

09/06/09

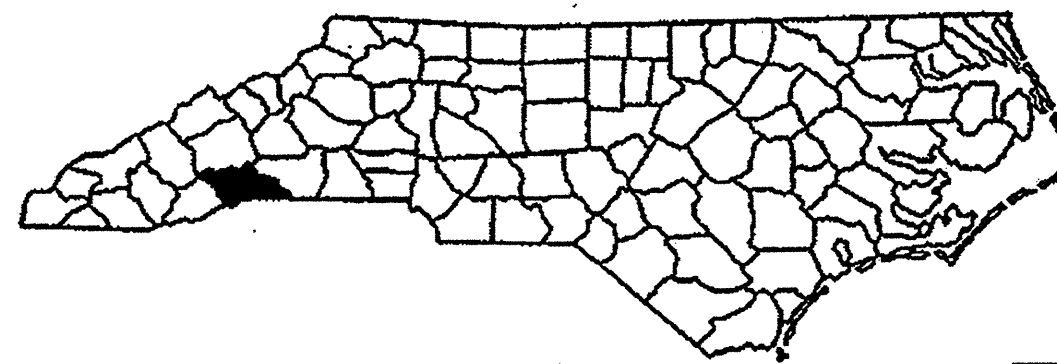
TIP PROJECT: 17BP.14.P.3

CONTRACT: C202971

*****SYSTEMS*****
*****SDGNS*****
*****USER*****

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

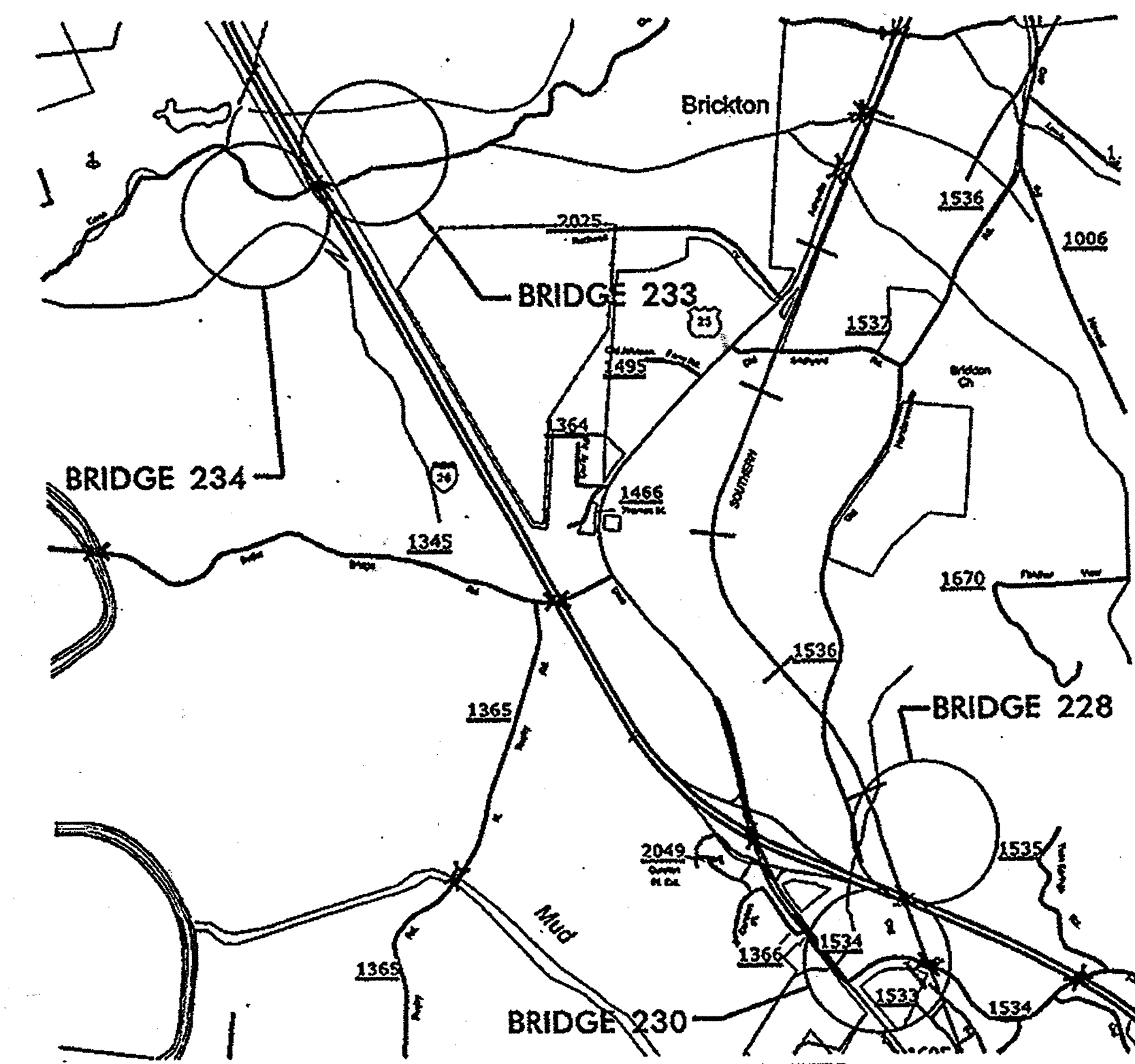
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.14.P.3	1	
TRM NO.	P.A. PROJ. NO.	DESCRIPTION	
17BP.14.P.3		PE	
17BP.14.P.3		CONST.	



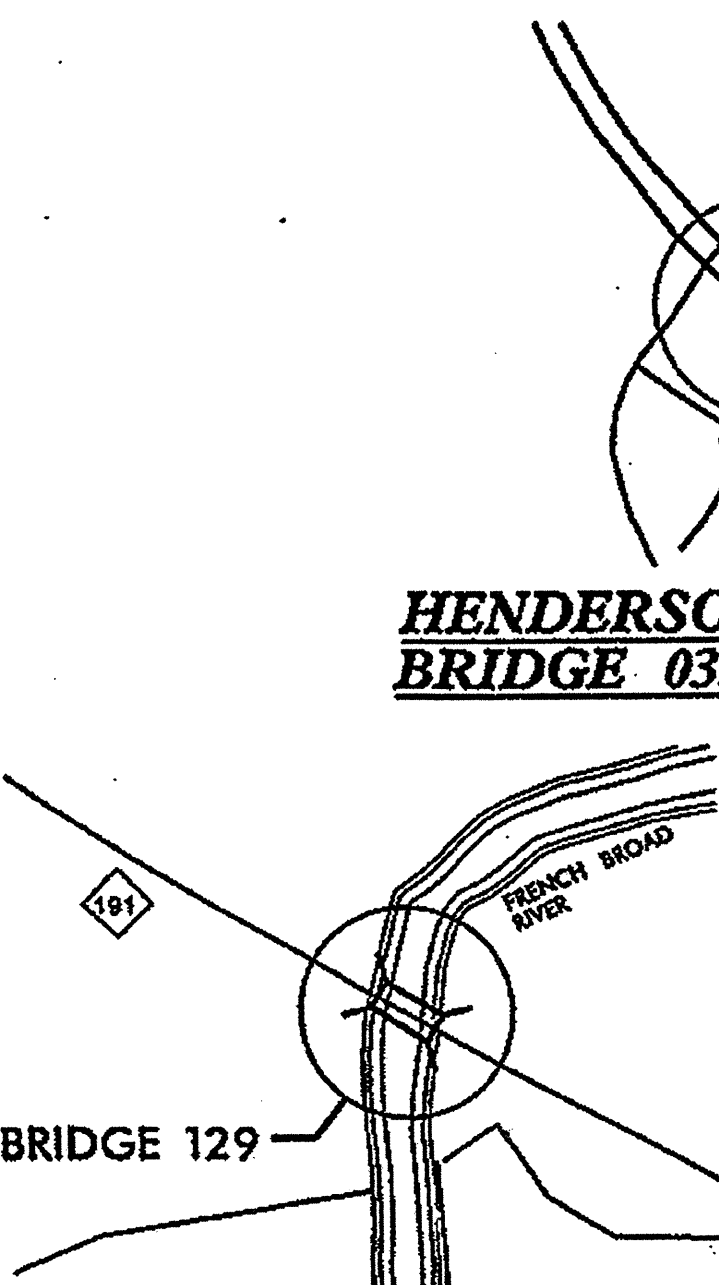
HENDERSON & POLK COUNTIES

LOCATION:
 HENDERSON COUNTY BRIDGE 033 ON I-26, US 74 OVER SR 1834
 HENDERSON COUNTY BRIDGE 129 ON NC 191 OVER FRENCH BROAD RIVER
 HENDERSON COUNTY BRIDGE 183 ON US 64 OVER I-26, US 74
 HENDERSON COUNTY BRIDGE 228 ON I-26, US 74 WBL OVER SOUTHERN RAILROAD
 HENDERSON COUNTY BRIDGE 230 ON I-26, US 74 EBL OVER NORFOLK SOUTHERN RR
 HENDERSON COUNTY BRIDGE 233 ON I-26, US 74 OVER CANE CREEK
 HENDERSON COUNTY BRIDGE 234 ON I-26, US 74 OVER CANE CREEK
 POLK COUNTY BRIDGE 032 ON NC 108 OVER I26
 POLK COUNTY BRIDGE 098 ON I-26 WBL OVER SR 1142
 POLK COUNTY BRIDGE 099 ON I-26 EBL OVER SR 1142

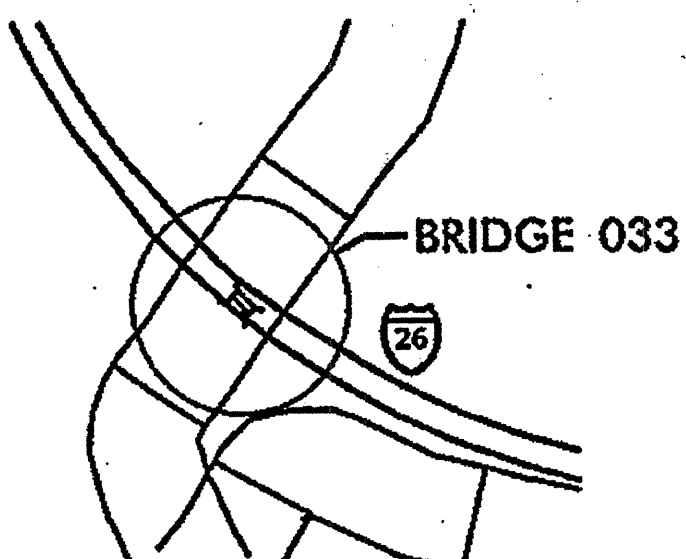
TYPE OF WORK: BRIDGE DECK PRESERVATION: LATEX MODIFIED CONCRETE OVERLAY



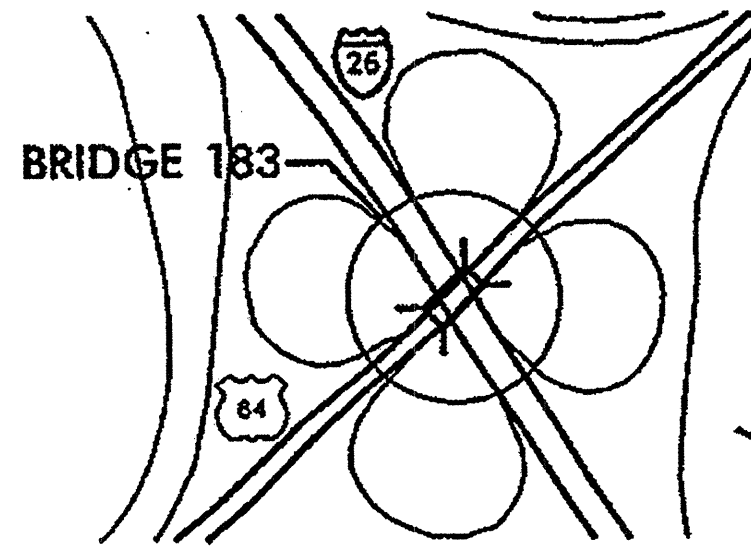
**HENDERSON COUNTY
BRIDGES 228 & 230 AND 233 & 234 LOCATIONS**



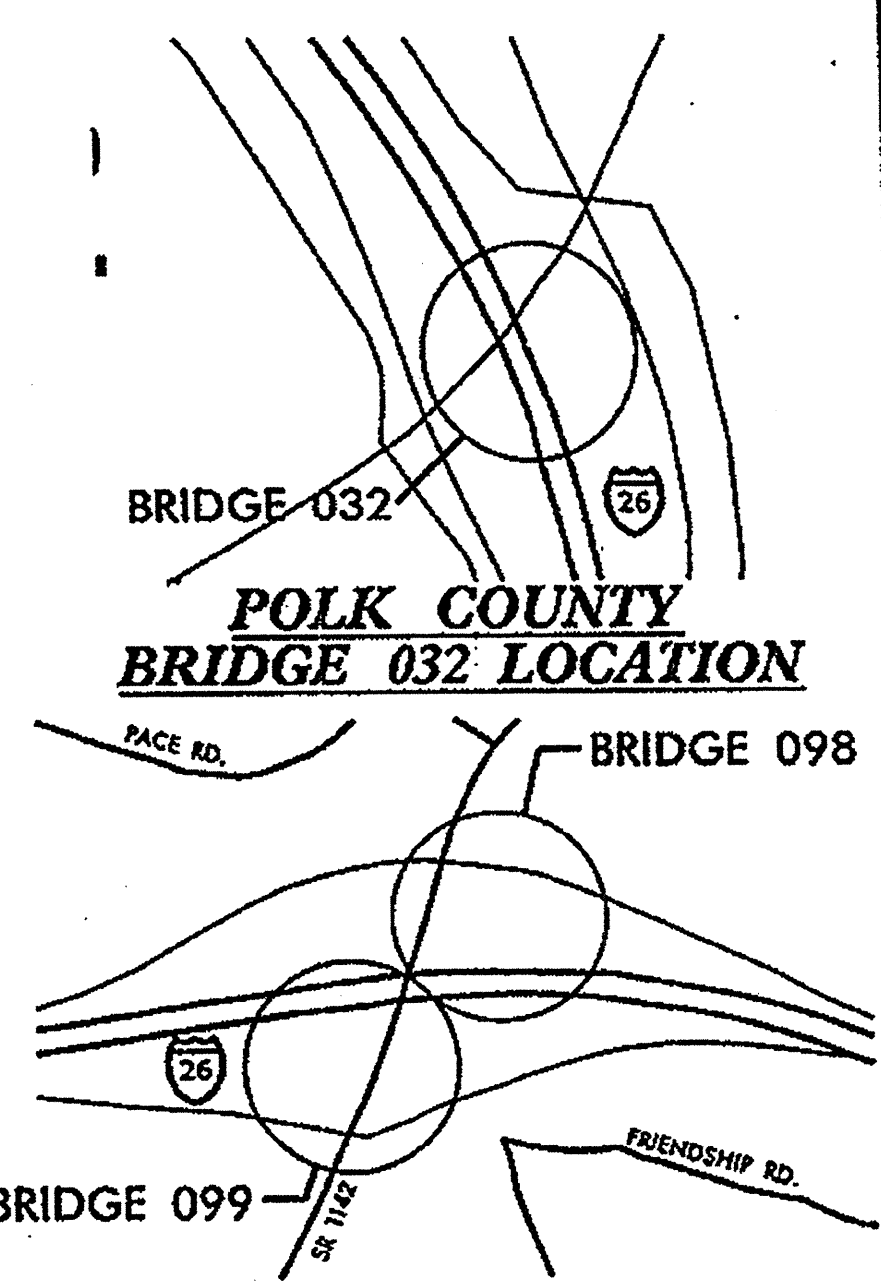
**HENDERSON COUNTY
BRIDGE 129 LOCATION**



**HENDERSON COUNTY
BRIDGE 033 LOCATION**



**HENDERSON COUNTY
BRIDGE 183 LOCATION**



**POLK COUNTY
BRIDGES 98 & 99 LOCATIONS**

PROJECT LENGTH

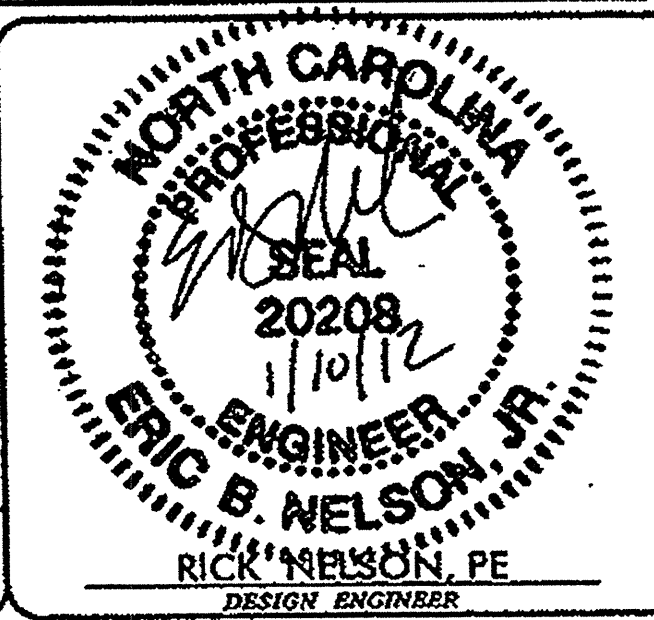


PREPARED IN THE OFFICE OF:
Stantec
FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

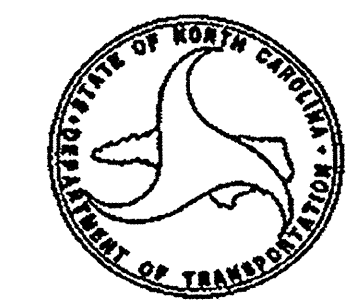
2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: N.A.
 LETTING DATE: MARCH 20, 2012

NC DOT CONTACT: ZAKI Wafa, PE
 BRIDGE MANAGEMENT PROJECT MANAGER



DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

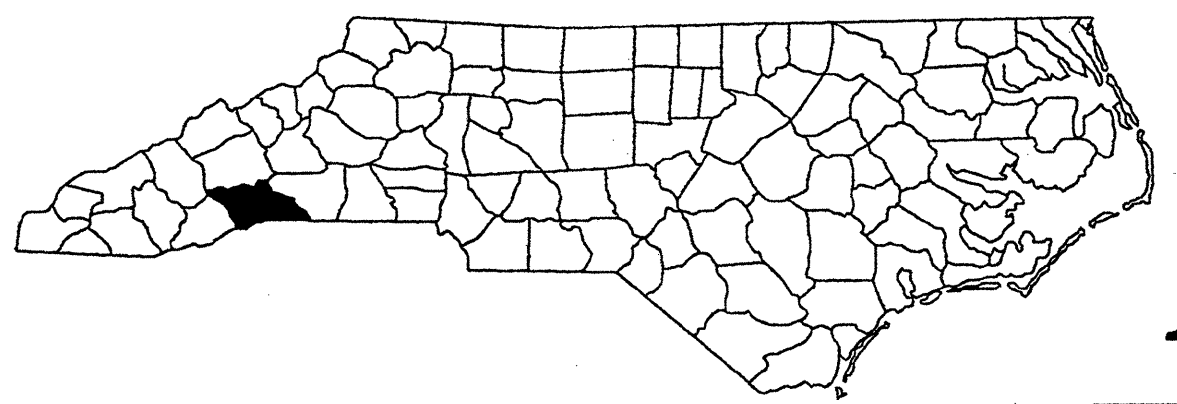


09/08/99

TIP PROJECT: WBS 17BP.14.P.3

CONTRACT: C202971

\$\$\$SYTIME\$\$\$
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\$\$\$DCGN\$\$\$
\$\$\$USERNAME\$\$\$



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	WBS 17BP.14.P.3	1A	

HENDERSON & POLK COUNTIES

INDEX OF SHEETS

DWG.	DESCRIPTION
1	TITLE SHEET
1A	INDEX OF SHEETS
2	SUMMARY OF QUANTITIES
RDY-1	ROADWAY PLANS - HENDERSON CO. 183
S-1 THRU S-6	STRUCTURE PLANS - HENDERSON CO. 033
S-7 THRU S-15	STRUCTURE PLANS - HENDERSON CO. 129
S-16 THRU S-23	STRUCTURE PLANS - HENDERSON CO. 183
S-24 THRU S-31	STRUCTURE PLANS - HENDERSON CO. 228
S-32 THRU S-37	STRUCTURE PLANS - HENDERSON CO. 230
S-38 THRU S-45	STRUCTURE PLANS - HENDERSON CO. 233
S-46 THRU S-53	STRUCTURE PLANS - HENDERSON CO. 234
S-54 THRU S-61	STRUCTURE PLANS - POLK CO. 032
S-62 THRU S-69	STRUCTURE PLANS - POLK CO. 098
S-70 THRU S-77	STRUCTURE PLANS - POLK CO. 099
TMP-1 THRU TMP-12	TRAFFIC MANAGEMENT PLANS

ROADWAY STANDARD DRAWINGS

2012 ROADWAY ENGLISH STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEARING 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
846.01	CONCRETE CURB, GUTTER, AND CURB & GUTTER

09/08/99

TIP PROJECT: WBS 17BP.14.P.3
CONTRACT: C202971

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

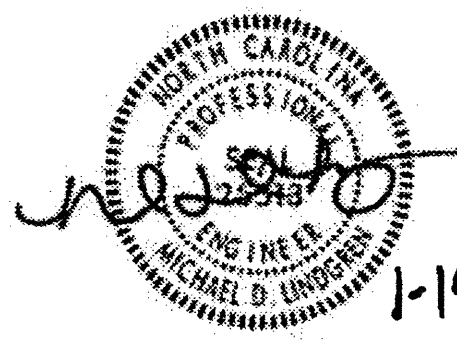
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	WBS 17BP.14.P.3	2	

SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202971

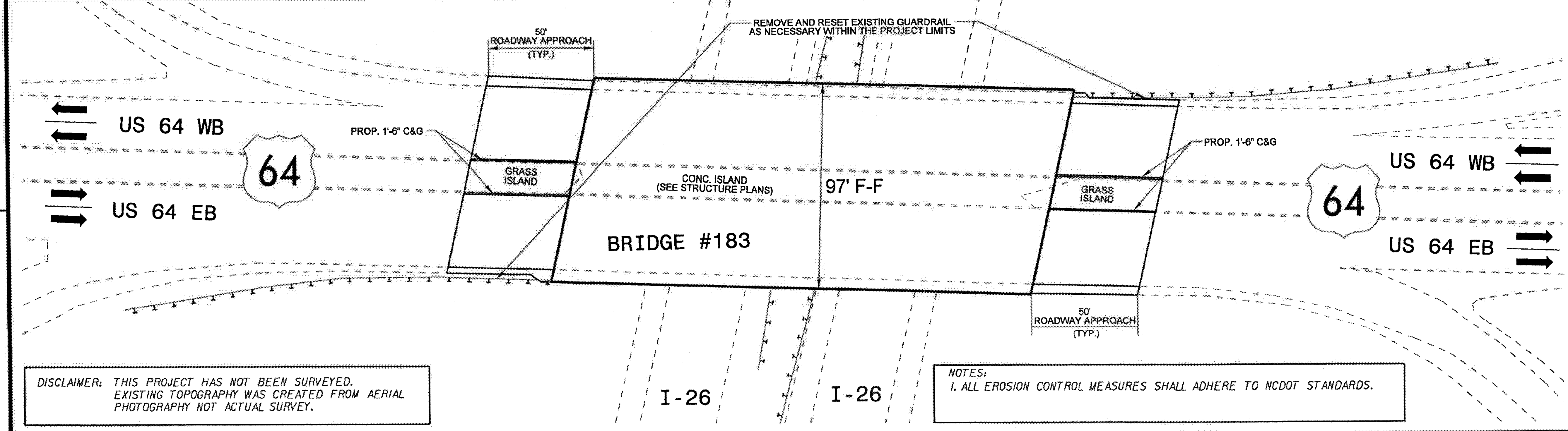
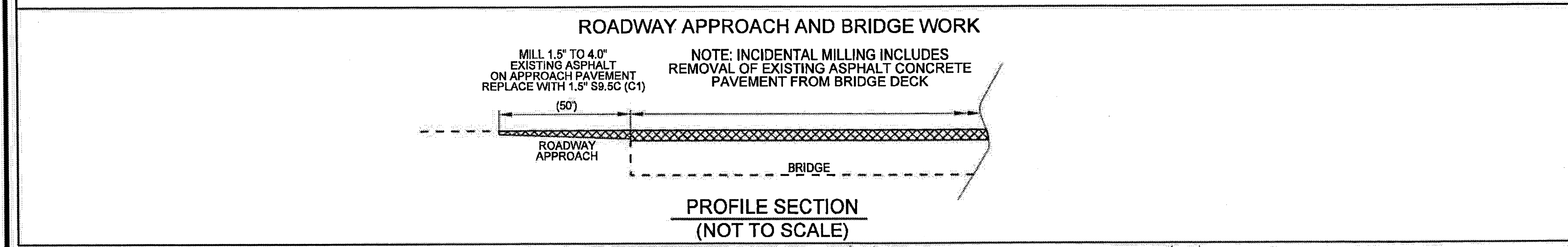
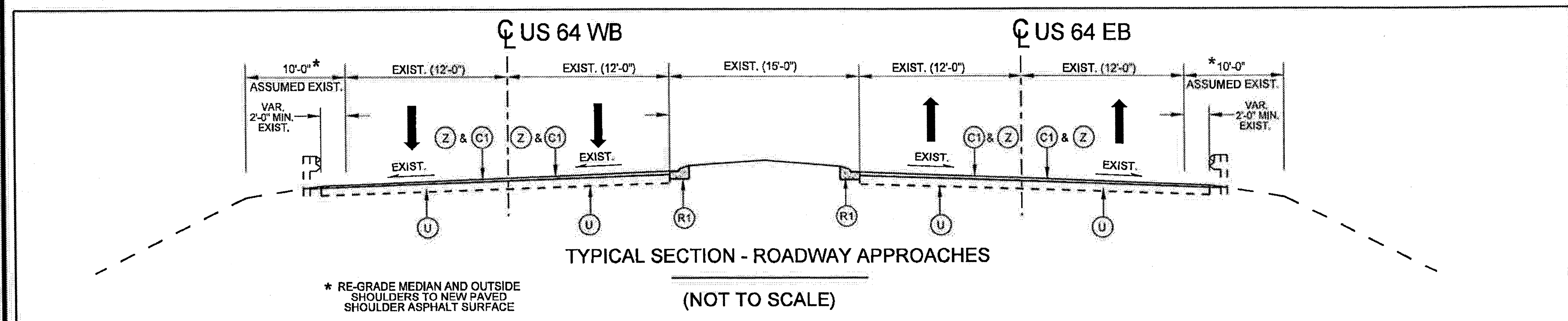
ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	8692000000-N	SP	Lump Sum		FOAM JOINT SEALS
0106000000-E	230	1	CY	BORROW EXCAVATION	8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PARTIAL REMOVAL OF EXISTING STRUCTURE
1245000000-E	SP	0.038	SMI	SHOULDER RECONSTRUCTION					
1330000000-E	607	889	SY	INCIDENTAL MILLING	8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM TEMP STEEL PLATE COVER FOR EXP JOINT SEAL REPAIR
1519000000-E	610	25	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B					
1523000000-E	610	338	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	8881000000-E	SP	82.9	CY	GENERIC STRUCTURE ITEM LATEX MOD CONC OVERLAY
1575000000-E	620	22	TON	ASPHALT BINDER FOR PLANT MIX	8881000000-E	SP	395.5	CY	GENERIC STRUCTURE ITEM LATEX MOD CONC OVERLAY - VERY EARLY STRENGTH
2542000000-E	846	200	LF	1'-6" CONCRETE CURB & GUTTER	8893000000-E	SP	8,443.5	SY	GENERIC STRUCTURE ITEM HYDRO-DEMOLITION OF BRIDGE DECK
3345000000-E	864	100	LF	REMOVE & RESET EXISTING GUARD- RAIL					
4400000000-E	1110	76	SF	WORK ZONE SIGNS (STATIONARY)	8893000000-E	SP	1,715.9	SY	GENERIC STRUCTURE ITEM PLACING & FINISHING LATEX MOD CONC OVERLAY
4405000000-E	1110	764	SF	WORK ZONE SIGNS (PORTABLE)					
4410000000-E	1110	20	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)	8893000000-E	SP	6,727.6	SY	GENERIC STRUCTURE ITEM PLACING & FINISHING LATEX MOD CONC OVERLAY - VERY EARLY STRENGTH
4415000000-N	1115	6	EA	FLASHING ARROW BOARD					
4420000000-N	1120	8	EA	PORTABLE CHANGEABLE MESSAGE SIGN	8893000000-E	SP	100	SY	GENERIC STRUCTURE ITEM REINFORCED CONCRETE DECK SLAB
4430000000-N	1130	375	EA	DRUMS	8893000000-E	SP	12,039.8	SY	GENERIC STRUCTURE ITEM SCARIFYING BRIDGE DECK
4445000000-E	1145	72	LF	BARRICADES (TYPE III)	8897000000-N	SP	3	EA	GENERIC STRUCTURE ITEM SPAN JACKING POLK COUNTY BRIDGE #32
4450000000-N	1150	896	HR	FLAGGER					
4480000000-N	1165	3	EA	TMA					
4510000000-N	SP	320	HR	LAW ENFORCEMENT					
4847000000-E	1205	6,418	LF	POLYUREA PAVEMENT MARKING LINES (4", *****) (HIGHLY REFLECTIVE ELEMENTS)					
4847000000-E	1205	2,725	LF	POLYUREA PAVEMENT MARKING LINES (4", *****) (STANDARD GLASS BEADS)					
4905000000-N	1253	56	EA	SNOWPLOWABLE PAVEMENT MARKERS					
8161000000-E	420	73,150	SF	GROOVING BRIDGE FLOORS					
8660000000-E	SP	84	CF	CONCRETE REPAIRS					
8664000000-E	SP	126	CF	SHOTCRETE REPAIRS					

\$\$\$SYTIME\$\$\$
 \$\$\$SERNAME\$\$\$
 \$\$\$DGN\$\$\$
 \$\$\$\$\$\$

PROJECT REFERENCE NO. WBS 178PJ4P.3	SHEET NO. RDY-1
ROADWAY DESIGN ENGINEER	
	
1-19-2012	

PAVEMENT SCHEDULE	
C1	PROP. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
R1	1'-6" CURB AND GUTTER
U	EXISTING PAVEMENT
Z	ASPHALT MILLING

TOTAL BILL OF MATERIALS	
SHOULDER RECONSTRUCTION	200 LF
INCIDENTAL MILLING	2864 SY
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C	75 TONS
REMOVE AND RESET EXISTING GUARDRAIL	100 LF
1'-6" C&G	200 LF

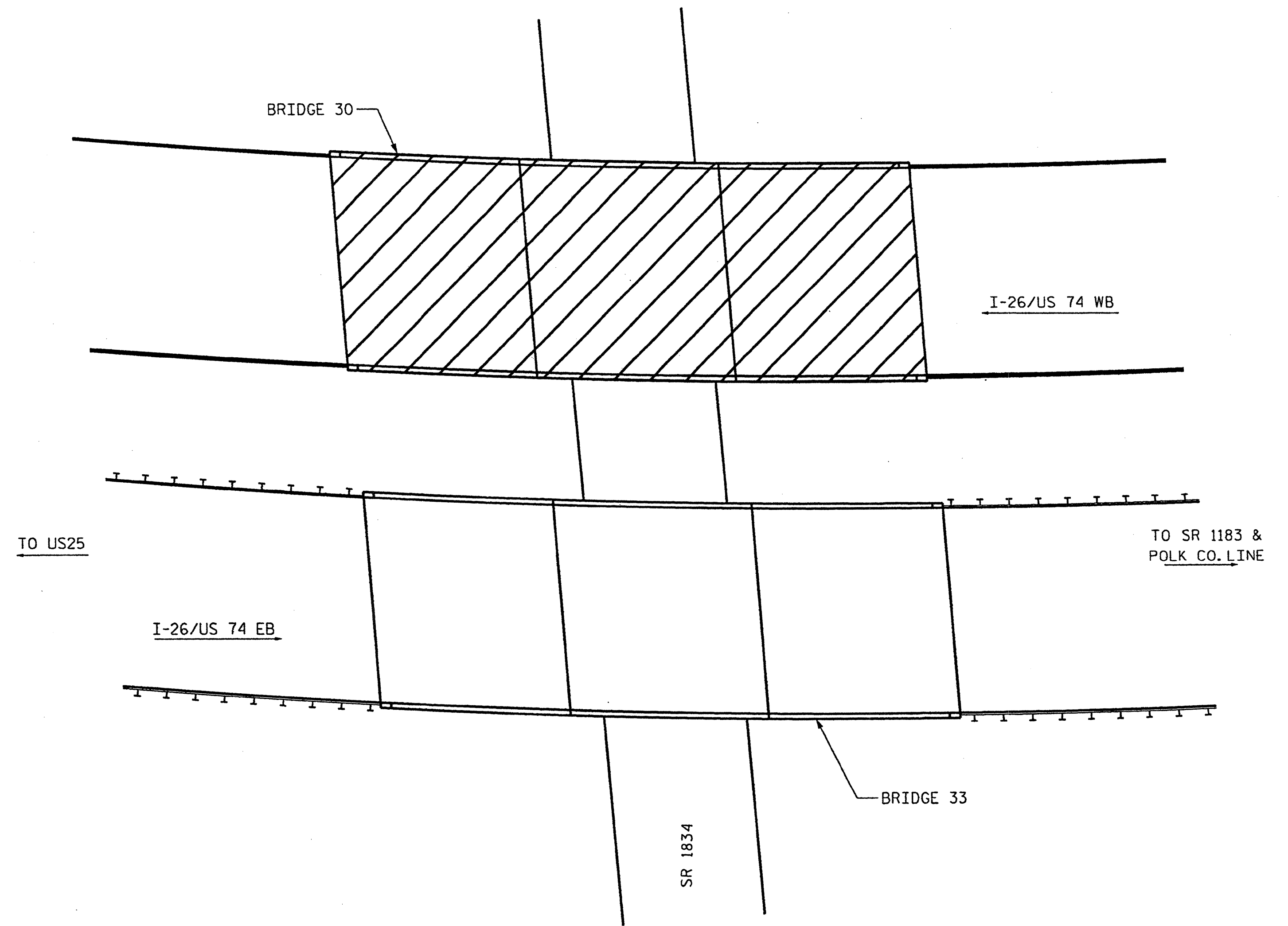


DISCLAIMER: THIS PROJECT HAS NOT BEEN SURVEYED. EXISTING TOPOGRAPHY WAS CREATED FROM AERIAL PHOTOGRAPHY NOT ACTUAL SURVEY.

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

REVISIONS

U:\Structures\Brlidge Group 2011\WBS 17BP.14.P.3 Henderson-Polk Co Henderson Co. Bridge 33 Drawing U.S. BOM.dgn 1/9/2012 12:31:27 PM Joelle



BRIDGE 33 ON I-26/US74
 LOCATION: BRIDGE 440033, I-26/US74 EBL OVER SR 1834
 2.5 MILES SOUTH OF JUNCTION SR 1954

BRIDGE 33

TOTAL BILL OF MATERIAL

INCIDENTAL MILLING	ASPHALT CONC. SURFACE COURSE TYPE S9.5C	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
SQ.YDS.	TON	SQ.FT.	LUMP SUM	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	CU.YDS.	CU.YDS.	SQ.YDS.	SQ.YDS.
460	37	4266	LUMP SUM	500.9	0.0	30.6	0.0	0.0	25.2	500.9	500.9

* 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. 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

LOCATION SKETCH AND TOTAL BILL OF MATERIALS

DECK REHAB. FOR BRIDGE NO. 33

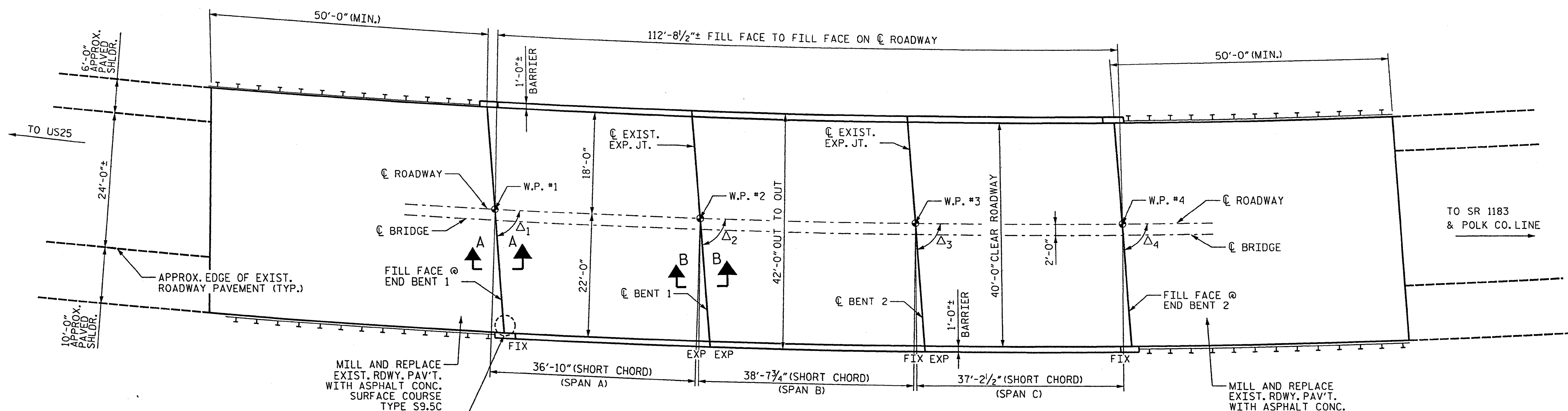
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1	
1			3			TOTAL SHEETS	
2			4			77	

Joseph Kelvington

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 Raleigh, NC 27606
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DRAWN BY : B T LATON DATE : 11/11
 CHECKED BY : J T KELVINGTON DATE : 11/11

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SKREW ANGLES AT BENTS (APPROXIMATE)
 $\Delta_1 = 93^\circ 16' 10''$
 $\Delta_2 = 94^\circ 20' 33''$
 $\Delta_3 = 95^\circ 29' 08''$
 $\Delta_4 = 96^\circ 35' 16''$

MILL AND REPLACE EXIST. RDWY. PAV'T. WITH ASPHALT CONC. SURFACE COURSE TYPE S9.5C
 FOR JOINT REPAIR SEE DETAIL "D" ON SHT. S-6. (TYP. EA. END BENT)

MILL AND REPLACE EXIST. RDWY. PAV'T. WITH ASPHALT CONC. SURFACE COURSE TYPE S9.5C

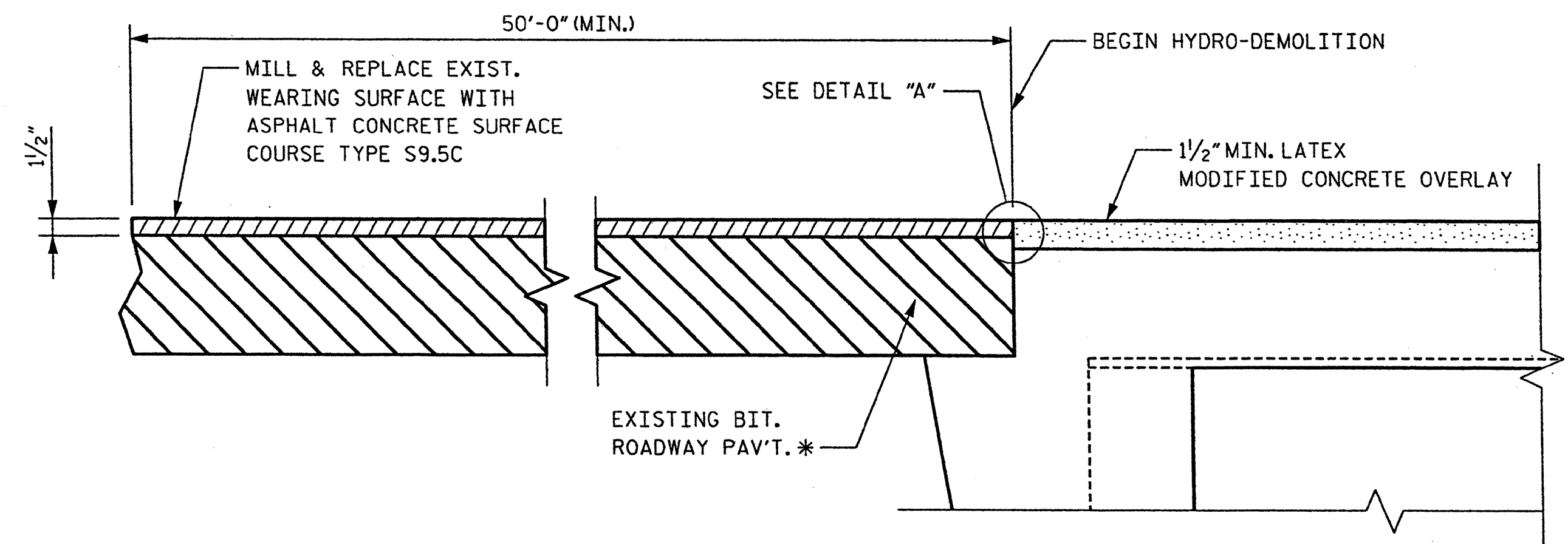
PLAN VIEW

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

SECTION A-A IS TYPICAL AT END BENTS 1 AND 2.
 SECTION B-B IS TYPICAL AT BENTS 1 AND 2. SEE SHEET S-5 FOR SECTION B-B.

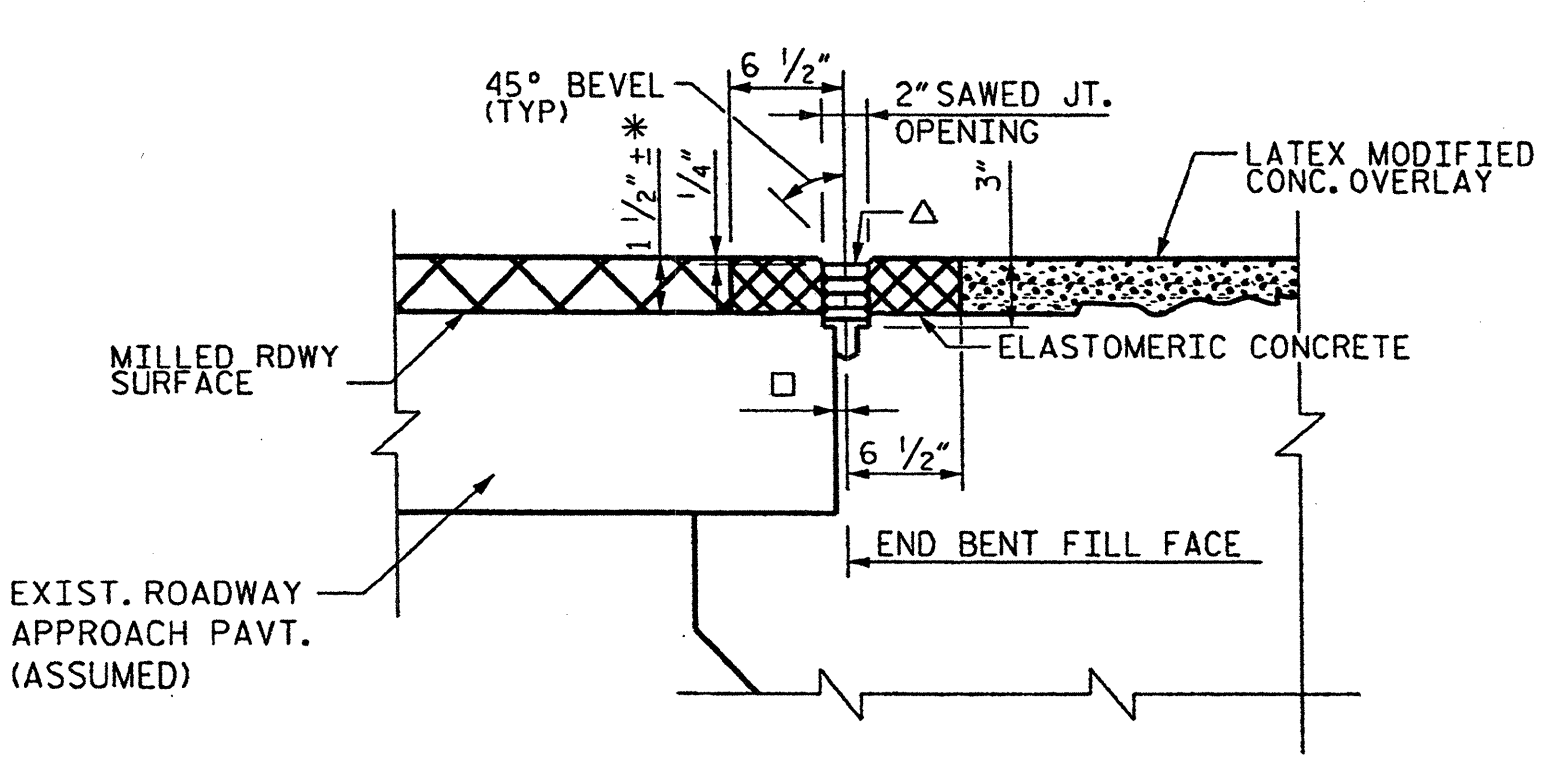
NOTES:

- 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 ON SHT. S-4.
- LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH.
- FOR LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.
- FOR SECTION B-B, SEE SHEET S-5.
- FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.



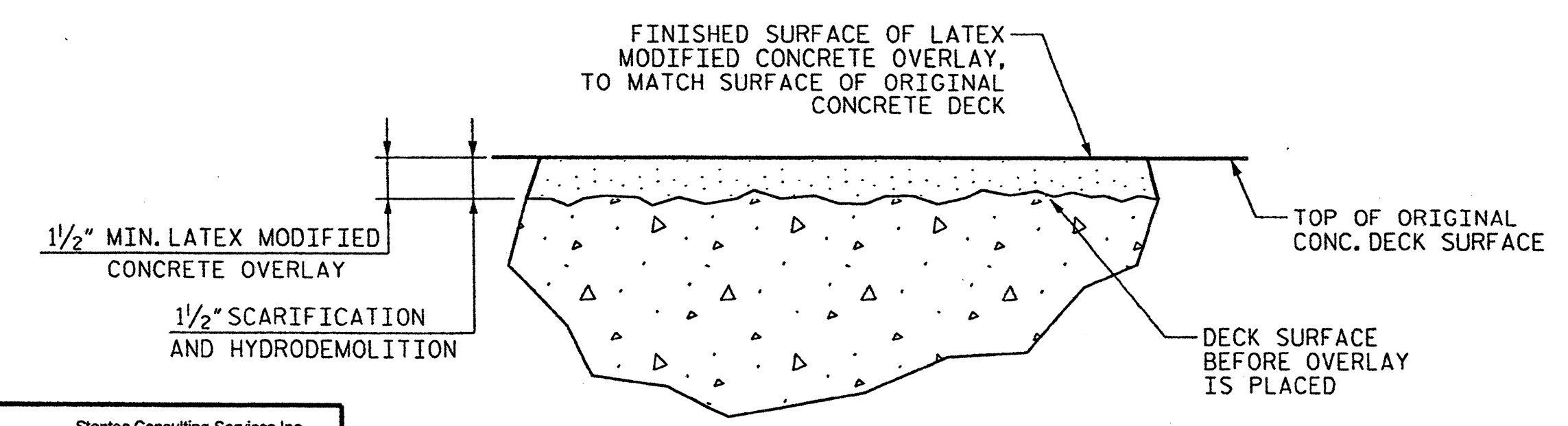
SECTION A-A

*PAV'T IS ASSUMED. MILL EXISTING BRIDGE APPROACH PAV'T SURFACE AND OVERLAY WITH 1/2" MIN. ASPHALT CONC. SURFACE COURSE TYP S9.5C



DETAIL A

- Δ USE 2.50" X 2.00" UNCOMPRESSED SEAL MATERIAL
- \square EXIST. 1/2" EXPANSION JOINT MATERIAL (ASSUMED)
- * 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-6 FOR ADDITIONAL JT. SEAL DETAILS @ END BENTS.



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

PROJECT NO. 17BP.14.P.3
 HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PLAN OF BRIDGE
 DECK REHAB. FOR BRIDGE NO. 33

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

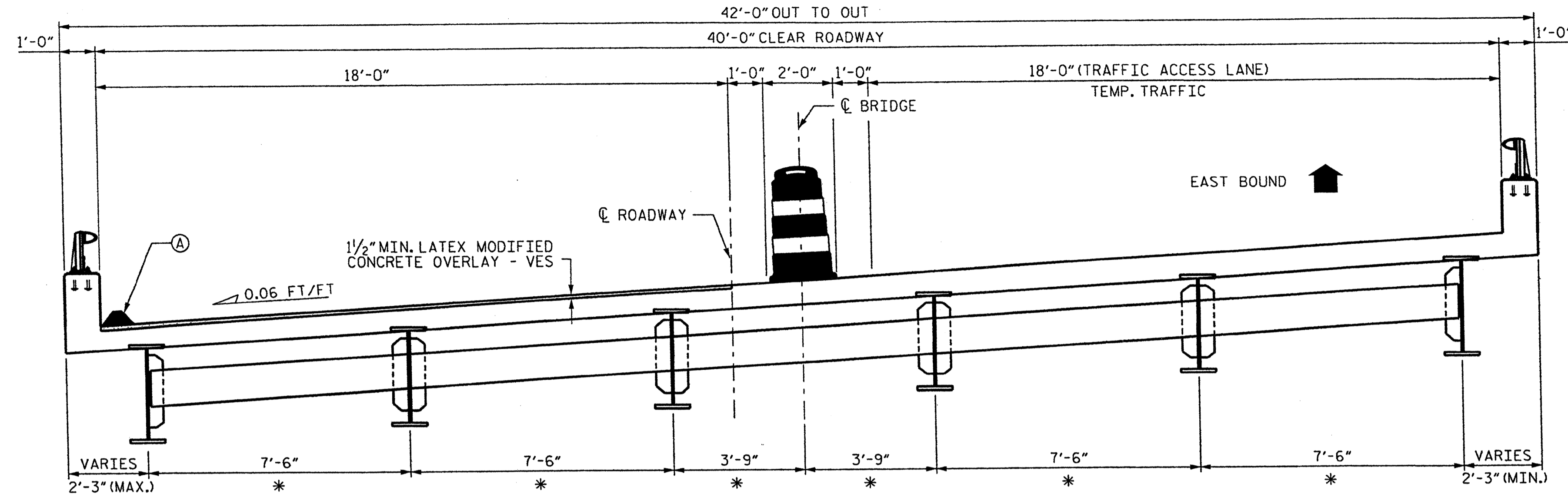
S-2
TOTAL SHEETS
77

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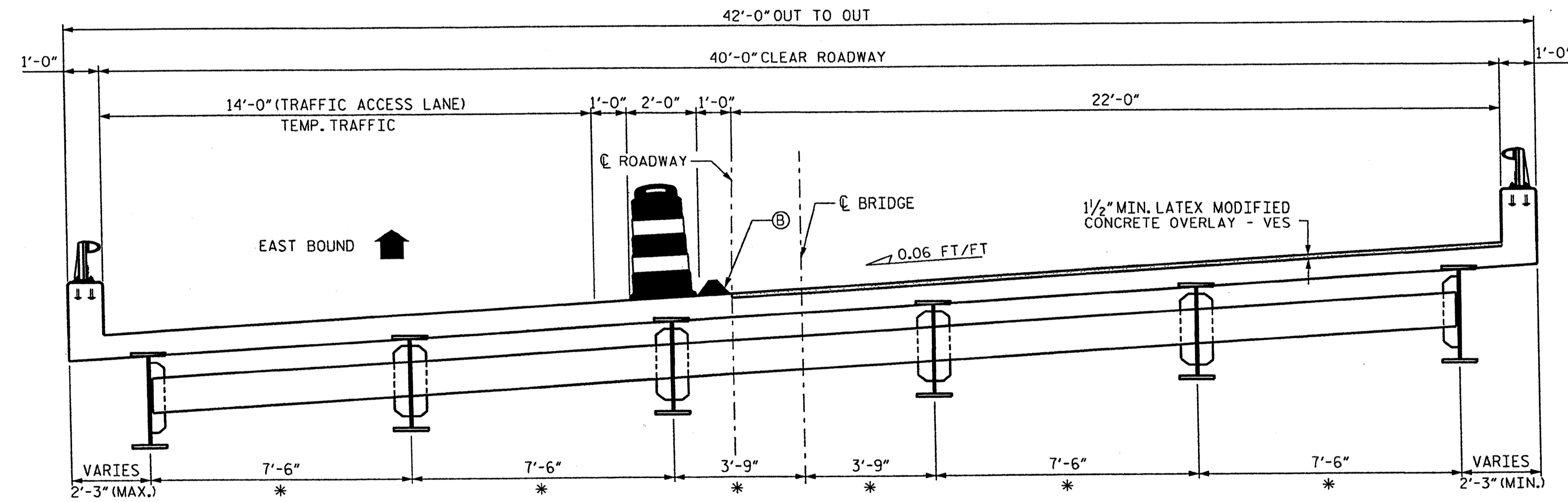
DRAWN BY : B. T. LATON DATE : 11/11
 CHECKED BY : J. T. KELVINGTON DATE : 11/11

Joseph Kelvington
 1/19/2012
 PROFESSIONAL ENGINEER
 13406

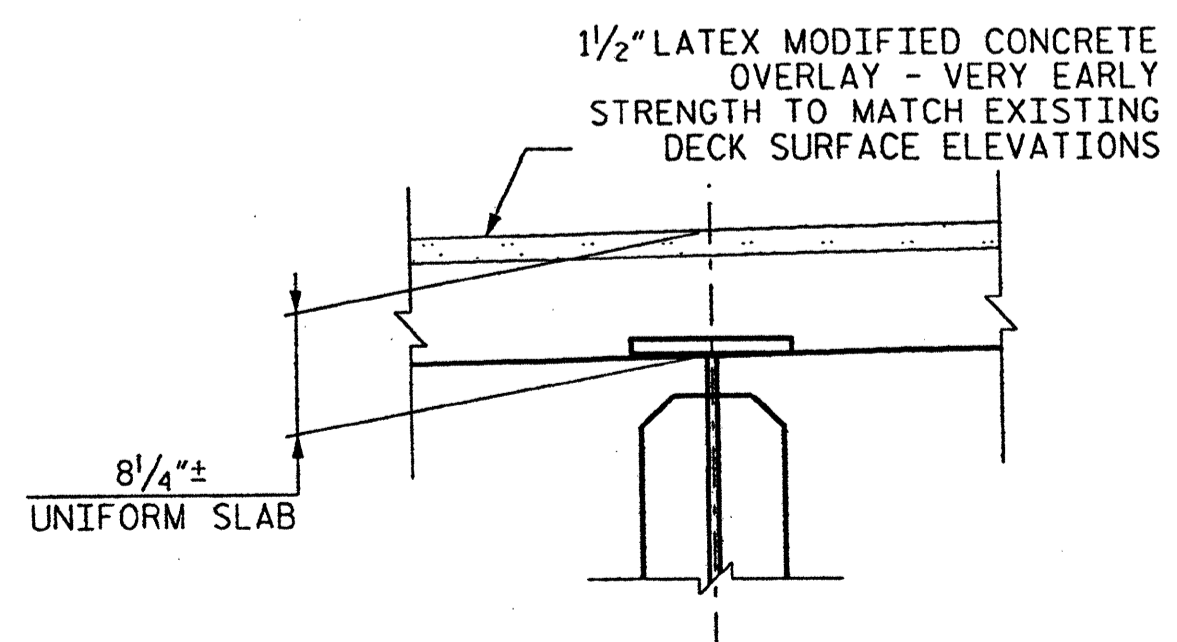
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TYPICAL SECTION - EBL
(SPANS A-C)
NOTE: ALL DIMENSIONS ARE RADIAL UNLESS NOTED.



TYPICAL SECTION - EBL
(SPANS A-C)
NOTE: ALL DIMENSIONS ARE RADIAL UNLESS NOTED.



SLAB BUILD-UP DETAIL

- NOTES:
- * VES DENOTES VERY EARLY STRENGTH.
 - 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 @ DRAINS AND EXPANSION JOINTS.
 - Ⓑ DAM CONTINUOUSLY THROUGH WORK ZONE TO CAPTURE RUN OFF. ALL DIMENSIONS SHOWN ARE APPROXIMATE.
 - * NOMINAL DIMENSION, VARIES ALONG LENGTH OF BEAM. RADIAL DIMENSION @ Ⓞ BENT AND Ⓞ BEAM.

PROJECT NO. 17BP.14.P.3
 HENDERSON COUNTY
 STATION: _____

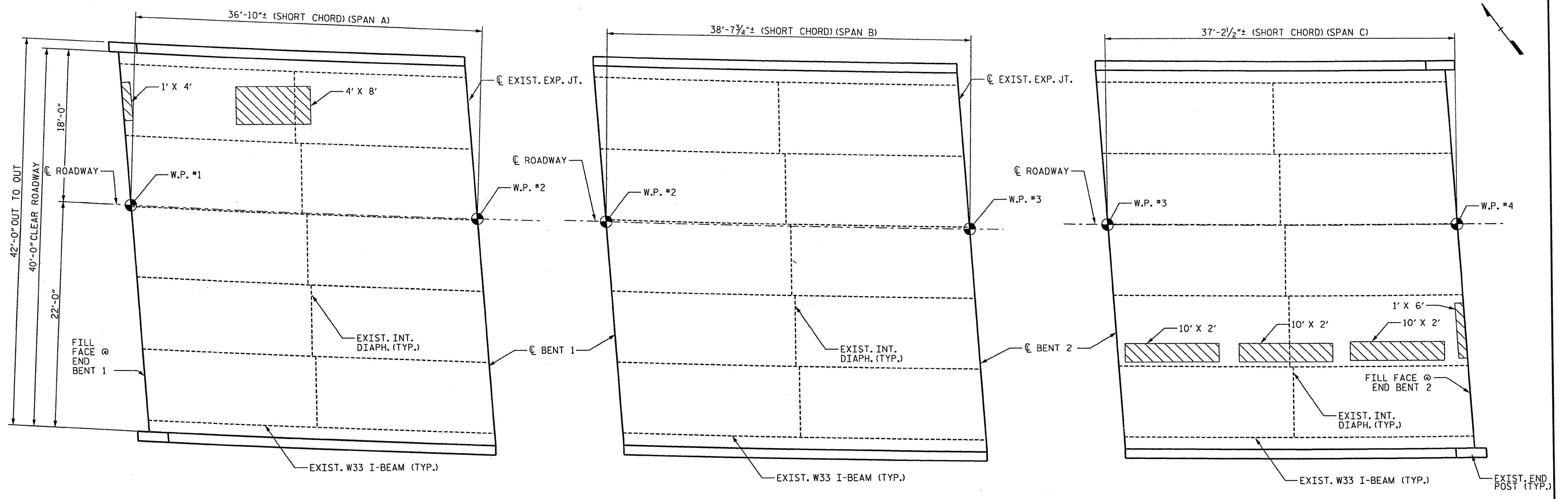
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BRIDGE TYPICAL SECTION					
DECK REHAB. FOR BRIDGE NO. 33					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-3
					TOTAL SHEETS 77

Joseph Kelvington
 JOSEPH KELVINGTON
 PROFESSIONAL ENGINEER
 LICENSE NO. 15117
 EXPIRES 12/31/2011

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DRAWN BY : B T LATON DATE : 11/11
 CHECKED BY : J T KELVINGTON DATE : 11/11

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PLAN OF SPAN A - DECK REPAIRS

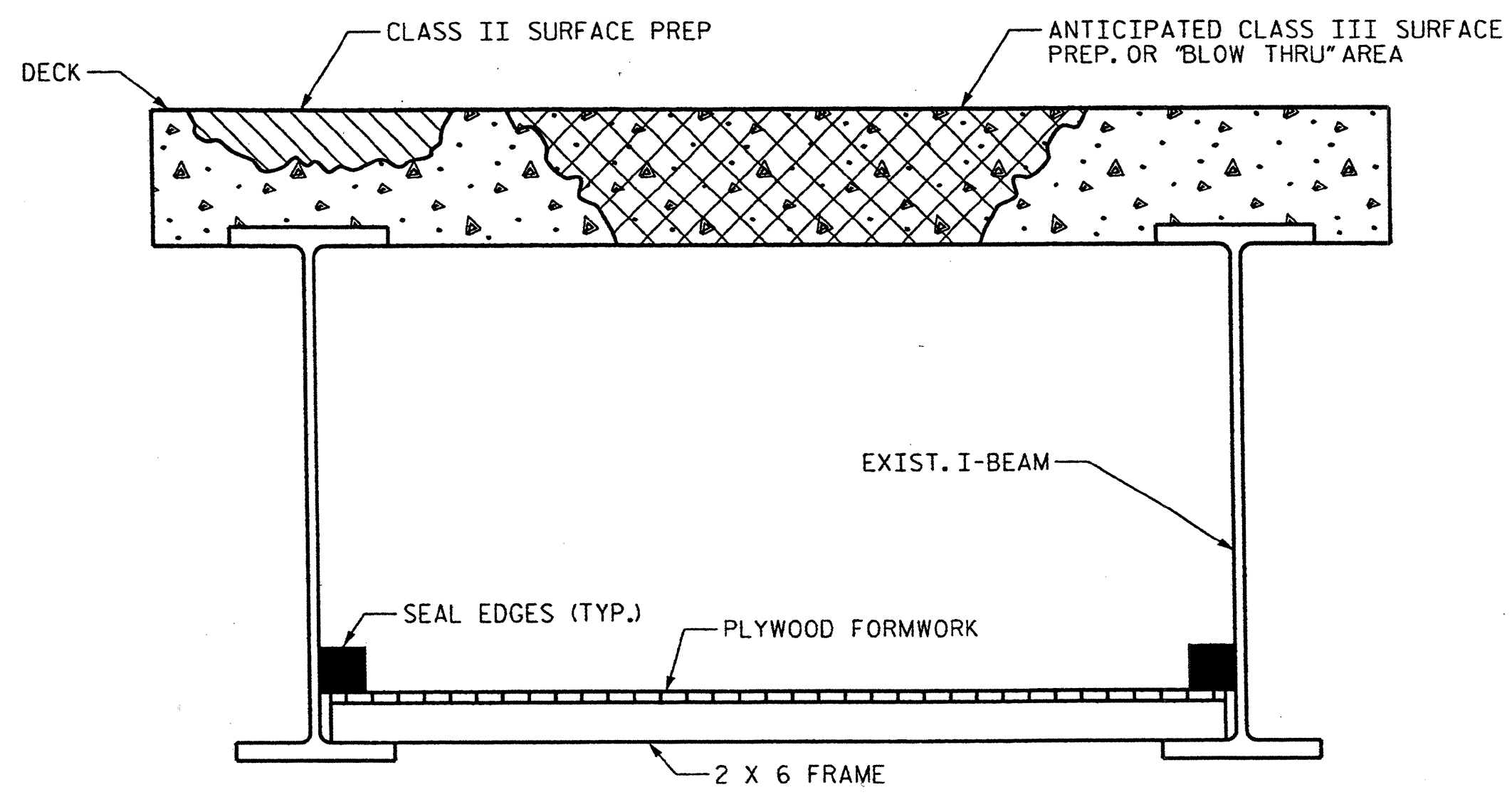
PLAN OF SPAN B - DECK REPAIRS

PLAN OF SPAN C - DECK REPAIRS

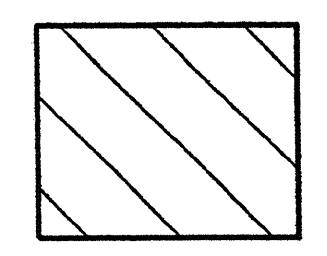
NOTE: ALL DIMENSIONS ARE RADIAL OR ARC DIMENSIONS UNLESS NOTED OTHERWISE.

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 REPRESENTATIVE AND DOES 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 ϕ BRIDGE X WIDTH OF AREA NORMAL TO ϕ BRIDGE

PROJECT NO. 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

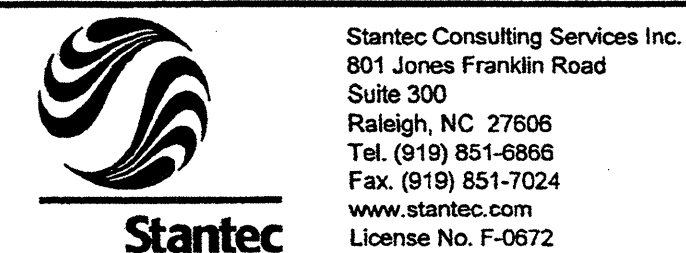
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK REPAIR DETAILS
 SPANS A-C

DECK REHAB. FOR BRIDGE NO. 33

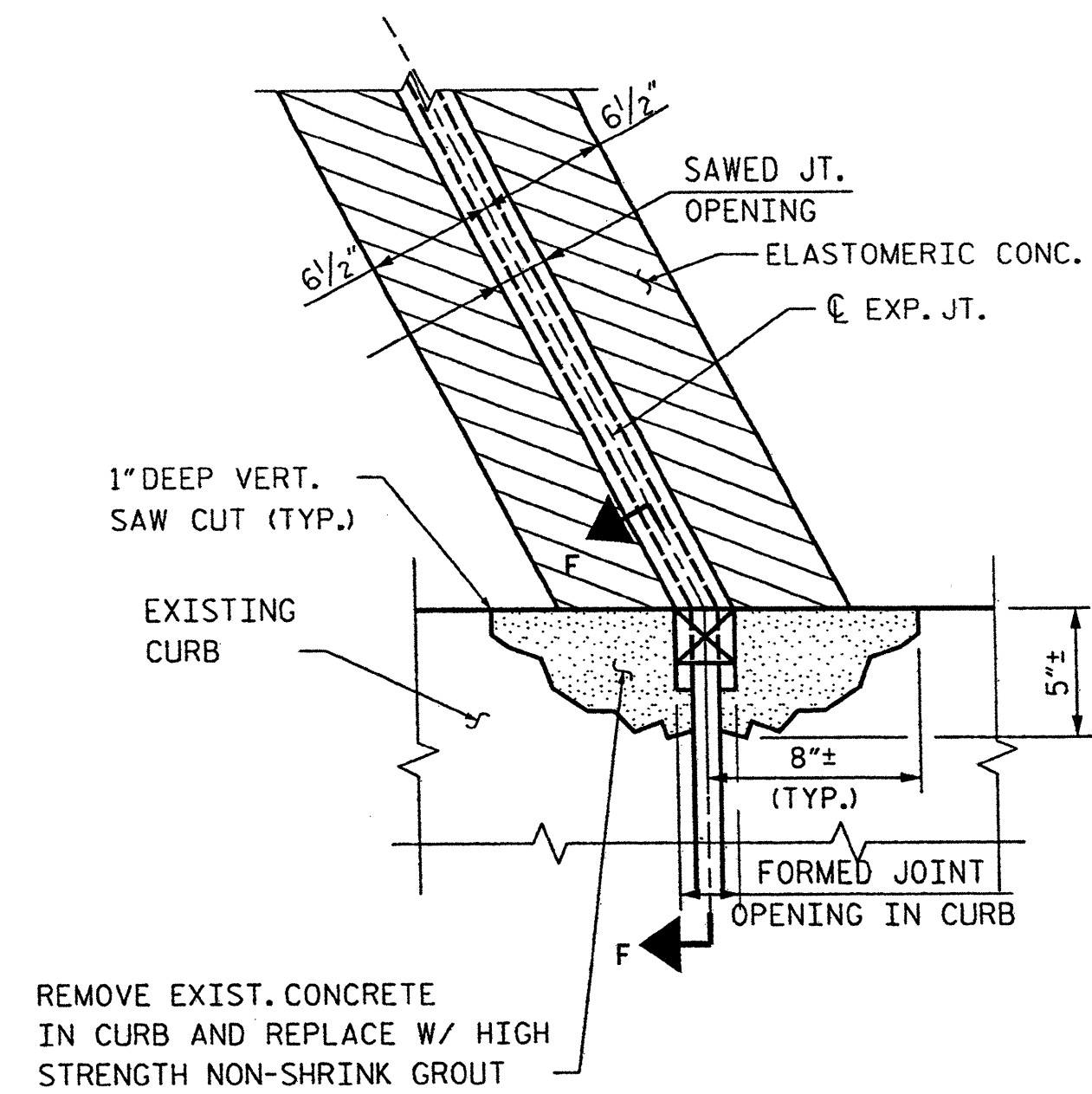
REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					77

Joseph T. Kelvington
 PROFESSIONAL ENGINEER
 No. 121406
 STATE OF NORTH CAROLINA

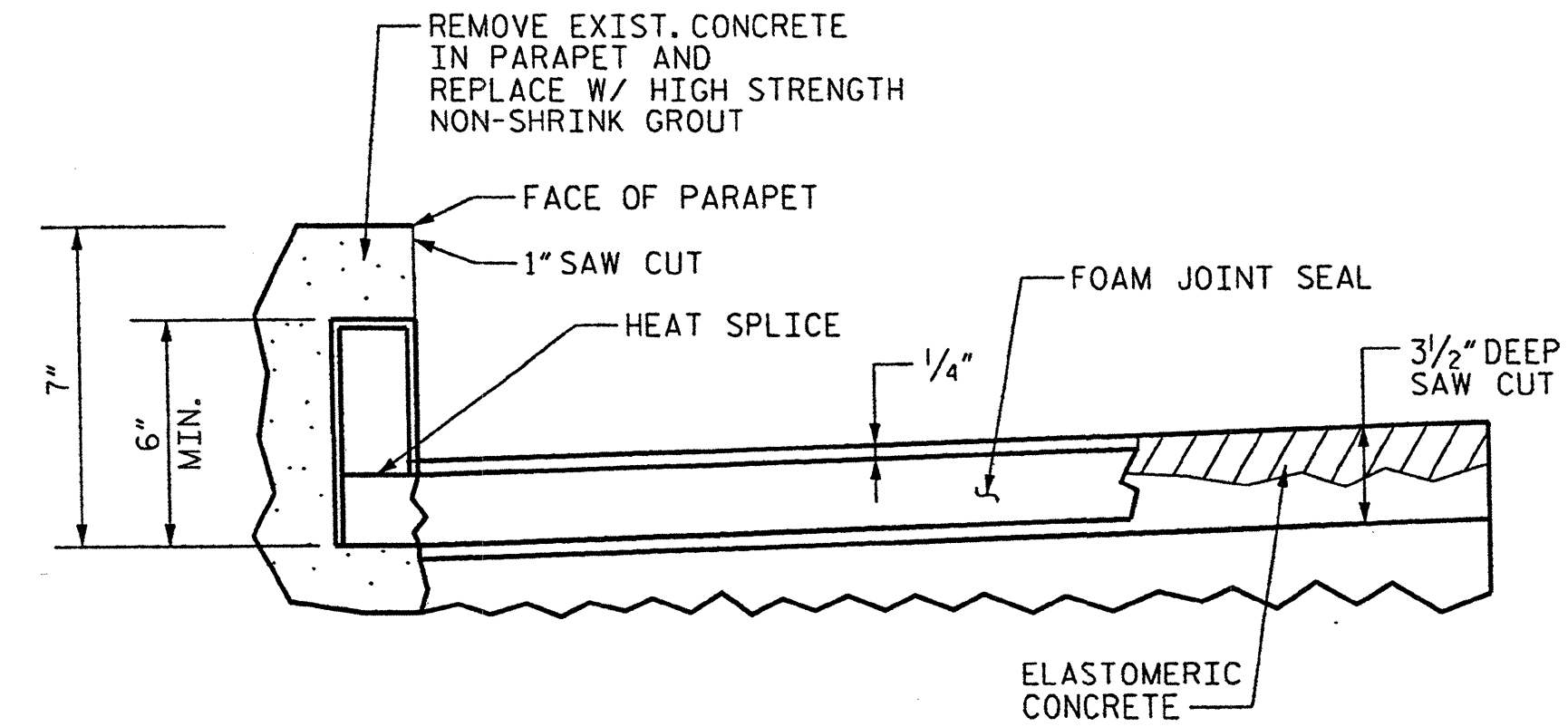


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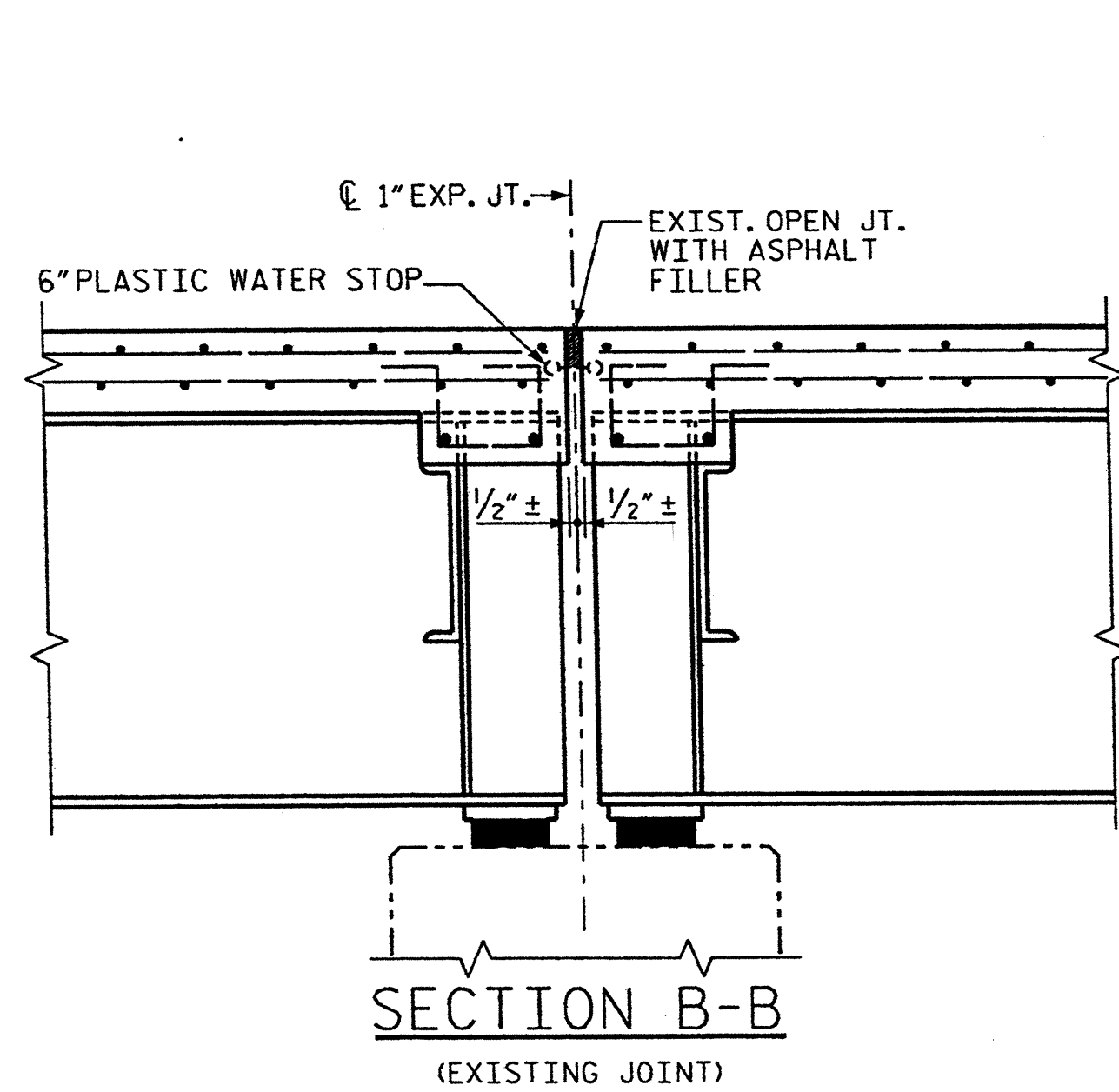


PARTIAL PLAN @ JOINT
(TYP. @ BENTS 1 & 2)

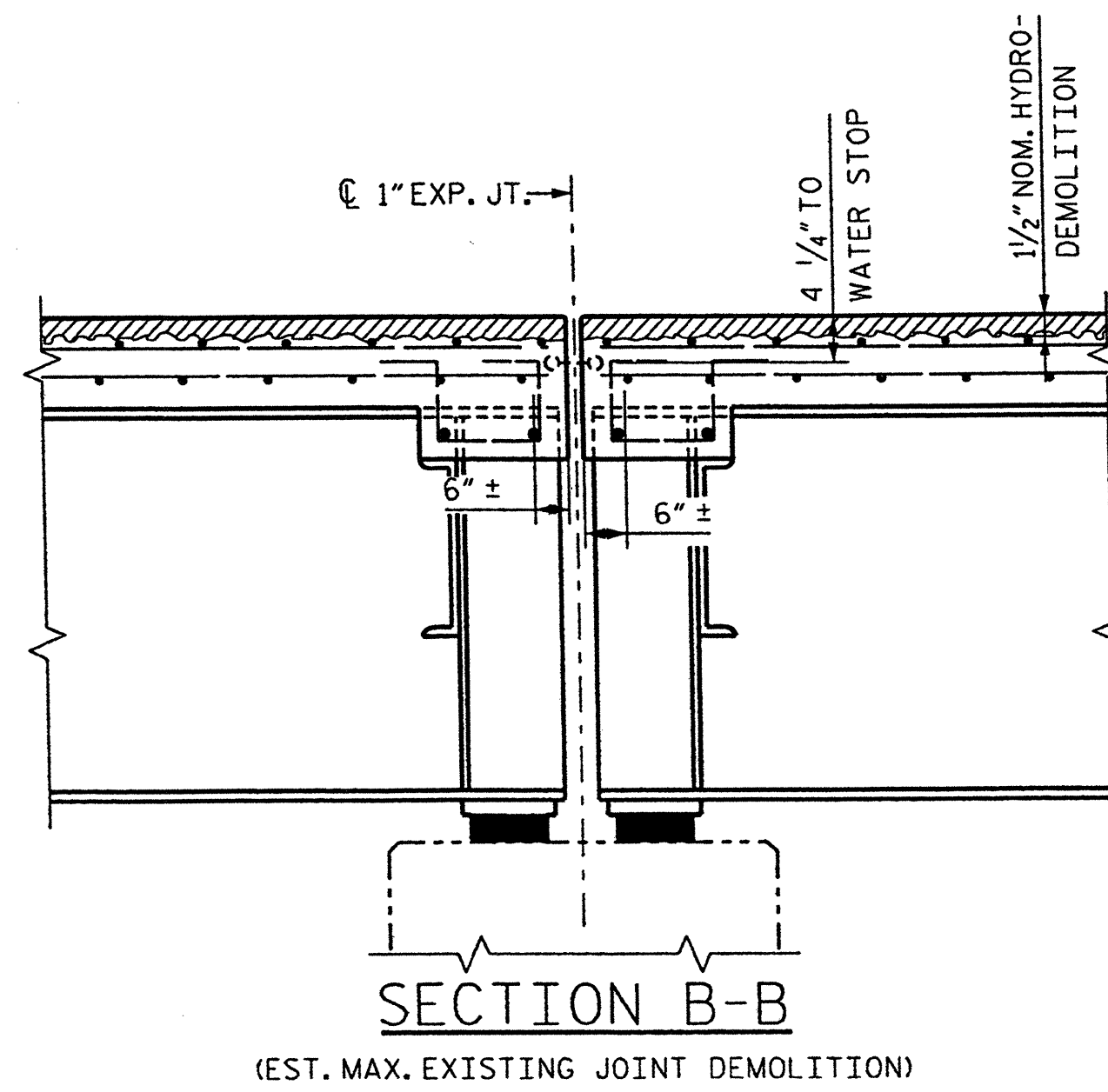


SECTION F-F

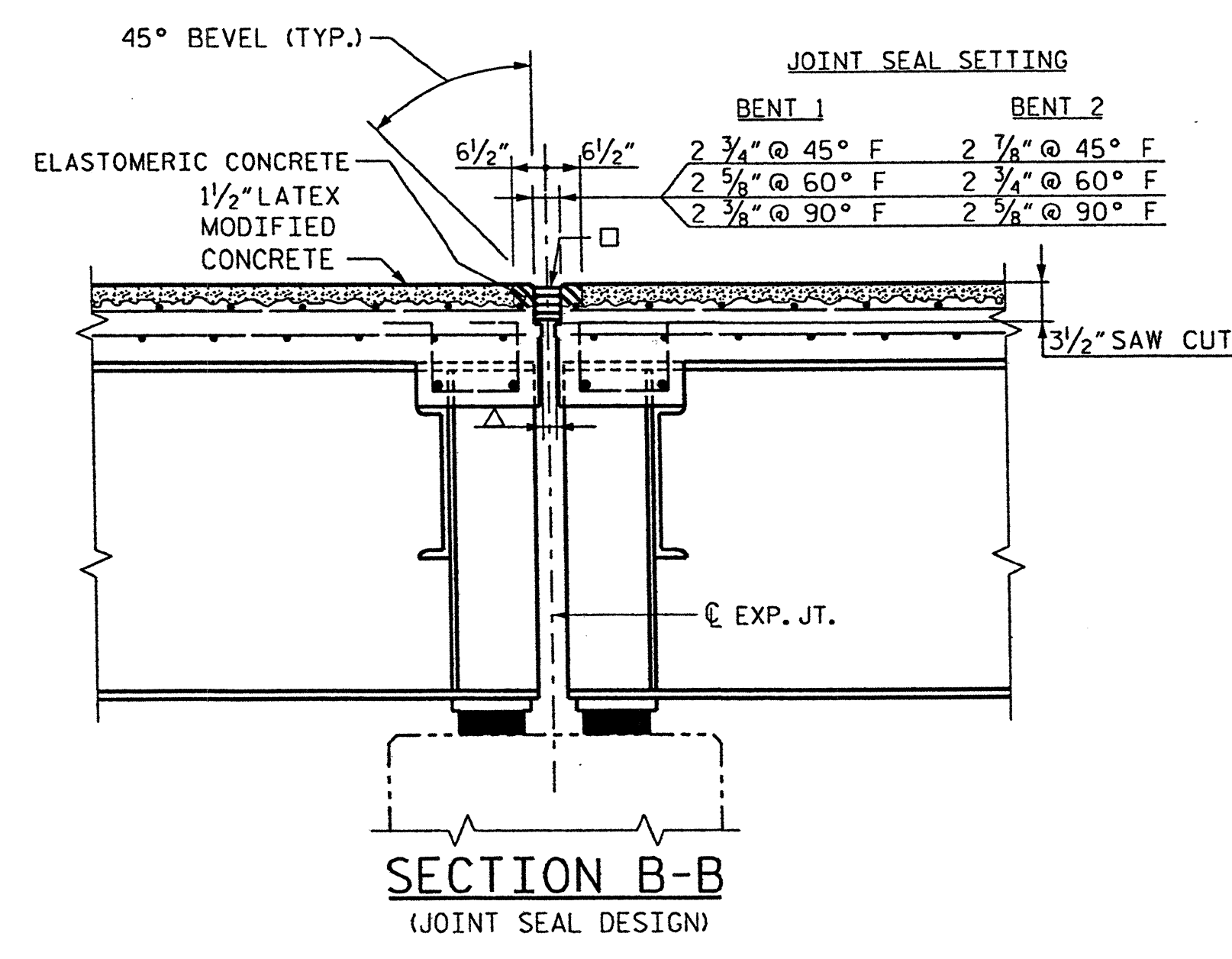
CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.
 FOR HIGH STRENGTH GROUT, SEE SPECIAL PROVISIONS.
 HIGH STRENGTH GROUT SHALL BE APPROVED BY THE ENGINEER.



SECTION B-B
(EXISTING JOINT)



SECTION B-B
(EST. MAX. EXISTING JOINT DEMOLITION)



SECTION B-B
(JOINT SEAL DESIGN)


□ USE 3.125" X 2.5" UNCOMPRESSED EVAZOTE JT. SEAL MATERIAL @ BENTS 1 AND 2
 △ 1" FORMED OPENING @ BENT 1 & BENT 2

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

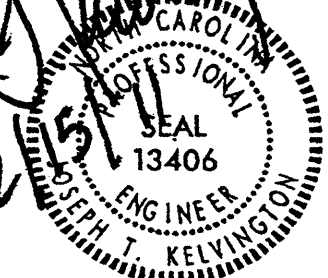
PROJECT NO. 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

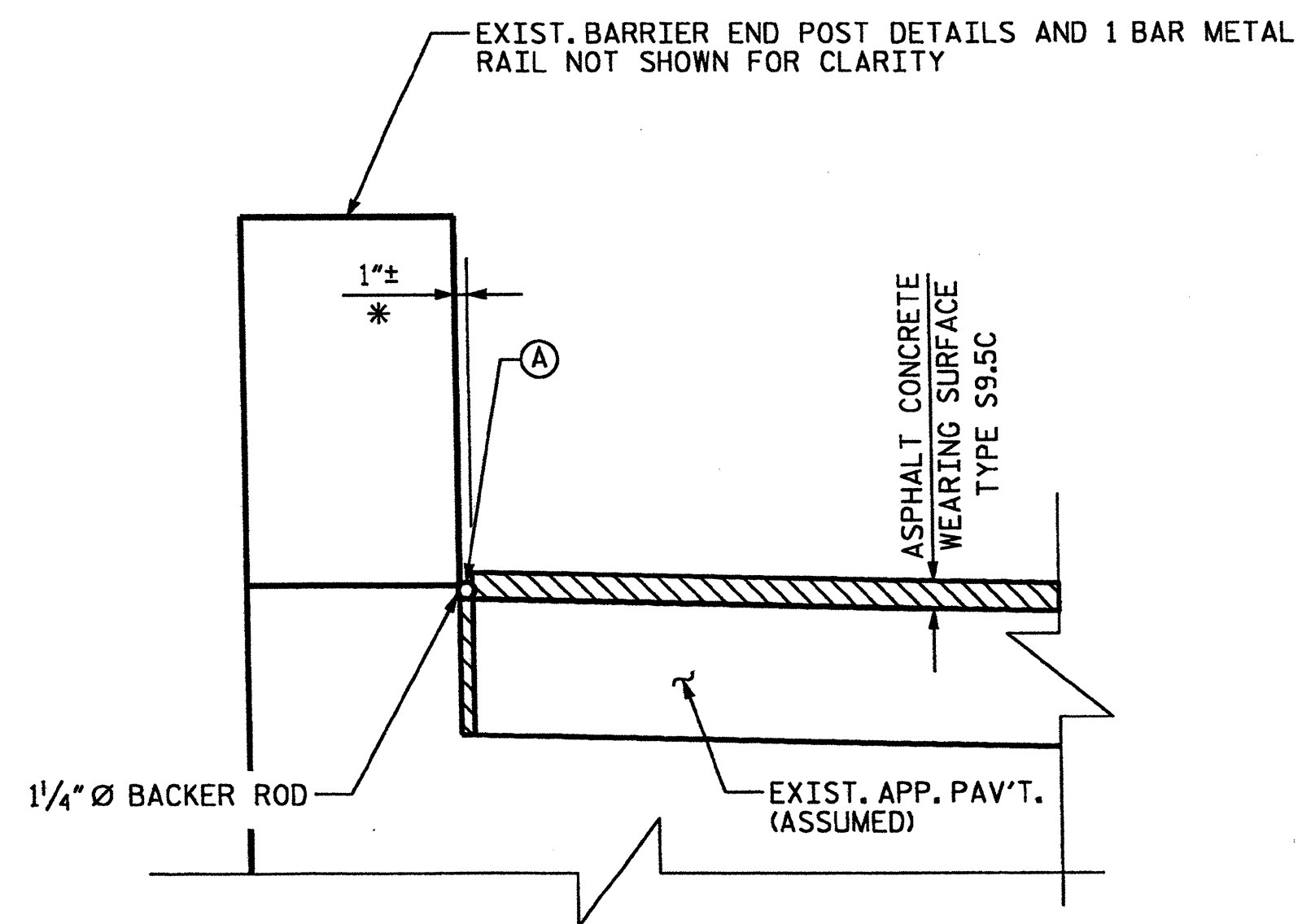
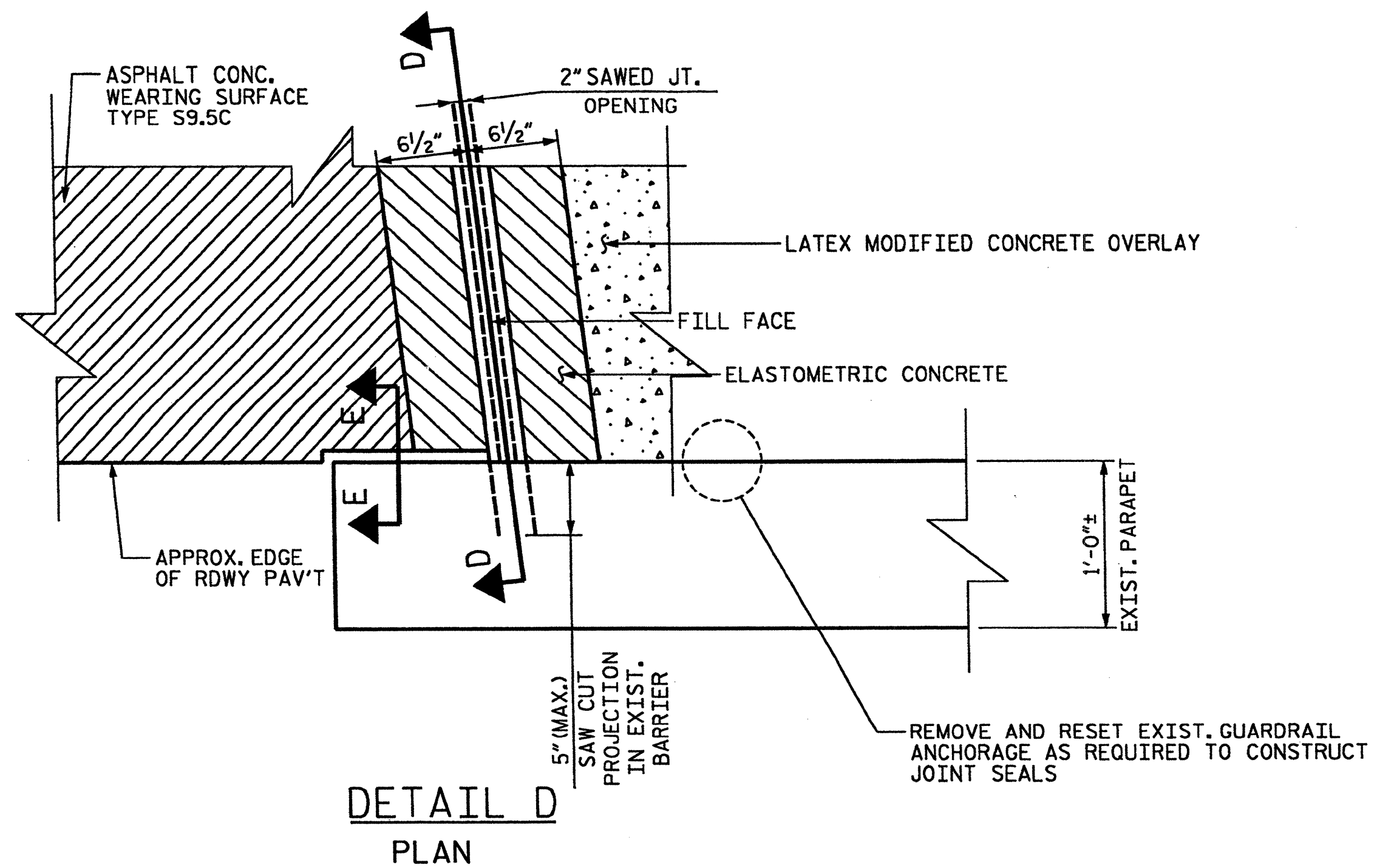
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 INTERIOR BENT JOINT SEAL DETAILS
 DECK REHAB. FOR BRIDGE NO. 33

REVISIONS						SHEET NO.
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1			3			77
2			4			


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

Joseph J. Kelvington
 12/15/11


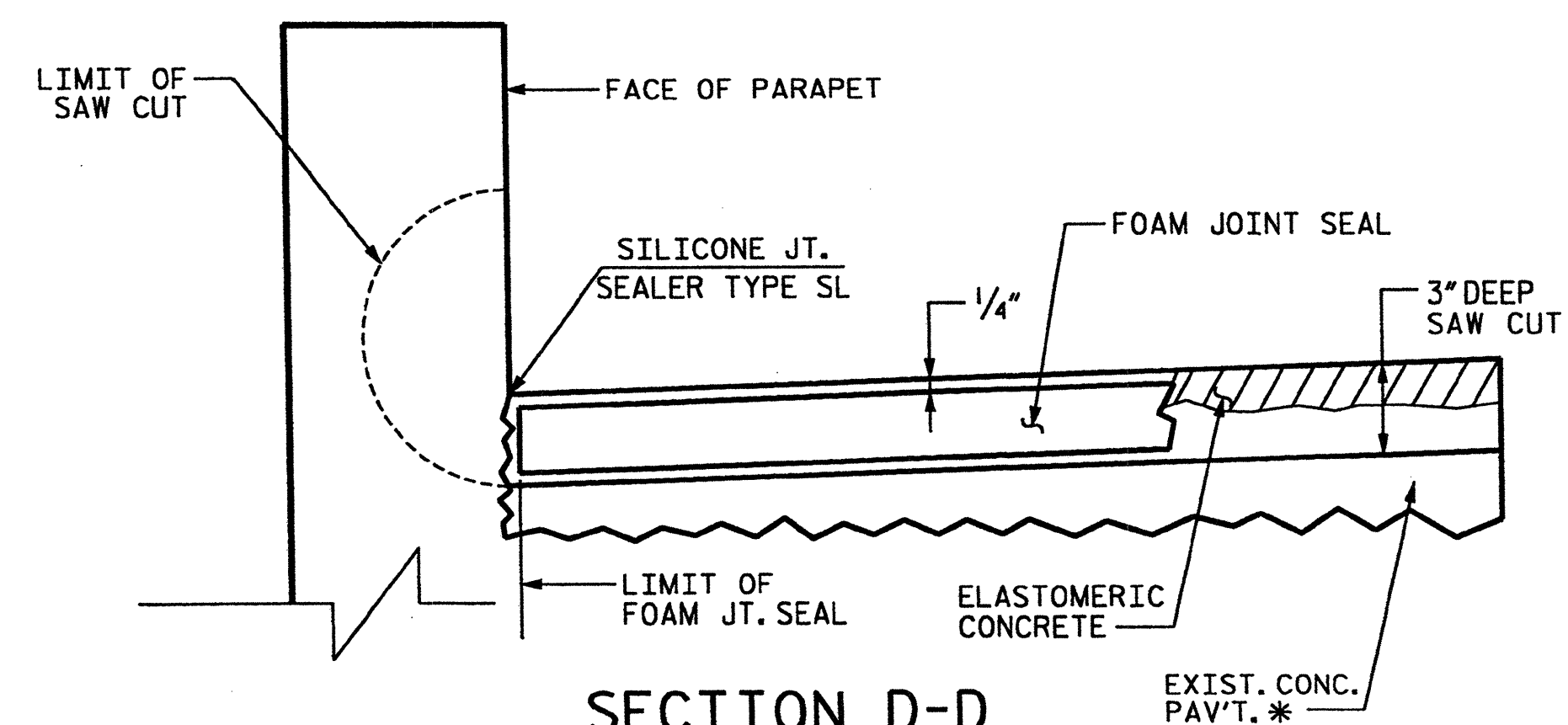


SECTION E-E

* EXISTING JOINT FILLED WITH BITUMINOUS JT. MATL. REMOVE EXP. JT. MATL. AS REQUIRED TO INSTALL BACKER ROD.

(A) SEAL JOINTS W/ LOW MODULUS SILICONE JOINT SEALER TYPE SL W/ BACKER ROD IN ALL EXISTING GAPS BETWEEN SLABS, CURBS, AND BARRIERS.

1/4" DIA. 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.



SECTION D-D

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

PROJECT NO. 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT JOINT
 SEAL DETAILS

DECK REHAB. FOR BRIDGE NO. 33

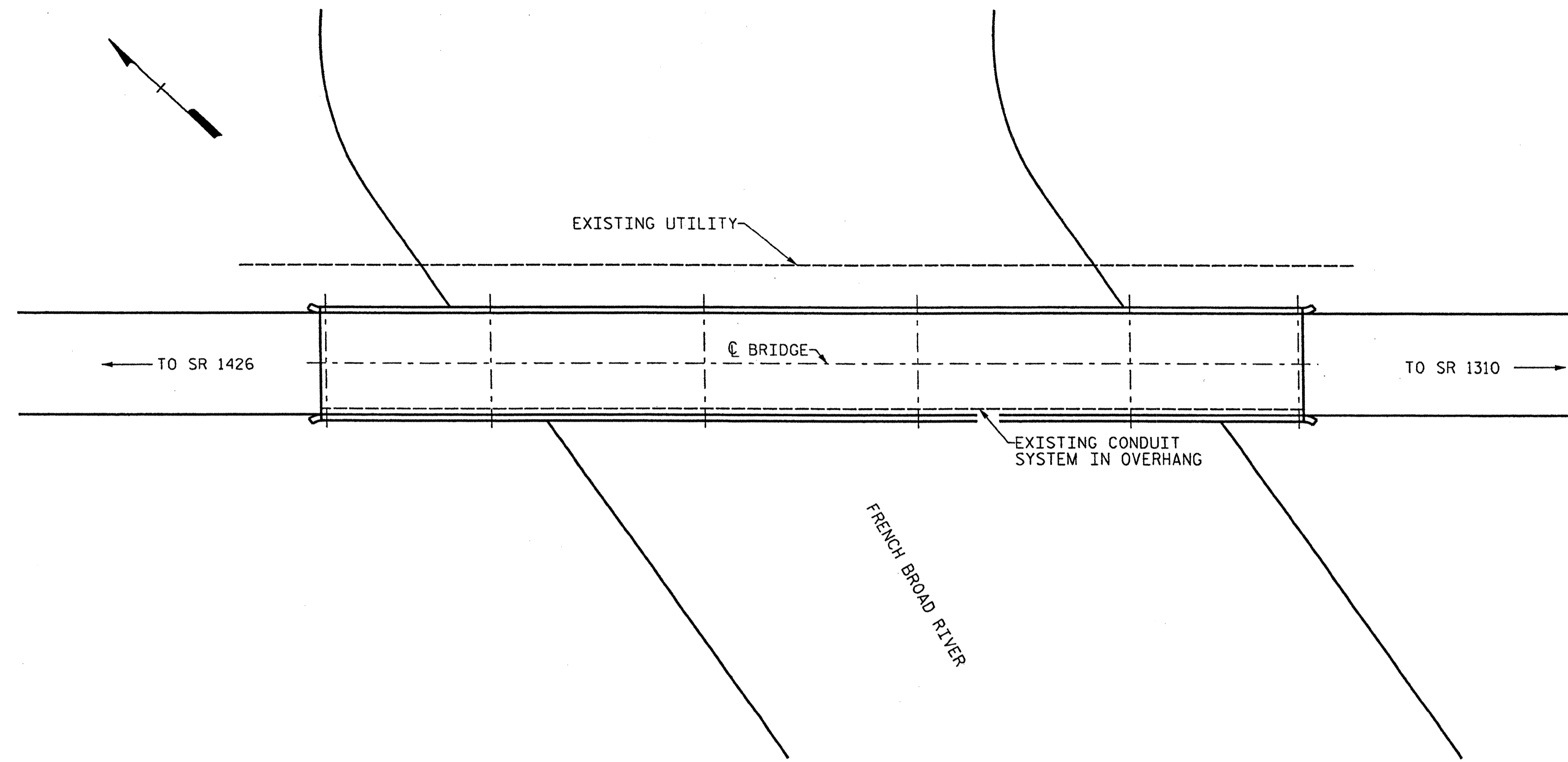
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
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2			4			77

Joseph M. Kelvington
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 ENGINEER
 13406
 KELVINGTON



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BRIDGE 129 ON NC 191

LOCATION: BRIDGE 440129, NC 191 OVER FRENCH BROAD RIVER 0.5 MILES NORTH OF JUNCTION SR 1310

TOTAL BILL OF MATERIAL

INCIDENTAL MILLING	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	ASHPHALT CONC. SURF. COURSE TYPE S9.5B	PARTIAL REMOVAL OF EXISTING STRUCTURE	REINFORCED CONCRETE DECK SLAB
SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	CU.YDS.	CU.YDS.	SO.YDS.	LUMP SUM	SO.FT.	TON	LUMP SUM	SO.FT.
311	870.3	0.0	19.5	0.0	870.3	0.0	50.3	870.3	LUMP SUM	7,551	25	LUMP SUM	100

* QUANTITIES ARE SHOWN 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 SEPERATE MEASUREMENT OR PAYMENT FOR THESE ITEMS SHALL BE MADE. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR HYDRO-DEMOLITION.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
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 RALEIGH

LOCATION SKETCH
 AND TOTAL
 BILL OF MATERIAL

DECK REHAB. FOR BRIDGE NO. 129

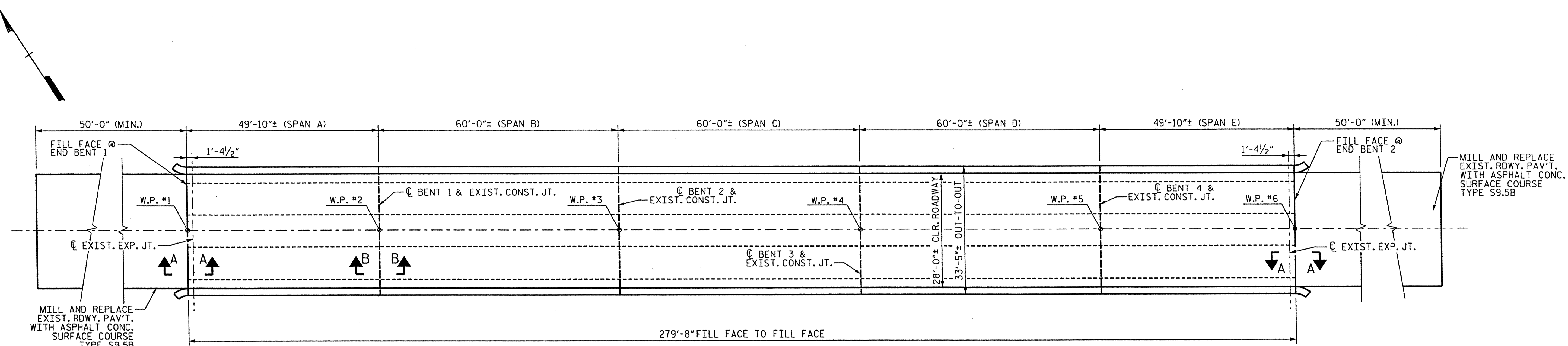
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Joseph Kelvington

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DRAWN BY : B. J. ELLIOT DATE : 11/11
 CHECKED BY : J. T. KELVINGTON DATE : 11/11

3 Henderson-Polk Co Henderson Co. Bridge 129 Drawing Vendor sen129.L.S. BOM.dgn 1/19/2012 12:35:27 PM Joelle

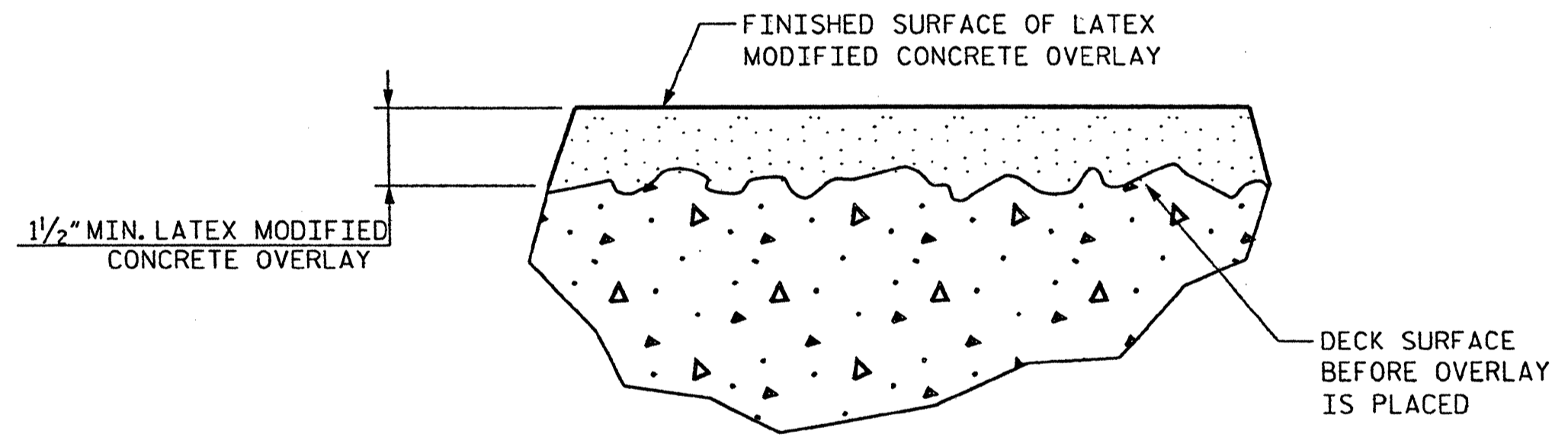


PLAN OF SPANS A-E

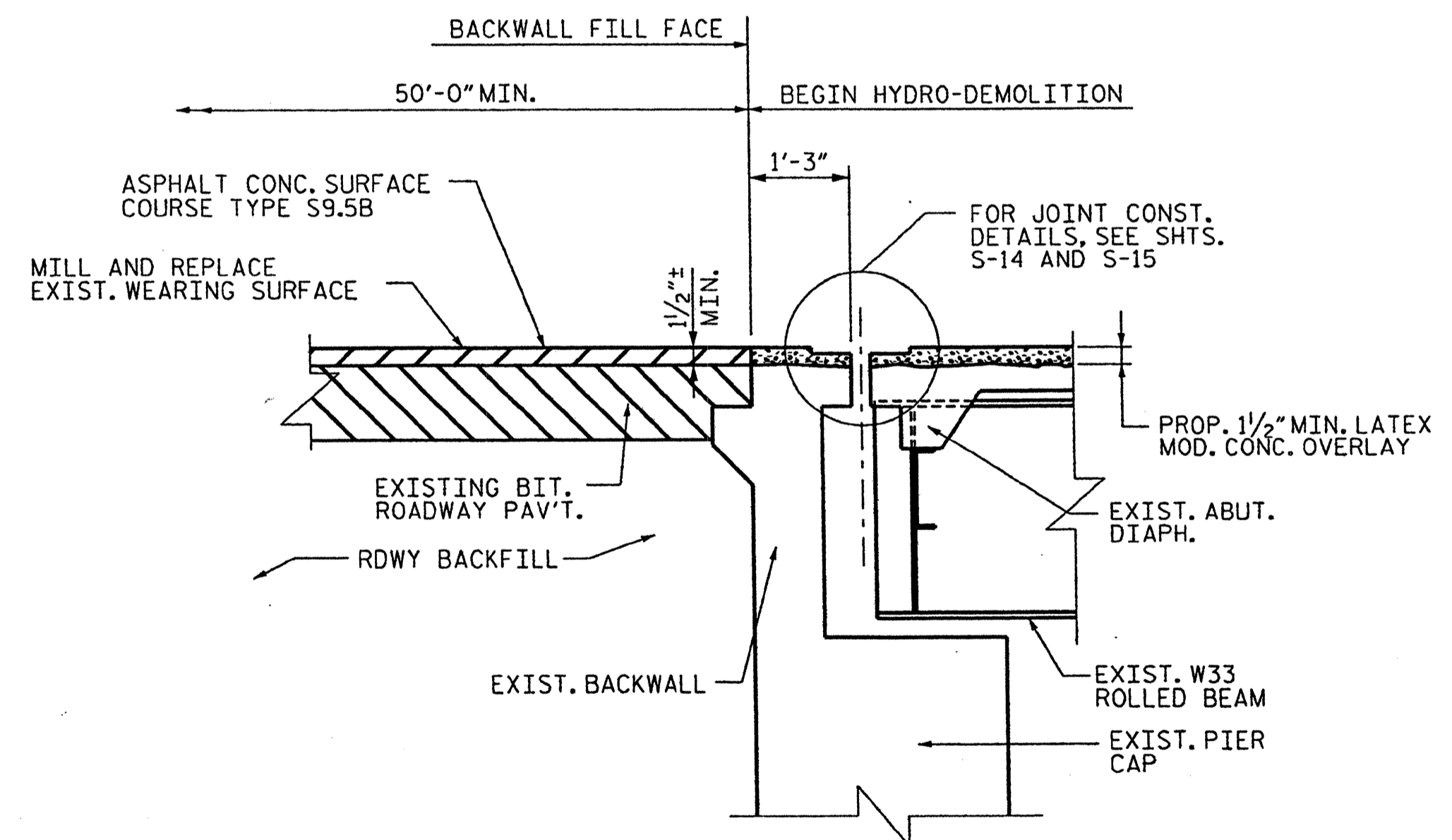
NOTE: BARRIER RAIL, POSTS, AND END POSTS NOT SHOWN FOR CLARITY.

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-10.
- FOR LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.
- FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.
- LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH.
- FOR SECTION B-B, SEE SHT. S-13.



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY



SECTION A-A

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK PLAN

DECK REHAB. FOR BRIDGE NO. 129

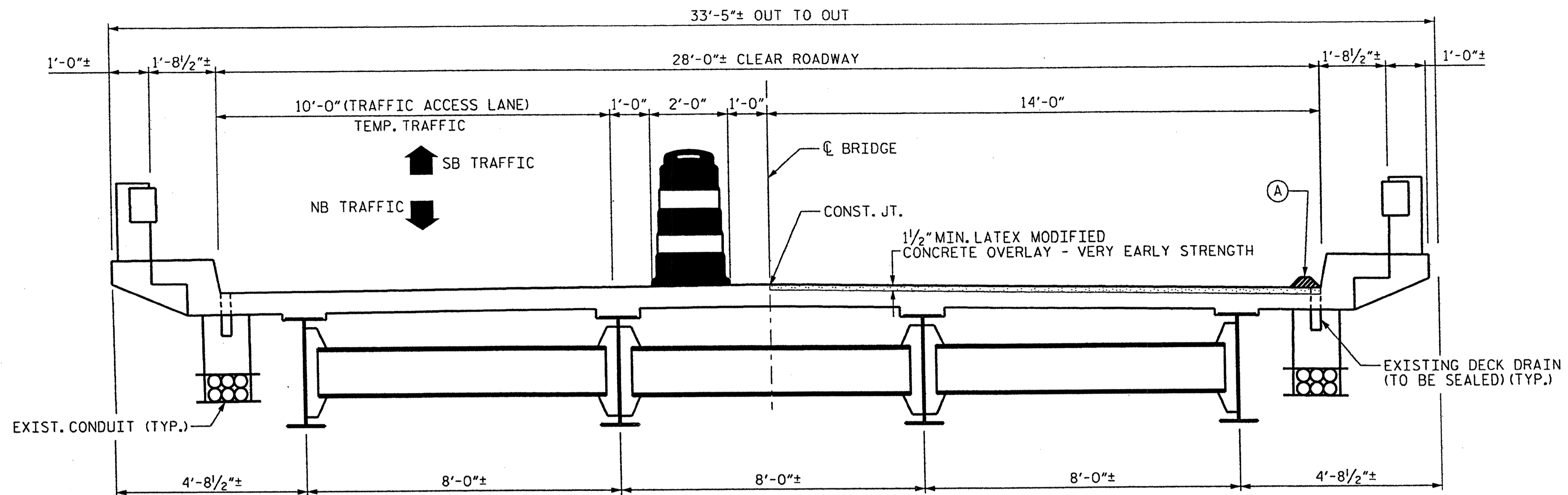
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-8
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 No. 2406
 STATE OF NORTH CAROLINA

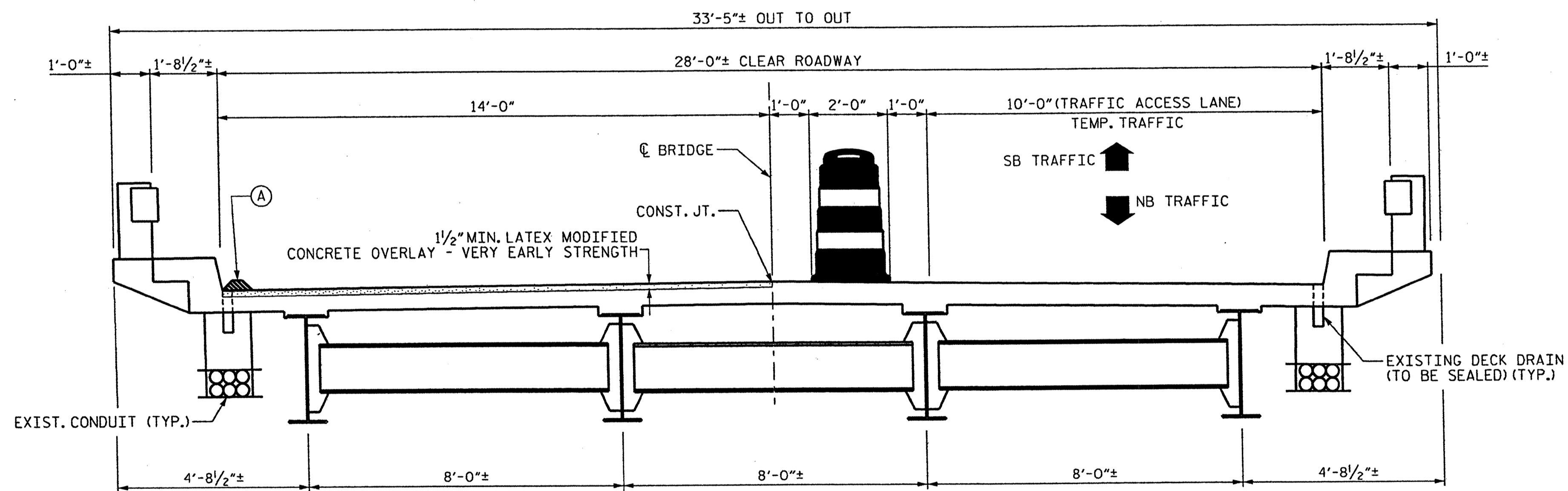
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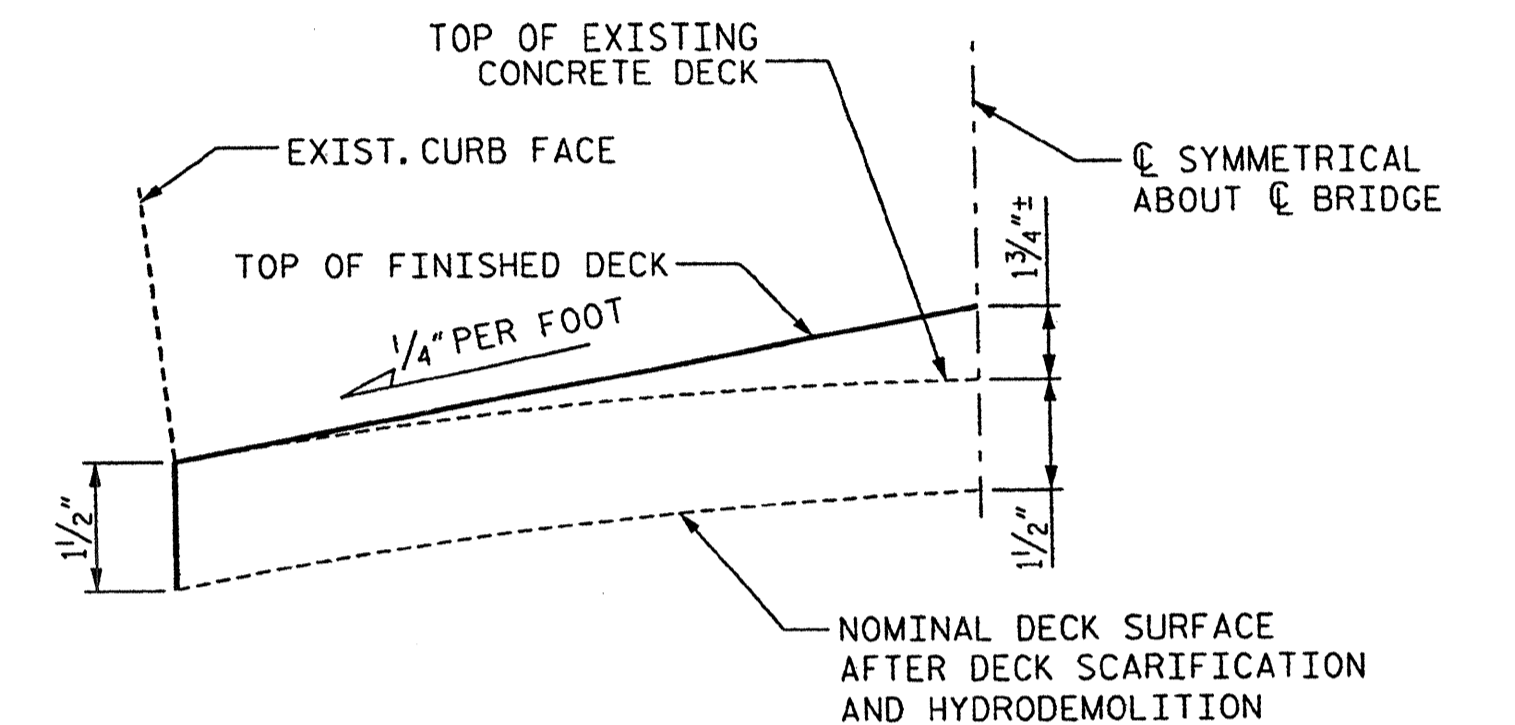
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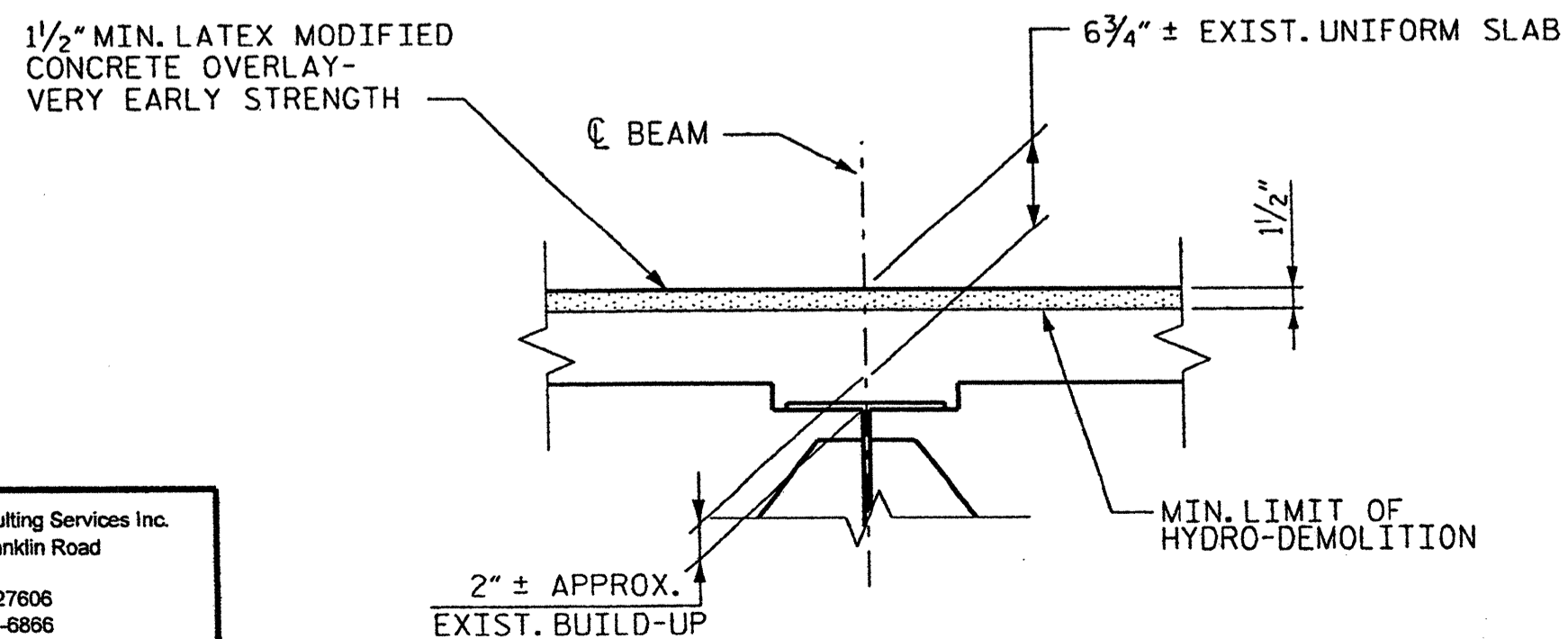
TYPICAL SECTION
SPANS A THRU E



TYPICAL SECTION
SPANS A THRU E



BRIDGE CROSS SLOPE SCHEMATIC FOR
DECK OVERLAY



EXIST SLAB
BUILD-UP

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 @ DRAINS AND EXPANSION JOINTS.

