

**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 B LOW MODULUS SILICONE SEALANT. THE 2" Ø BACKER ROD SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. THE 12" WIDE BOND BREAKING TAPE SHALL BE CENTERED OVER THE JOINT AND CONFORM TO THE REQUIREMENTS OF TYPE N BOND BREAKER. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.

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. FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

VERTICAL GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A VERTICAL CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

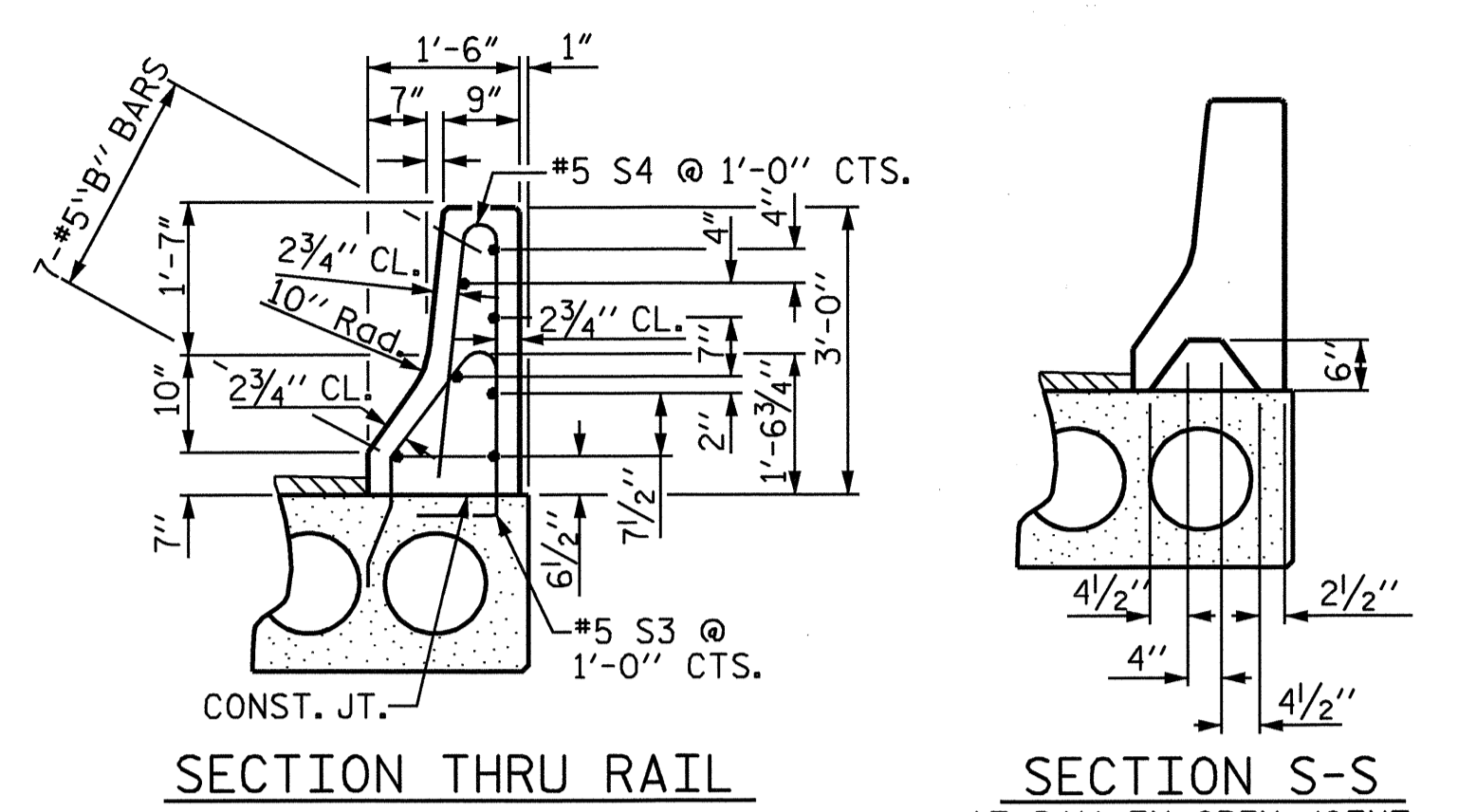
FOR ELASTOMERIC BEARINGS, SEE SPECIAL PROVISIONS.

FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

GRADE 270 STRANDS	
	1/2" Ø L.R.
AREA ( SQUARE INCHES )	0.153
ULTIMATE STRENGTH ( LBS. PER STRAND )	41,300
APPLIED PRESTRESS ( LBS. PER STRAND )	30,980

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

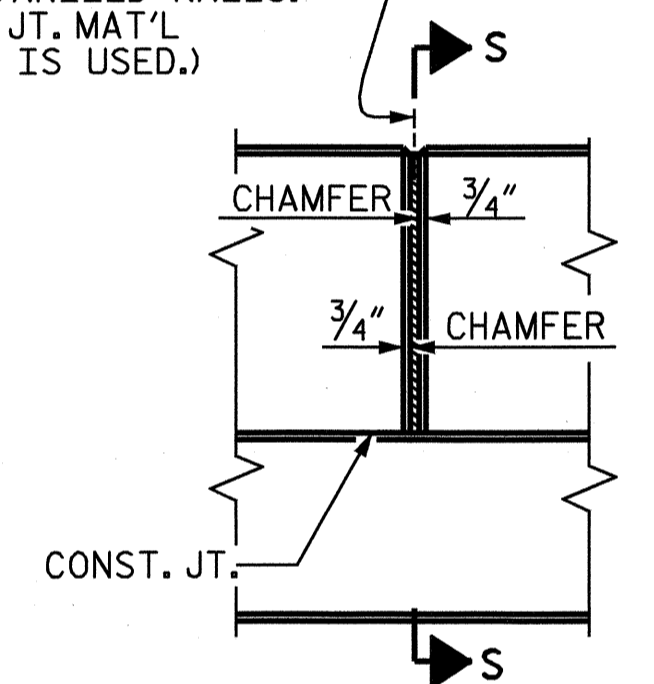
BAR SIZE	SUPERSTRUCTURE EXCEPT APPROACH SLABS, PARAPET, AND BARRIER RAIL		APPROACH SLABS		PARAPET AND BARRIER RAIL
	EPOXY COATED	UNCOATED	EPOXY COATED	UNCOATED	
#4	2'-0"	1'-9"	2'-0"	1'-9"	2'-9"
#5	2'-6"	2'-2"	2'-6"	2'-2"	3'-5"
#6	3'-0"	2'-7"	3'-10"	2'-7"	4'-4"
#7	5'-3"	3'-6"			
#8	6'-10"	4'-7"			



