

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5021	1	
WBS NO.	P.A. PROJ. NO.	DESCRIPTION	
41927.1.I	IMS-95-1 (76) 33	PE	
41927.2.I		RAW & UTILITY	
41927.3.I	IMS-095-1 (78) 33	CONSTRUCTION	

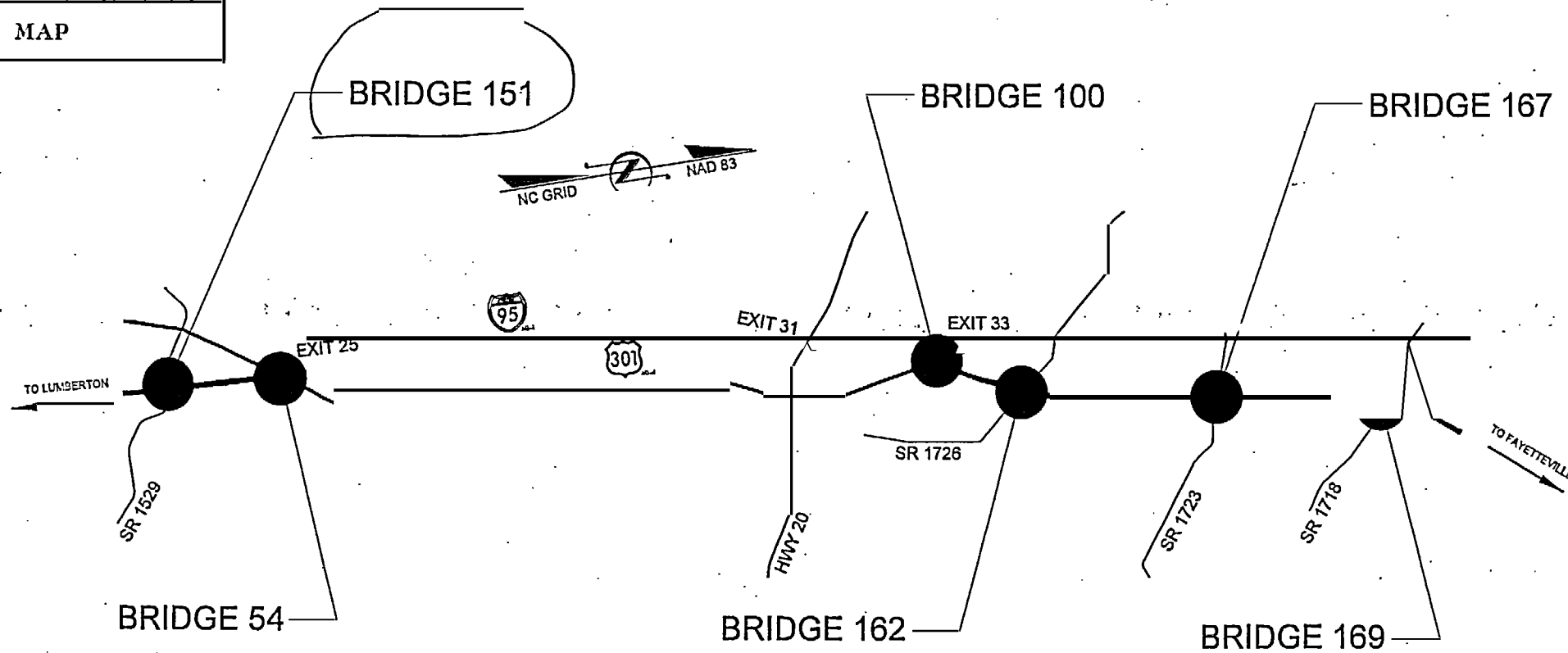
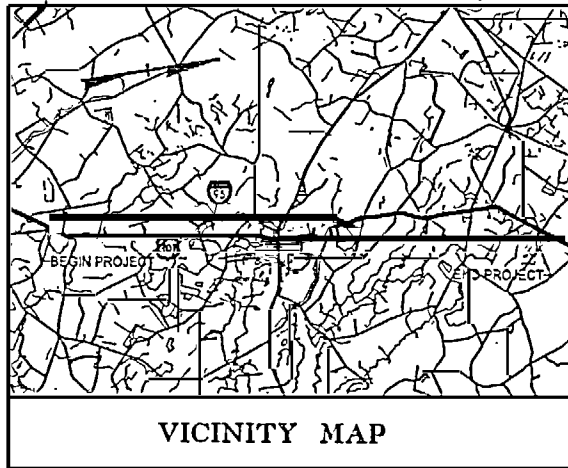
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROBESON COUNTY

**LOCATION: SPAN REPLACEMENTS ON BRIDGES 151, 162, 167, & 169
JACKING OF BRIDGES 54 & 100
LOCATED ALONG I-95**

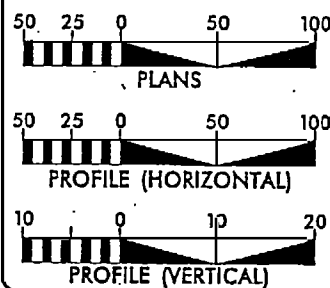
**TYPE OF WORK: JACK STRUCTURES, SPAN REPLACEMENTS,
GRADING, PAVING, AND DRAINAGE**

See Sheets 1-9 For Brldge 151
See Sheets 10-19 For Brldge 54
See Sheets 20-29 For Brldge 100
See Sheets 30-43 For Brldge 162
See Sheets 44-53 For Brldge 167
See Sheets 54-62 For Brldge 169



STRUCTURES

GRAPHIC SCALES



DESIGN DATA

V = 55 MPH

8/5/2008 9:51:34 AM B5021\Roadway\Proj\B-5021.RDY_STRUCTUREES_TSH.dgn
 2/21/2008 9:51:34 AM B5021\Roadway\Proj\B-5021.RDY_STRUCTUREES_TSH.dgn

CONTRACT: C202079 TIP PROJECT: B-5021

Prepared in the Office of:
 STV/Ralph Whitehead Associates, Inc.
 1000 West Morehead St., Ste. 203
 Charlotte, NC 28208
 for the North Carolina Department of Transportation

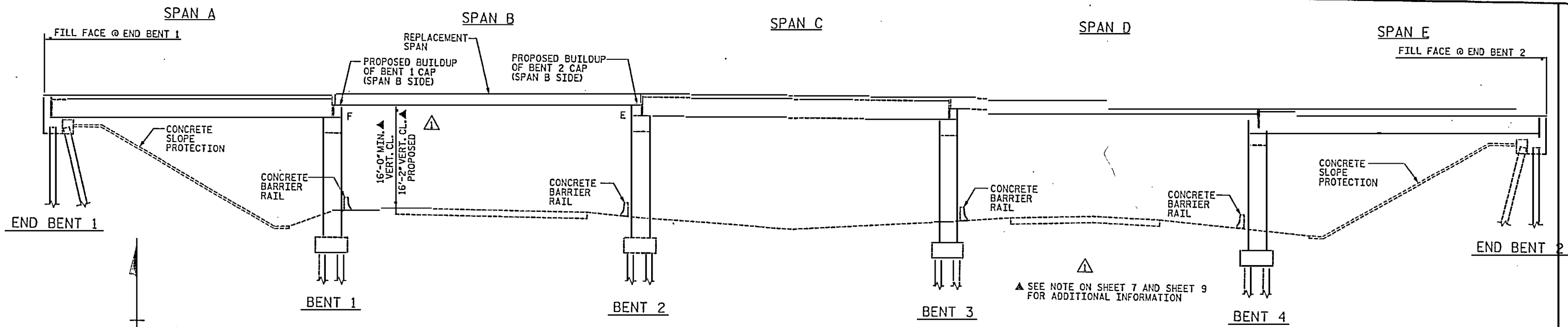
2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:	MARK F. ROBBINS, P.E. PROJECT ENGINEER
LETTING DATE: JULY 15, 2008	KEVIN G. BAILEY, P.E. PROJECT DESIGN ENGINEER

Prepared in the Office of:
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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

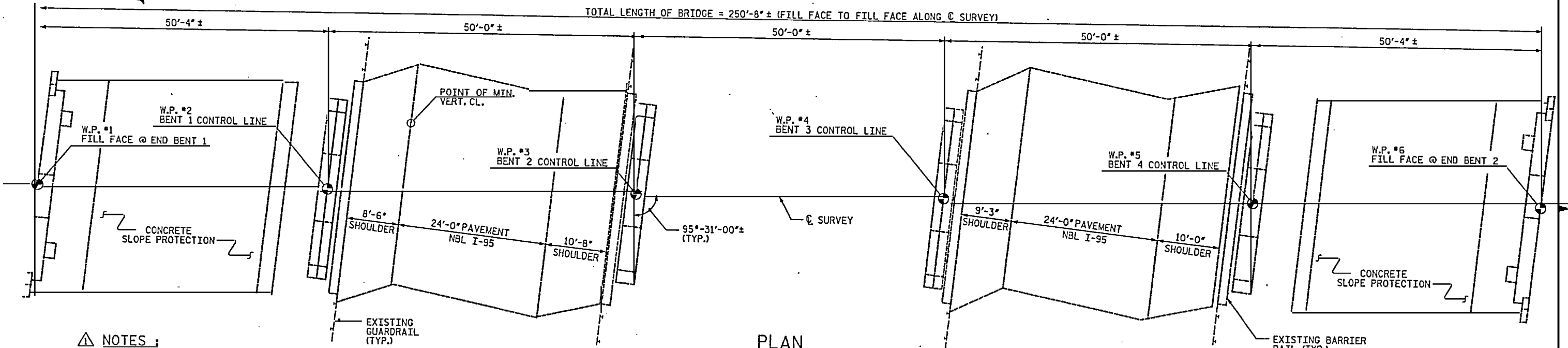
STATE HIGHWAY DESIGN ENGINEER



ALL DIMENSIONS IN THESE PLANS ARE BASED ON BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY DIMENSIONS IN FIELD PRIOR TO CONSTRUCTION AND ANY FABRICATION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES SUCH THAT NECESSARY ADJUSTMENTS BE MADE BY THE CONTRACTOR.