ALL DIMENSIONS SHOWN ARE APPROXIMATE.

PROJECT NO. WBS 17BP.14.P.3
ENDERSON COUNTY
STATION: _____

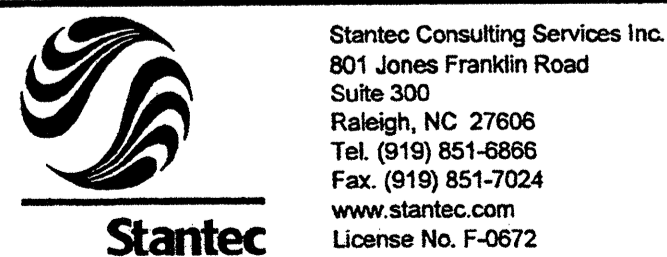
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RALEIGH

TYPICAL SECTION

DECK REHAB. FOR BRIDGE NO. 129

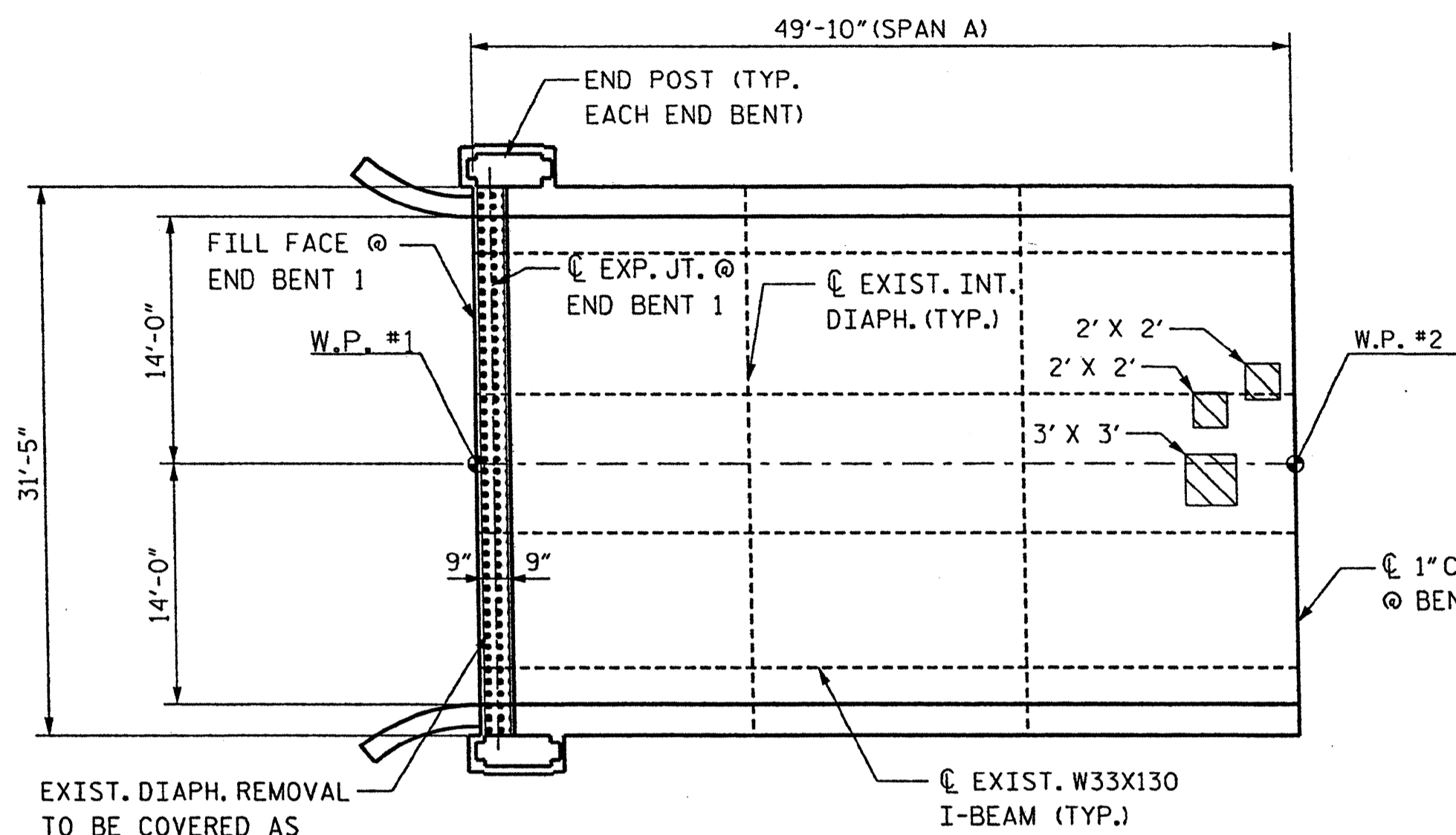
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
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2			4			77

Joseph Kelvington
12/15/11
Professional Engineer
No. 1206
J. T. KELVINGTON

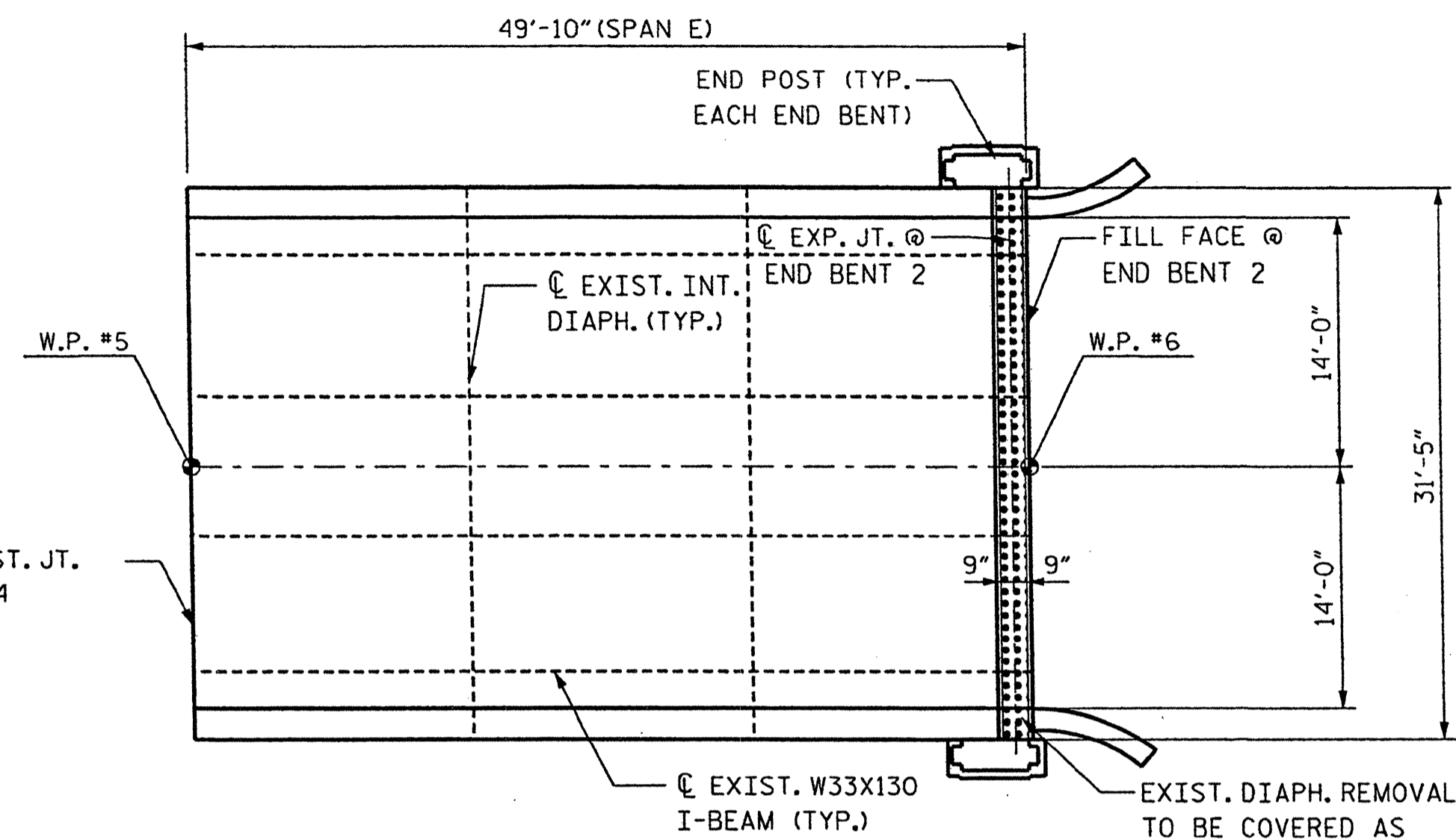


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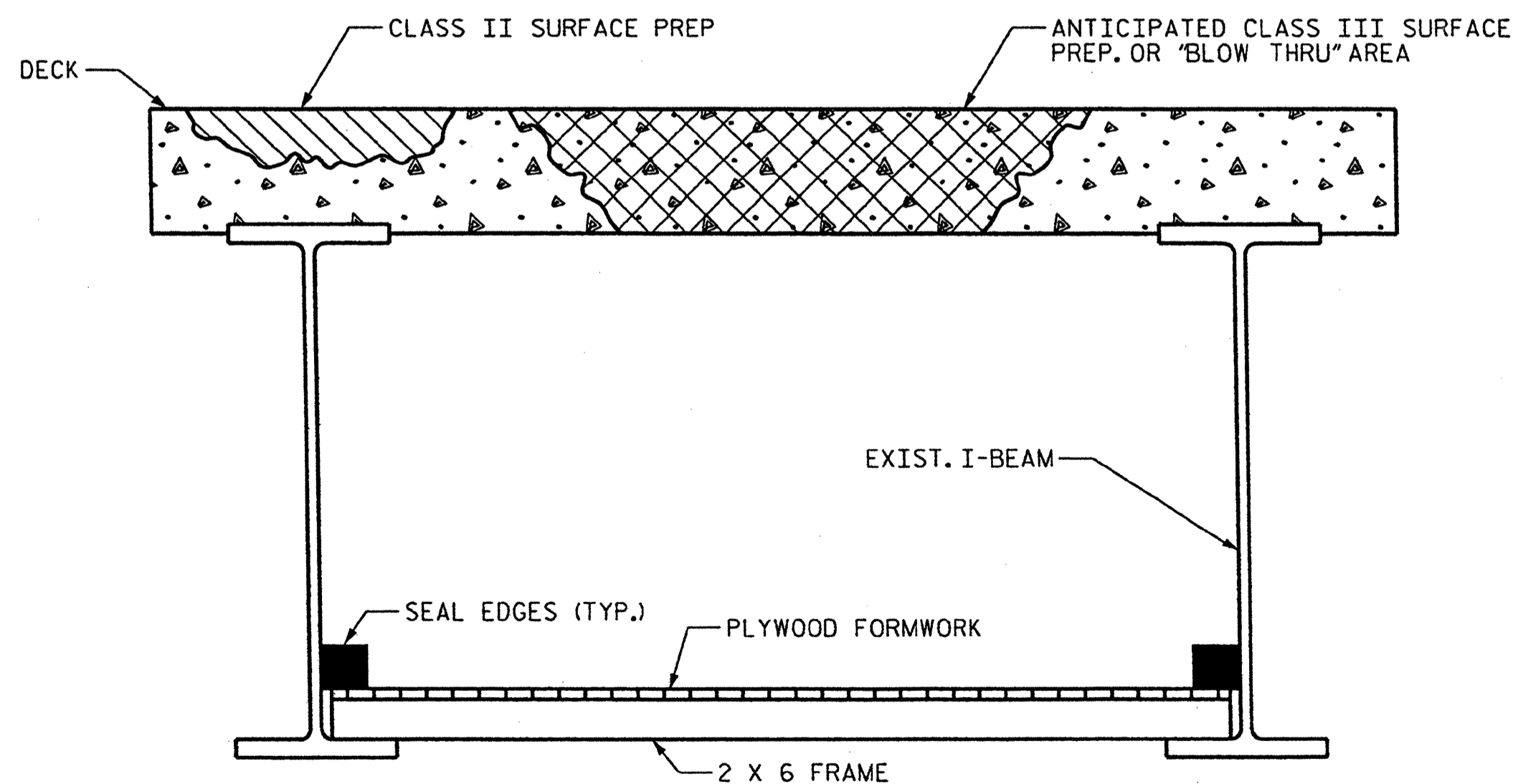


PLAN OF SPAN A - DECK REPAIRS

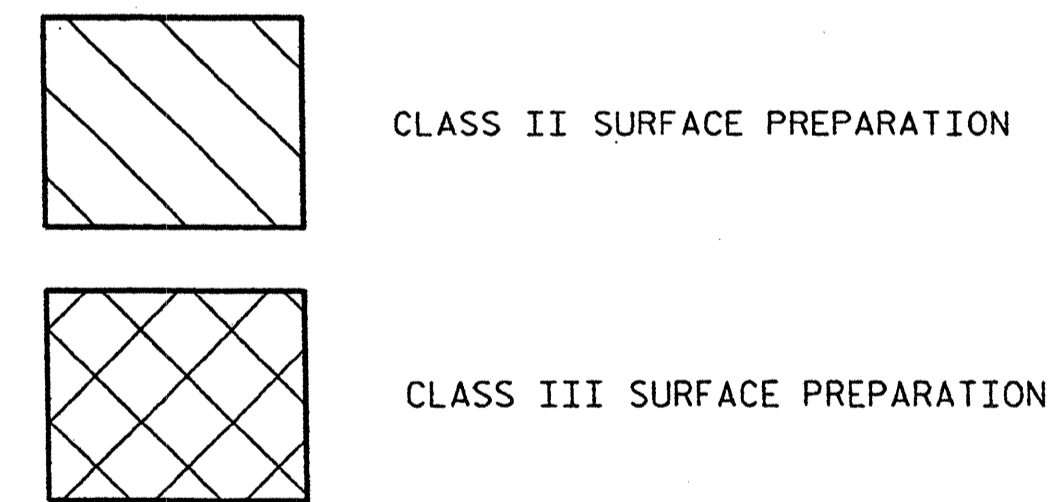


PLAN OF SPAN E - DECK REPAIRS

NOTE:
 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.
 SEE HYDRO-DEMOLITION SPECIAL PROVISIONS.
 CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES 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.



TYP. "BLOW-THRU" CONTAINMENT AND FORMWORK



NOTES:
 L' X W' = LENGTH OF AREA ALONG @ BRIDGE X
 WIDTH OF AREA NORMAL TO @ BRIDGE

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

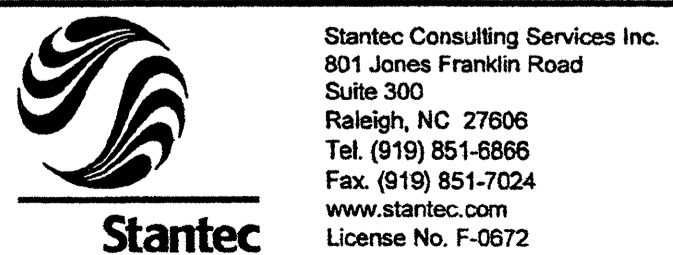
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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK REPAIR PLAN
 SPANS A & E

DECK REHAB. FOR BRIDGE NO. 129

REVISIONS						SHEET NO.
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2			4			77

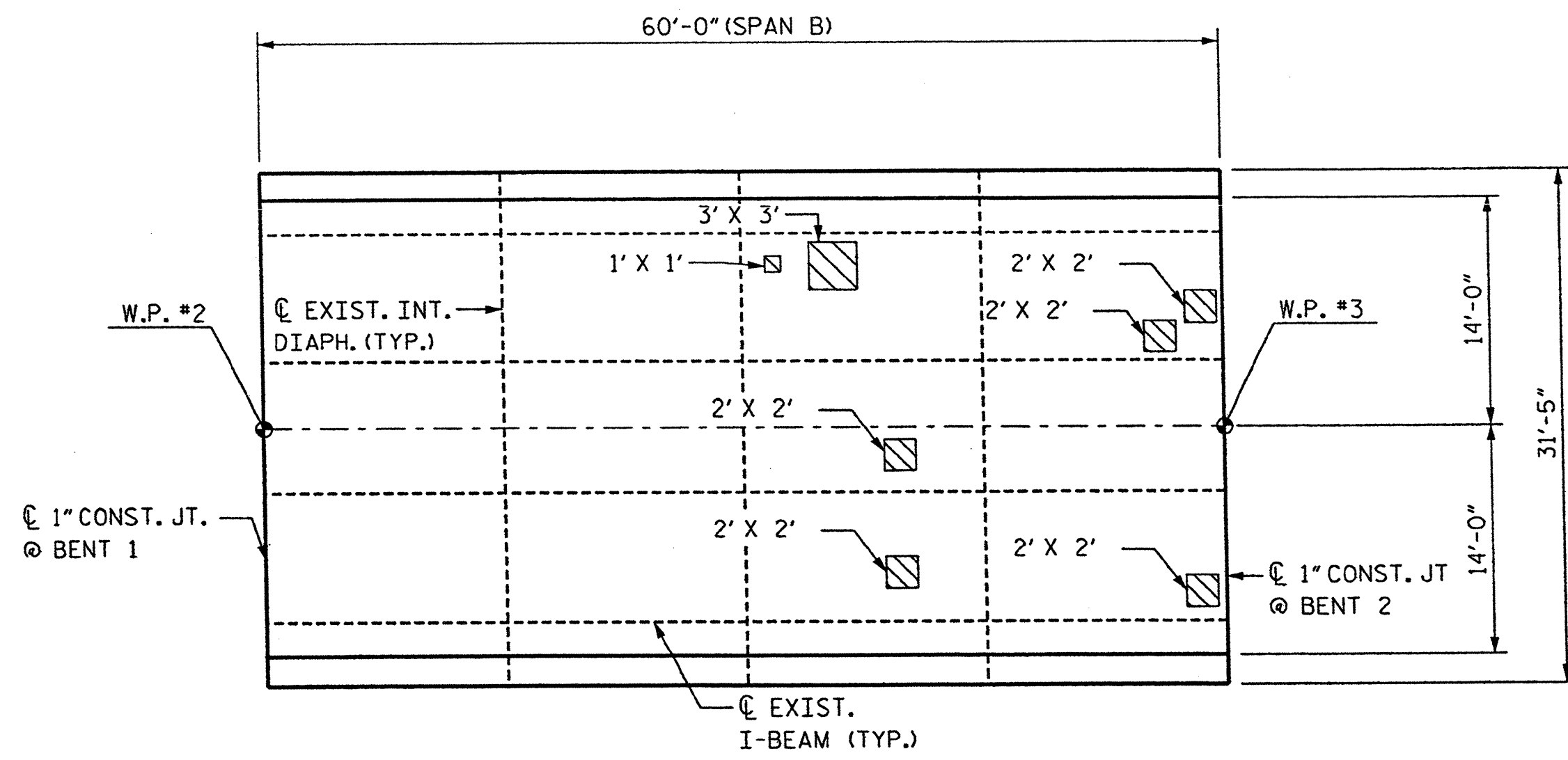
Joseph T. Kelvington
 SEAL 13406
 ENGINEER
 STATE OF NORTH CAROLINA



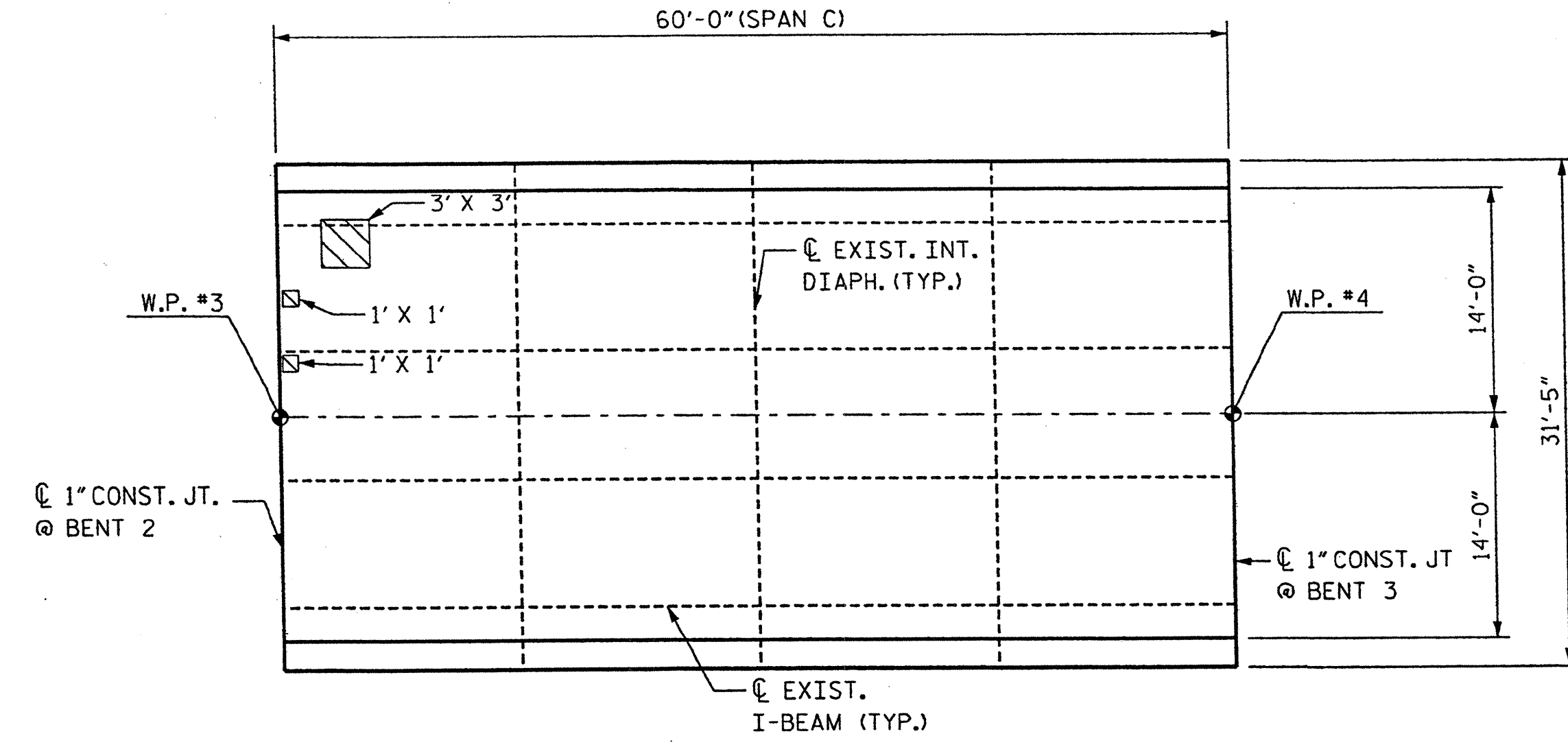
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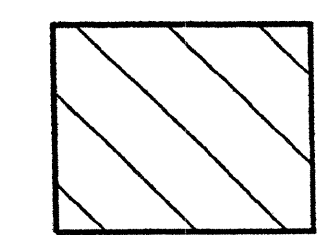
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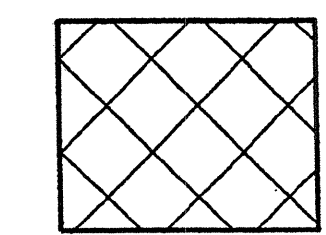
PLAN OF SPAN B - DECK REPAIRS



PLAN OF SPAN C - DECK REPAIRS



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

NOTES:

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

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK REPAIRS B & C

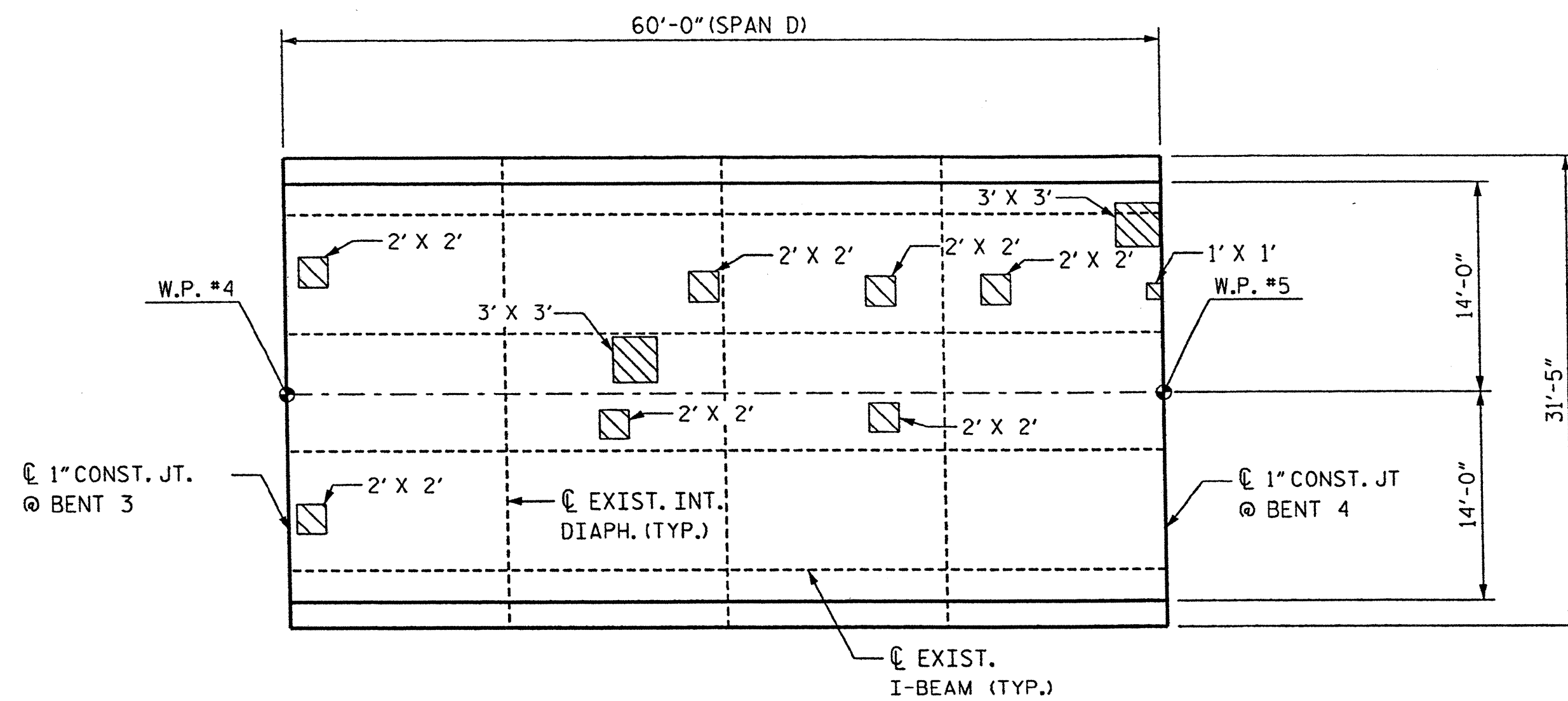
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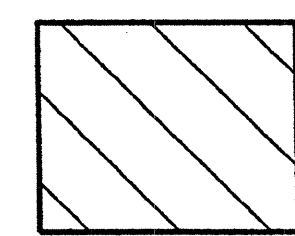
J. T. Kelvington
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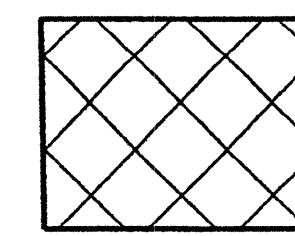
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 CHECKED BY : J. T. KELVINGTON DATE : 11/11



PLAN OF SPAN D - DECK REPAIRS



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

NOTES:

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

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

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DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK REPAIR PLAN
SPAN D

DECK REHAB. FOR BRIDGE NO. 129

REVISIONS						SHEET NO.
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2			4			77

Joseph T. Kelvington
12/11/11
Professional Engineer
Seal No. 13406
J. T. KELVINGTON

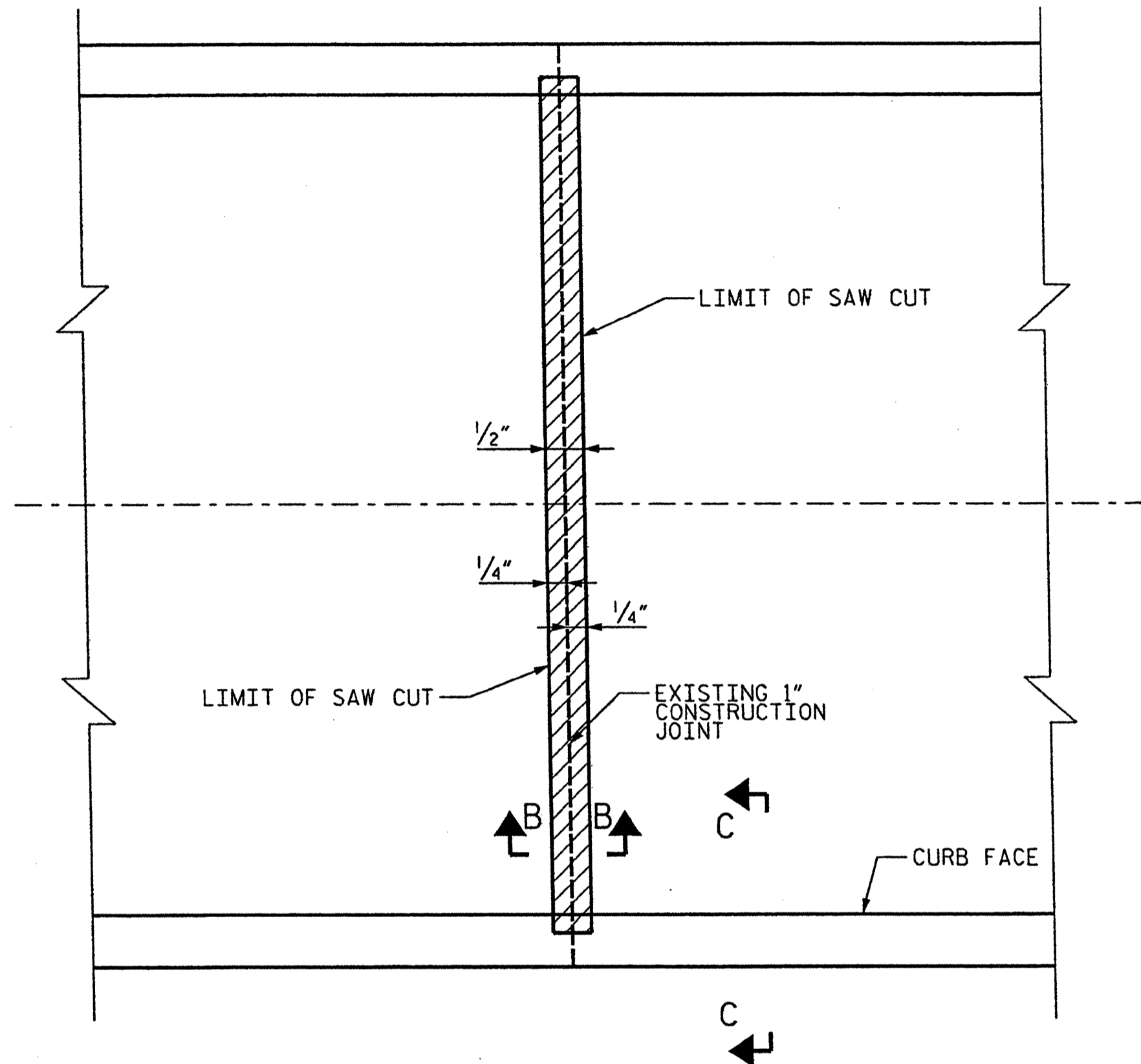


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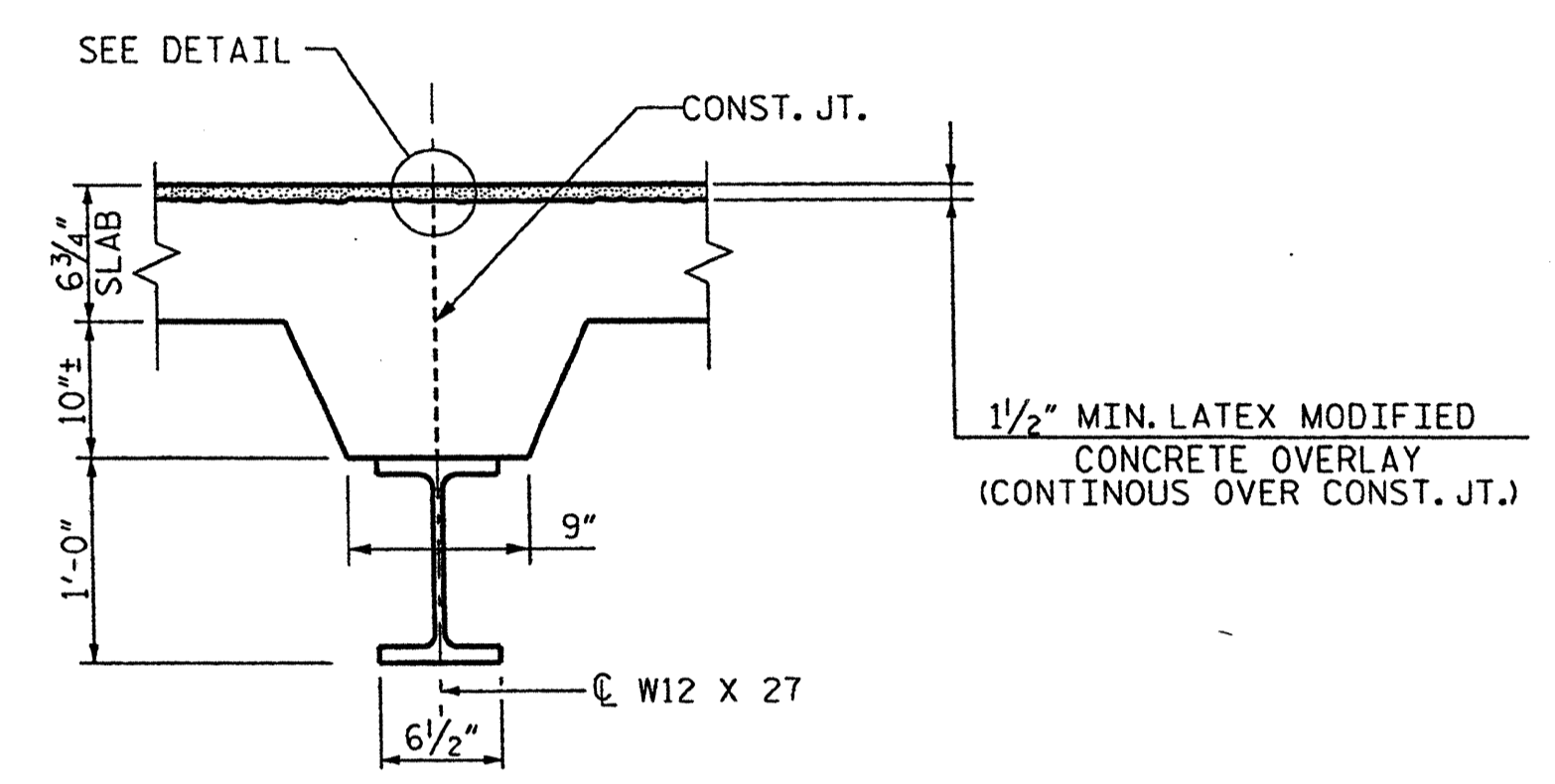
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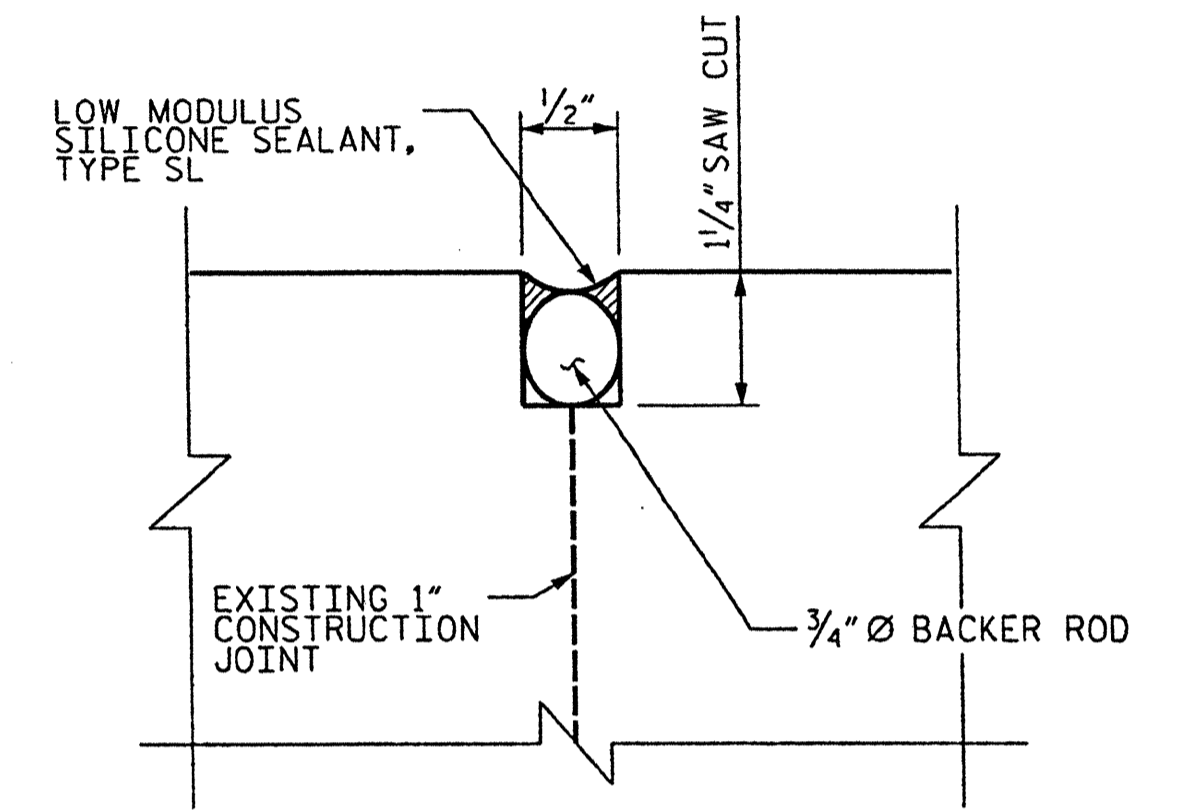
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INTERIOR JOINT PLAN

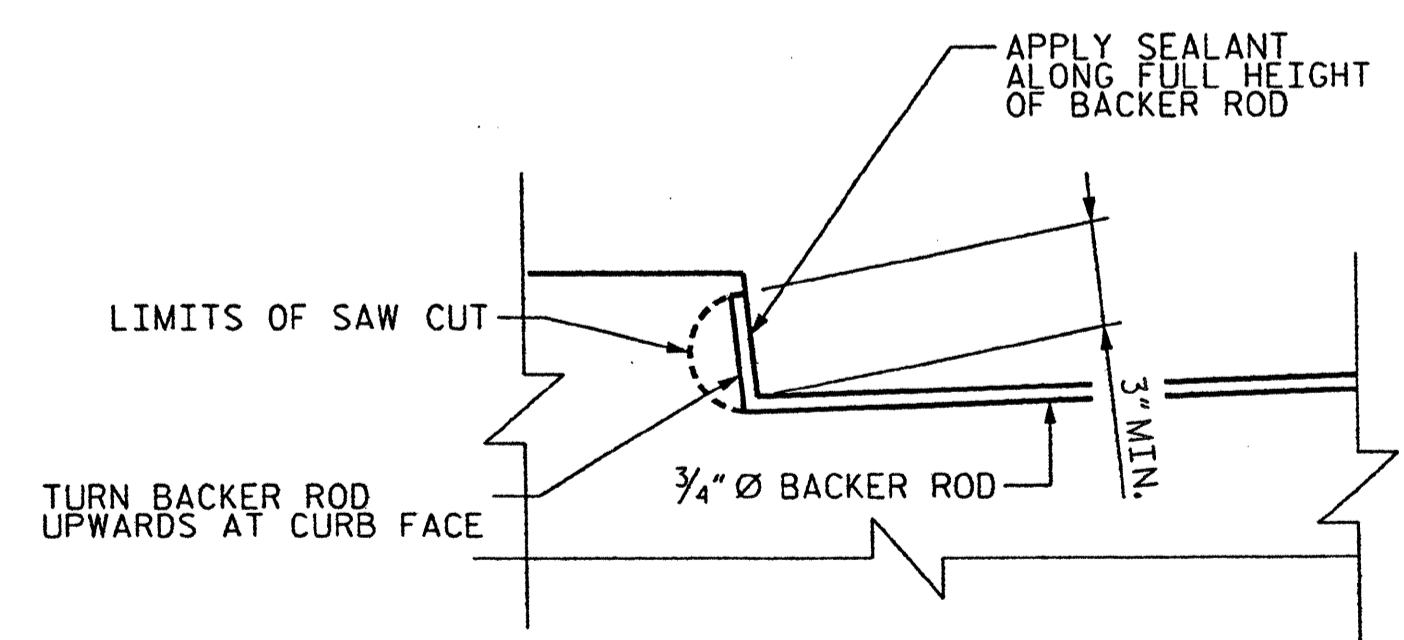


SECTION B-B
(TYP. EA. CONST. JT.)



DETAIL
(TYP. EA. CONST. JT.)

3/4" DIA. 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.



SECTION C-C
(TYP. EA. CONST. JT.)

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

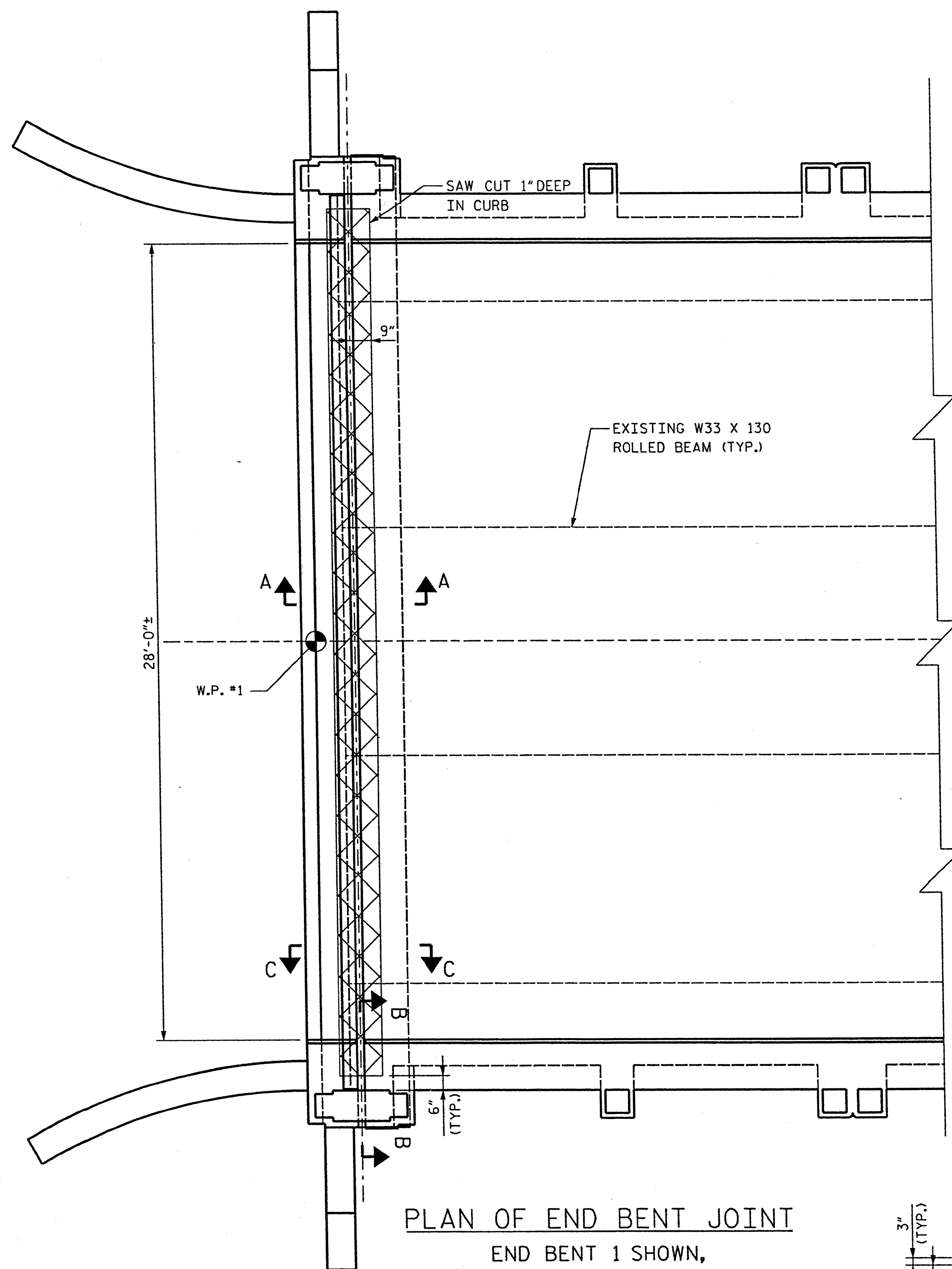
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INTERIOR BENT JOINT DETAILS					
DECK REHAB. FOR BRIDGE NO. 129					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
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Joseph J. Kelvington
 12/15/11
 ENGINEER
 STATE OF NORTH CAROLINA
 LICENSE NO. 13406

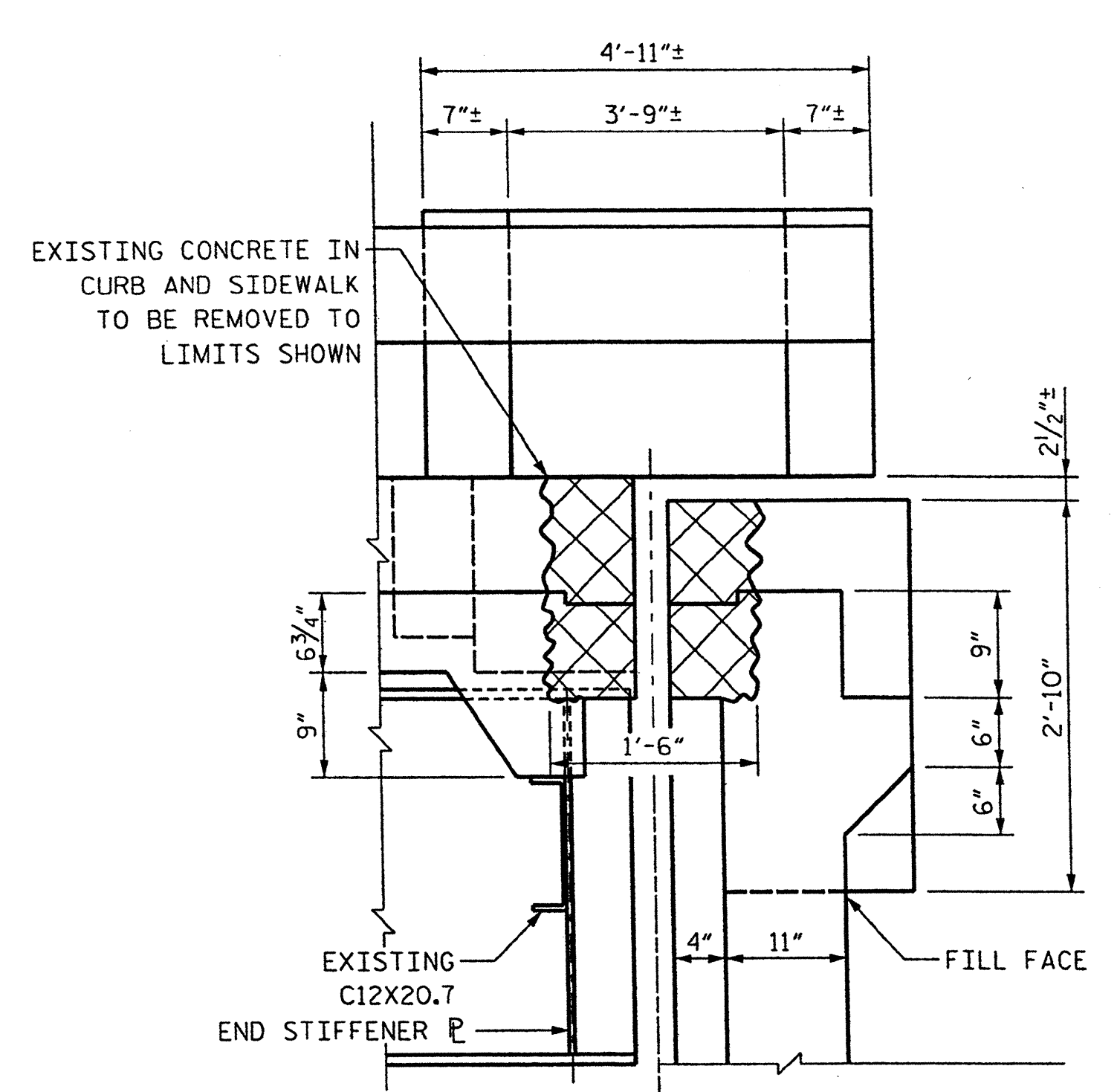
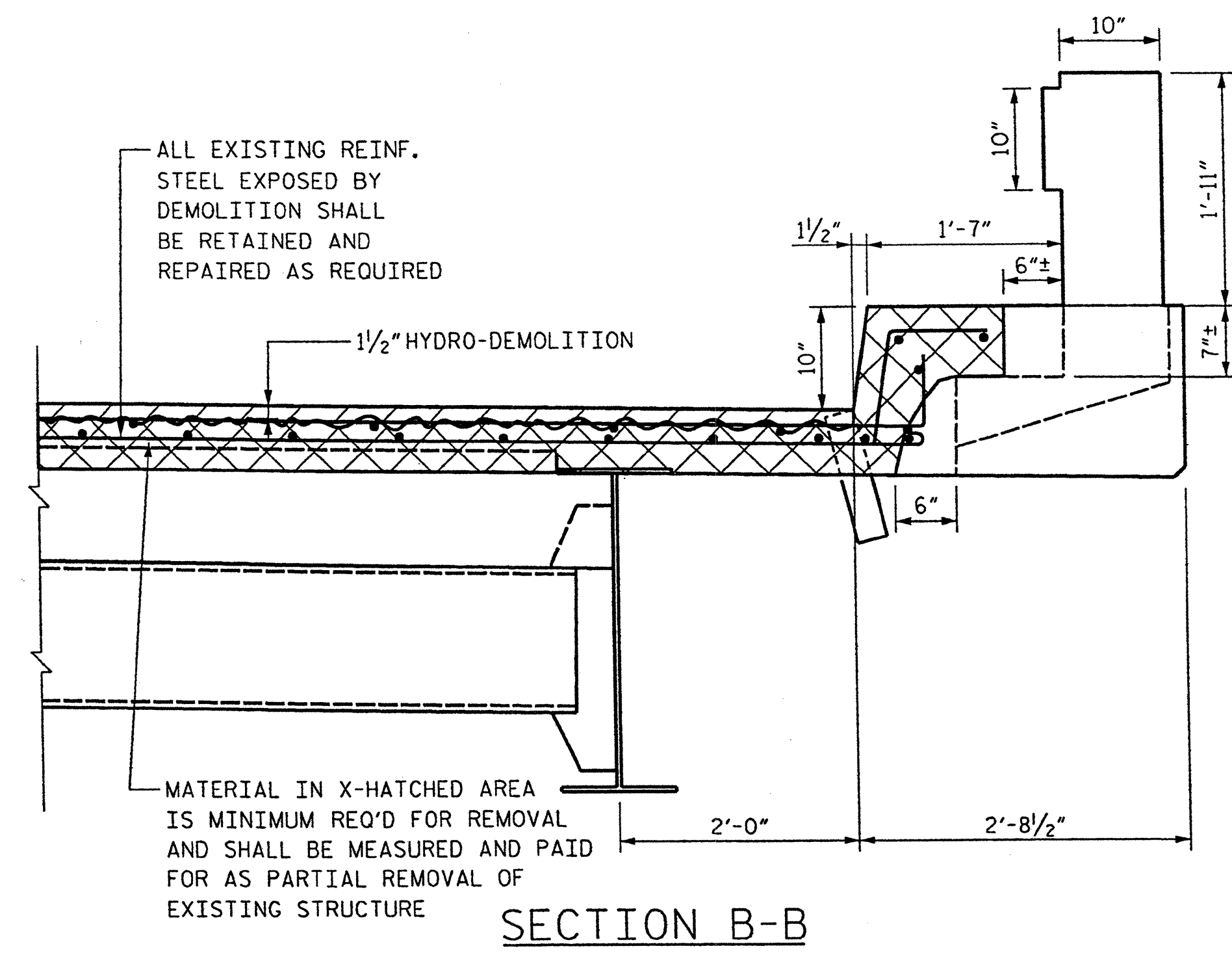
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 CHECKED BY : J. T. KELVINGTON DATE : 11/11

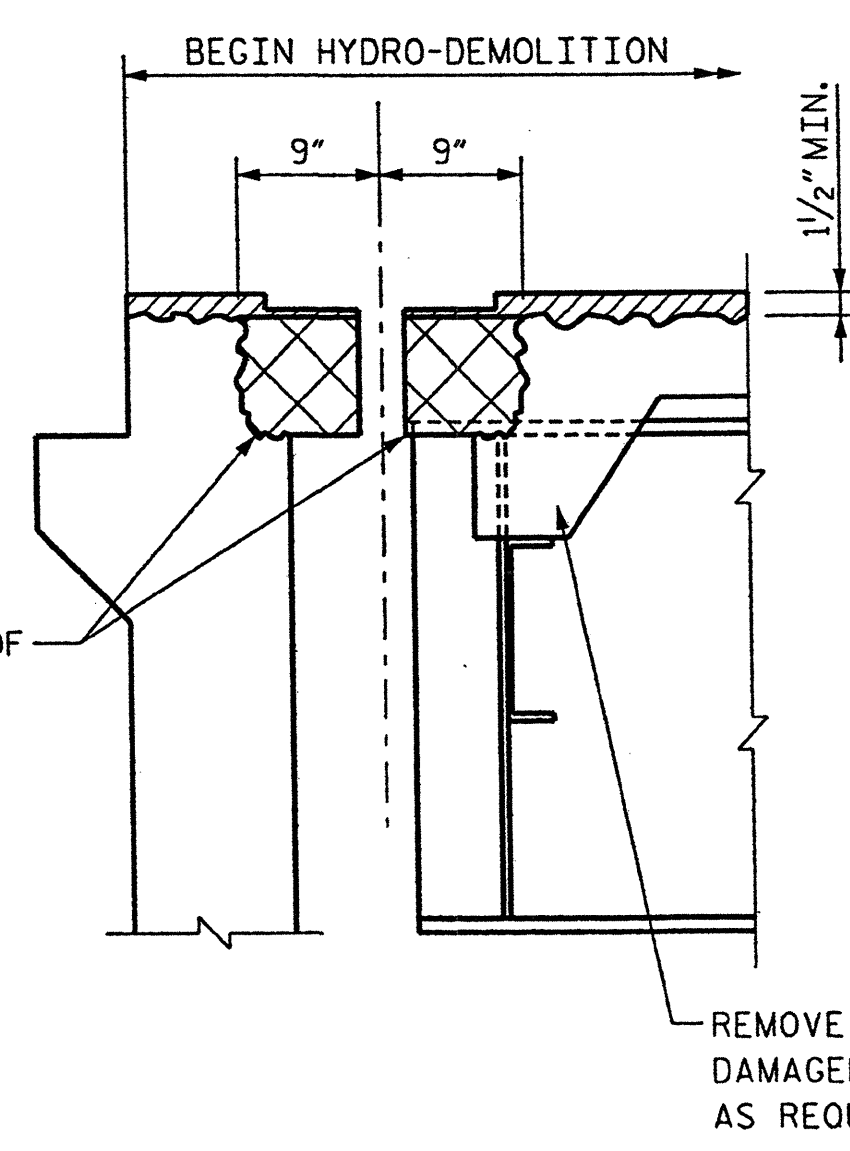
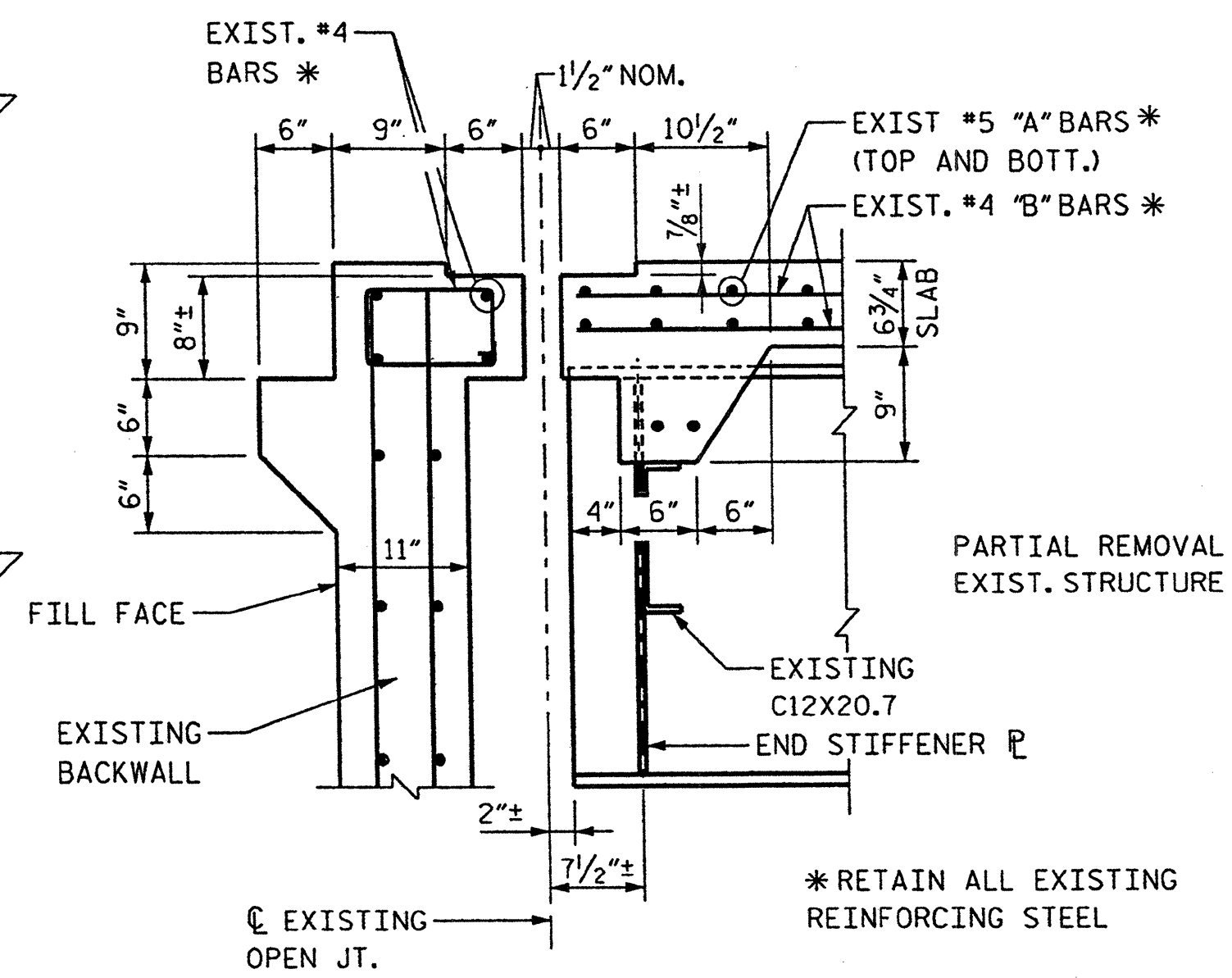
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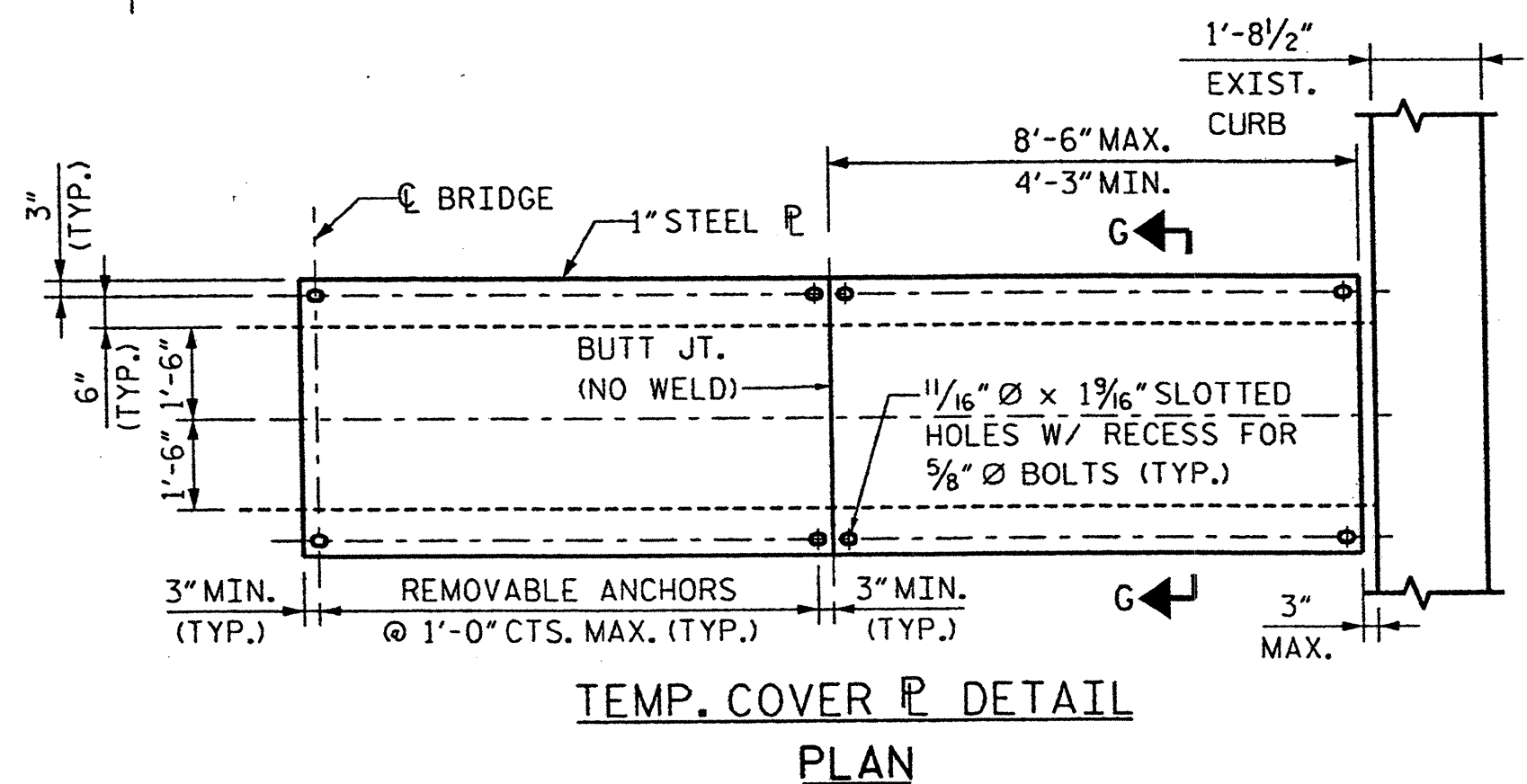
PLAN OF END BENT JOINT
END BENT 1 SHOWN,
END BENT 2 SIMILAR - OPP. HAND



NOTE:
REINF. NOT SHOWN FOR CLARITY



NOTE:
REINF. NOT SHOWN FOR CLARITY



FOR SECTION G-G, SEE SHT. S-15.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH				
EXISTING JOINT DEMOLITION				
DECK REHAB. FOR BRIDGE NO. 129				
SHEET NO. S-14				
TOTAL SHEETS 77				
REVISIONS				
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	

J. T. Kelvington

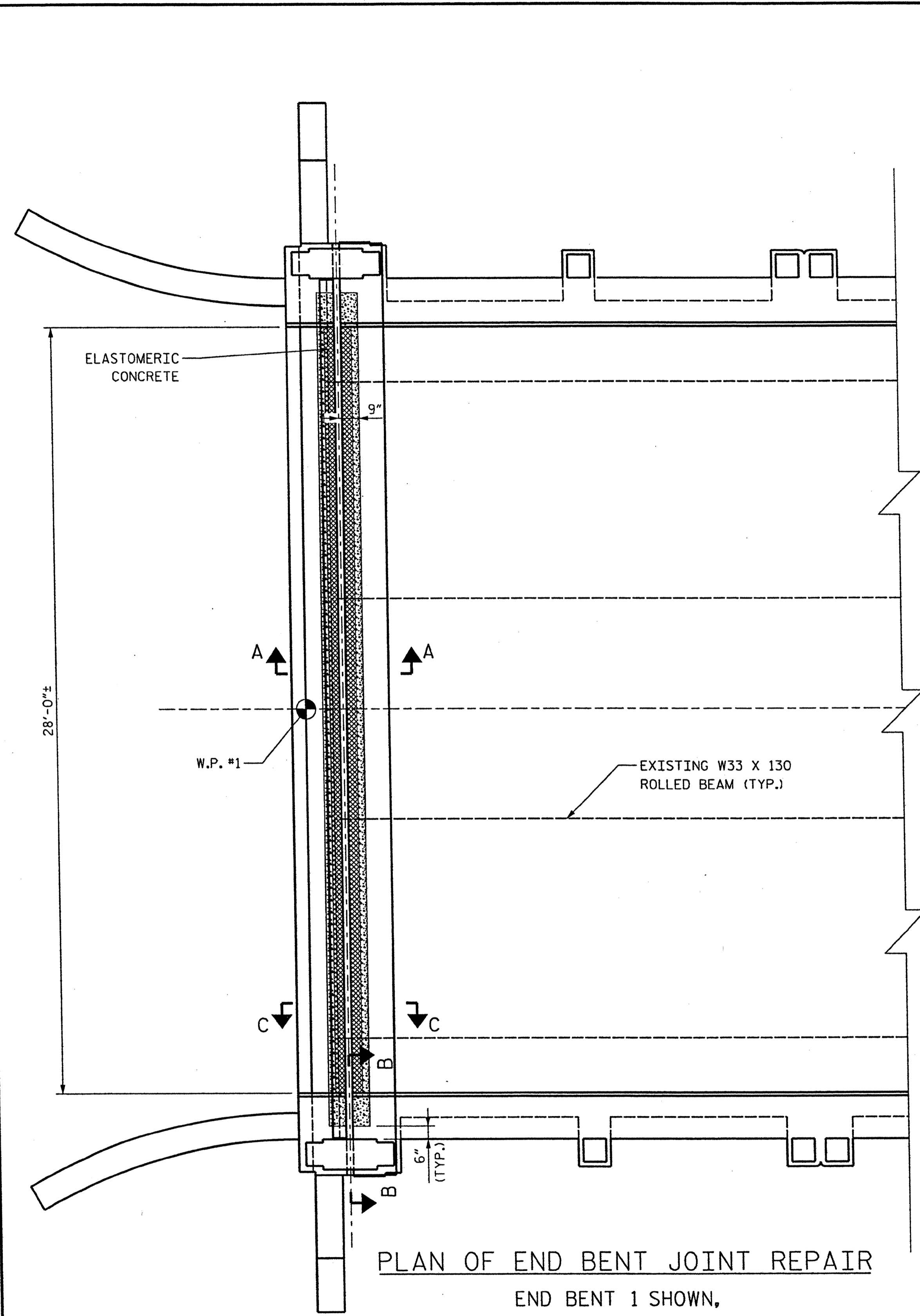
Professional Engineer
No. 18406
North Carolina

Stantec

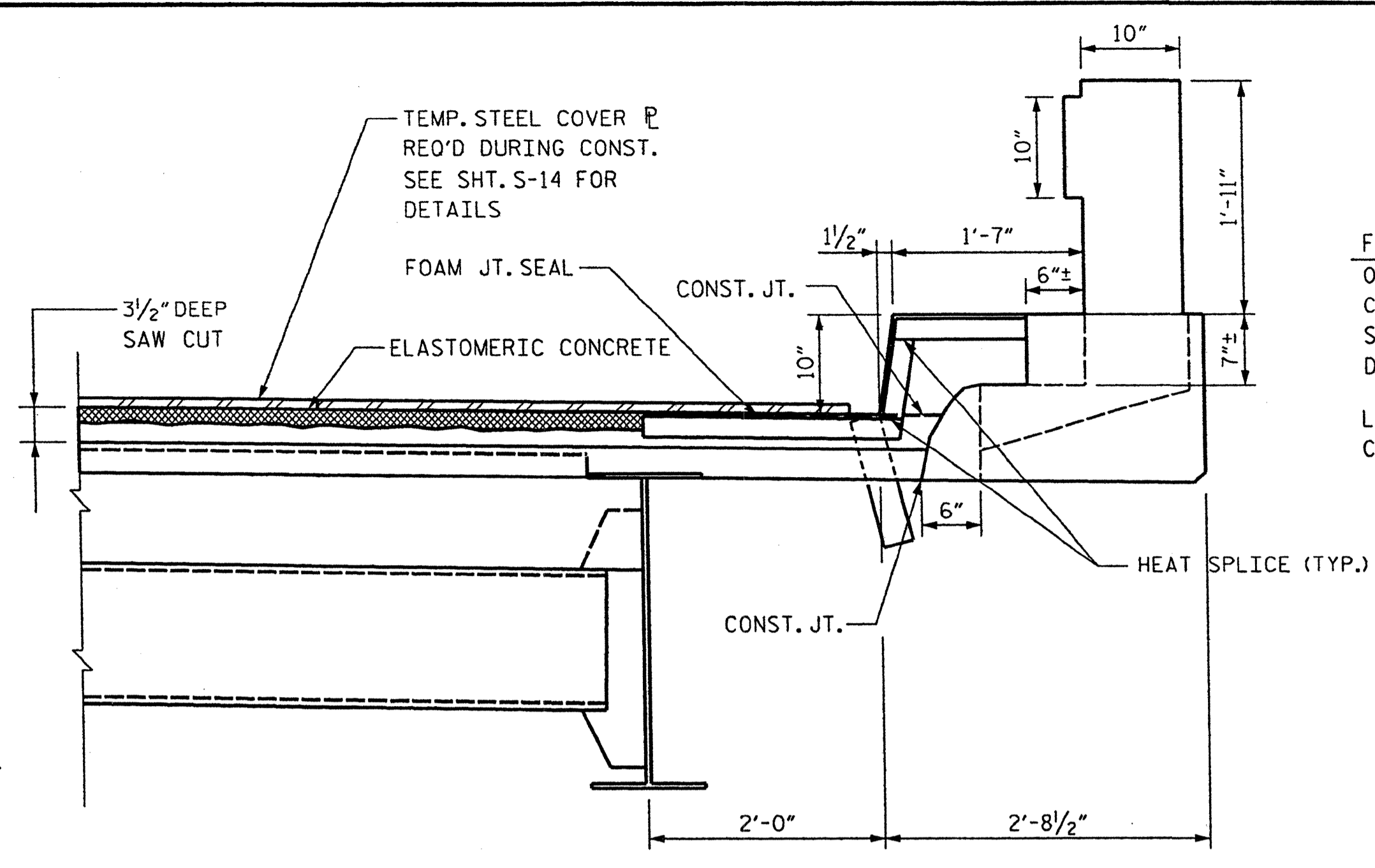
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Suite 300
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CHECKED BY: J. T. KELVINGTON DATE: 11/11

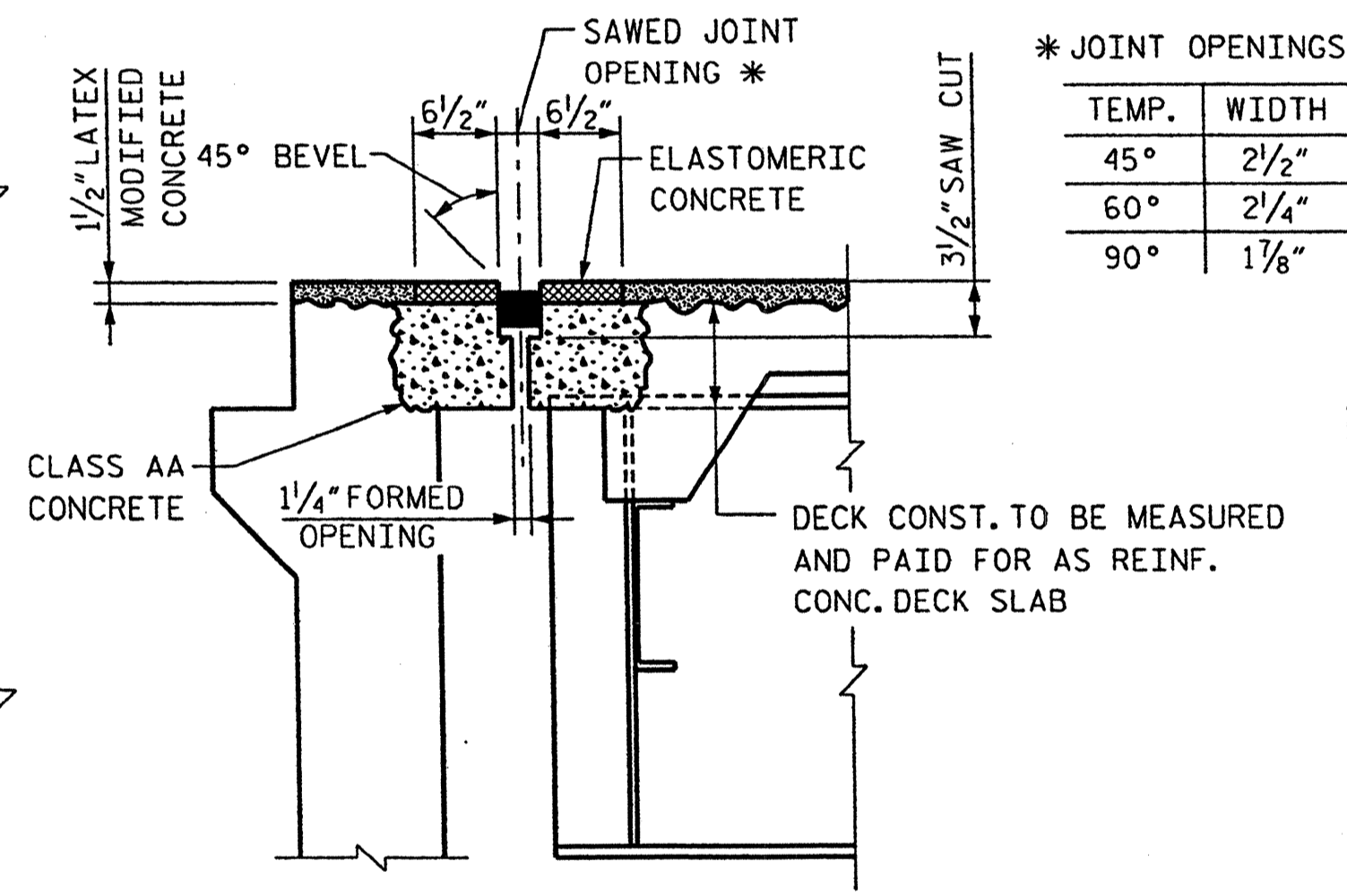
Polk Co Henderson Co. Br 129 Drawing Henderson23_EndBentJointDetails2.dgn 12/15/2011 4:16:12 PM Jjelle



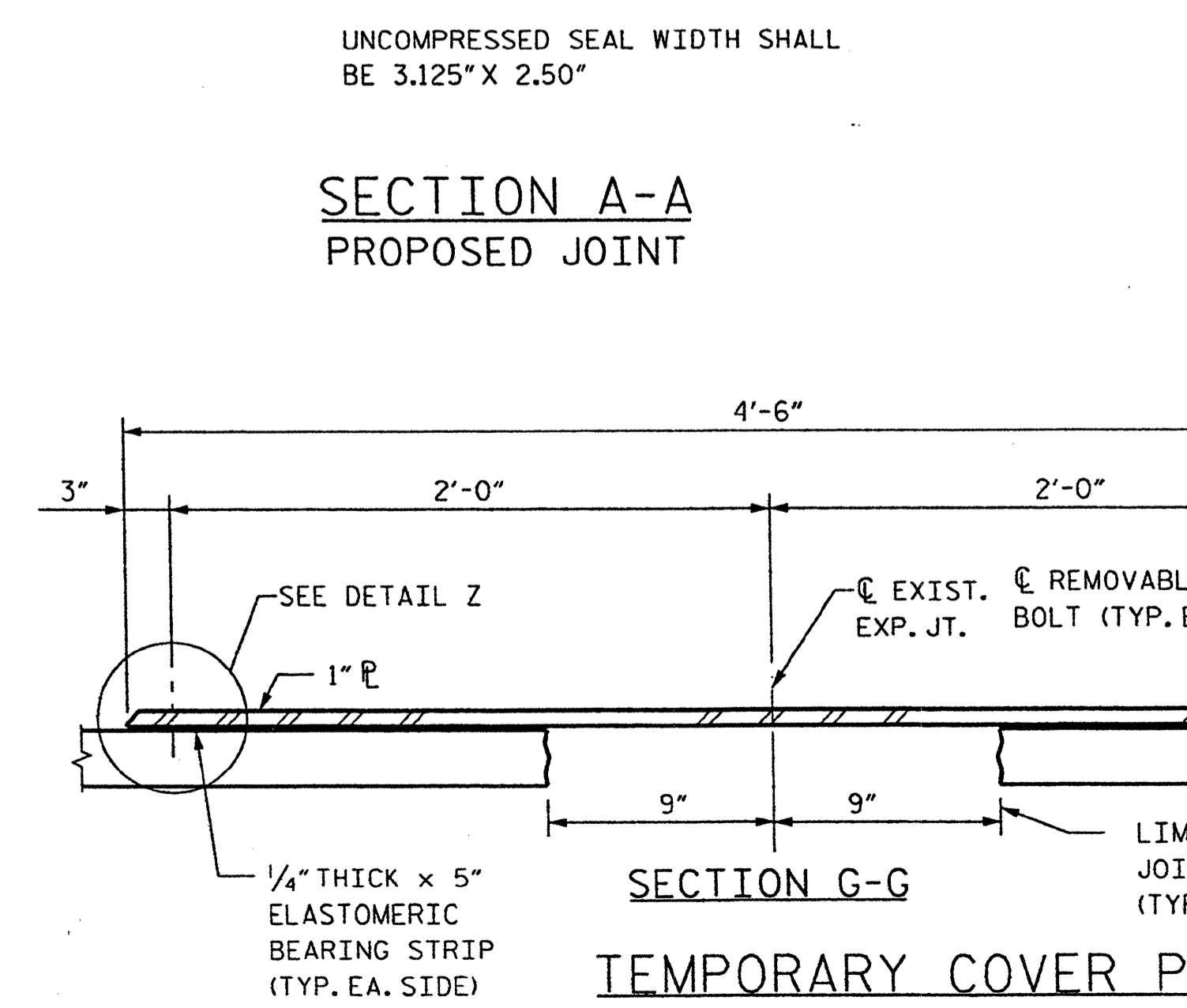
PLAN OF END BENT JOINT REPAIR
 END BENT 1 SHOWN,
 END BENT 2 SIMILAR - OPP. HAND



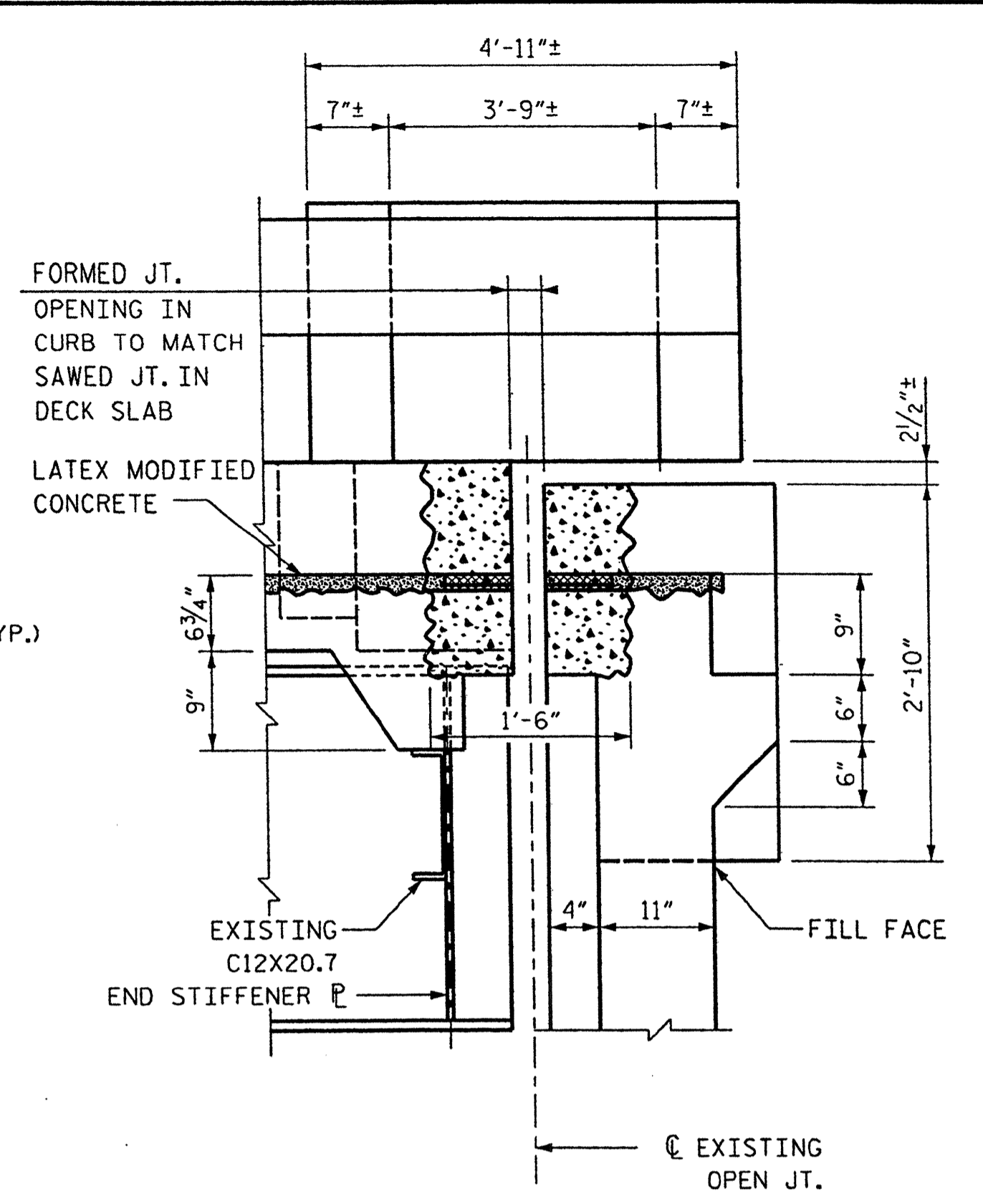
SECTION B-B



**SECTION A-A
PROPOSED JOINT**



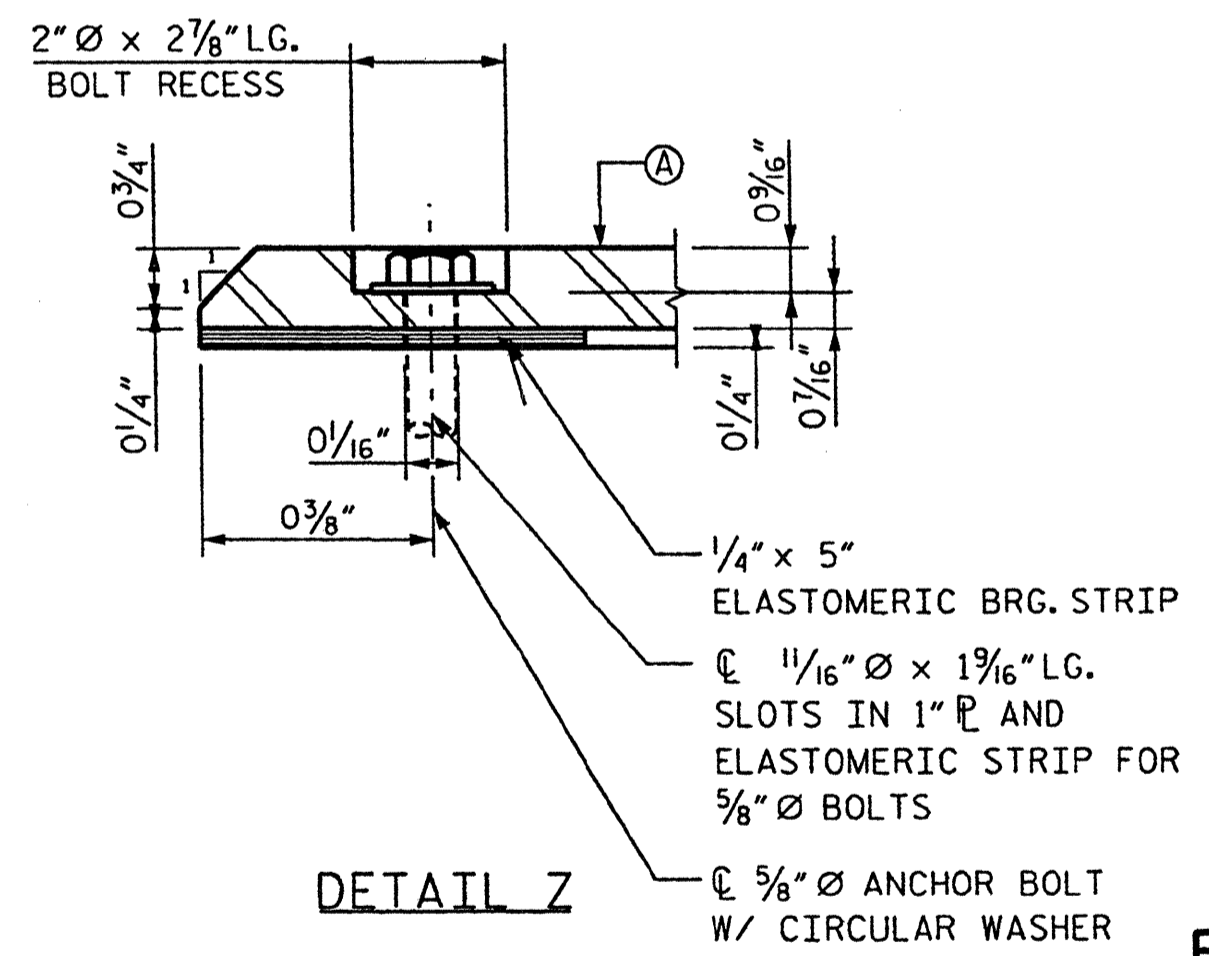
SECTION G-G
TEMPORARY COVER PLATE DETAILS
FOR JOINT SEAL REPLACEMENT @ END BENTS



SECTION C-C

* JOINT OPENINGS

TEMP.	WIDTH
45°	2 1/2"
60°	2 1/4"
90°	1 7/8"



DETAIL Z

FOR PARTIAL REMOVAL OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.
 REINFORCED CONCRETE DECK SLAB (1 END)= 50 SF
 ESTIMATE VOL. OF CLASS AA CONCRETE (1 END)= 1.0 CY

ELASTOMERIC CONCRETE	
LOCATION	QTY
END BENT 1	3.5 CF
END BENT 2	3.5 CF

TOTAL ELASTOMERIC CONC. = 7.0 CF
 TOTAL ELASTOMERIC CONC. = 0.3 CY

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

FOR TEMPORARY STEEL COVER & SEE SPECIAL PROVISIONS.
 (A) SURFACE TREATMENT FOR SKID RESISTANCE BONDED TO &
 REQUIRED ULTIMATE ANCHOR BOLT RESISTANCE:
 TENSION = 10.5k
 SHEAR = 1.0k

Joseph Kelvington
 12/15/2011
 13406
 J. T. KELVINGTON
 ENGINEER

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

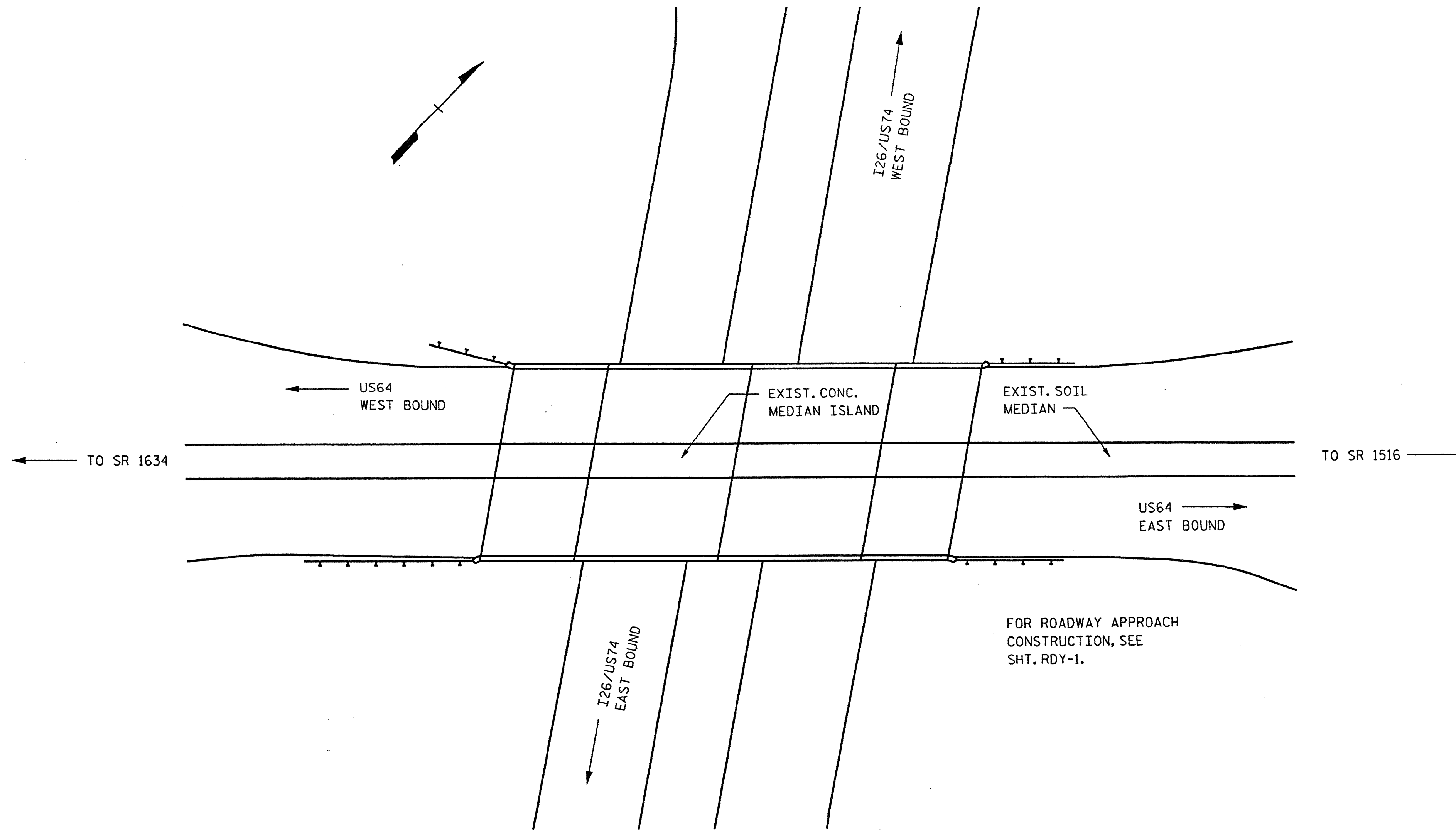
PROPOSED JOINT DETAILS

DECK REHAB. FOR BRIDGE NO. 129

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-15	
1			3			TOTAL SHEETS	
2			4			77	

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



BRIDGE 183

LOCATION: BRIDGE 440183, ON US64 OVER I26, US74
0.3 MILES EAST OF JUNCTION SR 1634

FOR ROADWAY APPROACH
CONSTRUCTION, SEE
SHT. RDY-1.

BRIDGE 183

TOTAL BILL OF MATERIAL

ASPHALT CONC. SURFACE COURSE TYPE S9.5C	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
TON	SQ.FT.	LUMP SUM	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	CU.YDS.	CU.YDS.	SQ.YDS.	SQ.YDS.
0	17146	LUMP SUM	1975.3	0.0	4.2	0.0	0.0	96.1	1975.3	1975.3

*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. 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LOCATION SKETCH
AND TOTAL
BILL OF MATERIALS

DECK REHAB. FOR BRIDGE NO. 183

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-16
1			3			TOTAL SHEETS 77
2			4			

Joseph T. Kelvington
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No. 3406
State of North Carolina

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DRAWN BY : C. B. BAKER DATE : 11/11
CHECKED BY : J. T. KELVINGTON DATE : 11/11

3_3_Henderson-Polk_Co_Bridge_183_Drawing_Henderson0813_LS_BDM.dgn 1/19/2012 12:37:31 PM Jgelle

NOTES:

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

FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

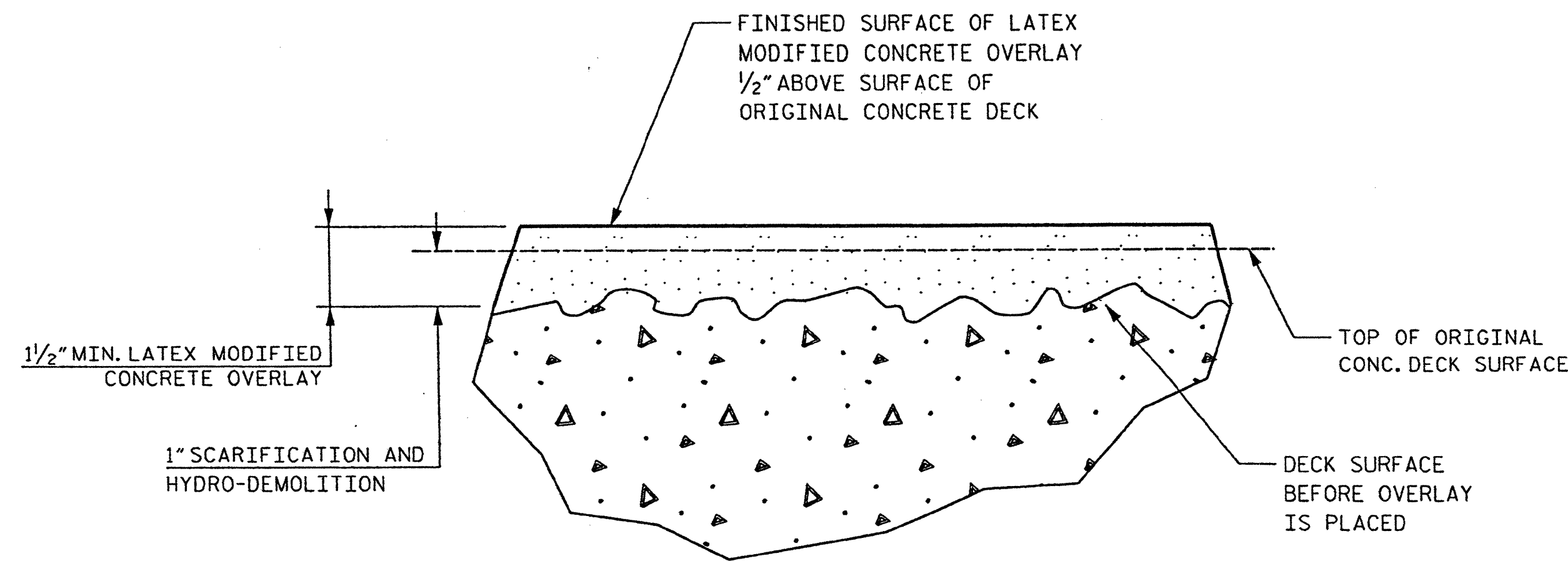
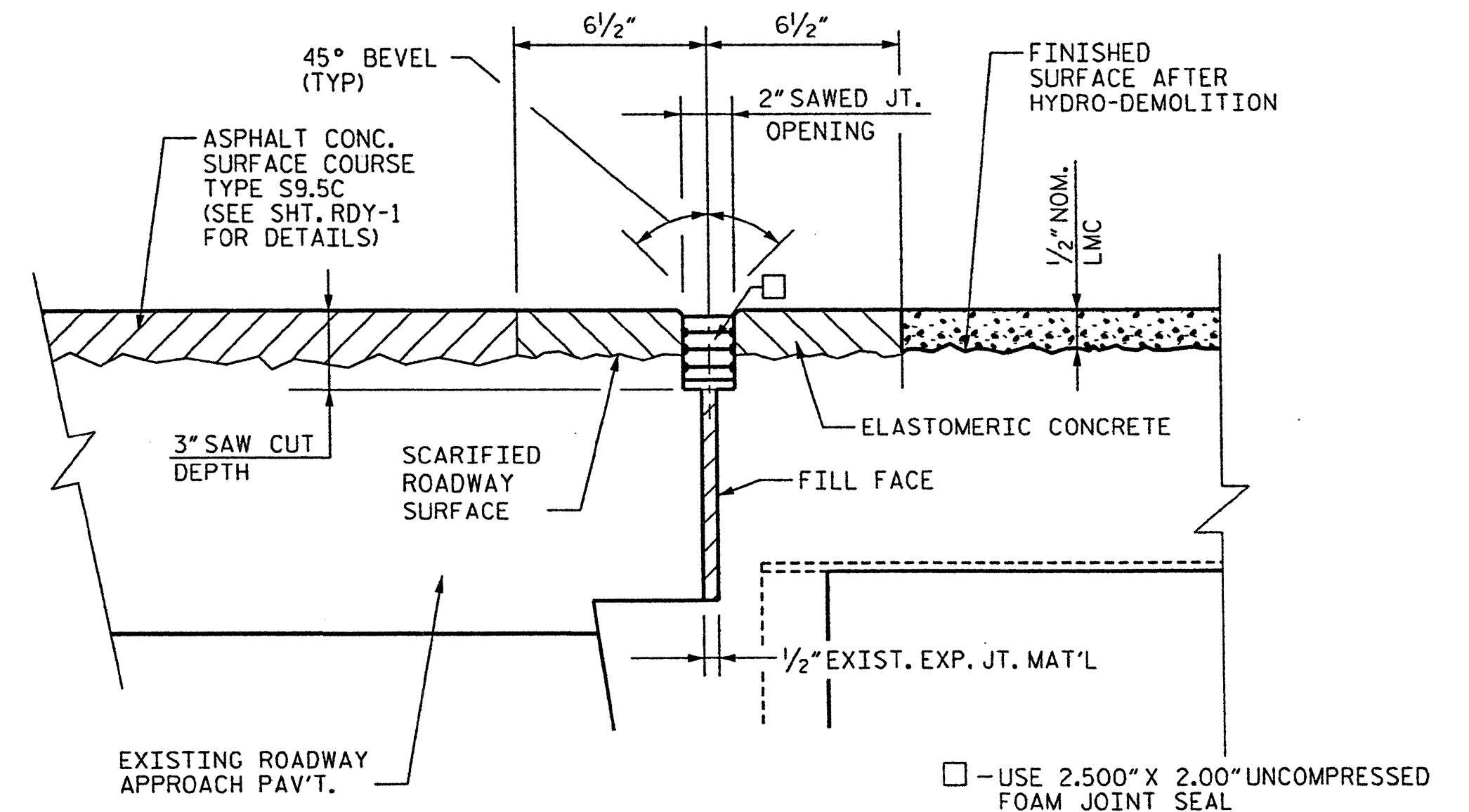
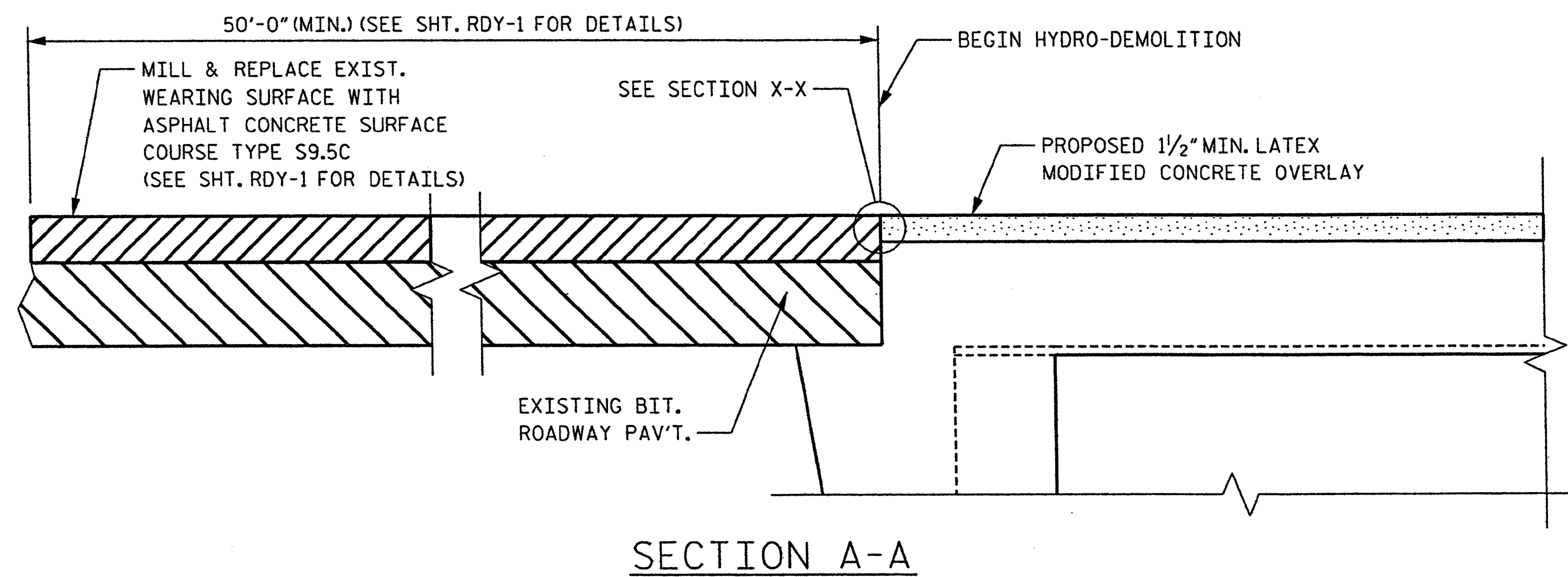
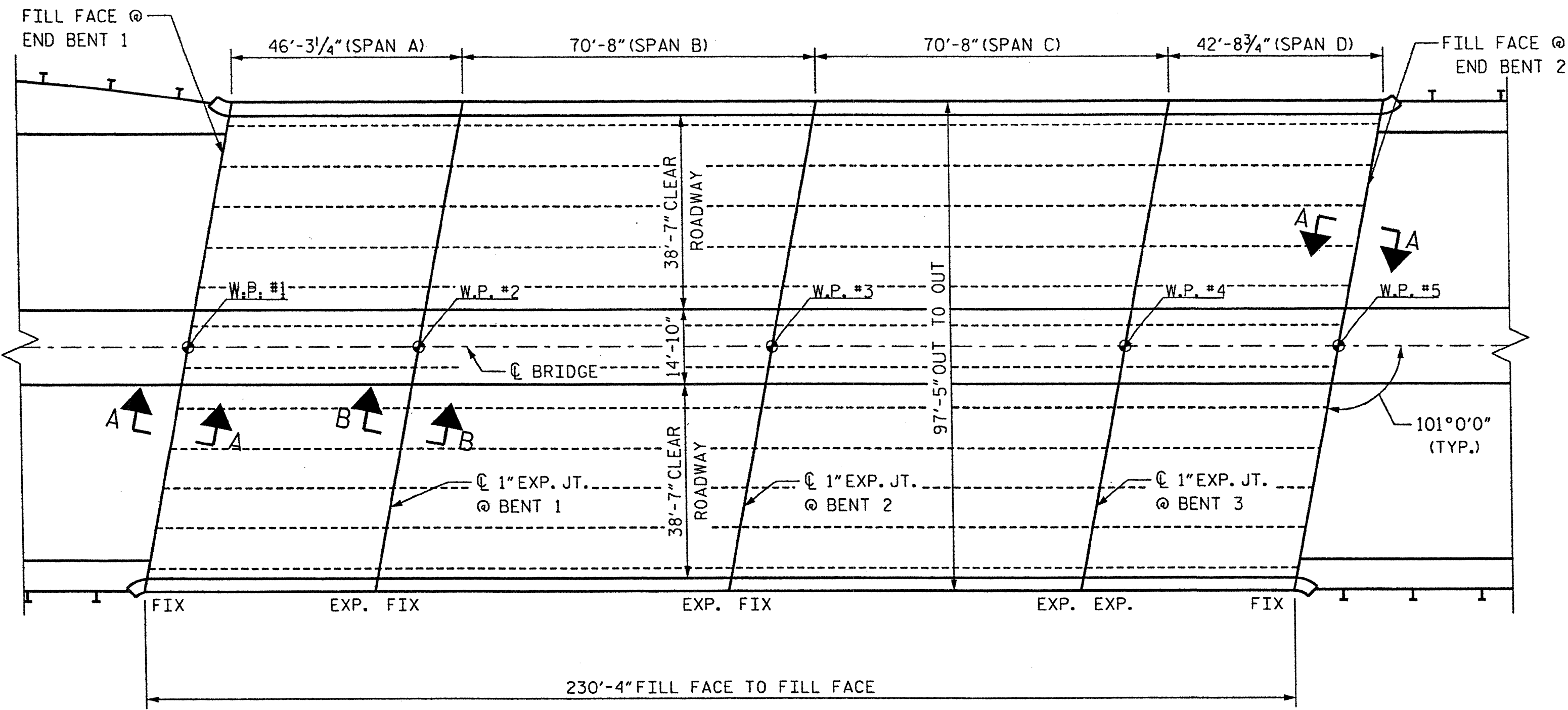
THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS. SEE SPECIAL PROVISIONS.

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 ON SHT. S-19.

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.



PROJECT NO. 17BP.14.P.3
 HENDERSON COUNTY
 STATION: _____

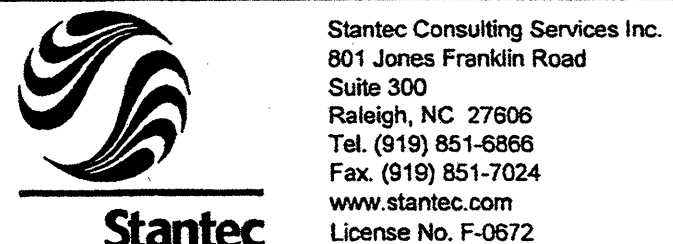
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF BRIDGE

DECK REHAB. FOR BRIDGE NO. 183

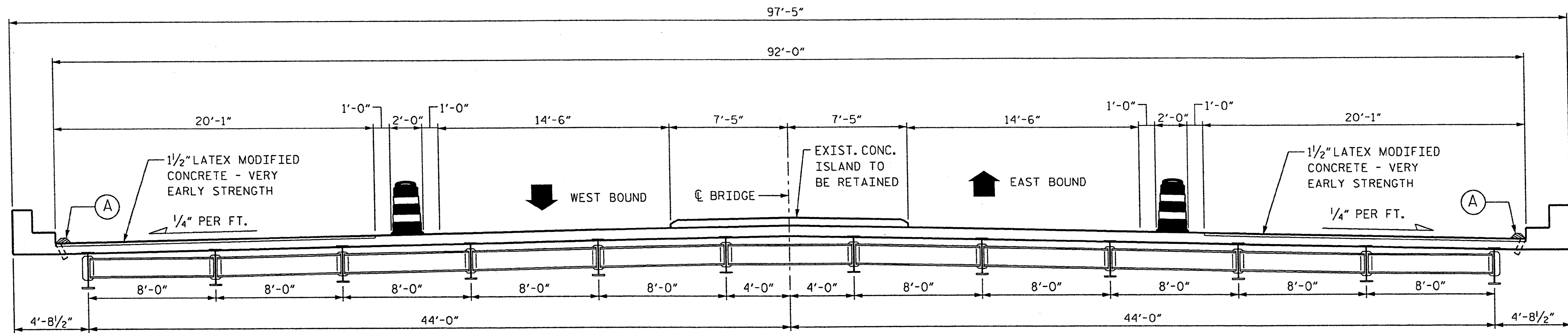
REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					77

Joseph Kelvington
 1/20/11
 SEAL 13406
 INC. INEER
 KELVINGTON

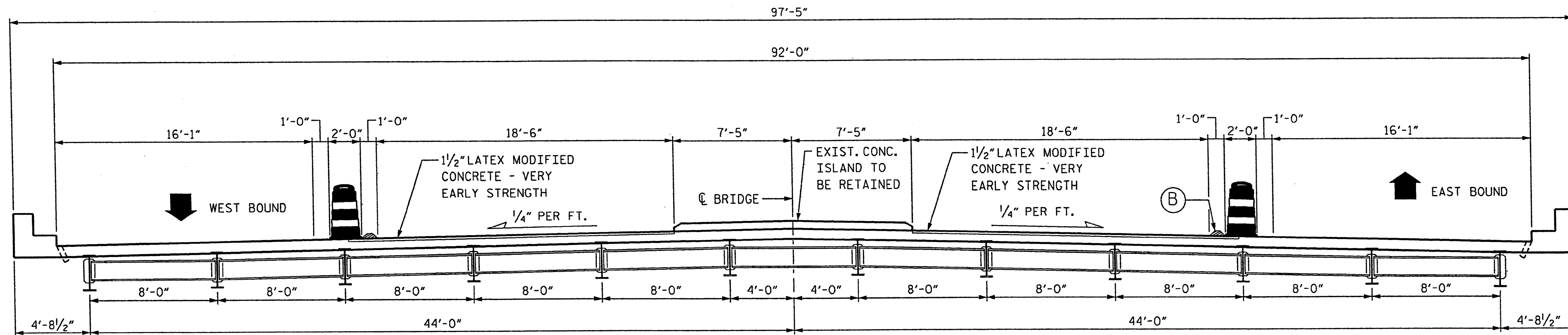


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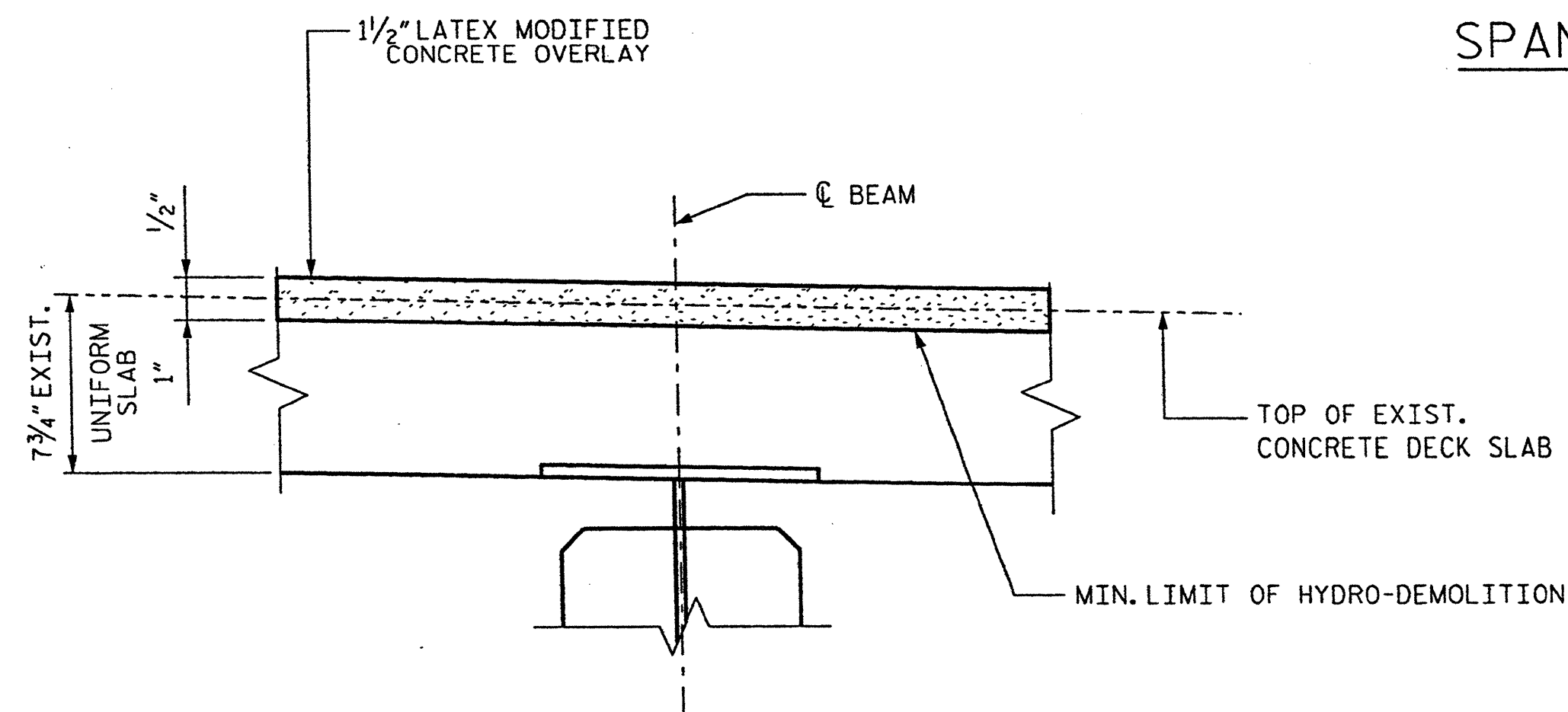
DRAWN BY : C. B. BAKER DATE : 11/11
 CHECKED BY : J. T. KELVINGTON DATE : 11/11



EB/WB LANE CONSTRUCTION
SPANS A-D



EB/WB LANE CONSTRUCTION
SPANS A-D



EXIST. SLAB BUILDUP

NOTES:

SPANS A-D W36 I-BEAMS SHOWN.

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

- (A) DAM AS REQUIRED TO CAPTURE CONCRETE SLURRY AT DRAINS AND EXPANSION JOINTS.
- (B) DAM SHALL BE CONTINUOUS ALONG EDGE OF WORK ZONE TO CAPTURE CONCRETE SLURRY.

