

**ELASTOMERIC BEARING DETAILS**

**DEAD LOAD DEFLECTION AND CAMBER**

TYPE I & TYPE VI	SPAN A	SPANS B & C	SPAN D
	1/2" Ø L.R. STRAND	1/2" Ø L.R. STRAND	1/2" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	2" ↑	2" ↑	1/2" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD **	5/16" ↓	5/16" ↓	1/16" ↓
FINAL CAMBER	1 1/16" ↑	1 1/16" ↑	7/16" ↑

TYPE II THRU TYPE V	SPAN A	SPANS B & C	SPAN D
	1/2" Ø L.R. STRAND	1/2" Ø L.R. STRAND	1/2" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	2" ↑	2" ↑	9/16" ↑
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD **	5/16" ↓	5/16" ↓	1/16" ↓
FINAL CAMBER	1 1/16" ↑	1 1/16" ↑	1/2" ↑

\*\* INCLUDES FUTURE WEARING SURFACE

DRAWN BY: M. J. OSTRISHKO DATE: 1/17/02  
CHECKED BY: K. D. LAYNE DATE: 2/17/02

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Klayne

**BILL OF MATERIAL FOR ONE CORED SLAB UNIT - SPAN A**

				TYPE I UNIT		TYPE II AND TYPE V UNIT		TYPE III UNIT		TYPE IV UNIT		TYPE VI UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
B1	4	#4	STR	24'-2"	65	24'-2"	65	24'-2"	65	24'-2"	65	24'-2"	65
S1	8	#4	1	4'-4"	23	4'-4"	23	4'-4"	23	4'-4"	23	4'-4"	23
S2	86	#4	1	5'-4"	306	5'-4"	306	5'-4"	306	5'-4"	306	5'-4"	306
S3	4	#4	1	5'-6"	15	5'-6"	15	5'-6"	15	5'-6"	15	5'-6"	15
S4	4	#4	1	5'-5"	14	5'-5"	14	5'-5"	14	5'-5"	14	5'-5"	14
S5	4	#4	1	5'-4"	14	5'-4"	14	5'-4"	14	5'-4"	14	5'-4"	14
* S6	49	#5	2									7'-8"	392
REINFORCING STEEL				LBS. 437		437		437		437		437	
* EPOXY COATED REINFORCING STEEL				LBS. 392		392		392		392		392	
5,000 P.S.I. CONCRETE				CU. YDS. 6.7		8.0		8.0		8.0		6.7	

**BILL OF MATERIAL FOR ONE CORED SLAB UNIT - SPANS B & C**

				TYPE I UNIT		TYPE II AND TYPE V UNIT		TYPE III UNIT		TYPE IV UNIT		TYPE VI UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
B2	4	#4	STR	24'-9"	66	24'-9"	66	24'-9"	66	24'-9"	66	24'-9"	66
S1	8	#4	1	4'-4"	23	4'-4"	23	4'-4"	23	4'-4"	23	4'-4"	23
S2	90	#4	1	5'-4"	321	5'-4"	321	5'-4"	321	5'-4"	321	5'-4"	321
S3	4	#4	1	5'-6"	15	5'-6"	15	5'-6"	15	5'-6"	15	5'-6"	15
S4	4	#4	1	5'-5"	14	5'-5"	14	5'-5"	14	5'-5"	14	5'-5"	14
S5	4	#4	1	5'-4"	14	5'-4"	14	5'-4"	14	5'-4"	14	5'-4"	14
* S6	51	#5	2									7'-8"	408
REINFORCING STEEL				LBS. 453		453		453		453		453	
* EPOXY COATED REINFORCING STEEL				LBS. 408		408		408		408		408	
5,000 P.S.I. CONCRETE				CU. YDS. 6.9		8.2		8.2		8.1		6.9	

