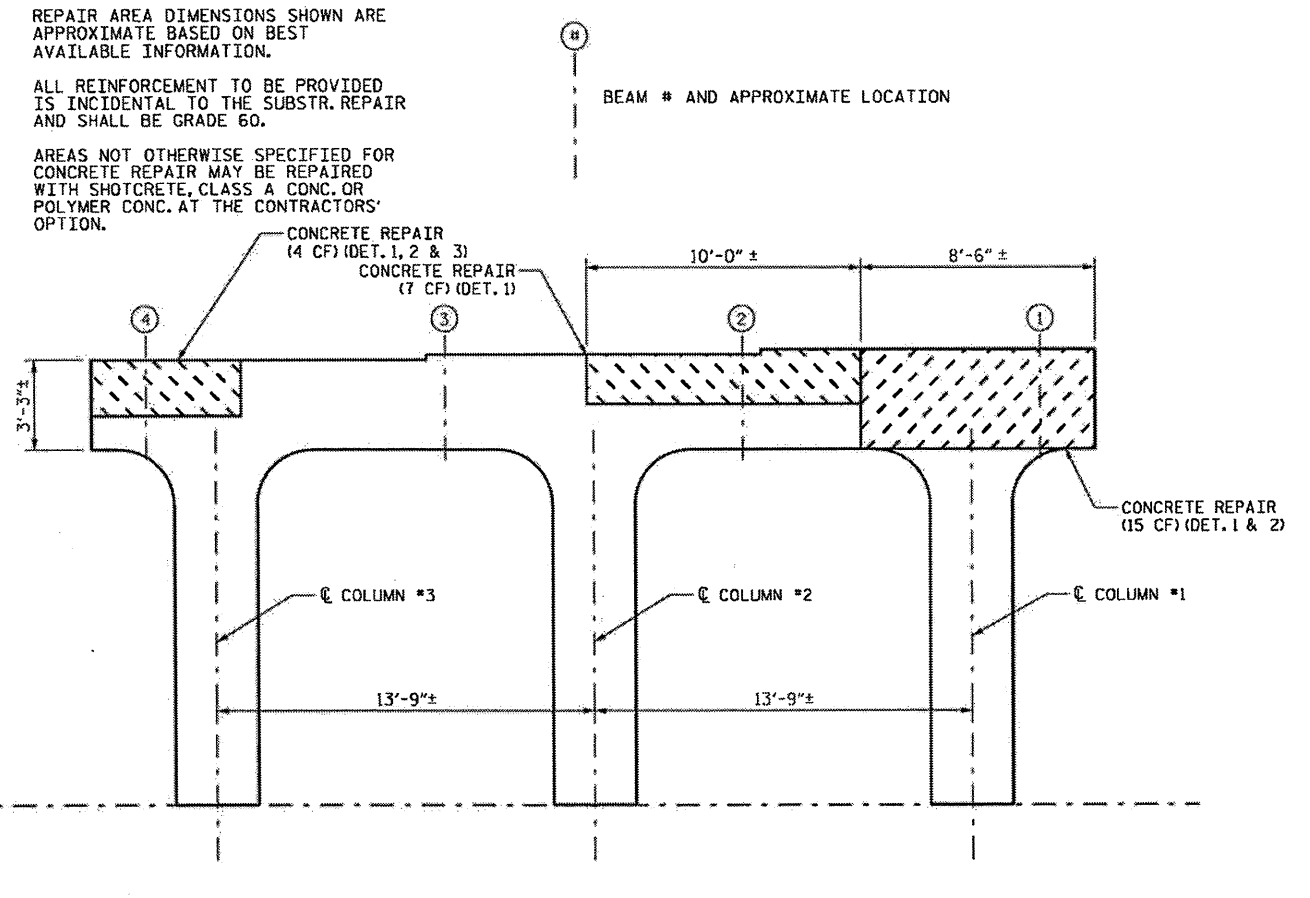
DRAWN BY: C. B. BAKER DATE: 1/12
 CHECKED BY: J. T. KELVINGTON DATE: 1/12



BENT 2 REPAIRS - PLAN



WEST FACE
BENT 2 REPAIRS (SPAN B SIDE)

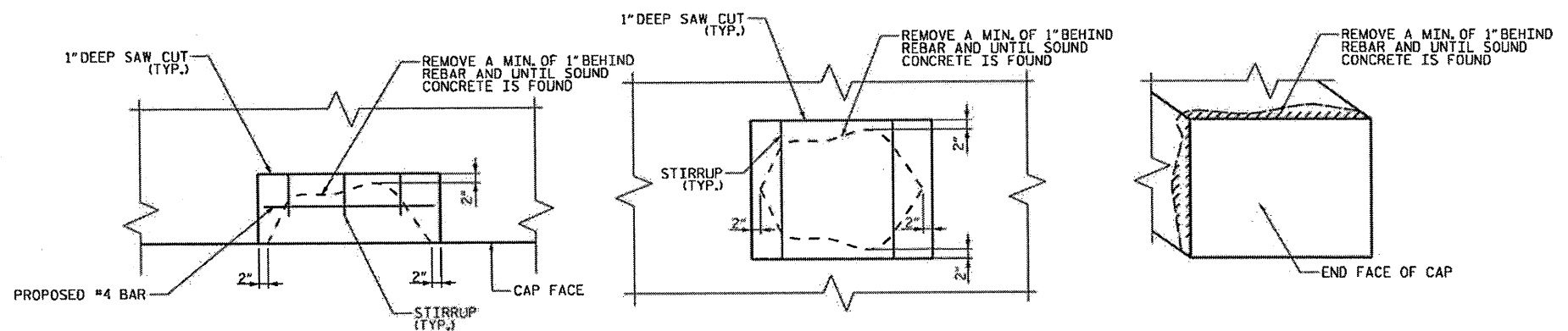


EAST FACE
BENT 2 REPAIRS (SPAN C SIDE)

TOTAL ESTIMATED QUANTITIES:
CONCRETE REPAIR = 26 CF
SHOTCRETE REPAIR = 0 CF

NOTES:
REPAIR AREA DIMENSIONS SHOWN ARE APPROXIMATE BASED ON BEST AVAILABLE INFORMATION.
ALL REINFORCEMENT TO BE PROVIDED IS INCIDENTAL TO THE SUBSTR. REPAIR AND SHALL BE GRADE 60.
AREAS NOT OTHERWISE SPECIFIED FOR CONCRETE REPAIR MAY BE REPAIRED WITH SHOTCRETE, CLASS A CONC. OR POLYMER CONC. AT THE CONTRACTORS' OPTION.

BEAM # AND APPROXIMATE LOCATION



TYPICAL REPAIR DETAIL 1

TYPICAL REPAIR DETAIL 2

TYPICAL REPAIR DETAIL 3

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
STATION: _____

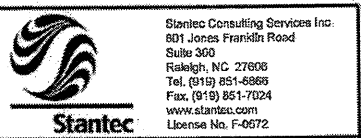
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIRS
BENT 2

DECK REHAB. FOR BRIDGE NO. 387

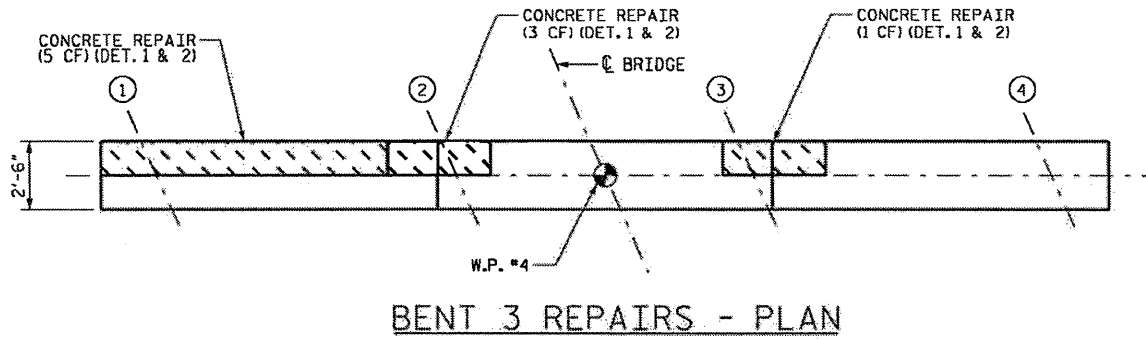
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-57
1			3			TOTAL SHEETS
2			4			58

Joseph J. Kelvington
Professional Engineer
SEAL 13406
JOSEPH J. KELVINGTON



DRAWN BY: C. B. BAKER DATE: 1/12
CHECKED BY: J. I. KELVINGTON DATE: 1/12

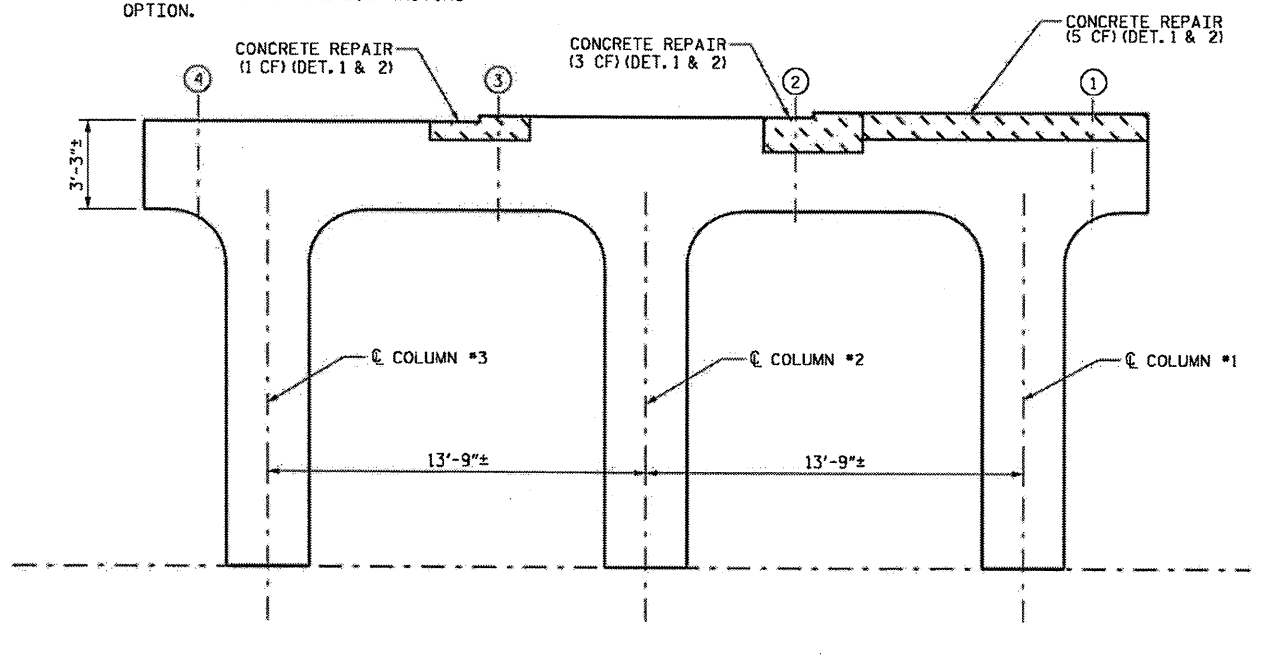
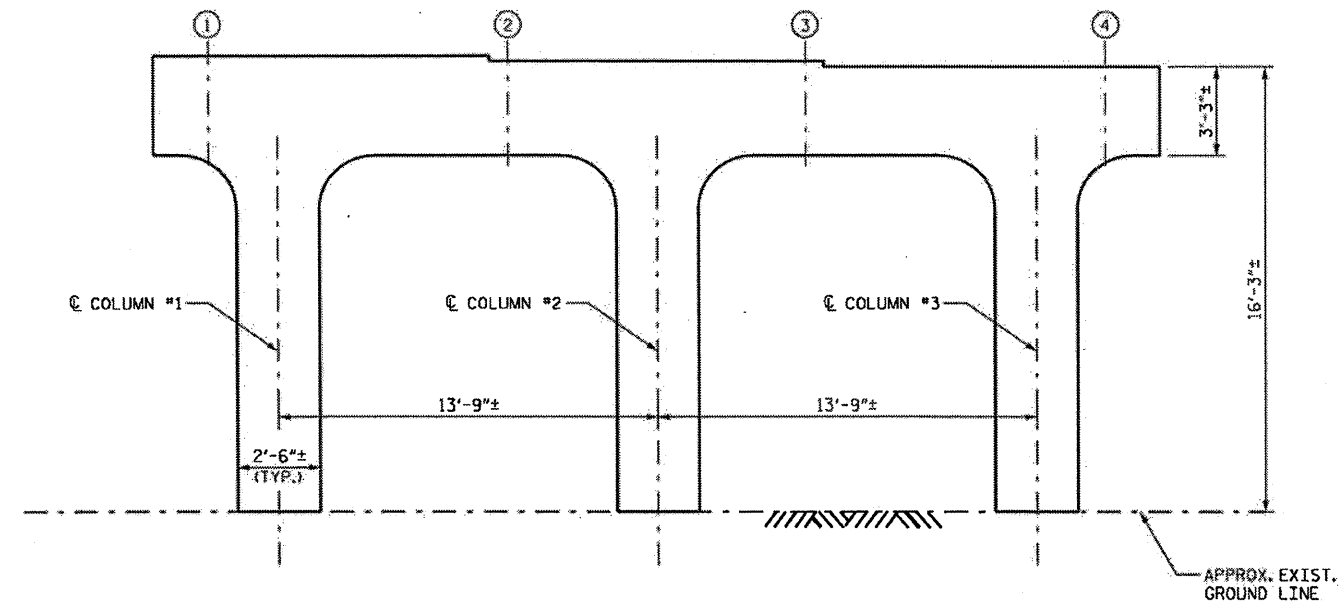
2: Buncombe Co\Buncombe Co. Bridge\Drawings\Buncombe387_Repair_Bent2.dgn 3/27/2012 12:39:10 PM jgelle