PROJECT NO. 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

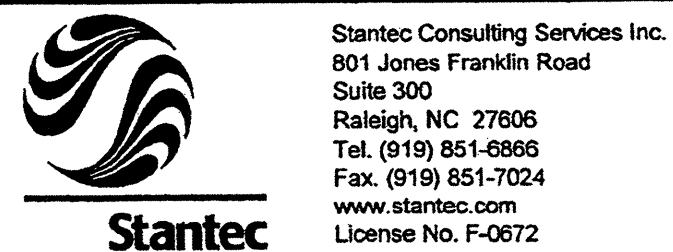
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE TYPICAL SECTION

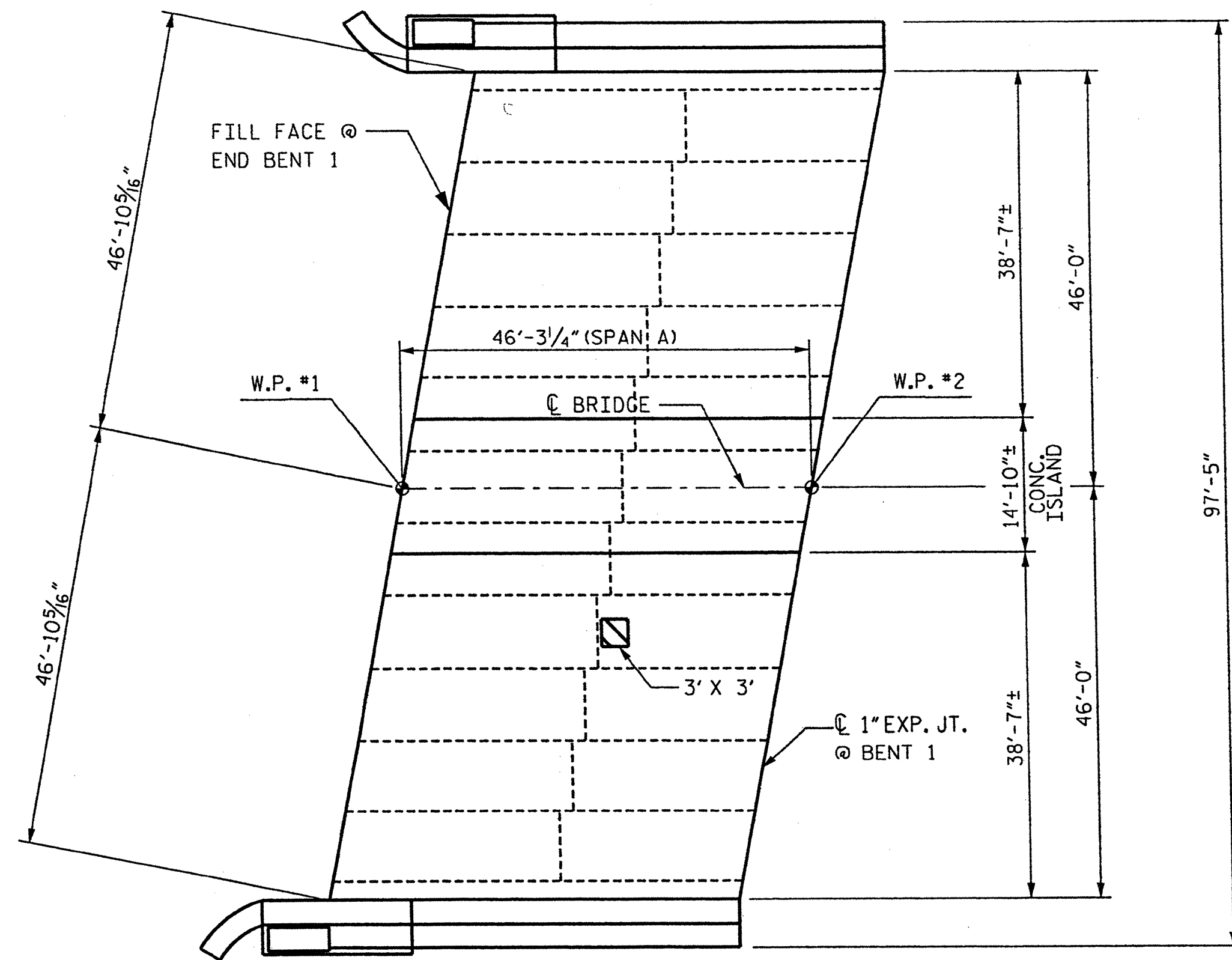
DECK REHAB. FOR BRIDGE NO. 183

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-18	
1			3			TOTAL SHEETS 77	
2			4				

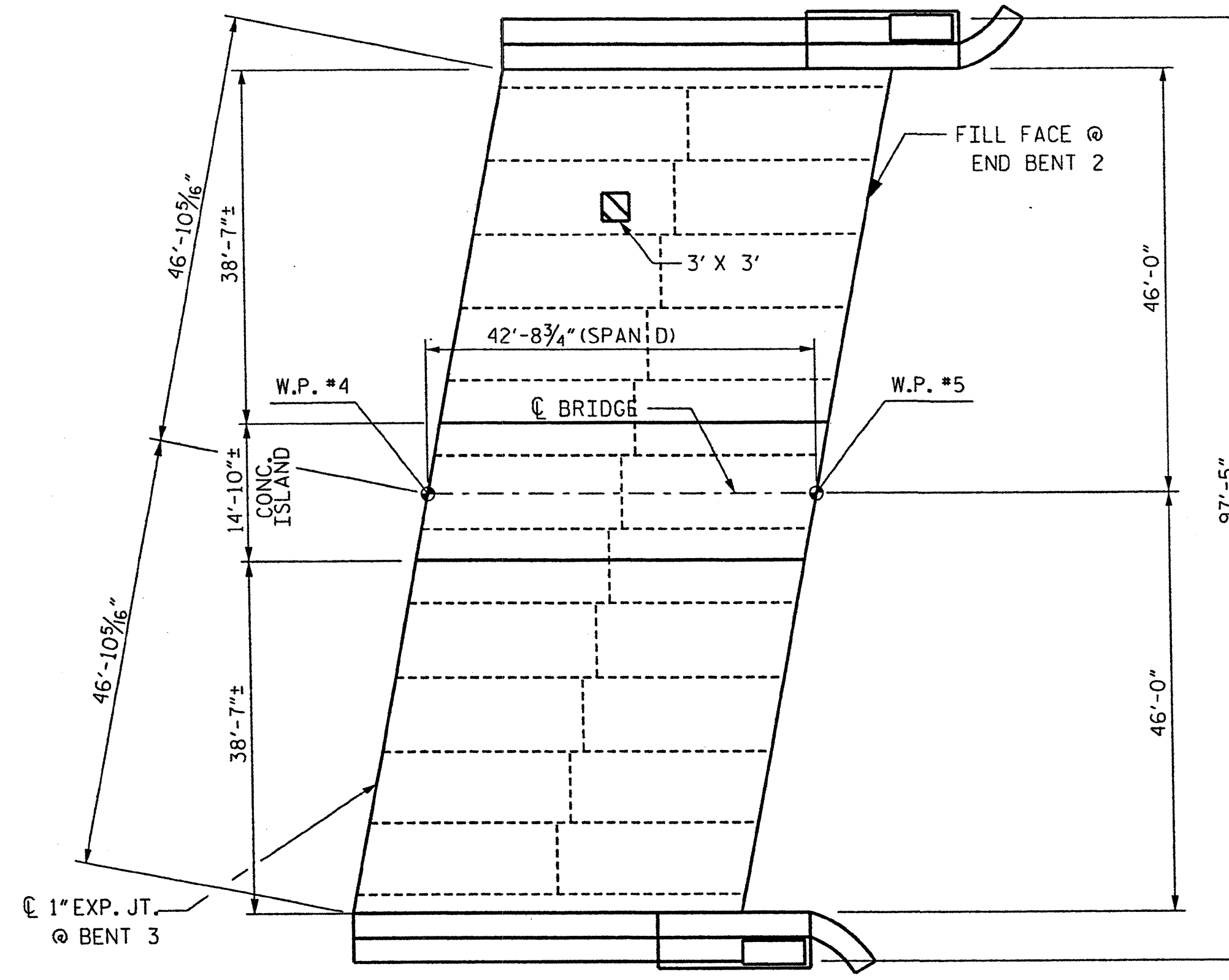
Joseph T. Kelvington
Professional Engineer
No. 18406
North Carolina



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

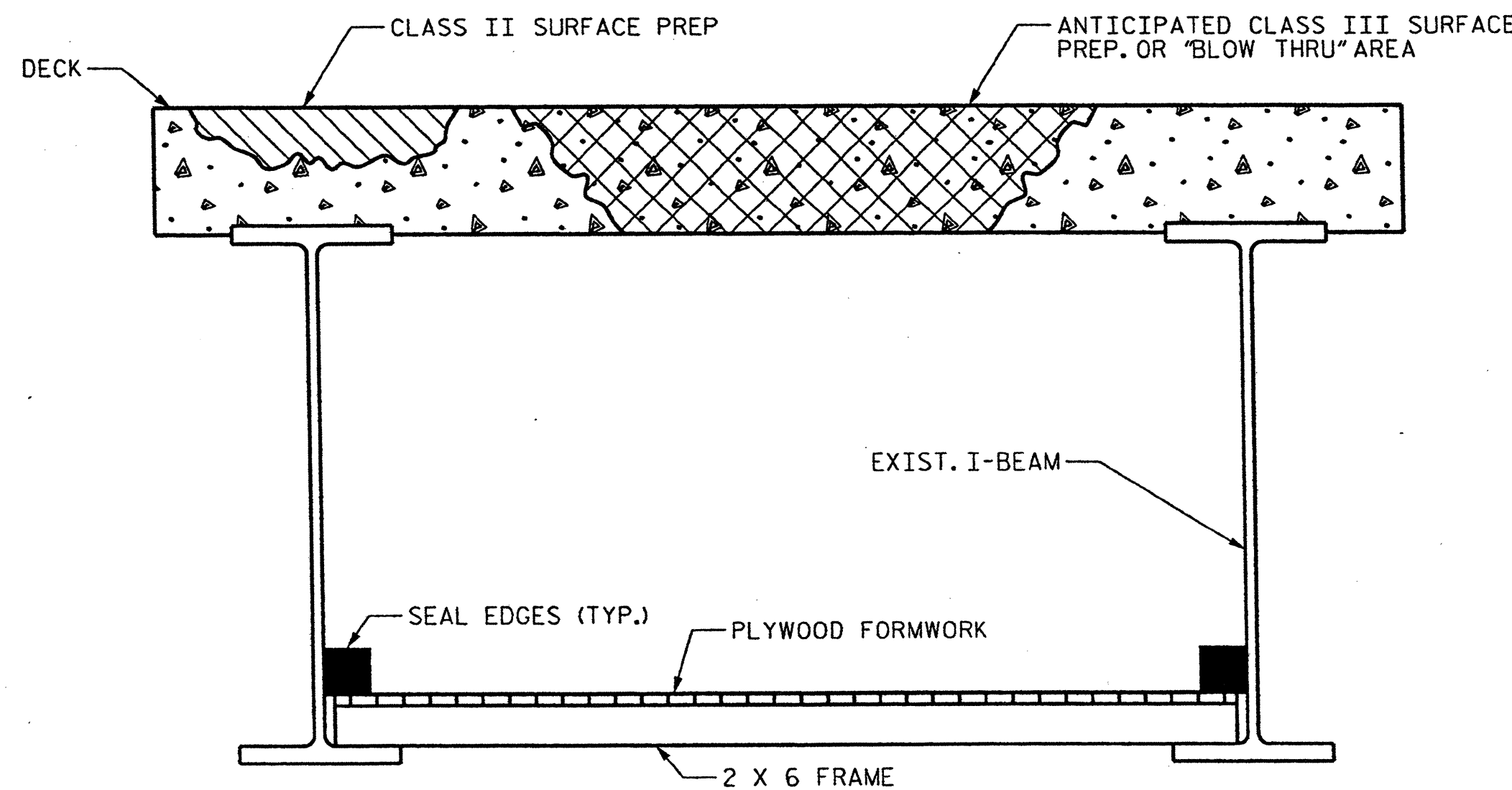


PLAN OF SPAN A - DECK REPAIRS

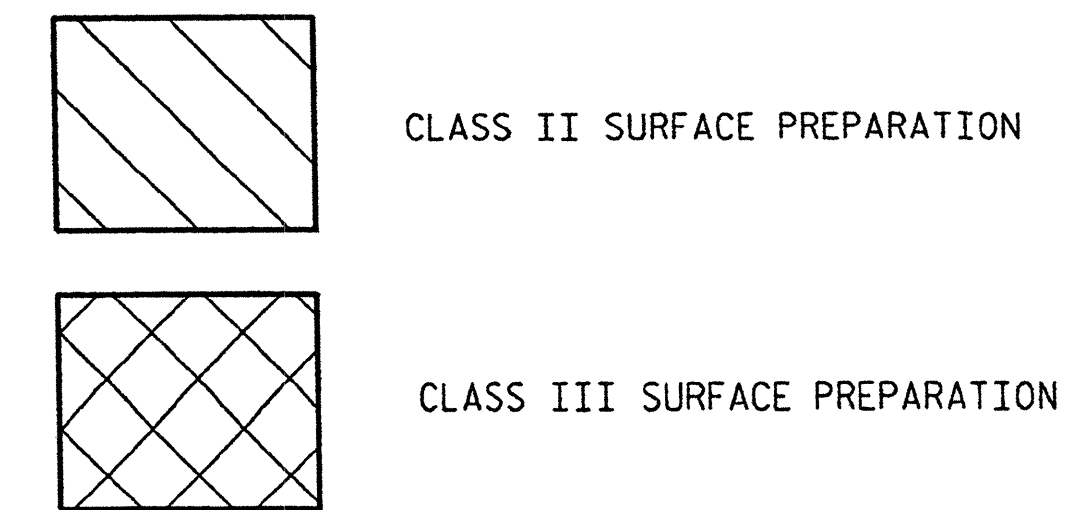


PLAN OF SPAN D - DECK REPAIRS

NOTE:
 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.
 SEE HYDRO-DEMOLITION SPECIAL PROVISIONS.
 CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES 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



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

PROJECT NO. 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DECK REPAIR DETAILS SPANS A & D					
DECK REHAB. FOR BRIDGE NO. 183					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-19					TOTAL SHEETS 77

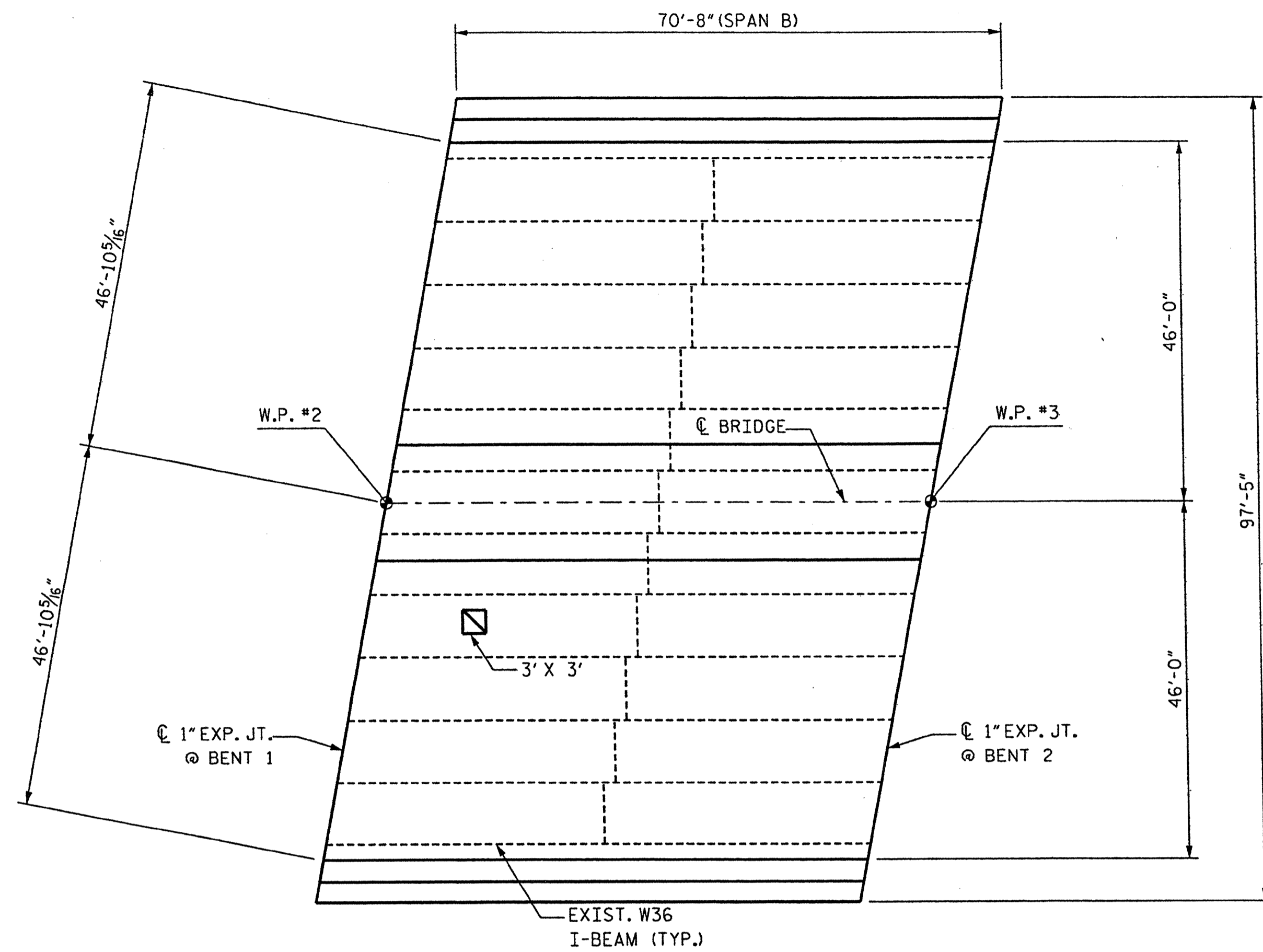
Joseph T. Kelvington
 1/20/11
 SEAL 13406
 PROFESSIONAL ENGINEER
 STATE OF NORTH CAROLINA

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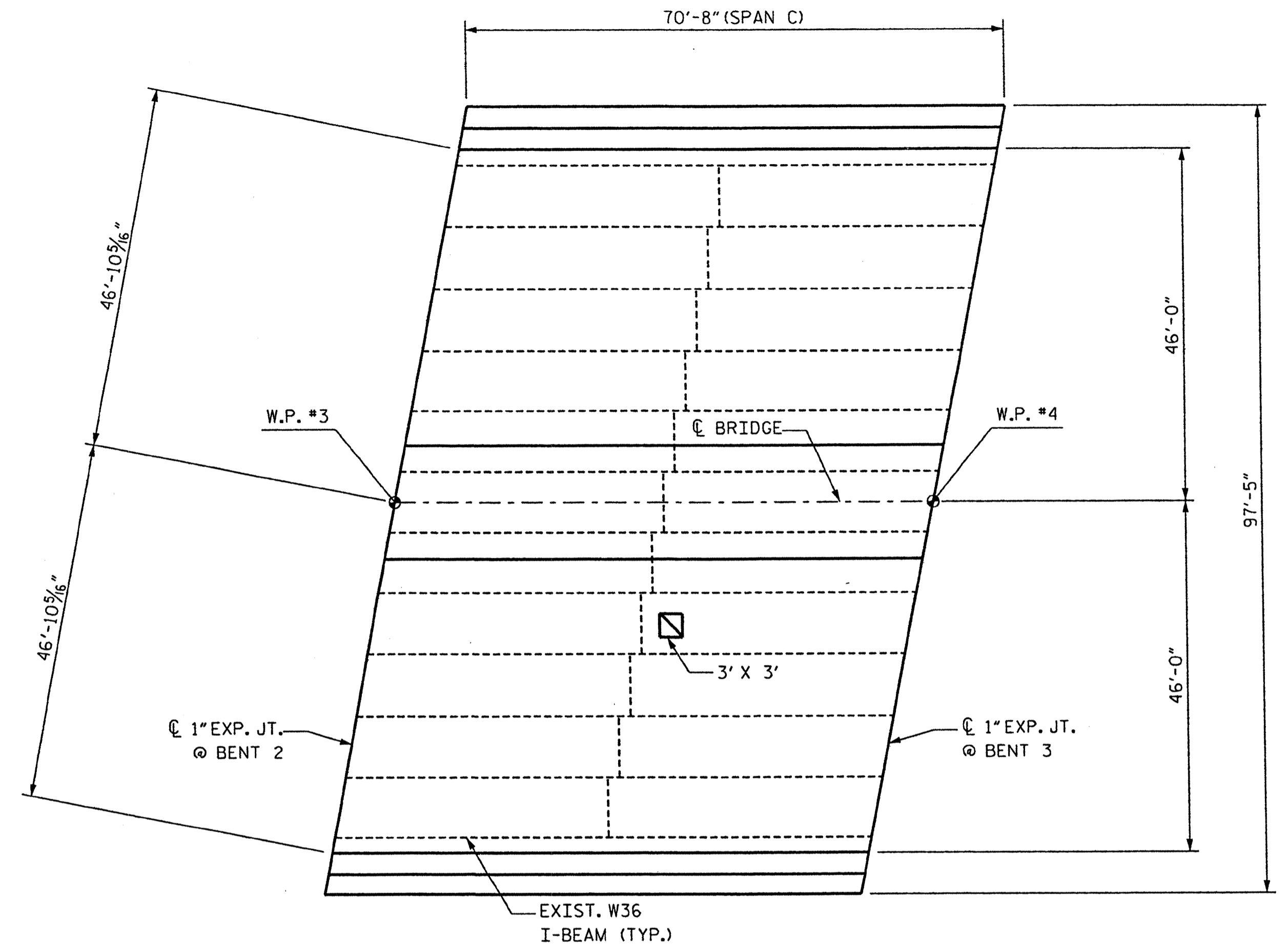
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 CHECKED BY : J T KELVINGTON DATE : 11/11

10:46:08 AM Jpelle
 1/19/2012
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 Henderson Co. Bridge 183\Drawing\Henderson\B3\RepairPlanA.dgn

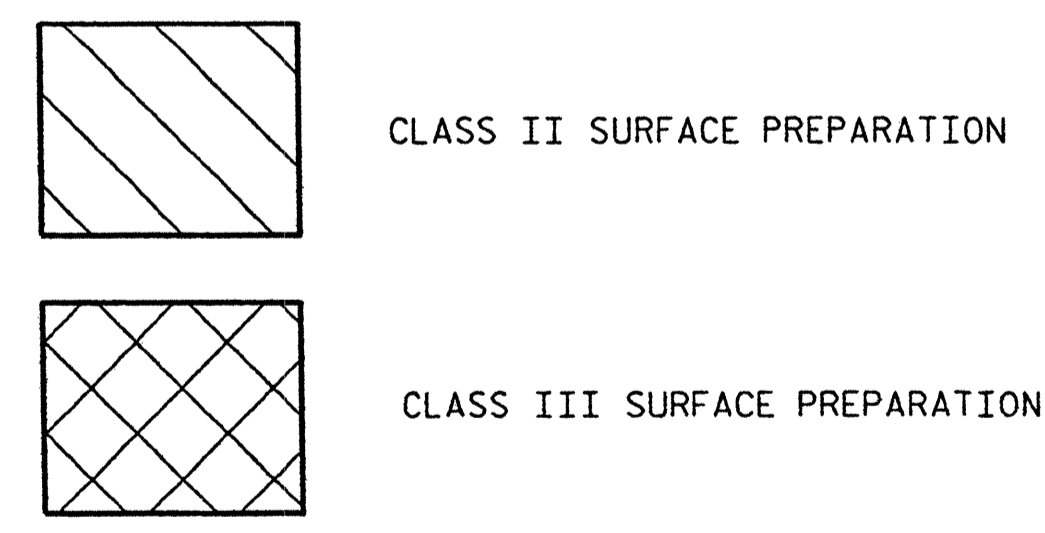
Henderson-Polk Co. Henderson Co. Bridge 183 Drawing Henderson-son183_RepairPlanBc.dgn 12/15/2011 10:14:22 AM Joelle



PLAN OF SPAN B - DECK REPAIRS



PLAN OF SPAN C - DECK REPAIRS



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

PROJECT NO. 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

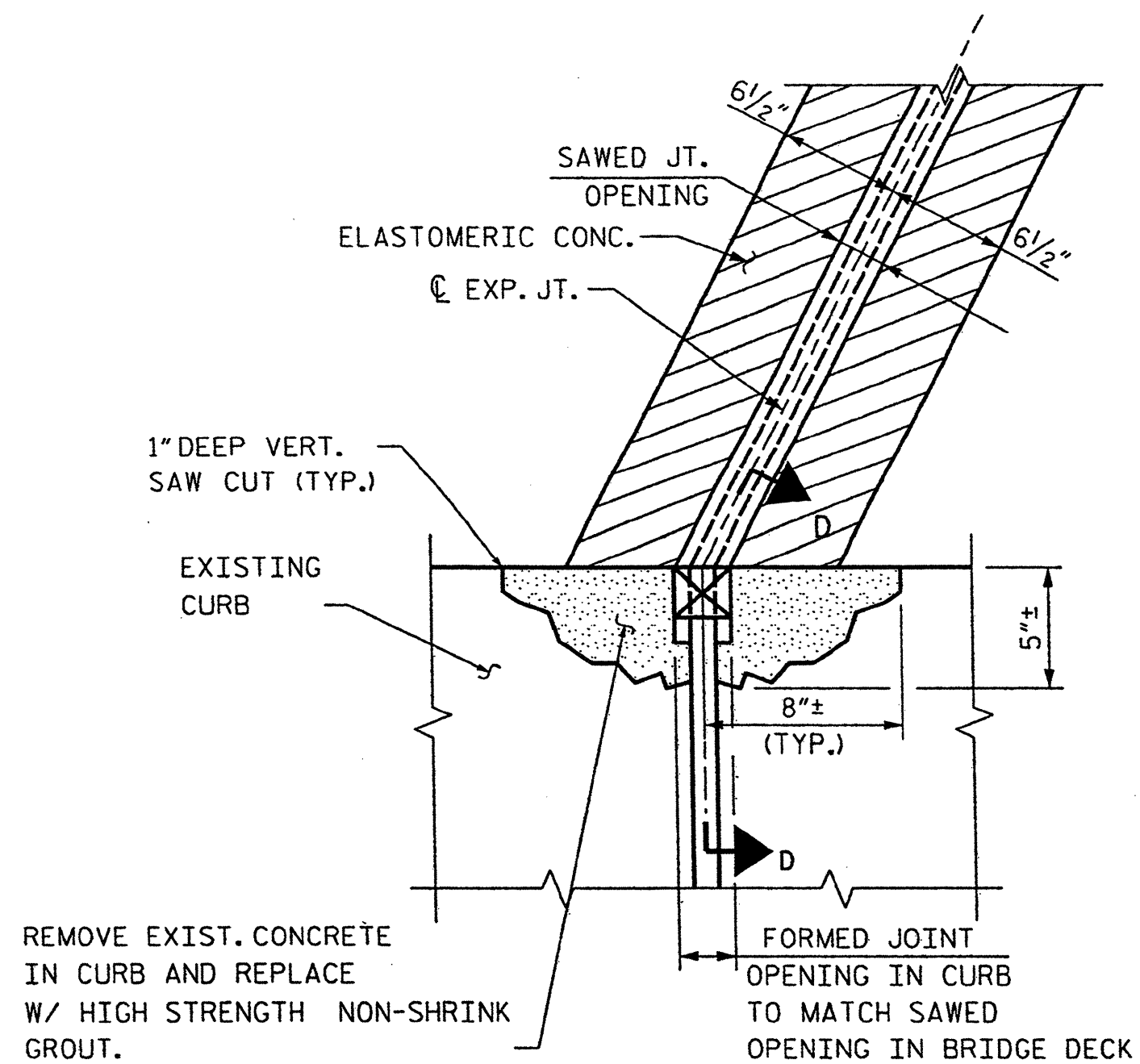
**DECK REPAIR DETAILS
 SPANS B & C**

DECK REHAB. FOR BRIDGE NO. 183

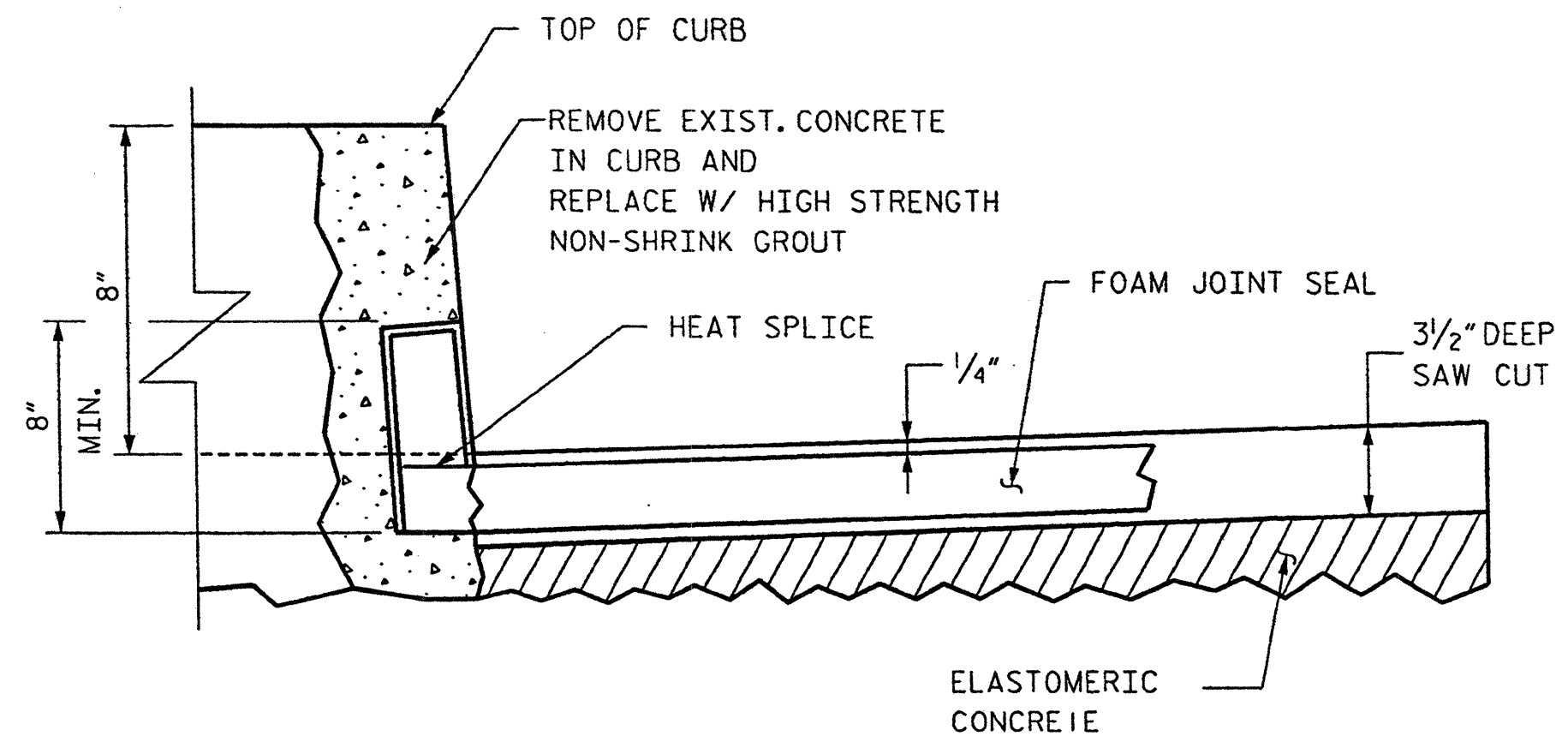
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-20
1			3			TOTAL SHEETS
2			4			77

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



PARTIAL PLAN @ JOINT
(TYP. @ BENTS 1-3)

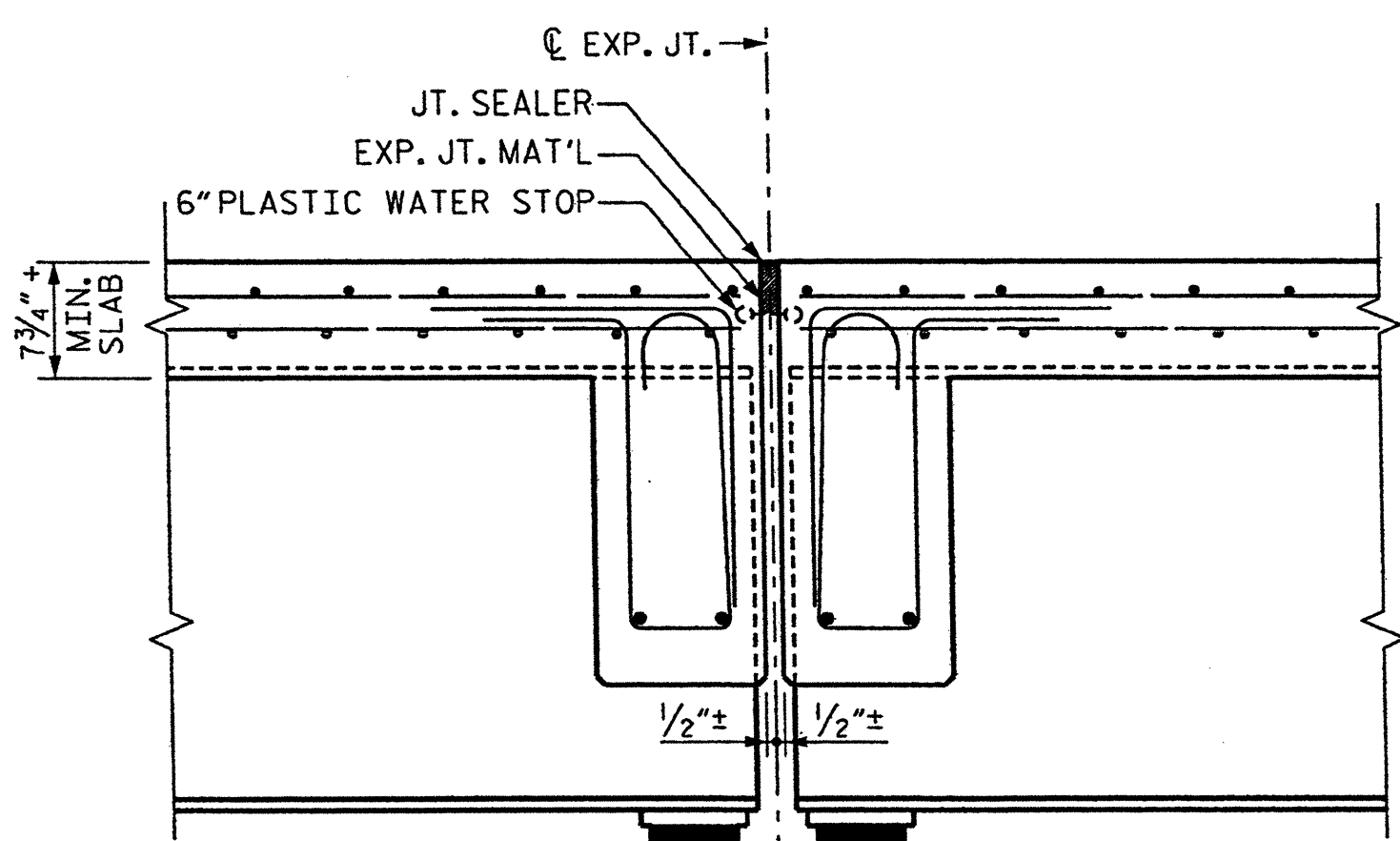


SECTION D-D

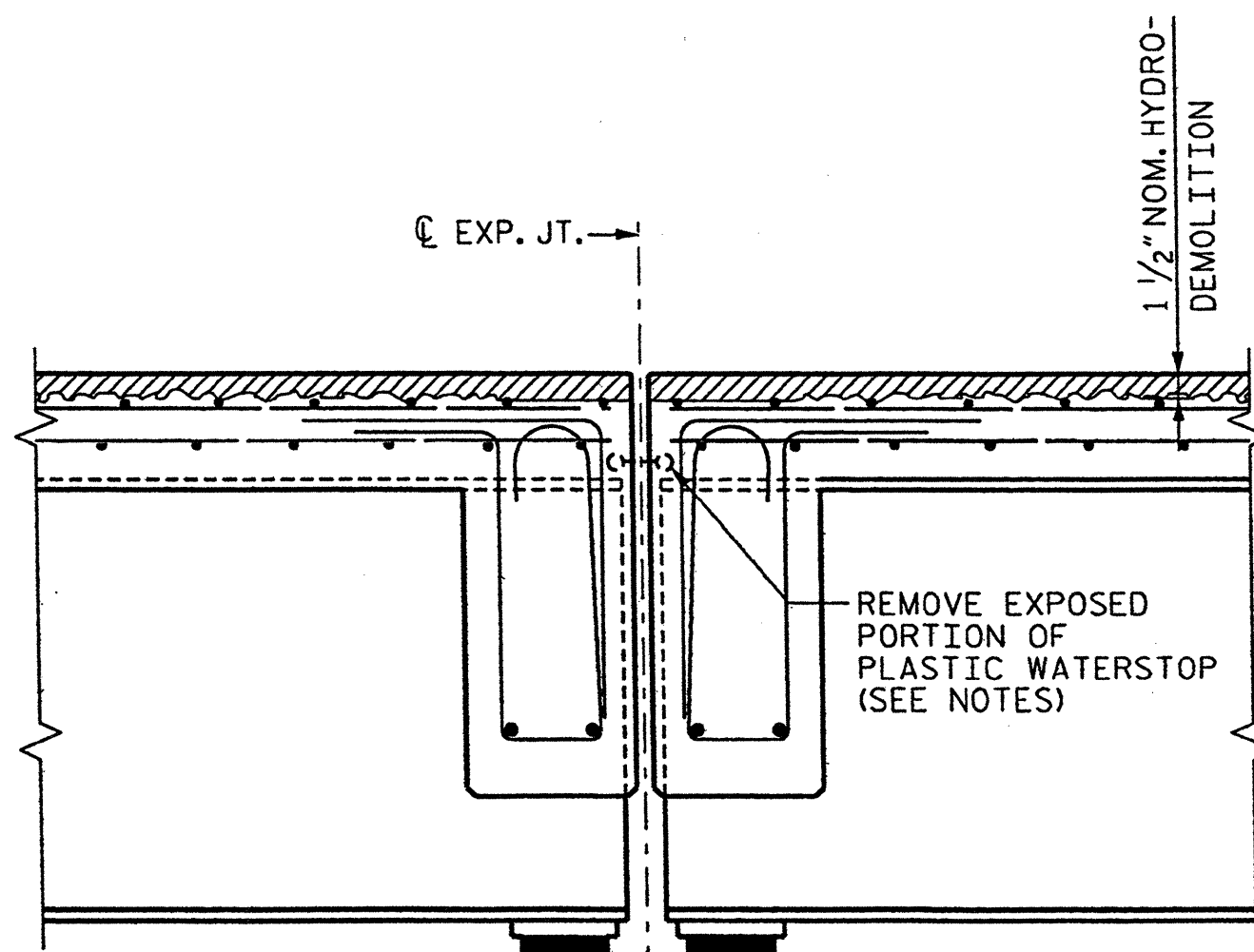
CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.

FOR HIGH STRENGTH GROUT, SEE SPECIAL PROVISIONS.

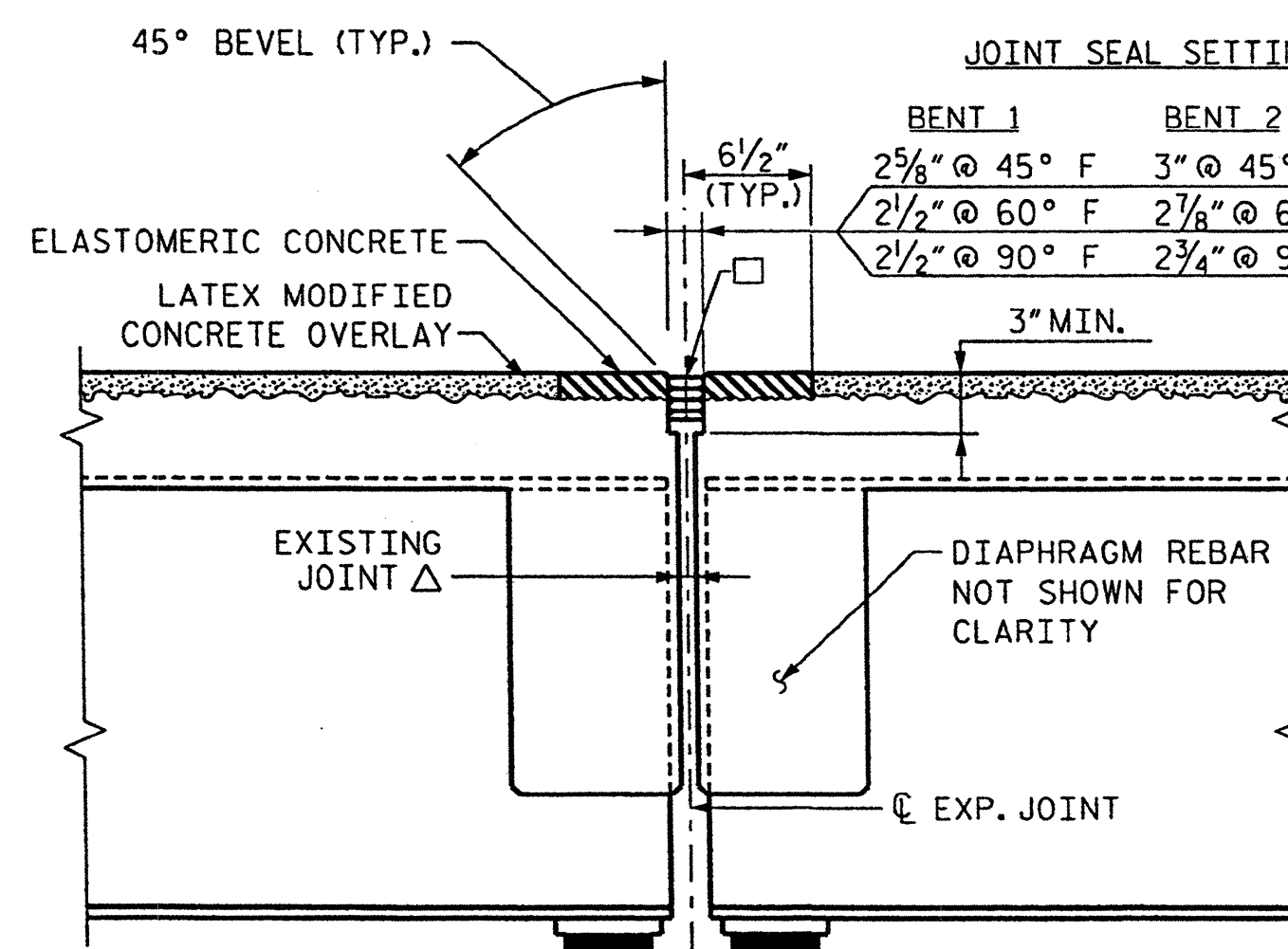
HIGH STRENGTH GROUT SHALL BE APPROVED BY THE ENGINEER.



SECTION B-B
(EXISTING JOINT)



SECTION B-B
(MIN. EXISTING JOINT DEMOLITION)



SECTION B-B
(PROPOSED FOAM JOINT SEAL EXPANSION)

JOINT SEAL SETTING

	BENT 1	BENT 2	BENT 3
25/8" @ 45° F	3" @ 45° F	3 3/8" @ 45° F	
2 1/2" @ 60° F	2 1/8" @ 60° F	2 1/8" @ 60° F	
2 1/2" @ 90° F	2 3/4" @ 90° F	2 5/8" @ 90° F	

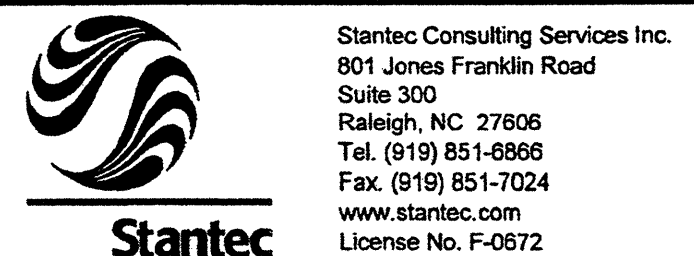
ELASTOMERIC CONCRETE	
LOCATION	QTY
BENT 1	11.7 C.F.
BENT 2	11.7 C.F.
BENT 3	11.7 C.F.

TOTAL ELASTOMERIC CONC. = 35.1 C.F.
TOTAL ELASTOMERIC CONC. = 1.3 C.Y.

- NOTES:**
- ALL LOOSE AND UNSOUND CONCRETE SHALL BE REMOVED. IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, THE ENTIRE WATERSTOP SHALL BE REMOVED.
 - RETAIN ALL EXIST. REINF. STEEL CLEAN AND REPAIR AS REQUIRED.

- USE 2.8125" X 2.5" UNCOMPRESSED FOAM JT. SEAL MATERIAL FOR BENT 1.
- USE 3.4375" X 2.5" UNCOMPRESSED FOAM JT. SEAL MATERIAL FOR BENT 2.
- USE 3.75" X 2.5" UNCOMPRESSED FOAM JT. SEAL MATERIAL FOR BENT 3.
- △ EXISTING 1" FORMED OPENING

PROJECT NO. 17BP.14.P.3
HENDERSON COUNTY
STATION: _____



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DRAWN BY: C. B. BAKER DATE: 11/11
CHECKED BY: J. T. KELVINGTON DATE: 11/11

Joseph J. Kelvington
12/15/11
Professional Engineer
No. 13406
State of North Carolina

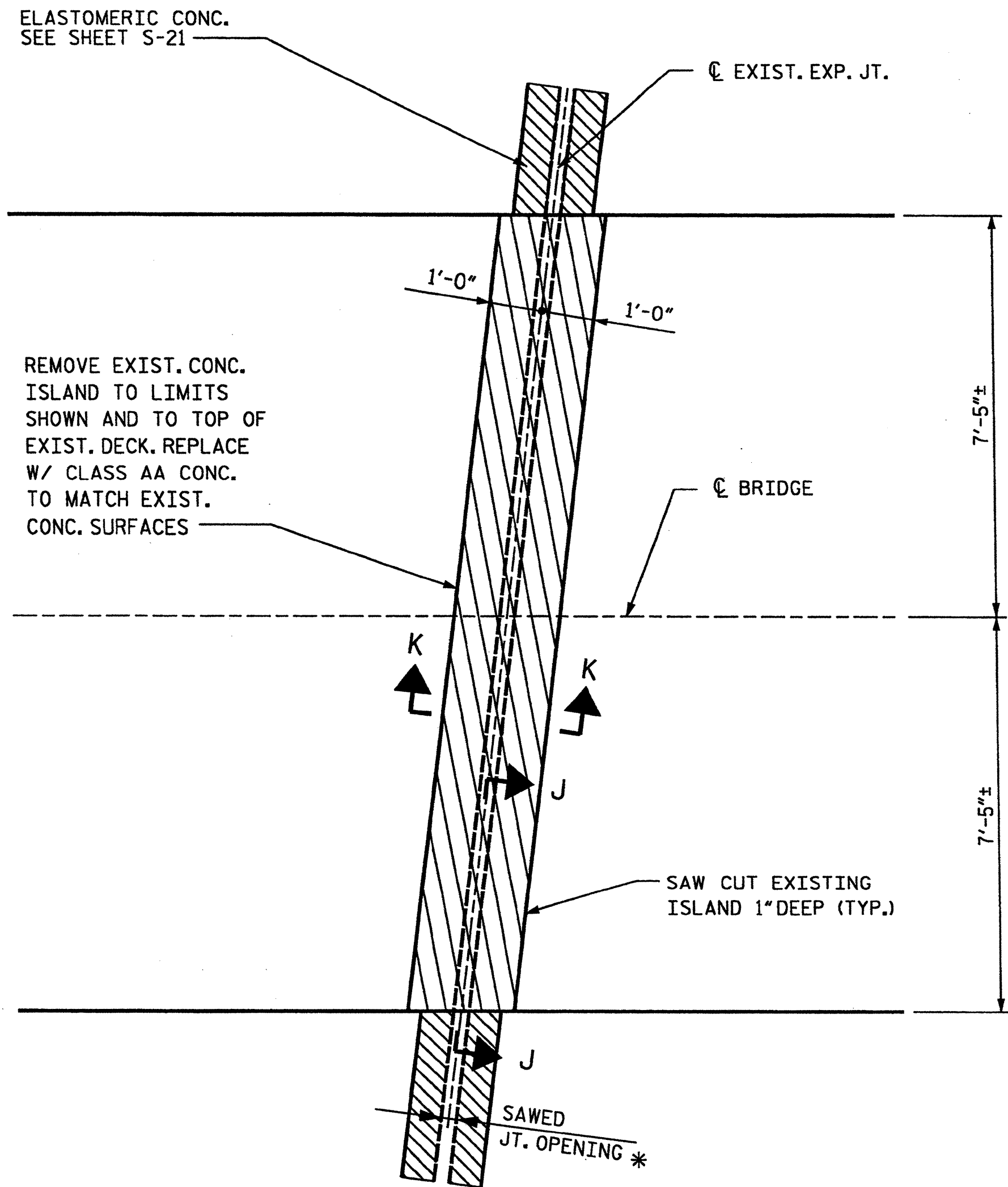
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

DECK REHAB. FOR BRIDGE NO. 183

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-21
1			3			TOTAL SHEETS
2			4			77

Henderson-Polk Co. Henderson Co. Bridge 183 Drawing Henderson183_001.dwg 12/15/2011 04:25 AM jgelle

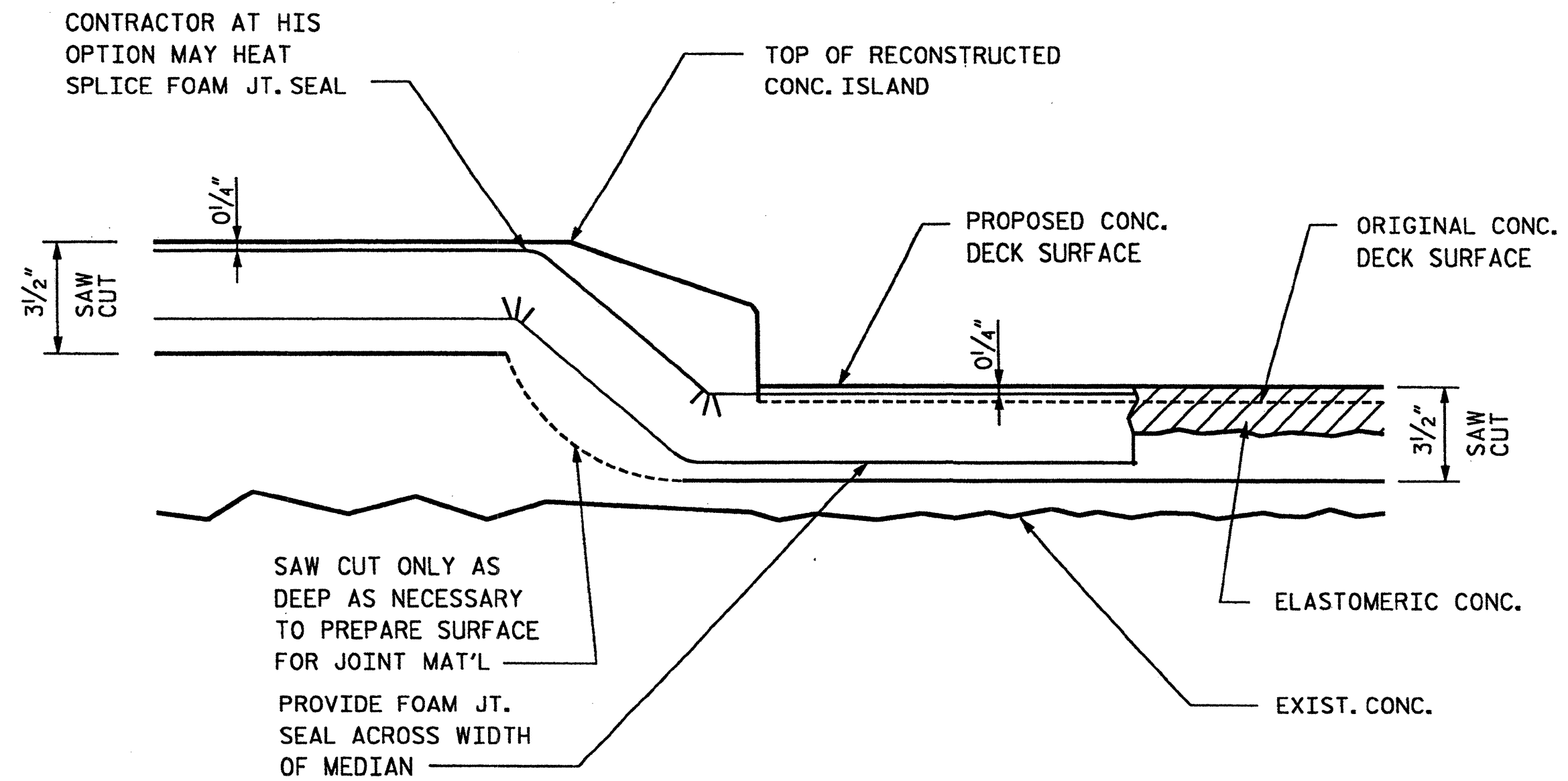


PARTIAL PLAN @ CONC. MEDIAN

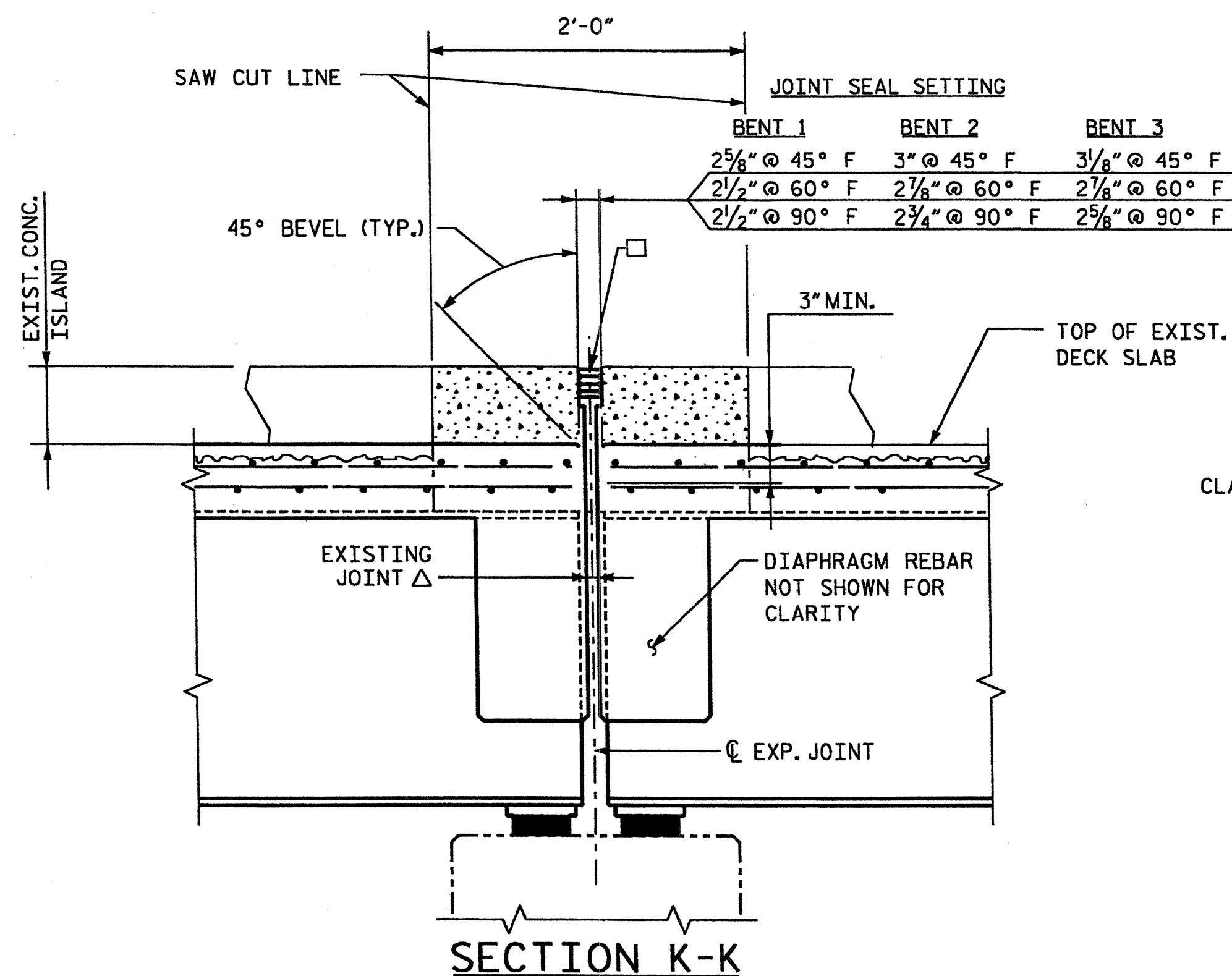
* SAWED JOINT OPENING IN ISLAND SHALL MATCH SAWED JOINT OPENING IN BRIDGE DECK.

RETAIN ALL EXISTING REINFORCING STEEL UNCOVERED IN MEDIAN. REPAIR DAMAGED REINFORCING STEEL AS DIRECTED BY THE ENGINEER.

NO SEPARATE PAYMENT FOR REMOVAL AND REPLACEMENT OF CONCRETE MEDIAN WILL BE MADE. ALL COSTS FOR MATERIAL, LABOR AND EQUIPMENT REQUIRED TO RECONSTRUCT MEDIAN CONCRETE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR FOAM JOINT SEALS.



SECTION J-J



SECTION K-K

□ USE 2.8125" X 2.5" UNCOMPRESSED FOAM JT. SEAL MATERIAL FOR BENT 1.

USE 3.4375" X 2.5" UNCOMPRESSED FOAM JT. SEAL MATERIAL FOR BENT 2.

USE 3.75" X 2.5" UNCOMPRESSED FOAM JT. SEAL MATERIAL FOR BENT 3.

Δ EXISTING 1" FORMED OPENING

PROJECT NO. 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

DECK REHAB. FOR BRIDGE NO. 183

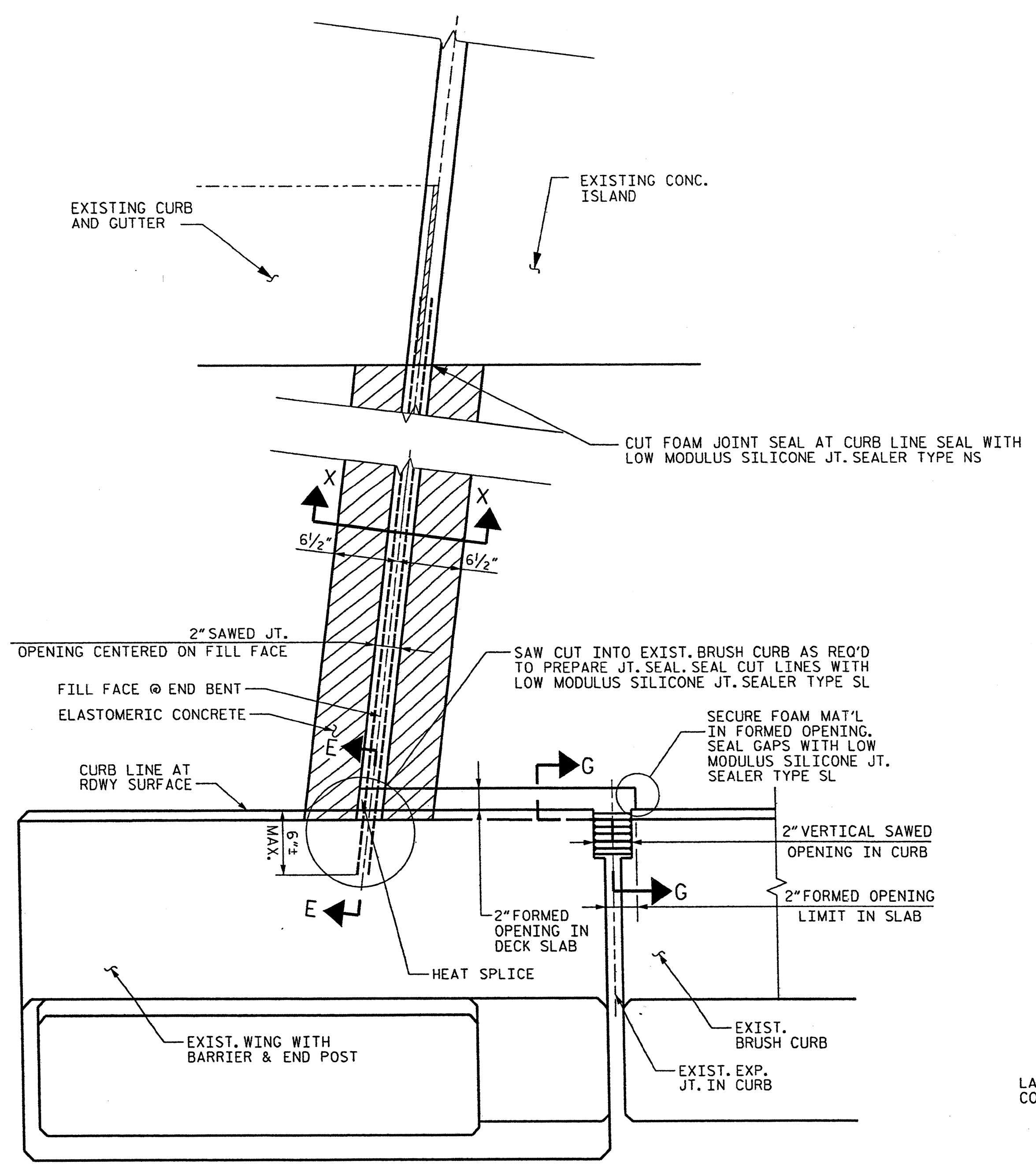
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-22	
1			3			TOTAL	77
2			4			SHEETS	



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 Tel. (919) 851-8866
 Fax. (919) 851-7024
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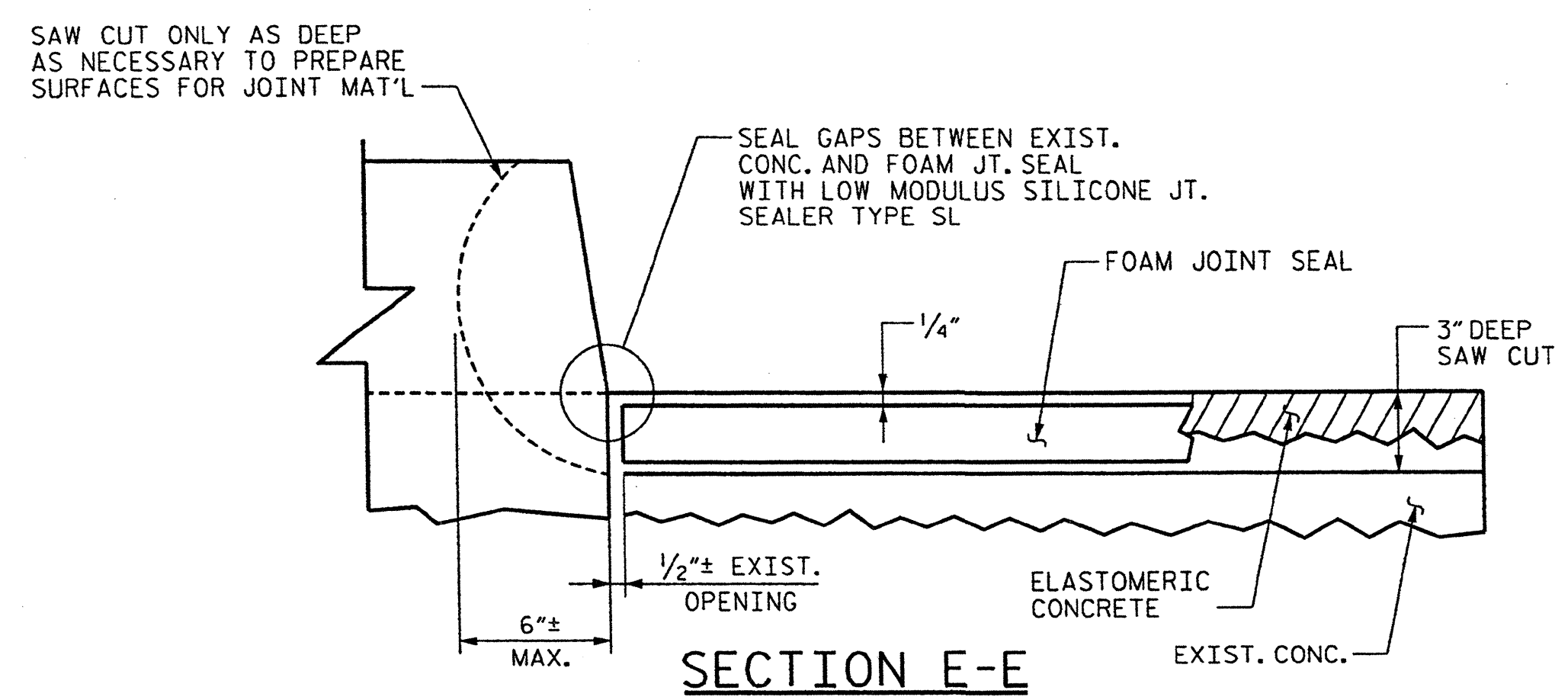
DRAWN BY: C B BAKER DATE: 11/11
 CHECKED BY: J T KELVINGTON DATE: 11/11

Joseph J. Kelvington
 11/15/2011
 SEAL 13406
 PROFESSIONAL ENGINEER
 STATE OF NORTH CAROLINA

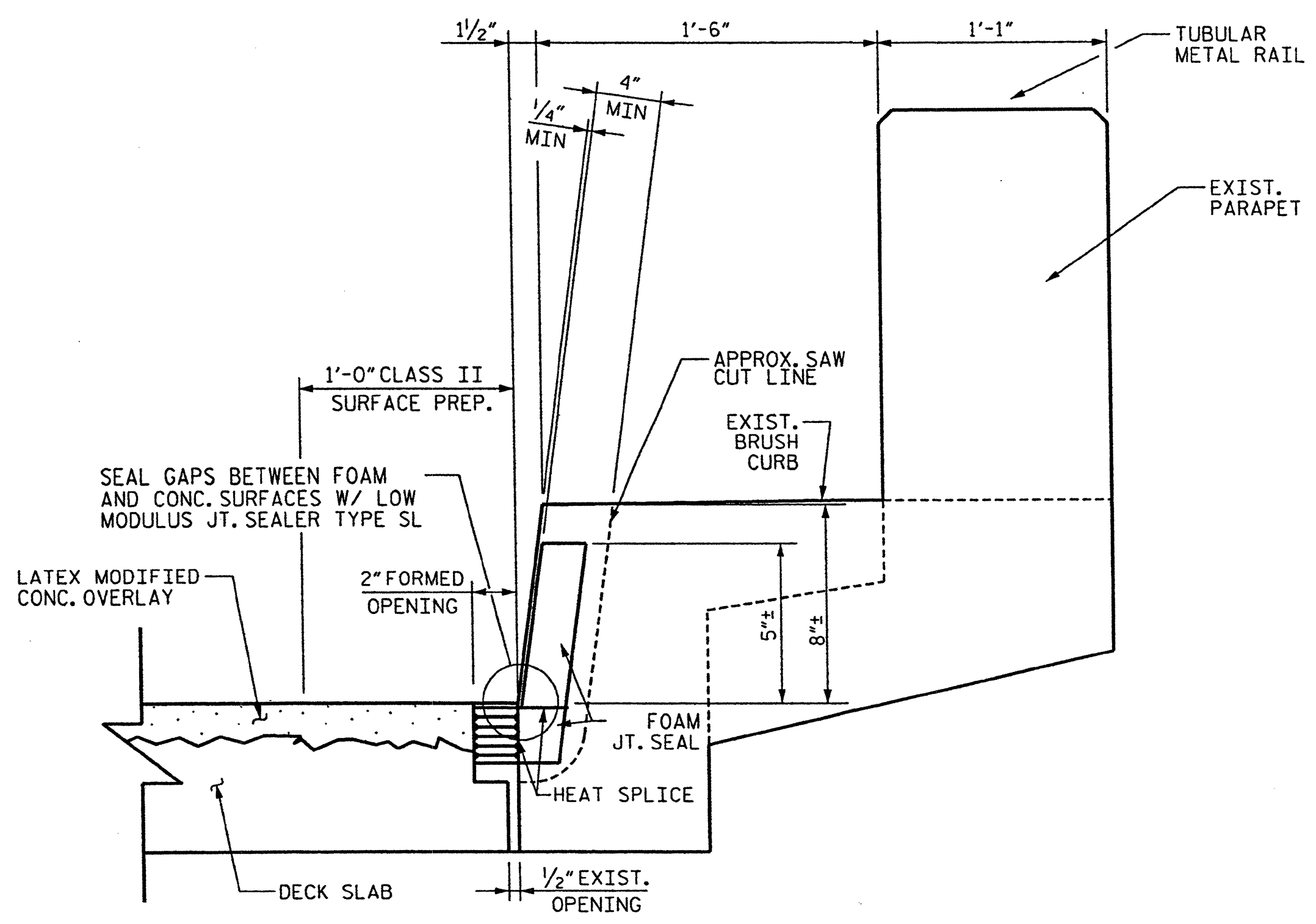


PARTIAL PLAN @ END BENT #1

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



SECTION E-E



SECTION G-G

ELASTOMERIC CONCRETE	
LOCATION	QTY
END BENT 1	11.7 C.F.
END BENT 2	11.7 C.F.

TOTAL ELASTOMERIC CONC. = 23.4 C.F.
 TOTAL ELASTOMERIC CONC. = 0.9 C.Y.

PROJECT NO. 17BP.14.P.3
ENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT JOINT SEAL DETAILS

DECK REHAB. FOR BRIDGE NO. 183

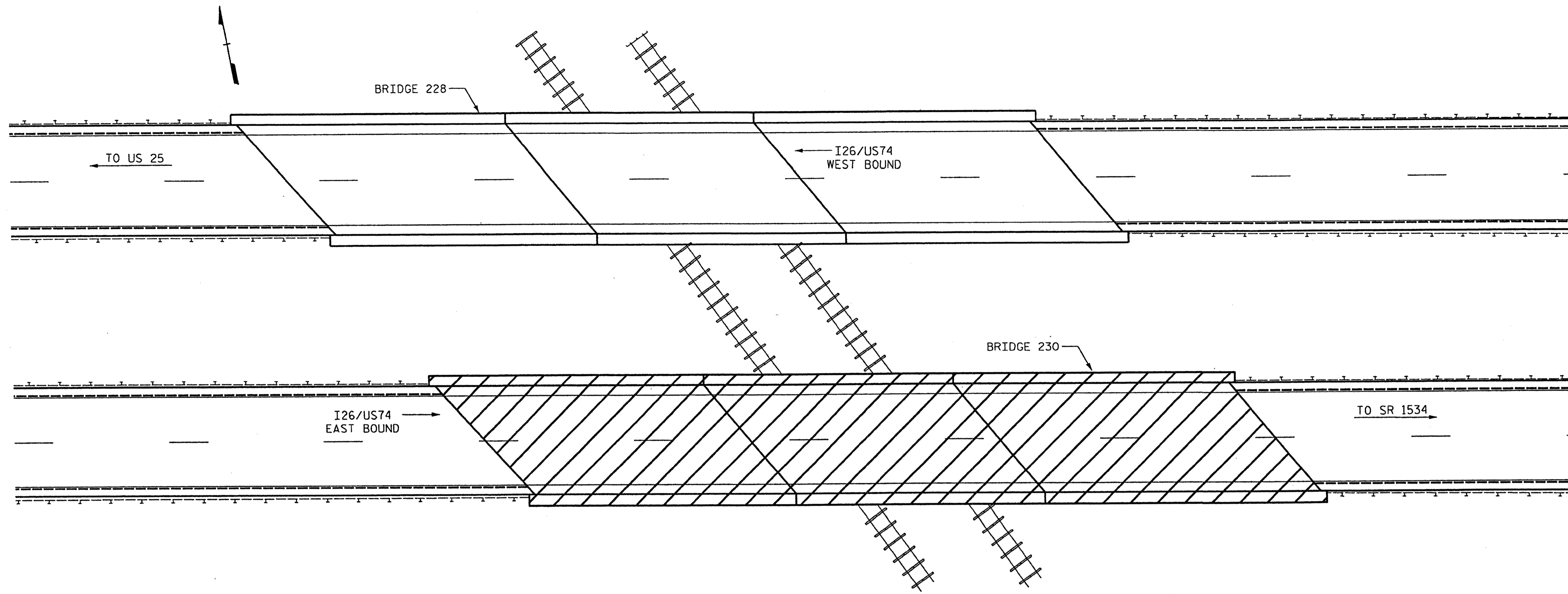
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-23	
1			3			TOTAL SHEETS	77
2			4				

Joseph M. Kelvington
 12/15/11
 SEAL 18406
 T. KELVINGTON

14.P.3 Henderson-Polk Co. Henderson Co. Bridge 183 Drawing\Hender-Polk\183_EndBent.dgn 12/15/2011 10:42:26 AM Jgelle

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DRAWN BY: C. B. BAKER DATE: 11/11
 CHECKED BY: J. T. KELVINGTON DATE: 11/11



**BRIDGE 228 ON I26/US 74
OVER SOUTHERN RAILROAD**

LOCATION: BRIDGE 440228, ON I26
0.4 MILES SOUTH OF JUNCTION US 25

BRIDGE 228

TOTAL BILL OF MATERIAL

INCIDENTAL MILLING	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	ASPHALT CONC. SURFACE COURSE TYPE S9.5C
SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	CU.YDS.	CU.YDS.	SQ.YDS.	LUMP SUM	SQ.FT.	TON
311	633.0	0.0	6.9	0.0	633.0	0.0	43.0	633.0	LUMP SUM	5445	25

* 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, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. NO SEPARATE MEASUREMENT OR PAYMENT FOR THESE ITEMS SHALL BE MADE. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR HYRDO-DEMOLITION.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**LOCATION SKETCH
AND TOTAL
BILL OF MATERIAL**

DECK REHAB. FOR BRIDGE NO. 228

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

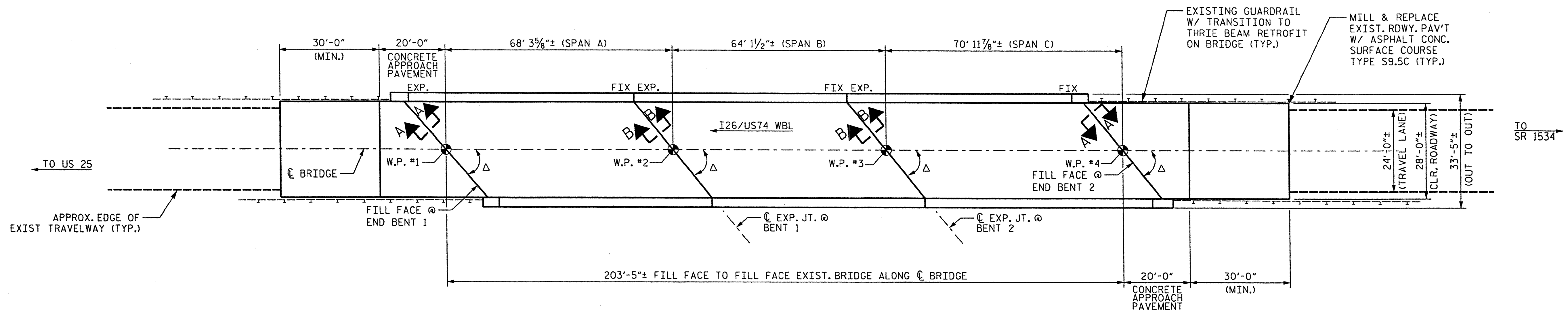
TOTAL SHEETS		S- 24
77		

Joseph J. Kelvington
11/20/11
13406
ENGINEER
J. KELVINGTON

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DRAWN BY : P. Z. ARMATA DATE : 11/11
CHECKED BY : J. T. KELVINGTON DATE : 11/11

4.P.3 Henderson-Polk Co. Henderson Co. Bridge 228 Drawing BFP228-Loeske_BOM.dgn 1/19/2012 11:53:33 PM Jgelle



Δ = 42°00'00"± (TYP. EA. BENT)

PLAN VIEW

NOTE: EXISTING PARAPET AND THRIE BEAM DETAILS NOT SHOWN FOR CLARITY

NOTES:

DECK DRAINS SHALL BE SEALED PRIOR TO BEGINING 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.

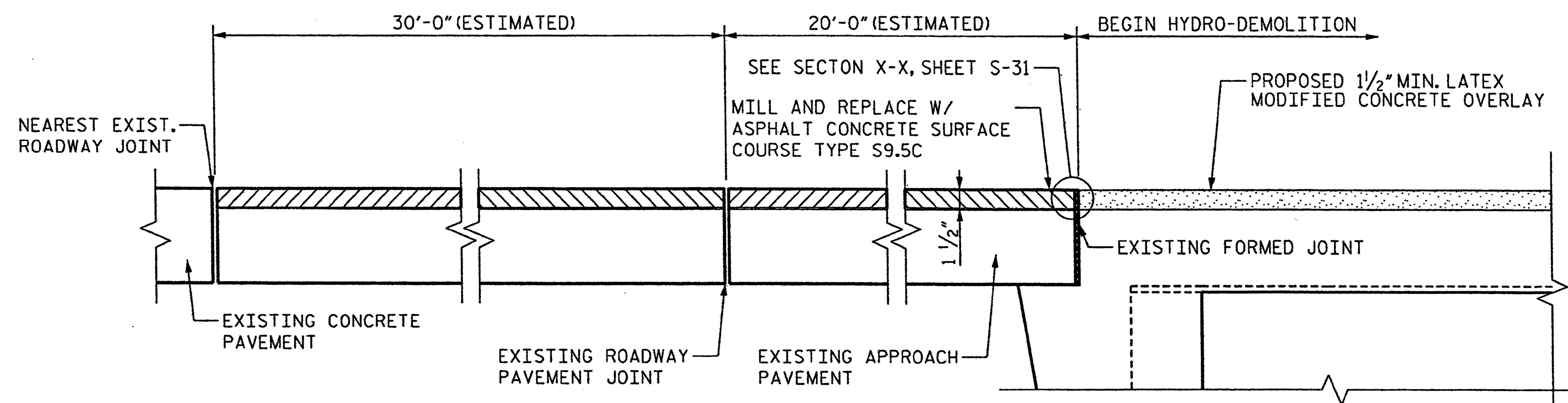
THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS III SURFACE PREPARATION ARE APPROXIMATE. THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK. SEE DETAIL ON SHT. S-27.

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

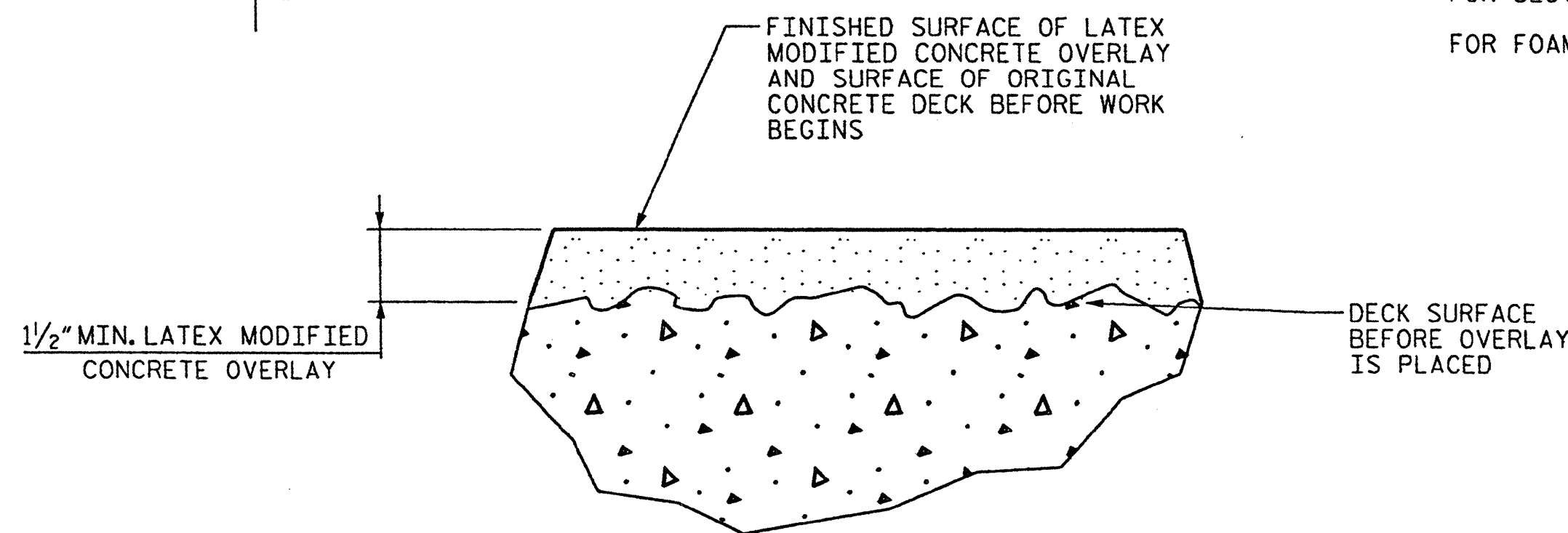
FOR LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.

FOR SECTION B-B, SEE SHEET S-30.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.



SECTION A-A



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

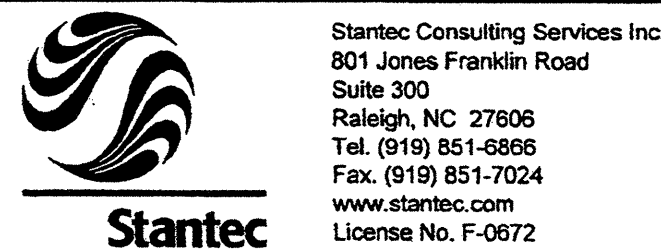
PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS
FOR DECK REPAIR

DECK REHAB. FOR BRIDGE NO. 228

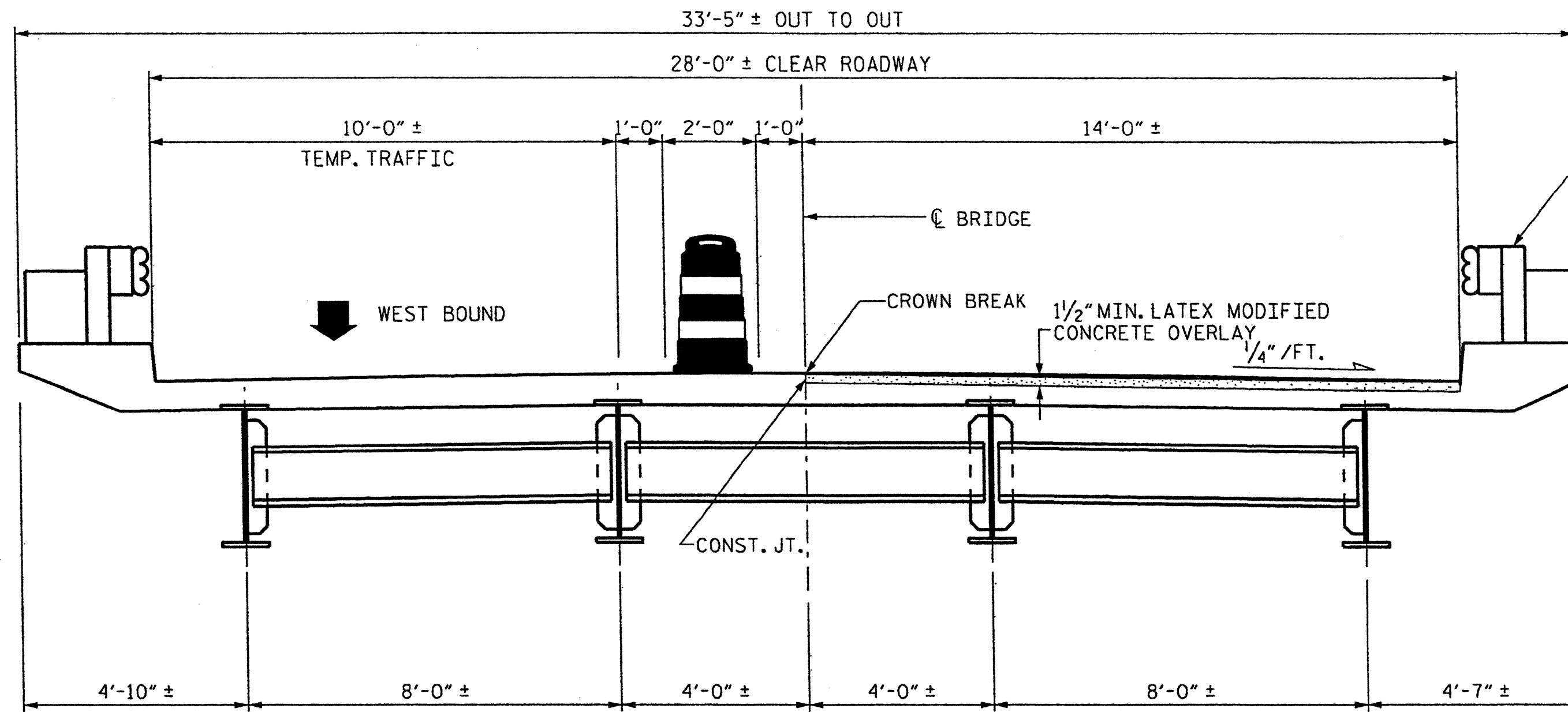
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-25
1			3			TOTAL SHEETS
2			4			77



DRAWN BY : P Z ARMATA DATE : 11/11
CHECKED BY : J T KELVINGTON DATE : 11/11

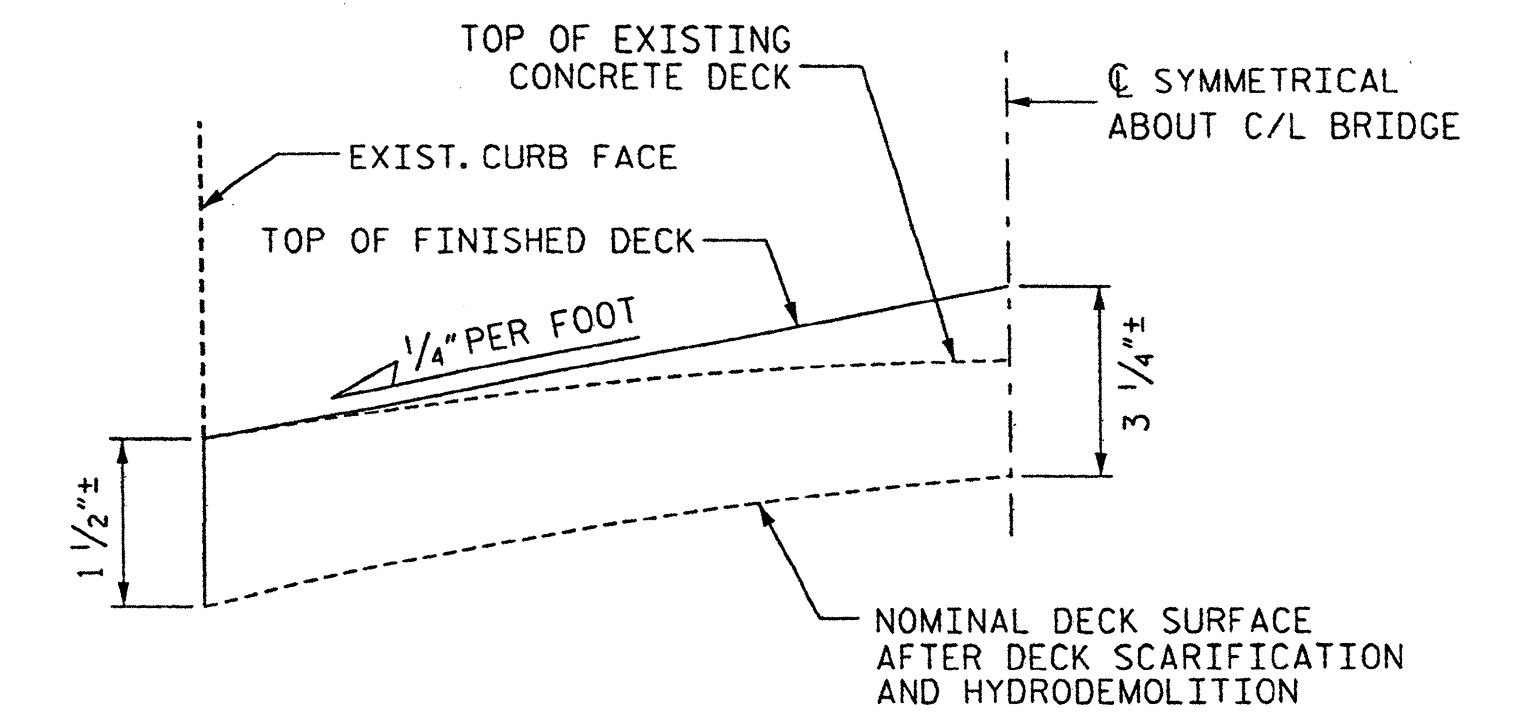
Joseph Kelvington
12/15/11
Professional Engineer Seal
No. 13406
Exp. 12/31/12

12/15/2011 10:52:02 AM Jgelle
C:\Henderson_Polk_Co\Henderson Co. Bridge 228\Drawing\BP228_DeckPlan.dgn

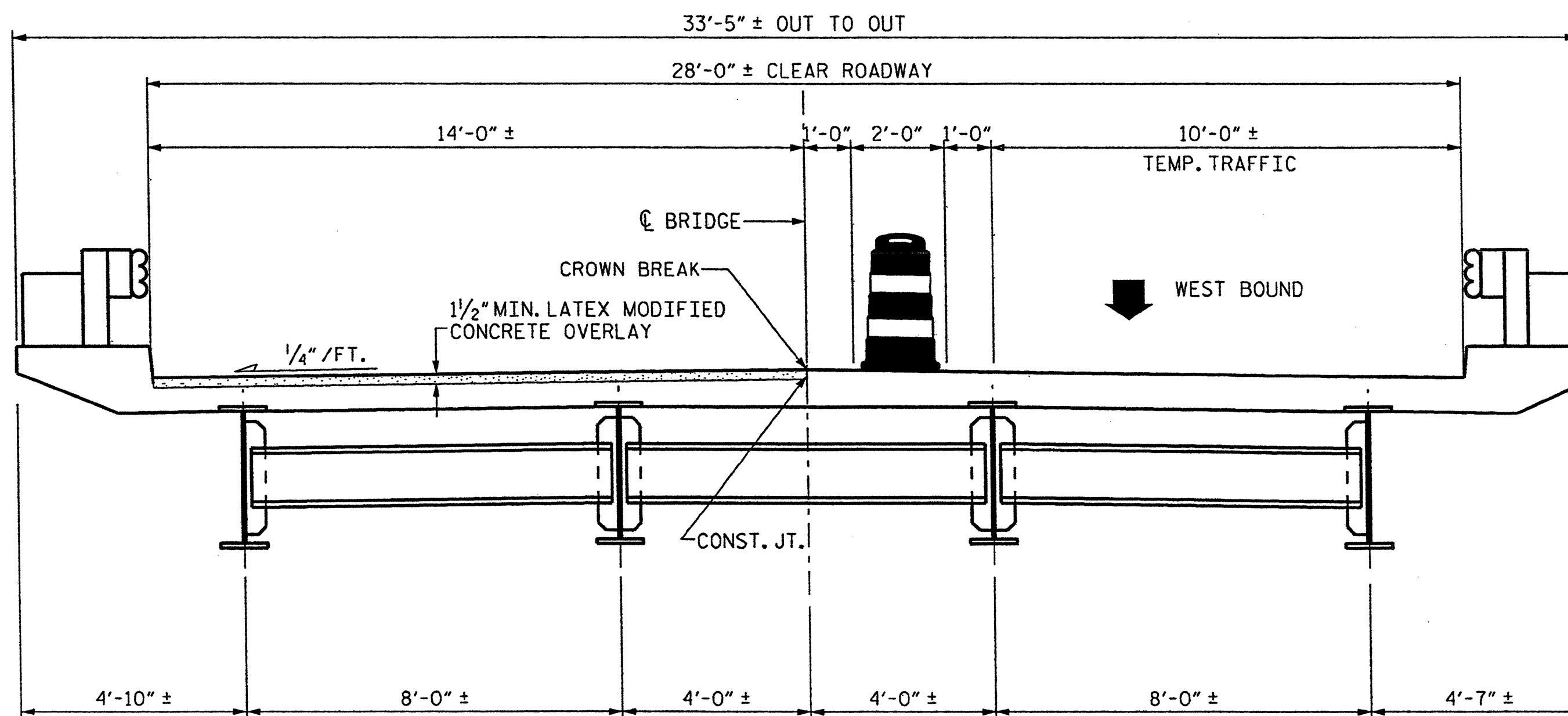


WBL CONSTRUCTION

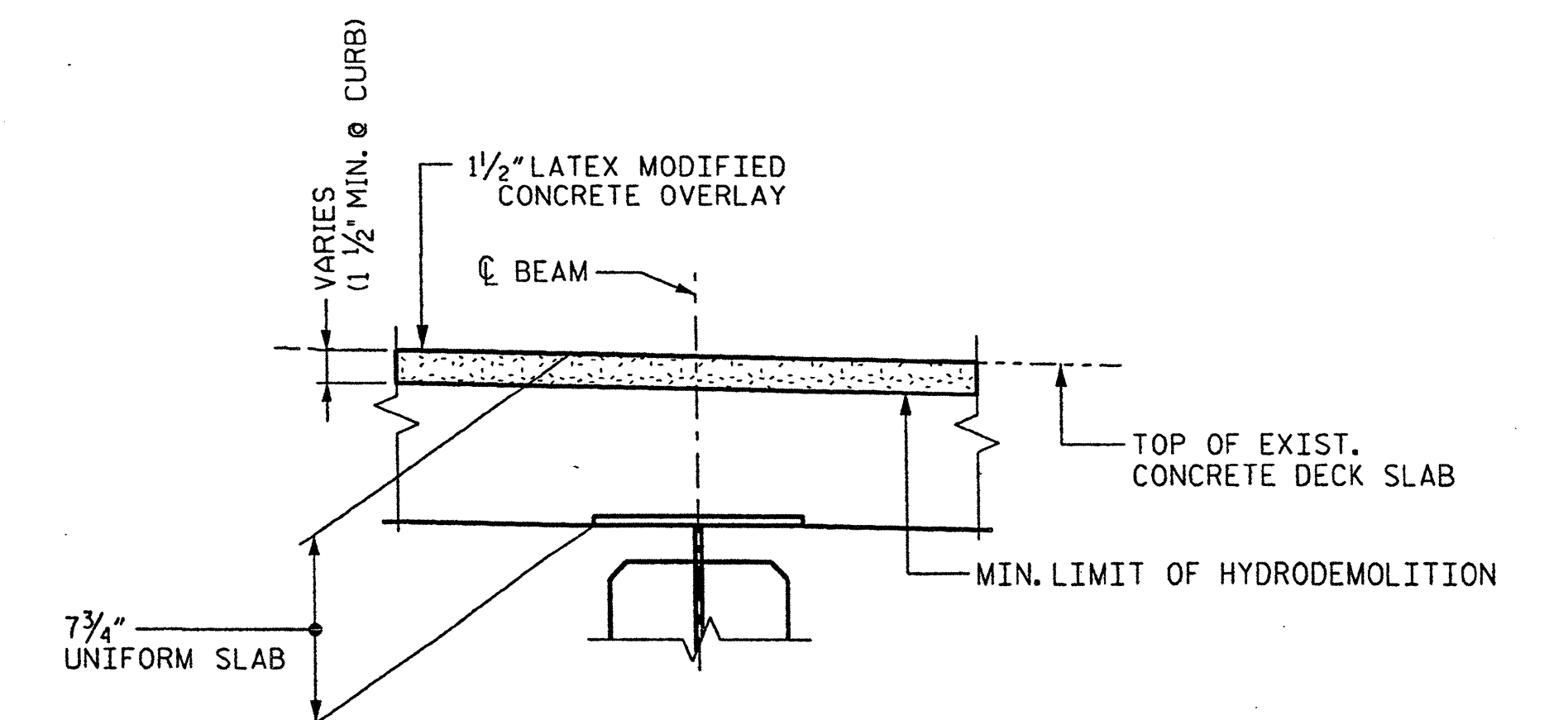
EXISTING THRIE BEAM RETROFIT TO BE REMOVED, STOCKPILED AND REPLACED ONLY AS NECESSARY FOR DECK REHABILITATION (TYP.)



BRIDGE CROSS SLOPE SCHEMATIC FOR DECK OVERLAY



WBL CONSTRUCTION



EXIST. SLAB DETAIL

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

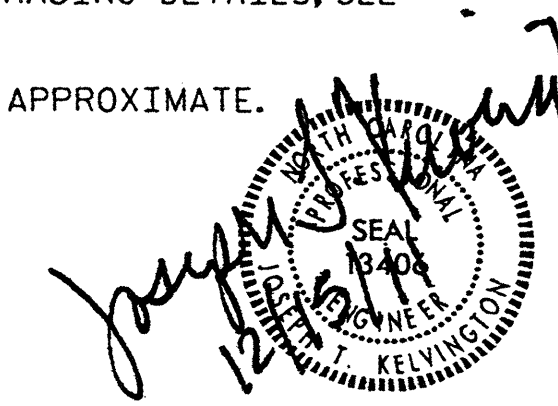
NOTES:
 WATER & CONCRETE SLURRY FROM HYDRO-DEMOLITION SHALL NOT BE ALLOWED TO DRAIN ACROSS TRAVEL LANES. CONTRACTOR SHALL PROVIDE A METHOD TO CONTROL THE WATER.
 FOR TRAFFIC CONTROL AND PHASING DETAILS, SEE TRAFFIC MANAGEMENT PLANS.
 ALL DIMENSIONS SHOWN ARE APPROXIMATE.

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BRIDGE TYPICAL SECTION

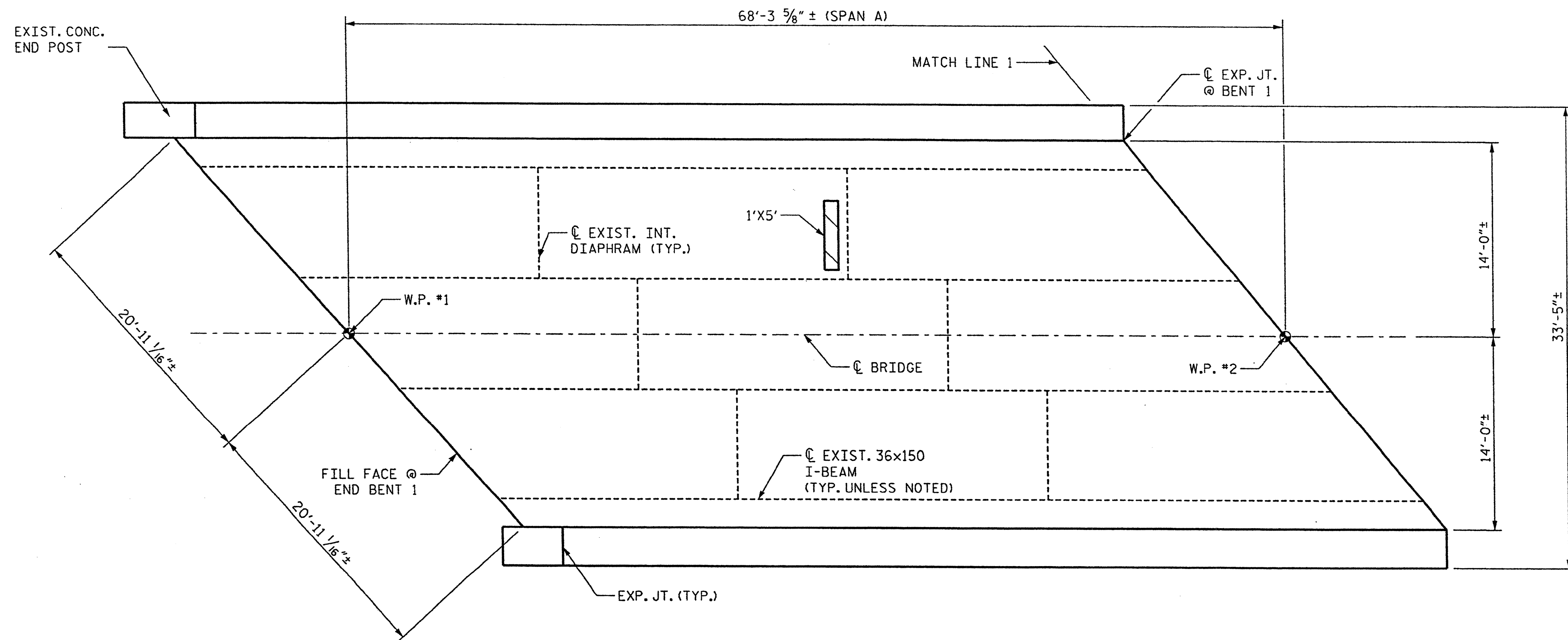
DECK REHAB. FOR BRIDGE NO. 228

REVISIONS						SHEET NO. S-26
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 77
2			4			

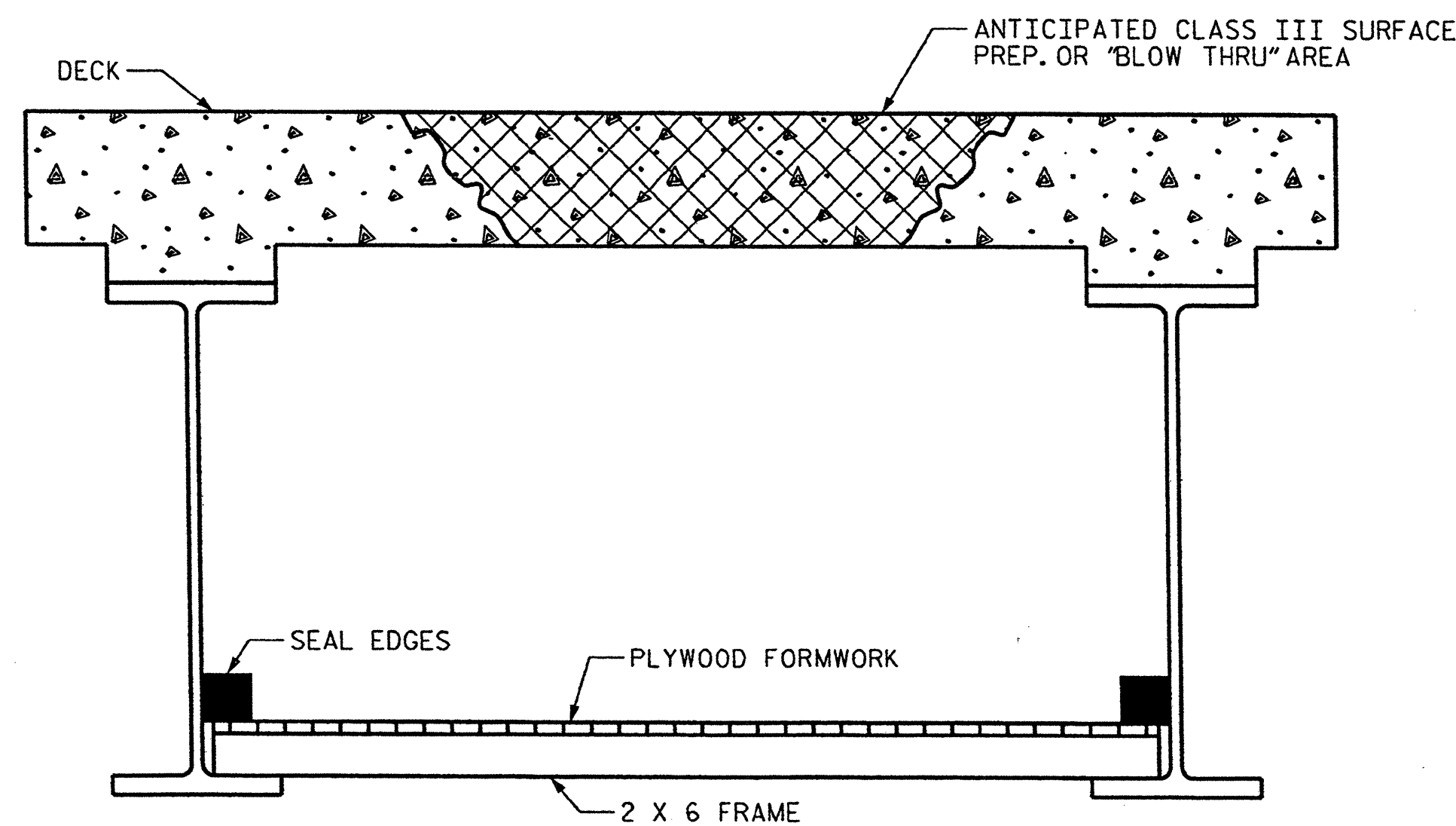


DRAWN BY : P. Z. ARMATA DATE : 11/11
 CHECKED BY : J. T. KELVINGTON DATE : 11/11

BP14.P.3 Henderson-Polk Co. Henderson Co. Bridge 228 Drawing BR228 Typ Sect.dgn 12/15/2011 10:44:35 AM Jgelle



PLAN OF SPAN A - DECK REPAIRS



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

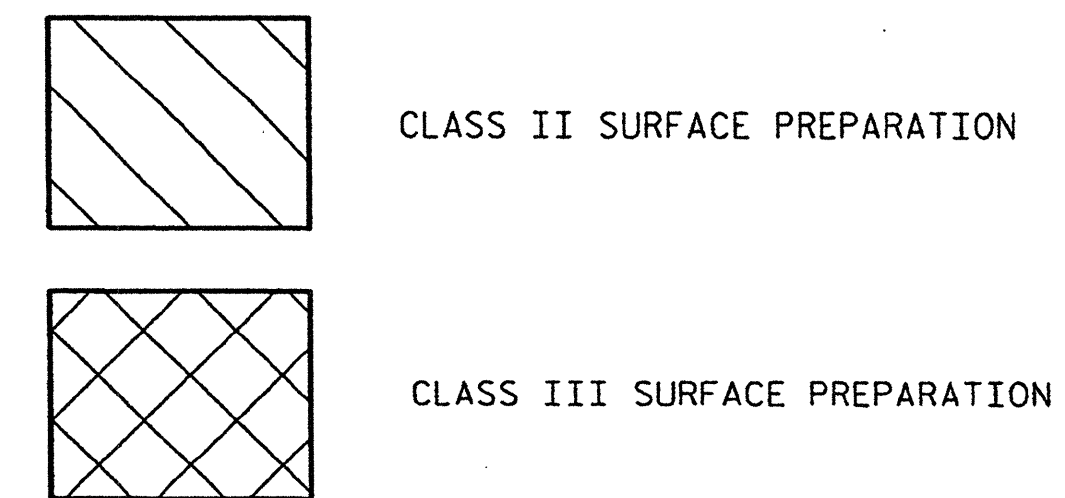
A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALLED IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.

SUBMIT DETAILS OF PROPOSED 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.

NOTE: CLASS II SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.



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

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK REPAIR DETAILS
 SPAN A

DECK REHAB. FOR BRIDGE NO. 228

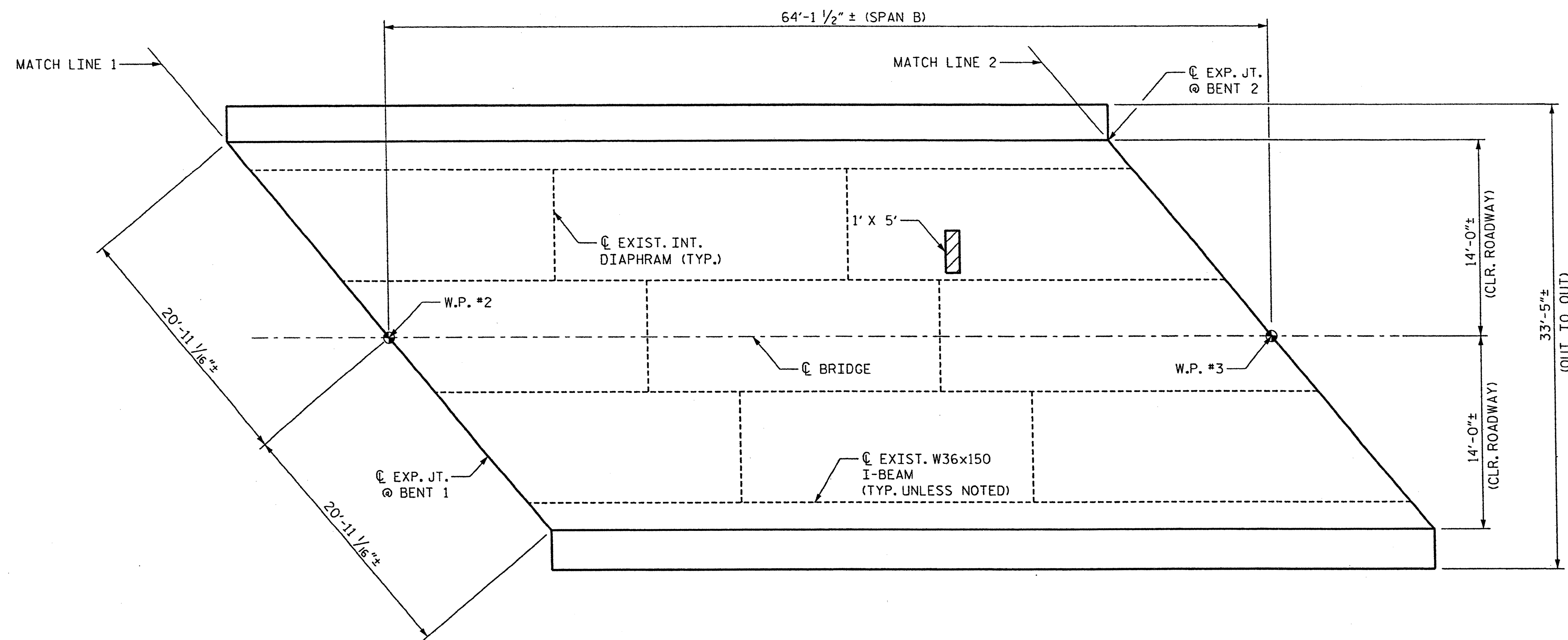
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-27
1			3			TOTAL SHEETS
2			4			77

Joseph Kelvington
 11/20/11
 ENGINEER
 13406

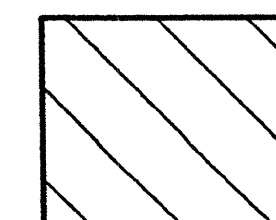
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 801 Jones Franklin Road
 Suite 300
 Raleigh, NC 27806
 Tel. (919) 851-6866
 Fax. (919) 851-7024
 www.stantec.com
 License No. F-0672

DRAWN BY : P. Z. ARMATA DATE : 11/11
 CHECKED BY : J. T. KELVINGTON DATE : 11/11

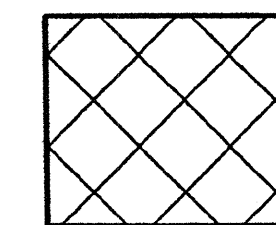
P.3 Henderson-Polk Co. Bridge 228 Drawing BP228_RepairPlanLA.dgn 1/19/2012 10:52:04 AM Joelle



PLAN OF SPAN B - DECK REPAIRS



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

NOTE:

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.

PROJECT NO. WBS 17BP.14.P.3

HENDERSON COUNTY

STATION: _____



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Fax. (919) 851-7024
www.stantec.com
License No. F-0572

DRAWN BY : P. Z. ARMATA DATE : 11/11
CHECKED BY : J. T. KELVINGTON DATE : 11/11

Joseph J. Kelvington
Professional Engineer Seal
13406
North Carolina
Professional Engineer
Joseph J. Kelvington

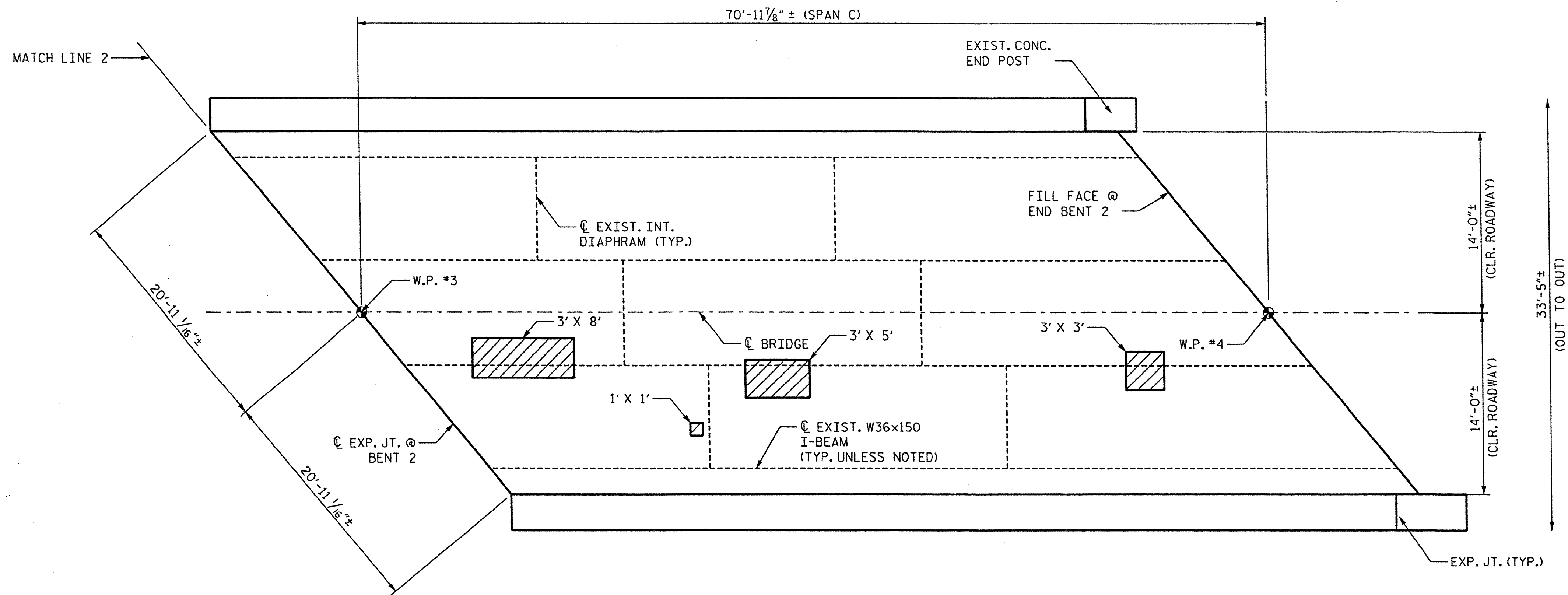
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK REPAIR DETAILS
SPAN B

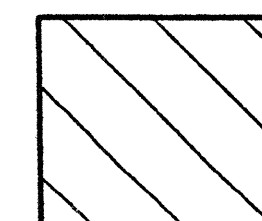
DECK REHAB. FOR BRIDGE NO. 228

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-28
1			3			TOTAL SHEETS
2			4			77

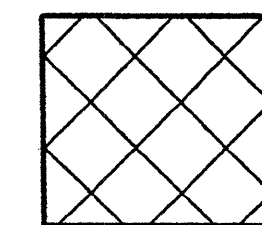
3: Henderson-Polk Co. Henderson Co. Bridge 228 Drawing WBS 17BP.14.P.3 Repair Plan 2 - B.dgn 12/15/2011 10:43:39 AM Jgelle



PLAN OF SPAN C - DECK REPAIRS



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

NOTE:

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.

