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MDX Girder System Analysis, Version 6.2.137
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 May 17, 2006 -  2:48 pm
 Files: Bonner.GSA
        GSA.OUT


    Contents of data file-

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       ID: BONNER BRIDGE CHANNEL SPANS
       CONDITIONS
         ENGLISH INPUT
         ENGLISH OUTPUT
         FLOAT LANES
         HS20 LOADING
         LFD METHOD
         RATE MODE
         RATING PROJECT
         SELF WEIGHT FOR DEAD LOAD 1
       DATA
         ADN-2 6.6667 13.3333 26.6667 33.3333 46.6667 53.3333 66.6667 73.3333
         86.6667 93.3333 106.6667 113.3333 126.6667 133.3333 146.6667 153.3333
         166.6667 173.3333 186.6667 193.3333 206.6667 213.3333 226.6667
         233.3333 246.6667 253.3333 266.6667 273.3333 286.6667 293.3333
         306.6667 313.3333 326.6667 333.3333 346.6667 353.3333 366.6667
         373.3333 386.6667 393.3333 406.6667 413.3333 426.6667 433.3333
         446.6667 453.3333 466.6667 473.3333 486.6667 493.3333
         ADN-3 6.6667 13.3333 26.6667 33.3333 46.6667 53.3333 66.6667 73.3333
         86.6667 93.3333 106.6667 113.3333 126.6667 133.3333 146.6667 153.3333
         166.6667 173.3333 186.6667 193.3333 206.6667 213.3333 226.6667
         233.3333 246.6667 253.3333 266.6667 273.3333 286.6667 293.3333
         306.6667 313.3333 326.6667 333.3333 346.6667 353.3333 366.6667
         373.3333 386.6667 393.3333 406.6667 413.3333 426.6667 433.3333
         446.6667 453.3333 466.6667 473.3333 486.6667 493.3333
         BR-1 20. 20. 20. 20. 20. 20. 20. 40. 20. 20. 20. 20. 20. 20. 20. 40.
         20. 20. 20. 20. 20. 20.
         CURB -2.
         FPC 3.
         GDSPC 8. 8. 8.
         LANES 12. 12.
         ROADWP 28.
         SKEW-1 90. 90. 90. 90.
         SLABEXT 4.625 4.625
         SLABT 7.25
         SLABWEAR 0.
         SPN-1 160. 180. 160.
         WAC-1 0.
         WAC-2 0.
         WAC-3 0.
         WAC-4 0.
         WAS-1 0.
```



```
         WAS-2 0.
         WAS-3 0.
         WAS-4 0.
         WCONC 150.
         WS-1 0.105
         WS-2 0.105
         WS-3 0.105
         WS-4 0.105
       ************************************************


Girder System Case Data - BONNER BRIDGE CHANNEL SPANS

Geometry

   Girder 1 Spans             160.000 ft    180.000 ft    160.000 ft

   Support angles for gdr  1  90.000 deg   90.000 deg   90.000 deg   90.000 deg


   Girder spacing               8.00 ft      8.00 ft      8.00 ft

   Slab extension from center of girder  1   4.62 ft

   Slab extension from center of girder  4   4.62 ft

   Intermediate brace spacing

     Girder -  1
          20.00 ft    20.00 ft    20.00 ft    20.00 ft    20.00 ft
          20.00 ft    20.00 ft    40.00 ft    20.00 ft    20.00 ft
          20.00 ft    20.00 ft    20.00 ft    20.00 ft    20.00 ft
          40.00 ft    20.00 ft    20.00 ft    20.00 ft    20.00 ft
          20.00 ft    20.00 ft

   No curvature

Lane Geometry


   Curb from girder 1
          -2.00 ft    -2.00 ft    -2.00 ft    -2.00 ft    -2.00 ft
          -2.00 ft    -2.00 ft    -2.00 ft    -2.00 ft    -2.00 ft
          -2.00 ft    -2.00 ft    -2.00 ft    -2.00 ft    -2.00 ft
          -2.00 ft    -2.00 ft    -2.00 ft    -2.00 ft    -2.00 ft
          -2.00 ft    -2.00 ft    -2.00 ft    -2.00 ft    -2.00 ft
          -2.00 ft    -2.00 ft    -2.00 ft    -2.00 ft    -2.00 ft
          -2.00 ft

   Lane spacing       12.00 ft    12.00 ft


   Float Range for Lanes - ft

        Tenth      Far Lane    Given          Range     Adjusted    Far Gdr
        Point      Boundary    Road Width               Road Width  From Curb
                   From Curb   From Curb

         All         24.00       28.00        4.00       28.00       26.00

Loading
```

Superimposed dead load

Girder - 1

0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft				

Girder - 2

0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft				

Girder - 3

0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft				

Girder - 4

0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft	0.10 k/ft
0.10 k/ft				

HS20 Loading

Influence surface values not displayed

Multiple Presence Factors

1.00	1.00	0.90	0.75

Units

Input Units - U.S. cust.
Output Units - U.S. cust.

Girder 1 Member Properties Used in Reanalysis

Tenth PT	Noncomp			Composite DL2			Composite LL		
	Ix (in4)	J (in4)	Iy (in4)	Ix (in4)	J (in4)	Iy (in4)	Ix (in4)	J (in4)	Iy (in4)
		(in4)			(in2)	(in)		(in4)	(in4)
0	51278.	8.	730.	82525.	1412.	15465.	112217.	1412.	44935
1	94842.	54.	1580.	132567.	1435.	16315.	170481.	1435.	45785

2	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
3	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
4	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
5	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
6	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
7	51278.	8.	730.	85325.	1412.	15465.	113450.	1412.	44935
8	75920.	26.	1216.	112334.	1421.	15951.	146463.	1421.	45421
9	171156.	83.	1823.	227851.	1449.	16558.	289059.	1449.	46028
10	254340.	100.	1945.	330588.	1458.	16680.	416230.	1458.	46150
11	154289.	83.	1823.	206238.	1449.	16558.	261896.	1449.	46028
12	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
13	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
14	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
15	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
16	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
17	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
18	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
19	154289.	83.	1823.	206238.	1449.	16558.	261896.	1449.	46028
20	254340.	100.	1945.	330588.	1458.	16680.	416230.	1458.	46150
21	171156.	83.	1823.	227851.	1449.	16558.	289059.	1449.	46028
22	75920.	26.	1216.	112334.	1421.	15951.	146463.	1421.	45421
23	51278.	8.	730.	85325.	1412.	15465.	113450.	1412.	44935
24	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
25	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
26	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
27	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
28	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
29	94842.	54.	1580.	132567.	1435.	16315.	170481.	1435.	45785
30	51278.	8.	730.	82525.	1412.	15465.	112217.	1412.	44935

Bracing off of Girder 1

I (in4)	J (in4)
2637.	0.8
951.	0.7
2637.	0.8
951.	0.7
2637.	0.8
951.	0.7
2637.	0.8
951.	0.7
5521.	0.8
951.	0.7
951.	0.7
2637.	0.8
951.	0.7
951.	0.7
2637.	0.8
951.	0.7
951.	0.7
5521.	0.8
951.	0.7
2637.	0.8
951.	0.7
2637.	0.8
951.	0.7
2637.	0.8
951.	0.7
2637.	0.8

OUTPUT.TXT

Girder 2 Member Properties Used in Reanalysis

Tenth PT	Noncomp			Composite DL2			Composite LL		
	Ix (in4)	J (in4)	Iy (in4)	Ix (in4)	J (in4)	Iy (in4)	Ix (in4)	J (in4)	Iy (in4)
		(in4)			(in2)	(in)		(in4)	(in4)
0	51278.	8.	730.	82525.	1412.	15465.	112217.	1412.	44935
1	94842.	54.	1580.	132567.	1435.	16315.	170481.	1435.	45785
2	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
3	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
4	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
5	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
6	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
7	51278.	8.	730.	85325.	1412.	15465.	113450.	1412.	44935
8	75920.	26.	1216.	112334.	1421.	15951.	146463.	1421.	45421
9	171156.	83.	1823.	227851.	1449.	16558.	289059.	1449.	46028
10	254340.	100.	1945.	330588.	1458.	16680.	416230.	1458.	46150
11	154289.	83.	1823.	206238.	1449.	16558.	261896.	1449.	46028
12	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
13	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
14	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
15	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
16	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
17	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
18	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
19	154289.	83.	1823.	206238.	1449.	16558.	261896.	1449.	46028
20	254340.	100.	1945.	330588.	1458.	16680.	416230.	1458.	46150
21	171156.	83.	1823.	227851.	1449.	16558.	289059.	1449.	46028
22	75920.	26.	1216.	112334.	1421.	15951.	146463.	1421.	45421
23	51278.	8.	730.	85325.	1412.	15465.	113450.	1412.	44935
24	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
25	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
26	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
27	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
28	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
29	94842.	54.	1580.	132567.	1435.	16315.	170481.	1435.	45785
30	51278.	8.	730.	82525.	1412.	15465.	112217.	1412.	44935

Bracing off of Girder 2

I (in4)	J (in4)
2637.	0.8
951.	0.7
2637.	0.8
951.	0.7
2637.	0.8
951.	0.7
2637.	0.8
951.	0.7
5521.	0.8
951.	0.7
951.	0.7
2637.	0.8
951.	0.7
951.	0.7
2637.	0.8

951.	0.7
951.	0.7
5521.	0.8
951.	0.7
2637.	0.8
951.	0.7
2637.	0.8
951.	0.7
2637.	0.8
951.	0.7
2637.	0.8

Girder 3 Member Properties Used in Reanalysis

Tenth PT	Noncomp			Composite DL2			Composite LL		
	Ix (in4)	J (in4)	Iy (in4)	Ix (in4)	J (in4)	Iy (in4)	Ix (in4)	J (in4)	Iy (in4)
		(in4)			(in2)	(in)		(in4)	(in4)
0	51278.	8.	730.	82525.	1412.	15465.	112217.	1412.	44935
1	94842.	54.	1580.	132567.	1435.	16315.	170481.	1435.	45785
2	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
3	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
4	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
5	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
6	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
7	51278.	8.	730.	85325.	1412.	15465.	113450.	1412.	44935
8	75920.	26.	1216.	112334.	1421.	15951.	146463.	1421.	45421
9	171156.	83.	1823.	227851.	1449.	16558.	289059.	1449.	46028
10	254340.	100.	1945.	330588.	1458.	16680.	416230.	1458.	46150
11	154289.	83.	1823.	206238.	1449.	16558.	261896.	1449.	46028
12	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
13	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
14	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
15	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
16	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
17	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
18	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
19	154289.	83.	1823.	206238.	1449.	16558.	261896.	1449.	46028
20	254340.	100.	1945.	330588.	1458.	16680.	416230.	1458.	46150
21	171156.	83.	1823.	227851.	1449.	16558.	289059.	1449.	46028
22	75920.	26.	1216.	112334.	1421.	15951.	146463.	1421.	45421
23	51278.	8.	730.	85325.	1412.	15465.	113450.	1412.	44935
24	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
25	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
26	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
27	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
28	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
29	94842.	54.	1580.	132567.	1435.	16315.	170481.	1435.	45785
30	51278.	8.	730.	82525.	1412.	15465.	112217.	1412.	44935

Bracing off of Girder 3

I (in4)	J (in4)
2637.	0.8
951.	0.7
2637.	0.8

951.		0.7
2637.		0.8
951.		0.7
2637.		0.8
951.		0.7
5521.		0.8
951.		0.7
951.		0.7
2637.		0.8
951.		0.7
951.		0.7
2637.		0.8
951.		0.7
951.		0.7
5521.		0.8
951.		0.7
2637.		0.8
951.		0.7
2637.		0.8
951.		0.7
2637.		0.8

Girder 4 Member Properties Used in Reanalysis

Tenth PT	Noncomp			Composite DL2			Composite LL		
	Ix (in4)	J (in4)	Iy (in4)	Ix (in4)	J (in4)	Iy (in4)	Ix (in4)	J (in4)	Iy (in4)
		(in4)			(in2)	(in)		(in4)	(in4)
0	51278.	8.	730.	82525.	1412.	15465.	112217.	1412.	44935
1	94842.	54.	1580.	132567.	1435.	16315.	170481.	1435.	45785
2	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
3	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
4	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
5	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
6	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
7	51278.	8.	730.	85325.	1412.	15465.	113450.	1412.	44935
8	75920.	26.	1216.	112334.	1421.	15951.	146463.	1421.	45421
9	171156.	83.	1823.	227851.	1449.	16558.	289059.	1449.	46028
10	254340.	100.	1945.	330588.	1458.	16680.	416230.	1458.	46150
11	154289.	83.	1823.	206238.	1449.	16558.	261896.	1449.	46028
12	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
13	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
14	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
15	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
16	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
17	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
18	63516.	15.	973.	98855.	1415.	15708.	130133.	1415.	45178
19	154289.	83.	1823.	206238.	1449.	16558.	261896.	1449.	46028
20	254340.	100.	1945.	330588.	1458.	16680.	416230.	1458.	46150
21	171156.	83.	1823.	227851.	1449.	16558.	289059.	1449.	46028
22	75920.	26.	1216.	112334.	1421.	15951.	146463.	1421.	45421
23	51278.	8.	730.	85325.	1412.	15465.	113450.	1412.	44935
24	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
25	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
26	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
27	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150
28	114144.	99.	1945.	152917.	1457.	16680.	194119.	1457.	46150

29	94842.	54.	1580.	132567.	1435.	16315.	170481.	1435.	45785
30	51278.	8.	730.	82525.	1412.	15465.	112217.	1412.	44935

Girder 1 Noncomposite Self Weight

Steel cross section, haunch, and slab

1.04 k/ft	1.13 k/ft	1.17 k/ft	1.17 k/ft	1.17 k/ft
1.17 k/ft	1.17 k/ft	1.04 k/ft	1.09 k/ft	1.19 k/ft
1.23 k/ft	1.18 k/ft	1.07 k/ft	1.07 k/ft	1.07 k/ft
1.07 k/ft	1.07 k/ft	1.07 k/ft	1.07 k/ft	1.18 k/ft
1.23 k/ft	1.19 k/ft	1.09 k/ft	1.04 k/ft	1.17 k/ft
1.17 k/ft	1.17 k/ft	1.17 k/ft	1.17 k/ft	1.13 k/ft
1.04 k/ft				

Total

1.04 k/ft	1.13 k/ft	1.17 k/ft	1.17 k/ft	1.17 k/ft
1.17 k/ft	1.17 k/ft	1.04 k/ft	1.09 k/ft	1.19 k/ft
1.23 k/ft	1.18 k/ft	1.07 k/ft	1.07 k/ft	1.07 k/ft
1.07 k/ft	1.07 k/ft	1.07 k/ft	1.07 k/ft	1.18 k/ft
1.23 k/ft	1.19 k/ft	1.09 k/ft	1.04 k/ft	1.17 k/ft
1.17 k/ft	1.17 k/ft	1.17 k/ft	1.17 k/ft	1.13 k/ft
1.04 k/ft				

Bracing off of Girder 1

0.43 K	0.24 K	0.43 K	0.24 K	0.43 K
0.24 K	0.43 K	0.24 K	0.47 K	0.24 K
0.24 K	0.43 K	0.24 K	0.24 K	0.43 K
0.24 K	0.24 K	0.47 K	0.24 K	0.43 K
0.24 K	0.43 K	0.24 K	0.43 K	0.24 K
0.43 K				

Half applied to each connected node.

Girder 2 Noncomposite Self Weight

Steel cross section, haunch, and slab

0.98 k/ft	1.07 k/ft	1.11 k/ft	1.11 k/ft	1.11 k/ft
1.11 k/ft	1.11 k/ft	0.98 k/ft	1.04 k/ft	1.13 k/ft
1.17 k/ft	1.12 k/ft	1.01 k/ft	1.01 k/ft	1.01 k/ft
1.01 k/ft	1.01 k/ft	1.01 k/ft	1.01 k/ft	1.12 k/ft
1.17 k/ft	1.13 k/ft	1.04 k/ft	0.98 k/ft	1.11 k/ft
1.11 k/ft	1.11 k/ft	1.11 k/ft	1.11 k/ft	1.07 k/ft
0.98 k/ft				

Total

0.98 k/ft	1.07 k/ft	1.11 k/ft	1.11 k/ft	1.11 k/ft
1.11 k/ft	1.11 k/ft	0.98 k/ft	1.04 k/ft	1.13 k/ft
1.17 k/ft	1.12 k/ft	1.01 k/ft	1.01 k/ft	1.01 k/ft
1.01 k/ft	1.01 k/ft	1.01 k/ft	1.01 k/ft	1.12 k/ft
1.17 k/ft	1.13 k/ft	1.04 k/ft	0.98 k/ft	1.11 k/ft
1.11 k/ft	1.11 k/ft	1.11 k/ft	1.11 k/ft	1.07 k/ft
0.98 k/ft				

Bracing off of Girder 2

0.43 K	0.24 K	0.43 K	0.24 K	0.43 K
0.24 K	0.43 K	0.24 K	0.47 K	0.24 K
0.24 K	0.43 K	0.24 K	0.24 K	0.43 K
0.24 K	0.24 K	0.47 K	0.24 K	0.43 K
0.24 K	0.43 K	0.24 K	0.43 K	0.24 K

0.43 K

Half applied to each connected node.

Girder 3 Noncomposite Self Weight

Steel cross section, haunch, and slab

0.98 k/ft	1.07 k/ft	1.11 k/ft	1.11 k/ft	1.11 k/ft
1.11 k/ft	1.11 k/ft	0.98 k/ft	1.04 k/ft	1.13 k/ft
1.17 k/ft	1.12 k/ft	1.01 k/ft	1.01 k/ft	1.01 k/ft
1.01 k/ft	1.01 k/ft	1.01 k/ft	1.01 k/ft	1.12 k/ft
1.17 k/ft	1.13 k/ft	1.04 k/ft	0.98 k/ft	1.11 k/ft
1.11 k/ft	1.11 k/ft	1.11 k/ft	1.11 k/ft	1.07 k/ft
0.98 k/ft				

Total

0.98 k/ft	1.07 k/ft	1.11 k/ft	1.11 k/ft	1.11 k/ft
1.11 k/ft	1.11 k/ft	0.98 k/ft	1.04 k/ft	1.13 k/ft
1.17 k/ft	1.12 k/ft	1.01 k/ft	1.01 k/ft	1.01 k/ft
1.01 k/ft	1.01 k/ft	1.01 k/ft	1.01 k/ft	1.12 k/ft
1.17 k/ft	1.13 k/ft	1.04 k/ft	0.98 k/ft	1.11 k/ft
1.11 k/ft	1.11 k/ft	1.11 k/ft	1.11 k/ft	1.07 k/ft
0.98 k/ft				

Bracing off of Girder 3

0.43 K	0.24 K	0.43 K	0.24 K	0.43 K
0.24 K	0.43 K	0.24 K	0.47 K	0.24 K
0.24 K	0.43 K	0.24 K	0.24 K	0.43 K
0.24 K	0.24 K	0.47 K	0.24 K	0.43 K
0.24 K	0.43 K	0.24 K	0.43 K	0.24 K
0.43 K				

Half applied to each connected node.

Girder 4 Noncomposite Self Weight

Steel cross section, haunch, and slab

1.04 k/ft	1.13 k/ft	1.17 k/ft	1.17 k/ft	1.17 k/ft
1.17 k/ft	1.17 k/ft	1.04 k/ft	1.09 k/ft	1.19 k/ft
1.23 k/ft	1.18 k/ft	1.07 k/ft	1.07 k/ft	1.07 k/ft
1.07 k/ft	1.07 k/ft	1.07 k/ft	1.07 k/ft	1.18 k/ft
1.23 k/ft	1.19 k/ft	1.09 k/ft	1.04 k/ft	1.17 k/ft
1.17 k/ft	1.17 k/ft	1.17 k/ft	1.17 k/ft	1.13 k/ft
1.04 k/ft				

Total

1.04 k/ft	1.13 k/ft	1.17 k/ft	1.17 k/ft	1.17 k/ft
1.17 k/ft	1.17 k/ft	1.04 k/ft	1.09 k/ft	1.19 k/ft
1.23 k/ft	1.18 k/ft	1.07 k/ft	1.07 k/ft	1.07 k/ft
1.07 k/ft	1.07 k/ft	1.07 k/ft	1.07 k/ft	1.18 k/ft
1.23 k/ft	1.19 k/ft	1.09 k/ft	1.04 k/ft	1.17 k/ft
1.17 k/ft	1.17 k/ft	1.17 k/ft	1.17 k/ft	1.13 k/ft
1.04 k/ft				

Girder 1 Geometry

Joint	X Coord - ft	Y Coord - ft	
1	0.00	0.00	Support
5	20.00	0.00	
7	40.00	0.00	
9	60.00	0.00	
11	80.00	0.00	
13	100.00	0.00	
15	120.00	0.00	
17	140.00	0.00	
19	160.00	0.00	Support
37	180.00	0.00	
39	200.00	0.00	
41	220.00	0.00	
43	240.00	0.00	
45	260.00	0.00	
47	280.00	0.00	
49	300.00	0.00	
51	320.00	0.00	
53	340.00	0.00	Support
73	360.00	0.00	
75	380.00	0.00	
77	400.00	0.00	
79	420.00	0.00	
81	440.00	0.00	
83	460.00	0.00	
85	480.00	0.00	
87	500.00	0.00	Support

Girder 2 Geometry

Joint	X Coord - ft	Y Coord - ft	
2	0.00	8.00	Support
105	6.67	8.00	
106	13.33	8.00	
6	20.00	8.00	
107	26.67	8.00	
108	33.33	8.00	
8	40.00	8.00	
109	46.67	8.00	
110	53.33	8.00	
10	60.00	8.00	
111	66.67	8.00	
112	73.33	8.00	
12	80.00	8.00	
113	86.67	8.00	
114	93.33	8.00	
14	100.00	8.00	
115	106.67	8.00	
116	113.33	8.00	
16	120.00	8.00	
117	126.67	8.00	
118	133.33	8.00	
18	140.00	8.00	
119	146.67	8.00	
120	153.33	8.00	
27	160.00	8.00	Support
121	166.67	8.00	
122	173.33	8.00	
38	180.00	8.00	
123	186.67	8.00	
124	193.33	8.00	
40	200.00	8.00	

125	206.67	8.00	
126	213.33	8.00	
42	220.00	8.00	
127	226.67	8.00	
128	233.33	8.00	
44	240.00	8.00	
129	246.67	8.00	
130	253.33	8.00	
46	260.00	8.00	
131	266.67	8.00	
132	273.33	8.00	
48	280.00	8.00	
133	286.67	8.00	
134	293.33	8.00	
50	300.00	8.00	
135	306.67	8.00	
136	313.33	8.00	
52	320.00	8.00	
137	326.67	8.00	
138	333.33	8.00	
62	340.00	8.00	Support
139	346.67	8.00	
140	353.33	8.00	
74	360.00	8.00	
141	366.67	8.00	
142	373.33	8.00	
76	380.00	8.00	
143	386.67	8.00	
144	393.33	8.00	
78	400.00	8.00	
145	406.67	8.00	
146	413.33	8.00	
80	420.00	8.00	
147	426.67	8.00	
148	433.33	8.00	
82	440.00	8.00	
149	446.67	8.00	
150	453.33	8.00	
84	460.00	8.00	
151	466.67	8.00	
152	473.33	8.00	
86	480.00	8.00	
153	486.67	8.00	
154	493.33	8.00	
95	500.00	8.00	Support

Girder 3 Geometry

Joint	X Coord - ft	Y Coord - ft	
3	0.00	16.00	Support
155	6.67	16.00	
156	13.33	16.00	
20	20.00	16.00	
157	26.67	16.00	
158	33.33	16.00	
21	40.00	16.00	
159	46.67	16.00	
160	53.33	16.00	
22	60.00	16.00	
161	66.67	16.00	
162	73.33	16.00	

23	80.00	16.00	
163	86.67	16.00	
164	93.33	16.00	
24	100.00	16.00	
165	106.67	16.00	
166	113.33	16.00	
25	120.00	16.00	
167	126.67	16.00	
168	133.33	16.00	
26	140.00	16.00	
169	146.67	16.00	
170	153.33	16.00	
35	160.00	16.00	Support
171	166.67	16.00	
172	173.33	16.00	
54	180.00	16.00	
173	186.67	16.00	
174	193.33	16.00	
55	200.00	16.00	
175	206.67	16.00	
176	213.33	16.00	
56	220.00	16.00	
177	226.67	16.00	
178	233.33	16.00	
57	240.00	16.00	
179	246.67	16.00	
180	253.33	16.00	
58	260.00	16.00	
181	266.67	16.00	
182	273.33	16.00	
59	280.00	16.00	
183	286.67	16.00	
184	293.33	16.00	
60	300.00	16.00	
185	306.67	16.00	
186	313.33	16.00	
61	320.00	16.00	
187	326.67	16.00	
188	333.33	16.00	
71	340.00	16.00	Support
189	346.67	16.00	
190	353.33	16.00	
88	360.00	16.00	
191	366.67	16.00	
192	373.33	16.00	
89	380.00	16.00	
193	386.67	16.00	
194	393.33	16.00	
90	400.00	16.00	
195	406.67	16.00	
196	413.33	16.00	
91	420.00	16.00	
197	426.67	16.00	
198	433.33	16.00	
92	440.00	16.00	
199	446.67	16.00	
200	453.33	16.00	
93	460.00	16.00	
201	466.67	16.00	
202	473.33	16.00	
94	480.00	16.00	
203	486.67	16.00	
204	493.33	16.00	

103	500.00	16.00	Support

Girder 4 Geometry

Joint	X Coord - ft	Y Coord - ft	
4	0.00	24.00	Support
28	20.00	24.00	
29	40.00	24.00	
30	60.00	24.00	
31	80.00	24.00	
32	100.00	24.00	
33	120.00	24.00	
34	140.00	24.00	
36	160.00	24.00	Support
63	180.00	24.00	
64	200.00	24.00	
65	220.00	24.00	
66	240.00	24.00	
67	260.00	24.00	
68	280.00	24.00	
69	300.00	24.00	
70	320.00	24.00	
72	340.00	24.00	Support
96	360.00	24.00	
97	380.00	24.00	
98	400.00	24.00	
99	420.00	24.00	
100	440.00	24.00	
101	460.00	24.00	
102	480.00	24.00	
104	500.00	24.00	Support

Span Lengths

Girder 1	160.000	180.000	160.000
Girder 2	160.000	180.000	160.000
Girder 3	160.000	180.000	160.000
Girder 4	160.000	180.000	160.000

Girder 1 Bracing Geometry

Joint 1 (	0.00,	0.00)	to	Joint 2 (	0.00,	0.00)
Joint 5 (	20.00,	0.00)	to	Joint 6 (	20.00,	0.00)
Joint 7 (	40.00,	0.00)	to	Joint 8 (	40.00,	0.00)
Joint 9 (	60.00,	0.00)	to	Joint 10 (	60.00,	0.00)
Joint 11 (	80.00,	0.00)	to	Joint 12 (	80.00,	0.00)
Joint 13 (	100.00,	0.00)	to	Joint 14 (	100.00,	0.00)
Joint 15 (	120.00,	0.00)	to	Joint 16 (	120.00,	0.00)
Joint 17 (	140.00,	0.00)	to	Joint 18 (	140.00,	0.00)
Joint 19 (	160.00,	0.00)	to	Joint 27 (	160.00,	0.00)
Joint 37 (	180.00,	0.00)	to	Joint 38 (	180.00,	0.00)
Joint 39 (	200.00,	0.00)	to	Joint 40 (	200.00,	0.00)
Joint 41 (	220.00,	0.00)	to	Joint 42 (	220.00,	0.00)
Joint 43 (	240.00,	0.00)	to	Joint 44 (	240.00,	0.00)
Joint 45 (	260.00,	0.00)	to	Joint 46 (	260.00,	0.00)

340.00	205.15	19.48	117.67	-20.96	342.30	203.67
Steel	58.74					
Conc	146.41					
500.00	68.26	6.26	59.29	-14.43	133.81	60.10
Steel	21.49					
Conc	46.77					

Girder 1 Service Moment - k-ft

Tenth Point	Location	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Range
0	0.00	0.00	0.00	0.00 L	-0.01 L	0.01
Top flg.spl	15.00	902.82	82.28	733.17	-121.31	854.48
Bot.flg.spl	15.00	902.82	82.28	733.17	-121.31	854.48
1	16.00	953.80	86.91	773.65 T	-129.40 L	903.06
Top flg.spl	27.00	1438.75	130.78	1136.12	-218.61	1354.72
Bot.flg.spl	27.00	1438.75	130.78	1136.12	-218.61	1354.72
2	32.00	1613.20	146.53	1278.57 L	-259.05 L	1537.62
3	48.00	1978.32	179.38	1640.78 L	-388.02 L	2028.80
4	64.00	2048.81	185.47	1813.75 L	-516.23 L	2329.99
5	80.00	1819.94	164.61	1815.55 L	-644.39 L	2459.93
6	96.00	1312.76	117.77	1612.97 L	-768.22 L	2381.19
Top flg.spl	98.00	1229.81	110.09	1576.75	-783.93	2360.68
Top flg.spl	110.00	638.29	55.43	1306.88	-879.19	2186.06
Bot.flg.spl	98.00	1229.81	110.09	1576.75	-783.93	2360.68
Bot.flg.spl	110.00	638.29	55.43	1306.88	-879.19	2186.06
7	112.00	527.46	45.00	1255.41 L	-895.32 L	2150.74
Top flg.spl	128.00	-489.48	-52.08	774.06	-1026.98	1801.03
Bot.flg.spl	128.00	-489.48	-52.08	774.06	-1026.98	1801.03
Top flg.spl	144.00	-1786.25	-176.17	433.81	-1517.40	1951.20
Bot.flg.spl	144.00	-1786.25	-176.17	433.81	-1517.40	1951.20
10	160.00	-3374.84	-326.38	380.13 L	-2378.60 L	2758.72
Top flg.spl	178.00	-1835.34	-176.41	386.50	-1429.73	1816.23
Top flg.spl	193.00	-850.82	-77.74	668.38	-936.94	1605.33
Bot.flg.spl	178.00	-1835.34	-176.41	386.50	-1429.73	1816.23
Bot.flg.spl	193.00	-850.82	-77.74	668.38	-936.94	1605.33
12	196.00	-682.25	-60.78	726.93 T	-873.68 L	1600.61
13	214.00	130.86	21.59	1093.38 T	-741.26 L	1834.64
14	232.00	618.22	70.92	1343.89 L	-713.03 L	2056.93
15	250.00	784.31	87.57	1433.40 L	-680.05 L	2113.45
16	268.00	619.81	71.02	1343.92 L	-712.89 L	2056.81
17	286.00	134.33	21.81	1093.63 T	-740.97 L	1834.60
18	304.00	-665.24	-59.63	678.43 T	-873.19 L	1551.62
Top flg.spl	307.00	-833.90	-76.60	618.25	-936.43	1554.67
Bot.flg.spl	307.00	-833.90	-76.60	618.25	-936.43	1554.67
Top flg.spl	322.00	-1828.93	-175.93	355.98	-1429.17	1785.15
Bot.flg.spl	322.00	-1828.93	-175.93	355.98	-1429.17	1785.15
20	340.00	-3374.45	-326.36	380.31 L	-2378.17 L	2758.48
Top flg.spl	356.00	-1791.05	-176.53	471.94	-1517.37	1989.30
Bot.flg.spl	356.00	-1791.05	-176.53	471.94	-1517.37	1989.30
Top flg.spl	372.00	-504.33	-53.15	773.93	-1027.14	1801.07
Bot.flg.spl	372.00	-504.33	-53.15	773.93	-1027.14	1801.07

Joint	47 (	280.00,	0.00)	to	Joint	48 (	280.00,	0.00)
Joint	49 (	300.00,	0.00)	to	Joint	50 (	300.00,	0.00)
Joint	51 (	320.00,	0.00)	to	Joint	52 (	320.00,	0.00)
Joint	53 (	340.00,	0.00)	to	Joint	62 (	340.00,	0.00)
Joint	73 (	360.00,	0.00)	to	Joint	74 (	360.00,	0.00)
Joint	75 (	380.00,	0.00)	to	Joint	76 (	380.00,	0.00)
Joint	77 (	400.00,	0.00)	to	Joint	78 (	400.00,	0.00)
Joint	79 (	420.00,	0.00)	to	Joint	80 (	420.00,	0.00)
Joint	81 (	440.00,	0.00)	to	Joint	82 (	440.00,	0.00)
Joint	83 (	460.00,	0.00)	to	Joint	84 (	460.00,	0.00)
Joint	85 (	480.00,	0.00)	to	Joint	86 (	480.00,	0.00)
Joint	87 (	500.00,	0.00)	to	Joint	95 (	500.00,	0.00)

Girder 2 Bracing Geometry

Joint	2 (	0.00,	8.00)	to	Joint	3 (	0.00,	8.00)
Joint	6 (	20.00,	8.00)	to	Joint	20 (	20.00,	8.00)
Joint	8 (	40.00,	8.00)	to	Joint	21 (	40.00,	8.00)
Joint	10 (	60.00,	8.00)	to	Joint	22 (	60.00,	8.00)
Joint	12 (	80.00,	8.00)	to	Joint	23 (	80.00,	8.00)
Joint	14 (	100.00,	8.00)	to	Joint	24 (	100.00,	8.00)
Joint	16 (	120.00,	8.00)	to	Joint	25 (	120.00,	8.00)
Joint	18 (	140.00,	8.00)	to	Joint	26 (	140.00,	8.00)
Joint	27 (	160.00,	8.00)	to	Joint	35 (	160.00,	8.00)
Joint	38 (	180.00,	8.00)	to	Joint	54 (	180.00,	8.00)
Joint	40 (	200.00,	8.00)	to	Joint	55 (	200.00,	8.00)
Joint	42 (	220.00,	8.00)	to	Joint	56 (	220.00,	8.00)
Joint	44 (	240.00,	8.00)	to	Joint	57 (	240.00,	8.00)
Joint	46 (	260.00,	8.00)	to	Joint	58 (	260.00,	8.00)
Joint	48 (	280.00,	8.00)	to	Joint	59 (	280.00,	8.00)
Joint	50 (	300.00,	8.00)	to	Joint	60 (	300.00,	8.00)
Joint	52 (	320.00,	8.00)	to	Joint	61 (	320.00,	8.00)
Joint	62 (	340.00,	8.00)	to	Joint	71 (	340.00,	8.00)
Joint	74 (	360.00,	8.00)	to	Joint	88 (	360.00,	8.00)
Joint	76 (	380.00,	8.00)	to	Joint	89 (	380.00,	8.00)
Joint	78 (	400.00,	8.00)	to	Joint	90 (	400.00,	8.00)
Joint	80 (	420.00,	8.00)	to	Joint	91 (	420.00,	8.00)
Joint	82 (	440.00,	8.00)	to	Joint	92 (	440.00,	8.00)
Joint	84 (	460.00,	8.00)	to	Joint	93 (	460.00,	8.00)
Joint	86 (	480.00,	8.00)	to	Joint	94 (	480.00,	8.00)
Joint	95 (	500.00,	8.00)	to	Joint	103 (	500.00,	8.00)

Girder 3 Bracing Geometry

Joint	3 (	0.00,	16.00)	to	Joint	4 (	0.00,	16.00)
Joint	20 (	20.00,	16.00)	to	Joint	28 (	20.00,	16.00)
Joint	21 (	40.00,	16.00)	to	Joint	29 (	40.00,	16.00)
Joint	22 (	60.00,	16.00)	to	Joint	30 (	60.00,	16.00)
Joint	23 (	80.00,	16.00)	to	Joint	31 (	80.00,	16.00)
Joint	24 (	100.00,	16.00)	to	Joint	32 (	100.00,	16.00)
Joint	25 (	120.00,	16.00)	to	Joint	33 (	120.00,	16.00)
Joint	26 (	140.00,	16.00)	to	Joint	34 (	140.00,	16.00)
Joint	35 (	160.00,	16.00)	to	Joint	36 (	160.00,	16.00)
Joint	54 (	180.00,	16.00)	to	Joint	63 (	180.00,	16.00)
Joint	55 (	200.00,	16.00)	to	Joint	64 (	200.00,	16.00)
Joint	56 (	220.00,	16.00)	to	Joint	65 (	220.00,	16.00)
Joint	57 (	240.00,	16.00)	to	Joint	66 (	240.00,	16.00)
Joint	58 (	260.00,	16.00)	to	Joint	67 (	260.00,	16.00)
Joint	59 (	280.00,	16.00)	to	Joint	68 (	280.00,	16.00)
Joint	60 (	300.00,	16.00)	to	Joint	69 (	300.00,	16.00)
Joint	61 (	320.00,	16.00)	to	Joint	70 (	320.00,	16.00)

Joint	71 (	340.00,	16.00)	to	Joint	72 (	340.00,
Joint	88 (	360.00,	16.00)	to	Joint	96 (	360.00,
Joint	89 (	380.00,	16.00)	to	Joint	97 (	380.00,
Joint	90 (	400.00,	16.00)	to	Joint	98 (	400.00,
Joint	91 (	420.00,	16.00)	to	Joint	99 (	420.00,
Joint	92 (	440.00,	16.00)	to	Joint	100 (	440.00,
Joint	93 (	460.00,	16.00)	to	Joint	101 (	460.00,
Joint	94 (	480.00,	16.00)	to	Joint	102 (	480.00,
Joint	103 (	500.00,	16.00)	to	Joint	104 (	500.00,

Girder 1 Service Shear - k

Tenth Pt	Noncomp Dead	Super-Imposed Dead	Live+ Impact	Range	Sidewalk Pos	Sidewalk Neg
0	68.18	6.27	58.48	67.04	0.00	0.00
1	50.80	4.59	53.61	60.89	0.00	0.00
2	32.50	2.92	44.76	53.65	0.00	0.00
3	13.76	1.22	34.31	53.34	0.00	0.00
4	-4.94	-0.46	26.79	51.95	0.00	0.00
5	-23.67	-2.14	-40.67	65.69	0.00	0.00
6	-41.06	-3.77	-40.25	55.73	0.00	0.00
7	-57.31	-5.36	-45.12	54.90	0.00	0.00
8	-71.27	-6.86	-55.77	62.15	0.00	0.00
9	-89.15	-8.51	-63.77	68.05	0.00	0.00
10	-108.45	-10.19	-77.09	80.89	0.00	0.00
10R	96.43	9.28	76.29	85.70	0.00	0.00
11	74.77	7.39	62.63	72.05	0.00	0.00
12	53.97	5.46	52.54	63.96	0.00	0.00
13	35.01	3.59	42.69	57.52	0.00	0.00
14	18.31	1.84	34.87	55.21	0.00	0.00
15	0.04	0.00	27.68	54.07	0.00	0.00
16	-18.22	-1.84	-33.97	55.44	0.00	0.00
17	-34.88	-3.58	-43.35	58.65	0.00	0.00
18	-53.81	-5.45	-52.56	63.86	0.00	0.00
19	-74.59	-7.38	-63.39	72.80	0.00	0.00
20	-96.25	-9.27	-76.11	85.53	0.00	0.00
20R	108.67	10.20	76.99	80.80	0.00	0.00
21	89.36	8.52	64.24	68.63	0.00	0.00
22	71.47	6.87	54.88	60.57	0.00	0.00
23	57.45	5.37	45.91	54.76	0.00	0.00
24	41.19	3.78	40.81	54.76	0.00	0.00
25	23.78	2.15	40.64	69.78	0.00	0.00
26	5.05	0.47	26.96	52.27	0.00	0.00
27	-13.65	-1.21	-33.17	53.93	0.00	0.00
28	-32.37	-2.91	-41.64	55.23	0.00	0.00
29	-50.67	-4.58	-49.84	57.62	0.00	0.00
30	-68.04	-6.26	-58.43	66.90	0.00	0.00

Concurrent Moment

0	0.00
1	555.51
2	1134.54
3	1574.11
4	1712.85
5	1658.98
6	1467.06
7	1255.41
8	774.06
9	433.81

10	380.13
11	386.50
12	620.40
13	1023.06
14	1322.33
15	1398.90
16	1282.56
17	1023.64
18	585.59
19	355.98
20	380.31
21	471.94
22	773.93
23	1254.61
24	1471.07
25	1688.41
26	1698.98
27	1585.07
28	1278.55
29	725.58
30	0.00

Girder 1 Service Moment - k-ft

Tenth Pt	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk Max	Sidewalk Min
0	0.00	0.00	0.00	-0.01	0.00	0.00
1	953.80	86.91	773.65	-129.40	0.00	0.00
2	1613.20	146.53	1278.57	-259.05	0.00	0.00
3	1978.32	179.38	1640.78	-388.02	0.00	0.00
4	2048.81	185.47	1813.75	-516.23	0.00	0.00
5	1819.94	164.61	1815.55	-644.39	0.00	0.00
6	1312.76	117.77	1612.97	-768.22	0.00	0.00
7	527.46	45.00	1255.41	-895.32	0.00	0.00
8	-489.48	-52.08	774.06	-1026.98	0.00	0.00
9	-1786.25	-176.17	433.81	-1517.40	0.00	0.00
10	-3374.84	-326.38	380.13	-2378.60	0.00	0.00
11	-1835.34	-176.41	386.50	-1429.73	0.00	0.00
12	-682.25	-60.78	726.93	-873.68	0.00	0.00
13	130.86	21.59	1093.38	-741.26	0.00	0.00
14	618.22	70.92	1343.89	-713.03	0.00	0.00
15	784.31	87.57	1433.40	-680.05	0.00	0.00
16	619.81	71.02	1343.92	-712.89	0.00	0.00
17	134.33	21.81	1093.63	-740.97	0.00	0.00
18	-665.24	-59.63	678.43	-873.19	0.00	0.00
19	-1828.93	-175.93	355.98	-1429.17	0.00	0.00
20	-3374.45	-326.36	380.31	-2378.17	0.00	0.00
21	-1791.05	-176.53	471.94	-1517.37	0.00	0.00
22	-504.33	-53.15	773.93	-1027.14	0.00	0.00
23	536.09	45.55	1254.61	-895.51	0.00	0.00
24	1309.15	117.52	1611.71	-768.38	0.00	0.00
25	1817.08	164.41	1814.64	-644.52	0.00	0.00
26	2047.74	185.40	1813.52	-516.34	0.00	0.00
27	1979.08	179.43	1641.21	-388.10	0.00	0.00
28	1610.93	146.41	1279.39	-259.10	0.00	0.00
29	946.08	86.45	725.58	-129.43	0.00	0.00
30	0.00	0.00	0.00	-0.01	0.00	0.00

Concurrent Shear

0	58.48	-8.56
1	50.11	-8.47
2	38.97	-10.31
3	29.08	-18.04
4	22.03	-23.36
5	-14.72	32.83
6	-11.83	38.41
7	-8.30	45.12
8	-6.37	55.77
9	-4.28	63.77
10	-3.81	77.09
11	62.63	-9.41
12	45.10	-11.42
13	38.32	-14.83
14	30.64	-20.28
15	25.76	-25.89
16	22.77	33.41
17	27.99	43.35
18	33.34	52.56
19	-9.41	63.39
20	-9.41	76.11
21	64.24	-4.39
22	54.88	-5.70
23	45.91	-8.55
24	37.65	-11.38
25	32.85	-22.40
26	23.08	-21.43
27	-17.77	29.50
28	-13.29	39.25
29	40.37	48.71
30	-8.47	58.43

Service Max Moment Contribution by Lane

	1	2
0	0.00	0.00
1	661.20	112.45
2	1063.14	215.43
3	1354.02	286.76
4	1491.19	322.56
5	1476.46	339.09
6	1324.16	288.81
7	1031.62	223.79
8	637.31	136.74
9	354.96	78.85
10	299.79	80.34
11	336.12	50.38
12	644.65	82.28
13	915.53	177.85
14	1110.75	233.14
15	1186.27	247.13
16	1110.75	233.17
17	915.75	177.89
18	596.11	82.32
19	305.60	50.38
20	299.95	80.36
21	393.08	78.86
22	637.20	136.73
23	1030.85	223.76
24	1322.94	288.78

25	1475.59	339.06
26	1490.98	322.54
27	1354.47	286.74
28	1063.96	215.43
29	613.12	112.45
30	0.00	0.00

Service Min Moment Contribution by Lane

	1	2
0	-0.01	0.00
1	-98.20	-31.21
2	-196.74	-62.31
3	-295.38	-92.64
4	-394.44	-121.80
5	-494.78	-149.61
6	-597.57	-170.65
7	-707.48	-187.84
8	-831.78	-195.19
9	-1278.82	-238.57
10	-2034.34	-344.26
11	-1204.99	-224.74
12	-716.84	-156.84
13	-580.68	-160.58
14	-548.22	-164.81
15	-519.71	-160.34
16	-548.09	-164.80
17	-580.41	-160.56
18	-716.38	-156.81
19	-1204.49	-224.69
20	-2033.93	-344.24
21	-1278.79	-238.58
22	-831.93	-195.21
23	-707.65	-187.86
24	-597.71	-170.67
25	-494.89	-149.63
26	-394.53	-121.81
27	-295.45	-92.65
28	-196.78	-62.32
29	-98.22	-31.21
30	-0.01	0.00

Girder 1 Single Truck Service Shear and Moment

Tenth Pt	LL+I Shr	Shr Range	Max Mom	Min Mom	Mom Range
0	50.32	55.58	0.00	0.00	0.01
1	46.17	51.42	661.20	-80.19	741.39
2	38.61	45.47	1062.21	-160.65	1222.87
3	31.37	48.47	1320.04	-241.20	1561.24
4	24.73	48.22	1412.20	-322.08	1734.28
5	-36.16	60.24	1370.58	-404.01	1774.59
6	-35.28	50.24	1209.02	-488.00	1697.02
7	-37.66	48.30	918.65	-577.88	1496.53
8	-43.55	49.25	588.08	-674.74	1262.81
9	-47.10	49.22	228.19	-778.68	1006.87
10	52.63	58.63	257.52	-888.83	1146.35
11	48.07	54.06	280.57	-693.78	974.35

12	41.73	48.01	644.65	-573.40	1218.05
13	36.05	47.35	915.53	-462.01	1377.55
14	31.17	49.34	1110.75	-354.91	1465.66
15	24.94	48.66	1172.90	-250.41	1423.31
16	-30.27	49.57	1110.75	-354.83	1465.58
17	-35.18	47.85	915.75	-461.91	1377.66
18	-40.73	47.94	596.11	-573.32	1169.43
19	-47.47	53.52	237.61	-693.73	931.34
20	52.23	56.15	257.57	-888.84	1146.41
21	47.96	49.91	257.68	-778.68	1036.36
22	44.53	48.97	588.40	-674.74	1263.14
23	38.95	48.43	918.75	-577.87	1496.62
24	36.09	49.52	1208.21	-487.99	1696.20
25	36.13	63.68	1370.19	-404.01	1774.20
26	24.90	48.49	1412.20	-322.08	1734.28
27	-30.11	48.94	1320.62	-241.20	1561.82
28	-35.06	46.62	1063.12	-160.65	1223.77
29	-42.41	47.71	613.12	-80.19	693.31
30	-48.91	54.21	0.00	0.00	0.01

Girder 1 Service Torque - k-ft

Tenth Pt	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Sidewalk
0	0.01	0.01	8.92	0.00
1	0.01	0.01	8.96	0.00
2	-0.02	-0.02	7.73	0.00
3	0.01	0.01	5.17	0.00
4	0.05	0.04	2.96	0.00
5	0.12	0.08	-3.95	0.00
6	0.12	0.08	-2.77	0.00
7	0.00	-0.01	-4.80	0.00
8	-0.02	-0.06	-8.39	0.00
9	-0.06	-0.05	-9.87	0.00
10	-0.06	-0.05	-9.86	0.00
10R	-0.05	-0.03	-9.89	0.00
11	-0.05	-0.03	-9.86	0.00
12	0.02	0.06	8.74	0.00
13	0.01	0.05	6.81	0.00
14	0.00	0.01	4.33	0.00
15	0.00	0.00	3.64	0.00
16	0.00	-0.01	-4.33	0.00
17	-0.01	-0.05	-6.81	0.00
18	-0.02	-0.06	-8.74	0.00
19	0.05	0.02	9.86	0.00
20	0.05	0.02	9.86	0.00
20R	0.05	0.05	9.88	0.00
21	0.05	0.05	9.86	0.00
22	0.02	0.06	8.39	0.00
23	0.00	0.01	4.80	0.00
24	-0.12	-0.08	2.77	0.00
25	-0.12	-0.08	3.95	0.00
26	-0.05	-0.04	-2.96	0.00
27	-0.01	-0.01	-5.17	0.00
28	0.02	0.02	-7.72	0.00
29	-0.01	-0.01	-8.96	0.00
30	-0.01	-0.01	-8.92	0.00

Sign convention

Positive torque - clockwise looking downstation

Girder 1 Service Bracing Shear - k

Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk
1	0.00	0.00	3.62	-3.17	0.00
5	-0.23	-0.01	2.33	-1.06	0.00
7	-0.20	0.02	4.04	-4.06	0.00
9	-0.14	0.01	2.06	-1.81	0.00
11	-1.55	-0.06	4.88	-4.98	0.00
13	-1.56	-0.09	2.22	-2.52	0.00
15	-3.32	-0.18	4.68	-5.14	0.00
17	-0.49	-0.03	1.95	-1.34	0.00
19	0.00	0.00	0.79	-0.62	0.00
37	0.47	0.03	2.30	-1.29	0.00
39	-0.36	-0.02	2.96	-1.71	0.00
41	-2.71	-0.14	4.97	-5.39	0.00
43	-1.05	-0.05	2.45	-2.39	0.00
45	-1.06	-0.05	2.45	-2.39	0.00
47	-2.75	-0.14	4.97	-5.39	0.00
49	-0.39	-0.02	2.96	-1.71	0.00
51	0.44	0.03	2.30	-1.29	0.00
53	0.00	0.00	0.79	-0.62	0.00
73	-0.47	-0.03	1.95	-1.34	0.00
75	-3.26	-0.18	4.68	-5.13	0.00
77	-1.54	-0.09	2.22	-2.51	0.00
79	-1.53	-0.05	4.88	-4.97	0.00
81	-0.14	0.01	2.06	-1.81	0.00
83	-0.22	0.02	4.04	-4.07	0.00
85	-0.23	-0.01	2.33	-1.06	0.00
87	0.00	0.00	3.62	-3.17	0.00

Sign convention

Positive shear - upward on member

	Concurrent Moment	
1	-15.90	7.54
5	-0.81	7.21
7	-17.18	27.46
9	-2.70	12.29
11	-36.00	3.95
13	-15.75	2.93
15	-35.32	21.80
17	-3.04	5.95
19	-3.61	1.87
37	-3.45	6.89
39	-3.40	9.93
41	-39.44	32.64
43	-3.92	14.02
45	-3.92	14.02
47	-39.52	32.52
49	-3.39	9.89
51	-3.45	6.86
53	-3.59	1.86
73	-3.03	5.94

75	-35.31	21.71
77	-15.73	2.90
79	-36.03	3.93
81	-2.70	12.29
83	-17.18	27.43
85	-0.81	7.20
87	-15.93	7.57

Girder 1 Service Bracing Moment - k-ft

Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk
1	-0.01	-0.01	15.87	-15.90	0.00
2	0.00	0.00	13.03	-9.50	0.00
5	0.03	0.02	4.16	-1.89	0.00
6	-1.81	-0.05	17.81	-7.80	0.00
7	-0.03	-0.03	15.33	-3.85	0.00
8	-1.65	0.12	29.79	-30.63	0.00
9	-0.04	-0.03	5.55	-4.26	0.00
10	-1.15	0.02	13.74	-12.66	0.00
11	-0.07	-0.04	4.40	-5.41	0.00
12	-12.44	-0.49	36.55	-36.00	0.00
13	0.13	0.09	4.93	-6.36	0.00
14	-12.32	-0.61	13.83	-15.75	0.00
15	0.02	0.05	5.79	-6.52	0.00
16	-26.53	-1.41	33.95	-35.32	0.00
17	0.03	-0.01	2.82	-4.08	0.00
18	-3.85	-0.22	12.55	-7.89	0.00
19	0.00	-0.03	3.13	-3.61	0.00
27	0.00	0.01	2.69	-1.84	0.00
37	-0.07	-0.08	2.92	-4.32	0.00
38	3.65	0.18	14.92	-7.50	0.00
39	0.00	0.00	3.68	-4.60	0.00
40	-2.90	-0.14	20.26	-11.41	0.00
41	0.01	0.05	4.78	-6.05	0.00
42	-21.67	-1.07	35.63	-39.44	0.00
43	0.00	0.01	4.66	-6.21	0.00
44	-8.41	-0.40	15.69	-15.89	0.00
45	0.00	0.01	4.65	-6.21	0.00
46	-8.45	-0.40	15.69	-15.89	0.00
47	0.01	0.05	4.76	-6.06	0.00
48	-21.99	-1.09	35.63	-39.52	0.00
49	0.00	0.01	3.67	-4.60	0.00
50	-3.10	-0.16	20.30	-11.41	0.00

51	-0.07	-0.08	2.94	-4.32	0.00
52	3.48	0.17	14.94	-7.49	0.00
53	0.00	-0.03	3.13	-3.59	0.00
62	0.00	0.01	2.70	-1.84	0.00
73	0.03	-0.01	2.83	-4.07	0.00
74	-3.71	-0.21	12.55	-7.87	0.00
75	0.02	0.05	5.74	-6.52	0.00
76	-26.09	-1.39	33.95	-35.31	0.00
77	0.13	0.09	4.91	-6.37	0.00
78	-12.20	-0.61	13.83	-15.73	0.00
79	-0.07	-0.04	4.38	-5.42	0.00
80	-12.32	-0.48	36.55	-36.03	0.00
81	-0.04	-0.03	5.56	-4.26	0.00
82	-1.17	0.02	13.74	-12.66	0.00
83	-0.03	-0.03	15.37	-3.84	0.00
84	-1.79	0.12	29.79	-30.66	0.00
85	0.03	0.02	4.14	-1.89	0.00
86	-1.84	-0.05	17.82	-7.80	0.00
87	-0.01	-0.01	15.88	-15.93	0.00
95	0.00	0.00	12.99	-9.49	0.00

Concurrent Shear

1	-3.17	3.62
2	-3.62	3.17
5	-1.06	1.77
6	-2.33	1.06
7	-4.06	1.75
8	-4.04	4.06
9	-1.81	0.52
10	-2.06	1.81
11	-2.37	0.27
12	-4.88	4.98
13	-1.93	0.91
14	-2.22	2.52
15	-5.14	4.23
16	-4.68	5.14
17	-1.34	1.75
18	-1.95	1.29
19	-0.62	0.79
27	-0.79	0.62
37	-1.29	2.12
38	-2.30	1.24

39	-0.90	2.61
40	-2.96	1.68
41	-2.07	1.57
42	-4.97	5.39
43	-1.59	0.40
44	-2.45	2.27
45	-0.94	0.40
46	-2.45	2.27
47	-2.07	1.57
48	-4.97	5.39
49	-0.90	2.61
50	-2.96	1.68
51	-1.29	2.12
52	-2.30	1.24
53	-0.62	0.79
62	-0.79	0.62
73	-1.34	1.75
74	-1.95	1.29
75	-5.13	4.23
76	-4.68	5.13
77	-1.93	0.91
78	-2.22	2.51
79	-2.36	0.27
80	-4.88	4.97
81	-1.81	0.52
82	-2.06	1.81
83	-4.07	1.75
84	-4.04	4.07
85	-1.06	1.77
86	-2.33	1.06
87	-3.17	3.62
95	-3.62	3.17

Girder 1 Service Lateral Bending Moment (x girder ht) - k-ft2
in Bottom Flange from Nonuniform Torsion

Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk
1	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00

13	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00
37	0.00	0.00	0.00	0.00	0.00
39	0.00	0.00	0.00	0.00	0.00
41	0.00	0.00	0.00	0.00	0.00
43	0.00	0.00	0.00	0.00	0.00
45	0.00	0.00	0.00	0.00	0.00
47	0.00	0.00	0.00	0.00	0.00
49	0.00	0.00	0.00	0.00	0.00
51	0.00	0.00	0.00	0.00	0.00
53	0.00	0.00	0.00	0.00	0.00
73	0.00	0.00	0.00	0.00	0.00
75	0.00	0.00	0.00	0.00	0.00
77	0.00	0.00	0.00	0.00	0.00
79	0.00	0.00	0.00	0.00	0.00
81	0.00	0.00	0.00	0.00	0.00
83	0.00	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00	0.00
87	0.00	0.00	0.00	0.00	0.00

Pos. value for tens. on left of bot. flg., looking downstation.
Reverse for top flg.

Girder 1 Service Vertical Reactions - k

Supp/Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk Max	Sidewalk Min
Governing						
1 1	68.40	6.27	59.33	-14.43	0.00	0.00
Steel	21.53					
Concrete	46.87					

Max LL+I Contribution by Lane

1	2
52.68	6.65

Concurrent reactions using same governing loaded lanes
as for Max LL+I

Concurrent at gdr 2 - 50.98

Contribution by all lanes

1	2
29.76	21.21

Concurrent at gdr 3 - 49.20

Contribution by all lanes

1	2
9.81	39.39

Concurrent at gdr 4 - 23.73

Contribution by all lanes
1 2
1.21 22.52

2 19 205.11 19.47 117.65 -20.96 0.00 0.00
Steel 58.73
Concrete 146.38

Max LL+I Contribution by Lane
1 2
105.50 12.15

Concurrent reactions using same governing loaded lanes
as for Max LL+I

Concurrent at gdr 2 - 109.12

Contribution by all lanes
1 2
63.42 45.70

Concurrent at gdr 3 - 95.75

Contribution by all lanes
1 2
17.45 78.29

Concurrent at gdr 4 - 47.27

Contribution by all lanes
1 2
1.26 46.01

3 53 205.15 19.48 117.67 -20.96 0.00 0.00
Steel 58.74
Concrete 146.41

Max LL+I Contribution by Lane
1 2
105.52 12.15

Concurrent reactions using same governing loaded lanes
as for Max LL+I

Concurrent at gdr 2 - 109.12

Contribution by all lanes
1 2
63.41 45.70

Concurrent at gdr 3 - 95.75

Contribution by all lanes
1 2

17.45 78.30

Concurrent at gdr 4 - 47.28

Contribution by all lanes
1 2
1.26 46.02

4 87 68.26 6.26 59.29 -14.43 0.00 0.00
Steel 21.49
Concrete 46.77

Max LL+I Contribution by Lane
1 2
52.64 6.65

Concurrent reactions using same governing loaded lanes
as for Max LL+I

Concurrent at gdr 2 - 50.96

Contribution by all lanes
1 2
29.75 21.21

Concurrent at gdr 3 - 49.18

Contribution by all lanes
1 2
9.81 39.38

Concurrent at gdr 4 - 23.73

Contribution by all lanes
1 2
1.21 22.51

Truck Loading

1	1	54.27	-7.05
2	19	55.95	-8.95
3	53	55.95	-8.95
4	87	54.23	-7.05

Lane Loading

1	1	59.33	-9.44
2	19	117.65	-11.46
3	53	117.67	-11.47
4	87	59.29	-9.44

Support Rotations - Degrees
About global axes used in Geometry table

Supp/Node	Noncomp Dead		Superimp Dead		LL+I+SW Range	
	x-axis	y-axis	x-axis	y-axis	x-axis	y-axis

1	1	0.00	0.27	0.00	0.02	(0.00 to 0.00)	(-0.05 to 0.11)
2	19	0.00	-0.08	0.00	0.00	(0.00 to 0.00)	(-0.08 to 0.08)
3	53	0.00	0.08	0.00	0.00	(0.00 to 0.00)	(-0.08 to 0.08)
4	87	0.00	-0.27	0.00	-0.02	(0.00 to 0.00)	(-0.11 to 0.05)

Girder 1 Deflections - in

Tenth Pt	Total Noncomp Dead	Steel	Wet Con-crete	Super-imposed Dead	Max LL+I Down	Max LL+I Up	Sidewalk Down	Sidewalk Up
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	0.883	0.308	0.576	0.058	0.470	0.087	0.000	0.000
2	1.590	0.557	1.032	0.104	0.872	0.168	0.000	0.000
3	2.091	0.740	1.352	0.137	1.190	0.240	0.000	0.000
4	2.336	0.836	1.500	0.152	1.388	0.298	0.000	0.000
5	2.305	0.838	1.467	0.148	1.458	0.338	0.000	0.000
6	2.040	0.760	1.280	0.129	1.392	0.355	0.000	0.000
7	1.554	0.600	0.954	0.096	1.184	0.335	0.000	0.000
8	0.939	0.385	0.554	0.057	0.846	0.269	0.000	0.000
9	0.370	0.167	0.202	0.021	0.423	0.152	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	-0.172	-0.122	-0.050	-0.006	0.423	0.162	0.000	0.000
12	-0.056	-0.161	0.105	0.007	0.870	0.281	0.000	0.000
13	0.252	-0.136	0.388	0.031	1.270	0.344	0.000	0.000
14	0.555	-0.092	0.647	0.053	1.545	0.357	0.000	0.000
15	0.680	-0.071	0.751	0.062	1.649	0.331	0.000	0.000
16	0.575	-0.087	0.662	0.055	1.552	0.355	0.000	0.000
17	0.286	-0.127	0.414	0.033	1.282	0.343	0.000	0.000
18	-0.039	-0.157	0.119	0.008	0.879	0.282	0.000	0.000
19	-0.172	-0.122	-0.050	-0.006	0.426	0.163	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.363	0.165	0.198	0.021	0.417	0.150	0.000	0.000
22	0.900	0.372	0.528	0.054	0.828	0.266	0.000	0.000
23	1.514	0.588	0.926	0.094	1.176	0.338	0.000	0.000
24	2.033	0.758	1.275	0.129	1.392	0.357	0.000	0.000
25	2.302	0.837	1.464	0.148	1.458	0.338	0.000	0.000
26	2.329	0.834	1.495	0.152	1.389	0.299	0.000	0.000
27	2.095	0.741	1.354	0.137	1.195	0.241	0.000	0.000
28	1.600	0.561	1.039	0.105	0.879	0.169	0.000	0.000
29	0.883	0.307	0.575	0.058	0.470	0.087	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Influence surfaces for deflection not using AASHTO 10.6.4.

Girder 1 Impact Factors

Axle at Tenth Pt	Shear Truck	Shear Lane	Moment Pos	Moment Neg	Defl	React
0	1.1754	1.1754	1.1754	1.1695	1.1754	1.1754
1	1.1859	1.1754	1.1754	1.1695	1.1754	
2	1.1976	1.1754	1.1754	1.1695	1.1754	
3	1.2110	1.1754	1.1754	1.1695	1.1754	
4	1.2262	1.1754	1.1754	1.1695	1.1754	
5	1.2439	1.1754	1.1754	1.1695	1.1754	
6	1.2262	1.1754	1.1754	1.1695	1.1754	
7	1.2110	1.1754	1.1754	1.1695	1.1754	
8	1.1976	1.1754	1.1754	1.1695	1.1754	
9	1.1859	1.1754	1.1754	1.1695	1.1754	

10L	1.1754	1.1754	1.1695	1.1695	1.1695	1.1075
10R	1.1639	1.1639	1.1695	1.1695	1.1695	1.1075
11	1.1742	1.1639	1.1639	1.1695	1.1639	
12	1.1859	1.1639	1.1639	1.1695	1.1639	
13	1.1992	1.1639	1.1639	1.1695	1.1639	
14	1.2146	1.1639	1.1639	1.1695	1.1639	
15	1.2326	1.1639	1.1639	1.1714	1.1639	
16	1.2146	1.1639	1.1639	1.1695	1.1639	
17	1.1992	1.1639	1.1639	1.1695	1.1639	
18	1.1859	1.1639	1.1639	1.1695	1.1639	
19	1.1742	1.1639	1.1639	1.1695	1.1639	
20L	1.1639	1.1639	1.1695	1.1695	1.1695	1.1075
20R	1.1754	1.1754	1.1695	1.1695	1.1695	1.1075
21	1.1859	1.1754	1.1754	1.1695	1.1754	
22	1.1976	1.1754	1.1754	1.1695	1.1754	
23	1.2110	1.1754	1.1754	1.1695	1.1754	
24	1.2262	1.1754	1.1754	1.1695	1.1754	
25	1.2439	1.1754	1.1754	1.1695	1.1754	
26	1.2262	1.1754	1.1754	1.1695	1.1754	
27	1.2110	1.1754	1.1754	1.1695	1.1754	
28	1.1976	1.1754	1.1754	1.1695	1.1754	
29	1.1859	1.1754	1.1754	1.1695	1.1754	
30	1.1754	1.1754	1.1754	1.1695	1.1754	1.1754

Girder 1 Wheel Location from Girder 1 by Tenth Point - ft

Lane values along a line perpendicular to right girder.

Lane 1 Boundary											
	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
Wheel 1											
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wheel 2											
6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Lane 2 Boundary											
10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Wheel 1											
12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Wheel 2											
18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00

Girder 2 Service Shear - k

Tenth Pt	Noncomp Dead	Super-Imposed Dead	Live+ Impact	Range	Sidewalk Pos	Sidewalk Neg

OUTPUT.TXT

0	67.61	6.31	62.78	68.71	0.00	0.00
1	51.14	4.63	54.45	59.84	0.00	0.00
2	33.16	2.94	45.36	61.96	0.00	0.00
3	14.71	1.28	42.46	63.66	0.00	0.00
4	-3.49	-0.39	35.83	66.25	0.00	0.00
5	-23.29	-2.13	-60.33	104.71	0.00	0.00
6	-41.10	-3.81	-42.45	66.77	0.00	0.00
7	-59.68	-5.58	-51.31	65.75	0.00	0.00
8	-79.59	-7.44	-53.14	65.94	0.00	0.00
9	-97.65	-9.15	-67.07	72.62	0.00	0.00
10	-116.05	-10.83	-85.52	87.70	0.00	0.00
10R	99.23	9.63	84.08	91.34	0.00	0.00
11	78.60	7.74	63.50	73.31	0.00	0.00
12	59.62	5.88	50.78	65.26	0.00	0.00
13	40.84	3.97	41.27	64.34	0.00	0.00
14	19.52	1.94	41.15	63.50	0.00	0.00
15	0.05	0.00	33.50	64.52	0.00	0.00
16	-19.42	-1.94	-39.04	63.87	0.00	0.00
17	-40.78	-3.97	40.39	64.70	0.00	0.00
18	-59.59	-5.88	-50.99	66.27	0.00	0.00
19	-78.58	-7.74	-63.00	72.70	0.00	0.00
20	-99.22	-9.63	-83.85	91.11	0.00	0.00
20R	116.00	10.82	85.35	87.87	0.00	0.00
21	97.60	9.14	65.53	70.66	0.00	0.00
22	79.56	7.44	54.39	65.90	0.00	0.00
23	59.71	5.58	53.22	65.52	0.00	0.00
24	41.15	3.81	44.95	66.91	0.00	0.00
25	23.33	2.13	58.57	108.04	0.00	0.00
26	3.55	0.40	-33.58	66.54	0.00	0.00
27	-14.65	-1.28	-39.96	63.86	0.00	0.00
28	-33.13	-2.94	-38.92	62.51	0.00	0.00
29	-51.11	-4.63	-49.15	62.93	0.00	0.00
30	-67.57	-6.31	-67.74	73.67	0.00	0.00

Concurrent Moment

0	0.00
1	525.92
2	1055.34
3	1376.57
4	1483.12
5	1372.67
6	1279.50
7	1059.55
8	720.89
9	437.02
10	319.87
11	386.00
12	597.30
13	913.23
14	1166.66
15	1247.62
16	1113.02
17	882.33
18	597.78
19	385.96
20	319.98
21	437.11
22	720.69
23	1061.45
24	1295.69
25	1372.66

26	1454.82
27	1376.63
28	1151.24
29	758.35
30	0.00

Girder 2 Service Moment - k-ft

Tenth Pt	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk Max	Sidewalk Min
0	0.00	0.00	0.00	0.00	0.00	0.00
1	950.67	87.46	757.76	-101.14	0.00	0.00
2	1623.78	148.01	1161.68	-202.27	0.00	0.00
3	2006.55	181.78	1418.94	-304.80	0.00	0.00
4	2097.78	188.86	1557.92	-409.25	0.00	0.00
5	1899.46	169.15	1514.25	-515.26	0.00	0.00
6	1384.50	121.67	1417.57	-632.41	0.00	0.00
7	568.58	46.25	1129.72	-750.76	0.00	0.00
8	-544.74	-57.91	720.89	-896.77	0.00	0.00
9	-1958.65	-190.55	437.02	-1404.65	0.00	0.00
10	-3669.22	-350.43	319.87	-2266.77	0.00	0.00
11	-2070.46	-194.13	386.00	-1346.50	0.00	0.00
12	-827.96	-71.30	724.53	-797.63	0.00	0.00
13	73.21	17.30	984.89	-603.63	0.00	0.00
14	607.25	70.15	1192.56	-560.18	0.00	0.00
15	782.03	87.62	1273.38	-530.26	0.00	0.00
16	608.91	70.24	1192.51	-560.11	0.00	0.00
17	76.65	17.50	985.06	-603.45	0.00	0.00
18	-823.58	-71.05	724.86	-797.59	0.00	0.00
19	-2066.52	-193.91	385.96	-1346.52	0.00	0.00
20	-3667.43	-350.33	319.98	-2267.91	0.00	0.00
21	-1960.02	-190.63	437.11	-1405.53	0.00	0.00
22	-546.63	-57.98	720.69	-896.94	0.00	0.00
23	566.11	46.12	1129.49	-750.85	0.00	0.00
24	1381.52	121.48	1416.99	-632.55	0.00	0.00
25	1897.06	169.00	1513.74	-515.35	0.00	0.00
26	2096.32	188.77	1557.75	-409.35	0.00	0.00
27	2005.93	181.74	1419.11	-304.81	0.00	0.00
28	1623.62	148.00	1162.50	-202.28	0.00	0.00
29	950.80	87.48	758.35	-101.18	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00

Concurrent Shear

0	42.49	52.11
1	49.30	-6.63
2	36.07	-13.19
3	36.09	-19.40
4	26.39	-26.71
5	-22.01	38.61
6	-16.48	38.85
7	-11.68	48.45
8	-10.07	53.14
9	-5.55	67.07
10	-2.18	85.52
11	63.50	-9.81
12	44.09	-14.48
13	36.52	-21.63
14	36.50	-21.62
15	28.92	-28.61

16	32.29	36.22
17	-32.15	-40.39
18	40.62	50.99
19	-9.70	63.00
20	-7.26	83.85
21	65.53	-5.13
22	54.39	-10.93
23	47.62	-10.35
24	39.27	-17.40
25	38.62	-34.89
26	-26.37	26.76
27	16.92	33.37
28	33.21	35.24
29	49.15	46.21
30	-2.25	51.71

Service Max Moment Contribution by Lane

	1	2
0	0.00	0.00
1	470.02	287.74
2	698.16	463.52
3	853.53	565.40
4	940.76	617.15
5	900.76	613.48
6	861.47	556.09
7	686.32	443.40
8	441.82	279.06
9	279.27	157.75
10	192.97	126.90
11	248.90	137.11
12	452.31	272.22
13	594.05	390.84
14	728.44	464.12
15	783.09	490.29
16	728.41	464.10
17	594.16	390.89
18	452.52	272.33
19	248.87	137.10
20	193.05	126.93
21	279.33	157.78
22	441.67	279.02
23	686.15	443.35
24	861.09	555.90
25	900.43	613.32
26	940.64	617.11
27	853.66	565.45
28	698.75	463.75
29	470.39	287.96
30	0.00	0.00

Service Min Moment Contribution by Lane

	1	2
0	0.00	0.00
1	-60.45	-40.69
2	-120.88	-81.39

3	-182.44	-122.36
4	-245.44	-163.81
5	-309.31	-205.95
6	-379.84	-252.58
7	-448.65	-302.11
8	-530.82	-365.95
9	-836.94	-567.71
10	-1358.27	-908.50
11	-803.56	-542.95
12	-474.55	-323.08
13	-360.68	-242.95
14	-335.33	-224.86
15	-317.90	-212.35
16	-335.27	-224.84
17	-360.55	-242.90
18	-474.46	-323.13
19	-803.47	-543.05
20	-1358.25	-909.66
21	-837.02	-568.51
22	-530.79	-366.15
23	-448.71	-302.14
24	-379.93	-252.62
25	-309.37	-205.98
26	-245.50	-163.85
27	-182.45	-122.36
28	-120.89	-81.39
29	-60.48	-40.70
30	0.00	0.00

Girder 2 Single Truck Service Shear and Moment

Tenth Pt	LL+I Shr	Shr Range	Max Mom	Min Mom	Mom Range
0	42.10	45.33	0.00	0.00	0.00
1	34.90	38.12	470.02	-49.16	519.18
2	29.38	42.39	698.16	-98.30	796.46
3	30.23	43.27	853.53	-148.41	1001.94
4	24.94	44.72	920.36	-199.76	1120.11
5	-38.34	67.19	851.54	-251.90	1103.44
6	-27.69	44.71	812.77	-309.77	1122.53
7	-34.47	44.13	637.05	-366.05	1003.11
8	-29.38	43.70	419.36	-427.40	846.76
9	-38.91	45.17	198.00	-495.07	693.07
10	52.10	55.80	164.97	-570.91	735.88
11	37.46	41.87	216.68	-457.36	674.04
12	30.42	42.16	452.31	-371.54	823.84
13	24.51	42.57	594.05	-288.37	882.43
14	27.39	41.49	728.44	-217.45	945.89
15	22.63	43.00	783.09	-152.79	935.89
16	-25.28	41.76	728.41	-217.47	945.88
17	22.71	43.00	594.16	-288.31	882.48
18	-28.79	42.89	452.52	-371.45	823.97
19	-35.36	42.24	216.41	-457.25	673.66
20	51.53	54.36	165.00	-570.96	735.96
21	40.62	44.32	198.16	-495.07	693.23
22	31.48	43.68	419.24	-427.37	846.61
23	36.58	44.10	637.27	-366.03	1003.30
24	30.13	45.04	812.52	-309.77	1122.30
25	37.17	69.26	851.39	-251.90	1103.28
26	-22.61	44.75	920.37	-199.77	1120.13
27	-27.86	43.20	853.66	-148.38	1002.04

28	-23.63	42.73	698.75	-98.28	797.03
29	-30.13	41.73	470.39	-49.17	519.56
30	-47.12	50.37	0.00	0.00	0.00

Girder 2 Service Torque - k-ft

Tenth Pt	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Sidewalk
0	0.00	0.00	6.93	0.00
1	0.00	0.00	6.96	0.00
2	-0.01	-0.01	5.91	0.00
3	0.00	0.00	4.09	0.00
4	0.03	0.02	2.24	0.00
5	0.03	0.02	2.24	0.00
6	0.06	0.04	-2.00	0.00
7	0.00	-0.01	-3.64	0.00
8	-0.01	-0.03	-6.46	0.00
9	-0.03	-0.03	-7.79	0.00
10	-0.03	-0.03	-7.79	0.00
10R	-0.03	-0.02	-7.96	0.00
11	-0.03	-0.02	-7.95	0.00
12	0.01	0.03	6.95	0.00
13	0.01	0.03	5.27	0.00
14	0.00	0.00	3.36	0.00
15	0.00	0.00	2.77	0.00
16	0.00	0.00	-3.36	0.00
17	-0.01	-0.03	-5.27	0.00
18	-0.01	-0.03	-6.95	0.00
19	0.03	0.01	7.94	0.00
20	0.03	0.01	7.95	0.00
20R	0.03	0.03	7.80	0.00
21	0.03	0.03	7.79	0.00
22	0.01	0.03	6.46	0.00
23	0.00	0.01	3.64	0.00
24	-0.06	-0.04	2.00	0.00
25	-0.06	-0.04	2.00	0.00
26	-0.03	-0.02	-2.24	0.00
27	0.00	0.00	-4.08	0.00
28	0.01	0.01	-5.91	0.00
29	0.00	0.00	-6.96	0.00
30	0.00	0.00	-6.93	0.00

Sign convention

Positive torque - clockwise looking downstation

Girder 2 Service Bracing Shear - k

Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk
2	0.00	0.00	1.28	-1.26	0.00
6	0.00	0.00	2.05	-3.11	0.00
8	0.00	0.00	5.35	-8.14	0.00
10	0.00	0.00	2.40	-3.68	0.00
12	0.00	0.00	5.54	-8.30	0.00
14	0.00	0.00	2.45	-3.57	0.00

16	0.00	0.00	6.33	-8.40	0.00
18	0.00	0.00	2.31	-2.58	0.00
27	0.00	0.00	0.25	-0.24	0.00
38	0.00	0.00	2.45	-2.78	0.00
40	0.00	0.00	3.17	-4.20	0.00
42	0.00	0.00	6.17	-8.76	0.00
44	0.00	0.00	3.23	-4.83	0.00
46	0.00	0.00	3.23	-4.83	0.00
48	0.00	0.00	6.17	-8.76	0.00
50	0.00	0.00	3.17	-4.20	0.00
52	0.00	0.00	2.45	-2.78	0.00
62	0.00	0.00	0.25	-0.24	0.00
74	0.00	0.00	2.31	-2.58	0.00
76	0.00	0.00	6.33	-8.40	0.00
78	0.00	0.00	2.46	-3.57	0.00
80	0.00	0.00	5.54	-8.30	0.00
82	0.00	0.00	2.40	-3.68	0.00
84	0.00	0.00	5.35	-8.14	0.00
86	0.00	0.00	2.05	-3.11	0.00
95	0.00	0.00	1.26	-1.26	0.00

Sign convention

Positive shear - upward on member

	Concurrent Moment	
2	-4.61	0.00
6	-0.18	19.15
8	-12.34	45.91
10	-6.31	19.46
12	-19.19	44.88
14	-9.69	17.37
16	-26.54	34.64
18	-6.20	8.91
27	-0.94	0.00
38	-6.35	9.92
40	-12.31	17.81
42	-22.64	47.28
44	-9.20	23.94
46	-9.16	23.82
48	-22.59	47.07
50	-12.28	17.73
52	-6.32	9.87
62	-0.94	0.00
74	-6.17	8.86
76	-26.43	34.49
78	-9.65	17.28
80	-19.08	44.64
82	-6.31	19.44
84	-12.33	45.90
86	-0.18	19.15
95	-4.62	0.00

Girder 2 Service Bracing Moment - k-ft

Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk
2	0.00	0.00	5.47	-4.61	0.00

3	0.00	0.00	5.47	-4.61	0.00
6	-1.80	-0.04	24.72	-8.10	0.00
20	-1.80	-0.04	19.38	-9.75	0.00
8	-1.66	0.11	71.88	-31.30	0.00
21	-1.66	0.11	68.01	-31.30	0.00
10	-1.17	0.00	28.68	-13.72	0.00
22	-1.17	0.00	27.27	-13.72	0.00
12	-12.48	-0.51	71.04	-38.37	0.00
23	-12.48	-0.51	68.63	-38.37	0.00
14	-12.25	-0.56	24.91	-16.41	0.00
24	-12.25	-0.56	25.20	-16.41	0.00
16	-26.52	-1.39	56.80	-42.45	0.00
25	-26.52	-1.39	58.56	-42.45	0.00
18	-3.84	-0.22	14.43	-8.96	0.00
26	-3.84	-0.22	15.48	-11.79	0.00
27	0.00	0.00	1.01	-0.94	0.00
35	0.00	0.00	1.07	-0.89	0.00
38	3.61	0.13	15.87	-8.28	0.00
54	3.61	0.13	16.86	-12.43	0.00
40	-2.89	-0.14	26.63	-13.48	0.00
55	-2.89	-0.14	25.17	-16.18	0.00
42	-21.67	-1.04	76.22	-43.82	0.00
56	-21.67	-1.04	71.32	-43.82	0.00
44	-8.41	-0.40	33.56	-18.08	0.00
57	-8.41	-0.40	33.15	-18.08	0.00
46	-8.45	-0.40	33.44	-18.08	0.00
58	-8.45	-0.40	33.12	-18.08	0.00
48	-21.98	-1.06	75.86	-43.73	0.00
59	-21.98	-1.06	71.02	-43.73	0.00
50	-3.09	-0.15	26.51	-13.43	0.00
60	-3.09	-0.15	25.06	-16.14	0.00
52	3.44	0.12	15.91	-8.24	0.00
61	3.44	0.12	16.89	-12.38	0.00
62	0.00	0.00	1.01	-0.94	0.00
71	0.00	0.00	1.07	-0.89	0.00
74	-3.70	-0.22	14.46	-8.93	0.00
88	-3.70	-0.22	15.48	-11.72	0.00
76	-26.08	-1.36	56.54	-42.24	0.00
89	-26.08	-1.36	58.50	-42.21	0.00
78	-12.13	-0.55	24.79	-16.32	0.00
90	-12.13	-0.55	25.16	-16.32	0.00
80	-12.35	-0.50	70.67	-38.17	0.00

91	-12.35	-0.50	68.24	-38.17	0.00
82	-1.19	0.00	28.62	-13.71	0.00
92	-1.19	0.00	27.22	-13.72	0.00
84	-1.80	0.10	71.88	-31.34	0.00
93	-1.80	0.10	68.04	-31.34	0.00
86	-1.83	-0.04	24.73	-8.10	0.00
94	-1.83	-0.04	19.39	-9.76	0.00
95	0.00	0.00	5.46	-4.62	0.00
103	0.00	0.00	5.46	-4.62	0.00

Concurrent Shear

2	-1.26	1.26
3	-1.26	1.26
6	-3.11	0.97
20	-0.49	2.95
8	0.19	3.40
21	-2.58	3.40
10	0.08	1.75
22	-2.40	1.75
12	0.29	3.55
23	-2.06	3.55
14	-0.93	1.47
24	-2.45	1.47
16	-0.35	3.82
25	-6.33	3.82
18	-2.58	1.75
26	-2.31	2.50
27	-0.24	0.25
35	-0.25	0.24
38	-2.78	1.84
54	-2.45	2.70
40	-0.93	1.56
55	-1.50	4.13
42	0.57	3.72
56	-1.88	3.72
44	-0.29	2.30
57	-3.23	2.30
46	-0.29	2.30
58	-3.23	2.30
48	0.57	3.72
59	-6.17	3.72

50	-0.93	1.56
60	-1.50	4.13
52	-2.78	1.84
61	-2.45	2.70
62	-0.24	0.25
71	-0.25	0.24
74	-2.58	1.75
88	-2.31	2.50
76	-0.34	3.82
89	-6.33	3.82
78	-0.93	1.47
90	-2.46	1.47
80	0.29	3.55
91	-2.06	3.55
82	0.08	1.75
92	-2.40	1.75
84	0.19	3.40
93	-2.58	3.40
86	-3.11	0.97
94	-0.49	2.95
95	-1.26	1.26
103	-1.26	1.26

Girder 2 Service Lateral Bending Moment (x girder ht) - k-ft2
in Bottom Flange from Nonuniform Torsion

Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk
2	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00
38	0.00	0.00	0.00	0.00	0.00
40	0.00	0.00	0.00	0.00	0.00
42	0.00	0.00	0.00	0.00	0.00
44	0.00	0.00	0.00	0.00	0.00
46	0.00	0.00	0.00	0.00	0.00
48	0.00	0.00	0.00	0.00	0.00
50	0.00	0.00	0.00	0.00	0.00
52	0.00	0.00	0.00	0.00	0.00
62	0.00	0.00	0.00	0.00	0.00
74	0.00	0.00	0.00	0.00	0.00
76	0.00	0.00	0.00	0.00	0.00
78	0.00	0.00	0.00	0.00	0.00

80	0.00	0.00	0.00	0.00	0.00
82	0.00	0.00	0.00	0.00	0.00
84	0.00	0.00	0.00	0.00	0.00
86	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00

Pos. value for tens. on left of bot. flg., looking downstation.
Reverse for top flg.

Girder 2 Service Vertical Reactions - k

Supp/Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk Max	Sidewalk Min
Governing						
1 2	68.04	6.31	63.54	-6.91	0.00	0.00
Steel	21.93					
Concrete	46.11					

Max LL+I Contribution by Lane

1	2
42.33	21.21

Concurrent reactions using same governing loaded lanes as for Max LL+I

Concurrent at gdr 1 - 38.80

Contribution by all lanes

1	2
32.15	6.65

Concurrent at gdr 3 - 44.08

Contribution by all lanes

1	2
4.69	39.39

Concurrent at gdr 4 - 21.70

Contribution by all lanes

1	2
-0.82	22.52

2 27	215.75	20.45	126.38	-9.59	0.00	0.00
Steel	63.51					
Concrete	152.24					

Max LL+I Contribution by Lane

1	2
80.68	45.70

```
Concurrent reactions using same governing loaded lanes
as for Max LL+I

 Concurrent at gdr  1 -      91.73

  Contribution by all lanes
        1         2
    79.58     12.15

 Concurrent at gdr  3 -     102.85

  Contribution by all lanes
        1         2
    24.55     78.29

 Concurrent at gdr  4 -      46.08

  Contribution by all lanes
        1         2
     0.07     46.01

3   62    215.69     20.45    126.39     -9.59    0.00     0.00
  Steel     63.50
  Concrete 152.20


 Max LL+I Contribution by Lane
      1         2
   80.68     45.70


Concurrent reactions using same governing loaded lanes
as for Max LL+I

 Concurrent at gdr  1 -      91.76

  Contribution by all lanes
        1         2
    79.61     12.15

 Concurrent at gdr  3 -     102.85

  Contribution by all lanes
        1         2
    24.55     78.30

 Concurrent at gdr  4 -      46.09

  Contribution by all lanes
        1         2
     0.07     46.02

4   95     68.01      6.31     63.51     -6.91    0.00     0.00
  Steel     21.92
  Concrete  46.09


 Max LL+I Contribution by Lane
      1         2
```



```
   42.30     21.21


Concurrent reactions using same governing loaded lanes
as for Max LL+I

 Concurrent at gdr  1 -      38.78

  Contribution by all lanes
        1         2
    32.13      6.65

 Concurrent at gdr  3 -      44.08

  Contribution by all lanes
        1         2
     4.70     39.38

 Concurrent at gdr  4 -      21.69

  Contribution by all lanes
        1         2
    -0.83     22.51


Truck Loading

   1   2                          62.61     -4.99
   2   27                         69.56     -7.17
   3   62                         69.55     -7.17
   4   95                         62.58     -4.99

Lane Loading

   1   2                          61.46     -6.72
   2   27                        126.38     -9.21
   3   62                        126.39     -9.21
   4   95                         61.44     -6.72

                Support Rotations - Degrees
           About global axes used in Geometry table

 Supp/Node   Noncomp Dead    Superimp Dead          LL+I+SW Range
             x-axis  y-axis  x-axis  y-axis       x-axis          y-axis

   1   2      0.00    0.27    0.00    0.02  ( 0.00 to  0.00) (-0.04 to  0.09)
   2   27     0.00   -0.08    0.00    0.00  ( 0.00 to  0.00) (-0.06 to  0.07)
   3   62     0.00    0.08    0.00    0.00  ( 0.00 to  0.00) (-0.07 to  0.06)
   4   95     0.00   -0.27    0.00   -0.02  ( 0.00 to  0.00) (-0.09 to  0.04)

Girder 2 Deflections - in

 Tenth  Total    Steel    Wet      Super-   Max      Max        Sidewalk
 Pt     Noncomp           Con-     imposed  LL+I     LL+I     Down      Up
        Dead              crete    Dead     Down     Up

    0   0.000   0.000    0.000    0.000    0.000    0.000    0.000    0.000
    1   0.873   0.306    0.567    0.057    0.382    0.068    0.000    0.000
    2   1.593   0.562    1.031    0.105    0.716    0.132    0.000    0.000
```

3	2.094	0.745	1.350	0.137	0.973	0.189	0.000	0.000
4	2.331	0.838	1.493	0.152	1.130	0.235	0.000	0.000
5	2.290	0.837	1.453	0.148	1.181	0.266	0.000	0.000
6	2.000	0.750	1.250	0.127	1.119	0.278	0.000	0.000
7	1.509	0.589	0.920	0.094	0.953	0.266	0.000	0.000
8	0.888	0.370	0.517	0.054	0.672	0.213	0.000	0.000
9	0.357	0.163	0.194	0.021	0.335	0.119	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	-0.162	-0.118	-0.044	-0.006	0.341	0.128	0.000	0.000
12	-0.056	-0.159	0.104	0.007	0.707	0.222	0.000	0.000
13	0.248	-0.135	0.383	0.031	1.036	0.272	0.000	0.000
14	0.540	-0.093	0.633	0.053	1.258	0.281	0.000	0.000
15	0.655	-0.075	0.730	0.061	1.344	0.259	0.000	0.000
16	0.542	-0.092	0.634	0.053	1.258	0.281	0.000	0.000
17	0.252	-0.134	0.385	0.032	1.036	0.272	0.000	0.000
18	-0.052	-0.158	0.106	0.007	0.708	0.222	0.000	0.000
19	-0.160	-0.117	-0.043	-0.006	0.341	0.128	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.356	0.163	0.193	0.021	0.335	0.119	0.000	0.000
22	0.884	0.369	0.515	0.054	0.671	0.213	0.000	0.000
23	1.504	0.588	0.917	0.094	0.952	0.266	0.000	0.000
24	1.996	0.749	1.247	0.127	1.119	0.279	0.000	0.000
25	2.287	0.836	1.450	0.148	1.181	0.266	0.000	0.000
26	2.328	0.837	1.490	0.152	1.130	0.235	0.000	0.000
27	2.092	0.744	1.348	0.137	0.973	0.189	0.000	0.000
28	1.591	0.561	1.030	0.105	0.716	0.132	0.000	0.000
29	0.873	0.306	0.567	0.057	0.383	0.068	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Influence surfaces for deflection not using AASHTO 10.6.4.

Girder 2 Impact Factors

Axle at Tenth Pt	Shear Truck	Shear Lane	Moment Pos	Moment Neg	Defl	React
0	1.1754	1.1754	1.1754	1.1695	1.1754	1.1754
1	1.1859	1.1754	1.1754	1.1695	1.1754	
2	1.1976	1.1754	1.1754	1.1695	1.1754	
3	1.2110	1.1754	1.1754	1.1695	1.1754	
4	1.2262	1.1754	1.1754	1.1695	1.1754	
5	1.2439	1.1754	1.1754	1.1695	1.1754	
6	1.2262	1.1754	1.1754	1.1695	1.1754	
7	1.2110	1.1754	1.1754	1.1695	1.1754	
8	1.1976	1.1754	1.1754	1.1695	1.1754	
9	1.1859	1.1754	1.1754	1.1695	1.1754	
10L	1.1754	1.1754	1.1695	1.1695	1.1695	1.1075
10R	1.1639	1.1639	1.1695	1.1695	1.1695	1.1075
11	1.1742	1.1639	1.1639	1.1695	1.1639	
12	1.1859	1.1639	1.1639	1.1695	1.1639	
13	1.1992	1.1639	1.1639	1.1695	1.1639	
14	1.2146	1.1639	1.1639	1.1695	1.1639	
15	1.2326	1.1639	1.1639	1.1714	1.1639	
16	1.2146	1.1639	1.1639	1.1695	1.1639	
17	1.1992	1.1639	1.1639	1.1695	1.1639	
18	1.1859	1.1639	1.1639	1.1695	1.1639	
19	1.1742	1.1639	1.1639	1.1695	1.1639	
20L	1.1639	1.1639	1.1695	1.1695	1.1695	1.1075
20R	1.1754	1.1754	1.1695	1.1695	1.1695	1.1075
21	1.1859	1.1754	1.1754	1.1695	1.1754	
22	1.1976	1.1754	1.1754	1.1695	1.1754	
23	1.2110	1.1754	1.1754	1.1695	1.1754	

24	1.2262	1.1754	1.1754	1.1695	1.1754	
25	1.2439	1.1754	1.1754	1.1695	1.1754	
26	1.2262	1.1754	1.1754	1.1695	1.1754	
27	1.2110	1.1754	1.1754	1.1695	1.1754	
28	1.1976	1.1754	1.1754	1.1695	1.1754	
29	1.1859	1.1754	1.1754	1.1695	1.1754	
30	1.1754	1.1754	1.1754	1.1695	1.1754	1.1754

Girder 2 Wheel Location from Girder 1 by Tenth Point - ft

Lane values along a line perpendicular to right girder.

Lane 1 Boundary											
-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
Wheel 1											
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Wheel 2											
8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Lane 2 Boundary											
10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Wheel 1											
12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Wheel 2											
18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00

Girder 3 Service Shear - k

Tenth Pt	Noncomp Dead	Super-Imposed Dead	Live+ Impact	Range	Sidewalk Pos	Sidewalk Neg
0	67.61	6.31	62.78	68.71	0.00	0.00
1	51.14	4.63	54.45	59.84	0.00	0.00
2	33.16	2.94	45.36	61.96	0.00	0.00
3	14.71	1.28	42.46	63.66	0.00	0.00
4	-3.49	-0.39	35.83	66.25	0.00	0.00
5	-23.29	-2.13	-60.33	104.71	0.00	0.00
6	-41.10	-3.81	-42.45	66.77	0.00	0.00
7	-59.68	-5.58	-51.31	65.75	0.00	0.00
8	-79.59	-7.44	-53.14	65.94	0.00	0.00
9	-97.65	-9.15	-67.07	72.62	0.00	0.00
10	-116.05	-10.83	-85.52	87.70	0.00	0.00
10R	99.23	9.63	84.08	91.34	0.00	0.00
11	78.60	7.74	63.50	73.31	0.00	0.00
12	59.62	5.88	50.78	65.26	0.00	0.00
13	40.84	3.97	41.27	64.34	0.00	0.00

14	19.52	1.94	41.15	63.50	0.00	0.00
15	0.05	0.00	33.50	64.52	0.00	0.00
16	-19.42	-1.94	-39.04	63.87	0.00	0.00
17	-40.78	-3.97	40.39	64.70	0.00	0.00
18	-59.59	-5.88	-50.99	66.27	0.00	0.00
19	-78.58	-7.74	-63.00	72.70	0.00	0.00
20	-99.22	-9.63	-83.85	91.11	0.00	0.00
20R	116.00	10.82	85.35	87.87	0.00	0.00
21	97.60	9.14	65.53	70.66	0.00	0.00
22	79.56	7.44	54.39	65.90	0.00	0.00
23	59.71	5.58	53.22	65.52	0.00	0.00
24	41.15	3.81	44.95	66.91	0.00	0.00
25	23.33	2.13	58.57	108.04	0.00	0.00
26	3.55	0.40	-33.58	66.54	0.00	0.00
27	-14.65	-1.28	-39.96	63.86	0.00	0.00
28	-33.13	-2.94	-38.92	62.51	0.00	0.00
29	-51.11	-4.63	-49.15	62.93	0.00	0.00
30	-67.57	-6.31	-67.74	73.67	0.00	0.00

Concurrent Moment

0	0.00
1	525.92
2	1055.34
3	1376.57
4	1483.12
5	1372.67
6	1279.50
7	1059.55
8	720.89
9	437.02
10	319.87
11	386.00
12	597.30
13	913.23
14	1166.66
15	1247.62
16	1113.02
17	882.33
18	597.78
19	385.96
20	319.98
21	437.11
22	720.69
23	1061.45
24	1295.69
25	1372.66
26	1454.82
27	1376.63
28	1151.24
29	758.35
30	0.00

Girder 3 Service Moment - k-ft

Tenth Pt	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk Max	Sidewalk Min
0	0.00	0.00	0.00	0.00	0.00	0.00
1	950.67	87.46	757.76	-101.14	0.00	0.00
2	1623.78	148.01	1161.68	-202.27	0.00	0.00

3	2006.55	181.78	1418.94	-304.80	0.00	0.00
4	2097.78	188.86	1557.92	-409.25	0.00	0.00
5	1899.46	169.15	1514.25	-515.26	0.00	0.00
6	1384.50	121.67	1417.57	-632.41	0.00	0.00
7	568.58	46.25	1129.72	-750.76	0.00	0.00
8	-544.74	-57.91	720.89	-896.77	0.00	0.00
9	-1958.65	-190.55	437.02	-1404.65	0.00	0.00
10	-3669.22	-350.43	319.87	-2266.77	0.00	0.00
11	-2070.46	-194.13	386.00	-1346.50	0.00	0.00
12	-827.96	-71.30	724.53	-797.63	0.00	0.00
13	73.21	17.30	984.89	-603.63	0.00	0.00
14	607.25	70.15	1192.56	-560.18	0.00	0.00
15	782.03	87.62	1273.38	-530.26	0.00	0.00
16	608.91	70.24	1192.51	-560.11	0.00	0.00
17	76.65	17.50	985.06	-603.45	0.00	0.00
18	-823.58	-71.05	724.86	-797.59	0.00	0.00
19	-2066.52	-193.91	385.96	-1346.52	0.00	0.00
20	-3667.43	-350.33	319.98	-2267.91	0.00	0.00
21	-1960.02	-190.63	437.11	-1405.53	0.00	0.00
22	-546.63	-57.98	720.69	-896.94	0.00	0.00
23	566.11	46.12	1129.49	-750.85	0.00	0.00
24	1381.52	121.48	1416.99	-632.55	0.00	0.00
25	1897.06	169.00	1513.74	-515.35	0.00	0.00
26	2096.32	188.77	1557.75	-409.35	0.00	0.00
27	2005.93	181.74	1419.11	-304.81	0.00	0.00
28	1623.62	148.00	1162.50	-202.28	0.00	0.00
29	950.80	87.48	758.35	-101.18	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00

Concurrent Shear

0	42.49	52.11
1	49.30	-6.63
2	36.07	-13.19
3	36.09	-19.40
4	26.39	-26.71
5	-22.01	38.61
6	-16.48	38.85
7	-11.68	48.45
8	-10.07	53.14
9	-5.55	67.07
10	-2.18	85.52
11	63.50	-9.81
12	44.09	-14.48
13	36.52	-21.63
14	36.50	-21.62
15	28.92	-28.61
16	32.29	36.22
17	-32.15	-40.39
18	40.62	50.99
19	-9.70	63.00
20	-7.26	83.85
21	65.53	-5.13
22	54.39	-10.93
23	47.62	-10.35
24	39.27	-17.40
25	38.62	-34.89
26	-26.37	26.76
27	16.92	33.37
28	33.21	35.24
29	49.15	46.21
30	-2.25	51.71

Service Max Moment Contribution by Lane

	1	2
0	0.00	0.00
1	287.74	470.02
2	463.52	698.16
3	565.40	853.53
4	617.15	940.76
5	613.48	900.76
6	556.09	861.47
7	443.40	686.32
8	279.06	441.82
9	157.75	279.27
10	126.90	192.97
11	137.11	248.90
12	272.22	452.31
13	390.84	594.05
14	464.12	728.44
15	490.29	783.09
16	464.10	728.41
17	390.89	594.16
18	272.33	452.52
19	137.10	248.87
20	126.93	193.05
21	157.78	279.33
22	279.02	441.67
23	443.35	686.15
24	555.90	861.09
25	613.32	900.43
26	617.11	940.64
27	565.45	853.66
28	463.75	698.75
29	287.96	470.39
30	0.00	0.00

Service Min Moment Contribution by Lane

	1	2
0	0.00	0.00
1	-40.69	-60.45
2	-81.39	-120.88
3	-122.36	-182.44
4	-163.81	-245.44
5	-205.95	-309.31
6	-252.58	-379.84
7	-302.11	-448.65
8	-365.95	-530.82
9	-567.71	-836.94
10	-908.50	-1358.27
11	-542.95	-803.56
12	-323.08	-474.55
13	-242.95	-360.68
14	-224.86	-335.33
15	-212.35	-317.90
16	-224.84	-335.27
17	-242.90	-360.55
18	-323.13	-474.46

19	-543.05	-803.47
20	-909.66	-1358.25
21	-568.51	-837.02
22	-366.15	-530.79
23	-302.14	-448.71
24	-252.62	-379.93
25	-205.98	-309.37
26	-163.85	-245.50
27	-122.36	-182.45
28	-81.39	-120.89
29	-40.70	-60.48
30	0.00	0.00

Girder 3 Single Truck Service Shear and Moment

Tenth Pt	LL+I Shr	Shr Range	Max Mom	Min Mom	Mom Range
0	42.10	45.33	0.00	0.00	0.00
1	34.90	38.12	470.02	-49.16	519.18
2	29.38	42.39	698.16	-98.30	796.46
3	30.23	43.27	853.53	-148.41	1001.94
4	24.94	44.72	920.36	-199.76	1120.11
5	-38.34	67.19	851.54	-251.90	1103.44
6	-27.69	44.71	812.77	-309.77	1122.53
7	-34.47	44.13	637.05	-366.05	1003.11
8	-29.38	43.70	419.36	-427.40	846.76
9	-38.91	45.17	198.00	-495.07	693.07
10	52.10	55.80	164.97	-570.91	735.88
11	37.46	41.87	216.68	-457.36	674.04
12	30.42	42.16	452.31	-371.54	823.84
13	24.51	42.57	594.05	-288.37	882.43
14	27.39	41.49	728.44	-217.45	945.89
15	22.63	43.00	783.09	-152.79	935.89
16	-25.28	41.76	728.41	-217.47	945.88
17	22.71	43.00	594.16	-288.31	882.48
18	-28.79	42.89	452.52	-371.45	823.97
19	-35.36	42.24	216.41	-457.25	673.66
20	51.53	54.36	165.00	-570.96	735.96
21	40.62	44.32	198.16	-495.07	693.23
22	31.48	43.68	419.24	-427.37	846.61
23	36.58	44.10	637.27	-366.03	1003.30
24	30.13	45.04	812.52	-309.77	1122.30
25	37.17	69.26	851.39	-251.90	1103.28
26	-22.61	44.75	920.37	-199.77	1120.13
27	-27.86	43.20	853.66	-148.38	1002.04
28	-23.63	42.73	698.75	-98.28	797.03
29	-30.13	41.73	470.39	-49.17	519.56
30	-47.12	50.37	0.00	0.00	0.00

Girder 3 Service Torque - k-ft

Tenth Pt	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Sidewalk
0	0.00	0.00	-6.93	0.00
1	0.00	0.00	-6.96	0.00
2	0.01	0.01	-5.91	0.00
3	0.00	0.00	-4.09	0.00
4	-0.03	-0.02	-2.24	0.00

5	-0.03	-0.02	-2.24	0.00
6	-0.06	-0.04	2.00	0.00
7	0.00	0.01	3.64	0.00
8	0.01	0.03	6.46	0.00
9	0.03	0.03	7.79	0.00
10	0.03	0.03	7.79	0.00
10R	0.03	0.02	7.96	0.00
11	0.03	0.02	7.95	0.00
12	-0.01	-0.03	-6.95	0.00
13	-0.01	-0.03	-5.27	0.00
14	0.00	0.00	-3.36	0.00
15	0.00	0.00	-2.77	0.00
16	0.00	0.00	3.36	0.00
17	0.01	0.03	5.27	0.00
18	0.01	0.03	6.95	0.00
19	-0.03	-0.01	-7.94	0.00
20	-0.03	-0.01	-7.95	0.00
20R	-0.03	-0.03	-7.80	0.00
21	-0.03	-0.03	-7.79	0.00
22	-0.01	-0.03	-6.46	0.00
23	0.00	-0.01	-3.64	0.00
24	0.06	0.04	-2.00	0.00
25	0.06	0.04	-2.00	0.00
26	0.03	0.02	2.24	0.00
27	0.00	0.00	4.08	0.00
28	-0.01	-0.01	5.91	0.00
29	0.00	0.00	6.96	0.00
30	0.00	0.00	6.93	0.00

Sign convention

Positive torque - clockwise looking downstation

Girder 3 Service Bracing Shear - k

Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk
3	0.00	0.00	3.17	-3.54	0.00
20	0.23	0.01	1.06	-4.13	0.00
21	0.20	-0.02	4.06	-9.49	0.00
22	0.14	-0.01	1.81	-3.95	0.00
23	1.55	0.06	4.98	-10.00	0.00
24	1.56	0.09	2.52	-3.25	0.00
25	3.32	0.18	5.14	-8.32	0.00
26	0.49	0.03	1.39	-2.38	0.00
35	0.00	0.00	0.62	-0.78	0.00
54	-0.47	-0.03	1.29	-2.63	0.00
55	0.36	0.02	1.71	-4.41	0.00
56	2.71	0.14	5.39	-10.17	0.00
57	1.05	0.05	2.39	-4.69	0.00
58	1.06	0.05	2.39	-4.69	0.00
59	2.75	0.14	5.39	-10.17	0.00
60	0.39	0.02	1.71	-4.42	0.00
61	-0.44	-0.03	1.30	-2.63	0.00
71	0.00	0.00	0.62	-0.78	0.00
88	0.47	0.03	1.39	-2.38	0.00
89	3.26	0.18	5.13	-8.33	0.00
90	1.54	0.09	2.51	-3.25	0.00
91	1.53	0.05	4.97	-10.00	0.00

92	0.14	-0.01	1.81	-3.95	0.00
93	0.22	-0.02	4.07	-9.49	0.00
94	0.23	0.01	1.06	-4.13	0.00
103	0.00	0.00	3.17	-3.62	0.00

Sign convention

Positive shear - upward on member

	Concurrent Moment	
3	-15.63	7.56
20	-0.44	20.97
21	-0.62	70.67
22	-0.47	28.97
23	-0.25	74.04
24	0.01	24.37
25	0.71	54.54
26	-0.30	12.15
35	-3.57	1.87
54	-2.31	11.03
55	-0.30	24.66
56	-0.03	76.45
57	-0.32	34.42
58	-0.32	34.30
59	-0.04	76.14
60	-0.30	24.54
61	-2.30	10.98
71	-3.58	1.86
88	-0.29	12.09
89	0.70	54.28
90	0.01	24.25
91	-0.25	73.67
92	-0.46	28.92
93	-0.62	70.67
94	-0.44	20.97
103	-15.95	7.57

Girder 3 Service Bracing Moment - k-ft

Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk
3	0.00	0.00	12.68	-9.50	0.00
4	-0.01	-0.01	15.88	-15.63	0.00
20	-1.81	-0.05	32.59	-7.82	0.00
28	0.03	0.02	4.14	-2.17	0.00
21	-1.65	0.12	75.28	-30.75	0.00
29	-0.03	-0.03	15.26	-3.86	0.00
22	-1.15	0.02	31.16	-12.70	0.00
30	-0.04	-0.03	5.52	-4.27	0.00
23	-12.44	-0.49	79.73	-36.12	0.00
31	-0.07	-0.04	4.40	-5.43	0.00
24	-12.32	-0.61	26.00	-15.79	0.00
32	0.13	0.09	4.93	-6.37	0.00

25	-26.53	-1.41	67.30	-35.42	0.00
33	0.02	0.05	5.69	-6.49	0.00
26	-3.85	-0.22	18.75	-9.65	0.00
34	0.03	-0.01	3.07	-4.09	0.00
35	0.00	0.01	2.65	-1.84	0.00
36	0.00	-0.03	3.12	-3.57	0.00
54	3.65	0.18	18.72	-8.99	0.00
63	-0.07	-0.08	2.81	-4.31	0.00
55	-2.90	-0.14	35.02	-11.43	0.00
64	0.00	0.00	3.68	-4.60	0.00
56	-21.67	-1.07	81.30	-39.50	0.00
65	0.01	0.05	4.78	-6.06	0.00
57	-8.41	-0.40	37.17	-15.83	0.00
66	0.00	0.01	4.66	-6.20	0.00
58	-8.45	-0.40	37.16	-15.82	0.00
67	0.00	0.01	4.65	-6.19	0.00
59	-21.99	-1.09	81.30	-39.40	0.00
68	0.01	0.05	4.76	-6.05	0.00
60	-3.10	-0.16	35.05	-11.39	0.00
69	0.00	0.01	3.67	-4.59	0.00
61	3.48	0.17	18.73	-8.97	0.00
70	-0.07	-0.08	2.86	-4.31	0.00
71	0.00	0.01	2.68	-1.83	0.00
72	0.00	-0.03	3.13	-3.58	0.00
88	-3.71	-0.21	18.74	-9.61	0.00
96	0.03	-0.01	3.10	-4.08	0.00
89	-26.09	-1.39	67.31	-35.22	0.00
97	0.02	0.05	5.83	-6.52	0.00
90	-12.20	-0.61	25.99	-15.70	0.00
98	0.13	0.09	4.91	-6.36	0.00
91	-12.32	-0.48	79.71	-35.92	0.00
99	-0.07	-0.04	4.38	-5.41	0.00
92	-1.17	0.02	31.17	-12.69	0.00
100	-0.04	-0.03	5.53	-4.27	0.00
93	-1.79	0.12	75.27	-30.79	0.00
101	-0.03	-0.03	15.30	-3.86	0.00
94	-1.84	-0.05	32.60	-7.83	0.00
102	0.03	0.02	4.13	-2.17	0.00
103	0.00	0.00	12.97	-9.52	0.00
104	-0.01	-0.01	15.85	-15.95	0.00

Concurrent Shear

3	-3.54	3.17
4	-3.17	3.54
20	-4.13	1.06
28	-1.06	3.18
21	-9.49	4.06
29	-4.06	1.75
22	-3.95	1.81
30	-1.81	0.52
23	-10.00	4.98
31	-2.37	0.27
24	-3.25	2.52
32	-1.93	0.91
25	-8.32	5.14
33	-5.14	4.23
26	-2.38	1.39
34	-1.39	1.75
35	-0.78	0.62
36	-0.62	0.78
54	-2.63	1.29
63	-1.29	2.11
55	-4.41	1.68
64	-0.90	2.61
56	-10.17	5.39
65	-2.07	1.57
57	-4.69	2.27
66	-1.59	0.40
58	-4.69	2.27
67	-0.94	0.40
59	-10.17	5.39
68	-2.07	1.57
60	-4.42	1.68
69	-0.90	2.61
61	-2.63	1.30
70	-1.30	2.12
71	-0.78	0.62
72	-0.62	0.78
88	-2.38	1.39
96	-1.39	1.75
89	-8.33	5.13
97	-5.13	4.23
90	-3.25	2.51

98	-1.93	0.91
91	-10.00	4.97
99	-2.36	0.27
92	-3.95	1.81
100	-1.81	0.52
93	-9.49	4.07
101	-4.07	1.75
94	-4.13	1.06
102	-1.06	3.18
103	-3.62	3.17
104	-3.17	3.62

Girder 3 Service Lateral Bending Moment (x girder ht) - k-ft2
in Bottom Flange from Nonuniform Torsion

Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk
3	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00
35	0.00	0.00	0.00	0.00	0.00
54	0.00	0.00	0.00	0.00	0.00
55	0.00	0.00	0.00	0.00	0.00
56	0.00	0.00	0.00	0.00	0.00
57	0.00	0.00	0.00	0.00	0.00
58	0.00	0.00	0.00	0.00	0.00
59	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00
61	0.00	0.00	0.00	0.00	0.00
71	0.00	0.00	0.00	0.00	0.00
88	0.00	0.00	0.00	0.00	0.00
89	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00
91	0.00	0.00	0.00	0.00	0.00
92	0.00	0.00	0.00	0.00	0.00
93	0.00	0.00	0.00	0.00	0.00
94	0.00	0.00	0.00	0.00	0.00
103	0.00	0.00	0.00	0.00	0.00

Pos. value for tens. on left of bot. flg., looking downstation.
Reverse for top flg.

Girder 3 Service Vertical Reactions - k

Supp/Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk Max	Sidewalk Min

Governing

1	3	68.04	6.31	63.54	-6.91	0.00	0.00
	Steel	21.93					
	Concrete	46.11					

Max LL+I Contribution by Lane

1	2
21.21	42.33

Concurrent reactions using same governing loaded lanes as for Max LL+I

Concurrent at gdr 1 - 21.70

Contribution by all lanes

1	2
22.52	-0.82

Concurrent at gdr 2 - 44.08

Contribution by all lanes

1	2
39.39	4.69

Concurrent at gdr 4 - 38.80

Contribution by all lanes

1	2
6.65	32.15

2	35	215.75	20.45	126.38	-9.59	0.00	0.00
	Steel	63.51					
	Concrete	152.24					

Max LL+I Contribution by Lane

1	2
45.70	80.68

Concurrent reactions using same governing loaded lanes as for Max LL+I

Concurrent at gdr 1 - 46.08

Contribution by all lanes

1	2
46.01	0.07

Concurrent at gdr 2 - 102.85

Contribution by all lanes

1	2
78.29	24.55

```
 Concurrent at gdr  4 -      91.73

  Contribution by all lanes
        1          2
    12.15      79.58


3   71    215.69     20.45    126.39     -9.59     0.00      0.00
  Steel     63.50
  Concrete 152.20


 Max LL+I Contribution by Lane
      1          2
   45.70      80.68


 Concurrent reactions using same governing loaded lanes
 as for Max LL+I


  Concurrent at gdr  1 -      46.09

  Contribution by all lanes
        1          2
    46.02       0.07

  Concurrent at gdr  2 -     102.85

  Contribution by all lanes
        1          2
    78.30      24.55

  Concurrent at gdr  4 -      91.76

  Contribution by all lanes
        1          2
    12.15      79.61


4  103     68.01      6.31     63.51     -6.91     0.00      0.00
  Steel     21.92
  Concrete  46.09


 Max LL+I Contribution by Lane
      1          2
   21.21      42.30


 Concurrent reactions using same governing loaded lanes
 as for Max LL+I


  Concurrent at gdr  1 -      21.69

  Contribution by all lanes
        1          2
    22.51      -0.83

  Concurrent at gdr  2 -      44.08

  Contribution by all lanes
```



```
        1          2
    39.38       4.70

 Concurrent at gdr  4 -      38.78

  Contribution by all lanes
        1          2
     6.65      32.13


Truck Loading

    1   3                      62.61      -4.99
    2  35                      69.56      -7.17
    3  71                      69.55      -7.17
    4 103                      62.58      -4.99

Lane Loading

    1   3                      61.46      -6.72
    2  35                     126.38      -9.21
    3  71                     126.39      -9.21
    4 103                      61.44      -6.72
```

Support Rotations - Degrees
About global axes used in Geometry table

Supp/Node	Noncomp Dead x-axis	Noncomp Dead y-axis	Superimp Dead x-axis	Superimp Dead y-axis	LL+I+SW Range x-axis	LL+I+SW Range y-axis
1 3	0.00	0.27	0.00	0.02	(0.00 to 0.00)	(-0.04 to 0.09)
2 35	0.00	-0.08	0.00	0.00	(0.00 to 0.00)	(-0.06 to 0.07)
3 71	0.00	0.08	0.00	0.00	(0.00 to 0.00)	(-0.07 to 0.06)
4 103	0.00	-0.27	0.00	-0.02	(0.00 to 0.00)	(-0.09 to 0.04)

Girder 3 Deflections - in

Tenth Pt	Total Noncomp Dead	Steel	Wet Con-crete	Super-imposed Dead	Max LL+I Down	Max LL+I Up	Sidewalk Down	Sidewalk Up
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	0.873	0.306	0.567	0.057	0.382	0.068	0.000	0.000
2	1.593	0.562	1.031	0.105	0.716	0.132	0.000	0.000
3	2.094	0.745	1.350	0.137	0.973	0.189	0.000	0.000
4	2.331	0.838	1.493	0.152	1.130	0.235	0.000	0.000
5	2.290	0.837	1.453	0.148	1.181	0.266	0.000	0.000
6	2.000	0.750	1.250	0.127	1.119	0.278	0.000	0.000
7	1.509	0.589	0.920	0.094	0.953	0.266	0.000	0.000
8	0.888	0.370	0.517	0.054	0.672	0.213	0.000	0.000
9	0.357	0.163	0.194	0.021	0.335	0.119	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	-0.162	-0.118	-0.044	-0.006	0.341	0.128	0.000	0.000
12	-0.056	-0.159	0.104	0.007	0.707	0.222	0.000	0.000
13	0.248	-0.135	0.383	0.031	1.036	0.272	0.000	0.000
14	0.540	-0.093	0.633	0.053	1.258	0.281	0.000	0.000
15	0.655	-0.075	0.730	0.061	1.344	0.259	0.000	0.000
16	0.542	-0.092	0.634	0.053	1.258	0.281	0.000	0.000
17	0.252	-0.134	0.385	0.032	1.036	0.272	0.000	0.000
18	-0.052	-0.158	0.106	0.007	0.708	0.222	0.000	0.000

19	-0.160	-0.117	-0.043	-0.006	0.341	0.128	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.356	0.163	0.193	0.021	0.335	0.119	0.000	0.000
22	0.884	0.369	0.515	0.054	0.671	0.213	0.000	0.000
23	1.504	0.588	0.917	0.094	0.952	0.266	0.000	0.000
24	1.996	0.749	1.247	0.127	1.119	0.279	0.000	0.000
25	2.287	0.836	1.450	0.148	1.181	0.266	0.000	0.000
26	2.328	0.837	1.490	0.152	1.130	0.235	0.000	0.000
27	2.092	0.744	1.348	0.137	0.973	0.189	0.000	0.000
28	1.591	0.561	1.030	0.105	0.716	0.132	0.000	0.000
29	0.873	0.306	0.567	0.057	0.383	0.068	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Influence surfaces for deflection not using AASHTO 10.6.4.

Girder 3 Impact Factors

Axle at Tenth Pt	Shear Truck	Shear Lane	Moment Pos	Moment Neg	Defl	React
0	1.1754	1.1754	1.1754	1.1695	1.1754	1.1754
1	1.1859	1.1754	1.1754	1.1695	1.1754	
2	1.1976	1.1754	1.1754	1.1695	1.1754	
3	1.2110	1.1754	1.1754	1.1695	1.1754	
4	1.2262	1.1754	1.1754	1.1695	1.1754	
5	1.2439	1.1754	1.1754	1.1695	1.1754	
6	1.2262	1.1754	1.1754	1.1695	1.1754	
7	1.2110	1.1754	1.1754	1.1695	1.1754	
8	1.1976	1.1754	1.1754	1.1695	1.1754	
9	1.1859	1.1754	1.1754	1.1695	1.1754	
10L	1.1754	1.1754	1.1695	1.1695	1.1695	1.1075
10R	1.1639	1.1639	1.1695	1.1695	1.1695	1.1075
11	1.1742	1.1639	1.1639	1.1695	1.1639	
12	1.1859	1.1639	1.1639	1.1695	1.1639	
13	1.1992	1.1639	1.1639	1.1695	1.1639	
14	1.2146	1.1639	1.1639	1.1695	1.1639	
15	1.2326	1.1639	1.1639	1.1714	1.1639	
16	1.2146	1.1639	1.1639	1.1695	1.1639	
17	1.1992	1.1639	1.1639	1.1695	1.1639	
18	1.1859	1.1639	1.1639	1.1695	1.1639	
19	1.1742	1.1639	1.1639	1.1695	1.1639	
20L	1.1639	1.1639	1.1695	1.1695	1.1695	1.1075
20R	1.1754	1.1754	1.1695	1.1695	1.1695	1.1075
21	1.1859	1.1754	1.1754	1.1695	1.1754	
22	1.1976	1.1754	1.1754	1.1695	1.1754	
23	1.2110	1.1754	1.1754	1.1695	1.1754	
24	1.2262	1.1754	1.1754	1.1695	1.1754	
25	1.2439	1.1754	1.1754	1.1695	1.1754	
26	1.2262	1.1754	1.1754	1.1695	1.1754	
27	1.2110	1.1754	1.1754	1.1695	1.1754	
28	1.1976	1.1754	1.1754	1.1695	1.1754	
29	1.1859	1.1754	1.1754	1.1695	1.1754	
30	1.1754	1.1754	1.1754	1.1695	1.1754	1.1754

Girder 3 Wheel Location from Girder 1 by Tenth Point - ft

Lane values along a line perpendicular to right girder.

Lane 1 Boundary

2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Wheel 1										
6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Wheel 2										
12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Lane 2 Boundary										
14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
Wheel 1										
16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Wheel 2										
22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00
	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00
	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00

Girder 4 Service Shear - k

Tenth Pt	Noncomp Dead	Super-Imposed Dead	Live+ Impact	Range	Sidewalk Pos	Sidewalk Neg
0	68.18	6.27	58.48	67.04	0.00	0.00
1	50.80	4.59	53.61	60.89	0.00	0.00
2	32.50	2.92	44.76	53.65	0.00	0.00
3	13.76	1.22	34.31	53.34	0.00	0.00
4	-4.94	-0.46	26.79	51.95	0.00	0.00
5	-23.67	-2.14	-40.67	65.69	0.00	0.00
6	-41.06	-3.77	-40.25	55.73	0.00	0.00
7	-57.31	-5.36	-45.12	54.90	0.00	0.00
8	-71.27	-6.86	-55.77	62.15	0.00	0.00
9	-89.15	-8.51	-63.77	68.05	0.00	0.00
10	-108.45	-10.19	-77.09	80.89	0.00	0.00
10R	96.43	9.28	76.29	85.70	0.00	0.00
11	74.77	7.39	62.63	72.05	0.00	0.00
12	53.97	5.46	52.54	63.96	0.00	0.00
13	35.01	3.59	42.69	57.52	0.00	0.00
14	18.31	1.84	34.87	55.21	0.00	0.00
15	0.04	0.00	27.68	54.07	0.00	0.00
16	-18.22	-1.84	-33.97	55.44	0.00	0.00
17	-34.88	-3.58	-43.35	58.65	0.00	0.00
18	-53.81	-5.45	-52.56	63.86	0.00	0.00
19	-74.59	-7.38	-63.39	72.80	0.00	0.00
20	-96.25	-9.27	-76.11	85.53	0.00	0.00
20R	108.67	10.20	76.99	80.80	0.00	0.00
21	89.36	8.52	64.24	68.63	0.00	0.00
22	71.47	6.87	54.88	60.57	0.00	0.00
23	57.45	5.37	45.91	54.76	0.00	0.00
24	41.19	3.78	40.81	54.76	0.00	0.00
25	23.78	2.15	40.64	69.78	0.00	0.00
26	5.05	0.47	26.96	52.27	0.00	0.00
27	-13.65	-1.21	-33.17	53.93	0.00	0.00
28	-32.37	-2.91	-41.64	55.23	0.00	0.00

29	-50.67	-4.58	-49.84	57.62	0.00	0.00
30	-68.04	-6.26	-58.43	66.90	0.00	0.00

Concurrent Moment

0	0.00
1	555.51
2	1134.54
3	1574.11
4	1712.85
5	1658.98
6	1467.06
7	1255.41
8	774.06
9	433.81
10	380.13
11	386.50
12	620.40
13	1023.06
14	1322.33
15	1398.90
16	1282.56
17	1023.64
18	585.59
19	355.98
20	380.31
21	471.94
22	773.93
23	1254.61
24	1471.07
25	1688.41
26	1698.98
27	1585.07
28	1278.55
29	725.58
30	0.00

Girder 4 Service Moment - k-ft

Tenth Pt	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk Max	Sidewalk Min
0	0.00	0.00	0.00	-0.01	0.00	0.00
1	953.80	86.91	773.65	-129.40	0.00	0.00
2	1613.20	146.53	1278.57	-259.05	0.00	0.00
3	1978.32	179.38	1640.78	-388.02	0.00	0.00
4	2048.81	185.47	1813.75	-516.23	0.00	0.00
5	1819.94	164.61	1815.55	-644.39	0.00	0.00
6	1312.76	117.77	1612.97	-768.22	0.00	0.00
7	527.46	45.00	1255.41	-895.32	0.00	0.00
8	-489.48	-52.08	774.06	-1026.98	0.00	0.00
9	-1786.25	-176.17	433.81	-1517.40	0.00	0.00
10	-3374.84	-326.38	380.13	-2378.60	0.00	0.00
11	-1835.34	-176.41	386.50	-1429.73	0.00	0.00
12	-682.25	-60.78	726.93	-873.68	0.00	0.00
13	130.86	21.59	1093.38	-741.26	0.00	0.00
14	618.22	70.92	1343.89	-713.03	0.00	0.00
15	784.31	87.57	1433.40	-680.05	0.00	0.00
16	619.81	71.02	1343.92	-712.89	0.00	0.00
17	134.32	21.81	1093.63	-740.97	0.00	0.00
18	-665.24	-59.63	678.43	-873.19	0.00	0.00

19	-1828.93	-175.93	355.98	-1429.17	0.00	0.00
20	-3374.45	-326.36	380.31	-2378.17	0.00	0.00
21	-1791.05	-176.53	471.94	-1517.37	0.00	0.00
22	-504.33	-53.15	773.93	-1027.14	0.00	0.00
23	536.09	45.55	1254.61	-895.51	0.00	0.00
24	1309.15	117.52	1611.71	-768.38	0.00	0.00
25	1817.08	164.41	1814.64	-644.52	0.00	0.00
26	2047.75	185.40	1813.52	-516.34	0.00	0.00
27	1979.08	179.43	1641.21	-388.10	0.00	0.00
28	1610.94	146.41	1279.39	-259.10	0.00	0.00
29	946.08	86.45	725.58	-129.43	0.00	0.00
30	0.00	0.00	0.00	-0.01	0.00	0.00

Concurrent Shear

0	58.48	-8.56
1	50.11	-8.47
2	38.97	-10.31
3	29.08	-18.04
4	22.03	-23.36
5	-14.72	32.83
6	-11.83	38.41
7	-8.30	45.12
8	-6.37	55.77
9	-4.28	63.77
10	-3.81	77.09
11	62.63	-9.41
12	45.10	-11.42
13	38.32	-14.83
14	30.64	-20.28
15	25.76	-25.89
16	22.77	33.41
17	27.99	43.35
18	33.34	52.56
19	-9.41	63.39
20	-9.41	76.11
21	64.24	-4.39
22	54.88	-5.70
23	45.91	-8.55
24	37.65	-11.38
25	32.85	-22.40
26	23.08	-21.43
27	-17.77	29.50
28	-13.29	39.25
29	40.37	48.71
30	-8.47	58.43

Service Max Moment Contribution by Lane

	1	2
0	0.00	0.00
1	112.45	661.20
2	215.43	1063.14
3	286.76	1354.02
4	322.56	1491.19
5	339.09	1476.46
6	288.81	1324.16
7	223.79	1031.62
8	136.74	637.31
9	78.85	354.96

10	80.34	299.79
11	50.38	336.12
12	82.28	644.65
13	177.85	915.53
14	233.14	1110.75
15	247.13	1186.27
16	233.17	1110.75
17	177.89	915.75
18	82.32	596.11
19	50.38	305.60
20	80.36	299.95
21	78.86	393.08
22	136.73	637.20
23	223.76	1030.85
24	288.78	1322.94
25	339.06	1475.59
26	322.54	1490.98
27	286.74	1354.47
28	215.43	1063.96
29	112.45	613.12
30	0.00	0.00

Service Min Moment Contribution by Lane

	1	2
0	0.00	-0.01
1	-31.21	-98.20
2	-62.31	-196.74
3	-92.64	-295.38
4	-121.80	-394.44
5	-149.61	-494.78
6	-170.65	-597.57
7	-187.84	-707.48
8	-195.19	-831.78
9	-238.57	-1278.82
10	-344.26	-2034.34
11	-224.74	-1204.99
12	-156.84	-716.84
13	-160.58	-580.68
14	-164.81	-548.22
15	-160.34	-519.71
16	-164.80	-548.09
17	-160.56	-580.41
18	-156.81	-716.38
19	-224.69	-1204.49
20	-344.24	-2033.93
21	-238.58	-1278.79
22	-195.21	-831.93
23	-187.86	-707.65
24	-170.67	-597.71
25	-149.63	-494.89
26	-121.81	-394.53
27	-92.65	-295.45
28	-62.32	-196.78
29	-31.21	-98.22
30	0.00	-0.01

Girder 4 Single Truck Service Shear and Moment

Tenth Pt	LL+I Shr	Shr Range	Max Mom	Min Mom	Mom Range
0	50.32	55.58	0.00	0.00	0.01
1	46.17	51.42	661.20	-80.19	741.39
2	38.61	45.47	1062.21	-160.65	1222.87
3	31.37	48.47	1320.04	-241.20	1561.24
4	24.73	48.22	1412.20	-322.08	1734.28
5	-36.16	60.24	1370.58	-404.01	1774.59
6	-35.28	50.24	1209.02	-488.00	1697.02
7	-37.66	48.30	918.65	-577.88	1496.53
8	-43.55	49.25	588.08	-674.74	1262.81
9	-47.10	49.22	228.19	-778.68	1006.87
10	52.63	58.63	257.52	-888.83	1146.35
11	48.07	54.06	280.57	-693.78	974.35
12	41.73	48.01	644.65	-573.40	1218.05
13	36.05	47.35	915.53	-462.01	1377.55
14	31.17	49.34	1110.75	-354.91	1465.66
15	24.94	48.66	1172.90	-250.41	1423.31
16	-30.27	49.57	1110.75	-354.83	1465.58
17	-35.18	47.85	915.75	-461.91	1377.66
18	-40.73	47.94	596.11	-573.32	1169.43
19	-47.47	53.52	237.61	-693.73	931.34
20	52.23	56.15	257.57	-888.84	1146.41
21	47.96	49.91	257.68	-778.68	1036.36
22	44.53	48.97	588.40	-674.74	1263.14
23	38.95	48.43	918.75	-577.87	1496.62
24	36.09	49.52	1208.21	-487.99	1696.20
25	36.13	63.68	1370.19	-404.01	1774.20
26	24.90	48.49	1412.20	-322.08	1734.28
27	-30.11	48.94	1320.62	-241.20	1561.82
28	-35.06	46.62	1063.12	-160.65	1223.77
29	-42.41	47.71	613.12	-80.19	693.31
30	-48.91	54.21	0.00	0.00	0.01

Girder 4 Service Torque - k-ft

Tenth Pt	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Sidewalk
0	-0.01	-0.01	-8.92	0.00
1	-0.01	-0.01	-8.96	0.00
2	0.02	0.02	-7.73	0.00
3	-0.01	-0.01	-5.17	0.00
4	-0.05	-0.04	-2.96	0.00
5	-0.12	-0.08	3.95	0.00
6	-0.12	-0.08	2.77	0.00
7	0.00	0.01	4.80	0.00
8	0.02	0.06	8.39	0.00
9	0.06	0.05	9.87	0.00
10	0.06	0.05	9.86	0.00
10R	0.05	0.03	9.89	0.00
11	0.05	0.03	9.86	0.00
12	-0.02	-0.06	-8.74	0.00
13	-0.01	-0.05	-6.81	0.00
14	0.00	-0.01	-4.33	0.00
15	0.00	0.00	-3.64	0.00
16	0.00	0.01	4.33	0.00
17	0.01	0.05	6.81	0.00
18	0.02	0.06	8.74	0.00
19	-0.05	-0.02	-9.86	0.00

20	-0.05	-0.02	-9.86	0.00
20R	-0.05	-0.05	-9.88	0.00
21	-0.05	-0.05	-9.86	0.00
22	-0.02	-0.06	-8.39	0.00
23	0.00	-0.01	-4.80	0.00
24	0.12	0.08	-2.77	0.00
25	0.12	0.08	-3.95	0.00
26	0.05	0.04	2.96	0.00
27	0.01	0.01	5.17	0.00
28	-0.02	-0.02	7.72	0.00
29	0.01	0.01	8.96	0.00
30	0.01	0.01	8.92	0.00

Sign convention

Positive torque - clockwise looking downstation

Girder 4 Service Lateral Bending Moment (x girder ht) - k-ft2
in Bottom Flange from Nonuniform Torsion

Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk
4	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00
32	0.00	0.00	0.00	0.00	0.00
33	0.00	0.00	0.00	0.00	0.00
34	0.00	0.00	0.00	0.00	0.00
36	0.00	0.00	0.00	0.00	0.00
63	0.00	0.00	0.00	0.00	0.00
64	0.00	0.00	0.00	0.00	0.00
65	0.00	0.00	0.00	0.00	0.00
66	0.00	0.00	0.00	0.00	0.00
67	0.00	0.00	0.00	0.00	0.00
68	0.00	0.00	0.00	0.00	0.00
69	0.00	0.00	0.00	0.00	0.00
70	0.00	0.00	0.00	0.00	0.00
72	0.00	0.00	0.00	0.00	0.00
96	0.00	0.00	0.00	0.00	0.00
97	0.00	0.00	0.00	0.00	0.00
98	0.00	0.00	0.00	0.00	0.00
99	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00
101	0.00	0.00	0.00	0.00	0.00
102	0.00	0.00	0.00	0.00	0.00
104	0.00	0.00	0.00	0.00	0.00

Pos. value for tens. on left of bot. flg., looking downstation.
Reverse for top flg.

Girder 4 Service Vertical Reactions - k

Supp/Node	Noncomp Dead	Super-Imposed Dead	Max Live+ Impact	Min Live+ Impact	Sidewalk Max	Sidewalk Min

Governing

1	4	68.40	6.27	59.33	-14.43	0.00	0.00
	Steel	21.53					
	Concrete	46.87					

Max LL+I Contribution by Lane

1	2
6.65	52.68

Concurrent reactions using same governing loaded lanes as for Max LL+I

Concurrent at gdr 1 - 23.73

Contribution by all lanes

1	2
22.52	1.21

Concurrent at gdr 2 - 49.20

Contribution by all lanes

1	2
39.39	9.81

Concurrent at gdr 3 - 50.98

Contribution by all lanes

1	2
21.21	29.76

2	36	205.11	19.47	117.65	-20.96	0.00	0.00
	Steel	58.73					
	Concrete	146.38					

Max LL+I Contribution by Lane

1	2
12.15	105.50

Concurrent reactions using same governing loaded lanes as for Max LL+I

Concurrent at gdr 1 - 47.27

Contribution by all lanes

1	2
46.01	1.26

Concurrent at gdr 2 - 95.75

Contribution by all lanes

1	2
78.29	17.45

Concurrent at gdr 3 - 109.12

Contribution by all lanes
1 2
45.70 63.42

3 72 205.15 19.48 117.67 -20.96 0.00 0.00
Steel 58.74
Concrete 146.41

Max LL+I Contribution by Lane
1 2
12.15 105.52

Concurrent reactions using same governing loaded lanes
as for Max LL+I

Concurrent at gdr 1 - 47.28

Contribution by all lanes
1 2
46.02 1.26

Concurrent at gdr 2 - 95.75

Contribution by all lanes
1 2
78.30 17.45

Concurrent at gdr 3 - 109.12

Contribution by all lanes
1 2
45.70 63.41

4 104 68.26 6.26 59.29 -14.43 0.00 0.00
Steel 21.49
Concrete 46.77

Max LL+I Contribution by Lane
1 2
6.65 52.64

Concurrent reactions using same governing loaded lanes
as for Max LL+I

Concurrent at gdr 1 - 23.73

Contribution by all lanes
1 2
22.51 1.21

Concurrent at gdr 2 - 49.18

Contribution by all lanes

1 2
39.38 9.81

Concurrent at gdr 3 - 50.96

Contribution by all lanes
1 2
21.21 29.75

Truck Loading

1	4	54.27	-7.05
2	36	55.95	-8.95
3	72	55.95	-8.95
4	104	54.23	-7.05

Lane Loading

1	4	59.33	-9.44
2	36	117.65	-11.46
3	72	117.67	-11.47
4	104	59.29	-9.44

Support Rotations - Degrees
About global axes used in Geometry table

Supp/Node		Noncomp Dead		Superimp Dead		LL+I+SW Range	
		x-axis	y-axis	x-axis	y-axis	x-axis	y-axis
1	4	0.00	0.27	0.00	0.02	(0.00 to 0.00)	(-0.05 to 0.11)
2	36	0.00	-0.08	0.00	0.00	(0.00 to 0.00)	(-0.08 to 0.08)
3	72	0.00	0.08	0.00	0.00	(0.00 to 0.00)	(-0.08 to 0.08)
4	104	0.00	-0.27	0.00	-0.02	(0.00 to 0.00)	(-0.11 to 0.05)

Girder 4 Deflections - in

Tenth Pt	Total Noncomp Dead	Steel	Wet Con-crete	Super-imposed Dead	Max LL+I Down	Max LL+I Up	Sidewalk Down	Sidewalk Up
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	0.883	0.308	0.576	0.058	0.470	0.087	0.000	0.000
2	1.590	0.557	1.032	0.104	0.872	0.168	0.000	0.000
3	2.091	0.740	1.352	0.137	1.190	0.240	0.000	0.000
4	2.336	0.836	1.500	0.152	1.388	0.298	0.000	0.000
5	2.305	0.838	1.467	0.148	1.458	0.338	0.000	0.000
6	2.040	0.760	1.280	0.129	1.392	0.355	0.000	0.000
7	1.554	0.600	0.954	0.096	1.184	0.335	0.000	0.000
8	0.939	0.385	0.554	0.057	0.846	0.269	0.000	0.000
9	0.370	0.167	0.202	0.021	0.423	0.152	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	-0.172	-0.122	-0.050	-0.006	0.423	0.162	0.000	0.000
12	-0.056	-0.161	0.105	0.007	0.870	0.281	0.000	0.000
13	0.252	-0.136	0.388	0.031	1.270	0.344	0.000	0.000
14	0.555	-0.092	0.647	0.053	1.545	0.357	0.000	0.000
15	0.680	-0.071	0.751	0.062	1.649	0.331	0.000	0.000
16	0.575	-0.087	0.662	0.055	1.552	0.355	0.000	0.000
17	0.286	-0.127	0.414	0.033	1.282	0.343	0.000	0.000
18	-0.039	-0.157	0.119	0.008	0.879	0.282	0.000	0.000

19	-0.172	-0.122	-0.050	-0.006	0.426	0.163	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.363	0.165	0.198	0.021	0.417	0.150	0.000	0.000
22	0.900	0.372	0.528	0.054	0.828	0.266	0.000	0.000
23	1.514	0.588	0.926	0.094	1.176	0.338	0.000	0.000
24	2.033	0.758	1.275	0.129	1.392	0.357	0.000	0.000
25	2.302	0.837	1.464	0.148	1.458	0.338	0.000	0.000
26	2.329	0.834	1.495	0.152	1.389	0.299	0.000	0.000
27	2.095	0.741	1.354	0.137	1.195	0.241	0.000	0.000
28	1.600	0.561	1.039	0.105	0.879	0.169	0.000	0.000
29	0.883	0.307	0.575	0.058	0.470	0.087	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Influence surfaces for deflection not using AASHTO 10.6.4.

Girder 4 Impact Factors

Axle at Tenth Pt	Shear Truck	Shear Lane	Moment Pos	Moment Neg	Defl	React
0	1.1754	1.1754	1.1754	1.1695	1.1754	1.1754
1	1.1859	1.1754	1.1754	1.1695	1.1754	
2	1.1976	1.1754	1.1754	1.1695	1.1754	
3	1.2110	1.1754	1.1754	1.1695	1.1754	
4	1.2262	1.1754	1.1754	1.1695	1.1754	
5	1.2439	1.1754	1.1754	1.1695	1.1754	
6	1.2262	1.1754	1.1754	1.1695	1.1754	
7	1.2110	1.1754	1.1754	1.1695	1.1754	
8	1.1976	1.1754	1.1754	1.1695	1.1754	
9	1.1859	1.1754	1.1754	1.1695	1.1754	
10L	1.1754	1.1754	1.1695	1.1695	1.1695	1.1075
10R	1.1639	1.1639	1.1695	1.1695	1.1695	1.1075
11	1.1742	1.1639	1.1639	1.1695	1.1639	
12	1.1859	1.1639	1.1639	1.1695	1.1639	
13	1.1992	1.1639	1.1639	1.1695	1.1639	
14	1.2146	1.1639	1.1639	1.1695	1.1639	
15	1.2326	1.1639	1.1639	1.1714	1.1639	
16	1.2146	1.1639	1.1639	1.1695	1.1639	
17	1.1992	1.1639	1.1639	1.1695	1.1639	
18	1.1859	1.1639	1.1639	1.1695	1.1639	
19	1.1742	1.1639	1.1639	1.1695	1.1639	
20L	1.1639	1.1639	1.1695	1.1695	1.1695	1.1075
20R	1.1754	1.1754	1.1695	1.1695	1.1695	1.1075
21	1.1859	1.1754	1.1754	1.1695	1.1754	
22	1.1976	1.1754	1.1754	1.1695	1.1754	
23	1.2110	1.1754	1.1754	1.1695	1.1754	
24	1.2262	1.1754	1.1754	1.1695	1.1754	
25	1.2439	1.1754	1.1754	1.1695	1.1754	
26	1.2262	1.1754	1.1754	1.1695	1.1754	
27	1.2110	1.1754	1.1754	1.1695	1.1754	
28	1.1976	1.1754	1.1754	1.1695	1.1754	
29	1.1859	1.1754	1.1754	1.1695	1.1754	
30	1.1754	1.1754	1.1754	1.1695	1.1754	1.1754

Girder 4 Wheel Location from Girder 1 by Tenth Point - ft

Lane values along a line perpendicular to right girder.

Lane 1 Boundary

2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Wheel 1										
6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Wheel 2										
12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Lane 2 Boundary										
14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
Wheel 1										
18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
Wheel 2										
24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00
	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00
	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00

run completed

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*************************************************************
MDX Steel Highway Girder Design Program, Version 6.2.137
Load Factor Design - Composite Girder

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Ph:573-446-3221 Fax:573-446-3278 Email: support@mdxsoftware.com
*************************************************************
 May 17, 2006 -  2:48 pm
 Files: Bonner.R1
        R1.OUT

    Contents of data file-

       ************************************************
       ID: BONNER BRIDGE CHANNEL SPANS
       CONDITIONS
         A36 STIFFENER STEEL
         ENGLISH INPUT
         ENGLISH OUTPUT
         FISHBELLY HAUNCH
         INTERMEDIATE TRANSVERSE STIFFENERS BOTH SIDES OF WEB
         LFD METHOD
         RATE MODE
         SYSTEM FORCES
       DATA
         BFISPB 8. 8. 8. 8.
         BFISPT 0.6875 0.6875 0.6875 0.6875
         BFOSPB 18. 18. 18. 18.
         BFOSPT 0.6875 0.6875 0.6875 0.6875
         BLONGSP 140. 40. 140. 40.
         BR 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20.
         20. 20. 20. 20. 20. 20. 20. 20.
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BSPL 15. 12. 71. 12. 18. 16. 34. 15. 114. 15. 34. 16. 18. 12. 71. 12.
EDGEH 1.5 1.5 1.5 1.5
EDGEV 1.5 1.5 1.5 1.5
EDGEW 3. 3. 3. 3.
ESLABW 87.
FBLTDIAM 0.875
FNHOLES 4 4 4 4
FPC 3.
FPEND 1.5 1.5 1.5 1.5
FSPBSP 3. 3. 3. 3.
FY 32.
FYRB 40.
GAGEF 3. 3. 3. 3.
GAGEH 3. 3. 3. 3.
GAGEV 3. 3. 3. 3.
HAUNCH 3.125
HAUNH 0. 31.5 31.5 31.5 31.5 0.
HAUNV 0. 33. 33. 33. 33. 0.
IGIRD 1
NBLTB 24 24 24 24
NBLTT 24 24 24 24
NBSTIFF 1 3 3 1
NLINEH 22 22 22 22
NLINEV 3 3 3 3
PIERW 3.
POSREBAR 2.79
REBSPC 158.25 3.5 176.5 3.5
SLABRA 1.4
SLABRP 4.625
SLABT 7.25
SLABWEAR 0.
SPL 117.5 95. 75. 95.
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1.625 2. 1.625 0.75
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SPLLST 0.5
SPLLSW 4.
SPLT 0.375 0.375 0.375 0.375
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SPLTST 0.5
SPLTSW 6.
SPLTYP 1 1 1 1
SPLWD 72. 105. 72. 105. 72.
SPLWT 0.5
SPN 160. 180. 160.
SS 0.5
STFGAP 0.
SUPBST 0.5
SUPBSW 8.
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TFOSPT 0.6875 0.6875 0.6875 0.6875
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  60. 60. 60. 60. 60. 60. 60. 60. 60. 60. 60. 60. 60.
  WCONC 150.
  WSTRES 18.
GO
************************************************
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Girder 1 Case Data - BONNER BRIDGE CHANNEL SPANS

AASHTO Specification

Load Factor Method
17th Edition Standard Specifications for Highway Bridges

Dimensions (additional information available in Dimensions table)

Given dimensions-

Web Depth	72.00 in 72.00 in	105.00 in	72.00 in	105.00 in
Web Thickness	0.50 in 0.50 in	0.50 in	0.50 in	0.50 in
Long. Stiff. Width	4.00 in 4.00 in	4.00 in	4.00 in	4.00 in
Long. Stiff. Thickness	0.50 in 0.50 in	0.50 in	0.50 in	0.50 in
Trans. Stiff. Width	6.00 in 6.00 in	6.00 in	6.00 in	6.00 in
Trans. Stiff. Thickness	0.50 in 0.50 in	0.50 in	0.50 in	0.50 in
Bearing Stiff. Width	8.00 in	8.00 in	8.00 in	8.00 in
Bearing Stiff. Thickness	0.50 in	0.50 in	0.50 in	0.50 in

Execution Mode

Rate Mode

Geometry

Brace locations

0.00 ft	20.00 ft	40.00 ft	60.00 ft
80.00 ft	100.00 ft	120.00 ft	140.00 ft
160.00 ft	180.00 ft	200.00 ft	220.00 ft
240.00 ft	260.00 ft	280.00 ft	300.00 ft
320.00 ft	340.00 ft	360.00 ft	380.00 ft
400.00 ft	420.00 ft	440.00 ft	460.00 ft
480.00 ft	500.00 ft		

Unbraced length of comp. flange at support 2 is 20.00 ft.
Unbraced length of comp. flange at support 3 is 20.00 ft.

Cover plates

No cover plates

Curvature

```
  No curvature

Flange splices

  Top flange splice locations

       15.00 ft     27.00 ft     98.00 ft    110.00 ft
      128.00 ft    144.00 ft    178.00 ft    193.00 ft
      307.00 ft    322.00 ft    356.00 ft    372.00 ft
      390.00 ft    402.00 ft    473.00 ft    485.00 ft


  Bottom flange splice locations

       15.00 ft     27.00 ft     98.00 ft    110.00 ft
      128.00 ft    144.00 ft    178.00 ft    193.00 ft
      307.00 ft    322.00 ft    356.00 ft    372.00 ft
      390.00 ft    402.00 ft    473.00 ft    485.00 ft


Girder Type

  Plate Girder

Section properties

  Composite region for composite loading -   0. -   500.00 ft

Span lengths

                              160.00 ft    180.00 ft    160.00 ft

Stiffeners


  Bearing Stiffeners

    Number of brng stfs each side at supp locs
          1  3  3  1

  Longitudinal Stiffeners

    Bottom longitudinal stiffener regions-
                              140.00   -   180.00 ft    320.00   -   360.00 ft

  Transverse Stiffeners

    Transverse stiffeners both sides
    Stiffener transitions
    Stiffener clips            0.50 in

Web Splices

  Web splice locations       117.50 ft    212.50 ft    287.50 ft    382.50 ft


Web haunches

  Fish belly web haunches at interior supports:
      Support  Haunch Left   Haunch Right
               V(in)  H(ft)  H(ft)  V(in)
         1       0.0    0.0    0.0    0.0
```



```
         2      33.0   31.5   31.5   33.0
         3      33.0   31.5   31.5   33.0
         4       0.0    0.0    0.0    0.0
  Pier width for haunch geometry =  3.00 ft

Fatigue

  AWS minimum welds
  Fatigue stress category B flange splices
  Case I   road for fatigue
  Redundant load path structure

Impact

  Impact factors assigned in GSA program

Loading

  Load Factors gamma, beta     1.300        1.670
  Unshored construction

Reactions

  Max unfactored live load+impact reactions
        59.33 k     117.65 k     117.67 k      59.29 k
  Min unfactored live load+impact reactions
       -14.43 k     -20.96 k     -20.96 k     -14.43 k
  Total comp. and noncomp. unfactored dead load reactions
        74.67 k     224.59 k     224.63 k      74.53 k

Material


 Concrete

  Unit wt of concrete           150. lb/cu ft
  Slab t for strength          7.25 in      7.25 in      7.25 in
  Concrete strength            3.00 ksi
  Effective slab width        87.00 in
  Neg mom rebar area
        1.40 in2    1.40 in2
  Rebar placement from bottom of slab
        4.62 in     4.62 in
  Pos mom rebar area                       2.79 in2     2.79 in2     2.79 in2
  Negative mom. slab used in dead load 2 analysis
  Slab haunch                  3.12 in      3.12 in      3.12 in
  Self weight slab width      103.50 in

 Steel

  Top flange yield            32.00 ksi    32.00 ksi    32.00 ksi    32.00 ksi
                              32.00 ksi
  Bottom flange yield         32.00 ksi    32.00 ksi    32.00 ksi    32.00 ksi
                              32.00 ksi
  Web yield                   32.00 ksi    32.00 ksi    32.00 ksi    32.00 ksi
                              32.00 ksi
  Rebar yield                 40.00 ksi

Summary tables

  Standard resolution summary tables

Units
```

```
  Input Units:  U.S. Customary
  Output Units: U.S. Customary

* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *
(Nonprismatic section used for this analysis.)

 Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

  Max live load+impact shear
       58.5L    53.6T    44.8T    34.3T    26.8T   -40.7T   -40.2T   -45.1L

  Dead load 1 shear
       68.2     50.8     32.5     13.8     -4.9    -23.7    -41.1    -57.3

  Dead load 2 shear
        6.3      4.6      2.9      1.2     -0.5     -2.1     -3.8     -5.4

  Max live load+impact moment
        0.0L   773.7T  1278.6L  1640.8L  1813.8L  1815.5L  1613.0L  1255.4L

  Min live load+impact moment
        0.0L  -129.4L  -259.0L  -388.0L  -516.2L  -644.4L  -768.2L  -895.3L

  Dead load 1 moment
        0.0    953.8   1613.2   1978.3   2048.8   1819.9   1312.8    527.5

  Dead load 2 moment
        0.0     86.9    146.5    179.4    185.5    164.6    117.8     45.0
* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *

   Rate Web depth            =  72.0000 in
        Web thickness        =   0.5000 in


Tenth    Top Flange   Min Top   Bott Flange  Min Bott   Flange to Web Weld
Point      Width      Flange t     Width     Flange t     Top       Bott

   0       18.00       0.750       18.00       0.750     1/ 4      1/ 4
   1       18.00       1.625       18.00       1.625     5/16      5/16
   2       18.00       2.000       18.00       2.000     5/16      5/16
   3       18.00       2.000       18.00       2.000     5/16      5/16
   4       18.00       2.000       18.00       2.000     5/16      5/16
   5       18.00       2.000       18.00       2.000     5/16      5/16
   6       18.00       2.000       18.00       2.000     5/16      5/16
   7       18.00       0.750       18.00       0.750     1/ 4      1/ 4

   2 -   8.00 x  0.500 brng. stf. at   0.00 ft   from left end of web section
         6.00 x   0.50 transverse stiffeners
           1 stiffener space at    60.00 in
                 (straddles web splice)

          Composite section properties at max positive moment - n =  9

             I                              =  194119. in4
             S (top steel)                  =  9350.29 in3
             S (bottom steel)               =  3514.14 in3
             S (concrete)                   =  6662.57 in3
             Neutral axis from bottom flange =   55.24 in


          Composite section properties at max positive moment - n = 27
```



```
             I                              =  152917. in4
             S (top steel)                  =  5158.18 in3
             S (bottom steel)               =  3298.87 in3
             S (concrete)                   =  4021.96 in3
             Neutral axis from bottom flange =   46.35 in


          Section properties of girder alone at max positive moment

             I                              =  114144. in4
             S (top)                        =  3003.79 in3
             S (bottom)                     =  3003.79 in3
             Neutral axis from bottom flange =   38.00 in


          Section properties of girder alone at max negative moment

             I                              =   51278. in4
             S (top)                        =  1395.32 in3
             S (bottom)                     =  1395.32 in3
             Neutral axis from bottom flange =   36.75 in


          Composite section properties at max negative moment

             I                              =   51278. in4
             S (top of steel)               =  1395.32 in3
             S (bottom of steel)            =  1395.32 in3
             S (reinf)                      =  1172.07 in3
             Neutral axis from bottom flange =   36.75 in


* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *


Web Section  1 Stresses
-----------------------

          Factored  Shear                    Factored   Bending
Tenth     Shear     Strength                 Moment     Strength
Point     (k )      (k )          Ratio      (k-ft)     (k-ft)        Ratio

  0        223.7    543.6 (5)     0.412        0.0    4390.7 (6)    0.000
  1        188.4    626.8 (3)     0.301     3032.5   10163.9 (20)   0.298
  2        143.2    626.8 (3)     0.228     5063.4   11525.1 (20)   0.439
  3         94.0    626.8 (3)     0.150     6367.1   11525.1 (20)   0.552
  4         61.6    626.8 (3)     0.098     6842.2   11525.1 (20)   0.594
  5        121.8    626.8 (3)     0.194     6521.5   11525.1 (20)   0.566
  6        145.7    626.8 (3)     0.232     5361.4   11525.1 (20)   0.465
  7        179.4    626.8 (3)     0.286     3469.7    7040.1 (20)   0.493

            Stiffeners
Location

   5.00    212.7    626.8 (3)     0.339
  10.00    201.7    626.8 (3)     0.322
  15.00    190.6    626.8 (3)     0.304
  20.00    177.1    626.8 (3)     0.283
  25.00    163.0    626.8 (3)     0.260
```

30.00	148.9	626.8 (3)	0.237	
35.00	134.0	626.8 (3)	0.214	
40.00	118.6	626.8 (3)	0.189	
45.00	103.2	626.8 (3)	0.165	
50.00	89.9	626.8 (3)	0.143	
55.00	79.8	626.8 (3)	0.127	
60.00	69.7	626.8 (3)	0.111	
65.00	65.4	626.8 (3)	0.104	
70.00	84.2	626.8 (3)	0.134	
75.00	103.0	626.8 (3)	0.164	
85.00	129.3	626.8 (3)	0.206	
90.00	136.7	626.8 (3)	0.218	
95.00	144.2	626.8 (3)	0.230	
100.00	154.1	626.8 (3)	0.246	
105.00	164.6	626.8 (3)	0.263	
110.00	175.2	626.8 (3)	0.279	
115.00	187.5	626.8 (3)	0.299	

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(5) C 0.58 Fyw D t
(20) compact section
(6) Fy S(equiv)
Maximum moment in factored strength expression

Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	
0.00	134.00	16.80	10.72	0.638	28.80	17.87	0.620

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	16.00	B	863.10	T	3502.	18000.	0.195
Base metal *	16.00	B	741.39	T	3000.	16000.	0.187
Base metal	32.00	B	1455.42	T	5092.	18000.	0.283
Base metal *	32.00	B	1222.87	T	4269.	16000.	0.267
Base metal	48.00	B	1872.42	T	6577.	18000.	0.365
Base metal *	48.00	B	1561.24	T	5471.	16000.	0.342
Base metal	64.00	B	2091.59	T	7386.	18000.	0.410
Base metal *	64.00	B	1734.28	T	6109.	16000.	0.382
Base metal	80.00	B	2160.38	T	7682.	18000.	0.427
Base metal *	80.00	B	1774.59	T	6294.	16000.	0.393
Base metal	96.00	B	2049.49	T	7362.	18000.	0.409
Base metal *	96.00	B	1697.02	T	6078.	16000.	0.380
Base metal	112.00	B	1804.31	T	13062.	18000.	0.726
Base metal *	112.00	B	1496.53	T	10771.	16000.	0.673
Near flg-web weld	16.00	B	863.10	T	3401.	18000.	0.189
Near flg-web weld *	16.00	B	741.39	T	2913.	16000.	0.182
Near flg-web weld	32.00	B	1455.42	T	4908.	18000.	0.273
Near flg-web weld *	32.00	B	1222.87	T	4114.	16000.	0.257
Near flg-web weld	48.00	B	1872.42	T	6339.	18000.	0.352
Near flg-web weld *	48.00	B	1561.24	T	5273.	16000.	0.330
Near flg-web weld	64.00	B	2091.59	T	7119.	18000.	0.395

Near flg-web weld *	64.00	B	1734.28	T	5888.	16000.	0.368
Near flg-web weld	80.00	B	2160.38	T	7404.	18000.	0.411
Near flg-web weld *	80.00	B	1774.59	T	6066.	16000.	0.379
Near flg-web weld	96.00	B	2049.49	T	7095.	18000.	0.394
Near flg-web weld *	96.00	B	1697.02	T	5858.	16000.	0.366
Near flg-web weld	112.00	B	1804.31	T	12897.	18000.	0.717
Near flg-web weld *	112.00	B	1496.53	T	10635.	16000.	0.665
Base metal	16.00	B	863.10	T	3502.	18000.	0.195
Base metal *	16.00	B	741.39	T	3000.	16000.	0.187
Base metal	32.00	B	1455.42	T	5092.	18000.	0.283
Base metal *	32.00	B	1222.87	T	4269.	16000.	0.267
Base metal	48.00	B	1872.42	T	6577.	18000.	0.365
Base metal *	48.00	B	1561.24	T	5471.	16000.	0.342
Base metal	64.00	B	2091.59	T	7386.	18000.	0.410
Base metal *	64.00	B	1734.28	T	6109.	16000.	0.382
Base metal	80.00	B	2160.38	T	7682.	18000.	0.427
Base metal *	80.00	B	1774.59	T	6294.	16000.	0.393
Base metal	96.00	B	2049.49	T	7362.	18000.	0.409
Base metal *	96.00	B	1697.02	T	6078.	16000.	0.380
Base metal	112.00	B	1804.31	T	13062.	18000.	0.726
Base metal *	112.00	B	1496.53	T	10771.	16000.	0.673
Top flg. splice	15.00	B	817.09	T	1202.	18000.	0.067
Top flg splice *	15.00	B	702.67	T	1038.	16000.	0.065
Top flg. splice	27.00	B	1289.15	T	2341.	18000.	0.130
Top flg splice *	27.00	B	1087.78	T	1924.	16000.	0.120
Top flg. splice	98.00	B	2026.19	T	4919.	18000.	0.273
Top flg splice *	98.00	B	1678.68	T	3971.	16000.	0.248
Top flg. splice	110.00	B	1837.81	T	7851.	18000.	0.436
Top flg splice *	110.00	B	1523.41	T	6307.	16000.	0.394
Bot flg. splice	15.00	B	817.09	T	4659.	18000.	0.259
Bot flg splice *	15.00	B	702.67	T	4058.	16000.	0.254
Bot flg. splice	27.00	B	1289.15	T	5253.	18000.	0.292
Bot flg splice *	27.00	B	1087.78	T	4420.	16000.	0.276
Bot flg. splice	98.00	B	2026.19	T	8556.	18000.	0.475
Bot flg splice *	98.00	B	1678.68	T	7063.	16000.	0.441
Bot flg. splice	110.00	B	1837.81	T	13294.	18000.	0.739
Bot flg splice *	110.00	B	1523.41	T	10954.	16000.	0.685
Trans. stiff. toe	10.00	C	539.44	T	2161.	13000.	0.166
Trans. stiff. toe *	10.00	C	463.37	T	1851.	12000.	0.154
Trans. stiff. toe	15.00	C	809.16	T	3242.	13000.	0.249
Trans. stiff. toe *	15.00	C	695.05	T	2777.	12000.	0.231
Trans. stiff. toe	20.00	C	1011.18	T	4058.	13000.	0.312
Trans. stiff. toe *	20.00	C	861.76	T	3449.	12000.	0.287
Trans. stiff. toe	25.00	C	1196.28	T	4128.	13000.	0.318
Trans. stiff. toe *	25.00	C	1012.22	T	3485.	12000.	0.290
Trans. stiff. toe	30.00	C	1381.38	T	4771.	13000.	0.367
Trans. stiff. toe *	30.00	C	1162.68	T	4007.	12000.	0.334
Trans. stiff. toe	35.00	C	1533.61	T	5303.	13000.	0.408
Trans. stiff. toe *	35.00	C	1286.31	T	4438.	12000.	0.370
Trans. stiff. toe	40.00	C	1663.92	T	5762.	13000.	0.443
Trans. stiff. toe *	40.00	C	1392.05	T	4809.	12000.	0.401
Trans. stiff. toe	45.00	C	1794.23	T	6220.	13000.	0.478
Trans. stiff. toe *	45.00	C	1497.79	T	5180.	12000.	0.432
Trans. stiff. toe	50.00	C	1899.82	T	6595.	13000.	0.507
Trans. stiff. toe *	50.00	C	1582.87	T	5481.	12000.	0.457
Trans. stiff. toe	55.00	C	1968.31	T	6844.	13000.	0.526
Trans. stiff. toe *	55.00	C	1636.95	T	5678.	12000.	0.473
Trans. stiff. toe	60.00	C	2036.80	T	7094.	13000.	0.546
Trans. stiff. toe *	60.00	C	1691.02	T	5875.	12000.	0.490
Trans. stiff. toe	65.00	C	2095.89	T	7312.	13000.	0.562
Trans. stiff. toe *	65.00	C	1736.80	T	6044.	12000.	0.504
Trans. stiff. toe	70.00	C	2117.39	T	7403.	13000.	0.569
Trans. stiff. toe *	70.00	C	1749.40	T	6101.	12000.	0.508

Trans. stiff. toe	75.00	C	2138.88	T	7494.	13000.	0.576
Trans. stiff. toe *	75.00	C	1761.99	T	6158.	12000.	0.513
Trans. stiff. toe	80.00	C	2160.38	T	7585.	13000.	0.583
Trans. stiff. toe *	80.00	C	1774.59	T	6215.	12000.	0.518
Trans. stiff. toe	85.00	C	2125.73	T	7487.	13000.	0.576
Trans. stiff. toe *	85.00	C	1750.35	T	6148.	12000.	0.512
Trans. stiff. toe	90.00	C	2091.07	T	7388.	13000.	0.568
Trans. stiff. toe *	90.00	C	1726.11	T	6082.	12000.	0.507
Trans. stiff. toe	95.00	C	2056.42	T	7289.	13000.	0.561
Trans. stiff. toe *	95.00	C	1701.87	T	6015.	12000.	0.501
Trans. stiff. toe	100.00	C	1988.20	T	7077.	13000.	0.544
Trans. stiff. toe *	100.00	C	1646.90	T	5846.	12000.	0.487
Trans. stiff. toe	105.00	C	1911.58	T	13464.	13000.	1.036
Trans. stiff. toe *	105.00	C	1584.24	T	11094.	12000.	0.924
Trans. stiff. toe	110.00	C	1834.96	T	13059.	13000.	1.005
Trans. stiff. toe *	110.00	C	1521.59	T	10766.	12000.	0.897
Trans. stiff. toe	115.00	C	1748.54	T	12594.	13000.	0.969
Trans. stiff. toe *	115.00	C	1452.71	T	10403.	12000.	0.867

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	16.00	B	878.93	L	3584.	29000.	0.124
Base metal	32.00	B	1537.62	L	5401.	29000.	0.186
Base metal	48.00	B	2028.80	L	7153.	29000.	0.247
Base metal	64.00	B	2329.99	L	8256.	29000.	0.285
Base metal	80.00	B	2459.93	L	8774.	29000.	0.303
Base metal	96.00	B	2381.19	L	8577.	29000.	0.296
Base metal	112.00	B	2150.74	L	15627.	29000.	0.539
Near flg-web weld	16.00	B	878.93	L	3480.	29000.	0.120
Near flg-web weld	32.00	B	1537.62	L	5205.	29000.	0.179
Near flg-web weld	48.00	B	2028.80	L	6894.	29000.	0.238
Near flg-web weld	64.00	B	2329.99	L	7957.	29000.	0.274
Near flg-web weld	80.00	B	2459.93	L	8456.	29000.	0.292
Near flg-web weld	96.00	B	2381.19	L	8266.	29000.	0.285
Near flg-web weld	112.00	B	2150.74	L	15431.	29000.	0.532
Base metal	16.00	B	878.93	L	3584.	29000.	0.124
Base metal	32.00	B	1537.62	L	5401.	29000.	0.186
Base metal	48.00	B	2028.80	L	7153.	29000.	0.247
Base metal	64.00	B	2329.99	L	8256.	29000.	0.285
Base metal	80.00	B	2459.93	L	8774.	29000.	0.303
Base metal	96.00	B	2381.19	L	8577.	29000.	0.296
Base metal	112.00	B	2150.74	L	15627.	29000.	0.539
Top flg. splice	15.00	B	830.45	L	1213.	29000.	0.042
Top flg. splice	27.00	B	1349.78	L	2562.	29000.	0.088
Top flg. splice	98.00	B	2360.68	L	5869.	29000.	0.202
Top flg. splice	110.00	B	2186.06	L	9530.	29000.	0.329
Bot flg. splice	15.00	B	830.45	L	4626.	29000.	0.160
Bot flg. splice	27.00	B	1349.78	L	5527.	29000.	0.191
Bot flg. splice	98.00	B	2360.68	L	10002.	29000.	0.345
Bot flg. splice	110.00	B	2186.06	L	15875.	29000.	0.547
Trans. stiff. toe	10.00	C	549.34	L	2212.	21000.	0.105
Trans. stiff. toe	15.00	C	824.00	L	3318.	21000.	0.158
Trans. stiff. toe	20.00	C	1043.60	L	4208.	21000.	0.200
Trans. stiff. toe	25.00	C	1249.44	L	4329.	21000.	0.206
Trans. stiff. toe	30.00	C	1455.29	L	5046.	21000.	0.240
Trans. stiff. toe	35.00	C	1629.72	L	5657.	21000.	0.269

Trans. stiff. toe	40.00	C	1783.21	L	6198.	21000.	0.295
Trans. stiff. toe	45.00	C	1936.71	L	6739.	21000.	0.321
Trans. stiff. toe	50.00	C	2066.45	L	7199.	21000.	0.343
Trans. stiff. toe	55.00	C	2160.57	L	7540.	21000.	0.359
Trans. stiff. toe	60.00	C	2254.69	L	7880.	21000.	0.375
Trans. stiff. toe	65.00	C	2338.11	L	8184.	21000.	0.390
Trans. stiff. toe	70.00	C	2378.72	L	8344.	21000.	0.397
Trans. stiff. toe	75.00	C	2419.33	L	8504.	21000.	0.405
Trans. stiff. toe	80.00	C	2459.93	L	8664.	21000.	0.413
Trans. stiff. toe	85.00	C	2435.33	L	8603.	21000.	0.410
Trans. stiff. toe	90.00	C	2410.72	L	8542.	21000.	0.407
Trans. stiff. toe	95.00	C	2386.11	L	8481.	21000.	0.404
Trans. stiff. toe	100.00	C	2323.58	L	8293.	21000.	0.395
Trans. stiff. toe	105.00	C	2251.56	L	15934.	21000.	0.759
Trans. stiff. toe	110.00	C	2179.54	L	15575.	21000.	0.742
Trans. stiff. toe	115.00	C	2085.17	L	15078.	21000.	0.718

* * * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * * *

Cost Schedule for Web Section 1

	lb
Flange	24239.7
Web	14393.8
Web stiffeners	2817.5
Bearing stiff.	163.3
Total steel	41614.3

Welding	Vol	lbs
Flange-web	257.2	72.9
Trans.stiff.-web (1/ 4 cont.)	207.0	58.7
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6
Total welding *	473.2	134.2
Total steel and weld		41748.5

Begin solution for web section 2.

* * * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * * *

Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

Max live load+impact shear

-55.8L	-63.8L	-77.1L	62.6L	52.5L

Dead load 1 shear

-71.3	-89.1	-108.5	74.8	54.0

Dead load 2 shear

-6.9	-8.5	-10.2	7.4	5.5

(Shear value at an interior support is at left of support.)