TOTAL ESTIMATED QUANTITIES:
 CONCRETE REPAIR = 9 CF
 SHOTCRETE REPAIR = 0 CF

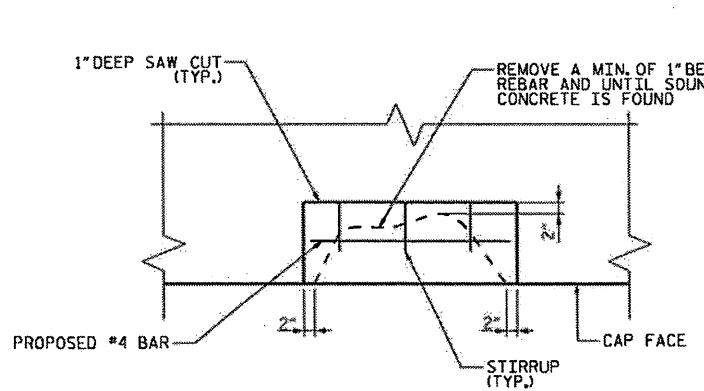
NOTES:
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BEAM # AND APPROXIMATE LOCATION

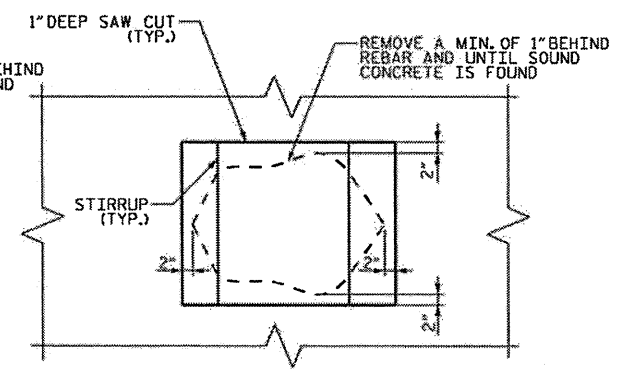


WEST FACE
 BENT 3 REPAIRS (SPAN C SIDE)

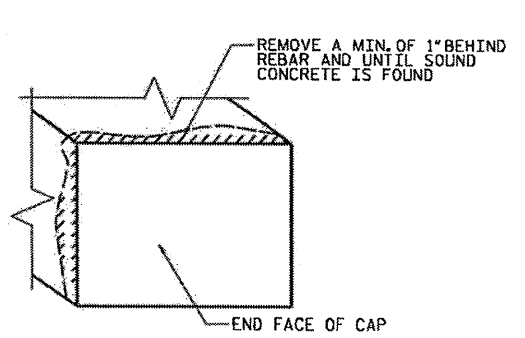
EAST FACE
 BENT 3 REPAIRS (SPAN D SIDE)



TYPICAL REPAIR DETAIL 1



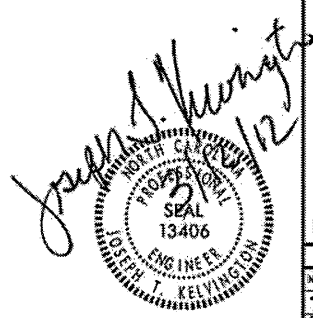
TYPICAL REPAIR DETAIL 2



TYPICAL REPAIR DETAIL 3

PROJECT NO. WBS 17BP.13.P.2
BUNCOMBE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA		DEPARTMENT OF TRANSPORTATION		RALEIGH	
SUBSTRUCTURE REPAIRS BENT 3					
DECK REHAB. FOR BRIDGE NO. 387					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-58
					TOTAL SHEETS 58



2: Buncombe Co\Buncombe Co. Bridge 387\Drawing\Buncombe387_Repair\Bent3.dgn 3/12/2012 2:39:52 PM jshelle

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DRAWN BY: C B BAKER DATE: 1/12
 CHECKED BY: J T KELVINGTON DATE: 1/12

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

BUNCOMBE COUNTY

DIVISION 13



BRIDGE PRESERVATION

BRIDGE #171 – NC 191 (Brevard Rd.) over I-26/US 74

BRIDGE #253 – Ramp from I-26 West to I-40 West over I-26 East and I-40 East

BRIDGE #324 – SR 1684 (Elk Mountain Rd.) over I-26/US 19/US 23/US 70

BRIDGE #382 – US 70/US 25 (Weaver Blvd.) over I-26/US 19 Bypass/US 23

BRIDGE #387 – SR 1727 (Monticello Rd.) over I-26/US 19 Business/US 23

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, AND INDEX OF SHEETS
TMP-1A	LIST OF ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-2	GENERAL NOTES
TMP-3	PHASING
TMP-4	BRIDGE #171 - NC 191 NB RIGHT LANE WORK AREA
TMP-5	BRIDGE #171 - NC 191 SB RIGHT LANE WORK AREA
TMP 6-6A	BRIDGE #171 - NC 191 CENTER LANE WORK AREAS
TMP-7,7A,7B,7C	BRIDGE #253 - EXIT 31B ROAD CLOSURE & LANE CLOSURES UNDER BRIDGE
TMP-8	BRIDGE #253 - BRIDGE CLOSURE DETOUR ROUTE
TMP-9	BRIDGE #324 - SR 1684 EB WORK AREA
TMP-10	BRIDGE #324 - SR 1684 WB WORK AREA
TMP-11,11A	BRIDGE #382 - US 70 EB WORK AREA
TMP-12,12A	BRIDGE #382 - US 70 WB WORK AREA

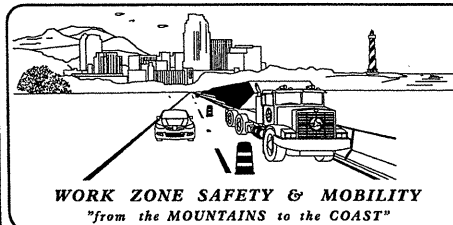
SHEET NO.
TMP-1

WBS 17BP.13.P.2

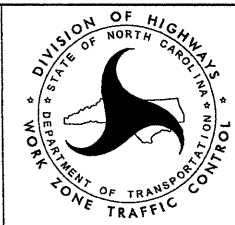
TRAFFIC MANAGEMENT STRATEGY

WORK ON BRIDGES #171, #324, #382 AND #387 WILL BE PERFORMED USING LANE CLOSURES.
WORK ON BRIDGE #253 WILL BE PERFORMED USING A ROAD CLOSURE WITH DETOUR ROUTE, AS WELL AS LANE CLOSURES UNDER THE BRIDGE.
REFER TO SHEET TMP-3 FOR PHASING.

2/9/2012 U:\TrafficControl\TCP\WBS 17BP.13.P.2 Buncombe Preservation\TCP\Plan Sheets\17BP.13.P.2.TC.TMP.01.TITLE.dgn



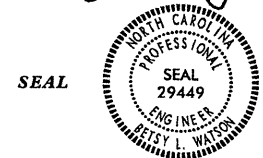
PLAN PREPARED FOR NCDOT BRIDGE MANAGEMENT UNIT
RALEIGH, NC
















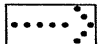














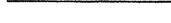






Stantec
PLAN PREPARED BY:
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www.stantec.com

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

APPROVED: *Betsy Watson*
DATE: *February 9, 2012*



LEGEND

-  DIRECTION OF TRAFFIC FLOW
 -  DIRECTION OF PEDESTRIAN TRAFFIC FLOW
 -  WORK AREA
 -  PAVEMENT REMOVAL
 -  NORTH ARROW
 -  TYPE III BARRICADE
 -  CONE
 -  DRUM
 -  SKINNY DRUM
 -  TUBULAR MARKER
 -  CHANGEABLE MESSAGE SIGN (CMS)
 -  FLAGGER
 -  AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)
 -  FLASHING ARROW BOARD (TYPE C)
 -  LAW ENFORCEMENT
 -  TRUCK MOUNTED ATTENUATOR (TMA)
 -  PORTABLE CONCRETE BARRIER (PCB)
 -  TEMPORARY CRASH CUSHION
 -  TEMPORARY SHORING
 -  WORK ZONE SIGN-PORTABLE
 -  WORK ZONE SIGN-STATIONARY
 -  WORK ZONE SIGN-STATIONARY OR PORTABLE
- SIGNALS**
-  EXISTING
 -  PROPOSED
 -  TEMPORARY
- PAVEMENT MARKINGS**
-  EXISTING PAVEMENT MARKING (GRAY)
 -  SKIP LINES
 -  MINI-SKIP LINES
 -  SOLID LINES
- PAVEMENT MARKING SYMBOLS**
-  PAVEMENT MARKING SYMBOLS
 -  EXISTING PAVEMENT MARKING SYMBOLS (HOLLOW)
 -  ONLY PAVEMENT MARKING ALPHANUMERIC CHARACTERS
- PAVEMENT MARKERS**
-  CRYSTAL/CRYSTAL
 -  CRYSTAL/RED
 -  YELLOW/YELLOW

ROADWAY STANDARD DRAWINGS

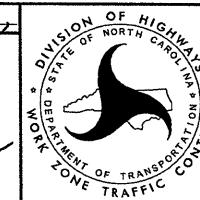
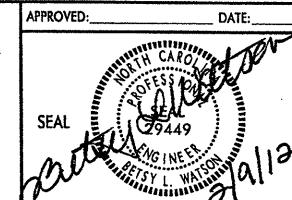
THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1253.01	RAISED PAVEMENT MARKERS - SNOWPLOWABLE

P:\9\2012\TrafficControl\TCP\WBS 17BP.13.P.2 Buncombe Preservation\TCP\Plan Sheets\17BP.13.P.2.TC.TMP.01A.RDWYSTDSLEGEND.dgn



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LEGEND
&
ROADWAY STANDARD DRAWINGS

GENERAL NOTES

PROJ. REFERENCE NO.	SHEET NO.
17BP.13.P.2	TMP-2

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

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

LANE CLOSURE TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
SR 1684 (ELK MTN. RD.) SR 1727 (MONTICELLO RD.)	6:00 A.M.-7:00 P.M. MONDAY THRU FRIDAY
NC 191	6:00 A.M.-7:00 P.M. MONDAY THRU SUNDAY
I-26 I-40 US 70/US 25	6:00 A.M.-8:00 P.M. MONDAY THRU THURSDAY AND 6:00 A.M. FRIDAY - 8:00 P.M. SUNDAY

HOLIDAY, HOLIDAY WEEKEND AND SPECIAL EVENT LANE CLOSURE AND ROAD CLOSURE TIME RESTRICTIONS

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

ROAD NAME ALL ROADS

- 1) FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2) FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 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.
- 3) FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 8:00 P.M. MONDAY.
- 4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY.
- 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. 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.
- 6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.
- 7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 8:00 P.M. MONDAY.
- 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.
- 9) FOR THE BELE CHERE FESTIVAL, BETWEEN THE HOURS OF 8:00 P.M. THE WEDNESDAY BEFORE THE FESTIVAL AND 6:00 A.M. THE WEDNESDAY AFTER THE FESTIVAL.
- 10) FOR THE NORTH CAROLINA MOUNTAIN STATE FAIR, BETWEEN THE HOURS OF 8:00 P.M. THE WEDNESDAY BEFORE THE FAIR AND 6:00 A.M. THE WEDNESDAY AFTER THE FAIR.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-26 EXIT 31B	6:00 A.M.-8:00 P.M. MONDAY THRU THURSDAY AND 6:00 A.M. FRIDAY - 8:00 P.M. SUNDAY

