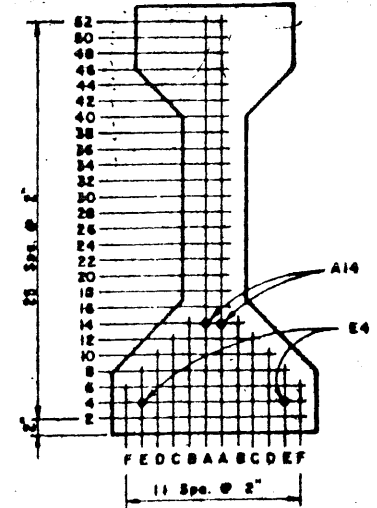


DESIGNED BEAMS (DEPRESSED STRANDS)

OPTIONAL DESIGN

SPAN NUMBER	* SPAN LENGTH	BEAM NO.	BEAM LENGTH (FT.)	BEAM TYPE	PRESTRESSING STRANDS					CONCRETE				OM. LOAD COMP. STRESS (TOP &.) Psi (psi)	OM. LOAD TENSILE STRESS (BOTT. &.) Psi (psi)	REQUIRED MINIMUM ULTIMATE MOMENT CAPACITY (Kl)
					TOTAL			DEPRESSED		RELEASE STRENGTH Psi (psi)	MINIMUM 28 DAY COMP. STRENGTH	NO.	TO			
					NO.	SIZE	STRTGTH	$\frac{1}{8}$ " END	$\frac{1}{4}$ " END							
1-2	54'-4 1/2"	1-5	54.04	II	24	1/2"	270K	20.75	10.75	10	A-34	4000	5000	1311	1070	3091

Ø LENGTH AT Ø OF SSW RAILWAY



AASHTO TYPE IV BM.

**GENERAL NOTES:**

Designed in accordance with current A.R.E.A Specifications.

All concrete shall be Class H.

When shown on this sheet, the fabricator has the option of furnishing either the designed depressed strand beam or an approved optional beam design. Low relaxation strands may be used.

Prestressed losses for the designed beams have been calculated according to the A.R.E.A Specifications for a relative humidity of 65%. Optional designs shall likewise conform.

Certain beams with depressed strands are subject to cracking in the end of the beam. When such cracks occur, all subsequent beams of the same type and strand pattern shall have strands wrapped in the following manner:

1. Alternate rows of depressed strands shall be wrapped for 2 feet from each end of the beam.
2. One half of the straight strands, as nearly as possible, shall be wrapped for 4 feet from each end of the beam.
3. The wrapping pattern shall be symmetrical about the vertical axis of the beam for both depressed and straight strands.
4. Strands shall be wrapped so that the centers of gravity of the depressed strands and the straight strands will remain within 1 inch of their original location.
5. Strands shall be tightly wrapped with a waterproof adhesive tape or plastic tubing may be used provided both ends and the seam of the tube are sealed with a waterproof tape.
6. Revised shop drawings will not be required, but wrapping patterns, and the beams affected, shall appear on the as-built drawings.

For depressed strand designed beams, strands shall be located as low as possible on the 2" grid system shown herein, unless a non-standard strand pattern is indicated. Fill Row "2", then Row "4", then Row "6", etc., beginning each row in the "A" position and working outward until the required number of strands is reached. All strands in the "A" position shall be depressed, maintaining the 2" spacing so that the upper two strands are in the position shown in the table at the beam ends.

Initial pretension for 1/2" 270 K strands = 28.9 K for regular stress relieved strand or 31.0 K for low relaxation strands.

Horizontal distances are shown for SPAN LENGTH and BEAM LENGTH. They must be corrected for grade or cross slope, where appropriate.

NO.	REVISION	BY	DATE
<p align="center">TEXAS TURNPIKE AUTHORITY DALLAS NORTH TOLLWAY</p>			
<p align="center">SSW RAILWAY UNDERPASS PRESTRESSED CONCRETE BEAMS</p>			
Turner Collicott Braden Inc. <small>Consulting Engineers</small>			SECTION VI
DRAWN FRW	DATE 6-83	DESIGNED FRW	DATE 6-83
CHECKED FRW	DATE 7-83	SCALE NONE	
CONTRACT NO DNT-114 SHEET S-59 OF S-52			

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