```
  Max live load+impact moment
      774.1L   433.8L   380.1L   386.5L   726.9T

  Min live load+impact moment
    -1027.0L -1517.4L -2378.6L -1429.7L  -873.7L

  Dead load 1 moment
     -489.5  -1786.2  -3374.8  -1835.3   -682.2

  Dead load 2 moment
      -52.1   -176.2   -326.4   -176.4    -60.8
* * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * * *

   Rate Web depth            = 105.0000 in
        Web thickness        =   0.5000 in


Tenth    Top Flange   Min Top   Bott Flange  Min Bott   Flange to Web Weld
Point      Width      Flange t     Width     Flange t     Top       Bott

   8       18.00       1.250       18.00       1.250      5/16      5/16
   9       18.00       1.875       18.00       1.875      5/16      5/16
  10       18.00       2.000       18.00       2.000      5/16      5/16
  11       18.00       1.875       18.00       1.875      5/16      5/16
  12       18.00       1.000       18.00       1.000      5/16      5/16

   2 -   8.00 x  0.500 brng. stf. at  42.50 ft   from left end of web section
         4.00 x   0.50 longitudinal stiffener
         6.00 x   0.50 transverse stiffeners
           1 stiffener space at    60.00 in
                 (straddles web splice)
           1 stiffener space at    60.00 in
                 (straddles web splice)

         Composite section properties at max positive moment - n =  9

            I                              =  146463. in4
            S (top steel)                  =  8622.68 in3
            S (bottom steel)               =  2546.55 in3
            S (concrete)                   =  5609.29 in3
            Neutral axis from bottom flange =    57.51 in


         Composite section properties at max positive moment - n = 27

            I                              =  112334. in4
            S (top steel)                  =  4193.07 in3
            S (bottom steel)               =  2354.55 in3
            S (concrete)                   =  3127.74 in3
            Neutral axis from bottom flange =    47.71 in


         Section properties of girder alone at max positive moment

            I                              =   75920. in4
            S (top)                        =  2038.13 in3
            S (bottom)                     =  2038.13 in3
            Neutral axis from bottom flange =    37.25 in


         Section properties of girder alone at max negative moment

            I                              =  254340. in4
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            S (top)                        =  4666.80 in3
            S (bottom)                     =  4666.80 in3
            Neutral axis from bottom flange =    54.50 in


         Composite section properties at max negative moment

            I                              =  259366. in4
            S (top of steel)               =  4818.24 in3
            S (bottom of steel)            =  4701.22 in3
            S (reinf)                      =  4353.24 in3
            Neutral axis from bottom flange =    55.17 in


* * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * * *


Web Section  2 Stresses
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          Factored  Shear                Factored   Bending
Tenth     Shear     Strength             Moment     Strength
Point     (k )      (k )        Ratio    (k-ft)     (k-ft)       Ratio

  8       222.7    626.8 (3)    0.355     2933.6   5435.0 (6)   0.540
  9       265.4    764.0 (3)    0.347     5845.4   9779.6 (6)   0.598
 10L      321.6    930.6 (3)    0.346     9975.5  12496.0 (6)   0.798
 10R      303.0    930.6 (3)    0.326     9975.5  12496.0 (6)   0.798
 11       242.8    730.3 (3)    0.332     5719.2   9236.1 (6)   0.619
 12       191.3    626.8 (3)    0.305     2862.7   4577.7 (6)   0.625

           Stiffeners
Location

 120.00    201.0    626.8 (3)    0.321
 125.00    214.5    626.8 (3)    0.342
 130.00    228.0    628.2 (3)    0.363
 135.00    241.4    652.1 (3)    0.370
 140.00    254.7    701.6 (3)    0.363
 145.00    268.9    780.6 (3)    0.345
 150.00    286.5    846.6 (3)    0.338
 155.00    304.0    883.0 (3)    0.344
 165.00    286.3    883.0 (3)    0.324
 170.00    269.6    846.6 (3)    0.318
 175.00    252.8    780.6 (3)    0.324
 180.00    237.1    701.6 (3)    0.338
 185.00    222.8    652.1 (3)    0.342
 190.00    208.5    628.2 (3)    0.332
 195.00    194.2    626.8 (3)    0.310
 200.00    180.6    626.8 (3)    0.288
 205.00    167.1    626.8 (3)    0.267
 210.00    153.6    626.8 (3)    0.245
      (3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
      (6) Fy S(equiv)
          Maximum moment in factored strength expression


 Bearing Stiffeners

   Location      Service  Allowable Actual Ratio Allowable Actual  Ratio
```

From Left End of Web Sect.	Reaction	Column Stress	Column Stress		Bearing Stress	Bearing Stress	
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	
42.50	342.23	16.60	9.51	0.573	28.80	15.21	0.528

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	128.00	C	1506.89	T	5851.	13000.	0.450
Base metal *	128.00	C	1262.81	T	4791.	10000.	0.479
Base metal	144.00	C	1233.19	T	3401.	13000.	0.262
Base metal *	144.00	C	1006.87	T	2798.	10000.	0.280
Base metal	160.00	C	1379.65	T	2931.	13000.	0.225
Base metal *	160.00	C	1146.35	T	2456.	10000.	0.246
Base metal	178.00	C	1152.78	T	3249.	13000.	0.250
Base metal *	178.00	C	974.35	T	2723.	10000.	0.272
Base metal	196.00	C	1426.87	T	5961.	13000.	0.459
Base metal *	196.00	C	1218.05	T	4928.	10000.	0.493
Near flg-web weld	128.00	B	1506.89	T	5780.	18000.	0.321
Base metal	128.00	B	1506.89	T	5909.	18000.	0.328
Near flg-web weld *	128.00	B	1262.81	T	4733.	16000.	0.296
Base metal *	128.00	B	1262.81	T	4838.	16000.	0.302
Near flg-web weld	144.00	B	1233.19	T	3359.	18000.	0.187
Base metal	144.00	B	1233.19	T	3456.	18000.	0.192
Near flg-web weld *	144.00	B	1006.87	T	2763.	16000.	0.173
Base metal *	144.00	B	1006.87	T	2842.	16000.	0.178
Near flg-web weld	160.00	B	1379.65	T	2898.	18000.	0.161
Base metal	160.00	B	1379.65	T	2976.	18000.	0.165
Near flg-web weld *	160.00	B	1146.35	T	2428.	16000.	0.152
Base metal *	160.00	B	1146.35	T	2493.	16000.	0.156
Near flg-web weld	178.00	B	1152.78	T	3206.	18000.	0.178
Base metal	178.00	B	1152.78	T	3303.	18000.	0.183
Near flg-web weld *	178.00	B	974.35	T	2687.	16000.	0.168
Base metal *	178.00	B	974.35	T	2768.	16000.	0.173
Near flg-web weld	196.00	B	1426.87	T	5901.	18000.	0.328
Base metal	196.00	B	1426.87	T	6004.	18000.	0.334
Near flg-web weld *	196.00	B	1218.05	T	4878.	16000.	0.305
Base metal *	196.00	B	1218.05	T	4963.	16000.	0.310
Top flg. splice	128.00	B	1506.89	T	8220.	18000.	0.457
Top flg splice *	128.00	B	1262.81	T	6709.	16000.	0.419
Top flg. splice	144.00	B	1233.19	T	3610.	18000.	0.201
Top flg splice *	144.00	B	1006.87	T	2970.	16000.	0.186
Top flg. splice	178.00	B	1152.78	T	3447.	18000.	0.191
Top flg splice *	178.00	B	974.35	T	2888.	16000.	0.180
Top flg. splice	193.00	B	1384.13	T	6056.	18000.	0.336
Top flg splice *	193.00	B	1183.28	T	5020.	16000.	0.314
Bot flg. splice	128.00	B	1506.89	T	11482.	18000.	0.638
Bot flg splice *	128.00	B	1262.81	T	9564.	16000.	0.598
Bot flg. splice	144.00	B	1233.19	T	4133.	18000.	0.230
Bot flg splice *	144.00	B	1006.87	T	3380.	16000.	0.211
Bot flg. splice	178.00	B	1152.78	T	4063.	18000.	0.226
Bot flg splice *	178.00	B	974.35	T	3428.	16000.	0.214
Bot flg. splice	193.00	B	1384.13	T	8667.	18000.	0.482
Bot flg splice *	193.00	B	1183.28	T	7363.	16000.	0.460
Trans. stiff. toe	120.00	C	1655.60	T	12033.	13000.	0.926
Trans. stiff. toe *	120.00	C	1379.67	T	9970.	12000.	0.831

Trans. stiff. toe	125.00	C	1562.66	T	5682.	13000.	0.437
Trans. stiff. toe *	125.00	C	1306.64	T	4642.	12000.	0.387
Trans. stiff. toe	130.00	C	1472.68	T	5690.	13000.	0.438
Trans. stiff. toe *	130.00	C	1230.82	T	4663.	12000.	0.389
Trans. stiff. toe	135.00	C	1387.15	T	5467.	13000.	0.421
Trans. stiff. toe *	135.00	C	1150.84	T	4489.	12000.	0.374
Trans. stiff. toe	140.00	C	1301.61	T	3712.	13000.	0.286
Trans. stiff. toe *	140.00	C	1070.86	T	3053.	12000.	0.254
Trans. stiff. toe	145.00	C	1242.34	T	3265.	13000.	0.251
Trans. stiff. toe *	145.00	C	1015.59	T	2689.	12000.	0.224
Trans. stiff. toe	150.00	C	1288.11	T	3070.	13000.	0.236
Trans. stiff. toe *	150.00	C	1059.18	T	2544.	12000.	0.212
Trans. stiff. toe	155.00	C	1333.88	T	2807.	13000.	0.216
Trans. stiff. toe *	155.00	C	1102.76	T	2339.	12000.	0.195
Trans. stiff. toe	160.00	C	1379.65	T	2875.	13000.	0.221
Trans. stiff. toe *	160.00	C	1146.35	T	2409.	12000.	0.201
Trans. stiff. toe	165.00	C	1316.63	T	2751.	13000.	0.212
Trans. stiff. toe *	165.00	C	1098.57	T	2305.	12000.	0.192
Trans. stiff. toe	170.00	C	1253.61	T	2936.	13000.	0.226
Trans. stiff. toe *	170.00	C	1050.79	T	2461.	12000.	0.205
Trans. stiff. toe	175.00	C	1190.59	T	3043.	13000.	0.234
Trans. stiff. toe *	175.00	C	1003.01	T	2551.	12000.	0.213
Trans. stiff. toe	180.00	C	1183.23	T	3338.	13000.	0.257
Trans. stiff. toe *	180.00	C	1001.42	T	2795.	12000.	0.233
Trans. stiff. toe	185.00	C	1259.37	T	3665.	13000.	0.282
Trans. stiff. toe *	185.00	C	1069.12	T	3063.	12000.	0.255
Trans. stiff. toe	200.00	C	1478.35	T	8905.	13000.	0.685
Trans. stiff. toe *	200.00	C	1253.49	T	7508.	12000.	0.626
Trans. stiff. toe	205.00	C	1542.71	T	9193.	13000.	0.707
Trans. stiff. toe *	205.00	C	1297.80	T	7695.	12000.	0.641
Trans. stiff. toe	210.00	C	1607.07	T	9482.	13000.	0.729
Trans. stiff. toe *	210.00	C	1342.10	T	7882.	12000.	0.657
Rebars	160.00		1379.65	T	3803.	20000.	0.190
Rebars *	160.00		1146.35	T	3160.	20000.	0.158

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	128.00	C	1801.03	L	7124.	21000.	0.339
Base metal	144.00	C	1951.20	L	5440.	21000.	0.259
Base metal	160.00	C	2758.72	L	6281.	21000.	0.299
Base metal	178.00	C	1816.23	L	5394.	21000.	0.257
Base metal	196.00	C	1494.08	L	6993.	21000.	0.333
Near flg-web weld	128.00	B	1801.03	L	9694.	29000.	0.334
Base metal	128.00	B	1801.03	L	9910.	29000.	0.342
Near flg-web weld	144.00	B	1951.20	L	5372.	29000.	0.185
Base metal	144.00	B	1951.20	L	5527.	29000.	0.191
Near flg-web weld	160.00	B	2758.72	L	6211.	29000.	0.214
Base metal	160.00	B	2758.72	L	6378.	29000.	0.220
Near flg-web weld	178.00	B	1816.23	L	5322.	29000.	0.184
Base metal	178.00	B	1816.23	L	5482.	29000.	0.189
Near flg-web weld	196.00	B	1494.08	L	6922.	29000.	0.239
Base metal	196.00	B	1494.08	L	7042.	29000.	0.243
Top flg. splice	128.00	B	1801.03	L	10034.	29000.	0.346
Top flg. splice	144.00	B	1951.20	L	5775.	29000.	0.199
Top flg. splice	178.00	B	1816.23	L	5729.	29000.	0.198
Top flg. splice	193.00	B	1506.64	L	7415.	29000.	0.256

Bot flg. splice	128.00	B	1801.03	L	13792.	29000.	0.476
Bot flg. splice	144.00	B	1951.20	L	6555.	29000.	0.226
Bot flg. splice	178.00	B	1816.23	L	6473.	29000.	0.223
Bot flg. splice	193.00	B	1506.64	L	9676.	29000.	0.334
Trans. stiff. toe	120.00	C	1975.89	L	14423.	21000.	0.687
Trans. stiff. toe	125.00	C	1866.60	L	6912.	21000.	0.329
Trans. stiff. toe	130.00	C	1819.81	L	7206.	21000.	0.343
Trans. stiff. toe	135.00	C	1866.73	L	7584.	21000.	0.361
Trans. stiff. toe	140.00	C	1913.66	L	5576.	21000.	0.266
Trans. stiff. toe	145.00	C	2001.67	L	5347.	21000.	0.255
Trans. stiff. toe	150.00	C	2254.02	L	5590.	21000.	0.266
Trans. stiff. toe	155.00	C	2506.37	L	5575.	21000.	0.265
Trans. stiff. toe	160.00	C	2758.72	L	6162.	21000.	0.293
Trans. stiff. toe	165.00	C	2496.92	L	5574.	21000.	0.265
Trans. stiff. toe	170.00	C	2235.11	L	5586.	21000.	0.266
Trans. stiff. toe	175.00	C	1973.31	L	5346.	21000.	0.255
Trans. stiff. toe	180.00	C	1780.43	L	5352.	21000.	0.255
Trans. stiff. toe	185.00	C	1690.95	L	5357.	21000.	0.255
Trans. stiff. toe	190.00	C	1601.46	L	7935.	21000.	0.378
Trans. stiff. toe	195.00	C	1511.98	L	6996.	21000.	0.333
Trans. stiff. toe	200.00	C	1554.14	L	6728.	21000.	0.320
Trans. stiff. toe	205.00	C	1629.20	L	6633.	21000.	0.316
Trans. stiff. toe	210.00	C	1704.27	L	10247.	21000.	0.488
Rebars	160.00		2758.72	L	7605.	20000.	0.380

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Cost Schedule for Web Section 2

	lb
Flange	18329.1
Web	13564.3
Web stiffeners	2698.1
Longitudinal stiff.	0.0
Bearing stiff.	238.2
Total steel	34829.6

Welding	Vol	lbs
Flange-web	222.7	63.1
Trans.stiff.-web (1/ 4 cont.)	198.2	56.2
Long.stiff.-web (1/ 4 cont.)	71.3	20.2
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6
Total welding *	501.1	142.1
Total steel and weld	34971.8	

Begin solution for web section 3.

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

Max live load+impact shear

42.7L	34.9T	27.7T	-34.0L	-43.3L

Dead load 1 shear

35.0	18.3	0.0	-18.2	-34.9

Dead load 2 shear

3.6	1.8	0.0	-1.8	-3.6

Max live load+impact moment

1093.4T	1343.9L	1433.4L	1343.9L	1093.6T

Min live load+impact moment

-741.3L	-713.0L	-680.0L	-712.9L	-741.0L

Dead load 1 moment

130.9	618.2	784.3	619.8	134.3

Dead load 2 moment

21.6	70.9	87.6	71.0	21.8

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Rate Web depth = 72.0000 in
Web thickness = 0.5000 in

Tenth Point	Top Flange Width	Min Top Flange t	Bott Flange Width	Min Bott Flange t	Flange to Web Weld Top	Flange to Web Weld Bott
13	18.00	1.000	18.00	1.000	5/16	5/16
14	18.00	1.000	18.00	1.000	5/16	5/16
15	18.00	1.000	18.00	1.000	5/16	5/16
16	18.00	1.000	18.00	1.000	5/16	5/16
17	18.00	1.000	18.00	1.000	5/16	5/16

6.00 x 0.50 transverse stiffeners
1 stiffener space at 60.00 in
(straddles web splice)
1 stiffener space at 60.00 in
(straddles web splice)

Composite section properties at max positive moment - n = 9

I = 130133. in4
S (top steel) = 8408.22 in3
S (bottom steel) = 2223.62 in3
S (concrete) = 5236.35 in3
Neutral axis from bottom flange = 58.52 in

Composite section properties at max positive moment - n = 27

I = 98855. in4
S (top steel) = 3864.33 in3
S (bottom steel) = 2041.67 in3
S (concrete) = 2827.95 in3
Neutral axis from bottom flange = 48.42 in

Section properties of girder alone at max positive moment

I = 63516. in4
S (top) = 1716.65 in3
S (bottom) = 1716.65 in3

Neutral axis from bottom flange = 37.00 in

Section properties of girder alone at max negative moment

I = 63516. in4
S (top) = 1716.65 in3
S (bottom) = 1716.65 in3
Neutral axis from bottom flange = 37.00 in

Composite section properties at max negative moment

I = 63516. in4
S (top of steel) = 1716.65 in3
S (bottom of steel) = 1716.65 in3
S (reinf) = 1451.79 in3
Neutral axis from bottom flange = 37.00 in

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Web Section 3 Stresses

Tenth Point	Factored Shear (k)	Shear Strength (k)	Ratio	Factored Moment (k-ft)	Bending Strength (k-ft)	Ratio
13	142.9	626.8 (3)	0.228	2571.9	7925.1 (20)	0.325
14	101.9	626.8 (3)	0.163	3813.5	7925.1 (20)	0.481
15	60.2	626.8 (3)	0.096	4245.4	7925.1 (20)	0.536
16	99.8	626.8 (3)	0.159	3815.7	7925.1 (20)	0.481
17	144.1	626.8 (3)	0.230	2577.3	7925.1 (20)	0.325

Stiffeners

Location			
215.00	140.6	626.8 (3)	0.224
220.00	129.2	626.8 (3)	0.206
225.00	117.8	626.8 (3)	0.188
230.00	106.4	626.8 (3)	0.170
235.00	94.9	626.8 (3)	0.151
240.00	83.3	626.8 (3)	0.133
245.00	71.8	626.8 (3)	0.114
255.00	71.2	626.8 (3)	0.114
260.00	82.2	626.8 (3)	0.131
265.00	93.2	626.8 (3)	0.149
270.00	104.7	626.8 (3)	0.167
275.00	117.0	626.8 (3)	0.187
280.00	129.4	626.8 (3)	0.206
285.00	141.7	626.8 (3)	0.226

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(20) compact section

Bearing Stiffeners

Location	Service	Allowable	Actual	Ratio	Allowable	Actual	Ratio

From Left End of Web Sect. (ft)	Reaction (k)	Column Stress (ksi)	Column Stress (ksi)	Bearing Stress (ksi)	Bearing Stress (ksi)

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)	Actual Stress Range	Allowable Stress Range	Ratio
Base metal	214.00	B	1658.55 T	9881.	18000.	0.549
Base metal *	214.00	B	1377.55 T	8170.	16000.	0.511
Base metal	232.00	B	1765.03 T	10254.	18000.	0.570
Base metal *	232.00	B	1465.66 T	8475.	16000.	0.530
Base metal	250.00	B	1703.03 T	9712.	18000.	0.540
Base metal *	250.00	B	1423.31 T	8080.	16000.	0.505
Base metal	268.00	B	1764.93 T	10254.	18000.	0.570
Base metal *	268.00	B	1465.58 T	8475.	16000.	0.530
Base metal	286.00	B	1658.65 T	9882.	18000.	0.549
Base metal *	286.00	B	1377.66 T	8171.	16000.	0.511
Near flg-web weld	214.00	B	1658.55 T	9712.	18000.	0.540
Near flg-web weld *	214.00	B	1377.55 T	8031.	16000.	0.502
Near flg-web weld	232.00	B	1765.03 T	10079.	18000.	0.560
Near flg-web weld *	232.00	B	1465.66 T	8330.	16000.	0.521
Near flg-web weld	250.00	B	1703.03 T	9546.	18000.	0.530
Near flg-web weld *	250.00	B	1423.31 T	7942.	16000.	0.496
Near flg-web weld	268.00	B	1764.93 T	10078.	18000.	0.560
Near flg-web weld *	268.00	B	1465.58 T	8330.	16000.	0.521
Near flg-web weld	286.00	B	1658.65 T	9713.	18000.	0.540
Near flg-web weld *	286.00	B	1377.66 T	8031.	16000.	0.502
Trans. stiff. toe	215.00	C	1664.47 T	9733.	13000.	0.749
Trans. stiff. toe *	215.00	C	1382.44 T	8047.	12000.	0.671
Trans. stiff. toe	220.00	C	1694.04 T	9835.	13000.	0.757
Trans. stiff. toe *	220.00	C	1406.92 T	8131.	12000.	0.678
Trans. stiff. toe	225.00	C	1723.62 T	9937.	13000.	0.764
Trans. stiff. toe *	225.00	C	1431.40 T	8214.	12000.	0.684
Trans. stiff. toe	230.00	C	1753.20 T	10038.	13000.	0.772
Trans. stiff. toe *	230.00	C	1455.87 T	8297.	12000.	0.691
Trans. stiff. toe	235.00	C	1754.70 T	9990.	13000.	0.768
Trans. stiff. toe *	235.00	C	1458.61 T	8266.	12000.	0.689
Trans. stiff. toe	240.00	C	1737.48 T	9842.	13000.	0.757
Trans. stiff. toe *	240.00	C	1446.84 T	8158.	12000.	0.680
Trans. stiff. toe	245.00	C	1720.25 T	9694.	13000.	0.746
Trans. stiff. toe *	245.00	C	1435.07 T	8050.	12000.	0.671
Trans. stiff. toe	250.00	C	1703.03 T	9546.	13000.	0.734
Trans. stiff. toe *	250.00	C	1423.31 T	7942.	12000.	0.662
Trans. stiff. toe	255.00	C	1720.23 T	9694.	13000.	0.746
Trans. stiff. toe *	255.00	C	1435.05 T	8050.	12000.	0.671
Trans. stiff. toe	260.00	C	1737.42 T	9842.	13000.	0.757
Trans. stiff. toe *	260.00	C	1446.79 T	8157.	12000.	0.680
Trans. stiff. toe	265.00	C	1754.62 T	9990.	13000.	0.768
Trans. stiff. toe *	265.00	C	1458.53 T	8265.	12000.	0.689
Trans. stiff. toe	270.00	C	1753.12 T	10038.	13000.	0.772
Trans. stiff. toe *	270.00	C	1455.81 T	8297.	12000.	0.691
Trans. stiff. toe	275.00	C	1723.60 T	9936.	13000.	0.764
Trans. stiff. toe *	275.00	C	1431.39 T	8214.	12000.	0.684
Trans. stiff. toe	280.00	C	1694.08 T	9835.	13000.	0.757
Trans. stiff. toe *	280.00	C	1406.97 T	8131.	12000.	0.678
Trans. stiff. toe	285.00	C	1664.56 T	9733.	13000.	0.749

Trans. stiff. toe *	285.00	C	1382.54	T	8048.	12000.	0.671

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	214.00	B	1764.32	L	10703.	29000.	0.369
Base metal	232.00	B	2045.58	L	12176.	29000.	0.420
Base metal	250.00	B	2113.45	L	12489.	29000.	0.431
Base metal	268.00	B	2045.73	L	12176.	29000.	0.420
Base metal	286.00	B	1764.61	L	10704.	29000.	0.369
Near flg-web weld	214.00	B	1764.32	L	10520.	29000.	0.363
Near flg-web weld	232.00	B	2045.58	L	11968.	29000.	0.413
Near flg-web weld	250.00	B	2113.45	L	12276.	29000.	0.423
Near flg-web weld	268.00	B	2045.73	L	11968.	29000.	0.413
Near flg-web weld	286.00	B	1764.61	L	10521.	29000.	0.363
Trans. stiff. toe	215.00	C	1779.95	L	10600.	21000.	0.505
Trans. stiff. toe	220.00	C	1858.08	L	11002.	21000.	0.524
Trans. stiff. toe	225.00	C	1936.20	L	11405.	21000.	0.543
Trans. stiff. toe	230.00	C	2014.33	L	11807.	21000.	0.562
Trans. stiff. toe	235.00	C	2056.90	L	12019.	21000.	0.572
Trans. stiff. toe	240.00	C	2075.75	L	12105.	21000.	0.576
Trans. stiff. toe	245.00	C	2094.60	L	12190.	21000.	0.580
Trans. stiff. toe	250.00	C	2113.45	L	12276.	21000.	0.585
Trans. stiff. toe	255.00	C	2094.64	L	12190.	21000.	0.580
Trans. stiff. toe	260.00	C	2075.83	L	12105.	21000.	0.576
Trans. stiff. toe	265.00	C	2057.02	L	12019.	21000.	0.572
Trans. stiff. toe	270.00	C	2014.50	L	11807.	21000.	0.562
Trans. stiff. toe	275.00	C	1936.41	L	11405.	21000.	0.543
Trans. stiff. toe	280.00	C	1858.32	L	11003.	21000.	0.524
Trans. stiff. toe	285.00	C	1780.23	L	10601.	21000.	0.505

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Cost Schedule for Web Section 3

	lb
Flange	9187.5
Web	9187.5
Web stiffeners	1837.5
Total steel	20212.5

Welding	Vol	lbs
Flange-web	175.8	49.8
Trans.stiff.-web (1/ 4 cont.)	135.0	38.3
Total welding *	310.8	88.1
Total steel and weld		20300.6

Begin solution for web section 4.

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

Max live load+impact shear
-52.6L -63.4L -76.1L 64.2L 54.9L

Dead load 1 shear
-53.8 -74.6 -96.2 89.4 71.5

Dead load 2 shear
-5.5 -7.4 -9.3 8.5 6.9
(Shear value at an interior support is at left of support.)

Max live load+impact moment
678.4T 356.0L 380.3L 471.9L 773.9L

Min live load+impact moment
-873.2L -1429.2L -2378.2L -1517.4L -1027.1L

Dead load 1 moment
-665.2 -1828.9 -3374.5 -1791.0 -504.3

Dead load 2 moment
-59.6 -175.9 -326.4 -176.5 -53.1

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Rate Web depth = 105.0000 in
Web thickness = 0.5000 in

Tenth Point	Top Flange Width	Min Top Flange t	Bott Flange Width	Min Bott Flange t	Flange to Web Weld Top	Bott
18	18.00	1.000	18.00	1.000	5/16	5/16
19	18.00	1.875	18.00	1.875	5/16	5/16
20	18.00	2.000	18.00	2.000	5/16	5/16
21	18.00	1.875	18.00	1.875	5/16	5/16
22	18.00	1.250	18.00	1.250	5/16	5/16

2 - 8.00 x 0.500 brng. stf. at 52.50 ft from left end of web section
4.00 x 0.50 longitudinal stiffener
6.00 x 0.50 transverse stiffeners
1 stiffener space at 60.00 in
(straddles web splice)
1 stiffener space at 60.00 in
(straddles web splice)

Composite section properties at max positive moment - n = 9

I = 146463. in4
S (top steel) = 8622.68 in3
S (bottom steel) = 2546.55 in3
S (concrete) = 5609.29 in3
Neutral axis from bottom flange = 57.51 in

Composite section properties at max positive moment - n = 27

```
   I                                =  112334. in4
   S (top steel)                    =  4193.07 in3
   S (bottom steel)                 =  2354.55 in3
   S (concrete)                     =  3127.74 in3
   Neutral axis from bottom flange =    47.71 in


Section properties of girder alone at max positive moment

   I                                =   75920. in4
   S (top)                          =  2038.13 in3
   S (bottom)                       =  2038.13 in3
   Neutral axis from bottom flange =    37.25 in


Section properties of girder alone at max negative moment

   I                                =  254340. in4
   S (top)                          =  4666.80 in3
   S (bottom)                       =  4666.80 in3
   Neutral axis from bottom flange =    54.50 in


Composite section properties at max negative moment

   I                                =  259366. in4
   S (top of steel)                 =  4818.24 in3
   S (bottom of steel)              =  4701.22 in3
   S (reinf)                        =  4353.24 in3
   Neutral axis from bottom flange =    55.17 in


* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *


Web Section  4 Stresses
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          Factored  Shear                Factored   Bending
Tenth     Shear     Strength             Moment     Strength
Point     (k )      (k )        Ratio    (k-ft)     (k-ft)       Ratio

 18       191.2     626.8 (3)    0.305     2838.0    4577.7 (6)  0.620
 19       244.2     730.3 (3)    0.334     5709.1    9236.1 (6)  0.618
 20L      302.4     930.6 (3)    0.325     9974.1   12496.0 (6)  0.798
 20R      321.7     930.6 (3)    0.346     9974.1   12496.0 (6)  0.798
 21       266.7     764.0 (3)    0.349     5852.0    9779.6 (6)  0.598
 22       221.0     626.8 (3)    0.353     2954.7    5435.0 (6)  0.544

             Stiffeners
Location

 290.00    154.6     626.8 (3)    0.247
 295.00    167.6     626.8 (3)    0.267
 300.00    180.7     626.8 (3)    0.288
 305.00    194.1     626.8 (3)    0.310
 310.00    208.8     628.2 (3)    0.332
 315.00    223.6     652.1 (3)    0.343
 320.00    238.3     701.6 (3)    0.340
 325.00    253.9     780.6 (3)    0.325
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 330.00    270.1     846.6 (3)    0.319
 335.00    286.2     883.0 (3)    0.324
 345.00    304.5     883.0 (3)    0.345
 350.00    287.3     846.6 (3)    0.339
 355.00    270.2     780.6 (3)    0.346
 360.00    255.3     701.6 (3)    0.364
 365.00    241.0     652.1 (3)    0.370
 370.00    226.7     628.2 (3)    0.361
 375.00    213.5     626.8 (3)    0.341
 380.00    201.2     626.8 (3)    0.321
     (3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
     (6) Fy S(equiv)
         Maximum moment in factored strength expression


Bearing Stiffeners

  Location      Service  Allowable Actual Ratio Allowable Actual  Ratio
  From Left End Reaction Column    Column       Bearing   Bearing
  of Web Sect.           Stress    Stress       Stress    Stress

    (ft)         (k )     (ksi)     (ksi)        (ksi)     (ksi)
    52.50       342.30    16.60     9.51  0.573   28.80   15.21   0.528


Fatigue - truck loading

  Condition       Location    Category     Force      Actual   Allowable Ratio
                  From left   (Table       Range      Stress   Stress
                  End of      10.3.1A)     (k-ft)     Range    Range
                  Girder

 Base metal            304.00     C        1378.24 T   5892.   13000.   0.453
 Base metal *          304.00     C        1169.43 T   4858.   10000.   0.486
 Base metal            322.00     C        1109.76 T   3200.   13000.   0.246
 Base metal *          322.00     C         931.34 T   2674.   10000.   0.267
 Base metal            340.00     C        1379.72 T   2931.   13000.   0.225
 Base metal *          340.00     C        1146.41 T   2456.   10000.   0.246
 Base metal            356.00     C        1262.68 T   3434.   13000.   0.264
 Base metal *          356.00     C        1036.36 T   2830.   10000.   0.283
 Base metal            372.00     C        1507.23 T   5851.   13000.   0.450
 Base metal *          372.00     C        1263.14 T   4792.   10000.   0.479
 Near flg-web weld     304.00     B        1378.24 T   5832.   18000.   0.324
 Base metal            304.00     B        1378.24 T   5933.   18000.   0.330
 Near flg-web weld *   304.00     B        1169.43 T   4809.   16000.   0.301
 Base metal *          304.00     B        1169.43 T   4893.   16000.   0.306
 Near flg-web weld     322.00     B        1109.76 T   3158.   18000.   0.175
 Base metal            322.00     B        1109.76 T   3253.   18000.   0.181
 Near flg-web weld *   322.00     B         931.34 T   2639.   16000.   0.165
 Base metal *          322.00     B         931.34 T   2718.   16000.   0.170
 Near flg-web weld     340.00     B        1379.72 T   2898.   18000.   0.161
 Base metal            340.00     B        1379.72 T   2976.   18000.   0.165
 Near flg-web weld *   340.00     B        1146.41 T   2428.   16000.   0.152
 Base metal *          340.00     B        1146.41 T   2493.   16000.   0.156
 Near flg-web weld     356.00     B        1262.68 T   3391.   18000.   0.188
 Base metal            356.00     B        1262.68 T   3488.   18000.   0.194
 Near flg-web weld *   356.00     B        1036.36 T   2795.   16000.   0.175
 Base metal *          356.00     B        1036.36 T   2875.   16000.   0.180
 Near flg-web weld     372.00     B        1507.23 T   5781.   18000.   0.321
 Base metal            372.00     B        1507.23 T   5909.   18000.   0.328
 Near flg-web weld *   372.00     B        1263.14 T   4734.   16000.   0.296
 Base metal *          372.00     B        1263.14 T   4839.   16000.   0.302
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Top flg. splice	307.00	B	1332.67	T	5982.	18000.	0.332
Top flg splice *	307.00	B	1131.82	T	4946.	16000.	0.309
Top flg. splice	322.00	B	1109.76	T	3397.	18000.	0.189
Top flg splice *	322.00	B	931.34	T	2838.	16000.	0.177
Top flg. splice	356.00	B	1262.68	T	3643.	18000.	0.202
Top flg splice *	356.00	B	1036.36	T	3003.	16000.	0.188
Top flg. splice	372.00	B	1507.23	T	8220.	18000.	0.457
Top flg splice *	372.00	B	1263.14	T	6709.	16000.	0.419
Bot flg. splice	307.00	B	1332.67	T	8389.	18000.	0.466
Bot flg splice *	307.00	B	1131.82	T	7085.	16000.	0.443
Bot flg. splice	322.00	B	1109.76	T	3931.	18000.	0.218
Bot flg splice *	322.00	B	931.34	T	3296.	16000.	0.206
Bot flg. splice	356.00	B	1262.68	T	4219.	18000.	0.234
Bot flg splice *	356.00	B	1036.36	T	3466.	16000.	0.217
Bot flg. splice	372.00	B	1507.23	T	11484.	18000.	0.638
Bot flg splice *	372.00	B	1263.14	T	9566.	16000.	0.598
Trans. stiff. toe	290.00	C	1596.34	T	9468.	13000.	0.728
Trans. stiff. toe *	290.00	C	1331.39	T	7861.	12000.	0.655
Trans. stiff. toe	295.00	C	1518.45	T	9106.	13000.	0.700
Trans. stiff. toe *	295.00	C	1273.55	T	7601.	12000.	0.633
Trans. stiff. toe	300.00	C	1440.56	T	5711.	13000.	0.439
Trans. stiff. toe *	300.00	C	1215.70	T	4689.	12000.	0.391
Trans. stiff. toe	305.00	C	1363.33	T	5789.	13000.	0.445
Trans. stiff. toe *	305.00	C	1156.20	T	4777.	12000.	0.398
Trans. stiff. toe	310.00	C	1288.75	T	5862.	13000.	0.451
Trans. stiff. toe *	310.00	C	1090.07	T	4854.	12000.	0.405
Trans. stiff. toe	315.00	C	1214.17	T	3630.	13000.	0.279
Trans. stiff. toe *	315.00	C	1023.93	T	3024.	12000.	0.252
Trans. stiff. toe	320.00	C	1139.60	T	3307.	13000.	0.254
Trans. stiff. toe *	320.00	C	957.79	T	2761.	12000.	0.230
Trans. stiff. toe	325.00	C	1154.76	T	3023.	13000.	0.233
Trans. stiff. toe *	325.00	C	967.18	T	2528.	12000.	0.211
Trans. stiff. toe	330.00	C	1229.75	T	2929.	13000.	0.225
Trans. stiff. toe *	330.00	C	1026.93	T	2451.	12000.	0.204
Trans. stiff. toe	335.00	C	1304.73	T	2752.	13000.	0.212
Trans. stiff. toe *	335.00	C	1086.67	T	2305.	12000.	0.192
Trans. stiff. toe	340.00	C	1379.72	T	2889.	13000.	0.222
Trans. stiff. toe *	340.00	C	1146.41	T	2421.	12000.	0.202
Trans. stiff. toe	345.00	C	1343.15	T	2829.	13000.	0.218
Trans. stiff. toe *	345.00	C	1112.02	T	2359.	12000.	0.197
Trans. stiff. toe	350.00	C	1306.57	T	3105.	13000.	0.239
Trans. stiff. toe *	350.00	C	1077.63	T	2576.	12000.	0.215
Trans. stiff. toe	355.00	C	1269.99	T	3312.	13000.	0.255
Trans. stiff. toe *	355.00	C	1043.24	T	2733.	12000.	0.228
Trans. stiff. toe	360.00	C	1323.81	T	3758.	13000.	0.289
Trans. stiff. toe *	360.00	C	1093.05	T	3096.	12000.	0.258
Trans. stiff. toe	365.00	C	1400.24	T	5522.	13000.	0.425
Trans. stiff. toe *	365.00	C	1163.92	T	4537.	12000.	0.378
Trans. stiff. toe	370.00	C	1476.66	T	5735.	13000.	0.441
Trans. stiff. toe *	370.00	C	1234.79	T	4700.	12000.	0.392
Trans. stiff. toe	375.00	C	1562.94	T	5721.	13000.	0.440
Trans. stiff. toe *	375.00	C	1306.91	T	4673.	12000.	0.389
Trans. stiff. toe	380.00	C	1655.81	T	5703.	13000.	0.439
Trans. stiff. toe *	380.00	C	1379.88	T	4640.	12000.	0.387
Rebars	340.00		1379.72	T	3803.	20000.	0.190
Rebars *	340.00		1146.41	T	3160.	20000.	0.158

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left	Category (Table	Force Range	Actual Stress	Allowable Stress	Ratio

	End of Girder	10.3.1A)	(k-ft)		Range	Range	
Base metal	304.00	C	1458.78	L	6940.	21000.	0.330
Base metal	322.00	C	1785.15	L	5357.	21000.	0.255
Base metal	340.00	C	2758.48	L	6280.	21000.	0.299
Base metal	356.00	C	1989.30	L	5482.	21000.	0.261
Base metal	372.00	C	1801.07	L	7125.	21000.	0.339
Near flg-web weld	304.00	B	1458.78	L	6869.	29000.	0.237
Base metal	304.00	B	1458.78	L	6989.	29000.	0.241
Near flg-web weld	322.00	B	1785.15	L	5286.	29000.	0.182
Base metal	322.00	B	1785.15	L	5445.	29000.	0.188
Near flg-web weld	340.00	B	2758.48	L	6210.	29000.	0.214
Base metal	340.00	B	2758.48	L	6377.	29000.	0.220
Near flg-web weld	356.00	B	1989.30	L	5413.	29000.	0.187
Base metal	356.00	B	1989.30	L	5569.	29000.	0.192
Near flg-web weld	372.00	B	1801.07	L	9695.	29000.	0.334
Base metal	372.00	B	1801.07	L	9910.	29000.	0.342
Top flg. splice	307.00	B	1469.27	L	7358.	29000.	0.254
Top flg. splice	322.00	B	1785.15	L	5691.	29000.	0.196
Top flg. splice	356.00	B	1989.30	L	5817.	29000.	0.201
Top flg. splice	372.00	B	1801.07	L	10035.	29000.	0.346
Bot flg. splice	307.00	B	1469.27	L	9473.	29000.	0.327
Bot flg. splice	322.00	B	1785.15	L	6377.	29000.	0.220
Bot flg. splice	356.00	B	1989.30	L	6666.	29000.	0.230
Bot flg. splice	372.00	B	1801.07	L	13793.	29000.	0.476
Trans. stiff. toe	290.00	C	1696.65	L	10253.	21000.	0.488
Trans. stiff. toe	295.00	C	1611.70	L	9859.	21000.	0.469
Trans. stiff. toe	300.00	C	1526.74	L	6733.	21000.	0.321
Trans. stiff. toe	305.00	C	1476.91	L	6992.	21000.	0.333
Trans. stiff. toe	310.00	C	1567.57	L	7939.	21000.	0.378
Trans. stiff. toe	315.00	C	1658.23	L	5346.	21000.	0.255
Trans. stiff. toe	320.00	C	1748.89	L	5345.	21000.	0.255
Trans. stiff. toe	325.00	C	1947.37	L	5349.	21000.	0.255
Trans. stiff. toe	330.00	C	2217.74	L	5600.	21000.	0.267
Trans. stiff. toe	335.00	C	2488.11	L	5592.	21000.	0.266
Trans. stiff. toe	340.00	C	2758.48	L	6190.	21000.	0.295
Trans. stiff. toe	345.00	C	2518.11	L	5612.	21000.	0.267
Trans. stiff. toe	350.00	C	2277.74	L	5644.	21000.	0.269
Trans. stiff. toe	355.00	C	2037.38	L	5414.	21000.	0.258
Trans. stiff. toe	360.00	C	1942.24	L	5640.	21000.	0.269
Trans. stiff. toe	365.00	C	1883.42	L	7658.	21000.	0.365
Trans. stiff. toe	370.00	C	1824.60	L	7262.	21000.	0.346
Trans. stiff. toe	375.00	C	1866.52	L	6960.	21000.	0.331
Trans. stiff. toe	380.00	C	1975.60	L	6927.	21000.	0.330
Rebars	340.00		2758.48	L	7604.	20000.	0.380

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Cost Schedule for Web Section 4

	lb
Flange	18329.1
Web	13564.3
Web stiffeners	2698.1
Longitudinal stiff.	0.0
Bearing stiff.	238.2
Total steel	34829.6

Welding	Vol	lbs
Flange-web	222.7	63.1
Trans.stiff.-web (1/ 4 cont.)	198.2	56.2
Long.stiff.-web (1/ 4 cont.)	71.3	20.2
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6
Total welding *	501.1	142.1
Total steel and weld	34971.8	

Begin solution for web section 5.

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

Max live load+impact shear								
	45.9L	40.8T	40.6T	27.0T	-33.2T	-41.6T	-49.8T	-58.4L
Dead load 1 shear								
	57.5	41.2	23.8	5.1	-13.6	-32.4	-50.7	-68.0
Dead load 2 shear								
	5.4	3.8	2.2	0.5	-1.2	-2.9	-4.6	-6.3
Max live load+impact moment								
	1254.6L	1611.7L	1814.6L	1813.5L	1641.2L	1279.4L	725.6T	0.0L
Min live load+impact moment								
	-895.5L	-768.4L	-644.5L	-516.3L	-388.1L	-259.1L	-129.4L	0.0L
Dead load 1 moment								
	536.1	1309.1	1817.1	2047.7	1979.1	1610.9	946.1	0.0
Dead load 2 moment								
	45.5	117.5	164.4	185.4	179.4	146.4	86.4	0.0

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Rate Web depth = 72.0000 in
Web thickness = 0.5000 in

Tenth Point	Top Flange Width	Min Top Flange t	Bott Flange Width	Min Bott Flange t	Flange to Web Weld Top	Flange to Web Weld Bott
23	18.00	0.750	18.00	0.750	1/ 4	1/ 4
24	18.00	2.000	18.00	2.000	5/16	5/16
25	18.00	2.000	18.00	2.000	5/16	5/16
26	18.00	2.000	18.00	2.000	5/16	5/16
27	18.00	2.000	18.00	2.000	5/16	5/16
28	18.00	2.000	18.00	2.000	5/16	5/16
29	18.00	1.625	18.00	1.625	5/16	5/16
30	18.00	0.750	18.00	0.750	1/ 4	1/ 4

2 - 8.00 x 0.500 brng. stf. at 117.50 ft from left end of web section
6.00 x 0.50 transverse stiffeners
1 stiffener space at 60.00 in

(straddles web splice)

Composite section properties at max positive moment - n = 9

I = 194119. in4
S (top steel) = 9350.29 in3
S (bottom steel) = 3514.14 in3
S (concrete) = 6662.57 in3
Neutral axis from bottom flange = 55.24 in

Composite section properties at max positive moment - n = 27

I = 152917. in4
S (top steel) = 5158.18 in3
S (bottom steel) = 3298.87 in3
S (concrete) = 4021.96 in3
Neutral axis from bottom flange = 46.35 in

Section properties of girder alone at max positive moment

I = 114144. in4
S (top) = 3003.79 in3
S (bottom) = 3003.79 in3
Neutral axis from bottom flange = 38.00 in

Section properties of girder alone at max negative moment

I = 51278. in4
S (top) = 1395.32 in3
S (bottom) = 1395.32 in3
Neutral axis from bottom flange = 36.75 in

Composite section properties at max negative moment

I = 51278. in4
S (top of steel) = 1395.32 in3
S (bottom of steel) = 1395.32 in3
S (reinf) = 1172.07 in3
Neutral axis from bottom flange = 36.75 in

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Web Section 5 Stresses

Tenth Point	Factored Shear (k)	Shear Strength (k)	Ratio	Factored Moment (k-ft)	Bending Strength (k-ft)	Ratio
23	181.3	626.8 (3)	0.289	3479.9	7040.1 (20)	0.494
24	147.1	626.8 (3)	0.235	5353.7	11525.1 (20)	0.465
25	121.9	626.8 (3)	0.195	6515.5	11525.1 (20)	0.565
26	65.7	626.8 (3)	0.105	6840.2	11525.1 (20)	0.594
27	91.3	626.8 (3)	0.146	6369.1	11525.1 (20)	0.553

28	136.3	626.8 (3)	0.217	5062.1	11525.1 (20)	0.439
29	180.0	626.8 (3)	0.287	2917.5	10163.9 (20)	0.287
30	223.5	543.6 (5)	0.411	0.0	4372.9 (6)	0.000

Stiffeners

Location				
385.00	188.8	626.8 (3)	0.301	
390.00	177.0	626.8 (3)	0.282	
395.00	166.3	626.8 (3)	0.265	
400.00	155.6	626.8 (3)	0.248	
405.00	145.5	626.8 (3)	0.232	
410.00	137.6	626.8 (3)	0.220	
415.00	129.8	626.8 (3)	0.207	
425.00	104.4	626.8 (3)	0.166	
430.00	86.8	626.8 (3)	0.138	
435.00	69.2	626.8 (3)	0.110	
440.00	72.1	626.8 (3)	0.115	
445.00	80.1	626.8 (3)	0.128	
450.00	88.1	626.8 (3)	0.141	
455.00	99.8	626.8 (3)	0.159	
460.00	113.8	626.8 (3)	0.182	
465.00	127.8	626.8 (3)	0.204	
470.00	141.7	626.8 (3)	0.226	
475.00	155.4	626.8 (3)	0.248	
480.00	169.1	626.8 (3)	0.270	
485.00	182.7	626.8 (3)	0.292	
490.00	196.3	626.8 (3)	0.313	
495.00	209.9	626.8 (3)	0.335	

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(5) C 0.58 Fyw D t
(20) compact section
(6) Fy S(equiv)
Maximum moment in factored strength expression

Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	
117.50	133.81	16.80	10.71	0.637	28.80	17.84	0.620

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	388.00	B	1804.39	T	13062.	18000.	0.726
Base metal *	388.00	B	1496.62	T	10771.	16000.	0.673
Base metal	404.00	B	2048.64	T	7359.	18000.	0.409
Base metal *	404.00	B	1696.20	T	6075.	16000.	0.380
Base metal	420.00	B	2159.97	T	7680.	18000.	0.427
Base metal *	420.00	B	1774.20	T	6293.	16000.	0.393
Base metal	436.00	B	2091.58	T	7386.	18000.	0.410
Base metal *	436.00	B	1734.28	T	6109.	16000.	0.382
Base metal	452.00	B	1873.00	T	6579.	18000.	0.366

Base metal *	452.00	B	1561.82	T	5473.	16000.	0.342
Base metal	468.00	B	1456.32	T	5095.	18000.	0.283
Base metal *	468.00	B	1223.77	T	4272.	16000.	0.267
Base metal	484.00	B	815.02	T	3312.	18000.	0.184
Base metal *	484.00	B	693.31	T	2810.	16000.	0.176
Near flg-web weld	388.00	B	1804.39	T	12898.	18000.	0.717
Near flg-web weld *	388.00	B	1496.62	T	10636.	16000.	0.665
Near flg-web weld	404.00	B	2048.64	T	7092.	18000.	0.394
Near flg-web weld *	404.00	B	1696.20	T	5855.	16000.	0.366
Near flg-web weld	420.00	B	2159.97	T	7402.	18000.	0.411
Near flg-web weld *	420.00	B	1774.20	T	6065.	16000.	0.379
Near flg-web weld	436.00	B	2091.58	T	7119.	18000.	0.395
Near flg-web weld *	436.00	B	1734.28	T	5888.	16000.	0.368
Near flg-web weld	452.00	B	1873.00	T	6341.	18000.	0.352
Near flg-web weld *	452.00	B	1561.82	T	5275.	16000.	0.330
Near flg-web weld	468.00	B	1456.32	T	4911.	18000.	0.273
Near flg-web weld *	468.00	B	1223.77	T	4117.	16000.	0.257
Near flg-web weld	484.00	B	815.02	T	3216.	18000.	0.179
Near flg-web weld *	484.00	B	693.31	T	2728.	16000.	0.171
Base metal	388.00	B	1804.39	T	13062.	18000.	0.726
Base metal *	388.00	B	1496.62	T	10771.	16000.	0.673
Base metal	404.00	B	2048.64	T	7359.	18000.	0.409
Base metal *	404.00	B	1696.20	T	6075.	16000.	0.380
Base metal	420.00	B	2159.97	T	7680.	18000.	0.427
Base metal *	420.00	B	1774.20	T	6293.	16000.	0.393
Base metal	436.00	B	2091.58	T	7386.	18000.	0.410
Base metal *	436.00	B	1734.28	T	6109.	16000.	0.382
Base metal	452.00	B	1873.00	T	6579.	18000.	0.366
Base metal *	452.00	B	1561.82	T	5473.	16000.	0.342
Base metal	468.00	B	1456.32	T	5095.	18000.	0.283
Base metal *	468.00	B	1223.77	T	4272.	16000.	0.267
Base metal	484.00	B	815.02	T	3312.	18000.	0.184
Base metal *	484.00	B	693.31	T	2810.	16000.	0.176
Top flg. splice	390.00	B	1837.81	T	7851.	18000.	0.436
Top flg splice *	390.00	B	1523.43	T	6307.	16000.	0.394
Top flg. splice	402.00	B	2025.37	T	4918.	18000.	0.273
Top flg splice *	402.00	B	1677.90	T	3970.	16000.	0.248
Top flg. splice	473.00	B	1280.04	T	2329.	18000.	0.129
Top flg splice *	473.00	B	1078.67	T	1912.	16000.	0.119
Top flg. splice	485.00	B	769.17	T	1129.	18000.	0.063
Top flg splice *	485.00	B	654.75	T	965.	16000.	0.060
Bot flg. splice	390.00	B	1837.81	T	13294.	18000.	0.739
Bot flg splice *	390.00	B	1523.43	T	10954.	16000.	0.685
Bot flg. splice	402.00	B	2025.37	T	8553.	18000.	0.475
Bot flg splice *	402.00	B	1677.90	T	7060.	16000.	0.441
Bot flg. splice	473.00	B	1280.04	T	5217.	18000.	0.290
Bot flg splice *	473.00	B	1078.67	T	4384.	16000.	0.274
Bot flg. splice	485.00	B	769.17	T	4355.	18000.	0.242
Bot flg splice *	485.00	B	654.75	T	3754.	16000.	0.235
Trans. stiff. toe	385.00	C	1748.67	T	12595.	13000.	0.969
Trans. stiff. toe *	385.00	C	1452.84	T	10404.	12000.	0.867
Trans. stiff. toe	390.00	C	1834.92	T	13059.	13000.	1.005
Trans. stiff. toe *	390.00	C	1521.57	T	10766.	12000.	0.897
Trans. stiff. toe	395.00	C	1911.25	T	13462.	13000.	1.036
Trans. stiff. toe *	395.00	C	1583.94	T	11092.	12000.	0.924
Trans. stiff. toe	400.00	C	1987.57	T	7075.	13000.	0.544
Trans. stiff. toe *	400.00	C	1646.31	T	5844.	12000.	0.487
Trans. stiff. toe	405.00	C	2055.59	T	7286.	13000.	0.560
Trans. stiff. toe *	405.00	C	1701.08	T	6012.	12000.	0.501
Trans. stiff. toe	410.00	C	2090.38	T	7385.	13000.	0.568
Trans. stiff. toe *	410.00	C	1725.45	T	6080.	12000.	0.507
Trans. stiff. toe	415.00	C	2125.18	T	7485.	13000.	0.576
Trans. stiff. toe *	415.00	C	1749.82	T	6147.	12000.	0.512

Trans. stiff. toe	420.00	C	2159.97	T	7584.	13000.	0.583
Trans. stiff. toe *	420.00	C	1774.20	T	6214.	12000.	0.518
Trans. stiff. toe	425.00	C	2138.60	T	7493.	13000.	0.576
Trans. stiff. toe *	425.00	C	1761.72	T	6157.	12000.	0.513
Trans. stiff. toe	430.00	C	2117.23	T	7402.	13000.	0.569
Trans. stiff. toe *	430.00	C	1749.25	T	6100.	12000.	0.508
Trans. stiff. toe	435.00	C	2095.85	T	7312.	13000.	0.562
Trans. stiff. toe *	435.00	C	1736.77	T	6044.	12000.	0.504
Trans. stiff. toe	440.00	C	2036.93	T	7094.	13000.	0.546
Trans. stiff. toe *	440.00	C	1691.16	T	5875.	12000.	0.490
Trans. stiff. toe	445.00	C	1968.63	T	6845.	13000.	0.527
Trans. stiff. toe *	445.00	C	1637.27	T	5679.	12000.	0.473
Trans. stiff. toe	450.00	C	1900.32	T	6596.	13000.	0.507
Trans. stiff. toe *	450.00	C	1583.38	T	5483.	12000.	0.457
Trans. stiff. toe	455.00	C	1794.87	T	6222.	13000.	0.479
Trans. stiff. toe *	455.00	C	1498.43	T	5182.	12000.	0.432
Trans. stiff. toe	460.00	C	1664.66	T	5764.	13000.	0.443
Trans. stiff. toe *	460.00	C	1392.79	T	4811.	12000.	0.401
Trans. stiff. toe	465.00	C	1534.45	T	5306.	13000.	0.408
Trans. stiff. toe *	465.00	C	1287.15	T	4441.	12000.	0.370
Trans. stiff. toe	470.00	C	1376.16	T	4754.	13000.	0.366
Trans. stiff. toe *	470.00	C	1157.46	T	3989.	12000.	0.332
Trans. stiff. toe	475.00	C	1175.75	T	4059.	13000.	0.312
Trans. stiff. toe *	475.00	C	991.69	T	3416.	12000.	0.285
Trans. stiff. toe	480.00	C	975.34	T	3918.	13000.	0.301
Trans. stiff. toe *	480.00	C	825.92	T	3309.	12000.	0.276
Trans. stiff. toe	485.00	C	764.08	T	3066.	13000.	0.236
Trans. stiff. toe *	485.00	C	649.98	T	2601.	12000.	0.217
Trans. stiff. toe	490.00	C	509.39	T	2044.	13000.	0.157
Trans. stiff. toe *	490.00	C	433.32	T	1734.	12000.	0.144

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	388.00	B	2150.13	L	15624.	29000.	0.539
Base metal	404.00	B	2380.09	L	8573.	29000.	0.296
Base metal	420.00	B	2459.16	L	8771.	29000.	0.302
Base metal	436.00	B	2329.86	L	8255.	29000.	0.285
Base metal	452.00	B	2029.31	L	7155.	29000.	0.247
Base metal	468.00	B	1538.49	L	5404.	29000.	0.186
Base metal	484.00	B	836.75	L	3417.	29000.	0.118
Near flg-web weld	388.00	B	2150.13	L	15428.	29000.	0.532
Near flg-web weld	404.00	B	2380.09	L	8263.	29000.	0.285
Near flg-web weld	420.00	B	2459.16	L	8454.	29000.	0.292
Near flg-web weld	436.00	B	2329.86	L	7957.	29000.	0.274
Near flg-web weld	452.00	B	2029.31	L	6896.	29000.	0.238
Near flg-web weld	468.00	B	1538.49	L	5208.	29000.	0.180
Near flg-web weld	484.00	B	836.75	L	3318.	29000.	0.114
Base metal	388.00	B	2150.13	L	15624.	29000.	0.539
Base metal	404.00	B	2380.09	L	8573.	29000.	0.296
Base metal	420.00	B	2459.16	L	8771.	29000.	0.302
Base metal	436.00	B	2329.86	L	8255.	29000.	0.285
Base metal	452.00	B	2029.31	L	7155.	29000.	0.247
Base metal	468.00	B	1538.49	L	5404.	29000.	0.186
Base metal	484.00	B	836.75	L	3417.	29000.	0.118
Top flg. splice	390.00	B	2185.38	L	9531.	29000.	0.329
Top flg. splice	402.00	B	2359.60	L	5868.	29000.	0.202

Top flg. splice	473.00	B	1341.85	L	2552.	29000.	0.088
Top flg. splice	485.00	B	788.41	L	1149.	29000.	0.040
Bot flg. splice	390.00	B	2185.38	L	15871.	29000.	0.547
Bot flg. splice	402.00	B	2359.60	L	9998.	29000.	0.345
Bot flg. splice	473.00	B	1341.85	L	5496.	29000.	0.190
Bot flg. splice	485.00	B	788.41	L	4359.	29000.	0.150
Trans. stiff. toe	385.00	C	2084.68	L	15075.	21000.	0.718
Trans. stiff. toe	390.00	C	2178.87	L	15571.	21000.	0.741
Trans. stiff. toe	395.00	C	2250.74	L	15929.	21000.	0.759
Trans. stiff. toe	400.00	C	2322.60	L	8290.	21000.	0.395
Trans. stiff. toe	405.00	C	2385.03	L	8478.	21000.	0.404
Trans. stiff. toe	410.00	C	2409.74	L	8539.	21000.	0.407
Trans. stiff. toe	415.00	C	2434.45	L	8600.	21000.	0.410
Trans. stiff. toe	420.00	C	2459.16	L	8661.	21000.	0.412
Trans. stiff. toe	425.00	C	2418.75	L	8502.	21000.	0.405
Trans. stiff. toe	430.00	C	2378.35	L	8343.	21000.	0.397
Trans. stiff. toe	435.00	C	2337.94	L	8184.	21000.	0.390
Trans. stiff. toe	440.00	C	2254.72	L	7880.	21000.	0.375
Trans. stiff. toe	445.00	C	2160.80	L	7540.	21000.	0.359
Trans. stiff. toe	450.00	C	2066.88	L	7201.	21000.	0.343
Trans. stiff. toe	455.00	C	1937.28	L	6741.	21000.	0.321
Trans. stiff. toe	460.00	C	1783.90	L	6200.	21000.	0.295
Trans. stiff. toe	465.00	C	1630.52	L	5660.	21000.	0.270
Trans. stiff. toe	470.00	C	1450.77	L	5031.	21000.	0.240
Trans. stiff. toe	475.00	C	1231.48	L	4268.	21000.	0.203
Trans. stiff. toe	480.00	C	1012.18	L	4086.	21000.	0.195
Trans. stiff. toe	485.00	C	784.45	L	3163.	21000.	0.151
Trans. stiff. toe	490.00	C	522.97	L	2109.	21000.	0.100

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Cost Schedule for Web Section 5

	lb
Flange	24239.7
Web	14393.8
Web stiffeners	2817.5
Bearing stiff.	163.3
Total steel	41614.3

Welding	Vol	lbs
Flange-web	257.2	72.9
Trans.stiff.-web (1/ 4 cont.)	207.0	58.7
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6
Total welding *	473.2	134.2
Total steel and weld		41748.5

Summary Tables

Girder 1 Service Shear -k

Tenth Point	Location	Noncomp Dead	Comp Dead	Max LL+I	Range
0	0.00	68.18	6.27	58.48 L	67.04
Top flg.spl.	15.00	51.92	4.70	54.03	61.31
Bot flg.spl.	15.00	51.92	4.70	54.03	61.31
1	16.00	50.80	4.59	53.61 T	60.89
Top flg.spl.	27.00	38.27	3.45	47.69	55.16
Bot flg.spl.	27.00	38.27	3.45	47.69	55.16
2	32.00	32.50	2.92	44.76 T	53.65
3	48.00	13.76	1.22	34.31 T	53.34
4	64.00	-4.94	-0.46	26.79 T	51.95
5	80.00	-23.67	-2.14	-40.67 T	65.69
6	96.00	-41.06	-3.77	-40.25 T	55.73
Top flg.spl.	98.00	-43.15	-3.97	-40.57	55.12
Top flg.spl.	110.00	-55.41	-5.17	-44.19	54.57
Bot flg.spl.	98.00	-43.15	-3.97	-40.57	55.12
Bot flg.spl.	110.00	-55.41	-5.17	-44.19	54.57
7	112.00	-57.31	-5.36	-45.12 L	54.90
Top flg.spl.	128.00	-71.27	-6.86	-55.77	62.15
Bot flg.spl.	128.00	-71.27	-6.86	-55.77	62.15
Top flg.spl.	144.00	-89.15	-8.51	-63.77	68.05
Bot flg.spl.	144.00	-89.15	-8.51	-63.77	68.05
10	160.00L	-108.45	-10.19	-77.09 L	80.89
10	160.00R	96.43	9.28	76.29 L	85.70
Top flg.spl.	178.00	74.77	7.39	62.63	72.05
Top flg.spl.	193.00	57.30	5.78	54.20	65.19
Bot flg.spl.	178.00	74.77	7.39	62.63	72.05
Bot flg.spl.	193.00	57.30	5.78	54.20	65.19
12	196.00	53.97	5.46	52.54 L	63.96
13	214.00	35.01	3.59	42.69 L	57.52
14	232.00	18.31	1.84	34.87 T	55.21
15	250.00	0.04	0.00	27.68 T	54.07
16	268.00	-18.22	-1.84	-33.97 L	55.44
17	286.00	-34.88	-3.58	-43.35 L	58.65
18	304.00	-53.81	-5.45	-52.56 L	63.86
Top flg.spl.	307.00	-57.15	-5.77	-54.26	65.09
Bot flg.spl.	307.00	-57.15	-5.77	-54.26	65.09
Top flg.spl.	322.00	-74.59	-7.38	-63.39	72.80
Bot flg.spl.	322.00	-74.59	-7.38	-63.39	72.80
20	340.00L	-96.25	-9.27	-76.11 L	85.53
20	340.00R	108.67	10.20	76.99 L	80.80
Top flg.spl.	356.00	89.36	8.52	64.24	68.63
Bot flg.spl.	356.00	89.36	8.52	64.24	68.63
Top flg.spl.	372.00	71.47	6.87	54.88	60.57
Bot flg.spl.	372.00	71.47	6.87	54.88	60.57
23	388.00	57.45	5.37	45.91 L	54.76
Top flg.spl.	390.00	55.54	5.18	45.06	54.44
Top flg.spl.	402.00	43.28	3.98	41.18	53.94
Bot flg.spl.	390.00	55.54	5.18	45.06	54.44
Bot flg.spl.	402.00	43.28	3.98	41.18	53.94
24	404.00	41.19	3.78	40.81 T	54.76
25	420.00	23.78	2.15	40.64 T	69.78
26	436.00	5.05	0.47	26.96 T	52.27
27	452.00	-13.65	-1.21	-33.17 T	53.93

28	468.00	-32.37	-2.91	-41.64 T	55.23
Top flg.spl.	473.00	-38.13	-3.44	-44.23	55.86
Bot flg.spl.	473.00	-38.13	-3.44	-44.23	55.86
29	484.00	-50.67	-4.58	-49.84 T	57.62
Top flg.spl.	485.00	-51.78	-4.69	-50.37	58.00
Bot flg.spl.	485.00	-51.78	-4.69	-50.37	58.00
30	500.00	-68.04	-6.26	-58.43 L	66.90

T - governed by truck loading
L - governed by lane loading

Girder 1 Truck-Lane Shear Ranges - k

Tenth	Loc	Truck		Lane	
		Max LL+I	Range	Max LL+I	Range
0	0.00	56.69	63.59	58.48	67.04
Top flg.spl.	15.00	52.91	59.75	49.50	57.92
Bot flg.spl.	15.00	52.91	59.75	49.50	57.92
1	16.00	52.52	59.42	48.89	57.36
Top flg.spl.	27.00	46.91	53.99	42.07	51.17
Bot flg.spl.	27.00	46.91	53.99	42.07	51.17
2	32.00	44.09	52.59	38.97	49.28
3	48.00	33.92	52.58	29.08	47.12
4	64.00	26.34	51.30	23.36	45.39
5	80.00	-40.09	65.69	-32.83	47.55
6	96.00	-39.16	54.56	-38.41	50.24
Top flg.spl.	98.00	-39.35	53.89	-39.18	50.61
Top flg.spl.	110.00	-41.96	53.55	-44.06	52.72
Bot flg.spl.	98.00	-39.35	53.89	-39.18	50.61
Bot flg.spl.	110.00	-41.96	53.55	-44.06	52.72
7	112.00	-42.62	53.68	-45.12	53.42
Top flg.spl.	128.00	-50.36	57.31	-55.77	62.15
Bot flg.spl.	128.00	-50.36	57.31	-55.77	62.15
Top flg.spl.	144.00	-54.13	57.99	-63.77	68.05
Bot flg.spl.	144.00	-54.13	57.99	-63.77	68.05
10	160.00L	-58.09	61.73	-77.09	80.89
10	160.00R	59.16	66.83	76.29	85.70
Top flg.spl.	178.00	54.59	62.26	62.63	72.05
Top flg.spl.	193.00	49.04	56.64	54.20	65.19
Bot flg.spl.	178.00	54.59	62.26	62.63	72.05
Bot flg.spl.	193.00	49.04	56.64	54.20	65.19
12	196.00	47.94	55.93	52.54	63.96
13	214.00	41.50	54.53	42.69	57.52
14	232.00	33.85	53.73	33.27	53.55
15	250.00	26.67	52.12	25.89	51.65
16	268.00	-33.00	54.04	-33.41	53.15
17	286.00	-40.69	55.10	-43.35	58.65
18	304.00	-46.98	55.90	-52.56	63.86
Top flg.spl.	307.00	-48.10	56.53	-54.26	65.09
Bot flg.spl.	307.00	-48.10	56.53	-54.26	65.09
Top flg.spl.	322.00	-54.07	61.81	-63.39	72.80
Bot flg.spl.	322.00	-54.07	61.81	-63.39	72.80
20	340.00L	-56.71	64.45	-76.11	85.53
20	340.00R	59.20	62.92	76.99	80.80
Top flg.spl.	356.00	54.92	58.64	64.24	68.63
Bot flg.spl.	356.00	54.92	58.64	64.24	68.63
Top flg.spl.	372.00	51.30	57.03	54.88	60.57
Bot flg.spl.	372.00	51.30	57.03	54.88	60.57
23	388.00	43.90	53.81	45.91	54.46
Top flg.spl.	390.00	43.23	53.63	44.83	53.74

Top flg.spl.	402.00	40.29	53.03	38.49	49.07
Bot flg.spl.	390.00	43.23	53.63	44.83	53.74
Bot flg.spl.	402.00	40.29	53.03	38.49	49.07
24	404.00	40.01	53.88	37.65	49.03
25	420.00	39.95	69.30	32.85	55.25
26	436.00	26.51	51.59	23.08	44.51
27	452.00	-32.66	53.06	-29.50	47.27
28	468.00	-40.58	53.79	-39.25	52.53
Top flg.spl.	473.00	-43.12	54.28	-42.23	54.14
Bot flg.spl.	473.00	-43.12	54.28	-42.23	54.14
29	484.00	-48.84	55.80	-48.71	57.62
Top flg.spl.	485.00	-49.30	56.08	-49.31	58.08
Bot flg.spl.	485.00	-49.30	56.08	-49.31	58.08
30	500.00	-55.35	62.31	-58.43	66.90

Girder 1 Factored Reactions - k

Loc	Noncomp Dead	Comp Dead	LL+I Down	LL+I Up	Max Total	Min Total
0.00	88.92	8.16	128.81	-31.33	225.88	65.75
Steel	27.99					
Conc	60.93					
160.00	266.65	25.31	255.41	-45.50	547.37	246.46
Steel	76.35					
Conc	190.30					
340.00	266.70	25.32	255.47	-45.50	547.49	246.51
Steel	76.36					
Conc	190.33					
500.00	88.74	8.14	128.71	-31.33	225.60	65.56
Steel	27.94					
Conc	60.80					

Unfactored Reactions - k

Loc	Noncomp Dead	Comp Dead	LL+I Down	LL+I Up	Max Total	Min Total
0.00	68.40	6.27	59.33	-14.43	134.00	60.24
Steel	21.53					
Conc	46.87					
160.00	205.11	19.47	117.65	-20.96	342.23	203.63
Steel	58.73					
Conc	146.38					

340.00	205.15	19.48	117.67	-20.96	342.30	203.67
Steel	58.74					
Conc	146.41					
500.00	68.26	6.26	59.29	-14.43	133.81	60.10
Steel	21.49					
Conc	46.77					

Girder 1 Service Moment - k-ft

Tenth Point	Location	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Range
0	0.00	0.00	0.00	0.00 L	-0.01 L	0.01
Top flg.spl	15.00	902.82	82.28	733.17	-121.31	854.48
Bot.flg.spl	15.00	902.82	82.28	733.17	-121.31	854.48
1	16.00	953.80	86.91	773.65 T	-129.40 L	903.06
Top flg.spl	27.00	1438.75	130.78	1136.12	-218.61	1354.72
Bot.flg.spl	27.00	1438.75	130.78	1136.12	-218.61	1354.72
2	32.00	1613.20	146.53	1278.57 L	-259.05 L	1537.62
3	48.00	1978.32	179.38	1640.78 L	-388.02 L	2028.80
4	64.00	2048.81	185.47	1813.75 L	-516.23 L	2329.99
5	80.00	1819.94	164.61	1815.55 L	-644.39 L	2459.93
6	96.00	1312.76	117.77	1612.97 L	-768.22 L	2381.19
Top flg.spl	98.00	1229.81	110.09	1576.75	-783.93	2360.68
Top flg.spl	110.00	638.29	55.43	1306.88	-879.19	2186.06
Bot.flg.spl	98.00	1229.81	110.09	1576.75	-783.93	2360.68
Bot.flg.spl	110.00	638.29	55.43	1306.88	-879.19	2186.06
7	112.00	527.46	45.00	1255.41 L	-895.32 L	2150.74
Top flg.spl	128.00	-489.48	-52.08	774.06	-1026.98	1801.03
Bot.flg.spl	128.00	-489.48	-52.08	774.06	-1026.98	1801.03
Top flg.spl	144.00	-1786.25	-176.17	433.81	-1517.40	1951.20
Bot.flg.spl	144.00	-1786.25	-176.17	433.81	-1517.40	1951.20
10	160.00	-3374.84	-326.38	380.13 L	-2378.60 L	2758.72
Top flg.spl	178.00	-1835.34	-176.41	386.50	-1429.73	1816.23
Top flg.spl	193.00	-850.82	-77.74	668.38	-936.94	1605.33
Bot.flg.spl	178.00	-1835.34	-176.41	386.50	-1429.73	1816.23
Bot.flg.spl	193.00	-850.82	-77.74	668.38	-936.94	1605.33
12	196.00	-682.25	-60.78	726.93 T	-873.68 L	1600.61
13	214.00	130.86	21.59	1093.38 T	-741.26 L	1834.64
14	232.00	618.22	70.92	1343.89 L	-713.03 L	2056.93
15	250.00	784.31	87.57	1433.40 L	-680.05 L	2113.45
16	268.00	619.81	71.02	1343.92 L	-712.89 L	2056.81
17	286.00	134.33	21.81	1093.63 T	-740.97 L	1834.60
18	304.00	-665.24	-59.63	678.43 T	-873.19 L	1551.62
Top flg.spl	307.00	-833.90	-76.60	618.25	-936.43	1554.67
Bot.flg.spl	307.00	-833.90	-76.60	618.25	-936.43	1554.67
Top flg.spl	322.00	-1828.93	-175.93	355.98	-1429.17	1785.15
Bot.flg.spl	322.00	-1828.93	-175.93	355.98	-1429.17	1785.15
20	340.00	-3374.45	-326.36	380.31 L	-2378.17 L	2758.48
Top flg.spl	356.00	-1791.05	-176.53	471.94	-1517.37	1989.30
Bot.flg.spl	356.00	-1791.05	-176.53	471.94	-1517.37	1989.30
Top flg.spl	372.00	-504.33	-53.15	773.93	-1027.14	1801.07
Bot.flg.spl	372.00	-504.33	-53.15	773.93	-1027.14	1801.07

OUTPUT.TXT

23	388.00	536.09	45.55	1254.61 L	-895.51 L	2150.13
Top flg.spl	390.00	647.35	56.00	1306.01	-879.38	2185.38
Top flg.spl	402.00	1227.02	109.89	1575.51	-784.09	2359.60
Bot.flg.spl	390.00	647.35	56.00	1306.01	-879.38	2185.38
Bot.flg.spl	402.00	1227.02	109.89	1575.51	-784.09	2359.60
24	404.00	1309.15	117.52	1611.71 L	-768.38 L	2380.09
25	420.00	1817.08	164.41	1814.64 L	-644.52 L	2459.16
26	436.00	2047.74	185.40	1813.52 L	-516.34 L	2329.86
27	452.00	1979.08	179.43	1641.21 L	-388.10 L	2029.31
28	468.00	1610.93	146.41	1279.39 L	-259.10 L	1538.49
Top flg.spl	473.00	1435.04	130.57	1126.95	-218.65	1345.60
Bot.flg.spl	473.00	1435.04	130.57	1126.95	-218.65	1345.60
29	484.00	946.08	86.45	725.58 T	-129.43 L	855.01
Top flg.spl	485.00	895.19	81.82	685.26	-121.34	806.60
Bot.flg.spl	485.00	895.19	81.82	685.26	-121.34	806.60
30	500.00	0.00	0.00	0.00 L	-0.01 L	0.01

T - governed by truck loading
L - governed by lane loading

At Bracing

20.00	1146.25	104.37	925.08	-161.79
40.00	1832.58	166.30	1483.33	-323.63
60.00	2059.25	186.48	1786.56	-484.19
80.00	1819.94	164.61	1815.55	-644.39
100.00	1142.51	102.00	1538.11	-799.69
120.00	53.97	-0.16	997.10	-916.30
140.00	-1434.70	-142.70	492.01	-1360.03
160.00	-3374.84	-326.38	380.13	-2378.60
180.00	-1688.14	-161.87	407.83	-1348.55
200.00	-472.18	-39.60	806.11	-807.65
220.00	329.51	41.71	1189.77	-720.27
240.00	731.70	82.35	1403.55	-698.96
260.00	732.55	82.41	1403.54	-698.89
280.00	331.05	41.80	1195.38	-720.04
300.00	-456.09	-38.52	762.68	-807.19
320.00	-1680.77	-161.32	374.68	-1347.99
340.00	-3374.45	-326.36	380.31	-2378.17
360.00	-1441.55	-143.20	527.71	-1360.07
380.00	46.66	-0.72	991.93	-916.50
400.00	1140.74	101.87	1536.89	-799.86
420.00	1817.08	164.41	1814.64	-644.52
440.00	2058.64	186.43	1786.49	-484.29
460.00	1832.44	166.30	1483.99	-323.70
480.00	1138.66	103.92	880.13	-161.83

Girder 1 Truck-Lane Moment Ranges - k-ft

Tenth Point	Loc	Truck Max LL+I	Truck Min LL+I	Truck Range	Lane Max LL+I	Lane Min LL+I	Lane Range
0	0.00	0.00	-0.01	0.01	0.00	-0.01	0.01
Top flg.spl	15.00	718.26	-98.82	817.09	709.14	-121.31	830.45
Bot.flg.spl	15.00	718.26	-98.82	817.09	709.14	-121.31	830.45
1	16.00	757.68	-105.42	863.10	749.53	-129.40	878.93
Top flg.spl	27.00	1111.06	-178.09	1289.15	1131.17	-218.61	1349.78
Bot.flg.spl	27.00	1111.06	-178.09	1289.15	1131.17	-218.61	1349.78
2	32.00	1244.38	-211.04	1455.42	1278.57	-259.05	1537.62
3	48.00	1556.30	-316.12	1872.42	1640.78	-388.02	2028.80

OUTPUT.TXT

4	64.00	1670.99	-420.60	2091.59	1813.75	-516.23	2329.99
5	80.00	1635.34	-525.04	2160.38	1815.55	-644.39	2459.93
6	96.00	1423.53	-625.96	2049.49	1612.97	-768.22	2381.19
Top flg.spl	98.00	1387.41	-638.78	2026.19	1576.75	-783.93	2360.68
Top flg.spl	110.00	1121.03	-716.78	1837.81	1306.88	-879.19	2186.06
Bot.flg.spl	98.00	1387.41	-638.78	2026.19	1576.75	-783.93	2360.68
Bot.flg.spl	110.00	1121.03	-716.78	1837.81	1306.88	-879.19	2186.06
7	112.00	1074.48	-729.83	1804.31	1255.41	-895.32	2150.74
8	128.00	671.99	-834.90	1506.89	774.06	-1026.98	1801.03
Top flg.spl	128.00	671.99	-834.90	1506.89	774.06	-1026.98	1801.03
Bot.flg.spl	128.00	671.99	-834.90	1506.89	774.06	-1026.98	1801.03
9	144.00	291.04	-942.14	1233.19	433.81	-1517.40	1951.20
Top flg.spl	144.00	291.04	-942.14	1233.19	433.81	-1517.40	1951.20
Bot.flg.spl	144.00	291.04	-942.14	1233.19	433.81	-1517.40	1951.20
10	160.00	325.65	-1054.00	1379.65	380.13	-2378.60	2758.72
11	178.00	320.12	-832.66	1152.78	386.50	-1429.73	1816.23
Top flg.spl	178.00	320.12	-832.66	1152.78	386.50	-1429.73	1816.23
Top flg.spl	193.00	657.78	-726.35	1384.13	569.70	-936.94	1506.64
Bot.flg.spl	178.00	320.12	-832.66	1152.78	386.50	-1429.73	1816.23
Bot.flg.spl	193.00	657.78	-726.35	1384.13	569.70	-936.94	1506.64
12	196.00	721.32	-705.55	1426.87	620.40	-873.68	1494.08
13	214.00	1074.57	-583.98	1658.55	1023.06	-741.26	1764.32
14	232.00	1307.51	-457.52	1765.03	1332.55	-713.03	2045.58
15	250.00	1375.92	-327.11	1703.03	1433.40	-680.05	2113.45
16	268.00	1307.50	-457.43	1764.93	1332.84	-712.89	2045.73
17	286.00	1074.78	-583.87	1658.65	1023.64	-740.97	1764.61
18	304.00	672.80	-705.45	1378.24	585.59	-873.19	1458.78
Top flg.spl	307.00	606.42	-726.25	1332.67	532.85	-936.43	1469.27
Bot.flg.spl	307.00	606.42	-726.25	1332.67	532.85	-936.43	1469.27
19	322.00	277.17	-832.60	1109.76	355.98	-1429.17	1785.15
Top flg.spl	322.00	277.17	-832.60	1109.76	355.98	-1429.17	1785.15
Bot.flg.spl	322.00	277.17	-832.60	1109.76	355.98	-1429.17	1785.15
20	340.00	325.72	-1054.01	1379.72	380.31	-2378.17	2758.48
21	356.00	320.54	-942.14	1262.68	471.94	-1517.37	1989.30
Top flg.spl	356.00	320.54	-942.14	1262.68	471.94	-1517.37	1989.30
Bot.flg.spl	356.00	320.54	-942.14	1262.68	471.94	-1517.37	1989.30
22	372.00	672.33	-834.90	1507.23	773.93	-1027.14	1801.07
Top flg.spl	372.00	672.33	-834.90	1507.23	773.93	-1027.14	1801.07
Bot.flg.spl	372.00	672.33	-834.90	1507.23	773.93	-1027.14	1801.07
23	388.00	1074.56	-729.83	1804.39	1254.61	-895.51	2150.13
Top flg.spl	390.00	1121.04	-716.78	1837.81	1306.01	-879.38	2185.38
Top flg.spl	402.00	1386.60	-638.77	2025.37	1575.51	-784.09	2359.60
Bot.flg.spl	390.00	1121.04	-716.78	1837.81	1306.01	-879.38	2185.38
Bot.flg.spl	402.00	1386.60	-638.77	2025.37	1575.51	-784.09	2359.60
24	404.00	1422.69	-625.95	2048.64	1611.71	-768.38	2380.09
25	420.00	1634.93	-525.04	2159.97	1814.64	-644.52	2459.16
26	436.00	1670.99	-420.59	2091.58	1813.52	-516.34	2329.86
27	452.00	1556.88	-316.12	1873.00	1641.21	-388.10	2029.31
28	468.00	1245.28	-211.03	1456.32	1279.39	-259.10	1538.49
Top flg.spl	473.00	1101.96	-178.09	1280.04	1123.20	-218.65	1341.85
Bot.flg.spl	473.00	1101.96	-178.09	1280.04	1123.20	-218.65	1341.85
29	484.00	709.60	-105.42	815.02	707.32	-129.43	836.75
Top flg.spl	485.00	670.35	-98.82	769.17	667.07	-121.34	788.41
Bot.flg.spl	485.00	670.35	-98.82	769.17	667.07	-121.34	788.41
30	500.00	0.00	-0.01	0.01	0.00	-0.01	0.01

Girder 1 Service Torque - k-ft

Tenth Point	Location	DL1	DL2	Max LL+I	Min LL+I	Range
0	0.00	0.00	0.01	8.92	-6.66	15.58

TOP FLG.SPL	15.00	0.01	0.01	9.00	-6.70	15.69
BOT.FLG.SPL	15.00	0.01	0.01	9.00	-6.70	15.69
1	16.00	0.00	0.01	8.96 T	-6.67 L	15.64
TOP FLG.SPL	27.00	-0.02	-0.01	8.25	-6.24	14.49
BOT.FLG.SPL	27.00	-0.02	-0.01	8.25	-6.24	14.49
2	32.00	0.00	-0.02	7.73 L	-5.89 L	13.62
3	48.00	0.00	0.01	5.17 L	-4.15 L	9.31
4	64.00	0.05	0.04	2.96 L	-2.82 L	5.78
5	80.00	0.12	0.08	3.32 L	-3.95 L	7.27
6	96.00	0.12	0.08	1.92 L	-2.77 L	4.69
TOP FLG.SPL	98.00	0.12	0.08	1.94	-2.85	4.79
TOP FLG.SPL	110.00	0.01	0.00	2.94	-4.46	7.40
BOT.FLG.SPL	98.00	0.12	0.08	1.94	-2.85	4.79
BOT.FLG.SPL	110.00	0.01	0.00	2.94	-4.46	7.40
7	112.00	0.00	-0.01	3.22 L	-4.80 L	8.02
TOP FLG.SPL	128.00	-0.02	-0.06	6.67	-8.39	15.06
BOT.FLG.SPL	128.00	-0.02	-0.06	6.67	-8.39	15.06
TOP FLG.SPL	144.00	-0.06	-0.05	8.66	-9.87	18.52
BOT.FLG.SPL	144.00	-0.06	-0.05	8.66	-9.87	18.52
10	160.00	-0.06	-0.05	9.44 L	-9.89 L	19.33
TOP FLG.SPL	178.00	-0.05	-0.03	9.41	-9.86	19.27
TOP FLG.SPL	193.00	0.01	0.05	8.94	-8.60	17.53
BOT.FLG.SPL	178.00	-0.05	-0.03	9.41	-9.86	19.27
BOT.FLG.SPL	193.00	0.01	0.05	8.94	-8.60	17.53
12	196.00	0.00	0.06	8.74 T	-8.28 L	17.02
13	214.00	0.00	0.05	6.81 T	-5.96 L	12.77
14	232.00	0.00	0.01	4.33 L	-3.83 L	8.16
15	250.00	0.00	0.00	3.64 L	-3.64 L	7.28
16	268.00	0.00	-0.01	3.83 L	-4.33 L	8.16
17	286.00	0.00	-0.05	5.96 T	-6.81 L	12.77
18	304.00	0.00	-0.06	8.28 T	-8.74 L	17.02
TOP FLG.SPL	307.00	-0.01	-0.05	8.60	-8.94	17.54
BOT.FLG.SPL	307.00	-0.01	-0.05	8.60	-8.94	17.54
TOP FLG.SPL	322.00	0.05	0.02	9.86	-9.41	19.27
BOT.FLG.SPL	322.00	0.05	0.02	9.86	-9.41	19.27
20	340.00	0.05	0.05	9.88 L	-9.42 L	19.30
TOP FLG.SPL	356.00	0.05	0.05	9.86	-8.66	18.52
BOT.FLG.SPL	356.00	0.05	0.05	9.86	-8.66	18.52
TOP FLG.SPL	372.00	0.02	0.06	8.39	-6.67	15.06
BOT.FLG.SPL	372.00	0.02	0.06	8.39	-6.67	15.06
23	388.00	0.00	0.01	4.80 L	-3.22 L	8.01
TOP FLG.SPL	390.00	-0.01	0.00	4.46	-2.94	7.40
TOP FLG.SPL	402.00	-0.11	-0.08	2.85	-1.93	4.79
BOT.FLG.SPL	390.00	-0.01	0.00	4.46	-2.94	7.40
BOT.FLG.SPL	402.00	-0.11	-0.08	2.85	-1.93	4.79
24	404.00	-0.12	-0.08	2.77 L	-1.92 L	4.69
25	420.00	-0.12	-0.08	3.95 L	-3.32 L	7.27
26	436.00	-0.05	-0.04	2.82 L	-2.96 L	5.78
27	452.00	0.00	-0.01	4.14 L	-5.17 L	9.31
28	468.00	0.00	0.02	5.89 L	-7.72 L	13.62
TOP FLG.SPL	473.00	0.02	0.01	6.24	-8.25	14.49
BOT.FLG.SPL	473.00	0.02	0.01	6.24	-8.25	14.49
29	484.00	0.00	-0.01	6.67 T	-8.96 L	15.64
TOP FLG.SPL	485.00	-0.01	-0.01	6.70	-9.00	15.69
BOT.FLG.SPL	485.00	-0.01	-0.01	6.70	-9.00	15.69
30	500.00	0.00	-0.01	6.66	-8.92	15.58

Girder 1 Combined Factored Moment - k-ft

Tenth Pt	Loc	Tot Dead+Max LL+I	Tot Dead+Min LL+I
0	0.00	0.01	-0.01

1	16.00	3032.53	1071.99
2	32.00	5063.43	1725.25
3	48.00	6367.13	1962.60
4	64.00	6842.23	1783.82
5	80.00	6521.48	1180.96
6	96.00	5361.44	191.88
7	112.00	3469.71	-1199.54
8	128.00	976.46	-2933.58
9	144.00	-1609.35	-5845.41
10	160.00	-3986.34	-9975.52
11	178.00	-1776.19	-5719.22
12	196.00	612.23	-2862.70
13	214.00	2571.92	-1411.08
14	232.00	3813.47	-652.11
15	250.00	4245.36	-342.93
16	268.00	3815.73	-649.61
17	286.00	2577.26	-1405.66
18	304.00	530.53	-2838.03
19	322.00	-1833.48	-5709.05
20	340.00	-3985.41	-9974.06
21	356.00	-1533.27	-5852.05
22	372.00	955.47	-2954.66
23	388.00	3479.90	-1188.03
24	404.00	5353.69	186.51
25	420.00	6515.54	1176.70
26	436.00	6840.23	1782.12
27	452.00	6369.13	1963.49
28	468.00	5062.10	1722.05
29	484.00	2917.52	1061.29
30	500.00	0.01	-0.01

Contraflexure Points

Service Noncomposite Dead

120.30 ft
211.10 ft
289.02 ft
379.76 ft

Top flange tension for region between contraflexure pts.
120.30 - 211.10
289.02 - 379.76

Bottom flange tension for region between contraflexure pts.
0.00 - 120.30
211.10 - 289.02
379.76 - 500.00

Service Tot Dead+Max LL+I

130.11 ft
196.23 ft
303.36 ft
369.98 ft

Top flange tension for region between contraflexure pts.
130.11 - 196.23
303.36 - 369.98

```
Bottom flange tension for region between contraflexure pts.
     0.00 -    130.11
   196.23 -    303.36
   369.98 -    500.00


Service Tot Dead+Min LL+I

   106.76 ft
   233.99 ft
   266.14 ft
   393.17 ft

    Top flange tension for region between contraflexure pts.
   106.76 -    233.99
   266.14 -    393.17

    Bottom flange tension for region between contraflexure pts.
     0.00 -    106.76
   233.99 -    266.14
   393.17 -    500.00


Factored Tot Dead+Max LL+I

   134.04 ft
   191.39 ft
   308.04 ft
   365.86 ft

    Top flange tension for region between contraflexure pts.
   134.04 -    191.39
   308.04 -    365.86

    Bottom flange tension for region between contraflexure pts.
     0.00 -    134.04
   191.39 -    308.04
   365.86 -    500.00


Factored Tot Dead+Min LL+I

    98.21 ft
   401.83 ft

    Top flange tension for region between contraflexure pts.
    98.21 -    401.83

    Bottom flange tension for region between contraflexure pts.
     0.00 -     98.21
   401.83 -    500.00


Factored Composite Dead - Construction

   119.42 ft
   209.28 ft
   290.82 ft
   380.62 ft

    Top flange tension for region between contraflexure pts.
   119.42 -    209.28
   290.82 -    380.62
```



```
  Rebar termination for 10.50.2.3 requirement
no limit   -  no limit
no limit   -  no limit
     Modulus of rupture -  410.79

Bottom flange tension for region between contraflexure pts.
     0.00 -    119.42
   209.28 -    290.82
   380.62 -    500.00


Total Dead + 1.67 Min LL+I - 10.57 Overload

    98.21 ft
   401.83 ft

    Top flange tension for region between contraflexure pts.
    98.21 -    401.83
   290.82 -    380.62

  Rebar termination for 10.50.2.3 requirement - noncomp dead excluded
   104.35 -    199.54
   300.71 -    395.65
     Modulus of rupture -  410.79

Bottom flange tension for region between contraflexure pts.
     0.00 -     98.21
   401.83 -    290.82
   380.62 -    500.00
```

Girder 1 Dimensions

Tenth Point	Loc	-Top Flange- tfw	tft	weld	----Web---- wd	wt	weld	-Bot Flange- bfw	bft	Area
0	0.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpL	15.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpR	15.00	18.00	1.625	1/ 4	72.00	0.500	1/ 4	18.00	1.625	94.50
1	16.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpL	27.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpR	27.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
2	32.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
3	48.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
4	64.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
5	80.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
6	96.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpL	98.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpR	98.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpL	110.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpR	110.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
7	112.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpL	128.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
SpR	128.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpL	144.00	18.00	1.750	5/16	89.41	0.500	5/16	18.00	1.750	107.71
SpR	144.00	18.00	2.000	5/16	89.77	0.500	5/16	18.00	2.000	116.88
10	160.00	18.00	2.000	5/16	105.00	0.500	5/16	18.00	2.000	124.50
SpL	178.00	18.00	2.000	5/16	85.51	0.500	5/16	18.00	2.000	114.75
SpR	178.00	18.00	1.750	5/16	85.18	0.500	5/16	18.00	1.750	105.59
SpL	193.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpR	193.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
12	196.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00

OUTPUT.TXT

13	214.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
14	232.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
15	250.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
16	268.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
17	286.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
18	304.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
SpL	307.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
SpR	307.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpL	322.00	18.00	1.750	5/16	85.18	0.500	5/16	18.00	1.750	105.59
SpR	322.00	18.00	2.000	5/16	85.51	0.500	5/16	18.00	2.000	114.75
20	340.00	18.00	2.000	5/16	105.00	0.500	5/16	18.00	2.000	124.50
SpL	356.00	18.00	2.000	5/16	89.77	0.500	5/16	18.00	2.000	116.88
SpR	356.00	18.00	1.750	5/16	89.41	0.500	5/16	18.00	1.750	107.71
SpL	372.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpR	372.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
23	388.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpL	390.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpR	390.00	18.00	1.625	1/ 4	72.00	0.500	1/ 4	18.00	1.625	94.50
SpL	402.00	18.00	1.625	1/ 4	72.00	0.500	1/ 4	18.00	1.625	94.50
SpR	402.00	18.00	2.000	1/ 4	72.00	0.500	1/ 4	18.00	2.000	108.00
24	404.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
25	420.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
26	436.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
27	452.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
28	468.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpL	473.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpR	473.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
29	484.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpL	485.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpR	485.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
30	500.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00

Theoretical Flange Splice Locations

Tenth Pt Range	Location
0 - 1	a
1 - 2	a
6 - 7	96.47
7 - 8	a
8 - 9	a
9 - 10	a
10 - 11	a
11 - 12	178.59
18 - 19	313.00
19 - 20	a
20 - 21	a
21 - 22	a
22 - 23	a
23 - 24	396.00
28 - 29	a
29 - 30	a

a. Splice not required in this range.

Stiffener Spacing

OUTPUT.TXT

Panel Start	Panel End	Uniform in Panel
0.00	500.00 ft	100 @ 60.00 in

Longitudinal Web Stiffeners

Web Section	Width	Thickness
2	4.00	0.500
4	4.00	0.500

Bearing Stiffeners

Location	Width	Thickness
0.00	8.00	0.500
160.00	8.00	0.500
340.00	8.00	0.500
500.00	8.00	0.500

Transverse Stiffeners

Web Section	Width	Thickness
1	6.00	0.500
2	6.00	0.500
3	6.00	0.500
4	6.00	0.500
5	6.00	0.500

Girder 1 Elastic Section Properties for Stiffness Analysis

Tenth Point	Noncomp I	Noncomp na from Bott	Noncomp na from Top Flg	Comp (n = 9) I	Comp (n = 9) na from Bott	Comp (n = 9) na from Top Flg	Comp (3n = 27) I	Comp (3n = 27) na from Bott	Comp (3n = 27) na from Top Flg
0	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19
1	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
2	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
3	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
4	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
5	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
6	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
7	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
8	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
9	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
10	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
11	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
12	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
13	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
14	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
15	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
16	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
17	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
18	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
19	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
20	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
21	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91

22	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
23	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
24	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
25	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
26	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
27	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
28	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
29	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
30	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19

Girder 1 Elastic Section Properties for Pos Mom Stress

Tenth Point	I	Noncomp na from Bott	Noncomp na from Top Flg	I	Comp (n = 9) na from Bott	Comp (n = 9) na from Top Flg	I	Comp (3n = 27) na from Bott	Comp (3n = 27) na from Top Flg
0	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19
1	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
2	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
3	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
4	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
5	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
6	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
7	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
8	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
9	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
10	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
11	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
12	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
13	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
14	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
15	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
16	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
17	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
18	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
19	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
20	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
21	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
22	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
23	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
24	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
25	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
26	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
27	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
28	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
29	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
30	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19

Girder 1 Elastic Section Properties for Neg Mom Stress

Tenth Point	I	Noncomp na from Bott	Noncomp na from Top Flg	I	Comp (n = 9) na from Bott	Comp (n = 9) na from Top Flg	I	Comp (3n = 27) na from Bott	Comp (3n = 27) na from Top Flg
0	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75
1	94842.	37.62	37.62	94842.	37.62	37.62	94842.	37.62	37.62
2	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00

3	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
4	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
5	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
6	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
7	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75
8	75920.	37.25	37.25	75920.	37.25	37.25	75920.	37.25	37.25
9	171156.	46.67	46.67	171156.	46.67	46.67	171156.	46.67	46.67
10	254340.	54.50	54.50	259366.	55.17	53.83	259366.	55.17	53.83
11	154289.	44.55	44.55	154289.	44.55	44.55	154289.	44.55	44.55
12	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
13	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
14	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
15	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
16	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
17	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
18	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
19	154289.	44.55	44.55	154289.	44.55	44.55	154289.	44.55	44.55
20	254340.	54.50	54.50	259366.	55.17	53.83	259366.	55.17	53.83
21	171156.	46.67	46.67	171156.	46.67	46.67	171156.	46.67	46.67
22	75920.	37.25	37.25	75920.	37.25	37.25	75920.	37.25	37.25
23	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75
24	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
25	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
26	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
27	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
28	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
29	94842.	37.62	37.62	94842.	37.62	37.62	94842.	37.62	37.62
30	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75

Girder 1 Plastic Section Properties

Tenth Point	C (10-123)	C (10-124)	a (10-125)	C' (10-126)	Ybar (10-127 10-128)	Dp	D'	Pos Mom Mp (k-ft) or Mu of (10-129c) (10-129d)	Neg Mom Mp (k-ft)
0								noncmpct	noncmpct
1	1720	3024	7.25	652.0	1.13	9.88	10.08	10163.89	noncmpct
2	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
3	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
4	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
5	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
6	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
7	1720	2016	7.25	148.0	0.26	9.88	9.97	7040.14	noncmpct
8								noncmpct	noncmpct
9								noncmpct	noncmpct
10								noncmpct	noncmpct
11								noncmpct	noncmpct
12								noncmpct	noncmpct
13	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
14	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
15	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
16	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
17	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
18								noncmpct	noncmpct
19								noncmpct	noncmpct
20								noncmpct	noncmpct
21								noncmpct	noncmpct
22								noncmpct	noncmpct

23	1720	2016	7.25	148.0	0.26	9.88	9.97	7040.14	noncmpct
24	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
25	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
26	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
27	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
28	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
29	1720	3024	7.25	652.0	1.13	9.88	10.08	10163.89	noncmpct
30								noncmpct	noncmpct

Girder 1 Elastic Noncomposite Section Properties at Web Splices

Splice Location	Web wd	wt	Top Flg tfw	tft	Bott Flg bfw	bft	Area (in2)	I (in4)	na from Bott	na from Top
117.50L	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75
117.50R	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75
212.50L	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
212.50R	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
287.50L	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
287.50R	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
382.50L	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75
382.50R	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75

Girder 1 Summary of Service Load Effects at Web Splice Locations

Splice Location

117.50

Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
-62.4	-5.9	204.0	14.4

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
-44.8	54.4	942.1	-765.8

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
-48.3	55.8	1103.9	-940.1

Concurrent moment for max shear of -48.3 = 1120.4
Concurrent shear for max moment of 1103.9 = -7.5
Concurrent shear for min moment of -940.1 = -48.3

212.50

Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
36.5	3.7	75.5	16.0

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
42.1	54.6	1049.7	-594.3

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
43.5	58.0	993.1	-748.3

Concurrent moment for max shear of 43.5 = 993.5
Concurrent shear for max moment of 1049.7 = 38.9
Concurrent shear for min moment of -748.3 = 14.5

287.50

Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
-36.4	-3.7	79.7	16.3

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
-41.3	55.2	1047.7	-594.2

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
-44.1	59.1	992.1	-748.0

Concurrent moment for max shear of -44.1 = 994.0
Concurrent shear for max moment of 1047.7 = -28.4
Concurrent shear for min moment of -748.0 = -44.1

382.50

Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
62.5	5.9	208.6	14.6

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
46.1	54.5	942.4	-765.8

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
48.9	56.5	1103.3	-940.3

Concurrent moment for max shear of 48.9 = 1119.2
Concurrent shear for max moment of 1103.3 = 48.9
Concurrent shear for min moment of -940.3 = 7.6

Parabolic interpolation used in this table.

Girder 1 Shear Strength at Web Splices

Splice Location	Web Depth	Web t Left of Spl	Web t Right of Spl	Stiff Spcng	Factored Shear at Spl	Shear Strngth Left of Splice	Perf Ratio	Shear Strngth Right of Splice	Perf Ratio
ft	in	in	in	in	k	k		k	
117.50	72.00	0.500	0.500	60.00	194.28	626.85	0.310	626.85	0.310
212.50	72.00	0.500	0.500	60.00	146.91	626.85	0.234	626.85	0.234
287.50	72.00	0.500	0.500	60.00	148.04	626.85	0.236	626.85	0.236
382.50	72.00	0.500	0.500	60.00	194.96	626.85	0.311	626.85	0.311

Girder 1 Grp I Factored Bending Stresses - ksi

Tenth Point	Loc	Top Flange

		Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	LL+I Rng	Tot	Allow	Ratio
0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000
Top Flg.Spl.		-10.1	-0.4	-2.3	2.3	4.6	-12.8	32.0	0.399
Top Flg.Spl.		-5.6	-0.3	-2.1	1.3	3.4	-8.0	32.0	0.283
1	16.00	-5.9	-0.3	-2.2	1.3	3.6	-8.4	32.0	0.298
Top Flg.Spl.		-8.9	-0.4	-3.3	2.3	5.6	-12.6	32.0	0.443
Top Flg.Spl.		-7.5	-0.4	-3.2	1.9	5.1	-11.0	32.0	0.391
2	32.00	-8.4	-0.4	-3.6	2.2	5.8	-12.4	32.0	0.439
3	48.00	-10.3	-0.5	-4.6	3.4	7.9	-15.4	32.0	0.552
4	64.00	-10.6	-0.6	-5.1	4.5	9.5	-16.3	32.0	0.594
5	80.00	-9.5	-0.5	-5.1	5.6	10.6	-15.0	32.0	0.566
6	96.00	-6.8	-0.4	-4.5	6.7	11.2	-11.7	32.0	0.465
Top Flg.Spl.		-6.4	-0.3	-4.4	6.8	11.2	-11.1	32.0	0.448
Top Flg.Spl.		-7.6	-0.4	-4.6	8.1	12.7	-12.6	32.0	0.508
Top Flg.Spl.		-4.0	-0.2	-3.8	9.1	12.9	-7.9	32.0	0.357
Top Flg.Spl.		-7.1	-0.2	-4.1	16.4	20.6	-11.5	32.0	0.516
7	112.00	-5.9	-0.2	-4.0	16.7	20.7	10.6	32.0	0.493
Top Flg.Spl.		5.5	0.6	-2.5	19.2	21.6	25.2	32.0	0.788
Top Flg.Spl.		2.8	0.3	-2.2	10.0	12.2	13.1	32.0	0.410
10	160.00	11.3	1.1	-0.8	12.9	13.6	25.2	32.0	0.787
Top Flg.Spl.		7.8	0.8	-0.9	10.2	11.1	18.7	32.0	0.586
Top Flg.Spl.		8.8	0.8	-1.0	11.4	12.4	21.0	32.0	0.657
Top Flg.Spl.		4.9	0.5	-1.9	9.1	11.0	14.5	32.0	0.453
Top Flg.Spl.		7.7	0.7	-2.1	14.2	16.3	22.7	32.0	0.708
12	196.00	6.2	0.6	-2.3	13.3	15.5	20.0	32.0	0.625
13	214.00	-1.2	-0.1	-3.4	11.2	14.6	10.0	32.0	0.325
14	232.00	-5.6	-0.3	-4.2	10.8	15.0	-10.1	32.0	0.481
15	250.00	-7.1	-0.4	-4.4	10.3	14.8	-11.9	32.0	0.536
16	268.00	-5.6	-0.3	-4.2	10.8	15.0	-10.1	32.0	0.481
17	286.00	-1.2	-0.1	-3.4	11.2	14.6	9.9	32.0	0.325
18	304.00	6.0	0.5	-2.1	13.3	15.4	19.8	32.0	0.620
Top Flg.Spl.		7.6	0.7	-1.9	14.2	16.1	22.5	32.0	0.703
Top Flg.Spl.		4.9	0.4	-1.8	9.1	10.9	14.4	32.0	0.450
20	340.00	11.3	1.1	-0.8	12.9	13.6	25.2	32.0	0.787
Top Flg.Spl.		7.2	0.7	-1.1	10.2	11.3	18.1	32.0	0.566
Top Flg.Spl.		8.1	0.8	-1.1	11.4	12.6	20.3	32.0	0.634
23	388.00	-6.0	-0.2	-4.0	16.7	20.7	10.5	32.0	0.494
Top Flg.Spl.		-7.2	-0.2	-4.1	16.4	20.6	-11.6	32.0	0.517
Top Flg.Spl.		-4.0	-0.2	-3.8	9.1	12.9	-8.0	32.0	0.358
Top Flg.Spl.		-7.6	-0.4	-4.6	8.1	12.7	-12.5	32.0	0.508
Top Flg.Spl.		-6.4	-0.3	-4.4	6.8	11.2	-11.1	32.0	0.448
24	404.00	-6.8	-0.4	-4.5	6.7	11.2	-11.6	32.0	0.465
25	420.00	-9.4	-0.5	-5.1	5.6	10.6	-15.0	32.0	0.565
26	436.00	-10.6	-0.6	-5.1	4.5	9.5	-16.2	32.0	0.594
27	452.00	-10.3	-0.5	-4.6	3.4	7.9	-15.4	32.0	0.553
28	468.00	-8.4	-0.4	-3.6	2.2	5.8	-12.4	32.0	0.439
Top Flg.Spl.		-7.5	-0.4	-3.1	1.9	5.0	-11.0	32.0	0.389
Top Flg.Spl.		-8.9	-0.4	-3.3	2.3	5.5	-12.6	32.0	0.441
29	484.00	-5.9	-0.3	-2.1	1.3	3.4	-8.2	32.0	0.287
Top Flg.Spl.		-5.5	-0.3	-2.0	1.3	3.2	-7.8	32.0	0.271
Top Flg.Spl.		-10.0	-0.4	-2.3	2.3	4.5	-12.7	32.0	0.396
30	500.00	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000

Governing expression for allowable compression stress

Tenth Pt	Expression
1	compact
2	compact
3	compact
4	compact

5	compact
6	compact
7	compact
13	compact
14	compact
15	compact
16	compact
17	compact
23	compact
24	compact
25	compact
26	compact
27	compact
28	compact
29	compact

Perf. ratio for compact section is (factored mom)/(mom strength).

First of two splice entries is to left of splice,
second is to right of splice.

Girder 1 Grp I Factored Bending Stresses - ksi

Tenth Point	Loc	Bottom Flange: Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	LL+I Rng	Wind	Tot	Allow	Ratio
0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000
Bot.Flg.Spl.		10.1	0.7	10.1	-2.3	12.3	0.0	20.9	32.0	0.653
Bot.Flg.Spl.		5.6	0.5	6.3	-1.3	7.6	0.0	12.3	32.0	0.386
1	16.00	5.9	0.5	6.7	-1.3	8.0	0.0	13.0	32.0	0.298
Bot.Flg.Spl.		8.9	0.7	9.8	-2.3	12.0	0.0	19.4	32.0	0.443
Bot.Flg.Spl.		7.5	0.6	8.4	-1.9	10.3	0.0	16.5	32.0	0.391
2	32.00	8.4	0.7	9.5	-2.2	11.7	0.0	18.5	32.0	0.439
3	48.00	10.3	0.8	12.2	-3.4	15.5	0.0	23.3	32.0	0.552
4	64.00	10.6	0.9	13.4	-4.5	17.9	0.0	25.0	32.0	0.594
5	80.00	9.5	0.8	13.5	-5.6	19.0	0.0	23.7	32.0	0.566
6	96.00	6.8	0.6	12.0	-6.7	18.6	0.0	19.3	32.0	0.465
Bot.Flg.Spl.		6.4	0.5	11.7	-6.8	18.5	0.0	18.6	32.0	0.448
Bot.Flg.Spl.		7.6	0.6	13.6	-8.1	21.7	0.0	21.8	32.0	0.508
Bot.Flg.Spl.		4.0	0.3	11.2	-9.1	20.3	0.0	15.5	32.0	0.357
Bot.Flg.Spl.		7.1	0.5	17.9	-16.4	34.3	0.0	25.6	32.0	0.516
7	112.00	5.9	0.4	17.2	-16.7	33.9	0.0	23.5	32.0	0.493
Bot.Flg.Spl.		-5.5	-0.6	10.6	-19.2	29.8	0.0	-25.2	32.0	0.788
Bot.Flg.Spl.		-2.8	-0.3	6.3	-10.0	16.3	0.0	-13.1	32.0	0.410
10	160.00	-11.3	-1.1	1.8	-13.2	15.0	0.0	-25.5	32.0	0.798
Bot.Flg.Spl.		-7.9	-0.8	2.4	-10.3	12.7	0.0	-19.0	32.0	0.594
Bot.Flg.Spl.		-8.9	-0.9	2.6	-11.6	14.2	0.0	-21.3	32.0	0.666
Bot.Flg.Spl.		-5.0	-0.5	5.5	-9.2	14.8	0.0	-14.7	32.0	0.459
Bot.Flg.Spl.		-7.8	-0.7	7.9	-14.4	22.3	0.0	-23.0	32.0	0.718
12	196.00	-6.2	-0.6	8.5	-13.3	21.8	0.0	-20.0	32.0	0.625
13	214.00	1.2	0.2	12.8	-11.2	24.1	0.0	14.2	32.0	0.325
14	232.00	5.6	0.5	15.7	-10.8	26.6	0.0	21.9	32.0	0.481
15	250.00	7.1	0.7	16.8	-10.3	27.1	0.0	24.6	32.0	0.536
16	268.00	5.6	0.5	15.7	-10.8	26.6	0.0	21.9	32.0	0.481
17	286.00	1.2	0.2	12.8	-11.2	24.1	0.0	14.2	32.0	0.325
18	304.00	-6.0	-0.5	7.9	-13.3	21.2	0.0	-19.8	32.0	0.620
Bot.Flg.Spl.		-7.6	-0.7	7.2	-14.2	21.5	0.0	-22.5	32.0	0.703
Bot.Flg.Spl.		-4.9	-0.4	5.0	-9.1	14.1	0.0	-14.4	32.0	0.450
20	340.00	-11.3	-1.1	1.8	-13.2	15.0	0.0	-25.5	32.0	0.798

Bot.Flg.Spl.	-7.3	-0.7	2.8	-10.4	13.1	0.0	-18.4	32.0	0.575
Bot.Flg.Spl.	-8.2	-0.8	3.0	-11.6	14.7	0.0	-20.6	32.0	0.645
23 388.00	6.0	0.4	17.2	-16.7	33.9	0.0	23.6	32.0	0.494
Bot.Flg.Spl.	7.2	0.5	17.9	-16.4	34.3	0.0	25.6	32.0	0.517
Bot.Flg.Spl.	4.0	0.3	11.2	-9.1	20.3	0.0	15.5	32.0	0.358
Bot.Flg.Spl.	7.6	0.6	13.5	-8.1	21.6	0.0	21.7	32.0	0.508
Bot.Flg.Spl.	6.4	0.5	11.7	-6.8	18.5	0.0	18.6	32.0	0.448
24 404.00	6.8	0.6	11.9	-6.7	18.6	0.0	19.3	32.0	0.465
25 420.00	9.4	0.8	13.5	-5.6	19.0	0.0	23.7	32.0	0.565
26 436.00	10.6	0.9	13.4	-4.5	17.9	0.0	25.0	32.0	0.594
27 452.00	10.3	0.8	12.2	-3.4	15.5	0.0	23.3	32.0	0.553
28 468.00	8.4	0.7	9.5	-2.2	11.7	0.0	18.5	32.0	0.439
Bot.Flg.Spl.	7.5	0.6	8.4	-1.9	10.3	0.0	16.4	32.0	0.389
Bot.Flg.Spl.	8.9	0.7	9.7	-2.3	11.9	0.0	19.3	32.0	0.441
29 484.00	5.9	0.5	6.2	-1.3	7.6	0.0	12.6	32.0	0.287
Bot.Flg.Spl.	5.5	0.5	5.9	-1.3	7.1	0.0	11.9	32.0	0.271
Bot.Flg.Spl.	10.0	0.7	9.4	-2.3	11.7	0.0	20.2	32.0	0.631
30 500.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000

Governing expression for allowable compression stress

Tenth Pt	Expression		
8	(10-103d)	Cb 1.1147	Rh 1.0000
9	(10-103d)	Cb 1.1652	Rh 1.0000
10	(10-103d)	Cb 1.1387	Rh 1.0000
11	(10-103d)	Cb 1.1387	Rh 1.0000
12	(10-103C)	Cb 1.1313	Rh 1.0000
18	(10-103C)	Cb 1.1344	Rh 1.0000
19	(10-103d)	Cb 1.1396	Rh 1.0000
20	(10-103d)	Cb 1.1396	Rh 1.0000
21	(10-103d)	Cb 1.1643	Rh 1.0000
22	(10-103d)	Cb 1.1132	Rh 1.0000

Perf. ratio for compact section is (factored mom)/(mom strength).

First of two splice entries is to left of splice,
second is to right of splice.

Girder 1 Grp I Factored Bending Stresses - ksi

Tenth Point	Loc	----- Slab ----- Comp Dead	Max LL+I	Tot	---- Rebars ---- Comp Dead	Min LL+I	Tot
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	16.00	-0.01	-0.36	-0.38	0.00	0.00	0.00
2	32.00	-0.02	-0.56	-0.58	0.00	0.00	0.00
3	48.00	-0.03	-0.71	-0.74	0.00	0.00	0.00
4	64.00	-0.03	-0.79	-0.81	0.00	0.00	0.00
5	80.00	-0.02	-0.79	-0.81	0.00	0.00	0.00
6	96.00	-0.02	-0.70	-0.72	0.00	0.00	0.00
7	112.00	-0.01	-0.75	-0.76	0.00	0.00	0.00
8	128.00	0.00	-0.40	-0.40	0.00	0.00	0.00
9	144.00	0.00	-0.15	-0.15	0.00	0.00	0.00
10	160.00	0.00	-0.11	-0.11	1.17	14.23	15.40
11	178.00	0.00	-0.14	-0.14	0.00	0.00	0.00
12	196.00	0.00	-0.40	-0.40	0.00	0.00	0.00
13	214.00	0.00	-0.60	-0.61	0.00	0.00	0.00
14	232.00	-0.01	-0.74	-0.76	0.00	0.00	0.00
15	250.00	-0.02	-0.79	-0.81	0.00	0.00	0.00
16	268.00	-0.01	-0.74	-0.76	0.00	0.00	0.00

17	286.00	0.00	-0.60	-0.61	0.00	0.00	0.00
18	304.00	0.00	-0.38	-0.38	0.00	0.00	0.00
19	322.00	0.00	-0.13	-0.13	0.00	0.00	0.00
20	340.00	0.00	-0.11	-0.11	1.17	14.23	15.40
21	356.00	0.00	-0.16	-0.16	0.00	0.00	0.00
22	372.00	0.00	-0.40	-0.40	0.00	0.00	0.00
23	388.00	-0.01	-0.75	-0.76	0.00	0.00	0.00
24	404.00	-0.02	-0.70	-0.72	0.00	0.00	0.00
25	420.00	-0.02	-0.79	-0.81	0.00	0.00	0.00
26	436.00	-0.03	-0.79	-0.81	0.00	0.00	0.00
27	452.00	-0.03	-0.71	-0.74	0.00	0.00	0.00
28	468.00	-0.02	-0.56	-0.58	0.00	0.00	0.00
29	484.00	-0.01	-0.34	-0.36	0.00	0.00	0.00
30	500.00	0.00	0.00	0.00	0.00	0.00	0.00

Girder 1 Bottom Flange Elastic Compression Strength - k-ft

Tenth PT	M1 Dc	M2 Mr	Cb	Lb Rb	Lp My	Lr Mu
8	1919.34	5003.24	1.39	240.00	275.95	630.03
	36.00	5435.02(103c)		1.00	5435.02	5435.02
9	5003.24	9975.52	1.30	240.00	275.95	643.87
	44.80	9779.63(103c)		1.00	9779.63	9779.63
10	5332.70	9975.52	1.27	240.00	275.95	634.69
	53.17	12536.58(103c)		1.00	12536.58	12536.58
11	5332.70	9975.52	1.27	240.00	275.95	647.30
	42.67	9236.09(103c)		1.00	9236.09	9236.09
12	2418.71	5332.70	1.34	240.00	275.95	611.95
	36.00	4577.73(103c)		1.00	4577.73	4577.73
18	2395.40	5321.21	1.34	240.00	275.95	611.95
	36.00	4577.73(103c)		1.00	4577.73	4577.73
19	5321.21	9974.06	1.28	240.00	275.95	647.30
	42.67	9236.09(103c)		1.00	9236.09	9236.09
20	5321.21	9974.06	1.28	240.00	275.95	634.69
	53.17	12536.58(103c)		1.00	12536.58	12536.58
21	5012.89	9974.06	1.30	240.00	275.95	643.87
	44.80	9779.63(103c)		1.00	9779.63	9779.63
22	1930.00	5012.89	1.39	240.00	275.95	630.03
	36.00	5435.02(103c)		1.00	5435.02	5435.02

Girder 1 Web Splice Analysis

Using method of LRFD spec. 6.13.6.1.4b.
Splice resists moment given by (C6.13.6.1.4b-1)
and horizontal force given by (C6.13.6.1.4b-2)
using LFD load factors.

0.875 ASTM A325 H.S. Bolts

****
Web splice location: 117.50
****

Web t left	0.500 in
Web t right	0.500 in
Factored shear	194.28 k
Shear strength left	626.85 k

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Shear strength right          626.85 k
Design shear                  291.42 k

 Strength
  Factored Bndg Stresses Top Flg      Bottom Flg
    at ctr of flg
  Noncomp dead          -1.03 ksi       1.03 ksi
  Comp dead             -0.04           0.07
  Max live              -2.93           8.04
  Min live               7.94          -7.94
  Total                  6.86           9.13
  Resistance            32.00          32.00

  Bottom flange controls
   Fcf                          24.00 ksi
   fcf                           9.13 ksi
   Rcf                           2.628
   fncf                          6.86 ksi
   Muw                         107.31 k-ft
   Huw                         756.69 k

  Top flange stress reversal
   Fcf                          24.00 ksi
   fcf                           6.86 ksi
   Rcf                           3.496
   fncf                         -6.84 ksi
   Muw                         862.46 k-ft
   Huw                           1.54 k

  Bottom flange stress reversal
   Fcf                          24.00 ksi
   fcf                           9.13 ksi
   Rcf                           2.628
   fncf                         -4.00 ksi
   Muw                         621.25 k-ft
   Huw                         242.75 k

 Overload
  Factored Bndg Stresses Top Flg      Bottom Flg
    at ctr of flg
  Noncomp dead          -0.79 ksi       0.79 ksi
  Comp dead             -0.03           0.05
  Max live              -2.25           6.17
  Min live               6.09          -6.09
  Total                  5.27           7.01
  Resistance            30.40          30.40

  Bottom flange controls
   Fcf                          24.00 ksi
   fcf                           7.01 ksi
   Rcf                           3.422
   fncf                          5.27 ksi
   Muw                         107.49 k-ft
   Huw                         756.51 k

  Top flange stress reversal
   Fcf                          24.00 ksi
   fcf                           5.27 ksi
   Rcf                           4.555
   fncf                         -5.25 ksi
   Muw                         862.45 k-ft
   Huw                           1.55 k
```



```
Bottom flange stress reversal
 Fcf                          24.00 ksi
 fcf                           7.01 ksi
 Rcf                           3.422
 fncf                         -3.07 ksi
 Muw                         621.30 k-ft
 Huw                         242.70 k

    Bolt pattern each side of splice
      Number of vertical lines          3 spaced at 3.000 in
      Number of horizontal lines       22 spaced at 3.000 in
      Vertical edge on plate        1.500 in
      Horizontal edge on web        3.000 in
                                                    Perf. Ratio
    Plate depth                    66.00 in
    Plate thickness                0.375 in
    Plate gross sect. shr strngth  918.72 k          0.317
    Plate net sect. fracture strng 1110.12 k         0.263
    Plate block shear strength     954.31 k          0.305

    Plate flexure for strength      29.08 ksi
    Allowable stress                32.00 ksi        0.909

    Plate flexure for overload      25.44 ksi
    Allowable stress                30.40 ksi        0.837

    Shear on extreme bolt - strength 16.56 k
    Shear on extreme bolt - overload 13.26 k
    Bolt shear strength             43.87 k          0.378
    Threads in shear plane

    Clear edge to splice line       2.500 in
    Horiz brng on web               16.56 k
    Horiz brng capacity on web      48.72 k          0.340

    Clear vertical distance         2.000 in
    Vert brng on web                16.56 k
    Vert brng capacity on web       48.72 k          0.340

  Fatigue
    Max fatigue moment            952.12 k-ft
    Min fatigue moment           -810.81

    Comp. stress at top of web     -1.05 ksi
    Tens. stress at top of web      2.99
    Comp. stress at bot of web     -2.99
    Tens. stress at bot of web      3.08

    Max fatge mom resisted by web   74.30 k-ft
    Max fatge mom horiz resultant   36.46 k
    Min fatge mom resisted by web -107.56 k-ft
    Min fatge mom horiz resultant    0.00 k

    Max shear at splice             7.21 k
    Min shear at splice           -41.51 k
    Mom from max shr eccentricity   3.60 k-ft
    Mom from min shr eccentricity -20.76 k-ft

    Total max + eccentric mom      77.91 k-ft
    Total min + eccentric mom    -128.32 k-ft

    Tot Bndg and axial stress
     at bot of plate from max mo     2.45 ksi
```

Tot Bndg and axial stress at bot of plate from min mo	-2.83 ksi	
Allowable range	29.00 ksi	0.182

Flange Plates

Top flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00 ksi	
Gross gov flg area - Ag	13.50	
An	11.62	
Beta	0.4532	
Effective gov flg area - Ae	13.50	
Resistance - Fcf x Ae	324.00 k	

Outside plate		18.00 x	0.688 Pl
Inside plates	2 -	8.00 x	0.688 Pls

Total number of bolts reqd on 4 gage lines on each side of splice	24	
Min spacing	2.62	
Max spacing outside line for sealing	4.50	
		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.308
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.524
Single bolt bearing strength	45.68	
Total bolt bearing strength	1096.20	0.296

Bottom flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00 ksi	
Gross gov flg area - Ag	13.50	
An	11.62	
Beta	0.4532	
Effective gov flg area - Ae	13.50	
Resistance - Fcf x Ae	324.00 k	
Fracture strength of flange	539.40	

Outside plate		18.00 x	0.688 Pl
Inside plates	2 -	8.00 x	0.688 Pls

			Perf. Ratio
Tens. capacity of gross section	710.60		0.456 (6.8.2.1-1)

Tens. capacity of net section	892.68		0.363 (6.8.2.1-2)

Total number of bolts reqd on 4 gage lines on each side of splice	24	
Min spacing	2.62	
Max spacing outside line for sealing	4.50	
		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.308
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.524
Single bolt bearing strength	45.68	
Total bolt bearing strength	1096.20	0.296

Block rupture on staggered pattern- outside plates

Net tension area - Atn	9.25	
Gross tension area - Atg	10.87	
Net shear area - Avn	15.77	
Resistance to rupture - Rr	2308.60	

Block rupture on staggered pattern- inside plates

Net tension area - Atn	6.72	
Gross tension area - Atg	7.99	
Net shear area - Avn	31.54	
Resistance to rupture - Rr	1053.38	
Tot block rupture resistance	3361.98	0.096

****
Web splice location: 212.50
****

Web t left	0.500 in
Web t right	0.500 in
Factored shear	146.91 k
Shear strength left	626.85 k
Shear strength right	626.85 k
Design shear	220.36 k

Strength

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.68 ksi	0.68 ksi
Comp dead	-0.06	0.12
Max live	-3.20	12.40
Min live	11.20	-11.20
Total	10.46	13.20
Resistance	32.00	32.00

Bottom flange controls

Fcf	24.00 ksi
fcf	13.20 ksi
Rcf	1.819
fncf	10.46 ksi
Muw	89.48 k-ft
Huw	774.52 k

```
 Top flange stress reversal
  Fcf                        24.00 ksi
  fcf                        10.46 ksi
  Rcf                         2.294
  fncf                      -10.40 ksi
  Muw                       861.62 k-ft
  Huw                         2.38 k

 Bottom flange stress reversal
  Fcf                        24.00 ksi
  fcf                        13.20 ksi
  Rcf                         1.819
  fncf                       -3.94 ksi
  Muw                       561.01 k-ft
  Huw                       302.99 k

Overload
 Factored Bndg Stresses Top Flg      Bottom Flg
   at ctr of flg
  Noncomp dead          -0.52 ksi       0.52 ksi
  Comp dead             -0.05           0.09
  Max live              -2.46           9.52
  Min live               8.60          -8.60
  Total                  8.03          10.13
  Resistance            30.40          30.40

 Bottom flange controls
  Fcf                        24.00 ksi
  fcf                        10.13 ksi
  Rcf                         2.369
  fncf                        8.03 ksi
  Muw                        89.57 k-ft
  Huw                       774.43 k

 Top flange stress reversal
  Fcf                        24.00 ksi
  fcf                         8.03 ksi
  Rcf                         2.988
  fncf                       -7.99 ksi
  Muw                       861.62 k-ft
  Huw                         2.38 k

 Bottom flange stress reversal
  Fcf                        24.00 ksi
  fcf                        10.13 ksi
  Rcf                         2.369
  fncf                       -3.03 ksi
  Muw                       561.04 k-ft
  Huw                       302.96 k

     Bolt pattern each side of splice
       Number of vertical lines          3 spaced at 3.000 in
       Number of horizontal lines       22 spaced at 3.000 in
       Vertical edge on plate         1.500 in
       Horizontal edge on web         3.000 in
                                                    Perf. Ratio
     Plate depth                     66.00 in
     Plate thickness                 0.375 in
     Plate gross sect. shr strngth  918.72 k        0.240
     Plate net sect. fracture strng 1110.12 k       0.199
     Plate block shear strength     954.31 k        0.231

     Plate flexure for strength      31.37 ksi
```



```
     Allowable stress                32.00 ksi      0.980

     Plate flexure for overload      29.59 ksi
     Allowable stress                30.40 ksi      0.973

     Shear on extreme bolt - strength 15.64 k
     Shear on extreme bolt - overload 14.82 k
     Bolt shear strength             43.87 k        0.357
     Threads in shear plane

     Clear edge to splice line        2.500 in
     Horiz brng on web               15.64 k
     Horiz brng capacity on web      48.72 k        0.321

     Clear vertical distance          2.000 in
     Vert brng on web                15.64 k
     Vert brng capacity on web       48.72 k        0.321

   Fatigue
     Max fatigue moment             920.52 k-ft
     Min fatigue moment            -645.42

     Comp. stress at top of web      -1.19 ksi
     Tens. stress at top of web       4.33
     Comp. stress at bot of web      -4.33
     Tens. stress at bot of web       4.84

     Max fatge mom resisted by web  108.54 k-ft
     Max fatge mom horiz resultant   65.73 k
     Min fatge mom resisted by web -155.90 k-ft
     Min fatge mom horiz resultant    0.00 k

     Max shear at splice             37.46 k
     Min shear at splice            -12.47 k
     Mom from max shr eccentricity   18.73 k-ft
     Mom from min shr eccentricity   -6.24 k-ft

     Total max + eccentric mom      127.28 k-ft
     Total min + eccentric mom     -162.13 k-ft

     Tot Bndg and axial stress
      at bot of plate from max mo     6.20 ksi
     Tot Bndg and axial stress
      at bot of plate from min mo    -5.36 ksi
     Allowable range                 18.00 ksi      0.642


Flange Plates


 Top flange plates

        18.00 x  1.000 flange

     Design stress - Fcf             24.00 ksi
     Gross gov flg area - Ag         18.00
     An                              15.50
     Beta                           0.4532
     Effective gov flg area - Ae     18.00
     Resistance - Fcf x Ae          432.00 k
```

Outside plate		18.00 x	0.688 Pl
Inside plates	2 -	8.00 x	0.688 Pls

Total number of bolts reqd on each side of splice	24
Min spacing	2.62
Max spacing outside line for sealing	4.50

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.410
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.699
Single bolt bearing strength	60.90	
Total bolt bearing strength	1461.60	0.296

Bottom flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00 ksi
Gross gov flg area - Ag	18.00
An	15.50
Beta	0.4532
Effective gov flg area - Ae	18.00
Resistance - Fcf x Ae	432.00 k
Fracture strength of flange	719.20

Outside plate		18.00 x	0.688 Pl
Inside plates	2 -	8.00 x	0.688 Pls

		Perf. Ratio	
Tens. capacity of gross section	710.60	0.608	(6.8.2.1-1)
Tens. capacity of net section	892.68	0.484	(6.8.2.1-2)

Total number of bolts reqd on each side of splice	24
Min spacing	2.62
Max spacing outside line for sealing	4.50

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.410
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.699
Single bolt bearing strength	60.90	
Total bolt bearing strength	1461.60	0.296

Block rupture on staggered pattern- outside plates

Net tension area - Atn	9.25

Gross tension area - Atg	10.87	
Net shear area - Avn	15.77	
Resistance to rupture - Rr	2308.60	
Block rupture on staggered pattern- inside plates		
Net tension area - Atn	6.72	
Gross tension area - Atg	7.99	
Net shear area - Avn	31.54	
Resistance to rupture - Rr	1053.38	
Tot block rupture resistance	3361.98	0.128

****
Web splice location: 287.50
****

Web t left	0.500 in
Web t right	0.500 in
Factored shear	148.04 k
Shear strength left	626.85 k
Shear strength right	626.85 k
Design shear	222.06 k

Strength

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.71 ksi	0.71 ksi
Comp dead	-0.06	0.12
Max live	-3.19	12.37
Min live	11.20	-11.20
Total	10.42	13.21
Resistance	32.00	32.00

Bottom flange controls

Fcf	24.00 ksi
fcf	13.21 ksi
Rcf	1.817
fncf	10.42 ksi
Muw	91.31 k-ft
Huw	772.69 k

Top flange stress reversal

Fcf	24.00 ksi
fcf	10.42 ksi
Rcf	2.303
fncf	-10.36 ksi
Muw	861.57 k-ft
Huw	2.43 k

Bottom flange stress reversal

Fcf	24.00 ksi
fcf	13.21 ksi
Rcf	1.817
fncf	-3.97 ksi
Muw	561.90 k-ft
Huw	302.10 k

Overload

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.55 ksi	0.55 ksi
Comp dead	-0.05	0.09

Max live	-2.45	9.50
Min live	8.60	-8.60
Total	8.00	10.14
Resistance	30.40	30.40

Bottom flange controls

Fcf	24.00	ksi
fcf	10.14	ksi
Rcf	2.366	
fncf	8.00	ksi
Muw	91.40	k-ft
Huw	772.60	k

Top flange stress reversal

Fcf	24.00	ksi
fcf	8.00	ksi
Rcf	3.001	
fncf	-7.95	ksi
Muw	861.57	k-ft
Huw	2.43	k

Bottom flange stress reversal

Fcf	24.00	ksi
fcf	10.14	ksi
Rcf	2.366	
fncf	-3.05	ksi
Muw	561.94	k-ft
Huw	302.06	k

Bolt pattern each side of splice

Number of vertical lines	3	spaced at 3.000 in
Number of horizontal lines	22	spaced at 3.000 in
Vertical edge on plate	1.500	in
Horizontal edge on web	3.000	in

			Perf. Ratio
Plate depth	66.00	in	
Plate thickness	0.375	in	
Plate gross sect. shr strngth	918.72	k	0.242
Plate net sect. fracture strng	1110.12	k	0.200
Plate block shear strength	954.31	k	0.233
Plate flexure for strength	31.40	ksi	
Allowable stress	32.00	ksi	0.981
Plate flexure for overload	25.85	ksi	
Allowable stress	30.40	ksi	0.850
Shear on extreme bolt - strength	15.66	k	
Shear on extreme bolt - overload	13.10	k	
Bolt shear strength	43.87	k	0.357
Threads in shear plane			
Clear edge to splice line	2.500	in	
Horiz brng on web	15.66	k	
Horiz brng capacity on web	48.72	k	0.321
Clear vertical distance	2.000	in	
Vert brng on web	15.66	k	
Vert brng capacity on web	48.72	k	0.321

Fatigue

Max fatigue moment	918.85	k-ft
Min fatigue moment	-645.16	

Comp. stress at top of web	-1.19	ksi	
Tens. stress at top of web	4.33		
Comp. stress at bot of web	-4.33		
Tens. stress at bot of web	4.83		
Max fatge mom resisted by web	108.35	k-ft	
Max fatge mom horiz resultant	65.62	k	
Min fatge mom resisted by web	-155.83	k-ft	
Min fatge mom horiz resultant	0.00	k	
Max shear at splice	12.84	k	
Min shear at splice	-38.06	k	
Mom from max shr eccentricity	6.42	k-ft	
Mom from min shr eccentricity	-19.03	k-ft	
Total max + eccentric mom	114.77	k-ft	
Total min + eccentric mom	-174.86	k-ft	
Tot Bndg and axial stress at bot of plate from max mo	5.78	ksi	
Tot Bndg and axial stress at bot of plate from min mo	-5.78	ksi	
Allowable range	18.00	ksi	0.642

Flange Plates

Top flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00	ksi	
Gross gov flg area - Ag	18.00		
An	15.50		
Beta	0.4532		
Effective gov flg area - Ae	18.00		
Resistance - Fcf x Ae	432.00	k	
Outside plate	18.00 x	0.688	Pl
Inside plates 2 -	8.00 x	0.688	Pls
Total number of bolts reqd on 4 gage lines on each side of splice	24		
Min spacing	2.62		
Max spacing outside line for sealing	4.50		

			Perf. Ratio
Single bolt shear strength	43.87		
Total bolt shear strength	1052.94		0.410
Single bolt slip strength	25.74		
Total bolt slip strength	617.76		0.699
Single bolt bearing strength	60.90		
Total bolt bearing strength	1461.60		0.296

Bottom flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00	ksi
Gross gov flg area - Ag	18.00	
An	15.50	
Beta	0.4532	
Effective gov flg area - Ae	18.00	
Resistance - Fcf x Ae	432.00	k
Fracture strength of flange	719.20	

Outside plate		18.00 x	0.688 Pl
Inside plates	2 -	8.00 x	0.688 Pls

		Perf. Ratio	
Tens. capacity of gross section	710.60	0.608	(6.8.2.1-1)
Tens. capacity of net section	892.68	0.484	(6.8.2.1-2)

Total number of bolts reqd on 4 gage lines on each side of splice	24	
Min spacing	2.62	
Max spacing outside line for sealing	4.50	

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.410
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.699
Single bolt bearing strength	60.90	
Total bolt bearing strength	1461.60	0.296

Block rupture on staggered pattern- outside plates

Net tension area - Atn	9.25
Gross tension area - Atg	10.87
Net shear area - Avn	15.77
Resistance to rupture - Rr	2308.60

Block rupture on staggered pattern- inside plates

Net tension area - Atn	6.72
Gross tension area - Atg	7.99
Net shear area - Avn	31.54
Resistance to rupture - Rr	1053.38

Tot block rupture resistance	3361.98	0.128

****
Web splice location: 382.50
****

Web t left	0.500	in
Web t right	0.500	in
Factored shear	194.96	k
Shear strength left	626.85	k

Shear strength right	626.85	k
Design shear	292.44	k

Strength

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-1.05 ksi	1.05 ksi
Comp dead	-0.04	0.07
Max live	-2.93	8.03
Min live	7.94	-7.94
Total	6.84	9.15
Resistance	32.00	32.00

Bottom flange controls

Fcf	24.00	ksi
fcf	9.15	ksi
Rcf	2.622	
fncf	6.84	ksi
Muw	109.08	k-ft
Huw	754.92	k

Top flange stress reversal

Fcf	24.00	ksi
fcf	6.84	ksi
Rcf	3.507	
fncf	-6.82	ksi
Muw	862.43	k-ft
Huw	1.57	k

Bottom flange stress reversal

Fcf	24.00	ksi
fcf	9.15	ksi
Rcf	2.622	
fncf	-4.02	ksi
Muw	621.89	k-ft
Huw	242.11	k

Overload

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.81 ksi	0.81 ksi
Comp dead	-0.03	0.05
Max live	-2.25	6.17
Min live	6.10	-6.10
Total	5.25	7.03
Resistance	30.40	30.40

Bottom flange controls

Fcf	24.00	ksi
fcf	7.03	ksi
Rcf	3.414	
fncf	5.25	ksi
Muw	109.26	k-ft
Huw	754.74	k

Top flange stress reversal

Fcf	24.00	ksi
fcf	5.25	ksi
Rcf	4.570	
fncf	-5.23	ksi
Muw	862.42	k-ft
Huw	1.58	k

```
Bottom flange stress reversal
 Fcf                          24.00 ksi
 fcf                           7.03 ksi
 Rcf                           3.414
 fncf                         -3.09 ksi
 Muw                         621.94 k-ft
 Huw                         242.06 k

    Bolt pattern each side of splice
      Number of vertical lines          3 spaced at 3.000 in
      Number of horizontal lines       22 spaced at 3.000 in
      Vertical edge on plate         1.500 in
      Horizontal edge on web         3.000 in
                                                  Perf. Ratio
    Plate depth                     66.00 in
    Plate thickness                  0.375 in
    Plate gross sect. shr strngth   918.72 k        0.318
    Plate net sect. fracture strng 1110.12 k        0.263
    Plate block shear strength      954.31 k        0.306

    Plate flexure for strength       29.09 ksi
    Allowable stress                 32.00 ksi      0.909

    Plate flexure for overload       30.36 ksi
    Allowable stress                 30.40 ksi      0.999

    Shear on extreme bolt - strength 16.58 k
    Shear on extreme bolt - overload 15.50 k
    Bolt shear strength              43.87 k        0.378
    Threads in shear plane

    Clear edge to splice line        2.500 in
    Horiz brng on web                16.58 k
    Horiz brng capacity on web       48.72 k        0.340

    Clear vertical distance          2.000 in
    Vert brng on web                 16.58 k
    Vert brng capacity on web        48.72 k        0.340

  Fatigue
    Max fatigue moment             951.61 k-ft
    Min fatigue moment            -810.97

    Comp. stress at top of web      -1.05 ksi
    Tens. stress at top of web       2.99
    Comp. stress at bot of web      -2.99
    Tens. stress at bot of web       3.08

    Max fatge mom resisted by web   74.26 k-ft
    Max fatge mom horiz resultant   36.44 k
    Min fatge mom resisted by web -107.59 k-ft
    Min fatge mom horiz resultant    0.00 k

    Max shear at splice             41.88 k
    Min shear at splice             -6.51 k
    Mom from max shr eccentricity   20.94 k-ft
    Mom from min shr eccentricity   -3.26 k-ft

    Total max + eccentric mom       95.20 k-ft
    Total min + eccentric mom     -110.84 k-ft

    Tot Bndg and axial stress
     at bot of plate from max mo     4.25 ksi
```



```
    Tot Bndg and axial stress
     at bot of plate from min mo    -3.66 ksi
    Allowable range                 29.00 ksi      0.273


Flange Plates


 Top flange plates

       18.00 x  0.750 flange

    Design stress - Fcf             24.00 ksi
    Gross gov flg area - Ag         13.50
    An                              11.62
    Beta                           0.4532
    Effective gov flg area - Ae     13.50
    Resistance - Fcf x Ae          324.00 k

    Outside plate              18.00 x   0.688 Pl
    Inside plates         2 -   8.00 x   0.688 Pls


    Total number of bolts reqd on  4 gage lines
    on each side of splice                    24

    Min spacing                             2.62
    Max spacing outside line for sealing    4.50

                                          Perf. Ratio
    Single bolt shear strength      43.87
    Total bolt shear strength     1052.94         0.308

    Single bolt slip strength       25.74
    Total bolt slip strength       617.76         0.524

    Single bolt bearing strength    45.68
    Total bolt bearing strength   1096.20         0.296


 Bottom flange plates

       18.00 x  0.750 flange

    Design stress - Fcf             24.00 ksi
    Gross gov flg area - Ag         13.50
    An                              11.62
    Beta                           0.4532
    Effective gov flg area - Ae     13.50
    Resistance - Fcf x Ae          324.00 k
    Fracture strength of flange    539.40

    Outside plate              18.00 x   0.688 Pl
    Inside plates         2 -   8.00 x   0.688 Pls


