

### ELASTOMERIC BEARING DETAILS

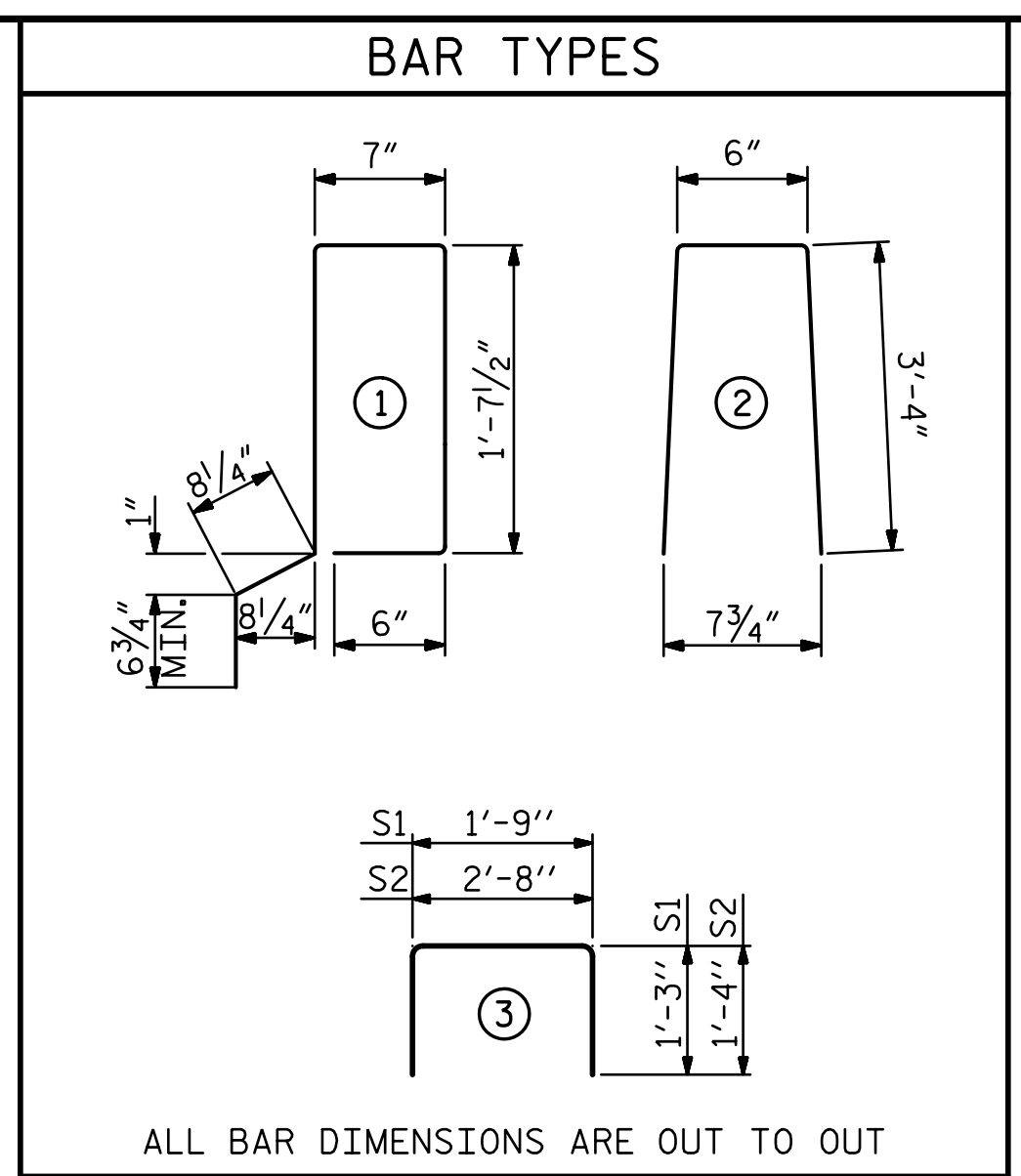
ELASTOMER IN ALL BEARINGS SHALL BE 60 DUROMETER HARDNESS.

