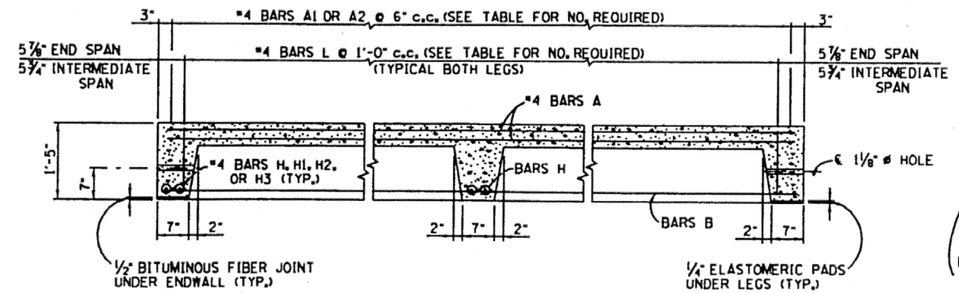
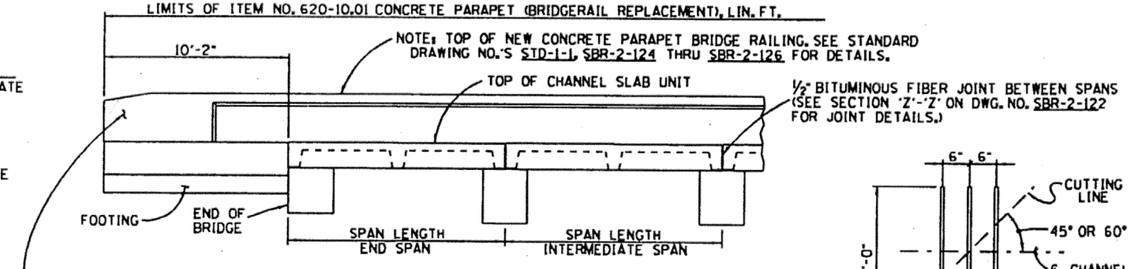


SECTION 'A'-'A'



NOTE: NEW 10'-2" CONCRETE PARAPET RAIL ENDPOST TO BE CAST AT THE END OF BRIDGE ON THE ROADWAY SHOULDER AREA. FOR DETAILS AND NOTES PERTAINING TO THE NEW 10'-2" ENDPOST SEE STANDARD DRAWING NO.'S SBR-2-124, SBR-2-125, AND SBR-2-126.

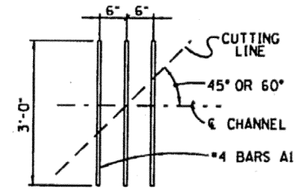
SIDE ELEVATION - 90° SKEW

NOTE: OTHER SKEWS SIMILAR.

PROJECT NO.	YEAR	SHEET NO.
	1992	

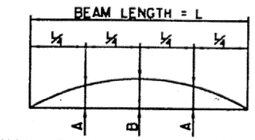
REVISIONS

	NO.	DATE	BY	BRIEF DESCRIPTION
B/R	1	2-24-95	TO	REMOVED SIGNATURES
B/R	2	1-4-96	TO	REVISED BR DRAWING NO. TO SBR DRAWING NO. AND REVISED STD-2-1 TO STD-1-1



DETAIL 'X'

SHOWING TRANSVERSE STEEL IN SKEWED ENDS OF CHANNEL SLAB.



NOTE: CHANNEL UNITS SHALL BE CAMBERED TO COMPENSATE FOR DEAD LOAD DEFLECTION. THIS CURVE IS FOR DEAD LOAD BEAM AND ALL DEAD LOADS APPLIED AFTER CHANNEL UNITS ARE IN PLACE. IN LIEU OF CAMBERING THE CHANNEL UNITS, THE CAMBER MAY BE PROVIDED BY VARYING THE DEPTH OF ASPHALT OR CONCRETE OVERLAY.

SPAN LENGTH	DIMENSION A	DIMENSION B
16	1/16"	⅛"
18	⅛"	⅛"
20	⅛"	¼"
22	3/16"	½"
24	3/16"	½"
26	½"	5/16"
28	5/16"	⅞"
30	⅞"	1¼"
32	1⅛"	1½"
34	1½"	2"

DEAD LOAD CORRECTION CURVE

BILL OF STEEL

LOADING HI5-44-90°, 75°, 60° AND 45° SKEW (SEE NOTE BELOW)