                                          Perf. Ratio
    Tens. capacity of gross section  710.60         0.456  (6.8.2.1-1)
```

Tens. capacity of net section	892.68	0.363	(6.8.2.1-2)

Total number of bolts reqd on 4 gage lines on each side of splice 24

Min spacing	2.62	
Max spacing outside line for sealing	4.50	

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.308
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.524
Single bolt bearing strength	45.68	
Total bolt bearing strength	1096.20	0.296

Block rupture on staggered pattern- outside plates

Net tension area - Atn	9.25
Gross tension area - Atg	10.87
Net shear area - Avn	15.77
Resistance to rupture - Rr	2308.60

Block rupture on staggered pattern- inside plates

Net tension area - Atn	6.72
Gross tension area - Atg	7.99
Net shear area - Avn	31.54
Resistance to rupture - Rr	1053.38
Tot block rupture resistance	3361.98

Perf. Ratio: 0.096

Girder 1 Web Compression Bending Stress for Constructibility - ksi

Tenth Point	Noncomp. Dead Factored Mom	Noncomp. Dead Web Bending Stress	Allowable (10-173)	Ratio
0	0.00	0.00	32.00	0.000
1	1239.94	5.65	32.00	0.176
2	2097.16	7.94	32.00	0.248
3	2571.81	9.73	32.00	0.304
4	2663.45	10.08	32.00	0.315
5	2365.92	8.95	32.00	0.280
6	1706.59	6.46	32.00	0.202
7	685.70	5.78	32.00	0.181
8	-636.32	0.00	32.00	0.000
9	-2322.12	0.00	32.00	0.000
10	-4387.29	10.69	32.00	0.334
11	-2385.94	0.00	32.00	0.000
12	-886.92	6.03	32.00	0.189
13	170.12	1.16	32.00	0.036
14	803.69	5.47	32.00	0.171
15	1019.61	6.93	32.00	0.217
16	805.75	5.48	32.00	0.171
17	174.62	1.19	32.00	0.037
18	-864.81	5.88	32.00	0.184
19	-2377.61	0.00	32.00	0.000
20	-4386.79	10.69	32.00	0.334
21	-2328.36	0.00	32.00	0.000
22	-655.64	0.00	32.00	0.000

23	696.92	5.87	32.00	0.183
24	1701.89	6.44	32.00	0.201
25	2362.21	8.94	32.00	0.279
26	2662.07	10.08	32.00	0.315
27	2572.80	9.74	32.00	0.304
28	2094.22	7.93	32.00	0.248
29	1229.91	5.60	32.00	0.175
30	0.00	0.00	32.00	0.000

Girder 1 Top Flange 10.57 Overload Stress - ksi

Tenth	Loc	Noncomp Dead	Comp Dead	1.67 Max LL+I	1.67 Min LL+I	Allowable	Ratio
0	0.00	0.00	0.00	0.00	0.00	30.40	0.000
Top flg.spl.		-7.76	-0.30	-1.86	1.74	30.40	0.327
Top flg.spl.		-4.30	-0.21	-1.64	0.96	30.40	0.202
1	16.00	-4.54	-0.22	-1.73	1.03	30.40	0.214
Top flg.spl.		-6.85	-0.34	-2.54	1.74	30.40	0.320
Top flg.spl.		-5.75	-0.30	-2.43	1.46	30.40	0.279
2	32.00	-6.44	-0.34	-2.74	1.73	30.40	0.313
3	48.00	-7.90	-0.42	-3.52	2.59	30.40	0.389
4	64.00	-8.18	-0.43	-3.89	3.44	30.40	0.411
5	80.00	-7.27	-0.38	-3.89	4.30	30.40	0.380
6	96.00	-5.24	-0.27	-3.46	5.13	30.40	0.295
Top flg.spl.		-4.91	-0.26	-3.38	5.23	30.40	0.281
Top flg.spl.		-5.85	-0.28	-3.52	6.23	30.40	0.318
Top flg.spl.		-3.04	-0.14	-2.92	6.99	30.40	0.201
Top flg.spl.		-5.49	-0.19	-3.19	12.63	30.40	0.292
7	112.00	-4.54	-0.15	-3.06	12.86	30.40	0.269
Top flg.spl.		4.21	0.45	-1.89	14.75	30.40	0.638
Top flg.spl.		2.19	0.23	-1.71	7.67	30.40	0.332
Top flg.spl.		6.20	0.61	-0.81	8.79	30.40	0.513
Top flg.spl.		5.53	0.53	-0.78	7.58	30.40	0.449
10	160.00	8.68	0.81	-0.60	9.89	30.40	0.638
Top flg.spl.		6.01	0.58	-0.72	7.82	30.40	0.474
Top flg.spl.		6.74	0.65	-0.75	8.77	30.40	0.532
Top flg.spl.		3.81	0.35	-1.47	7.00	30.40	0.367
Top flg.spl.		5.95	0.54	-1.59	10.94	30.40	0.573
12	196.00	4.77	0.42	-1.73	10.20	30.40	0.506
13	214.00	-0.91	-0.07	-2.61	8.65	30.40	0.252
14	232.00	-4.32	-0.22	-3.20	8.32	30.40	0.255
15	250.00	-5.48	-0.27	-3.42	7.94	30.40	0.302
16	268.00	-4.33	-0.22	-3.20	8.32	30.40	0.255
17	286.00	-0.94	-0.07	-2.61	8.65	30.40	0.251
18	304.00	4.65	0.42	-1.62	10.19	30.40	0.502
Top flg.spl.		5.83	0.54	-1.47	10.93	30.40	0.569
Top flg.spl.		3.73	0.34	-1.36	7.00	30.40	0.364
Top flg.spl.		6.72	0.65	-0.69	8.77	30.40	0.531
Top flg.spl.		5.99	0.56	-0.67	7.55	30.40	0.464
20	340.00	8.68	0.81	-0.60	9.89	30.40	0.638
Top flg.spl.		5.54	0.55	-0.85	7.84	30.40	0.458
Top flg.spl.		6.21	0.61	-0.88	8.79	30.40	0.514
Top flg.spl.		2.26	0.24	-1.70	7.68	30.40	0.335
Top flg.spl.		4.34	0.18	-1.89	14.75	30.40	0.634
23	388.00	-4.61	-0.15	-3.06	12.86	30.40	0.266
Top flg.spl.		-5.57	-0.19	-3.18	12.63	30.40	0.294
Top flg.spl.		-3.08	-0.14	-2.92	6.99	30.40	0.202
Top flg.spl.		-5.84	-0.28	-3.52	6.23	30.40	0.317
Top flg.spl.		-4.90	-0.26	-3.38	5.23	30.40	0.281
24	404.00	-5.23	-0.27	-3.45	5.13	30.40	0.295
25	420.00	-7.26	-0.38	-3.89	4.30	30.40	0.379

26	436.00	-8.18	-0.43	-3.89	3.44	30.40	0.411
27	452.00	-7.91	-0.42	-3.52	2.59	30.40	0.390
28	468.00	-6.44	-0.34	-2.74	1.73	30.40	0.313
Top flg.spl.		-5.73	-0.30	-2.42	1.46	30.40	0.278
Top flg.spl.		-6.83	-0.33	-2.52	1.74	30.40	0.319
29	484.00	-4.50	-0.22	-1.62	1.03	30.40	0.209
Top flg.spl.		-4.26	-0.21	-1.53	0.96	30.40	0.197
Top flg.spl.		-7.70	-0.30	-1.74	1.74	30.40	0.320
30	500.00	0.00	0.00	0.00	0.00	30.40	0.000

Girder 1 Bottom Flange 10.57 Overload Stress - ksi

Tenth	Loc	Noncomp Dead	Comp Dead	1.67 Max LL+I	1.67 Min LL+I	Allowable	Ratio
0	0.00	0.00	0.00	0.00	0.00	30.40	0.000
Bot.flg.spl.		7.76	0.58	7.76	-1.74	30.40	0.530
Bot.flg.spl.		4.30	0.35	4.85	-0.96	30.40	0.312
1	16.00	4.54	0.37	5.12	-1.03	30.40	0.330
Bot.flg.spl.		6.85	0.56	7.51	-1.74	30.40	0.491
Bot.flg.spl.		5.75	0.48	6.48	-1.46	30.40	0.418
2	32.00	6.44	0.53	7.29	-1.73	30.40	0.469
3	48.00	7.90	0.65	9.36	-2.59	30.40	0.589
4	64.00	8.18	0.67	10.34	-3.44	30.40	0.632
5	80.00	7.27	0.60	10.35	-4.30	30.40	0.599
6	96.00	5.24	0.43	9.20	-5.13	30.40	0.489
Bot.flg.spl.		4.91	0.40	8.99	-5.23	30.40	0.471
Bot.flg.spl.		5.85	0.47	10.43	-6.23	30.40	0.551
Bot.flg.spl.		3.04	0.24	8.64	-6.99	30.40	0.392
Bot.flg.spl.		5.49	0.38	13.78	-12.63	30.40	0.647
7	112.00	4.54	0.31	13.24	-12.86	30.40	0.595
Bot.flg.spl.		-4.21	-0.45	8.16	-14.75	30.40	0.638
Bot.flg.spl.		-2.19	-0.23	4.86	-7.67	30.40	0.332
Bot.flg.spl.		-6.20	-0.61	2.12	-8.79	30.40	0.513
Bot.flg.spl.		-5.53	-0.54	1.92	-7.78	30.40	0.456
10	160.00	-8.68	-0.83	1.40	-10.14	30.40	0.646
Bot.flg.spl.		-6.01	-0.58	1.81	-7.82	30.40	0.474
Bot.flg.spl.		-6.74	-0.65	2.00	-8.77	30.40	0.532
Bot.flg.spl.		-3.81	-0.35	4.20	-7.00	30.40	0.367
Bot.flg.spl.		-5.95	-0.54	6.02	-10.94	30.40	0.573
12	196.00	-4.77	-0.42	6.55	-10.20	30.40	0.506
13	214.00	0.91	0.13	9.85	-8.65	30.40	0.358
14	232.00	4.32	0.42	12.11	-8.32	30.40	0.554
15	250.00	5.48	0.51	12.92	-7.94	30.40	0.622
16	268.00	4.33	0.42	12.11	-8.32	30.40	0.555
17	286.00	0.94	0.13	9.86	-8.65	30.40	0.359
18	304.00	-4.65	-0.42	6.11	-10.19	30.40	0.502
Bot.flg.spl.		-5.83	-0.54	5.57	-10.93	30.40	0.569
Bot.flg.spl.		-3.73	-0.34	3.88	-7.00	30.40	0.364
Bot.flg.spl.		-6.72	-0.65	1.84	-8.77	30.40	0.531
Bot.flg.spl.		-5.99	-0.57	1.67	-7.76	30.40	0.471
20	340.00	-8.68	-0.83	1.40	-10.14	30.40	0.646
Bot.flg.spl.		-5.54	-0.55	2.09	-7.84	30.40	0.458
Bot.flg.spl.		-6.21	-0.61	2.30	-8.79	30.40	0.514
Bot.flg.spl.		-2.26	-0.24	4.86	-7.68	30.40	0.335
Bot.flg.spl.		-4.34	-0.37	8.16	-14.75	30.40	0.640
23	388.00	4.61	0.32	13.23	-12.86	30.40	0.597
Bot.flg.spl.		5.57	0.39	13.77	-12.63	30.40	0.649
Bot.flg.spl.		3.08	0.24	8.64	-6.99	30.40	0.393
Bot.flg.spl.		5.84	0.47	10.42	-6.23	30.40	0.550
Bot.flg.spl.		4.90	0.40	8.98	-5.23	30.40	0.470
24	404.00	5.23	0.43	9.19	-5.13	30.40	0.488

25	420.00	7.26	0.60	10.35	-4.30	30.40	0.599
26	436.00	8.18	0.67	10.34	-3.44	30.40	0.631
27	452.00	7.91	0.65	9.36	-2.59	30.40	0.589
28	468.00	6.44	0.53	7.30	-1.73	30.40	0.469
Bot.flg.spl.		5.73	0.47	6.43	-1.46	30.40	0.416
Bot.flg.spl.		6.83	0.55	7.45	-1.74	30.40	0.488
29	484.00	4.50	0.37	4.80	-1.03	30.40	0.318
Bot.flg.spl.		4.26	0.35	4.53	-0.96	30.40	0.301
Bot.flg.spl.		7.70	0.57	7.25	-1.74	30.40	0.511
30	500.00	0.00	0.00	0.00	0.00	30.40	0.000

Girder 1 Factored Noncomp Dead Wet Concrete Stresses - ksi

[Slab pouring sequence not taken into account in this table. Actual stresses are dependent on the pouring sequence and may be significantly different from those printed here.]

Tenth Point	Loc	Top Flange	Allow-able	bottom Flange	Allow-able
0	0.0	0.0	32.0	0.0	32.0
Top flg.spl	15.0	-10.1	32.0	10.1	32.0
Top flg.spl	15.0	-10.1	32.0	10.1	32.0
Bot.flg.spl	15.0	-10.1	32.0	10.1	32.0
Bot.flg.spl	15.0	-10.1	32.0	10.1	32.0
1	16.0	-5.9	32.0	5.9	32.0
Top flg.spl	27.0	-8.9	32.0	8.9	32.0
Top flg.spl	27.0	-8.9	32.0	8.9	32.0
Bot.flg.spl	27.0	-8.9	32.0	8.9	32.0
Bot.flg.spl	27.0	-8.9	32.0	8.9	32.0
2	32.0	-8.4	32.0	8.4	32.0
3	48.0	-10.3	32.0	10.3	32.0
4	64.0	-10.6	32.0	10.6	32.0
5	80.0	-9.5	32.0	9.5	32.0
6	96.0	-6.8	32.0	6.8	32.0
Top flg.spl	98.0	-6.4	32.0	6.4	32.0
Top flg.spl	98.0	-6.4	32.0	6.4	32.0
Top flg.spl	110.0	-3.3	32.0	3.3	32.0
Top flg.spl	110.0	-3.3	32.0	3.3	32.0
Bot.flg.spl	98.0	-6.4	32.0	6.4	32.0
Bot.flg.spl	98.0	-6.4	32.0	6.4	32.0
Bot.flg.spl	110.0	-3.3	32.0	3.3	32.0
Bot.flg.spl	110.0	-3.3	32.0	3.3	32.0
7	112.0	-5.9	32.0	5.9	32.0
Top flg.spl	128.0	5.5	32.0	-5.5	32.0
Top flg.spl	128.0	5.5	32.0	-5.5	32.0
Bot.flg.spl	128.0	5.5	32.0	-5.5	32.0
Bot.flg.spl	128.0	2.8	32.0	-2.8	32.0
Top flg.spl	144.0	8.0	32.0	-8.0	32.0
Top flg.spl	144.0	8.0	32.0	-8.0	32.0
Bot.flg.spl	144.0	8.0	32.0	-8.0	32.0
Bot.flg.spl	144.0	7.2	32.0	-7.2	32.0
10	160.0	11.3	32.0	-11.3	32.0
Top flg.spl	178.0	7.8	32.0	-7.8	32.0
Top flg.spl	178.0	7.8	32.0	-7.8	32.0
Top flg.spl	193.0	3.6	32.0	-3.6	32.0
Top flg.spl	193.0	3.6	32.0	-3.6	32.0
Bot.flg.spl	178.0	7.8	32.0	-7.8	32.0
Bot.flg.spl	178.0	8.7	32.0	-8.7	32.0
Bot.flg.spl	193.0	3.6	32.0	-3.6	32.0
Bot.flg.spl	193.0	4.1	32.0	-4.1	32.0

12	196.0	6.2	32.0	-6.2	32.0
13	214.0	-1.2	32.0	1.2	32.0
14	232.0	-5.6	32.0	5.6	32.0
15	250.0	-7.1	32.0	7.1	32.0
16	268.0	-5.6	32.0	5.6	32.0
17	286.0	-1.2	32.0	1.2	32.0
18	304.0	6.0	32.0	-6.0	32.0
Top flg.spl	307.0	7.6	32.0	-7.6	32.0
Top flg.spl	307.0	7.6	32.0	-7.6	32.0
Bot.flg.spl	307.0	7.6	32.0	-7.6	32.0
Bot.flg.spl	307.0	7.6	32.0	-7.6	32.0
Top flg.spl	322.0	8.7	32.0	-8.7	32.0
Top flg.spl	322.0	8.7	32.0	-8.7	32.0
Bot.flg.spl	322.0	8.7	32.0	-8.7	32.0
Bot.flg.spl	322.0	7.8	32.0	-7.8	32.0
20	340.0	11.3	32.0	-11.3	32.0
Top flg.spl	356.0	7.2	32.0	-7.2	32.0
Top flg.spl	356.0	7.2	32.0	-7.2	32.0
Bot.flg.spl	356.0	7.2	32.0	-7.2	32.0
Bot.flg.spl	356.0	8.1	32.0	-8.1	32.0
Top flg.spl	372.0	2.9	32.0	-2.9	32.0
Top flg.spl	372.0	2.9	32.0	-2.9	32.0
Bot.flg.spl	372.0	2.9	32.0	-2.9	32.0
Bot.flg.spl	372.0	5.6	32.0	-5.6	32.0
23	388.0	-6.0	32.0	6.0	32.0
Top flg.spl	390.0	-7.2	32.0	7.2	32.0
Top flg.spl	390.0	-7.2	32.0	7.2	32.0
Top flg.spl	402.0	-13.7	32.0	13.7	32.0
Top flg.spl	402.0	-13.7	32.0	13.7	32.0
Bot.flg.spl	390.0	-7.2	32.0	7.2	32.0
Bot.flg.spl	390.0	-7.2	32.0	7.2	32.0
Bot.flg.spl	402.0	-13.7	32.0	13.7	32.0
Bot.flg.spl	402.0	-13.7	32.0	13.7	32.0
24	404.0	-6.8	32.0	6.8	32.0
25	420.0	-9.4	32.0	9.4	32.0
26	436.0	-10.6	32.0	10.6	32.0
27	452.0	-10.3	32.0	10.3	32.0
28	468.0	-8.4	32.0	8.4	32.0
Top flg.spl	473.0	-7.5	32.0	7.5	32.0
Top flg.spl	473.0	-7.5	32.0	7.5	32.0
Bot.flg.spl	473.0	-7.5	32.0	7.5	32.0
Bot.flg.spl	473.0	-7.5	32.0	7.5	32.0
29	484.0	-5.9	32.0	5.9	32.0
Top flg.spl	485.0	-5.5	32.0	5.5	32.0
Top flg.spl	485.0	-5.5	32.0	5.5	32.0
Bot.flg.spl	485.0	-5.5	32.0	5.5	32.0
Bot.flg.spl	485.0	-5.5	32.0	5.5	32.0
30	500.0	0.0	32.0	0.0	32.0

Girder 1 Factored Strengths

Tenth Point	Loc	Factored Shear (k)	Shear Strength (k)	Ratio	Factored Moment (k-ft)	Bending Strength (k-ft)	Ratio
0	0.00	223.7	543.6 (5)	0.412	0.0	4390.7 (6)	0.000
1	16.00	188.4	626.8 (3)	0.301	3032.5	10163.9 (20)	0.298
2	32.00	143.2	626.8 (3)	0.228	5063.4	11525.1 (20)	0.439
3	48.00	94.0	626.8 (3)	0.150	6367.1	11525.1 (20)	0.552
4	64.00	61.6	626.8 (3)	0.098	6842.2	11525.1 (20)	0.594
5	80.00	121.8	626.8 (3)	0.194	6521.5	11525.1 (20)	0.566

6	96.00	145.7	626.8 (3)	0.232	5361.4	11525.1 (20)	0.465
7	112.00	179.4	626.8 (3)	0.286	3469.7	7040.1 (20)	0.493
8	128.00	222.7	626.8 (3)	0.355	2933.6	5435.0 (6)	0.540
9	144.00	265.4	764.0 (3)	0.347	5845.4	9779.6 (6)	0.598
10L	160.00	321.6	930.6 (3)	0.346	9975.5	12496.0 (6)	0.798
10R	160.00	303.0	930.6 (3)	0.326	9975.5	12496.0 (6)	0.798
11	178.00	242.8	730.3 (3)	0.332	5719.2	9236.1 (6)	0.619
12	196.00	191.3	626.8 (3)	0.305	2862.7	4577.7 (6)	0.625
13	214.00	142.9	626.8 (3)	0.228	2571.9	7925.1 (20)	0.325
14	232.00	101.9	626.8 (3)	0.163	3813.5	7925.1 (20)	0.481
15	250.00	60.2	626.8 (3)	0.096	4245.4	7925.1 (20)	0.536
16	268.00	99.8	626.8 (3)	0.159	3815.7	7925.1 (20)	0.481
17	286.00	144.1	626.8 (3)	0.230	2577.3	7925.1 (20)	0.325
18	304.00	191.2	626.8 (3)	0.305	2838.0	4577.7 (6)	0.620
19	322.00	244.2	730.3 (3)	0.334	5709.1	9236.1 (6)	0.618
20L	340.00	302.4	930.6 (3)	0.325	9974.1	12496.0 (6)	0.798
20R	340.00	321.7	930.6 (3)	0.346	9974.1	12496.0 (6)	0.798
21	356.00	266.7	764.0 (3)	0.349	5852.0	9779.6 (6)	0.598
22	372.00	221.0	626.8 (3)	0.353	2954.7	5435.0 (6)	0.544
23	388.00	181.3	626.8 (3)	0.289	3479.9	7040.1 (20)	0.494
24	404.00	147.1	626.8 (3)	0.235	5353.7	11525.1 (20)	0.465
25	420.00	121.9	626.8 (3)	0.195	6515.5	11525.1 (20)	0.565
26	436.00	65.7	626.8 (3)	0.105	6840.2	11525.1 (20)	0.594
27	452.00	91.3	626.8 (3)	0.146	6369.1	11525.1 (20)	0.553
28	468.00	136.3	626.8 (3)	0.217	5062.1	11525.1 (20)	0.439
29	484.00	180.0	626.8 (3)	0.287	2917.5	10163.9 (20)	0.287
30	500.00	223.5	543.6 (5)	0.411	0.0	4372.9 (6)	0.000

Shear Strength at Intermediate Transverse Stiffeners

5.00	212.7	626.8 (3)	0.339
10.00	201.7	626.8 (3)	0.322
15.00	190.6	626.8 (3)	0.304
20.00	177.1	626.8 (3)	0.283
25.00	163.0	626.8 (3)	0.260
30.00	148.9	626.8 (3)	0.237
35.00	134.0	626.8 (3)	0.214
40.00	118.6	626.8 (3)	0.189
45.00	103.2	626.8 (3)	0.165
50.00	89.9	626.8 (3)	0.143
55.00	79.8	626.8 (3)	0.127
60.00	69.7	626.8 (3)	0.111
65.00	65.4	626.8 (3)	0.104
70.00	84.2	626.8 (3)	0.134
75.00	103.0	626.8 (3)	0.164
85.00	129.3	626.8 (3)	0.206
90.00	136.7	626.8 (3)	0.218
95.00	144.2	626.8 (3)	0.230
100.00	154.1	626.8 (3)	0.246
105.00	164.6	626.8 (3)	0.263
110.00	175.2	626.8 (3)	0.279
115.00	187.5	626.8 (3)	0.299
120.00	201.0	626.8 (3)	0.321
125.00	214.5	626.8 (3)	0.342
130.00	228.0	628.2 (3)	0.363
135.00	241.4	652.1 (3)	0.370
140.00	254.7	701.6 (3)	0.363
145.00	268.9	780.6 (3)	0.345
150.00	286.5	846.6 (3)	0.338
155.00	304.0	883.0 (3)	0.344
165.00	286.3	883.0 (3)	0.324
170.00	269.6	846.6 (3)	0.318
175.00	252.8	780.6 (3)	0.324

180.00	237.1	701.6 (3)	0.338
185.00	222.8	652.1 (3)	0.342
190.00	208.5	628.2 (3)	0.332
195.00	194.2	626.8 (3)	0.310
200.00	180.6	626.8 (3)	0.288
205.00	167.1	626.8 (3)	0.267
210.00	153.6	626.8 (3)	0.245
215.00	140.6	626.8 (3)	0.224
220.00	129.2	626.8 (3)	0.206
225.00	117.8	626.8 (3)	0.188
230.00	106.4	626.8 (3)	0.170
235.00	94.9	626.8 (3)	0.151
240.00	83.3	626.8 (3)	0.133
245.00	71.8	626.8 (3)	0.114
255.00	71.2	626.8 (3)	0.114
260.00	82.2	626.8 (3)	0.131
265.00	93.2	626.8 (3)	0.149
270.00	104.7	626.8 (3)	0.167
275.00	117.0	626.8 (3)	0.187
280.00	129.4	626.8 (3)	0.206
285.00	141.7	626.8 (3)	0.226
290.00	154.6	626.8 (3)	0.247
295.00	167.6	626.8 (3)	0.267
300.00	180.7	626.8 (3)	0.288
305.00	194.1	626.8 (3)	0.310
310.00	208.8	628.2 (3)	0.332
315.00	223.6	652.1 (3)	0.343
320.00	238.3	701.6 (3)	0.340
325.00	253.9	780.6 (3)	0.325
330.00	270.1	846.6 (3)	0.319
335.00	286.2	883.0 (3)	0.324
345.00	304.5	883.0 (3)	0.345
350.00	287.3	846.6 (3)	0.339
355.00	270.2	780.6 (3)	0.346
360.00	255.3	701.6 (3)	0.364
365.00	241.0	652.1 (3)	0.370
370.00	226.7	628.2 (3)	0.361
375.00	213.5	626.8 (3)	0.341
380.00	201.2	626.8 (3)	0.321
385.00	188.8	626.8 (3)	0.301
390.00	177.0	626.8 (3)	0.282
395.00	166.3	626.8 (3)	0.265
400.00	155.6	626.8 (3)	0.248
405.00	145.5	626.8 (3)	0.232
410.00	137.6	626.8 (3)	0.220
415.00	129.8	626.8 (3)	0.207
425.00	104.4	626.8 (3)	0.166
430.00	86.8	626.8 (3)	0.138
435.00	69.2	626.8 (3)	0.110
440.00	72.1	626.8 (3)	0.115
445.00	80.1	626.8 (3)	0.128
450.00	88.1	626.8 (3)	0.141
455.00	99.8	626.8 (3)	0.159
460.00	113.8	626.8 (3)	0.182
465.00	127.8	626.8 (3)	0.204
470.00	141.7	626.8 (3)	0.226
475.00	155.4	626.8 (3)	0.248
480.00	169.1	626.8 (3)	0.270
485.00	182.7	626.8 (3)	0.292
490.00	196.3	626.8 (3)	0.313
495.00	209.9	626.8 (3)	0.335

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(5) C 0.58 Fyw D t
(20) compact section
(6) Fy S(equiv)
Maximum moment in factored strength expression

Girder 1 Load Factor Ratings

Span 1

Location	Moment Capacity	Shear Capacity	Rating Factors Inventory	Operating
0.00	5049.5 B	543.6	3.52 V	5.88 V
15.00L	7040.1 C	626.8	4.72 V	7.88 V
15.00R	10163.9 C	626.8	4.72 V	7.88 V
5.00S	7040.1 C	626.8	4.32 V	7.21 V
10.00S	7040.1 C	626.8	4.49 V	7.51 V
16.00	10163.9 C	626.8	4.77 V	7.96 V
27.00L	7677.3 S	626.8	3.06 S	5.11 S
27.00R	8902.5 S	626.8	3.73 S	6.23 S
20.00S	7677.3 S	626.8	4.01 S	6.69 S
25.00S	7677.3 S	626.8	3.29 S	5.50 S
30.00S	8902.5 S	626.8	3.40 S	5.68 S
32.00	8902.5 S	626.8	3.21 S	5.36 S
35.00S	8902.5 S	626.8	2.98 S	4.97 S
40.00S	8902.5 S	626.8	2.66 S	4.44 S
45.00S	8902.5 S	626.8	2.44 S	4.07 S
48.00	8902.5 S	626.8	2.33 S	3.90 S
50.00S	8902.5 S	626.8	2.28 S	3.81 S
55.00S	8902.5 S	626.8	2.17 S	3.63 S
60.00S	8902.5 S	626.8	2.11 S	3.52 S
64.00	8902.5 S	626.8	2.08 S	3.48 S
65.00S	8902.5 S	626.8	2.08 S	3.47 S
70.00S	8902.5 S	626.8	2.08 S	3.47 S
75.00S	8902.5 S	626.8	2.11 S	3.52 S
80.00	8902.5 S	626.8	2.18 S	3.63 S
85.00S	8902.5 S	626.8	2.28 S	3.81 S
90.00S	8902.5 S	626.8	2.44 S	4.08 S
95.00S	8902.5 S	626.8	2.64 S	4.41 S
96.00	8902.5 S	626.8	2.69 S	4.49 S
98.00L	8902.5 S	626.8	2.79 S	4.66 S
98.00R	7677.3 S	626.8	2.31 S	3.86 S
110.00L	7677.3 S	626.8	3.14 S	5.24 S
110.00R	4814.3 S	626.8	1.78 S	2.97 S
100.00S	7677.3 S	626.8	2.41 S	4.03 S
105.00S	7677.3 S	626.8	2.73 S	4.56 S
112.00	4814.3 S	626.8	1.93 S	3.22 S
115.00S	4814.3 S	626.8	2.19 S	3.66 S
120.00S	4814.3 S	626.8	2.85 S	4.75 S
125.00S	3720.9 B	626.8	1.57 T	2.62 T
128.00L	3720.9 B	626.8	1.35 T	2.26 T
128.00R	7151.1 B	626.8	2.89 T	4.83 T
130.00S	7170.0 B	628.2	2.70 T	4.50 T
135.00S	7507.6 B	652.1	2.33 T	3.88 T
140.00S	8285.0 B	701.6	2.11 B	3.53 B
144.00L	9245.9 B	762.5	2.03 T	3.39 T
144.00R	10393.0 B	765.4	2.38 B	3.97 B
145.00S	10593.2 B	780.6	2.34 T	3.90 T
150.00S	11704.3 B	846.6	2.14 T	3.58 T
155.00S	12318.6 B	883.0	1.84 T	3.07 T

160.00	12536.6 B	930.6	1.49 B	2.49 B

Span 2

Location	Moment Capacity	Shear Capacity	Rating Factors Inventory	Operating
0.00	12536.6 B	930.6	1.49 B	2.49 B
5.00S	12409.7 B	883.0	1.52 B	2.55 B
10.00S	11791.7 B	846.6	2.11 B	3.52 B
15.00S	10674.2 B	780.6	2.28 B	3.80 B
18.00L	9744.8 B	731.6	2.30 T	3.84 T
18.00R	8727.5 B	729.0	1.97 T	3.29 T
33.00L	7151.1 B	626.8	2.92 T	4.88 T
33.00R	4577.7 B	626.8	1.66 T	2.77 T
20.00S	8285.0 B	701.6	2.01 B	3.35 B
25.00S	7507.6 B	652.1	2.21 T	3.69 T
30.00S	7170.0 B	628.2	2.60 T	4.34 T
35.00S	4577.7 B	626.8	1.82 T	3.04 T
36.00	4577.7 B	626.8	1.90 T	3.18 T
40.00S	4577.7 B	626.8	2.23 T	3.73 T
45.00S	4577.7 B	626.8	2.12 T	3.54 T
50.00S	5633.2 S	626.8	3.28 S	5.48 S
54.00	5633.2 S	626.8	2.98 S	4.98 S
55.00S	5633.2 S	626.8	2.91 S	4.85 S
60.00S	5633.2 S	626.8	2.60 S	4.34 S
65.00S	5633.2 S	626.8	2.35 S	3.93 S
70.00S	5633.2 S	626.8	2.17 S	3.63 S
72.00	5633.2 S	626.8	2.12 S	3.54 S
75.00S	5633.2 S	626.8	2.05 S	3.42 S
80.00S	5633.2 S	626.8	1.96 S	3.27 S
85.00S	5633.2 S	626.8	1.91 S	3.18 S
90.00	5633.2 S	626.8	1.89 S	3.15 S
95.00S	5633.2 S	626.8	1.91 S	3.18 S
100.00S	5633.2 S	626.8	1.96 S	3.27 S
105.00S	5633.2 S	626.8	2.05 S	3.42 S
108.00	5633.2 S	626.8	2.12 S	3.54 S
110.00S	5633.2 S	626.8	2.17 S	3.63 S
115.00S	5633.2 S	626.8	2.35 S	3.92 S
120.00S	5633.2 S	626.8	2.58 S	4.32 S
125.00S	5633.2 S	626.8	2.90 S	4.84 S
126.00	5633.2 S	626.8	2.98 S	4.97 S
130.00S	4577.7 B	626.8	2.06 B	3.44 B
135.00S	4577.7 B	626.8	2.17 T	3.62 T
140.00S	4577.7 B	626.8	2.25 T	3.75 T
144.00	4577.7 B	626.8	1.92 T	3.20 T
147.00L	4577.7 B	626.8	1.67 T	2.79 T
147.00R	7151.1 B	626.8	2.94 T	4.90 T
145.00S	4577.7 B	626.8	1.83 T	3.06 T
150.00S	7170.0 B	628.2	2.61 T	4.36 T
155.00S	7507.6 B	652.1	2.22 T	3.70 T
160.00S	8285.0 B	701.6	2.01 B	3.36 B
162.00L	8727.5 B	729.0	1.97 T	3.29 T
162.00R	9821.0 B	731.6	2.32 B	3.87 B
165.00S	10593.2 B	780.6	2.26 T	3.78 T
170.00S	11704.3 B	846.6	2.09 T	3.49 T
175.00S	12318.6 B	883.0	1.81 T	3.03 T
180.00	12536.6 B	930.6	1.49 B	2.49 B

Span 3

Location	Moment Capacity	Shear Capacity	Rating Factors Inventory	Operating

0.00	12536.6 B	930.6	1.49 B	2.49 B
5.00S	12409.7 B	883.0	1.58 B	2.65 B
10.00S	11791.7 B	846.6	2.16 B	3.60 B
15.00S	10674.2 B	780.6	2.35 B	3.93 B
16.00L	10313.5 B	765.4	2.35 T	3.93 T
16.00R	9245.9 B	762.5	2.03 T	3.39 T
20.00S	8285.0 B	701.6	2.11 B	3.52 B
25.00S	7507.6 B	652.1	2.32 T	3.87 T
30.00S	7170.0 B	628.2	2.69 T	4.49 T
32.00L	7151.1 B	626.8	2.88 T	4.81 T
32.00R	5067.7 B	626.8	1.84 B	3.07 B
35.00S	3720.9 B	626.8	1.56 T	2.60 T
40.00S	5067.7 B	626.8	2.31 B	3.86 B
45.00S	4814.3 S	626.8	2.19 S	3.65 S
48.00	4814.3 S	626.8	1.93 S	3.22 S
50.00L	4814.3 S	626.8	1.77 S	2.96 S
50.00R	7677.3 S	626.8	3.14 S	5.24 S
62.00L	7677.3 S	626.8	2.31 S	3.86 S
62.00R	8902.5 S	626.8	2.79 S	4.67 S
55.00S	7677.3 S	626.8	2.73 S	4.56 S
60.00S	7677.3 S	626.8	2.41 S	4.03 S
64.00	8902.5 S	626.8	2.69 S	4.50 S
65.00S	8902.5 S	626.8	2.65 S	4.42 S
70.00S	8902.5 S	626.8	2.44 S	4.08 S
75.00S	8902.5 S	626.8	2.28 S	3.82 S
80.00	8902.5 S	626.8	2.18 S	3.64 S
85.00S	8902.5 S	626.8	2.11 S	3.52 S
90.00S	8902.5 S	626.8	2.08 S	3.48 S
95.00S	8902.5 S	626.8	2.08 S	3.47 S
96.00	8902.5 S	626.8	2.08 S	3.48 S
100.00S	8902.5 S	626.8	2.11 S	3.52 S
105.00S	8902.5 S	626.8	2.17 S	3.63 S
110.00S	8902.5 S	626.8	2.28 S	3.80 S
112.00	8902.5 S	626.8	2.33 S	3.90 S
115.00S	8902.5 S	626.8	2.43 S	4.07 S
120.00S	8902.5 S	626.8	2.66 S	4.44 S
125.00S	8902.5 S	626.8	2.97 S	4.95 S
128.00	8902.5 S	626.8	3.21 S	5.36 S
133.00L	8902.5 S	626.8	3.76 S	6.29 S
133.00R	7677.3 S	626.8	3.09 S	5.16 S
130.00S	8902.5 S	626.8	3.41 S	5.69 S
135.00S	7677.3 S	626.8	3.34 S	5.58 S
140.00S	7677.3 S	626.8	4.22 S	7.04 S
144.00	10163.9 C	626.8	5.13 V	8.57 V
145.00L	10163.9 C	626.8	5.06 V	8.45 V
145.00R	4797.0 S	626.8	3.05 S	5.10 S
150.00S	7040.1 C	626.8	4.74 V	7.92 V
155.00S	3720.9 C	626.8	4.45 V	7.43 V
160.00	5049.5 B	543.6	3.52 V	5.88 V

Rating Codes:
T - Top steel governs
B - Bottom steel governs
C - Concrete governs
R - Rebar governs
V - Shear governs
S - Serviceability governs
I - Moment-shear interaction governs

Mom Capacity Codes:
C - Compact

B - Braced non-compact
U - Unbraced non-compact
T - Transition between compact and braced non-compact
S - Serviceability

This table is based on eq. (6-1a) of the AASHTO Manual
for Condition Evaluation of Bridges.

Noncompact shapes ratings based on stress, as

$$IR = \frac{Fb - \text{Dead load factored stress}}{\text{LL+I factored stress}}$$

Noncompact shape moment capacity is the product of
allowable stress and LL+I section modulus.

Girder 1 Bearing Stiffeners

Location from Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
0.00	134.00	16.80	10.72	0.638	28.80	17.87	0.620
160.00	342.23	16.60	9.51	0.573	28.80	15.21	0.528
340.00	342.30	16.60	9.51	0.573	28.80	15.21	0.528
500.00	133.81	16.80	10.71	0.637	28.80	17.84	0.620

Girder 1 Fatigue Summary

Condition	Location from Left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)	Actual Stress Range	Allowable Stress Range	Ratio
Base metal	16.00	B	863.10 T	3502.	18000.	0.195
Base metal *	16.00	B	741.39 T	3000.	16000.	0.187
Base metal	32.00	B	1455.42 T	5092.	18000.	0.283
Base metal *	32.00	B	1222.87 T	4269.	16000.	0.267
Base metal	48.00	B	1872.42 T	6577.	18000.	0.365
Base metal *	48.00	B	1561.24 T	5471.	16000.	0.342
Base metal	64.00	B	2091.59 T	7386.	18000.	0.410
Base metal *	64.00	B	1734.28 T	6109.	16000.	0.382
Base metal	80.00	B	2160.38 T	7682.	18000.	0.427
Base metal *	80.00	B	1774.59 T	6294.	16000.	0.393
Base metal	96.00	B	2049.49 T	7362.	18000.	0.409
Base metal *	96.00	B	1697.02 T	6078.	16000.	0.380
Base metal	112.00	B	1804.31 T	13062.	18000.	0.726
Base metal *	112.00	B	1496.53 T	10771.	16000.	0.673
Near flg-web weld	16.00	B	863.10 T	3401.	18000.	0.189
Near flg-web weld *	16.00	B	741.39 T	2913.	16000.	0.182
Near flg-web weld	32.00	B	1455.42 T	4908.	18000.	0.273
Near flg-web weld *	32.00	B	1222.87 T	4114.	16000.	0.257
Near flg-web weld	48.00	B	1872.42 T	6339.	18000.	0.352
Near flg-web weld *	48.00	B	1561.24 T	5273.	16000.	0.330
Near flg-web weld	64.00	B	2091.59 T	7119.	18000.	0.395
Near flg-web weld *	64.00	B	1734.28 T	5888.	16000.	0.368

Near flg-web weld	80.00	B	2160.38 T	7404.	18000.	0.411
Near flg-web weld *	80.00	B	1774.59 T	6066.	16000.	0.379
Near flg-web weld	96.00	B	2049.49 T	7095.	18000.	0.394
Near flg-web weld *	96.00	B	1697.02 T	5858.	16000.	0.366
Near flg-web weld	112.00	B	1804.31 T	12897.	18000.	0.717
Near flg-web weld *	112.00	B	1496.53 T	10635.	16000.	0.665
Base metal	16.00	B	863.10 T	3502.	18000.	0.195
Base metal *	16.00	B	741.39 T	3000.	16000.	0.187
Base metal	32.00	B	1455.42 T	5092.	18000.	0.283
Base metal *	32.00	B	1222.87 T	4269.	16000.	0.267
Base metal	48.00	B	1872.42 T	6577.	18000.	0.365
Base metal *	48.00	B	1561.24 T	5471.	16000.	0.342
Base metal	64.00	B	2091.59 T	7386.	18000.	0.410
Base metal *	64.00	B	1734.28 T	6109.	16000.	0.382
Base metal	80.00	B	2160.38 T	7682.	18000.	0.427
Base metal *	80.00	B	1774.59 T	6294.	16000.	0.393
Base metal	96.00	B	2049.49 T	7362.	18000.	0.409
Base metal *	96.00	B	1697.02 T	6078.	16000.	0.380
Base metal	112.00	B	1804.31 T	13062.	18000.	0.726
Base metal *	112.00	B	1496.53 T	10771.	16000.	0.673
Top flg. splice	15.00	B	817.09 T	1202.	18000.	0.067
Top flg splice *	15.00	B	702.67 T	1038.	16000.	0.065
Top flg. splice	27.00	B	1289.15 T	2341.	18000.	0.130
Top flg splice *	27.00	B	1087.78 T	1924.	16000.	0.120
Top flg. splice	98.00	B	2026.19 T	4919.	18000.	0.273
Top flg splice *	98.00	B	1678.68 T	3971.	16000.	0.248
Top flg. splice	110.00	B	1837.81 T	7851.	18000.	0.436
Top flg splice *	110.00	B	1523.41 T	6307.	16000.	0.394
Bot flg. splice	15.00	B	817.09 T	4659.	18000.	0.259
Bot flg splice *	15.00	B	702.67 T	4058.	16000.	0.254
Bot flg. splice	27.00	B	1289.15 T	5253.	18000.	0.292
Bot flg splice *	27.00	B	1087.78 T	4420.	16000.	0.276
Bot flg. splice	98.00	B	2026.19 T	8556.	18000.	0.475
Bot flg splice *	98.00	B	1678.68 T	7063.	16000.	0.441
Bot flg. splice	110.00	B	1837.81 T	13294.	18000.	0.739
Bot flg splice *	110.00	B	1523.41 T	10954.	16000.	0.685
Trans. stiff. toe	10.00	C	539.44 T	2161.	13000.	0.166
Trans. stiff. toe *	10.00	C	463.37 T	1851.	12000.	0.154
Trans. stiff. toe	15.00	C	809.16 T	3242.	13000.	0.249
Trans. stiff. toe *	15.00	C	695.05 T	2777.	12000.	0.231
Trans. stiff. toe	20.00	C	1011.18 T	4058.	13000.	0.312
Trans. stiff. toe *	20.00	C	861.76 T	3449.	12000.	0.287
Trans. stiff. toe	25.00	C	1196.28 T	4128.	13000.	0.318
Trans. stiff. toe *	25.00	C	1012.22 T	3485.	12000.	0.290
Trans. stiff. toe	30.00	C	1381.38 T	4771.	13000.	0.367
Trans. stiff. toe *	30.00	C	1162.68 T	4007.	12000.	0.334
Trans. stiff. toe	35.00	C	1533.61 T	5303.	13000.	0.408
Trans. stiff. toe *	35.00	C	1286.31 T	4438.	12000.	0.370
Trans. stiff. toe	40.00	C	1663.92 T	5762.	13000.	0.443
Trans. stiff. toe *	40.00	C	1392.05 T	4809.	12000.	0.401
Trans. stiff. toe	45.00	C	1794.23 T	6220.	13000.	0.478
Trans. stiff. toe *	45.00	C	1497.79 T	5180.	12000.	0.432
Trans. stiff. toe	50.00	C	1899.82 T	6595.	13000.	0.507
Trans. stiff. toe *	50.00	C	1582.87 T	5481.	12000.	0.457
Trans. stiff. toe	55.00	C	1968.31 T	6844.	13000.	0.526
Trans. stiff. toe *	55.00	C	1636.95 T	5678.	12000.	0.473
Trans. stiff. toe	60.00	C	2036.80 T	7094.	13000.	0.546
Trans. stiff. toe *	60.00	C	1691.02 T	5875.	12000.	0.490
Trans. stiff. toe	65.00	C	2095.89 T	7312.	13000.	0.562
Trans. stiff. toe *	65.00	C	1736.80 T	6044.	12000.	0.504
Trans. stiff. toe	70.00	C	2117.39 T	7403.	13000.	0.569
Trans. stiff. toe *	70.00	C	1749.40 T	6101.	12000.	0.508
Trans. stiff. toe	75.00	C	2138.88 T	7494.	13000.	0.576

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Trans. stiff. toe *	75.00	C	1761.99	T	6158.	12000.	0.513
Trans. stiff. toe	80.00	C	2160.38	T	7585.	13000.	0.583
Trans. stiff. toe *	80.00	C	1774.59	T	6215.	12000.	0.518
Trans. stiff. toe	85.00	C	2125.73	T	7487.	13000.	0.576
Trans. stiff. toe *	85.00	C	1750.35	T	6148.	12000.	0.512
Trans. stiff. toe	90.00	C	2091.07	T	7388.	13000.	0.568
Trans. stiff. toe *	90.00	C	1726.11	T	6082.	12000.	0.507
Trans. stiff. toe	95.00	C	2056.42	T	7289.	13000.	0.561
Trans. stiff. toe *	95.00	C	1701.87	T	6015.	12000.	0.501
Trans. stiff. toe	100.00	C	1988.20	T	7077.	13000.	0.544
Trans. stiff. toe *	100.00	C	1646.90	T	5846.	12000.	0.487
Trans. stiff. toe	105.00	C	1911.58	T	13464.	13000.	1.036
Trans. stiff. toe *	105.00	C	1584.24	T	11094.	12000.	0.924
Trans. stiff. toe	110.00	C	1834.96	T	13059.	13000.	1.005
Trans. stiff. toe *	110.00	C	1521.59	T	10766.	12000.	0.897
Trans. stiff. toe	115.00	C	1748.54	T	12594.	13000.	0.969
Trans. stiff. toe *	115.00	C	1452.71	T	10403.	12000.	0.867
Base metal	16.00	B	878.93	L	3584.	29000.	0.124
Base metal	32.00	B	1537.62	L	5401.	29000.	0.186
Base metal	48.00	B	2028.80	L	7153.	29000.	0.247
Base metal	64.00	B	2329.99	L	8256.	29000.	0.285
Base metal	80.00	B	2459.93	L	8774.	29000.	0.303
Base metal	96.00	B	2381.19	L	8577.	29000.	0.296
Base metal	112.00	B	2150.74	L	15627.	29000.	0.539
Near flg-web weld	16.00	B	878.93	L	3480.	29000.	0.120
Near flg-web weld	32.00	B	1537.62	L	5205.	29000.	0.179
Near flg-web weld	48.00	B	2028.80	L	6894.	29000.	0.238
Near flg-web weld	64.00	B	2329.99	L	7957.	29000.	0.274
Near flg-web weld	80.00	B	2459.93	L	8456.	29000.	0.292
Near flg-web weld	96.00	B	2381.19	L	8266.	29000.	0.285
Near flg-web weld	112.00	B	2150.74	L	15431.	29000.	0.532
Base metal	16.00	B	878.93	L	3584.	29000.	0.124
Base metal	32.00	B	1537.62	L	5401.	29000.	0.186
Base metal	48.00	B	2028.80	L	7153.	29000.	0.247
Base metal	64.00	B	2329.99	L	8256.	29000.	0.285
Base metal	80.00	B	2459.93	L	8774.	29000.	0.303
Base metal	96.00	B	2381.19	L	8577.	29000.	0.296
Base metal	112.00	B	2150.74	L	15627.	29000.	0.539
Top flg. splice	15.00	B	830.45	L	1213.	29000.	0.042
Top flg. splice	27.00	B	1349.78	L	2562.	29000.	0.088
Top flg. splice	98.00	B	2360.68	L	5869.	29000.	0.202
Top flg. splice	110.00	B	2186.06	L	9530.	29000.	0.329
Bot flg. splice	15.00	B	830.45	L	4626.	29000.	0.160
Bot flg. splice	27.00	B	1349.78	L	5527.	29000.	0.191
Bot flg. splice	98.00	B	2360.68	L	10002.	29000.	0.345
Bot flg. splice	110.00	B	2186.06	L	15875.	29000.	0.547
Trans. stiff. toe	10.00	C	549.34	L	2212.	21000.	0.105
Trans. stiff. toe	15.00	C	824.00	L	3318.	21000.	0.158
Trans. stiff. toe	20.00	C	1043.60	L	4208.	21000.	0.200
Trans. stiff. toe	25.00	C	1249.44	L	4329.	21000.	0.206
Trans. stiff. toe	30.00	C	1455.29	L	5046.	21000.	0.240
Trans. stiff. toe	35.00	C	1629.72	L	5657.	21000.	0.269
Trans. stiff. toe	40.00	C	1783.21	L	6198.	21000.	0.295
Trans. stiff. toe	45.00	C	1936.71	L	6739.	21000.	0.321
Trans. stiff. toe	50.00	C	2066.45	L	7199.	21000.	0.343
Trans. stiff. toe	55.00	C	2160.57	L	7540.	21000.	0.359
Trans. stiff. toe	60.00	C	2254.69	L	7880.	21000.	0.375
Trans. stiff. toe	65.00	C	2338.11	L	8184.	21000.	0.390
Trans. stiff. toe	70.00	C	2378.72	L	8344.	21000.	0.397
Trans. stiff. toe	75.00	C	2419.33	L	8504.	21000.	0.405
Trans. stiff. toe	80.00	C	2459.93	L	8664.	21000.	0.413
Trans. stiff. toe	85.00	C	2435.33	L	8603.	21000.	0.410
Trans. stiff. toe	90.00	C	2410.72	L	8542.	21000.	0.407

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Trans. stiff. toe	95.00	C	2386.11	L	8481.	21000.	0.404
Trans. stiff. toe	100.00	C	2323.58	L	8293.	21000.	0.395
Trans. stiff. toe	105.00	C	2251.56	L	15934.	21000.	0.759
Trans. stiff. toe	110.00	C	2179.54	L	15575.	21000.	0.742
Trans. stiff. toe	115.00	C	2085.17	L	15078.	21000.	0.718
Base metal	128.00	C	1506.89	T	5851.	13000.	0.450
Base metal *	128.00	C	1262.81	T	4791.	10000.	0.479
Base metal	144.00	C	1233.19	T	3401.	13000.	0.262
Base metal *	144.00	C	1006.87	T	2798.	10000.	0.280
Base metal	160.00	C	1379.65	T	2931.	13000.	0.225
Base metal *	160.00	C	1146.35	T	2456.	10000.	0.246
Base metal	178.00	C	1152.78	T	3249.	13000.	0.250
Base metal *	178.00	C	974.35	T	2723.	10000.	0.272
Base metal	196.00	C	1426.87	T	5961.	13000.	0.459
Base metal *	196.00	C	1218.05	T	4928.	10000.	0.493
Near flg-web weld	128.00	B	1506.89	T	5655.	18000.	0.314
Base metal	128.00	B	1506.89	T	5780.	18000.	0.321
Near flg-web weld *	128.00	B	1262.81	T	4630.	16000.	0.289
Base metal *	128.00	B	1262.81	T	4733.	16000.	0.296
Near flg-web weld *	128.00	B	1262.81	T	4733.	16000.	0.296
Base metal *	128.00	B	1262.81	T	4838.	16000.	0.302
Near flg-web weld	144.00	B	1233.19	T	3265.	18000.	0.181
Base metal	144.00	B	1233.19	T	3359.	18000.	0.187
Near flg-web weld *	144.00	B	1006.87	T	2685.	16000.	0.168
Base metal *	144.00	B	1006.87	T	2763.	16000.	0.173
Near flg-web weld *	144.00	B	1006.87	T	2763.	16000.	0.173
Base metal *	144.00	B	1006.87	T	2842.	16000.	0.178
Near flg-web weld	160.00	B	1379.65	T	2822.	18000.	0.157
Base metal	160.00	B	1379.65	T	2898.	18000.	0.161
Near flg-web weld *	160.00	B	1146.35	T	2365.	16000.	0.148
Base metal *	160.00	B	1146.35	T	2428.	16000.	0.152
Near flg-web weld *	160.00	B	1146.35	T	2428.	16000.	0.152
Base metal *	160.00	B	1146.35	T	2493.	16000.	0.156
Near flg-web weld	178.00	B	1152.78	T	3113.	18000.	0.173
Base metal	178.00	B	1152.78	T	3206.	18000.	0.178
Near flg-web weld *	178.00	B	974.35	T	2609.	16000.	0.163
Base metal *	178.00	B	974.35	T	2687.	16000.	0.168
Near flg-web weld *	178.00	B	974.35	T	2687.	16000.	0.168
Base metal *	178.00	B	974.35	T	2768.	16000.	0.173
Near flg-web weld	196.00	B	1426.87	T	5800.	18000.	0.322
Base metal	196.00	B	1426.87	T	5901.	18000.	0.328
Near flg-web weld *	196.00	B	1218.05	T	4795.	16000.	0.300
Base metal *	196.00	B	1218.05	T	4878.	16000.	0.305
Near flg-web weld *	196.00	B	1218.05	T	4878.	16000.	0.305
Base metal *	196.00	B	1218.05	T	4963.	16000.	0.310
Top flg. splice	128.00	B	1506.89	T	8220.	18000.	0.457
Top flg splice *	128.00	B	1262.81	T	6709.	16000.	0.419
Top flg. splice	144.00	B	1233.19	T	3610.	18000.	0.201
Top flg splice *	144.00	B	1006.87	T	2970.	16000.	0.186
Top flg. splice	178.00	B	1152.78	T	3447.	18000.	0.191
Top flg splice *	178.00	B	974.35	T	2888.	16000.	0.180
Top flg. splice	193.00	B	1384.13	T	6056.	18000.	0.336
Top flg splice *	193.00	B	1183.28	T	5020.	16000.	0.314
Bot flg. splice	128.00	B	1506.89	T	11482.	18000.	0.638
Bot flg splice *	128.00	B	1262.81	T	9564.	16000.	0.598
Bot flg. splice	144.00	B	1233.19	T	4133.	18000.	0.230
Bot flg splice *	144.00	B	1006.87	T	3380.	16000.	0.211
Bot flg. splice	178.00	B	1152.78	T	4063.	18000.	0.226
Bot flg splice *	178.00	B	974.35	T	3428.	16000.	0.214
Bot flg. splice	193.00	B	1384.13	T	8667.	18000.	0.482
Bot flg splice *	193.00	B	1183.28	T	7363.	16000.	0.460
Trans. stiff. toe	120.00	C	1655.60	T	12033.	13000.	0.926
Trans. stiff. toe *	120.00	C	1379.67	T	9970.	12000.	0.831

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Trans. stiff. toe	125.00	C	1562.66	T	5682.	13000.	0.437
Trans. stiff. toe *	125.00	C	1306.64	T	4642.	12000.	0.387
Trans. stiff. toe	130.00	C	1472.68	T	5690.	13000.	0.438
Trans. stiff. toe *	130.00	C	1230.82	T	4663.	12000.	0.389
Trans. stiff. toe	135.00	C	1387.15	T	5467.	13000.	0.421
Trans. stiff. toe *	135.00	C	1150.84	T	4489.	12000.	0.374
Trans. stiff. toe	140.00	C	1301.61	T	3712.	13000.	0.286
Trans. stiff. toe *	140.00	C	1070.86	T	3053.	12000.	0.254
Trans. stiff. toe	145.00	C	1242.34	T	3265.	13000.	0.251
Trans. stiff. toe *	145.00	C	1015.59	T	2689.	12000.	0.224
Trans. stiff. toe	150.00	C	1288.11	T	3070.	13000.	0.236
Trans. stiff. toe *	150.00	C	1059.18	T	2544.	12000.	0.212
Trans. stiff. toe	155.00	C	1333.88	T	2807.	13000.	0.216
Trans. stiff. toe *	155.00	C	1102.76	T	2339.	12000.	0.195
Trans. stiff. toe	160.00	C	1379.65	T	2875.	13000.	0.221
Trans. stiff. toe *	160.00	C	1146.35	T	2409.	12000.	0.201
Trans. stiff. toe	165.00	C	1316.63	T	2751.	13000.	0.212
Trans. stiff. toe *	165.00	C	1098.57	T	2305.	12000.	0.192
Trans. stiff. toe	170.00	C	1253.61	T	2936.	13000.	0.226
Trans. stiff. toe *	170.00	C	1050.79	T	2461.	12000.	0.205
Trans. stiff. toe	175.00	C	1190.59	T	3043.	13000.	0.234
Trans. stiff. toe *	175.00	C	1003.01	T	2551.	12000.	0.213
Trans. stiff. toe	180.00	C	1183.23	T	3338.	13000.	0.257
Trans. stiff. toe *	180.00	C	1001.42	T	2795.	12000.	0.233
Trans. stiff. toe	185.00	C	1259.37	T	3665.	13000.	0.282
Trans. stiff. toe *	185.00	C	1069.12	T	3063.	12000.	0.255
Trans. stiff. toe	200.00	C	1478.35	T	8905.	13000.	0.685
Trans. stiff. toe *	200.00	C	1253.49	T	7508.	12000.	0.626
Trans. stiff. toe	205.00	C	1542.71	T	9193.	13000.	0.707
Trans. stiff. toe *	205.00	C	1297.80	T	7695.	12000.	0.641
Trans. stiff. toe	210.00	C	1607.07	T	9482.	13000.	0.729
Trans. stiff. toe *	210.00	C	1342.10	T	7882.	12000.	0.657
Rebars	160.00		1379.65	T	3803.	20000.	0.190
Rebars *	160.00		1146.35	T	3160.	20000.	0.158
Base metal	128.00	C	1801.03	L	7124.	21000.	0.339
Base metal	144.00	C	1951.20	L	5440.	21000.	0.259
Base metal	160.00	C	2758.72	L	6281.	21000.	0.299
Base metal	178.00	C	1816.23	L	5394.	21000.	0.257
Base metal	196.00	C	1494.08	L	6993.	21000.	0.333
Near flg-web weld	128.00	B	1801.03	L	9483.	29000.	0.327
Base metal	128.00	B	1801.03	L	9694.	29000.	0.334
Near flg-web weld	144.00	B	1951.20	L	5221.	29000.	0.180
Base metal	144.00	B	1951.20	L	5372.	29000.	0.185
Near flg-web weld	160.00	B	2758.72	L	6048.	29000.	0.209
Base metal	160.00	B	2758.72	L	6211.	29000.	0.214
Near flg-web weld	178.00	B	1816.23	L	5167.	29000.	0.178
Base metal	178.00	B	1816.23	L	5322.	29000.	0.184
Near flg-web weld	196.00	B	1494.08	L	6804.	29000.	0.235
Base metal	196.00	B	1494.08	L	6922.	29000.	0.239
Top flg. splice	128.00	B	1801.03	L	10034.	29000.	0.346
Top flg. splice	144.00	B	1951.20	L	5775.	29000.	0.199
Top flg. splice	178.00	B	1816.23	L	5729.	29000.	0.198
Top flg. splice	193.00	B	1506.64	L	7415.	29000.	0.256
Bot flg. splice	128.00	B	1801.03	L	13792.	29000.	0.476
Bot flg. splice	144.00	B	1951.20	L	6555.	29000.	0.226
Bot flg. splice	178.00	B	1816.23	L	6473.	29000.	0.223
Bot flg. splice	193.00	B	1506.64	L	9676.	29000.	0.334
Trans. stiff. toe	120.00	C	1975.89	L	14423.	21000.	0.687
Trans. stiff. toe	125.00	C	1866.60	L	6912.	21000.	0.329
Trans. stiff. toe	130.00	C	1819.81	L	7206.	21000.	0.343
Trans. stiff. toe	135.00	C	1866.73	L	7584.	21000.	0.361
Trans. stiff. toe	140.00	C	1913.66	L	5576.	21000.	0.266
Trans. stiff. toe	145.00	C	2001.67	L	5347.	21000.	0.255

Trans. stiff. toe	150.00	C	2254.02	L	5590.	21000.	0.266
Trans. stiff. toe	155.00	C	2506.37	L	5575.	21000.	0.265
Trans. stiff. toe	160.00	C	2758.72	L	6162.	21000.	0.293
Trans. stiff. toe	165.00	C	2496.92	L	5574.	21000.	0.265
Trans. stiff. toe	170.00	C	2235.11	L	5586.	21000.	0.266
Trans. stiff. toe	175.00	C	1973.31	L	5346.	21000.	0.255
Trans. stiff. toe	180.00	C	1780.43	L	5352.	21000.	0.255
Trans. stiff. toe	185.00	C	1690.95	L	5357.	21000.	0.255
Trans. stiff. toe	190.00	C	1601.46	L	7935.	21000.	0.378
Trans. stiff. toe	195.00	C	1511.98	L	6996.	21000.	0.333
Trans. stiff. toe	200.00	C	1554.14	L	6728.	21000.	0.320
Trans. stiff. toe	205.00	C	1629.20	L	6633.	21000.	0.316
Trans. stiff. toe	210.00	C	1704.27	L	10247.	21000.	0.488
Rebars	160.00		2758.72	L	7605.	20000.	0.380
Base metal	214.00	B	1658.55	T	9881.	18000.	0.549
Base metal *	214.00	B	1377.55	T	8170.	16000.	0.511
Base metal	232.00	B	1765.03	T	10254.	18000.	0.570
Base metal *	232.00	B	1465.66	T	8475.	16000.	0.530
Base metal	250.00	B	1703.03	T	9712.	18000.	0.540
Base metal *	250.00	B	1423.31	T	8080.	16000.	0.505
Base metal	268.00	B	1764.93	T	10254.	18000.	0.570
Base metal *	268.00	B	1465.58	T	8475.	16000.	0.530
Base metal	286.00	B	1658.65	T	9882.	18000.	0.549
Base metal *	286.00	B	1377.66	T	8171.	16000.	0.511
Near flg-web weld	214.00	B	1658.55	T	9712.	18000.	0.540
Near flg-web weld *	214.00	B	1377.55	T	8031.	16000.	0.502
Near flg-web weld	232.00	B	1765.03	T	10079.	18000.	0.560
Near flg-web weld *	232.00	B	1465.66	T	8330.	16000.	0.521
Near flg-web weld	250.00	B	1703.03	T	9546.	18000.	0.530
Near flg-web weld *	250.00	B	1423.31	T	7942.	16000.	0.496
Near flg-web weld	268.00	B	1764.93	T	10078.	18000.	0.560
Near flg-web weld *	268.00	B	1465.58	T	8330.	16000.	0.521
Near flg-web weld	286.00	B	1658.65	T	9713.	18000.	0.540
Near flg-web weld *	286.00	B	1377.66	T	8031.	16000.	0.502
Trans. stiff. toe	215.00	C	1664.47	T	9733.	13000.	0.749
Trans. stiff. toe *	215.00	C	1382.44	T	8047.	12000.	0.671
Trans. stiff. toe	220.00	C	1694.04	T	9835.	13000.	0.757
Trans. stiff. toe *	220.00	C	1406.92	T	8131.	12000.	0.678
Trans. stiff. toe	225.00	C	1723.62	T	9937.	13000.	0.764
Trans. stiff. toe *	225.00	C	1431.40	T	8214.	12000.	0.684
Trans. stiff. toe	230.00	C	1753.20	T	10038.	13000.	0.772
Trans. stiff. toe *	230.00	C	1455.87	T	8297.	12000.	0.691
Trans. stiff. toe	235.00	C	1754.70	T	9990.	13000.	0.768
Trans. stiff. toe *	235.00	C	1458.61	T	8266.	12000.	0.689
Trans. stiff. toe	240.00	C	1737.48	T	9842.	13000.	0.757
Trans. stiff. toe *	240.00	C	1446.84	T	8158.	12000.	0.680
Trans. stiff. toe	245.00	C	1720.25	T	9694.	13000.	0.746
Trans. stiff. toe *	245.00	C	1435.07	T	8050.	12000.	0.671
Trans. stiff. toe	250.00	C	1703.03	T	9546.	13000.	0.734
Trans. stiff. toe *	250.00	C	1423.31	T	7942.	12000.	0.662
Trans. stiff. toe	255.00	C	1720.23	T	9694.	13000.	0.746
Trans. stiff. toe *	255.00	C	1435.05	T	8050.	12000.	0.671
Trans. stiff. toe	260.00	C	1737.42	T	9842.	13000.	0.757
Trans. stiff. toe *	260.00	C	1446.79	T	8157.	12000.	0.680
Trans. stiff. toe	265.00	C	1754.62	T	9990.	13000.	0.768
Trans. stiff. toe *	265.00	C	1458.53	T	8265.	12000.	0.689
Trans. stiff. toe	270.00	C	1753.12	T	10038.	13000.	0.772
Trans. stiff. toe *	270.00	C	1455.81	T	8297.	12000.	0.691
Trans. stiff. toe	275.00	C	1723.60	T	9936.	13000.	0.764
Trans. stiff. toe *	275.00	C	1431.39	T	8214.	12000.	0.684
Trans. stiff. toe	280.00	C	1694.08	T	9835.	13000.	0.757
Trans. stiff. toe *	280.00	C	1406.97	T	8131.	12000.	0.678
Trans. stiff. toe	285.00	C	1664.56	T	9733.	13000.	0.749

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Trans. stiff. toe *	285.00	C	1382.54	T	8048.	12000.	0.671
Base metal	214.00	B	1764.32	L	10703.	29000.	0.369
Base metal	232.00	B	2045.58	L	12176.	29000.	0.420
Base metal	250.00	B	2113.45	L	12489.	29000.	0.431
Base metal	268.00	B	2045.73	L	12176.	29000.	0.420
Base metal	286.00	B	1764.61	L	10704.	29000.	0.369
Near flg-web weld	214.00	B	1764.32	L	10520.	29000.	0.363
Near flg-web weld	232.00	B	2045.58	L	11968.	29000.	0.413
Near flg-web weld	250.00	B	2113.45	L	12276.	29000.	0.423
Near flg-web weld	268.00	B	2045.73	L	11968.	29000.	0.413
Near flg-web weld	286.00	B	1764.61	L	10521.	29000.	0.363
Trans. stiff. toe	215.00	C	1779.95	L	10600.	21000.	0.505
Trans. stiff. toe	220.00	C	1858.08	L	11002.	21000.	0.524
Trans. stiff. toe	225.00	C	1936.20	L	11405.	21000.	0.543
Trans. stiff. toe	230.00	C	2014.33	L	11807.	21000.	0.562
Trans. stiff. toe	235.00	C	2056.90	L	12019.	21000.	0.572
Trans. stiff. toe	240.00	C	2075.75	L	12105.	21000.	0.576
Trans. stiff. toe	245.00	C	2094.60	L	12190.	21000.	0.580
Trans. stiff. toe	250.00	C	2113.45	L	12276.	21000.	0.585
Trans. stiff. toe	255.00	C	2094.64	L	12190.	21000.	0.580
Trans. stiff. toe	260.00	C	2075.83	L	12105.	21000.	0.576
Trans. stiff. toe	265.00	C	2057.02	L	12019.	21000.	0.572
Trans. stiff. toe	270.00	C	2014.50	L	11807.	21000.	0.562
Trans. stiff. toe	275.00	C	1936.41	L	11405.	21000.	0.543
Trans. stiff. toe	280.00	C	1858.32	L	11003.	21000.	0.524
Trans. stiff. toe	285.00	C	1780.23	L	10601.	21000.	0.505
Base metal	304.00	C	1378.24	T	5892.	13000.	0.453
Base metal *	304.00	C	1169.43	T	4858.	10000.	0.486
Base metal	322.00	C	1109.76	T	3200.	13000.	0.246
Base metal *	322.00	C	931.34	T	2674.	10000.	0.267
Base metal	340.00	C	1379.72	T	2931.	13000.	0.225
Base metal *	340.00	C	1146.41	T	2456.	10000.	0.246
Base metal	356.00	C	1262.68	T	3434.	13000.	0.264
Base metal *	356.00	C	1036.36	T	2830.	10000.	0.283
Base metal	372.00	C	1507.23	T	5851.	13000.	0.450
Base metal *	372.00	C	1263.14	T	4792.	10000.	0.479
Near flg-web weld	304.00	B	1378.24	T	5732.	18000.	0.318
Base metal	304.00	B	1378.24	T	5832.	18000.	0.324
Near flg-web weld *	304.00	B	1169.43	T	4727.	16000.	0.295
Base metal *	304.00	B	1169.43	T	4809.	16000.	0.301
Near flg-web weld *	304.00	B	1169.43	T	4809.	16000.	0.301
Base metal *	304.00	B	1169.43	T	4893.	16000.	0.306
Near flg-web weld	322.00	B	1109.76	T	3066.	18000.	0.170
Base metal	322.00	B	1109.76	T	3158.	18000.	0.175
Near flg-web weld *	322.00	B	931.34	T	2562.	16000.	0.160
Base metal *	322.00	B	931.34	T	2639.	16000.	0.165
Near flg-web weld *	322.00	B	931.34	T	2639.	16000.	0.165
Base metal *	322.00	B	931.34	T	2718.	16000.	0.170
Near flg-web weld	340.00	B	1379.72	T	2822.	18000.	0.157
Base metal	340.00	B	1379.72	T	2898.	18000.	0.161
Near flg-web weld *	340.00	B	1146.41	T	2365.	16000.	0.148
Base metal *	340.00	B	1146.41	T	2428.	16000.	0.152
Near flg-web weld *	340.00	B	1146.41	T	2428.	16000.	0.152
Base metal *	340.00	B	1146.41	T	2493.	16000.	0.156
Near flg-web weld	356.00	B	1262.68	T	3296.	18000.	0.183
Base metal	356.00	B	1262.68	T	3391.	18000.	0.188
Near flg-web weld *	356.00	B	1036.36	T	2716.	16000.	0.170
Base metal *	356.00	B	1036.36	T	2795.	16000.	0.175
Near flg-web weld *	356.00	B	1036.36	T	2795.	16000.	0.175
Base metal *	356.00	B	1036.36	T	2875.	16000.	0.180
Near flg-web weld	372.00	B	1507.23	T	5655.	18000.	0.314
Base metal	372.00	B	1507.23	T	5781.	18000.	0.321
Near flg-web weld *	372.00	B	1263.14	T	4631.	16000.	0.289

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Base metal *	372.00	B	1263.14	T	4734.	16000.	0.296
Near flg-web weld *	372.00	B	1263.14	T	4734.	16000.	0.296
Base metal *	372.00	B	1263.14	T	4839.	16000.	0.302
Top flg. splice	307.00	B	1332.67	T	5982.	18000.	0.332
Top flg splice *	307.00	B	1131.82	T	4946.	16000.	0.309
Top flg. splice	322.00	B	1109.76	T	3397.	18000.	0.189
Top flg splice *	322.00	B	931.34	T	2838.	16000.	0.177
Top flg. splice	356.00	B	1262.68	T	3643.	18000.	0.202
Top flg splice *	356.00	B	1036.36	T	3003.	16000.	0.188
Top flg. splice	372.00	B	1507.23	T	8220.	18000.	0.457
Top flg splice *	372.00	B	1263.14	T	6709.	16000.	0.419
Bot flg. splice	307.00	B	1332.67	T	8389.	18000.	0.466
Bot flg splice *	307.00	B	1131.82	T	7085.	16000.	0.443
Bot flg. splice	322.00	B	1109.76	T	3931.	18000.	0.218
Bot flg splice *	322.00	B	931.34	T	3296.	16000.	0.206
Bot flg. splice	356.00	B	1262.68	T	4219.	18000.	0.234
Bot flg splice *	356.00	B	1036.36	T	3466.	16000.	0.217
Bot flg. splice	372.00	B	1507.23	T	11484.	18000.	0.638
Bot flg splice *	372.00	B	1263.14	T	9566.	16000.	0.598
Trans. stiff. toe	290.00	C	1596.34	T	9468.	13000.	0.728
Trans. stiff. toe *	290.00	C	1331.39	T	7861.	12000.	0.655
Trans. stiff. toe	295.00	C	1518.45	T	9106.	13000.	0.700
Trans. stiff. toe *	295.00	C	1273.55	T	7601.	12000.	0.633
Trans. stiff. toe	300.00	C	1440.56	T	5711.	13000.	0.439
Trans. stiff. toe *	300.00	C	1215.70	T	4689.	12000.	0.391
Trans. stiff. toe	305.00	C	1363.33	T	5789.	13000.	0.445
Trans. stiff. toe *	305.00	C	1156.20	T	4777.	12000.	0.398
Trans. stiff. toe	310.00	C	1288.75	T	5862.	13000.	0.451
Trans. stiff. toe *	310.00	C	1090.07	T	4854.	12000.	0.405
Trans. stiff. toe	315.00	C	1214.17	T	3630.	13000.	0.279
Trans. stiff. toe *	315.00	C	1023.93	T	3024.	12000.	0.252
Trans. stiff. toe	320.00	C	1139.60	T	3307.	13000.	0.254
Trans. stiff. toe *	320.00	C	957.79	T	2761.	12000.	0.230
Trans. stiff. toe	325.00	C	1154.76	T	3023.	13000.	0.233
Trans. stiff. toe *	325.00	C	967.18	T	2528.	12000.	0.211
Trans. stiff. toe	330.00	C	1229.75	T	2929.	13000.	0.225
Trans. stiff. toe *	330.00	C	1026.93	T	2451.	12000.	0.204
Trans. stiff. toe	335.00	C	1304.73	T	2752.	13000.	0.212
Trans. stiff. toe *	335.00	C	1086.67	T	2305.	12000.	0.192
Trans. stiff. toe	340.00	C	1379.72	T	2889.	13000.	0.222
Trans. stiff. toe *	340.00	C	1146.41	T	2421.	12000.	0.202
Trans. stiff. toe	345.00	C	1343.15	T	2829.	13000.	0.218
Trans. stiff. toe *	345.00	C	1112.02	T	2359.	12000.	0.197
Trans. stiff. toe	350.00	C	1306.57	T	3105.	13000.	0.239
Trans. stiff. toe *	350.00	C	1077.63	T	2576.	12000.	0.215
Trans. stiff. toe	355.00	C	1269.99	T	3312.	13000.	0.255
Trans. stiff. toe *	355.00	C	1043.24	T	2733.	12000.	0.228
Trans. stiff. toe	360.00	C	1323.81	T	3758.	13000.	0.289
Trans. stiff. toe *	360.00	C	1093.05	T	3096.	12000.	0.258
Trans. stiff. toe	365.00	C	1400.24	T	5522.	13000.	0.425
Trans. stiff. toe *	365.00	C	1163.92	T	4537.	12000.	0.378
Trans. stiff. toe	370.00	C	1476.66	T	5735.	13000.	0.441
Trans. stiff. toe *	370.00	C	1234.79	T	4700.	12000.	0.392
Trans. stiff. toe	375.00	C	1562.94	T	5721.	13000.	0.440
Trans. stiff. toe *	375.00	C	1306.91	T	4673.	12000.	0.389
Trans. stiff. toe	380.00	C	1655.81	T	5703.	13000.	0.439
Trans. stiff. toe *	380.00	C	1379.88	T	4640.	12000.	0.387
Rebars	340.00		1379.72	T	3803.	20000.	0.190
Rebars *	340.00		1146.41	T	3160.	20000.	0.158
Base metal	304.00	C	1458.78	L	6940.	21000.	0.330
Base metal	322.00	C	1785.15	L	5357.	21000.	0.255
Base metal	340.00	C	2758.48	L	6280.	21000.	0.299
Base metal	356.00	C	1989.30	L	5482.	21000.	0.261

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Base metal	372.00	C	1801.07	L	7125.	21000.	0.339
Near flg-web weld	304.00	B	1458.78	L	6752.	29000.	0.233
Base metal	304.00	B	1458.78	L	6869.	29000.	0.237
Near flg-web weld	322.00	B	1785.15	L	5132.	29000.	0.177
Base metal	322.00	B	1785.15	L	5286.	29000.	0.182
Near flg-web weld	340.00	B	2758.48	L	6047.	29000.	0.209
Base metal	340.00	B	2758.48	L	6210.	29000.	0.214
Near flg-web weld	356.00	B	1989.30	L	5261.	29000.	0.181
Base metal	356.00	B	1989.30	L	5413.	29000.	0.187
Near flg-web weld	372.00	B	1801.07	L	9484.	29000.	0.327
Base metal	372.00	B	1801.07	L	9695.	29000.	0.334
Top flg. splice	307.00	B	1469.27	L	7358.	29000.	0.254
Top flg. splice	322.00	B	1785.15	L	5691.	29000.	0.196
Top flg. splice	356.00	B	1989.30	L	5817.	29000.	0.201
Top flg. splice	372.00	B	1801.07	L	10035.	29000.	0.346
Bot flg. splice	307.00	B	1469.27	L	9473.	29000.	0.327
Bot flg. splice	322.00	B	1785.15	L	6377.	29000.	0.220
Bot flg. splice	356.00	B	1989.30	L	6666.	29000.	0.230
Bot flg. splice	372.00	B	1801.07	L	13793.	29000.	0.476
Trans. stiff. toe	290.00	C	1696.65	L	10253.	21000.	0.488
Trans. stiff. toe	295.00	C	1611.70	L	9859.	21000.	0.469
Trans. stiff. toe	300.00	C	1526.74	L	6733.	21000.	0.321
Trans. stiff. toe	305.00	C	1476.91	L	6992.	21000.	0.333
Trans. stiff. toe	310.00	C	1567.57	L	7939.	21000.	0.378
Trans. stiff. toe	315.00	C	1658.23	L	5346.	21000.	0.255
Trans. stiff. toe	320.00	C	1748.89	L	5345.	21000.	0.255
Trans. stiff. toe	325.00	C	1947.37	L	5349.	21000.	0.255
Trans. stiff. toe	330.00	C	2217.74	L	5600.	21000.	0.267
Trans. stiff. toe	335.00	C	2488.11	L	5592.	21000.	0.266
Trans. stiff. toe	340.00	C	2758.48	L	6190.	21000.	0.295
Trans. stiff. toe	345.00	C	2518.11	L	5612.	21000.	0.267
Trans. stiff. toe	350.00	C	2277.74	L	5644.	21000.	0.269
Trans. stiff. toe	355.00	C	2037.38	L	5414.	21000.	0.258
Trans. stiff. toe	360.00	C	1942.24	L	5640.	21000.	0.269
Trans. stiff. toe	365.00	C	1883.42	L	7658.	21000.	0.365
Trans. stiff. toe	370.00	C	1824.60	L	7262.	21000.	0.346
Trans. stiff. toe	375.00	C	1866.52	L	6960.	21000.	0.331
Trans. stiff. toe	380.00	C	1975.60	L	6927.	21000.	0.330
Rebars	340.00		2758.48	L	7604.	20000.	0.380
Base metal	388.00	B	1804.39	T	13062.	18000.	0.726
Base metal *	388.00	B	1496.62	T	10771.	16000.	0.673
Base metal	404.00	B	2048.64	T	7359.	18000.	0.409
Base metal *	404.00	B	1696.20	T	6075.	16000.	0.380
Base metal	420.00	B	2159.97	T	7680.	18000.	0.427
Base metal *	420.00	B	1774.20	T	6293.	16000.	0.393
Base metal	436.00	B	2091.58	T	7386.	18000.	0.410
Base metal *	436.00	B	1734.28	T	6109.	16000.	0.382
Base metal	452.00	B	1873.00	T	6579.	18000.	0.366
Base metal *	452.00	B	1561.82	T	5473.	16000.	0.342
Base metal	468.00	B	1456.32	T	5095.	18000.	0.283
Base metal *	468.00	B	1223.77	T	4272.	16000.	0.267
Base metal	484.00	B	815.02	T	3312.	18000.	0.184
Base metal *	484.00	B	693.31	T	2810.	16000.	0.176
Near flg-web weld	388.00	B	1804.39	T	12898.	18000.	0.717
Near flg-web weld *	388.00	B	1496.62	T	10636.	16000.	0.665
Near flg-web weld	404.00	B	2048.64	T	7092.	18000.	0.394
Near flg-web weld *	404.00	B	1696.20	T	5855.	16000.	0.366
Near flg-web weld	420.00	B	2159.97	T	7402.	18000.	0.411
Near flg-web weld *	420.00	B	1774.20	T	6065.	16000.	0.379
Near flg-web weld	436.00	B	2091.58	T	7119.	18000.	0.395
Near flg-web weld *	436.00	B	1734.28	T	5888.	16000.	0.368
Near flg-web weld	452.00	B	1873.00	T	6341.	18000.	0.352
Near flg-web weld *	452.00	B	1561.82	T	5275.	16000.	0.330

Near flg-web weld	468.00	B	1456.32	T	4911.	18000.	0.273
Near flg-web weld *	468.00	B	1223.77	T	4117.	16000.	0.257
Near flg-web weld	484.00	B	815.02	T	3216.	18000.	0.179
Near flg-web weld *	484.00	B	693.31	T	2728.	16000.	0.171
Base metal	388.00	B	1804.39	T	13062.	18000.	0.726
Base metal *	388.00	B	1496.62	T	10771.	16000.	0.673
Base metal	404.00	B	2048.64	T	7359.	18000.	0.409
Base metal *	404.00	B	1696.20	T	6075.	16000.	0.380
Base metal	420.00	B	2159.97	T	7680.	18000.	0.427
Base metal *	420.00	B	1774.20	T	6293.	16000.	0.393
Base metal	436.00	B	2091.58	T	7386.	18000.	0.410
Base metal *	436.00	B	1734.28	T	6109.	16000.	0.382
Base metal	452.00	B	1873.00	T	6579.	18000.	0.366
Base metal *	452.00	B	1561.82	T	5473.	16000.	0.342
Base metal	468.00	B	1456.32	T	5095.	18000.	0.283
Base metal *	468.00	B	1223.77	T	4272.	16000.	0.267
Base metal	484.00	B	815.02	T	3312.	18000.	0.184
Base metal *	484.00	B	693.31	T	2810.	16000.	0.176
Top flg. splice	390.00	B	1837.81	T	7851.	18000.	0.436
Top flg splice *	390.00	B	1523.43	T	6307.	16000.	0.394
Top flg. splice	402.00	B	2025.37	T	4918.	18000.	0.273
Top flg splice *	402.00	B	1677.90	T	3970.	16000.	0.248
Top flg. splice	473.00	B	1280.04	T	2329.	18000.	0.129
Top flg splice *	473.00	B	1078.67	T	1912.	16000.	0.119
Top flg. splice	485.00	B	769.17	T	1129.	18000.	0.063
Top flg splice *	485.00	B	654.75	T	965.	16000.	0.060
Bot flg. splice	390.00	B	1837.81	T	13294.	18000.	0.739
Bot flg splice *	390.00	B	1523.43	T	10954.	16000.	0.685
Bot flg. splice	402.00	B	2025.37	T	8553.	18000.	0.475
Bot flg splice *	402.00	B	1677.90	T	7060.	16000.	0.441
Bot flg. splice	473.00	B	1280.04	T	5217.	18000.	0.290
Bot flg splice *	473.00	B	1078.67	T	4384.	16000.	0.274
Bot flg. splice	485.00	B	769.17	T	4355.	18000.	0.242
Bot flg splice *	485.00	B	654.75	T	3754.	16000.	0.235
Trans. stiff. toe	385.00	C	1748.67	T	12595.	13000.	0.969
Trans. stiff. toe *	385.00	C	1452.84	T	10404.	12000.	0.867
Trans. stiff. toe	390.00	C	1834.92	T	13059.	13000.	1.005
Trans. stiff. toe *	390.00	C	1521.57	T	10766.	12000.	0.897
Trans. stiff. toe	395.00	C	1911.25	T	13462.	13000.	1.036
Trans. stiff. toe *	395.00	C	1583.94	T	11092.	12000.	0.924
Trans. stiff. toe	400.00	C	1987.57	T	7075.	13000.	0.544
Trans. stiff. toe *	400.00	C	1646.31	T	5844.	12000.	0.487
Trans. stiff. toe	405.00	C	2055.59	T	7286.	13000.	0.560
Trans. stiff. toe *	405.00	C	1701.08	T	6012.	12000.	0.501
Trans. stiff. toe	410.00	C	2090.38	T	7385.	13000.	0.568
Trans. stiff. toe *	410.00	C	1725.45	T	6080.	12000.	0.507
Trans. stiff. toe	415.00	C	2125.18	T	7485.	13000.	0.576
Trans. stiff. toe *	415.00	C	1749.82	T	6147.	12000.	0.512
Trans. stiff. toe	420.00	C	2159.97	T	7584.	13000.	0.583
Trans. stiff. toe *	420.00	C	1774.20	T	6214.	12000.	0.518
Trans. stiff. toe	425.00	C	2138.60	T	7493.	13000.	0.576
Trans. stiff. toe *	425.00	C	1761.72	T	6157.	12000.	0.513
Trans. stiff. toe	430.00	C	2117.23	T	7402.	13000.	0.569
Trans. stiff. toe *	430.00	C	1749.25	T	6100.	12000.	0.508
Trans. stiff. toe	435.00	C	2095.85	T	7312.	13000.	0.562
Trans. stiff. toe *	435.00	C	1736.77	T	6044.	12000.	0.504
Trans. stiff. toe	440.00	C	2036.93	T	7094.	13000.	0.546
Trans. stiff. toe *	440.00	C	1691.16	T	5875.	12000.	0.490
Trans. stiff. toe	445.00	C	1968.63	T	6845.	13000.	0.527
Trans. stiff. toe *	445.00	C	1637.27	T	5679.	12000.	0.473
Trans. stiff. toe	450.00	C	1900.32	T	6596.	13000.	0.507
Trans. stiff. toe *	450.00	C	1583.38	T	5483.	12000.	0.457
Trans. stiff. toe	455.00	C	1794.87	T	6222.	13000.	0.479

Trans. stiff. toe *	455.00	C	1498.43	T	5182.	12000.	0.432
Trans. stiff. toe	460.00	C	1664.66	T	5764.	13000.	0.443
Trans. stiff. toe *	460.00	C	1392.79	T	4811.	12000.	0.401
Trans. stiff. toe	465.00	C	1534.45	T	5306.	13000.	0.408
Trans. stiff. toe *	465.00	C	1287.15	T	4441.	12000.	0.370
Trans. stiff. toe	470.00	C	1376.16	T	4754.	13000.	0.366
Trans. stiff. toe *	470.00	C	1157.46	T	3989.	12000.	0.332
Trans. stiff. toe	475.00	C	1175.75	T	4059.	13000.	0.312
Trans. stiff. toe *	475.00	C	991.69	T	3416.	12000.	0.285
Trans. stiff. toe	480.00	C	975.34	T	3918.	13000.	0.301
Trans. stiff. toe *	480.00	C	825.92	T	3309.	12000.	0.276
Trans. stiff. toe	485.00	C	764.08	T	3066.	13000.	0.236
Trans. stiff. toe *	485.00	C	649.98	T	2601.	12000.	0.217
Trans. stiff. toe	490.00	C	509.39	T	2044.	13000.	0.157
Trans. stiff. toe *	490.00	C	433.32	T	1734.	12000.	0.144
Base metal	388.00	B	2150.13	L	15624.	29000.	0.539
Base metal	404.00	B	2380.09	L	8573.	29000.	0.296
Base metal	420.00	B	2459.16	L	8771.	29000.	0.302
Base metal	436.00	B	2329.86	L	8255.	29000.	0.285
Base metal	452.00	B	2029.31	L	7155.	29000.	0.247
Base metal	468.00	B	1538.49	L	5404.	29000.	0.186
Base metal	484.00	B	836.75	L	3417.	29000.	0.118
Near flg-web weld	388.00	B	2150.13	L	15428.	29000.	0.532
Near flg-web weld	404.00	B	2380.09	L	8263.	29000.	0.285
Near flg-web weld	420.00	B	2459.16	L	8454.	29000.	0.292
Near flg-web weld	436.00	B	2329.86	L	7957.	29000.	0.274
Near flg-web weld	452.00	B	2029.31	L	6896.	29000.	0.238
Near flg-web weld	468.00	B	1538.49	L	5208.	29000.	0.180
Near flg-web weld	484.00	B	836.75	L	3318.	29000.	0.114
Base metal	388.00	B	2150.13	L	15624.	29000.	0.539
Base metal	404.00	B	2380.09	L	8573.	29000.	0.296
Base metal	420.00	B	2459.16	L	8771.	29000.	0.302
Base metal	436.00	B	2329.86	L	8255.	29000.	0.285
Base metal	452.00	B	2029.31	L	7155.	29000.	0.247
Base metal	468.00	B	1538.49	L	5404.	29000.	0.186
Base metal	484.00	B	836.75	L	3417.	29000.	0.118
Top flg. splice	390.00	B	2185.38	L	9531.	29000.	0.329
Top flg. splice	402.00	B	2359.60	L	5868.	29000.	0.202
Top flg. splice	473.00	B	1341.85	L	2552.	29000.	0.088
Top flg. splice	485.00	B	788.41	L	1149.	29000.	0.040
Bot flg. splice	390.00	B	2185.38	L	15871.	29000.	0.547
Bot flg. splice	402.00	B	2359.60	L	9998.	29000.	0.345
Bot flg. splice	473.00	B	1341.85	L	5496.	29000.	0.190
Bot flg. splice	485.00	B	788.41	L	4359.	29000.	0.150
Trans. stiff. toe	385.00	C	2084.68	L	15075.	21000.	0.718
Trans. stiff. toe	390.00	C	2178.87	L	15571.	21000.	0.741
Trans. stiff. toe	395.00	C	2250.74	L	15929.	21000.	0.759
Trans. stiff. toe	400.00	C	2322.60	L	8290.	21000.	0.395
Trans. stiff. toe	405.00	C	2385.03	L	8478.	21000.	0.404
Trans. stiff. toe	410.00	C	2409.74	L	8539.	21000.	0.407
Trans. stiff. toe	415.00	C	2434.45	L	8600.	21000.	0.410
Trans. stiff. toe	420.00	C	2459.16	L	8661.	21000.	0.412
Trans. stiff. toe	425.00	C	2418.75	L	8502.	21000.	0.405
Trans. stiff. toe	430.00	C	2378.35	L	8343.	21000.	0.397
Trans. stiff. toe	435.00	C	2337.94	L	8184.	21000.	0.390
Trans. stiff. toe	440.00	C	2254.72	L	7880.	21000.	0.375
Trans. stiff. toe	445.00	C	2160.80	L	7540.	21000.	0.359
Trans. stiff. toe	450.00	C	2066.88	L	7201.	21000.	0.343
Trans. stiff. toe	455.00	C	1937.28	L	6741.	21000.	0.321
Trans. stiff. toe	460.00	C	1783.90	L	6200.	21000.	0.295
Trans. stiff. toe	465.00	C	1630.52	L	5660.	21000.	0.270
Trans. stiff. toe	470.00	C	1450.77	L	5031.	21000.	0.240
Trans. stiff. toe	475.00	C	1231.48	L	4268.	21000.	0.203

Trans. stiff. toe	480.00	C	1012.18	L	4086.	21000.	0.195
Trans. stiff. toe	485.00	C	784.45	L	3163.	21000.	0.151
Trans. stiff. toe	490.00	C	522.97	L	2109.	21000.	0.100

* Single truck, one traffic lane, >2,000,000 cycles

T - truck loading
L - lane loading

Girder 1 Maximum Performance Ratios

Criterion	Location ft	Live Ld Effect	Dead Ld Effect	Max Performance Ratio
Shear	0.00	58.5	74.5	0.412
Bending	160.00	2378.6	3701.2	0.798
Bolted web spl	382.50	1103.3	223.2	0.999
Fatigue	105.00			1.036
Bearing Stf.	0.00	59.3	74.7	0.638

Girder 1 Truck loading - 2000000 cycles

Maximum Pitch for 0.875 x 4.50 Stud Connectors for Fatigue

Tenth Point	Location	Shear Range (k)		Studs in a Line	Max Pitch (in)	
0	0.00	63.59	T	2	14.96	
1	16.00	59.42	T	2	20.40	
2	32.00	52.59	T	2	24.82	*
3	48.00	52.58	T	2	24.82	*
4	64.00	51.30	T	2	25.44	*
5	80.00	65.69	T	2	19.87	
6	96.00	54.56	T	2	23.92	
7	112.00	53.68	T	2	18.31	
8	128.00	57.31	T	2	19.49	
9	144.00	57.99	T	2	482.29	*
10	160.00	66.83	T	2	559.30	*
11	178.00	62.26	T	2	421.97	*
12	196.00	55.93	T	2	222.87	*
13	214.00	54.53	T	2	19.28	
14	232.00	53.73	T	2	19.57	
15	250.00	52.12	T	2	20.17	
16	268.00	54.04	T	2	19.46	
17	286.00	55.10	T	2	19.08	
18	304.00	55.90	T	2	222.98	*
19	322.00	61.81	T	2	425.08	*
20	340.00	64.45	T	2	579.96	*
21	356.00	58.64	T	2	476.91	*
22	372.00	57.03	T	2	19.59	
23	388.00	53.81	T	2	18.26	
24	404.00	53.88	T	2	24.22	*
25	420.00	69.30	T	2	18.83	
26	436.00	51.59	T	2	25.30	*
27	452.00	53.06	T	2	24.60	*

28	468.00	53.79 T	2	24.26 *
29	484.00	55.80 T	2	21.72
30	500.00	62.31 T	2	15.26

Girder 1 Lane loading - 500000 cycles

Maximum Pitch for 0.875 x 4.50 Stud Connectors for Fatigue

Tenth Point	Location	Shear Range (k)	Studs in a Line	Max Pitch (in)
0	0.00	67.04 L	2	19.16
1	16.00	57.36 L	2	28.54 *
2	32.00	49.28 L	2	35.76 *
3	48.00	47.12 L	2	37.40 *
4	64.00	45.39 L	2	38.83 *
5	80.00	47.55 L	2	37.06 *
6	96.00	50.24 L	2	35.08 *
7	112.00	53.42 L	2	24.84 *
8	128.00	62.15 L	2	24.27 *
9	144.00	68.05 L	2	554.96 *
10	160.00	85.70 L	2	588.92 *
11	178.00	72.05 L	2	492.42 *
12	196.00	63.96 L	2	263.16 *
13	214.00	57.52 L	2	24.69 *
14	232.00	53.55 L	2	26.51 *
15	250.00	51.65 L	2	27.49 *
16	268.00	53.15 L	2	26.71 *
17	286.00	58.65 L	2	24.21 *
18	304.00	63.86 L	2	263.57 *
19	322.00	72.80 L	2	487.29 *
20	340.00	85.53 L	2	590.12 *
21	356.00	68.63 L	2	550.26 *
22	372.00	60.57 L	2	24.90 *
23	388.00	54.46 L	2	24.37 *
24	404.00	49.03 L	2	35.95 *
25	420.00	55.25 L	2	31.90 *
26	436.00	44.51 L	2	39.60 *
27	452.00	47.27 L	2	37.28 *
28	468.00	52.53 L	2	33.55 *
29	484.00	57.62 L	2	28.41 *
30	500.00	66.90 L	2	19.20

Girder 1 Truck loading - >2000000 cycles

(Single truck in single lane)

Maximum Pitch for 0.875 x 4.50 Stud Connectors for Fatigue

Tenth Point	Location	Shear Range (k)	Studs in a Line	Max Pitch (in)
0	0.00	55.58	2	11.99
1	16.00	51.42	2	16.52
2	32.00	45.47	2	20.11
3	48.00	48.47	2	18.87
4	64.00	48.22	2	18.96

5	80.00	60.24	2	15.18
6	96.00	50.24	2	18.20
7	112.00	48.30	2	14.25
8	128.00	49.25	2	15.89
9	144.00	49.22	2	398.10 *
10	160.00	52.99	2	494.22 *
11	178.00	54.06	2	340.50 *
12	196.00	48.01	2	181.91 *
13	214.00	47.35	2	15.56
14	232.00	49.34	2	14.93
15	250.00	48.66	2	15.14
16	268.00	49.57	2	14.86
17	286.00	47.85	2	15.40
18	304.00	47.94	2	182.19 *
19	322.00	53.52	2	343.97 *
20	340.00	56.15	2	466.34 *
21	356.00	49.91	2	392.63 *
22	372.00	48.97	2	15.98
23	388.00	48.43	2	14.22
24	404.00	49.52	2	18.46
25	420.00	63.68	2	14.36
26	436.00	48.49	2	18.86
27	452.00	48.94	2	18.68
28	468.00	46.62	2	19.61
29	484.00	47.71	2	17.80
30	500.00	54.21	2	12.29

* Use 24 inches as per AASHTO 10.38.5.1.

Minimum Number of Connectors for Ultimate Strength

Beg TP	End TP	Beg Loc	End Loc	Number
0	4	0.00	64.00	62
4	10	64.00	160.00	65
10	15	160.00	250.00	65
15	20	250.00	340.00	65
20	26	340.00	436.00	65
26	30	436.00	500.00	62

Girder 1 Cost Schedule Totals

	lb
Flange	94325.0
Web	65103.6
Stiffeners	12868.6
Bearing stiff.	803.1
Total steel	173100.3

Flange-web weld	322.0
Web stiff. weld	308.5
Bearing stiff. weld	10.2
Total welding	640.7
Total steel and weld	173741.1

Girder 1 Service Deflections - in

	Tenth Pt	Total Noncomp Dead	Steel	Wet Con-crete	Super-Imposed Dead	Max LL+I Down	Max LL+I Up
	Support	0.000	0.000	0.000	0.000	0.000	0.000
	1	0.883	0.308	0.576	0.058	0.470	0.087
	2	1.590	0.557	1.032	0.104	0.872	0.168
	3	2.091	0.740	1.352	0.137	1.190	0.240
	4	2.336	0.836	1.500	0.152	1.388	0.298
	5	2.305	0.838	1.467	0.148	1.458	0.338
	6	2.040	0.760	1.280	0.129	1.392	0.355
	7	1.554	0.600	0.954	0.096	1.184	0.335
	8	0.939	0.385	0.554	0.057	0.846	0.269
	9	0.370	0.167	0.202	0.021	0.423	0.152
	Support	0.000	0.000	0.000	0.000	0.000	0.000
	11	-0.172	-0.122	-0.050	-0.006	0.423	0.162
	12	-0.056	-0.161	0.105	0.007	0.870	0.281
	13	0.252	-0.136	0.388	0.031	1.270	0.344
	14	0.555	-0.092	0.647	0.053	1.545	0.357
	15	0.680	-0.071	0.751	0.062	1.649	0.331
	16	0.575	-0.087	0.662	0.055	1.552	0.355
	17	0.286	-0.127	0.414	0.033	1.282	0.343
	18	-0.039	-0.157	0.119	0.008	0.879	0.282
	19	-0.172	-0.122	-0.050	-0.006	0.426	0.163
	Support	0.000	0.000	0.000	0.000	0.000	0.000
	21	0.363	0.165	0.198	0.021	0.417	0.150
	22	0.900	0.372	0.528	0.054	0.828	0.266
	23	1.514	0.588	0.926	0.094	1.176	0.338
	24	2.033	0.758	1.275	0.129	1.392	0.357
	25	2.302	0.837	1.464	0.148	1.458	0.338
	26	2.329	0.834	1.495	0.152	1.389	0.299
	27	2.095	0.741	1.354	0.137	1.195	0.241
	28	1.600	0.561	1.039	0.105	0.879	0.169
	29	0.883	0.307	0.575	0.058	0.470	0.087
	Support	0.000	0.000	0.000	0.000	0.000	0.000

Influence surfaces for defl developed assuming unequal participation of girders in resisting deflection.

	Loc						
Brace	20.00	1.077	0.376	0.701	0.070	0.577	0.108
Brace	40.00	1.873	0.659	1.213	0.123	1.046	0.206
Brace	60.00	2.301	0.821	1.480	0.150	1.351	0.286
Brace	80.00	2.305	0.838	1.467	0.148	1.458	0.338
Brace	100.00	1.939	0.727	1.212	0.122	1.353	0.353
Web Spl	117.50	1.357	0.532	0.824	0.084	1.083	0.318
Brace	120.00	1.240	0.493	0.748	0.076	1.026	0.309

Brace	140.00	0.493	0.217	0.276	0.029	0.529	0.184
Brace	160.00	0.000	0.000	0.000	0.000	0.000	0.000
Brace	180.00	-0.173	-0.130	-0.043	-0.005	0.472	0.178
Brace	200.00	-0.004	-0.161	0.157	0.011	0.963	0.300
Web Spl	212.50	0.227	-0.139	0.365	0.029	1.242	0.341
Brace	220.00	0.354	-0.123	0.477	0.039	1.376	0.354
Brace	240.00	0.632	-0.080	0.712	0.059	1.612	0.350
Brace	260.00	0.644	-0.077	0.721	0.060	1.616	0.349
Brace	280.00	0.387	-0.115	0.502	0.041	1.387	0.352
Web Spl	287.50	0.261	-0.130	0.391	0.031	1.253	0.340
Brace	300.00	0.017	-0.156	0.173	0.013	0.973	0.300
Brace	320.00	-0.172	-0.130	-0.042	-0.005	0.475	0.179
Brace	340.00	0.000	0.000	0.000	0.000	0.000	0.000
Brace	360.00	0.481	0.213	0.268	0.028	0.520	0.182
Brace	380.00	1.197	0.479	0.718	0.073	1.010	0.308
Web Spl	382.50	1.313	0.519	0.794	0.081	1.071	0.319
Brace	400.00	1.926	0.724	1.202	0.121	1.352	0.355
Brace	420.00	2.302	0.837	1.464	0.148	1.458	0.338
Brace	440.00	2.295	0.819	1.476	0.150	1.352	0.286
Brace	460.00	1.880	0.662	1.218	0.123	1.052	0.207
Brace	480.00	1.078	0.376	0.702	0.071	0.578	0.108

Positive dead load deflection is downward.
Live load deflection as indicated in column heading.

run completed

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MDX Steel Highway Girder Design Program, Version 6.2.137
Load Factor Design - Composite Girder

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Ph:573-446-3221 Fax:573-446-3278 Email: support@mdxsoftware.com
************************************************************
 May 17, 2006 -  2:49 pm
 Files: Bonner.R2
        R2.OUT

    Contents of data file-

       ***********************************************
       ID: BONNER BRIDGE CHANNEL SPANS
       CONDITIONS
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         ENGLISH INPUT
         ENGLISH OUTPUT
         FISHBELLY HAUNCH
         INTERMEDIATE TRANSVERSE STIFFENERS BOTH SIDES OF WEB
         LFD METHOD
         RATE MODE
         SYSTEM FORCES
       DATA
         BFISPB 8. 8. 8. 8.
         BFISPT 0.6875 0.6875 0.6875 0.6875
         BFOSPB 18. 18. 18. 18.
         BFOSPT 0.6875 0.6875 0.6875 0.6875
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EDGEV 1.5 1.5 1.5 1.5
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ESLABW 87.
FBLTDIAM 0.875
FNHOLES 4 4 4 4
FPC 3.
FPEND 1.5 1.5 1.5 1.5
FSPBSP 3. 3. 3. 3.
FY 32.
FYRB 40.
GAGEF 3. 3. 3. 3.
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GAGEV 3. 3. 3. 3.
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HAUNV 0. 33. 33. 33. 33. 0.
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NBLTT 24 24 24 24
NBSTIFF 1 3 3 1
NLINEH 22 22 22 22
NLINEV 3 3 3 3
PIERW 3.
POSREBAR 2.79
REBSPC 158.25 3.5 176.5 3.5
SLABRA 1.4
SLABRP 4.625
SLABT 7.25
SLABWEAR 0.
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SPLLSW 4.
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SPLTSW 6.
SPLTYP 1 1 1 1
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SPLWT 0.5
SPN 160. 180. 160.
SS 0.5
STFGAP 0.
SUPBST 0.5
SUPBSW 8.
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TFISPT 0.6875 0.6875 0.6875 0.6875
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TFOSPT 0.6875 0.6875 0.6875 0.6875
TSLABW 96.
TSPL 15. 12. 71. 12. 18. 16. 34. 15. 114. 15. 34. 16. 18. 12. 71. 12.
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WCONC 150.
WSTRES 18.
GO
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Girder 2 Case Data - BONNER BRIDGE CHANNEL SPANS

AASHTO Specification

Load Factor Method
17th Edition Standard Specifications for Highway Bridges

Dimensions (additional information available in Dimensions table)

Given dimensions-

Web Depth	72.00	in	105.00	in	72.00	in	105.00	in
	72.00	in						
Web Thickness	0.50	in	0.50	in	0.50	in	0.50	in
	0.50	in						
Long. Stiff. Width	4.00	in	4.00	in	4.00	in	4.00	in
	4.00	in						
Long. Stiff. Thickness	0.50	in	0.50	in	0.50	in	0.50	in
	0.50	in						
Trans. Stiff. Width	6.00	in	6.00	in	6.00	in	6.00	in
	6.00	in						
Trans. Stiff. Thickness	0.50	in	0.50	in	0.50	in	0.50	in
	0.50	in						
Bearing Stiff. Width	8.00	in	8.00	in	8.00	in	8.00	in
Bearing Stiff. Thickness	0.50	in	0.50	in	0.50	in	0.50	in

Execution Mode

Rate Mode

Geometry

Brace locations

0.00 ft	20.00 ft	40.00 ft	60.00 ft
80.00 ft	100.00 ft	120.00 ft	140.00 ft
160.00 ft	180.00 ft	200.00 ft	220.00 ft
240.00 ft	260.00 ft	280.00 ft	300.00 ft
320.00 ft	340.00 ft	360.00 ft	380.00 ft
400.00 ft	420.00 ft	440.00 ft	460.00 ft
480.00 ft	500.00 ft		

Unbraced length of comp. flange at support 2 is 20.00 ft.
Unbraced length of comp. flange at support 3 is 20.00 ft.

Cover plates

No cover plates

Curvature

No curvature

Flange splices

Top flange splice locations

15.00 ft	27.00 ft	98.00 ft	110.00 ft
128.00 ft	144.00 ft	178.00 ft	193.00 ft
307.00 ft	322.00 ft	356.00 ft	372.00 ft
390.00 ft	402.00 ft	473.00 ft	485.00 ft

Bottom flange splice locations

15.00 ft	27.00 ft	98.00 ft	110.00 ft
128.00 ft	144.00 ft	178.00 ft	193.00 ft
307.00 ft	322.00 ft	356.00 ft	372.00 ft
390.00 ft	402.00 ft	473.00 ft	485.00 ft

Girder Type

Plate Girder

Section properties

Composite region for composite loading - 0. - 500.00 ft

Span lengths

160.00 ft 180.00 ft 160.00 ft

Stiffeners

Bearing Stiffeners

Number of brng stfs each side at supp locs
1 3 3 1

Longitudinal Stiffeners

Bottom longitudinal stiffener regions-
140.00 - 180.00 ft 320.00 - 360.00 ft

Transverse Stiffeners

Transverse stiffeners both sides
Stiffener transitions
Stiffener clips 0.50 in

Web Splices

Web splice locations 117.50 ft 212.50 ft 287.50 ft 382.50 ft

Web haunches

Fish belly web haunches at interior supports:

Support	Haunch Left V(in)	H(ft)	Haunch Right H(ft)	V(in)
1	0.0	0.0	0.0	0.0
2	33.0	31.5	31.5	33.0
3	33.0	31.5	31.5	33.0
4	0.0	0.0	0.0	0.0

Pier width for haunch geometry = 3.00 ft

Fatigue

AWS minimum welds
Fatigue stress category B flange splices
Case I road for fatigue
Redundant load path structure

Impact

Impact factors assigned in GSA program

Loading

Load Factors gamma, beta 1.300 1.670
Unshored construction

Reactions

Max unfactored live load+impact reactions
63.54 k 126.38 k 126.39 k 63.51 k
Min unfactored live load+impact reactions
-6.91 k -9.59 k -9.59 k -6.91 k
Total comp. and noncomp. unfactored dead load reactions
74.35 k 236.20 k 236.14 k 74.32 k

Material

Concrete

Unit wt of concrete	150. lb/cu ft			
Slab t for strength	7.25 in	7.25 in	7.25 in	
Concrete strength	3.00 ksi			
Effective slab width	87.00 in			
Neg mom rebar area	1.40 in2	1.40 in2		
Rebar placement from bottom of slab	4.62 in	4.62 in		
Pos mom rebar area			2.79 in2	2.79 in2 2.79 in2
Negative mom. slab used in dead load 2 analysis				
Slab haunch	3.12 in	3.12 in	3.12 in	
Self weight slab width	96.00 in			

Steel

Top flange yield	32.00 ksi	32.00 ksi	32.00 ksi	32.00 ksi 32.00 ksi
Bottom flange yield	32.00 ksi	32.00 ksi	32.00 ksi	32.00 ksi 32.00 ksi
Web yield	32.00 ksi	32.00 ksi	32.00 ksi	32.00 ksi 32.00 ksi
Rebar yield	40.00 ksi			

Summary tables

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                                    OUTPUT.TXT
   Standard resolution summary tables

Units

   Input Units:  U.S. Customary
   Output Units: U.S. Customary

 * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * *
 (Nonprismatic section used for this analysis.)

  Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

   Max live load+impact shear
        62.8T    54.5T    45.4T    42.5T    35.8T   -60.3T   -42.4T   -51.3T

   Dead load 1 shear
        67.6     51.1     33.2     14.7     -3.5    -23.3    -41.1    -59.7

   Dead load 2 shear
         6.3      4.6      2.9      1.3     -0.4     -2.1     -3.8     -5.6

   Max live load+impact moment
         0.0T   757.8T  1161.7T  1418.9L  1557.9L  1514.2L  1417.6L  1129.7L

   Min live load+impact moment
         0.0T  -101.1L  -202.3L  -304.8L  -409.3L  -515.3L  -632.4L  -750.8L

   Dead load 1 moment
         0.0    950.7   1623.8   2006.5   2097.8   1899.5   1384.5    568.6

   Dead load 2 moment
         0.0     87.5    148.0    181.8    188.9    169.1    121.7     46.2
 * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * *

    Rate Web depth            =  72.0000 in
         Web thickness        =   0.5000 in

 Tenth    Top Flange   Min Top   Bott Flange  Min Bott   Flange to Web Weld
 Point      Width      Flange t     Width     Flange t     Top       Bott

    0       18.00       0.750       18.00      0.750      1/ 4      1/ 4
    1       18.00       1.625       18.00      1.625      5/16      5/16
    2       18.00       2.000       18.00      2.000      5/16      5/16
    3       18.00       2.000       18.00      2.000      5/16      5/16
    4       18.00       2.000       18.00      2.000      5/16      5/16
    5       18.00       2.000       18.00      2.000      5/16      5/16
    6       18.00       2.000       18.00      2.000      5/16      5/16
    7       18.00       0.750       18.00      0.750      1/ 4      1/ 4

    2 -   8.00 x  0.500 brng. stf. at   0.00 ft   from left end of web section
          6.00 x   0.50 transverse stiffeners
            1 stiffener space at    60.00 in
                   (straddles web splice)

           Composite section properties at max positive moment - n =  9

              I                                =  194119. in4
              S (top steel)                    =  9350.29 in3
              S (bottom steel)                 =  3514.14 in3
              S (concrete)                     =  6662.57 in3
              Neutral axis from bottom flange =    55.24 in
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                                    OUTPUT.TXT

           Composite section properties at max positive moment - n = 27

              I                                =  152917. in4
              S (top steel)                    =  5158.18 in3
              S (bottom steel)                 =  3298.87 in3
              S (concrete)                     =  4021.96 in3
              Neutral axis from bottom flange =    46.35 in

           Section properties of girder alone at max positive moment

              I                                =  114144. in4
              S (top)                          =  3003.79 in3
              S (bottom)                       =  3003.79 in3
              Neutral axis from bottom flange =    38.00 in

           Section properties of girder alone at max negative moment

              I                                =   51278. in4
              S (top)                          =  1395.32 in3
              S (bottom)                       =  1395.32 in3
              Neutral axis from bottom flange =    36.75 in

           Composite section properties at max negative moment

              I                                =   51278. in4
              S (top of steel)                 =  1395.32 in3
              S (bottom of steel)              =  1395.32 in3
              S (reinf)                        =  1172.07 in3
              Neutral axis from bottom flange =    36.75 in

 * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * *


 Web Section  1 Stresses
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              Factored  Shear                Factored   Bending
 Tenth        Shear     Strength             Moment     Strength
 Point        (k )      (k )       Ratio     (k-ft)     (k-ft)       Ratio

   0          232.4    543.6 (5)    0.428        0.0   7040.1 (20) 0.000
   1          190.7    626.8 (3)    0.304     2994.7  10084.3 (20) 0.297
   2          145.4    626.8 (3)    0.232     4825.3  11238.3 (20) 0.429
   3          113.0    626.8 (3)    0.180     5925.3  11525.1 (20) 0.514
   4           72.8    626.8 (3)    0.116     6354.9  11525.1 (20) 0.551
   5          164.0    626.8 (3)    0.262     5976.6  11525.1 (20) 0.519
   6          150.5    626.8 (3)    0.240     5035.6  11525.1 (20) 0.437
   7          196.2    626.8 (3)    0.313     3251.9   7040.1 (20) 0.462

                 Stiffeners
 Location

    5.00      219.4    626.8 (3)    0.350
   10.00      206.4    626.8 (3)    0.329
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15.00	193.3	626.8	(3)	0.308
20.00	179.4	626.8	(3)	0.286
25.00	165.2	626.8	(3)	0.264
30.00	151.1	626.8	(3)	0.241
35.00	139.3	626.8	(3)	0.222
40.00	129.2	626.8	(3)	0.206
45.00	119.0	626.8	(3)	0.190
50.00	107.9	626.8	(3)	0.172
55.00	95.4	626.8	(3)	0.152
60.00	82.8	626.8	(3)	0.132
65.00	78.5	626.8	(3)	0.125
70.00	107.0	626.8	(3)	0.171
75.00	135.5	626.8	(3)	0.216
85.00	159.8	626.8	(3)	0.255
90.00	155.6	626.8	(3)	0.248
95.00	151.4	626.8	(3)	0.241
100.00	162.0	626.8	(3)	0.258
105.00	176.2	626.8	(3)	0.281
110.00	190.5	626.8	(3)	0.304
115.00	202.3	626.8	(3)	0.323

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(5) C 0.58 Fyw D t
(20) compact section

Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	
0.00	137.89	16.80	11.03	0.657	28.80	18.39	0.638

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)		Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	16.00	B		839.86	T	3391.	18000.	0.188
Base metal *	16.00	B		519.18	T	2095.	16000.	0.131
Base metal	32.00	B		1325.86	T	4623.	18000.	0.257
Base metal *	32.00	B		796.46	T	2777.	16000.	0.174
Base metal	48.00	B		1659.69	T	5811.	18000.	0.323
Base metal *	48.00	B		1001.94	T	3507.	16000.	0.219
Base metal	64.00	B		1842.32	T	6484.	18000.	0.360
Base metal *	64.00	B		1120.11	T	3941.	16000.	0.246
Base metal	80.00	B		1849.30	T	6558.	18000.	0.364
Base metal *	80.00	B		1103.44	T	3914.	16000.	0.245
Base metal	96.00	B		1838.84	T	6577.	18000.	0.365
Base metal *	96.00	B		1122.53	T	4013.	16000.	0.251
Base metal	112.00	B		1652.96	T	11833.	18000.	0.657
Base metal *	112.00	B		1003.11	T	7171.	16000.	0.448
Near flg-web weld	16.00	B		839.86	T	3293.	18000.	0.183
Near flg-web weld *	16.00	B		519.18	T	2035.	16000.	0.127
Near flg-web weld	32.00	B		1325.86	T	4455.	18000.	0.248
Near flg-web weld *	32.00	B		796.46	T	2676.	16000.	0.167
Near flg-web weld	48.00	B		1659.69	T	5601.	18000.	0.311
Near flg-web weld *	48.00	B		1001.94	T	3381.	16000.	0.211

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Near flg-web weld	64.00	B		1842.32	T	6249.	18000.	0.347
Near flg-web weld *	64.00	B		1120.11	T	3798.	16000.	0.237
Near flg-web weld	80.00	B		1849.30	T	6320.	18000.	0.351
Near flg-web weld *	80.00	B		1103.44	T	3772.	16000.	0.236
Near flg-web weld	96.00	B		1838.84	T	6339.	18000.	0.352
Near flg-web weld *	96.00	B		1122.53	T	3868.	16000.	0.242
Near flg-web weld	112.00	B		1652.96	T	11684.	18000.	0.649
Near flg-web weld *	112.00	B		1003.11	T	7081.	16000.	0.443
Top flg. splice	15.00	B		797.74	T	1182.	18000.	0.066
Top flg splice *	15.00	B		493.82	T	732.	16000.	0.046
Top flg. splice	27.00	B		1190.33	T	2071.	18000.	0.115
Top flg splice *	27.00	B		717.52	T	1247.	16000.	0.078
Top flg. splice	98.00	B		1825.19	T	4260.	18000.	0.237
Top flg splice *	98.00	B		1115.18	T	2588.	16000.	0.162
Top flg. splice	110.00	B		1679.87	T	6761.	18000.	0.376
Top flg splice *	110.00	B		1020.05	T	4075.	16000.	0.255
Bot flg. splice	15.00	B		797.74	T	4651.	18000.	0.258
Bot flg splice *	15.00	B		493.82	T	2887.	16000.	0.180
Bot flg. splice	27.00	B		1190.33	T	4829.	18000.	0.268
Bot flg splice *	27.00	B		717.52	T	2910.	16000.	0.182
Bot flg. splice	98.00	B		1825.19	T	7666.	18000.	0.426
Bot flg splice *	98.00	B		1115.18	T	4680.	16000.	0.293
Bot flg. splice	110.00	B		1679.87	T	12015.	18000.	0.668
Bot flg splice *	110.00	B		1020.05	T	7286.	16000.	0.455
Trans. stiff. toe	10.00	C		524.91	T	2093.	13000.	0.161
Trans. stiff. toe *	10.00	C		324.49	T	1293.	12000.	0.108
Trans. stiff. toe	15.00	C		787.37	T	3139.	13000.	0.241
Trans. stiff. toe *	15.00	C		486.73	T	1940.	12000.	0.162
Trans. stiff. toe	20.00	C		961.36	T	3840.	13000.	0.295
Trans. stiff. toe *	20.00	C		588.50	T	2350.	12000.	0.196
Trans. stiff. toe	25.00	C		1113.23	T	3827.	13000.	0.294
Trans. stiff. toe *	25.00	C		675.15	T	2321.	12000.	0.193
Trans. stiff. toe	30.00	C		1265.11	T	4354.	13000.	0.335
Trans. stiff. toe *	30.00	C		761.80	T	2621.	12000.	0.218
Trans. stiff. toe	35.00	C		1388.45	T	4785.	13000.	0.368
Trans. stiff. toe *	35.00	C		834.99	T	2877.	12000.	0.240
Trans. stiff. toe	40.00	C		1492.77	T	5151.	13000.	0.396
Trans. stiff. toe *	40.00	C		899.20	T	3103.	12000.	0.259
Trans. stiff. toe	45.00	C		1597.10	T	5518.	13000.	0.424
Trans. stiff. toe *	45.00	C		963.41	T	3328.	12000.	0.277
Trans. stiff. toe	50.00	C		1682.52	T	5821.	13000.	0.448
Trans. stiff. toe *	50.00	C		1016.71	T	3517.	12000.	0.293
Trans. stiff. toe	55.00	C		1739.59	T	6029.	13000.	0.464
Trans. stiff. toe *	55.00	C		1053.64	T	3651.	12000.	0.304
Trans. stiff. toe	60.00	C		1796.66	T	6236.	13000.	0.480
Trans. stiff. toe *	60.00	C		1090.57	T	3784.	12000.	0.315
Trans. stiff. toe	65.00	C		1842.75	T	6407.	13000.	0.493
Trans. stiff. toe *	65.00	C		1119.07	T	3890.	12000.	0.324
Trans. stiff. toe	70.00	C		1844.94	T	6430.	13000.	0.495
Trans. stiff. toe *	70.00	C		1113.86	T	3881.	12000.	0.323
Trans. stiff. toe	75.00	C		1847.12	T	6453.	13000.	0.496
Trans. stiff. toe *	75.00	C		1108.65	T	3873.	12000.	0.323
Trans. stiff. toe	80.00	C		1849.30	T	6475.	13000.	0.498
Trans. stiff. toe *	80.00	C		1103.44	T	3865.	12000.	0.322
Trans. stiff. toe	85.00	C		1846.03	T	6481.	13000.	0.499
Trans. stiff. toe *	85.00	C		1109.41	T	3895.	12000.	0.325
Trans. stiff. toe	90.00	C		1842.76	T	6487.	13000.	0.499
Trans. stiff. toe *	90.00	C		1115.37	T	3926.	12000.	0.327
Trans. stiff. toe	95.00	C		1839.49	T	6493.	13000.	0.499
Trans. stiff. toe *	95.00	C		1121.34	T	3956.	12000.	0.330
Trans. stiff. toe	100.00	C		1792.37	T	6352.	13000.	0.489
Trans. stiff. toe *	100.00	C		1092.68	T	3870.	12000.	0.322
Trans. stiff. toe	105.00	C		1734.28	T	12096.	13000.	0.930

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Trans. stiff. toe *	105.00	C	1055.36	T	7351.	12000.	0.613
Trans. stiff. toe	110.00	C	1676.20	T	11802.	13000.	0.908
Trans. stiff. toe *	110.00	C	1018.03	T	7158.	12000.	0.596
Trans. stiff. toe	115.00	C	1605.50	T	11434.	13000.	0.880
Trans. stiff. toe *	115.00	C	973.79	T	6924.	12000.	0.577

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	16.00	B	798.35	L	3242.	29000.	0.112
Base metal	32.00	B	1338.41	L	4688.	29000.	0.162
Base metal	48.00	B	1721.40	L	6055.	29000.	0.209
Base metal	64.00	B	1967.17	L	6955.	29000.	0.240
Base metal	80.00	B	2029.51	L	7229.	29000.	0.249
Base metal	96.00	B	2049.98	L	7367.	29000.	0.254
Base metal	112.00	B	1880.48	L	13590.	29000.	0.469
Near flg-web weld	16.00	B	798.35	L	3149.	29000.	0.109
Near flg-web weld	32.00	B	1338.41	L	4518.	29000.	0.156
Near flg-web weld	48.00	B	1721.40	L	5836.	29000.	0.201
Near flg-web weld	64.00	B	1967.17	L	6703.	29000.	0.231
Near flg-web weld	80.00	B	2029.51	L	6968.	29000.	0.240
Near flg-web weld	96.00	B	2049.98	L	7100.	29000.	0.245
Near flg-web weld	112.00	B	1880.48	L	13420.	29000.	0.463
Top flg. splice	15.00	B	756.02	L	1111.	29000.	0.038
Top flg. splice	27.00	B	1186.51	L	2177.	29000.	0.075
Top flg. splice	98.00	B	2039.18	L	4966.	29000.	0.171
Top flg. splice	110.00	B	1906.77	L	8079.	29000.	0.279
Bot flg. splice	15.00	B	756.02	L	4293.	29000.	0.148
Bot flg. splice	27.00	B	1186.51	L	4841.	29000.	0.167
Bot flg. splice	98.00	B	2039.18	L	8615.	29000.	0.297
Bot flg. splice	110.00	B	1906.77	L	13771.	29000.	0.475
Trans. stiff. toe	10.00	C	498.97	L	2001.	21000.	0.095
Trans. stiff. toe	15.00	C	748.45	L	3001.	21000.	0.143
Trans. stiff. toe	20.00	C	933.37	L	3749.	21000.	0.179
Trans. stiff. toe	25.00	C	1102.13	L	3807.	21000.	0.181
Trans. stiff. toe	30.00	C	1270.90	L	4394.	21000.	0.209
Trans. stiff. toe	35.00	C	1410.22	L	4882.	21000.	0.232
Trans. stiff. toe	40.00	C	1529.90	L	5304.	21000.	0.253
Trans. stiff. toe	45.00	C	1649.59	L	5726.	21000.	0.273
Trans. stiff. toe	50.00	C	1752.12	L	6090.	21000.	0.290
Trans. stiff. toe	55.00	C	1828.92	L	6368.	21000.	0.303
Trans. stiff. toe	60.00	C	1905.72	L	6645.	21000.	0.316
Trans. stiff. toe	65.00	C	1971.06	L	6884.	21000.	0.328
Trans. stiff. toe	70.00	C	1990.55	L	6969.	21000.	0.332
Trans. stiff. toe	75.00	C	2010.03	L	7054.	21000.	0.336
Trans. stiff. toe	80.00	C	2029.51	L	7138.	21000.	0.340
Trans. stiff. toe	85.00	C	2035.91	L	7181.	21000.	0.342
Trans. stiff. toe	90.00	C	2042.30	L	7224.	21000.	0.344
Trans. stiff. toe	95.00	C	2048.70	L	7266.	21000.	0.346
Trans. stiff. toe	100.00	C	2007.61	L	7149.	21000.	0.340
Trans. stiff. toe	105.00	C	1954.64	L	13765.	21000.	0.655
Trans. stiff. toe	110.00	C	1901.67	L	13518.	21000.	0.644
Trans. stiff. toe	115.00	C	1831.20	L	13174.	21000.	0.627

* * * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * * *

Cost Schedule for Web Section 1

	lb
Flange	24239.7
Web	14393.8
Web stiffeners	2817.5
Bearing stiff.	163.3
Total steel	41614.3

Welding	Vol	lbs
Flange-web	257.2	72.9
Trans.stiff.-web (1/ 4 cont.)	207.0	58.7
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6
Total welding *	473.2	134.2
Total steel and weld	41748.5	

Begin solution for web section 2.

* * * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * * *

Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

Max live load+impact shear
-53.1L -67.1L -85.5L 63.5L 50.8L

Dead load 1 shear
-79.6 -97.6 -116.0 78.6 59.6

Dead load 2 shear
-7.4 -9.1 -10.8 7.7 5.9
(Shear value at an interior support is at left of support.)

Max live load+impact moment
720.9L 437.0L 319.9L 386.0L 724.5T

Min live load+impact moment
-896.8L -1404.6L -2266.8L -1346.5L -797.6L

Dead load 1 moment
-544.7 -1958.6 -3669.2 -2070.5 -828.0

Dead load 2 moment
-57.9 -190.6 -350.4 -194.1 -71.3

* * * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * * *

Rate Web depth = 105.0000 in
Web thickness = 0.5000 in

Tenth Point	Top Flange Width	Min Top Flange t	Bott Flange Width	Min Bott Flange t	Flange to Web Weld Top	Flange to Web Weld Bott

8	18.00	1.250	18.00	1.250	5/16	5/16
9	18.00	1.875	18.00	1.875	5/16	5/16
10	18.00	2.000	18.00	2.000	5/16	5/16
11	18.00	1.875	18.00	1.875	5/16	5/16
12	18.00	1.000	18.00	1.000	5/16	5/16

```
 2 -   8.00 x  0.500 brng. stf. at  42.50 ft   from left end of web section
       4.00 x   0.50 longitudinal stiffener
       6.00 x   0.50 transverse stiffeners
         1 stiffener space at    60.00 in
               (straddles web splice)
         1 stiffener space at    60.00 in
               (straddles web splice)

       Composite section properties at max positive moment - n =  9

          I                              =  146463. in4
          S (top steel)                  =  8622.68 in3
          S (bottom steel)               =  2546.55 in3
          S (concrete)                   =  5609.29 in3
          Neutral axis from bottom flange =    57.51 in


       Composite section properties at max positive moment - n = 27

          I                              =  112334. in4
          S (top steel)                  =  4193.07 in3
          S (bottom steel)               =  2354.55 in3
          S (concrete)                   =  3127.74 in3
          Neutral axis from bottom flange =    47.71 in


       Section properties of girder alone at max positive moment

          I                              =   75920. in4
          S (top)                        =  2038.13 in3
          S (bottom)                     =  2038.13 in3
          Neutral axis from bottom flange =    37.25 in


       Section properties of girder alone at max negative moment

          I                              =  254340. in4
          S (top)                        =  4666.80 in3
          S (bottom)                     =  4666.80 in3
          Neutral axis from bottom flange =    54.50 in


       Composite section properties at max negative moment

          I                              =  259366. in4
          S (top of steel)               =  4818.24 in3
          S (bottom of steel)            =  4701.22 in3
          S (reinf)                      =  4353.24 in3
          Neutral axis from bottom flange =    55.17 in


* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *


Web Section  2 Stresses
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Tenth Point	Factored Shear (k)	Shear Strength (k)	Ratio	Factored Moment (k-ft)	Bending Strength (k-ft)	Ratio
8	228.5	626.8 (3)	0.365	2730.3	5435.0 (6)	0.502
9	284.4	764.0 (3)	0.372	5843.5	9779.6 (6)	0.598
10L	350.6	930.6 (3)	0.377	10146.7	12493.3 (6)	0.812
10R	324.1	930.6 (3)	0.348	10146.7	12493.3 (6)	0.812
11	250.1	730.3 (3)	0.342	5867.2	9236.1 (6)	0.635
12	195.4	626.8 (3)	0.312	2900.7	4577.7 (6)	0.634

Stiffeners

Location						
120.00	212.4	626.8 (3)	0.339			
125.00	222.4	626.8 (3)	0.355			
130.00	235.5	628.2 (3)	0.375			
135.00	253.0	652.1 (3)	0.388			
140.00	270.5	701.6 (3)	0.385			
145.00	288.6	780.6 (3)	0.370			
150.00	309.3	846.6 (3)	0.365			
155.00	329.9	883.0 (3)	0.374			
165.00	303.5	883.0 (3)	0.344			
170.00	283.0	846.6 (3)	0.334			
175.00	262.4	780.6 (3)	0.336			
180.00	244.0	701.6 (3)	0.348			
185.00	228.8	652.1 (3)	0.351			
190.00	213.6	628.2 (3)	0.340			
195.00	198.4	626.8 (3)	0.317			
200.00	184.8	626.8 (3)	0.295			
205.00	171.6	626.8 (3)	0.274			
210.00	158.4	626.8 (3)	0.253			

```
     (3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
     (6) Fy S(equiv)
         Maximum moment in factored strength expression
```

Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	
42.50	362.58	16.60	10.07	0.607	28.80	16.11	0.560

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)	Actual Stress Range	Allowable Stress Range	Ratio
Base metal	128.00	C	1399.85 T	5177.	13000.	0.398
Base metal *	128.00	C	846.76 T	3100.	10000.	0.310
Base metal	144.00	C	1134.87 T	3070.	13000.	0.236
Base metal *	144.00	C	693.07 T	1837.	10000.	0.184
Base metal	160.00	C	1246.21 T	2680.	13000.	0.206

Base metal *	160.00	C	735.88	T	1577.	10000.	0.158
Base metal	178.00	C	1095.81	T	3040.	13000.	0.234
Base metal *	178.00	C	674.04	T	1831.	10000.	0.183
Base metal	196.00	C	1346.01	T	5378.	13000.	0.414
Base metal *	196.00	C	823.84	T	3243.	10000.	0.324
Near flg-web weld	128.00	B	1399.85	T	5115.	18000.	0.284
Base metal	128.00	B	1399.85	T	5228.	18000.	0.290
Near flg-web weld *	128.00	B	846.76	T	3063.	16000.	0.191
Base metal *	128.00	B	846.76	T	3131.	16000.	0.196
Near flg-web weld	144.00	B	1134.87	T	3032.	18000.	0.168
Base metal	144.00	B	1134.87	T	3119.	18000.	0.173
Near flg-web weld *	144.00	B	693.07	T	1814.	16000.	0.113
Base metal *	144.00	B	693.07	T	1866.	16000.	0.117
Near flg-web weld	160.00	B	1246.21	T	2650.	18000.	0.147
Base metal	160.00	B	1246.21	T	2721.	18000.	0.151
Near flg-web weld *	160.00	B	735.88	T	1559.	16000.	0.097
Base metal *	160.00	B	735.88	T	1601.	16000.	0.100
Near flg-web weld	178.00	B	1095.81	T	3000.	18000.	0.167
Base metal	178.00	B	1095.81	T	3090.	18000.	0.172
Near flg-web weld *	178.00	B	674.04	T	1807.	16000.	0.113
Base metal *	178.00	B	674.04	T	1861.	16000.	0.116
Near flg-web weld	196.00	B	1346.01	T	5324.	18000.	0.296
Base metal	196.00	B	1346.01	T	5417.	18000.	0.301
Near flg-web weld *	196.00	B	823.84	T	3210.	16000.	0.201
Base metal *	196.00	B	823.84	T	3266.	16000.	0.204
Top flg. splice	128.00	B	1399.85	T	7222.	18000.	0.401
Top flg splice *	128.00	B	846.76	T	4318.	16000.	0.270
Top flg. splice	144.00	B	1134.87	T	3257.	18000.	0.181
Top flg splice *	144.00	B	693.07	T	1947.	16000.	0.122
Top flg. splice	178.00	B	1095.81	T	3224.	18000.	0.179
Top flg splice *	178.00	B	674.04	T	1941.	16000.	0.121
Top flg. splice	193.00	B	1313.37	T	5503.	18000.	0.306
Top flg splice *	193.00	B	805.21	T	3316.	16000.	0.207
Bot flg. splice	128.00	B	1399.85	T	10531.	18000.	0.585
Bot flg splice *	128.00	B	846.76	T	6354.	16000.	0.397
Bot flg. splice	144.00	B	1134.87	T	3788.	18000.	0.210
Bot flg splice *	144.00	B	693.07	T	2303.	16000.	0.144
Bot flg. splice	178.00	B	1095.81	T	3850.	18000.	0.214
Bot flg splice *	178.00	B	674.04	T	2358.	16000.	0.147
Bot flg. splice	193.00	B	1313.37	T	8153.	18000.	0.453
Bot flg splice *	193.00	B	805.21	T	4981.	16000.	0.311
Trans. stiff. toe	120.00	C	1526.40	T	10966.	13000.	0.844
Trans. stiff. toe *	120.00	C	924.93	T	6632.	12000.	0.553
Trans. stiff. toe	125.00	C	1447.30	T	5013.	13000.	0.386
Trans. stiff. toe *	125.00	C	876.08	T	3006.	12000.	0.250
Trans. stiff. toe	130.00	C	1366.72	T	5046.	13000.	0.388
Trans. stiff. toe *	130.00	C	827.55	T	3020.	12000.	0.252
Trans. stiff. toe	135.00	C	1283.92	T	4875.	13000.	0.375
Trans. stiff. toe *	135.00	C	779.52	T	2913.	12000.	0.243
Trans. stiff. toe	140.00	C	1201.11	T	3340.	13000.	0.257
Trans. stiff. toe *	140.00	C	731.49	T	1999.	12000.	0.167
Trans. stiff. toe	145.00	C	1141.83	T	2950.	13000.	0.227
Trans. stiff. toe *	145.00	C	695.74	T	1763.	12000.	0.147
Trans. stiff. toe	150.00	C	1176.62	T	2787.	13000.	0.214
Trans. stiff. toe *	150.00	C	709.12	T	1657.	12000.	0.138
Trans. stiff. toe	155.00	C	1211.42	T	2559.	13000.	0.197
Trans. stiff. toe *	155.00	C	722.50	T	1513.	12000.	0.126
Trans. stiff. toe	160.00	C	1246.21	T	2629.	13000.	0.202
Trans. stiff. toe *	160.00	C	735.88	T	1547.	12000.	0.129
Trans. stiff. toe	165.00	C	1204.43	T	2530.	13000.	0.195
Trans. stiff. toe *	165.00	C	718.70	T	1498.	12000.	0.125
Trans. stiff. toe	170.00	C	1162.66	T	2718.	13000.	0.209
Trans. stiff. toe *	170.00	C	701.52	T	1619.	12000.	0.135

Trans. stiff. toe	175.00	C	1120.88	T	2836.	13000.	0.218
Trans. stiff. toe *	175.00	C	684.35	T	1701.	12000.	0.142
Trans. stiff. toe	180.00	C	1123.61	T	3114.	13000.	0.240
Trans. stiff. toe *	180.00	C	690.68	T	1876.	12000.	0.156
Trans. stiff. toe	185.00	C	1193.11	T	3393.	13000.	0.261
Trans. stiff. toe *	185.00	C	732.30	T	2046.	12000.	0.171
Trans. stiff. toe	205.00	C	1405.89	T	8321.	13000.	0.640
Trans. stiff. toe *	205.00	C	853.13	T	5042.	12000.	0.420
Trans. stiff. toe	210.00	C	1439.15	T	8436.	13000.	0.649
Trans. stiff. toe *	210.00	C	869.41	T	5092.	12000.	0.424
Rebars	160.00		1246.21	T	3435.	20000.	0.172
Rebars *	160.00		735.88	T	2029.	20000.	0.101

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	128.00	C	1617.66	L	6283.	21000.	0.299
Base metal	144.00	C	1841.67	L	5075.	21000.	0.242
Base metal	160.00	C	2586.64	L	5946.	21000.	0.283
Base metal	178.00	C	1732.51	L	5105.	21000.	0.243
Base metal	196.00	C	1394.94	L	6428.	21000.	0.306
Near flg-web weld	128.00	B	1617.66	L	6207.	29000.	0.214
Base metal	128.00	B	1617.66	L	6345.	29000.	0.219
Near flg-web weld	144.00	B	1841.67	L	5011.	29000.	0.173
Base metal	144.00	B	1841.67	L	5155.	29000.	0.178
Near flg-web weld	160.00	B	2586.64	L	5879.	29000.	0.203
Base metal	160.00	B	2586.64	L	6037.	29000.	0.208
Near flg-web weld	178.00	B	1732.51	L	5037.	29000.	0.174
Base metal	178.00	B	1732.51	L	5188.	29000.	0.179
Near flg-web weld	196.00	B	1394.94	L	6363.	29000.	0.219
Base metal	196.00	B	1394.94	L	6474.	29000.	0.223
Top flg. splice	128.00	B	1617.66	L	8828.	29000.	0.304
Top flg. splice	144.00	B	1841.67	L	5385.	29000.	0.186
Top flg. splice	178.00	B	1732.51	L	5421.	29000.	0.187
Top flg. splice	193.00	B	1421.47	L	6886.	29000.	0.237
Bot flg. splice	128.00	B	1617.66	L	12328.	29000.	0.425
Bot flg. splice	144.00	B	1841.67	L	6171.	29000.	0.213
Bot flg. splice	178.00	B	1732.51	L	6164.	29000.	0.213
Bot flg. splice	193.00	B	1421.47	L	9097.	29000.	0.314
Trans. stiff. toe	120.00	C	1749.07	L	12707.	21000.	0.605
Trans. stiff. toe	125.00	C	1666.94	L	6060.	21000.	0.289
Trans. stiff. toe	130.00	C	1645.66	L	6413.	21000.	0.305
Trans. stiff. toe	135.00	C	1715.66	L	6879.	21000.	0.328
Trans. stiff. toe	140.00	C	1785.67	L	5146.	21000.	0.245
Trans. stiff. toe	145.00	C	1888.23	L	4996.	21000.	0.238
Trans. stiff. toe	150.00	C	2121.03	L	5253.	21000.	0.250
Trans. stiff. toe	155.00	C	2353.83	L	5260.	21000.	0.250
Trans. stiff. toe	160.00	C	2586.64	L	5833.	21000.	0.278
Trans. stiff. toe	165.00	C	2349.38	L	5278.	21000.	0.251
Trans. stiff. toe	170.00	C	2112.12	L	5289.	21000.	0.252
Trans. stiff. toe	175.00	C	1874.86	L	5061.	21000.	0.241
Trans. stiff. toe	180.00	C	1695.00	L	5054.	21000.	0.241
Trans. stiff. toe	185.00	C	1601.23	L	5030.	21000.	0.240
Trans. stiff. toe	190.00	C	1507.46	L	7381.	21000.	0.351
Trans. stiff. toe	195.00	C	1413.69	L	6446.	21000.	0.307
Trans. stiff. toe	200.00	C	1415.06	L	6049.	21000.	0.288
Trans. stiff. toe	205.00	C	1440.21	L	5792.	21000.	0.276

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 Trans. stiff. toe     210.00     C        1465.36 L   8786.   21000.   0.418
 Rebars                160.00              2586.64 L   7130.   20000.   0.357
* * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * *


Cost Schedule for Web Section  2
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                                          lb

                  Flange                18329.1
                  Web                   13564.3
                  Web stiffeners         2698.1
                  Longitudinal stiff.       0.0
                  Bearing stiff.          238.2

                  Total steel           34829.6

           Welding                  Vol    lbs

Flange-web                        222.7    63.1
Trans.stiff.-web    ( 1/ 4 cont.) 198.2    56.2
Long.stiff.-web     ( 1/ 4 cont.)  71.3    20.2
Brng.stiff.( 1)-web( 1/ 4 cont.)   9.0     2.6

                  Total welding *  501.1   142.1

                  Total steel and weld   34971.8



Begin solution for web section  3.

* * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * *

 Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

  Max live load+impact shear
       41.3L    41.1T    33.5T   -39.0T    40.4L

  Dead load 1 shear
       40.8     19.5      0.1    -19.4    -40.8

  Dead load 2 shear
        4.0      1.9      0.0     -1.9     -4.0

  Max live load+impact moment
      984.9T  1192.6T  1273.4T  1192.5T   985.1T

  Min live load+impact moment
     -603.6L  -560.2L  -530.3L  -560.1L  -603.4L

  Dead load 1 moment
       73.2    607.3    782.0    608.9     76.6

  Dead load 2 moment
       17.3     70.2     87.6     70.2     17.5
* * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * *
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   Rate Web depth           =  72.0000 in
        Web thickness       =   0.5000 in


Tenth    Top Flange   Min Top   Bott Flange  Min Bott   Flange to Web Weld
Point      Width      Flange t     Width     Flange t     Top       Bott

  13       18.00       1.000       18.00       1.000      5/16      5/16
  14       18.00       1.000       18.00       1.000      5/16      5/16
  15       18.00       1.000       18.00       1.000      5/16      5/16
  16       18.00       1.000       18.00       1.000      5/16      5/16
  17       18.00       1.000       18.00       1.000      5/16      5/16
       6.00 x   0.50 transverse stiffeners
         1 stiffener space at    60.00 in
                (straddles web splice)
         1 stiffener space at    60.00 in
                (straddles web splice)

        Composite section properties at max positive moment - n =  9

           I                              =  130133. in4
           S (top steel)                  =  8408.22 in3
           S (bottom steel)               =  2223.62 in3
           S (concrete)                   =  5236.35 in3
           Neutral axis from bottom flange =    58.52 in


        Composite section properties at max positive moment - n = 27

           I                              =   98855. in4
           S (top steel)                  =  3864.33 in3
           S (bottom steel)               =  2041.67 in3
           S (concrete)                   =  2827.95 in3
           Neutral axis from bottom flange =    48.42 in


        Section properties of girder alone at max positive moment

           I                              =   63516. in4
           S (top)                        =  1716.65 in3
           S (bottom)                     =  1716.65 in3
           Neutral axis from bottom flange =    37.00 in


        Section properties of girder alone at max negative moment

           I                              =   63516. in4
           S (top)                        =  1716.65 in3
           S (bottom)                     =  1716.65 in3
           Neutral axis from bottom flange =    37.00 in


        Composite section properties at max negative moment

           I                              =   63516. in4
           S (top of steel)               =  1716.65 in3
           S (bottom of steel)            =  1716.65 in3
           S (reinf)                      =  1451.79 in3
           Neutral axis from bottom flange =    37.00 in


* * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * *
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OUTPUT.TXT

Web Section 3 Stresses

Tenth Point	Factored Shear (k)	Shear Strength (k)	Ratio	Factored Moment (k-ft)	Bending Strength (k-ft)	Ratio
13	147.9	626.8 (3)	0.236	2255.8	7925.1 (20)	0.285
14	117.2	626.8 (3)	0.187	3469.7	7925.1 (20)	0.438
15	72.8	626.8 (3)	0.116	3895.1	7925.1 (20)	0.491
16	112.5	626.8 (3)	0.180	3471.8	7925.1 (20)	0.438
17	111.0	626.8 (3)	0.177	2261.0	7925.1 (20)	0.285

Stiffeners

Location			
215.00	146.2	626.8 (3)	0.233
220.00	137.7	626.8 (3)	0.220
225.00	129.1	626.8 (3)	0.206
230.00	120.6	626.8 (3)	0.192
235.00	109.8	626.8 (3)	0.175
240.00	97.5	626.8 (3)	0.156
245.00	85.1	626.8 (3)	0.136
255.00	83.8	626.8 (3)	0.134
260.00	94.9	626.8 (3)	0.151
265.00	105.9	626.8 (3)	0.169
270.00	112.4	626.8 (3)	0.179
275.00	111.9	626.8 (3)	0.179
280.00	111.5	626.8 (3)	0.178
285.00	111.1	626.8 (3)	0.177

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(20) compact section

Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	214.00	B	1465.76	T	8677.	18000.	0.482
Base metal *	214.00	B	882.43	T	5222.	16000.	0.326
Base metal	232.00	B	1554.71	T	8967.	18000.	0.498
Base metal *	232.00	B	945.89	T	5451.	16000.	0.341
Base metal	250.00	B	1527.69	T	8650.	18000.	0.481
Base metal *	250.00	B	935.89	T	5294.	16000.	0.331
Base metal	268.00	B	1554.68	T	8967.	18000.	0.498
Base metal *	268.00	B	945.88	T	5451.	16000.	0.341

Base metal	286.00	B	1465.84	T	8677.	18000.	0.482
Base metal *	286.00	B	882.48	T	5222.	16000.	0.326
Near flg-web weld	214.00	B	1465.76	T	8528.	18000.	0.474
Near flg-web weld *	214.00	B	882.43	T	5132.	16000.	0.321
Near flg-web weld	232.00	B	1554.71	T	8814.	18000.	0.490
Near flg-web weld *	232.00	B	945.89	T	5358.	16000.	0.335
Near flg-web weld	250.00	B	1527.69	T	8502.	18000.	0.472
Near flg-web weld *	250.00	B	935.89	T	5204.	16000.	0.325
Near flg-web weld	268.00	B	1554.68	T	8814.	18000.	0.490
Near flg-web weld *	268.00	B	945.88	T	5358.	16000.	0.335
Near flg-web weld	286.00	B	1465.84	T	8529.	18000.	0.474
Near flg-web weld *	286.00	B	882.48	T	5133.	16000.	0.321
Trans. stiff. toe	215.00	C	1470.70	T	8544.	13000.	0.657
Trans. stiff. toe *	215.00	C	885.95	T	5145.	12000.	0.429
Trans. stiff. toe	220.00	C	1495.41	T	8624.	13000.	0.663
Trans. stiff. toe *	220.00	C	903.58	T	5208.	12000.	0.434
Trans. stiff. toe	225.00	C	1520.12	T	8703.	13000.	0.669
Trans. stiff. toe *	225.00	C	921.21	T	5270.	12000.	0.439
Trans. stiff. toe	230.00	C	1544.82	T	8782.	13000.	0.676
Trans. stiff. toe *	230.00	C	938.84	T	5333.	12000.	0.444
Trans. stiff. toe	235.00	C	1550.21	T	8762.	13000.	0.674
Trans. stiff. toe *	235.00	C	944.22	T	5332.	12000.	0.444
Trans. stiff. toe	240.00	C	1542.70	T	8675.	13000.	0.667
Trans. stiff. toe *	240.00	C	941.44	T	5289.	12000.	0.441
Trans. stiff. toe	245.00	C	1535.20	T	8589.	13000.	0.661
Trans. stiff. toe *	245.00	C	938.66	T	5247.	12000.	0.437
Trans. stiff. toe	250.00	C	1527.69	T	8502.	13000.	0.654
Trans. stiff. toe *	250.00	C	935.89	T	5204.	12000.	0.434
Trans. stiff. toe	255.00	C	1535.19	T	8589.	13000.	0.661
Trans. stiff. toe *	255.00	C	938.66	T	5247.	12000.	0.437
Trans. stiff. toe	260.00	C	1542.69	T	8675.	13000.	0.667
Trans. stiff. toe *	260.00	C	941.44	T	5289.	12000.	0.441
Trans. stiff. toe	265.00	C	1550.18	T	8762.	13000.	0.674
Trans. stiff. toe *	265.00	C	944.21	T	5332.	12000.	0.444
Trans. stiff. toe	270.00	C	1544.81	T	8782.	13000.	0.676
Trans. stiff. toe *	270.00	C	938.83	T	5333.	12000.	0.444
Trans. stiff. toe	275.00	C	1520.13	T	8703.	13000.	0.669
Trans. stiff. toe *	275.00	C	921.22	T	5270.	12000.	0.439
Trans. stiff. toe	280.00	C	1495.45	T	8624.	13000.	0.663
Trans. stiff. toe *	280.00	C	903.61	T	5208.	12000.	0.434
Trans. stiff. toe	285.00	C	1470.77	T	8544.	13000.	0.657
Trans. stiff. toe *	285.00	C	886.00	T	5145.	12000.	0.429

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	214.00	B	1485.48	L	8979.	29000.	0.310
Base metal	232.00	B	1706.75	L	10103.	29000.	0.348
Base metal	250.00	B	1778.96	L	10445.	29000.	0.360
Base metal	268.00	B	1706.84	L	10104.	29000.	0.348
Base metal	286.00	B	1485.78	L	8980.	29000.	0.310
Near flg-web weld	214.00	B	1485.48	L	8825.	29000.	0.304
Near flg-web weld	232.00	B	1706.75	L	9931.	29000.	0.342
Near flg-web weld	250.00	B	1778.96	L	10267.	29000.	0.354
Near flg-web weld	268.00	B	1706.84	L	9931.	29000.	0.342
Near flg-web weld	286.00	B	1485.78	L	8826.	29000.	0.304
Trans. stiff. toe	215.00	C	1497.78	L	8887.	21000.	0.423

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 Trans. stiff. toe     220.00     C        1559.24 L   9194.   21000.   0.438
 Trans. stiff. toe     225.00     C        1620.70 L   9501.   21000.   0.452
 Trans. stiff. toe     230.00     C        1682.16 L   9808.   21000.   0.467
 Trans. stiff. toe     235.00     C        1718.78 L   9987.   21000.   0.476
 Trans. stiff. toe     240.00     C        1738.84 L  10080.   21000.   0.480
 Trans. stiff. toe     245.00     C        1758.90 L  10174.   21000.   0.484
 Trans. stiff. toe     250.00     C        1778.96 L  10267.   21000.   0.489
 Trans. stiff. toe     255.00     C        1758.93 L  10174.   21000.   0.484
 Trans. stiff. toe     260.00     C        1738.89 L  10080.   21000.   0.480
 Trans. stiff. toe     265.00     C        1718.86 L   9987.   21000.   0.476
 Trans. stiff. toe     270.00     C        1682.28 L   9808.   21000.   0.467
 Trans. stiff. toe     275.00     C        1620.87 L   9502.   21000.   0.452
 Trans. stiff. toe     280.00     C        1559.46 L   9195.   21000.   0.438
 Trans. stiff. toe     285.00     C        1498.06 L   8888.   21000.   0.423
* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *


Cost Schedule for Web Section  3
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                                        lb

                    Flange             9187.5
                    Web                9187.5
                    Web stiffeners     1837.5

                    Total steel       20212.5


            Welding                   Vol    lbs

Flange-web                           175.8    49.8
Trans.stiff.-web    ( 1/ 4 cont.)    135.0    38.3

                    Total welding *  310.8    88.1

                    Total steel and weld   20300.6



Begin solution for web section  4.

* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *

 Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

  Max live load+impact shear
      -51.0L   -63.0L   -83.8L    65.5L    54.4L

  Dead load 1 shear
      -59.6    -78.6    -99.2     97.6     79.6

  Dead load 2 shear
       -5.9     -7.7     -9.6      9.1      7.4
   (Shear value at an interior support is at left of support.)

  Max live load+impact moment
      724.9T   386.0L   320.0L   437.1L   720.7L

  Min live load+impact moment
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     -797.6L -1346.5L -2267.9L -1405.5L  -896.9L

  Dead load 1 moment
     -823.6  -2066.5  -3667.4  -1960.0   -546.6

  Dead load 2 moment
      -71.0   -193.9   -350.3   -190.6    -58.0
* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *

    Rate Web depth            = 105.0000 in
         Web thickness        =   0.5000 in


Tenth    Top Flange   Min Top   Bott Flange  Min Bott   Flange to Web Weld
Point      Width      Flange t     Width     Flange t     Top       Bott

  18       18.00       1.000       18.00      1.000      5/16      5/16
  19       18.00       1.875       18.00      1.875      5/16      5/16
  20       18.00       2.000       18.00      2.000      5/16      5/16
  21       18.00       1.875       18.00      1.875      5/16      5/16
  22       18.00       1.250       18.00      1.250      5/16      5/16

   2 -   8.00 x  0.500 brng. stf. at  52.50 ft   from left end of web section
         4.00 x   0.50 longitudinal stiffener
         6.00 x   0.50 transverse stiffeners
           1 stiffener space at    60.00 in
                 (straddles web splice)
           1 stiffener space at    60.00 in
                 (straddles web splice)

         Composite section properties at max positive moment - n =  9

            I                                =  146463. in4
            S (top steel)                    =  8622.68 in3
            S (bottom steel)                 =  2546.55 in3
            S (concrete)                     =  5609.29 in3
            Neutral axis from bottom flange =    57.51 in


         Composite section properties at max positive moment - n = 27

            I                                =  112334. in4
            S (top steel)                    =  4193.07 in3
            S (bottom steel)                 =  2354.55 in3
            S (concrete)                     =  3127.74 in3
            Neutral axis from bottom flange =    47.71 in


         Section properties of girder alone at max positive moment

            I                                =   75920. in4
            S (top)                          =  2038.13 in3
            S (bottom)                       =  2038.13 in3
            Neutral axis from bottom flange =    37.25 in


         Section properties of girder alone at max negative moment

            I                                =  254340. in4
            S (top)                          =  4666.80 in3
            S (bottom)                       =  4666.80 in3
            Neutral axis from bottom flange =    54.50 in
```

Composite section properties at max negative moment

I	=	259366. in4
S (top of steel)	=	4818.24 in3
S (bottom of steel)	=	4701.22 in3
S (reinf)	=	4353.24 in3
Neutral axis from bottom flange	=	55.17 in

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Web Section 4 Stresses

Tenth Point	Factored Shear (k)	Shear Strength (k)	Ratio	Factored Moment (k-ft)	Bending Strength (k-ft)	Ratio
18	195.8	626.8 (3)	0.312	2894.6	4577.7 (6)	0.632
19	249.0	730.3 (3)	0.341	5861.9	9236.1 (6)	0.635
20L	323.5	930.6 (3)	0.348	10146.7	12493.3 (6)	0.812
20R	350.2	930.6 (3)	0.376	10146.7	12493.3 (6)	0.812
21	281.0	764.0 (3)	0.368	5847.2	9779.6 (6)	0.598
22	231.2	626.8 (3)	0.369	2733.2	5435.0 (6)	0.503

Stiffeners

Location			
290.00	129.8	626.8 (3)	0.207
295.00	153.4	626.8 (3)	0.245
300.00	177.0	626.8 (3)	0.282
305.00	198.8	626.8 (3)	0.317
310.00	213.5	628.2 (3)	0.340
315.00	228.3	652.1 (3)	0.350
320.00	243.1	701.6 (3)	0.346
325.00	261.4	780.6 (3)	0.335
330.00	282.1	846.6 (3)	0.333
335.00	302.8	883.0 (3)	0.343
345.00	328.6	883.0 (3)	0.372
350.00	307.0	846.6 (3)	0.363
355.00	285.4	780.6 (3)	0.366
360.00	268.6	701.6 (3)	0.383
365.00	253.0	652.1 (3)	0.388
370.00	237.4	628.2 (3)	0.378
375.00	225.4	626.8 (3)	0.360
380.00	215.8	626.8 (3)	0.344

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(6) Fy S(equiv)
Maximum moment in factored strength expression

Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Ratio Column Stress	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)	(ksi)	(ksi)	

52.50	362.53	16.60	10.07	0.606	28.80	16.11	0.559

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	304.00	C	1346.23	T	5378.	13000.	0.414
Base metal *	304.00	C	823.97	T	3242.	10000.	0.324
Base metal	322.00	C	1095.30	T	3040.	13000.	0.234
Base metal *	322.00	C	673.66	T	1831.	10000.	0.183
Base metal	340.00	C	1246.33	T	2681.	13000.	0.206
Base metal *	340.00	C	735.96	T	1577.	10000.	0.158
Base metal	356.00	C	1135.05	T	3071.	13000.	0.236
Base metal *	356.00	C	693.23	T	1837.	10000.	0.184
Base metal	372.00	C	1399.64	T	5177.	13000.	0.398
Base metal *	372.00	C	846.61	T	3100.	10000.	0.310
Near flg-web weld	304.00	B	1346.23	T	5324.	18000.	0.296
Base metal	304.00	B	1346.23	T	5416.	18000.	0.301
Near flg-web weld *	304.00	B	823.97	T	3210.	16000.	0.201
Base metal *	304.00	B	823.97	T	3265.	16000.	0.204
Near flg-web weld	322.00	B	1095.30	T	2999.	18000.	0.167
Base metal	322.00	B	1095.30	T	3089.	18000.	0.172
Near flg-web weld *	322.00	B	673.66	T	1806.	16000.	0.113
Base metal *	322.00	B	673.66	T	1861.	16000.	0.116
Near flg-web weld	340.00	B	1246.33	T	2650.	18000.	0.147
Base metal	340.00	B	1246.33	T	2722.	18000.	0.151
Near flg-web weld *	340.00	B	735.96	T	1559.	16000.	0.097
Base metal *	340.00	B	735.96	T	1601.	16000.	0.100
Near flg-web weld	356.00	B	1135.05	T	3032.	18000.	0.168
Base metal	356.00	B	1135.05	T	3119.	18000.	0.173
Near flg-web weld *	356.00	B	693.23	T	1814.	16000.	0.113
Base metal *	356.00	B	693.23	T	1866.	16000.	0.117
Near flg-web weld	372.00	B	1399.64	T	5114.	18000.	0.284
Base metal	372.00	B	1399.64	T	5228.	18000.	0.290
Near flg-web weld *	372.00	B	846.61	T	3062.	16000.	0.191
Base metal *	372.00	B	846.61	T	3130.	16000.	0.196
Top flg. splice	307.00	B	1313.53	T	5502.	18000.	0.306
Top flg splice *	307.00	B	805.30	T	3316.	16000.	0.207
Top flg. splice	322.00	B	1095.30	T	3223.	18000.	0.179
Top flg splice *	322.00	B	673.66	T	1940.	16000.	0.121
Top flg. splice	356.00	B	1135.05	T	3257.	18000.	0.181
Top flg splice *	356.00	B	693.23	T	1947.	16000.	0.122
Top flg. splice	372.00	B	1399.64	T	7221.	18000.	0.401
Top flg splice *	372.00	B	846.61	T	4317.	16000.	0.270
Bot flg. splice	307.00	B	1313.53	T	8153.	18000.	0.453
Bot flg splice *	307.00	B	805.30	T	4982.	16000.	0.311
Bot flg. splice	322.00	B	1095.30	T	3848.	18000.	0.214
Bot flg splice *	322.00	B	673.66	T	2357.	16000.	0.147
Bot flg. splice	356.00	B	1135.05	T	3788.	18000.	0.210
Bot flg splice *	356.00	B	693.23	T	2304.	16000.	0.144
Bot flg. splice	372.00	B	1399.64	T	10530.	18000.	0.585
Bot flg splice *	372.00	B	846.61	T	6353.	16000.	0.397
Trans. stiff. toe	290.00	C	1439.26	T	8475.	13000.	0.652
Trans. stiff. toe *	290.00	C	869.48	T	5116.	12000.	0.426
Trans. stiff. toe	295.00	C	1406.03	T	8360.	13000.	0.643
Trans. stiff. toe	315.00	C	1192.88	T	3412.	13000.	0.262
Trans. stiff. toe *	315.00	C	732.11	T	2057.	12000.	0.171
Trans. stiff. toe	320.00	C	1123.18	T	3131.	13000.	0.241

Trans. stiff. toe *	320.00	C	690.36	T	1886.	12000.	0.157
Trans. stiff. toe	325.00	C	1120.47	T	2851.	13000.	0.219
Trans. stiff. toe *	325.00	C	684.04	T	1710.	12000.	0.142
Trans. stiff. toe	330.00	C	1162.42	T	2733.	13000.	0.210
Trans. stiff. toe *	330.00	C	701.35	T	1628.	12000.	0.136
Trans. stiff. toe	335.00	C	1204.38	T	2542.	13000.	0.196
Trans. stiff. toe *	335.00	C	718.65	T	1505.	12000.	0.125
Trans. stiff. toe	340.00	C	1246.33	T	2642.	13000.	0.203
Trans. stiff. toe *	340.00	C	735.96	T	1554.	12000.	0.130
Trans. stiff. toe	345.00	C	1211.55	T	2571.	13000.	0.198
Trans. stiff. toe *	345.00	C	722.61	T	1521.	12000.	0.127
Trans. stiff. toe	350.00	C	1176.78	T	2803.	13000.	0.216
Trans. stiff. toe *	350.00	C	709.25	T	1666.	12000.	0.139
Trans. stiff. toe	355.00	C	1142.00	T	2967.	13000.	0.228
Trans. stiff. toe *	355.00	C	695.90	T	1773.	12000.	0.148
Trans. stiff. toe	360.00	C	1201.20	T	3358.	13000.	0.258
Trans. stiff. toe *	360.00	C	731.58	T	2010.	12000.	0.167
Trans. stiff. toe	365.00	C	1283.88	T	4908.	13000.	0.378
Trans. stiff. toe *	365.00	C	779.51	T	2933.	12000.	0.244
Trans. stiff. toe	370.00	C	1366.57	T	5080.	13000.	0.391
Trans. stiff. toe *	370.00	C	827.44	T	3040.	12000.	0.253
Trans. stiff. toe	375.00	C	1447.20	T	5047.	13000.	0.388
Trans. stiff. toe *	375.00	C	875.99	T	3026.	12000.	0.252
Trans. stiff. toe	380.00	C	1526.47	T	5006.	13000.	0.385
Trans. stiff. toe *	380.00	C	924.95	T	3008.	12000.	0.251
Rebars	340.00		1246.33	T	3436.	20000.	0.172
Rebars *	340.00		735.96	T	2029.	20000.	0.101

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	304.00	C	1395.37	L	6429.	21000.	0.306
Base metal	322.00	C	1732.49	L	5105.	21000.	0.243
Base metal	340.00	C	2587.89	L	5949.	21000.	0.283
Base metal	356.00	C	1842.65	L	5078.	21000.	0.242
Base metal	372.00	C	1617.62	L	6284.	21000.	0.299
Near flg-web weld	304.00	B	1395.37	L	6364.	29000.	0.219
Base metal	304.00	B	1395.37	L	6474.	29000.	0.223
Near flg-web weld	322.00	B	1732.49	L	5037.	29000.	0.174
Base metal	322.00	B	1732.49	L	5188.	29000.	0.179
Near flg-web weld	340.00	B	2587.89	L	5882.	29000.	0.203
Base metal	340.00	B	2587.89	L	6040.	29000.	0.208
Near flg-web weld	356.00	B	1842.65	L	5014.	29000.	0.173
Base metal	356.00	B	1842.65	L	5158.	29000.	0.178
Near flg-web weld	372.00	B	1617.62	L	6208.	29000.	0.214
Base metal	372.00	B	1617.62	L	6346.	29000.	0.219
Top flg. splice	307.00	B	1421.87	L	6886.	29000.	0.237
Top flg. splice	322.00	B	1732.49	L	5421.	29000.	0.187
Top flg. splice	356.00	B	1842.65	L	5388.	29000.	0.186
Top flg. splice	372.00	B	1617.62	L	8829.	29000.	0.304
Bot flg. splice	307.00	B	1421.87	L	9099.	29000.	0.314
Bot flg. splice	322.00	B	1732.49	L	6164.	29000.	0.213
Bot flg. splice	356.00	B	1842.65	L	6174.	29000.	0.213
Bot flg. splice	372.00	B	1617.62	L	12328.	29000.	0.425
Trans. stiff. toe	290.00	C	1465.69	L	8828.	21000.	0.420
Trans. stiff. toe	295.00	C	1440.57	L	8779.	21000.	0.418
Trans. stiff. toe	300.00	C	1415.46	L	6090.	21000.	0.290

Trans. stiff. toe	305.00	C	1414.10	L	6490.	21000.	0.309
Trans. stiff. toe	310.00	C	1507.74	L	7432.	21000.	0.354
Trans. stiff. toe	315.00	C	1601.38	L	5059.	21000.	0.241
Trans. stiff. toe	320.00	C	1695.03	L	5084.	21000.	0.242
Trans. stiff. toe	325.00	C	1875.05	L	5091.	21000.	0.242
Trans. stiff. toe	330.00	C	2112.67	L	5321.	21000.	0.253
Trans. stiff. toe	335.00	C	2350.28	L	5305.	21000.	0.253
Trans. stiff. toe	340.00	C	2587.89	L	5864.	21000.	0.279
Trans. stiff. toe	345.00	C	2355.00	L	5288.	21000.	0.252
Trans. stiff. toe	350.00	C	2122.11	L	5285.	21000.	0.252
Trans. stiff. toe	355.00	C	1889.22	L	5026.	21000.	0.239
Trans. stiff. toe	360.00	C	1786.39	L	5176.	21000.	0.246
Trans. stiff. toe	365.00	C	1716.07	L	6928.	21000.	0.330
Trans. stiff. toe	370.00	C	1645.75	L	6457.	21000.	0.307
Trans. stiff. toe	375.00	C	1666.88	L	6102.	21000.	0.291
Trans. stiff. toe	380.00	C	1748.98	L	6013.	21000.	0.286
Rebars	340.00		2587.89	L	7134.	20000.	0.357

* * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * *

Cost Schedule for Web Section 4

	lb
Flange	18329.1
Web	13564.3
Web stiffeners	2698.1
Longitudinal stiff.	0.0
Bearing stiff.	238.2
Total steel	34829.6

Welding	Vol	lbs
Flange-web	222.7	63.1
Trans.stiff.-web (1/ 4 cont.)	198.2	56.2
Long.stiff.-web (1/ 4 cont.)	71.3	20.2
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6
Total welding *	501.1	142.1
Total steel and weld	34971.8	

Begin solution for web section 5.

* * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * *

Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

Max live load+impact shear

53.2T	45.0T	58.6T	33.6T	-40.0T	-38.9T	-49.1T	-67.7T

Dead load 1 shear

59.7	41.1	23.3	3.5	-14.7	-33.1	-51.1	-67.6

Dead load 2 shear

```
      5.6      3.8      2.1      0.4     -1.3     -2.9     -4.6     -6.3

  Max live load+impact moment
    1129.5L  1417.0L  1513.7L  1557.8L  1419.1L  1162.5T   758.3T     0.0T

  Min live load+impact moment
    -750.8L  -632.5L  -515.4L  -409.3L  -304.8L  -202.3L  -101.2L     0.0T

  Dead load 1 moment
     566.1    1381.5   1897.1   2096.3   2005.9   1623.6    950.8      0.0

  Dead load 2 moment
      46.1     121.5    169.0    188.8    181.7    148.0     87.5      0.0
* * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * * *

   Rate Web depth            =  72.0000 in
        Web thickness        =   0.5000 in


Tenth    Top Flange   Min Top   Bott Flange  Min Bott   Flange to Web Weld
Point      Width      Flange t     Width     Flange t     Top       Bott

  23       18.00       0.750       18.00       0.750      1/ 4      1/ 4
  24       18.00       2.000       18.00       2.000      5/16      5/16
  25       18.00       2.000       18.00       2.000      5/16      5/16
  26       18.00       2.000       18.00       2.000      5/16      5/16
  27       18.00       2.000       18.00       2.000      5/16      5/16
  28       18.00       2.000       18.00       2.000      5/16      5/16
  29       18.00       1.625       18.00       1.625      5/16      5/16
  30       18.00       0.750       18.00       0.750      1/ 4      1/ 4

   2 -   8.00 x  0.500 brng. stf. at 117.50 ft   from left end of web section
         6.00 x   0.50 transverse stiffeners
           1 stiffener space at    60.00 in
                 (straddles web splice)

          Composite section properties at max positive moment - n =  9

             I                              =  194119. in4
             S (top steel)                  =  9350.29 in3
             S (bottom steel)               =  3514.14 in3
             S (concrete)                   =  6662.57 in3
             Neutral axis from bottom flange =    55.24 in


          Composite section properties at max positive moment - n = 27

             I                              =  152917. in4
             S (top steel)                  =  5158.18 in3
             S (bottom steel)               =  3298.87 in3
             S (concrete)                   =  4021.96 in3
             Neutral axis from bottom flange =    46.35 in


          Section properties of girder alone at max positive moment

             I                              =  114144. in4
             S (top)                        =  3003.79 in3
             S (bottom)                     =  3003.79 in3
             Neutral axis from bottom flange =    38.00 in


          Section properties of girder alone at max negative moment
```



```
             I                              =   51278. in4
             S (top)                        =  1395.32 in3
             S (bottom)                     =  1395.32 in3
             Neutral axis from bottom flange =    36.75 in


          Composite section properties at max negative moment

             I                              =   51278. in4
             S (top of steel)               =  1395.32 in3
             S (bottom of steel)            =  1395.32 in3
             S (reinf)                      =  1172.07 in3
             Neutral axis from bottom flange =    36.75 in


* * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * * *


Web Section  5 Stresses
-----------------------

          Factored  Shear                Factored   Bending
Tenth     Shear     Strength             Moment     Strength
Point     (k )      (k )        Ratio    (k-ft)     (k-ft)        Ratio

 23        200.4    626.8 (3)    0.320     3248.0    7040.1 (20) 0.461
 24        156.0    626.8 (3)    0.249     5030.2   11525.1 (20) 0.436
 25        160.2    626.8 (3)    0.256     5972.2   11525.1 (20) 0.518
 26         78.0    626.8 (3)    0.124     6352.5   11525.1 (20) 0.551
 27        107.5    626.8 (3)    0.171     5924.9   11525.1 (20) 0.514
 28        131.4    626.8 (3)    0.210     4826.9   11239.0 (20) 0.429
 29        179.2    626.8 (3)    0.286     2996.1   10084.6 (20) 0.297
 30        243.1    543.6 (5)    0.447        0.0    7040.1 (20) 0.000

          Stiffeners
Location

 385.00    206.2    626.8 (3)    0.329
 390.00    194.9    626.8 (3)    0.311
 395.00    181.0    626.8 (3)    0.289
 400.00    167.1    626.8 (3)    0.267
 405.00    156.3    626.8 (3)    0.249
 410.00    157.6    626.8 (3)    0.251
 415.00    158.9    626.8 (3)    0.254
 425.00    134.6    626.8 (3)    0.215
 430.00    108.9    626.8 (3)    0.174
 435.00     83.2    626.8 (3)    0.133
 440.00     85.4    626.8 (3)    0.136
 445.00     94.6    626.8 (3)    0.151
 450.00    103.8    626.8 (3)    0.166
 455.00    111.9    626.8 (3)    0.179
 460.00    119.4    626.8 (3)    0.191
 465.00    126.9    626.8 (3)    0.202
 470.00    137.4    626.8 (3)    0.219
 475.00    152.3    626.8 (3)    0.243
 480.00    167.2    626.8 (3)    0.267
 485.00    183.1    626.8 (3)    0.292
 490.00    203.1    626.8 (3)    0.324
 495.00    223.1    626.8 (3)    0.356
```

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(5) C 0.58 Fyw D t
(20) compact section

Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	
117.50	137.82	16.80	11.03	0.656	28.80	18.38	0.638

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	388.00	B	1653.30	T	11835.	18000.	0.657
Base metal *	388.00	B	1003.30	T	7172.	16000.	0.448
Base metal	404.00	B	1838.47	T	6576.	18000.	0.365
Base metal *	404.00	B	1122.30	T	4012.	16000.	0.251
Base metal	420.00	B	1849.05	T	6557.	18000.	0.364
Base metal *	420.00	B	1103.28	T	3914.	16000.	0.245
Base metal	436.00	B	1842.34	T	6484.	18000.	0.360
Base metal *	436.00	B	1120.13	T	3941.	16000.	0.246
Base metal	452.00	B	1659.82	T	5811.	18000.	0.323
Base metal *	452.00	B	1002.04	T	3508.	16000.	0.219
Base metal	468.00	B	1326.65	T	4625.	18000.	0.257
Base metal *	468.00	B	797.03	T	2779.	16000.	0.174
Base metal	484.00	B	840.46	T	3394.	18000.	0.189
Base metal *	484.00	B	519.56	T	2097.	16000.	0.131
Near flg-web weld	388.00	B	1653.30	T	11686.	18000.	0.649
Near flg-web weld *	388.00	B	1003.30	T	7082.	16000.	0.443
Near flg-web weld	404.00	B	1838.47	T	6338.	18000.	0.352
Near flg-web weld *	404.00	B	1122.30	T	3867.	16000.	0.242
Near flg-web weld	420.00	B	1849.05	T	6319.	18000.	0.351
Near flg-web weld *	420.00	B	1103.28	T	3772.	16000.	0.236
Near flg-web weld	436.00	B	1842.34	T	6249.	18000.	0.347
Near flg-web weld *	436.00	B	1120.13	T	3798.	16000.	0.237
Near flg-web weld	452.00	B	1659.82	T	5601.	18000.	0.311
Near flg-web weld *	452.00	B	1002.04	T	3381.	16000.	0.211
Near flg-web weld	468.00	B	1326.65	T	4458.	18000.	0.248
Near flg-web weld *	468.00	B	797.03	T	2678.	16000.	0.167
Near flg-web weld	484.00	B	840.46	T	3296.	18000.	0.183
Near flg-web weld *	484.00	B	519.56	T	2036.	16000.	0.127
Top flg. splice	390.00	B	1680.19	T	6761.	18000.	0.376
Top flg splice *	390.00	B	1020.24	T	4076.	16000.	0.255
Top flg. splice	402.00	B	1824.87	T	4260.	18000.	0.237
Top flg splice *	402.00	B	1114.97	T	2587.	16000.	0.162
Top flg. splice	473.00	B	1191.15	T	2073.	18000.	0.115
Top flg splice *	473.00	B	718.11	T	1247.	16000.	0.078
Top flg. splice	485.00	B	798.31	T	1183.	18000.	0.066
Top flg splice *	485.00	B	494.18	T	733.	16000.	0.046
Bot flg. splice	390.00	B	1680.19	T	12017.	18000.	0.668
Bot flg splice *	390.00	B	1020.24	T	7287.	16000.	0.455
Bot flg. splice	402.00	B	1824.87	T	7665.	18000.	0.426
Bot flg splice *	402.00	B	1114.97	T	4679.	16000.	0.292

Bot flg. splice	473.00	B	1191.15	T	4832.	18000.	0.268
Bot flg splice *	473.00	B	718.11	T	2913.	16000.	0.182
Bot flg. splice	485.00	B	798.31	T	4655.	18000.	0.259
Bot flg splice *	485.00	B	494.18	T	2890.	16000.	0.181
Trans. stiff. toe	385.00	C	1605.74	T	11435.	13000.	0.880
Trans. stiff. toe *	385.00	C	973.92	T	6925.	12000.	0.577
Trans. stiff. toe	390.00	C	1676.45	T	11803.	13000.	0.908
Trans. stiff. toe *	390.00	C	1018.17	T	7159.	12000.	0.597
Trans. stiff. toe	395.00	C	1734.31	T	12096.	13000.	0.930
Trans. stiff. toe *	395.00	C	1055.36	T	7351.	12000.	0.613
Trans. stiff. toe	400.00	C	1792.18	T	6351.	13000.	0.489
Trans. stiff. toe *	400.00	C	1092.55	T	3869.	12000.	0.322
Trans. stiff. toe	405.00	C	1839.13	T	6492.	13000.	0.499
Trans. stiff. toe *	405.00	C	1121.11	T	3956.	12000.	0.330
Trans. stiff. toe	410.00	C	1842.44	T	6486.	13000.	0.499
Trans. stiff. toe *	410.00	C	1115.17	T	3925.	12000.	0.327
Trans. stiff. toe	415.00	C	1845.74	T	6480.	13000.	0.498
Trans. stiff. toe *	415.00	C	1109.23	T	3895.	12000.	0.325
Trans. stiff. toe	420.00	C	1849.05	T	6474.	13000.	0.498
Trans. stiff. toe *	420.00	C	1103.28	T	3864.	12000.	0.322
Trans. stiff. toe	425.00	C	1846.95	T	6452.	13000.	0.496
Trans. stiff. toe *	425.00	C	1108.55	T	3873.	12000.	0.323
Trans. stiff. toe	430.00	C	1844.86	T	6429.	13000.	0.495
Trans. stiff. toe *	430.00	C	1113.81	T	3881.	12000.	0.323
Trans. stiff. toe	435.00	C	1842.76	T	6407.	13000.	0.493
Trans. stiff. toe *	435.00	C	1119.08	T	3890.	12000.	0.324
Trans. stiff. toe	440.00	C	1796.71	T	6236.	13000.	0.480
Trans. stiff. toe *	440.00	C	1090.61	T	3784.	12000.	0.315
Trans. stiff. toe	445.00	C	1739.67	T	6029.	13000.	0.464
Trans. stiff. toe *	445.00	C	1053.71	T	3651.	12000.	0.304
Trans. stiff. toe	450.00	C	1682.64	T	5821.	13000.	0.448
Trans. stiff. toe *	450.00	C	1016.80	T	3517.	12000.	0.293
Trans. stiff. toe	455.00	C	1597.35	T	5519.	13000.	0.425
Trans. stiff. toe *	455.00	C	963.60	T	3329.	12000.	0.277
Trans. stiff. toe	460.00	C	1493.24	T	5153.	13000.	0.396
Trans. stiff. toe *	460.00	C	899.54	T	3104.	12000.	0.259
Trans. stiff. toe	465.00	C	1389.12	T	4787.	13000.	0.368
Trans. stiff. toe *	465.00	C	835.47	T	2879.	12000.	0.240
Trans. stiff. toe	470.00	C	1265.88	T	4357.	13000.	0.335
Trans. stiff. toe *	470.00	C	762.35	T	2623.	12000.	0.219
Trans. stiff. toe	475.00	C	1113.94	T	3830.	13000.	0.295
Trans. stiff. toe *	475.00	C	675.64	T	2322.	12000.	0.194
Trans. stiff. toe	480.00	C	962.01	T	3843.	13000.	0.296
Trans. stiff. toe *	480.00	C	588.93	T	2351.	12000.	0.196
Trans. stiff. toe	485.00	C	787.93	T	3142.	13000.	0.242
Trans. stiff. toe *	485.00	C	487.09	T	1941.	12000.	0.162
Trans. stiff. toe	490.00	C	525.29	T	2094.	13000.	0.161
Trans. stiff. toe *	490.00	C	324.73	T	1294.	12000.	0.108

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	388.00	B	1880.34	L	13590.	29000.	0.469
Base metal	404.00	B	2049.54	L	7366.	29000.	0.254
Base metal	420.00	B	2029.10	L	7228.	29000.	0.249
Base metal	436.00	B	1967.10	L	6955.	29000.	0.240
Base metal	452.00	B	1721.49	L	6055.	29000.	0.209

Base metal	468.00	B	1338.86	L	4689.	29000.	0.162
Base metal	484.00	B	798.83	L	3244.	29000.	0.112
Near flg-web weld	388.00	B	1880.34	L	13419.	29000.	0.463
Near flg-web weld	404.00	B	2049.54	L	7099.	29000.	0.245
Near flg-web weld	420.00	B	2029.10	L	6966.	29000.	0.240
Near flg-web weld	436.00	B	1967.10	L	6703.	29000.	0.231
Near flg-web weld	452.00	B	1721.49	L	5836.	29000.	0.201
Near flg-web weld	468.00	B	1338.86	L	4519.	29000.	0.156
Near flg-web weld	484.00	B	798.83	L	3150.	29000.	0.109
Top flg. splice	390.00	B	1906.61	L	8079.	29000.	0.279
Top flg. splice	402.00	B	2038.76	L	4965.	29000.	0.171
Top flg. splice	473.00	B	1187.01	L	2178.	29000.	0.075
Top flg. splice	485.00	B	756.49	L	1111.	29000.	0.038
Bot flg. splice	390.00	B	1906.61	L	13770.	29000.	0.475
Bot flg. splice	402.00	B	2038.76	L	8613.	29000.	0.297
Bot flg. splice	473.00	B	1187.01	L	4843.	29000.	0.167
Bot flg. splice	485.00	B	756.49	L	4296.	29000.	0.148
Trans. stiff. toe	385.00	C	1831.08	L	13174.	21000.	0.627
Trans. stiff. toe	390.00	C	1901.49	L	13517.	21000.	0.644
Trans. stiff. toe	395.00	C	1954.37	L	13764.	21000.	0.655
Trans. stiff. toe	400.00	C	2007.24	L	7147.	21000.	0.340
Trans. stiff. toe	405.00	C	2048.26	L	7265.	21000.	0.346
Trans. stiff. toe	410.00	C	2041.88	L	7222.	21000.	0.344
Trans. stiff. toe	415.00	C	2035.49	L	7180.	21000.	0.342
Trans. stiff. toe	420.00	C	2029.10	L	7137.	21000.	0.340
Trans. stiff. toe	425.00	C	2009.72	L	7053.	21000.	0.336
Trans. stiff. toe	430.00	C	1990.35	L	6968.	21000.	0.332
Trans. stiff. toe	435.00	C	1970.97	L	6884.	21000.	0.328
Trans. stiff. toe	440.00	C	1905.70	L	6645.	21000.	0.316
Trans. stiff. toe	445.00	C	1828.94	L	6368.	21000.	0.303
Trans. stiff. toe	450.00	C	1752.19	L	6090.	21000.	0.290
Trans. stiff. toe	455.00	C	1649.75	L	5726.	21000.	0.273
Trans. stiff. toe	460.00	C	1530.18	L	5305.	21000.	0.253
Trans. stiff. toe	465.00	C	1410.60	L	4883.	21000.	0.233
Trans. stiff. toe	470.00	C	1271.36	L	4395.	21000.	0.209
Trans. stiff. toe	475.00	C	1102.60	L	3808.	21000.	0.181
Trans. stiff. toe	480.00	C	933.84	L	3751.	21000.	0.179
Trans. stiff. toe	485.00	C	748.90	L	3003.	21000.	0.143
Trans. stiff. toe	490.00	C	499.27	L	2002.	21000.	0.095

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Cost Schedule for Web Section 5

	lb
Flange	24239.7
Web	14393.8
Web stiffeners	2817.5
Bearing stiff.	163.3
Total steel	41614.3

Welding	Vol	lbs
Flange-web	257.2	72.9
Trans.stiff.-web (1/ 4 cont.)	207.0	58.7
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6

Total welding * 473.2 134.2

Total steel and weld 41748.5

Summary Tables

Girder 2 Service Shear -k

Tenth Point	Location	Noncomp Dead	Comp Dead	Max LL+I	Range
0	0.00	67.61	6.31	62.78 T	68.71
Top flg.spl.	15.00	52.21	4.74	54.99	60.08
Bot flg.spl.	15.00	52.21	4.74	54.99	60.08
1	16.00	51.14	4.63	54.45 T	59.84
Top flg.spl.	27.00	38.83	3.47	47.54	61.34
Bot flg.spl.	27.00	38.83	3.47	47.54	61.34
2	32.00	33.16	2.94	45.36 T	61.96
3	48.00	14.71	1.28	42.46 T	63.66
4	64.00	-3.49	-0.39	35.83 T	66.25
5	80.00	-23.29	-2.13	-60.33 T	104.71
6	96.00	-41.10	-3.81	-42.45 T	66.77
Top flg.spl.	98.00	-43.38	-4.02	-42.09	64.62
Top flg.spl.	110.00	-57.28	-5.35	-50.59	65.82
Bot flg.spl.	98.00	-43.38	-4.02	-42.09	64.62
Bot flg.spl.	110.00	-57.28	-5.35	-50.59	65.82
7	112.00	-59.68	-5.58	-51.31 T	65.75
Top flg.spl.	128.00	-79.59	-7.44	-53.14	65.94
Bot flg.spl.	128.00	-79.59	-7.44	-53.14	65.94
Top flg.spl.	144.00	-97.65	-9.15	-67.07	72.62
Bot flg.spl.	144.00	-97.65	-9.15	-67.07	72.62
10	160.00L	-116.05	-10.83	-85.52 L	87.70
10	160.00R	99.23	9.63	84.08 L	91.34
Top flg.spl.	178.00	78.60	7.74	63.50	73.31
Top flg.spl.	193.00	62.77	6.19	52.68	66.11
Bot flg.spl.	178.00	78.60	7.74	63.50	73.31
Bot flg.spl.	193.00	62.77	6.19	52.68	66.11
12	196.00	59.62	5.88	50.78 L	65.26
13	214.00	40.84	3.97	41.27 L	64.34
14	232.00	19.52	1.94	41.15 T	63.50
15	250.00	0.05	0.00	33.50 T	64.52
16	268.00	-19.42	-1.94	-39.04 T	63.87
17	286.00	-40.78	-3.97	-40.39 L	64.70
18	304.00	-59.59	-5.88	-50.99 L	66.27
Top flg.spl.	307.00	-62.74	-6.19	-52.90	67.00
Bot flg.spl.	307.00	-62.74	-6.19	-52.90	67.00
Top flg.spl.	322.00	-78.58	-7.74	-63.00	72.70
Bot flg.spl.	322.00	-78.58	-7.74	-63.00	72.70
20	340.00L	-99.22	-9.63	-83.85 L	91.11
20	340.00R	116.00	10.82	85.35 L	87.87
Top flg.spl.	356.00	97.60	9.14	65.53	70.66
Bot flg.spl.	356.00	97.60	9.14	65.53	70.66

Top flg.spl.	372.00	79.56	7.44	54.39	65.90
Bot flg.spl.	372.00	79.56	7.44	54.39	65.90
23	388.00	59.71	5.58	53.22 T	65.52
Top flg.spl.	390.00	57.32	5.35	52.57	65.60
Top flg.spl.	402.00	43.43	4.03	44.79	64.56
Bot flg.spl.	390.00	57.32	5.35	52.57	65.60
Bot flg.spl.	402.00	43.43	4.03	44.79	64.56
24	404.00	41.15	3.81	44.95 T	66.91
25	420.00	23.33	2.13	58.57 T	108.04
26	436.00	3.55	0.40	33.58 T	66.54
27	452.00	-14.65	-1.28	-39.96 T	63.86
28	468.00	-33.13	-2.94	-38.92 T	62.51
Top flg.spl.	473.00	-38.80	-3.46	-40.91	62.46
Bot flg.spl.	473.00	-38.80	-3.46	-40.91	62.46
29	484.00	-51.11	-4.63	-49.15 T	62.93
Top flg.spl.	485.00	-52.18	-4.73	-50.06	63.30
Bot flg.spl.	485.00	-52.18	-4.73	-50.06	63.30
30	500.00	-67.57	-6.31	-67.74 T	73.67

T - governed by truck loading
L - governed by lane loading

Girder 2 Truck-Lane Shear Ranges - k

Tenth	Loc	Truck Max LL+I	Truck Range	Lane Max LL+I	Lane Range
0	0.00	62.31	67.72	61.45	68.15
Top flg.spl.	15.00	54.98	60.04	46.12	52.55
Bot flg.spl.	15.00	54.98	60.04	46.12	52.55
1	16.00	54.45	59.84	45.30	51.93
Top flg.spl.	27.00	47.54	61.34	37.99	49.17
Bot flg.spl.	27.00	47.54	61.34	37.99	49.17
2	32.00	45.36	61.96	35.76	48.95
3	48.00	42.46	63.66	33.25	52.65
4	64.00	35.83	66.25	27.23	53.10
5	80.00	-60.33	104.71	-38.61	60.62
6	96.00	-42.45	66.77	-38.85	55.33
Top flg.spl.	98.00	-42.07	64.62	-39.54	55.38
Top flg.spl.	110.00	-50.42	65.87	-47.51	59.62
Bot flg.spl.	98.00	-42.07	64.62	-39.54	55.38
Bot flg.spl.	110.00	-50.42	65.87	-47.51	59.62
7	112.00	-50.91	65.75	-48.45	60.13
Top flg.spl.	128.00	-49.07	64.97	-53.14	63.20
Bot flg.spl.	128.00	-49.07	64.97	-53.14	63.20
Top flg.spl.	144.00	-60.61	67.57	-67.07	72.62
Bot flg.spl.	144.00	-60.61	67.57	-67.07	72.62
10	160.00L	-70.40	72.26	-85.52	87.70
10	160.00R	73.28	79.46	84.08	91.34
Top flg.spl.	178.00	58.58	65.47	63.50	73.31
Top flg.spl.	193.00	50.46	63.29	52.71	66.24
Bot flg.spl.	178.00	58.58	65.47	63.50	73.31
Bot flg.spl.	193.00	50.46	63.29	52.71	66.24
12	196.00	48.95	63.14	50.78	65.26
13	214.00	40.60	64.34	40.80	62.43
14	232.00	41.15	63.50	36.29	57.90
15	250.00	33.50	64.52	29.05	57.25
16	268.00	-39.04	63.87	-36.22	58.42
17	286.00	-38.68	64.70	-40.39	61.56
18	304.00	-47.16	63.74	-50.99	66.27
Top flg.spl.	307.00	-48.66	63.88	-52.90	67.22

Bot flg.spl.	307.00	-48.66	63.88	-52.90	67.22
Top flg.spl.	322.00	-56.50	65.88	-63.00	72.70
Bot flg.spl.	322.00	-56.50	65.88	-63.00	72.70
20	340.00L	-71.62	77.86	-83.85	91.11
20	340.00R	72.73	74.60	85.35	87.87
Top flg.spl.	356.00	62.21	66.62	65.53	70.66
Bot flg.spl.	356.00	62.21	66.62	65.53	70.66
Top flg.spl.	372.00	51.36	65.05	54.39	65.32
Bot flg.spl.	372.00	51.36	65.05	54.39	65.32
23	388.00	53.07	65.52	47.62	57.97
Top flg.spl.	390.00	52.59	65.64	46.66	57.48
Top flg.spl.	402.00	44.78	64.56	39.90	55.85
Bot flg.spl.	390.00	52.59	65.64	46.66	57.48
Bot flg.spl.	402.00	44.78	64.56	39.90	55.85
24	404.00	44.95	66.91	39.27	56.68
25	420.00	58.57	108.04	38.62	73.51
26	436.00	33.58	66.54	26.95	53.14
27	452.00	-39.96	63.86	-33.37	53.59
28	468.00	-38.92	62.51	-35.24	53.26
Top flg.spl.	473.00	-40.91	62.46	-37.69	54.19
Bot flg.spl.	473.00	-40.91	62.46	-37.69	54.19
29	484.00	-49.15	62.93	-46.21	57.95
Top flg.spl.	485.00	-50.05	63.27	-47.03	58.42
Bot flg.spl.	485.00	-50.05	63.27	-47.03	58.42
30	500.00	-67.34	72.78	-61.29	67.92

Girder 2 Factored Reactions - k

Loc	Noncomp Dead	Comp Dead	LL+I Down	LL+I Up	Max Total	Min Total
0.00	88.46	8.20	137.94	-15.00	234.60	81.66
Steel	28.51					
Conc	59.94					
160.00	280.47	26.58	274.38	-20.82	581.44	286.24
Steel	82.57					
Conc	197.91					
340.00	280.40	26.58	274.38	-20.83	581.37	286.16
Steel	82.55					
Conc	197.85					
500.00	88.41	8.20	137.88	-15.00	234.49	81.61
Steel	28.50					
Conc	59.91					

Unfactored Reactions - k

Loc	Noncomp Dead	Comp Dead	LL+I Down	LL+I Up	Max Total	Min Total

	0.00	68.04	6.31	63.54	-6.91	137.89	67.45
	Steel	21.93					
	Conc	46.11					
	160.00	215.75	20.45	126.38	-9.59	362.58	226.61
	Steel	63.51					
	Conc	152.24					
	340.00	215.69	20.45	126.39	-9.59	362.53	226.55
	Steel	63.50					
	Conc	152.20					
	500.00	68.01	6.31	63.51	-6.91	137.82	67.41
	Steel	21.92					
	Conc	46.09					

Girder 2 Service Moment - k-ft

Tenth Point	Location	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Range
0	0.00	0.00	0.00	0.00 T	0.00	0.00
Top flg.spl	15.00	899.38	82.78	720.77	-94.82	815.59
Bot.flg.spl	15.00	899.38	82.78	720.77	-94.82	815.59
1	16.00	950.67	87.46	757.76 T	-101.14 L	858.91
Top flg.spl	27.00	1444.62	131.96	1051.21	-170.52	1221.73
Bot.flg.spl	27.00	1444.62	131.96	1051.21	-170.52	1221.73
2	32.00	1623.78	148.01	1161.68 T	-202.27 L	1363.95
3	48.00	2006.55	181.78	1418.93 L	-304.80 L	1723.73
4	64.00	2097.78	188.86	1557.92 L	-409.25 L	1967.17
5	80.00	1899.46	169.15	1514.25 L	-515.26 L	2029.51
6	96.00	1384.50	121.67	1417.57 L	-632.41 L	2049.98
Top flg.spl	98.00	1298.97	113.77	1392.04	-647.14	2039.18
Top flg.spl	110.00	686.84	57.25	1172.32	-734.46	1906.78
Bot.flg.spl	98.00	1298.97	113.77	1392.04	-647.14	2039.18
Bot.flg.spl	110.00	686.84	57.25	1172.32	-734.46	1906.78
7	112.00	568.58	46.25	1129.72 L	-750.76 L	1880.48
Top flg.spl	128.00	-544.74	-57.91	720.89	-896.77	1617.66
Bot.flg.spl	128.00	-544.74	-57.91	720.89	-896.77	1617.66
Top flg.spl	144.00	-1958.65	-190.55	437.02	-1404.65	1841.67
Bot.flg.spl	144.00	-1958.65	-190.55	437.02	-1404.65	1841.67
10	160.00	-3669.22	-350.43	319.87 L	-2266.77 L	2586.64
Top flg.spl	178.00	-2070.46	-194.13	386.00	-1346.50	1732.51
Top flg.spl	193.00	-1011.34	-89.40	673.54	-864.47	1538.00
Bot.flg.spl	178.00	-2070.46	-194.13	386.00	-1346.50	1732.51
Bot.flg.spl	193.00	-1011.34	-89.40	673.54	-864.47	1538.00
12	196.00	-827.96	-71.30	724.53 T	-797.63 L	1522.16
13	214.00	73.21	17.30	984.89 T	-603.63 L	1588.52
14	232.00	607.25	70.15	1192.56 T	-560.18 L	1752.75
15	250.00	782.03	87.62	1273.38 T	-530.26 L	1803.64
16	268.00	608.91	70.24	1192.51 T	-560.11 L	1752.62

17	286.00	76.65	17.50	985.06 T	-603.45 L	1588.51
18	304.00	-823.58	-71.05	724.86 T	-797.59 L	1522.45
Top flg.spl	307.00	-1006.94	-89.14	673.84	-864.44	1538.28
Bot.flg.spl	307.00	-1006.94	-89.14	673.84	-864.44	1538.28
Top flg.spl	322.00	-2066.52	-193.91	385.96	-1346.52	1732.49
Bot.flg.spl	322.00	-2066.52	-193.91	385.96	-1346.52	1732.49
20	340.00	-3667.43	-350.33	319.98 L	-2267.91 L	2587.89
Top flg.spl	356.00	-1960.02	-190.63	437.11	-1405.53	1842.65
Bot.flg.spl	356.00	-1960.02	-190.63	437.11	-1405.53	1842.65
Top flg.spl	372.00	-546.63	-57.98	720.69	-896.94	1617.62
Bot.flg.spl	372.00	-546.63	-57.98	720.69	-896.94	1617.62
23	388.00	566.11	46.12	1129.49 L	-750.85 L	1880.34
Top flg.spl	390.00	684.30	57.11	1172.06	-734.54	1906.61
Top flg.spl	402.00	1295.99	113.58	1391.49	-647.28	2038.76
Bot.flg.spl	390.00	684.30	57.11	1172.06	-734.54	1906.61
Bot.flg.spl	402.00	1295.99	113.58	1391.49	-647.28	2038.76
24	404.00	1381.52	121.48	1416.99 L	-632.55 L	2049.54
25	420.00	1897.06	169.00	1513.74 L	-515.35 L	2029.10
26	436.00	2096.32	188.77	1557.75 L	-409.35 L	1967.10
27	452.00	2005.93	181.74	1419.11 L	-304.81 L	1723.91
28	468.00	1623.62	148.00	1162.50 T	-202.28 L	1364.78
Top flg.spl	473.00	1444.57	131.96	1052.05	-170.53	1222.58
Bot.flg.spl	473.00	1444.57	131.96	1052.05	-170.53	1222.58
29	484.00	950.80	87.48	758.35 T	-101.18 L	859.53
Top flg.spl	485.00	899.52	82.80	721.33	-94.86	816.19
Bot.flg.spl	485.00	899.52	82.80	721.33	-94.86	816.19
30	500.00	0.00	0.00	0.00	0.00 T	0.00

T - governed by truck loading
L - governed by lane loading

At Bracing

20.00	1144.97	105.12	891.91	-126.43
40.00	1851.61	168.23	1305.09	-253.29
60.00	2102.11	189.61	1540.29	-382.99
80.00	1899.46	169.15	1514.25	-515.26
100.00	1208.73	105.43	1363.53	-661.89
120.00	49.49	-2.27	909.68	-778.53
140.00	-1577.36	-154.84	492.36	-1244.47
160.00	-3669.22	-350.43	319.87	-2266.77
180.00	-1914.82	-178.83	410.17	-1267.18
200.00	-598.20	-48.66	789.14	-723.85
220.00	292.01	38.89	1059.97	-572.42
240.00	729.29	82.29	1244.15	-545.21
260.00	730.19	82.33	1244.08	-545.18
280.00	294.95	39.06	1060.07	-572.25
300.00	-593.91	-48.41	789.48	-723.79
320.00	-1910.73	-178.60	410.14	-1267.14
340.00	-3667.43	-350.33	319.98	-2267.91
360.00	-1579.11	-154.93	492.40	-1245.22
380.00	47.32	-2.36	909.44	-778.58
400.00	1205.78	105.25	1363.00	-662.02
420.00	1897.06	169.00	1513.74	-515.35
440.00	2100.88	189.53	1540.22	-383.07
460.00	1851.27	168.21	1305.55	-253.29
480.00	1145.07	105.14	892.59	-126.46

Girder 2 Truck-Lane Moment Ranges - k-ft

Tenth	Loc	Truck			Lane		
		Max LL+I	Min LL+I	Range	Max LL+I	Min LL+I	Range
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Top flg.spl	15.00	720.77	-76.97	797.74	661.20	-94.82	756.02
Bot.flg.spl	15.00	720.77	-76.97	797.74	661.20	-94.82	756.02
1	16.00	757.76	-82.10	839.86	697.21	-101.14	798.35
Top flg.spl	27.00	1051.92	-138.40	1190.33	1016.00	-170.52	1186.51
Bot.flg.spl	27.00	1051.92	-138.40	1190.33	1016.00	-170.52	1186.51
2	32.00	1161.68	-164.18	1325.86	1136.14	-202.27	1338.41
3	48.00	1412.28	-247.41	1659.69	1416.60	-304.80	1721.40
4	64.00	1510.09	-332.23	1842.32	1557.92	-409.25	1967.17
5	80.00	1430.95	-418.35	1849.30	1514.25	-515.26	2029.51
6	96.00	1325.03	-513.81	1838.84	1417.57	-632.41	2049.98
Top flg.spl	98.00	1299.38	-525.81	1825.19	1392.04	-647.14	2039.18
Top flg.spl	110.00	1082.28	-597.59	1679.87	1172.32	-734.46	1906.77
Bot.flg.spl	98.00	1299.38	-525.81	1825.19	1392.04	-647.14	2039.18
Bot.flg.spl	110.00	1082.28	-597.59	1679.87	1172.32	-734.46	1906.77
7	112.00	1042.68	-610.28	1652.96	1129.72	-750.76	1880.48
8	128.00	681.65	-718.19	1399.85	720.89	-896.77	1617.66
Top flg.spl	128.00	681.65	-718.19	1399.85	720.89	-896.77	1617.66
Bot.flg.spl	128.00	681.65	-718.19	1399.85	720.89	-896.77	1617.66
9	144.00	295.33	-839.54	1134.87	437.02	-1404.65	1841.67
Top flg.spl	144.00	295.33	-839.54	1134.87	437.02	-1404.65	1841.67
Bot.flg.spl	144.00	295.33	-839.54	1134.87	437.02	-1404.65	1841.67
10	160.00	273.03	-973.18	1246.21	319.87	-2266.77	2586.64
11	178.00	325.13	-770.69	1095.81	386.00	-1346.50	1732.51
Top flg.spl	178.00	325.13	-770.69	1095.81	386.00	-1346.50	1732.51
Top flg.spl	193.00	667.62	-645.75	1313.37	557.00	-864.47	1421.47
Bot.flg.spl	178.00	325.13	-770.69	1095.81	386.00	-1346.50	1732.51
Bot.flg.spl	193.00	667.62	-645.75	1313.37	557.00	-864.47	1421.47
12	196.00	724.53	-621.48	1346.01	597.30	-797.63	1394.94
13	214.00	984.89	-480.87	1465.76	881.85	-603.63	1485.48
14	232.00	1192.56	-362.14	1554.71	1146.56	-560.18	1706.75
15	250.00	1273.38	-254.31	1527.69	1248.71	-530.26	1778.96
16	268.00	1192.51	-362.18	1554.68	1146.73	-560.11	1706.84
17	286.00	985.06	-480.78	1465.84	882.33	-603.45	1485.78
18	304.00	724.86	-621.37	1346.23	597.78	-797.59	1395.37
Top flg.spl	307.00	667.89	-645.64	1313.53	557.42	-864.44	1421.87
Bot.flg.spl	307.00	667.89	-645.64	1313.53	557.42	-864.44	1421.87
19	322.00	324.74	-770.56	1095.30	385.96	-1346.52	1732.49
Top flg.spl	322.00	324.74	-770.56	1095.30	385.96	-1346.52	1732.49
Bot.flg.spl	322.00	324.74	-770.56	1095.30	385.96	-1346.52	1732.49
20	340.00	273.06	-973.27	1246.33	319.98	-2267.91	2587.89
21	356.00	295.50	-839.55	1135.05	437.11	-1405.53	1842.65
Top flg.spl	356.00	295.50	-839.55	1135.05	437.11	-1405.53	1842.65
Bot.flg.spl	356.00	295.50	-839.55	1135.05	437.11	-1405.53	1842.65
22	372.00	681.51	-718.13	1399.64	720.69	-896.94	1617.62
Top flg.spl	372.00	681.51	-718.13	1399.64	720.69	-896.94	1617.62
Bot.flg.spl	372.00	681.51	-718.13	1399.64	720.69	-896.94	1617.62
23	388.00	1043.07	-610.23	1653.30	1129.49	-750.85	1880.34
Top flg.spl	390.00	1082.65	-597.55	1680.19	1172.06	-734.54	1906.61
Top flg.spl	402.00	1299.06	-525.82	1824.87	1391.49	-647.28	2038.76
Bot.flg.spl	390.00	1082.65	-597.55	1680.19	1172.06	-734.54	1906.61
Bot.flg.spl	402.00	1299.06	-525.82	1824.87	1391.49	-647.28	2038.76
24	404.00	1324.65	-513.82	1838.47	1416.99	-632.55	2049.54
25	420.00	1430.71	-418.34	1849.05	1513.74	-515.35	2029.10
26	436.00	1510.10	-332.24	1842.34	1557.75	-409.35	1967.10
27	452.00	1412.45	-247.37	1659.82	1416.68	-304.81	1721.49
28	468.00	1162.50	-164.15	1326.65	1136.59	-202.28	1338.86
Top flg.spl	473.00	1052.77	-138.38	1191.15	1016.48	-170.53	1187.01
Bot.flg.spl	473.00	1052.77	-138.38	1191.15	1016.48	-170.53	1187.01
29	484.00	758.35	-82.11	840.46	697.65	-101.18	798.83

Top flg.spl	485.00	721.33	-76.98	798.31	661.62	-94.86	756.49
Bot.flg.spl	485.00	721.33	-76.98	798.31	661.62	-94.86	756.49
30	500.00	0.00	0.00	0.00	0.00	0.00	0.00

Girder 2 Service Torque - k-ft

Tenth Point	Location	DL1	DL2	Max LL+I	Min LL+I	Range
0	0.00	0.00	0.00	6.93	-5.71	12.65
TOP FLG.SPL	15.00	0.00	0.00	6.99	-5.76	12.76
BOT.FLG.SPL	15.00	0.00	0.00	6.99	-5.76	12.76
1	16.00	0.00	0.00	6.96 T	-5.74 L	12.70
TOP FLG.SPL	27.00	-0.01	-0.01	6.32	-5.21	11.53
BOT.FLG.SPL	27.00	-0.01	-0.01	6.32	-5.21	11.53
2	32.00	0.00	-0.01	5.91 T	-4.88 L	10.80
3	48.00	0.00	0.00	4.09 L	-3.50 L	7.58
4	64.00	0.00	0.02	2.24 L	-2.17 L	4.41
5	80.00	0.00	0.02	2.24 L	-2.17 L	4.41
6	96.00	0.06	0.04	1.42 L	-2.00 L	3.42
TOP FLG.SPL	98.00	0.06	0.04	1.47	-2.10	3.57
TOP FLG.SPL	110.00	0.00	0.00	2.53	-3.37	5.90
BOT.FLG.SPL	98.00	0.06	0.04	1.47	-2.10	3.57
BOT.FLG.SPL	110.00	0.00	0.00	2.53	-3.37	5.90
7	112.00	0.00	-0.01	2.77 L	-3.64 L	6.42
TOP FLG.SPL	128.00	-0.01	-0.03	5.55	-6.46	12.01
BOT.FLG.SPL	128.00	-0.01	-0.03	5.55	-6.46	12.01
TOP FLG.SPL	144.00	-0.03	-0.03	7.12	-7.79	14.91
BOT.FLG.SPL	144.00	-0.03	-0.03	7.12	-7.79	14.91
10	160.00	0.00	-0.03	7.53 L	-7.96 L	15.49
TOP FLG.SPL	178.00	-0.03	-0.02	7.51	-7.95	15.46
TOP FLG.SPL	193.00	0.01	0.03	7.12	-7.15	14.27
BOT.FLG.SPL	178.00	-0.03	-0.02	7.51	-7.95	15.46
BOT.FLG.SPL	193.00	0.01	0.03	7.12	-7.15	14.27
12	196.00	0.00	0.03	6.95 T	-6.91 L	13.86
13	214.00	0.00	0.03	5.27 T	-4.93 L	10.20
14	232.00	0.00	0.00	3.36 T	-3.16 L	6.52
15	250.00	0.00	0.00	2.77 T	-2.77 L	5.55
16	268.00	0.00	0.00	3.16 T	-3.36 L	6.51
17	286.00	0.00	-0.03	4.93 T	-5.27 L	10.20
18	304.00	0.00	-0.03	6.91 T	-6.95 L	13.86
TOP FLG.SPL	307.00	-0.01	-0.03	7.15	-7.12	14.27
BOT.FLG.SPL	307.00	-0.01	-0.03	7.15	-7.12	14.27
TOP FLG.SPL	322.00	0.03	0.01	7.94	-7.51	15.46
BOT.FLG.SPL	322.00	0.03	0.01	7.94	-7.51	15.46
20	340.00	0.00	0.03	7.95 L	-7.52 L	15.47
TOP FLG.SPL	356.00	0.03	0.03	7.79	-7.12	14.91
BOT.FLG.SPL	356.00	0.03	0.03	7.79	-7.12	14.91
TOP FLG.SPL	372.00	0.01	0.03	6.46	-5.55	12.01
BOT.FLG.SPL	372.00	0.01	0.03	6.46	-5.55	12.01
23	388.00	0.00	0.01	3.64 L	-2.77 L	6.41
TOP FLG.SPL	390.00	0.00	0.00	3.37	-2.53	5.90
TOP FLG.SPL	402.00	-0.06	-0.04	2.11	-1.52	3.63
BOT.FLG.SPL	390.00	0.00	0.00	3.37	-2.53	5.90
BOT.FLG.SPL	402.00	-0.06	-0.04	2.11	-1.52	3.63
24	404.00	-0.06	-0.04	2.00 L	-1.42 L	3.42
25	420.00	-0.06	-0.04	2.00 L	-1.42 L	3.42
26	436.00	0.00	-0.02	2.17 L	-2.24 L	4.40
27	452.00	0.00	0.00	3.50 L	-4.08 L	7.58
28	468.00	0.00	0.01	4.88 T	-5.91 L	10.79
TOP FLG.SPL	473.00	0.01	0.01	5.21	-6.32	11.53
BOT.FLG.SPL	473.00	0.01	0.01	5.21	-6.32	11.53

29	484.00	0.00	0.00	5.74 T	-6.96 L	12.70
TOP FLG.SPL	485.00	0.00	0.00	5.76	-6.99	12.76
BOT.FLG.SPL	485.00	0.00	0.00	5.76	-6.99	12.76
30	500.00	0.00	0.00	5.71	-6.93	12.65

Girder 2 Combined Factored Moment - k-ft

Tenth Pt	Loc	Tot Dead+Max LL+I	Tot Dead+Min LL+I
0	0.00	0.00	0.00
1	16.00	2994.67	1129.98
2	32.00	4825.33	1864.19
3	48.00	5925.34	2183.11
4	64.00	6354.87	2084.14
5	80.00	5976.62	1570.55
6	96.00	5035.56	585.05
7	112.00	3251.90	-830.63
8	128.00	781.59	-2730.34
9	144.00	-1845.19	-5843.46
10	160.00	-4531.12	-10146.70
11	178.00	-2105.96	-5867.24
12	196.00	403.92	-2900.70
13	214.00	2255.85	-1192.83
14	232.00	3469.69	-335.53
15	250.00	3895.05	-20.65
16	268.00	3471.83	-333.10
17	286.00	2260.95	-1187.69
18	304.00	410.65	-2894.59
19	322.00	-2100.63	-5861.86
20	340.00	-4528.40	-10146.72
21	356.00	-1846.86	-5847.25
22	372.00	778.61	-2733.25
23	388.00	3248.03	-834.20
24	404.00	5030.19	580.63
25	420.00	5972.21	1567.04
26	436.00	6352.50	2081.93
27	452.00	5924.86	2182.24
28	468.00	4826.89	1863.96
29	484.00	2996.14	1130.10
30	500.00	0.00	-0.01

Contraflexure Points

Service Noncomposite Dead

120.17 ft
212.54 ft
287.53 ft
379.86 ft

Top flange tension for region between contraflexure pts.
120.17 - 212.54
287.53 - 379.86

Bottom flange tension for region between contraflexure pts.
0.00 - 120.17
212.54 - 287.53
379.86 - 500.00

Service Tot Dead+Max LL+I

129.03 ft
198.52 ft
301.55 ft
370.98 ft

Top flange tension for region between contraflexure pts.
129.03 - 198.52
301.55 - 370.98

Bottom flange tension for region between contraflexure pts.
0.00 - 129.03
198.52 - 301.55
370.98 - 500.00

Service Tot Dead+Min LL+I

109.85 ft
228.65 ft
271.41 ft
390.20 ft

Top flange tension for region between contraflexure pts.
109.85 - 228.65
271.41 - 390.20

Bottom flange tension for region between contraflexure pts.
0.00 - 109.85
228.65 - 271.41
390.20 - 500.00

Factored Tot Dead+Max LL+I

132.76 ft
193.10 ft
306.94 ft
367.26 ft

Top flange tension for region between contraflexure pts.
132.76 - 193.10
306.94 - 367.26

Bottom flange tension for region between contraflexure pts.
0.00 - 132.76
193.10 - 306.94
367.26 - 500.00

Factored Tot Dead+Min LL+I

102.61 ft
397.43 ft

Top flange tension for region between contraflexure pts.
102.61 - 397.43

Bottom flange tension for region between contraflexure pts.
0.00 - 102.61
397.43 - 500.00

Factored Composite Dead - Construction

119.10 ft
210.49 ft
289.56 ft
380.91 ft

Top flange tension for region between contraflexure pts.
119.10 - 210.49
289.56 - 380.91

Rebar termination for 10.50.2.3 requirement
no limit - no limit
no limit - no limit
Modulus of rupture - 410.79

Bottom flange tension for region between contraflexure pts.
0.00 - 119.10
210.49 - 289.56
380.91 - 500.00

Total Dead + 1.67 Min LL+I - 10.57 Overload

102.61 ft
397.43 ft

Top flange tension for region between contraflexure pts.
102.61 - 397.43
289.56 - 380.91

Rebar termination for 10.50.2.3 requirement - noncomp dead excluded
118.10 - 198.94
301.12 - 381.91
Modulus of rupture - 410.79

Bottom flange tension for region between contraflexure pts.
0.00 - 102.61
397.43 - 289.56
380.91 - 500.00

Girder 2 Dimensions

Tenth Point	Loc	-Top Flange- tfw	tft	weld	----Web---- wd	wt	weld	-Bot Flange- bfw	bft	Area
0	0.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpL	15.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpR	15.00	18.00	1.625	1/ 4	72.00	0.500	1/ 4	18.00	1.625	94.50
1	16.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpL	27.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpR	27.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
2	32.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
3	48.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
4	64.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
5	80.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
6	96.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpL	98.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpR	98.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpL	110.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpR	110.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00

Tenth Point	Loc	-Top Flange- tfw	tft	weld	----Web---- wd	wt	weld	-Bot Flange- bfw	bft	Area
7	112.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpL	128.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
SpR	128.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpL	144.00	18.00	1.750	5/16	89.41	0.500	5/16	18.00	1.750	107.71
SpR	144.00	18.00	2.000	5/16	89.77	0.500	5/16	18.00	2.000	116.88
10	160.00	18.00	2.000	5/16	105.00	0.500	5/16	18.00	2.000	124.50
SpL	178.00	18.00	2.000	5/16	85.51	0.500	5/16	18.00	2.000	114.75
SpR	178.00	18.00	1.750	5/16	85.18	0.500	5/16	18.00	1.750	105.59
SpL	193.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpR	193.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
12	196.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
13	214.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
14	232.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
15	250.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
16	268.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
17	286.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
18	304.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
SpL	307.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
SpR	307.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpL	322.00	18.00	1.750	5/16	85.18	0.500	5/16	18.00	1.750	105.59
SpR	322.00	18.00	2.000	5/16	85.51	0.500	5/16	18.00	2.000	114.75
20	340.00	18.00	2.000	5/16	105.00	0.500	5/16	18.00	2.000	124.50
SpL	356.00	18.00	2.000	5/16	89.77	0.500	5/16	18.00	2.000	116.88
SpR	356.00	18.00	1.750	5/16	89.41	0.500	5/16	18.00	1.750	107.71
SpL	372.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpR	372.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
23	388.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpL	390.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpR	390.00	18.00	1.625	1/ 4	72.00	0.500	1/ 4	18.00	1.625	94.50
SpL	402.00	18.00	1.625	1/ 4	72.00	0.500	1/ 4	18.00	1.625	94.50
SpR	402.00	18.00	2.000	1/ 4	72.00	0.500	1/ 4	18.00	2.000	108.00
24	404.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
25	420.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
26	436.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
27	452.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
28	468.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpL	473.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpR	473.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
29	484.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpL	485.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpR	485.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
30	500.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00

Theoretical Flange Splice Locations

Tenth Pt Range	Location
0 - 1	a
1 - 2	a
6 - 7	a
7 - 8	a
8 - 9	a
9 - 10	a
10 - 11	a
11 - 12	179.33
18 - 19	313.00
19 - 20	a
20 - 21	a
21 - 22	a
22 - 23	a
23 - 24	a

28 - 29 a
29 - 30 a

a. Splice not required in this range.

Stiffener Spacing

Panel Start	Panel End	Uniform in Panel
0.00	500.00 ft	100 @ 60.00 in

Longitudinal Web Stiffeners

Web Section	Width	Thickness
2	4.00	0.500
4	4.00	0.500

Bearing Stiffeners

Location	Width	Thickness
0.00	8.00	0.500
160.00	8.00	0.500
340.00	8.00	0.500
500.00	8.00	0.500

Transverse Stiffeners

Web Section	Width	Thickness
1	6.00	0.500
2	6.00	0.500
3	6.00	0.500
4	6.00	0.500
5	6.00	0.500

Girder 2 Elastic Section Properties for Stiffness Analysis

Tenth Point	Noncomp I	Noncomp na from Bott	Noncomp na from Top Flg	Comp (n = 9) I	Comp (n = 9) na from Bott	Comp (n = 9) na from Top Flg	Comp (3n = 27) I	Comp (3n = 27) na from Bott	Comp (3n = 27) na from Top Flg
0	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19
1	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
2	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
3	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
4	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
5	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
6	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
7	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
8	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
9	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
10	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20

11	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
12	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
13	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
14	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
15	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
16	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
17	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
18	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
19	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
20	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
21	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
22	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
23	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
24	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
25	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
26	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
27	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
28	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
29	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
30	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19

Girder 2 Elastic Section Properties for Pos Mom Stress

Tenth Point	I	Noncomp na from Bott	Noncomp na from Top Flg	I	Comp (n = 9) na from Bott	Comp (n = 9) na from Top Flg	I	Comp (3n = 27) na from Bott	Comp (3n = 27) na from Top Flg
0	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19
1	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
2	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
3	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
4	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
5	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
6	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
7	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
8	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
9	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
10	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
11	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
12	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
13	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
14	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
15	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
16	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
17	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
18	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
19	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
20	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
21	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
22	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
23	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
24	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
25	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
26	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
27	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
28	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
29	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
30	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19

Girder 2 Elastic Section Properties for Neg Mom Stress

Tenth Point	I	Noncomp na from Bott	Noncomp na from Top Flg	I	Comp (n = 9) na from Bott	Comp (n = 9) na from Top Flg	I	Comp (3n = 27) na from Bott	Comp (3n = 27) na from Top Flg
0	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75
1	94842.	37.62	37.62	94842.	37.62	37.62	94842.	37.62	37.62
2	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
3	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
4	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
5	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
6	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
7	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75
8	75920.	37.25	37.25	75920.	37.25	37.25	75920.	37.25	37.25
9	171156.	46.67	46.67	171156.	46.67	46.67	171156.	46.67	46.67
10	254340.	54.50	54.50	259366.	55.17	53.83	259366.	55.17	53.83
11	154289.	44.55	44.55	154289.	44.55	44.55	154289.	44.55	44.55
12	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
13	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
14	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
15	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
16	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
17	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
18	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
19	154289.	44.55	44.55	154289.	44.55	44.55	154289.	44.55	44.55
20	254340.	54.50	54.50	259366.	55.17	53.83	259366.	55.17	53.83
21	171156.	46.67	46.67	171156.	46.67	46.67	171156.	46.67	46.67
22	75920.	37.25	37.25	75920.	37.25	37.25	75920.	37.25	37.25
23	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75
24	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
25	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
26	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
27	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
28	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
29	94842.	37.62	37.62	94842.	37.62	37.62	94842.	37.62	37.62
30	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75

Girder 2 Plastic Section Properties

Tenth Point	C (10-123)	C (10-124)	a (10-125)	C' (10-126)	Ybar (10-127 10-128)	Dp	D'	Pos Mom Mp (k-ft) or Mu of (10-129c) (10-129d)	Neg Mom Mp (k-ft)
0	1720	2016	7.25	148.0	0.26	9.88	9.97	7040.14	noncmpct
1	1720	3024	7.25	652.0	1.13	9.88	10.08	10084.31	noncmpct
2	1720	3456	7.25	868.0	1.51	9.88	10.12	11238.31	noncmpct
3	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
4	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
5	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
6	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
7	1720	2016	7.25	148.0	0.26	9.88	9.97	7040.14	noncmpct
8								noncmpct	noncmpct
9								noncmpct	noncmpct
10								noncmpct	noncmpct
11								noncmpct	noncmpct

12								noncmpct	noncmpct
13	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
14	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
15	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
16	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
17	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
18								noncmpct	noncmpct
19								noncmpct	noncmpct
20								noncmpct	noncmpct
21								noncmpct	noncmpct
22								noncmpct	noncmpct
23	1720	2016	7.25	148.0	0.26	9.88	9.97	7040.14	noncmpct
24	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
25	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
26	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
27	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
28	1720	3456	7.25	868.0	1.51	9.88	10.12	11238.97	noncmpct
29	1720	3024	7.25	652.0	1.13	9.88	10.08	10084.63	noncmpct
30	1720	2016	7.25	148.0	0.26	9.88	9.97	7040.14	noncmpct

Girder 2 Elastic Noncomposite Section Properties at Web Splices

Splice Location	Web wd	wt	Top Flg tfw	tft	Bott Flg bfw	bft	Area (in2)	I (in4)	na from Bott	na from Top
117.50L	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75
117.50R	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75
212.50L	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
212.50R	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
287.50L	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
287.50R	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
382.50L	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75
382.50R	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75

Girder 2 Summary of Service Load Effects at Web Splice Locations

Splice Location

117.50

Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
-66.4	-6.2	219.4	13.7

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
-51.4	65.5	927.5	-646.1

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
-50.6	61.4	1002.8	-797.8

Concurrent moment for max shear of -51.4 = 956.5

Concurrent shear for max moment of 1002.8 = -10.8
Concurrent shear for min moment of -797.8 = -50.6

212.50

Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
42.5	4.1	12.1	11.3

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
41.0	64.3	965.2	-491.8

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
41.4	62.7	858.9	-614.1

Concurrent moment for max shear of 41.4 = 889.3
Concurrent shear for max moment of 965.2 = 36.9
Concurrent shear for min moment of -614.1 = 21.3

287.50

Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
-42.4	-4.1	15.7	11.5

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
-39.0	64.7	965.4	-491.7

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
-41.0	61.9	859.4	-613.9

Concurrent moment for max shear of -41.0 = 860.7
Concurrent shear for max moment of 965.4 = -32.5
Concurrent shear for min moment of -613.9 = -41.0

382.50

Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
66.4	6.2	217.1	13.6

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
53.6	65.3	927.8	-646.0

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
50.1	59.8	1002.6	-797.9

Concurrent moment for max shear of 53.6 = 956.3
Concurrent shear for max moment of 1002.6 = 50.1
Concurrent shear for min moment of -797.9 = 9.7

Parabolic interpolation used in this table.

Girder 2 Shear Strength at Web Splices

Splice Location	Web Depth	Web t Left of Spl	Web t Right of Spl	Stiff Spcng	Factored Shear at Spl	Shear Strngth Left of Splice	Perf Ratio	Shear Strngth Right of Splice	Perf Ratio
ft	in	in	in	in	k	k		k	

117.50	72.00	0.500	0.500	60.00	207.32	626.85	0.331	626.85	0.331
212.50	72.00	0.500	0.500	60.00	151.82	626.85	0.242	626.85	0.242
287.50	72.00	0.500	0.500	60.00	150.03	626.85	0.239	626.85	0.239
382.50	72.00	0.500	0.500	60.00	210.99	626.85	0.337	626.85	0.337

Girder 2 Grp I Factored Bending Stresses - ksi

Tenth Point	Loc	Top Flange							
		Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	LL+I Rng	Tot	Allow	Ratio
0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000
Top	Flg.Spl.	-10.1	-0.4	-2.3	1.8	4.1	-12.7	32.0	0.397
Top	Flg.Spl.	-5.6	-0.3	-2.1	1.0	3.1	-7.9	32.0	0.248
1	16.00	-5.9	-0.3	-2.2	1.0	3.2	-8.4	32.0	0.297
Top	Flg.Spl.	-8.9	-0.4	-3.1	1.8	4.8	-12.4	32.0	0.435
Top	Flg.Spl.	-7.5	-0.4	-2.9	1.5	4.4	-10.8	32.0	0.385
2	32.00	-8.4	-0.4	-3.2	1.8	5.0	-12.1	32.0	0.429
3	48.00	-10.4	-0.5	-4.0	2.6	6.6	-14.9	32.0	0.514
4	64.00	-10.9	-0.6	-4.3	3.5	7.9	-15.8	32.0	0.551
5	80.00	-9.9	-0.5	-4.2	4.5	8.7	-14.6	32.0	0.519
6	96.00	-7.2	-0.4	-3.9	5.5	9.4	-11.5	32.0	0.437
Top	Flg.Spl.	-6.7	-0.3	-3.9	5.6	9.5	-11.0	32.0	0.422
Top	Flg.Spl.	-8.0	-0.4	-4.0	6.7	10.7	-12.5	32.0	0.478
Top	Flg.Spl.	-4.3	-0.2	-3.4	7.6	11.0	-7.8	32.0	0.335
Top	Flg.Spl.	-7.7	-0.3	-3.7	13.7	17.4	-11.6	32.0	0.484
7	112.00	-6.4	-0.2	-3.6	14.0	17.6	-10.1	32.0	0.462
Top	Flg.Spl.	6.1	0.6	-2.3	16.7	19.0	23.5	32.0	0.734
Top	Flg.Spl.	3.2	0.3	-2.1	8.7	10.8	12.2	32.0	0.382
10	160.00	12.3	1.1	-0.7	12.3	12.9	25.7	32.0	0.802
Top	Flg.Spl.	8.8	0.8	-0.9	9.6	10.5	19.2	32.0	0.601
Top	Flg.Spl.	9.9	0.9	-1.0	10.7	11.7	21.6	32.0	0.674
Top	Flg.Spl.	5.9	0.5	-1.9	8.4	10.3	14.8	32.0	0.463
Top	Flg.Spl.	9.2	0.8	-2.1	13.1	15.2	23.1	32.0	0.723
12	196.00	7.5	0.6	-2.2	12.1	14.3	20.3	32.0	0.634
13	214.00	-0.7	-0.1	-3.1	9.2	12.2	8.4	32.0	0.285
14	232.00	-5.5	-0.3	-3.7	8.5	12.2	-9.5	32.0	0.438
15	250.00	-7.1	-0.4	-3.9	8.0	12.0	-11.4	32.0	0.491
16	268.00	-5.5	-0.3	-3.7	8.5	12.2	-9.5	32.0	0.438
17	286.00	-0.7	-0.1	-3.1	9.2	12.2	8.4	32.0	0.285
18	304.00	7.5	0.6	-2.2	12.1	14.4	20.2	32.0	0.632
Top	Flg.Spl.	9.2	0.8	-2.1	13.1	15.2	23.1	32.0	0.721
Top	Flg.Spl.	5.9	0.5	-1.9	8.4	10.3	14.8	32.0	0.462
20	340.00	12.3	1.1	-0.7	12.3	12.9	25.7	32.0	0.802
Top	Flg.Spl.	7.9	0.8	-1.0	9.4	10.5	18.1	32.0	0.566
Top	Flg.Spl.	8.8	0.9	-1.1	10.6	11.6	20.3	32.0	0.634
23	388.00	-6.3	-0.2	-3.6	14.0	17.6	-10.1	32.0	0.461
Top	Flg.Spl.	-7.7	-0.3	-3.7	13.7	17.4	-11.6	32.0	0.483
Top	Flg.Spl.	-4.2	-0.2	-3.4	7.6	11.0	-7.8	32.0	0.335
Top	Flg.Spl.	-8.0	-0.4	-4.0	6.7	10.7	-12.4	32.0	0.478
Top	Flg.Spl.	-6.7	-0.3	-3.9	5.6	9.5	-11.0	32.0	0.421
24	404.00	-7.2	-0.4	-3.9	5.5	9.4	-11.5	32.0	0.436
25	420.00	-9.9	-0.5	-4.2	4.5	8.7	-14.6	32.0	0.518
26	436.00	-10.9	-0.6	-4.3	3.6	7.9	-15.8	32.0	0.551
27	452.00	-10.4	-0.5	-4.0	2.6	6.6	-14.9	32.0	0.514
28	468.00	-8.4	-0.4	-3.2	1.8	5.0	-12.1	32.0	0.429
Top	Flg.Spl.	-7.5	-0.4	-2.9	1.5	4.4	-10.8	32.0	0.385
Top	Flg.Spl.	-8.9	-0.4	-3.1	1.8	4.8	-12.4	32.0	0.436
29	484.00	-5.9	-0.3	-2.2	1.0	3.2	-8.4	32.0	0.297
Top	Flg.Spl.	-5.6	-0.3	-2.1	1.0	3.1	-7.9	32.0	0.282

Top	Flg.Spl.	-10.1	-0.4	-2.4	1.8	4.2	-12.8	32.0	0.404
30	500.00	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000

Governing expression for allowable compression stress

Tenth Pt	Expression
1	compact
2	compact
3	compact
4	compact
5	compact
6	compact
7	compact
13	compact
14	compact
15	compact
16	compact
17	compact
23	compact
24	compact
25	compact
26	compact
27	compact
28	compact
29	compact

Perf. ratio for compact section is (factored mom)/(mom strength).

First of two splice entries is to left of splice, second is to right of splice.

Girder 2 Grp I Factored Bending Stresses - ksi

Tenth Point	Loc	Bottom Flange								
		Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	LL+I Rng	Wind	Tot	Allow	Ratio
0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000
Bot.	Flg.Spl.	10.1	0.9	9.9	-1.8	11.7	0.0	20.9	32.0	0.652
Bot.	Flg.Spl.	5.6	0.5	6.2	-1.0	7.2	0.0	12.3	32.0	0.384
1	16.00	5.9	0.5	6.5	-1.0	7.6	0.0	12.9	32.0	0.297
Bot.	Flg.Spl.	8.9	0.7	9.0	-1.8	10.8	0.0	18.7	32.0	0.435
Bot.	Flg.Spl.	7.5	0.6	7.8	-1.5	9.3	0.0	15.9	32.0	0.385
2	32.00	8.4	0.7	8.6	-1.8	10.4	0.0	17.7	32.0	0.429
3	48.00	10.4	0.9	10.5	-2.6	13.2	0.0	21.8	32.0	0.514
4	64.00	10.9	0.9	11.5	-3.5	15.1	0.0	23.3	32.0	0.551
5	80.00	9.9	0.8	11.2	-4.5	15.7	0.0	21.9	32.0	0.519
6	96.00	7.2	0.6	10.5	-5.5	16.0	0.0	18.3	32.0	0.437
Bot.	Flg.Spl.	6.7	0.5	10.3	-5.6	15.9	0.0	17.6	32.0	0.422
Bot.	Flg.Spl.	8.0	0.6	12.0	-6.7	18.7	0.0	20.6	32.0	0.478
Bot.	Flg.Spl.	4.3	0.3	10.1	-7.6	17.7	0.0	14.6	32.0	0.335
Bot.	Flg.Spl.	7.7	0.5	16.1	-13.7	29.8	0.0	24.3	32.0	0.484
7	112.00	6.4	0.4	15.5	-14.0	29.5	0.0	22.3	32.0	0.462
Bot.	Flg.Spl.	-6.1	-0.6	9.9	-16.7	26.6	0.0	-23.5	32.0	0.734
Bot.	Flg.Spl.	-3.2	-0.3	5.9	-8.7	14.6	0.0	-12.2	32.0	0.382
10	160.00	-12.3	-1.2	1.5	-12.6	14.1	0.0	-26.0	32.0	0.812
Bot.	Flg.Spl.	-8.9	-0.8	2.4	-9.7	12.1	0.0	-19.5	32.0	0.609
Bot.	Flg.Spl.	-10.0	-0.9	2.6	-10.9	13.5	0.0	-21.9	32.0	0.683
Bot.	Flg.Spl.	-6.0	-0.5	5.6	-8.5	14.1	0.0	-15.0	32.0	0.469

Bot.Flg.Spl.	-9.3	-0.8	8.0	-13.3	21.3	0.0	-23.4	32.0	0.732
12	196.00	-7.5	-0.6	8.5	-12.1	20.6	0.0	-20.3	32.0	0.634
13	214.00	0.7	0.1	11.5	-9.2	20.7	0.0	12.3	32.0	0.285
14	232.00	5.5	0.5	14.0	-8.5	22.5	0.0	20.0	32.0	0.438
15	250.00	7.1	0.7	14.9	-8.0	23.0	0.0	22.7	32.0	0.491
16	268.00	5.5	0.5	14.0	-8.5	22.5	0.0	20.0	32.0	0.438
17	286.00	0.7	0.1	11.5	-9.2	20.7	0.0	12.4	32.0	0.285
18	304.00	-7.5	-0.6	8.5	-12.1	20.6	0.0	-20.2	32.0	0.632
Bot.Flg.Spl.	-9.2	-0.8	7.9	-13.1	21.0	0.0	-23.1	32.0	0.721
Bot.Flg.Spl.	-5.9	-0.5	5.5	-8.4	13.9	0.0	-14.8	32.0	0.462
20	340.00	-12.3	-1.2	1.5	-12.6	14.1	0.0	-26.0	32.0	0.812
Bot.Flg.Spl.	-8.0	-0.8	2.6	-9.6	12.2	0.0	-18.4	32.0	0.575
Bot.Flg.Spl.	-9.0	-0.9	2.8	-10.8	13.6	0.0	-20.6	32.0	0.644
23	388.00	6.3	0.4	15.5	-14.0	29.5	0.0	22.2	32.0	0.461
Bot.Flg.Spl.	7.7	0.5	16.1	-13.7	29.8	0.0	24.2	32.0	0.483
Bot.Flg.Spl.	4.2	0.3	10.1	-7.6	17.7	0.0	14.6	32.0	0.335
Bot.Flg.Spl.	8.0	0.6	12.0	-6.7	18.7	0.0	20.6	32.0	0.478
Bot.Flg.Spl.	6.7	0.5	10.3	-5.6	15.9	0.0	17.6	32.0	0.421
24	404.00	7.2	0.6	10.5	-5.5	16.0	0.0	18.3	32.0	0.436
25	420.00	9.9	0.8	11.2	-4.5	15.7	0.0	21.9	32.0	0.518
26	436.00	10.9	0.9	11.5	-3.6	15.1	0.0	23.3	32.0	0.551
27	452.00	10.4	0.9	10.5	-2.6	13.2	0.0	21.8	32.0	0.514
28	468.00	8.4	0.7	8.6	-1.8	10.4	0.0	17.8	32.0	0.429
Bot.Flg.Spl.	7.5	0.6	7.8	-1.5	9.3	0.0	15.9	32.0	0.385
Bot.Flg.Spl.	8.9	0.7	9.0	-1.8	10.8	0.0	18.7	32.0	0.436
29	484.00	5.9	0.5	6.5	-1.0	7.6	0.0	12.9	32.0	0.297
Bot.Flg.Spl.	5.6	0.5	6.2	-1.0	7.2	0.0	12.2	32.0	0.282
Bot.Flg.Spl.	10.1	0.8	9.9	-1.8	11.7	0.0	20.7	32.0	0.404
30	500.00	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000

Governing expression for allowable compression stress

Tenth Pt	Expression		
8	(10-103d)	Cb 1.1787	Rh 1.0000
9	(10-103d)	Cb 1.1764	Rh 1.0000
10	(10-103d)	Cb 1.1351	Rh 1.0000
11	(10-103d)	Cb 1.1351	Rh 1.0000
12	(10-103C)	Cb 1.1432	Rh 1.0000
18	(10-103C)	Cb 1.1438	Rh 1.0000
19	(10-103d)	Cb 1.1356	Rh 1.0000
20	(10-103d)	Cb 1.1356	Rh 1.0000
21	(10-103d)	Cb 1.1761	Rh 1.0000
22	(10-103d)	Cb 1.1782	Rh 1.0000

Perf. ratio for compact section is (factored mom)/(mom strength).

First of two splice entries is to left of splice,
second is to right of splice.

Girder 2 Grp I Factored Bending Stresses - ksi

Tenth Point	Loc	----- Slab ----- Comp Dead	Max LL+I	Tot	---- Rebars ---- Comp Dead	Min LL+I	Tot
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	16.00	-0.01	-0.36	-0.37	0.00	0.00	0.00
2	32.00	-0.02	-0.50	-0.53	0.00	0.00	0.00
3	48.00	-0.03	-0.62	-0.64	0.00	0.00	0.00
4	64.00	-0.03	-0.68	-0.70	0.00	0.00	0.00
5	80.00	-0.02	-0.66	-0.68	0.00	0.00	0.00

6	96.00	-0.02	-0.62	-0.63	0.00	0.00	0.00
7	112.00	-0.01	-0.68	-0.69	0.00	0.00	0.00
8	128.00	0.00	-0.37	-0.37	0.00	0.00	0.00
9	144.00	0.00	-0.15	-0.15	0.00	0.00	0.00
10	160.00	0.00	-0.09	-0.09	1.26	13.57	14.82
11	178.00	0.00	-0.14	-0.14	0.00	0.00	0.00
12	196.00	0.00	-0.40	-0.40	0.00	0.00	0.00
13	214.00	0.00	-0.54	-0.55	0.00	0.00	0.00
14	232.00	-0.01	-0.66	-0.67	0.00	0.00	0.00
15	250.00	-0.02	-0.70	-0.72	0.00	0.00	0.00
16	268.00	-0.01	-0.66	-0.67	0.00	0.00	0.00
17	286.00	0.00	-0.54	-0.55	0.00	0.00	0.00
18	304.00	0.00	-0.40	-0.40	0.00	0.00	0.00
19	322.00	0.00	-0.14	-0.14	0.00	0.00	0.00
20	340.00	0.00	-0.09	-0.09	1.26	13.57	14.83
21	356.00	0.00	-0.15	-0.15	0.00	0.00	0.00
22	372.00	0.00	-0.37	-0.37	0.00	0.00	0.00
23	388.00	-0.01	-0.68	-0.69	0.00	0.00	0.00
24	404.00	-0.02	-0.62	-0.63	0.00	0.00	0.00
25	420.00	-0.02	-0.66	-0.68	0.00	0.00	0.00
26	436.00	-0.03	-0.68	-0.70	0.00	0.00	0.00
27	452.00	-0.03	-0.62	-0.64	0.00	0.00	0.00
28	468.00	-0.02	-0.51	-0.53	0.00	0.00	0.00
29	484.00	-0.01	-0.36	-0.37	0.00	0.00	0.00
30	500.00	0.00	0.00	0.00	0.00	0.00	0.00

Girder 2 Bottom Flange Elastic Compression Strength - k-ft

Tenth PT	M1 Dc	M2 Mr	Cb	Lb Rb	Lp My	Lr Mu
8	1628.81	4953.60	1.44	240.00	275.95	630.03
	36.00	5435.02(103c)		1.00	5435.02	5435.02
9	4953.60	10146.70	1.31	240.00	275.95	643.87
	44.80	9779.63(103c)		1.00	9779.63	9779.63
10	5472.79	10146.70	1.27	240.00	275.95	634.69
	53.17	12536.58(103c)		1.00	12536.58	12536.58
11	5472.79	10146.70	1.27	240.00	275.95	647.30
	42.67	9236.09(103c)		1.00	9236.09	9236.09
12	2412.40	5472.79	1.35	240.00	275.95	611.95
	36.00	4577.73(103c)		1.00	4577.73	4577.73
18	2406.36	5467.09	1.35	240.00	275.95	611.95
	36.00	4577.73(103c)		1.00	4577.73	4577.73
19	5467.09	10146.72	1.27	240.00	275.95	647.30
	42.67	9236.09(103c)		1.00	9236.09	9236.09
20	5467.09	10146.72	1.27	240.00	275.95	634.69
	53.17	12536.58(103c)		1.00	12536.58	12536.58
21	4957.61	10146.72	1.31	240.00	275.95	643.87
	44.80	9779.63(103c)		1.00	9779.63	9779.63
22	1631.85	4957.61	1.44	240.00	275.95	630.03
	36.00	5435.02(103c)		1.00	5435.02	5435.02

Girder 2 Web Splice Analysis

Using method of LRFD spec. 6.13.6.1.4b.
Splice resists moment given by (C6.13.6.1.4b-1)
and horizontal force given by (C6.13.6.1.4b-2)
using LFD load factors.

0.875 ASTM A325 H.S. Bolts