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) LANE CLOSURES ARE REQUIRED WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN ANY PORTION OF A TRAVEL LANE. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- E) INSTALL ALL LANE CLOSURES ACCORDING TO THE PLANS, ROADWAY STANDARD DRAWINGS (1101.02), OR AS DIRECTED BY THE ENGINEER.
- F) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER. COVER OR LAY DOWN SIGNS, AND TURN OFF ARROW BOARDS AND MESSAGE BOARDS.
- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- I) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

ROAD CLOSURES

- J) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY ROAD CLOSURE.
- K) FURNISH AND INSTALL SIGNING AND DEVICES FOR ROAD CLOSURES ACCORDING TO THE TRAFFIC MANAGEMENT PLAN. COVER OR REMOVE ALL SIGNS AND DEVICES FOR ROAD CLOSURES WHEN NOT IN EFFECT.
- L) FURNISH AND INSTALL OFFSITE-DETOUR ROUTE SIGNING AS SHOWN IN THE TRAFFIC MANAGEMENT PLAN. COVER OR REMOVE OFFSITE-DETOUR SIGNING WHEN THE DETOUR IS NOT IN OPERATION. ALL DETOUR ROUTES MUST BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTING.
- M) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- N) WHEN CLOSING A ROADWAY OR DRIVEWAY PLACE TYPE III BARRICADES COMPLETELY ACROSS THE ROADWAY OR FROM CURB TO CURB. ATTACH BARRICADE MOUNTED "ROAD CLOSED" SIGN R11-2 AT ALL CLOSURE LOCATIONS. IF LOCAL TRAFFIC IS TO BE MAINTAINED STAGGER THE BARRICADES TO ALLOW ACCESS.
- O) INSTALL SIGNS BEFORE BARRICADES WHEN CLOSING A ROADWAY TO TRAFFIC. REMOVE BARRICADES BEFORE SIGNS WHEN OPENING A ROADWAY TO TRAFFIC. INSTALL/REMOVE ROAD CLOSURE SIGNS AND BARRICADES IN A CONTINUOUS OPERATION AND WITHIN THE SAME CALENDAR DAY.

PAVEMENT MARKINGS AND MARKERS

- P) RECORD ALL LOCATIONS AND TYPES OF EXISTING PAVEMENT MARKINGS AS THEY WILL BE REPLACED IN THE SAME LOCATION ON THE NEW SURFACE.
- Q) UPON COMPLETION OF ALL OTHER CONSTRUCTION OPERATIONS INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	PAVEMENT MARKER
ALL ROADS	POLYUREA	SNOWPLOWABLE
- R) REPLACE ANY PAVEMENT MARKINGS ERADICATED OR DAMAGED BY CONSTRUCTION OPERATIONS BEFORE OPENING LANES TO TRAFFIC. A THIN LAYER OF PAINT MAY BE USED INITIALLY UNTIL FINAL MARKINGS ARE PLACED.
- S) FOR PAVEMENT MARKING SYMBOLS, ALPHANUMERIC CHARACTERS, DIAGONAL LINES AND STOP BARS USE THE FOLLOWING TYPE OF MARKING:

ON ASPHALT PAVEMENTS

1. THERMOPLASTIC HEATED IN PLACE, OR
2. THERMOPLASTIC EXTRUDED.

ON CONCRETE PAVEMENTS


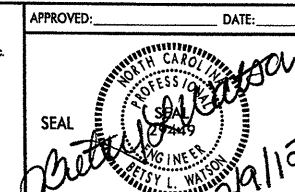
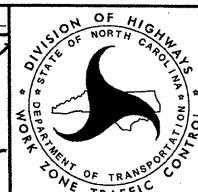
1. COLD APPLIED PLASTIC (TYPE 2)
2. THERMOPLASTIC HEATED IN PLACE (OPTIONAL)

T) DO NOT USE POLYUREA MARKING ON TYPE S9.5A SURFACE COURSE.

MISCELLANEOUS

- U) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER. LOCATIONS SHOWN IN THE PLANS ARE APPROXIMATE AND MAY BE REVISED AS THE OFFICER OR THE ENGINEER DEEM NECESSARY.
- V) ALL DIMENSIONS AND STATIONS IN THE TRAFFIC MANAGEMENT PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- W) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.

2/9/2012 11:47:11 AM TrafficControl\TCP\WBS 17BP.13.P.2 Buncombe Preservation\TCP\Plan Sheets\17BP.13.P.2.TC_TMP_02 - GENERAL NOTESMASTER.dgn

 <p style="font-size: 8px;">Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27608 Tel. (919) 851-8866 Fax. (919) 851-7024 www.stantec.com License No. F-0672</p>	<p style="font-size: 8px;">APPROVED: _____ DATE: _____</p>			<h2 style="margin: 0;">GENERAL NOTES</h2>
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PHASING

BRIDGE #171 - NC 191 (BREVARD RD.) OVER I-26/US 74

FOR NC 191 NORTHBOUND RIGHT LANE WORK AREA, USE RIGHT LANE CLOSURES PER SHEET TMP-4.

FOR NC 191 SOUTHBOUND RIGHT LANE WORK AREA, USE RIGHT LANE CLOSURES PER SHEET TMP-5.

FOR NC 191 CENTER LANE WORK AREAS, USE LEFT LANE CLOSURES PER SHEETS TMP-6, 6A.

BRIDGE #324 - SR 1684 (ELK MOUNTAIN RD.) OVER I-26

USE FLAGGER/LAW ENFORCEMENT CONTROLLED LANE CLOSURES PER SHEETS TMP-9,10.

BRIDGE #382 - US 25/US 70 OVER US 19/US 23 BYPASS

FOR US 70 EASTBOUND WORK AREA, USE FLAGGING OPERATION PER SHEETS TMP-11,11A.

FOR US 70 WESTBOUND WORK AREA, USE FLAGGING OPERATION PER SHEETS TMP-12,12A.

BRIDGE #387 - SR 1727 (MONTICELLO RD.) OVER I-26

WHEN CONSTRUCTING BRIDGE #387, USE FLAGGING OPERATION AS SHOWN ON ROADWAY STANDARD DRAWING 1101.02 SHEET 1.

BRIDGE #253 - I-26 RAMP OVER I-40 EB AND I-240 RAMP

REFER TO SHEETS TMP-7,7A,7B,7C,8.


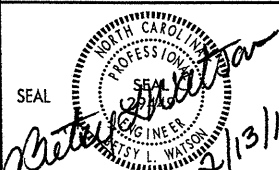

PERFORM ALL DECK OVERLAY, DECK PRESERVATION, GROOVING, JOINTS, SPAN JACKING, BEARING REPLACEMENT, AND STRUCTURE STEEL REPAIR WORK FOR BRIDGE #253 USING ROAD CLOSURES OF EXIT 31B WITHIN A FORTY TWO (42) CONSECUTIVE CALENDAR DAY PERIOD.

BRIDGE PAINTING AND SHOTCRETE REPAIRS WILL NOT BE REQUIRED TO BE COMPLETED DURING THE 42 DAY PERIOD.

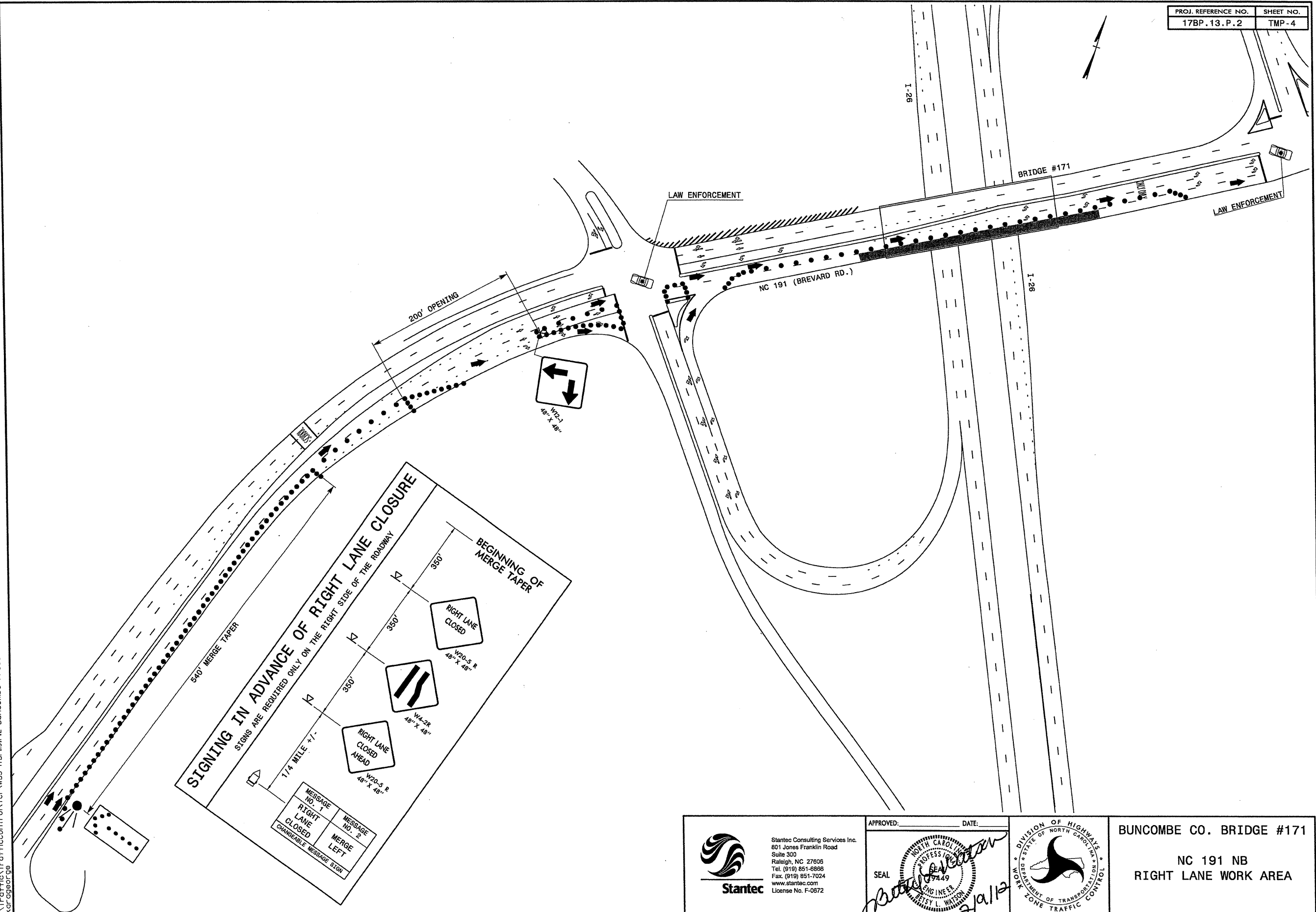
USE LANE CLOSURES UNDER BRIDGE WHEN WORKING ON THE SHOULDER OR IN A LANE, OR WHEN THE VERTICAL CLEARANCE TO BRIDGE #253 IS REDUCED DUE TO THE INSTALLATION OF TEMPORARY AUXILIARY BEAMS. ANY TEMPORARY BEAMS THAT AFFECT THE VERTICAL CLEARANCE MUST BE REMOVED BEFORE LANES ARE OPEN TO TRAFFIC.

SEE GENERAL NOTES FOR LANE CLOSURE AND ROAD CLOSURE TIME RESTRICTIONS. REFER TO PROJECT SPECIAL PROVISIONS FOR INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES.

