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<th>LI (FT.)</th>
<th>L2 (FT.)</th>
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<th>WEIGHT (LBS.)</th>
<th>G (IN.)</th>
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TOTAL 767.25

POST QUANTITIES

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SPECIFIC NOTE:
1. Constant includes stub post weight

GENERAL NOTES:
1. Pile shall be the same size as the sign post and is to be driven to c 12 to 14 ton bearing capacity.
2. See sheets 48 and 49 for Structural Details, Type A Signs (Breakaway).
3. Post lengths are approximate.
4. "X" is the distance from the edge of the thru lane to the first post.
5. "H" is the height above the pavement edge to the bottom edge of panel.
6. P is the length of H-pile post.
7. See sheet 71 for cross section.
8. See sheet 27-29 for sign panels.

A SIGN DATA SHEET

DRAWN BY: CHECKED By RAS CERTIFIED BY: Michael D. Under LIC NO. 10502 DATE 2/5/2013 STATE PROJ NO. SHEET NO. 3 OF 73 SHEETS
## SIGN PANELS TYPE C

### SIGN PANELS TYPE C B

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**TOTAL:** 856.50

### SPECIFIC NOTES:
1. Mounting height is minimum, see sheet 51 for Typical Mounting.
2. For punching and mounting details, see sheet 52.
3. Mounted back to back.
4. Mounted in concrete, see sheet 47.
5. Mounted on bridge median Island, see sheet 54.
6. Mounted on bridge rail, see sheet 55.

### GENERAL NOTES:
1. Post lengths are approximate and include embedment but do not include additional length required for splice.
2. See sheets 50-52 for structural details.

---

**C SIGN DATA SHEET**

**DRAWN BY:**
**CHECKED BY:**
**CERTIFIED BY:**
**LIC. NO.:** 10502
**DATE:** 2/21/2013
**STATE PROJ. NO.:**
**SHEET NO.:** 4 of 73 SHEETS
### SIGN PANELS TYPE D

<table>
<thead>
<tr>
<th>SIGN NO.</th>
<th>QUANT.</th>
<th>PANEL NO. &amp; TYPE</th>
<th>POSTS</th>
<th>KNEE BRACES QUANT.</th>
<th>KNEE BRACES FT. (L)</th>
<th>SPACING FT. (IN.)</th>
<th>WGT. HT. FT. (T)</th>
<th>PANEL WHT.</th>
<th>TOTAL AREA (SQ. FT.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-1</td>
<td>2</td>
<td>2-U</td>
<td>2</td>
<td>16</td>
<td>42</td>
<td>7</td>
<td>12 x 60</td>
<td>30.00</td>
<td>60.00</td>
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<tr>
<td>D-2</td>
<td>1</td>
<td>2-U</td>
<td>2</td>
<td>18</td>
<td>42</td>
<td>7</td>
<td>12 x 84</td>
<td>42.00</td>
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<tr>
<td>D-3</td>
<td>1</td>
<td>2-U</td>
<td>2</td>
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<td>D-4</td>
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<td>2</td>
<td>18</td>
<td>42</td>
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<td>12 x 84</td>
<td>42.00</td>
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<td>D-5</td>
<td>1</td>
<td>2-U</td>
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<td>18</td>
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<td>12 x 84</td>
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<td>D-6</td>
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<td>18</td>
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<td>84.00</td>
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<td>2</td>
<td>17</td>
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<td>96 x 48</td>
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<td>D-9</td>
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<td>42 x 54</td>
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<td>D-11</td>
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<td>2-U</td>
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<td>2</td>
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<td>54 x 66</td>
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**SUB TOTAL:** 531.25
# SIGN PANELS TYPE D

<table>
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<tr>
<th>SIGN NO.</th>
<th>QUANT.</th>
<th>NO- Type</th>
<th>KNEE BRACES QUANT.</th>
<th>LEN. (IN.)</th>
<th>SPACING (IN.)</th>
<th>MFG HT. (FT.)</th>
<th>PANEL</th>
<th>PANEL LEGEND</th>
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<tr>
<td>0-16</td>
<td>1</td>
<td>2-U</td>
<td>2</td>
<td>19</td>
<td>54</td>
<td>7</td>
<td>78 x 78</td>
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<tr>
<td>0-17</td>
<td>1</td>
<td>2-U</td>
<td>2</td>
<td>18</td>
<td>30</td>
<td>7</td>
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<tr>
<td>0-18</td>
<td>1</td>
<td>2-U</td>
<td>2</td>
<td>16</td>
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<td>7</td>
<td>108 x 36</td>
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<tr>
<td>0-19</td>
<td>1</td>
<td>2-U</td>
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<td>2</td>
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<td>7</td>
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<td>17</td>
<td>66</td>
<td>7</td>
<td>108 x 54</td>
<td>40.50</td>
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</tbody>
</table>

**SUB TOTAL** 362.75

**TOTAL** 894.00

**SPECIFIC NOTE:**
1. Mounting height is minimum, see sheet 51 for typical mounting.
2. Mounted on bridge rail, see sheet 55.