GUTTERLINE ASPHALT THICKNESS & RAIL HEIGHT		
	ASPHALT OVERLAY THICKNESS	RAIL HEIGHT
	@ MID-SPAN	@ MID-SPAN
40' UNITS	2"	3'-8"

BILL OF MATERIAL FOR ONE 40' CORED SLAB UNIT									
				EXTERIOR UNITS C.S.U. #1 & #13		INTERIOR UNITS C.S.U. #2-#6 & #8-#12		INTERIOR UNIT C.S.U. #7	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT	LENGTH	WEIGHT
B4	4	#4	STR	20'-9"	55	20'-9"	55	20'-9"	55
S1	8	#5	3	4'-3"	35	4'-3"	35	4'-3"	35
S2	84	#4	3	5'-4"	299	5'-4"	299	5'-4"	299
* S3	48	#5	1	5'-7"	280				
REINFORCING STEEL				LBS.	389		389		389
* EPOXY COATED REINFORCING STEEL				LBS.	280				
5000 P.S.I. CONCRETE				CU. YDS.	5.8		5.8		6.8
0.6" Ø L.R. STRANDS				No.	13		13		13

CORED SLABS REQUIRED				
STAGE NUMBER		NUMBER	LENGTH	TOTAL LENGTH
1	EXTERIOR C.S.	1	40'-0"	40'-0"
	INTERIOR C.S.	5	40'-0"	200'-0"
	INTERIOR C.S. W/ 8" Ø VOIDS	1	40'-0"	40'-0"
	TOTAL	7	—	280'-0"
2	EXTERIOR C.S.	1	40'-0"	40'-0"
	INTERIOR C.S.	5	40'-0"	200'-0"
	TOTAL	6	—	240'-0"