ELEVATION

SECTIONS AT BENTS AND END BENTS ARE AT RIGHT ANGLES



PLAN

PILES, FOOTINGS AND COLUMNS NOT SHOWN IN PLAN VIEW FOR CLARITY

NOTES :

- ASSUMED LIVE LOAD = HS 20 OR ALTERNATE LOADING.
- FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
- CORED SLABS HAVE BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS.
- SPAN B OF THE EXISTING STRUCTURE CONSISTING OF 50'-0" PRESTRESSED CONCRETE GIRDERS, 24'-0" CLEAR ROADWAY WIDTH, REINFORCED CONCRETE DECK SHALL BE REMOVED, FOR PARTIAL REMOVAL OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR MAINTENANCE & PROTECTION OF TRAFFIC BENEATH BRIDGE, SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL

	PARTIAL REMOVAL OF EXISTING STRUCTURE	CLASS AA CONCRETE	REINFORCING STEEL	CONCRETE BRIDGE RAIL	ELASTOMERIC BEARINGS	3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLABS
	LUMP SUM	CU. YDS.	LBS.	LIN. FT.	LUMP SUM	LIN. FT.
SUPERSTRUCTURE	LUMP SUM			99.75	LUMP SUM	448.88
BENT 1		4.6	800			
BENT 2		4.4	793			
TOTAL	LUMP SUM	9.0	1,593	99.75	LUMP SUM	448.88

REVISION #1: REVISED PER REVIEW COMMENTS
 BY: TJT DATE: 5-08
 CH'KD BY: KGB DATE: 5-08

DRAWN BY: JTG DATE: 02-08
 CHECKED BY: TBQ DATE: 03-08

D-1809.1

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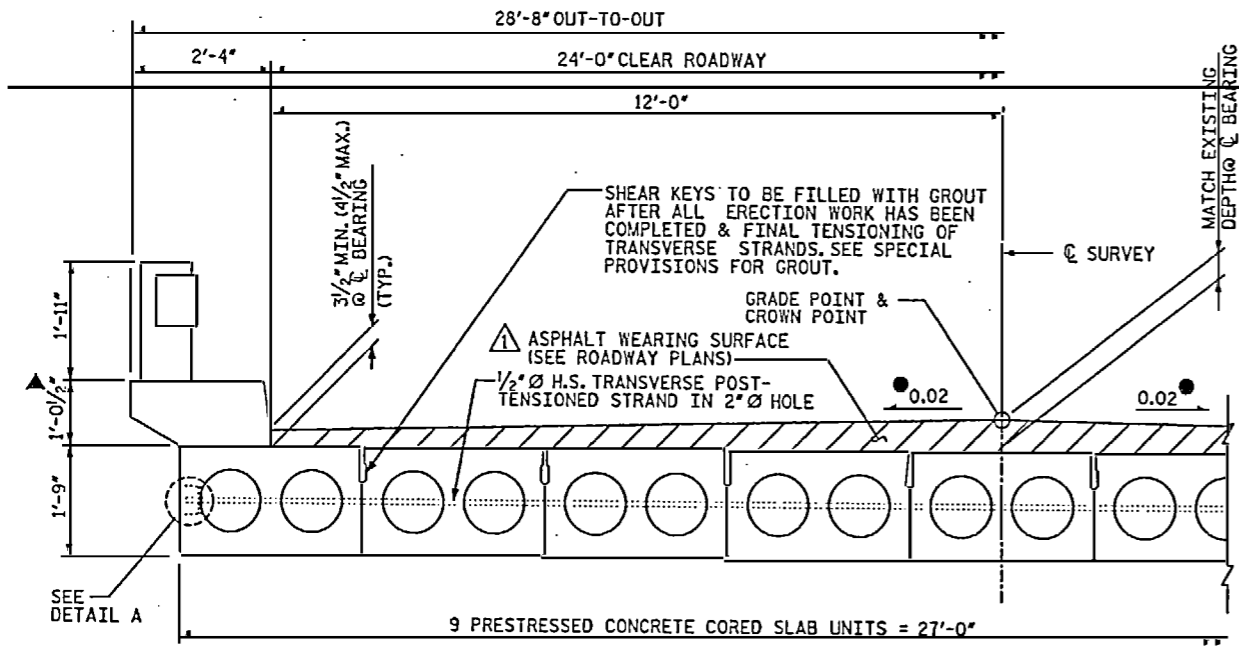
PROJECT NO. B-5021
 ROBESON COUNTY
 BRIDGE: 151

MODIFICATION OF BRIDGE NO. 151

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 BRIDGE OVER I-95
 ON SR 1529

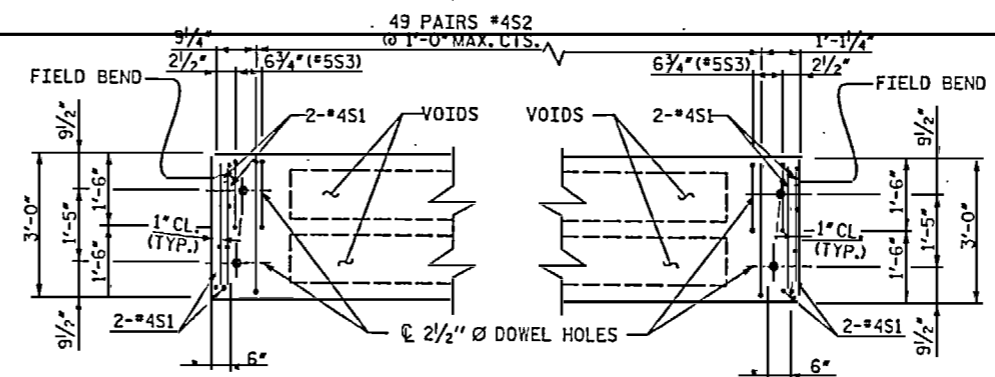
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1	STV	5-08	3			S-1
2			4			TOTAL SHEETS 62



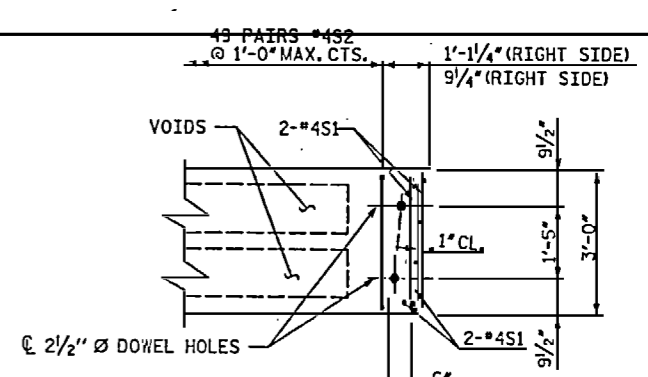
TYPICAL HALF SECTION
(BRIDGE SYMMETRIC ABOUT C SURVEY)

▲ CURB HEIGHT MAY NEED TO BE ADJUSTED TO MATCH TOP OF CURB IN ADJACENT SPAN. REINFORCING SHALL BE ADJUSTED TO MATCH THE REVISED CURB HEIGHT.

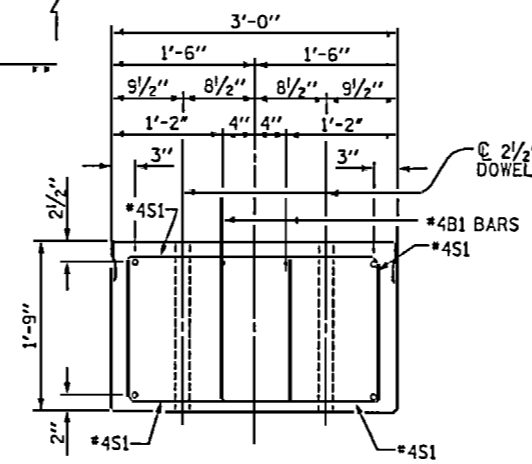
● CONTRACTOR SHALL MAKE A SMOOTH TRANSITION TO MATCH EXISTING CROSS SLOPE ON ROADWAY APPROACHES.



PART PLAN EXTERIOR SLAB SECTION
(LEFT SIDE SHOWN, RIGHT SIDE SIMILAR BY SYMMETRY)

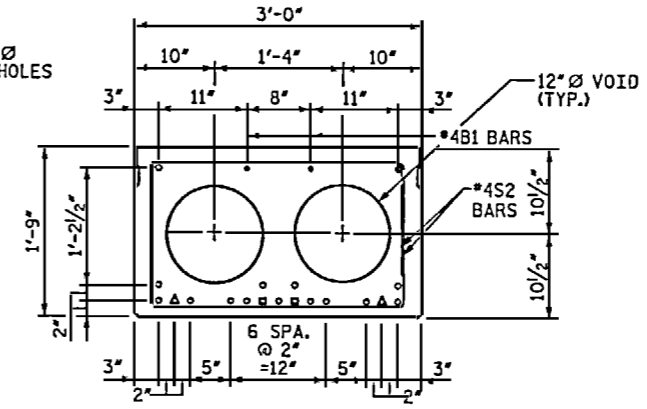


PART PLAN INTERIOR SLAB SECTION
(FAR END SHOWN, NEAR END SIMILAR BY SYMMETRY)



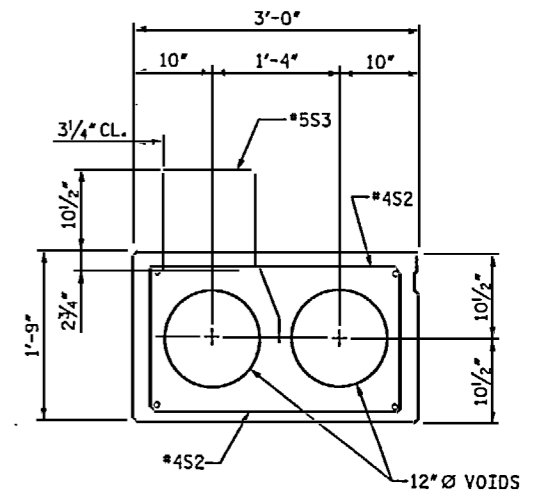
SLAB END ELEVATION

SHOWING PLACE OF DOUBLE STIRRUPS AND LOCATION OF DOWEL HOLES.
INTERIOR SLAB SECTION SHOWN, EXTERIOR SLAB SECTION SIMILAR EXCEPT SHEAR KEY LOCATION.
STRAND LAYOUT NOT SHOWN.



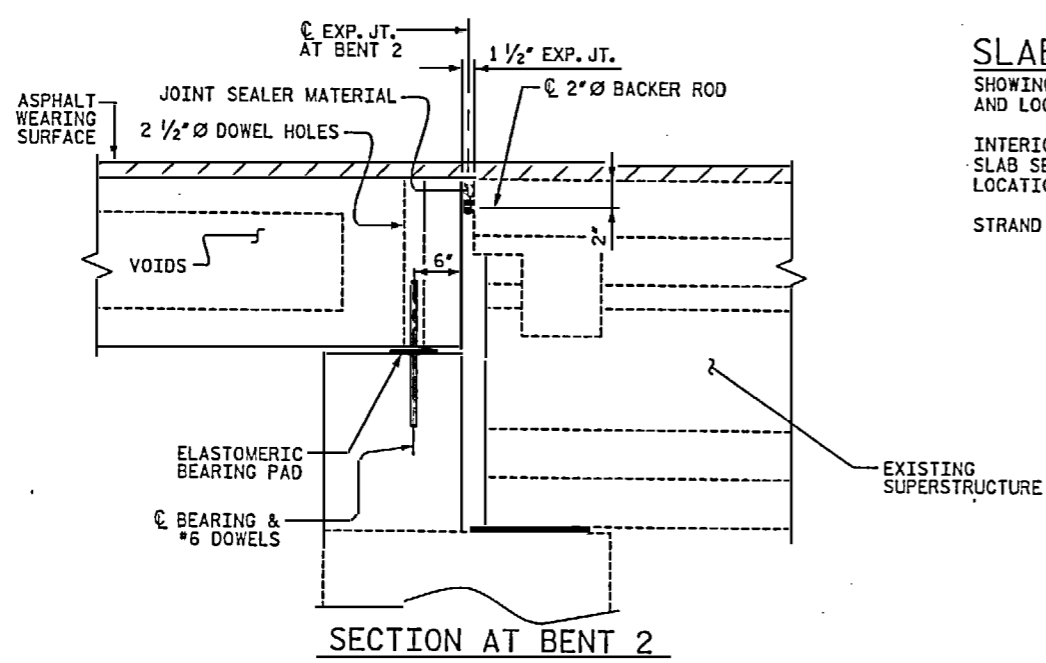
INTERIOR SLAB SECTION
(19 TOTAL STRANDS REQUIRED)

○ DENOTES 1/2" Ø L.R. STRANDS
▲ DENOTES SHEATHED STRAND, BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 2'-0" FROM END OF SLAB.
■ DENOTES SHEATHED STRAND, BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 4'-0" FROM END OF SLAB.
SEE STANDARD SPECIFICATIONS ARTICLE 1078-7.