**GENERAL NOTES:**
1. Post lengths are approximate and include embedment, but do not include additional length required for splice.
2. See sheets 50 to 52 for structural details.
4. See sheets 30-35 for sign panels.
### SIGN PANELS TYPE EA

<table>
<thead>
<tr>
<th>SIGN NO.</th>
<th>QUANT.</th>
<th>LOCATION</th>
<th>PANEL</th>
<th>POSTS</th>
<th>LEGEND</th>
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**Total**

<p>| | | | | | |</p>
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### SIGN PANELS TYPE EO

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<th>PANEL</th>
<th>POSTS</th>
<th>LEGEND</th>
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</thead>
<tbody>
<tr>
<td>EO-1</td>
<td>4</td>
<td>GM 369-494(L), GM 371-494, GM 372-494(R), GM 373-494(R)</td>
<td>96 x 30</td>
<td>20.00</td>
<td>59.00</td>
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<tr>
<td>EO-2</td>
<td>4</td>
<td>GM 369-494(L), GM 370-494(R), GM 372-494(L), GM 373-494(L)</td>
<td>96 x 30</td>
<td>20.00</td>
<td>59.00</td>
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<tr>
<td>EO-3</td>
<td>1</td>
<td>GM 370-494(L)</td>
<td>78 x 30</td>
<td>16.25</td>
<td>48.75</td>
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</table>

**Total**

<p>| | | | | | |</p>
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</thead>
<tbody>
<tr>
<td></td>
<td>42.50</td>
<td></td>
<td></td>
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</tbody>
</table>

### GENERAL NOTES:

1. See sheets 36 for sign panels.
2. Post spacing may be varied to miss members of OH sign structures.
3. See sheets 36 and 37 for sign panels.
2. See roadway layouts for delineator and marker locations.

1. For Delineator and Marker placement, see sheet 46.

**GENERAL NOTES:**


(4) Attach to 3 lb/ft post (Mn/DOT 3401).

(3) See Standard Signs Manual for Clearance Marker X4-4 (12" x 36").


**SPECIFIC NOTES:**


3. See Standard Signs Manual for Clearance Marker X4-4 (12" x 36").

4. Attach to 3 lb/ft post (Mn/DOT 3401).


**OVERLAY, DELINEATOR & MARKER DATA SHEET**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>QUANT.</th>
<th>LOCATION</th>
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<tbody>
<tr>
<td>WHITE(X4-6)</td>
<td>34</td>
<td>EXIT NOSE</td>
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<tr>
<td>YELLOW(X4-6)</td>
<td>24</td>
<td>EXIT NOSE</td>
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<tr>
<td>(X4-2)</td>
<td>8</td>
<td>EXIT NOSE</td>
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<tr>
<td>(X4-4L)</td>
<td>3</td>
<td>ISLAND</td>
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### SIGN PANELS TYPE OH

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<th>SIGN NO.</th>
<th>LOCATION</th>
<th>PANEL</th>
<th>PANEL</th>
<th>PANEL</th>
<th>TOTAL AREA</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td>SIZE</td>
<td>AREA</td>
<td>SIZE</td>
<td>AREA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(IN.)</td>
<td>(SQ. FT.)</td>
<td>(IN.)</td>
<td>(SQ. FT.)</td>
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<tr>
<td>OH 1-77</td>
<td>NB</td>
<td>120 x 132</td>
<td>110.00</td>
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</tr>
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<td>OH 2-77</td>
<td>SB</td>
<td>120 x 108</td>
<td>90.00</td>
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<td>OH 3-77</td>
<td>NB</td>
<td>150 x 132</td>
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<td>144 x 114</td>
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<td>OH 4-77</td>
<td>SB</td>
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<td>EB</td>
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<td>70.00</td>
<td>210 x 114</td>
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<tr>
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<td>WB</td>
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<td>170.50</td>
<td>216 x 114</td>
<td>171.00</td>
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<tr>
<td>OH 371-494</td>
<td>WB</td>
<td>120 x 84</td>
<td>70.00</td>
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<tr>
<td>OH 372-494</td>
<td>WB</td>
<td>174 x 132</td>
<td>159.50</td>
<td>126 x 90</td>
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<tr>
<td>OH 373-494</td>
<td>WB</td>
<td>174 x 132</td>
<td>159.50</td>
<td>168 x 114</td>
<td>133.00</td>
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<tr>
<td>TOTAL</td>
<td></td>
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</table>

