

DEAD LOAD DEFLECTION DIAGRAM

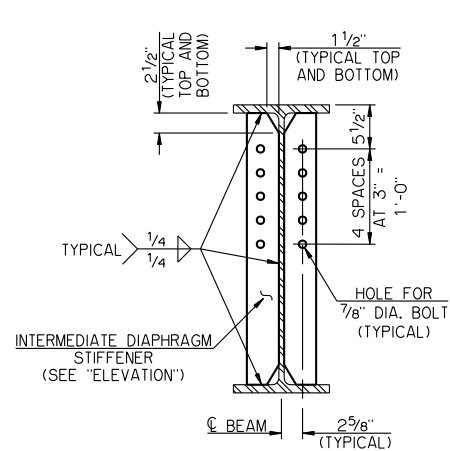
ELEVATION

BRIDGE SKEW 30° LEFT FORWARD IS SHOWN IN DRAWING.

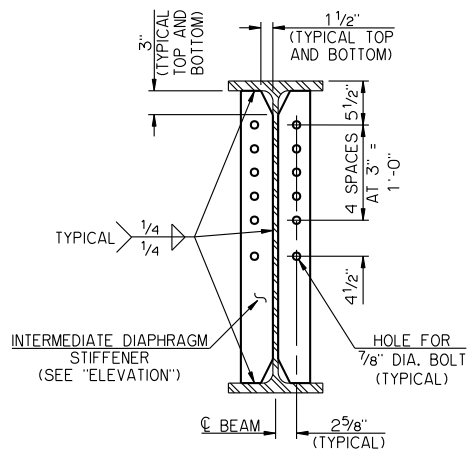
SPAN	BEAM	BEAM LENGTH	A	BRIDGE SKEW						N1	S1	L1	S2	N3	S3	L3	BEARING STIFFENER	LFD OPERATING RATING (1)	MAXIMUM (ADTT) ₂₄ ALLOWABLE (2)
				0°		30° LEFT FORWARD		30° RIGHT FORWARD											
				B	C	B	C	B	C										
55'	W33 X 118	54'-8"	17'-10"	17'-10"	17'-10"	14'-10 1/2"	20'-9 1/2"	20'-9 1/2"	14'-10 1/2"	22	6"	11'-0"	0"	54	7"	31'-6"	PL 1/2" X 4"	HS 30.2	506
60'	W36 X 135	59'-8"	19'-6"	19'-6"	19'-6"	16'-6 1/2"	22'-5 1/2"	22'-5 1/2"	16'-6 1/2"	36	6"	18'-0"	7"	32	8"	21'-4"	PL 1/2" X 4"	HS 32.2	549
65'	W36 X 150	64'-8"	21'-2"	21'-2"	21'-2"	18'-2 1/2"	24'-1 1/2"	24'-1 1/2"	18'-2 1/2"	39	6"	19'-6"	7"	35	8"	23'-4"	PL 1/2" X 4"	HS 31.8	502
70'	W36 X 160	69'-8"	22'-10"	22'-10"	22'-10"	19'-10 1/2"	25'-9 1/2"	25'-9 1/2"	19'-10 1/2"	30	6"	15'-0"	0"	66	7"	38'-6"	PL 1/2" X 4"	HS 28.2	416
75'	W40 X 183	74'-8"	24'-6"	24'-6"	24'-6"	21'-6 1/2"	27'-5 1/2"	27'-5 1/2"	21'-6 1/2"	45	6"	22'-6"	7"	41	8"	27'-4"	PL 1/2" X 4"	HS 33.2	534

SPAN	BEAM AND DIAPHRAGM DEFLECTION					
	CL BEARING	.1 AND .9	.2 AND .8	.3 AND .7	.4 AND .6	.5
55'	0.00"	0.05"	0.09"	0.12"	0.14"	0.15"
60'	0.00"	0.05"	0.10"	0.14"	0.17"	0.18"
65'	0.00"	0.07"	0.14"	0.19"	0.22"	0.23"
70'	0.00"	0.10"	0.18"	0.25"	0.29"	0.30"
75'	0.00"	0.10"	0.20"	0.27"	0.32"	0.33"

