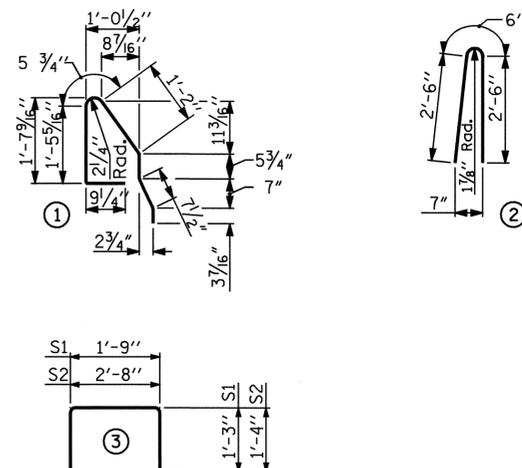


BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL FOR ONE CORED SLAB SECTION

SPAN A				EXTERIOR UNIT		INTERIOR UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT
B1	2	# 4	STR	23'-5"	31	23'-5"	31
S1	8	# 5	3	4'-3"	35	4'-3"	35
S2	46	# 4	3	5'-4"	164	5'-4"	164
* S3	25	# 5	1	5'-3"	137		
REINFORCING STEEL				230 LBS.		230 LBS.	
* EPOXY COATED REINFORCING STEEL				137 LBS.			
5,000 P.S.I. CONCRETE				3.4 C. Y.		3.4 C. Y.	
1/2" Ø L.R. STRANDS				No.	12		12

BILL OF MATERIAL FOR ONE CORED SLAB SECTION

SPAN B				EXTERIOR UNIT		INTERIOR UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT
B3	4	# 4	STR	25'-3"	67	25'-3"	67
S1	8	# 5	3	4'-3"	35	4'-3"	35
S2	96	# 4	3	5'-4"	342	5'-4"	342
* S3	50	# 5	1	5'-3"	274		
REINFORCING STEEL				444 LBS.		444 LBS.	
* EPOXY COATED REINFORCING STEEL				274 LBS.			
5,000 P.S.I. CONCRETE				6.8 C. Y.		6.8 C. Y.	
1/2" Ø L.R. STRANDS				No.	19		19

DEAD LOAD DEFLECTION AND CAMBER

	SPAN A	SPAN B
	3'-0" x 1'-9"	3'-0" x 1'-9"
CAMBER (SLAB ALONE IN PLACE)	1/2" Ø L.R. STRAND 5/16" ↑	1/2" Ø L.R. STRAND 1 9/16" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD **	0" ↓	5/16" ↓
FINAL CAMBER	5/16" ↑	1 1/4" ↑

** INCLUDES FUTURE WEARING SURFACE

CORED SLABS REQUIRED

UNIT TYPE	NUMBER PER SPAN	LENGTH		TOTAL LENGTH
		SPAN A	SPAN B	
INTERIOR	12	23'-9 3/4"	48'-9 3/4"	871'-6"
EXTERIOR	2	23'-9 3/4"	48'-9 3/4"	145'-3"
TOTAL NUMBER	14	333'-4 1/2"	683'-4 1/2"	1016'-9"

BILL OF MATERIAL FOR CONCRETE BARRIER RAIL

BAR	BARS PER SPAN		TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
	SPAN A	SPAN B					
* B2	28		28	#5	STR	11'-7"	338
* B4		28	28	#5	STR	24'-1"	703
* S4	50	100	150	#5	2	5'-6"	860
EPOXY COATED REINFORCING STEEL				LBS.		1901	
CLASS AA CONCRETE				C. Y.		16.6	
TOTAL LIN. FT. OF CONCRETE BARRIER RAIL						145.50	

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

SPLICE LENGTH CHART

BAR	SIZE	LENGTH
B3	4	1'-9"



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 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.

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.

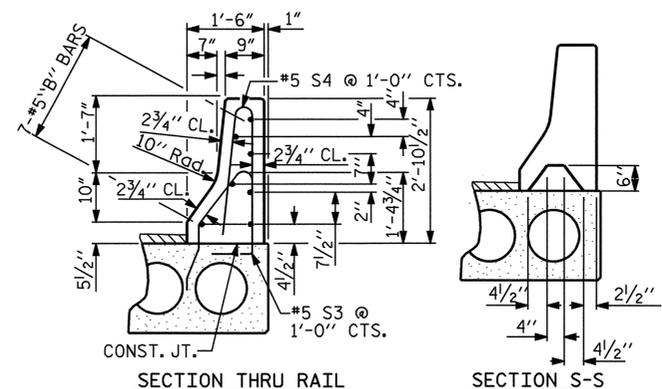
PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE CORED SLAB UNIT ENDS.

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 JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

FOR ELASTOMERIC BEARINGS, SEE SPECIAL PROVISIONS.

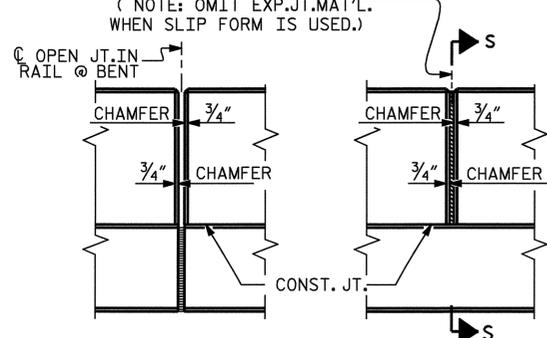
FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.



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

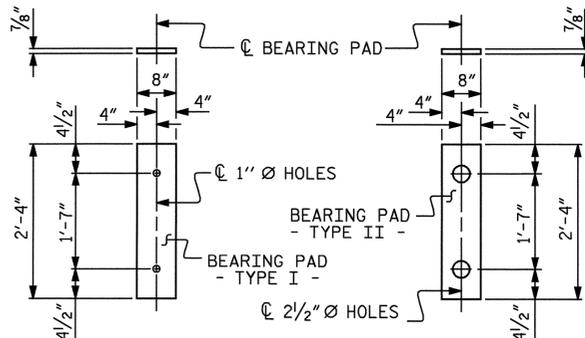
BARRIER RAIL - END OF RAIL DETAILS

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



FIXED END (TYPE I - 28 REQUIRED) EXPANSION END (TYPE II - 28 REQUIRED)

ELASTOMERIC BEARING DETAILS

ASSEMBLED BY : J.D. HAWK	DATE : 3/15/04
CHECKED BY : J.G. KHARVA	DATE : 9/04
DRAWN BY : WJH 4/89	REV. 2/6/97 EEM/RGW
CHECKED BY : FCJ 5/89	REV. 8/16/99 RWW/LES
	REV. 10/17/00 RWW/LES

PROJECT NO. B-3182

HALIFAX COUNTY

STATION: 15+07.50 -L-

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

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

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS
2			4			12