PROJECT NO. WBS 17BP.14.P.3
ENDERSON COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK REPAIR DETAILS
SPAN C

DECK REHAB. FOR BRIDGE NO. 228

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					77

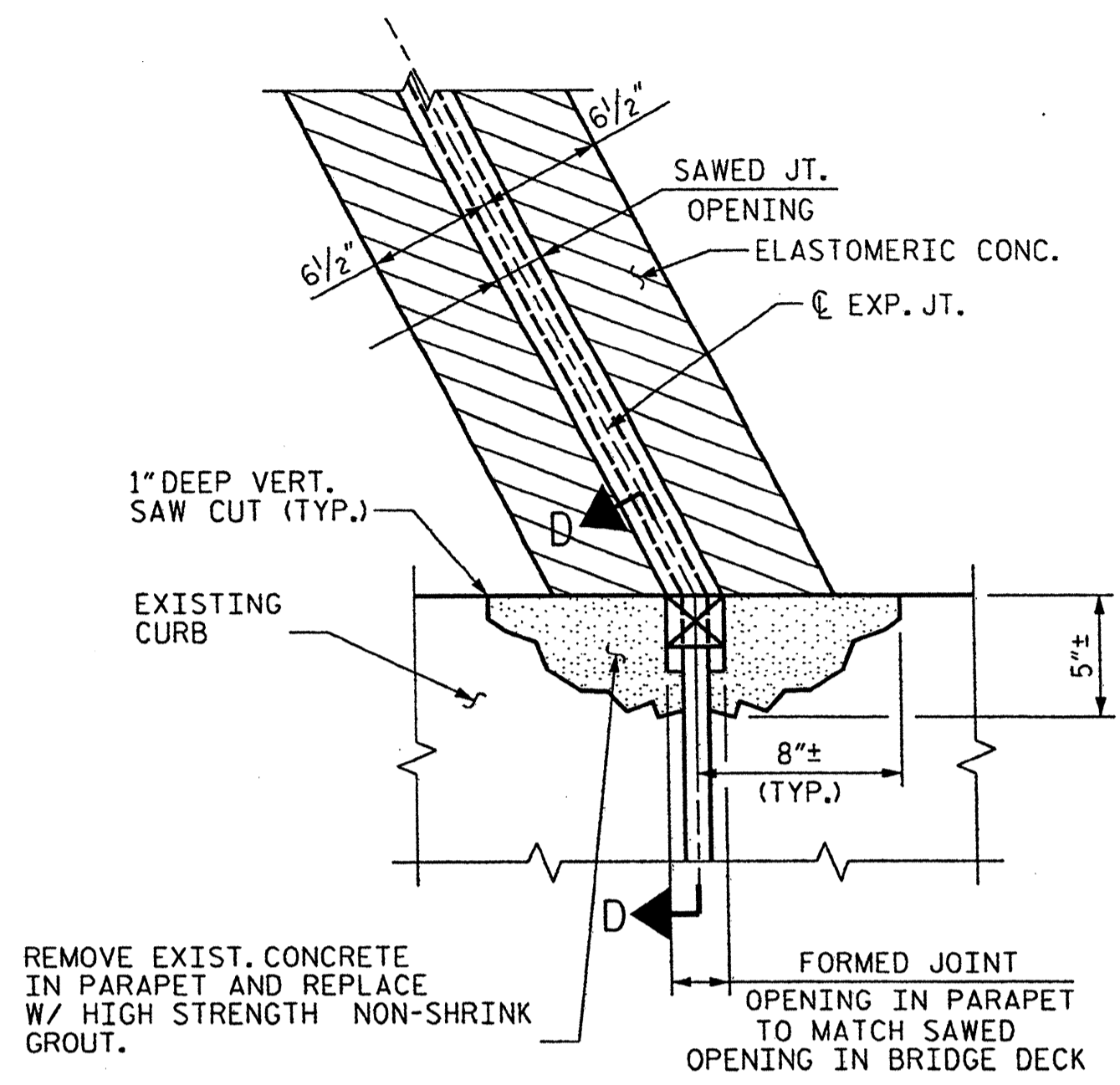
Joseph Kelvington
Professional Engineer Seal
13406
KELVINGTON



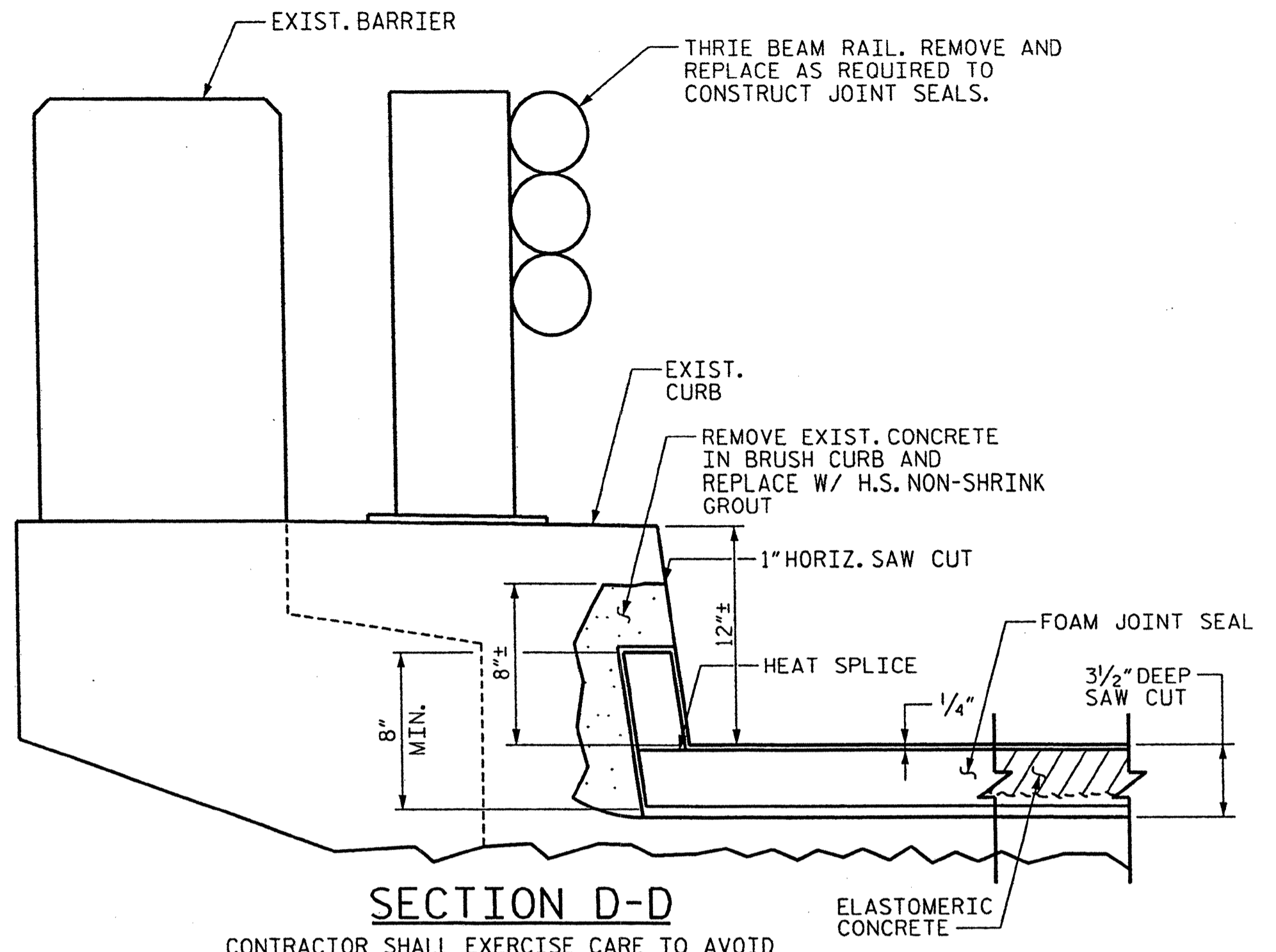
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DRAWN BY : P. Z. ARMATA DATE : 11/11
CHECKED BY : J. T. KELVINGTON DATE : 11/11

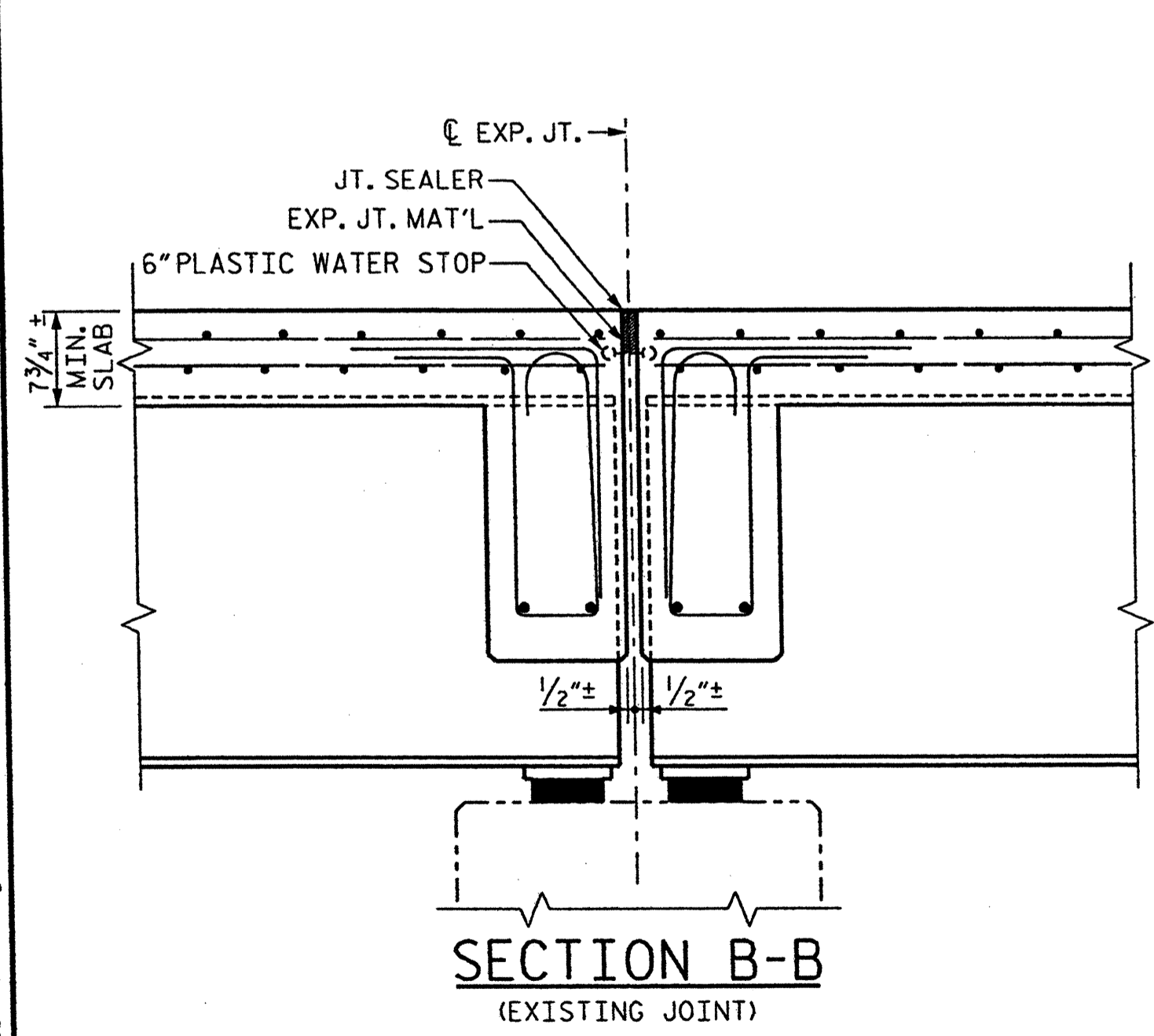
12/15/2011 10:44:41 AM jbell
 228\Drawing\BP228_Repair\Plan3_C.dgn



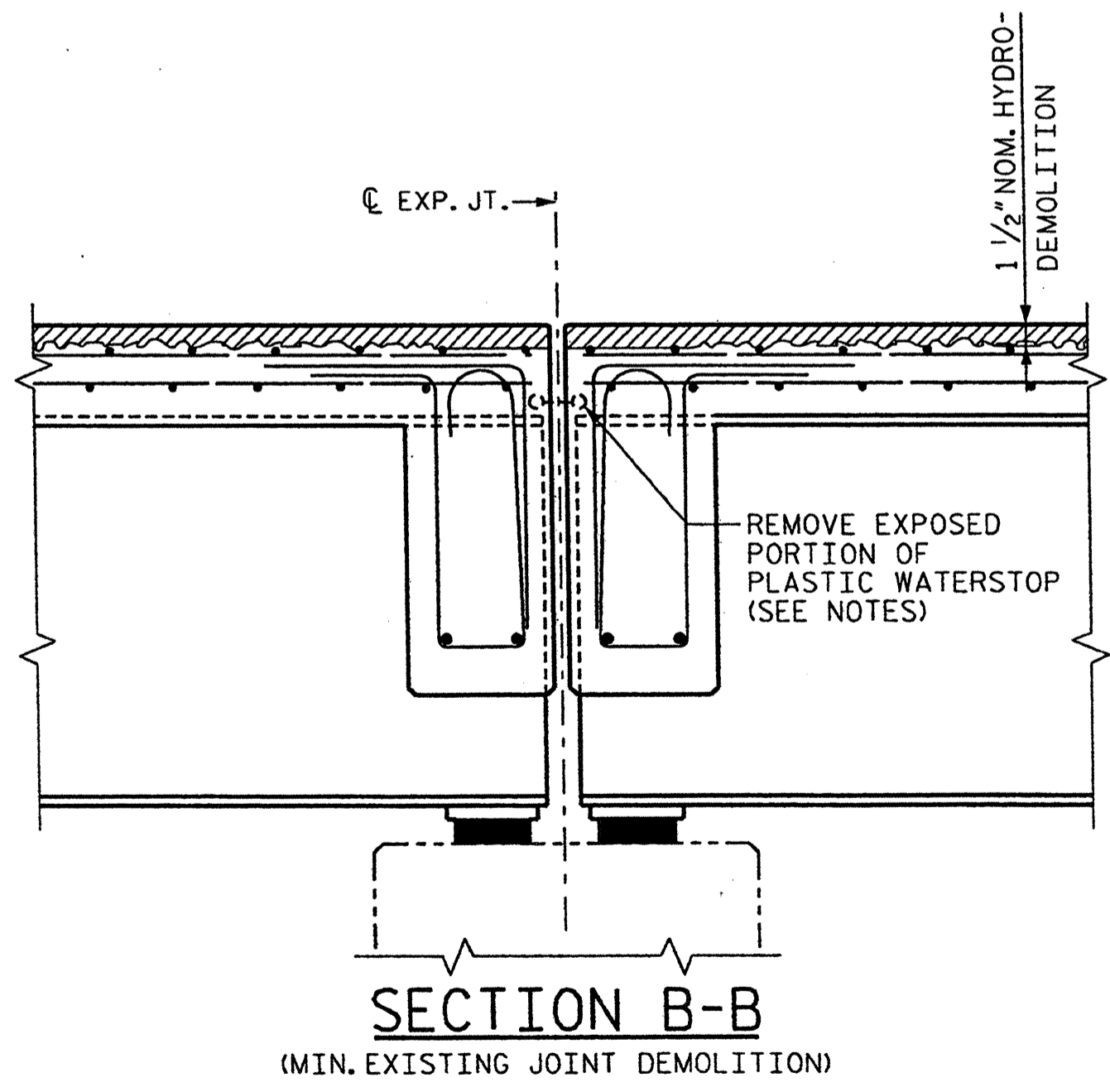
**PARTIAL PLAN @ JOINT
BENT 1&2**



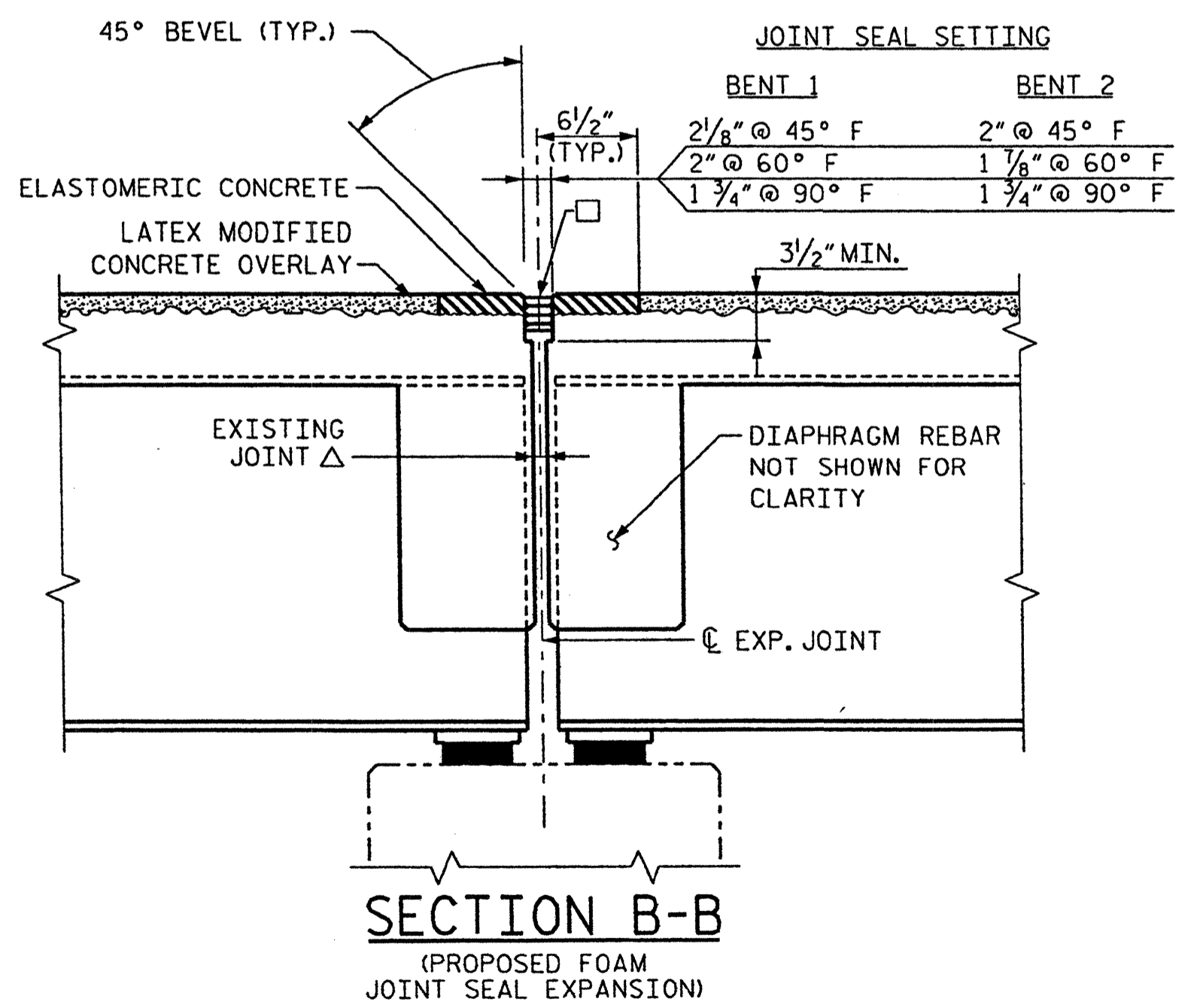
SECTION D-D
CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.
FOR HIGH STRENGTH GROUT, SEE SPECIAL PROVISION. "GROUT FOR STRUCTURES"
HIGH STRENGTH GROUT SHALL BE APPROVED BY THE ENGINEER.



**SECTION B-B
(EXISTING JOINT)**



**SECTION B-B
(MIN. EXISTING JOINT DEMOLITION)**



**SECTION B-B
(PROPOSED FOAM JOINT SEAL EXPANSION)**
NOTE: FOR FOAM JOINT SEAL, SEE SPECIAL PROVISIONS.
THE INSTALLED EVAZOTE 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.
△ EXIST. JOINT OPENING @ BENTS 1 & 2 = 1".

JOINT SEAL SETTING

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

ELASTOMERIC CONCRETE	
LOCATION	QTY
BENT 1	5.23 C.F.
BENT 2	5.23 C.F.

TOTAL ELASTOMERIC CONC. = 10.5 C.F.
TOTAL ELASTOMERIC CONC. = 0.4 C.Y.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

EXPANSION JOINT DETAILS

DECK REHAB. FOR BRIDGE NO. 228

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

TOTAL SHEETS: 77

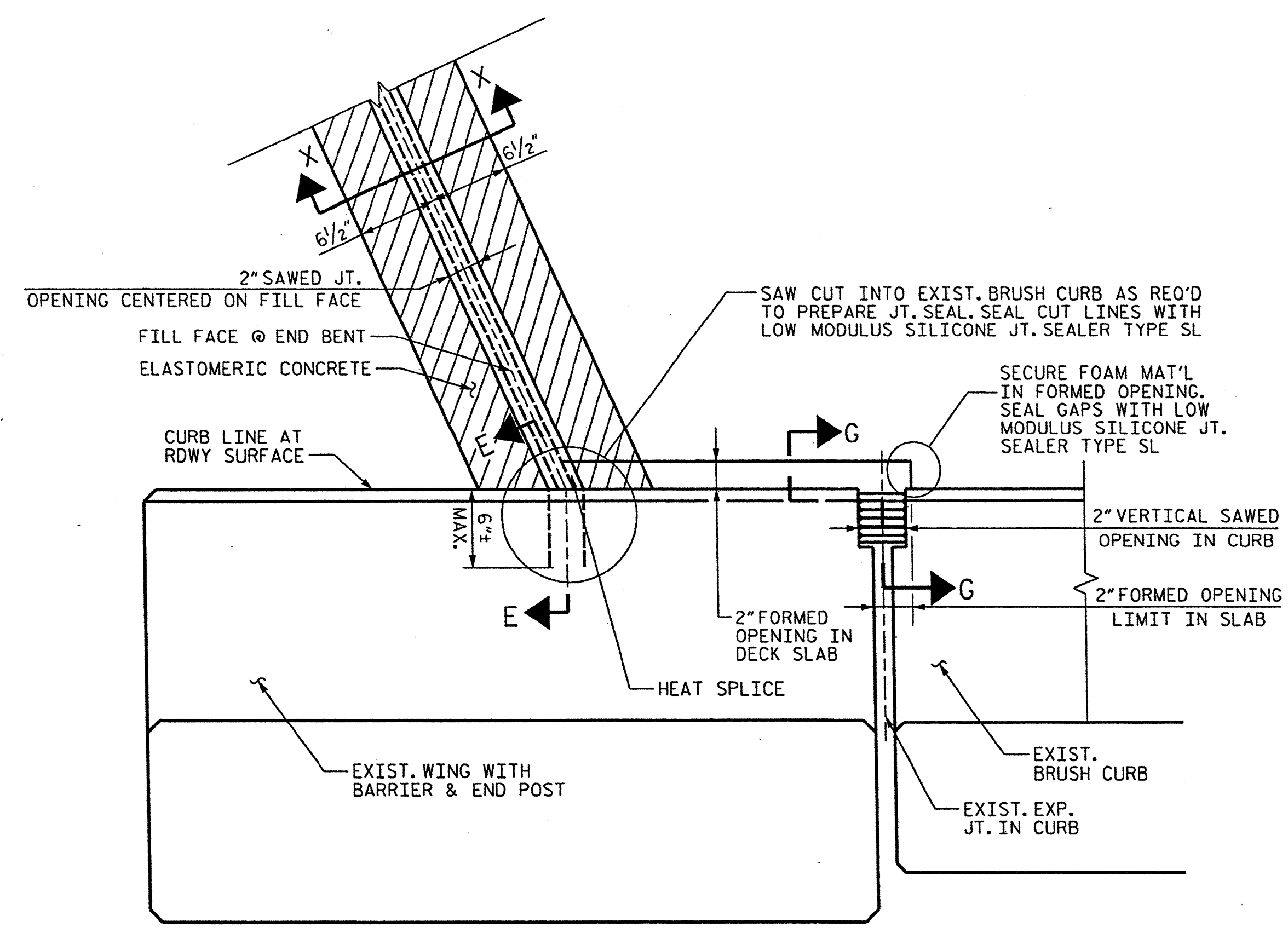
John Kelvington
Professional Engineer
No. 13406
State of North Carolina

P:\M.P.3 Henderson-Polk Co Bridge 228 Drawing\BP228.ExpandDet.dgn 12/15/2011 10:44:43 AM jgelle

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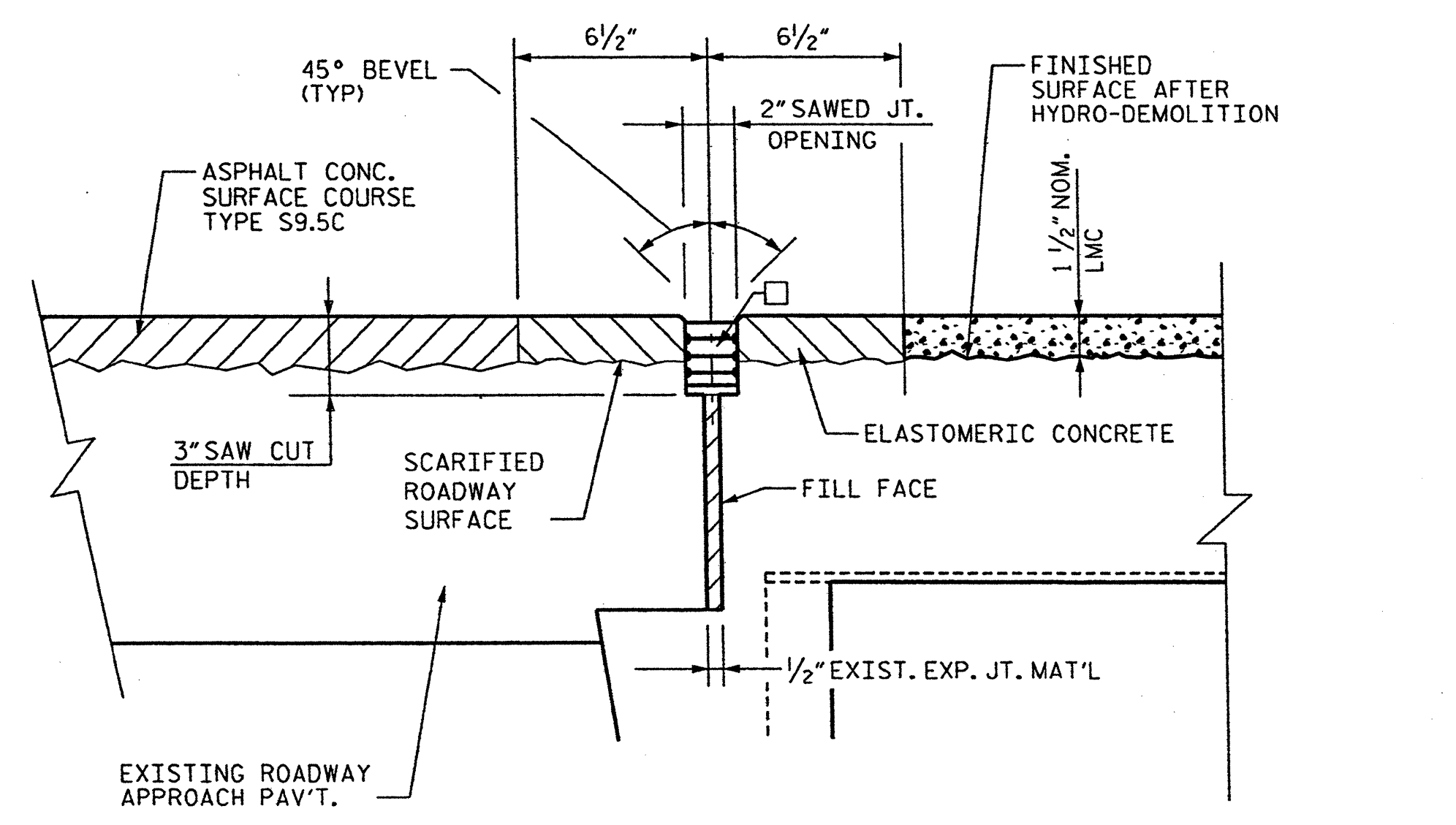
DRAWN BY: P. Z. ARMATA DATE: 11/11
CHECKED BY: J. T. KELVINGTON DATE: 11/11

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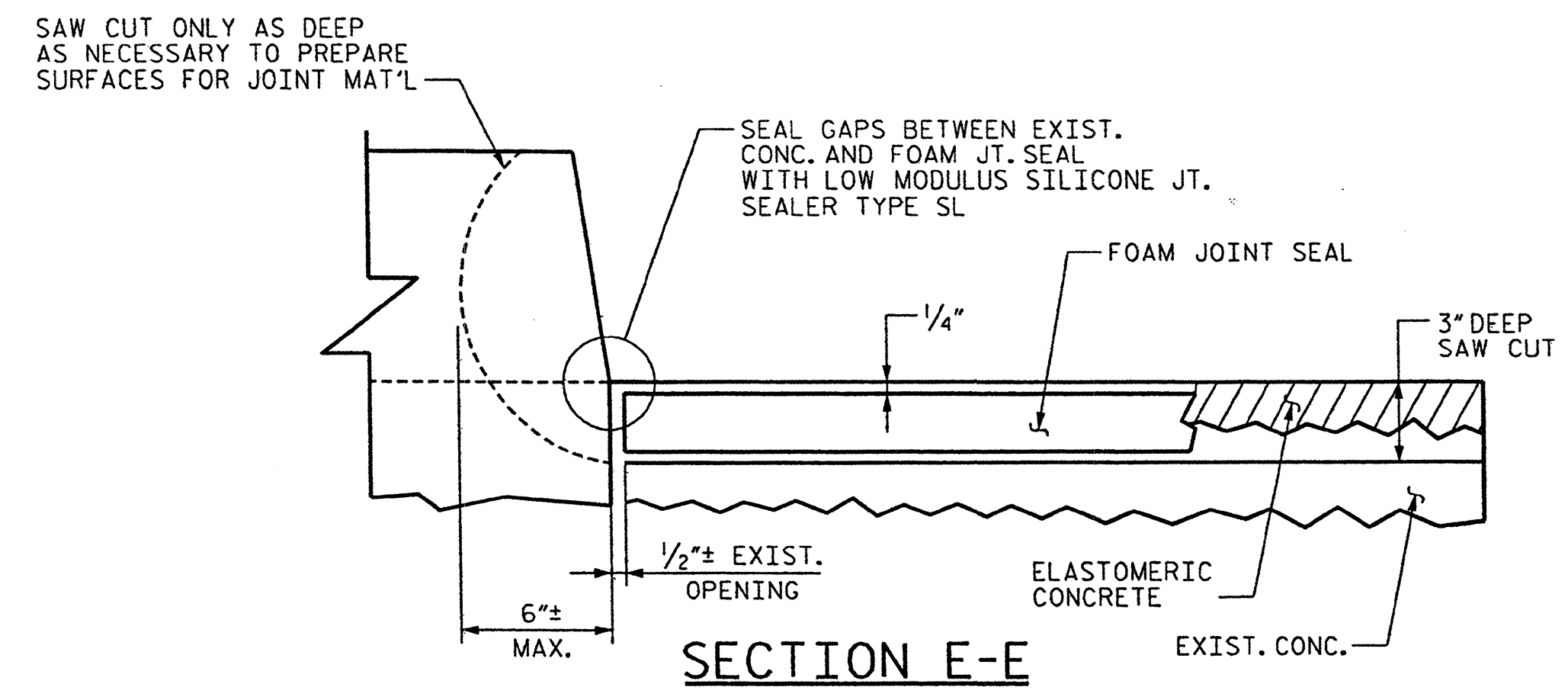


PARTIAL PLAN @ END BENT #1
(END BENT #2 SIMILAR)

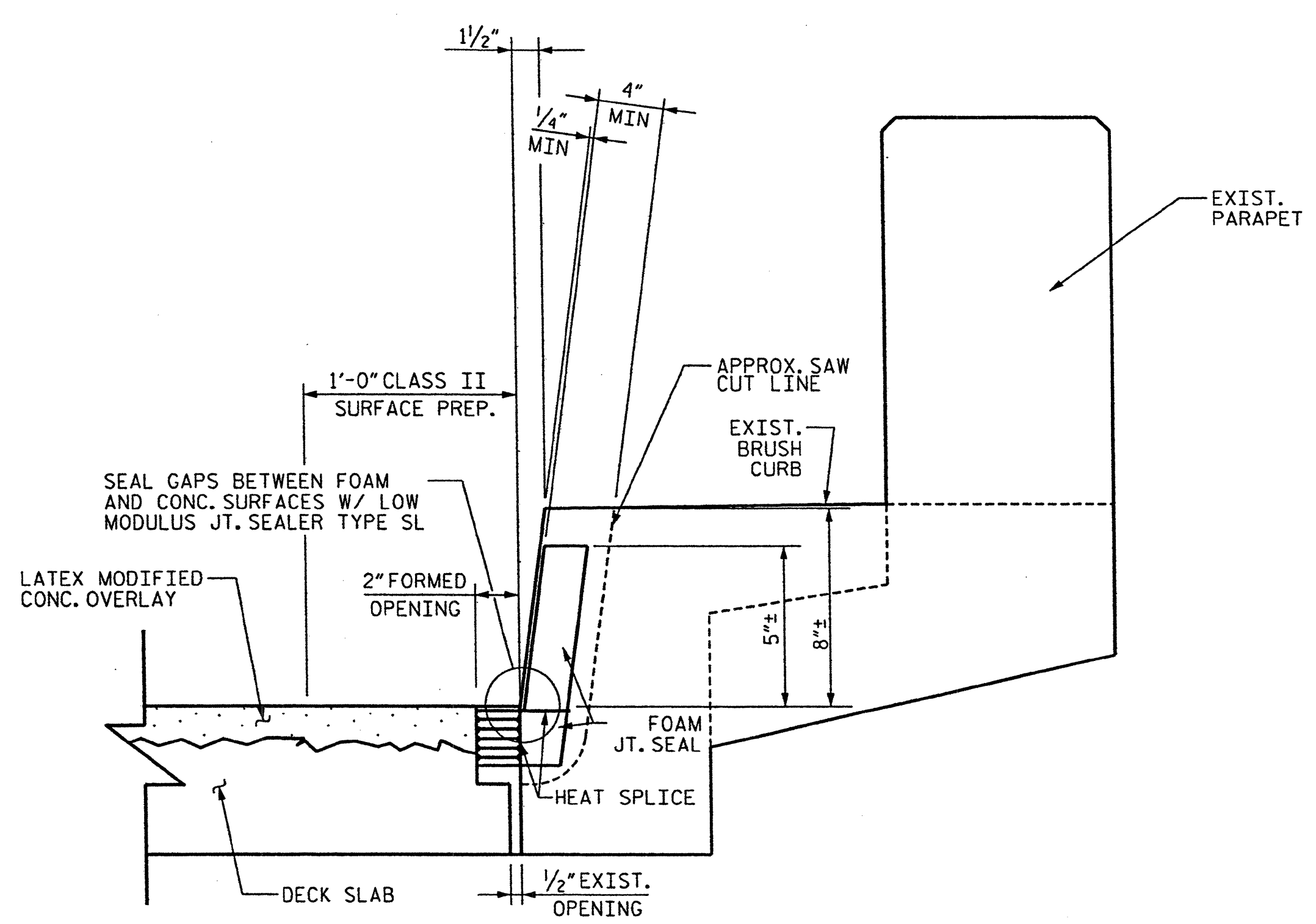
NOTE: METAL RAIL, END POSTS AND BARRIER PARAPET WALL DETAILS NOT SHOWN FOR CLARITY.



SECTION X-X □ - USE 2.8125" X 2.00" UNCOMPRESSED FOAM JOINT SEAL



SECTION E-E



SECTION G-G

NOTE: THRIE BEAM NOT SHOWN FOR CLARITY. REMOVE AND REPLACE AS REQUIRED TO CONSTRUCT JOINT SEALS.

ELASTOMERIC CONCRETE	
LOCATION	QTY
END BENT 1	5.01 C.F.
END BENT 2	5.01 C.F.

TOTAL ELASTOMERIC CONC. = 10.02 C.F.
TOTAL ELASTOMERIC CONC. = 0.4 C.Y.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT JOINT SEAL DETAILS

DECK REHAB. FOR BRIDGE NO. 228

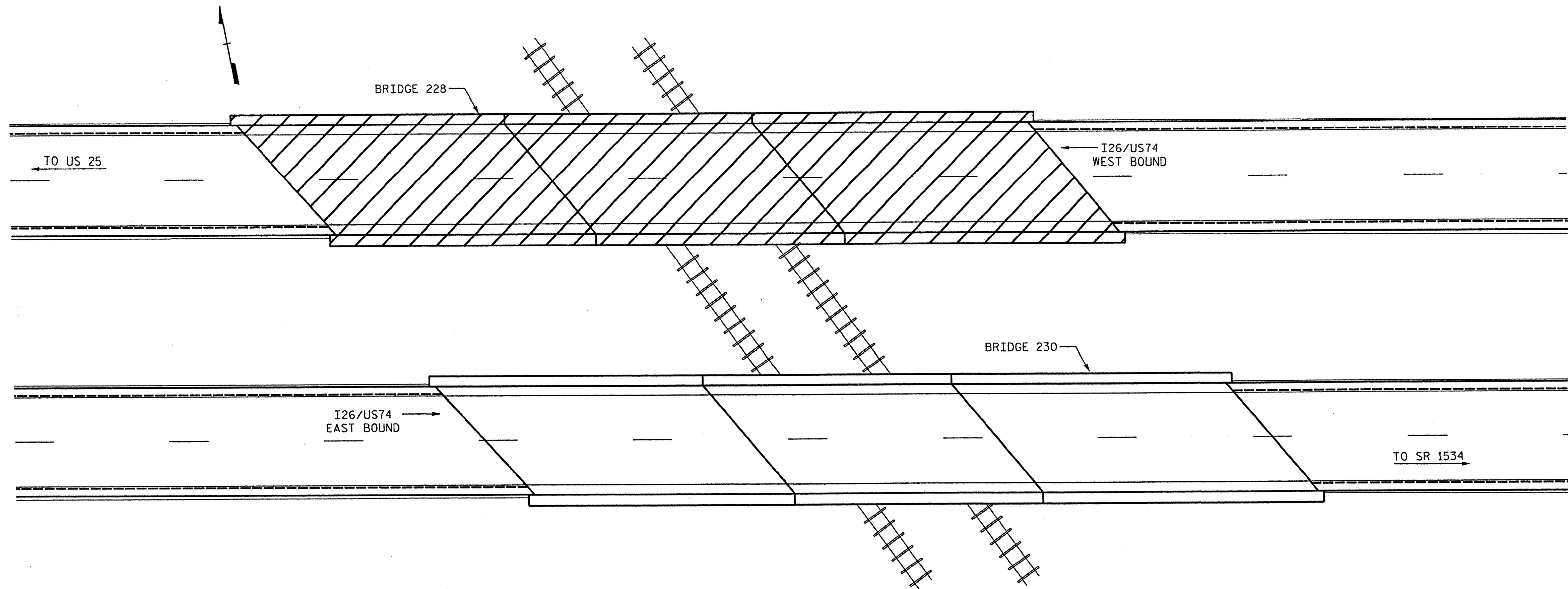
REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	

S-31
TOTAL SHEETS 77

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DRAWN BY: P. Z. ARMATA DATE: 11/11
CHECKED BY: J. T. KELVINGTON DATE: 11/11

Joseph L. Kelvington
Professional Engineer
No. 12451
Exp. 12/31/11



**BRIDGE 230 ON I26/US 74
OVER SOUTHERN RAILROAD**

LOCATION: BRIDGE 440230, ON I26
0.4 MILES SOUTH OF JUNCTION US 25

BRIDGE 230

TOTAL BILL OF MATERIAL

INCIDENTAL MILLING	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	ASPHALT CONC. SURFACE COURSE TYPE S9.5C
SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	CU.YDS.	CU.YDS.	SO.YDS.	LUMP SUM	SO.FT.	TON
378	768.7	0.0	4.0	0.0	768.7	0.0	60.8	768.7	LUMP SUM	6612	30

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

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

LOCATION SKETCH
 AND TOTAL
 BILL OF MATERIAL

DECK REHAB. FOR BRIDGE NO. 230

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-32
2			4			75

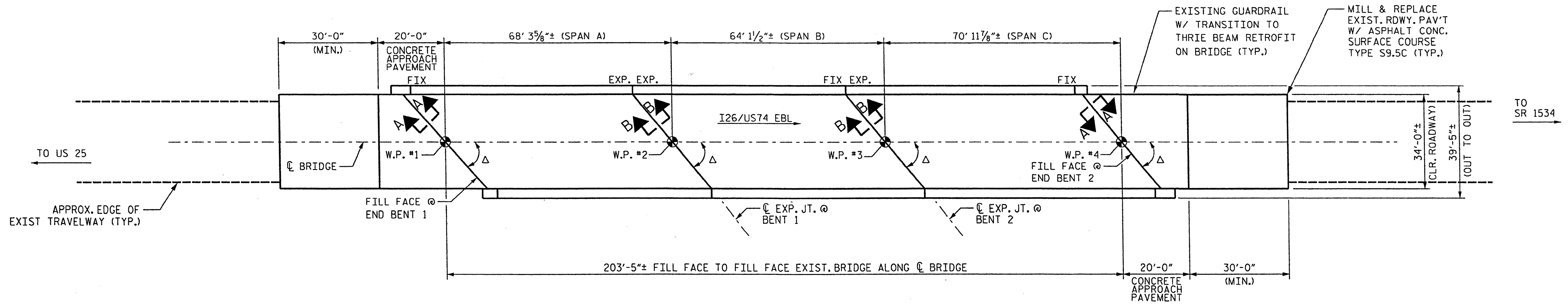
Joseph Kelvington
 PROFESSIONAL ENGINEER
 NO. 11827
 STATE OF NORTH CAROLINA



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

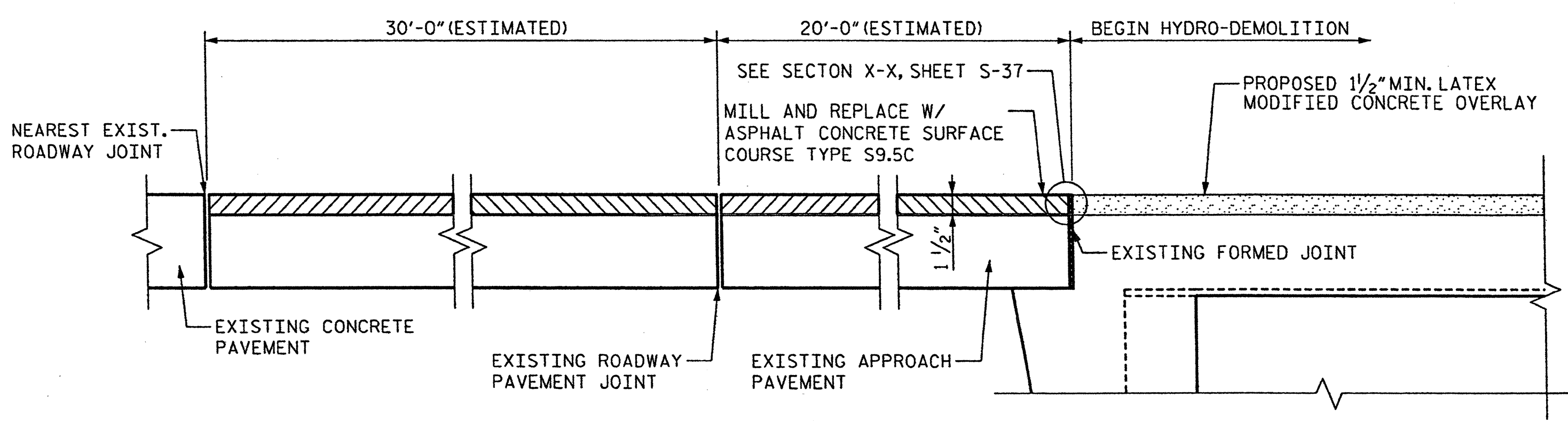
DRAWN BY : P. Z. ARMATA DATE : 11/11
 CHECKED BY : J. T. KELVINGTON DATE : 11/11

ITBP.14.P.3 Henderson-Folk Co. Bridge 230 Drawing\BP230.LS.BOM.dgn 1/9/2012 12:48:29 PM Jjelle

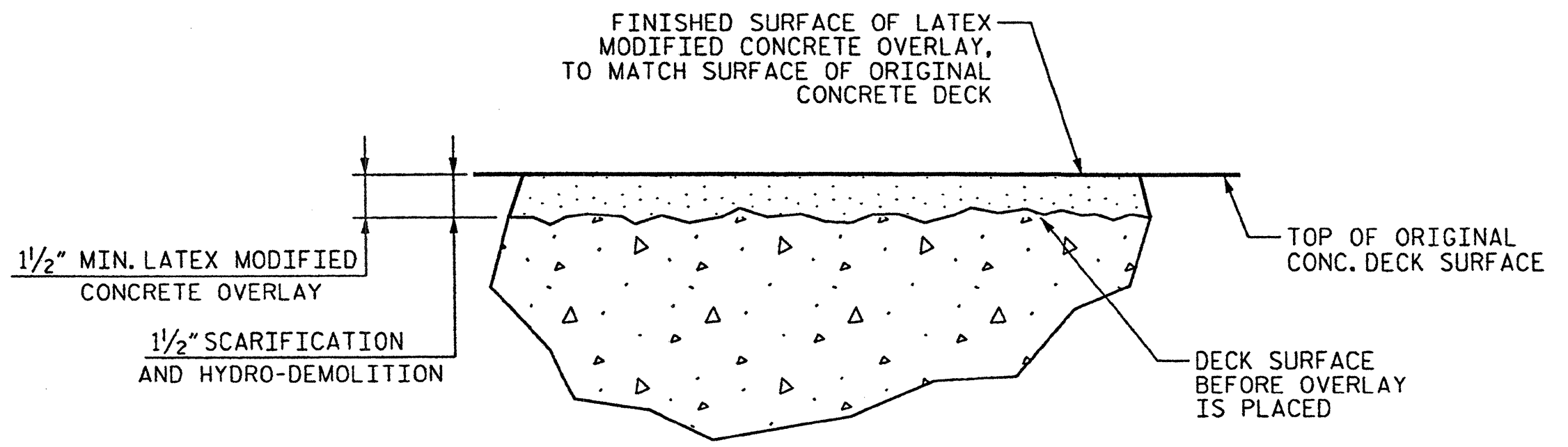


Δ = 42°00'00"± (TYP. EA. BENT)

PLAN VIEW



SECTION A-A



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

- NOTES:**
- DECK DRAINS SHALL BE SEALED PRIOR TO BEGINING 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-35.
 - 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 S-36.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

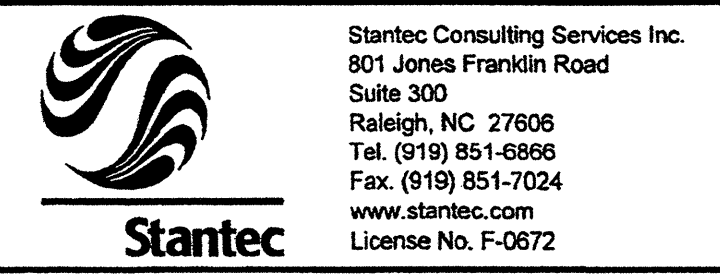
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF BRIDGE

DECK REHAB. FOR BRIDGE NO. 230

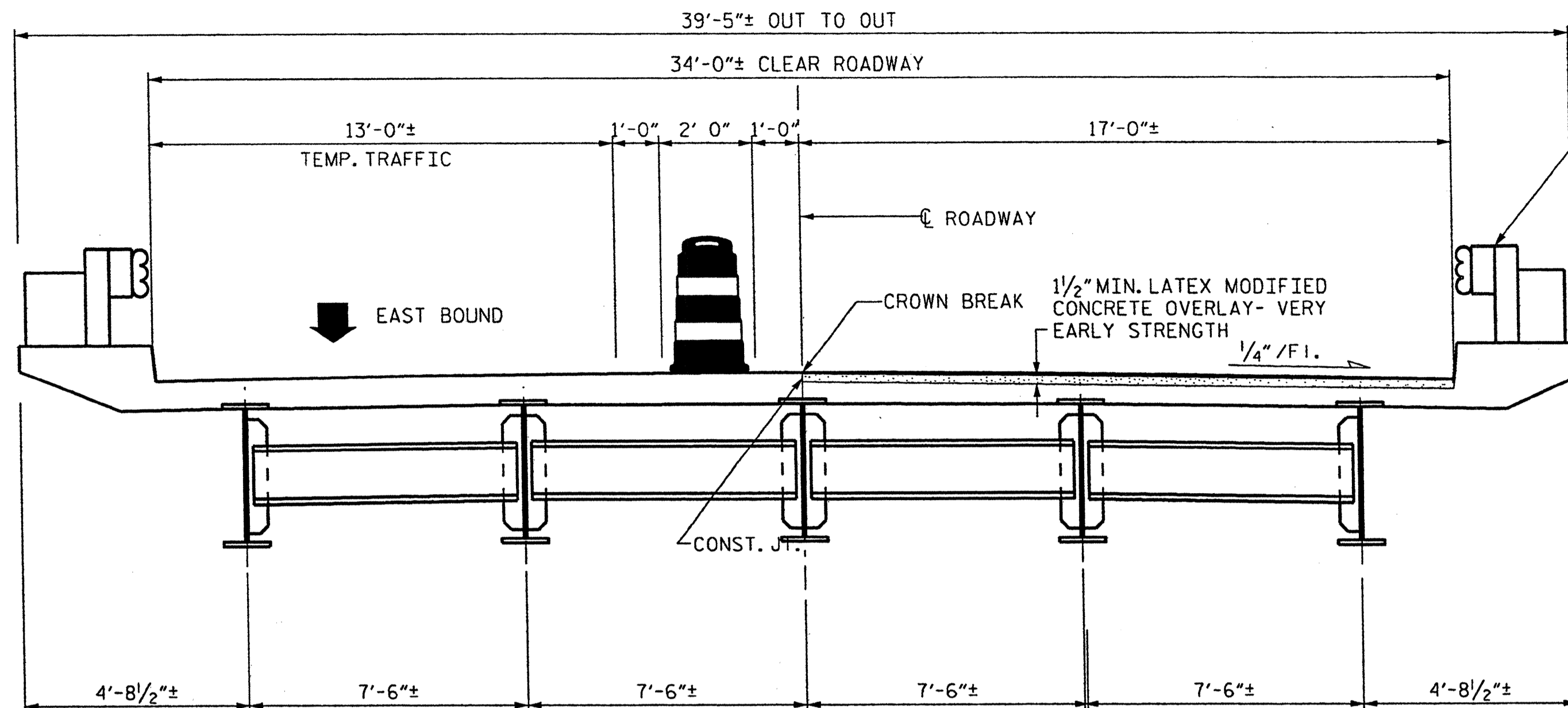
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-33
2			4			77

Joseph J. Kelvington
 12/15/2011
 PROFESSIONAL ENGINEER
 SEAL
 13406
 STATE OF NORTH CAROLINA

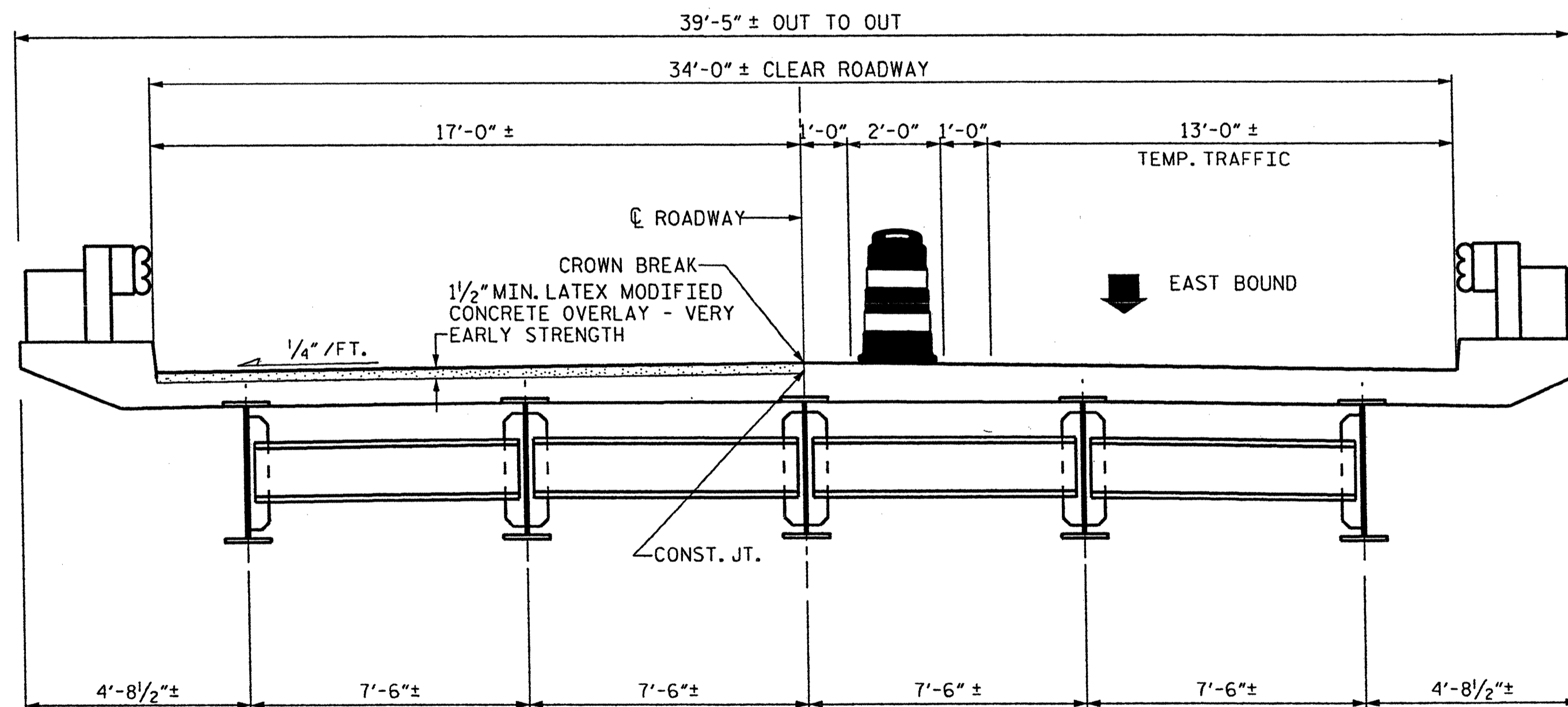


DRAWN BY : K R TYLER DATE : 11/11
 CHECKED BY : J T KELVINGTON DATE : 11/11

12/15/2011 1:32:08 PM Jpegelle
 IP: 14.P.3 Henderson-Polk Co. Henderson Co. Bridge 230.Draining\BP230_DeckPlan1.dgn

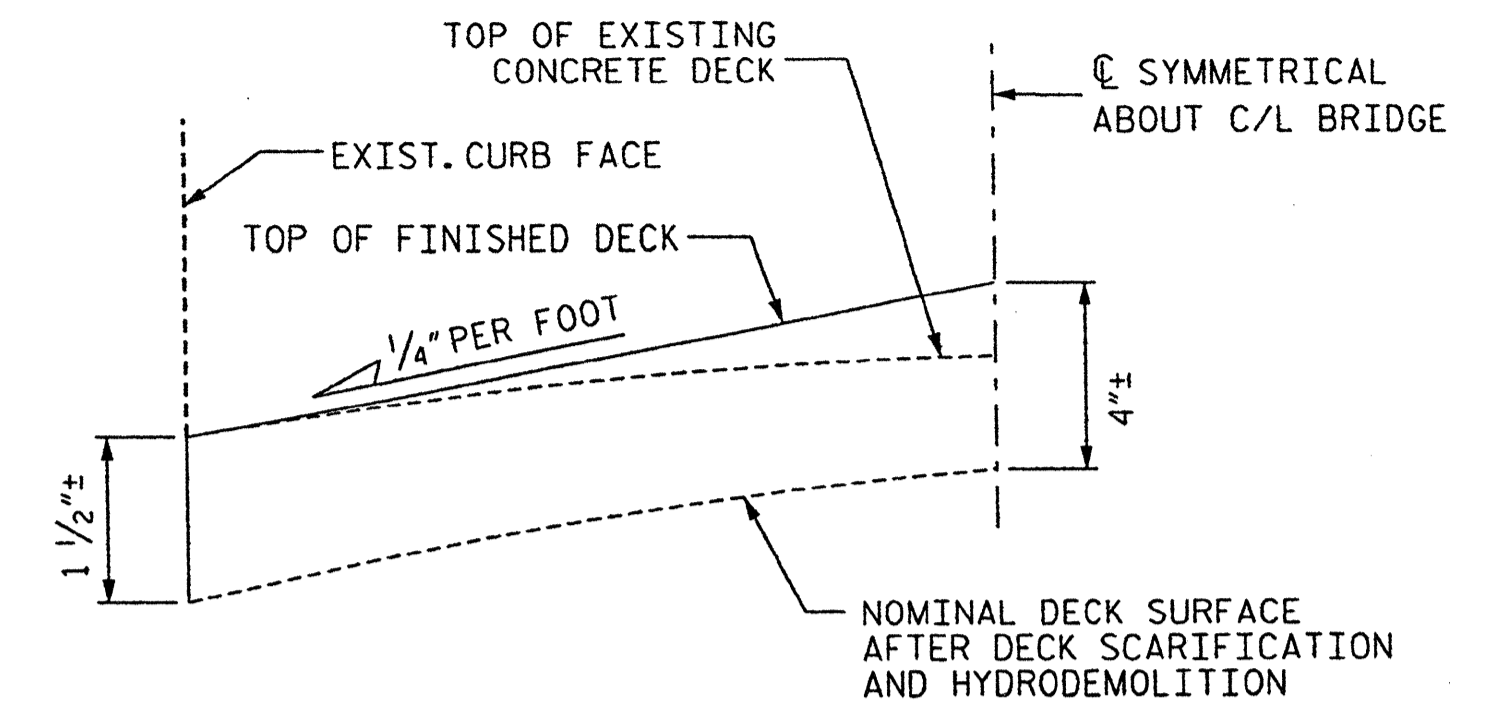


EBL CONSTRUCTION

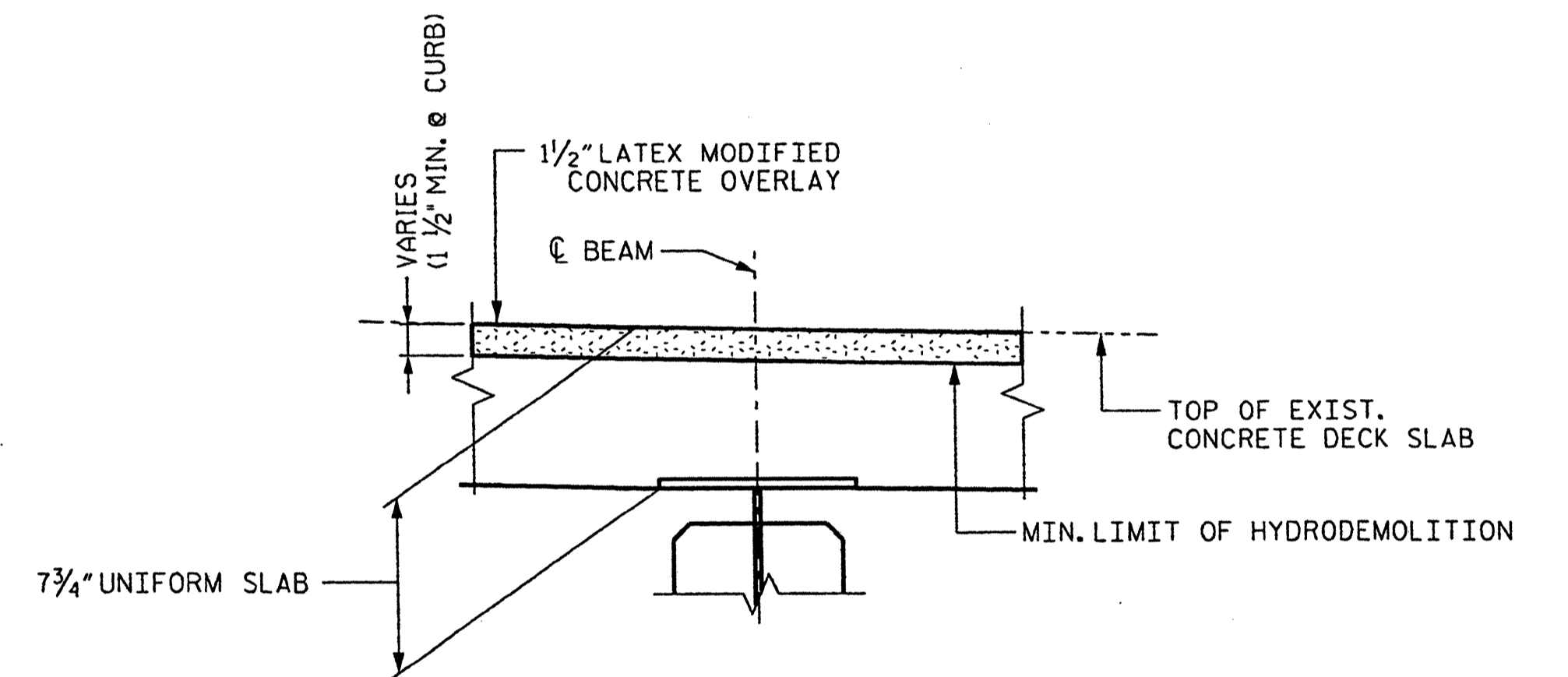


EBL CONSTRUCTION

EXISTING THRIE BEAM RETROFIT TO BE REMOVED, STOCKPILED AND REPLACED ONLY AS NECESSARY FOR DECK REHABILITATION (TYP.)



BRIDGE CROSS SLOPE SCHEMATIC FOR DECK OVERLAY



EXIST. SLAB 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.

ALL DIMENSIONS SHOWN ARE APPROXIMATE.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

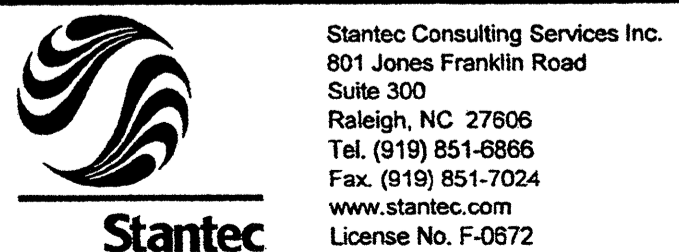
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BRIDGE TYPICAL SECTION

DECK REHAB. FOR BRIDGE NO. 230

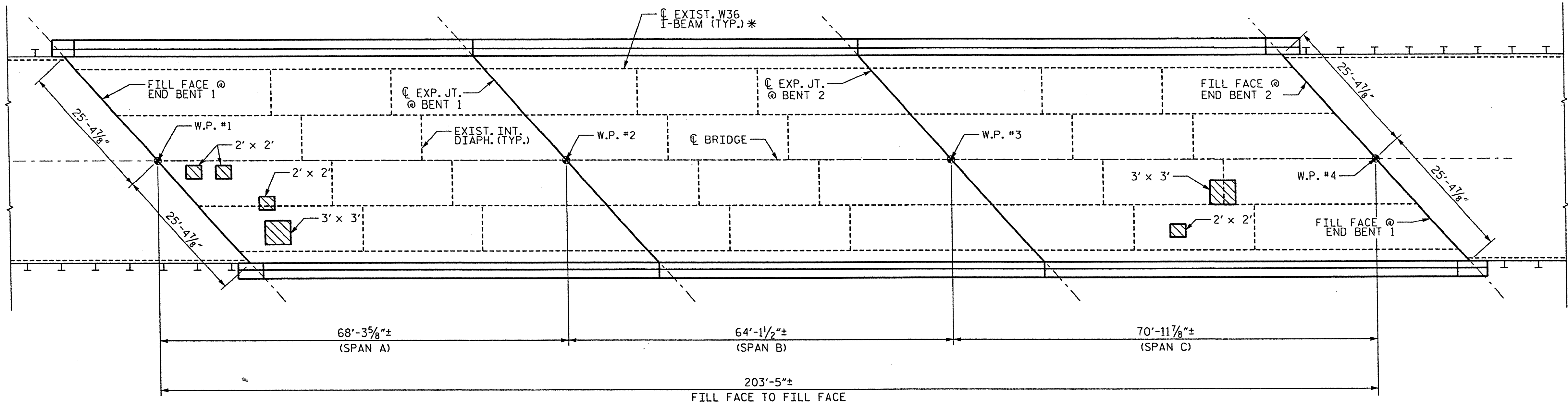
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-34	
1			3			TOTAL SHEETS	
2			4			77	

Joseph Kelvington
 11/15/11
 PROFESSIONAL ENGINEER
 STATE OF NORTH CAROLINA
 SEAL
 13406
 JOSEPH T. KELVINGTON



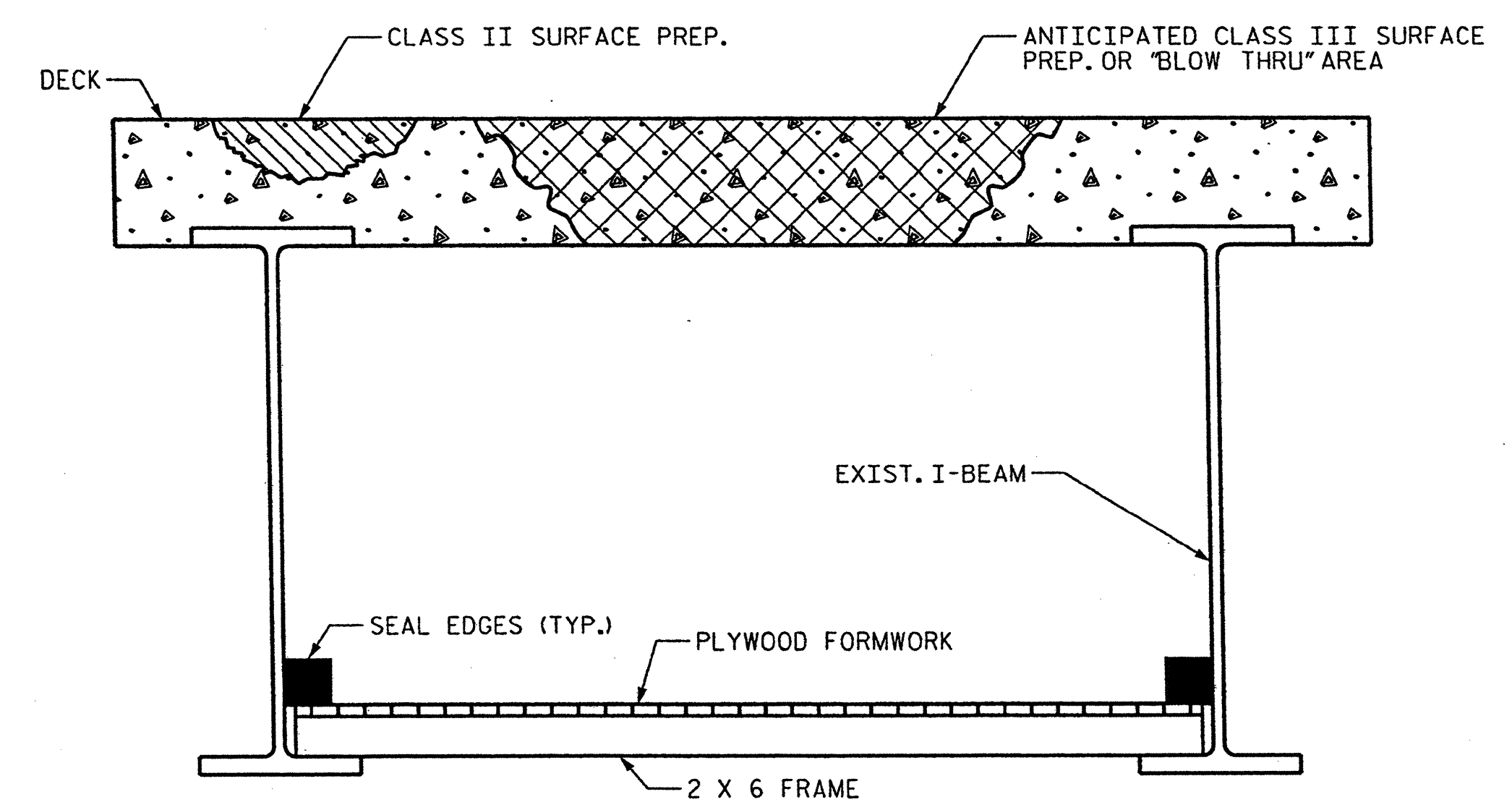
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 801 Jones Franklin Road
 Suite 300
 Raleigh, NC 27806
 Tel. (919) 851-8866
 Fax. (919) 851-7024
 www.stantec.com
 License No. F-0672

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



PLAN OF SPANS A THRU C - DECK REPAIRS

NOTE: EXISTING PARAPET AND THRIE BEAM DETAIL NOT SHOWN FOR CLARITY



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

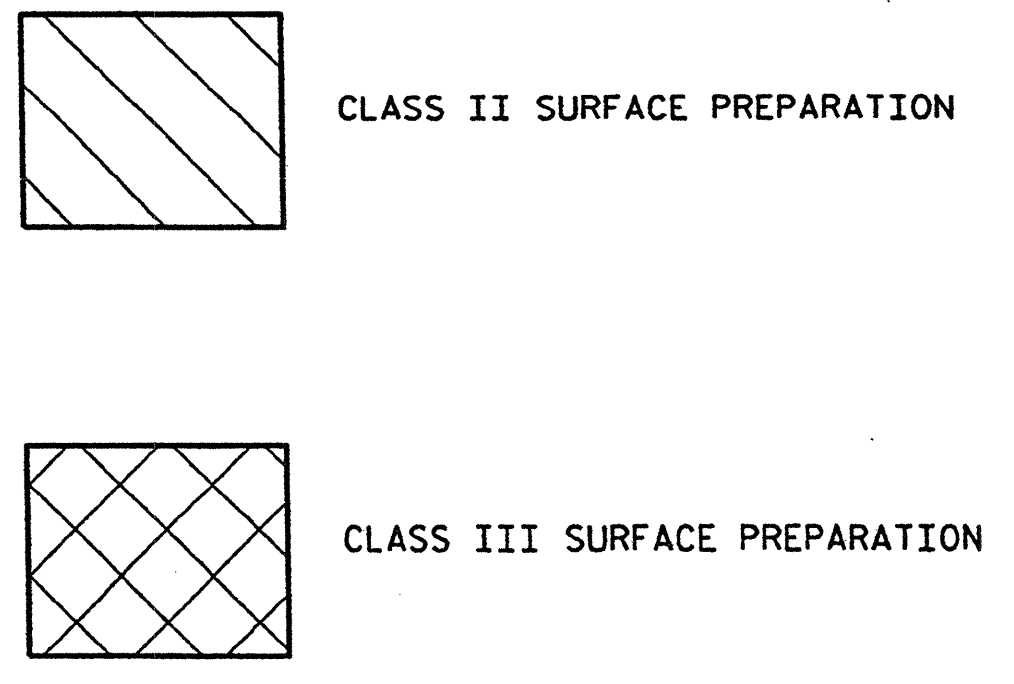
A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALL IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.

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.

SEE HYDRO-DEMOLITION SPECIAL PROVISIONS.



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

NOTE:

CLASS II SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**DECK REPAIR DETAILS
 SPANS A THRU C**

DECK REHAB. FOR BRIDGE NO. 230

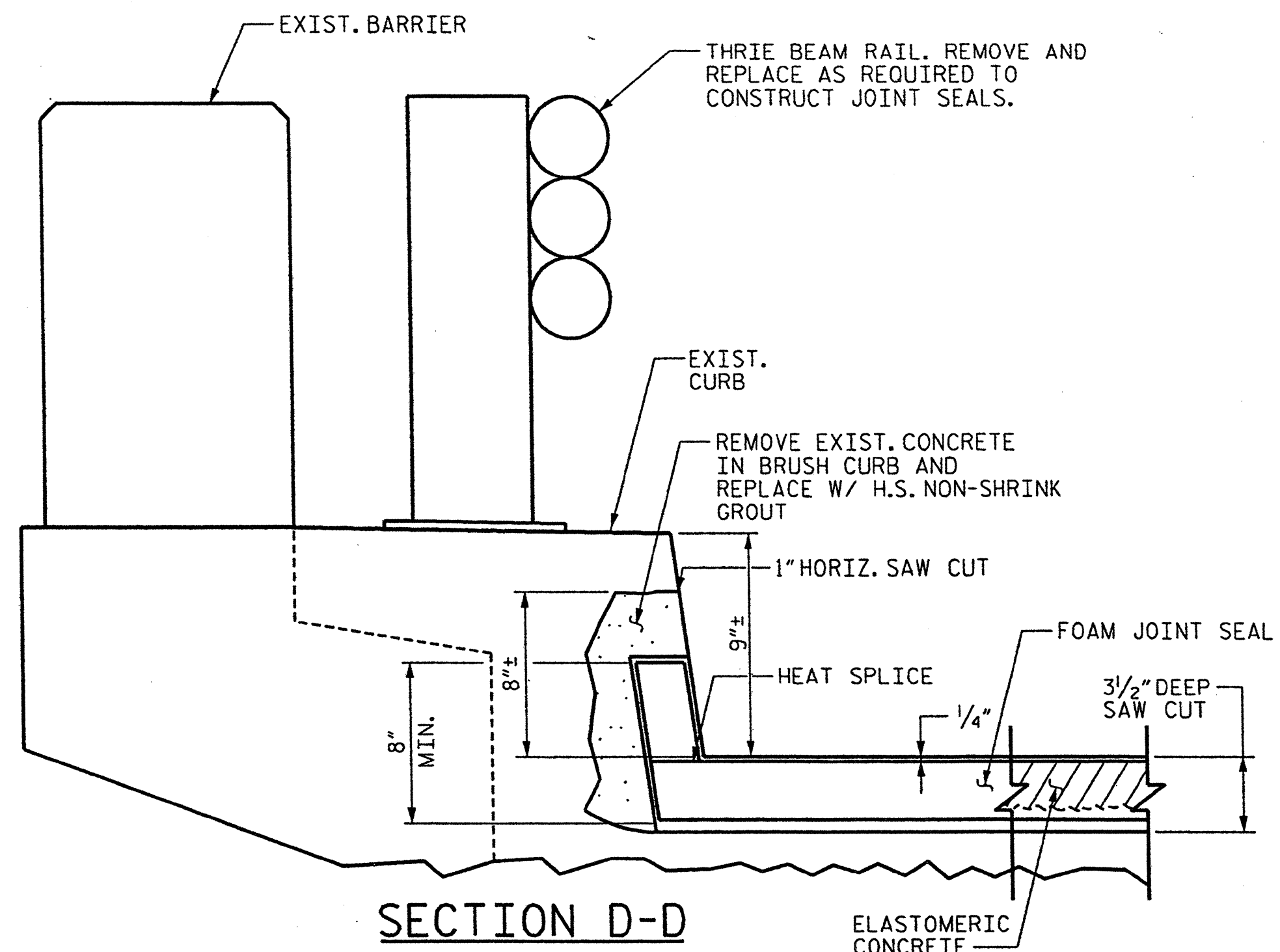
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S- 35	
1			3			TOTAL SHEETS	
2			4			77	

Joseph I. Kelvington
 11/20/11
 PROFESSIONAL ENGINEER
 STATE OF NORTH CAROLINA
 LICENSE NO. 3406

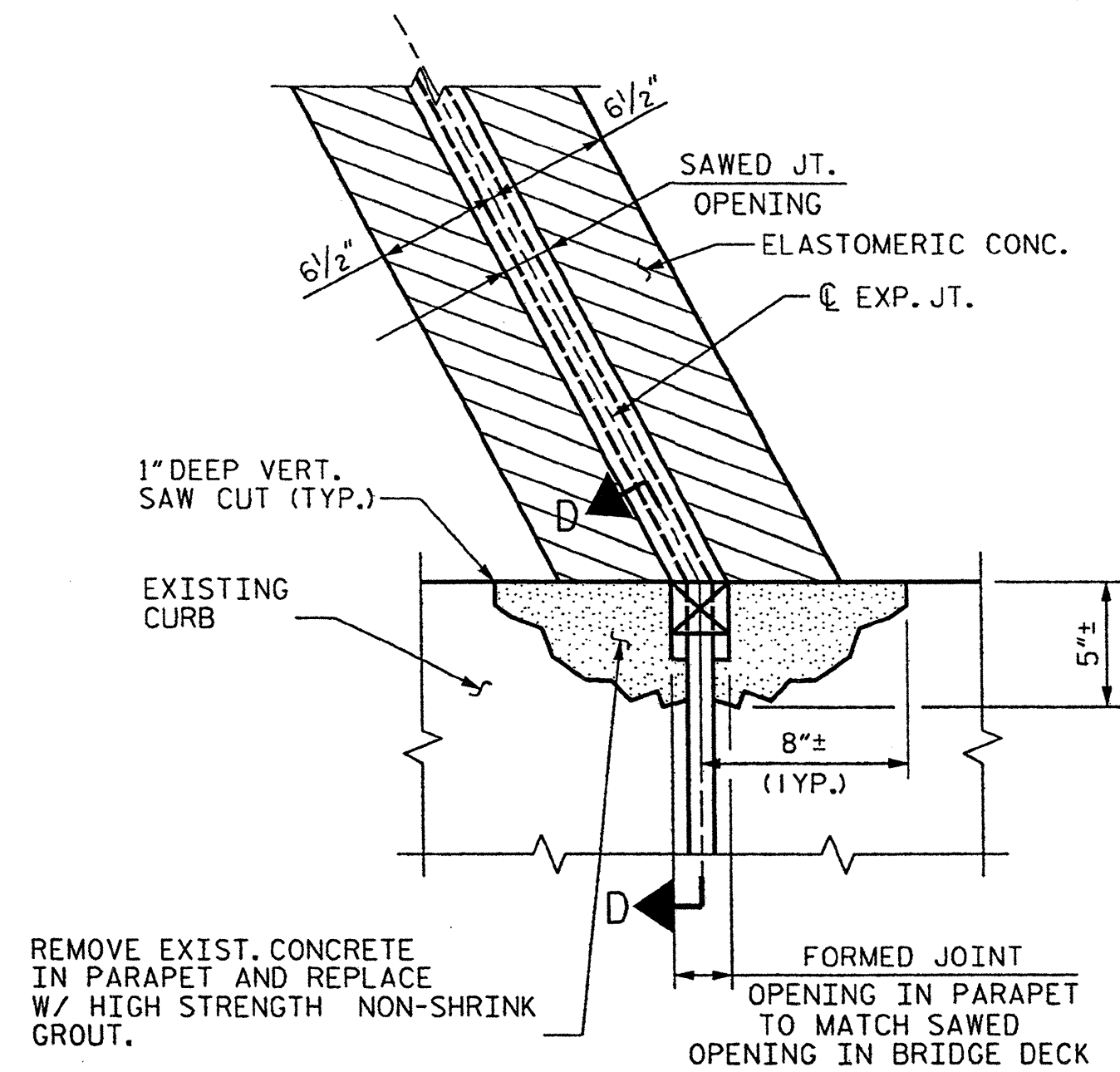
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DRAWN BY : K R TYLER DATE : 11/11
 CHECKED BY : J I KELVINGTON DATE : 11/11

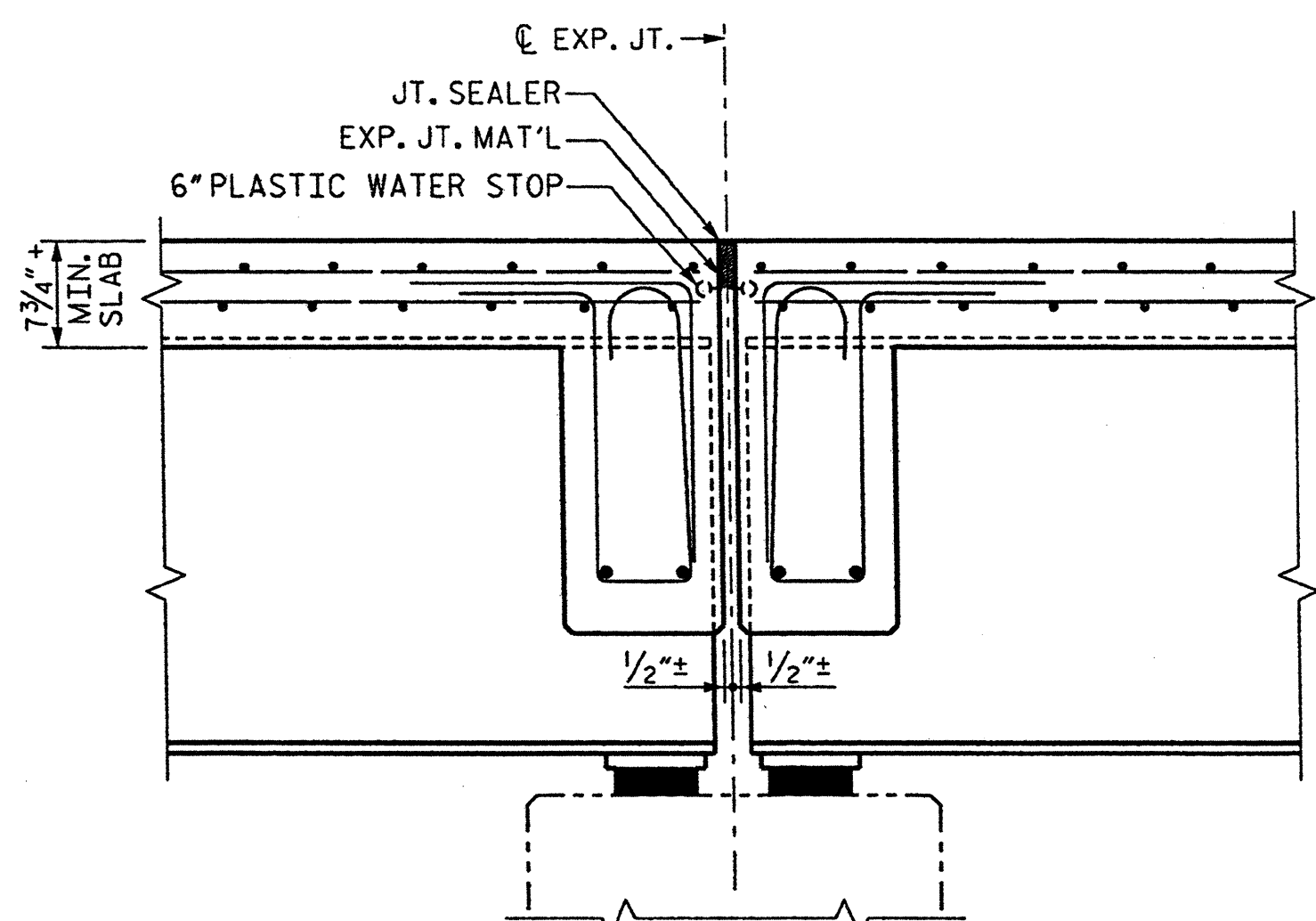
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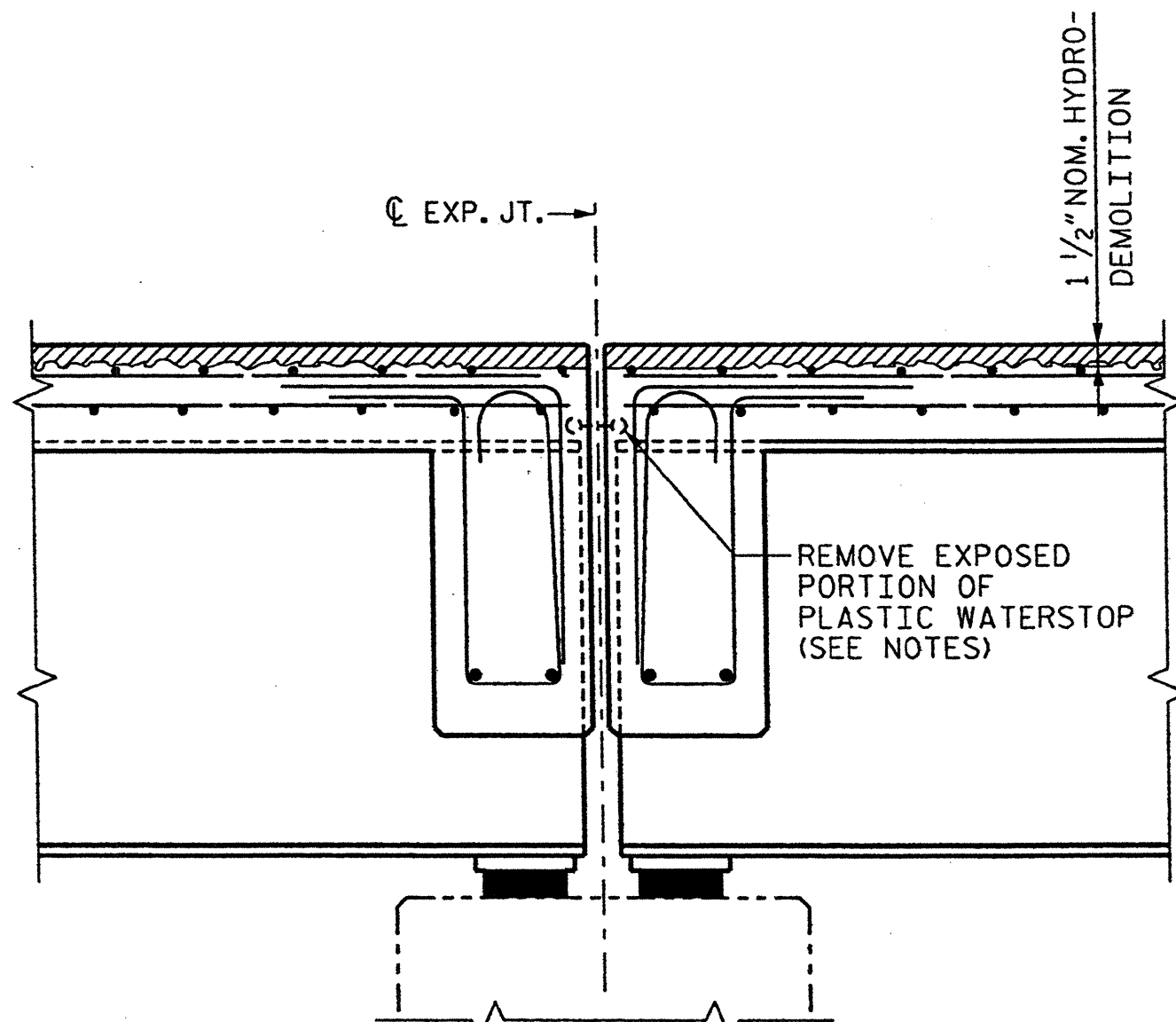
SECTION D-D
 CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.
 FOR HIGH STRENGTH GROUT, SEE SPECIAL PROVISION, "GROUT FOR STRUCTURES"
 HIGH STRENGTH GROUT SHALL BE APPROVED BY THE ENGINEER.



HIGH STRENGTH GROUT SHALL BE APPROVED BY THE ENGINEER
 FOR HIGH STRENGTH GROUT, SEE THE SPECIAL PROVISION ENTITLED "GROUT FOR STRUCTURES"
PARTIAL PLAN @ JOINT BENT 1&2

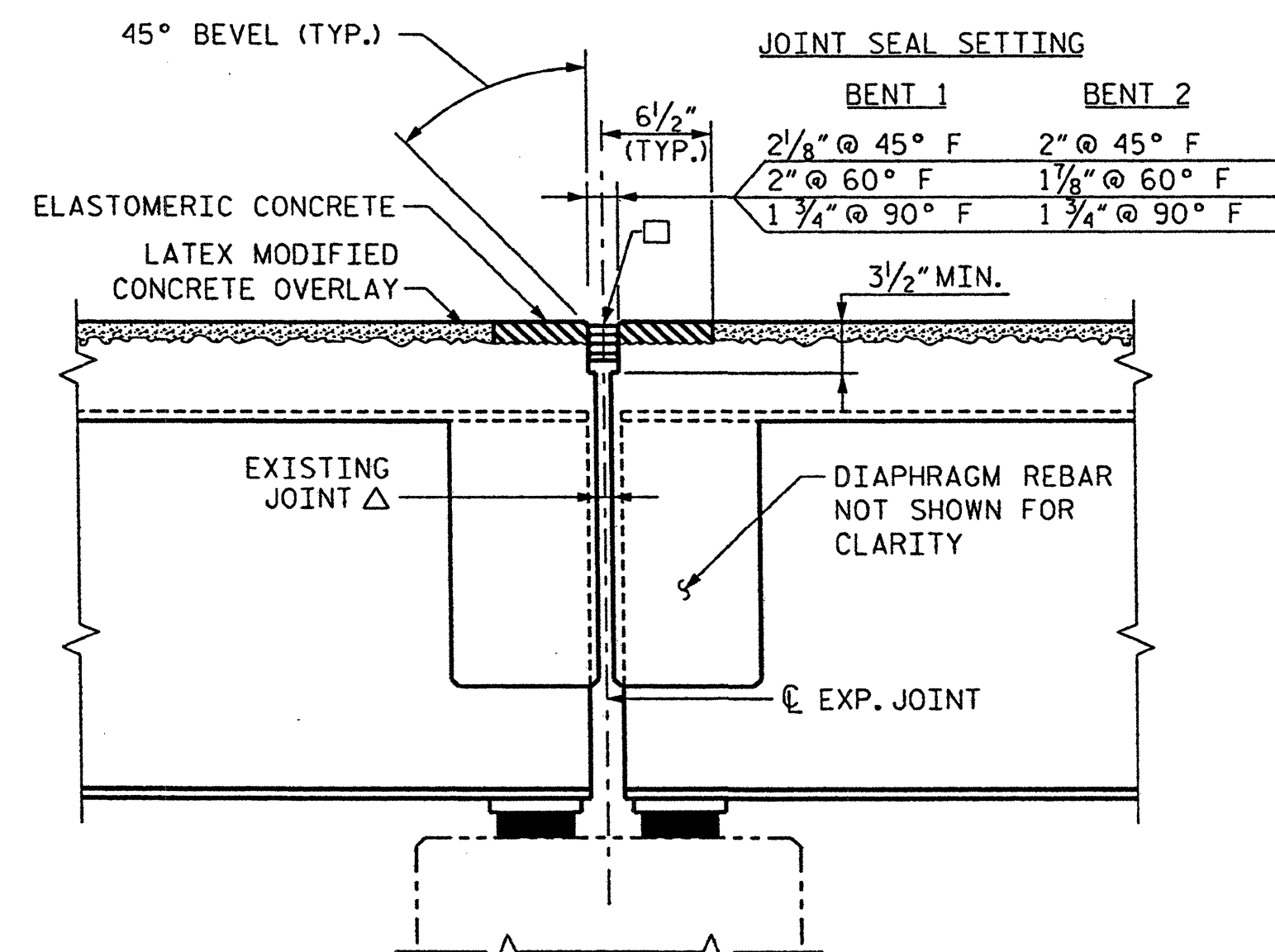


SECTION B-B
(EXISTING JOINT)



SECTION B-B
(MIN. EXISTING JOINT DEMOLITION)

NOTES:
 1. ALL LOOSE AND UNSOUND CONCRETE SHALL BE REMOVED. IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, THE ENTIRE WATERSTOP SHALL BE REMOVED.
 2. RETAIN ALL EXIST. REINF. STEEL CLEAN AND REPAIR AS REQUIRED.



SECTION B-B
(PROPOSED FOAM JOINT SEAL EXPANSION)

NOTE: FOR FOAM JOINT SEAL, SEE SPECIAL PROVISIONS.
 THE INSTALLED EVAZOTE 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.
 EXIST. JOINT OPENING @ BENTS 1 & 2 = 1".

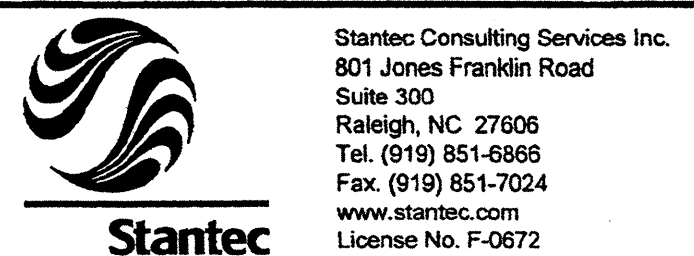
JOINT SEAL SETTING

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

ELASTOMERIC CONCRETE	
LOCATION	QTY
BENT 1	6.35 C.F.
BENT 2	6.35 C.F.

TOTAL ELASTOMERIC CONC. = 6.7 C.F.
 TOTAL ELASTOMERIC CONC. = 0.5 C.Y.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____



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

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

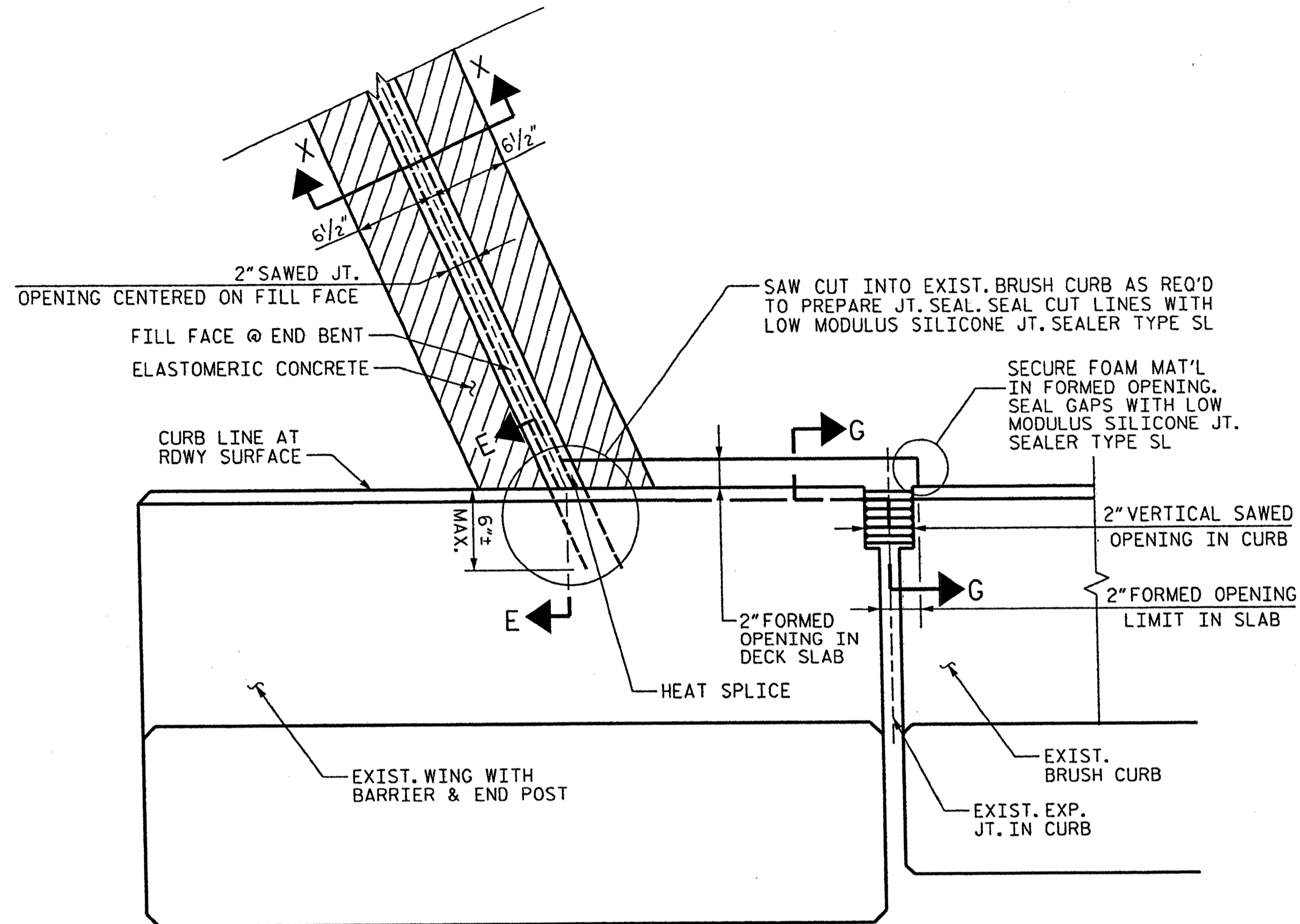
EXPANSION JOINT DETAILS

DECK REHAB. FOR BRIDGE NO. 230

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S- 36	
1			3			TOTAL SHEETS	
2			4			77	

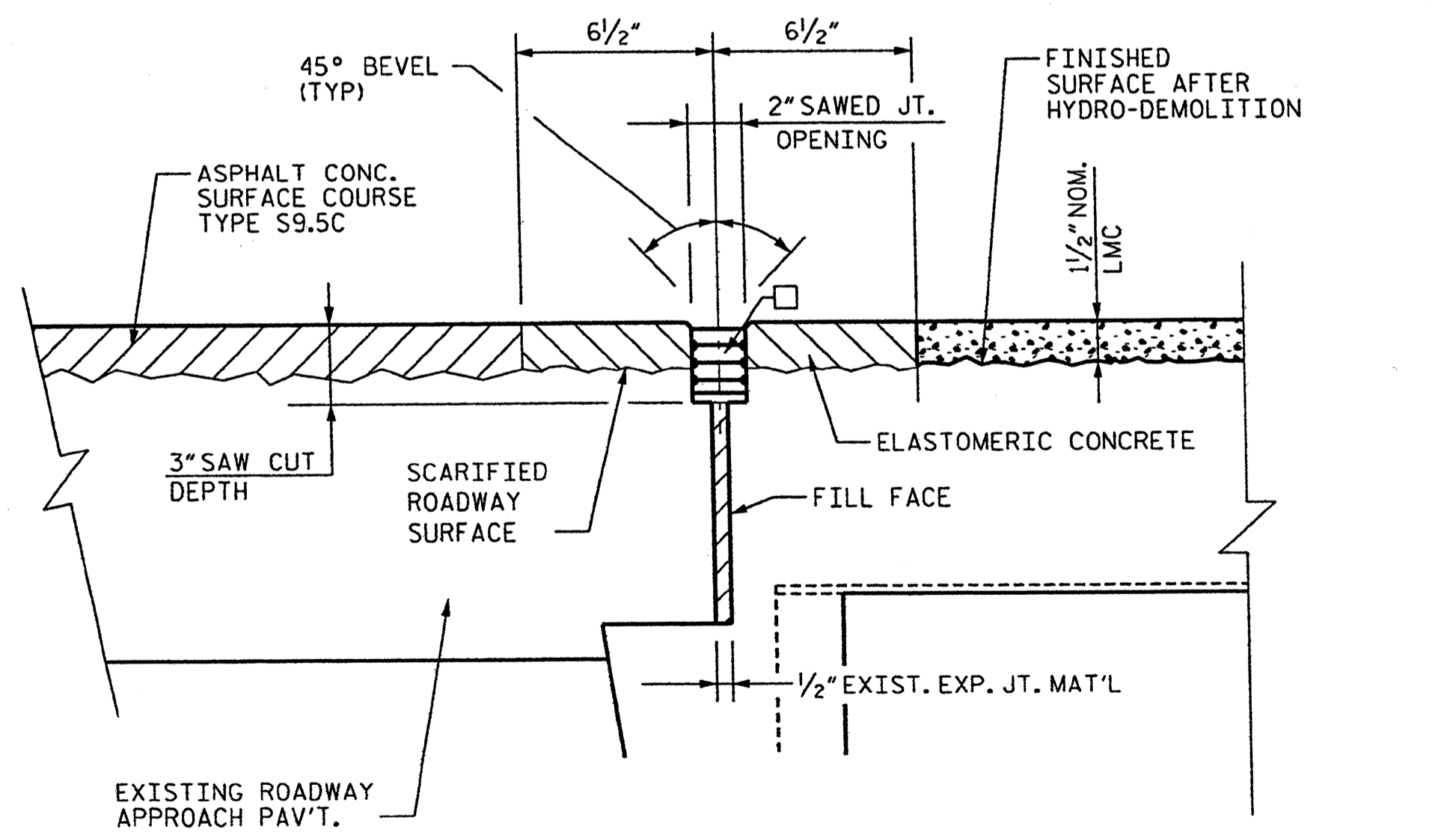
Joseph H. Hume
 PROJECT ENGINEER
 13406

BS 17BP.14.P.3 Henderson Co. Bridge 230A.Dr.cawing\BP230_DET.dgn 12/15/2011 1:33:20 PM jgelle



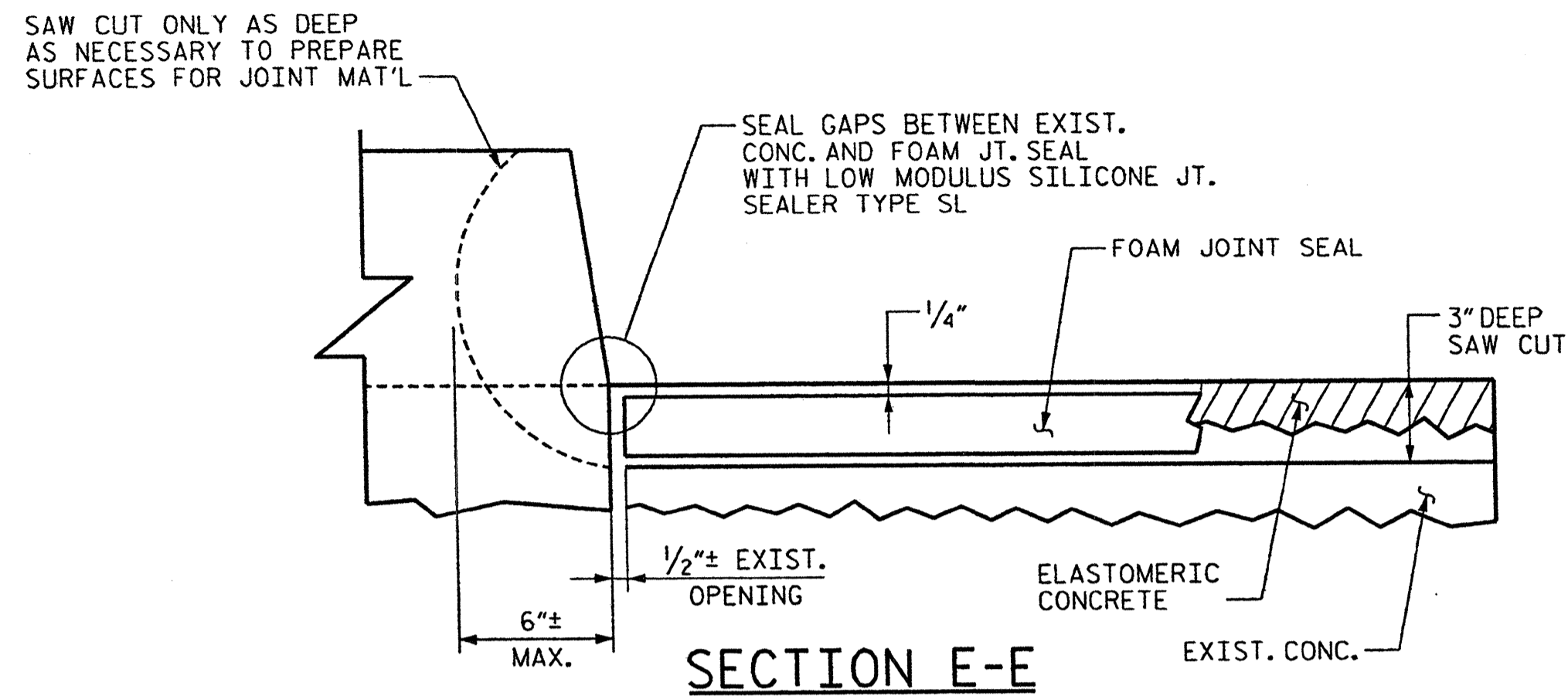
PARTIAL PLAN @ END BENT #1
(END BENT #2 SIMILAR)

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

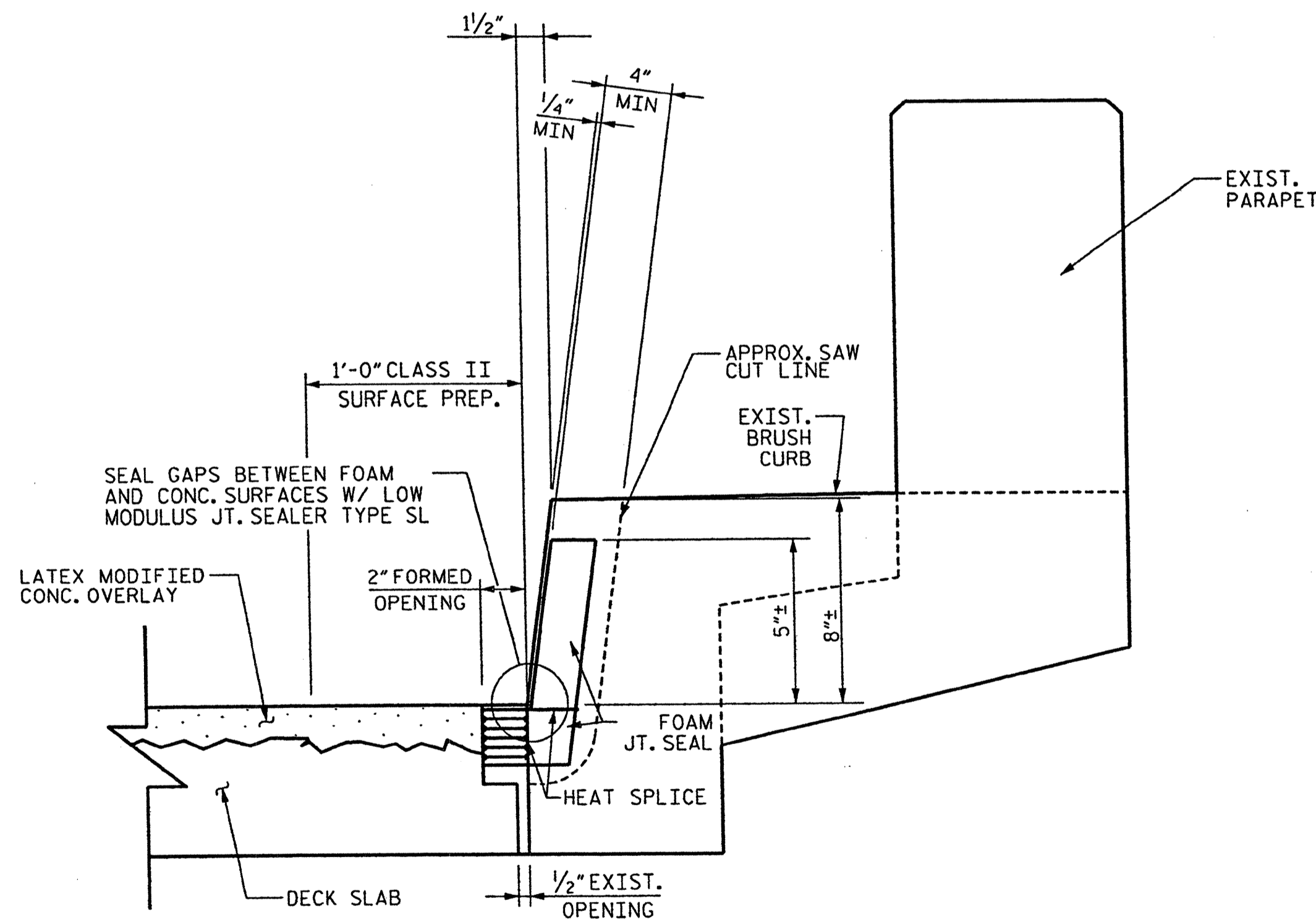


SECTION X-X

□ - USE 2.500" X 2.00" UNCOMPRESSED FOAM JOINT SEAL



SECTION E-E



SECTION G-G

NOTE: THRIE BEAM NOT SHOWN FOR CLARITY. REMOVE AND REPLACE AS REQUIRED TO CONSTRUCT JOINT SEALS.

ELASTOMERIC CONCRETE	
LOCATION	QTY
END BENT 1	6.1 C.F.
END BENT 2	6.1 C.F.

TOTAL ELASTOMERIC CONC. = 12.2 C.F.
TOTAL ELASTOMERIC CONC. = 0.5 C.Y.

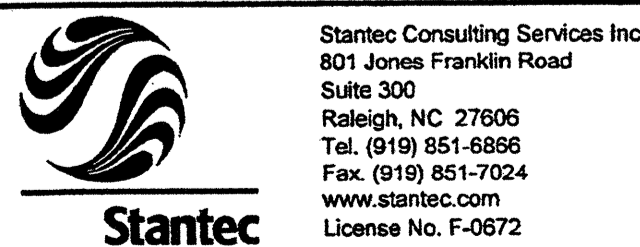
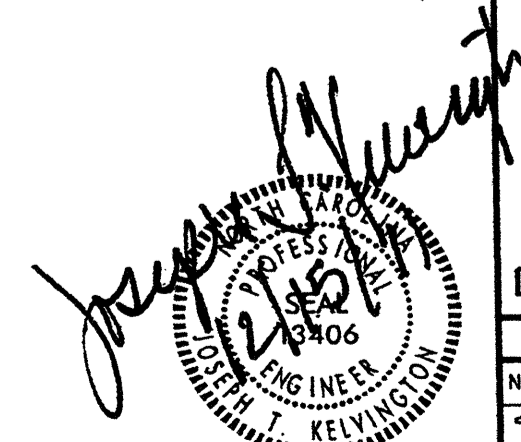
PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT JOINT SEAL DETAILS

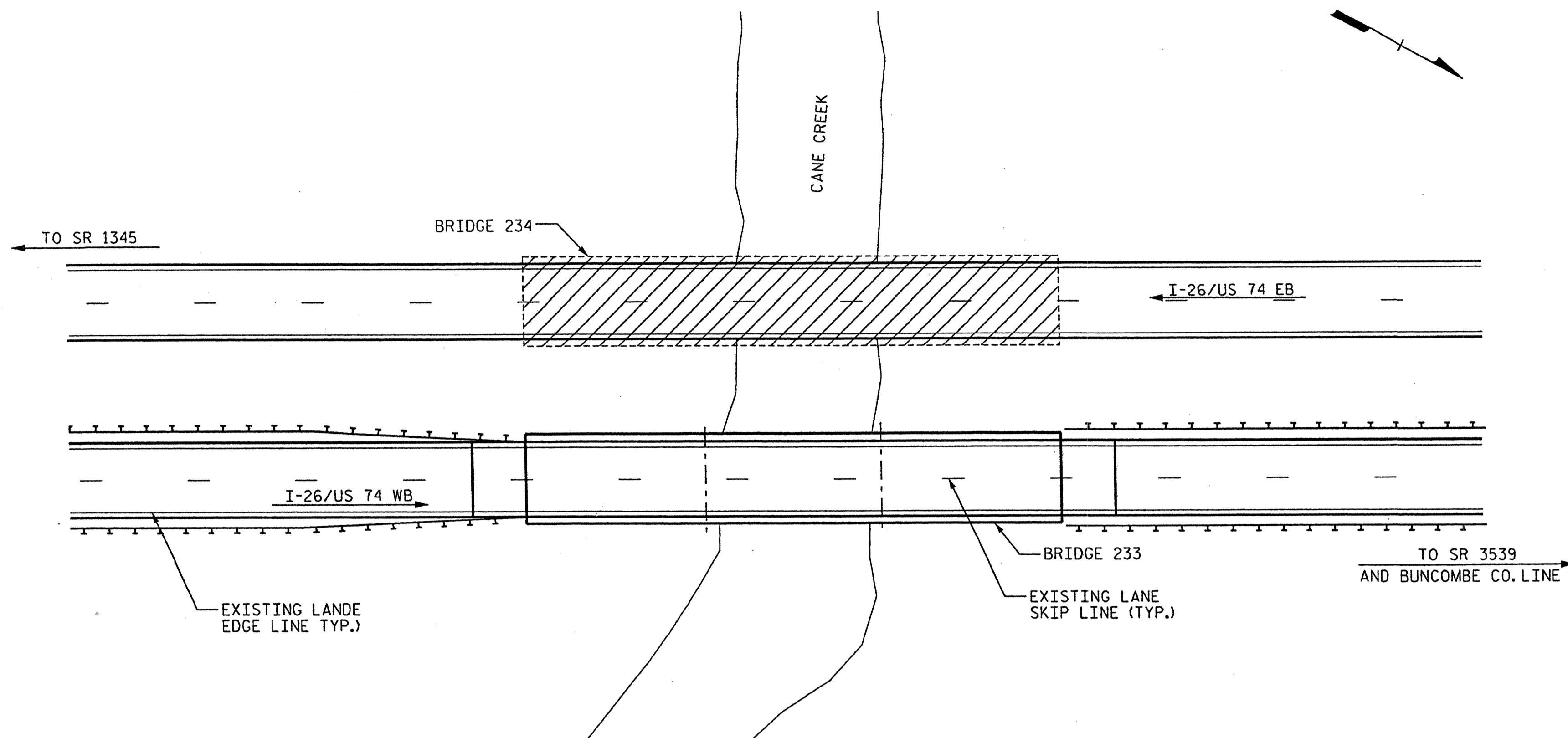
DECK REHAB. FOR BRIDGE NO. 230

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-37	
1			3			TOTAL SHEETS 77	
2			4				



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

12/15/2011 3:28:08 PM jgelle \\NBS\17BP.14.P.3_Henderson-Polk Co.\Henderson Co. Bridge\230\Drawing\BP230_Def2.dgn



BRIDGE 233 ON SR I-26/US 74

LOCATION: BRIDGE 440233, I-26/US 74 WBL OVER CANE CREEK 1.6 MILES NORTH OF JUNCTION WITH US 25

FOR BRIDGE 234, I-26/US 74 EBL SEE SHTS. S-46 THRU S-53.

TOTAL BILL OF MATERIAL											
INCIDENTAL MILLING	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	ASHPHALT CONC. SURF. COURSE TYPE S9.5C
SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	CU.YDS.	CU.YDS.	SO.YDS.	LUMP SUM	SO.FT.	TON
311	616.8	0.0	10.7	1.1	616.8	0.1	42.0	616.8	LUMP SUM	5383	25

* 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.14.P.3

HENDERSON COUNTY

STATION: _____

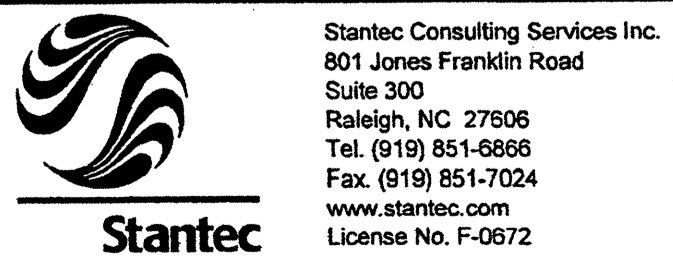
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LOCATION SKETCH
AND TOTAL
BILL OF MATERIAL

DECK REHAB. FOR BRIDGE NO. 233

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
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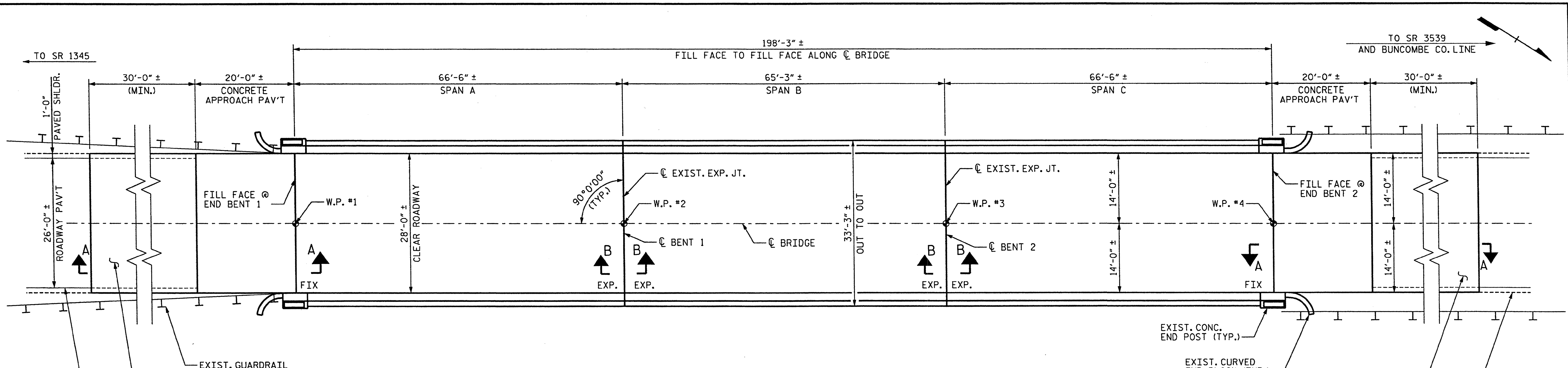
Joseph Kelvington
Professional Engineer
13406
North Carolina
Seal



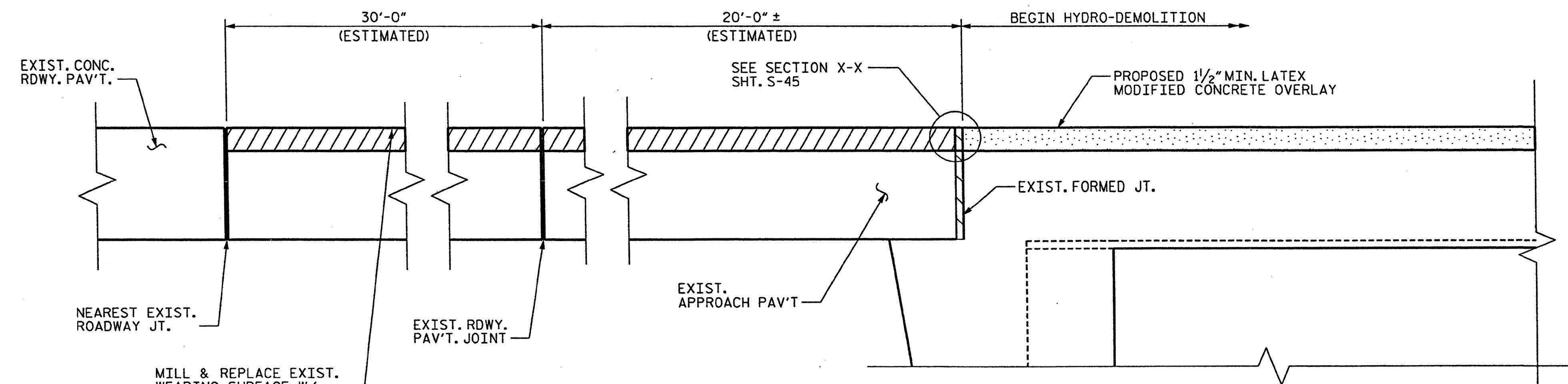
Stantec Consulting Services Inc.
801 Jones Franklin Road
Suite 300
Raleigh, NC 27606
Tel. (919) 851-6866
Fax. (919) 851-7024
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DRAWN BY : B. C. MACYOWSKY DATE : 11-22-11
CHECKED BY : J. T. KELVINGTON DATE : 11-22-11

11/19/2012 1:55:51 PM Joelle 17BP.14.P.3 Henderson-Polk Co. Bridge 233.Dwg 17BP.14.P.3.LS.B01.dgn

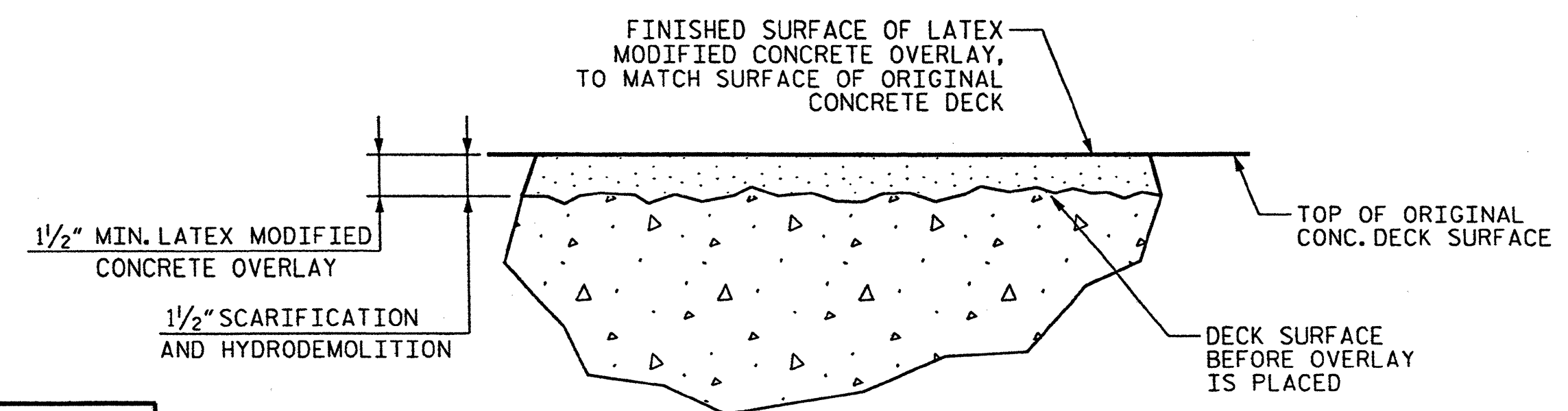


PLAN VIEW OF SPANS A-C



SECTION A-A

PAV'T IS ASSUMED. MILL EXISTING BRIDGE APPROACH PAV'T SURFACE AND OVERLAY WITH 1/2" MIN. ASPHALT CONC. SURFACE COURSE TYP S9.5C



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

- 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. S-41.
 - 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. S-44.
 - FOR END BENT JOINT SEAL DETAILS, SEE SHT. S-45.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF BRIDGE

DECK REHAB. FOR BRIDGE NO. 233

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

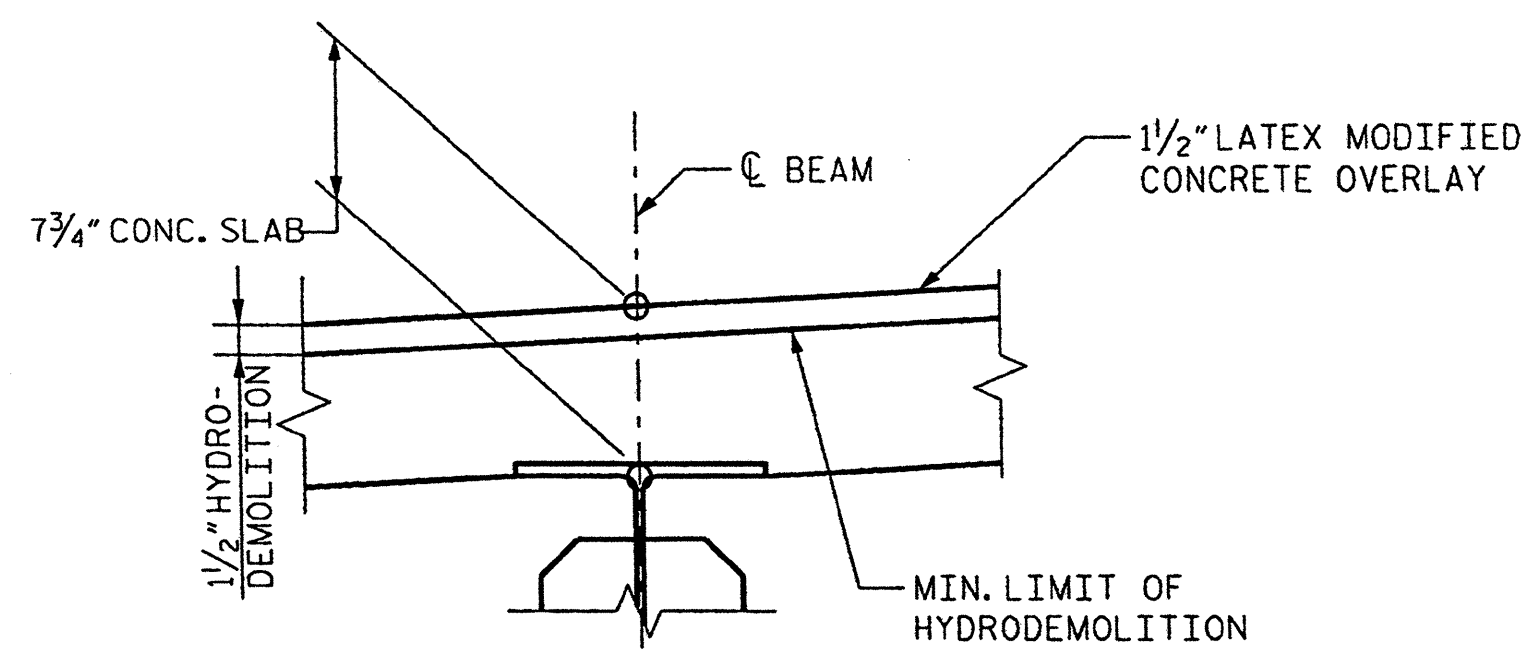
SHEET NO. S-39
 TOTAL SHEETS 77

Joseph Kelvington
 11/22/11
 SEAL 13406
 ENGINEER

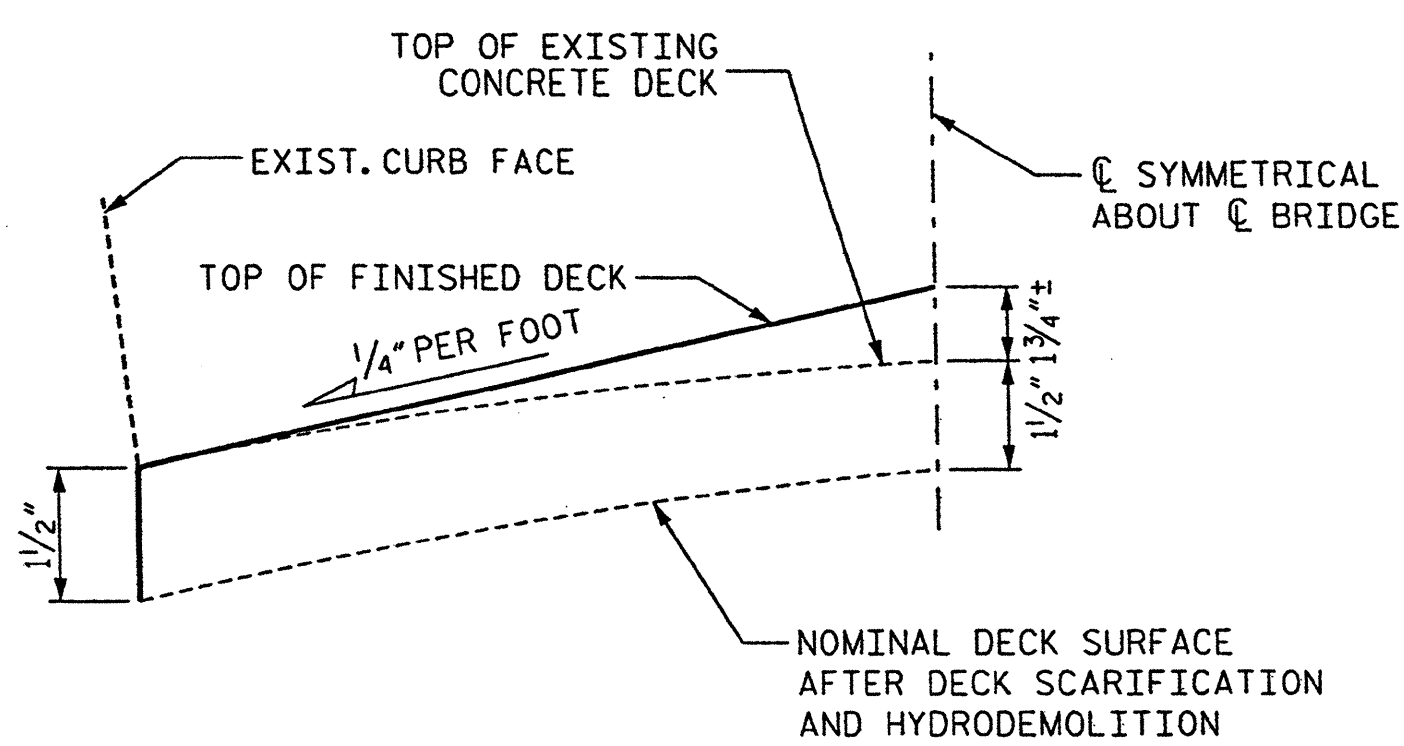


DRAWN BY: B. C. MACYOWSKY DATE: 11-22-11
 CHECKED BY: J. T. KELVINGTON DATE: 11-22-11

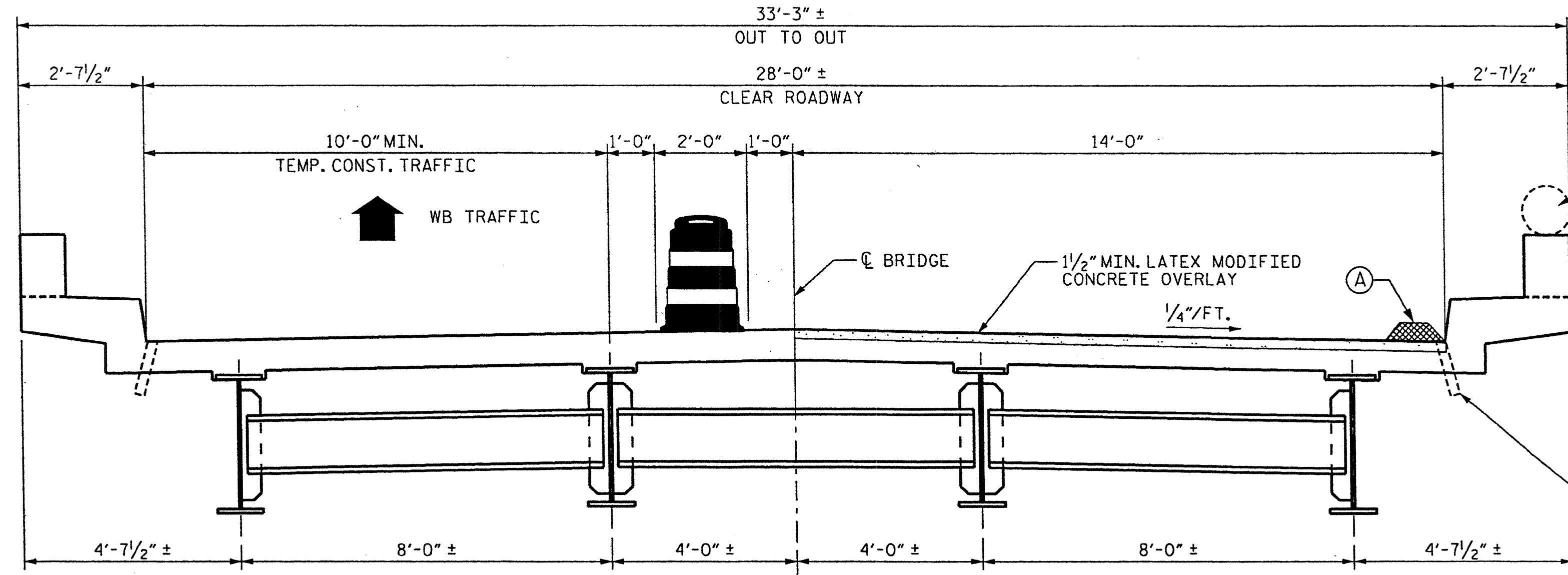
P.3 Henderson-Polk Co. Henderson Co. Bridge 233\Drawing\BP440233.Dwg_Plan.dgn 1/4/2012 4:43:50 PM cbaker



EXIST. SLAB DETAIL

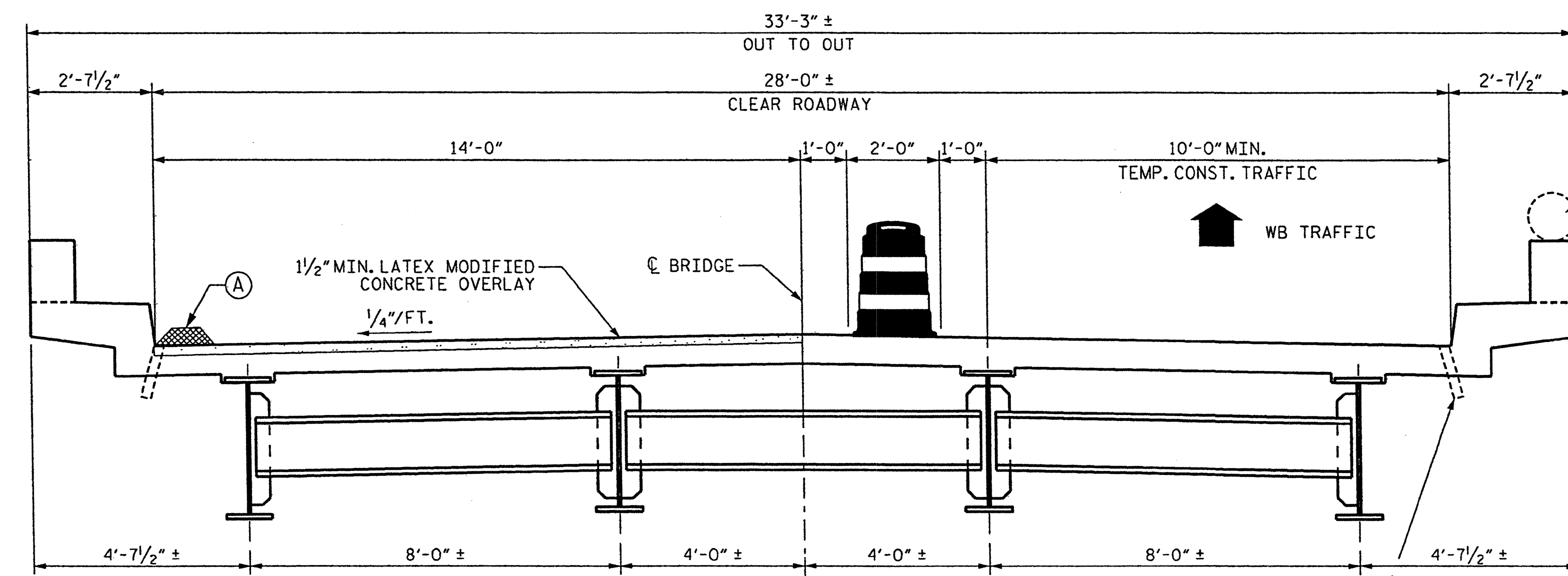


BRIDGE CROSS SLOPE SCHEMATIC FOR DECK OVERLAY



TYPICAL SECTION

SPAN A, B, C
NOTE: ALL DIMENSIONS SHOWN ARE APPROXIMATE.



