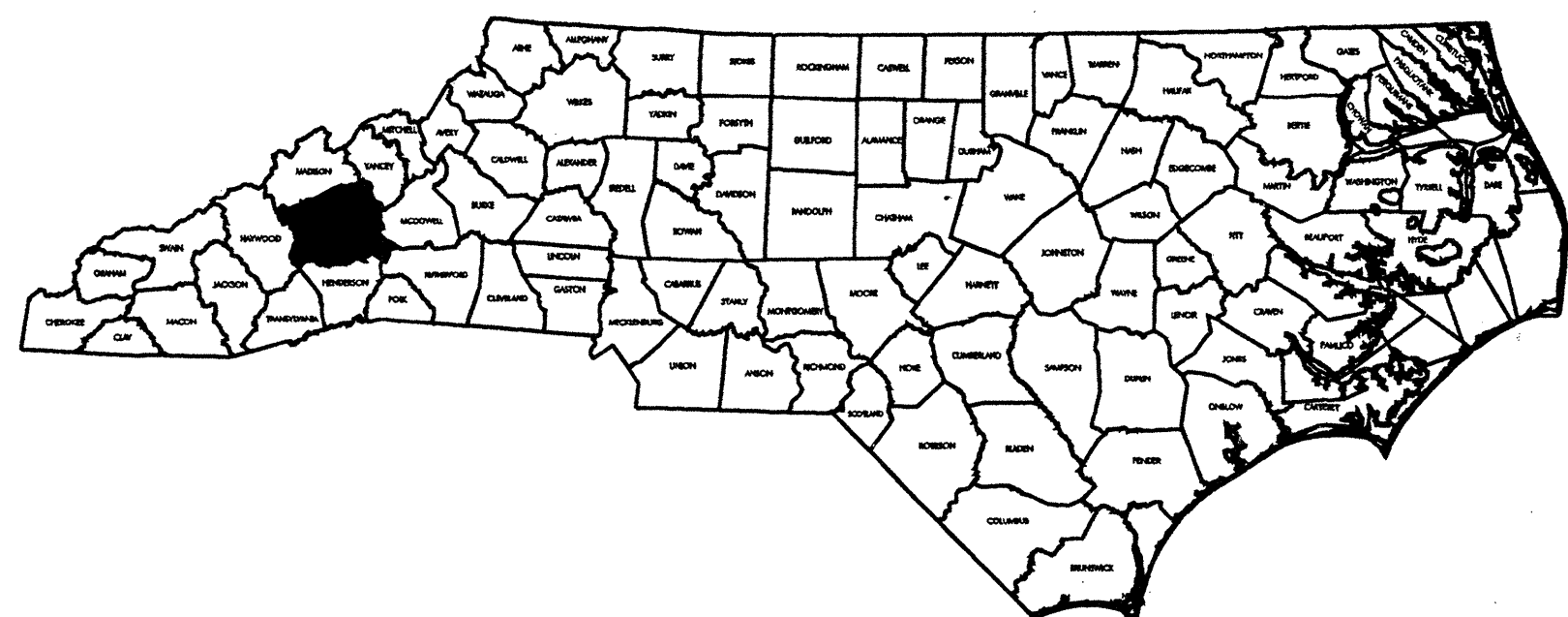


CONTRACT NO: C202473 TIP PROJECT: B-5179B

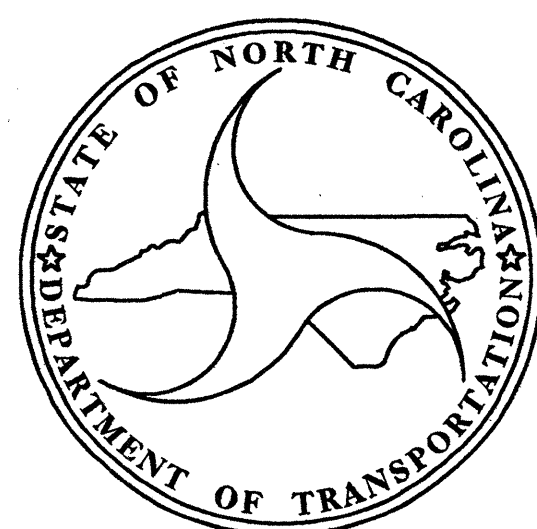
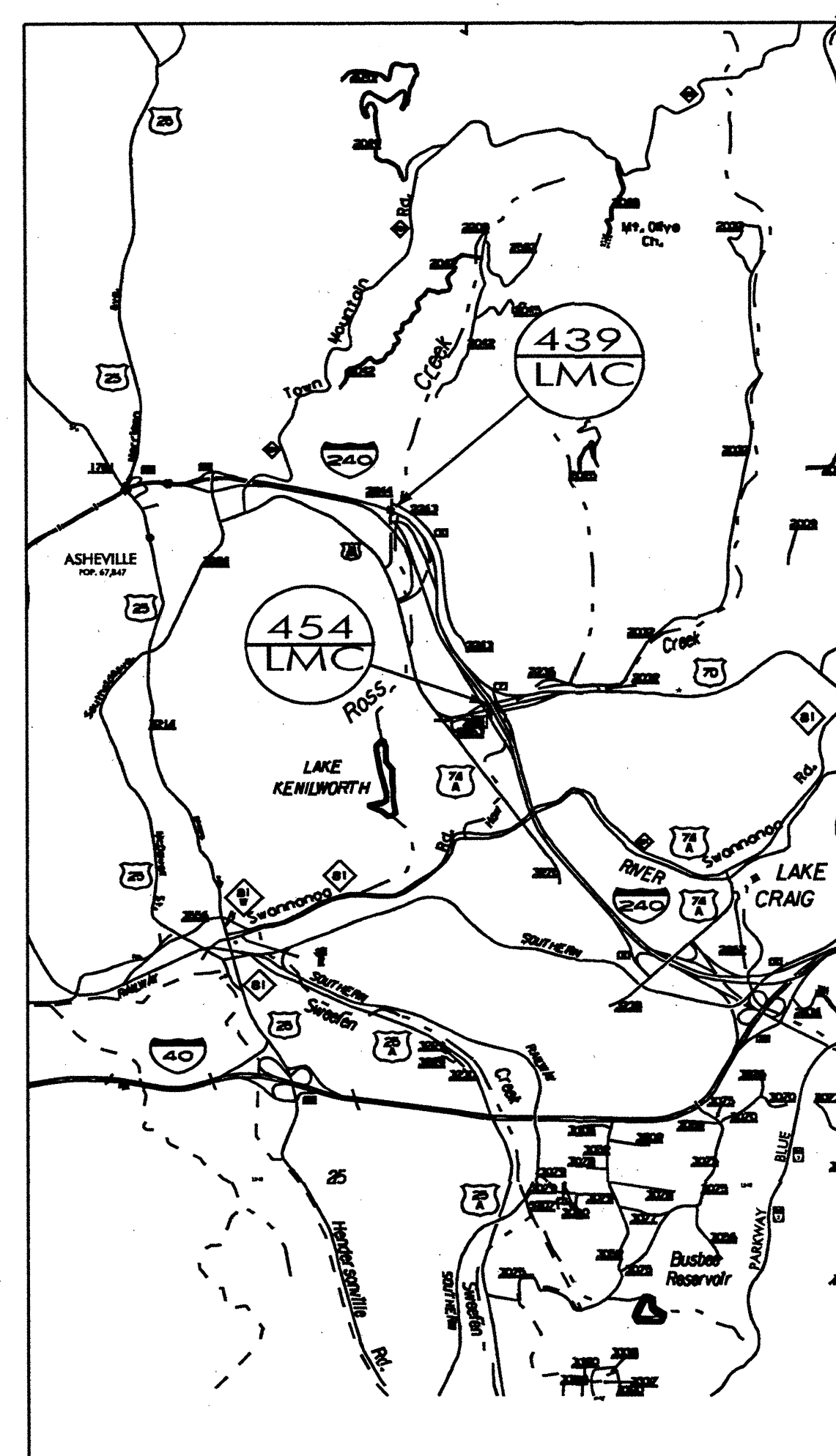
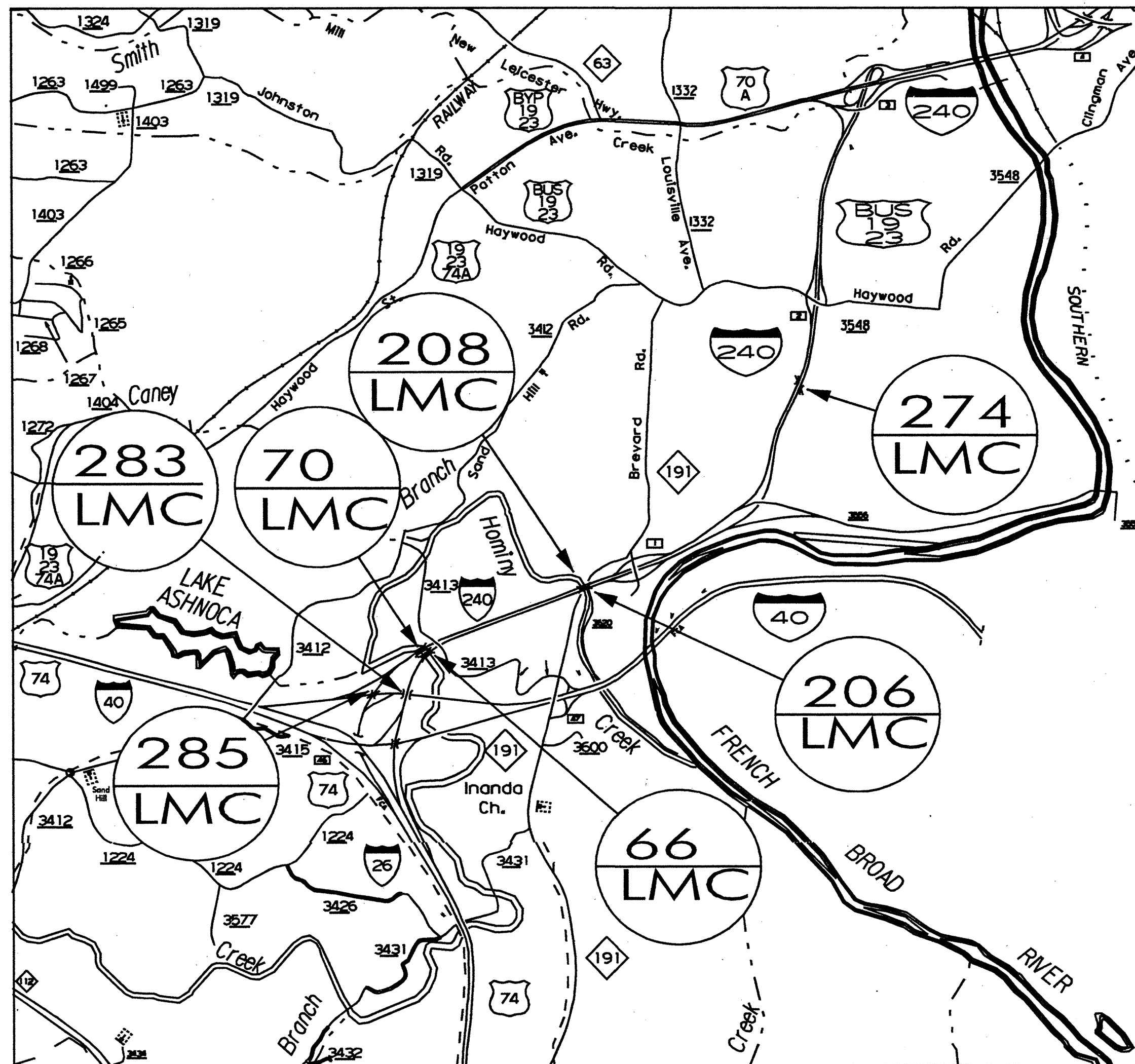


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
BUNCOMBE COUNTY

LOCATION: I-240
TYPE OF WORK: BRIDGE DECK PRESERVATION
OF BRIDGE #66, 70, 206, 208, 274, 283, 285, 439 AND #454
IN BUNCOMBE COUNTY.

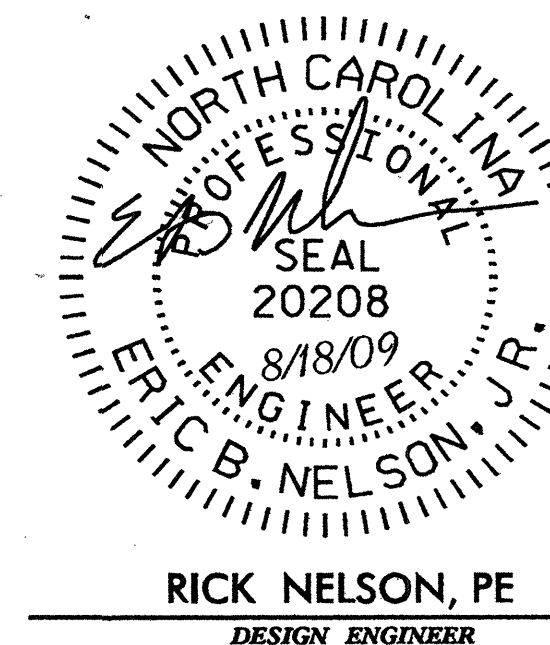
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5179B	1	
STATE PROJECT NO.	F.A. PROJ. NO.	DESCRIPTION	
45066.1ST1	STM-000S (531)	PE	
45066.3ST2	STM-000S (594)	CONSTR	

KEY:
 HYDRO DEMOLITION WITH LATEX MODIFIED CONCRETE-
VERY EARLY STRENGTH.



PROJECT LENGTH

Prepared in the Office of: BRIDGE MANAGEMENT UNIT NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 2006 STANDARD SPECIFICATIONS	
LETTING DATE: DECEMBER 15, 2009	DAN HOLDERMAN, PE STATE BRIDGE MANAGEMENT ENGINEER
MIKE SUMMERS BRIDGE MANAGEMENT PROJECT MANAGER	



\$DATE\$
\$FILE\$

CONTRACT NO:

TIP PROJECT: B-5179B

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

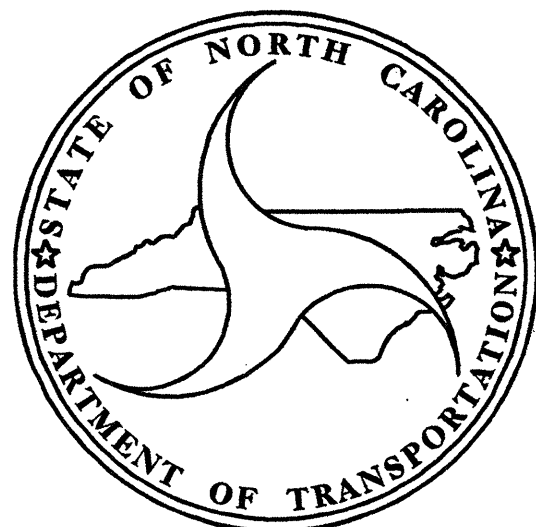
BUNCOMBE COUNTY

LOCATION: I-240
TYPE OF WORK: BRIDGE DECK PRESERVATION
OF BRIDGE #66, 70, 206, 208, 274, 283, 285, 439 AND #454
IN BUNCOMBE COUNTY.

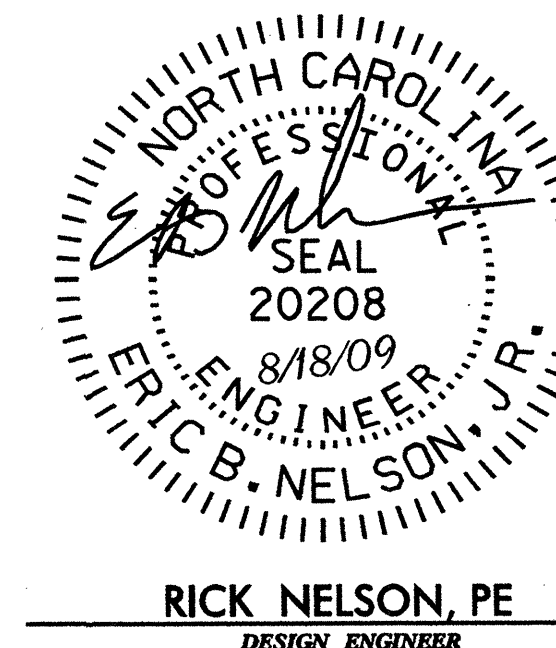
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5179B	1	1A
STATE PROJECT NO.	P.A. PROJ. NO.	DESCRIPTION	
45066.1ST1	STM-000S (531)	PE	
45066.3ST2	STM-000S (694)	CONSTR	

INDEX OF SHEETS

1	TITLE SHEET
1A	INDEX OF SHEET
2	SUMMARY OF QUANTITIES
S1 THRU S28	STRUCTURE PLANS
TCP-1 THRU TCP-11	TRAFFIC CONTROL PLANS



Prepared In the Office of: BRIDGE MANAGEMENT UNIT NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
2006 STANDARD SPECIFICATIONS	
LETTING DATE: December 15, 2009	DAN HOLDERMAN, PE STATE BRIDGE MANAGEMENT ENGINEER
MIKE SUMMERS BRIDGE MANAGEMENT PROJECT MANAGER	

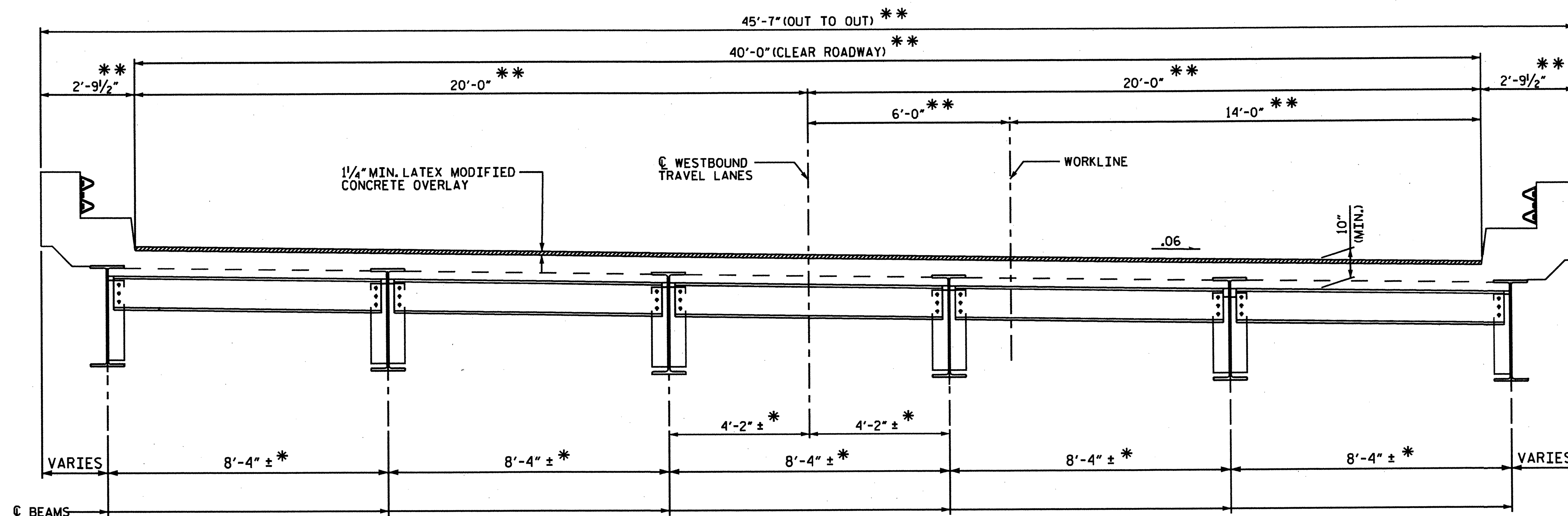


SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202473

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
4400000000-E	1110	1,337	SF	WORK ZONE SIGNS (STATIONARY)
4405000000-E	1110	240	SF	WORK ZONE SIGNS (PORTABLE)
4410000000-E	1110	347	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4415000000-N	1115	6	EA	FLASHING ARROW PANELS, TYPE C
4420000000-N	1120	20	EA	CHANGEABLE MESSAGE SIGN
4430000000-N	1130	800	EA	DRUMS
4435000000-N	1135	100	EA	CONES
4445000000-E	1145	1,032	LF	BARRICADES (TYPE III)
4455000000-N	1150	4	MD	FLAGGER
4465000000-N	1160	2	EA	TEMPORARY CRASH CUSHIONS
4470000000-N	1160	2	EA	RESET TEMPORARY CRASH CUSHIONS
4480000000-N	1165	8	EA	TMIA
4485000000-E	1170	1,500	LF	PORTABLE CONCRETE BARRIER
4500000000-E	1170	1,500	LF	RESET PORTABLE CONCRETE BARRIER
4510000000-N	SP	864	HR	LAW ENFORCEMENT
4810000000-E	1205	16,013	LF	PAINT PAVEMENT MARKING LINES (4")
4820000000-E	1205	800	LF	PAINT PAVEMENT MARKING LINES (8")

ItemNumber	Sec #	Quantity	Unit	Description
4905000000-N	1253	58	EA	SNOWPLOWABLE PAVEMENT MARKERS
8161000000-E	420	70,505	SF	GROOVING BRIDGE FLOORS
8692000000-N	SP	Lump Sum		EVAZOTE JOINT SEALS
8881000000-E	SP	14	CY	GENERIC STRUCTURE ITEM CLASS AA CONCRETE
8881000000-E	SP	702	CY	GENERIC STRUCTURE ITEM LATEX MOD CONCRETE OVERLAY - VERY EARLY STRENGTH
8892000000-E	SP	909	SF	GENERIC STRUCTURE ITEM UNDER DECK CONTAINMENT
8893000000-E	SP	10,090	SY	GENERIC STRUCTURE ITEM HYDRO-DEMOLITION OF BRIDGE DECK
8893000000-E	SP	10,090	SY	GENERIC STRUCTURE ITEM PLACING & FINISHING LATEX MOD CONCRETE OVERLAY - VERY EARLY STRENGTH
8893000000-E	SP	10,090	SY	GENERIC STRUCTURE ITEM SCARIFYING BRIDGE DECK

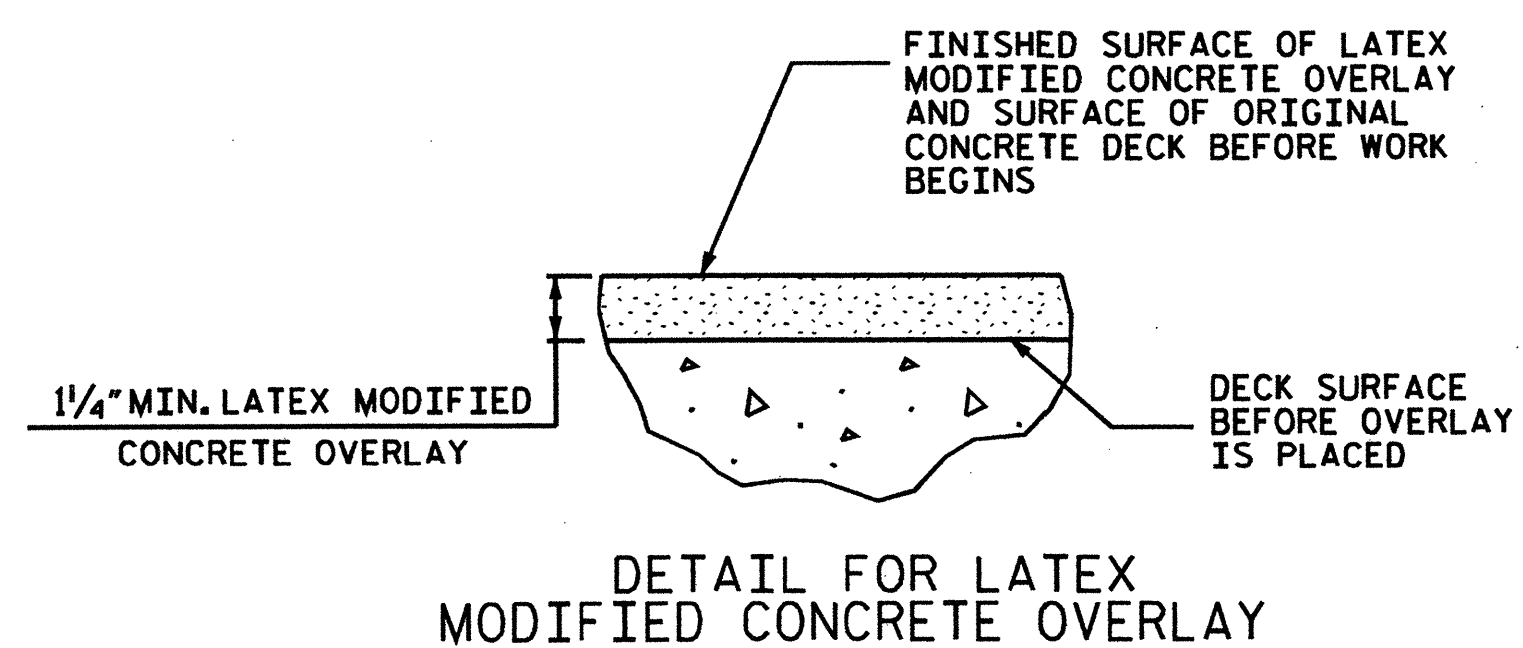


TYP. SECTION

(SHOWING DIAPHRAGMS AT EXPANSION JOINTS)

* ALONG THE SKEW AT END BENTS

** RADIAL DIMENSIONS



NOTES:

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

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

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 "TYP. "BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL.

THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE EVAZOTE JOINT SEAL SHALL BE 2 1/2" AT END BENTS 1 & 2 AND BENTS 1&2. FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR JOINT REPAIR, SEE SPECIAL PROVISIONS.

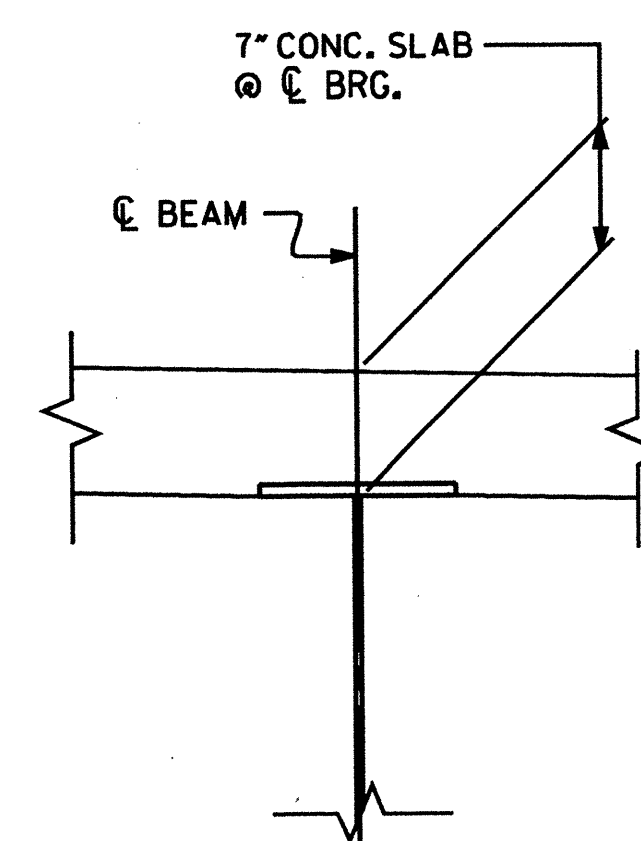
LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH.

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

THE BRIDGE DECK SHALL BE TINED. NO SEPARATE PAYMENT SHALL BE MADE FOR BRIDGE DECK TINING AS THIS IS CONSIDERED INCIDENTAL TO THE PAY ITEM FOR "PLACING AND FINISHING OF LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH".

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.



EXIST. SLAB SECTION

PROJECT NO. B-5179B

BUNCOMBE COUNTY

STATION: 623+09.00 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

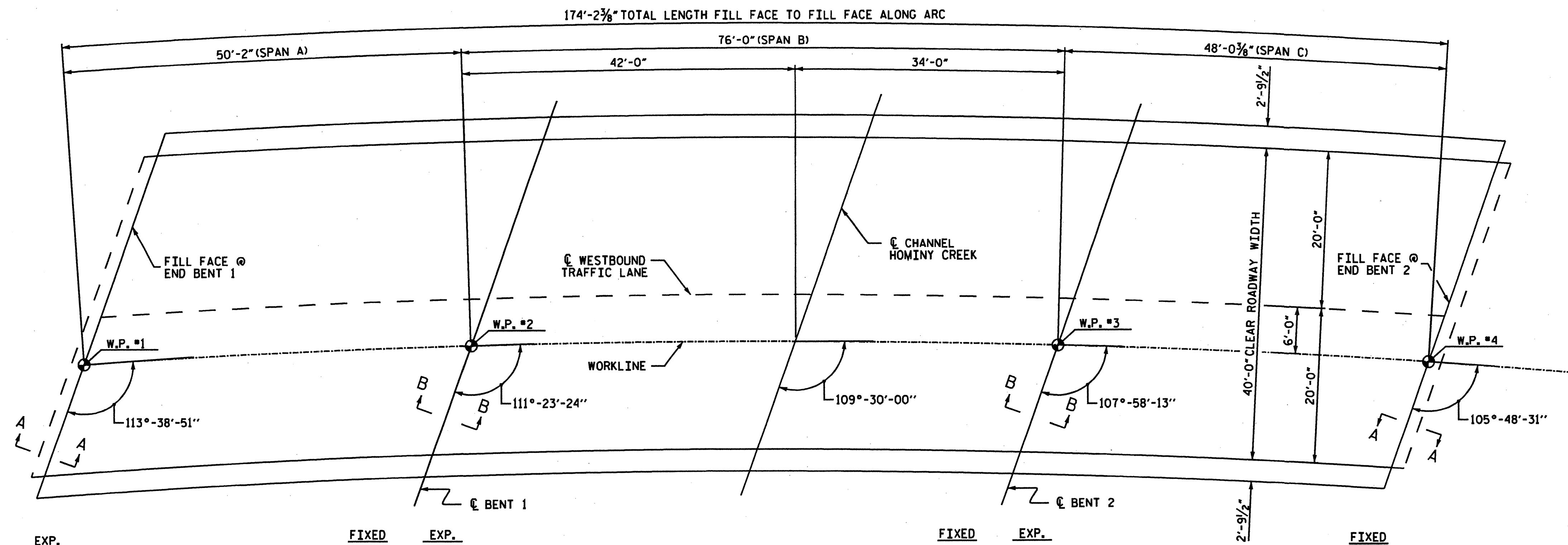
TYPICAL SECTION

DECK REHAB. FOR BRIDGE NO. 66

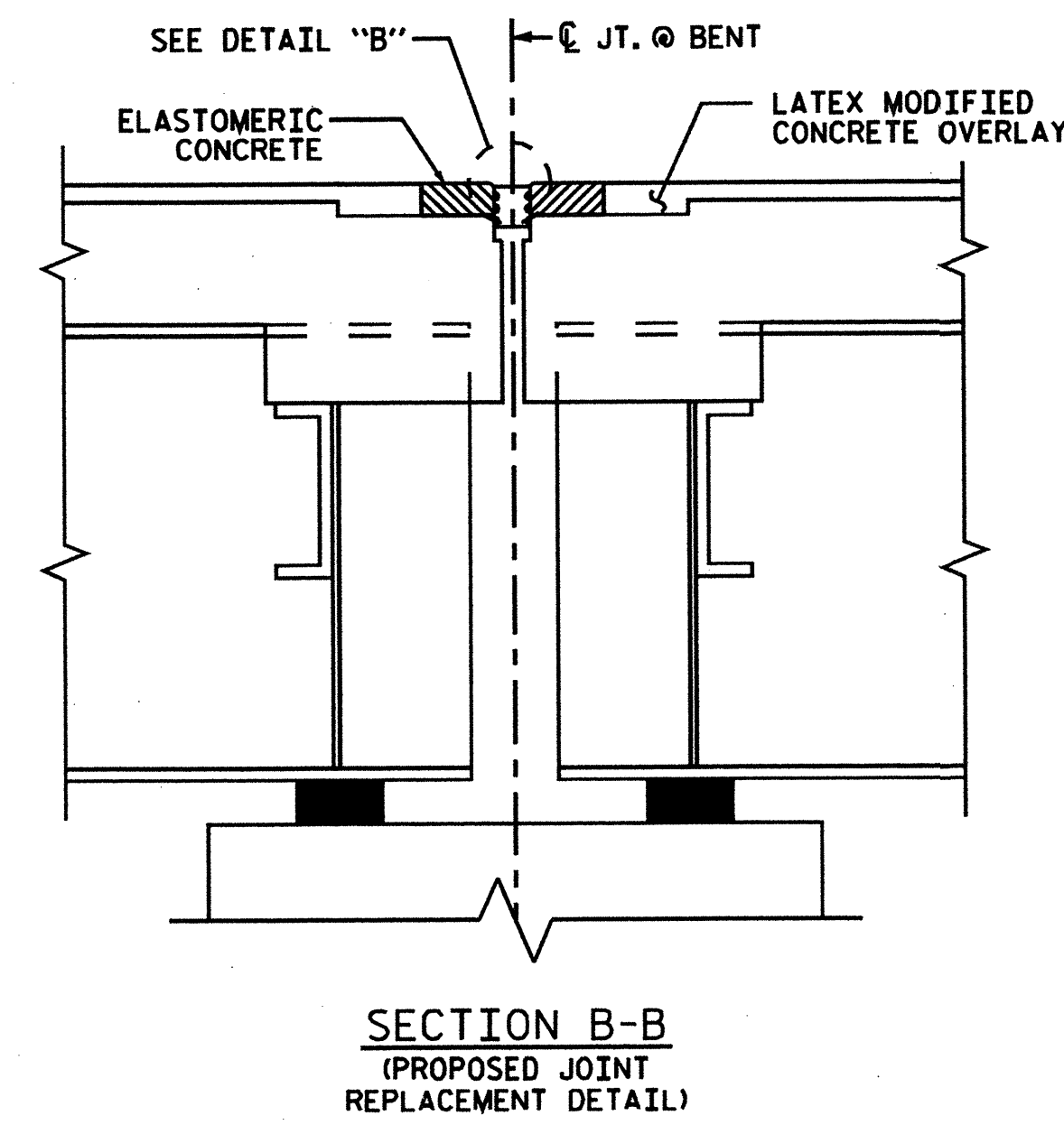
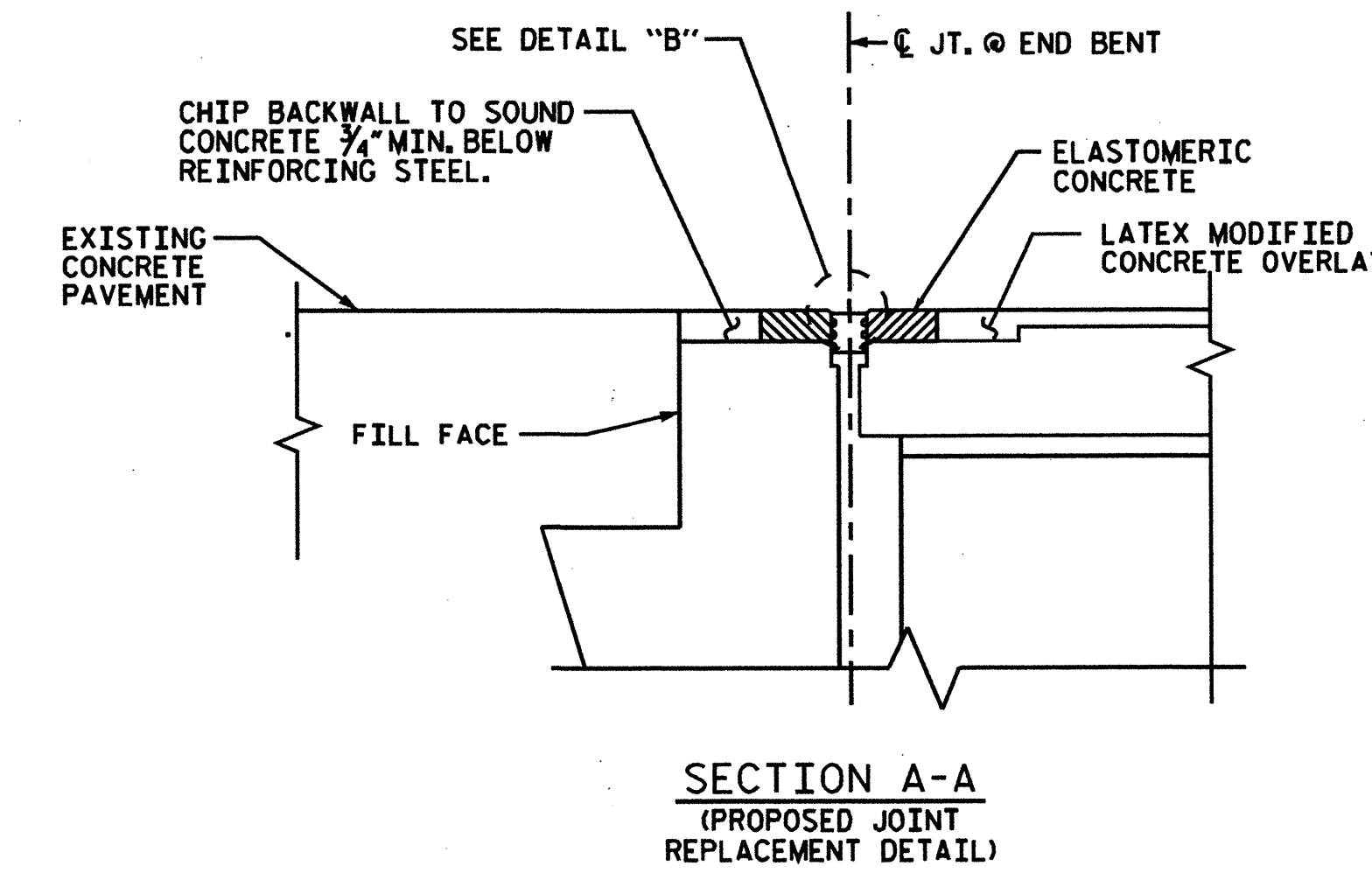
REVISIONS						SHEET NO. S-1.
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS 28
2			4			

DRAWN BY: M.A. ALLEN DATE: 08-09

CHECKED BY: R.W. WRIGHT DATE: 08-09



PLAN OF SPANS



PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 623+09.00 -L-

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS
FOR DECK REPAIR

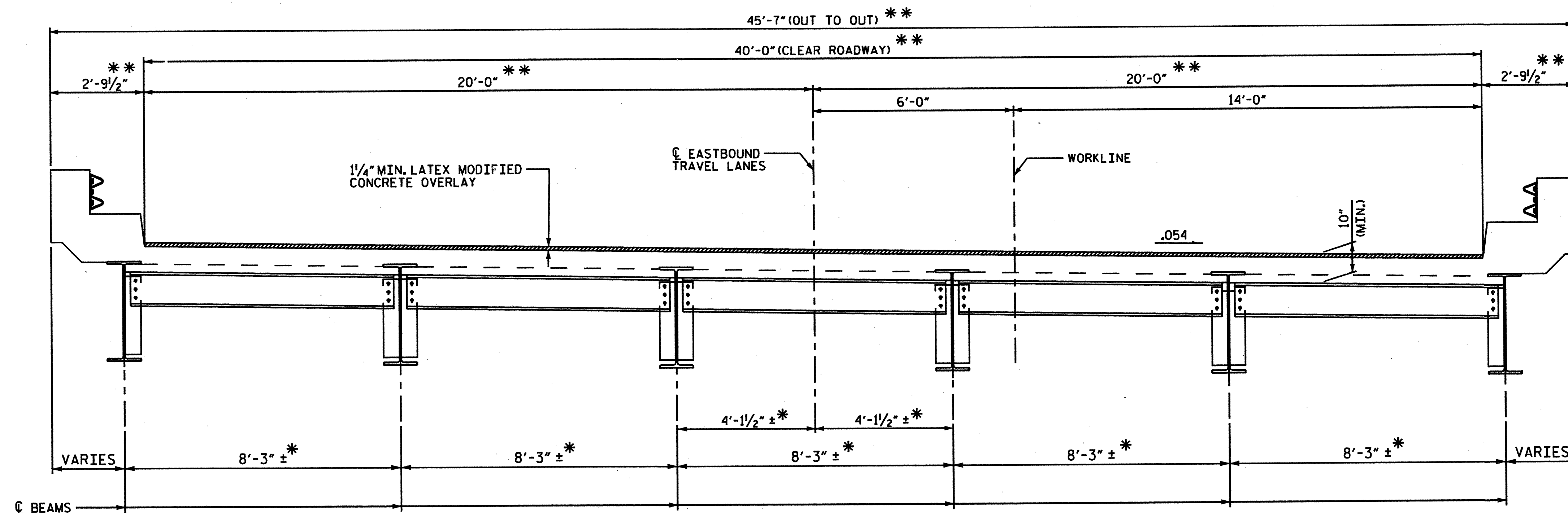
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REVISIONS						SHEET NO. S-2 TOTAL SHEETS 28
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

TOTAL BILL OF MATERIAL									
SCARIFYING BRIDGE DECK	CLASS I* SURFACE PREPARATION	CLASS II* SURFACE PREPARATION	CLASS III* SURFACE PREPARATION	UNDER DECK CONTAINMENT	HYDRO- DEMOLITION OF BRIDGE DECK	CLASS AA CONCRETE	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING AND FINISHING OF LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH	EVAZOTE JOINT SEALS
SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	SO. FT.	SO. YDS.	CU. YDS.	CU. YDS.	SO. YDS.	LUMP SUM
775	527	242	6	54	775	1	54	775	LUMP SUM

* QUANTITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

DRAWN BY : M.A. ALLEN DATE : 08-09
CHECKED BY : R.W. WRIGHT DATE : 08-09

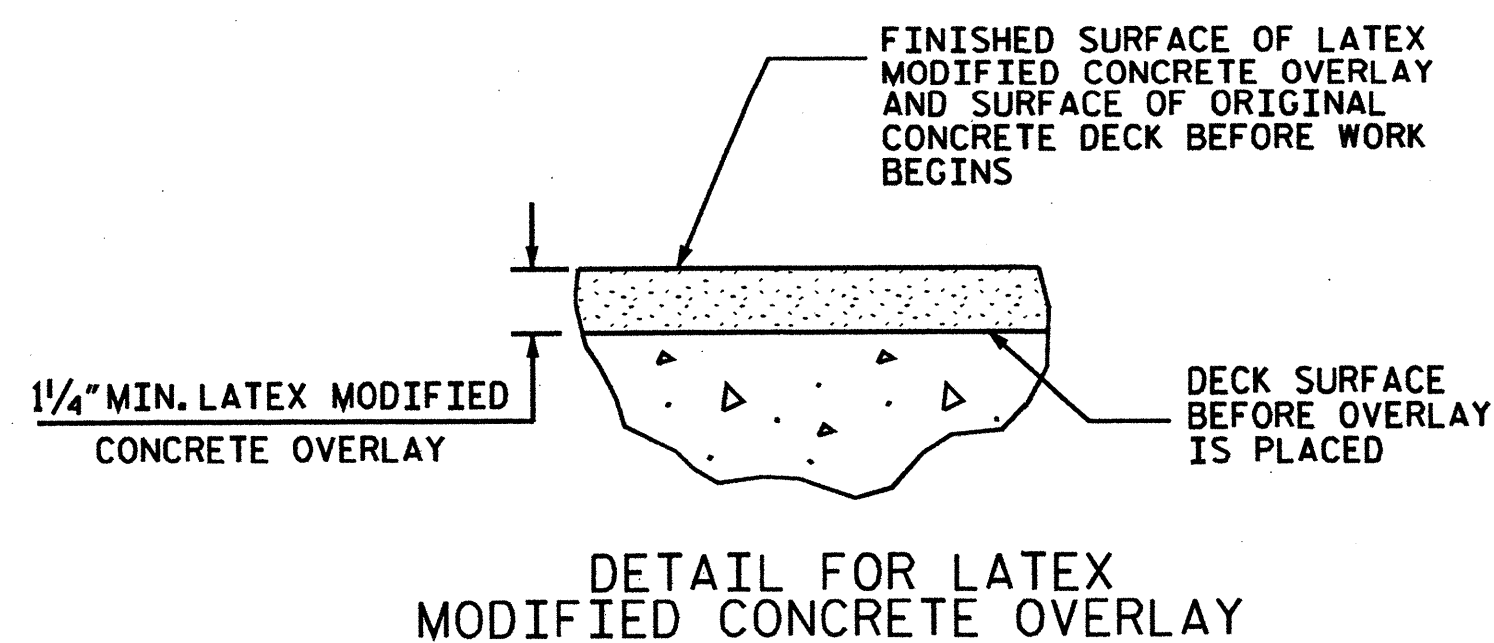


TYP. SECTION

(SHOWING DIAPHRAGMS AT EXPANSION JOINTS)

* ALONG THE SKEW AT END BENTS

** RADIAL DIMENSIONS



NOTES:

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

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

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 "TYP. "BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL.

THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE EVAZOTE JOINT SEAL SHALL BE 2 1/2" AT END BENTS 1 & 2 AND BENTS 1&2. FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR JOINT REPAIR, SEE SPECIAL PROVISIONS.

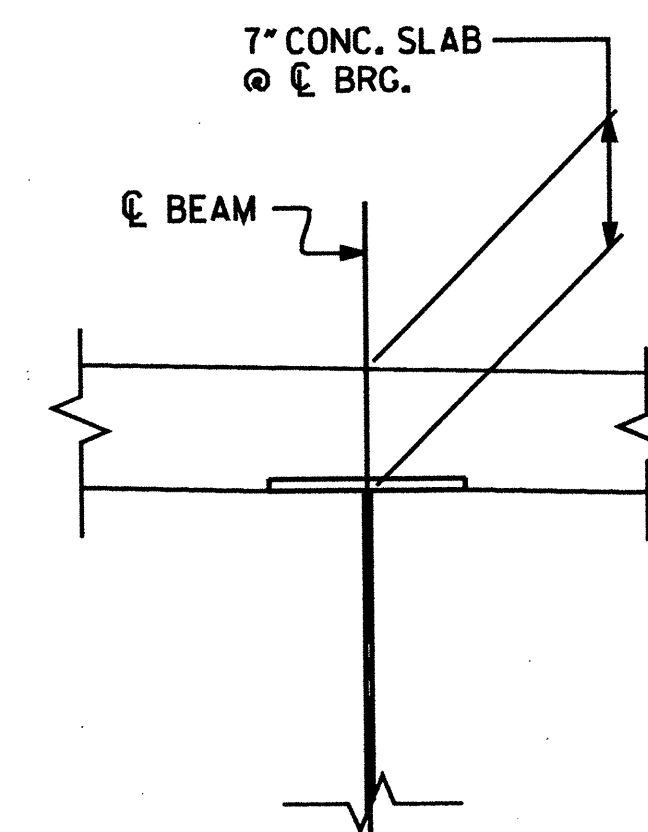
LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH.

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

THE BRIDGE DECK SHALL BE TINED, NO SEPARATE PAYMENT SHALL BE MADE FOR BRIDGE DECK TINDING AS THIS IS CONSIDERED INCIDENTAL TO THE PAY ITEM FOR "PLACING AND FINISHING OF LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH".

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.



