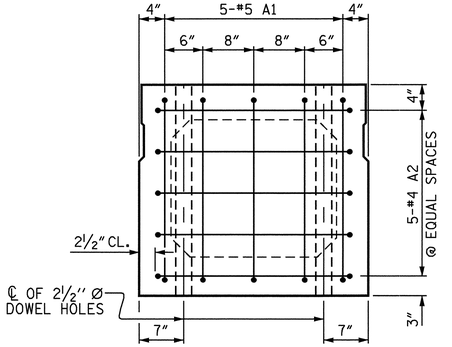
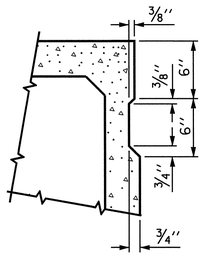


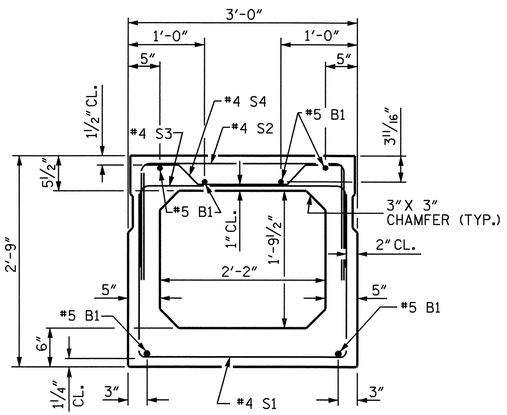
END ELEVATION

SHOWING PLACEMENT OF #5 & #4 "A" BARS AND LOCATION OF DOWEL HOLES. (INTERIOR BOX BEAM SECTION SHOWN-EXTERIOR SECTION SIMILAR EXCEPT SHEAR KEY LOCATION. STRAND LAYOUT NOT SHOWN.)



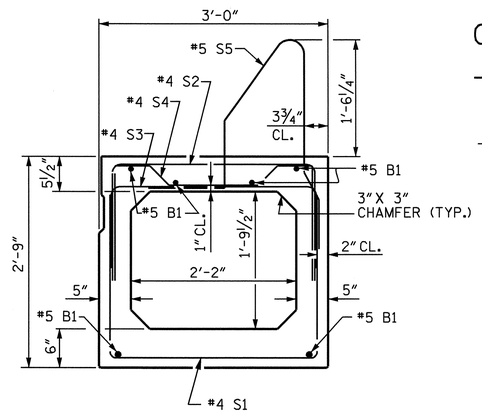
SHEAR KEY DETAIL

NOTE: OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR BOX BEAMS.



INTERIOR BOX BEAM SECTION

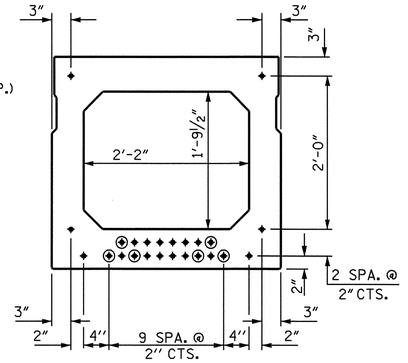
(STRAND LAYOUT NOT SHOWN)



EXTERIOR BOX BEAM SECTION

(STRAND LAYOUT NOT SHOWN)

0.6" Ø LOW RELAXATION STRAND LAYOUT



TYPICAL STRAND LOCATION

(24 STRANDS REQUIRED)

(INTERIOR BOX BEAM SECTION SHOWN-EXTERIOR SECTION SIMILAR EXCEPT SHEAR KEY LOCATION)

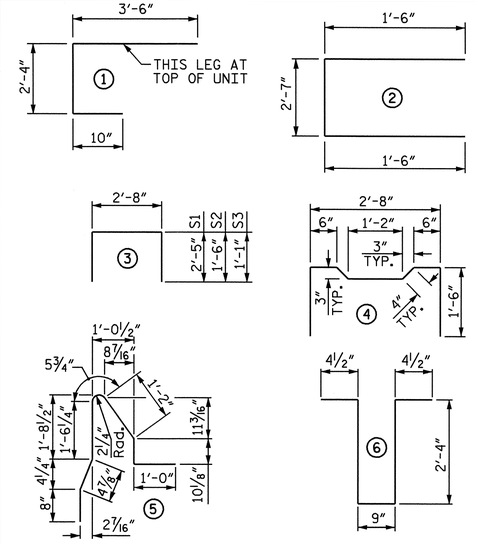
DEBONDING LEGEND

- ● FULLY BONDED STRANDS
- ◉ BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 6'-0" FROM EACH END OF BOX BEAM UNIT. SEE STANDARD SPECIFICATIONS ARTICLE 1078-7.