TYPICAL SECTION

SPAN A, B, C
NOTE: ALL DIMENSIONS SHOWN ARE APPROXIMATE.

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.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

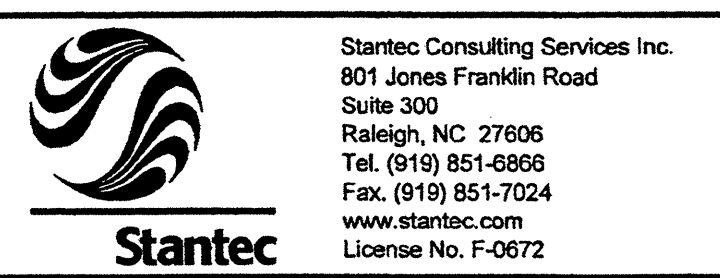
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION
DECK REHAB. FOR BRIDGE NO. 233

REVISIONS						SHEET NO. S-40
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 77
2			4			

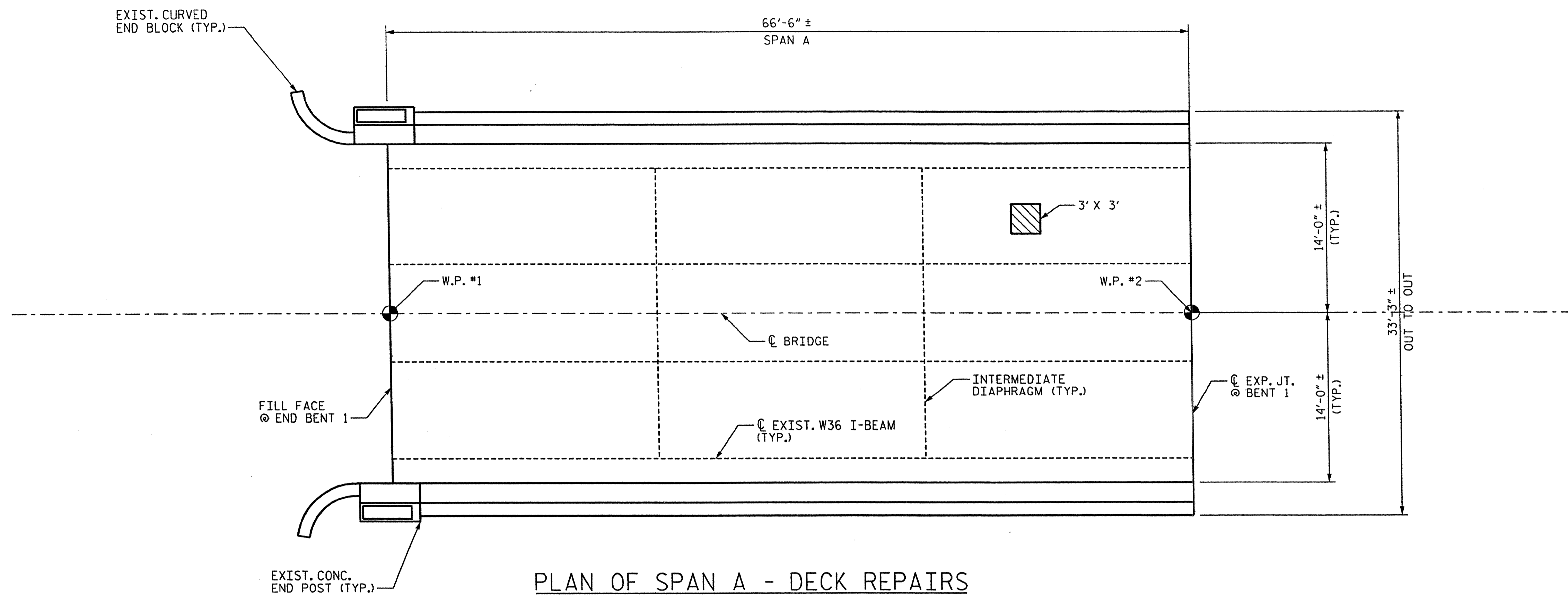
Handwritten signature and stamp
PROF. ENGINEER
13406
J. T. KELVINGTON

4.P.3 Henderson-Polk Co. Bridge 233 Drawing 17BP.14.P.3 Typ Sect.dgn 12/15/2011 10:50:07 AM Joelle



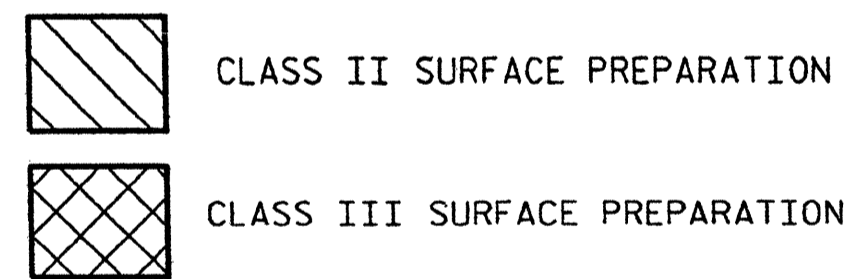
Stantec Consulting Services Inc.
801 Jones Franklin Road
Suite 300
Raleigh, NC 27606
Tel. (919) 851-6866
Fax. (919) 851-7024
www.stantec.com
License No. F-0872

DRAWN BY: B. C. MACYOWSKY DATE: 11-22-11
CHECKED BY: J. T. KELVINGTON DATE: 11-22-11

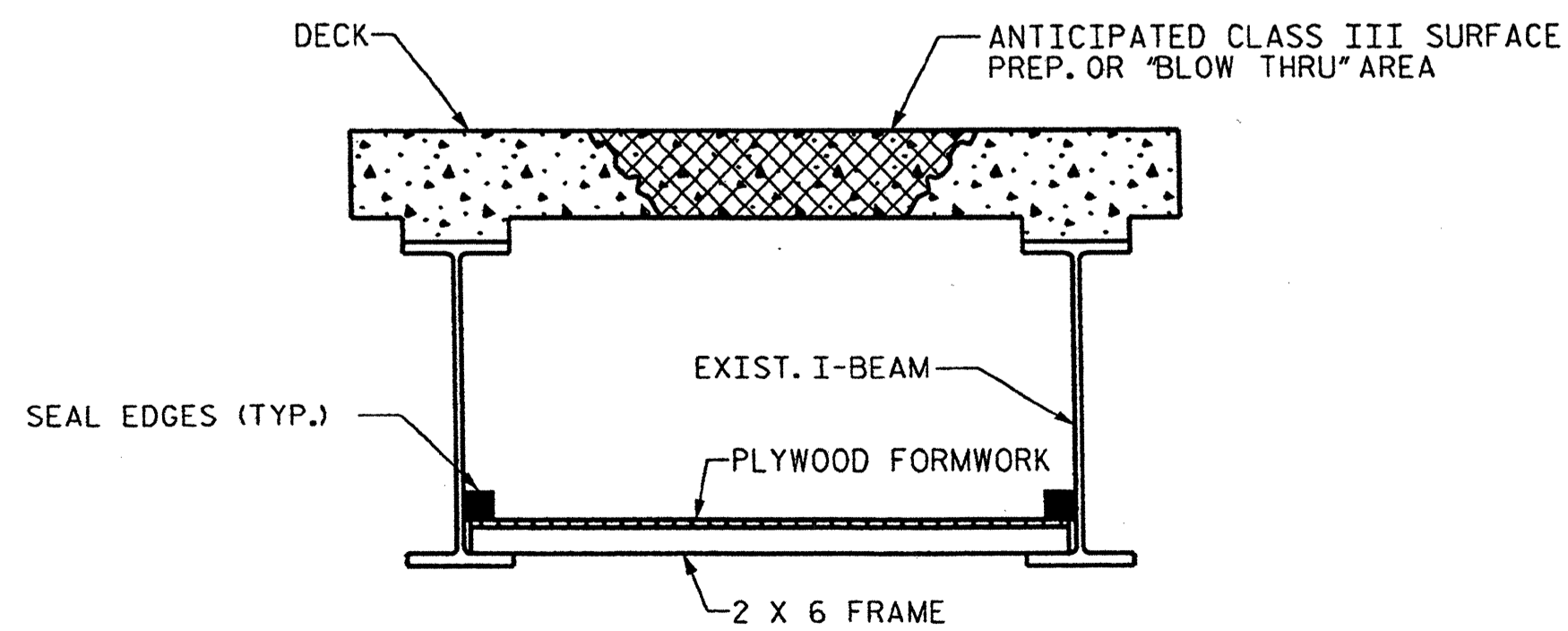


PLAN OF SPAN A - DECK REPAIRS

NOTE: EXIST. BARRIER AND END POST DETAILS ARE NOT SHOWN FOR CLARITY.



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



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

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 REPRESENTATIVE AND DOES 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 IN LIEU OF BLOW THRU CONTAINMENT.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK REPAIR DETAILS

DECK REHAB. FOR BRIDGE NO. 233

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			77
2			4			

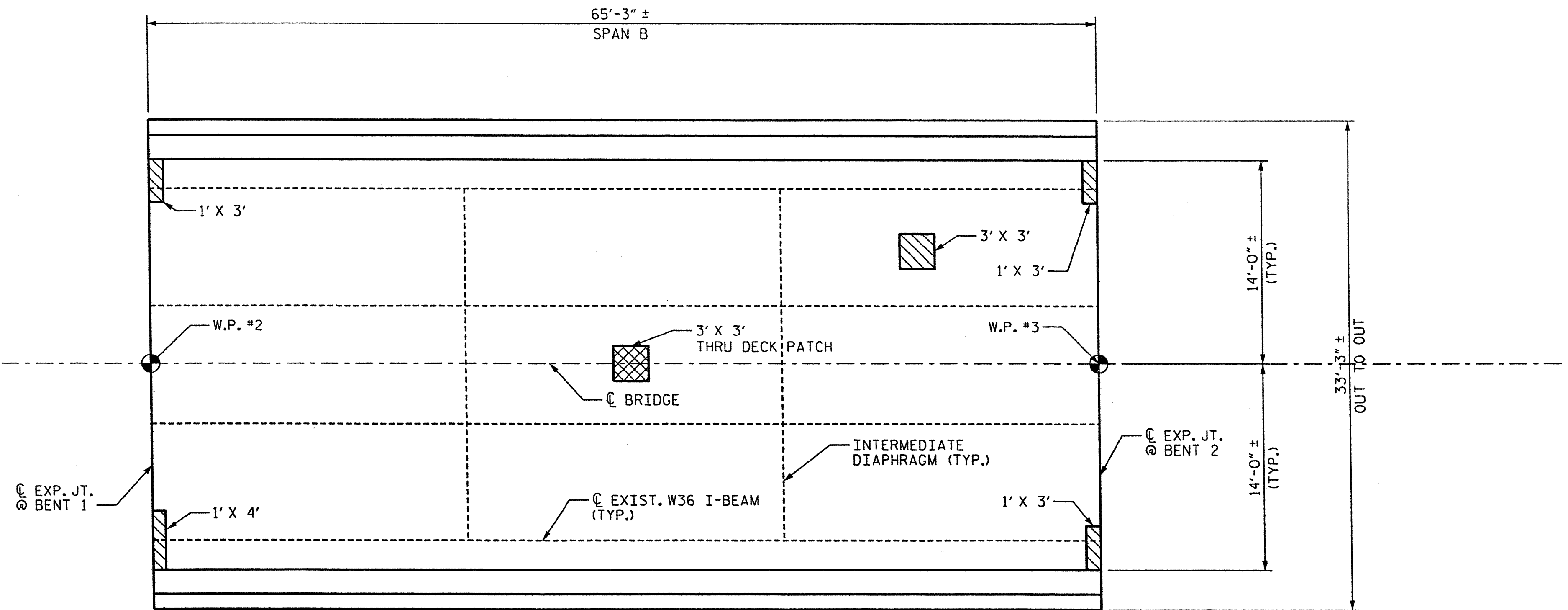
S-41

Joseph Kelvington
 PROFESSIONAL ENGINEER
 No. 406
 STATE OF NORTH CAROLINA

12/15/2011 11:28 AM Joelle
 13 Henderson-Folk Co. Bridge 233\Drawings\BP40233_Repair\Plan.dgn

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DRAWN BY : B. C. MACYOWSKY DATE : 11-22-11
 CHECKED BY : J. T. KELVINGTON DATE : 11-22-11



PLAN OF SPAN B - DECK REPAIRS

NOTE: EXIST. BARRIER AND END POST DETAILS 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 IF AREA PERPENDICULAR TO 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 REPRESENTATIVE AND DOES 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 IN LIEU OF BLOW THRU CONTAINMENT.

PROJECT NO. WBS 17BP.14.P.3
 HENDERSON COUNTY
 STATION:

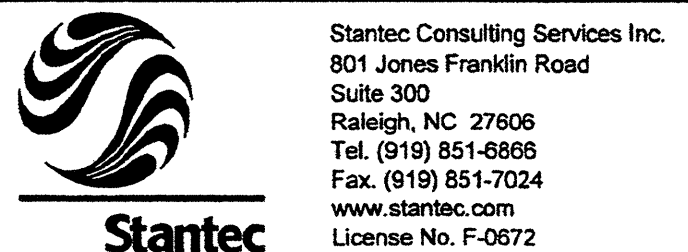
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK REPAIR DETAILS

DECK REHAB. FOR BRIDGE NO. 233

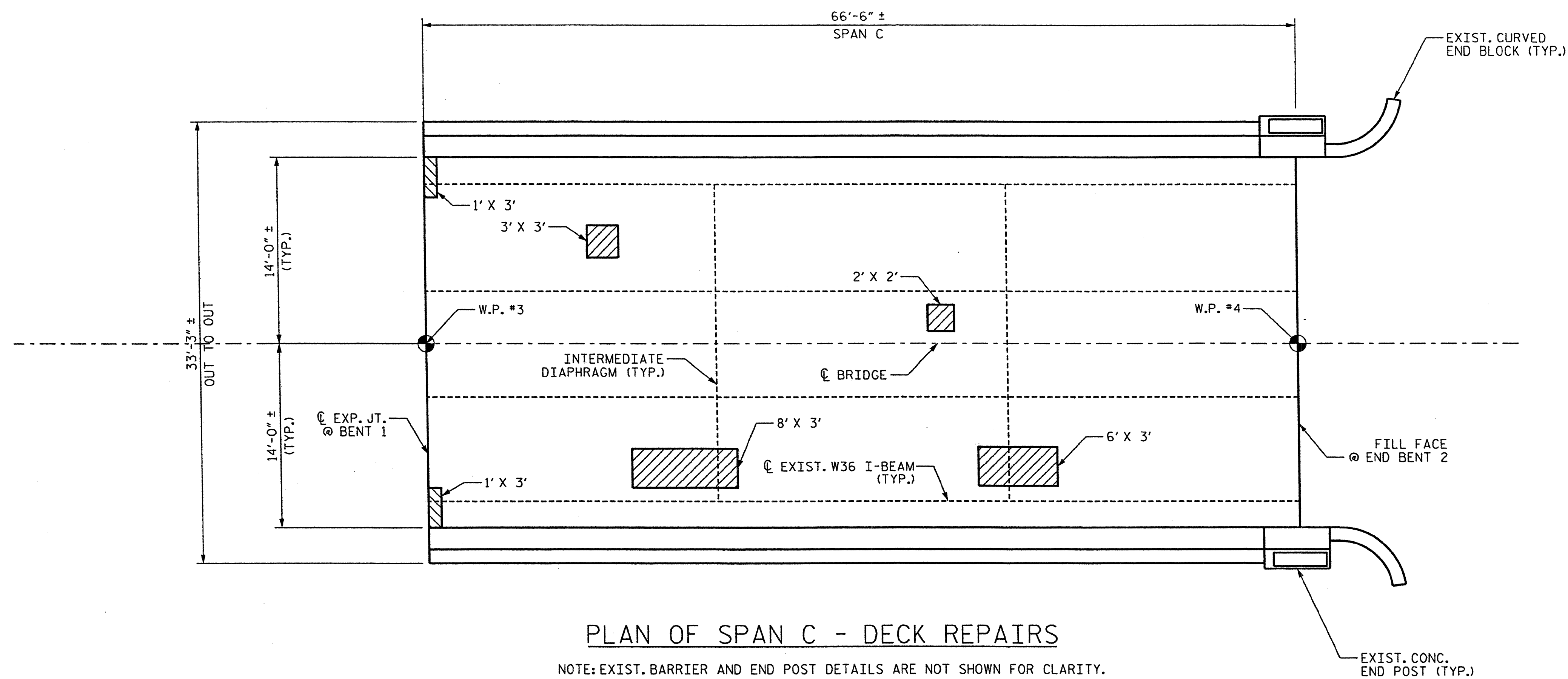
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-42
2			4			77

Joseph A. Kelvington
 PROFESSIONAL ENGINEER
 NO. 13406
 STATE OF NORTH CAROLINA



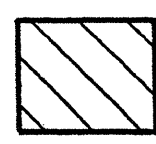
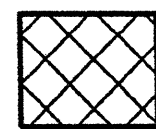
Stantec Consulting Services Inc.
 801 Jones Franklin Road
 Suite 300
 Raleigh, NC 27606
 Tel. (919) 851-8868
 Fax. (919) 851-7024
 www.stantec.com
 License No. F-0672

DRAWN BY : B. C. MACYOWSKY DATE : 11-22-11
 CHECKED BY : J. T. KELVINGTON DATE : 11-22-11



PLAN OF SPAN C - DECK REPAIRS

NOTE: EXIST. BARRIER AND END POST DETAILS ARE NOT SHOWN FOR CLARITY.

-  CLASS II SURFACE PREPARATION
-  CLASS III SURFACE PREPARATION

L X W = LENGTH OF AREA PARALLEL TO $\text{\textcircled{C}}$ BRIDGE X WIDTH IF AREA 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 REPRESENTATIVE AND DOES 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 IN LIEU OF BLOW THRU CONTAINMENT.

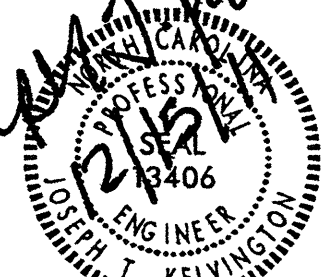
PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK REPAIR DETAILS

DECK REHAB. FOR BRIDGE NO. 233

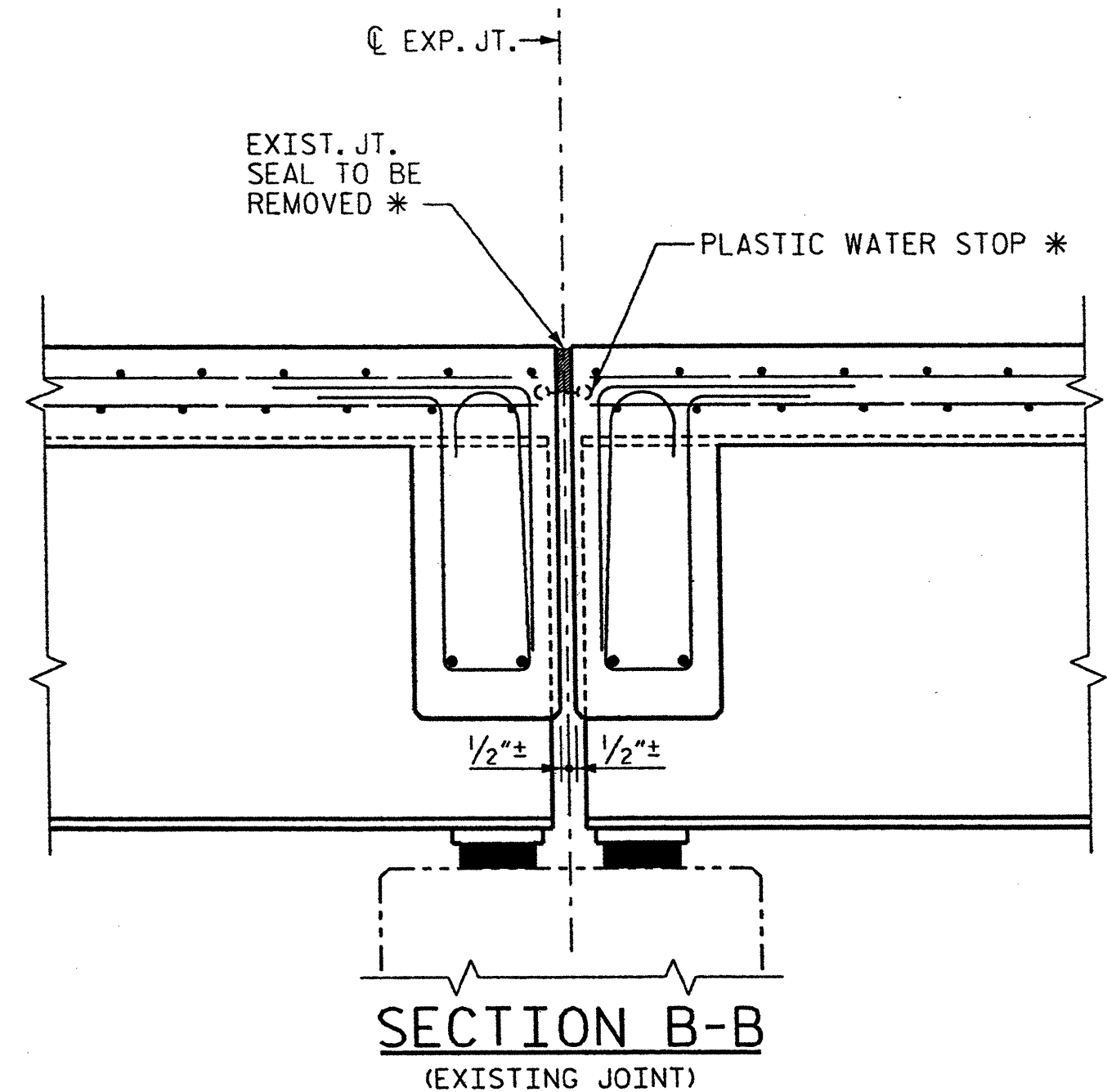
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-43
1			3			TOTAL SHEETS
2			4			77

Joey Kelvington


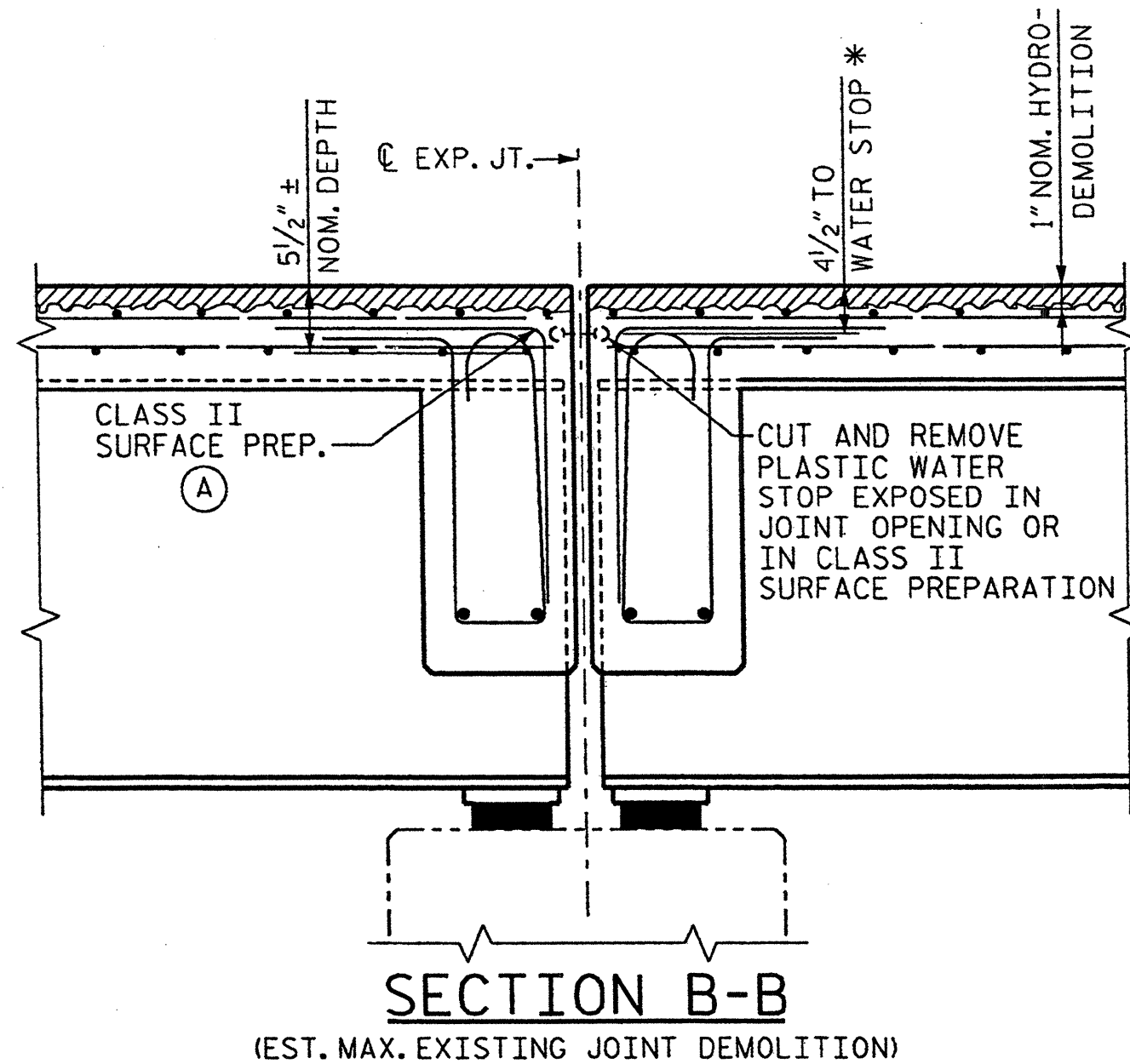
Henderson-Polk Co. Henderson Co. Bridge 233 Drawing \BP440233_Repairs\Plan3.dgn 12/15/2011 11:08 AM Jjoelle



DRAWN BY : B. C. MACYOWSKY DATE : 11-22-11
 CHECKED BY : J. T. KELVINGTON DATE : 11-22-11

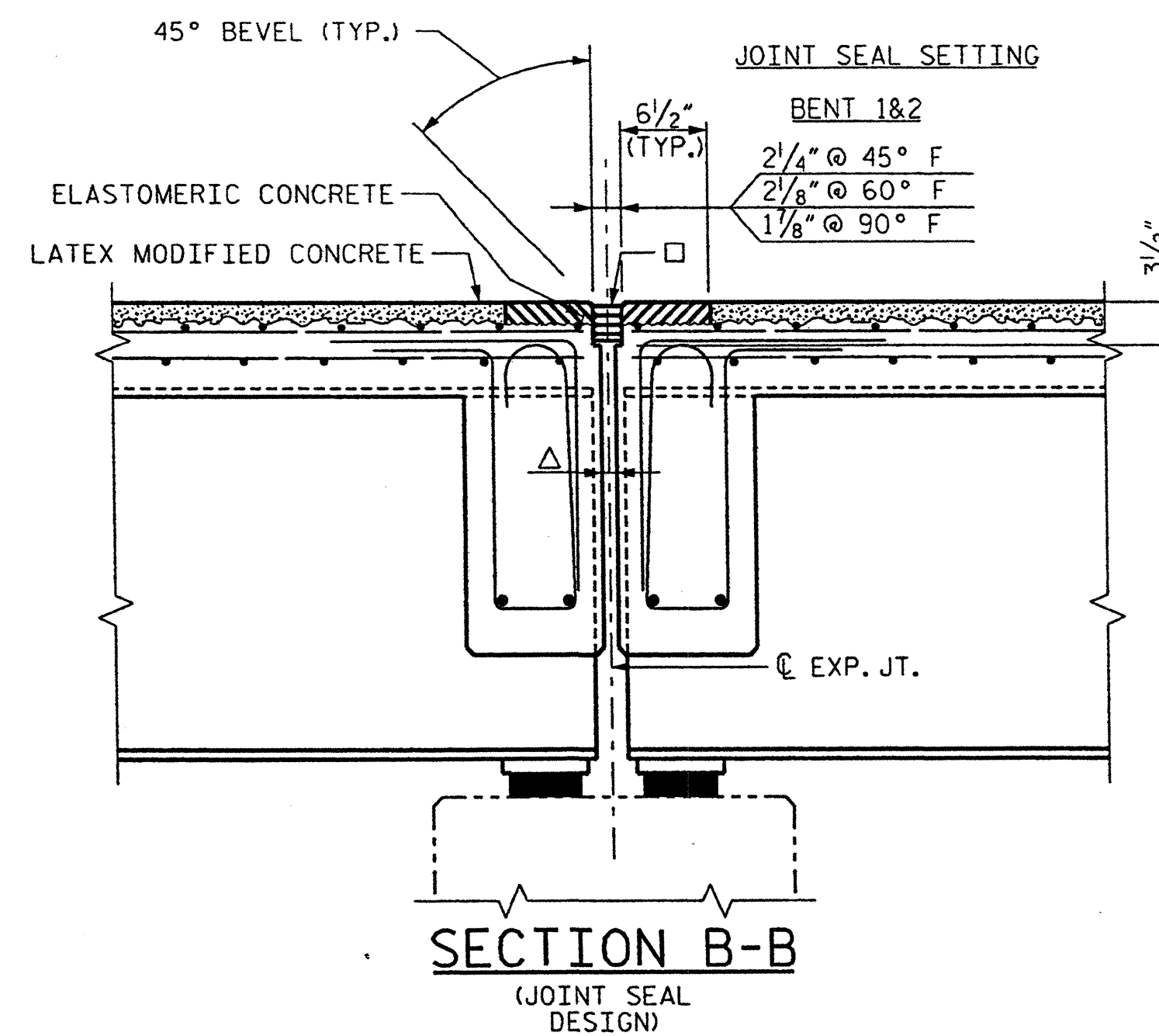


* FROM BEST AVAILABLE INFORMATION



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

Ⓐ CLASS II SURFACE PREPARATION ONLY AS REQUIRED TO REMOVE UNSOUND CONCRETE AND PREPARE SURFACE FOR NEW ELASTOMERIC CONCRETE.



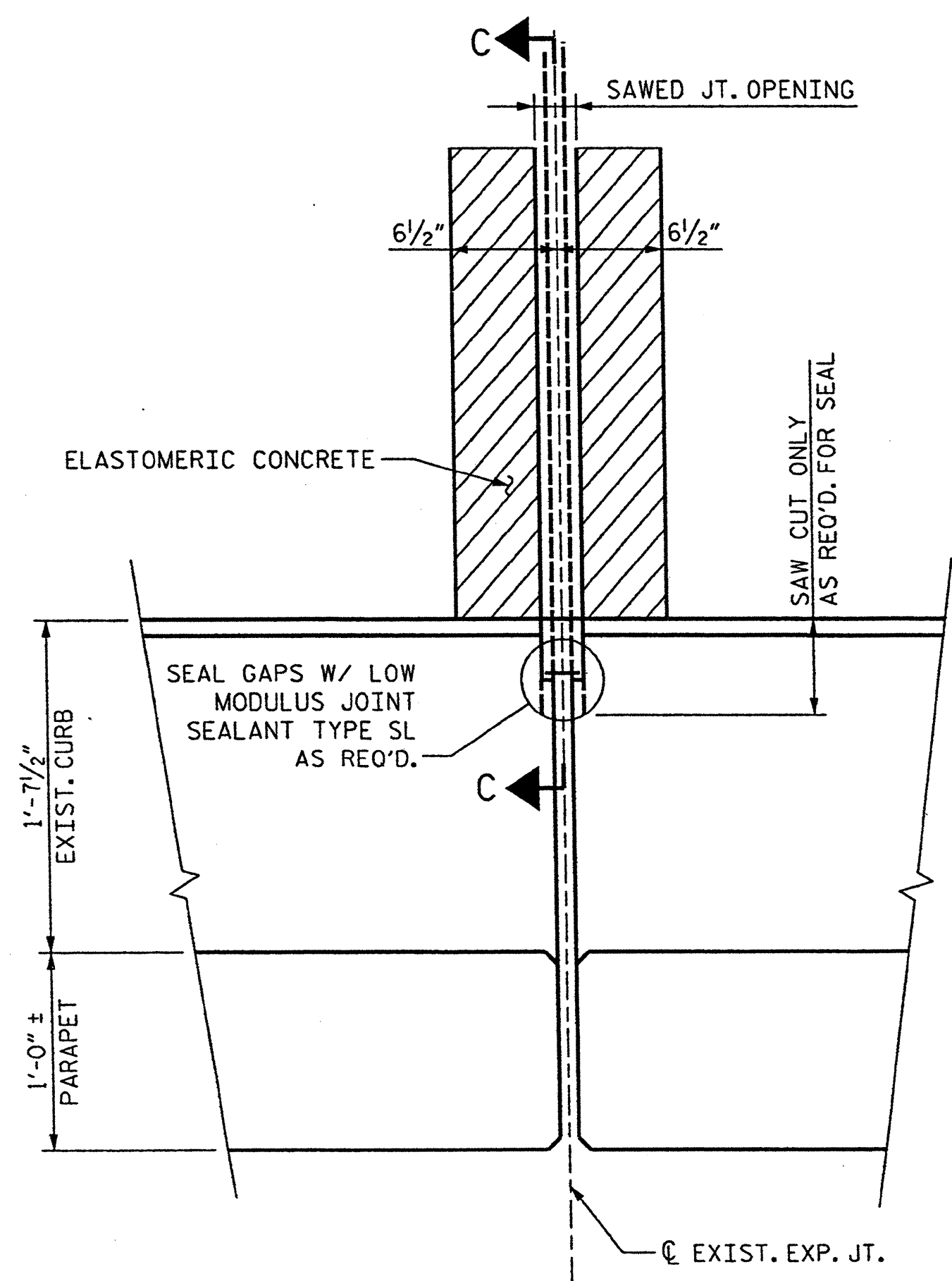
□ USE 2.8125" X 2.50" UNCOMPRESSED EVAZOTE JT. SEAL MATERIAL AT BENT 1

□ USE 2.8125" X 2.50" UNCOMPRESSED EVAZOTE JT. SEAL MATERIAL AT BENT 2

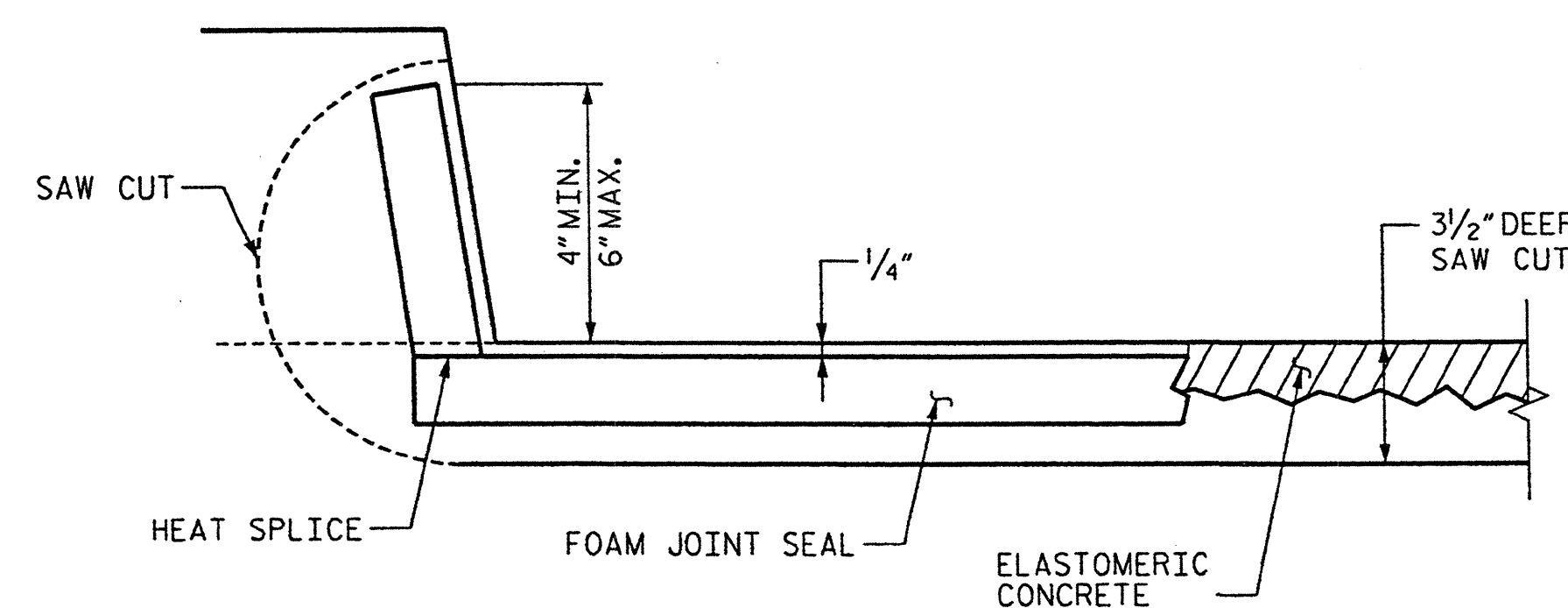
△ 1" FORMED OPENING

ELASTOMERIC CONCRETE	
LOCATION	QTY
BENT 1	3.5 C.F.
BENT 2	3.5 C.F.

TOTAL ELASTOMERIC CONC. = 7.0 C.F.
TOTAL ELASTOMERIC CONC. = 0.3 C.Y.



PARTIAL PLAN @ INTERIOR BENT



SECTION C-C

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

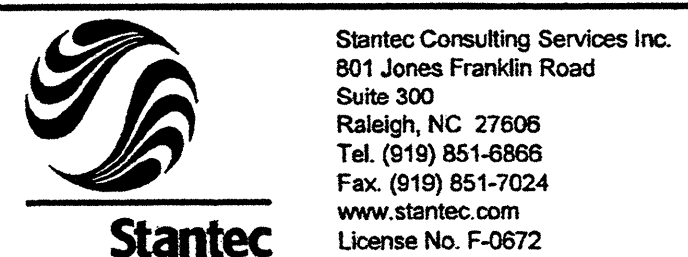
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

INTERIOR BENT JOINT SEAL DETAILS

DECK REHAB. FOR BRIDGE NO. 233

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-44	
1			3			TOTAL SHEETS	
2			4			77	

J. T. Kelvington
Professional Engineer
No. 12406
State of North Carolina

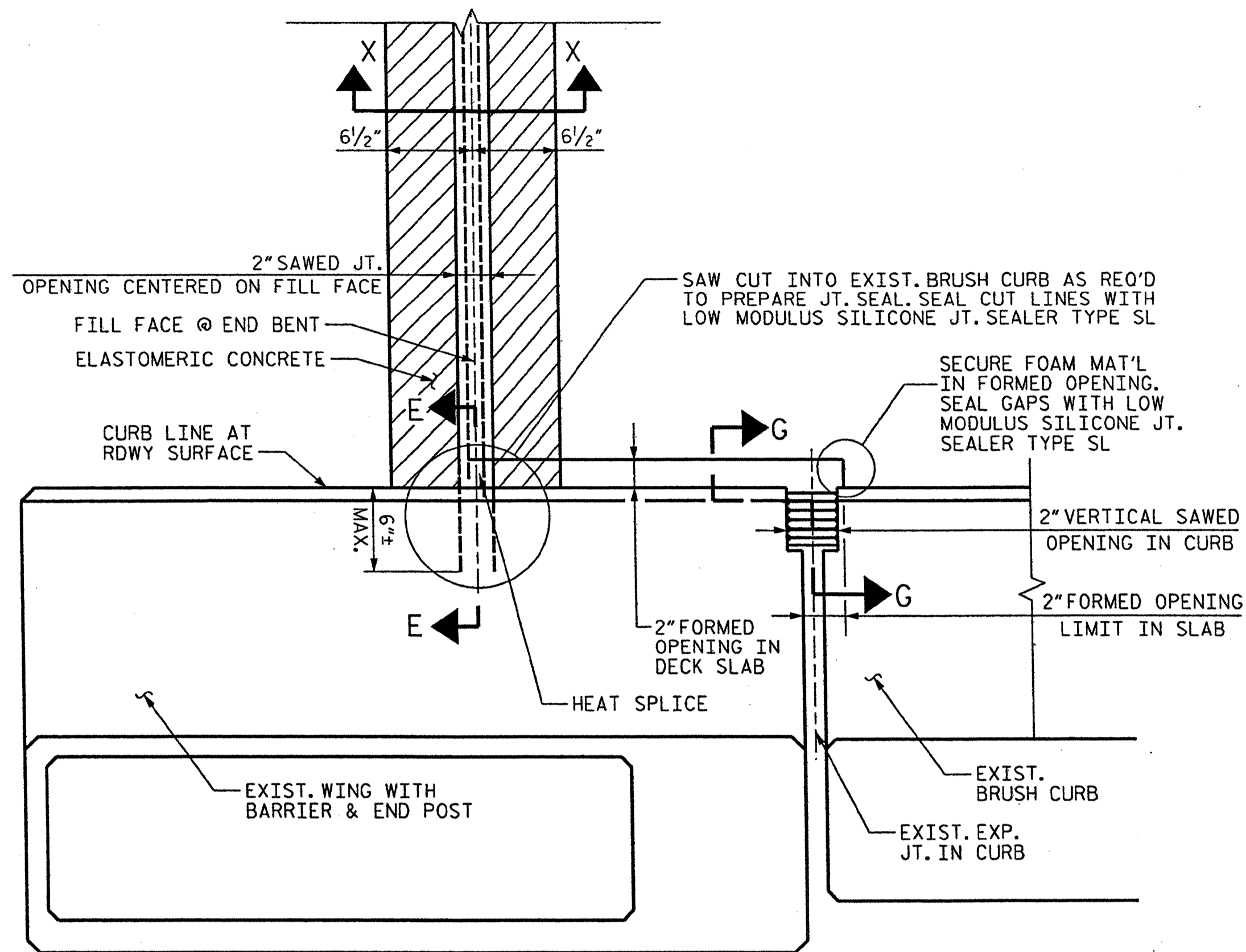


DRAWN BY: B. C. MACYOWSKY DATE: 11-22-11
CHECKED BY: J. T. KELVINGTON DATE: 11-22-11

12/15/2011 4:03:30 PM jgelle 233\Drawing\BP-140233_Det1.dgn Henderson-Polk Co\Henderson-Polk

SAW CUT ONLY AS DEEP AS NECESSARY TO PREPARE SURFACES FOR JOINT MAT'L

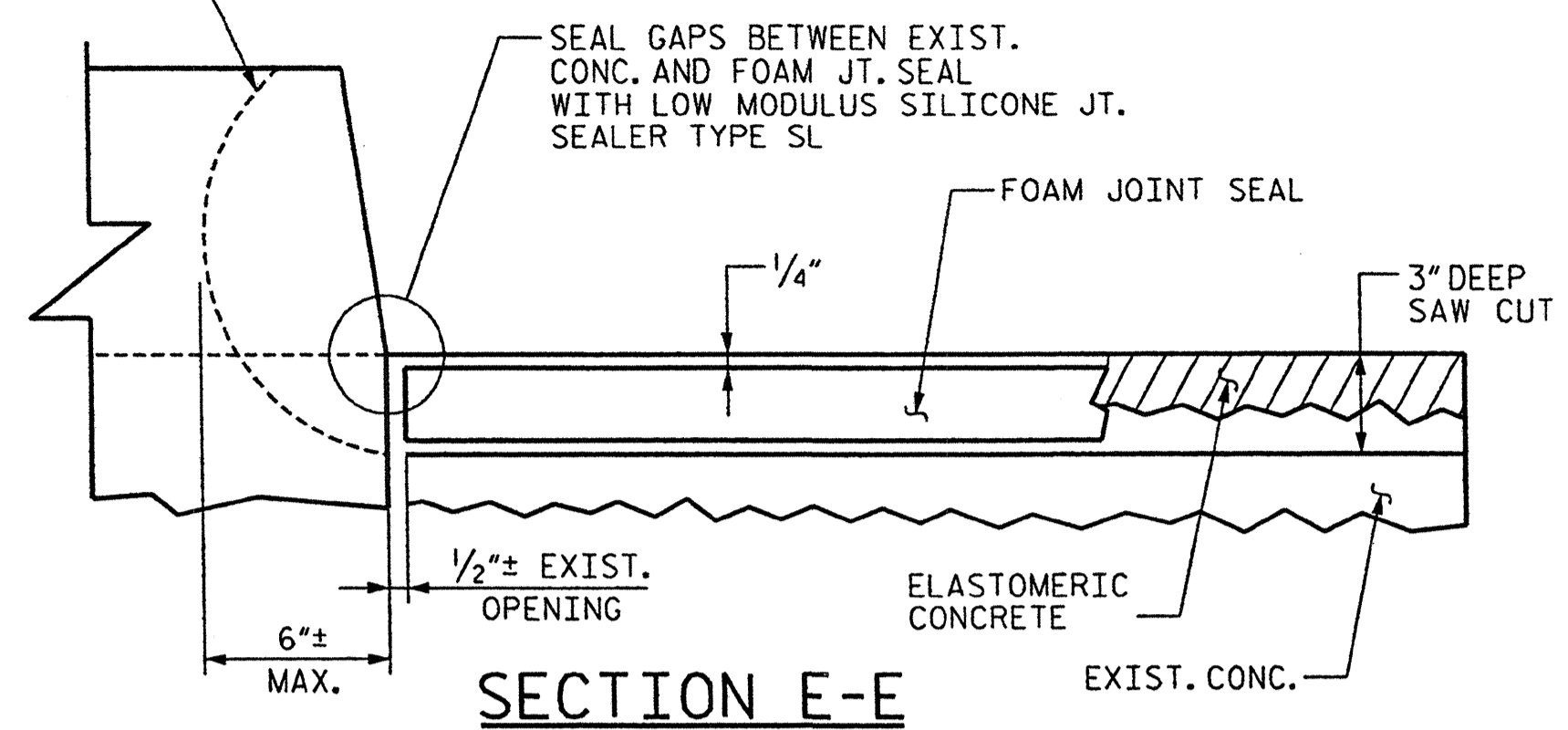
SEAL GAPS BETWEEN EXIST. CONC. AND FOAM JT. SEAL WITH LOW MODULUS SILICONE JT. SEALER TYPE SL



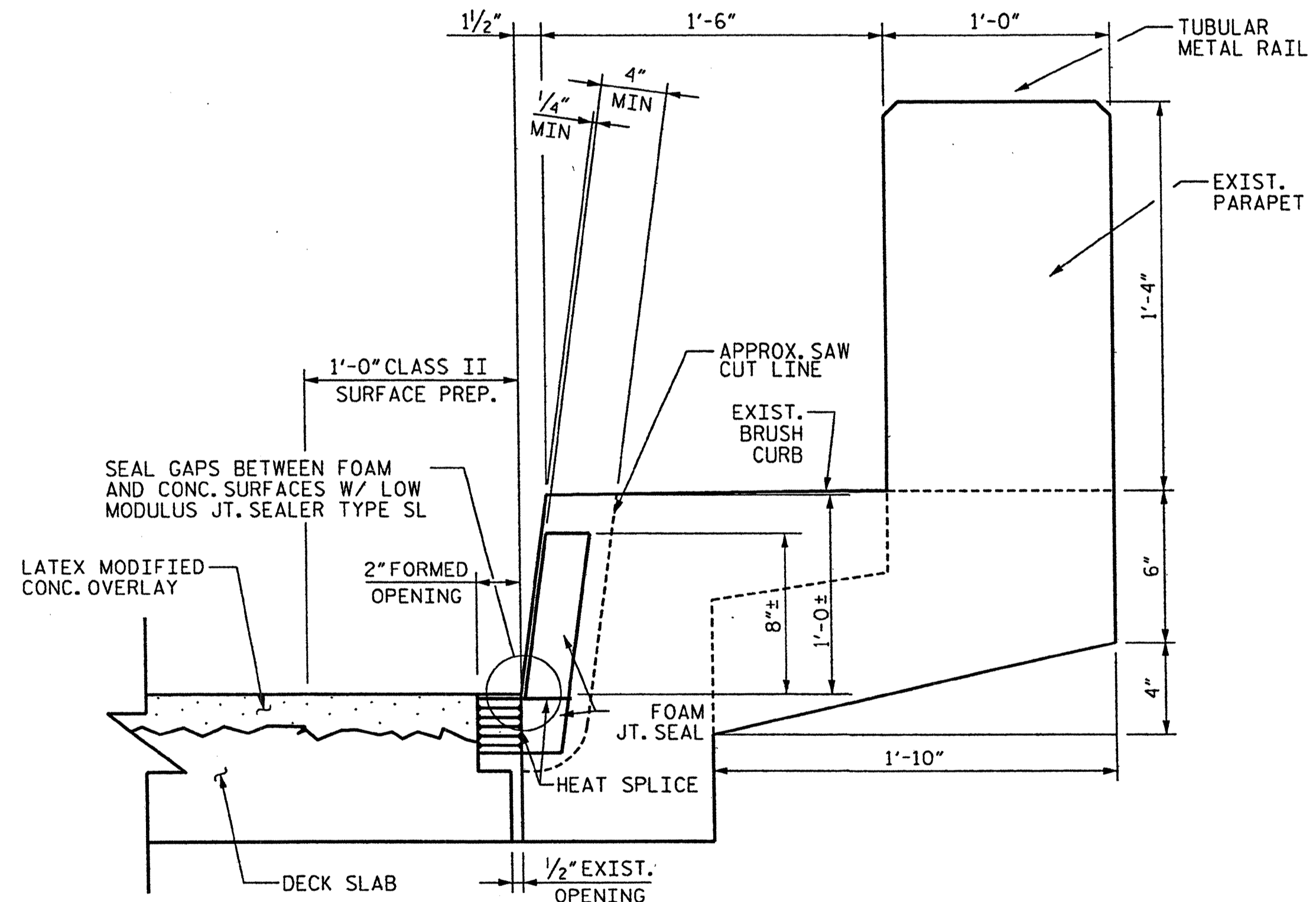
PARTIAL PLAN @ END BENT #1

(END BENT #2 SIMILAR)

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



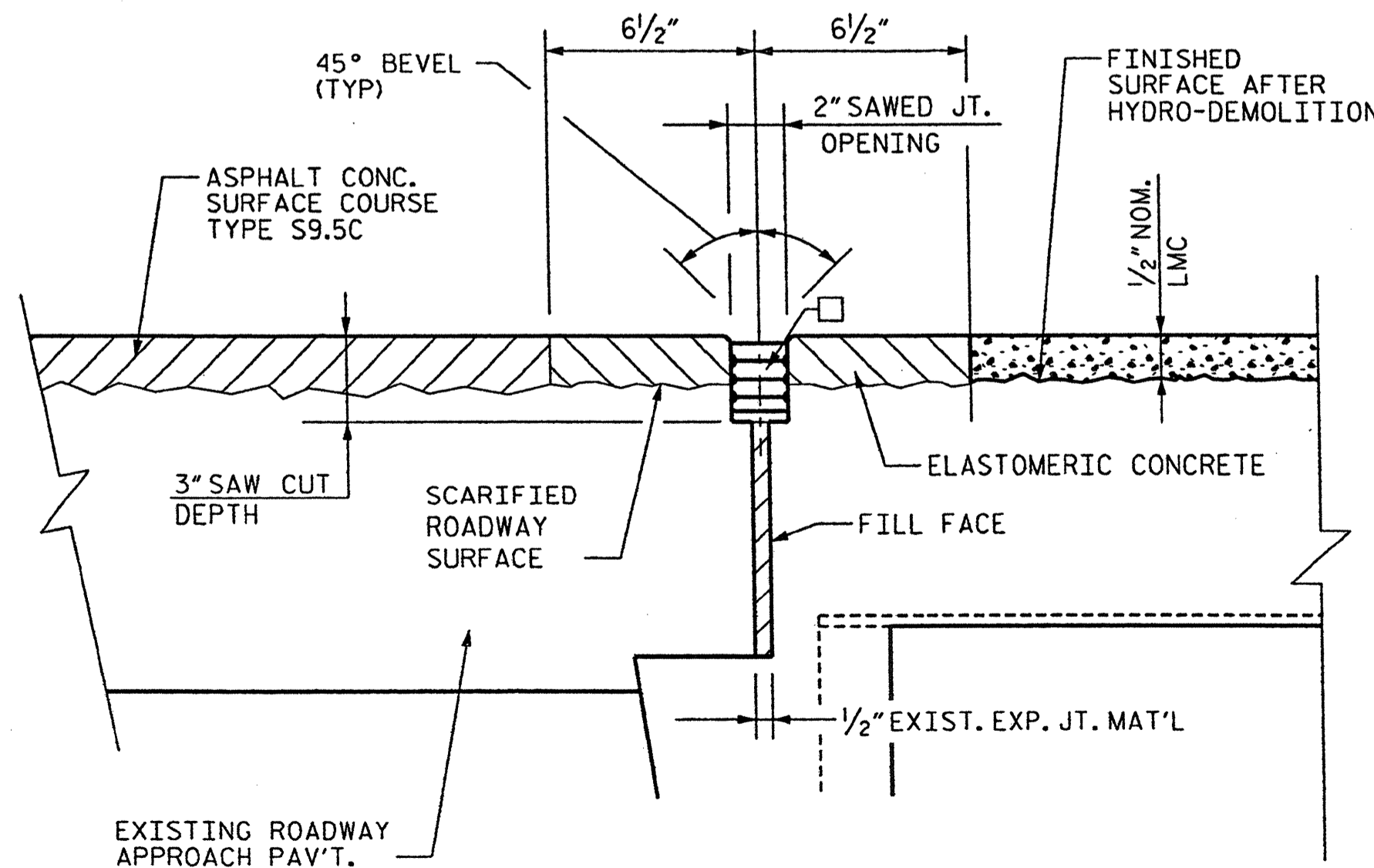
SECTION E-E



SECTION G-G

ELASTOMERIC CONCRETE	
LOCATION	QTY
END BENT 1	3.5 C.F.
END BENT 2	3.5 C.F.

TOTAL ELASTOMERIC CONC. = 7.0 C.F.
TOTAL ELASTOMERIC CONC. = 0.3 C.Y.



SECTION X-X

□ - USE 2.50" X 2.00" UNCOMPRESSED FOAM JOINT SEAL

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____



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Fax. (919) 851-7024
www.stantec.com
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DRAWN BY : B. C. MACYOWSKY DATE : 11-22-11
CHECKED BY : J. T. KELVINGTON DATE : 11-22-11

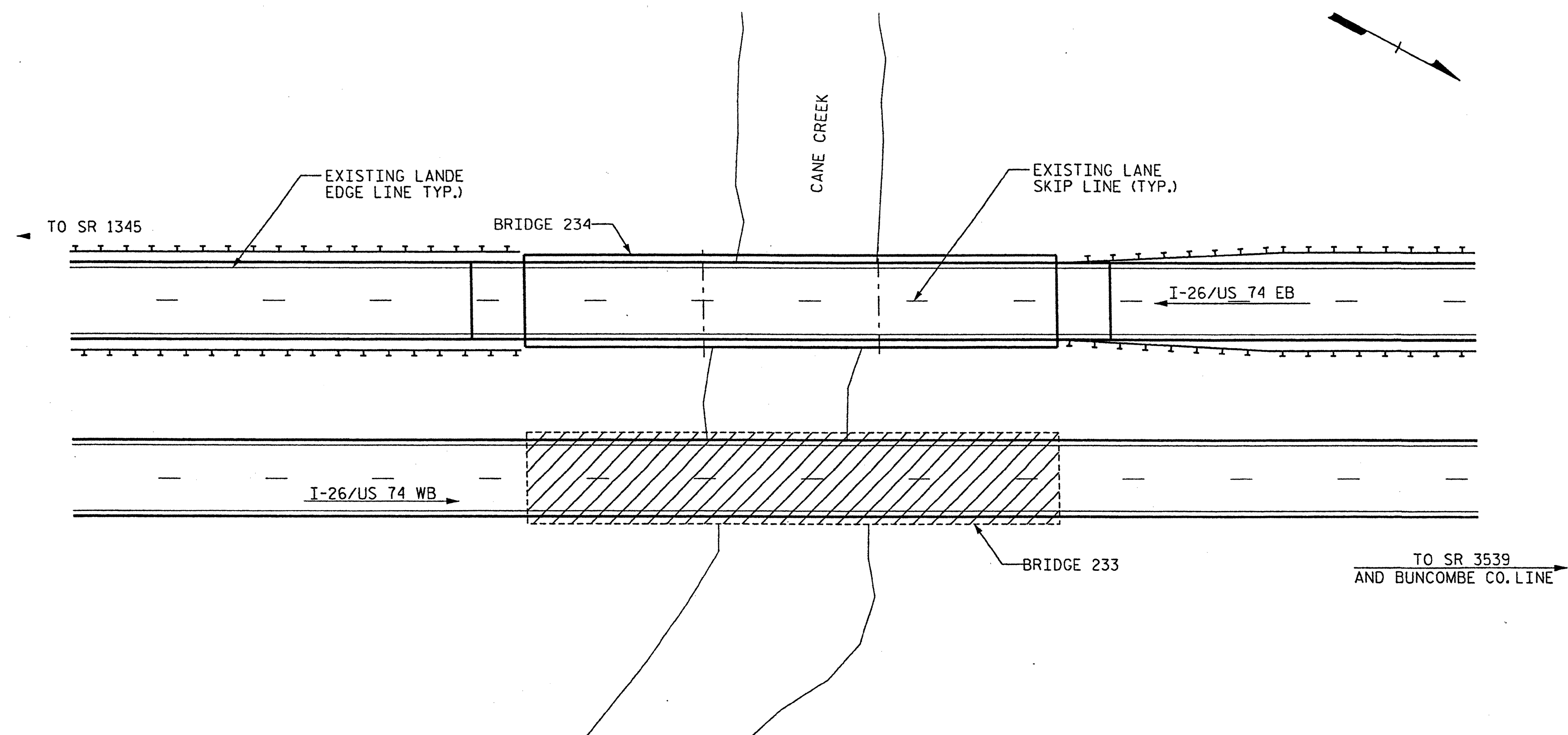
J. T. Kelvington
Professional Engineer
12/23/11
13406

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT JOINT SEAL DETAILS

DECK REHAB. FOR BRIDGE NO. 233

REVISIONS						SHEET NO. S-45
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 77
2			4			



BRIDGE 234 ON SR I-26/US 74

LOCATION: BRIDGE 440234, I-26/US 74 EBL OVER CANE CREEK 1.6 MILES NORTH OF JUNCTION WITH US 25

FOR BRIDGE 234, I-26/US 74 WBL SEE SHTS. S-38 THRU S-45.

TOTAL BILL OF MATERIAL											
INCIDENTAL MILLING	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	ASHPHALT CONC. SURF. COURSE TYPE S9.5C
SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	CU.YDS.	CU.YDS.	SO.YDS.	LUMP SUM	SO.FT.	TON
311	616.8	0.0	10.4	0.0	616.8	0.0	41.9	616.8	LUMP SUM	5383	25

* 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.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

LOCATION SKETCH
 AND TOTAL
 BILL OF MATERIAL

DECK REHAB. FOR BRIDGE NO. 234

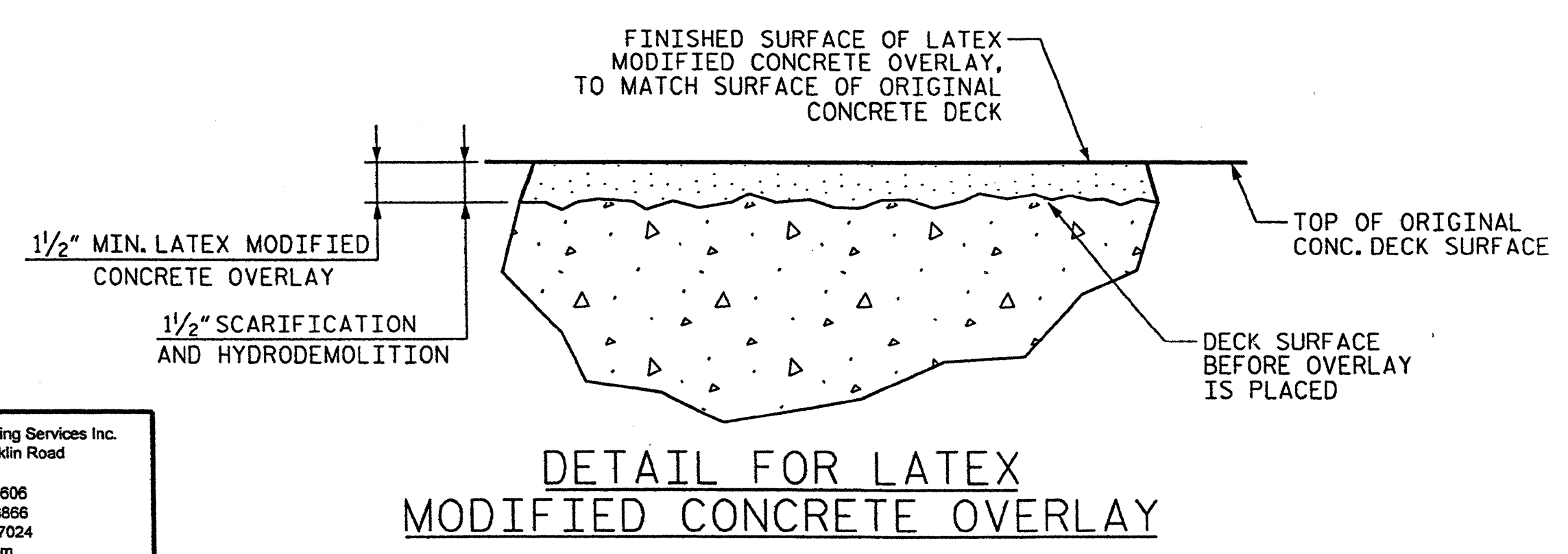
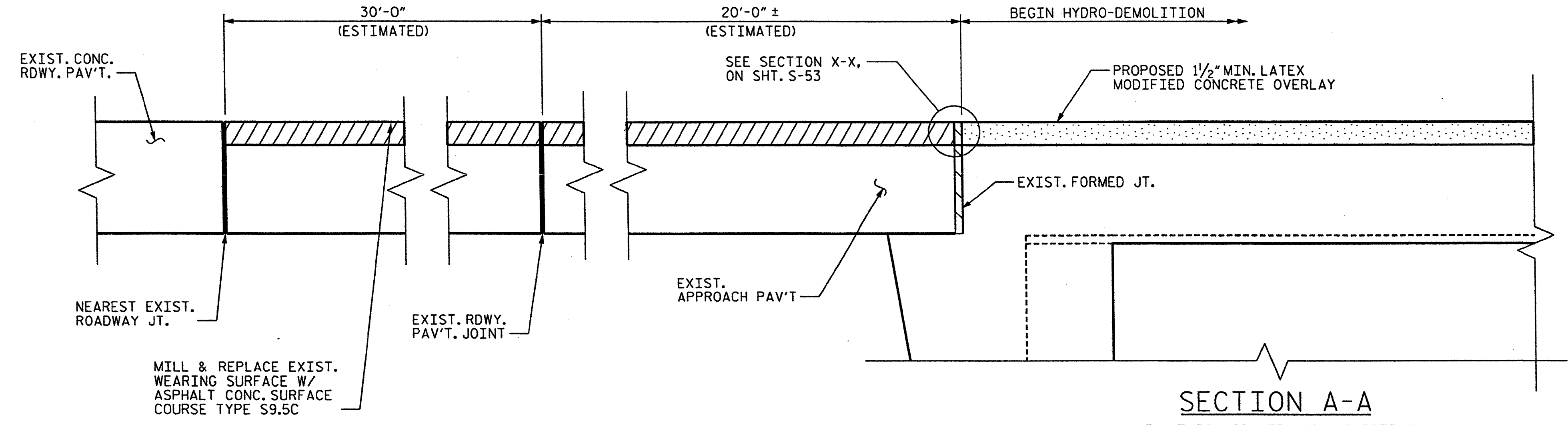
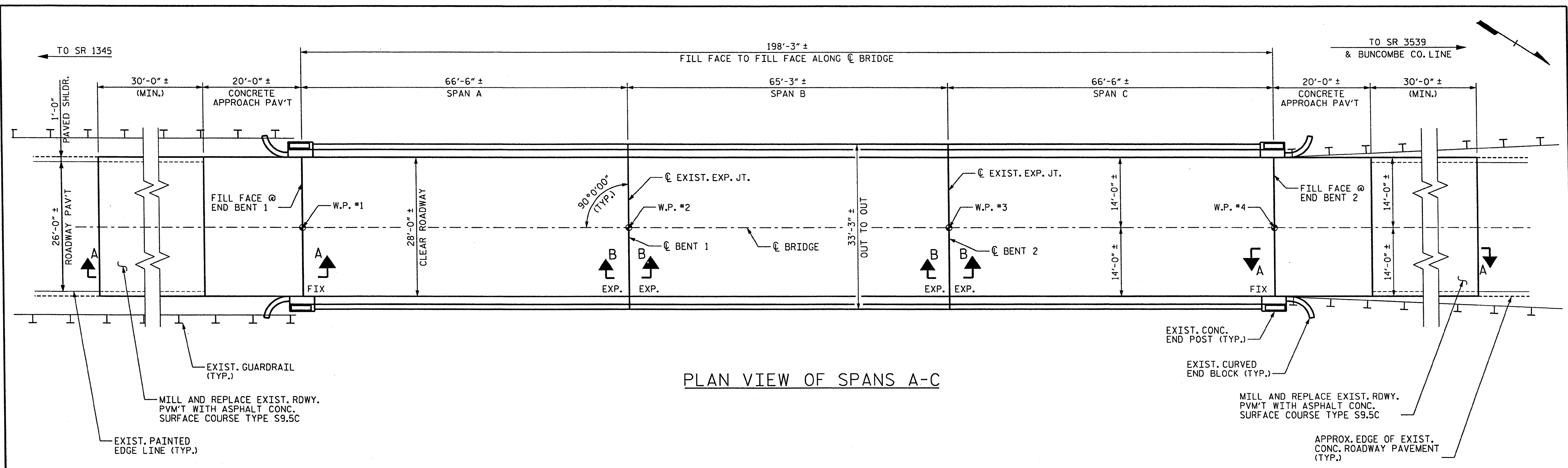
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS	
1			3			S-46	
2			4			77	

Joseph J. Kelvington
 11/20/11
 SEAL 13406
 J. T. KELVINGTON
 ENGINEER

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 Fax. (919) 851-7024
 www.stantec.com
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DRAWN BY : B. C. MACYOWSKY DATE : 11-22-11
 CHECKED BY : J. T. KELVINGTON DATE : 11-22-11

1/19/2012 11:20:36 PM Jgelle
 2:14.P.3 Henderson-Polk Co. Bridge 234\Drawing\BR440234.LS_BOM.dgn



- 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-49.
 - 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-52.
 - FOR END BENT JOINT SEAL DETAILS, SEE SHT. S-53.

PROJECT NO. WBS 17BP.14.P.3
 HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF BRIDGE

DECK REHAB. FOR BRIDGE NO. 234

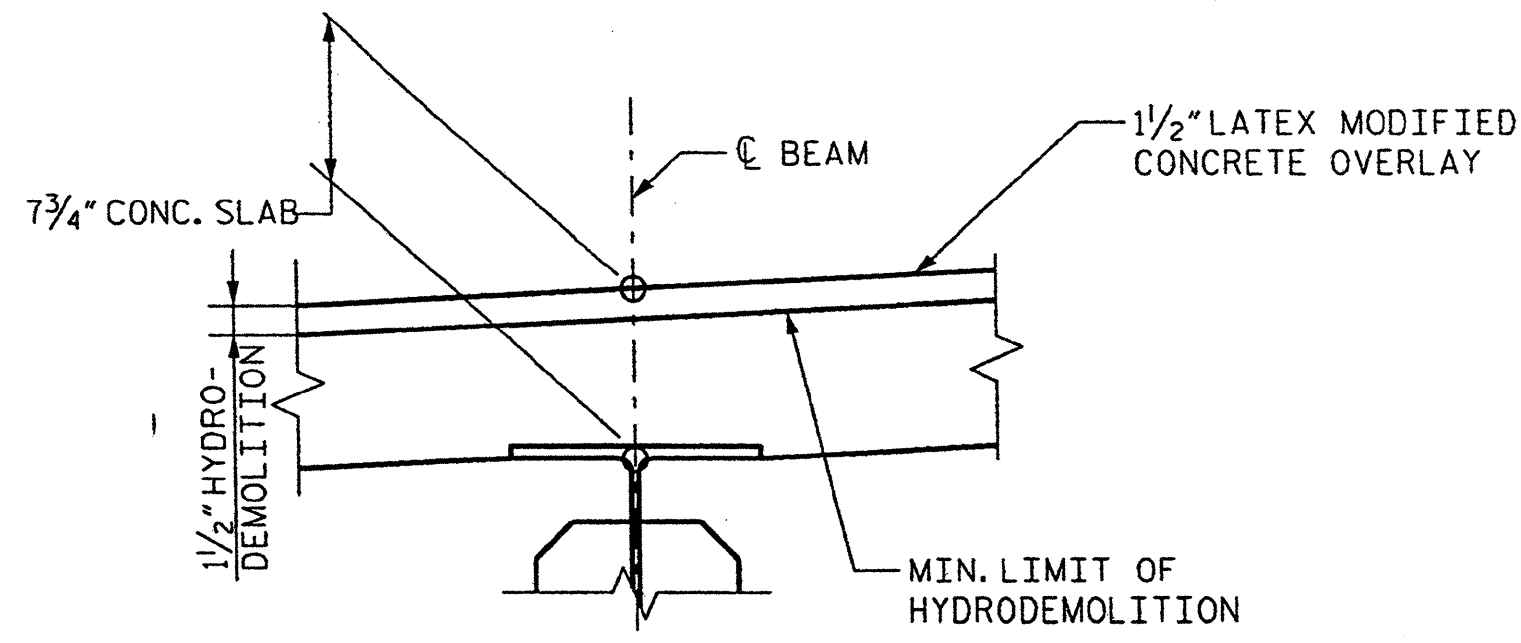
REVISIONS						SHEET NO. S-47 TOTAL SHEETS 77
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

Joseph Kelvington
 11/22/2011
 3406
 J. KELVINGTON

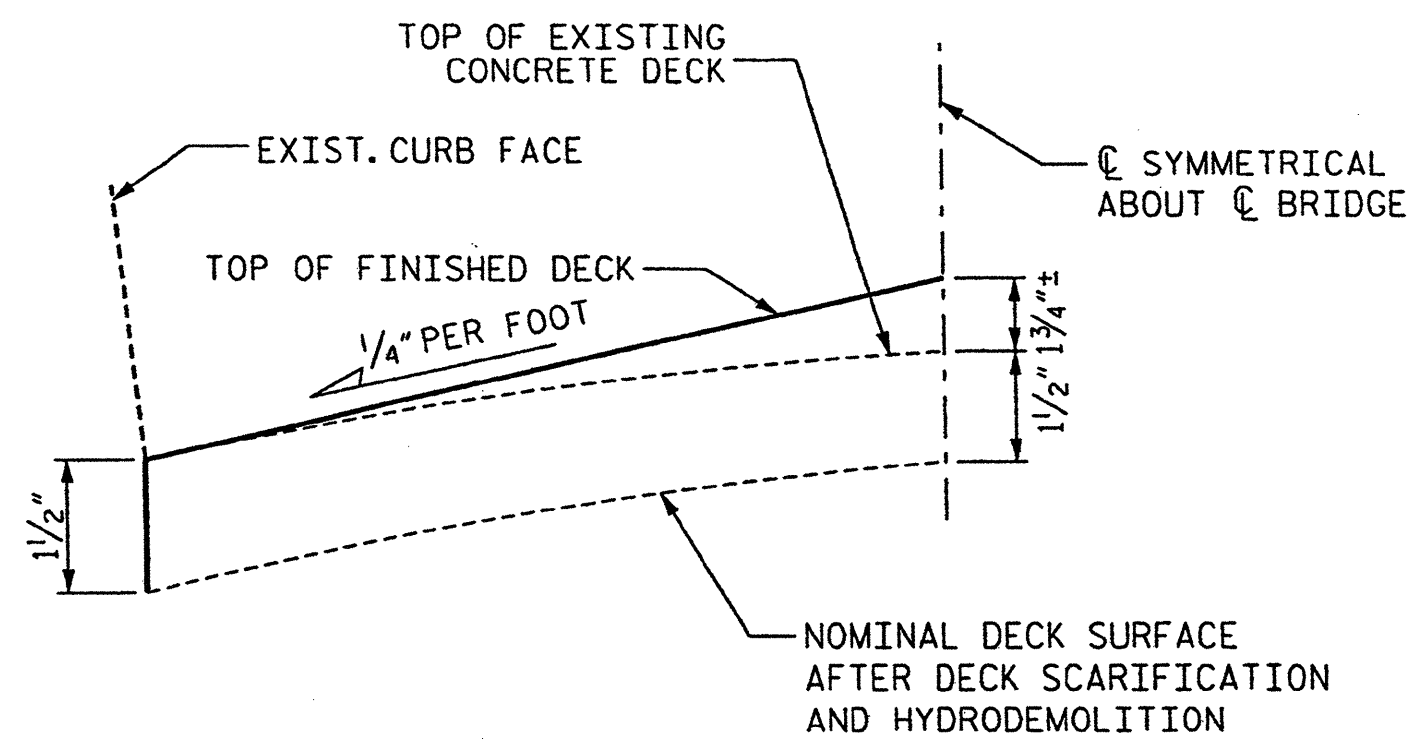
P.3 Henderson-Polk Co. Henderson, Co. Bridge 234A.Draining.BP140234.Deck.Plan.dgn 1/4/2012 4:48:50 PM cboker

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 Fax. (919) 851-7024
 www.stantec.com
 License No. F-0672

DRAWN BY : B. C. MACYOWSKY DATE : 11-22-11
 CHECKED BY : J. T. KELVINGTON DATE : 11-22-11



EXIST. SLAB DETAIL



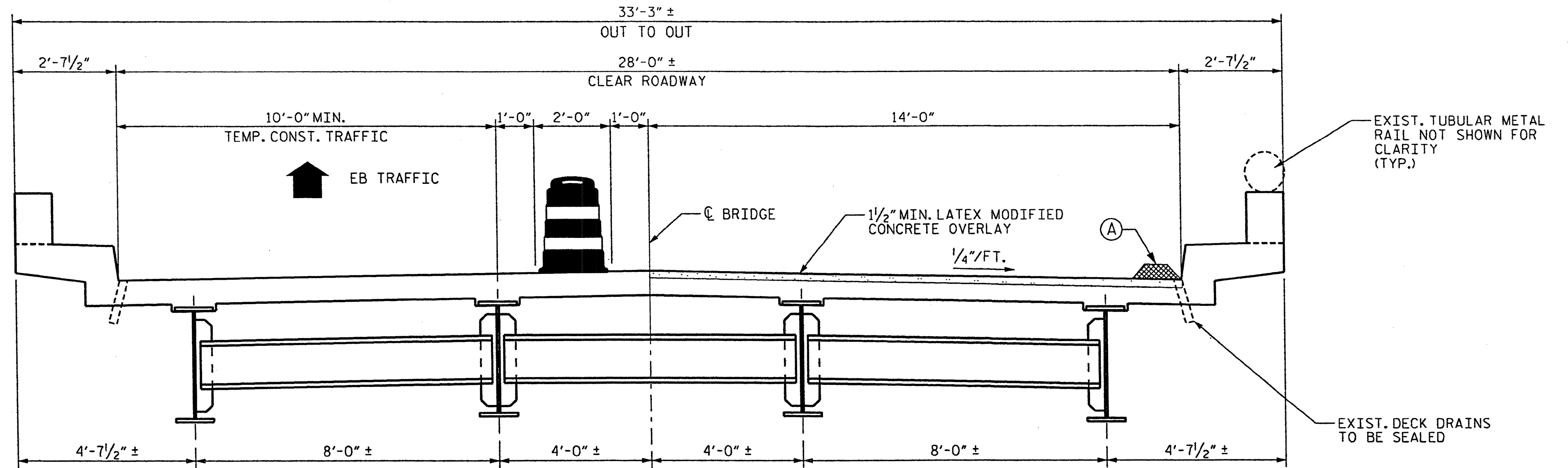
BRIDGE CROSS SLOPE SCHEMATIC FOR DECK OVERLAY

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.

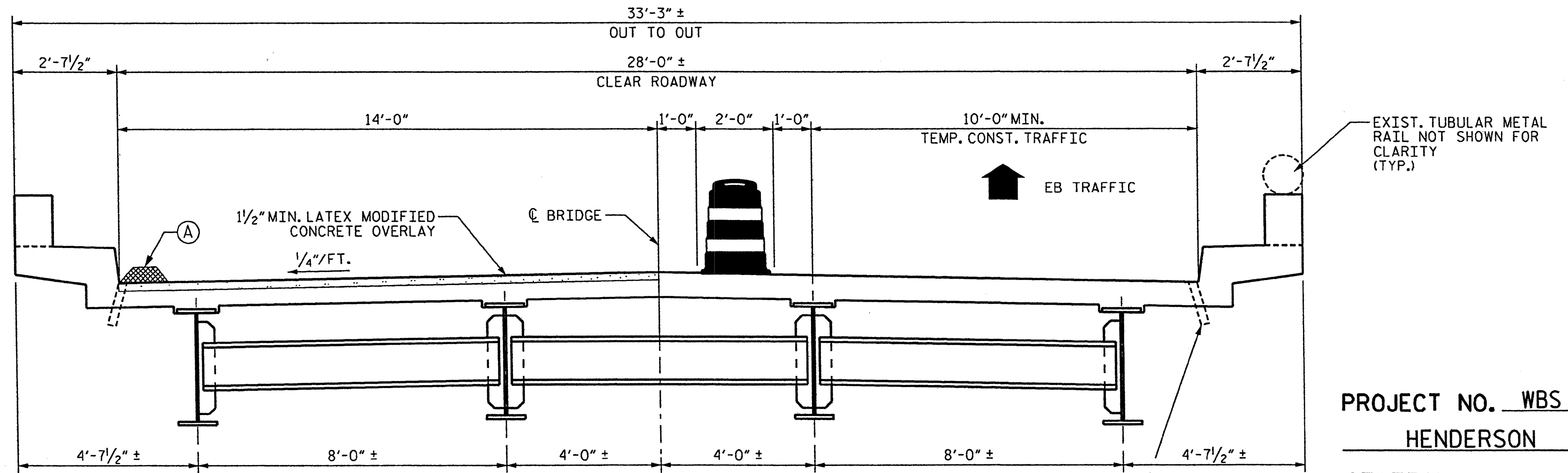
FOR TRAFFIC CONTROL AND CONSTRUCTION PHASING, SEE TRANSPORTATION MANAGEMENT PLANS.

(A) DAM @ EXP. JOINTS AS REQUIRED TO SEAL JOINTS.



TYPICAL SECTION

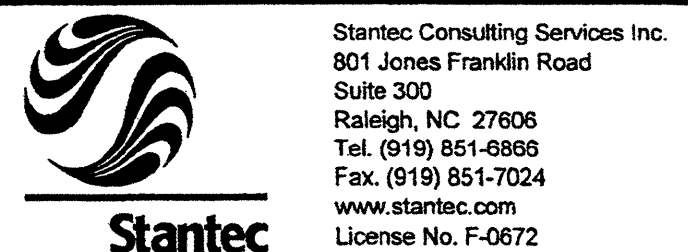
SPAN A, B, C
NOTE: ALL DIMENSIONS SHOWN ARE APPROXIMATE.



TYPICAL SECTION

SPAN A, B, C
NOTE: ALL DIMENSIONS SHOWN ARE APPROXIMATE.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____



DRAWN BY: B. C. MACYOWSKY DATE: 11-22-11
CHECKED BY: J. T. KELVINGTON DATE: 11-22-11

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

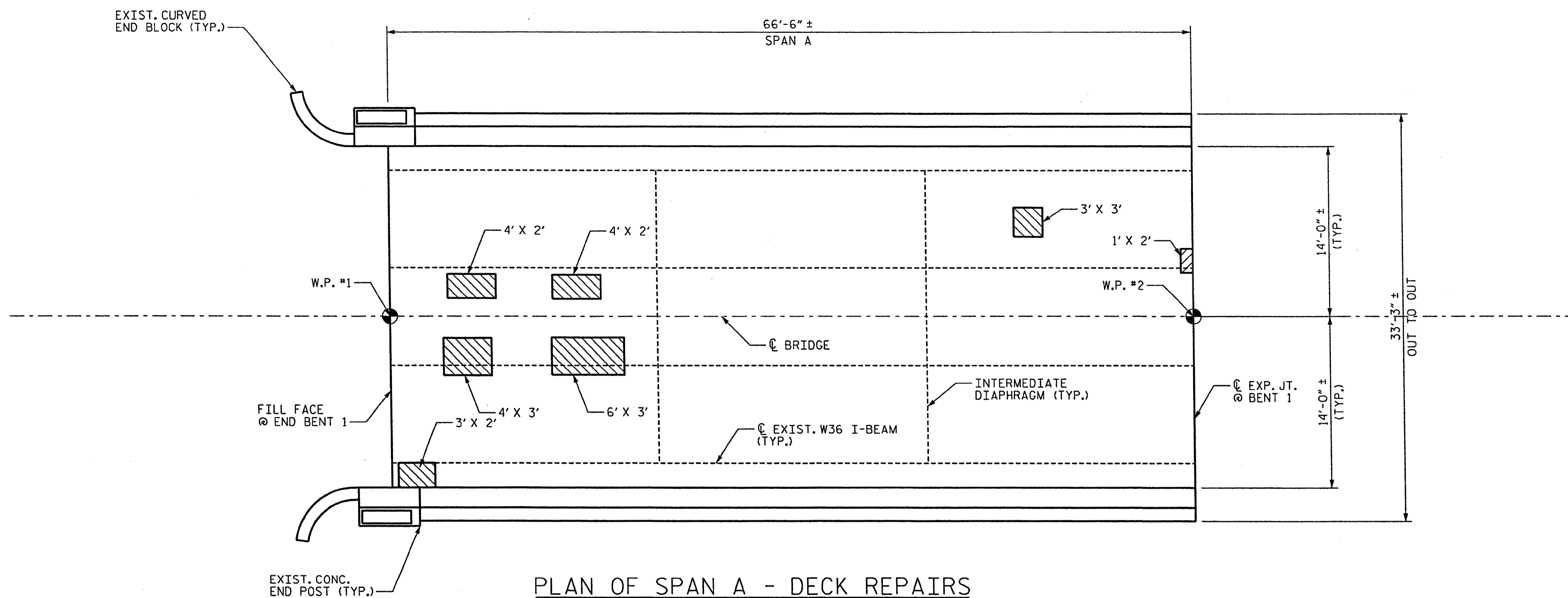
TYPICAL SECTION

DECK REHAB. FOR BRIDGE NO. 234

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-48	
1			3			TOTAL SHEETS	
2			4			77	

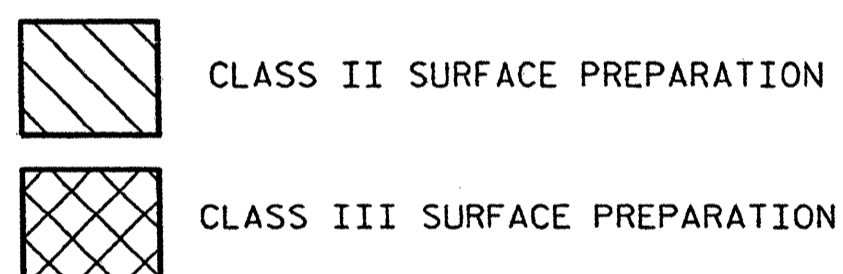
Joseph M. Kelvington
Professional Engineer
No. 12345
State of North Carolina
KELVINGTON

4.P.3 Henderson-Polk Co Henderson Co. Bridge 234.Drawing.BP.14.P.3 TypSect.dgn 12/15/2011 10:51:26 AM Jgelle

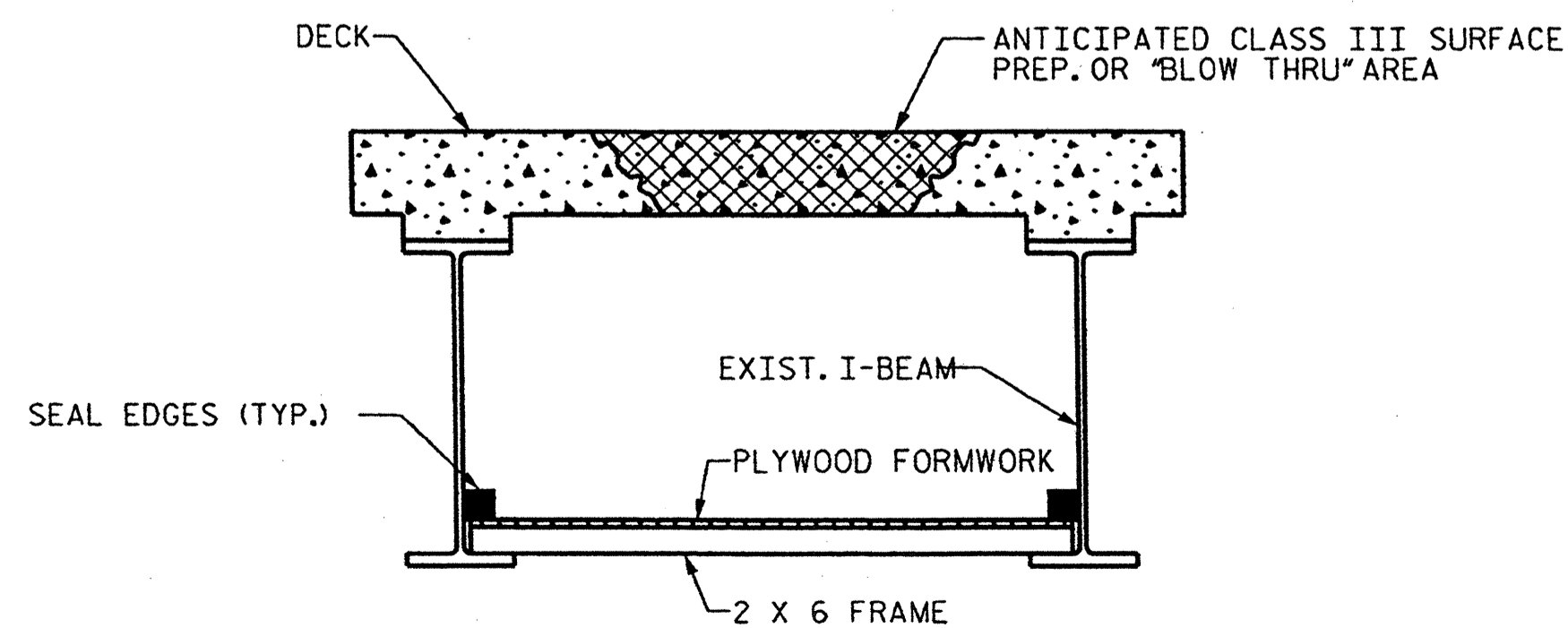


PLAN OF SPAN A - DECK REPAIRS

NOTE: EXIST. BARRIER AND END POST DETAILS ARE NOT SHOWN FOR CLARITY.



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



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

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 REPRESENTATIVE AND DOES 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 IN LIEU OF BLOW THRU CONTAINMENT.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK REPAIR DETAILS

DECK REHAB. FOR BRIDGE NO. 234

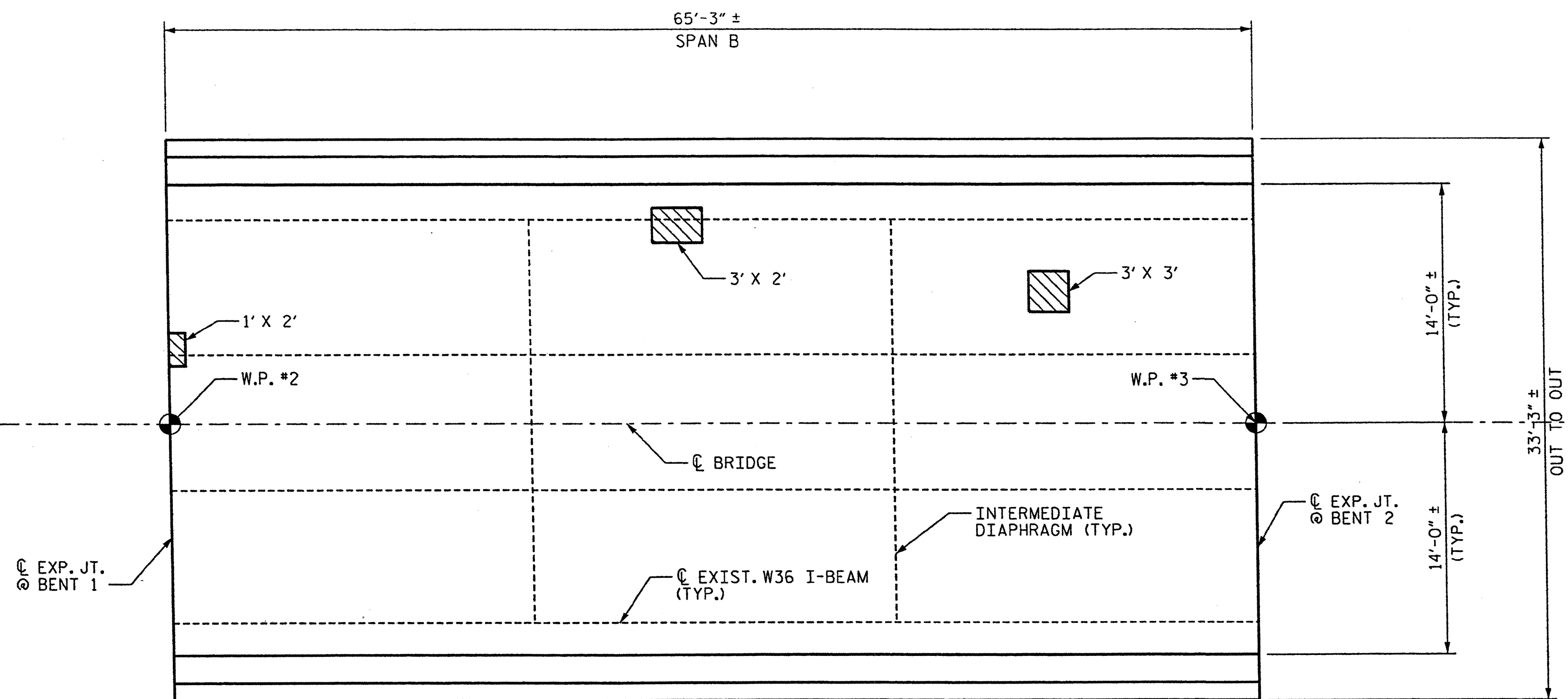
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			5-49
2			4			77

Handwritten signature and stamp:
 J. T. KELVINGTON
 PROFESSIONAL ENGINEER
 LICENSE NO. 15411

12/15/2011 11:4:03 AM Jgelle
 C:\Users\jgelle\Documents\234\Drawing\BP40234_RepairPlan.dgn
 Henderson-Polk Co. Henderson Co. Bridge 234

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

DRAWN BY : B. C. MACYOWSKY DATE : 11-22-11
 CHECKED BY : J. T. KELVINGTON DATE : 11-22-11



PLAN OF SPAN B - DECK REPAIRS

NOTE: EXIST. BARRIER AND END POST DETAILS 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 IF AREA PERPENDICULAR TO 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 REPRESENTATIVE AND DOES 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 IN LIEU OF BLOW THRU CONTAINMENT.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK REPAIR DETAILS

DECK REHAB. FOR BRIDGE NO. 234

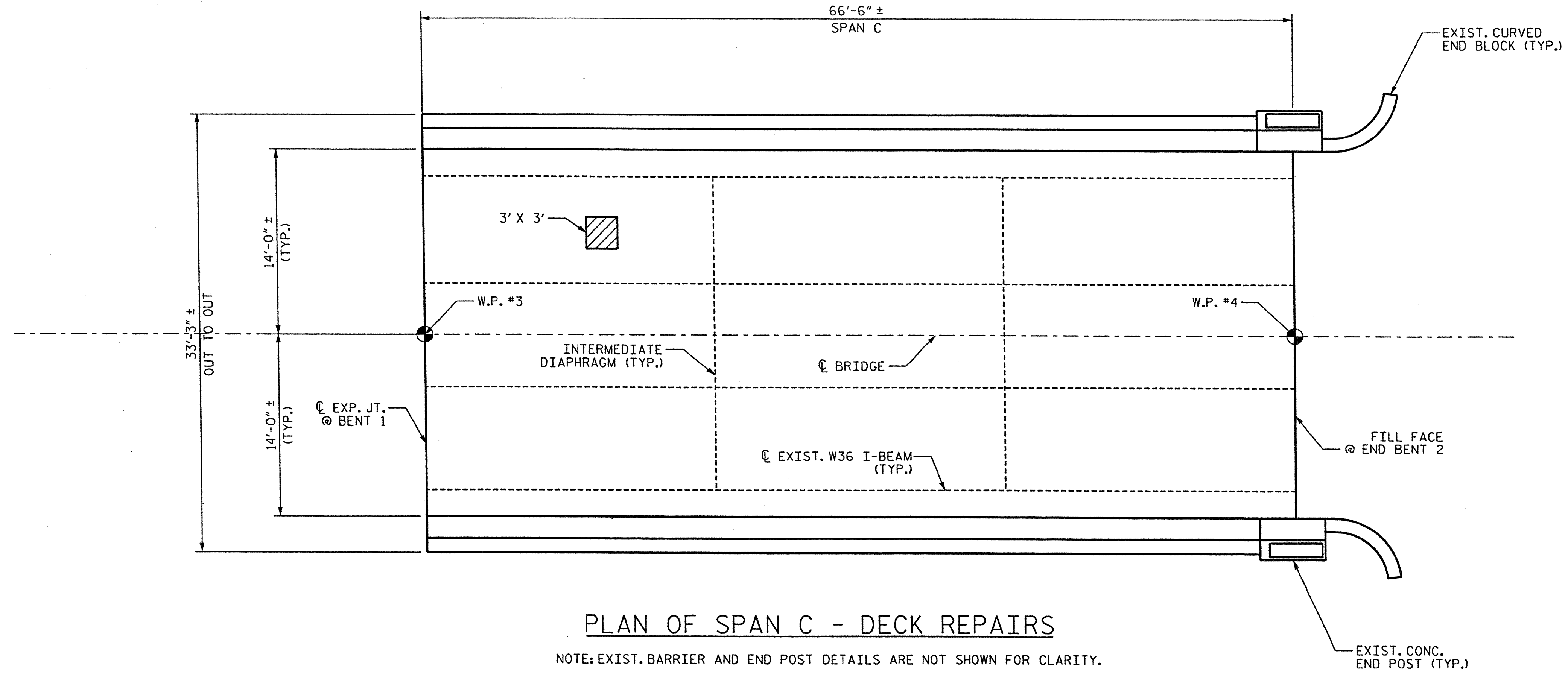
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-50
1			3			TOTAL SHEETS
2			4			77

J. T. Kelvington

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DRAWN BY : B. C. MACYOWSKY DATE : 11-22-11
CHECKED BY : J. T. KELVINGTON DATE : 11-22-11

3 Henderson-Polk Co. Henderson Co. Bridge 234 Drawing\BP440234_RepairPlan2.dgn 12/15/2011 11:41:39 AM Jgelle



PLAN OF SPAN C - DECK REPAIRS

NOTE: EXIST. BARRIER AND END POST DETAILS ARE NOT SHOWN FOR CLARITY.

-  CLASS II SURFACE PREPARATION
-  CLASS III SURFACE PREPARATION

L X W = LENGTH OF AREA PARALLEL TO CL BRIDGE X
WIDTH IF AREA PERPENDICULAR TO CL 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 REPRESENTATIVE AND DOES 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 IN LIEU OF BLOW THRU CONTAINMENT.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

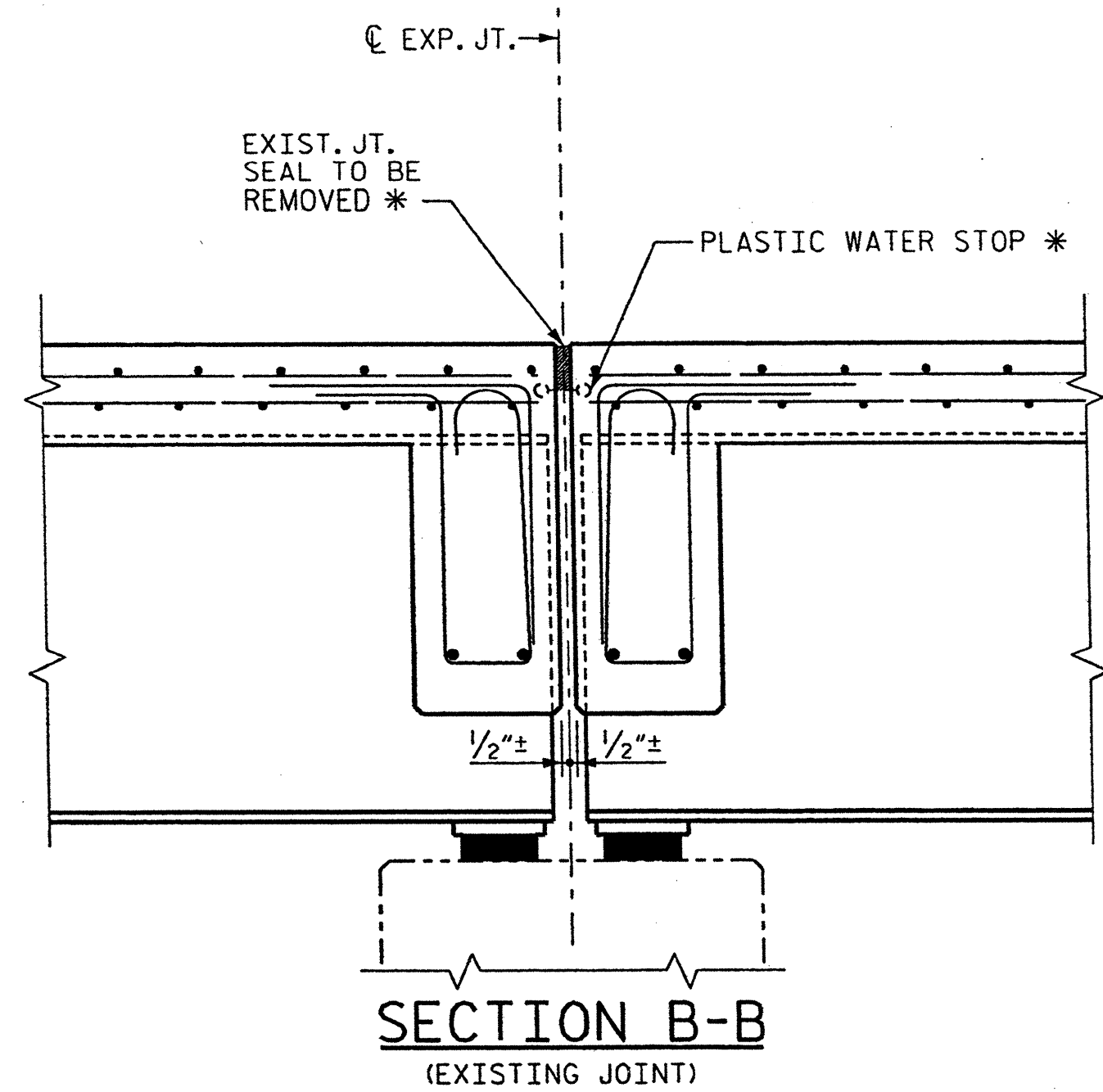
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DECK REPAIR DETAILS					
DECK REHAB. FOR BRIDGE NO. 234					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-51
					TOTAL SHEETS 77

Joseph T. Kelvington
Professional Engineer
No. 15846
State of North Carolina

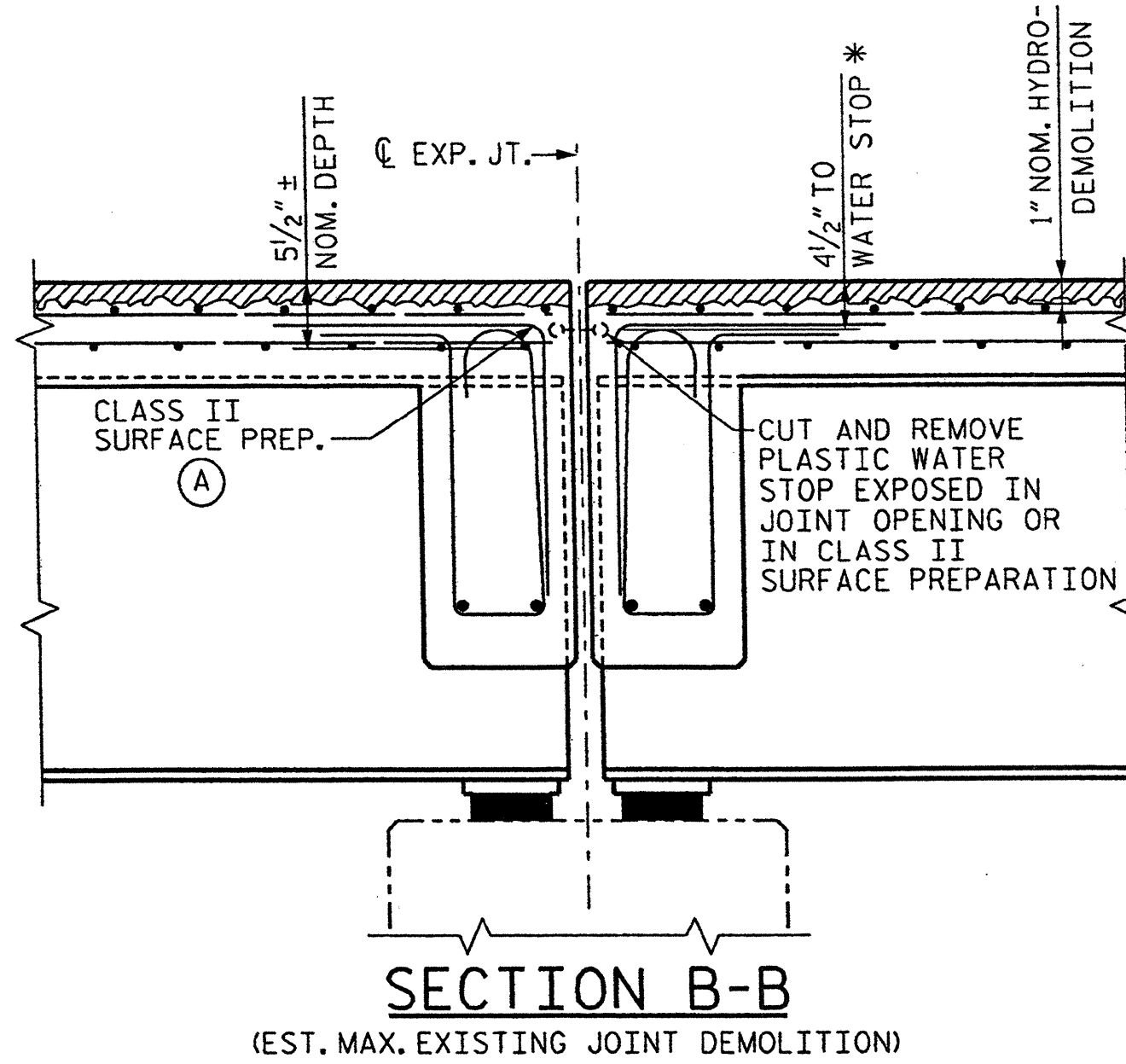


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Fax. (919) 851-7024
www.stantec.com
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DRAWN BY : B. C. MACYOWSKY DATE : 11-22-11
CHECKED BY : J. T. KELVINGTON DATE : 11-22-11

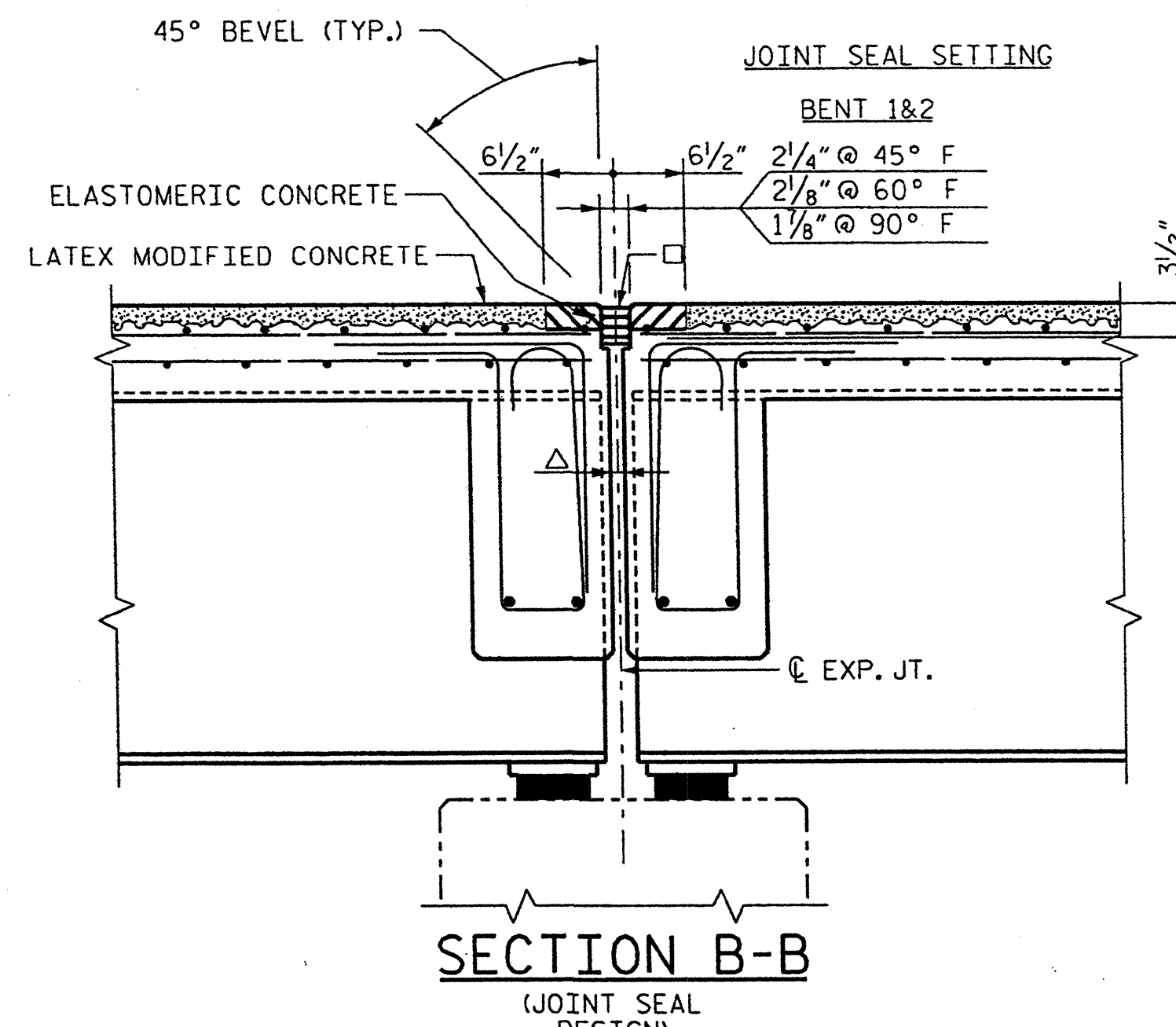


* FROM BEST AVAILABLE INFORMATION



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

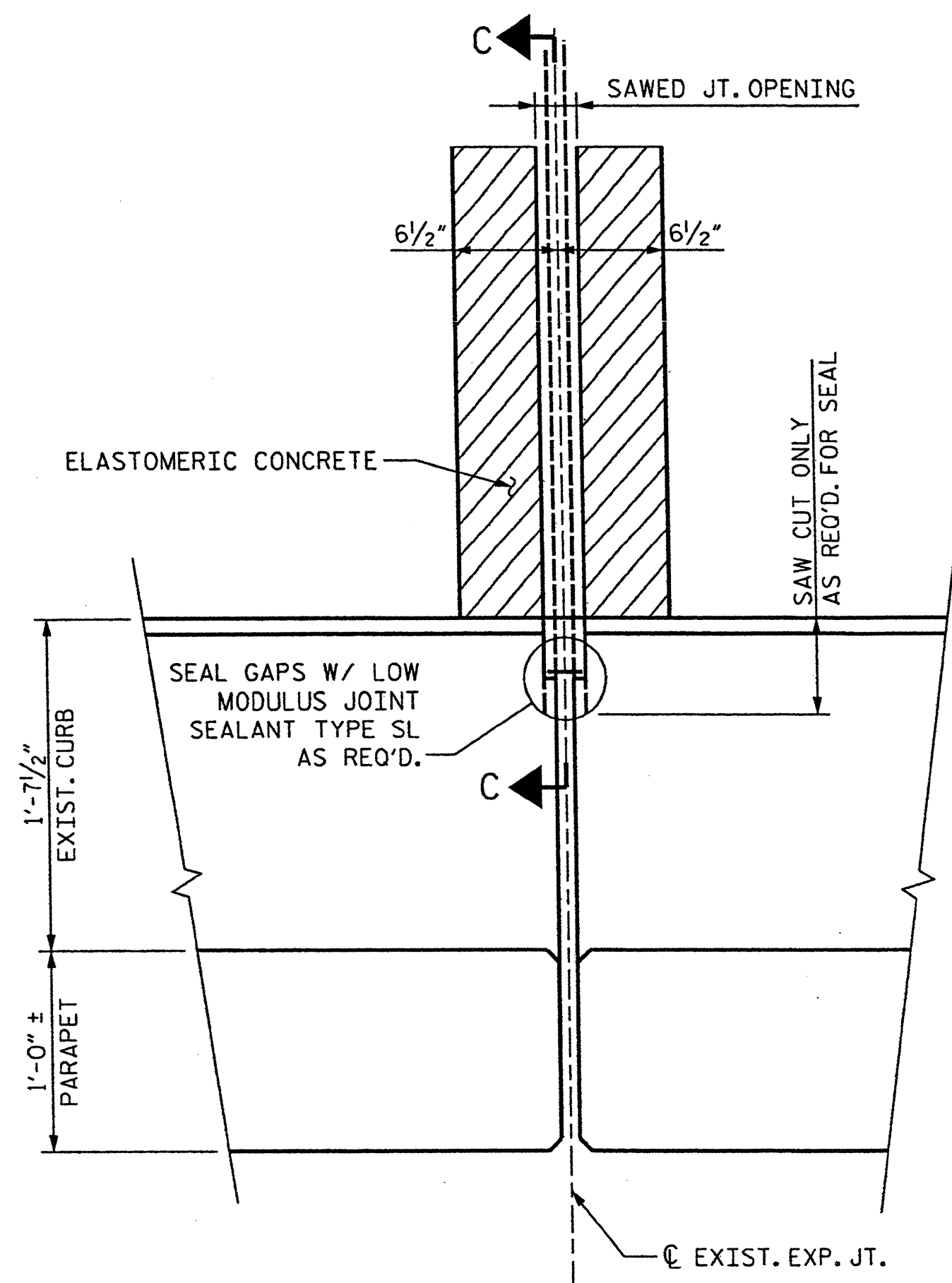
(A) CLASS II SURFACE PREPARATION ONLY AS REQUIRED TO REMOVE UNSOUND CONCRETE AND PREPARE SURFACE FOR NEW ELASTOMERIC CONCRETE.