```
**************************
Web splice location: 117.50
**************************

  Web t left                    0.500 in
  Web t right                   0.500 in
  Factored shear              207.32 k
  Shear strength left         626.85 k
  Shear strength right        626.85 k
  Design shear                310.97 k

   Strength
    Factored Bndg Stresses Top Flg      Bottom Flg
      at ctr of flg
     Noncomp dead          -1.11 ksi       1.11 ksi
     Comp dead             -0.04           0.06
     Max live              -2.66           7.30
     Min live               6.74          -6.74
     Total                  5.59           8.47
     Resistance            32.00          32.00

    Bottom flange controls
     Fcf                         24.00 ksi
     fcf                          8.47 ksi
     Rcf                          2.833
     fncf                         5.59 ksi
     Muw                        147.08 k-ft
     Huw                        716.92 k

    Top flange stress reversal
     Fcf                         24.00 ksi
     fcf                          5.59 ksi
     Rcf                          4.295
     fncf                        -5.56 ksi
     Muw                        862.20 k-ft
     Huw                          1.80 k

    Bottom flange stress reversal
     Fcf                         24.00 ksi
     fcf                          8.47 ksi
     Rcf                          2.833
     fncf                        -3.81 ksi
     Muw                        626.21 k-ft
     Huw                        237.79 k

   Overload
    Factored Bndg Stresses Top Flg      Bottom Flg
      at ctr of flg
     Noncomp dead          -0.85 ksi       0.85 ksi
     Comp dead             -0.03           0.05
     Max live              -2.04           5.60
     Min live               5.17          -5.17
     Total                  4.29           6.51
     Resistance            30.40          30.40

    Bottom flange controls
     Fcf                         24.00 ksi
     fcf                          6.51 ksi
     Rcf                          3.689
     fncf                         4.29 ksi
```



```
 Muw                        147.28 k-ft
 Huw                        716.72 k

Top flange stress reversal
 Fcf                         24.00 ksi
 fcf                          4.29 ksi
 Rcf                          5.597
 fncf                        -4.27 ksi
 Muw                        862.19 k-ft
 Huw                          1.81 k

Bottom flange stress reversal
 Fcf                         24.00 ksi
 fcf                          6.51 ksi
 Rcf                          3.689
 fncf                        -2.93 ksi
 Muw                        626.28 k-ft
 Huw                        237.72 k

    Bolt pattern each side of splice
      Number of vertical lines          3 spaced at 3.000 in
      Number of horizontal lines       22 spaced at 3.000 in
      Vertical edge on plate        1.500 in
      Horizontal edge on web        3.000 in
                                                    Perf. Ratio
    Plate depth                    66.00 in
    Plate thickness                0.375 in
    Plate gross sect. shr strngth  918.72 k          0.338
    Plate net sect. fracture strng 1110.12 k         0.280
    Plate block shear strength     954.31 k          0.326

    Plate flexure for strength      29.38 ksi
    Allowable stress                32.00 ksi        0.918

    Plate flexure for overload      25.25 ksi
    Allowable stress                30.40 ksi        0.831

    Shear on extreme bolt - strength 16.82 k
    Shear on extreme bolt - overload 13.29 k
    Bolt shear strength             43.87 k          0.383
    Threads in shear plane

    Clear edge to splice line       2.500 in
    Horiz brng on web               16.82 k
    Horiz brng capacity on web      48.72 k          0.345

    Clear vertical distance         2.000 in
    Vert brng on web                16.82 k
    Vert brng capacity on web       48.72 k          0.345

  Fatigue
    Max fatigue moment            864.94 k-ft
    Min fatigue moment           -688.13

    Comp. stress at top of web     -0.95 ksi
    Tens. stress at top of web      2.54
    Comp. stress at bot of web     -2.54
    Tens. stress at bot of web      2.80

    Max fatge mom resisted by web   67.50 k-ft
    Max fatge mom horiz resultant   33.13 k
    Min fatge mom resisted by web  -91.29 k-ft
    Min fatge mom horiz resultant    0.00 k
```

Max shear at splice	11.17 k	
Min shear at splice	-45.48 k	
Mom from max shr eccentricity	5.59 k-ft	
Mom from min shr eccentricity	-22.74 k-ft	
Total max + eccentric mom	73.08 k-ft	
Total min + eccentric mom	-114.03 k-ft	
Tot Bndg and axial stress at bot of plate from max mo	2.28 ksi	
Tot Bndg and axial stress at bot of plate from min mo	-2.51 ksi	
Allowable range	29.00 ksi	0.165

Flange Plates

Top flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00 ksi	
Gross gov flg area - Ag	13.50	
An	11.62	
Beta	0.4532	
Effective gov flg area - Ae	13.50	
Resistance - Fcf x Ae	324.00 k	
Outside plate	18.00 x 0.688 Pl	
Inside plates 2 -	8.00 x 0.688 Pls	
Total number of bolts reqd on 4 gage lines on each side of splice	24	
Min spacing	2.62	
Max spacing outside line for sealing	4.50	
		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.308
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.524
Single bolt bearing strength	45.68	
Total bolt bearing strength	1096.20	0.296

Bottom flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00 ksi	
Gross gov flg area - Ag	13.50	
An	11.62	
Beta	0.4532	
Effective gov flg area - Ae	13.50	

Resistance - Fcf x Ae	324.00 k	
Fracture strength of flange	539.40	
Outside plate	18.00 x 0.688 Pl	
Inside plates 2 -	8.00 x 0.688 Pls	
		Perf. Ratio
Tens. capacity of gross section	710.60	0.456 (6.8.2.1-1)
Tens. capacity of net section	892.68	0.363 (6.8.2.1-2)
Total number of bolts reqd on 4 gage lines on each side of splice	24	
Min spacing	2.62	
Max spacing outside line for sealing	4.50	
		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.308
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.524
Single bolt bearing strength	45.68	
Total bolt bearing strength	1096.20	0.296
Block rupture on staggered pattern- outside plates		
Net tension area - Atn	9.25	
Gross tension area - Atg	10.87	
Net shear area - Avn	15.77	
Resistance to rupture - Rr	2308.60	
Block rupture on staggered pattern- inside plates		
Net tension area - Atn	6.72	
Gross tension area - Atg	7.99	
Net shear area - Avn	31.54	
Resistance to rupture - Rr	1053.38	
Tot block rupture resistance	3361.98	0.096

****
Web splice location: 212.50
****

Web t left	0.500 in
Web t right	0.500 in
Factored shear	151.82 k
Shear strength left	626.85 k
Shear strength right	626.85 k
Design shear	227.74 k

Strength Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.11 ksi	0.11 ksi
Comp dead	-0.04	0.09
Max live	-2.89	11.21
Min live	9.19	-9.19

Total	9.04	11.41
Resistance	32.00	32.00

Bottom flange controls

Fcf	24.00	ksi
fcf	11.41	ksi
Rcf	2.104	
fncf	9.04	ksi
Muw	89.62	k-ft
Huw	774.38	k

Top flange stress reversal

Fcf	24.00	ksi
fcf	9.04	ksi
Rcf	2.655	
fncf	-9.00	ksi
Muw	862.06	k-ft
Huw	1.94	k

Bottom flange stress reversal

Fcf	24.00	ksi
fcf	11.41	ksi
Rcf	2.104	
fncf	-3.05	ksi
Muw	547.42	k-ft
Huw	316.58	k

Overload

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.08 ksi	0.08 ksi
Comp dead	-0.03	0.07
Max live	-2.22	8.61
Min live	7.06	-7.06
Total	6.94	8.76
Resistance	30.40	30.40

Bottom flange controls

Fcf	24.00	ksi
fcf	8.76	ksi
Rcf	2.741	
fncf	6.94	ksi
Muw	89.65	k-ft
Huw	774.35	k

Top flange stress reversal

Fcf	24.00	ksi
fcf	6.94	ksi
Rcf	3.459	
fncf	-6.91	ksi
Muw	862.05	k-ft
Huw	1.95	k

Bottom flange stress reversal

Fcf	24.00	ksi
fcf	8.76	ksi
Rcf	2.741	
fncf	-2.34	ksi
Muw	547.43	k-ft
Huw	316.57	k

Bolt pattern each side of splice

Number of vertical lines	3 spaced at 3.000 in

Number of horizontal lines	22	spaced at 3.000 in	
Vertical edge on plate	1.500	in	
Horizontal edge on web	3.000	in	
			Perf. Ratio
Plate depth	66.00	in	
Plate thickness	0.375	in	
Plate gross sect. shr strngth	918.72	k	0.248
Plate net sect. fracture strng	1110.12	k	0.205
Plate block shear strength	954.31	k	0.239
Plate flexure for strength	31.45	ksi	
Allowable stress	32.00	ksi	0.983
Plate flexure for overload	29.61	ksi	
Allowable stress	30.40	ksi	0.974
Shear on extreme bolt - strength	15.72	k	
Shear on extreme bolt - overload	14.86	k	
Bolt shear strength	43.87	k	0.358
Threads in shear plane			
Clear edge to splice line	2.500	in	
Horiz brng on web	15.72	k	
Horiz brng capacity on web	48.72	k	0.323
Clear vertical distance	2.000	in	
Vert brng on web	15.72	k	
Vert brng capacity on web	48.72	k	0.323

Fatigue

Max fatigue moment	832.49	k-ft
Min fatigue moment	-529.62	
Comp. stress at top of web	-1.08	ksi
Tens. stress at top of web	3.55	
Comp. stress at bot of web	-3.55	
Tens. stress at bot of web	4.38	
Max fatge mom resisted by web	98.16	k-ft
Max fatge mom horiz resultant	59.45	k
Min fatge mom resisted by web	-127.93	k-ft
Min fatge mom horiz resultant	0.00	k
Max shear at splice	35.97	k
Min shear at splice	-19.58	k
Mom from max shr eccentricity	17.99	k-ft
Mom from min shr eccentricity	-9.79	k-ft
Total max + eccentric mom	116.15	k-ft
Total min + eccentric mom	-137.72	k-ft
Tot Bndg and axial stress at bot of plate from max mo	5.64	ksi
Tot Bndg and axial stress at bot of plate from min mo	-4.55	ksi
Allowable range	18.00	ksi 0.566

Flange Plates

OUTPUT.TXT

Top flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00	ksi
Gross gov flg area - Ag	18.00	
An	15.50	
Beta	0.4532	
Effective gov flg area - Ae	18.00	
Resistance - Fcf x Ae	432.00	k

Outside plate		18.00 x	0.688 Pl
Inside plates	2 -	8.00 x	0.688 Pls

		Perf. Ratio	
Tens. capacity of gross section	710.60	0.608	(6.8.2.1-1)
Tens. capacity of net section	639.12	0.676	(6.8.2.1-2)

Total number of bolts reqd on 4 gage lines on each side of splice: 24

Min spacing	2.62	
Max spacing outside line for sealing	4.50	

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.410
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.699
Single bolt bearing strength	60.90	
Total bolt bearing strength	1461.60	0.296

Block rupture on staggered pattern- outside plates

Net tension area - Atn	9.25	
Gross tension area - Atg	10.87	
Net shear area - Avn	15.77	
Resistance to rupture - Rr	2308.60	

Block rupture on staggered pattern- inside plates

Net tension area - Atn	6.72	
Gross tension area - Atg	7.99	
Net shear area - Avn	31.54	
Resistance to rupture - Rr	1053.38	
Tot block rupture resistance	3361.98	0.128

Bottom flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00	ksi
Gross gov flg area - Ag	18.00	
An	15.50	
Beta	0.4532	
Effective gov flg area - Ae	18.00	

OUTPUT.TXT

Resistance - Fcf x Ae	432.00	k
Fracture strength of flange	719.20	

Outside plate		18.00 x	0.688 Pl
Inside plates	2 -	8.00 x	0.688 Pls

		Perf. Ratio	
Tens. capacity of gross section	710.60	0.608	(6.8.2.1-1)
Tens. capacity of net section	892.68	0.484	(6.8.2.1-2)

Total number of bolts reqd on 4 gage lines on each side of splice: 24

Min spacing	2.62	
Max spacing outside line for sealing	4.50	

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.410
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.699
Single bolt bearing strength	60.90	
Total bolt bearing strength	1461.60	0.296

Block rupture on staggered pattern- outside plates

Net tension area - Atn	9.25	
Gross tension area - Atg	10.87	
Net shear area - Avn	15.77	
Resistance to rupture - Rr	2308.60	

Block rupture on staggered pattern- inside plates

Net tension area - Atn	6.72	
Gross tension area - Atg	7.99	
Net shear area - Avn	31.54	
Resistance to rupture - Rr	1053.38	
Tot block rupture resistance	3361.98	0.128

****
Web splice location: 287.50
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Web t left	0.500 in
Web t right	0.500 in
Factored shear	150.03 k
Shear strength left	626.85 k
Shear strength right	626.85 k
Design shear	225.05 k

Strength Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.14 ksi	0.14 ksi
Comp dead	-0.05	0.09
Max live	-2.89	11.21
Min live	9.19	-9.19

Total	9.00	11.44
Resistance	32.00	32.00

Bottom flange controls

Fcf	24.00	ksi
fcf	11.44	ksi
Rcf	2.098	
fncf	9.00	ksi
Muw	92.02	k-ft
Huw	771.98	k

Top flange stress reversal

Fcf	24.00	ksi
fcf	9.00	ksi
Rcf	2.665	
fncf	-8.96	ksi
Muw	862.01	k-ft
Huw	1.99	k

Bottom flange stress reversal

Fcf	24.00	ksi
fcf	11.44	ksi
Rcf	2.098	
fncf	-3.08	ksi
Muw	548.32	k-ft
Huw	315.68	k

Overload

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.11 ksi	0.11 ksi
Comp dead	-0.03	0.07
Max live	-2.22	8.61
Min live	7.06	-7.06
Total	6.91	8.78
Resistance	30.40	30.40

Bottom flange controls

Fcf	24.00	ksi
fcf	8.78	ksi
Rcf	2.732	
fncf	6.91	ksi
Muw	92.05	k-ft
Huw	771.95	k

Top flange stress reversal

Fcf	24.00	ksi
fcf	6.91	ksi
Rcf	3.472	
fncf	-6.88	ksi
Muw	862.01	k-ft
Huw	1.99	k

Bottom flange stress reversal

Fcf	24.00	ksi
fcf	8.78	ksi
Rcf	2.732	
fncf	-2.37	ksi
Muw	548.33	k-ft
Huw	315.67	k

Bolt pattern each side of splice

Number of vertical lines	3 spaced at 3.000 in

Number of horizontal lines	22	spaced at 3.000 in	
Vertical edge on plate	1.500	in	
Horizontal edge on web	3.000	in	
			Perf. Ratio
Plate depth	66.00	in	
Plate thickness	0.375	in	
Plate gross sect. shr strngth	918.72	k	0.245
Plate net sect. fracture strng	1110.12	k	0.203
Plate block shear strength	954.31	k	0.236
Plate flexure for strength	31.41	ksi	
Allowable stress	32.00	ksi	0.982
Plate flexure for overload	25.80	ksi	
Allowable stress	30.40	ksi	0.849
Shear on extreme bolt - strength	15.69	k	
Shear on extreme bolt - overload	13.09	k	
Bolt shear strength	43.87	k	0.358
Threads in shear plane			
Clear edge to splice line	2.500	in	
Horiz brng on web	15.69	k	
Horiz brng capacity on web	48.72	k	0.322
Clear vertical distance	2.000	in	
Vert brng on web	15.69	k	
Vert brng capacity on web	48.72	k	0.322

Fatigue

Max fatigue moment	832.65	k-ft
Min fatigue moment	-529.46	
Comp. stress at top of web	-1.08	ksi
Tens. stress at top of web	3.55	
Comp. stress at bot of web	-3.55	
Tens. stress at bot of web	4.38	
Max fatge mom resisted by web	98.18	k-ft
Max fatge mom horiz resultant	59.46	k
Min fatge mom resisted by web	-127.89	k-ft
Min fatge mom horiz resultant	0.00	k
Max shear at splice	20.60	k
Min shear at splice	-35.30	k
Mom from max shr eccentricity	10.30	k-ft
Mom from min shr eccentricity	-17.65	k-ft
Total max + eccentric mom	108.48	k-ft
Total min + eccentric mom	-145.54	k-ft
Tot Bndg and axial stress at bot of plate from max mo	5.39	ksi
Tot Bndg and axial stress at bot of plate from min mo	-4.81	ksi
Allowable range	18.00	ksi 0.567

Flange Plates

Top flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00	ksi
Gross gov flg area - Ag	18.00	
An	15.50	
Beta	0.4532	
Effective gov flg area - Ae	18.00	
Resistance - Fcf x Ae	432.00	k
Fracture strength of flange	719.20	

Outside plate		18.00 x	0.688 Pl
Inside plates	2 -	8.00 x	0.688 Pls

		Perf. Ratio	
Tens. capacity of gross section	710.60	0.608	(6.8.2.1-1)
Tens. capacity of net section	639.12	0.676	(6.8.2.1-2)

Total number of bolts reqd on 4 gage lines on each side of splice	24
Min spacing	2.62
Max spacing outside line for sealing	4.50

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.410
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.699
Single bolt bearing strength	60.90	
Total bolt bearing strength	1461.60	0.296

Block rupture on staggered pattern- outside plates

Net tension area - Atn	9.25	
Gross tension area - Atg	10.87	
Net shear area - Avn	15.77	
Resistance to rupture - Rr	2308.60	

Block rupture on staggered pattern- inside plates

Net tension area - Atn	6.72	
Gross tension area - Atg	7.99	
Net shear area - Avn	31.54	
Resistance to rupture - Rr	1053.38	
Tot block rupture resistance	3361.98	0.128

Bottom flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00	ksi
Gross gov flg area - Ag	18.00	
An	15.50	
Beta	0.4532	

Effective gov flg area - Ae	18.00	
Resistance - Fcf x Ae	432.00	k
Fracture strength of flange	719.20	

Outside plate		18.00 x	0.688 Pl
Inside plates	2 -	8.00 x	0.688 Pls

		Perf. Ratio	
Tens. capacity of gross section	710.60	0.608	(6.8.2.1-1)
Tens. capacity of net section	892.68	0.484	(6.8.2.1-2)

Total number of bolts reqd on 4 gage lines on each side of splice	24
Min spacing	2.62
Max spacing outside line for sealing	4.50

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.410
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.699
Single bolt bearing strength	60.90	
Total bolt bearing strength	1461.60	0.296

Block rupture on staggered pattern- outside plates

Net tension area - Atn	9.25	
Gross tension area - Atg	10.87	
Net shear area - Avn	15.77	
Resistance to rupture - Rr	2308.60	

Block rupture on staggered pattern- inside plates

Net tension area - Atn	6.72	
Gross tension area - Atg	7.99	
Net shear area - Avn	31.54	
Resistance to rupture - Rr	1053.38	
Tot block rupture resistance	3361.98	0.128

****
Web splice location: 382.50
****

Web t left	0.500	in
Web t right	0.500	in
Factored shear	210.99	k
Shear strength left	626.85	k
Shear strength right	626.85	k
Design shear	316.48	k

Strength Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-1.10 ksi	1.10 ksi
Comp dead	-0.04	0.06
Max live	-2.66	7.30

Min live	6.74	-6.74
Total	5.60	8.46
Resistance	32.00	32.00

Bottom flange controls

Fcf	24.00	ksi
fcf	8.46	ksi
Rcf	2.837	
fncf	5.60	ksi
Muw	145.99	k-ft
Huw	718.01	k

Top flange stress reversal

Fcf	24.00	ksi
fcf	5.60	ksi
Rcf	4.285	
fncf	-5.58	ksi
Muw	862.22	k-ft
Huw	1.78	k

Bottom flange stress reversal

Fcf	24.00	ksi
fcf	8.46	ksi
Rcf	2.837	
fncf	-3.80	ksi
Muw	625.89	k-ft
Huw	238.11	k

Overload

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.84 ksi	0.84 ksi
Comp dead	-0.03	0.05
Max live	-2.04	5.60
Min live	5.17	-5.17
Total	4.30	6.50
Resistance	30.40	30.40

Bottom flange controls

Fcf	24.00	ksi
fcf	6.50	ksi
Rcf	3.695	
fncf	4.30	ksi
Muw	146.18	k-ft
Huw	717.82	k

Top flange stress reversal

Fcf	24.00	ksi
fcf	4.30	ksi
Rcf	5.584	
fncf	-4.28	ksi
Muw	862.21	k-ft
Huw	1.79	k

Bottom flange stress reversal

Fcf	24.00	ksi
fcf	6.50	ksi
Rcf	3.695	
fncf	-2.92	ksi
Muw	625.95	k-ft
Huw	238.05	k

Bolt pattern each side of splice

Number of vertical lines	3	spaced at 3.000	in
Number of horizontal lines	22	spaced at 3.000	in
Vertical edge on plate	1.500	in	
Horizontal edge on web	3.000	in	

			Perf. Ratio
Plate depth	66.00	in	
Plate thickness	0.375	in	
Plate gross sect. shr strngth	918.72	k	0.344
Plate net sect. fracture strng	1110.12	k	0.285
Plate block shear strength	954.31	k	0.332
Plate flexure for strength	29.46	ksi	
Allowable stress	32.00	ksi	0.920
Plate flexure for overload	27.20	ksi	
Allowable stress	30.40	ksi	0.895
Shear on extreme bolt - strength	16.89	k	
Shear on extreme bolt - overload	15.74	k	
Bolt shear strength	43.87	k	0.385
Threads in shear plane			
Clear edge to splice line	2.500	in	
Horiz brng on web	16.89	k	
Horiz brng capacity on web	48.72	k	0.347
Clear vertical distance	2.000	in	
Vert brng on web	16.89	k	
Vert brng capacity on web	48.72	k	0.347

Fatigue

Max fatigue moment	864.78	k-ft
Min fatigue moment	-688.22	
Comp. stress at top of web	-0.95	ksi
Tens. stress at top of web	2.54	
Comp. stress at bot of web	-2.54	
Tens. stress at bot of web	2.79	
Max fatge mom resisted by web	67.49	k-ft
Max fatge mom horiz resultant	33.12	k
Min fatge mom resisted by web	-91.30	k-ft
Min fatge mom horiz resultant	0.00	k
Max shear at splice	46.94	k
Min shear at splice	-9.51	k
Mom from max shr eccentricity	23.47	k-ft
Mom from min shr eccentricity	-4.76	k-ft
Total max + eccentric mom	90.96	k-ft
Total min + eccentric mom	-96.06	k-ft
Tot Bndg and axial stress at bot of plate from max mo	4.01	ksi
Tot Bndg and axial stress at bot of plate from min mo	-3.18	ksi
Allowable range	29.00	ksi 0.248

Flange Plates

Top flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00	ksi
Gross gov flg area - Ag	13.50	
An	11.62	
Beta	0.4532	
Effective gov flg area - Ae	13.50	
Resistance - Fcf x Ae	324.00	k
Fracture strength of flange	539.40	

Outside plate		18.00 x	0.688 Pl
Inside plates	2 -	8.00 x	0.688 Pls

Total number of bolts reqd on each side of splice	24
Min spacing	2.62
Max spacing outside line for sealing	4.50

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.308
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.524
Single bolt bearing strength	45.68	
Total bolt bearing strength	1096.20	0.296

Bottom flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00	ksi
Gross gov flg area - Ag	13.50	
An	11.62	
Beta	0.4532	
Effective gov flg area - Ae	13.50	
Resistance - Fcf x Ae	324.00	k
Fracture strength of flange	539.40	

Outside plate		18.00 x	0.688 Pl
Inside plates	2 -	8.00 x	0.688 Pls

		Perf. Ratio	
Tens. capacity of gross section	710.60	0.456	(6.8.2.1-1)
Tens. capacity of net section	892.68	0.363	(6.8.2.1-2)

Total number of bolts reqd on each side of splice	24
Min spacing	2.62
Max spacing outside line for sealing	4.50

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.308
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.524
Single bolt bearing strength	45.68	
Total bolt bearing strength	1096.20	0.296

Block rupture on staggered pattern- outside plates

Net tension area - Atn	9.25
Gross tension area - Atg	10.87
Net shear area - Avn	15.77
Resistance to rupture - Rr	2308.60

Block rupture on staggered pattern- inside plates

Net tension area - Atn	6.72
Gross tension area - Atg	7.99
Net shear area - Avn	31.54
Resistance to rupture - Rr	1053.38

Tot block rupture resistance	3361.98	0.096

Girder 2 Web Compression Bending Stress for Constructibility - ksi

Tenth Point	Noncomp. Dead Factored Mom	Noncomp. Dead Web Bending Stress	Allowable (10-173)	Ratio
0	0.00	0.00	32.00	0.000
1	1235.87	5.63	32.00	0.176
2	2110.92	7.99	32.00	0.250
3	2608.51	9.87	32.00	0.309
4	2727.11	10.32	32.00	0.323
5	2469.30	9.35	32.00	0.292
6	1799.85	6.81	32.00	0.213
7	739.16	6.23	32.00	0.195
8	-708.17	0.00	32.00	0.000
9	-2546.24	0.00	32.00	0.000
10	-4769.98	11.62	32.00	0.363
11	-2691.60	0.00	32.00	0.000
12	-1076.34	7.32	32.00	0.229
13	95.17	0.65	32.00	0.020
14	789.43	5.37	32.00	0.168
15	1016.63	6.91	32.00	0.216
16	791.58	5.38	32.00	0.168
17	99.64	0.68	32.00	0.021
18	-1070.65	7.28	32.00	0.228
19	-2686.47	0.00	32.00	0.000
20	-4767.65	11.61	32.00	0.363
21	-2548.02	0.00	32.00	0.000
22	-710.62	0.00	32.00	0.000
23	735.95	6.20	32.00	0.194
24	1795.98	6.80	32.00	0.212
25	2466.17	9.33	32.00	0.292
26	2725.22	10.31	32.00	0.322
27	2607.71	9.87	32.00	0.308
28	2110.71	7.99	32.00	0.250
29	1236.04	5.63	32.00	0.176
30	0.00	0.00	32.00	0.000

Girder 2 Top Flange 10.57 Overload Stress - ksi

Tenth	Loc	Noncomp Dead	Comp Dead	1.67 Max LL+I	1.67 Min LL+I	Allowable	Ratio
0	0.00	0.00	0.00	0.00	0.00	30.40	0.000
Top flg.spl.		-7.73	-0.30	-1.83	1.36	30.40	0.325
Top flg.spl.		-4.28	-0.21	-1.61	0.75	30.40	0.201
1	16.00	-4.53	-0.22	-1.69	0.80	30.40	0.212
Top flg.spl.		-6.88	-0.34	-2.35	1.36	30.40	0.315
Top flg.spl.		-5.77	-0.31	-2.25	1.14	30.40	0.274
2	32.00	-6.49	-0.34	-2.49	1.35	30.40	0.307
3	48.00	-8.02	-0.42	-3.04	2.03	30.40	0.378
4	64.00	-8.38	-0.44	-3.34	2.73	30.40	0.400
5	80.00	-7.59	-0.39	-3.25	3.44	30.40	0.369
6	96.00	-5.53	-0.28	-3.04	4.22	30.40	0.291
Top flg.spl.		-5.19	-0.26	-2.98	4.32	30.40	0.278
Top flg.spl.		-6.18	-0.29	-3.11	5.14	30.40	0.315
Top flg.spl.		-3.27	-0.15	-2.62	5.84	30.40	0.198
Top flg.spl.		-5.91	-0.19	-2.86	10.55	30.40	0.295
7	112.00	-4.89	-0.16	-2.75	10.78	30.40	0.257
Top flg.spl.		4.68	0.50	-1.76	12.88	30.40	0.594
Top flg.spl.		2.44	0.26	-1.59	6.70	30.40	0.309
Top flg.spl.		6.80	0.66	-0.81	8.14	30.40	0.513
Top flg.spl.		6.06	0.57	-0.78	7.02	30.40	0.449
10	160.00	9.43	0.87	-0.50	9.43	30.40	0.649
Top flg.spl.		6.78	0.64	-0.72	7.37	30.40	0.486
Top flg.spl.		7.61	0.71	-0.75	8.26	30.40	0.546
Top flg.spl.		4.53	0.40	-1.48	6.46	30.40	0.375
Top flg.spl.		7.07	0.62	-1.61	10.09	30.40	0.585
12	196.00	5.79	0.50	-1.73	9.31	30.40	0.513
13	214.00	-0.51	-0.05	-2.35	7.05	30.40	0.213
14	232.00	-4.24	-0.22	-2.84	6.54	30.40	0.240
15	250.00	-5.47	-0.27	-3.03	6.19	30.40	0.289
16	268.00	-4.26	-0.22	-2.84	6.54	30.40	0.241
17	286.00	-0.54	-0.05	-2.35	7.04	30.40	0.212
18	304.00	5.76	0.50	-1.73	9.31	30.40	0.512
Top flg.spl.		7.04	0.62	-1.61	10.09	30.40	0.584
Top flg.spl.		4.51	0.40	-1.48	6.46	30.40	0.374
Top flg.spl.		7.59	0.71	-0.75	8.26	30.40	0.545
Top flg.spl.		6.77	0.61	-0.72	7.11	30.40	0.477
20	340.00	9.43	0.87	-0.50	9.43	30.40	0.649
Top flg.spl.		6.07	0.59	-0.78	7.27	30.40	0.458
Top flg.spl.		6.80	0.66	-0.81	8.14	30.40	0.513
Top flg.spl.		2.45	0.26	-1.59	6.70	30.40	0.309
Top flg.spl.		4.70	0.20	-1.76	12.88	30.40	0.585
23	388.00	-4.87	-0.16	-2.75	10.78	30.40	0.256
Top flg.spl.		-5.89	-0.19	-2.86	10.55	30.40	0.294
Top flg.spl.		-3.26	-0.15	-2.62	5.84	30.40	0.198
Top flg.spl.		-6.17	-0.29	-3.11	5.15	30.40	0.315
Top flg.spl.		-5.18	-0.26	-2.98	4.32	30.40	0.277
24	404.00	-5.52	-0.28	-3.04	4.22	30.40	0.291
25	420.00	-7.58	-0.39	-3.24	3.44	30.40	0.369
26	436.00	-8.37	-0.44	-3.34	2.73	30.40	0.400
27	452.00	-8.01	-0.42	-3.04	2.03	30.40	0.378
28	468.00	-6.49	-0.34	-2.49	1.35	30.40	0.307
Top flg.spl.		-5.77	-0.31	-2.25	1.14	30.40	0.274
Top flg.spl.		-6.88	-0.34	-2.35	1.36	30.40	0.315
29	484.00	-4.53	-0.22	-1.69	0.80	30.40	0.212
Top flg.spl.		-4.28	-0.21	-1.61	0.75	30.40	0.201
Top flg.spl.		-7.74	-0.30	-1.83	1.36	30.40	0.325

30	500.00	0.00	0.00	0.00	0.00	30.40	0.000

Girder 2 Bottom Flange 10.57 Overload Stress - ksi

Tenth	Loc	Noncomp Dead	Comp Dead	1.67 Max LL+I	1.67 Min LL+I	Allowable	Ratio
0	0.00	0.00	0.00	0.00	0.00	30.40	0.000
Bot.flg.spl.		7.73	0.58	7.63	-1.36	30.40	0.524
Bot.flg.spl.		4.28	0.35	4.77	-0.75	30.40	0.309
1	16.00	4.53	0.37	5.01	-0.80	30.40	0.326
Bot.flg.spl.		6.88	0.56	6.95	-1.36	30.40	0.473
Bot.flg.spl.		5.77	0.48	5.99	-1.14	30.40	0.403
2	32.00	6.49	0.54	6.62	-1.35	30.40	0.449
3	48.00	8.02	0.66	8.09	-2.03	30.40	0.552
4	64.00	8.38	0.69	8.88	-2.73	30.40	0.591
5	80.00	7.59	0.62	8.64	-3.44	30.40	0.554
6	96.00	5.53	0.44	8.08	-4.22	30.40	0.462
Bot.flg.spl.		5.19	0.41	7.94	-4.32	30.40	0.445
Bot.flg.spl.		6.18	0.48	9.21	-5.14	30.40	0.522
Bot.flg.spl.		3.27	0.24	7.75	-5.84	30.40	0.371
Bot.flg.spl.		5.91	0.40	12.36	-10.55	30.40	0.614
7	112.00	4.89	0.32	11.91	-10.78	30.40	0.563
Bot.flg.spl.		-4.68	-0.50	7.60	-12.88	30.40	0.594
Bot.flg.spl.		-2.44	-0.26	4.53	-6.70	30.40	0.309
Bot.flg.spl.		-6.80	-0.66	2.13	-8.14	30.40	0.513
Bot.flg.spl.		-6.06	-0.59	1.94	-7.21	30.40	0.456
10	160.00	-9.43	-0.89	1.18	-9.66	30.40	0.658
Bot.flg.spl.		-6.78	-0.64	1.81	-7.37	30.40	0.486
Bot.flg.spl.		-7.61	-0.71	1.99	-8.26	30.40	0.546
Bot.flg.spl.		-4.53	-0.40	4.23	-6.46	30.40	0.375
Bot.flg.spl.		-7.07	-0.62	6.07	-10.09	30.40	0.585
12	196.00	-5.79	-0.50	6.53	-9.31	30.40	0.513
13	214.00	0.51	0.10	8.88	-7.05	30.40	0.312
14	232.00	4.24	0.41	10.75	-6.54	30.40	0.507
15	250.00	5.47	0.51	11.48	-6.19	30.40	0.574
16	268.00	4.26	0.41	10.75	-6.54	30.40	0.507
17	286.00	0.54	0.10	8.88	-7.04	30.40	0.313
18	304.00	-5.76	-0.50	6.53	-9.31	30.40	0.512
Bot.flg.spl.		-7.04	-0.62	6.07	-10.09	30.40	0.584
Bot.flg.spl.		-4.51	-0.40	4.23	-6.46	30.40	0.374
Bot.flg.spl.		-7.59	-0.71	1.99	-8.26	30.40	0.545
Bot.flg.spl.		-6.77	-0.63	1.81	-7.31	30.40	0.484
20	340.00	-9.43	-0.89	1.18	-9.67	30.40	0.658
Bot.flg.spl.		-6.07	-0.59	1.94	-7.27	30.40	0.458
Bot.flg.spl.		-6.80	-0.66	2.13	-8.14	30.40	0.513
Bot.flg.spl.		-2.45	-0.26	4.52	-6.70	30.40	0.309
Bot.flg.spl.		-4.70	-0.40	7.60	-12.88	30.40	0.592
23	388.00	4.87	0.32	11.91	-10.78	30.40	0.562
Bot.flg.spl.		5.89	0.40	12.36	-10.55	30.40	0.613
Bot.flg.spl.		3.26	0.24	7.75	-5.84	30.40	0.370
Bot.flg.spl.		6.17	0.48	9.20	-5.15	30.40	0.521
Bot.flg.spl.		5.18	0.41	7.94	-4.32	30.40	0.445
24	404.00	5.52	0.44	8.08	-4.22	30.40	0.462
25	420.00	7.58	0.61	8.63	-3.44	30.40	0.553
26	436.00	8.37	0.69	8.88	-2.73	30.40	0.590
27	452.00	8.01	0.66	8.09	-2.03	30.40	0.552
28	468.00	6.49	0.54	6.63	-1.35	30.40	0.449
Bot.flg.spl.		5.77	0.48	6.00	-1.14	30.40	0.403
Bot.flg.spl.		6.88	0.56	6.96	-1.36	30.40	0.473
29	484.00	4.53	0.37	5.01	-0.80	30.40	0.326
Bot.flg.spl.		4.28	0.35	4.77	-0.75	30.40	0.309

Bot.flg.spl.		7.74	0.58	7.63	-1.36	30.40	0.525
30	500.00	0.00	0.00	0.00	0.00	30.40	0.000

Girder 2 Factored Noncomp Dead Wet Concrete Stresses - ksi

[Slab pouring sequence not taken into account in this table.
Actual stresses are dependent on the pouring sequence and
may be significantly different from those printed here.]

Tenth Point	Loc	Top Flange	Allow-able	bottom Flange	Allow-able
0	0.0	0.0	32.0	0.0	32.0
Top flg.spl	15.0	-10.1	32.0	10.1	32.0
Top flg.spl	15.0	-10.1	32.0	10.1	32.0
Bot.flg.spl	15.0	-10.1	32.0	10.1	32.0
Bot.flg.spl	15.0	-10.1	32.0	10.1	32.0
1	16.0	-5.9	32.0	5.9	32.0
Top flg.spl	27.0	-8.9	32.0	8.9	32.0
Top flg.spl	27.0	-8.9	32.0	8.9	32.0
Bot.flg.spl	27.0	-8.9	32.0	8.9	32.0
Bot.flg.spl	27.0	-8.9	32.0	8.9	32.0
2	32.0	-8.4	32.0	8.4	32.0
3	48.0	-10.4	32.0	10.4	32.0
4	64.0	-10.9	32.0	10.9	32.0
5	80.0	-9.9	32.0	9.9	32.0
6	96.0	-7.2	32.0	7.2	32.0
Top flg.spl	98.0	-6.7	32.0	6.7	32.0
Top flg.spl	98.0	-6.7	32.0	6.7	32.0
Top flg.spl	110.0	-3.6	32.0	3.6	32.0
Top flg.spl	110.0	-3.6	32.0	3.6	32.0
Bot.flg.spl	98.0	-6.7	32.0	6.7	32.0
Bot.flg.spl	98.0	-6.7	32.0	6.7	32.0
Bot.flg.spl	110.0	-3.6	32.0	3.6	32.0
Bot.flg.spl	110.0	-3.6	32.0	3.6	32.0
7	112.0	-6.4	32.0	6.4	32.0
Top flg.spl	128.0	6.1	32.0	-6.1	32.0
Top flg.spl	128.0	6.1	32.0	-6.1	32.0
Bot.flg.spl	128.0	6.1	32.0	-6.1	32.0
Bot.flg.spl	128.0	3.2	32.0	-3.2	32.0
Top flg.spl	144.0	8.8	32.0	-8.8	32.0
Top flg.spl	144.0	8.8	32.0	-8.8	32.0
Bot.flg.spl	144.0	8.8	32.0	-8.8	32.0
Bot.flg.spl	144.0	7.9	32.0	-7.9	32.0
10	160.0	12.3	32.0	-12.3	32.0
Top flg.spl	178.0	8.8	32.0	-8.8	32.0
Top flg.spl	178.0	8.8	32.0	-8.8	32.0
Top flg.spl	193.0	4.3	32.0	-4.3	32.0
Top flg.spl	193.0	4.3	32.0	-4.3	32.0
Bot.flg.spl	178.0	8.8	32.0	-8.8	32.0
Bot.flg.spl	178.0	9.9	32.0	-9.9	32.0
Bot.flg.spl	193.0	4.3	32.0	-4.3	32.0
Bot.flg.spl	193.0	4.8	32.0	-4.8	32.0
12	196.0	7.5	32.0	-7.5	32.0
13	214.0	-0.7	32.0	0.7	32.0
14	232.0	-5.5	32.0	5.5	32.0
15	250.0	-7.1	32.0	7.1	32.0
16	268.0	-5.5	32.0	5.5	32.0
17	286.0	-0.7	32.0	0.7	32.0
18	304.0	7.5	32.0	-7.5	32.0
Top flg.spl	307.0	9.2	32.0	-9.2	32.0

Top flg.spl	307.0	9.2	32.0	-9.2	32.0
Bot.flg.spl	307.0	9.2	32.0	-9.2	32.0
Bot.flg.spl	307.0	9.2	32.0	-9.2	32.0
Top flg.spl	322.0	9.9	32.0	-9.9	32.0
Top flg.spl	322.0	9.9	32.0	-9.9	32.0
Bot.flg.spl	322.0	9.9	32.0	-9.9	32.0
Bot.flg.spl	322.0	8.8	32.0	-8.8	32.0
20	340.0	12.3	32.0	-12.3	32.0
Top flg.spl	356.0	7.9	32.0	-7.9	32.0
Top flg.spl	356.0	7.9	32.0	-7.9	32.0
Bot.flg.spl	356.0	7.9	32.0	-7.9	32.0
Bot.flg.spl	356.0	8.8	32.0	-8.8	32.0
Top flg.spl	372.0	3.2	32.0	-3.2	32.0
Top flg.spl	372.0	3.2	32.0	-3.2	32.0
Bot.flg.spl	372.0	3.2	32.0	-3.2	32.0
Bot.flg.spl	372.0	6.1	32.0	-6.1	32.0
23	388.0	-6.3	32.0	6.3	32.0
Top flg.spl	390.0	-7.7	32.0	7.7	32.0
Top flg.spl	390.0	-7.7	32.0	7.7	32.0
Top flg.spl	402.0	-14.5	32.0	14.5	32.0
Top flg.spl	402.0	-14.5	32.0	14.5	32.0
Bot.flg.spl	390.0	-7.7	32.0	7.7	32.0
Bot.flg.spl	390.0	-7.7	32.0	7.7	32.0
Bot.flg.spl	402.0	-14.5	32.0	14.5	32.0
Bot.flg.spl	402.0	-14.5	32.0	14.5	32.0
24	404.0	-7.2	32.0	7.2	32.0
25	420.0	-9.9	32.0	9.9	32.0
26	436.0	-10.9	32.0	10.9	32.0
27	452.0	-10.4	32.0	10.4	32.0
28	468.0	-8.4	32.0	8.4	32.0
Top flg.spl	473.0	-7.5	32.0	7.5	32.0
Top flg.spl	473.0	-7.5	32.0	7.5	32.0
Bot.flg.spl	473.0	-7.5	32.0	7.5	32.0
Bot.flg.spl	473.0	-7.5	32.0	7.5	32.0
29	484.0	-5.9	32.0	5.9	32.0
Top flg.spl	485.0	-5.6	32.0	5.6	32.0
Top flg.spl	485.0	-5.6	32.0	5.6	32.0
Bot.flg.spl	485.0	-5.6	32.0	5.6	32.0
Bot.flg.spl	485.0	-5.6	32.0	5.6	32.0
30	500.0	0.0	32.0	0.0	32.0

Girder 2 Factored Strengths

Tenth Point	Loc	Factored Shear (k)	Shear Strength (k)	Ratio	Factored Moment (k-ft)	Bending Strength (k-ft)	Ratio
0	0.00	232.4	543.6 (5)	0.428	0.0	7040.1 (20)	0.000
1	16.00	190.7	626.8 (3)	0.304	2994.7	10084.3 (20)	0.297
2	32.00	145.4	626.8 (3)	0.232	4825.3	11238.3 (20)	0.429
3	48.00	113.0	626.8 (3)	0.180	5925.3	11525.1 (20)	0.514
4	64.00	72.8	626.8 (3)	0.116	6354.9	11525.1 (20)	0.551
5	80.00	164.0	626.8 (3)	0.262	5976.6	11525.1 (20)	0.519
6	96.00	150.5	626.8 (3)	0.240	5035.6	11525.1 (20)	0.437
7	112.00	196.2	626.8 (3)	0.313	3251.9	7040.1 (20)	0.462
8	128.00	228.5	626.8 (3)	0.365	2730.3	5435.0 (6)	0.502
9	144.00	284.4	764.0 (3)	0.372	5843.5	9779.6 (6)	0.598
10L	160.00	350.6	930.6 (3)	0.377	10146.7	12493.3 (6)	0.812
10R	160.00	324.1	930.6 (3)	0.348	10146.7	12493.3 (6)	0.812
11	178.00	250.1	730.3 (3)	0.342	5867.2	9236.1 (6)	0.635
12	196.00	195.4	626.8 (3)	0.312	2900.7	4577.7 (6)	0.634

13	214.00	147.9	626.8 (3)	0.236	2255.8	7925.1 (20)	0.285
14	232.00	117.2	626.8 (3)	0.187	3469.7	7925.1 (20)	0.438
15	250.00	72.8	626.8 (3)	0.116	3895.1	7925.1 (20)	0.491
16	268.00	112.5	626.8 (3)	0.180	3471.8	7925.1 (20)	0.438
17	286.00	111.0	626.8 (3)	0.177	2261.0	7925.1 (20)	0.285
18	304.00	195.8	626.8 (3)	0.312	2894.6	4577.7 (6)	0.632
19	322.00	249.0	730.3 (3)	0.341	5861.9	9236.1 (6)	0.635
20L	340.00	323.5	930.6 (3)	0.348	10146.7	12493.3 (6)	0.812
20R	340.00	350.2	930.6 (3)	0.376	10146.7	12493.3 (6)	0.812
21	356.00	281.0	764.0 (3)	0.368	5847.2	9779.6 (6)	0.598
22	372.00	231.2	626.8 (3)	0.369	2733.2	5435.0 (6)	0.503
23	388.00	200.4	626.8 (3)	0.320	3248.0	7040.1 (20)	0.461
24	404.00	156.0	626.8 (3)	0.249	5030.2	11525.1 (20)	0.436
25	420.00	160.2	626.8 (3)	0.256	5972.2	11525.1 (20)	0.518
26	436.00	78.0	626.8 (3)	0.124	6352.5	11525.1 (20)	0.551
27	452.00	107.5	626.8 (3)	0.171	5924.9	11525.1 (20)	0.514
28	468.00	131.4	626.8 (3)	0.210	4826.9	11239.0 (20)	0.429
29	484.00	179.2	626.8 (3)	0.286	2996.1	10084.6 (20)	0.297
30	500.00	243.1	543.6 (5)	0.447	0.0	7040.1 (20)	0.000

Shear Strength at Intermediate Transverse Stiffeners

5.00	219.4	626.8 (3)	0.350
10.00	206.4	626.8 (3)	0.329
15.00	193.3	626.8 (3)	0.308
20.00	179.4	626.8 (3)	0.286
25.00	165.2	626.8 (3)	0.264
30.00	151.1	626.8 (3)	0.241
35.00	139.3	626.8 (3)	0.222
40.00	129.2	626.8 (3)	0.206
45.00	119.0	626.8 (3)	0.190
50.00	107.9	626.8 (3)	0.172
55.00	95.4	626.8 (3)	0.152
60.00	82.8	626.8 (3)	0.132
65.00	78.5	626.8 (3)	0.125
70.00	107.0	626.8 (3)	0.171
75.00	135.5	626.8 (3)	0.216
85.00	159.8	626.8 (3)	0.255
90.00	155.6	626.8 (3)	0.248
95.00	151.4	626.8 (3)	0.241
100.00	162.0	626.8 (3)	0.258
105.00	176.2	626.8 (3)	0.281
110.00	190.5	626.8 (3)	0.304
115.00	202.3	626.8 (3)	0.323
120.00	212.4	626.8 (3)	0.339
125.00	222.4	626.8 (3)	0.355
130.00	235.5	628.2 (3)	0.375
135.00	253.0	652.1 (3)	0.388
140.00	270.5	701.6 (3)	0.385
145.00	288.6	780.6 (3)	0.370
150.00	309.3	846.6 (3)	0.365
155.00	329.9	883.0 (3)	0.374
165.00	303.5	883.0 (3)	0.344
170.00	283.0	846.6 (3)	0.334
175.00	262.4	780.6 (3)	0.336
180.00	244.0	701.6 (3)	0.348
185.00	228.8	652.1 (3)	0.351
190.00	213.6	628.2 (3)	0.340
195.00	198.4	626.8 (3)	0.317
200.00	184.8	626.8 (3)	0.295
205.00	171.6	626.8 (3)	0.274
210.00	158.4	626.8 (3)	0.253
215.00	146.2	626.8 (3)	0.233

220.00	137.7	626.8 (3)	0.220
225.00	129.1	626.8 (3)	0.206
230.00	120.6	626.8 (3)	0.192
235.00	109.8	626.8 (3)	0.175
240.00	97.5	626.8 (3)	0.156
245.00	85.1	626.8 (3)	0.136
255.00	83.8	626.8 (3)	0.134
260.00	94.9	626.8 (3)	0.151
265.00	105.9	626.8 (3)	0.169
270.00	112.4	626.8 (3)	0.179
275.00	111.9	626.8 (3)	0.179
280.00	111.5	626.8 (3)	0.178
285.00	111.1	626.8 (3)	0.177
290.00	129.8	626.8 (3)	0.207
295.00	153.4	626.8 (3)	0.245
300.00	177.0	626.8 (3)	0.282
305.00	198.8	626.8 (3)	0.317
310.00	213.5	628.2 (3)	0.340
315.00	228.3	652.1 (3)	0.350
320.00	243.1	701.6 (3)	0.346
325.00	261.4	780.6 (3)	0.335
330.00	282.1	846.6 (3)	0.333
335.00	302.8	883.0 (3)	0.343
345.00	328.6	883.0 (3)	0.372
350.00	307.0	846.6 (3)	0.363
355.00	285.4	780.6 (3)	0.366
360.00	268.6	701.6 (3)	0.383
365.00	253.0	652.1 (3)	0.388
370.00	237.4	628.2 (3)	0.378
375.00	225.4	626.8 (3)	0.360
380.00	215.8	626.8 (3)	0.344
385.00	206.2	626.8 (3)	0.329
390.00	194.9	626.8 (3)	0.311
395.00	181.0	626.8 (3)	0.289
400.00	167.1	626.8 (3)	0.267
405.00	156.3	626.8 (3)	0.249
410.00	157.6	626.8 (3)	0.251
415.00	158.9	626.8 (3)	0.254
425.00	134.6	626.8 (3)	0.215
430.00	108.9	626.8 (3)	0.174
435.00	83.2	626.8 (3)	0.133
440.00	85.4	626.8 (3)	0.136
445.00	94.6	626.8 (3)	0.151
450.00	103.8	626.8 (3)	0.166
455.00	111.9	626.8 (3)	0.179
460.00	119.4	626.8 (3)	0.191
465.00	126.9	626.8 (3)	0.202
470.00	137.4	626.8 (3)	0.219
475.00	152.3	626.8 (3)	0.243
480.00	167.2	626.8 (3)	0.267
485.00	183.1	626.8 (3)	0.292
490.00	203.1	626.8 (3)	0.324
495.00	223.1	626.8 (3)	0.356

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(5) C 0.58 Fyw D t
(20) compact section
(6) Fy S(equiv)
Maximum moment in factored strength expression

Girder 2 Load Factor Ratings

Span 1

Location	Moment Capacity	Shear Capacity	Rating Factors Inventory	Operating
0.00	7040.1 C	543.6	3.28 V	5.48 V
15.00L	7040.1 C	626.8	4.63 V	7.73 V
15.00R	10086.1 C	626.8	4.63 V	7.73 V
5.00S	7040.1 C	626.8	4.11 V	6.87 V
10.00S	7039.1 C	626.8	4.36 V	7.27 V
16.00	10084.3 C	626.8	4.69 V	7.83 V
27.00L	7677.3 S	626.8	3.30 S	5.52 S
27.00R	8902.5 S	626.8	4.03 S	6.73 S
20.00S	7677.3 S	626.8	4.15 S	6.94 S
25.00S	7677.3 S	626.8	3.52 S	5.88 S
30.00S	8902.5 S	626.8	3.71 S	6.19 S
32.00	8902.5 S	626.8	3.53 S	5.89 S
35.00S	8902.5 S	626.8	3.30 S	5.51 S
40.00S	8902.5 S	626.8	3.01 S	5.02 S
45.00S	8902.5 S	626.8	2.79 S	4.66 S
48.00	8902.5 S	626.8	2.68 S	4.48 S
50.00S	8902.5 S	626.8	2.63 S	4.39 S
55.00S	8902.5 S	626.8	2.51 S	4.19 S
60.00S	8902.5 S	626.8	2.43 S	4.05 S
64.00	8902.5 S	626.8	2.40 S	4.01 S
65.00S	8902.5 S	626.8	2.40 S	4.01 S
70.00S	8902.5 S	626.8	2.41 S	4.03 S
75.00S	8902.5 S	626.8	2.49 S	4.16 S
80.00	8902.5 S	626.8	2.57 S	4.29 S
85.00S	8902.5 S	626.8	2.68 S	4.47 S
90.00S	8902.5 S	626.8	2.78 S	4.65 S
95.00S	8902.5 S	626.8	2.98 S	4.97 S
96.00	8902.5 S	626.8	3.02 S	5.05 S
98.00L	8902.5 S	626.8	3.12 S	5.22 S
98.00R	7677.3 S	626.8	2.58 S	4.31 S
110.00L	7677.3 S	626.8	3.47 S	5.79 S
110.00R	4814.3 S	626.8	1.95 S	3.26 S
100.00S	7677.3 S	626.8	2.68 S	4.48 S
105.00S	7677.3 S	626.8	3.03 S	5.06 S
112.00	4814.3 S	626.8	2.11 S	3.53 S
115.00S	4814.3 S	626.8	2.40 S	4.01 S
120.00S	4814.3 S	626.8	3.12 S	5.21 S
125.00S	3720.9 B	626.8	1.79 T	2.99 T
128.00L	3720.9 B	626.8	1.51 T	2.52 T
128.00R	7151.1 B	626.8	3.27 T	5.46 T
130.00S	7170.0 B	628.2	3.02 T	5.04 T
135.00S	7507.6 B	652.1	2.53 T	4.22 T
140.00S	8285.0 B	701.6	2.23 B	3.73 B
144.00L	9245.9 B	762.5	2.12 T	3.53 T
144.00R	10393.0 B	765.4	2.49 B	4.15 B
145.00S	10593.2 B	780.6	2.44 T	4.07 T
150.00S	11704.3 B	846.6	2.20 T	3.67 T
155.00S	12318.6 B	883.0	1.86 T	3.10 T
160.00	12536.6 B	930.6	1.48 B	2.47 B

Span 2

Location	Moment Capacity	Shear Capacity	Rating Factors Inventory	Operating
0.00	12536.6 B	930.6	1.48 B	2.47 B

5.00S	12409.7 B	883.0	1.51 B	2.52 B
10.00S	11791.7 B	846.6	2.12 B	3.54 B
15.00S	10674.2 B	780.6	2.30 B	3.84 B
18.00L	9744.8 B	731.6	2.33 T	3.89 T
18.00R	8727.5 B	729.0	1.98 T	3.30 T
33.00L	7151.1 B	626.8	3.05 T	5.09 T
33.00R	4577.7 B	626.8	1.68 T	2.80 T
20.00S	8285.0 B	701.6	2.02 B	3.38 B
25.00S	7507.6 B	652.1	2.25 T	3.75 T
30.00S	7170.0 B	628.2	2.67 T	4.47 T
35.00S	4577.7 B	626.8	1.87 T	3.12 T
36.00	4577.7 B	626.8	1.97 T	3.29 T
40.00S	4577.7 B	626.8	2.18 T	3.64 T
45.00S	4577.7 B	626.8	2.20 T	3.68 T
50.00S	5633.2 S	626.8	3.54 S	5.91 S
54.00	5633.2 S	626.8	3.36 S	5.60 S
55.00S	5633.2 S	626.8	3.28 S	5.48 S
60.00S	5633.2 S	626.8	2.94 S	4.92 S
65.00S	5633.2 S	626.8	2.66 S	4.44 S
70.00S	5633.2 S	626.8	2.46 S	4.11 S
72.00	5633.2 S	626.8	2.40 S	4.00 S
75.00S	5633.2 S	626.8	2.31 S	3.86 S
80.00S	5633.2 S	626.8	2.21 S	3.70 S
85.00S	5633.2 S	626.8	2.15 S	3.59 S
90.00	5633.2 S	626.8	2.13 S	3.55 S
95.00S	5633.2 S	626.8	2.15 S	3.59 S
100.00S	7925.1 C	626.8	1.74 V	2.90 V
105.00S	5633.2 S	626.8	2.31 S	3.86 S
108.00	5633.2 S	626.8	2.39 S	4.00 S
110.00S	5633.2 S	626.8	2.46 S	4.10 S
115.00S	5633.2 S	626.8	2.66 S	4.44 S
120.00S	5633.2 S	626.8	2.94 S	4.91 S
125.00S	5633.2 S	626.8	3.28 S	5.47 S
126.00	5633.2 S	626.8	3.35 S	5.60 S
130.00S	4577.7 B	626.8	2.19 B	3.65 B
135.00S	4577.7 B	626.8	2.20 T	3.68 T
140.00S	4577.7 B	626.8	2.18 T	3.65 T
144.00	4577.7 B	626.8	1.97 T	3.29 T
147.00L	4577.7 B	626.8	1.68 T	2.81 T
147.00R	7151.1 B	626.8	3.05 T	5.10 T
145.00S	4577.7 B	626.8	1.87 T	3.13 T
150.00S	7170.0 B	628.2	2.68 T	4.47 T
155.00S	7507.6 B	652.1	2.25 T	3.76 T
160.00S	8285.0 B	701.6	2.02 B	3.38 B
162.00L	8727.5 B	729.0	1.98 T	3.31 T
162.00R	9821.0 B	731.6	2.35 B	3.92 B
165.00S	10593.2 B	780.6	2.28 T	3.81 T
170.00S	11704.3 B	846.6	2.10 T	3.51 T
175.00S	12318.6 B	883.0	1.82 T	3.03 T
180.00	12536.6 B	930.6	1.48 B	2.47 B

Span 3

Location	Moment Capacity	Shear Capacity	Rating Factors Inventory	Operating
0.00	12536.6 B	930.6	1.48 B	2.47 B
5.00S	12409.7 B	883.0	1.58 B	2.65 B
10.00S	11791.7 B	846.6	2.21 B	3.70 B
15.00S	10674.2 B	780.6	2.45 B	4.10 B
16.00L	10313.5 B	765.4	2.46 T	4.11 T
16.00R	9245.9 B	762.5	2.11 T	3.53 T
20.00S	8285.0 B	701.6	2.23 B	3.73 B

25.00S	7507.6 B	652.1	2.53 T	4.22 T
30.00S	7170.0 B	628.2	3.01 T	5.03 T
32.00L	7151.1 B	626.8	3.27 T	5.46 T
32.00R	5067.7 B	626.8	2.06 B	3.45 B
35.00S	3720.9 B	626.8	1.79 T	2.98 T
40.00S	5067.7 B	626.8	2.52 B	4.21 B
45.00S	4814.3 S	626.8	2.40 S	4.02 S
48.00	4814.3 S	626.8	2.12 S	3.53 S
50.00L	4814.3 S	626.8	1.95 S	3.26 S
50.00R	7677.3 S	626.8	3.47 S	5.80 S
62.00L	7677.3 S	626.8	2.58 S	4.31 S
62.00R	8902.5 S	626.8	3.13 S	5.22 S
55.00S	7677.3 S	626.8	3.03 S	5.07 S
60.00S	7677.3 S	626.8	2.69 S	4.49 S
64.00	8902.5 S	626.8	3.02 S	5.05 S
65.00S	8902.5 S	626.8	2.98 S	4.97 S
70.00S	8902.5 S	626.8	2.79 S	4.65 S
75.00S	8902.5 S	626.8	2.68 S	4.48 S
80.00	8902.5 S	626.8	2.57 S	4.30 S
85.00S	8902.5 S	626.8	2.49 S	4.16 S
90.00S	8902.5 S	626.8	2.41 S	4.03 S
95.00S	8902.5 S	626.8	2.40 S	4.01 S
96.00	8902.5 S	626.8	2.40 S	4.01 S
100.00S	8902.5 S	626.8	2.43 S	4.05 S
105.00S	8902.5 S	626.8	2.51 S	4.19 S
110.00S	8902.5 S	626.8	2.63 S	4.39 S
112.00	8902.5 S	626.8	2.68 S	4.48 S
115.00S	8902.5 S	626.8	2.79 S	4.66 S
120.00S	8902.5 S	626.8	3.01 S	5.02 S
125.00S	8902.5 S	626.8	3.30 S	5.51 S
128.00	8902.5 S	626.8	3.53 S	5.89 S
133.00L	8902.5 S	626.8	4.03 S	6.72 S
133.00R	7677.3 S	626.8	3.30 S	5.51 S
130.00S	8902.5 S	626.8	3.71 S	6.19 S
135.00S	7677.3 S	626.8	3.52 S	5.88 S
140.00S	7677.3 S	626.8	4.15 S	6.93 S
144.00	7677.3 S	626.8	5.09 S	8.49 S
145.00L	10086.4 C	626.8	5.09 V	8.49 V
145.00R	4797.0 S	626.8	2.89 S	4.83 S
150.00S	4814.3 S	626.8	4.53 S	7.56 S
155.00S	7040.1 C	626.8	4.06 V	6.78 V
160.00	7040.1 C	543.6	3.04 V	5.08 V

Rating Codes:
T - Top steel governs
B - Bottom steel governs
C - Concrete governs
R - Rebar governs
V - Shear governs
S - Serviceability governs
I - Moment-shear interaction governs

Mom Capacity Codes:
C - Compact
B - Braced non-compact
U - Unbraced non-compact
T - Transition between compact and braced non-compact
S - Serviceability

This table is based on eq. (6-1a) of the AASHTO Manual

for Condition Evaluation of Bridges.

Noncompact shapes ratings based on stress, as

$$IR = \frac{Fb - \text{Dead load factored stress}}{\text{LL+I factored stress}}$$

Noncompact shape moment capacity is the product of allowable stress and LL+I section modulus.

Girder 2 Bearing Stiffeners

Location from Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
0.00	137.89	16.80	11.03	0.657	28.80	18.39	0.638
160.00	362.58	16.60	10.07	0.607	28.80	16.11	0.560
340.00	362.53	16.60	10.07	0.606	28.80	16.11	0.559
500.00	137.82	16.80	11.03	0.656	28.80	18.38	0.638

Girder 2 Fatigue Summary

Condition	Location from Left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)	Actual Stress Range	Allowable Stress Range	Ratio
Base metal	16.00	B	839.86 T	3391.	18000.	0.188
Base metal *	16.00	B	519.18 T	2095.	16000.	0.131
Base metal	32.00	B	1325.86 T	4623.	18000.	0.257
Base metal *	32.00	B	796.46 T	2777.	16000.	0.174
Base metal	48.00	B	1659.69 T	5811.	18000.	0.323
Base metal *	48.00	B	1001.94 T	3507.	16000.	0.219
Base metal	64.00	B	1842.32 T	6484.	18000.	0.360
Base metal *	64.00	B	1120.11 T	3941.	16000.	0.246
Base metal	80.00	B	1849.30 T	6558.	18000.	0.364
Base metal *	80.00	B	1103.44 T	3914.	16000.	0.245
Base metal	96.00	B	1838.84 T	6577.	18000.	0.365
Base metal *	96.00	B	1122.53 T	4013.	16000.	0.251
Base metal	112.00	B	1652.96 T	11833.	18000.	0.657
Base metal *	112.00	B	1003.11 T	7171.	16000.	0.448
Near flg-web weld	16.00	B	839.86 T	3293.	18000.	0.183
Near flg-web weld *	16.00	B	519.18 T	2035.	16000.	0.127
Near flg-web weld	32.00	B	1325.86 T	4455.	18000.	0.248
Near flg-web weld *	32.00	B	796.46 T	2676.	16000.	0.167
Near flg-web weld	48.00	B	1659.69 T	5601.	18000.	0.311
Near flg-web weld *	48.00	B	1001.94 T	3381.	16000.	0.211
Near flg-web weld	64.00	B	1842.32 T	6249.	18000.	0.347
Near flg-web weld *	64.00	B	1120.11 T	3798.	16000.	0.237
Near flg-web weld	80.00	B	1849.30 T	6320.	18000.	0.351
Near flg-web weld *	80.00	B	1103.44 T	3772.	16000.	0.236
Near flg-web weld	96.00	B	1838.84 T	6339.	18000.	0.352
Near flg-web weld *	96.00	B	1122.53 T	3868.	16000.	0.242
Near flg-web weld	112.00	B	1652.96 T	11684.	18000.	0.649
Near flg-web weld *	112.00	B	1003.11 T	7081.	16000.	0.443
Top flg. splice	15.00	B	797.74 T	1182.	18000.	0.066
Top flg splice *	15.00	B	493.82 T	732.	16000.	0.046

OUTPUT.TXT

Top flg. splice	27.00	B	1190.33	T	2071.	18000.	0.115
Top flg splice *	27.00	B	717.52	T	1247.	16000.	0.078
Top flg. splice	98.00	B	1825.19	T	4260.	18000.	0.237
Top flg splice *	98.00	B	1115.18	T	2588.	16000.	0.162
Top flg. splice	110.00	B	1679.87	T	6761.	18000.	0.376
Top flg splice *	110.00	B	1020.05	T	4075.	16000.	0.255
Bot flg. splice	15.00	B	797.74	T	4651.	18000.	0.258
Bot flg splice *	15.00	B	493.82	T	2887.	16000.	0.180
Bot flg. splice	27.00	B	1190.33	T	4829.	18000.	0.268
Bot flg splice *	27.00	B	717.52	T	2910.	16000.	0.182
Bot flg. splice	98.00	B	1825.19	T	7666.	18000.	0.426
Bot flg splice *	98.00	B	1115.18	T	4680.	16000.	0.293
Bot flg. splice	110.00	B	1679.87	T	12015.	18000.	0.668
Bot flg splice *	110.00	B	1020.05	T	7286.	16000.	0.455
Trans. stiff. toe	10.00	C	524.91	T	2093.	13000.	0.161
Trans. stiff. toe *	10.00	C	324.49	T	1293.	12000.	0.108
Trans. stiff. toe	15.00	C	787.37	T	3139.	13000.	0.241
Trans. stiff. toe *	15.00	C	486.73	T	1940.	12000.	0.162
Trans. stiff. toe	20.00	C	961.36	T	3840.	13000.	0.295
Trans. stiff. toe *	20.00	C	588.50	T	2350.	12000.	0.196
Trans. stiff. toe	25.00	C	1113.23	T	3827.	13000.	0.294
Trans. stiff. toe *	25.00	C	675.15	T	2321.	12000.	0.193
Trans. stiff. toe	30.00	C	1265.11	T	4354.	13000.	0.335
Trans. stiff. toe *	30.00	C	761.80	T	2621.	12000.	0.218
Trans. stiff. toe	35.00	C	1388.45	T	4785.	13000.	0.368
Trans. stiff. toe *	35.00	C	834.99	T	2877.	12000.	0.240
Trans. stiff. toe	40.00	C	1492.77	T	5151.	13000.	0.396
Trans. stiff. toe *	40.00	C	899.20	T	3103.	12000.	0.259
Trans. stiff. toe	45.00	C	1597.10	T	5518.	13000.	0.424
Trans. stiff. toe *	45.00	C	963.41	T	3328.	12000.	0.277
Trans. stiff. toe	50.00	C	1682.52	T	5821.	13000.	0.448
Trans. stiff. toe *	50.00	C	1016.71	T	3517.	12000.	0.293
Trans. stiff. toe	55.00	C	1739.59	T	6029.	13000.	0.464
Trans. stiff. toe *	55.00	C	1053.64	T	3651.	12000.	0.304
Trans. stiff. toe	60.00	C	1796.66	T	6236.	13000.	0.480
Trans. stiff. toe *	60.00	C	1090.57	T	3784.	12000.	0.315
Trans. stiff. toe	65.00	C	1842.75	T	6407.	13000.	0.493
Trans. stiff. toe *	65.00	C	1119.07	T	3890.	12000.	0.324
Trans. stiff. toe	70.00	C	1844.94	T	6430.	13000.	0.495
Trans. stiff. toe *	70.00	C	1113.86	T	3881.	12000.	0.323
Trans. stiff. toe	75.00	C	1847.12	T	6453.	13000.	0.496
Trans. stiff. toe *	75.00	C	1108.65	T	3873.	12000.	0.323
Trans. stiff. toe	80.00	C	1849.30	T	6475.	13000.	0.498
Trans. stiff. toe *	80.00	C	1103.44	T	3865.	12000.	0.322
Trans. stiff. toe	85.00	C	1846.03	T	6481.	13000.	0.499
Trans. stiff. toe *	85.00	C	1109.41	T	3895.	12000.	0.325
Trans. stiff. toe	90.00	C	1842.76	T	6487.	13000.	0.499
Trans. stiff. toe *	90.00	C	1115.37	T	3926.	12000.	0.327
Trans. stiff. toe	95.00	C	1839.49	T	6493.	13000.	0.499
Trans. stiff. toe *	95.00	C	1121.34	T	3956.	12000.	0.330
Trans. stiff. toe	100.00	C	1792.37	T	6352.	13000.	0.489
Trans. stiff. toe *	100.00	C	1092.68	T	3870.	12000.	0.322
Trans. stiff. toe	105.00	C	1734.28	T	12096.	13000.	0.930
Trans. stiff. toe *	105.00	C	1055.36	T	7351.	12000.	0.613
Trans. stiff. toe	110.00	C	1676.20	T	11802.	13000.	0.908
Trans. stiff. toe *	110.00	C	1018.03	T	7158.	12000.	0.596
Trans. stiff. toe	115.00	C	1605.50	T	11434.	13000.	0.880
Trans. stiff. toe *	115.00	C	973.79	T	6924.	12000.	0.577
Base metal	16.00	B	798.35	L	3242.	29000.	0.112
Base metal	32.00	B	1338.41	L	4688.	29000.	0.162
Base metal	48.00	B	1721.40	L	6055.	29000.	0.209
Base metal	64.00	B	1967.17	L	6955.	29000.	0.240
Base metal	80.00	B	2029.51	L	7229.	29000.	0.249

OUTPUT.TXT

Base metal	96.00	B	2049.98	L	7367.	29000.	0.254
Base metal	112.00	B	1880.48	L	13590.	29000.	0.469
Near flg-web weld	16.00	B	798.35	L	3149.	29000.	0.109
Near flg-web weld	32.00	B	1338.41	L	4518.	29000.	0.156
Near flg-web weld	48.00	B	1721.40	L	5836.	29000.	0.201
Near flg-web weld	64.00	B	1967.17	L	6703.	29000.	0.231
Near flg-web weld	80.00	B	2029.51	L	6968.	29000.	0.240
Near flg-web weld	96.00	B	2049.98	L	7100.	29000.	0.245
Near flg-web weld	112.00	B	1880.48	L	13420.	29000.	0.463
Top flg. splice	15.00	B	756.02	L	1111.	29000.	0.038
Top flg. splice	27.00	B	1186.51	L	2177.	29000.	0.075
Top flg. splice	98.00	B	2039.18	L	4966.	29000.	0.171
Top flg. splice	110.00	B	1906.77	L	8079.	29000.	0.279
Bot flg. splice	15.00	B	756.02	L	4293.	29000.	0.148
Bot flg. splice	27.00	B	1186.51	L	4841.	29000.	0.167
Bot flg. splice	98.00	B	2039.18	L	8615.	29000.	0.297
Bot flg. splice	110.00	B	1906.77	L	13771.	29000.	0.475
Trans. stiff. toe	10.00	C	498.97	L	2001.	21000.	0.095
Trans. stiff. toe	15.00	C	748.45	L	3001.	21000.	0.143
Trans. stiff. toe	20.00	C	933.37	L	3749.	21000.	0.179
Trans. stiff. toe	25.00	C	1102.13	L	3807.	21000.	0.181
Trans. stiff. toe	30.00	C	1270.90	L	4394.	21000.	0.209
Trans. stiff. toe	35.00	C	1410.22	L	4882.	21000.	0.232
Trans. stiff. toe	40.00	C	1529.90	L	5304.	21000.	0.253
Trans. stiff. toe	45.00	C	1649.59	L	5726.	21000.	0.273
Trans. stiff. toe	50.00	C	1752.12	L	6090.	21000.	0.290
Trans. stiff. toe	55.00	C	1828.92	L	6368.	21000.	0.303
Trans. stiff. toe	60.00	C	1905.72	L	6645.	21000.	0.316
Trans. stiff. toe	65.00	C	1971.06	L	6884.	21000.	0.328
Trans. stiff. toe	70.00	C	1990.55	L	6969.	21000.	0.332
Trans. stiff. toe	75.00	C	2010.03	L	7054.	21000.	0.336
Trans. stiff. toe	80.00	C	2029.51	L	7138.	21000.	0.340
Trans. stiff. toe	85.00	C	2035.91	L	7181.	21000.	0.342
Trans. stiff. toe	90.00	C	2042.30	L	7224.	21000.	0.344
Trans. stiff. toe	95.00	C	2048.70	L	7266.	21000.	0.346
Trans. stiff. toe	100.00	C	2007.61	L	7149.	21000.	0.340
Trans. stiff. toe	105.00	C	1954.64	L	13765.	21000.	0.655
Trans. stiff. toe	110.00	C	1901.67	L	13518.	21000.	0.644
Trans. stiff. toe	115.00	C	1831.20	L	13174.	21000.	0.627
Base metal	128.00	C	1399.85	T	5177.	13000.	0.398
Base metal *	128.00	C	846.76	T	3100.	10000.	0.310
Base metal	144.00	C	1134.87	T	3070.	13000.	0.236
Base metal *	144.00	C	693.07	T	1837.	10000.	0.184
Base metal	160.00	C	1246.21	T	2680.	13000.	0.206
Base metal *	160.00	C	735.88	T	1577.	10000.	0.158
Base metal	178.00	C	1095.81	T	3040.	13000.	0.234
Base metal *	178.00	C	674.04	T	1831.	10000.	0.183
Base metal	196.00	C	1346.01	T	5378.	13000.	0.414
Base metal *	196.00	C	823.84	T	3243.	10000.	0.324
Near flg-web weld	128.00	B	1399.85	T	5003.	18000.	0.278
Base metal	128.00	B	1399.85	T	5115.	18000.	0.284
Near flg-web weld *	128.00	B	846.76	T	2996.	16000.	0.187
Base metal *	128.00	B	846.76	T	3063.	16000.	0.191
Near flg-web weld *	128.00	B	846.76	T	3063.	16000.	0.191
Base metal *	128.00	B	846.76	T	3131.	16000.	0.196
Near flg-web weld	144.00	B	1134.87	T	2947.	18000.	0.164
Base metal	144.00	B	1134.87	T	3032.	18000.	0.168
Near flg-web weld *	144.00	B	693.07	T	1763.	16000.	0.110
Base metal *	144.00	B	693.07	T	1814.	16000.	0.113
Near flg-web weld *	144.00	B	693.07	T	1814.	16000.	0.113
Base metal *	144.00	B	693.07	T	1866.	16000.	0.117
Near flg-web weld	160.00	B	1246.21	T	2581.	18000.	0.143
Base metal	160.00	B	1246.21	T	2650.	18000.	0.147

OUTPUT.TXT

Near flg-web weld *	160.00	B	735.88	T	1518.	16000.	0.095
Base metal *	160.00	B	735.88	T	1559.	16000.	0.097
Near flg-web weld *	160.00	B	735.88	T	1559.	16000.	0.097
Base metal *	160.00	B	735.88	T	1601.	16000.	0.100
Near flg-web weld	178.00	B	1095.81	T	2912.	18000.	0.162
Base metal	178.00	B	1095.81	T	3000.	18000.	0.167
Near flg-web weld *	178.00	B	674.04	T	1754.	16000.	0.110
Base metal *	178.00	B	674.04	T	1807.	16000.	0.113
Near flg-web weld *	178.00	B	674.04	T	1807.	16000.	0.113
Base metal *	178.00	B	674.04	T	1861.	16000.	0.116
Near flg-web weld	196.00	B	1346.01	T	5233.	18000.	0.291
Base metal	196.00	B	1346.01	T	5324.	18000.	0.296
Near flg-web weld *	196.00	B	823.84	T	3155.	16000.	0.197
Base metal *	196.00	B	823.84	T	3210.	16000.	0.201
Near flg-web weld *	196.00	B	823.84	T	3210.	16000.	0.201
Base metal *	196.00	B	823.84	T	3266.	16000.	0.204
Top flg. splice	128.00	B	1399.85	T	7222.	18000.	0.401
Top flg splice *	128.00	B	846.76	T	4318.	16000.	0.270
Top flg. splice	144.00	B	1134.87	T	3257.	18000.	0.181
Top flg splice *	144.00	B	693.07	T	1947.	16000.	0.122
Top flg. splice	178.00	B	1095.81	T	3224.	18000.	0.179
Top flg splice *	178.00	B	674.04	T	1941.	16000.	0.121
Top flg. splice	193.00	B	1313.37	T	5503.	18000.	0.306
Top flg splice *	193.00	B	805.21	T	3316.	16000.	0.207
Bot flg. splice	128.00	B	1399.85	T	10531.	18000.	0.585
Bot flg splice *	128.00	B	846.76	T	6354.	16000.	0.397
Bot flg. splice	144.00	B	1134.87	T	3788.	18000.	0.210
Bot flg splice *	144.00	B	693.07	T	2303.	16000.	0.144
Bot flg. splice	178.00	B	1095.81	T	3850.	18000.	0.214
Bot flg splice *	178.00	B	674.04	T	2358.	16000.	0.147
Bot flg. splice	193.00	B	1313.37	T	8153.	18000.	0.453
Bot flg splice *	193.00	B	805.21	T	4981.	16000.	0.311
Trans. stiff. toe	120.00	C	1526.40	T	10966.	13000.	0.844
Trans. stiff. toe *	120.00	C	924.93	T	6632.	12000.	0.553
Trans. stiff. toe	125.00	C	1447.30	T	5013.	13000.	0.386
Trans. stiff. toe *	125.00	C	876.08	T	3006.	12000.	0.250
Trans. stiff. toe	130.00	C	1366.72	T	5046.	13000.	0.388
Trans. stiff. toe *	130.00	C	827.55	T	3020.	12000.	0.252
Trans. stiff. toe	135.00	C	1283.92	T	4875.	13000.	0.375
Trans. stiff. toe *	135.00	C	779.52	T	2913.	12000.	0.243
Trans. stiff. toe	140.00	C	1201.11	T	3340.	13000.	0.257
Trans. stiff. toe *	140.00	C	731.49	T	1999.	12000.	0.167
Trans. stiff. toe	145.00	C	1141.83	T	2950.	13000.	0.227
Trans. stiff. toe *	145.00	C	695.74	T	1763.	12000.	0.147
Trans. stiff. toe	150.00	C	1176.62	T	2787.	13000.	0.214
Trans. stiff. toe *	150.00	C	709.12	T	1657.	12000.	0.138
Trans. stiff. toe	155.00	C	1211.42	T	2559.	13000.	0.197
Trans. stiff. toe *	155.00	C	722.50	T	1513.	12000.	0.126
Trans. stiff. toe	160.00	C	1246.21	T	2629.	13000.	0.202
Trans. stiff. toe *	160.00	C	735.88	T	1547.	12000.	0.129
Trans. stiff. toe	165.00	C	1204.43	T	2530.	13000.	0.195
Trans. stiff. toe *	165.00	C	718.70	T	1498.	12000.	0.125
Trans. stiff. toe	170.00	C	1162.66	T	2718.	13000.	0.209
Trans. stiff. toe *	170.00	C	701.52	T	1619.	12000.	0.135
Trans. stiff. toe	175.00	C	1120.88	T	2836.	13000.	0.218
Trans. stiff. toe *	175.00	C	684.35	T	1701.	12000.	0.142
Trans. stiff. toe	180.00	C	1123.61	T	3114.	13000.	0.240
Trans. stiff. toe *	180.00	C	690.68	T	1876.	12000.	0.156
Trans. stiff. toe	185.00	C	1193.11	T	3393.	13000.	0.261
Trans. stiff. toe *	185.00	C	732.30	T	2046.	12000.	0.171
Trans. stiff. toe	205.00	C	1405.89	T	8321.	13000.	0.640
Trans. stiff. toe *	205.00	C	853.13	T	5042.	12000.	0.420
Trans. stiff. toe	210.00	C	1439.15	T	8436.	13000.	0.649

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Trans. stiff. toe *	210.00	C	869.41	T	5092.	12000.	0.424
Rebars	160.00		1246.21	T	3435.	20000.	0.172
Rebars *	160.00		735.88	T	2029.	20000.	0.101
Base metal	128.00	C	1617.66	L	6283.	21000.	0.299
Base metal	144.00	C	1841.67	L	5075.	21000.	0.242
Base metal	160.00	C	2586.64	L	5946.	21000.	0.283
Base metal	178.00	C	1732.51	L	5105.	21000.	0.243
Base metal	196.00	C	1394.94	L	6428.	21000.	0.306
Near flg-web weld	128.00	B	1617.66	L	6072.	29000.	0.209
Base metal	128.00	B	1617.66	L	6207.	29000.	0.214
Near flg-web weld	144.00	B	1841.67	L	4871.	29000.	0.168
Base metal	144.00	B	1841.67	L	5011.	29000.	0.173
Near flg-web weld	160.00	B	2586.64	L	5725.	29000.	0.197
Base metal	160.00	B	2586.64	L	5879.	29000.	0.203
Near flg-web weld	178.00	B	1732.51	L	4890.	29000.	0.169
Base metal	178.00	B	1732.51	L	5037.	29000.	0.174
Near flg-web weld	196.00	B	1394.94	L	6254.	29000.	0.216
Base metal	196.00	B	1394.94	L	6363.	29000.	0.219
Top flg. splice	128.00	B	1617.66	L	8828.	29000.	0.304
Top flg. splice	144.00	B	1841.67	L	5385.	29000.	0.186
Top flg. splice	178.00	B	1732.51	L	5421.	29000.	0.187
Top flg. splice	193.00	B	1421.47	L	6886.	29000.	0.237
Bot flg. splice	128.00	B	1617.66	L	12328.	29000.	0.425
Bot flg. splice	144.00	B	1841.67	L	6171.	29000.	0.213
Bot flg. splice	178.00	B	1732.51	L	6164.	29000.	0.213
Bot flg. splice	193.00	B	1421.47	L	9097.	29000.	0.314
Trans. stiff. toe	120.00	C	1749.07	L	12707.	21000.	0.605
Trans. stiff. toe	125.00	C	1666.94	L	6060.	21000.	0.289
Trans. stiff. toe	130.00	C	1645.66	L	6413.	21000.	0.305
Trans. stiff. toe	135.00	C	1715.66	L	6879.	21000.	0.328
Trans. stiff. toe	140.00	C	1785.67	L	5146.	21000.	0.245
Trans. stiff. toe	145.00	C	1888.23	L	4996.	21000.	0.238
Trans. stiff. toe	150.00	C	2121.03	L	5253.	21000.	0.250
Trans. stiff. toe	155.00	C	2353.83	L	5260.	21000.	0.250
Trans. stiff. toe	160.00	C	2586.64	L	5833.	21000.	0.278
Trans. stiff. toe	165.00	C	2349.38	L	5278.	21000.	0.251
Trans. stiff. toe	170.00	C	2112.12	L	5289.	21000.	0.252
Trans. stiff. toe	175.00	C	1874.86	L	5061.	21000.	0.241
Trans. stiff. toe	180.00	C	1695.00	L	5054.	21000.	0.241
Trans. stiff. toe	185.00	C	1601.23	L	5030.	21000.	0.240
Trans. stiff. toe	190.00	C	1507.46	L	7381.	21000.	0.351
Trans. stiff. toe	195.00	C	1413.69	L	6446.	21000.	0.307
Trans. stiff. toe	200.00	C	1415.06	L	6049.	21000.	0.288
Trans. stiff. toe	205.00	C	1440.21	L	5792.	21000.	0.276
Trans. stiff. toe	210.00	C	1465.36	L	8786.	21000.	0.418
Rebars	160.00		2586.64	L	7130.	20000.	0.357
Base metal	214.00	B	1465.76	T	8677.	18000.	0.482
Base metal *	214.00	B	882.43	T	5222.	16000.	0.326
Base metal	232.00	B	1554.71	T	8967.	18000.	0.498
Base metal *	232.00	B	945.89	T	5451.	16000.	0.341
Base metal	250.00	B	1527.69	T	8650.	18000.	0.481
Base metal *	250.00	B	935.89	T	5294.	16000.	0.331
Base metal	268.00	B	1554.68	T	8967.	18000.	0.498
Base metal *	268.00	B	945.88	T	5451.	16000.	0.341
Base metal	286.00	B	1465.84	T	8677.	18000.	0.482
Base metal *	286.00	B	882.48	T	5222.	16000.	0.326
Near flg-web weld	214.00	B	1465.76	T	8528.	18000.	0.474
Near flg-web weld *	214.00	B	882.43	T	5132.	16000.	0.321
Near flg-web weld	232.00	B	1554.71	T	8814.	18000.	0.490
Near flg-web weld *	232.00	B	945.89	T	5358.	16000.	0.335
Near flg-web weld	250.00	B	1527.69	T	8502.	18000.	0.472
Near flg-web weld *	250.00	B	935.89	T	5204.	16000.	0.325
Near flg-web weld	268.00	B	1554.68	T	8814.	18000.	0.490

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Near flg-web weld *	268.00	B	945.88	T	5358.	16000.	0.335
Near flg-web weld	286.00	B	1465.84	T	8529.	18000.	0.474
Near flg-web weld *	286.00	B	882.48	T	5133.	16000.	0.321
Trans. stiff. toe	215.00	C	1470.70	T	8544.	13000.	0.657
Trans. stiff. toe *	215.00	C	885.95	T	5145.	12000.	0.429
Trans. stiff. toe	220.00	C	1495.41	T	8624.	13000.	0.663
Trans. stiff. toe *	220.00	C	903.58	T	5208.	12000.	0.434
Trans. stiff. toe	225.00	C	1520.12	T	8703.	13000.	0.669
Trans. stiff. toe *	225.00	C	921.21	T	5270.	12000.	0.439
Trans. stiff. toe	230.00	C	1544.82	T	8782.	13000.	0.676
Trans. stiff. toe *	230.00	C	938.84	T	5333.	12000.	0.444
Trans. stiff. toe	235.00	C	1550.21	T	8762.	13000.	0.674
Trans. stiff. toe *	235.00	C	944.22	T	5332.	12000.	0.444
Trans. stiff. toe	240.00	C	1542.70	T	8675.	13000.	0.667
Trans. stiff. toe *	240.00	C	941.44	T	5289.	12000.	0.441
Trans. stiff. toe	245.00	C	1535.20	T	8589.	13000.	0.661
Trans. stiff. toe *	245.00	C	938.66	T	5247.	12000.	0.437
Trans. stiff. toe	250.00	C	1527.69	T	8502.	13000.	0.654
Trans. stiff. toe *	250.00	C	935.89	T	5204.	12000.	0.434
Trans. stiff. toe	255.00	C	1535.19	T	8589.	13000.	0.661
Trans. stiff. toe *	255.00	C	938.66	T	5247.	12000.	0.437
Trans. stiff. toe	260.00	C	1542.69	T	8675.	13000.	0.667
Trans. stiff. toe *	260.00	C	941.44	T	5289.	12000.	0.441
Trans. stiff. toe	265.00	C	1550.18	T	8762.	13000.	0.674
Trans. stiff. toe *	265.00	C	944.21	T	5332.	12000.	0.444
Trans. stiff. toe	270.00	C	1544.81	T	8782.	13000.	0.676
Trans. stiff. toe *	270.00	C	938.83	T	5333.	12000.	0.444
Trans. stiff. toe	275.00	C	1520.13	T	8703.	13000.	0.669
Trans. stiff. toe *	275.00	C	921.22	T	5270.	12000.	0.439
Trans. stiff. toe	280.00	C	1495.45	T	8624.	13000.	0.663
Trans. stiff. toe *	280.00	C	903.61	T	5208.	12000.	0.434
Trans. stiff. toe	285.00	C	1470.77	T	8544.	13000.	0.657
Trans. stiff. toe *	285.00	C	886.00	T	5145.	12000.	0.429
Base metal	214.00	B	1485.48	L	8979.	29000.	0.310
Base metal	232.00	B	1706.75	L	10103.	29000.	0.348
Base metal	250.00	B	1778.96	L	10445.	29000.	0.360
Base metal	268.00	B	1706.84	L	10104.	29000.	0.348
Base metal	286.00	B	1485.78	L	8980.	29000.	0.310
Near flg-web weld	214.00	B	1485.48	L	8825.	29000.	0.304
Near flg-web weld	232.00	B	1706.75	L	9931.	29000.	0.342
Near flg-web weld	250.00	B	1778.96	L	10267.	29000.	0.354
Near flg-web weld	268.00	B	1706.84	L	9931.	29000.	0.342
Near flg-web weld	286.00	B	1485.78	L	8826.	29000.	0.304
Trans. stiff. toe	215.00	C	1497.78	L	8887.	21000.	0.423
Trans. stiff. toe	220.00	C	1559.24	L	9194.	21000.	0.438
Trans. stiff. toe	225.00	C	1620.70	L	9501.	21000.	0.452
Trans. stiff. toe	230.00	C	1682.16	L	9808.	21000.	0.467
Trans. stiff. toe	235.00	C	1718.78	L	9987.	21000.	0.476
Trans. stiff. toe	240.00	C	1738.84	L	10080.	21000.	0.480
Trans. stiff. toe	245.00	C	1758.90	L	10174.	21000.	0.484
Trans. stiff. toe	250.00	C	1778.96	L	10267.	21000.	0.489
Trans. stiff. toe	255.00	C	1758.93	L	10174.	21000.	0.484
Trans. stiff. toe	260.00	C	1738.89	L	10080.	21000.	0.480
Trans. stiff. toe	265.00	C	1718.86	L	9987.	21000.	0.476
Trans. stiff. toe	270.00	C	1682.28	L	9808.	21000.	0.467
Trans. stiff. toe	275.00	C	1620.87	L	9502.	21000.	0.452
Trans. stiff. toe	280.00	C	1559.46	L	9195.	21000.	0.438
Trans. stiff. toe	285.00	C	1498.06	L	8888.	21000.	0.423
Base metal	304.00	C	1346.23	T	5378.	13000.	0.414
Base metal *	304.00	C	823.97	T	3242.	10000.	0.324
Base metal	322.00	C	1095.30	T	3040.	13000.	0.234
Base metal *	322.00	C	673.66	T	1831.	10000.	0.183
Base metal	340.00	C	1246.33	T	2681.	13000.	0.206

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Base metal *	340.00	C	735.96	T	1577.	10000.	0.158
Base metal	356.00	C	1135.05	T	3071.	13000.	0.236
Base metal *	356.00	C	693.23	T	1837.	10000.	0.184
Base metal	372.00	C	1399.64	T	5177.	13000.	0.398
Base metal *	372.00	C	846.61	T	3100.	10000.	0.310
Near flg-web weld	304.00	B	1346.23	T	5233.	18000.	0.291
Base metal	304.00	B	1346.23	T	5324.	18000.	0.296
Near flg-web weld *	304.00	B	823.97	T	3155.	16000.	0.197
Base metal *	304.00	B	823.97	T	3210.	16000.	0.201
Near flg-web weld *	304.00	B	823.97	T	3210.	16000.	0.201
Base metal *	304.00	B	823.97	T	3265.	16000.	0.204
Near flg-web weld	322.00	B	1095.30	T	2912.	18000.	0.162
Base metal	322.00	B	1095.30	T	2999.	18000.	0.167
Near flg-web weld *	322.00	B	673.66	T	1754.	16000.	0.110
Base metal *	322.00	B	673.66	T	1806.	16000.	0.113
Near flg-web weld *	322.00	B	673.66	T	1806.	16000.	0.113
Base metal *	322.00	B	673.66	T	1861.	16000.	0.116
Near flg-web weld	340.00	B	1246.33	T	2581.	18000.	0.143
Base metal	340.00	B	1246.33	T	2650.	18000.	0.147
Near flg-web weld *	340.00	B	735.96	T	1519.	16000.	0.095
Base metal *	340.00	B	735.96	T	1559.	16000.	0.097
Near flg-web weld *	340.00	B	735.96	T	1559.	16000.	0.097
Base metal *	340.00	B	735.96	T	1601.	16000.	0.100
Near flg-web weld	356.00	B	1135.05	T	2947.	18000.	0.164
Base metal	356.00	B	1135.05	T	3032.	18000.	0.168
Near flg-web weld *	356.00	B	693.23	T	1763.	16000.	0.110
Base metal *	356.00	B	693.23	T	1814.	16000.	0.113
Near flg-web weld *	356.00	B	693.23	T	1814.	16000.	0.113
Base metal *	356.00	B	693.23	T	1866.	16000.	0.117
Near flg-web weld	372.00	B	1399.64	T	5003.	18000.	0.278
Base metal	372.00	B	1399.64	T	5114.	18000.	0.284
Near flg-web weld *	372.00	B	846.61	T	2996.	16000.	0.187
Base metal *	372.00	B	846.61	T	3062.	16000.	0.191
Near flg-web weld *	372.00	B	846.61	T	3062.	16000.	0.191
Base metal *	372.00	B	846.61	T	3130.	16000.	0.196
Top flg. splice	307.00	B	1313.53	T	5502.	18000.	0.306
Top flg splice *	307.00	B	805.30	T	3316.	16000.	0.207
Top flg. splice	322.00	B	1095.30	T	3223.	18000.	0.179
Top flg splice *	322.00	B	673.66	T	1940.	16000.	0.121
Top flg. splice	356.00	B	1135.05	T	3257.	18000.	0.181
Top flg splice *	356.00	B	693.23	T	1947.	16000.	0.122
Top flg. splice	372.00	B	1399.64	T	7221.	18000.	0.401
Top flg splice *	372.00	B	846.61	T	4317.	16000.	0.270
Bot flg. splice	307.00	B	1313.53	T	8153.	18000.	0.453
Bot flg splice *	307.00	B	805.30	T	4982.	16000.	0.311
Bot flg. splice	322.00	B	1095.30	T	3848.	18000.	0.214
Bot flg splice *	322.00	B	673.66	T	2357.	16000.	0.147
Bot flg. splice	356.00	B	1135.05	T	3788.	18000.	0.210
Bot flg splice *	356.00	B	693.23	T	2304.	16000.	0.144
Bot flg. splice	372.00	B	1399.64	T	10530.	18000.	0.585
Bot flg splice *	372.00	B	846.61	T	6353.	16000.	0.397
Trans. stiff. toe	290.00	C	1439.26	T	8475.	13000.	0.652
Trans. stiff. toe *	290.00	C	869.48	T	5116.	12000.	0.426
Trans. stiff. toe	295.00	C	1406.03	T	8360.	13000.	0.643
Trans. stiff. toe	315.00	C	1192.88	T	3412.	13000.	0.262
Trans. stiff. toe *	315.00	C	732.11	T	2057.	12000.	0.171
Trans. stiff. toe	320.00	C	1123.18	T	3131.	13000.	0.241
Trans. stiff. toe *	320.00	C	690.36	T	1886.	12000.	0.157
Trans. stiff. toe	325.00	C	1120.47	T	2851.	13000.	0.219
Trans. stiff. toe *	325.00	C	684.04	T	1710.	12000.	0.142
Trans. stiff. toe	330.00	C	1162.42	T	2733.	13000.	0.210
Trans. stiff. toe *	330.00	C	701.35	T	1628.	12000.	0.136
Trans. stiff. toe	335.00	C	1204.38	T	2542.	13000.	0.196

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Trans. stiff. toe *	335.00	C	718.65	T	1505.	12000.	0.125
Trans. stiff. toe	340.00	C	1246.33	T	2642.	13000.	0.203
Trans. stiff. toe *	340.00	C	735.96	T	1554.	12000.	0.130
Trans. stiff. toe	345.00	C	1211.55	T	2571.	13000.	0.198
Trans. stiff. toe *	345.00	C	722.61	T	1521.	12000.	0.127
Trans. stiff. toe	350.00	C	1176.78	T	2803.	13000.	0.216
Trans. stiff. toe *	350.00	C	709.25	T	1666.	12000.	0.139
Trans. stiff. toe	355.00	C	1142.00	T	2967.	13000.	0.228
Trans. stiff. toe *	355.00	C	695.90	T	1773.	12000.	0.148
Trans. stiff. toe	360.00	C	1201.20	T	3358.	13000.	0.258
Trans. stiff. toe *	360.00	C	731.58	T	2010.	12000.	0.167
Trans. stiff. toe	365.00	C	1283.88	T	4908.	13000.	0.378
Trans. stiff. toe *	365.00	C	779.51	T	2933.	12000.	0.244
Trans. stiff. toe	370.00	C	1366.57	T	5080.	13000.	0.391
Trans. stiff. toe *	370.00	C	827.44	T	3040.	12000.	0.253
Trans. stiff. toe	375.00	C	1447.20	T	5047.	13000.	0.388
Trans. stiff. toe *	375.00	C	875.99	T	3026.	12000.	0.252
Trans. stiff. toe	380.00	C	1526.47	T	5006.	13000.	0.385
Trans. stiff. toe *	380.00	C	924.95	T	3008.	12000.	0.251
Rebars	340.00		1246.33	T	3436.	20000.	0.172
Rebars *	340.00		735.96	T	2029.	20000.	0.101
Base metal	304.00	C	1395.37	L	6429.	21000.	0.306
Base metal	322.00	C	1732.49	L	5105.	21000.	0.243
Base metal	340.00	C	2587.89	L	5949.	21000.	0.283
Base metal	356.00	C	1842.65	L	5078.	21000.	0.242
Base metal	372.00	C	1617.62	L	6284.	21000.	0.299
Near flg-web weld	304.00	B	1395.37	L	6255.	29000.	0.216
Base metal	304.00	B	1395.37	L	6364.	29000.	0.219
Near flg-web weld	322.00	B	1732.49	L	4890.	29000.	0.169
Base metal	322.00	B	1732.49	L	5037.	29000.	0.174
Near flg-web weld	340.00	B	2587.89	L	5728.	29000.	0.198
Base metal	340.00	B	2587.89	L	5882.	29000.	0.203
Near flg-web weld	356.00	B	1842.65	L	4874.	29000.	0.168
Base metal	356.00	B	1842.65	L	5014.	29000.	0.173
Near flg-web weld	372.00	B	1617.62	L	6073.	29000.	0.209
Base metal	372.00	B	1617.62	L	6208.	29000.	0.214
Top flg. splice	307.00	B	1421.87	L	6886.	29000.	0.237
Top flg. splice	322.00	B	1732.49	L	5421.	29000.	0.187
Top flg. splice	356.00	B	1842.65	L	5388.	29000.	0.186
Top flg. splice	372.00	B	1617.62	L	8829.	29000.	0.304
Bot flg. splice	307.00	B	1421.87	L	9099.	29000.	0.314
Bot flg. splice	322.00	B	1732.49	L	6164.	29000.	0.213
Bot flg. splice	356.00	B	1842.65	L	6174.	29000.	0.213
Bot flg. splice	372.00	B	1617.62	L	12328.	29000.	0.425
Trans. stiff. toe	290.00	C	1465.69	L	8828.	21000.	0.420
Trans. stiff. toe	295.00	C	1440.57	L	8779.	21000.	0.418
Trans. stiff. toe	300.00	C	1415.46	L	6090.	21000.	0.290
Trans. stiff. toe	305.00	C	1414.10	L	6490.	21000.	0.309
Trans. stiff. toe	310.00	C	1507.74	L	7432.	21000.	0.354
Trans. stiff. toe	315.00	C	1601.38	L	5059.	21000.	0.241
Trans. stiff. toe	320.00	C	1695.03	L	5084.	21000.	0.242
Trans. stiff. toe	325.00	C	1875.05	L	5091.	21000.	0.242
Trans. stiff. toe	330.00	C	2112.67	L	5321.	21000.	0.253
Trans. stiff. toe	335.00	C	2350.28	L	5305.	21000.	0.253
Trans. stiff. toe	340.00	C	2587.89	L	5864.	21000.	0.279
Trans. stiff. toe	345.00	C	2355.00	L	5288.	21000.	0.252
Trans. stiff. toe	350.00	C	2122.11	L	5285.	21000.	0.252
Trans. stiff. toe	355.00	C	1889.22	L	5026.	21000.	0.239
Trans. stiff. toe	360.00	C	1786.39	L	5176.	21000.	0.246
Trans. stiff. toe	365.00	C	1716.07	L	6928.	21000.	0.330
Trans. stiff. toe	370.00	C	1645.75	L	6457.	21000.	0.307
Trans. stiff. toe	375.00	C	1666.88	L	6102.	21000.	0.291
Trans. stiff. toe	380.00	C	1748.98	L	6013.	21000.	0.286

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OUTPUT.TXT

Rebars	340.00		2587.89	L	7134.	20000.	0.357
Base metal	388.00	B	1653.30	T	11835.	18000.	0.657
Base metal *	388.00	B	1003.30	T	7172.	16000.	0.448
Base metal	404.00	B	1838.47	T	6576.	18000.	0.365
Base metal *	404.00	B	1122.30	T	4012.	16000.	0.251
Base metal	420.00	B	1849.05	T	6557.	18000.	0.364
Base metal *	420.00	B	1103.28	T	3914.	16000.	0.245
Base metal	436.00	B	1842.34	T	6484.	18000.	0.360
Base metal *	436.00	B	1120.13	T	3941.	16000.	0.246
Base metal	452.00	B	1659.82	T	5811.	18000.	0.323
Base metal *	452.00	B	1002.04	T	3508.	16000.	0.219
Base metal	468.00	B	1326.65	T	4625.	18000.	0.257
Base metal *	468.00	B	797.03	T	2779.	16000.	0.174
Base metal	484.00	B	840.46	T	3394.	18000.	0.189
Base metal *	484.00	B	519.56	T	2097.	16000.	0.131
Near flg-web weld	388.00	B	1653.30	T	11686.	18000.	0.649
Near flg-web weld *	388.00	B	1003.30	T	7082.	16000.	0.443
Near flg-web weld	404.00	B	1838.47	T	6338.	18000.	0.352
Near flg-web weld *	404.00	B	1122.30	T	3867.	16000.	0.242
Near flg-web weld	420.00	B	1849.05	T	6319.	18000.	0.351
Near flg-web weld *	420.00	B	1103.28	T	3772.	16000.	0.236
Near flg-web weld	436.00	B	1842.34	T	6249.	18000.	0.347
Near flg-web weld *	436.00	B	1120.13	T	3798.	16000.	0.237
Near flg-web weld	452.00	B	1659.82	T	5601.	18000.	0.311
Near flg-web weld *	452.00	B	1002.04	T	3381.	16000.	0.211
Near flg-web weld	468.00	B	1326.65	T	4458.	18000.	0.248
Near flg-web weld *	468.00	B	797.03	T	2678.	16000.	0.167
Near flg-web weld	484.00	B	840.46	T	3296.	18000.	0.183
Near flg-web weld *	484.00	B	519.56	T	2036.	16000.	0.127
Top flg. splice	390.00	B	1680.19	T	6761.	18000.	0.376
Top flg splice *	390.00	B	1020.24	T	4076.	16000.	0.255
Top flg. splice	402.00	B	1824.87	T	4260.	18000.	0.237
Top flg splice *	402.00	B	1114.97	T	2587.	16000.	0.162
Top flg. splice	473.00	B	1191.15	T	2073.	18000.	0.115
Top flg splice *	473.00	B	718.11	T	1247.	16000.	0.078
Top flg. splice	485.00	B	798.31	T	1183.	18000.	0.066
Top flg splice *	485.00	B	494.18	T	733.	16000.	0.046
Bot flg. splice	390.00	B	1680.19	T	12017.	18000.	0.668
Bot flg splice *	390.00	B	1020.24	T	7287.	16000.	0.455
Bot flg. splice	402.00	B	1824.87	T	7665.	18000.	0.426
Bot flg splice *	402.00	B	1114.97	T	4679.	16000.	0.292
Bot flg. splice	473.00	B	1191.15	T	4832.	18000.	0.268
Bot flg splice *	473.00	B	718.11	T	2913.	16000.	0.182
Bot flg. splice	485.00	B	798.31	T	4655.	18000.	0.259
Bot flg splice *	485.00	B	494.18	T	2890.	16000.	0.181
Trans. stiff. toe	385.00	C	1605.74	T	11435.	13000.	0.880
Trans. stiff. toe *	385.00	C	973.92	T	6925.	12000.	0.577
Trans. stiff. toe	390.00	C	1676.45	T	11803.	13000.	0.908
Trans. stiff. toe *	390.00	C	1018.17	T	7159.	12000.	0.597
Trans. stiff. toe	395.00	C	1734.31	T	12096.	13000.	0.930
Trans. stiff. toe *	395.00	C	1055.36	T	7351.	12000.	0.613
Trans. stiff. toe	400.00	C	1792.18	T	6351.	13000.	0.489
Trans. stiff. toe *	400.00	C	1092.55	T	3869.	12000.	0.322
Trans. stiff. toe	405.00	C	1839.13	T	6492.	13000.	0.499
Trans. stiff. toe *	405.00	C	1121.11	T	3956.	12000.	0.330
Trans. stiff. toe	410.00	C	1842.44	T	6486.	13000.	0.499
Trans. stiff. toe *	410.00	C	1115.17	T	3925.	12000.	0.327
Trans. stiff. toe	415.00	C	1845.74	T	6480.	13000.	0.498
Trans. stiff. toe *	415.00	C	1109.23	T	3895.	12000.	0.325
Trans. stiff. toe	420.00	C	1849.05	T	6474.	13000.	0.498
Trans. stiff. toe *	420.00	C	1103.28	T	3864.	12000.	0.322
Trans. stiff. toe	425.00	C	1846.95	T	6452.	13000.	0.496
Trans. stiff. toe *	425.00	C	1108.55	T	3873.	12000.	0.323

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Trans. stiff. toe	430.00	C	1844.86	T	6429.	13000.	0.495
Trans. stiff. toe *	430.00	C	1113.81	T	3881.	12000.	0.323
Trans. stiff. toe	435.00	C	1842.76	T	6407.	13000.	0.493
Trans. stiff. toe *	435.00	C	1119.08	T	3890.	12000.	0.324
Trans. stiff. toe	440.00	C	1796.71	T	6236.	13000.	0.480
Trans. stiff. toe *	440.00	C	1090.61	T	3784.	12000.	0.315
Trans. stiff. toe	445.00	C	1739.67	T	6029.	13000.	0.464
Trans. stiff. toe *	445.00	C	1053.71	T	3651.	12000.	0.304
Trans. stiff. toe	450.00	C	1682.64	T	5821.	13000.	0.448
Trans. stiff. toe *	450.00	C	1016.80	T	3517.	12000.	0.293
Trans. stiff. toe	455.00	C	1597.35	T	5519.	13000.	0.425
Trans. stiff. toe *	455.00	C	963.60	T	3329.	12000.	0.277
Trans. stiff. toe	460.00	C	1493.24	T	5153.	13000.	0.396
Trans. stiff. toe *	460.00	C	899.54	T	3104.	12000.	0.259
Trans. stiff. toe	465.00	C	1389.12	T	4787.	13000.	0.368
Trans. stiff. toe *	465.00	C	835.47	T	2879.	12000.	0.240
Trans. stiff. toe	470.00	C	1265.88	T	4357.	13000.	0.335
Trans. stiff. toe *	470.00	C	762.35	T	2623.	12000.	0.219
Trans. stiff. toe	475.00	C	1113.94	T	3830.	13000.	0.295
Trans. stiff. toe *	475.00	C	675.64	T	2322.	12000.	0.194
Trans. stiff. toe	480.00	C	962.01	T	3843.	13000.	0.296
Trans. stiff. toe *	480.00	C	588.93	T	2351.	12000.	0.196
Trans. stiff. toe	485.00	C	787.93	T	3142.	13000.	0.242
Trans. stiff. toe *	485.00	C	487.09	T	1941.	12000.	0.162
Trans. stiff. toe	490.00	C	525.29	T	2094.	13000.	0.161
Trans. stiff. toe *	490.00	C	324.73	T	1294.	12000.	0.108
Base metal	388.00	B	1880.34	L	13590.	29000.	0.469
Base metal	404.00	B	2049.54	L	7366.	29000.	0.254
Base metal	420.00	B	2029.10	L	7228.	29000.	0.249
Base metal	436.00	B	1967.10	L	6955.	29000.	0.240
Base metal	452.00	B	1721.49	L	6055.	29000.	0.209
Base metal	468.00	B	1338.86	L	4689.	29000.	0.162
Base metal	484.00	B	798.83	L	3244.	29000.	0.112
Near flg-web weld	388.00	B	1880.34	L	13419.	29000.	0.463
Near flg-web weld	404.00	B	2049.54	L	7099.	29000.	0.245
Near flg-web weld	420.00	B	2029.10	L	6966.	29000.	0.240
Near flg-web weld	436.00	B	1967.10	L	6703.	29000.	0.231
Near flg-web weld	452.00	B	1721.49	L	5836.	29000.	0.201
Near flg-web weld	468.00	B	1338.86	L	4519.	29000.	0.156
Near flg-web weld	484.00	B	798.83	L	3150.	29000.	0.109
Top flg. splice	390.00	B	1906.61	L	8079.	29000.	0.279
Top flg. splice	402.00	B	2038.76	L	4965.	29000.	0.171
Top flg. splice	473.00	B	1187.01	L	2178.	29000.	0.075
Top flg. splice	485.00	B	756.49	L	1111.	29000.	0.038
Bot flg. splice	390.00	B	1906.61	L	13770.	29000.	0.475
Bot flg. splice	402.00	B	2038.76	L	8613.	29000.	0.297
Bot flg. splice	473.00	B	1187.01	L	4843.	29000.	0.167
Bot flg. splice	485.00	B	756.49	L	4296.	29000.	0.148
Trans. stiff. toe	385.00	C	1831.08	L	13174.	21000.	0.627
Trans. stiff. toe	390.00	C	1901.49	L	13517.	21000.	0.644
Trans. stiff. toe	395.00	C	1954.37	L	13764.	21000.	0.655
Trans. stiff. toe	400.00	C	2007.24	L	7147.	21000.	0.340
Trans. stiff. toe	405.00	C	2048.26	L	7265.	21000.	0.346
Trans. stiff. toe	410.00	C	2041.88	L	7222.	21000.	0.344
Trans. stiff. toe	415.00	C	2035.49	L	7180.	21000.	0.342
Trans. stiff. toe	420.00	C	2029.10	L	7137.	21000.	0.340
Trans. stiff. toe	425.00	C	2009.72	L	7053.	21000.	0.336
Trans. stiff. toe	430.00	C	1990.35	L	6968.	21000.	0.332
Trans. stiff. toe	435.00	C	1970.97	L	6884.	21000.	0.328
Trans. stiff. toe	440.00	C	1905.70	L	6645.	21000.	0.316
Trans. stiff. toe	445.00	C	1828.94	L	6368.	21000.	0.303
Trans. stiff. toe	450.00	C	1752.19	L	6090.	21000.	0.290
Trans. stiff. toe	455.00	C	1649.75	L	5726.	21000.	0.273

Trans. stiff. toe	460.00	C	1530.18	L	5305.	21000.	0.253
Trans. stiff. toe	465.00	C	1410.60	L	4883.	21000.	0.233
Trans. stiff. toe	470.00	C	1271.36	L	4395.	21000.	0.209
Trans. stiff. toe	475.00	C	1102.60	L	3808.	21000.	0.181
Trans. stiff. toe	480.00	C	933.84	L	3751.	21000.	0.179
Trans. stiff. toe	485.00	C	748.90	L	3003.	21000.	0.143
Trans. stiff. toe	490.00	C	499.27	L	2002.	21000.	0.095

* Single truck, one traffic lane, >2,000,000 cycles

T - truck loading
L - lane loading

Girder 2 Maximum Performance Ratios

Criterion	Location ft	Live Ld Effect	Dead Ld Effect	Max Performance Ratio
Shear	500.00	67.7	73.9	0.447
Bending	160.00	2266.8	4019.6	0.812
Bolted web spl	212.50	965.2	23.4	0.983
Fatigue	395.00			0.930
Bearing Stf.	0.00	63.5	74.4	0.657

Girder 2 Truck loading - 2000000 cycles

Maximum Pitch for 0.875 x 4.50 Stud Connectors for Fatigue

Tenth Point	Location	Shear Range (k)		Studs in a Line	Max Pitch (in)	
0	0.00	67.72	T	2	14.04	
1	16.00	59.84	T	2	20.26	
2	32.00	61.96	T	2	21.06	
3	48.00	63.66	T	2	20.50	
4	64.00	66.25	T	2	19.70	
5	80.00	104.71	T	2	12.46	
6	96.00	66.77	T	2	19.55	
7	112.00	65.75	T	2	14.94	
8	128.00	64.97	T	2	17.19	
9	144.00	67.57	T	2	413.87	*
10	160.00	79.46	T	2	470.38	*
11	178.00	65.47	T	2	401.30	*
12	196.00	63.14	T	2	197.41	*
13	214.00	64.34	T	2	16.34	
14	232.00	63.50	T	2	16.56	
15	250.00	64.52	T	2	16.30	
16	268.00	63.87	T	2	16.46	
17	286.00	64.70	T	2	16.25	
18	304.00	63.74	T	2	195.57	*
19	322.00	65.88	T	2	398.80	*
20	340.00	77.86	T	2	480.06	*
21	356.00	66.62	T	2	419.79	*
22	372.00	65.05	T	2	17.17	
23	388.00	65.52	T	2	15.00	

24	404.00	66.91 T	2	19.51
25	420.00	108.04 T	2	12.08
26	436.00	66.54 T	2	19.61
27	452.00	63.86 T	2	20.44
28	468.00	62.51 T	2	20.88
29	484.00	62.93 T	2	19.26
30	500.00	72.78 T	2	13.07

Girder 2 Lane loading - 500000 cycles

Maximum Pitch for 0.875 x 4.50 Stud Connectors for Fatigue

Tenth Point	Location	Shear Range (k)	Studs in a Line	Max Pitch (in)
0	0.00	68.15 L	2	18.84
1	16.00	51.93 L	2	31.52 *
2	32.00	48.95 L	2	36.00 *
3	48.00	52.65 L	2	33.47 *
4	64.00	53.10 L	2	33.19 *
5	80.00	60.62 L	2	29.07 *
6	96.00	55.33 L	2	31.85 *
7	112.00	60.13 L	2	22.07
8	128.00	63.20 L	2	23.87
9	144.00	72.62 L	2	520.03 *
10	160.00	91.34 L	2	552.53 *
11	178.00	73.31 L	2	483.92 *
12	196.00	65.26 L	2	257.91 *
13	214.00	62.43 L	2	22.74
14	232.00	57.90 L	2	24.52 *
15	250.00	57.25 L	2	24.80 *
16	268.00	58.42 L	2	24.30 *
17	286.00	61.56 L	2	23.06
18	304.00	66.27 L	2	254.00 *
19	322.00	72.70 L	2	488.01 *
20	340.00	91.11 L	2	553.94 *
21	356.00	70.66 L	2	534.45 *
22	372.00	65.32 L	2	23.10
23	388.00	57.97 L	2	22.89
24	404.00	56.68 L	2	31.09 *
25	420.00	73.51 L	2	23.97
26	436.00	53.14 L	2	33.17 *
27	452.00	53.59 L	2	32.89 *
28	468.00	53.26 L	2	33.09 *
29	484.00	57.95 L	2	28.25 *
30	500.00	67.92 L	2	18.91

Girder 2 Truck loading - >2000000 cycles

(Single truck in single lane)

Maximum Pitch for 0.875 x 4.50 Stud Connectors for Fatigue

Tenth Point	Location	Shear Range (k)	Studs in a Line	Max Pitch (in)
0	0.00	45.33	2	14.70

1	16.00	38.12	2	22.28
2	32.00	42.39	2	21.57
3	48.00	43.27	2	21.13
4	64.00	44.72	2	20.45
5	80.00	67.19	2	13.61
6	96.00	44.71	2	20.45
7	112.00	44.13	2	15.60
8	128.00	43.70	2	17.91
9	144.00	45.17	2	433.76 *
10	160.00	50.22	2	521.42 *
11	178.00	41.87	2	439.64 *
12	196.00	42.16	2	207.16 *
13	214.00	42.57	2	17.31
14	232.00	41.49	2	17.76
15	250.00	43.00	2	17.13
16	268.00	41.76	2	17.64
17	286.00	43.00	2	17.13
18	304.00	42.89	2	203.63 *
19	322.00	42.24	2	435.75 *
20	340.00	54.36	2	481.74 *
21	356.00	44.32	2	442.14 *
22	372.00	43.68	2	17.92
23	388.00	44.10	2	15.61
24	404.00	45.04	2	20.30
25	420.00	69.26	2	13.20
26	436.00	44.75	2	20.43
27	452.00	43.20	2	21.17
28	468.00	42.73	2	21.40
29	484.00	41.73	2	20.35
30	500.00	50.37	2	13.23

* Use 24 inches as per AASHTO 10.38.5.1.

Minimum Number of Connectors for Ultimate Strength

Beg TP	End TP	Beg Loc	End Loc	Number
0	4	0.00	64.00	62
4	10	64.00	160.00	65
10	15	160.00	250.00	65
15	20	250.00	340.00	65
20	26	340.00	436.00	65
26	30	436.00	500.00	62

Girder 2 Cost Schedule Totals

	lb
Flange	94325.0
Web	65103.6
Stiffeners	12868.6

Bearing stiff.	803.1
Total steel	173100.3
Flange-web weld	322.0
Web stiff. weld	308.5
Bearing stiff. weld	10.2
Total welding	640.7
Total steel and weld	173741.1

Girder 2 Service Deflections - in

	Tenth Pt	Total Noncomp Dead	Steel	Wet Con-crete	Super-Imposed Dead	Max LL+I Down	Max LL+I Up
	Support	0.000	0.000	0.000	0.000	0.000	0.000
	1	0.873	0.306	0.567	0.057	0.382	0.068
	2	1.593	0.562	1.031	0.105	0.716	0.132
	3	2.094	0.745	1.350	0.137	0.973	0.189
	4	2.331	0.838	1.493	0.152	1.130	0.235
	5	2.290	0.837	1.453	0.148	1.181	0.266
	6	2.000	0.750	1.250	0.127	1.119	0.278
	7	1.509	0.589	0.920	0.094	0.953	0.266
	8	0.888	0.370	0.517	0.054	0.672	0.213
	9	0.357	0.163	0.194	0.021	0.335	0.119
	Support	0.000	0.000	0.000	0.000	0.000	0.000
	11	-0.162	-0.118	-0.044	-0.006	0.341	0.128
	12	-0.056	-0.159	0.104	0.007	0.707	0.222
	13	0.248	-0.135	0.383	0.031	1.036	0.272
	14	0.540	-0.093	0.633	0.053	1.258	0.281
	15	0.655	-0.075	0.730	0.061	1.344	0.259
	16	0.542	-0.092	0.634	0.053	1.258	0.281
	17	0.252	-0.134	0.385	0.032	1.036	0.272
	18	-0.052	-0.158	0.106	0.007	0.708	0.222
	19	-0.160	-0.117	-0.043	-0.006	0.341	0.128
	Support	0.000	0.000	0.000	0.000	0.000	0.000
	21	0.356	0.163	0.193	0.021	0.335	0.119
	22	0.884	0.369	0.515	0.054	0.671	0.213
	23	1.504	0.588	0.917	0.094	0.952	0.266
	24	1.996	0.749	1.247	0.127	1.119	0.279
	25	2.287	0.836	1.450	0.148	1.181	0.266
	26	2.328	0.837	1.490	0.152	1.130	0.235
	27	2.092	0.744	1.348	0.137	0.973	0.189
	28	1.591	0.561	1.030	0.105	0.716	0.132
	29	0.873	0.306	0.567	0.057	0.383	0.068
	Support	0.000	0.000	0.000	0.000	0.000	0.000

Influence surfaces for defl developed assuming unequal participation of girders in resisting deflection.

	Loc						
Brace	20.00	1.067	0.375	0.693	0.070	0.470	0.085
Brace	40.00	1.877	0.664	1.212	0.123	0.857	0.162
Brace	60.00	2.298	0.824	1.474	0.150	1.100	0.225

Brace	80.00	2.290	0.837	1.453	0.148	1.181	0.266
Brace	100.00	1.896	0.717	1.180	0.120	1.087	0.278
Web Spl	117.50	1.310	0.520	0.790	0.081	0.869	0.252
Brace	120.00	1.187	0.478	0.709	0.073	0.819	0.244
Brace	140.00	0.474	0.211	0.263	0.028	0.419	0.145
Brace	160.00	0.000	0.000	0.000	0.000	0.000	0.000
Brace	180.00	-0.163	-0.126	-0.037	-0.005	0.381	0.140
Brace	200.00	-0.005	-0.160	0.154	0.012	0.784	0.237
Web Spl	212.50	0.224	-0.137	0.361	0.030	1.013	0.269
Brace	220.00	0.347	-0.123	0.470	0.039	1.122	0.279
Brace	240.00	0.613	-0.082	0.695	0.058	1.313	0.275
Brace	260.00	0.614	-0.082	0.696	0.058	1.313	0.275
Brace	280.00	0.350	-0.122	0.472	0.039	1.122	0.279
Web Spl	287.50	0.227	-0.137	0.363	0.030	1.013	0.269
Brace	300.00	-0.002	-0.159	0.157	0.012	0.784	0.237
Brace	320.00	-0.162	-0.126	-0.036	-0.005	0.381	0.140
Brace	340.00	0.000	0.000	0.000	0.000	0.000	0.000
Brace	360.00	0.472	0.210	0.261	0.028	0.419	0.145
Brace	380.00	1.183	0.477	0.706	0.073	0.819	0.244
Web Spl	382.50	1.305	0.519	0.786	0.081	0.869	0.252
Brace	400.00	1.892	0.715	1.177	0.120	1.087	0.278
Brace	420.00	2.287	0.836	1.450	0.148	1.181	0.266
Brace	440.00	2.295	0.823	1.472	0.150	1.100	0.225
Brace	460.00	1.875	0.664	1.211	0.123	0.857	0.162
Brace	480.00	1.067	0.374	0.693	0.070	0.471	0.085

Positive dead load deflection is downward.
Live load deflection as indicated in column heading.

run completed

```
************************************************************
MDX Steel Highway Girder Design Program, Version 6.2.137
Load Factor Design - Composite Girder

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Ph:573-446-3221 Fax:573-446-3278 Email: support@mdxsoftware.com
************************************************************
 May 17, 2006 -  2:49 pm
 Files: Bonner.R3
        R3.OUT

    Contents of data file-

       ************************************************
       ID: BONNER BRIDGE CHANNEL SPANS
       CONDITIONS
         A36 STIFFENER STEEL
         ENGLISH INPUT
         ENGLISH OUTPUT
         FISHBELLY HAUNCH
         INTERMEDIATE TRANSVERSE STIFFENERS BOTH SIDES OF WEB
         LFD METHOD
         RATE MODE
         SYSTEM FORCES
       DATA
```

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BFISPB 8. 8. 8. 8.
BFISPT 0.6875 0.6875 0.6875 0.6875
BFOSPB 18. 18. 18. 18.
BFOSPT 0.6875 0.6875 0.6875 0.6875
BLONGSP 140. 40. 140. 40.
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EDGEV 1.5 1.5 1.5 1.5
EDGEW 3. 3. 3. 3.
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FBLTDIAM 0.875
FNHOLES 4 4 4 4
FPC 3.
FPEND 1.5 1.5 1.5 1.5
FSPBSP 3. 3. 3. 3.
FY 32.
FYRB 40.
GAGEF 3. 3. 3. 3.
GAGEH 3. 3. 3. 3.
GAGEV 3. 3. 3. 3.
HAUNCH 3.125
HAUNH 0. 31.5 31.5 31.5 31.5 0.
HAUNV 0. 33. 33. 33. 33. 0.
IGIRD 3
NBLTB 24 24 24 24
NBLTT 24 24 24 24
NBSTIFF 1 3 3 1
NLINEH 22 22 22 22
NLINEV 3 3 3 3
PIERW 3.
POSREBAR 2.79
REBSPC 158.25 3.5 176.5 3.5
SLABRA 1.4
SLABRP 4.625
SLABT 7.25
SLABWEAR 0.
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SPLLST 0.5
SPLLSW 4.
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1.625 2. 1.625 0.75
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SPLTST 0.5
SPLTSW 6.
SPLTYP 1 1 1 1
SPLWD 72. 105. 72. 105. 72.
SPLWT 0.5
SPN 160. 180. 160.
SS 0.5
STFGAP 0.
SUPBST 0.5
SUPBSW 8.
TFISPB 8. 8. 8. 8.
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TFOSPB 18. 18. 18. 18.
TFOSPT 0.6875 0.6875 0.6875 0.6875
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WCONC 150.
WSTRES 18.
GO
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Girder 3 Case Data - BONNER BRIDGE CHANNEL SPANS

AASHTO Specification

Load Factor Method
17th Edition Standard Specifications for Highway Bridges

Dimensions (additional information available in Dimensions table)

Given dimensions-

Web Depth	72.00 in 72.00 in	105.00 in	72.00 in	105.00 in
Web Thickness	0.50 in 0.50 in	0.50 in	0.50 in	0.50 in
Long. Stiff. Width	4.00 in 4.00 in	4.00 in	4.00 in	4.00 in
Long. Stiff. Thickness	0.50 in 0.50 in	0.50 in	0.50 in	0.50 in
Trans. Stiff. Width	6.00 in 6.00 in	6.00 in	6.00 in	6.00 in
Trans. Stiff. Thickness	0.50 in 0.50 in	0.50 in	0.50 in	0.50 in
Bearing Stiff. Width	8.00 in	8.00 in	8.00 in	8.00 in
Bearing Stiff. Thickness	0.50 in	0.50 in	0.50 in	0.50 in

Execution Mode

Rate Mode

Geometry

Brace locations

0.00 ft	20.00 ft	40.00 ft	60.00 ft
80.00 ft	100.00 ft	120.00 ft	140.00 ft
160.00 ft	180.00 ft	200.00 ft	220.00 ft
240.00 ft	260.00 ft	280.00 ft	300.00 ft
320.00 ft	340.00 ft	360.00 ft	380.00 ft
400.00 ft	420.00 ft	440.00 ft	460.00 ft
480.00 ft	500.00 ft		

Unbraced length of comp. flange at support 2 is 20.00 ft.
Unbraced length of comp. flange at support 3 is 20.00 ft.

```
Cover plates

   No cover plates

 Curvature

   No curvature

 Flange splices

   Top flange splice locations

        15.00 ft     27.00 ft     98.00 ft    110.00 ft
       128.00 ft    144.00 ft    178.00 ft    193.00 ft
       307.00 ft    322.00 ft    356.00 ft    372.00 ft
       390.00 ft    402.00 ft    473.00 ft    485.00 ft


   Bottom flange splice locations

        15.00 ft     27.00 ft     98.00 ft    110.00 ft
       128.00 ft    144.00 ft    178.00 ft    193.00 ft
       307.00 ft    322.00 ft    356.00 ft    372.00 ft
       390.00 ft    402.00 ft    473.00 ft    485.00 ft


Girder Type

   Plate Girder

 Section properties

   Composite region for composite loading -   0. -   500.00 ft

 Span lengths

                              160.00 ft    180.00 ft    160.00 ft

 Stiffeners


   Bearing Stiffeners

     Number of brng stfs each side at supp locs
           1  3  3  1

   Longitudinal Stiffeners

     Bottom longitudinal stiffener regions-
                              140.00   -   180.00 ft    320.00   -   360.00 ft

   Transverse Stiffeners

     Transverse stiffeners both sides
     Stiffener transitions
     Stiffener clips            0.50 in

 Web Splices

   Web splice locations       117.50 ft    212.50 ft    287.50 ft    382.50 ft
```



```
 Web haunches

   Fish belly web haunches at interior supports:
       Support  Haunch Left   Haunch Right
                V(in)  H(ft)  H(ft)  V(in)
          1       0.0    0.0    0.0    0.0
          2      33.0   31.5   31.5   33.0
          3      33.0   31.5   31.5   33.0
          4       0.0    0.0    0.0    0.0
   Pier width for haunch geometry =  3.00 ft

Fatigue

   AWS minimum welds
   Fatigue stress category B flange splices
   Case I   road for fatigue
   Redundant load path structure

Impact

   Impact factors assigned in GSA program

Loading

   Load Factors gamma, beta     1.300        1.670
   Unshored construction

Reactions

   Max unfactored live load+impact reactions
         63.54 k     126.38 k     126.39 k      63.51 k
   Min unfactored live load+impact reactions
         -6.91 k      -9.59 k      -9.59 k      -6.91 k
   Total comp. and noncomp. unfactored dead load reactions
         74.35 k     236.20 k     236.14 k      74.32 k

Material


 Concrete

   Unit wt of concrete           150. lb/cu ft
   Slab t for strength          7.25 in      7.25 in      7.25 in
   Concrete strength            3.00 ksi
   Effective slab width        87.00 in
   Neg mom rebar area
         1.40 in2    1.40 in2
   Rebar placement from bottom of slab
         4.62 in     4.62 in
   Pos mom rebar area                                    2.79 in2     2.79 in2     2.79 in2
   Negative mom. slab used in dead load 2 analysis
   Slab haunch                  3.12 in      3.12 in      3.12 in
   Self weight slab width      96.00 in

 Steel

   Top flange yield            32.00 ksi    32.00 ksi    32.00 ksi    32.00 ksi
                               32.00 ksi
   Bottom flange yield         32.00 ksi    32.00 ksi    32.00 ksi    32.00 ksi
                               32.00 ksi
   Web yield                   32.00 ksi    32.00 ksi    32.00 ksi    32.00 ksi
                               32.00 ksi
```

```
                                    OUTPUT.TXT
   Rebar yield                 40.00 ksi

Summary tables

   Standard resolution summary tables

Units

   Input Units:  U.S. Customary
   Output Units: U.S. Customary


 * * * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * * *
 (Nonprismatic section used for this analysis.)

  Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

   Max live load+impact shear
        62.8T     54.5T     45.4T     42.5T     35.8T    -60.3T    -42.4T    -51.3T

   Dead load 1 shear
        67.6      51.1      33.2      14.7      -3.5     -23.3     -41.1     -59.7

   Dead load 2 shear
         6.3       4.6       2.9       1.3      -0.4      -2.1      -3.8      -5.6

   Max live load+impact moment
         0.0T    757.8T   1161.7T   1418.9L   1557.9L   1514.2L   1417.6L   1129.7L

   Min live load+impact moment
         0.0T   -101.1L   -202.3L   -304.8L   -409.3L   -515.3L   -632.4L   -750.8L

   Dead load 1 moment
         0.0     950.7    1623.8    2006.5    2097.8    1899.5    1384.5     568.6

   Dead load 2 moment
         0.0      87.5     148.0     181.8     188.9     169.1     121.7      46.2
 * * * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * * *

    Rate Web depth            =  72.0000 in
         Web thickness        =   0.5000 in


 Tenth     Top Flange    Min Top    Bott Flange  Min Bott    Flange to Web Weld
 Point       Width       Flange t      Width     Flange t      Top       Bott

    0        18.00        0.750        18.00       0.750       1/ 4      1/ 4
    1        18.00        1.625        18.00       1.625       5/16      5/16
    2        18.00        2.000        18.00       2.000       5/16      5/16
    3        18.00        2.000        18.00       2.000       5/16      5/16
    4        18.00        2.000        18.00       2.000       5/16      5/16
    5        18.00        2.000        18.00       2.000       5/16      5/16
    6        18.00        2.000        18.00       2.000       5/16      5/16
    7        18.00        0.750        18.00       0.750       1/ 4      1/ 4

    2 -   8.00 x  0.500 brng. stf. at    0.00 ft   from left end of web section
          6.00 x   0.50 transverse stiffeners
            1 stiffener space at    60.00 in
                  (straddles web splice)

           Composite section properties at max positive moment - n =  9

              I                                =  194119. in4
                                    Page 250
```

```
                                    OUTPUT.TXT
      S (top steel)                =  9350.29 in3
      S (bottom steel)             =  3514.14 in3
      S (concrete)                 =  6662.57 in3
      Neutral axis from bottom flange =    55.24 in

   Composite section properties at max positive moment - n = 27

      I                            =  152917. in4
      S (top steel)                =  5158.18 in3
      S (bottom steel)             =  3298.87 in3
      S (concrete)                 =  4021.96 in3
      Neutral axis from bottom flange =    46.35 in


   Section properties of girder alone at max positive moment

      I                            =  114144. in4
      S (top)                      =  3003.79 in3
      S (bottom)                   =  3003.79 in3
      Neutral axis from bottom flange =    38.00 in


   Section properties of girder alone at max negative moment

      I                            =   51278. in4
      S (top)                      =  1395.32 in3
      S (bottom)                   =  1395.32 in3
      Neutral axis from bottom flange =    36.75 in


   Composite section properties at max negative moment

      I                            =   51278. in4
      S (top of steel)             =  1395.32 in3
      S (bottom of steel)          =  1395.32 in3
      S (reinf)                    =  1172.07 in3
      Neutral axis from bottom flange =    36.75 in


* * * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * * *


Web Section  1 Stresses
-----------------------

           Factored  Shear                Factored   Bending
Tenth      Shear     Strength             Moment     Strength
Point      (k )      (k )        Ratio    (k-ft)     (k-ft)       Ratio

  0        232.4     543.6 (5)   0.428        0.0    7040.1 (20) 0.000
  1        190.7     626.8 (3)   0.304     2994.7   10084.3 (20) 0.297
  2        145.4     626.8 (3)   0.232     4825.3   11238.3 (20) 0.429
  3        113.0     626.8 (3)   0.180     5925.3   11525.1 (20) 0.514
  4         72.8     626.8 (3)   0.116     6354.9   11525.1 (20) 0.551
  5        164.0     626.8 (3)   0.262     5976.6   11525.1 (20) 0.519
  6        150.5     626.8 (3)   0.240     5035.6   11525.1 (20) 0.437
  7        196.2     626.8 (3)   0.313     3251.9    7040.1 (20) 0.462

              Stiffeners
                                    Page 251
```

OUTPUT.TXT

Location

5.00	219.4	626.8 (3)	0.350	
10.00	206.4	626.8 (3)	0.329	
15.00	193.3	626.8 (3)	0.308	
20.00	179.4	626.8 (3)	0.286	
25.00	165.2	626.8 (3)	0.264	
30.00	151.1	626.8 (3)	0.241	
35.00	139.3	626.8 (3)	0.222	
40.00	129.2	626.8 (3)	0.206	
45.00	119.0	626.8 (3)	0.190	
50.00	107.9	626.8 (3)	0.172	
55.00	95.4	626.8 (3)	0.152	
60.00	82.8	626.8 (3)	0.132	
65.00	78.5	626.8 (3)	0.125	
70.00	107.0	626.8 (3)	0.171	
75.00	135.5	626.8 (3)	0.216	
85.00	159.8	626.8 (3)	0.255	
90.00	155.6	626.8 (3)	0.248	
95.00	151.4	626.8 (3)	0.241	
100.00	162.0	626.8 (3)	0.258	
105.00	176.2	626.8 (3)	0.281	
110.00	190.5	626.8 (3)	0.304	
115.00	202.3	626.8 (3)	0.323	

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(5) C 0.58 Fyw D t
(20) compact section

Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	
0.00	137.89	16.80	11.03	0.657	28.80	18.39	0.638

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	16.00	B	839.86	T	3391.	18000.	0.188
Base metal *	16.00	B	519.18	T	2095.	16000.	0.131
Base metal	32.00	B	1325.86	T	4623.	18000.	0.257
Base metal *	32.00	B	796.46	T	2777.	16000.	0.174
Base metal	48.00	B	1659.69	T	5811.	18000.	0.323
Base metal *	48.00	B	1001.94	T	3507.	16000.	0.219
Base metal	64.00	B	1842.32	T	6484.	18000.	0.360
Base metal *	64.00	B	1120.11	T	3941.	16000.	0.246
Base metal	80.00	B	1849.30	T	6558.	18000.	0.364
Base metal *	80.00	B	1103.44	T	3914.	16000.	0.245
Base metal	96.00	B	1838.84	T	6577.	18000.	0.365
Base metal *	96.00	B	1122.53	T	4013.	16000.	0.251
Base metal	112.00	B	1652.96	T	11833.	18000.	0.657
Base metal *	112.00	B	1003.11	T	7171.	16000.	0.448
Near flg-web weld	16.00	B	839.86	T	3293.	18000.	0.183
Near flg-web weld *	16.00	B	519.18	T	2035.	16000.	0.127

Near flg-web weld	32.00	B	1325.86	T	4455.	18000.	0.248
Near flg-web weld *	32.00	B	796.46	T	2676.	16000.	0.167
Near flg-web weld	48.00	B	1659.69	T	5601.	18000.	0.311
Near flg-web weld *	48.00	B	1001.94	T	3381.	16000.	0.211
Near flg-web weld	64.00	B	1842.32	T	6249.	18000.	0.347
Near flg-web weld *	64.00	B	1120.11	T	3798.	16000.	0.237
Near flg-web weld	80.00	B	1849.30	T	6320.	18000.	0.351
Near flg-web weld *	80.00	B	1103.44	T	3772.	16000.	0.236
Near flg-web weld	96.00	B	1838.84	T	6339.	18000.	0.352
Near flg-web weld *	96.00	B	1122.53	T	3868.	16000.	0.242
Near flg-web weld	112.00	B	1652.96	T	11684.	18000.	0.649
Near flg-web weld *	112.00	B	1003.11	T	7081.	16000.	0.443
Top flg. splice	15.00	B	797.74	T	1182.	18000.	0.066
Top flg splice *	15.00	B	493.82	T	732.	16000.	0.046
Top flg. splice	27.00	B	1190.33	T	2071.	18000.	0.115
Top flg splice *	27.00	B	717.52	T	1247.	16000.	0.078
Top flg. splice	98.00	B	1825.19	T	4260.	18000.	0.237
Top flg splice *	98.00	B	1115.18	T	2588.	16000.	0.162
Top flg. splice	110.00	B	1679.87	T	6761.	18000.	0.376
Top flg splice *	110.00	B	1020.05	T	4075.	16000.	0.255
Bot flg. splice	15.00	B	797.74	T	4651.	18000.	0.258
Bot flg splice *	15.00	B	493.82	T	2887.	16000.	0.180
Bot flg. splice	27.00	B	1190.33	T	4829.	18000.	0.268
Bot flg splice *	27.00	B	717.52	T	2910.	16000.	0.182
Bot flg. splice	98.00	B	1825.19	T	7666.	18000.	0.426
Bot flg splice *	98.00	B	1115.18	T	4680.	16000.	0.293
Bot flg. splice	110.00	B	1679.87	T	12015.	18000.	0.668
Bot flg splice *	110.00	B	1020.05	T	7286.	16000.	0.455
Trans. stiff. toe	10.00	C	524.91	T	2093.	13000.	0.161
Trans. stiff. toe *	10.00	C	324.49	T	1293.	12000.	0.108
Trans. stiff. toe	15.00	C	787.37	T	3139.	13000.	0.241
Trans. stiff. toe *	15.00	C	486.73	T	1940.	12000.	0.162
Trans. stiff. toe	20.00	C	961.36	T	3840.	13000.	0.295
Trans. stiff. toe *	20.00	C	588.50	T	2350.	12000.	0.196
Trans. stiff. toe	25.00	C	1113.23	T	3827.	13000.	0.294
Trans. stiff. toe *	25.00	C	675.15	T	2321.	12000.	0.193
Trans. stiff. toe	30.00	C	1265.11	T	4354.	13000.	0.335
Trans. stiff. toe *	30.00	C	761.80	T	2621.	12000.	0.218
Trans. stiff. toe	35.00	C	1388.45	T	4785.	13000.	0.368
Trans. stiff. toe *	35.00	C	834.99	T	2877.	12000.	0.240
Trans. stiff. toe	40.00	C	1492.77	T	5151.	13000.	0.396
Trans. stiff. toe *	40.00	C	899.20	T	3103.	12000.	0.259
Trans. stiff. toe	45.00	C	1597.10	T	5518.	13000.	0.424
Trans. stiff. toe *	45.00	C	963.41	T	3328.	12000.	0.277
Trans. stiff. toe	50.00	C	1682.52	T	5821.	13000.	0.448
Trans. stiff. toe *	50.00	C	1016.71	T	3517.	12000.	0.293
Trans. stiff. toe	55.00	C	1739.59	T	6029.	13000.	0.464
Trans. stiff. toe *	55.00	C	1053.64	T	3651.	12000.	0.304
Trans. stiff. toe	60.00	C	1796.66	T	6236.	13000.	0.480
Trans. stiff. toe *	60.00	C	1090.57	T	3784.	12000.	0.315
Trans. stiff. toe	65.00	C	1842.75	T	6407.	13000.	0.493
Trans. stiff. toe *	65.00	C	1119.07	T	3890.	12000.	0.324
Trans. stiff. toe	70.00	C	1844.94	T	6430.	13000.	0.495
Trans. stiff. toe *	70.00	C	1113.86	T	3881.	12000.	0.323
Trans. stiff. toe	75.00	C	1847.12	T	6453.	13000.	0.496
Trans. stiff. toe *	75.00	C	1108.65	T	3873.	12000.	0.323
Trans. stiff. toe	80.00	C	1849.30	T	6475.	13000.	0.498
Trans. stiff. toe *	80.00	C	1103.44	T	3865.	12000.	0.322
Trans. stiff. toe	85.00	C	1846.03	T	6481.	13000.	0.499
Trans. stiff. toe *	85.00	C	1109.41	T	3895.	12000.	0.325
Trans. stiff. toe	90.00	C	1842.76	T	6487.	13000.	0.499
Trans. stiff. toe *	90.00	C	1115.37	T	3926.	12000.	0.327
Trans. stiff. toe	95.00	C	1839.49	T	6493.	13000.	0.499

Trans. stiff. toe *	95.00	C	1121.34	T	3956.	12000.	0.330
Trans. stiff. toe	100.00	C	1792.37	T	6352.	13000.	0.489
Trans. stiff. toe *	100.00	C	1092.68	T	3870.	12000.	0.322
Trans. stiff. toe	105.00	C	1734.28	T	12096.	13000.	0.930
Trans. stiff. toe *	105.00	C	1055.36	T	7351.	12000.	0.613
Trans. stiff. toe	110.00	C	1676.20	T	11802.	13000.	0.908
Trans. stiff. toe *	110.00	C	1018.03	T	7158.	12000.	0.596
Trans. stiff. toe	115.00	C	1605.50	T	11434.	13000.	0.880
Trans. stiff. toe *	115.00	C	973.79	T	6924.	12000.	0.577

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	16.00	B	798.35	L	3242.	29000.	0.112
Base metal	32.00	B	1338.41	L	4688.	29000.	0.162
Base metal	48.00	B	1721.40	L	6055.	29000.	0.209
Base metal	64.00	B	1967.17	L	6955.	29000.	0.240
Base metal	80.00	B	2029.51	L	7229.	29000.	0.249
Base metal	96.00	B	2049.98	L	7367.	29000.	0.254
Base metal	112.00	B	1880.48	L	13590.	29000.	0.469
Near flg-web weld	16.00	B	798.35	L	3149.	29000.	0.109
Near flg-web weld	32.00	B	1338.41	L	4518.	29000.	0.156
Near flg-web weld	48.00	B	1721.40	L	5836.	29000.	0.201
Near flg-web weld	64.00	B	1967.17	L	6703.	29000.	0.231
Near flg-web weld	80.00	B	2029.51	L	6968.	29000.	0.240
Near flg-web weld	96.00	B	2049.98	L	7100.	29000.	0.245
Near flg-web weld	112.00	B	1880.48	L	13420.	29000.	0.463
Top flg. splice	15.00	B	756.02	L	1111.	29000.	0.038
Top flg. splice	27.00	B	1186.51	L	2177.	29000.	0.075
Top flg. splice	98.00	B	2039.18	L	4966.	29000.	0.171
Top flg. splice	110.00	B	1906.77	L	8079.	29000.	0.279
Bot flg. splice	15.00	B	756.02	L	4293.	29000.	0.148
Bot flg. splice	27.00	B	1186.51	L	4841.	29000.	0.167
Bot flg. splice	98.00	B	2039.18	L	8615.	29000.	0.297
Bot flg. splice	110.00	B	1906.77	L	13771.	29000.	0.475
Trans. stiff. toe	10.00	C	498.97	L	2001.	21000.	0.095
Trans. stiff. toe	15.00	C	748.45	L	3001.	21000.	0.143
Trans. stiff. toe	20.00	C	933.37	L	3749.	21000.	0.179
Trans. stiff. toe	25.00	C	1102.13	L	3807.	21000.	0.181
Trans. stiff. toe	30.00	C	1270.90	L	4394.	21000.	0.209
Trans. stiff. toe	35.00	C	1410.22	L	4882.	21000.	0.232
Trans. stiff. toe	40.00	C	1529.90	L	5304.	21000.	0.253
Trans. stiff. toe	45.00	C	1649.59	L	5726.	21000.	0.273
Trans. stiff. toe	50.00	C	1752.12	L	6090.	21000.	0.290
Trans. stiff. toe	55.00	C	1828.92	L	6368.	21000.	0.303
Trans. stiff. toe	60.00	C	1905.72	L	6645.	21000.	0.316
Trans. stiff. toe	65.00	C	1971.06	L	6884.	21000.	0.328
Trans. stiff. toe	70.00	C	1990.55	L	6969.	21000.	0.332
Trans. stiff. toe	75.00	C	2010.03	L	7054.	21000.	0.336
Trans. stiff. toe	80.00	C	2029.51	L	7138.	21000.	0.340
Trans. stiff. toe	85.00	C	2035.91	L	7181.	21000.	0.342
Trans. stiff. toe	90.00	C	2042.30	L	7224.	21000.	0.344
Trans. stiff. toe	95.00	C	2048.70	L	7266.	21000.	0.346
Trans. stiff. toe	100.00	C	2007.61	L	7149.	21000.	0.340
Trans. stiff. toe	105.00	C	1954.64	L	13765.	21000.	0.655
Trans. stiff. toe	110.00	C	1901.67	L	13518.	21000.	0.644
Trans. stiff. toe	115.00	C	1831.20	L	13174.	21000.	0.627

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Cost Schedule for Web Section 1

	lb
Flange	24239.7
Web	14393.8
Web stiffeners	2817.5
Bearing stiff.	163.3
Total steel	41614.3

Welding	Vol	lbs
Flange-web	257.2	72.9
Trans.stiff.-web (1/ 4 cont.)	207.0	58.7
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6
Total welding *	473.2	134.2
Total steel and weld	41748.5	

Begin solution for web section 2.

* * * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * * *

Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

Max live load+impact shear
-53.1L -67.1L -85.5L 63.5L 50.8L

Dead load 1 shear
-79.6 -97.6 -116.0 78.6 59.6

Dead load 2 shear
-7.4 -9.1 -10.8 7.7 5.9
(Shear value at an interior support is at left of support.)

Max live load+impact moment
720.9L 437.0L 319.9L 386.0L 724.5T

Min live load+impact moment
-896.8L -1404.6L -2266.8L -1346.5L -797.6L

Dead load 1 moment
-544.7 -1958.6 -3669.2 -2070.5 -828.0

Dead load 2 moment
-57.9 -190.6 -350.4 -194.1 -71.3

* * * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * * *

Rate Web depth = 105.0000 in
Web thickness = 0.5000 in

OUTPUT.TXT

Tenth Point	Top Flange Width	Min Top Flange t	Bott Flange Width	Min Bott Flange t	Flange to Web Weld Top	Flange to Web Weld Bott
8	18.00	1.250	18.00	1.250	5/16	5/16
9	18.00	1.875	18.00	1.875	5/16	5/16
10	18.00	2.000	18.00	2.000	5/16	5/16
11	18.00	1.875	18.00	1.875	5/16	5/16
12	18.00	1.000	18.00	1.000	5/16	5/16

```
   2 -   8.00 x  0.500 brng. stf. at  42.50 ft   from left end of web section
         4.00 x   0.50 longitudinal stiffener
         6.00 x   0.50 transverse stiffeners
           1 stiffener space at    60.00 in
                 (straddles web splice)
           1 stiffener space at    60.00 in
                 (straddles web splice)

         Composite section properties at max positive moment - n =  9

            I                                =  146463. in4
            S (top steel)                    =  8622.68 in3
            S (bottom steel)                 =  2546.55 in3
            S (concrete)                     =  5609.29 in3
            Neutral axis from bottom flange =    57.51 in


         Composite section properties at max positive moment - n = 27

            I                                =  112334. in4
            S (top steel)                    =  4193.07 in3
            S (bottom steel)                 =  2354.55 in3
            S (concrete)                     =  3127.74 in3
            Neutral axis from bottom flange =    47.71 in


         Section properties of girder alone at max positive moment

            I                                =   75920. in4
            S (top)                          =  2038.13 in3
            S (bottom)                       =  2038.13 in3
            Neutral axis from bottom flange =    37.25 in


         Section properties of girder alone at max negative moment

            I                                =  254340. in4
            S (top)                          =  4666.80 in3
            S (bottom)                       =  4666.80 in3
            Neutral axis from bottom flange =    54.50 in


         Composite section properties at max negative moment

            I                                =  259366. in4
            S (top of steel)                 =  4818.24 in3
            S (bottom of steel)              =  4701.22 in3
            S (reinf)                        =  4353.24 in3
            Neutral axis from bottom flange =    55.17 in


* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *
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OUTPUT.TXT

Web Section 2 Stresses

Tenth Point	Factored Shear (k)	Shear Strength (k)	Ratio	Factored Moment (k-ft)	Bending Strength (k-ft)	Ratio
8	228.5	626.8 (3)	0.365	2730.3	5435.0 (6)	0.502
9	284.4	764.0 (3)	0.372	5843.5	9779.6 (6)	0.598
10L	350.6	930.6 (3)	0.377	10146.7	12493.3 (6)	0.812
10R	324.1	930.6 (3)	0.348	10146.7	12493.3 (6)	0.812
11	250.1	730.3 (3)	0.342	5867.2	9236.1 (6)	0.635
12	195.4	626.8 (3)	0.312	2900.7	4577.7 (6)	0.634

Stiffeners

Location						
120.00	212.4	626.8 (3)	0.339			
125.00	222.4	626.8 (3)	0.355			
130.00	235.5	628.2 (3)	0.375			
135.00	253.0	652.1 (3)	0.388			
140.00	270.5	701.6 (3)	0.385			
145.00	288.6	780.6 (3)	0.370			
150.00	309.3	846.6 (3)	0.365			
155.00	329.9	883.0 (3)	0.374			
165.00	303.5	883.0 (3)	0.344			
170.00	283.0	846.6 (3)	0.334			
175.00	262.4	780.6 (3)	0.336			
180.00	244.0	701.6 (3)	0.348			
185.00	228.8	652.1 (3)	0.351			
190.00	213.6	628.2 (3)	0.340			
195.00	198.4	626.8 (3)	0.317			
200.00	184.8	626.8 (3)	0.295			
205.00	171.6	626.8 (3)	0.274			
210.00	158.4	626.8 (3)	0.253			

```
     (3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
     (6) Fy S(equiv)
         Maximum moment in factored strength expression
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Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	
42.50	362.58	16.60	10.07	0.607	28.80	16.11	0.560

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	128.00	C	1399.85	T	5177.	13000.	0.398

Base metal *	128.00	C	846.76	T	3100.	10000.	0.310
Base metal	144.00	C	1134.87	T	3070.	13000.	0.236
Base metal *	144.00	C	693.07	T	1837.	10000.	0.184
Base metal	160.00	C	1246.21	T	2680.	13000.	0.206
Base metal *	160.00	C	735.88	T	1577.	10000.	0.158
Base metal	178.00	C	1095.81	T	3040.	13000.	0.234
Base metal *	178.00	C	674.04	T	1831.	10000.	0.183
Base metal	196.00	C	1346.01	T	5378.	13000.	0.414
Base metal *	196.00	C	823.84	T	3243.	10000.	0.324
Near flg-web weld	128.00	B	1399.85	T	5115.	18000.	0.284
Base metal	128.00	B	1399.85	T	5228.	18000.	0.290
Near flg-web weld *	128.00	B	846.76	T	3063.	16000.	0.191
Base metal *	128.00	B	846.76	T	3131.	16000.	0.196
Near flg-web weld	144.00	B	1134.87	T	3032.	18000.	0.168
Base metal	144.00	B	1134.87	T	3119.	18000.	0.173
Near flg-web weld *	144.00	B	693.07	T	1814.	16000.	0.113
Base metal *	144.00	B	693.07	T	1866.	16000.	0.117
Near flg-web weld	160.00	B	1246.21	T	2650.	18000.	0.147
Base metal	160.00	B	1246.21	T	2721.	18000.	0.151
Near flg-web weld *	160.00	B	735.88	T	1559.	16000.	0.097
Base metal *	160.00	B	735.88	T	1601.	16000.	0.100
Near flg-web weld	178.00	B	1095.81	T	3000.	18000.	0.167
Base metal	178.00	B	1095.81	T	3090.	18000.	0.172
Near flg-web weld *	178.00	B	674.04	T	1807.	16000.	0.113
Base metal *	178.00	B	674.04	T	1861.	16000.	0.116
Near flg-web weld	196.00	B	1346.01	T	5324.	18000.	0.296
Base metal	196.00	B	1346.01	T	5417.	18000.	0.301
Near flg-web weld *	196.00	B	823.84	T	3210.	16000.	0.201
Base metal *	196.00	B	823.84	T	3266.	16000.	0.204
Top flg. splice	128.00	B	1399.85	T	7222.	18000.	0.401
Top flg splice *	128.00	B	846.76	T	4318.	16000.	0.270
Top flg. splice	144.00	B	1134.87	T	3257.	18000.	0.181
Top flg splice *	144.00	B	693.07	T	1947.	16000.	0.122
Top flg. splice	178.00	B	1095.81	T	3224.	18000.	0.179
Top flg splice *	178.00	B	674.04	T	1941.	16000.	0.121
Top flg. splice	193.00	B	1313.37	T	5503.	18000.	0.306
Top flg splice *	193.00	B	805.21	T	3316.	16000.	0.207
Bot flg. splice	128.00	B	1399.85	T	10531.	18000.	0.585
Bot flg splice *	128.00	B	846.76	T	6354.	16000.	0.397
Bot flg. splice	144.00	B	1134.87	T	3788.	18000.	0.210
Bot flg splice *	144.00	B	693.07	T	2303.	16000.	0.144
Bot flg. splice	178.00	B	1095.81	T	3850.	18000.	0.214
Bot flg splice *	178.00	B	674.04	T	2358.	16000.	0.147
Bot flg. splice	193.00	B	1313.37	T	8153.	18000.	0.453
Bot flg splice *	193.00	B	805.21	T	4981.	16000.	0.311
Trans. stiff. toe	120.00	C	1526.40	T	10966.	13000.	0.844
Trans. stiff. toe *	120.00	C	924.93	T	6632.	12000.	0.553
Trans. stiff. toe	125.00	C	1447.30	T	5013.	13000.	0.386
Trans. stiff. toe *	125.00	C	876.08	T	3006.	12000.	0.250
Trans. stiff. toe	130.00	C	1366.72	T	5046.	13000.	0.388
Trans. stiff. toe *	130.00	C	827.55	T	3020.	12000.	0.252
Trans. stiff. toe	135.00	C	1283.92	T	4875.	13000.	0.375
Trans. stiff. toe *	135.00	C	779.52	T	2913.	12000.	0.243
Trans. stiff. toe	140.00	C	1201.11	T	3340.	13000.	0.257
Trans. stiff. toe *	140.00	C	731.49	T	1999.	12000.	0.167
Trans. stiff. toe	145.00	C	1141.83	T	2950.	13000.	0.227
Trans. stiff. toe *	145.00	C	695.74	T	1763.	12000.	0.147
Trans. stiff. toe	150.00	C	1176.62	T	2787.	13000.	0.214
Trans. stiff. toe *	150.00	C	709.12	T	1657.	12000.	0.138
Trans. stiff. toe	155.00	C	1211.42	T	2559.	13000.	0.197
Trans. stiff. toe *	155.00	C	722.50	T	1513.	12000.	0.126
Trans. stiff. toe	160.00	C	1246.21	T	2629.	13000.	0.202
Trans. stiff. toe *	160.00	C	735.88	T	1547.	12000.	0.129

Trans. stiff. toe	165.00	C	1204.43	T	2530.	13000.	0.195
Trans. stiff. toe *	165.00	C	718.70	T	1498.	12000.	0.125
Trans. stiff. toe	170.00	C	1162.66	T	2718.	13000.	0.209
Trans. stiff. toe *	170.00	C	701.52	T	1619.	12000.	0.135
Trans. stiff. toe	175.00	C	1120.88	T	2836.	13000.	0.218
Trans. stiff. toe *	175.00	C	684.35	T	1701.	12000.	0.142
Trans. stiff. toe	180.00	C	1123.61	T	3114.	13000.	0.240
Trans. stiff. toe *	180.00	C	690.68	T	1876.	12000.	0.156
Trans. stiff. toe	185.00	C	1193.11	T	3393.	13000.	0.261
Trans. stiff. toe *	185.00	C	732.30	T	2046.	12000.	0.171
Trans. stiff. toe	205.00	C	1405.89	T	8321.	13000.	0.640
Trans. stiff. toe *	205.00	C	853.13	T	5042.	12000.	0.420
Trans. stiff. toe	210.00	C	1439.15	T	8436.	13000.	0.649
Trans. stiff. toe *	210.00	C	869.41	T	5092.	12000.	0.424
Rebars	160.00		1246.21	T	3435.	20000.	0.172
Rebars *	160.00		735.88	T	2029.	20000.	0.101

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	128.00	C	1617.66	L	6283.	21000.	0.299
Base metal	144.00	C	1841.67	L	5075.	21000.	0.242
Base metal	160.00	C	2586.64	L	5946.	21000.	0.283
Base metal	178.00	C	1732.51	L	5105.	21000.	0.243
Base metal	196.00	C	1394.94	L	6428.	21000.	0.306
Near flg-web weld	128.00	B	1617.66	L	6207.	29000.	0.214
Base metal	128.00	B	1617.66	L	6345.	29000.	0.219
Near flg-web weld	144.00	B	1841.67	L	5011.	29000.	0.173
Base metal	144.00	B	1841.67	L	5155.	29000.	0.178
Near flg-web weld	160.00	B	2586.64	L	5879.	29000.	0.203
Base metal	160.00	B	2586.64	L	6037.	29000.	0.208
Near flg-web weld	178.00	B	1732.51	L	5037.	29000.	0.174
Base metal	178.00	B	1732.51	L	5188.	29000.	0.179
Near flg-web weld	196.00	B	1394.94	L	6363.	29000.	0.219
Base metal	196.00	B	1394.94	L	6474.	29000.	0.223
Top flg. splice	128.00	B	1617.66	L	8828.	29000.	0.304
Top flg. splice	144.00	B	1841.67	L	5385.	29000.	0.186
Top flg. splice	178.00	B	1732.51	L	5421.	29000.	0.187
Top flg. splice	193.00	B	1421.47	L	6886.	29000.	0.237
Bot flg. splice	128.00	B	1617.66	L	12328.	29000.	0.425
Bot flg. splice	144.00	B	1841.67	L	6171.	29000.	0.213
Bot flg. splice	178.00	B	1732.51	L	6164.	29000.	0.213
Bot flg. splice	193.00	B	1421.47	L	9097.	29000.	0.314
Trans. stiff. toe	120.00	C	1749.07	L	12707.	21000.	0.605
Trans. stiff. toe	125.00	C	1666.94	L	6060.	21000.	0.289
Trans. stiff. toe	130.00	C	1645.66	L	6413.	21000.	0.305
Trans. stiff. toe	135.00	C	1715.66	L	6879.	21000.	0.328
Trans. stiff. toe	140.00	C	1785.67	L	5146.	21000.	0.245
Trans. stiff. toe	145.00	C	1888.23	L	4996.	21000.	0.238
Trans. stiff. toe	150.00	C	2121.03	L	5253.	21000.	0.250
Trans. stiff. toe	155.00	C	2353.83	L	5260.	21000.	0.250
Trans. stiff. toe	160.00	C	2586.64	L	5833.	21000.	0.278
Trans. stiff. toe	165.00	C	2349.38	L	5278.	21000.	0.251
Trans. stiff. toe	170.00	C	2112.12	L	5289.	21000.	0.252
Trans. stiff. toe	175.00	C	1874.86	L	5061.	21000.	0.241
Trans. stiff. toe	180.00	C	1695.00	L	5054.	21000.	0.241
Trans. stiff. toe	185.00	C	1601.23	L	5030.	21000.	0.240

```
 Trans. stiff. toe     190.00     C        1507.46 L   7381.   21000.   0.351
 Trans. stiff. toe     195.00     C        1413.69 L   6446.   21000.   0.307
 Trans. stiff. toe     200.00     C        1415.06 L   6049.   21000.   0.288
 Trans. stiff. toe     205.00     C        1440.21 L   5792.   21000.   0.276
 Trans. stiff. toe     210.00     C        1465.36 L   8786.   21000.   0.418
 Rebars                160.00              2586.64 L   7130.   20000.   0.357
* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *


Cost Schedule for Web Section  2
--------------------------------

                                          lb

                    Flange               18329.1
                    Web                  13564.3
                    Web stiffeners        2698.1
                    Longitudinal stiff.      0.0
                    Bearing stiff.         238.2

                    Total steel          34829.6


            Welding                   Vol    lbs

Flange-web                           222.7    63.1
Trans.stiff.-web    ( 1/ 4 cont.)    198.2    56.2
Long.stiff.-web     ( 1/ 4 cont.)     71.3    20.2
Brng.stiff.( 1)-web( 1/ 4 cont.)      9.0     2.6

                    Total welding *  501.1   142.1

                    Total steel and weld  34971.8


Begin solution for web section  3.

* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *

 Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

  Max live load+impact shear
       41.3L    41.1T    33.5T   -39.0T    40.4L

  Dead load 1 shear
       40.8     19.5      0.1    -19.4    -40.8

  Dead load 2 shear
        4.0      1.9      0.0     -1.9     -4.0

  Max live load+impact moment
      984.9T  1192.6T  1273.4T  1192.5T   985.1T

  Min live load+impact moment
     -603.6L  -560.2L  -530.3L  -560.1L  -603.4L

  Dead load 1 moment
       73.2    607.3    782.0    608.9     76.6
```



```
  Dead load 2 moment
       17.3     70.2     87.6     70.2     17.5
* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *

    Rate Web depth           =  72.0000 in
         Web thickness       =   0.5000 in


Tenth    Top Flange   Min Top   Bott Flange  Min Bott   Flange to Web Weld
Point      Width      Flange t     Width     Flange t     Top       Bott

  13       18.00       1.000       18.00       1.000      5/16      5/16
  14       18.00       1.000       18.00       1.000      5/16      5/16
  15       18.00       1.000       18.00       1.000      5/16      5/16
  16       18.00       1.000       18.00       1.000      5/16      5/16
  17       18.00       1.000       18.00       1.000      5/16      5/16
         6.00 x   0.50 transverse stiffeners
           1 stiffener space at    60.00 in
                 (straddles web splice)
           1 stiffener space at    60.00 in
                 (straddles web splice)

 Composite section properties at max positive moment - n =  9

    I                                =  130133. in4
    S (top steel)                    =  8408.22 in3
    S (bottom steel)                 =  2223.62 in3
    S (concrete)                     =  5236.35 in3
    Neutral axis from bottom flange =    58.52 in


 Composite section properties at max positive moment - n = 27

    I                                =   98855. in4
    S (top steel)                    =  3864.33 in3
    S (bottom steel)                 =  2041.67 in3
    S (concrete)                     =  2827.95 in3
    Neutral axis from bottom flange =    48.42 in


 Section properties of girder alone at max positive moment

    I                                =   63516. in4
    S (top)                          =  1716.65 in3
    S (bottom)                       =  1716.65 in3
    Neutral axis from bottom flange =    37.00 in


 Section properties of girder alone at max negative moment

    I                                =   63516. in4
    S (top)                          =  1716.65 in3
    S (bottom)                       =  1716.65 in3
    Neutral axis from bottom flange =    37.00 in


 Composite section properties at max negative moment

    I                                =   63516. in4
    S (top of steel)                 =  1716.65 in3
    S (bottom of steel)              =  1716.65 in3
    S (reinf)                        =  1451.79 in3
    Neutral axis from bottom flange =    37.00 in
```

```
* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *


Web Section  3 Stresses
-----------------------

            Factored  Shear              Factored   Bending
Tenth       Shear     Strength           Moment     Strength
Point       (k )      (k )       Ratio   (k-ft)     (k-ft)      Ratio

 13         147.9     626.8 (3)    0.236     2255.8   7925.1 (20) 0.285
 14         117.2     626.8 (3)    0.187     3469.7   7925.1 (20) 0.438
 15          72.8     626.8 (3)    0.116     3895.1   7925.1 (20) 0.491
 16         112.5     626.8 (3)    0.180     3471.8   7925.1 (20) 0.438
 17         111.0     626.8 (3)    0.177     2261.0   7925.1 (20) 0.285

              Stiffeners
Location

 215.00     146.2     626.8 (3)    0.233
 220.00     137.7     626.8 (3)    0.220
 225.00     129.1     626.8 (3)    0.206
 230.00     120.6     626.8 (3)    0.192
 235.00     109.8     626.8 (3)    0.175
 240.00      97.5     626.8 (3)    0.156
 245.00      85.1     626.8 (3)    0.136
 255.00      83.8     626.8 (3)    0.134
 260.00      94.9     626.8 (3)    0.151
 265.00     105.9     626.8 (3)    0.169
 270.00     112.4     626.8 (3)    0.179
 275.00     111.9     626.8 (3)    0.179
 280.00     111.5     626.8 (3)    0.178
 285.00     111.1     626.8 (3)    0.177
      (3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
     (20) compact section


 Bearing Stiffeners

   Location      Service  Allowable Actual Ratio Allowable Actual  Ratio
   From Left End Reaction Column    Column       Bearing   Bearing
   of Web Sect.           Stress    Stress       Stress    Stress

     (ft)         (k )     (ksi)     (ksi)        (ksi)     (ksi)


Fatigue - truck loading

   Condition       Location    Category     Force    Actual   Allowable Ratio
                   From left  (Table       Range    Stress   Stress
                   End of     10.3.1A)     (k-ft)   Range    Range
                   Girder

 Base metal            214.00     B        1465.76 T   8677.   18000.   0.482
 Base metal *          214.00     B         882.43 T   5222.   16000.   0.326
 Base metal            232.00     B        1554.71 T   8967.   18000.   0.498
 Base metal *          232.00     B         945.89 T   5451.   16000.   0.341
```



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 Base metal            250.00     B        1527.69 T   8650.   18000.   0.481
 Base metal *          250.00     B         935.89 T   5294.   16000.   0.331
 Base metal            268.00     B        1554.68 T   8967.   18000.   0.498
 Base metal *          268.00     B         945.88 T   5451.   16000.   0.341
 Base metal            286.00     B        1465.84 T   8677.   18000.   0.482
 Base metal *          286.00     B         882.48 T   5222.   16000.   0.326
 Near flg-web weld     214.00     B        1465.76 T   8528.   18000.   0.474
 Near flg-web weld *   214.00     B         882.43 T   5132.   16000.   0.321
 Near flg-web weld     232.00     B        1554.71 T   8814.   18000.   0.490
 Near flg-web weld *   232.00     B         945.89 T   5358.   16000.   0.335
 Near flg-web weld     250.00     B        1527.69 T   8502.   18000.   0.472
 Near flg-web weld *   250.00     B         935.89 T   5204.   16000.   0.325
 Near flg-web weld     268.00     B        1554.68 T   8814.   18000.   0.490
 Near flg-web weld *   268.00     B         945.88 T   5358.   16000.   0.335
 Near flg-web weld     286.00     B        1465.84 T   8529.   18000.   0.474
 Near flg-web weld *   286.00     B         882.48 T   5133.   16000.   0.321
 Trans. stiff. toe     215.00     C        1470.70 T   8544.   13000.   0.657
 Trans. stiff. toe *   215.00     C         885.95 T   5145.   12000.   0.429
 Trans. stiff. toe     220.00     C        1495.41 T   8624.   13000.   0.663
 Trans. stiff. toe *   220.00     C         903.58 T   5208.   12000.   0.434
 Trans. stiff. toe     225.00     C        1520.12 T   8703.   13000.   0.669
 Trans. stiff. toe *   225.00     C         921.21 T   5270.   12000.   0.439
 Trans. stiff. toe     230.00     C        1544.82 T   8782.   13000.   0.676
 Trans. stiff. toe *   230.00     C         938.84 T   5333.   12000.   0.444
 Trans. stiff. toe     235.00     C        1550.21 T   8762.   13000.   0.674
 Trans. stiff. toe *   235.00     C         944.22 T   5332.   12000.   0.444
 Trans. stiff. toe     240.00     C        1542.70 T   8675.   13000.   0.667
 Trans. stiff. toe *   240.00     C         941.44 T   5289.   12000.   0.441
 Trans. stiff. toe     245.00     C        1535.20 T   8589.   13000.   0.661
 Trans. stiff. toe *   245.00     C         938.66 T   5247.   12000.   0.437
 Trans. stiff. toe     250.00     C        1527.69 T   8502.   13000.   0.654
 Trans. stiff. toe *   250.00     C         935.89 T   5204.   12000.   0.434
 Trans. stiff. toe     255.00     C        1535.19 T   8589.   13000.   0.661
 Trans. stiff. toe *   255.00     C         938.66 T   5247.   12000.   0.437
 Trans. stiff. toe     260.00     C        1542.69 T   8675.   13000.   0.667
 Trans. stiff. toe *   260.00     C         941.44 T   5289.   12000.   0.441
 Trans. stiff. toe     265.00     C        1550.18 T   8762.   13000.   0.674
 Trans. stiff. toe *   265.00     C         944.21 T   5332.   12000.   0.444
 Trans. stiff. toe     270.00     C        1544.81 T   8782.   13000.   0.676
 Trans. stiff. toe *   270.00     C         938.83 T   5333.   12000.   0.444
 Trans. stiff. toe     275.00     C        1520.13 T   8703.   13000.   0.669
 Trans. stiff. toe *   275.00     C         921.22 T   5270.   12000.   0.439
 Trans. stiff. toe     280.00     C        1495.45 T   8624.   13000.   0.663
 Trans. stiff. toe *   280.00     C         903.61 T   5208.   12000.   0.434
 Trans. stiff. toe     285.00     C        1470.77 T   8544.   13000.   0.657
 Trans. stiff. toe *   285.00     C         886.00 T   5145.   12000.   0.429

 * single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

   Condition       Location    Category     Force    Actual   Allowable Ratio
                   From left  (Table       Range    Stress   Stress
                   End of     10.3.1A)     (k-ft)   Range    Range
                   Girder

 Base metal            214.00     B        1485.48 L   8979.   29000.   0.310
 Base metal            232.00     B        1706.75 L  10103.   29000.   0.348
 Base metal            250.00     B        1778.96 L  10445.   29000.   0.360
 Base metal            268.00     B        1706.84 L  10104.   29000.   0.348
 Base metal            286.00     B        1485.78 L   8980.   29000.   0.310
 Near flg-web weld     214.00     B        1485.48 L   8825.   29000.   0.304
 Near flg-web weld     232.00     B        1706.75 L   9931.   29000.   0.342
```

OUTPUT.TXT

Near flg-web weld	250.00	B	1778.96	L	10267.	29000.	0.354
Near flg-web weld	268.00	B	1706.84	L	9931.	29000.	0.342
Near flg-web weld	286.00	B	1485.78	L	8826.	29000.	0.304
Trans. stiff. toe	215.00	C	1497.78	L	8887.	21000.	0.423
Trans. stiff. toe	220.00	C	1559.24	L	9194.	21000.	0.438
Trans. stiff. toe	225.00	C	1620.70	L	9501.	21000.	0.452
Trans. stiff. toe	230.00	C	1682.16	L	9808.	21000.	0.467
Trans. stiff. toe	235.00	C	1718.78	L	9987.	21000.	0.476
Trans. stiff. toe	240.00	C	1738.84	L	10080.	21000.	0.480
Trans. stiff. toe	245.00	C	1758.90	L	10174.	21000.	0.484
Trans. stiff. toe	250.00	C	1778.96	L	10267.	21000.	0.489
Trans. stiff. toe	255.00	C	1758.93	L	10174.	21000.	0.484
Trans. stiff. toe	260.00	C	1738.89	L	10080.	21000.	0.480
Trans. stiff. toe	265.00	C	1718.86	L	9987.	21000.	0.476
Trans. stiff. toe	270.00	C	1682.28	L	9808.	21000.	0.467
Trans. stiff. toe	275.00	C	1620.87	L	9502.	21000.	0.452
Trans. stiff. toe	280.00	C	1559.46	L	9195.	21000.	0.438
Trans. stiff. toe	285.00	C	1498.06	L	8888.	21000.	0.423

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Cost Schedule for Web Section 3

	lb
Flange	9187.5
Web	9187.5
Web stiffeners	1837.5
Total steel	20212.5

Welding	Vol	lbs
Flange-web	175.8	49.8
Trans.stiff.-web (1/ 4 cont.)	135.0	38.3
Total welding *	310.8	88.1
Total steel and weld	20300.6	

Begin solution for web section 4.

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

Max live load+impact shear
-51.0L -63.0L -83.8L 65.5L 54.4L

Dead load 1 shear
-59.6 -78.6 -99.2 97.6 79.6

Dead load 2 shear
-5.9 -7.7 -9.6 9.1 7.4
(Shear value at an interior support is at left of support.)

OUTPUT.TXT

Max live load+impact moment
724.9T 386.0L 320.0L 437.1L 720.7L

Min live load+impact moment
-797.6L -1346.5L -2267.9L -1405.5L -896.9L

Dead load 1 moment
-823.6 -2066.5 -3667.4 -1960.0 -546.6

Dead load 2 moment
-71.0 -193.9 -350.3 -190.6 -58.0

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Rate Web depth = 105.0000 in
Web thickness = 0.5000 in

Tenth Point	Top Flange Width	Min Top Flange t	Bott Flange Width	Min Bott Flange t	Flange to Web Weld Top	Flange to Web Weld Bott
18	18.00	1.000	18.00	1.000	5/16	5/16
19	18.00	1.875	18.00	1.875	5/16	5/16
20	18.00	2.000	18.00	2.000	5/16	5/16
21	18.00	1.875	18.00	1.875	5/16	5/16
22	18.00	1.250	18.00	1.250	5/16	5/16

2 - 8.00 x 0.500 brng. stf. at 52.50 ft from left end of web section
4.00 x 0.50 longitudinal stiffener
6.00 x 0.50 transverse stiffeners
1 stiffener space at 60.00 in
(straddles web splice)
1 stiffener space at 60.00 in
(straddles web splice)

Composite section properties at max positive moment - n = 9

I = 146463. in4
S (top steel) = 8622.68 in3
S (bottom steel) = 2546.55 in3
S (concrete) = 5609.29 in3
Neutral axis from bottom flange = 57.51 in

Composite section properties at max positive moment - n = 27

I = 112334. in4
S (top steel) = 4193.07 in3
S (bottom steel) = 2354.55 in3
S (concrete) = 3127.74 in3
Neutral axis from bottom flange = 47.71 in

Section properties of girder alone at max positive moment

I = 75920. in4
S (top) = 2038.13 in3
S (bottom) = 2038.13 in3
Neutral axis from bottom flange = 37.25 in

Section properties of girder alone at max negative moment

I = 254340. in4

```
   S (top)                          =  4666.80 in3
   S (bottom)                       =  4666.80 in3
   Neutral axis from bottom flange =    54.50 in

 Composite section properties at max negative moment

   I                                =  259366. in4
   S (top of steel)                 =  4818.24 in3
   S (bottom of steel)              =  4701.22 in3
   S (reinf)                        =  4353.24 in3
   Neutral axis from bottom flange =    55.17 in

* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *


Web Section  4 Stresses
-----------------------

           Factored  Shear                Factored   Bending
Tenth      Shear     Strength             Moment     Strength
Point      (k )      (k )        Ratio    (k-ft)     (k-ft)       Ratio

 18        195.8    626.8 (3)    0.312     2894.6   4577.7 (6)  0.632
 19        249.0    730.3 (3)    0.341     5861.9   9236.1 (6)  0.635
 20L       323.5    930.6 (3)    0.348    10146.7  12493.3 (6)  0.812
 20R       350.2    930.6 (3)    0.376    10146.7  12493.3 (6)  0.812
 21        281.0    764.0 (3)    0.368     5847.2   9779.6 (6)  0.598
 22        231.2    626.8 (3)    0.369     2733.2   5435.0 (6)  0.503

             Stiffeners
Location

 290.00     129.8    626.8 (3)    0.207
 295.00     153.4    626.8 (3)    0.245
 300.00     177.0    626.8 (3)    0.282
 305.00     198.8    626.8 (3)    0.317
 310.00     213.5    628.2 (3)    0.340
 315.00     228.3    652.1 (3)    0.350
 320.00     243.1    701.6 (3)    0.346
 325.00     261.4    780.6 (3)    0.335
 330.00     282.1    846.6 (3)    0.333
 335.00     302.8    883.0 (3)    0.343
 345.00     328.6    883.0 (3)    0.372
 350.00     307.0    846.6 (3)    0.363
 355.00     285.4    780.6 (3)    0.366
 360.00     268.6    701.6 (3)    0.383
 365.00     253.0    652.1 (3)    0.388
 370.00     237.4    628.2 (3)    0.378
 375.00     225.4    626.8 (3)    0.360
 380.00     215.8    626.8 (3)    0.344
      (3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
      (6) Fy S(equiv)
          Maximum moment in factored strength expression


 Bearing Stiffeners

   Location      Service  Allowable Actual Ratio Allowable Actual  Ratio
```



```
  From Left End Reaction Column    Column       Bearing   Bearing
  of Web Sect.          Stress     Stress       Stress    Stress

    (ft)        (k )     (ksi)      (ksi)        (ksi)     (ksi)
    52.50     362.53     16.60     10.07  0.606  28.80     16.11   0.559


Fatigue - truck loading

   Condition       Location    Category     Force     Actual   Allowable Ratio
                   From left   (Table       Range     Stress   Stress
                   End of      10.3.1A)     (k-ft)    Range    Range
                   Girder

 Base metal            304.00     C        1346.23 T   5378.    13000.   0.414
 Base metal *          304.00     C         823.97 T   3242.    10000.   0.324
 Base metal            322.00     C        1095.30 T   3040.    13000.   0.234
 Base metal *          322.00     C         673.66 T   1831.    10000.   0.183
 Base metal            340.00     C        1246.33 T   2681.    13000.   0.206
 Base metal *          340.00     C         735.96 T   1577.    10000.   0.158
 Base metal            356.00     C        1135.05 T   3071.    13000.   0.236
 Base metal *          356.00     C         693.23 T   1837.    10000.   0.184
 Base metal            372.00     C        1399.64 T   5177.    13000.   0.398
 Base metal *          372.00     C         846.61 T   3100.    10000.   0.310
 Near flg-web weld     304.00     B        1346.23 T   5324.    18000.   0.296
 Base metal            304.00     B        1346.23 T   5416.    18000.   0.301
 Near flg-web weld *   304.00     B         823.97 T   3210.    16000.   0.201
 Base metal *          304.00     B         823.97 T   3265.    16000.   0.204
 Near flg-web weld     322.00     B        1095.30 T   2999.    18000.   0.167
 Base metal            322.00     B        1095.30 T   3089.    18000.   0.172
 Near flg-web weld *   322.00     B         673.66 T   1806.    16000.   0.113
 Base metal *          322.00     B         673.66 T   1861.    16000.   0.116
 Near flg-web weld     340.00     B        1246.33 T   2650.    18000.   0.147
 Base metal            340.00     B        1246.33 T   2722.    18000.   0.151
 Near flg-web weld *   340.00     B         735.96 T   1559.    16000.   0.097
 Base metal *          340.00     B         735.96 T   1601.    16000.   0.100
 Near flg-web weld     356.00     B        1135.05 T   3032.    18000.   0.168
 Base metal            356.00     B        1135.05 T   3119.    18000.   0.173
 Near flg-web weld *   356.00     B         693.23 T   1814.    16000.   0.113
 Base metal *          356.00     B         693.23 T   1866.    16000.   0.117
 Near flg-web weld     372.00     B        1399.64 T   5114.    18000.   0.284
 Base metal            372.00     B        1399.64 T   5228.    18000.   0.290
 Near flg-web weld *   372.00     B         846.61 T   3062.    16000.   0.191
 Base metal *          372.00     B         846.61 T   3130.    16000.   0.196
 Top flg. splice       307.00     B        1313.53 T   5502.    18000.   0.306
 Top flg splice *      307.00     B         805.30 T   3316.    16000.   0.207
 Top flg. splice       322.00     B        1095.30 T   3223.    18000.   0.179
 Top flg splice *      322.00     B         673.66 T   1940.    16000.   0.121
 Top flg. splice       356.00     B        1135.05 T   3257.    18000.   0.181
 Top flg splice *      356.00     B         693.23 T   1947.    16000.   0.122
 Top flg. splice       372.00     B        1399.64 T   7221.    18000.   0.401
 Top flg splice *      372.00     B         846.61 T   4317.    16000.   0.270
 Bot flg. splice       307.00     B        1313.53 T   8153.    18000.   0.453
 Bot flg splice *      307.00     B         805.30 T   4982.    16000.   0.311
 Bot flg. splice       322.00     B        1095.30 T   3848.    18000.   0.214
 Bot flg splice *      322.00     B         673.66 T   2357.    16000.   0.147
 Bot flg. splice       356.00     B        1135.05 T   3788.    18000.   0.210
 Bot flg splice *      356.00     B         693.23 T   2304.    16000.   0.144
 Bot flg. splice       372.00     B        1399.64 T  10530.    18000.   0.585
 Bot flg splice *      372.00     B         846.61 T   6353.    16000.   0.397
 Trans. stiff. toe     290.00     C        1439.26 T   8475.    13000.   0.652
 Trans. stiff. toe *   290.00     C         869.48 T   5116.    12000.   0.426
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Trans. stiff. toe	295.00	C	1406.03	T	8360.	13000.	0.643
Trans. stiff. toe	315.00	C	1192.88	T	3412.	13000.	0.262
Trans. stiff. toe *	315.00	C	732.11	T	2057.	12000.	0.171
Trans. stiff. toe	320.00	C	1123.18	T	3131.	13000.	0.241
Trans. stiff. toe *	320.00	C	690.36	T	1886.	12000.	0.157
Trans. stiff. toe	325.00	C	1120.47	T	2851.	13000.	0.219
Trans. stiff. toe *	325.00	C	684.04	T	1710.	12000.	0.142
Trans. stiff. toe	330.00	C	1162.42	T	2733.	13000.	0.210
Trans. stiff. toe *	330.00	C	701.35	T	1628.	12000.	0.136
Trans. stiff. toe	335.00	C	1204.38	T	2542.	13000.	0.196
Trans. stiff. toe *	335.00	C	718.65	T	1505.	12000.	0.125
Trans. stiff. toe	340.00	C	1246.33	T	2642.	13000.	0.203
Trans. stiff. toe *	340.00	C	735.96	T	1554.	12000.	0.130
Trans. stiff. toe	345.00	C	1211.55	T	2571.	13000.	0.198
Trans. stiff. toe *	345.00	C	722.61	T	1521.	12000.	0.127
Trans. stiff. toe	350.00	C	1176.78	T	2803.	13000.	0.216
Trans. stiff. toe *	350.00	C	709.25	T	1666.	12000.	0.139
Trans. stiff. toe	355.00	C	1142.00	T	2967.	13000.	0.228
Trans. stiff. toe *	355.00	C	695.90	T	1773.	12000.	0.148
Trans. stiff. toe	360.00	C	1201.20	T	3358.	13000.	0.258
Trans. stiff. toe *	360.00	C	731.58	T	2010.	12000.	0.167
Trans. stiff. toe	365.00	C	1283.88	T	4908.	13000.	0.378
Trans. stiff. toe *	365.00	C	779.51	T	2933.	12000.	0.244
Trans. stiff. toe	370.00	C	1366.57	T	5080.	13000.	0.391
Trans. stiff. toe *	370.00	C	827.44	T	3040.	12000.	0.253
Trans. stiff. toe	375.00	C	1447.20	T	5047.	13000.	0.388
Trans. stiff. toe *	375.00	C	875.99	T	3026.	12000.	0.252
Trans. stiff. toe	380.00	C	1526.47	T	5006.	13000.	0.385
Trans. stiff. toe *	380.00	C	924.95	T	3008.	12000.	0.251
Rebars	340.00		1246.33	T	3436.	20000.	0.172
Rebars *	340.00		735.96	T	2029.	20000.	0.101

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	304.00	C	1395.37	L	6429.	21000.	0.306
Base metal	322.00	C	1732.49	L	5105.	21000.	0.243
Base metal	340.00	C	2587.89	L	5949.	21000.	0.283
Base metal	356.00	C	1842.65	L	5078.	21000.	0.242
Base metal	372.00	C	1617.62	L	6284.	21000.	0.299
Near flg-web weld	304.00	B	1395.37	L	6364.	29000.	0.219
Base metal	304.00	B	1395.37	L	6474.	29000.	0.223
Near flg-web weld	322.00	B	1732.49	L	5037.	29000.	0.174
Base metal	322.00	B	1732.49	L	5188.	29000.	0.179
Near flg-web weld	340.00	B	2587.89	L	5882.	29000.	0.203
Base metal	340.00	B	2587.89	L	6040.	29000.	0.208
Near flg-web weld	356.00	B	1842.65	L	5014.	29000.	0.173
Base metal	356.00	B	1842.65	L	5158.	29000.	0.178
Near flg-web weld	372.00	B	1617.62	L	6208.	29000.	0.214
Base metal	372.00	B	1617.62	L	6346.	29000.	0.219
Top flg. splice	307.00	B	1421.87	L	6886.	29000.	0.237
Top flg. splice	322.00	B	1732.49	L	5421.	29000.	0.187
Top flg. splice	356.00	B	1842.65	L	5388.	29000.	0.186
Top flg. splice	372.00	B	1617.62	L	8829.	29000.	0.304
Bot flg. splice	307.00	B	1421.87	L	9099.	29000.	0.314
Bot flg. splice	322.00	B	1732.49	L	6164.	29000.	0.213
Bot flg. splice	356.00	B	1842.65	L	6174.	29000.	0.213

Bot flg. splice	372.00	B	1617.62	L	12328.	29000.	0.425
Trans. stiff. toe	290.00	C	1465.69	L	8828.	21000.	0.420
Trans. stiff. toe	295.00	C	1440.57	L	8779.	21000.	0.418
Trans. stiff. toe	300.00	C	1415.46	L	6090.	21000.	0.290
Trans. stiff. toe	305.00	C	1414.10	L	6490.	21000.	0.309
Trans. stiff. toe	310.00	C	1507.74	L	7432.	21000.	0.354
Trans. stiff. toe	315.00	C	1601.38	L	5059.	21000.	0.241
Trans. stiff. toe	320.00	C	1695.03	L	5084.	21000.	0.242
Trans. stiff. toe	325.00	C	1875.05	L	5091.	21000.	0.242
Trans. stiff. toe	330.00	C	2112.67	L	5321.	21000.	0.253
Trans. stiff. toe	335.00	C	2350.28	L	5305.	21000.	0.253
Trans. stiff. toe	340.00	C	2587.89	L	5864.	21000.	0.279
Trans. stiff. toe	345.00	C	2355.00	L	5288.	21000.	0.252
Trans. stiff. toe	350.00	C	2122.11	L	5285.	21000.	0.252
Trans. stiff. toe	355.00	C	1889.22	L	5026.	21000.	0.239
Trans. stiff. toe	360.00	C	1786.39	L	5176.	21000.	0.246
Trans. stiff. toe	365.00	C	1716.07	L	6928.	21000.	0.330
Trans. stiff. toe	370.00	C	1645.75	L	6457.	21000.	0.307
Trans. stiff. toe	375.00	C	1666.88	L	6102.	21000.	0.291
Trans. stiff. toe	380.00	C	1748.98	L	6013.	21000.	0.286
Rebars	340.00		2587.89	L	7134.	20000.	0.357

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Cost Schedule for Web Section 4

	lb
Flange	18329.1
Web	13564.3
Web stiffeners	2698.1
Longitudinal stiff.	0.0
Bearing stiff.	238.2
Total steel	34829.6

Welding	Vol	lbs
Flange-web	222.7	63.1
Trans.stiff.-web (1/ 4 cont.)	198.2	56.2
Long.stiff.-web (1/ 4 cont.)	71.3	20.2
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6
Total welding *	501.1	142.1
Total steel and weld	34971.8	

Begin solution for web section 5.

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

Max live load+impact shear

53.2T	45.0T	58.6T	33.6T	-40.0T	-38.9T	-49.1T	-67.7T

```
                                    OUTPUT.TXT
  Dead load 1 shear
       59.7     41.1     23.3      3.5    -14.7    -33.1    -51.1    -67.6

  Dead load 2 shear
        5.6      3.8      2.1      0.4     -1.3     -2.9     -4.6     -6.3

  Max live load+impact moment
     1129.5L  1417.0L  1513.7L  1557.8L  1419.1L  1162.5T   758.3T     0.0T

  Min live load+impact moment
     -750.8L  -632.5L  -515.4L  -409.3L  -304.8L  -202.3L  -101.2L     0.0T

  Dead load 1 moment
      566.1   1381.5   1897.1   2096.3   2005.9   1623.6    950.8      0.0

  Dead load 2 moment
       46.1    121.5    169.0    188.8    181.7    148.0     87.5      0.0
* * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * * *

    Rate Web depth            =  72.0000 in
         Web thickness        =   0.5000 in

Tenth    Top Flange   Min Top   Bott Flange  Min Bott   Flange to Web Weld
Point      Width      Flange t     Width     Flange t     Top       Bott

  23       18.00       0.750       18.00       0.750      1/ 4      1/ 4
  24       18.00       2.000       18.00       2.000      5/16      5/16
  25       18.00       2.000       18.00       2.000      5/16      5/16
  26       18.00       2.000       18.00       2.000      5/16      5/16
  27       18.00       2.000       18.00       2.000      5/16      5/16
  28       18.00       2.000       18.00       2.000      5/16      5/16
  29       18.00       1.625       18.00       1.625      5/16      5/16
  30       18.00       0.750       18.00       0.750      1/ 4      1/ 4

    2 -   8.00 x  0.500 brng. stf. at 117.50 ft   from left end of web section
          6.00 x   0.50 transverse stiffeners
            1 stiffener space at    60.00 in
                  (straddles web splice)

          Composite section properties at max positive moment - n =  9

             I                                =  194119. in4
             S (top steel)                    =  9350.29 in3
             S (bottom steel)                 =  3514.14 in3
             S (concrete)                     =  6662.57 in3
             Neutral axis from bottom flange =    55.24 in


          Composite section properties at max positive moment - n = 27

             I                                =  152917. in4
             S (top steel)                    =  5158.18 in3
             S (bottom steel)                 =  3298.87 in3
             S (concrete)                     =  4021.96 in3
             Neutral axis from bottom flange =    46.35 in


          Section properties of girder alone at max positive moment

             I                                =  114144. in4
             S (top)                          =  3003.79 in3
             S (bottom)                       =  3003.79 in3
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                                    OUTPUT.TXT
             Neutral axis from bottom flange =    38.00 in

          Section properties of girder alone at max negative moment

             I                                =   51278. in4
             S (top)                          =  1395.32 in3
             S (bottom)                       =  1395.32 in3
             Neutral axis from bottom flange =    36.75 in


          Composite section properties at max negative moment

             I                                =   51278. in4
             S (top of steel)                 =  1395.32 in3
             S (bottom of steel)              =  1395.32 in3
             S (reinf)                        =  1172.07 in3
             Neutral axis from bottom flange =    36.75 in


* * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * * *


Web Section  5 Stresses
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           Factored  Shear                Factored   Bending
Tenth      Shear     Strength             Moment     Strength
Point      (k )      (k )        Ratio    (k-ft)     (k-ft)       Ratio

 23         200.4    626.8 (3)    0.320     3248.0    7040.1 (20) 0.461
 24         156.0    626.8 (3)    0.249     5030.2   11525.1 (20) 0.436
 25         160.2    626.8 (3)    0.256     5972.2   11525.1 (20) 0.518
 26          78.0    626.8 (3)    0.124     6352.5   11525.1 (20) 0.551
 27         107.5    626.8 (3)    0.171     5924.9   11525.1 (20) 0.514
 28         131.4    626.8 (3)    0.210     4826.9   11239.0 (20) 0.429
 29         179.2    626.8 (3)    0.286     2996.1   10084.6 (20) 0.297
 30         243.1    543.6 (5)    0.447        0.0    7040.1 (20) 0.000

          Stiffeners
Location

 385.00     206.2    626.8 (3)    0.329
 390.00     194.9    626.8 (3)    0.311
 395.00     181.0    626.8 (3)    0.289
 400.00     167.1    626.8 (3)    0.267
 405.00     156.3    626.8 (3)    0.249
 410.00     157.6    626.8 (3)    0.251
 415.00     158.9    626.8 (3)    0.254
 425.00     134.6    626.8 (3)    0.215
 430.00     108.9    626.8 (3)    0.174
 435.00      83.2    626.8 (3)    0.133
 440.00      85.4    626.8 (3)    0.136
 445.00      94.6    626.8 (3)    0.151
 450.00     103.8    626.8 (3)    0.166
 455.00     111.9    626.8 (3)    0.179
 460.00     119.4    626.8 (3)    0.191
 465.00     126.9    626.8 (3)    0.202
 470.00     137.4    626.8 (3)    0.219
 475.00     152.3    626.8 (3)    0.243
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480.00	167.2	626.8 (3)	0.267	
485.00	183.1	626.8 (3)	0.292	
490.00	203.1	626.8 (3)	0.324	
495.00	223.1	626.8 (3)	0.356	

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(5) C 0.58 Fyw D t
(20) compact section

Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	
117.50	137.82	16.80	11.03	0.656	28.80	18.38	0.638

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	388.00	B	1653.30	T	11835.	18000.	0.657
Base metal *	388.00	B	1003.30	T	7172.	16000.	0.448
Base metal	404.00	B	1838.47	T	6576.	18000.	0.365
Base metal *	404.00	B	1122.30	T	4012.	16000.	0.251
Base metal	420.00	B	1849.05	T	6557.	18000.	0.364
Base metal *	420.00	B	1103.28	T	3914.	16000.	0.245
Base metal	436.00	B	1842.34	T	6484.	18000.	0.360
Base metal *	436.00	B	1120.13	T	3941.	16000.	0.246
Base metal	452.00	B	1659.82	T	5811.	18000.	0.323
Base metal *	452.00	B	1002.04	T	3508.	16000.	0.219
Base metal	468.00	B	1326.65	T	4625.	18000.	0.257
Base metal *	468.00	B	797.03	T	2779.	16000.	0.174
Base metal	484.00	B	840.46	T	3394.	18000.	0.189
Base metal *	484.00	B	519.56	T	2097.	16000.	0.131
Near flg-web weld	388.00	B	1653.30	T	11686.	18000.	0.649
Near flg-web weld *	388.00	B	1003.30	T	7082.	16000.	0.443
Near flg-web weld	404.00	B	1838.47	T	6338.	18000.	0.352
Near flg-web weld *	404.00	B	1122.30	T	3867.	16000.	0.242
Near flg-web weld	420.00	B	1849.05	T	6319.	18000.	0.351
Near flg-web weld *	420.00	B	1103.28	T	3772.	16000.	0.236
Near flg-web weld	436.00	B	1842.34	T	6249.	18000.	0.347
Near flg-web weld *	436.00	B	1120.13	T	3798.	16000.	0.237
Near flg-web weld	452.00	B	1659.82	T	5601.	18000.	0.311
Near flg-web weld *	452.00	B	1002.04	T	3381.	16000.	0.211
Near flg-web weld	468.00	B	1326.65	T	4458.	18000.	0.248
Near flg-web weld *	468.00	B	797.03	T	2678.	16000.	0.167
Near flg-web weld	484.00	B	840.46	T	3296.	18000.	0.183
Near flg-web weld *	484.00	B	519.56	T	2036.	16000.	0.127
Top flg. splice	390.00	B	1680.19	T	6761.	18000.	0.376
Top flg splice *	390.00	B	1020.24	T	4076.	16000.	0.255
Top flg. splice	402.00	B	1824.87	T	4260.	18000.	0.237
Top flg splice *	402.00	B	1114.97	T	2587.	16000.	0.162
Top flg. splice	473.00	B	1191.15	T	2073.	18000.	0.115
Top flg splice *	473.00	B	718.11	T	1247.	16000.	0.078
Top flg. splice	485.00	B	798.31	T	1183.	18000.	0.066
Top flg splice *	485.00	B	494.18	T	733.	16000.	0.046

Bot flg. splice	390.00	B	1680.19	T	12017.	18000.	0.668
Bot flg splice *	390.00	B	1020.24	T	7287.	16000.	0.455
Bot flg. splice	402.00	B	1824.87	T	7665.	18000.	0.426
Bot flg splice *	402.00	B	1114.97	T	4679.	16000.	0.292
Bot flg. splice	473.00	B	1191.15	T	4832.	18000.	0.268
Bot flg splice *	473.00	B	718.11	T	2913.	16000.	0.182
Bot flg. splice	485.00	B	798.31	T	4655.	18000.	0.259
Bot flg splice *	485.00	B	494.18	T	2890.	16000.	0.181
Trans. stiff. toe	385.00	C	1605.74	T	11435.	13000.	0.880
Trans. stiff. toe *	385.00	C	973.92	T	6925.	12000.	0.577
Trans. stiff. toe	390.00	C	1676.45	T	11803.	13000.	0.908
Trans. stiff. toe *	390.00	C	1018.17	T	7159.	12000.	0.597
Trans. stiff. toe	395.00	C	1734.31	T	12096.	13000.	0.930
Trans. stiff. toe *	395.00	C	1055.36	T	7351.	12000.	0.613
Trans. stiff. toe	400.00	C	1792.18	T	6351.	13000.	0.489
Trans. stiff. toe *	400.00	C	1092.55	T	3869.	12000.	0.322
Trans. stiff. toe	405.00	C	1839.13	T	6492.	13000.	0.499
Trans. stiff. toe *	405.00	C	1121.11	T	3956.	12000.	0.330
Trans. stiff. toe	410.00	C	1842.44	T	6486.	13000.	0.499
Trans. stiff. toe *	410.00	C	1115.17	T	3925.	12000.	0.327
Trans. stiff. toe	415.00	C	1845.74	T	6480.	13000.	0.498
Trans. stiff. toe *	415.00	C	1109.23	T	3895.	12000.	0.325
Trans. stiff. toe	420.00	C	1849.05	T	6474.	13000.	0.498
Trans. stiff. toe *	420.00	C	1103.28	T	3864.	12000.	0.322
Trans. stiff. toe	425.00	C	1846.95	T	6452.	13000.	0.496
Trans. stiff. toe *	425.00	C	1108.55	T	3873.	12000.	0.323
Trans. stiff. toe	430.00	C	1844.86	T	6429.	13000.	0.495
Trans. stiff. toe *	430.00	C	1113.81	T	3881.	12000.	0.323
Trans. stiff. toe	435.00	C	1842.76	T	6407.	13000.	0.493
Trans. stiff. toe *	435.00	C	1119.08	T	3890.	12000.	0.324
Trans. stiff. toe	440.00	C	1796.71	T	6236.	13000.	0.480
Trans. stiff. toe *	440.00	C	1090.61	T	3784.	12000.	0.315
Trans. stiff. toe	445.00	C	1739.67	T	6029.	13000.	0.464
Trans. stiff. toe *	445.00	C	1053.71	T	3651.	12000.	0.304
Trans. stiff. toe	450.00	C	1682.64	T	5821.	13000.	0.448
Trans. stiff. toe *	450.00	C	1016.80	T	3517.	12000.	0.293
Trans. stiff. toe	455.00	C	1597.35	T	5519.	13000.	0.425
Trans. stiff. toe *	455.00	C	963.60	T	3329.	12000.	0.277
Trans. stiff. toe	460.00	C	1493.24	T	5153.	13000.	0.396
Trans. stiff. toe *	460.00	C	899.54	T	3104.	12000.	0.259
Trans. stiff. toe	465.00	C	1389.12	T	4787.	13000.	0.368
Trans. stiff. toe *	465.00	C	835.47	T	2879.	12000.	0.240
Trans. stiff. toe	470.00	C	1265.88	T	4357.	13000.	0.335
Trans. stiff. toe *	470.00	C	762.35	T	2623.	12000.	0.219
Trans. stiff. toe	475.00	C	1113.94	T	3830.	13000.	0.295
Trans. stiff. toe *	475.00	C	675.64	T	2322.	12000.	0.194
Trans. stiff. toe	480.00	C	962.01	T	3843.	13000.	0.296
Trans. stiff. toe *	480.00	C	588.93	T	2351.	12000.	0.196
Trans. stiff. toe	485.00	C	787.93	T	3142.	13000.	0.242
Trans. stiff. toe *	485.00	C	487.09	T	1941.	12000.	0.162
Trans. stiff. toe	490.00	C	525.29	T	2094.	13000.	0.161
Trans. stiff. toe *	490.00	C	324.73	T	1294.	12000.	0.108

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	388.00	B	1880.34	L	13590.	29000.	0.469

Base metal	404.00	B	2049.54	L	7366.	29000.	0.254
Base metal	420.00	B	2029.10	L	7228.	29000.	0.249
Base metal	436.00	B	1967.10	L	6955.	29000.	0.240
Base metal	452.00	B	1721.49	L	6055.	29000.	0.209
Base metal	468.00	B	1338.86	L	4689.	29000.	0.162
Base metal	484.00	B	798.83	L	3244.	29000.	0.112
Near flg-web weld	388.00	B	1880.34	L	13419.	29000.	0.463
Near flg-web weld	404.00	B	2049.54	L	7099.	29000.	0.245
Near flg-web weld	420.00	B	2029.10	L	6966.	29000.	0.240
Near flg-web weld	436.00	B	1967.10	L	6703.	29000.	0.231
Near flg-web weld	452.00	B	1721.49	L	5836.	29000.	0.201
Near flg-web weld	468.00	B	1338.86	L	4519.	29000.	0.156
Near flg-web weld	484.00	B	798.83	L	3150.	29000.	0.109
Top flg. splice	390.00	B	1906.61	L	8079.	29000.	0.279
Top flg. splice	402.00	B	2038.76	L	4965.	29000.	0.171
Top flg. splice	473.00	B	1187.01	L	2178.	29000.	0.075
Top flg. splice	485.00	B	756.49	L	1111.	29000.	0.038
Bot flg. splice	390.00	B	1906.61	L	13770.	29000.	0.475
Bot flg. splice	402.00	B	2038.76	L	8613.	29000.	0.297
Bot flg. splice	473.00	B	1187.01	L	4843.	29000.	0.167
Bot flg. splice	485.00	B	756.49	L	4296.	29000.	0.148
Trans. stiff. toe	385.00	C	1831.08	L	13174.	21000.	0.627
Trans. stiff. toe	390.00	C	1901.49	L	13517.	21000.	0.644
Trans. stiff. toe	395.00	C	1954.37	L	13764.	21000.	0.655
Trans. stiff. toe	400.00	C	2007.24	L	7147.	21000.	0.340
Trans. stiff. toe	405.00	C	2048.26	L	7265.	21000.	0.346
Trans. stiff. toe	410.00	C	2041.88	L	7222.	21000.	0.344
Trans. stiff. toe	415.00	C	2035.49	L	7180.	21000.	0.342
Trans. stiff. toe	420.00	C	2029.10	L	7137.	21000.	0.340
Trans. stiff. toe	425.00	C	2009.72	L	7053.	21000.	0.336
Trans. stiff. toe	430.00	C	1990.35	L	6968.	21000.	0.332
Trans. stiff. toe	435.00	C	1970.97	L	6884.	21000.	0.328
Trans. stiff. toe	440.00	C	1905.70	L	6645.	21000.	0.316
Trans. stiff. toe	445.00	C	1828.94	L	6368.	21000.	0.303
Trans. stiff. toe	450.00	C	1752.19	L	6090.	21000.	0.290
Trans. stiff. toe	455.00	C	1649.75	L	5726.	21000.	0.273
Trans. stiff. toe	460.00	C	1530.18	L	5305.	21000.	0.253
Trans. stiff. toe	465.00	C	1410.60	L	4883.	21000.	0.233
Trans. stiff. toe	470.00	C	1271.36	L	4395.	21000.	0.209
Trans. stiff. toe	475.00	C	1102.60	L	3808.	21000.	0.181
Trans. stiff. toe	480.00	C	933.84	L	3751.	21000.	0.179
Trans. stiff. toe	485.00	C	748.90	L	3003.	21000.	0.143
Trans. stiff. toe	490.00	C	499.27	L	2002.	21000.	0.095

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Cost Schedule for Web Section 5

	lb
Flange	24239.7
Web	14393.8
Web stiffeners	2817.5
Bearing stiff.	163.3
Total steel	41614.3

Welding	Vol	lbs

Flange-web	257.2	72.9
Trans.stiff.-web (1/ 4 cont.)	207.0	58.7
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6
Total welding *	473.2	134.2
Total steel and weld	41748.5	

Summary Tables

Girder 3 Service Shear -k

Tenth Point	Location	Noncomp Dead	Comp Dead	Max LL+I	Range
0	0.00	67.61	6.31	62.78 T	68.71
Top flg.spl.	15.00	52.21	4.74	54.99	60.08
Bot flg.spl.	15.00	52.21	4.74	54.99	60.08
1	16.00	51.14	4.63	54.45 T	59.84
Top flg.spl.	27.00	38.83	3.47	47.54	61.34
Bot flg.spl.	27.00	38.83	3.47	47.54	61.34
2	32.00	33.16	2.94	45.36 T	61.96
3	48.00	14.71	1.28	42.46 T	63.66
4	64.00	-3.49	-0.39	35.83 T	66.25
5	80.00	-23.29	-2.13	-60.33 T	104.71
6	96.00	-41.10	-3.81	-42.45 T	66.77
Top flg.spl.	98.00	-43.38	-4.02	-42.09	64.62
Top flg.spl.	110.00	-57.28	-5.35	-50.59	65.82
Bot flg.spl.	98.00	-43.38	-4.02	-42.09	64.62
Bot flg.spl.	110.00	-57.28	-5.35	-50.59	65.82
7	112.00	-59.68	-5.58	-51.31 T	65.75
Top flg.spl.	128.00	-79.59	-7.44	-53.14	65.94
Bot flg.spl.	128.00	-79.59	-7.44	-53.14	65.94
Top flg.spl.	144.00	-97.65	-9.15	-67.07	72.62
Bot flg.spl.	144.00	-97.65	-9.15	-67.07	72.62
10	160.00L	-116.05	-10.83	-85.52 L	87.70
10	160.00R	99.23	9.63	84.08 L	91.34
Top flg.spl.	178.00	78.60	7.74	63.50	73.31
Top flg.spl.	193.00	62.77	6.19	52.68	66.11
Bot flg.spl.	178.00	78.60	7.74	63.50	73.31
Bot flg.spl.	193.00	62.77	6.19	52.68	66.11
12	196.00	59.62	5.88	50.78 L	65.26
13	214.00	40.84	3.97	41.27 L	64.34
14	232.00	19.52	1.94	41.15 T	63.50
15	250.00	0.05	0.00	33.50 T	64.52
16	268.00	-19.42	-1.94	-39.04 T	63.87
17	286.00	-40.78	-3.97	-40.39 L	64.70
18	304.00	-59.59	-5.88	-50.99 L	66.27
Top flg.spl.	307.00	-62.74	-6.19	-52.90	67.00
Bot flg.spl.	307.00	-62.74	-6.19	-52.90	67.00
Top flg.spl.	322.00	-78.58	-7.74	-63.00	72.70
Bot flg.spl.	322.00	-78.58	-7.74	-63.00	72.70

20	340.00L	-99.22	-9.63	-83.85 L	91.11
20	340.00R	116.00	10.82	85.35 L	87.87
Top flg.spl.	356.00	97.60	9.14	65.53	70.66
Bot flg.spl.	356.00	97.60	9.14	65.53	70.66
Top flg.spl.	372.00	79.56	7.44	54.39	65.90
Bot flg.spl.	372.00	79.56	7.44	54.39	65.90
23	388.00	59.71	5.58	53.22 T	65.52
Top flg.spl.	390.00	57.32	5.35	52.57	65.60
Top flg.spl.	402.00	43.43	4.03	44.79	64.56
Bot flg.spl.	390.00	57.32	5.35	52.57	65.60
Bot flg.spl.	402.00	43.43	4.03	44.79	64.56
24	404.00	41.15	3.81	44.95 T	66.91
25	420.00	23.33	2.13	58.57 T	108.04
26	436.00	3.55	0.40	33.58 T	66.54
27	452.00	-14.65	-1.28	-39.96 T	63.86
28	468.00	-33.13	-2.94	-38.92 T	62.51
Top flg.spl.	473.00	-38.80	-3.46	-40.91	62.46
Bot flg.spl.	473.00	-38.80	-3.46	-40.91	62.46
29	484.00	-51.11	-4.63	-49.15 T	62.93
Top flg.spl.	485.00	-52.18	-4.73	-50.06	63.30
Bot flg.spl.	485.00	-52.18	-4.73	-50.06	63.30
30	500.00	-67.57	-6.31	-67.74 T	73.67

T - governed by truck loading
L - governed by lane loading

Girder 3 Truck-Lane Shear Ranges - k

Tenth	Loc	Truck Max LL+I	Truck Range	Lane Max LL+I	Lane Range
0	0.00	62.31	67.72	61.45	68.15
Top flg.spl.	15.00	54.98	60.04	46.12	52.55
Bot flg.spl.	15.00	54.98	60.04	46.12	52.55
1	16.00	54.45	59.84	45.30	51.93
Top flg.spl.	27.00	47.54	61.34	37.99	49.17
Bot flg.spl.	27.00	47.54	61.34	37.99	49.17
2	32.00	45.36	61.96	35.76	48.95
3	48.00	42.46	63.66	33.25	52.65
4	64.00	35.83	66.25	27.23	53.10
5	80.00	-60.33	104.71	-38.61	60.62
6	96.00	-42.45	66.77	-38.85	55.33
Top flg.spl.	98.00	-42.07	64.62	-39.54	55.38
Top flg.spl.	110.00	-50.42	65.87	-47.51	59.62
Bot flg.spl.	98.00	-42.07	64.62	-39.54	55.38
Bot flg.spl.	110.00	-50.42	65.87	-47.51	59.62
7	112.00	-50.91	65.75	-48.45	60.13
Top flg.spl.	128.00	-49.07	64.97	-53.14	63.20
Bot flg.spl.	128.00	-49.07	64.97	-53.14	63.20
Top flg.spl.	144.00	-60.61	67.57	-67.07	72.62
Bot flg.spl.	144.00	-60.61	67.57	-67.07	72.62
10	160.00L	-70.40	72.26	-85.52	87.70
10	160.00R	73.28	79.46	84.08	91.34
Top flg.spl.	178.00	58.58	65.47	63.50	73.31
Top flg.spl.	193.00	50.46	63.29	52.71	66.24
Bot flg.spl.	178.00	58.58	65.47	63.50	73.31
Bot flg.spl.	193.00	50.46	63.29	52.71	66.24
12	196.00	48.95	63.14	50.78	65.26
13	214.00	40.60	64.34	40.80	62.43
14	232.00	41.15	63.50	36.29	57.90
15	250.00	33.50	64.52	29.05	57.25

16	268.00	-39.04	63.87	-36.22	58.42
17	286.00	-38.68	64.70	-40.39	61.56
18	304.00	-47.16	63.74	-50.99	66.27
Top flg.spl.	307.00	-48.66	63.88	-52.90	67.22
Bot flg.spl.	307.00	-48.66	63.88	-52.90	67.22
Top flg.spl.	322.00	-56.50	65.88	-63.00	72.70
Bot flg.spl.	322.00	-56.50	65.88	-63.00	72.70
20	340.00L	-71.62	77.86	-83.85	91.11
20	340.00R	72.73	74.60	85.35	87.87
Top flg.spl.	356.00	62.21	66.62	65.53	70.66
Bot flg.spl.	356.00	62.21	66.62	65.53	70.66
Top flg.spl.	372.00	51.36	65.05	54.39	65.32
Bot flg.spl.	372.00	51.36	65.05	54.39	65.32
23	388.00	53.07	65.52	47.62	57.97
Top flg.spl.	390.00	52.59	65.64	46.66	57.48
Top flg.spl.	402.00	44.78	64.56	39.90	55.85
Bot flg.spl.	390.00	52.59	65.64	46.66	57.48
Bot flg.spl.	402.00	44.78	64.56	39.90	55.85
24	404.00	44.95	66.91	39.27	56.68
25	420.00	58.57	108.04	38.62	73.51
26	436.00	33.58	66.54	26.95	53.14
27	452.00	-39.96	63.86	-33.37	53.59
28	468.00	-38.92	62.51	-35.24	53.26
Top flg.spl.	473.00	-40.91	62.46	-37.69	54.19
Bot flg.spl.	473.00	-40.91	62.46	-37.69	54.19
29	484.00	-49.15	62.93	-46.21	57.95
Top flg.spl.	485.00	-50.05	63.27	-47.03	58.42
Bot flg.spl.	485.00	-50.05	63.27	-47.03	58.42
30	500.00	-67.34	72.78	-61.29	67.92

Girder 3 Factored Reactions - k

Loc	Noncomp Dead	Comp Dead	LL+I Down	LL+I Up	Max Total	Min Total
0.00	88.46	8.20	137.94	-15.00	234.60	81.66
Steel	28.51					
Conc	59.94					
160.00	280.47	26.58	274.38	-20.82	581.44	286.24
Steel	82.57					
Conc	197.91					
340.00	280.40	26.58	274.38	-20.83	581.37	286.16
Steel	82.55					
Conc	197.85					
500.00	88.41	8.20	137.88	-15.00	234.49	81.61
Steel	28.50					
Conc	59.91					

OUTPUT.TXT

Unfactored Reactions - k

Loc	Noncomp Dead	Comp Dead	LL+I Down	LL+I Up	Max Total	Min Total
0.00	68.04	6.31	63.54	-6.91	137.89	67.45
Steel	21.93					
Conc	46.11					
160.00	215.75	20.45	126.38	-9.59	362.58	226.61
Steel	63.51					
Conc	152.24					
340.00	215.69	20.45	126.39	-9.59	362.53	226.55
Steel	63.50					
Conc	152.20					
500.00	68.01	6.31	63.51	-6.91	137.82	67.41
Steel	21.92					
Conc	46.09					

Girder 3 Service Moment - k-ft

Tenth Point	Location	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Range
0	0.00	0.00	0.00	0.00	0.00 T	0.00
Top flg.spl	15.00	899.38	82.78	720.77	-94.82	815.59
Bot.flg.spl	15.00	899.38	82.78	720.77	-94.82	815.59
1	16.00	950.67	87.46	757.76 T	-101.14 L	858.91
Top flg.spl	27.00	1444.62	131.96	1051.21	-170.52	1221.73
Bot.flg.spl	27.00	1444.62	131.96	1051.21	-170.52	1221.73
2	32.00	1623.78	148.01	1161.68 T	-202.27 L	1363.95
3	48.00	2006.55	181.78	1418.93 L	-304.80 L	1723.73
4	64.00	2097.78	188.86	1557.92 L	-409.25 L	1967.17
5	80.00	1899.46	169.15	1514.25 L	-515.26 L	2029.51
6	96.00	1384.50	121.67	1417.57 L	-632.41 L	2049.98
Top flg.spl	98.00	1298.97	113.77	1392.04	-647.14	2039.18
Top flg.spl	110.00	686.84	57.25	1172.32	-734.46	1906.78
Bot.flg.spl	98.00	1298.97	113.77	1392.04	-647.14	2039.18
Bot.flg.spl	110.00	686.84	57.25	1172.32	-734.46	1906.78
7	112.00	568.58	46.25	1129.72 L	-750.76 L	1880.48
Top flg.spl	128.00	-544.74	-57.91	720.89	-896.77	1617.66
Bot.flg.spl	128.00	-544.74	-57.91	720.89	-896.77	1617.66
Top flg.spl	144.00	-1958.65	-190.55	437.02	-1404.65	1841.67
Bot.flg.spl	144.00	-1958.65	-190.55	437.02	-1404.65	1841.67
10	160.00	-3669.22	-350.43	319.87 L	-2266.77 L	2586.64
Top flg.spl	178.00	-2070.46	-194.13	386.00	-1346.50	1732.51
Top flg.spl	193.00	-1011.34	-89.40	673.54	-864.47	1538.00
Bot.flg.spl	178.00	-2070.46	-194.13	386.00	-1346.50	1732.51
Bot.flg.spl	193.00	-1011.34	-89.40	673.54	-864.47	1538.00
12	196.00	-827.96	-71.30	724.53 T	-797.63 L	1522.16

13	214.00	73.21	17.30	984.89 T	-603.63 L	1588.52
14	232.00	607.25	70.15	1192.56 T	-560.18 L	1752.75
15	250.00	782.03	87.62	1273.38 T	-530.26 L	1803.64
16	268.00	608.91	70.24	1192.51 T	-560.11 L	1752.62
17	286.00	76.65	17.50	985.06 T	-603.45 L	1588.51
18	304.00	-823.58	-71.05	724.86 T	-797.59 L	1522.45
Top flg.spl	307.00	-1006.94	-89.14	673.84	-864.44	1538.28
Bot.flg.spl	307.00	-1006.94	-89.14	673.84	-864.44	1538.28
Top flg.spl	322.00	-2066.52	-193.91	385.96	-1346.52	1732.49
Bot.flg.spl	322.00	-2066.52	-193.91	385.96	-1346.52	1732.49
20	340.00	-3667.43	-350.33	319.98 L	-2267.91 L	2587.89
Top flg.spl	356.00	-1960.02	-190.63	437.11	-1405.53	1842.65
Bot.flg.spl	356.00	-1960.02	-190.63	437.11	-1405.53	1842.65
Top flg.spl	372.00	-546.63	-57.98	720.69	-896.94	1617.62
Bot.flg.spl	372.00	-546.63	-57.98	720.69	-896.94	1617.62
23	388.00	566.11	46.12	1129.49 L	-750.85 L	1880.34
Top flg.spl	390.00	684.30	57.11	1172.06	-734.54	1906.61
Top flg.spl	402.00	1295.99	113.58	1391.49	-647.28	2038.76
Bot.flg.spl	390.00	684.30	57.11	1172.06	-734.54	1906.61
Bot.flg.spl	402.00	1295.99	113.58	1391.49	-647.28	2038.76
24	404.00	1381.52	121.48	1416.99 L	-632.55 L	2049.54
25	420.00	1897.06	169.00	1513.74 L	-515.35 L	2029.10
26	436.00	2096.32	188.77	1557.75 L	-409.35 L	1967.10
27	452.00	2005.93	181.74	1419.11 L	-304.81 L	1723.91
28	468.00	1623.62	148.00	1162.50 T	-202.28 L	1364.78
Top flg.spl	473.00	1444.57	131.96	1052.05	-170.53	1222.58
Bot.flg.spl	473.00	1444.57	131.96	1052.05	-170.53	1222.58
29	484.00	950.80	87.48	758.35 T	-101.18 L	859.53
Top flg.spl	485.00	899.52	82.80	721.33	-94.86	816.19
Bot.flg.spl	485.00	899.52	82.80	721.33	-94.86	816.19
30	500.00	0.00	0.00	0.00	0.00 T	0.00

T - governed by truck loading
L - governed by lane loading

At Bracing

20.00	1144.97	105.12	891.91	-126.43
40.00	1851.61	168.23	1305.09	-253.29
60.00	2102.11	189.61	1540.29	-382.99
80.00	1899.46	169.15	1514.25	-515.26
100.00	1208.73	105.43	1363.53	-661.89
120.00	49.49	-2.27	909.68	-778.53
140.00	-1577.36	-154.84	492.36	-1244.47
160.00	-3669.22	-350.43	319.87	-2266.77
180.00	-1914.82	-178.83	410.17	-1267.18
200.00	-598.20	-48.66	789.14	-723.85
220.00	292.01	38.89	1059.97	-572.42
240.00	729.29	82.29	1244.15	-545.21
260.00	730.19	82.33	1244.08	-545.18
280.00	294.95	39.06	1060.07	-572.25
300.00	-593.91	-48.41	789.48	-723.79
320.00	-1910.73	-178.60	410.14	-1267.14
340.00	-3667.43	-350.33	319.98	-2267.91
360.00	-1579.11	-154.93	492.40	-1245.22
380.00	47.32	-2.36	909.44	-778.58
400.00	1205.78	105.25	1363.00	-662.02
420.00	1897.06	169.00	1513.74	-515.35
440.00	2100.88	189.53	1540.22	-383.07
460.00	1851.27	168.21	1305.55	-253.29
480.00	1145.07	105.14	892.59	-126.46

Girder 3 Truck-Lane Moment Ranges - k-ft

Tenth	Loc	Truck			Lane		
		Max LL+I	Min LL+I	Range	Max LL+I	Min LL+I	Range
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Top flg.spl	15.00	720.77	-76.97	797.74	661.20	-94.82	756.02
Bot.flg.spl	15.00	720.77	-76.97	797.74	661.20	-94.82	756.02
1	16.00	757.76	-82.10	839.86	697.21	-101.14	798.35
Top flg.spl	27.00	1051.92	-138.40	1190.33	1016.00	-170.52	1186.51
Bot.flg.spl	27.00	1051.92	-138.40	1190.33	1016.00	-170.52	1186.51
2	32.00	1161.68	-164.18	1325.86	1136.14	-202.27	1338.41
3	48.00	1412.28	-247.41	1659.69	1416.60	-304.80	1721.40
4	64.00	1510.09	-332.23	1842.32	1557.92	-409.25	1967.17
5	80.00	1430.95	-418.35	1849.30	1514.25	-515.26	2029.51
6	96.00	1325.03	-513.81	1838.84	1417.57	-632.41	2049.98
Top flg.spl	98.00	1299.38	-525.81	1825.19	1392.04	-647.14	2039.18
Top flg.spl	110.00	1082.28	-597.59	1679.87	1172.32	-734.46	1906.77
Bot.flg.spl	98.00	1299.38	-525.81	1825.19	1392.04	-647.14	2039.18
Bot.flg.spl	110.00	1082.28	-597.59	1679.87	1172.32	-734.46	1906.77
7	112.00	1042.68	-610.28	1652.96	1129.72	-750.76	1880.48
8	128.00	681.65	-718.19	1399.85	720.89	-896.77	1617.66
Top flg.spl	128.00	681.65	-718.19	1399.85	720.89	-896.77	1617.66
Bot.flg.spl	128.00	681.65	-718.19	1399.85	720.89	-896.77	1617.66
9	144.00	295.33	-839.54	1134.87	437.02	-1404.65	1841.67
Top flg.spl	144.00	295.33	-839.54	1134.87	437.02	-1404.65	1841.67
Bot.flg.spl	144.00	295.33	-839.54	1134.87	437.02	-1404.65	1841.67
10	160.00	273.03	-973.18	1246.21	319.87	-2266.77	2586.64
11	178.00	325.13	-770.69	1095.81	386.00	-1346.50	1732.51
Top flg.spl	178.00	325.13	-770.69	1095.81	386.00	-1346.50	1732.51
Top flg.spl	193.00	667.62	-645.75	1313.37	557.00	-864.47	1421.47
Bot.flg.spl	178.00	325.13	-770.69	1095.81	386.00	-1346.50	1732.51
Bot.flg.spl	193.00	667.62	-645.75	1313.37	557.00	-864.47	1421.47
12	196.00	724.53	-621.48	1346.01	597.30	-797.63	1394.94
13	214.00	984.89	-480.87	1465.76	881.85	-603.63	1485.48
14	232.00	1192.56	-362.14	1554.71	1146.56	-560.18	1706.75
15	250.00	1273.38	-254.31	1527.69	1248.71	-530.26	1778.96
16	268.00	1192.51	-362.18	1554.68	1146.73	-560.11	1706.84
17	286.00	985.06	-480.78	1465.84	882.33	-603.45	1485.78
18	304.00	724.86	-621.37	1346.23	597.78	-797.59	1395.37
Top flg.spl	307.00	667.89	-645.64	1313.53	557.42	-864.44	1421.87
Bot.flg.spl	307.00	667.89	-645.64	1313.53	557.42	-864.44	1421.87
19	322.00	324.74	-770.56	1095.30	385.96	-1346.52	1732.49
Top flg.spl	322.00	324.74	-770.56	1095.30	385.96	-1346.52	1732.49
Bot.flg.spl	322.00	324.74	-770.56	1095.30	385.96	-1346.52	1732.49
20	340.00	273.06	-973.27	1246.33	319.98	-2267.91	2587.89
21	356.00	295.50	-839.55	1135.05	437.11	-1405.53	1842.65
Top flg.spl	356.00	295.50	-839.55	1135.05	437.11	-1405.53	1842.65
Bot.flg.spl	356.00	295.50	-839.55	1135.05	437.11	-1405.53	1842.65
22	372.00	681.51	-718.13	1399.64	720.69	-896.94	1617.62
Top flg.spl	372.00	681.51	-718.13	1399.64	720.69	-896.94	1617.62
Bot.flg.spl	372.00	681.51	-718.13	1399.64	720.69	-896.94	1617.62
23	388.00	1043.07	-610.23	1653.30	1129.49	-750.85	1880.34
Top flg.spl	390.00	1082.65	-597.55	1680.19	1172.06	-734.54	1906.61
Top flg.spl	402.00	1299.06	-525.82	1824.87	1391.49	-647.28	2038.76
Bot.flg.spl	390.00	1082.65	-597.55	1680.19	1172.06	-734.54	1906.61
Bot.flg.spl	402.00	1299.06	-525.82	1824.87	1391.49	-647.28	2038.76
24	404.00	1324.65	-513.82	1838.47	1416.99	-632.55	2049.54
25	420.00	1430.71	-418.34	1849.05	1513.74	-515.35	2029.10
26	436.00	1510.10	-332.24	1842.34	1557.75	-409.35	1967.10
27	452.00	1412.45	-247.37	1659.82	1416.68	-304.81	1721.49

28	468.00	1162.50	-164.15	1326.65	1136.59	-202.28	1338.86
Top flg.spl	473.00	1052.77	-138.38	1191.15	1016.48	-170.53	1187.01
Bot.flg.spl	473.00	1052.77	-138.38	1191.15	1016.48	-170.53	1187.01
29	484.00	758.35	-82.11	840.46	697.65	-101.18	798.83
Top flg.spl	485.00	721.33	-76.98	798.31	661.62	-94.86	756.49
Bot.flg.spl	485.00	721.33	-76.98	798.31	661.62	-94.86	756.49
30	500.00	0.00	0.00	0.00	0.00	0.00	0.00

Girder 3 Service Torque - k-ft

Tenth Point	Location	DL1	DL2	Max LL+I	Min LL+I	Range
0	0.00	0.00	0.00	5.71	-6.93	12.65
TOP FLG.SPL	15.00	0.00	0.00	5.76	-6.99	12.76
BOT.FLG.SPL	15.00	0.00	0.00	5.76	-6.99	12.76
1	16.00	0.00	0.00	5.74 T	-6.96 L	12.70
TOP FLG.SPL	27.00	0.01	0.01	5.21	-6.32	11.53
BOT.FLG.SPL	27.00	0.01	0.01	5.21	-6.32	11.53
2	32.00	0.00	0.01	4.88 T	-5.91 L	10.80
3	48.00	0.00	0.00	3.50 L	-4.09 L	7.58
4	64.00	0.00	-0.02	2.17 L	-2.24 L	4.41
5	80.00	0.00	-0.02	2.17 L	-2.24 L	4.41
6	96.00	-0.06	-0.04	2.00 L	-1.42 L	3.42
TOP FLG.SPL	98.00	-0.06	-0.04	2.10	-1.47	3.57
TOP FLG.SPL	110.00	0.00	0.00	3.37	-2.53	5.90
BOT.FLG.SPL	98.00	-0.06	-0.04	2.10	-1.47	3.57
BOT.FLG.SPL	110.00	0.00	0.00	3.37	-2.53	5.90
7	112.00	0.00	0.01	3.64 L	-2.77 L	6.42
TOP FLG.SPL	128.00	0.01	0.03	6.46	-5.55	12.01
BOT.FLG.SPL	128.00	0.01	0.03	6.46	-5.55	12.01
TOP FLG.SPL	144.00	0.03	0.03	7.79	-7.12	14.91
BOT.FLG.SPL	144.00	0.03	0.03	7.79	-7.12	14.91
10	160.00	0.00	0.03	7.96 L	-7.53 L	15.49
TOP FLG.SPL	178.00	0.03	0.02	7.95	-7.51	15.46
TOP FLG.SPL	193.00	-0.01	-0.03	7.15	-7.12	14.27
BOT.FLG.SPL	178.00	0.03	0.02	7.95	-7.51	15.46
BOT.FLG.SPL	193.00	-0.01	-0.03	7.15	-7.12	14.27
12	196.00	0.00	-0.03	6.91 T	-6.95 L	13.86
13	214.00	0.00	-0.03	4.93 T	-5.27 L	10.20
14	232.00	0.00	0.00	3.16 T	-3.36 L	6.52
15	250.00	0.00	0.00	2.77 T	-2.77 L	5.55
16	268.00	0.00	0.00	3.36 T	-3.16 L	6.51
17	286.00	0.00	0.03	5.27 T	-4.93 L	10.20
18	304.00	0.00	0.03	6.95 T	-6.91 L	13.86
TOP FLG.SPL	307.00	0.01	0.03	7.12	-7.15	14.27
BOT.FLG.SPL	307.00	0.01	0.03	7.12	-7.15	14.27
TOP FLG.SPL	322.00	-0.03	-0.01	7.51	-7.94	15.46
BOT.FLG.SPL	322.00	-0.03	-0.01	7.51	-7.94	15.46
20	340.00	0.00	-0.03	7.52 L	-7.95 L	15.47
TOP FLG.SPL	356.00	-0.03	-0.03	7.12	-7.79	14.91
BOT.FLG.SPL	356.00	-0.03	-0.03	7.12	-7.79	14.91
TOP FLG.SPL	372.00	-0.01	-0.03	5.55	-6.46	12.01
BOT.FLG.SPL	372.00	-0.01	-0.03	5.55	-6.46	12.01
23	388.00	0.00	-0.01	2.77 L	-3.64 L	6.41
TOP FLG.SPL	390.00	0.00	0.00	2.53	-3.37	5.90
TOP FLG.SPL	402.00	0.06	0.04	1.52	-2.11	3.63
BOT.FLG.SPL	390.00	0.00	0.00	2.53	-3.37	5.90
BOT.FLG.SPL	402.00	0.06	0.04	1.52	-2.11	3.63
24	404.00	0.06	0.04	1.42 L	-2.00 L	3.42
25	420.00	0.06	0.04	1.42 L	-2.00 L	3.42
26	436.00	0.00	0.02	2.24 L	-2.17 L	4.40

27	452.00	0.00	0.00	4.08 L	-3.50 L	7.58
28	468.00	0.00	-0.01	5.91 T	-4.88 L	10.79
TOP FLG.SPL	473.00	-0.01	-0.01	6.32	-5.21	11.53
BOT.FLG.SPL	473.00	-0.01	-0.01	6.32	-5.21	11.53
29	484.00	0.00	0.00	6.96 T	-5.74 L	12.70
TOP FLG.SPL	485.00	0.00	0.00	6.99	-5.76	12.76
BOT.FLG.SPL	485.00	0.00	0.00	6.99	-5.76	12.76
30	500.00	0.00	0.00	6.93	-5.71	12.65

Girder 3 Combined Factored Moment - k-ft

Tenth Pt	Loc	Tot Dead+Max LL+I	Tot Dead+Min LL+I
0	0.00	0.00	0.00
1	16.00	2994.67	1129.98
2	32.00	4825.33	1864.19
3	48.00	5925.34	2183.11
4	64.00	6354.87	2084.14
5	80.00	5976.62	1570.55
6	96.00	5035.56	585.05
7	112.00	3251.90	-830.63
8	128.00	781.59	-2730.34
9	144.00	-1845.19	-5843.46
10	160.00	-4531.12	-10146.70
11	178.00	-2105.96	-5867.24
12	196.00	403.92	-2900.70
13	214.00	2255.85	-1192.83
14	232.00	3469.69	-335.53
15	250.00	3895.05	-20.65
16	268.00	3471.83	-333.10
17	286.00	2260.95	-1187.69
18	304.00	410.65	-2894.59
19	322.00	-2100.63	-5861.86
20	340.00	-4528.40	-10146.72
21	356.00	-1846.86	-5847.25
22	372.00	778.61	-2733.25
23	388.00	3248.03	-834.20
24	404.00	5030.19	580.63
25	420.00	5972.21	1567.04
26	436.00	6352.50	2081.93
27	452.00	5924.86	2182.24
28	468.00	4826.90	1863.96
29	484.00	2996.14	1130.10
30	500.00	0.00	-0.01

Contraflexure Points

Service Noncomposite Dead

120.17 ft
212.54 ft
287.53 ft
379.86 ft

Top flange tension for region between contraflexure pts.
120.17 - 212.54
287.53 - 379.86

Bottom flange tension for region between contraflexure pts.
0.00 - 120.17

212.54 - 287.53
379.86 - 500.00

Service Tot Dead+Max LL+I

129.03 ft
198.52 ft
301.55 ft
370.98 ft

Top flange tension for region between contraflexure pts.
129.03 - 198.52
301.55 - 370.98

Bottom flange tension for region between contraflexure pts.
0.00 - 129.03
198.52 - 301.55
370.98 - 500.00

Service Tot Dead+Min LL+I

109.85 ft
228.65 ft
271.41 ft
390.20 ft

Top flange tension for region between contraflexure pts.
109.85 - 228.65
271.41 - 390.20

Bottom flange tension for region between contraflexure pts.
0.00 - 109.85
228.65 - 271.41
390.20 - 500.00

Factored Tot Dead+Max LL+I

132.76 ft
193.10 ft
306.94 ft
367.26 ft

Top flange tension for region between contraflexure pts.
132.76 - 193.10
306.94 - 367.26

Bottom flange tension for region between contraflexure pts.
0.00 - 132.76
193.10 - 306.94
367.26 - 500.00

Factored Tot Dead+Min LL+I

102.61 ft
397.43 ft

Top flange tension for region between contraflexure pts.
102.61 - 397.43

```
Bottom flange tension for region between contraflexure pts.
     0.00 -    102.61
   397.43 -    500.00


Factored Composite Dead - Construction

   119.10 ft
   210.49 ft
   289.56 ft
   380.91 ft

    Top flange tension for region between contraflexure pts.
     119.10 -    210.49
     289.56 -    380.91

      Rebar termination for 10.50.2.3 requirement
    no limit   -  no limit
    no limit   -  no limit
         Modulus of rupture -  410.79

    Bottom flange tension for region between contraflexure pts.
     0.00 -    119.10
   210.49 -    289.56
   380.91 -    500.00


Total Dead + 1.67 Min LL+I - 10.57 Overload

   102.61 ft
   397.43 ft

    Top flange tension for region between contraflexure pts.
     102.61 -    397.43
     289.56 -    380.91

  Rebar termination for 10.50.2.3 requirement - noncomp dead excluded
     118.10 -    198.94
     301.12 -    381.91
         Modulus of rupture -  410.79

    Bottom flange tension for region between contraflexure pts.
     0.00 -    102.61
   397.43 -    289.56
   380.91 -    500.00
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Girder 3 Dimensions

Tenth Point	Loc	-Top Flange- tfw	tft	weld	----Web---- wd	wt	weld	-Bot Flange- bfw	bft	Area
0	0.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpL	15.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpR	15.00	18.00	1.625	1/ 4	72.00	0.500	1/ 4	18.00	1.625	94.50
1	16.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpL	27.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpR	27.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
2	32.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
3	48.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
4	64.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
5	80.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
6	96.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00

SpL	98.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpR	98.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpL	110.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpR	110.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
7	112.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpL	128.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
SpR	128.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpL	144.00	18.00	1.750	5/16	89.41	0.500	5/16	18.00	1.750	107.71
SpR	144.00	18.00	2.000	5/16	89.77	0.500	5/16	18.00	2.000	116.88
10	160.00	18.00	2.000	5/16	105.00	0.500	5/16	18.00	2.000	124.50
SpL	178.00	18.00	2.000	5/16	85.51	0.500	5/16	18.00	2.000	114.75
SpR	178.00	18.00	1.750	5/16	85.18	0.500	5/16	18.00	1.750	105.59
SpL	193.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpR	193.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
12	196.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
13	214.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
14	232.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
15	250.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
16	268.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
17	286.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
18	304.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
SpL	307.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
SpR	307.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpL	322.00	18.00	1.750	5/16	85.18	0.500	5/16	18.00	1.750	105.59
SpR	322.00	18.00	2.000	5/16	85.51	0.500	5/16	18.00	2.000	114.75
20	340.00	18.00	2.000	5/16	105.00	0.500	5/16	18.00	2.000	124.50
SpL	356.00	18.00	2.000	5/16	89.77	0.500	5/16	18.00	2.000	116.88
SpR	356.00	18.00	1.750	5/16	89.41	0.500	5/16	18.00	1.750	107.71
SpL	372.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpR	372.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
23	388.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpL	390.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpR	390.00	18.00	1.625	1/ 4	72.00	0.500	1/ 4	18.00	1.625	94.50
SpL	402.00	18.00	1.625	1/ 4	72.00	0.500	1/ 4	18.00	1.625	94.50
SpR	402.00	18.00	2.000	1/ 4	72.00	0.500	1/ 4	18.00	2.000	108.00
24	404.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
25	420.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
26	436.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
27	452.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
28	468.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpL	473.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpR	473.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
29	484.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpL	485.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpR	485.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
30	500.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00

Theoretical Flange Splice Locations

Tenth Pt Range	Location
0 - 1	a
1 - 2	a
6 - 7	a
7 - 8	a
8 - 9	a
9 - 10	a
10 - 11	a
11 - 12	179.33
18 - 19	313.00
19 - 20	a

20 -	21	a
21 -	22	a
22 -	23	a
23 -	24	a
28 -	29	a
29 -	30	a

a. Splice not required in this range.

Stiffener Spacing

Panel Start	Panel End	Uniform in Panel
0.00	500.00 ft	100 @ 60.00 in

Longitudinal Web Stiffeners

Web Section	Width	Thickness
2	4.00	0.500
4	4.00	0.500

Bearing Stiffeners

Location	Width	Thickness
0.00	8.00	0.500
160.00	8.00	0.500
340.00	8.00	0.500
500.00	8.00	0.500

Transverse Stiffeners

Web Section	Width	Thickness
1	6.00	0.500
2	6.00	0.500
3	6.00	0.500
4	6.00	0.500
5	6.00	0.500

Girder 3 Elastic Section Properties for Stiffness Analysis

Tenth Point	Noncomp I	Noncomp na from Bott	Noncomp na from Top Flg	Comp (n = 9) I	Comp (n = 9) na from Bott	Comp (n = 9) na from Top Flg	Comp (3n = 27) I	Comp (3n = 27) na from Bott	Comp (3n = 27) na from Top Flg
0	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19
1	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
2	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
3	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
4	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
5	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
6	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65

7	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
8	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
9	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
10	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
11	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
12	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
13	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
14	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
15	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
16	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
17	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
18	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
19	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
20	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
21	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
22	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
23	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
24	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
25	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
26	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
27	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
28	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
29	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
30	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19

Girder 3 Elastic Section Properties for Pos Mom Stress

Tenth Point	Noncomp I	Noncomp na from Bott	Noncomp na from Top Flg	Comp (n = 9) I	Comp (n = 9) na from Bott	Comp (n = 9) na from Top Flg	Comp (3n = 27) I	Comp (3n = 27) na from Bott	Comp (3n = 27) na from Top Flg
0	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19
1	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
2	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
3	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
4	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
5	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
6	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
7	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
8	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
9	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
10	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
11	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
12	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
13	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
14	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
15	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
16	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
17	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
18	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
19	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
20	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
21	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
22	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
23	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
24	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
25	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
26	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
27	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
28	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65

29	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
30	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19

Girder 3 Elastic Section Properties for Neg Mom Stress

	----- Noncomp -----			------ Comp ------ (n = 9)			------ Comp ------ (3n = 27)		
Tenth Point	I	na from Bott	na from Top Flg	I	na from Bott	na from Top Flg	I	na from Bott	na from Top Flg
0	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75
1	94842.	37.62	37.62	94842.	37.62	37.62	94842.	37.62	37.62
2	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
3	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
4	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
5	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
6	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
7	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75
8	75920.	37.25	37.25	75920.	37.25	37.25	75920.	37.25	37.25
9	171156.	46.67	46.67	171156.	46.67	46.67	171156.	46.67	46.67
10	254340.	54.50	54.50	259366.	55.17	53.83	259366.	55.17	53.83
11	154289.	44.55	44.55	154289.	44.55	44.55	154289.	44.55	44.55
12	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
13	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
14	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
15	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
16	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
17	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
18	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
19	154289.	44.55	44.55	154289.	44.55	44.55	154289.	44.55	44.55
20	254340.	54.50	54.50	259366.	55.17	53.83	259366.	55.17	53.83
21	171156.	46.67	46.67	171156.	46.67	46.67	171156.	46.67	46.67
22	75920.	37.25	37.25	75920.	37.25	37.25	75920.	37.25	37.25
23	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75
24	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
25	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
26	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
27	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
28	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
29	94842.	37.62	37.62	94842.	37.62	37.62	94842.	37.62	37.62
30	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75

Girder 3 Plastic Section Properties

Tenth Point	C (10-123)	C (10-124)	a (10-125)	C' (10-126)	Ybar (10-127 10-128)	Dp	D'	Pos Mom Mp (k-ft) or Mu of (10-129c) (10-129d)	Neg Mom Mp (k-ft)
0	1720	2016	7.25	148.0	0.26	9.88	9.97	7040.14	noncmpct
1	1720	3024	7.25	652.0	1.13	9.88	10.08	10084.31	noncmpct
2	1720	3456	7.25	868.0	1.51	9.88	10.12	11238.31	noncmpct
3	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
4	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
5	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
6	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
7	1720	2016	7.25	148.0	0.26	9.88	9.97	7040.14	noncmpct

8								noncmpct	noncmpct
9								noncmpct	noncmpct
10								noncmpct	noncmpct
11								noncmpct	noncmpct
12								noncmpct	noncmpct
13	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
14	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
15	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
16	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
17	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
18								noncmpct	noncmpct
19								noncmpct	noncmpct
20								noncmpct	noncmpct
21								noncmpct	noncmpct
22								noncmpct	noncmpct
23	1720	2016	7.25	148.0	0.26	9.88	9.97	7040.14	noncmpct
24	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
25	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
26	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
27	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
28	1720	3456	7.25	868.0	1.51	9.88	10.12	11238.97	noncmpct
29	1720	3024	7.25	652.0	1.13	9.88	10.08	10084.63	noncmpct
30	1720	2016	7.25	148.0	0.26	9.88	9.97	7040.14	noncmpct

Girder 3 Elastic Noncomposite Section Properties at Web Splices

Splice Location	Web wd	wt	Top Flg tfw	tft	Bott Flg bfw	bft	Area (in2)	I (in4)	na from Bott	na from Top
117.50L	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75
117.50R	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75
212.50L	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
212.50R	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
287.50L	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
287.50R	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
382.50L	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75
382.50R	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75

Girder 3 Summary of Service Load Effects at Web Splice Locations

Splice Location	Dead Load Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom	Live Load + Imp - Truck Max Shr	Range	Max Mom	Min Mom	Live Load + Imp - Lane
117.50	-66.4	-6.2	219.4	13.7	-51.4	65.5	927.5	-646.1	

OUTPUT.TXT

	Max Shr	Range	Max Mom	Min Mom
	-50.6	61.4	1002.8	-797.8

Concurrent moment for max shear of -51.4 = 956.5
Concurrent shear for max moment of 1002.8 = -10.8
Concurrent shear for min moment of -797.8 = -50.6

212.50 Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
42.5	4.1	12.1	11.3

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
41.0	64.3	965.2	-491.8

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
41.4	62.7	858.9	-614.1

Concurrent moment for max shear of 41.4 = 889.3
Concurrent shear for max moment of 965.2 = 36.9
Concurrent shear for min moment of -614.1 = 21.3

287.50 Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
-42.4	-4.1	15.7	11.5

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
-39.0	64.7	965.4	-491.7

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
-41.0	61.9	859.4	-613.9

Concurrent moment for max shear of -41.0 = 860.7
Concurrent shear for max moment of 965.4 = -32.5
Concurrent shear for min moment of -613.9 = -41.0

382.50 Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
66.4	6.2	217.1	13.6

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
53.6	65.3	927.8	-646.0

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
50.1	59.8	1002.6	-797.9

Concurrent moment for max shear of 53.6 = 956.3
Concurrent shear for max moment of 1002.6 = 50.1
Concurrent shear for min moment of -797.9 = 9.7

Parabolic interpolation used in this table.

Girder 3 Shear Strength at Web Splices

Splice Location	Web Depth	Web t Left	Web t Right	Stiff Spcng	Factored Shear	Shear Strngth	Perf Ratio	Shear Strngth	Perf Ratio
ft	in	in	in	in	k	k		k	
117.50	72.00	0.500	0.500	60.00	207.32	626.85	0.331	626.85	0.331
212.50	72.00	0.500	0.500	60.00	151.82	626.85	0.242	626.85	0.242
287.50	72.00	0.500	0.500	60.00	150.03	626.85	0.239	626.85	0.239
382.50	72.00	0.500	0.500	60.00	210.99	626.85	0.337	626.85	0.337

OUTPUT.TXT

Girder 3 Grp I Factored Bending Stresses - ksi

Tenth Point	Loc	Top Flange: Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	LL+I Rng	Tot	Allow	Ratio
0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000
Top Flg.Spl.		-10.1	-0.4	-2.3	1.8	4.1	-12.7	32.0	0.397
Top Flg.Spl.		-5.6	-0.3	-2.1	1.0	3.1	-7.9	32.0	0.248
1	16.00	-5.9	-0.3	-2.2	1.0	3.2	-8.4	32.0	0.297
Top Flg.Spl.		-8.9	-0.4	-3.1	1.8	4.8	-12.4	32.0	0.435
Top Flg.Spl.		-7.5	-0.4	-2.9	1.5	4.4	-10.8	32.0	0.385
2	32.00	-8.4	-0.4	-3.2	1.8	5.0	-12.1	32.0	0.429
3	48.00	-10.4	-0.5	-4.0	2.6	6.6	-14.9	32.0	0.514
4	64.00	-10.9	-0.6	-4.3	3.5	7.9	-15.8	32.0	0.551
5	80.00	-9.9	-0.5	-4.2	4.5	8.7	-14.6	32.0	0.519
6	96.00	-7.2	-0.4	-3.9	5.5	9.4	-11.5	32.0	0.437
Top Flg.Spl.		-6.7	-0.3	-3.9	5.6	9.5	-11.0	32.0	0.422
Top Flg.Spl.		-8.0	-0.4	-4.0	6.7	10.7	-12.5	32.0	0.478
Top Flg.Spl.		-4.3	-0.2	-3.4	7.6	11.0	-7.8	32.0	0.335
Top Flg.Spl.		-7.7	-0.3	-3.7	13.7	17.4	-11.6	32.0	0.484
7	112.00	-6.4	-0.2	-3.6	14.0	17.6	-10.1	32.0	0.462
Top Flg.Spl.		6.1	0.6	-2.3	16.7	19.0	23.5	32.0	0.734
Top Flg.Spl.		3.2	0.3	-2.1	8.7	10.8	12.2	32.0	0.382
10	160.00	12.3	1.1	-0.7	12.3	12.9	25.7	32.0	0.802
Top Flg.Spl.		8.8	0.8	-0.9	9.6	10.5	19.2	32.0	0.601
Top Flg.Spl.		9.9	0.9	-1.0	10.7	11.7	21.6	32.0	0.674
Top Flg.Spl.		5.9	0.5	-1.9	8.4	10.3	14.8	32.0	0.463
Top Flg.Spl.		9.2	0.8	-2.1	13.1	15.2	23.1	32.0	0.723
12	196.00	7.5	0.6	-2.2	12.1	14.3	20.3	32.0	0.634
13	214.00	-0.7	-0.1	-3.1	9.2	12.2	8.4	32.0	0.285
14	232.00	-5.5	-0.3	-3.7	8.5	12.2	-9.5	32.0	0.438
15	250.00	-7.1	-0.4	-3.9	8.0	12.0	-11.4	32.0	0.491
16	268.00	-5.5	-0.3	-3.7	8.5	12.2	-9.5	32.0	0.438
17	286.00	-0.7	-0.1	-3.1	9.2	12.2	8.4	32.0	0.285
18	304.00	7.5	0.6	-2.2	12.1	14.4	20.2	32.0	0.632
Top Flg.Spl.		9.2	0.8	-2.1	13.1	15.2	23.1	32.0	0.721
Top Flg.Spl.		5.9	0.5	-1.9	8.4	10.3	14.8	32.0	0.462
20	340.00	12.3	1.1	-0.7	12.3	12.9	25.7	32.0	0.802
Top Flg.Spl.		7.9	0.8	-1.0	9.4	10.5	18.1	32.0	0.566
Top Flg.Spl.		8.8	0.9	-1.1	10.6	11.6	20.3	32.0	0.634
23	388.00	-6.3	-0.2	-3.6	14.0	17.6	-10.1	32.0	0.461
Top Flg.Spl.		-7.7	-0.3	-3.7	13.7	17.4	-11.6	32.0	0.483
Top Flg.Spl.		-4.2	-0.2	-3.4	7.6	11.0	-7.8	32.0	0.335
Top Flg.Spl.		-8.0	-0.4	-4.0	6.7	10.7	-12.4	32.0	0.478
Top Flg.Spl.		-6.7	-0.3	-3.9	5.6	9.5	-11.0	32.0	0.421
24	404.00	-7.2	-0.4	-3.9	5.5	9.4	-11.5	32.0	0.436
25	420.00	-9.9	-0.5	-4.2	4.5	8.7	-14.6	32.0	0.518
26	436.00	-10.9	-0.6	-4.3	3.6	7.9	-15.8	32.0	0.551
27	452.00	-10.4	-0.5	-4.0	2.6	6.6	-14.9	32.0	0.514
28	468.00	-8.4	-0.4	-3.2	1.8	5.0	-12.1	32.0	0.429

Top Flg.Spl.	-7.5	-0.4	-2.9	1.5	4.4	-10.8	32.0	0.385	
Top Flg.Spl.	-8.9	-0.4	-3.1	1.8	4.8	-12.4	32.0	0.436	
29 484.00	-5.9	-0.3	-2.2	1.0	3.2	-8.4	32.0	0.297	
Top Flg.Spl.	-5.6	-0.3	-2.1	1.0	3.1	-7.9	32.0	0.282	
Top Flg.Spl.	-10.1	-0.4	-2.4	1.8	4.2	-12.8	32.0	0.404	
30 500.00	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000	

Governing expression for allowable compression stress

Tenth Pt	Expression
1	compact
2	compact
3	compact
4	compact
5	compact
6	compact
7	compact
13	compact
14	compact
15	compact
16	compact
17	compact
23	compact
24	compact
25	compact
26	compact
27	compact
28	compact
29	compact

Perf. ratio for compact section is (factored mom)/(mom strength).

First of two splice entries is to left of splice,
second is to right of splice.

Girder 3 Grp I Factored Bending Stresses - ksi

Tenth Point	Loc	Bottom Flange								
		Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	LL+I Rng	Wind	Tot	Allow	Ratio
0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000
Bot.Flg.Spl.		10.1	0.9	9.9	-1.8	11.7	0.0	20.9	32.0	0.652
Bot.Flg.Spl.		5.6	0.5	6.2	-1.0	7.2	0.0	12.3	32.0	0.384
1	16.00	5.9	0.5	6.5	-1.0	7.6	0.0	12.9	32.0	0.297
Bot.Flg.Spl.		8.9	0.7	9.0	-1.8	10.8	0.0	18.7	32.0	0.435
Bot.Flg.Spl.		7.5	0.6	7.8	-1.5	9.3	0.0	15.9	32.0	0.385
2	32.00	8.4	0.7	8.6	-1.8	10.4	0.0	17.7	32.0	0.429
3	48.00	10.4	0.9	10.5	-2.6	13.2	0.0	21.8	32.0	0.514
4	64.00	10.9	0.9	11.5	-3.5	15.1	0.0	23.3	32.0	0.551
5	80.00	9.9	0.8	11.2	-4.5	15.7	0.0	21.9	32.0	0.519
6	96.00	7.2	0.6	10.5	-5.5	16.0	0.0	18.3	32.0	0.437
Bot.Flg.Spl.		6.7	0.5	10.3	-5.6	15.9	0.0	17.6	32.0	0.422
Bot.Flg.Spl.		8.0	0.6	12.0	-6.7	18.7	0.0	20.6	32.0	0.478
Bot.Flg.Spl.		4.3	0.3	10.1	-7.6	17.7	0.0	14.6	32.0	0.335
Bot.Flg.Spl.		7.7	0.5	16.1	-13.7	29.8	0.0	24.3	32.0	0.484
7	112.00	6.4	0.4	15.5	-14.0	29.5	0.0	22.3	32.0	0.462
Bot.Flg.Spl.		-6.1	-0.6	9.9	-16.7	26.6	0.0	-23.5	32.0	0.734
Bot.Flg.Spl.		-3.2	-0.3	5.9	-8.7	14.6	0.0	-12.2	32.0	0.382

10	160.00	-12.3	-1.2	1.5	-12.6	14.1	0.0	-26.0	32.0	0.812
Bot.Flg.Spl.		-8.9	-0.8	2.4	-9.7	12.1	0.0	-19.5	32.0	0.609
Bot.Flg.Spl.		-10.0	-0.9	2.6	-10.9	13.5	0.0	-21.9	32.0	0.683
Bot.Flg.Spl.		-6.0	-0.5	5.6	-8.5	14.1	0.0	-15.0	32.0	0.469
Bot.Flg.Spl.		-9.3	-0.8	8.0	-13.3	21.3	0.0	-23.4	32.0	0.732
12	196.00	-7.5	-0.6	8.5	-12.1	20.6	0.0	-20.3	32.0	0.634
13	214.00	0.7	0.1	11.5	-9.2	20.7	0.0	12.3	32.0	0.285
14	232.00	5.5	0.5	14.0	-8.5	22.5	0.0	20.0	32.0	0.438
15	250.00	7.1	0.7	14.9	-8.0	23.0	0.0	22.7	32.0	0.491
16	268.00	5.5	0.5	14.0	-8.5	22.5	0.0	20.0	32.0	0.438
17	286.00	0.7	0.1	11.5	-9.2	20.7	0.0	12.4	32.0	0.285
18	304.00	-7.5	-0.6	8.5	-12.1	20.6	0.0	-20.2	32.0	0.632
Bot.Flg.Spl.		-9.2	-0.8	7.9	-13.1	21.0	0.0	-23.1	32.0	0.721
Bot.Flg.Spl.		-5.9	-0.5	5.5	-8.4	13.9	0.0	-14.8	32.0	0.462
20	340.00	-12.3	-1.2	1.5	-12.6	14.1	0.0	-26.0	32.0	0.812
Bot.Flg.Spl.		-8.0	-0.8	2.6	-9.6	12.2	0.0	-18.4	32.0	0.575
Bot.Flg.Spl.		-9.0	-0.9	2.8	-10.8	13.6	0.0	-20.6	32.0	0.644
23	388.00	6.3	0.4	15.5	-14.0	29.5	0.0	22.2	32.0	0.461
Bot.Flg.Spl.		7.7	0.5	16.1	-13.7	29.8	0.0	24.2	32.0	0.483
Bot.Flg.Spl.		4.2	0.3	10.1	-7.6	17.7	0.0	14.6	32.0	0.335
Bot.Flg.Spl.		8.0	0.6	12.0	-6.7	18.7	0.0	20.6	32.0	0.478
Bot.Flg.Spl.		6.7	0.5	10.3	-5.6	15.9	0.0	17.6	32.0	0.421
24	404.00	7.2	0.6	10.5	-5.5	16.0	0.0	18.3	32.0	0.436
25	420.00	9.9	0.8	11.2	-4.5	15.7	0.0	21.9	32.0	0.518
26	436.00	10.9	0.9	11.5	-3.6	15.1	0.0	23.3	32.0	0.551
27	452.00	10.4	0.9	10.5	-2.6	13.2	0.0	21.8	32.0	0.514
28	468.00	8.4	0.7	8.6	-1.8	10.4	0.0	17.8	32.0	0.429
Bot.Flg.Spl.		7.5	0.6	7.8	-1.5	9.3	0.0	15.9	32.0	0.385
Bot.Flg.Spl.		8.9	0.7	9.0	-1.8	10.8	0.0	18.7	32.0	0.436
29	484.00	5.9	0.5	6.5	-1.0	7.6	0.0	12.9	32.0	0.297
Bot.Flg.Spl.		5.6	0.5	6.2	-1.0	7.2	0.0	12.2	32.0	0.282
Bot.Flg.Spl.		10.1	0.8	9.9	-1.8	11.7	0.0	20.7	32.0	0.404
30	500.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000

Governing expression for allowable compression stress

Tenth Pt	Expression		
8	(10-103d)	Cb 1.1787	Rh 1.0000
9	(10-103d)	Cb 1.1764	Rh 1.0000
10	(10-103d)	Cb 1.1351	Rh 1.0000
11	(10-103d)	Cb 1.1351	Rh 1.0000
12	(10-103C)	Cb 1.1432	Rh 1.0000
18	(10-103C)	Cb 1.1438	Rh 1.0000
19	(10-103d)	Cb 1.1356	Rh 1.0000
20	(10-103d)	Cb 1.1356	Rh 1.0000
21	(10-103d)	Cb 1.1761	Rh 1.0000
22	(10-103d)	Cb 1.1782	Rh 1.0000

Perf. ratio for compact section is (factored mom)/(mom strength).

First of two splice entries is to left of splice,
second is to right of splice.

Girder 3 Grp I Factored Bending Stresses - ksi

Tenth Point	Loc	Slab			Rebars		
		Comp Dead	Max LL+I	Tot	Comp Dead	Min LL+I	Tot
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	16.00	-0.01	-0.36	-0.37	0.00	0.00	0.00

2	32.00	-0.02	-0.50	-0.53	0.00	0.00	0.00
3	48.00	-0.03	-0.62	-0.64	0.00	0.00	0.00
4	64.00	-0.03	-0.68	-0.70	0.00	0.00	0.00
5	80.00	-0.02	-0.66	-0.68	0.00	0.00	0.00
6	96.00	-0.02	-0.62	-0.63	0.00	0.00	0.00
7	112.00	-0.01	-0.68	-0.69	0.00	0.00	0.00
8	128.00	0.00	-0.37	-0.37	0.00	0.00	0.00
9	144.00	0.00	-0.15	-0.15	0.00	0.00	0.00
10	160.00	0.00	-0.09	-0.09	1.26	13.57	14.82
11	178.00	0.00	-0.14	-0.14	0.00	0.00	0.00
12	196.00	0.00	-0.40	-0.40	0.00	0.00	0.00
13	214.00	0.00	-0.54	-0.55	0.00	0.00	0.00
14	232.00	-0.01	-0.66	-0.67	0.00	0.00	0.00
15	250.00	-0.02	-0.70	-0.72	0.00	0.00	0.00
16	268.00	-0.01	-0.66	-0.67	0.00	0.00	0.00
17	286.00	0.00	-0.54	-0.55	0.00	0.00	0.00
18	304.00	0.00	-0.40	-0.40	0.00	0.00	0.00
19	322.00	0.00	-0.14	-0.14	0.00	0.00	0.00
20	340.00	0.00	-0.09	-0.09	1.26	13.57	14.83
21	356.00	0.00	-0.15	-0.15	0.00	0.00	0.00
22	372.00	0.00	-0.37	-0.37	0.00	0.00	0.00
23	388.00	-0.01	-0.68	-0.69	0.00	0.00	0.00
24	404.00	-0.02	-0.62	-0.63	0.00	0.00	0.00
25	420.00	-0.02	-0.66	-0.68	0.00	0.00	0.00
26	436.00	-0.03	-0.68	-0.70	0.00	0.00	0.00
27	452.00	-0.03	-0.62	-0.64	0.00	0.00	0.00
28	468.00	-0.02	-0.51	-0.53	0.00	0.00	0.00
29	484.00	-0.01	-0.36	-0.37	0.00	0.00	0.00
30	500.00	0.00	0.00	0.00	0.00	0.00	0.00

Girder 3 Bottom Flange Elastic Compression Strength - k-ft

Tenth PT	M1 Dc	M2 Mr	Cb	Lb Rb	Lp My	Lr Mu
8	1628.81	4953.60	1.44	240.00	275.95	630.03
	36.00	5435.02(103c)		1.00	5435.02	5435.02
9	4953.60	10146.70	1.31	240.00	275.95	643.87
	44.80	9779.63(103c)		1.00	9779.63	9779.63
10	5472.79	10146.70	1.27	240.00	275.95	634.69
	53.17	12536.58(103c)		1.00	12536.58	12536.58
11	5472.79	10146.70	1.27	240.00	275.95	647.30
	42.67	9236.09(103c)		1.00	9236.09	9236.09
12	2412.40	5472.79	1.35	240.00	275.95	611.95
	36.00	4577.73(103c)		1.00	4577.73	4577.73
18	2406.36	5467.09	1.35	240.00	275.95	611.95
	36.00	4577.73(103c)		1.00	4577.73	4577.73
19	5467.09	10146.72	1.27	240.00	275.95	647.30
	42.67	9236.09(103c)		1.00	9236.09	9236.09
20	5467.09	10146.72	1.27	240.00	275.95	634.69
	53.17	12536.58(103c)		1.00	12536.58	12536.58
21	4957.61	10146.72	1.31	240.00	275.95	643.87
	44.80	9779.63(103c)		1.00	9779.63	9779.63
22	1631.85	4957.61	1.44	240.00	275.95	630.03
	36.00	5435.02(103c)		1.00	5435.02	5435.02

Girder 3 Web Splice Analysis

Using method of LRFD spec. 6.13.6.1.4b.
Splice resists moment given by (C6.13.6.1.4b-1)
and horizontal force given by (C6.13.6.1.4b-2)

using LFD load factors.

0.875 ASTM A325 H.S. Bolts

****
Web splice location: 117.50
****

Web t left	0.500 in
Web t right	0.500 in
Factored shear	207.32 k
Shear strength left	626.85 k
Shear strength right	626.85 k
Design shear	310.97 k

Strength

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-1.11 ksi	1.11 ksi
Comp dead	-0.04	0.06
Max live	-2.66	7.30
Min live	6.74	-6.74
Total	5.59	8.47
Resistance	32.00	32.00

Bottom flange controls

Fcf	24.00 ksi
fcf	8.47 ksi
Rcf	2.833
fncf	5.59 ksi
Muw	147.08 k-ft
Huw	716.92 k

Top flange stress reversal

Fcf	24.00 ksi
fcf	5.59 ksi
Rcf	4.295
fncf	-5.56 ksi
Muw	862.20 k-ft
Huw	1.80 k

Bottom flange stress reversal

Fcf	24.00 ksi
fcf	8.47 ksi
Rcf	2.833
fncf	-3.81 ksi
Muw	626.21 k-ft
Huw	237.79 k

Overload

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.85 ksi	0.85 ksi
Comp dead	-0.03	0.05
Max live	-2.04	5.60
Min live	5.17	-5.17
Total	4.29	6.51
Resistance	30.40	30.40

Bottom flange controls

Fcf	24.00 ksi	
fcf	6.51 ksi	
Rcf	3.689	
fncf	4.29 ksi	
Muw	147.28 k-ft	
Huw	716.72 k	

Top flange stress reversal

Fcf	24.00 ksi	
fcf	4.29 ksi	
Rcf	5.597	
fncf	-4.27 ksi	
Muw	862.19 k-ft	
Huw	1.81 k	

Bottom flange stress reversal

Fcf	24.00 ksi	
fcf	6.51 ksi	
Rcf	3.689	
fncf	-2.93 ksi	
Muw	626.28 k-ft	
Huw	237.72 k	

Bolt pattern each side of splice

Number of vertical lines	3	spaced at 3.000	in
Number of horizontal lines	22	spaced at 3.000	in
Vertical edge on plate	1.500	in	
Horizontal edge on web	3.000	in	

			Perf. Ratio
Plate depth	66.00	in	
Plate thickness	0.375	in	
Plate gross sect. shr strngth	918.72	k	0.338
Plate net sect. fracture strng	1110.12	k	0.280
Plate block shear strength	954.31	k	0.326
Plate flexure for strength	29.38	ksi	
Allowable stress	32.00	ksi	0.918
Plate flexure for overload	25.25	ksi	
Allowable stress	30.40	ksi	0.831
Shear on extreme bolt - strength	16.82	k	
Shear on extreme bolt - overload	13.29	k	
Bolt shear strength	43.87	k	0.383
Threads in shear plane			
Clear edge to splice line	2.500	in	
Horiz brng on web	16.82	k	
Horiz brng capacity on web	48.72	k	0.345
Clear vertical distance	2.000	in	
Vert brng on web	16.82	k	
Vert brng capacity on web	48.72	k	0.345

Fatigue

Max fatigue moment	864.94	k-ft
Min fatigue moment	-688.13	
Comp. stress at top of web	-0.95	ksi
Tens. stress at top of web	2.54	
Comp. stress at bot of web	-2.54	
Tens. stress at bot of web	2.80	

Max fatge mom resisted by web	67.50	k-ft
Max fatge mom horiz resultant	33.13	k
Min fatge mom resisted by web	-91.29	k-ft
Min fatge mom horiz resultant	0.00	k
Max shear at splice	11.17	k
Min shear at splice	-45.48	k
Mom from max shr eccentricity	5.59	k-ft
Mom from min shr eccentricity	-22.74	k-ft
Total max + eccentric mom	73.08	k-ft
Total min + eccentric mom	-114.03	k-ft
Tot Bndg and axial stress at bot of plate from max mo	2.28	ksi
Tot Bndg and axial stress at bot of plate from min mo	-2.51	ksi
Allowable range	29.00	ksi 0.165

Flange Plates

Top flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00	ksi	
Gross gov flg area - Ag	13.50		
An	11.62		
Beta	0.4532		
Effective gov flg area - Ae	13.50		
Resistance - Fcf x Ae	324.00	k	
Outside plate	18.00 x	0.688	Pl
Inside plates 2 -	8.00 x	0.688	Pls
Total number of bolts reqd on each side of splice	4 gage lines	24	
Min spacing		2.62	
Max spacing outside line for sealing		4.50	

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.308
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.524
Single bolt bearing strength	45.68	
Total bolt bearing strength	1096.20	0.296

Bottom flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00	ksi

Gross gov flg area - Ag	13.50	
An	11.62	
Beta	0.4532	
Effective gov flg area - Ae	13.50	
Resistance - Fcf x Ae	324.00 k	
Fracture strength of flange	539.40	
Outside plate	18.00 x 0.688 Pl	
Inside plates 2 -	8.00 x 0.688 Pls	
	Perf. Ratio	
Tens. capacity of gross section	710.60	0.456 (6.8.2.1-1)
Tens. capacity of net section	892.68	0.363 (6.8.2.1-2)
Total number of bolts reqd on 4 gage lines on each side of splice	24	
Min spacing	2.62	
Max spacing outside line for sealing	4.50	
	Perf. Ratio	
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.308
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.524
Single bolt bearing strength	45.68	
Total bolt bearing strength	1096.20	0.296
Block rupture on staggered pattern- outside plates		
Net tension area - Atn	9.25	
Gross tension area - Atg	10.87	
Net shear area - Avn	15.77	
Resistance to rupture - Rr	2308.60	
Block rupture on staggered pattern- inside plates		
Net tension area - Atn	6.72	
Gross tension area - Atg	7.99	
Net shear area - Avn	31.54	
Resistance to rupture - Rr	1053.38	
Tot block rupture resistance	3361.98	0.096

****
Web splice location: 212.50
****

Web t left	0.500 in
Web t right	0.500 in
Factored shear	151.82 k
Shear strength left	626.85 k
Shear strength right	626.85 k
Design shear	227.74 k

Strength

Factored Bndg Stresses Top Flg at ctr of flg	Bottom Flg

Noncomp dead	-0.11 ksi	0.11 ksi
Comp dead	-0.04	0.09
Max live	-2.89	11.21
Min live	9.19	-9.19
Total	9.04	11.41
Resistance	32.00	32.00

Bottom flange controls

Fcf	24.00 ksi
fcf	11.41 ksi
Rcf	2.104
fncf	9.04 ksi
Muw	89.62 k-ft
Huw	774.38 k

Top flange stress reversal

Fcf	24.00 ksi
fcf	9.04 ksi
Rcf	2.655
fncf	-9.00 ksi
Muw	862.06 k-ft
Huw	1.94 k

Bottom flange stress reversal

Fcf	24.00 ksi
fcf	11.41 ksi
Rcf	2.104
fncf	-3.05 ksi
Muw	547.42 k-ft
Huw	316.58 k

Overload

Factored Bndg Stresses Top Flg at ctr of flg	Bottom Flg
Noncomp dead -0.08 ksi	0.08 ksi
Comp dead -0.03	0.07
Max live -2.22	8.61
Min live 7.06	-7.06
Total 6.94	8.76
Resistance 30.40	30.40

Bottom flange controls

Fcf	24.00 ksi
fcf	8.76 ksi
Rcf	2.741
fncf	6.94 ksi
Muw	89.65 k-ft
Huw	774.35 k

Top flange stress reversal

Fcf	24.00 ksi
fcf	6.94 ksi
Rcf	3.459
fncf	-6.91 ksi
Muw	862.05 k-ft
Huw	1.95 k

Bottom flange stress reversal

Fcf	24.00 ksi
fcf	8.76 ksi
Rcf	2.741
fncf	-2.34 ksi
Muw	547.43 k-ft

Huw 316.57 k

Bolt pattern each side of splice			
Number of vertical lines	3	spaced at 3.000 in	
Number of horizontal lines	22	spaced at 3.000 in	
Vertical edge on plate	1.500	in	
Horizontal edge on web	3.000	in	
			Perf. Ratio
Plate depth	66.00	in	
Plate thickness	0.375	in	
Plate gross sect. shr strngth	918.72	k	0.248
Plate net sect. fracture strng	1110.12	k	0.205
Plate block shear strength	954.31	k	0.239
Plate flexure for strength	31.45	ksi	
Allowable stress	32.00	ksi	0.983
Plate flexure for overload	29.61	ksi	
Allowable stress	30.40	ksi	0.974
Shear on extreme bolt - strength	15.72	k	
Shear on extreme bolt - overload	14.86	k	
Bolt shear strength	43.87	k	0.358
Threads in shear plane			
Clear edge to splice line	2.500	in	
Horiz brng on web	15.72	k	
Horiz brng capacity on web	48.72	k	0.323
Clear vertical distance	2.000	in	
Vert brng on web	15.72	k	
Vert brng capacity on web	48.72	k	0.323

Fatigue

Max fatigue moment	832.49	k-ft
Min fatigue moment	-529.62	
Comp. stress at top of web	-1.08	ksi
Tens. stress at top of web	3.55	
Comp. stress at bot of web	-3.55	
Tens. stress at bot of web	4.38	
Max fatge mom resisted by web	98.16	k-ft
Max fatge mom horiz resultant	59.45	k
Min fatge mom resisted by web	-127.93	k-ft
Min fatge mom horiz resultant	0.00	k
Max shear at splice	35.97	k
Min shear at splice	-19.58	k
Mom from max shr eccentricity	17.99	k-ft
Mom from min shr eccentricity	-9.79	k-ft
Total max + eccentric mom	116.15	k-ft
Total min + eccentric mom	-137.72	k-ft
Tot Bndg and axial stress at bot of plate from max mo	5.64	ksi
Tot Bndg and axial stress at bot of plate from min mo	-4.55	ksi
Allowable range	18.00	ksi 0.566

Flange Plates

Top flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00	ksi	
Gross gov flg area - Ag	18.00		
An	15.50		
Beta	0.4532		
Effective gov flg area - Ae	18.00		
Resistance - Fcf x Ae	432.00	k	
Outside plate	18.00 x	0.688	Pl
Inside plates 2 -	8.00 x	0.688	Pls

			Perf. Ratio
Tens. capacity of gross section	710.60	0.608	(6.8.2.1-1)
Tens. capacity of net section	639.12	0.676	(6.8.2.1-2)
Total number of bolts reqd on 4 gage lines on each side of splice	24		
Min spacing	2.62		
Max spacing outside line for sealing	4.50		
			Perf. Ratio
Single bolt shear strength	43.87		
Total bolt shear strength	1052.94	0.410	
Single bolt slip strength	25.74		
Total bolt slip strength	617.76	0.699	
Single bolt bearing strength	60.90		
Total bolt bearing strength	1461.60	0.296	

Block rupture on staggered pattern- outside plates

Net tension area - Atn	9.25	
Gross tension area - Atg	10.87	
Net shear area - Avn	15.77	
Resistance to rupture - Rr	2308.60	

Block rupture on staggered pattern- inside plates

Net tension area - Atn	6.72	
Gross tension area - Atg	7.99	
Net shear area - Avn	31.54	
Resistance to rupture - Rr	1053.38	
Tot block rupture resistance	3361.98	0.128

Bottom flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00	ksi

Gross gov flg area - Ag	18.00	
An	15.50	
Beta	0.4532	
Effective gov flg area - Ae	18.00	
Resistance - Fcf x Ae	432.00 k	
Fracture strength of flange	719.20	

Outside plate	18.00 x	0.688 Pl	
Inside plates 2 -	8.00 x	0.688 Pls	

		Perf. Ratio	
Tens. capacity of gross section	710.60	0.608	(6.8.2.1-1)
Tens. capacity of net section	892.68	0.484	(6.8.2.1-2)

Total number of bolts reqd on 4 gage lines on each side of splice	24	
Min spacing	2.62	
Max spacing outside line for sealing	4.50	

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.410
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.699
Single bolt bearing strength	60.90	
Total bolt bearing strength	1461.60	0.296

Block rupture on staggered pattern- outside plates		
Net tension area - Atn	9.25	
Gross tension area - Atg	10.87	
Net shear area - Avn	15.77	
Resistance to rupture - Rr	2308.60	
Block rupture on staggered pattern- inside plates		
Net tension area - Atn	6.72	
Gross tension area - Atg	7.99	
Net shear area - Avn	31.54	
Resistance to rupture - Rr	1053.38	
Tot block rupture resistance	3361.98	0.128

****
Web splice location: 287.50
****

Web t left	0.500 in
Web t right	0.500 in
Factored shear	150.03 k
Shear strength left	626.85 k
Shear strength right	626.85 k
Design shear	225.05 k

Strength

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg

Noncomp dead	-0.14 ksi	0.14 ksi
Comp dead	-0.05	0.09
Max live	-2.89	11.21
Min live	9.19	-9.19
Total	9.00	11.44
Resistance	32.00	32.00

Bottom flange controls	
Fcf	24.00 ksi
fcf	11.44 ksi
Rcf	2.098
fncf	9.00 ksi
Muw	92.02 k-ft
Huw	771.98 k
Top flange stress reversal	
Fcf	24.00 ksi
fcf	9.00 ksi
Rcf	2.665
fncf	-8.96 ksi
Muw	862.01 k-ft
Huw	1.99 k
Bottom flange stress reversal	
Fcf	24.00 ksi
fcf	11.44 ksi
Rcf	2.098
fncf	-3.08 ksi
Muw	548.32 k-ft
Huw	315.68 k

Overload

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.11 ksi	0.11 ksi
Comp dead	-0.03	0.07
Max live	-2.22	8.61
Min live	7.06	-7.06
Total	6.91	8.78
Resistance	30.40	30.40

Bottom flange controls	
Fcf	24.00 ksi
fcf	8.78 ksi
Rcf	2.732
fncf	6.91 ksi
Muw	92.05 k-ft
Huw	771.95 k
Top flange stress reversal	
Fcf	24.00 ksi
fcf	6.91 ksi
Rcf	3.472
fncf	-6.88 ksi
Muw	862.01 k-ft
Huw	1.99 k
Bottom flange stress reversal	
Fcf	24.00 ksi
fcf	8.78 ksi
Rcf	2.732
fncf	-2.37 ksi
Muw	548.33 k-ft

Huw 315.67 k

Bolt pattern each side of splice

Number of vertical lines	3	spaced at 3.000 in	
Number of horizontal lines	22	spaced at 3.000 in	
Vertical edge on plate	1.500	in	
Horizontal edge on web	3.000	in	
			Perf. Ratio
Plate depth	66.00	in	
Plate thickness	0.375	in	
Plate gross sect. shr strngth	918.72	k	0.245
Plate net sect. fracture strng	1110.12	k	0.203
Plate block shear strength	954.31	k	0.236
Plate flexure for strength	31.41	ksi	
Allowable stress	32.00	ksi	0.982
Plate flexure for overload	25.80	ksi	
Allowable stress	30.40	ksi	0.849
Shear on extreme bolt - strength	15.69	k	
Shear on extreme bolt - overload	13.09	k	
Bolt shear strength	43.87	k	0.358
Threads in shear plane			
Clear edge to splice line	2.500	in	
Horiz brng on web	15.69	k	
Horiz brng capacity on web	48.72	k	0.322
Clear vertical distance	2.000	in	
Vert brng on web	15.69	k	
Vert brng capacity on web	48.72	k	0.322

Fatigue

Max fatigue moment	832.65	k-ft
Min fatigue moment	-529.46	
Comp. stress at top of web	-1.08	ksi
Tens. stress at top of web	3.55	
Comp. stress at bot of web	-3.55	
Tens. stress at bot of web	4.38	
Max fatge mom resisted by web	98.18	k-ft
Max fatge mom horiz resultant	59.46	k
Min fatge mom resisted by web	-127.89	k-ft
Min fatge mom horiz resultant	0.00	k
Max shear at splice	20.60	k
Min shear at splice	-35.30	k
Mom from max shr eccentricity	10.30	k-ft
Mom from min shr eccentricity	-17.65	k-ft
Total max + eccentric mom	108.48	k-ft
Total min + eccentric mom	-145.54	k-ft
Tot Bndg and axial stress at bot of plate from max mo	5.39	ksi
Tot Bndg and axial stress at bot of plate from min mo	-4.81	ksi
Allowable range	18.00	ksi 0.567

Flange Plates

Top flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00	ksi	
Gross gov flg area - Ag	18.00		
An	15.50		
Beta	0.4532		
Effective gov flg area - Ae	18.00		
Resistance - Fcf x Ae	432.00	k	
Fracture strength of flange	719.20		
Outside plate	18.00 x	0.688	Pl
Inside plates 2 -	8.00 x	0.688	Pls

		Perf. Ratio	
Tens. capacity of gross section	710.60	0.608	(6.8.2.1-1)
Tens. capacity of net section	639.12	0.676	(6.8.2.1-2)
Total number of bolts reqd on 4 gage lines on each side of splice	24		
Min spacing	2.62		
Max spacing outside line for sealing	4.50		
		Perf. Ratio	
Single bolt shear strength	43.87		
Total bolt shear strength	1052.94	0.410	
Single bolt slip strength	25.74		
Total bolt slip strength	617.76	0.699	
Single bolt bearing strength	60.90		
Total bolt bearing strength	1461.60	0.296	

Block rupture on staggered pattern- outside plates

Net tension area - Atn	9.25	
Gross tension area - Atg	10.87	
Net shear area - Avn	15.77	
Resistance to rupture - Rr	2308.60	

Block rupture on staggered pattern- inside plates

Net tension area - Atn	6.72	
Gross tension area - Atg	7.99	
Net shear area - Avn	31.54	
Resistance to rupture - Rr	1053.38	
Tot block rupture resistance	3361.98	0.128

Bottom flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00 ksi		
Gross gov flg area - Ag	18.00		
An	15.50		
Beta	0.4532		
Effective gov flg area - Ae	18.00		
Resistance - Fcf x Ae	432.00 k		
Fracture strength of flange	719.20		
Outside plate	18.00 x	0.688 Pl	
Inside plates 2 -	8.00 x	0.688 Pls	
		Perf. Ratio	
Tens. capacity of gross section	710.60	0.608	(6.8.2.1-1)
Tens. capacity of net section	892.68	0.484	(6.8.2.1-2)
Total number of bolts reqd on 4 gage lines on each side of splice	24		
Min spacing	2.62		
Max spacing outside line for sealing	4.50		
		Perf. Ratio	
Single bolt shear strength	43.87		
Total bolt shear strength	1052.94	0.410	
Single bolt slip strength	25.74		
Total bolt slip strength	617.76	0.699	
Single bolt bearing strength	60.90		
Total bolt bearing strength	1461.60	0.296	
Block rupture on staggered pattern- outside plates			
Net tension area - Atn	9.25		
Gross tension area - Atg	10.87		
Net shear area - Avn	15.77		
Resistance to rupture - Rr	2308.60		
Block rupture on staggered pattern- inside plates			
Net tension area - Atn	6.72		
Gross tension area - Atg	7.99		
Net shear area - Avn	31.54		
Resistance to rupture - Rr	1053.38		
Tot block rupture resistance	3361.98	0.128	

****
Web splice location: 382.50
****

Web t left	0.500 in
Web t right	0.500 in
Factored shear	210.99 k
Shear strength left	626.85 k
Shear strength right	626.85 k
Design shear	316.48 k

Strength
Factored Bndg Stresses Top Flg Bottom Flg

at ctr of flg		
Noncomp dead	-1.10 ksi	1.10 ksi
Comp dead	-0.04	0.06
Max live	-2.66	7.30
Min live	6.74	-6.74
Total	5.60	8.46
Resistance	32.00	32.00

Bottom flange controls

Fcf	24.00 ksi
fcf	8.46 ksi
Rcf	2.837
fncf	5.60 ksi
Muw	145.99 k-ft
Huw	718.01 k

Top flange stress reversal

Fcf	24.00 ksi
fcf	5.60 ksi
Rcf	4.285
fncf	-5.58 ksi
Muw	862.22 k-ft
Huw	1.78 k

Bottom flange stress reversal

Fcf	24.00 ksi
fcf	8.46 ksi
Rcf	2.837
fncf	-3.80 ksi
Muw	625.89 k-ft
Huw	238.11 k

Overload

Factored Bndg Stresses	Top Flg	Bottom Flg
at ctr of flg		
Noncomp dead	-0.84 ksi	0.84 ksi
Comp dead	-0.03	0.05
Max live	-2.04	5.60
Min live	5.17	-5.17
Total	4.30	6.50
Resistance	30.40	30.40

Bottom flange controls

Fcf	24.00 ksi
fcf	6.50 ksi
Rcf	3.695
fncf	4.30 ksi
Muw	146.18 k-ft
Huw	717.82 k

Top flange stress reversal

Fcf	24.00 ksi
fcf	4.30 ksi
Rcf	5.584
fncf	-4.28 ksi
Muw	862.21 k-ft
Huw	1.79 k

Bottom flange stress reversal

Fcf	24.00 ksi
fcf	6.50 ksi
Rcf	3.695
fncf	-2.92 ksi

Muw 625.95 k-ft
Huw 238.05 k

Bolt pattern each side of splice
Number of vertical lines 3 spaced at 3.000 in
Number of horizontal lines 22 spaced at 3.000 in
Vertical edge on plate 1.500 in
Horizontal edge on web 3.000 in

			Perf. Ratio
Plate depth	66.00	in	
Plate thickness	0.375	in	
Plate gross sect. shr strngth	918.72	k	0.344
Plate net sect. fracture strng	1110.12	k	0.285
Plate block shear strength	954.31	k	0.332
Plate flexure for strength	29.46	ksi	
Allowable stress	32.00	ksi	0.920
Plate flexure for overload	27.20	ksi	
Allowable stress	30.40	ksi	0.895
Shear on extreme bolt - strength	16.89	k	
Shear on extreme bolt - overload	15.74	k	
Bolt shear strength	43.87	k	0.385
Threads in shear plane			
Clear edge to splice line	2.500	in	
Horiz brng on web	16.89	k	
Horiz brng capacity on web	48.72	k	0.347
Clear vertical distance	2.000	in	
Vert brng on web	16.89	k	
Vert brng capacity on web	48.72	k	0.347

Fatigue

Max fatigue moment	864.78	k-ft
Min fatigue moment	-688.22	
Comp. stress at top of web	-0.95	ksi
Tens. stress at top of web	2.54	
Comp. stress at bot of web	-2.54	
Tens. stress at bot of web	2.79	
Max fatge mom resisted by web	67.49	k-ft
Max fatge mom horiz resultant	33.12	k
Min fatge mom resisted by web	-91.30	k-ft
Min fatge mom horiz resultant	0.00	k
Max shear at splice	46.94	k
Min shear at splice	-9.51	k
Mom from max shr eccentricity	23.47	k-ft
Mom from min shr eccentricity	-4.76	k-ft
Total max + eccentric mom	90.96	k-ft
Total min + eccentric mom	-96.06	k-ft
Tot Bndg and axial stress at bot of plate from max mo	4.01	ksi
Tot Bndg and axial stress at bot of plate from min mo	-3.18	ksi
Allowable range	29.00	ksi

Flange Plates

Top flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00	ksi	
Gross gov flg area - Ag	13.50		
An	11.62		
Beta	0.4532		
Effective gov flg area - Ae	13.50		
Resistance - Fcf x Ae	324.00	k	
Fracture strength of flange	539.40		
Outside plate	18.00 x	0.688	Pl
Inside plates 2 -	8.00 x	0.688	Pls

Total number of bolts reqd on 4 gage lines
on each side of splice 24

Min spacing 2.62
Max spacing outside line for sealing 4.50

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.308
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.524
Single bolt bearing strength	45.68	
Total bolt bearing strength	1096.20	0.296

Bottom flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00	ksi	
Gross gov flg area - Ag	13.50		
An	11.62		
Beta	0.4532		
Effective gov flg area - Ae	13.50		
Resistance - Fcf x Ae	324.00	k	
Fracture strength of flange	539.40		
Outside plate	18.00 x	0.688	Pl
Inside plates 2 -	8.00 x	0.688	Pls

		Perf. Ratio	
Tens. capacity of gross section	710.60	0.456	(6.8.2.1-1)
Tens. capacity of net section	892.68	0.363	(6.8.2.1-2)

Total number of bolts reqd on 4 gage lines

on each side of splice		24
Min spacing		2.62
Max spacing outside line for sealing		4.50
		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.308
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.524
Single bolt bearing strength	45.68	
Total bolt bearing strength	1096.20	0.296
Block rupture on staggered pattern- outside plates		
Net tension area - Atn	9.25	
Gross tension area - Atg	10.87	
Net shear area - Avn	15.77	
Resistance to rupture - Rr	2308.60	
Block rupture on staggered pattern- inside plates		
Net tension area - Atn	6.72	
Gross tension area - Atg	7.99	
Net shear area - Avn	31.54	
Resistance to rupture - Rr	1053.38	
Tot block rupture resistance	3361.98	0.096

Girder 3 Web Compression Bending Stress for Constructibility - ksi

Tenth Point	Noncomp. Dead Factored Mom	Noncomp. Dead Web Bending Stress	Allowable (10-173)	Ratio
0	0.00	0.00	32.00	0.000
1	1235.87	5.63	32.00	0.176
2	2110.92	7.99	32.00	0.250
3	2608.51	9.87	32.00	0.309
4	2727.11	10.32	32.00	0.323
5	2469.30	9.35	32.00	0.292
6	1799.85	6.81	32.00	0.213
7	739.16	6.23	32.00	0.195
8	-708.17	0.00	32.00	0.000
9	-2546.24	0.00	32.00	0.000
10	-4769.98	11.62	32.00	0.363
11	-2691.60	0.00	32.00	0.000
12	-1076.34	7.32	32.00	0.229
13	95.17	0.65	32.00	0.020
14	789.43	5.37	32.00	0.168
15	1016.63	6.91	32.00	0.216
16	791.58	5.38	32.00	0.168
17	99.64	0.68	32.00	0.021
18	-1070.66	7.28	32.00	0.228
19	-2686.47	0.00	32.00	0.000
20	-4767.65	11.61	32.00	0.363
21	-2548.02	0.00	32.00	0.000
22	-710.62	0.00	32.00	0.000
23	735.95	6.20	32.00	0.194
24	1795.98	6.80	32.00	0.212
25	2466.17	9.33	32.00	0.292
26	2725.22	10.31	32.00	0.322

27	2607.71	9.87	32.00	0.308
28	2110.71	7.99	32.00	0.250
29	1236.04	5.63	32.00	0.176
30	0.00	0.00	32.00	0.000

Girder 3 Top Flange 10.57 Overload Stress - ksi

Tenth	Loc	Noncomp Dead	Comp Dead	1.67 Max LL+I	1.67 Min LL+I	Allowable	Ratio
0	0.00	0.00	0.00	0.00	0.00	30.40	0.000
Top flg.spl.		-7.73	-0.30	-1.83	1.36	30.40	0.325
Top flg.spl.		-4.28	-0.21	-1.61	0.75	30.40	0.201
1	16.00	-4.53	-0.22	-1.69	0.80	30.40	0.212
Top flg.spl.		-6.88	-0.34	-2.35	1.36	30.40	0.315
Top flg.spl.		-5.77	-0.31	-2.25	1.14	30.40	0.274
2	32.00	-6.49	-0.34	-2.49	1.35	30.40	0.307
3	48.00	-8.02	-0.42	-3.04	2.03	30.40	0.378
4	64.00	-8.38	-0.44	-3.34	2.73	30.40	0.400
5	80.00	-7.59	-0.39	-3.25	3.44	30.40	0.369
6	96.00	-5.53	-0.28	-3.04	4.22	30.40	0.291
Top flg.spl.		-5.19	-0.26	-2.98	4.32	30.40	0.278
Top flg.spl.		-6.18	-0.29	-3.11	5.14	30.40	0.315
Top flg.spl.		-3.27	-0.15	-2.62	5.84	30.40	0.198
Top flg.spl.		-5.91	-0.19	-2.86	10.55	30.40	0.295
7	112.00	-4.89	-0.16	-2.75	10.78	30.40	0.257
Top flg.spl.		4.68	0.50	-1.76	12.88	30.40	0.594
Top flg.spl.		2.44	0.26	-1.59	6.70	30.40	0.309
Top flg.spl.		6.80	0.66	-0.81	8.14	30.40	0.513
Top flg.spl.		6.06	0.57	-0.78	7.02	30.40	0.449
10	160.00	9.43	0.87	-0.50	9.43	30.40	0.649
Top flg.spl.		6.78	0.64	-0.72	7.37	30.40	0.486
Top flg.spl.		7.61	0.71	-0.75	8.26	30.40	0.546
Top flg.spl.		4.53	0.40	-1.48	6.46	30.40	0.375
Top flg.spl.		7.07	0.62	-1.61	10.09	30.40	0.585
12	196.00	5.79	0.50	-1.73	9.31	30.40	0.513
13	214.00	-0.51	-0.05	-2.35	7.05	30.40	0.213
14	232.00	-4.24	-0.22	-2.84	6.54	30.40	0.240
15	250.00	-5.47	-0.27	-3.03	6.19	30.40	0.289
16	268.00	-4.26	-0.22	-2.84	6.54	30.40	0.241
17	286.00	-0.54	-0.05	-2.35	7.04	30.40	0.212
18	304.00	5.76	0.50	-1.73	9.31	30.40	0.512
Top flg.spl.		7.04	0.62	-1.61	10.09	30.40	0.584
Top flg.spl.		4.51	0.40	-1.48	6.46	30.40	0.374
Top flg.spl.		7.59	0.71	-0.75	8.26	30.40	0.545
Top flg.spl.		6.77	0.61	-0.72	7.11	30.40	0.477
20	340.00	9.43	0.87	-0.50	9.43	30.40	0.649
Top flg.spl.		6.07	0.59	-0.78	7.27	30.40	0.458
Top flg.spl.		6.80	0.66	-0.81	8.14	30.40	0.513
Top flg.spl.		2.45	0.26	-1.59	6.70	30.40	0.309
Top flg.spl.		4.70	0.20	-1.76	12.88	30.40	0.585
23	388.00	-4.87	-0.16	-2.75	10.78	30.40	0.256
Top flg.spl.		-5.89	-0.19	-2.86	10.55	30.40	0.294
Top flg.spl.		-3.26	-0.15	-2.62	5.84	30.40	0.198
Top flg.spl.		-6.17	-0.29	-3.11	5.15	30.40	0.315
Top flg.spl.		-5.18	-0.26	-2.98	4.32	30.40	0.277
24	404.00	-5.52	-0.28	-3.04	4.22	30.40	0.291
25	420.00	-7.58	-0.39	-3.24	3.44	30.40	0.369
26	436.00	-8.37	-0.44	-3.34	2.73	30.40	0.400
27	452.00	-8.01	-0.42	-3.04	2.03	30.40	0.378
28	468.00	-6.49	-0.34	-2.49	1.35	30.40	0.307
Top flg.spl.		-5.77	-0.31	-2.25	1.14	30.40	0.274

Top flg.spl.	-6.88	-0.34	-2.35	1.36	30.40	0.315
29 484.00	-4.53	-0.22	-1.69	0.80	30.40	0.212
Top flg.spl.	-4.28	-0.21	-1.61	0.75	30.40	0.201
Top flg.spl.	-7.74	-0.30	-1.83	1.36	30.40	0.325
30 500.00	0.00	0.00	0.00	0.00	30.40	0.000

Girder 3 Bottom Flange 10.57 Overload Stress - ksi

Tenth Loc	Noncomp Dead	Comp Dead	1.67 Max LL+I	1.67 Min LL+I	Allowable	Ratio
0 0.00	0.00	0.00	0.00	0.00	30.40	0.000
Bot.flg.spl.	7.73	0.58	7.63	-1.36	30.40	0.524
Bot.flg.spl.	4.28	0.35	4.77	-0.75	30.40	0.309
1 16.00	4.53	0.37	5.01	-0.80	30.40	0.326
Bot.flg.spl.	6.88	0.56	6.95	-1.36	30.40	0.473
Bot.flg.spl.	5.77	0.48	5.99	-1.14	30.40	0.403
2 32.00	6.49	0.54	6.62	-1.35	30.40	0.449
3 48.00	8.02	0.66	8.09	-2.03	30.40	0.552
4 64.00	8.38	0.69	8.88	-2.73	30.40	0.591
5 80.00	7.59	0.62	8.64	-3.44	30.40	0.554
6 96.00	5.53	0.44	8.08	-4.22	30.40	0.462
Bot.flg.spl.	5.19	0.41	7.94	-4.32	30.40	0.445
Bot.flg.spl.	6.18	0.48	9.21	-5.14	30.40	0.522
Bot.flg.spl.	3.27	0.24	7.75	-5.84	30.40	0.371
Bot.flg.spl.	5.91	0.40	12.36	-10.55	30.40	0.614
7 112.00	4.89	0.32	11.91	-10.78	30.40	0.563
Bot.flg.spl.	-4.68	-0.50	7.60	-12.88	30.40	0.594
Bot.flg.spl.	-2.44	-0.26	4.53	-6.70	30.40	0.309
Bot.flg.spl.	-6.80	-0.66	2.13	-8.14	30.40	0.513
Bot.flg.spl.	-6.06	-0.59	1.94	-7.21	30.40	0.456
10 160.00	-9.43	-0.89	1.18	-9.66	30.40	0.658
Bot.flg.spl.	-6.78	-0.64	1.81	-7.37	30.40	0.486
Bot.flg.spl.	-7.61	-0.71	1.99	-8.26	30.40	0.546
Bot.flg.spl.	-4.53	-0.40	4.23	-6.46	30.40	0.375
Bot.flg.spl.	-7.07	-0.62	6.07	-10.09	30.40	0.585
12 196.00	-5.79	-0.50	6.53	-9.31	30.40	0.513
13 214.00	0.51	0.10	8.88	-7.05	30.40	0.312
14 232.00	4.24	0.41	10.75	-6.54	30.40	0.507
15 250.00	5.47	0.51	11.48	-6.19	30.40	0.574
16 268.00	4.26	0.41	10.75	-6.54	30.40	0.507
17 286.00	0.54	0.10	8.88	-7.04	30.40	0.313
18 304.00	-5.76	-0.50	6.53	-9.31	30.40	0.512
Bot.flg.spl.	-7.04	-0.62	6.07	-10.09	30.40	0.584
Bot.flg.spl.	-4.51	-0.40	4.23	-6.46	30.40	0.374
Bot.flg.spl.	-7.59	-0.71	1.99	-8.26	30.40	0.545
Bot.flg.spl.	-6.77	-0.63	1.81	-7.31	30.40	0.484
20 340.00	-9.43	-0.89	1.18	-9.67	30.40	0.658
Bot.flg.spl.	-6.07	-0.59	1.94	-7.27	30.40	0.458
Bot.flg.spl.	-6.80	-0.66	2.13	-8.14	30.40	0.513
Bot.flg.spl.	-2.45	-0.26	4.52	-6.70	30.40	0.309
Bot.flg.spl.	-4.70	-0.40	7.60	-12.88	30.40	0.592
23 388.00	4.87	0.32	11.91	-10.78	30.40	0.562
Bot.flg.spl.	5.89	0.40	12.36	-10.55	30.40	0.613
Bot.flg.spl.	3.26	0.24	7.75	-5.84	30.40	0.370
Bot.flg.spl.	6.17	0.48	9.20	-5.15	30.40	0.521
Bot.flg.spl.	5.18	0.41	7.94	-4.32	30.40	0.445
24 404.00	5.52	0.44	8.08	-4.22	30.40	0.462
25 420.00	7.58	0.61	8.63	-3.44	30.40	0.553
26 436.00	8.37	0.69	8.88	-2.73	30.40	0.590
27 452.00	8.01	0.66	8.09	-2.03	30.40	0.552
28 468.00	6.49	0.54	6.63	-1.35	30.40	0.449

Bot.flg.spl.	5.77	0.48	6.00	-1.14	30.40	0.403
Bot.flg.spl.	6.88	0.56	6.96	-1.36	30.40	0.473
29 484.00	4.53	0.37	5.01	-0.80	30.40	0.326
Bot.flg.spl.	4.28	0.35	4.77	-0.75	30.40	0.309
Bot.flg.spl.	7.74	0.58	7.63	-1.36	30.40	0.525
30 500.00	0.00	0.00	0.00	0.00	30.40	0.000

Girder 3 Factored Noncomp Dead Wet Concrete Stresses - ksi

[Slab pouring sequence not taken into account in this table.
Actual stresses are dependent on the pouring sequence and
may be significantly different from those printed here.]

Tenth Point	Loc	Top Flange	Allow-able	bottom Flange	Allow-able
0	0.0	0.0	32.0	0.0	32.0
Top flg.spl	15.0	-10.1	32.0	10.1	32.0
Top flg.spl	15.0	-10.1	32.0	10.1	32.0
Bot.flg.spl	15.0	-10.1	32.0	10.1	32.0
Bot.flg.spl	15.0	-10.1	32.0	10.1	32.0
1	16.0	-5.9	32.0	5.9	32.0
Top flg.spl	27.0	-8.9	32.0	8.9	32.0
Top flg.spl	27.0	-8.9	32.0	8.9	32.0
Bot.flg.spl	27.0	-8.9	32.0	8.9	32.0
Bot.flg.spl	27.0	-8.9	32.0	8.9	32.0
2	32.0	-8.4	32.0	8.4	32.0
3	48.0	-10.4	32.0	10.4	32.0
4	64.0	-10.9	32.0	10.9	32.0
5	80.0	-9.9	32.0	9.9	32.0
6	96.0	-7.2	32.0	7.2	32.0
Top flg.spl	98.0	-6.7	32.0	6.7	32.0
Top flg.spl	98.0	-6.7	32.0	6.7	32.0
Top flg.spl	110.0	-3.6	32.0	3.6	32.0
Top flg.spl	110.0	-3.6	32.0	3.6	32.0
Bot.flg.spl	98.0	-6.7	32.0	6.7	32.0
Bot.flg.spl	98.0	-6.7	32.0	6.7	32.0
Bot.flg.spl	110.0	-3.6	32.0	3.6	32.0
Bot.flg.spl	110.0	-3.6	32.0	3.6	32.0
7	112.0	-6.4	32.0	6.4	32.0
Top flg.spl	128.0	6.1	32.0	-6.1	32.0
Top flg.spl	128.0	6.1	32.0	-6.1	32.0
Bot.flg.spl	128.0	6.1	32.0	-6.1	32.0
Bot.flg.spl	128.0	3.2	32.0	-3.2	32.0
Top flg.spl	144.0	8.8	32.0	-8.8	32.0
Top flg.spl	144.0	8.8	32.0	-8.8	32.0
Bot.flg.spl	144.0	8.8	32.0	-8.8	32.0
Bot.flg.spl	144.0	7.9	32.0	-7.9	32.0
10	160.0	12.3	32.0	-12.3	32.0
Top flg.spl	178.0	8.8	32.0	-8.8	32.0
Top flg.spl	178.0	8.8	32.0	-8.8	32.0
Top flg.spl	193.0	4.3	32.0	-4.3	32.0
Top flg.spl	193.0	4.3	32.0	-4.3	32.0
Bot.flg.spl	178.0	8.8	32.0	-8.8	32.0
Bot.flg.spl	178.0	9.9	32.0	-9.9	32.0
Bot.flg.spl	193.0	4.3	32.0	-4.3	32.0
Bot.flg.spl	193.0	4.8	32.0	-4.8	32.0
12	196.0	7.5	32.0	-7.5	32.0
13	214.0	-0.7	32.0	0.7	32.0
14	232.0	-5.5	32.0	5.5	32.0
15	250.0	-7.1	32.0	7.1	32.0

16	268.0	-5.5	32.0	5.5	32.0
17	286.0	-0.7	32.0	0.7	32.0
18	304.0	7.5	32.0	-7.5	32.0
Top flg.spl	307.0	9.2	32.0	-9.2	32.0
Top flg.spl	307.0	9.2	32.0	-9.2	32.0
Bot.flg.spl	307.0	9.2	32.0	-9.2	32.0
Bot.flg.spl	307.0	9.2	32.0	-9.2	32.0
Top flg.spl	322.0	9.9	32.0	-9.9	32.0
Top flg.spl	322.0	9.9	32.0	-9.9	32.0
Bot.flg.spl	322.0	9.9	32.0	-9.9	32.0
Bot.flg.spl	322.0	8.8	32.0	-8.8	32.0
20	340.0	12.3	32.0	-12.3	32.0
Top flg.spl	356.0	7.9	32.0	-7.9	32.0
Top flg.spl	356.0	7.9	32.0	-7.9	32.0
Bot.flg.spl	356.0	7.9	32.0	-7.9	32.0
Bot.flg.spl	356.0	8.8	32.0	-8.8	32.0
Top flg.spl	372.0	3.2	32.0	-3.2	32.0
Top flg.spl	372.0	3.2	32.0	-3.2	32.0
Bot.flg.spl	372.0	3.2	32.0	-3.2	32.0
Bot.flg.spl	372.0	6.1	32.0	-6.1	32.0
23	388.0	-6.3	32.0	6.3	32.0
Top flg.spl	390.0	-7.7	32.0	7.7	32.0
Top flg.spl	390.0	-7.7	32.0	7.7	32.0
Top flg.spl	402.0	-14.5	32.0	14.5	32.0
Top flg.spl	402.0	-14.5	32.0	14.5	32.0
Bot.flg.spl	390.0	-7.7	32.0	7.7	32.0
Bot.flg.spl	390.0	-7.7	32.0	7.7	32.0
Bot.flg.spl	402.0	-14.5	32.0	14.5	32.0
Bot.flg.spl	402.0	-14.5	32.0	14.5	32.0
24	404.0	-7.2	32.0	7.2	32.0
25	420.0	-9.9	32.0	9.9	32.0
26	436.0	-10.9	32.0	10.9	32.0
27	452.0	-10.4	32.0	10.4	32.0
28	468.0	-8.4	32.0	8.4	32.0
Top flg.spl	473.0	-7.5	32.0	7.5	32.0
Top flg.spl	473.0	-7.5	32.0	7.5	32.0
Bot.flg.spl	473.0	-7.5	32.0	7.5	32.0
Bot.flg.spl	473.0	-7.5	32.0	7.5	32.0
29	484.0	-5.9	32.0	5.9	32.0
Top flg.spl	485.0	-5.6	32.0	5.6	32.0
Top flg.spl	485.0	-5.6	32.0	5.6	32.0
Bot.flg.spl	485.0	-5.6	32.0	5.6	32.0
Bot.flg.spl	485.0	-5.6	32.0	5.6	32.0
30	500.0	0.0	32.0	0.0	32.0

Girder 3 Factored Strengths

Tenth Point	Loc	Factored Shear (k)	Shear Strength (k)	Ratio	Factored Moment (k-ft)	Bending Strength (k-ft)	Ratio
0	0.00	232.4	543.6 (5)	0.428	0.0	7040.1 (20)	0.000
1	16.00	190.7	626.8 (3)	0.304	2994.7	10084.3 (20)	0.297
2	32.00	145.4	626.8 (3)	0.232	4825.3	11238.3 (20)	0.429
3	48.00	113.0	626.8 (3)	0.180	5925.3	11525.1 (20)	0.514
4	64.00	72.8	626.8 (3)	0.116	6354.9	11525.1 (20)	0.551
5	80.00	164.0	626.8 (3)	0.262	5976.6	11525.1 (20)	0.519
6	96.00	150.5	626.8 (3)	0.240	5035.6	11525.1 (20)	0.437
7	112.00	196.2	626.8 (3)	0.313	3251.9	7040.1 (20)	0.462
8	128.00	228.5	626.8 (3)	0.365	2730.3	5435.0 (6)	0.502
9	144.00	284.4	764.0 (3)	0.372	5843.5	9779.6 (6)	0.598

10L	160.00	350.6	930.6 (3)	0.377	10146.7	12493.3 (6)	0.812
10R	160.00	324.1	930.6 (3)	0.348	10146.7	12493.3 (6)	0.812
11	178.00	250.1	730.3 (3)	0.342	5867.2	9236.1 (6)	0.635
12	196.00	195.4	626.8 (3)	0.312	2900.7	4577.7 (6)	0.634
13	214.00	147.9	626.8 (3)	0.236	2255.8	7925.1 (20)	0.285
14	232.00	117.2	626.8 (3)	0.187	3469.7	7925.1 (20)	0.438
15	250.00	72.8	626.8 (3)	0.116	3895.1	7925.1 (20)	0.491
16	268.00	112.5	626.8 (3)	0.180	3471.8	7925.1 (20)	0.438
17	286.00	111.0	626.8 (3)	0.177	2261.0	7925.1 (20)	0.285
18	304.00	195.8	626.8 (3)	0.312	2894.6	4577.7 (6)	0.632
19	322.00	249.0	730.3 (3)	0.341	5861.9	9236.1 (6)	0.635
20L	340.00	323.5	930.6 (3)	0.348	10146.7	12493.3 (6)	0.812
20R	340.00	350.2	930.6 (3)	0.376	10146.7	12493.3 (6)	0.812
21	356.00	281.0	764.0 (3)	0.368	5847.2	9779.6 (6)	0.598
22	372.00	231.2	626.8 (3)	0.369	2733.2	5435.0 (6)	0.503
23	388.00	200.4	626.8 (3)	0.320	3248.0	7040.1 (20)	0.461
24	404.00	156.0	626.8 (3)	0.249	5030.2	11525.1 (20)	0.436
25	420.00	160.2	626.8 (3)	0.256	5972.2	11525.1 (20)	0.518
26	436.00	78.0	626.8 (3)	0.124	6352.5	11525.1 (20)	0.551
27	452.00	107.5	626.8 (3)	0.171	5924.9	11525.1 (20)	0.514
28	468.00	131.4	626.8 (3)	0.210	4826.9	11239.0 (20)	0.429
29	484.00	179.2	626.8 (3)	0.286	2996.1	10084.6 (20)	0.297
30	500.00	243.1	543.6 (5)	0.447	0.0	7040.1 (20)	0.000

Shear Strength at Intermediate Transverse Stiffeners

5.00	219.4	626.8 (3)	0.350
10.00	206.4	626.8 (3)	0.329
15.00	193.3	626.8 (3)	0.308
20.00	179.4	626.8 (3)	0.286
25.00	165.2	626.8 (3)	0.264
30.00	151.1	626.8 (3)	0.241
35.00	139.3	626.8 (3)	0.222
40.00	129.2	626.8 (3)	0.206
45.00	119.0	626.8 (3)	0.190
50.00	107.9	626.8 (3)	0.172
55.00	95.4	626.8 (3)	0.152
60.00	82.8	626.8 (3)	0.132
65.00	78.5	626.8 (3)	0.125
70.00	107.0	626.8 (3)	0.171
75.00	135.5	626.8 (3)	0.216
85.00	159.8	626.8 (3)	0.255
90.00	155.6	626.8 (3)	0.248
95.00	151.4	626.8 (3)	0.241
100.00	162.0	626.8 (3)	0.258
105.00	176.2	626.8 (3)	0.281
110.00	190.5	626.8 (3)	0.304
115.00	202.3	626.8 (3)	0.323
120.00	212.4	626.8 (3)	0.339
125.00	222.4	626.8 (3)	0.355
130.00	235.5	628.2 (3)	0.375
135.00	253.0	652.1 (3)	0.388
140.00	270.5	701.6 (3)	0.385
145.00	288.6	780.6 (3)	0.370
150.00	309.3	846.6 (3)	0.365
155.00	329.9	883.0 (3)	0.374
165.00	303.5	883.0 (3)	0.344
170.00	283.0	846.6 (3)	0.334
175.00	262.4	780.6 (3)	0.336
180.00	244.0	701.6 (3)	0.348
185.00	228.8	652.1 (3)	0.351
190.00	213.6	628.2 (3)	0.340
195.00	198.4	626.8 (3)	0.317

200.00	184.8	626.8 (3)	0.295
205.00	171.6	626.8 (3)	0.274
210.00	158.4	626.8 (3)	0.253
215.00	146.2	626.8 (3)	0.233
220.00	137.7	626.8 (3)	0.220
225.00	129.1	626.8 (3)	0.206
230.00	120.6	626.8 (3)	0.192
235.00	109.8	626.8 (3)	0.175
240.00	97.5	626.8 (3)	0.156
245.00	85.1	626.8 (3)	0.136
255.00	83.8	626.8 (3)	0.134
260.00	94.9	626.8 (3)	0.151
265.00	105.9	626.8 (3)	0.169
270.00	112.4	626.8 (3)	0.179
275.00	111.9	626.8 (3)	0.179
280.00	111.5	626.8 (3)	0.178
285.00	111.1	626.8 (3)	0.177
290.00	129.8	626.8 (3)	0.207
295.00	153.4	626.8 (3)	0.245
300.00	177.0	626.8 (3)	0.282
305.00	198.8	626.8 (3)	0.317
310.00	213.5	628.2 (3)	0.340
315.00	228.3	652.1 (3)	0.350
320.00	243.1	701.6 (3)	0.346
325.00	261.4	780.6 (3)	0.335
330.00	282.1	846.6 (3)	0.333
335.00	302.8	883.0 (3)	0.343
345.00	328.6	883.0 (3)	0.372
350.00	307.0	846.6 (3)	0.363
355.00	285.4	780.6 (3)	0.366
360.00	268.6	701.6 (3)	0.383
365.00	253.0	652.1 (3)	0.388
370.00	237.4	628.2 (3)	0.378
375.00	225.4	626.8 (3)	0.360
380.00	215.8	626.8 (3)	0.344
385.00	206.2	626.8 (3)	0.329
390.00	194.9	626.8 (3)	0.311
395.00	181.0	626.8 (3)	0.289
400.00	167.1	626.8 (3)	0.267
405.00	156.3	626.8 (3)	0.249
410.00	157.6	626.8 (3)	0.251
415.00	158.9	626.8 (3)	0.254
425.00	134.6	626.8 (3)	0.215
430.00	108.9	626.8 (3)	0.174
435.00	83.2	626.8 (3)	0.133
440.00	85.4	626.8 (3)	0.136
445.00	94.6	626.8 (3)	0.151
450.00	103.8	626.8 (3)	0.166
455.00	111.9	626.8 (3)	0.179
460.00	119.4	626.8 (3)	0.191
465.00	126.9	626.8 (3)	0.202
470.00	137.4	626.8 (3)	0.219
475.00	152.3	626.8 (3)	0.243
480.00	167.2	626.8 (3)	0.267
485.00	183.1	626.8 (3)	0.292
490.00	203.1	626.8 (3)	0.324
495.00	223.1	626.8 (3)	0.356

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(5) C 0.58 Fyw D t
(20) compact section
(6) Fy S(equiv)

Maximum moment in factored strength expression

Girder 3 Load Factor Ratings

Span 1

Location	Moment Capacity	Shear Capacity	Rating Factors Inventory	Operating
0.00	7040.1 C	543.6	3.28 V	5.48 V
15.00L	7040.1 C	626.8	4.63 V	7.73 V
15.00R	10086.1 C	626.8	4.63 V	7.73 V
5.00S	7040.1 C	626.8	4.11 V	6.87 V
10.00S	7039.1 C	626.8	4.36 V	7.27 V
16.00	10084.3 C	626.8	4.69 V	7.83 V
27.00L	7677.3 S	626.8	3.30 S	5.52 S
27.00R	8902.5 S	626.8	4.03 S	6.73 S
20.00S	7677.3 S	626.8	4.15 S	6.94 S
25.00S	7677.3 S	626.8	3.52 S	5.88 S
30.00S	8902.5 S	626.8	3.71 S	6.19 S
32.00	8902.5 S	626.8	3.53 S	5.89 S
35.00S	8902.5 S	626.8	3.30 S	5.51 S
40.00S	8902.5 S	626.8	3.01 S	5.02 S
45.00S	8902.5 S	626.8	2.79 S	4.66 S
48.00	8902.5 S	626.8	2.68 S	4.48 S
50.00S	8902.5 S	626.8	2.63 S	4.39 S
55.00S	8902.5 S	626.8	2.51 S	4.19 S
60.00S	8902.5 S	626.8	2.43 S	4.05 S
64.00	8902.5 S	626.8	2.40 S	4.01 S
65.00S	8902.5 S	626.8	2.40 S	4.01 S
70.00S	8902.5 S	626.8	2.41 S	4.03 S
75.00S	8902.5 S	626.8	2.49 S	4.16 S
80.00	8902.5 S	626.8	2.57 S	4.29 S
85.00S	8902.5 S	626.8	2.68 S	4.47 S
90.00S	8902.5 S	626.8	2.78 S	4.65 S
95.00S	8902.5 S	626.8	2.98 S	4.97 S
96.00	8902.5 S	626.8	3.02 S	5.05 S
98.00L	8902.5 S	626.8	3.12 S	5.22 S
98.00R	7677.3 S	626.8	2.58 S	4.31 S
110.00L	7677.3 S	626.8	3.47 S	5.79 S
110.00R	4814.3 S	626.8	1.95 S	3.26 S
100.00S	7677.3 S	626.8	2.68 S	4.48 S
105.00S	7677.3 S	626.8	3.03 S	5.06 S
112.00	4814.3 S	626.8	2.11 S	3.53 S
115.00S	4814.3 S	626.8	2.40 S	4.01 S
120.00S	4814.3 S	626.8	3.12 S	5.21 S
125.00S	3720.9 B	626.8	1.79 T	2.99 T
128.00L	3720.9 B	626.8	1.51 T	2.52 T
128.00R	7151.1 B	626.8	3.27 T	5.46 T
130.00S	7170.0 B	628.2	3.02 T	5.04 T
135.00S	7507.6 B	652.1	2.53 T	4.22 T
140.00S	8285.0 B	701.6	2.23 B	3.73 B
144.00L	9245.9 B	762.5	2.12 T	3.53 T
144.00R	10393.0 B	765.4	2.49 B	4.15 B
145.00S	10593.2 B	780.6	2.44 T	4.07 T
150.00S	11704.3 B	846.6	2.20 T	3.67 T
155.00S	12318.6 B	883.0	1.86 T	3.10 T
160.00	12536.6 B	930.6	1.48 B	2.47 B

Span 2

Location	Moment Capacity	Shear Capacity	Rating Factors Inventory	Operating
0.00	12536.6 B	930.6	1.48 B	2.47 B
5.00S	12409.7 B	883.0	1.51 B	2.52 B
10.00S	11791.7 B	846.6	2.12 B	3.54 B
15.00S	10674.2 B	780.6	2.30 B	3.84 B
18.00L	9744.8 B	731.6	2.33 T	3.89 T
18.00R	8727.5 B	729.0	1.98 T	3.30 T
33.00L	7151.1 B	626.8	3.05 T	5.09 T
33.00R	4577.7 B	626.8	1.68 T	2.80 T
20.00S	8285.0 B	701.6	2.02 B	3.38 B
25.00S	7507.6 B	652.1	2.25 T	3.75 T
30.00S	7170.0 B	628.2	2.67 T	4.47 T
35.00S	4577.7 B	626.8	1.87 T	3.12 T
36.00	4577.7 B	626.8	1.97 T	3.29 T
40.00S	4577.7 B	626.8	2.18 T	3.64 T
45.00S	4577.7 B	626.8	2.20 T	3.68 T
50.00S	5633.2 S	626.8	3.54 S	5.91 S
54.00	5633.2 S	626.8	3.36 S	5.60 S
55.00S	5633.2 S	626.8	3.28 S	5.48 S
60.00S	5633.2 S	626.8	2.94 S	4.92 S
65.00S	5633.2 S	626.8	2.66 S	4.44 S
70.00S	5633.2 S	626.8	2.46 S	4.11 S
72.00	5633.2 S	626.8	2.40 S	4.00 S
75.00S	5633.2 S	626.8	2.31 S	3.86 S
80.00S	5633.2 S	626.8	2.21 S	3.70 S
85.00S	5633.2 S	626.8	2.15 S	3.59 S
90.00	5633.2 S	626.8	2.13 S	3.55 S
95.00S	5633.2 S	626.8	2.15 S	3.59 S
100.00S	7925.1 C	626.8	1.74 V	2.90 V
105.00S	5633.2 S	626.8	2.31 S	3.86 S
108.00	5633.2 S	626.8	2.39 S	4.00 S
110.00S	5633.2 S	626.8	2.46 S	4.10 S
115.00S	5633.2 S	626.8	2.66 S	4.44 S
120.00S	5633.2 S	626.8	2.94 S	4.91 S
125.00S	5633.2 S	626.8	3.28 S	5.47 S
126.00	5633.2 S	626.8	3.35 S	5.60 S
130.00S	4577.7 B	626.8	2.19 B	3.65 B
135.00S	4577.7 B	626.8	2.20 T	3.68 T
140.00S	4577.7 B	626.8	2.18 T	3.65 T
144.00	4577.7 B	626.8	1.97 T	3.29 T
147.00L	4577.7 B	626.8	1.68 T	2.81 T
147.00R	7151.1 B	626.8	3.05 T	5.10 T
145.00S	4577.7 B	626.8	1.87 T	3.13 T
150.00S	7170.0 B	628.2	2.68 T	4.47 T
155.00S	7507.6 B	652.1	2.25 T	3.76 T
160.00S	8285.0 B	701.6	2.02 B	3.38 B
162.00L	8727.5 B	729.0	1.98 T	3.31 T
162.00R	9821.0 B	731.6	2.35 B	3.92 B
165.00S	10593.2 B	780.6	2.28 T	3.81 T
170.00S	11704.3 B	846.6	2.10 T	3.51 T
175.00S	12318.6 B	883.0	1.82 T	3.03 T
180.00	12536.6 B	930.6	1.48 B	2.47 B

Span 3

Location	Moment Capacity	Shear Capacity	Rating Factors Inventory	Operating
0.00	12536.6 B	930.6	1.48 B	2.47 B
5.00S	12409.7 B	883.0	1.58 B	2.65 B
10.00S	11791.7 B	846.6	2.21 B	3.70 B

15.00S	10674.2 B	780.6	2.45 B	4.10 B
16.00L	10313.5 B	765.4	2.46 T	4.11 T
16.00R	9245.9 B	762.5	2.11 T	3.53 T
20.00S	8285.0 B	701.6	2.23 B	3.73 B
25.00S	7507.6 B	652.1	2.53 T	4.22 T
30.00S	7170.0 B	628.2	3.01 T	5.03 T
32.00L	7151.1 B	626.8	3.27 T	5.46 T
32.00R	5067.7 B	626.8	2.06 B	3.45 B
35.00S	3720.9 B	626.8	1.79 T	2.98 T
40.00S	5067.7 B	626.8	2.52 B	4.21 B
45.00S	4814.3 S	626.8	2.40 S	4.02 S
48.00	4814.3 S	626.8	2.12 S	3.53 S
50.00L	4814.3 S	626.8	1.95 S	3.26 S
50.00R	7677.3 S	626.8	3.47 S	5.80 S
62.00L	7677.3 S	626.8	2.58 S	4.31 S
62.00R	8902.5 S	626.8	3.13 S	5.22 S
55.00S	7677.3 S	626.8	3.03 S	5.07 S
60.00S	7677.3 S	626.8	2.69 S	4.49 S
64.00	8902.5 S	626.8	3.02 S	5.05 S
65.00S	8902.5 S	626.8	2.98 S	4.97 S
70.00S	8902.5 S	626.8	2.79 S	4.65 S
75.00S	8902.5 S	626.8	2.68 S	4.48 S
80.00	8902.5 S	626.8	2.57 S	4.30 S
85.00S	8902.5 S	626.8	2.49 S	4.16 S
90.00S	8902.5 S	626.8	2.41 S	4.03 S
95.00S	8902.5 S	626.8	2.40 S	4.01 S
96.00	8902.5 S	626.8	2.40 S	4.01 S
100.00S	8902.5 S	626.8	2.43 S	4.05 S
105.00S	8902.5 S	626.8	2.51 S	4.19 S
110.00S	8902.5 S	626.8	2.63 S	4.39 S
112.00	8902.5 S	626.8	2.68 S	4.48 S
115.00S	8902.5 S	626.8	2.79 S	4.66 S
120.00S	8902.5 S	626.8	3.01 S	5.02 S
125.00S	8902.5 S	626.8	3.30 S	5.51 S
128.00	8902.5 S	626.8	3.53 S	5.89 S
133.00L	8902.5 S	626.8	4.03 S	6.72 S
133.00R	7677.3 S	626.8	3.30 S	5.51 S
130.00S	8902.5 S	626.8	3.71 S	6.19 S
135.00S	7677.3 S	626.8	3.52 S	5.88 S
140.00S	7677.3 S	626.8	4.15 S	6.93 S
144.00	7677.3 S	626.8	5.09 S	8.49 S
145.00L	10086.4 C	626.8	5.09 V	8.49 V
145.00R	4797.0 S	626.8	2.89 S	4.83 S
150.00S	4814.3 S	626.8	4.53 S	7.56 S
155.00S	7040.1 C	626.8	4.06 V	6.78 V
160.00	7040.1 C	543.6	3.04 V	5.08 V

Rating Codes:
T - Top steel governs
B - Bottom steel governs
C - Concrete governs
R - Rebar governs
V - Shear governs
S - Serviceability governs
I - Moment-shear interaction governs

Mom Capacity Codes:
C - Compact
B - Braced non-compact
U - Unbraced non-compact
T - Transition between compact and braced non-compact
S - Serviceability

This table is based on eq. (6-1a) of the AASHTO Manual
for Condition Evaluation of Bridges.

Noncompact shapes ratings based on stress, as

$$IR = \frac{Fb - \text{Dead load factored stress}}{\text{LL+I factored stress}}$$

Noncompact shape moment capacity is the product of
allowable stress and LL+I section modulus.

Girder 3 Bearing Stiffeners

Location from Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
0.00	137.89	16.80	11.03	0.657	28.80	18.39	0.638
160.00	362.58	16.60	10.07	0.607	28.80	16.11	0.560
340.00	362.53	16.60	10.07	0.606	28.80	16.11	0.559
500.00	137.82	16.80	11.03	0.656	28.80	18.38	0.638

Girder 3 Fatigue Summary

Condition	Location from Left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	16.00	B	839.86	T	3391.	18000.	0.188
Base metal *	16.00	B	519.18	T	2095.	16000.	0.131
Base metal	32.00	B	1325.86	T	4623.	18000.	0.257
Base metal *	32.00	B	796.46	T	2777.	16000.	0.174
Base metal	48.00	B	1659.69	T	5811.	18000.	0.323
Base metal *	48.00	B	1001.94	T	3507.	16000.	0.219
Base metal	64.00	B	1842.32	T	6484.	18000.	0.360
Base metal *	64.00	B	1120.11	T	3941.	16000.	0.246
Base metal	80.00	B	1849.30	T	6558.	18000.	0.364
Base metal *	80.00	B	1103.44	T	3914.	16000.	0.245
Base metal	96.00	B	1838.84	T	6577.	18000.	0.365
Base metal *	96.00	B	1122.53	T	4013.	16000.	0.251
Base metal	112.00	B	1652.96	T	11833.	18000.	0.657
Base metal *	112.00	B	1003.11	T	7171.	16000.	0.448
Near flg-web weld	16.00	B	839.86	T	3293.	18000.	0.183
Near flg-web weld *	16.00	B	519.18	T	2035.	16000.	0.127
Near flg-web weld	32.00	B	1325.86	T	4455.	18000.	0.248
Near flg-web weld *	32.00	B	796.46	T	2676.	16000.	0.167
Near flg-web weld	48.00	B	1659.69	T	5601.	18000.	0.311
Near flg-web weld *	48.00	B	1001.94	T	3381.	16000.	0.211
Near flg-web weld	64.00	B	1842.32	T	6249.	18000.	0.347
Near flg-web weld *	64.00	B	1120.11	T	3798.	16000.	0.237
Near flg-web weld	80.00	B	1849.30	T	6320.	18000.	0.351
Near flg-web weld *	80.00	B	1103.44	T	3772.	16000.	0.236
Near flg-web weld	96.00	B	1838.84	T	6339.	18000.	0.352
Near flg-web weld *	96.00	B	1122.53	T	3868.	16000.	0.242

Near flg-web weld	112.00	B	1652.96	T	11684.	18000.	0.649
Near flg-web weld *	112.00	B	1003.11	T	7081.	16000.	0.443
Top flg. splice	15.00	B	797.74	T	1182.	18000.	0.066
Top flg splice *	15.00	B	493.82	T	732.	16000.	0.046
Top flg. splice	27.00	B	1190.33	T	2071.	18000.	0.115
Top flg splice *	27.00	B	717.52	T	1247.	16000.	0.078
Top flg. splice	98.00	B	1825.19	T	4260.	18000.	0.237
Top flg splice *	98.00	B	1115.18	T	2588.	16000.	0.162
Top flg. splice	110.00	B	1679.87	T	6761.	18000.	0.376
Top flg splice *	110.00	B	1020.05	T	4075.	16000.	0.255
Bot flg. splice	15.00	B	797.74	T	4651.	18000.	0.258
Bot flg splice *	15.00	B	493.82	T	2887.	16000.	0.180
Bot flg. splice	27.00	B	1190.33	T	4829.	18000.	0.268
Bot flg splice *	27.00	B	717.52	T	2910.	16000.	0.182
Bot flg. splice	98.00	B	1825.19	T	7666.	18000.	0.426
Bot flg splice *	98.00	B	1115.18	T	4680.	16000.	0.293
Bot flg. splice	110.00	B	1679.87	T	12015.	18000.	0.668
Bot flg splice *	110.00	B	1020.05	T	7286.	16000.	0.455
Trans. stiff. toe	10.00	C	524.91	T	2093.	13000.	0.161
Trans. stiff. toe *	10.00	C	324.49	T	1293.	12000.	0.108
Trans. stiff. toe	15.00	C	787.37	T	3139.	13000.	0.241
Trans. stiff. toe *	15.00	C	486.73	T	1940.	12000.	0.162
Trans. stiff. toe	20.00	C	961.36	T	3840.	13000.	0.295
Trans. stiff. toe *	20.00	C	588.50	T	2350.	12000.	0.196
Trans. stiff. toe	25.00	C	1113.23	T	3827.	13000.	0.294
Trans. stiff. toe *	25.00	C	675.15	T	2321.	12000.	0.193
Trans. stiff. toe	30.00	C	1265.11	T	4354.	13000.	0.335
Trans. stiff. toe *	30.00	C	761.80	T	2621.	12000.	0.218
Trans. stiff. toe	35.00	C	1388.45	T	4785.	13000.	0.368
Trans. stiff. toe *	35.00	C	834.99	T	2877.	12000.	0.240
Trans. stiff. toe	40.00	C	1492.77	T	5151.	13000.	0.396
Trans. stiff. toe *	40.00	C	899.20	T	3103.	12000.	0.259
Trans. stiff. toe	45.00	C	1597.10	T	5518.	13000.	0.424
Trans. stiff. toe *	45.00	C	963.41	T	3328.	12000.	0.277
Trans. stiff. toe	50.00	C	1682.52	T	5821.	13000.	0.448
Trans. stiff. toe *	50.00	C	1016.71	T	3517.	12000.	0.293
Trans. stiff. toe	55.00	C	1739.59	T	6029.	13000.	0.464
Trans. stiff. toe *	55.00	C	1053.64	T	3651.	12000.	0.304
Trans. stiff. toe	60.00	C	1796.66	T	6236.	13000.	0.480
Trans. stiff. toe *	60.00	C	1090.57	T	3784.	12000.	0.315
Trans. stiff. toe	65.00	C	1842.75	T	6407.	13000.	0.493
Trans. stiff. toe *	65.00	C	1119.07	T	3890.	12000.	0.324
Trans. stiff. toe	70.00	C	1844.94	T	6430.	13000.	0.495
Trans. stiff. toe *	70.00	C	1113.86	T	3881.	12000.	0.323
Trans. stiff. toe	75.00	C	1847.12	T	6453.	13000.	0.496
Trans. stiff. toe *	75.00	C	1108.65	T	3873.	12000.	0.323
Trans. stiff. toe	80.00	C	1849.30	T	6475.	13000.	0.498
Trans. stiff. toe *	80.00	C	1103.44	T	3865.	12000.	0.322
Trans. stiff. toe	85.00	C	1846.03	T	6481.	13000.	0.499
Trans. stiff. toe *	85.00	C	1109.41	T	3895.	12000.	0.325
Trans. stiff. toe	90.00	C	1842.76	T	6487.	13000.	0.499
Trans. stiff. toe *	90.00	C	1115.37	T	3926.	12000.	0.327
Trans. stiff. toe	95.00	C	1839.49	T	6493.	13000.	0.499
Trans. stiff. toe *	95.00	C	1121.34	T	3956.	12000.	0.330
Trans. stiff. toe	100.00	C	1792.37	T	6352.	13000.	0.489
Trans. stiff. toe *	100.00	C	1092.68	T	3870.	12000.	0.322
Trans. stiff. toe	105.00	C	1734.28	T	12096.	13000.	0.930
Trans. stiff. toe *	105.00	C	1055.36	T	7351.	12000.	0.613
Trans. stiff. toe	110.00	C	1676.20	T	11802.	13000.	0.908
Trans. stiff. toe *	110.00	C	1018.03	T	7158.	12000.	0.596
Trans. stiff. toe	115.00	C	1605.50	T	11434.	13000.	0.880
Trans. stiff. toe *	115.00	C	973.79	T	6924.	12000.	0.577
Base metal	16.00	B	798.35	L	3242.	29000.	0.112

Base metal	32.00	B	1338.41	L	4688.	29000.	0.162
Base metal	48.00	B	1721.40	L	6055.	29000.	0.209
Base metal	64.00	B	1967.17	L	6955.	29000.	0.240
Base metal	80.00	B	2029.51	L	7229.	29000.	0.249
Base metal	96.00	B	2049.98	L	7367.	29000.	0.254
Base metal	112.00	B	1880.48	L	13590.	29000.	0.469
Near flg-web weld	16.00	B	798.35	L	3149.	29000.	0.109
Near flg-web weld	32.00	B	1338.41	L	4518.	29000.	0.156
Near flg-web weld	48.00	B	1721.40	L	5836.	29000.	0.201
Near flg-web weld	64.00	B	1967.17	L	6703.	29000.	0.231
Near flg-web weld	80.00	B	2029.51	L	6968.	29000.	0.240
Near flg-web weld	96.00	B	2049.98	L	7100.	29000.	0.245
Near flg-web weld	112.00	B	1880.48	L	13420.	29000.	0.463
Top flg. splice	15.00	B	756.02	L	1111.	29000.	0.038
Top flg. splice	27.00	B	1186.51	L	2177.	29000.	0.075
Top flg. splice	98.00	B	2039.18	L	4966.	29000.	0.171
Top flg. splice	110.00	B	1906.77	L	8079.	29000.	0.279
Bot flg. splice	15.00	B	756.02	L	4293.	29000.	0.148
Bot flg. splice	27.00	B	1186.51	L	4841.	29000.	0.167
Bot flg. splice	98.00	B	2039.18	L	8615.	29000.	0.297
Bot flg. splice	110.00	B	1906.77	L	13771.	29000.	0.475
Trans. stiff. toe	10.00	C	498.97	L	2001.	21000.	0.095
Trans. stiff. toe	15.00	C	748.45	L	3001.	21000.	0.143
Trans. stiff. toe	20.00	C	933.37	L	3749.	21000.	0.179
Trans. stiff. toe	25.00	C	1102.13	L	3807.	21000.	0.181
Trans. stiff. toe	30.00	C	1270.90	L	4394.	21000.	0.209
Trans. stiff. toe	35.00	C	1410.22	L	4882.	21000.	0.232
Trans. stiff. toe	40.00	C	1529.90	L	5304.	21000.	0.253
Trans. stiff. toe	45.00	C	1649.59	L	5726.	21000.	0.273
Trans. stiff. toe	50.00	C	1752.12	L	6090.	21000.	0.290
Trans. stiff. toe	55.00	C	1828.92	L	6368.	21000.	0.303
Trans. stiff. toe	60.00	C	1905.72	L	6645.	21000.	0.316
Trans. stiff. toe	65.00	C	1971.06	L	6884.	21000.	0.328
Trans. stiff. toe	70.00	C	1990.55	L	6969.	21000.	0.332
Trans. stiff. toe	75.00	C	2010.03	L	7054.	21000.	0.336
Trans. stiff. toe	80.00	C	2029.51	L	7138.	21000.	0.340
Trans. stiff. toe	85.00	C	2035.91	L	7181.	21000.	0.342
Trans. stiff. toe	90.00	C	2042.30	L	7224.	21000.	0.344
Trans. stiff. toe	95.00	C	2048.70	L	7266.	21000.	0.346
Trans. stiff. toe	100.00	C	2007.61	L	7149.	21000.	0.340
Trans. stiff. toe	105.00	C	1954.64	L	13765.	21000.	0.655
Trans. stiff. toe	110.00	C	1901.67	L	13518.	21000.	0.644
Trans. stiff. toe	115.00	C	1831.20	L	13174.	21000.	0.627
Base metal	128.00	C	1399.85	T	5177.	13000.	0.398
Base metal *	128.00	C	846.76	T	3100.	10000.	0.310
Base metal	144.00	C	1134.87	T	3070.	13000.	0.236
Base metal *	144.00	C	693.07	T	1837.	10000.	0.184
Base metal	160.00	C	1246.21	T	2680.	13000.	0.206
Base metal *	160.00	C	735.88	T	1577.	10000.	0.158
Base metal	178.00	C	1095.81	T	3040.	13000.	0.234
Base metal *	178.00	C	674.04	T	1831.	10000.	0.183
Base metal	196.00	C	1346.01	T	5378.	13000.	0.414
Base metal *	196.00	C	823.84	T	3243.	10000.	0.324
Near flg-web weld	128.00	B	1399.85	T	5003.	18000.	0.278
Base metal	128.00	B	1399.85	T	5115.	18000.	0.284
Near flg-web weld *	128.00	B	846.76	T	2996.	16000.	0.187
Base metal *	128.00	B	846.76	T	3063.	16000.	0.191
Near flg-web weld *	128.00	B	846.76	T	3063.	16000.	0.191
Base metal *	128.00	B	846.76	T	3131.	16000.	0.196
Near flg-web weld	144.00	B	1134.87	T	2947.	18000.	0.164
Base metal	144.00	B	1134.87	T	3032.	18000.	0.168
Near flg-web weld *	144.00	B	693.07	T	1763.	16000.	0.110
Base metal *	144.00	B	693.07	T	1814.	16000.	0.113

Near flg-web weld *	144.00	B	693.07	T	1814.	16000.	0.113
Base metal *	144.00	B	693.07	T	1866.	16000.	0.117
Near flg-web weld	160.00	B	1246.21	T	2581.	18000.	0.143
Base metal	160.00	B	1246.21	T	2650.	18000.	0.147
Near flg-web weld *	160.00	B	735.88	T	1518.	16000.	0.095
Base metal *	160.00	B	735.88	T	1559.	16000.	0.097
Near flg-web weld *	160.00	B	735.88	T	1559.	16000.	0.097
Base metal *	160.00	B	735.88	T	1601.	16000.	0.100
Near flg-web weld	178.00	B	1095.81	T	2912.	18000.	0.162
Base metal	178.00	B	1095.81	T	3000.	18000.	0.167
Near flg-web weld *	178.00	B	674.04	T	1754.	16000.	0.110
Base metal *	178.00	B	674.04	T	1807.	16000.	0.113
Near flg-web weld *	178.00	B	674.04	T	1807.	16000.	0.113
Base metal *	178.00	B	674.04	T	1861.	16000.	0.116
Near flg-web weld	196.00	B	1346.01	T	5233.	18000.	0.291
Base metal	196.00	B	1346.01	T	5324.	18000.	0.296
Near flg-web weld *	196.00	B	823.84	T	3155.	16000.	0.197
Base metal *	196.00	B	823.84	T	3210.	16000.	0.201
Near flg-web weld *	196.00	B	823.84	T	3210.	16000.	0.201
Base metal *	196.00	B	823.84	T	3266.	16000.	0.204
Top flg. splice	128.00	B	1399.85	T	7222.	18000.	0.401
Top flg splice *	128.00	B	846.76	T	4318.	16000.	0.270
Top flg. splice	144.00	B	1134.87	T	3257.	18000.	0.181
Top flg splice *	144.00	B	693.07	T	1947.	16000.	0.122
Top flg. splice	178.00	B	1095.81	T	3224.	18000.	0.179
Top flg splice *	178.00	B	674.04	T	1941.	16000.	0.121
Top flg. splice	193.00	B	1313.37	T	5503.	18000.	0.306
Top flg splice *	193.00	B	805.21	T	3316.	16000.	0.207
Bot flg. splice	128.00	B	1399.85	T	10531.	18000.	0.585
Bot flg splice *	128.00	B	846.76	T	6354.	16000.	0.397
Bot flg. splice	144.00	B	1134.87	T	3788.	18000.	0.210
Bot flg splice *	144.00	B	693.07	T	2303.	16000.	0.144
Bot flg. splice	178.00	B	1095.81	T	3850.	18000.	0.214
Bot flg splice *	178.00	B	674.04	T	2358.	16000.	0.147
Bot flg. splice	193.00	B	1313.37	T	8153.	18000.	0.453
Bot flg splice *	193.00	B	805.21	T	4981.	16000.	0.311
Trans. stiff. toe	120.00	C	1526.40	T	10966.	13000.	0.844
Trans. stiff. toe *	120.00	C	924.93	T	6632.	12000.	0.553
Trans. stiff. toe	125.00	C	1447.30	T	5013.	13000.	0.386
Trans. stiff. toe *	125.00	C	876.08	T	3006.	12000.	0.250
Trans. stiff. toe	130.00	C	1366.72	T	5046.	13000.	0.388
Trans. stiff. toe *	130.00	C	827.55	T	3020.	12000.	0.252
Trans. stiff. toe	135.00	C	1283.92	T	4875.	13000.	0.375
Trans. stiff. toe *	135.00	C	779.52	T	2913.	12000.	0.243
Trans. stiff. toe	140.00	C	1201.11	T	3340.	13000.	0.257
Trans. stiff. toe *	140.00	C	731.49	T	1999.	12000.	0.167
Trans. stiff. toe	145.00	C	1141.83	T	2950.	13000.	0.227
Trans. stiff. toe *	145.00	C	695.74	T	1763.	12000.	0.147
Trans. stiff. toe	150.00	C	1176.62	T	2787.	13000.	0.214
Trans. stiff. toe *	150.00	C	709.12	T	1657.	12000.	0.138
Trans. stiff. toe	155.00	C	1211.42	T	2559.	13000.	0.197
Trans. stiff. toe *	155.00	C	722.50	T	1513.	12000.	0.126
Trans. stiff. toe	160.00	C	1246.21	T	2629.	13000.	0.202
Trans. stiff. toe *	160.00	C	735.88	T	1547.	12000.	0.129
Trans. stiff. toe	165.00	C	1204.43	T	2530.	13000.	0.195
Trans. stiff. toe *	165.00	C	718.70	T	1498.	12000.	0.125
Trans. stiff. toe	170.00	C	1162.66	T	2718.	13000.	0.209
Trans. stiff. toe *	170.00	C	701.52	T	1619.	12000.	0.135
Trans. stiff. toe	175.00	C	1120.88	T	2836.	13000.	0.218
Trans. stiff. toe *	175.00	C	684.35	T	1701.	12000.	0.142
Trans. stiff. toe	180.00	C	1123.61	T	3114.	13000.	0.240
Trans. stiff. toe *	180.00	C	690.68	T	1876.	12000.	0.156
Trans. stiff. toe	185.00	C	1193.11	T	3393.	13000.	0.261

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Trans. stiff. toe *	185.00	C	732.30	T	2046.	12000.	0.171
Trans. stiff. toe	205.00	C	1405.89	T	8321.	13000.	0.640
Trans. stiff. toe *	205.00	C	853.13	T	5042.	12000.	0.420
Trans. stiff. toe	210.00	C	1439.15	T	8436.	13000.	0.649
Trans. stiff. toe *	210.00	C	869.41	T	5092.	12000.	0.424
Rebars	160.00		1246.21	T	3435.	20000.	0.172
Rebars *	160.00		735.88	T	2029.	20000.	0.101
Base metal	128.00	C	1617.66	L	6283.	21000.	0.299
Base metal	144.00	C	1841.67	L	5075.	21000.	0.242
Base metal	160.00	C	2586.64	L	5946.	21000.	0.283
Base metal	178.00	C	1732.51	L	5105.	21000.	0.243
Base metal	196.00	C	1394.94	L	6428.	21000.	0.306
Near flg-web weld	128.00	B	1617.66	L	6072.	29000.	0.209
Base metal	128.00	B	1617.66	L	6207.	29000.	0.214
Near flg-web weld	144.00	B	1841.67	L	4871.	29000.	0.168
Base metal	144.00	B	1841.67	L	5011.	29000.	0.173
Near flg-web weld	160.00	B	2586.64	L	5725.	29000.	0.197
Base metal	160.00	B	2586.64	L	5879.	29000.	0.203
Near flg-web weld	178.00	B	1732.51	L	4890.	29000.	0.169
Base metal	178.00	B	1732.51	L	5037.	29000.	0.174
Near flg-web weld	196.00	B	1394.94	L	6254.	29000.	0.216
Base metal	196.00	B	1394.94	L	6363.	29000.	0.219
Top flg. splice	128.00	B	1617.66	L	8828.	29000.	0.304
Top flg. splice	144.00	B	1841.67	L	5385.	29000.	0.186
Top flg. splice	178.00	B	1732.51	L	5421.	29000.	0.187
Top flg. splice	193.00	B	1421.47	L	6886.	29000.	0.237
Bot flg. splice	128.00	B	1617.66	L	12328.	29000.	0.425
Bot flg. splice	144.00	B	1841.67	L	6171.	29000.	0.213
Bot flg. splice	178.00	B	1732.51	L	6164.	29000.	0.213
Bot flg. splice	193.00	B	1421.47	L	9097.	29000.	0.314
Trans. stiff. toe	120.00	C	1749.07	L	12707.	21000.	0.605
Trans. stiff. toe	125.00	C	1666.94	L	6060.	21000.	0.289
Trans. stiff. toe	130.00	C	1645.66	L	6413.	21000.	0.305
Trans. stiff. toe	135.00	C	1715.66	L	6879.	21000.	0.328
Trans. stiff. toe	140.00	C	1785.67	L	5146.	21000.	0.245
Trans. stiff. toe	145.00	C	1888.23	L	4996.	21000.	0.238
Trans. stiff. toe	150.00	C	2121.03	L	5253.	21000.	0.250
Trans. stiff. toe	155.00	C	2353.83	L	5260.	21000.	0.250
Trans. stiff. toe	160.00	C	2586.64	L	5833.	21000.	0.278
Trans. stiff. toe	165.00	C	2349.38	L	5278.	21000.	0.251
Trans. stiff. toe	170.00	C	2112.12	L	5289.	21000.	0.252
Trans. stiff. toe	175.00	C	1874.86	L	5061.	21000.	0.241
Trans. stiff. toe	180.00	C	1695.00	L	5054.	21000.	0.241
Trans. stiff. toe	185.00	C	1601.23	L	5030.	21000.	0.240
Trans. stiff. toe	190.00	C	1507.46	L	7381.	21000.	0.351
Trans. stiff. toe	195.00	C	1413.69	L	6446.	21000.	0.307
Trans. stiff. toe	200.00	C	1415.06	L	6049.	21000.	0.288
Trans. stiff. toe	205.00	C	1440.21	L	5792.	21000.	0.276
Trans. stiff. toe	210.00	C	1465.36	L	8786.	21000.	0.418
Rebars	160.00		2586.64	L	7130.	20000.	0.357
Base metal	214.00	B	1465.76	T	8677.	18000.	0.482
Base metal *	214.00	B	882.43	T	5222.	16000.	0.326
Base metal	232.00	B	1554.71	T	8967.	18000.	0.498
Base metal *	232.00	B	945.89	T	5451.	16000.	0.341
Base metal	250.00	B	1527.69	T	8650.	18000.	0.481
Base metal *	250.00	B	935.89	T	5294.	16000.	0.331
Base metal	268.00	B	1554.68	T	8967.	18000.	0.498
Base metal *	268.00	B	945.88	T	5451.	16000.	0.341
Base metal	286.00	B	1465.84	T	8677.	18000.	0.482
Base metal *	286.00	B	882.48	T	5222.	16000.	0.326
Near flg-web weld	214.00	B	1465.76	T	8528.	18000.	0.474
Near flg-web weld *	214.00	B	882.43	T	5132.	16000.	0.321
Near flg-web weld	232.00	B	1554.71	T	8814.	18000.	0.490

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Near flg-web weld *	232.00	B	945.89	T	5358.	16000.	0.335
Near flg-web weld	250.00	B	1527.69	T	8502.	18000.	0.472
Near flg-web weld *	250.00	B	935.89	T	5204.	16000.	0.325
Near flg-web weld	268.00	B	1554.68	T	8814.	18000.	0.490
Near flg-web weld *	268.00	B	945.88	T	5358.	16000.	0.335
Near flg-web weld	286.00	B	1465.84	T	8529.	18000.	0.474
Near flg-web weld *	286.00	B	882.48	T	5133.	16000.	0.321
Trans. stiff. toe	215.00	C	1470.70	T	8544.	13000.	0.657
Trans. stiff. toe *	215.00	C	885.95	T	5145.	12000.	0.429
Trans. stiff. toe	220.00	C	1495.41	T	8624.	13000.	0.663
Trans. stiff. toe *	220.00	C	903.58	T	5208.	12000.	0.434
Trans. stiff. toe	225.00	C	1520.12	T	8703.	13000.	0.669
Trans. stiff. toe *	225.00	C	921.21	T	5270.	12000.	0.439
Trans. stiff. toe	230.00	C	1544.82	T	8782.	13000.	0.676
Trans. stiff. toe *	230.00	C	938.84	T	5333.	12000.	0.444
Trans. stiff. toe	235.00	C	1550.21	T	8762.	13000.	0.674
Trans. stiff. toe *	235.00	C	944.22	T	5332.	12000.	0.444
Trans. stiff. toe	240.00	C	1542.70	T	8675.	13000.	0.667
Trans. stiff. toe *	240.00	C	941.44	T	5289.	12000.	0.441
Trans. stiff. toe	245.00	C	1535.20	T	8589.	13000.	0.661
Trans. stiff. toe *	245.00	C	938.66	T	5247.	12000.	0.437
Trans. stiff. toe	250.00	C	1527.69	T	8502.	13000.	0.654
Trans. stiff. toe *	250.00	C	935.89	T	5204.	12000.	0.434
Trans. stiff. toe	255.00	C	1535.19	T	8589.	13000.	0.661
Trans. stiff. toe *	255.00	C	938.66	T	5247.	12000.	0.437
Trans. stiff. toe	260.00	C	1542.69	T	8675.	13000.	0.667
Trans. stiff. toe *	260.00	C	941.44	T	5289.	12000.	0.441
Trans. stiff. toe	265.00	C	1550.18	T	8762.	13000.	0.674
Trans. stiff. toe *	265.00	C	944.21	T	5332.	12000.	0.444
Trans. stiff. toe	270.00	C	1544.81	T	8782.	13000.	0.676
Trans. stiff. toe *	270.00	C	938.83	T	5333.	12000.	0.444
Trans. stiff. toe	275.00	C	1520.13	T	8703.	13000.	0.669
Trans. stiff. toe *	275.00	C	921.22	T	5270.	12000.	0.439
Trans. stiff. toe	280.00	C	1495.45	T	8624.	13000.	0.663
Trans. stiff. toe *	280.00	C	903.61	T	5208.	12000.	0.434
Trans. stiff. toe	285.00	C	1470.77	T	8544.	13000.	0.657
Trans. stiff. toe *	285.00	C	886.00	T	5145.	12000.	0.429
Base metal	214.00	B	1485.48	L	8979.	29000.	0.310
Base metal	232.00	B	1706.75	L	10103.	29000.	0.348
Base metal	250.00	B	1778.96	L	10445.	29000.	0.360
Base metal	268.00	B	1706.84	L	10104.	29000.	0.348
Base metal	286.00	B	1485.78	L	8980.	29000.	0.310
Near flg-web weld	214.00	B	1485.48	L	8825.	29000.	0.304
Near flg-web weld	232.00	B	1706.75	L	9931.	29000.	0.342
Near flg-web weld	250.00	B	1778.96	L	10267.	29000.	0.354
Near flg-web weld	268.00	B	1706.84	L	9931.	29000.	0.342
Near flg-web weld	286.00	B	1485.78	L	8826.	29000.	0.304
Trans. stiff. toe	215.00	C	1497.78	L	8887.	21000.	0.423
Trans. stiff. toe	220.00	C	1559.24	L	9194.	21000.	0.438
Trans. stiff. toe	225.00	C	1620.70	L	9501.	21000.	0.452
Trans. stiff. toe	230.00	C	1682.16	L	9808.	21000.	0.467
Trans. stiff. toe	235.00	C	1718.78	L	9987.	21000.	0.476
Trans. stiff. toe	240.00	C	1738.84	L	10080.	21000.	0.480
Trans. stiff. toe	245.00	C	1758.90	L	10174.	21000.	0.484
Trans. stiff. toe	250.00	C	1778.96	L	10267.	21000.	0.489
Trans. stiff. toe	255.00	C	1758.93	L	10174.	21000.	0.484
Trans. stiff. toe	260.00	C	1738.89	L	10080.	21000.	0.480
Trans. stiff. toe	265.00	C	1718.86	L	9987.	21000.	0.476
Trans. stiff. toe	270.00	C	1682.28	L	9808.	21000.	0.467
Trans. stiff. toe	275.00	C	1620.87	L	9502.	21000.	0.452
Trans. stiff. toe	280.00	C	1559.46	L	9195.	21000.	0.438
Trans. stiff. toe	285.00	C	1498.06	L	8888.	21000.	0.423
Base metal	304.00	C	1346.23	T	5378.	13000.	0.414

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Base metal *	304.00	C	823.97	T	3242.	10000.	0.324
Base metal	322.00	C	1095.30	T	3040.	13000.	0.234
Base metal *	322.00	C	673.66	T	1831.	10000.	0.183
Base metal	340.00	C	1246.33	T	2681.	13000.	0.206
Base metal *	340.00	C	735.96	T	1577.	10000.	0.158
Base metal	356.00	C	1135.05	T	3071.	13000.	0.236
Base metal *	356.00	C	693.23	T	1837.	10000.	0.184
Base metal	372.00	C	1399.64	T	5177.	13000.	0.398
Base metal *	372.00	C	846.61	T	3100.	10000.	0.310
Near flg-web weld	304.00	B	1346.23	T	5233.	18000.	0.291
Base metal	304.00	B	1346.23	T	5324.	18000.	0.296
Near flg-web weld *	304.00	B	823.97	T	3155.	16000.	0.197
Base metal *	304.00	B	823.97	T	3210.	16000.	0.201
Near flg-web weld *	304.00	B	823.97	T	3210.	16000.	0.201
Base metal *	304.00	B	823.97	T	3265.	16000.	0.204
Near flg-web weld	322.00	B	1095.30	T	2912.	18000.	0.162
Base metal	322.00	B	1095.30	T	2999.	18000.	0.167
Near flg-web weld *	322.00	B	673.66	T	1754.	16000.	0.110
Base metal *	322.00	B	673.66	T	1806.	16000.	0.113
Near flg-web weld *	322.00	B	673.66	T	1806.	16000.	0.113
Base metal *	322.00	B	673.66	T	1861.	16000.	0.116
Near flg-web weld	340.00	B	1246.33	T	2581.	18000.	0.143
Base metal	340.00	B	1246.33	T	2650.	18000.	0.147
Near flg-web weld *	340.00	B	735.96	T	1519.	16000.	0.095
Base metal *	340.00	B	735.96	T	1559.	16000.	0.097
Near flg-web weld *	340.00	B	735.96	T	1559.	16000.	0.097
Base metal *	340.00	B	735.96	T	1601.	16000.	0.100
Near flg-web weld	356.00	B	1135.05	T	2947.	18000.	0.164
Base metal	356.00	B	1135.05	T	3032.	18000.	0.168
Near flg-web weld *	356.00	B	693.23	T	1763.	16000.	0.110
Base metal *	356.00	B	693.23	T	1814.	16000.	0.113
Near flg-web weld *	356.00	B	693.23	T	1814.	16000.	0.113
Base metal *	356.00	B	693.23	T	1866.	16000.	0.117
Near flg-web weld	372.00	B	1399.64	T	5003.	18000.	0.278
Base metal	372.00	B	1399.64	T	5114.	18000.	0.284
Near flg-web weld *	372.00	B	846.61	T	2996.	16000.	0.187
Base metal *	372.00	B	846.61	T	3062.	16000.	0.191
Near flg-web weld *	372.00	B	846.61	T	3062.	16000.	0.191
Base metal *	372.00	B	846.61	T	3130.	16000.	0.196
Top flg. splice	307.00	B	1313.53	T	5502.	18000.	0.306
Top flg splice *	307.00	B	805.30	T	3316.	16000.	0.207
Top flg. splice	322.00	B	1095.30	T	3223.	18000.	0.179
Top flg splice *	322.00	B	673.66	T	1940.	16000.	0.121
Top flg. splice	356.00	B	1135.05	T	3257.	18000.	0.181
Top flg splice *	356.00	B	693.23	T	1947.	16000.	0.122
Top flg. splice	372.00	B	1399.64	T	7221.	18000.	0.401
Top flg splice *	372.00	B	846.61	T	4317.	16000.	0.270
Bot flg. splice	307.00	B	1313.53	T	8153.	18000.	0.453
Bot flg splice *	307.00	B	805.30	T	4982.	16000.	0.311
Bot flg. splice	322.00	B	1095.30	T	3848.	18000.	0.214
Bot flg splice *	322.00	B	673.66	T	2357.	16000.	0.147
Bot flg. splice	356.00	B	1135.05	T	3788.	18000.	0.210
Bot flg splice *	356.00	B	693.23	T	2304.	16000.	0.144
Bot flg. splice	372.00	B	1399.64	T	10530.	18000.	0.585
Bot flg splice *	372.00	B	846.61	T	6353.	16000.	0.397
Trans. stiff. toe	290.00	C	1439.26	T	8475.	13000.	0.652
Trans. stiff. toe *	290.00	C	869.48	T	5116.	12000.	0.426
Trans. stiff. toe	295.00	C	1406.03	T	8360.	13000.	0.643
Trans. stiff. toe	315.00	C	1192.88	T	3412.	13000.	0.262
Trans. stiff. toe *	315.00	C	732.11	T	2057.	12000.	0.171
Trans. stiff. toe	320.00	C	1123.18	T	3131.	13000.	0.241
Trans. stiff. toe *	320.00	C	690.36	T	1886.	12000.	0.157
Trans. stiff. toe	325.00	C	1120.47	T	2851.	13000.	0.219

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Trans. stiff. toe *	325.00	C	684.04	T	1710.	12000.	0.142
Trans. stiff. toe	330.00	C	1162.42	T	2733.	13000.	0.210
Trans. stiff. toe *	330.00	C	701.35	T	1628.	12000.	0.136
Trans. stiff. toe	335.00	C	1204.38	T	2542.	13000.	0.196
Trans. stiff. toe *	335.00	C	718.65	T	1505.	12000.	0.125
Trans. stiff. toe	340.00	C	1246.33	T	2642.	13000.	0.203
Trans. stiff. toe *	340.00	C	735.96	T	1554.	12000.	0.130
Trans. stiff. toe	345.00	C	1211.55	T	2571.	13000.	0.198
Trans. stiff. toe *	345.00	C	722.61	T	1521.	12000.	0.127
Trans. stiff. toe	350.00	C	1176.78	T	2803.	13000.	0.216
Trans. stiff. toe *	350.00	C	709.25	T	1666.	12000.	0.139
Trans. stiff. toe	355.00	C	1142.00	T	2967.	13000.	0.228
Trans. stiff. toe *	355.00	C	695.90	T	1773.	12000.	0.148
Trans. stiff. toe	360.00	C	1201.20	T	3358.	13000.	0.258
Trans. stiff. toe *	360.00	C	731.58	T	2010.	12000.	0.167
Trans. stiff. toe	365.00	C	1283.88	T	4908.	13000.	0.378
Trans. stiff. toe *	365.00	C	779.51	T	2933.	12000.	0.244
Trans. stiff. toe	370.00	C	1366.57	T	5080.	13000.	0.391
Trans. stiff. toe *	370.00	C	827.44	T	3040.	12000.	0.253
Trans. stiff. toe	375.00	C	1447.20	T	5047.	13000.	0.388
Trans. stiff. toe *	375.00	C	875.99	T	3026.	12000.	0.252
Trans. stiff. toe	380.00	C	1526.47	T	5006.	13000.	0.385
Trans. stiff. toe *	380.00	C	924.95	T	3008.	12000.	0.251
Rebars	340.00		1246.33	T	3436.	20000.	0.172
Rebars *	340.00		735.96	T	2029.	20000.	0.101
Base metal	304.00	C	1395.37	L	6429.	21000.	0.306
Base metal	322.00	C	1732.49	L	5105.	21000.	0.243
Base metal	340.00	C	2587.89	L	5949.	21000.	0.283
Base metal	356.00	C	1842.65	L	5078.	21000.	0.242
Base metal	372.00	C	1617.62	L	6284.	21000.	0.299
Near flg-web weld	304.00	B	1395.37	L	6255.	29000.	0.216
Base metal	304.00	B	1395.37	L	6364.	29000.	0.219
Near flg-web weld	322.00	B	1732.49	L	4890.	29000.	0.169
Base metal	322.00	B	1732.49	L	5037.	29000.	0.174
Near flg-web weld	340.00	B	2587.89	L	5728.	29000.	0.198
Base metal	340.00	B	2587.89	L	5882.	29000.	0.203
Near flg-web weld	356.00	B	1842.65	L	4874.	29000.	0.168
Base metal	356.00	B	1842.65	L	5014.	29000.	0.173
Near flg-web weld	372.00	B	1617.62	L	6073.	29000.	0.209
Base metal	372.00	B	1617.62	L	6208.	29000.	0.214
Top flg. splice	307.00	B	1421.87	L	6886.	29000.	0.237
Top flg. splice	322.00	B	1732.49	L	5421.	29000.	0.187
Top flg. splice	356.00	B	1842.65	L	5388.	29000.	0.186
Top flg. splice	372.00	B	1617.62	L	8829.	29000.	0.304
Bot flg. splice	307.00	B	1421.87	L	9099.	29000.	0.314
Bot flg. splice	322.00	B	1732.49	L	6164.	29000.	0.213
Bot flg. splice	356.00	B	1842.65	L	6174.	29000.	0.213
Bot flg. splice	372.00	B	1617.62	L	12328.	29000.	0.425
Trans. stiff. toe	290.00	C	1465.69	L	8828.	21000.	0.420
Trans. stiff. toe	295.00	C	1440.57	L	8779.	21000.	0.418
Trans. stiff. toe	300.00	C	1415.46	L	6090.	21000.	0.290
Trans. stiff. toe	305.00	C	1414.10	L	6490.	21000.	0.309
Trans. stiff. toe	310.00	C	1507.74	L	7432.	21000.	0.354
Trans. stiff. toe	315.00	C	1601.38	L	5059.	21000.	0.241
Trans. stiff. toe	320.00	C	1695.03	L	5084.	21000.	0.242
Trans. stiff. toe	325.00	C	1875.05	L	5091.	21000.	0.242
Trans. stiff. toe	330.00	C	2112.67	L	5321.	21000.	0.253
Trans. stiff. toe	335.00	C	2350.28	L	5305.	21000.	0.253
Trans. stiff. toe	340.00	C	2587.89	L	5864.	21000.	0.279
Trans. stiff. toe	345.00	C	2355.00	L	5288.	21000.	0.252
Trans. stiff. toe	350.00	C	2122.11	L	5285.	21000.	0.252
Trans. stiff. toe	355.00	C	1889.22	L	5026.	21000.	0.239
Trans. stiff. toe	360.00	C	1786.39	L	5176.	21000.	0.246

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Trans. stiff. toe	365.00	C	1716.07	L	6928.	21000.	0.330
Trans. stiff. toe	370.00	C	1645.75	L	6457.	21000.	0.307
Trans. stiff. toe	375.00	C	1666.88	L	6102.	21000.	0.291
Trans. stiff. toe	380.00	C	1748.98	L	6013.	21000.	0.286
Rebars	340.00		2587.89	L	7134.	20000.	0.357
Base metal	388.00	B	1653.30	T	11835.	18000.	0.657
Base metal *	388.00	B	1003.30	T	7172.	16000.	0.448
Base metal	404.00	B	1838.47	T	6576.	18000.	0.365
Base metal *	404.00	B	1122.30	T	4012.	16000.	0.251
Base metal	420.00	B	1849.05	T	6557.	18000.	0.364
Base metal *	420.00	B	1103.28	T	3914.	16000.	0.245
Base metal	436.00	B	1842.34	T	6484.	18000.	0.360
Base metal *	436.00	B	1120.13	T	3941.	16000.	0.246
Base metal	452.00	B	1659.82	T	5811.	18000.	0.323
Base metal *	452.00	B	1002.04	T	3508.	16000.	0.219
Base metal	468.00	B	1326.65	T	4625.	18000.	0.257
Base metal *	468.00	B	797.03	T	2779.	16000.	0.174
Base metal	484.00	B	840.46	T	3394.	18000.	0.189
Base metal *	484.00	B	519.56	T	2097.	16000.	0.131
Near flg-web weld	388.00	B	1653.30	T	11686.	18000.	0.649
Near flg-web weld *	388.00	B	1003.30	T	7082.	16000.	0.443
Near flg-web weld	404.00	B	1838.47	T	6338.	18000.	0.352
Near flg-web weld *	404.00	B	1122.30	T	3867.	16000.	0.242
Near flg-web weld	420.00	B	1849.05	T	6319.	18000.	0.351
Near flg-web weld *	420.00	B	1103.28	T	3772.	16000.	0.236
Near flg-web weld	436.00	B	1842.34	T	6249.	18000.	0.347
Near flg-web weld *	436.00	B	1120.13	T	3798.	16000.	0.237
Near flg-web weld	452.00	B	1659.82	T	5601.	18000.	0.311
Near flg-web weld *	452.00	B	1002.04	T	3381.	16000.	0.211
Near flg-web weld	468.00	B	1326.65	T	4458.	18000.	0.248
Near flg-web weld *	468.00	B	797.03	T	2678.	16000.	0.167
Near flg-web weld	484.00	B	840.46	T	3296.	18000.	0.183
Near flg-web weld *	484.00	B	519.56	T	2036.	16000.	0.127
Top flg. splice	390.00	B	1680.19	T	6761.	18000.	0.376
Top flg splice *	390.00	B	1020.24	T	4076.	16000.	0.255
Top flg. splice	402.00	B	1824.87	T	4260.	18000.	0.237
Top flg splice *	402.00	B	1114.97	T	2587.	16000.	0.162
Top flg. splice	473.00	B	1191.15	T	2073.	18000.	0.115
Top flg splice *	473.00	B	718.11	T	1247.	16000.	0.078
Top flg. splice	485.00	B	798.31	T	1183.	18000.	0.066
Top flg splice *	485.00	B	494.18	T	733.	16000.	0.046
Bot flg. splice	390.00	B	1680.19	T	12017.	18000.	0.668
Bot flg splice *	390.00	B	1020.24	T	7287.	16000.	0.455
Bot flg. splice	402.00	B	1824.87	T	7665.	18000.	0.426
Bot flg splice *	402.00	B	1114.97	T	4679.	16000.	0.292
Bot flg. splice	473.00	B	1191.15	T	4832.	18000.	0.268
Bot flg splice *	473.00	B	718.11	T	2913.	16000.	0.182
Bot flg. splice	485.00	B	798.31	T	4655.	18000.	0.259
Bot flg splice *	485.00	B	494.18	T	2890.	16000.	0.181
Trans. stiff. toe	385.00	C	1605.74	T	11435.	13000.	0.880
Trans. stiff. toe *	385.00	C	973.92	T	6925.	12000.	0.577
Trans. stiff. toe	390.00	C	1676.45	T	11803.	13000.	0.908
Trans. stiff. toe *	390.00	C	1018.17	T	7159.	12000.	0.597
Trans. stiff. toe	395.00	C	1734.31	T	12096.	13000.	0.930
Trans. stiff. toe *	395.00	C	1055.36	T	7351.	12000.	0.613
Trans. stiff. toe	400.00	C	1792.18	T	6351.	13000.	0.489
Trans. stiff. toe *	400.00	C	1092.55	T	3869.	12000.	0.322
Trans. stiff. toe	405.00	C	1839.13	T	6492.	13000.	0.499
Trans. stiff. toe *	405.00	C	1121.11	T	3956.	12000.	0.330
Trans. stiff. toe	410.00	C	1842.44	T	6486.	13000.	0.499
Trans. stiff. toe *	410.00	C	1115.17	T	3925.	12000.	0.327
Trans. stiff. toe	415.00	C	1845.74	T	6480.	13000.	0.498
Trans. stiff. toe *	415.00	C	1109.23	T	3895.	12000.	0.325

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Trans. stiff. toe	420.00	C	1849.05	T	6474.	13000.	0.498
Trans. stiff. toe *	420.00	C	1103.28	T	3864.	12000.	0.322
Trans. stiff. toe	425.00	C	1846.95	T	6452.	13000.	0.496
Trans. stiff. toe *	425.00	C	1108.55	T	3873.	12000.	0.323
Trans. stiff. toe	430.00	C	1844.86	T	6429.	13000.	0.495
Trans. stiff. toe *	430.00	C	1113.81	T	3881.	12000.	0.323
Trans. stiff. toe	435.00	C	1842.76	T	6407.	13000.	0.493
Trans. stiff. toe *	435.00	C	1119.08	T	3890.	12000.	0.324
Trans. stiff. toe	440.00	C	1796.71	T	6236.	13000.	0.480
Trans. stiff. toe *	440.00	C	1090.61	T	3784.	12000.	0.315
Trans. stiff. toe	445.00	C	1739.67	T	6029.	13000.	0.464
Trans. stiff. toe *	445.00	C	1053.71	T	3651.	12000.	0.304
Trans. stiff. toe	450.00	C	1682.64	T	5821.	13000.	0.448
Trans. stiff. toe *	450.00	C	1016.80	T	3517.	12000.	0.293
Trans. stiff. toe	455.00	C	1597.35	T	5519.	13000.	0.425
Trans. stiff. toe *	455.00	C	963.60	T	3329.	12000.	0.277
Trans. stiff. toe	460.00	C	1493.24	T	5153.	13000.	0.396
Trans. stiff. toe *	460.00	C	899.54	T	3104.	12000.	0.259
Trans. stiff. toe	465.00	C	1389.12	T	4787.	13000.	0.368
Trans. stiff. toe *	465.00	C	835.47	T	2879.	12000.	0.240
Trans. stiff. toe	470.00	C	1265.88	T	4357.	13000.	0.335
Trans. stiff. toe *	470.00	C	762.35	T	2623.	12000.	0.219
Trans. stiff. toe	475.00	C	1113.94	T	3830.	13000.	0.295
Trans. stiff. toe *	475.00	C	675.64	T	2322.	12000.	0.194
Trans. stiff. toe	480.00	C	962.01	T	3843.	13000.	0.296
Trans. stiff. toe *	480.00	C	588.93	T	2351.	12000.	0.196
Trans. stiff. toe	485.00	C	787.93	T	3142.	13000.	0.242
Trans. stiff. toe *	485.00	C	487.09	T	1941.	12000.	0.162
Trans. stiff. toe	490.00	C	525.29	T	2094.	13000.	0.161
Trans. stiff. toe *	490.00	C	324.73	T	1294.	12000.	0.108
Base metal	388.00	B	1880.34	L	13590.	29000.	0.469
Base metal	404.00	B	2049.54	L	7366.	29000.	0.254
Base metal	420.00	B	2029.10	L	7228.	29000.	0.249
Base metal	436.00	B	1967.10	L	6955.	29000.	0.240
Base metal	452.00	B	1721.49	L	6055.	29000.	0.209
Base metal	468.00	B	1338.86	L	4689.	29000.	0.162
Base metal	484.00	B	798.83	L	3244.	29000.	0.112
Near flg-web weld	388.00	B	1880.34	L	13419.	29000.	0.463
Near flg-web weld	404.00	B	2049.54	L	7099.	29000.	0.245
Near flg-web weld	420.00	B	2029.10	L	6966.	29000.	0.240
Near flg-web weld	436.00	B	1967.10	L	6703.	29000.	0.231
Near flg-web weld	452.00	B	1721.49	L	5836.	29000.	0.201
Near flg-web weld	468.00	B	1338.86	L	4519.	29000.	0.156
Near flg-web weld	484.00	B	798.83	L	3150.	29000.	0.109
Top flg. splice	390.00	B	1906.61	L	8079.	29000.	0.279
Top flg. splice	402.00	B	2038.76	L	4965.	29000.	0.171
Top flg. splice	473.00	B	1187.01	L	2178.	29000.	0.075
Top flg. splice	485.00	B	756.49	L	1111.	29000.	0.038
Bot flg. splice	390.00	B	1906.61	L	13770.	29000.	0.475
Bot flg. splice	402.00	B	2038.76	L	8613.	29000.	0.297
Bot flg. splice	473.00	B	1187.01	L	4843.	29000.	0.167
Bot flg. splice	485.00	B	756.49	L	4296.	29000.	0.148
Trans. stiff. toe	385.00	C	1831.08	L	13174.	21000.	0.627
Trans. stiff. toe	390.00	C	1901.49	L	13517.	21000.	0.644
Trans. stiff. toe	395.00	C	1954.37	L	13764.	21000.	0.655
Trans. stiff. toe	400.00	C	2007.24	L	7147.	21000.	0.340
Trans. stiff. toe	405.00	C	2048.26	L	7265.	21000.	0.346
Trans. stiff. toe	410.00	C	2041.88	L	7222.	21000.	0.344
Trans. stiff. toe	415.00	C	2035.49	L	7180.	21000.	0.342
Trans. stiff. toe	420.00	C	2029.10	L	7137.	21000.	0.340
Trans. stiff. toe	425.00	C	2009.72	L	7053.	21000.	0.336
Trans. stiff. toe	430.00	C	1990.35	L	6968.	21000.	0.332
Trans. stiff. toe	435.00	C	1970.97	L	6884.	21000.	0.328

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Trans. stiff. toe	440.00	C	1905.70	L	6645.	21000.	0.316
Trans. stiff. toe	445.00	C	1828.94	L	6368.	21000.	0.303
Trans. stiff. toe	450.00	C	1752.19	L	6090.	21000.	0.290
Trans. stiff. toe	455.00	C	1649.75	L	5726.	21000.	0.273
Trans. stiff. toe	460.00	C	1530.18	L	5305.	21000.	0.253
Trans. stiff. toe	465.00	C	1410.60	L	4883.	21000.	0.233
Trans. stiff. toe	470.00	C	1271.36	L	4395.	21000.	0.209
Trans. stiff. toe	475.00	C	1102.60	L	3808.	21000.	0.181
Trans. stiff. toe	480.00	C	933.84	L	3751.	21000.	0.179
Trans. stiff. toe	485.00	C	748.90	L	3003.	21000.	0.143
Trans. stiff. toe	490.00	C	499.27	L	2002.	21000.	0.095

* Single truck, one traffic lane, >2,000,000 cycles

T - truck loading
L - lane loading

Girder 3 Maximum Performance Ratios

Criterion	Location ft	Live Ld Effect	Dead Ld Effect	Max Performance Ratio
Shear	500.00	67.7	73.9	0.447
Bending	160.00	2266.8	4019.6	0.812
Bolted web spl	212.50	965.2	23.4	0.983
Fatigue	395.00			0.930
Bearing Stf.	0.00	63.5	74.4	0.657

Girder 3 Truck loading - 2000000 cycles

Maximum Pitch for 0.875 x 4.50 Stud Connectors for Fatigue

Tenth Point	Location	Shear Range (k)		Studs in a Line	Max Pitch (in)	
0	0.00	67.72	T	2	14.04	
1	16.00	59.84	T	2	20.26	
2	32.00	61.96	T	2	21.06	
3	48.00	63.66	T	2	20.50	
4	64.00	66.25	T	2	19.70	
5	80.00	104.71	T	2	12.46	
6	96.00	66.77	T	2	19.55	
7	112.00	65.75	T	2	14.94	
8	128.00	64.97	T	2	17.19	
9	144.00	67.57	T	2	413.87	*
10	160.00	79.46	T	2	470.38	*
11	178.00	65.47	T	2	401.30	*
12	196.00	63.14	T	2	197.41	*
13	214.00	64.34	T	2	16.34	
14	232.00	63.50	T	2	16.56	
15	250.00	64.52	T	2	16.30	
16	268.00	63.87	T	2	16.46	
17	286.00	64.70	T	2	16.25	
18	304.00	63.74	T	2	195.57	*
19	322.00	65.88	T	2	398.80	*

20	340.00	77.86	T	2	480.06	*
21	356.00	66.62	T	2	419.79	*
22	372.00	65.05	T	2	17.17	
23	388.00	65.52	T	2	15.00	
24	404.00	66.91	T	2	19.51	
25	420.00	108.04	T	2	12.08	
26	436.00	66.54	T	2	19.61	
27	452.00	63.86	T	2	20.44	
28	468.00	62.51	T	2	20.88	
29	484.00	62.93	T	2	19.26	
30	500.00	72.78	T	2	13.07	

Girder 3 Lane loading - 500000 cycles

Maximum Pitch for 0.875 x 4.50 Stud Connectors for Fatigue

Tenth Point	Location	Shear Range (k)		Studs in a Line	Max Pitch (in)	
0	0.00	68.15	L	2	18.84	
1	16.00	51.93	L	2	31.52	*
2	32.00	48.95	L	2	36.00	*
3	48.00	52.65	L	2	33.47	*
4	64.00	53.10	L	2	33.19	*
5	80.00	60.62	L	2	29.07	*
6	96.00	55.33	L	2	31.85	*
7	112.00	60.13	L	2	22.07	
8	128.00	63.20	L	2	23.87	
9	144.00	72.62	L	2	520.03	*
10	160.00	91.34	L	2	552.53	*
11	178.00	73.31	L	2	483.92	*
12	196.00	65.26	L	2	257.91	*
13	214.00	62.43	L	2	22.74	
14	232.00	57.90	L	2	24.52	*
15	250.00	57.25	L	2	24.80	*
16	268.00	58.42	L	2	24.30	*
17	286.00	61.56	L	2	23.06	
18	304.00	66.27	L	2	254.00	*
19	322.00	72.70	L	2	488.01	*
20	340.00	91.11	L	2	553.94	*
21	356.00	70.66	L	2	534.45	*
22	372.00	65.32	L	2	23.10	
23	388.00	57.97	L	2	22.89	
24	404.00	56.68	L	2	31.09	*
25	420.00	73.51	L	2	23.97	
26	436.00	53.14	L	2	33.17	*
27	452.00	53.59	L	2	32.89	*
28	468.00	53.26	L	2	33.09	*
29	484.00	57.95	L	2	28.25	*
30	500.00	67.92	L	2	18.91	

Girder 3 Truck loading - >2000000 cycles

(Single truck in single lane)

Maximum Pitch for 0.875 x 4.50 Stud Connectors for Fatigue

Tenth Point	Location	Shear Range	Studs in a Line	Max Pitch

		(k)		(in)	
0	0.00	45.33	2	14.70	
1	16.00	38.12	2	22.28	
2	32.00	42.39	2	21.57	
3	48.00	43.27	2	21.13	
4	64.00	44.72	2	20.45	
5	80.00	67.19	2	13.61	
6	96.00	44.71	2	20.45	
7	112.00	44.13	2	15.60	
8	128.00	43.70	2	17.91	
9	144.00	45.17	2	433.76	*
10	160.00	50.22	2	521.42	*
11	178.00	41.87	2	439.64	*
12	196.00	42.16	2	207.16	*
13	214.00	42.57	2	17.31	
14	232.00	41.49	2	17.76	
15	250.00	43.00	2	17.13	
16	268.00	41.76	2	17.64	
17	286.00	43.00	2	17.13	
18	304.00	42.89	2	203.63	*
19	322.00	42.24	2	435.75	*
20	340.00	54.36	2	481.74	*
21	356.00	44.32	2	442.14	*
22	372.00	43.68	2	17.92	
23	388.00	44.10	2	15.61	
24	404.00	45.04	2	20.30	
25	420.00	69.26	2	13.20	
26	436.00	44.75	2	20.43	
27	452.00	43.20	2	21.17	
28	468.00	42.73	2	21.40	
29	484.00	41.73	2	20.35	
30	500.00	50.37	2	13.23	

* Use 24 inches as per AASHTO 10.38.5.1.

Minimum Number of Connectors for Ultimate Strength

Beg TP	End TP	Beg Loc	End Loc	Number
0	4	0.00	64.00	62
4	10	64.00	160.00	65
10	15	160.00	250.00	65
15	20	250.00	340.00	65
20	26	340.00	436.00	65
26	30	436.00	500.00	62

Girder 3 Cost Schedule Totals

	lb
Flange	94325.0
Web	65103.6
Stiffeners	12868.6
Bearing stiff.	803.1
Total steel	173100.3
Flange-web weld	322.0
Web stiff. weld	308.5
Bearing stiff. weld	10.2
Total welding	640.7
Total steel and weld	173741.1

Girder 3 Service Deflections - in

Tenth Pt	Total Noncomp Dead	Steel	Wet Con-crete	Super-Imposed Dead	Max LL+I Down	Max LL+I Up
Support	0.000	0.000	0.000	0.000	0.000	0.000
1	0.873	0.306	0.567	0.057	0.382	0.068
2	1.593	0.562	1.031	0.105	0.716	0.132
3	2.094	0.745	1.350	0.137	0.973	0.189
4	2.331	0.838	1.493	0.152	1.130	0.235
5	2.290	0.837	1.453	0.148	1.181	0.266
6	2.000	0.750	1.250	0.127	1.119	0.278
7	1.509	0.589	0.920	0.094	0.953	0.266
8	0.888	0.370	0.517	0.054	0.672	0.213
9	0.357	0.163	0.194	0.021	0.335	0.119
Support	0.000	0.000	0.000	0.000	0.000	0.000
11	-0.162	-0.118	-0.044	-0.006	0.341	0.128
12	-0.056	-0.159	0.104	0.007	0.707	0.222
13	0.248	-0.135	0.383	0.031	1.036	0.272
14	0.540	-0.093	0.633	0.053	1.258	0.281
15	0.655	-0.075	0.730	0.061	1.344	0.259
16	0.542	-0.092	0.634	0.053	1.258	0.281
17	0.252	-0.134	0.385	0.032	1.036	0.272
18	-0.052	-0.158	0.106	0.007	0.708	0.222
19	-0.160	-0.117	-0.043	-0.006	0.341	0.128
Support	0.000	0.000	0.000	0.000	0.000	0.000
21	0.356	0.163	0.193	0.021	0.335	0.119
22	0.884	0.369	0.515	0.054	0.671	0.213
23	1.504	0.588	0.917	0.094	0.952	0.266
24	1.996	0.749	1.247	0.127	1.119	0.279
25	2.287	0.836	1.450	0.148	1.181	0.266
26	2.328	0.837	1.490	0.152	1.130	0.235
27	2.092	0.744	1.348	0.137	0.973	0.189
28	1.591	0.561	1.030	0.105	0.716	0.132
29	0.873	0.306	0.567	0.057	0.383	0.068
Support	0.000	0.000	0.000	0.000	0.000	0.000

Influence surfaces for defl developed assuming unequal participation of girders in resisting deflection.

Loc

Brace	20.00	1.067	0.375	0.693	0.070	0.470	0.085
Brace	40.00	1.877	0.664	1.212	0.123	0.857	0.162
Brace	60.00	2.298	0.824	1.474	0.150	1.100	0.225
Brace	80.00	2.290	0.837	1.453	0.148	1.181	0.266
Brace	100.00	1.896	0.717	1.180	0.120	1.087	0.278
Web Spl	117.50	1.310	0.520	0.790	0.081	0.869	0.252
Brace	120.00	1.187	0.478	0.709	0.073	0.819	0.244
Brace	140.00	0.474	0.211	0.263	0.028	0.419	0.145
Brace	160.00	0.000	0.000	0.000	0.000	0.000	0.000
Brace	180.00	-0.163	-0.126	-0.037	-0.005	0.381	0.140
Brace	200.00	-0.005	-0.160	0.154	0.012	0.784	0.237
Web Spl	212.50	0.224	-0.137	0.361	0.030	1.013	0.269
Brace	220.00	0.347	-0.123	0.470	0.039	1.122	0.279
Brace	240.00	0.613	-0.082	0.695	0.058	1.313	0.275
Brace	260.00	0.614	-0.082	0.696	0.058	1.313	0.275
Brace	280.00	0.350	-0.122	0.472	0.039	1.122	0.279
Web Spl	287.50	0.227	-0.137	0.363	0.030	1.013	0.269
Brace	300.00	-0.002	-0.159	0.157	0.012	0.784	0.237
Brace	320.00	-0.162	-0.126	-0.036	-0.005	0.381	0.140
Brace	340.00	0.000	0.000	0.000	0.000	0.000	0.000
Brace	360.00	0.472	0.210	0.261	0.028	0.419	0.145
Brace	380.00	1.183	0.477	0.706	0.073	0.819	0.244
Web Spl	382.50	1.305	0.519	0.786	0.081	0.869	0.252
Brace	400.00	1.892	0.715	1.177	0.120	1.087	0.278
Brace	420.00	2.287	0.836	1.450	0.148	1.181	0.266
Brace	440.00	2.295	0.823	1.472	0.150	1.100	0.225
Brace	460.00	1.875	0.664	1.211	0.123	0.857	0.162
Brace	480.00	1.067	0.374	0.693	0.070	0.471	0.085

Positive dead load deflection is downward.
Live load deflection as indicated in column heading.

run completed

