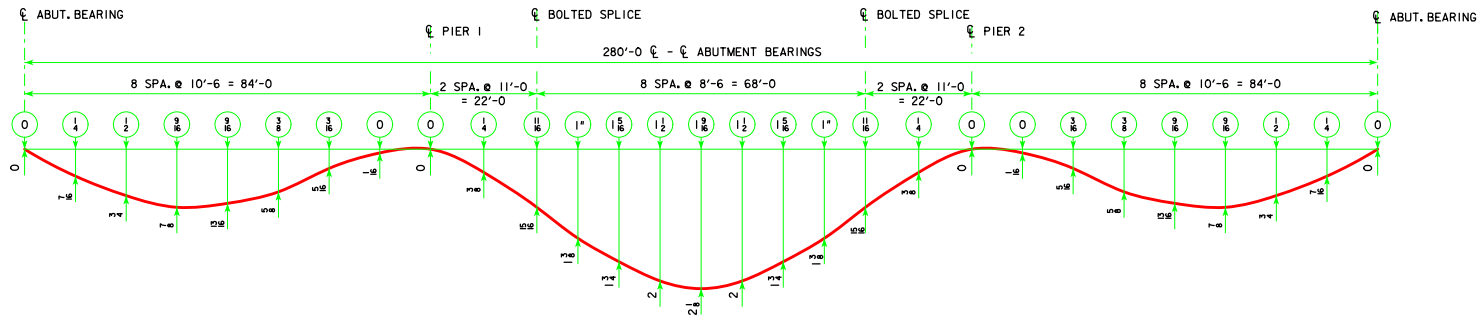

DEAD LOAD DEFLECTION DIAGRAM

NOTES:

1. ENCIRCLED NUMBERS INDICATE ANTICIPATED DEFLECTION DUE TO CONCRETE ONLY.
2. DEFLECTIONS ARE IN INCHES.

MOMENT AND REACTION TABLE

MOMENT - foot-kips | REACTION - kips

LOAD NAME		LOAD - k/ft		POSITIVE MOMENT				NEGATIVE MOMENT		REACTION			
				0.4 PT. END SPAN		0.5 PT. CENTER SPAN		PIER	PIER	ABUTMENT	ABUTMENT	PIER	PIER
		INTERIOR	EXTERIOR	INTERIOR	EXTERIOR	INTERIOR	EXTERIOR	INTERIOR	EXTERIOR	INTERIOR	EXTERIOR	INTERIOR	EXTERIOR
DC1		0.74*	0.72*	456	429	523	489	998	935	31	30	109	103
DC2		0.14	0.14	70	69	96	95	127	127	4	4	15	15
DW		0.15	0.15	73	72	100	99	132	133	5	5	16	16
LIVE LOAD +IMPACT HL-93	DISTRIBUTION FACTOR	MOMENT	MOMENT	1159	1288	1273	1538	962	1122	-	-	-	-
		0.612	0.681										
		REACTION	REACTION	-	-	-	-	-	-	84	74	146	129
		0.772	0.681										
TOTAL				-	-	-	-	2219	2317	124	113	286	263

* LOAD VALUES DO NOT INCLUDE GIRDER WEIGHT.
MOMENT AND REACTION VALUES DO INCLUDE GIRDER WEIGHT.
MOMENTS AND REACTIONS SHOWN ARE UNFACTORED.

04-2014
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

ROLLED STEEL BEAM BRIDGES

JUNE, 2010

BEAM DEFLECTIONS
280'-0 BRIDGE

RS40-067-10

REVISED 04-2014 - MOVED THE REACTION LIVE LOAD IMPACT COLUMN NUMBERS IN THE MOMENT ROW TO THE REACTION ROW.