EXIST. SLAB SECTION

PROJECT NO. B-5179B

BUNCOMBE COUNTY

STATION: 630+62.50 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

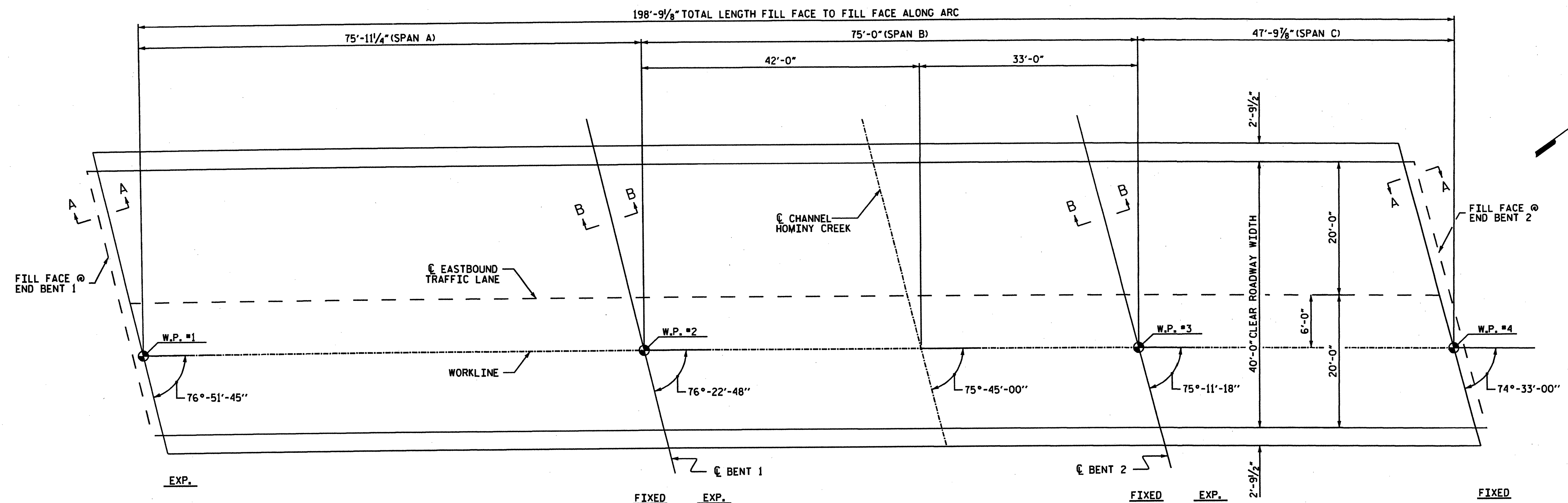
TYPICAL SECTION

DECK REHAB. FOR BRIDGE NO. 70

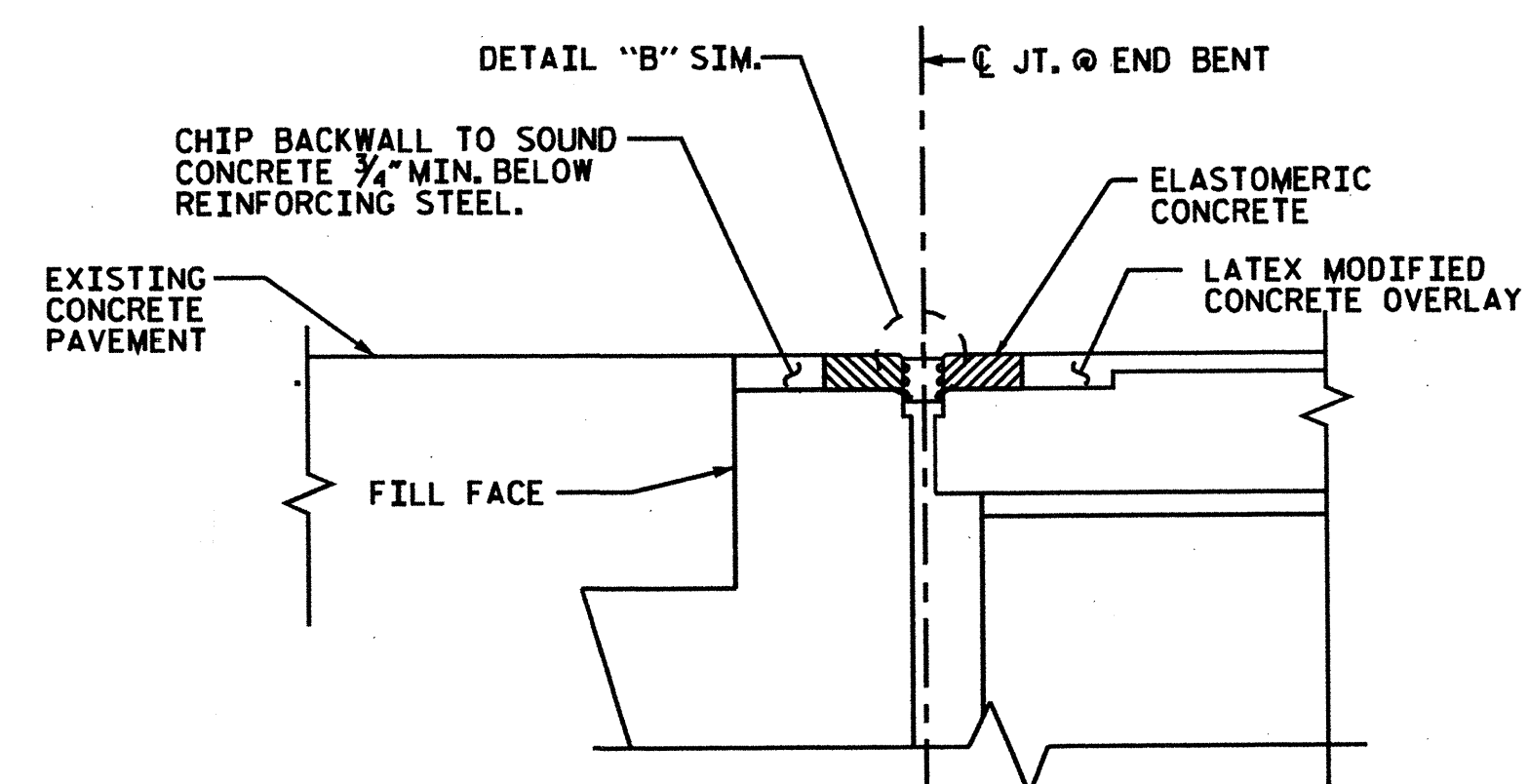
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			S-4
2			4			
TOTAL SHEETS						28

DRAWN BY : M.A. ALLEN DATE : 08-09

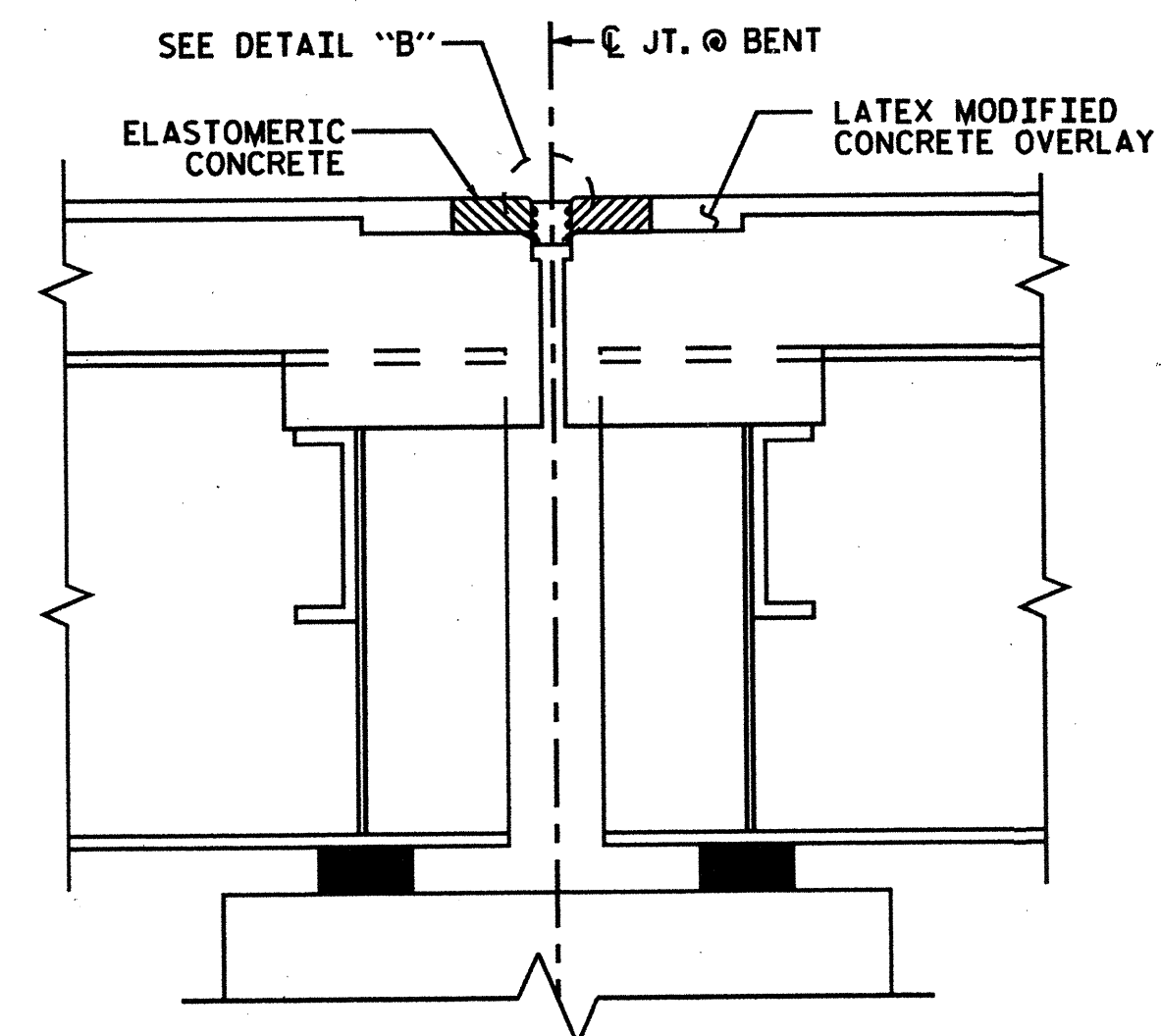
CHECKED BY : R.W. WRIGHT DATE : 08-09



PLAN OF SPANS



SECTION A-A
(PROPOSED JOINT REPLACEMENT DETAIL)



SECTION B-B
(PROPOSED JOINT REPLACEMENT DETAIL)

TOTAL BILL OF MATERIAL

SCARIFYING BRIDGE DECK	CLASS I* SURFACE PREPARATION	CLASS II* SURFACE PREPARATION	CLASS III* SURFACE PREPARATION	UNDER DECK CONTAINMENT	HYDRO-DEMOLITION OF BRIDGE DECK	CLASS AA CONCRETE	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING AND FINISHING OF LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH	EVAZOTE JOINT SEALS
SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	SO. FT.	SO. YDS.	CU. YDS.	CU. YDS.	SO. YDS.	LUMP SUM
885	647	208	30	270	885	4	62	885	LUMP SUM

* QUANTITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

DRAWN BY : M.A. ALLEN DATE : 08-09
CHECKED BY : R.W. WRIGHT DATE : 08-09

PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 630+62.50 -L-

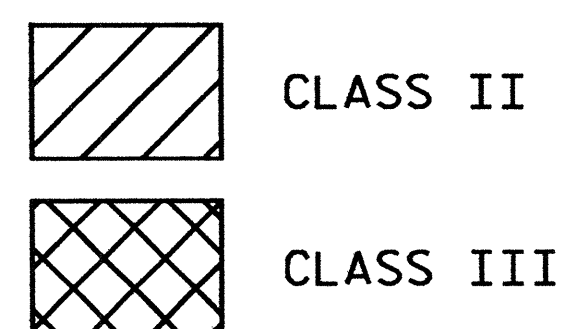
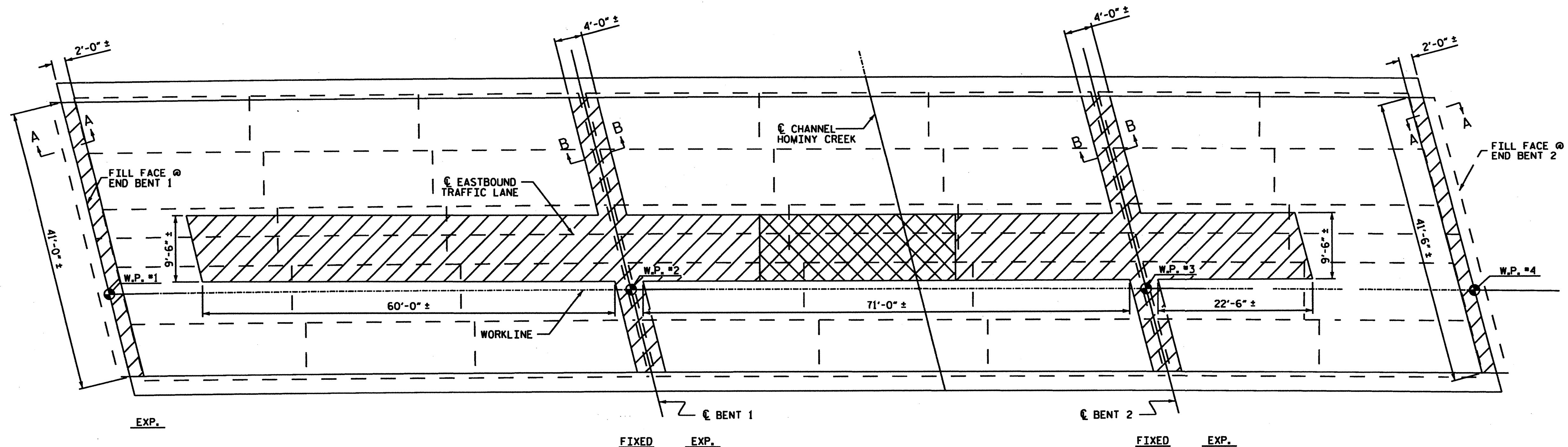
SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

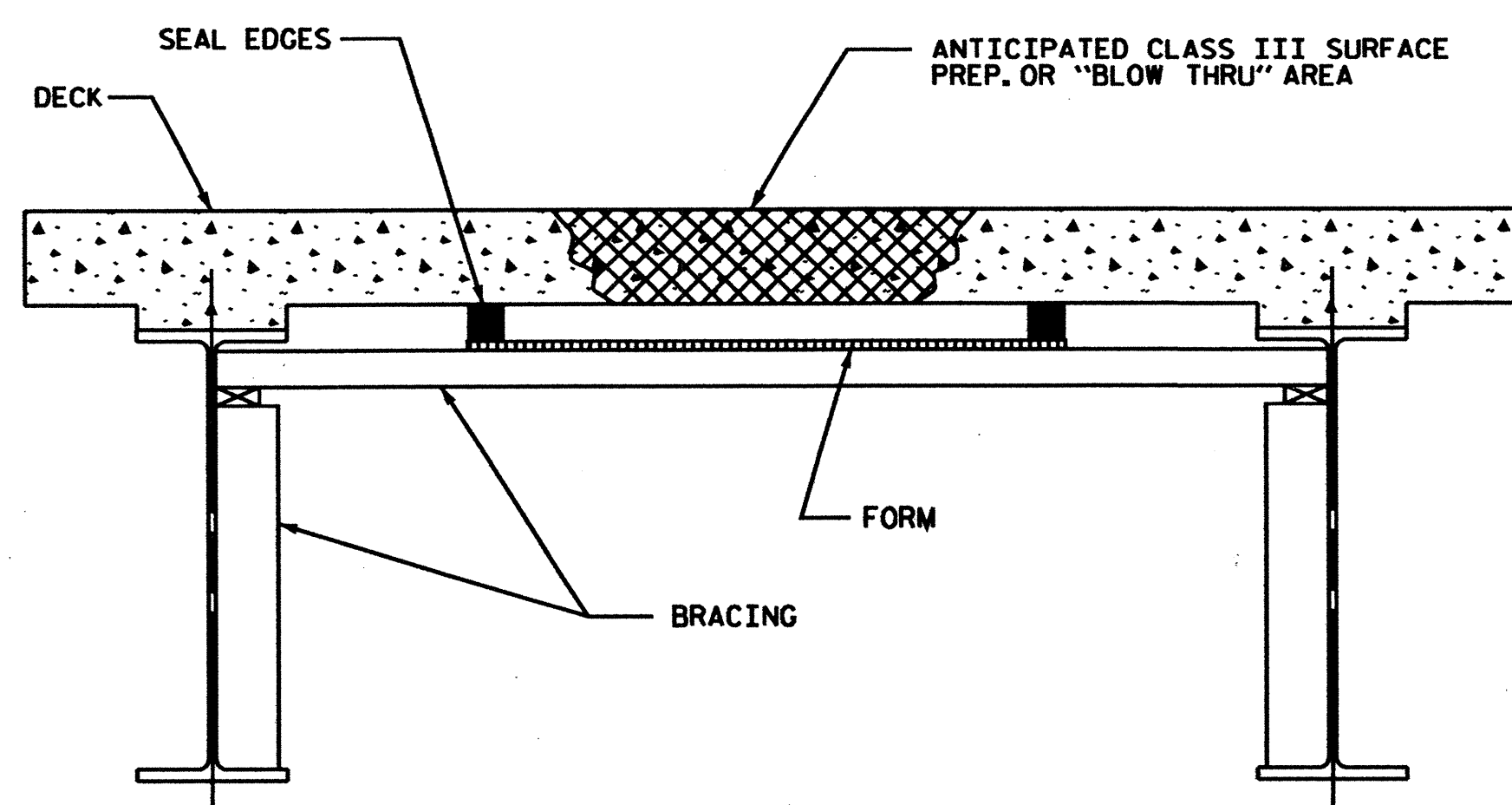
PLAN OF SPANS
FOR DECK REPAIR

DECK REHAB. FOR BRIDGE NO. 70

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			5-5
2			4			TOTAL SHEETS 28



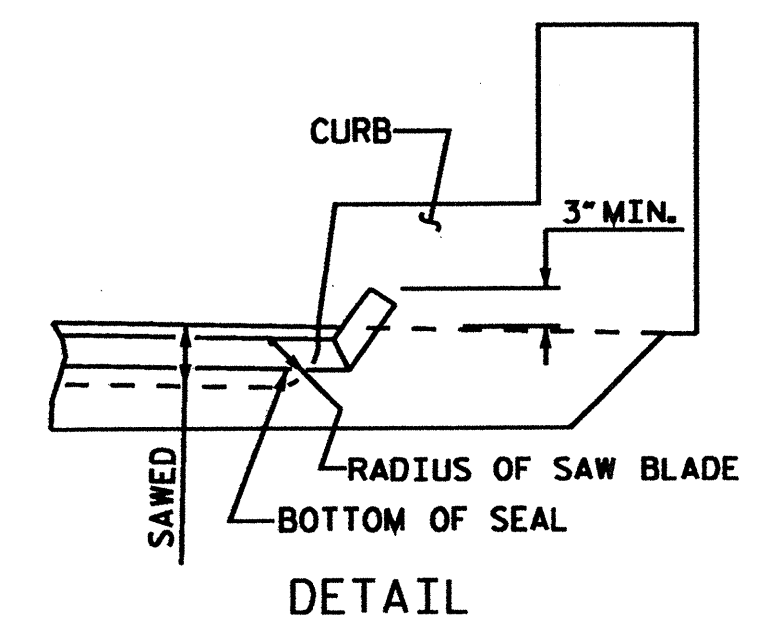
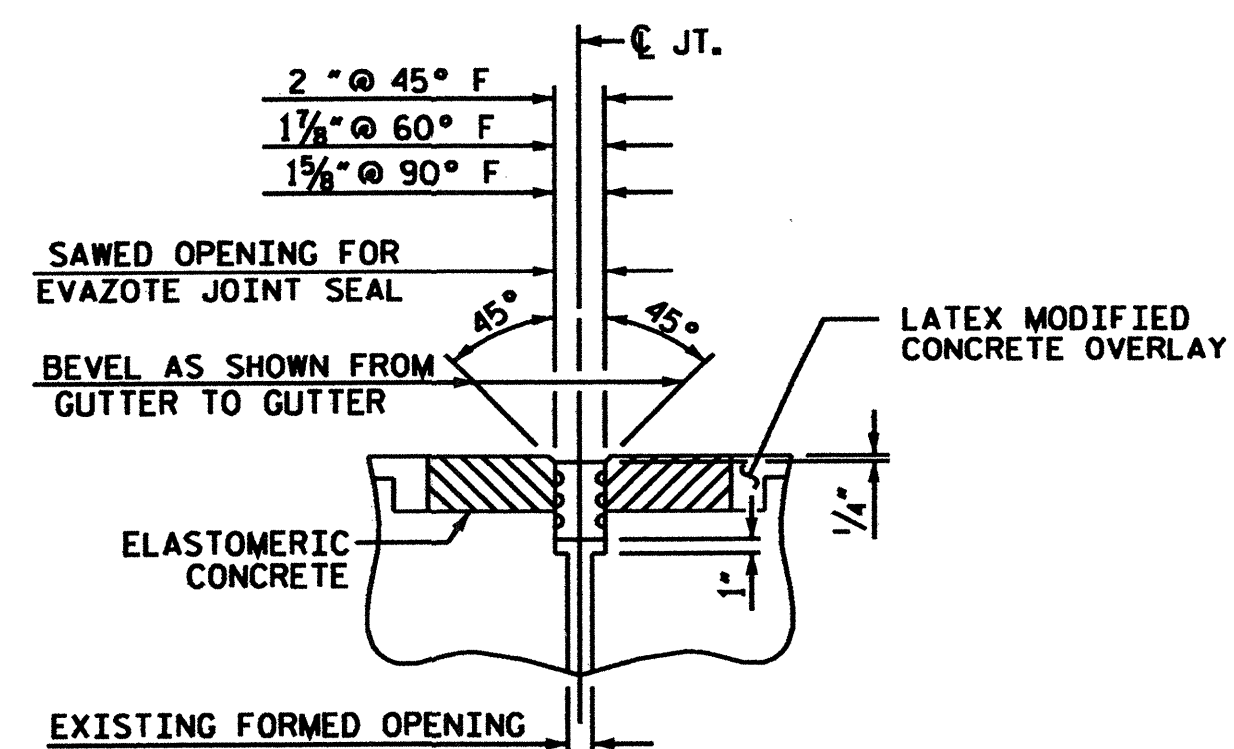
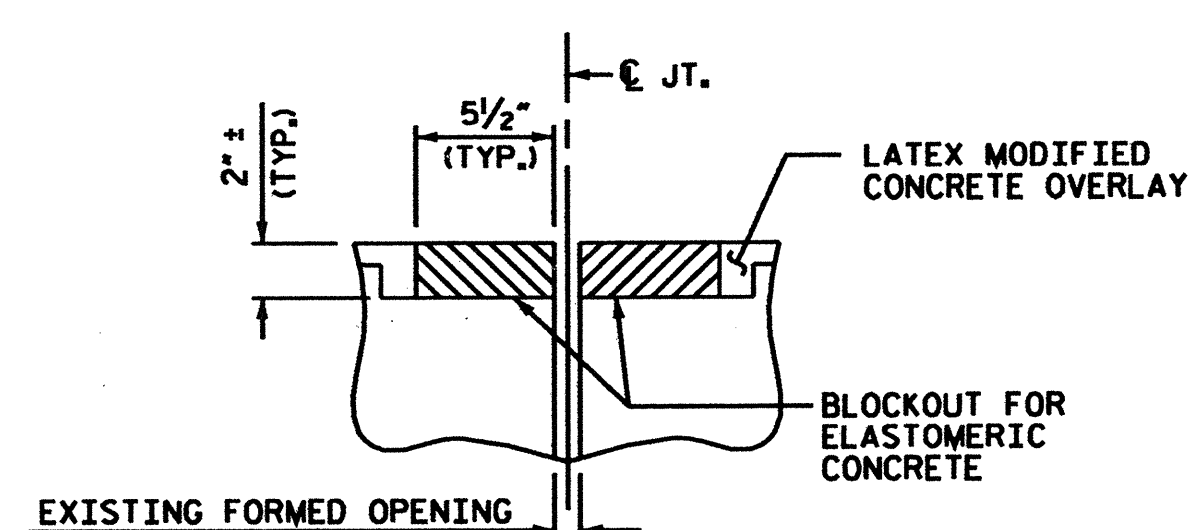
PLAN OF SPANS - DECK REPAIRS



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.



ELASTOMERIC CONCRETE	
BENT NO.	ELASTOMERIC CONCRETE * (CU. FT.)
E.B. 1	6.3
BENT 1	6.3
BENT 2	6.3
E.B. 2	6.3
TOTAL	25.2

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

PROJECT NO. B-5179B
BUNCOMBE COUNTY
 STATION: 630+62.50 -L-

SHEET 2 OF 2

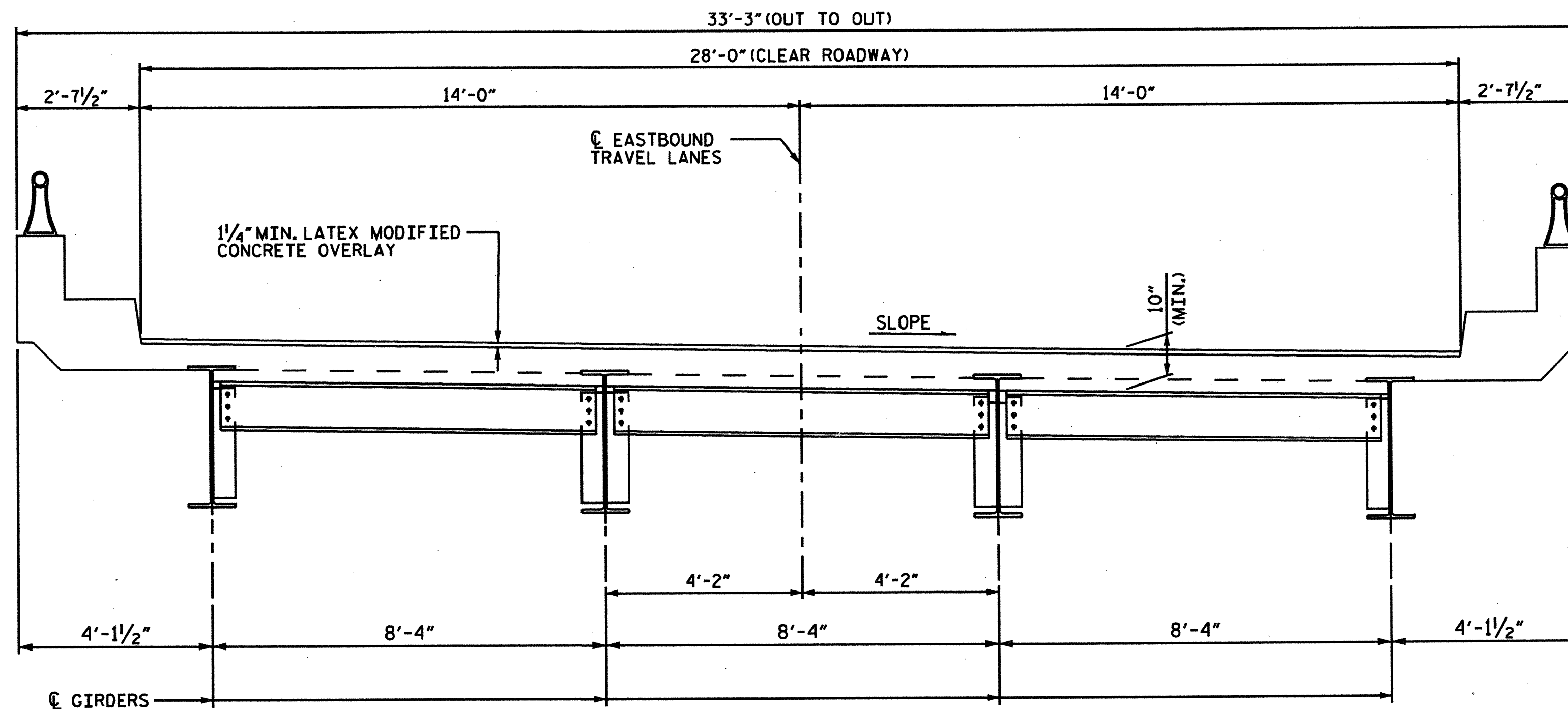
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS
 FOR DECK REPAIR

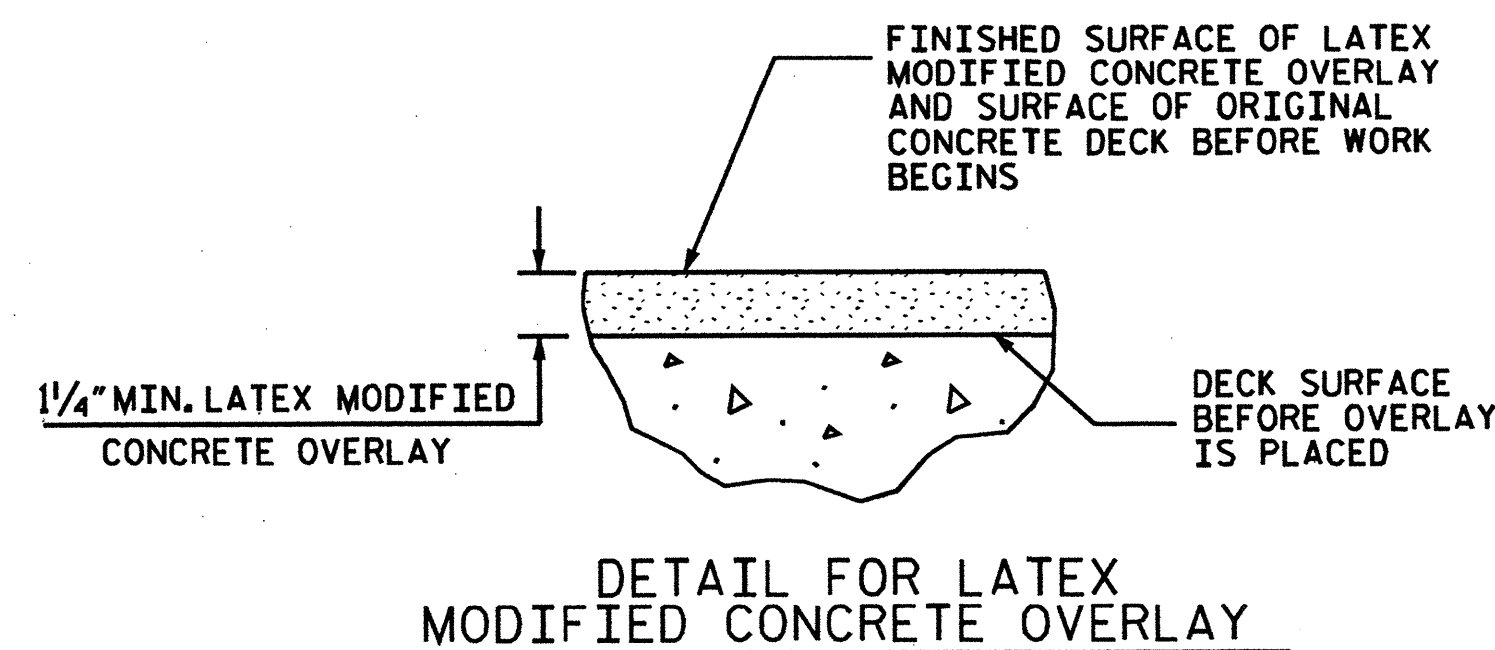
DECK REHAB. FOR BRIDGE NO. 70

REVISIONS				SHEET NO.
NO.	BY	DATE	NO.	
1			3	S-6
2			4	
TOTAL SHEETS				28

DRAWN BY: M.A. ALLEN DATE: 08-09
 CHECKED BY: R.W. WRIGHT DATE: 08-09



TYP. SECTION
(SHOWING PARTIAL DIAPHRAGMS AT EXPANSION JOINTS)



NOTES:

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

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

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 "TYP. "BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL.

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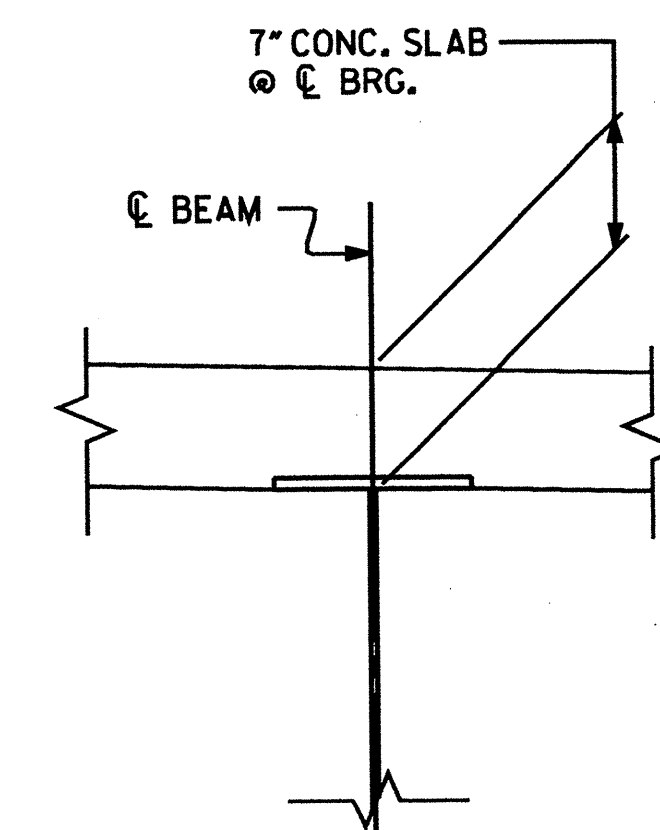
LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH.

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

FOR GROOVING BRIDGE FLOORS INFORMATION, SEE "LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH" SPECIAL PROVISION.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.



EXIST. SLAB SECTION

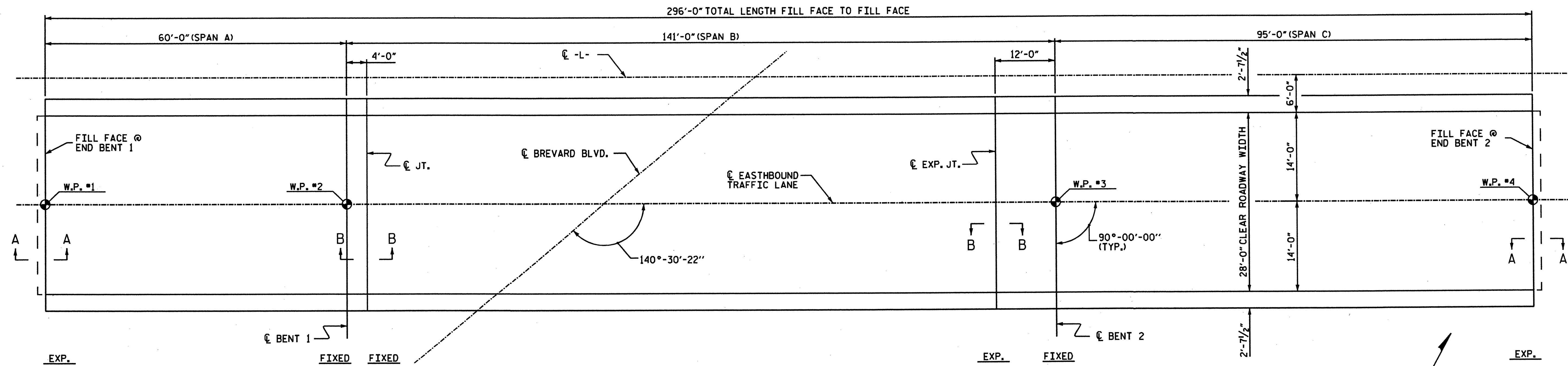
PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 25+07.35 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
TYPICAL SECTION

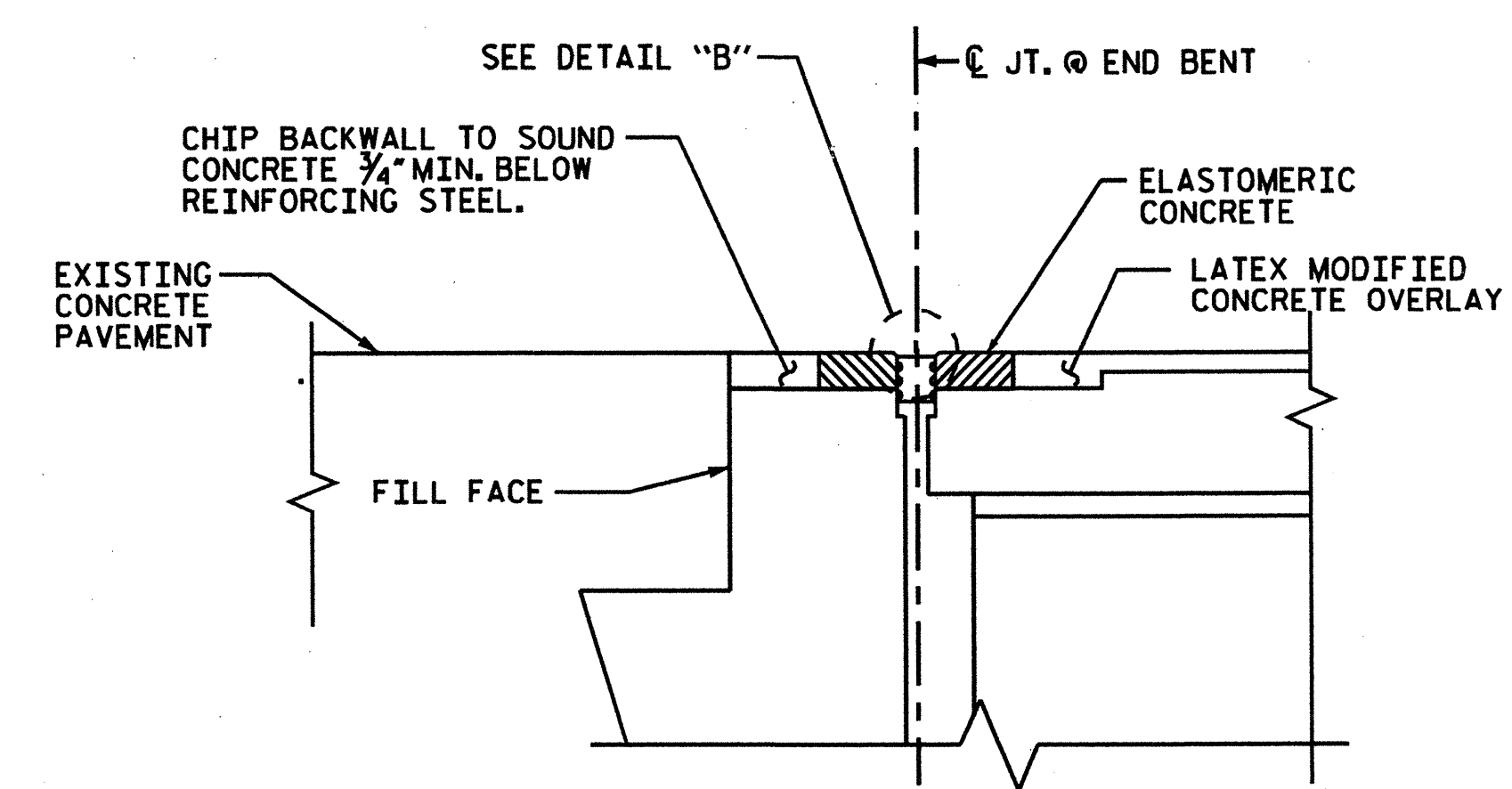
DECK REHAB. FOR BRIDGE NO. 206

REVISIONS						SHEET NO. S-7
NO.	BY	DATE	NO.	BY	DATE	
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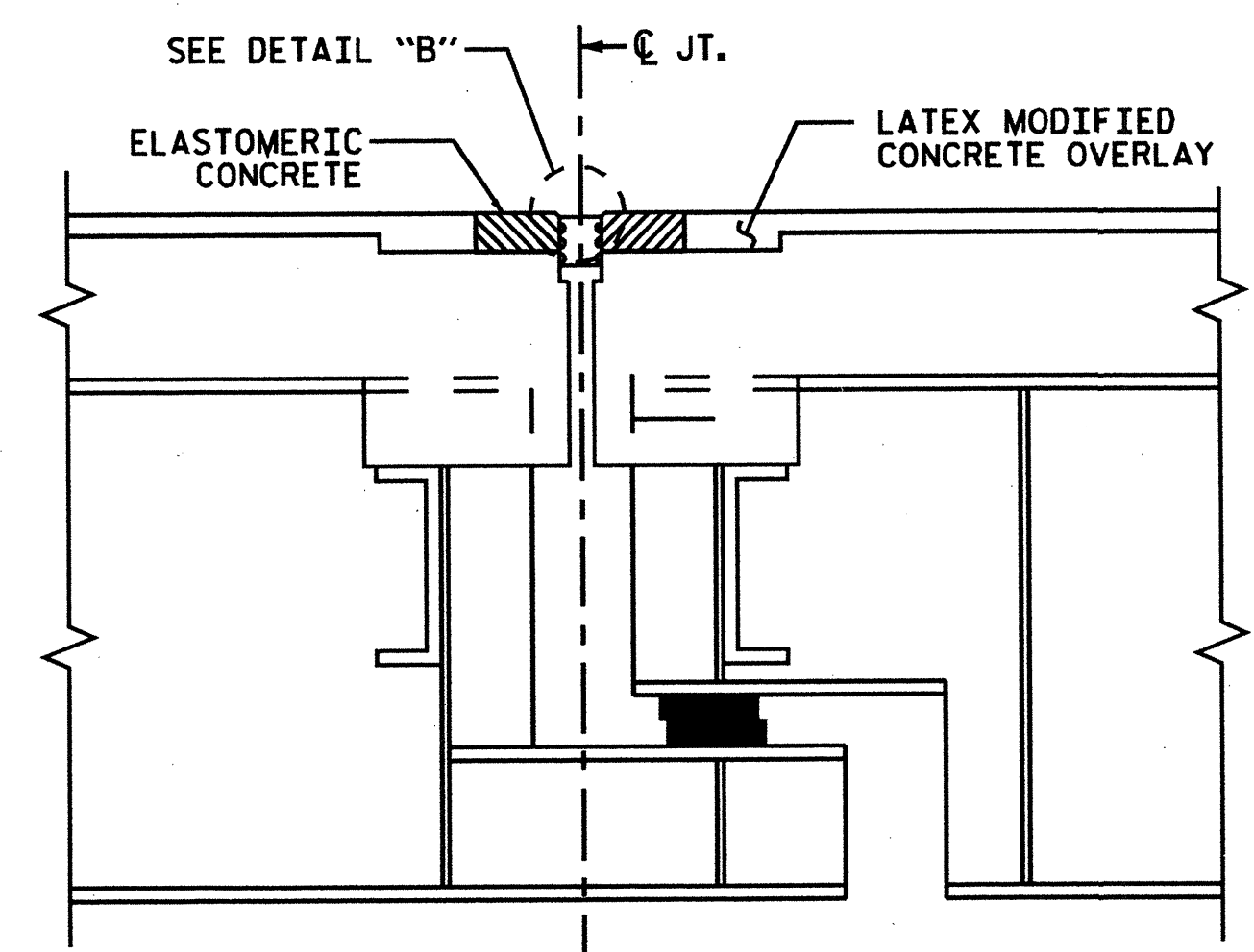
DRAWN BY : M.A. ALLEN DATE : 08-09
CHECKED BY : R.W. WRIGHT DATE : 08-09



PLAN OF SPANS



SECTION A-A
(PROPOSED JOINT REPLACEMENT DETAIL)



SECTION B-B
(PROPOSED JOINT REPLACEMENT DETAIL)

PROJECT NO. B-5179B
BUNCOMBE COUNTY
 STATION: 25+07.35 -L-

SHEET 1 OF 2

TOTAL BILL OF MATERIAL										
SCARIFYING BRIDGE DECK	CLASS I* SURFACE PREPARATION	CLASS II* SURFACE PREPARATION	CLASS III* SURFACE PREPARATION	UNDER DECK CONTAINMENT	HYDRO- DEMOLITION OF BRIDGE DECK	CLASS AA CONCRETE	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING AND FINISHING OF LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH	EVAZOTE JOINT SEALS	GROOVING BRIDGE FLOORS
SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	SO. FT.	SO. YDS.	CU. YDS.	CU. YDS.	SO. YDS.	LUMP SUM	SO. FT.
920	831	86	3	27	920	0.5	64	920	LUMP SUM	7300

* QUANTITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

DRAWN BY : M.A. ALLEN DATE : 08-09
 CHECKED BY : R.W. WRIGHT DATE : 08-09

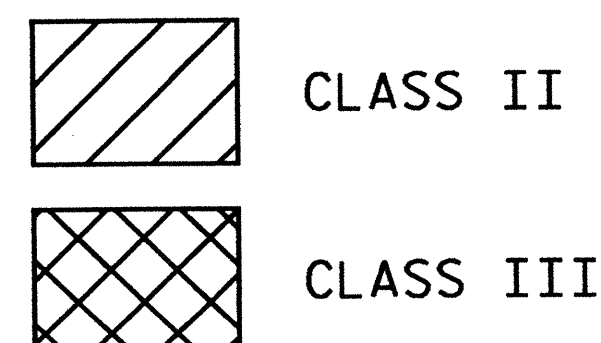
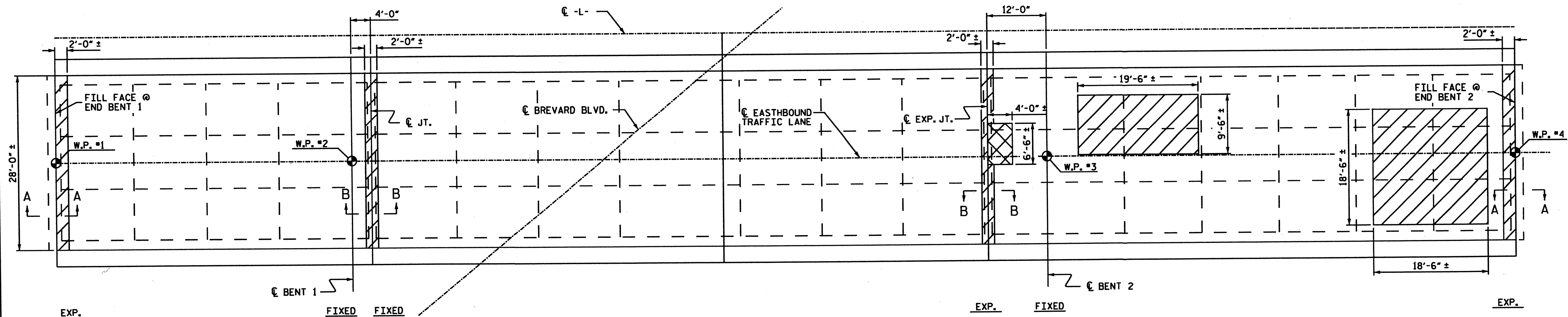
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS
 FOR DECK REPAIR

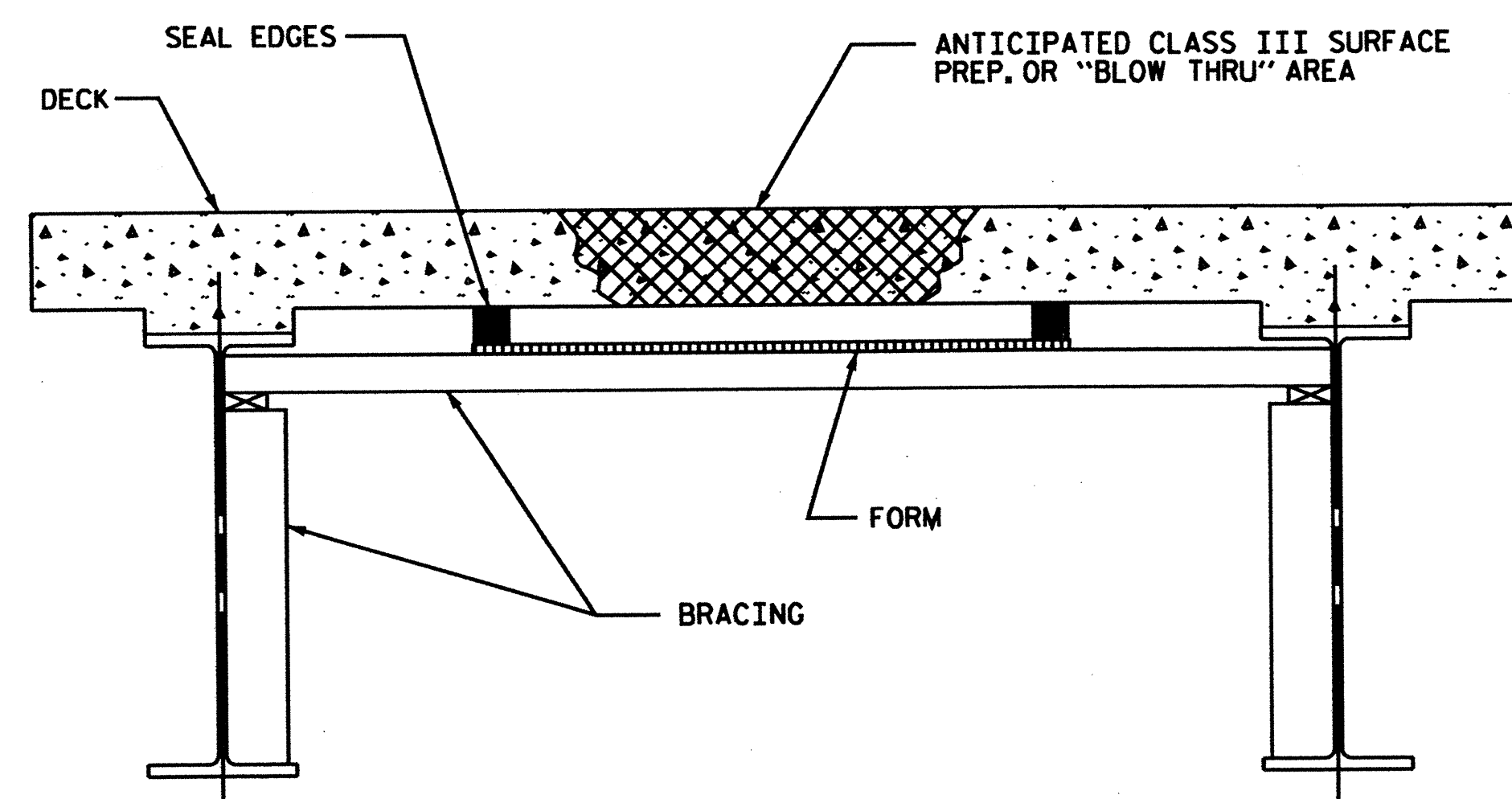
DECK REHAB. FOR BRIDGE NO. 206

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

TOTAL SHEETS 28



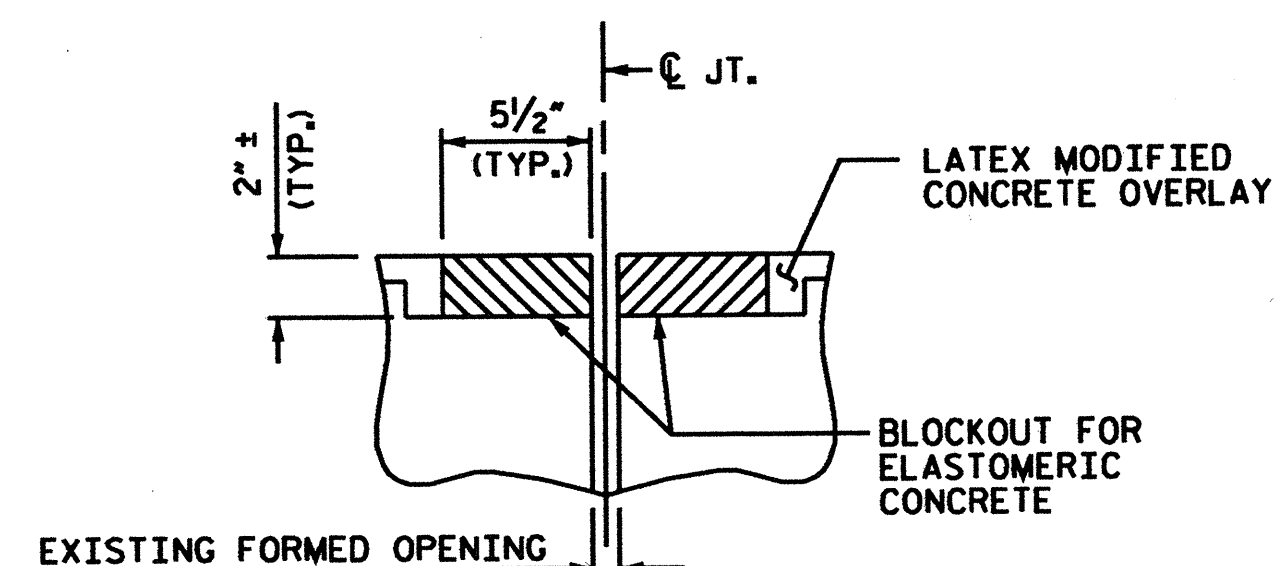
PLAN OF SPANS - DECK REPAIRS



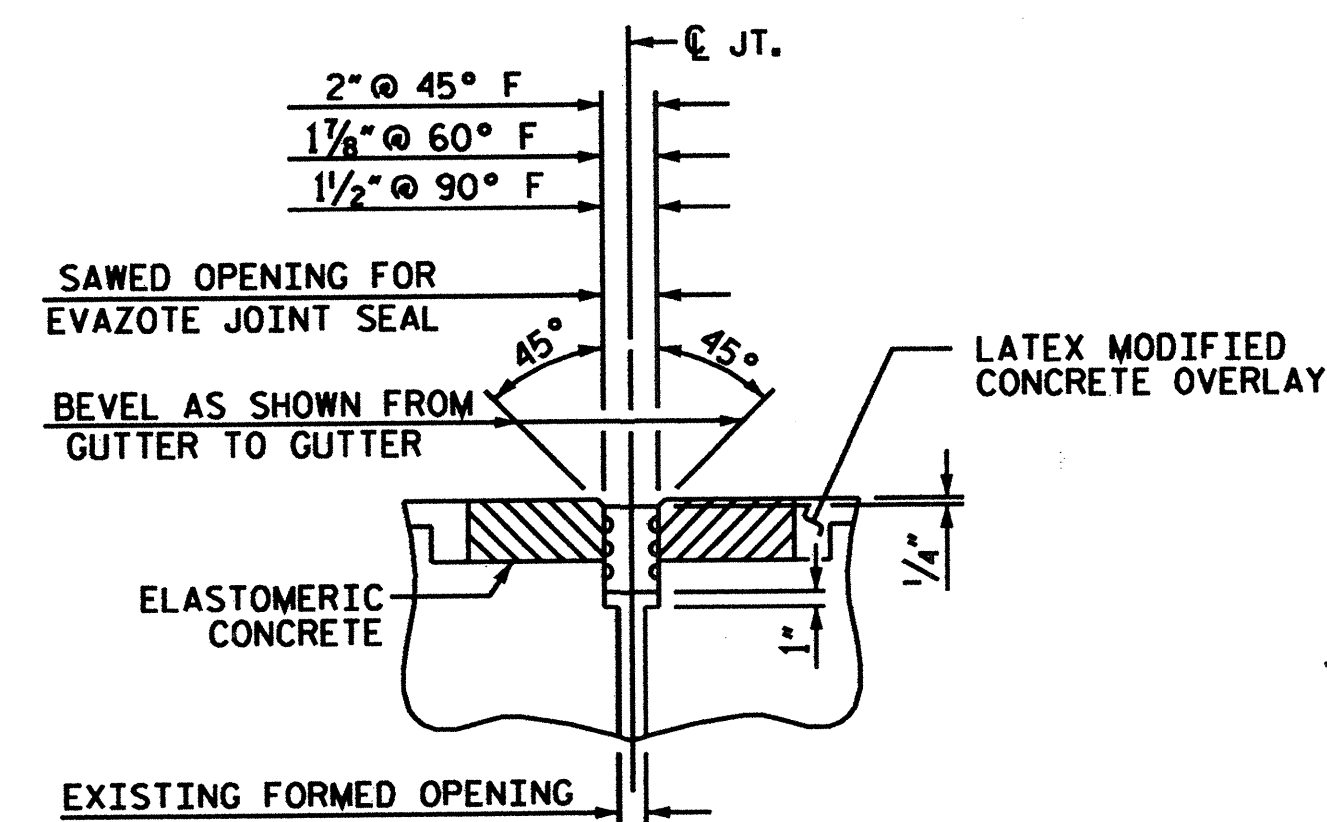
TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

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.

