| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 59 | * | WILL | 608 | 304 |

| STA. | TO STA. |
|---|---|

| FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT |

* (26, 26HB-1 & 114) R-2
CONTRACT NO. 60363

## SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars (MBB) shall be $\frac{3}{16}'' \times 1\frac{1}{2}''$ on $1\frac{3}{16}''$ centers and conform to ASTM B211 Alloy 6061-T6.

Cross bars (CB) shall be $\frac{3}{16}'' \times 1\frac{1}{2}''$ on 4'' centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

### OR

Aluminum Grating with modified "t" sections for main bearing bars shall meet the following requirements:

Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.$^3$ per bar, a depth of $1\frac{1}{2}''$, spaced on $1\frac{3}{16}''$ centers.

Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4'' centers.

### SECTION W-W

Continuous handrail hinge (Shown)
Handrail joint location (If needed)
L 2'' x 1½'' x ¼'', 2½'' long
L 2'' x 1½'' x ¼'', 6'' long
$\frac{3}{8}''$ gap ($\pm \frac{1}{4}''$)
℄ WF(A-N)4 and grating splice

(CONTINUOUS WALKWAY GRATING)

(AT WALKWAY GRATING SPLICE)

### SECTION B-B

℄ Truss & Truss Grating
WF(A-N)4x1.79 sign support or WF(A-N)4x3.06 sign and walkway support
Minimum elevation for top of WF(A-N)4x3.06 for walkway only
℄ $\frac{7}{16}''$ φ holes, typ.
℄ $\frac{3}{8}''$ φ Stainless steel u-bolts. Provide 2 stainless steel washers and 2 hexagon locknuts per bolt. (4 bolts required per walkway bracket. 2 top and 2 bottom).
℄ Truss and sign
Sign Panel Place symmetrical about ℄ truss
Handrail See Details on Base Sheet OSC-A-8.
Handrail Hinge See Details on Base Sheet OSC-A-8.
Walkway grating See Detail W
Light Fixture (If required)
1'-2'' standard aluminum grating, see Details T and T' ②.
Bottom of WF(A-N)4x1.79 and sign
Detail D
1'-4''   2'-0'' Standard Aluminum Grating   7½''   10¾''   6½''   6½''   1¼''
6'-0½''
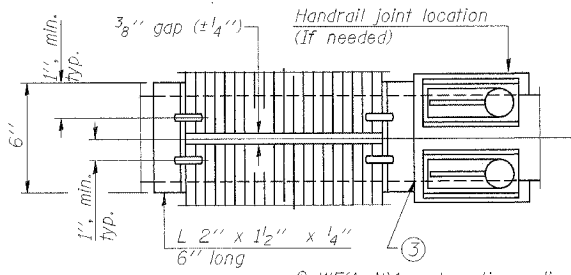
Sign shall be even with the top of the bracket, but it may extend no more than 6'' above the top of the bracket for field adjustments.

### DETAIL W
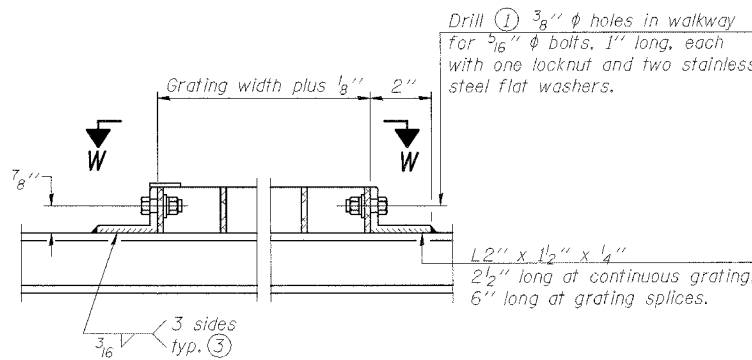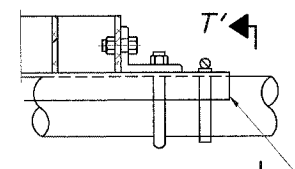(Walkway grating)

Grating width plus ⅛''   2''
Drill ① $\frac{3}{8}''$ φ holes in walkway for $\frac{5}{16}''$ φ bolts, 1'' long, each with one locknut and two stainless steel flat washers.
L2'' x 1½'' x ¼'', 2½'' long at continuous grating. 6'' long at grating splices.
3 sides typ. ③
$\frac{3}{16}$ V

