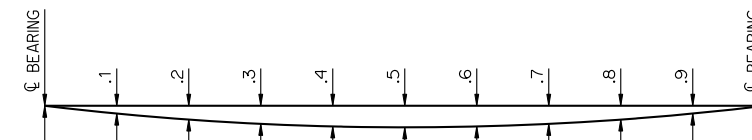


ELEVATION
BRIDGE SKEW 30° LEFT FORWARD IS SHOWN IN DRAWING.

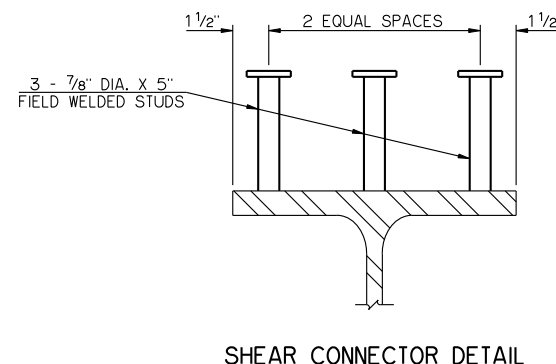
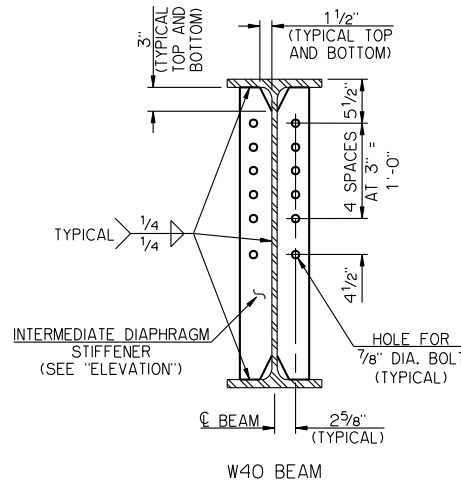
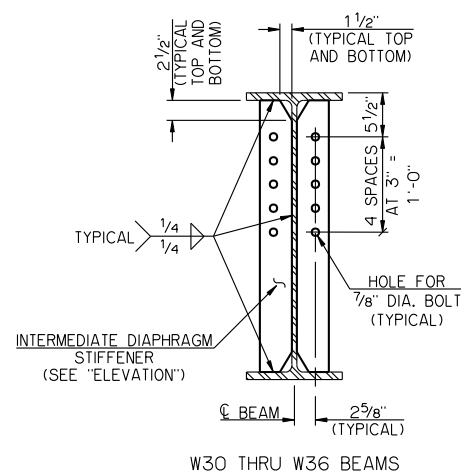


DEAD LOAD DEFLECTION DIAGRAM

SPAN	BEAM	BEAM LENGTH	A	BRIDGE SKEW								BEARING STIFFENER	LFD OPERATING RATING ①	MAXIMUM (ADTT) ₂₄ ALLOWABLE ②					
				0°		30° LEFT FORWARD		30° RIGHT FORWARD		N1	S1				L1	S2	N3	S3	L3
				B	C	B	C	B	C										
55'	W30 X 116	54'-8"	17'-10"	17'-10"	17'-10"	15'-2 1/4"	20'-5 3/4"	20'-5 3/4"	15'-2 1/4"	33	6"	16'-6"	7"	29	8"	19'-4"	W 3/4" X 4 1/2"	HS 31.6	539
60'	W33 X 130	59'-8"	19'-6"	19'-6"	19'-6"	16'-10 1/4"	22'-1 3/4"	22'-1 3/4"	16'-10 1/4"	36	6"	18'-0"	7"	32	8"	21'-4"	W 3/4" X 5"	HS 34.0	579
65'	W36 X 135	64'-8"	21'-2"	21'-2"	21'-2"	18'-6 1/4"	23'-9 3/4"	23'-9 3/4"	18'-6 1/4"	25	6"	12'-6"	7"	56	8"	37'-4"	W 3/4" X 5"	HS 31.0	476
70'	W36 X 150	69'-8"	22'-10"	22'-10"	22'-10"	20'-2 1/4"	25'-5 3/4"	25'-5 3/4"	20'-2 1/4"	28	6"	14'-0"	7"	59	8"	39'-4"	W 3/4" X 5"	HS 30.8	460
75'	W40 X 167	74'-8"	24'-6"	24'-6"	24'-6"	21'-10 1/4"	27'-1 3/4"	27'-1 3/4"	21'-10 1/4"	39	7"	22'-9"	6"	36	9"	27'-0"	W 3/4" X 5"	HS 33.6	527