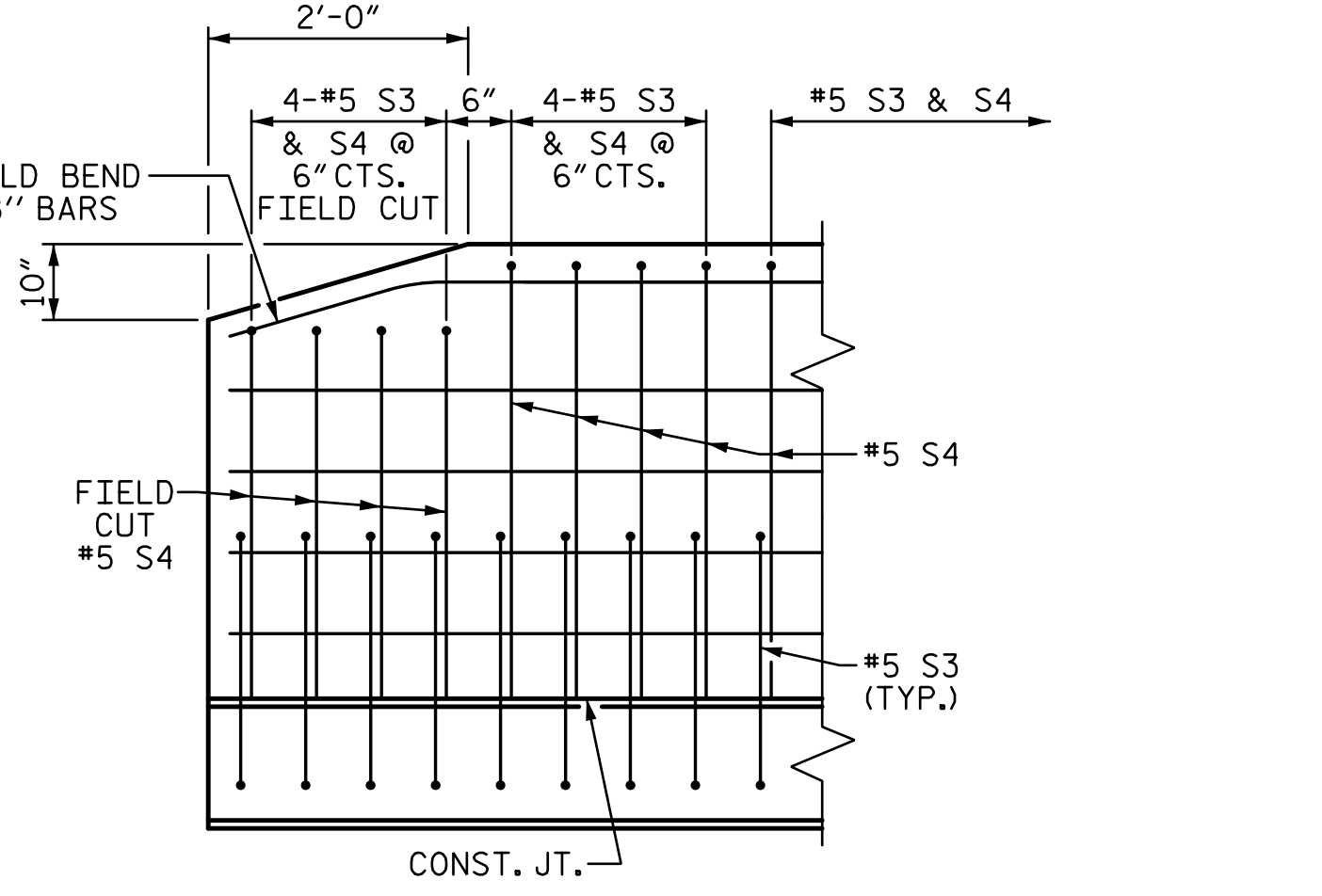
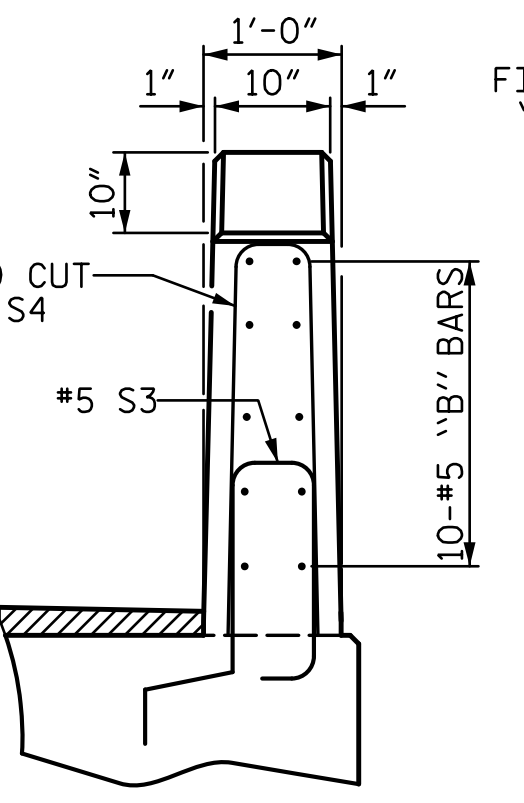
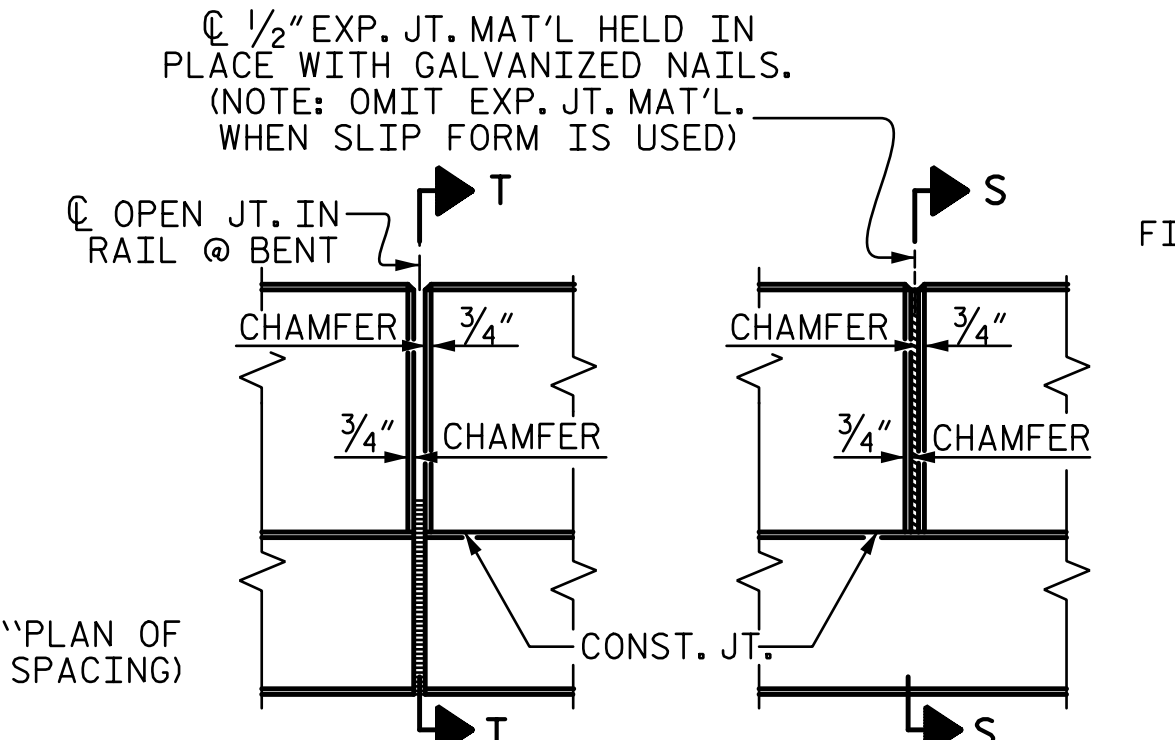
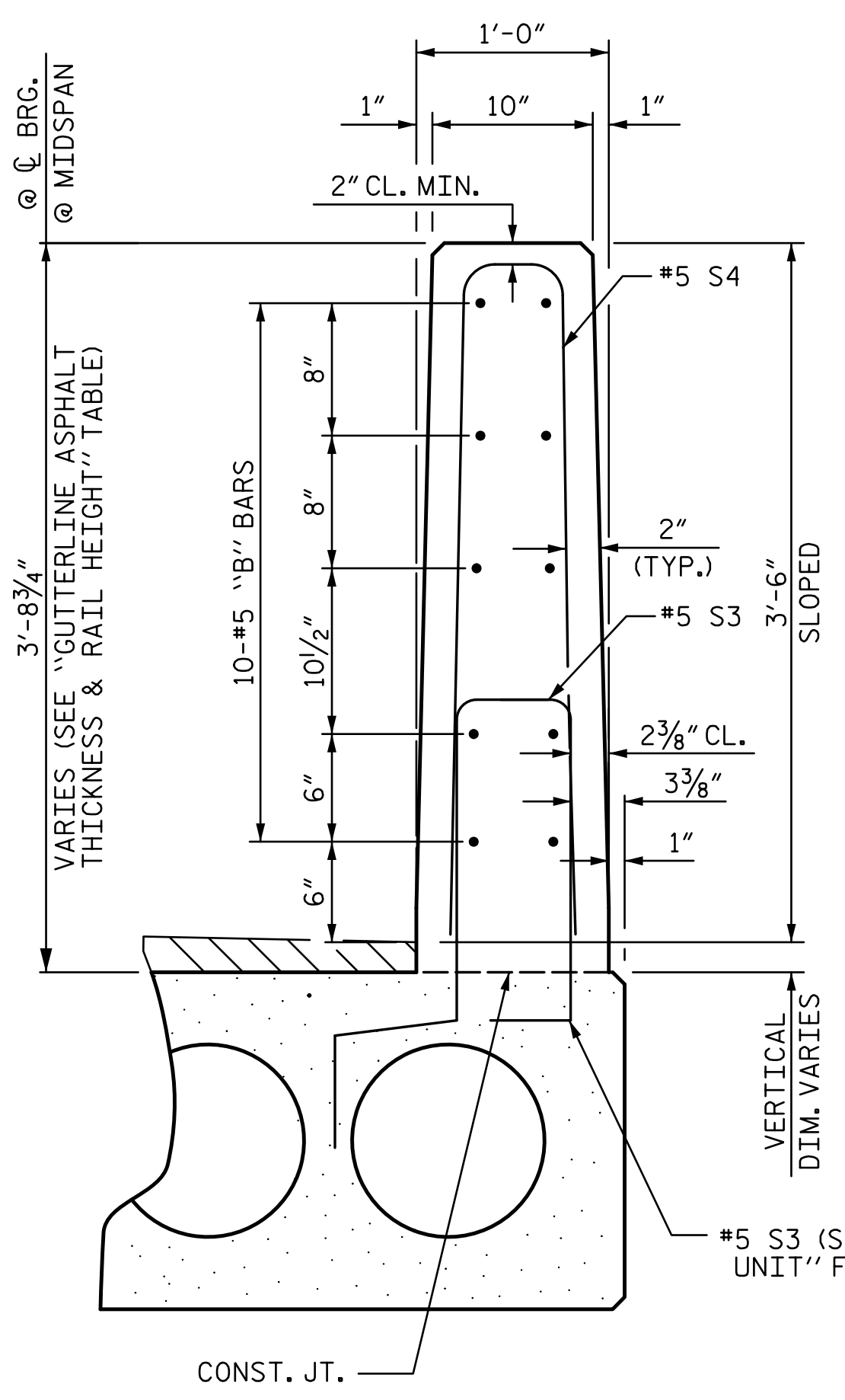
GRADE 270 STRANDS	
	0.6" Ø L.R.
AREA (SQUARE INCHES)	0.217
ULTIMATE STRENGTH (LBS. PER STRAND)	58,600
APPLIED PRESTRESS (LBS. PER STRAND)	43,950



