

**NOTES**

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW-RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203M 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 420 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 64mm Ø DOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS SHALL BE FILLED WITH GROUT. THE 64mm Ø DOWEL HOLES AT EXPANSION ENDS OF SLAB SECTIONS SHALL BE FILLED WITH JOINT SEALER MATERIAL TO 38mm 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 51mm Ø BACKER ROD SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. 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 27.6 MPa.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

PRESTRESSED 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, 12mm 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 6.1m IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 3.5m IN LENGTH.

FOR ELASTOMERIC BEARINGS, SEE SPECIAL PROVISIONS.

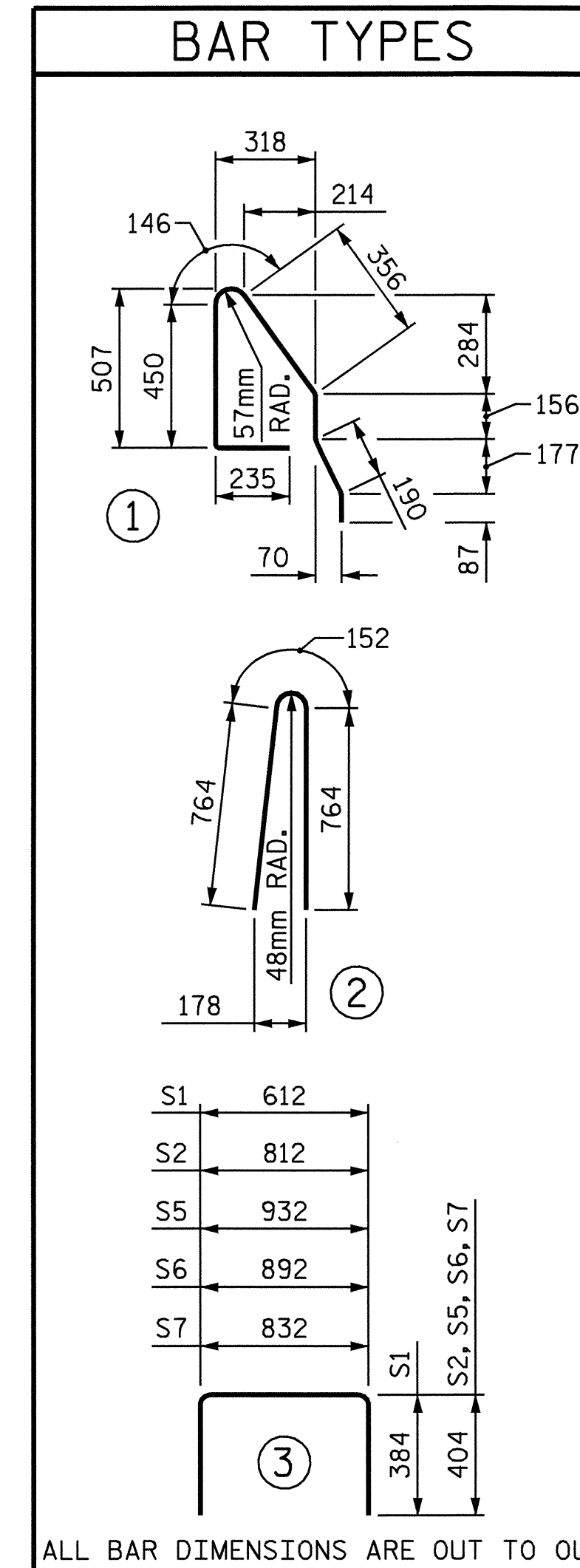
FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

PROJECT NO. B-3266  
WILKES COUNTY  
 STATION: 12+48.000 -L-

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 STANDARD  
 914mm X 533mm  
 PRESTRESSED  
 CONCRETE CORED  
 SLAB UNIT