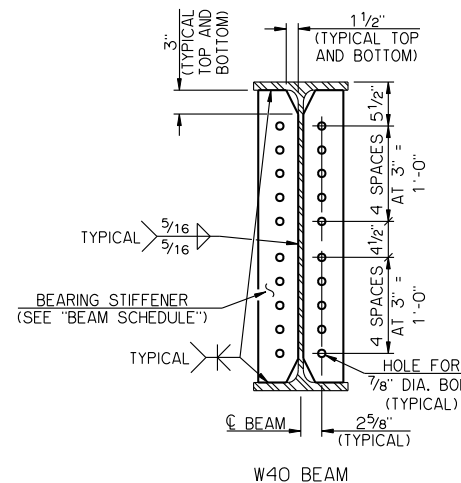
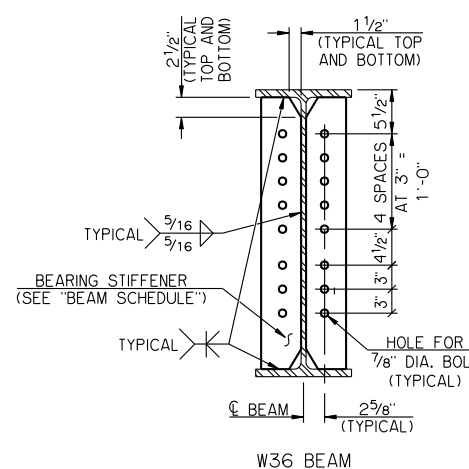
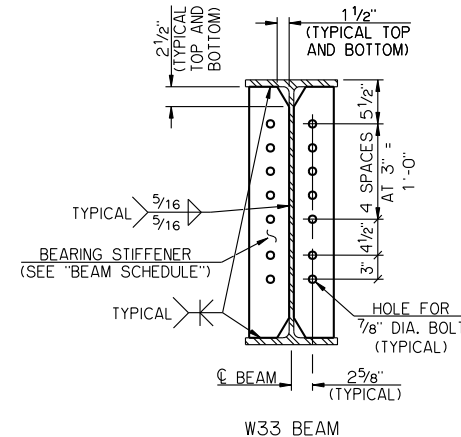
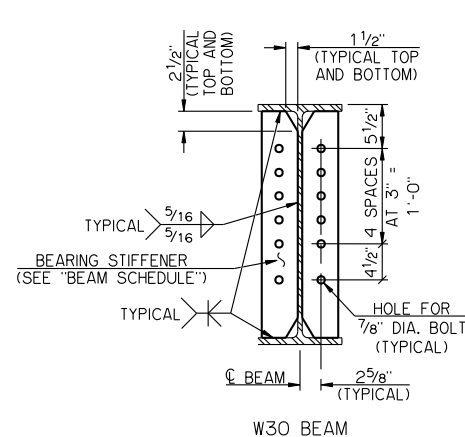
SPAN	BEAM AND DIAPHRAGM DEFLECTION					
	CL BEARING	.1 AND .9	.2 AND .8	.3 AND .7	.4 AND .6	.5
55'	0.00"	0.05"	0.10"	0.14"	0.16"	0.17"
60'	0.00"	0.06"	0.12"	0.16"	0.19"	0.20"
65'	0.00"	0.08"	0.14"	0.20"	0.23"	0.24"
70'	0.00"	0.10"	0.18"	0.25"	0.29"	0.31"
75'	0.00"	0.11"	0.21"	0.28"	0.33"	0.35"

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"	0.39"	0.74"	1.01"	1.18"	1.24"
60'	0.00"	0.41"	0.78"	1.07"	1.25"	1.31"
65'	0.00"	0.49"	0.93"	1.27"	1.49"	1.57"
70'	0.00"	0.58"	1.09"	1.50"	1.75"	1.84"
75'	0.00"	0.60"	1.13"	1.55"	1.82"	1.91"



INTERMEDIATE DIAPHRAGM STIFFENER DETAILS

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



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" FILLET WELDS. NON-DESTRUCTIVE TESTING WILL BE REQUIRED AS APPROPRIATE. COSTS TO CONSTRUCT PLATE GIRDERS SHALL BE AT THE CONTRACTOR'S EXPENSE.

TERMINATE FILLET WELDS 3/8" FROM THE EDGES OF CLIPPED CORNERS AND NON-CLIPPED CORNERS OF STIFFENER PLATES.

FOR ADDITIONAL DETAILS, SEE "DIAPHRAGM DETAILS."

- ① 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.
- ② 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.
- ③ 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. Dusch* DATE 9-9-2011
OKLAHOMA DEPARTMENT OF TRANSPORTATION
COUNTY BRIDGE STANDARD (ENGLISH)
ROLLED BEAM DETAILS
55' THRU 75' SPANS
32' CLEAR ROADWAY - CONVENTIONAL - SKEWED 0° AND 30°
2009 SPECIFICATIONS CB32-C-SKO.30-RB-5575 01E
CB-704E