SPAN LENGTH (FT)	BAR #4A NO.	#4A LGTH.	#4A1 ① NO.	#4A1 ① LGTH.	#4A2 ② NO.	#4A2 ② LGTH.	B SIZE	B NO.	B LGTH.	#4F NO.	#4F LGTH.	#4H NO.	#4H LGTH.	#4H1 NO.	#4H1 LGTH.	#4H2 NO.	#4H2 LGTH.	#4H3 NO.	#4H3 LGTH.	#4L NO.	#4L LGTH.
16	10	15'-6"	62	3'-0"	62	3'-2"	8	4	15'-8"	8	3'-0"	SEE NOTE ③	4'-4"	SEE NOTE ③	4'-6"	SEE NOTE ③	4'-10"	SEE NOTE ③	5'-8"	32	3'-8"
18	10	17'-6"	70	3'-0"	70	3'-2"	8	4	17'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	36	3'-8"
20	10	19'-6"	78	3'-0"	78	3'-2"	9	4	19'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	40	3'-8"
22	10	21'-6"	86	3'-0"	86	3'-2"	9	4	21'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	44	3'-8"
24	10	23'-6"	94	3'-0"	94	3'-2"	10	4	23'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	48	3'-8"
26	10	25'-6"	102	3'-0"	102	3'-2"	10	4	25'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	52	3'-8"
28	10	27'-6"	110	3'-0"	110	3'-2"	9	8	27'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	56	3'-8"
30	10	29'-6"	118	3'-0"	118	3'-2"	11	8	29'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	60	3'-8"
32	10	31'-6"	126	3'-0"	126	3'-2"	11	8	31'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	64	3'-8"
34	10	33'-6"	134	3'-0"	134	3'-2"	11	8	33'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	68	3'-8"

NOTE: BARS LISTED IN BILL OF STEEL ARE FOR ALL SKEWS (90°, 75°, 60° & 45°) UNLESS NOTED OTHERWISE.
① BARS A1 ARE FOR 90°, 60° & 45° SKEWS.
② BARS A2 ARE FOR 75° SKEW ONLY.
③ 90° SKEW REQUIRES 6-#4 BARS H.
75° SKEW REQUIRES 2-#4 BARS H AND 4-#4 BARS H1.
60° SKEW REQUIRES 2-#4 BARS H AND 4-#4 BARS H2.
45° SKEW REQUIRES 2-#4 BARS H AND 4-#4 BARS H3.

ESTIMATED QUANTITIES

HI5-44 LOADING

SPAN LENGTH (FT) ITEM	90° CONCRETE CLASS 'A' C.Y.	90° REINFORCING STEEL LB.	75° CONCRETE CLASS 'A' C.Y.	75° REINFORCING STEEL LB.	60° CONCRETE CLASS 'A' C.Y.	60° REINFORCING STEEL LB.	45° CONCRETE CLASS 'A' C.Y.	45° REINFORCING STEEL LB.
16	1.8	629	1.8	630	1.8	630	1.9	642
18	2.0	703	2.0	704	2.0	705	2.1	719
20	2.2	849	2.2	849	2.3	850	2.3	853
22	2.4	929	2.4	929	2.5	930	2.5	937
24	2.6	1108	2.7	1109	2.7	1110	2.7	1106
26	2.9	1196	2.9	1196	2.9	1197	2.9	1196
28	3.1	1577	3.1	1577	3.1	1578	3.1	1564
30	3.3	2202	3.3	2202	3.3	2203	3.3	2127
32	3.5	2340	3.5	2340	3.5	2341	3.5	2269
34	3.7	2477	3.7	2478	3.7	2479	3.7	2410

NOTE: COST OF BITUMINOUS FIBERBOARD, JOINT SEALER, ELASTOMERIC BEARING PADS, LAG SCREWS, BOLTS AND WASHERS (FOR JOINING PRECAST CHANNELS) TO BE INCLUDED IN COST OF PRECAST UNIT.

STRENGTH OF CONCRETE

HI5-44 LOADING

SPAN LENGTH (FT) ITEM	MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS PSI
16	3000
18	3000
20	3000
22	3000
24	3000
26	3000
28	3000
30	3000
32	3500
34	4400

BILL OF STEEL

LOADING HS20-44-90°, 75°, 60° AND 45° SKEW (SEE NOTE BELOW)