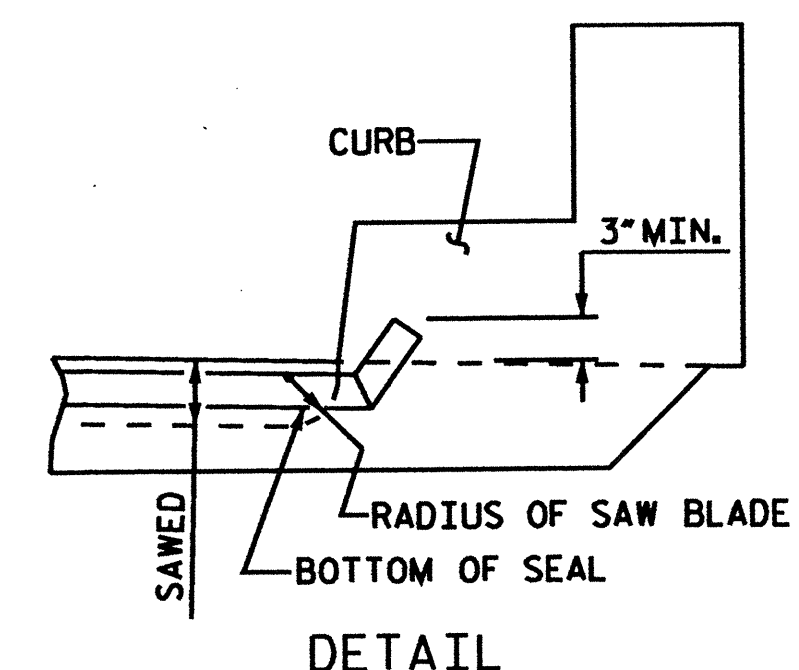


DETAIL A
EVAZOTE JOINT SEAL
(PRE-SAWED ELASTOMERIC
CONCRETE DIMENSIONS)



DETAIL B
EVAZOTE JOINT SEAL
(EXPANSION)

NOTE:
FOR FIXED JOINT, SAW CUT
WIDTH SHALL BE 1 1/8" AND
CENTERED ABOUT THE JOINT.



DETAIL C

ELASTOMERIC CONCRETE	
BENT NO.	ELASTOMERIC CONCRETE * (CU. FT.)
E.B. 1	4.3
BENT 1	4.3
BENT 2	4.3
E.B. 2	4.3
TOTAL	17.2

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 25+07.35 -L-

SHEET 2 OF 2

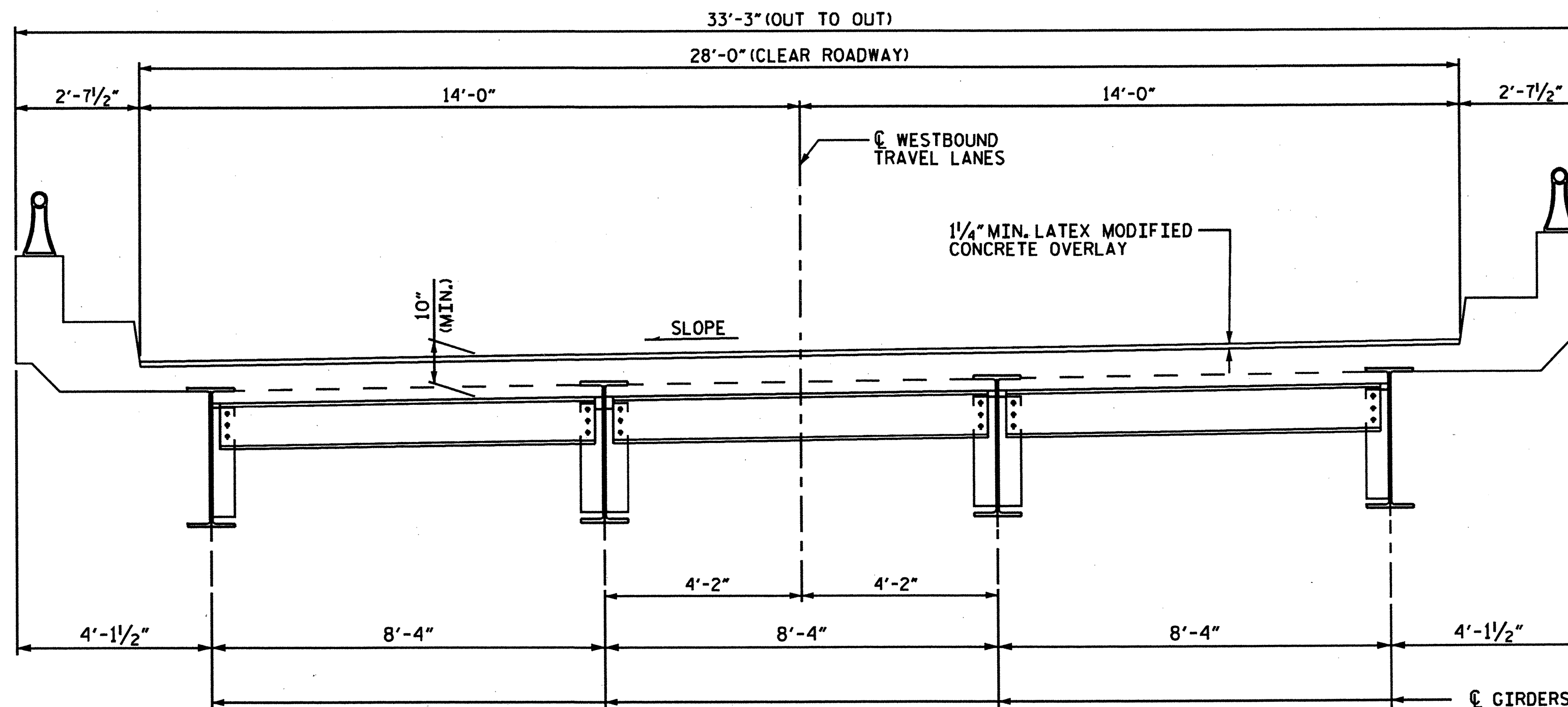
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS FOR DECK REPAIR

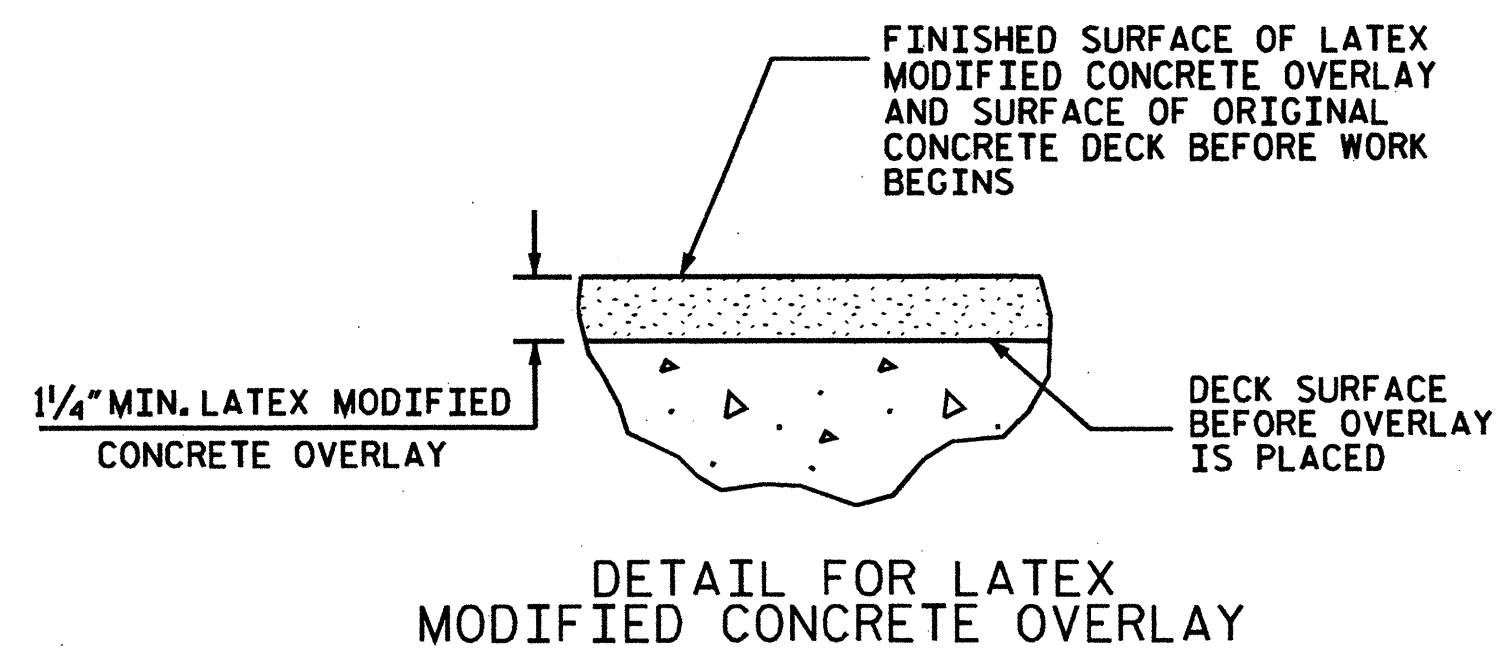
DECK REHAB. FOR BRIDGE NO. 206

REVISIONS						SHEET NO. S-9
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS 28
2			4			

DRAWN BY: M.A. ALLEN DATE: 08-09
CHECKED BY: R.W. WRIGHT DATE: 08-09



TYP. SECTION
(SHOWING PARTIAL DIAPHRAGMS AT EXPANSION JOINTS)



NOTES:

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

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

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 "TYP. "BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL.

THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE EVAZOTE JOINT SEAL SHALL BE 2 1/2" AT END BENTS 1 & 2 AND BENTS 1&2. FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR JOINT REPAIR, SEE SPECIAL PROVISIONS.

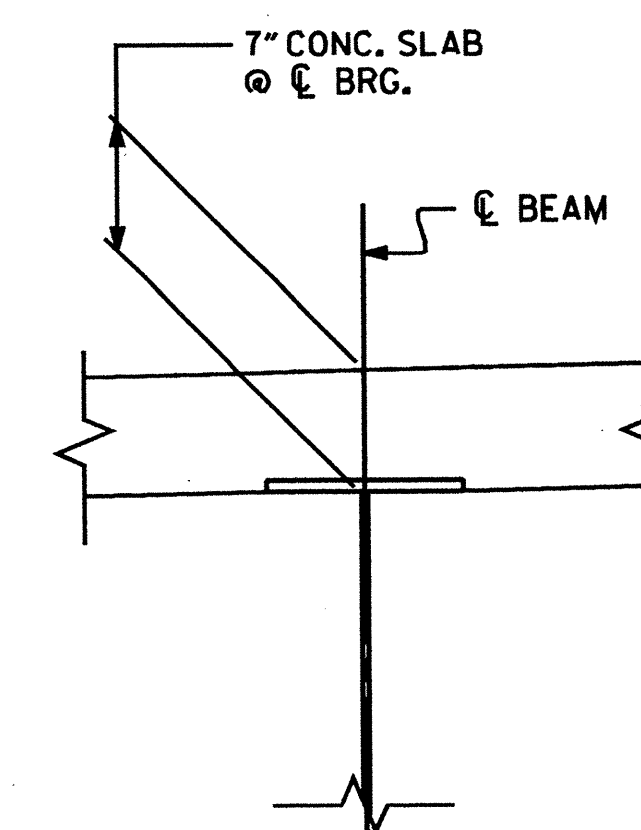
LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH.

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

FOR GROOVING BRIDGE FLOORS INFORMATION, SEE "LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH" SPECIAL PROVISION.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.



EXIST. SLAB SECTION

PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 25+07.35 -L-

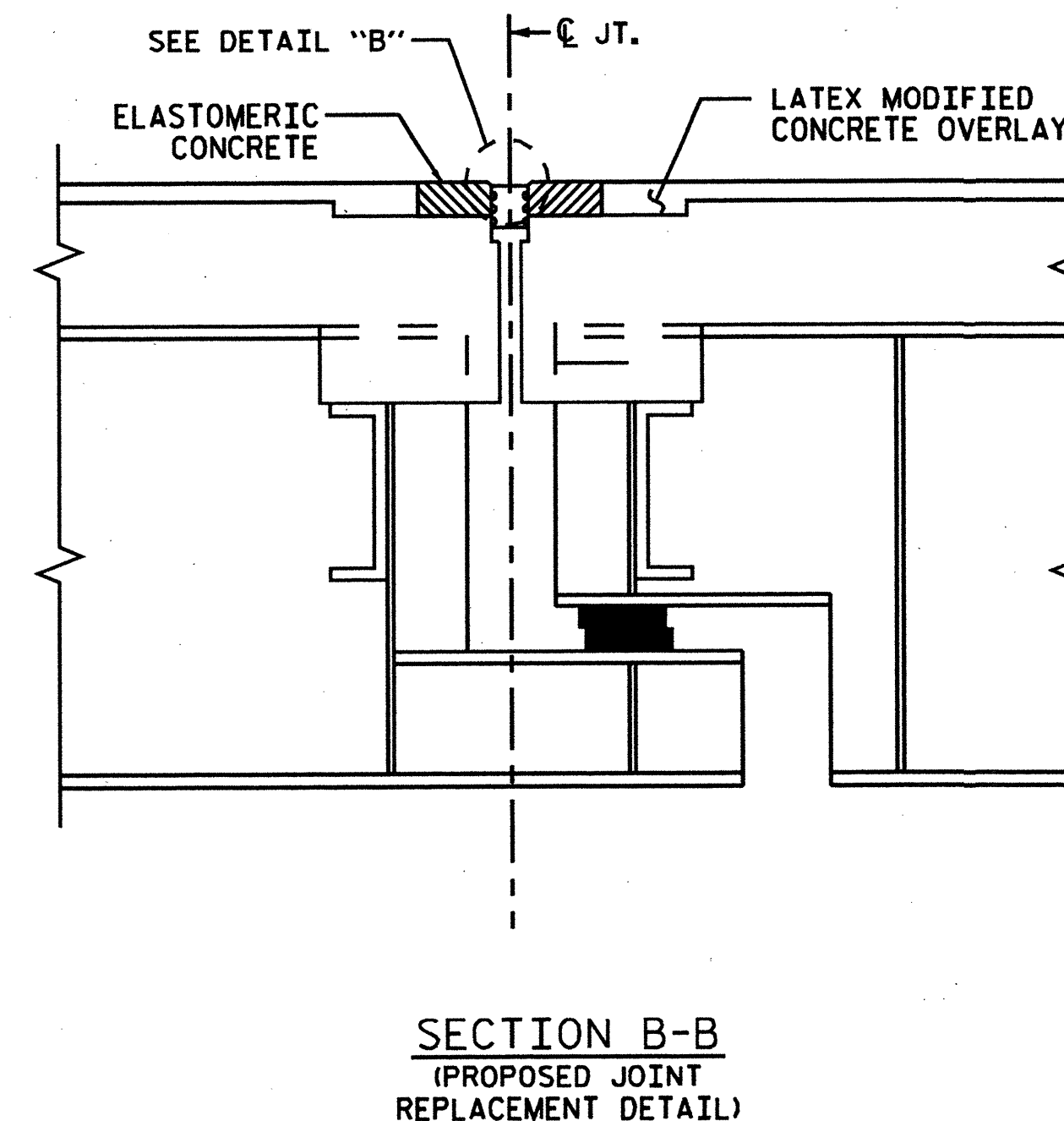
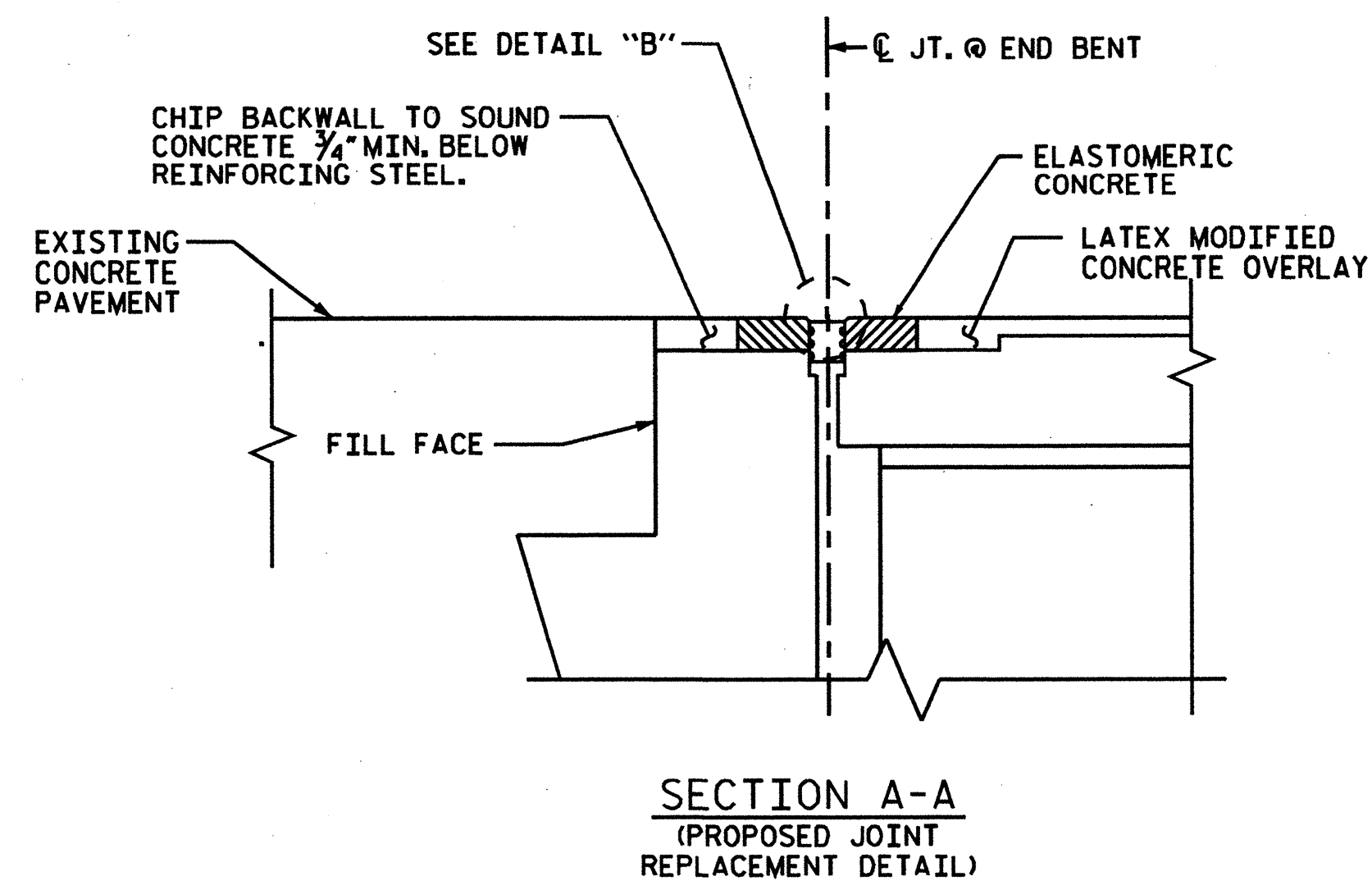
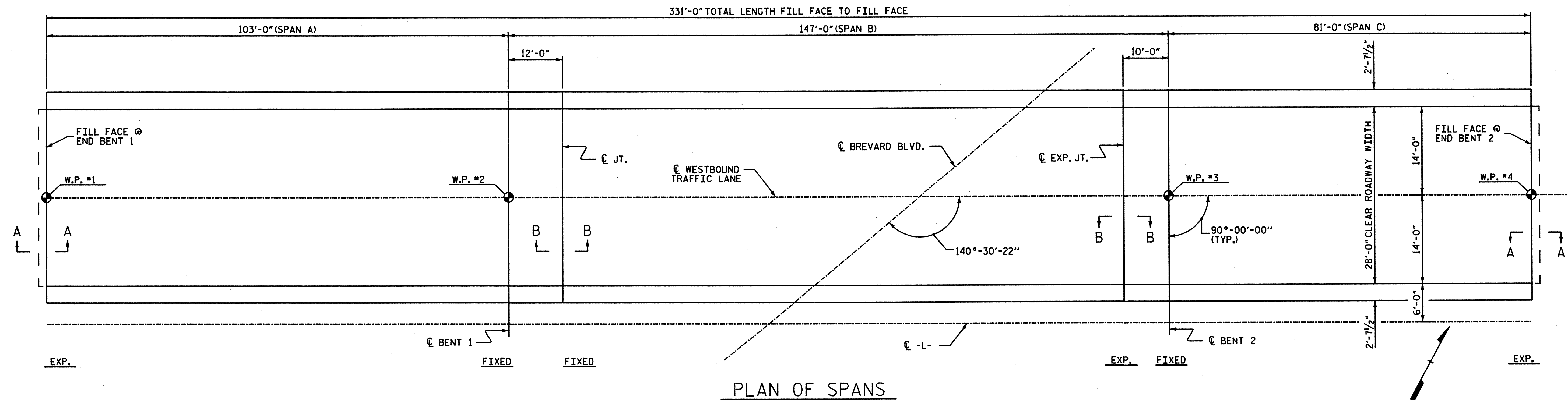
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION

DECK REHAB. FOR BRIDGE NO. 208

REVISIONS						SHEET NO. S-10
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS 28
2			4			

DRAWN BY : M.A. ALLEN DATE : 08-09
CHECKED BY : R.W. WRIGHT DATE : 08-09



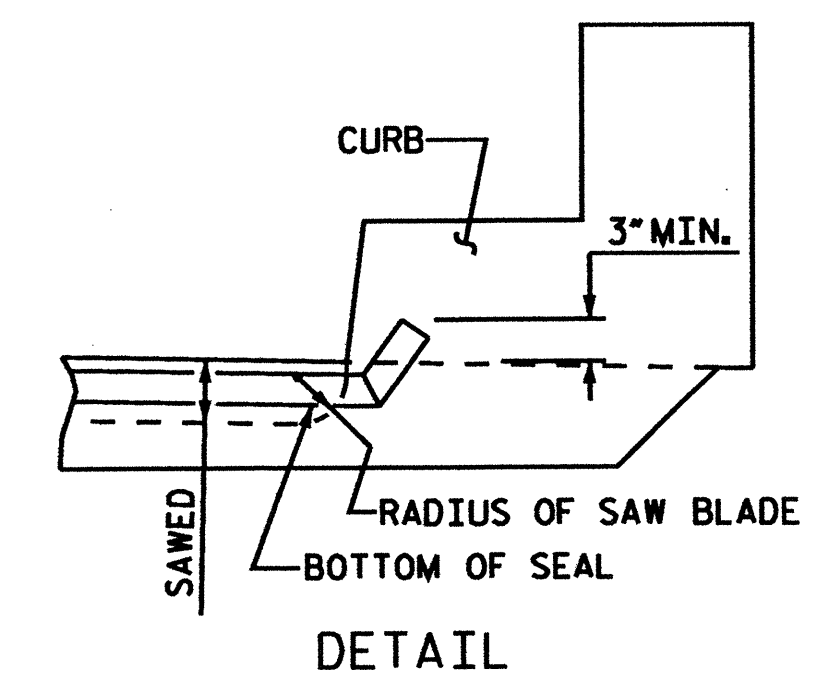
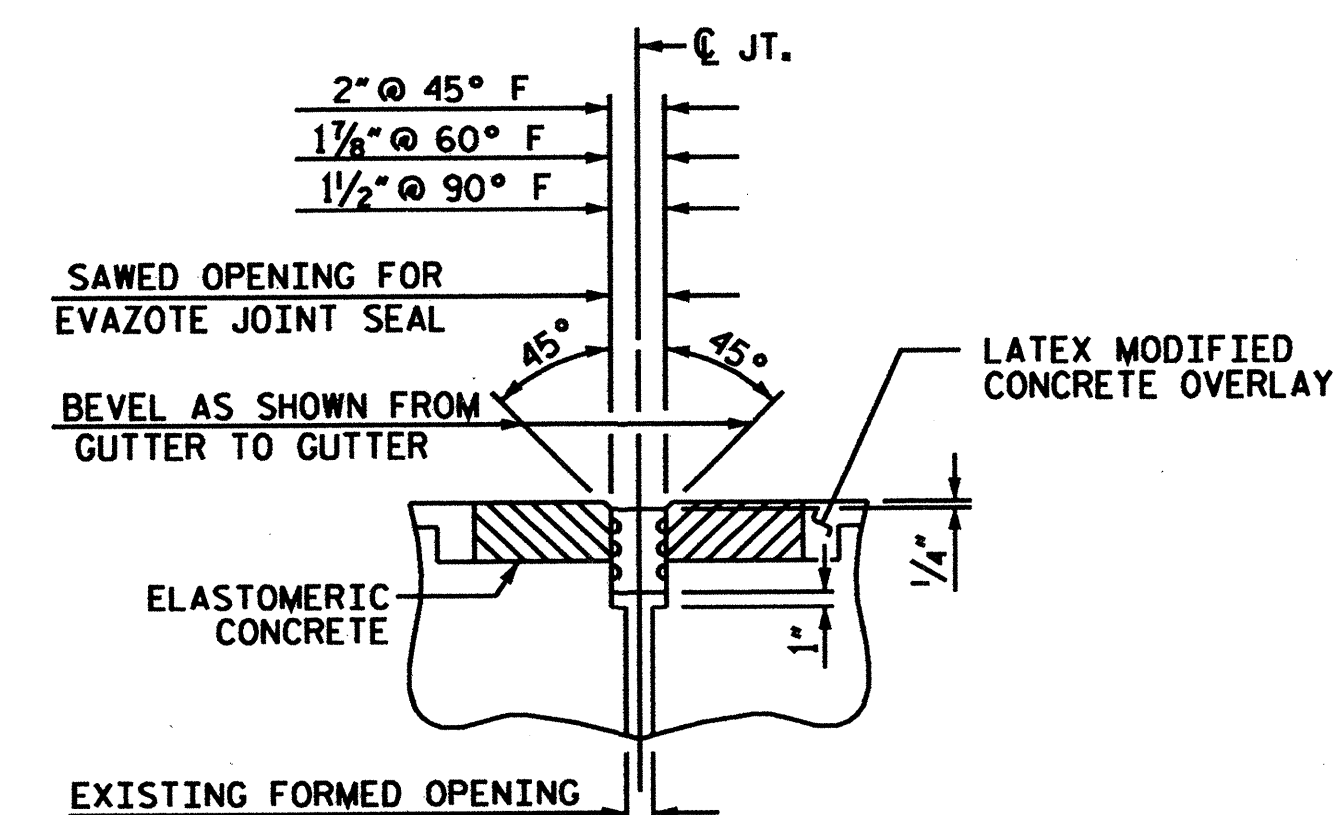
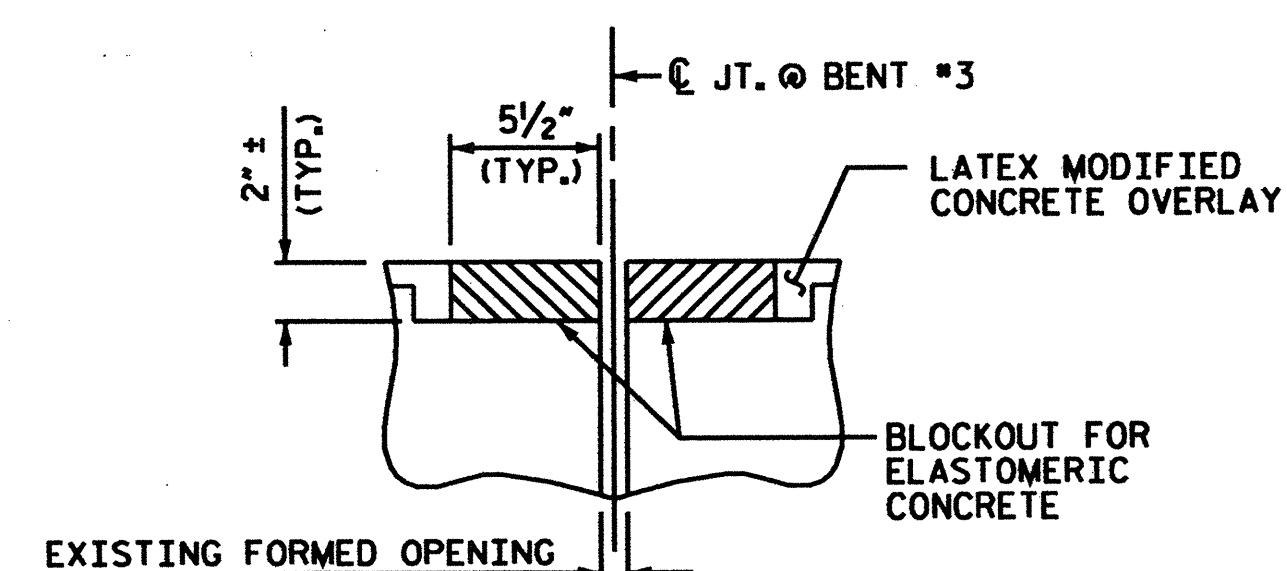
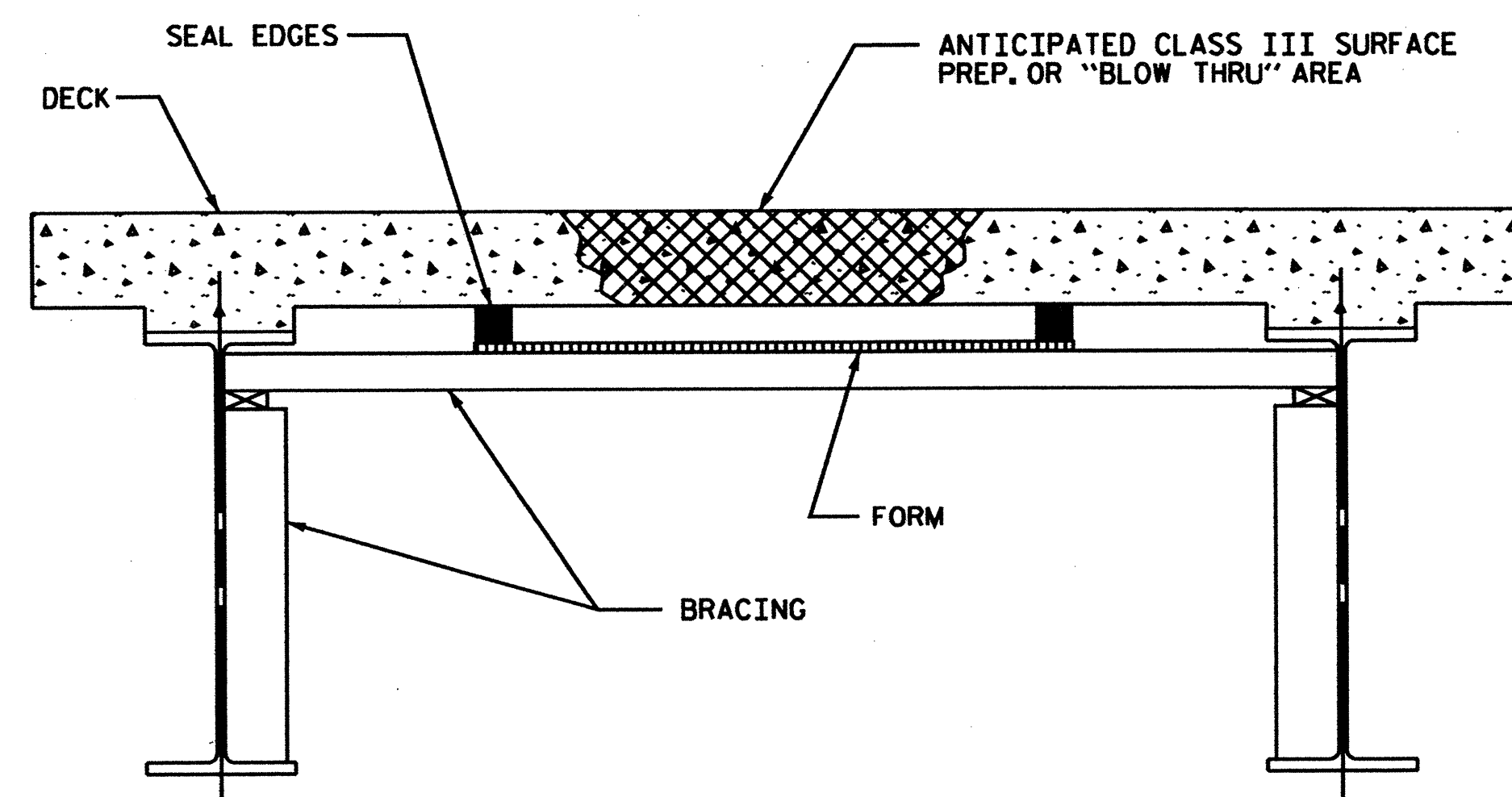
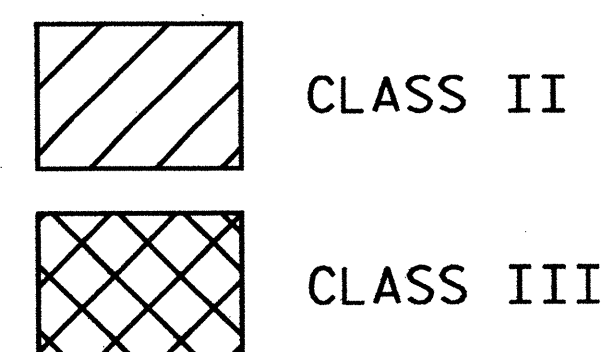
PROJECT NO. B-5179B
BUNCOMBE COUNTY
 STATION: 25+07.35 -L-
 SHEET 1 OF 2

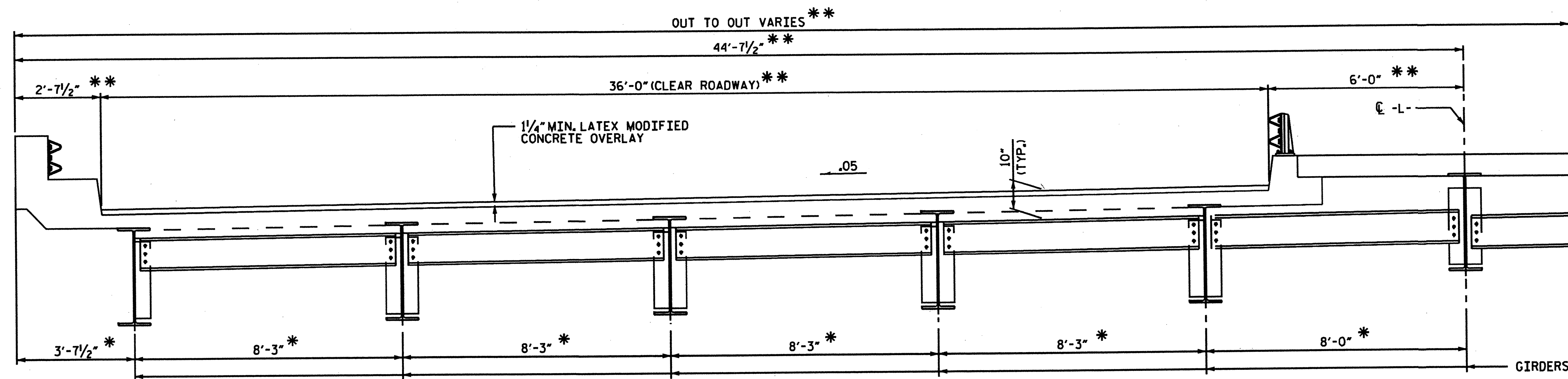
TOTAL BILL OF MATERIAL										
SCARIFYING BRIDGE DECK	CLASS I* SURFACE PREPARATION	CLASS II* SURFACE PREPARATION	CLASS III* SURFACE PREPARATION	UNDER DECK CONTAINMENT	HYDRO- DEMOLITION OF BRIDGE DECK	CLASS AA CONCRETE	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING AND FINISHING OF LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH	EVAZOTE JOINT SEALS	GROOVING BRIDGE FLOORS
SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	SO. FT.	SO. YDS.	CU. YDS.	CU. YDS.	SO. YDS.	LUMP SUM	SO. FT.
1030	869	136	25	225	1030	3.5	72	1030	LUMP SUM	8155

* QUANTITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

DRAWN BY: M.A. ALLEN DATE: 08-09
 CHECKED BY: R.W. WRIGHT DATE: 08-09

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PLAN OF SPANS FOR DECK REPAIR					
DECK REHAB. FOR BRIDGE NO. 208					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
TOTAL SHEETS 28					SHEET NO. S-11

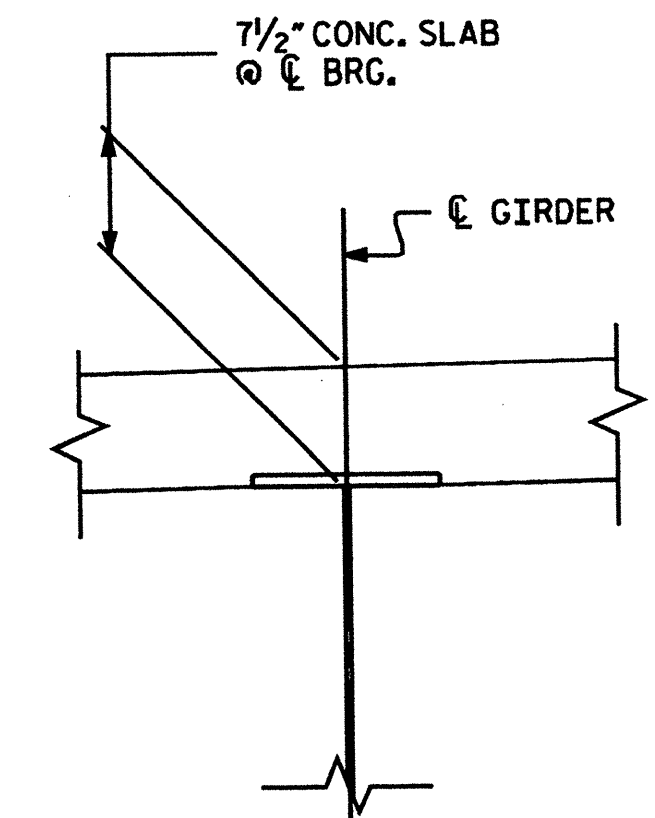




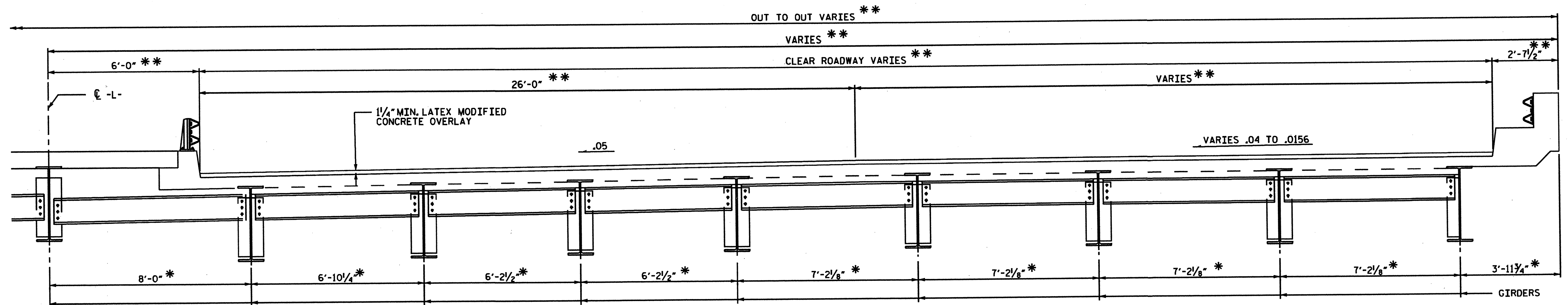
TYP. SECTION-SOUTHBOUND LANE

(SHOWING DIAPHRAGMS AT EXPANSION JOINTS)

- * RADIAL THRU WORKPOINT
- ** RADIAL DIMENSIONS TO C -L-



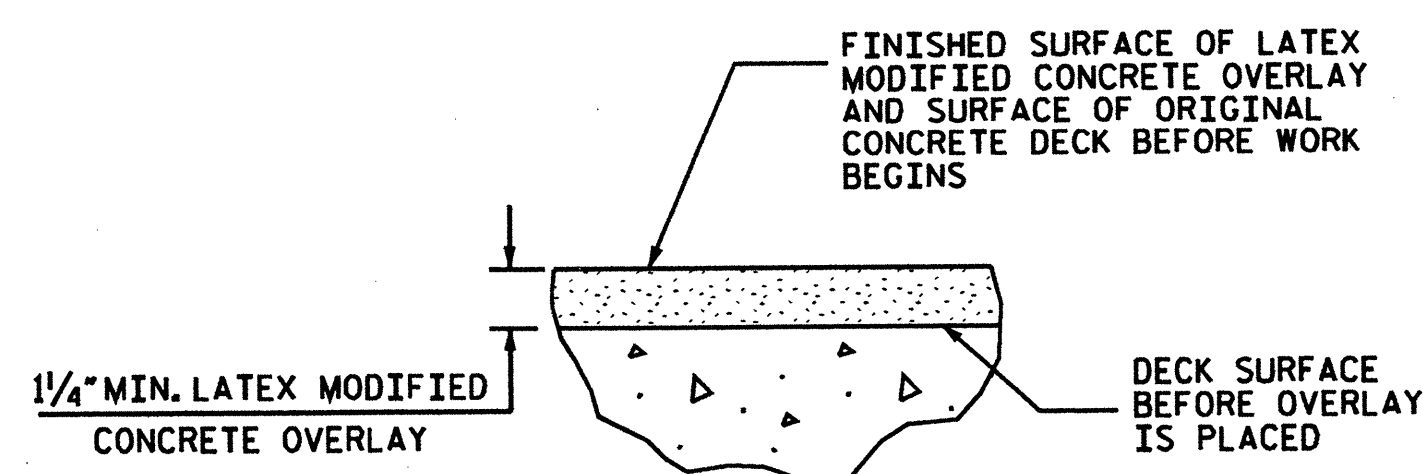
EXIST. SLAB SECTION



TYP. SECTION-NORTHBOUND LANE

(SHOWING DIAPHRAGMS AT EXPANSION JOINTS)
(SPAN C SHOWN, SPANS A & B SIM.)

- * RADIAL THRU WORKPOINT #4
- ** RADIAL DIMENSIONS TO C -L-



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

NOTES:

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

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

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 "TYP. "BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL.

THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE EVAZOTE JOINT SEAL SHALL BE 2 1/2" AT END BENTS 1 & 2 AND BENTS 1&2, FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR JOINT REPAIR, SEE SPECIAL PROVISIONS.