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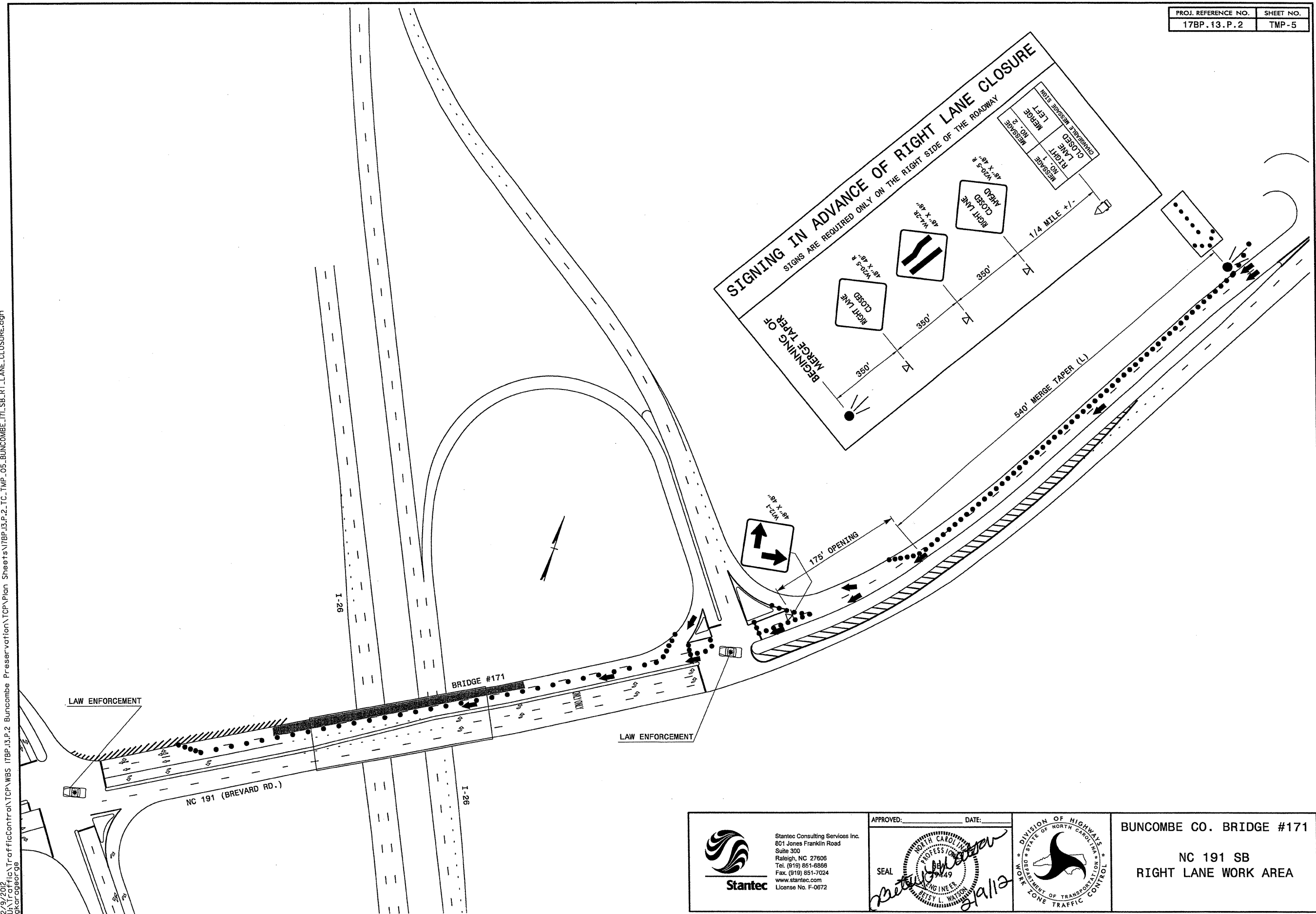
 <p>Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672</p>	<p>APPROVED: _____ DATE: _____</p> <div style="text-align: center;">  <p>SEAL</p> </div>		<p>PHASING</p>
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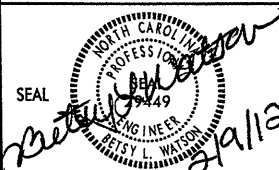

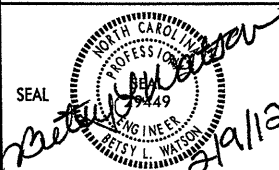
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 gkarageorge



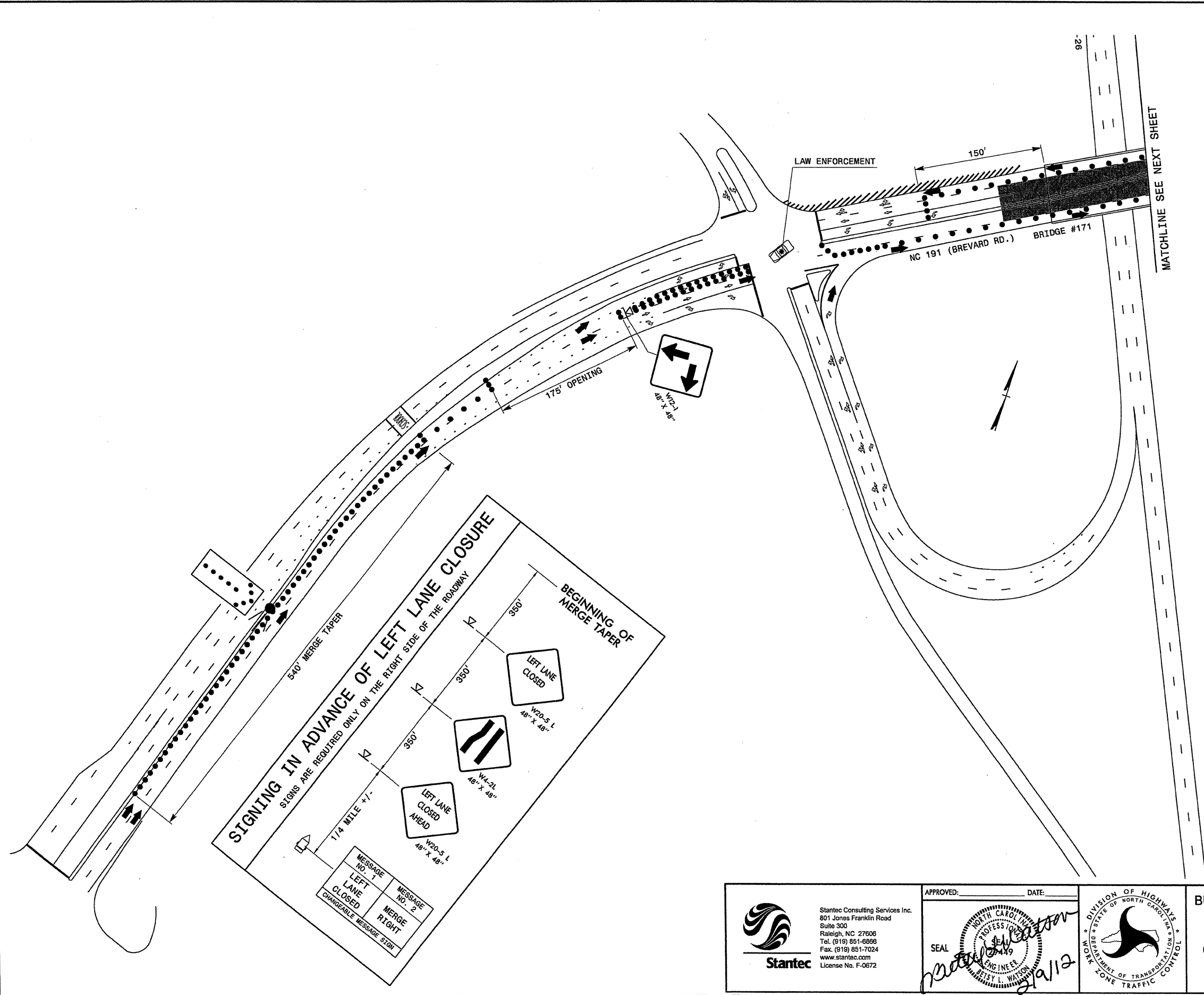
<p>Stantec Consulting Services Inc. 601 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-8888 Fax. (919) 851-7024 www.stantec.com License No. F-0572</p>	APPROVED: _____ DATE: _____ 	<p>DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL</p>	<p>BUNCOMBE CO. BRIDGE #171</p> <p>NC 191 NB</p> <p>RIGHT LANE WORK AREA</p>
	SEAL: <i>T. L. Watson</i> 2/9/12		


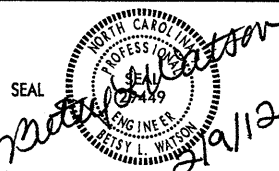

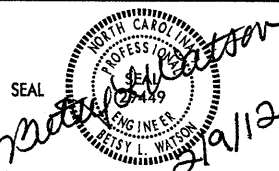
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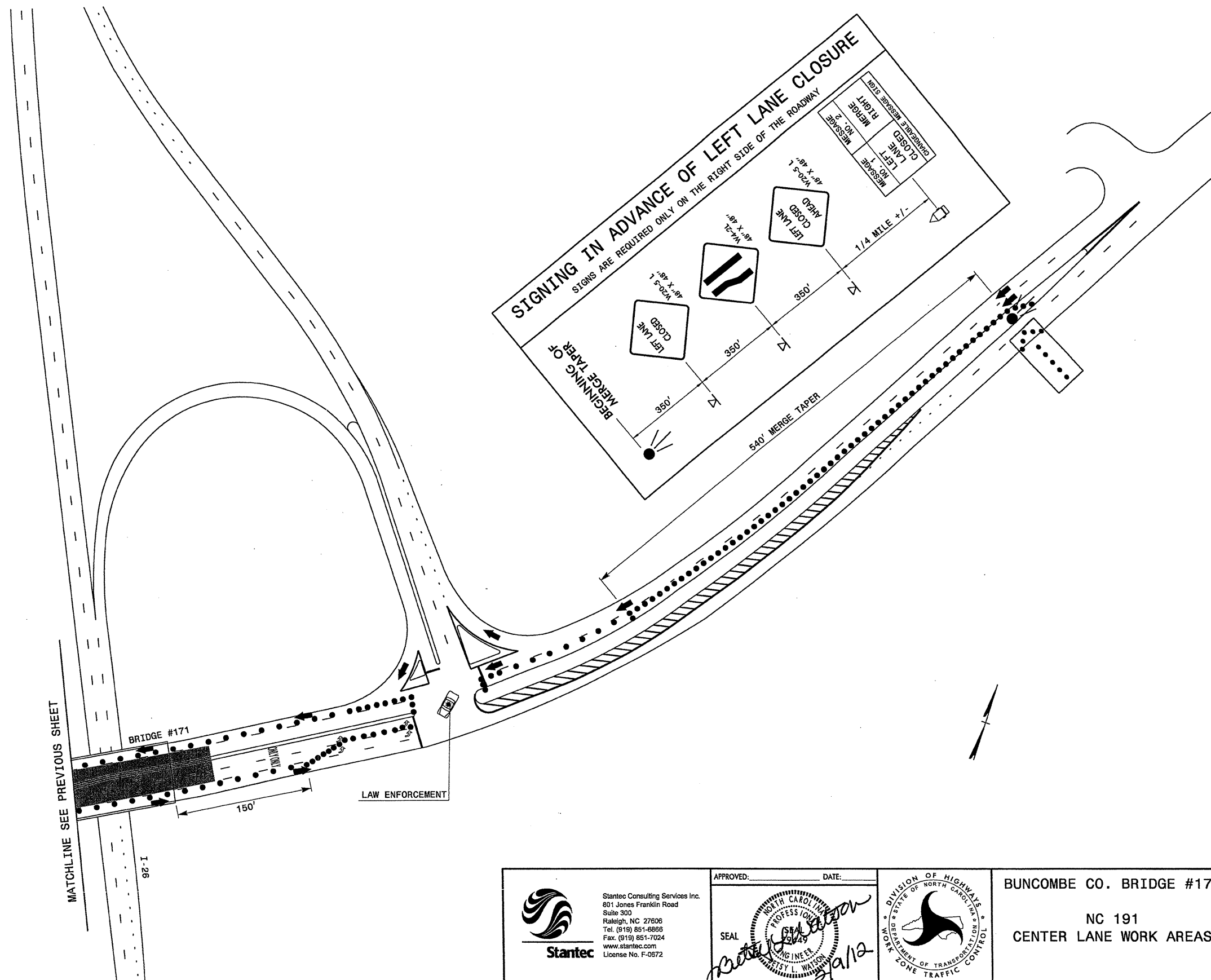
 <p>Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672</p>	APPROVED: _____ DATE: _____ 		BUNCOMBE CO. BRIDGE #171 NC 191 SB RIGHT LANE WORK AREA
			