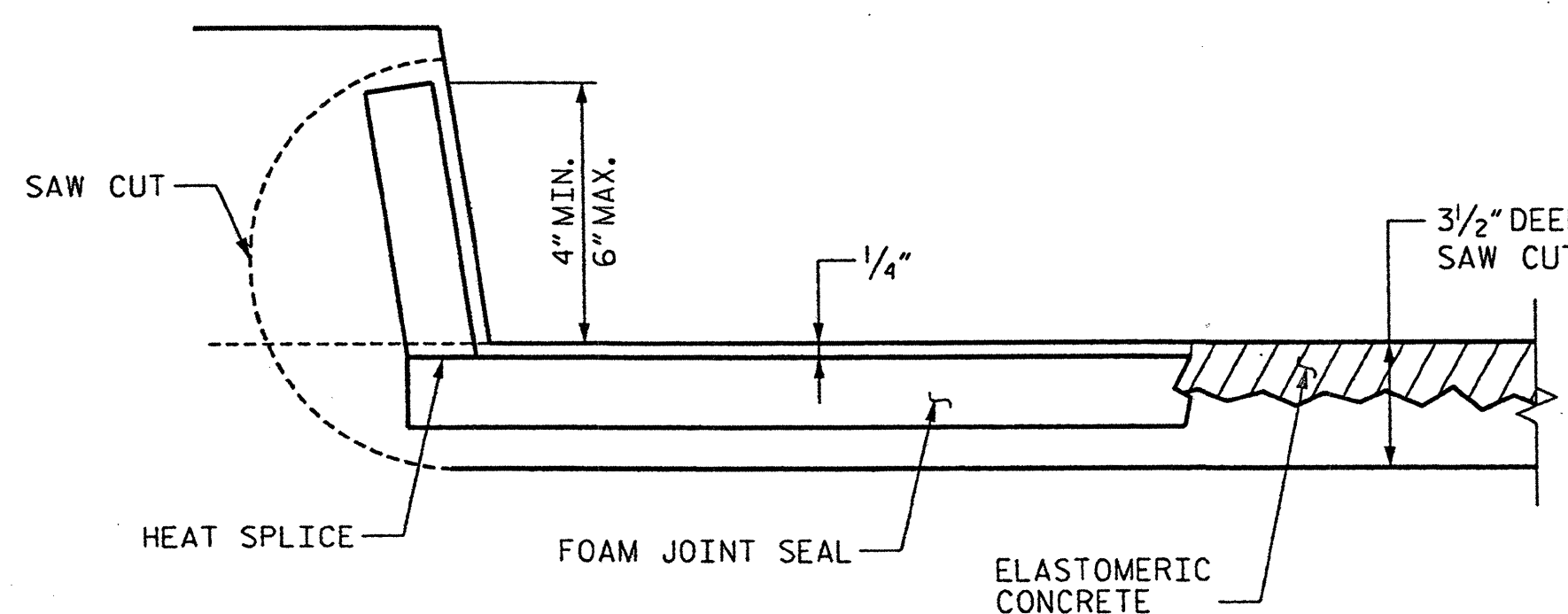
- USE 2.8125" X 2.50" UNCOMPRESSED EVAZOTE JT. SEAL MATERIAL AT BENT 1
- USE 2.8125" X 2.50" UNCOMPRESSED EVAZOTE JT. SEAL MATERIAL AT BENT 2
- △ 1" FORMED OPENING

ELASTOMERIC CONCRETE	
LOCATION	QTY
BENT 1	3.5 C.F.
BENT 2	3.5 C.F.

TOTAL ELASTOMERIC CONC. = 7.0 C.F.
TOTAL ELASTOMERIC CONC. = 0.3 C.Y.



PARTIAL PLAN @ INTERIOR BENT



SECTION C-C

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

INTERIOR BENT JOINT SEAL DETAILS

DECK REHAB. FOR BRIDGE NO. 234

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-52
1			3			TOTAL SHEETS
2			4			77

Joseph T. Kelvington
Professional Engineer
10/11/2011

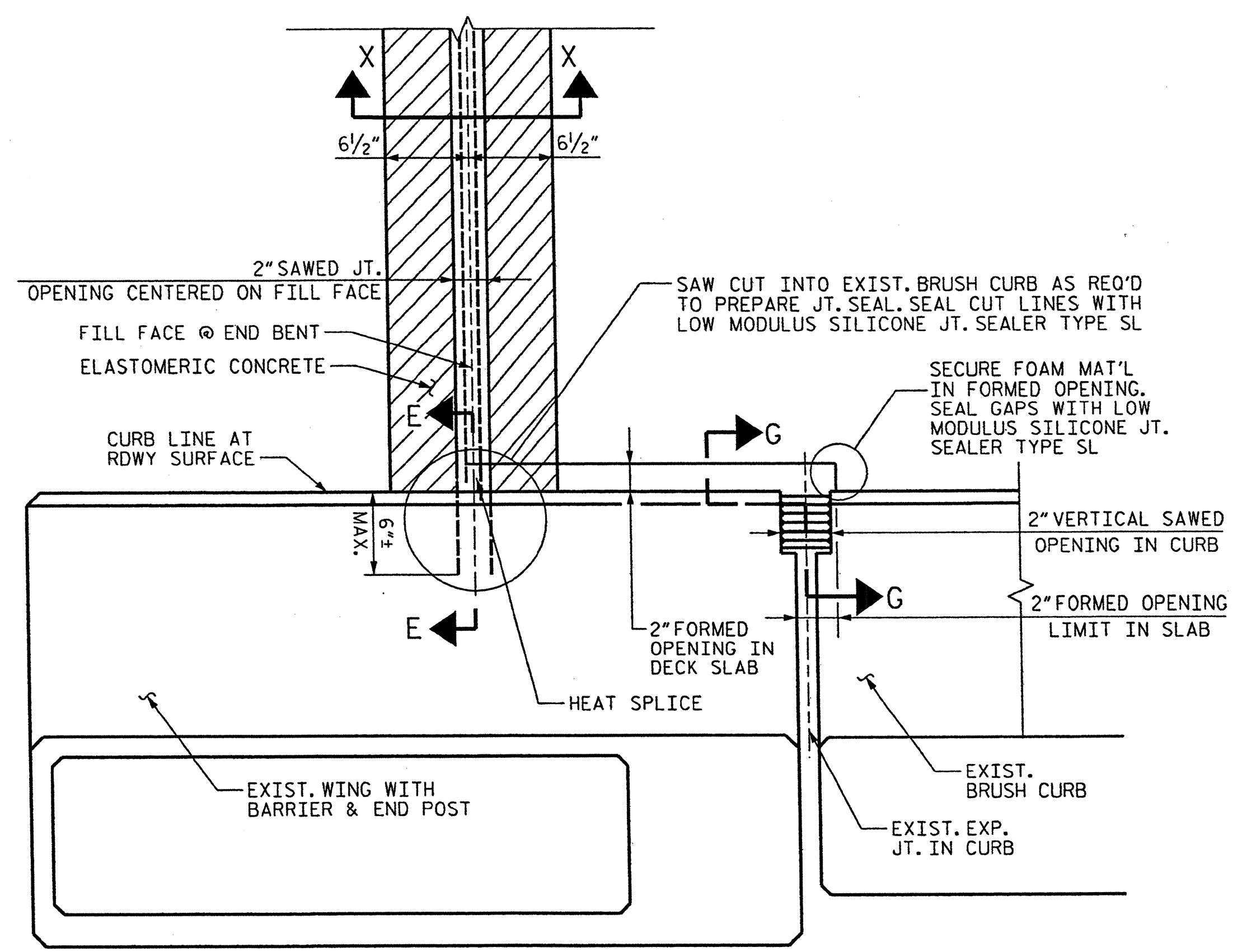
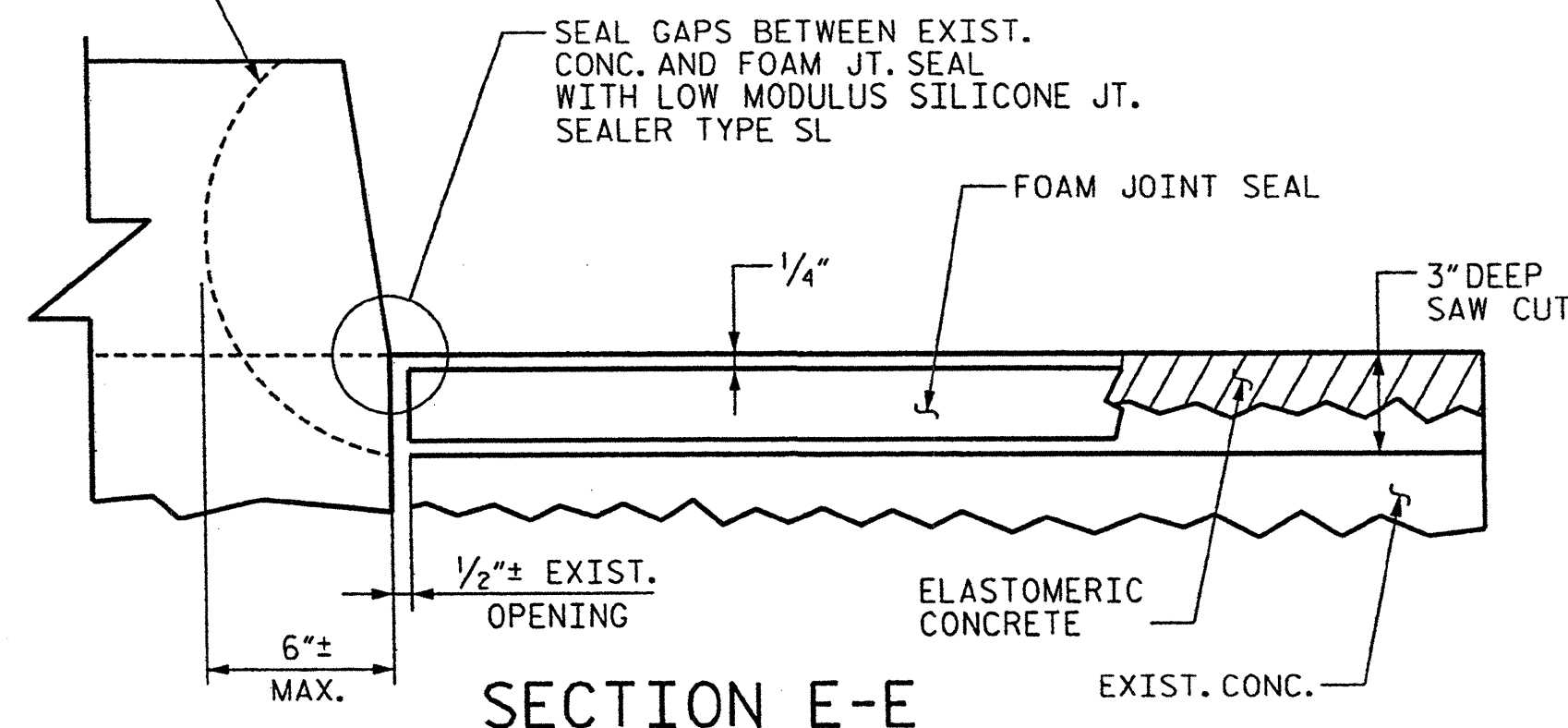


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Fax. (919) 851-7024
www.stantec.com
License No. F-0672

DRAWN BY: B. C. MACYOWSKY DATE: 11-22-11
CHECKED BY: J. T. KELVINGTON DATE: 11-22-11

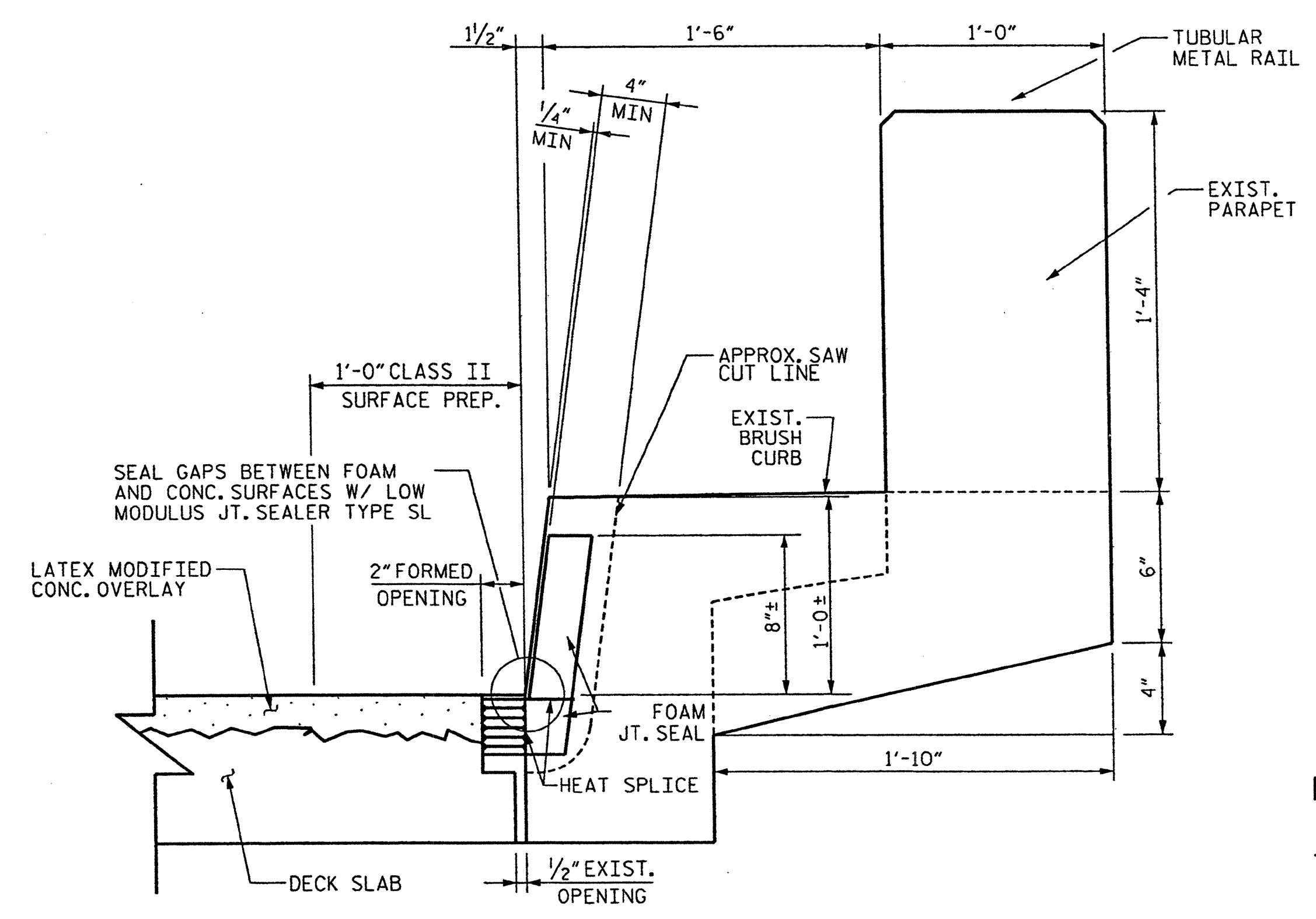
BP_14.P.3 Henderson-Polk Co. Henderson Co. Bridge 234A.Draining.BP140234_Deck.dgn 12/15/2011 10:15:34 AM Jgelle

SAW CUT ONLY AS DEEP AS NECESSARY TO PREPARE SURFACES FOR JOINT MAT'L



PARTIAL PLAN @ END BENT #1

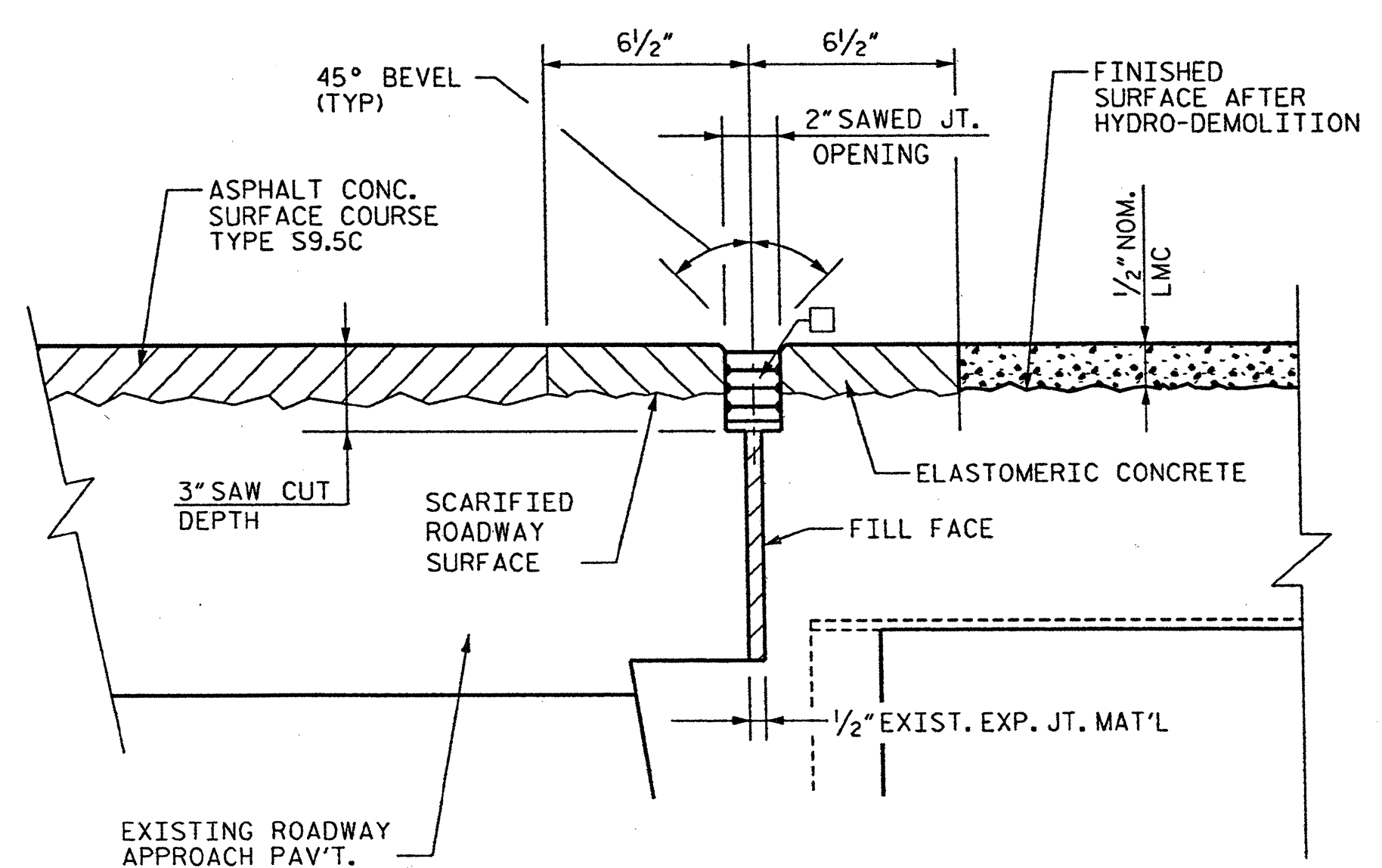
(END BENT #2 SIMILAR)
NOTE: METAL RAIL, END POSTS AND BARRIER PARAPET WALL DETAILS NOT SHOWN FOR CLARITY.



ELASTOMERIC CONCRETE	
LOCATION	QTY
END BENT 1	3.5 C.F.
END BENT 2	3.5 C.F.

TOTAL ELASTOMERIC CONC. = 7.0 C.F.
TOTAL ELASTOMERIC CONC. = 0.3 C.Y.

PROJECT NO. WBS 17BP.14.P.3
HENDERSON COUNTY
STATION: _____



□ - USE 2.50" X 2.00" UNCOMPRESSED FOAM JOINT SEAL

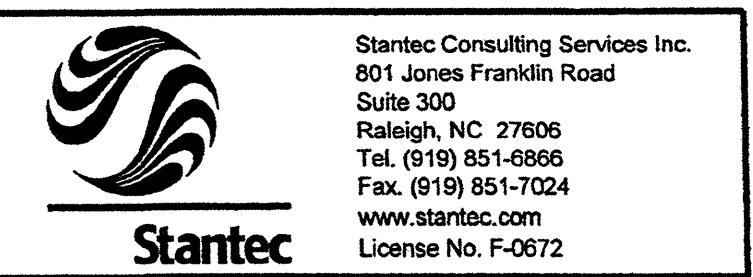
Joseph Kelvington
12/15/11
Professional Engineer
No. 12154
State of North Carolina

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT JOINT SEAL DETAILS

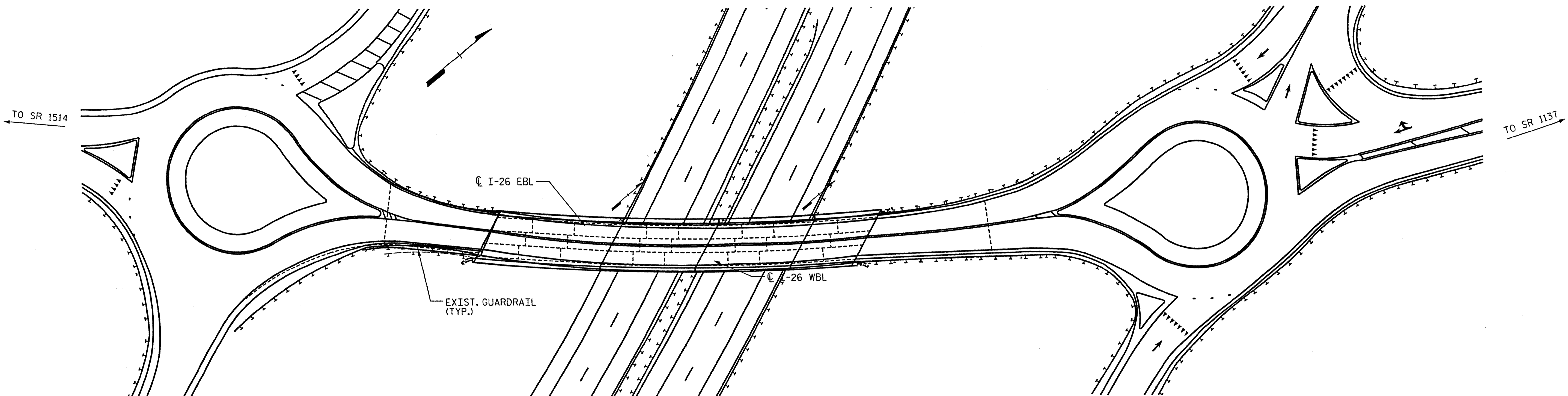
DECK REHAB. FOR BRIDGE NO. 234

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-53	
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2			4			77	



DRAWN BY: B. C. MACYOWSKY DATE: 11-22-11
CHECKED BY: J. T. KELVINGTON DATE: 11-22-11

17BP.14.P.3 Henderson-Poik Co\Henderson Co. Bridge 234\Drawing\BR440234-De1.dgn 12/15/2011 10:53:37 AM jjoelle



BRIDGE 32 ON NC 108
 LOCATION: BRIDGE 740032, NC 108 OVER I-26

TOTAL BILL OF MATERIAL

INCIDENTAL MILLING	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	ASHPHALT CONC. SURF. COURSE TYPE S9.5C	CONCRETE REPAIRS	SHOTCRETE REPAIRS	SPAN JACKING POLK COUNTY BRIDGE #32
SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	CU.YDS.	CU.YDS.	SO.YDS.	LUMP SUM	SO.FT.	TON	CU.FT.	CU.FT.	EA.
405	745.8	0	8.1	0	745.8	0	36.2	745.8	LUMP SUM	6451	37	84	126	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.14.P.3
POLK COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

LOCATION SKETCH
 AND TOTAL
 BILL OF MATERIAL

DECK REHAB. FOR BRIDGE NO. 032

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-54
1			3			TOTAL SHEETS
2			4			77

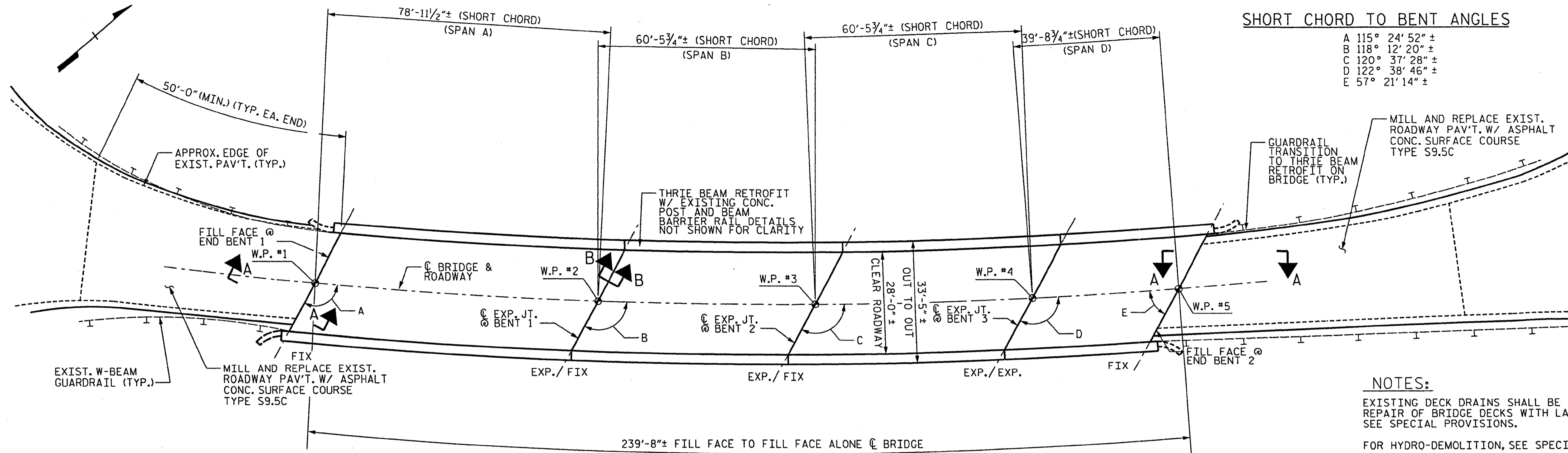
Joseph J. Kelvington
 11/20/11
 SEAL 13406
 ENGINEER
 JOSEPH J. KELVINGTON

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DRAWN BY : J. L. HENNEKES DATE : 11-22-11
 CHECKED BY : J. T. KELVINGTON DATE : 11-22-11

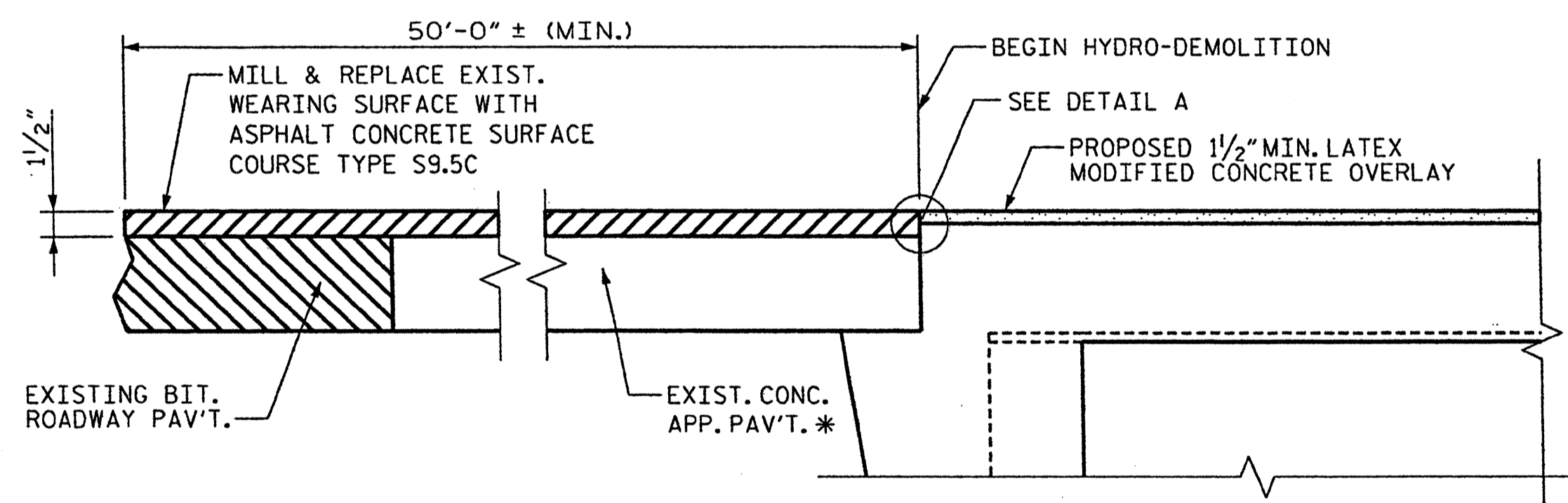
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11/19/2012 10:00:21 AM Jgelle
 I:\BP.14.P.3 Henderson-Polk Co. Bridge 32-Dr\row\hp\BP740032_DeckPlan.dgn



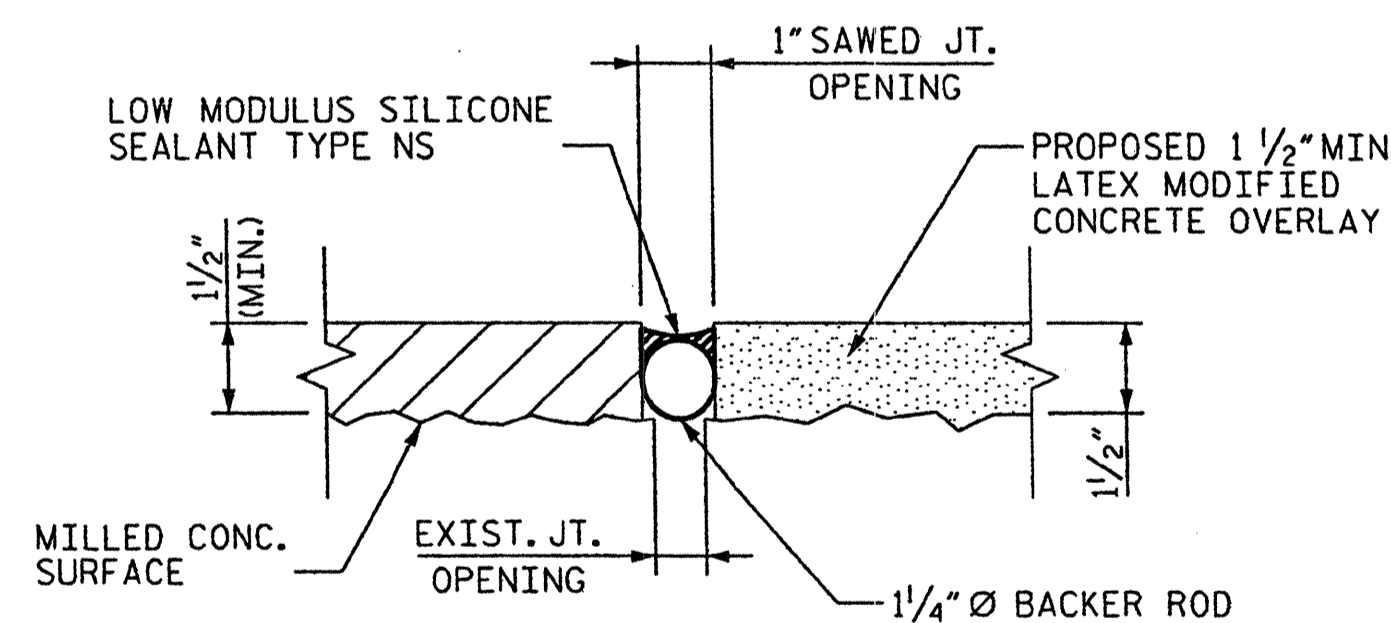
PLAN OF SPANS A-D

** ANGLES SHOWN ARE MEASURED TO SHORT CHORDS
 Δ NOTE: ALL HORIZONTAL DIMENSIONS ARE RADIAL OR ARC DIMENSIONS UNLESS NOTED OTHERWISE.



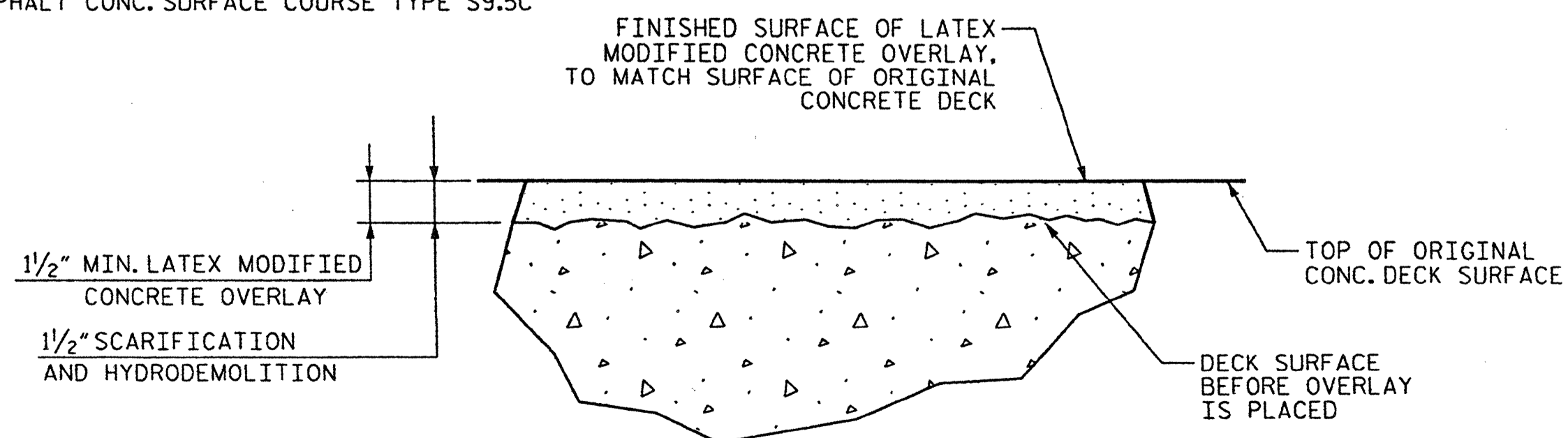
SECTION A-A

* PAV'T IS ASSUMED. MILL EXISTING BRIDGE APPROACH PAV'T SURFACE AND OVERLAY W/ 1/2" MIN. ASPHALT CONC. SURFACE COURSE TYPE S9.5C



DETAIL A

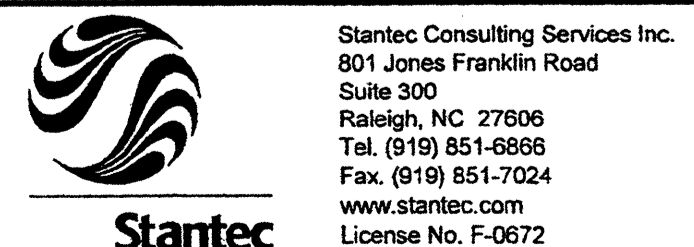
CONCRETE JOINT SEAL @ END BENT



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

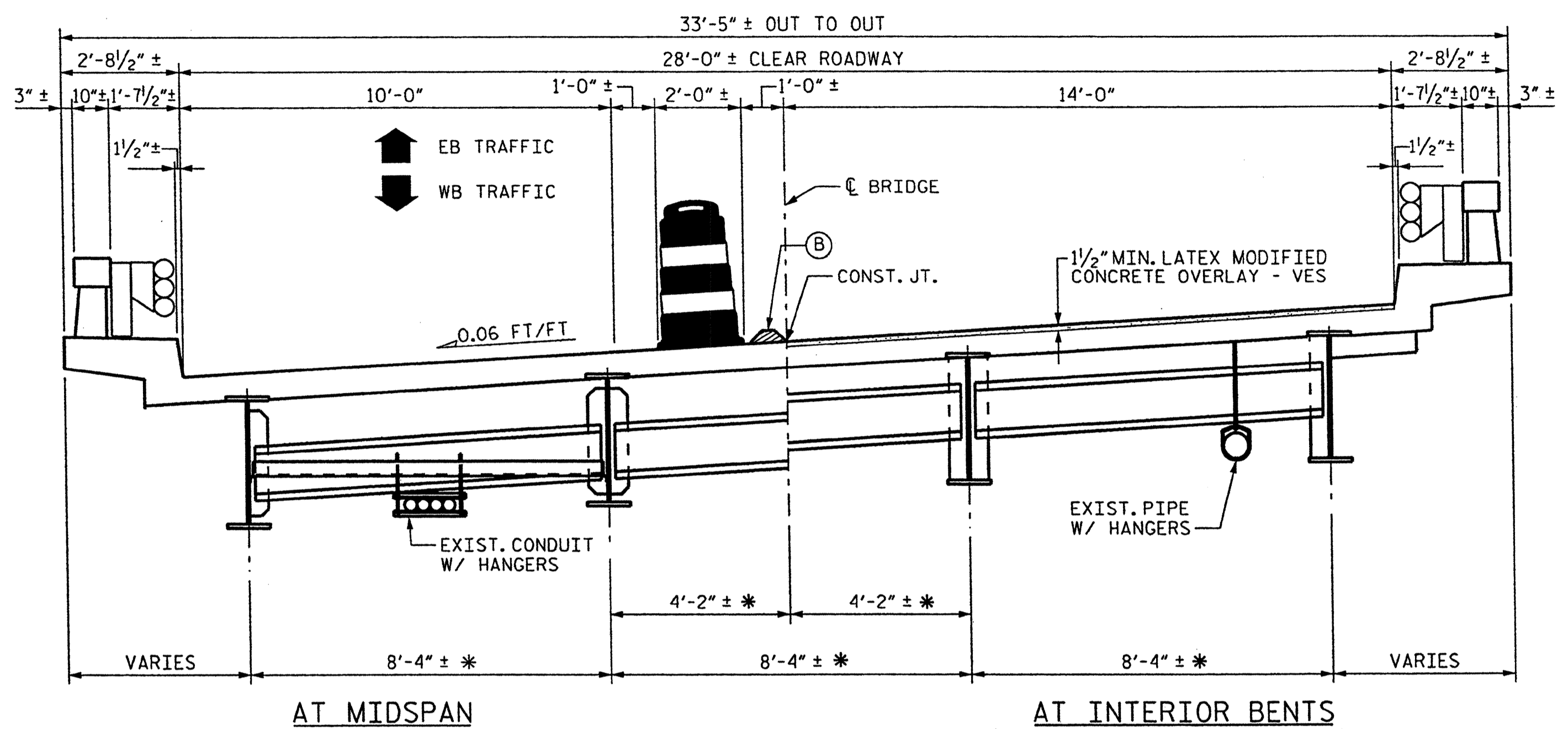
PROJECT NO. WBS 17BP.14.P.3
 POLK COUNTY
 STATION:

STATE OF NORTH CAROLINA					
DEPARTMENT OF TRANSPORTATION					
RALEIGH					
DECK PLAN					
DECK REHAB. FOR BRIDGE NO. 032					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-55
					TOTAL SHEETS 77



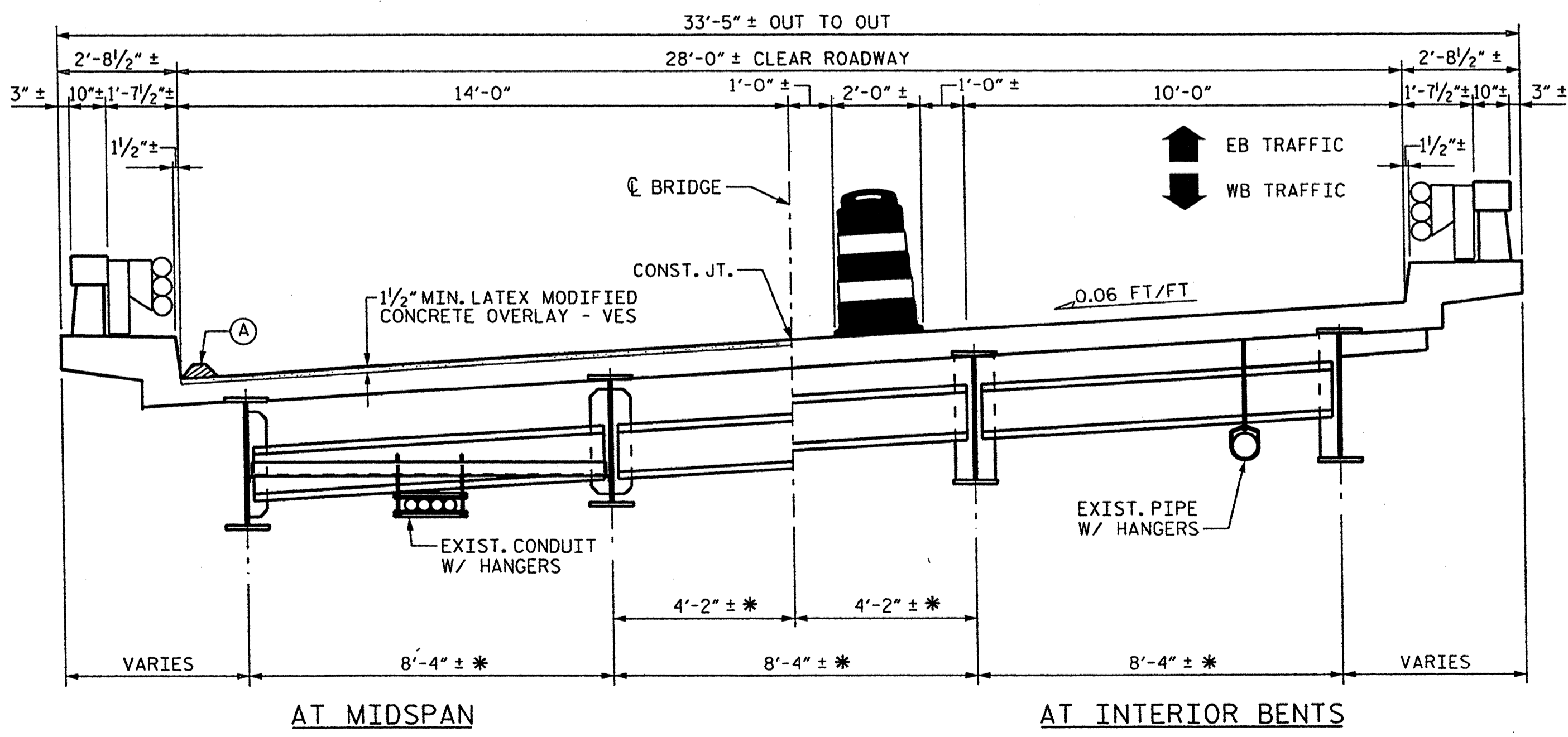
DRAWN BY: J. L. HENNEKES DATE: 11-22-11
 CHECKED BY: J. T. KELVINGTON DATE: 11-22-11

Joseph Kelvington
 11/22/11
 13406
 ENGINEER



**TYPICAL SECTION
SPANS A THRU D**

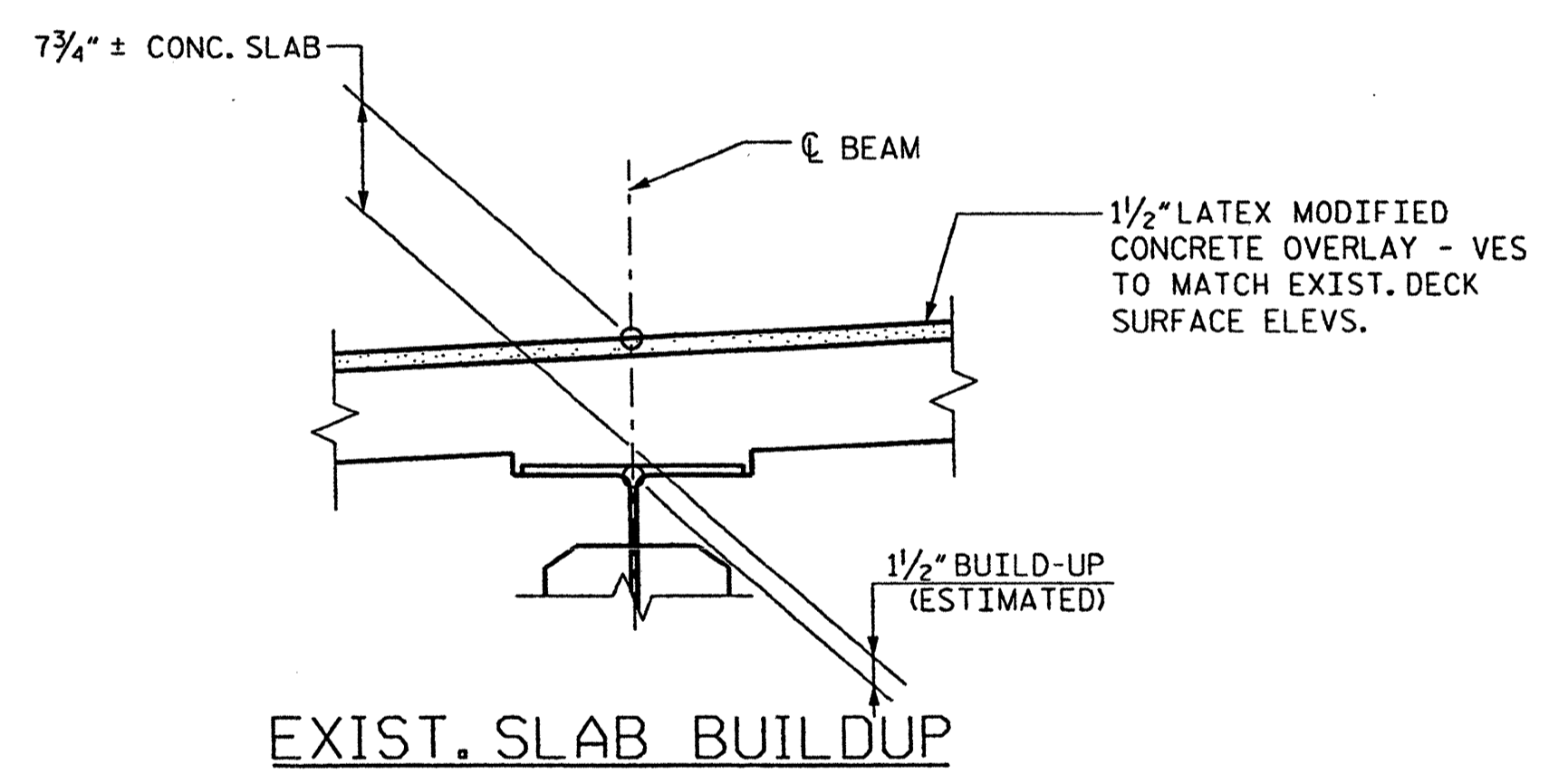
NOTE: ALL DIMENSIONS ARE RADIAL UNLESS OTHERWISE NOTED



**TYPICAL SECTION
SPANS A THRU D**

NOTE: ALL DIMENSIONS ARE RADIAL UNLESS OTHERWISE NOTED

- NOTES:
- SPANS A-D (W36 OR W33 I-BEAM) SHOWN.
 - ALL HORIZONTAL DIMENSIONS SHOWN ARE RADIAL.
 - ALL DIMENSIONS ARE APPROXIMATE.
 - 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.
 - (B) DAM CONTINUOUSLY ALONG BARRIER.
 - VES DENOTES VERY EARLY STRENGTH.
 - * DIMENSION VARIES. RADIAL @ C BENT & C BEAM.



PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
 STATION: _____

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-56	
TYPICAL SECTION						TOTAL SHEETS 77	
DECK REHAB. FOR BRIDGE NO. 032							
REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:		
1			3				
2			4				

Joseph T. Kelvington
 12/15/2011
 J. T. KELVINGTON
 ENGINEER
 3406



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 Fax. (919) 851-7024
 www.stantec.com
 License No. F-0672

DRAWN BY: J. L. HENNEKES DATE: 11-22-11
 CHECKED BY: J. T. KELVINGTON DATE: 11-22-11

I:\WBS 17BP.14.P.3_Henderman-Polk Co.\Polk Co. Bridge 32\Drawings\BP1740032_Typ5sect.dgn 12/15/2011 3:28:18 PM jpe11e

NOTE:

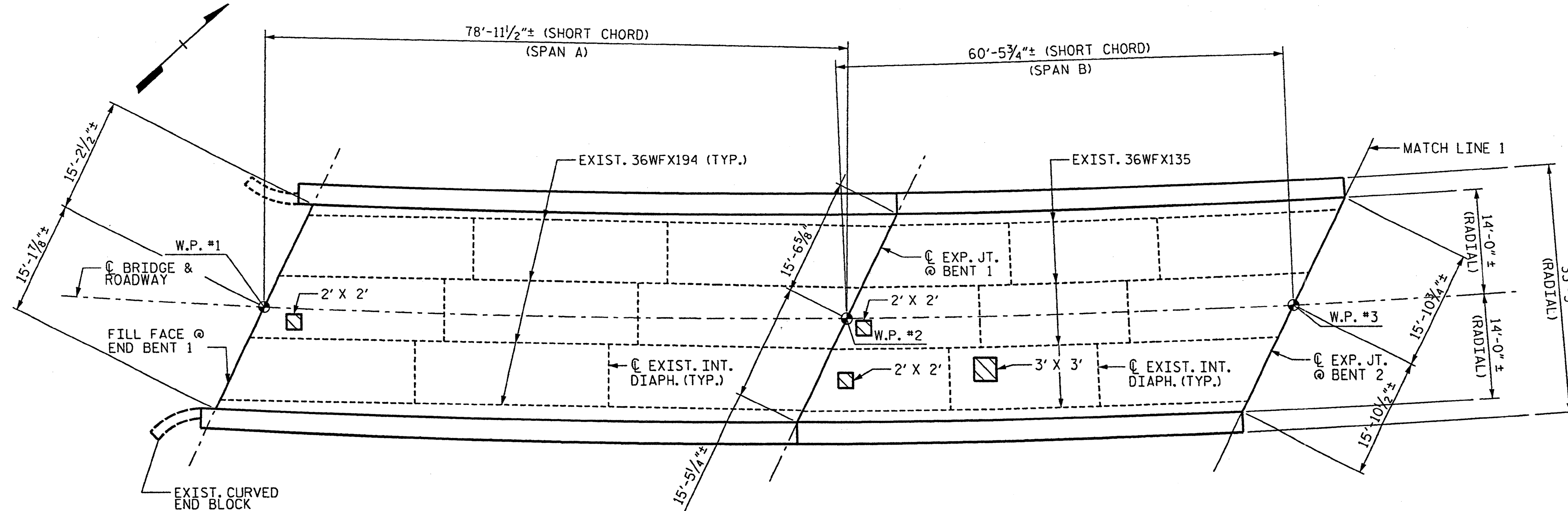
CONTRACTOR SHALL FURNISH FORM WORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.

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.

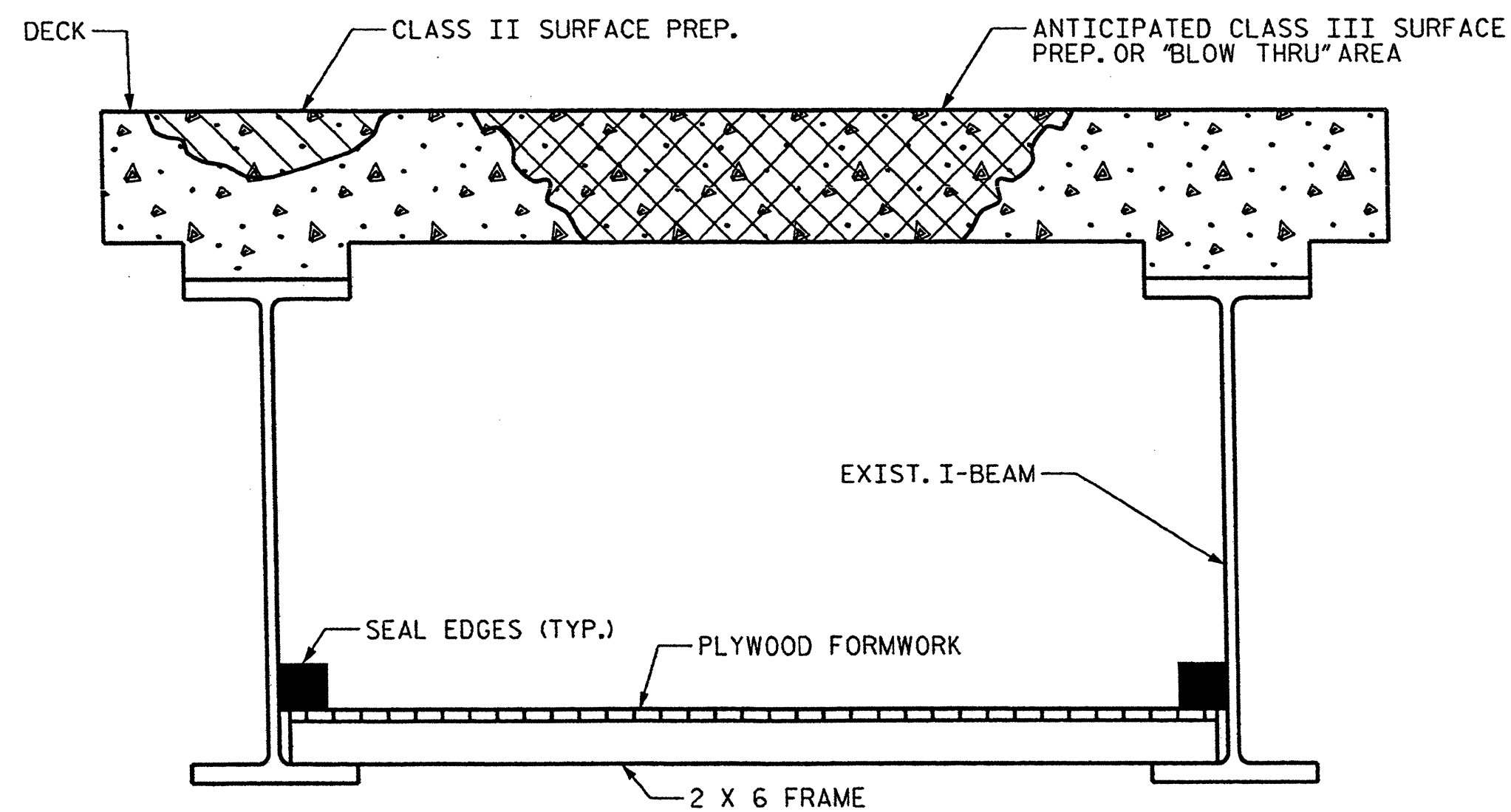
FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.

CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.



PLAN OF SPANS A & B - DECK REPAIRS

NOTE: BARRIER RAILS AND THRIE BEAM RETROFIT NOT SHOWN FOR CLARITY



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

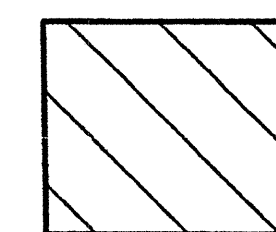
A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALL IN AREAS INDICATED AS CLASS III SURFACE PREPARATION.

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

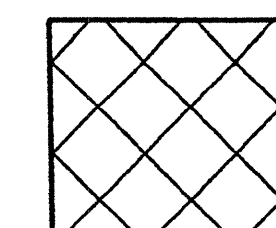
COSTS FOR INSTALLING AND REMOVING FORMWORK SHALL BE INCIDENTAL TO THE PRICE PER SQ. YARD OF HYDRO-DEMOLITION.

CONTRACTOR, AT HIS OPTION, MAY CHOOSE TO MONITOR HYDRO-DEMOLITION WORK AND CONTROL BLOW THRU MATERIALS IN ANOTHER MANNER THAN SHOWN IN THESE PLANS. SEE TRANSPORTATION MANAGEMENT PLANS.

NOTE: CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

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

PROJECT NO. WBS 17BP.14.P.3

POLK COUNTY

STATION: _____

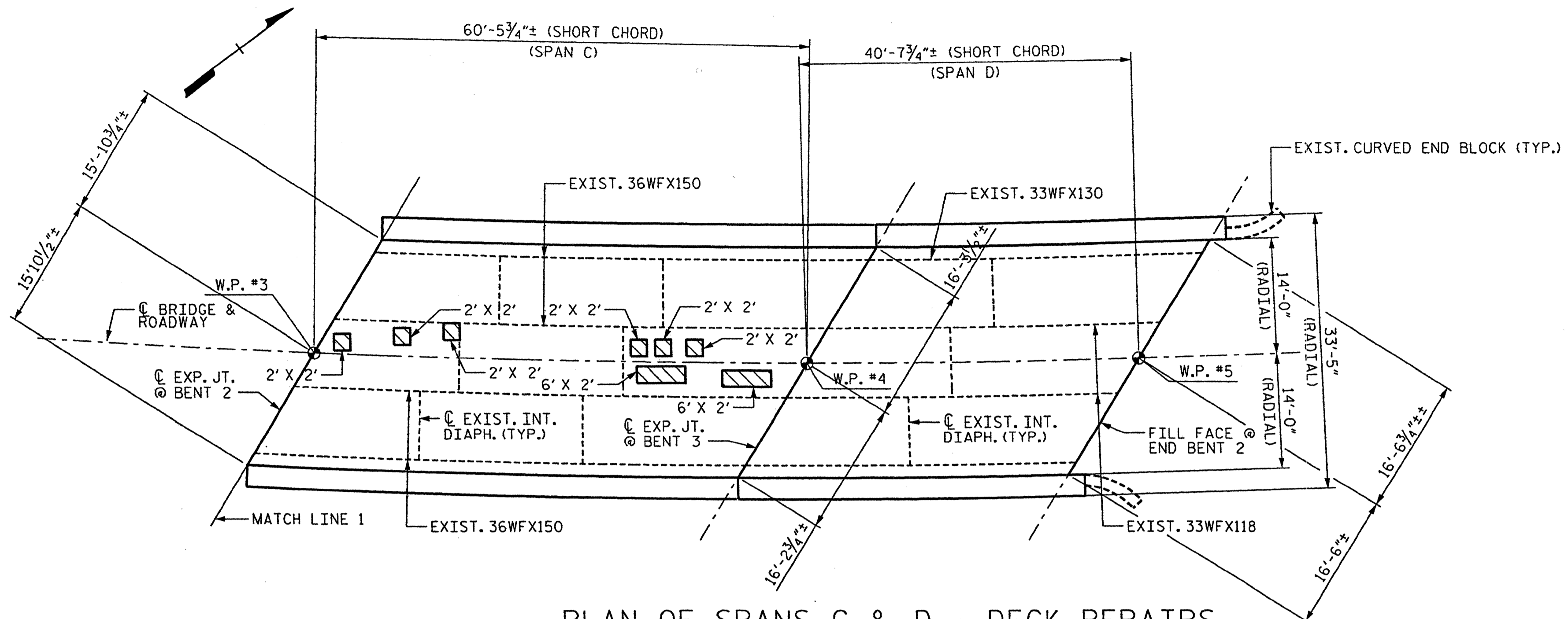


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DRAWN BY : J. L. HENNEKES DATE : 11-22-11
CHECKED BY : J. T. KELVINGTON DATE : 11-22-11

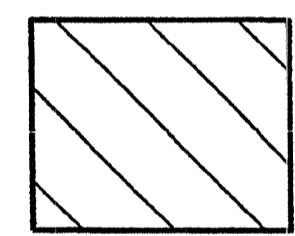
Joseph Kelvington
12/15/11
Professional Engineer Seal
13406
J. KELVINGTON

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DECK REPAIR DETAILS SPANS A & B					
DECK REHAB. FOR BRIDGE NO. 032					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-57
TOTAL SHEETS					77

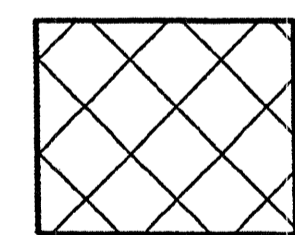


PLAN OF SPANS C & D - DECK REPAIRS
 NOTE: BARRIER RAILS AND THRIE BEAM RETROFIT NOT SHOWN FOR CLARITY

NOTE:
 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 REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

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

NOTE: CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
 STATION: _____

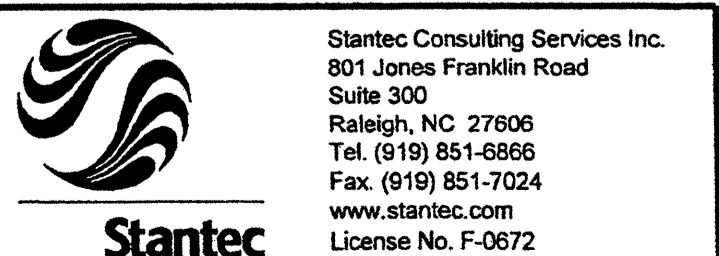
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK REPAIR DETAILS
 SPANS C & D

DECK REHAB. FOR BRIDGE NO. 032

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-58
1			3			TOTAL SHEETS
2			4			77

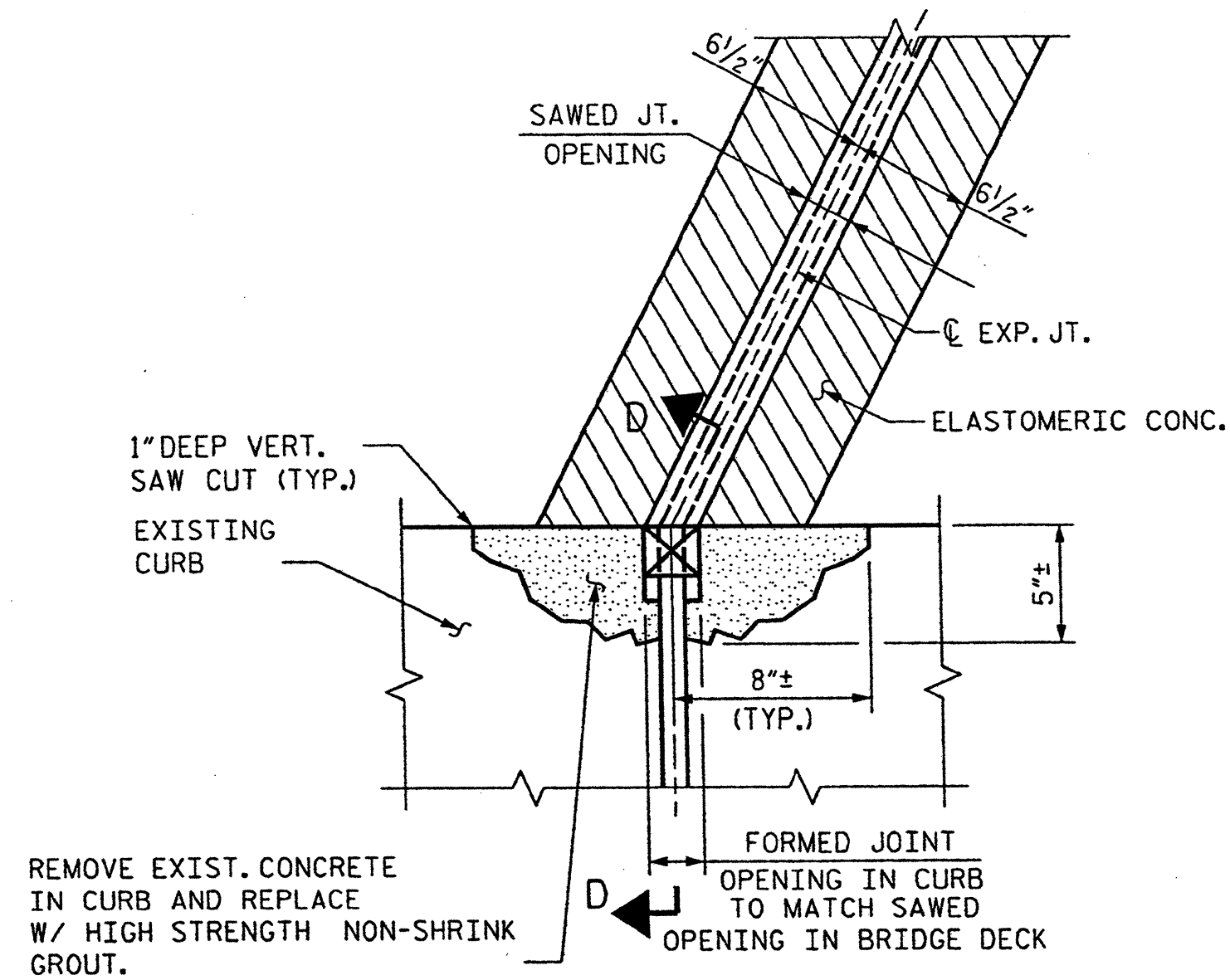
J. T. Kelvington
 J. T. KELVINGTON
 PROFESSIONAL ENGINEER
 LICENSE NO. 3406
 NORTH CAROLINA



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 Suite 300
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 Fax. (919) 851-7024
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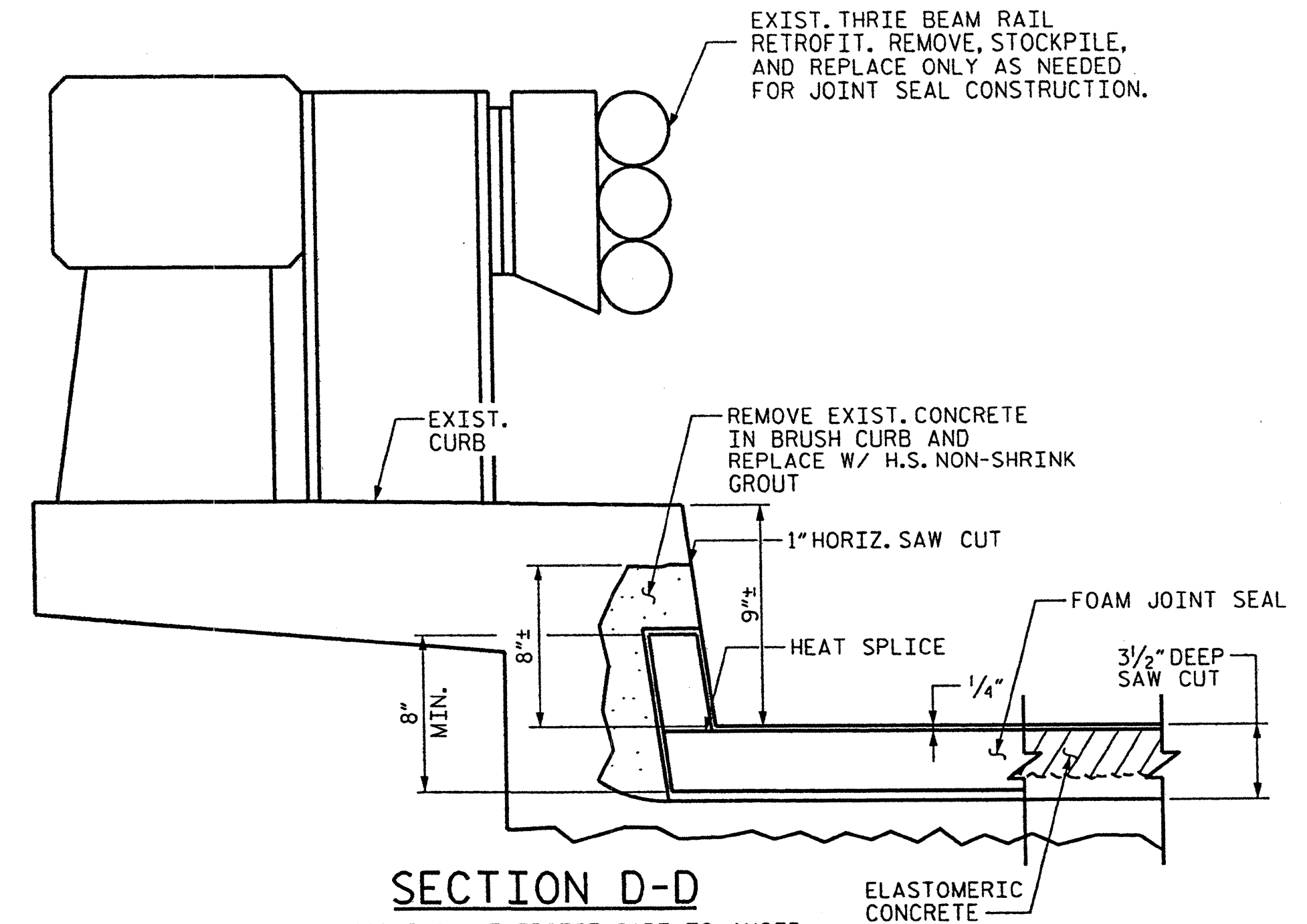
DRAWN BY : J. L. HENNEKES DATE : 11-22-11
 CHECKED BY : J. T. KELVINGTON DATE : 11-22-11

17BP.14.P.3 Henderson-Polk Co. Bridge 32. Drawing BP740032.RepairPlan2.dgn 12/15/2011 4:42:25 PM Jgelle



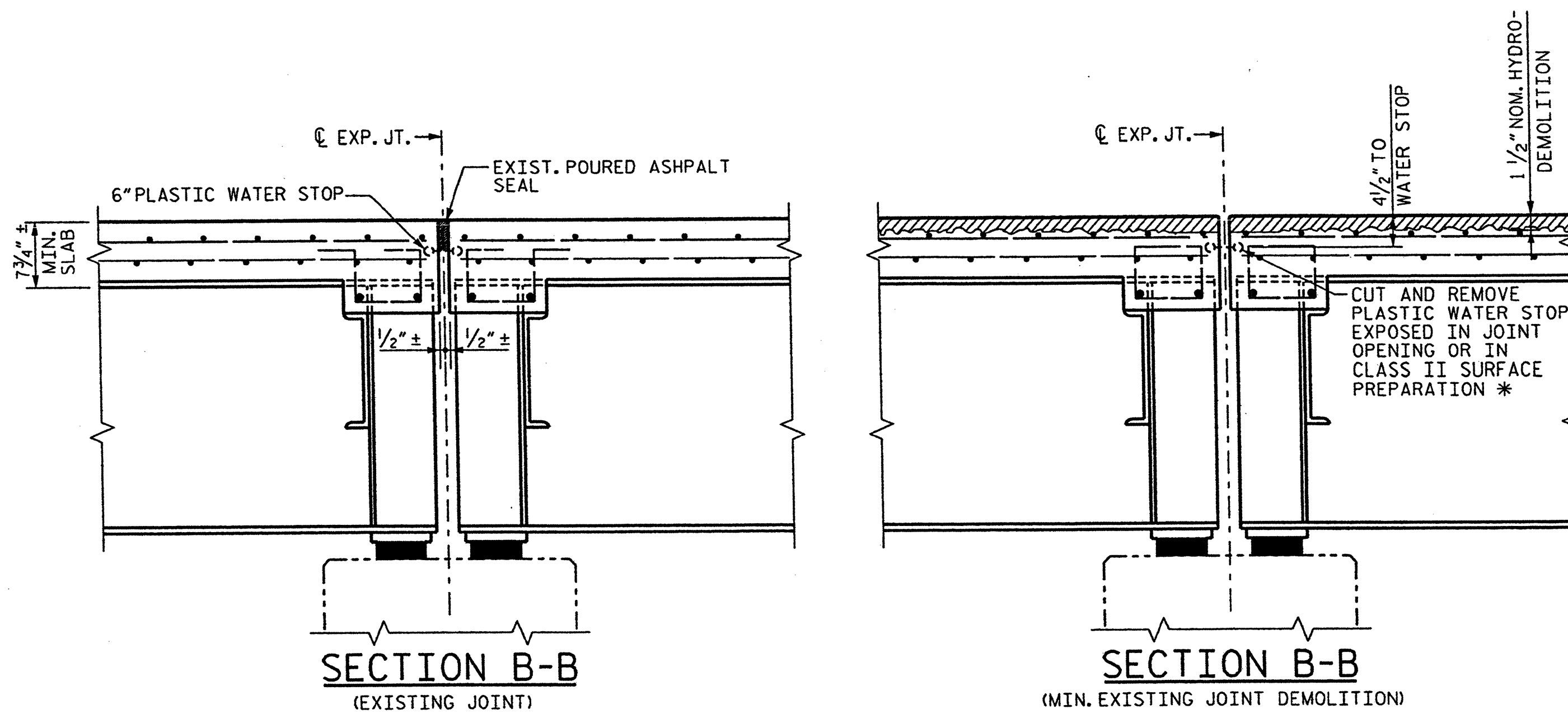
PARTIAL PLAN @ JOINT

(TYP. @ INTERIOR BENTS)
 HIGH STRENGTH GROUT SHALL BE APPROVED BY THE ENGINEER. FOR HIGH STRENGTH GROUT, SEE SPECIAL PROVISION ENTITLED "GROUT FOR STRUCTURES."



SECTION D-D

CONTRACTOR SHALL EXERCISE CARE TO AVOID CUTTING OR DAMAGING EXISTING REINF. STEEL.
 FOR HIGH STRENGTH GROUT, SEE SPECIAL PROVISION. "GROUT FOR STRUCTURES"
 HIGH STRENGTH GROUT SHALL BE APPROVED BY THE ENGINEER.

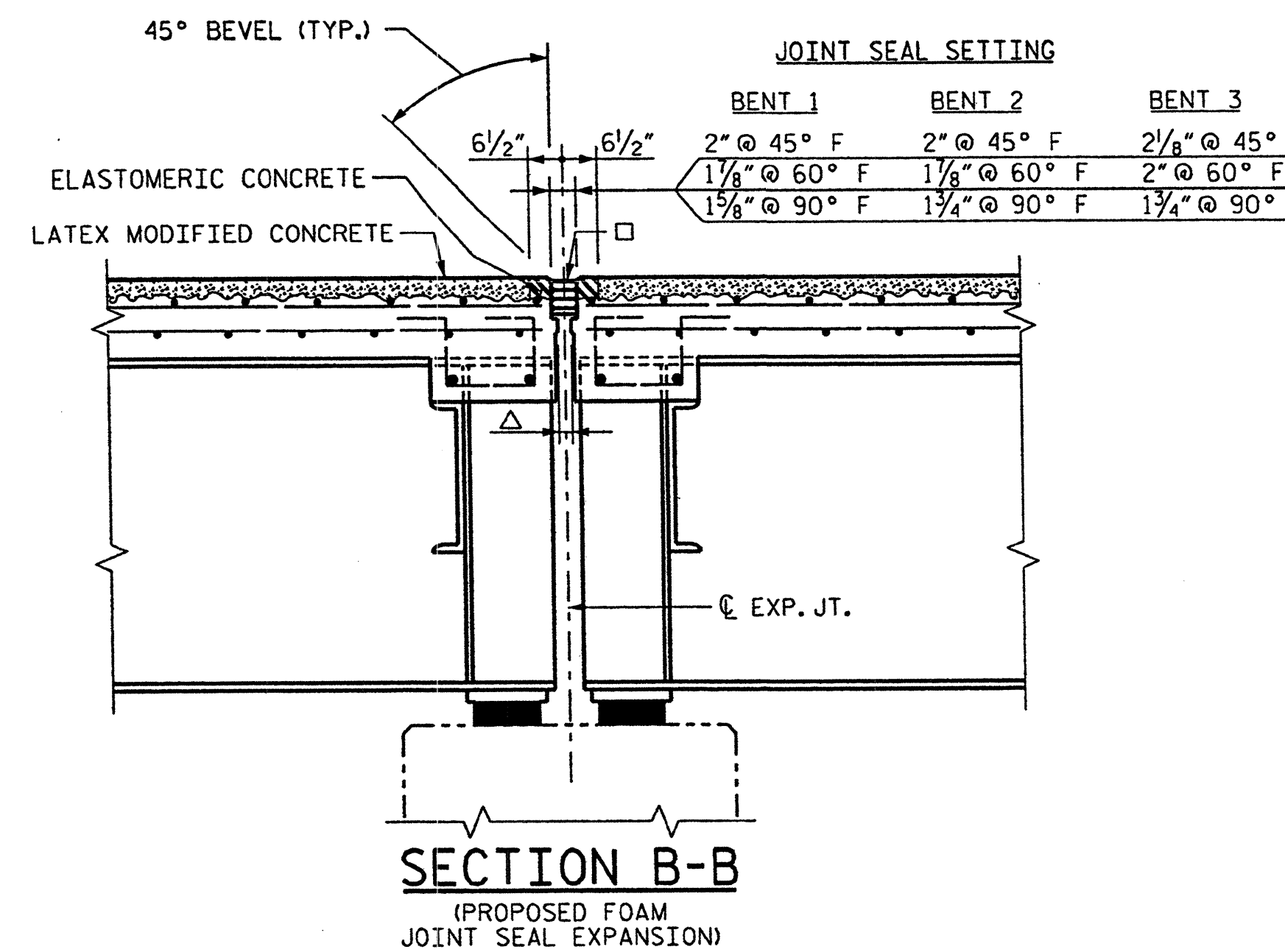


SECTION B-B
(EXISTING JOINT)

SECTION B-B
(MIN. EXISTING JOINT DEMOLITION)

* ALL LOOSE AND UNSOUND CONCRETE SHALL BE REMOVED. IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, THE ENTIRE WATERSTOP SHALL BE REMOVED. OTHERWISE, PREPARE SURFACES BY HYDRO-DEMOLITION TO THE NOMINAL DEPTHS SHOWN.

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



SECTION B-B
(PROPOSED FOAM JOINT SEAL EXPANSION)

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" FORMED OPENING @ BENTS 1, 2, AND 3.

ELASTOMERIC CONCRETE	
LOCATION	QTY
BENT 1	3.9 C.F.
BENT 2	4.0 C.F.
BENT 3	4.1 C.F.

TOTAL ELASTOMERIC CONC. = 12 C.F.
 TOTAL ELASTOMERIC CONC. = 0.44 C.Y.

PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

INTERIOR BENT JOINT SEAL DETAILS

DECK REHAB. FOR BRIDGE NO. 032

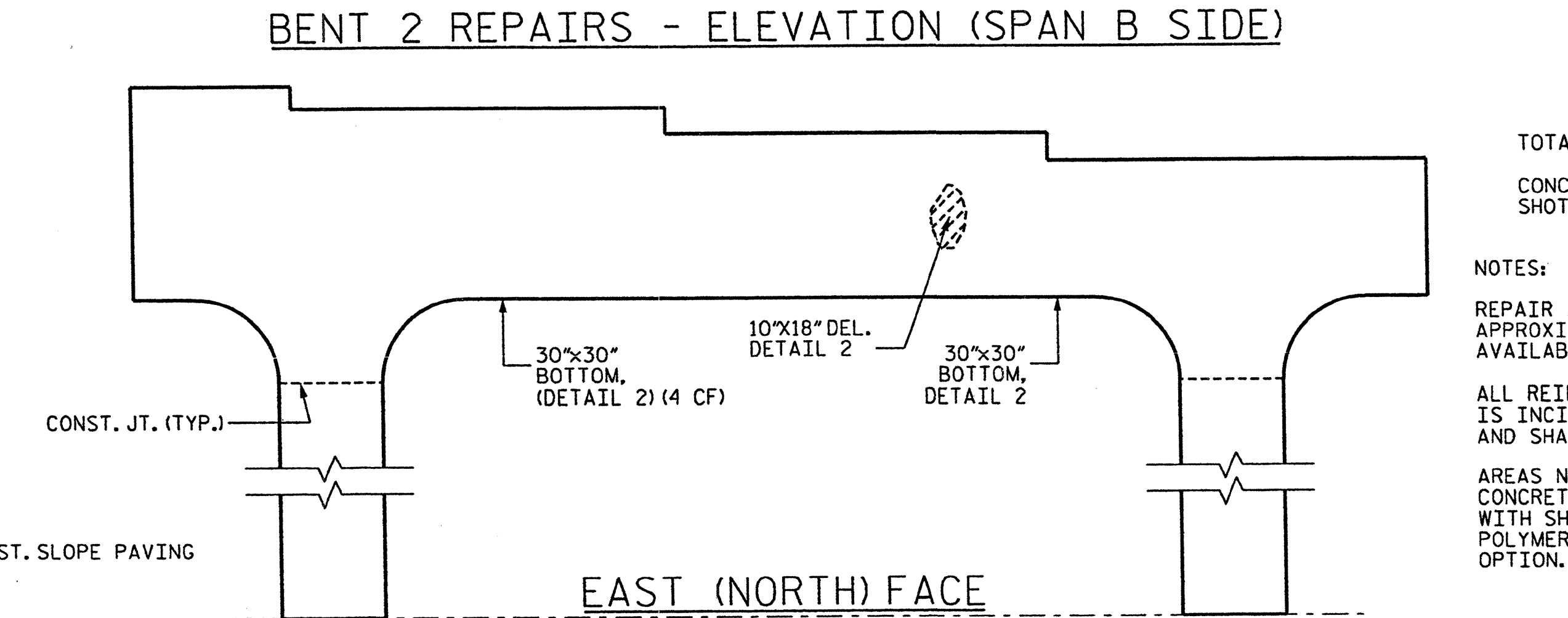
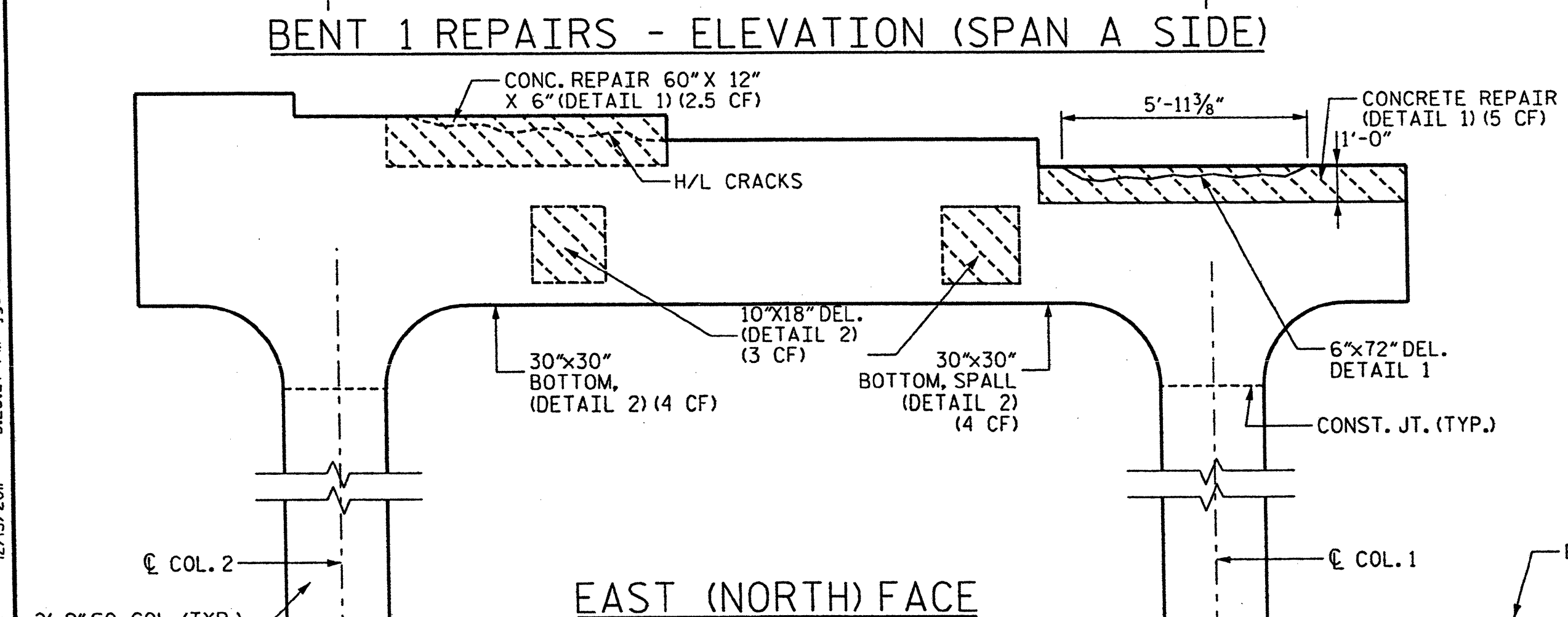
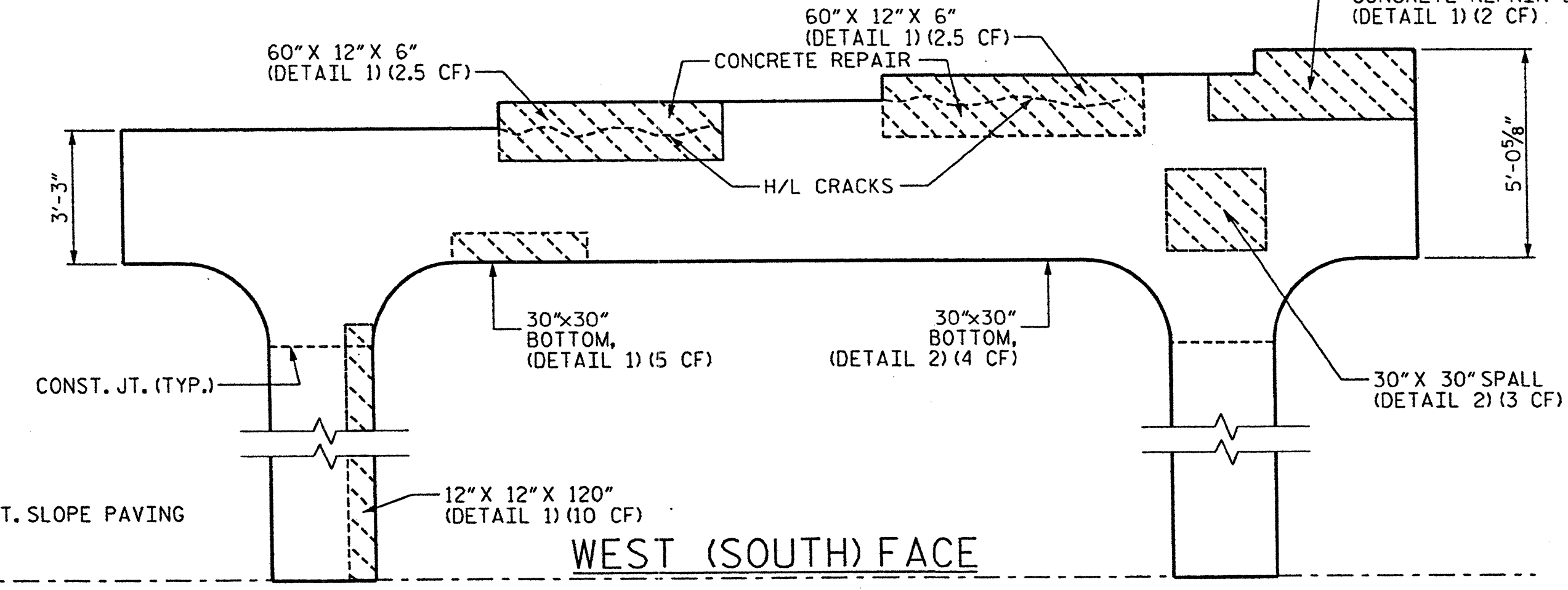
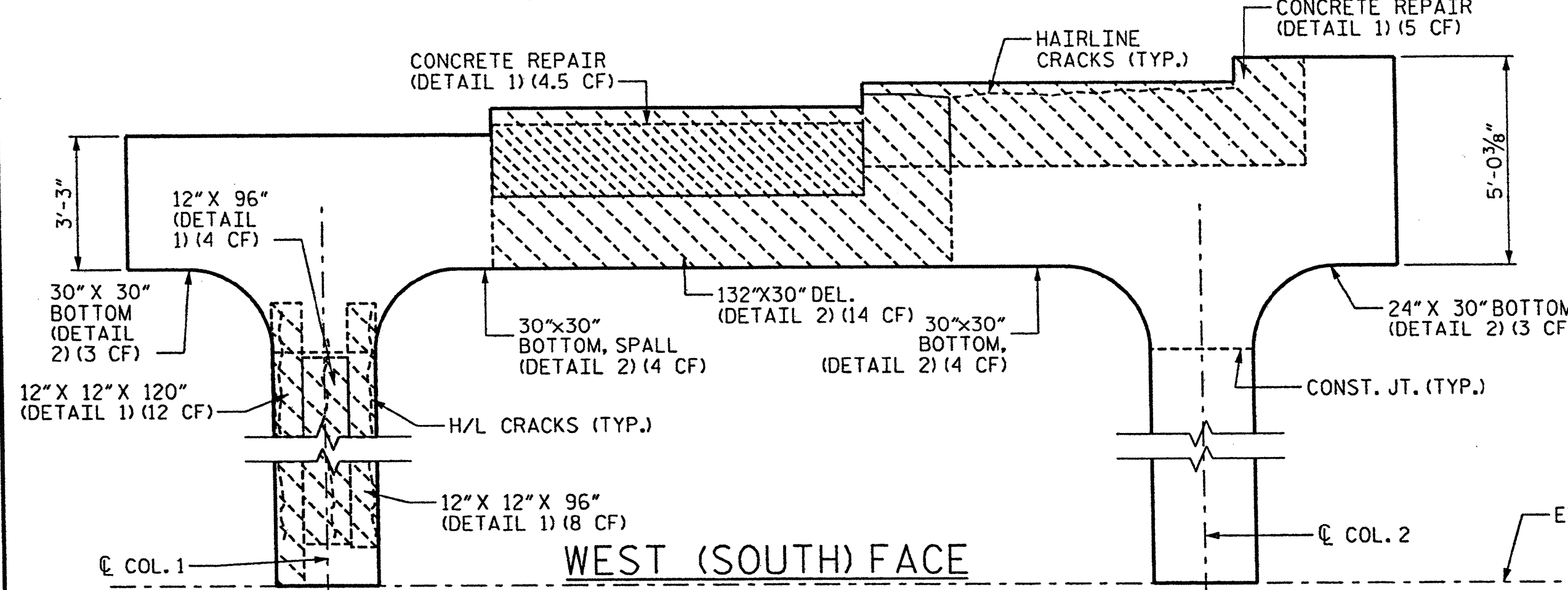
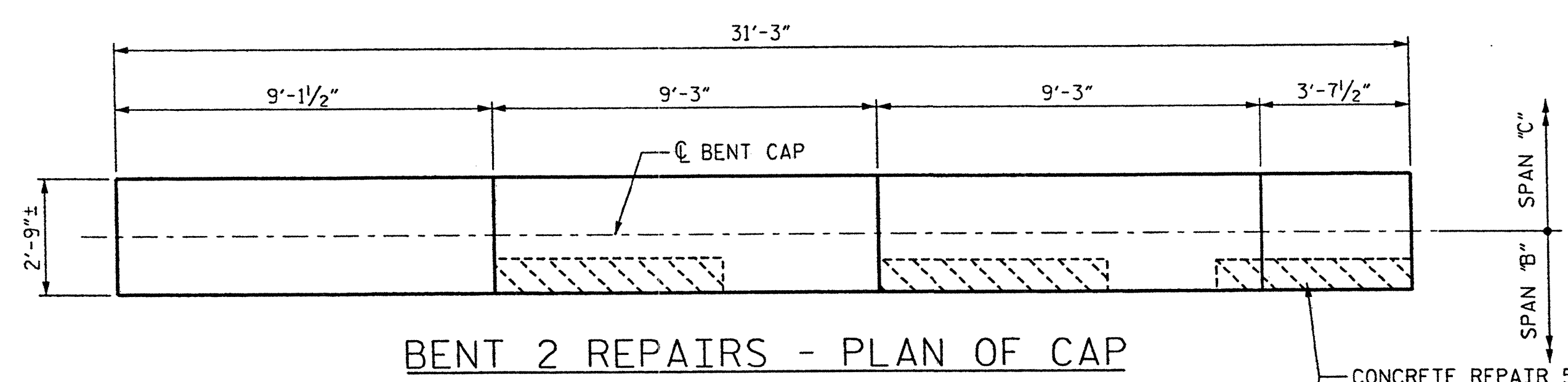
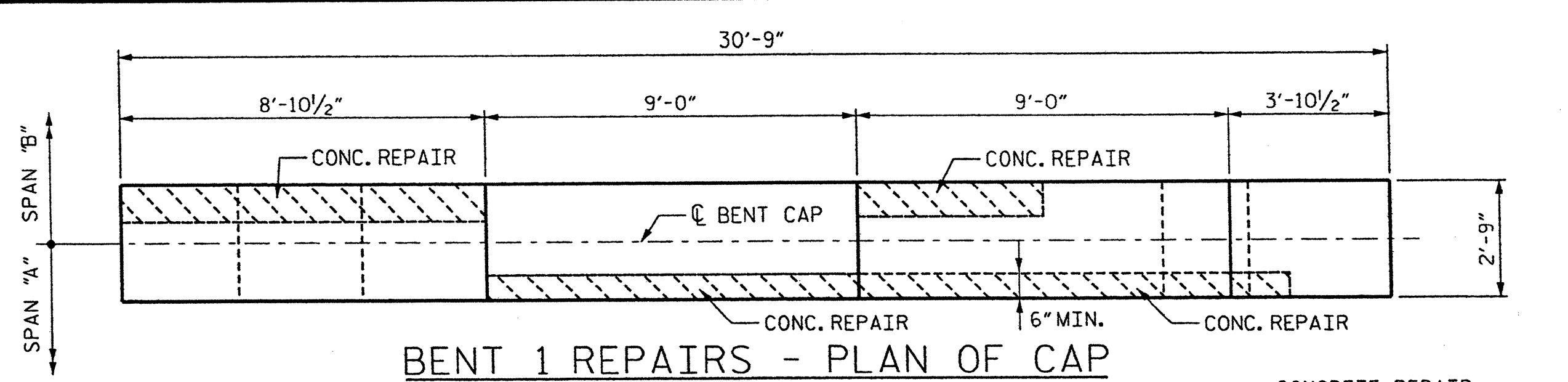
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-59	
1			3			TOTAL	77
2			4			SHEETS	

J. T. Kelvington
 12/15/11
 PROFESSIONAL ENGINEER
 STATE OF NORTH CAROLINA
 LICENSE NO. 3406

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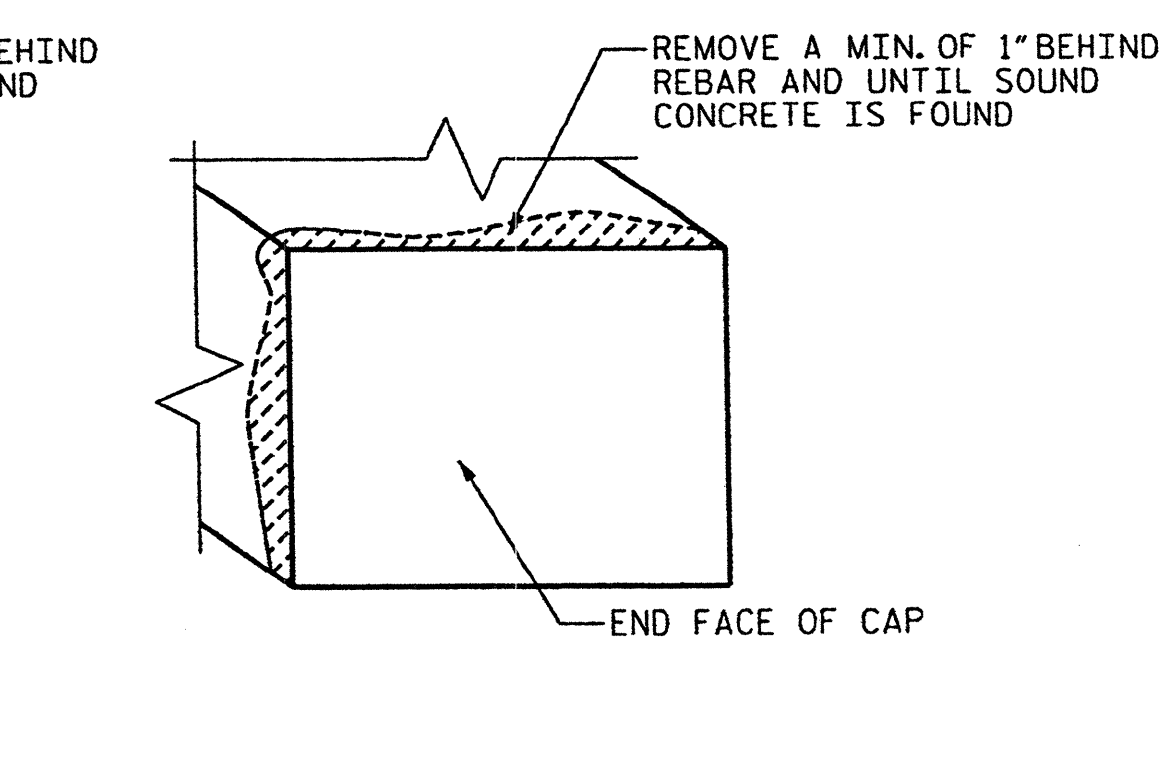
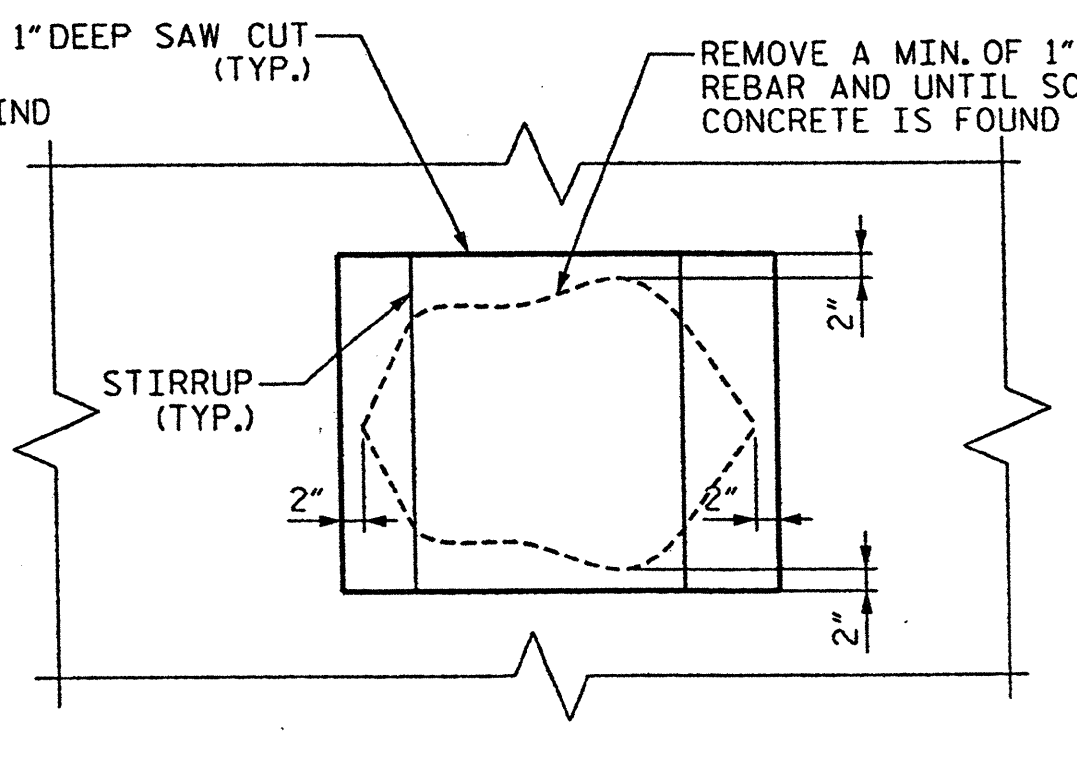
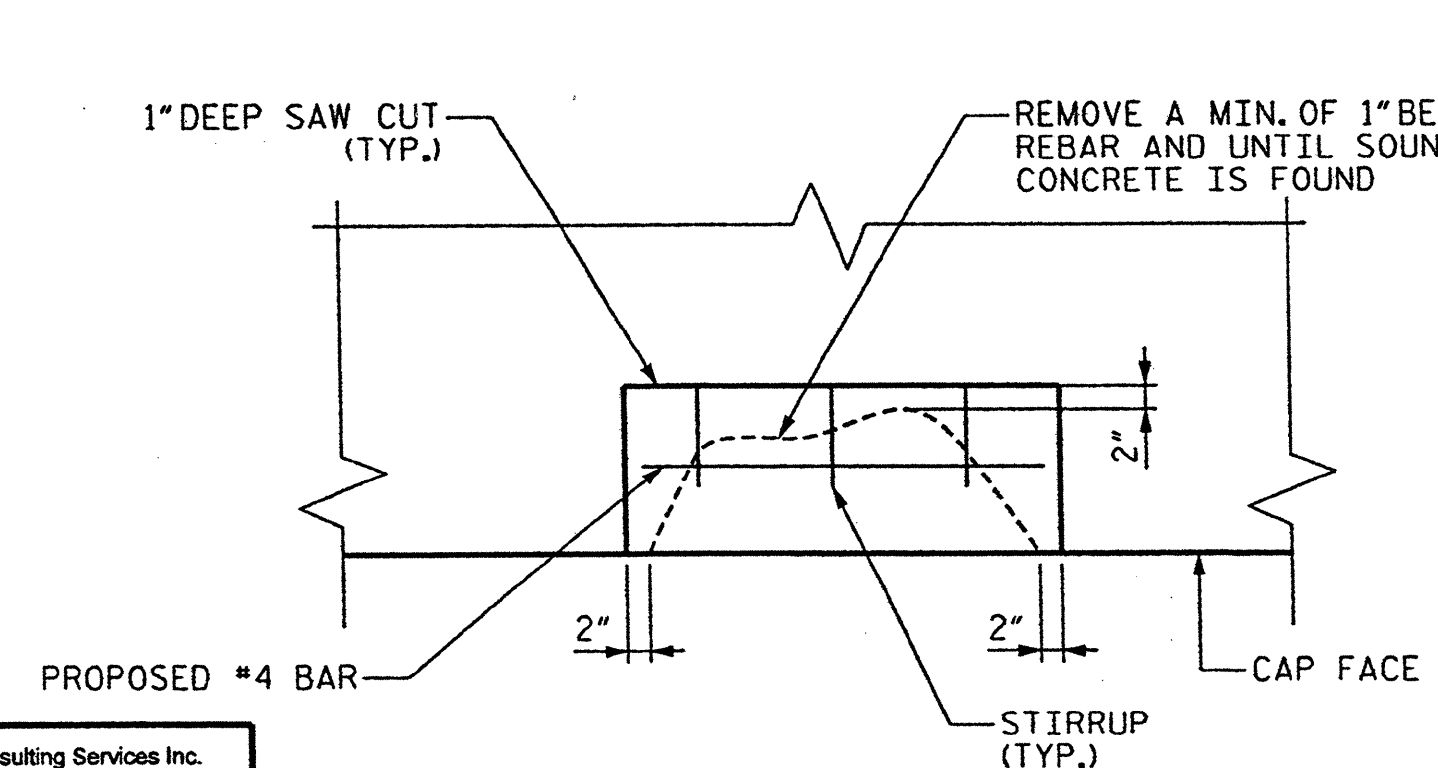
DRAWN BY: J. L. HENNEKES DATE: 11-22-11
 CHECKED BY: J. T. KELVINGTON DATE: 11-22-11

3/28/27 PM Jjelle
 12/15/2011
 32:00:00\ng\BPT740032-BENT1&2.dgn
 01\WBS 17BP.14.P.3_Henderson-Polk Co.\Polk Co.\Bridge_32:00:00\ng\BPT740032-BENT1&2.dgn



TOTAL ESTIMATED QUANTITIES:
 CONCRETE REPAIR = 24 CF
 SHOTCRETE REPAIR = 77 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.



TYPICAL REPAIR DETAIL 1

TYPICAL REPAIR DETAIL 2

TYPICAL REPAIR DETAIL 3

PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
 STATION: _____

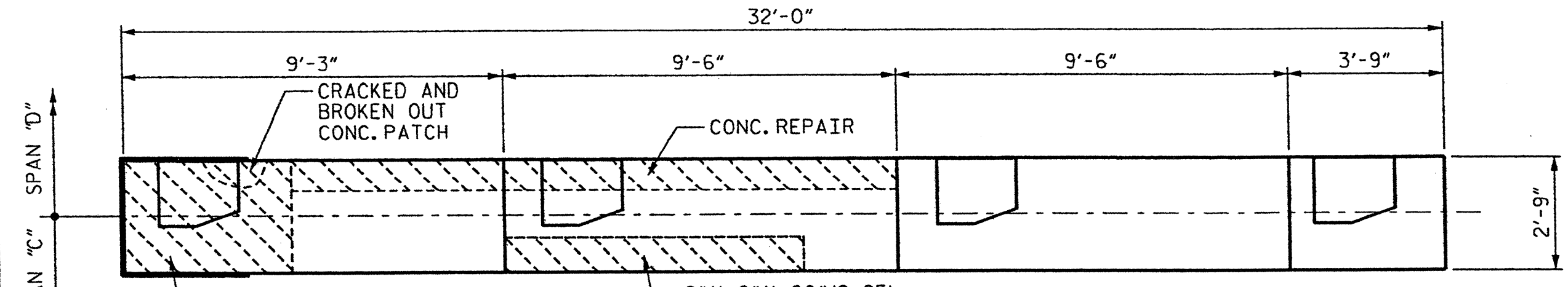
STATE OF NORTH CAROLINA					SHEET NO. S-60
DEPARTMENT OF TRANSPORTATION					
RALEIGH					
BENT REPAIR TYPICAL					
BENTS 1 & 2					
DECK REHAB. FOR BRIDGE NO. 032					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					77

John T. Kelvington
 12/15/11
 ENGINEER
 STATE OF NORTH CAROLINA
 LICENSE NO. 1406

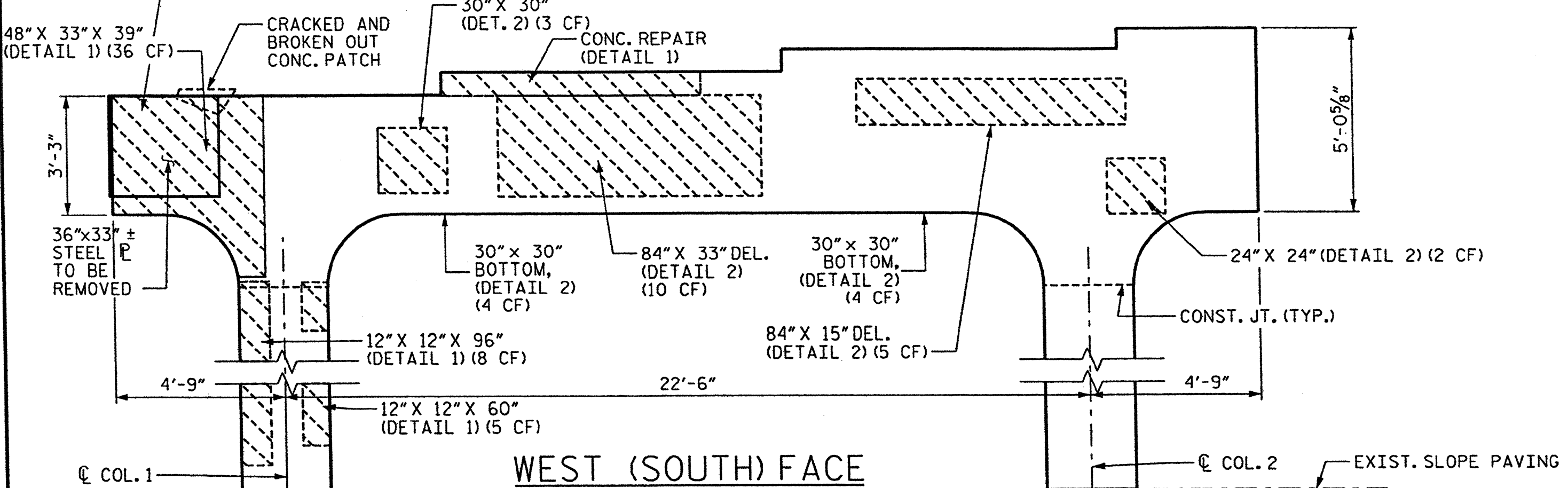
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DRAWN BY: J. L. HENNEKES DATE: 11-22-11
 CHECKED BY: J. T. KELVINGTON DATE: 11-22-11

2011 WBS 17BP.14.P.3, Henderson-Polk Co. Bridge, 32-Drawing\BPT40032_BENT3.dgn 12/15/2011 3:59:57 PM Jgelle

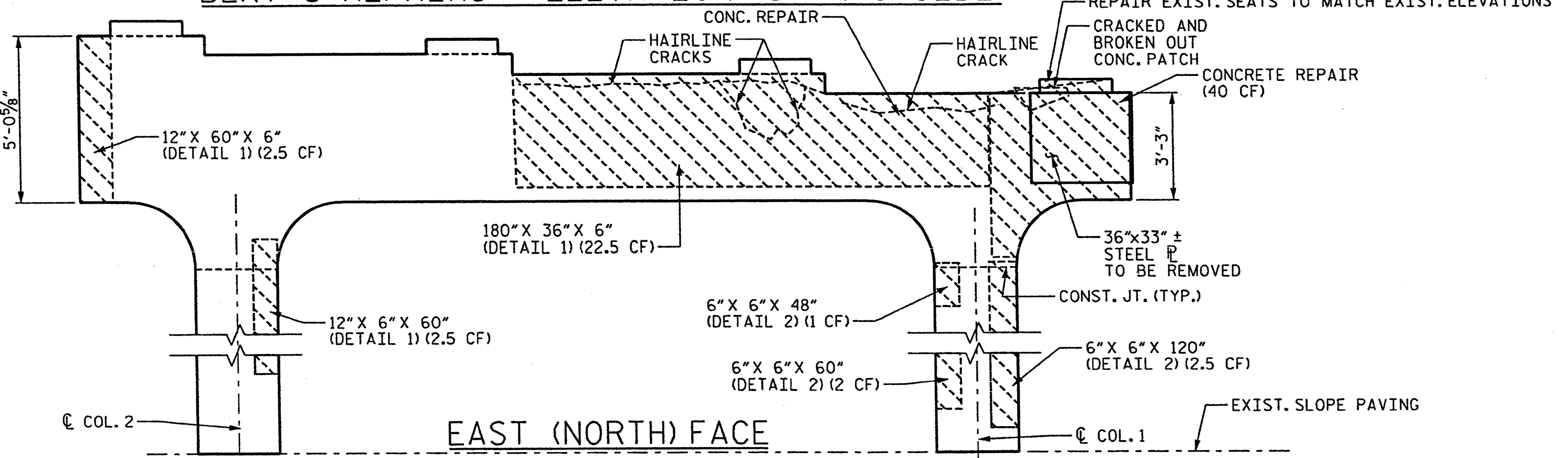


BENT 3 REPAIRS - PLAN OF CAP



WEST (SOUTH) FACE

BENT 3 REPAIRS - ELEVATION (SPAN C SIDE)

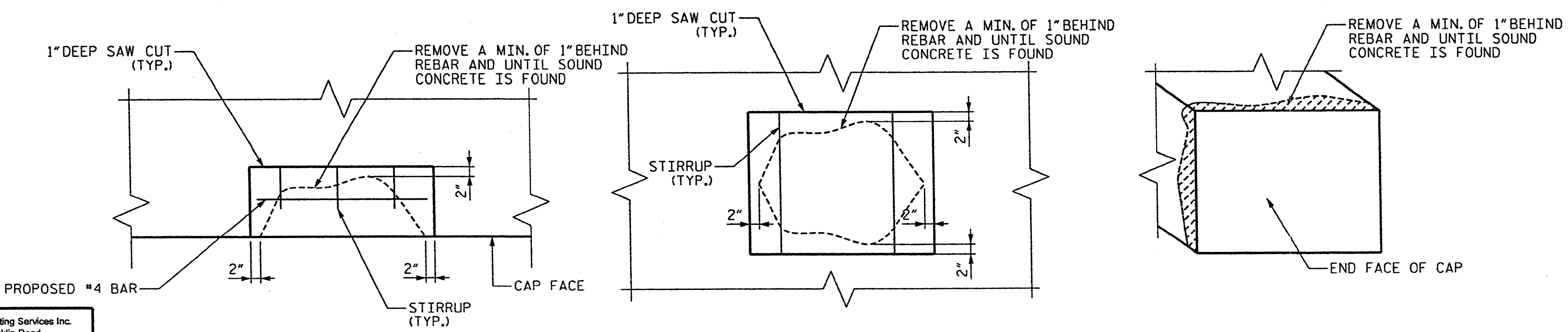


EAST (NORTH) FACE

BENT 3 REPAIRS - ELEVATION (SPAN D SIDE)

TOTAL ESTIMATED QUANTITIES:
 CONCRETE REPAIR = 60 CF
 SHOTCRETE REPAIR = 49 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.



TYPICAL REPAIR DETAIL 1

TYPICAL REPAIR DETAIL 2

TYPICAL REPAIR DETAIL 3

PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT REPAIR TYPICAL
 BENT 3**

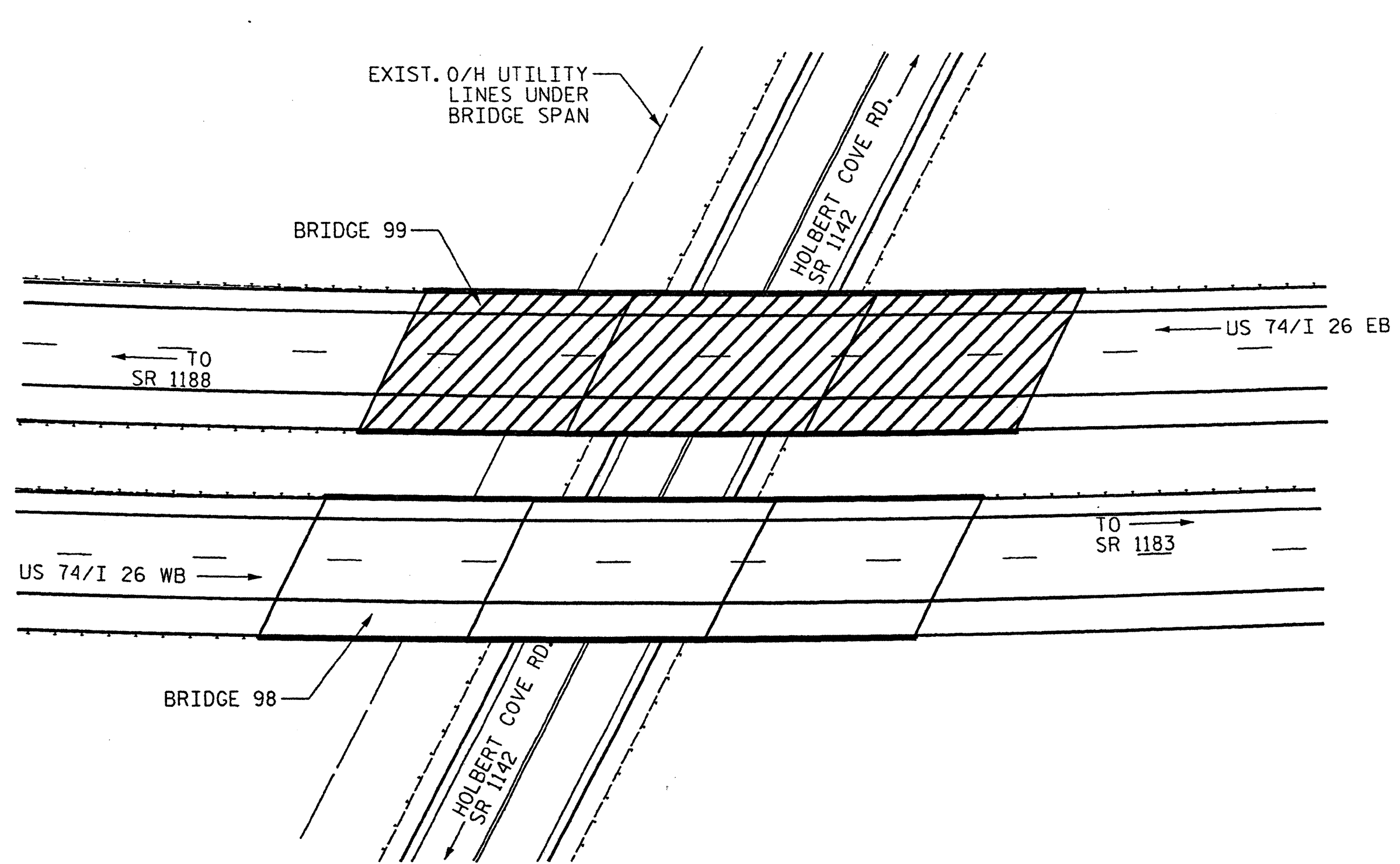
DECK REHAB. FOR BRIDGE NO. 032

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-61	
1			3			TOTAL SHEETS	77
2			4				

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DRAWN BY: J. L. HENNEKES DATE: 11-22-11
 CHECKED BY: J. T. KELVINGTON DATE: 11-22-11

Joseph J. Hennekes
 12/15/2011
 PROJECT ENGINEER



BRIDGE 98 ON US 74/I 26 WBL

LOCATION: BRIDGE 740098, US 74/I 26 WBL OVER
HOLBERT COVE RD. 7.3 MI. NORTH OF JUNCTION NC 108

 BRIDGE 99, US 74/I 26 EB SEE DWGS. S-70 THRU S-77.

BRIDGE 98

TOTAL BILL OF MATERIAL

INCIDENTAL MILLING	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	PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY	FOAM JOINT SEALS	GROOVING BRIDGE FLOORS	ASPHALT CONC. SURFACE COURSE TYPE S9.5C
SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	CU.YDS.	CU.YDS.	SQ.YDS.	LUMP SUM	SQ.FT.	TON
525	856.4	0.0	13.8	0.0	856.4	0.0	41.4	856.4	LUMP SUM	7443	42

* 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 AND PAYMENT SHALL BE MADE. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR HYDRO-DEMOLITION.