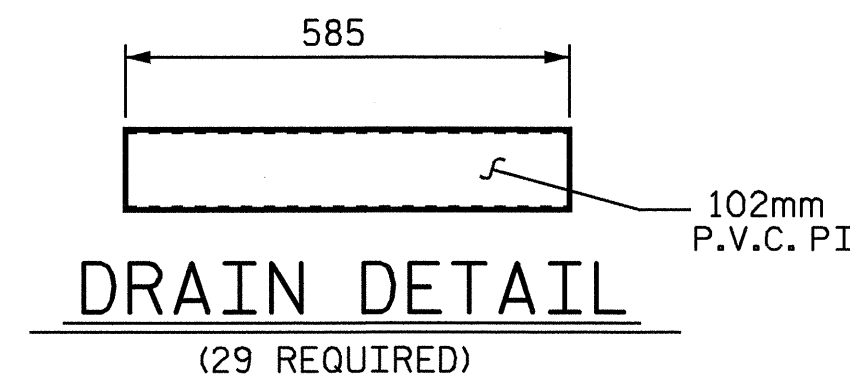
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

TOTAL SHEETS 26



GRADE 270 STRANDS	
AREA (mm <sup>2</sup> )	12.70mm Ø L.R.
ULTIMATE STRENGTH (kN PER STRAND)	98.71
APPLIED PRESTRESS (kN PER STRAND)	183.7
	137.8

SPLICE CHART	
B1	540
B2	540
B3	1050 MIN.
B4	1050 MIN.



BILL OF MATERIAL FOR ONE CORED SLAB UNIT (SPANS A, B, & C)							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
B1	4	#13	STR	7700	31	7700	31
S1	8	#16	3	1380	17	1380	17
S2	92	#13	3	1620	148	1620	148
* S3	52	#16	1	1620	131		
S5	4	#13	3	1740	7	1740	7
S6	4	#13	3	1700	7	1700	7
S7	4	#13	3	1640	7	1640	7
REINFORCING STEEL				kg	217		217
* EPOXY COATED REINFORCING STEEL				kg	131		
34.5 MPa CONCRETE				CU. METERS	5.1		5.1
12.70mm Ø L.R. STRANDS				No.	19		19