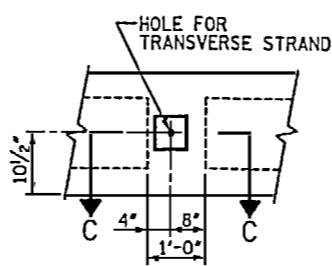


EXTERIOR SLAB SECTION
(FOR PRESTRESSED STRAND AND #4B1 BAR LAYOUT, SEE INTERIOR SLAB SECTION)

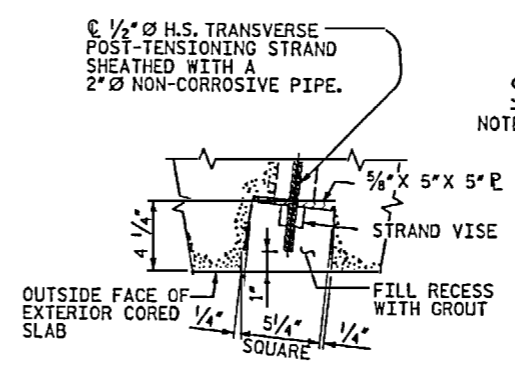
▲ NOTE: ASPHALT WEARING SURFACE IS INCLUDED IN THE QUANTITIES ON THE ROADWAY PLANS.



SECTION AT BENT 2
(BENT 1 SIMILAR BY SYMMETRY)



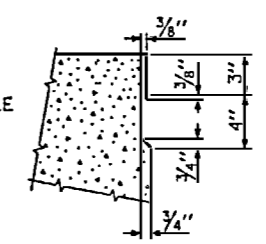
ELEVATION VIEW



SECTION C-C

SHEAR KEY DETAIL

NOTE: OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR CORED SLAB



DETAIL A
GROUTED RECESS AT END OF POST-TENSIONED STRAND CORED SLABS

▲ REVISION #1: REVISED PER REVIEW COMMENTS
BY: TJT DATE: 5-08
CH'KD BY: KGB DATE: 5-08

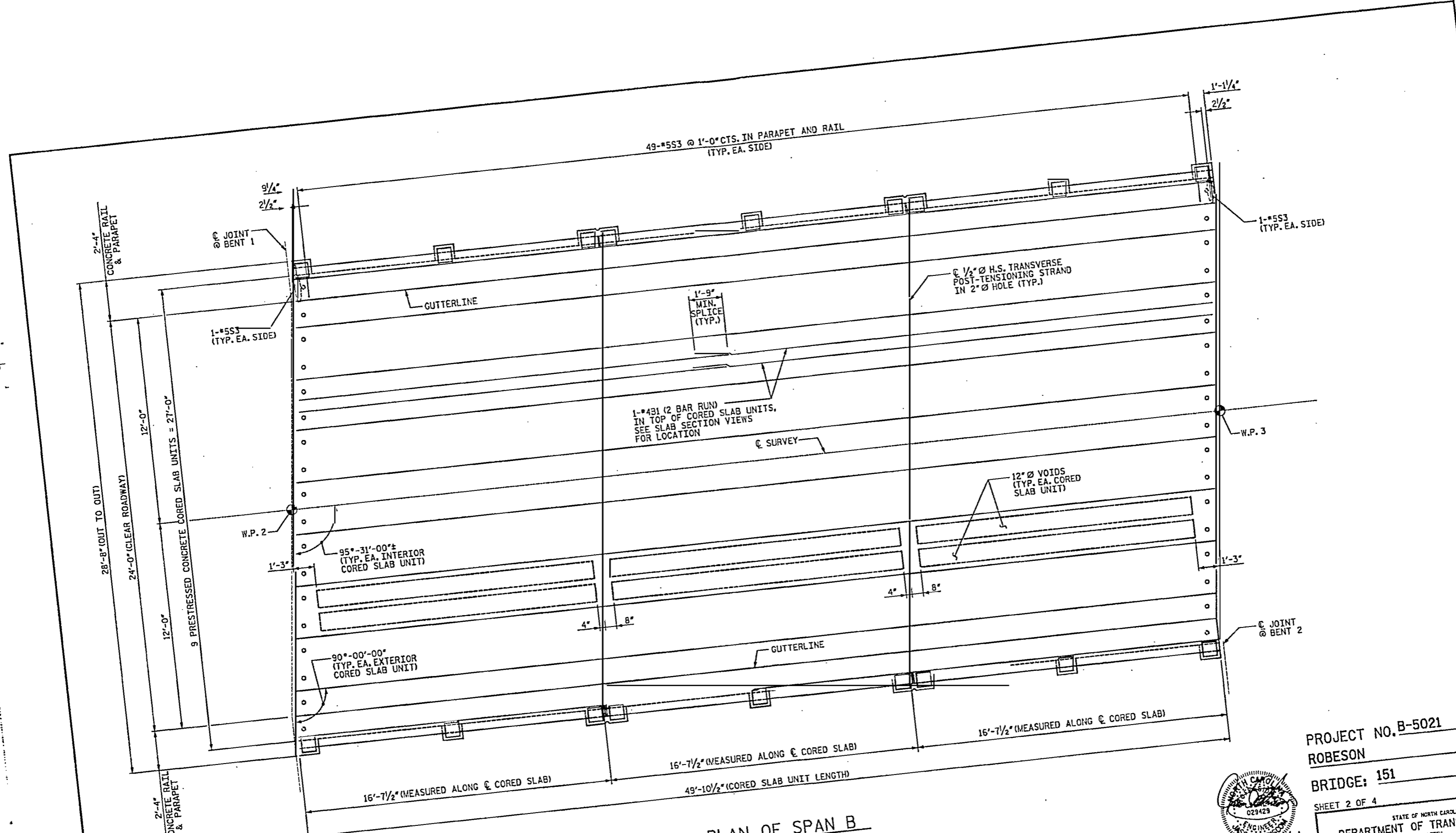
DRAWN BY: TRL DATE: 2-08
CHECKED BY: TBQ DATE: 3-08

D-1809.2
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Charlotte, NC 28228

PROJECT NO. B-5021
ROBESON COUNTY
BRIDGE: 151

SHEET 1 OF 4

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
3'-0" X 1'-9" PRESTRESSED CORED SLAB					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1	STV	5-08	3		
2			4		
				SHEET NO.	S-2
				TOTAL SHEETS	62

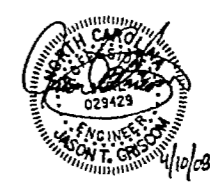


PLAN OF SPAN B

FOR ADDITIONAL CONCRETE RAIL REINFORCING STEEL & DETAILS, SEE "CONCRETE BRIDGE RAIL" SHEET.

PROJECT NO. B-5021
 ROBESON COUNTY
 BRIDGE: 151
 SHEET 2 OF 4

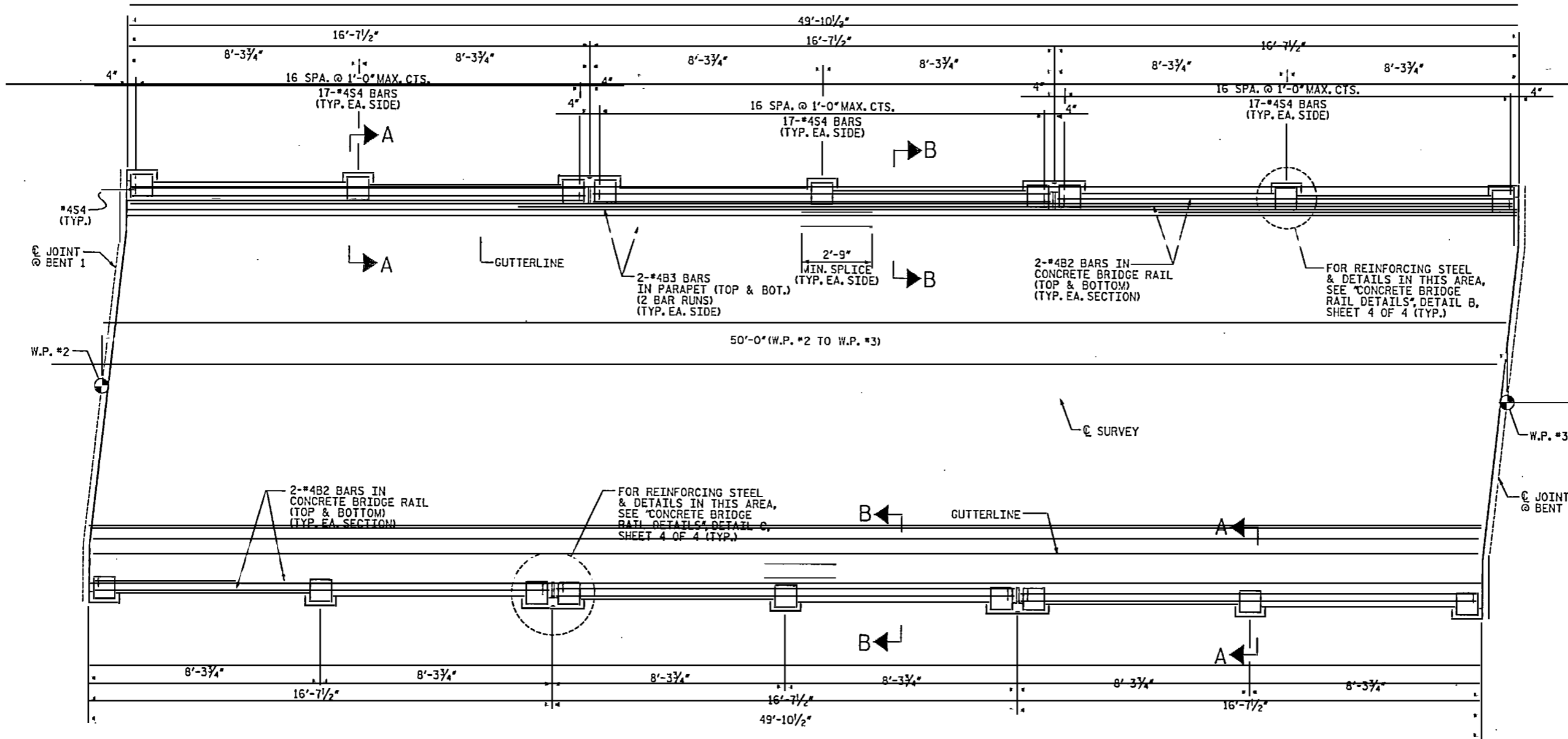
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE
 PLAN OF SPAN B