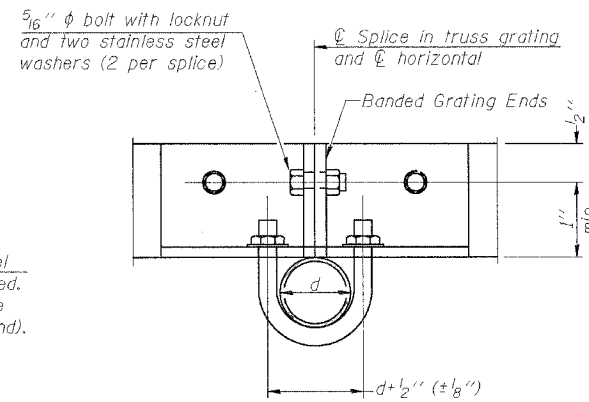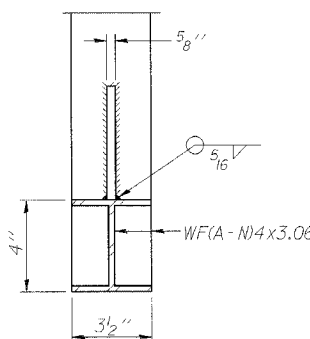### DETAIL T'
(Truss grating splice)
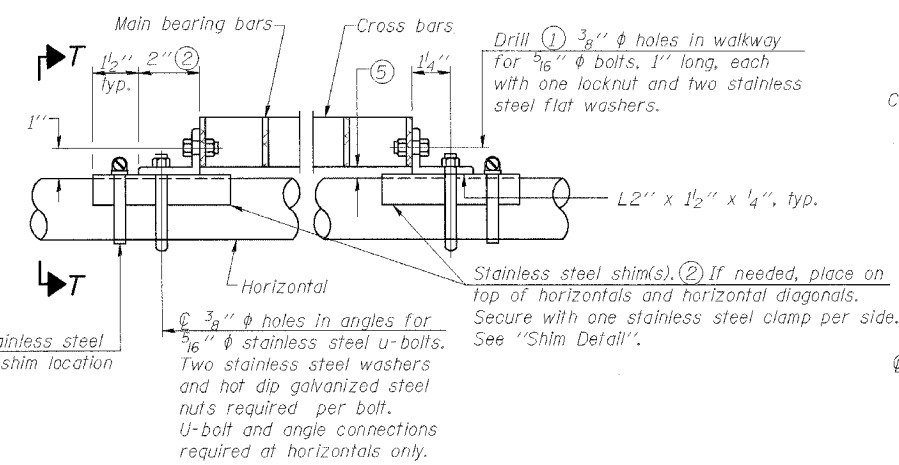Details not shown same as Detail T. Alternate materials may be used subject to the Engineer's review and approval.
Stainless Steel Shim, if needed, full width (one clamp each end).
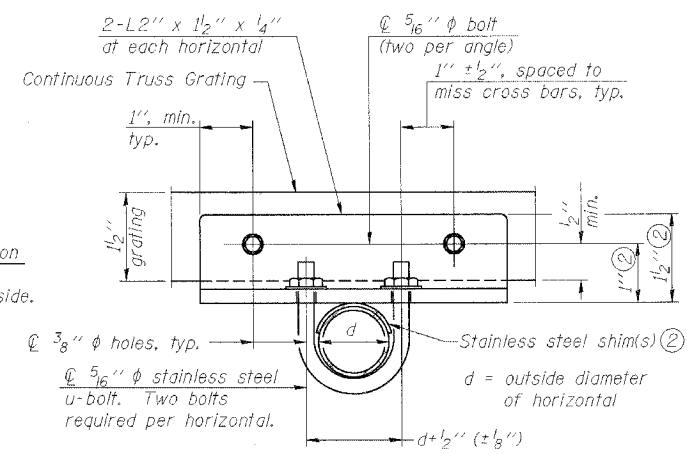
### SECTION T'-T'
$\frac{5}{16}''$ φ bolt with locknut and two stainless steel washers (2 per splice)
℄ Splice in truss grating and ℄ horizontal
Banded Grating Ends
d+½'' (±⅛'')