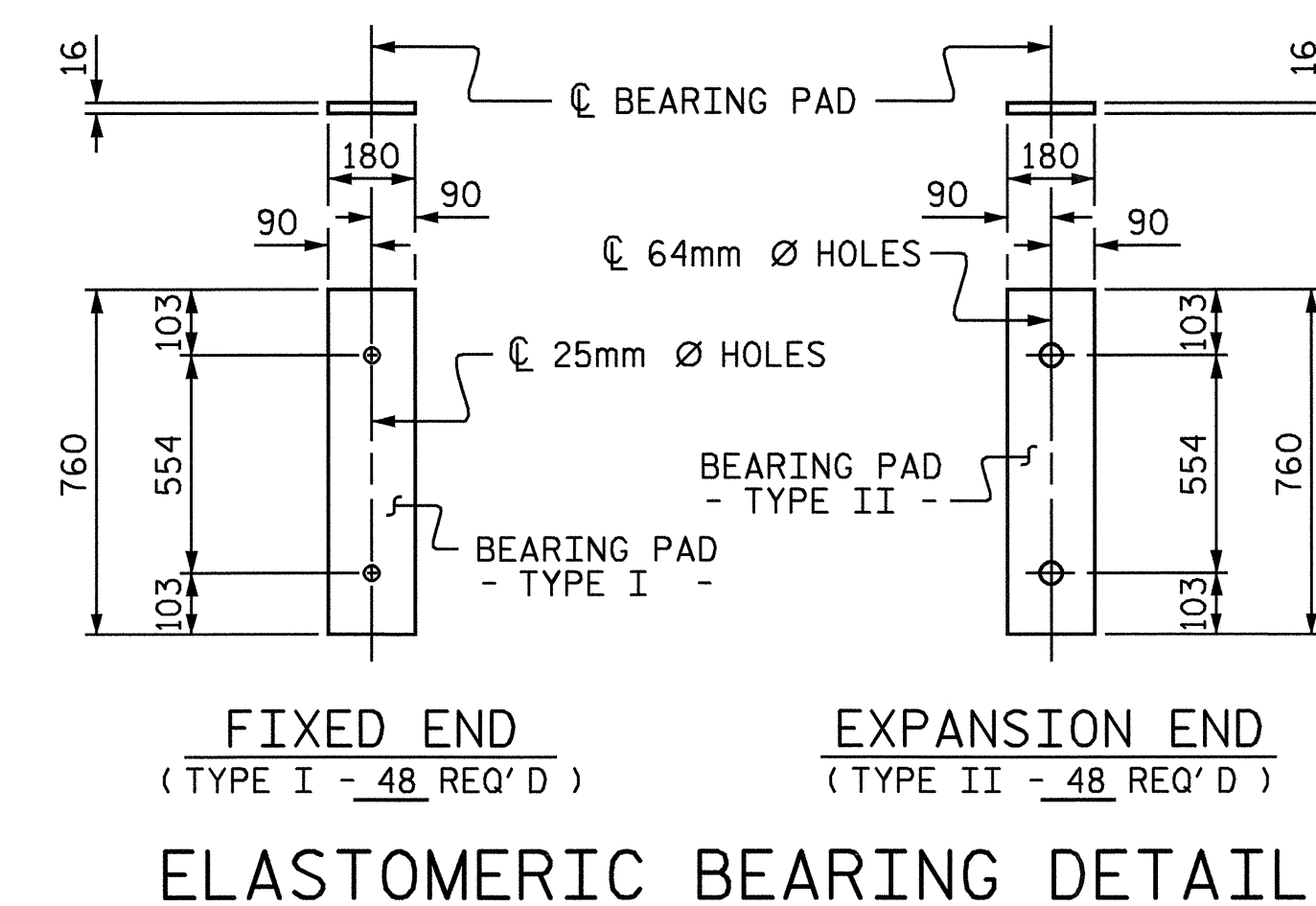
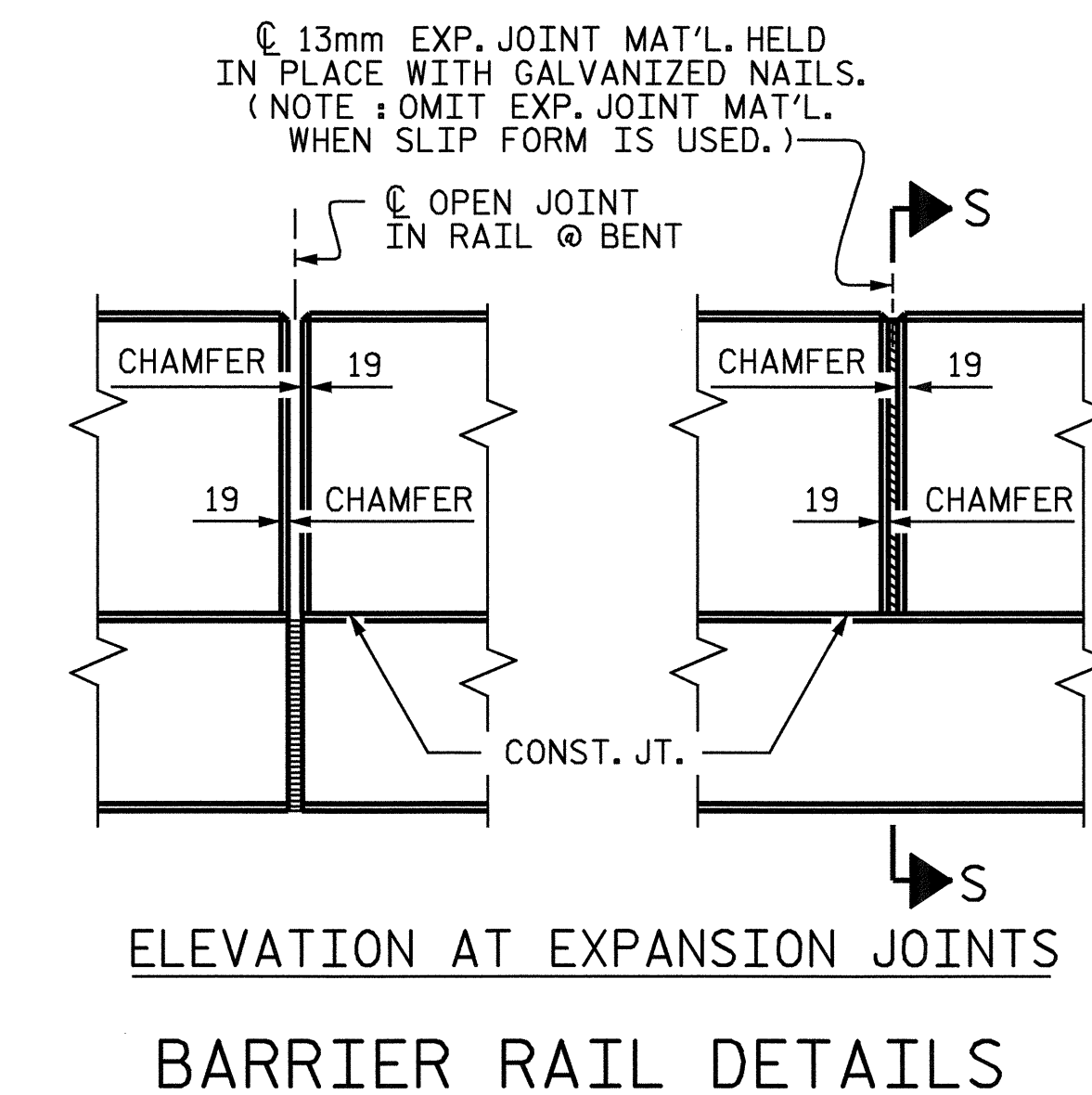
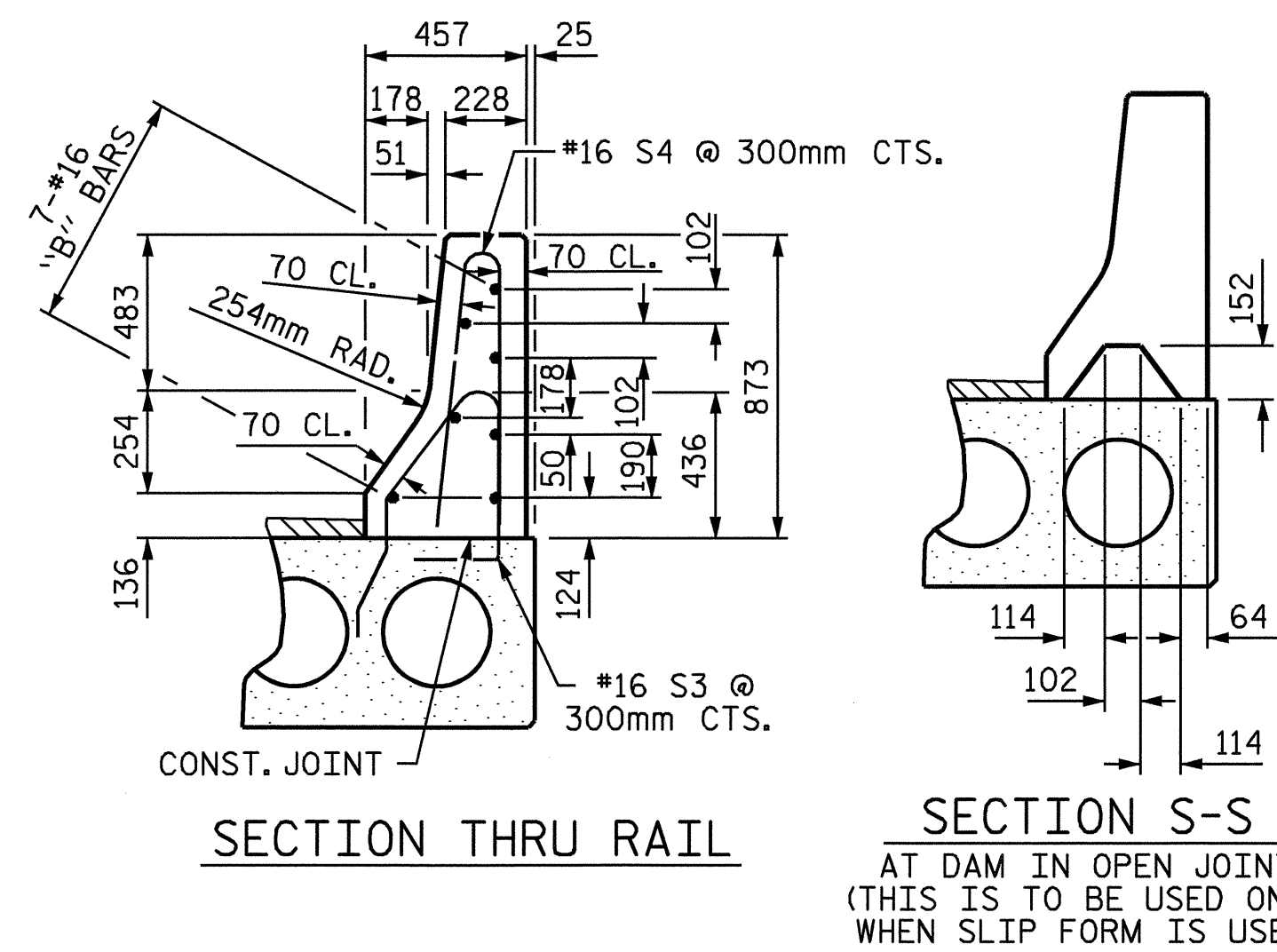
BILL OF MATERIAL FOR ONE CORED SLAB UNIT (SPAN D)							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
B2	4	#13	STR	6520	26	6520	26
S1	8	#16	3	1380	17	1380	17
S2	76	#13	3	1620	122	1620	122
* S3	44	#16	1	1620	111		
S5	4	#13	3	1740	7	1740	7
S6	4	#13	3	1700	7	1700	7
S7	4	#13	3	1640	7	1640	7
REINFORCING STEEL				kg	186		186
* EPOXY COATED REINFORCING STEEL				kg	111		
34.5 MPa CONCRETE				CU. METERS	4.3		4.3
12.70mm Ø L.R. STRANDS				No.	14		14