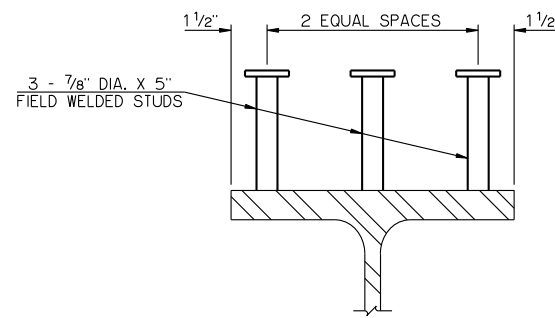
SPAN	STEEL SIP FORMS, DECK SLAB, HAUNCH, AND CONCRETE TRAFFIC RAIL (TR3) DEFLECTION (3)					
	CL BEARING	.1 AND .9	.2 AND .8	.3 AND .7	.4 AND .6	.5
55'	0.00"	0.36"	0.68"	0.94"	1.10"	1.15"
60'	0.00"	0.39"	0.74"	1.02"	1.19"	1.25"
65'	0.00"	0.47"	0.90"	1.23"	1.43"	1.51"
70'	0.00"	0.59"	1.13"	1.54"	1.80"	1.89"
75'	0.00"	0.58"	1.10"	1.51"	1.77"	1.85"



W33 AND W36 BEAMS



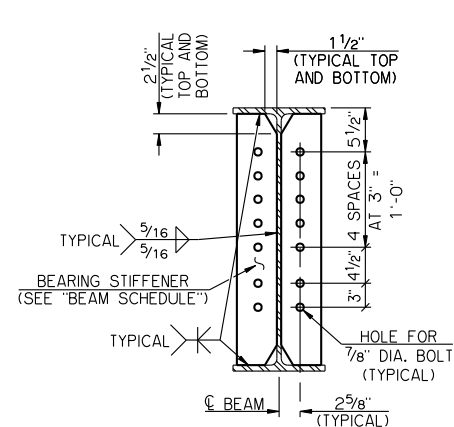
W40 BEAM



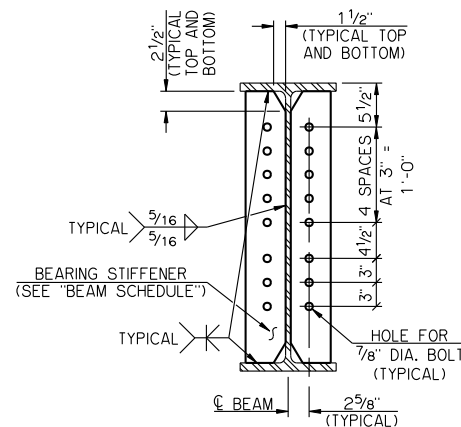
SHEAR CONNECTOR DETAIL

INTERMEDIATE DIAPHRAGM STIFFENER DETAILS

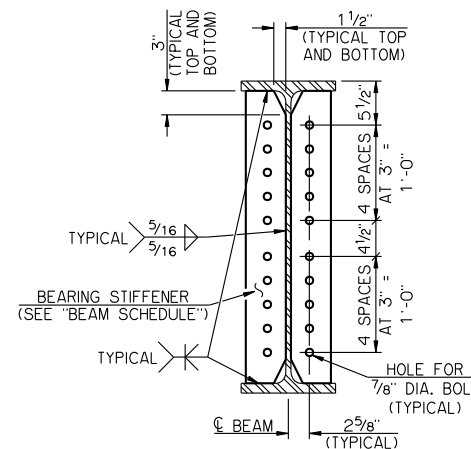
DETAILS SHOWN AT INTERIOR BEAM. OMIT INTERMEDIATE DIAPHRAGM STIFFENERS AT OUTSIDE FACE OF EXTERIOR BEAMS.