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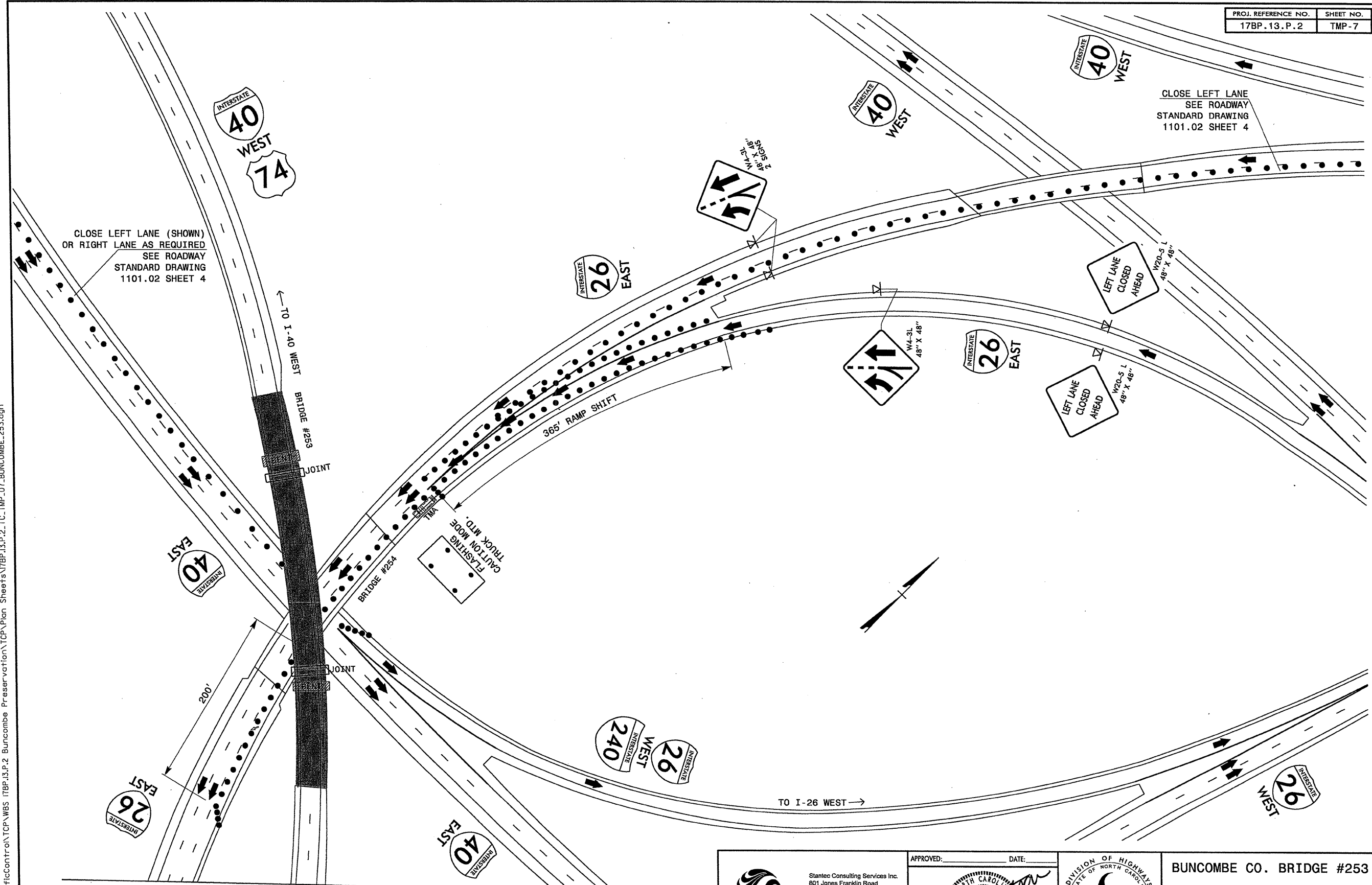


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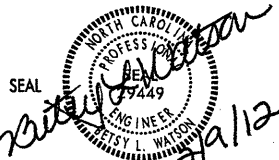



CLOSE LEFT LANE (SHOWN)
OR RIGHT LANE AS REQUIRED
SEE ROADWAY
STANDARD DRAWING
1101.02 SHEET 4

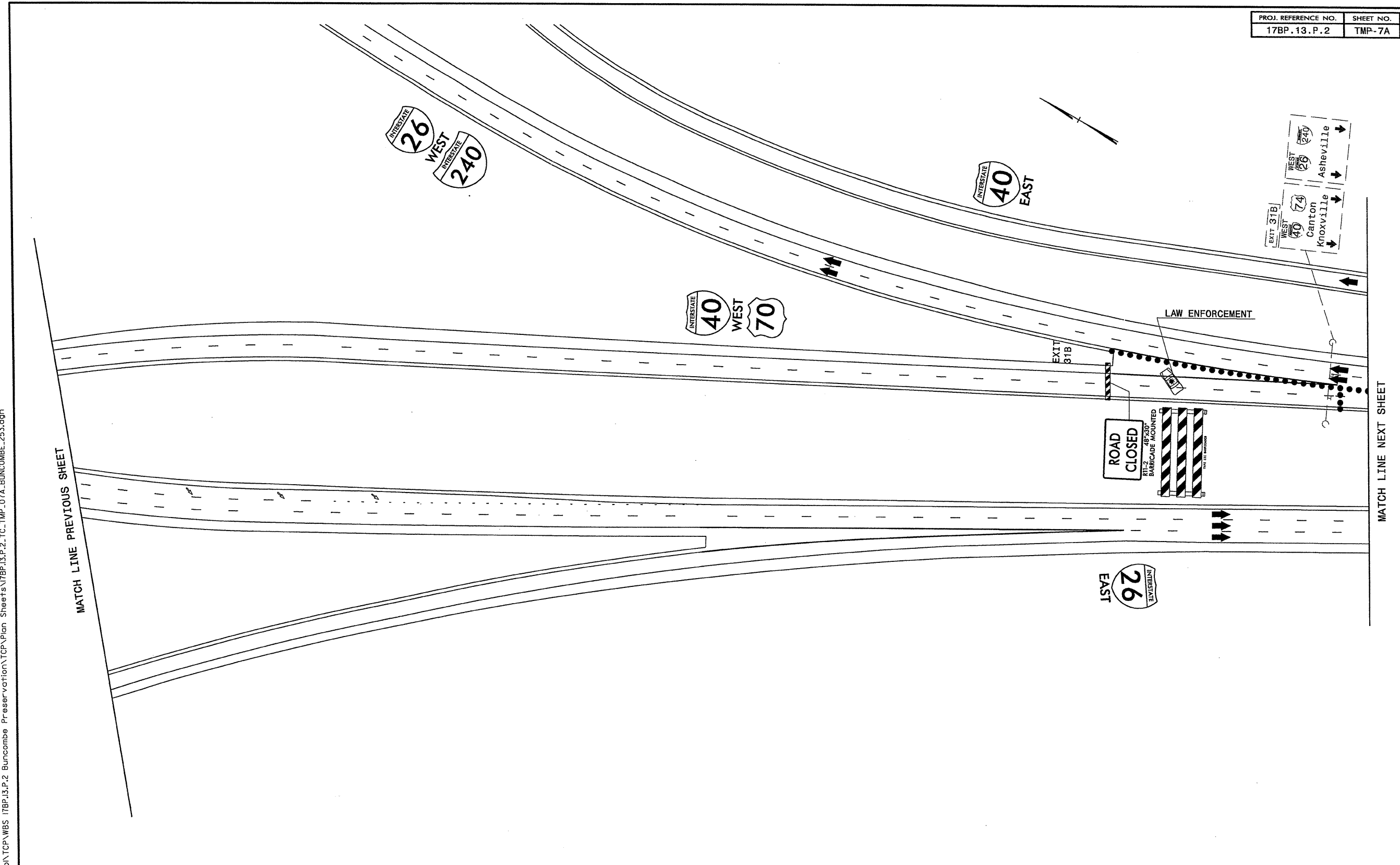
CLOSE LEFT LANE
SEE ROADWAY
STANDARD DRAWING
1101.02 SHEET 4

MATCH LINE NEXT SHEET


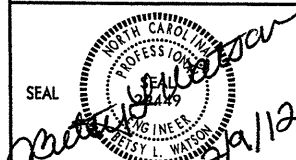

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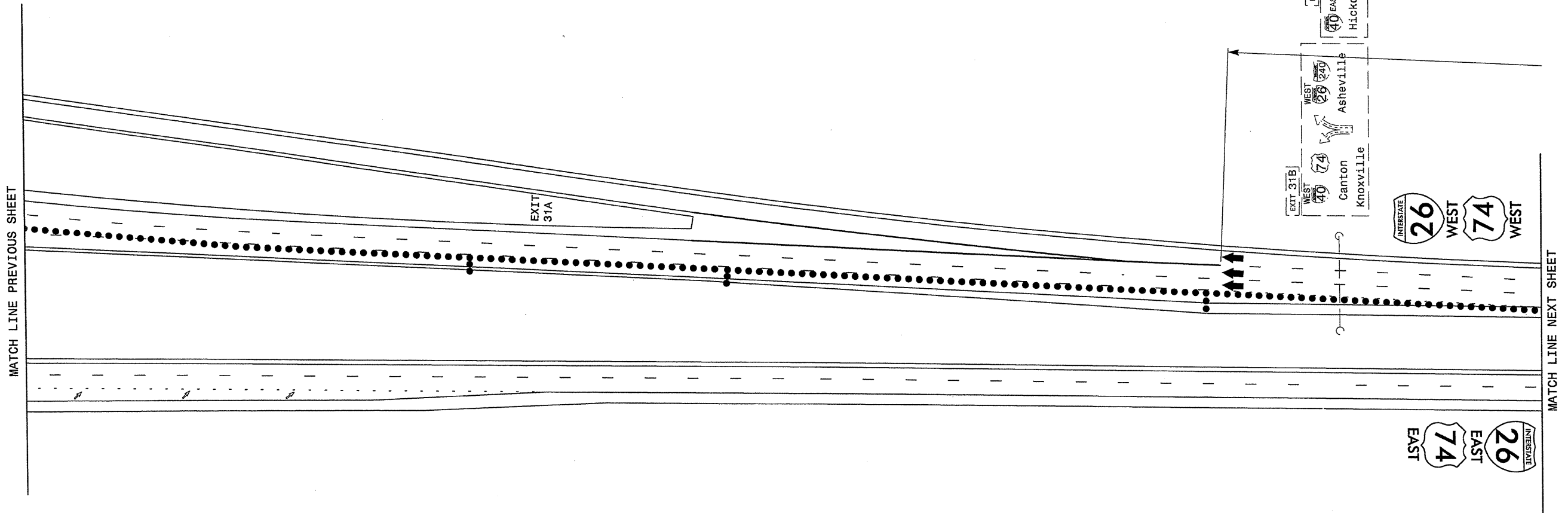
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	<p>SEAL</p> <p><i>Patsy L. Watson</i> 2/9/12</p>		