**GENERAL NOTE:**

1. See sheets 38-42 for sign panels.
GENERAL NOTES:

1. The subscript E on the post type denotes the post which has the hand hole and provisions for grounding, i.e. post type 3E.
2. Tabulated elevations and dimensions are approximate only. Fabrication dependent on these elevations and dimensions shall not be started until the Engineer has made final determination of them in the field.
3. Left and right designations are shown looking in direction of traffic flow.
4. See sheets 59 to 70 for details.
5. See sheets 72-73 for cross section.
GENERAL NOTES:
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE Gopher
  One Call Excavation Notice System (Phone 651-454-0002), Required
  By Minnesota Statute 216D, For All Utility Locations.
- NO UTILITIES WILL BE AFFECTED BY WORK ON THIS PROJECT.
- THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY
  LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO
  THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR
  THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

UTILITIES
THE FOLLOWING LIST SHOWS THE UTILITY COMPANIES WITHIN THE PROJECT LIMITS

- AT&T Broadband
- City of Apple Valley
- City of Eagan
- City of Mendota Heights
- Dakota County Highway Dept.
- Dakota Electric
- Northern Natural Gas
- Frontier Communications, Inc.
- Koch Pipeline Company, C.P.
- NCI Workcom Network Service, Inc.
- ONVOY
- Metropolitan Council (Transit)
- Metropolitan Council (Waste)
- WNDOT
- Mobile Pipe Line Company
- Xcel Energy
- Peoples Natural Gas
- Board of Water Commissioners of the City of St Paul
- Williams Energy Service

STATE PROJ. NO. 10502
SHEET NO. 11 OF 73 SHEETS
SEE SHEETS 23 & 24
FOR DIFFLEY RD SIGNING
BLOOMINGTON

SEE SHEET 46 FOR DELINEATION (PLAN A)

SEE SHEET 46 FOR DELINEATION (PLAN B)

CERTIFIED BY
LICENSED PROFESSIONAL ENGINEER

DRAWN BY
CHECKED BY: RAS

DATE: 2/5/2013

T. H. 494 STA. 470 + 00 - 485 + 00

STATE PROJ. NO. SHEET NO. 17 OF 73 SHEETS
SEE SHEET 46 FOR DELINEATION (PLAN A)

SEE SHEETS 25 & 26 FOR MINNESOTA 70 SIGNING
SEE SHEETS 25 & 26 FOR MINNESOTA 70 SIGNING
A-1: 12.0" Radius, 2.0" Border, White on Brown;
[Cliff Rd] E Mod; [1 ½] E Mod; [2 ¼] E Mod; [127th St] E Mod;

A-2: 6.0" Radius, 2.0" Border, White on Brown;
[Minnesota Zoo] E Mod; [NEXT RIGHT] E Mod.

SEE SHEET 29 FOR NOTES

DRAWN BY: CHECKED BY: RAS
CERTIFIED BY: Michael W. Link
LICENSE NO. 10502
DATE: 2/5/2013

STATE PROJ. NO. SHEET NO. 27 OF 73 SHEETS
A-3; 12.0" Radius, 3.0" Border, White on Green;
[Rock Creek] E Mod; [Grantsburg] E Mod; [1 MILE] E Mod;

A-4; 12.0" Radius, 2.0" Border, White on Green;
[59] E Mod;
NOTES:

1. Corners of the sign panels extending beyond the border shall not be trimmed.
D-19; 3.0" Radius, 1.0" Border, White on Green;
Arrow 5 - 13.0" 180°; [Grantsburg] E Mod; [Rock Creek] E Mod;
Arrow 5 - 13.0" 0°;

D-20; 6.0" Radius, 1.3" Border, White on Green;
[JCT] E Mod;

SEE SHEET 35 FOR NOTES

TYPE D SIGN PANELS
NOTES:

D-26; 6.0" Radius, 1.3" Border, White on Green;
Arrow 14 - 18.0' 90°; [St Paul] E Mod; [Minneapolis] E Mod; [Duluth] E Mod;
Arrow 5 - 15.0' 0°;

D-25; 9.0" Radius, 1.5" Border, White on Green;
Arrow 5 - 13.0' 90°; [SOUTH] E Mod; [NORTH] E Mod;
Arrow 5 - 13.0' 0°;
NOTE:
1. Corners of the sign panels extending beyond the border shall not be trimmed.