```
****************************************************************
MDX Steel Highway Girder Design Program, Version 6.2.137
Load Factor Design - Composite Girder

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Ph:573-446-3221 Fax:573-446-3278 Email: support@mdxsoftware.com
****************************************************************
 May 17, 2006 -  2:49 pm
 Files: Bonner.R4
        R4.OUT

    Contents of data file-

       ************************************************
       ID: BONNER BRIDGE CHANNEL SPANS
       CONDITIONS
         A36 STIFFENER STEEL
         ENGLISH INPUT
         ENGLISH OUTPUT
         FISHBELLY HAUNCH
         INTERMEDIATE TRANSVERSE STIFFENERS BOTH SIDES OF WEB
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  LFD METHOD
  RATE MODE
  SYSTEM FORCES
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  BFOSPB 18. 18. 18. 18.
  BFOSPT 0.6875 0.6875 0.6875 0.6875
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  EDGEV 1.5 1.5 1.5 1.5
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  FNHOLES 4 4 4 4
  FPC 3.
  FPEND 1.5 1.5 1.5 1.5
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  FY 32.
  FYRB 40.
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  GAGEH 3. 3. 3. 3.
  GAGEV 3. 3. 3. 3.
  HAUNCH 3.125
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  HAUNV 0. 33. 33. 33. 33. 0.
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  NBLTT 24 24 24 24
  NBSTIFF 1 3 3 1
  NLINEH 22 22 22 22
  NLINEV 3 3 3 3
  PIERW 3.
  POSREBAR 2.79
  REBSPC 158.25 3.5 176.5 3.5
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  SLABRP 4.625
  SLABT 7.25
  SLABWEAR 0.
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  SS 0.5
  STFGAP 0.
  SUPBST 0.5
  SUPBSW 8.
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      WSTRES 18.
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Girder 4 Case Data - BONNER BRIDGE CHANNEL SPANS

AASHTO Specification

Load Factor Method
17th Edition Standard Specifications for Highway Bridges

Dimensions (additional information available in Dimensions table)

Given dimensions-

Web Depth	72.00 in 72.00 in	105.00 in	72.00 in	105.00 in
Web Thickness	0.50 in 0.50 in	0.50 in	0.50 in	0.50 in
Long. Stiff. Width	4.00 in 4.00 in	4.00 in	4.00 in	4.00 in
Long. Stiff. Thickness	0.50 in 0.50 in	0.50 in	0.50 in	0.50 in
Trans. Stiff. Width	6.00 in 6.00 in	6.00 in	6.00 in	6.00 in
Trans. Stiff. Thickness	0.50 in 0.50 in	0.50 in	0.50 in	0.50 in
Bearing Stiff. Width	8.00 in	8.00 in	8.00 in	8.00 in
Bearing Stiff. Thickness	0.50 in	0.50 in	0.50 in	0.50 in

Execution Mode

Rate Mode

Geometry

Brace locations

0.00 ft	20.00 ft	40.00 ft	60.00 ft
80.00 ft	100.00 ft	120.00 ft	140.00 ft
160.00 ft	180.00 ft	200.00 ft	220.00 ft
240.00 ft	260.00 ft	280.00 ft	300.00 ft
320.00 ft	340.00 ft	360.00 ft	380.00 ft
400.00 ft	420.00 ft	440.00 ft	460.00 ft
480.00 ft	500.00 ft		

Unbraced length of comp. flange at support 2 is 20.00 ft.
Unbraced length of comp. flange at support 3 is 20.00 ft.

Cover plates

No cover plates

Curvature

No curvature

Flange splices

Top flange splice locations

15.00 ft	27.00 ft	98.00 ft	110.00 ft
128.00 ft	144.00 ft	178.00 ft	193.00 ft
307.00 ft	322.00 ft	356.00 ft	372.00 ft
390.00 ft	402.00 ft	473.00 ft	485.00 ft

Bottom flange splice locations

15.00 ft	27.00 ft	98.00 ft	110.00 ft
128.00 ft	144.00 ft	178.00 ft	193.00 ft
307.00 ft	322.00 ft	356.00 ft	372.00 ft
390.00 ft	402.00 ft	473.00 ft	485.00 ft

Girder Type

Plate Girder

Section properties

Composite region for composite loading - 0. - 500.00 ft

Span lengths

160.00 ft 180.00 ft 160.00 ft

Stiffeners

Bearing Stiffeners

Number of brng stfs each side at supp locs
1 3 3 1

Longitudinal Stiffeners

Bottom longitudinal stiffener regions-
140.00 - 180.00 ft 320.00 - 360.00 ft

Transverse Stiffeners

Transverse stiffeners both sides
Stiffener transitions
Stiffener clips 0.50 in

```
Web Splices

   Web splice locations       117.50 ft    212.50 ft    287.50 ft    382.50 ft


 Web haunches

   Fish belly web haunches at interior supports:
       Support  Haunch Left   Haunch Right
                V(in)  H(ft)  H(ft)  V(in)
          1       0.0    0.0   0.0    0.0
          2      33.0   31.5   31.5   33.0
          3      33.0   31.5   31.5   33.0
          4       0.0    0.0   0.0    0.0
   Pier width for haunch geometry =  3.00 ft

Fatigue

   AWS minimum welds
   Fatigue stress category B flange splices
   Case I   road for fatigue
   Redundant load path structure

Impact

   Impact factors assigned in GSA program

Loading

   Load Factors gamma, beta     1.300        1.670
   Unshored construction

Reactions

   Max unfactored live load+impact reactions
        59.33 k     117.65 k     117.67 k      59.29 k
   Min unfactored live load+impact reactions
       -14.43 k     -20.96 k     -20.96 k     -14.43 k
   Total comp. and noncomp. unfactored dead load reactions
        74.67 k     224.59 k     224.63 k      74.53 k

Material


 Concrete

   Unit wt of concrete           150. lb/cu ft
   Slab t for strength          7.25 in      7.25 in      7.25 in
   Concrete strength            3.00 ksi
   Effective slab width        87.00 in
   Neg mom rebar area
         1.40 in2    1.40 in2
   Rebar placement from bottom of slab
         4.62 in     4.62 in
   Pos mom rebar area                       2.79 in2     2.79 in2     2.79 in2
   Negative mom. slab used in dead load 2 analysis
   Slab haunch                  3.12 in      3.12 in      3.12 in
   Self weight slab width      103.50 in

 Steel

   Top flange yield            32.00 ksi    32.00 ksi    32.00 ksi    32.00 ksi
                               32.00 ksi
```



```
   Bottom flange yield         32.00 ksi    32.00 ksi    32.00 ksi    32.00 ksi
                               32.00 ksi
   Web yield                   32.00 ksi    32.00 ksi    32.00 ksi    32.00 ksi
                               32.00 ksi
   Rebar yield                 40.00 ksi

Summary tables

   Standard resolution summary tables

Units

   Input Units:  U.S. Customary
   Output Units: U.S. Customary


 * * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * * *
 (Nonprismatic section used for this analysis.)

  Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

   Max live load+impact shear
        58.5L     53.6T     44.8T     34.3T     26.8T    -40.7T    -40.2T    -45.1L

   Dead load 1 shear
        68.2      50.8      32.5      13.8      -4.9     -23.7     -41.1     -57.3

   Dead load 2 shear
         6.3       4.6       2.9       1.2      -0.5      -2.1      -3.8      -5.4

   Max live load+impact moment
         0.0L    773.7T   1278.6L   1640.8L   1813.8L   1815.5L   1613.0L   1255.4L

   Min live load+impact moment
         0.0L   -129.4L   -259.0L   -388.0L   -516.2L   -644.4L   -768.2L   -895.3L

   Dead load 1 moment
         0.0     953.8    1613.2    1978.3    2048.8    1819.9    1312.8     527.5

   Dead load 2 moment
         0.0      86.9     146.5     179.4     185.5     164.6     117.8      45.0
 * * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * * *

    Rate Web depth            =  72.0000 in
         Web thickness        =   0.5000 in


 Tenth     Top Flange   Min Top   Bott Flange  Min Bott   Flange to Web Weld
 Point       Width      Flange t     Width     Flange t     Top       Bott

    0        18.00       0.750       18.00       0.750      1/ 4      1/ 4
    1        18.00       1.625       18.00       1.625      5/16      5/16
    2        18.00       2.000       18.00       2.000      5/16      5/16
    3        18.00       2.000       18.00       2.000      5/16      5/16
    4        18.00       2.000       18.00       2.000      5/16      5/16
    5        18.00       2.000       18.00       2.000      5/16      5/16
    6        18.00       2.000       18.00       2.000      5/16      5/16
    7        18.00       0.750       18.00       0.750      1/ 4      1/ 4

    2 -   8.00 x  0.500 brng. stf. at   0.00 ft   from left end of web section
          6.00 x   0.50 transverse stiffeners
            1 stiffener space at    60.00 in
                  (straddles web splice)
```

OUTPUT.TXT

Composite section properties at max positive moment - n = 9

I	=	194119. in4
S (top steel)	=	9350.29 in3
S (bottom steel)	=	3514.14 in3
S (concrete)	=	6662.57 in3
Neutral axis from bottom flange	=	55.24 in

Composite section properties at max positive moment - n = 27

I	=	152917. in4
S (top steel)	=	5158.18 in3
S (bottom steel)	=	3298.87 in3
S (concrete)	=	4021.96 in3
Neutral axis from bottom flange	=	46.35 in

Section properties of girder alone at max positive moment

I	=	114144. in4
S (top)	=	3003.79 in3
S (bottom)	=	3003.79 in3
Neutral axis from bottom flange	=	38.00 in

Section properties of girder alone at max negative moment

I	=	51278. in4
S (top)	=	1395.32 in3
S (bottom)	=	1395.32 in3
Neutral axis from bottom flange	=	36.75 in

Composite section properties at max negative moment

I	=	51278. in4
S (top of steel)	=	1395.32 in3
S (bottom of steel)	=	1395.32 in3
S (reinf)	=	1172.07 in3
Neutral axis from bottom flange	=	36.75 in

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Web Section 1 Stresses

Tenth Point	Factored Shear (k)	Shear Strength (k)	Ratio	Factored Moment (k-ft)	Bending Strength (k-ft)	Ratio
0	223.7	543.6 (5)	0.412	0.0	4390.7 (6)	0.000
1	188.4	626.8 (3)	0.301	3032.5	10163.9 (20)	0.298
2	143.2	626.8 (3)	0.228	5063.4	11525.1 (20)	0.439
3	94.0	626.8 (3)	0.150	6367.1	11525.1 (20)	0.552
4	61.6	626.8 (3)	0.098	6842.2	11525.1 (20)	0.594
5	121.8	626.8 (3)	0.194	6521.5	11525.1 (20)	0.566

6	145.7	626.8 (3)	0.232	5361.4	11525.1 (20)	0.465
7	179.4	626.8 (3)	0.286	3469.7	7040.1 (20)	0.493

Stiffeners

Location			
5.00	212.7	626.8 (3)	0.339
10.00	201.7	626.8 (3)	0.322
15.00	190.6	626.8 (3)	0.304
20.00	177.1	626.8 (3)	0.283
25.00	163.0	626.8 (3)	0.260
30.00	148.9	626.8 (3)	0.237
35.00	134.0	626.8 (3)	0.214
40.00	118.6	626.8 (3)	0.189
45.00	103.2	626.8 (3)	0.165
50.00	89.9	626.8 (3)	0.143
55.00	79.8	626.8 (3)	0.127
60.00	69.7	626.8 (3)	0.111
65.00	65.4	626.8 (3)	0.104
70.00	84.2	626.8 (3)	0.134
75.00	103.0	626.8 (3)	0.164
85.00	129.3	626.8 (3)	0.206
90.00	136.7	626.8 (3)	0.218
95.00	144.2	626.8 (3)	0.230
100.00	154.1	626.8 (3)	0.246
105.00	164.6	626.8 (3)	0.263
110.00	175.2	626.8 (3)	0.279
115.00	187.5	626.8 (3)	0.299

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(5) C 0.58 Fyw D t
(20) compact section
(6) Fy S(equiv)
Maximum moment in factored strength expression

Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	
0.00	134.00	16.80	10.72	0.638	28.80	17.87	0.620

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	16.00	B	863.10	T	3502.	18000.	0.195
Base metal *	16.00	B	741.39	T	3000.	16000.	0.187
Base metal	32.00	B	1455.42	T	5092.	18000.	0.283
Base metal *	32.00	B	1222.87	T	4269.	16000.	0.267
Base metal	48.00	B	1872.42	T	6577.	18000.	0.365
Base metal *	48.00	B	1561.24	T	5471.	16000.	0.342
Base metal	64.00	B	2091.59	T	7386.	18000.	0.410
Base metal *	64.00	B	1734.28	T	6109.	16000.	0.382
Base metal	80.00	B	2160.38	T	7682.	18000.	0.427
Base metal *	80.00	B	1774.59	T	6294.	16000.	0.393

Base metal	96.00	B	2049.49	T	7362.	18000.	0.409
Base metal *	96.00	B	1697.02	T	6078.	16000.	0.380
Base metal	112.00	B	1804.31	T	13062.	18000.	0.726
Base metal *	112.00	B	1496.53	T	10771.	16000.	0.673
Near flg-web weld	16.00	B	863.10	T	3401.	18000.	0.189
Near flg-web weld *	16.00	B	741.39	T	2913.	16000.	0.182
Near flg-web weld	32.00	B	1455.42	T	4908.	18000.	0.273
Near flg-web weld *	32.00	B	1222.87	T	4114.	16000.	0.257
Near flg-web weld	48.00	B	1872.42	T	6339.	18000.	0.352
Near flg-web weld *	48.00	B	1561.24	T	5273.	16000.	0.330
Near flg-web weld	64.00	B	2091.59	T	7119.	18000.	0.395
Near flg-web weld *	64.00	B	1734.28	T	5888.	16000.	0.368
Near flg-web weld	80.00	B	2160.38	T	7404.	18000.	0.411
Near flg-web weld *	80.00	B	1774.59	T	6066.	16000.	0.379
Near flg-web weld	96.00	B	2049.49	T	7095.	18000.	0.394
Near flg-web weld *	96.00	B	1697.02	T	5858.	16000.	0.366
Near flg-web weld	112.00	B	1804.31	T	12897.	18000.	0.717
Near flg-web weld *	112.00	B	1496.53	T	10635.	16000.	0.665
Base metal	16.00	B	863.10	T	3502.	18000.	0.195
Base metal *	16.00	B	741.39	T	3000.	16000.	0.187
Base metal	32.00	B	1455.42	T	5092.	18000.	0.283
Base metal *	32.00	B	1222.87	T	4269.	16000.	0.267
Base metal	48.00	B	1872.42	T	6577.	18000.	0.365
Base metal *	48.00	B	1561.24	T	5471.	16000.	0.342
Base metal	64.00	B	2091.59	T	7386.	18000.	0.410
Base metal *	64.00	B	1734.28	T	6109.	16000.	0.382
Base metal	80.00	B	2160.38	T	7682.	18000.	0.427
Base metal *	80.00	B	1774.59	T	6294.	16000.	0.393
Base metal	96.00	B	2049.49	T	7362.	18000.	0.409
Base metal *	96.00	B	1697.02	T	6078.	16000.	0.380
Base metal	112.00	B	1804.31	T	13062.	18000.	0.726
Base metal *	112.00	B	1496.53	T	10771.	16000.	0.673
Top flg. splice	15.00	B	817.09	T	1202.	18000.	0.067
Top flg splice *	15.00	B	702.67	T	1038.	16000.	0.065
Top flg. splice	27.00	B	1289.15	T	2341.	18000.	0.130
Top flg splice *	27.00	B	1087.78	T	1924.	16000.	0.120
Top flg. splice	98.00	B	2026.19	T	4919.	18000.	0.273
Top flg splice *	98.00	B	1678.68	T	3971.	16000.	0.248
Top flg. splice	110.00	B	1837.81	T	7851.	18000.	0.436
Top flg splice *	110.00	B	1523.41	T	6307.	16000.	0.394
Bot flg. splice	15.00	B	817.09	T	4659.	18000.	0.259
Bot flg splice *	15.00	B	702.67	T	4058.	16000.	0.254
Bot flg. splice	27.00	B	1289.15	T	5253.	18000.	0.292
Bot flg splice *	27.00	B	1087.78	T	4420.	16000.	0.276
Bot flg. splice	98.00	B	2026.19	T	8556.	18000.	0.475
Bot flg splice *	98.00	B	1678.68	T	7063.	16000.	0.441
Bot flg. splice	110.00	B	1837.81	T	13294.	18000.	0.739
Bot flg splice *	110.00	B	1523.41	T	10954.	16000.	0.685
Trans. stiff. toe	10.00	C	539.44	T	2161.	13000.	0.166
Trans. stiff. toe *	10.00	C	463.37	T	1851.	12000.	0.154
Trans. stiff. toe	15.00	C	809.16	T	3242.	13000.	0.249
Trans. stiff. toe *	15.00	C	695.05	T	2777.	12000.	0.231
Trans. stiff. toe	20.00	C	1011.18	T	4058.	13000.	0.312
Trans. stiff. toe *	20.00	C	861.76	T	3449.	12000.	0.287
Trans. stiff. toe	25.00	C	1196.28	T	4128.	13000.	0.318
Trans. stiff. toe *	25.00	C	1012.22	T	3485.	12000.	0.290
Trans. stiff. toe	30.00	C	1381.38	T	4771.	13000.	0.367
Trans. stiff. toe *	30.00	C	1162.68	T	4007.	12000.	0.334
Trans. stiff. toe	35.00	C	1533.61	T	5303.	13000.	0.408
Trans. stiff. toe *	35.00	C	1286.31	T	4438.	12000.	0.370
Trans. stiff. toe	40.00	C	1663.92	T	5762.	13000.	0.443
Trans. stiff. toe *	40.00	C	1392.05	T	4809.	12000.	0.401
Trans. stiff. toe	45.00	C	1794.23	T	6220.	13000.	0.478

Trans. stiff. toe *	45.00	C	1497.79	T	5180.	12000.	0.432
Trans. stiff. toe	50.00	C	1899.82	T	6595.	13000.	0.507
Trans. stiff. toe *	50.00	C	1582.87	T	5481.	12000.	0.457
Trans. stiff. toe	55.00	C	1968.31	T	6844.	13000.	0.526
Trans. stiff. toe *	55.00	C	1636.95	T	5678.	12000.	0.473
Trans. stiff. toe	60.00	C	2036.80	T	7094.	13000.	0.546
Trans. stiff. toe *	60.00	C	1691.02	T	5875.	12000.	0.490
Trans. stiff. toe	65.00	C	2095.89	T	7312.	13000.	0.562
Trans. stiff. toe *	65.00	C	1736.80	T	6044.	12000.	0.504
Trans. stiff. toe	70.00	C	2117.39	T	7403.	13000.	0.569
Trans. stiff. toe *	70.00	C	1749.40	T	6101.	12000.	0.508
Trans. stiff. toe	75.00	C	2138.88	T	7494.	13000.	0.576
Trans. stiff. toe *	75.00	C	1761.99	T	6158.	12000.	0.513
Trans. stiff. toe	80.00	C	2160.38	T	7585.	13000.	0.583
Trans. stiff. toe *	80.00	C	1774.59	T	6215.	12000.	0.518
Trans. stiff. toe	85.00	C	2125.73	T	7487.	13000.	0.576
Trans. stiff. toe *	85.00	C	1750.35	T	6148.	12000.	0.512
Trans. stiff. toe	90.00	C	2091.07	T	7388.	13000.	0.568
Trans. stiff. toe *	90.00	C	1726.11	T	6082.	12000.	0.507
Trans. stiff. toe	95.00	C	2056.42	T	7289.	13000.	0.561
Trans. stiff. toe *	95.00	C	1701.87	T	6015.	12000.	0.501
Trans. stiff. toe	100.00	C	1988.20	T	7077.	13000.	0.544
Trans. stiff. toe *	100.00	C	1646.90	T	5846.	12000.	0.487
Trans. stiff. toe	105.00	C	1911.58	T	13464.	13000.	1.036
Trans. stiff. toe *	105.00	C	1584.24	T	11094.	12000.	0.924
Trans. stiff. toe	110.00	C	1834.96	T	13059.	13000.	1.005
Trans. stiff. toe *	110.00	C	1521.59	T	10766.	12000.	0.897
Trans. stiff. toe	115.00	C	1748.54	T	12594.	13000.	0.969
Trans. stiff. toe *	115.00	C	1452.71	T	10403.	12000.	0.867

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	16.00	B	878.93	L	3584.	29000.	0.124
Base metal	32.00	B	1537.62	L	5401.	29000.	0.186
Base metal	48.00	B	2028.80	L	7153.	29000.	0.247
Base metal	64.00	B	2329.99	L	8256.	29000.	0.285
Base metal	80.00	B	2459.93	L	8774.	29000.	0.303
Base metal	96.00	B	2381.19	L	8577.	29000.	0.296
Base metal	112.00	B	2150.74	L	15627.	29000.	0.539
Near flg-web weld	16.00	B	878.93	L	3480.	29000.	0.120
Near flg-web weld	32.00	B	1537.62	L	5205.	29000.	0.179
Near flg-web weld	48.00	B	2028.80	L	6894.	29000.	0.238
Near flg-web weld	64.00	B	2329.99	L	7957.	29000.	0.274
Near flg-web weld	80.00	B	2459.93	L	8456.	29000.	0.292
Near flg-web weld	96.00	B	2381.19	L	8266.	29000.	0.285
Near flg-web weld	112.00	B	2150.74	L	15431.	29000.	0.532
Base metal	16.00	B	878.93	L	3584.	29000.	0.124
Base metal	32.00	B	1537.62	L	5401.	29000.	0.186
Base metal	48.00	B	2028.80	L	7153.	29000.	0.247
Base metal	64.00	B	2329.99	L	8256.	29000.	0.285
Base metal	80.00	B	2459.93	L	8774.	29000.	0.303
Base metal	96.00	B	2381.19	L	8577.	29000.	0.296
Base metal	112.00	B	2150.74	L	15627.	29000.	0.539
Top flg. splice	15.00	B	830.45	L	1213.	29000.	0.042
Top flg. splice	27.00	B	1349.78	L	2562.	29000.	0.088
Top flg. splice	98.00	B	2360.68	L	5869.	29000.	0.202

Top flg. splice	110.00	B	2186.06	L	9530.	29000.	0.329
Bot flg. splice	15.00	B	830.45	L	4626.	29000.	0.160
Bot flg. splice	27.00	B	1349.78	L	5527.	29000.	0.191
Bot flg. splice	98.00	B	2360.68	L	10002.	29000.	0.345
Bot flg. splice	110.00	B	2186.06	L	15875.	29000.	0.547
Trans. stiff. toe	10.00	C	549.34	L	2212.	21000.	0.105
Trans. stiff. toe	15.00	C	824.00	L	3318.	21000.	0.158
Trans. stiff. toe	20.00	C	1043.60	L	4208.	21000.	0.200
Trans. stiff. toe	25.00	C	1249.44	L	4329.	21000.	0.206
Trans. stiff. toe	30.00	C	1455.29	L	5046.	21000.	0.240
Trans. stiff. toe	35.00	C	1629.72	L	5657.	21000.	0.269
Trans. stiff. toe	40.00	C	1783.21	L	6198.	21000.	0.295
Trans. stiff. toe	45.00	C	1936.71	L	6739.	21000.	0.321
Trans. stiff. toe	50.00	C	2066.45	L	7199.	21000.	0.343
Trans. stiff. toe	55.00	C	2160.57	L	7540.	21000.	0.359
Trans. stiff. toe	60.00	C	2254.69	L	7880.	21000.	0.375
Trans. stiff. toe	65.00	C	2338.11	L	8184.	21000.	0.390
Trans. stiff. toe	70.00	C	2378.72	L	8344.	21000.	0.397
Trans. stiff. toe	75.00	C	2419.33	L	8504.	21000.	0.405
Trans. stiff. toe	80.00	C	2459.93	L	8664.	21000.	0.413
Trans. stiff. toe	85.00	C	2435.33	L	8603.	21000.	0.410
Trans. stiff. toe	90.00	C	2410.72	L	8542.	21000.	0.407
Trans. stiff. toe	95.00	C	2386.11	L	8481.	21000.	0.404
Trans. stiff. toe	100.00	C	2323.58	L	8293.	21000.	0.395
Trans. stiff. toe	105.00	C	2251.56	L	15934.	21000.	0.759
Trans. stiff. toe	110.00	C	2179.54	L	15575.	21000.	0.742
Trans. stiff. toe	115.00	C	2085.17	L	15078.	21000.	0.718

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Cost Schedule for Web Section 1

	lb
Flange	24239.7
Web	14393.8
Web stiffeners	2817.5
Bearing stiff.	163.3
Total steel	41614.3

Welding	Vol	lbs
Flange-web	257.2	72.9
Trans.stiff.-web (1/ 4 cont.)	207.0	58.7
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6
Total welding *	473.2	134.2
Total steel and weld		41748.5

Begin solution for web section 2.

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

Max live load+impact shear

-55.8L	-63.8L	-77.1L	62.6L	52.5L

Dead load 1 shear

-71.3	-89.1	-108.5	74.8	54.0

Dead load 2 shear

-6.9	-8.5	-10.2	7.4	5.5

(Shear value at an interior support is at left of support.)

Max live load+impact moment

774.1L	433.8L	380.1L	386.5L	726.9T

Min live load+impact moment

-1027.0L	-1517.4L	-2378.6L	-1429.7L	-873.7L

Dead load 1 moment

-489.5	-1786.2	-3374.8	-1835.3	-682.2

Dead load 2 moment

-52.1	-176.2	-326.4	-176.4	-60.8

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Rate Web depth = 105.0000 in
Web thickness = 0.5000 in

Tenth Point	Top Flange Width	Min Top Flange t	Bott Flange Width	Min Bott Flange t	Flange to Web Weld Top	Flange to Web Weld Bott
8	18.00	1.250	18.00	1.250	5/16	5/16
9	18.00	1.875	18.00	1.875	5/16	5/16
10	18.00	2.000	18.00	2.000	5/16	5/16
11	18.00	1.875	18.00	1.875	5/16	5/16
12	18.00	1.000	18.00	1.000	5/16	5/16

2 - 8.00 x 0.500 brng. stf. at 42.50 ft from left end of web section
4.00 x 0.50 longitudinal stiffener
6.00 x 0.50 transverse stiffeners
1 stiffener space at 60.00 in
(straddles web splice)
1 stiffener space at 60.00 in
(straddles web splice)

Composite section properties at max positive moment - n = 9

I = 146463. in4
S (top steel) = 8622.68 in3
S (bottom steel) = 2546.55 in3
S (concrete) = 5609.29 in3
Neutral axis from bottom flange = 57.51 in

Composite section properties at max positive moment - n = 27

I = 112334. in4
S (top steel) = 4193.07 in3
S (bottom steel) = 2354.55 in3
S (concrete) = 3127.74 in3
Neutral axis from bottom flange = 47.71 in

Section properties of girder alone at max positive moment

I	=	75920. in4
S (top)	=	2038.13 in3
S (bottom)	=	2038.13 in3
Neutral axis from bottom flange	=	37.25 in

Section properties of girder alone at max negative moment

I	=	254340. in4
S (top)	=	4666.80 in3
S (bottom)	=	4666.80 in3
Neutral axis from bottom flange	=	54.50 in

Composite section properties at max negative moment

I	=	259366. in4
S (top of steel)	=	4818.24 in3
S (bottom of steel)	=	4701.22 in3
S (reinf)	=	4353.24 in3
Neutral axis from bottom flange	=	55.17 in

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Web Section 2 Stresses

Tenth Point	Factored Shear (k)	Shear Strength (k)	Ratio	Factored Moment (k-ft)	Bending Strength (k-ft)	Ratio
8	222.7	626.8 (3)	0.355	2933.6	5435.0 (6)	0.540
9	265.4	764.0 (3)	0.347	5845.4	9779.6 (6)	0.598
10L	321.6	930.6 (3)	0.346	9975.5	12496.0 (6)	0.798
10R	303.0	930.6 (3)	0.326	9975.5	12496.0 (6)	0.798
11	242.8	730.3 (3)	0.332	5719.2	9236.1 (6)	0.619
12	191.3	626.8 (3)	0.305	2862.7	4577.7 (6)	0.625

Stiffeners

Location			
120.00	201.0	626.8 (3)	0.321
125.00	214.5	626.8 (3)	0.342
130.00	228.0	628.2 (3)	0.363
135.00	241.4	652.1 (3)	0.370
140.00	254.7	701.6 (3)	0.363
145.00	268.9	780.6 (3)	0.345
150.00	286.5	846.6 (3)	0.338
155.00	304.0	883.0 (3)	0.344
165.00	286.3	883.0 (3)	0.324
170.00	269.6	846.6 (3)	0.318
175.00	252.8	780.6 (3)	0.324
180.00	237.1	701.6 (3)	0.338
185.00	222.8	652.1 (3)	0.342
190.00	208.5	628.2 (3)	0.332
195.00	194.2	626.8 (3)	0.310

200.00	180.6	626.8 (3)	0.288
205.00	167.1	626.8 (3)	0.267
210.00	153.6	626.8 (3)	0.245

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(6) Fy S(equiv)
Maximum moment in factored strength expression

Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	
42.50	342.23	16.60	9.51	0.573	28.80	15.21	0.528

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	128.00	C	1506.89	T	5851.	13000.	0.450
Base metal *	128.00	C	1262.81	T	4791.	10000.	0.479
Base metal	144.00	C	1233.19	T	3401.	13000.	0.262
Base metal *	144.00	C	1006.87	T	2798.	10000.	0.280
Base metal	160.00	C	1379.65	T	2931.	13000.	0.225
Base metal *	160.00	C	1146.35	T	2456.	10000.	0.246
Base metal	178.00	C	1152.78	T	3249.	13000.	0.250
Base metal *	178.00	C	974.35	T	2723.	10000.	0.272
Base metal	196.00	C	1426.87	T	5961.	13000.	0.459
Base metal *	196.00	C	1218.05	T	4928.	10000.	0.493
Near flg-web weld	128.00	B	1506.89	T	5780.	18000.	0.321
Base metal	128.00	B	1506.89	T	5909.	18000.	0.328
Near flg-web weld *	128.00	B	1262.81	T	4733.	16000.	0.296
Base metal *	128.00	B	1262.81	T	4838.	16000.	0.302
Near flg-web weld	144.00	B	1233.19	T	3359.	18000.	0.187
Base metal	144.00	B	1233.19	T	3456.	18000.	0.192
Near flg-web weld *	144.00	B	1006.87	T	2763.	16000.	0.173
Base metal *	144.00	B	1006.87	T	2842.	16000.	0.178
Near flg-web weld	160.00	B	1379.65	T	2898.	18000.	0.161
Base metal	160.00	B	1379.65	T	2976.	18000.	0.165
Near flg-web weld *	160.00	B	1146.35	T	2428.	16000.	0.152
Base metal *	160.00	B	1146.35	T	2493.	16000.	0.156
Near flg-web weld	178.00	B	1152.78	T	3206.	18000.	0.178
Base metal	178.00	B	1152.78	T	3303.	18000.	0.183
Near flg-web weld *	178.00	B	974.35	T	2687.	16000.	0.168
Base metal *	178.00	B	974.35	T	2768.	16000.	0.173
Near flg-web weld	196.00	B	1426.87	T	5901.	18000.	0.328
Base metal	196.00	B	1426.87	T	6004.	18000.	0.334
Near flg-web weld *	196.00	B	1218.05	T	4878.	16000.	0.305
Base metal *	196.00	B	1218.05	T	4963.	16000.	0.310
Top flg. splice	128.00	B	1506.89	T	8220.	18000.	0.457
Top flg splice *	128.00	B	1262.81	T	6709.	16000.	0.419
Top flg. splice	144.00	B	1233.19	T	3610.	18000.	0.201
Top flg splice *	144.00	B	1006.87	T	2970.	16000.	0.186
Top flg. splice	178.00	B	1152.78	T	3447.	18000.	0.191
Top flg splice *	178.00	B	974.35	T	2888.	16000.	0.180
Top flg. splice	193.00	B	1384.13	T	6056.	18000.	0.336

Top flg splice *	193.00	B	1183.28	T	5020.	16000.	0.314
Bot flg. splice	128.00	B	1506.89	T	11482.	18000.	0.638
Bot flg splice *	128.00	B	1262.81	T	9564.	16000.	0.598
Bot flg. splice	144.00	B	1233.19	T	4133.	18000.	0.230
Bot flg splice *	144.00	B	1006.87	T	3380.	16000.	0.211
Bot flg. splice	178.00	B	1152.78	T	4063.	18000.	0.226
Bot flg splice *	178.00	B	974.35	T	3428.	16000.	0.214
Bot flg. splice	193.00	B	1384.13	T	8667.	18000.	0.482
Bot flg splice *	193.00	B	1183.28	T	7363.	16000.	0.460
Trans. stiff. toe	120.00	C	1655.60	T	12033.	13000.	0.926
Trans. stiff. toe *	120.00	C	1379.67	T	9970.	12000.	0.831
Trans. stiff. toe	125.00	C	1562.66	T	5682.	13000.	0.437
Trans. stiff. toe *	125.00	C	1306.64	T	4642.	12000.	0.387
Trans. stiff. toe	130.00	C	1472.68	T	5690.	13000.	0.438
Trans. stiff. toe *	130.00	C	1230.82	T	4663.	12000.	0.389
Trans. stiff. toe	135.00	C	1387.15	T	5467.	13000.	0.421
Trans. stiff. toe *	135.00	C	1150.84	T	4489.	12000.	0.374
Trans. stiff. toe	140.00	C	1301.61	T	3712.	13000.	0.286
Trans. stiff. toe *	140.00	C	1070.86	T	3053.	12000.	0.254
Trans. stiff. toe	145.00	C	1242.34	T	3265.	13000.	0.251
Trans. stiff. toe *	145.00	C	1015.59	T	2689.	12000.	0.224
Trans. stiff. toe	150.00	C	1288.11	T	3070.	13000.	0.236
Trans. stiff. toe *	150.00	C	1059.18	T	2544.	12000.	0.212
Trans. stiff. toe	155.00	C	1333.88	T	2807.	13000.	0.216
Trans. stiff. toe *	155.00	C	1102.76	T	2339.	12000.	0.195
Trans. stiff. toe	160.00	C	1379.65	T	2875.	13000.	0.221
Trans. stiff. toe *	160.00	C	1146.35	T	2409.	12000.	0.201
Trans. stiff. toe	165.00	C	1316.63	T	2751.	13000.	0.212
Trans. stiff. toe *	165.00	C	1098.57	T	2305.	12000.	0.192
Trans. stiff. toe	170.00	C	1253.61	T	2936.	13000.	0.226
Trans. stiff. toe *	170.00	C	1050.79	T	2461.	12000.	0.205
Trans. stiff. toe	175.00	C	1190.59	T	3043.	13000.	0.234
Trans. stiff. toe *	175.00	C	1003.01	T	2551.	12000.	0.213
Trans. stiff. toe	180.00	C	1183.23	T	3338.	13000.	0.257
Trans. stiff. toe *	180.00	C	1001.42	T	2795.	12000.	0.233
Trans. stiff. toe	185.00	C	1259.37	T	3665.	13000.	0.282
Trans. stiff. toe *	185.00	C	1069.12	T	3063.	12000.	0.255
Trans. stiff. toe	200.00	C	1478.35	T	8905.	13000.	0.685
Trans. stiff. toe *	200.00	C	1253.49	T	7508.	12000.	0.626
Trans. stiff. toe	205.00	C	1542.71	T	9193.	13000.	0.707
Trans. stiff. toe *	205.00	C	1297.80	T	7695.	12000.	0.641
Trans. stiff. toe	210.00	C	1607.07	T	9482.	13000.	0.729
Trans. stiff. toe *	210.00	C	1342.10	T	7882.	12000.	0.657
Rebars	160.00		1379.65	T	3803.	20000.	0.190
Rebars *	160.00		1146.35	T	3160.	20000.	0.158

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	128.00	C	1801.03	L	7124.	21000.	0.339
Base metal	144.00	C	1951.20	L	5440.	21000.	0.259
Base metal	160.00	C	2758.72	L	6281.	21000.	0.299
Base metal	178.00	C	1816.23	L	5394.	21000.	0.257
Base metal	196.00	C	1494.08	L	6993.	21000.	0.333
Near flg-web weld	128.00	B	1801.03	L	9694.	29000.	0.334
Base metal	128.00	B	1801.03	L	9910.	29000.	0.342
Near flg-web weld	144.00	B	1951.20	L	5372.	29000.	0.185

Base metal	144.00	B	1951.20	L	5527.	29000.	0.191
Near flg-web weld	160.00	B	2758.72	L	6211.	29000.	0.214
Base metal	160.00	B	2758.72	L	6378.	29000.	0.220
Near flg-web weld	178.00	B	1816.23	L	5322.	29000.	0.184
Base metal	178.00	B	1816.23	L	5482.	29000.	0.189
Near flg-web weld	196.00	B	1494.08	L	6922.	29000.	0.239
Base metal	196.00	B	1494.08	L	7042.	29000.	0.243
Top flg. splice	128.00	B	1801.03	L	10034.	29000.	0.346
Top flg. splice	144.00	B	1951.20	L	5775.	29000.	0.199
Top flg. splice	178.00	B	1816.23	L	5729.	29000.	0.198
Top flg. splice	193.00	B	1506.64	L	7415.	29000.	0.256
Bot flg. splice	128.00	B	1801.03	L	13792.	29000.	0.476
Bot flg. splice	144.00	B	1951.20	L	6555.	29000.	0.226
Bot flg. splice	178.00	B	1816.23	L	6473.	29000.	0.223
Bot flg. splice	193.00	B	1506.64	L	9676.	29000.	0.334
Trans. stiff. toe	120.00	C	1975.89	L	14423.	21000.	0.687
Trans. stiff. toe	125.00	C	1866.60	L	6912.	21000.	0.329
Trans. stiff. toe	130.00	C	1819.81	L	7206.	21000.	0.343
Trans. stiff. toe	135.00	C	1866.73	L	7584.	21000.	0.361
Trans. stiff. toe	140.00	C	1913.66	L	5576.	21000.	0.266
Trans. stiff. toe	145.00	C	2001.67	L	5347.	21000.	0.255
Trans. stiff. toe	150.00	C	2254.02	L	5590.	21000.	0.266
Trans. stiff. toe	155.00	C	2506.37	L	5575.	21000.	0.265
Trans. stiff. toe	160.00	C	2758.72	L	6162.	21000.	0.293
Trans. stiff. toe	165.00	C	2496.92	L	5574.	21000.	0.265
Trans. stiff. toe	170.00	C	2235.11	L	5586.	21000.	0.266
Trans. stiff. toe	175.00	C	1973.31	L	5346.	21000.	0.255
Trans. stiff. toe	180.00	C	1780.43	L	5352.	21000.	0.255
Trans. stiff. toe	185.00	C	1690.95	L	5357.	21000.	0.255
Trans. stiff. toe	190.00	C	1601.46	L	7935.	21000.	0.378
Trans. stiff. toe	195.00	C	1511.98	L	6996.	21000.	0.333
Trans. stiff. toe	200.00	C	1554.14	L	6728.	21000.	0.320
Trans. stiff. toe	205.00	C	1629.20	L	6633.	21000.	0.316
Trans. stiff. toe	210.00	C	1704.27	L	10247.	21000.	0.488
Rebars	160.00		2758.72	L	7605.	20000.	0.380

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Cost Schedule for Web Section 2

	lb
Flange	18329.1
Web	13564.3
Web stiffeners	2698.1
Longitudinal stiff.	0.0
Bearing stiff.	238.2
Total steel	34829.6

Welding	Vol	lbs
Flange-web	222.7	63.1
Trans.stiff.-web (1/ 4 cont.)	198.2	56.2
Long.stiff.-web (1/ 4 cont.)	71.3	20.2
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6
Total welding *	501.1	142.1

```
                Total steel and weld   34971.8



Begin solution for web section  3.
* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *

 Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

  Max live load+impact shear
       42.7L    34.9T    27.7T   -34.0L   -43.3L

  Dead load 1 shear
       35.0     18.3      0.0    -18.2    -34.9

  Dead load 2 shear
        3.6      1.8      0.0     -1.8     -3.6

  Max live load+impact moment
     1093.4T  1343.9L  1433.4L  1343.9L  1093.6T

  Min live load+impact moment
     -741.3L  -713.0L  -680.0L  -712.9L  -741.0L

  Dead load 1 moment
      130.9    618.2    784.3    619.8    134.3

  Dead load 2 moment
       21.6     70.9     87.6     71.0     21.8
* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *

    Rate Web depth            =  72.0000 in
         Web thickness        =   0.5000 in


Tenth    Top Flange   Min Top   Bott Flange  Min Bott   Flange to Web Weld
Point      Width      Flange t     Width     Flange t     Top       Bott

  13       18.00       1.000       18.00      1.000      5/16      5/16
  14       18.00       1.000       18.00      1.000      5/16      5/16
  15       18.00       1.000       18.00      1.000      5/16      5/16
  16       18.00       1.000       18.00      1.000      5/16      5/16
  17       18.00       1.000       18.00      1.000      5/16      5/16
         6.00 x   0.50 transverse stiffeners
           1 stiffener space at    60.00 in
                 (straddles web splice)
           1 stiffener space at    60.00 in
                 (straddles web splice)

          Composite section properties at max positive moment - n =  9

             I                              =  130133. in4
             S (top steel)                  =  8408.22 in3
             S (bottom steel)               =  2223.62 in3
             S (concrete)                   =  5236.35 in3
             Neutral axis from bottom flange =    58.52 in


          Composite section properties at max positive moment - n = 27

             I                              =   98855. in4
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             S (top steel)                  =  3864.33 in3
             S (bottom steel)               =  2041.67 in3
             S (concrete)                   =  2827.95 in3
             Neutral axis from bottom flange =    48.42 in


          Section properties of girder alone at max positive moment

             I                              =   63516. in4
             S (top)                        =  1716.65 in3
             S (bottom)                     =  1716.65 in3
             Neutral axis from bottom flange =    37.00 in


          Section properties of girder alone at max negative moment

             I                              =   63516. in4
             S (top)                        =  1716.65 in3
             S (bottom)                     =  1716.65 in3
             Neutral axis from bottom flange =    37.00 in


          Composite section properties at max negative moment

             I                              =   63516. in4
             S (top of steel)               =  1716.65 in3
             S (bottom of steel)            =  1716.65 in3
             S (reinf)                      =  1451.79 in3
             Neutral axis from bottom flange =    37.00 in


* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *


Web Section  3 Stresses
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          Factored  Shear              Factored   Bending
Tenth     Shear     Strength           Moment     Strength
Point     (k )      (k )       Ratio   (k-ft)     (k-ft)       Ratio

 13       142.9     626.8 (3)   0.228     2571.9   7925.1 (20) 0.325
 14       101.9     626.8 (3)   0.163     3813.5   7925.1 (20) 0.481
 15        60.2     626.8 (3)   0.096     4245.4   7925.1 (20) 0.536
 16        99.8     626.8 (3)   0.159     3815.7   7925.1 (20) 0.481
 17       144.1     626.8 (3)   0.230     2577.3   7925.1 (20) 0.325

            Stiffeners
Location

 215.00    140.6     626.8 (3)   0.224
 220.00    129.2     626.8 (3)   0.206
 225.00    117.8     626.8 (3)   0.188
 230.00    106.4     626.8 (3)   0.170
 235.00     94.9     626.8 (3)   0.151
 240.00     83.3     626.8 (3)   0.133
 245.00     71.8     626.8 (3)   0.114
 255.00     71.2     626.8 (3)   0.114
 260.00     82.2     626.8 (3)   0.131
 265.00     93.2     626.8 (3)   0.149
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```
270.00     104.7    626.8 (3)    0.167
275.00     117.0    626.8 (3)    0.187
280.00     129.4    626.8 (3)    0.206
285.00     141.7    626.8 (3)    0.226
     (3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
    (20) compact section
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Bearing Stiffeners

Location From Left End of Web Sect. (ft)	Service Reaction (k)	Allowable Column Stress (ksi)	Actual Column Stress (ksi)	Ratio	Allowable Bearing Stress (ksi)	Actual Bearing Stress (ksi)	Ratio

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	214.00	B	1658.55	T	9881.	18000.	0.549
Base metal *	214.00	B	1377.55	T	8170.	16000.	0.511
Base metal	232.00	B	1765.03	T	10254.	18000.	0.570
Base metal *	232.00	B	1465.66	T	8475.	16000.	0.530
Base metal	250.00	B	1703.03	T	9712.	18000.	0.540
Base metal *	250.00	B	1423.31	T	8080.	16000.	0.505
Base metal	268.00	B	1764.93	T	10254.	18000.	0.570
Base metal *	268.00	B	1465.58	T	8475.	16000.	0.530
Base metal	286.00	B	1658.65	T	9882.	18000.	0.549
Base metal *	286.00	B	1377.66	T	8171.	16000.	0.511
Near flg-web weld	214.00	B	1658.55	T	9712.	18000.	0.540
Near flg-web weld *	214.00	B	1377.55	T	8031.	16000.	0.502
Near flg-web weld	232.00	B	1765.03	T	10079.	18000.	0.560
Near flg-web weld *	232.00	B	1465.66	T	8330.	16000.	0.521
Near flg-web weld	250.00	B	1703.03	T	9546.	18000.	0.530
Near flg-web weld *	250.00	B	1423.31	T	7942.	16000.	0.496
Near flg-web weld	268.00	B	1764.93	T	10078.	18000.	0.560
Near flg-web weld *	268.00	B	1465.58	T	8330.	16000.	0.521
Near flg-web weld	286.00	B	1658.65	T	9713.	18000.	0.540
Near flg-web weld *	286.00	B	1377.66	T	8031.	16000.	0.502
Trans. stiff. toe	215.00	C	1664.47	T	9733.	13000.	0.749
Trans. stiff. toe *	215.00	C	1382.44	T	8047.	12000.	0.671
Trans. stiff. toe	220.00	C	1694.04	T	9835.	13000.	0.757
Trans. stiff. toe *	220.00	C	1406.92	T	8131.	12000.	0.678
Trans. stiff. toe	225.00	C	1723.62	T	9937.	13000.	0.764
Trans. stiff. toe *	225.00	C	1431.40	T	8214.	12000.	0.684
Trans. stiff. toe	230.00	C	1753.20	T	10038.	13000.	0.772
Trans. stiff. toe *	230.00	C	1455.87	T	8297.	12000.	0.691
Trans. stiff. toe	235.00	C	1754.70	T	9990.	13000.	0.768
Trans. stiff. toe *	235.00	C	1458.61	T	8266.	12000.	0.689
Trans. stiff. toe	240.00	C	1737.48	T	9842.	13000.	0.757
Trans. stiff. toe *	240.00	C	1446.84	T	8158.	12000.	0.680
Trans. stiff. toe	245.00	C	1720.25	T	9694.	13000.	0.746
Trans. stiff. toe *	245.00	C	1435.07	T	8050.	12000.	0.671
Trans. stiff. toe	250.00	C	1703.03	T	9546.	13000.	0.734
Trans. stiff. toe *	250.00	C	1423.31	T	7942.	12000.	0.662
Trans. stiff. toe	255.00	C	1720.23	T	9694.	13000.	0.746
Trans. stiff. toe *	255.00	C	1435.05	T	8050.	12000.	0.671

Trans. stiff. toe	260.00	C	1737.42	T	9842.	13000.	0.757
Trans. stiff. toe *	260.00	C	1446.79	T	8157.	12000.	0.680
Trans. stiff. toe	265.00	C	1754.62	T	9990.	13000.	0.768
Trans. stiff. toe *	265.00	C	1458.53	T	8265.	12000.	0.689
Trans. stiff. toe	270.00	C	1753.12	T	10038.	13000.	0.772
Trans. stiff. toe *	270.00	C	1455.81	T	8297.	12000.	0.691
Trans. stiff. toe	275.00	C	1723.60	T	9936.	13000.	0.764
Trans. stiff. toe *	275.00	C	1431.39	T	8214.	12000.	0.684
Trans. stiff. toe	280.00	C	1694.08	T	9835.	13000.	0.757
Trans. stiff. toe *	280.00	C	1406.97	T	8131.	12000.	0.678
Trans. stiff. toe	285.00	C	1664.56	T	9733.	13000.	0.749
Trans. stiff. toe *	285.00	C	1382.54	T	8048.	12000.	0.671

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	214.00	B	1764.32	L	10703.	29000.	0.369
Base metal	232.00	B	2045.58	L	12176.	29000.	0.420
Base metal	250.00	B	2113.45	L	12489.	29000.	0.431
Base metal	268.00	B	2045.73	L	12176.	29000.	0.420
Base metal	286.00	B	1764.61	L	10704.	29000.	0.369
Near flg-web weld	214.00	B	1764.32	L	10520.	29000.	0.363
Near flg-web weld	232.00	B	2045.58	L	11968.	29000.	0.413
Near flg-web weld	250.00	B	2113.45	L	12276.	29000.	0.423
Near flg-web weld	268.00	B	2045.73	L	11968.	29000.	0.413
Near flg-web weld	286.00	B	1764.61	L	10521.	29000.	0.363
Trans. stiff. toe	215.00	C	1779.95	L	10600.	21000.	0.505
Trans. stiff. toe	220.00	C	1858.08	L	11002.	21000.	0.524
Trans. stiff. toe	225.00	C	1936.20	L	11405.	21000.	0.543
Trans. stiff. toe	230.00	C	2014.33	L	11807.	21000.	0.562
Trans. stiff. toe	235.00	C	2056.90	L	12019.	21000.	0.572
Trans. stiff. toe	240.00	C	2075.75	L	12105.	21000.	0.576
Trans. stiff. toe	245.00	C	2094.60	L	12190.	21000.	0.580
Trans. stiff. toe	250.00	C	2113.45	L	12276.	21000.	0.585
Trans. stiff. toe	255.00	C	2094.64	L	12190.	21000.	0.580
Trans. stiff. toe	260.00	C	2075.83	L	12105.	21000.	0.576
Trans. stiff. toe	265.00	C	2057.02	L	12019.	21000.	0.572
Trans. stiff. toe	270.00	C	2014.50	L	11807.	21000.	0.562
Trans. stiff. toe	275.00	C	1936.41	L	11405.	21000.	0.543
Trans. stiff. toe	280.00	C	1858.32	L	11003.	21000.	0.524
Trans. stiff. toe	285.00	C	1780.23	L	10601.	21000.	0.505

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Cost Schedule for Web Section 3

	lb
Flange	9187.5
Web	9187.5
Web stiffeners	1837.5
Total steel	20212.5

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                                    OUTPUT.TXT
            Welding                   Vol    lbs

Flange-web                          175.8    49.8
Trans.stiff.-web   ( 1/ 4 cont.)    135.0    38.3

                  Total welding *   310.8    88.1

                  Total steel and weld   20300.6


Begin solution for web section  4.

* * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * * *

 Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

  Max live load+impact shear
      -52.6L   -63.4L   -76.1L    64.2L    54.9L

  Dead load 1 shear
      -53.8    -74.6    -96.2     89.4     71.5

  Dead load 2 shear
       -5.5     -7.4     -9.3      8.5      6.9
   (Shear value at an interior support is at left of support.)

  Max live load+impact moment
      678.4T   356.0L   380.3L   471.9L   773.9L

  Min live load+impact moment
     -873.2L -1429.2L -2378.2L -1517.4L -1027.1L

  Dead load 1 moment
     -665.2  -1828.9  -3374.5  -1791.0   -504.3

  Dead load 2 moment
      -59.6   -175.9   -326.4   -176.5    -53.1
* * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * * *

   Rate Web depth            = 105.0000 in
        Web thickness        =   0.5000 in


Tenth    Top Flange   Min Top   Bott Flange  Min Bott   Flange to Web Weld
Point      Width      Flange t     Width     Flange t     Top       Bott

  18       18.00       1.000       18.00      1.000      5/16      5/16
  19       18.00       1.875       18.00      1.875      5/16      5/16
  20       18.00       2.000       18.00      2.000      5/16      5/16
  21       18.00       1.875       18.00      1.875      5/16      5/16
  22       18.00       1.250       18.00      1.250      5/16      5/16

   2 -   8.00 x  0.500 brng. stf. at  52.50 ft   from left end of web section
         4.00 x   0.50 longitudinal stiffener
         6.00 x   0.50 transverse stiffeners
           1 stiffener space at    60.00 in
                  (straddles web splice)
           1 stiffener space at    60.00 in
                  (straddles web splice)

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                                    OUTPUT.TXT
Composite section properties at max positive moment - n =  9

   I                                =  146463. in4
   S (top steel)                    =  8622.68 in3
   S (bottom steel)                 =  2546.55 in3
   S (concrete)                     =  5609.29 in3
   Neutral axis from bottom flange =    57.51 in


Composite section properties at max positive moment - n = 27

   I                                =  112334. in4
   S (top steel)                    =  4193.07 in3
   S (bottom steel)                 =  2354.55 in3
   S (concrete)                     =  3127.74 in3
   Neutral axis from bottom flange =    47.71 in


Section properties of girder alone at max positive moment

   I                                =   75920. in4
   S (top)                          =  2038.13 in3
   S (bottom)                       =  2038.13 in3
   Neutral axis from bottom flange =    37.25 in


Section properties of girder alone at max negative moment

   I                                =  254340. in4
   S (top)                          =  4666.80 in3
   S (bottom)                       =  4666.80 in3
   Neutral axis from bottom flange =    54.50 in


Composite section properties at max negative moment

   I                                =  259366. in4
   S (top of steel)                 =  4818.24 in3
   S (bottom of steel)              =  4701.22 in3
   S (reinf)                        =  4353.24 in3
   Neutral axis from bottom flange =    55.17 in


* * * * * * * * * * * * * * * * R A T E  M O D E * * * * * * * * * * * * * * * *


Web Section  4 Stresses
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            Factored  Shear                Factored   Bending
Tenth       Shear     Strength             Moment     Strength
Point       (k )      (k )       Ratio     (k-ft)     (k-ft)       Ratio

 18         191.2    626.8 (3)    0.305     2838.0    4577.7 (6)  0.620
 19         244.2    730.3 (3)    0.334     5709.1    9236.1 (6)  0.618
 20L        302.4    930.6 (3)    0.325     9974.1   12496.0 (6)  0.798
 20R        321.7    930.6 (3)    0.346     9974.1   12496.0 (6)  0.798
 21         266.7    764.0 (3)    0.349     5852.0    9779.6 (6)  0.598
 22         221.0    626.8 (3)    0.353     2954.7    5435.0 (6)  0.544

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Stiffeners

Location				
290.00	154.6	626.8 (3)	0.247	
295.00	167.6	626.8 (3)	0.267	
300.00	180.7	626.8 (3)	0.288	
305.00	194.1	626.8 (3)	0.310	
310.00	208.8	628.2 (3)	0.332	
315.00	223.6	652.1 (3)	0.343	
320.00	238.3	701.6 (3)	0.340	
325.00	253.9	780.6 (3)	0.325	
330.00	270.1	846.6 (3)	0.319	
335.00	286.2	883.0 (3)	0.324	
345.00	304.5	883.0 (3)	0.345	
350.00	287.3	846.6 (3)	0.339	
355.00	270.2	780.6 (3)	0.346	
360.00	255.3	701.6 (3)	0.364	
365.00	241.0	652.1 (3)	0.370	
370.00	226.7	628.2 (3)	0.361	
375.00	213.5	626.8 (3)	0.341	
380.00	201.2	626.8 (3)	0.321	

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(6) Fy S(equiv)
Maximum moment in factored strength expression

Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	
52.50	342.30	16.60	9.51	0.573	28.80	15.21	0.528

Fatigue - truck loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)		Actual Stress Range	Allowable Stress Range	Ratio
Base metal	304.00	C	1378.24	T	5892.	13000.	0.453
Base metal *	304.00	C	1169.43	T	4858.	10000.	0.486
Base metal	322.00	C	1109.76	T	3200.	13000.	0.246
Base metal *	322.00	C	931.34	T	2674.	10000.	0.267
Base metal	340.00	C	1379.72	T	2931.	13000.	0.225
Base metal *	340.00	C	1146.41	T	2456.	10000.	0.246
Base metal	356.00	C	1262.68	T	3434.	13000.	0.264
Base metal *	356.00	C	1036.36	T	2830.	10000.	0.283
Base metal	372.00	C	1507.23	T	5851.	13000.	0.450
Base metal *	372.00	C	1263.14	T	4792.	10000.	0.479
Near flg-web weld	304.00	B	1378.24	T	5832.	18000.	0.324
Base metal	304.00	B	1378.24	T	5933.	18000.	0.330
Near flg-web weld *	304.00	B	1169.43	T	4809.	16000.	0.301
Base metal *	304.00	B	1169.43	T	4893.	16000.	0.306
Near flg-web weld	322.00	B	1109.76	T	3158.	18000.	0.175
Base metal	322.00	B	1109.76	T	3253.	18000.	0.181
Near flg-web weld *	322.00	B	931.34	T	2639.	16000.	0.165
Base metal *	322.00	B	931.34	T	2718.	16000.	0.170
Near flg-web weld	340.00	B	1379.72	T	2898.	18000.	0.161

Base metal	340.00	B	1379.72	T	2976.	18000.	0.165
Near flg-web weld *	340.00	B	1146.41	T	2428.	16000.	0.152
Base metal *	340.00	B	1146.41	T	2493.	16000.	0.156
Near flg-web weld	356.00	B	1262.68	T	3391.	18000.	0.188
Base metal	356.00	B	1262.68	T	3488.	18000.	0.194
Near flg-web weld *	356.00	B	1036.36	T	2795.	16000.	0.175
Base metal *	356.00	B	1036.36	T	2875.	16000.	0.180
Near flg-web weld	372.00	B	1507.23	T	5781.	18000.	0.321
Base metal	372.00	B	1507.23	T	5909.	18000.	0.328
Near flg-web weld *	372.00	B	1263.14	T	4734.	16000.	0.296
Base metal *	372.00	B	1263.14	T	4839.	16000.	0.302
Top flg. splice	307.00	B	1332.67	T	5982.	18000.	0.332
Top flg splice *	307.00	B	1131.82	T	4946.	16000.	0.309
Top flg. splice	322.00	B	1109.76	T	3397.	18000.	0.189
Top flg splice *	322.00	B	931.34	T	2838.	16000.	0.177
Top flg. splice	356.00	B	1262.68	T	3643.	18000.	0.202
Top flg splice *	356.00	B	1036.36	T	3003.	16000.	0.188
Top flg. splice	372.00	B	1507.23	T	8220.	18000.	0.457
Top flg splice *	372.00	B	1263.14	T	6709.	16000.	0.419
Bot flg. splice	307.00	B	1332.67	T	8389.	18000.	0.466
Bot flg splice *	307.00	B	1131.82	T	7085.	16000.	0.443
Bot flg. splice	322.00	B	1109.76	T	3931.	18000.	0.218
Bot flg splice *	322.00	B	931.34	T	3296.	16000.	0.206
Bot flg. splice	356.00	B	1262.68	T	4219.	18000.	0.234
Bot flg splice *	356.00	B	1036.36	T	3466.	16000.	0.217
Bot flg. splice	372.00	B	1507.23	T	11484.	18000.	0.638
Bot flg splice *	372.00	B	1263.14	T	9566.	16000.	0.598
Trans. stiff. toe	290.00	C	1596.34	T	9468.	13000.	0.728
Trans. stiff. toe *	290.00	C	1331.39	T	7861.	12000.	0.655
Trans. stiff. toe	295.00	C	1518.45	T	9106.	13000.	0.700
Trans. stiff. toe *	295.00	C	1273.55	T	7601.	12000.	0.633
Trans. stiff. toe	300.00	C	1440.56	T	5711.	13000.	0.439
Trans. stiff. toe *	300.00	C	1215.70	T	4689.	12000.	0.391
Trans. stiff. toe	305.00	C	1363.33	T	5789.	13000.	0.445
Trans. stiff. toe *	305.00	C	1156.20	T	4777.	12000.	0.398
Trans. stiff. toe	310.00	C	1288.75	T	5862.	13000.	0.451
Trans. stiff. toe *	310.00	C	1090.07	T	4854.	12000.	0.405
Trans. stiff. toe	315.00	C	1214.17	T	3630.	13000.	0.279
Trans. stiff. toe *	315.00	C	1023.93	T	3024.	12000.	0.252
Trans. stiff. toe	320.00	C	1139.60	T	3307.	13000.	0.254
Trans. stiff. toe *	320.00	C	957.79	T	2761.	12000.	0.230
Trans. stiff. toe	325.00	C	1154.76	T	3023.	13000.	0.233
Trans. stiff. toe *	325.00	C	967.18	T	2528.	12000.	0.211
Trans. stiff. toe	330.00	C	1229.75	T	2929.	13000.	0.225
Trans. stiff. toe *	330.00	C	1026.93	T	2451.	12000.	0.204
Trans. stiff. toe	335.00	C	1304.73	T	2752.	13000.	0.212
Trans. stiff. toe *	335.00	C	1086.67	T	2305.	12000.	0.192
Trans. stiff. toe	340.00	C	1379.72	T	2889.	13000.	0.222
Trans. stiff. toe *	340.00	C	1146.41	T	2421.	12000.	0.202
Trans. stiff. toe	345.00	C	1343.15	T	2829.	13000.	0.218
Trans. stiff. toe *	345.00	C	1112.02	T	2359.	12000.	0.197
Trans. stiff. toe	350.00	C	1306.57	T	3105.	13000.	0.239
Trans. stiff. toe *	350.00	C	1077.63	T	2576.	12000.	0.215
Trans. stiff. toe	355.00	C	1269.99	T	3312.	13000.	0.255
Trans. stiff. toe *	355.00	C	1043.24	T	2733.	12000.	0.228
Trans. stiff. toe	360.00	C	1323.81	T	3758.	13000.	0.289
Trans. stiff. toe *	360.00	C	1093.05	T	3096.	12000.	0.258
Trans. stiff. toe	365.00	C	1400.24	T	5522.	13000.	0.425
Trans. stiff. toe *	365.00	C	1163.92	T	4537.	12000.	0.378
Trans. stiff. toe	370.00	C	1476.66	T	5735.	13000.	0.441
Trans. stiff. toe *	370.00	C	1234.79	T	4700.	12000.	0.392
Trans. stiff. toe	375.00	C	1562.94	T	5721.	13000.	0.440
Trans. stiff. toe *	375.00	C	1306.91	T	4673.	12000.	0.389

Trans. stiff. toe	380.00	C	1655.81 T	5703.	13000.	0.439
Trans. stiff. toe *	380.00	C	1379.88 T	4640.	12000.	0.387
Rebars	340.00		1379.72 T	3803.	20000.	0.190
Rebars *	340.00		1146.41 T	3160.	20000.	0.158

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)	Actual Stress Range	Allowable Stress Range	Ratio
Base metal	304.00	C	1458.78 L	6940.	21000.	0.330
Base metal	322.00	C	1785.15 L	5357.	21000.	0.255
Base metal	340.00	C	2758.48 L	6280.	21000.	0.299
Base metal	356.00	C	1989.30 L	5482.	21000.	0.261
Base metal	372.00	C	1801.07 L	7125.	21000.	0.339
Near flg-web weld	304.00	B	1458.78 L	6869.	29000.	0.237
Base metal	304.00	B	1458.78 L	6989.	29000.	0.241
Near flg-web weld	322.00	B	1785.15 L	5286.	29000.	0.182
Base metal	322.00	B	1785.15 L	5445.	29000.	0.188
Near flg-web weld	340.00	B	2758.48 L	6210.	29000.	0.214
Base metal	340.00	B	2758.48 L	6377.	29000.	0.220
Near flg-web weld	356.00	B	1989.30 L	5413.	29000.	0.187
Base metal	356.00	B	1989.30 L	5569.	29000.	0.192
Near flg-web weld	372.00	B	1801.07 L	9695.	29000.	0.334
Base metal	372.00	B	1801.07 L	9910.	29000.	0.342
Top flg. splice	307.00	B	1469.27 L	7358.	29000.	0.254
Top flg. splice	322.00	B	1785.15 L	5691.	29000.	0.196
Top flg. splice	356.00	B	1989.30 L	5817.	29000.	0.201
Top flg. splice	372.00	B	1801.07 L	10035.	29000.	0.346
Bot flg. splice	307.00	B	1469.27 L	9473.	29000.	0.327
Bot flg. splice	322.00	B	1785.15 L	6377.	29000.	0.220
Bot flg. splice	356.00	B	1989.30 L	6666.	29000.	0.230
Bot flg. splice	372.00	B	1801.07 L	13793.	29000.	0.476
Trans. stiff. toe	290.00	C	1696.65 L	10253.	21000.	0.488
Trans. stiff. toe	295.00	C	1611.70 L	9859.	21000.	0.469
Trans. stiff. toe	300.00	C	1526.74 L	6733.	21000.	0.321
Trans. stiff. toe	305.00	C	1476.91 L	6992.	21000.	0.333
Trans. stiff. toe	310.00	C	1567.57 L	7939.	21000.	0.378
Trans. stiff. toe	315.00	C	1658.23 L	5346.	21000.	0.255
Trans. stiff. toe	320.00	C	1748.89 L	5345.	21000.	0.255
Trans. stiff. toe	325.00	C	1947.37 L	5349.	21000.	0.255
Trans. stiff. toe	330.00	C	2217.74 L	5600.	21000.	0.267
Trans. stiff. toe	335.00	C	2488.11 L	5592.	21000.	0.266
Trans. stiff. toe	340.00	C	2758.48 L	6190.	21000.	0.295
Trans. stiff. toe	345.00	C	2518.11 L	5612.	21000.	0.267
Trans. stiff. toe	350.00	C	2277.74 L	5644.	21000.	0.269
Trans. stiff. toe	355.00	C	2037.38 L	5414.	21000.	0.258
Trans. stiff. toe	360.00	C	1942.24 L	5640.	21000.	0.269
Trans. stiff. toe	365.00	C	1883.42 L	7658.	21000.	0.365
Trans. stiff. toe	370.00	C	1824.60 L	7262.	21000.	0.346
Trans. stiff. toe	375.00	C	1866.52 L	6960.	21000.	0.331
Trans. stiff. toe	380.00	C	1975.60 L	6927.	21000.	0.330
Rebars	340.00		2758.48 L	7604.	20000.	0.380

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Cost Schedule for Web Section 4

	lb
Flange	18329.1
Web	13564.3
Web stiffeners	2698.1
Longitudinal stiff.	0.0
Bearing stiff.	238.2
Total steel	34829.6

Welding	Vol	lbs
Flange-web	222.7	63.1
Trans.stiff.-web (1/ 4 cont.)	198.2	56.2
Long.stiff.-web (1/ 4 cont.)	71.3	20.2
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6
Total welding *	501.1	142.1
Total steel and weld	34971.8	

Begin solution for web section 5.

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Service load shear (kips) and moment (kip-ft) at span tenth points on web sect

Max live load+impact shear								
45.9L	40.8T	40.6T	27.0T	-33.2T	-41.6T	-49.8T	-58.4L	
Dead load 1 shear								
57.5	41.2	23.8	5.1	-13.6	-32.4	-50.7	-68.0	
Dead load 2 shear								
5.4	3.8	2.2	0.5	-1.2	-2.9	-4.6	-6.3	
Max live load+impact moment								
1254.6L	1611.7L	1814.6L	1813.5L	1641.2L	1279.4L	725.6T	0.0L	
Min live load+impact moment								
-895.5L	-768.4L	-644.5L	-516.3L	-388.1L	-259.1L	-129.4L	0.0L	
Dead load 1 moment								
536.1	1309.1	1817.1	2047.7	1979.1	1610.9	946.1	0.0	
Dead load 2 moment								
45.5	117.5	164.4	185.4	179.4	146.4	86.4	0.0	

* * * * * * * * * * * * * * * * R A T E M O D E * * * * * * * * * * * * * * * *

Rate Web depth = 72.0000 in
Web thickness = 0.5000 in

Tenth Point	Top Flange Width	Min Top Flange t	Bott Flange Width	Min Bott Flange t	Flange to Web Weld Top	Flange to Web Weld Bott
23	18.00	0.750	18.00	0.750	1/ 4	1/ 4

24	18.00	2.000	18.00	2.000	5/16	5/16
25	18.00	2.000	18.00	2.000	5/16	5/16
26	18.00	2.000	18.00	2.000	5/16	5/16
27	18.00	2.000	18.00	2.000	5/16	5/16
28	18.00	2.000	18.00	2.000	5/16	5/16
29	18.00	1.625	18.00	1.625	5/16	5/16
30	18.00	0.750	18.00	0.750	1/ 4	1/ 4

```
 2 -   8.00 x  0.500 brng. stf. at 117.50 ft   from left end of web section
       6.00 x   0.50 transverse stiffeners
         1 stiffener space at    60.00 in
               (straddles web splice)

       Composite section properties at max positive moment - n =  9

          I                                =  194119. in4
          S (top steel)                    =  9350.29 in3
          S (bottom steel)                 =  3514.14 in3
          S (concrete)                     =  6662.57 in3
          Neutral axis from bottom flange =    55.24 in


       Composite section properties at max positive moment - n = 27

          I                                =  152917. in4
          S (top steel)                    =  5158.18 in3
          S (bottom steel)                 =  3298.87 in3
          S (concrete)                     =  4021.96 in3
          Neutral axis from bottom flange =    46.35 in


       Section properties of girder alone at max positive moment

          I                                =  114144. in4
          S (top)                          =  3003.79 in3
          S (bottom)                       =  3003.79 in3
          Neutral axis from bottom flange =    38.00 in


       Section properties of girder alone at max negative moment

          I                                =   51278. in4
          S (top)                          =  1395.32 in3
          S (bottom)                       =  1395.32 in3
          Neutral axis from bottom flange =    36.75 in


       Composite section properties at max negative moment

          I                                =   51278. in4
          S (top of steel)                 =  1395.32 in3
          S (bottom of steel)              =  1395.32 in3
          S (reinf)                        =  1172.07 in3
          Neutral axis from bottom flange =    36.75 in


* * * * * * * * * * * * * * * * R A T E   M O D E * * * * * * * * * * * * * * * *


Web Section  5 Stresses
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Tenth Point	Factored Shear (k)	Shear Strength (k)	Ratio	Factored Moment (k-ft)	Bending Strength (k-ft)	Ratio
23	181.3	626.8 (3)	0.289	3479.9	7040.1 (20)	0.494
24	147.1	626.8 (3)	0.235	5353.7	11525.1 (20)	0.465
25	121.9	626.8 (3)	0.195	6515.5	11525.1 (20)	0.565
26	65.7	626.8 (3)	0.105	6840.2	11525.1 (20)	0.594
27	91.3	626.8 (3)	0.146	6369.1	11525.1 (20)	0.553
28	136.3	626.8 (3)	0.217	5062.1	11525.1 (20)	0.439
29	180.0	626.8 (3)	0.287	2917.5	10163.9 (20)	0.287
30	223.5	543.6 (5)	0.411	0.0	4372.9 (6)	0.000

Stiffeners

Location						
385.00	188.8	626.8 (3)	0.301			
390.00	177.0	626.8 (3)	0.282			
395.00	166.3	626.8 (3)	0.265			
400.00	155.6	626.8 (3)	0.248			
405.00	145.5	626.8 (3)	0.232			
410.00	137.6	626.8 (3)	0.220			
415.00	129.8	626.8 (3)	0.207			
425.00	104.4	626.8 (3)	0.166			
430.00	86.8	626.8 (3)	0.138			
435.00	69.2	626.8 (3)	0.110			
440.00	72.1	626.8 (3)	0.115			
445.00	80.1	626.8 (3)	0.128			
450.00	88.1	626.8 (3)	0.141			
455.00	99.8	626.8 (3)	0.159			
460.00	113.8	626.8 (3)	0.182			
465.00	127.8	626.8 (3)	0.204			
470.00	141.7	626.8 (3)	0.226			
475.00	155.4	626.8 (3)	0.248			
480.00	169.1	626.8 (3)	0.270			
485.00	182.7	626.8 (3)	0.292			
490.00	196.3	626.8 (3)	0.313			
495.00	209.9	626.8 (3)	0.335			

```
     (3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
     (5) C 0.58 Fyw D t
    (20) compact section
     (6) Fy S(equiv)
         Maximum moment in factored strength expression
```

Bearing Stiffeners

Location From Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
(ft)	(k)	(ksi)	(ksi)		(ksi)	(ksi)	
117.50	133.81	16.80	10.71	0.637	28.80	17.84	0.620

Fatigue - truck loading

Condition	Location From left End of	Category (Table 10.3.1A)	Force Range (k-ft)	Actual Stress Range	Allowable Stress Range	Ratio

OUTPUT.TXT

Girder						
Base metal	388.00	B	1804.39 T	13062.	18000.	0.726
Base metal *	388.00	B	1496.62 T	10771.	16000.	0.673
Base metal	404.00	B	2048.64 T	7359.	18000.	0.409
Base metal *	404.00	B	1696.20 T	6075.	16000.	0.380
Base metal	420.00	B	2159.97 T	7680.	18000.	0.427
Base metal *	420.00	B	1774.20 T	6293.	16000.	0.393
Base metal	436.00	B	2091.58 T	7386.	18000.	0.410
Base metal *	436.00	B	1734.28 T	6109.	16000.	0.382
Base metal	452.00	B	1873.00 T	6579.	18000.	0.366
Base metal *	452.00	B	1561.82 T	5473.	16000.	0.342
Base metal	468.00	B	1456.32 T	5095.	18000.	0.283
Base metal *	468.00	B	1223.77 T	4272.	16000.	0.267
Base metal	484.00	B	815.02 T	3312.	18000.	0.184
Base metal *	484.00	B	693.31 T	2810.	16000.	0.176
Near flg-web weld	388.00	B	1804.39 T	12898.	18000.	0.717
Near flg-web weld *	388.00	B	1496.62 T	10636.	16000.	0.665
Near flg-web weld	404.00	B	2048.64 T	7092.	18000.	0.394
Near flg-web weld *	404.00	B	1696.20 T	5855.	16000.	0.366
Near flg-web weld	420.00	B	2159.97 T	7402.	18000.	0.411
Near flg-web weld *	420.00	B	1774.20 T	6065.	16000.	0.379
Near flg-web weld	436.00	B	2091.58 T	7119.	18000.	0.395
Near flg-web weld *	436.00	B	1734.28 T	5888.	16000.	0.368
Near flg-web weld	452.00	B	1873.00 T	6341.	18000.	0.352
Near flg-web weld *	452.00	B	1561.82 T	5275.	16000.	0.330
Near flg-web weld	468.00	B	1456.32 T	4911.	18000.	0.273
Near flg-web weld *	468.00	B	1223.77 T	4117.	16000.	0.257
Near flg-web weld	484.00	B	815.02 T	3216.	18000.	0.179
Near flg-web weld *	484.00	B	693.31 T	2728.	16000.	0.171
Base metal	388.00	B	1804.39 T	13062.	18000.	0.726
Base metal *	388.00	B	1496.62 T	10771.	16000.	0.673
Base metal	404.00	B	2048.64 T	7359.	18000.	0.409
Base metal *	404.00	B	1696.20 T	6075.	16000.	0.380
Base metal	420.00	B	2159.97 T	7680.	18000.	0.427
Base metal *	420.00	B	1774.20 T	6293.	16000.	0.393
Base metal	436.00	B	2091.58 T	7386.	18000.	0.410
Base metal *	436.00	B	1734.28 T	6109.	16000.	0.382
Base metal	452.00	B	1873.00 T	6579.	18000.	0.366
Base metal *	452.00	B	1561.82 T	5473.	16000.	0.342
Base metal	468.00	B	1456.32 T	5095.	18000.	0.283
Base metal *	468.00	B	1223.77 T	4272.	16000.	0.267
Base metal	484.00	B	815.02 T	3312.	18000.	0.184
Base metal *	484.00	B	693.31 T	2810.	16000.	0.176
Top flg. splice	390.00	B	1837.81 T	7851.	18000.	0.436
Top flg splice *	390.00	B	1523.43 T	6307.	16000.	0.394
Top flg. splice	402.00	B	2025.37 T	4918.	18000.	0.273
Top flg splice *	402.00	B	1677.90 T	3970.	16000.	0.248
Top flg. splice	473.00	B	1280.04 T	2329.	18000.	0.129
Top flg splice *	473.00	B	1078.67 T	1912.	16000.	0.119
Top flg. splice	485.00	B	769.17 T	1129.	18000.	0.063
Top flg splice *	485.00	B	654.75 T	965.	16000.	0.060
Bot flg. splice	390.00	B	1837.81 T	13294.	18000.	0.739
Bot flg splice *	390.00	B	1523.43 T	10954.	16000.	0.685
Bot flg. splice	402.00	B	2025.37 T	8553.	18000.	0.475
Bot flg splice *	402.00	B	1677.90 T	7060.	16000.	0.441
Bot flg. splice	473.00	B	1280.04 T	5217.	18000.	0.290
Bot flg splice *	473.00	B	1078.67 T	4384.	16000.	0.274
Bot flg. splice	485.00	B	769.17 T	4355.	18000.	0.242
Bot flg splice *	485.00	B	654.75 T	3754.	16000.	0.235
Trans. stiff. toe	385.00	C	1748.67 T	12595.	13000.	0.969
Trans. stiff. toe *	385.00	C	1452.84 T	10404.	12000.	0.867
Trans. stiff. toe	390.00	C	1834.92 T	13059.	13000.	1.005

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OUTPUT.TXT

Trans. stiff. toe *	390.00	C	1521.57 T	10766.	12000.	0.897
Trans. stiff. toe	395.00	C	1911.25 T	13462.	13000.	1.036
Trans. stiff. toe *	395.00	C	1583.94 T	11092.	12000.	0.924
Trans. stiff. toe	400.00	C	1987.57 T	7075.	13000.	0.544
Trans. stiff. toe *	400.00	C	1646.31 T	5844.	12000.	0.487
Trans. stiff. toe	405.00	C	2055.59 T	7286.	13000.	0.560
Trans. stiff. toe *	405.00	C	1701.08 T	6012.	12000.	0.501
Trans. stiff. toe	410.00	C	2090.38 T	7385.	13000.	0.568
Trans. stiff. toe *	410.00	C	1725.45 T	6080.	12000.	0.507
Trans. stiff. toe	415.00	C	2125.18 T	7485.	13000.	0.576
Trans. stiff. toe *	415.00	C	1749.82 T	6147.	12000.	0.512
Trans. stiff. toe	420.00	C	2159.97 T	7584.	13000.	0.583
Trans. stiff. toe *	420.00	C	1774.20 T	6214.	12000.	0.518
Trans. stiff. toe	425.00	C	2138.60 T	7493.	13000.	0.576
Trans. stiff. toe *	425.00	C	1761.72 T	6157.	12000.	0.513
Trans. stiff. toe	430.00	C	2117.23 T	7402.	13000.	0.569
Trans. stiff. toe *	430.00	C	1749.25 T	6100.	12000.	0.508
Trans. stiff. toe	435.00	C	2095.85 T	7312.	13000.	0.562
Trans. stiff. toe *	435.00	C	1736.77 T	6044.	12000.	0.504
Trans. stiff. toe	440.00	C	2036.93 T	7094.	13000.	0.546
Trans. stiff. toe *	440.00	C	1691.16 T	5875.	12000.	0.490
Trans. stiff. toe	445.00	C	1968.63 T	6845.	13000.	0.527
Trans. stiff. toe *	445.00	C	1637.27 T	5679.	12000.	0.473
Trans. stiff. toe	450.00	C	1900.32 T	6596.	13000.	0.507
Trans. stiff. toe *	450.00	C	1583.38 T	5483.	12000.	0.457
Trans. stiff. toe	455.00	C	1794.87 T	6222.	13000.	0.479
Trans. stiff. toe *	455.00	C	1498.43 T	5182.	12000.	0.432
Trans. stiff. toe	460.00	C	1664.66 T	5764.	13000.	0.443
Trans. stiff. toe *	460.00	C	1392.79 T	4811.	12000.	0.401
Trans. stiff. toe	465.00	C	1534.45 T	5306.	13000.	0.408
Trans. stiff. toe *	465.00	C	1287.15 T	4441.	12000.	0.370
Trans. stiff. toe	470.00	C	1376.16 T	4754.	13000.	0.366
Trans. stiff. toe *	470.00	C	1157.46 T	3989.	12000.	0.332
Trans. stiff. toe	475.00	C	1175.75 T	4059.	13000.	0.312
Trans. stiff. toe *	475.00	C	991.69 T	3416.	12000.	0.285
Trans. stiff. toe	480.00	C	975.34 T	3918.	13000.	0.301
Trans. stiff. toe *	480.00	C	825.92 T	3309.	12000.	0.276
Trans. stiff. toe	485.00	C	764.08 T	3066.	13000.	0.236
Trans. stiff. toe *	485.00	C	649.98 T	2601.	12000.	0.217
Trans. stiff. toe	490.00	C	509.39 T	2044.	13000.	0.157
Trans. stiff. toe *	490.00	C	433.32 T	1734.	12000.	0.144

* single truck, one traffic lane, >2,000,000 cycles

Fatigue - lane loading

Condition	Location From left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)	Actual Stress Range	Allowable Stress Range	Ratio
Base metal	388.00	B	2150.13 L	15624.	29000.	0.539
Base metal	404.00	B	2380.09 L	8573.	29000.	0.296
Base metal	420.00	B	2459.16 L	8771.	29000.	0.302
Base metal	436.00	B	2329.86 L	8255.	29000.	0.285
Base metal	452.00	B	2029.31 L	7155.	29000.	0.247
Base metal	468.00	B	1538.49 L	5404.	29000.	0.186
Base metal	484.00	B	836.75 L	3417.	29000.	0.118
Near flg-web weld	388.00	B	2150.13 L	15428.	29000.	0.532
Near flg-web weld	404.00	B	2380.09 L	8263.	29000.	0.285
Near flg-web weld	420.00	B	2459.16 L	8454.	29000.	0.292
Near flg-web weld	436.00	B	2329.86 L	7957.	29000.	0.274
Near flg-web weld	452.00	B	2029.31 L	6896.	29000.	0.238

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Near flg-web weld	468.00	B	1538.49	L	5208.	29000.	0.180
Near flg-web weld	484.00	B	836.75	L	3318.	29000.	0.114
Base metal	388.00	B	2150.13	L	15624.	29000.	0.539
Base metal	404.00	B	2380.09	L	8573.	29000.	0.296
Base metal	420.00	B	2459.16	L	8771.	29000.	0.302
Base metal	436.00	B	2329.86	L	8255.	29000.	0.285
Base metal	452.00	B	2029.31	L	7155.	29000.	0.247
Base metal	468.00	B	1538.49	L	5404.	29000.	0.186
Base metal	484.00	B	836.75	L	3417.	29000.	0.118
Top flg. splice	390.00	B	2185.38	L	9531.	29000.	0.329
Top flg. splice	402.00	B	2359.60	L	5868.	29000.	0.202
Top flg. splice	473.00	B	1341.85	L	2552.	29000.	0.088
Top flg. splice	485.00	B	788.41	L	1149.	29000.	0.040
Bot flg. splice	390.00	B	2185.38	L	15871.	29000.	0.547
Bot flg. splice	402.00	B	2359.60	L	9998.	29000.	0.345
Bot flg. splice	473.00	B	1341.85	L	5496.	29000.	0.190
Bot flg. splice	485.00	B	788.41	L	4359.	29000.	0.150
Trans. stiff. toe	385.00	C	2084.68	L	15075.	21000.	0.718
Trans. stiff. toe	390.00	C	2178.87	L	15571.	21000.	0.741
Trans. stiff. toe	395.00	C	2250.74	L	15929.	21000.	0.759
Trans. stiff. toe	400.00	C	2322.60	L	8290.	21000.	0.395
Trans. stiff. toe	405.00	C	2385.03	L	8478.	21000.	0.404
Trans. stiff. toe	410.00	C	2409.74	L	8539.	21000.	0.407
Trans. stiff. toe	415.00	C	2434.45	L	8600.	21000.	0.410
Trans. stiff. toe	420.00	C	2459.16	L	8661.	21000.	0.412
Trans. stiff. toe	425.00	C	2418.75	L	8502.	21000.	0.405
Trans. stiff. toe	430.00	C	2378.35	L	8343.	21000.	0.397
Trans. stiff. toe	435.00	C	2337.94	L	8184.	21000.	0.390
Trans. stiff. toe	440.00	C	2254.72	L	7880.	21000.	0.375
Trans. stiff. toe	445.00	C	2160.80	L	7540.	21000.	0.359
Trans. stiff. toe	450.00	C	2066.88	L	7201.	21000.	0.343
Trans. stiff. toe	455.00	C	1937.28	L	6741.	21000.	0.321
Trans. stiff. toe	460.00	C	1783.90	L	6200.	21000.	0.295
Trans. stiff. toe	465.00	C	1630.52	L	5660.	21000.	0.270
Trans. stiff. toe	470.00	C	1450.77	L	5031.	21000.	0.240
Trans. stiff. toe	475.00	C	1231.48	L	4268.	21000.	0.203
Trans. stiff. toe	480.00	C	1012.18	L	4086.	21000.	0.195
Trans. stiff. toe	485.00	C	784.45	L	3163.	21000.	0.151
Trans. stiff. toe	490.00	C	522.97	L	2109.	21000.	0.100

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Cost Schedule for Web Section 5

	lb
Flange	24239.7
Web	14393.8
Web stiffeners	2817.5
Bearing stiff.	163.3
Total steel	41614.3

Welding	Vol	lbs
Flange-web	257.2	72.9
Trans.stiff.-web (1/ 4 cont.)	207.0	58.7
Brng.stiff.(1)-web(1/ 4 cont.)	9.0	2.6

Total welding * 473.2 134.2

Total steel and weld 41748.5

Summary Tables

Girder 4 Service Shear -k

Tenth Point	Location	Noncomp Dead	Comp Dead	Max LL+I	Range
0	0.00	68.18	6.27	58.48 L	67.04
Top flg.spl.	15.00	51.92	4.70	54.03	61.31
Bot flg.spl.	15.00	51.92	4.70	54.03	61.31
1	16.00	50.80	4.59	53.61 T	60.89
Top flg.spl.	27.00	38.27	3.45	47.69	55.16
Bot flg.spl.	27.00	38.27	3.45	47.69	55.16
2	32.00	32.50	2.92	44.76 T	53.65
3	48.00	13.76	1.22	34.31 T	53.34
4	64.00	-4.94	-0.46	26.79 T	51.95
5	80.00	-23.67	-2.14	-40.67 T	65.69
6	96.00	-41.06	-3.77	-40.25 T	55.73
Top flg.spl.	98.00	-43.15	-3.97	-40.57	55.12
Top flg.spl.	110.00	-55.41	-5.17	-44.19	54.57
Bot flg.spl.	98.00	-43.15	-3.97	-40.57	55.12
Bot flg.spl.	110.00	-55.41	-5.17	-44.19	54.57
7	112.00	-57.31	-5.36	-45.12 L	54.90
Top flg.spl.	128.00	-71.27	-6.86	-55.77	62.15
Bot flg.spl.	128.00	-71.27	-6.86	-55.77	62.15
Top flg.spl.	144.00	-89.15	-8.51	-63.77	68.05
Bot flg.spl.	144.00	-89.15	-8.51	-63.77	68.05
10	160.00L	-108.45	-10.19	-77.09 L	80.89
10	160.00R	96.43	9.28	76.29 L	85.70
Top flg.spl.	178.00	74.77	7.39	62.63	72.05
Top flg.spl.	193.00	57.30	5.78	54.20	65.19
Bot flg.spl.	178.00	74.77	7.39	62.63	72.05
Bot flg.spl.	193.00	57.30	5.78	54.20	65.19
12	196.00	53.97	5.46	52.54 L	63.96
13	214.00	35.01	3.59	42.69 L	57.52
14	232.00	18.31	1.84	34.87 T	55.21
15	250.00	0.04	0.00	27.68 T	54.07
16	268.00	-18.22	-1.84	-33.97 L	55.44
17	286.00	-34.88	-3.58	-43.35 L	58.65
18	304.00	-53.81	-5.45	-52.56 L	63.86
Top flg.spl.	307.00	-57.15	-5.77	-54.26	65.09
Bot flg.spl.	307.00	-57.15	-5.77	-54.26	65.09
Top flg.spl.	322.00	-74.59	-7.38	-63.39	72.80
Bot flg.spl.	322.00	-74.59	-7.38	-63.39	72.80
20	340.00L	-96.25	-9.27	-76.11 L	85.53
20	340.00R	108.67	10.20	76.99 L	80.80
Top flg.spl.	356.00	89.36	8.52	64.24	68.63
Bot flg.spl.	356.00	89.36	8.52	64.24	68.63

Top flg.spl.	372.00	71.47	6.87	54.88	60.57
Bot flg.spl.	372.00	71.47	6.87	54.88	60.57
23	388.00	57.45	5.37	45.91 L	54.76
Top flg.spl.	390.00	55.54	5.18	45.06	54.44
Top flg.spl.	402.00	43.28	3.98	41.18	53.94
Bot flg.spl.	390.00	55.54	5.18	45.06	54.44
Bot flg.spl.	402.00	43.28	3.98	41.18	53.94
24	404.00	41.19	3.78	40.81 T	54.76
25	420.00	23.78	2.15	40.64 T	69.78
26	436.00	5.05	0.47	26.96 T	52.27
27	452.00	-13.65	-1.21	-33.17 T	53.93
28	468.00	-32.37	-2.91	-41.64 T	55.23
Top flg.spl.	473.00	-38.13	-3.44	-44.23	55.86
Bot flg.spl.	473.00	-38.13	-3.44	-44.23	55.86
29	484.00	-50.67	-4.58	-49.84 T	57.62
Top flg.spl.	485.00	-51.78	-4.69	-50.37	58.00
Bot flg.spl.	485.00	-51.78	-4.69	-50.37	58.00
30	500.00	-68.04	-6.26	-58.43 L	66.90

T - governed by truck loading
L - governed by lane loading

Girder 4 Truck-Lane Shear Ranges - k

Tenth	Loc	Truck		Lane	
		Max LL+I	Range	Max LL+I	Range
0	0.00	56.69	63.59	58.48	67.04
Top flg.spl.	15.00	52.91	59.75	49.50	57.92
Bot flg.spl.	15.00	52.91	59.75	49.50	57.92
1	16.00	52.52	59.42	48.89	57.36
Top flg.spl.	27.00	46.91	53.99	42.07	51.17
Bot flg.spl.	27.00	46.91	53.99	42.07	51.17
2	32.00	44.09	52.59	38.97	49.28
3	48.00	33.92	52.58	29.08	47.12
4	64.00	26.34	51.30	23.36	45.39
5	80.00	-40.09	65.69	-32.83	47.55
6	96.00	-39.16	54.56	-38.41	50.24
Top flg.spl.	98.00	-39.35	53.89	-39.18	50.61
Top flg.spl.	110.00	-41.96	53.55	-44.06	52.72
Bot flg.spl.	98.00	-39.35	53.89	-39.18	50.61
Bot flg.spl.	110.00	-41.96	53.55	-44.06	52.72
7	112.00	-42.62	53.68	-45.12	53.42
Top flg.spl.	128.00	-50.36	57.31	-55.77	62.15
Bot flg.spl.	128.00	-50.36	57.31	-55.77	62.15
Top flg.spl.	144.00	-54.13	57.99	-63.77	68.05
Bot flg.spl.	144.00	-54.13	57.99	-63.77	68.05
10	160.00L	-58.09	61.73	-77.09	80.89
10	160.00R	59.16	66.83	76.29	85.70
Top flg.spl.	178.00	54.59	62.26	62.63	72.05
Top flg.spl.	193.00	49.04	56.64	54.20	65.19
Bot flg.spl.	178.00	54.59	62.26	62.63	72.05
Bot flg.spl.	193.00	49.04	56.64	54.20	65.19
12	196.00	47.94	55.93	52.54	63.96
13	214.00	41.50	54.53	42.69	57.52
14	232.00	33.85	53.73	33.27	53.55
15	250.00	26.67	52.12	25.89	51.65
16	268.00	-33.00	54.04	-33.41	53.15
17	286.00	-40.69	55.10	-43.35	58.65
18	304.00	-46.98	55.90	-52.56	63.86
Top flg.spl.	307.00	-48.10	56.53	-54.26	65.09

Bot flg.spl.	307.00	-48.10	56.53	-54.26	65.09
Top flg.spl.	322.00	-54.07	61.81	-63.39	72.80
Bot flg.spl.	322.00	-54.07	61.81	-63.39	72.80
20	340.00L	-56.71	64.45	-76.11	85.53
20	340.00R	59.20	62.92	76.99	80.80
Top flg.spl.	356.00	54.92	58.64	64.24	68.63
Bot flg.spl.	356.00	54.92	58.64	64.24	68.63
Top flg.spl.	372.00	51.30	57.03	54.88	60.57
Bot flg.spl.	372.00	51.30	57.03	54.88	60.57
23	388.00	43.90	53.81	45.91	54.46
Top flg.spl.	390.00	43.23	53.63	44.83	53.74
Top flg.spl.	402.00	40.29	53.03	38.49	49.07
Bot flg.spl.	390.00	43.23	53.63	44.83	53.74
Bot flg.spl.	402.00	40.29	53.03	38.49	49.07
24	404.00	40.01	53.88	37.65	49.03
25	420.00	39.95	69.30	32.85	55.25
26	436.00	26.51	51.59	23.08	44.51
27	452.00	-32.66	53.06	-29.50	47.27
28	468.00	-40.58	53.79	-39.25	52.53
Top flg.spl.	473.00	-43.12	54.28	-42.23	54.14
Bot flg.spl.	473.00	-43.12	54.28	-42.23	54.14
29	484.00	-48.84	55.80	-48.71	57.62
Top flg.spl.	485.00	-49.30	56.08	-49.31	58.08
Bot flg.spl.	485.00	-49.30	56.08	-49.31	58.08
30	500.00	-55.35	62.31	-58.43	66.90

Girder 4 Factored Reactions - k

Loc	Noncomp Dead	Comp Dead	LL+I Down	LL+I Up	Max Total	Min Total
0.00	88.92	8.16	128.81	-31.33	225.88	65.75
Steel	27.99					
Conc	60.93					
160.00	266.65	25.31	255.41	-45.50	547.37	246.46
Steel	76.35					
Conc	190.30					
340.00	266.70	25.32	255.47	-45.50	547.49	246.51
Steel	76.36					
Conc	190.33					
500.00	88.74	8.14	128.71	-31.33	225.60	65.56
Steel	27.94					
Conc	60.80					

Unfactored Reactions - k

Loc	Noncomp Dead	Comp Dead	LL+I Down	LL+I Up	Max Total	Min Total

0.00	68.40	6.27	59.33	-14.43	134.00	60.24
Steel	21.53					
Conc	46.87					
160.00	205.11	19.47	117.65	-20.96	342.23	203.63
Steel	58.73					
Conc	146.38					
340.00	205.15	19.48	117.67	-20.96	342.30	203.67
Steel	58.74					
Conc	146.41					
500.00	68.26	6.26	59.29	-14.43	133.81	60.10
Steel	21.49					
Conc	46.77					

Girder 4 Service Moment - k-ft

Tenth Point	Location	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Range
0	0.00	0.00	0.00	0.00 L	-0.01 L	0.01
Top flg.spl	15.00	902.82	82.28	733.17	-121.31	854.48
Bot.flg.spl	15.00	902.82	82.28	733.17	-121.31	854.48
1	16.00	953.80	86.91	773.65 T	-129.40 L	903.06
Top flg.spl	27.00	1438.75	130.78	1136.12	-218.61	1354.72
Bot.flg.spl	27.00	1438.75	130.78	1136.12	-218.61	1354.72
2	32.00	1613.20	146.53	1278.57 L	-259.05 L	1537.62
3	48.00	1978.32	179.38	1640.78 L	-388.02 L	2028.80
4	64.00	2048.81	185.47	1813.75 L	-516.23 L	2329.99
5	80.00	1819.94	164.61	1815.55 L	-644.39 L	2459.93
6	96.00	1312.76	117.77	1612.97 L	-768.22 L	2381.19
Top flg.spl	98.00	1229.81	110.09	1576.75	-783.93	2360.68
Top flg.spl	110.00	638.29	55.43	1306.88	-879.19	2186.06
Bot.flg.spl	98.00	1229.81	110.09	1576.75	-783.93	2360.68
Bot.flg.spl	110.00	638.29	55.43	1306.88	-879.19	2186.06
7	112.00	527.46	45.00	1255.41 L	-895.32 L	2150.74
Top flg.spl	128.00	-489.48	-52.08	774.06	-1026.98	1801.03
Bot.flg.spl	128.00	-489.48	-52.08	774.06	-1026.98	1801.03
Top flg.spl	144.00	-1786.25	-176.17	433.81	-1517.39	1951.20
Bot.flg.spl	144.00	-1786.25	-176.17	433.81	-1517.39	1951.20
10	160.00	-3374.84	-326.38	380.13 L	-2378.60 L	2758.72
Top flg.spl	178.00	-1835.34	-176.41	386.50	-1429.73	1816.23
Top flg.spl	193.00	-850.82	-77.74	668.38	-936.94	1605.33
Bot.flg.spl	178.00	-1835.34	-176.41	386.50	-1429.73	1816.23
Bot.flg.spl	193.00	-850.82	-77.74	668.38	-936.94	1605.33
12	196.00	-682.25	-60.78	726.93 T	-873.68 L	1600.61
13	214.00	130.86	21.59	1093.38 T	-741.26 L	1834.64
14	232.00	618.22	70.92	1343.89 L	-713.03 L	2056.93
15	250.00	784.31	87.57	1433.40 L	-680.05 L	2113.45
16	268.00	619.81	71.02	1343.92 L	-712.89 L	2056.81

17	286.00	134.32	21.81	1093.63 T	-740.97 L	1834.60
18	304.00	-665.24	-59.63	678.43 T	-873.19 L	1551.62
Top flg.spl	307.00	-833.90	-76.60	618.25	-936.43	1554.67
Bot.flg.spl	307.00	-833.90	-76.60	618.25	-936.43	1554.67
Top flg.spl	322.00	-1828.93	-175.93	355.98	-1429.17	1785.15
Bot.flg.spl	322.00	-1828.93	-175.93	355.98	-1429.17	1785.15
20	340.00	-3374.45	-326.36	380.31 L	-2378.17 L	2758.48
Top flg.spl	356.00	-1791.05	-176.53	471.94	-1517.37	1989.30
Bot.flg.spl	356.00	-1791.05	-176.53	471.94	-1517.37	1989.30
Top flg.spl	372.00	-504.33	-53.15	773.93	-1027.14	1801.07
Bot.flg.spl	372.00	-504.33	-53.15	773.93	-1027.14	1801.07
23	388.00	536.09	45.55	1254.61 L	-895.51 L	2150.13
Top flg.spl	390.00	647.35	56.00	1306.01	-879.38	2185.38
Top flg.spl	402.00	1227.02	109.89	1575.51	-784.09	2359.60
Bot.flg.spl	390.00	647.35	56.00	1306.01	-879.38	2185.38
Bot.flg.spl	402.00	1227.02	109.89	1575.51	-784.09	2359.60
24	404.00	1309.15	117.52	1611.71 L	-768.38 L	2380.09
25	420.00	1817.08	164.41	1814.64 L	-644.52 L	2459.16
26	436.00	2047.75	185.40	1813.52 L	-516.34 L	2329.86
27	452.00	1979.08	179.43	1641.21 L	-388.10 L	2029.31
28	468.00	1610.94	146.41	1279.39 L	-259.10 L	1538.49
Top flg.spl	473.00	1435.04	130.57	1126.95	-218.65	1345.60
Bot.flg.spl	473.00	1435.04	130.57	1126.95	-218.65	1345.60
29	484.00	946.08	86.45	725.58 T	-129.43 L	855.01
Top flg.spl	485.00	895.19	81.82	685.26	-121.34	806.60
Bot.flg.spl	485.00	895.19	81.82	685.26	-121.34	806.60
30	500.00	0.00	0.00	0.00 L	-0.01 L	0.01

T - governed by truck loading
L - governed by lane loading

At Bracing

20.00	1146.25	104.37	925.08	-161.79
40.00	1832.59	166.30	1483.33	-323.63
60.00	2059.25	186.48	1786.56	-484.19
80.00	1819.94	164.61	1815.55	-644.39
100.00	1142.51	102.00	1538.11	-799.69
120.00	53.97	-0.16	997.10	-916.30
140.00	-1434.70	-142.70	492.01	-1360.03
160.00	-3374.84	-326.38	380.13	-2378.60
180.00	-1688.14	-161.87	407.83	-1348.55
200.00	-472.18	-39.60	806.11	-807.65
220.00	329.51	41.71	1189.77	-720.27
240.00	731.70	82.35	1403.55	-698.96
260.00	732.55	82.41	1403.54	-698.89
280.00	331.05	41.80	1195.38	-720.04
300.00	-456.09	-38.52	762.68	-807.19
320.00	-1680.77	-161.32	374.68	-1347.99
340.00	-3374.45	-326.36	380.31	-2378.17
360.00	-1441.55	-143.20	527.71	-1360.07
380.00	46.66	-0.72	991.93	-916.50
400.00	1140.74	101.87	1536.89	-799.86
420.00	1817.08	164.41	1814.64	-644.52
440.00	2058.64	186.43	1786.49	-484.29
460.00	1832.44	166.30	1483.99	-323.70
480.00	1138.66	103.92	880.13	-161.83

Girder 4 Truck-Lane Moment Ranges - k-ft

OUTPUT.TXT

Tenth	Loc	Truck			Lane		
		Max LL+I	Min LL+I	Range	Max LL+I	Min LL+I	Range
0	0.00	0.00	-0.01	0.01	0.00	-0.01	0.01
Top flg.spl	15.00	718.26	-98.82	817.09	709.14	-121.31	830.45
Bot.flg.spl	15.00	718.26	-98.82	817.09	709.14	-121.31	830.45
1	16.00	757.68	-105.42	863.10	749.53	-129.40	878.93
Top flg.spl	27.00	1111.06	-178.09	1289.15	1131.17	-218.61	1349.78
Bot.flg.spl	27.00	1111.06	-178.09	1289.15	1131.17	-218.61	1349.78
2	32.00	1244.38	-211.04	1455.42	1278.57	-259.05	1537.62
3	48.00	1556.30	-316.12	1872.42	1640.78	-388.02	2028.80
4	64.00	1670.99	-420.60	2091.59	1813.75	-516.23	2329.99
5	80.00	1635.34	-525.04	2160.38	1815.55	-644.39	2459.93
6	96.00	1423.53	-625.96	2049.49	1612.97	-768.22	2381.19
Top flg.spl	98.00	1387.41	-638.78	2026.19	1576.75	-783.93	2360.68
Top flg.spl	110.00	1121.03	-716.78	1837.81	1306.88	-879.19	2186.06
Bot.flg.spl	98.00	1387.41	-638.78	2026.19	1576.75	-783.93	2360.68
Bot.flg.spl	110.00	1121.03	-716.78	1837.81	1306.88	-879.19	2186.06
7	112.00	1074.48	-729.83	1804.31	1255.41	-895.32	2150.74
8	128.00	671.99	-834.90	1506.89	774.06	-1026.98	1801.03
Top flg.spl	128.00	671.99	-834.90	1506.89	774.06	-1026.98	1801.03
Bot.flg.spl	128.00	671.99	-834.90	1506.89	774.06	-1026.98	1801.03
9	144.00	291.04	-942.14	1233.19	433.81	-1517.39	1951.20
Top flg.spl	144.00	291.04	-942.14	1233.19	433.81	-1517.39	1951.20
Bot.flg.spl	144.00	291.04	-942.14	1233.19	433.81	-1517.39	1951.20
10	160.00	325.65	-1054.00	1379.65	380.13	-2378.60	2758.72
11	178.00	320.12	-832.66	1152.78	386.50	-1429.73	1816.23
Top flg.spl	178.00	320.12	-832.66	1152.78	386.50	-1429.73	1816.23
Top flg.spl	193.00	657.78	-726.35	1384.13	569.70	-936.94	1506.64
Bot.flg.spl	178.00	320.12	-832.66	1152.78	386.50	-1429.73	1816.23
Bot.flg.spl	193.00	657.78	-726.35	1384.13	569.70	-936.94	1506.64
12	196.00	721.32	-705.55	1426.87	620.40	-873.68	1494.08
13	214.00	1074.57	-583.98	1658.55	1023.06	-741.26	1764.32
14	232.00	1307.51	-457.52	1765.03	1332.55	-713.03	2045.58
15	250.00	1375.92	-327.11	1703.03	1433.40	-680.05	2113.45
16	268.00	1307.50	-457.43	1764.93	1332.84	-712.89	2045.73
17	286.00	1074.78	-583.87	1658.65	1023.64	-740.97	1764.61
18	304.00	672.80	-705.45	1378.24	585.59	-873.19	1458.78
Top flg.spl	307.00	606.42	-726.25	1332.67	532.85	-936.43	1469.27
Bot.flg.spl	307.00	606.42	-726.25	1332.67	532.85	-936.43	1469.27
19	322.00	277.17	-832.60	1109.76	355.98	-1429.17	1785.15
Top flg.spl	322.00	277.17	-832.60	1109.76	355.98	-1429.17	1785.15
Bot.flg.spl	322.00	277.17	-832.60	1109.76	355.98	-1429.17	1785.15
20	340.00	325.72	-1054.01	1379.72	380.31	-2378.17	2758.48
21	356.00	320.54	-942.14	1262.68	471.94	-1517.37	1989.30
Top flg.spl	356.00	320.54	-942.14	1262.68	471.94	-1517.37	1989.30
Bot.flg.spl	356.00	320.54	-942.14	1262.68	471.94	-1517.37	1989.30
22	372.00	672.33	-834.90	1507.23	773.93	-1027.14	1801.07
Top flg.spl	372.00	672.33	-834.90	1507.23	773.93	-1027.14	1801.07
Bot.flg.spl	372.00	672.33	-834.90	1507.23	773.93	-1027.14	1801.07
23	388.00	1074.56	-729.83	1804.39	1254.61	-895.51	2150.13
Top flg.spl	390.00	1121.04	-716.78	1837.81	1306.01	-879.38	2185.38
Top flg.spl	402.00	1386.60	-638.77	2025.37	1575.51	-784.09	2359.60
Bot.flg.spl	390.00	1121.04	-716.78	1837.81	1306.01	-879.38	2185.38
Bot.flg.spl	402.00	1386.60	-638.77	2025.37	1575.51	-784.09	2359.60
24	404.00	1422.69	-625.95	2048.64	1611.71	-768.38	2380.09
25	420.00	1634.93	-525.04	2159.97	1814.64	-644.52	2459.16
26	436.00	1670.99	-420.59	2091.58	1813.52	-516.34	2329.86
27	452.00	1556.88	-316.12	1873.00	1641.21	-388.10	2029.31
28	468.00	1245.28	-211.03	1456.32	1279.39	-259.10	1538.49
Top flg.spl	473.00	1101.96	-178.09	1280.04	1123.20	-218.65	1341.85
Bot.flg.spl	473.00	1101.96	-178.09	1280.04	1123.20	-218.65	1341.85
29	484.00	709.60	-105.42	815.02	707.32	-129.43	836.75

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OUTPUT.TXT

Top flg.spl	485.00	670.35	-98.82	769.17	667.07	-121.34	788.41
Bot.flg.spl	485.00	670.35	-98.82	769.17	667.07	-121.34	788.41
30	500.00	0.00	-0.01	0.01	0.00	-0.01	0.01

Girder 4 Service Torque - k-ft

Tenth Point	Location	DL1	DL2	Max LL+I	Min LL+I	Range
0	0.00	0.00	-0.01	6.66	-8.92	15.58
TOP FLG.SPL	15.00	-0.01	-0.01	6.70	-9.00	15.69
BOT.FLG.SPL	15.00	-0.01	-0.01	6.70	-9.00	15.69
1	16.00	0.00	-0.01	6.67 T	-8.96 L	15.64
TOP FLG.SPL	27.00	0.02	0.01	6.24	-8.25	14.49
BOT.FLG.SPL	27.00	0.02	0.01	6.24	-8.25	14.49
2	32.00	0.00	0.02	5.89 L	-7.73 L	13.62
3	48.00	0.00	-0.01	4.15 L	-5.17 L	9.31
4	64.00	-0.05	-0.04	2.82 L	-2.96 L	5.78
5	80.00	-0.12	-0.08	3.95 L	-3.32 L	7.27
6	96.00	-0.12	-0.08	2.77 L	-1.92 L	4.69
TOP FLG.SPL	98.00	-0.12	-0.08	2.85	-1.94	4.79
TOP FLG.SPL	110.00	-0.01	0.00	4.46	-2.94	7.40
BOT.FLG.SPL	98.00	-0.12	-0.08	2.85	-1.94	4.79
BOT.FLG.SPL	110.00	-0.01	0.00	4.46	-2.94	7.40
7	112.00	0.00	0.01	4.80 L	-3.22 L	8.02
TOP FLG.SPL	128.00	0.02	0.06	8.39	-6.67	15.06
BOT.FLG.SPL	128.00	0.02	0.06	8.39	-6.67	15.06
TOP FLG.SPL	144.00	0.06	0.05	9.87	-8.66	18.52
BOT.FLG.SPL	144.00	0.06	0.05	9.87	-8.66	18.52
10	160.00	0.06	0.05	9.89 L	-9.44 L	19.33
TOP FLG.SPL	178.00	0.05	0.03	9.86	-9.41	19.27
TOP FLG.SPL	193.00	-0.01	-0.05	8.60	-8.94	17.53
BOT.FLG.SPL	178.00	0.05	0.03	9.86	-9.41	19.27
BOT.FLG.SPL	193.00	-0.01	-0.05	8.60	-8.94	17.53
12	196.00	0.00	-0.06	8.28 T	-8.74 L	17.02
13	214.00	0.00	-0.05	5.96 T	-6.81 L	12.77
14	232.00	0.00	-0.01	3.83 L	-4.33 L	8.16
15	250.00	0.00	0.00	3.64 L	-3.64 L	7.28
16	268.00	0.00	0.01	4.33 L	-3.83 L	8.16
17	286.00	0.00	0.05	6.81 T	-5.96 L	12.77
18	304.00	0.00	0.06	8.74 T	-8.28 L	17.02
TOP FLG.SPL	307.00	0.01	0.05	8.94	-8.60	17.54
BOT.FLG.SPL	307.00	0.01	0.05	8.94	-8.60	17.54
TOP FLG.SPL	322.00	-0.05	-0.02	9.41	-9.86	19.27
BOT.FLG.SPL	322.00	-0.05	-0.02	9.41	-9.86	19.27
20	340.00	-0.05	-0.05	9.42 L	-9.88 L	19.30
TOP FLG.SPL	356.00	-0.05	-0.05	8.66	-9.86	18.52
BOT.FLG.SPL	356.00	-0.05	-0.05	8.66	-9.86	18.52
TOP FLG.SPL	372.00	-0.02	-0.06	6.67	-8.39	15.06
BOT.FLG.SPL	372.00	-0.02	-0.06	6.67	-8.39	15.06
23	388.00	0.00	-0.01	3.22 L	-4.80 L	8.01
TOP FLG.SPL	390.00	0.01	0.00	2.94	-4.46	7.40
TOP FLG.SPL	402.00	0.11	0.08	1.93	-2.85	4.79
BOT.FLG.SPL	390.00	0.01	0.00	2.94	-4.46	7.40
BOT.FLG.SPL	402.00	0.11	0.08	1.93	-2.85	4.79
24	404.00	0.12	0.08	1.92 L	-2.77 L	4.69
25	420.00	0.12	0.08	3.32 L	-3.95 L	7.27
26	436.00	0.05	0.04	2.96 L	-2.82 L	5.78
27	452.00	0.00	0.01	5.17 L	-4.14 L	9.31
28	468.00	0.00	-0.02	7.72 L	-5.89 L	13.62
TOP FLG.SPL	473.00	-0.02	-0.01	8.25	-6.24	14.49
BOT.FLG.SPL	473.00	-0.02	-0.01	8.25	-6.24	14.49

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29	484.00	0.00	0.01	8.96 T	-6.67 L	15.64
TOP FLG.SPL	485.00	0.01	0.01	9.00	-6.70	15.69
BOT.FLG.SPL	485.00	0.01	0.01	9.00	-6.70	15.69
30	500.00	0.00	0.01	8.92	-6.66	15.58

Girder 4 Combined Factored Moment - k-ft

Tenth Pt	Loc	Tot Dead+Max LL+I	Tot Dead+Min LL+I
0	0.00	0.01	-0.01
1	16.00	3032.53	1071.99
2	32.00	5063.43	1725.25
3	48.00	6367.13	1962.60
4	64.00	6842.23	1783.82
5	80.00	6521.48	1180.96
6	96.00	5361.44	191.88
7	112.00	3469.71	-1199.54
8	128.00	976.46	-2933.58
9	144.00	-1609.35	-5845.41
10	160.00	-3986.34	-9975.52
11	178.00	-1776.19	-5719.22
12	196.00	612.23	-2862.70
13	214.00	2571.92	-1411.08
14	232.00	3813.47	-652.11
15	250.00	4245.36	-342.93
16	268.00	3815.73	-649.61
17	286.00	2577.26	-1405.66
18	304.00	530.53	-2838.03
19	322.00	-1833.48	-5709.05
20	340.00	-3985.41	-9974.07
21	356.00	-1533.27	-5852.05
22	372.00	955.47	-2954.66
23	388.00	3479.90	-1188.03
24	404.00	5353.69	186.51
25	420.00	6515.54	1176.70
26	436.00	6840.23	1782.12
27	452.00	6369.13	1963.49
28	468.00	5062.11	1722.05
29	484.00	2917.52	1061.30
30	500.00	0.01	-0.01

Contraflexure Points

Service Noncomposite Dead

120.30 ft
211.10 ft
289.02 ft
379.76 ft

Top flange tension for region between contraflexure pts.
120.30 - 211.10
289.02 - 379.76

Bottom flange tension for region between contraflexure pts.
0.00 - 120.30
211.10 - 289.02
379.76 - 500.00

Service Tot Dead+Max LL+I

130.11 ft
196.23 ft
303.36 ft
369.98 ft

Top flange tension for region between contraflexure pts.
130.11 - 196.23
303.36 - 369.98

Bottom flange tension for region between contraflexure pts.
0.00 - 130.11
196.23 - 303.36
369.98 - 500.00

Service Tot Dead+Min LL+I

106.76 ft
233.99 ft
266.14 ft
393.17 ft

Top flange tension for region between contraflexure pts.
106.76 - 233.99
266.14 - 393.17

Bottom flange tension for region between contraflexure pts.
0.00 - 106.76
233.99 - 266.14
393.17 - 500.00

Factored Tot Dead+Max LL+I

134.04 ft
191.39 ft
308.04 ft
365.86 ft

Top flange tension for region between contraflexure pts.
134.04 - 191.39
308.04 - 365.86

Bottom flange tension for region between contraflexure pts.
0.00 - 134.04
191.39 - 308.04
365.86 - 500.00

Factored Tot Dead+Min LL+I

98.21 ft
401.83 ft

Top flange tension for region between contraflexure pts.
98.21 - 401.83

Bottom flange tension for region between contraflexure pts.
0.00 - 98.21
401.83 - 500.00

Factored Composite Dead - Construction

119.42 ft
209.28 ft
290.82 ft
380.62 ft

Top flange tension for region between contraflexure pts.
119.42 - 209.28
290.82 - 380.62

Rebar termination for 10.50.2.3 requirement
no limit - no limit
no limit - no limit
Modulus of rupture - 410.79

Bottom flange tension for region between contraflexure pts.
0.00 - 119.42
209.28 - 290.82
380.62 - 500.00

Total Dead + 1.67 Min LL+I - 10.57 Overload

98.21 ft
401.83 ft

Top flange tension for region between contraflexure pts.
98.21 - 401.83
290.82 - 380.62

Rebar termination for 10.50.2.3 requirement - noncomp dead excluded
104.35 - 199.54
300.71 - 395.65
Modulus of rupture - 410.79

Bottom flange tension for region between contraflexure pts.
0.00 - 98.21
401.83 - 290.82
380.62 - 500.00

Girder 4 Dimensions

Tenth Point	Loc	-Top Flange- tfw	tft	weld	----Web---- wd	wt	weld	-Bot Flange- bfw	bft	Area
0	0.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpL	15.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpR	15.00	18.00	1.625	1/ 4	72.00	0.500	1/ 4	18.00	1.625	94.50
1	16.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpL	27.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpR	27.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
2	32.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
3	48.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
4	64.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
5	80.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
6	96.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpL	98.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpR	98.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpL	110.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpR	110.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00

Tenth Point	Loc	-Top Flange- tfw	tft	weld	----Web---- wd	wt	weld	-Bot Flange- bfw	bft	Area
7	112.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpL	128.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
SpR	128.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpL	144.00	18.00	1.750	5/16	89.41	0.500	5/16	18.00	1.750	107.71
SpR	144.00	18.00	2.000	5/16	89.77	0.500	5/16	18.00	2.000	116.88
10	160.00	18.00	2.000	5/16	105.00	0.500	5/16	18.00	2.000	124.50
SpL	178.00	18.00	2.000	5/16	85.51	0.500	5/16	18.00	2.000	114.75
SpR	178.00	18.00	1.750	5/16	85.18	0.500	5/16	18.00	1.750	105.59
SpL	193.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpR	193.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
12	196.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
13	214.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
14	232.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
15	250.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
16	268.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
17	286.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
18	304.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
SpL	307.00	18.00	1.000	5/16	72.00	0.500	5/16	18.00	1.000	72.00
SpR	307.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpL	322.00	18.00	1.750	5/16	85.18	0.500	5/16	18.00	1.750	105.59
SpR	322.00	18.00	2.000	5/16	85.51	0.500	5/16	18.00	2.000	114.75
20	340.00	18.00	2.000	5/16	105.00	0.500	5/16	18.00	2.000	124.50
SpL	356.00	18.00	2.000	5/16	89.77	0.500	5/16	18.00	2.000	116.88
SpR	356.00	18.00	1.750	5/16	89.41	0.500	5/16	18.00	1.750	107.71
SpL	372.00	18.00	1.750	5/16	72.00	0.500	5/16	18.00	1.750	99.00
SpR	372.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
23	388.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpL	390.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00
SpR	390.00	18.00	1.625	1/ 4	72.00	0.500	1/ 4	18.00	1.625	94.50
SpL	402.00	18.00	1.625	1/ 4	72.00	0.500	1/ 4	18.00	1.625	94.50
SpR	402.00	18.00	2.000	1/ 4	72.00	0.500	1/ 4	18.00	2.000	108.00
24	404.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
25	420.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
26	436.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
27	452.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
28	468.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpL	473.00	18.00	2.000	5/16	72.00	0.500	5/16	18.00	2.000	108.00
SpR	473.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
29	484.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpL	485.00	18.00	1.625	5/16	72.00	0.500	5/16	18.00	1.625	94.50
SpR	485.00	18.00	0.750	5/16	72.00	0.500	5/16	18.00	0.750	63.00
30	500.00	18.00	0.750	1/ 4	72.00	0.500	1/ 4	18.00	0.750	63.00

Theoretical Flange Splice Locations

Tenth Pt Range	Location
0 - 1	a
1 - 2	a
6 - 7	96.47
7 - 8	a
8 - 9	a
9 - 10	a
10 - 11	a
11 - 12	178.59
18 - 19	313.00
19 - 20	a
20 - 21	a
21 - 22	a
22 - 23	a
23 - 24	396.00

28 - 29 a
29 - 30 a

a. Splice not required in this range.

Stiffener Spacing

Panel Start	Panel End	Uniform in Panel
0.00	500.00 ft	100 @ 60.00 in

Longitudinal Web Stiffeners

Web Section	Width	Thickness
2	4.00	0.500
4	4.00	0.500

Bearing Stiffeners

Location	Width	Thickness
0.00	8.00	0.500
160.00	8.00	0.500
340.00	8.00	0.500
500.00	8.00	0.500

Transverse Stiffeners

Web Section	Width	Thickness
1	6.00	0.500
2	6.00	0.500
3	6.00	0.500
4	6.00	0.500
5	6.00	0.500

Girder 4 Elastic Section Properties for Stiffness Analysis

Tenth Point	Noncomp I	Noncomp na from Bott	Noncomp na from Top Flg	Comp (n = 9) I	Comp (n = 9) na from Bott	Comp (n = 9) na from Top Flg	Comp (3n = 27) I	Comp (3n = 27) na from Bott	Comp (3n = 27) na from Top Flg
0	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19
1	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
2	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
3	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
4	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
5	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
6	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
7	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
8	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
9	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
10	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20

11	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
12	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
13	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
14	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
15	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
16	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
17	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
18	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
19	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
20	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
21	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
22	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
23	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
24	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
25	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
26	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
27	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
28	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
29	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
30	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19

Girder 4 Elastic Section Properties for Pos Mom Stress

Tenth Point	Noncomp I	Noncomp na from Bott	Noncomp na from Top Flg	Comp (n = 9) I	Comp (n = 9) na from Bott	Comp (n = 9) na from Top Flg	Comp (3n = 27) I	Comp (3n = 27) na from Bott	Comp (3n = 27) na from Top Flg
0	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19
1	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
2	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
3	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
4	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
5	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
6	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
7	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
8	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
9	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
10	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
11	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
12	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
13	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
14	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
15	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
16	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
17	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
18	63516.	37.00	37.00	130133.	58.52	15.48	98855.	48.42	25.58
19	154289.	44.55	44.55	261896.	64.24	24.86	206238.	54.05	35.05
20	254340.	54.50	54.50	416230.	76.39	32.61	330588.	64.80	44.20
21	171156.	46.67	46.67	289059.	66.97	26.37	227851.	56.43	36.91
22	75920.	37.25	37.25	146463.	57.51	16.99	112334.	47.71	26.79
23	51278.	36.75	36.75	113450.	59.70	13.80	85325.	49.32	24.18
24	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
25	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
26	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
27	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
28	114144.	38.00	38.00	194119.	55.24	20.76	152917.	46.35	29.65
29	94842.	37.62	37.62	170481.	56.25	19.00	132567.	46.91	28.34
30	51278.	36.75	36.75	112217.	59.26	14.24	82525.	48.31	25.19

OUTPUT.TXT

Girder 4 Elastic Section Properties for Neg Mom Stress

Tenth Point	Noncomp I	Noncomp na from Bott	Noncomp na from Top Flg	Comp (n = 9) I	Comp (n = 9) na from Bott	Comp (n = 9) na from Top Flg	Comp (3n = 27) I	Comp (3n = 27) na from Bott	Comp (3n = 27) na from Top Flg
0	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75
1	94842.	37.62	37.62	94842.	37.62	37.62	94842.	37.62	37.62
2	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
3	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
4	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
5	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
6	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
7	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75
8	75920.	37.25	37.25	75920.	37.25	37.25	75920.	37.25	37.25
9	171156.	46.67	46.67	171156.	46.67	46.67	171156.	46.67	46.67
10	254340.	54.50	54.50	259366.	55.17	53.83	259366.	55.17	53.83
11	154289.	44.55	44.55	154289.	44.55	44.55	154289.	44.55	44.55
12	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
13	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
14	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
15	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
16	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
17	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
18	63516.	37.00	37.00	63516.	37.00	37.00	63516.	37.00	37.00
19	154289.	44.55	44.55	154289.	44.55	44.55	154289.	44.55	44.55
20	254340.	54.50	54.50	259366.	55.17	53.83	259366.	55.17	53.83
21	171156.	46.67	46.67	171156.	46.67	46.67	171156.	46.67	46.67
22	75920.	37.25	37.25	75920.	37.25	37.25	75920.	37.25	37.25
23	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75
24	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
25	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
26	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
27	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
28	114144.	38.00	38.00	114144.	38.00	38.00	114144.	38.00	38.00
29	94842.	37.62	37.62	94842.	37.62	37.62	94842.	37.62	37.62
30	51278.	36.75	36.75	51278.	36.75	36.75	51278.	36.75	36.75

Girder 4 Plastic Section Properties

Tenth Point	C (10-123)	C (10-124)	a (10-125)	C' (10-126)	Ybar (10-127 10-128)	Dp	D'	Pos Mom Mp (k-ft) or Mu of (10-129c) (10-129d)	Neg Mom Mp (k-ft)
0								noncmpct	noncmpct
1	1720	3024	7.25	652.0	1.13	9.88	10.08	10163.89	noncmpct
2	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
3	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
4	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
5	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
6	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
7	1720	2016	7.25	148.0	0.26	9.88	9.97	7040.14	noncmpct
8								noncmpct	noncmpct
9								noncmpct	noncmpct
10								noncmpct	noncmpct
11								noncmpct	noncmpct

OUTPUT.TXT

12								noncmpct	noncmpct
13	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
14	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
15	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
16	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
17	1720	2304	7.25	292.0	0.51	9.88	10.01	7925.14	noncmpct
18								noncmpct	noncmpct
19								noncmpct	noncmpct
20								noncmpct	noncmpct
21								noncmpct	noncmpct
22								noncmpct	noncmpct
23	1720	2016	7.25	148.0	0.26	9.88	9.97	7040.14	noncmpct
24	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
25	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
26	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
27	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
28	1720	3456	7.25	868.0	1.51	9.88	10.12	11525.14	noncmpct
29	1720	3024	7.25	652.0	1.13	9.88	10.08	10163.89	noncmpct
30								noncmpct	noncmpct

Girder 4 Elastic Noncomposite Section Properties at Web Splices

Splice Location	Web wd	Web wt	Top Flg tfw	Top Flg tft	Bott Flg bfw	Bott Flg bft	Area (in2)	I (in4)	na from Bott	na from Top
117.50L	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75
117.50R	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75
212.50L	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
212.50R	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
287.50L	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
287.50R	72.00	0.500	18.00	1.00	18.00	1.00	72.0	63516.	37.00	37.00
382.50L	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75
382.50R	72.00	0.500	18.00	0.75	18.00	0.75	63.0	51278.	36.75	36.75

Girder 4 Summary of Service Load Effects at Web Splice Locations

Splice Location: 117.50

Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
-62.4	-5.9	204.0	14.4

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
-44.8	54.4	942.1	-765.8

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
-48.3	55.8	1103.9	-940.1

Concurrent moment for max shear of -48.3 = 1120.4

Concurrent shear for max moment of 1103.9 = -7.5
Concurrent shear for min moment of -940.1 = -48.3

212.50

Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
36.5	3.7	75.5	16.0

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
42.1	54.6	1049.7	-594.3

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
43.5	58.0	993.1	-748.3

Concurrent moment for max shear of 43.5 = 993.5
Concurrent shear for max moment of 1049.7 = 38.9
Concurrent shear for min moment of -748.3 = 14.5

287.50

Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
-36.4	-3.7	79.7	16.3

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
-41.3	55.2	1047.7	-594.2

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
-44.1	59.1	992.1	-748.0

Concurrent moment for max shear of -44.1 = 994.0
Concurrent shear for max moment of 1047.7 = -28.4
Concurrent shear for min moment of -748.0 = -44.1

382.50

Dead Load

Noncomp Shr	Comp Shr	Noncomp Mom	Comp Mom
62.5	5.9	208.6	14.6

Live Load + Imp - Truck

Max Shr	Range	Max Mom	Min Mom
46.1	54.5	942.4	-765.8

Live Load + Imp - Lane

Max Shr	Range	Max Mom	Min Mom
48.9	56.5	1103.3	-940.3

Concurrent moment for max shear of 48.9 = 1119.2
Concurrent shear for max moment of 1103.3 = 48.9
Concurrent shear for min moment of -940.3 = 7.6

Parabolic interpolation used in this table.