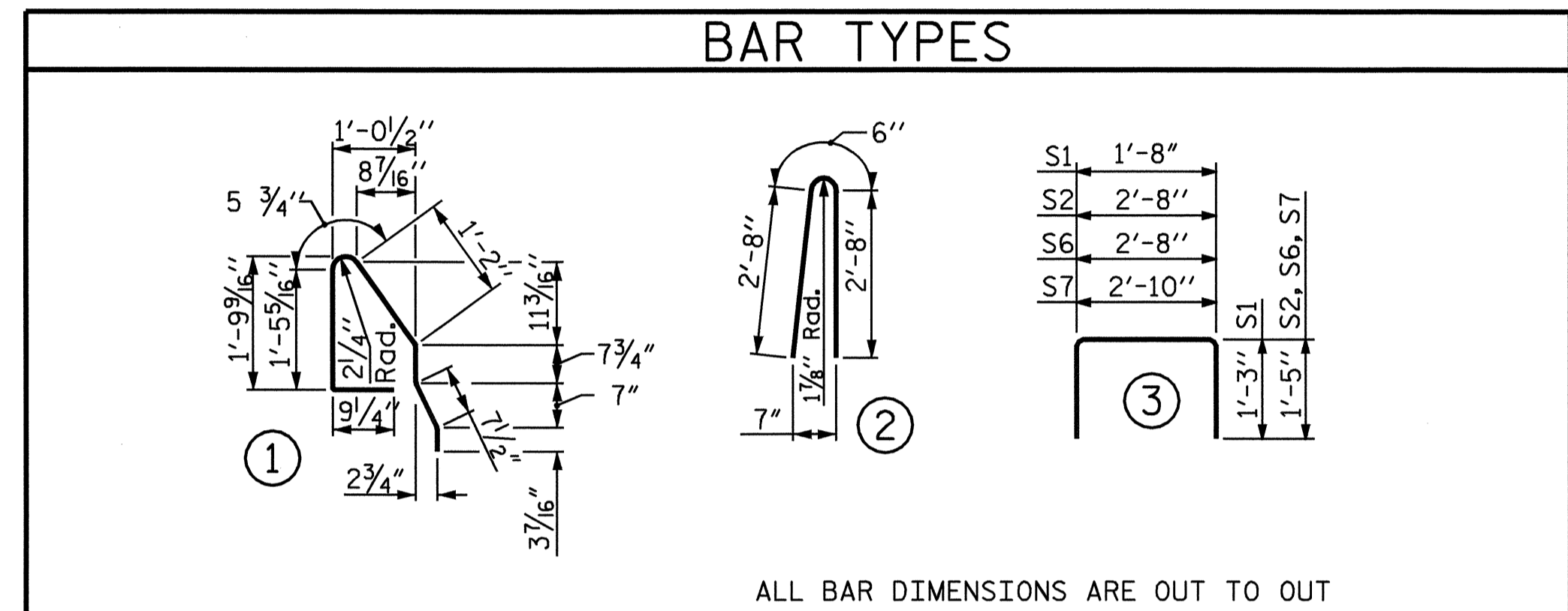
**SECTION THRU RAIL**

**SECTION S-S**  
AT DAM IN OPEN JOINT  
(THIS IS TO BE USED ONLY WHEN SLIP FORM IS USED)

1/2" EXP. JT. MAT'L HELD IN PLACE WITH GALVANIZED NAILS. (NOTE: OMIT EXP. JT. MAT'L WHEN SLIP FORM IS USED.)



**ELEVATION AT EXPANSION JOINTS BARRIER RAIL DETAILS**



ALL BAR DIMENSIONS ARE OUT TO OUT

**BILL OF MATERIAL FOR ONE CORED SLAB SECTION**

BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
B1	6	# 4	STR	20'- 11"	84	20'- 11"	84
S1	8	# 4	3	4'- 2"	22	4'- 2"	22
S2	110	# 4	3	5'- 6"	404	5'- 6"	404
* S3	60	# 5	1	5'- 7"	349		
S6	4	# 4	3	5'- 6"	15	5'- 6"	15
S7	4	# 4	3	5'- 8"	15	5'- 8"	15
REINFORCING STEEL					540 LBS.		540 LBS.
* EPOXY COATED REINFORCING STEEL					349 LBS.		0 LBS.
5,000 P.S.I. CONCRETE					8.5 CU. YDS.		8.5 CU. YDS.
1/2" Ø L.R. STRANDS					No. 28		No. 28