EXIT 165

EA-1; 6.0" Radius, 2.0" Border, White on Green;
(EXIT 165) E Mod;
NOTE:
1. Corners of the sign panels extending beyond the border shall not be trimmed.

EO-1: 6.0" Radius, 2.0" Border, White on Green;
[EXIT 7A] E Mod;

EO-2: 6.0" Radius, 2.0" Border, White on Green;
[EXIT 7B] E Mod;

EO-3: 6.0" Radius, 2.0" Border, White on Green;
[EXIT 8] E Mod;
OH 1-77:
12.0" Radius, 2.0" Border, White on Green;
[Diffley] E Mod; [Rd] E Mod;
(EXIT 1 MILE) E Mod;

OH 2-77:
12.0" Radius, 2.0" Border, White on Green;
[Cliff Rd] E Mod; [EXIT 1 MILE] E Mod;
OH 3-77(R) & OH 4-77;
12.0" Radius, 2.0" Border, White on Green;
[Difflley] E Mod; [Rd] E Mod; Arrow 17 - 36.0" 60°;

SEE SHEET 42 FOR NOTES
NOTES:
1. Corners of the sign panel extending beyond the border shall not be trimmed.

TYPE OH SIGN PANELS

CERTIFIED BY

LICENSED PROFESSIONAL ENGINEER

DATE 2/5/2013

DRAWN BY

CHECKED BY:

OF 73 SHEETS

STATE PROJ. NO. 10502
NOTE: ALL DIMENSIONS AND SIZES SHOWN ARE IN INCHES.

- Use appropriate numerals. - Min. (MN/OT 3552.24@).
- Plate material: - Min. (MN/OT 3552.24@).
- Green background: - Min. (MN/OT 3552.24@).
- White numerals or letters: - Min. (MN/OT 3552.24@).

1. Diameter of 6" bolt (3/4" x 0.03" Min.)
2. Stainless steel strap
3. Galvanized or stainless steel bracket, bolt and washer.

STRAP MOUNTING DETAIL
1. If a secondary sign is mounted below a major sign, the major sign shall be at least 8' above the pavement edge and the secondary sign at least 5'.

2. All route markers, warning and regulatory signs shall be at least 6' above pavement edge except where heavy pedestrian traffic is encountered they shall be 7'.

3. Sign faces shall be vertical.

4. Overhead signs shall be positioned at right angles to the thru roadway unless otherwise noted.

5. To avoid specular glare, θΔ shall be approximately 93° for signs located less than 30' from the edge of pavement and approximately 9° for signs located 30' or more from edge of pavement. This applies to signs type A, C, & D and includes signs in the gore.

6. (H) is the perpendicular distance from the ground line to the friction fuse on the post. This distance shall be at least 7'.

7. Where "H" is less than 30', "H" shall be 7.45'. Where "H" is 30' or greater, minimum and preferred "H" is 5'.

8. Lateral clearances given apply to right and or left side installation.

9. When a type A sign is installed directly behind traffic barrier, the left edge of the sign panel shall be located a minimum of 4 feet behind the face of the traffic barrier.
STANDARD SIGN PLACEMENT
REGULATORY, WRONG WAY, AND EXCLUSION SIGNS
ON FREEWAY DIAMOND INTERCHANGE RAMPS

ONE WAY
ONE WAY
ONE WAY

ADDITIONAL SIGN REQUIRED WHEN RAMPS ARE 3 LANES OR WIDER
NOTE: CORE OR PREFORM A 6" (1/2") DIAMETER HOLE FOR EACH POST.

FLANGED CHANNEL POST MOUNTED THROUGH SURFACED MEDIAN OR SIDEWALK
**H-PILE FOOTING**

**SITE PROJ. NO.**

**STATE PROJ. NO.**

**SHEET NO.** 48 OF 73 SHEETS

**Revised 9-10-01**

**BOLT SIZES AND TORQUE**

- **M5**: Bolt with heavy hex, nut & 3 washers with each bolt, see table for bolt diameter and torque. See bolting procedure.

