

FIXED END
(TYPE I - 80 REQ'D)

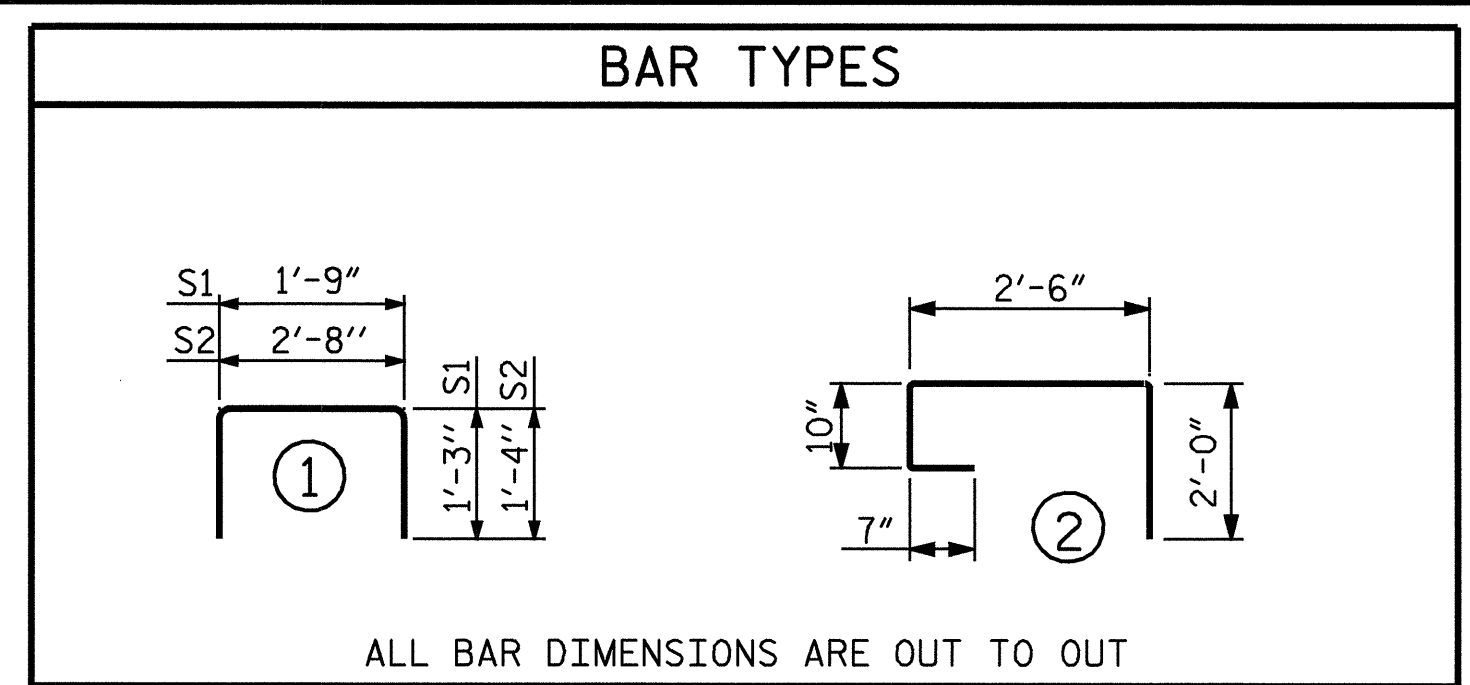
EXPANSION END
(TYPE II - 40 REQ'D)

ELASTOMERIC BEARING DETAILS

CLASS AA CONCRETE (FOR CONCRETE WEARING SURFACE)	
*CONCRETE WEARING SURFACE	(CU. YD.) 76.8

*PAID FOR BY THE SQ. FT. PRICE FOR "CONCRETE WEARING SURFACE." (4982 SQ. FT.)

GROOVING BRIDGE FLOORS	
BRIDGE DECK	4644 SQ.FT.
APPROACH SLAB	995 SQ.FT.
TOTAL	5639 SQ.FT.



CORED SLABS REQUIRED					
UNIT TYPE	NUMBER PER SPAN	LENGTH			TOTAL LENGTH
		SPAN A	SPAN B	SPAN C	
INTERIOR	16	28'-9 1/2"	49'-10 1/2"	28'-9 1/2"	1719'-4"
INT. (SIDEWALK)	2	28'-9 1/2"	49'-10 1/2"	28'-9 1/2"	214'-11"
EXT. (SIDEWALK)	2	28'-9 1/2"	49'-10 1/2"	28'-9 1/2"	214'-11"
TOTAL NUMBER	60				2149'-2"

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 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.

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.

PLACEMENT OF THE CONCRETE OVERLAY SHALL OCCUR AFTER CASTING THE SIDEWALK.

THE TOP SURFACE OF ALL THE CORED SLAB UNITS SHALL HAVE A 3/8" RAKED FINISH.