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

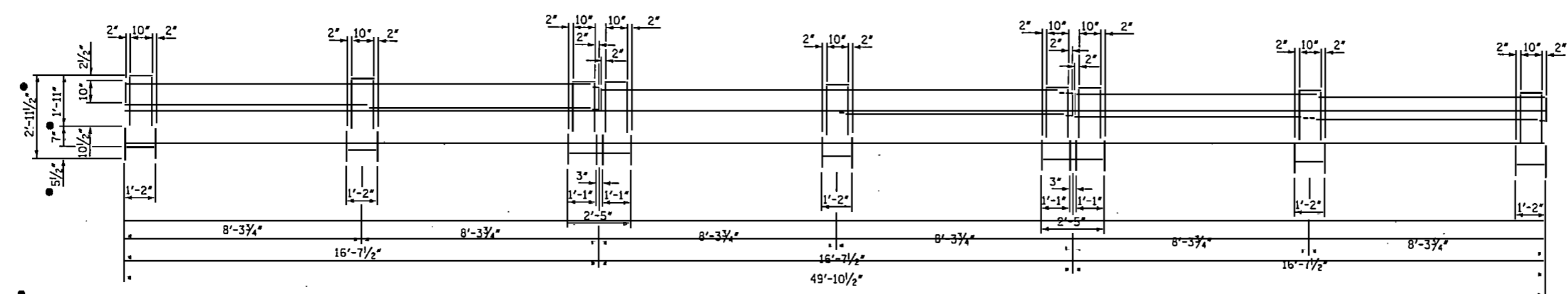
D-1809.3
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 1000 West Morehead St., Ste. 209
 Charlotte, NC 28228

DRAWN BY: TRL DATE: 1-08
 CHECKED BY: TBQ DATE: 3-08



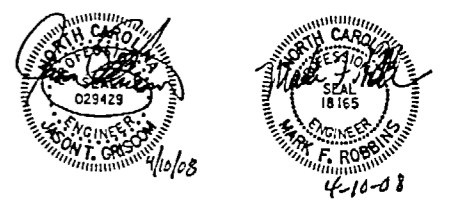
NOTE:
FOR SECTION VIEWS, SEE SHEET 4 OF 4.
CONCRETE BRIDGE RAIL SHALL BE CHAMFERED TO MATCH EXISTING RAIL. FOR CONCRETE BRIDGE RAIL, SEE SPECIAL PROVISIONS.

PLAN



ELEVATION
(EXTERIOR OF RIGHT SIDE RAIL SHOWN, LEFT RAIL SIMILAR)

• DIMENSIONS MAY NEED TO BE ADJUSTED TO MATCH TOP OF RAIL IN ADJACENT SPAN. REINFORCING SHALL BE ADJUSTED TO MATCH THE REVISED RAIL HEIGHT.



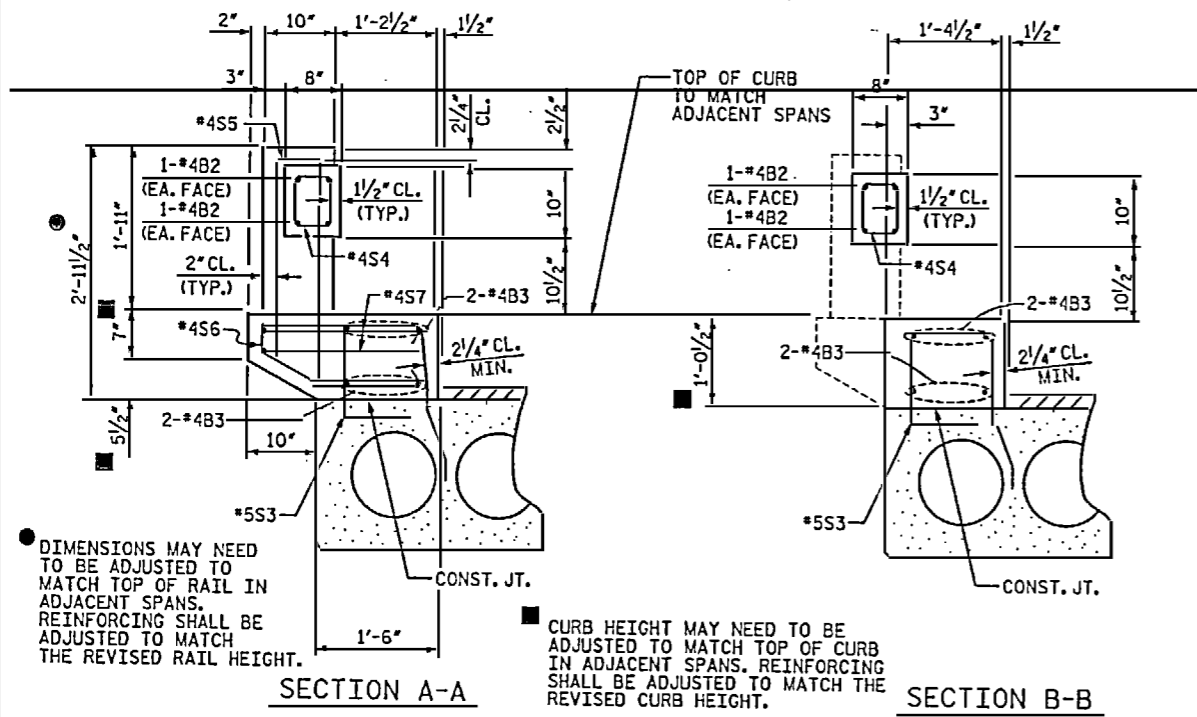
PROJECT NO. B-5021
ROBESON COUNTY
BRIDGE: 151
SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
CONCRETE
BRIDGE RAIL

BRIDGE 151		REVISIONS						SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE				
1			3			5-4			
2			4			TOTAL SHEETS 62			

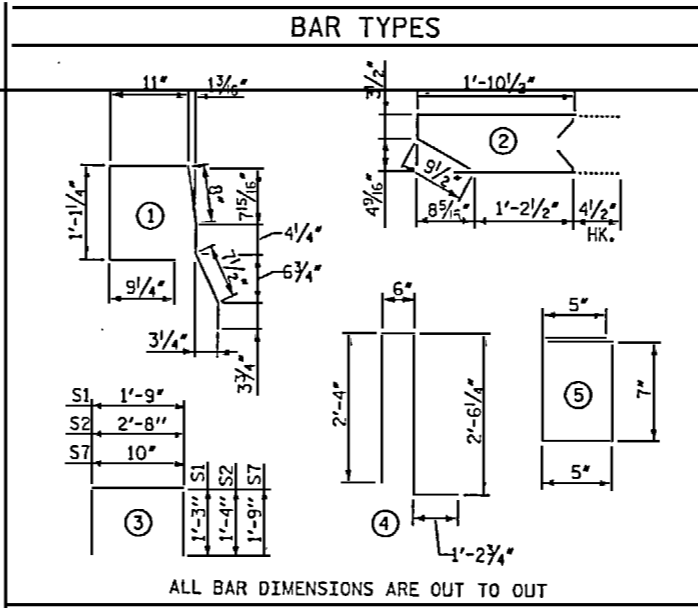
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CHECKED BY : TBQ DATE : 3-08

D-1809.4
STV/Ralph Whitehead Associates, Inc.
1000 West Morehead St., Ste. 200
Charlotte, NC 28208



DIMENSIONS MAY NEED TO BE ADJUSTED TO MATCH TOP OF RAIL IN ADJACENT SPANS. REINFORCING SHALL BE ADJUSTED TO MATCH THE REVISED RAIL HEIGHT.

CURB HEIGHT MAY NEED TO BE ADJUSTED TO MATCH TOP OF CURB IN ADJACENT SPANS. REINFORCING SHALL BE ADJUSTED TO MATCH THE REVISED CURB HEIGHT.



BILL OF MATERIAL FOR ONE CORED SLAB SECTION

BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT LENGTH	EXTERIOR UNIT WEIGHT	INTERIOR UNIT LENGTH	INTERIOR UNIT WEIGHT
B1	4	#4	STR	25'-8"	69	25'-8"	69
S1	16	#4	3	4'-3"	45	4'-3"	45
S2	98	#4	3	5'-4"	349	5'-4"	349
*S3	49	#5	1	4'-9"	243		
REINFORCING STEEL					463 LBS.		463 LBS.
*EPOXY COATED REINFORCING STEEL					243 LBS.		
5000 P.S.I. CONCRETE					7.0 CY		7.0 CY
1/2" Ø L.R. STRANDS				No.	19		19

DEAD LOAD DEFLECTION AND CAMBER

	3'-0" x 1'-9"
	1/2" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	1 3/4"
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD**	1/4"
FINAL CAMBER	1 1/8"

** INCLUDES FUTURE WEARING SURFACE

BILL OF MATERIAL FOR CONCRETE BRIDGE RAIL AND PARAPET

BAR	TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
*B2	24	#4	STR	16'-2"	259
*B3	16	#4	STR	26'-2"	280
*S4	102	#4	5	2'-5"	165
*S5	36	#4	4	6'-7"	158
*S6	36	#4	2	4'-11"	118
*S7	36	#4	3	4'-4"	104
*EPOXY COATED REINFORCING STEEL					1,084 LBS.
CLASS AA CONCRETE					9.1 CY
TOTAL LIN. FT. OF CONCRETE BARRIER RAIL					99'-9"

CORED SLABS REQUIRED

	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR C.S.	2	49'-10 1/2"	99'-9"
INTERIOR C.S.	7	49'-10 1/2"	349'-11 1/2"
TOTAL	9		448'-10 1/2"

GRADE 270 STRANDS

AREA (SQUARE INCHES)	0.153
ULTIMATE STRENGTH (LBS. PER STRAND)	41,300
APPLIED PRESTRESS (LBS. PER STRAND)	30,980

NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL CAST WITH THE CORED SLAB SECTIONS SHALL BE GRADE 60 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE CORED SLABS.

RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.

THE 2 1/2" Ø DOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS SHALL BE FILLED WITH GROUT. THE 2 1/2" Ø DOWEL HOLES AT EXPANSION ENDS OF SLAB SECTIONS SHALL BE FILLED WITH JOINT SEALER MATERIAL TO 1/2" ABOVE THE TOP OF DOWELS AND THEN FILLED WITH GROUT.

THE JOINT SEALER MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF TYPE SL LOW MODULUS SILICONE SEALANT. THE 2" Ø BACKER ROD SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS. PAYMENT FOR JOINT SEALER MATERIAL SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION OF THE BRIDGE.

