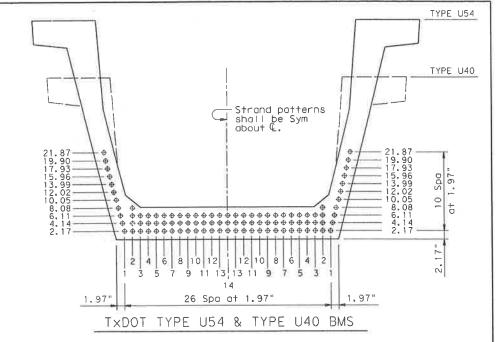
The use of this standard is governed by the "Texas Engineering Practice	Act". No warranty of any kind is made by TxD01 for any purpose whatsoever.	XDOT assumes no responsibility for the conversion of this standing to	other formats or for incorrect results or damages resulting from its use.	
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		DESIGNED BEAMS								AMS	(STRAIGHT STRANDS)											OPTIONAL DESIGN								
		PRESTRESSING STRANDS								DEBONDED STRAND PATTERN PER ROW CONCRETE											DESIGN	DESIGN LOAD	REQUIRED MINIMUM	LIVE						
	STRUCTURE	SPAN NO.	BEAM NO.	BEAM TYPE	STRAND PATTERN	TOTAL NO.	SIZE	STRGTH	"e" Ç	"e" END	TOT NO.	DIST FROM BOTTOM	NO. STR	OF ANDS	١	IUMBI		F ST				NDED	то	R	VIN1MUM RELEASE STRCTH	MINIMUM 28 DAY COMP STRGTH	COMP STRESS (TOP (1)	TENSILE STRESS (BOTT Q)	ULTIMATE MOMENT CAPACITY	DISTRIB FACTOR
				200	NO.	110.	(in)	fpu (ksi)	(in)	(in)	DE.B	(in)	TOTAL	DE- BONDEC	3	6	9	12	15						f'ci (ksi)	f'c (ksi)	(SERV I) fct(ksi)	(SERV [II) fcb(ksi)	(STRGTH I) (ft-kips)	0
ŀ	PONTE AVE	1	1& 7	U54		95	1/2	270	17.12	15.88	32	2.17	27	20	0	10		- 1	- 11	- 1		- 1		- 1	7.105	9.675	5.590	-4.589	10,334	0.999
	BRIDGE	(t	2-6	U54		87	1/2	270	18.00	16.95	38	4.14 2.17 4.14	27 27 27	12 20 18	0 14	6 4	0 B O	2	4	0 0	0	0	0	0 0	6.645	8,114	5.077	-4.304	10,268	0.392



GENERAL NOTES:

Designed in accordance with AASHTO LRFD Specifications. All concrete must be Class H. Use Class H (HPC) if required When shown on this sheet, the Fabricator has the option of furnishing either the designed beam or an approved optional beam design. All optional design submittals and shop drawings must be signed, sealed and dated by a registered Professional Engineer. Optional designs must have a calculated residual camber equal to or greater than that of the designed beam.

Prestress losses for the designed beams have been calculated for a relative humidity of 65 percent. Optional designs must likewise

conform,

Locate strands for the designed beam as low as possible on the 1.97" grid system. Fill row "2.17", then row "4.14", then row "6.11", etc., beginning each row in the "1" position and, distributing uniformly as practical, working inward until the required number of strands is reached. All strands, including those in the web, must be adequately tied to reinforcing steel, bar supports, or other devices to prevent displacement during concrete placement.

Do not debond strands in position "1". Distribute debonded strands

equally about the vertical centerline. Debonded lengths must decrease

equally about the vertical centerline. Debonded lengths must decrease working inward, with debonding staggered in each row.

Encase debonded strands in plastic tubing along entire debonded length, and seal ends of tubing with waterproof tape. Split plastic tubing may be used provided the seam of the tubing is sufficiently sealed with waterproof tape to prohibit grout infiltration. Wrapping of strands with tape to provide debonding is not permitted.

Full-length debonded strands are not permitted in strand positions 1 and 2. If placing concrete in two stages, double wrap all full-length debonded strands in row "2.17" and internal vibrator diameter cannot exceed 1 1/8" diameter for first stage, Full-length debonding must comply with Item 426.4.F.4.

Strands for the designed beam must be low relaxation strands

Strands for the designed beam must be low relaxation strands

pretensioned to 75 percent of fpu each.
The grid pattern for the strands is based on exact conversions from a metric grid spacing of 50mm.

1) Portion of full HL 93





PRESTRESSED CONCRETE U-BEAMS (DESIGN DATA)

		U	31	1D		
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