W33 BEAM



W36 BEAM



W40 BEAM

BEARING STIFFENER DETAILS

DETAILS SHOWN AT INTERIOR BEAM. OMIT BOLT HOLES ONLY IN BEARING STIFFENERS AT OUTSIDE FACE OF EXTERIOR BEAMS.

NOTES

STRUCTURAL STEEL FOR ROLLED BEAMS AND ALL STIFFENER PLATES SHALL CONFORM TO AASHTO M 270 (ASTM A 709), GRADE 50W, WEATHERING STEEL. ADDITIONALLY, THE STRUCTURAL STEEL SHALL SATISFY THE CHARPY V-NOTCH IMPACT TEST REQUIREMENTS OF AASHTO M 270 FOR ZONE 2 (NON-FRACTURE CRITICAL). SHEAR CONNECTORS SHALL CONFORM TO AASHTO M 169 (ASTM A 108), COLD DRAWN BARS, GRADES 1015, 1018 OR 1020, SEMI-KILLED OR FULLY KILLED DEOXIDATION

BEAMS SHALL BE CAMBERED TO ACCOUNT FOR VERTICAL CURVE, IF NECESSARY. IF CAMBERING IS NOT REQUIRED, PLACE NATURAL CAMBER UP.

CONTRACTOR MAY ELECT TO FABRICATE PLATE GIRDERS USING EQUIVALENT PLATE SIZES IN LIEU OF ROLLED BEAM SHAPE SHOWN. WEB TO FLANGE WELDS SHALL BE MINIMUM 5/16\"/>

TERMINATE FILLET WELDS 3/8\"/>

FOR ADDITIONAL DETAILS, SEE "DIAPHRAGM DETAILS."

- THE LFD OPERATING RATING SHOWN IN THE TABLE IS FOR THE ROLLED BEAMS ONLY AND APPLIES ONLY TO THE ROLLED BEAMS OF A BRIDGE CONSTRUCTED IN STRICT CONFORMANCE TO ALL RELEVANT DETAILS CONTAINED IN THE COMPLETE SET OF COUNTY BRIDGE STANDARDS AND TO THE ODOT STANDARD SPECIFICATIONS.
- THIS STANDARD SHALL NOT BE USED IF THE (ADTT)₂₄ EXCEEDS THE VALUE SHOWN IN THE TABLE. THE (ADTT)₂₄ IS THE NUMBER OF TRUCKS PER DAY TRAVELING THE BRIDGE IN ONE DIRECTION AVERAGED OVER A 75-YEAR DESIGN LIFE. A TRUCK IS DEFINED AS ANY VEHICLE HAVING MORE THAN EITHER TWO AXLES OR FOUR WHEELS.
- THE DEAD LOAD DEFLECTIONS SHOWN AT THE TENTH POINTS ARE THE THEORETICAL BEAM DEFLECTIONS DUE TO A 5 PSF STEEL SIP FORMS ALLOWANCE, DECK SLAB, HAUNCH AND CONCRETE TRAFFIC RAIL (TR3). THE DEAD LOAD DEFLECTIONS SHALL BE ACCOUNTED FOR IN THE HAUNCH DEPTH CALCULATIONS.

APPROVED BY BRIDGE ENGINEER *Robert J. Duch* DATE 9-9-2011
 OKLAHOMA DEPARTMENT OF TRANSPORTATION
 COUNTY BRIDGE STANDARD (ENGLISH)
ROLLED BEAM DETAILS
55' THRU 75' SPANS
 26' CLEAR ROADWAY - CONVENTIONAL - SKEWED 0° AND 30°
 2009 SPECIFICATIONS CB26-C-SKO..30-RB-5575 Q1E
 CB-324E