BILL OF MATERIAL FOR ONE CORED SLAB SECTION																													
			SPAN A									SPAN B									SPAN C								
			INTERIOR UNIT			INT. (SIDEWALK)			EXT. (SIDEWALK)			INTERIOR UNIT			INT. (SIDEWALK)			EXT. (SIDEWALK)			INTERIOR UNIT			INT. (SIDEWALK)			EXT. (SIDEWALK)		
BAR	SIZE	TYPE	NUMBER	LENGTH	WEIGHT	NUMBER	LENGTH	WEIGHT	NUMBER	LENGTH	WEIGHT	NUMBER	LENGTH	WEIGHT	NUMBER	LENGTH	WEIGHT	NUMBER	LENGTH	WEIGHT	NUMBER	LENGTH	WEIGHT	NUMBER	LENGTH	WEIGHT			
B1	# 4	STR	2	28'-5"	38	2	28'-5"	38	2	28'-5"	38	4	25'-8"	69	4	25'-8"	69	4	25'-8"	69	2	28'-5"	38	2	28'-5"	38	2	28'-5"	38
B2	# 4	STR																											
S1	# 4	1	8	4'-3"	23	8	4'-3"	23	8	4'-3"	23	8	4'-3"	23	8	4'-3"	23	8	4'-3"	23	8	4'-3"	23	8	4'-3"	23	8	4'-3"	23
S2	# 4	1	60	5'-4"	214	60	5'-4"	214	60	5'-4"	214	102	5'-4"	363	102	5'-4"	363	102	5'-4"	363	60	5'-4"	214	60	5'-4"	214	60	5'-4"	214
*S3	# 4	2				4	5'-11"	16	4	5'-11"	16				7	5'-11"	28	7	5'-11"	28				4	5'-11"	16	4	5'-11"	16
REINFORCING STEEL			275 LBS.			275 LBS.			275 LBS.			455 LBS.			455 LBS.			455 LBS.			275 LBS.			275 LBS.			275 LBS.		
* EPOXY COATED REINF. STEEL			0			16 LBS.			16 LBS.			0			28 LBS.			28 LBS.			0			16 LBS.			16 LBS.		
5,000 P.S.I. CONCRETE			4.2 C.Y.			4.2 C.Y.			4.2 C.Y.			7.2 C.Y.			7.2 C.Y.			7.2 C.Y.			4.2 C.Y.			4.2 C.Y.			4.2 C.Y.		
1/2" Ø L.R. STRANDS			12			12			12			25			25			25			12			12			12		

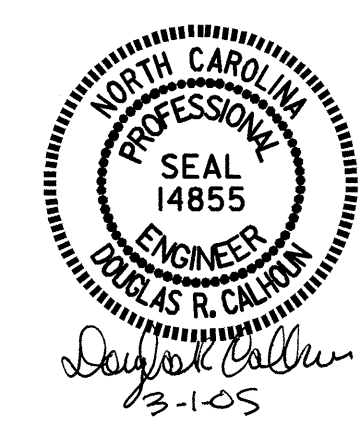
DEAD LOAD DEFLECTION AND CAMBER			
3'-0" x 1'-9" 1/2" Ø L.R. STRAND			
	SPAN A	SPAN B	SPAN C
CAMBER (SLAB ALONE IN PLACE) ↑	7/16"	2 7/16"	7/16"
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD ** ↓	1/16"	3/8"	1/16"
FINAL CAMBER ↑	3/8"	2 1/16"	3/8"

** INCLUDES FUTURE WEARING SURFACE

GRADE 270 STRANDS	
AREA (SQ. INCHES)	0.153
ULTIMATE STRENGTH (LBS. PER STRAND)	41,300
APPLIED PRESTRESS (LBS. PER STRAND)	30,980

SUPERSTRUCTURE REINFORCING STEEL LENGTHS ARE BASED ON THE FOLLOWING MINIMUM SPLICE LENGTHS					
BAR SIZE	SUPERSTRUCTURE EXCEPT APPROACH SLABS, PARAPET, AND BARRIER RAIL		APPROACH SLABS		PARAPET AND BARRIER RAIL
	EPOXY COATED	UNCOATED	EPOXY COATED	UNCOATED	
#4	2'-0"	1'-9"	2'-0"	1'-9"	2'-9"
#5	2'-6"	2'-2"	2'-6"	2'-2"	3'-5"
#6	3'-0"	2'-7"	3'-10"	2'-7"	4'-4"
#7	5'-3"	3'-6"			
#8	6'-10"	4'-7"			

PROJECT NO. B-3450
DURHAM COUNTY
 STATION: 22+37.00 -L-



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
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-40					TOTAL SHEETS 53

ASSEMBLED BY : A.L.MEADOWS	DATE : 7/24/02
CHECKED BY : T.A.HARRIS	DATE : 9/13/02
DRAWN BY : WJH 4/89	REV. 8/16/99 RWW/LES
CHECKED BY : FCJ 5/89	REV. 10/17/00 RWW/LES
	REV. 7/10/01RR RWW/LES