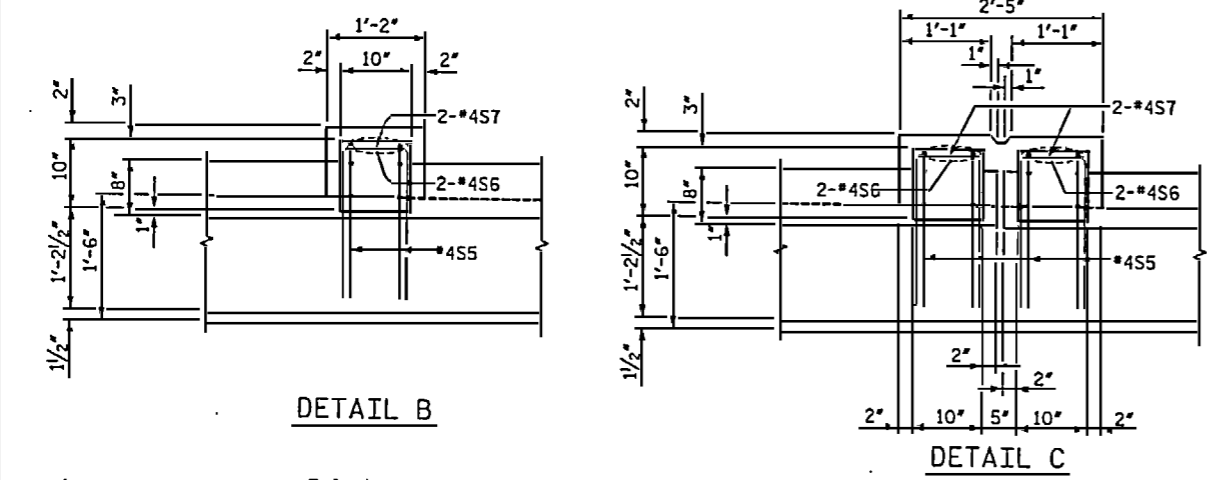
WHEN CORED SLABS ARE CAST, A POSITIVE HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDEWAYS. THIS SYSTEM SHALL BE DESIGNED TO BE LEFT IN PLACE UNTIL THE CONCRETE HAS REACHED RELEASE STRENGTH, AT LEAST THREE WEEKS PRIOR TO CASTING CORED SLABS. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND COMMENT, DETAILED DRAWINGS OF THE PROPOSED HOLD-DOWN SYSTEM, IN ADDITION TO STRUCTURAL DETAILS, LOCATION AND SPACING OF THE HOLD-DOWNS SHALL BE INDICATED.

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE CORED SLAB UNIT SHALL BE DONE WHEN THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 4000 PSI.

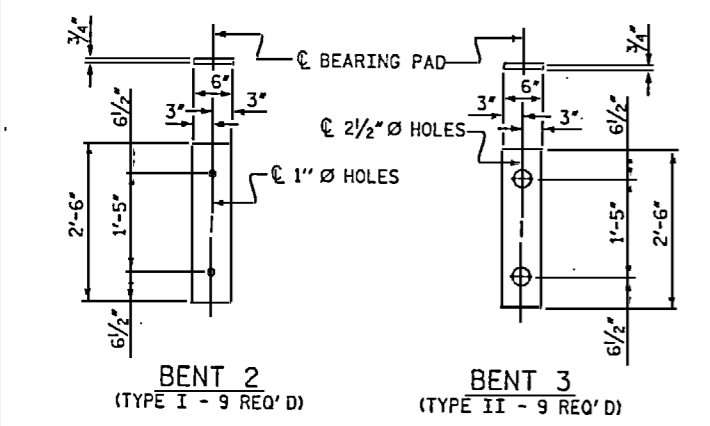
ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED. PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE CORED SLAB UNIT ENDS.

APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS.

VERTICAL GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BRIDGE RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINTS SHALL BE LOCATED AT A SPACING OF 8 FEET TO 10 FEET BETWEEN EXPANSION JOINTS AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.



CONCRETE BRIDGE RAIL DETAILS



ELASTOMERIC BEARING DETAILS

SUPERSTRUCTURE REINFORCING STEEL LENGTHS ARE BASED ON THE FOLLOWING MINIMUM SPLICE LENGTHS

BAR SIZE	SUPERSTRUCTURE EXCEPT APPROACH SLABS, PARAPET AND BARRIER RAIL		APPROACH SLABS		PARAPET AND BARRIER RAIL
	EPOXY COATED	UNCOATED	EPOXY COATED	UNCOATED	
#4	2'-0"	1'-9"	2'-0"	1'-9"	2'-9"
#5	2'-6"	2'-2"	2'-6"	2'-2"	3'-5"
#6	3'-0"	2'-7"	3'-10"	2'-7"	4'-4"
#7	5'-3"	3'-6"			
#8	6'-10"	4'-7"			

PROJECT NO. B-5021
ROBESON COUNTY
BRIDGE: 151
SHEET 4 OF 4



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE CONCRETE BRIDGE RAIL DETAILS

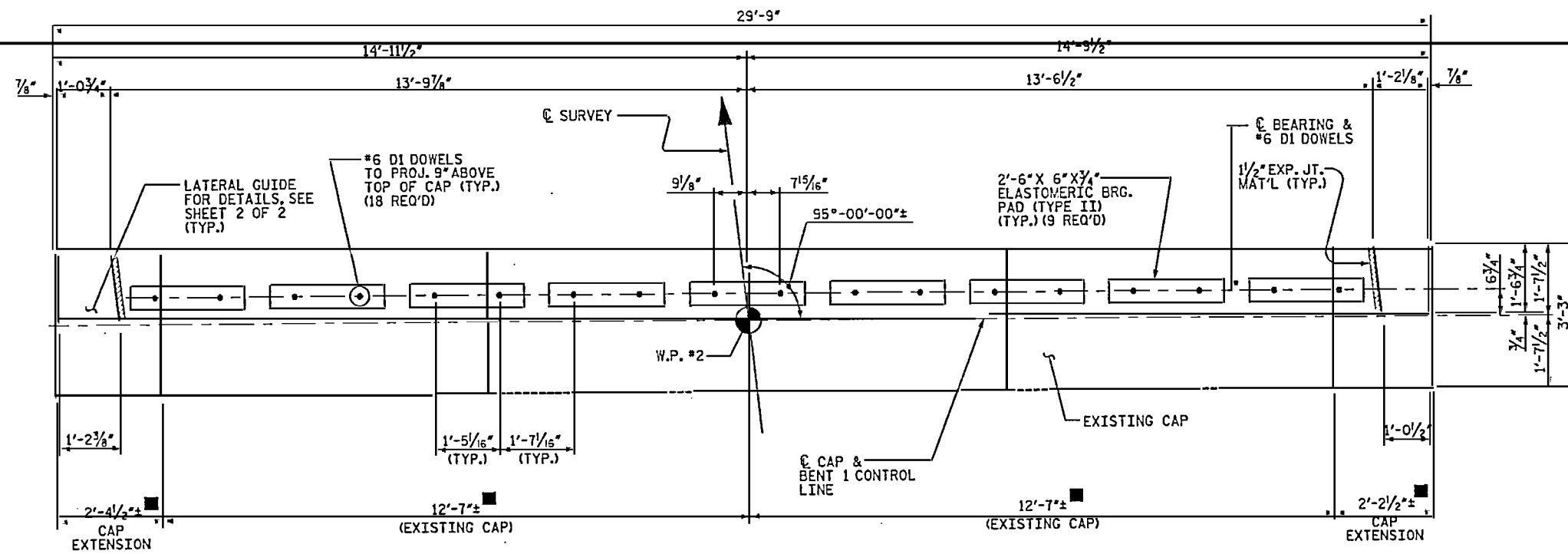
DRAWN BY: TRL DATE: 1-08
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1000 West Morehead St., Ste. 200
Charlotte, NC 28208

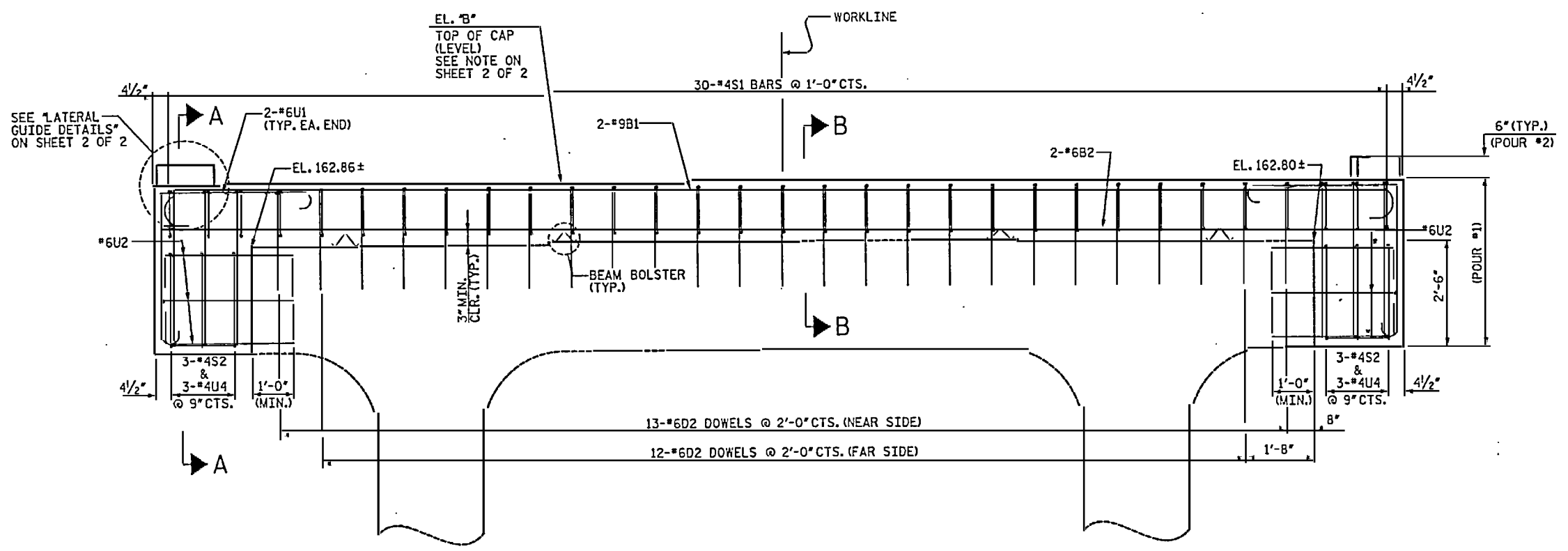
REVISIONS

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

SHEET NO. S-5
TOTAL SHEETS 22



PLAN



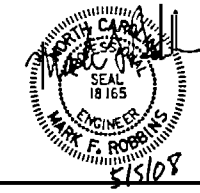
ELEVATION
(LOOKING UPSTATION)

NOTES

- REINFORCING STEEL MAY BE SHIFTED AS NECESSARY TO CLEAR DOWELS.
- THE LATERAL GUIDES ARE NOT TO BE POURED UNTIL AFTER THE CORED SLAB UNITS ARE IN PLACE.
- ALL ELEVATIONS ARE TO BE VERIFIED BY THE ENGINEER.
- A HIGH EARLY STRENGTH PORTLAND CEMENT CONCRETE SHALL BE USED TO ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI PRIOR TO PLACING CORED SLAB UNITS. SEE STANDARD SPECIFICATION SECTION 1000 FOR DETAILS.
- *6D2 & *6U2 DOWELS SHALL BE ADHESIVELY ANCHORED USING AN APPROVED ADHESIVE CONSIDERING LOAD RESISTANCE, IN-SERVICE AND INSTALLATION TEMPERATURE, AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS, AND CREEP. ANCHORS SHALL BE INSTALLED TO THE MINIMUM EMBEDMENT DEPTHS AS SHOWN ON PLANS. LEVEL ONE FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE DOWEL IS 26 KIPS. FOR ADHESIVELY ANCHORED DOWELS, SEE SPECIAL PROVISIONS.
- DIMENSIONS AND ELEVATIONS ARE BASED ON AS-BUILT DIMENSIONS AND FIELD SURVEY INFORMATION. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS PRIOR TO CONSTRUCTION. REINFORCING AND CONCRETE CAP EXTENSIONS SHALL BE ADJUSTED TO MATCH FIELD VERIFIED DIMENSIONS PROVIDED THAT THE OUT-TO-OUT DIMENSIONS REMAIN AS DETAILED.