Girder 4 Shear Strength at Web Splices

Splice Location	Web Depth	Web t Left of Spl	Web t Right of Spl	Stiff Spcng	Factored Shear at Spl	Shear Strngth Left of Splice	Perf Ratio	Shear Strngth Right of Splice	Perf Ratio
ft	in	in	in	in	k	k		k	

117.50	72.00	0.500	0.500	60.00	194.28	626.85	0.310	626.85	0.310
212.50	72.00	0.500	0.500	60.00	146.91	626.85	0.234	626.85	0.234
287.50	72.00	0.500	0.500	60.00	148.04	626.85	0.236	626.85	0.236
382.50	72.00	0.500	0.500	60.00	194.96	626.85	0.311	626.85	0.311

Girder 4 Grp I Factored Bending Stresses - ksi

Tenth Point	Loc	Top Flange: Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	LL+I Rng	Tot	Allow	Ratio
0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000
Top Flg.Spl.		-10.1	-0.4	-2.3	2.3	4.6	-12.8	32.0	0.399
Top Flg.Spl.		-5.6	-0.3	-2.1	1.3	3.4	-8.0	32.0	0.283
1	16.00	-5.9	-0.3	-2.2	1.3	3.6	-8.4	32.0	0.298
Top Flg.Spl.		-8.9	-0.4	-3.3	2.3	5.6	-12.6	32.0	0.443
Top Flg.Spl.		-7.5	-0.4	-3.2	1.9	5.1	-11.0	32.0	0.391
2	32.00	-8.4	-0.4	-3.6	2.2	5.8	-12.4	32.0	0.439
3	48.00	-10.3	-0.5	-4.6	3.4	7.9	-15.4	32.0	0.552
4	64.00	-10.6	-0.6	-5.1	4.5	9.5	-16.3	32.0	0.594
5	80.00	-9.5	-0.5	-5.1	5.6	10.6	-15.0	32.0	0.566
6	96.00	-6.8	-0.4	-4.5	6.7	11.2	-11.7	32.0	0.465
Top Flg.Spl.		-6.4	-0.3	-4.4	6.8	11.2	-11.1	32.0	0.448
Top Flg.Spl.		-7.6	-0.4	-4.6	8.1	12.7	-12.6	32.0	0.508
Top Flg.Spl.		-4.0	-0.2	-3.8	9.1	12.9	-7.9	32.0	0.357
Top Flg.Spl.		-7.1	-0.2	-4.1	16.4	20.6	-11.5	32.0	0.516
7	112.00	-5.9	-0.2	-4.0	16.7	20.7	10.6	32.0	0.493
Top Flg.Spl.		5.5	0.6	-2.5	19.2	21.6	25.2	32.0	0.788
Top Flg.Spl.		2.8	0.3	-2.2	10.0	12.2	13.1	32.0	0.410
10	160.00	11.3	1.1	-0.8	12.9	13.6	25.2	32.0	0.787
Top Flg.Spl.		7.8	0.8	-0.9	10.2	11.1	18.7	32.0	0.586
Top Flg.Spl.		8.8	0.8	-1.0	11.4	12.4	21.0	32.0	0.657
Top Flg.Spl.		4.9	0.5	-1.9	9.1	11.0	14.5	32.0	0.453
Top Flg.Spl.		7.7	0.7	-2.1	14.2	16.3	22.7	32.0	0.708
12	196.00	6.2	0.6	-2.3	13.3	15.5	20.0	32.0	0.625
13	214.00	-1.2	-0.1	-3.4	11.2	14.6	10.0	32.0	0.325
14	232.00	-5.6	-0.3	-4.2	10.8	15.0	-10.1	32.0	0.481
15	250.00	-7.1	-0.4	-4.4	10.3	14.8	-11.9	32.0	0.536
16	268.00	-5.6	-0.3	-4.2	10.8	15.0	-10.1	32.0	0.481
17	286.00	-1.2	-0.1	-3.4	11.2	14.6	9.9	32.0	0.325
18	304.00	6.0	0.5	-2.1	13.3	15.4	19.8	32.0	0.620
Top Flg.Spl.		7.6	0.7	-1.9	14.2	16.1	22.5	32.0	0.703
Top Flg.Spl.		4.9	0.4	-1.8	9.1	10.9	14.4	32.0	0.450
20	340.00	11.3	1.1	-0.8	12.9	13.6	25.2	32.0	0.787
Top Flg.Spl.		7.2	0.7	-1.1	10.2	11.3	18.1	32.0	0.566
Top Flg.Spl.		8.1	0.8	-1.1	11.4	12.6	20.3	32.0	0.634
23	388.00	-6.0	-0.2	-4.0	16.7	20.7	10.5	32.0	0.494
Top Flg.Spl.		-7.2	-0.2	-4.1	16.4	20.6	-11.6	32.0	0.517
Top Flg.Spl.		-4.0	-0.2	-3.8	9.1	12.9	-8.0	32.0	0.358
Top Flg.Spl.		-7.6	-0.4	-4.6	8.1	12.7	-12.5	32.0	0.508
Top Flg.Spl.		-6.4	-0.3	-4.4	6.8	11.2	-11.1	32.0	0.448
24	404.00	-6.8	-0.4	-4.5	6.7	11.2	-11.6	32.0	0.465
25	420.00	-9.4	-0.5	-5.1	5.6	10.6	-15.0	32.0	0.565
26	436.00	-10.6	-0.6	-5.1	4.5	9.5	-16.2	32.0	0.594
27	452.00	-10.3	-0.5	-4.6	3.4	7.9	-15.4	32.0	0.553
28	468.00	-8.4	-0.4	-3.6	2.2	5.8	-12.4	32.0	0.439
Top Flg.Spl.		-7.5	-0.4	-3.1	1.9	5.0	-11.0	32.0	0.389
Top Flg.Spl.		-8.9	-0.4	-3.3	2.3	5.5	-12.6	32.0	0.441
29	484.00	-5.9	-0.3	-2.1	1.3	3.4	-8.2	32.0	0.287
Top Flg.Spl.		-5.5	-0.3	-2.0	1.3	3.2	-7.8	32.0	0.271

Top	Flg.Spl.	-10.0	-0.4	-2.3	2.3	4.5	-12.7	32.0	0.396
30	500.00	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000

Governing expression for allowable compression stress

Tenth Pt	Expression
1	compact
2	compact
3	compact
4	compact
5	compact
6	compact
7	compact
13	compact
14	compact
15	compact
16	compact
17	compact
23	compact
24	compact
25	compact
26	compact
27	compact
28	compact
29	compact

Perf. ratio for compact section is (factored mom)/(mom strength).

First of two splice entries is to left of splice,
second is to right of splice.

Girder 4 Grp I Factored Bending Stresses - ksi

Tenth Point	Loc	Bottom Flange								
		Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	LL+I Rng	Wind	Tot	Allow	Ratio
0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000
Bot.Flg.Spl.		10.1	0.7	10.1	-2.3	12.3	0.0	20.9	32.0	0.653
Bot.Flg.Spl.		5.6	0.5	6.3	-1.3	7.6	0.0	12.3	32.0	0.386
1	16.00	5.9	0.5	6.7	-1.3	8.0	0.0	13.0	32.0	0.298
Bot.Flg.Spl.		8.9	0.7	9.8	-2.3	12.0	0.0	19.4	32.0	0.443
Bot.Flg.Spl.		7.5	0.6	8.4	-1.9	10.3	0.0	16.5	32.0	0.391
2	32.00	8.4	0.7	9.5	-2.2	11.7	0.0	18.5	32.0	0.439
3	48.00	10.3	0.8	12.2	-3.4	15.5	0.0	23.3	32.0	0.552
4	64.00	10.6	0.9	13.4	-4.5	17.9	0.0	25.0	32.0	0.594
5	80.00	9.5	0.8	13.5	-5.6	19.0	0.0	23.7	32.0	0.566
6	96.00	6.8	0.6	12.0	-6.7	18.6	0.0	19.3	32.0	0.465
Bot.Flg.Spl.		6.4	0.5	11.7	-6.8	18.5	0.0	18.6	32.0	0.448
Bot.Flg.Spl.		7.6	0.6	13.6	-8.1	21.7	0.0	21.8	32.0	0.508
Bot.Flg.Spl.		4.0	0.3	11.2	-9.1	20.3	0.0	15.5	32.0	0.357
Bot.Flg.Spl.		7.1	0.5	17.9	-16.4	34.3	0.0	25.6	32.0	0.516
7	112.00	5.9	0.4	17.2	-16.7	33.9	0.0	23.5	32.0	0.493
Bot.Flg.Spl.		-5.5	-0.6	10.6	-19.2	29.8	0.0	-25.2	32.0	0.788
Bot.Flg.Spl.		-2.8	-0.3	6.3	-10.0	16.3	0.0	-13.1	32.0	0.410
10	160.00	-11.3	-1.1	1.8	-13.2	15.0	0.0	-25.5	32.0	0.798
Bot.Flg.Spl.		-7.9	-0.8	2.4	-10.3	12.7	0.0	-19.0	32.0	0.594
Bot.Flg.Spl.		-8.9	-0.9	2.6	-11.6	14.2	0.0	-21.3	32.0	0.666
Bot.Flg.Spl.		-5.0	-0.5	5.5	-9.2	14.8	0.0	-14.7	32.0	0.459

Bot.Flg.Spl.		-7.8	-0.7	7.9	-14.4	22.3	0.0	-23.0	32.0	0.718
12	196.00	-6.2	-0.6	8.5	-13.3	21.8	0.0	-20.0	32.0	0.625
13	214.00	1.2	0.2	12.8	-11.2	24.1	0.0	14.2	32.0	0.325
14	232.00	5.6	0.5	15.7	-10.8	26.6	0.0	21.9	32.0	0.481
15	250.00	7.1	0.7	16.8	-10.3	27.1	0.0	24.6	32.0	0.536
16	268.00	5.6	0.5	15.7	-10.8	26.6	0.0	21.9	32.0	0.481
17	286.00	1.2	0.2	12.8	-11.2	24.1	0.0	14.2	32.0	0.325
18	304.00	-6.0	-0.5	7.9	-13.3	21.2	0.0	-19.8	32.0	0.620
Bot.Flg.Spl.		-7.6	-0.7	7.2	-14.2	21.5	0.0	-22.5	32.0	0.703
Bot.Flg.Spl.		-4.9	-0.4	5.0	-9.1	14.1	0.0	-14.4	32.0	0.450
20	340.00	-11.3	-1.1	1.8	-13.2	15.0	0.0	-25.5	32.0	0.798
Bot.Flg.Spl.		-7.3	-0.7	2.8	-10.4	13.1	0.0	-18.4	32.0	0.575
Bot.Flg.Spl.		-8.2	-0.8	3.0	-11.6	14.7	0.0	-20.6	32.0	0.645
23	388.00	6.0	0.4	17.2	-16.7	33.9	0.0	23.6	32.0	0.494
Bot.Flg.Spl.		7.2	0.5	17.9	-16.4	34.3	0.0	25.6	32.0	0.517
Bot.Flg.Spl.		4.0	0.3	11.2	-9.1	20.3	0.0	15.5	32.0	0.358
Bot.Flg.Spl.		7.6	0.6	13.5	-8.1	21.6	0.0	21.7	32.0	0.508
Bot.Flg.Spl.		6.4	0.5	11.7	-6.8	18.5	0.0	18.6	32.0	0.448
24	404.00	6.8	0.6	11.9	-6.7	18.6	0.0	19.3	32.0	0.465
25	420.00	9.4	0.8	13.5	-5.6	19.0	0.0	23.7	32.0	0.565
26	436.00	10.6	0.9	13.4	-4.5	17.9	0.0	25.0	32.0	0.594
27	452.00	10.3	0.8	12.2	-3.4	15.5	0.0	23.3	32.0	0.553
28	468.00	8.4	0.7	9.5	-2.2	11.7	0.0	18.5	32.0	0.439
Bot.Flg.Spl.		7.5	0.6	8.4	-1.9	10.3	0.0	16.4	32.0	0.389
Bot.Flg.Spl.		8.9	0.7	9.7	-2.3	11.9	0.0	19.3	32.0	0.441
29	484.00	5.9	0.5	6.2	-1.3	7.6	0.0	12.6	32.0	0.287
Bot.Flg.Spl.		5.5	0.5	5.9	-1.3	7.1	0.0	11.9	32.0	0.271
Bot.Flg.Spl.		10.0	0.7	9.4	-2.3	11.7	0.0	20.2	32.0	0.631
30	500.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.000

Governing expression for allowable compression stress

Tenth Pt	Expression		
8	(10-103d)	Cb 1.1147	Rh 1.0000
9	(10-103d)	Cb 1.1652	Rh 1.0000
10	(10-103d)	Cb 1.1387	Rh 1.0000
11	(10-103d)	Cb 1.1387	Rh 1.0000
12	(10-103C)	Cb 1.1313	Rh 1.0000
18	(10-103C)	Cb 1.1344	Rh 1.0000
19	(10-103d)	Cb 1.1396	Rh 1.0000
20	(10-103d)	Cb 1.1396	Rh 1.0000
21	(10-103d)	Cb 1.1643	Rh 1.0000
22	(10-103d)	Cb 1.1132	Rh 1.0000

Perf. ratio for compact section is (factored mom)/(mom strength).

First of two splice entries is to left of splice,
second is to right of splice.

Girder 4 Grp I Factored Bending Stresses - ksi

Tenth Point	Loc	Slab			Rebars		
		Comp Dead	Max LL+I	Tot	Comp Dead	Min LL+I	Tot
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	16.00	-0.01	-0.36	-0.38	0.00	0.00	0.00
2	32.00	-0.02	-0.56	-0.58	0.00	0.00	0.00
3	48.00	-0.03	-0.71	-0.74	0.00	0.00	0.00
4	64.00	-0.03	-0.79	-0.81	0.00	0.00	0.00
5	80.00	-0.02	-0.79	-0.81	0.00	0.00	0.00

6	96.00	-0.02	-0.70	-0.72	0.00	0.00	0.00
7	112.00	-0.01	-0.75	-0.76	0.00	0.00	0.00
8	128.00	0.00	-0.40	-0.40	0.00	0.00	0.00
9	144.00	0.00	-0.15	-0.15	0.00	0.00	0.00
10	160.00	0.00	-0.11	-0.11	1.17	14.23	15.40
11	178.00	0.00	-0.14	-0.14	0.00	0.00	0.00
12	196.00	0.00	-0.40	-0.40	0.00	0.00	0.00
13	214.00	0.00	-0.60	-0.61	0.00	0.00	0.00
14	232.00	-0.01	-0.74	-0.76	0.00	0.00	0.00
15	250.00	-0.02	-0.79	-0.81	0.00	0.00	0.00
16	268.00	-0.01	-0.74	-0.76	0.00	0.00	0.00
17	286.00	0.00	-0.60	-0.61	0.00	0.00	0.00
18	304.00	0.00	-0.38	-0.38	0.00	0.00	0.00
19	322.00	0.00	-0.13	-0.13	0.00	0.00	0.00
20	340.00	0.00	-0.11	-0.11	1.17	14.23	15.40
21	356.00	0.00	-0.16	-0.16	0.00	0.00	0.00
22	372.00	0.00	-0.40	-0.40	0.00	0.00	0.00
23	388.00	-0.01	-0.75	-0.76	0.00	0.00	0.00
24	404.00	-0.02	-0.70	-0.72	0.00	0.00	0.00
25	420.00	-0.02	-0.79	-0.81	0.00	0.00	0.00
26	436.00	-0.03	-0.79	-0.81	0.00	0.00	0.00
27	452.00	-0.03	-0.71	-0.74	0.00	0.00	0.00
28	468.00	-0.02	-0.56	-0.58	0.00	0.00	0.00
29	484.00	-0.01	-0.34	-0.36	0.00	0.00	0.00
30	500.00	0.00	0.00	0.00	0.00	0.00	0.00

Girder 4 Bottom Flange Elastic Compression Strength - k-ft

Tenth PT	M1 Dc	M2 Mr	Cb	Lb Rb	Lp My	Lr Mu
8	1919.34	5003.24	1.39	240.00	275.95	630.03
	36.00	5435.02(103c)		1.00	5435.02	5435.02
9	5003.24	9975.52	1.30	240.00	275.95	643.87
	44.80	9779.63(103c)		1.00	9779.63	9779.63
10	5332.70	9975.52	1.27	240.00	275.95	634.69
	53.17	12536.58(103c)		1.00	12536.58	12536.58
11	5332.70	9975.52	1.27	240.00	275.95	647.30
	42.67	9236.09(103c)		1.00	9236.09	9236.09
12	2418.71	5332.70	1.34	240.00	275.95	611.95
	36.00	4577.73(103c)		1.00	4577.73	4577.73
18	2395.40	5321.21	1.34	240.00	275.95	611.95
	36.00	4577.73(103c)		1.00	4577.73	4577.73
19	5321.21	9974.07	1.28	240.00	275.95	647.30
	42.67	9236.09(103c)		1.00	9236.09	9236.09
20	5321.21	9974.07	1.28	240.00	275.95	634.69
	53.17	12536.58(103c)		1.00	12536.58	12536.58
21	5012.89	9974.07	1.30	240.00	275.95	643.87
	44.80	9779.63(103c)		1.00	9779.63	9779.63
22	1930.00	5012.89	1.39	240.00	275.95	630.03
	36.00	5435.02(103c)		1.00	5435.02	5435.02

Girder 4 Web Splice Analysis

Using method of LRFD spec. 6.13.6.1.4b.
Splice resists moment given by (C6.13.6.1.4b-1)
and horizontal force given by (C6.13.6.1.4b-2)
using LFD load factors.

0.875 ASTM A325 H.S. Bolts

****
Web splice location: 117.50
****

Web t left	0.500 in
Web t right	0.500 in
Factored shear	194.28 k
Shear strength left	626.85 k
Shear strength right	626.85 k
Design shear	291.42 k

Strength

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-1.03 ksi	1.03 ksi
Comp dead	-0.04	0.07
Max live	-2.93	8.04
Min live	7.94	-7.94
Total	6.86	9.13
Resistance	32.00	32.00

Bottom flange controls

Fcf	24.00 ksi
fcf	9.13 ksi
Rcf	2.628
fncf	6.86 ksi
Muw	107.31 k-ft
Huw	756.69 k

Top flange stress reversal

Fcf	24.00 ksi
fcf	6.86 ksi
Rcf	3.496
fncf	-6.84 ksi
Muw	862.46 k-ft
Huw	1.54 k

Bottom flange stress reversal

Fcf	24.00 ksi
fcf	9.13 ksi
Rcf	2.628
fncf	-4.00 ksi
Muw	621.25 k-ft
Huw	242.75 k

Overload

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.79 ksi	0.79 ksi
Comp dead	-0.03	0.05
Max live	-2.25	6.17
Min live	6.09	-6.09
Total	5.27	7.01
Resistance	30.40	30.40

Bottom flange controls

Fcf	24.00 ksi
fcf	7.01 ksi
Rcf	3.422
fncf	5.27 ksi

Muw	107.49	k-ft
Huw	756.51	k

Top flange stress reversal

Fcf	24.00	ksi
fcf	5.27	ksi
Rcf	4.555	
fncf	-5.25	ksi
Muw	862.45	k-ft
Huw	1.55	k

Bottom flange stress reversal

Fcf	24.00	ksi
fcf	7.01	ksi
Rcf	3.422	
fncf	-3.07	ksi
Muw	621.30	k-ft
Huw	242.70	k

Bolt pattern each side of splice

Number of vertical lines	3	spaced at 3.000	in
Number of horizontal lines	22	spaced at 3.000	in
Vertical edge on plate	1.500	in	
Horizontal edge on web	3.000	in	
			Perf. Ratio
Plate depth	66.00	in	
Plate thickness	0.375	in	
Plate gross sect. shr strngth	918.72	k	0.317
Plate net sect. fracture strng	1110.12	k	0.263
Plate block shear strength	954.31	k	0.305
Plate flexure for strength	29.08	ksi	
Allowable stress	32.00	ksi	0.909
Plate flexure for overload	25.44	ksi	
Allowable stress	30.40	ksi	0.837
Shear on extreme bolt - strength	16.56	k	
Shear on extreme bolt - overload	13.26	k	
Bolt shear strength	43.87	k	0.378
Threads in shear plane			
Clear edge to splice line	2.500	in	
Horiz brng on web	16.56	k	
Horiz brng capacity on web	48.72	k	0.340
Clear vertical distance	2.000	in	
Vert brng on web	16.56	k	
Vert brng capacity on web	48.72	k	0.340

Fatigue

Max fatigue moment	952.12	k-ft
Min fatigue moment	-810.81	
Comp. stress at top of web	-1.05	ksi
Tens. stress at top of web	2.99	
Comp. stress at bot of web	-2.99	
Tens. stress at bot of web	3.08	
Max fatge mom resisted by web	74.30	k-ft
Max fatge mom horiz resultant	36.46	k
Min fatge mom resisted by web	-107.56	k-ft
Min fatge mom horiz resultant	0.00	k

Max shear at splice	7.21	k
Min shear at splice	-41.51	k
Mom from max shr eccentricity	3.60	k-ft
Mom from min shr eccentricity	-20.76	k-ft
Total max + eccentric mom	77.91	k-ft
Total min + eccentric mom	-128.32	k-ft
Tot Bndg and axial stress at bot of plate from max mo	2.45	ksi
Tot Bndg and axial stress at bot of plate from min mo	-2.83	ksi
Allowable range	29.00	ksi 0.182

Flange Plates

Top flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00	ksi	
Gross gov flg area - Ag	13.50		
An	11.62		
Beta	0.4532		
Effective gov flg area - Ae	13.50		
Resistance - Fcf x Ae	324.00	k	
Outside plate	18.00 x	0.688	Pl
Inside plates 2 -	8.00 x	0.688	Pls
Total number of bolts reqd on each side of splice	4 gage lines	24	
Min spacing		2.62	
Max spacing outside line for sealing		4.50	
			Perf. Ratio
Single bolt shear strength	43.87		
Total bolt shear strength	1052.94		0.308
Single bolt slip strength	25.74		
Total bolt slip strength	617.76		0.524
Single bolt bearing strength	45.68		
Total bolt bearing strength	1096.20		0.296

Bottom flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00	ksi
Gross gov flg area - Ag	13.50	
An	11.62	
Beta	0.4532	
Effective gov flg area - Ae	13.50	

Resistance - Fcf x Ae 324.00 k
Fracture strength of flange 539.40

Outside plate 18.00 x 0.688 Pl
Inside plates 2 - 8.00 x 0.688 Pls

		Perf. Ratio	
Tens. capacity of gross section	710.60	0.456	(6.8.2.1-1)
Tens. capacity of net section	892.68	0.363	(6.8.2.1-2)

Total number of bolts reqd on 4 gage lines on each side of splice 24

Min spacing 2.62
Max spacing outside line for sealing 4.50

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.308
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.524
Single bolt bearing strength	45.68	
Total bolt bearing strength	1096.20	0.296

Block rupture on staggered pattern- outside plates

Net tension area - Atn	9.25
Gross tension area - Atg	10.87
Net shear area - Avn	15.77
Resistance to rupture - Rr	2308.60

Block rupture on staggered pattern- inside plates

Net tension area - Atn	6.72
Gross tension area - Atg	7.99
Net shear area - Avn	31.54
Resistance to rupture - Rr	1053.38
Tot block rupture resistance	3361.98

Perf. Ratio 0.096

****
Web splice location: 212.50
****

Web t left	0.500 in
Web t right	0.500 in
Factored shear	146.91 k
Shear strength left	626.85 k
Shear strength right	626.85 k
Design shear	220.36 k

Strength

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.68 ksi	0.68 ksi
Comp dead	-0.06	0.12
Max live	-3.20	12.40
Min live	11.20	-11.20

Total	10.46	13.20
Resistance	32.00	32.00

Bottom flange controls

Fcf	24.00 ksi
fcf	13.20 ksi
Rcf	1.819
fncf	10.46 ksi
Muw	89.48 k-ft
Huw	774.52 k

Top flange stress reversal

Fcf	24.00 ksi
fcf	10.46 ksi
Rcf	2.294
fncf	-10.40 ksi
Muw	861.62 k-ft
Huw	2.38 k

Bottom flange stress reversal

Fcf	24.00 ksi
fcf	13.20 ksi
Rcf	1.819
fncf	-3.94 ksi
Muw	561.01 k-ft
Huw	302.99 k

Overload

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.52 ksi	0.52 ksi
Comp dead	-0.05	0.09
Max live	-2.46	9.52
Min live	8.60	-8.60
Total	8.03	10.13
Resistance	30.40	30.40

Bottom flange controls

Fcf	24.00 ksi
fcf	10.13 ksi
Rcf	2.369
fncf	8.03 ksi
Muw	89.57 k-ft
Huw	774.43 k

Top flange stress reversal

Fcf	24.00 ksi
fcf	8.03 ksi
Rcf	2.988
fncf	-7.99 ksi
Muw	861.62 k-ft
Huw	2.38 k

Bottom flange stress reversal

Fcf	24.00 ksi
fcf	10.13 ksi
Rcf	2.369
fncf	-3.03 ksi
Muw	561.04 k-ft
Huw	302.96 k

Bolt pattern each side of splice
Number of vertical lines 3 spaced at 3.000 in

OUTPUT.TXT

Number of horizontal lines	22	spaced at 3.000 in	
Vertical edge on plate	1.500	in	
Horizontal edge on web	3.000	in	
			Perf. Ratio
Plate depth	66.00	in	
Plate thickness	0.375	in	
Plate gross sect. shr strngth	918.72	k	0.240
Plate net sect. fracture strng	1110.12	k	0.199
Plate block shear strength	954.31	k	0.231
Plate flexure for strength	31.37	ksi	
Allowable stress	32.00	ksi	0.980
Plate flexure for overload	29.59	ksi	
Allowable stress	30.40	ksi	0.973
Shear on extreme bolt - strength	15.64	k	
Shear on extreme bolt - overload	14.82	k	
Bolt shear strength	43.87	k	0.357
Threads in shear plane			
Clear edge to splice line	2.500	in	
Horiz brng on web	15.64	k	
Horiz brng capacity on web	48.72	k	0.321
Clear vertical distance	2.000	in	
Vert brng on web	15.64	k	
Vert brng capacity on web	48.72	k	0.321

Fatigue

Max fatigue moment	920.52	k-ft
Min fatigue moment	-645.42	
Comp. stress at top of web	-1.19	ksi
Tens. stress at top of web	4.33	
Comp. stress at bot of web	-4.33	
Tens. stress at bot of web	4.84	
Max fatge mom resisted by web	108.54	k-ft
Max fatge mom horiz resultant	65.73	k
Min fatge mom resisted by web	-155.90	k-ft
Min fatge mom horiz resultant	0.00	k
Max shear at splice	37.46	k
Min shear at splice	-12.47	k
Mom from max shr eccentricity	18.73	k-ft
Mom from min shr eccentricity	-6.24	k-ft
Total max + eccentric mom	127.28	k-ft
Total min + eccentric mom	-162.13	k-ft
Tot Bndg and axial stress at bot of plate from max mo	6.20	ksi
Tot Bndg and axial stress at bot of plate from min mo	-5.36	ksi
Allowable range	18.00	ksi 0.642

Flange Plates

OUTPUT.TXT

Top flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00	ksi	
Gross gov flg area - Ag	18.00		
An	15.50		
Beta	0.4532		
Effective gov flg area - Ae	18.00		
Resistance - Fcf x Ae	432.00	k	
Outside plate	18.00 x	0.688	Pl
Inside plates 2 -	8.00 x	0.688	Pls

Total number of bolts reqd on each side of splice	4 gage lines 24
Min spacing	2.62
Max spacing outside line for sealing	4.50

			Perf. Ratio
Single bolt shear strength	43.87		
Total bolt shear strength	1052.94		0.410
Single bolt slip strength	25.74		
Total bolt slip strength	617.76		0.699
Single bolt bearing strength	60.90		
Total bolt bearing strength	1461.60		0.296

Bottom flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00	ksi	
Gross gov flg area - Ag	18.00		
An	15.50		
Beta	0.4532		
Effective gov flg area - Ae	18.00		
Resistance - Fcf x Ae	432.00	k	
Fracture strength of flange	719.20		
Outside plate	18.00 x	0.688	Pl
Inside plates 2 -	8.00 x	0.688	Pls

			Perf. Ratio	
Tens. capacity of gross section	710.60		0.608	(6.8.2.1-1)
Tens. capacity of net section	892.68		0.484	(6.8.2.1-2)

Total number of bolts reqd on each side of splice	4 gage lines 24
Min spacing	2.62
Max spacing outside line for sealing	4.50

Perf. Ratio

Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.410
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.699
Single bolt bearing strength	60.90	
Total bolt bearing strength	1461.60	0.296
Block rupture on staggered pattern- outside plates		
Net tension area - Atn	9.25	
Gross tension area - Atg	10.87	
Net shear area - Avn	15.77	
Resistance to rupture - Rr	2308.60	
Block rupture on staggered pattern- inside plates		
Net tension area - Atn	6.72	
Gross tension area - Atg	7.99	
Net shear area - Avn	31.54	
Resistance to rupture - Rr	1053.38	
Tot block rupture resistance	3361.98	0.128

****
Web splice location: 287.50
****

Web t left	0.500 in
Web t right	0.500 in
Factored shear	148.04 k
Shear strength left	626.85 k
Shear strength right	626.85 k
Design shear	222.06 k

Strength

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.71 ksi	0.71 ksi
Comp dead	-0.06	0.12
Max live	-3.19	12.37
Min live	11.20	-11.20
Total	10.42	13.21
Resistance	32.00	32.00

Bottom flange controls

Fcf	24.00 ksi
fcf	13.21 ksi
Rcf	1.817
fncf	10.42 ksi
Muw	91.31 k-ft
Huw	772.69 k

Top flange stress reversal

Fcf	24.00 ksi
fcf	10.42 ksi
Rcf	2.303
fncf	-10.36 ksi
Muw	861.57 k-ft
Huw	2.43 k

Bottom flange stress reversal

Fcf	24.00 ksi

fcf	13.21 ksi
Rcf	1.817
fncf	-3.97 ksi
Muw	561.90 k-ft
Huw	302.10 k

Overload

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.55 ksi	0.55 ksi
Comp dead	-0.05	0.09
Max live	-2.45	9.50
Min live	8.60	-8.60
Total	8.00	10.14
Resistance	30.40	30.40

Bottom flange controls

Fcf	24.00 ksi
fcf	10.14 ksi
Rcf	2.366
fncf	8.00 ksi
Muw	91.40 k-ft
Huw	772.60 k

Top flange stress reversal

Fcf	24.00 ksi
fcf	8.00 ksi
Rcf	3.001
fncf	-7.95 ksi
Muw	861.57 k-ft
Huw	2.43 k

Bottom flange stress reversal

Fcf	24.00 ksi
fcf	10.14 ksi
Rcf	2.366
fncf	-3.05 ksi
Muw	561.94 k-ft
Huw	302.06 k

Bolt pattern each side of splice

Number of vertical lines	3	spaced at 3.000 in
Number of horizontal lines	22	spaced at 3.000 in
Vertical edge on plate	1.500 in	
Horizontal edge on web	3.000 in	

		Perf. Ratio
Plate depth	66.00 in	
Plate thickness	0.375 in	
Plate gross sect. shr strngth	918.72 k	0.242
Plate net sect. fracture strng	1110.12 k	0.200
Plate block shear strength	954.31 k	0.233
Plate flexure for strength	31.40 ksi	
Allowable stress	32.00 ksi	0.981
Plate flexure for overload	25.85 ksi	
Allowable stress	30.40 ksi	0.850
Shear on extreme bolt - strength	15.66 k	
Shear on extreme bolt - overload	13.10 k	
Bolt shear strength	43.87 k	0.357
Threads in shear plane		

Clear edge to splice line	2.500 in	
Horiz brng on web	15.66 k	
Horiz brng capacity on web	48.72 k	0.321
Clear vertical distance	2.000 in	
Vert brng on web	15.66 k	
Vert brng capacity on web	48.72 k	0.321

Fatigue

Max fatigue moment	918.85 k-ft	
Min fatigue moment	-645.16	
Comp. stress at top of web	-1.19 ksi	
Tens. stress at top of web	4.33	
Comp. stress at bot of web	-4.33	
Tens. stress at bot of web	4.83	
Max fatge mom resisted by web	108.35 k-ft	
Max fatge mom horiz resultant	65.62 k	
Min fatge mom resisted by web	-155.83 k-ft	
Min fatge mom horiz resultant	0.00 k	
Max shear at splice	12.84 k	
Min shear at splice	-38.06 k	
Mom from max shr eccentricity	6.42 k-ft	
Mom from min shr eccentricity	-19.03 k-ft	
Total max + eccentric mom	114.77 k-ft	
Total min + eccentric mom	-174.86 k-ft	
Tot Bndg and axial stress at bot of plate from max mo	5.78 ksi	
Tot Bndg and axial stress at bot of plate from min mo	-5.78 ksi	
Allowable range	18.00 ksi	0.642

Flange Plates

Top flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00 ksi	
Gross gov flg area - Ag	18.00	
An	15.50	
Beta	0.4532	
Effective gov flg area - Ae	18.00	
Resistance - Fcf x Ae	432.00 k	
Outside plate	18.00 x 0.688 Pl	
Inside plates 2 -	8.00 x 0.688 Pls	
Total number of bolts reqd on 4 gage lines on each side of splice	24	
Min spacing	2.62	
Max spacing outside line for sealing	4.50	

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.410
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.699
Single bolt bearing strength	60.90	
Total bolt bearing strength	1461.60	0.296

Bottom flange plates

18.00 x 1.000 flange

Design stress - Fcf	24.00 ksi	
Gross gov flg area - Ag	18.00	
An	15.50	
Beta	0.4532	
Effective gov flg area - Ae	18.00	
Resistance - Fcf x Ae	432.00 k	
Fracture strength of flange	719.20	
Outside plate	18.00 x 0.688 Pl	
Inside plates 2 -	8.00 x 0.688 Pls	

		Perf. Ratio	
Tens. capacity of gross section	710.60	0.608	(6.8.2.1-1)
Tens. capacity of net section	892.68	0.484	(6.8.2.1-2)

Total number of bolts reqd on 4 gage lines on each side of splice	24	
Min spacing	2.62	
Max spacing outside line for sealing	4.50	

		Perf. Ratio
Single bolt shear strength	43.87	
Total bolt shear strength	1052.94	0.410
Single bolt slip strength	25.74	
Total bolt slip strength	617.76	0.699
Single bolt bearing strength	60.90	
Total bolt bearing strength	1461.60	0.296

Block rupture on staggered pattern- outside plates

Net tension area - Atn	9.25
Gross tension area - Atg	10.87
Net shear area - Avn	15.77
Resistance to rupture - Rr	2308.60

Block rupture on staggered pattern- inside plates

Net tension area - Atn	6.72
Gross tension area - Atg	7.99
Net shear area - Avn	31.54
Resistance to rupture - Rr	1053.38

Tot block rupture resistance	3361.98	0.128

****
Web splice location: 382.50
****

Web t left	0.500 in
Web t right	0.500 in
Factored shear	194.96 k
Shear strength left	626.85 k
Shear strength right	626.85 k
Design shear	292.44 k

Strength

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-1.05 ksi	1.05 ksi
Comp dead	-0.04	0.07
Max live	-2.93	8.03
Min live	7.94	-7.94
Total	6.84	9.15
Resistance	32.00	32.00

Bottom flange controls

Fcf	24.00 ksi
fcf	9.15 ksi
Rcf	2.622
fncf	6.84 ksi
Muw	109.08 k-ft
Huw	754.92 k

Top flange stress reversal

Fcf	24.00 ksi
fcf	6.84 ksi
Rcf	3.507
fncf	-6.82 ksi
Muw	862.42 k-ft
Huw	1.57 k

Bottom flange stress reversal

Fcf	24.00 ksi
fcf	9.15 ksi
Rcf	2.622
fncf	-4.02 ksi
Muw	621.89 k-ft
Huw	242.11 k

Overload

Factored Bndg Stresses at ctr of flg	Top Flg	Bottom Flg
Noncomp dead	-0.81 ksi	0.81 ksi
Comp dead	-0.03	0.05
Max live	-2.25	6.17
Min live	6.10	-6.10
Total	5.25	7.03
Resistance	30.40	30.40

Bottom flange controls

Fcf	24.00 ksi
fcf	7.03 ksi
Rcf	3.414
fncf	5.25 ksi

Muw	109.26 k-ft
Huw	754.74 k

Top flange stress reversal

Fcf	24.00 ksi
fcf	5.25 ksi
Rcf	4.570
fncf	-5.23 ksi
Muw	862.42 k-ft
Huw	1.58 k

Bottom flange stress reversal

Fcf	24.00 ksi
fcf	7.03 ksi
Rcf	3.414
fncf	-3.09 ksi
Muw	621.94 k-ft
Huw	242.06 k

Bolt pattern each side of splice

Number of vertical lines	3	spaced at 3.000 in
Number of horizontal lines	22	spaced at 3.000 in
Vertical edge on plate	1.500 in	
Horizontal edge on web	3.000 in	

			Perf. Ratio
Plate depth	66.00	in	
Plate thickness	0.375	in	
Plate gross sect. shr strngth	918.72	k	0.318
Plate net sect. fracture strng	1110.12	k	0.263
Plate block shear strength	954.31	k	0.306
Plate flexure for strength	29.09	ksi	
Allowable stress	32.00	ksi	0.909
Plate flexure for overload	30.36	ksi	
Allowable stress	30.40	ksi	0.999
Shear on extreme bolt - strength	16.58	k	
Shear on extreme bolt - overload	15.50	k	
Bolt shear strength	43.87	k	0.378
Threads in shear plane			
Clear edge to splice line	2.500	in	
Horiz brng on web	16.58	k	
Horiz brng capacity on web	48.72	k	0.340
Clear vertical distance	2.000	in	
Vert brng on web	16.58	k	
Vert brng capacity on web	48.72	k	0.340

Fatigue

Max fatigue moment	951.61 k-ft
Min fatigue moment	-810.97
Comp. stress at top of web	-1.05 ksi
Tens. stress at top of web	2.99
Comp. stress at bot of web	-2.99
Tens. stress at bot of web	3.08
Max fatge mom resisted by web	74.26 k-ft
Max fatge mom horiz resultant	36.44 k
Min fatge mom resisted by web	-107.59 k-ft
Min fatge mom horiz resultant	0.00 k

OUTPUT.TXT

Max shear at splice	41.88 k		
Min shear at splice	-6.51 k		
Mom from max shr eccentricity	20.94 k-ft		
Mom from min shr eccentricity	-3.26 k-ft		
Total max + eccentric mom	95.20 k-ft		
Total min + eccentric mom	-110.84 k-ft		
Tot Bndg and axial stress at bot of plate from max mo	4.25 ksi		
Tot Bndg and axial stress at bot of plate from min mo	-3.66 ksi		
Allowable range	29.00 ksi	0.273	

Flange Plates

Top flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00 ksi		
Gross gov flg area - Ag	13.50		
An	11.62		
Beta	0.4532		
Effective gov flg area - Ae	13.50		
Resistance - Fcf x Ae	324.00 k		
Outside plate	18.00 x	0.688 Pl	
Inside plates 2 -	8.00 x	0.688 Pls	
Total number of bolts reqd on 4 gage lines on each side of splice	24		
Min spacing	2.62		
Max spacing outside line for sealing	4.50		
			Perf. Ratio
Single bolt shear strength	43.87		
Total bolt shear strength	1052.94		0.308
Single bolt slip strength	25.74		
Total bolt slip strength	617.76		0.524
Single bolt bearing strength	45.68		
Total bolt bearing strength	1096.20		0.296

Bottom flange plates

18.00 x 0.750 flange

Design stress - Fcf	24.00 ksi		
Gross gov flg area - Ag	13.50		
An	11.62		
Beta	0.4532		
Effective gov flg area - Ae	13.50		

Resistance - Fcf x Ae	324.00 k		
Fracture strength of flange	539.40		
Outside plate	18.00 x	0.688 Pl	
Inside plates 2 -	8.00 x	0.688 Pls	
			Perf. Ratio
Tens. capacity of gross section	710.60	0.456	(6.8.2.1-1)
Tens. capacity of net section	892.68	0.363	(6.8.2.1-2)
Total number of bolts reqd on 4 gage lines on each side of splice	24		
Min spacing	2.62		
Max spacing outside line for sealing	4.50		
			Perf. Ratio
Single bolt shear strength	43.87		
Total bolt shear strength	1052.94	0.308	
Single bolt slip strength	25.74		
Total bolt slip strength	617.76	0.524	
Single bolt bearing strength	45.68		
Total bolt bearing strength	1096.20	0.296	
Block rupture on staggered pattern- outside plates			
Net tension area - Atn	9.25		
Gross tension area - Atg	10.87		
Net shear area - Avn	15.77		
Resistance to rupture - Rr	2308.60		
Block rupture on staggered pattern- inside plates			
Net tension area - Atn	6.72		
Gross tension area - Atg	7.99		
Net shear area - Avn	31.54		
Resistance to rupture - Rr	1053.38		
Tot block rupture resistance	3361.98	0.096	

Girder 4 Web Compression Bending Stress for Constructibility - ksi

Tenth Point	Noncomp. Dead Factored Mom	Noncomp. Dead Web Bending Stress	Allowable (10-173)	Ratio
0	0.00	0.00	32.00	0.000
1	1239.94	5.65	32.00	0.176
2	2097.16	7.94	32.00	0.248
3	2571.81	9.73	32.00	0.304
4	2663.45	10.08	32.00	0.315
5	2365.92	8.95	32.00	0.280
6	1706.59	6.46	32.00	0.202
7	685.70	5.78	32.00	0.181
8	-636.32	0.00	32.00	0.000
9	-2322.12	0.00	32.00	0.000
10	-4387.29	10.69	32.00	0.334
11	-2385.94	0.00	32.00	0.000

12	-886.92	6.03	32.00	0.189
13	170.12	1.16	32.00	0.036
14	803.69	5.47	32.00	0.171
15	1019.61	6.93	32.00	0.217
16	805.75	5.48	32.00	0.171
17	174.62	1.19	32.00	0.037
18	-864.81	5.88	32.00	0.184
19	-2377.61	0.00	32.00	0.000
20	-4386.79	10.69	32.00	0.334
21	-2328.36	0.00	32.00	0.000
22	-655.64	0.00	32.00	0.000
23	696.92	5.87	32.00	0.183
24	1701.89	6.44	32.00	0.201
25	2362.21	8.94	32.00	0.279
26	2662.07	10.08	32.00	0.315
27	2572.80	9.74	32.00	0.304
28	2094.22	7.93	32.00	0.248
29	1229.91	5.60	32.00	0.175
30	0.00	0.00	32.00	0.000

Girder 4 Top Flange 10.57 Overload Stress - ksi

Tenth	Loc	Noncomp Dead	Comp Dead	1.67 Max LL+I	1.67 Min LL+I	Allowable	Ratio
0	0.00	0.00	0.00	0.00	0.00	30.40	0.000
Top flg.spl.		-7.76	-0.30	-1.86	1.74	30.40	0.327
Top flg.spl.		-4.30	-0.21	-1.64	0.96	30.40	0.202
1	16.00	-4.54	-0.22	-1.73	1.03	30.40	0.214
Top flg.spl.		-6.85	-0.34	-2.54	1.74	30.40	0.320
Top flg.spl.		-5.75	-0.30	-2.43	1.46	30.40	0.279
2	32.00	-6.44	-0.34	-2.74	1.73	30.40	0.313
3	48.00	-7.90	-0.42	-3.52	2.59	30.40	0.389
4	64.00	-8.18	-0.43	-3.89	3.44	30.40	0.411
5	80.00	-7.27	-0.38	-3.89	4.30	30.40	0.380
6	96.00	-5.24	-0.27	-3.46	5.13	30.40	0.295
Top flg.spl.		-4.91	-0.26	-3.38	5.23	30.40	0.281
Top flg.spl.		-5.85	-0.28	-3.52	6.23	30.40	0.318
Top flg.spl.		-3.04	-0.14	-2.92	6.99	30.40	0.201
Top flg.spl.		-5.49	-0.19	-3.19	12.63	30.40	0.292
7	112.00	-4.54	-0.15	-3.06	12.86	30.40	0.269
Top flg.spl.		4.21	0.45	-1.89	14.75	30.40	0.638
Top flg.spl.		2.19	0.23	-1.71	7.67	30.40	0.332
Top flg.spl.		6.20	0.61	-0.81	8.79	30.40	0.513
Top flg.spl.		5.53	0.53	-0.78	7.58	30.40	0.449
10	160.00	8.68	0.81	-0.60	9.89	30.40	0.638
Top flg.spl.		6.01	0.58	-0.72	7.82	30.40	0.474
Top flg.spl.		6.74	0.65	-0.75	8.77	30.40	0.532
Top flg.spl.		3.81	0.35	-1.47	7.00	30.40	0.367
Top flg.spl.		5.95	0.54	-1.59	10.94	30.40	0.573
12	196.00	4.77	0.42	-1.73	10.20	30.40	0.506
13	214.00	-0.91	-0.07	-2.61	8.65	30.40	0.252
14	232.00	-4.32	-0.22	-3.20	8.32	30.40	0.255
15	250.00	-5.48	-0.27	-3.42	7.94	30.40	0.302
16	268.00	-4.33	-0.22	-3.20	8.32	30.40	0.255
17	286.00	-0.94	-0.07	-2.61	8.65	30.40	0.251
18	304.00	4.65	0.42	-1.62	10.19	30.40	0.502
Top flg.spl.		5.83	0.54	-1.47	10.93	30.40	0.569
Top flg.spl.		3.73	0.34	-1.36	7.00	30.40	0.364
Top flg.spl.		6.72	0.65	-0.69	8.77	30.40	0.531
Top flg.spl.		5.99	0.56	-0.67	7.55	30.40	0.464
20	340.00	8.68	0.81	-0.60	9.89	30.40	0.638

Top flg.spl.	5.54	0.55	-0.85	7.84	30.40	0.458
Top flg.spl.	6.21	0.61	-0.88	8.79	30.40	0.514
Top flg.spl.	2.26	0.24	-1.70	7.68	30.40	0.335
Top flg.spl.	4.34	0.18	-1.89	14.75	30.40	0.634
23 388.00	-4.61	-0.15	-3.06	12.86	30.40	0.266
Top flg.spl.	-5.57	-0.19	-3.18	12.63	30.40	0.294
Top flg.spl.	-3.08	-0.14	-2.92	6.99	30.40	0.202
Top flg.spl.	-5.84	-0.28	-3.52	6.23	30.40	0.317
Top flg.spl.	-4.90	-0.26	-3.38	5.23	30.40	0.281
24 404.00	-5.23	-0.27	-3.45	5.13	30.40	0.295
25 420.00	-7.26	-0.38	-3.89	4.30	30.40	0.379
26 436.00	-8.18	-0.43	-3.89	3.44	30.40	0.411
27 452.00	-7.91	-0.42	-3.52	2.59	30.40	0.390
28 468.00	-6.44	-0.34	-2.74	1.73	30.40	0.313
Top flg.spl.	-5.73	-0.30	-2.42	1.46	30.40	0.278
Top flg.spl.	-6.83	-0.33	-2.52	1.74	30.40	0.319
29 484.00	-4.50	-0.22	-1.62	1.03	30.40	0.209
Top flg.spl.	-4.26	-0.21	-1.53	0.96	30.40	0.197
Top flg.spl.	-7.70	-0.30	-1.74	1.74	30.40	0.320
30 500.00	0.00	0.00	0.00	0.00	30.40	0.000

Girder 4 Bottom Flange 10.57 Overload Stress - ksi

Tenth	Loc	Noncomp Dead	Comp Dead	1.67 Max LL+I	1.67 Min LL+I	Allowable	Ratio
0	0.00	0.00	0.00	0.00	0.00	30.40	0.000
Bot.flg.spl.		7.76	0.58	7.76	-1.74	30.40	0.530
Bot.flg.spl.		4.30	0.35	4.85	-0.96	30.40	0.312
1	16.00	4.54	0.37	5.12	-1.03	30.40	0.330
Bot.flg.spl.		6.85	0.56	7.51	-1.74	30.40	0.491
Bot.flg.spl.		5.75	0.48	6.48	-1.46	30.40	0.418
2	32.00	6.44	0.53	7.29	-1.73	30.40	0.469
3	48.00	7.90	0.65	9.36	-2.59	30.40	0.589
4	64.00	8.18	0.67	10.34	-3.44	30.40	0.632
5	80.00	7.27	0.60	10.35	-4.30	30.40	0.599
6	96.00	5.24	0.43	9.20	-5.13	30.40	0.489
Bot.flg.spl.		4.91	0.40	8.99	-5.23	30.40	0.471
Bot.flg.spl.		5.85	0.47	10.43	-6.23	30.40	0.551
Bot.flg.spl.		3.04	0.24	8.64	-6.99	30.40	0.392
Bot.flg.spl.		5.49	0.38	13.78	-12.63	30.40	0.647
7	112.00	4.54	0.31	13.24	-12.86	30.40	0.595
Bot.flg.spl.		-4.21	-0.45	8.16	-14.75	30.40	0.638
Bot.flg.spl.		-2.19	-0.23	4.86	-7.67	30.40	0.332
Bot.flg.spl.		-6.20	-0.61	2.12	-8.79	30.40	0.513
Bot.flg.spl.		-5.53	-0.54	1.92	-7.78	30.40	0.456
10	160.00	-8.68	-0.83	1.40	-10.14	30.40	0.646
Bot.flg.spl.		-6.01	-0.58	1.81	-7.82	30.40	0.474
Bot.flg.spl.		-6.74	-0.65	2.00	-8.77	30.40	0.532
Bot.flg.spl.		-3.81	-0.35	4.20	-7.00	30.40	0.367
Bot.flg.spl.		-5.95	-0.54	6.02	-10.94	30.40	0.573
12	196.00	-4.77	-0.42	6.55	-10.20	30.40	0.506
13	214.00	0.91	0.13	9.85	-8.65	30.40	0.358
14	232.00	4.32	0.42	12.11	-8.32	30.40	0.554
15	250.00	5.48	0.51	12.92	-7.94	30.40	0.622
16	268.00	4.33	0.42	12.11	-8.32	30.40	0.555
17	286.00	0.94	0.13	9.86	-8.65	30.40	0.359
18	304.00	-4.65	-0.42	6.11	-10.19	30.40	0.502
Bot.flg.spl.		-5.83	-0.54	5.57	-10.93	30.40	0.569
Bot.flg.spl.		-3.73	-0.34	3.88	-7.00	30.40	0.364
Bot.flg.spl.		-6.72	-0.65	1.84	-8.77	30.40	0.531
Bot.flg.spl.		-5.99	-0.57	1.67	-7.76	30.40	0.471

20	340.00	-8.68	-0.83	1.40	-10.14	30.40	0.646
Bot.flg.spl.		-5.54	-0.55	2.09	-7.84	30.40	0.458
Bot.flg.spl.		-6.21	-0.61	2.30	-8.79	30.40	0.514
Bot.flg.spl.		-2.26	-0.24	4.86	-7.68	30.40	0.335
Bot.flg.spl.		-4.34	-0.37	8.16	-14.75	30.40	0.640
23	388.00	4.61	0.32	13.23	-12.86	30.40	0.597
Bot.flg.spl.		5.57	0.39	13.77	-12.63	30.40	0.649
Bot.flg.spl.		3.08	0.24	8.64	-6.99	30.40	0.393
Bot.flg.spl.		5.84	0.47	10.42	-6.23	30.40	0.550
Bot.flg.spl.		4.90	0.40	8.98	-5.23	30.40	0.470
24	404.00	5.23	0.43	9.19	-5.13	30.40	0.488
25	420.00	7.26	0.60	10.35	-4.30	30.40	0.599
26	436.00	8.18	0.67	10.34	-3.44	30.40	0.631
27	452.00	7.91	0.65	9.36	-2.59	30.40	0.589
28	468.00	6.44	0.53	7.30	-1.73	30.40	0.469
Bot.flg.spl.		5.73	0.47	6.43	-1.46	30.40	0.416
Bot.flg.spl.		6.83	0.55	7.45	-1.74	30.40	0.488
29	484.00	4.50	0.37	4.80	-1.03	30.40	0.318
Bot.flg.spl.		4.26	0.35	4.53	-0.96	30.40	0.301
Bot.flg.spl.		7.70	0.57	7.25	-1.74	30.40	0.511
30	500.00	0.00	0.00	0.00	0.00	30.40	0.000

Girder 4 Factored Noncomp Dead Wet Concrete Stresses - ksi

[Slab pouring sequence not taken into account in this table.
Actual stresses are dependent on the pouring sequence and
may be significantly different from those printed here.]

Tenth Point	Loc	Top Flange	Allow-able	bottom Flange	Allow-able
0	0.0	0.0	32.0	0.0	32.0
Top flg.spl	15.0	-10.1	32.0	10.1	32.0
Top flg.spl	15.0	-10.1	32.0	10.1	32.0
Bot.flg.spl	15.0	-10.1	32.0	10.1	32.0
Bot.flg.spl	15.0	-10.1	32.0	10.1	32.0
1	16.0	-5.9	32.0	5.9	32.0
Top flg.spl	27.0	-8.9	32.0	8.9	32.0
Top flg.spl	27.0	-8.9	32.0	8.9	32.0
Bot.flg.spl	27.0	-8.9	32.0	8.9	32.0
Bot.flg.spl	27.0	-8.9	32.0	8.9	32.0
2	32.0	-8.4	32.0	8.4	32.0
3	48.0	-10.3	32.0	10.3	32.0
4	64.0	-10.6	32.0	10.6	32.0
5	80.0	-9.5	32.0	9.5	32.0
6	96.0	-6.8	32.0	6.8	32.0
Top flg.spl	98.0	-6.4	32.0	6.4	32.0
Top flg.spl	98.0	-6.4	32.0	6.4	32.0
Top flg.spl	110.0	-3.3	32.0	3.3	32.0
Top flg.spl	110.0	-3.3	32.0	3.3	32.0
Bot.flg.spl	98.0	-6.4	32.0	6.4	32.0
Bot.flg.spl	98.0	-6.4	32.0	6.4	32.0
Bot.flg.spl	110.0	-3.3	32.0	3.3	32.0
Bot.flg.spl	110.0	-3.3	32.0	3.3	32.0
7	112.0	-5.9	32.0	5.9	32.0
Top flg.spl	128.0	5.5	32.0	-5.5	32.0
Top flg.spl	128.0	5.5	32.0	-5.5	32.0
Bot.flg.spl	128.0	5.5	32.0	-5.5	32.0
Bot.flg.spl	128.0	2.8	32.0	-2.8	32.0
Top flg.spl	144.0	8.0	32.0	-8.0	32.0
Top flg.spl	144.0	8.0	32.0	-8.0	32.0

Bot.flg.spl	144.0	8.0	32.0	-8.0	32.0
Bot.flg.spl	144.0	7.2	32.0	-7.2	32.0
10	160.0	11.3	32.0	-11.3	32.0
Top flg.spl	178.0	7.8	32.0	-7.8	32.0
Top flg.spl	178.0	7.8	32.0	-7.8	32.0
Top flg.spl	193.0	3.6	32.0	-3.6	32.0
Top flg.spl	193.0	3.6	32.0	-3.6	32.0
Bot.flg.spl	178.0	7.8	32.0	-7.8	32.0
Bot.flg.spl	178.0	8.7	32.0	-8.7	32.0
Bot.flg.spl	193.0	3.6	32.0	-3.6	32.0
Bot.flg.spl	193.0	4.1	32.0	-4.1	32.0
12	196.0	6.2	32.0	-6.2	32.0
13	214.0	-1.2	32.0	1.2	32.0
14	232.0	-5.6	32.0	5.6	32.0
15	250.0	-7.1	32.0	7.1	32.0
16	268.0	-5.6	32.0	5.6	32.0
17	286.0	-1.2	32.0	1.2	32.0
18	304.0	6.0	32.0	-6.0	32.0
Top flg.spl	307.0	7.6	32.0	-7.6	32.0
Top flg.spl	307.0	7.6	32.0	-7.6	32.0
Bot.flg.spl	307.0	7.6	32.0	-7.6	32.0
Bot.flg.spl	307.0	7.6	32.0	-7.6	32.0
Top flg.spl	322.0	8.7	32.0	-8.7	32.0
Top flg.spl	322.0	8.7	32.0	-8.7	32.0
Bot.flg.spl	322.0	8.7	32.0	-8.7	32.0
Bot.flg.spl	322.0	7.8	32.0	-7.8	32.0
20	340.0	11.3	32.0	-11.3	32.0
Top flg.spl	356.0	7.2	32.0	-7.2	32.0
Top flg.spl	356.0	7.2	32.0	-7.2	32.0
Bot.flg.spl	356.0	7.2	32.0	-7.2	32.0
Bot.flg.spl	356.0	8.1	32.0	-8.1	32.0
Top flg.spl	372.0	2.9	32.0	-2.9	32.0
Top flg.spl	372.0	2.9	32.0	-2.9	32.0
Bot.flg.spl	372.0	2.9	32.0	-2.9	32.0
Bot.flg.spl	372.0	5.6	32.0	-5.6	32.0
23	388.0	-6.0	32.0	6.0	32.0
Top flg.spl	390.0	-7.2	32.0	7.2	32.0
Top flg.spl	390.0	-7.2	32.0	7.2	32.0
Top flg.spl	402.0	-13.7	32.0	13.7	32.0
Top flg.spl	402.0	-13.7	32.0	13.7	32.0
Bot.flg.spl	390.0	-7.2	32.0	7.2	32.0
Bot.flg.spl	390.0	-7.2	32.0	7.2	32.0
Bot.flg.spl	402.0	-13.7	32.0	13.7	32.0
Bot.flg.spl	402.0	-13.7	32.0	13.7	32.0
24	404.0	-6.8	32.0	6.8	32.0
25	420.0	-9.4	32.0	9.4	32.0
26	436.0	-10.6	32.0	10.6	32.0
27	452.0	-10.3	32.0	10.3	32.0
28	468.0	-8.4	32.0	8.4	32.0
Top flg.spl	473.0	-7.5	32.0	7.5	32.0
Top flg.spl	473.0	-7.5	32.0	7.5	32.0
Bot.flg.spl	473.0	-7.5	32.0	7.5	32.0
Bot.flg.spl	473.0	-7.5	32.0	7.5	32.0
29	484.0	-5.9	32.0	5.9	32.0
Top flg.spl	485.0	-5.5	32.0	5.5	32.0
Top flg.spl	485.0	-5.5	32.0	5.5	32.0
Bot.flg.spl	485.0	-5.5	32.0	5.5	32.0
Bot.flg.spl	485.0	-5.5	32.0	5.5	32.0
30	500.0	0.0	32.0	0.0	32.0

Girder 4 Factored Strengths

OUTPUT.TXT

Tenth Point	Loc	Factored Shear (k)	Shear Strength (k)	Ratio	Factored Moment (k-ft)	Bending Strength (k-ft)	Ratio
0	0.00	223.7	543.6 (5)	0.412	0.0	4390.7 (6)	0.000
1	16.00	188.4	626.8 (3)	0.301	3032.5	10163.9 (20)	0.298
2	32.00	143.2	626.8 (3)	0.228	5063.4	11525.1 (20)	0.439
3	48.00	94.0	626.8 (3)	0.150	6367.1	11525.1 (20)	0.552
4	64.00	61.6	626.8 (3)	0.098	6842.2	11525.1 (20)	0.594
5	80.00	121.8	626.8 (3)	0.194	6521.5	11525.1 (20)	0.566
6	96.00	145.7	626.8 (3)	0.232	5361.4	11525.1 (20)	0.465
7	112.00	179.4	626.8 (3)	0.286	3469.7	7040.1 (20)	0.493
8	128.00	222.7	626.8 (3)	0.355	2933.6	5435.0 (6)	0.540
9	144.00	265.4	764.0 (3)	0.347	5845.4	9779.6 (6)	0.598
10L	160.00	321.6	930.6 (3)	0.346	9975.5	12496.0 (6)	0.798
10R	160.00	303.0	930.6 (3)	0.326	9975.5	12496.0 (6)	0.798
11	178.00	242.8	730.3 (3)	0.332	5719.2	9236.1 (6)	0.619
12	196.00	191.3	626.8 (3)	0.305	2862.7	4577.7 (6)	0.625
13	214.00	142.9	626.8 (3)	0.228	2571.9	7925.1 (20)	0.325
14	232.00	101.9	626.8 (3)	0.163	3813.5	7925.1 (20)	0.481
15	250.00	60.2	626.8 (3)	0.096	4245.4	7925.1 (20)	0.536
16	268.00	99.8	626.8 (3)	0.159	3815.7	7925.1 (20)	0.481
17	286.00	144.1	626.8 (3)	0.230	2577.3	7925.1 (20)	0.325
18	304.00	191.2	626.8 (3)	0.305	2838.0	4577.7 (6)	0.620
19	322.00	244.2	730.3 (3)	0.334	5709.1	9236.1 (6)	0.618
20L	340.00	302.4	930.6 (3)	0.325	9974.1	12496.0 (6)	0.798
20R	340.00	321.7	930.6 (3)	0.346	9974.1	12496.0 (6)	0.798
21	356.00	266.7	764.0 (3)	0.349	5852.0	9779.6 (6)	0.598
22	372.00	221.0	626.8 (3)	0.353	2954.7	5435.0 (6)	0.544
23	388.00	181.3	626.8 (3)	0.289	3479.9	7040.1 (20)	0.494
24	404.00	147.1	626.8 (3)	0.235	5353.7	11525.1 (20)	0.465
25	420.00	121.9	626.8 (3)	0.195	6515.5	11525.1 (20)	0.565
26	436.00	65.7	626.8 (3)	0.105	6840.2	11525.1 (20)	0.594
27	452.00	91.3	626.8 (3)	0.146	6369.1	11525.1 (20)	0.553
28	468.00	136.3	626.8 (3)	0.217	5062.1	11525.1 (20)	0.439
29	484.00	180.0	626.8 (3)	0.287	2917.5	10163.9 (20)	0.287
30	500.00	223.5	543.6 (5)	0.411	0.0	4372.9 (6)	0.000

Shear Strength at Intermediate Transverse Stiffeners

5.00	212.7	626.8 (3)	0.339
10.00	201.7	626.8 (3)	0.322
15.00	190.6	626.8 (3)	0.304
20.00	177.1	626.8 (3)	0.283
25.00	163.0	626.8 (3)	0.260
30.00	148.9	626.8 (3)	0.237
35.00	134.0	626.8 (3)	0.214
40.00	118.6	626.8 (3)	0.189
45.00	103.2	626.8 (3)	0.165
50.00	89.9	626.8 (3)	0.143
55.00	79.8	626.8 (3)	0.127
60.00	69.7	626.8 (3)	0.111
65.00	65.4	626.8 (3)	0.104
70.00	84.2	626.8 (3)	0.134
75.00	103.0	626.8 (3)	0.164
85.00	129.3	626.8 (3)	0.206
90.00	136.7	626.8 (3)	0.218
95.00	144.2	626.8 (3)	0.230
100.00	154.1	626.8 (3)	0.246
105.00	164.6	626.8 (3)	0.263
110.00	175.2	626.8 (3)	0.279
115.00	187.5	626.8 (3)	0.299

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OUTPUT.TXT

120.00	201.0	626.8 (3)	0.321
125.00	214.5	626.8 (3)	0.342
130.00	228.0	628.2 (3)	0.363
135.00	241.4	652.1 (3)	0.370
140.00	254.7	701.6 (3)	0.363
145.00	268.9	780.6 (3)	0.345
150.00	286.5	846.6 (3)	0.338
155.00	304.0	883.0 (3)	0.344
165.00	286.3	883.0 (3)	0.324
170.00	269.6	846.6 (3)	0.318
175.00	252.8	780.6 (3)	0.324
180.00	237.1	701.6 (3)	0.338
185.00	222.8	652.1 (3)	0.342
190.00	208.5	628.2 (3)	0.332
195.00	194.2	626.8 (3)	0.310
200.00	180.6	626.8 (3)	0.288
205.00	167.1	626.8 (3)	0.267
210.00	153.6	626.8 (3)	0.245
215.00	140.6	626.8 (3)	0.224
220.00	129.2	626.8 (3)	0.206
225.00	117.8	626.8 (3)	0.188
230.00	106.4	626.8 (3)	0.170
235.00	94.9	626.8 (3)	0.151
240.00	83.3	626.8 (3)	0.133
245.00	71.8	626.8 (3)	0.114
255.00	71.2	626.8 (3)	0.114
260.00	82.2	626.8 (3)	0.131
265.00	93.2	626.8 (3)	0.149
270.00	104.7	626.8 (3)	0.167
275.00	117.0	626.8 (3)	0.187
280.00	129.4	626.8 (3)	0.206
285.00	141.7	626.8 (3)	0.226
290.00	154.6	626.8 (3)	0.247
295.00	167.6	626.8 (3)	0.267
300.00	180.7	626.8 (3)	0.288
305.00	194.1	626.8 (3)	0.310
310.00	208.8	628.2 (3)	0.332
315.00	223.6	652.1 (3)	0.343
320.00	238.3	701.6 (3)	0.340
325.00	253.9	780.6 (3)	0.325
330.00	270.1	846.6 (3)	0.319
335.00	286.2	883.0 (3)	0.324
345.00	304.5	883.0 (3)	0.345
350.00	287.3	846.6 (3)	0.339
355.00	270.2	780.6 (3)	0.346
360.00	255.3	701.6 (3)	0.364
365.00	241.0	652.1 (3)	0.370
370.00	226.7	628.2 (3)	0.361
375.00	213.5	626.8 (3)	0.341
380.00	201.2	626.8 (3)	0.321
385.00	188.8	626.8 (3)	0.301
390.00	177.0	626.8 (3)	0.282
395.00	166.3	626.8 (3)	0.265
400.00	155.6	626.8 (3)	0.248
405.00	145.5	626.8 (3)	0.232
410.00	137.6	626.8 (3)	0.220
415.00	129.8	626.8 (3)	0.207
425.00	104.4	626.8 (3)	0.166
430.00	86.8	626.8 (3)	0.138
435.00	69.2	626.8 (3)	0.110
440.00	72.1	626.8 (3)	0.115
445.00	80.1	626.8 (3)	0.128
450.00	88.1	626.8 (3)	0.141

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455.00	99.8	626.8	(3)	0.159
460.00	113.8	626.8	(3)	0.182
465.00	127.8	626.8	(3)	0.204
470.00	141.7	626.8	(3)	0.226
475.00	155.4	626.8	(3)	0.248
480.00	169.1	626.8	(3)	0.270
485.00	182.7	626.8	(3)	0.292
490.00	196.3	626.8	(3)	0.313
495.00	209.9	626.8	(3)	0.335

(3) Vp(C+.87(1-C)/sqrt(1+(Do/D)**2))
(5) C 0.58 Fyw D t
(20) compact section
(6) Fy S(equiv)
Maximum moment in factored strength expression

Girder 4 Load Factor Ratings

Span 1

Location	Moment Capacity	Shear Capacity	Rating Factors Inventory	Operating
0.00	5049.5 B	543.6	3.52 V	5.88 V
15.00L	7040.1 C	626.8	4.72 V	7.88 V
15.00R	10163.9 C	626.8	4.72 V	7.88 V
5.00S	7040.1 C	626.8	4.32 V	7.21 V
10.00S	7040.1 C	626.8	4.49 V	7.51 V
16.00	10163.9 C	626.8	4.77 V	7.96 V
27.00L	7677.3 S	626.8	3.06 S	5.11 S
27.00R	8902.5 S	626.8	3.73 S	6.23 S
20.00S	7677.3 S	626.8	4.01 S	6.69 S
25.00S	7677.3 S	626.8	3.29 S	5.50 S
30.00S	8902.5 S	626.8	3.40 S	5.68 S
32.00	8902.5 S	626.8	3.21 S	5.36 S
35.00S	8902.5 S	626.8	2.98 S	4.97 S
40.00S	8902.5 S	626.8	2.66 S	4.44 S
45.00S	8902.5 S	626.8	2.44 S	4.07 S
48.00	8902.5 S	626.8	2.33 S	3.90 S
50.00S	8902.5 S	626.8	2.28 S	3.81 S
55.00S	8902.5 S	626.8	2.17 S	3.63 S
60.00S	8902.5 S	626.8	2.11 S	3.52 S
64.00	8902.5 S	626.8	2.08 S	3.48 S
65.00S	8902.5 S	626.8	2.08 S	3.47 S
70.00S	8902.5 S	626.8	2.08 S	3.47 S
75.00S	8902.5 S	626.8	2.11 S	3.52 S
80.00	8902.5 S	626.8	2.18 S	3.63 S
85.00S	8902.5 S	626.8	2.28 S	3.81 S
90.00S	8902.5 S	626.8	2.44 S	4.08 S
95.00S	8902.5 S	626.8	2.64 S	4.41 S
96.00	8902.5 S	626.8	2.69 S	4.49 S
98.00L	8902.5 S	626.8	2.79 S	4.66 S
98.00R	7677.3 S	626.8	2.31 S	3.86 S
110.00L	7677.3 S	626.8	3.14 S	5.24 S
110.00R	4814.3 S	626.8	1.78 S	2.97 S
100.00S	7677.3 S	626.8	2.41 S	4.03 S
105.00S	7677.3 S	626.8	2.73 S	4.56 S
112.00	4814.3 S	626.8	1.93 S	3.22 S
115.00S	4814.3 S	626.8	2.19 S	3.66 S
120.00S	4814.3 S	626.8	2.85 S	4.75 S

125.00S	3720.9 B	626.8	1.57 T	2.62 T
128.00L	3720.9 B	626.8	1.35 T	2.26 T
128.00R	7151.1 B	626.8	2.89 T	4.83 T
130.00S	7170.0 B	628.2	2.70 T	4.50 T
135.00S	7507.6 B	652.1	2.33 T	3.88 T
140.00S	8285.0 B	701.6	2.11 B	3.53 B
144.00L	9245.9 B	762.5	2.03 T	3.39 T
144.00R	10393.0 B	765.4	2.38 B	3.97 B
145.00S	10593.2 B	780.6	2.34 T	3.90 T
150.00S	11704.3 B	846.6	2.14 T	3.58 T
155.00S	12318.6 B	883.0	1.84 T	3.07 T
160.00	12536.6 B	930.6	1.49 B	2.49 B

Span 2

Location	Moment Capacity	Shear Capacity	Rating Factors Inventory	Operating
0.00	12536.6 B	930.6	1.49 B	2.49 B
5.00S	12409.7 B	883.0	1.52 B	2.55 B
10.00S	11791.7 B	846.6	2.11 B	3.52 B
15.00S	10674.2 B	780.6	2.28 B	3.80 B
18.00L	9744.8 B	731.6	2.30 T	3.84 T
18.00R	8727.5 B	729.0	1.97 T	3.29 T
33.00L	7151.1 B	626.8	2.92 T	4.88 T
33.00R	4577.7 B	626.8	1.66 T	2.77 T
20.00S	8285.0 B	701.6	2.01 B	3.35 B
25.00S	7507.6 B	652.1	2.21 T	3.69 T
30.00S	7170.0 B	628.2	2.60 T	4.34 T
35.00S	4577.7 B	626.8	1.82 T	3.04 T
36.00	4577.7 B	626.8	1.90 T	3.18 T
40.00S	4577.7 B	626.8	2.23 T	3.73 T
45.00S	4577.7 B	626.8	2.12 T	3.54 T
50.00S	5633.2 S	626.8	3.28 S	5.48 S
54.00	5633.2 S	626.8	2.98 S	4.98 S
55.00S	5633.2 S	626.8	2.91 S	4.85 S
60.00S	5633.2 S	626.8	2.60 S	4.34 S
65.00S	5633.2 S	626.8	2.35 S	3.93 S
70.00S	5633.2 S	626.8	2.17 S	3.63 S
72.00	5633.2 S	626.8	2.12 S	3.54 S
75.00S	5633.2 S	626.8	2.05 S	3.42 S
80.00S	5633.2 S	626.8	1.96 S	3.27 S
85.00S	5633.2 S	626.8	1.91 S	3.18 S
90.00	5633.2 S	626.8	1.89 S	3.15 S
95.00S	5633.2 S	626.8	1.91 S	3.18 S
100.00S	5633.2 S	626.8	1.96 S	3.27 S
105.00S	5633.2 S	626.8	2.05 S	3.42 S
108.00	5633.2 S	626.8	2.12 S	3.54 S
110.00S	5633.2 S	626.8	2.17 S	3.63 S
115.00S	5633.2 S	626.8	2.35 S	3.92 S
120.00S	5633.2 S	626.8	2.58 S	4.32 S
125.00S	5633.2 S	626.8	2.90 S	4.84 S
126.00	5633.2 S	626.8	2.98 S	4.97 S
130.00S	4577.7 B	626.8	2.06 B	3.44 B
135.00S	4577.7 B	626.8	2.17 T	3.62 T
140.00S	4577.7 B	626.8	2.25 T	3.75 T
144.00	4577.7 B	626.8	1.92 T	3.20 T
147.00L	4577.7 B	626.8	1.67 T	2.79 T
147.00R	7151.1 B	626.8	2.94 T	4.90 T
145.00S	4577.7 B	626.8	1.83 T	3.06 T
150.00S	7170.0 B	628.2	2.61 T	4.36 T
155.00S	7507.6 B	652.1	2.22 T	3.70 T
160.00S	8285.0 B	701.6	2.01 B	3.36 B

162.00L	8727.5 B	729.0	1.97 T	3.29 T
162.00R	9821.0 B	731.6	2.32 B	3.87 B
165.00S	10593.2 B	780.6	2.26 T	3.78 T
170.00S	11704.3 B	846.6	2.09 T	3.49 T
175.00S	12318.6 B	883.0	1.81 T	3.03 T
180.00	12536.6 B	930.6	1.49 B	2.49 B

Span 3

Location	Moment Capacity	Shear Capacity	Rating Factors Inventory	Operating
0.00	12536.6 B	930.6	1.49 B	2.49 B
5.00S	12409.7 B	883.0	1.58 B	2.65 B
10.00S	11791.7 B	846.6	2.16 B	3.60 B
15.00S	10674.2 B	780.6	2.35 B	3.93 B
16.00L	10313.5 B	765.4	2.35 T	3.93 T
16.00R	9245.9 B	762.5	2.03 T	3.39 T
20.00S	8285.0 B	701.6	2.11 B	3.52 B
25.00S	7507.6 B	652.1	2.32 T	3.87 T
30.00S	7170.0 B	628.2	2.69 T	4.49 T
32.00L	7151.1 B	626.8	2.88 T	4.81 T
32.00R	5067.7 B	626.8	1.84 B	3.07 B
35.00S	3720.9 B	626.8	1.56 T	2.60 T
40.00S	5067.7 B	626.8	2.31 B	3.86 B
45.00S	4814.3 S	626.8	2.19 S	3.65 S
48.00	4814.3 S	626.8	1.93 S	3.22 S
50.00L	4814.3 S	626.8	1.77 S	2.96 S
50.00R	7677.3 S	626.8	3.14 S	5.24 S
62.00L	7677.3 S	626.8	2.31 S	3.86 S
62.00R	8902.5 S	626.8	2.79 S	4.67 S
55.00S	7677.3 S	626.8	2.73 S	4.56 S
60.00S	7677.3 S	626.8	2.41 S	4.03 S
64.00	8902.5 S	626.8	2.69 S	4.50 S
65.00S	8902.5 S	626.8	2.65 S	4.42 S
70.00S	8902.5 S	626.8	2.44 S	4.08 S
75.00S	8902.5 S	626.8	2.28 S	3.82 S
80.00	8902.5 S	626.8	2.18 S	3.64 S
85.00S	8902.5 S	626.8	2.11 S	3.52 S
90.00S	8902.5 S	626.8	2.08 S	3.48 S
95.00S	8902.5 S	626.8	2.08 S	3.47 S
96.00	8902.5 S	626.8	2.08 S	3.48 S
100.00S	8902.5 S	626.8	2.11 S	3.52 S
105.00S	8902.5 S	626.8	2.17 S	3.63 S
110.00S	8902.5 S	626.8	2.28 S	3.80 S
112.00	8902.5 S	626.8	2.33 S	3.90 S
115.00S	8902.5 S	626.8	2.43 S	4.07 S
120.00S	8902.5 S	626.8	2.66 S	4.44 S
125.00S	8902.5 S	626.8	2.97 S	4.95 S
128.00	8902.5 S	626.8	3.21 S	5.36 S
133.00L	8902.5 S	626.8	3.76 S	6.29 S
133.00R	7677.3 S	626.8	3.09 S	5.16 S
130.00S	8902.5 S	626.8	3.41 S	5.69 S
135.00S	7677.3 S	626.8	3.34 S	5.58 S
140.00S	7677.3 S	626.8	4.22 S	7.04 S
144.00	10163.9 C	626.8	5.13 V	8.57 V
145.00L	10163.9 C	626.8	5.06 V	8.45 V
145.00R	4797.0 S	626.8	3.05 S	5.10 S
150.00S	7040.1 C	626.8	4.74 V	7.92 V
155.00S	3720.9 C	626.8	4.45 V	7.43 V
160.00	5049.5 B	543.6	3.52 V	5.88 V

Rating Codes:

T - Top steel governs
B - Bottom steel governs
C - Concrete governs
R - Rebar governs
V - Shear governs
S - Serviceability governs
I - Moment-shear interaction governs

Mom Capacity Codes:
C - Compact
B - Braced non-compact
U - Unbraced non-compact
T - Transition between compact and braced non-compact
S - Serviceability

This table is based on eq. (6-1a) of the AASHTO Manual
for Condition Evaluation of Bridges.

Noncompact shapes ratings based on stress, as

$$IR = \frac{Fb - \text{Dead load factored stress}}{\text{LL+I factored stress}}$$

Noncompact shape moment capacity is the product of
allowable stress and LL+I section modulus.

Girder 4 Bearing Stiffeners

Location from Left End of Web Sect.	Service Reaction	Allowable Column Stress	Actual Column Stress	Ratio	Allowable Bearing Stress	Actual Bearing Stress	Ratio
0.00	134.00	16.80	10.72	0.638	28.80	17.87	0.620
160.00	342.23	16.60	9.51	0.573	28.80	15.21	0.528
340.00	342.30	16.60	9.51	0.573	28.80	15.21	0.528
500.00	133.81	16.80	10.71	0.637	28.80	17.84	0.620

Girder 4 Fatigue Summary

Condition	Location from Left End of Girder	Category (Table 10.3.1A)	Force Range (k-ft)	Actual Stress Range	Allowable Stress Range	Ratio
Base metal	16.00	B	863.10 T	3502.	18000.	0.195
Base metal *	16.00	B	741.39 T	3000.	16000.	0.187
Base metal	32.00	B	1455.42 T	5092.	18000.	0.283
Base metal *	32.00	B	1222.87 T	4269.	16000.	0.267
Base metal	48.00	B	1872.42 T	6577.	18000.	0.365
Base metal *	48.00	B	1561.24 T	5471.	16000.	0.342
Base metal	64.00	B	2091.59 T	7386.	18000.	0.410
Base metal *	64.00	B	1734.28 T	6109.	16000.	0.382
Base metal	80.00	B	2160.38 T	7682.	18000.	0.427
Base metal *	80.00	B	1774.59 T	6294.	16000.	0.393
Base metal	96.00	B	2049.49 T	7362.	18000.	0.409

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Base metal *	96.00	B	1697.02	T	6078.	16000.	0.380
Base metal	112.00	B	1804.31	T	13062.	18000.	0.726
Base metal *	112.00	B	1496.53	T	10771.	16000.	0.673
Near flg-web weld	16.00	B	863.10	T	3401.	18000.	0.189
Near flg-web weld *	16.00	B	741.39	T	2913.	16000.	0.182
Near flg-web weld	32.00	B	1455.42	T	4908.	18000.	0.273
Near flg-web weld *	32.00	B	1222.87	T	4114.	16000.	0.257
Near flg-web weld	48.00	B	1872.42	T	6339.	18000.	0.352
Near flg-web weld *	48.00	B	1561.24	T	5273.	16000.	0.330
Near flg-web weld	64.00	B	2091.59	T	7119.	18000.	0.395
Near flg-web weld *	64.00	B	1734.28	T	5888.	16000.	0.368
Near flg-web weld	80.00	B	2160.38	T	7404.	18000.	0.411
Near flg-web weld *	80.00	B	1774.59	T	6066.	16000.	0.379
Near flg-web weld	96.00	B	2049.49	T	7095.	18000.	0.394
Near flg-web weld *	96.00	B	1697.02	T	5858.	16000.	0.366
Near flg-web weld	112.00	B	1804.31	T	12897.	18000.	0.717
Near flg-web weld *	112.00	B	1496.53	T	10635.	16000.	0.665
Base metal	16.00	B	863.10	T	3502.	18000.	0.195
Base metal *	16.00	B	741.39	T	3000.	16000.	0.187
Base metal	32.00	B	1455.42	T	5092.	18000.	0.283
Base metal *	32.00	B	1222.87	T	4269.	16000.	0.267
Base metal	48.00	B	1872.42	T	6577.	18000.	0.365
Base metal *	48.00	B	1561.24	T	5471.	16000.	0.342
Base metal	64.00	B	2091.59	T	7386.	18000.	0.410
Base metal *	64.00	B	1734.28	T	6109.	16000.	0.382
Base metal	80.00	B	2160.38	T	7682.	18000.	0.427
Base metal *	80.00	B	1774.59	T	6294.	16000.	0.393
Base metal	96.00	B	2049.49	T	7362.	18000.	0.409
Base metal *	96.00	B	1697.02	T	6078.	16000.	0.380
Base metal	112.00	B	1804.31	T	13062.	18000.	0.726
Base metal *	112.00	B	1496.53	T	10771.	16000.	0.673
Top flg. splice	15.00	B	817.09	T	1202.	18000.	0.067
Top flg splice *	15.00	B	702.67	T	1038.	16000.	0.065
Top flg. splice	27.00	B	1289.15	T	2341.	18000.	0.130
Top flg splice *	27.00	B	1087.78	T	1924.	16000.	0.120
Top flg. splice	98.00	B	2026.19	T	4919.	18000.	0.273
Top flg splice *	98.00	B	1678.68	T	3971.	16000.	0.248
Top flg. splice	110.00	B	1837.81	T	7851.	18000.	0.436
Top flg splice *	110.00	B	1523.41	T	6307.	16000.	0.394
Bot flg. splice	15.00	B	817.09	T	4659.	18000.	0.259
Bot flg splice *	15.00	B	702.67	T	4058.	16000.	0.254
Bot flg. splice	27.00	B	1289.15	T	5253.	18000.	0.292
Bot flg splice *	27.00	B	1087.78	T	4420.	16000.	0.276
Bot flg. splice	98.00	B	2026.19	T	8556.	18000.	0.475
Bot flg splice *	98.00	B	1678.68	T	7063.	16000.	0.441
Bot flg. splice	110.00	B	1837.81	T	13294.	18000.	0.739
Bot flg splice *	110.00	B	1523.41	T	10954.	16000.	0.685
Trans. stiff. toe	10.00	C	539.44	T	2161.	13000.	0.166
Trans. stiff. toe *	10.00	C	463.37	T	1851.	12000.	0.154
Trans. stiff. toe	15.00	C	809.16	T	3242.	13000.	0.249
Trans. stiff. toe *	15.00	C	695.05	T	2777.	12000.	0.231
Trans. stiff. toe	20.00	C	1011.18	T	4058.	13000.	0.312
Trans. stiff. toe *	20.00	C	861.76	T	3449.	12000.	0.287
Trans. stiff. toe	25.00	C	1196.28	T	4128.	13000.	0.318
Trans. stiff. toe *	25.00	C	1012.22	T	3485.	12000.	0.290
Trans. stiff. toe	30.00	C	1381.38	T	4771.	13000.	0.367
Trans. stiff. toe *	30.00	C	1162.68	T	4007.	12000.	0.334
Trans. stiff. toe	35.00	C	1533.61	T	5303.	13000.	0.408
Trans. stiff. toe *	35.00	C	1286.31	T	4438.	12000.	0.370
Trans. stiff. toe	40.00	C	1663.92	T	5762.	13000.	0.443
Trans. stiff. toe *	40.00	C	1392.05	T	4809.	12000.	0.401
Trans. stiff. toe	45.00	C	1794.23	T	6220.	13000.	0.478
Trans. stiff. toe *	45.00	C	1497.79	T	5180.	12000.	0.432

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Trans. stiff. toe	50.00	C	1899.82	T	6595.	13000.	0.507
Trans. stiff. toe *	50.00	C	1582.87	T	5481.	12000.	0.457
Trans. stiff. toe	55.00	C	1968.31	T	6844.	13000.	0.526
Trans. stiff. toe *	55.00	C	1636.95	T	5678.	12000.	0.473
Trans. stiff. toe	60.00	C	2036.80	T	7094.	13000.	0.546
Trans. stiff. toe *	60.00	C	1691.02	T	5875.	12000.	0.490
Trans. stiff. toe	65.00	C	2095.89	T	7312.	13000.	0.562
Trans. stiff. toe *	65.00	C	1736.80	T	6044.	12000.	0.504
Trans. stiff. toe	70.00	C	2117.39	T	7403.	13000.	0.569
Trans. stiff. toe *	70.00	C	1749.40	T	6101.	12000.	0.508
Trans. stiff. toe	75.00	C	2138.88	T	7494.	13000.	0.576
Trans. stiff. toe *	75.00	C	1761.99	T	6158.	12000.	0.513
Trans. stiff. toe	80.00	C	2160.38	T	7585.	13000.	0.583
Trans. stiff. toe *	80.00	C	1774.59	T	6215.	12000.	0.518
Trans. stiff. toe	85.00	C	2125.73	T	7487.	13000.	0.576
Trans. stiff. toe *	85.00	C	1750.35	T	6148.	12000.	0.512
Trans. stiff. toe	90.00	C	2091.07	T	7388.	13000.	0.568
Trans. stiff. toe *	90.00	C	1726.11	T	6082.	12000.	0.507
Trans. stiff. toe	95.00	C	2056.42	T	7289.	13000.	0.561
Trans. stiff. toe *	95.00	C	1701.87	T	6015.	12000.	0.501
Trans. stiff. toe	100.00	C	1988.20	T	7077.	13000.	0.544
Trans. stiff. toe *	100.00	C	1646.90	T	5846.	12000.	0.487
Trans. stiff. toe	105.00	C	1911.58	T	13464.	13000.	1.036
Trans. stiff. toe *	105.00	C	1584.24	T	11094.	12000.	0.924
Trans. stiff. toe	110.00	C	1834.96	T	13059.	13000.	1.005
Trans. stiff. toe *	110.00	C	1521.59	T	10766.	12000.	0.897
Trans. stiff. toe	115.00	C	1748.54	T	12594.	13000.	0.969
Trans. stiff. toe *	115.00	C	1452.71	T	10403.	12000.	0.867
Base metal	16.00	B	878.93	L	3584.	29000.	0.124
Base metal	32.00	B	1537.62	L	5401.	29000.	0.186
Base metal	48.00	B	2028.80	L	7153.	29000.	0.247
Base metal	64.00	B	2329.99	L	8256.	29000.	0.285
Base metal	80.00	B	2459.93	L	8774.	29000.	0.303
Base metal	96.00	B	2381.19	L	8577.	29000.	0.296
Base metal	112.00	B	2150.74	L	15627.	29000.	0.539
Near flg-web weld	16.00	B	878.93	L	3480.	29000.	0.120
Near flg-web weld	32.00	B	1537.62	L	5205.	29000.	0.179
Near flg-web weld	48.00	B	2028.80	L	6894.	29000.	0.238
Near flg-web weld	64.00	B	2329.99	L	7957.	29000.	0.274
Near flg-web weld	80.00	B	2459.93	L	8456.	29000.	0.292
Near flg-web weld	96.00	B	2381.19	L	8266.	29000.	0.285
Near flg-web weld	112.00	B	2150.74	L	15431.	29000.	0.532
Base metal	16.00	B	878.93	L	3584.	29000.	0.124
Base metal	32.00	B	1537.62	L	5401.	29000.	0.186
Base metal	48.00	B	2028.80	L	7153.	29000.	0.247
Base metal	64.00	B	2329.99	L	8256.	29000.	0.285
Base metal	80.00	B	2459.93	L	8774.	29000.	0.303
Base metal	96.00	B	2381.19	L	8577.	29000.	0.296
Base metal	112.00	B	2150.74	L	15627.	29000.	0.539
Top flg. splice	15.00	B	830.45	L	1213.	29000.	0.042
Top flg. splice	27.00	B	1349.78	L	2562.	29000.	0.088
Top flg. splice	98.00	B	2360.68	L	5869.	29000.	0.202
Top flg. splice	110.00	B	2186.06	L	9530.	29000.	0.329
Bot flg. splice	15.00	B	830.45	L	4626.	29000.	0.160
Bot flg. splice	27.00	B	1349.78	L	5527.	29000.	0.191
Bot flg. splice	98.00	B	2360.68	L	10002.	29000.	0.345
Bot flg. splice	110.00	B	2186.06	L	15875.	29000.	0.547
Trans. stiff. toe	10.00	C	549.34	L	2212.	21000.	0.105
Trans. stiff. toe	15.00	C	824.00	L	3318.	21000.	0.158
Trans. stiff. toe	20.00	C	1043.60	L	4208.	21000.	0.200
Trans. stiff. toe	25.00	C	1249.44	L	4329.	21000.	0.206
Trans. stiff. toe	30.00	C	1455.29	L	5046.	21000.	0.240
Trans. stiff. toe	35.00	C	1629.72	L	5657.	21000.	0.269

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Trans. stiff. toe	40.00	C	1783.21	L	6198.	21000.	0.295
Trans. stiff. toe	45.00	C	1936.71	L	6739.	21000.	0.321
Trans. stiff. toe	50.00	C	2066.45	L	7199.	21000.	0.343
Trans. stiff. toe	55.00	C	2160.57	L	7540.	21000.	0.359
Trans. stiff. toe	60.00	C	2254.69	L	7880.	21000.	0.375
Trans. stiff. toe	65.00	C	2338.11	L	8184.	21000.	0.390
Trans. stiff. toe	70.00	C	2378.72	L	8344.	21000.	0.397
Trans. stiff. toe	75.00	C	2419.33	L	8504.	21000.	0.405
Trans. stiff. toe	80.00	C	2459.93	L	8664.	21000.	0.413
Trans. stiff. toe	85.00	C	2435.33	L	8603.	21000.	0.410
Trans. stiff. toe	90.00	C	2410.72	L	8542.	21000.	0.407
Trans. stiff. toe	95.00	C	2386.11	L	8481.	21000.	0.404
Trans. stiff. toe	100.00	C	2323.58	L	8293.	21000.	0.395
Trans. stiff. toe	105.00	C	2251.56	L	15934.	21000.	0.759
Trans. stiff. toe	110.00	C	2179.54	L	15575.	21000.	0.742
Trans. stiff. toe	115.00	C	2085.17	L	15078.	21000.	0.718
Base metal	128.00	C	1506.89	T	5851.	13000.	0.450
Base metal *	128.00	C	1262.81	T	4791.	10000.	0.479
Base metal	144.00	C	1233.19	T	3401.	13000.	0.262
Base metal *	144.00	C	1006.87	T	2798.	10000.	0.280
Base metal	160.00	C	1379.65	T	2931.	13000.	0.225
Base metal *	160.00	C	1146.35	T	2456.	10000.	0.246
Base metal	178.00	C	1152.78	T	3249.	13000.	0.250
Base metal *	178.00	C	974.35	T	2723.	10000.	0.272
Base metal	196.00	C	1426.87	T	5961.	13000.	0.459
Base metal *	196.00	C	1218.05	T	4928.	10000.	0.493
Near flg-web weld	128.00	B	1506.89	T	5655.	18000.	0.314
Base metal	128.00	B	1506.89	T	5780.	18000.	0.321
Near flg-web weld *	128.00	B	1262.81	T	4630.	16000.	0.289
Base metal *	128.00	B	1262.81	T	4733.	16000.	0.296
Near flg-web weld *	128.00	B	1262.81	T	4733.	16000.	0.296
Base metal *	128.00	B	1262.81	T	4838.	16000.	0.302
Near flg-web weld	144.00	B	1233.19	T	3265.	18000.	0.181
Base metal	144.00	B	1233.19	T	3359.	18000.	0.187
Near flg-web weld *	144.00	B	1006.87	T	2685.	16000.	0.168
Base metal *	144.00	B	1006.87	T	2763.	16000.	0.173
Near flg-web weld *	144.00	B	1006.87	T	2763.	16000.	0.173
Base metal *	144.00	B	1006.87	T	2842.	16000.	0.178
Near flg-web weld	160.00	B	1379.65	T	2822.	18000.	0.157
Base metal	160.00	B	1379.65	T	2898.	18000.	0.161
Near flg-web weld *	160.00	B	1146.35	T	2365.	16000.	0.148
Base metal *	160.00	B	1146.35	T	2428.	16000.	0.152
Near flg-web weld *	160.00	B	1146.35	T	2428.	16000.	0.152
Base metal *	160.00	B	1146.35	T	2493.	16000.	0.156
Near flg-web weld	178.00	B	1152.78	T	3113.	18000.	0.173
Base metal	178.00	B	1152.78	T	3206.	18000.	0.178
Near flg-web weld *	178.00	B	974.35	T	2609.	16000.	0.163
Base metal *	178.00	B	974.35	T	2687.	16000.	0.168
Near flg-web weld *	178.00	B	974.35	T	2687.	16000.	0.168
Base metal *	178.00	B	974.35	T	2768.	16000.	0.173
Near flg-web weld	196.00	B	1426.87	T	5800.	18000.	0.322
Base metal	196.00	B	1426.87	T	5901.	18000.	0.328
Near flg-web weld *	196.00	B	1218.05	T	4795.	16000.	0.300
Base metal *	196.00	B	1218.05	T	4878.	16000.	0.305
Near flg-web weld *	196.00	B	1218.05	T	4878.	16000.	0.305
Base metal *	196.00	B	1218.05	T	4963.	16000.	0.310
Top flg. splice	128.00	B	1506.89	T	8220.	18000.	0.457
Top flg splice *	128.00	B	1262.81	T	6709.	16000.	0.419
Top flg. splice	144.00	B	1233.19	T	3610.	18000.	0.201
Top flg splice *	144.00	B	1006.87	T	2970.	16000.	0.186
Top flg. splice	178.00	B	1152.78	T	3447.	18000.	0.191
Top flg splice *	178.00	B	974.35	T	2888.	16000.	0.180
Top flg. splice	193.00	B	1384.13	T	6056.	18000.	0.336

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Top flg splice *	193.00	B	1183.28	T	5020.	16000.	0.314
Bot flg. splice	128.00	B	1506.89	T	11482.	18000.	0.638
Bot flg splice *	128.00	B	1262.81	T	9564.	16000.	0.598
Bot flg. splice	144.00	B	1233.19	T	4133.	18000.	0.230
Bot flg splice *	144.00	B	1006.87	T	3380.	16000.	0.211
Bot flg. splice	178.00	B	1152.78	T	4063.	18000.	0.226
Bot flg splice *	178.00	B	974.35	T	3428.	16000.	0.214
Bot flg. splice	193.00	B	1384.13	T	8667.	18000.	0.482
Bot flg splice *	193.00	B	1183.28	T	7363.	16000.	0.460
Trans. stiff. toe	120.00	C	1655.60	T	12033.	13000.	0.926
Trans. stiff. toe *	120.00	C	1379.67	T	9970.	12000.	0.831
Trans. stiff. toe	125.00	C	1562.66	T	5682.	13000.	0.437
Trans. stiff. toe *	125.00	C	1306.64	T	4642.	12000.	0.387
Trans. stiff. toe	130.00	C	1472.68	T	5690.	13000.	0.438
Trans. stiff. toe *	130.00	C	1230.82	T	4663.	12000.	0.389
Trans. stiff. toe	135.00	C	1387.15	T	5467.	13000.	0.421
Trans. stiff. toe *	135.00	C	1150.84	T	4489.	12000.	0.374
Trans. stiff. toe	140.00	C	1301.61	T	3712.	13000.	0.286
Trans. stiff. toe *	140.00	C	1070.86	T	3053.	12000.	0.254
Trans. stiff. toe	145.00	C	1242.34	T	3265.	13000.	0.251
Trans. stiff. toe *	145.00	C	1015.59	T	2689.	12000.	0.224
Trans. stiff. toe	150.00	C	1288.11	T	3070.	13000.	0.236
Trans. stiff. toe *	150.00	C	1059.18	T	2544.	12000.	0.212
Trans. stiff. toe	155.00	C	1333.88	T	2807.	13000.	0.216
Trans. stiff. toe *	155.00	C	1102.76	T	2339.	12000.	0.195
Trans. stiff. toe	160.00	C	1379.65	T	2875.	13000.	0.221
Trans. stiff. toe *	160.00	C	1146.35	T	2409.	12000.	0.201
Trans. stiff. toe	165.00	C	1316.63	T	2751.	13000.	0.212
Trans. stiff. toe *	165.00	C	1098.57	T	2305.	12000.	0.192
Trans. stiff. toe	170.00	C	1253.61	T	2936.	13000.	0.226
Trans. stiff. toe *	170.00	C	1050.79	T	2461.	12000.	0.205
Trans. stiff. toe	175.00	C	1190.59	T	3043.	13000.	0.234
Trans. stiff. toe *	175.00	C	1003.01	T	2551.	12000.	0.213
Trans. stiff. toe	180.00	C	1183.23	T	3338.	13000.	0.257
Trans. stiff. toe *	180.00	C	1001.42	T	2795.	12000.	0.233
Trans. stiff. toe	185.00	C	1259.37	T	3665.	13000.	0.282
Trans. stiff. toe *	185.00	C	1069.12	T	3063.	12000.	0.255
Trans. stiff. toe	200.00	C	1478.35	T	8905.	13000.	0.685
Trans. stiff. toe *	200.00	C	1253.49	T	7508.	12000.	0.626
Trans. stiff. toe	205.00	C	1542.71	T	9193.	13000.	0.707
Trans. stiff. toe *	205.00	C	1297.80	T	7695.	12000.	0.641
Trans. stiff. toe	210.00	C	1607.07	T	9482.	13000.	0.729
Trans. stiff. toe *	210.00	C	1342.10	T	7882.	12000.	0.657
Rebars	160.00		1379.65	T	3803.	20000.	0.190
Rebars *	160.00		1146.35	T	3160.	20000.	0.158
Base metal	128.00	C	1801.03	L	7124.	21000.	0.339
Base metal	144.00	C	1951.20	L	5440.	21000.	0.259
Base metal	160.00	C	2758.72	L	6281.	21000.	0.299
Base metal	178.00	C	1816.23	L	5394.	21000.	0.257
Base metal	196.00	C	1494.08	L	6993.	21000.	0.333
Near flg-web weld	128.00	B	1801.03	L	9483.	29000.	0.327
Base metal	128.00	B	1801.03	L	9694.	29000.	0.334
Near flg-web weld	144.00	B	1951.20	L	5221.	29000.	0.180
Base metal	144.00	B	1951.20	L	5372.	29000.	0.185
Near flg-web weld	160.00	B	2758.72	L	6048.	29000.	0.209
Base metal	160.00	B	2758.72	L	6211.	29000.	0.214
Near flg-web weld	178.00	B	1816.23	L	5167.	29000.	0.178
Base metal	178.00	B	1816.23	L	5322.	29000.	0.184
Near flg-web weld	196.00	B	1494.08	L	6804.	29000.	0.235
Base metal	196.00	B	1494.08	L	6922.	29000.	0.239
Top flg. splice	128.00	B	1801.03	L	10034.	29000.	0.346
Top flg. splice	144.00	B	1951.20	L	5775.	29000.	0.199
Top flg. splice	178.00	B	1816.23	L	5729.	29000.	0.198

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Top flg. splice	193.00	B	1506.64	L	7415.	29000.	0.256
Bot flg. splice	128.00	B	1801.03	L	13792.	29000.	0.476
Bot flg. splice	144.00	B	1951.20	L	6555.	29000.	0.226
Bot flg. splice	178.00	B	1816.23	L	6473.	29000.	0.223
Bot flg. splice	193.00	B	1506.64	L	9676.	29000.	0.334
Trans. stiff. toe	120.00	C	1975.89	L	14423.	21000.	0.687
Trans. stiff. toe	125.00	C	1866.60	L	6912.	21000.	0.329
Trans. stiff. toe	130.00	C	1819.81	L	7206.	21000.	0.343
Trans. stiff. toe	135.00	C	1866.73	L	7584.	21000.	0.361
Trans. stiff. toe	140.00	C	1913.66	L	5576.	21000.	0.266
Trans. stiff. toe	145.00	C	2001.67	L	5347.	21000.	0.255
Trans. stiff. toe	150.00	C	2254.02	L	5590.	21000.	0.266
Trans. stiff. toe	155.00	C	2506.37	L	5575.	21000.	0.265
Trans. stiff. toe	160.00	C	2758.72	L	6162.	21000.	0.293
Trans. stiff. toe	165.00	C	2496.92	L	5574.	21000.	0.265
Trans. stiff. toe	170.00	C	2235.11	L	5586.	21000.	0.266
Trans. stiff. toe	175.00	C	1973.31	L	5346.	21000.	0.255
Trans. stiff. toe	180.00	C	1780.43	L	5352.	21000.	0.255
Trans. stiff. toe	185.00	C	1690.95	L	5357.	21000.	0.255
Trans. stiff. toe	190.00	C	1601.46	L	7935.	21000.	0.378
Trans. stiff. toe	195.00	C	1511.98	L	6996.	21000.	0.333
Trans. stiff. toe	200.00	C	1554.14	L	6728.	21000.	0.320
Trans. stiff. toe	205.00	C	1629.20	L	6633.	21000.	0.316
Trans. stiff. toe	210.00	C	1704.27	L	10247.	21000.	0.488
Rebars	160.00		2758.72	L	7605.	20000.	0.380
Base metal	214.00	B	1658.55	T	9881.	18000.	0.549
Base metal *	214.00	B	1377.55	T	8170.	16000.	0.511
Base metal	232.00	B	1765.03	T	10254.	18000.	0.570
Base metal *	232.00	B	1465.66	T	8475.	16000.	0.530
Base metal	250.00	B	1703.03	T	9712.	18000.	0.540
Base metal *	250.00	B	1423.31	T	8080.	16000.	0.505
Base metal	268.00	B	1764.93	T	10254.	18000.	0.570
Base metal *	268.00	B	1465.58	T	8475.	16000.	0.530
Base metal	286.00	B	1658.65	T	9882.	18000.	0.549
Base metal *	286.00	B	1377.66	T	8171.	16000.	0.511
Near flg-web weld	214.00	B	1658.55	T	9712.	18000.	0.540
Near flg-web weld *	214.00	B	1377.55	T	8031.	16000.	0.502
Near flg-web weld	232.00	B	1765.03	T	10079.	18000.	0.560
Near flg-web weld *	232.00	B	1465.66	T	8330.	16000.	0.521
Near flg-web weld	250.00	B	1703.03	T	9546.	18000.	0.530
Near flg-web weld *	250.00	B	1423.31	T	7942.	16000.	0.496
Near flg-web weld	268.00	B	1764.93	T	10078.	18000.	0.560
Near flg-web weld *	268.00	B	1465.58	T	8330.	16000.	0.521
Near flg-web weld	286.00	B	1658.65	T	9713.	18000.	0.540
Near flg-web weld *	286.00	B	1377.66	T	8031.	16000.	0.502
Trans. stiff. toe	215.00	C	1664.47	T	9733.	13000.	0.749
Trans. stiff. toe *	215.00	C	1382.44	T	8047.	12000.	0.671
Trans. stiff. toe	220.00	C	1694.04	T	9835.	13000.	0.757
Trans. stiff. toe *	220.00	C	1406.92	T	8131.	12000.	0.678
Trans. stiff. toe	225.00	C	1723.62	T	9937.	13000.	0.764
Trans. stiff. toe *	225.00	C	1431.40	T	8214.	12000.	0.684
Trans. stiff. toe	230.00	C	1753.20	T	10038.	13000.	0.772
Trans. stiff. toe *	230.00	C	1455.87	T	8297.	12000.	0.691
Trans. stiff. toe	235.00	C	1754.70	T	9990.	13000.	0.768
Trans. stiff. toe *	235.00	C	1458.61	T	8266.	12000.	0.689
Trans. stiff. toe	240.00	C	1737.48	T	9842.	13000.	0.757
Trans. stiff. toe *	240.00	C	1446.84	T	8158.	12000.	0.680
Trans. stiff. toe	245.00	C	1720.25	T	9694.	13000.	0.746
Trans. stiff. toe *	245.00	C	1435.07	T	8050.	12000.	0.671
Trans. stiff. toe	250.00	C	1703.03	T	9546.	13000.	0.734
Trans. stiff. toe *	250.00	C	1423.31	T	7942.	12000.	0.662
Trans. stiff. toe	255.00	C	1720.23	T	9694.	13000.	0.746
Trans. stiff. toe *	255.00	C	1435.05	T	8050.	12000.	0.671

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Trans. stiff. toe	260.00	C	1737.42	T	9842.	13000.	0.757
Trans. stiff. toe *	260.00	C	1446.79	T	8157.	12000.	0.680
Trans. stiff. toe	265.00	C	1754.62	T	9990.	13000.	0.768
Trans. stiff. toe *	265.00	C	1458.53	T	8265.	12000.	0.689
Trans. stiff. toe	270.00	C	1753.12	T	10038.	13000.	0.772
Trans. stiff. toe *	270.00	C	1455.81	T	8297.	12000.	0.691
Trans. stiff. toe	275.00	C	1723.60	T	9936.	13000.	0.764
Trans. stiff. toe *	275.00	C	1431.39	T	8214.	12000.	0.684
Trans. stiff. toe	280.00	C	1694.08	T	9835.	13000.	0.757
Trans. stiff. toe *	280.00	C	1406.97	T	8131.	12000.	0.678
Trans. stiff. toe	285.00	C	1664.56	T	9733.	13000.	0.749
Trans. stiff. toe *	285.00	C	1382.54	T	8048.	12000.	0.671
Base metal	214.00	B	1764.32	L	10703.	29000.	0.369
Base metal	232.00	B	2045.58	L	12176.	29000.	0.420
Base metal	250.00	B	2113.45	L	12489.	29000.	0.431
Base metal	268.00	B	2045.73	L	12176.	29000.	0.420
Base metal	286.00	B	1764.61	L	10704.	29000.	0.369
Near flg-web weld	214.00	B	1764.32	L	10520.	29000.	0.363
Near flg-web weld	232.00	B	2045.58	L	11968.	29000.	0.413
Near flg-web weld	250.00	B	2113.45	L	12276.	29000.	0.423
Near flg-web weld	268.00	B	2045.73	L	11968.	29000.	0.413
Near flg-web weld	286.00	B	1764.61	L	10521.	29000.	0.363
Trans. stiff. toe	215.00	C	1779.95	L	10600.	21000.	0.505
Trans. stiff. toe	220.00	C	1858.08	L	11002.	21000.	0.524
Trans. stiff. toe	225.00	C	1936.20	L	11405.	21000.	0.543
Trans. stiff. toe	230.00	C	2014.33	L	11807.	21000.	0.562
Trans. stiff. toe	235.00	C	2056.90	L	12019.	21000.	0.572
Trans. stiff. toe	240.00	C	2075.75	L	12105.	21000.	0.576
Trans. stiff. toe	245.00	C	2094.60	L	12190.	21000.	0.580
Trans. stiff. toe	250.00	C	2113.45	L	12276.	21000.	0.585
Trans. stiff. toe	255.00	C	2094.64	L	12190.	21000.	0.580
Trans. stiff. toe	260.00	C	2075.83	L	12105.	21000.	0.576
Trans. stiff. toe	265.00	C	2057.02	L	12019.	21000.	0.572
Trans. stiff. toe	270.00	C	2014.50	L	11807.	21000.	0.562
Trans. stiff. toe	275.00	C	1936.41	L	11405.	21000.	0.543
Trans. stiff. toe	280.00	C	1858.32	L	11003.	21000.	0.524
Trans. stiff. toe	285.00	C	1780.23	L	10601.	21000.	0.505
Base metal	304.00	C	1378.24	T	5892.	13000.	0.453
Base metal *	304.00	C	1169.43	T	4858.	10000.	0.486
Base metal	322.00	C	1109.76	T	3200.	13000.	0.246
Base metal *	322.00	C	931.34	T	2674.	10000.	0.267
Base metal	340.00	C	1379.72	T	2931.	13000.	0.225
Base metal *	340.00	C	1146.41	T	2456.	10000.	0.246
Base metal	356.00	C	1262.68	T	3434.	13000.	0.264
Base metal *	356.00	C	1036.36	T	2830.	10000.	0.283
Base metal	372.00	C	1507.23	T	5851.	13000.	0.450
Base metal *	372.00	C	1263.14	T	4792.	10000.	0.479
Near flg-web weld	304.00	B	1378.24	T	5732.	18000.	0.318
Base metal	304.00	B	1378.24	T	5832.	18000.	0.324
Near flg-web weld *	304.00	B	1169.43	T	4727.	16000.	0.295
Base metal *	304.00	B	1169.43	T	4809.	16000.	0.301
Near flg-web weld *	304.00	B	1169.43	T	4809.	16000.	0.301
Base metal *	304.00	B	1169.43	T	4893.	16000.	0.306
Near flg-web weld	322.00	B	1109.76	T	3066.	18000.	0.170
Base metal	322.00	B	1109.76	T	3158.	18000.	0.175
Near flg-web weld *	322.00	B	931.34	T	2562.	16000.	0.160
Base metal *	322.00	B	931.34	T	2639.	16000.	0.165
Near flg-web weld *	322.00	B	931.34	T	2639.	16000.	0.165
Base metal *	322.00	B	931.34	T	2718.	16000.	0.170
Near flg-web weld	340.00	B	1379.72	T	2822.	18000.	0.157
Base metal	340.00	B	1379.72	T	2898.	18000.	0.161
Near flg-web weld *	340.00	B	1146.41	T	2365.	16000.	0.148
Base metal *	340.00	B	1146.41	T	2428.	16000.	0.152

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Near flg-web weld *	340.00	B	1146.41	T	2428.	16000.	0.152
Base metal *	340.00	B	1146.41	T	2493.	16000.	0.156
Near flg-web weld	356.00	B	1262.68	T	3296.	18000.	0.183
Base metal	356.00	B	1262.68	T	3391.	18000.	0.188
Near flg-web weld *	356.00	B	1036.36	T	2716.	16000.	0.170
Base metal *	356.00	B	1036.36	T	2795.	16000.	0.175
Near flg-web weld *	356.00	B	1036.36	T	2795.	16000.	0.175
Base metal *	356.00	B	1036.36	T	2875.	16000.	0.180
Near flg-web weld	372.00	B	1507.23	T	5655.	18000.	0.314
Base metal	372.00	B	1507.23	T	5781.	18000.	0.321
Near flg-web weld *	372.00	B	1263.14	T	4631.	16000.	0.289
Base metal *	372.00	B	1263.14	T	4734.	16000.	0.296
Near flg-web weld *	372.00	B	1263.14	T	4734.	16000.	0.296
Base metal *	372.00	B	1263.14	T	4839.	16000.	0.302
Top flg. splice	307.00	B	1332.67	T	5982.	18000.	0.332
Top flg splice *	307.00	B	1131.82	T	4946.	16000.	0.309
Top flg. splice	322.00	B	1109.76	T	3397.	18000.	0.189
Top flg splice *	322.00	B	931.34	T	2838.	16000.	0.177
Top flg. splice	356.00	B	1262.68	T	3643.	18000.	0.202
Top flg splice *	356.00	B	1036.36	T	3003.	16000.	0.188
Top flg. splice	372.00	B	1507.23	T	8220.	18000.	0.457
Top flg splice *	372.00	B	1263.14	T	6709.	16000.	0.419
Bot flg. splice	307.00	B	1332.67	T	8389.	18000.	0.466
Bot flg splice *	307.00	B	1131.82	T	7085.	16000.	0.443
Bot flg. splice	322.00	B	1109.76	T	3931.	18000.	0.218
Bot flg splice *	322.00	B	931.34	T	3296.	16000.	0.206
Bot flg. splice	356.00	B	1262.68	T	4219.	18000.	0.234
Bot flg splice *	356.00	B	1036.36	T	3466.	16000.	0.217
Bot flg. splice	372.00	B	1507.23	T	11484.	18000.	0.638
Bot flg splice *	372.00	B	1263.14	T	9566.	16000.	0.598
Trans. stiff. toe	290.00	C	1596.34	T	9468.	13000.	0.728
Trans. stiff. toe *	290.00	C	1331.39	T	7861.	12000.	0.655
Trans. stiff. toe	295.00	C	1518.45	T	9106.	13000.	0.700
Trans. stiff. toe *	295.00	C	1273.55	T	7601.	12000.	0.633
Trans. stiff. toe	300.00	C	1440.56	T	5711.	13000.	0.439
Trans. stiff. toe *	300.00	C	1215.70	T	4689.	12000.	0.391
Trans. stiff. toe	305.00	C	1363.33	T	5789.	13000.	0.445
Trans. stiff. toe *	305.00	C	1156.20	T	4777.	12000.	0.398
Trans. stiff. toe	310.00	C	1288.75	T	5862.	13000.	0.451
Trans. stiff. toe *	310.00	C	1090.07	T	4854.	12000.	0.405
Trans. stiff. toe	315.00	C	1214.17	T	3630.	13000.	0.279
Trans. stiff. toe *	315.00	C	1023.93	T	3024.	12000.	0.252
Trans. stiff. toe	320.00	C	1139.60	T	3307.	13000.	0.254
Trans. stiff. toe *	320.00	C	957.79	T	2761.	12000.	0.230
Trans. stiff. toe	325.00	C	1154.76	T	3023.	13000.	0.233
Trans. stiff. toe *	325.00	C	967.18	T	2528.	12000.	0.211
Trans. stiff. toe	330.00	C	1229.75	T	2929.	13000.	0.225
Trans. stiff. toe *	330.00	C	1026.93	T	2451.	12000.	0.204
Trans. stiff. toe	335.00	C	1304.73	T	2752.	13000.	0.212
Trans. stiff. toe *	335.00	C	1086.67	T	2305.	12000.	0.192
Trans. stiff. toe	340.00	C	1379.72	T	2889.	13000.	0.222
Trans. stiff. toe *	340.00	C	1146.41	T	2421.	12000.	0.202
Trans. stiff. toe	345.00	C	1343.15	T	2829.	13000.	0.218
Trans. stiff. toe *	345.00	C	1112.02	T	2359.	12000.	0.197
Trans. stiff. toe	350.00	C	1306.57	T	3105.	13000.	0.239
Trans. stiff. toe *	350.00	C	1077.63	T	2576.	12000.	0.215
Trans. stiff. toe	355.00	C	1269.99	T	3312.	13000.	0.255
Trans. stiff. toe *	355.00	C	1043.24	T	2733.	12000.	0.228
Trans. stiff. toe	360.00	C	1323.81	T	3758.	13000.	0.289
Trans. stiff. toe *	360.00	C	1093.05	T	3096.	12000.	0.258
Trans. stiff. toe	365.00	C	1400.24	T	5522.	13000.	0.425
Trans. stiff. toe *	365.00	C	1163.92	T	4537.	12000.	0.378
Trans. stiff. toe	370.00	C	1476.66	T	5735.	13000.	0.441

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Trans. stiff. toe *	370.00	C	1234.79	T	4700.	12000.	0.392
Trans. stiff. toe	375.00	C	1562.94	T	5721.	13000.	0.440
Trans. stiff. toe *	375.00	C	1306.91	T	4673.	12000.	0.389
Trans. stiff. toe	380.00	C	1655.81	T	5703.	13000.	0.439
Trans. stiff. toe *	380.00	C	1379.88	T	4640.	12000.	0.387
Rebars	340.00		1379.72	T	3803.	20000.	0.190
Rebars *	340.00		1146.41	T	3160.	20000.	0.158
Base metal	304.00	C	1458.78	L	6940.	21000.	0.330
Base metal	322.00	C	1785.15	L	5357.	21000.	0.255
Base metal	340.00	C	2758.48	L	6280.	21000.	0.299
Base metal	356.00	C	1989.30	L	5482.	21000.	0.261
Base metal	372.00	C	1801.07	L	7125.	21000.	0.339
Near flg-web weld	304.00	B	1458.78	L	6752.	29000.	0.233
Base metal	304.00	B	1458.78	L	6869.	29000.	0.237
Near flg-web weld	322.00	B	1785.15	L	5132.	29000.	0.177
Base metal	322.00	B	1785.15	L	5286.	29000.	0.182
Near flg-web weld	340.00	B	2758.48	L	6047.	29000.	0.209
Base metal	340.00	B	2758.48	L	6210.	29000.	0.214
Near flg-web weld	356.00	B	1989.30	L	5261.	29000.	0.181
Base metal	356.00	B	1989.30	L	5413.	29000.	0.187
Near flg-web weld	372.00	B	1801.07	L	9484.	29000.	0.327
Base metal	372.00	B	1801.07	L	9695.	29000.	0.334
Top flg. splice	307.00	B	1469.27	L	7358.	29000.	0.254
Top flg. splice	322.00	B	1785.15	L	5691.	29000.	0.196
Top flg. splice	356.00	B	1989.30	L	5817.	29000.	0.201
Top flg. splice	372.00	B	1801.07	L	10035.	29000.	0.346
Bot flg. splice	307.00	B	1469.27	L	9473.	29000.	0.327
Bot flg. splice	322.00	B	1785.15	L	6377.	29000.	0.220
Bot flg. splice	356.00	B	1989.30	L	6666.	29000.	0.230
Bot flg. splice	372.00	B	1801.07	L	13793.	29000.	0.476
Trans. stiff. toe	290.00	C	1696.65	L	10253.	21000.	0.488
Trans. stiff. toe	295.00	C	1611.70	L	9859.	21000.	0.469
Trans. stiff. toe	300.00	C	1526.74	L	6733.	21000.	0.321
Trans. stiff. toe	305.00	C	1476.91	L	6992.	21000.	0.333
Trans. stiff. toe	310.00	C	1567.57	L	7939.	21000.	0.378
Trans. stiff. toe	315.00	C	1658.23	L	5346.	21000.	0.255
Trans. stiff. toe	320.00	C	1748.89	L	5345.	21000.	0.255
Trans. stiff. toe	325.00	C	1947.37	L	5349.	21000.	0.255
Trans. stiff. toe	330.00	C	2217.74	L	5600.	21000.	0.267
Trans. stiff. toe	335.00	C	2488.11	L	5592.	21000.	0.266
Trans. stiff. toe	340.00	C	2758.48	L	6190.	21000.	0.295
Trans. stiff. toe	345.00	C	2518.11	L	5612.	21000.	0.267
Trans. stiff. toe	350.00	C	2277.74	L	5644.	21000.	0.269
Trans. stiff. toe	355.00	C	2037.38	L	5414.	21000.	0.258
Trans. stiff. toe	360.00	C	1942.24	L	5640.	21000.	0.269
Trans. stiff. toe	365.00	C	1883.42	L	7658.	21000.	0.365
Trans. stiff. toe	370.00	C	1824.60	L	7262.	21000.	0.346
Trans. stiff. toe	375.00	C	1866.52	L	6960.	21000.	0.331
Trans. stiff. toe	380.00	C	1975.60	L	6927.	21000.	0.330
Rebars	340.00		2758.48	L	7604.	20000.	0.380
Base metal	388.00	B	1804.39	T	13062.	18000.	0.726
Base metal *	388.00	B	1496.62	T	10771.	16000.	0.673
Base metal	404.00	B	2048.64	T	7359.	18000.	0.409
Base metal *	404.00	B	1696.20	T	6075.	16000.	0.380
Base metal	420.00	B	2159.97	T	7680.	18000.	0.427
Base metal *	420.00	B	1774.20	T	6293.	16000.	0.393
Base metal	436.00	B	2091.58	T	7386.	18000.	0.410
Base metal *	436.00	B	1734.28	T	6109.	16000.	0.382
Base metal	452.00	B	1873.00	T	6579.	18000.	0.366
Base metal *	452.00	B	1561.82	T	5473.	16000.	0.342
Base metal	468.00	B	1456.32	T	5095.	18000.	0.283
Base metal *	468.00	B	1223.77	T	4272.	16000.	0.267
Base metal	484.00	B	815.02	T	3312.	18000.	0.184

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Base metal *	484.00	B	693.31	T	2810.	16000.	0.176
Near flg-web weld	388.00	B	1804.39	T	12898.	18000.	0.717
Near flg-web weld *	388.00	B	1496.62	T	10636.	16000.	0.665
Near flg-web weld	404.00	B	2048.64	T	7092.	18000.	0.394
Near flg-web weld *	404.00	B	1696.20	T	5855.	16000.	0.366
Near flg-web weld	420.00	B	2159.97	T	7402.	18000.	0.411
Near flg-web weld *	420.00	B	1774.20	T	6065.	16000.	0.379
Near flg-web weld	436.00	B	2091.58	T	7119.	18000.	0.395
Near flg-web weld *	436.00	B	1734.28	T	5888.	16000.	0.368
Near flg-web weld	452.00	B	1873.00	T	6341.	18000.	0.352
Near flg-web weld *	452.00	B	1561.82	T	5275.	16000.	0.330
Near flg-web weld	468.00	B	1456.32	T	4911.	18000.	0.273
Near flg-web weld *	468.00	B	1223.77	T	4117.	16000.	0.257
Near flg-web weld	484.00	B	815.02	T	3216.	18000.	0.179
Near flg-web weld *	484.00	B	693.31	T	2728.	16000.	0.171
Base metal	388.00	B	1804.39	T	13062.	18000.	0.726
Base metal *	388.00	B	1496.62	T	10771.	16000.	0.673
Base metal	404.00	B	2048.64	T	7359.	18000.	0.409
Base metal *	404.00	B	1696.20	T	6075.	16000.	0.380
Base metal	420.00	B	2159.97	T	7680.	18000.	0.427
Base metal *	420.00	B	1774.20	T	6293.	16000.	0.393
Base metal	436.00	B	2091.58	T	7386.	18000.	0.410
Base metal *	436.00	B	1734.28	T	6109.	16000.	0.382
Base metal	452.00	B	1873.00	T	6579.	18000.	0.366
Base metal *	452.00	B	1561.82	T	5473.	16000.	0.342
Base metal	468.00	B	1456.32	T	5095.	18000.	0.283
Base metal *	468.00	B	1223.77	T	4272.	16000.	0.267
Base metal	484.00	B	815.02	T	3312.	18000.	0.184
Base metal *	484.00	B	693.31	T	2810.	16000.	0.176
Top flg. splice	390.00	B	1837.81	T	7851.	18000.	0.436
Top flg splice *	390.00	B	1523.43	T	6307.	16000.	0.394
Top flg. splice	402.00	B	2025.37	T	4918.	18000.	0.273
Top flg splice *	402.00	B	1677.90	T	3970.	16000.	0.248
Top flg. splice	473.00	B	1280.04	T	2329.	18000.	0.129
Top flg splice *	473.00	B	1078.67	T	1912.	16000.	0.119
Top flg. splice	485.00	B	769.17	T	1129.	18000.	0.063
Top flg splice *	485.00	B	654.75	T	965.	16000.	0.060
Bot flg. splice	390.00	B	1837.81	T	13294.	18000.	0.739
Bot flg splice *	390.00	B	1523.43	T	10954.	16000.	0.685
Bot flg. splice	402.00	B	2025.37	T	8553.	18000.	0.475
Bot flg splice *	402.00	B	1677.90	T	7060.	16000.	0.441
Bot flg. splice	473.00	B	1280.04	T	5217.	18000.	0.290
Bot flg splice *	473.00	B	1078.67	T	4384.	16000.	0.274
Bot flg. splice	485.00	B	769.17	T	4355.	18000.	0.242
Bot flg splice *	485.00	B	654.75	T	3754.	16000.	0.235
Trans. stiff. toe	385.00	C	1748.67	T	12595.	13000.	0.969
Trans. stiff. toe *	385.00	C	1452.84	T	10404.	12000.	0.867
Trans. stiff. toe	390.00	C	1834.92	T	13059.	13000.	1.005
Trans. stiff. toe *	390.00	C	1521.57	T	10766.	12000.	0.897
Trans. stiff. toe	395.00	C	1911.25	T	13462.	13000.	1.036
Trans. stiff. toe *	395.00	C	1583.94	T	11092.	12000.	0.924
Trans. stiff. toe	400.00	C	1987.57	T	7075.	13000.	0.544
Trans. stiff. toe *	400.00	C	1646.31	T	5844.	12000.	0.487
Trans. stiff. toe	405.00	C	2055.59	T	7286.	13000.	0.560
Trans. stiff. toe *	405.00	C	1701.08	T	6012.	12000.	0.501
Trans. stiff. toe	410.00	C	2090.38	T	7385.	13000.	0.568
Trans. stiff. toe *	410.00	C	1725.45	T	6080.	12000.	0.507
Trans. stiff. toe	415.00	C	2125.18	T	7485.	13000.	0.576
Trans. stiff. toe *	415.00	C	1749.82	T	6147.	12000.	0.512
Trans. stiff. toe	420.00	C	2159.97	T	7584.	13000.	0.583
Trans. stiff. toe *	420.00	C	1774.20	T	6214.	12000.	0.518
Trans. stiff. toe	425.00	C	2138.60	T	7493.	13000.	0.576
Trans. stiff. toe *	425.00	C	1761.72	T	6157.	12000.	0.513

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Trans. stiff. toe	430.00	C	2117.23	T	7402.	13000.	0.569
Trans. stiff. toe *	430.00	C	1749.25	T	6100.	12000.	0.508
Trans. stiff. toe	435.00	C	2095.85	T	7312.	13000.	0.562
Trans. stiff. toe *	435.00	C	1736.77	T	6044.	12000.	0.504
Trans. stiff. toe	440.00	C	2036.93	T	7094.	13000.	0.546
Trans. stiff. toe *	440.00	C	1691.16	T	5875.	12000.	0.490
Trans. stiff. toe	445.00	C	1968.63	T	6845.	13000.	0.527
Trans. stiff. toe *	445.00	C	1637.27	T	5679.	12000.	0.473
Trans. stiff. toe	450.00	C	1900.32	T	6596.	13000.	0.507
Trans. stiff. toe *	450.00	C	1583.38	T	5483.	12000.	0.457
Trans. stiff. toe	455.00	C	1794.87	T	6222.	13000.	0.479
Trans. stiff. toe *	455.00	C	1498.43	T	5182.	12000.	0.432
Trans. stiff. toe	460.00	C	1664.66	T	5764.	13000.	0.443
Trans. stiff. toe *	460.00	C	1392.79	T	4811.	12000.	0.401
Trans. stiff. toe	465.00	C	1534.45	T	5306.	13000.	0.408
Trans. stiff. toe *	465.00	C	1287.15	T	4441.	12000.	0.370
Trans. stiff. toe	470.00	C	1376.16	T	4754.	13000.	0.366
Trans. stiff. toe *	470.00	C	1157.46	T	3989.	12000.	0.332
Trans. stiff. toe	475.00	C	1175.75	T	4059.	13000.	0.312
Trans. stiff. toe *	475.00	C	991.69	T	3416.	12000.	0.285
Trans. stiff. toe	480.00	C	975.34	T	3918.	13000.	0.301
Trans. stiff. toe *	480.00	C	825.92	T	3309.	12000.	0.276
Trans. stiff. toe	485.00	C	764.08	T	3066.	13000.	0.236
Trans. stiff. toe *	485.00	C	649.98	T	2601.	12000.	0.217
Trans. stiff. toe	490.00	C	509.39	T	2044.	13000.	0.157
Trans. stiff. toe *	490.00	C	433.32	T	1734.	12000.	0.144
Base metal	388.00	B	2150.13	L	15624.	29000.	0.539
Base metal	404.00	B	2380.09	L	8573.	29000.	0.296
Base metal	420.00	B	2459.16	L	8771.	29000.	0.302
Base metal	436.00	B	2329.86	L	8255.	29000.	0.285
Base metal	452.00	B	2029.31	L	7155.	29000.	0.247
Base metal	468.00	B	1538.49	L	5404.	29000.	0.186
Base metal	484.00	B	836.75	L	3417.	29000.	0.118
Near flg-web weld	388.00	B	2150.13	L	15428.	29000.	0.532
Near flg-web weld	404.00	B	2380.09	L	8263.	29000.	0.285
Near flg-web weld	420.00	B	2459.16	L	8454.	29000.	0.292
Near flg-web weld	436.00	B	2329.86	L	7957.	29000.	0.274
Near flg-web weld	452.00	B	2029.31	L	6896.	29000.	0.238
Near flg-web weld	468.00	B	1538.49	L	5208.	29000.	0.180
Near flg-web weld	484.00	B	836.75	L	3318.	29000.	0.114
Base metal	388.00	B	2150.13	L	15624.	29000.	0.539
Base metal	404.00	B	2380.09	L	8573.	29000.	0.296
Base metal	420.00	B	2459.16	L	8771.	29000.	0.302
Base metal	436.00	B	2329.86	L	8255.	29000.	0.285
Base metal	452.00	B	2029.31	L	7155.	29000.	0.247
Base metal	468.00	B	1538.49	L	5404.	29000.	0.186
Base metal	484.00	B	836.75	L	3417.	29000.	0.118
Top flg. splice	390.00	B	2185.38	L	9531.	29000.	0.329
Top flg. splice	402.00	B	2359.60	L	5868.	29000.	0.202
Top flg. splice	473.00	B	1341.85	L	2552.	29000.	0.088
Top flg. splice	485.00	B	788.41	L	1149.	29000.	0.040
Bot flg. splice	390.00	B	2185.38	L	15871.	29000.	0.547
Bot flg. splice	402.00	B	2359.60	L	9998.	29000.	0.345
Bot flg. splice	473.00	B	1341.85	L	5496.	29000.	0.190
Bot flg. splice	485.00	B	788.41	L	4359.	29000.	0.150
Trans. stiff. toe	385.00	C	2084.68	L	15075.	21000.	0.718
Trans. stiff. toe	390.00	C	2178.87	L	15571.	21000.	0.741
Trans. stiff. toe	395.00	C	2250.74	L	15929.	21000.	0.759
Trans. stiff. toe	400.00	C	2322.60	L	8290.	21000.	0.395
Trans. stiff. toe	405.00	C	2385.03	L	8478.	21000.	0.404
Trans. stiff. toe	410.00	C	2409.74	L	8539.	21000.	0.407
Trans. stiff. toe	415.00	C	2434.45	L	8600.	21000.	0.410
Trans. stiff. toe	420.00	C	2459.16	L	8661.	21000.	0.412

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Trans. stiff. toe	425.00	C	2418.75	L	8502.	21000.	0.405
Trans. stiff. toe	430.00	C	2378.35	L	8343.	21000.	0.397
Trans. stiff. toe	435.00	C	2337.94	L	8184.	21000.	0.390
Trans. stiff. toe	440.00	C	2254.72	L	7880.	21000.	0.375
Trans. stiff. toe	445.00	C	2160.80	L	7540.	21000.	0.359
Trans. stiff. toe	450.00	C	2066.88	L	7201.	21000.	0.343
Trans. stiff. toe	455.00	C	1937.28	L	6741.	21000.	0.321
Trans. stiff. toe	460.00	C	1783.90	L	6200.	21000.	0.295
Trans. stiff. toe	465.00	C	1630.52	L	5660.	21000.	0.270
Trans. stiff. toe	470.00	C	1450.77	L	5031.	21000.	0.240
Trans. stiff. toe	475.00	C	1231.48	L	4268.	21000.	0.203
Trans. stiff. toe	480.00	C	1012.18	L	4086.	21000.	0.195
Trans. stiff. toe	485.00	C	784.45	L	3163.	21000.	0.151
Trans. stiff. toe	490.00	C	522.97	L	2109.	21000.	0.100

* Single truck, one traffic lane, >2,000,000 cycles

T - truck loading
L - lane loading

Girder 4 Maximum Performance Ratios

Criterion	Location ft	Live Ld Effect	Dead Ld Effect	Max Performance Ratio
Shear	0.00	58.5	74.5	0.412
Bending	160.00	2378.6	3701.2	0.798
Bolted web spl	382.50	1103.3	223.2	0.999
Fatigue	105.00			1.036
Bearing Stf.	0.00	59.3	74.7	0.638

Girder 4 Truck loading - 2000000 cycles

Maximum Pitch for 0.875 x 4.50 Stud Connectors for Fatigue

Tenth Point	Location	Shear Range (k)		Studs in a Line	Max Pitch (in)	
0	0.00	63.59	T	2	14.96	
1	16.00	59.42	T	2	20.40	
2	32.00	52.59	T	2	24.82	*
3	48.00	52.58	T	2	24.82	*
4	64.00	51.30	T	2	25.44	*
5	80.00	65.69	T	2	19.87	
6	96.00	54.56	T	2	23.92	
7	112.00	53.68	T	2	18.31	
8	128.00	57.31	T	2	19.49	
9	144.00	57.99	T	2	482.29	*
10	160.00	66.83	T	2	559.30	*
11	178.00	62.26	T	2	421.97	*
12	196.00	55.93	T	2	222.87	*
13	214.00	54.53	T	2	19.28	
14	232.00	53.73	T	2	19.57	
15	250.00	52.12	T	2	20.17	
16	268.00	54.04	T	2	19.46	

17	286.00	55.10	T	2	19.08	
18	304.00	55.90	T	2	222.98	*
19	322.00	61.81	T	2	425.08	*
20	340.00	64.45	T	2	579.96	*
21	356.00	58.64	T	2	476.91	*
22	372.00	57.03	T	2	19.59	
23	388.00	53.81	T	2	18.26	
24	404.00	53.88	T	2	24.22	*
25	420.00	69.30	T	2	18.83	
26	436.00	51.59	T	2	25.30	*
27	452.00	53.06	T	2	24.60	*
28	468.00	53.79	T	2	24.26	*
29	484.00	55.80	T	2	21.72	
30	500.00	62.31	T	2	15.26	

Girder 4 Lane loading - 500000 cycles

Maximum Pitch for 0.875 x 4.50 Stud Connectors for Fatigue

Tenth Point	Location	Shear Range (k)		Studs in a Line	Max Pitch (in)	
0	0.00	67.04	L	2	19.16	
1	16.00	57.36	L	2	28.54	*
2	32.00	49.28	L	2	35.76	*
3	48.00	47.12	L	2	37.40	*
4	64.00	45.39	L	2	38.83	*
5	80.00	47.55	L	2	37.06	*
6	96.00	50.24	L	2	35.08	*
7	112.00	53.42	L	2	24.84	*
8	128.00	62.15	L	2	24.27	*
9	144.00	68.05	L	2	554.96	*
10	160.00	85.70	L	2	588.92	*
11	178.00	72.05	L	2	492.42	*
12	196.00	63.96	L	2	263.16	*
13	214.00	57.52	L	2	24.69	*
14	232.00	53.55	L	2	26.51	*
15	250.00	51.65	L	2	27.49	*
16	268.00	53.15	L	2	26.71	*
17	286.00	58.65	L	2	24.21	*
18	304.00	63.86	L	2	263.57	*
19	322.00	72.80	L	2	487.29	*
20	340.00	85.53	L	2	590.12	*
21	356.00	68.63	L	2	550.26	*
22	372.00	60.57	L	2	24.90	*
23	388.00	54.46	L	2	24.37	*
24	404.00	49.03	L	2	35.95	*
25	420.00	55.25	L	2	31.90	*
26	436.00	44.51	L	2	39.60	*
27	452.00	47.27	L	2	37.28	*
28	468.00	52.53	L	2	33.55	*
29	484.00	57.62	L	2	28.41	*
30	500.00	66.90	L	2	19.20	

Girder 4 Truck loading - >2000000 cycles

(Single truck in single lane)

Maximum Pitch for 0.875 x 4.50 Stud Connectors for Fatigue

Tenth Point	Location	Shear Range (k)	Studs in a Line	Max Pitch (in)	
0	0.00	55.58	2	11.99	
1	16.00	51.42	2	16.52	
2	32.00	45.47	2	20.11	
3	48.00	48.47	2	18.87	
4	64.00	48.22	2	18.96	
5	80.00	60.24	2	15.18	
6	96.00	50.24	2	18.20	
7	112.00	48.30	2	14.25	
8	128.00	49.25	2	15.89	
9	144.00	49.22	2	398.10	*
10	160.00	52.99	2	494.22	*
11	178.00	54.06	2	340.50	*
12	196.00	48.01	2	181.91	*
13	214.00	47.35	2	15.56	
14	232.00	49.34	2	14.93	
15	250.00	48.66	2	15.14	
16	268.00	49.57	2	14.86	
17	286.00	47.85	2	15.40	
18	304.00	47.94	2	182.19	*
19	322.00	53.52	2	343.97	*
20	340.00	56.15	2	466.34	*
21	356.00	49.91	2	392.63	*
22	372.00	48.97	2	15.98	
23	388.00	48.43	2	14.22	
24	404.00	49.52	2	18.46	
25	420.00	63.68	2	14.36	
26	436.00	48.49	2	18.86	
27	452.00	48.94	2	18.68	
28	468.00	46.62	2	19.61	
29	484.00	47.71	2	17.80	
30	500.00	54.21	2	12.29	

* Use 24 inches as per AASHTO 10.38.5.1.

Minimum Number of Connectors for Ultimate Strength

Beg TP	End TP	Beg Loc	End Loc	Number
0	4	0.00	64.00	62
4	10	64.00	160.00	65
10	15	160.00	250.00	65
15	20	250.00	340.00	65
20	26	340.00	436.00	65
26	30	436.00	500.00	62

Girder 4 Cost Schedule Totals

	lb
Flange	94325.0
Web	65103.6
Stiffeners	12868.6
Bearing stiff.	803.1
Total steel	173100.3
Flange-web weld	322.0
Web stiff. weld	308.5
Bearing stiff. weld	10.2
Total welding	640.7
Total steel and weld	173741.1

Girder 4 Service Deflections - in

Tenth Pt	Total Noncomp Dead	Steel	Wet Con-crete	Super-Imposed Dead	Max LL+I Down	Max LL+I Up
Support	0.000	0.000	0.000	0.000	0.000	0.000
1	0.883	0.308	0.576	0.058	0.470	0.087
2	1.590	0.557	1.032	0.104	0.872	0.168
3	2.091	0.740	1.352	0.137	1.190	0.240
4	2.336	0.836	1.500	0.152	1.388	0.298
5	2.305	0.838	1.467	0.148	1.458	0.338
6	2.040	0.760	1.280	0.129	1.392	0.355
7	1.554	0.600	0.954	0.096	1.184	0.335
8	0.939	0.385	0.554	0.057	0.846	0.269
9	0.370	0.167	0.202	0.021	0.423	0.152
Support	0.000	0.000	0.000	0.000	0.000	0.000
11	-0.172	-0.122	-0.050	-0.006	0.423	0.162
12	-0.056	-0.161	0.105	0.007	0.870	0.281
13	0.252	-0.136	0.388	0.031	1.270	0.344
14	0.555	-0.092	0.647	0.053	1.545	0.357
15	0.680	-0.071	0.751	0.062	1.649	0.331
16	0.575	-0.087	0.662	0.055	1.552	0.355
17	0.286	-0.127	0.414	0.033	1.282	0.343
18	-0.039	-0.157	0.119	0.008	0.879	0.282
19	-0.172	-0.122	-0.050	-0.006	0.426	0.163
Support	0.000	0.000	0.000	0.000	0.000	0.000
21	0.363	0.165	0.198	0.021	0.417	0.150
22	0.900	0.372	0.528	0.054	0.828	0.266
23	1.514	0.588	0.926	0.094	1.176	0.338
24	2.033	0.758	1.275	0.129	1.392	0.357
25	2.302	0.837	1.464	0.148	1.458	0.338
26	2.329	0.834	1.495	0.152	1.389	0.299
27	2.095	0.741	1.354	0.137	1.195	0.241
28	1.600	0.561	1.039	0.105	0.879	0.169
29	0.883	0.307	0.575	0.058	0.470	0.087
Support	0.000	0.000	0.000	0.000	0.000	0.000

Influence surfaces for defl developed assuming unequal

participation of girders in resisting deflection.

	Loc						
Brace	20.00	1.077	0.376	0.701	0.070	0.577	0.108
Brace	40.00	1.873	0.659	1.213	0.123	1.046	0.206
Brace	60.00	2.301	0.821	1.480	0.150	1.351	0.286
Brace	80.00	2.305	0.838	1.467	0.148	1.458	0.338
Brace	100.00	1.939	0.727	1.212	0.122	1.353	0.353
Web Spl	117.50	1.357	0.532	0.824	0.084	1.083	0.318
Brace	120.00	1.240	0.493	0.748	0.076	1.026	0.309
Brace	140.00	0.493	0.217	0.276	0.029	0.529	0.184
Brace	160.00	0.000	0.000	0.000	0.000	0.000	0.000
Brace	180.00	-0.173	-0.130	-0.043	-0.005	0.472	0.178
Brace	200.00	-0.004	-0.161	0.157	0.011	0.963	0.300
Web Spl	212.50	0.227	-0.139	0.365	0.029	1.242	0.341
Brace	220.00	0.354	-0.123	0.477	0.039	1.376	0.354
Brace	240.00	0.632	-0.080	0.712	0.059	1.612	0.350
Brace	260.00	0.644	-0.077	0.721	0.060	1.616	0.349
Brace	280.00	0.387	-0.115	0.502	0.041	1.387	0.352
Web Spl	287.50	0.261	-0.130	0.391	0.031	1.253	0.340
Brace	300.00	0.017	-0.156	0.173	0.013	0.973	0.300
Brace	320.00	-0.172	-0.130	-0.042	-0.005	0.475	0.179
Brace	340.00	0.000	0.000	0.000	0.000	0.000	0.000
Brace	360.00	0.481	0.213	0.268	0.028	0.520	0.182
Brace	380.00	1.197	0.479	0.718	0.073	1.010	0.308
Web Spl	382.50	1.313	0.519	0.794	0.081	1.071	0.319
Brace	400.00	1.926	0.724	1.202	0.121	1.352	0.355
Brace	420.00	2.302	0.837	1.464	0.148	1.458	0.338
Brace	440.00	2.295	0.819	1.476	0.150	1.352	0.286
Brace	460.00	1.880	0.662	1.218	0.123	1.052	0.207
Brace	480.00	1.078	0.376	0.702	0.071	0.578	0.108

Positive dead load deflection is downward.
Live load deflection as indicated in column heading.

run completed

```
*****************************************************************
MDX Bracing Design Program, Version 6.2.137
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Phone: 573-446-3221              Email: support@mdxsoftware.com
Fax:   573-446-3278             Web: http://www.mdxsoftware.com
*****************************************************************
 May 17, 2006 -  2:48 pm
 Files: BONNER.X
        X.OUT

    Contents of data file-

       ************************************************
       ID: BONNER BRIDGE CHANNEL SPANS
       CONDITIONS
         A36 STEEL
         ALL SHAPES L3X3X0.5 FOR GROUP 2
         BOTTOM CHORD L3X3X0.5 LONG LEG CONNECTED FOR GROUP 1
```



```
         BOTTOM CHORD L3X3X0.5 LONG LEG CONNECTED FOR GROUP 3
         DIAGONALS L3X3X0.5 LONG LEG CONNECTED FOR GROUP 1
         DIAGONALS L3X3X0.5 LONG LEG CONNECTED FOR GROUP 3
         ENGLISH INPUT
         ENGLISH OUTPUT
         LFD METHOD
         RATE MODE
         TOP CHORD W12X26 FLANGE COPE FOR GROUP 1
         TOP CHORD W12X26 FLANGE COPE FOR GROUP 3
         TYPE A BRACING FOR GROUP 2
         TYPE E BRACING FOR GROUP 1
         TYPE E BRACING FOR GROUP 3
       DATA
         BRL-1 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.
         8. 8. 8. 8. 8.
         BRL-2 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.
         8. 8. 8. 8. 8.
         BRL-3 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.
         8. 8. 8. 8. 8.
         GCONNDST 3. 3. 3.
         GRP-1 1 2 1 2 1 2 1 2 3 2 2 1 2 2 1 2 2 3 2 1 2 1 2 1 2 1
         GRP-2 1 2 1 2 1 2 1 2 3 2 2 1 2 2 1 2 2 3 2 1 2 1 2 1 2 1
         GRP-3 1 2 1 2 1 2 1 2 3 2 2 1 2 2 1 2 2 3 2 1 2 1 2 1 2 1
         GRPHT 60. 60. 93.
       GO
       ************************************************


Case Data - BONNER BRIDGE CHANNEL SPANS

Execution Mode

   Rate Mode

Fatigue

*    Category B
*    Case I road

Geometry

   Brace lengths

     Girder  1      8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
                    8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
                    8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
                    8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
                    8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
                    8.00 ft

     Girder  2      8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
                    8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
                    8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
                    8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
                    8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
                    8.00 ft

     Girder  3      8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
                    8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
                    8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
                    8.00 ft    8.00 ft    8.00 ft    8.00 ft    8.00 ft
```

8.00 ft 8.00 ft 8.00 ft 8.00 ft 8.00 ft
8.00 ft

Connection to center of web distance by group

3.00 3.00 3.00

Loading

Load factor method

Material

Steel grade: A36

Units

Input Units - English
Output Units - English

* Default

Girder 1 Shapes

Brace 1

Type E bracing - top and bottom chords
crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 1 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	3.62	-2.58	0.00
Concurrent Mom		-15.90	7.54	k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.01	-0.01	15.87	-15.90	0.00

Concurrent shear -3.17 3.62 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	13.03	-9.50	0.00
Concurrent shear		-3.62	3.17	k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.00	0.00	0.53	-0.90	0.53	-0.54	0.00	0.00
UR-LL diag	0.00	0.00	2.98	-3.33	3.19	-3.28	0.00	0.00
LR-UL diag	0.00	0.00	3.19	-2.74	3.24	-3.33	0.00	0.00
Bot chord	0.00	0.00	0.69	-0.41	0.42	-0.41	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	1.14	188.29	0.006	1.94	219.38	0.009
UR-LL diag	6.92	76.50	0.090	7.23	62.55	0.116
LR-UL diag	7.04	76.50	0.092	7.23	62.55	0.116
Bot chord	1.51	76.50	0.020	0.89	48.80	0.018

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.8487

Actual	Allow	Ratio	Actual	Allow	Ratio

	Range	Range		Range	Range	
Top chord	0.22	29.00	0.008	0.18	16.00	0.012
UR-LL diag	2.71	29.00	0.093	2.30	16.00	0.144
LR-UL diag	2.74	29.00	0.094	2.32	16.00	0.145
Bot chord	0.48	29.00	0.016	0.40	16.00	0.025

Girder 1 Shapes

Brace 2

Type A bracing - crossed diagonals
Bottom chord

Shape	Comp KL/r	Tens L/r
Diagonals: L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 2 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.23	-0.01	2.33	-1.02	0.00

Concurrent Mom -0.81 7.21 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.03	0.02	4.16	-1.89	0.00

Concurrent shear -1.06 1.77 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.81	-0.05	17.81	-7.80	0.00

Concurrent shear -2.33 1.06 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.41	0.01	0.92	-4.00	1.87	-4.28	0.00	0.00
LL-TR diag	-0.01	-0.01	0.45	-1.73	0.10	-4.00	0.00	0.00
Bot chord	-0.33	0.00	3.17	0.00	3.63	-1.52	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	4.61	76.50	0.060	8.75	62.55	0.140
LR-UL diag	0.97	76.50	0.013	8.70	62.55	0.139
Bot chord	7.45	76.50	0.097	3.75	48.80	0.077

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.8487

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.44	18.00	0.135	2.07	16.00	0.129
LR-UL diag	1.67	18.00	0.093	1.42	16.00	0.089
Bot chord	2.26	18.00	0.126	1.92	16.00	0.120

Girder 1 Shapes

Brace 3

Type E bracing - top and bottom chords
crossed diagonals

Shape	Comp KL/r	Tens L/r
Top chord: W 12.00 x 26.00	44.70	59.60
Diagonals: L 3.00 x 3.00 x 0.500	90.34	92.61

Bot chord: L 3.00 x 3.00 x 0.500 115.58 154.11

Girder 1 Forces - HS

Forces on Brace 3 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.20	0.02	4.06	-4.04	0.00
Concurrent Mom		-17.18	27.46	k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.03	-0.03	15.33	-3.85	0.00
Concurrent shear		-4.06	1.75	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.65	0.12	29.79	-30.63	0.00
Concurrent shear		-4.04	4.06	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Girder 1 Service Axial Forces - k

Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord 0.18	-0.01	0.44	-2.77	3.47	-3.30	0.00	0.00

UR-LL diag	0.16	-0.02	4.02	-3.72	3.60	-3.27	0.00	0.00
LR-UL diag	-0.21	0.02	3.60	-3.66	4.09	-4.13	0.00	0.00
Bot chord	-0.14	0.01	2.15	-0.34	2.56	-2.69	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	7.75	188.29	0.041	6.94	219.38	0.032
UR-LL diag	8.90	76.50	0.116	7.89	62.55	0.126
LR-UL diag	8.63	76.50	0.113	9.21	62.55	0.147
Bot chord	5.38	76.50	0.070	6.01	48.80	0.123

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles — Single Truck >2000000 Cycles

Single/Multi Moment Ratio- 0.8177

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	1.09	18.00	0.061	0.89	16.00	0.056
UR-LL diag	3.24	18.00	0.180	2.65	16.00	0.166
LR-UL diag	3.43	18.00	0.190	2.80	16.00	0.175
Bot chord	2.18	18.00	0.121	1.78	16.00	0.111

Girder 1 Shapes

Brace 4

Type A bracing - crossed diagonals

Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 4 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.14	0.01	2.06	-2.06	0.00
Concurrent Mom		-2.70	12.29	k-ft

OUTPUT.TXT

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.04	-0.03	5.55	-4.26	0.00

Concurrent shear -1.81 0.52 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.15	0.02	13.74	-12.66	0.00

Concurrent shear -2.06 1.81 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.26	0.00	1.93	-3.06	3.04	-3.30	0.00	0.00
LL-TR diag	0.01	0.01	1.02	-2.95	0.75	-3.06	0.00	0.00
Bot chord	-0.22	0.00	2.00	-0.92	2.41	-2.35	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	6.94	76.50	0.091	6.84	62.55	0.109
LR-UL diag	2.25	76.50	0.029	6.61	62.55	0.106
Bot chord	4.95	76.50	0.065	5.39	48.80	0.110

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.7851

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.63	29.00	0.091	2.07	16.00	0.129
LR-UL diag	1.59	29.00	0.055	1.25	16.00	0.078
Bot chord	1.99	29.00	0.069	1.56	16.00	0.098

Girder 1 Shapes

Brace 5

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 5 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.55	-0.06	4.98	-4.95	0.00

Concurrent Mom -36.00 3.95 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.07	-0.04	4.40	-5.41	0.00

Concurrent shear -2.37 0.27 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

OUTPUT.TXT

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.44	-0.49	36.55	-36.00	0.00

Concurrent shear -4.88 4.98 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	1.32	0.06	3.90	0.00	3.90	-4.11	0.00	0.00
UR-LL diag	1.22	0.04	4.01	-5.02	3.96	-4.90	0.00	0.00
LR-UL diag	-1.57	-0.06	3.96	-4.90	4.95	-5.02	0.00	0.00
Bot chord	-1.03	-0.04	0.00	-3.03	3.19	-3.03	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	10.27	188.29	0.055	7.14	219.38	0.033
UR-LL diag	10.35	76.50	0.135	9.25	62.55	0.148
LR-UL diag	8.63	76.50	0.113	13.01	62.55	0.208
Bot chord	5.54	76.50	0.072	7.96	48.80	0.163

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.7549

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	1.28	29.00	0.044	0.97	16.00	0.061
UR-LL diag	3.71	29.00	0.128	2.80	16.00	0.175
LR-UL diag	4.15	29.00	0.143	3.14	16.00	0.196
Bot chord	2.60	29.00	0.090	1.96	16.00	0.123

Girder 1 Shapes

Brace 6

Type A bracing - crossed diagonals

OUTPUT.TXT

Bottom chord Shape	Comp KL/r	Tens L/r
Diagonals: L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 6 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.56	-0.09	2.52	-2.34	0.00

Concurrent Mom -15.75 2.93 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.13	0.09	4.93	-6.36	0.00

Concurrent shear -1.93 0.91 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.32	-0.61	13.83	-15.75	0.00

Concurrent shear -2.22 2.52 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	(-)	LL+I Forces at adj gd (+)	(-)	Side-walk (+)	(-)
TL-LR diag	2.77	0.14	3.51	-0.75	3.79	-3.32	0.00	0.00
LL-TR diag	-0.03	-0.02	3.79	-1.19	3.51	-0.75	0.00	0.00
Bot chord	-2.28	-0.10	0.00	-2.52	2.20	-2.52	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	12.00	76.50	0.157	3.43	62.55	0.055
LR-UL diag	8.15	76.50	0.107	2.64	62.55	0.042
Bot chord	1.68	76.50	0.022	8.57	48.80	0.176

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles

	Actual Range	Allow Range	Ratio
UR-LL diag	2.99	29.00	0.103
LR-UL diag	2.21	29.00	0.076
Bot chord	1.72	29.00	0.059

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.7451

	Actual Range	Allow Range	Ratio
UR-LL diag	2.23	16.00	0.139
LR-UL diag	1.65	16.00	0.103
Bot chord	1.28	16.00	0.080

Girder 1 Shapes

Brace 7

Type E bracing - top and bottom chords crossed diagonals

Shape	Comp KL/r	Tens L/r
Top chord: W 12.00 x 26.00	44.70	59.60
Diagonals: L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 7 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-3.32	-0.18	5.14	-3.66	0.00

Concurrent Mom -35.32 21.80 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.02	0.05	5.79	-6.52	0.00

Concurrent shear -5.14 4.23 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-26.53	-1.41	33.95	-35.32	0.00

Concurrent shear -4.68 5.14 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	(-)	LL+I Forces at adj gd (+)	(-)	Side-walk (+)	(-)
Top chord	2.80	0.14	3.62	-2.10	3.62	-3.70	0.00	0.00
UR-LL diag	2.61	0.15	4.22	-5.12	4.14	-3.72	0.00	0.00
LR-UL diag	-3.37	-0.18	4.14	-5.04	4.71	-5.12	0.00	0.00
Bot chord	-2.17	-0.11	1.63	-2.80	2.87	-2.80	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio

Top chord	11.67	188.29	0.062	4.20	219.38	0.019
UR-LL diag	12.75	76.50	0.167	7.53	62.55	0.120
LR-UL diag	5.62	76.50	0.073	15.73	62.55	0.252
Bot chord	3.26	76.50	0.043	9.05	48.80	0.186

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles — Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6944

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	1.17	29.00	0.041	0.82	16.00	0.051
UR-LL diag	3.85	29.00	0.133	2.67	16.00	0.167
LR-UL diag	4.08	29.00	0.141	2.83	16.00	0.177
Bot chord	2.37	29.00	0.082	1.64	16.00	0.103

Girder 1 Shapes

Brace 8

Type A bracing - crossed diagonals
Bottom chord

Shape	Comp KL/r	Tens L/r
Diagonals: L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 8 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.49	-0.03	1.95	-1.12	0.00
Concurrent Mom		-3.04	5.95	k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.03	-0.01	2.82	-4.08	0.00
Concurrent shear		-1.34	1.75	k
Moment from fatigue trk				
		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-3.85	-0.22	12.55	-7.89	0.00
Concurrent shear		-1.95	1.29	k
Moment from fatigue trk				
		0.00	0.00	
Concurrent Shr		0.00	0.00	

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.87	0.05	1.73	-2.78	1.90	-3.02	0.00	0.00
LL-TR diag	-0.01	0.00	0.98	-1.43	0.59	-2.78	0.00	0.00
Bot chord	-0.72	-0.04	1.71	-0.88	2.10	-1.23	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	5.31	76.50	0.069	5.36	62.55	0.086
LR-UL diag	2.12	76.50	0.028	6.05	62.55	0.097
Bot chord	3.57	76.50	0.047	3.65	48.80	0.075

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles — Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5491

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	1.99	29.00	0.069	1.09	16.00	0.068
LR-UL diag	1.47	29.00	0.051	0.81	16.00	0.051
Bot chord	1.43	29.00	0.049	0.79	16.00	0.049

Girder 1 Shapes

Brace 9

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	108.09	110.80
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 9 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	0.79	-0.63	0.00
Concurrent Mom		-3.61	1.87	k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	-0.03	3.13	-3.61	0.00
Concurrent shear		-0.62	0.79	k
Moment from fatigue trk				
		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.01	2.69	-1.84	0.00
Concurrent shear		-0.79	0.62	k
Moment from fatigue trk				
		0.00	0.00	

Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.00	0.00	0.09	-0.11	0.09	-0.07	0.00	0.00
UR-LL diag	0.00	0.00	0.44	-0.56	0.54	-0.55	0.00	0.00
LR-UL diag	0.00	0.00	0.54	-0.45	0.54	-0.56	0.00	0.00
Bot chord	0.00	0.00	0.09	-0.08	0.06	-0.08	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	0.20	188.29	0.001	0.24	219.38	0.001
UR-LL diag	1.16	76.50	0.015	1.21	53.24	0.023
LR-UL diag	1.18	76.50	0.015	1.20	53.24	0.023
Bot chord	0.20	76.50	0.003	0.17	48.80	0.004

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles — Single Truck >2000000 Cycles

Single/Multi Moment Ratio- 0.3737

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	0.03	29.00	0.001	0.01	16.00	0.001
UR-LL diag	0.46	29.00	0.016	0.17	16.00	0.011
LR-UL diag	0.46	29.00	0.016	0.17	16.00	0.011
Bot chord	0.07	29.00	0.003	0.03	16.00	0.002

Girder 1 Shapes

Brace 10

Type A bracing - crossed diagonals Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 10 - Lane load governs

OUTPUT.TXT

Shear - k

	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
	0.47	0.03	2.30	-1.29	0.00
Concurrent Mom			-3.45	6.89	k-ft

Moment at Girder 1 - k-ft - right side of brace

	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
	-0.07	-0.08	2.92	-4.32	0.00
Concurrent shear			-1.29	2.12	k
Moment from fatigue trk			0.00	0.00	
Concurrent Shr			0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
	3.65	0.18	14.92	-7.50	0.00
Concurrent shear			-2.30	1.24	k
Moment from fatigue trk			0.00	0.00	
Concurrent Shr			0.00	0.00	

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	-0.82	-0.04	1.62	-3.31	1.80	-3.59	0.00	0.00
LL-TR diag	0.02	0.02	1.04	-1.66	0.66	-3.31	0.00	0.00
Bot chord	0.67	0.02	2.06	-0.77	2.52	-1.14	0.00	0.00

Girder 1 Stresses

OUTPUT.TXT

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	2.79	76.50	0.037	8.91	62.55	0.142
LR-UL diag	2.30	76.50	0.030	7.14	62.55	0.114
Bot chord	6.37	76.50	0.083	1.59	48.80	0.033

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles — Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5299

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.15	29.00	0.074	1.14	16.00	0.071
LR-UL diag	1.69	29.00	0.058	0.90	16.00	0.056
Bot chord	1.60	29.00	0.055	0.85	16.00	0.053

Girder 1 Shapes

Brace 11

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals: L	3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L	3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 11 - Truck load governs

Shear - k

	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
	-0.36	-0.02	2.96	-1.87	0.00
Concurrent Mom			-3.40	9.93	k-ft

Moment at Girder 1 - k-ft - right side of brace

	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
	0.00	0.00	3.68	-4.60	0.00
Concurrent shear			-0.90	2.61	k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-2.90	-0.14	20.26	-11.41	0.00

Concurrent shear -2.96 1.68 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.65	0.03	0.98	-4.52	2.74	-4.87	0.00	0.00
LL-TR diag	0.00	0.00	1.11	-2.39	0.98	-4.52	0.00	0.00
Bot chord	-0.54	-0.03	3.08	0.00	3.67	-2.04	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	6.84	76.50	0.089	9.68	62.55	0.155
LR-UL diag	2.40	76.50	0.031	9.81	62.55	0.157
Bot chord	7.23	76.50	0.094	5.16	48.80	0.106

Fatigue Stresses - ksi

	Multilane Loading - 2000000 Cycles			Single Truck >2000000 Cycles Single/Multi Moment Ratio- 0.8758		
	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	3.06	18.00	0.170	2.68	16.00	0.168
LR-UL diag	2.16	18.00	0.120	1.89	16.00	0.118

Bot chord	2.47	18.00	0.137	2.16	16.00	0.135

Girder 1 Shapes

Brace 12

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 12 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-2.71	-0.14	5.39	-4.97	0.00

Concurrent Mom -39.44 32.64 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.01	0.05	4.78	-6.05	0.00

Concurrent shear -2.07 1.57 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-21.67	-1.07	35.63	-39.44	0.00

Concurrent shear -4.97 5.39 k

OUTPUT.TXT

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	2.29	0.11	4.33	-3.16	4.33	-3.83	0.00	0.00
UR-LL diag	2.13	0.11	4.90	-5.44	4.27	-4.05	0.00	0.00
LR-UL diag	-2.75	-0.14	4.27	-4.05	4.99	-5.44	0.00	0.00
Bot chord	-1.77	-0.08	2.45	-3.36	2.97	-3.36	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	12.52	188.29	0.066	5.20	219.38	0.024
UR-LL diag	13.57	76.50	0.177	8.89	62.55	0.142
LR-UL diag	7.09	76.50	0.093	15.57	62.55	0.249
Bot chord	4.04	76.50	0.053	9.71	48.80	0.199

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.8337

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	1.33	18.00	0.074	1.11	16.00	0.069
UR-LL diag	4.29	18.00	0.238	3.57	16.00	0.223
LR-UL diag	4.33	18.00	0.241	3.61	16.00	0.226
Bot chord	2.62	18.00	0.146	2.18	16.00	0.137

Girder 1 Shapes

Brace 13

Type A bracing - crossed diagonals
Bottom chord

Shape	Comp KL/r	Tens L/r
Diagonals: L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L 3.00 x 3.00 x 0.500	115.58	154.11

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OUTPUT.TXT

Girder 1 Forces - HS

Forces on Brace 13 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.05	-0.05	2.45	-2.45	0.00

Concurrent Mom -3.92 14.02 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.01	4.66	-6.21	0.00

Concurrent shear -1.59 0.40 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-8.41	-0.40	15.69	-15.89	0.00

Concurrent shear -2.45 2.27 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	1.90	0.09	1.74	-3.48	3.82	-3.77	0.00	0.00
LL-TR diag	0.00	0.00	1.49	-3.37	1.05	-3.48	0.00	0.00
Bot chord	-1.58	-0.07	2.11	-1.89	2.60	-2.94	0.00	0.00

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Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	10.87	76.50	0.142	5.60	62.55	0.090
LR-UL diag	3.24	76.50	0.042	7.55	62.55	0.121
Bot chord	3.49	76.50	0.046	8.54	48.80	0.175

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles — Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.8229

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	3.17	29.00	0.109	2.61	16.00	0.163
LR-UL diag	1.97	29.00	0.068	1.62	16.00	0.101
Bot chord	2.29	29.00	0.079	1.89	16.00	0.118

Girder 1 Shapes

Brace 14

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 14 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.06	-0.05	2.45	-2.45	0.00

Concurrent Mom -3.92 14.02 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk

0.00	0.01	4.65	-6.21	0.00

Concurrent shear -0.94 0.40 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-8.45	-0.40	15.69	-15.89	0.00

Concurrent shear -2.45 2.27 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	1.90	0.09	1.05	-3.48	3.82	-3.77	0.00	0.00
LL-TR diag	0.00	0.00	1.49	-3.37	1.05	-3.48	0.00	0.00
Bot chord	-1.58	-0.07	2.11	-1.89	2.60	-2.94	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	10.88	76.50	0.142	5.60	62.55	0.089
LR-UL diag	3.24	76.50	0.042	7.55	62.55	0.121
Bot chord	3.49	76.50	0.046	8.55	48.80	0.175

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles — Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.8228

Actual	Allow	Ratio	Actual	Allow	Ratio

OUTPUT.TXT

	Range	Range		Range	Range	
UR-LL diag	3.17	18.00	0.176	2.61	16.00	0.163
LR-UL diag	1.97	18.00	0.109	1.62	16.00	0.101
Bot chord	2.29	18.00	0.127	1.89	16.00	0.118

Girder 1 Shapes

Brace 15

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 15 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-2.75	-0.14	5.39	-4.97	0.00

Concurrent Mom -39.52 32.52 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.01	0.05	4.76	-6.06	0.00

Concurrent shear -2.07 1.57 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-21.99	-1.09	35.63	-39.52	0.00

Concurrent shear -4.97 5.39 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	2.32	0.11	4.35	-3.13	4.35	-3.83	0.00	0.00
UR-LL diag	2.17	0.11	4.90	-5.45	4.27	-4.06	0.00	0.00
LR-UL diag	-2.79	-0.14	4.27	-4.06	4.99	-5.45	0.00	0.00
Bot chord	-1.80	-0.08	2.43	-3.37	2.97	-3.37	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	12.60	188.29	0.067	5.16	219.38	0.024
UR-LL diag	13.60	76.50	0.178	8.86	62.55	0.142
LR-UL diag	7.03	76.50	0.092	15.64	62.55	0.250
Bot chord	4.00	76.50	0.052	9.77	48.80	0.200

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles — Single Truck >2000000 Cycles

Single/Multi Moment Ratio- 0.8337

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	1.33	18.00	0.074	1.11	16.00	0.069
UR-LL diag	4.29	18.00	0.238	3.57	16.00	0.223
LR-UL diag	4.33	18.00	0.241	3.61	16.00	0.226
Bot chord	2.62	18.00	0.146	2.19	16.00	0.137

Girder 1 Shapes

Brace 16

Type A bracing - crossed diagonals Bottom chord

Shape	Comp KL/r	Tens L/r

Diagonals: L	3.00 x	3.00 x 0.500	90.34	92.61
Bot chord: L	3.00 x	3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 16 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk	
-0.39	-0.02	2.96	-1.87	0.00	
Concurrent Mom		-3.39	9.89	k-ft	

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk	
0.00	0.01	3.67	-4.60	0.00	
Concurrent shear		-0.90	2.61	k	
Moment from fatigue trk			0.00	0.00	
Concurrent Shr		0.00	0.00		

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk	
-3.10	-0.16	20.30	-11.41	0.00	
Concurrent shear		-2.96	1.68	k	
Moment from fatigue trk			0.00	0.00	
Concurrent Shr		0.00	0.00		

Girder 1 Service Axial Forces - k

Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)

TL-LR diag	0.70	0.03	0.99	-4.52	2.74	-4.88	0.00	0.00
LL-TR diag	0.00	0.00	1.10	-2.38	0.99	-4.52	0.00	0.00
Bot chord	-0.58	-0.03	3.08	0.00	3.68	-2.04	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	6.91	76.50	0.090	9.64	62.55	0.154
LR-UL diag	2.40	76.50	0.031	9.82	62.55	0.157
Bot chord	7.19	76.50	0.094	5.22	48.80	0.107

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles — Single Truck >2000000 Cycles

Single/Multi Moment Ratio- 0.8695

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	3.06	18.00	0.170	2.66	16.00	0.167
LR-UL diag	2.16	18.00	0.120	1.88	16.00	0.118
Bot chord	2.47	18.00	0.137	2.15	16.00	0.134

Girder 1 Shapes

Brace 17

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals: L	3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L	3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 17 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk	
0.44	0.03	2.30	-1.28	0.00	
Concurrent Mom		-3.45	6.86	k-ft	

Moment at Girder 1 - k-ft - right side of brace

OUTPUT.TXT

	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
	-0.07	-0.08	2.94	-4.32	0.00
Concurrent shear			-1.29	2.12	k
Moment from fatigue trk			0.00	0.00	
Concurrent Shr			0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
	3.48	0.17	14.94	-7.49	0.00
Concurrent shear			-2.30	1.24	k
Moment from fatigue trk			0.00	0.00	
Concurrent Shr			0.00	0.00	

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	-0.78	-0.04	1.62	-3.31	1.80	-3.59	0.00	0.00
LL-TR diag	0.02	0.02	1.04	-1.65	0.67	-3.31	0.00	0.00
Bot chord	0.64	0.01	2.07	-0.76	2.53	-1.14	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	2.84	76.50	0.037	8.86	62.55	0.142
LR-UL diag	2.30	76.50	0.030	7.15	62.55	0.114
Bot chord	6.34	76.50	0.083	1.62	48.80	0.033

Fatigue Stresses - ksi

OUTPUT.TXT

Multilane Loading - 500000 Cycles Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5291

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.15	29.00	0.074	1.14	16.00	0.071
LR-UL diag	1.69	29.00	0.058	0.90	16.00	0.056
Bot chord	1.60	29.00	0.055	0.85	16.00	0.053

Girder 1 Shapes

Brace 18

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	108.09	110.80
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 18 - Lane load governs

Shear - k

	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
	0.00	0.00	0.79	-0.63	0.00
Concurrent Mom			-3.59	1.86	k-ft

Moment at Girder 1 - k-ft - right side of brace

	Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
	0.00	-0.03	3.13	-3.59	0.00
Concurrent shear			-0.62	0.79	k
Moment from fatigue trk			0.00	0.00	
Concurrent Shr			0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp	Comp	Max	Min	Side-

Dead	Dead	LL+I	LL+I	walk
0.00	0.01	2.70	-1.84	0.00

Concurrent shear -0.79 0.62 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.00	0.00	0.09	-0.11	0.09	-0.07	0.00	0.00
UR-LL diag	0.00	0.00	0.44	-0.56	0.54	-0.55	0.00	0.00
LR-UL diag	0.00	0.00	0.54	-0.45	0.54	-0.56	0.00	0.00
Bot chord	0.00	0.00	0.09	-0.08	0.06	-0.08	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	0.20	188.29	0.001	0.24	219.38	0.001
UR-LL diag	1.16	76.50	0.015	1.21	53.24	0.023
LR-UL diag	1.18	76.50	0.015	1.20	53.24	0.023
Bot chord	0.20	76.50	0.003	0.17	48.80	0.003

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.3737

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	0.03	29.00	0.001	0.01	16.00	0.001
UR-LL diag	0.46	29.00	0.016	0.17	16.00	0.011
LR-UL diag	0.46	29.00	0.016	0.17	16.00	0.011
Bot chord	0.07	29.00	0.002	0.03	16.00	0.002

Girder 1 Shapes

Brace 19

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals: L	3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L	3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 19 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.47	-0.03	1.95	-1.12	0.00

Concurrent Mom -3.03 5.94 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.03	-0.01	2.83	-4.07	0.00

Concurrent shear -1.34 1.75 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-3.71	-0.21	12.55	-7.87	0.00

Concurrent shear -1.95 1.29 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

OUTPUT.TXT

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.84	0.05	1.73	-2.78	1.89	-3.02	0.00	0.00
LL-TR diag	-0.01	0.00	0.98	-1.43	0.60	-2.78	0.00	0.00
Bot chord	-0.69	-0.04	1.71	-0.87	2.10	-1.22	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	5.26	76.50	0.069	5.40	62.55	0.086
LR-UL diag	2.12	76.50	0.028	6.05	62.55	0.097
Bot chord	3.61	76.50	0.047	3.59	48.80	0.074

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles — Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5491

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	1.99	29.00	0.069	1.09	16.00	0.068
LR-UL diag	1.47	29.00	0.051	0.81	16.00	0.051
Bot chord	1.43	29.00	0.049	0.79	16.00	0.049

Girder 1 Shapes

Brace 20

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 20 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-3.26	-0.18	5.13	-3.66	0.00

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Concurrent Mom -35.31 21.71 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.02	0.05	5.74	-6.52	0.00

Concurrent shear -5.13 4.23 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-26.09	-1.39	33.95	-35.31	0.00

Concurrent shear -4.68 5.13 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	2.75	0.14	3.62	-2.10	3.62	-3.70	0.00	0.00
UR-LL diag	2.57	0.14	4.21	-5.11	4.14	-3.72	0.00	0.00
LR-UL diag	-3.31	-0.18	4.14	-5.04	4.71	-5.11	0.00	0.00
Bot chord	-2.13	-0.11	1.63	-2.81	2.87	-2.81	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio

Top chord	11.62	188.29	0.062	4.27	219.38	0.019
UR-LL diag	12.68	76.50	0.166	7.57	62.55	0.121
LR-UL diag	5.69	76.50	0.074	15.64	62.55	0.250
Bot chord	3.31	76.50	0.043	9.01	48.80	0.185

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles

	Actual Range	Allow Range	Ratio
Top chord	1.18	29.00	0.041
UR-LL diag	3.84	29.00	0.133
LR-UL diag	4.08	29.00	0.141
Bot chord	2.37	29.00	0.082

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6946

	Actual Range	Allow Range	Ratio
Top chord	0.82	16.00	0.051
UR-LL diag	2.67	16.00	0.167
LR-UL diag	2.83	16.00	0.177
Bot chord	1.65	16.00	0.103

Girder 1 Shapes

Brace 21

Type A bracing - crossed diagonals
Bottom chord

Shape	Comp KL/r	Tens L/r
Diagonals: L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 21 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.54	-0.09	2.51	-2.33	0.00

Concurrent Mom -15.73 2.90 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.13	0.09	4.91	-6.37	0.00

Concurrent shear -1.93 0.91 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.20	-0.61	13.83	-15.73	0.00

Concurrent shear -2.22 2.51 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	2.75	0.14	3.51	-0.75	3.78	-3.33	0.00	0.00
LL-TR diag	-0.03	-0.02	3.78	-1.18	3.51	-0.75	0.00	0.00
Bot chord	-2.26	-0.09	0.00	-2.52	2.20	-2.52	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	11.96	76.50	0.156	3.47	62.55	0.056
LR-UL diag	8.14	76.50	0.106	2.63	62.55	0.042
Bot chord	1.72	76.50	0.022	8.54	48.80	0.175

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles

	Actual Range	Allow Range	Ratio
UR-LL diag	2.99	29.00	0.103
LR-UL diag	2.21	29.00	0.076
Bot chord	1.72	29.00	0.059

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.7453

	Actual Range	Allow Range	Ratio
UR-LL diag	2.23	16.00	0.139
LR-UL diag	1.65	16.00	0.103
Bot chord	1.28	16.00	0.080

Girder 1 Shapes

OUTPUT.TXT

Brace 22

Type E bracing - top and bottom chords
crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 22 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.53	-0.05	4.97	-4.94	0.00

Concurrent Mom -36.03 3.93 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.07	-0.04	4.38	-5.42	0.00

Concurrent shear -2.36 0.27 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.32	-0.48	36.55	-36.03	0.00

Concurrent shear -4.88 4.97 k

Moment from fatigue trk

0.00 0.00

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Concurrent Shr 0.00 0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	1.31	0.06	3.92	0.00	3.92	-4.12	0.00	0.00
UR-LL diag	1.20	0.04	4.01	-5.01	3.95	-4.90	0.00	0.00
LR-UL diag	-1.56	-0.06	3.95	-4.90	4.95	-5.01	0.00	0.00
Bot chord	-1.02	-0.04	0.00	-3.04	3.19	-3.04	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	10.27	188.29	0.055	7.16	219.38	0.033
UR-LL diag	10.32	76.50	0.135	9.26	62.55	0.148
LR-UL diag	8.65	76.50	0.113	12.98	62.55	0.207
Bot chord	5.55	76.50	0.073	7.97	48.80	0.163

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.7551

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	1.29	29.00	0.044	0.97	16.00	0.061
UR-LL diag	3.71	29.00	0.128	2.80	16.00	0.175
LR-UL diag	4.15	29.00	0.143	3.14	16.00	0.196
Bot chord	2.61	29.00	0.090	1.97	16.00	0.123

Girder 1 Shapes

Brace 23

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 23 - Lane load governs

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Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.14	0.01	2.06	-2.06	0.00
Concurrent Mom		-2.70	12.29	k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.04	-0.03	5.56	-4.26	0.00
Concurrent shear		-1.81	0.52	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.17	0.02	13.74	-12.66	0.00
Concurrent shear		-2.06	1.81	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.26	0.00	1.93	-3.06	3.04	-3.30	0.00	0.00
LL-TR diag	0.01	0.01	1.02	-2.95	0.75	-3.06	0.00	0.00
Bot chord	-0.23	0.00	2.00	-0.92	2.41	-2.34	0.00	0.00

Girder 1 Stresses

OUTPUT.TXT

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	6.94	76.50	0.091	6.83	62.55	0.109
LR-UL diag	2.25	76.50	0.029	6.61	62.55	0.106
Bot chord	4.94	76.50	0.065	5.39	48.80	0.110

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.7852

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.63	29.00	0.091	2.07	16.00	0.129
LR-UL diag	1.59	29.00	0.055	1.25	16.00	0.078
Bot chord	1.99	29.00	0.069	1.56	16.00	0.098

Girder 1 Shapes

Brace 24

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 24 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.22	0.02	4.07	-4.04	0.00
Concurrent Mom		-17.18	27.43	k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.03	-0.03	15.37	-3.84	0.00
Concurrent shear		-4.07	1.75	k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.79	0.12	29.79	-30.66	0.00

Concurrent shear -4.04 4.07 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.19	-0.01	0.43	-2.77	3.47	-3.30	0.00	0.00
UR-LL diag	0.17	-0.01	4.01	-3.73	3.61	-3.27	0.00	0.00
LR-UL diag	-0.22	0.02	3.61	-3.66	4.09	-4.14	0.00	0.00
Bot chord	-0.15	0.01	2.15	-0.34	2.56	-2.69	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	7.77	188.29	0.041	6.92	219.38	0.032
UR-LL diag	8.92	76.50	0.117	7.88	62.55	0.126
LR-UL diag	8.60	76.50	0.112	9.25	62.55	0.148
Bot chord	5.37	76.50	0.070	6.03	48.80	0.124

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles — Single Truck >2000000 Cycles

Single/Multi Moment Ratio- 0.8178

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	1.09	18.00	0.061	0.90	16.00	0.056
UR-LL diag	3.24	18.00	0.180	2.65	16.00	0.166
LR-UL diag	3.43	18.00	0.190	2.80	16.00	0.175
Bot chord	2.18	18.00	0.121	1.78	16.00	0.112

Girder 1 Shapes

Brace 25

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 1 Forces - HS

Forces on Brace 25 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.23	-0.01	2.33	-1.02	0.00

Concurrent Mom -0.81 7.20 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.03	0.02	4.14	-1.89	0.00

Concurrent shear -1.06 1.77 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.84	-0.05	17.82	-7.80	0.00

Concurrent shear -2.33 1.06 k

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Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.41	0.01	0.92	-4.00	1.87	-4.28	0.00	0.00
LL-TR diag	-0.01	-0.01	0.45	-1.73	0.11	-4.00	0.00	0.00
Bot chord	-0.34	0.00	3.17	0.00	3.63	-1.53	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	4.62	76.50	0.060	8.74	62.55	0.140
LR-UL diag	0.97	76.50	0.013	8.71	62.55	0.139
Bot chord	7.44	76.50	0.097	3.76	48.80	0.077