PROJECT NO. WBS 17BP.14.P.3

POLK COUNTY

STATION: _____

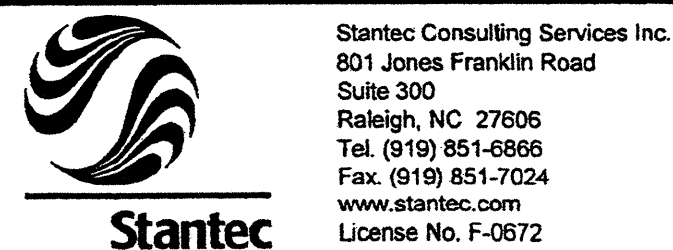
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LOCATION SKETCH
AND TOTAL
BILL OF MATERIAL

DECK REHAB. FOR BRIDGE NO. 98

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-63	
1			3			TOTAL SHEETS	
2			4			77	

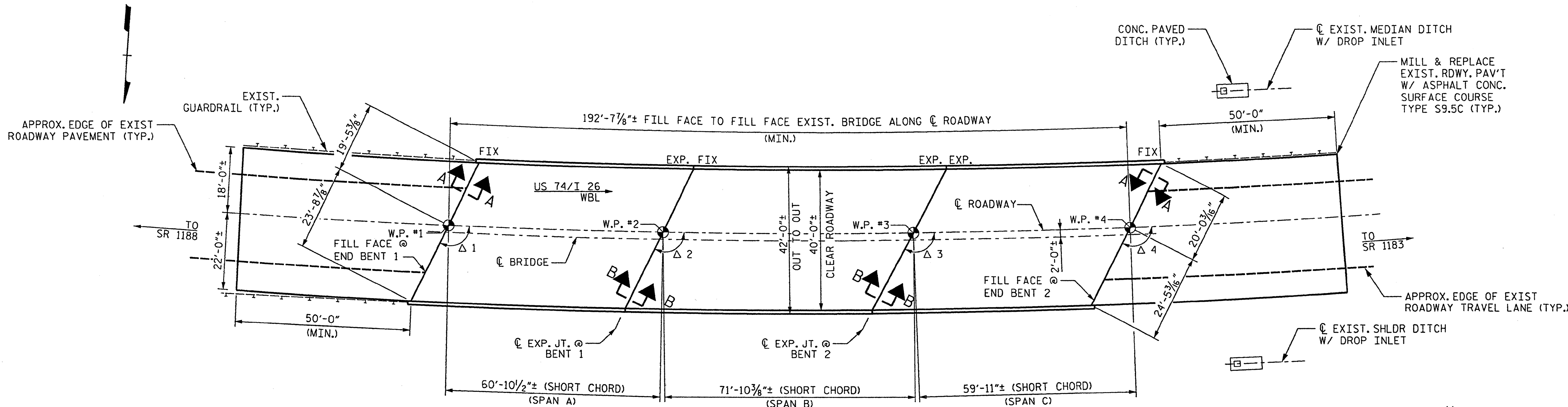
Joseph Kelvington

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Raleigh, NC 27606
Tel. (919) 851-6866
Fax. (919) 851-7024
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DRAWN BY : P. Z. ARMATA DATE : 11/11
CHECKED BY : J. T. KELVINGTON DATE : 11/11

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SHORT CHORD TO BENT ANGLES (APPROX.)

Δ 1 = 112°55'23"

Δ 2 = 114°25'00"

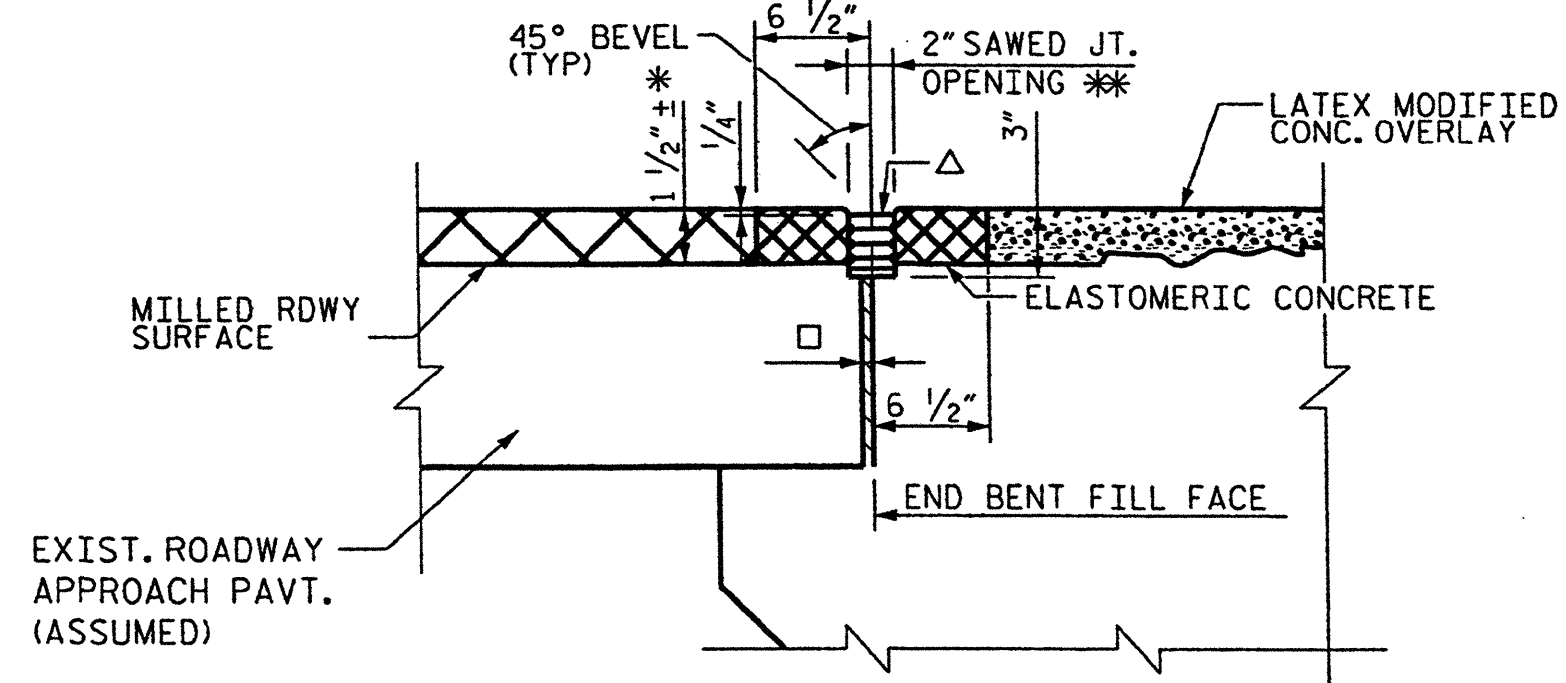
Δ 3 = 115°31'16"

Δ 4 = 115°31'16"

PLAN OF SPANS A-C

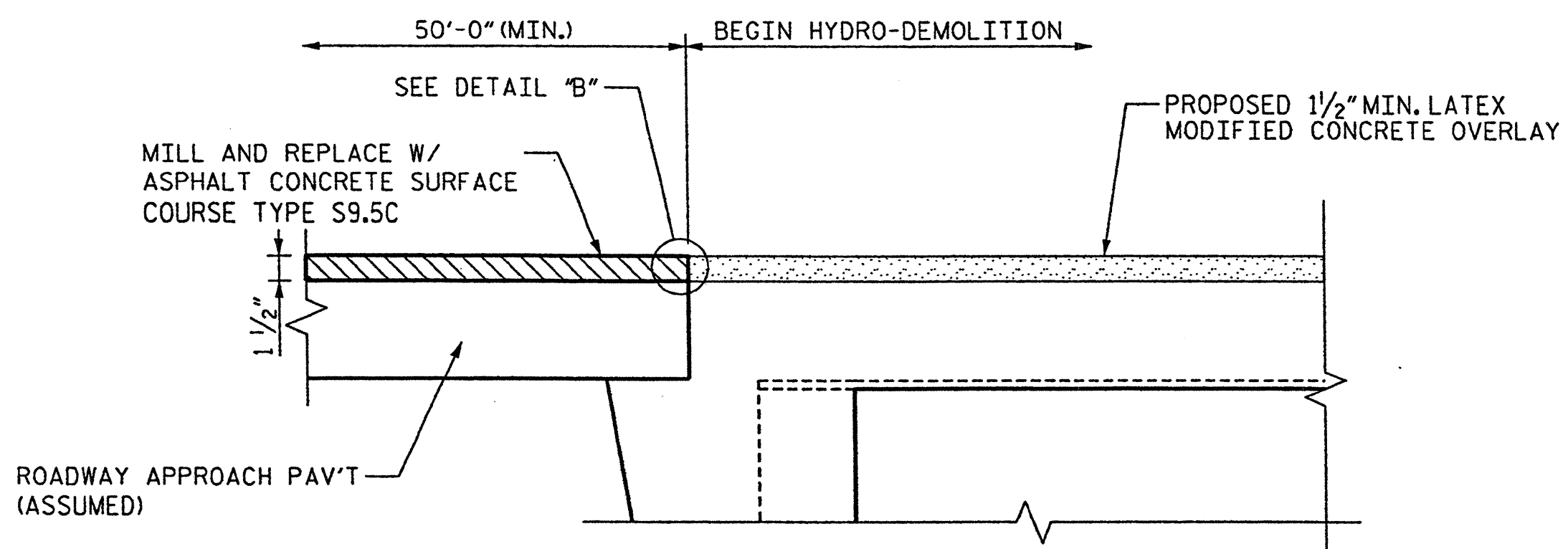
NOTE: ALL DIMENSIONS SHOWN ARE ARC DIMENSIONS OR RADIAL DIMENSIONS UNLESS NOTED OTHERWISE

PARAPET RAIL AND END POST DETAILS NOT SHOWN FOR CLARITY

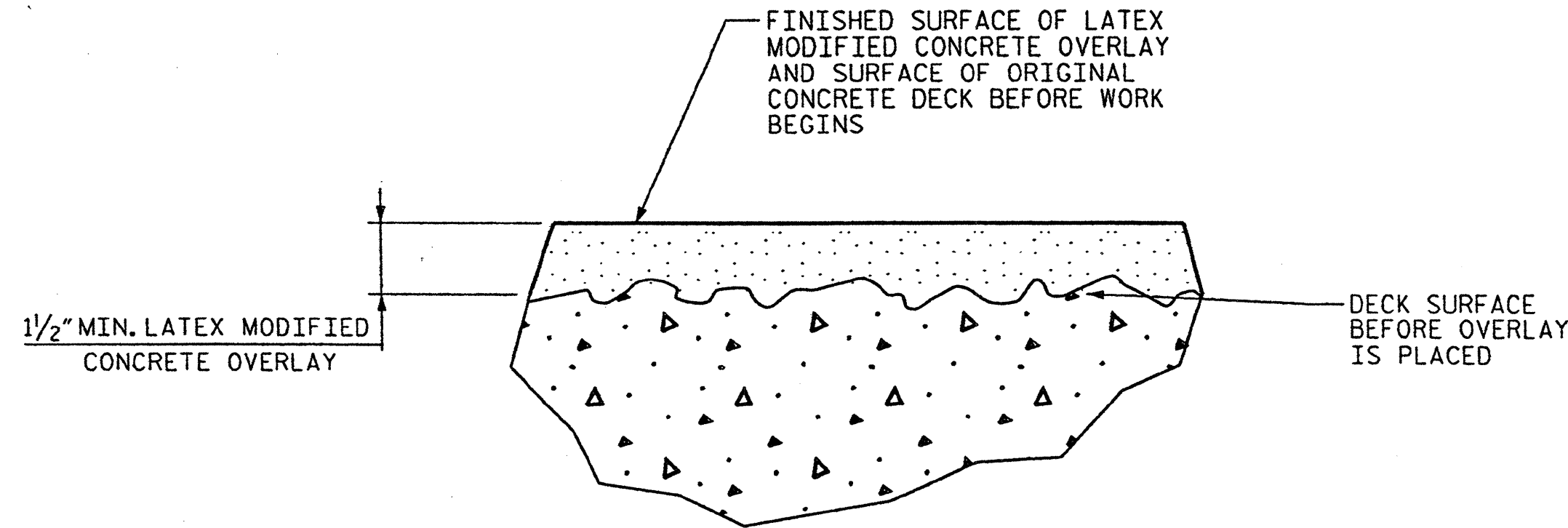


DETAIL B

- Δ USE 2.50" X 2.00" UNCOMPRESSED SEAL MATERIAL
- EXIST. 1/2" EXPANSION JOINT MATERIAL (ASSUMED)
- * 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-67 FOR ADDITIONAL JT. SEAL DETAILS @ END BENTS.
- ** CENTERED ABOUT FILL FACE



SECTION A-A



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

NOTES:

- 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 ON SHT. S-65.
- FOR LATEX MODIFIED CONCRETE, SEE SPECIAL PROVISIONS.
- FOR SECTION B-B, SEE SHEET S-68.
- FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

PROJECT NO. WBS 17BP.14.P.3

POLK COUNTY

STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS FOR DECK REPAIR

DECK REHAB. FOR BRIDGE NO. 98

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-63
1			3			TOTAL SHEETS 77
2			4			

Joseph M. ...

Professional Engineer Seal: JOSEPH M. KELVINGTON, ENGINEER, No. 51406, State of North Carolina

Stantec

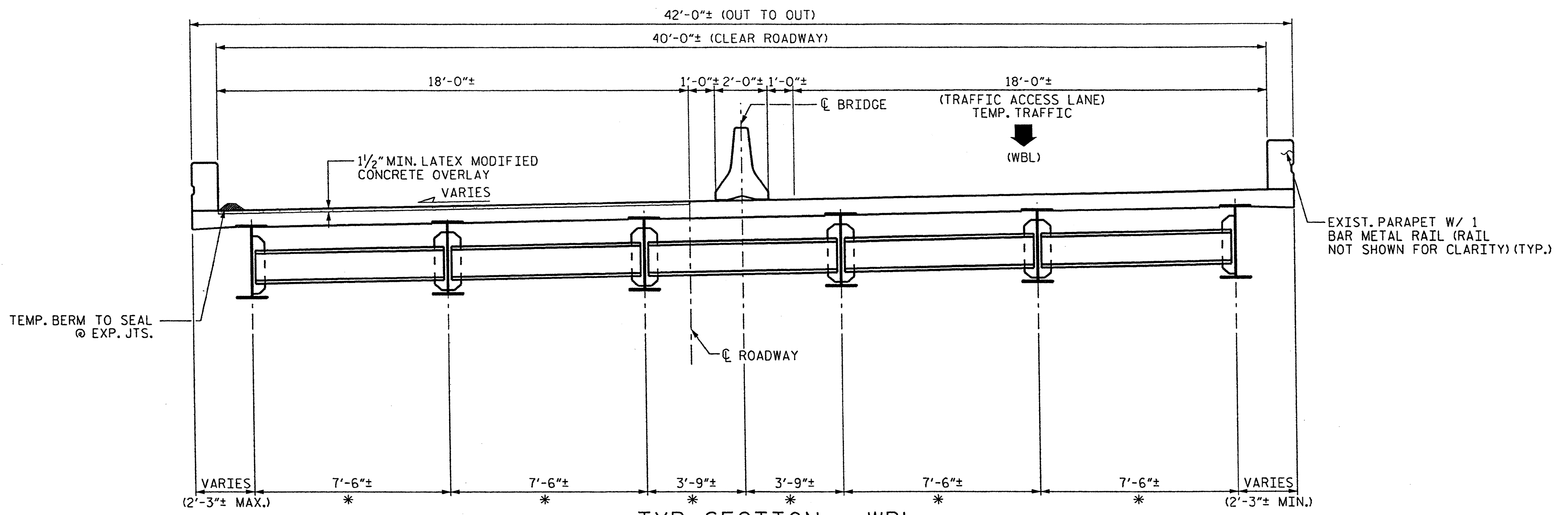
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CHECKED BY: J. I. KELVINGTON DATE: 11/11

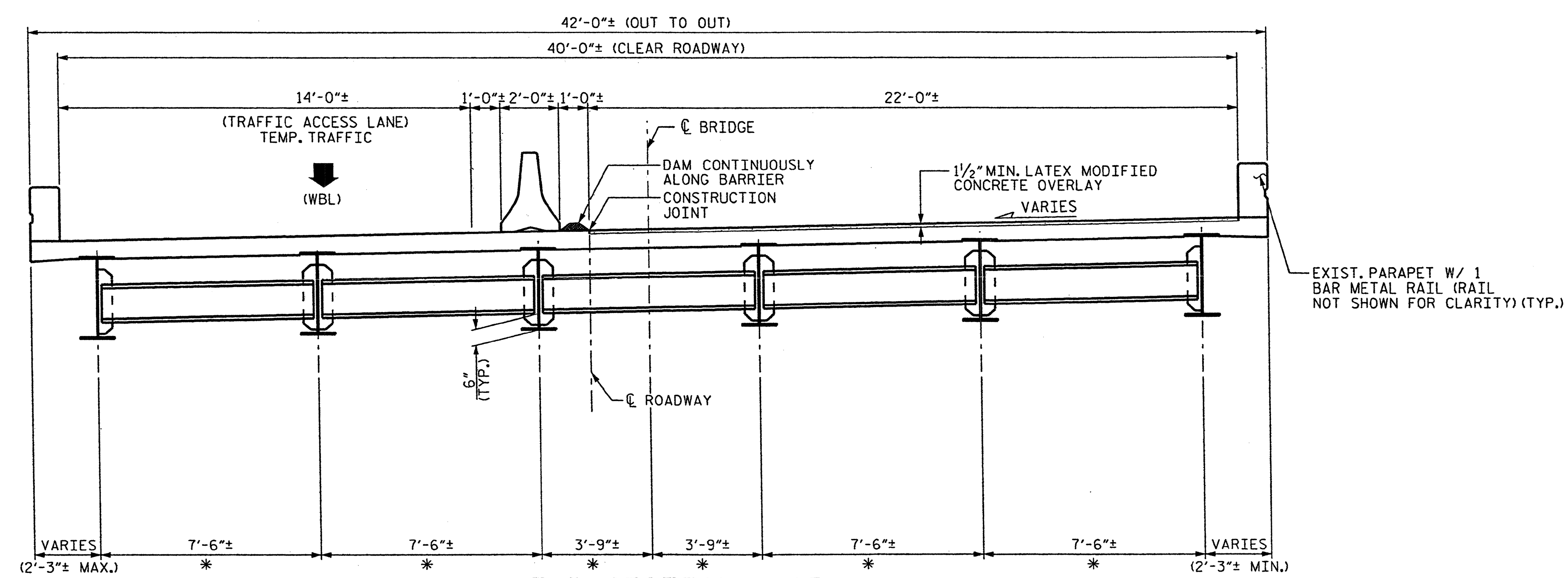
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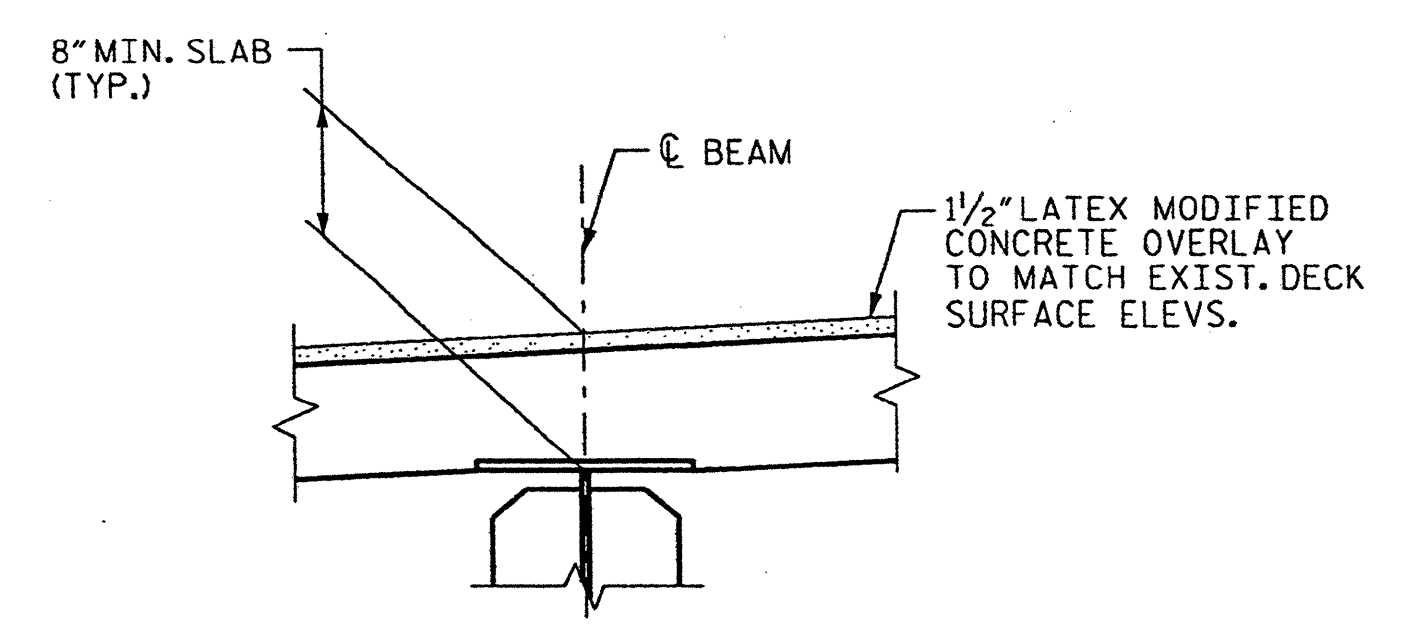
TYP. SECTION - WBL

NOTE: ALL DIMENSION SHOWN ARE RADIAL UNLESS NOTED.



TYP. SECTION - WBL

NOTE: ALL DIMENSION SHOWN ARE RADIAL UNLESS NOTED.



EXIST. SLAB BUILDUP
ESTIMATED EXISTING CLEAR COVER = 1 3/8" +/-

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.
ALL DIMENSIONS ARE APPROXIMATE.
FOR TRAFFIC CONTROL AND PHASING DETAILS, SEE TRAFFIC MANAGEMENT PLANS.
* VARIES ALONG LENGTH OF BEAM RADIAL DIMENSION @ CL BENT AND CL BEAM

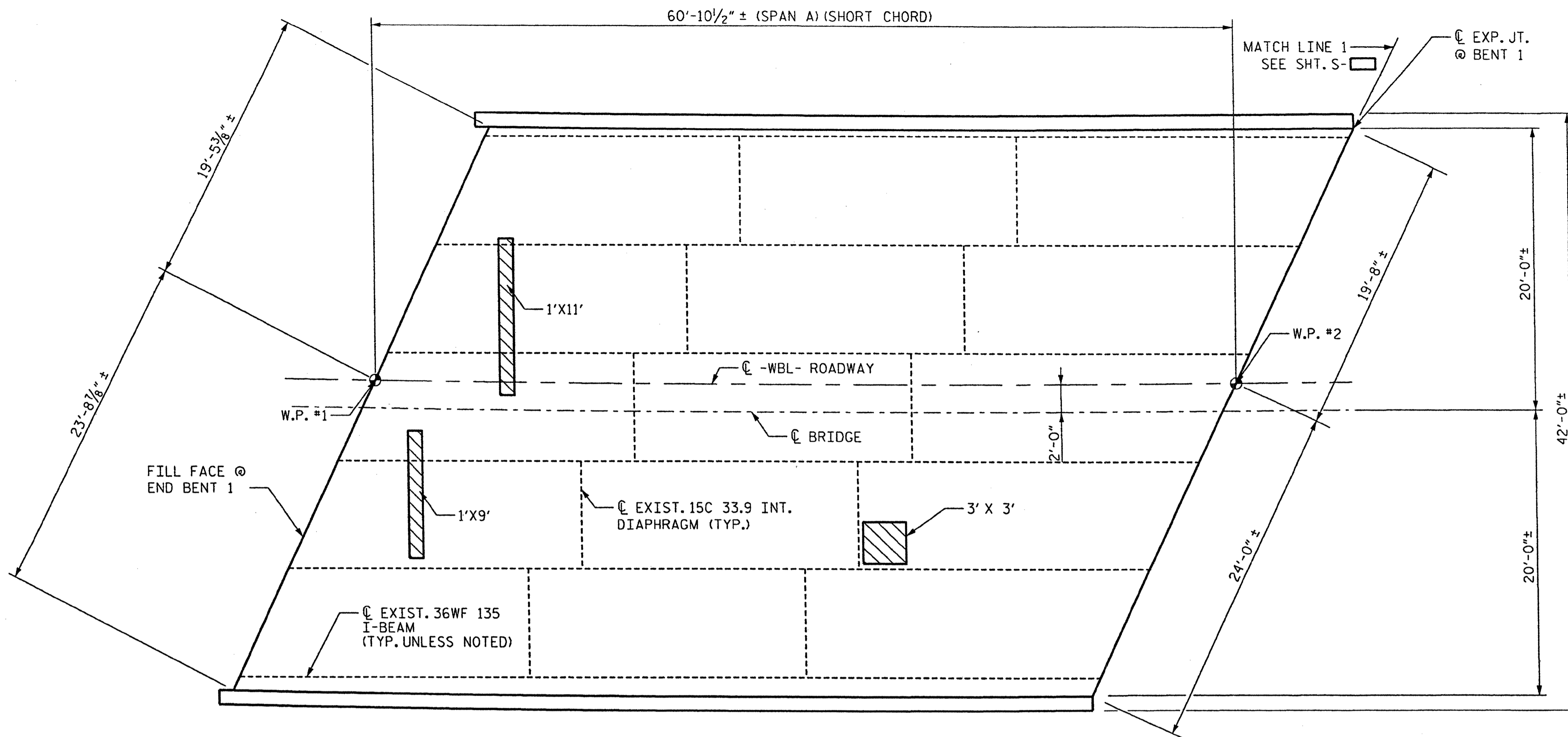
James J. Kelvington
12/15/11
PROFESSIONAL ENGINEER
STATE OF NORTH CAROLINA
SEAL 13406
KELVINGTON

PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
STATION: _____

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH				
TYPICAL SECTION				
DECK REHAB. FOR BRIDGE NO. 98				
REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	
				S-64
				TOTAL SHEETS 77

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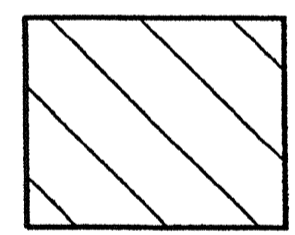
DRAWN BY : P. Z. ARMATA DATE : 11/11
CHECKED BY : J. T. KELVINGTON DATE : 11/11



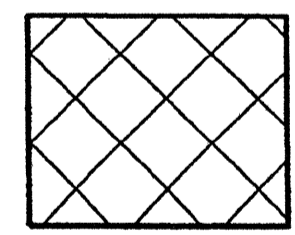
NOTE:
 CONTRACTOR SHALL FURNISH FORM WORK TO SUPPORT SLAB OVERHANG REGIONS WITH EXTENSIVE CLASS III SURFACE PREPARATION.
 SUBMIT DETAILS OF PROPOSED FORM WORK FOR APPROVAL PRIOR TO BEGINNING WORK.
 COSTS FOR INSTALLING AND REMOVING FORM WORK SHALL BE INCIDENTAL TO THE PRICE BID PER SQ. YD. OF HYDRO-DEMOLITION.
 FOR HYDRO-DEMOLITION, SEE SPECIAL PROVISIONS.
 CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.

PLAN OF SPAN A - DECK REPAIRS

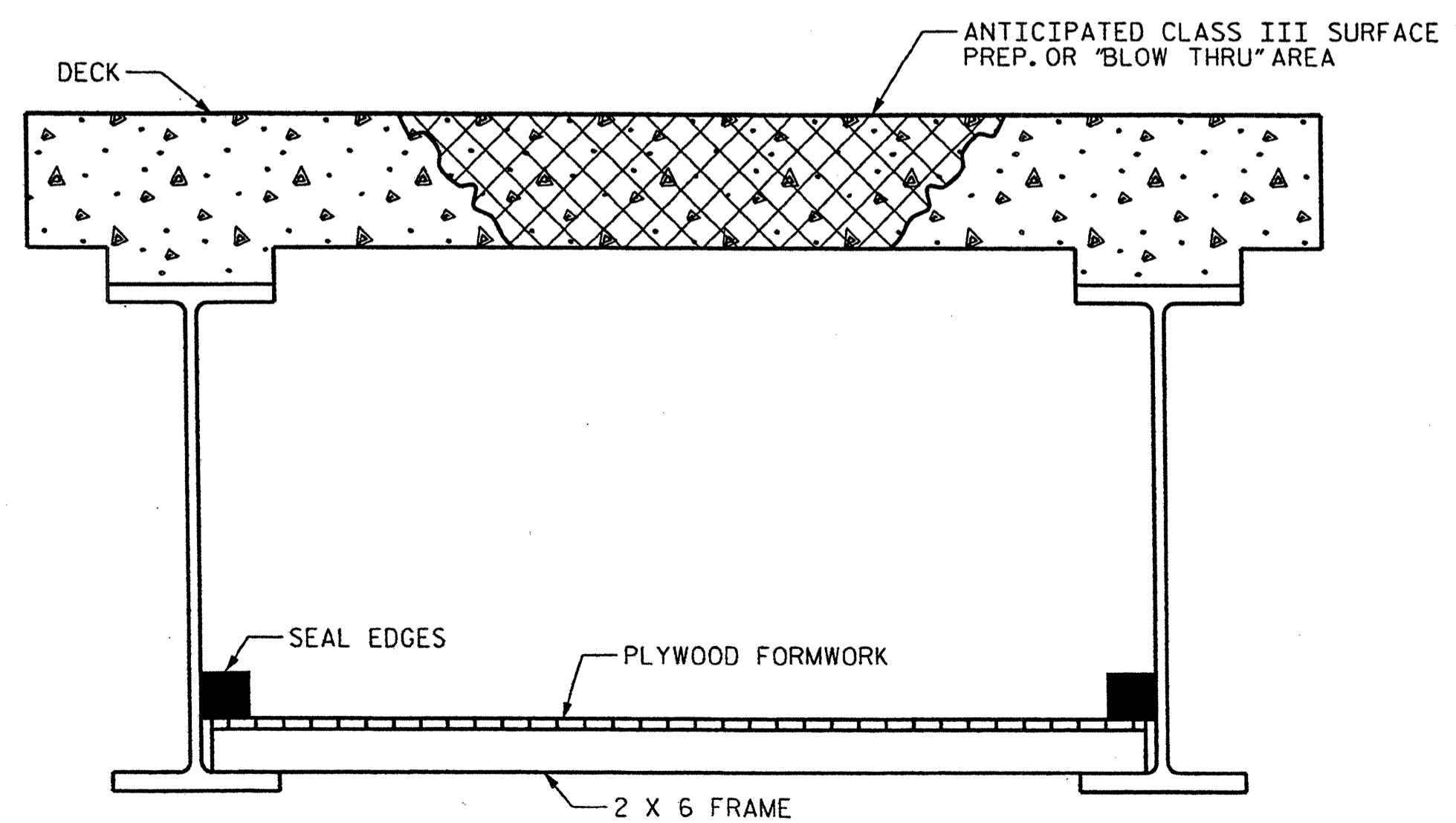
NOTE: HORIZONTAL DIMENSIONS ARE RADIAL OR ARC DISTANCES UNLESS NOTED OTHERWISE



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

NOTES:

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

A METHOD TO CAPTURE WATER AND DEBRIS FROM BLOW THRU DURING HYDRO-DEMOLITION SHALL BE INSTALL 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.

PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
 STATION: _____

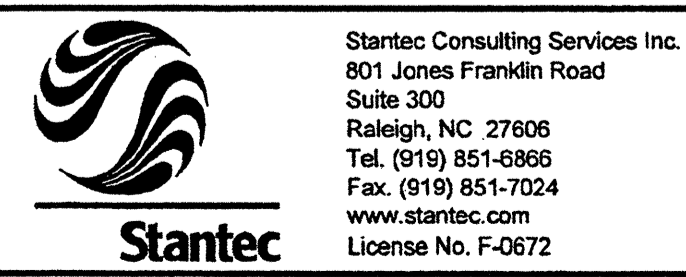
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**DECK REPAIR DETAILS
 SPAN A**

DECK REHAB. FOR BRIDGE NO. 98

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-65
2			4			77

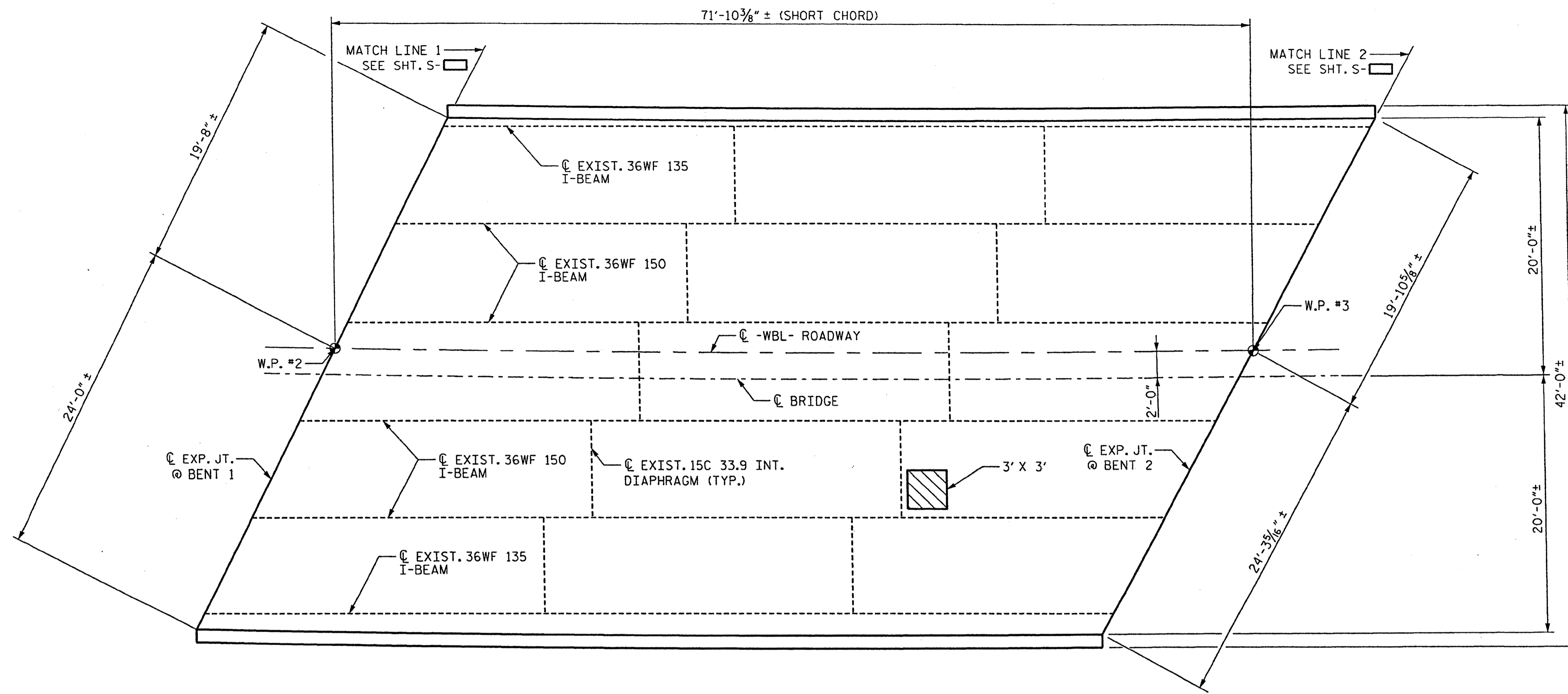
Joelle M. Smith
 12/15/11
 PROFESSIONAL ENGINEER
 78406
 KELVINGTON



DRAWN BY : P. Z. ARMATA DATE : 11/11
 CHECKED BY : J. T. KELVINGTON DATE : 11/11

WBS 17BP.14.P.3 Hender son-Polk Co Polk Co Bridge 9810r-ewing\Bp3g_Repair-Plan1.dgn 12/15/2011 10:16:10 AM Joelle

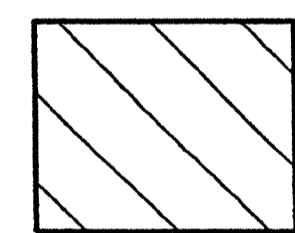
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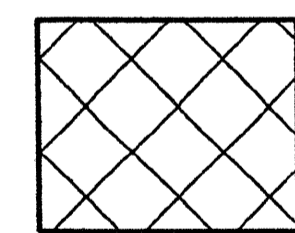
PLAN OF SPAN B - DECK REPAIRS

NOTE: HORIZONTAL DIMENSIONS ARE RADIAL OR ARC DISTANCES UNLESS NOTED OTHERWISE

NOTE:
 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 REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.



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.14.P.3
POLK COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**DECK REPAIR DETAILS
 SPAN B**

DECK REHAB. FOR BRIDGE NO. 98

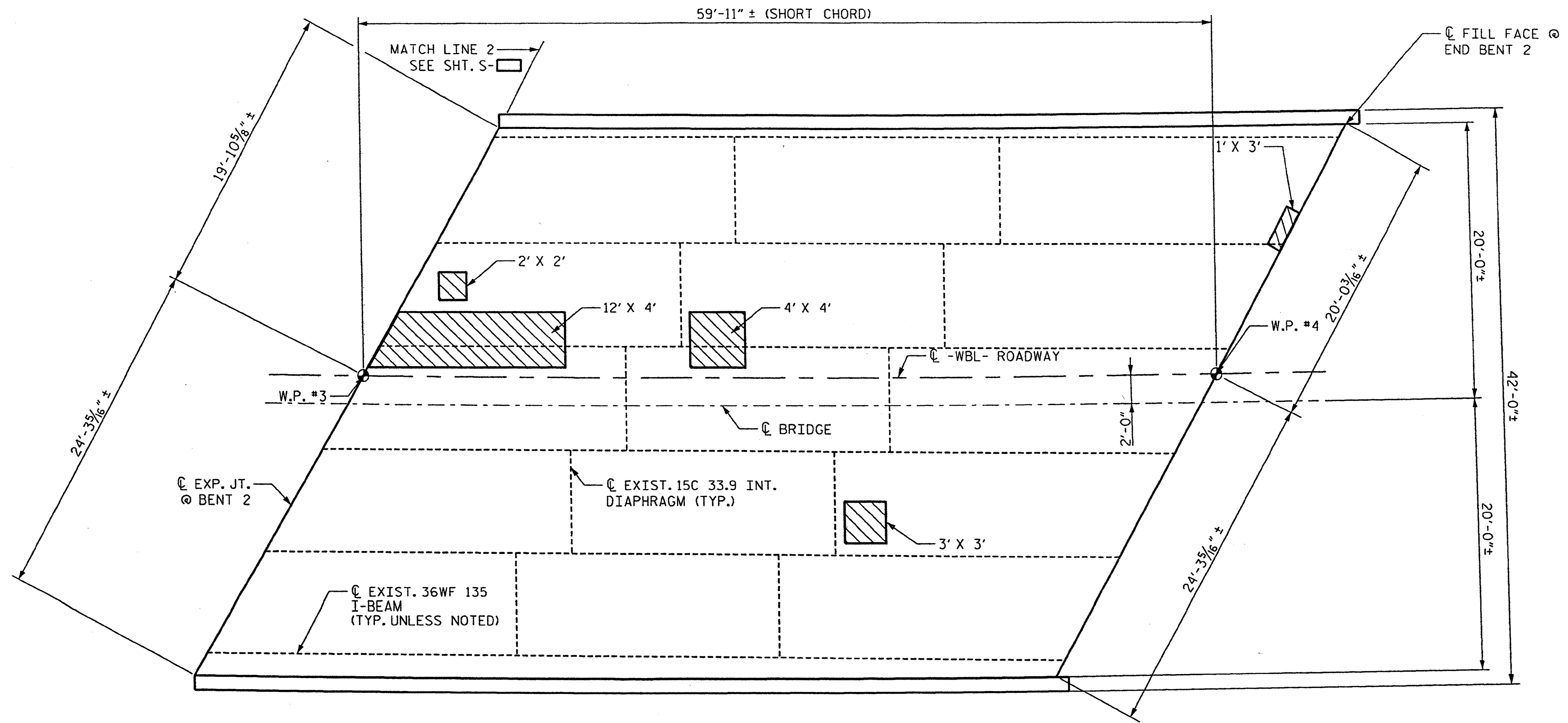
REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	

TOTAL SHEETS: 77

Joseph J. Kelvington
 12/15/11
 PROFESSIONAL ENGINEER
 STATE OF NORTH CAROLINA
 13406

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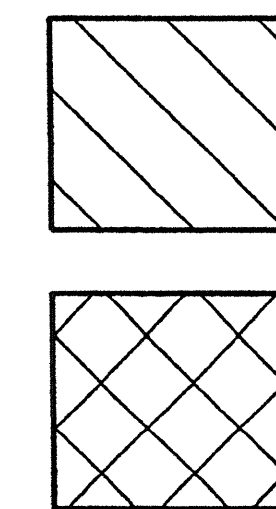
DRAWN BY : P. Z. ARMATA DATE : 11/11
 CHECKED BY : J. T. KELVINGTON DATE : 11/11



NOTE:
 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 REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.

PLAN OF SPAN C - DECK REPAIRS

NOTE: HORIZONTAL DIMENSIONS ARE RADIAL OR ARC DISTANCES UNLESS NOTED OTHERWISE.



CLASS II SURFACE PREPARATION

CLASS III SURFACE PREPARATION

NOTES:

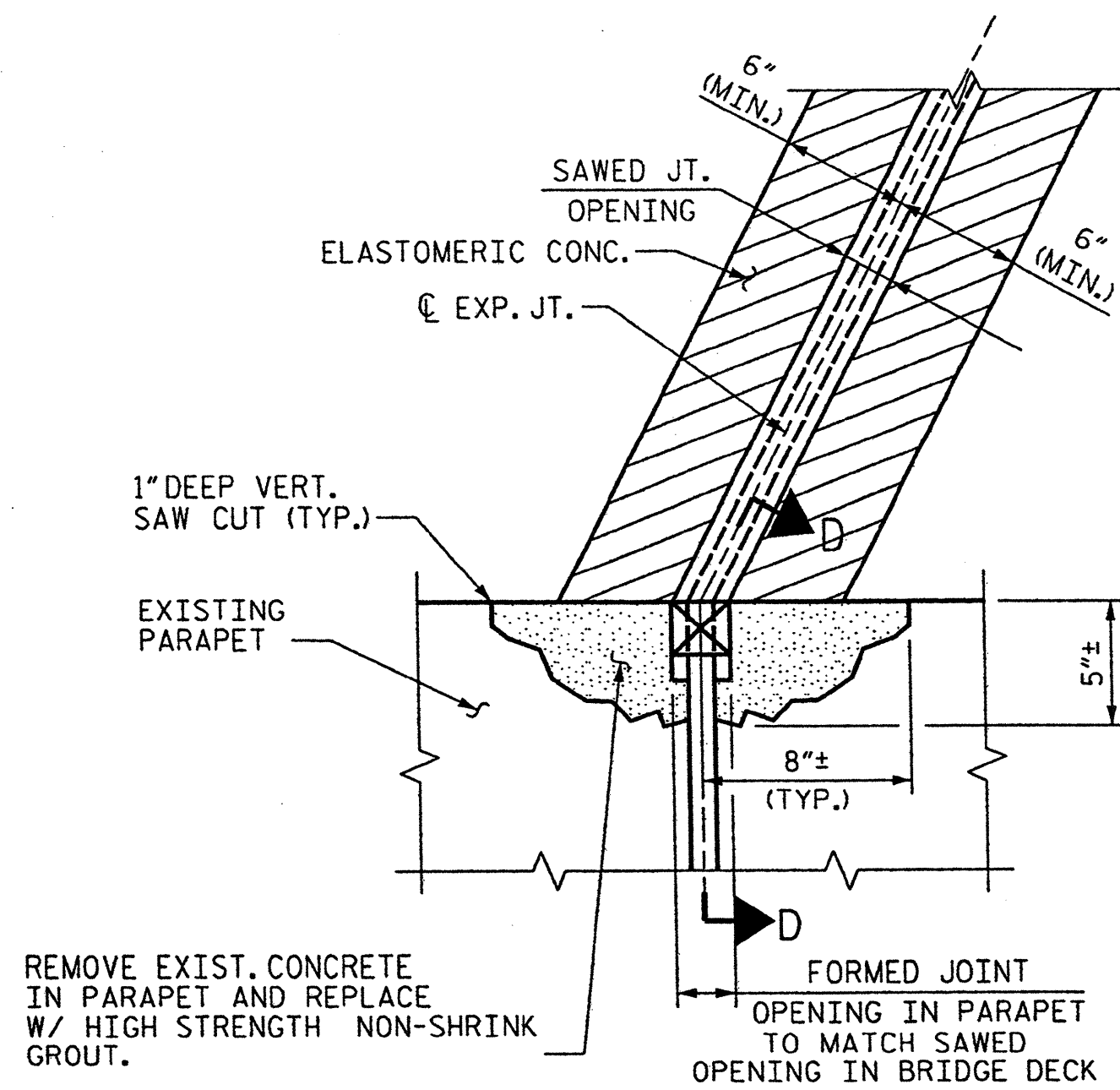
L' X W' = LENGTH OF AREA ALONG CL BRIDGE X WIDTH OF AREA NORMAL TO CL BRIDGE

PROJECT NO. WBS 17BP.14.P.3
 _____ POLK COUNTY
 STATION: _____

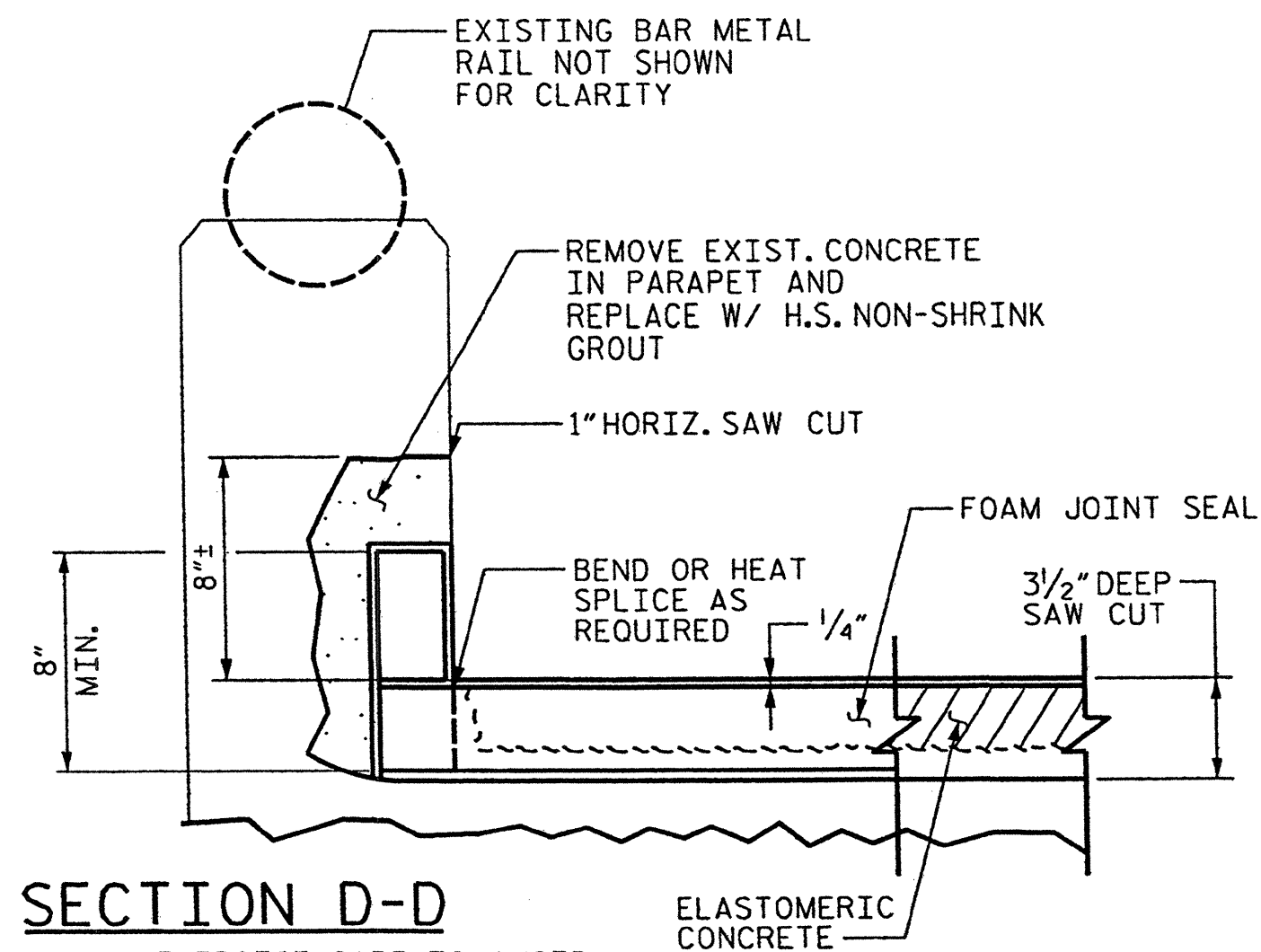
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DECK REPAIR DETAILS SPAN C					
DECK REHAB. FOR BRIDGE NO. 98					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					5-67
					77



DRAWN BY : P. Z. ARMATA DATE : 11/11
 CHECKED BY : J. T. KELVINGTON DATE : 11/11



PARTIAL PLAN @ JOINT



SECTION D-D

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

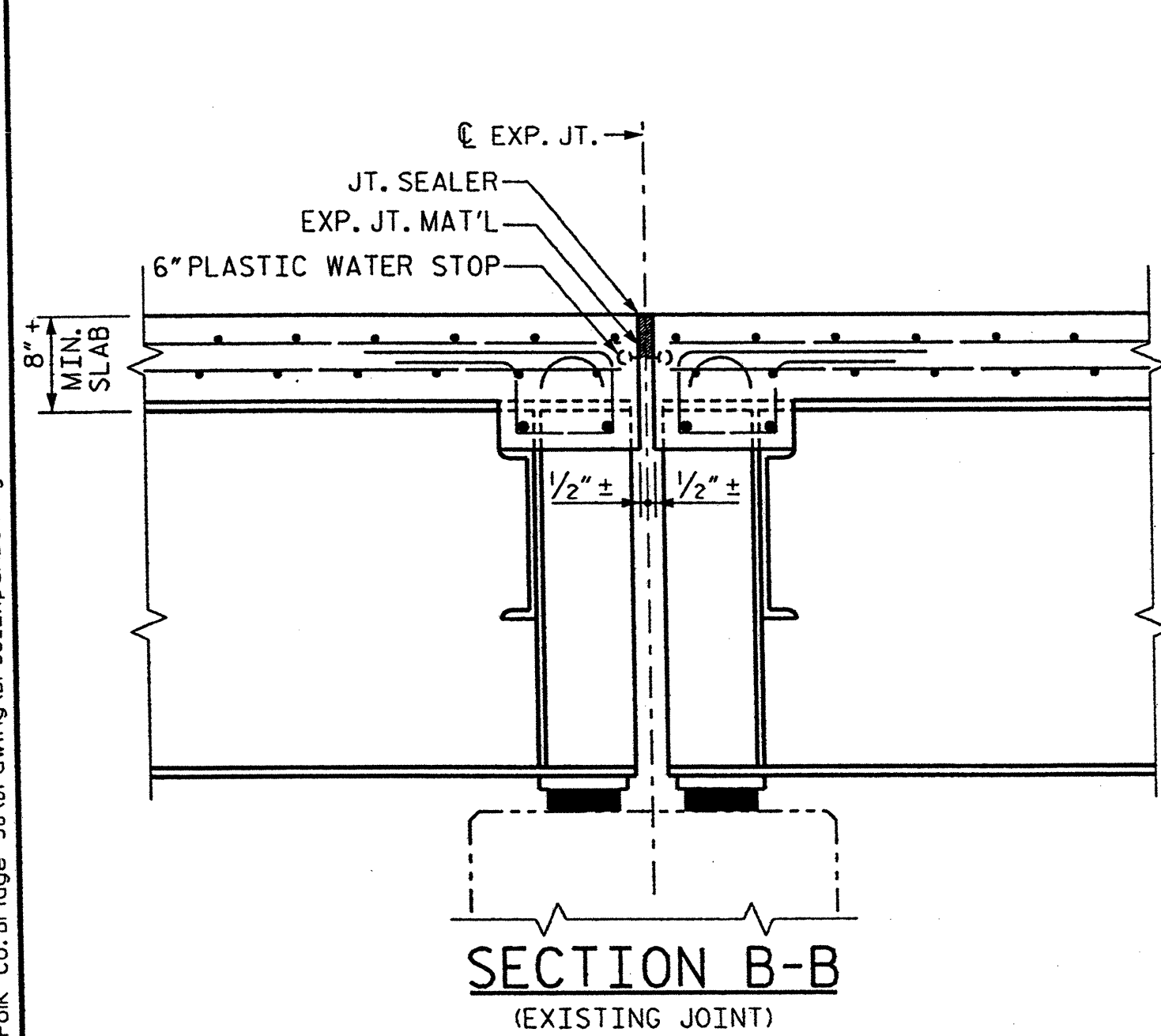
FOR HIGH STRENGTH GROUT, SEE SPECIAL PROVISION. "GROUT FOR STRUCTURES"

HIGH STRENGTH GROUT SHALL BE APPROVED BY THE ENGINEER.

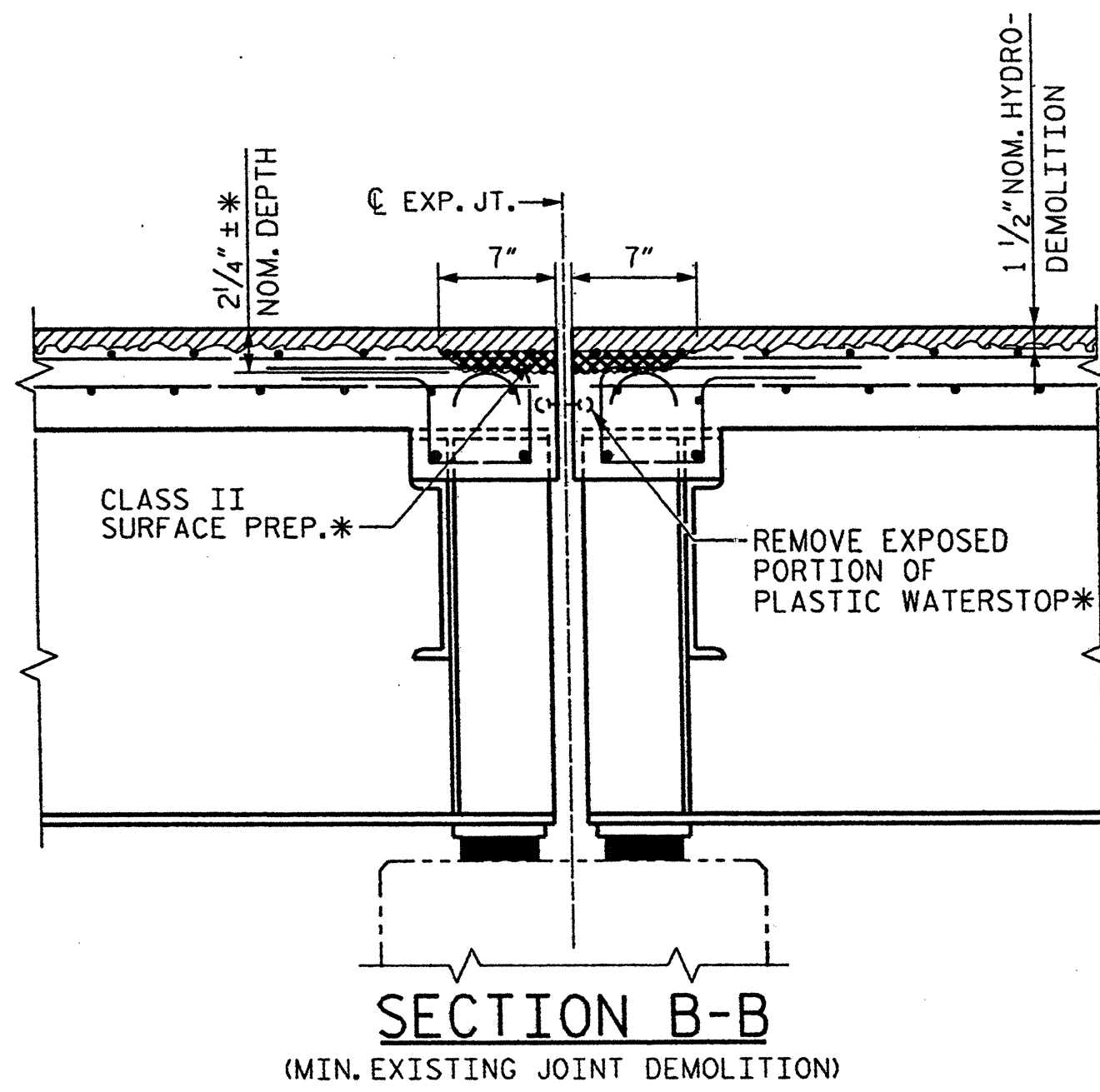
ELASTOMERIC CONCRETE

LOCATION	QTY
END BENT 1	5.4 C.F.
BENT 1	5.0 C.F.
BENT 2	5.1 C.F.
END BENT 2	5.6 C.F.

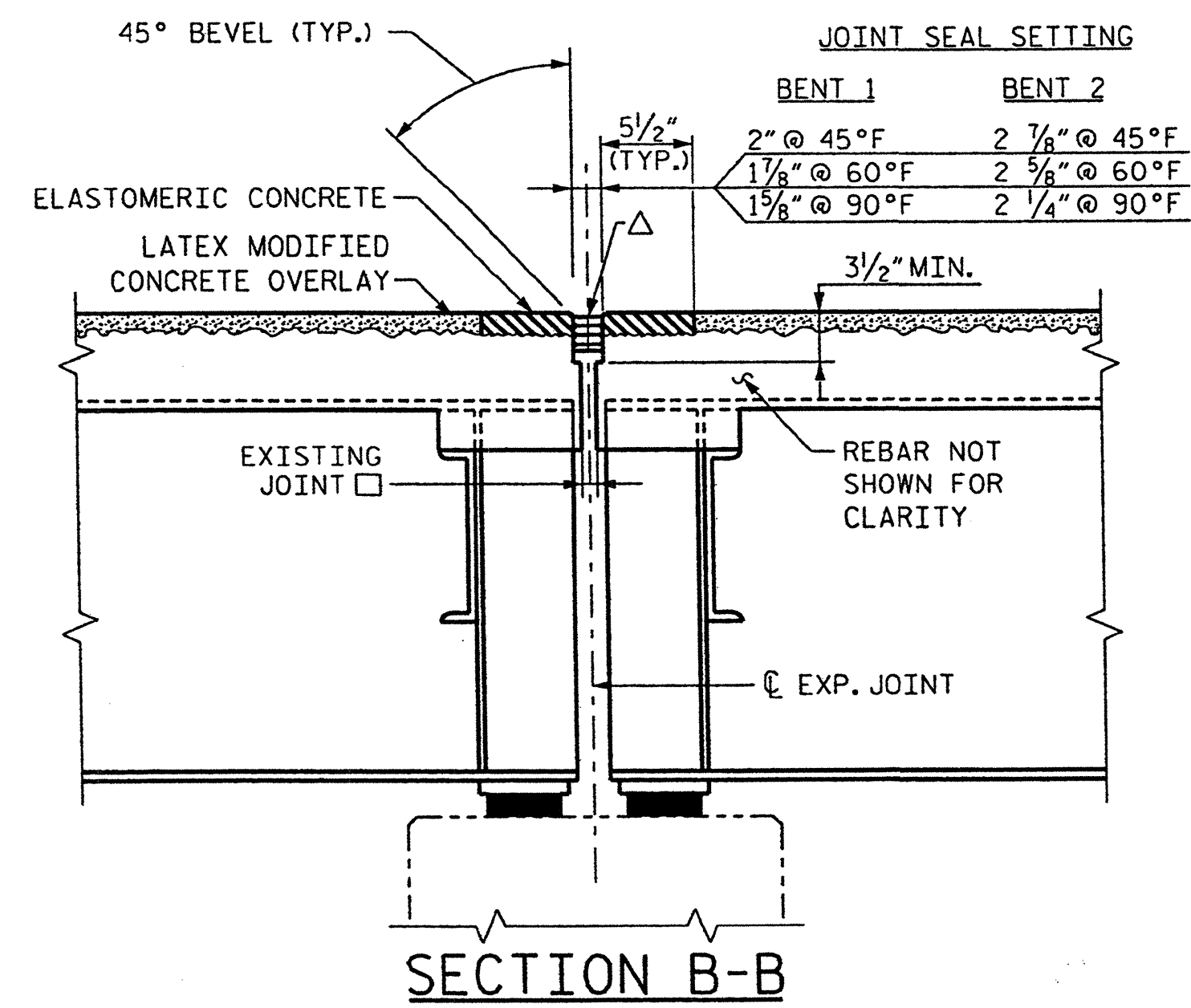
TOTAL ELASTOMERIC CONC. = 21.1 C.F.
TOTAL ELASTOMERIC CONC. = 0.8 C.Y.



SECTION B-B
(EXISTING JOINT)



SECTION B-B
(MIN. EXISTING JOINT DEMOLITION)



SECTION B-B
(PROPOSED FOAM JOINT SEAL EXPANSION)

NOTE: FOR FOAM JOINT SEAL, SEE SPECIAL PROVISIONS.

THE INSTALLED EVAZOTE JOINT SEALS SHALL BE WATERTIGHT

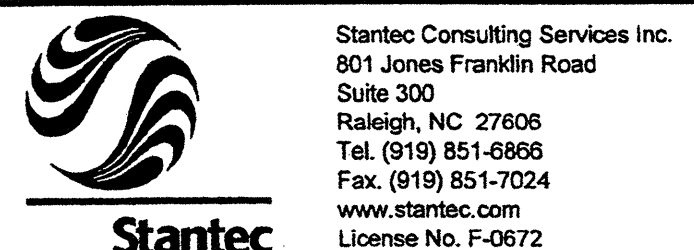
THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE FOAM JOINT SEAL IN LIEU OF SAWING THE JOINT.

- △ USE 2.8125" x 2.50" UNCOMPRESSED SEAL @ BENT 1.
- USE 3.4375" x 2.50" UNCOMPRESSED SEAL @ BENT 2.

- EXIST. JOINT OPENING @ BENT 1 = 1"
- EXIST. JOINT OPENING @ BENT 2 = 1 1/2"

* ALL LOOSE AND UNSOUND CONCRETE SHALL BE REMOVED. IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, THE ENTIRE WATERSTOP SHALL BE REMOVED. OTHERWISE, PREPARE SURFACES BY HYDRO-DEMOLITION TO THE NOMINAL DEPTHS SHOWN

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



DRAWN BY : P. Z. ARMATA DATE : 11/11
CHECKED BY : J. T. KELVINGTON DATE : 11/11

PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

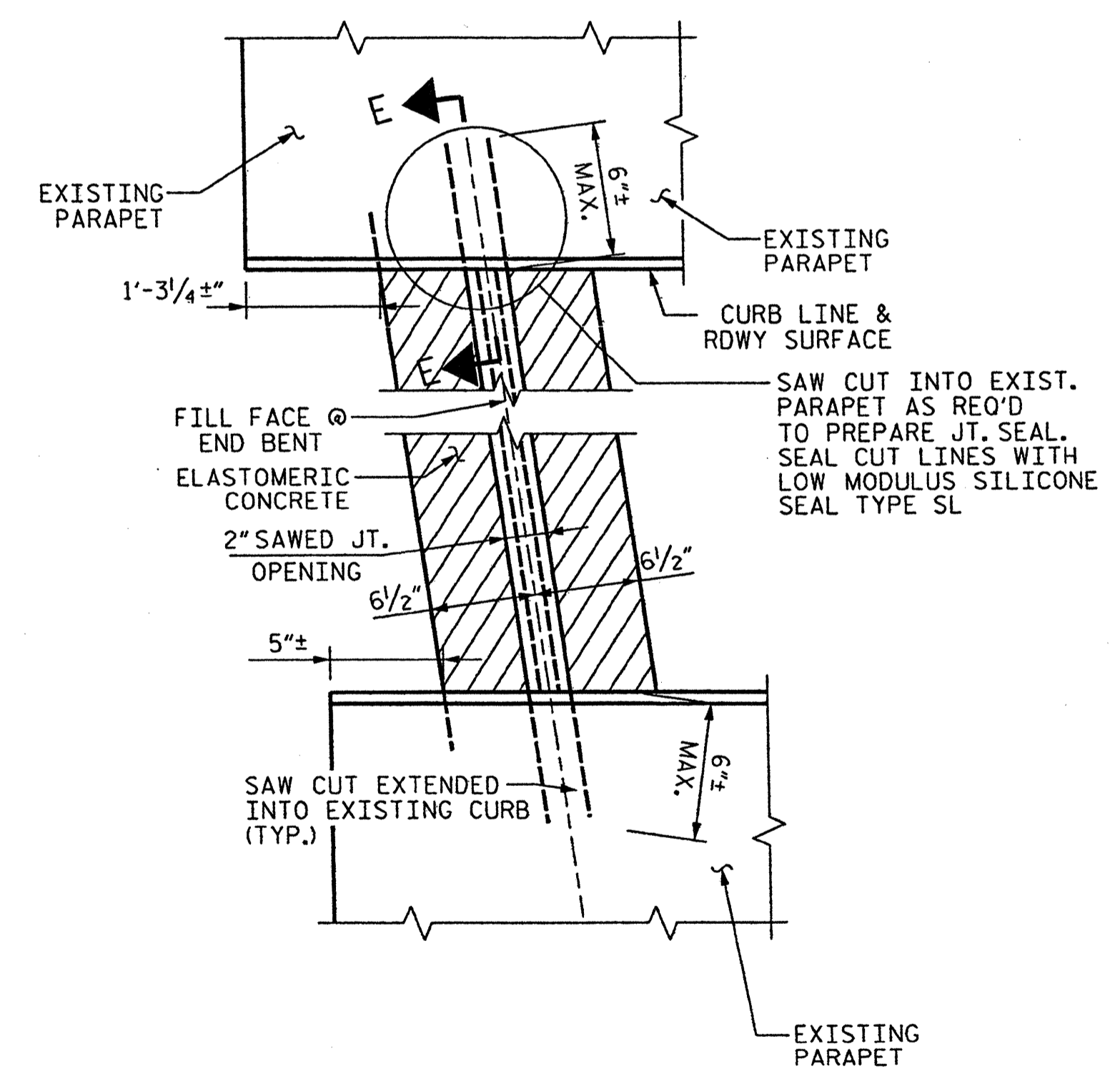
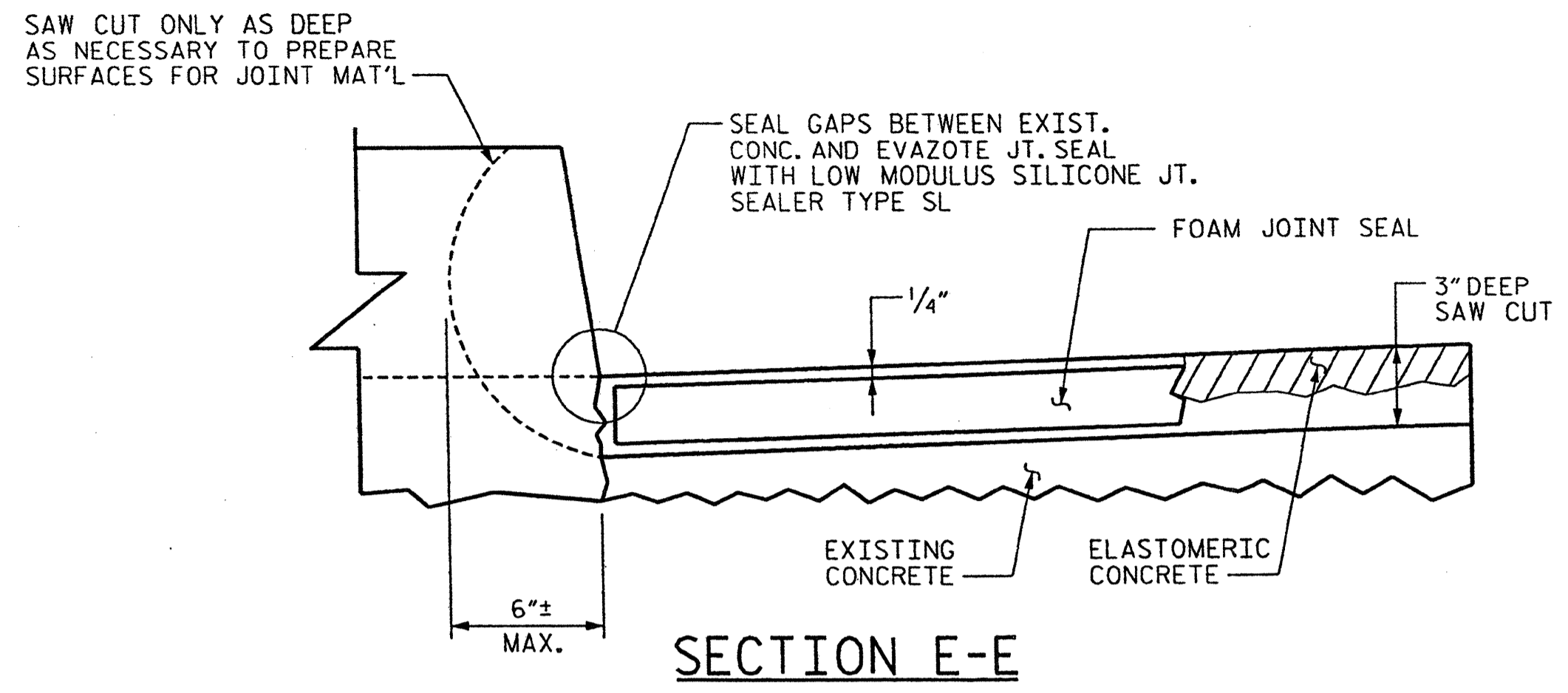
EXPANSION JOINT DETAILS

DECK REHAB. FOR BRIDGE NO. 98

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-68
1			3			TOTAL SHEETS
2			4			77

Joseph Kelvington
Professional Engineer
No. 13406
State of North Carolina

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

PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**END BENT JOINT SEAL
 DETAILS**

DECK REHAB. FOR BRIDGE NO. 98

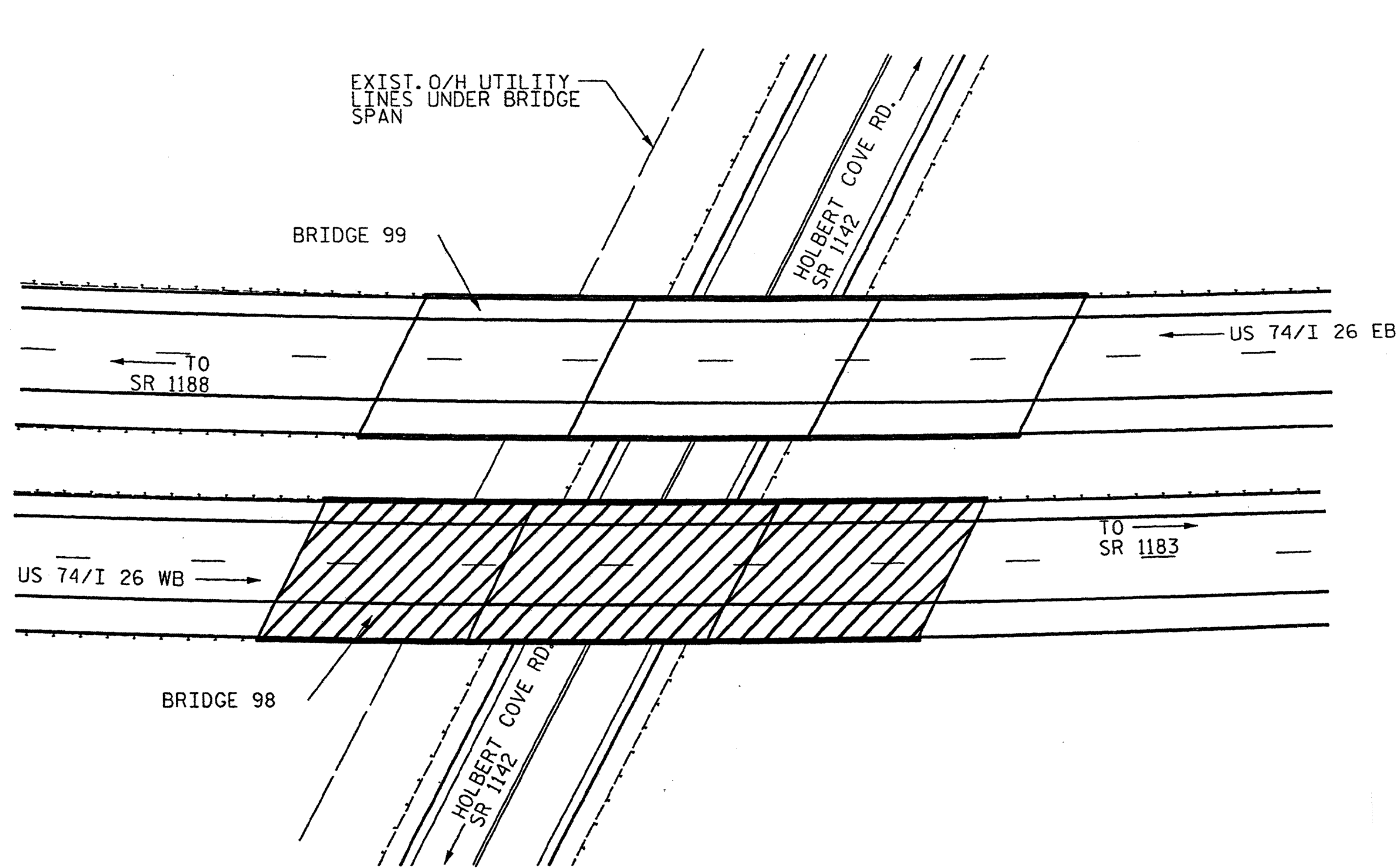
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-69
1			3			TOTAL SHEETS
2			4			77

Joseph J. Kelvington
 11/15/11
 ENGINEER
 13406

211\WBS 17BP.14.P.3 Henderson-Polk Co. Bridge 98\Drawing\BP98_EndBent.dgn 12/15/2011 10:16:19 AM jgelle

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



BRIDGE 99 ON US 74/I 26 EBL

LOCATION: BRIDGE 740099, US 74/I 26 EBL OVER
HOLBERT COVE RD. 7.3 MI. NORTH OF JUNCTION NC 108

BRIDGE 98, US 74/I 26 EB SEE DWGS. S-62 THRU S-69

BRIDGE 99

TOTAL BILL OF MATERIAL

INCIDENTAL MILLING	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	PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY	FOAM JOINT SEALS	GROOVING BRIDGE FLOORS	ASPHALT CONC. SURFACE COURSE TYPE S9.5C
SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	SO.YDS.	CU.YDS.	CU.YDS.	SO.YDS.	LUMP SUM	SO.FT.	TON
525	859.5	0.0	14.8	0.0	859.5	0.0	41.5	859.5	LUMP SUM	7470	42

* 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 AND PAYMENT SHALL BE MADE. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR HYDRO-DEMOLITION.

PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LOCATION SKETCH
AND TOTAL
BILL OF MATERIAL

DECK REHAB. FOR BRIDGE NO. 99

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

TOTAL SHEETS 77

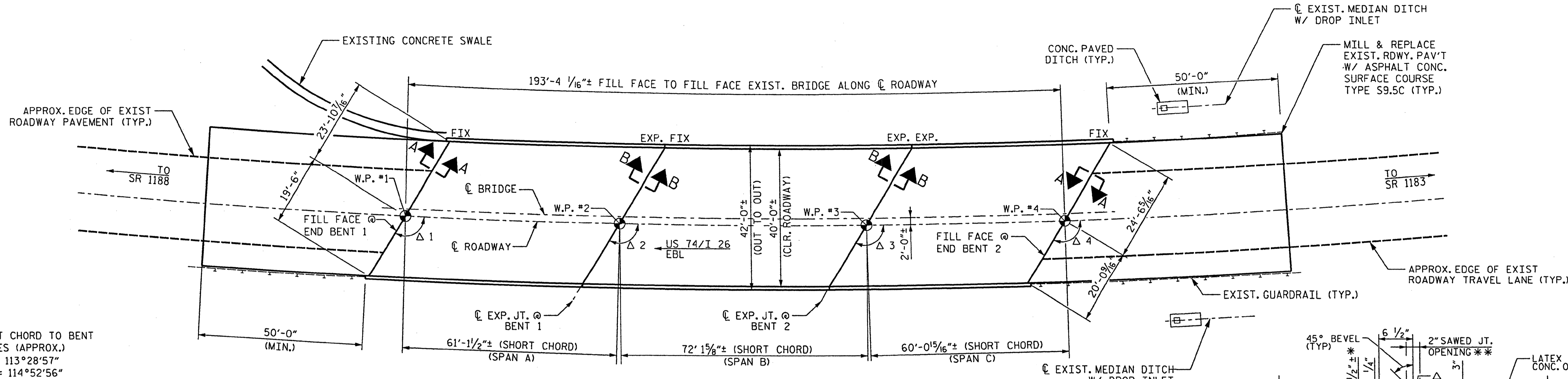
Joseph Kelvington
Professional Engineer
Seal 13406
KELVINGTON

VBS 17BP.14.P.3 Henderson-Polk Co. Bridge 99 Drawing\BP99_LocSke_BOM.dgn 1/19/2012 12:55 PM Jgelle

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Fax. (919) 851-7024
www.stantec.com
License No. F-0672

DRAWN BY : P Z ARMATA DATE : 11/11
CHECKED BY : J T KELVINGTON DATE : 11/11

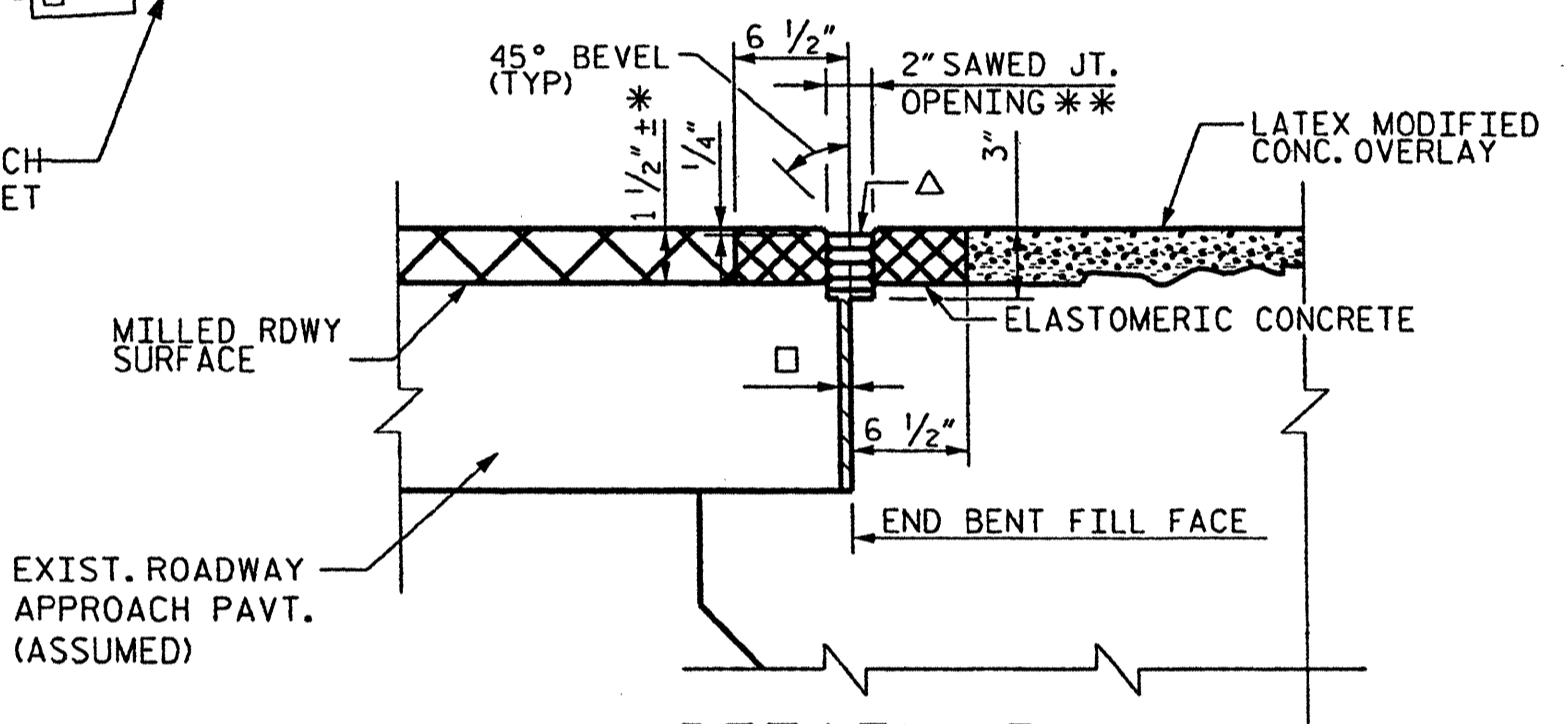
12/15/2011 2:43:40 PM Joelle
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SHORT CHORD TO BENT ANGLES (APPROX.)
 Δ 1 = 113°28'57"
 Δ 2 = 114°52'56"
 Δ 3 = 115°50'18"
 Δ 4 = 115°50'18"

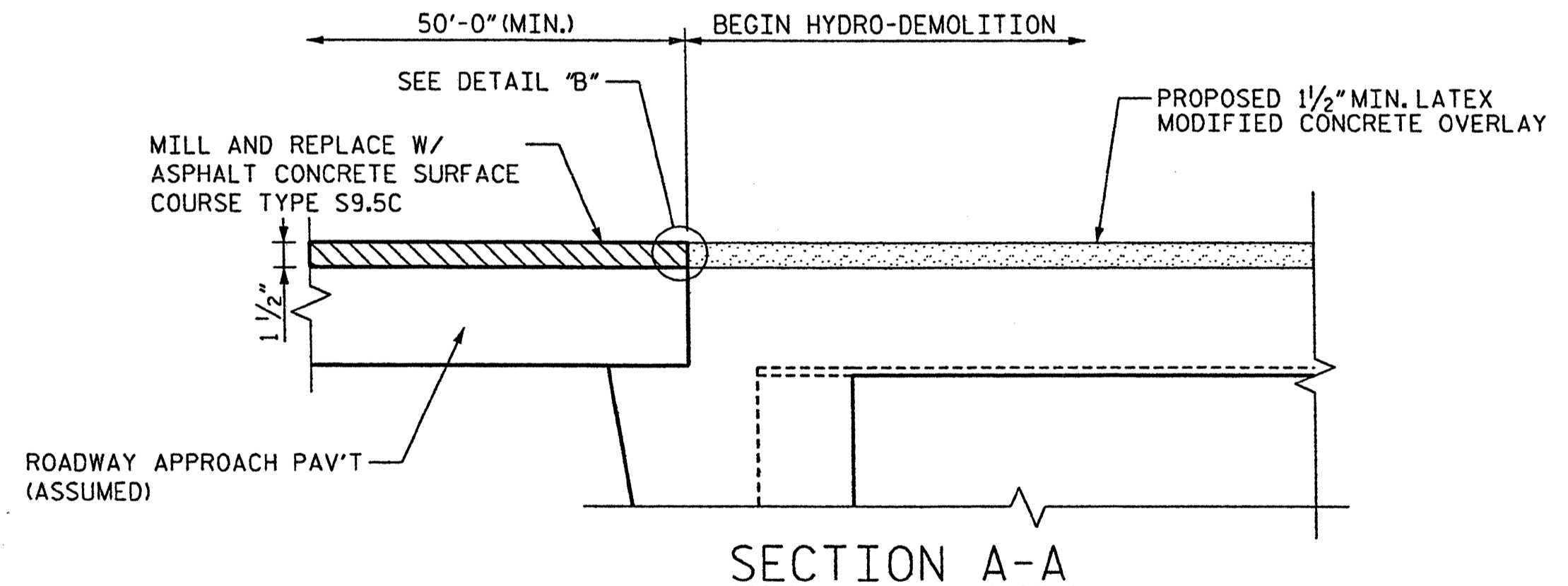
PLAN OF SPANS A-C

NOTE: ALL DIMENSIONS SHOWN ARE ARC DIMENSIONS OR RADIAL DIMENSIONS UNLESS NOTED OTHERWISE
 PARAPET RAIL AND END POST DETAILS NOT SHOWN FOR CLARITY
 ALL DIMENSIONS ARE APPROXIMATE

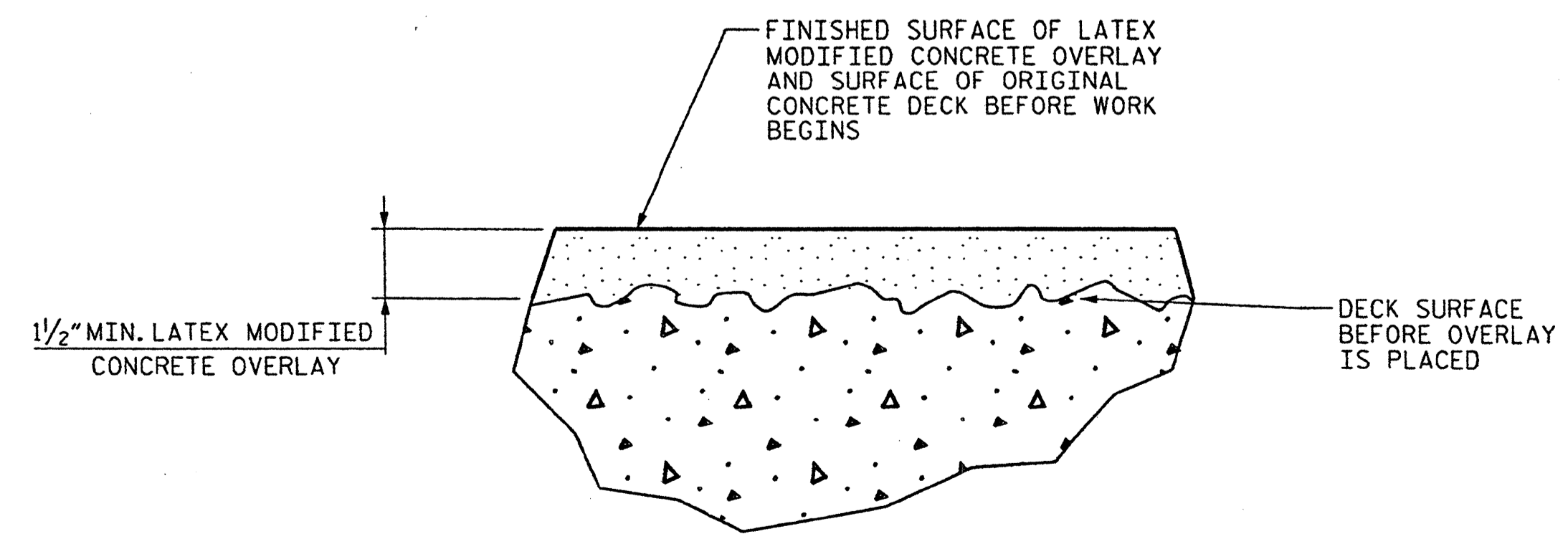


DETAIL "B"

Δ USE 2.50" X 2.00" UNCOMPRESSED SEAL MATERIAL
 □ EXISTING 1/2" EXPANSION JOINT MATERIAL (ASSUMED)
 * 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-75 FOR ADDITIONAL JT. SEAL DETAILS @ END BENTS.
 ** CENTERED ABOUT FILL FACE



SECTION A-A



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

NOTES:

- 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 ON SHT. S-73.
- FOR LATEX MODIFIED CONCRETE, SEE SPECIAL PROVISIONS.
- FOR SECTION B-B, SEE SHEET S-76.
- FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

PROJECT NO. **WBS 17BP.14.P.3**
 POLK COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
PLAN OF SPANS FOR DECK REPAIR
 DECK REHAB. FOR BRIDGE NO. 99

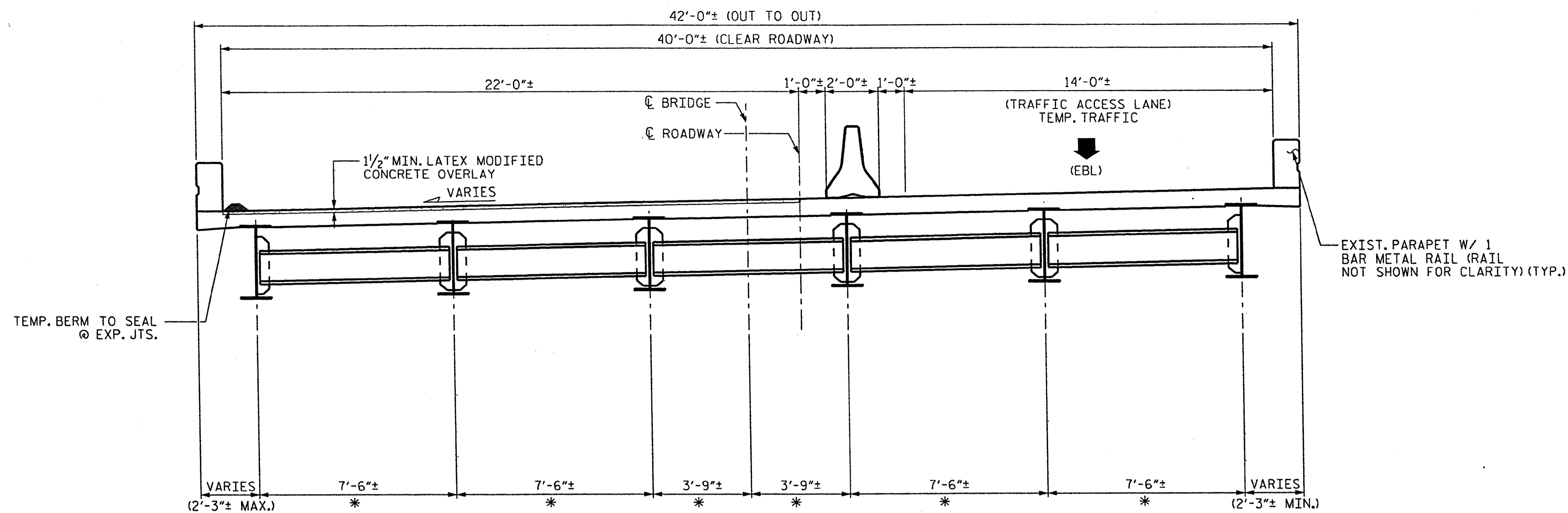
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-71	
1			3			TOTAL SHEETS	77
2			4				

Joseph H. Kelvington
 12/15/11
 PROFESSIONAL SEAL
 ENGINEER
 L. KELVINGTON

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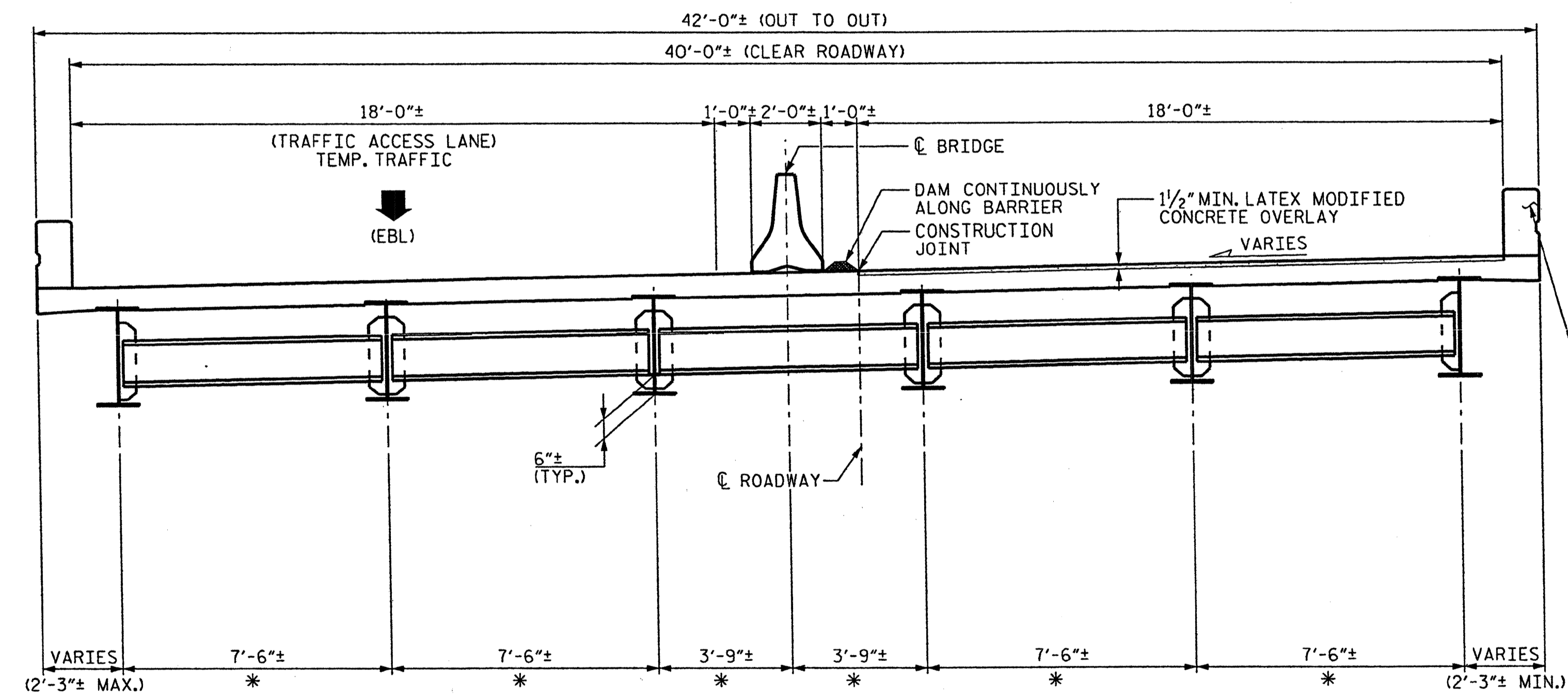
DRAWN BY: P. Z. ARMATA DATE: 11/11
 CHECKED BY: J. T. KELVINGTON DATE: 11/11

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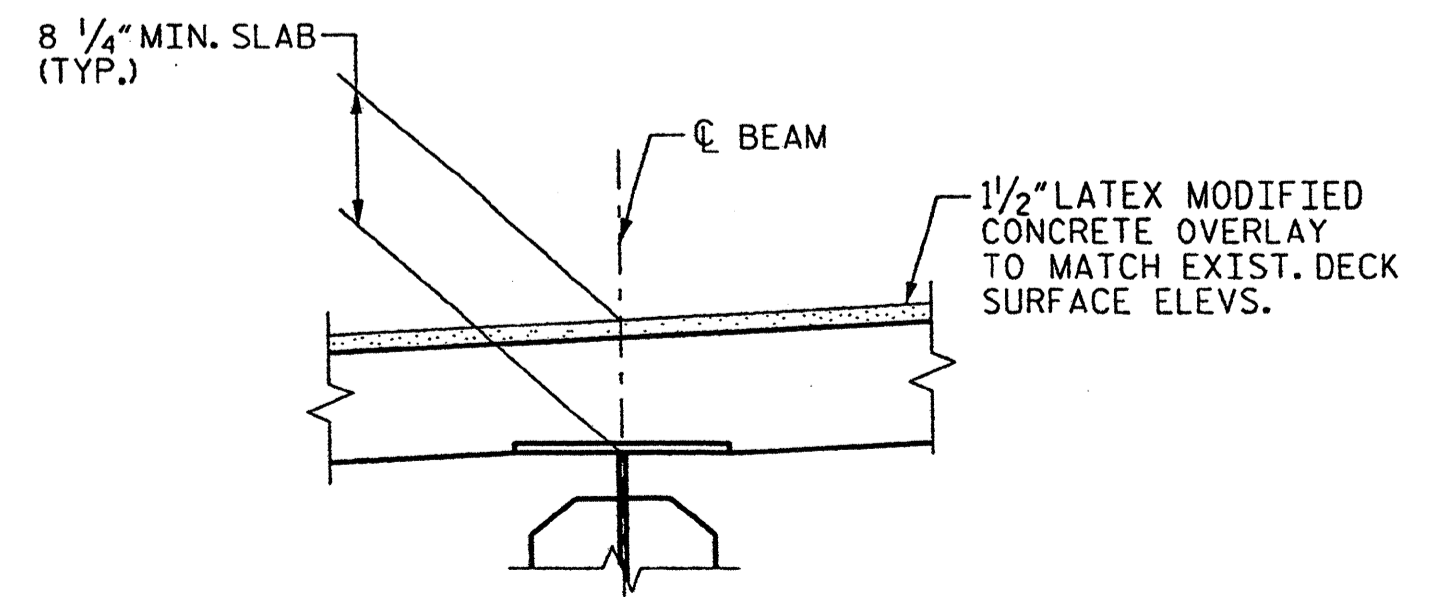
TYP. SECTION - EBL

NOTE: ALL DIMENSION SHOWN ARE RADIAL UNLESS NOTED.



TYP. SECTION - EBL

NOTE: ALL DIMENSION SHOWN ARE RADIAL UNLESS NOTED.



EXIST. SLAB BUILDUP
ESTIMATED EXISTING TOP CLEAR COVER = 1 3/8"±

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.
 ALL DIMENSIONS ARE APPROXIMATE.
 FOR TRAFFIC CONTROL AND PHASING DETAILS, SEE TRAFFIC MANAGEMENT PLANS.
 * VARIES ALONG LENGTH OF BEAM. RADIAL DIMENSION @ C/BENT AND C/BEAM.

PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
 STATION: _____

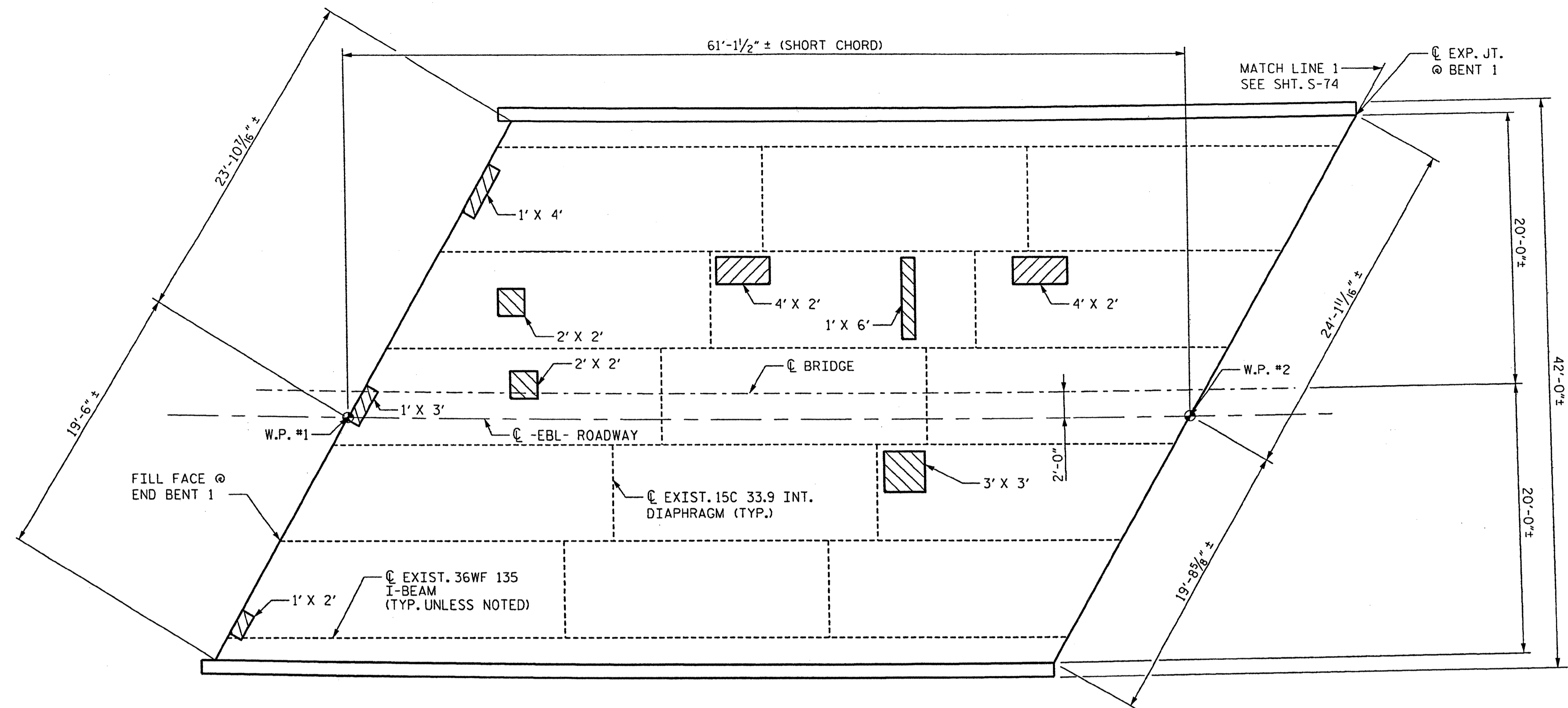
STATE OF NORTH CAROLINA					
DEPARTMENT OF TRANSPORTATION					
RALEIGH					
TYPICAL SECTION					
DECK REHAB. FOR BRIDGE NO. 99					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-72
TOTAL SHEETS					77

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 18406
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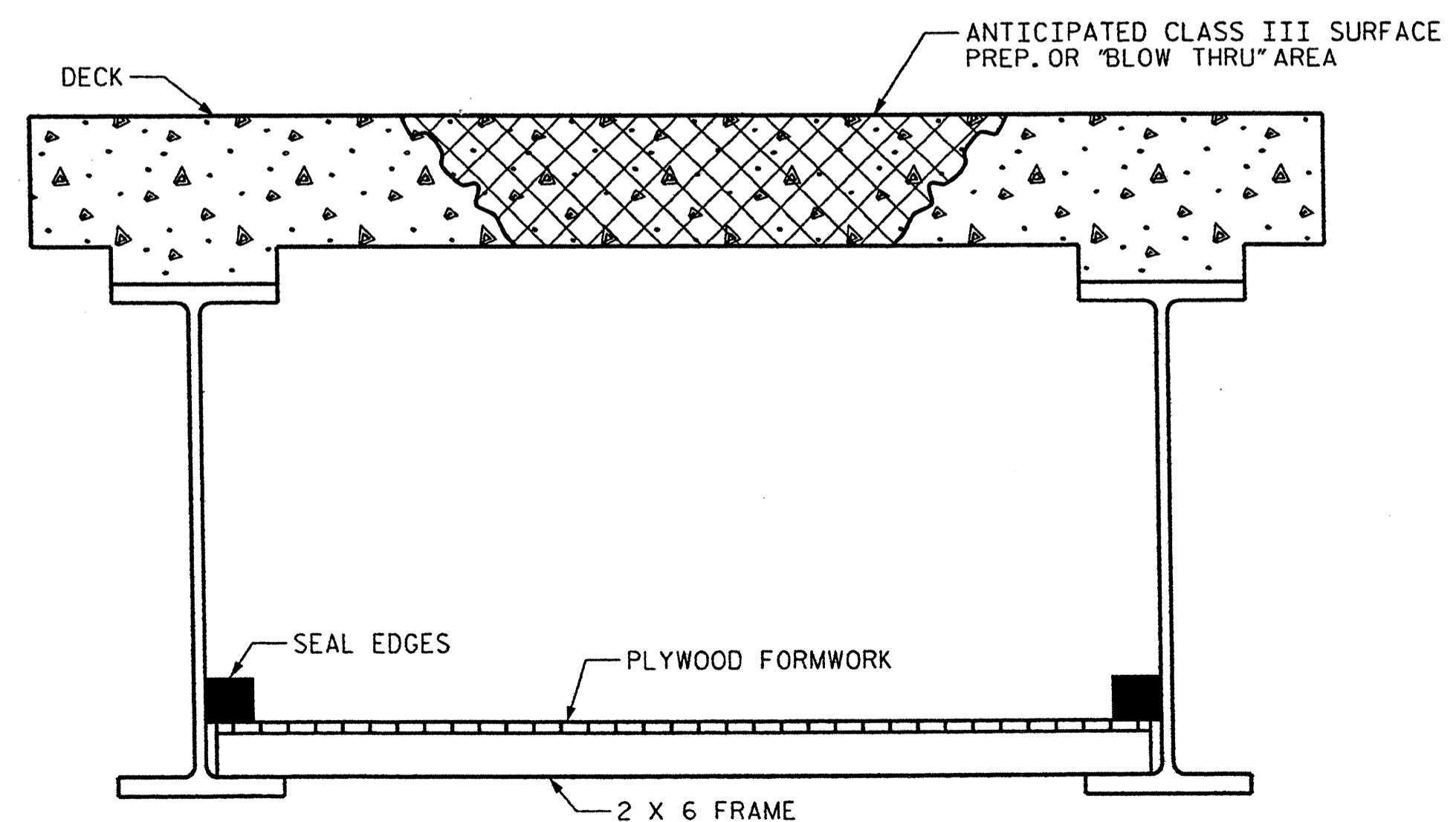
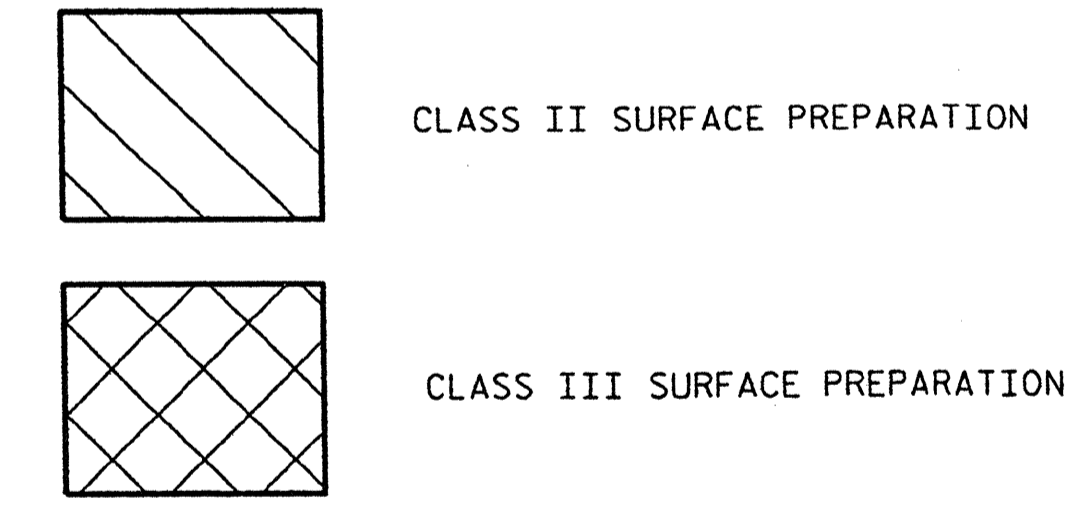
DRAWN BY: P. Z. ARMATA DATE: 11/11
 CHECKED BY: J. T. KELVINGTON DATE: 11/11

NOTE:
 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.
 SEE HYDRO-DEMOLITION SPECIAL PROVISIONS.
 CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.



PLAN OF SPAN A - DECK REPAIRS

NOTE: HORIZONTAL DIMENSIONS ARE RADIAL OR ARC DISTANCES UNLESS NOTED OTHERWISE
 ALL DIMENSIONS ARE APPROXIMATE



TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

NOTES:
 L' X W' = LENGTH OF AREA ALONG @ BRIDGE X
 WIDTH OF AREA NORMAL TO @ BRIDGE

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.

PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
 STATION: _____

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH			
DECK REPAIR DETAILS SPAN A			
DECK REHAB. FOR BRIDGE NO. 99			
REVISIONS		SHEET NO.	
NO.	BY:	DATE:	NO.
1			3
2			4
TOTAL SHEETS		77	

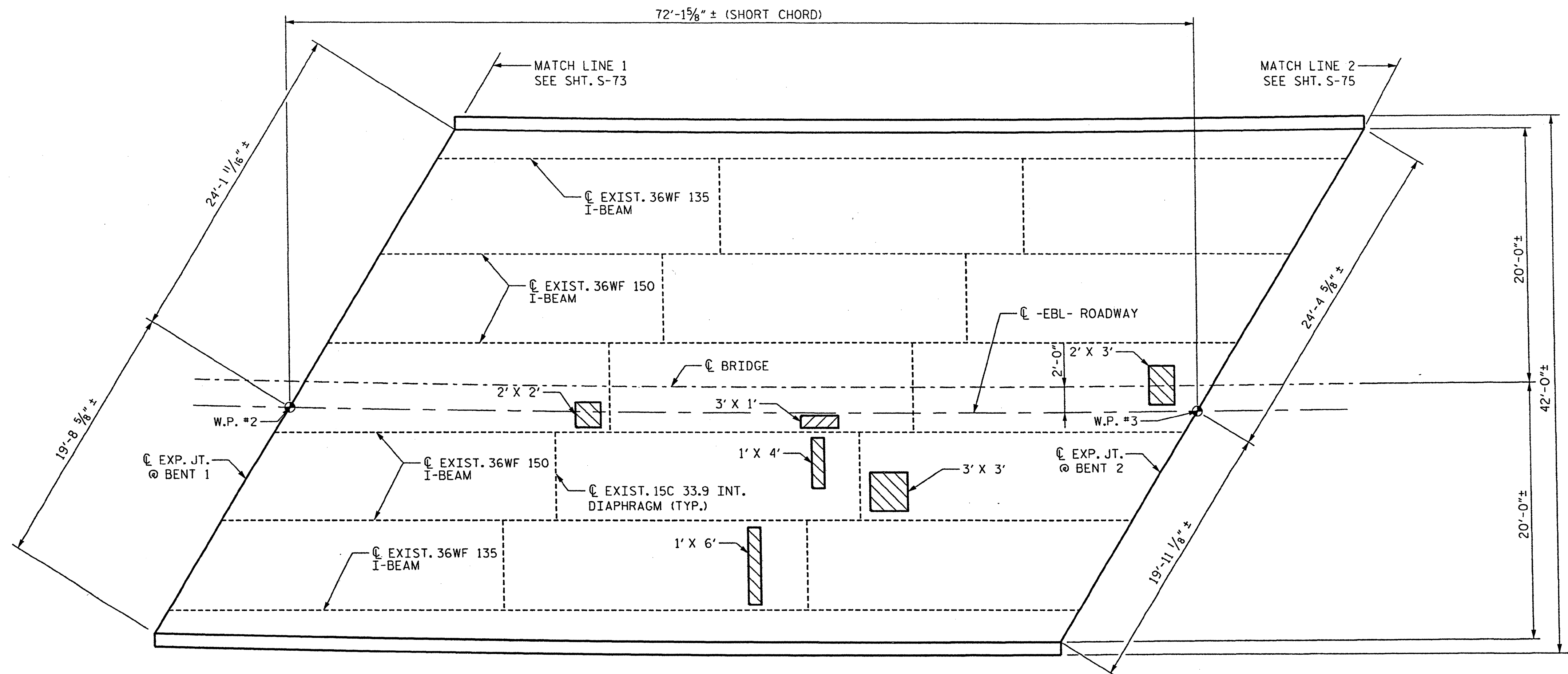
Joseph M. Kelvington
 PROFESSIONAL ENGINEER
 No. 15406
 STATE OF NORTH CAROLINA

WBS 17BP.14.P.3 Hender son-Polk Co. Bridge 99 Drawing\BEP99_Repairs-Plan.dgn 12/15/2011 10:16:29 AM Joelle

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

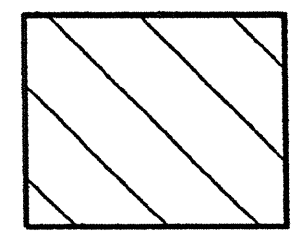
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 12/15/2011 10:16:32 AM Jgeille



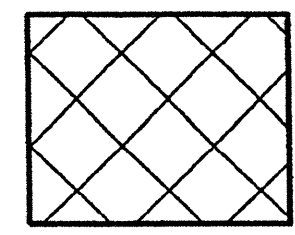
NOTE:
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 SEE HYDRO-DEMOLITION SPECIAL PROVISIONS.
 CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.

PLAN OF SPAN B - DECK REPAIRS

NOTE: HORIZONTAL DIMENSIONS ARE RADIAL OR ARC DISTANCES UNLESS NOTED OTHERWISE
 ALL DIMENSIONS ARE APPROXIMATE



CLASS II SURFACE PREPARATION



CLASS III SURFACE PREPARATION

NOTES:

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

PROJECT NO. **WBS 17BP.14.P.3**
 POLK COUNTY
 STATION: _____

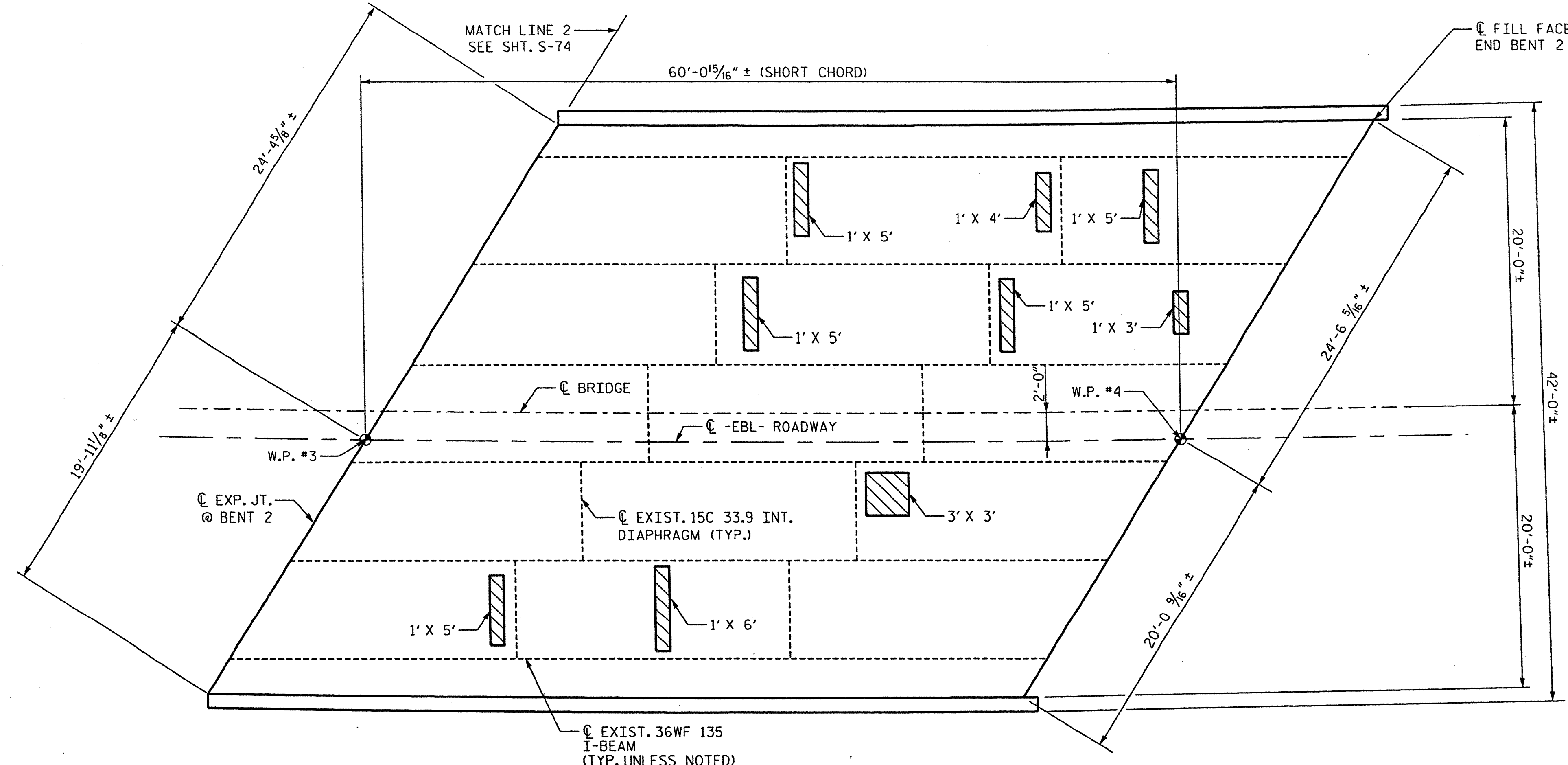


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 www.stantec.com
 License No. F-0672

DRAWN BY: P. Z. ARMATA DATE: 11/11
 CHECKED BY: J. T. KELVINGTON DATE: 11/11

John S. ...
 PROFESSIONAL ENGINEER
 STATE OF NORTH CAROLINA
 13406
 J. KELVINGTON

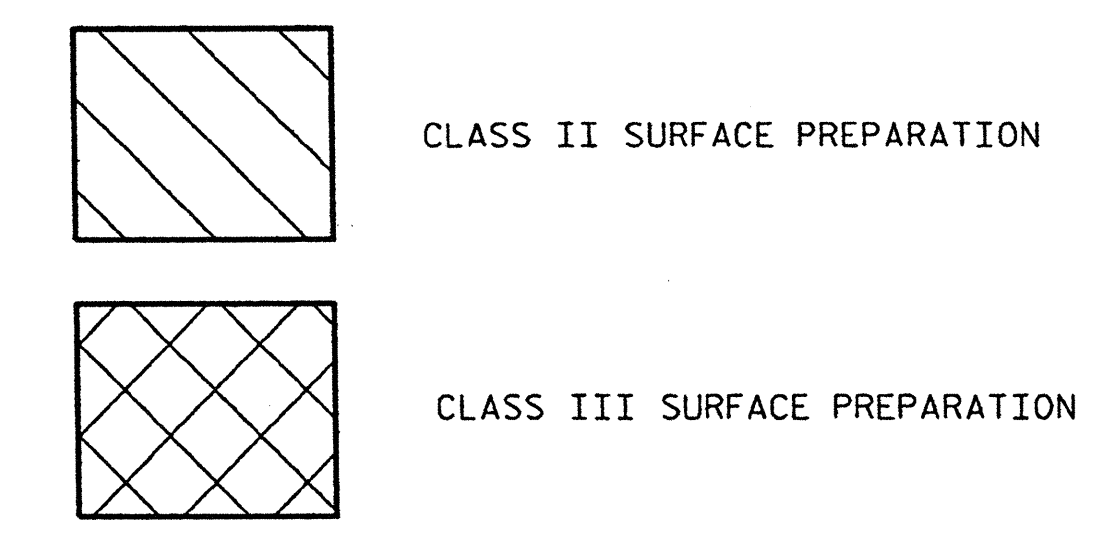
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DECK REPAIR DETAILS SPAN B					
DECK REHAB. FOR BRIDGE NO. 99					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-74					TOTAL SHEETS 77



PLAN OF SPAN C - DECK REPAIRS

NOTE: HORIZONTAL DIMENSIONS ARE RADIAL OR ARC DISTANCES UNLESS NOTED OTHERWISE
ALL DIMENSIONS ARE APPROXIMATE

NOTE:
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.
SEE HYDRO-DEMOLITION SPECIAL PROVISIONS.
CLASS II AND CLASS III SURFACE PREPARATION SHOWN IS REPRESENTATIVE AND DOES NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED @ THE PROJECT SITE.