PROJ. REFERENCE NO.	SHEET NO.
17BP.13.P.2	TMP-7A


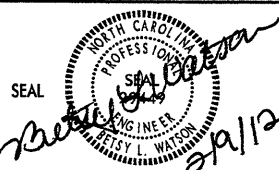



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	2/9/12		

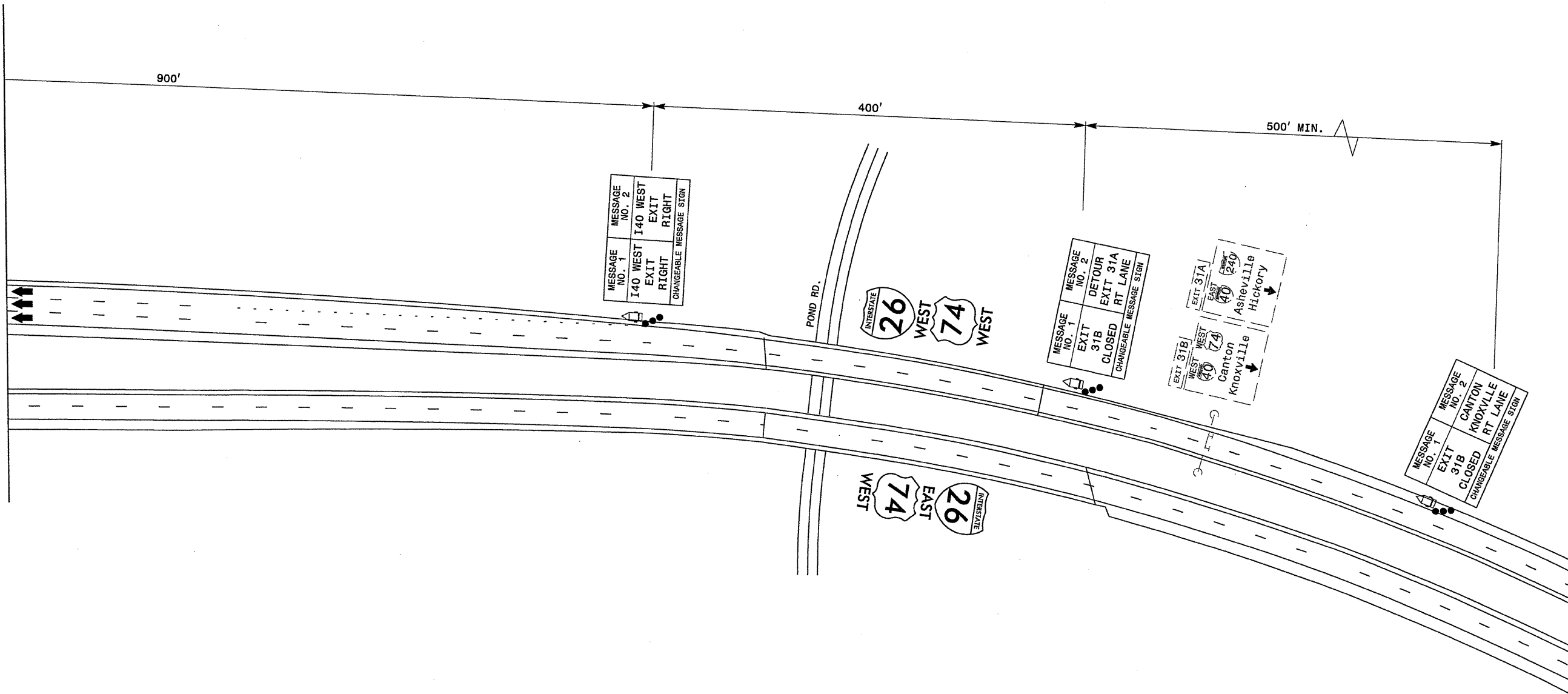



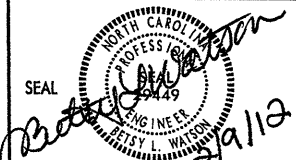

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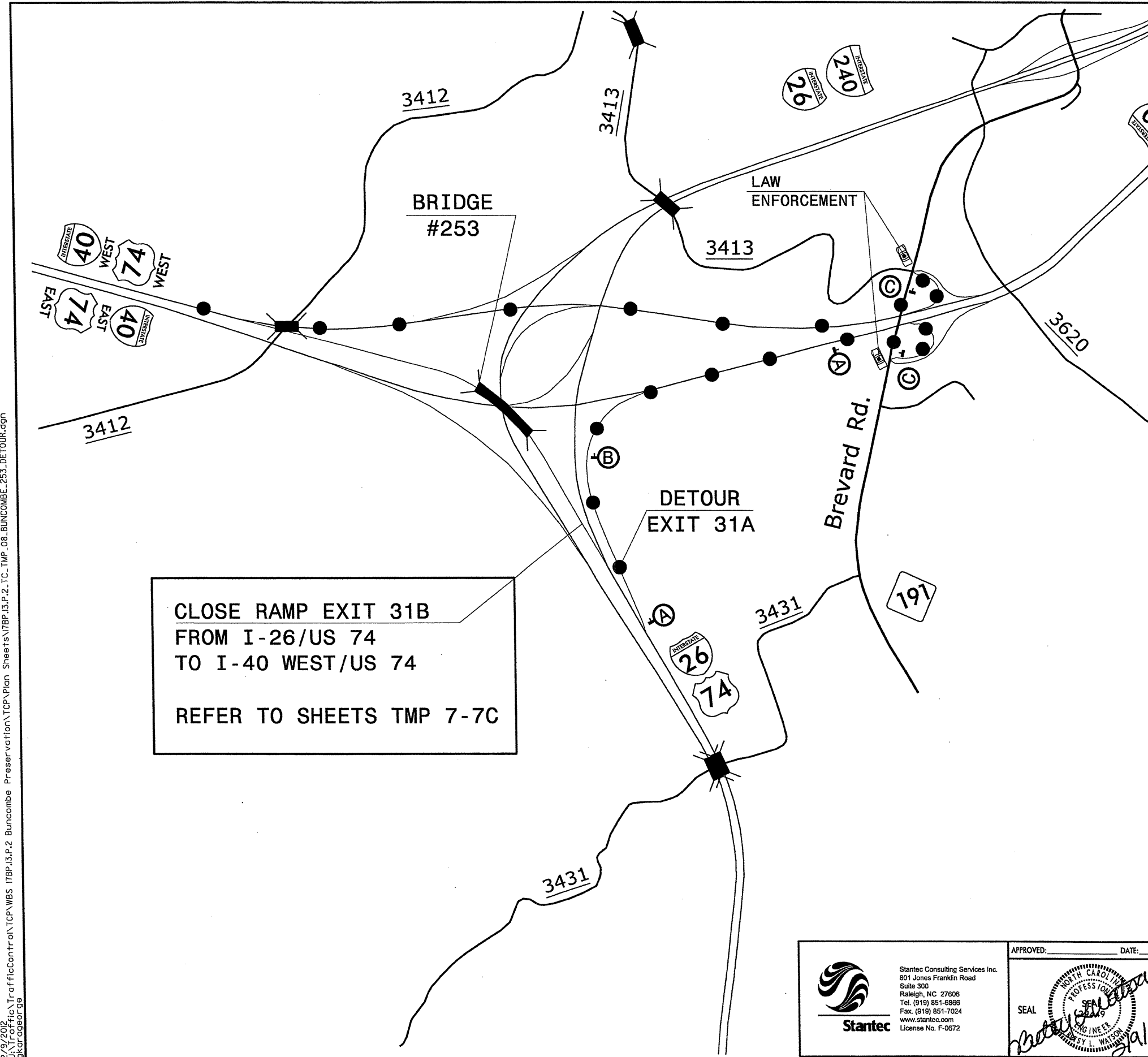
 Stantec	Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672	APPROVED: _____ DATE: _____  SEAL <i>Patsy L. Watson</i> 2/9/12	 DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL	BUNCOMBE CO. BRIDGE #253 EXIT 31B ROAD CLOSURE & LANE CLOSURES UNDER BRIDGE
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MATCH LINE PREVIOUS SHEET



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	SEAL R. L. Watson 2/19/12		



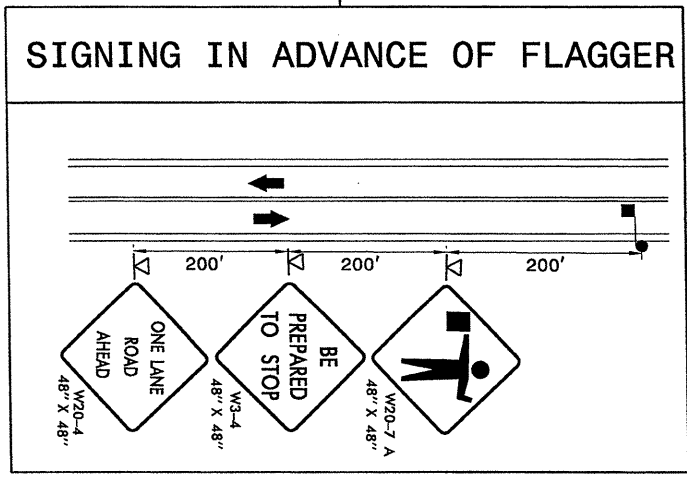
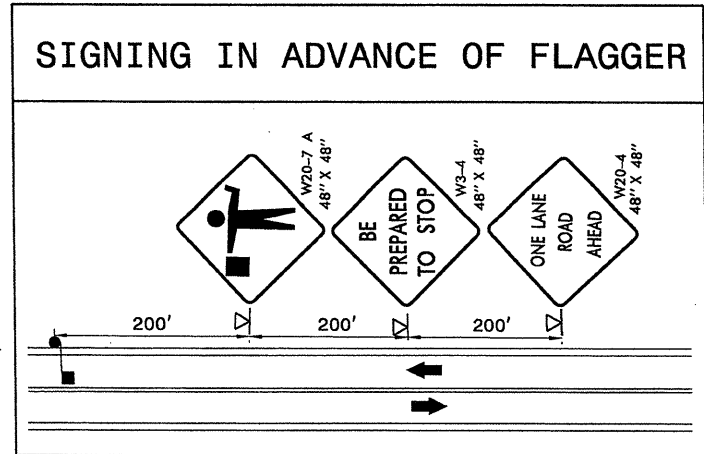
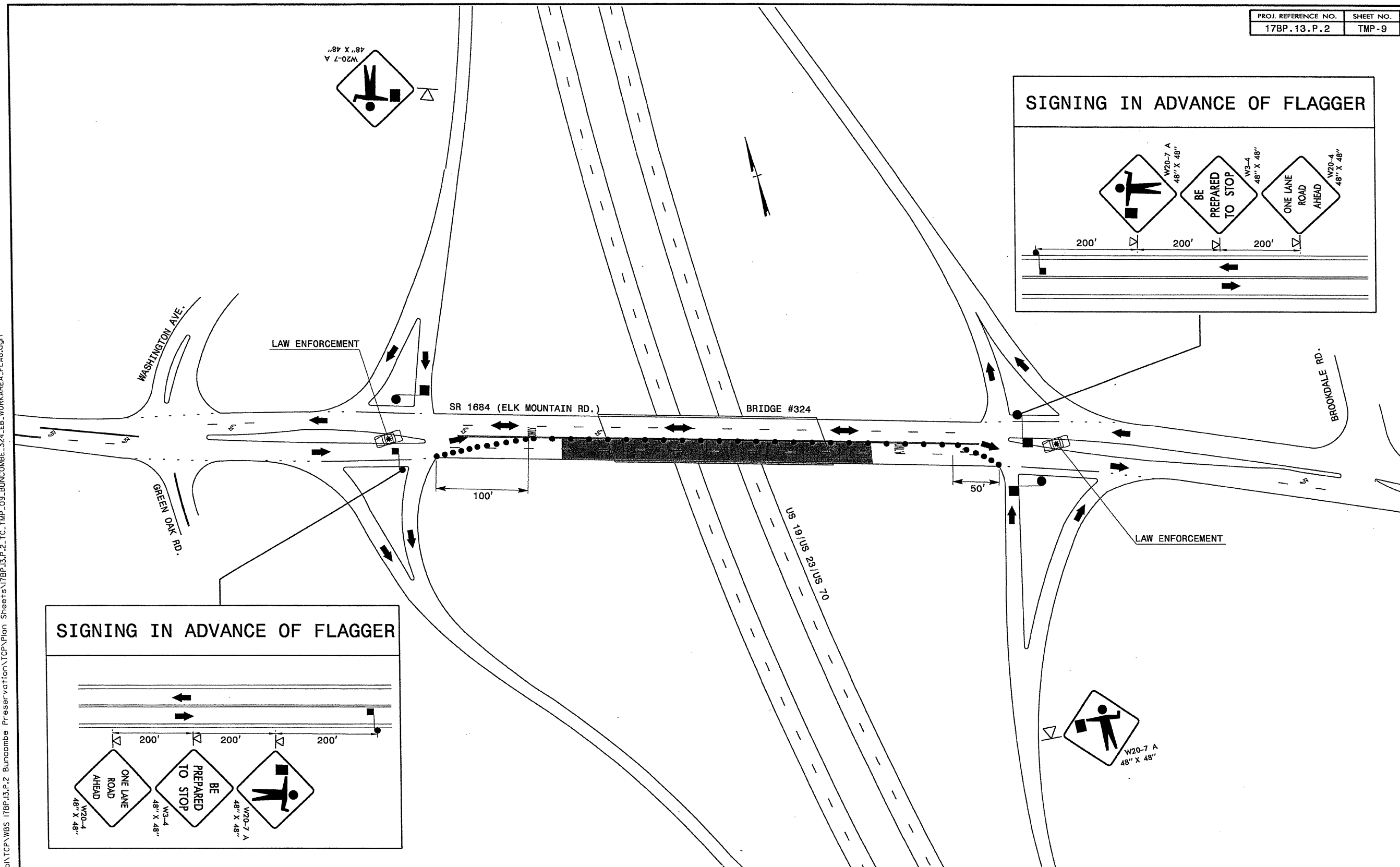
CLOSE RAMP EXIT 31B
FROM I-26/US 74
TO I-40 WEST/US 74
REFER TO SHEETS TMP 7-7C

