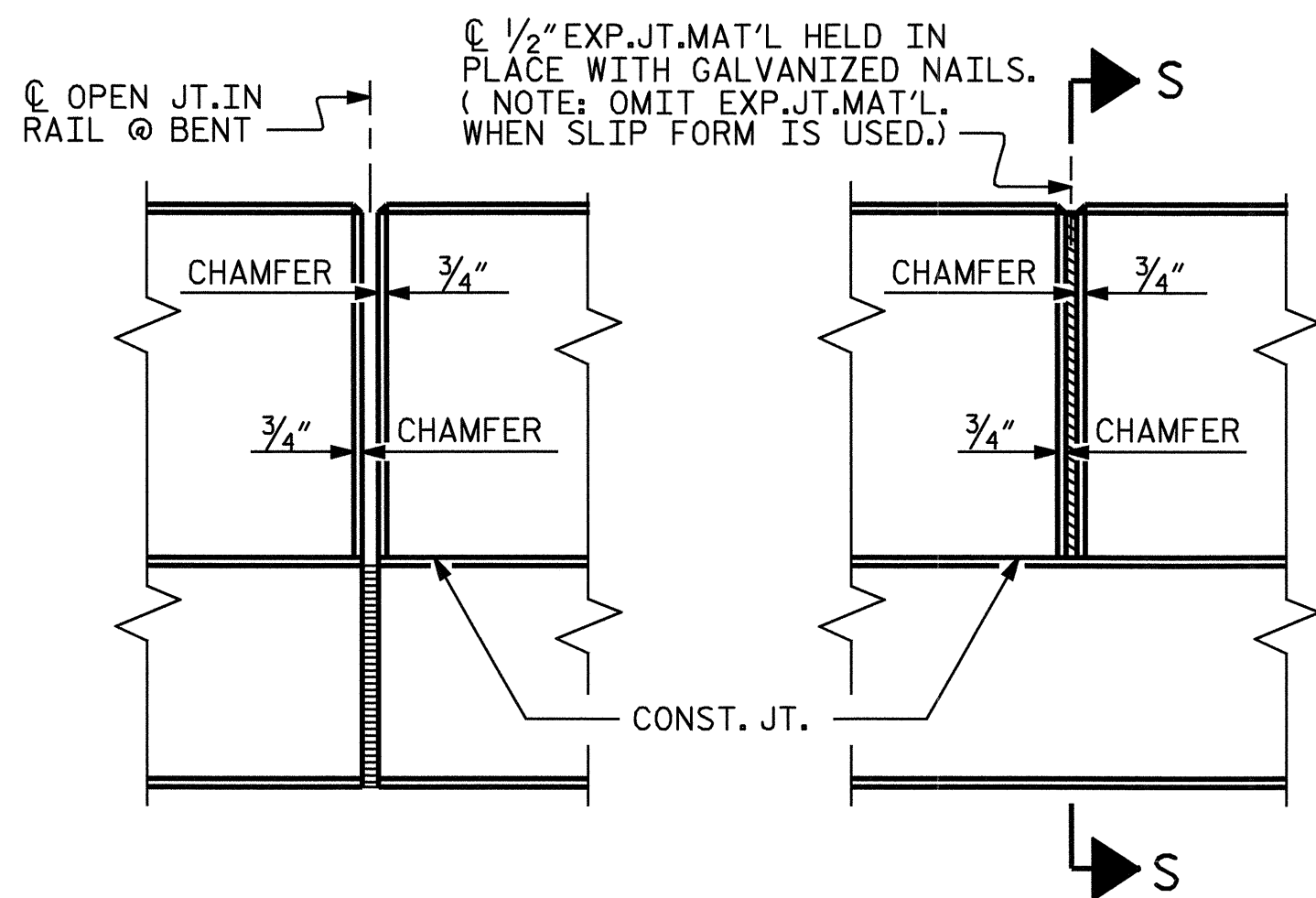
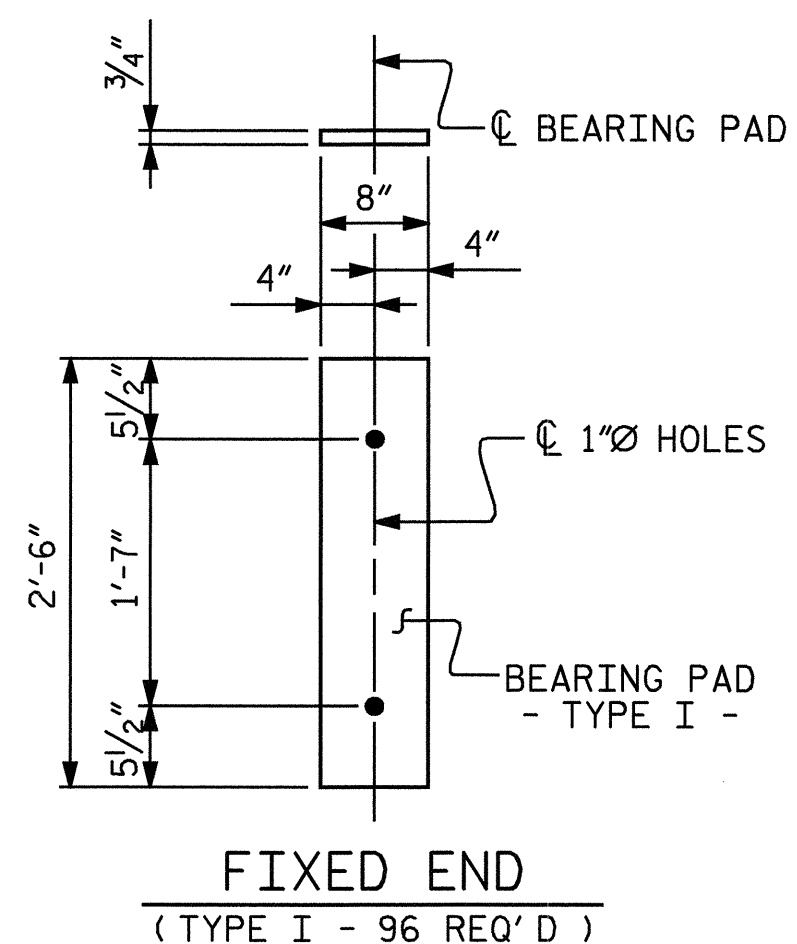