CORED SLABS REQUIRED			
UNIT TYPE	NUMBER	LENGTH	TOTAL LENGTH
SPANS A, B, & C EXTERIOR C.S.	6	14.956m	89.736m
SPANS A, B, & C INTERIOR C.S.	30	14.956m	448.680m
SPAN D EXTERIOR C.S.	2	12.582m	25.164m
SPAN D INTERIOR C.S.	10	12.582m	125.820m
TOTAL	48		689.400m

DEAD LOAD DEFLECTIONS AND CAMBERS		
	914mm x 533mm 12.70mm Ø L.R. STRAND	
	SPANS A, B, & C	SPAN D
CAMBER (SLAB ALONE IN PLACE) ↓	38	20
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD *	6	3
FINAL CAMBER ↑	32	17

\* 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	SPAN C	SPAN D					
* B3	56	56	56		168	#16	STR.	4280	1116
* B4				56	56	#16	STR.	3680	320
* S4	104	104	104	88	400	#16	2	1680	1043
* EPOXY COATED REINFORCING STEEL					kg			2479	
CLASS AA CONCRETE					CU. METERS			32.1	
TOTAL LENGTH OF CONCRETE BARRIER RAIL					METERS			115.164	



ASSEMBLED BY : William J. Parker	DATE : 01/15/04
CHECKED BY : A.B. NAIK	DATE : 4/27/04
DRAWN BY : WJH 4/89	REV. 10/17/00 RWW/LES
CHECKED BY : FCJ 5/89	REV. 7/10/01 RWW/LES
	REV. 5/7/03 RWW/JTE