PROJECT NO. B-5021
ROBESON COUNTY
BRIDGE: 151

SHEET 1 OF 2



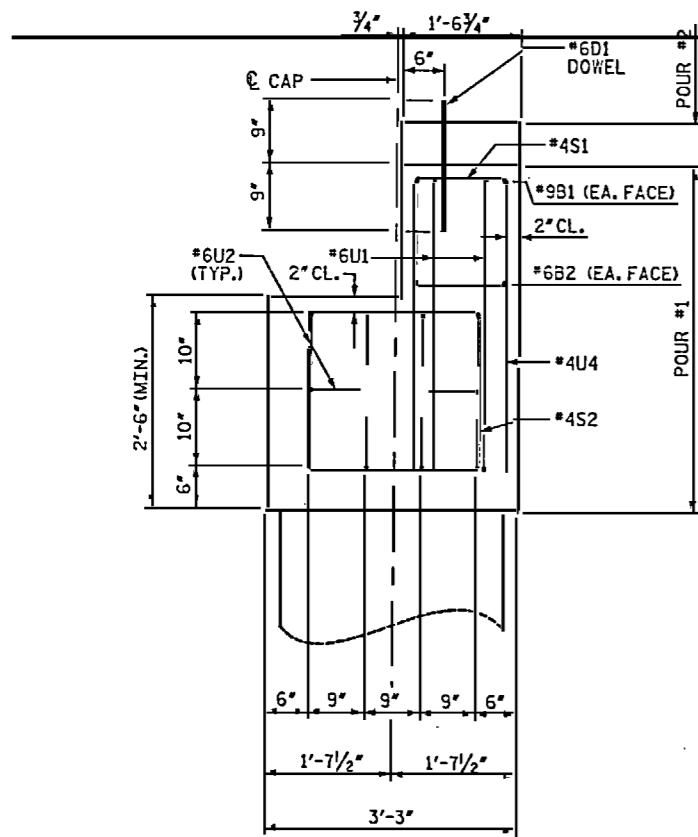
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE
BENT 1

REVISION #1: REVISED PER REVIEW COMMENTS
BY: TJT DATE: 5-08
CHK'D BY: KGB DATE: 5-08

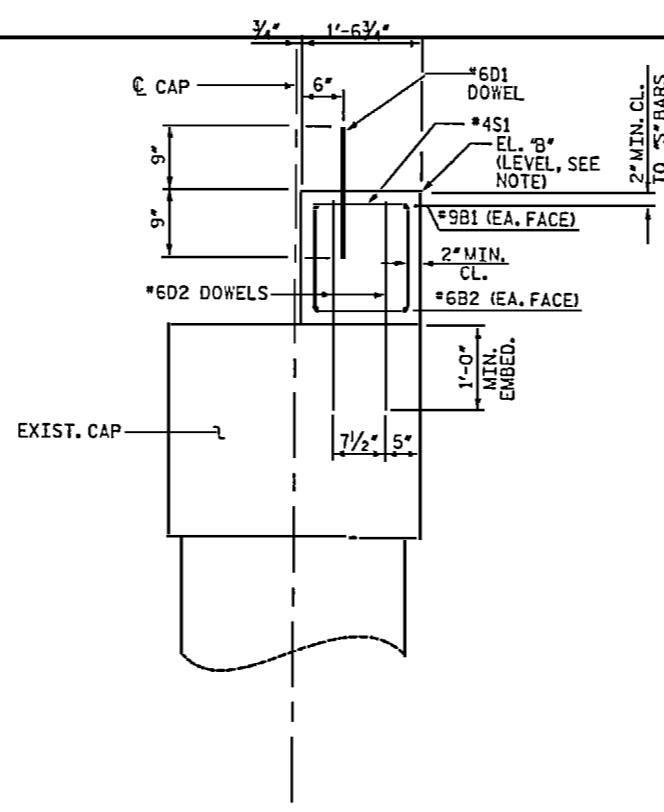
DRAWN BY: TRL DATE: 1-08
CHECKED BY: TBQ DATE: 3-08

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Charlotte, NC 28208

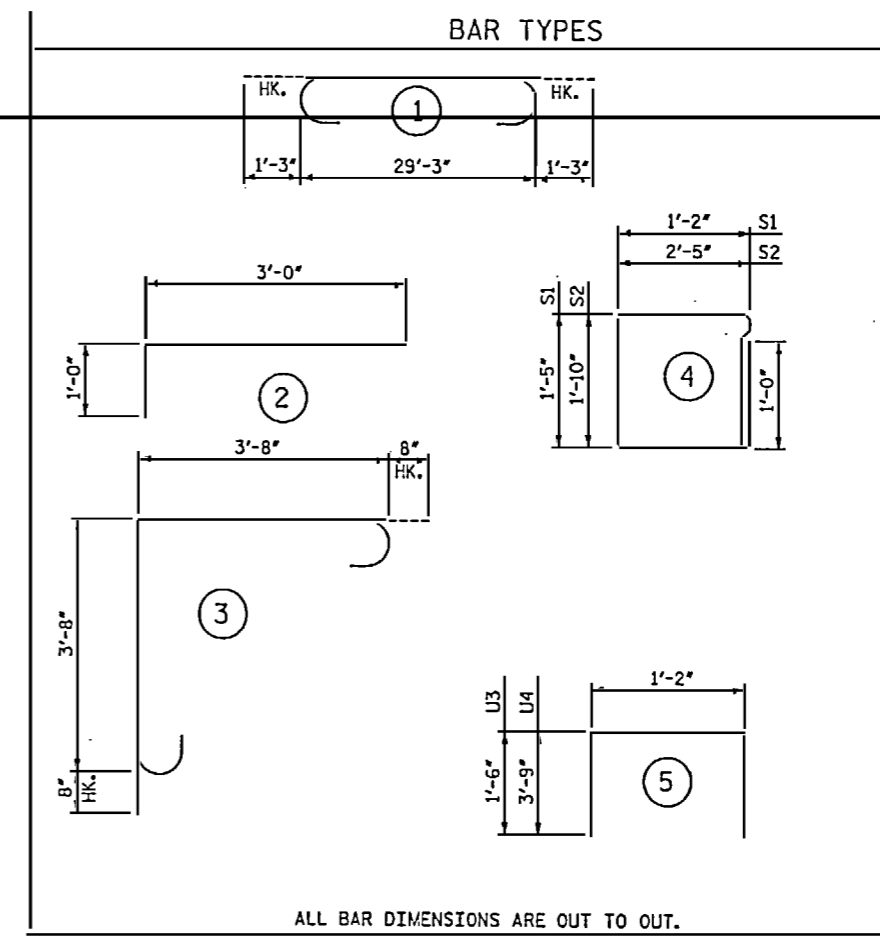
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1	STV	5-08	3			5-6
2			4			TOTAL SHEETS 62



SECTION A-A

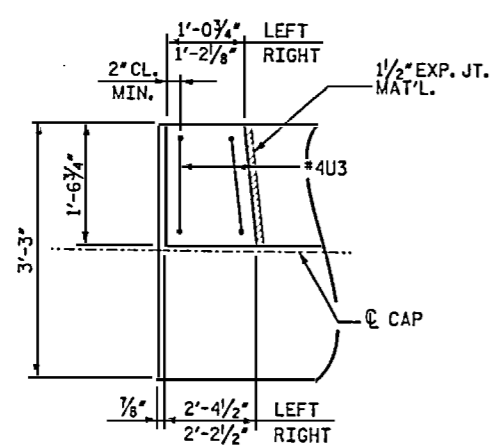


SECTION B-B

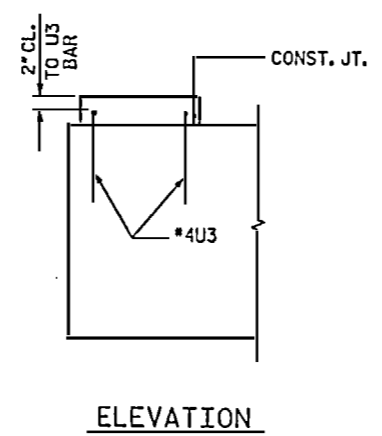


ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL					
BENT 1					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	2	9	(1)	31'-9"	216
B2	2	6	STR.	29'-3"	88
D1	18	6	STR.	1'-6"	41
D2	25	6	STR.	2'-0"	75
S1	30	4	(4)	6'-2"	124
S2	6	4	(4)	9'-6"	38
U1	4	6	(3)	8'-8"	52
U2	20	6	(2)	4'-0"	120
U3	4	4	(5)	4'-2"	11
U4	6	4	(5)	8'-8"	35
REINFORCING STEEL					LBS. 800
CLASS AA CONCRETE BREAKDOWN					
POUR 1 (CAP)					CY 4.5
POUR 2 (LATERAL GUIDE)					CY 0.1
TOTAL					CY 4.6

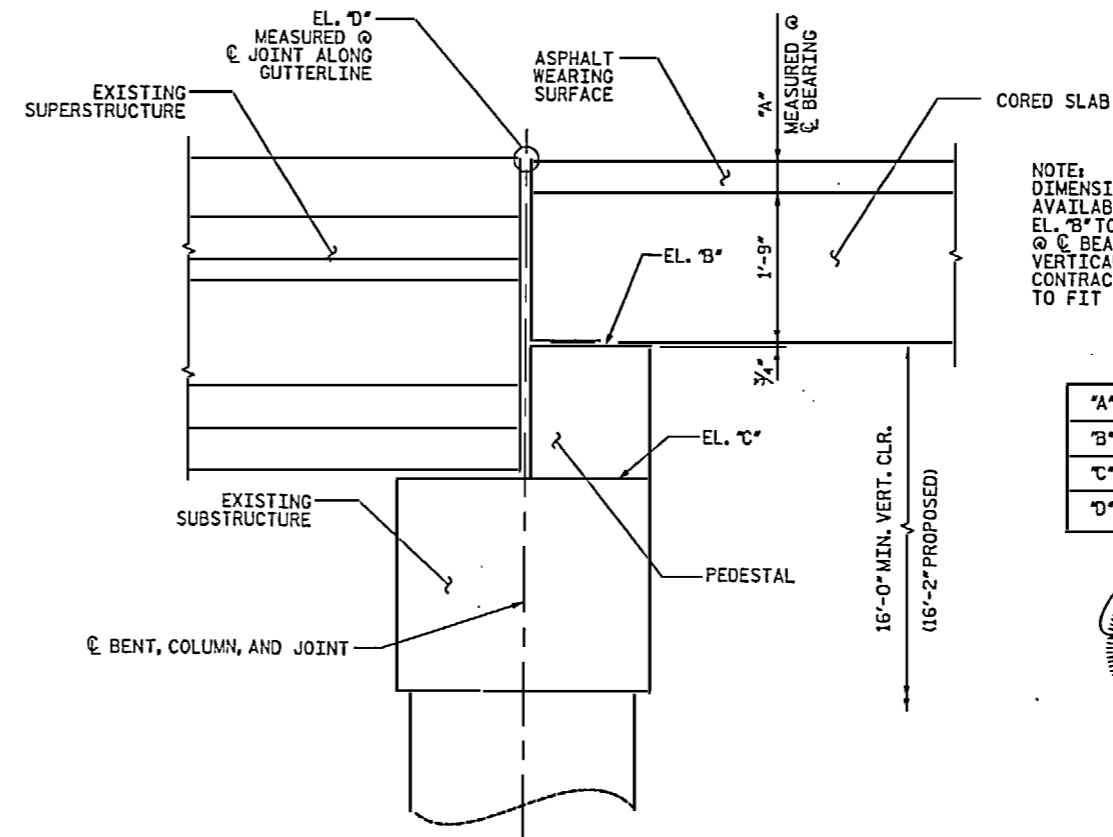


PLAN



ELEVATION

LATERAL GUIDE DETAILS
(LEFT SIDE SHOWN, RIGHT SIDE SIMILAR)

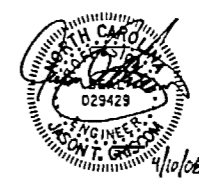


PEDESTAL HEIGHT

NOTE: DIMENSIONS AND ELEVATIONS SHOWN ARE FROM BEST INFORMATION AVAILABLE. CONTRACTOR SHALL MAKE ADJUSTMENTS TO PEDESTAL EL. 'B' TO MAINTAIN 3/2" (4 1/2" MAX.) ASPHALT WEARING SURFACE @ C BEARING, MATCH EL. 'D', AND TO MAINTAIN THE 16'-0" MIN. VERTICAL CLEARANCE. IF ANY ELEVATIONS ARE MODIFIED, THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE REINFORCING TO FIT THE PEDESTAL HEIGHT.