**BILL OF MATERIAL FOR ONE CORED SLAB UNIT - SPAN D**

				TYPE I UNIT		TYPE II AND TYPE V UNIT		TYPE III UNIT		TYPE IV UNIT		TYPE VI UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
B3	4	#4	STR	18'-2"	49	18'-2"	49	18'-2"	49	18'-2"	49	18'-2"	49
S1	8	#4	1	4'-4"	23	4'-4"	23	4'-4"	23	4'-4"	23	4'-4"	23
S2	62	#4	1	5'-4"	221	5'-4"	221	5'-4"	221	5'-4"	221	5'-4"	221
S3	4	#4	1	5'-6"	15	5'-6"	15	5'-6"	15	5'-6"	15	5'-6"	15
S4	4	#4	1	5'-5"	14	5'-5"	14	5'-5"	14	5'-5"	14	5'-5"	14
S5	4	#4	1	5'-4"	14	5'-4"	14	5'-4"	14	5'-4"	14	5'-4"	14
* S6	37	#5	2									7'-8"	296
REINFORCING STEEL				LBS. 336		336		336		336		336	
* EPOXY COATED REINFORCING STEEL				LBS. 296		296		296		296		296	
5,000 P.S.I. CONCRETE				CU. YDS. 5.0		6.0		5.9		5.8		5.0	

NOTE: QUANTITIES FOR CONCRETE PARAPET AND END POST ARE NOT INCLUDED. SEE "RAIL POST SPACING AND END OF RAIL DETAIL" SHEETS.

**1/2" Ø L. R. STRANDS FOR ONE CORED SLAB UNIT**

UNIT TYPE	NUMBER OF STRANDS			
	SPAN A	SPAN B	SPAN C	SPAN D
TYPE I & TYPE VI	23	23	23	12
TYPE II THRU TYPE V	24	24	24	13

**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

**CORED SLABS UNITS REQUIRED**

UNIT TYPE	NUMBER	LENGTH				TOTAL LENGTH
		SPAN A	SPAN B	SPAN C	SPAN D	
TYPE I	12 EACH SPAN	46'-8 13/16"	47'-10 3/8"	47'-10 3/8"	34'-8 13/16"	2126.38
TYPE II	1 EACH SPAN	46'-8 13/16"	47'-10 3/8"	47'-10 3/8"	34'-8 13/16"	177.20
TYPE III	1 EACH SPAN	46'-8 13/16"	47'-10 3/8"	47'-10 3/8"	34'-8 13/16"	177.20
TYPE IV	1 EACH SPAN	46'-8 13/16"	47'-10 3/8"	47'-10 3/8"	34'-8 13/16"	177.20
TYPE V	1 EACH SPAN	46'-8 13/16"	47'-10 3/8"	47'-10 3/8"	34'-8 13/16"	177.20
TYPE VI	1 EACH SPAN	46'-8 13/16"	47'-10 3/8"	47'-10 3/8"	34'-8 13/16"	177.20
TOTAL	17 EACH SPAN					3012.38

**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 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 CONCRETE PARAPET SHALL BE EPOXY COATED.

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

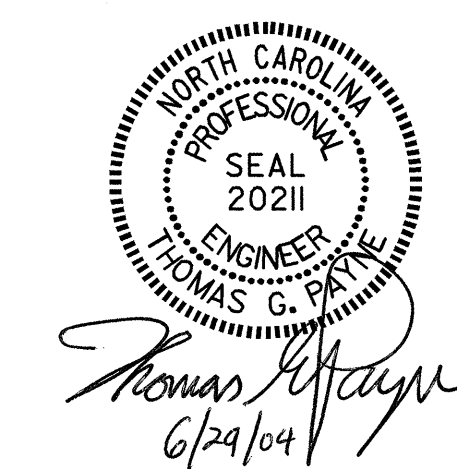
APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS. FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

PRESTRESSED CONCRETE CORED SLAB UNITS SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR. SEE SPECIAL PROVISIONS FOR CALCIUM NITRITE CORROSION INHIBITOR.

PRESTRESSED CONCRETE CORED SLAB UNITS ARE DESIGNED FOR AN ALLOWABLE TENSILE STRESS OF 0 PSI IN THE PRECOMPRESSED TENSILE ZONE UNDER ALL LOADING CONDITIONS.

FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

PROJECT NO. B-3445  
CURRITUCK COUNTY  
STATION: 24+18.00 -L-



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

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

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-19	
1			3			TOTAL SHEETS	
2			4			43	