

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 LUMP SUM 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. 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 CONCRETE PARAPET 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.

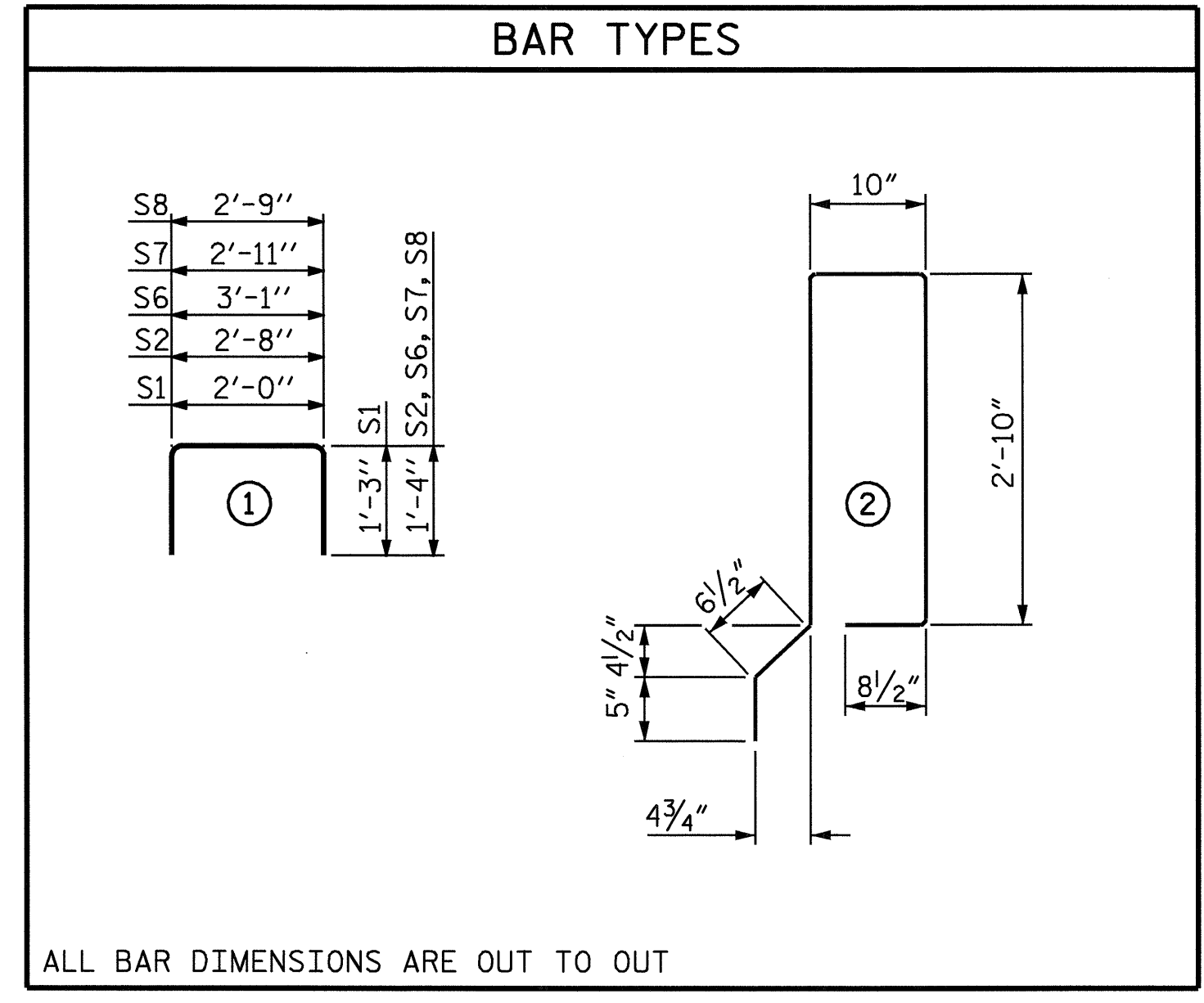
FOR ELASTOMERIC BEARINGS, SEE SPECIAL PROVISIONS.

FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

SPAN A							
BILL OF MATERIAL FOR ONE CORED SLAB SECTION							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
B1	2	# 4	STR	28'-2"	38	28'-2"	38
S1	8	# 4	1	4'-6"	24	4'-6"	24
S2	50	# 4	1	5'-4"	178	5'-4"	178
* S3	60	# 5	2	8'-2"	511		
S6	4	# 4	1	5'-9"	15	5'-9"	15
S7	4	# 4	1	5'-7"	15	5'-7"	15
S8	4	# 4	1	5'-5"	14	5'-5"	14
REINFORCING STEEL				284 LBS.		284 LBS.	
* EPOXY COATED REINFORCING STEEL				511 LBS.		511 LBS.	
5,000 P.S.I. CONCRETE				4.2 CU. YDS.		4.2 CU. YDS.	
1/2" Ø L.R. STRANDS No.				12		12	

SPAN B							
BILL OF MATERIAL FOR ONE CORED SLAB SECTION							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
B2	4	# 4	STR	25'-8"	69	25'-8"	69
S1	8	# 4	1	4'-6"	24	4'-6"	24
S2	94	# 4	1	5'-4"	335	5'-4"	335
* S3	102	# 5	2	8'-2"	869		
S6	4	# 4	1	5'-9"	15	5'-9"	15
S7	4	# 4	1	5'-7"	15	5'-7"	15
S8	4	# 4	1	5'-5"	14	5'-5"	14
REINFORCING STEEL				472 LBS.		472 LBS.	
* EPOXY COATED REINFORCING STEEL				869 LBS.		869 LBS.	
5,000 P.S.I. CONCRETE				7.0 CU. YDS.		7.0 CU. YDS.	
1/2" Ø L.R. STRANDS No.				24		24	

SPAN C							
BILL OF MATERIAL FOR ONE CORED SLAB SECTION							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
B1	2	# 4	STR	28'-2"	38	28'-2"	38
S1	8	# 4	1	4'-6"	24	4'-6"	24
S2	50	# 4	1	5'-4"	178	5'-4"	178
* S3	60	# 5	2	8'-2"	511		
S6	4	# 4	1	5'-9"	15	5'-9"	15
S7	4	# 4	1	5'-7"	15	5'-7"	15
S8	4	# 4	1	5'-5"	14	5'-5"	14
REINFORCING STEEL				284 LBS.		284 LBS.	
* EPOXY COATED REINFORCING STEEL				511 LBS.		511 LBS.	
5,000 P.S.I. CONCRETE				4.2 CU. YDS.		4.2 CU. YDS.	
1/2" Ø L.R. STRANDS No.				12		12	



CORED SLABS REQUIRED					
	NUMBER PER SPAN	LENGTH			TOTAL LENGTH
		SPAN A	SPAN B	SPAN C	
EXTERIOR C.S.	2	28'-7 9/16"	49'-10 1/4"	28'-7 9/16"	214'-2 3/4"
INTERIOR C.S.	13	28'-7 9/16"	49'-10 1/4"	28'-7 9/16"	1392'-5 7/8"
TOTAL					1606'-8 5/8"

DEAD LOAD DEFLECTION AND CAMBER			
3'-0" x 1'-9" 1/2" Ø L.R. STRAND			
	SPAN A	SPAN B	SPAN C
CAMBER (SLAB ALONE IN PLACE)	7/16" ↑	2 5/16" ↑	7/16" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD**	1/16" ↓	3/8" ↓	1/16" ↓
FINAL CAMBER	3/8" ↑	1 5/16" ↑	3/8" ↑

** INCLUDES FUTURE WEARING SURFACE

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

SPLICE CHART	
B2	1'-9"

ASSEMBLED BY : A.L.MEADOWS DATE : 11/18/02
 CHECKED BY : T.A.HARRIS DATE : 5/1/03
 DRAWN BY : WJH 4/89 REV. 10/17/00 RWW/LES
 CHECKED BY : FCJ 5/89 REV. 7/10/01 RWW/LES
 REV. 5/7/03RR RWW/JTE



PROJECT NO. B-3451
DURHAM COUNTY
 STATION: 14+99.30 -L-

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD 3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLAB UNIT					
OCTOBER				1981	
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-14					TOTAL SHEETS 27