SECTION S-S  
AT DAM IN OPEN JOINT  
(THIS IS TO BE USED ONLY  
WHEN SLIP FORM IS USED)

SECTION THRU RAIL



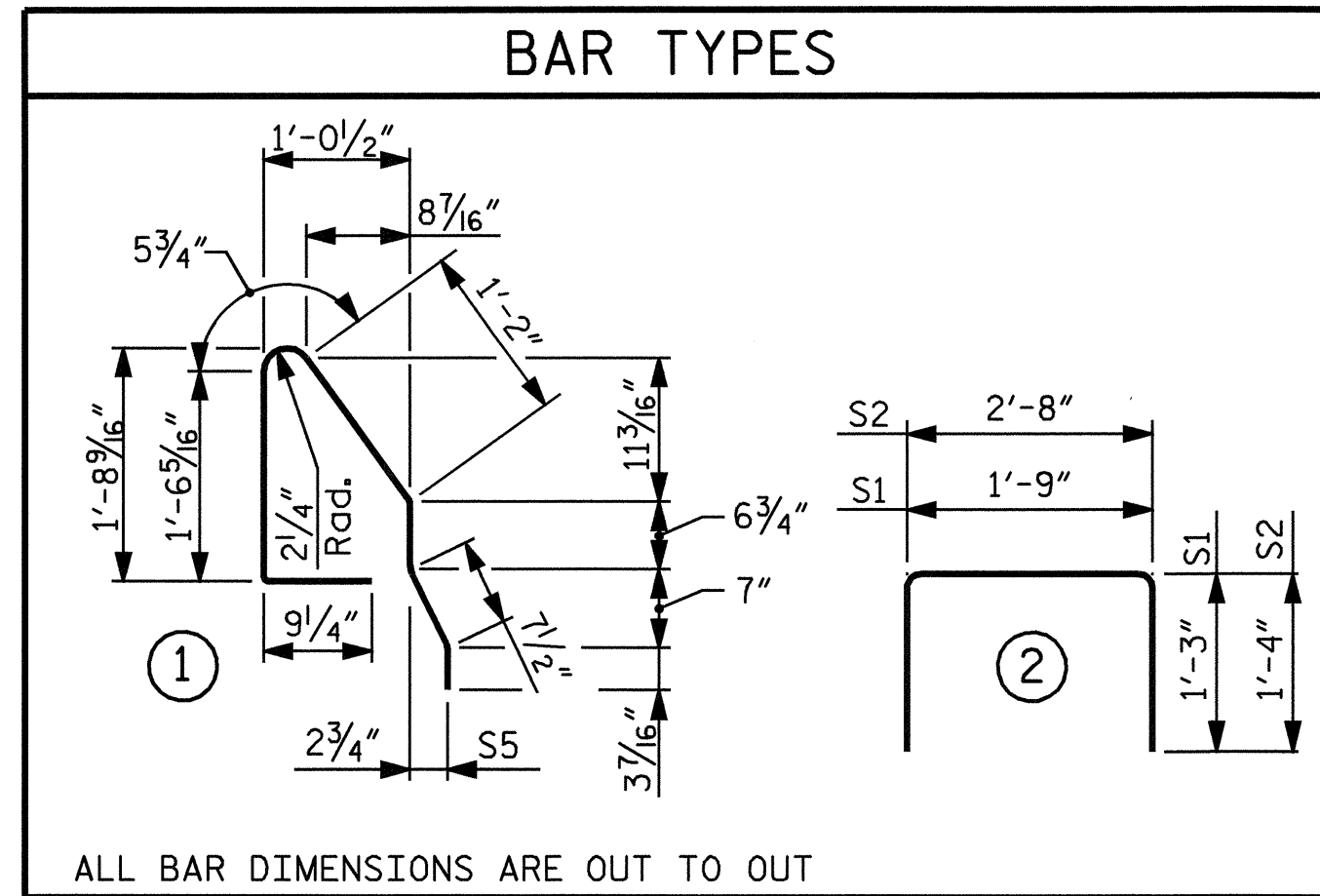
ELEVATION AT EXPANSION JOINTS  
BARRIER RAIL DETAILS



