FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
3	FLA.			

INSTRUCTIONAL NOTES

GENERAL:

The Standard Drawings for prestressed beams depict details and notes that are fully developed. These drawings are ready for inclusion in the contract documents after completing the portion of the title block that provides specific project information.

The Semi-Standard Drawings contain generic details and notes, and require the completion of the Table of Beam Variables and the Strand Patterns and Debonding Schedule detail.

When completed, Semi-Standard Drawings shall be included in the plans in conjunction with the appropriate Standard Drawings. Do not include duplicate Standard Drawings in the same set of bridge drawings.

Standard Drawings and properly completed Semi-Standard Drawings shall provide sufficient information to permit beam fabrication without the necessity of a shop drawings submittal.

The drawings shall be matched as follows:

Standard Index No.	Semi-Standard Index No.
100	S-102, S-103 and/or S-104
101	S-105 and/or S-106
110	S-111, S-112, S-113 and/or S-114

EXAMPLE:

The following example shows the data required for completion of a "Semi-Standard" drawing, in this case an AASHTO Type III Beam (Index No. S-103).

The example assumes a three span bridge designed for the following conditions:

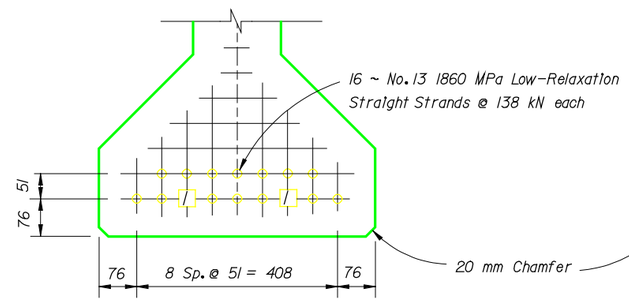
Live Load: MS18
Additional Live Load: 5% (MS18); (NO DIAPHRAGMS)
Future Wearing Surface: Design includes allowance for 720 N/m²
Stay-In-Place Metal Forms: Design includes allowance for 1.0 kN/m² for non-composite dead load over the projected plan area of the forms due to the weight of metal forms and concrete required to fill the form flutes.
Environment (Superstructure): Slightly Aggressive

Bridge Characteristics:
Length: 56.500 m
Width: 12.950 m (out-to-out)
Clear Roadway: 12.000 m
Superstructure: Three simple spans of prestressed concrete beams with 200 mm composite deck slab
Spans: 16.800 m, 22.900 m, 16.800 m
Sidewalk: None
Horizontal Alignment: Straight
Vertical Alignment: +2.00% Grade
Skew Angle: 15 degrees (Right)

Beam Design:
Beam: Type III
Spacing: 2.775 m, (Spans 1 & 3, 5 Beams)
2.220 m, (Span 2, 6 Beams)
Design Span Length: 16.218 m (Spans 1 & 3); 22.333 m (Span 2)
Dead Load on Composite Section:
Spans 1 & 3: 4.17 kN/m
Span 2: 3.47 kN/m
Dead Load on Non-Composite Section:
Spans 1 & 3: 2.27 kN/m
Span 2: 1.74 kN/m

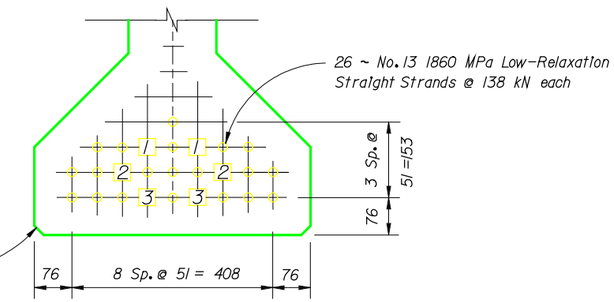
Additional Instructions: The 200 mm spacing for Bars "K" shall extend to approximately L/4. The length of Bars "A" shall be 3.000 m or 0.15L whichever is larger.

OTHER CONSIDERATIONS: When the actual number of beams or strand patterns exceed those that can be accommodated on a single semi-standard sheet, use additional semi-standard sheets or provide a new drawing showing an expanded "Table of Beam Variables" and any required additional strand patterns. If special conditions require dimensions or details not covered in the Table as provided, add additional columns to the Table as required.



TYPE 1

1 - Debond 1.600 m from ends of beam



TYPE 2

1 - Debond 5.800 m from ends of beam
2 - Debond 2.600 m from ends of beam
3 - Debond 900 mm from ends of beam

STRAND PATTERNS AND DEBONDING SCHEDULE

NOTE: All dimensions are in millimeters (mm), except as noted.

TABLE OF BEAM VARIABLES

BEAM ID.	CONCRETE PROPERTIES: CLASS	STRENGTHS: REL. (f'ci)	STRENGTHS: 28-DAY (f'c)	STND PTRN TYPE	PLAN VIEW CASE	END ELEV COND.	END OF BEAM AND BEARING DIMENSIONS **: ANGLE Ø	DIM P	DIM J	DIM K	BEAM DIMENSIONS *: DIM L	DIM R	DIM V	NUMBER OF SPACES FOR BARS K: S1	S2	S3	S4	DIAPHRAGM INSERT LOCATIONS *: DIM X1	DIM X2	DIM Y	NS/FS (7): #1	#2	REINFORCING STEEL: A LENGTH *	K NO. REQ'D	N LENGTH *
101 to 105	III	28 MPa	35 MPa	1	3	2	75° 00' 00"	22 mm	140 mm	255 mm	16.574 m	8 mm	322 mm	19	6	5	1	–	–	–	–	–	3.000 m	69	16.660 m
201 to 206	III	28 MPa	35 MPa	2	3	2	75° 00' 00"	22 mm	140 mm	255 mm	22.684 m	16 mm	377 mm	27	8	7	1	–	–	–	–	–	3.400 m	93	22.760 m
301 to 305	III	28 MPa	35 MPa	1	3	2	75° 00' 00"	22 mm	140 mm	255 mm	16.574 m	8 mm	322 mm	19	6	5	1	–	–	–	–	–	3.000 m	69	16.660 m

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
			97R		

	NAMES	DATES
DRAWN BY	JSP	8-92
CHECKED BY	CBH	8-92
DESIGNED BY	AJG	8-92
CHECKED BY	CBH	8-92
APPROVED BY	REN	

ENGINEER OF RECORD:
STRUCTURES DESIGN OFFICE
CENTRAL OFFICE
605 Suwannee Street, MS 33
Tallahassee, Florida 32399-0450

LOGO:

SEAL:

FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN OFFICE

ROAD NO.	COUNTY	PROJECT NO.

SHEET TITLE: PRESTRESSED BEAM INSTRUCTIONS

PROJECT NAME:

DRAWING NO. 1 of 1

INDEX NO. 1-099

DATE "" TIME

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