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

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

FOR GROOVING BRIDGE FLOORS INFORMATION, SEE "LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH" SPECIAL PROVISION.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

PROJECT NO. B-5179B
BUNCOMBE COUNTY
 STATION: 86+21.69 -L-

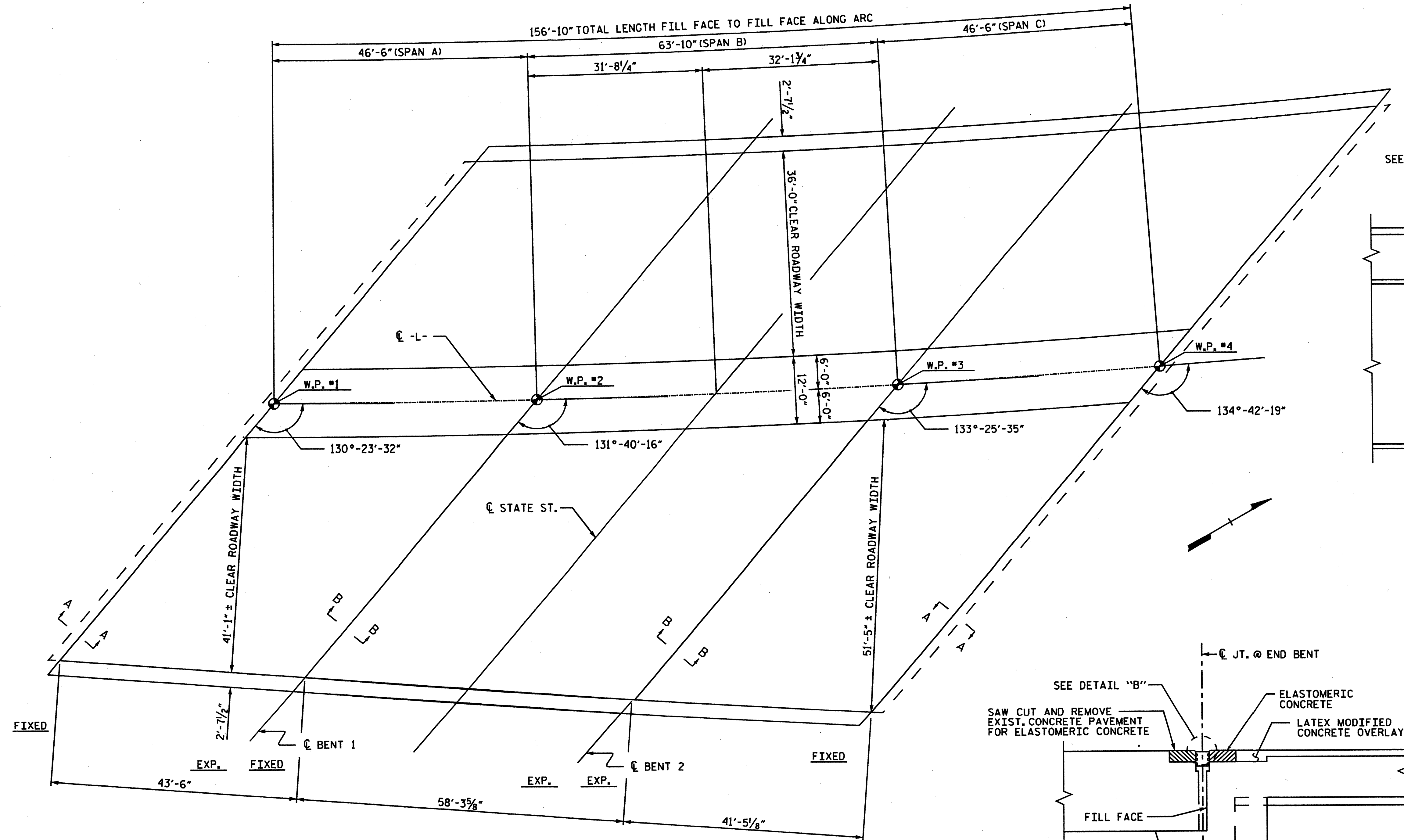
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

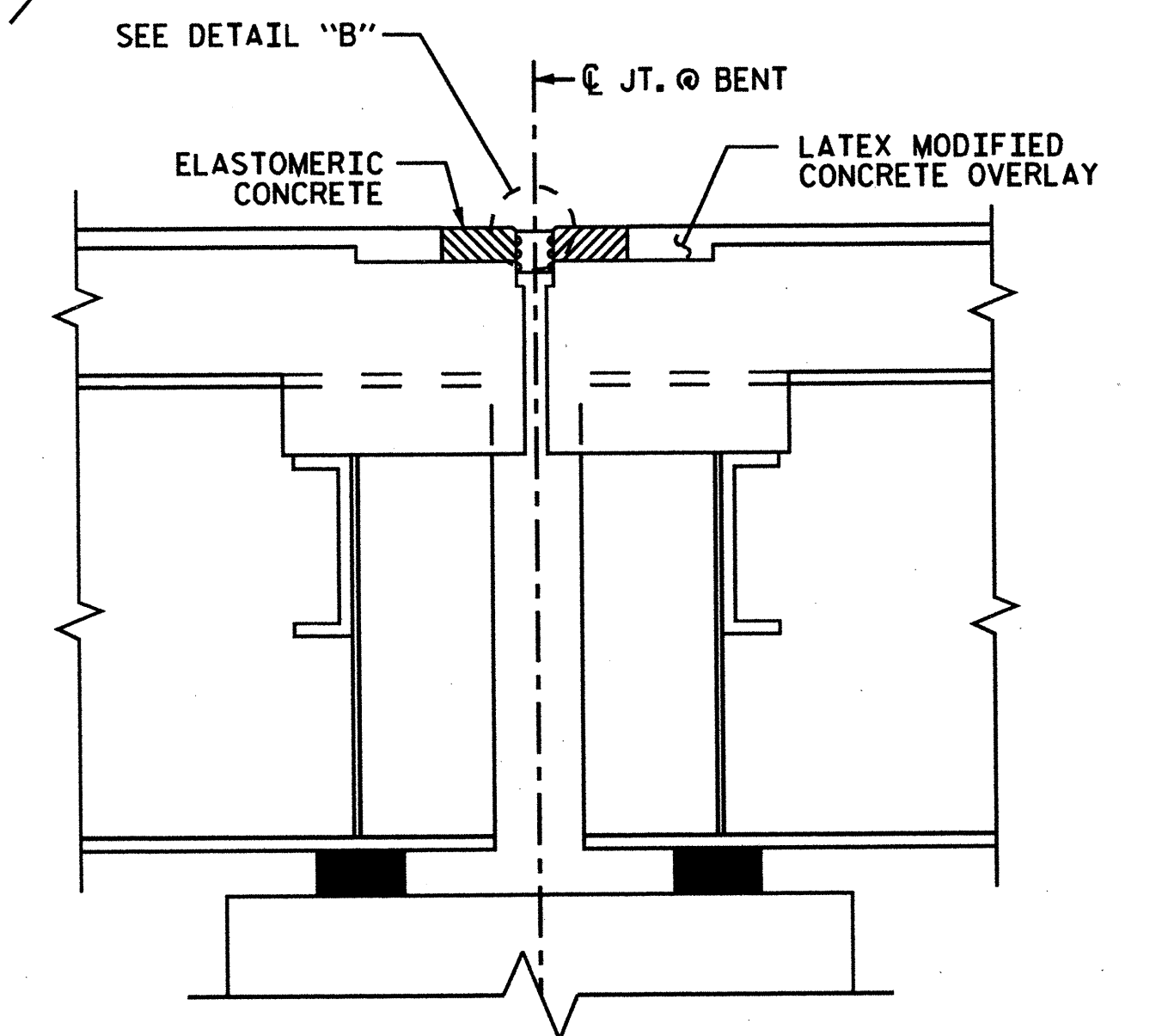
DECK REHAB. FOR BRIDGE NO. 274

REVISIONS						SHEET NO. S-13
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS 28
2			4			

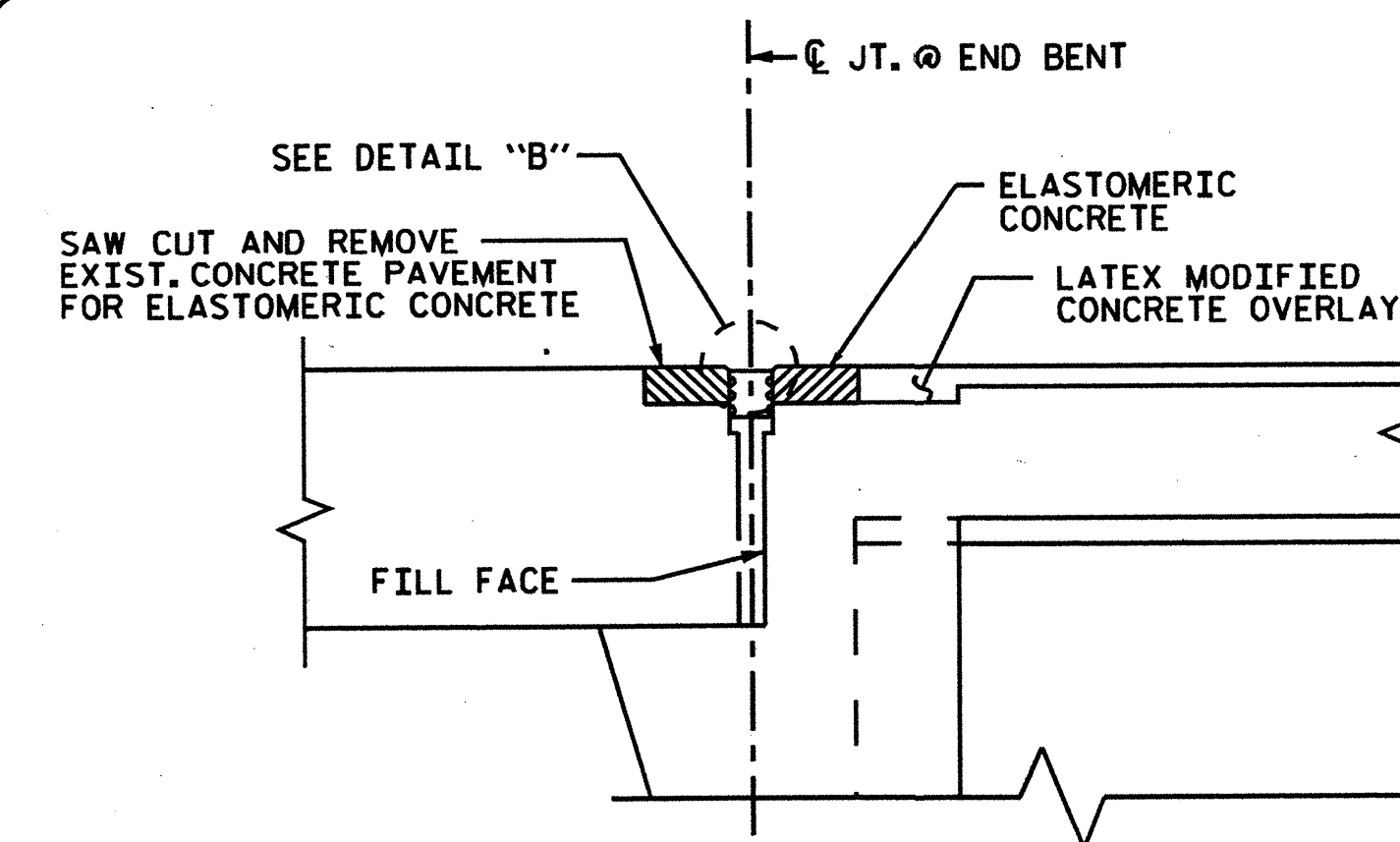
DRAWN BY: M.A. ALLEN DATE: 08-09
 CHECKED BY: R.W. WRIGHT DATE: 08-09



PLAN OF SPANS



SECTION B-B
(PROPOSED JOINT
REPLACEMENT DETAIL)



SECTION A-A
(PROPOSED JOINT
REPLACEMENT DETAIL)

PROJECT NO. B-5179B
BUNCOMBE COUNTY
 STATION: 86+21.69 -L-

SHEET 1 OF 2

TOTAL BILL OF MATERIAL										
SCARIFYING BRIDGE DECK	CLASS I* SURFACE PREPARATION	CLASS II* SURFACE PREPARATION	CLASS III* SURFACE PREPARATION	UNDER DECK CONTAINMENT	HYDRO- DEMOLITION OF BRIDGE DECK	CLASS AA CONCRETE	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING AND FINISHING OF LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH	EVAZOTE JOINT SEALS	GROOVING BRIDGE FLOORS
SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	SO. FT.	SO. YDS.	CU. YDS.	CU. YDS.	SO. YDS.	LUMP SUM	SO. FT.
1410	975	433	2	18	1410	1	98	1410	LUMP SUM	11605

* QUANTITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

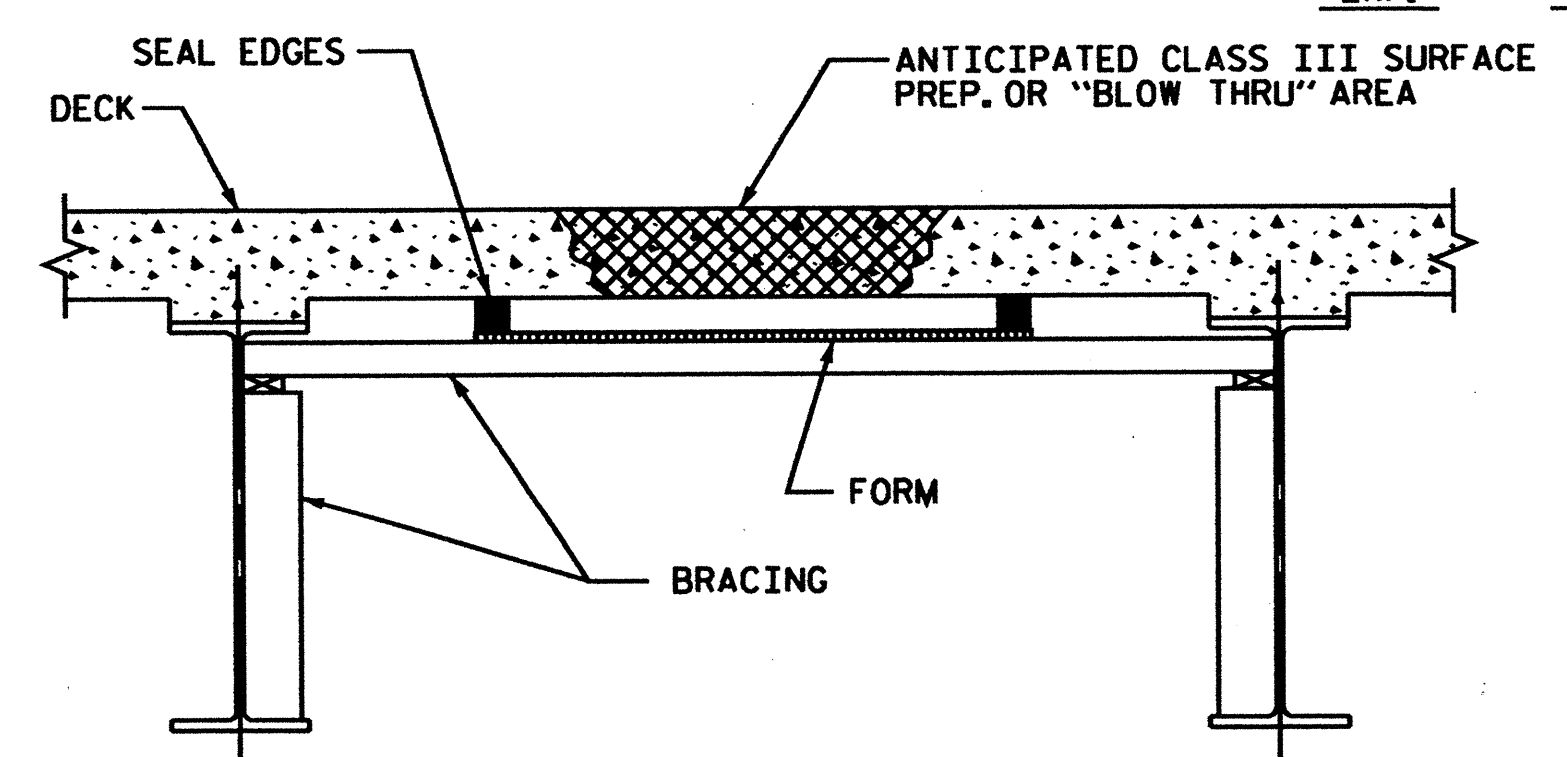
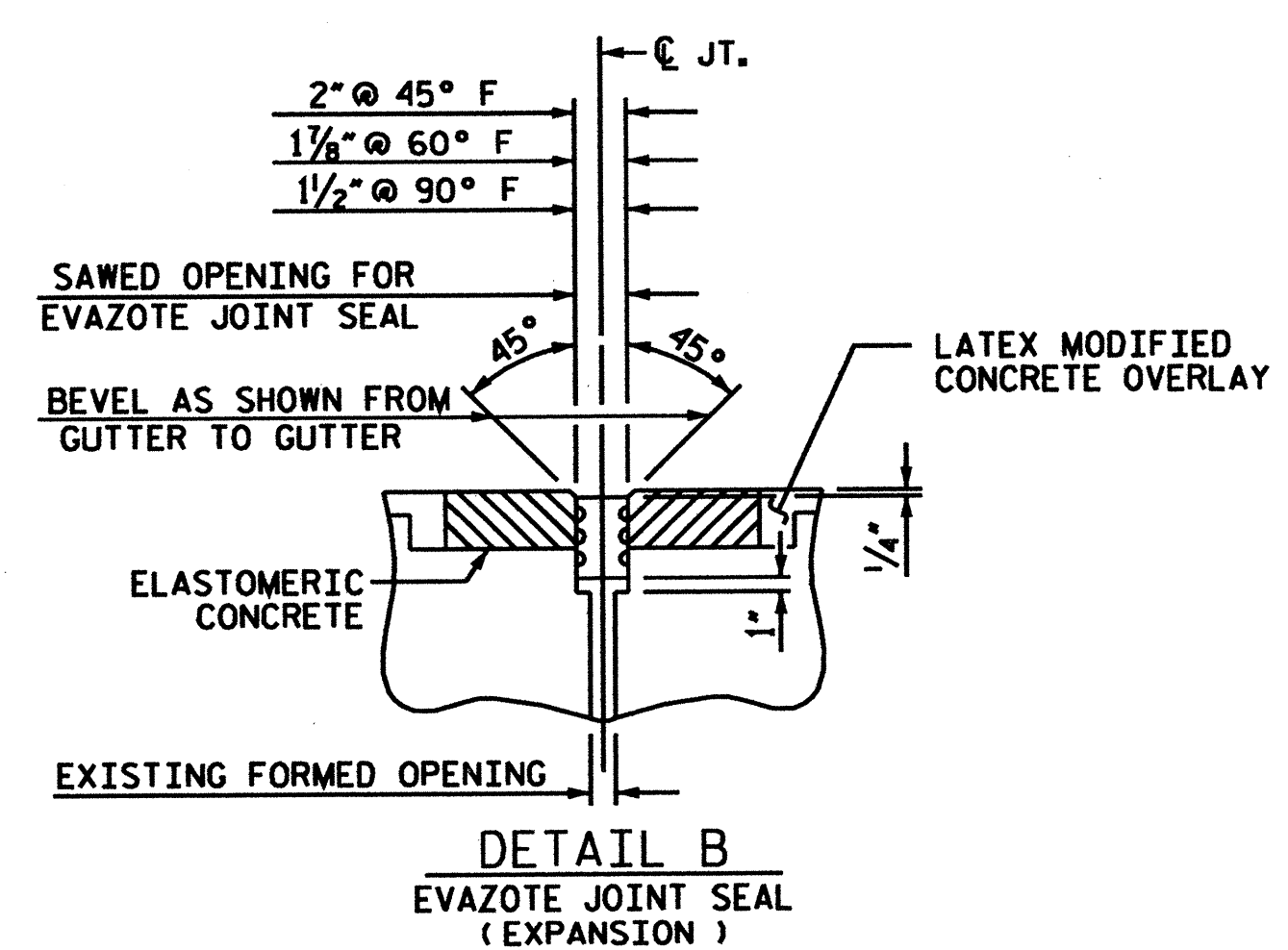
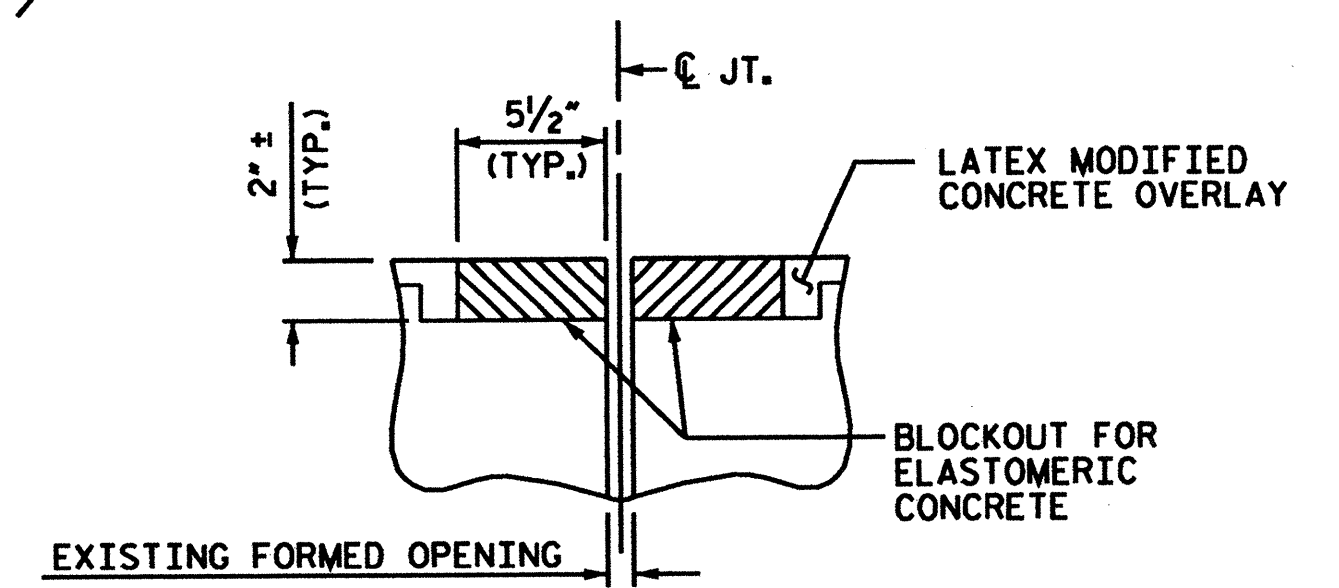
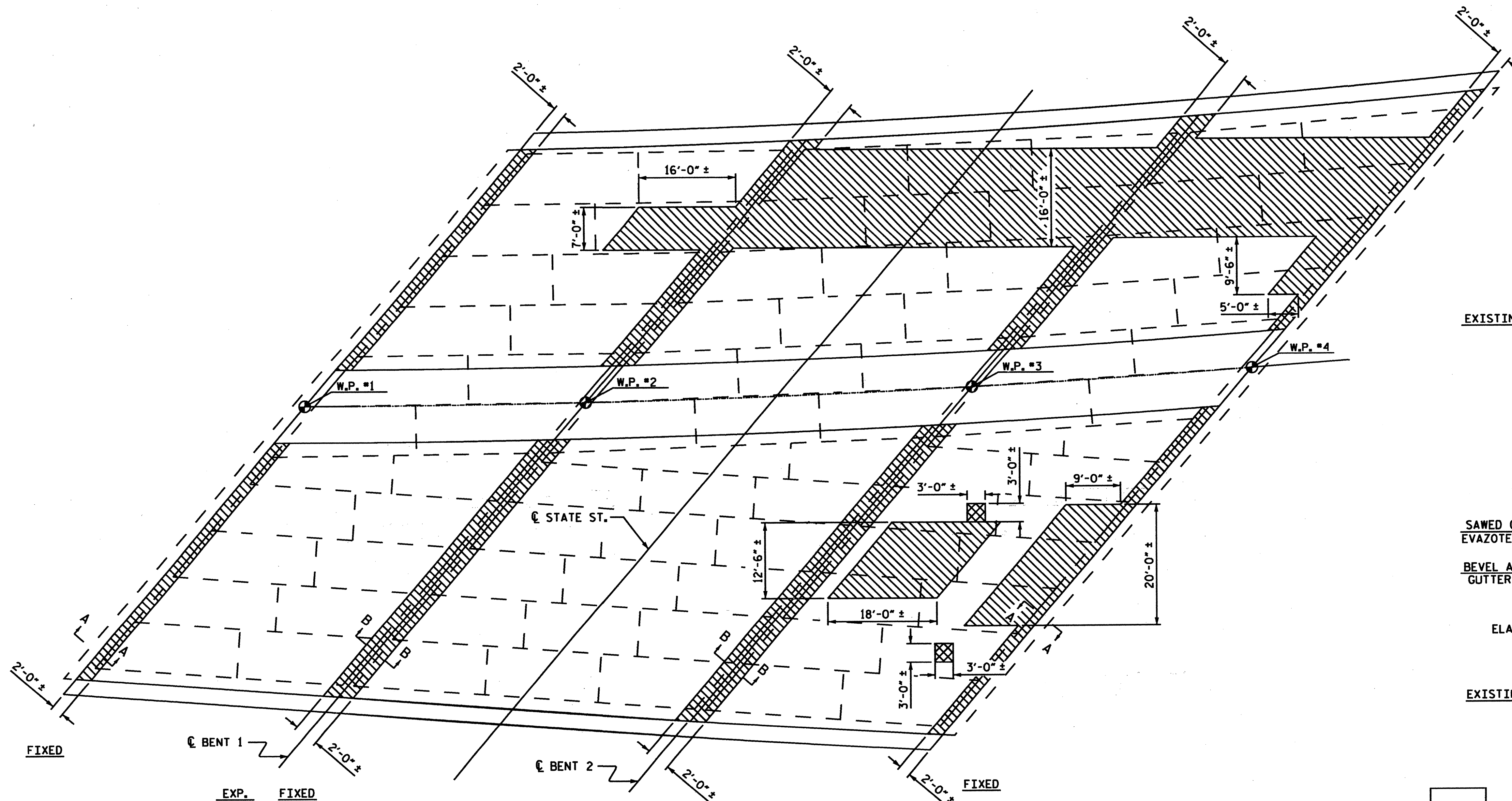
DRAWN BY: M.A. ALLEN DATE: 08-09
 CHECKED BY: R.W. WRIGHT DATE: 08-09

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

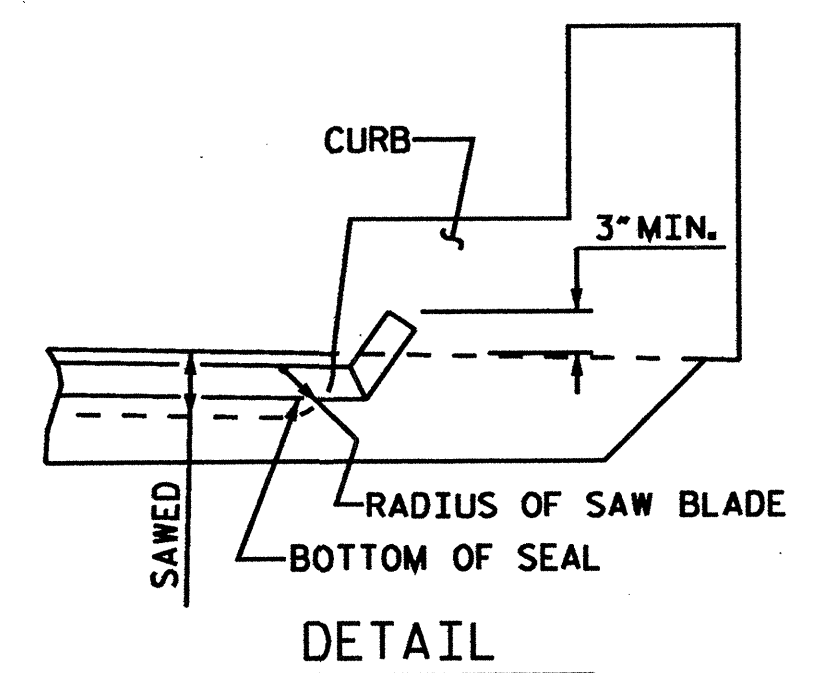
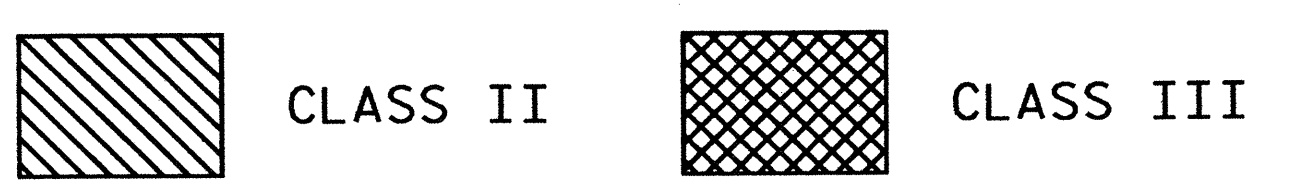
PLAN OF SPANS
 FOR DECK REPAIR

DECK REHAB. FOR BRIDGE NO. 274

REVISIONS						SHEET NO. S-14
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS 28
2			4			



PLAN OF SPANS - 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.

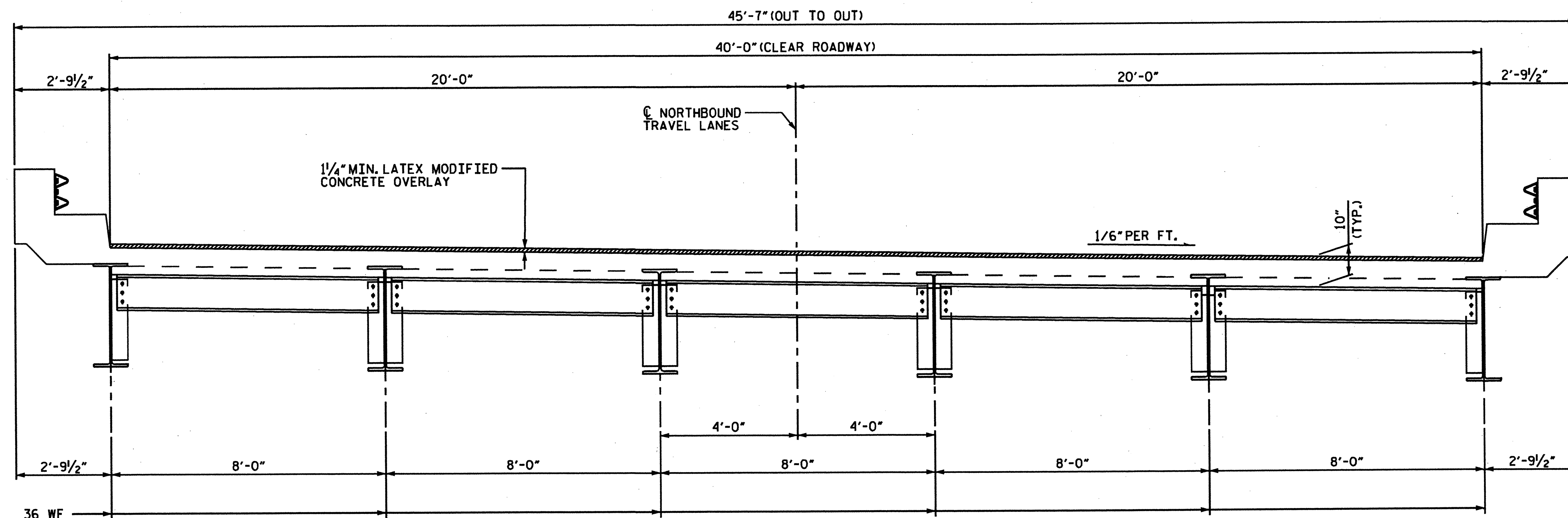
ELASTOMERIC CONCRETE	
BENT NO.	ELASTOMERIC CONCRETE * (CU. FT.)
E.B. 1	15.1
BENT 1	16.0
BENT 2	17.4
E.B. 2	18.7
TOTAL	67.2

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

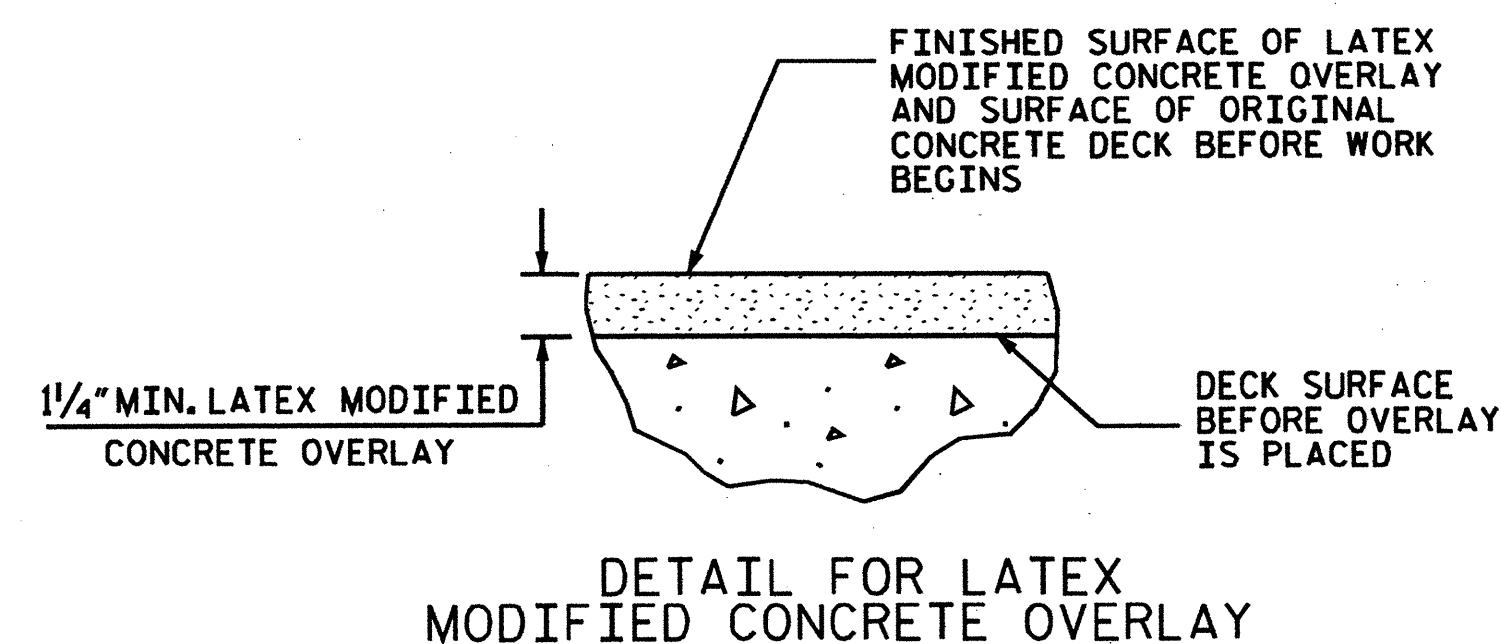
PROJECT NO. B-5179B
BUNCOMBE COUNTY
 STATION: 86+21.69 -L-
 SHEET 2 OF 2

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PLAN OF SPANS FOR DECK REPAIR					
DECK REHAB. FOR BRIDGE NO. 274					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
SHEET NO. S-15					TOTAL SHEETS 28

DRAWN BY: M.A. ALLEN DATE: 08-09
 CHECKED BY: R.W. WRIGHT DATE: 08-09



TYP. SECTION
(SHOWING DIAPHRAGMS AT EXPANSION JOINTS)



NOTES:

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

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

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 "TYP. "BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL.

THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE EVAZOTE JOINT SEAL SHALL BE 2 1/2" AT END BENTS 1 & 2 AND BENTS 1&2. FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR JOINT REPAIR, SEE SPECIAL PROVISIONS.

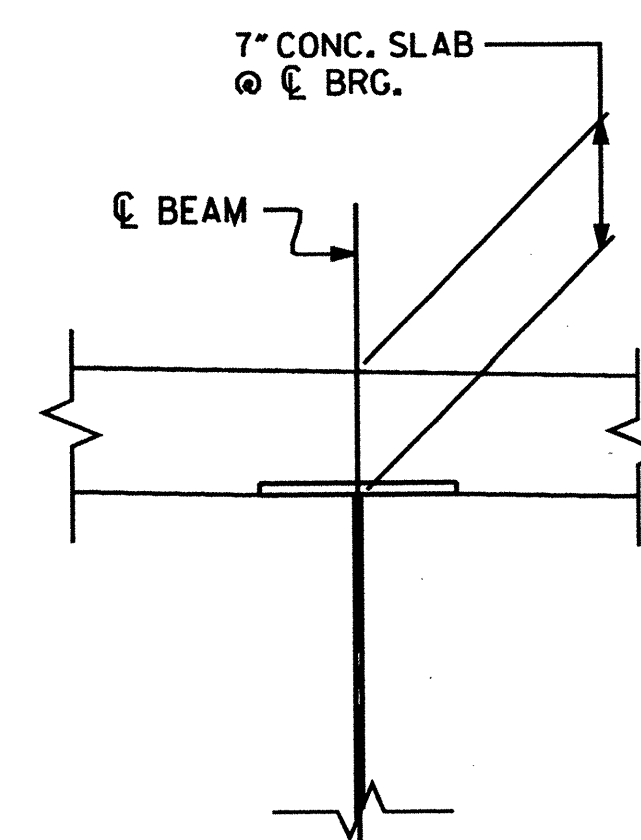
LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH.

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

FOR GROOVING BRIDGE FLOORS INFORMATION, SEE "LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH" SPECIAL PROVISION.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.



EXIST. SLAB SECTION

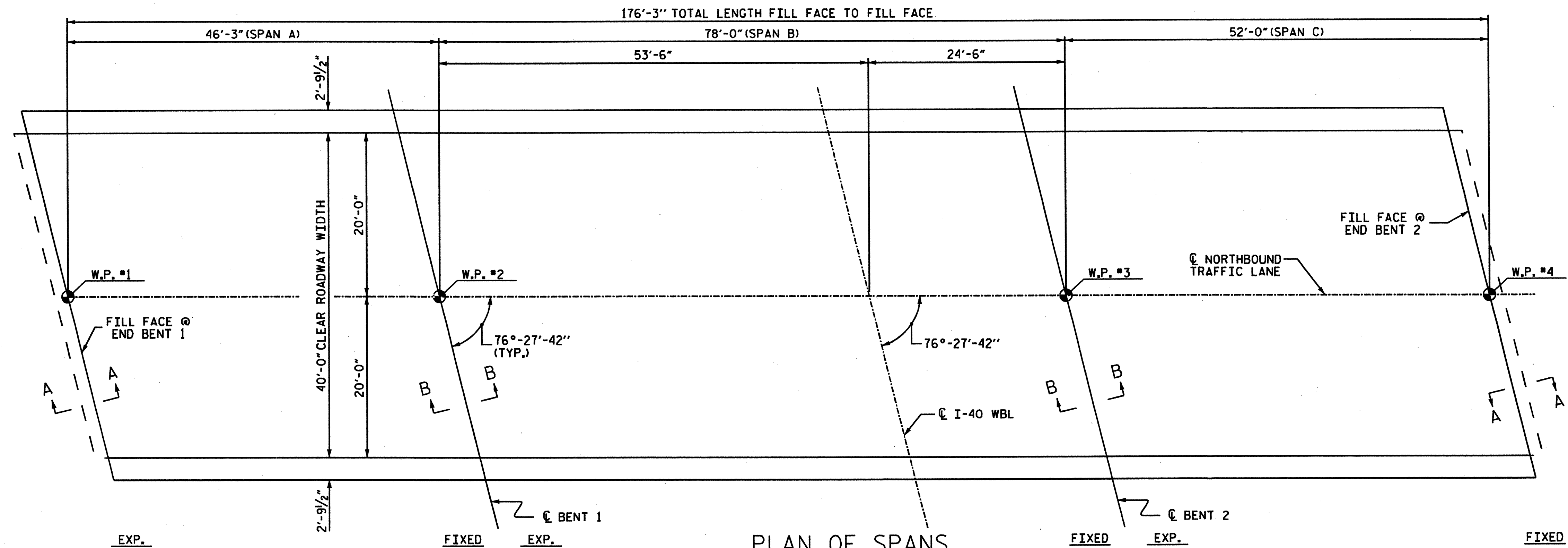
PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 615+00.74 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
TYPICAL SECTION

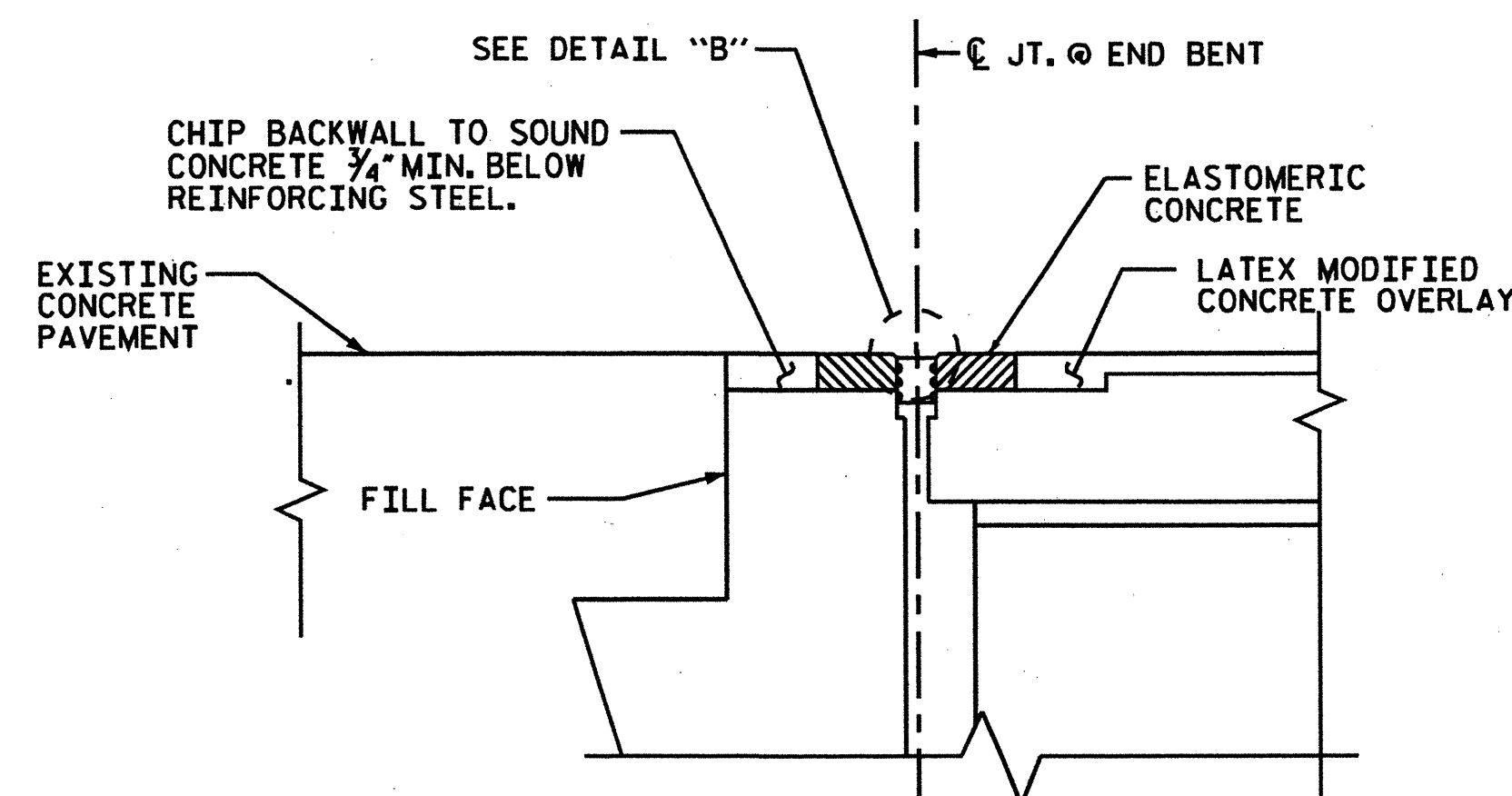
DECK REHAB. FOR BRIDGE NO. 283

REVISIONS				SHEET NO. S-16
NO.	BY	DATE	NO.	
1			3	TOTAL SHEETS 28
2			4	

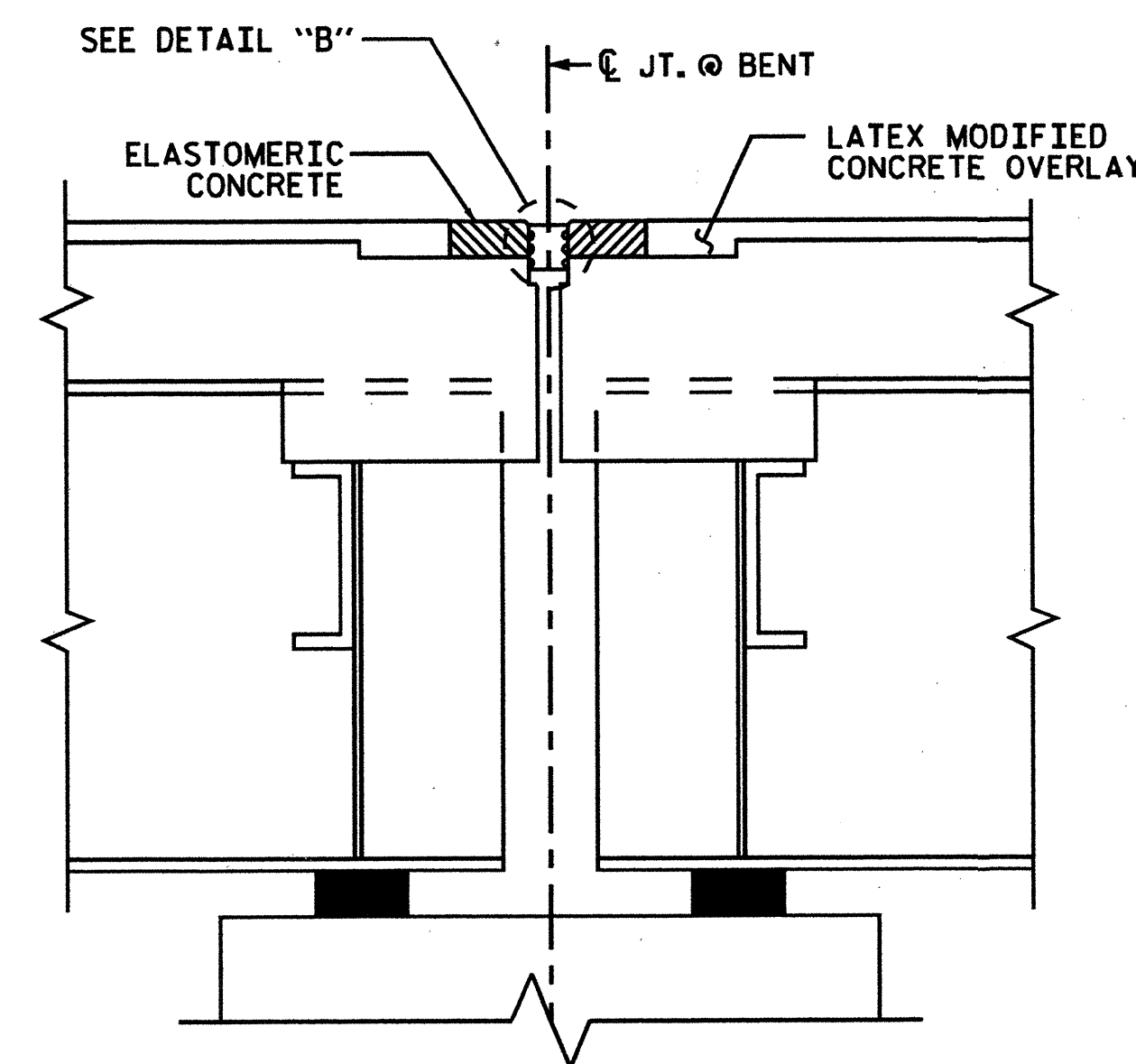
DRAWN BY : M.A. ALLEN DATE : 08-09
CHECKED BY : R.W. WRIGHT DATE : 08-09



PLAN OF SPANS



SECTION A-A
(PROPOSED JOINT REPLACEMENT DETAIL)



SECTION B-B
(PROPOSED JOINT REPLACEMENT DETAIL)

PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 615+00.74 -L-

SHEET 1 OF 2

TOTAL BILL OF MATERIAL										
SCARIFYING BRIDGE DECK	CLASS I* SURFACE PREPARATION	CLASS II* SURFACE PREPARATION	CLASS III** SURFACE PREPARATION	UNDER DECK CONTAINMENT	HYDRO- DEMOLITION OF BRIDGE DECK	CLASS AA CONCRETE	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING AND FINISHING OF LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH	EVAZOTE JOINT SEALS	GROOVING BRIDGE FLOORS
SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	SO. FT.	SO. YDS.	CU. YDS.	CU. YDS.	SO. YDS.	LUMP SUM	SO. FT.
790	506	284	0	0	790	0	55	790	LUMP SUM	6520

* QUANTITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

** NO LOCATIONS ARE ANTICIPATED. IF ANY LOCATIONS ARE ENCOUNTERED PRIOR TO OR DURING HYDRO-DEMOLITION, SEE "TYP. "BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL.