ELASTOMERIC BEARING DETAILS

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

CORED SLABS REQUIRED					
SPAN	EXTERIOR CORED SLABS		INTERIOR CORED SLABS		TOTAL LENGTH
	No.	LENGTH	No.	LENGTH	
A	2	28'-9 3/4"	10	28'-9 3/4"	288'-1 1/2"
B	2	49'-10 1/2"	10	49'-10 1/2"	498'-9"
C	2	49'-10 1/2"	10	49'-10 1/2"	498'-9"
D	2	28'-9 3/4"	10	28'-9 3/4"	288'-1 1/2"
TOTAL NO. OF CORED SLAB UNITS =					48
TOTAL LENGTH OF CORED SLAB UNITS =					1888'-6"



BILL OF MATERIAL FOR ONE CORED SLAB SECTION IN SPAN A OR SPAN D

BAR NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
			LENGTH	WEIGHT	LENGTH	WEIGHT
B1	#4	STR	28- 5	38	28- 5	38
S1	#4	2	4- 3	23	4- 3	23
S2	#4	2	5- 4	200	5- 4	200
* S5	#5	1	5- 5	169		
REINFORCING STEEL				Lbs. 261		261
* EPOXY COATED REINFORCING STEEL				Lbs. 169		
5000 PSI CONCRETE				Cu. Yds. 4.2		4.2
1/2"Ø L.R. STRANDS				No. 12		12

BILL OF MATERIAL FOR ONE CORED SLAB SECTION IN SPAN B OR SPAN C

BAR NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
			LENGTH	WEIGHT	LENGTH	WEIGHT
B2	#4	STR	25- 8	69	25- 8	69
S1	#4	2	4- 3	23	4- 3	23
S2	#4	2	5- 4	349	5- 4	349
* S5	#5	1	5- 5	288		
REINFORCING STEEL				Lbs. 441		441
* EPOXY COATED REINFORCING STEEL				Lbs. 288		
5000 PSI CONCRETE				Cu. Yds. 6.9		6.9
1/2"Ø L.R. STRANDS				No. 22		22

BAR TYPES		BILL OF MAT'L FOR CONCRETE BARRIER RAIL							
BAR	SIZE	BARS PER SPAN				TOTAL NO.	TYPE	LENGTH	WEIGHT
		SPAN A	SPAN B	SPAN C	SPAN D				
B3	#5	28			28	56	STR.	14- 0	818
B4	#5		28	28	28	56	STR.	24- 7	1,436
S6	#5	60	102	102	60	324	3	5- 8	1,915
EPOXY COATED REINFORCING STEEL							Lbs	4,169	
CLASS AA CONCRETE							Cu. Yds.	36.0	
TOTAL LENGTH OF CONCRETE BARRIER RAIL							Lin. Ft.	315.5	

DEAD LOAD DEFLECTION AND CAMBER				
	SPAN A	SPAN B	SPAN C	SPAN D
	1/2"Ø L.R. STRAND	1/2"Ø L.R. STRAND	1/2"Ø L.R. STRAND	1/2"Ø L.R. STRAND
CAMBER ( SLAB UNIT ALONE IN PLACE )	7/16" ↑	2" ↑	2" ↑	7/16" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD**	0 ↓	1/4" ↓	1/4" ↓	0 ↓
FINAL CAMBER	7/16" ↑	1 1/16" ↑	1 1/16" ↑	7/16" ↑

\*\*INCLUDES FUTURE WEARING SURFACE

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 CONSTRUCTION OF SUPERSTRUCTURE.

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 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.

WHEN CORED SLABS ARE CAST, A POSITIVE HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDWAYS. 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.

FOR CONSTRUCTION OF SUPERSTRUCTURE, SEE SPECIAL PROVISIONS.

PROJECT NO. B-4027  
BERTIE COUNTY  
 STATION 18+50.00 -L-



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

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

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

TOTAL SHEETS 23