"A"	3 1/2"
"B"	164.64
"C"	162.80
"D"	166.75

PROJECT NO. B-5021
ROBESON COUNTY
BRIDGE: 151
SHEET 2 OF 2



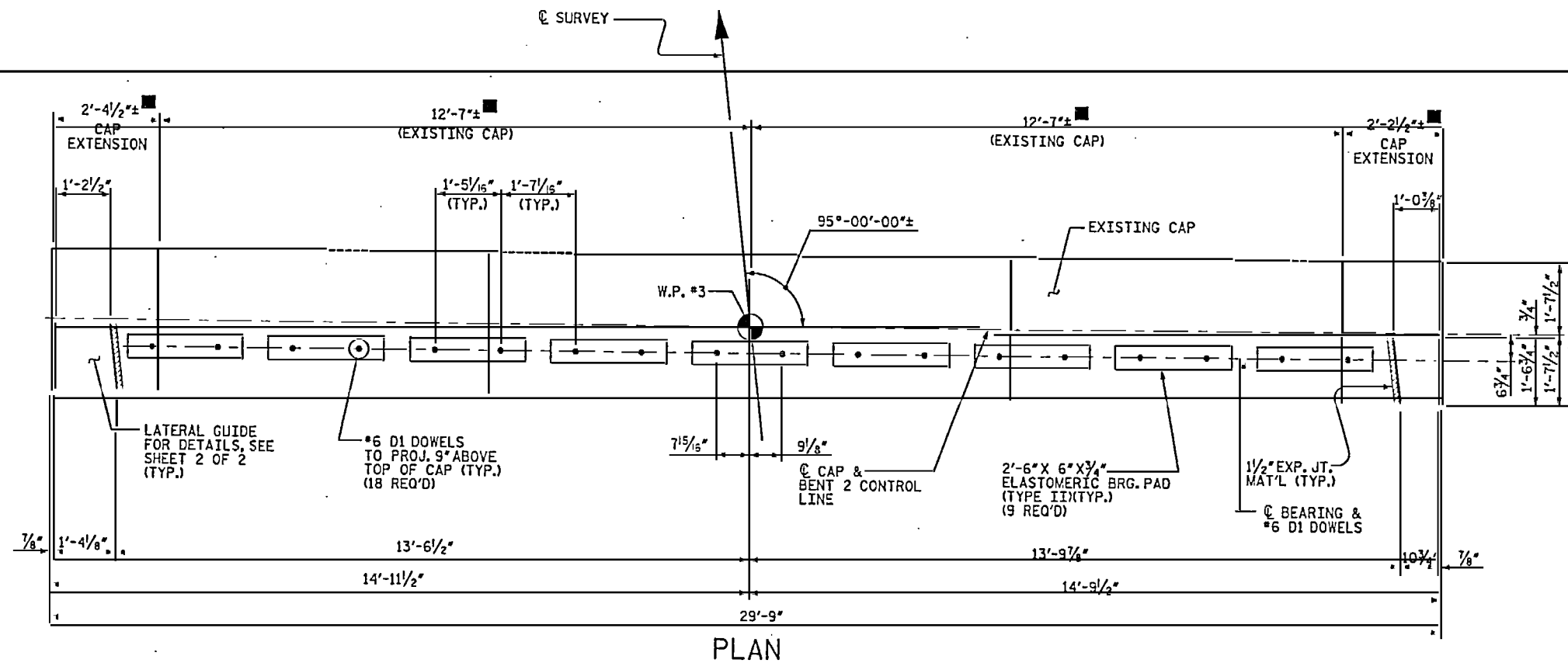
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 1

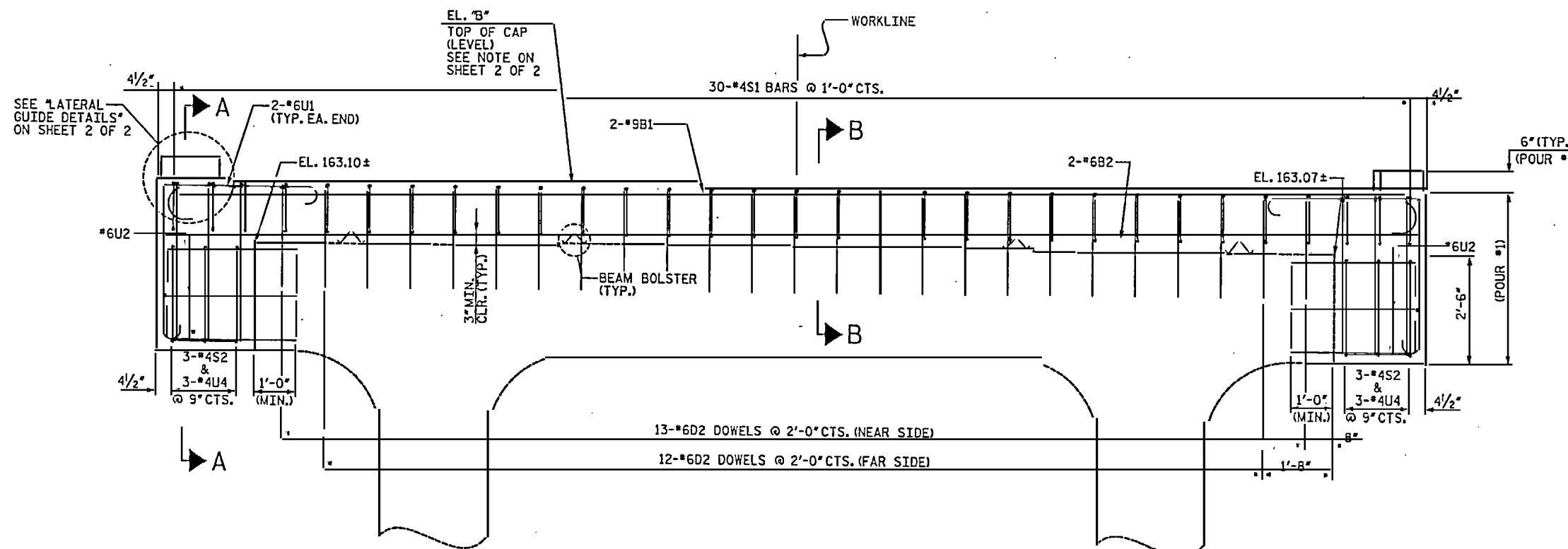
DRAWN BY: TRL DATE: 1-08
CHECKED BY: TBQ DATE: 3-08

D-1809.7
STV/Ralph Whitehead Associates, Inc.
1000 West Morehead St., Ste. 200
Charlotte, NC 28203

REVISIONS						SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE	S-7	
1			3			TOTAL SHEETS 62	
2			4				



PLAN



ELEVATION
(LOOKING UPSTATION)

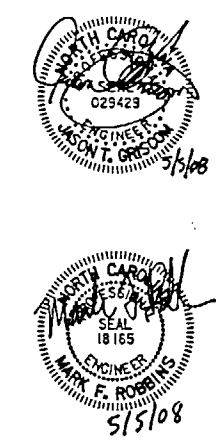
NOTES

- REINFORCING STEEL MAY BE SHIFTED AS NECESSARY TO CLEAR DOWELS.
- THE LATERAL GUIDES ARE NOT TO BE POURED UNTIL AFTER THE CORED SLAB UNITS ARE IN PLACE.
- ALL ELEVATIONS ARE TO BE VERIFIED BY THE ENGINEER.
- A HIGH EARLY STRENGTH PORTLAND CEMENT CONCRETE SHALL BE USED TO ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI PRIOR TO PLACING CORED SLAB UNITS. SEE STANDARD SPECIFICATION SECTION 1000 FOR DETAILS.
- ▲ *6D2 & *6U2 DOWELS SHALL BE ADHESIVELY ANCHORED USING AN APPROVED ADHESIVE CONSIDERING LOAD RESISTANCE, IN-SERVICE AND INSTALLATION TEMPERATURE, AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS, AND CREEP. ANCHORS SHALL BE INSTALLED TO THE MINIMUM EMBEDMENT DEPTHS AS SHOWN ON PLANS. LEVEL ONE FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE DOWEL IS 26 KIPS. FOR ADHESIVELY ANCHORED DOWELS, SEE SPECIAL PROVISIONS.
- DIMENSIONS AND ELEVATIONS ARE BASED ON AS-BUILT DIMENSIONS AND FIELD SURVEY INFORMATION. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS PRIOR TO CONSTRUCTION. REINFORCING AND CONCRETE CAP EXTENSIONS SHALL BE ADJUSTED TO MATCH FIELD VERIFIED DIMENSIONS PROVIDED THAT THE OUT-TO-OUT DIMENSIONS REMAIN AS DETAILED.