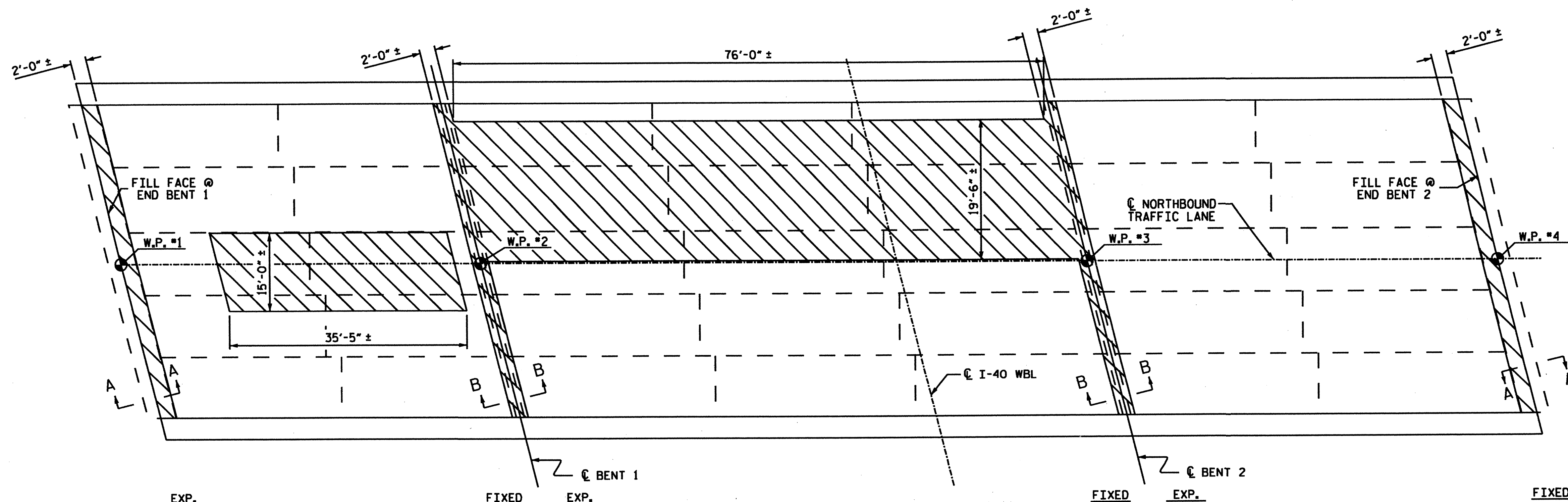
DRAWN BY: M.A. ALLEN DATE: 08-09
CHECKED BY: R.W. WRIGHT DATE: 08-09

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

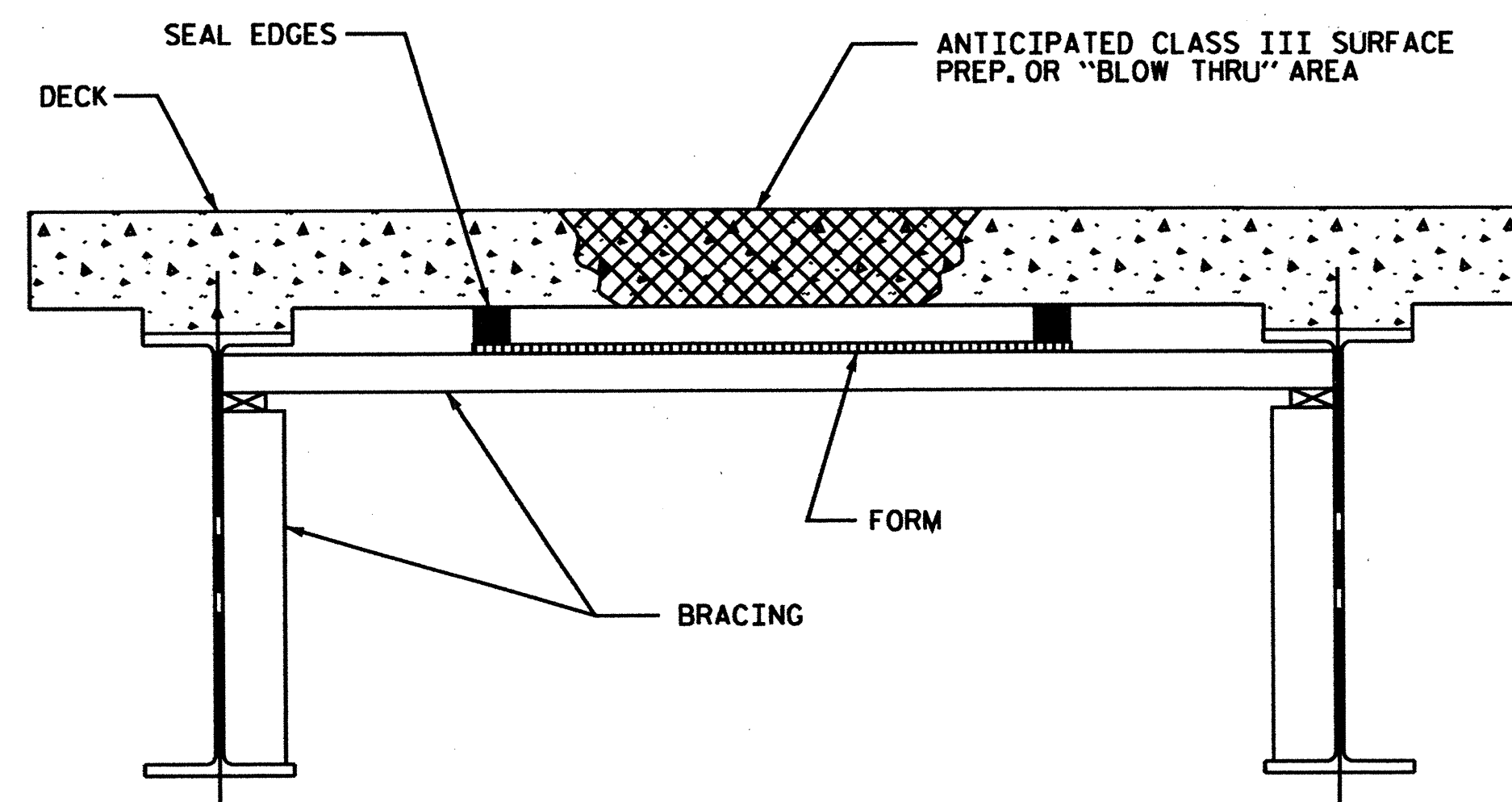
PLAN OF SPANS
FOR DECK REPAIR

DECK REHAB. FOR BRIDGE NO. 283

REVISIONS						SHEET NO. S-17
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS 28
2			4			



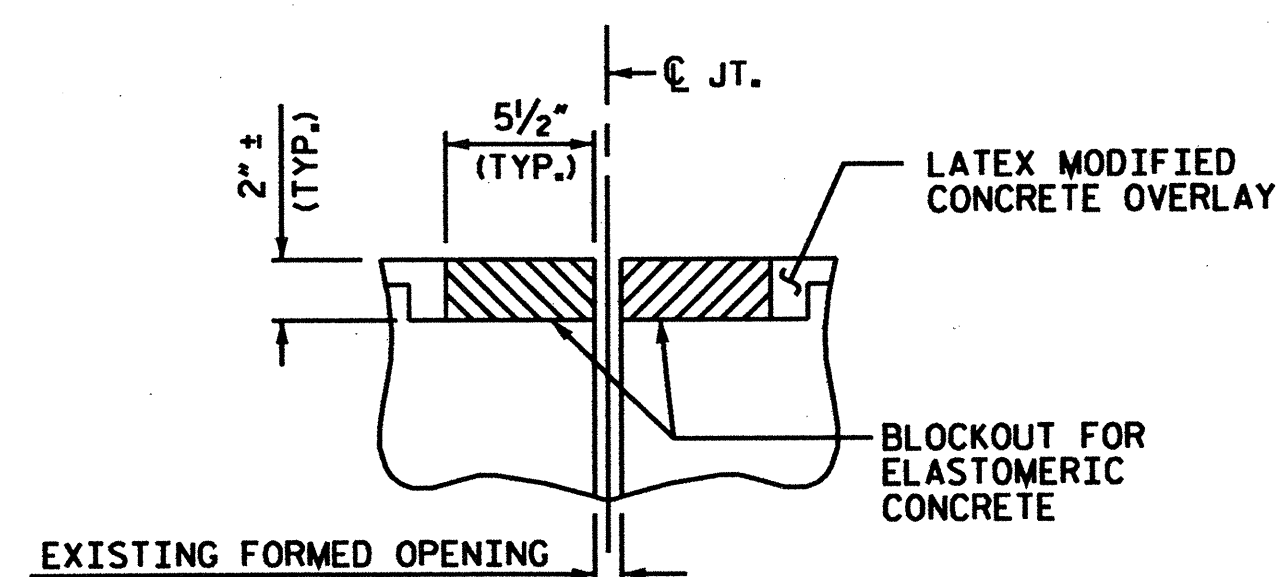
PLAN OF SPANS - DECK REPAIRS



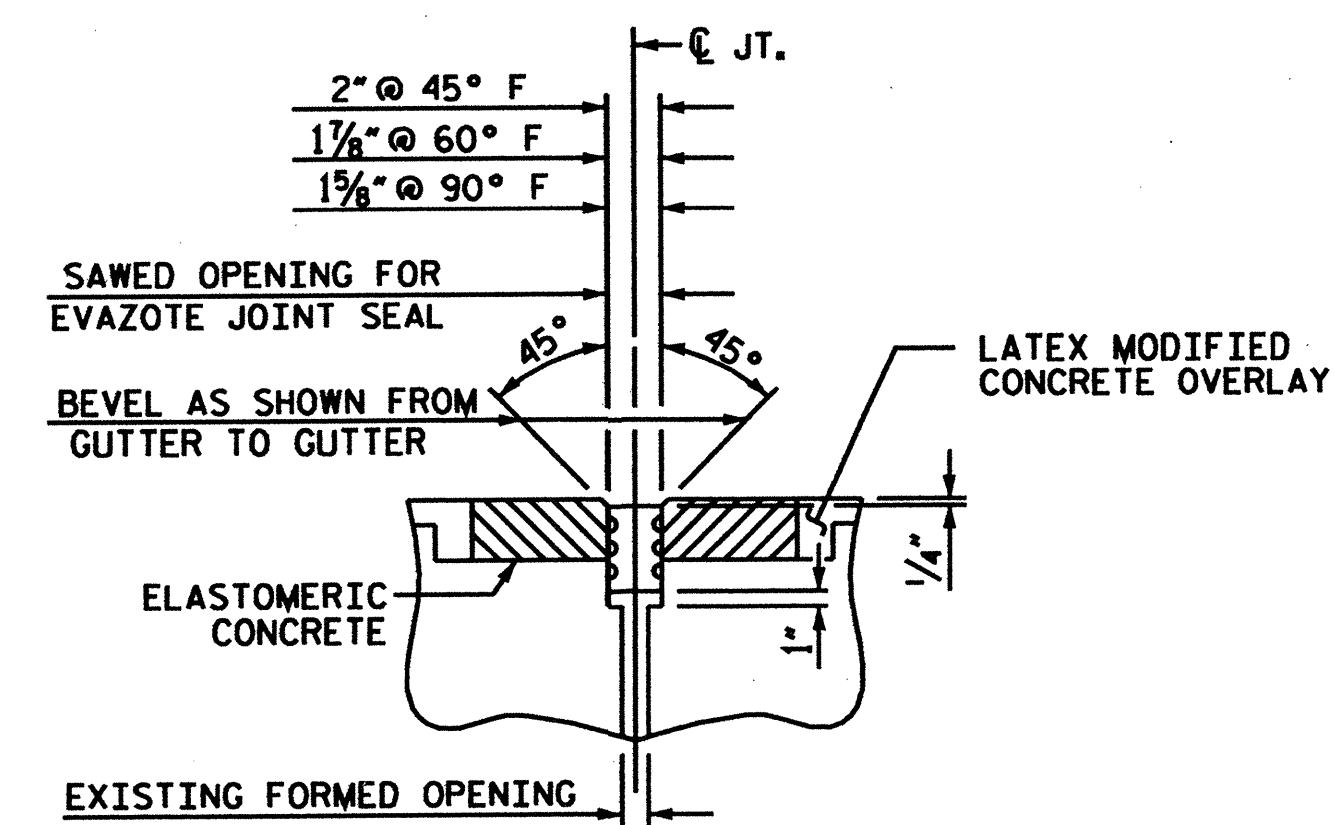
TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

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.

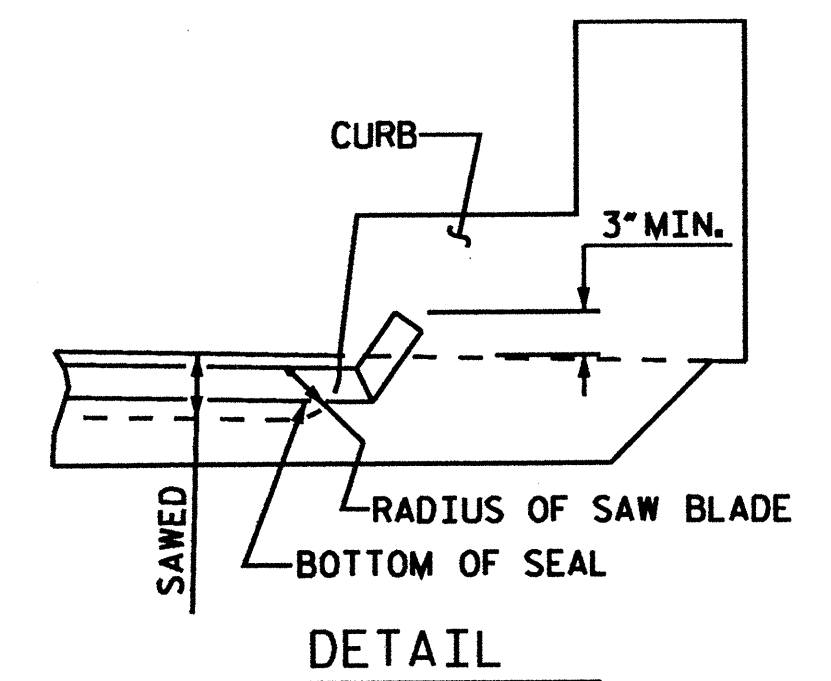


DETAIL B
EVAZOTE JOINT SEAL
(PRE-SAWED ELASTOMERIC
CONCRETE DIMENSIONS)



DETAIL B
EVAZOTE JOINT SEAL
(EXPANSION)

NOTE:
FOR FIXED JOINT, SAW CUT
WIDTH SHALL BE 1 1/4" AND
CENTERED ABOUT THE JOINT.



DETAIL

ELASTOMERIC CONCRETE	
BENT NO.	ELASTOMERIC CONCRETE * (CU. FT.)
E.B. 1	6.3
BENT 1	6.3
BENT 2	6.3
E.B. 2	6.3
TOTAL	25.2

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 615+00.74 -L-

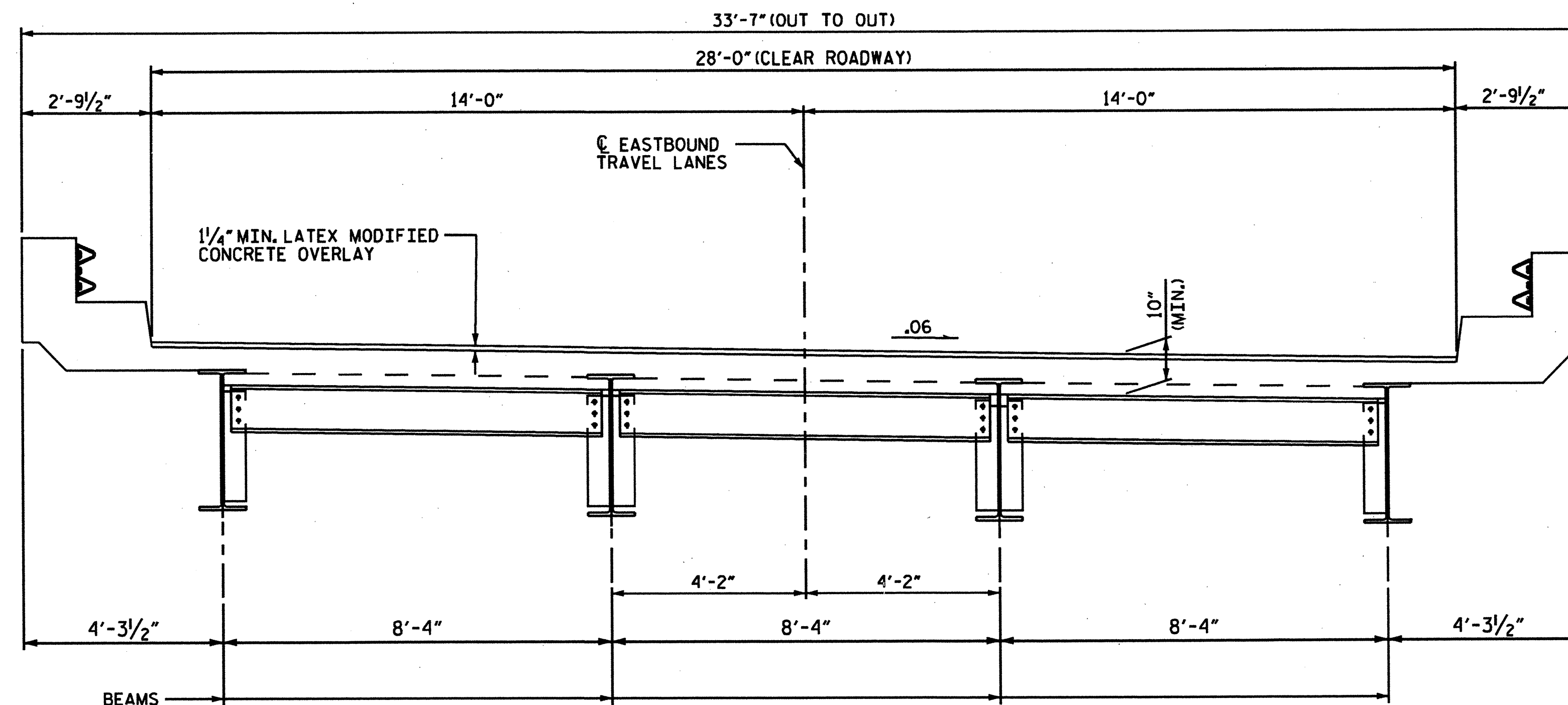
SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

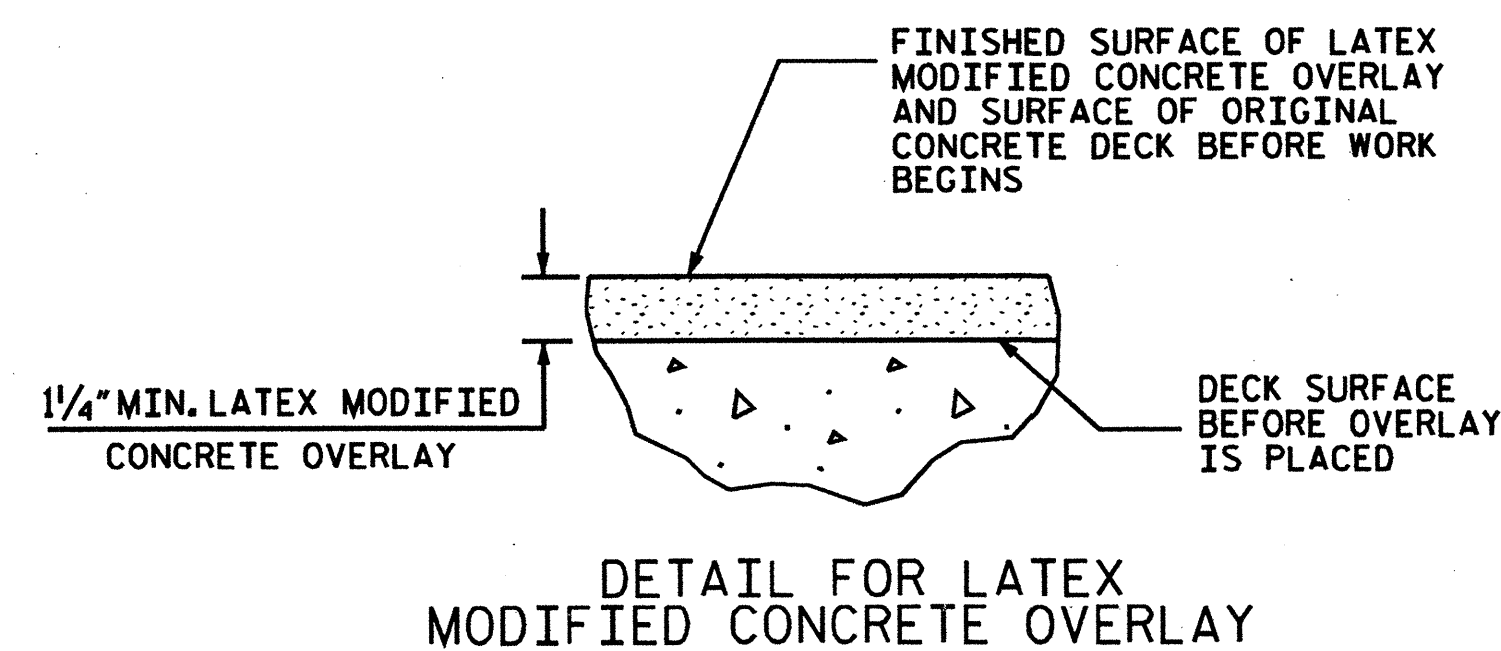
PLAN OF SPANS
FOR DECK REPAIR

DECK REHAB. FOR BRIDGE NO. 283

REVISIONS						SHEET NO. S-18
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS 28
2			4			

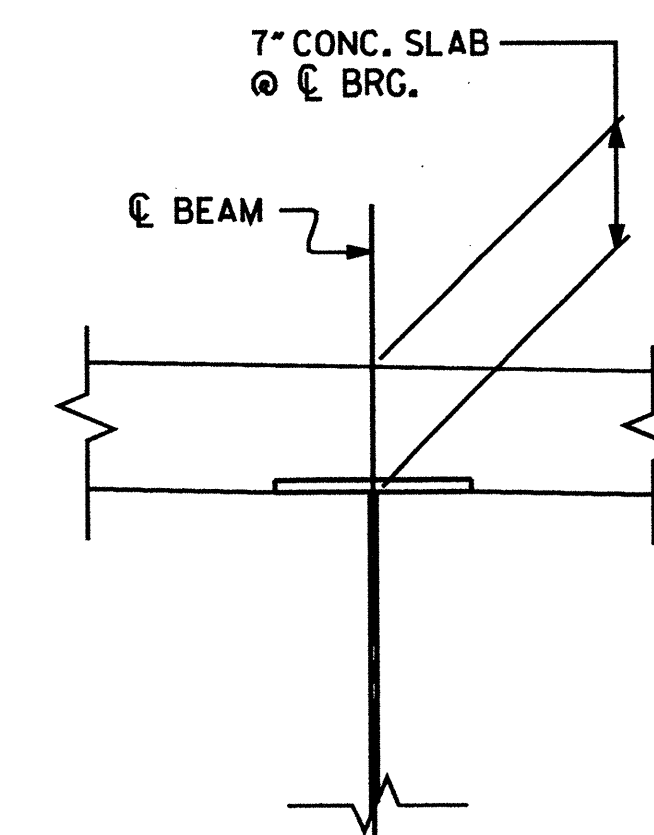


TYP. SECTION
 (SHOWING DIAPHRAGMS AT EXPANSION JOINTS)



NOTES:

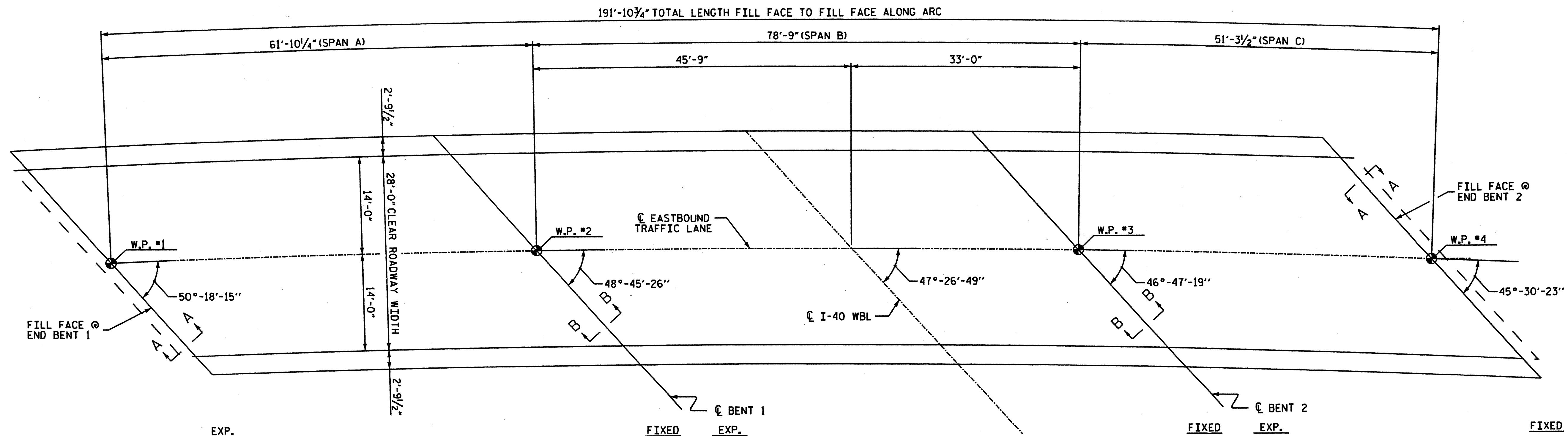
- FOR HYDRO-DEMOLITION OF BRIDGE DECK, SEE SPECIAL PROVISIONS.
- THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE "HYDRO-DEMOLITION OF BRIDGE DECK" SPECIAL PROVISION.
- THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS III SURFACE PREPARATION ARE APPROXIMATE. THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK. SEE "TYP. "BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL.
- THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE EVAZOTE JOINT SEAL SHALL BE 2 1/2" AT END BENTS 1 & 2 AND BENTS 1&2. FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE FOR JOINT REPAIR, SEE SPECIAL PROVISIONS.
- LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH.
- FOR LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.
- FOR GROOVING BRIDGE FLOORS INFORMATION, SEE "LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH" SPECIAL PROVISION.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.



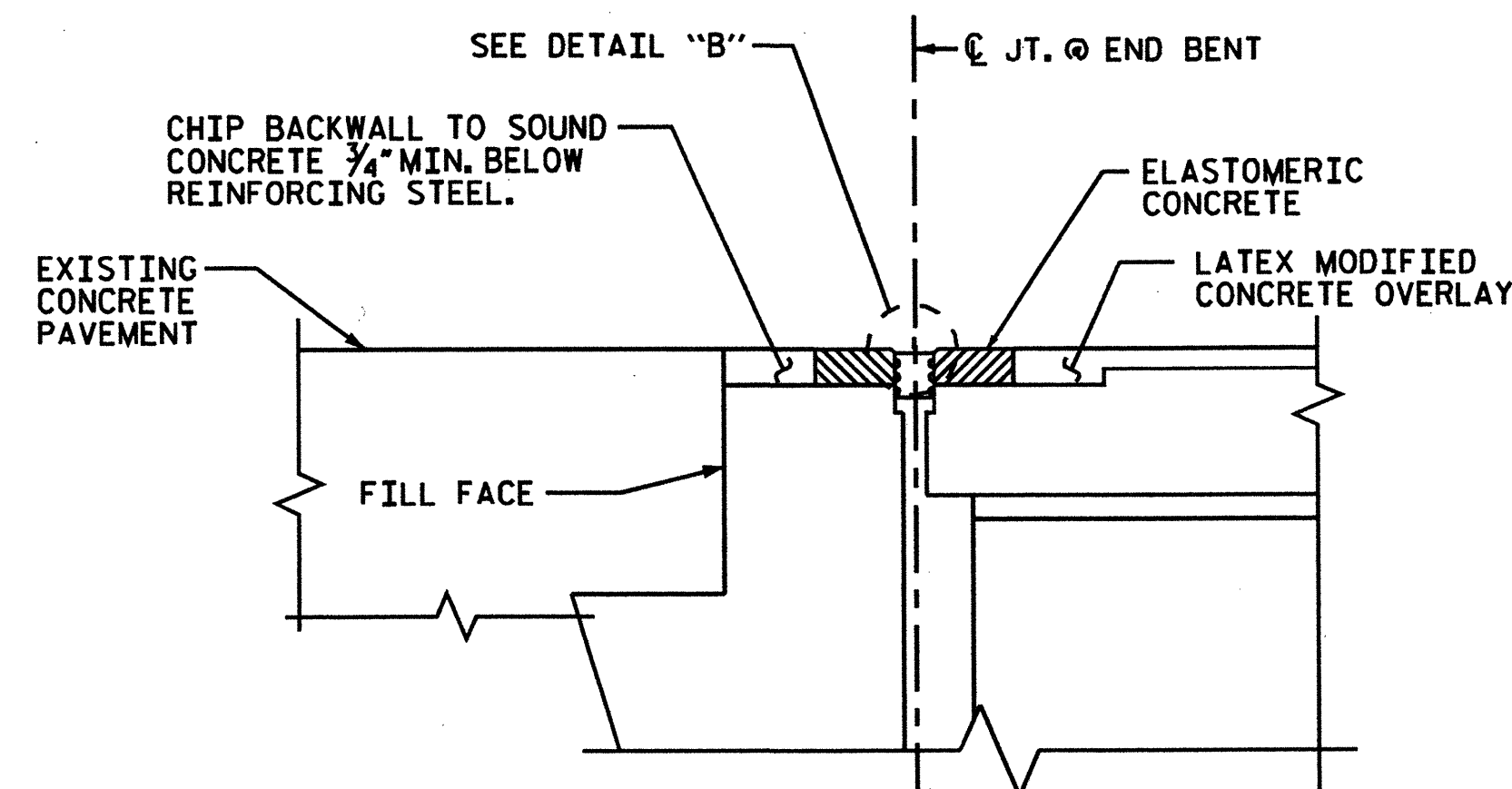
EXIST. SLAB SECTION

PROJECT NO. B-5179B
BUNCOMBE COUNTY
 STATION: 617+63.12 -L-

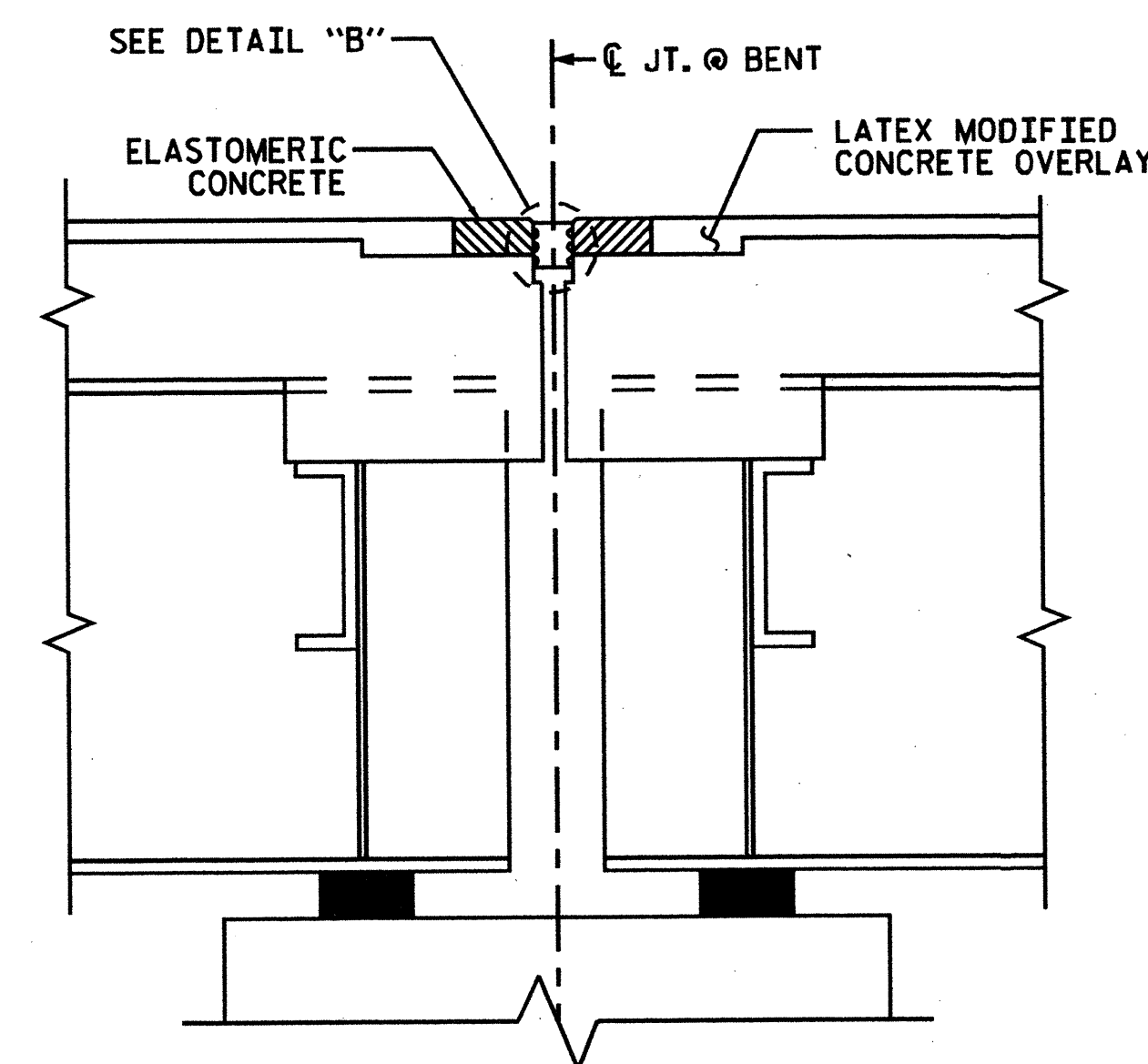
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
TYPICAL SECTION					
DECK REHAB. FOR BRIDGE NO. 285					
REVISIONS					SHEET NO. S-19
NO.	BY	DATE	NO.	DATE	
1			3		TOTAL SHEETS 28
2			4		



PLAN OF SPANS



SECTION A-A
(PROPOSED JOINT REPLACEMENT DETAIL)



SECTION B-B
(PROPOSED JOINT REPLACEMENT DETAIL)

TOTAL BILL OF MATERIAL

SCARIFYING BRIDGE DECK	CLASS I* SURFACE PREPARATION	CLASS II* SURFACE PREPARATION	CLASS III** SURFACE PREPARATION	UNDER DECK CONTAINMENT	HYDRO- DEMOLITION OF BRIDGE DECK	CLASS AA CONCRETE	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING AND FINISHING OF LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH	EVAZOTE JOINT SEALS	GROOVING BRIDGE FLOORS
SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	SO. FT.	SO. YDS.	CU. YDS.	CU. YDS.	SO. YDS.	LUMP SUM	SO. FT.
600	508	92	0	0	600	0	42	600	LUMP SUM	4800

* QUANTITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

** NO LOCATIONS ARE ANTICIPATED. IF ANY LOCATIONS ARE ENCOUNTERED PRIOR TO OR DURING HYDRO-DEMOLITION, SEE "TYP. "BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL.

DRAWN BY : M.A. ALLEN DATE : 08-09
CHECKED BY : R.W. WRIGHT DATE : 08-09

PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 617+63.12 -L-

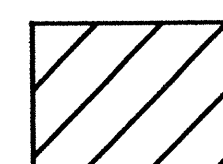
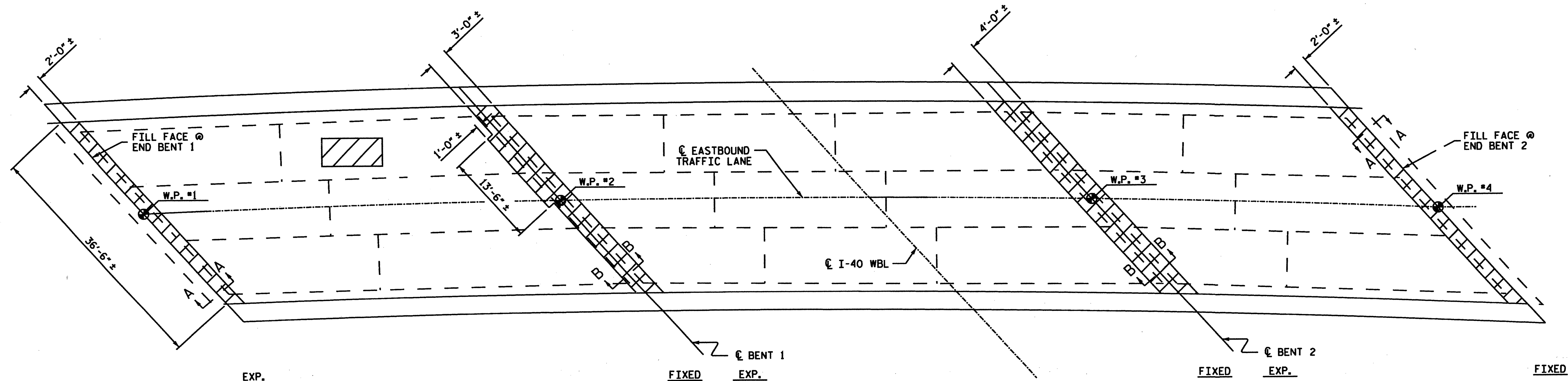
SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

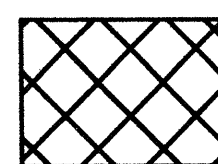
PLAN OF SPANS
FOR DECK REPAIR

DECK REHAB. FOR BRIDGE NO. 285

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			5-20
2			4			TOTAL SHEETS 28

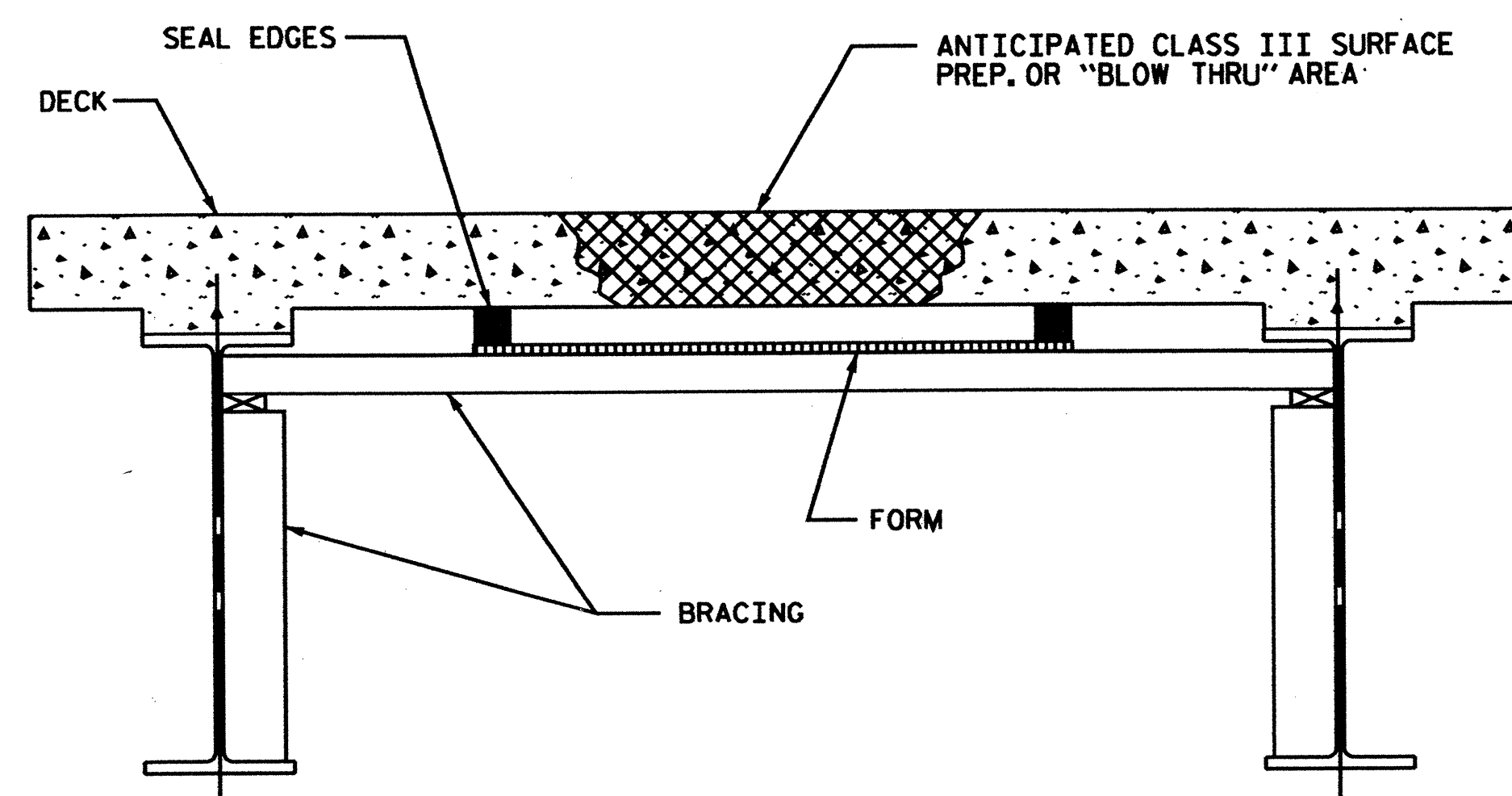


CLASS II



CLASS III

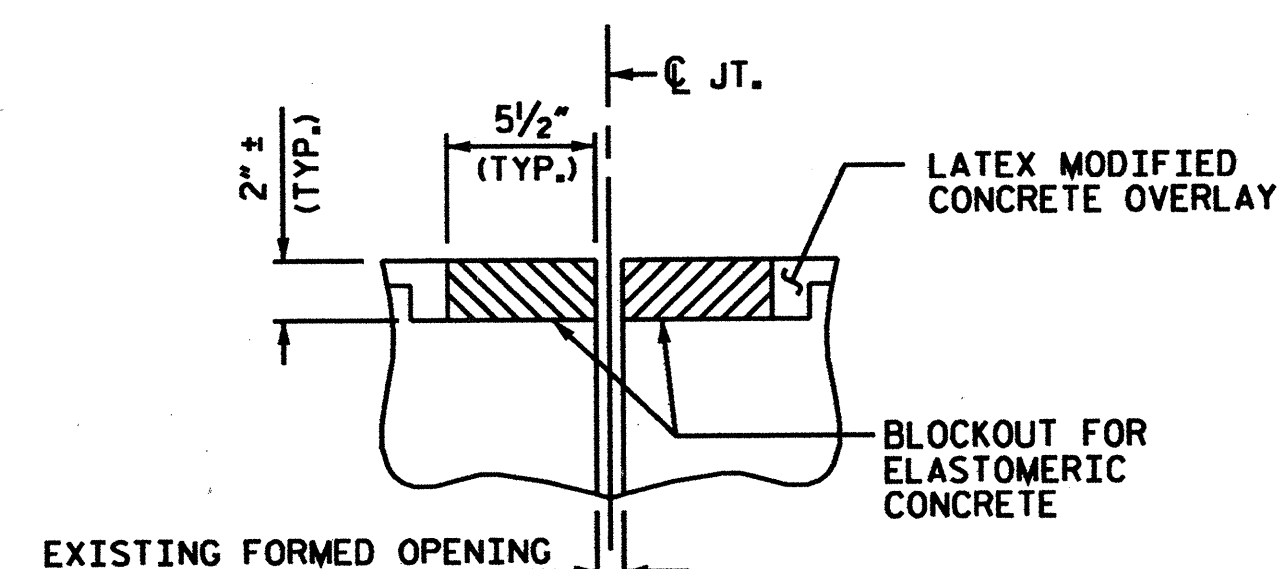
PLAN OF SPANS - DECK REPAIRS



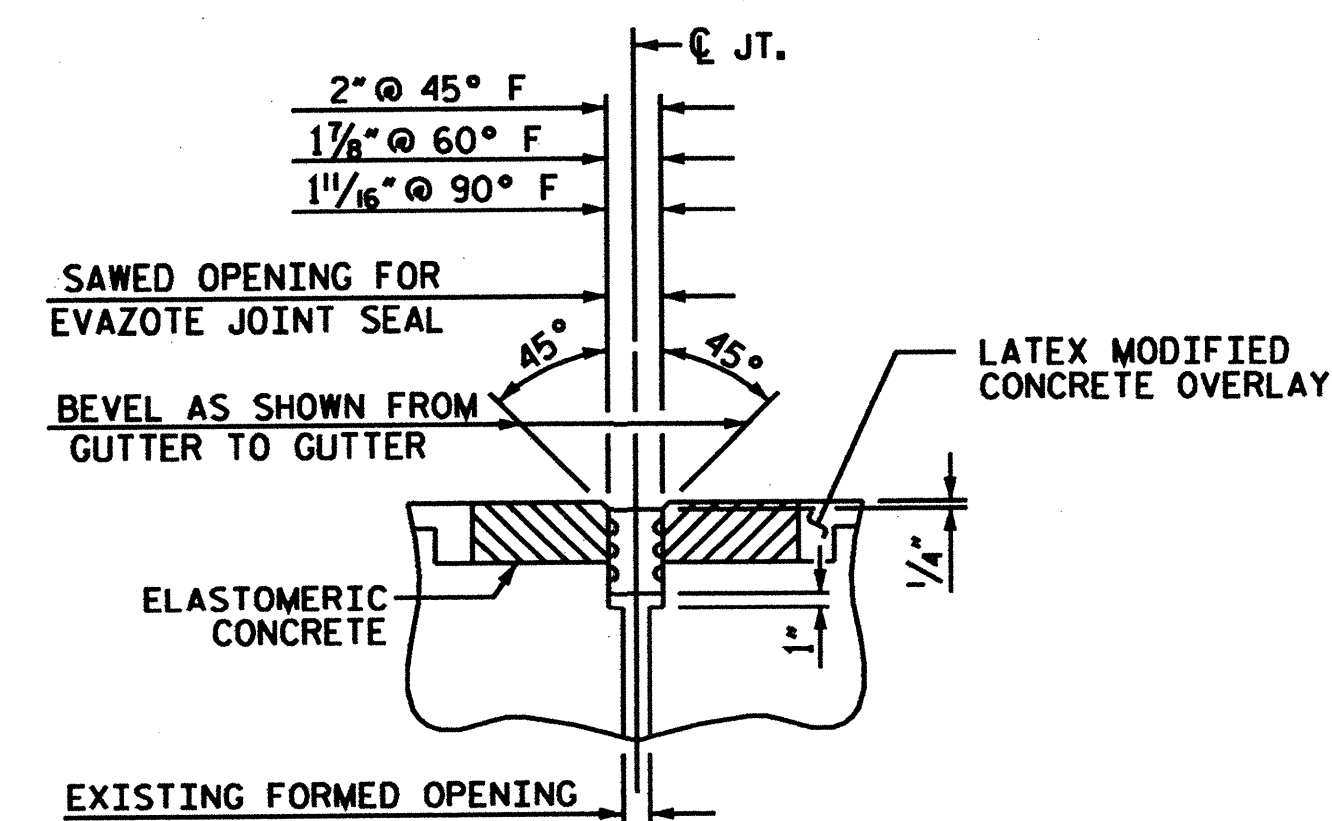
TYP. "BLOW THRU" CONTAINMENT AND FORMWORK

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.

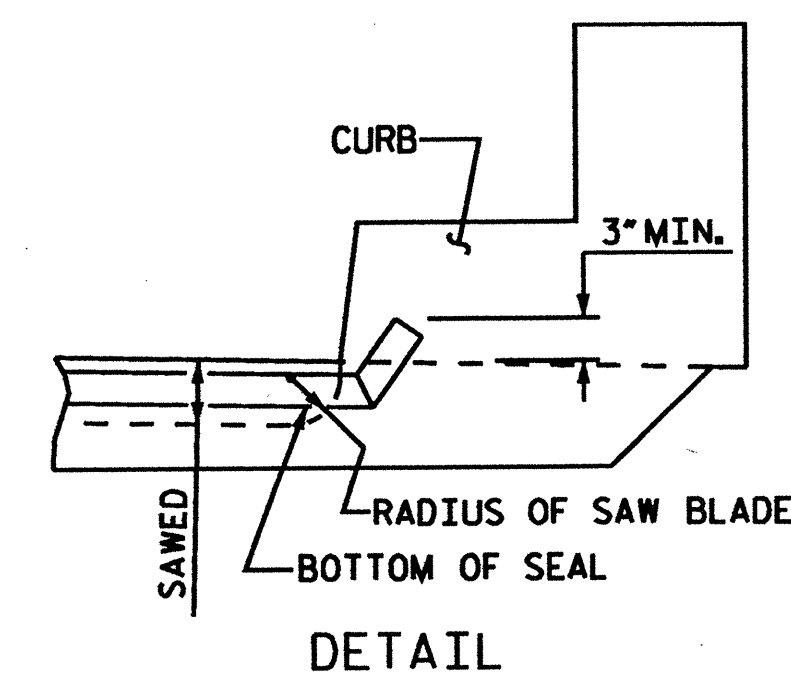


DETAIL B
EVAZOTE JOINT SEAL
(PRE-SAWED ELASTOMERIC
CONCRETE DIMENSIONS)



DETAIL B
EVAZOTE JOINT SEAL
(EXPANSION)

NOTE:
FOR FIXED JOINT, SAW CUT
WIDTH SHALL BE 1 1/8" AND
CENTERED ABOUT THE JOINT.