Fatigue Stresses - ksi

	Multilane Loading - 2000000 Cycles			Single Truck >2000000 Cycles Single/Multi Moment Ratio- 0.8415		
	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.44	18.00	0.136	2.05	16.00	0.128
LR-UL diag	1.67	18.00	0.093	1.40	16.00	0.088
Bot chord	2.27	18.00	0.126	1.91	16.00	0.119

Girder 1 Shapes

Brace 26

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

OUTPUT.TXT

Girder 1 Forces - HS

Forces on Brace 26 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	3.62	-2.57	0.00

Concurrent Mom -15.93 7.57 k-ft

Moment at Girder 1 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.01	-0.01	15.88	-15.93	0.00

Concurrent shear -3.17 3.62 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	12.99	-9.49	0.00

Concurrent shear -3.62 3.17 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 1 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 1 (+)	LL+I Forces at gd 1 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.00	0.00	0.54	-0.90	0.54	-0.54	0.00	0.00
UR-LL diag	0.00	0.00	2.98	-3.33	3.19	-3.28	0.00	0.00
LR-UL diag	0.00	0.00	3.19	-2.74	3.24	-3.33	0.00	0.00

Bot chord	0.00	0.00	0.70	-0.42	0.42	-0.42	0.00	0.00

Girder 1 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	1.16	188.29	0.006	1.95	219.38	0.009
UR-LL diag	6.91	76.50	0.090	7.24	62.55	0.116
LR-UL diag	7.04	76.50	0.092	7.23	62.55	0.116
Bot chord	1.51	76.50	0.020	0.90	48.80	0.019

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.8415

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	0.22	29.00	0.008	0.19	16.00	0.012
UR-LL diag	2.71	29.00	0.093	2.28	16.00	0.143
LR-UL diag	2.74	29.00	0.094	2.30	16.00	0.144
Bot chord	0.48	29.00	0.017	0.40	16.00	0.025

Brace	Combined Stresses Top Chord	Diag	Bott Chord	Fatigue Stresses Top Chord	Diag	Bott Chord
1	0.009	0.116	0.020	0.012	0.145	0.025
2	0.000	0.140	0.097	0.000	0.135	0.126
3	0.041	0.147	0.123	0.061	0.190	0.121
4	0.000	0.109	0.110	0.000	0.129	0.098
5	0.055	0.208	0.163	0.061	0.196	0.123
6	0.000	0.157	0.176	0.000	0.139	0.080
7	0.062	0.252	0.186	0.051	0.177	0.103
8	0.000	0.097	0.075	0.000	0.069	0.049
9	0.001	0.023	0.004	0.001	0.016	0.003
10	0.000	0.142	0.083	0.000	0.074	0.055
11	0.000	0.157	0.106	0.000	0.170	0.137
12	0.066	0.249	0.199	0.074	0.241	0.146
13	0.000	0.142	0.175	0.000	0.163	0.118
14	0.000	0.142	0.175	0.000	0.176	0.127
15	0.067	0.250	0.200	0.074	0.241	0.146
16	0.000	0.157	0.107	0.000	0.170	0.137
17	0.000	0.142	0.083	0.000	0.074	0.055
18	0.001	0.023	0.003	0.001	0.016	0.002
19	0.000	0.097	0.074	0.000	0.069	0.049
20	0.062	0.250	0.185	0.051	0.177	0.103
21	0.000	0.156	0.175	0.000	0.139	0.080
22	0.055	0.207	0.163	0.061	0.196	0.123
23	0.000	0.109	0.110	0.000	0.129	0.098
24	0.041	0.148	0.124	0.061	0.190	0.121
25	0.000	0.140	0.097	0.000	0.136	0.126
26	0.009	0.116	0.020	0.012	0.144	0.025

Girder 1 Summary of Analyses

Brace	Type	Shr (k)	Mom (k-ft)	Load Effect	1	2	3 (k)	4	5
1	E	0.00	-0.01	ncomp dead rt	0.00	0.00	0.00	0.00	
1	E	0.00	-0.01	super dead rt	0.00	0.00	0.00	0.00	
1	E	-3.17	15.87	max ll+i mom rt	-0.90	2.98	-2.74	0.69	
1	E	3.62	-15.90	max ll+i shr rt	0.53	-3.33	3.19	-0.41	
1	E	3.62	-15.90	min ll+i mom rt	0.53	-3.33	3.19	-0.41	
1	E	-2.58	7.54	min ll+i shr rt	0.48	2.26	-2.39	-0.37	
1	E	-3.62	13.03	max ll+i mom lt	0.12	3.24	-3.28	-0.09	
1	E	-3.62	-15.90	max ll+i shr lt	0.53	-3.33	3.19	-0.41	
1	E	3.17	-9.50	min ll+i mom lt	-0.54	-2.79	2.93	0.42	
1	E	2.58	7.54	min ll+i shr lt	0.48	2.26	-2.39	-0.37	
2	A	-0.23	0.03	ncomp dead rt	0.41	-0.01	-0.01	0.41	-0.33
2	A	-0.01	0.02	super dead rt	0.01	-0.01	-0.01	0.01	0.00
2	A	-1.06	4.16	max ll+i mom rt	0.92	-1.00	-1.00	0.92	0.07
2	A	2.33	-0.81	max ll+i shr rt	-4.00	0.19	0.19	-4.00	3.17
2	A	1.77	-1.89	min ll+i mom rt	-2.73	0.45	0.45	-2.73	1.89
2	A	-1.02	7.21	min ll+i shr rt	0.10	-1.73	-1.73	0.10	1.35
2	A	-2.33	17.81	max ll+i mom lt	-4.28	-0.09	-0.09	-4.28	3.63
2	A	-2.33	-0.81	max ll+i shr lt	0.19	-4.00	-4.00	0.19	3.17
2	A	1.06	-7.80	min ll+i mom lt	1.87	-0.04	-0.04	1.87	-1.52
2	A	1.02	7.21	min ll+i shr lt	-1.73	0.10	0.10	-1.73	1.35
3	E	-0.20	-0.03	ncomp dead rt	0.18	0.16	-0.21	-0.14	
3	E	0.02	-0.03	super dead rt	-0.01	-0.02	0.02	0.01	
3	E	-4.06	15.33	max ll+i mom rt	-0.02	3.67	-3.66	0.02	
3	E	4.06	-17.18	max ll+i shr rt	0.44	-3.72	3.60	-0.34	
3	E	1.75	-3.85	min ll+i mom rt	-0.61	-1.50	1.66	0.48	
3	E	-4.04	27.46	min ll+i shr rt	-2.77	4.02	-3.27	2.15	
3	E	-4.04	29.79	max ll+i mom lt	-3.30	4.09	-3.20	2.56	
3	E	-4.06	-17.18	max ll+i shr lt	0.44	-3.72	3.60	-0.34	
3	E	4.06	-30.63	min ll+i mom lt	3.47	-4.13	3.20	-2.69	
3	E	4.04	27.46	min ll+i shr lt	-2.77	4.02	-3.27	2.15	
4	A	-0.14	-0.04	ncomp dead rt	0.26	0.01	0.01	0.26	-0.22
4	A	0.01	-0.03	super dead rt	0.00	0.01	0.01	0.00	0.00
4	A	-1.81	5.55	max ll+i mom rt	1.93	-1.33	-1.33	1.93	-0.50
4	A	2.06	-2.70	max ll+i shr rt	-3.06	0.65	0.65	-3.06	2.00
4	A	0.52	-4.26	min ll+i mom rt	0.08	1.02	1.02	0.08	-0.92
4	A	-2.06	12.29	min ll+i shr rt	0.75	-2.95	-2.95	0.75	1.83
4	A	-2.06	13.74	max ll+i mom lt	-3.30	0.40	0.40	-3.30	2.41
4	A	-2.06	-2.70	max ll+i shr lt	0.65	-3.06	-3.06	0.65	2.00
4	A	1.81	-12.66	min ll+i mom lt	3.04	-0.22	-0.22	3.04	-2.35
4	A	2.06	12.29	min ll+i shr lt	-2.95	0.75	0.75	-2.95	1.83
5	E	-1.55	-0.07	ncomp dead rt	1.32	1.22	-1.57	-1.03	
5	E	-0.06	-0.04	super dead rt	0.06	0.04	-0.06	-0.04	
5	E	-2.37	4.40	max ll+i mom rt	1.01	2.00	-2.27	-0.78	
5	E	4.98	-36.00	max ll+i shr rt	3.90	-5.02	3.96	-3.03	
5	E	0.27	-5.41	min ll+i mom rt	0.99	-0.38	0.11	-0.77	
5	E	-4.95	3.95	min ll+i shr rt	3.29	4.01	-4.90	-2.55	
5	E	-4.88	36.55	max ll+i mom lt	-4.11	4.95	-3.84	3.19	
5	E	-4.98	-36.00	max ll+i shr lt	3.90	-5.02	3.96	-3.03	

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5	E	4.98	-36.00	min ll+i mom lt	3.90	-5.02	3.96	-3.03
5	E	4.95	3.95	min ll+i shr lt	3.29	4.01	-4.90	-2.55
6	A	-1.56	0.13	ncomp dead rt	2.77	-0.03	-0.03	2.77	-2.28
6	A	-0.09	0.09	super dead rt	0.14	-0.02	-0.02	0.14	-0.10
6	A	-1.93	4.93	max ll+i mom rt	2.30	-1.19	-1.19	2.30	-0.93
6	A	2.52	-15.75	max ll+i shr rt	-0.75	3.79	3.79	-0.75	-2.52
6	A	0.91	-6.36	min ll+i mom rt	-0.12	1.53	1.53	-0.12	-1.18
6	A	-2.34	2.93	min ll+i shr rt	3.51	-0.70	-0.70	3.51	-2.34
6	A	-2.22	13.83	max ll+i mom lt	-3.32	0.68	0.68	-3.32	2.20
6	A	-2.52	-15.75	max ll+i shr lt	3.79	-0.75	-0.75	3.79	-2.52
6	A	2.52	-15.75	min ll+i mom lt	3.79	-0.75	-0.75	3.79	-2.52
6	A	2.34	2.93	min ll+i shr lt	-0.70	3.51	3.51	-0.70	-2.34
7	E	-3.32	0.02	ncomp dead rt	2.80	2.61	-3.37	-2.17
7	E	-0.18	0.05	super dead rt	0.14	0.15	-0.18	-0.11
7	E	-5.14	5.79	max ll+i mom rt	3.04	4.22	-5.04	-2.35
7	E	5.14	-35.32	max ll+i shr rt	3.62	-5.12	4.14	-2.80
7	E	4.23	-6.52	min ll+i mom rt	-2.10	-3.53	4.09	1.63
7	E	-3.66	21.80	min ll+i shr rt	-1.82	3.54	-3.05	1.41
7	E	-4.68	33.95	max ll+i mom lt	-3.70	4.71	-3.72	2.87
7	E	-5.14	-35.32	max ll+i shr lt	3.62	-5.12	4.14	-2.80
7	E	5.14	-35.32	min ll+i mom lt	3.62	-5.12	4.14	-2.80
7	E	3.66	21.80	min ll+i shr lt	-1.82	3.54	-3.05	1.41
8	A	-0.49	0.03	ncomp dead rt	0.87	-0.01	-0.01	0.87	-0.72
8	A	-0.03	-0.01	super dead rt	0.05	0.00	0.00	0.05	-0.04
8	A	-1.34	2.82	max ll+i mom rt	1.73	-0.68	-0.68	1.73	-0.88
8	A	1.95	-3.04	max ll+i shr rt	-2.78	0.73	0.73	-2.78	1.71
8	A	1.75	-4.08	min ll+i mom rt	-2.17	0.98	0.98	-2.17	0.99
8	A	-1.12	5.95	min ll+i shr rt	0.59	-1.43	-1.43	0.59	0.70
8	A	-1.95	12.55	max ll+i mom lt	-3.02	0.50	0.50	-3.02	2.10
8	A	-1.95	-3.04	max ll+i shr lt	0.73	-2.78	-2.78	0.73	1.71
8	A	1.29	-7.89	min ll+i mom lt	1.90	-0.42	-0.42	1.90	-1.23
8	A	1.12	5.95	min ll+i shr lt	-1.43	0.59	0.59	-1.43	0.70
9	E	0.00	0.00	ncomp dead rt	0.00	0.00	0.00	0.00
9	E	0.00	-0.03	super dead rt	0.00	0.00	0.00	0.00
9	E	-0.62	3.13	max ll+i mom rt	-0.11	0.44	-0.42	0.09
9	E	0.79	-3.61	max ll+i shr rt	0.09	-0.56	0.54	-0.08
9	E	0.79	-3.61	min ll+i mom rt	0.09	-0.56	0.54	-0.08
9	E	-0.63	1.87	min ll+i shr rt	0.07	0.43	-0.45	-0.06
9	E	-0.79	2.69	max ll+i mom lt	0.04	0.54	-0.55	-0.03
9	E	-0.79	-3.61	max ll+i shr lt	0.09	-0.56	0.54	-0.08
9	E	0.62	-1.84	min ll+i mom lt	-0.07	-0.42	0.44	0.06
9	E	0.63	1.87	min ll+i shr lt	0.07	0.43	-0.45	-0.06
10	A	0.47	-0.07	ncomp dead rt	-0.82	0.02	0.02	-0.82	0.67
10	A	0.03	-0.08	super dead rt	-0.04	0.02	0.02	-0.04	0.02
10	A	-1.29	2.92	max ll+i mom rt	1.62	-0.70	-0.70	1.62	-0.77
10	A	2.30	-3.45	max ll+i shr rt	-3.31	0.83	0.83	-3.31	2.06
10	A	2.12	-4.32	min ll+i mom rt	-2.78	1.04	1.04	-2.78	1.45
10	A	-1.29	6.89	min ll+i shr rt	0.66	-1.66	-1.66	0.66	0.83
10	A	-2.30	14.92	max ll+i mom lt	-3.59	0.55	0.55	-3.59	2.52
10	A	-2.30	-3.45	max ll+i shr lt	0.83	-3.31	-3.31	0.83	2.06
10	A	1.24	-7.50	min ll+i mom lt	1.80	-0.43	-0.43	1.80	-1.14
10	A	1.29	6.89	min ll+i shr lt	-1.66	0.66	0.66	-1.66	0.83

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11	A	-0.36	0.00	ncomp dead rt	0.65	0.00	0.00	0.65	-0.54
11	A	-0.02	0.00	super dead rt	0.03	0.00	0.00	0.03	-0.03
11	A	-0.90	3.68	max ll+i mom rt	0.74	-0.88	-0.88	0.74	0.12
11	A	2.96	-3.40	max ll+i shr rt	-4.52	0.82	0.82	-4.52	3.08
11	A	2.61	-4.60	min ll+i mom rt	-3.60	1.11	1.11	-3.60	2.08
11	A	-1.87	9.93	min ll+i shr rt	0.98	-2.39	-2.39	0.98	1.17
11	A	-2.96	20.26	max ll+i mom lt	-4.87	0.46	0.46	-4.87	3.67
11	A	-2.96	-3.40	max ll+i shr lt	0.82	-4.52	-4.52	0.82	3.08
11	A	1.68	-11.41	min ll+i mom lt	2.74	-0.29	-0.29	2.74	-2.04
11	A	1.87	9.93	min ll+i shr lt	-2.39	0.98	0.98	-2.39	1.17
12	E	-2.71	0.01	ncomp dead rt	2.29	2.13	-2.75	-1.77
12	E	-0.14	0.05	super dead rt	0.11	0.11	-0.14	-0.08
12	E	-2.07	4.78	max ll+i mom rt	0.67	1.77	-1.95	-0.52
12	E	5.39	-39.44	max ll+i shr rt	4.33	-5.44	4.27	-3.36
12	E	1.57	-6.05	min ll+i mom rt	0.04	-1.42	1.41	-0.03
12	E	-4.97	32.64	min ll+i shr rt	-3.16	4.90	-4.05	2.45
12	E	-4.97	35.63	max ll+i mom lt	-3.83	4.99	-3.96	2.97
12	E	-5.39	-39.44	max ll+i shr lt	4.33	-5.44	4.27	-3.36
12	E	5.39	-39.44	min ll+i mom lt	4.33	-5.44	4.27	-3.36
12	E	4.97	32.64	min ll+i shr lt	-3.16	4.90	-4.05	2.45
13	A	-1.05	0.00	ncomp dead rt	1.90	0.00	0.00	1.90	-1.58
13	A	-0.05	0.01	super dead rt	0.09	0.00	0.00	0.09	-0.07
13	A	-1.59	4.66	max ll+i mom rt	1.74	-1.12	-1.12	1.74	-0.52
13	A	2.45	-3.92	max ll+i shr rt	-3.48	0.94	0.94	-3.48	2.11
13	A	0.40	-6.21	min ll+i mom rt	0.78	1.49	1.49	0.78	-1.89
13	A	-2.45	14.02	min ll+i shr rt	1.05	-3.37	-3.37	1.05	1.93
13	A	-2.45	15.69	max ll+i mom lt	-3.77	0.65	0.65	-3.77	2.60
13	A	-2.45	-3.92	max ll+i shr lt	0.94	-3.48	-3.48	0.94	2.11
13	A	2.27	-15.89	min ll+i mom lt	3.82	-0.28	-0.28	3.82	-2.94
13	A	2.45	14.02	min ll+i shr lt	-3.37	1.05	1.05	-3.37	1.93
14	A	-1.06	0.00	ncomp dead rt	1.90	0.00	0.00	1.90	-1.58
14	A	-0.05	0.01	super dead rt	0.09	0.00	0.00	0.09	-0.07
14	A	-0.94	4.65	max ll+i mom rt	0.57	-1.12	-1.12	0.57	0.45
14	A	2.45	-3.92	max ll+i shr rt	-3.48	0.94	0.94	-3.48	2.11
14	A	0.40	-6.21	min ll+i mom rt	0.78	1.49	1.49	0.78	-1.89
14	A	-2.45	14.02	min ll+i shr rt	1.05	-3.37	-3.37	1.05	1.93
14	A	-2.45	15.69	max ll+i mom lt	-3.77	0.65	0.65	-3.77	2.60
14	A	-2.45	-3.92	max ll+i shr lt	0.94	-3.48	-3.48	0.94	2.11
14	A	2.27	-15.89	min ll+i mom lt	3.82	-0.28	-0.28	3.82	-2.94
14	A	2.45	14.02	min ll+i shr lt	-3.37	1.05	1.05	-3.37	1.93
15	E	-2.75	0.01	ncomp dead rt	2.32	2.17	-2.79	-1.80
15	E	-0.14	0.05	super dead rt	0.11	0.11	-0.14	-0.08
15	E	-2.07	4.76	max ll+i mom rt	0.67	1.77	-1.95	-0.52
15	E	5.39	-39.52	max ll+i shr rt	4.35	-5.45	4.27	-3.37
15	E	1.57	-6.06	min ll+i mom rt	0.04	-1.42	1.41	-0.03
15	E	-4.97	32.52	min ll+i shr rt	-3.13	4.90	-4.06	2.43
15	E	-4.97	35.63	max ll+i mom lt	-3.83	4.99	-3.96	2.97
15	E	-5.39	-39.52	max ll+i shr lt	4.35	-5.45	4.27	-3.37
15	E	5.39	-39.52	min ll+i mom lt	4.35	-5.45	4.27	-3.37
15	E	4.97	32.52	min ll+i shr lt	-3.13	4.90	-4.06	2.43
16	A	-0.39	0.00	ncomp dead rt	0.70	0.00	0.00	0.70	-0.58
16	A	-0.02	0.01	super dead rt	0.03	0.00	0.00	0.03	-0.03

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16	A	-0.90	3.67	max ll+i mom rt	0.74	-0.88	-0.88	0.74	0.11
16	A	2.96	-3.39	max ll+i shr rt	-4.52	0.82	0.82	-4.52	3.08
16	A	2.61	-4.60	min ll+i mom rt	-3.60	1.10	1.10	-3.60	2.08
16	A	-1.87	9.89	min ll+i shr rt	0.99	-2.38	-2.38	0.99	1.16
16	A	-2.96	20.30	max ll+i mom lt	-4.88	0.46	0.46	-4.88	3.68
16	A	-2.96	-3.39	max ll+i shr lt	0.82	-4.52	-4.52	0.82	3.08
16	A	1.68	-11.41	min ll+i mom lt	2.74	-0.29	-0.29	2.74	-2.04
16	A	1.87	9.89	min ll+i shr lt	-2.38	0.99	0.99	-2.38	1.16
17	A	0.44	-0.07	ncomp dead rt	-0.78	0.02	0.02	-0.78	0.64
17	A	0.03	-0.08	super dead rt	-0.04	0.02	0.02	-0.04	0.01
17	A	-1.29	2.94	max ll+i mom rt	1.62	-0.71	-0.71	1.62	-0.76
17	A	2.30	-3.45	max ll+i shr rt	-3.31	0.83	0.83	-3.31	2.07
17	A	2.12	-4.32	min ll+i mom rt	-2.78	1.04	1.04	-2.78	1.45
17	A	-1.28	6.86	min ll+i shr rt	0.67	-1.65	-1.65	0.67	0.82
17	A	-2.30	14.94	max ll+i mom lt	-3.59	0.55	0.55	-3.59	2.53
17	A	-2.30	-3.45	max ll+i shr lt	0.83	-3.31	-3.31	0.83	2.07
17	A	1.24	-7.49	min ll+i mom lt	1.80	-0.43	-0.43	1.80	-1.14
17	A	1.28	6.86	min ll+i shr lt	-1.65	0.67	0.67	-1.65	0.82
18	E	0.00	0.00	ncomp dead rt	0.00	0.00	0.00	0.00	
18	E	0.00	-0.03	super dead rt	0.00	0.00	0.00	0.00	
18	E	-0.62	3.13	max ll+i mom rt	-0.11	0.44	-0.42	0.09	
18	E	0.79	-3.59	max ll+i shr rt	0.09	-0.56	0.54	-0.08	
18	E	0.79	-3.59	min ll+i mom rt	0.09	-0.56	0.54	-0.08	
18	E	-0.63	1.86	min ll+i shr rt	0.07	0.43	-0.45	-0.06	
18	E	-0.79	2.70	max ll+i mom lt	0.03	0.54	-0.55	-0.03	
18	E	-0.79	-3.59	max ll+i shr lt	0.09	-0.56	0.54	-0.08	
18	E	0.62	-1.84	min ll+i mom lt	-0.07	-0.42	0.44	0.06	
18	E	0.63	1.86	min ll+i shr lt	0.07	0.43	-0.45	-0.06	
19	A	-0.47	0.03	ncomp dead rt	0.84	-0.01	-0.01	0.84	-0.69
19	A	-0.03	-0.01	super dead rt	0.05	0.00	0.00	0.05	-0.04
19	A	-1.34	2.83	max ll+i mom rt	1.73	-0.68	-0.68	1.73	-0.87
19	A	1.95	-3.03	max ll+i shr rt	-2.78	0.73	0.73	-2.78	1.71
19	A	1.75	-4.07	min ll+i mom rt	-2.17	0.98	0.98	-2.17	0.99
19	A	-1.12	5.94	min ll+i shr rt	0.60	-1.43	-1.43	0.60	0.69
19	A	-1.95	12.55	max ll+i mom lt	-3.02	0.49	0.49	-3.02	2.10
19	A	-1.95	-3.03	max ll+i shr lt	0.73	-2.78	-2.78	0.73	1.71
19	A	1.29	-7.87	min ll+i mom lt	1.89	-0.43	-0.43	1.89	-1.22
19	A	1.12	5.94	min ll+i shr lt	-1.43	0.60	0.60	-1.43	0.69
20	E	-3.26	0.02	ncomp dead rt	2.75	2.57	-3.31	-2.13	
20	E	-0.18	0.05	super dead rt	0.14	0.14	-0.18	-0.11	
20	E	-5.13	5.74	max ll+i mom rt	3.04	4.21	-5.04	-2.36	
20	E	5.13	-35.31	max ll+i shr rt	3.62	-5.11	4.14	-2.81	
20	E	4.23	-6.52	min ll+i mom rt	-2.10	-3.53	4.09	1.63	
20	E	-3.66	21.71	min ll+i shr rt	-1.80	3.54	-3.05	1.40	
20	E	-4.68	33.95	max ll+i mom lt	-3.70	4.71	-3.72	2.87	
20	E	-5.13	-35.31	max ll+i shr lt	3.62	-5.11	4.14	-2.81	
20	E	5.13	-35.31	min ll+i mom lt	3.62	-5.11	4.14	-2.81	
20	E	3.66	21.71	min ll+i shr lt	-1.80	3.54	-3.05	1.40	
21	A	-1.54	0.13	ncomp dead rt	2.75	-0.03	-0.03	2.75	-2.26
21	A	-0.09	0.09	super dead rt	0.14	-0.02	-0.02	0.14	-0.09
21	A	-1.93	4.91	max ll+i mom rt	2.30	-1.18	-1.18	2.30	-0.93
21	A	2.51	-15.73	max ll+i shr rt	-0.75	3.78	3.78	-0.75	-2.52
21	A	0.91	-6.37	min ll+i mom rt	-0.11	1.53	1.53	-0.11	-1.18

21	A	-2.33	2.90	min ll+i shr rt	3.51	-0.70	-0.70	3.51	-2.34
21	A	-2.22	13.83	max ll+i mom lt	-3.33	0.68	0.68	-3.33	2.20
21	A	-2.51	-15.73	max ll+i shr lt	3.78	-0.75	-0.75	3.78	-2.52
21	A	2.51	-15.73	min ll+i mom lt	3.78	-0.75	-0.75	3.78	-2.52
21	A	2.33	2.90	min ll+i shr lt	-0.70	3.51	3.51	-0.70	-2.34
22	E	-1.53	-0.07	ncomp dead rt	1.31	1.20	-1.56	-1.02	
22	E	-0.05	-0.04	super dead rt	0.06	0.04	-0.06	-0.04	
22	E	-2.36	4.38	max ll+i mom rt	1.01	2.00	-2.27	-0.78	
22	E	4.97	-36.03	max ll+i shr rt	3.92	-5.01	3.95	-3.04	
22	E	0.27	-5.42	min ll+i mom rt	0.99	-0.38	0.11	-0.77	
22	E	-4.94	3.93	min ll+i shr rt	3.29	4.01	-4.90	-2.55	
22	E	-4.88	36.55	max ll+i mom lt	-4.12	4.95	-3.84	3.19	
22	E	-4.97	-36.03	max ll+i shr lt	3.92	-5.01	3.95	-3.04	
22	E	4.97	-36.03	min ll+i mom lt	3.92	-5.01	3.95	-3.04	
22	E	4.94	3.93	min ll+i shr lt	3.29	4.01	-4.90	-2.55	
23	A	-0.14	-0.04	ncomp dead rt	0.26	0.01	0.01	0.26	-0.23
23	A	0.01	-0.03	super dead rt	0.00	0.01	0.01	0.00	0.00
23	A	-1.81	5.56	max ll+i mom rt	1.93	-1.34	-1.34	1.93	-0.49
23	A	2.06	-2.70	max ll+i shr rt	-3.06	0.65	0.65	-3.06	2.00
23	A	0.52	-4.26	min ll+i mom rt	0.08	1.02	1.02	0.08	-0.92
23	A	-2.06	12.29	min ll+i shr rt	0.75	-2.95	-2.95	0.75	1.83
23	A	-2.06	13.74	max ll+i mom lt	-3.30	0.40	0.40	-3.30	2.41
23	A	-2.06	-2.70	max ll+i shr lt	0.65	-3.06	-3.06	0.65	2.00
23	A	1.81	-12.66	min ll+i mom lt	3.04	-0.23	-0.23	3.04	-2.34
23	A	2.06	12.29	min ll+i shr lt	-2.95	0.75	0.75	-2.95	1.83
24	E	-0.22	-0.03	ncomp dead rt	0.19	0.17	-0.22	-0.15	
24	E	0.02	-0.03	super dead rt	-0.01	-0.01	0.02	0.01	
24	E	-4.07	15.37	max ll+i mom rt	-0.02	3.67	-3.66	0.02	
24	E	4.07	-17.18	max ll+i shr rt	0.43	-3.73	3.61	-0.34	
24	E	1.75	-3.84	min ll+i mom rt	-0.62	-1.50	1.66	0.48	
24	E	-4.04	27.43	min ll+i shr rt	-2.77	4.01	-3.27	2.15	
24	E	-4.04	29.79	max ll+i mom lt	-3.30	4.09	-3.20	2.56	
24	E	-4.07	-17.18	max ll+i shr lt	0.43	-3.73	3.61	-0.34	
24	E	4.07	-30.66	min ll+i mom lt	3.47	-4.14	3.20	-2.69	
24	E	4.04	27.43	min ll+i shr lt	-2.77	4.01	-3.27	2.15	
25	A	-0.23	0.03	ncomp dead rt	0.41	-0.01	-0.01	0.41	-0.34
25	A	-0.01	0.02	super dead rt	0.01	-0.01	-0.01	0.01	0.00
25	A	-1.06	4.14	max ll+i mom rt	0.92	-1.00	-1.00	0.92	0.06
25	A	2.33	-0.81	max ll+i shr rt	-4.00	0.19	0.19	-4.00	3.17
25	A	1.77	-1.89	min ll+i mom rt	-2.73	0.45	0.45	-2.73	1.90
25	A	-1.02	7.20	min ll+i shr rt	0.11	-1.73	-1.73	0.11	1.35
25	A	-2.33	17.82	max ll+i mom lt	-4.28	-0.09	-0.09	-4.28	3.63
25	A	-2.33	-0.81	max ll+i shr lt	0.19	-4.00	-4.00	0.19	3.17
25	A	1.06	-7.80	min ll+i mom lt	1.87	-0.04	-0.04	1.87	-1.53
25	A	1.02	7.20	min ll+i shr lt	-1.73	0.11	0.11	-1.73	1.35
26	E	0.00	-0.01	ncomp dead rt	0.00	0.00	0.00	0.00	
26	E	0.00	-0.01	super dead rt	0.00	0.00	0.00	0.00	
26	E	-3.17	15.88	max ll+i mom rt	-0.90	2.98	-2.74	0.70	
26	E	3.62	-15.93	max ll+i shr rt	0.54	-3.33	3.19	-0.42	
26	E	3.62	-15.93	min ll+i mom rt	0.54	-3.33	3.19	-0.42	
26	E	-2.57	7.57	min ll+i shr rt	0.47	2.26	-2.38	-0.36	
26	E	-3.62	12.99	max ll+i mom lt	0.13	3.24	-3.28	-0.10	
26	E	-3.62	-15.93	max ll+i shr lt	0.54	-3.33	3.19	-0.42	

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26	E	3.17	-9.49	min ll+i mom lt	-0.54	-2.79	2.93	0.42
26	E	2.57	7.57	min ll+i shr lt	0.47	2.26	-2.38	-0.36

Key -

Type A
- 1 - UL-Ctr Diag
- 2 - LL-Ctr Diag
- 3 - Ctr-UR Diag
- 4 - Ctr-LR Diag
- 5 - Bot Chd

Type E
- 1 - Top Chd
- 2 - UR-LL Diag
- 3 - LR-UL Diag
- 4 - Bot Chd

Right side is connected to girder 1

Girder 1 Max Combined Member Forces - k

Brace	Type	Top Chord Tens	Top Chord Comp	Diagonal Tens	Diagonal Comp	Bottom Chord Tens	Bottom Chord Comp
1	E	1.14	-1.94	7.04	-7.23	1.51	-0.89
2	A			4.61	-8.75	7.45	-3.75
3	E	7.75	-6.94	8.90	-9.21	5.38	-6.01
4	A			6.94	-6.84	4.95	-5.39
5	E	10.27	-7.14	10.35	-13.01	5.54	-7.96
6	A			12.00	-3.43	1.68	-8.57
7	E	11.67	-4.20	12.75	-15.73	3.26	-9.05
8	A			5.31	-6.05	3.57	-3.65
9	E	0.20	-0.24	1.18	-1.21	0.20	-0.17
10	A			2.79	-8.91	6.37	-1.59
11	A			6.84	-9.81	7.23	-5.16
12	E	12.52	-5.20	13.57	-15.57	4.04	-9.71
13	A			10.87	-7.55	3.49	-8.54
14	A			10.88	-7.55	3.49	-8.55
15	E	12.60	-5.16	13.60	-15.64	4.00	-9.77
16	A			6.91	-9.82	7.19	-5.22
17	A			2.84	-8.86	6.34	-1.62
18	E	0.20	-0.24	1.18	-1.21	0.20	-0.17
19	A			5.26	-6.05	3.61	-3.59
20	E	11.62	-4.27	12.68	-15.64	3.31	-9.01
21	A			11.96	-3.47	1.72	-8.54
22	E	10.27	-7.16	10.32	-12.98	5.55	-7.97
23	A			6.94	-6.83	4.94	-5.39
24	E	7.77	-6.92	8.92	-9.25	5.37	-6.03
25	A			4.62	-8.74	7.44	-3.76
26	E	1.16	-1.95	7.04	-7.24	1.51	-0.90

Girder 1 Loading Stress Range - ksi

Brace	Type	Top Chord	Diagonal	Bottom Chord

1	E	0.22	2.74	0.48
2	A		2.44	2.26
3	E	1.09	3.43	2.18
4	A		2.63	1.99
5	E	1.28	4.15	2.60
6	A		2.99	1.72
7	E	1.17	4.08	2.37
8	A		1.99	1.43
9	E	0.03	0.46	0.07
10	A		2.15	1.60
11	A		3.06	2.47
12	E	1.33	4.33	2.62
13	A		3.17	2.29
14	A		3.17	2.29
15	E	1.33	4.33	2.62
16	A		3.06	2.47
17	A		2.15	1.60
18	E	0.03	0.46	0.07
19	A		1.99	1.43
20	E	1.18	4.08	2.37
21	A		2.99	1.72
22	E	1.29	4.15	2.61
23	A		2.63	1.99
24	E	1.09	3.43	2.18
25	A		2.44	2.27
26	E	0.22	2.74	0.48

Girder 1 Combined Factored Connection Forces - Grp I

Brace	Type	Right Side Vert k	Right Side Horiz k	Left Side Vert k	Left Side Horiz k
1	E	3.93	-6.91	-3.93	-6.90
2	A	2.37	3.14	-2.37	7.25
3	E	-4.53	11.91	4.53	-13.70
4	A	-2.32	5.31	2.32	-5.79
5	E	-6.41	-15.66	6.45	-18.99
6	A	-3.61	-6.78	3.80	-10.20
7	E	-7.85	-15.32	7.85	-22.60
8	A	-1.78	2.59	-1.78	-4.49
9	E	0.86	-1.01	-0.86	-1.01
10	A	2.82	2.95	-2.82	7.48
11	A	2.96	4.31	-2.96	8.01
12	E	-7.24	-17.11	7.70	-23.04
13	A	-3.38	6.09	3.38	-9.19
14	A	-3.38	6.09	3.38	-9.20
15	E	-7.27	-17.14	7.73	-23.16
16	A	2.95	4.30	-2.95	7.97
17	A	2.80	2.94	-2.80	7.43
18	E	0.86	-1.01	-0.86	-1.00
19	A	1.79	2.58	-1.79	-4.44
20	E	-7.81	-15.31	7.81	-22.47
21	A	-3.59	-6.77	3.79	-10.16
22	E	-6.39	-15.67	6.43	-18.97
23	A	-2.32	5.31	2.32	-5.79
24	E	-4.55	11.90	4.55	-13.75
25	A	2.37	3.14	-2.37	7.24
26	E	3.93	-6.92	-3.93	-6.92

Horizontal force listed applied to each of top and bottom connections.

Vertical force listed applied to each of top and bottom connections for Types A and E.
Vertical force listed applied to connection supporting a diagonal for Types B and C.
Forces applied along centroidal axes of connecting members.

Right side is connected to girder 1

Sign convention:

Positive shear is upward on both sides.

Positive horiz force corresponds to positive end moment where top horiz force is toward brace and bottom horiz force is away from brace.

Negative horiz force corresponds to negative end moment where top horiz force is away from brace and bottom horiz force is toward brace.

Girder 2 Shapes

Brace 1

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 1 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	1.26	-1.28	0.00

Concurrent Mom -4.61 0.00 k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	5.47	-4.61	0.00

Concurrent shear -1.26 1.26 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	5.47	-4.61	0.00

Concurrent shear -1.26 1.26 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.00	0.00	1.08	-0.17	1.08	-0.17	0.00	0.00
UR-LL diag	0.00	0.00	1.16	-1.13	1.14	-1.30	0.00	0.00
LR-UL diag	0.00	0.00	1.14	-1.30	1.16	-1.13	0.00	0.00
Bot chord	0.00	0.00	0.13	-0.84	0.13	-0.84	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	2.34	188.29	0.012	0.36	219.38	0.002
UR-LL diag	2.52	76.50	0.033	2.81	62.55	0.045
LR-UL diag	2.52	76.50	0.033	2.81	62.55	0.045
Bot chord	0.28	76.50	0.004	1.81	48.80	0.037

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6155

Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio

Top chord	0.23	18.00	0.013	0.14	16.00	0.009
UR-LL diag	1.02	18.00	0.056	0.63	16.00	0.039
LR-UL diag	1.02	18.00	0.056	0.63	16.00	0.039
Bot chord	0.36	18.00	0.020	0.22	16.00	0.014

Girder 2 Shapes

Brace 2

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 2 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	3.11	-3.11	0.00
Concurrent Mom		-0.18	19.15	k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.80	-0.04	24.72	-8.10	0.00
Concurrent shear		-3.11	0.97	k
Moment from fatigue trk				
		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.80	-0.04	19.38	-9.75	0.00

Concurrent shear	-0.49	2.95	k
Moment from fatigue trk			
	0.00	0.00	
Concurrent Shr	0.00	0.00	

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.43	0.01	1.01	-5.57	2.34	-4.66	0.00	0.00
LL-TR diag	0.43	0.01	1.95	-5.94	1.01	-5.57	0.00	0.00
Bot chord	-0.72	-0.02	5.22	-1.79	7.01	0.00	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	5.66	76.50	0.074	11.51	62.55	0.184
LR-UL diag	4.80	76.50	0.063	12.33	62.55	0.197
Bot chord	14.26	76.50	0.186	4.83	48.80	0.099

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6155

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	3.13	18.00	0.174	1.93	16.00	0.120
LR-UL diag	3.08	18.00	0.171	1.89	16.00	0.118
Bot chord	3.95	18.00	0.219	2.43	16.00	0.152

Girder 2 Shapes

Brace 3

Type E bracing - top and bottom chords
crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 3 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	8.14	-8.08	0.00
Concurrent Mom		-12.34	45.91	k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.66	0.11	71.88	-31.30	0.00
Concurrent shear		0.19	3.40	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.66	0.11	68.01	-31.30	0.00
Concurrent shear		-2.58	3.40	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.37	-0.02	4.18	-16.36	4.18	-13.15	0.00	0.00
UR-LL diag	-0.05	0.00	7.76	-6.78	7.89	-6.81	0.00	0.00

LR-UL diag	-0.05	0.00	7.89	-6.81	7.76	-6.78	0.00	0.00
Bot chord	-0.29	0.02	12.69	-3.24	10.19	-3.24	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	9.54	188.29	0.051	35.06	219.38	0.160
UR-LL diag	17.06	76.50	0.223	14.84	62.55	0.237
LR-UL diag	17.06	76.50	0.223	14.84	62.55	0.237
Bot chord	27.19	76.50	0.355	7.40	48.80	0.152

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles — Single Truck >2000000 Cycles

Single/Multi Moment Ratio- 0.6013

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	2.94	18.00	0.163	1.77	16.00	0.110
UR-LL diag	6.19	18.00	0.344	3.72	16.00	0.233
LR-UL diag	6.19	18.00	0.344	3.72	16.00	0.233
Bot chord	7.15	18.00	0.397	4.30	16.00	0.269

Girder 2 Shapes

Brace 4

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 4 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	3.68	-3.62	0.00
Concurrent Mom		-6.31	19.46	k-ft

Moment at Girder 2 - k-ft - right side of brace

OUTPUT.TXT

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.17	0.00	28.68	-13.72	0.00
Concurrent shear		0.08	1.75	k
Moment from fatigue trk				
		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.17	0.00	27.27	-13.72	0.00
Concurrent shear		-2.40	1.75	k
Moment from fatigue trk				
		0.00	0.00	
Concurrent Shr		0.00	0.00	

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.28	0.00	1.84	-7.04	3.30	-6.55	0.00	0.00
LL-TR diag	0.28	0.00	3.30	-6.89	1.84	-5.12	0.00	0.00
Bot chord	-0.47	0.00	11.59	-2.87	7.31	-2.87	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	7.53	76.50	0.098	14.92	62.55	0.238
LR-UL diag	7.53	76.50	0.098	14.60	62.55	0.233
Bot chord	24.56	76.50	0.321	6.83	48.80	0.140

Fatigue Stresses - ksi

OUTPUT.TXT

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5935

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	4.11	18.00	0.228	2.44	16.00	0.153
LR-UL diag	4.06	18.00	0.225	2.41	16.00	0.151
Bot chord	6.50	18.00	0.361	3.86	16.00	0.241

Girder 2 Shapes

Brace 5

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 5 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	8.30	-8.19	0.00
Concurrent Mom		-19.19	44.88	k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.48	-0.51	71.04	-38.37	0.00
Concurrent shear		0.29	3.55	k
Moment from fatigue trk				
		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp	Comp	Max	Min	Side-

Dead	Dead	LL+I	LL+I	walk
-12.48	-0.51	68.63	-38.37	0.00

Concurrent shear -2.06 3.55 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	(-)	LL+I Forces at adj gd (+)	(-)	Side-walk (+)	(-)
Top chord	2.81	0.11	5.64	-16.25	5.64	-13.72	0.00	0.00
UR-LL diag	-0.38	-0.02	7.81	-7.12	7.84	-6.95	0.00	0.00
LR-UL diag	-0.38	-0.02	7.84	-6.95	7.81	-7.12	0.00	0.00
Bot chord	-2.18	-0.09	12.60	-4.38	10.64	-4.38	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	16.05	188.29	0.085	31.47	219.38	0.143
UR-LL diag	16.51	76.50	0.216	15.96	62.55	0.255
LR-UL diag	16.51	76.50	0.216	15.96	62.55	0.255
Bot chord	24.41	76.50	0.319	12.45	48.80	0.255

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5624

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	3.20	18.00	0.178	1.80	16.00	0.113
UR-LL diag	6.28	18.00	0.349	3.53	16.00	0.221
LR-UL diag	6.28	18.00	0.349	3.53	16.00	0.221
Bot chord	7.52	18.00	0.418	4.23	16.00	0.264

Girder 2 Shapes

Brace 6

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals: L	3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L	3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 6 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	3.57	-3.53	0.00

Concurrent Mom -9.69 17.37 k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.25	-0.56	24.91	-16.41	0.00

Concurrent shear -0.93 1.47 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.25	-0.56	25.20	-16.41	0.00

Concurrent shear -2.45 1.47 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 2 Service Axial Forces - k

OUTPUT.TXT

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	(-)	LL+I Forces at adj gd (+)	(-)	Side-walk (+)	(-)
TL-LR diag	2.94	0.13	2.19	-4.32	3.94	-6.06	0.00	0.00
LL-TR diag	2.94	0.13	3.94	-5.99	2.19	-4.10	0.00	0.00
Bot chord	-4.90	-0.22	8.57	-4.36	6.40	-4.36	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	12.57	76.50	0.164	9.14	62.55	0.146
LR-UL diag	12.57	76.50	0.164	9.00	62.55	0.144
Bot chord	11.95	76.50	0.156	16.12	48.80	0.330

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles — Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5710

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	4.06	18.00	0.225	2.32	16.00	0.145
LR-UL diag	4.03	18.00	0.224	2.30	16.00	0.144
Bot chord	5.62	18.00	0.312	3.21	16.00	0.200

Girder 2 Shapes

Brace 7

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 7 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	8.40	-8.31	0.00

Concurrent Mom -26.54 34.64 k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-26.52	-1.39	56.80	-42.45	0.00

Concurrent shear -0.35 3.82 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-26.52	-1.39	58.56	-42.45	0.00

Concurrent shear -6.33 3.82 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	(-)	LL+I Forces at adj gd (+)	(-)	Side-walk (+)	(-)
Top chord	5.98	0.31	6.34	-12.50	6.34	-7.85	0.00	0.00
UR-LL diag	-0.81	-0.04	7.59	-7.42	7.72	-7.38	0.00	0.00
LR-UL diag	-0.81	-0.04	7.72	-7.38	7.59	-7.42	0.00	0.00
Bot chord	-4.63	-0.24	9.70	-4.91	6.09	-4.91	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio

Top chord	21.93	188.29	0.116	18.97	219.38	0.086
UR-LL diag	15.66	76.50	0.205	17.21	62.55	0.275
LR-UL diag	15.66	76.50	0.205	17.21	62.55	0.275
Bot chord	14.71	76.50	0.192	17.01	48.80	0.349

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles				Single Truck >2000000 Cycles Single/Multi Moment Ratio- 0.5203		
	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	2.85	18.00	0.158	1.48	16.00	0.093
UR-LL diag	6.33	18.00	0.352	3.29	16.00	0.206
LR-UL diag	6.33	18.00	0.352	3.29	16.00	0.206
Bot chord	6.35	18.00	0.353	3.30	16.00	0.206

Girder 2 Shapes

Brace 8

Type A bracing - crossed diagonals
Bottom chord

Shape	Comp KL/r	Tens L/r
Diagonals: L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 8 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	2.58	-2.58	0.00
Concurrent Mom		-6.20	8.91	k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-3.84	-0.22	14.43	-8.96	0.00
Concurrent shear		-2.58	1.75	k

Moment from fatigue trk

0.00 0.00

Concurrent Shr	0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-3.84	-0.22	15.48	-11.79	0.00
Concurrent shear		-2.31	2.50	k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.92	0.05	2.51	-3.16	2.83	-3.72	0.00	0.00
LL-TR diag	0.92	0.05	2.15	-3.47	2.51	-3.16	0.00	0.00
Bot chord	-1.53	-0.09	1.91	-0.96	2.73	-0.97	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	7.42	76.50	0.097	6.81	62.55	0.109
LR-UL diag	6.71	76.50	0.088	6.26	62.55	0.100
Bot chord	3.82	76.50	0.050	4.22	48.80	0.086

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles				Single Truck >2000000 Cycles Single/Multi Moment Ratio- 0.3835		
	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.69	18.00	0.149	1.03	16.00	0.064
LR-UL diag	2.44	18.00	0.136	0.94	16.00	0.059
Bot chord	1.64	18.00	0.091	0.63	16.00	0.039

Girder 2 Shapes

OUTPUT.TXT

Brace 9

Type E bracing - top and bottom chords
crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	108.09	110.80
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 9 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	0.25	-0.25	0.00
Concurrent Mom		-0.94	0.00	k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	1.01	-0.94	0.00
Concurrent shear		-0.24	0.25	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	1.07	-0.89	0.00
Concurrent shear		-0.25	0.24	k
Moment from fatigue trk		0.00	0.00	

OUTPUT.TXT

Concurrent Shr 0.00 0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.00	0.00	0.13	-0.02	0.13	-0.02	0.00	0.00
UR-LL diag	0.00	0.00	0.17	-0.18	0.18	-0.19	0.00	0.00
LR-UL diag	0.00	0.00	0.18	-0.19	0.18	-0.18	0.00	0.00
Bot chord	0.00	0.00	0.01	-0.11	0.02	-0.11	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	0.28	188.29	0.002	0.04	219.38	0.000
UR-LL diag	0.38	76.50	0.005	0.41	53.24	0.008
LR-UL diag	0.38	76.50	0.005	0.41	53.24	0.008
Bot chord	0.03	76.50	0.000	0.24	48.80	0.005

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.2519

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	0.03	18.00	0.002	0.01	16.00	0.000
UR-LL diag	0.15	18.00	0.008	0.04	16.00	0.002
LR-UL diag	0.15	18.00	0.008	0.04	16.00	0.002
Bot chord	0.05	18.00	0.003	0.01	16.00	0.001

Girder 2 Shapes

Brace 10

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 10 - Truck load governs

OUTPUT.TXT

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk	
0.00	0.00	2.78	-2.78	0.00	
Concurrent Mom		-6.35	9.92		k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk	
3.61	0.13	15.87	-8.28	0.00	
Concurrent shear		-2.78	1.84		k
Moment from fatigue trk			0.00	0.00	
Concurrent Shr			0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk	
3.61	0.13	16.86	-12.43	0.00	
Concurrent shear		-2.45	2.70		k
Moment from fatigue trk			0.00	0.00	
Concurrent Shr			0.00	0.00	

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	-0.87	-0.03	2.62	-3.48	2.99	-4.05	0.00	0.00
LL-TR diag	-0.87	-0.03	1.99	-3.81	2.62	-3.48	0.00	0.00
Bot chord	1.44	0.05	2.18	-0.55	3.07	-0.92	0.00	0.00

Girder 2 Stresses

OUTPUT.TXT

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	5.32	76.50	0.069	9.97	62.55	0.159
LR-UL diag	4.53	76.50	0.059	9.45	62.55	0.151
Bot chord	8.62	76.50	0.113	0.04	48.80	0.001

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.3713

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.88	18.00	0.160	1.07	16.00	0.067
LR-UL diag	2.62	18.00	0.146	0.97	16.00	0.061
Bot chord	1.88	18.00	0.104	0.70	16.00	0.044

Girder 2 Shapes

Brace 11

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 11 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk	
0.00	0.00	4.20	-4.20	0.00	
Concurrent Mom		-12.31	17.81		k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk	
-2.89	-0.14	26.63	-13.48	0.00	
Concurrent shear		-0.93	1.56		k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-2.89	-0.14	25.17	-16.18	0.00

Concurrent shear -1.50 4.13 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.70	0.03	3.28	-4.73	3.89	-6.05	0.00	0.00
LL-TR diag	0.70	0.03	3.24	-6.40	3.28	-4.61	0.00	0.00
Bot chord	-1.16	-0.06	9.26	-3.05	7.81	-0.28	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	9.39	76.50	0.123	12.19	62.55	0.195
LR-UL diag	8.07	76.50	0.106	12.95	62.55	0.207
Bot chord	18.54	76.50	0.242	8.20	48.80	0.168

Fatigue Stresses - ksi

	Multilane Loading - 2000000 Cycles			Single Truck >2000000 Cycles		
				Single/Multi Moment Ratio- 0.6196		
	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	4.03	18.00	0.224	2.50	16.00	0.156
LR-UL diag	3.87	18.00	0.215	2.40	16.00	0.150
Bot chord	5.47	18.00	0.304	3.39	16.00	0.212

Girder 2 Shapes

Brace 12

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 12 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	8.76	-8.66	0.00

Concurrent Mom -22.64 47.28 k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-21.67	-1.04	76.22	-43.82	0.00

Concurrent shear 0.57 3.72 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-21.67	-1.04	71.32	-43.82	0.00

Concurrent shear -1.88 3.72 k

OUTPUT.TXT

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	4.88	0.23	6.73	-17.66	6.73	-14.48	0.00	0.00
UR-LL diag	-0.66	-0.03	8.26	-7.59	8.21	-7.36	0.00	0.00
LR-UL diag	-0.66	-0.03	8.21	-7.36	8.26	-7.59	0.00	0.00
Bot chord	-3.79	-0.18	13.69	-5.22	11.23	-5.22	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	21.26	188.29	0.113	31.68	219.38	0.144
UR-LL diag	17.03	76.50	0.223	17.37	62.55	0.278
LR-UL diag	17.03	76.50	0.223	17.37	62.55	0.278
Bot chord	24.57	76.50	0.321	16.49	48.80	0.338

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6057

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	3.59	18.00	0.200	2.18	16.00	0.136
UR-LL diag	6.64	18.00	0.369	4.02	16.00	0.252
LR-UL diag	6.64	18.00	0.369	4.02	16.00	0.252
Bot chord	8.34	18.00	0.463	5.05	16.00	0.316

Girder 2 Shapes

Brace 13

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 13 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	4.83	-4.73	0.00

Concurrent Mom -9.20 23.94 k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-8.41	-0.40	33.56	-18.08	0.00

Concurrent shear -0.29 2.30 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-8.41	-0.40	33.15	-18.08	0.00

Concurrent shear -3.23 2.30 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	2.02	0.10	2.77	-7.55	4.35	-7.97	0.00	0.00
LL-TR diag	2.02	0.10	4.35	-8.07	2.77	-6.50	0.00	0.00
Bot chord	-3.37	-0.16	12.99	-3.79	8.41	-3.79	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	12.19	76.50	0.159	14.54	62.55	0.232
LR-UL diag	12.19	76.50	0.159	14.76	62.55	0.236
Bot chord	23.63	76.50	0.309	12.80	48.80	0.262

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

	Actual Range	Allow Range	Ratio
UR-LL diag	4.94	18.00	0.275
LR-UL diag	4.98	18.00	0.277
Bot chord	7.49	18.00	0.416

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6127

	Actual Range	Allow Range	Ratio
UR-LL diag	3.03	16.00	0.189
LR-UL diag	3.05	16.00	0.191
Bot chord	4.59	16.00	0.287

Girder 2 Shapes

Brace 14

Type A bracing - crossed diagonals
Bottom chord

Shape	Comp KL/r	Tens L/r
Diagonals: L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 14 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	4.83	-4.73	0.00

Concurrent Mom -9.16 23.82 k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-8.45	-0.40	33.44	-18.08	0.00

Concurrent shear -0.29 2.30 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-8.45	-0.40	33.12	-18.08	0.00

Concurrent shear -3.23 2.30 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	2.03	0.10	2.80	-7.52	4.35	-7.96	0.00	0.00
LL-TR diag	2.03	0.10	4.35	-8.04	2.80	-6.51	0.00	0.00
Bot chord	-3.38	-0.16	12.95	-3.78	8.40	-3.78	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	12.20	76.50	0.159	14.52	62.55	0.232
LR-UL diag	12.20	76.50	0.159	14.68	62.55	0.235
Bot chord	23.51	76.50	0.307	12.82	48.80	0.263

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

	Actual Range	Allow Range	Ratio

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6127

	Actual Range	Allow Range	Ratio

UR-LL diag	4.94	18.00	0.274	3.03	16.00	0.189
LR-UL diag	4.97	18.00	0.276	3.04	16.00	0.190
Bot chord	7.47	18.00	0.415	4.58	16.00	0.286

Girder 2 Shapes

Brace 15

Type E bracing - top and bottom chords crossed diagonals

Shape	Comp KL/r	Tens L/r
Top chord: W 12.00 x 26.00	44.70	59.60
Diagonals: L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 15 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	8.76	-8.66	0.00

Concurrent Mom -22.59 47.07 k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-21.98	-1.06	75.86	-43.73	0.00

Concurrent shear 0.57 3.72 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-21.98	-1.06	71.02	-43.73	0.00

Concurrent shear -6.17 3.72 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	4.95	0.24	6.71	-17.58	6.71	-10.79	0.00	0.00
UR-LL diag	-0.67	-0.03	8.25	-7.58	8.21	-7.36	0.00	0.00
LR-UL diag	-0.67	-0.03	8.21	-7.36	8.25	-7.58	0.00	0.00
Bot chord	-3.84	-0.19	13.63	-5.20	8.36	-5.20	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	21.32	188.29	0.113	31.41	219.38	0.143
UR-LL diag	17.00	76.50	0.222	17.38	62.55	0.278
LR-UL diag	17.00	76.50	0.222	17.38	62.55	0.278
Bot chord	24.36	76.50	0.318	16.53	48.80	0.339

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles

Single/Multi Moment Ratio- 0.6057

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	3.58	18.00	0.199	2.17	16.00	0.136
UR-LL diag	6.64	18.00	0.369	4.02	16.00	0.251
LR-UL diag	6.64	18.00	0.369	4.02	16.00	0.251
Bot chord	8.31	18.00	0.461	5.03	16.00	0.314

Girder 2 Shapes

Brace 16

Type A bracing - crossed diagonals Bottom chord

Shape	Comp KL/r	Tens L/r
Diagonals: L 3.00 x 3.00 x 0.500	90.34	92.61

Bot chord: L 3.00 x 3.00 x 0.500 115.58 154.11

Girder 2 Forces - HS

Forces on Brace 16 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	4.20	-4.20	0.00
Concurrent Mom		-12.28	17.73	k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-3.09	-0.15	26.51	-13.43	0.00
Concurrent shear		-0.93	1.56	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-3.09	-0.15	25.06	-16.14	0.00
Concurrent shear		-1.50	4.13	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Girder 2 Service Axial Forces - k

Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.74	0.04	3.31	-4.70	3.88	-6.02	0.00	0.00
LL-TR diag	0.74	0.04	3.23	-6.37	3.31	-4.62	0.00	0.00
Bot chord	-1.24	-0.06	9.21	-3.04	7.77	-0.26	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	9.43	76.50	0.123	12.07	62.55	0.193
LR-UL diag	8.19	76.50	0.107	12.82	62.55	0.205
Bot chord	18.32	76.50	0.239	8.28	48.80	0.170

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles — Single Truck >2000000 Cycles

Single/Multi Moment Ratio- 0.6196

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	4.02	18.00	0.223	2.49	16.00	0.156
LR-UL diag	3.87	18.00	0.215	2.40	16.00	0.150
Bot chord	5.44	18.00	0.302	3.37	16.00	0.211

Girder 2 Shapes

Brace 17

Type A bracing - crossed diagonals

Bottom chord

Shape	Comp KL/r	Tens L/r
Diagonals: L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 17 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	2.78	-2.78	0.00
Concurrent Mom		-6.32	9.87	k-ft

Moment at Girder 2 - k-ft - right side of brace

OUTPUT.TXT

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
3.44	0.12	15.91	-8.24	0.00

Concurrent shear -2.78 1.84 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
3.44	0.12	16.89	-12.38	0.00

Concurrent shear -2.45 2.70 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	-0.83	-0.03	2.64	-3.49	2.97	-4.06	0.00	0.00
LL-TR diag	-0.83	-0.03	1.98	-3.82	2.64	-3.49	0.00	0.00
Bot chord	1.38	0.05	2.20	-0.54	3.08	-0.89	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	5.34	76.50	0.070	9.93	62.55	0.159
LR-UL diag	4.61	76.50	0.060	9.42	62.55	0.151
Bot chord	8.54	76.50	0.112	0.09	48.80	0.002

Fatigue Stresses - ksi

0.00 0.00 1.07 -0.89 0.00

Concurrent shear -0.25 0.24 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.00	0.00	0.13	-0.02	0.13	-0.02	0.00	0.00
UR-LL diag	0.00	0.00	0.17	-0.17	0.18	-0.19	0.00	0.00
LR-UL diag	0.00	0.00	0.18	-0.19	0.18	-0.17	0.00	0.00
Bot chord	0.00	0.00	0.01	-0.11	0.02	-0.11	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	0.28	188.29	0.002	0.04	219.38	0.000
UR-LL diag	0.38	76.50	0.005	0.41	53.24	0.008
LR-UL diag	0.38	76.50	0.005	0.41	53.24	0.008
Bot chord	0.03	76.50	0.000	0.24	48.80	0.005

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.2518

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	0.03	18.00	0.002	0.01	16.00	0.000
UR-LL diag	0.15	18.00	0.008	0.04	16.00	0.002
LR-UL diag	0.15	18.00	0.008	0.04	16.00	0.002
Bot chord	0.05	18.00	0.003	0.01	16.00	0.001

Girder 2 Shapes

Brace 19

Type A bracing - crossed diagonals
Bottom chord

OUTPUT.TXT

	Shape	Comp KL/r	Tens L/r
Diagonals: L	3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L	3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 19 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	2.58	-2.58	0.00
Concurrent Mom		-6.17	8.86	k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-3.70	-0.22	14.46	-8.93	0.00
Concurrent shear		-2.58	1.75	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-3.70	-0.22	15.48	-11.72	0.00
Concurrent shear		-2.31	2.50	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Girder 2 Service Axial Forces - k

Noncmp Comp	LL+I	LL+I	Side-

OUTPUT.TXT

	Dead	Dead	Forces at gd 2 (+)	Forces at gd 2 (-)	Forces at adj gd (+)	Forces at adj gd (-)	walk (+)	walk (-)
TL-LR diag	0.89	0.05	2.52	-3.16	2.82	-3.72	0.00	0.00
LL-TR diag	0.89	0.05	2.15	-3.47	2.52	-3.16	0.00	0.00
Bot chord	-1.48	-0.09	1.92	-0.94	2.73	-0.94	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	7.34	76.50	0.096	6.86	62.55	0.110
LR-UL diag	6.69	76.50	0.087	6.32	62.55	0.101
Bot chord	3.90	76.50	0.051	4.08	48.80	0.084

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.3833

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.68	18.00	0.149	1.03	16.00	0.064
LR-UL diag	2.45	18.00	0.136	0.94	16.00	0.059
Bot chord	1.63	18.00	0.091	0.62	16.00	0.039

Girder 2 Shapes

Brace 20

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals: L	3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L	3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 20 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	8.40	-8.31	0.00

OUTPUT.TXT

Concurrent Mom	-26.43		34.49	k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-26.08	-1.36	56.54	-42.24	0.00

Concurrent shear	-0.34	3.82	k
Moment from fatigue trk	0.00	0.00	
Concurrent Shr	0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-26.08	-1.36	58.50	-42.21	0.00

Concurrent shear	-6.33	3.82	k
Moment from fatigue trk	0.00	0.00	
Concurrent Shr	0.00	0.00	

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	5.88	0.31	6.29	-12.45	6.28	-7.84	0.00	0.00
UR-LL diag	-0.79	-0.04	7.59	-7.42	7.73	-7.39	0.00	0.00
LR-UL diag	-0.79	-0.04	7.73	-7.39	7.59	-7.42	0.00	0.00
Bot chord	-4.56	-0.24	9.65	-4.88	6.08	-4.87	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	21.69	188.29	0.115	18.98	219.38	0.087

UR-LL diag	15.69	76.50	0.205	17.19	62.55	0.275
LR-UL diag	15.69	76.50	0.205	17.19	62.55	0.275
Bot chord	14.72	76.50	0.192	16.82	48.80	0.345

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles | Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5203

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	2.83	18.00	0.157	1.47	16.00	0.092
UR-LL diag	6.33	18.00	0.352	3.30	16.00	0.206
LR-UL diag	6.33	18.00	0.352	3.30	16.00	0.206
Bot chord	6.32	18.00	0.351	3.29	16.00	0.205

Girder 2 Shapes

Brace 21

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 21 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	3.57	-3.53	0.00

Concurrent Mom	-9.65	17.28	k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.13	-0.55	24.79	-16.32	0.00

Concurrent shear	-0.93	1.47	k
Moment from fatigue trk	0.00	0.00	

Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.13	-0.55	25.16	-16.32	0.00

Concurrent shear	-2.46	1.47	k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	2.92	0.13	2.21	-4.28	3.92	-6.05	0.00	0.00
LL-TR diag	2.92	0.13	3.92	-5.96	2.21	-4.11	0.00	0.00
Bot chord	-4.85	-0.22	8.52	-4.32	6.38	-4.32	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	12.48	76.50	0.163	9.17	62.55	0.147
LR-UL diag	12.48	76.50	0.163	8.97	62.55	0.143
Bot chord	11.90	76.50	0.156	15.98	48.80	0.327

Fatigue Stresses - ksi

	Multilane Loading - 2000000 Cycles			Single Truck >2000000 Cycles Single/Multi Moment Ratio- 0.5711		
	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	4.05	18.00	0.225	2.31	16.00	0.144
LR-UL diag	4.01	18.00	0.223	2.29	16.00	0.143
Bot chord	5.58	18.00	0.310	3.19	16.00	0.199

Girder 2 Shapes

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 22 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	8.30	-8.19	0.00

Concurrent Mom	-19.08	44.64	k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.35	-0.50	70.67	-38.17	0.00

Concurrent shear	0.29	3.55	k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.35	-0.50	68.24	-38.17	0.00

Concurrent shear	-2.06	3.55	k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

OUTPUT.TXT

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	(-)	LL+I Forces at adj gd (+)	(-)	Side-walk (+)	(-)
Top chord	2.78	0.11	5.60	-16.17	5.60	-13.64	0.00	0.00
UR-LL diag	-0.38	-0.02	7.81	-7.11	7.84	-6.96	0.00	0.00
LR-UL diag	-0.38	-0.02	7.84	-6.96	7.81	-7.11	0.00	0.00
Bot chord	-2.16	-0.09	12.54	-4.34	10.58	-4.34	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	15.92	188.29	0.085	31.33	219.38	0.143
UR-LL diag	16.52	76.50	0.216	15.95	62.55	0.255
LR-UL diag	16.52	76.50	0.216	15.95	62.55	0.255
Bot chord	24.30	76.50	0.318	12.34	48.80	0.253

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5624

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	3.18	18.00	0.177	1.79	16.00	0.112
UR-LL diag	6.28	18.00	0.349	3.53	16.00	0.221
LR-UL diag	6.28	18.00	0.349	3.53	16.00	0.221
Bot chord	7.48	18.00	0.415	4.21	16.00	0.263

Girder 2 Shapes

Brace 23

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 23 - Truck load governs

Shear - k

OUTPUT.TXT

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	3.68	-3.62	0.00
Concurrent Mom		-6.31	19.44	k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.19	0.00	28.62	-13.71	0.00
Concurrent shear		0.08	1.75	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.19	0.00	27.22	-13.72	0.00
Concurrent shear		-2.40	1.75	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	(-)	LL+I Forces at adj gd (+)	(-)	Side-walk (+)	(-)
TL-LR diag	0.29	0.00	1.85	-7.03	3.30	-6.54	0.00	0.00
LL-TR diag	0.29	0.00	3.30	-6.88	1.85	-5.12	0.00	0.00
Bot chord	-0.48	0.00	11.57	-2.86	7.29	-2.86	0.00	0.00

Girder 2 Stresses

OUTPUT.TXT

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	7.53	76.50	0.098	14.88	62.55	0.238
LR-UL diag	7.53	76.50	0.098	14.56	62.55	0.233
Bot chord	24.50	76.50	0.320	6.84	48.80	0.140

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5935

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	4.11	18.00	0.228	2.44	16.00	0.152
LR-UL diag	4.05	18.00	0.225	2.41	16.00	0.150
Bot chord	6.49	18.00	0.360	3.85	16.00	0.241

Girder 2 Shapes

Brace 24

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 24 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	8.14	-8.08	0.00

Concurrent Mom -12.33 45.90 k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.80	0.10	71.88	-31.34	0.00

Concurrent shear 0.19 3.40 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.80	0.10	68.04	-31.34	0.00

Concurrent shear -2.58 3.40 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.41	-0.02	4.19	-16.36	4.19	-13.15	0.00	0.00
UR-LL diag	-0.05	0.00	7.76	-6.78	7.89	-6.81	0.00	0.00
LR-UL diag	-0.05	0.00	7.89	-6.81	7.76	-6.78	0.00	0.00
Bot chord	-0.32	0.02	12.68	-3.25	10.20	-3.25	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	9.60	188.29	0.051	35.02	219.38	0.160
UR-LL diag	17.06	76.50	0.223	14.86	62.55	0.237
LR-UL diag	17.06	76.50	0.223	14.86	62.55	0.237
Bot chord	27.15	76.50	0.355	7.44	48.80	0.153

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6013

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	2.94	18.00	0.163	1.77	16.00	0.110

UR-LL diag	6.19	18.00	0.344	3.72	16.00	0.233
LR-UL diag	6.19	18.00	0.344	3.72	16.00	0.233
Bot chord	7.15	18.00	0.397	4.30	16.00	0.269

Girder 2 Shapes

Brace 25

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 2 Forces - HS

Forces on Brace 25 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	3.11	-3.11	0.00
Concurrent Mom		-0.18	19.15	k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.83	-0.04	24.73	-8.10	0.00
Concurrent shear		-3.11	0.97	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.83	-0.04	19.39	-9.76	0.00
Concurrent shear		-0.49	2.95	k

Moment from fatigue trk	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.44	0.01	1.01	-5.57	2.35	-4.66	0.00	0.00
LL-TR diag	0.44	0.01	1.95	-5.94	1.01	-5.57	0.00	0.00
Bot chord	-0.73	-0.02	5.22	-1.79	7.02	0.00	0.00	0.00

Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	5.68	76.50	0.074	11.51	62.55	0.184
LR-UL diag	4.81	76.50	0.063	12.32	62.55	0.197
Bot chord	14.26	76.50	0.186	4.85	48.80	0.099

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6155

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	3.13	18.00	0.174	1.93	16.00	0.120
LR-UL diag	3.08	18.00	0.171	1.89	16.00	0.118
Bot chord	3.95	18.00	0.220	2.43	16.00	0.152

Girder 2 Shapes

Brace 26

Type E bracing - top and bottom chords
crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

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Girder 2 Forces - HS

Forces on Brace 26 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	1.26	-1.24	0.00
Concurrent Mom		-4.62	0.00	k-ft

Moment at Girder 2 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	5.46	-4.62	0.00
Concurrent shear		-1.26	1.26	k
Moment from fatigue trk				
		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	5.46	-4.62	0.00
Concurrent shear		-1.26	1.26	k
Moment from fatigue trk				
		0.00	0.00	
Concurrent Shr		0.00	0.00	

Girder 2 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 2 (+)	LL+I Forces at gd 2 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.00	0.00	1.05	-0.16	1.05	-0.16	0.00	0.00
UR-LL diag	0.00	0.00	1.16	-1.13	1.14	-1.26	0.00	0.00
LR-UL diag	0.00	0.00	1.14	-1.26	1.16	-1.13	0.00	0.00
Bot chord	0.00	0.00	0.13	-0.81	0.13	-0.81	0.00	0.00

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Girder 2 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	2.27	188.29	0.012	0.36	219.38	0.002
UR-LL diag	2.51	76.50	0.033	2.73	62.55	0.044
LR-UL diag	2.51	76.50	0.033	2.73	62.55	0.044
Bot chord	0.28	76.50	0.004	1.76	48.80	0.036

Fatigue Stresses - ksi

	Multilane Loading - 2000000 Cycles Actual Range	Allow Range	Ratio	Single Truck >2000000 Cycles Single/Multi Moment Ratio- 0.6155 Actual Range	Allow Range	Ratio
Top chord	0.22	18.00	0.012	0.14	16.00	0.009
UR-LL diag	1.00	18.00	0.056	0.62	16.00	0.039
LR-UL diag	1.00	18.00	0.056	0.62	16.00	0.039
Bot chord	0.35	18.00	0.020	0.22	16.00	0.014

Brace	Combined Stresses Top Chord	Diag	Bott Chord	Fatigue Stresses Top Chord	Diag	Bott Chord
1	0.012	0.045	0.037	0.013	0.056	0.020
2	0.000	0.197	0.186	0.000	0.174	0.219
3	0.160	0.237	0.355	0.163	0.344	0.397
4	0.000	0.238	0.321	0.000	0.228	0.361
5	0.143	0.255	0.319	0.178	0.349	0.418
6	0.000	0.164	0.330	0.000	0.225	0.312
7	0.116	0.275	0.349	0.158	0.352	0.353
8	0.000	0.109	0.086	0.000	0.149	0.091
9	0.002	0.008	0.005	0.002	0.008	0.003
10	0.000	0.159	0.113	0.000	0.160	0.104
11	0.000	0.207	0.242	0.000	0.224	0.304
12	0.144	0.278	0.338	0.200	0.369	0.463
13	0.000	0.236	0.309	0.000	0.277	0.416
14	0.000	0.235	0.307	0.000	0.276	0.415
15	0.143	0.278	0.339	0.199	0.369	0.461
16	0.000	0.205	0.239	0.000	0.223	0.302
17	0.000	0.159	0.112	0.000	0.160	0.104
18	0.002	0.008	0.005	0.002	0.008	0.003
19	0.000	0.110	0.084	0.000	0.149	0.091
20	0.115	0.275	0.345	0.157	0.352	0.351
21	0.000	0.163	0.327	0.000	0.225	0.310
22	0.143	0.255	0.318	0.177	0.349	0.415
23	0.000	0.238	0.320	0.000	0.228	0.360
24	0.160	0.237	0.355	0.163	0.344	0.397
25	0.000	0.197	0.186	0.000	0.174	0.220
26	0.012	0.044	0.036	0.012	0.056	0.020

Girder 2 Summary of Analyses

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Brace	Type	Shr (k)	Mom (k-ft)	Load Effect	1	2	3 (k)	4	5
1	E	0.00	0.00	ncomp dead rt	0.00	0.00	0.00	0.00	
1	E	0.00	0.00	super dead rt	0.00	0.00	0.00	0.00	
1	E	-1.26	5.47	max ll+i mom rt	-0.17	1.16	-1.11	0.13	
1	E	1.26	-4.61	max ll+i shr rt	-0.03	-1.13	1.14	0.02	
1	E	1.26	-4.61	min ll+i mom rt	-0.03	-1.13	1.14	0.02	
1	E	-1.28	0.00	min ll+i shr rt	1.08	1.00	-1.30	-0.84	
1	E	-1.26	5.47	max ll+i mom lt	-0.17	1.16	-1.11	0.13	
1	E	-1.26	-4.61	max ll+i shr lt	-0.03	-1.13	1.14	0.02	
1	E	1.26	-4.61	min ll+i mom lt	-0.03	-1.13	1.14	0.02	
1	E	1.28	0.00	min ll+i shr lt	1.08	1.00	-1.30	-0.84	
2	A	0.00	-1.80	ncomp dead rt	0.43	0.43	0.43	0.43	-0.72
2	A	0.00	-0.04	super dead rt	0.01	0.01	0.01	0.01	-0.02
2	A	-3.11	24.72	max ll+i mom rt	-0.33	-5.94	-5.94	-0.33	5.22
2	A	3.11	-0.18	max ll+i shr rt	-5.57	0.04	0.04	-5.57	4.60
2	A	0.97	-8.10	min ll+i mom rt	0.20	1.95	1.95	0.20	-1.79
2	A	-3.11	19.15	min ll+i shr rt	1.01	-4.60	-4.60	1.01	2.99
2	A	-0.49	19.38	max ll+i mom lt	-4.66	-3.77	-3.77	-4.66	7.01
2	A	-3.11	-0.18	max ll+i shr lt	0.04	-5.57	-5.57	0.04	4.60
2	A	2.95	-9.75	min ll+i mom lt	2.34	-2.98	-2.98	2.34	0.53
2	A	3.11	19.15	min ll+i shr lt	-4.60	1.01	1.01	-4.60	2.99
3	E	0.00	-1.66	ncomp dead rt	0.37	-0.05	-0.05	-0.29	
3	E	0.00	0.11	super dead rt	-0.02	0.00	0.00	0.02	
3	E	0.19	71.88	max ll+i mom rt	-16.36	2.03	2.38	12.69	
3	E	8.14	-12.34	max ll+i shr rt	-4.10	-6.78	7.89	3.18	
3	E	3.40	-31.30	min ll+i mom rt	4.18	-3.63	2.50	-3.24	
3	E	-8.08	45.91	min ll+i shr rt	-3.52	7.76	-6.81	2.73	
3	E	-2.58	68.01	max ll+i mom lt	-13.15	4.10	-0.55	10.19	
3	E	-8.14	-12.34	max ll+i shr lt	-4.10	-6.78	7.89	3.18	
3	E	3.40	-31.30	min ll+i mom lt	4.18	-3.63	2.50	-3.24	
3	E	8.08	45.91	min ll+i shr lt	-3.52	7.76	-6.81	2.73	
4	A	0.00	-1.17	ncomp dead rt	0.28	0.28	0.28	0.28	-0.47
4	A	0.00	0.00	super dead rt	0.00	0.00	0.00	0.00	0.00
4	A	0.08	28.68	max ll+i mom rt	-7.04	-6.89	-6.89	-7.04	11.59
4	A	3.68	-6.31	max ll+i shr rt	-5.12	1.52	1.52	-5.12	3.00
4	A	1.75	-13.72	min ll+i mom rt	0.15	3.30	3.30	0.15	-2.87
4	A	-3.62	19.46	min ll+i shr rt	1.84	-4.68	-4.68	1.84	2.36
4	A	-2.40	27.27	max ll+i mom lt	-6.55	-2.23	-2.23	-6.55	7.31
4	A	-3.68	-6.31	max ll+i shr lt	1.52	-5.12	-5.12	1.52	3.00
4	A	1.75	-13.72	min ll+i mom lt	3.30	0.15	0.15	3.30	-2.87
4	A	3.62	19.46	min ll+i shr lt	-4.68	1.84	1.84	-4.68	2.36
5	E	0.00	-12.48	ncomp dead rt	2.81	-0.38	-0.38	-2.18	
5	E	0.00	-0.51	super dead rt	0.11	-0.02	-0.02	-0.09	
5	E	0.29	71.04	max ll+i mom rt	-16.25	1.93	2.45	12.60	
5	E	8.30	-19.19	max ll+i shr rt	-2.69	-7.12	7.84	2.08	
5	E	3.55	-38.37	min ll+i mom rt	5.64	-3.96	2.44	-4.38	
5	E	-8.19	44.88	min ll+i shr rt	-3.19	7.81	-6.95	2.47	
5	E	-2.06	68.63	max ll+i mom lt	-13.72	3.71	0.00	10.64	
5	E	-8.30	-19.19	max ll+i shr lt	-2.69	-7.12	7.84	2.08	
5	E	3.55	-38.37	min ll+i mom lt	5.64	-3.96	2.44	-4.38	

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5	E	8.19	44.88	min ll+i shr lt	-3.19	7.81	-6.95	2.47	
6	A	0.00	-12.25	ncomp dead rt	2.94	2.94	2.94	2.94	-4.90
6	A	0.00	-0.56	super dead rt	0.13	0.13	0.13	0.13	-0.22
6	A	-0.93	24.91	max ll+i mom rt	-4.32	-5.99	-5.99	-4.32	8.57
6	A	3.57	-9.69	max ll+i shr rt	-4.10	2.33	2.33	-4.10	1.47
6	A	1.47	-16.41	min ll+i mom rt	1.29	3.94	3.94	1.29	-4.36
6	A	-3.53	17.37	min ll+i shr rt	2.19	-4.17	-4.17	2.19	1.65
6	A	-2.45	25.20	max ll+i mom lt	-6.06	-1.63	-1.63	-6.06	6.40
6	A	-3.57	-9.69	max ll+i shr lt	2.33	-4.10	-4.10	2.33	1.47
6	A	1.47	-16.41	min ll+i mom lt	3.94	1.29	1.29	3.94	-4.36
6	A	3.53	17.37	min ll+i shr lt	-4.17	2.19	2.19	-4.17	1.65
7	E	0.00	-26.52	ncomp dead rt	5.98	-0.81	-0.81	-4.63	
7	E	0.00	-1.39	super dead rt	0.31	-0.04	-0.04	-0.24	
7	E	-0.35	56.80	max ll+i mom rt	-12.50	2.00	1.37	9.70	
7	E	8.40	-26.54	max ll+i shr rt	-1.12	-7.42	7.72	0.87	
7	E	3.82	-42.45	min ll+i mom rt	6.34	-4.30	2.59	-4.91	
7	E	-8.31	34.64	min ll+i shr rt	-0.79	7.59	-7.38	0.61	
7	E	-6.33	58.56	max ll+i mom lt	-7.85	6.76	-4.64	6.09	
7	E	-8.40	-26.54	max ll+i shr lt	-1.12	-7.42	7.72	0.87	
7	E	3.82	-42.45	min ll+i mom lt	6.34	-4.30	2.59	-4.91	
7	E	8.31	34.64	min ll+i shr lt	-0.79	7.59	-7.38	0.61	
8	A	0.00	-3.84	ncomp dead rt	0.92	0.92	0.92	0.92	-1.53
8	A	0.00	-0.22	super dead rt	0.05	0.05	0.05	0.05	-0.09
8	A	-2.58	14.43	max ll+i mom rt	1.18	-3.47	-3.47	1.18	1.91
8	A	2.58	-6.20	max ll+i shr rt	-3.16	1.49	1.49	-3.16	1.39
8	A	1.75	-8.96	min ll+i mom rt	-1.00	2.15	2.15	-1.00	-0.96
8	A	-2.58	8.91	min ll+i shr rt	2.51	-2.14	-2.14	2.51	-0.30
8	A	-2.31	15.48	max ll+i mom lt	-3.72	0.44	0.44	-3.72	2.73
8	A	-2.58	-6.20	max ll+i shr lt	1.49	-3.16	-3.16	1.49	1.39
8	A	2.50	-11.79	min ll+i mom lt	2.83	-1.67	-1.67	2.83	-0.97
8	A	2.58	8.91	min ll+i shr lt	-2.14	2.51	2.51	-2.14	-0.30
9	E	0.00	0.00	ncomp dead rt	0.00	0.00	0.00	0.00	
9	E	0.00	0.00	super dead rt	0.00	0.00	0.00	0.00	
9	E	-0.24	1.01	max ll+i mom rt	-0.02	0.17	-0.16	0.01	
9	E	0.25	-0.94	max ll+i shr rt	0.00	-0.18	0.18	0.00	
9	E	0.25	-0.94	min ll+i mom rt	0.00	-0.18	0.18	0.00	
9	E	-0.25	0.00	min ll+i shr rt	0.13	0.16	-0.19	-0.11	
9	E	-0.25	1.07	max ll+i mom lt	-0.02	0.18	-0.17	0.02	
9	E	-0.25	-0.94	max ll+i shr lt	0.00	-0.18	0.18	0.00	
9	E	0.24	-0.89	min ll+i mom lt	0.00	-0.17	0.16	0.00	
9	E	0.25	0.00	min ll+i shr lt	0.13	0.16	-0.19	-0.11	
10	A	0.00	3.61	ncomp dead rt	-0.87	-0.87	-0.87	-0.87	1.44
10	A	0.00	0.13	super dead rt	-0.03	-0.03	-0.03	-0.03	0.05
10	A	-2.78	15.87	max ll+i mom rt	1.19	-3.81	-3.81	1.19	2.18
10	A	2.78	-6.35	max ll+i shr rt	-3.48	1.53	1.53	-3.48	1.63
10	A	1.84	-8.28	min ll+i mom rt	-1.33	1.99	1.99	-1.33	-0.55
10	A	-2.78	9.92	min ll+i shr rt	2.62	-2.38	-2.38	2.62	-0.20
10	A	-2.45	16.86	max ll+i mom lt	-4.05	0.36	0.36	-4.05	3.07
10	A	-2.78	-6.35	max ll+i shr lt	1.53	-3.48	-3.48	1.53	1.63
10	A	2.70	-12.43	min ll+i mom lt	2.99	-1.89	-1.89	2.99	-0.92
10	A	2.78	9.92	min ll+i shr lt	-2.38	2.62	2.62	-2.38	-0.20

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11	A	0.00	-2.89	ncomp dead rt	0.70	0.70	0.70	0.70	-1.16
11	A	0.00	-0.14	super dead rt	0.03	0.03	0.03	0.03	-0.06
11	A	-0.93	26.63	max ll+i mom rt	-4.73	-6.40	-6.40	-4.73	9.26
11	A	4.20	-12.31	max ll+i shr rt	-4.61	2.96	2.96	-4.61	1.37
11	A	1.56	-13.48	min ll+i mom rt	0.43	3.24	3.24	0.43	-3.05
11	A	-4.20	17.81	min ll+i shr rt	3.28	-4.28	-4.28	3.28	0.83
11	A	-1.50	25.17	max ll+i mom lt	-6.05	-3.34	-3.34	-6.05	7.81
11	A	-4.20	-12.31	max ll+i shr lt	2.96	-4.61	-4.61	2.96	1.37
11	A	4.13	-16.18	min ll+i mom lt	3.89	-3.55	-3.55	3.89	-0.28
11	A	4.20	17.81	min ll+i shr lt	-4.28	3.28	3.28	-4.28	0.83
12	E	0.00	-21.67	ncomp dead rt	4.88	-0.66	-0.66	-3.79	
12	E	0.00	-1.04	super dead rt	0.23	-0.03	-0.03	-0.18	
12	E	0.57	76.22	max ll+i mom rt	-17.66	1.86	2.90	13.69	
12	E	8.76	-22.64	max ll+i shr rt	-2.30	-7.59	8.21	1.78	
12	E	3.72	-43.82	min ll+i mom rt	6.73	-4.26	2.44	-5.22	
12	E	-8.66	47.28	min ll+i shr rt	-3.34	8.26	-7.36	2.59	
12	E	-1.88	71.32	max ll+i mom lt	-14.48	3.65	0.26	11.23	
12	E	-8.76	-22.64	max ll+i shr lt	-2.30	-7.59	8.21	1.78	
12	E	3.72	-43.82	min ll+i mom lt	6.73	-4.26	2.44	-5.22	
12	E	8.66	47.28	min ll+i shr lt	-3.34	8.26	-7.36	2.59	
13	A	0.00	-8.41	ncomp dead rt	2.02	2.02	2.02	2.02	-3.37
13	A	0.00	-0.40	super dead rt	0.10	0.10	0.10	0.10	-0.16
13	A	-0.29	33.56	max ll+i mom rt	-7.55	-8.07	-8.07	-7.55	12.99
13	A	4.83	-9.20	max ll+i shr rt	-6.50	2.21	2.21	-6.50	3.57
13	A	2.30	-18.08	min ll+i mom rt	0.20	4.35	4.35	0.20	-3.79
13	A	-4.73	23.94	min ll+i shr rt	2.77	-5.75	-5.75	2.77	2.48
13	A	-3.23	33.15	max ll+i mom lt	-7.97	-2.14	-2.14	-7.97	8.41
13	A	-4.83	-9.20	max ll+i shr lt	2.21	-6.50	-6.50	2.21	3.57
13	A	2.30	-18.08	min ll+i mom lt	4.35	0.20	0.20	4.35	-3.79
13	A	4.73	23.94	min ll+i shr lt	-5.75	2.77	2.77	-5.75	2.48
14	A	0.00	-8.45	ncomp dead rt	2.03	2.03	2.03	2.03	-3.38
14	A	0.00	-0.40	super dead rt	0.10	0.10	0.10	0.10	-0.16
14	A	-0.29	33.44	max ll+i mom rt	-7.52	-8.04	-8.04	-7.52	12.95
14	A	4.83	-9.16	max ll+i shr rt	-6.51	2.20	2.20	-6.51	3.59
14	A	2.30	-18.08	min ll+i mom rt	0.20	4.35	4.35	0.20	-3.78
14	A	-4.73	23.82	min ll+i shr rt	2.80	-5.73	-5.73	2.80	2.44
14	A	-3.23	33.12	max ll+i mom lt	-7.96	-2.13	-2.13	-7.96	8.40
14	A	-4.83	-9.16	max ll+i shr lt	2.20	-6.51	-6.51	2.20	3.59
14	A	2.30	-18.08	min ll+i mom lt	4.35	0.20	0.20	4.35	-3.78
14	A	4.73	23.82	min ll+i shr lt	-5.73	2.80	2.80	-5.73	2.44
15	E	0.00	-21.98	ncomp dead rt	4.95	-0.67	-0.67	-3.84	
15	E	0.00	-1.06	super dead rt	0.24	-0.03	-0.03	-0.19	
15	E	0.57	75.86	max ll+i mom rt	-17.58	1.85	2.89	13.63	
15	E	8.76	-22.59	max ll+i shr rt	-2.31	-7.58	8.21	1.79	
15	E	3.72	-43.73	min ll+i mom rt	6.71	-4.26	2.45	-5.20	
15	E	-8.66	47.07	min ll+i shr rt	-3.29	8.25	-7.36	2.55	
15	E	-6.17	71.02	max ll+i mom lt	-10.79	7.02	-4.11	8.36	
15	E	-8.76	-22.59	max ll+i shr lt	-2.31	-7.58	8.21	1.79	
15	E	3.72	-43.73	min ll+i mom lt	6.71	-4.26	2.45	-5.20	
15	E	8.66	47.07	min ll+i shr lt	-3.29	8.25	-7.36	2.55	
16	A	0.00	-3.09	ncomp dead rt	0.74	0.74	0.74	0.74	-1.24
16	A	0.00	-0.15	super dead rt	0.04	0.04	0.04	0.04	-0.06
16	A	-0.93	26.51	max ll+i mom rt	-4.70	-6.37	-6.37	-4.70	9.21

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16	A	4.20	-12.28	max ll+i shr rt	-4.62	2.95	2.95	-4.62	1.38
16	A	1.56	-13.43	min ll+i mom rt	0.42	3.23	3.23	0.42	-3.04
16	A	-4.20	17.73	min ll+i shr rt	3.31	-4.26	-4.26	3.31	0.80
16	A	-1.50	25.06	max ll+i mom lt	-6.02	-3.31	-3.31	-6.02	7.77
16	A	-4.20	-12.28	max ll+i shr lt	2.95	-4.62	-4.62	2.95	1.38
16	A	4.13	-16.14	min ll+i mom lt	3.88	-3.57	-3.57	3.88	-0.26
16	A	4.20	17.73	min ll+i shr lt	-4.26	3.31	3.31	-4.26	0.80
17	A	0.00	3.44	ncomp dead rt	-0.83	-0.83	-0.83	-0.83	1.38
17	A	0.00	0.12	super dead rt	-0.03	-0.03	-0.03	-0.03	0.05
17	A	-2.78	15.91	max ll+i mom rt	1.18	-3.82	-3.82	1.18	2.20
17	A	2.78	-6.32	max ll+i shr rt	-3.49	1.52	1.52	-3.49	1.64
17	A	1.84	-8.24	min ll+i mom rt	-1.33	1.98	1.98	-1.33	-0.54
17	A	-2.78	9.87	min ll+i shr rt	2.64	-2.37	-2.37	2.64	-0.22
17	A	-2.45	16.89	max ll+i mom lt	-4.06	0.36	0.36	-4.06	3.08
17	A	-2.78	-6.32	max ll+i shr lt	1.52	-3.49	-3.49	1.52	1.64
17	A	2.70	-12.38	min ll+i mom lt	2.97	-1.90	-1.90	2.97	-0.89
17	A	2.78	9.87	min ll+i shr lt	-2.37	2.64	2.64	-2.37	-0.22
18	E	0.00	0.00	ncomp dead rt	0.00	0.00	0.00	0.00	
18	E	0.00	0.00	super dead rt	0.00	0.00	0.00	0.00	
18	E	-0.24	1.01	max ll+i mom rt	-0.02	0.17	-0.16	0.01	
18	E	0.25	-0.94	max ll+i shr rt	0.00	-0.17	0.18	0.00	
18	E	0.25	-0.94	min ll+i mom rt	0.00	-0.17	0.18	0.00	
18	E	-0.25	0.00	min ll+i shr rt	0.13	0.16	-0.19	-0.11	
18	E	-0.25	1.07	max ll+i mom lt	-0.02	0.18	-0.17	0.02	
18	E	-0.25	-0.94	max ll+i shr lt	0.00	-0.17	0.18	0.00	
18	E	0.24	-0.89	min ll+i mom lt	0.00	-0.16	0.16	0.00	
18	E	0.25	0.00	min ll+i shr lt	0.13	0.16	-0.19	-0.11	
19	A	0.00	-3.70	ncomp dead rt	0.89	0.89	0.89	0.89	-1.48
19	A	0.00	-0.22	super dead rt	0.05	0.05	0.05	0.05	-0.09
19	A	-2.58	14.46	max ll+i mom rt	1.17	-3.47	-3.47	1.17	1.92
19	A	2.58	-6.17	max ll+i shr rt	-3.16	1.48	1.48	-3.16	1.40
19	A	1.75	-8.93	min ll+i mom rt	-1.01	2.15	2.15	-1.01	-0.94
19	A	-2.58	8.86	min ll+i shr rt	2.52	-2.13	-2.13	2.52	-0.32
19	A	-2.31	15.48	max ll+i mom lt	-3.72	0.43	0.43	-3.72	2.73
19	A	-2.58	-6.17	max ll+i shr lt	1.48	-3.16	-3.16	1.48	1.40
19	A	2.50	-11.72	min ll+i mom lt	2.82	-1.68	-1.68	2.82	-0.94
19	A	2.58	8.86	min ll+i shr lt	-2.13	2.52	2.52	-2.13	-0.32
20	E	0.00	-26.08	ncomp dead rt	5.88	-0.79	-0.79	-4.56	
20	E	0.00	-1.36	super dead rt	0.31	-0.04	-0.04	-0.24	
20	E	-0.34	56.54	max ll+i mom rt	-12.45	1.99	1.37	9.65	
20	E	8.40	-26.43	max ll+i shr rt	-1.14	-7.42	7.73	0.89	
20	E	3.82	-42.24	min ll+i mom rt	6.29	-4.29	2.59	-4.88	
20	E	-8.31	34.49	min ll+i shr rt	-0.75	7.59	-7.39	0.58	
20	E	-6.33	58.50	max ll+i mom lt	-7.84	6.76	-4.65	6.08	
20	E	-8.40	-26.43	max ll+i shr lt	-1.14	-7.42	7.73	0.89	
20	E	3.82	-42.21	min ll+i mom lt	6.28	-4.29	2.59	-4.87	
20	E	8.31	34.49	min ll+i shr lt	-0.75	7.59	-7.39	0.58	
21	A	0.00	-12.13	ncomp dead rt	2.92	2.92	2.92	2.92	-4.85
21	A	0.00	-0.55	super dead rt	0.13	0.13	0.13	0.13	-0.22
21	A	-0.93	24.79	max ll+i mom rt	-4.28	-5.96	-5.96	-4.28	8.52
21	A	3.57	-9.65	max ll+i shr rt	-4.11	2.32	2.32	-4.11	1.49
21	A	1.47	-16.32	min ll+i mom rt	1.27	3.92	3.92	1.27	-4.32
21	A	-3.53	17.28	min ll+i shr rt	2.21	-4.15	-4.15	2.21	1.62

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21	A	-2.46	25.16	max ll+i mom lt	-6.05	-1.62	-6.05	6.38
21	A	-3.57	-9.65	max ll+i shr lt	2.32	-4.11	2.32	1.49
21	A	1.47	-16.32	min ll+i mom lt	3.92	1.27	3.92	-4.32
21	A	3.53	17.28	min ll+i shr lt	-4.15	2.21	-4.15	1.62
22	E	0.00	-12.35	ncomp dead rt	2.78	-0.38	-2.16	
22	E	0.00	-0.50	super dead rt	0.11	-0.02	-0.09	
22	E	0.29	70.67	max ll+i mom rt	-16.17	1.92	12.54	
22	E	8.30	-19.08	max ll+i shr rt	-2.71	-7.11	2.10	
22	E	3.55	-38.17	min ll+i mom rt	5.60	-3.96	-4.34	
22	E	-8.19	44.64	min ll+i shr rt	-3.14	7.81	2.43	
22	E	-2.06	68.24	max ll+i mom lt	-13.64	3.69	10.58	
22	E	-8.30	-19.08	max ll+i shr lt	-2.71	-7.11	2.10	
22	E	3.55	-38.17	min ll+i mom lt	5.60	-3.96	-4.34	
22	E	8.19	44.64	min ll+i shr lt	-3.14	7.81	2.43	
23	A	0.00	-1.19	ncomp dead rt	0.29	0.29	0.29	-0.48
23	A	0.00	0.00	super dead rt	0.00	0.00	0.00	0.00
23	A	0.08	28.62	max ll+i mom rt	-7.03	-6.88	-7.03	11.57
23	A	3.68	-6.31	max ll+i shr rt	-5.12	1.52	-5.12	3.00
23	A	1.75	-13.71	min ll+i mom rt	0.15	3.30	0.15	-2.86
23	A	-3.62	19.44	min ll+i shr rt	1.85	-4.67	1.85	2.35
23	A	-2.40	27.22	max ll+i mom lt	-6.54	-2.22	-6.54	7.29
23	A	-3.68	-6.31	max ll+i shr lt	1.52	-5.12	1.52	3.00
23	A	1.75	-13.72	min ll+i mom lt	3.30	0.15	3.30	-2.86
23	A	3.62	19.44	min ll+i shr lt	-4.67	1.85	-4.67	2.35
24	E	0.00	-1.80	ncomp dead rt	0.41	-0.05	-0.32	
24	E	0.00	0.10	super dead rt	-0.02	0.00	0.02	
24	E	0.19	71.88	max ll+i mom rt	-16.36	2.03	12.68	
24	E	8.14	-12.33	max ll+i shr rt	-4.10	-6.78	3.18	
24	E	3.40	-31.34	min ll+i mom rt	4.19	-3.63	-3.25	
24	E	-8.08	45.90	min ll+i shr rt	-3.51	7.76	-6.81	2.72
24	E	-2.58	68.04	max ll+i mom lt	-13.15	4.10	-0.55	10.20
24	E	-8.14	-12.33	max ll+i shr lt	-4.10	-6.78	7.89	3.18
24	E	3.40	-31.34	min ll+i mom lt	4.19	-3.63	2.50	-3.25
24	E	8.08	45.90	min ll+i shr lt	-3.51	7.76	-6.81	2.72
25	A	0.00	-1.83	ncomp dead rt	0.44	0.44	0.44	0.44 -0.73
25	A	0.00	-0.04	super dead rt	0.01	0.01	0.01	0.01 -0.02
25	A	-3.11	24.73	max ll+i mom rt	-0.33	-5.94	-5.94	-0.33 5.22
25	A	3.11	-0.18	max ll+i shr rt	-5.57	0.04	0.04	-5.57 4.60
25	A	0.97	-8.10	min ll+i mom rt	0.20	1.95	1.95	0.20 -1.79
25	A	-3.11	19.15	min ll+i shr rt	1.01	-4.60	-4.60	1.01 2.99
25	A	-0.49	19.39	max ll+i mom lt	-4.66	-3.77	-3.77	-4.66 7.02
25	A	-3.11	-0.18	max ll+i shr lt	0.04	-5.57	-5.57	0.04 4.60
25	A	2.95	-9.76	min ll+i mom lt	2.35	-2.98	-2.98	2.35 0.53
25	A	3.11	19.15	min ll+i shr lt	-4.60	1.01	1.01	-4.60 2.99
26	E	0.00	0.00	ncomp dead rt	0.00	0.00	0.00	0.00
26	E	0.00	0.00	super dead rt	0.00	0.00	0.00	0.00
26	E	-1.26	5.46	max ll+i mom rt	-0.16	1.16	-1.11	0.13
26	E	1.26	-4.62	max ll+i shr rt	-0.02	-1.13	1.14	0.02
26	E	1.26	-4.62	min ll+i mom rt	-0.02	-1.13	1.14	0.02
26	E	-1.24	0.00	min ll+i shr rt	1.05	0.97	-1.26	-0.81
26	E	-1.26	5.46	max ll+i mom lt	-0.16	1.16	-1.11	0.13
26	E	-1.26	-4.62	max ll+i shr lt	-0.02	-1.13	1.14	0.02
26	E	1.26	-4.62	min ll+i mom lt	-0.02	-1.13	1.14	0.02

26	E	1.24	0.00	min ll+i shr lt	1.05	0.97	-1.26	-0.81

Key -

Type A
- 1 - UL-Ctr Diag
- 2 - LL-Ctr Diag
- 3 - Ctr-UR Diag
- 4 - Ctr-LR Diag
- 5 - Bot Chd

Type E
- 1 - Top Chd
- 2 - UR-LL Diag
- 3 - LR-UL Diag
- 4 - Bot Chd

Right side is connected to girder 2

Girder 2 Max Combined Member Forces - k

Brace	Type	Top Chord Tens	Top Chord Comp	Diagonal Tens	Diagonal Comp	Bottom Chord Tens	Bottom Chord Comp
1	E	2.34	-0.36	2.52	-2.81	0.28	-1.81
2	A			5.66	-12.33	14.26	-4.83
3	E	9.54	-35.06	17.06	-14.84	27.19	-7.40
4	A			7.53	-14.92	24.56	-6.83
5	E	16.05	-31.47	16.51	-15.96	24.41	-12.45
6	A			12.57	-9.14	11.95	-16.12
7	E	21.93	-18.97	15.66	-17.21	14.71	-17.01
8	A			7.42	-6.81	3.82	-4.22
9	E	0.28	-0.04	0.38	-0.41	0.03	-0.24
10	A			5.32	-9.97	8.62	-0.04
11	A			9.39	-12.95	18.54	-8.20
12	E	21.26	-31.68	17.03	-17.37	24.57	-16.49
13	A			12.19	-14.76	23.63	-12.80
14	A			12.20	-14.68	23.51	-12.82
15	E	21.32	-31.41	17.00	-17.38	24.36	-16.53
16	A			9.43	-12.82	18.32	-8.28
17	A			5.34	-9.93	8.54	-0.09
18	E	0.28	-0.04	0.38	-0.41	0.03	-0.24
19	A			7.34	-6.86	3.90	-4.08
20	E	21.69	-18.98	15.69	-17.19	14.72	-16.82
21	A			12.48	-9.17	11.90	-15.98
22	E	15.92	-31.33	16.52	-15.95	24.30	-12.34
23	A			7.53	-14.88	24.50	-6.84
24	E	9.60	-35.02	17.06	-14.86	27.15	-7.44
25	A			5.68	-12.32	14.26	-4.85
26	E	2.27	-0.36	2.51	-2.73	0.28	-1.76

Girder 2 Loading Stress Range - ksi

Brace	Type	Top Chord	Diagonal	Bottom Chord
1	E	0.23	1.02	0.36

2	A		3.13	3.95
3	E	2.94	6.19	7.15
4	A		4.11	6.50
5	E	3.20	6.28	7.52
6	A		4.06	5.62
7	E	2.85	6.33	6.35
8	A		2.69	1.64
9	E	0.03	0.15	0.05
10	A		2.88	1.88
11	A		4.03	5.47
12	E	3.59	6.64	8.34
13	A		4.98	7.49
14	A		4.97	7.47
15	E	3.58	6.64	8.31
16	A		4.02	5.44
17	A		2.88	1.87
18	E	0.03	0.15	0.05
19	A		2.68	1.63
20	E	2.83	6.33	6.32
21	A		4.05	5.58
22	E	3.18	6.28	7.48
23	A		4.11	6.49
24	E	2.94	6.19	7.15
25	A		3.13	3.95
26	E	0.22	1.00	0.35

Girder 2 Combined Factored Connection Forces - Grp I

Brace	Type	Right Side Vert k	Right Side Horiz k	Left Side Vert k	Left Side Horiz k
1	E	-1.38	2.37	1.38	2.37
2	A	-3.38	10.26	3.38	7.94
3	E	8.83	30.81	-8.83	29.13
4	A	3.99	12.15	-3.99	11.53
5	E	9.01	27.47	-9.01	26.42
6	A	3.87	-10.46	-3.87	-10.46
7	E	9.12	-25.69	-9.12	-25.69
8	A	-2.80	5.21	-2.80	-6.18
9	E	0.27	0.28	-0.27	0.30
10	A	-3.02	7.86	-3.02	8.29
11	A	4.56	10.77	-4.56	10.14
12	E	9.51	27.19	-9.51	25.06
13	A	5.25	12.28	-5.25	12.10
14	A	5.25	12.22	-5.25	12.08
15	E	9.51	26.95	-9.51	-24.98
16	A	4.56	10.67	-4.56	10.04
17	A	3.02	7.83	-3.02	8.26
18	E	0.27	0.28	-0.27	0.30
19	A	-2.80	5.26	-2.80	-6.11
20	E	9.12	-25.48	-9.12	-25.46
21	A	3.87	-10.39	-3.87	-10.39
22	E	9.01	27.35	-9.01	26.29
23	A	3.99	12.12	-3.99	11.51
24	E	8.83	30.77	-8.83	29.10
25	A	-3.38	10.25	3.38	7.93
26	E	1.37	2.37	-1.37	2.37

Horizontal force listed applied to each of top and bottom connections.
Vertical force listed applied to each of top and bottom connections

for Types A and E.
Vertical force listed applied to connection supporting a diagonal
for Types B and C.
Forces applied along centroidal axes of connecting members.

Right side is connected to girder 2

Sign convention:

Positive shear is upward on both sides.

Positive horiz force corresponds to positive end moment where top horiz force is toward brace and bottom horiz force is away from brace.

Negative horiz force corresponds to negative end moment where top horiz force is away from brace and bottom horiz force is toward brace.

Girder 3 Shapes

Brace 1

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 1 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	3.54	-2.58	0.00

Concurrent Mom -15.63 7.56 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	12.68	-9.50	0.00

Concurrent shear -3.54 3.17 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.01	-0.01	15.88	-15.63	0.00

Concurrent shear -3.17 3.54 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.00	0.00	0.53	-0.54	0.53	-0.90	0.00	0.00
UR-LL diag	0.00	0.00	3.17	-3.26	3.12	-2.74	0.00	0.00
LR-UL diag	0.00	0.00	3.12	-3.21	2.98	-3.26	0.00	0.00
Bot chord	0.00	0.00	0.42	-0.41	0.70	-0.41	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	1.15	188.29	0.006	1.95	219.38	0.009
UR-LL diag	6.89	76.50	0.090	7.08	62.55	0.113
LR-UL diag	6.77	76.50	0.088	7.08	62.55	0.113
Bot chord	1.51	76.50	0.020	0.90	48.80	0.018

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6155

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	0.22	29.00	0.008	0.13	16.00	0.008
UR-LL diag	2.68	29.00	0.092	1.65	16.00	0.103
LR-UL diag	2.65	29.00	0.092	1.63	16.00	0.102
Bot chord	0.48	29.00	0.016	0.29	16.00	0.018

Girder 3 Shapes

Brace 2

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 2 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.23	0.01	4.13	-2.82	0.00

Concurrent Mom -0.44 20.97 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.81	-0.05	32.59	-7.82	0.00

Concurrent shear -4.13 1.06 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.03	0.02	4.14	-2.17	0.00

Concurrent shear -1.06 3.18 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.02	0.00	0.05	-7.34	0.52	-5.04	0.00	0.00
LL-TR diag	0.44	0.01	1.88	-7.83	0.92	-7.34	0.00	0.00
Bot chord	-0.38	-0.01	6.84	-1.53	6.02	0.00	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	1.15	76.50	0.015	15.91	62.55	0.254
LR-UL diag	4.66	76.50	0.061	16.42	62.55	0.263
Bot chord	14.35	76.50	0.188	3.83	48.80	0.079

Fatigue Stresses - ksi

	Multilane Loading - 2000000 Cycles			Single Truck >2000000 Cycles Single/Multi Moment Ratio- 0.6155		
	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.91	18.00	0.162	1.79	16.00	0.112
LR-UL diag	3.73	18.00	0.207	2.30	16.00	0.144
Bot chord	3.78	18.00	0.210	2.33	16.00	0.145

Girder 3 Shapes

Brace 3

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 3 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.20	-0.02	9.49	-9.49	0.00

Concurrent Mom -0.62 70.67 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.65	0.12	75.28	-30.75	0.00

Concurrent shear -9.49 4.06 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.03	-0.03	15.26	-3.86	0.00

Concurrent shear -4.06 1.75 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.20	-0.01	3.49	-8.94	0.00	-7.91	0.00	0.00
UR-LL diag	-0.21	0.02	9.76	-7.49	9.61	-7.48	0.00	0.00
LR-UL diag	0.16	-0.02	9.61	-7.48	9.62	-7.49	0.00	0.00

OUTPUT.TXT

Bot chord	-0.16	0.01	6.94	-2.71	6.13	0.00	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	7.83	188.29	0.042	19.17	219.38	0.087
UR-LL diag	20.94	76.50	0.274	16.51	62.55	0.264
LR-UL diag	21.06	76.50	0.275	16.08	62.55	0.257
Bot chord	14.87	76.50	0.194	6.07	48.80	0.124

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles — Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6013

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	1.84	18.00	0.102	1.10	16.00	0.069
UR-LL diag	7.32	18.00	0.406	4.40	16.00	0.275
LR-UL diag	7.25	18.00	0.403	4.36	16.00	0.272
Bot chord	4.25	18.00	0.236	2.56	16.00	0.160

Girder 3 Shapes

Brace 4

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 4 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.14	-0.01	3.95	-3.95	0.00

Concurrent Mom -0.47 28.97 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.15	0.02	31.16	-12.70	0.00

Concurrent shear -3.95 1.81 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.04	-0.03	5.52	-4.27	0.00

Concurrent shear -1.81 0.52 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.03	0.01	0.16	-7.02	1.03	-6.96	0.00	0.00
LL-TR diag	0.28	0.00	3.05	-7.49	1.94	-7.02	0.00	0.00
Bot chord	-0.25	0.00	6.53	-2.36	5.74	-0.93	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	2.27	76.50	0.030	15.19	62.55	0.243
LR-UL diag	6.98	76.50	0.091	15.91	62.55	0.254
Bot chord	13.85	76.50	0.181	5.46	48.80	0.112

Fatigue Stresses - ksi

OUTPUT.TXT

Multilane Loading - 2000000 Cycles Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5935

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	3.03	18.00	0.169	1.80	16.00	0.113
LR-UL diag	4.16	18.00	0.231	2.47	16.00	0.154
Bot chord	3.93	18.00	0.219	2.33	16.00	0.146

Girder 3 Shapes

Brace 5

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 5 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
1.55	0.06	10.00	-10.00	0.00

Concurrent Mom -0.25 74.04 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.44	-0.49	79.73	-36.12	0.00

Concurrent shear -10.00 4.98 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk

-0.07	-0.04	4.40	-5.43	0.00

Concurrent shear -2.37 0.27 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	1.50	0.06	3.93	-9.52	1.01	-8.39	0.00	0.00
UR-LL diag	-1.60	-0.06	10.30	-7.88	10.14	-7.90	0.00	0.00
LR-UL diag	1.19	0.04	10.14	-7.90	10.12	-7.88	0.00	0.00
Bot chord	-1.16	-0.05	7.38	-3.05	6.51	-0.78	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	10.56	188.29	0.056	18.63	219.38	0.085
UR-LL diag	20.20	76.50	0.264	19.30	62.55	0.309
LR-UL diag	23.63	76.50	0.309	15.55	62.55	0.249
Bot chord	14.45	76.50	0.189	8.19	48.80	0.168

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5624

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	2.00	18.00	0.111	1.12	16.00	0.070
UR-LL diag	7.72	18.00	0.429	4.34	16.00	0.271
LR-UL diag	7.65	18.00	0.425	4.30	16.00	0.269
Bot chord	4.58	18.00	0.254	2.58	16.00	0.161

Girder 3 Shapes

Brace 6

Type A bracing - crossed diagonals
Bottom chord

OUTPUT.TXT

	Shape	Comp KL/r	Tens L/r
Diagonals: L	3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L	3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 6 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
1.56	0.09	3.25	-3.25	0.00
Concurrent Mom		0.01	24.37	k-ft
-12.32	-0.61	26.00	-15.79	0.00
Concurrent shear		-3.25	2.52	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.13	0.09	4.93	-6.37	0.00
Concurrent shear		-1.93	0.91	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Girder 3 Service Axial Forces - k

Noncmp Comp	LL+I	LL+I	Side-

OUTPUT.TXT

	Dead	Dead	Forces at gd 3 (+)	Forces at gd 3 (-)	Forces at adj gd (+)	Forces at adj gd (-)	walk (+)	walk (-)
TL-LR diag	0.16	-0.01	0.00	-5.86	1.53	-5.86	0.00	0.00
LL-TR diag	2.96	0.15	3.79	-6.25	2.30	-5.86	0.00	0.00
Bot chord	-2.59	-0.11	5.53	-2.54	4.88	-1.18	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	3.51	76.50	0.046	12.53	62.55	0.200
LR-UL diag	12.28	76.50	0.160	9.53	62.55	0.152
Bot chord	8.48	76.50	0.111	9.03	48.80	0.185

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles — Single Truck >2000000 Cycles

Single/Multi Moment Ratio- 0.5710

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.85	18.00	0.158	1.63	16.00	0.102
LR-UL diag	4.06	18.00	0.225	2.32	16.00	0.145
Bot chord	3.52	18.00	0.196	2.01	16.00	0.126

Girder 3 Shapes

Brace 7

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord: W	12.00 x 26.00	44.70	59.60
Diagonals: L	3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L	3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 7 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
3.32	0.18	8.32	-7.30	0.00

Concurrent Mom 0.71 54.54 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-26.53	-1.41	67.30	-35.42	0.00

Concurrent shear -8.32 5.14 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.02	0.05	5.69	-6.49	0.00

Concurrent shear -5.14 4.23 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	3.17	0.16	3.64	-8.13	3.06	-7.19	0.00	0.00
UR-LL diag	-3.42	-0.19	8.60	-6.53	8.47	-5.76	0.00	0.00
LR-UL diag	2.56	0.14	8.47	-6.41	7.41	-6.53	0.00	0.00
Bot chord	-2.46	-0.13	6.30	-2.82	5.58	-2.37	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	12.23	188.29	0.065	13.31	219.38	0.061

UR-LL diag	13.98	76.50	0.183	18.87	62.55	0.302
LR-UL diag	21.91	76.50	0.286	10.66	62.55	0.170
Bot chord	10.32	76.50	0.135	9.49	48.80	0.194

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles / Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5203

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	1.76	18.00	0.098	0.91	16.00	0.057
UR-LL diag	6.42	18.00	0.357	3.34	16.00	0.209
LR-UL diag	6.36	18.00	0.353	3.31	16.00	0.207
Bot chord	3.99	18.00	0.222	2.08	16.00	0.130

Girder 3 Shapes

Brace 8

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 8 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.49	0.03	2.38	-1.55	0.00

Concurrent Mom -0.30 12.15 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-3.85	-0.22	18.75	-9.65	0.00

Concurrent shear -2.38 1.39 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.03	-0.01	3.07	-4.09	0.00

Concurrent shear	-1.39	1.75	k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.05	0.01	0.00	-4.22	0.98	-2.92	0.00	0.00
LL-TR diag	0.93	0.05	2.32	-4.51	1.76	-4.22	0.00	0.00
Bot chord	-0.81	-0.05	3.93	-1.78	3.45	-0.85	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	2.20	76.50	0.029	9.09	62.55	0.145
LR-UL diag	6.31	76.50	0.082	8.51	62.55	0.136
Bot chord	7.41	76.50	0.097	4.98	48.80	0.102

Fatigue Stresses - ksi

	Multilane Loading - 2000000 Cycles			Single Truck >2000000 Cycles Single/Multi Moment Ratio= 0.3835		
	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.00	18.00	0.111	0.77	16.00	0.048
LR-UL diag	2.73	18.00	0.152	1.05	16.00	0.065
Bot chord	2.50	18.00	0.139	0.96	16.00	0.060

Girder 3 Shapes

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	108.09	110.80
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 9 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	0.78	-0.63	0.00

Concurrent Mom	-3.57	1.87	k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.01	2.65	-1.84	0.00

Concurrent shear	-0.78	0.62	k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	-0.03	3.12	-3.57	0.00

Concurrent shear	-0.62	0.78	k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

OUTPUT.TXT

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.00	0.00	0.09	-0.07	0.09	-0.11	0.00	0.00
UR-LL diag	0.00	0.00	0.54	-0.55	0.53	-0.45	0.00	0.00
LR-UL diag	0.00	0.00	0.53	-0.54	0.44	-0.55	0.00	0.00
Bot chord	0.00	0.00	0.06	-0.08	0.09	-0.08	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	0.20	188.29	0.001	0.24	219.38	0.001
UR-LL diag	1.17	76.50	0.015	1.19	53.24	0.022
LR-UL diag	1.15	76.50	0.015	1.20	53.24	0.023
Bot chord	0.20	76.50	0.003	0.17	48.80	0.003

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles

	Actual Range	Allow Range	Ratio
Top chord	0.03	29.00	0.001
UR-LL diag	0.45	29.00	0.016
LR-UL diag	0.45	29.00	0.016
Bot chord	0.07	29.00	0.003

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.2519

	Actual Range	Allow Range	Ratio
Top chord	0.01	16.00	0.001
UR-LL diag	0.11	16.00	0.007
LR-UL diag	0.11	16.00	0.007
Bot chord	0.02	16.00	0.001

Girder 3 Shapes

Brace 10

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 10 - Truck load governs

Shear - k

OUTPUT.TXT

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.47	-0.03	2.63	-1.62	0.00

Concurrent Mom -2.31 11.03 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
3.65	0.18	18.72	-8.99	0.00

Concurrent shear -2.63 1.29 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.07	-0.08	2.81	-4.31	0.00

Concurrent shear -1.29 2.11 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	-0.04	0.02	0.27	-4.18	1.04	-2.65	0.00	0.00
LL-TR diag	-0.88	-0.04	2.16	-4.50	1.66	-4.18	0.00	0.00
Bot chord	0.76	0.02	3.55	-1.66	3.02	-0.82	0.00	0.00

Girder 3 Stresses

OUTPUT.TXT

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	2.22	76.50	0.029	9.12	62.55	0.146
LR-UL diag	3.50	76.50	0.046	10.97	62.55	0.175
Bot chord	8.72	76.50	0.114	2.57	48.80	0.053

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.3713

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.01	18.00	0.112	0.75	16.00	0.047
LR-UL diag	2.65	18.00	0.147	0.99	16.00	0.062
Bot chord	2.27	18.00	0.126	0.84	16.00	0.053

Girder 3 Shapes

Brace 11

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 11 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.36	0.02	4.41	-3.32	0.00

Concurrent Mom -0.30 24.66 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-2.90	-0.14	35.02	-11.43	0.00

Concurrent shear -4.41 1.68 k

OUTPUT.TXT

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	3.68	-4.60	0.00

Concurrent shear -0.90 2.61 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.04	0.00	0.07	-7.89	1.11	-5.93	0.00	0.00
LL-TR diag	0.70	0.03	2.75	-8.42	0.74	-7.89	0.00	0.00
Bot chord	-0.62	-0.03	7.39	-2.05	6.50	0.00	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	2.46	76.50	0.032	17.07	62.55	0.273
LR-UL diag	6.91	76.50	0.090	17.32	62.55	0.277
Bot chord	15.19	76.50	0.199	5.28	48.80	0.108

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6196

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	3.39	18.00	0.188	2.10	16.00	0.131
LR-UL diag	4.35	18.00	0.242	2.70	16.00	0.169
Bot chord	4.22	18.00	0.234	2.61	16.00	0.163

Girder 3 Shapes

Brace 12

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 12 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
2.71	0.14	10.17	-10.17	0.00
Concurrent Mom		-0.03	76.45	k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-21.67	-1.07	81.30	-39.50	0.00
Concurrent shear		-10.17	5.39	k
Moment from fatigue trk				
		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.01	0.05	4.78	-6.06	0.00
Concurrent shear		-2.07	1.57	k
Moment from fatigue trk				
		0.00	0.00	
Concurrent Shr		0.00	0.00	

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	2.59	0.12	4.35	-9.73	0.67	-8.63	0.00	0.00
UR-LL diag	-2.79	-0.14	10.48	-8.01	10.32	-8.00	0.00	0.00
LR-UL diag	2.09	0.11	10.32	-8.00	10.33	-8.01	0.00	0.00
Bot chord	-2.01	-0.10	7.54	-3.37	6.70	-0.52	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	12.97	188.29	0.069	17.59	219.38	0.080
UR-LL diag	18.93	76.50	0.247	21.20	62.55	0.339
LR-UL diag	25.29	76.50	0.331	14.52	62.55	0.232
Bot chord	13.64	76.50	0.178	10.06	48.80	0.206

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6057

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	2.10	18.00	0.117	1.27	16.00	0.080
UR-LL diag	7.84	18.00	0.436	4.75	16.00	0.297
LR-UL diag	7.77	18.00	0.432	4.71	16.00	0.294
Bot chord	4.78	18.00	0.265	2.89	16.00	0.181

Girder 3 Shapes

Brace 13

Type A bracing - crossed diagonals Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

OUTPUT.TXT

Forces on Brace 13 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
1.05	0.05	4.69	-4.69	0.00
Concurrent Mom		-0.32	34.42	k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-8.41	-0.40	37.17	-15.83	0.00
Concurrent shear		-4.69	2.27	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.01	4.66	-6.20	0.00
Concurrent shear		-1.59	0.40	k
Moment from fatigue trk		0.00	0.00	
Concurrent Shr		0.00	0.00	

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.13	0.00	0.17	-8.37	1.49	-8.27	0.00	0.00
LL-TR diag	2.02	0.10	3.80	-8.93	1.74	-8.37	0.00	0.00
Bot chord	-1.79	-0.08	7.84	-2.92	6.90	-1.88	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	3.40	76.50	0.044	18.00	62.55	0.288
LR-UL diag	11.01	76.50	0.144	16.64	62.55	0.266
Bot chord	14.58	76.50	0.191	8.77	48.80	0.180

Fatigue Stresses - ksi

	Multilane Loading - 2000000 Cycles Actual Range	Allow Range	Ratio	Single Truck >2000000 Cycles Single/Multi Moment Ratio- 0.6127 Actual Range	Allow Range	Ratio
UR-LL diag	3.74	18.00	0.208	2.29	16.00	0.143
LR-UL diag	5.04	18.00	0.280	3.09	16.00	0.193
Bot chord	4.75	18.00	0.264	2.91	16.00	0.182

Girder 3 Shapes

Brace 14

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 14 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
1.06	0.05	4.69	-4.69	0.00
Concurrent Mom		-0.32	34.30	k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-8.45	-0.40	37.16	-15.82	0.00

Concurrent shear -4.69 2.27 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.01	4.65	-6.19	0.00

Concurrent shear -0.94 0.40 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.13	0.00	0.20	-8.37	1.49	-8.24	0.00	0.00
LL-TR diag	2.03	0.10	3.80	-8.93	0.77	-8.37	0.00	0.00
Bot chord	-1.79	-0.08	7.84	-2.92	6.90	-1.88	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	3.40	76.50	0.044	18.00	62.55	0.288
LR-UL diag	11.02	76.50	0.144	16.63	62.55	0.266
Bot chord	14.57	76.50	0.190	8.78	48.80	0.180

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles

Single/Multi Moment Ratio- 0.6127

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	3.74	18.00	0.208	2.29	16.00	0.143
LR-UL diag	5.04	18.00	0.280	3.09	16.00	0.193
Bot chord	4.75	18.00	0.264	2.91	16.00	0.182

Girder 3 Shapes

Brace 15

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 15 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
2.75	0.14	10.17	-10.17	0.00

Concurrent Mom -0.04 76.14 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-21.99	-1.09	81.30	-39.40	0.00

Concurrent shear -10.17 5.39 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.01	0.05	4.76	-6.05	0.00

Concurrent shear -2.07 1.57 k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	2.63	0.12	4.32	-9.73	0.67	-8.58	0.00	0.00
UR-LL diag	-2.83	-0.14	10.48	-8.01	10.32	-8.01	0.00	0.00
LR-UL diag	2.12	0.11	10.32	-8.01	10.32	-8.01	0.00	0.00
Bot chord	-2.04	-0.10	7.54	-3.35	6.65	-0.52	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	12.97	188.29	0.069	17.54	219.38	0.080
UR-LL diag	18.88	76.50	0.247	21.26	62.55	0.340
LR-UL diag	25.32	76.50	0.331	14.48	62.55	0.232
Bot chord	13.60	76.50	0.178	10.05	48.80	0.206

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6057

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	2.10	18.00	0.117	1.27	16.00	0.079
UR-LL diag	7.84	18.00	0.436	4.75	16.00	0.297
LR-UL diag	7.77	18.00	0.432	4.71	16.00	0.294
Bot chord	4.77	18.00	0.265	2.89	16.00	0.181

Girder 3 Shapes

Brace 16

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals: L	3.00 x 3.00 x 0.500	90.34	92.61

Bot chord: L	3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 16 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.39	0.02	4.42	-3.32	0.00
Concurrent Mom		-0.30	24.54	k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-3.10	-0.16	35.05	-11.39	0.00
Concurrent shear		-4.42	1.68	k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.01	3.67	-4.59	0.00
Concurrent shear		-0.90	2.61	k

Moment from fatigue trk

	0.00	0.00
Concurrent Shr	0.00	0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.05	0.00	0.09	-7.90	1.10	-5.90	0.00	0.00

LL-TR diag	0.74	0.04	2.74	-8.43	0.74	-7.90	0.00	0.00
Bot chord	-0.66	-0.03	7.39	-2.03	6.51	0.00	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	2.46	76.50	0.032	17.08	62.55	0.273
LR-UL diag	6.96	76.50	0.091	17.28	62.55	0.276
Bot chord	15.15	76.50	0.198	5.31	48.80	0.109

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

	Actual Range	Allow Range	Ratio
UR-LL diag	3.39	18.00	0.188
LR-UL diag	4.35	18.00	0.242
Bot chord	4.22	18.00	0.234

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6196

	Actual Range	Allow Range	Ratio
UR-LL diag	2.10	16.00	0.131
LR-UL diag	2.70	16.00	0.169
Bot chord	2.61	16.00	0.163

Girder 3 Shapes

Brace 17

Type A bracing - crossed diagonals
Bottom chord

Shape	Comp KL/r	Tens L/r
Diagonals: L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 17 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.44	-0.03	2.63	-1.62	0.00

Concurrent Mom -2.30 10.98 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
3.48	0.17	18.73	-8.97	0.00

Concurrent shear -2.63 1.30 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.07	-0.08	2.86	-4.31	0.00

Concurrent shear -1.30 2.12 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	-0.04	0.02	0.27	-4.19	1.04	-2.64	0.00	0.00
LL-TR diag	-0.84	-0.04	2.16	-4.50	1.65	-4.19	0.00	0.00
Bot chord	0.73	0.02	3.55	-1.64	3.02	-0.80	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	2.22	76.50	0.029	9.12	62.55	0.146
LR-UL diag	3.54	76.50	0.046	10.91	62.55	0.174
Bot chord	8.68	76.50	0.113	2.60	48.80	0.053

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles Single Truck >2000000 Cycles

OUTPUT.TXT

Single/Multi Moment Ratio- 0.3712

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.01	18.00	0.112	0.75	16.00	0.047
LR-UL diag	2.65	18.00	0.147	0.98	16.00	0.062
Bot chord	2.27	18.00	0.126	0.84	16.00	0.053

Girder 3 Shapes

Brace 18

Type E bracing - top and bottom chords
crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	108.09	110.80
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 18 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	0.78	-0.63	0.00

Concurrent Mom -3.58 1.86 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.01	2.68	-1.83	0.00

Concurrent shear -0.78 0.62 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk

0.00	-0.03	3.13	-3.58	0.00

Concurrent shear -0.62 0.78 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.00	0.00	0.09	-0.07	0.09	-0.11	0.00	0.00
UR-LL diag	0.00	0.00	0.54	-0.55	0.54	-0.45	0.00	0.00
LR-UL diag	0.00	0.00	0.54	-0.55	0.44	-0.55	0.00	0.00
Bot chord	0.00	0.00	0.06	-0.08	0.10	-0.08	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	0.20	188.29	0.001	0.24	219.38	0.001
UR-LL diag	1.18	76.50	0.015	1.20	53.24	0.023
LR-UL diag	1.16	76.50	0.015	1.21	53.24	0.023
Bot chord	0.21	76.50	0.003	0.17	48.80	0.003

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles

Single Truck >2000000 Cycles

Single/Multi Moment Ratio- 0.2518

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	0.03	29.00	0.001	0.01	16.00	0.000
UR-LL diag	0.46	29.00	0.016	0.11	16.00	0.007
LR-UL diag	0.45	29.00	0.016	0.11	16.00	0.007
Bot chord	0.07	29.00	0.003	0.02	16.00	0.001

Girder 3 Shapes

Brace 19

Type A bracing - crossed diagonals
Bottom chord

Shape Comp KL/r Tens L/r

Diagonals: L 3.00 x 3.00 x 0.500 90.34 92.61

Bot chord: L 3.00 x 3.00 x 0.500 115.58 154.11

Girder 3 Forces - HS

Forces on Brace 19 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.47	0.03	2.38	-1.55	0.00
Concurrent Mom		-0.29	12.09	k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-3.71	-0.21	18.74	-9.61	0.00
Concurrent shear		-2.38	1.39	k
Moment from fatigue trk				
		0.00	0.00	
Concurrent Shr		0.00	0.00	

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.03	-0.01	3.10	-4.08	0.00
Concurrent shear		-1.39	1.75	k
Moment from fatigue trk				
		0.00	0.00	
Concurrent Shr		0.00	0.00	

Girder 3 Service Axial Forces - k

Noncmp Dead	Comp Dead	LL+I Forces (+)	LL+I Forces (-)	Side-walk

	at gd 3 (+)	at gd 3 (-)	at adj gd (+)	at adj gd (-)	(+)	(-)
TL-LR diag	0.05	0.01	0.00	-4.22	0.98	-2.91	0.00	0.00
LL-TR diag	0.89	0.05	2.31	-4.51	1.76	-4.22	0.00	0.00
Bot chord	-0.78	-0.05	3.93	-1.76	3.45	-0.84	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	2.20	76.50	0.029	9.09	62.55	0.145
LR-UL diag	6.24	76.50	0.082	8.55	62.55	0.137
Bot chord	7.45	76.50	0.097	4.91	48.80	0.101

Fatigue Stresses - ksi

	Multilane Loading - 2000000 Cycles Actual Range	Allow Range	Ratio	Single Truck >2000000 Cycles Single/Multi Moment Ratio- 0.3833 Actual Range	Allow Range	Ratio
UR-LL diag	2.00	18.00	0.111	0.76	16.00	0.048
LR-UL diag	2.73	18.00	0.151	1.04	16.00	0.065
Bot chord	2.49	18.00	0.138	0.95	16.00	0.060

Girder 3 Shapes

Brace 20

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 20 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
3.26	0.18	8.33	-7.31	0.00
Concurrent Mom		0.70	54.28	k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-26.09	-1.39	67.31	-35.22	0.00

Concurrent shear -8.33 5.13 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.02	0.05	5.83	-6.52	0.00

Concurrent shear -5.13 4.23 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	3.12	0.16	3.60	-8.13	3.02	-7.19	0.00	0.00
UR-LL diag	-3.36	-0.18	8.60	-6.53	8.48	-5.77	0.00	0.00
LR-UL diag	2.52	0.14	8.48	-6.41	7.40	-6.53	0.00	0.00
Bot chord	-2.42	-0.12	6.30	-2.79	5.58	-2.34	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	12.08	188.29	0.064	13.39	219.38	0.061
UR-LL diag	14.07	76.50	0.184	18.80	62.55	0.300

LR-UL diag	21.86	76.50	0.286	10.73	62.55	0.171
Bot chord	10.38	76.50	0.136	9.37	48.80	0.192

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles / Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5203

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	1.75	18.00	0.097	0.91	16.00	0.057
UR-LL diag	6.42	18.00	0.357	3.34	16.00	0.209
LR-UL diag	6.36	18.00	0.354	3.31	16.00	0.207
Bot chord	3.98	18.00	0.221	2.07	16.00	0.130

Girder 3 Shapes

Brace 21

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals: L	3.00 x 3.00 x 0.500	90.34	92.61
Bot chord: L	3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 21 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
1.54	0.09	3.25	-3.25	0.00

Concurrent Mom 0.01 24.25 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.20	-0.61	25.99	-15.70	0.00

Concurrent shear -3.25 2.51 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

OUTPUT.TXT

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.13	0.09	4.91	-6.36	0.00

Concurrent shear -1.93 0.91 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.15	-0.01	0.03	-5.86	1.53	-5.83	0.00	0.00
LL-TR diag	2.93	0.15	3.77	-6.25	2.30	-5.86	0.00	0.00
Bot chord	-2.57	-0.11	5.52	-2.51	4.87	-1.18	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	3.50	76.50	0.046	12.53	62.55	0.200
LR-UL diag	12.19	76.50	0.159	9.56	62.55	0.153
Bot chord	8.51	76.50	0.111	8.93	48.80	0.183

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

	Actual Range	Allow Range	Ratio
UR-LL diag	2.85	18.00	0.158
LR-UL diag	4.05	18.00	0.225
Bot chord	3.51	18.00	0.195

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5711

	Actual Range	Allow Range	Ratio
UR-LL diag	1.63	16.00	0.102
LR-UL diag	2.31	16.00	0.144
Bot chord	2.01	16.00	0.125

Girder 3 Shapes

Brace 22

OUTPUT.TXT

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 22 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
1.53	0.05	10.00	-10.00	0.00

Concurrent Mom -0.25 73.67 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-12.32	-0.48	79.71	-35.92	0.00

Concurrent shear -10.00 4.97 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.07	-0.04	4.38	-5.41	0.00

Concurrent shear -2.36 0.27 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

OUTPUT.TXT

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	1.48	0.06	3.89	-9.51	1.01	-8.39	0.00	0.00
UR-LL diag	-1.58	-0.06	10.29	-7.88	10.14	-7.91	0.00	0.00
LR-UL diag	1.18	0.04	10.14	-7.91	10.11	-7.88	0.00	0.00
Bot chord	-1.15	-0.05	7.38	-3.02	6.50	-0.78	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	10.45	188.29	0.056	18.65	219.38	0.085
UR-LL diag	20.22	76.50	0.264	19.30	62.55	0.309
LR-UL diag	23.60	76.50	0.309	15.59	62.55	0.249
Bot chord	14.46	76.50	0.189	8.11	48.80	0.166

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5624

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	1.99	18.00	0.110	1.12	16.00	0.070
UR-LL diag	7.72	18.00	0.429	4.34	16.00	0.271
LR-UL diag	7.65	18.00	0.425	4.30	16.00	0.269
Bot chord	4.57	18.00	0.254	2.57	16.00	0.161

Girder 3 Shapes

Brace 23

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 23 - Truck load governs

Shear - k

OUTPUT.TXT

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.14	-0.01	3.95	-3.95	0.00

Concurrent Mom -0.46 28.92 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.17	0.02	31.17	-12.69	0.00

Concurrent shear -3.95 1.81 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.04	-0.03	5.53	-4.27	0.00

Concurrent shear -1.81 0.52 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.03	0.01	0.18	-7.02	1.03	-6.95	0.00	0.00
LL-TR diag	0.28	0.00	3.05	-7.49	1.94	-7.02	0.00	0.00
Bot chord	-0.26	0.00	6.54	-2.36	5.75	-0.92	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

OUTPUT.TXT

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	2.27	76.50	0.030	15.19	62.55	0.243
LR-UL diag	6.98	76.50	0.091	15.91	62.55	0.254
Bot chord	13.85	76.50	0.181	5.46	48.80	0.112

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles — Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.5935

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	3.03	18.00	0.169	1.80	16.00	0.113
LR-UL diag	4.16	18.00	0.231	2.47	16.00	0.154
Bot chord	3.93	18.00	0.219	2.33	16.00	0.146

Girder 3 Shapes

Brace 24

Type E bracing - top and bottom chords crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 24 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.22	-0.02	9.49	-9.49	0.00

Concurrent Mom -0.62 70.67 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.79	0.12	75.27	-30.79	0.00

Concurrent shear -9.49 4.07 k

OUTPUT.TXT

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.03	-0.03	15.30	-3.86	0.00

Concurrent shear -4.07 1.75 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.22	-0.01	3.50	-8.94	0.00	-7.91	0.00	0.00
UR-LL diag	-0.23	0.02	9.76	-7.49	9.61	-7.48	0.00	0.00
LR-UL diag	0.17	-0.01	9.61	-7.48	9.62	-7.49	0.00	0.00
Bot chord	-0.17	0.01	6.94	-2.71	6.13	0.00	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	7.86	188.29	0.042	19.15	219.38	0.087
UR-LL diag	20.91	76.50	0.273	16.53	62.55	0.264
LR-UL diag	21.08	76.50	0.276	16.05	62.55	0.257
Bot chord	14.85	76.50	0.194	6.10	48.80	0.125

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles — Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6013

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	1.84	18.00	0.102	1.11	16.00	0.069
UR-LL diag	7.31	18.00	0.406	4.40	16.00	0.275

LR-UL diag	7.25	18.00	0.403	4.36	16.00	0.272
Bot chord	4.25	18.00	0.236	2.56	16.00	0.160

Girder 3 Shapes

Brace 25

Type A bracing - crossed diagonals
Bottom chord

	Shape	Comp KL/r	Tens L/r
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

Forces on Brace 25 - Truck load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.23	0.01	4.13	-2.82	0.00

Concurrent Mom -0.44 20.97 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-1.84	-0.05	32.60	-7.83	0.00

Concurrent shear -4.13 1.06 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.03	0.02	4.13	-2.17	0.00

Concurrent shear -1.06 3.18 k

Moment from fatigue trk

0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
TL-LR diag	0.02	0.00	0.05	-7.34	0.52	-5.04	0.00	0.00
LL-TR diag	0.44	0.01	1.88	-7.84	0.93	-7.34	0.00	0.00
Bot chord	-0.39	-0.01	6.84	-1.54	6.02	0.00	0.00	0.00

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
UR-LL diag	1.15	76.50	0.015	15.91	62.55	0.254
LR-UL diag	4.68	76.50	0.061	16.42	62.55	0.262
Bot chord	14.35	76.50	0.188	3.84	48.80	0.079

Fatigue Stresses - ksi

Multilane Loading - 2000000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6155

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
UR-LL diag	2.91	18.00	0.162	1.79	16.00	0.112
LR-UL diag	3.73	18.00	0.207	2.30	16.00	0.144
Bot chord	3.78	18.00	0.210	2.33	16.00	0.145

Girder 3 Shapes

Brace 26

Type E bracing - top and bottom chords
crossed diagonals

	Shape	Comp KL/r	Tens L/r
Top chord:	W 12.00 x 26.00	44.70	59.60
Diagonals:	L 3.00 x 3.00 x 0.500	90.34	92.61
Bot chord:	L 3.00 x 3.00 x 0.500	115.58	154.11

Girder 3 Forces - HS

OUTPUT.TXT

Forces on Brace 26 - Lane load governs

Shear - k

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	3.62	-2.57	0.00

Concurrent Mom -15.95 7.57 k-ft

Moment at Girder 3 - k-ft - right side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
0.00	0.00	12.97	-9.52	0.00

Concurrent shear -3.62 3.17 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Moment at Adjacent Girder - k-ft - left side of brace

Noncomp Dead	Comp Dead	Max LL+I	Min LL+I	Side-walk
-0.01	-0.01	15.85	-15.95	0.00

Concurrent shear -3.17 3.62 k

Moment from fatigue trk 0.00 0.00

Concurrent Shr 0.00 0.00

Girder 3 Service Axial Forces - k

	Noncmp Dead	Comp Dead	LL+I Forces at gd 3 (+)	LL+I Forces at gd 3 (-)	LL+I Forces at adj gd (+)	LL+I Forces at adj gd (-)	Side-walk (+)	Side-walk (-)
Top chord	0.00	0.00	0.54	-0.53	0.54	-0.89	0.00	0.00
UR-LL diag	0.00	0.00	3.24	-3.33	3.19	-2.74	0.00	0.00
LR-UL diag	0.00	0.00	3.19	-3.28	2.98	-3.33	0.00	0.00
Bot chord	0.00	0.00	0.41	-0.42	0.69	-0.42	0.00	0.00

OUTPUT.TXT

Girder 3 Stresses

Grp I - Combined Factored Axial Forces - k

	Tens Actual	Tens Allow	Ratio	Comp Actual	Comp Allow	Ratio
Top chord	1.17	188.29	0.006	1.94	219.38	0.009
UR-LL diag	7.04	76.50	0.092	7.23	62.55	0.116
LR-UL diag	6.91	76.50	0.090	7.24	62.55	0.116
Bot chord	1.50	76.50	0.020	0.91	48.80	0.019

Fatigue Stresses - ksi

Multilane Loading - 500000 Cycles

Single Truck >2000000 Cycles
Single/Multi Moment Ratio- 0.6155

	Actual Range	Allow Range	Ratio	Actual Range	Allow Range	Ratio
Top chord	0.22	29.00	0.008	0.14	16.00	0.008
UR-LL diag	2.74	29.00	0.094	1.68	16.00	0.105
LR-UL diag	2.71	29.00	0.093	1.67	16.00	0.104
Bot chord	0.48	29.00	0.016	0.29	16.00	0.018

Brace	Combined Stresses Top Chord	Combined Stresses Diag	Combined Stresses Bott Chord	Fatigue Stresses Top Chord	Fatigue Stresses Diag	Fatigue Stresses Bott Chord
1	0.009	0.113	0.020	0.008	0.103	0.018
2	0.000	0.263	0.188	0.000	0.207	0.210
3	0.087	0.275	0.194	0.102	0.406	0.236
4	0.000	0.254	0.181	0.000	0.231	0.219
5	0.085	0.309	0.189	0.111	0.429	0.254
6	0.000	0.200	0.185	0.000	0.225	0.196
7	0.065	0.302	0.194	0.098	0.357	0.222
8	0.000	0.145	0.102	0.000	0.152	0.139
9	0.001	0.023	0.003	0.001	0.016	0.003
10	0.000	0.175	0.114	0.000	0.147	0.126
11	0.000	0.277	0.199	0.000	0.242	0.234
12	0.080	0.339	0.206	0.117	0.436	0.265
13	0.000	0.288	0.191	0.000	0.280	0.264
14	0.000	0.288	0.190	0.000	0.280	0.264
15	0.080	0.340	0.206	0.117	0.436	0.265
16	0.000	0.276	0.198	0.000	0.242	0.234
17	0.000	0.174	0.113	0.000	0.147	0.126
18	0.001	0.023	0.003	0.001	0.016	0.003
19	0.000	0.145	0.101	0.000	0.151	0.138
20	0.064	0.300	0.192	0.097	0.357	0.221
21	0.000	0.200	0.183	0.000	0.225	0.195
22	0.085	0.309	0.189	0.110	0.429	0.254
23	0.000	0.254	0.181	0.000	0.231	0.219
24	0.087	0.276	0.194	0.102	0.406	0.236
25	0.000	0.262	0.188	0.000	0.207	0.210
26	0.009	0.116	0.020	0.008	0.105	0.018

Girder 3 Summary of Analyses

OUTPUT.TXT

Brace	Type	Shr (k)	Mom (k-ft)	Load Effect	1	2	3 (k)	4	5
1	E	0.00	0.00	ncomp dead rt	0.00	0.00	0.00	0.00	
1	E	0.00	0.00	super dead rt	0.00	0.00	0.00	0.00	
1	E	-3.54	12.68	max ll+i mom rt	0.13	3.17	-3.21	-0.10	
1	E	3.54	-15.63	max ll+i shr rt	0.53	-3.26	3.12	-0.41	
1	E	3.17	-9.50	min ll+i mom rt	-0.54	-2.79	2.93	0.42	
1	E	-2.58	7.56	min ll+i shr rt	0.47	2.26	-2.39	-0.37	
1	E	-3.17	15.88	max ll+i mom lt	-0.90	2.98	-2.74	0.70	
1	E	-3.54	-15.63	max ll+i shr lt	0.53	-3.26	3.12	-0.41	
1	E	3.54	-15.63	min ll+i mom lt	0.53	-3.26	3.12	-0.41	
1	E	2.58	7.56	min ll+i shr lt	0.47	2.26	-2.39	-0.37	
2	A	0.23	-1.81	ncomp dead rt	0.02	0.44	0.44	0.02	-0.38
2	A	0.01	-0.05	super dead rt	0.00	0.01	0.01	0.00	-0.01
2	A	-4.13	32.59	max ll+i mom rt	-0.39	-7.83	-7.83	-0.39	6.84
2	A	4.13	-0.44	max ll+i shr rt	-7.34	0.11	0.11	-7.34	6.02
2	A	1.06	-7.82	min ll+i mom rt	-0.04	1.88	1.88	-0.04	-1.53
2	A	-2.82	20.97	min ll+i shr rt	0.05	-5.04	-5.04	0.05	4.16
2	A	-1.06	4.14	max ll+i mom lt	-1.00	0.92	0.92	-1.00	0.06
2	A	-4.13	-0.44	max ll+i shr lt	0.11	-7.34	-7.34	0.11	6.02
2	A	3.18	-2.17	min ll+i mom lt	0.52	-5.21	-5.21	0.52	3.90
2	A	2.82	20.97	min ll+i shr lt	-5.04	0.05	0.05	-5.04	4.16
3	E	0.20	-1.65	ncomp dead rt	0.20	-0.21	0.16	-0.16	
3	E	-0.02	0.12	super dead rt	-0.01	0.02	-0.02	0.01	
3	E	-9.49	75.28	max ll+i mom rt	-8.94	9.76	-7.34	6.94	
3	E	9.49	-0.62	max ll+i shr rt	-7.88	-7.49	9.61	6.11	
3	E	4.06	-30.75	min ll+i mom rt	3.49	-4.13	3.19	-2.71	
3	E	-9.49	70.67	min ll+i shr rt	-7.91	9.62	-7.48	6.13	
3	E	-4.06	15.26	max ll+i mom lt	-0.01	3.66	-3.66	0.00	
3	E	-9.49	-0.62	max ll+i shr lt	-7.88	-7.49	9.61	6.11	
3	E	1.75	-3.86	min ll+i mom lt	-0.61	-1.50	1.66	0.47	
3	E	9.49	70.67	min ll+i shr lt	-7.91	9.62	-7.48	6.13	
4	A	0.14	-1.15	ncomp dead rt	0.03	0.28	0.28	0.03	-0.25
4	A	-0.01	0.02	super dead rt	0.01	0.00	0.00	0.01	0.00
4	A	-3.95	31.16	max ll+i mom rt	-0.36	-7.49	-7.49	-0.36	6.53
4	A	3.95	-0.47	max ll+i shr rt	-7.02	0.11	0.11	-7.02	5.74
4	A	1.81	-12.70	min ll+i mom rt	-0.21	3.05	3.05	-0.21	-2.36
4	A	-3.95	28.97	min ll+i shr rt	0.16	-6.96	-6.96	0.16	5.66
4	A	-1.81	5.52	max ll+i mom lt	-1.33	1.94	1.94	-1.33	-0.51
4	A	-3.95	-0.47	max ll+i shr lt	0.11	-7.02	-7.02	0.11	5.74
4	A	0.52	-4.27	min ll+i mom lt	1.03	0.08	0.08	1.03	-0.93
4	A	3.95	28.97	min ll+i shr lt	-6.96	0.16	0.16	-6.96	5.66
5	E	1.55	-12.44	ncomp dead rt	1.50	-1.60	1.19	-1.16	
5	E	0.06	-0.49	super dead rt	0.06	-0.06	0.04	-0.05	
5	E	-10.00	79.73	max ll+i mom rt	-9.52	10.30	-7.73	7.38	
5	E	10.00	-0.25	max ll+i shr rt	-8.39	-7.88	10.14	6.51	
5	E	4.98	-36.12	min ll+i mom rt	3.93	-5.02	3.96	-3.05	
5	E	-10.00	74.04	min ll+i shr rt	-8.23	10.12	-7.90	6.38	
5	E	-2.37	4.40	max ll+i mom lt	1.01	2.00	-2.27	-0.78	
5	E	-10.00	-0.25	max ll+i shr lt	-8.39	-7.88	10.14	6.51	
5	E	0.27	-5.43	min ll+i mom lt	0.99	-0.38	0.11	-0.77	
5	E	10.00	74.04	min ll+i shr lt	-8.23	10.12	-7.90	6.38	

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6	A	1.56	-12.32	ncomp dead rt	0.16	2.96	2.96	0.16	-2.59
6	A	0.09	-0.61	super dead rt	-0.01	0.15	0.15	-0.01	-0.11
6	A	-3.25	26.00	max ll+i mom rt	-0.39	-6.25	-6.25	-0.39	5.53
6	A	3.25	0.01	max ll+i shr rt	-5.86	0.00	0.00	-5.86	4.88
6	A	2.52	-15.79	min ll+i mom rt	-0.75	3.79	3.79	-0.75	-2.54
6	A	-3.25	24.37	min ll+i shr rt	0.00	-5.86	-5.86	0.00	4.87
6	A	-1.93	4.93	max ll+i mom lt	-1.19	2.30	2.30	-1.19	-0.93
6	A	-3.25	0.01	max ll+i shr lt	0.00	-5.86	-5.86	0.00	4.88
6	A	0.91	-6.37	min ll+i mom lt	1.53	-0.11	-0.11	1.53	-1.18
6	A	3.25	24.37	min ll+i shr lt	-5.86	0.00	0.00	-5.86	4.87
7	E	3.32	-26.53	ncomp dead rt	3.17	-3.42	2.56	-2.46	
7	E	0.18	-1.41	super dead rt	0.16	-0.19	0.14	-0.13	
7	E	-8.32	67.30	max ll+i mom rt	-8.13	8.60	-6.41	6.30	
7	E	8.32	0.71	max ll+i shr rt	-7.19	-6.53	8.47	5.58	
7	E	5.14	-35.42	min ll+i mom rt	3.64	-5.12	4.14	-2.82	
7	E	-7.30	54.54	min ll+i shr rt	-6.12	7.41	-5.76	4.74	
7	E	-5.14	5.69	max ll+i mom lt	3.06	4.22	-5.04	-2.37	
7	E	-8.32	0.71	max ll+i shr lt	-7.19	-6.53	8.47	5.58	
7	E	4.23	-6.49	min ll+i mom lt	-2.11	-3.53	4.10	1.64	
7	E	7.30	54.54	min ll+i shr lt	-6.12	7.41	-5.76	4.74	
8	A	0.49	-3.85	ncomp dead rt	0.05	0.93	0.93	0.05	-0.81
8	A	0.03	-0.22	super dead rt	0.01	0.05	0.05	0.01	-0.05
8	A	-2.38	18.75	max ll+i mom rt	-0.21	-4.51	-4.51	-0.21	3.93
8	A	2.38	-0.30	max ll+i shr rt	-4.22	0.07	0.07	-4.22	3.45
8	A	1.39	-9.65	min ll+i mom rt	-0.18	2.32	2.32	-0.18	-1.78
8	A	-1.55	12.15	min ll+i shr rt	-0.12	-2.92	-2.92	-0.12	2.53
8	A	-1.39	3.07	max ll+i mom lt	-0.74	1.76	1.76	-0.74	-0.85
8	A	-2.38	-0.30	max ll+i shr lt	0.07	-4.22	-4.22	0.07	3.45
8	A	1.75	-4.09	min ll+i mom lt	0.98	-2.17	-2.17	0.98	0.99
8	A	1.55	12.15	min ll+i shr lt	-2.92	-0.12	-0.12	-2.92	2.53
9	E	0.00	0.00	ncomp dead rt	0.00	0.00	0.00	0.00	
9	E	0.00	0.01	super dead rt	0.00	0.00	0.00	0.00	
9	E	-0.78	2.65	max ll+i mom rt	0.04	0.54	-0.54	-0.03	
9	E	0.78	-3.57	max ll+i shr rt	0.09	-0.55	0.53	-0.08	
9	E	0.62	-1.84	min ll+i mom rt	-0.07	-0.42	0.44	0.06	
9	E	-0.63	1.87	min ll+i shr rt	0.07	0.43	-0.45	-0.06	
9	E	-0.62	3.12	max ll+i mom lt	-0.11	0.44	-0.42	0.09	
9	E	-0.78	-3.57	max ll+i shr lt	0.09	-0.55	0.53	-0.08	
9	E	0.78	-3.57	min ll+i mom lt	0.09	-0.55	0.53	-0.08	
9	E	0.63	1.87	min ll+i shr lt	0.07	0.43	-0.45	-0.06	
10	A	-0.47	3.65	ncomp dead rt	-0.04	-0.88	-0.88	-0.04	0.76
10	A	-0.03	0.18	super dead rt	0.02	-0.04	-0.04	0.02	0.02
10	A	-2.63	18.72	max ll+i mom rt	0.24	-4.50	-4.50	0.24	3.55
10	A	2.63	-2.31	max ll+i shr rt	-4.18	0.55	0.55	-4.18	3.02
10	A	1.29	-8.99	min ll+i mom rt	-0.17	2.16	2.16	-0.17	-1.66
10	A	-1.62	11.03	min ll+i shr rt	0.27	-2.65	-2.65	0.27	1.98
10	A	-1.29	2.81	max ll+i mom lt	-0.68	1.66	1.66	-0.68	-0.82
10	A	-2.63	-2.31	max ll+i shr lt	0.55	-4.18	-4.18	0.55	3.02
10	A	2.11	-4.31	min ll+i mom lt	1.04	-2.76	-2.76	1.04	1.43
10	A	1.62	11.03	min ll+i shr lt	-2.65	0.27	0.27	-2.65	1.98
11	A	0.36	-2.90	ncomp dead rt	0.04	0.70	0.70	0.04	-0.62

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11	A	0.02	-0.14	super dead rt	0.00	0.03	0.03	0.00	-0.03
11	A	-4.41	35.02	max ll+i mom rt	-0.46	-8.42	-8.42	-0.46	7.39
11	A	4.41	-0.30	max ll+i shr rt	-7.89	0.07	0.07	-7.89	6.50
11	A	1.68	-11.43	min ll+i mom rt	-0.29	2.75	2.75	-0.29	-2.05
11	A	-3.32	24.66	min ll+i shr rt	0.07	-5.93	-5.93	0.07	4.88
11	A	-0.90	3.68	max ll+i mom lt	-0.88	0.74	0.74	-0.88	0.12
11	A	-4.41	-0.30	max ll+i shr lt	0.07	-7.89	-7.89	0.07	6.50
11	A	2.61	-4.60	min ll+i mom lt	1.11	-3.60	-3.60	1.11	2.07
11	A	3.32	24.66	min ll+i shr lt	-5.93	0.07	0.07	-5.93	4.88
12	E	2.71	-21.67	ncomp dead rt	2.59	-2.79	2.09	-2.01	
12	E	0.14	-1.07	super dead rt	0.12	-0.14	0.11	-0.10	
12	E	-10.17	81.30	max ll+i mom rt	-9.73	10.48	-7.85	7.54	
12	E	10.17	-0.03	max ll+i shr rt	-8.58	-8.01	10.32	6.66	
12	E	5.39	-39.50	min ll+i mom rt	4.35	-5.44	4.27	-3.37	
12	E	-10.17	76.45	min ll+i shr rt	-8.63	10.33	-8.00	6.70	
12	E	-2.07	4.78	max ll+i mom lt	0.67	1.77	-1.95	-0.52	
12	E	-10.17	-0.03	max ll+i shr lt	-8.58	-8.01	10.32	6.66	
12	E	1.57	-6.06	min ll+i mom lt	0.04	-1.42	1.41	-0.03	
12	E	10.17	76.45	min ll+i shr lt	-8.63	10.33	-8.00	6.70	
13	A	1.05	-8.41	ncomp dead rt	0.13	2.02	2.02	0.13	-1.79
13	A	0.05	-0.40	super dead rt	0.00	0.10	0.10	0.00	-0.08
13	A	-4.69	37.17	max ll+i mom rt	-0.49	-8.93	-8.93	-0.49	7.84
13	A	4.69	-0.32	max ll+i shr rt	-8.37	0.08	0.08	-8.37	6.90
13	A	2.27	-15.83	min ll+i mom rt	-0.30	3.80	3.80	-0.30	-2.92
13	A	-4.69	34.42	min ll+i shr rt	0.17	-8.27	-8.27	0.17	6.74
13	A	-1.59	4.66	max ll+i mom lt	-1.12	1.74	1.74	-1.12	-0.52
13	A	-4.69	-0.32	max ll+i shr lt	0.08	-8.37	-8.37	0.08	6.90
13	A	0.40	-6.20	min ll+i mom lt	1.49	0.78	0.78	1.49	-1.88
13	A	4.69	34.42	min ll+i shr lt	-8.27	0.17	0.17	-8.27	6.74
14	A	1.06	-8.45	ncomp dead rt	0.13	2.03	2.03	0.13	-1.79
14	A	0.05	-0.40	super dead rt	0.00	0.10	0.10	0.00	-0.08
14	A	-4.69	37.16	max ll+i mom rt	-0.49	-8.93	-8.93	-0.49	7.84
14	A	4.69	-0.32	max ll+i shr rt	-8.37	0.08	0.08	-8.37	6.90
14	A	2.27	-15.82	min ll+i mom rt	-0.30	3.80	3.80	-0.30	-2.92
14	A	-4.69	34.30	min ll+i shr rt	0.20	-8.24	-8.24	0.20	6.69
14	A	-0.94	4.65	max ll+i mom lt	-1.12	0.57	0.57	-1.12	0.45
14	A	-4.69	-0.32	max ll+i shr lt	0.08	-8.37	-8.37	0.08	6.90
14	A	0.40	-6.19	min ll+i mom lt	1.49	0.77	0.77	1.49	-1.88
14	A	4.69	34.30	min ll+i shr lt	-8.24	0.20	0.20	-8.24	6.69
15	E	2.75	-21.99	ncomp dead rt	2.63	-2.83	2.12	-2.04	
15	E	0.14	-1.09	super dead rt	0.12	-0.14	0.11	-0.10	
15	E	-10.17	81.30	max ll+i mom rt	-9.73	10.48	-7.85	7.54	
15	E	10.17	-0.04	max ll+i shr rt	-8.58	-8.01	10.32	6.65	
15	E	5.39	-39.40	min ll+i mom rt	4.32	-5.44	4.28	-3.35	
15	E	-10.17	76.14	min ll+i shr rt	-8.56	10.32	-8.01	6.64	
15	E	-2.07	4.76	max ll+i mom lt	0.67	1.77	-1.95	-0.52	
15	E	-10.17	-0.04	max ll+i shr lt	-8.58	-8.01	10.32	6.65	
15	E	1.57	-6.05	min ll+i mom lt	0.04	-1.42	1.41	-0.03	
15	E	10.17	76.14	min ll+i shr lt	-8.56	10.32	-8.01	6.64	
16	A	0.39	-3.10	ncomp dead rt	0.05	0.74	0.74	0.05	-0.66
16	A	0.02	-0.16	super dead rt	0.00	0.04	0.04	0.00	-0.03
16	A	-4.42	35.05	max ll+i mom rt	-0.46	-8.43	-8.43	-0.46	7.39
16	A	4.42	-0.30	max ll+i shr rt	-7.90	0.07	0.07	-7.90	6.51

16	A	1.68	-11.39	min ll+i mom rt	-0.30	2.74	2.74	-0.30	-2.03
16	A	-3.32	24.54	min ll+i shr rt	0.09	-5.90	-5.90	0.09	4.83
16	A	-0.90	3.67	max ll+i mom lt	-0.88	0.74	0.74	-0.88	0.11
16	A	-4.42	-0.30	max ll+i shr lt	0.07	-7.90	-7.90	0.07	6.51
16	A	2.61	-4.59	min ll+i mom lt	1.10	-3.60	-3.60	1.10	2.08
16	A	3.32	24.54	min ll+i shr lt	-5.90	0.09	0.09	-5.90	4.83
17	A	-0.44	3.48	ncomp dead rt	-0.04	-0.84	-0.84	-0.04	0.73
17	A	-0.03	0.17	super dead rt	0.02	-0.04	-0.04	0.02	0.02
17	A	-2.63	18.73	max ll+i mom rt	0.24	-4.50	-4.50	0.24	3.55
17	A	2.63	-2.30	max ll+i shr rt	-4.19	0.55	0.55	-4.19	3.02
17	A	1.30	-8.97	min ll+i mom rt	-0.18	2.16	2.16	-0.18	-1.64
17	A	-1.62	10.98	min ll+i shr rt	0.27	-2.64	-2.64	0.27	1.97
17	A	-1.30	2.86	max ll+i mom lt	-0.69	1.65	1.65	-0.69	-0.80
17	A	-2.63	-2.30	max ll+i shr lt	0.55	-4.19	-4.19	0.55	3.02
17	A	2.12	-4.31	min ll+i mom lt	1.04	-2.78	-2.78	1.04	1.45
17	A	1.62	10.98	min ll+i shr lt	-2.64	0.27	0.27	-2.64	1.97
18	E	0.00	0.00	ncomp dead rt	0.00	0.00	0.00	0.00	
18	E	0.00	0.01	super dead rt	0.00	0.00	0.00	0.00	
18	E	-0.78	2.68	max ll+i mom rt	0.04	0.54	-0.55	-0.03	
18	E	0.78	-3.58	max ll+i shr rt	0.09	-0.55	0.54	-0.08	
18	E	0.62	-1.83	min ll+i mom rt	-0.07	-0.42	0.44	0.06	
18	E	-0.63	1.86	min ll+i shr rt	0.07	0.43	-0.45	-0.06	
18	E	-0.62	3.13	max ll+i mom lt	-0.11	0.44	-0.42	0.10	
18	E	-0.78	-3.58	max ll+i shr lt	0.09	-0.55	0.54	-0.08	
18	E	0.78	-3.58	min ll+i mom lt	0.09	-0.55	0.54	-0.08	
18	E	0.63	1.86	min ll+i shr lt	0.07	0.43	-0.45	-0.06	
19	A	0.47	-3.71	ncomp dead rt	0.05	0.89	0.89	0.05	-0.78
19	A	0.03	-0.21	super dead rt	0.01	0.05	0.05	0.01	-0.05
19	A	-2.38	18.74	max ll+i mom rt	-0.22	-4.51	-4.51	-0.22	3.93
19	A	2.38	-0.29	max ll+i shr rt	-4.22	0.07	0.07	-4.22	3.45
19	A	1.39	-9.61	min ll+i mom rt	-0.19	2.31	2.31	-0.19	-1.76
19	A	-1.55	12.09	min ll+i shr rt	-0.11	-2.91	-2.91	-0.11	2.51
19	A	-1.39	3.10	max ll+i mom lt	-0.75	1.76	1.76	-0.75	-0.84
19	A	-2.38	-0.29	max ll+i shr lt	0.07	-4.22	-4.22	0.07	3.45
19	A	1.75	-4.08	min ll+i mom lt	0.98	-2.17	-2.17	0.98	0.99
19	A	1.55	12.09	min ll+i shr lt	-2.91	-0.11	-0.11	-2.91	2.51
20	E	3.26	-26.09	ncomp dead rt	3.12	-3.36	2.52	-2.42	
20	E	0.18	-1.39	super dead rt	0.16	-0.18	0.14	-0.12	
20	E	-8.33	67.31	max ll+i mom rt	-8.13	8.60	-6.41	6.30	
20	E	8.33	0.70	max ll+i shr rt	-7.19	-6.53	8.48	5.58	
20	E	5.13	-35.22	min ll+i mom rt	3.60	-5.11	4.14	-2.79	
20	E	-7.31	54.28	min ll+i shr rt	-6.06	7.40	-5.77	4.70	
20	E	-5.13	5.83	max ll+i mom lt	3.02	4.22	-5.03	-2.34	
20	E	-8.33	0.70	max ll+i shr lt	-7.19	-6.53	8.48	5.58	
20	E	4.23	-6.52	min ll+i mom lt	-2.10	-3.53	4.09	1.63	
20	E	7.31	54.28	min ll+i shr lt	-6.06	7.40	-5.77	4.70	
21	A	1.54	-12.20	ncomp dead rt	0.15	2.93	2.93	0.15	-2.57
21	A	0.09	-0.61	super dead rt	-0.01	0.15	0.15	-0.01	-0.11
21	A	-3.25	25.99	max ll+i mom rt	-0.39	-6.25	-6.25	-0.39	5.52
21	A	3.25	0.01	max ll+i shr rt	-5.86	0.00	0.00	-5.86	4.87
21	A	2.51	-15.70	min ll+i mom rt	-0.76	3.77	3.77	-0.76	-2.51
21	A	-3.25	24.25	min ll+i shr rt	0.03	-5.83	-5.83	0.03	4.83
21	A	-1.93	4.91	max ll+i mom lt	-1.18	2.30	2.30	-1.18	-0.93

21	A	-3.25	0.01	max ll+i shr lt	0.00	-5.86	-5.86	0.00	4.87
21	A	0.91	-6.36	min ll+i mom lt	1.53	-0.12	-0.12	1.53	-1.18
21	A	3.25	24.25	min ll+i shr lt	-5.83	0.03	0.03	-5.83	4.83
22	E	1.53	-12.32	ncomp dead rt	1.48	-1.58	1.18	-1.15	
22	E	0.05	-0.48	super dead rt	0.06	-0.06	0.04	-0.05	
22	E	-10.00	79.71	max ll+i mom rt	-9.51	10.29	-7.73	7.38	
22	E	10.00	-0.25	max ll+i shr rt	-8.39	-7.88	10.14	6.50	
22	E	4.97	-35.92	min ll+i mom rt	3.89	-5.01	3.96	-3.02	
22	E	-10.00	73.67	min ll+i shr rt	-8.15	10.11	-7.91	6.32	
22	E	-2.36	4.38	max ll+i mom lt	1.01	2.00	-2.27	-0.78	
22	E	-10.00	-0.25	max ll+i shr lt	-8.39	-7.88	10.14	6.50	
22	E	0.27	-5.41	min ll+i mom lt	0.99	-0.38	0.11	-0.77	
22	E	10.00	73.67	min ll+i shr lt	-8.15	10.11	-7.91	6.32	
23	A	0.14	-1.17	ncomp dead rt	0.03	0.28	0.28	0.03	-0.26
23	A	-0.01	0.02	super dead rt	0.01	0.00	0.00	0.01	0.00
23	A	-3.95	31.17	max ll+i mom rt	-0.36	-7.49	-7.49	-0.36	6.54
23	A	3.95	-0.46	max ll+i shr rt	-7.02	0.11	0.11	-7.02	5.75
23	A	1.81	-12.69	min ll+i mom rt	-0.22	3.05	3.05	-0.22	-2.36
23	A	-3.95	28.92	min ll+i shr rt	0.18	-6.95	-6.95	0.18	5.64
23	A	-1.81	5.53	max ll+i mom lt	-1.33	1.94	1.94	-1.33	-0.51
23	A	-3.95	-0.46	max ll+i shr lt	0.11	-7.02	-7.02	0.11	5.75
23	A	0.52	-4.27	min ll+i mom lt	1.03	0.08	0.08	1.03	-0.92
23	A	3.95	28.92	min ll+i shr lt	-6.95	0.18	0.18	-6.95	5.64
24	E	0.22	-1.79	ncomp dead rt	0.22	-0.23	0.17	-0.17	
24	E	-0.02	0.12	super dead rt	-0.01	0.02	-0.01	0.01	
24	E	-9.49	75.27	max ll+i mom rt	-8.94	9.76	-7.34	6.94	
24	E	9.49	-0.62	max ll+i shr rt	-7.88	-7.49	9.61	6.11	
24	E	4.07	-30.79	min ll+i mom rt	3.50	-4.14	3.19	-2.71	
24	E	-9.49	70.67	min ll+i shr rt	-7.91	9.62	-7.48	6.13	
24	E	-4.07	15.30	max ll+i mom lt	-0.01	3.67	-3.67	0.01	
24	E	-9.49	-0.62	max ll+i shr lt	-7.88	-7.49	9.61	6.11	
24	E	1.75	-3.86	min ll+i mom lt	-0.61	-1.50	1.66	0.48	
24	E	9.49	70.67	min ll+i shr lt	-7.91	9.62	-7.48	6.13	
25	A	0.23	-1.84	ncomp dead rt	0.02	0.44	0.44	0.02	-0.39
25	A	0.01	-0.05	super dead rt	0.00	0.01	0.01	0.00	-0.01
25	A	-4.13	32.60	max ll+i mom rt	-0.39	-7.84	-7.84	-0.39	6.84
25	A	4.13	-0.44	max ll+i shr rt	-7.34	0.11	0.11	-7.34	6.02
25	A	1.06	-7.83	min ll+i mom rt	-0.04	1.88	1.88	-0.04	-1.54
25	A	-2.82	20.97	min ll+i shr rt	0.05	-5.04	-5.04	0.05	4.16
25	A	-1.06	4.13	max ll+i mom lt	-0.99	0.93	0.93	-0.99	0.06
25	A	-4.13	-0.44	max ll+i shr lt	0.11	-7.34	-7.34	0.11	6.02
25	A	3.18	-2.17	min ll+i mom lt	0.52	-5.21	-5.21	0.52	3.90
25	A	2.82	20.97	min ll+i shr lt	-5.04	0.05	0.05	-5.04	4.16
26	E	0.00	0.00	ncomp dead rt	0.00	0.00	0.00	0.00	
26	E	0.00	0.00	super dead rt	0.00	0.00	0.00	0.00	
26	E	-3.62	12.97	max ll+i mom rt	0.13	3.24	-3.28	-0.10	
26	E	3.62	-15.95	max ll+i shr rt	0.54	-3.33	3.19	-0.42	
26	E	3.17	-9.52	min ll+i mom rt	-0.53	-2.79	2.93	0.41	
26	E	-2.57	7.57	min ll+i shr rt	0.47	2.26	-2.38	-0.36	
26	E	-3.17	15.85	max ll+i mom lt	-0.89	2.98	-2.74	0.69	
26	E	-3.62	-15.95	max ll+i shr lt	0.54	-3.33	3.19	-0.42	
26	E	3.62	-15.95	min ll+i mom lt	0.54	-3.33	3.19	-0.42	
26	E	2.57	7.57	min ll+i shr lt	0.47	2.26	-2.38	-0.36	

Key -

Type A
- 1 - UL-Ctr Diag
- 2 - LL-Ctr Diag
- 3 - Ctr-UR Diag
- 4 - Ctr-LR Diag
- 5 - Bot Chd

Type E
- 1 - Top Chd
- 2 - UR-LL Diag
- 3 - LR-UL Diag
- 4 - Bot Chd

Right side is connected to girder 3

Girder 3 — Max Combined Member Forces - k

Brace	Type	Top Chord Tens	Top Chord Comp	Diagonal Tens	Diagonal Comp	Bottom Chord Tens	Bottom Chord Comp
1	E	1.15	-1.95	6.89	-7.08	1.51	-0.90
2	A			4.66	-16.42	14.35	-3.83
3	E	7.83	-19.17	21.06	-16.51	14.87	-6.07
4	A			6.98	-15.91	13.85	-5.46
5	E	10.56	-18.63	23.63	-19.30	14.45	-8.19
6	A			12.28	-12.53	8.48	-9.03
7	E	12.23	-13.31	21.91	-18.87	10.32	-9.49
8	A			6.31	-9.09	7.41	-4.98
9	E	0.20	-0.24	1.17	-1.20	0.20	-0.17
10	A			3.50	-10.97	8.72	-2.57
11	A			6.91	-17.32	15.19	-5.28
12	E	12.97	-17.59	25.29	-21.20	13.64	-10.06
13	A			11.01	-18.00	14.58	-8.77
14	A			11.02	-18.00	14.57	-8.78
15	E	12.97	-17.54	25.32	-21.26	13.60	-10.05
16	A			6.96	-17.28	15.15	-5.31
17	A			3.54	-10.91	8.68	-2.60
18	E	0.20	-0.24	1.18	-1.21	0.21	-0.17
19	A			6.24	-9.09	7.45	-4.91
20	E	12.08	-13.39	21.86	-18.80	10.38	-9.37
21	A			12.19	-12.53	8.51	-8.93
22	E	10.45	-18.65	23.60	-19.30	14.46	-8.11
23	A			6.98	-15.91	13.85	-5.46
24	E	7.86	-19.15	21.08	-16.53	14.85	-6.10
25	A			4.68	-16.42	14.35	-3.84
26	E	1.17	-1.94	7.04	-7.24	1.50	-0.91

Girder 3 — Loading Stress Range - ksi

Brace	Type	Top Chord	Diagonal	Bottom Chord
1	E	0.22	2.68	0.48
2	A		3.73	3.78

3	E	1.84	7.32	4.25
4	A		4.16	3.93
5	E	2.00	7.72	4.58
6	A		4.06	3.52
7	E	1.76	6.42	3.99
8	A		2.73	2.50
9	E	0.03	0.45	0.07
10	A		2.65	2.27
11	A		4.35	4.22
12	E	2.10	7.84	4.78
13	A		5.04	4.75
14	A		5.04	4.75
15	E	2.10	7.84	4.77
16	A		4.35	4.22
17	A		2.65	2.27
18	E	0.03	0.46	0.07
19	A		2.73	2.49
20	E	1.75	6.42	3.98
21	A		4.05	3.51
22	E	1.99	7.72	4.57
23	A		4.16	3.93
24	E	1.84	7.31	4.25
25	A		3.73	3.78
26	E	0.22	2.74	0.48

Girder 3 Combined Factored Connection Forces - Grp I

Brace	Type	Right Side		Left Side	
		Vert k	Horiz k	Vert k	Horiz k
1	E	-3.84	-6.78	3.84	6.89
2	A	4.64	13.67	-4.64	9.12
3	E	10.42	32.29	-10.42	30.67
4	A	4.38	13.24	-4.38	12.56
5	E	11.89	31.26	-11.89	32.12
6	A	4.59	-10.22	-4.59	10.64
7	E	11.31	-22.64	-11.31	23.70
8	A	2.92	7.08	-2.92	5.28
9	E	-0.85	-1.00	0.85	-1.00
10	A	-3.18	9.13	2.61	4.75
11	A	5.04	14.41	-5.04	10.71
12	E	12.89	29.39	-12.89	33.21
13	A	5.80	13.85	-5.80	14.95
14	A	5.81	13.84	-5.81	14.89
15	E	12.92	29.30	-12.92	33.07
16	A	5.06	14.37	-5.06	10.66
17	A	-3.16	9.08	2.61	4.73
18	E	-0.85	-1.00	0.85	-1.01
19	A	2.90	7.12	-2.90	5.26
20	E	11.28	-22.44	-11.28	23.59
21	A	4.58	-10.14	-4.58	10.58
22	E	11.88	31.29	-11.88	31.96
23	A	4.38	13.23	-4.38	12.54
24	E	10.43	32.25	-10.43	30.67
25	A	4.64	13.66	-4.64	9.12
26	E	-3.93	-6.92	3.93	-6.93

Horizontal force listed applied to each of top and bottom connections.
Vertical force listed applied to each of top and bottom connections
for Types A and E.

Vertical force listed applied to connection supporting a diagonal
for Types B and C.
Forces applied along centroidal axes of connecting members.

Right side is connected to girder 3

Sign convention:

Positive shear is upward on both sides.

Positive horiz force corresponds to positive end moment
where top horiz force is toward brace and bottom horiz force
is away from brace.

Negative horiz force corresponds to negative end moment
where top horiz force is away from brace and bottom horiz force
is toward brace.

Brace Number	I (in4)	J (in4)	Weight (kips)
1	2637.26	0.77	0.435
2	950.73	0.70	0.240
3	2637.26	0.77	0.435
4	950.73	0.70	0.240
5	2637.26	0.77	0.435
6	950.73	0.70	0.240
7	2637.26	0.77	0.435
8	950.73	0.70	0.240
9	5520.89	0.77	0.468
10	950.73	0.70	0.240
11	950.73	0.70	0.240
12	2637.26	0.77	0.435
13	950.73	0.70	0.240
14	950.73	0.70	0.240
15	2637.26	0.77	0.435
16	950.73	0.70	0.240
17	950.73	0.70	0.240
18	5520.89	0.77	0.468
19	950.73	0.70	0.240
20	2637.26	0.77	0.435
21	950.73	0.70	0.240
22	2637.26	0.77	0.435
23	950.73	0.70	0.240
24	2637.26	0.77	0.435
25	950.73	0.70	0.240
26	2637.26	0.77	0.435

Brace Number	I (in4)	J (in4)	Weight (kips)
1	2637.26	0.77	0.435
2	950.73	0.70	0.240
3	2637.26	0.77	0.435
4	950.73	0.70	0.240
5	2637.26	0.77	0.435
6	950.73	0.70	0.240
7	2637.26	0.77	0.435

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8	950.73	0.70	0.240
9	5520.89	0.77	0.468
10	950.73	0.70	0.240
11	950.73	0.70	0.240
12	2637.26	0.77	0.435
13	950.73	0.70	0.240
14	950.73	0.70	0.240
15	2637.26	0.77	0.435
16	950.73	0.70	0.240
17	950.73	0.70	0.240
18	5520.89	0.77	0.468
19	950.73	0.70	0.240
20	2637.26	0.77	0.435
21	950.73	0.70	0.240
22	2637.26	0.77	0.435
23	950.73	0.70	0.240
24	2637.26	0.77	0.435
25	950.73	0.70	0.240
26	2637.26	0.77	0.435

Brace Number	I (in4)	J (in4)	Weight (kips)
1	2637.26	0.77	0.435
2	950.73	0.70	0.240
3	2637.26	0.77	0.435
4	950.73	0.70	0.240
5	2637.26	0.77	0.435
6	950.73	0.70	0.240
7	2637.26	0.77	0.435
8	950.73	0.70	0.240
9	5520.89	0.77	0.468
10	950.73	0.70	0.240
11	950.73	0.70	0.240
12	2637.26	0.77	0.435
13	950.73	0.70	0.240
14	950.73	0.70	0.240
15	2637.26	0.77	0.435
16	950.73	0.70	0.240
17	950.73	0.70	0.240
18	5520.89	0.77	0.468
19	950.73	0.70	0.240
20	2637.26	0.77	0.435
21	950.73	0.70	0.240
22	2637.26	0.77	0.435
23	950.73	0.70	0.240
24	2637.26	0.77	0.435
25	950.73	0.70	0.240
26	2637.26	0.77	0.435

run completed

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