SPLICE LENGTH CHART		
BAR	SIZE	SPLICE
B1	#5	2'-2"

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

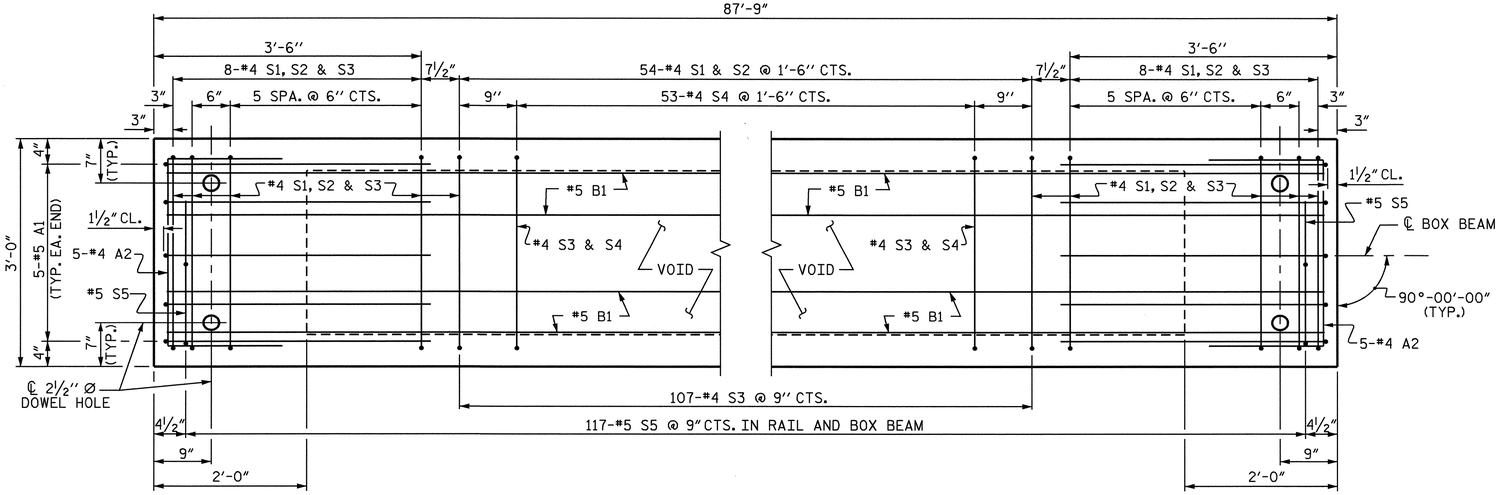
BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL FOR ONE BOX BEAM SECTION

				EXTERIOR UNIT		INTERIOR UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT
A1	10	#5	1	6'-8"	70	6'-8"	70
A2	40	#4	2	5'-7"	149	5'-7"	149
B1	12	#5	STR	44'-10"	561	44'-10"	561
K1	15	#4	6	6'-2"	62	6'-2"	62
K2	10	#4	STR	2'-7"	17	2'-7"	17
S1	70	#4	3	7'-6"	351	7'-6"	351
S2	70	#4	3	5'-8"	265	5'-8"	265
S3	123	#4	3	4'-10"	397	4'-10"	397
S4	53	#4	4	5'-10"	207	5'-10"	207
✳ S5	117	#5	5	6'-1"	742	--	--
REINFORCING STEEL					2079 LBS.		2079 LBS.
✳ EPOXY COATED REINF. STEEL					742 LBS.		
6500 P.S.I. CONCRETE					15.8 CU. YDS.		15.7 CU. YDS.
0.6" Ø L.R. STRANDS					No. 24		No. 24



PLAN OF BOX BEAM

EXTERIOR UNIT SHOWN, INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S5 BARS.
FOR LOCATION OF DIAPHRAGMS, SEE PLAN OF SPANS.
FOR REINFORCING STEEL IN DIAPHRAGMS, SEE DIAPHRAGM DETAILS.

NORTH CAROLINA PROFESSIONAL SEAL 025516 ENGINEER EMILY E. MURRAY
Emily E. Murray 2/15/06

PROJECT NO. B-4319
WAYNE COUNTY
STATION: 16+29.00 -L-

SHEET 3 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
3'-0" X 2'-9"
PRESTRESSED CONCRETE
BOX BEAM UNIT

SPAN "A"

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
1			3			TOTAL SHEETS
2			4			18

ASSEMBLED BY : ZION J. RORIE	DATE : 7/1/05
CHECKED BY : M. D. PISO	DATE : 11/05
DRAWN BY : TLA 5/05	ADDED 7/11/05
CHECKED BY : GM 6/05	

15-FEB-2006 09:30
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STD. NO. PCBB4