DETAIL

ELASTOMERIC CONCRETE	
BENT NO.	ELASTOMERIC CONCRETE * (CU. FT.)
E.B. 1	5.8
BENT 1	5.8
BENT 2	5.8
E.B. 2	5.8
TOTAL	23.2

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 617+63.12 -L-

SHEET 2 OF 2

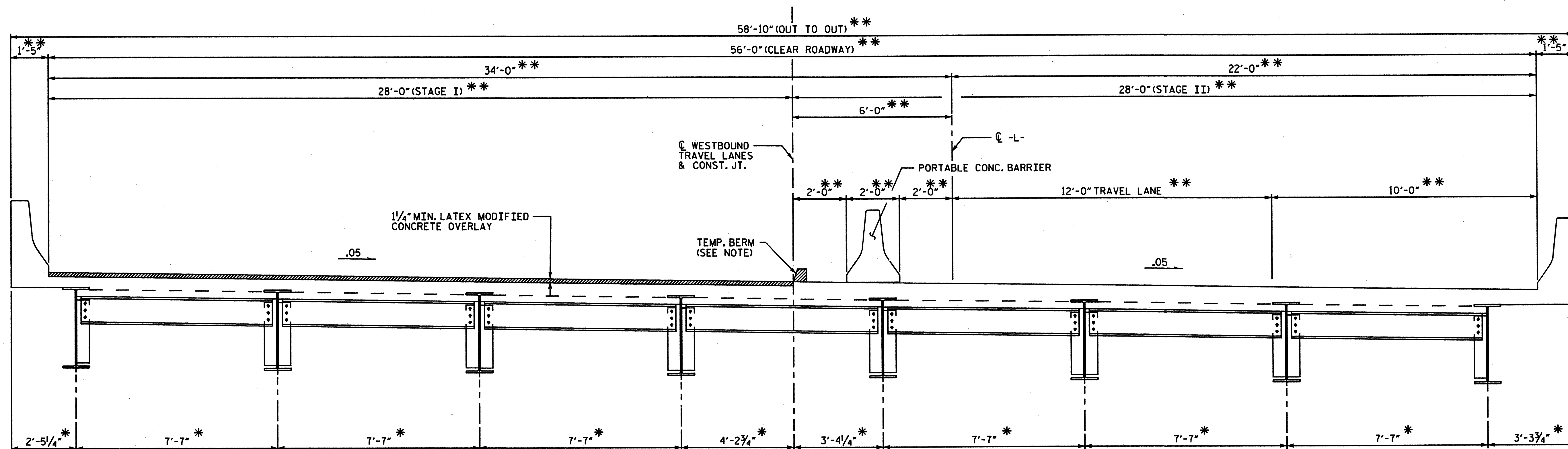
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS FOR DECK REPAIR

DECK REHAB. FOR BRIDGE NO. 285

REVISIONS						SHEET NO. S-21 TOTAL SHEETS 28
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

DRAWN BY: M.A. ALLEN DATE: 08-09
CHECKED BY: R.W. WRIGHT DATE: 08-09



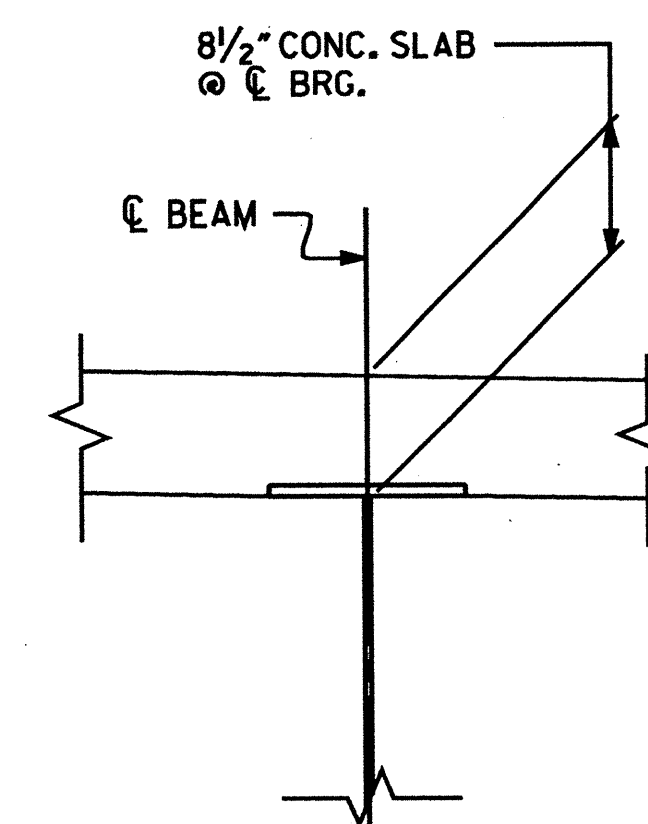
TYP. SECTION - STAGE I

(SHOWING DIAPHRAGMS AT EXPANSION JOINTS)

* RADIAL THRU WORKPOINT

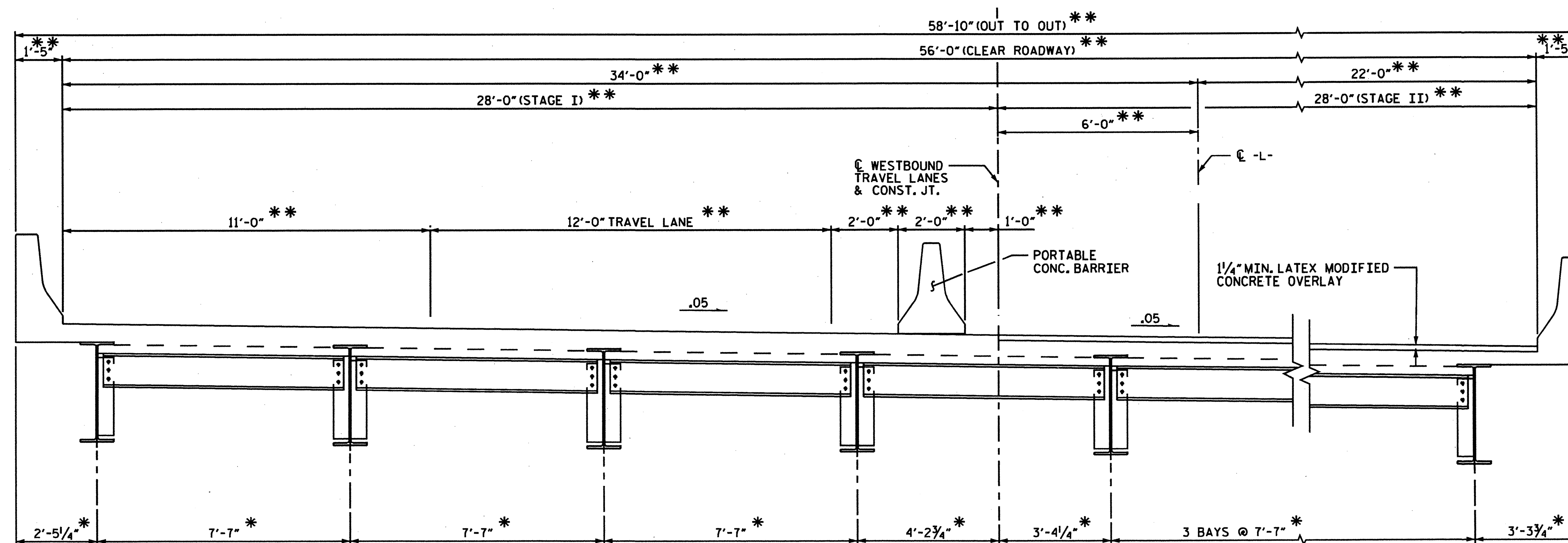
** RADIAL DIMENSIONS

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



EXIST. SLAB SECTION

PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 57+41.24 -L-



TYP. SECTION - STAGE II

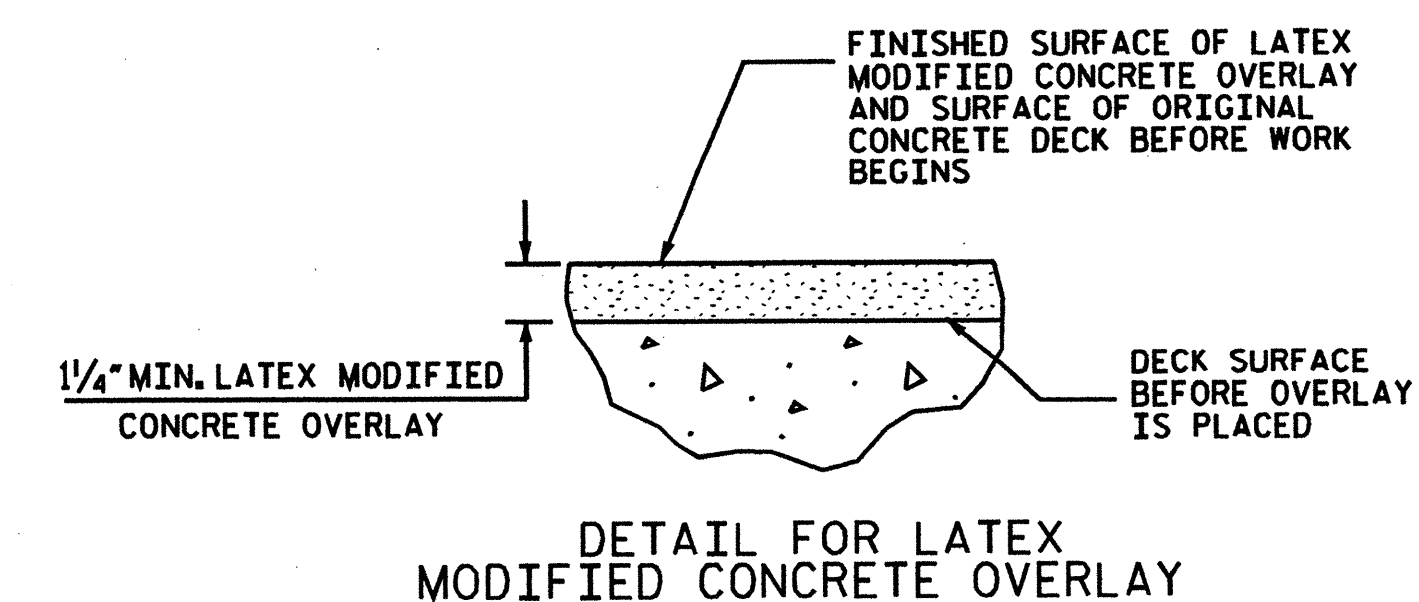
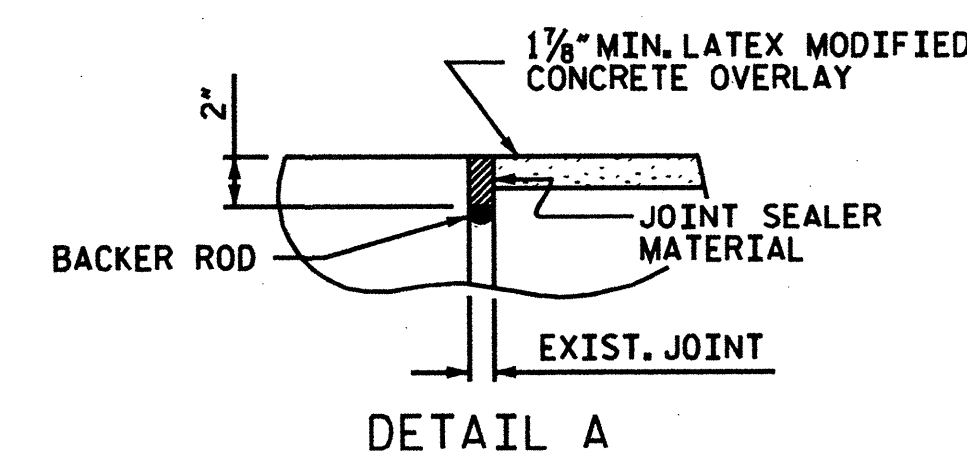
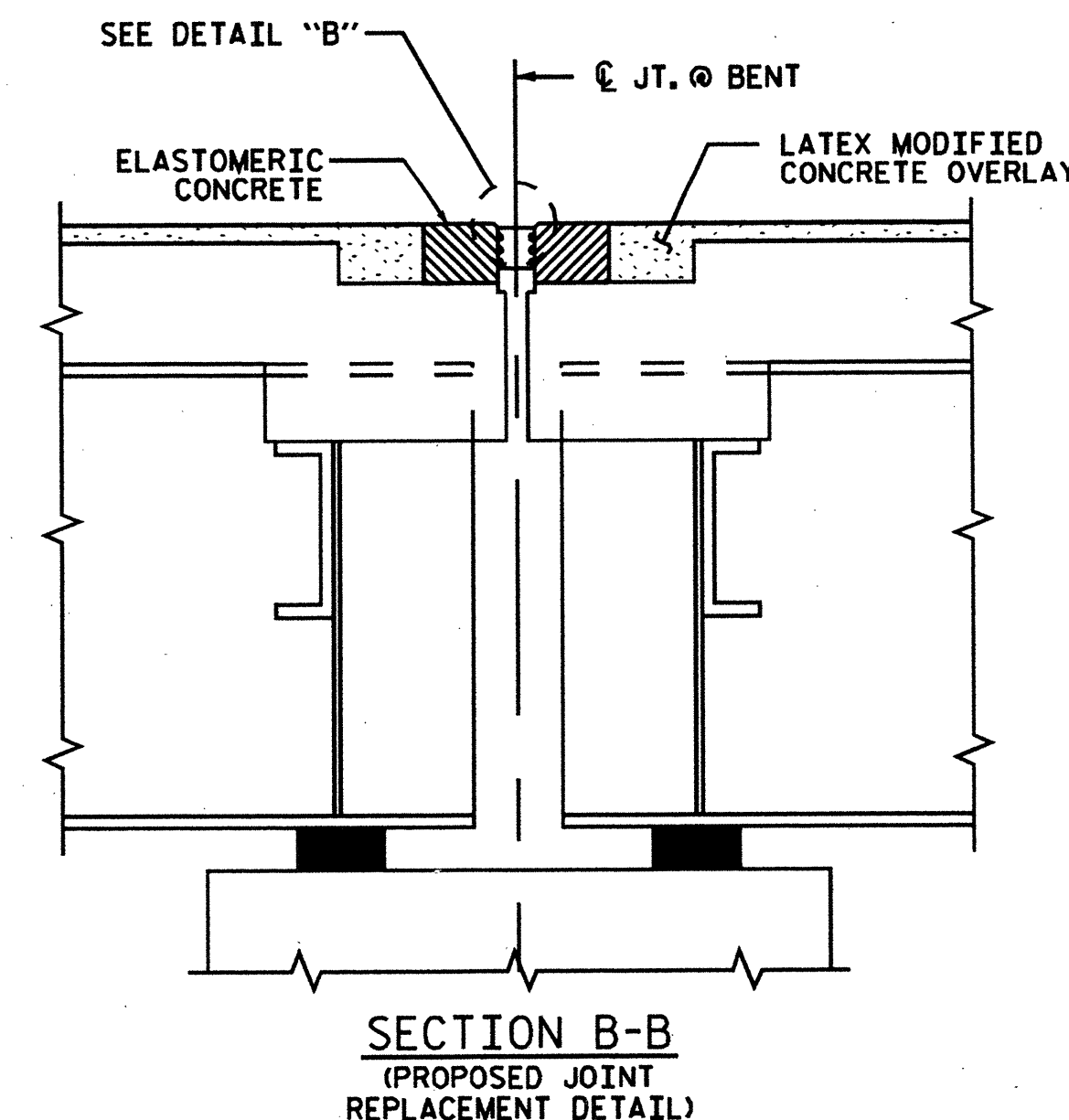
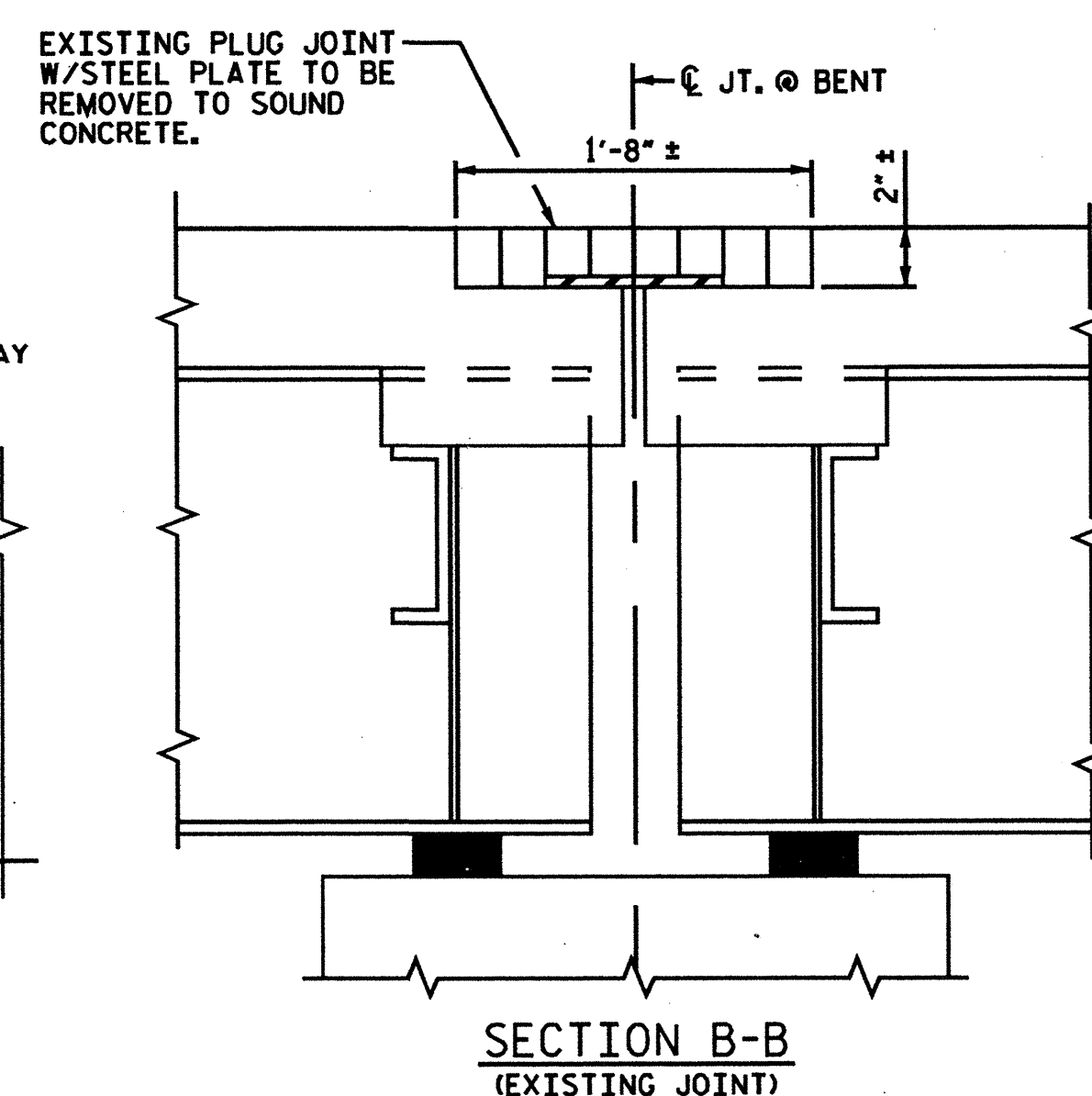
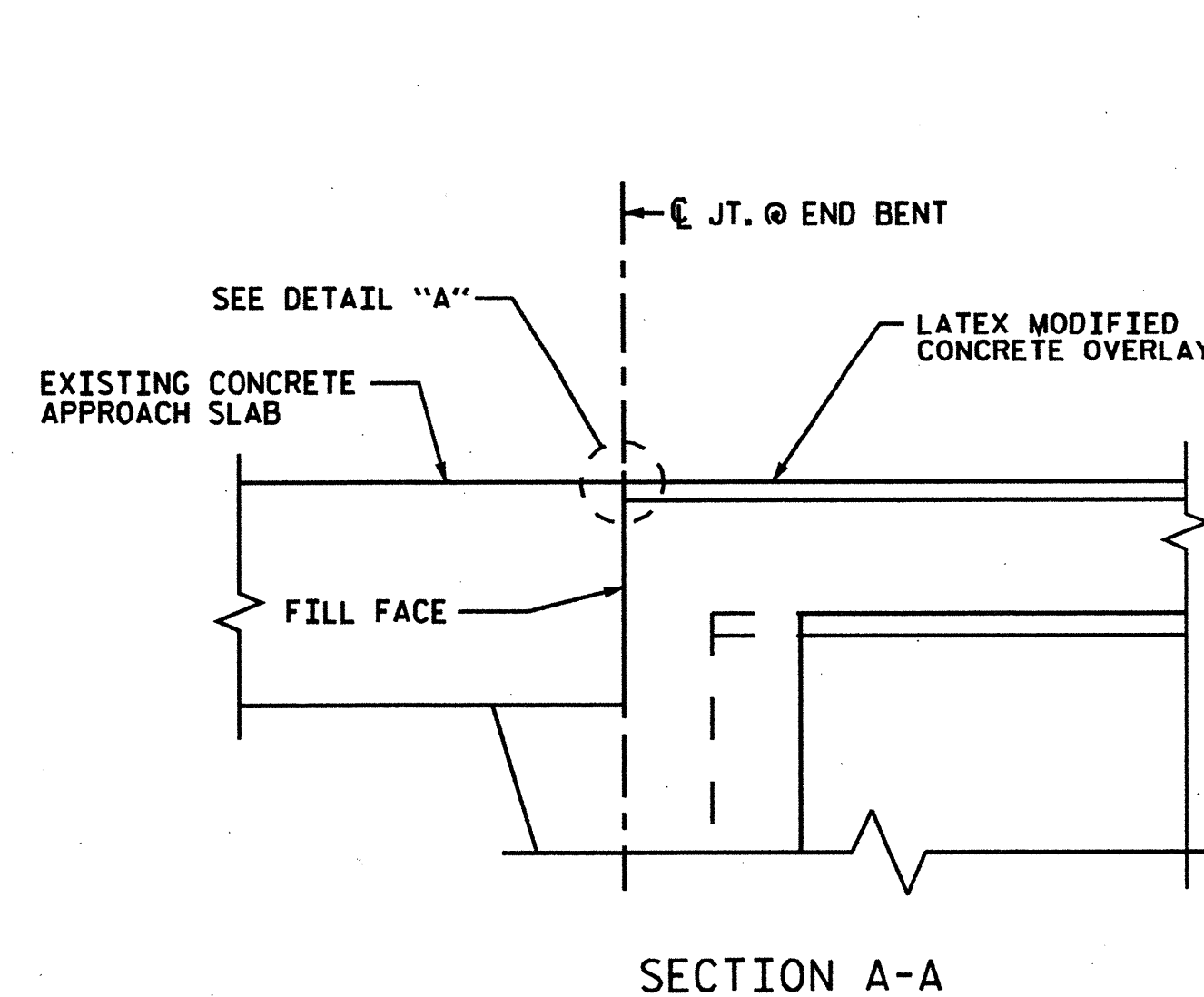
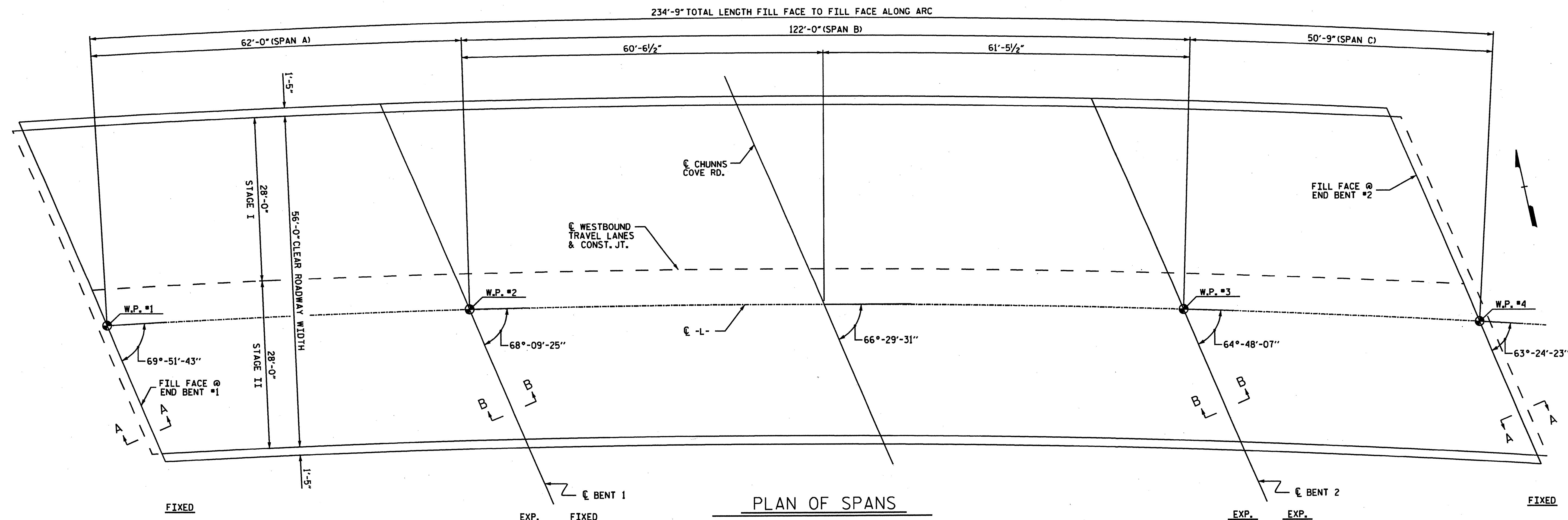
(SHOWING DIAPHRAGMS AT EXPANSION JOINTS)

* RADIAL THRU WORKPOINT

** RADIAL DIMENSIONS

DRAWN BY: M.A. ALLEN DATE: 08-09
CHECKED BY: R.W. WRIGHT DATE: 08-09

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
TYPICAL SECTION					
DECK REHAB. FOR BRIDGE NO. 439					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
SHEET NO. S-22					TOTAL SHEETS 28



TOTAL BILL OF MATERIAL										
SCARIFYING BRIDGE DECK	CLASS I* SURFACE PREPARATION	CLASS II* SURFACE PREPARATION	CLASS III* SURFACE PREPARATION	UNDER DECK CONTAINMENT	HYDRO-DEMOLITION OF BRIDGE DECK	CLASS AA CONCRETE	LATEX MODIFIED OVERLAY-VERY EARLY STRENGTH	PLACING AND FINISHING OF LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH	EVAZOTE JOINT SEALS	GROOVING BRIDGE FLOORS
SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	SO. FT.	SO. YDS.	CU. YDS.	CU. YDS.	SO. YDS.	LUMP SUM	SO. FT.
1460	1174	258	28	252	1460	4	101	1460	LUMP SUM	12400

* QUANTITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

DRAWN BY : M.A. ALLEN DATE : 08-09
CHECKED BY : R.W. WRIGHT DATE : 08-09

PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 57+41.24 -L-

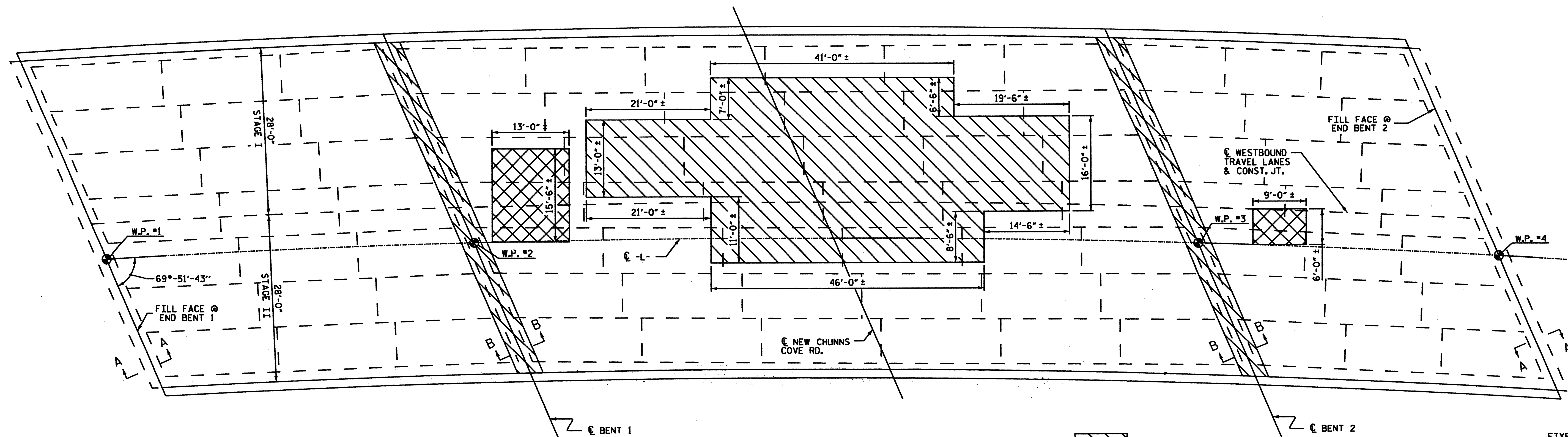
SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS
FOR DECK REPAIR

DECK REHAB. FOR BRIDGE NO. 439

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			5-23
2			4			TOTAL SHEETS 28

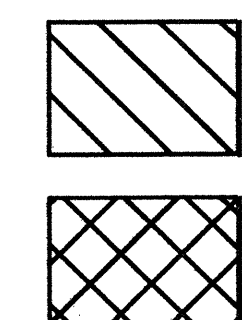


FIXED

EXP.

FIXED

PLAN OF SPANS - DECK REPAIRS

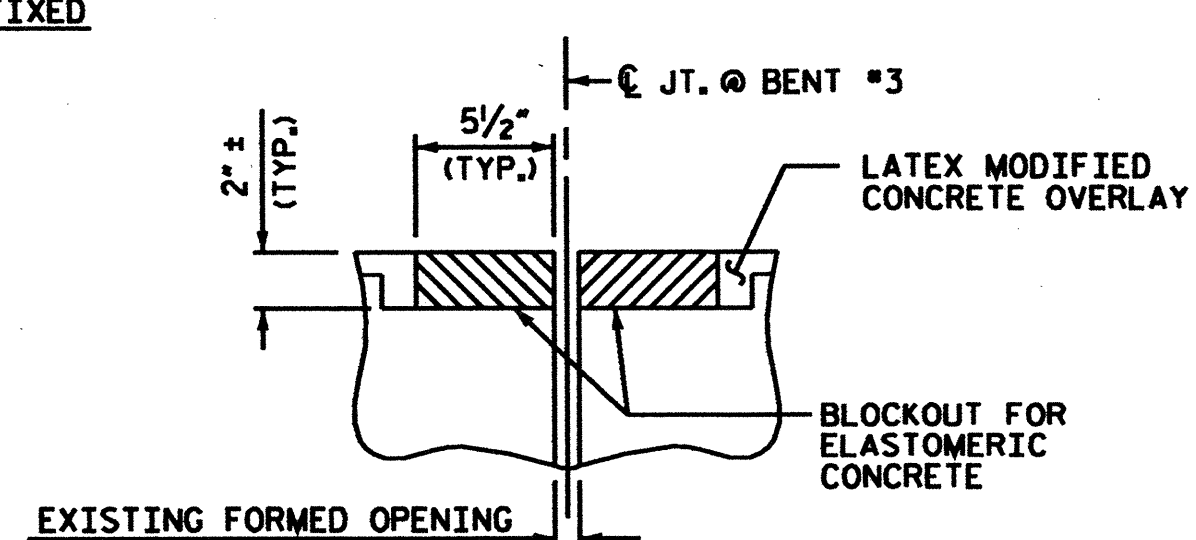


CLASS II

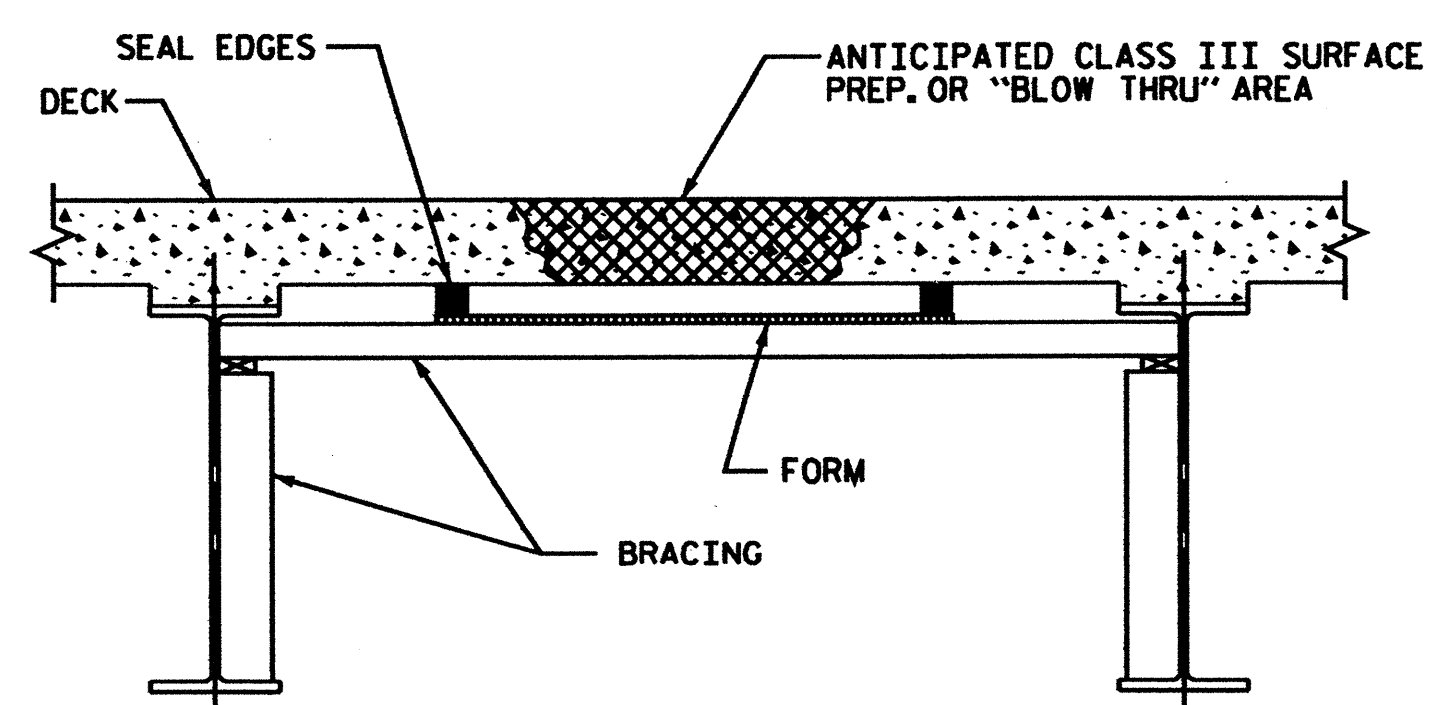
EXP.

EXP.

FIXED



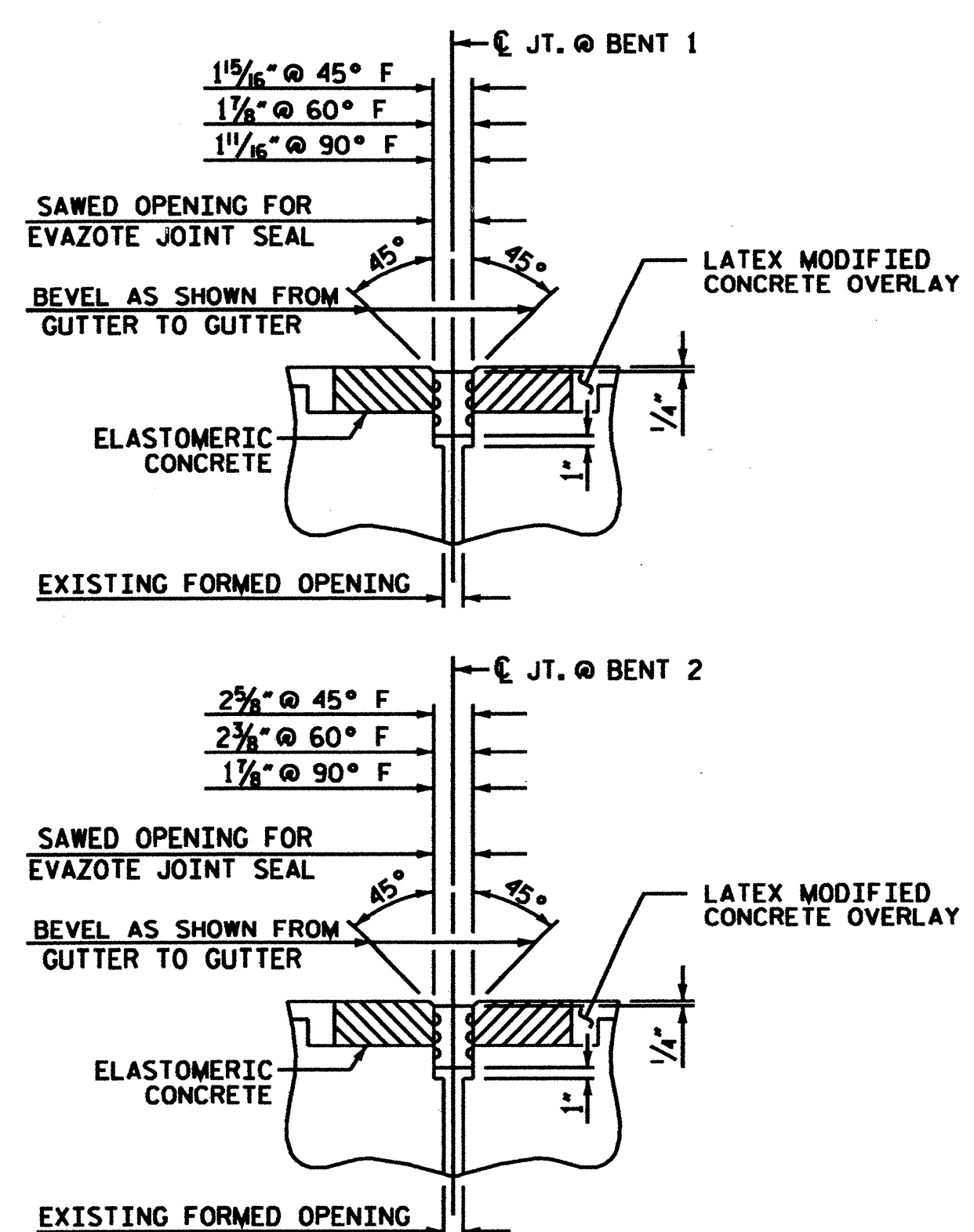
DETAIL B
EVAZOTE JOINT SEAL
(PRE-SAWED ELASTOMERIC
CONCRETE DIMENSIONS)



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.



DETAIL B
EVAZOTE JOINT SEAL
(EXPANSION)

NOTES:

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

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

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 "TYP. "BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL.

THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE EVAZOTE JOINT SEAL SHALL BE 2 1/2" AT BENT 1 & 3 3/8" AT BENT 2. FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR JOINT REPAIR, SEE SPECIAL PROVISIONS.

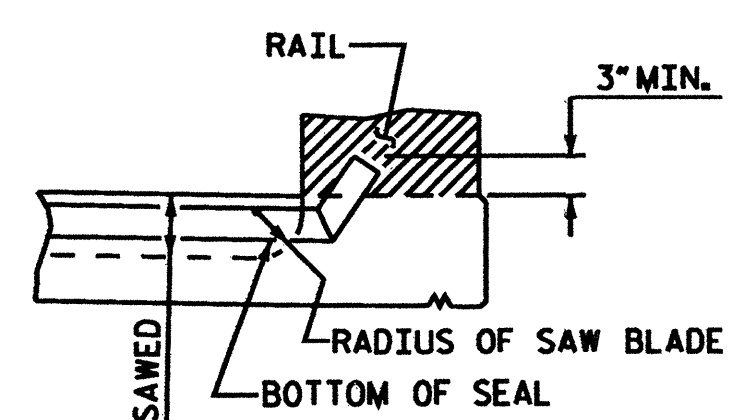
LATEX MODIFIED CONCRETE SHALL BE LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH.

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

FOR GROOVING BRIDGE FLOORS INFORMATION, SEE "LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH" SPECIAL PROVISION.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.



DETAIL

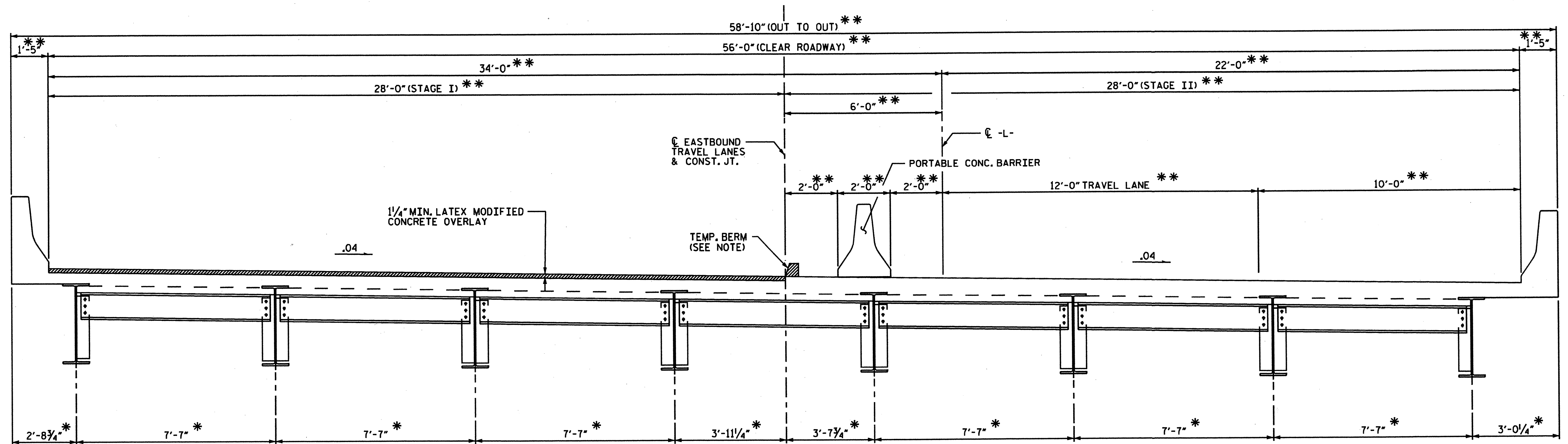
ELASTOMERIC CONCRETE	
BENT NO.	ELASTOMERIC CONCRETE * (CU. FT.)
BENT 1	9.5
BENT 2	9.5
TOTAL	19.0

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

PROJECT NO. B-5179B
BUNCOMBE COUNTY
 STATION: 57+41.24 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PLAN OF SPANS FOR DECK REPAIR					
DECK REHAB. FOR BRIDGE NO. 439					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
					SHEET NO. S-24
					TOTAL SHEETS 28



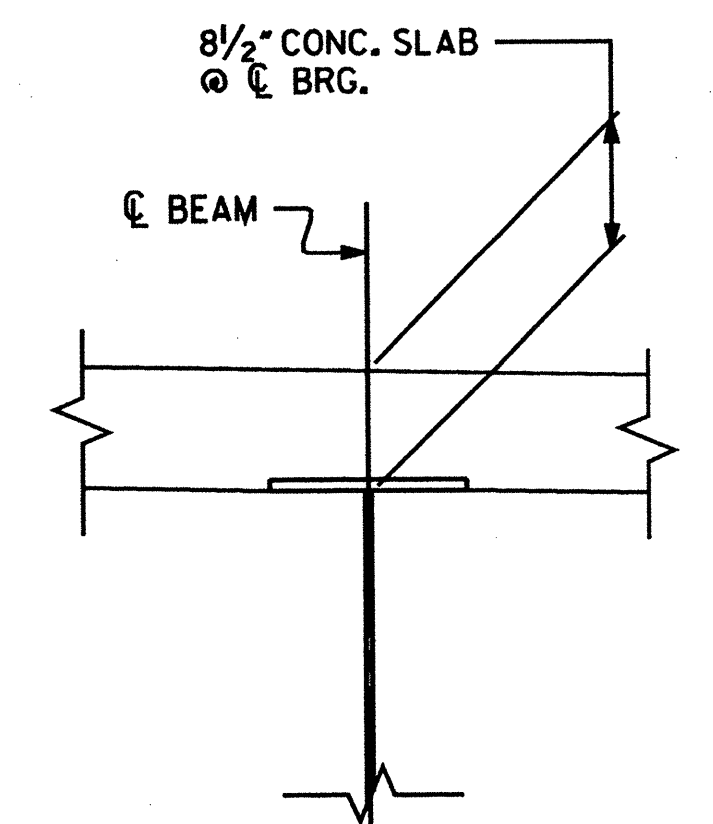
TYP. SECTION - STAGE I

(SHOWING DIAPHRAGMS AT EXPANSION JOINTS)

* RADIAL THRU WORKPOINT

** RADIAL DIMENSIONS

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



EXIST. SLAB SECTION

PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 111+34.20 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION

DECK REHAB. FOR BRIDGE NO. 454

REVISIONS						SHEET NO. S-25
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS 28
2			4			

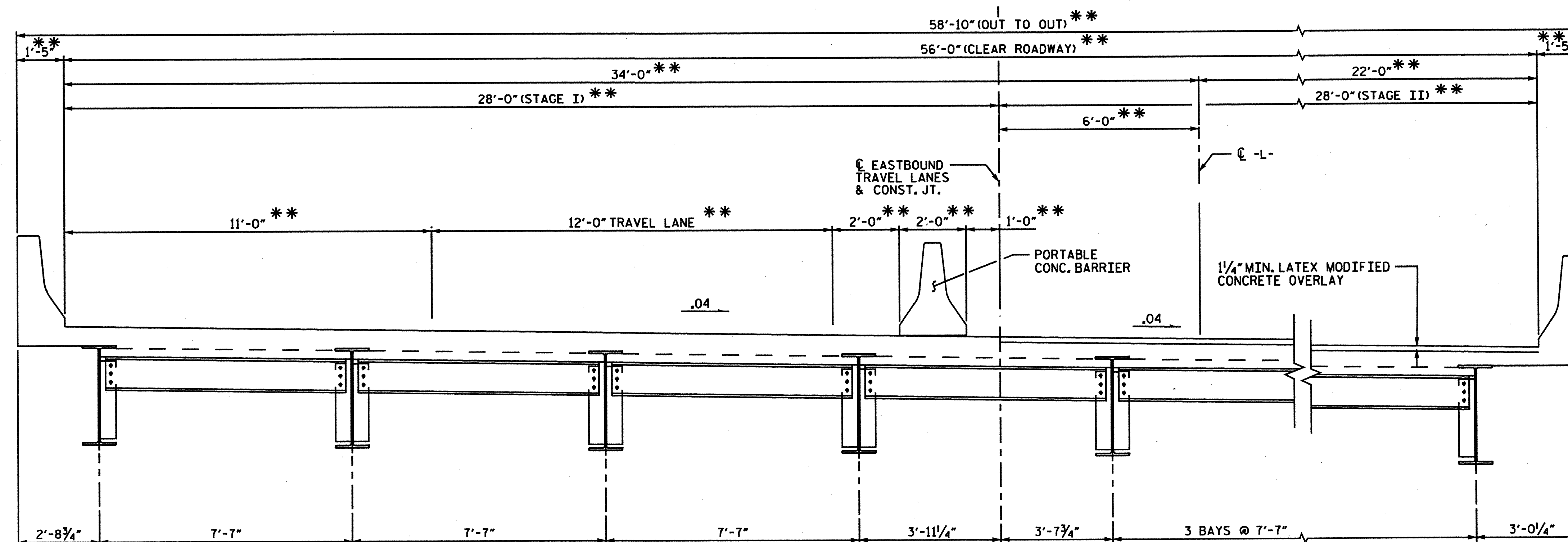
DRAWN BY : M.A. ALLEN DATE : 08-09
CHECKED BY : R.W. WRIGHT DATE : 08-09