DEAD LOAD DEFLECTION AND CAMBER	
40' CORED SLAB UNIT	3'-0" x 1'-9"
CAMBER (SLAB ALONE IN PLACE)	0.6" Ø L.R. STRAND
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD**	7/8" ↓
FINAL CAMBER	1/8" ↓
	3/4" ↑

\*\* INCLUDES FUTURE WEARING SURFACE

BILL OF MATERIAL FOR VERTICAL CONCRETE BARRIER RAIL						
BAR	BARS PER PAIR OF EXTERIOR UNITS	TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
40' UNIT						
* B11	40	40	#5	STR	19'-7"	817
* S4	96	96	#5	2	7'-2"	718
* EPOXY COATED REINFORCING STEEL				LBS.		1535
CLASS AA CONCRETE				CU. YDS.		10.2
TOTAL VERTICAL CONCRETE BARRIER RAIL				LN. FT.		80.13



### END OF RAIL DETAILS

### 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 NON-SHRINK GROUT.

THE BACKER RODS SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.

WHEN CORED SLABS ARE CAST, AN INTERNAL HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDEWAYS. AT LEAST SIX 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.

ALL REINFORCING STEEL IN THE VERTICAL CONCRETE BARRIER RAIL 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.

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

FLAME CUTTING OF THE TRANSVERSE POST-TENSIONING STRAND IS NOT ALLOWED.

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.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

THE PERMITTED THREADED INSERTS ARE DETAILED AS AN OPTION FOR THE CONTRACTOR TO ATTACH FALSEWORK AND FORMWORK DURING CONSTRUCTION.

THE PERMITTED THREADED INSERTS IN THE EXTERIOR UNITS SHALL BE SIZED BY THE CONTRACTOR, SPACED AT 4'-0" CENTERS AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS. STAINLESS STEEL THREADED INSERTS MAY BE USED AS AN ALTERNATE.

THE PERMITTED THREADED INSERTS SHALL BE GROUTED BY THE CONTRACTOR IMMEDIATELY FOLLOWING REMOVAL OF THE FALSEWORK.

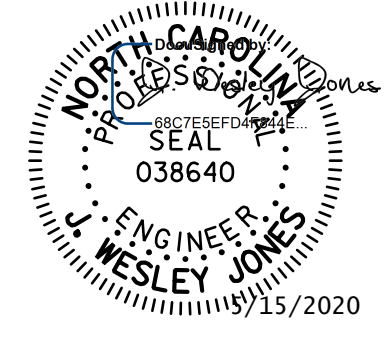
THE COST OF THE PERMITTED THREADED INSERTS SHALL BE INCLUDED IN THE PRICE BID FOR THE PRECAST UNITS.

PROJECT NO. BR-0126  
WILKES COUNTY  
 STATION: 16+62.00 -L-

SHEET 4 OF 4

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

3'-0" X 1'-9"  
 PRESTRESSED CONCRETE  
 CORED SLAB UNIT  
 90° SKEW  
 (SPAN B)



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

S-14  
 TOTAL SHEETS 23

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