A	DETOUR	M4-8 24" X 12"	DETOUR	M4-8 24" X 12"
	WEST	M3-4 24" X 12"	DETOUR	M4-8 24" X 12"
	INTERSTATE 40	M1-1	74	M1-4 24"X24"
	↗	M6-2 21" X 15"	↗	M6-2 21" X 15"
B	DETOUR	M4-8 24" X 12"	DETOUR	M4-8 24" X 12"
	WEST	M3-4 24" X 12"	DETOUR	M4-8 24" X 12"
	INTERSTATE 40	M1-1	74	M1-4 24"X24"
	↑	M6-3 21" X 15"	↑	M6-3 21" X 15"
C	DETOUR	M4-8 24" X 12"	DETOUR	M4-8 24" X 12"
	WEST	M3-4 24" X 12"	DETOUR	M4-8 24" X 12"
	INTERSTATE 40	M1-1	74	M1-4 24"X24"
	→	M6-1 21" X 15"	→	M6-1 21" X 15"

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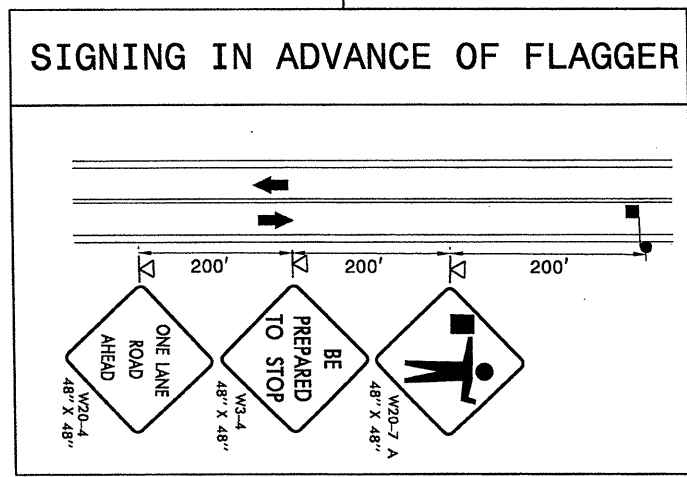
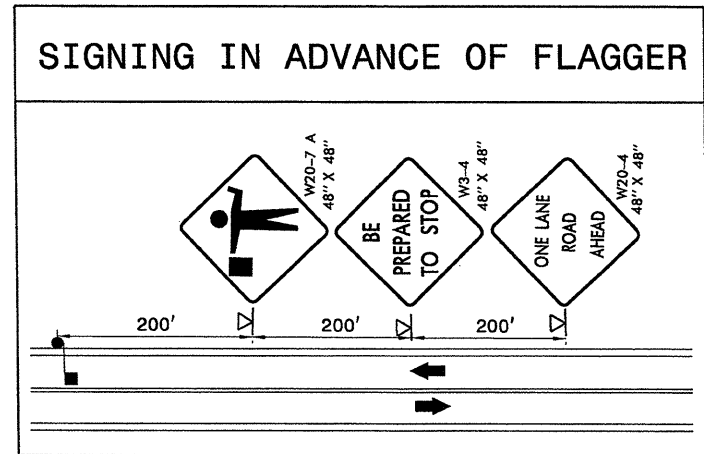
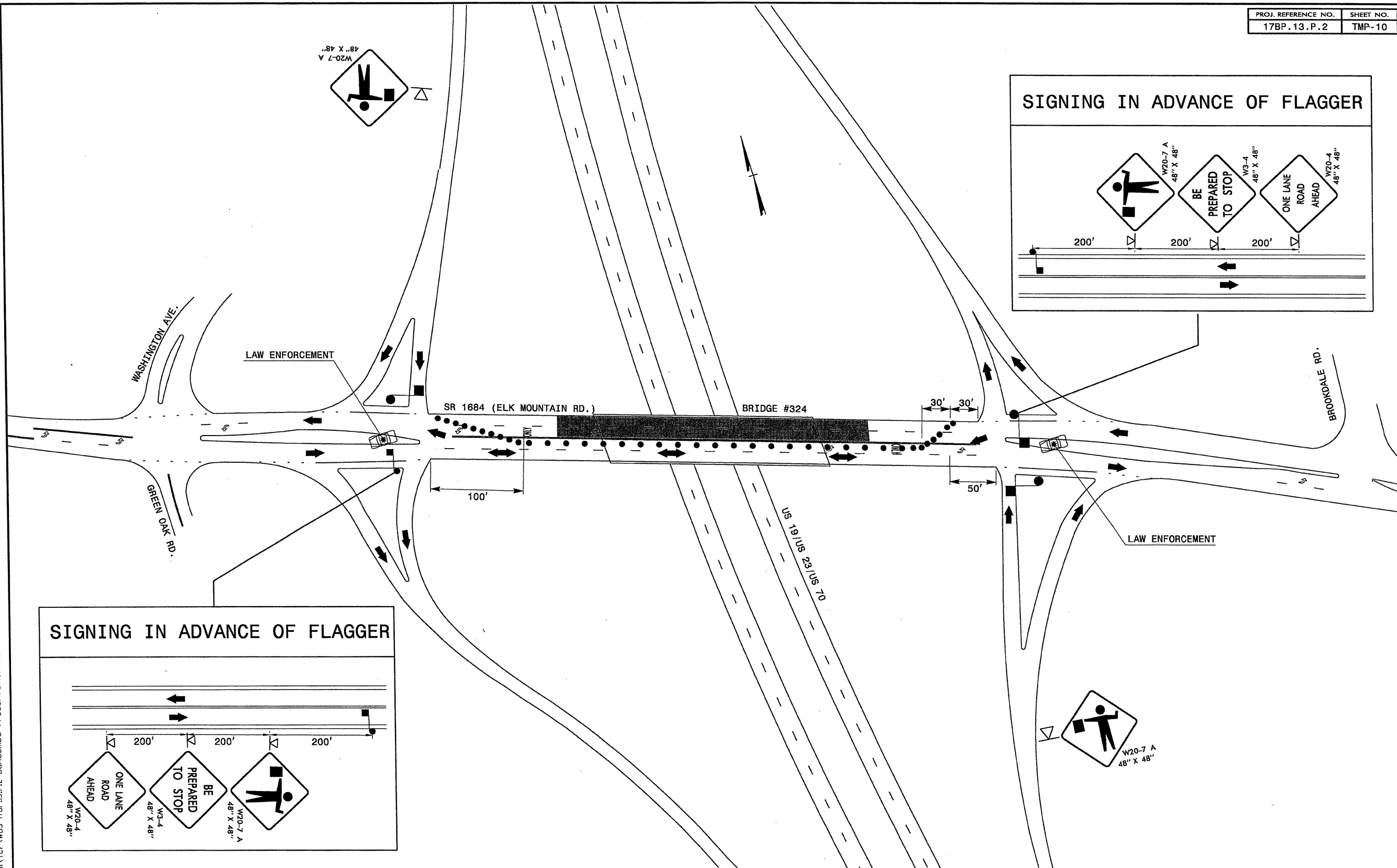
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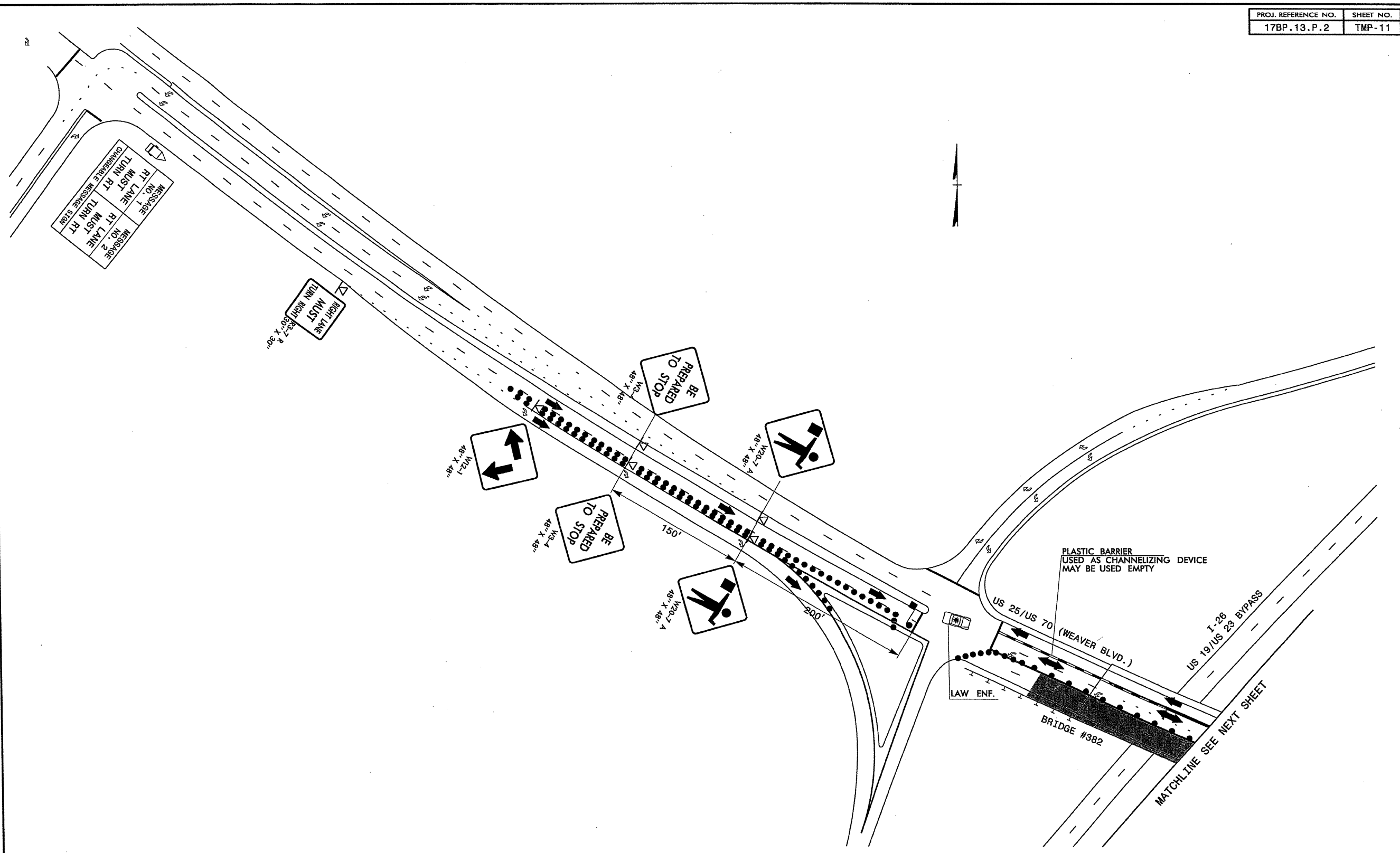
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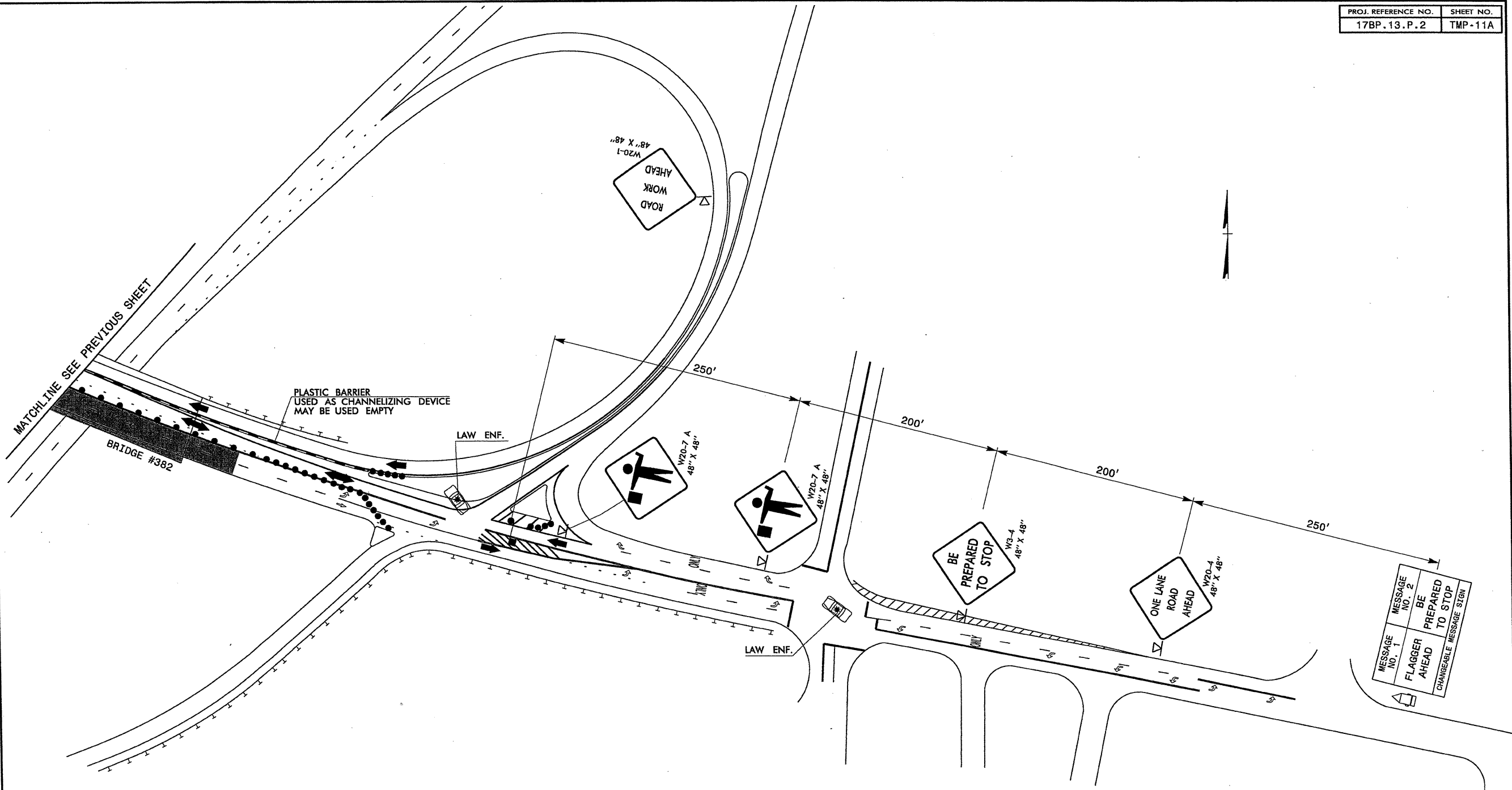
<p>Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-8866 Fax. (919) 851-7024 www.stantec.com License No. F-0672</p>	APPROVED: _____ DATE: _____ 	<p>DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL</p>	<p>BUNCOMBE CO. BRIDGE #324</p> <p>SR 1684 WESTBOUND WORK AREA</p>
	SEAL: _____ 		