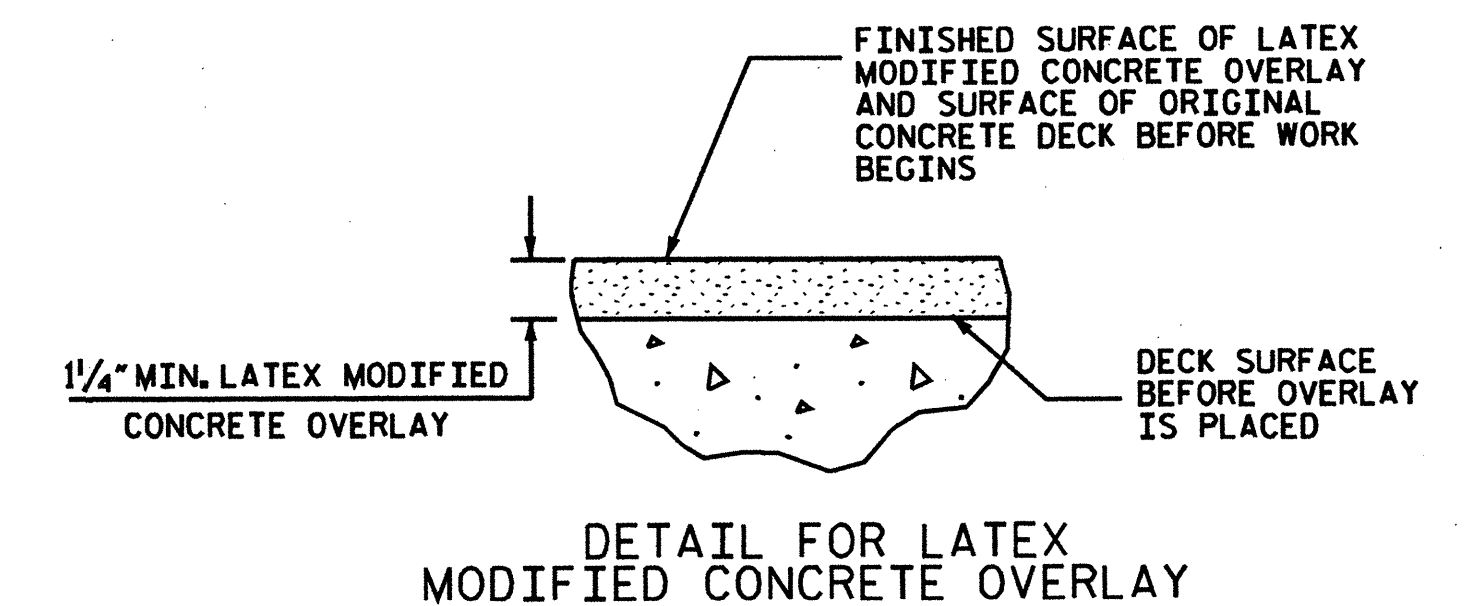
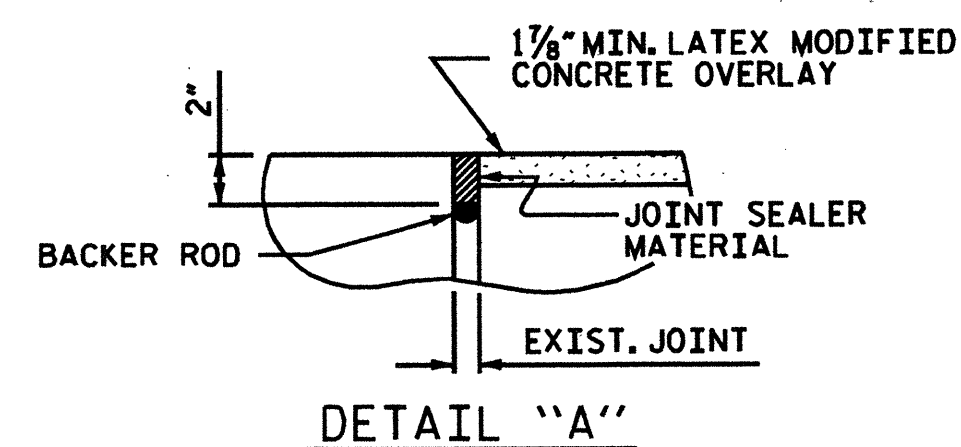
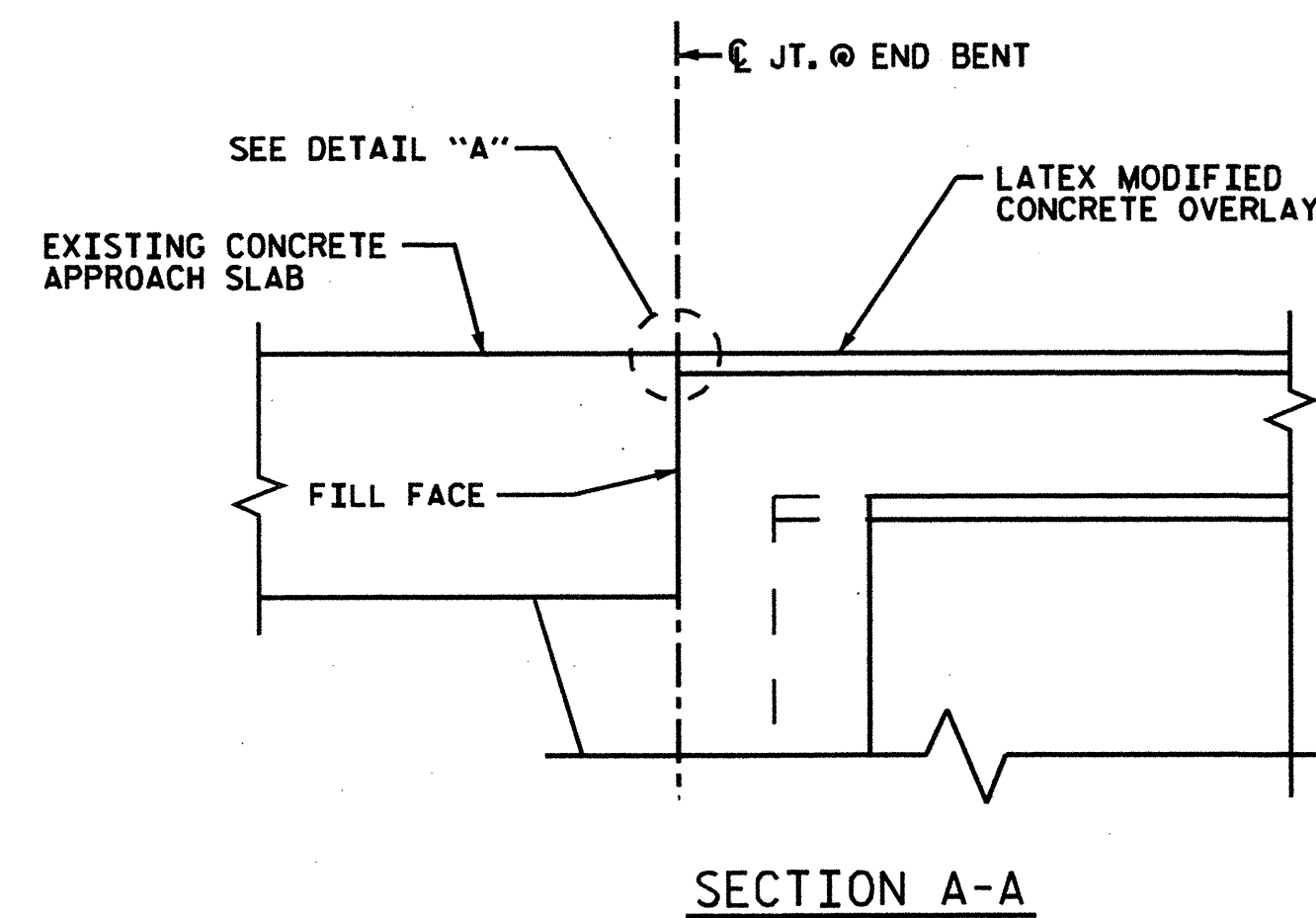
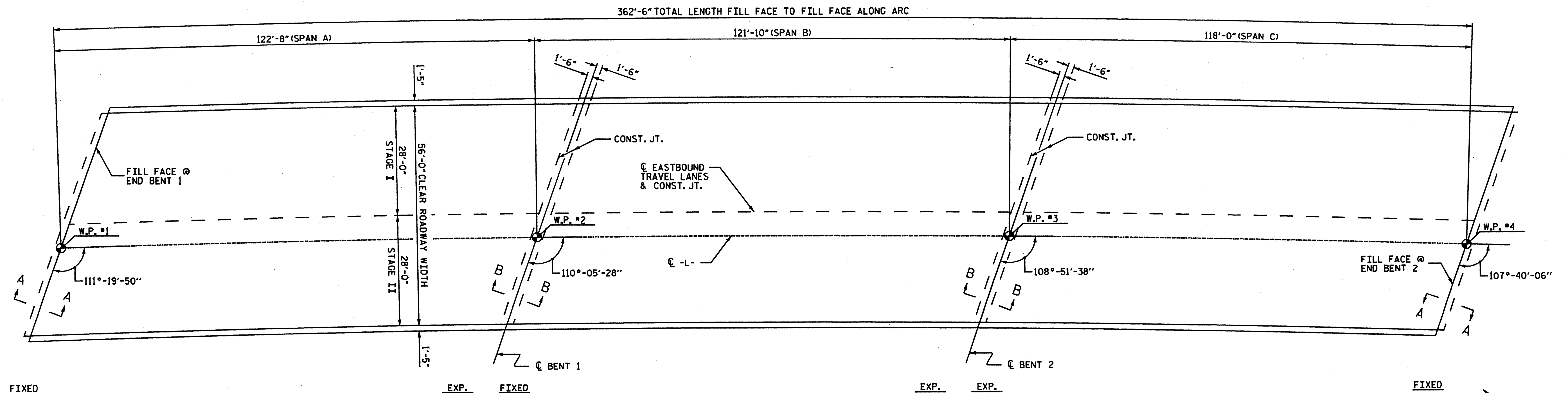
TYP. SECTION - STAGE II

(SHOWING DIAPHRAGMS AT EXPANSION JOINTS)

* RADIAL THRU WORKPOINT

** RADIAL DIMENSIONS





PROJECT NO. B-5179B
BUNCOMBE COUNTY
 STATION: 111+34.20 -L-

SHEET 1 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS
 FOR DECK REPAIR

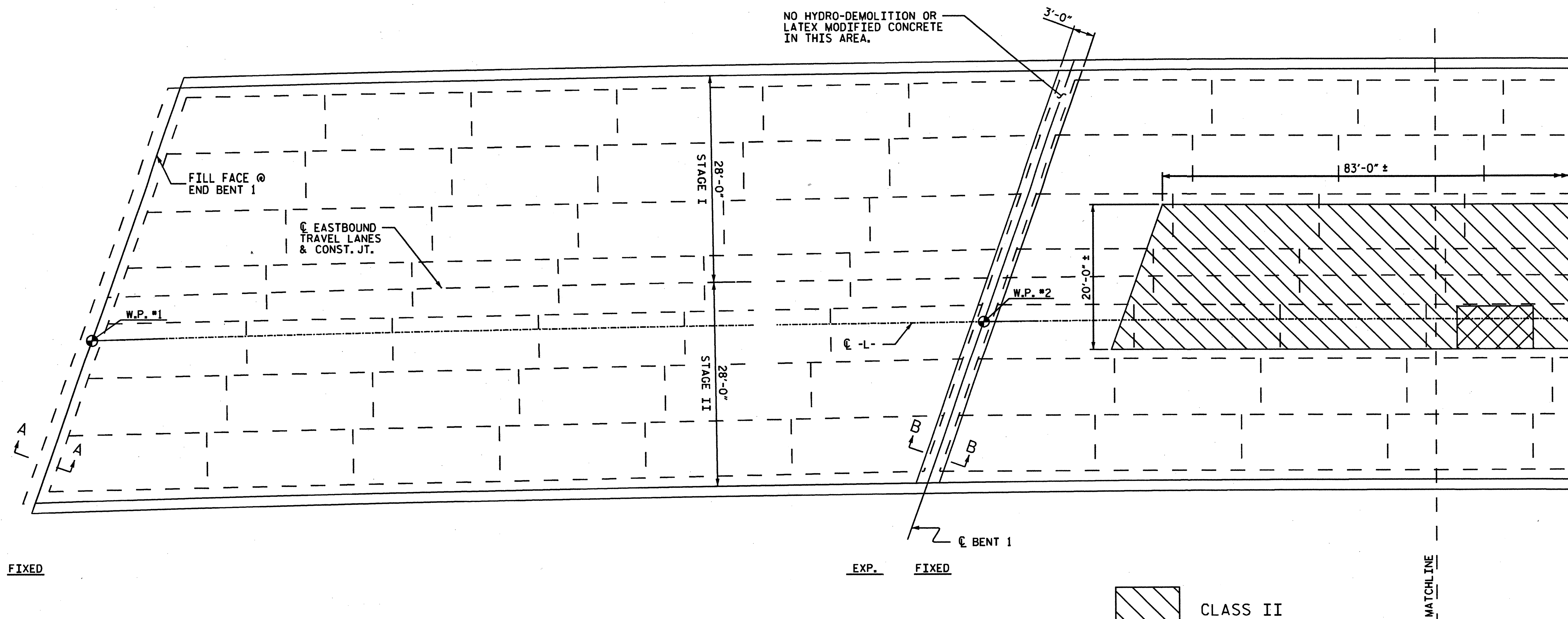
DECK REHAB. FOR BRIDGE NO. 454

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			5-26
2			4			TOTAL SHEETS 28

TOTAL BILL OF MATERIAL									
SCARIFYING BRIDGE DECK	CLASS I* SURFACE PREPARATION	CLASS II* SURFACE PREPARATION	CLASS III* SURFACE PREPARATION	UNDER DECK CONTAINMENT	HYDRO-DEMOLITION OF BRIDGE DECK	CLASS AA CONCRETE	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	PLACING AND FINISHING OF LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH	GROOVING BRIDGE FLOORS
SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	SO. FT.	SO. YDS.	CU. YDS.	CU. YDS.	SO. YDS.	SO. FT.
2220	2035	178	7	63	2220	0	154	2220	18820

* QUANTITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

DRAWN BY: M.A. ALLEN DATE: 08-09
 CHECKED BY: R.W. WRIGHT DATE: 08-09

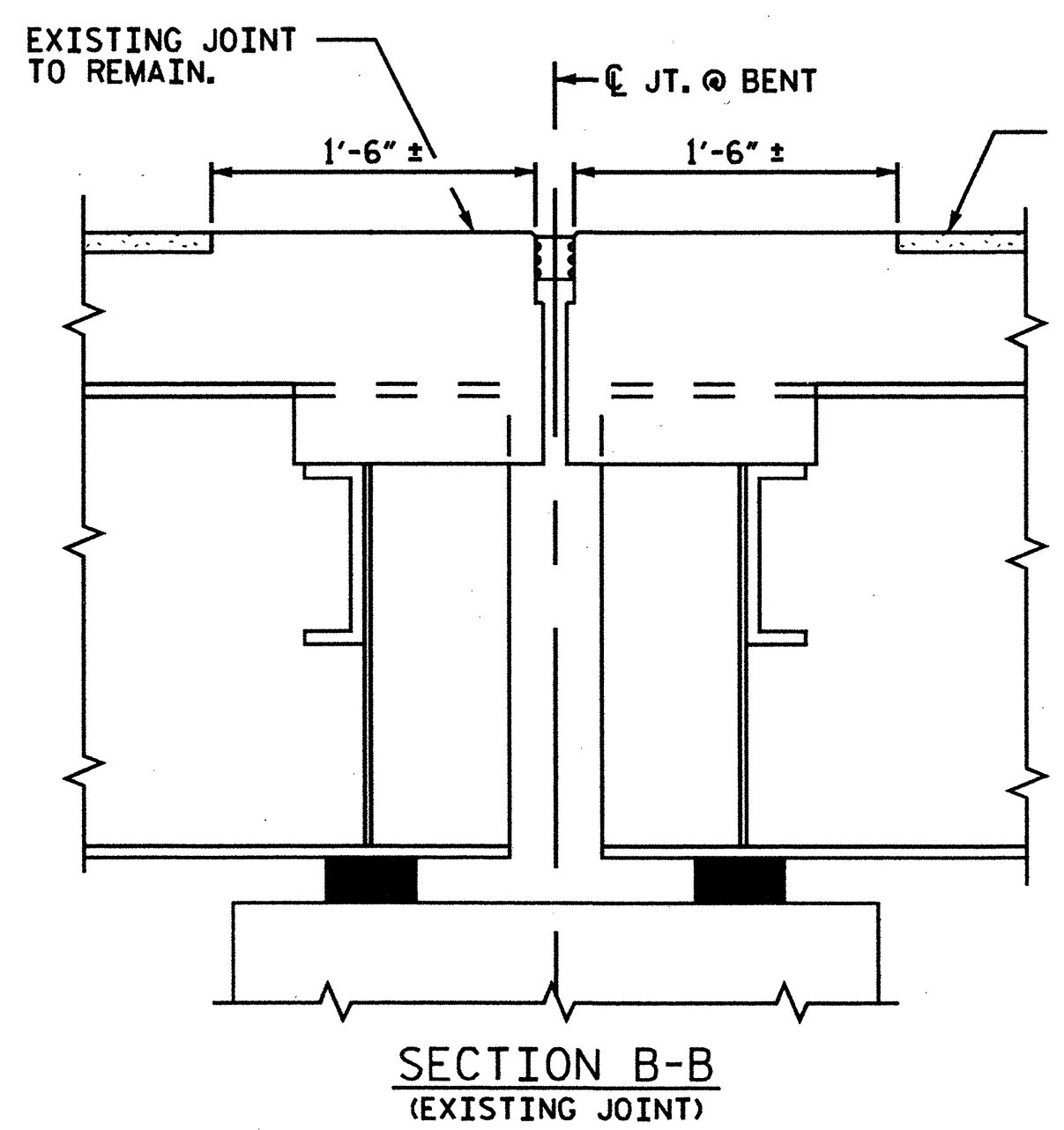


FIXED

EXP. FIXED

MATCHLINE

CLASS II
CLASS III



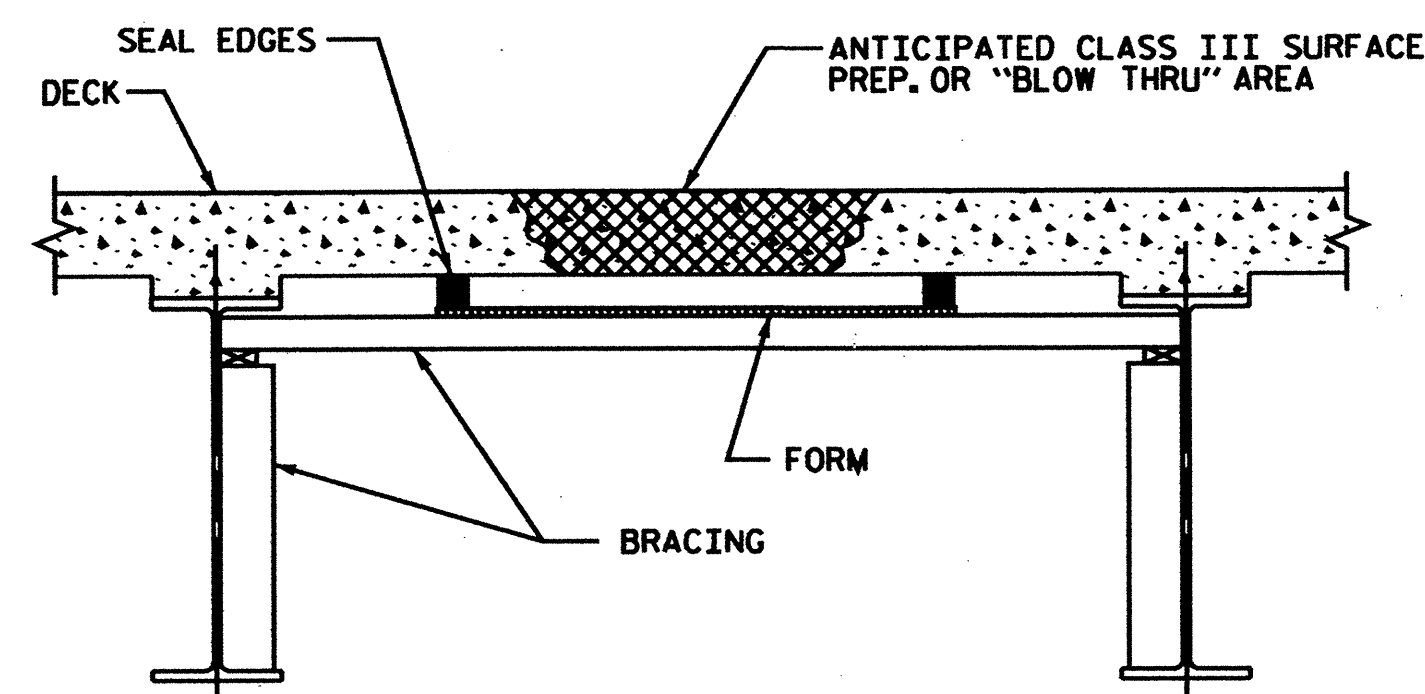
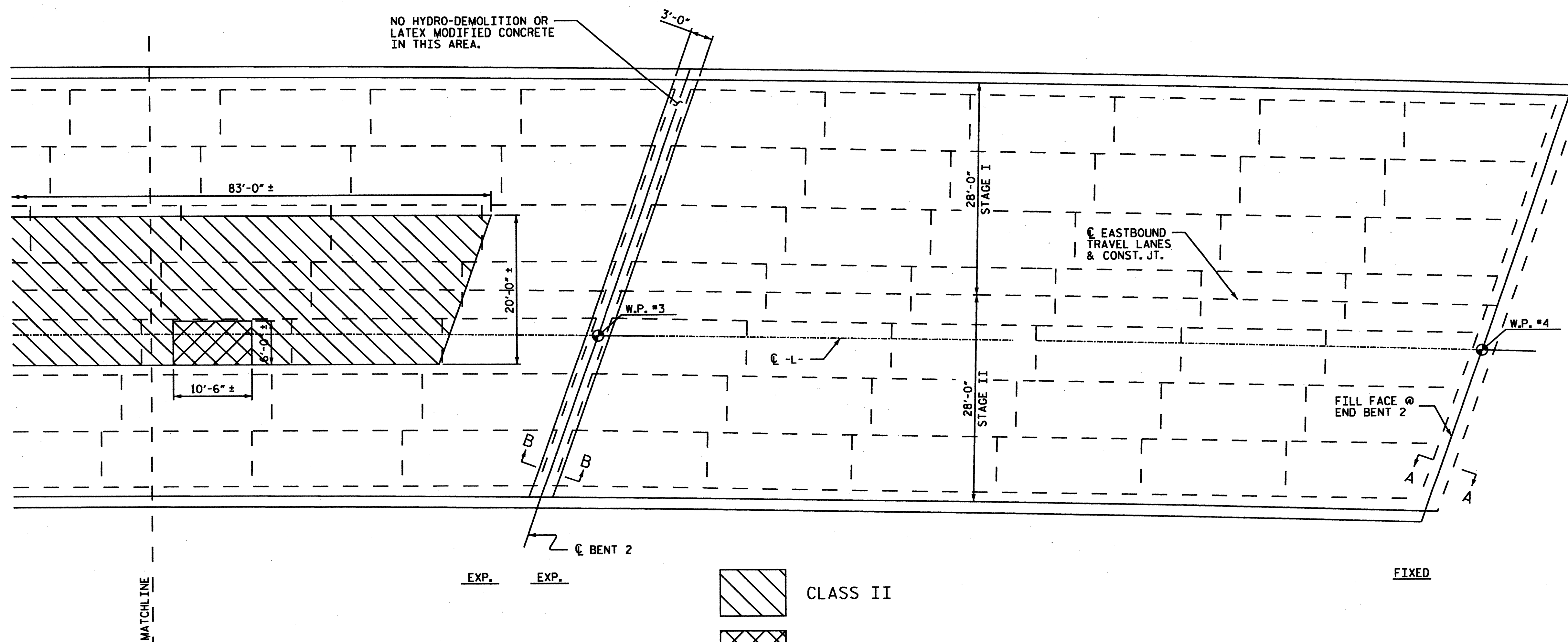
SECTION B-B
(EXISTING JOINT)

PROJECT NO. B-5179B
BUNCOMBE COUNTY
STATION: 111+34.20 -L-

SHEET 2 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PLAN OF SPANS FOR DECK REPAIR					
DECK REHAB. FOR BRIDGE NO. 454					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
SHEET NO.					S-27
TOTAL SHEETS					28

DRAWN BY: M.A. ALLEN DATE: 08-09
CHECKED BY: R.W. WRIGHT DATE: 08-09



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.

NOTES:

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

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

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 "TYP. "BLOW THRU" CONTAINMENT AND FORMWORK" DETAIL.

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

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

FOR GROOVING BRIDGE FLOORS INFORMATION, SEE "LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH" SPECIAL PROVISION.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

PROJECT NO. B-5179B
BUNCOMBE COUNTY
 STATION: 111+34.20 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS
 FOR DECK REPAIR

DECK REHAB. FOR BRIDGE NO. 454

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

DRAWN BY: M.A. ALLEN DATE: 08-09
 CHECKED BY: R.W. WRIGHT DATE: 08-09

10/2/2009
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B-5179B

TIP PROJECT: B-5179B CONTRACT NO. C202311

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
TRAFFIC CONTROL, MARKING & DELINEATION
BUNCOMBE COUNTY

LOCATION: BRIDGES 66, 70, 206, 208, 274, 283, 285, 439 AND 454 ALONG I-240

TYPE OF WORK: TRAFFIC CONTROL FOR BRIDGE DECK PRESERVATION

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 JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE
CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - INTERCHANGES
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1250.01	PAVEMENT MARKER SPACING
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS

INDEX OF SHEETS

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND INDEX OF SHEETS
TCP-2, 2A	GENERAL NOTES
TCP-3, 3A	PROJECT PHASING
TCP-4	OVERVIEW AND VICINITY MAP
TCP-5	I-240 E DETOUR #1 BRIDGES 66, 206, 274, 283
TCP-5A	I-240 E DETOUR #1, SHEET 2
TCP-6	I-240 E DETOUR #2 BRIDGES 66, 206, 283
TCP-7	I-240 W DETOUR #1 BRIDGES 70, 208, 274, 285
TCP-7A	I-240 W DETOUR #1, SHEET 2
TCP-8	I-240 W DETOUR #2 BRIDGES 70, 208, 285
TCP-9	BRIDGE #439 REHAB I-240 W
TCP-9A	BRIDGE #439 - RAMP CLOSURE
TCP-10	BRIDGE #454 REHAB I-240 E
TCP-10A	BRIDGE #454 REHAB - RAMP CLOSURE
TCP-11	WORK ZONE ADVANCE WARNING SIGNS

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- NORTH ARROW
- PROPOSED PVMT. EXIST. PVMT.
- WORK AREA
- REMOVAL OF EXISTING PAVEMENT

TRAFFIC CONTROL DEVICES

- TYPE I BARRICADE
- TYPE II BARRICADE
- TYPE III BARRICADE
- CONE
- DRUM SKINNY DRUM
- FLASHING ARROW PANEL (TYPE C)
- STATIONARY SIGN
- PORTABLE SIGN
- STATIONARY OR PORTABLE SIGN
- PORTABLE CONCRETE BARRIER
- TEMPORARY CRASH CUSHION
- CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- POLICE
- FLAGGER

PAVEMENT MARKINGS

- CRYSTAL/CRYSTAL PAVEMENT MARKER
- YELLOW/YELLOW PAVEMENT MARKER
- CRYSTAL/RED PAVEMENT MARKER
- PAVEMENT MARKING SYMBOLS

APPROVED DATE: October 6, 2009



PLAN PREPARED BY:



Stantec Consulting Services Inc.
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27606
Tel. 919.851.6866
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www.stantec.com

BETSY L. WATSON, PE

TRAFFIC CONTROL ENGINEER

GEORGE KARAGEORGE

TRAFFIC CONTROL DESIGNER

GENERAL NOTES

TRAFFIC BARRIER

P) ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION, PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE TEMPORARY BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

PLACE TEMPORARY BARRIER NO CLOSER THAN 2 FT. FROM A TRAVEL LANE, UNLESS OTHERWISE SHOWN IN THE PLAN. A 1 FOOT OFFSET MAY BE USED IF 2 FT. IS NOT ATTAINABLE, AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW, BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW, BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

Q) PROTECT THE APPROACH END OF PORTABLE CONCRETE BARRIER AT ALL TIMES INCLUDING DURING INSTALLATION AND REMOVAL OF THE BARRIER. PROTECT APPROACH END BY EITHER A TRUCK MOUNTED IMPACT ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

TRAFFIC CONTROL DEVICES

R) UNLESS OTHERWISE NOTED IN THE PLANS, SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED, REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.

S) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

T) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

U) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS SHOWN IN THE PAVEMENT MARKING PLAN.

V) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON FINAL LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT (2 APPS)	SNOWPLOWABLE

W) REPLACE ALL PAVEMENT MARKINGS AND MARKERS BEFORE RE-OPENING LANES TO TRAFFIC.

MISCELLANEOUS

X) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS, AS DIRECTED BY THE ENGINEER.

Y) ALL DIMENSIONS AND STATIONS IN THE TRAFFIC CONTROL PLAN AND PHASING ARE APPROXIMATE; FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.

Z) THE CONTRACTOR IS TO FURNISH, INSTALL, MAINTAIN, RELOCATE AND REMOVE CHANGEABLE MESSAGE SIGNS DURING VARIOUS STAGES OF CONSTRUCTION AT THE DISCRETION OF THE ENGINEER TO ADEQUATELY INFORM MOTORISTS OF CHANGING WORK ZONE CONDITIONS.

AA) PLACE ALL CHANGEABLE MESSAGE SIGNS AS NEEDED IN THE LOCATIONS AND WITH THE WORD MESSAGES AS SHOWN IN THE TCP OR AS DIRECTED BY THE ENGINEER TO PROVIDE ADVANCE WARNING TO THE PUBLIC DURING CONSTRUCTION.

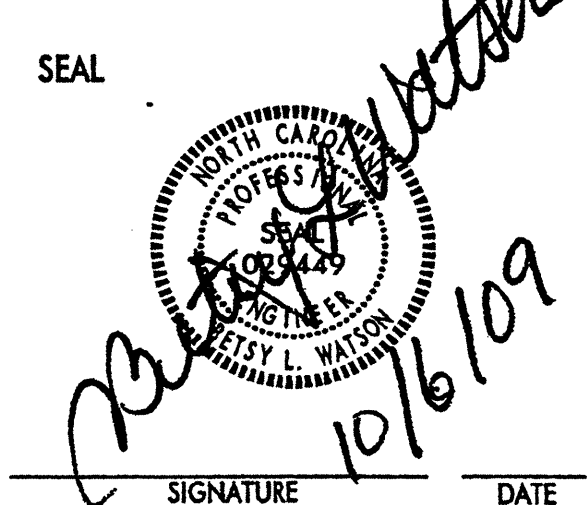
BB) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE INCLUDING THE FOLLOWING AREAS OF CONCERN:

- A. LANE CLOSURE RESTRICTIONS.
- B. DETOURS OFFSITE AND ONSITE.
- C. AREAS OF CONSTRICTED HORIZONTAL CLEARANCES (NARROW LANES OR LANES BORDERED WITH EITHER PCB AND/OR GUARDRAIL).

CC) COORDINATE WITH THE ENGINEER TO MAKE SURE THAT THE FOLLOWING TASKS ARE COMPLETED BY NCDOT PERSONNEL PRIOR TO IMPLEMENTING ANY DETOURS:

- SIGNAL TIMINGS ALONG AFFECTED LOCAL ROUTES HAVE BEEN ADJUSTED.
- HAR AND DMS MESSAGES HAVE BEEN PREPARED/IMPLEMENTED.
- NECESSARY PUBLIC INFORMATION MEASURES HAVE BEEN ADDRESSED.

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gkarsgeorge

 Stantec Stantec Consulting Services Inc. Suite 300, 801 Jones Franklin Road Raleigh, NC 27606 Tel. 919.851.8866 Fax. 919.851.7024 www.stantec.com		GENERAL NOTES	
		SCALE: NONE	
		DATE: AUG. 2009	
		DWG. BY: GK	
DESIGN BY: BLW			
REVIEWED BY: BLW	DATE	REVISIONS	CADD FILE

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THE TRAFFIC CONTROL PHASING FOR THIS PROJECT IS DIVIDED INTO 4 AREAS OF CONSTRUCTION

- AREA 1 - BRIDGES #283, 66, 206 AND 274 ON I-240 EASTBOUND
- AREA 2 - BRIDGES #285, 70, 208 AND 274 ON I-240 WESTBOUND
- AREA 3 - BRIDGE #439 I-240 WESTBOUND
- AREA 4 - BRIDGE #454 I-240 EASTBOUND

THE FOLLOWING RESTRICTIONS APPLY TO WORK PERFORMED IN THESE AREAS.

- WHEN WORKING IN AREA 1 DO NOT WORK IN ANY OTHER AREAS.
- WHEN WORKING IN AREA 2 DO NOT WORK IN ANY OTHER AREAS.
- WORK IN AREAS 3 AND 4 MAY BE PERFORMED SIMULTANEOUSLY.

INSTALL WORK ZONE ADVANCE WARNING SIGNS PRIOR TO ANY CONSTRUCTION OPERATIONS (TCP-11).

AREA 1 BRIDGES 283, 66, 206, AND 274 - EASTBOUND DIRECTION
SEE SHEET TCP-4 FOR OVERVIEW

STEP 1: BEGIN PREPARATION OF TRAFFIC CONTROL DEVICES FOR IMPLEMENTATION IN NEXT STEP. INSTALL CHANGEABLE MESSAGE SIGNS AS WILL BE REQUIRED FOR ROAD CLOSURES AND PUBLIC INFORMATION.

INTERMEDIATE CONTRACT TIME SPECIAL PROVISION
COMPLETE THE WORK REQUIRED OF AREA 1-STEPS 2A, 2B AND 2C IN A CONTINUOUS OPERATION WITHIN A PERIOD OF ONE WEEKEND BETWEEN THE HOURS OF FRIDAY 6:00 P.M. AND THE FOLLOWING MONDAY AT 6:00 A.M..

STEP 2A: INSTALL TRAFFIC CONTROL DEVICES TO IMPLEMENT I-240 EASTBOUND DETOUR #1 AND CLOSE I-240 EASTBOUND AS SHOWN ON SHEET TCP-5, 5A.

STEP 2B: CONSTRUCT BRIDGE PRESERVATION FOR BRIDGE NO. 274 EASTBOUND DIRECTION.

WORK ON BRIDGES 283, 66, AND 206 EASTBOUND MAY BE PERFORMED DURING THIS DETOUR, HOWEVER, ANY WORK THAT IS BEGUN MUST BE COMPLETED SUCH THAT ALL LANES ARE REOPENED TO TRAFFIC BY THE END OF THIS INTERMEDIATE CONTRACT TIME.

STEP 2C: REMOVE TRAFFIC CONTROL DEVICES FOR DETOUR AND OPEN I-240 EASTBOUND TO THE NORMAL TRAFFIC PATTERN.

INTERMEDIATE CONTRACT TIME SPECIAL PROVISION
COMPLETE THE WORK REQUIRED OF AREA 1-STEPS 3A, 3B AND 3C IN TWO CONTINUOUS OPERATIONS WITHIN A PERIOD OF TWO WEEKENDS BETWEEN THE HOURS OF FRIDAY 6:00 P.M. AND THE FOLLOWING MONDAY AT 6:00 A.M.. DURING THE TIME BETWEEN THE TWO WEEKENDS, RE-OPEN ALL LANES TO THE NORMAL TRAFFIC PATTERN. THE ABOVE MENTIONED TWO WEEKENDS DO NOT HAVE TO BE CONSECUTIVE.

STEP 3A: INSTALL TRAFFIC CONTROL DEVICES TO IMPLEMENT I-240 EASTBOUND DETOUR #2 AND CLOSE I-240 EASTBOUND AS SHOWN ON SHEET TCP-6.

STEP 3B: CONSTRUCT BRIDGE PRESERVATION FOR BRIDGE NO.S 66, 206 AND 283.

STEP 3C: REMOVE TRAFFIC CONTROL DEVICES FOR DETOUR AND OPEN I-240 EASTBOUND TO THE NORMAL TRAFFIC PATTERN.

AREA 2 BRIDGES 208, 70, 285, AND 274 - WESTBOUND DIRECTION
SEE SHEET TCP-4 FOR OVERVIEW

STEP 1: BEGIN PREPARATION OF TRAFFIC CONTROL DEVICES FOR IMPLEMENTATION IN NEXT STEP. INSTALL CHANGEABLE MESSAGE SIGNS AS WILL BE REQUIRED FOR ROAD CLOSURES AND PUBLIC INFORMATION.

INTERMEDIATE CONTRACT TIME SPECIAL PROVISION
COMPLETE THE WORK REQUIRED OF AREA 2-STEPS 2A, 2B AND 2C IN A CONTINUOUS OPERATION WITHIN A PERIOD OF ONE WEEKEND BETWEEN THE HOURS OF FRIDAY 6:00 P.M. AND THE FOLLOWING MONDAY AT 6:00 A.M..

STEP 2A: INSTALL TRAFFIC CONTROL DEVICES TO IMPLEMENT I-240 WESTBOUND DETOUR #1 AND CLOSE I-240 WESTBOUND AS SHOWN ON SHEET TCP-7, 7A.

STEP 2B: CONSTRUCT BRIDGE PRESERVATION FOR BRIDGE NO. 274 WESTBOUND DIRECTION.

WORK ON BRIDGES 208, 70, AND 285 WESTBOUND MAY BE PERFORMED DURING THIS DETOUR, HOWEVER, ANY WORK THAT IS BEGUN MUST BE COMPLETED SUCH THAT ALL LANES ARE REOPENED TO TRAFFIC BY THE END OF THIS INTERMEDIATE CONTRACT TIME.

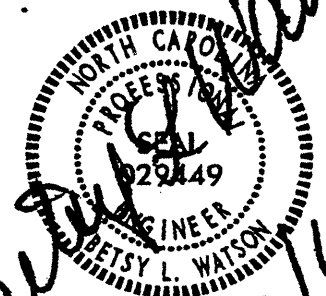
STEP 2C: REMOVE TRAFFIC CONTROL DEVICES FOR DETOUR AND OPEN I-240 WESTBOUND TO THE NORMAL TRAFFIC PATTERN.

INTERMEDIATE CONTRACT TIME SPECIAL PROVISION
COMPLETE THE WORK REQUIRED OF AREA 2-STEPS 3A, 3B AND 3C IN TWO CONTINUOUS OPERATIONS WITHIN A PERIOD OF TWO WEEKENDS BETWEEN THE HOURS OF FRIDAY 6:00 P.M. AND THE FOLLOWING MONDAY AT 6:00 A.M.. DURING THE TIME BETWEEN THE TWO WEEKENDS, RE-OPEN ALL LANES TO THE NORMAL TRAFFIC PATTERN. THE ABOVE MENTIONED TWO WEEKENDS DO NOT HAVE TO BE CONSECUTIVE.

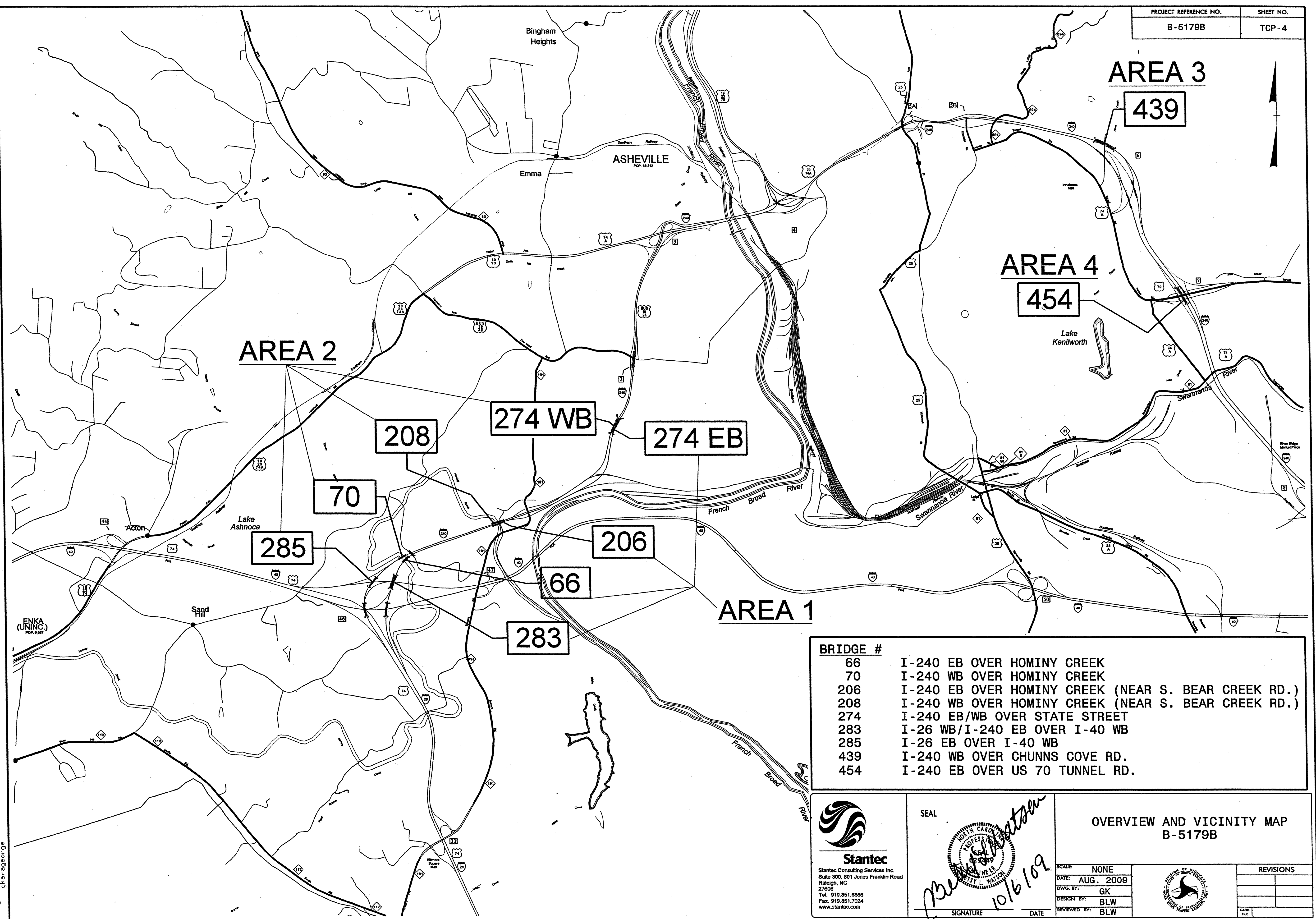
STEP 3A: INSTALL TRAFFIC CONTROL DEVICES TO IMPLEMENT I-240 WESTBOUND DETOUR #2 AND CLOSE I-240 WESTBOUND AS SHOWN ON SHEET TCP-8.

STEP 3B: CONSTRUCT BRIDGE PRESERVATION FOR BRIDGE NO.S 208, 70 AND 285.

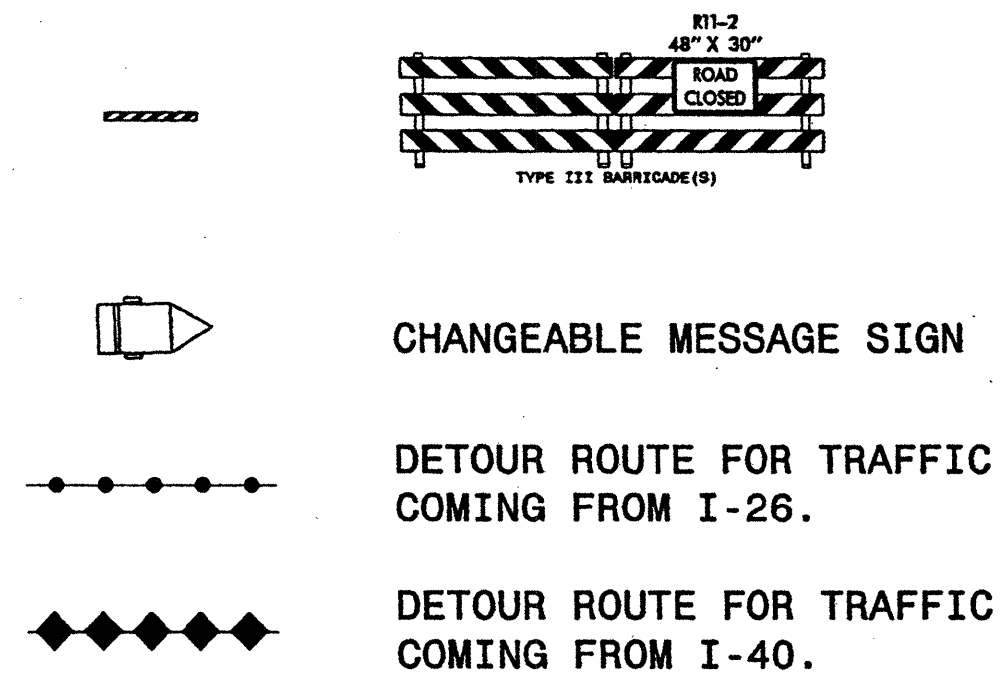
STEP 3C: REMOVE TRAFFIC CONTROL DEVICES FOR DETOUR AND OPEN I-240 WESTBOUND TO THE NORMAL TRAFFIC PATTERN.

 Stantec Stantec Consulting Services Inc. Suite 300, 801 Jones Franklin Road Raleigh, NC 27606 Tel. 919.851.8886 Fax. 919.851.7024 www.stantec.com	SEAL  10/6/09	TRAFFIC CONTROL PHASING AREA 1 AND AREA 2							
		SCALE: NONE DATE: AUG. 2009 DWG. BY: GK DESIGN BY: BLW REVIEWED BY: BLW	REVISIONS <table><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>						

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gk:aragorge



LEGEND



APPROXIMATE LOCATION OF CMS FOR LEFT LANE CLOSURE. SEE RSD 1101.02 SHEET 3 OF 9 FOR PLACEMENT AND MESSAGES.

USE RSD 1101.02, SHEET 3 OF 9 TO CLOSE LEFTMOST OF THE 3 EB LANES OF I-40 E IN ADVANCE OF EXIT 46B.

ON I-26 BETWEEN EXITS 31A AND 31B: KEEP RIGHT LANE CLOSED WITH DRUMS. CHANNELIZE BOTH OPEN LANES ONTO EXIT 31B. USE 48" X 48" "ALL TRAFFIC" SIGN ON BOTH SIDES OF EXIT RAMP AS SHOWN IN RSD 1101.03 SHEET 7.

NOTES

- USE THIS DETOUR SHEET TO CLOSE I-240 E TO WORK ON BRIDGES 283, 66, 206, & 274.
- COMPLETE ALL WORK ON BRIDGE 274 I-240 EB DURING THIS DETOUR.
- THIS DETOUR IS ONLY TO BE IN PLACE FOR ONE WEEKEND.
- COORDINATE WITH THE ENGINEER TO MAKE SURE THAT THE FOLLOWING TASKS ARE COMPLETED BY NCDOT PERSONNEL PRIOR TO IMPLEMENTING THIS DETOUR:
 - SIGNAL TIMINGS ALONG THE PATTON AVENUE CLOSED LOOP SYSTEM AND ANY OTHER AFFECTED LOCAL ROUTES HAVE BEEN ADJUSTED
 - HAR AND DMS MESSAGES HAVE BEEN PREPARED/ IMPLEMENTED
 - NECESSARY PUBLIC INFORMATION MEASURES HAVE BEEN ADDRESSED

A

MESSAGE NO. 1	MESSAGE NO. 2
I-240 E/ I-26 W CLOSED	USE ALT ROUTE
CHANGEABLE MESSAGE SIGN	

B

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 46B CLOSED	USE EXIT 53B
CHANGEABLE MESSAGE SIGN	

C

MESSAGE NO. 1	MESSAGE NO. 2
I-240 E/ I-26 W CLOSED	2 MILES AHEAD
CHANGEABLE MESSAGE SIGN	

D

MESSAGE NO. 1	MESSAGE NO. 2
RT LANE MUST USE EXIT 31A	2 MILES AHEAD
CHANGEABLE MESSAGE SIGN	

E

MESSAGE NO. 1	MESSAGE NO. 2
I-240 E/ I-26 W CLOSED	USE EXIT 31A I-40 E
CHANGEABLE MESSAGE SIGN	

F

MESSAGE NO. 1	MESSAGE NO. 2
RT LANE MUST USE EXIT 31A	RT LANE EXIT ONLY
CHANGEABLE MESSAGE SIGN	

G*

MESSAGE NO. 1	MESSAGE NO. 2
ALL TRAFFIC	USE EXIT 31B
CHANGEABLE MESSAGE SIGN	

H

MESSAGE NO. 1	MESSAGE NO. 2
I-240 E CLOSED	USE I-40E TO EXIT 53B
CHANGEABLE MESSAGE SIGN	

*PLACE ALONG I-26 W AFTER EXIT 31A AND IN ADVANCE OF EXIT 31B.

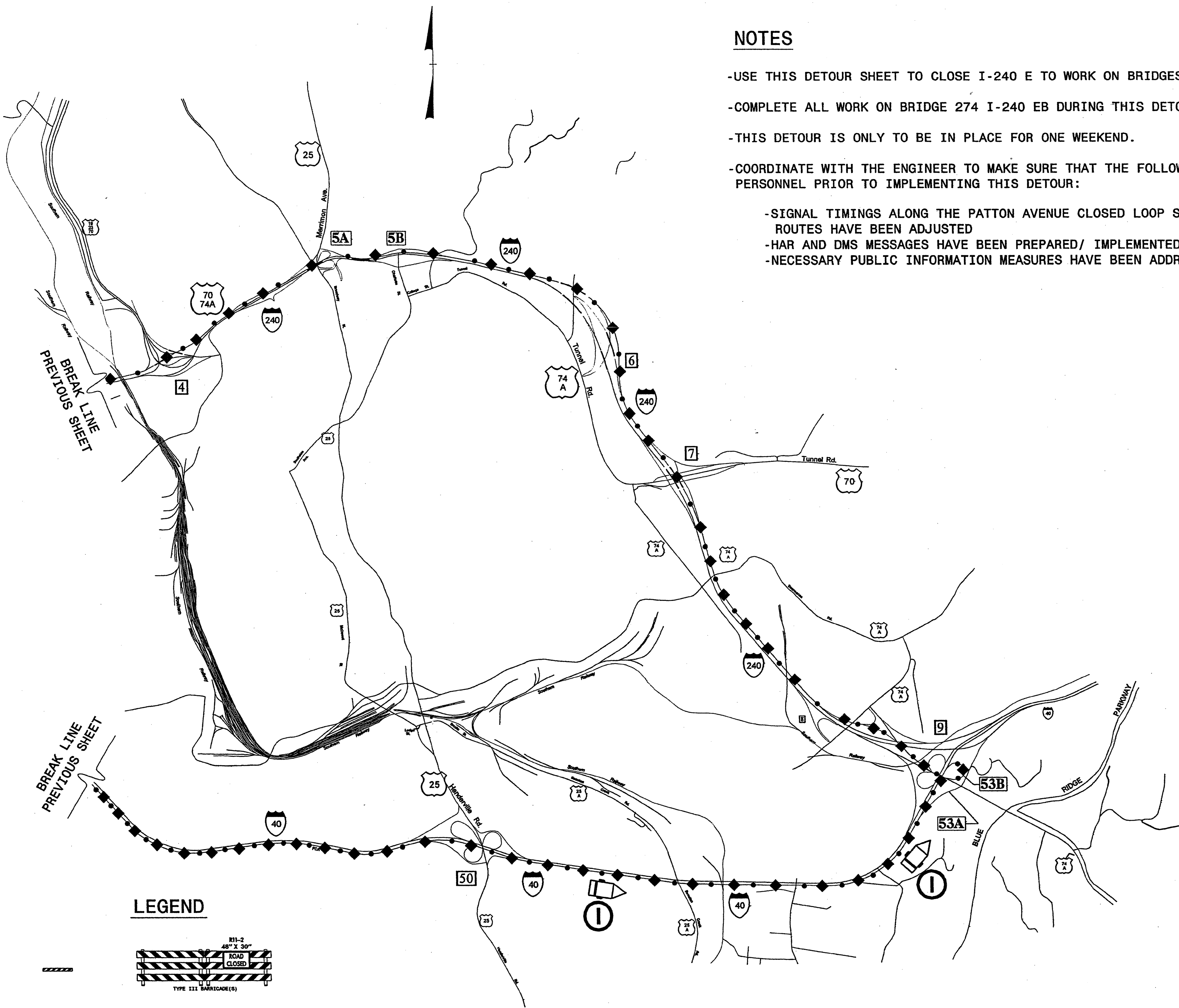
I

MESSAGE NO. 1	MESSAGE NO. 2
I240 E/ I26 W TRAFFIC	USE EXIT 53B
CHANGEABLE MESSAGE SIGN	

 Stantec Stantec Consulting Services Inc. Suite 300, 801 Jones Franklin Road Raleigh, NC 27606 Tel: 919.851.8868 Fax: 919.851.7024 www.stantec.com	SEAL 	I-240 EAST DETOUR #1 BRIDGES 283, 66, 206, & 274	
	SCALE: NONE DATE: AUG. 2009 DWG. BY: GK DESIGN BY: BLW REVIEWED BY: BLW		REVISIONS CADD FILE

NOTES

- USE THIS DETOUR SHEET TO CLOSE I-240 E TO WORK ON BRIDGES 283, 66, 206, & 274.
- COMPLETE ALL WORK ON BRIDGE 274 I-240 EB DURING THIS DETOUR.
- THIS DETOUR IS ONLY TO BE IN PLACE FOR ONE WEEKEND.
- COORDINATE WITH THE ENGINEER TO MAKE SURE THAT THE FOLLOWING TASKS ARE COMPLETED BY NCDOT PERSONNEL PRIOR TO IMPLEMENTING THIS DETOUR:
 - SIGNAL TIMINGS ALONG THE PATTON AVENUE CLOSED LOOP SYSTEM AND ANY OTHER AFFECTED LOCAL ROUTES HAVE BEEN ADJUSTED
 - HAR AND DMS MESSAGES HAVE BEEN PREPARED/ IMPLEMENTED
 - NECESSARY PUBLIC INFORMATION MEASURES HAVE BEEN ADDRESSED



①

MESSAGE NO. 1	MESSAGE NO. 2
I-240 E/ I-26 W TRAFFIC	USE EXIT 53B
CHANGEABLE MESSAGE SIGN	

LEGEND

- TYPE III BARRICADE(S)
- CHANGEABLE MESSAGE SIGN
- DETOUR ROUTE FOR TRAFFIC COMING FROM I-26.
- DETOUR ROUTE FOR TRAFFIC COMING FROM I-40.