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

PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**DECK REPAIR DETAILS
SPAN C**

DECK REHAB. FOR BRIDGE NO. 99

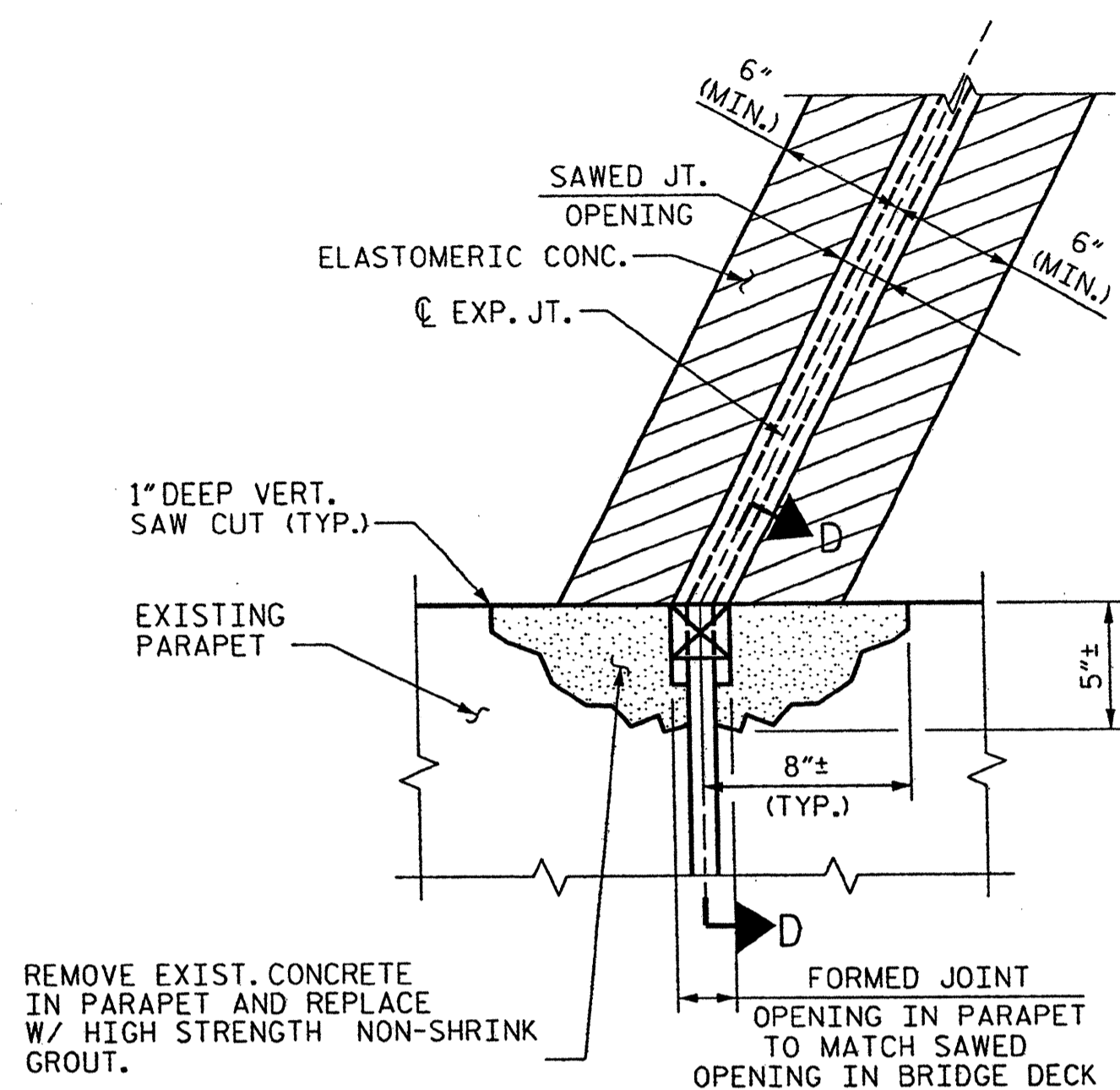
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-75
1			3			TOTAL SHEETS 77
2			4			

Joseph T. Kelvington
12/15/11
PROFESSIONAL ENGINEER
SEAL 13406
JOSEPH T. KELVINGTON

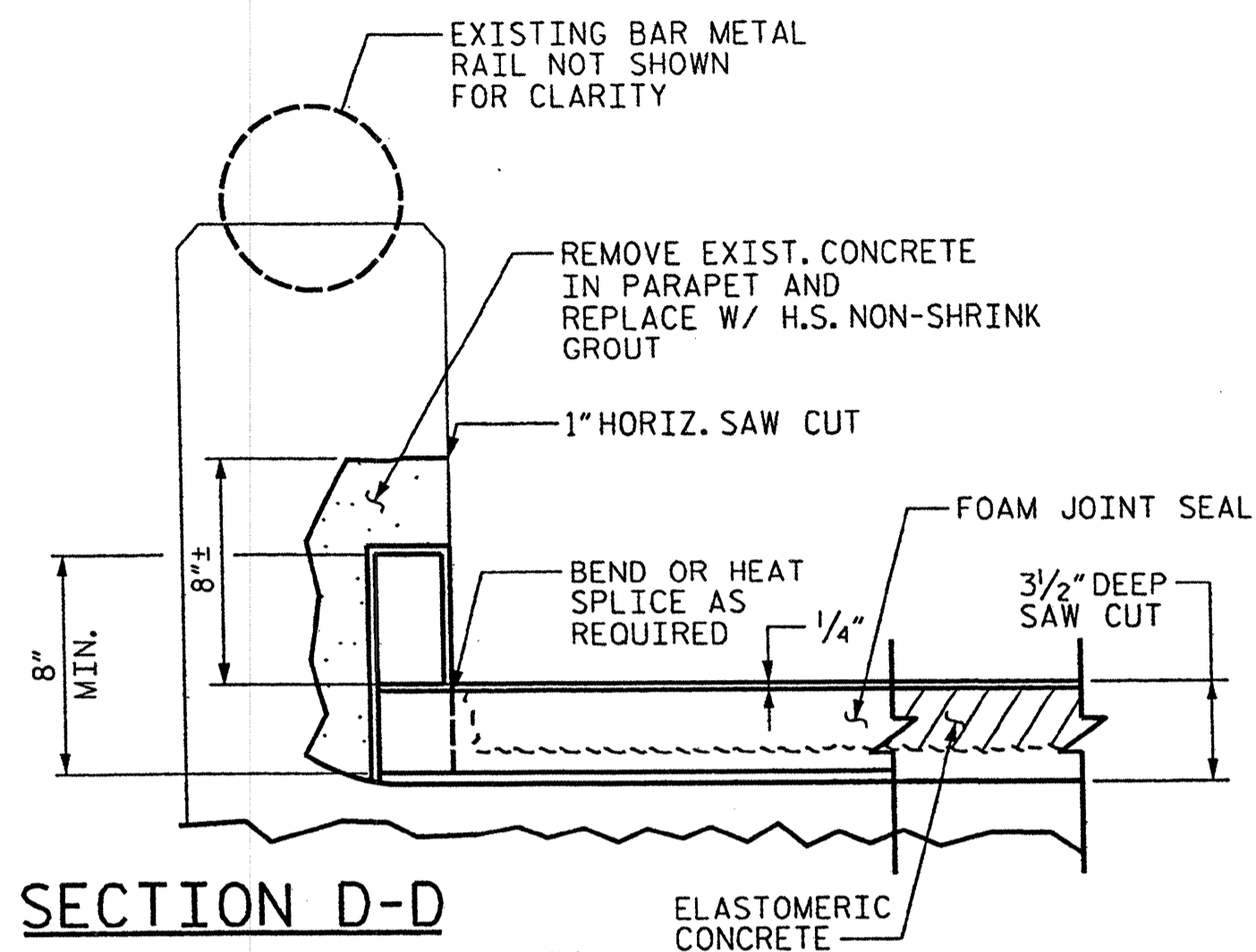
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Suite 300
Raleigh, NC 27606
Tel. (919) 851-6966
Fax. (919) 851-7024
www.stantec.com
License No. F-0672

DRAWN BY : P. Z. ARMATA DATE : 11/11
CHECKED BY : J. T. KELVINGTON DATE : 11/11

WBS 17BP.14.P.3 Henderson-Polk Co. Bridge 99 Drawing\BP99.Repair\Plan3.dgn 12/15/2011 10:16:34 AM Jgelie



PARTIAL PLAN @ JOINT



SECTION D-D

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

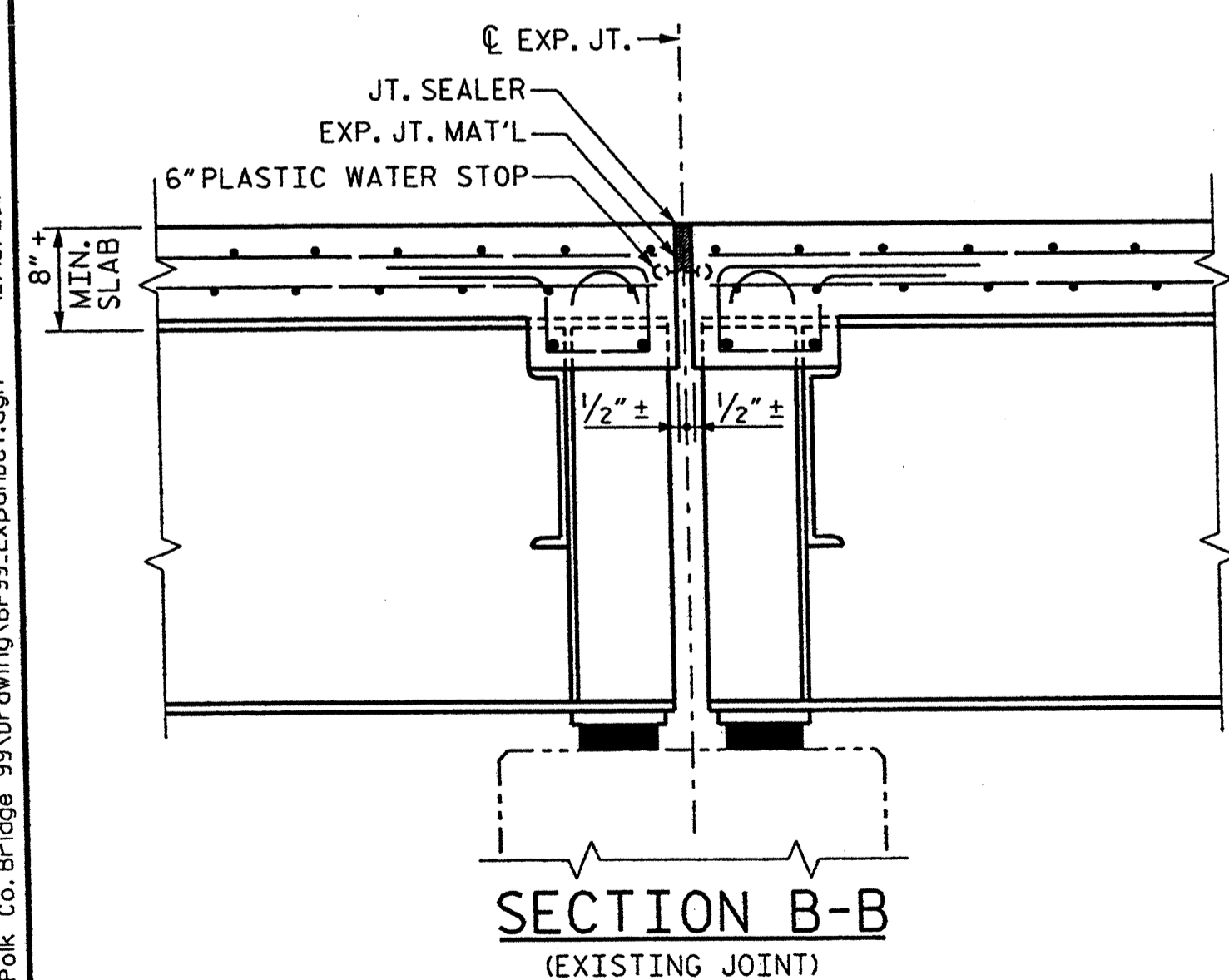
FOR HIGH STRENGTH GROUT, SEE SPECIAL PROVISION. "GROUT FOR STRUCTURES"

HIGH STRENGTH GROUT SHALL BE APPROVED BY THE ENGINEER.

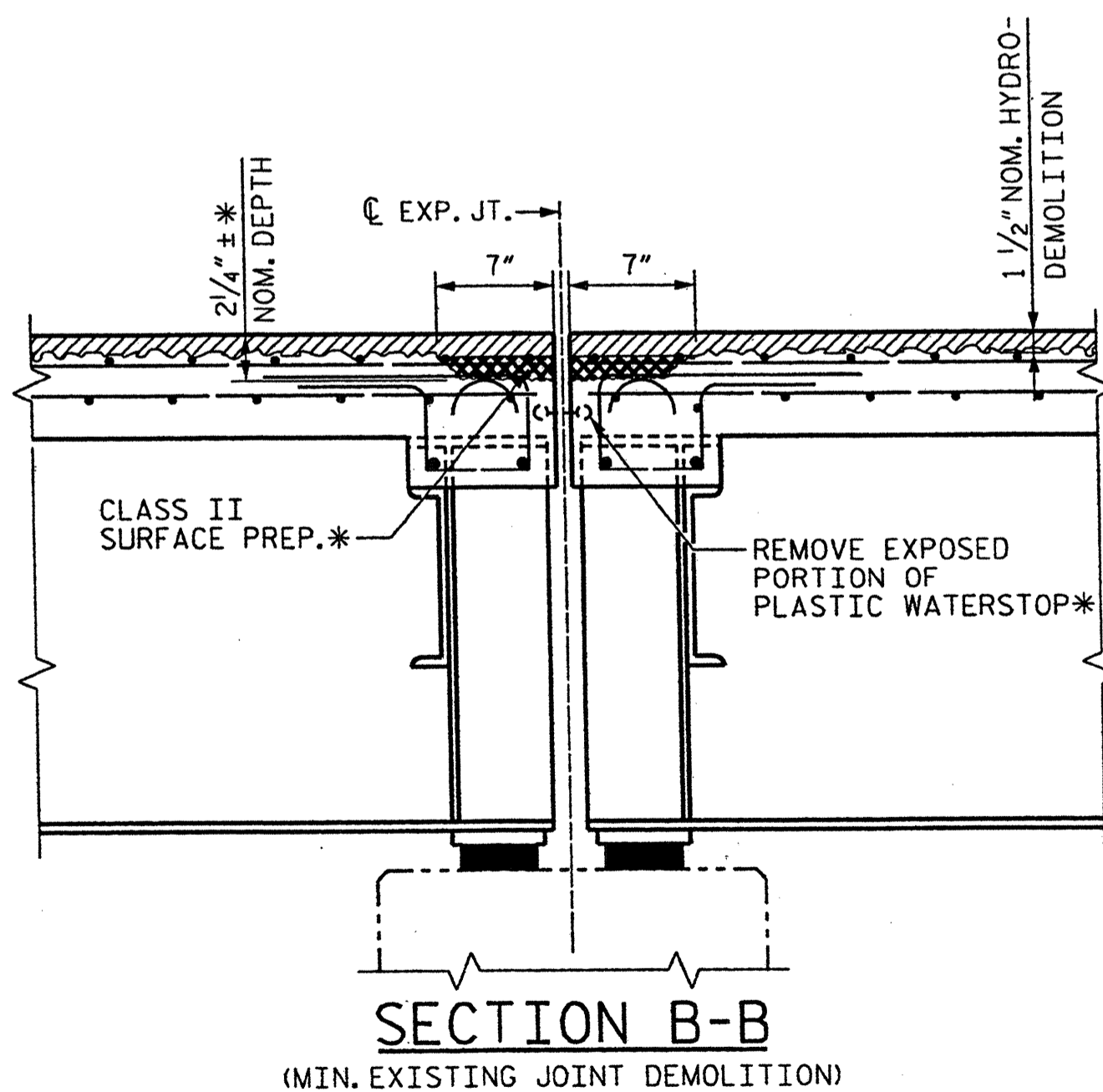
ELASTOMERIC CONCRETE

LOCATION	QTY
END BENT 1	5.4 C.F.
BENT 1	5.0 C.F.
BENT 2	5.1 C.F.
END BENT 2	5.3 C.F.

TOTAL ELASTOMERIC CONC. = 20.8 C.F.
TOTAL ELASTOMERIC CONC. = 0.8 C.Y.



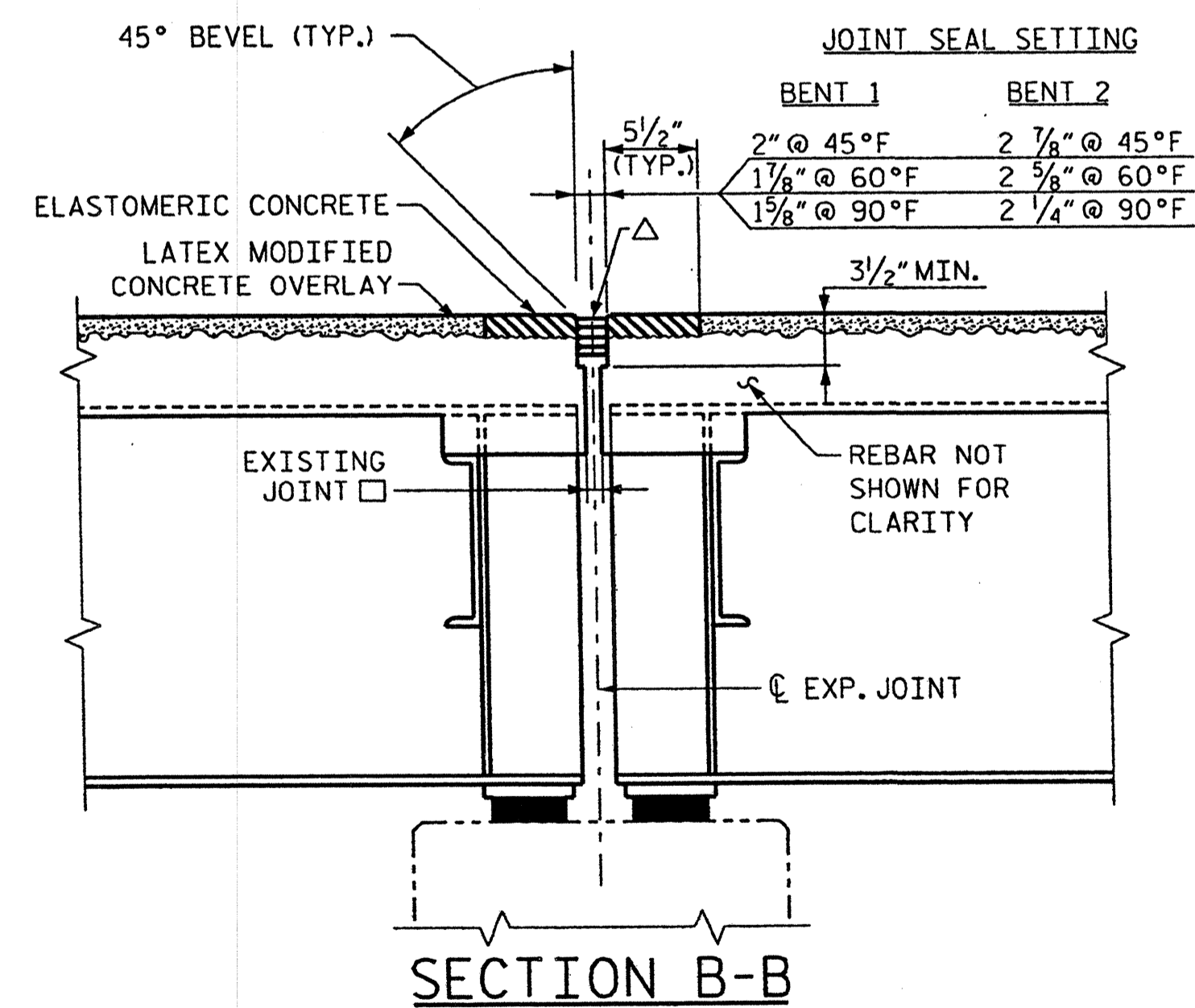
SECTION B-B
(EXISTING JOINT)



SECTION B-B
(MIN. EXISTING JOINT DEMOLITION)

* ALL LOOSE AND UNSOUND CONCRETE SHALL BE REMOVED. IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, THE ENTIRE WATERSTOP SHALL BE REMOVED. OTHERWISE, PREPARE SURFACES BY HYDRO-DEMOLITION TO THE NOMINAL DEPTHS SHOWN

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



SECTION B-B
(PROPOSED FOAM JOINT SEAL EXPANSION)

NOTE: FOR FOAM JOINT SEAL, SEE SPECIAL PROVISIONS.

THE INSTALLED EVAZOTE 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 @ BENT 1.
- USE 3.4375" x 2.50" UNCOMPRESSED SEAL @ BENT 2.

- EXIST. JOINT OPENING @ BENT 1 = 1"
- EXIST. JOINT OPENING @ BENT 2 = 1 1/2"

PROJECT NO. WBS 17BP.14.P.3
POLK COUNTY
STATION: _____

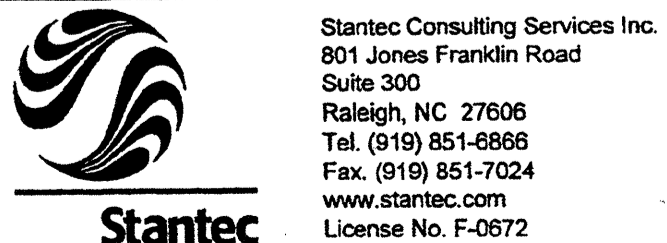
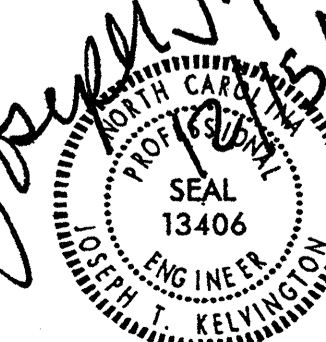
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

EXPANSION JOINT DETAILS

DECK REHAB. FOR BRIDGE NO. 99

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-76
1			3			TOTAL SHEETS
2			4			77

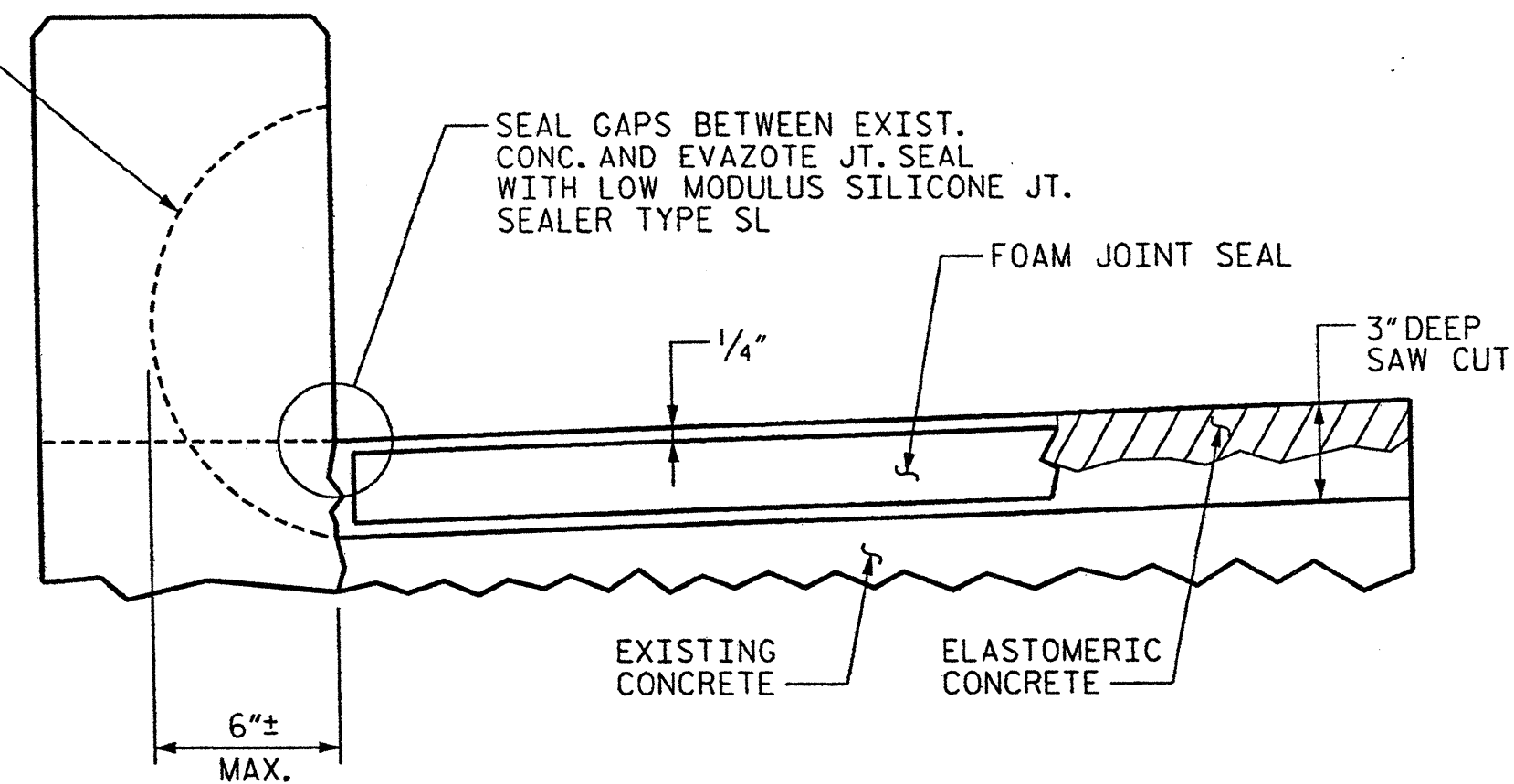
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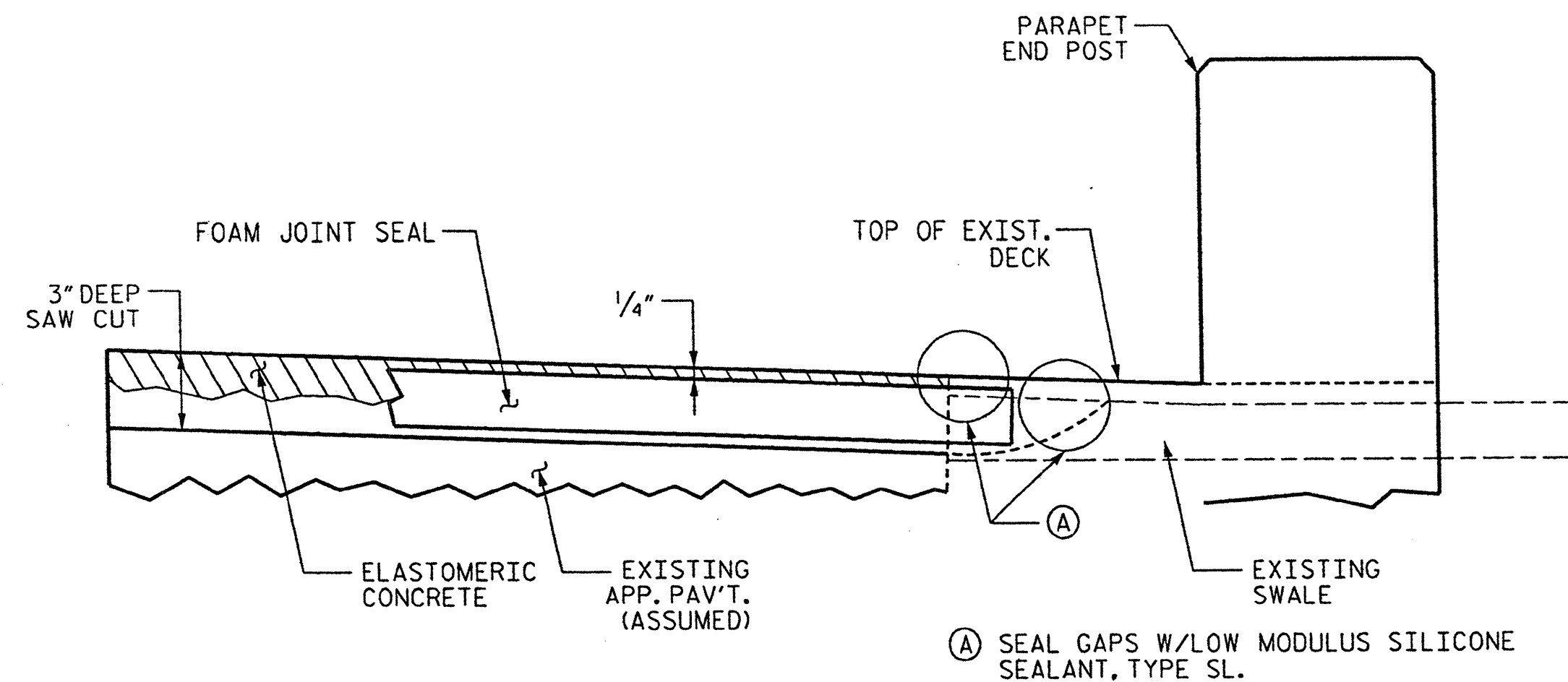
DRAWN BY: P. Z. ARMATA DATE: 11/11
CHECKED BY: J. T. KELVINGTON DATE: 11/11

NWBS 17BP.14.P.3 Henderson-Polk Co. Bridge 99 Drawing\BP99_Expansion.dgn 12/15/2011 10:16:36 AM Jgelle

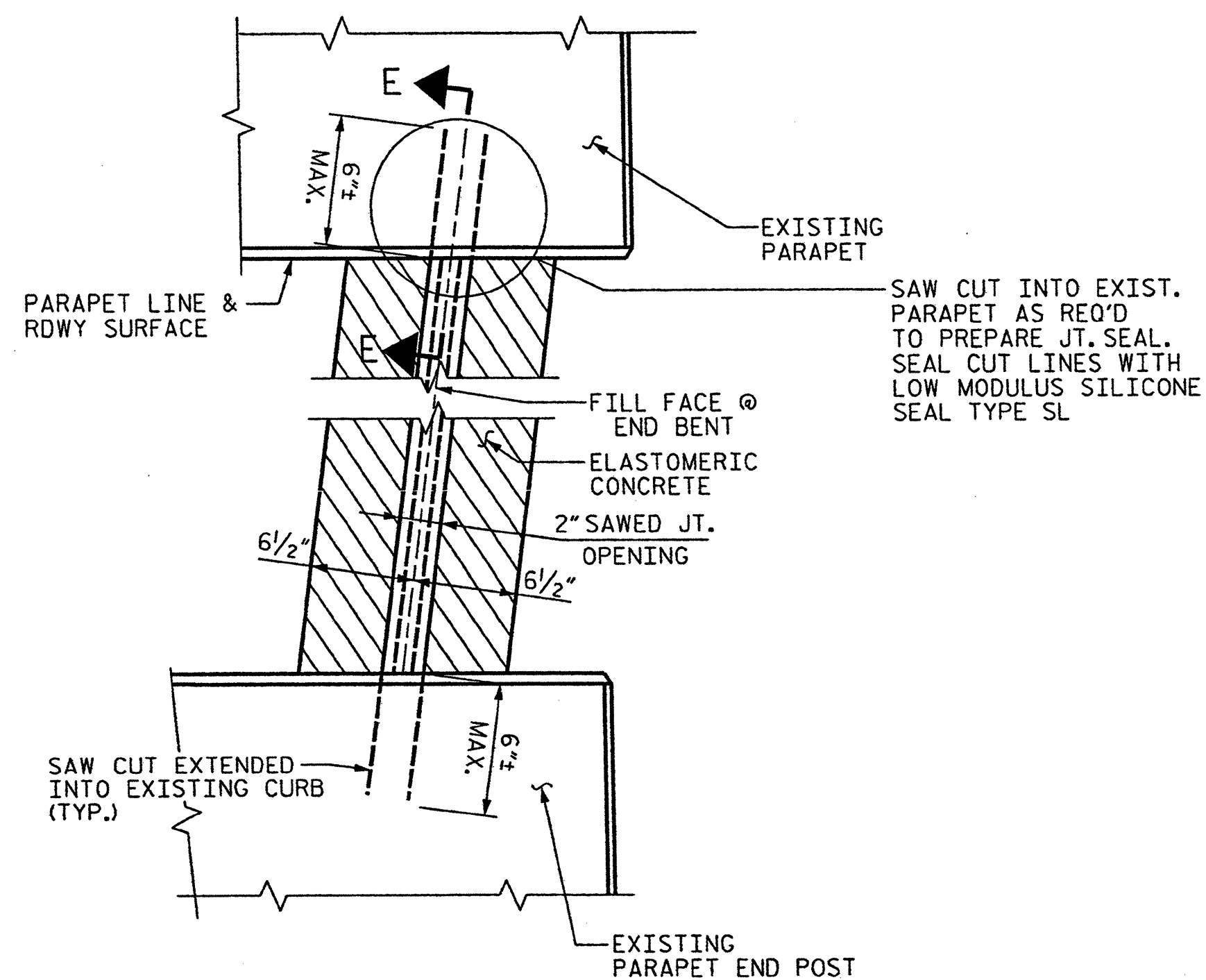
SAW CUT ONLY AS DEEP AS NECESSARY TO PREPARE SURFACES FOR JOINT MAT'L



SECTION E-E

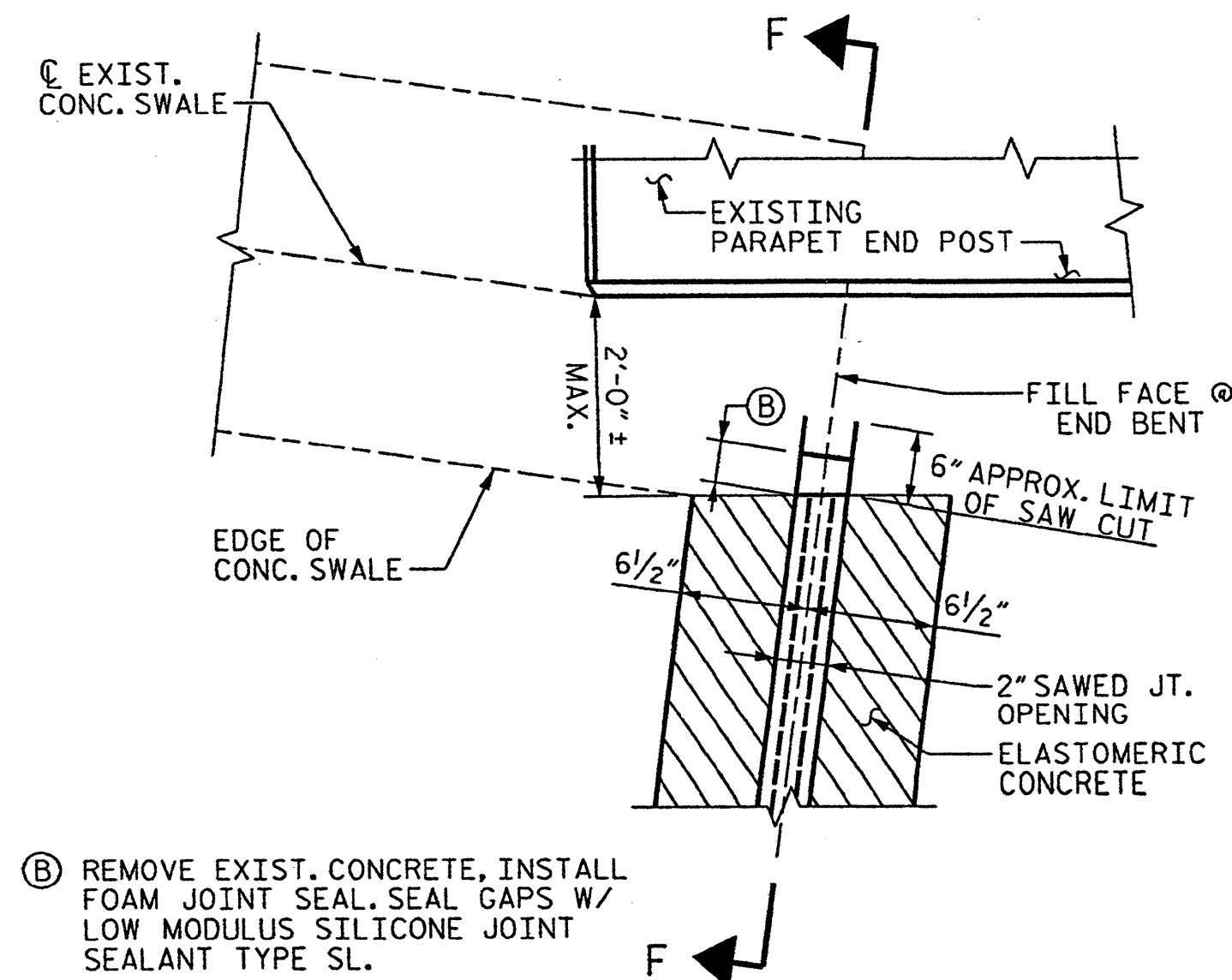


SECTION F-F



PARTIAL PLAN @ END BENT #2

(END BENT #1 SIMILAR)
(EXCEPT AS SHOWN ELSEWHERE ON THIS DRAWING)



PARTIAL PLAN @ END BENT #2

RAIL @ SOUTH SIDE

PROJECT NO. WBS 17BP.14.P.3

POLK COUNTY

STATION: _____



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Fax. (919) 851-7024
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DRAWN BY : P. Z. ARMATA DATE : 11/11
CHECKED BY : J. T. KELVINGTON DATE : 11/11

John T. Kelvington
PROFESSIONAL ENGINEER
NO. 13406
STATE OF NORTH CAROLINA

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT JOINT SEAL
DETAILS

DECK REHAB. FOR BRIDGE NO. 99

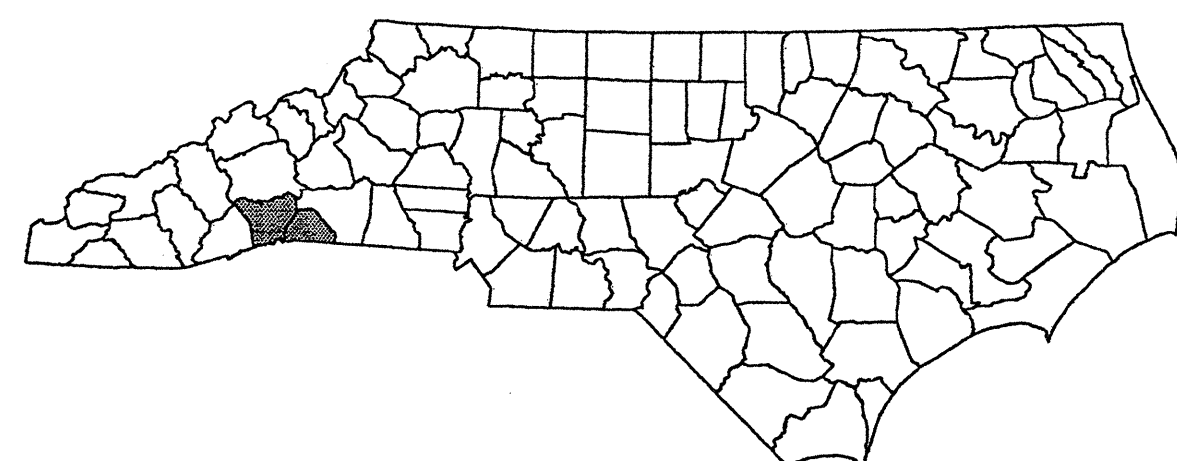
REVISIONS						SHEET NO. S-77
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 77
2			4			

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN
HENDERSON & POLK COUNTIES

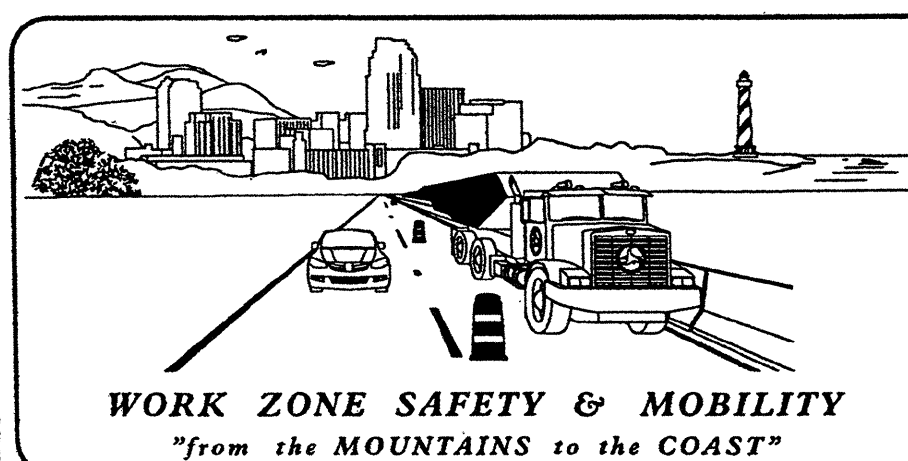
DIVISION 14



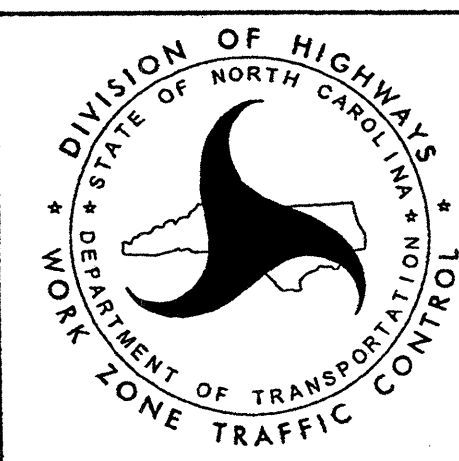
BRIDGE DECK PRESERVATION

- HENDERSON BRIDGE #33 - I-26/US 74 EB OVER SR 1834**
- HENDERSON BRIDGE #129 - NC 191 OVER FRENCH BROAD RIVER**
- HENDERSON BRIDGE #183 - US 64 OVER I-26/US 74**
- HENDERSON BRIDGE #228 - I-26/US 74 WB OVER SOUTHERN RAILROAD**
- HENDERSON BRIDGE #230 - I-26/US 74 EB OVER SOUTHERN RAILROAD**
- HENDERSON BRIDGE #233 - I-26/US 74 WB OVER CANE CREEK**
- HENDERSON BRIDGE #234 - I-26/US 74 EB OVER CANE CREEK**

- POLK BRIDGE #32 - NC 108 OVER I-26**
- POLK BRIDGE #98 - I-26 WB OVER SR 1142**
- POLK BRIDGE #99 - I-26 EB OVER SR 1142**



PLAN PREPARED FOR NCDOT BRIDGE MANAGEMENT UNIT
RALEIGH, NC



INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-1A	LEGEND AND LIST OF ROADWAY STANDARD DRAWINGS
TMP-2	GENERAL NOTES
TMP-3	PHASING
TMP-4	HENDERSON #183 US 64 EB LEFT LANE CLOSURES
TMP-5	HENDERSON #183 US 64 EB RIGHT LANE CLOSURES
TMP-6	HENDERSON #183 DETOUR ROUTE-EXIT FROM I-26 EAST TO US 64 EAST
TMP-7	HENDERSON #183 US 64 WB LEFT LANE CLOSURES
TMP-8	HENDERSON #183 US 64 WB RIGHT LANE CLOSURES
TMP-9	HENDERSON #183 DETOUR ROUTE-EXIT FROM I-26 WEST TO US 64 WEST
TMP-10	POLK #32 NC 108 EB WORK AREA FLAGGER LANE CLOSURE
TMP-11	POLK #32 RAMP CLOSURE FROM US 74 EAST TO NC 108
TMP-12	POLK #32 NC 108 WB WORK AREA FLAGGER LANE CLOSURE

TRAFFIC MANAGEMENT STRATEGY

PROPOSED BRIDGE WORK WILL BE PERFORMED USING LANE CLOSURES AND RAMP CLOSURES.

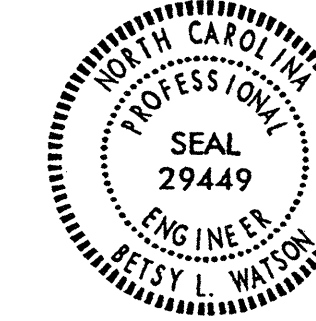


PLAN PREPARED BY:
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www.stantec.com

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

APPROVED: *Betsy L. Watson*
DATE: 12/15/11

SEAL



SHEET NO.
TMP-1

WBS 17BP.14.P.3

12/14/2011 U:\TrafficControl\TCP\WBS 17BP.14.P.3 Henderson Polk Preservation\TCP\Plan Sheets\17BP.14.P.3.TC_TMP_01.TITLE.dgn gkarageorge

LEGEND

- ← DIRECTION OF TRAFFIC FLOW
- WORK AREA
- ↑ NORTH ARROW
- TYPE III BARRICADE
- ▲ CONE
- DRUM ◎ SKINNY DRUM ⊙ TUBULAR MARKER
- CHANGEABLE MESSAGE SIGN (CMS)
- FLAGGER
- 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 WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD 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
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMP
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1253.01	RAISED PAVEMENT MARKERS - SNOWPLOWABLE

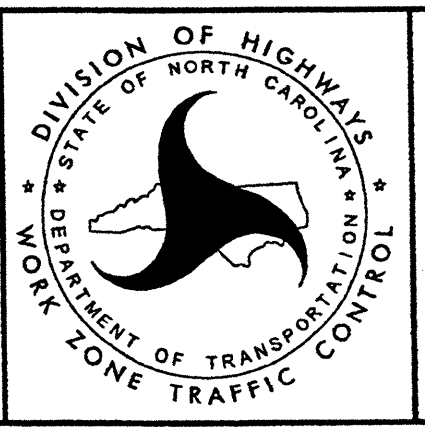
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APPROVED: _____ DATE: _____

SEAL

12/15/11



LEGEND
&
ROADWAY STANDARD DRAWINGS

GENERAL NOTES

PROJ. REFERENCE NO. 17BP.14.P.3	SHEET NO. 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 UNDESIRABLE 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
NC 191 SR 1834	6:00 A.M.-9:00 A.M. MONDAY THRU FRIDAY 4:00 P.M.-7:00 P.M. MONDAY THRU FRIDAY
US 64, NC 108	6:00 A.M.-7:00 P.M. MONDAY THRU THURSDAY & 6:00 A.M. FRIDAY - 7:00 P.M. SUNDAY
I-26, US 74	6:00 A.M.-8:00 P.M. MONDAY THRU THURSDAY & 6:00 A.M. FRIDAY - 8:00 P.M. SUNDAY

HOLIDAY & HOLIDAY WEEKEND LANE CLOSURE TIME RESTRICTIONS

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

ROAD NAME
ALL ROADS

- 1) FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2) FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 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.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
BRIDGE #183 EXITS 49A, 49B & BRIDGE #32 EXIT FROM US 74 EAST TO NC 108	6:00 A.M.-7:00 P.M. MONDAY-THURSDAY & 6:00 A.M. FRIDAY - 7:00 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) INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- I) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- J) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

ROAD CLOSURES

- K) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY ROAD CLOSURE.
- L) PROVIDE 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.
- M) PROVIDE DETOUR ROUTE SIGNING AS SHOWN IN THE TRAFFIC MANAGEMENT PLAN. COVER OR REMOVE DETOUR SIGNING WHEN THE DETOUR IS NOT IN OPERATION. ALL DETOUR ROUTES MUST BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTING.
- N) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- O) 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.
- P) INSTALL SIGNS BEFORE BARRICADES WHEN CLOSING A ROADWAY TO TRAFFIC. REMOVE BARRICADES BEFORE SIGNS WHEN OPENING A ROADWAY TO TRAFFIC. INSTALL/REMOVE ROAD CLOSURE SIGNS AND BARRICADES IN A CONTINUOUS OPERATION AND WITHIN THE SAME CALENDAR DAY.

FLAGGER OPERATIONS

- Q) DURING FLAGGER OPERATIONS DO NOT STOP TRAFFIC FOR MORE THAN 5 MINUTES AT A TIME.
- R) FLAGGER STATIONS SHALL BE LOCATED SUCH THAT APPROACHING TRAFFIC WILL HAVE SUFFICIENT DISTANCE TO STOP AT THE INTENDED STOPPING POINT. IF NEEDED, EXTEND THE LANE CLOSURE SUCH THAT THE FLAGGER STATION IS POSITIONED BEFORE A HORIZONTAL OR CREST VERTICAL CURVE WHERE ADEQUATE STOPPING SIGHT DISTANCE TO THE FLAGGER IS PROVIDED. REFER TO ROADWAY STANDARD DRAWING 1101.11 SHEET 2.
- S) FLAGGERS SHALL NOT STAND IN THE ROADWAY.
- T) FLAGGER STATIONS SHALL BE ILLUMINATED AT NIGHT.
- U) PLACE CHANNELIZING DEVICES FOR FLAGGER OPERATION LANE CLOSURES AT A MAXIMUM SPACING OF 20 FEET IN TAPERS AND AT A MAXIMUM SPACING OF 80 FEET ALONG THE BUFFER SPACE AND WORK AREA.
- V) DRUMS OR SKINNY DRUMS MAY BE USED INSTEAD OF CONES AT NO ADDITIONAL COST.
- W) ADVISE RESIDENTS AND BUSINESSES AFFECTED BY THE LANE CLOSURE ABOUT METHODS OF SAFE INGRESS AND EGRESS FROM DRIVEWAYS DURING FLAGGING AND PILOT CAR OPERATIONS.

PAVEMENT MARKINGS AND MARKERS

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


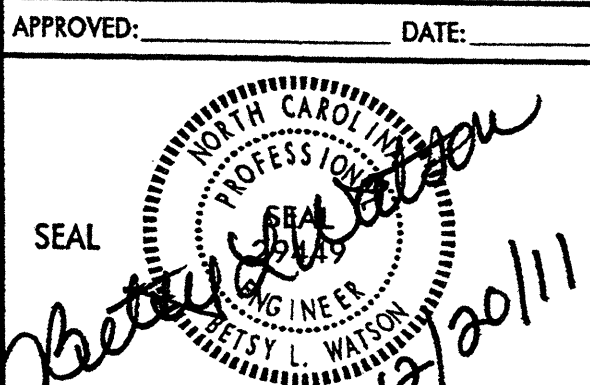
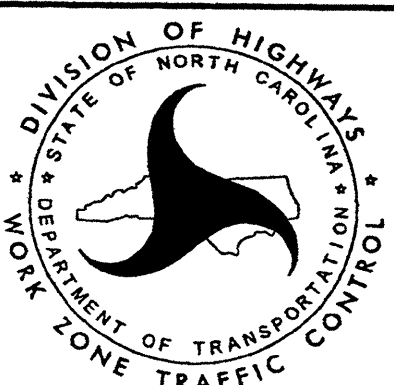
ROAD NAME	MARKING	PAVEMENT MARKER
ALL ROADS	POLYUREA	SNOWPLOWABLE

- Z) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- AA) REPLACE PAVEMENT MARKINGS BEFORE OPENING LANES OR A ROADWAY TO TRAFFIC. A THIN LAYER OF PAINT MAY BE USED INITIALLY UNTIL FINAL MARKINGS ARE PLACED.

MISCELLANEOUS

- BB) ALL DIMENSIONS AND STATIONS IN THE TRAFFIC MANAGEMENT PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- CC) PLACE ALL CHANGEABLE MESSAGE SIGNS AS NEEDED IN THE LOCATIONS AND WITH THE WORD MESSAGES AS SHOWN IN THE PLAN OR AS DIRECTED BY THE ENGINEER TO PROVIDE ADVANCE WARNING TO THE PUBLIC DURING CONSTRUCTION.
- DD) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.

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 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: _____ 		GENERAL NOTES
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PROJ. REFERENCE NO.	SHEET NO.
17BP.14.P.3	TMP-3

PHASING

HENDERSON CO. BRIDGE #33, #228, #230, #233, #234

PERFORM BRIDGE WORK USING LEFT AND RIGHT LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02 SHEET 4 OF 15 OR ROADWAY STANDARD DRAWING 1101.02 SHEET 6 OF 15.

HENDERSON CO. BRIDGE #129

PERFORM BRIDGE WORK USING FLAGGER CONTROLLED LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 15.

HENDERSON CO. BRIDGE #183

PERFORM BRIDGE WORK ON US 64 EB INSIDE LANE USING LEFT LANE CLOSURES. SEE SHEET TMP-4.

PERFORM BRIDGE WORK ON US 64 EB OUTSIDE LANE USING RIGHT LANE CLOSURES. SEE SHEET TMP-5.

DURING WORK ON US 64 EB IMPLEMENT DETOUR OF RAMP FROM I-26 EB TO US 64 EB. AS SHOWN ON SHEET TMP-6.

PERFORM BRIDGE WORK ON US 64 WB INSIDE LANE USING LEFT LANE CLOSURES. SEE SHEET TMP-7.

PERFORM BRIDGE WORK ON US 64 WB OUTSIDE LANE USING RIGHT LANE CLOSURES. SEE SHEET TMP-8.

DURING WORK ON US 64 WB IMPLEMENT DETOUR OF RAMP FROM I-26 WB TO US 64 WB, AS SHOWN ON SHEET TMP-9.

POLK CO. BRIDGE #32


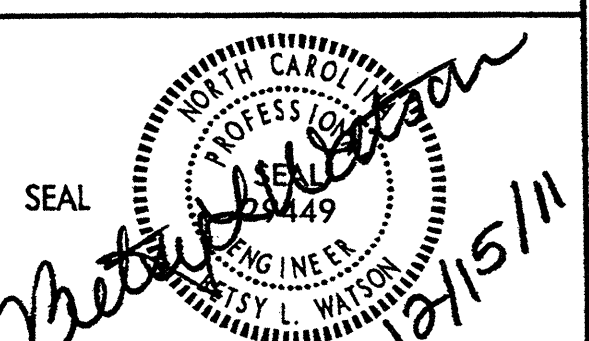

PERFORM BRIDGE WORK ON NC 108 EB USING FLAGGER CONTROLLED LANE CLOSURES, PER SHEET TMP-10. CLOSE RAMP FROM US 74 EAST TO NC 108 DURING WORK ON NC 108 EB. SEE SHEET TMP-11 FOR RAMP CLOSURE AND DETOUR.

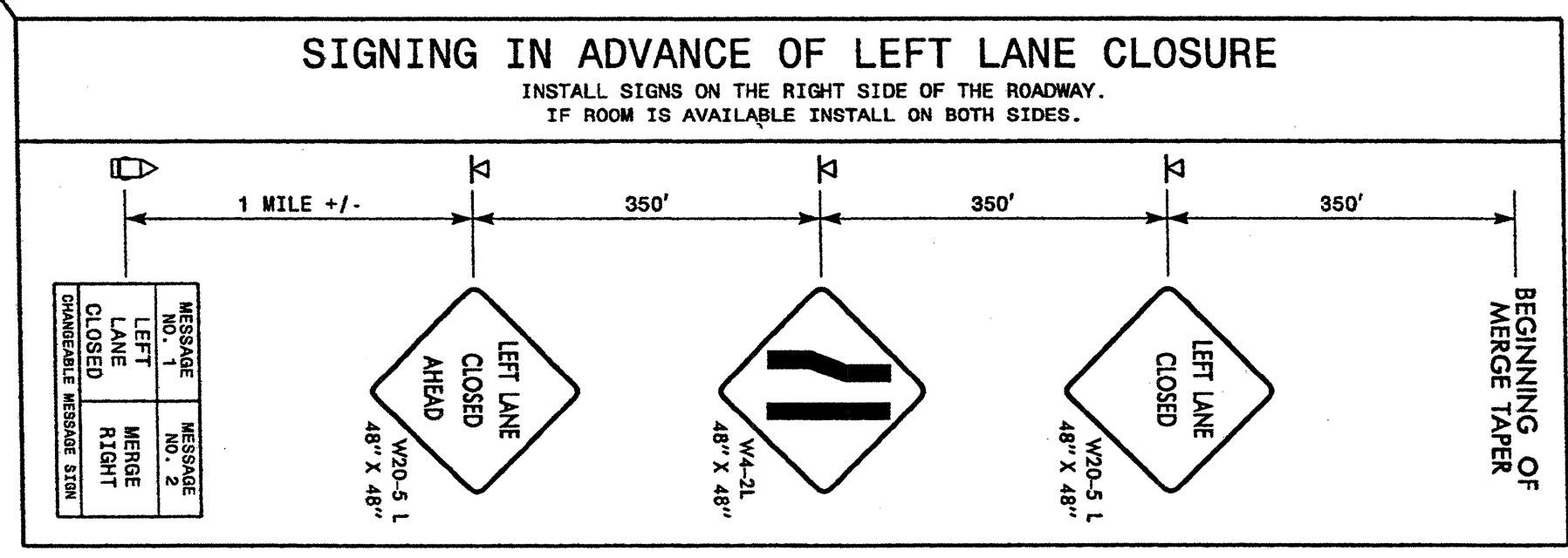
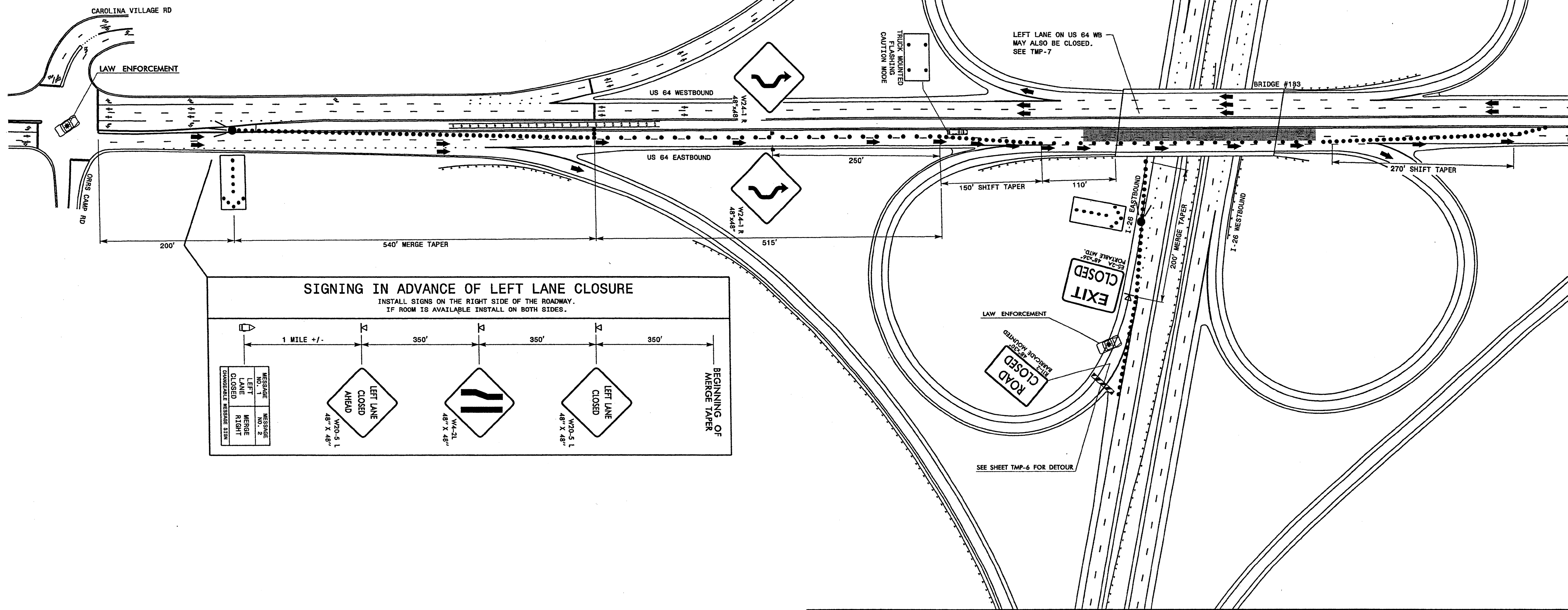
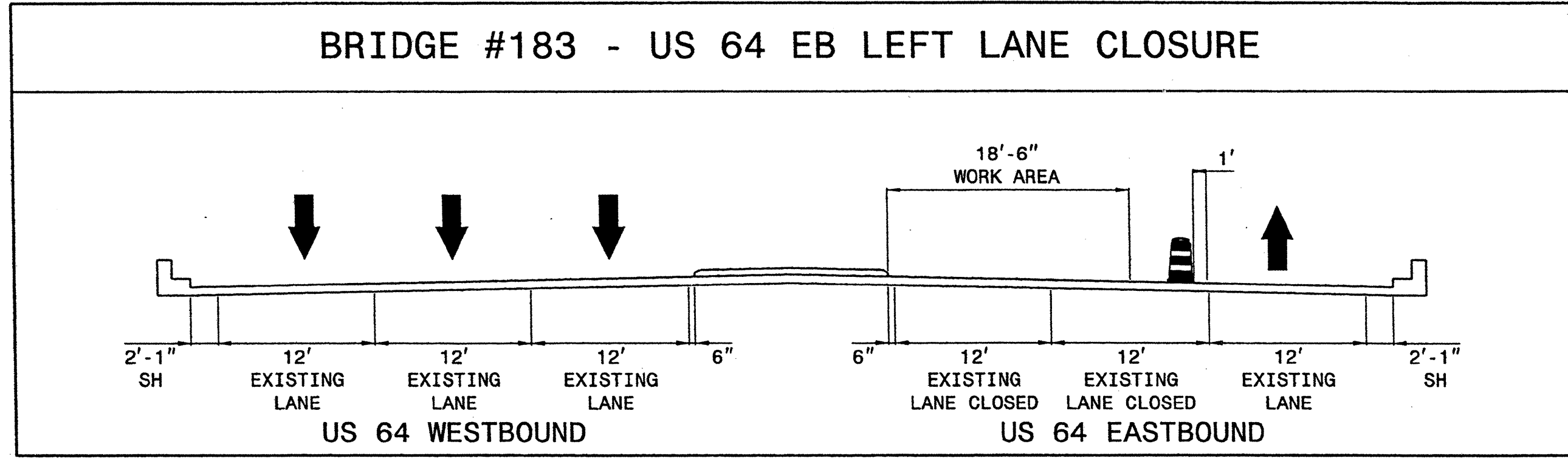
PERFORM BRIDGE WORK ON NC 108 WB USING FLAGGER CONTROLLED LANE CLOSURES PER SHEET TMP-12.

POLK CO. BRIDGE #98, #99

PERFORM BRIDGE WORK USING LEFT AND RIGHT LANE CLOSURES PER ROADWAY STANDARD DRAWING 1101.02 SHEET 4 OF 15 OR ROADWAY STANDARD DRAWING 1101.02 SHEET 6 OF 15.

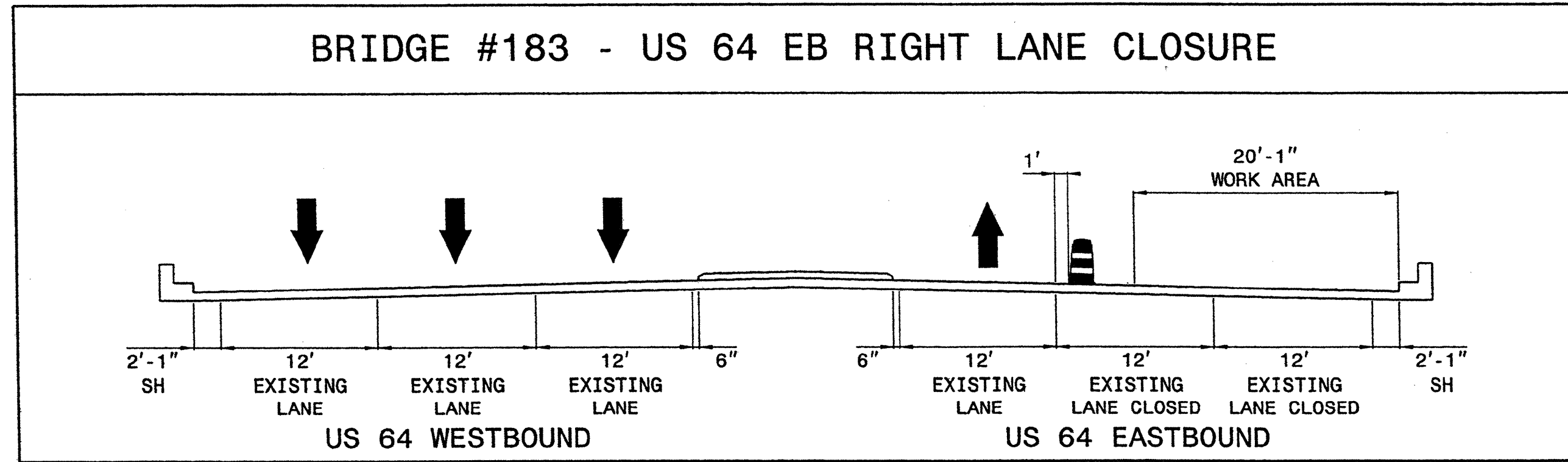
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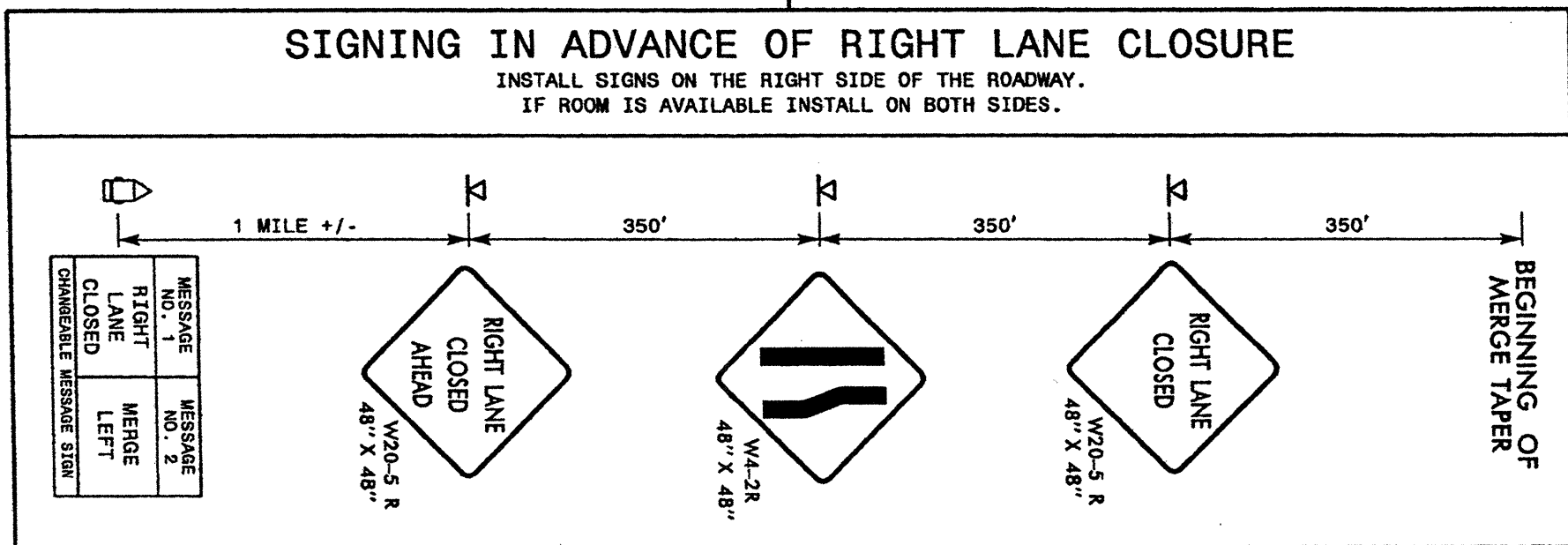
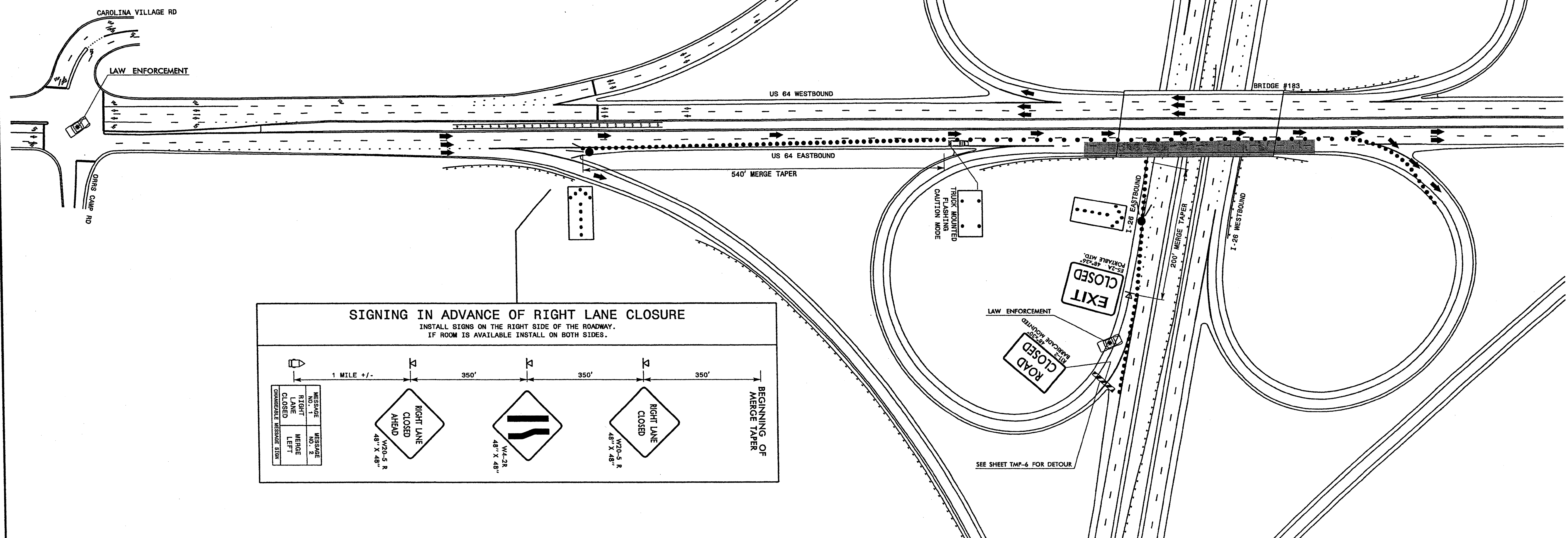


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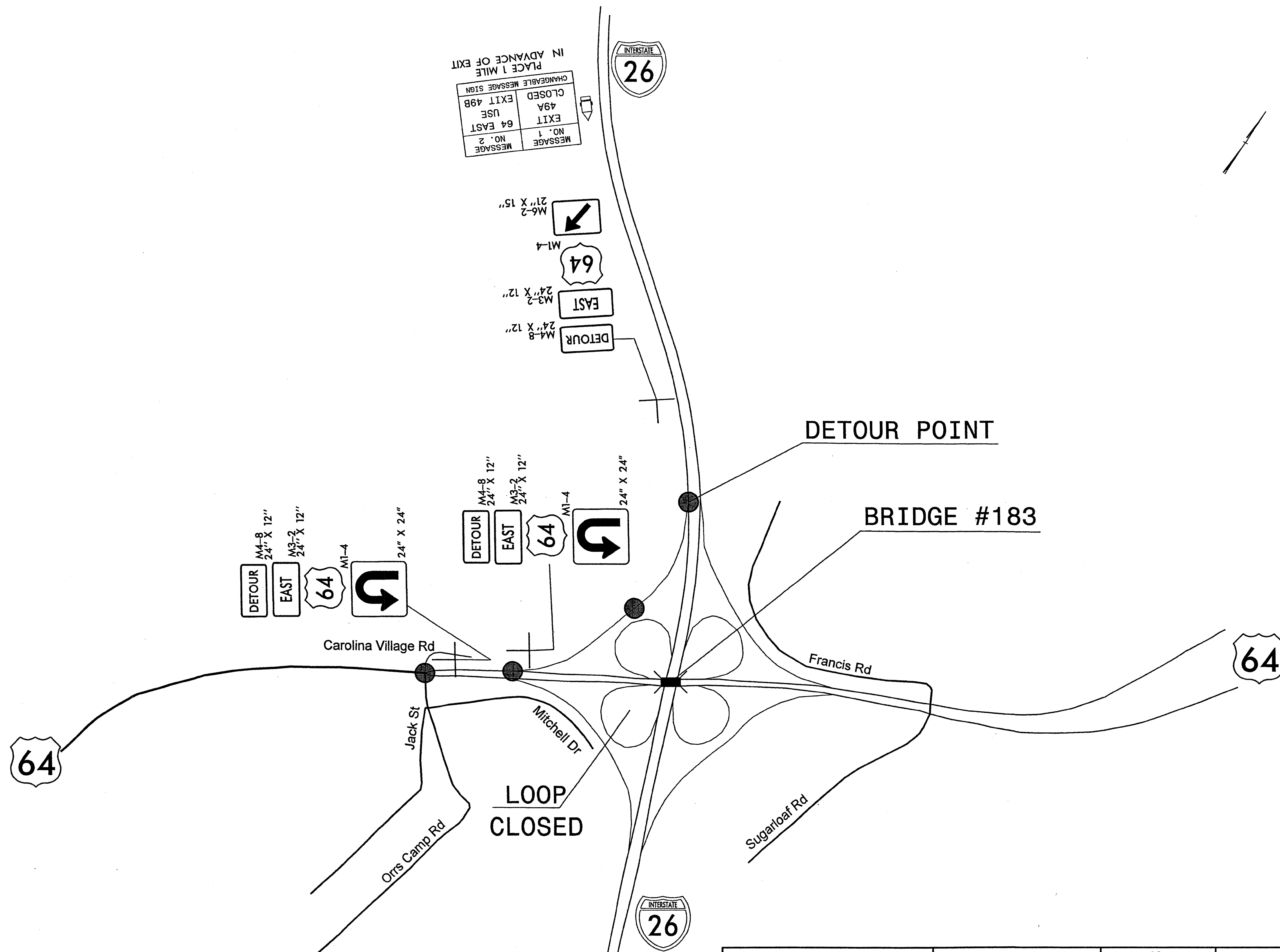



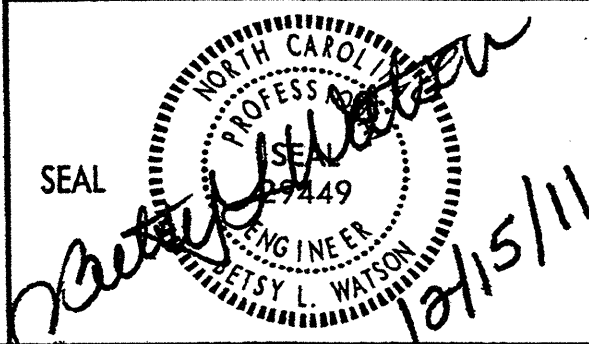

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 skarc@george



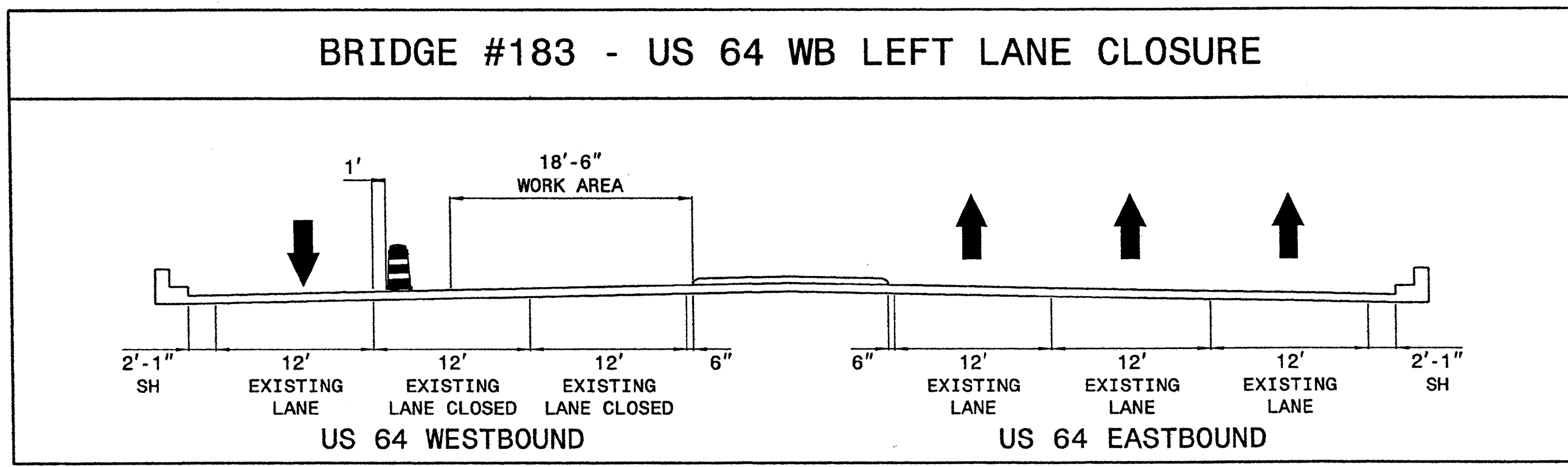
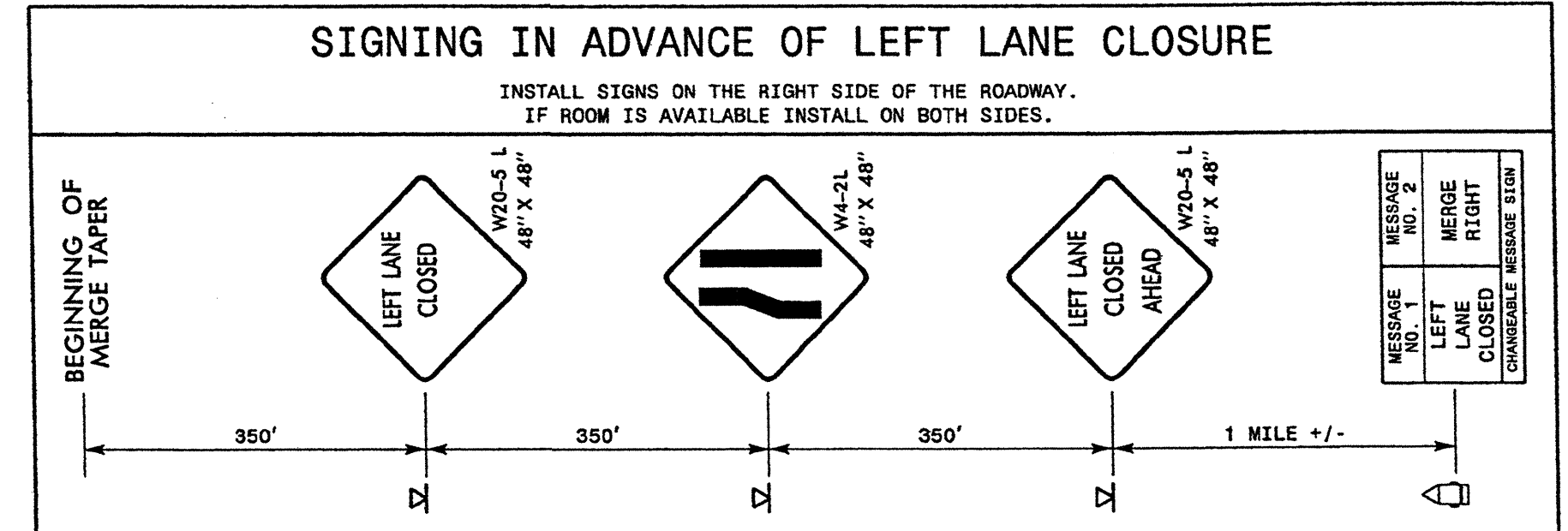
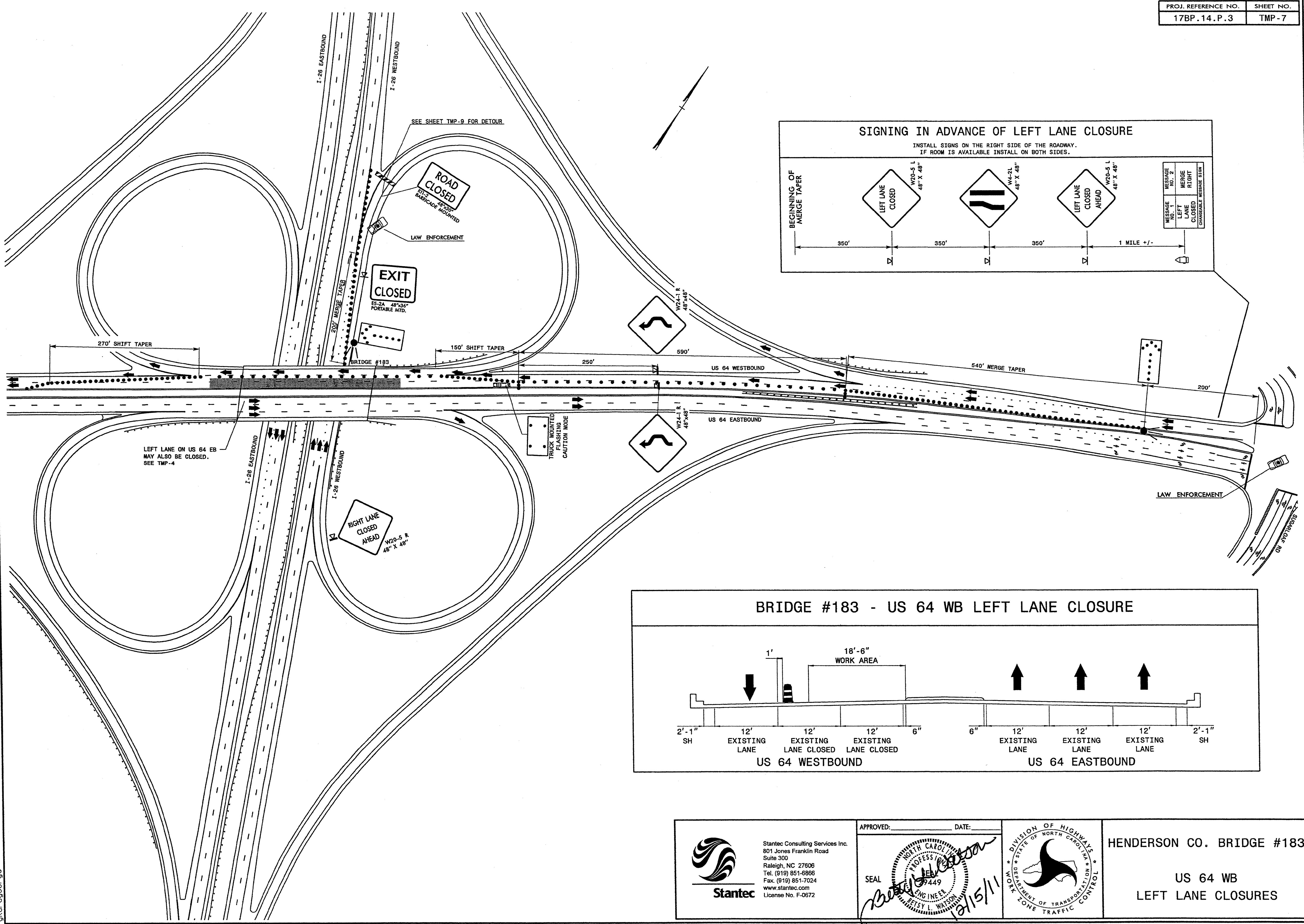
<p>Stantec</p>	Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0572	APPROVED: _____ DATE: _____ 	<p>HENDERSON CO. BRIDGE #183</p> <p>US 64 EB</p> <p>RIGHT LANE CLOSURES</p>

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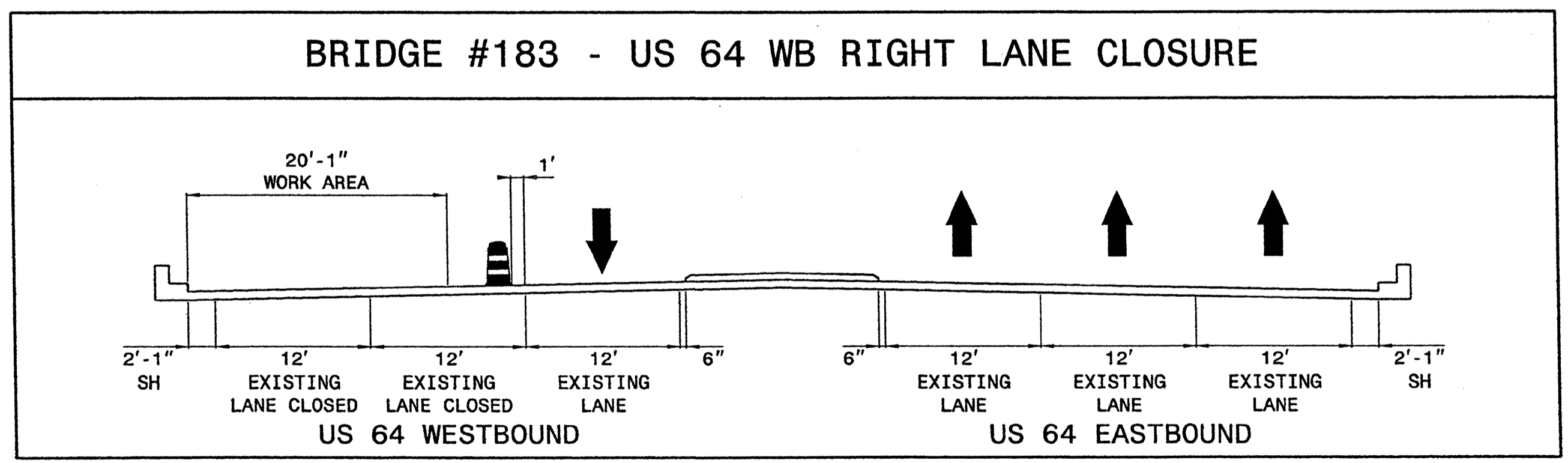
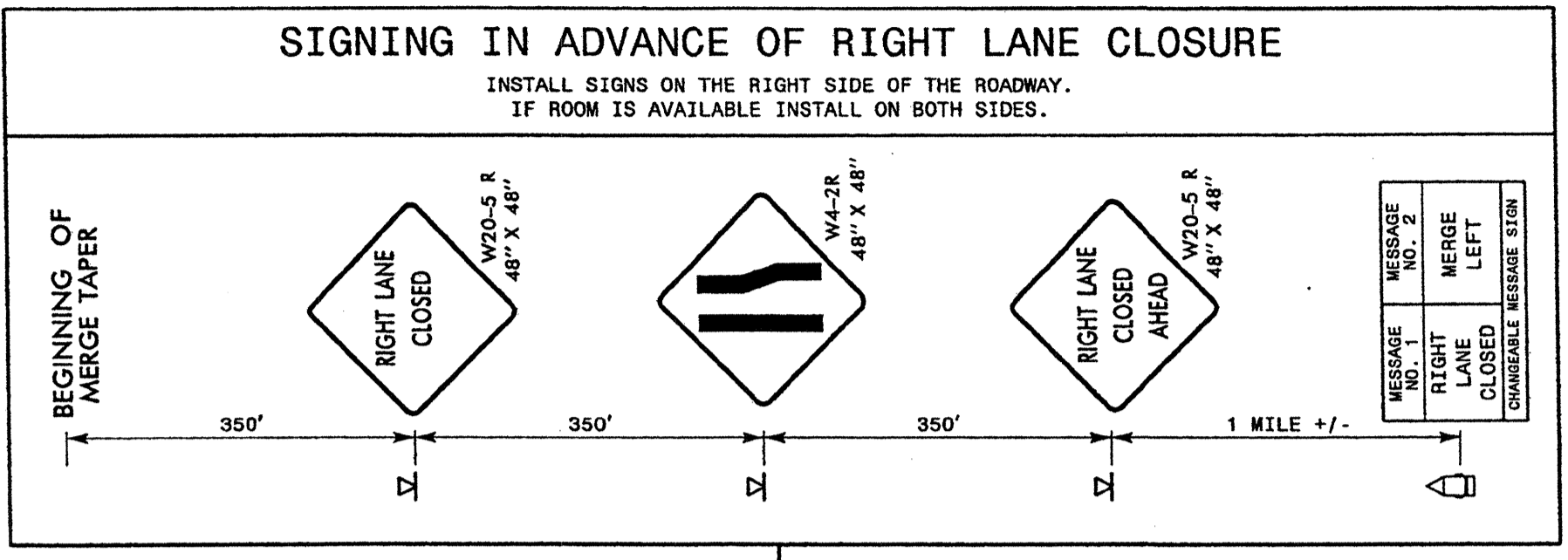
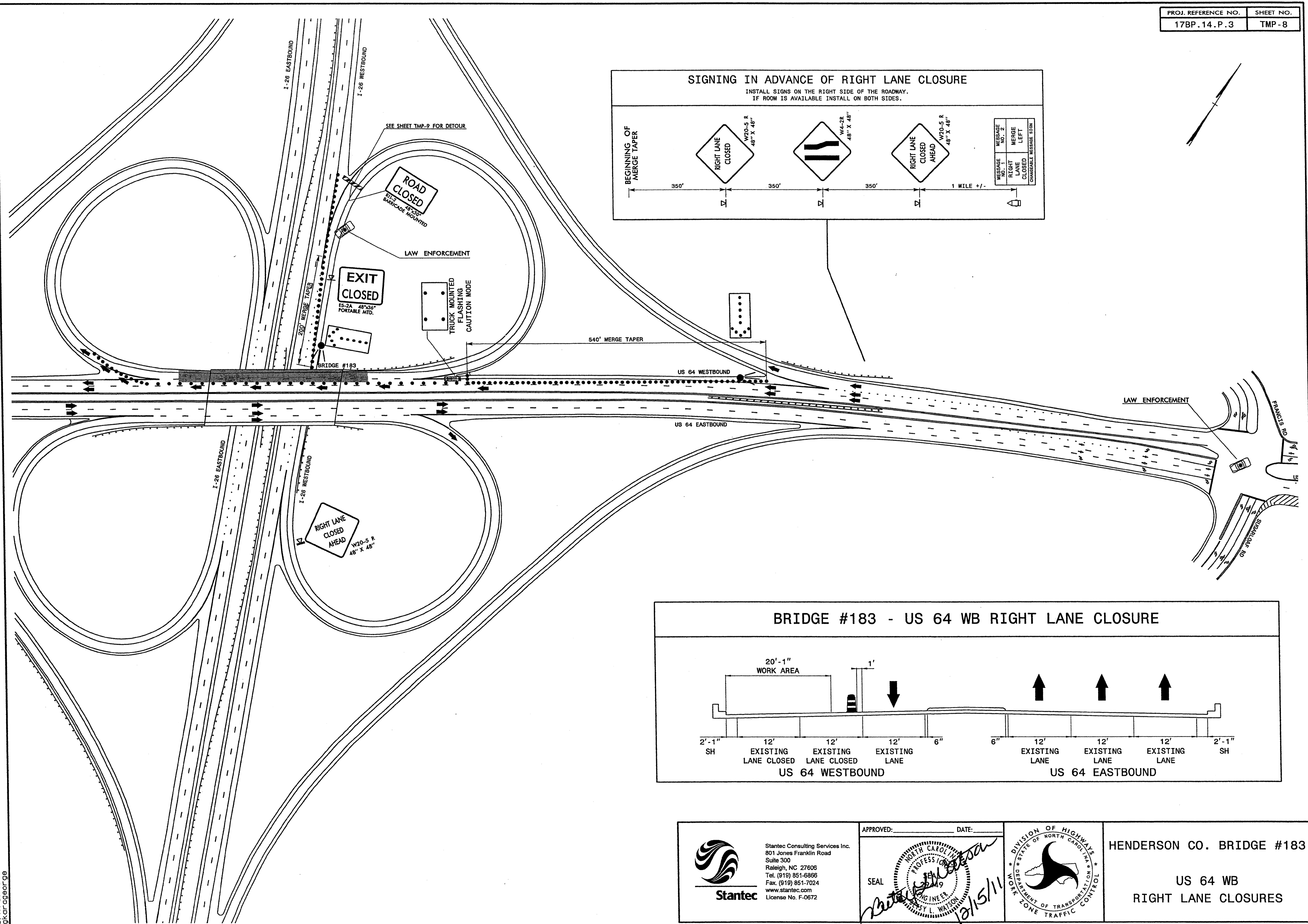
 Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6886 Fax. (919) 851-7024 www.stantec.com License No. F-0672	APPROVED: _____ DATE: _____ 	 DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL	HENDERSON CO. BRIDGE #183 DETOUR ROUTE EXIT FROM I-26 EB TO US 64 EB
	12/15/11		

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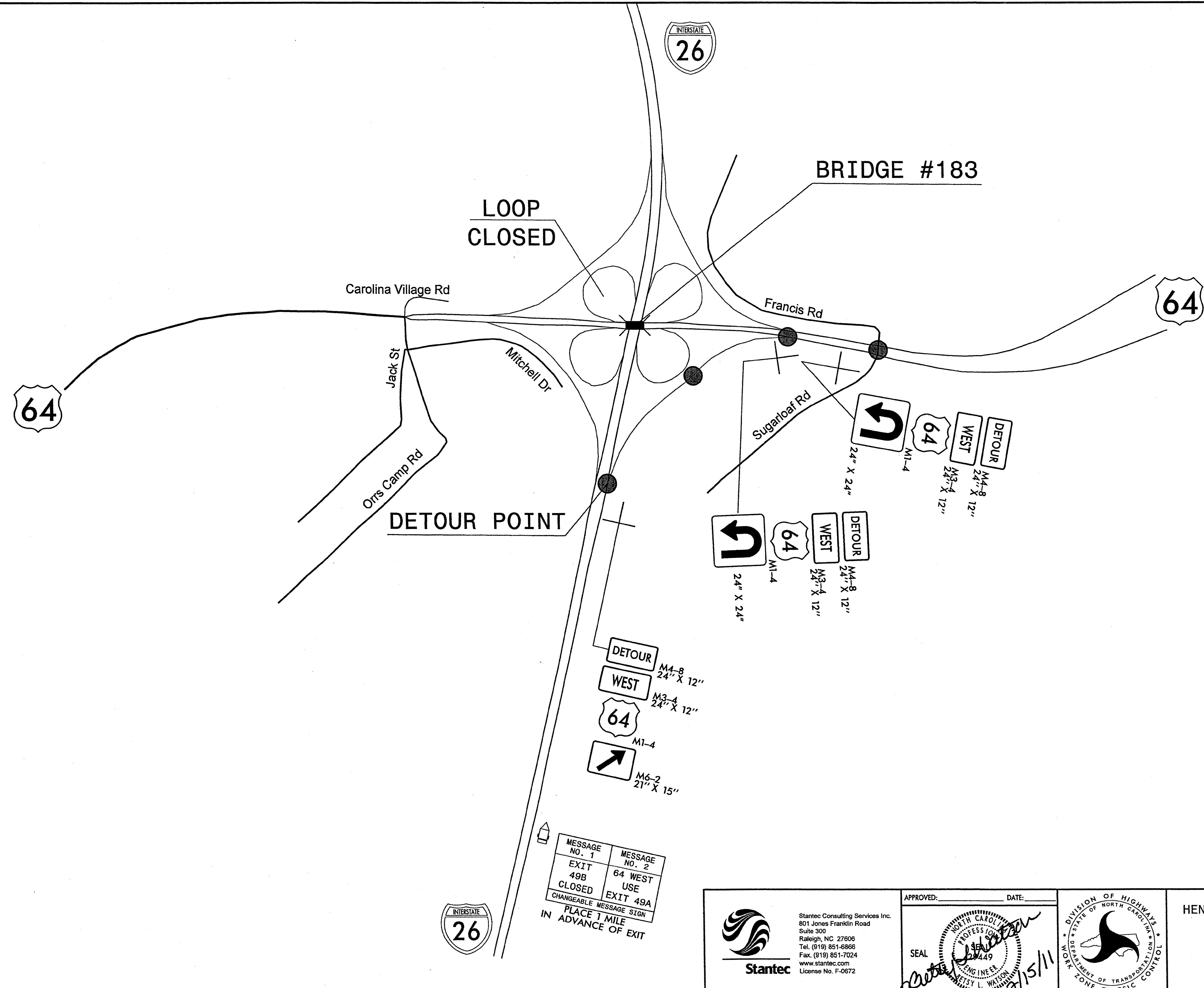


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	12/15/11		

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 jgarcia
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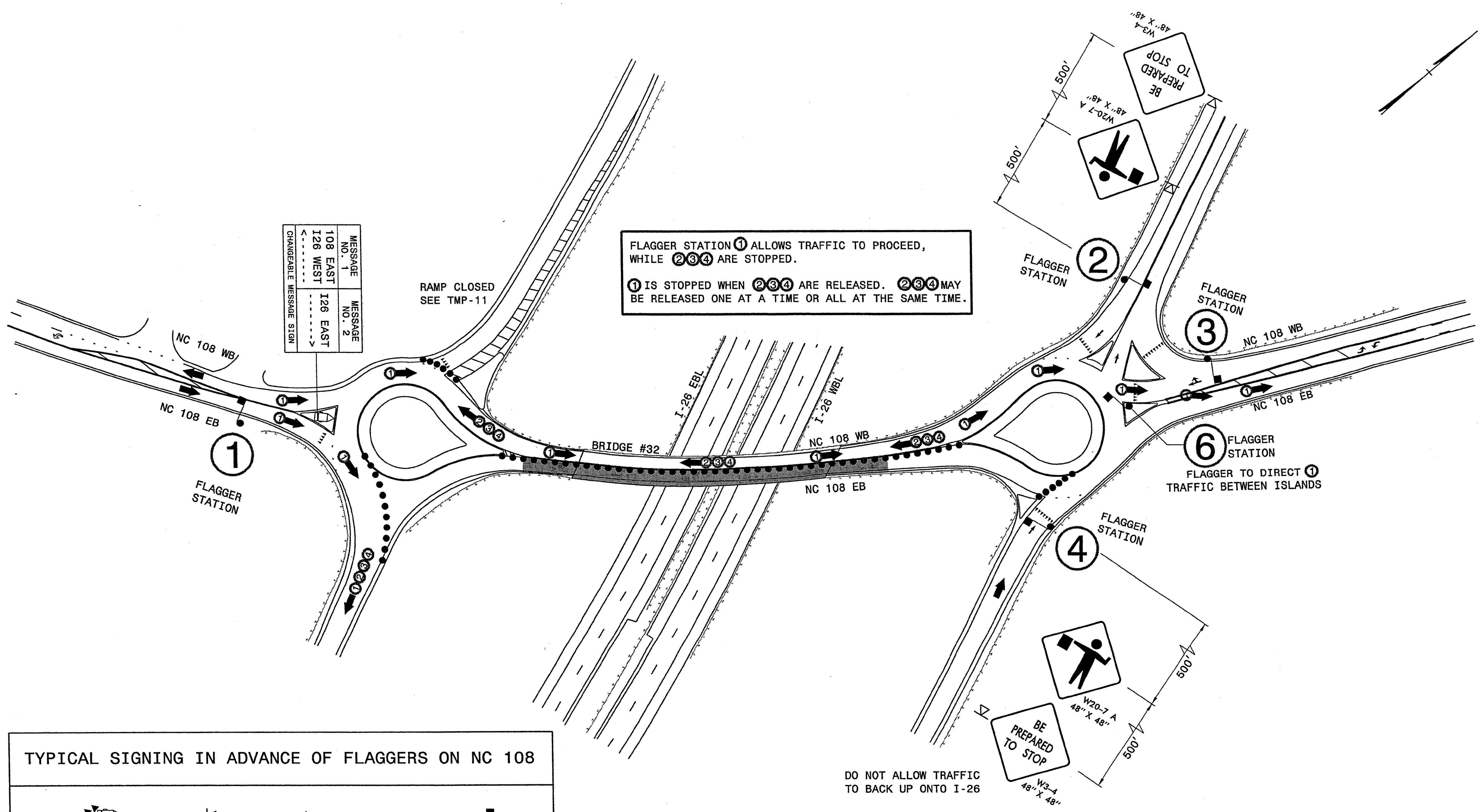
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MESSAGE NO. 1	MESSAGE NO. 2
EXIT 49B	64 WEST USE
CLOSED	EXIT 49A
CHANGEABLE MESSAGE SIGN	
PLACE 1 MILE IN ADVANCE OF EXIT	

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APPROVED: _____ DATE: _____

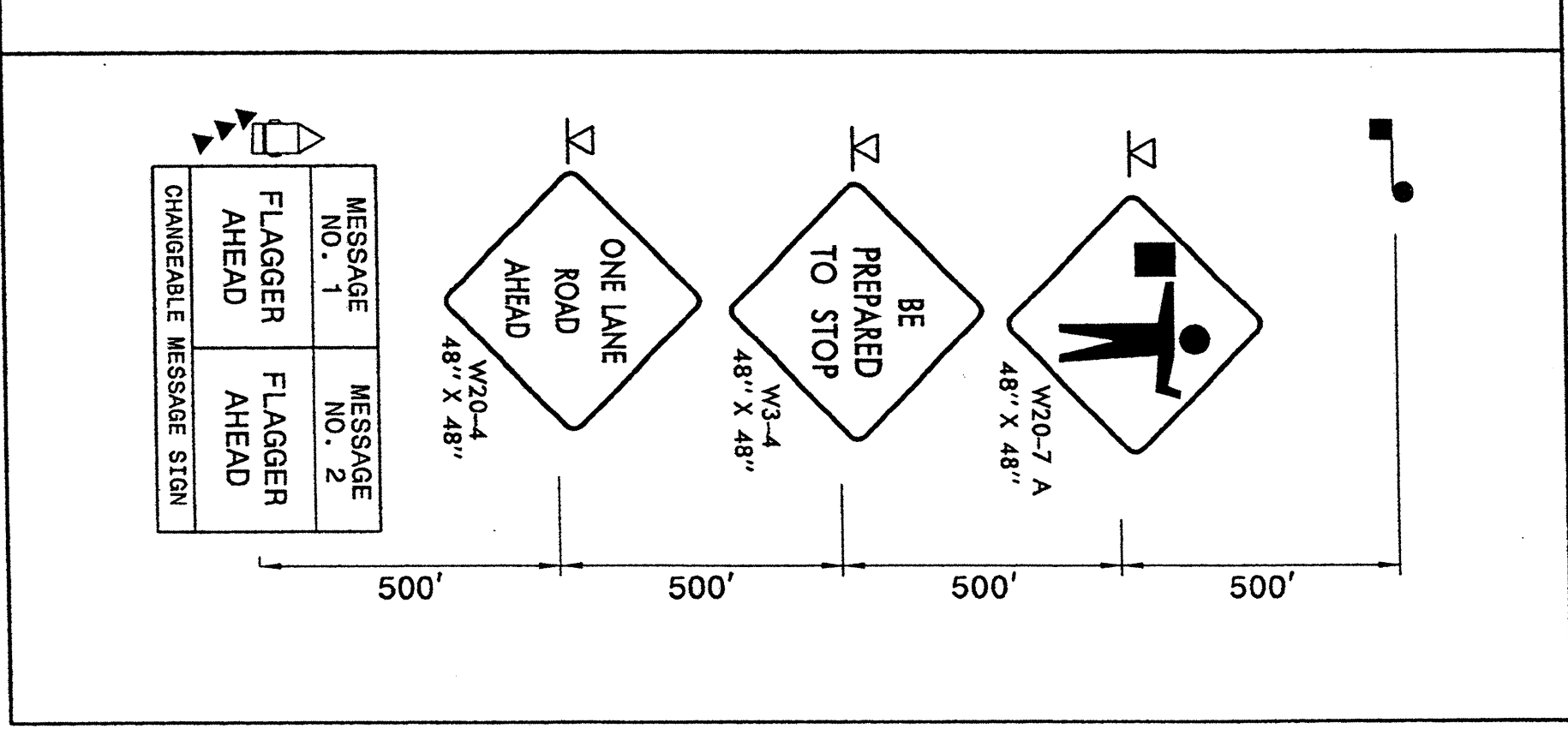
HENDERSON CO. BRIDGE #183
 DETOUR ROUTE
 EXIT FROM I-26 WB
 TO US 64 WB



FLAGGER STATION 1 ALLOWS TRAFFIC TO PROCEED, WHILE 2, 3, 4 ARE STOPPED.
 1 IS STOPPED WHEN 2, 3, 4 ARE RELEASED. 2, 3, 4 MAY BE RELEASED ONE AT A TIME OR ALL AT THE SAME TIME.

CHANGEABLE MESSAGE SIGN	MESSAGE NO. 1	MESSAGE NO. 2
	108 EAST 126 WEST ←----->	126 EAST 108 WEST ----->

TYPICAL SIGNING IN ADVANCE OF FLAGGERS ON NC 108

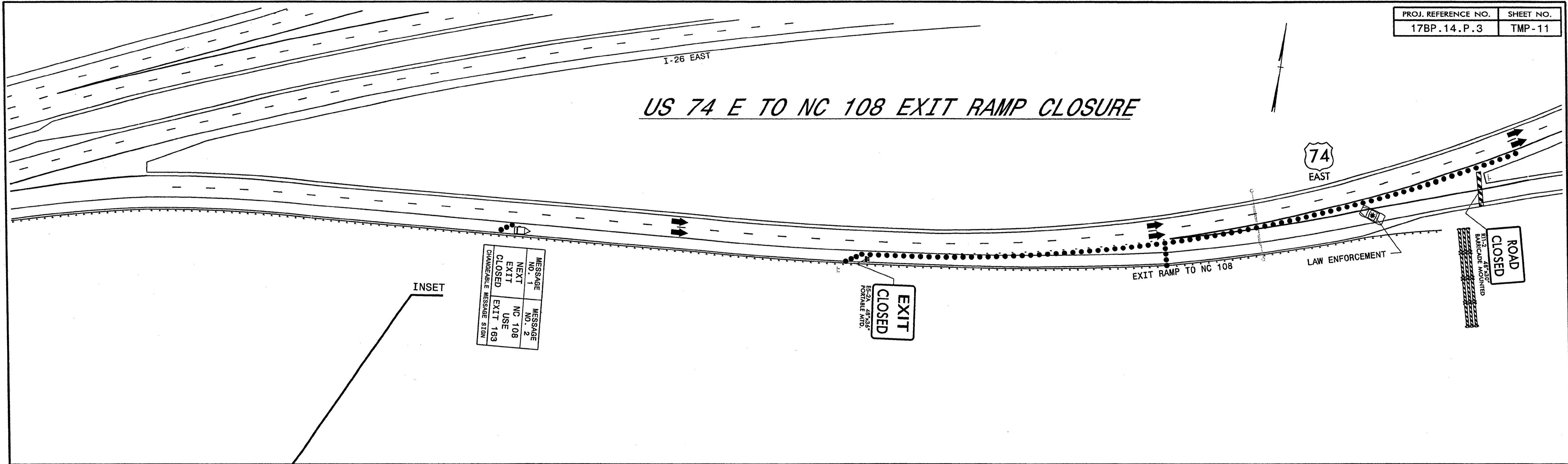


DO NOT ALLOW TRAFFIC TO BACK UP ONTO I-26

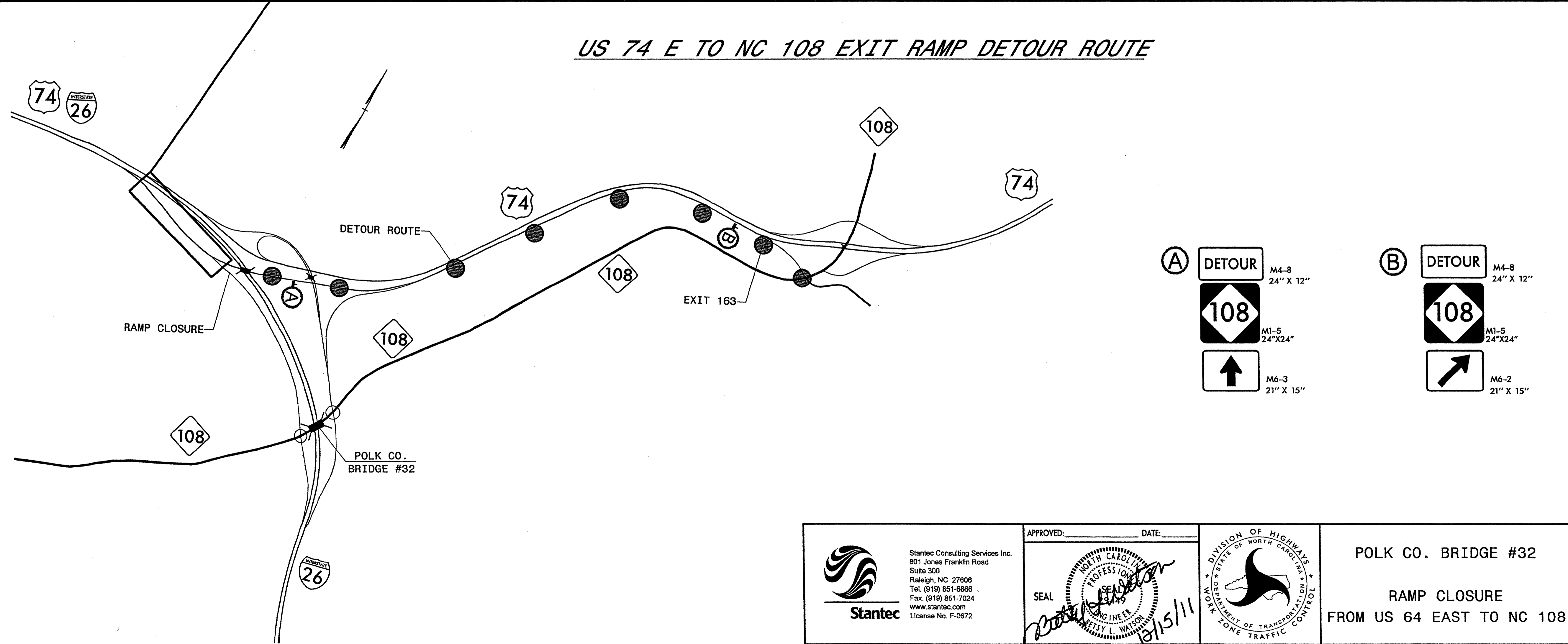
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 gkaragar@stantec.com

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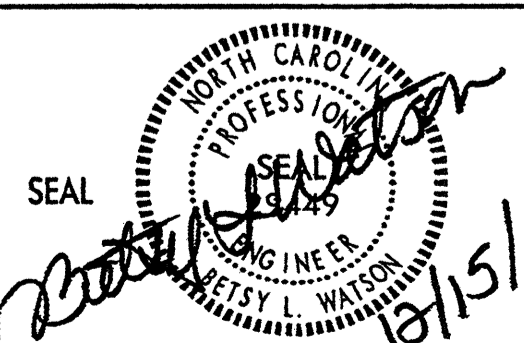

US 74 E TO NC 108 EXIT RAMP CLOSURE



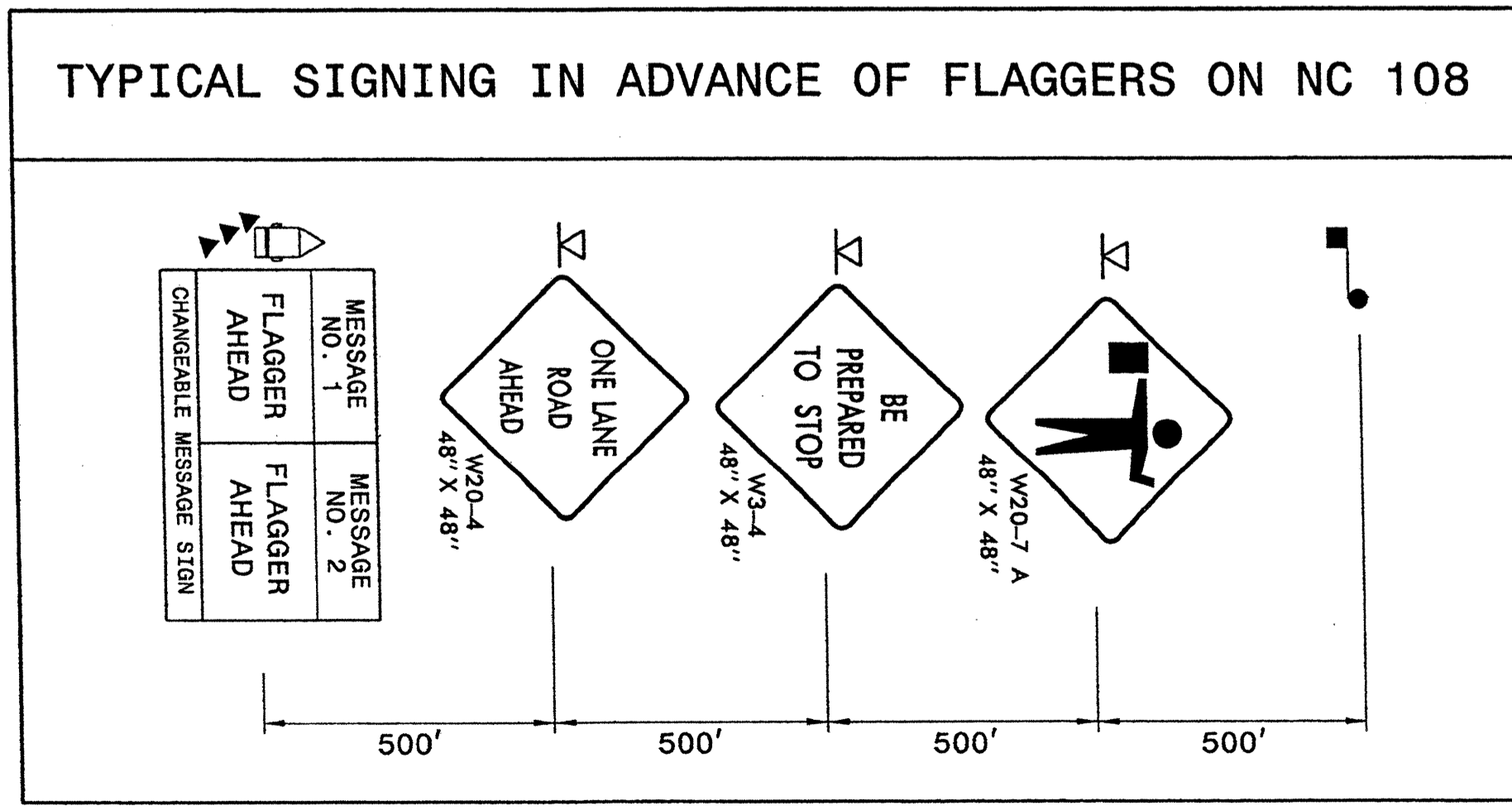
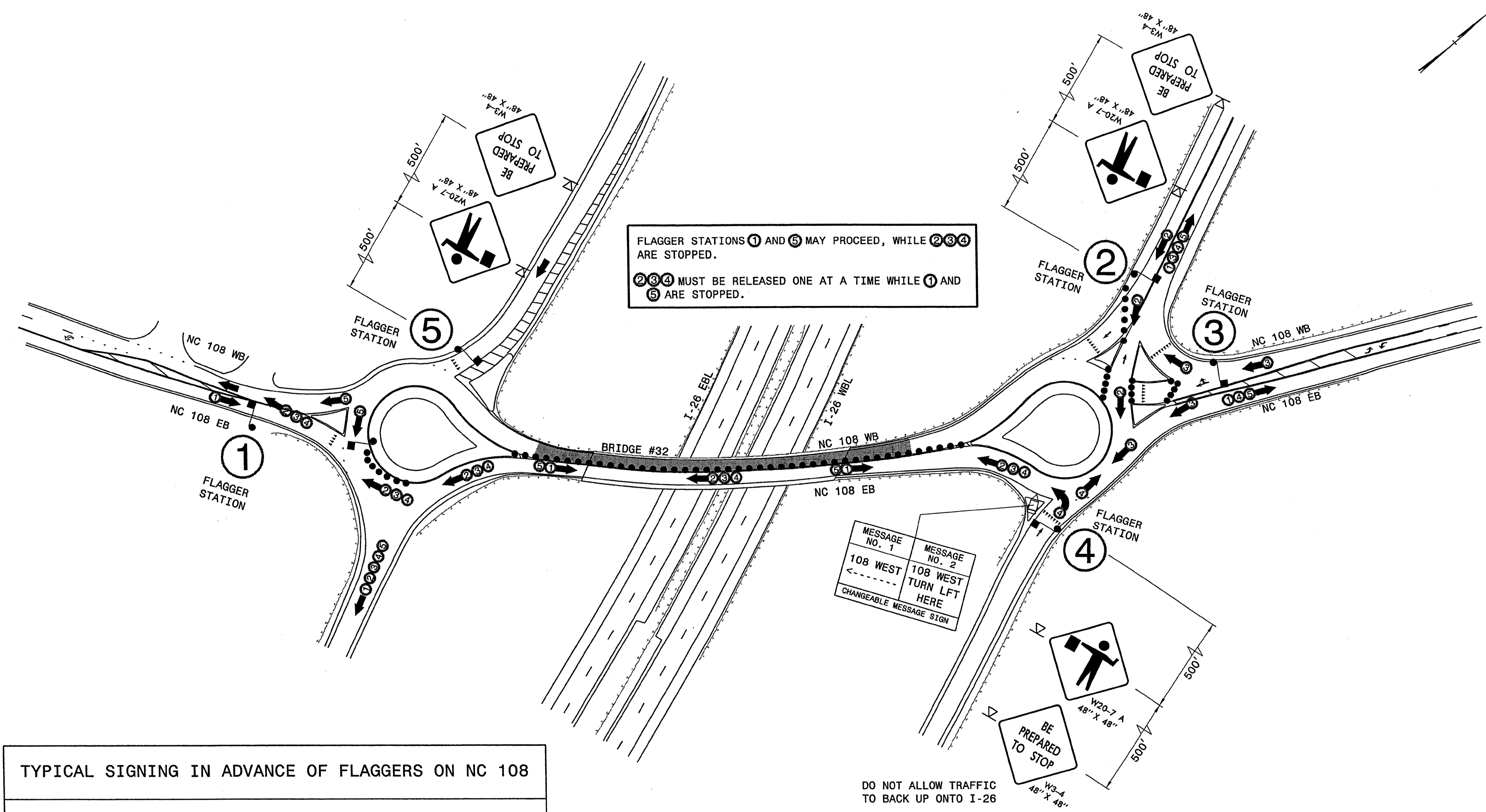
US 74 E TO NC 108 EXIT RAMP DETOUR ROUTE



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	SEAL _____ 11/15/11		

12/14/2011
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 akcaro@stantec.com



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	SEAL 		

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 SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16" INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

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

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

SPECIAL NOTES:

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

ENGLISH

JANUARY, 1990

STD. NO. SN