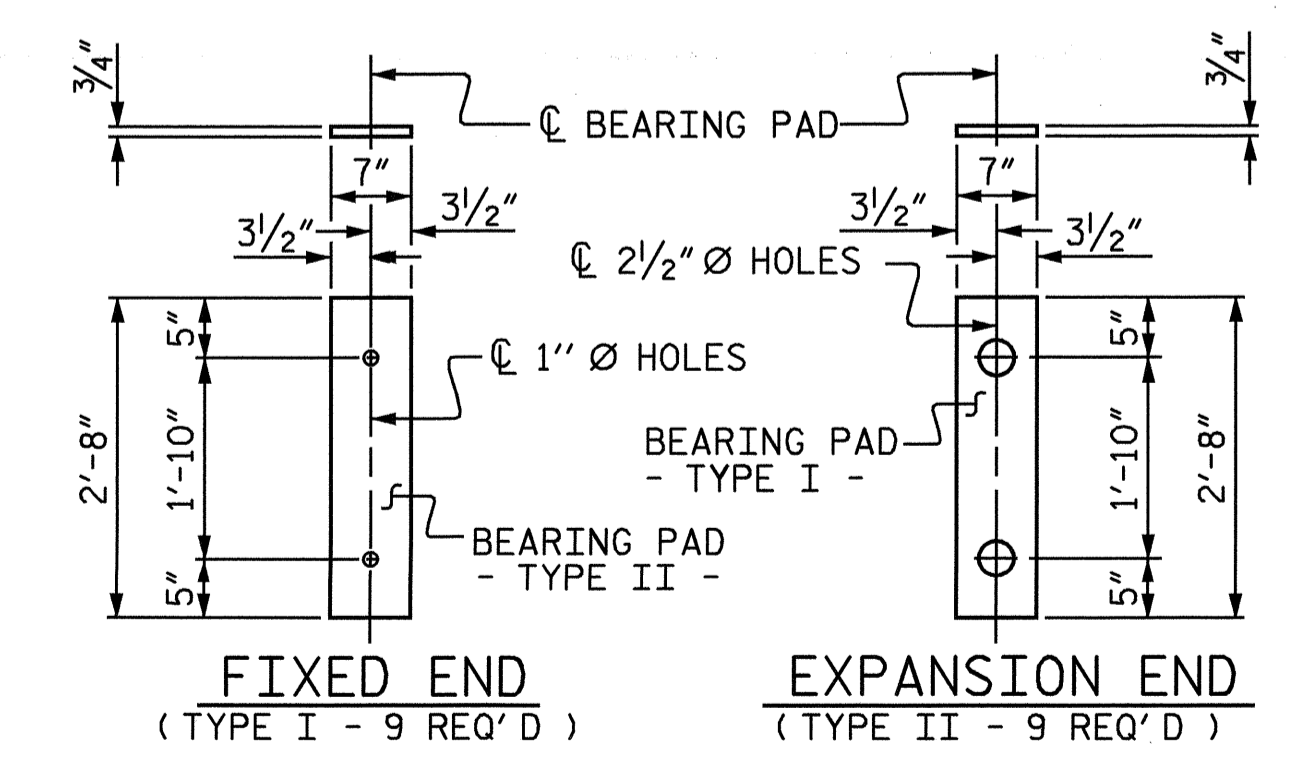
**DEAD LOAD DEFLECTION AND CAMBER**

	3'-0" x 1'-9"
CAMBER (SLAB ALONE IN PLACE)	3 3/16" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD**	1 1/16" ↓
FINAL CAMBER	2 5/8" ↑

\*\* INCLUDES FUTURE WEARING SURFACE

**BILL OF MATERIAL FOR CONCRETE BARRIER RAIL**

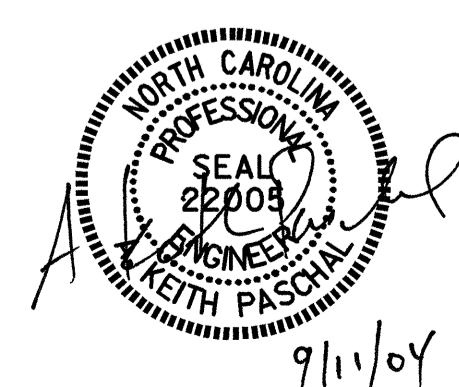
BAR	BARS PER SPAN		TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
	SPAN A	SPAN B					
* B2	56		56	# 5	STR	16'-4"	954
* S4	120		120	# 5	2	5'-10"	730
* EPOXY COATED REINFORCING STEEL							1684 LBS.
CLASS AA CONCRETE							14.1 CU. YDS.
TOTAL LIN. FT. OF CONCRETE BARRIER RAIL							118.8 LIN. FT.



**ELASTOMERIC BEARING DETAILS**  
(ELASTOMER IN ALL BEARINGS SHALL BE 60 DUROMETER HARDNESS)

**CORED SLABS REQUIRED**

	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR C.S.	2	59'-4 3/16"	118'-9 3/16"
INTERIOR C.S.	7	59'-4 3/16"	415'-9 1/16"
TOTAL	9		534'-7 5/16"



PROJECT NO. B-3667  
JACKSON COUNTY  
STATION: 15+60.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLAB UNIT**

OCTOBER 1981

REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	37
1			3			
2			4			

SHEET NO. S-27

ASSEMBLED BY : F. B. POOLE DATE : 3-8-04  
CHECKED BY : A. L. MEADOWS DATE : 8-11-04  
DRAWN BY : WJH 4/89 REV. 10/17/00 RWW/LES  
CHECKED BY : FCJ 5/89 REV. 7/10/01 RWW/LES  
REV. 5/7/03R RWW/JTE