SEAL

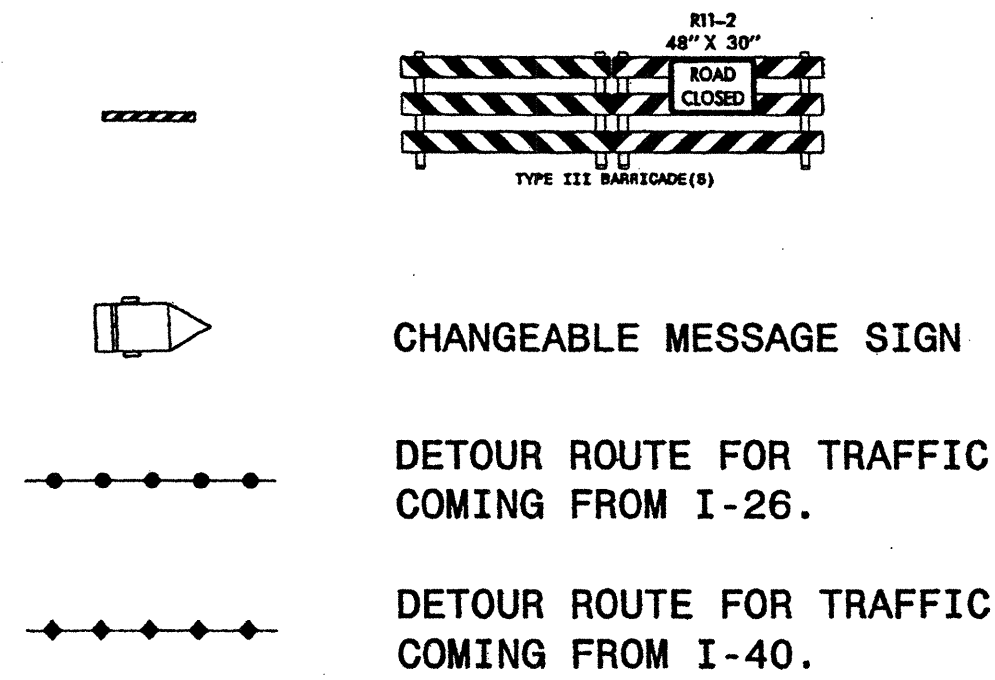
Matthew Watson
10/6/09

SIGNATURE DATE

I-240 EAST DETOUR #1 BRIDGES 283, 66, 206, & 274		REVISIONS	
SCALE: NONE	DATE: AUG. 2009		CADD FILE
DWG. BY: GK	DESIGN BY: BLW		
REVIEWED BY: BLW			

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LEGEND



APPROXIMATE LOCATION OF CMS FOR LEFT LANE CLOSURE. SEE RSD 1101.02 SHEET 3 OF 9 FOR PLACEMENT AND MESSAGES.

USE RSD 1101.02, SHEET 3 OF 9 TO CLOSE LEFTMOST OF THE 3 EB LANES OF I-40 E IN ADVANCE OF EXIT 46B.

ON I-26 BETWEEN EXITS 31A AND 31B: KEEP RIGHT LANE CLOSED WITH DRUMS. CHANNELIZE BOTH OPEN LANES ONTO EXIT 31B. USE 48" X 48" "ALL TRAFFIC" SIGN ON BOTH SIDES OF EXIT RAMP AS SHOWN IN RSD 1101.03 SHEET 7.

NOTES

- USE THIS DETOUR SHEET TO CLOSE I-240 E TO WORK ON BRIDGES 283, 66, AND 206.
- COMPLETE ALL WORK ON BRIDGE 274 I-240 EB BEFORE IMPLEMENTING THIS DETOUR.
- USE THE I-240 E DETOUR #1 SHOWN ON SHEET TCP-5, 5A DURING WORK ON BRIDGE 274.
- COORDINATE WITH THE ENGINEER TO MAKE SURE THAT THE FOLLOWING TASKS ARE COMPLETED BY NCDOT PERSONNEL PRIOR TO IMPLEMENTING THIS DETOUR:
 - SIGNAL TIMINGS ALONG THE PATTON AVENUE CLOSED LOOP SYSTEM AND ANY OTHER AFFECTED LOCAL ROUTES SUCH AS NC 191 HAVE BEEN ADJUSTED
 - HAR AND DMS MESSAGES HAVE BEEN PREPARED/ IMPLEMENTED
 - NECESSARY PUBLIC INFORMATION MEASURES HAVE BEEN ADDRESSED

USE DRUMS TO CHANNELIZE RIGHT THROUGH LANE ONTO EXIT 31A.

USE DRUMS TO CLOSE NEWLY ORIGINATED RIGHT LANE (DO NOT ALLOW TO ORIGINATE).

MESSAGE NO. 1	MESSAGE NO. 2
I-240 E/ I-26 W CLOSED	USE ALT ROUTE
CHANGEABLE MESSAGE SIGN	

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 46B CLOSED	USE NC 191 EXIT 47
CHANGEABLE MESSAGE SIGN	

MESSAGE NO. 1	MESSAGE NO. 2
I-240 E/ I-26 W CLOSED	2 MILES AHEAD
CHANGEABLE MESSAGE SIGN	

MESSAGE NO. 1	MESSAGE NO. 2
RT LANE MUST USE EXIT 31A	2 MILES AHEAD
CHANGEABLE MESSAGE SIGN	

MESSAGE NO. 1	MESSAGE NO. 2
I-240 E/ I-26 W CLOSED	USE EXIT 31A I-40 E
CHANGEABLE MESSAGE SIGN	

MESSAGE NO. 1	MESSAGE NO. 2
RT LANE MUST USE EXIT 31A	RT LANE EXIT ONLY
CHANGEABLE MESSAGE SIGN	

MESSAGE NO. 1	MESSAGE NO. 2
ALL TRAFFIC	USE EXIT 31B
CHANGEABLE MESSAGE SIGN	

*PLACE ALONG I-26 W AFTER EXIT 31A AND IN ADVANCE OF EXIT 31B.

MESSAGE NO. 1	MESSAGE NO. 2
TO I-240 E/ I-26 W	USE NC 191 EXIT 47
CHANGEABLE MESSAGE SIGN	

MESSAGE NO. 1	MESSAGE NO. 2
TO I240E TO I26W ----->	TURN RIGHT HERE
CHANGEABLE MESSAGE SIGN	

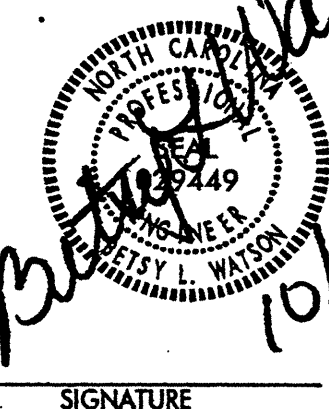
*PLACE AT TOP OF EXIT LOOP TO INSTRUCT DETOURED TRAFFIC TO TURN RIGHT ON NC 191.

MESSAGE NO. 1	MESSAGE NO. 2
I-240 E I-26 W ----->	TURN RIGHT HERE
CHANGEABLE MESSAGE SIGN	

*THIS SIGN MAY BE ELIMINATED AT THE DISCRETION OF THE ENGINEER SINCE JUNCTION IS SIGNED ALREADY.



SEAL



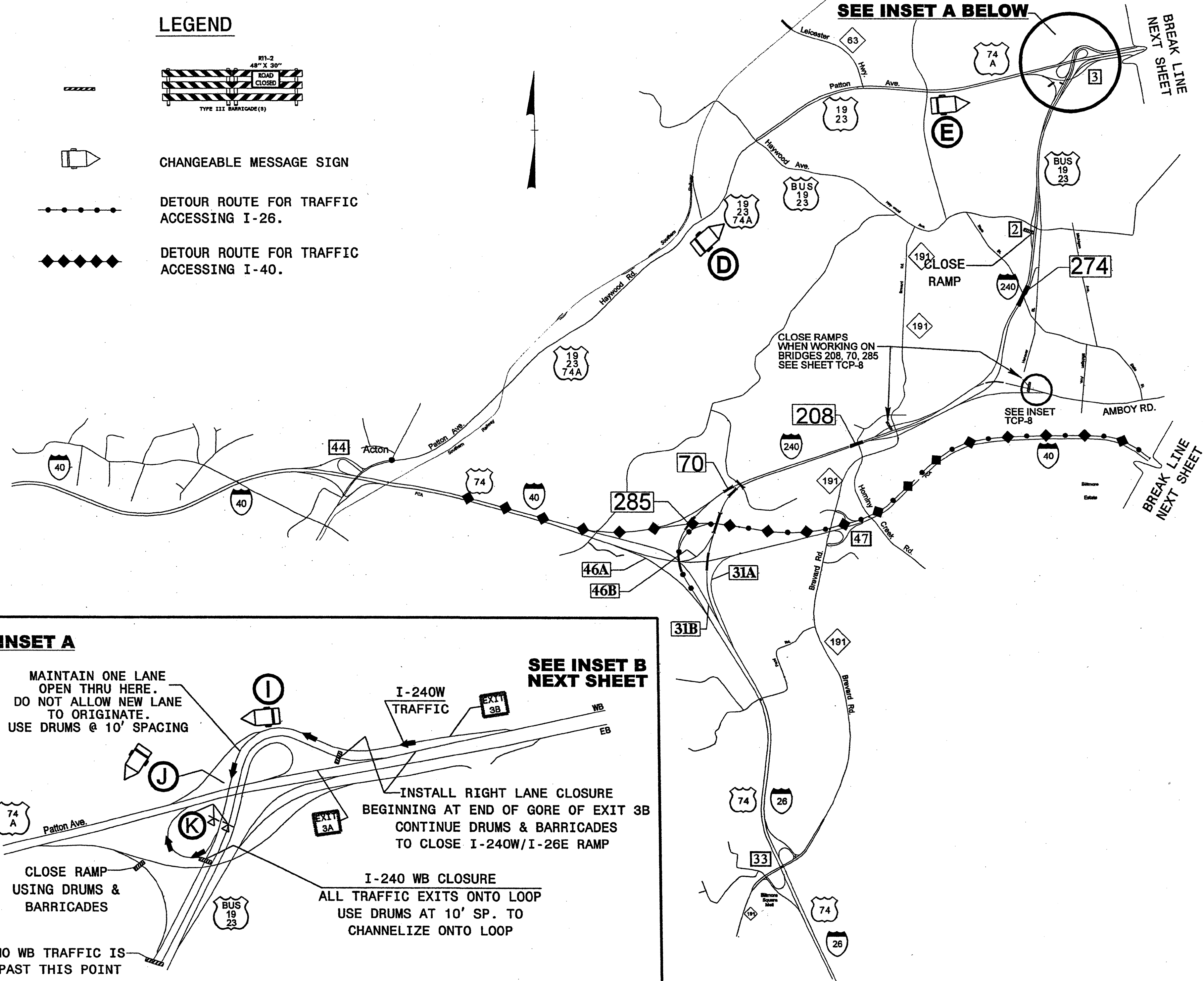
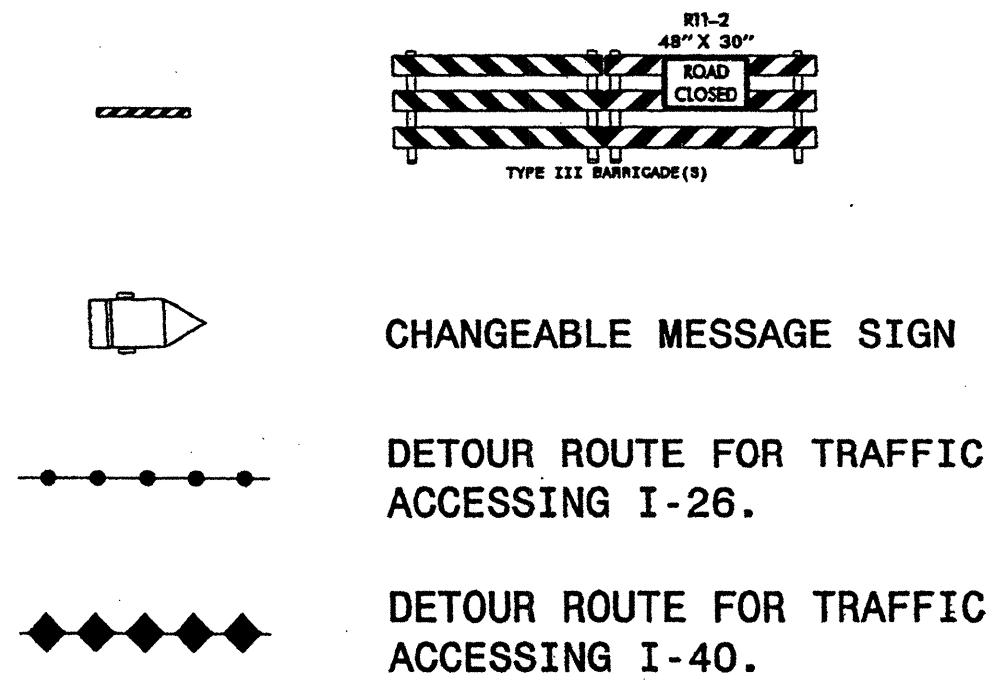
I-240 EAST
DETOUR #2
BRIDGES 283, 66 & 206

SCALE: NONE
DATE: AUG. 2009
DWG. BY: GK
DESIGN BY: BLW
REVIEWED BY: BLW



REVISIONS	

LEGEND



NOTES

- USE THIS DETOUR SHEET TO CLOSE I-240 W TO WORK ON BRIDGES 285, 70, 208, & 274.
- COMPLETE ALL WORK ON BRIDGE 274 I-240 WB DURING THIS DETOUR.
- THIS DETOUR IS ONLY TO BE IN PLACE FOR ONE WEEKEND.
- COORDINATE WITH THE ENGINEER TO MAKE SURE THAT THE FOLLOWING TASKS ARE COMPLETED BY NCDOT PERSONNEL PRIOR TO IMPLEMENTING THIS DETOUR:
 - SIGNAL TIMINGS ALONG THE PATTON AVENUE CLOSED LOOP SYSTEM AND ANY OTHER AFFECTED LOCAL ROUTES HAVE BEEN ADJUSTED
 - HAR AND DMS MESSAGES HAVE BEEN PREPARED/ IMPLEMENTED
 - NECESSARY PUBLIC INFORMATION MEASURES HAVE BEEN ADDRESSED

(A)

MESSAGE NO. 1	MESSAGE NO. 2
I-240 W CLOSED AHEAD	USE I-240 E TO I-40W

CHANGEABLE MESSAGE SIGN

(B)

MESSAGE NO. 1	MESSAGE NO. 2
I-240 W CLOSED	USE I-240 E TO I-40W

CHANGEABLE MESSAGE SIGN

(C)

MESSAGE NO. 1	MESSAGE NO. 2
I-240 W DETOURED TRAFFIC	USE EXIT 9 I-40 W

CHANGEABLE MESSAGE SIGN

(D)

MESSAGE NO. 1	MESSAGE NO. 2
I-240 W CLOSED AHEAD	USE ALT ROUTE

CHANGEABLE MESSAGE SIGN

(E)

MESSAGE NO. 1	MESSAGE NO. 2
I-240 W DETOURED AHEAD	USE I-240 E TO I-40W

CHANGEABLE MESSAGE SIGN

(F)

MESSAGE NO. 1	MESSAGE NO. 2
I-240 W DETOURED TRAFFIC	USE I-240 E TO I-40W

CHANGEABLE MESSAGE SIGN

(G)*

MESSAGE NO. 1	MESSAGE NO. 2
I-240 W CLOSED	PAST PATTON AVENUE

CHANGEABLE MESSAGE SIGN

(H)

MESSAGE NO. 1	MESSAGE NO. 2
I-240 W CLOSED	USE EXIT 3B

CHANGEABLE MESSAGE SIGN

*PLACE SIGN (G) ALONG ROUTES HAVING AN INTERCHANGE WITH I-240 AS DIRECTED BY THE ENGINEER.

(I)

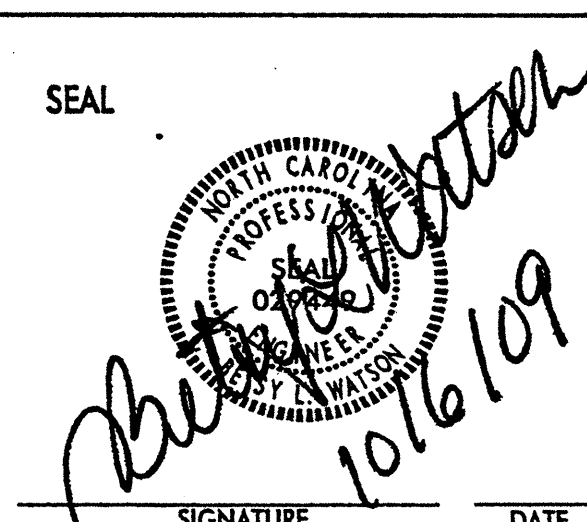
MESSAGE NO. 1	MESSAGE NO. 2
I-240 W KEEP LEFT	CAUTION REDUCE SPEED

CHANGEABLE MESSAGE SIGN

(J)

MESSAGE NO. 1	MESSAGE NO. 2
ALL TRAFFIC EXIT	REDUCE SPEED

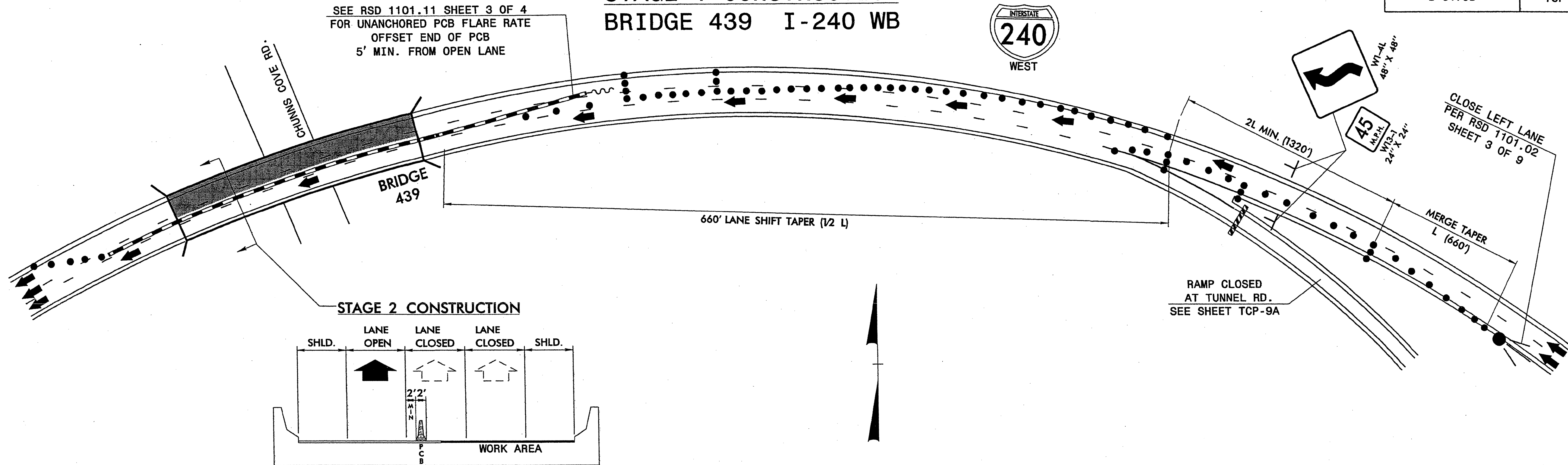
CHANGEABLE MESSAGE SIGN



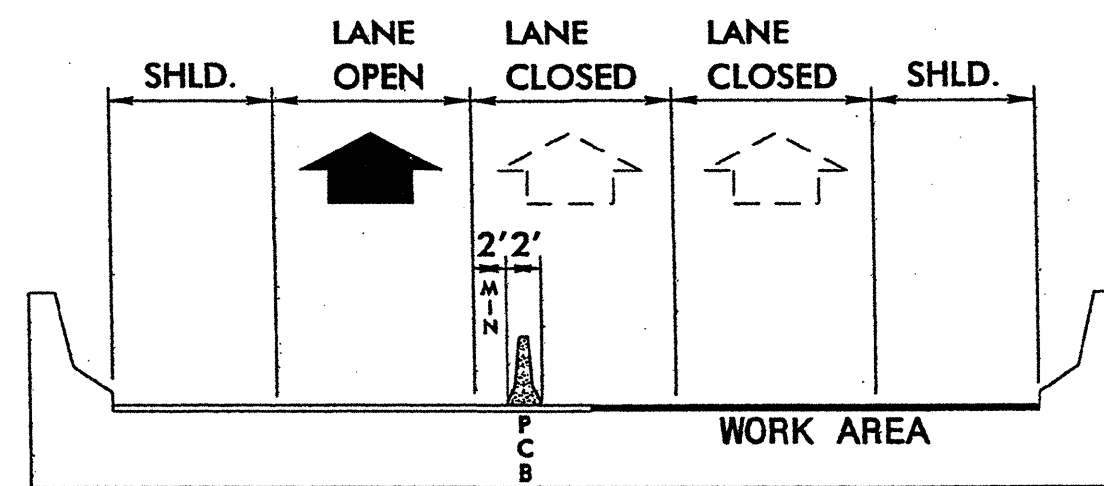
**I-240 WEST
DETOUR #1
BRIDGES 285, 70, 208, & 274**

SCALE	NONE		REVISIONS	
DATE:	AUG. 2009			
DWG. BY:	GK			
DESIGN BY:	BLW			
REVIEWED BY:	RI W			

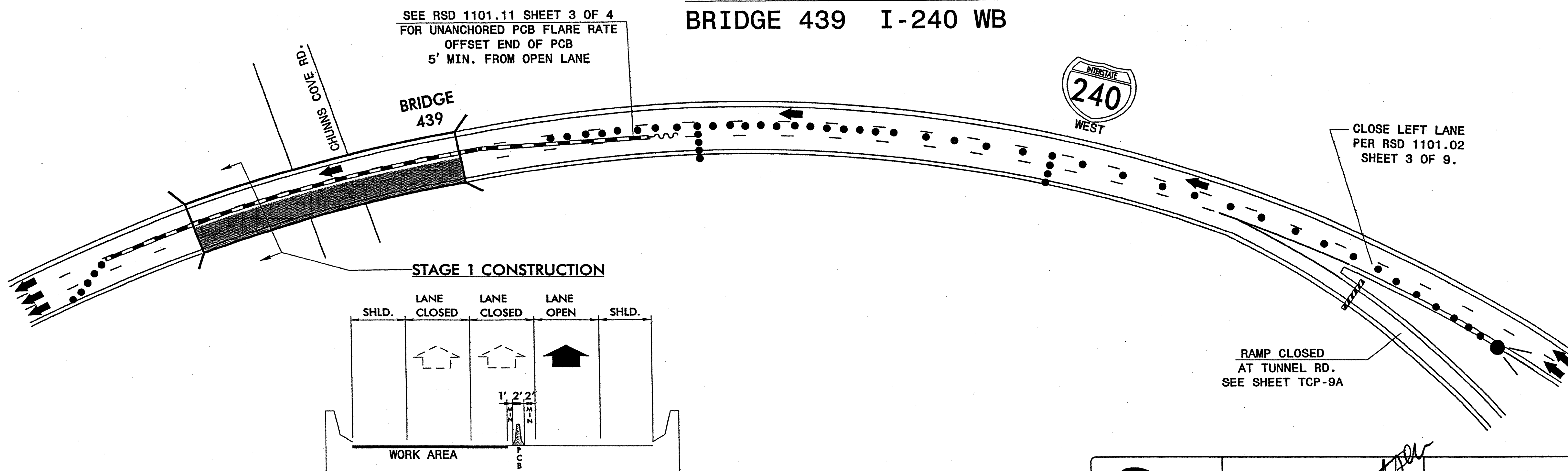
STAGE 1 CONSTRUCTION BRIDGE 439 I-240 WB



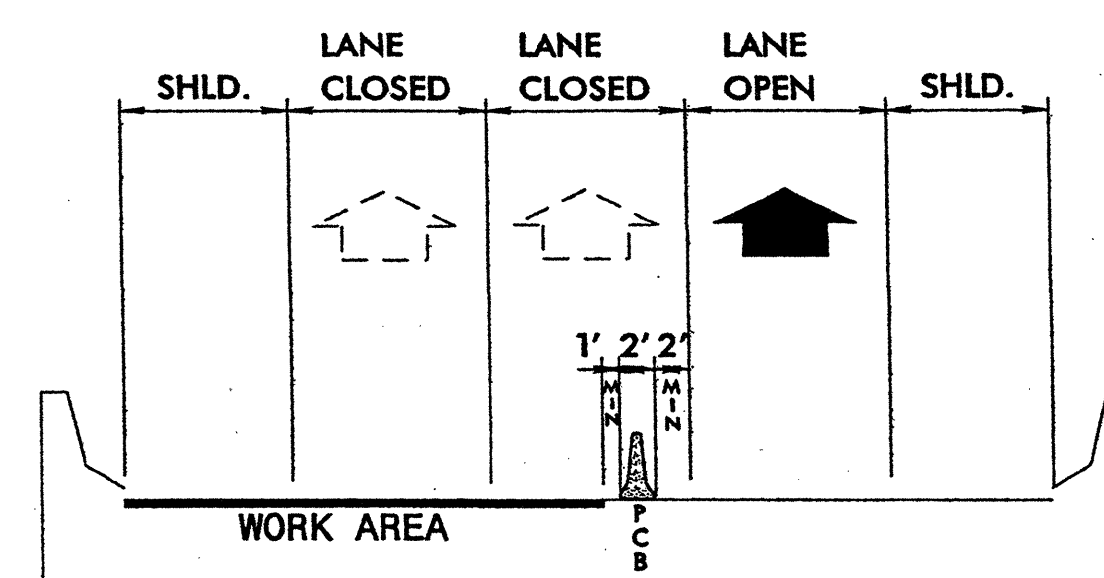
STAGE 2 CONSTRUCTION



STAGE 2 CONSTRUCTION BRIDGE 439 I-240 WB



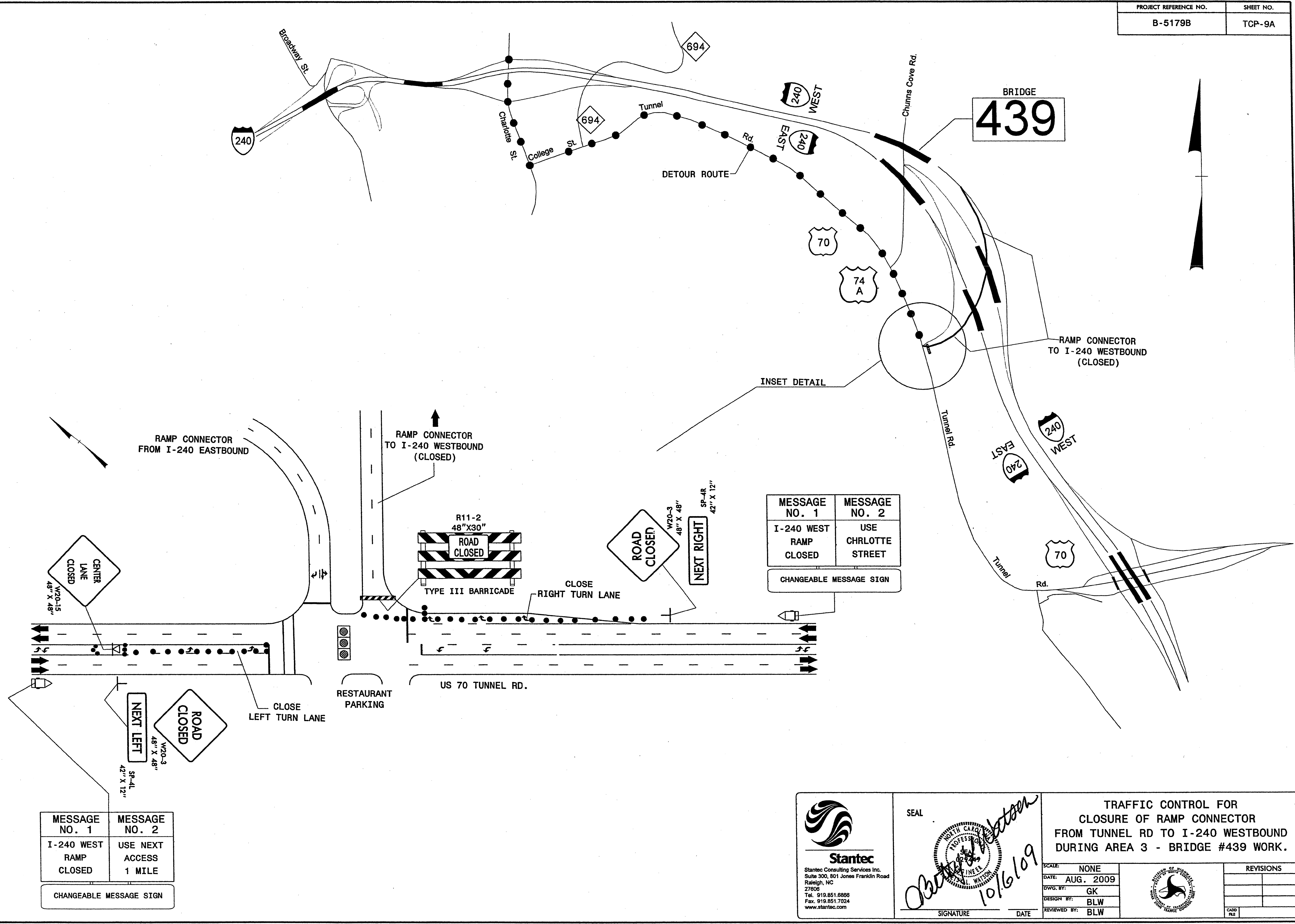
STAGE 1 CONSTRUCTION



 Stantec Stantec Consulting Services Inc. Suite 300, 801 Jones Franklin Road Raleigh, NC 27606 Tel. 919.851.8888 Fax. 919.851.7024 www.stantec.com	SEAL 	TRAFFIC CONTROL FOR AREA 3 - BRIDGE #439 I-240 WESTBOUND							
	SCALE: NONE DATE: AUG. 2009 DWG. BY: GK DESIGN BY: BLW REVIEWED BY: BLW		REVISIONS <table border="1"> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>						

10/2/2009
esign\trafficcontrol\B-5179b tcp plansheets\B5179b.tcp.psh.09_439.dgn
gkerageorge

10/6/2009 10:08:09 AM TCP\PLANSHEETS\B5179B TCP-Psh-09A_439_RAMP_CLOSURE.dgn
 9/15/2009 10:08:09 AM



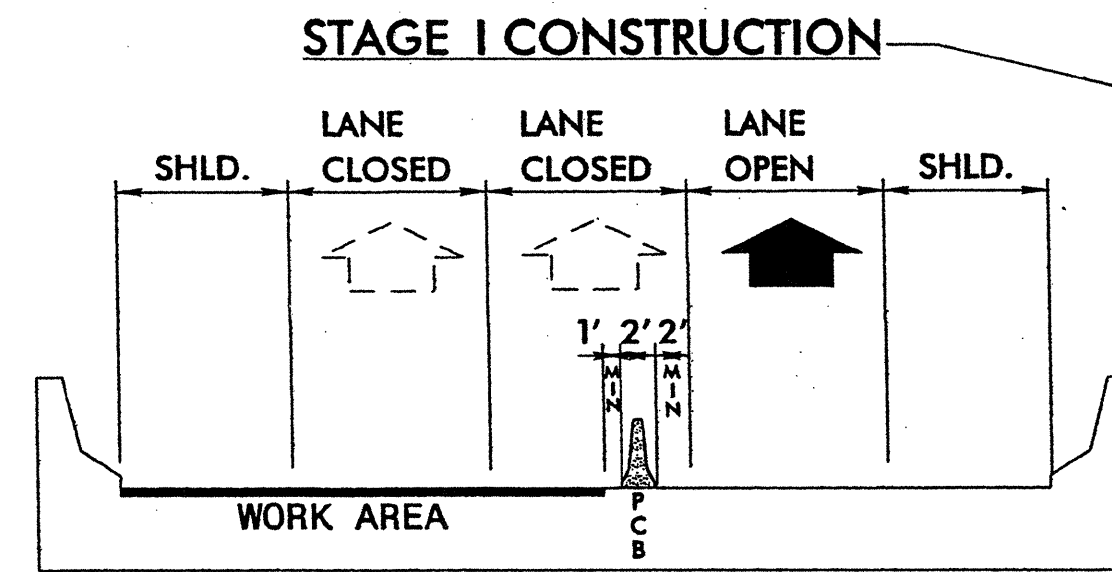
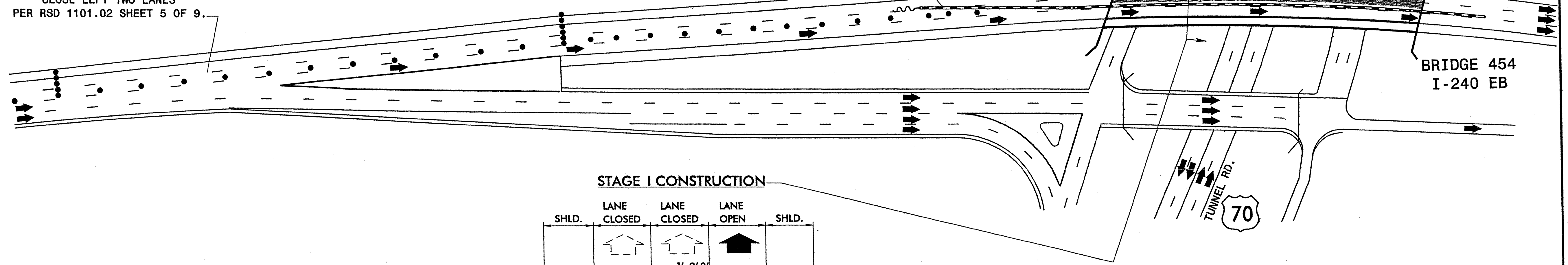
Stantec Stantec Consulting Services Inc. Suite 300, 801 Jones Franklin Road Raleigh, NC 27608 Tel. 919.851.6868 Fax. 919.851.7024 www.stantec.com	SEAL 10/6/09	TRAFFIC CONTROL FOR CLOSURE OF RAMP CONNECTOR FROM TUNNEL RD TO I-240 WESTBOUND DURING AREA 3 - BRIDGE #439 WORK.								
		SCALE: NONE		<table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REVISIONS					
		REVISIONS								
DATE: AUG. 2009										
DWG. BY: GK										
DESIGN BY: BLW										
REVIEWED BY: BLW										

NOTE:
ENTRANCE RAMP FROM CHUNNS COVE RD. IS CLOSED
DURING DURATION OF BRIDGE #454 WORK. SEE
SHEET TCP-10A FOR RAMP CLOSURE.

STAGE 1 CONSTRUCTION BRIDGE 454 I-240 EB

SEE RSD 1101.11 SHEET 3 OF 4
FOR UNANCHORED PCB FLARE RATE
OFFSET END OF PCB
5' MIN. FROM OPEN LANE

CLOSE LEFT TWO LANES
PER RSD 1101.02 SHEET 5 OF 9.

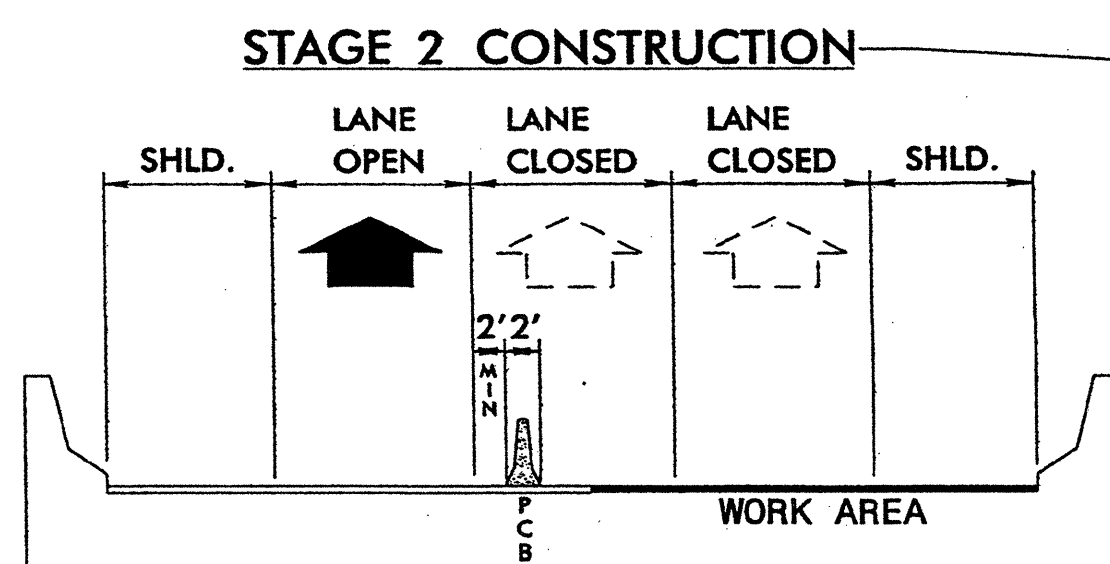
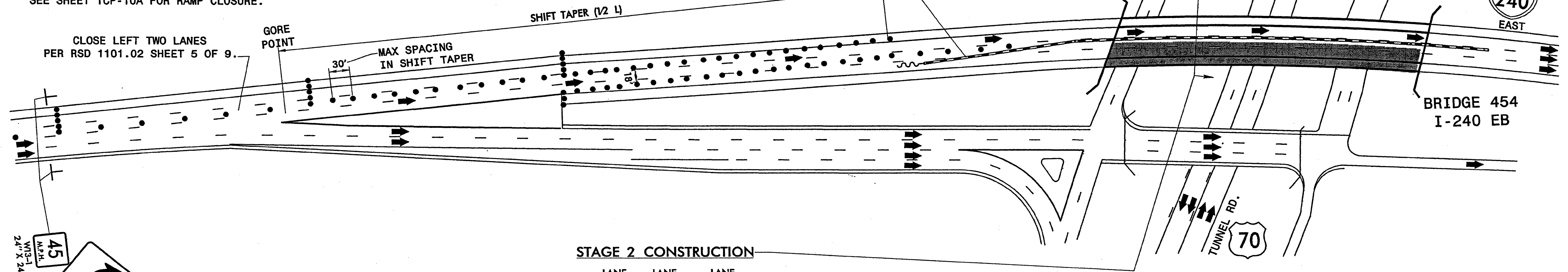


STAGE 2 CONSTRUCTION BRIDGE 454 I-240 EB

NOTE:
ENTRANCE RAMP FROM CHUNNS COVE RD. IS CLOSED
DURING DURATION OF BRIDGE #454 WORK.
SEE SHEET TCP-10A FOR RAMP CLOSURE.

SEE RSD 1101.11 SHEET 3 OF 4
FOR UNANCHORED PCB FLARE RATE
OFFSET END OF PCB
5' MIN. FROM OPEN LANE

CLOSE LEFT TWO LANES
PER RSD 1101.02 SHEET 5 OF 9.



10/2/2009 accontrol\B-5179b tcp\plansheets\B5179B_tcp_psh-10_454.dgn
gk\garage

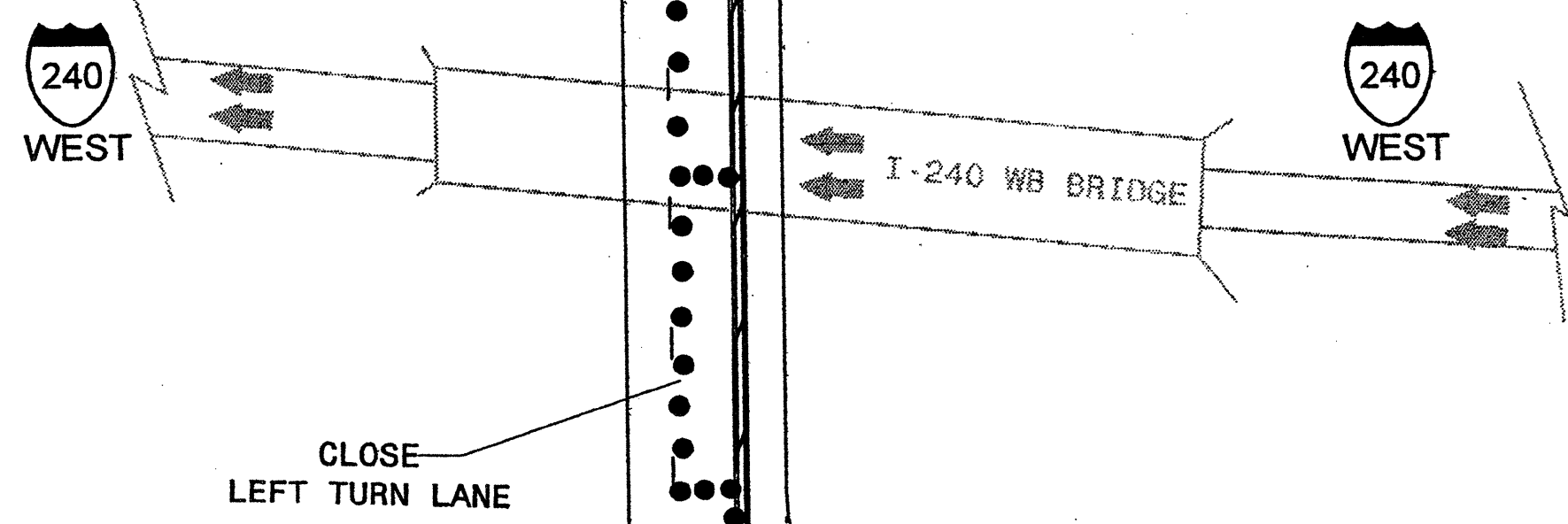
 Stantec Stantec Consulting Services Inc. Suite 300, 801 Jones Franklin Road Raleigh, NC Tel: 919.851.6666 Fax: 919.851.7024 www.stantec.com	SEAL <i>Jeffrey L. Watson</i> 10/6/09 SIGNATURE	TRAFFIC CONTROL FOR AREA 4 - BRIDGE #454 I-240 EASTBOUND		REVISIONS <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>								
SCALE:	NONE											
DATE:	AUG. 2009											
DESIGN BY:	GK											
REVIEWED BY:	BLW	CADD FILE										

MESSAGE NO. 1	MESSAGE NO. 2
I-240 EB RAMP CLOSED	FOLLOW US 70 TO I-240

CHANGEABLE MESSAGE SIGN

SP-4L
42" X 12"
NEXT LEFT

W20-3
48" X 48"
ROAD CLOSED



RAMP FROM I-240 WESTBOUND

TYPE III BARRICADE
R11-2
48" X 30"
ROAD CLOSED

RAMP CONNECTOR TO I-240 EASTBOUND (CLOSED)

240 EAST

CHUNN'S COVE RD.

I-240 EB BRIDGE

ROAD CLOSED

W20-3
48" X 48"
NEXT RIGHT

SP-4R
42" X 12"

INSET DETAIL

MESSAGE NO. 1	MESSAGE NO. 2
I-240 EB RAMP CLOSED	FOLLOW US 70 TO I-240

CHANGEABLE MESSAGE SIGN

74 A
DETOUR ROUTE

70

Tunnel Rd.

240 EAST

240 WEST

BRIDGE
454

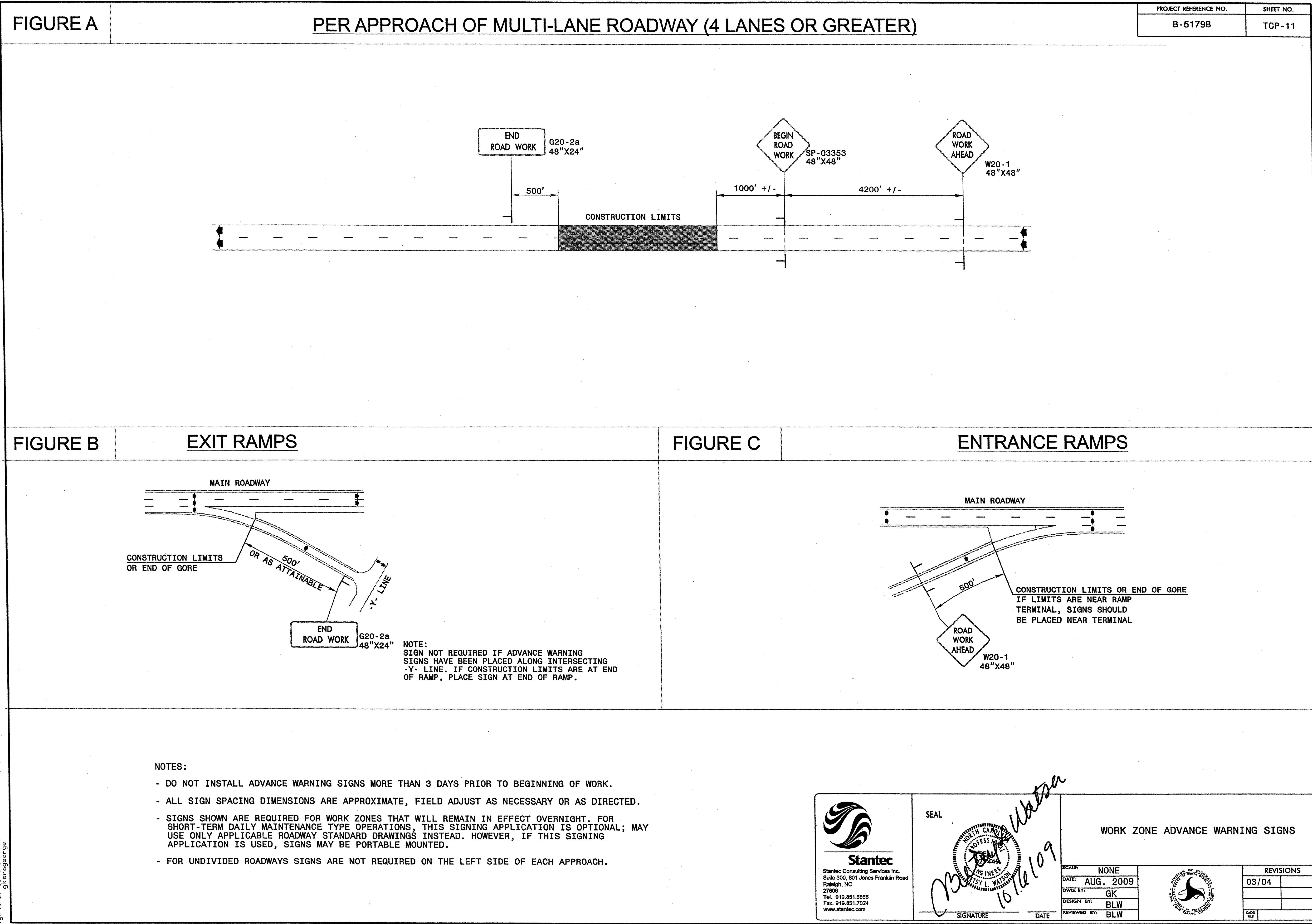
RAMP CONNECTOR TO I-240 EASTBOUND (CLOSED)

Stantec
Stantec Consulting Services Inc.
Suite 300, 801 Jones Franklin Road
Raleigh, NC 27606
Tel. 919.851.6886
Fax. 919.851.7024
www.stantec.com

SEAL
DATE: 10/6/09
SIGNATURE: [Signature]

TRAFFIC CONTROL FOR CLOSURE OF RAMP CONNECTOR FROM CHUNN'S COVE RD. TO I-240 EASTBOUND DURING BRIDGE #454 WORK.	
SCALE: NONE	REVISIONS
DATE: AUG. 2009	
DWG. BY: GK	
DESIGN BY: BLW	
REVIEWED BY: BLW	

J:\6/2009\B-5179B TCP\PLANSHEETS\B5179B-tcp.psh-10A-454-RAMP_CLOSURE.dgn
AFFIC\T\stg\George



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

SPECIAL NOTES:

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

ENGLISH

JANUARY, 1990

STD. NO. SN