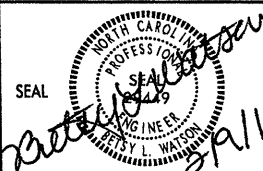

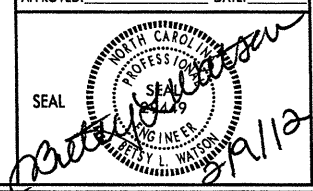
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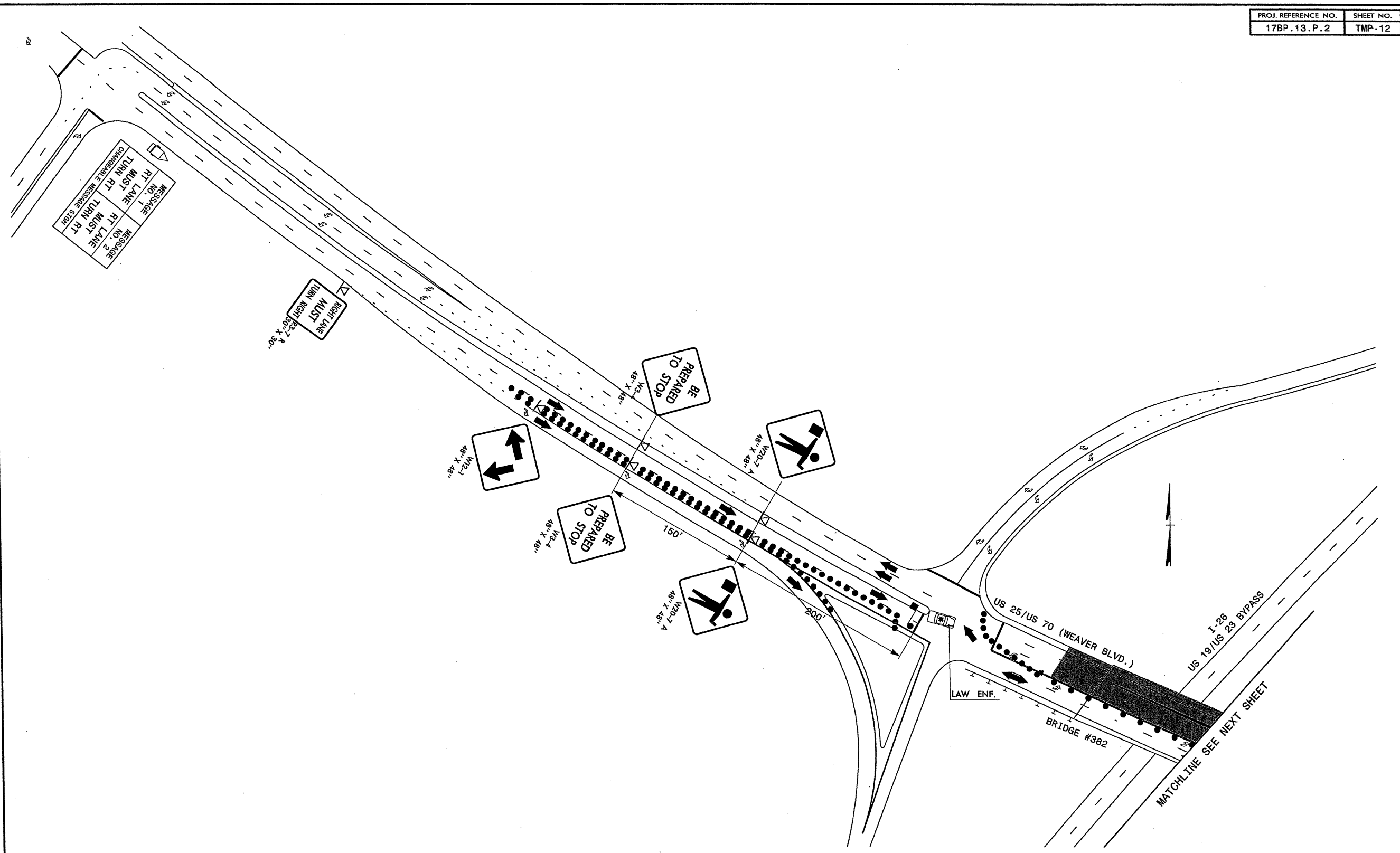
<p>Stantec Consulting Services Inc. 601 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672</p>	APPROVED: _____ DATE: _____ 	<p>DIVISION OF HIGHWAYS NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL</p>	<p>BUNCOMBE CO. BRIDGE #382</p> <p>US 70 EB WORK AREA</p>
	<p><i>Patsy L. Watson</i></p>		


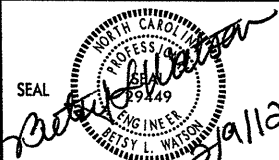

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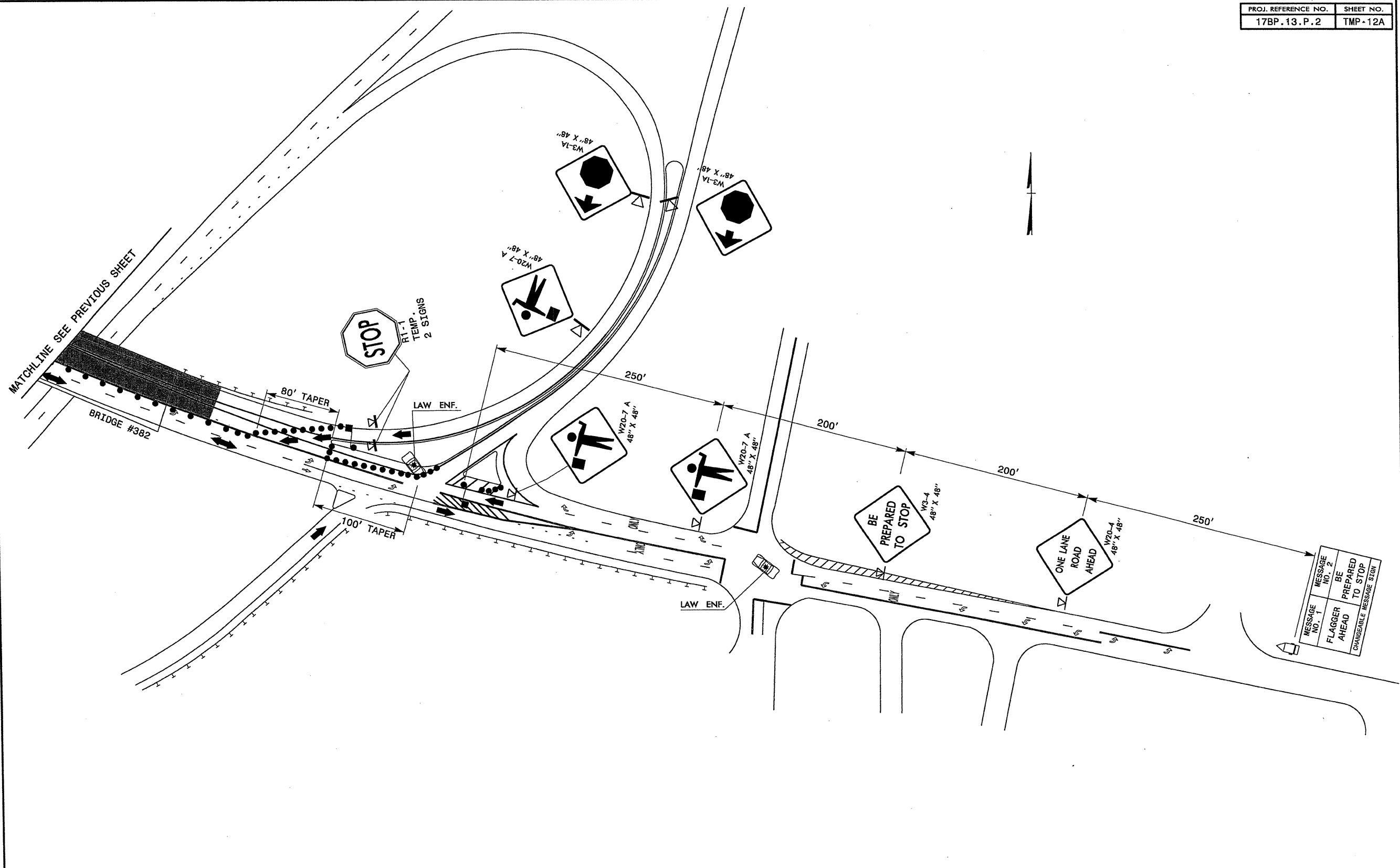
 <p>Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672</p>	APPROVED: _____ DATE: _____ 		BUNCOMBE CO. BRIDGE #382 US 70 EB WORK AREA
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 Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27605 Tel. (919) 851-8868 Fax. (919) 851-7024 www.stantec.com License No. F-0672	APPROVED: _____ DATE: _____ 	 DIVISION OF HIGHWAYS DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL	BUNCOMBE CO. BRIDGE #382 US 70 WB WORK AREA
	SEAL: <i>Patsy L. Watson</i> <i>5/12</i>		

2/9/2012
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<p> Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672 </p>	APPROVED: _____ DATE: _____ 	<p> DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL </p>	<p align="center"> BUNCOMBE CO. BRIDGE #382 US 70 WB WORK AREA </p>
	SEAL <i>Patsy L. Wilson</i> 2/9/12		

STANDARD NOTES

DESIGN DATA:

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

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2006 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

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

CONCRETE:

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

CONCRETE CHAMFERS:

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

DOWELS:

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

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

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

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

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

REINFORCING STEEL:

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

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

STRUCTURAL STEEL:

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

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

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

HANDRAILS AND POSTS:

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

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

SPECIAL NOTES:

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

ENGLISH

JANUARY, 1990

STD. NO. SN