SPAN LENGTH (FT)	BAR #4A NO.	#4A LGTH.	#4A1 ① NO.	#4A1 ① LGTH.	#4A2 ② NO.	#4A2 ② LGTH.	B SIZE	B NO.	B LGTH.	#4F NO.	#4F LGTH.	#4H NO.	#4H LGTH.	#4H1 NO.	#4H1 LGTH.	#4H2 NO.	#4H2 LGTH.	#4H3 NO.	#4H3 LGTH.	#4L NO.	#4L LGTH.
16	10	15'-6"	62	3'-0"	62	3'-2"	8	4	15'-8"	8	3'-0"	SEE NOTE ③	4'-4"	SEE NOTE ③	4'-6"	SEE NOTE ③	4'-10"	SEE NOTE ③	5'-8"	32	3'-8"
18	10	17'-6"	70	3'-0"	70	3'-2"	9	4	17'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	36	3'-8"
20	10	19'-6"	78	3'-0"	78	3'-2"	9	4	19'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	40	3'-8"
22	10	21'-6"	86	3'-0"	86	3'-2"	10	4	21'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	44	3'-8"
24	10	23'-6"	94	3'-0"	94	3'-2"	10	4	23'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	48	3'-8"
26	10	25'-6"	102	3'-0"	102	3'-2"	11	8	25'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	52	3'-8"
28	10	27'-6"	110	3'-0"	110	3'-2"	11	8	27'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	56	3'-8"
30	10	29'-6"	118	3'-0"	118	3'-2"	11	8	29'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	60	3'-8"
32	10	31'-6"	126	3'-0"	126	3'-2"	11	8	31'-8"	8	3'-0"		4'-4"		4'-6"		4'-10"		5'-8"	64	3'-8"

NOTE: BARS LISTED IN BILL OF STEEL ARE FOR ALL SKEWS (90°, 75°, 60° & 45°) UNLESS NOTED OTHERWISE.
① BARS A1 ARE FOR 90°, 60° & 45° SKEWS.
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③ 90° SKEW REQUIRES 6-#4 BARS H.
75° SKEW REQUIRES 2-#4 BARS H AND 4-#4 BARS H1.
60° SKEW REQUIRES 2-#4 BARS H AND 4-#4 BARS H2.
45° SKEW REQUIRES 2-#4 BARS H AND 4-#4 BARS H3.

ESTIMATED QUANTITIES

HS20-44 LOADING

SPAN LENGTH (FT) ITEM	90° CONCRETE CLASS 'A' C.Y.	90° REINFORCING STEEL LB.	75° CONCRETE CLASS 'A' C.Y.	75° REINFORCING STEEL LB.	60° CONCRETE CLASS 'A' C.Y.	60° REINFORCING STEEL LB.	45° CONCRETE CLASS 'A' C.Y.	45° REINFORCING STEEL LB.
16	1.8	629	1.8	630	1.8	630	1.9	642
18	2.0	769	2.0	769	2.0	770	2.1	719
20	2.2	849	2.2	849	2.3	850	2.3	853
22	2.4	1021	2.4	1022	2.5	1022	2.5	937
24	2.6	1108	2.7	1109	2.7	1110	2.7	1106
26	2.9	1926	2.9	1927	2.9	1928	2.9	1196
28	3.1	2064	3.1	2065	3.1	2065	3.1	1564
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32	3.5	2340	3.5	2340	3.5	2341	3.5	2269

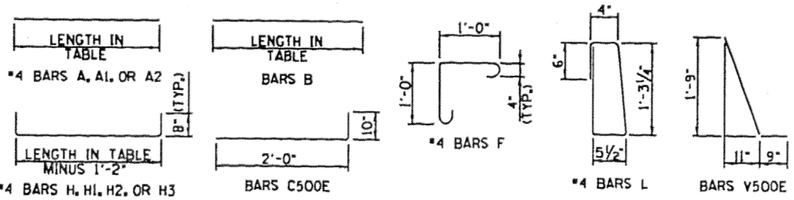
NOTE: COST OF BITUMINOUS FIBERBOARD, JOINT SEALER, ELASTOMERIC BEARING PADS, LAG SCREWS, BOLTS AND WASHERS (FOR JOINING PRECAST CHANNELS) TO BE INCLUDED IN COST OF PRECAST UNIT.

STRENGTH OF CONCRETE

HS20-44 LOADING

SPAN LENGTH (FT) ITEM	MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS PSI
16	3000
18	3000
20	3000
22	3000
24	3000
26	3000
28	3500
30	4200
32	4500

B/R MINOR REVISION - FHWA APPROVAL NOT REQUIRED



DESIGNED BY P.B.O. = W.M.M. DATE 11-91
DRAWN BY DONNA DOUGLAS DATE 11-91
SUPERVISED BY P.B.O. DATE 11-91
CHECKED BY McINTURFF DATE 2-92

'E' DENOTES: BAR TO BE EPOXY COATED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

DETAILS FOR PRECAST SLAB BRIDGE CHANNELS
SPANS 16'-0" THRU 34'-0"
SKEWS 90°-75°-60°-45°
1992

SBR-2-123

WITH DWG. NO. SBR-2-122