### SECTION D-D
$\frac{5}{8}''$
$\frac{5}{16}$ V
WF(A-N)4x3.06
4''
3½''

### DETAIL T
(Continuous Truss grating)

Main bearing bars
Cross bars
Drill ① $\frac{3}{8}''$ φ holes in walkway for $\frac{5}{16}''$ φ bolts, 1'' long, each with one locknut and two stainless steel flat washers.
L2'' x 1½'' x ¼'', typ.
Horizontal
Stainless steel shim(s). ② If needed, place on top of horizontals and horizontal diagonals. Secure with one stainless steel clamp per side. See "Shim Detail".
℄ $\frac{3}{8}''$ φ holes in angles for $\frac{5}{16}''$ φ stainless steel u-bolts. Two stainless steel washers and hot dip galvanized steel nuts required per bolt. U-bolt and angle connections required at horizontals only.
Screw type stainless steel tube clamp at shim location
½'' 2'' ②   1'' typ.   1¼''

### SECTION T-T
2-L2'' x 1½'' x ¼'' at each horizontal
Continuous Truss Grating
℄ $\frac{5}{16}''$ φ bolt (two per angle) 1'' ±½'', spaced to miss cross bars, typ.
℄ $\frac{3}{8}''$ φ holes, typ.
℄ $\frac{5}{16}''$ φ stainless steel u-bolt. Two bolts required per horizontal.
Stainless steel shim(s) ②
d = outside diameter of horizontal
d+½'' (±⅛'')

### DETAIL D
$\frac{5}{8}''$ x 5'' plate
$\frac{5}{16}$   60°
WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6
No back gouge
5''   1   1

### SHIM DETAIL
$\frac{1}{16}$ or 16 ga. ②
ELEVATION   END VIEW
4''   2''
R = bend to match tube (approximately)

### Notes

① Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.

② Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.

③ If Handrail Joint present, weld angle to WF(A-N)4 and ¼'' extension bars. (See Base Sheet OSC-A-8.)

④ ℄ ⅛'' x ½'' x 2'' welded to handrail posts to protect locations that contact grating.

⑤ Tube to grating gap may vary from 0 to ½'', max. to align walkway, allow for camber, etc.

| NUMBER | REVISION | DATE |
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OSC-A-7   6/01/2007
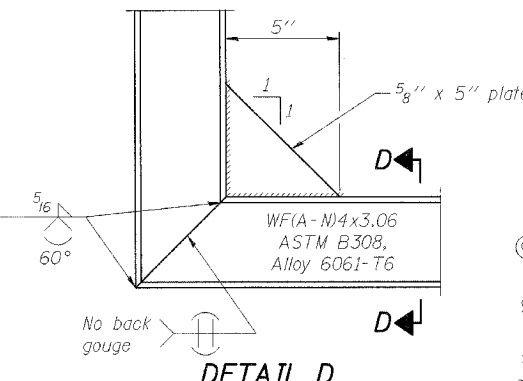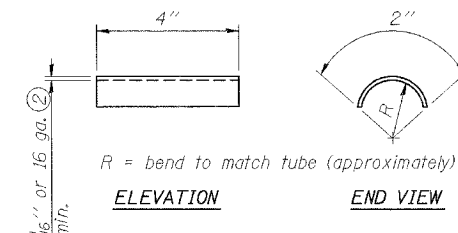
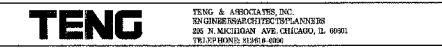| Structure Number | Station | A | B | C | D |
|---|---|---|---|---|---|
| 1C099I055R250.46 | 63+00 | 7'' | 5'-9'' | 5'-6'' | 11'-9'' |
| 1C099I055R250.76 | 79+00 | 7'' | 5'-9'' | 5'-6'' | 11'-9'' |
| 1C099I055L250.93 | 88+00 | 7'' | 4'-6'' | 5'-6'' | 10'-6'' |

| REVISIONS | |
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| NAME | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI 55 AT FAP 338 ILLINOIS ROUTE 59
SECTION: (26, 26HB-1 & 114) R-2

WALKWAY DETAILS
ALUMINUM TRUSS & STEEL POST

DRAWN BY: MDB
DATE: 03/14/08   CHECKED BY:

TENG
TENG & ASSOCIATES, INC.
ENGINEERS-ARCHITECTS-PLANNERS
205 N. MICHIGAN AVE. CHICAGO, IL 60601
TELEPHONE: 312/616-0000