▲ REVISION #1: REVISED PER REVIEW COMMENTS
 BY: TJT DATE: 5-08
 CH'KD BY: KGB DATE: 5-08

DRAWN BY: TRL DATE: 1-08
 CHECKED BY: TBQ DATE: 3-08

D-1809.8
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 Charlotte, NC 28208



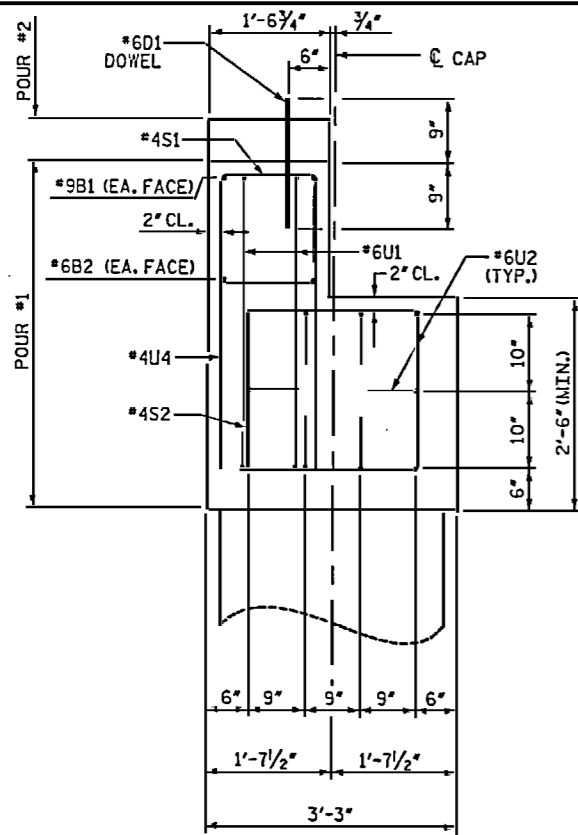
PROJECT NO. B-5021
 ROBESON COUNTY
 BRIDGE: 151
 SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

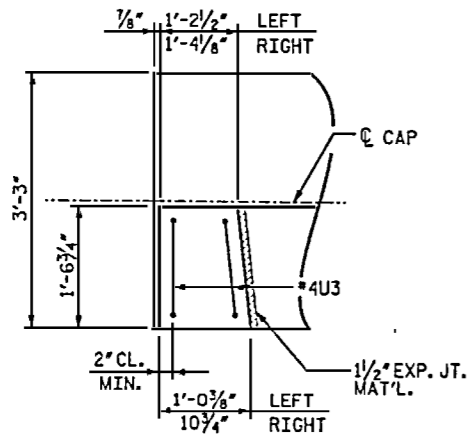
SUBSTRUCTURE
 BENT 2

REVISIONS				SHEET NO.
NO.	BY	DATE	NO.	DATE
1	STV	5-08	3	
2			4	

S-8
 1077
 62

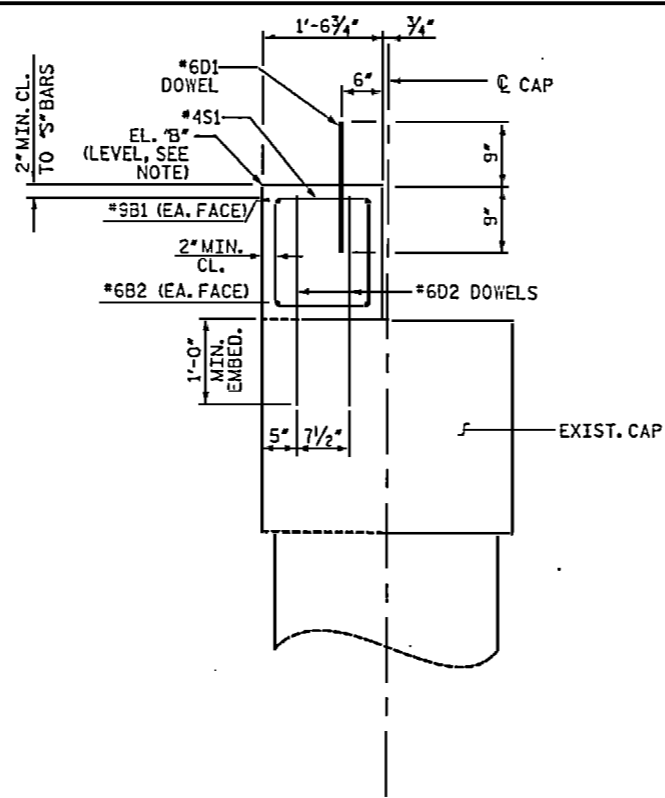


SECTION A-A

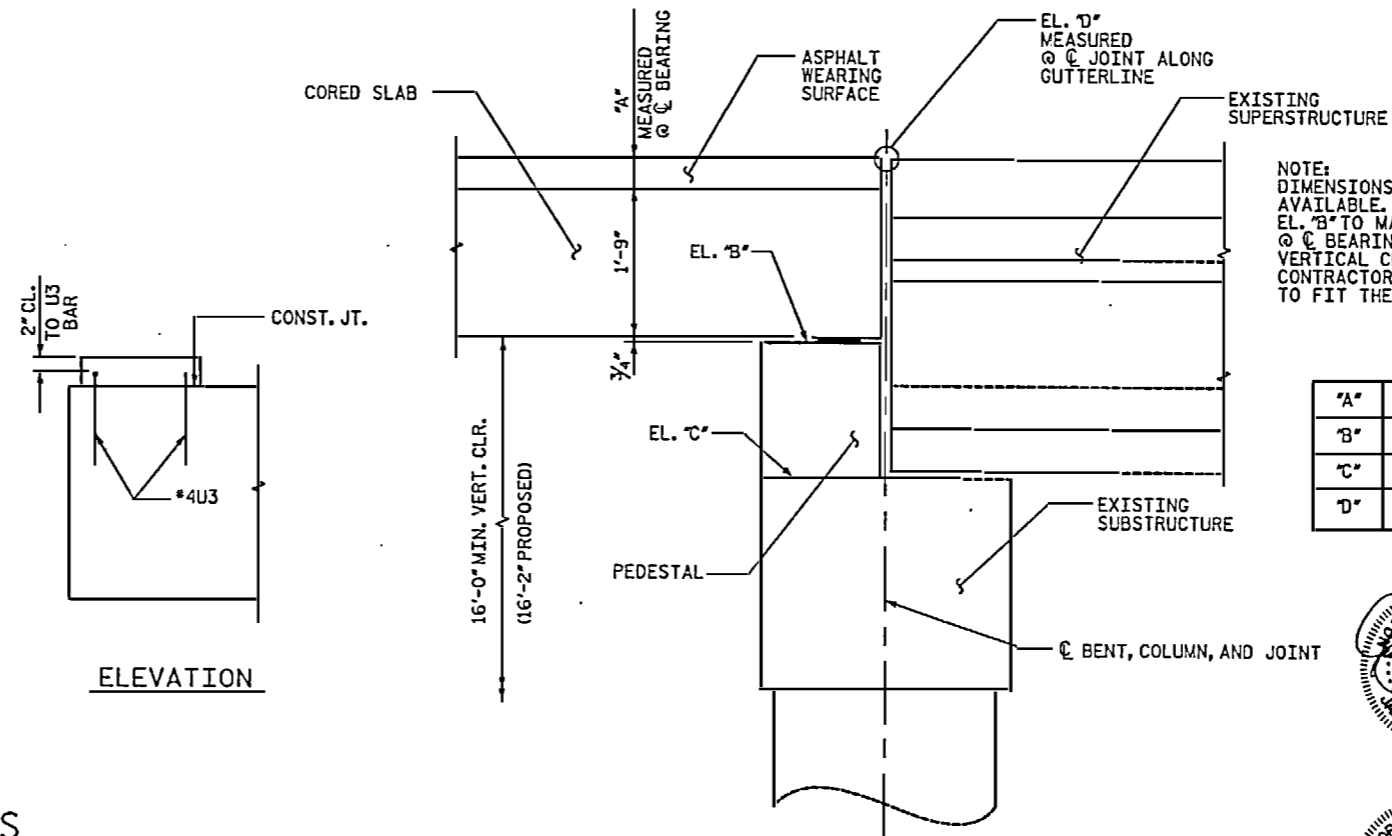


PLAN

LATERAL GUIDE DETAILS
(LEFT SIDE SHOWN, RIGHT SIDE SIMILAR)



SECTION B-B



ELEVATION

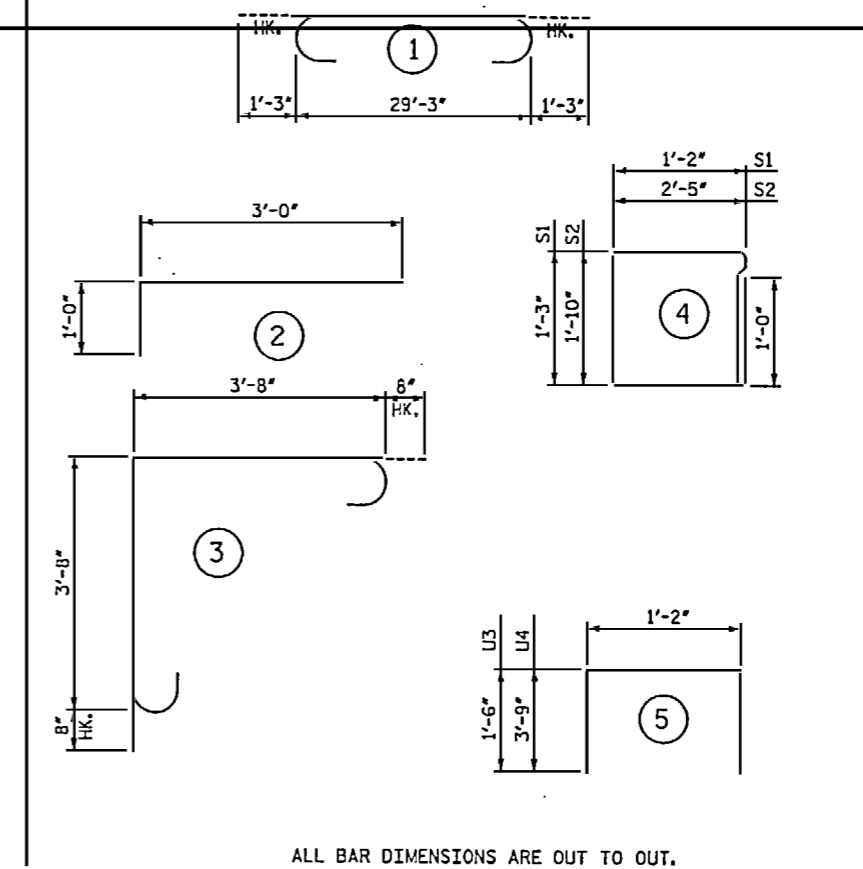
PEDESTAL HEIGHT

NOTE:
DIMENSIONS AND ELEVATIONS SHOWN ARE FROM BEST INFORMATION AVAILABLE. CONTRACTOR SHALL MAKE ADJUSTMENTS TO PEDESTAL EL. 'B' TO MAINTAIN 3/2" (4 1/2" MAX.) ASPHALT WEARING SURFACE @ C BEARING, MATCH EL. 'D', AND TO MAINTAIN THE 16'-0" MIN. VERTICAL CLEARANCE. IF ANY ELEVATIONS ARE MODIFIED, THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE REINFORCING TO FIT THE PEDESTAL HEIGHT.

"A"	3 1/2"
"B"	164.76
"C"	163.07
"D"	166.87



BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

BENT 2

BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	2	9	(1)	31'-9"	216
B2	2	6	STR.	29'-3"	88
D1	18	6	STR.	1'-6"	41
D2	25	6	STR.	2'-0"	75
S1	30	4	(4)	5'-10"	117
S2	6	4	(4)	9'-6"	38
U1	4	6	(3)	8'-8"	52
U2	20	6	(2)	4'-0"	120
U3	4	4	(5)	4'-2"	11
U4	6	4	(5)	8'-8"	35

REINFORCING STEEL LBS. 793

CLASS AA CONCRETE BREAKDOWN

POUR	TYPE	CY
POUR 1 (CAP)		4.3
POUR 2 (LATERAL GUIDE)		0.1
TOTAL		4.4

PROJECT NO. B-5021
ROBESON COUNTY
BRIDGE: 151
SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 2

REVISIONS

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

SHEET NO.
5-9
TOTAL SHEETS
62

DRAWN BY: TRL DATE: 1-08
CHECKED BY: TBQ DATE: 3-08

D-1809.9

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Charlotte, NC 28208