**GROUND LINE**

**BASE PLATE**

**STIFFENER PLATE**

**SIGN POST AND STUB POST ELEVATION**

**KEEPER PLATE**

**FUSION DETAIL**

**MAXIMUM PROJECTION OF STUB POST SHALL NOT EXTEND BEYOND A LINE, ABOVE AND 4'' PARALLEL TO ANY CHORD, WHICH IS PERPENDICULAR TO OR ALIGNED RADIAL TO THE CENTERLINE OF THE HIGHWAY AND HAS ITS (THE CHORD'S) END POINTS ON THE GROUND SURFACE ON OPPOSITE SIDES OF THE STUD POST.**

**SPECIFIC NOTES:**

1. MEASURE FROM TOP OF BASE PLATE
2. OLD BEAM DEPTH = 10'', NEW REVISED BEAM DEPTH = 9-3/8''. KEEPER PLATES MUST BE FABRICATED ACCORDINGLY

**TYPE A SIGN STRUCTURAL DETAILS**

**H-PILE FOOTING**

**SHEET 1 OF 2**

**DIMENSION**

- BOLT SIZE
- BASE CONNECTION DATA
- FUSE AND HINGE PLATE DATA
- FOOTING DATA

**POST SIZE**

- W4x13
- W5x16
- W6x20
- W8x24
- WBx28
- WBx31
- W12x39

**DIA.**

- 3/8''
- 5/8''
- 3/4''
- 1-1/2''

**LENGTH**

- 3-1/4''
- 4-1/4''
- 5-1/4''
- 6-1/4''

**FOOTING DATA**

- M1: WASHER AREA
- M2: BASEPLATE AREA
- M3: PLATE AREA
- M4: HOLE AREA
- M5: TOTAL AREA

**FOOTING DATA**

- W12x39

**BOLTING PROCEDURE - BASE CONNECTION**

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND NUTS AND THREE WASHERS ON EACH BOLT BETWEEN PLATES.
2. ASSEMBLE KEEPER PLATE TO BASEPLATE AND FIXTURE PLATE TO SIGN POST AND STUB POST.
3. BUTTON ALL BOLTS THE PRESCRIBED TORQUE, SEE TABLE.
4. BOLT ALL BOLTS THE MAXIMUM POSSIBLE WITH 12'' OR 15'' BARRELS TO BAR BOLTS AND NUTS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TIGHTNESS, SEE TABLE.

**BOLTING PROCEDURE - SIGN POST TO STUB POST**

1. ASSEMBLE SIGN POST TO STUD POST WITH BOLTS AND NUTS AND THREE WASHERS ON EACH BOLT BETWEEN PLATES.
2. ASSEMBLE SIGN POST TO STUD POST WITH BOLTS AND NUTS AND THREE WASHERS ON EACH BOLT BETWEEN PLATES.
3. BUTTON ALL BOLTS THE PRESCRIBED TORQUE, SEE TABLE.
4. BOLT ALL BOLTS THE MAXIMUM POSSIBLE WITH 12'' OR 15'' BARRELS TO BAR BOLTS AND NUTS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TIGHTNESS, SEE TABLE.
NOTE: POST CLIPS SHALL BE INSTALLED ON BOTH SIDES OF EACH POST AT EACH PANEL JOINT AS INDICATED.

SECTION F-F

BOLT SIZE MIN. RESIDUAL BOLT TENSION

1/2"-014, 12,050#
5/8"-014, 19,200#
3/4"-014, 28,400#
7/8"-014, 39,250#
1"-014, 51,500#
1-1/4"-014, 66,450#

GENERAL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO MN/DOT 3308.
   HIGH STRENGTH BOLTS SHALL CONFORM TO A.S.T.M.-A325.
   SPIRALS SHALL CONFORM TO MN/DOT 3305-NO SPLICES.

2. FORMS WILL BE REQUIRED FOR THE EXPOSED VERTICAL SURFACES OF THE FOOTINGS.

3. REFER TO "SIGN DATA" SHEET FOR SPECIFIC DATA ON SURFACES OF THE FOOTINGS.

4. FRICTION FUSE PLATE SHALL BE INSTALLED ON SIDE OF EACH INDIVIDUAL SIGN INSTALLATION.

5. ALL POST CUTS SHALL BE SAW CUTS, PLATES MAY BE SHEARED OR FLAME CUT USING A MECHANICALLY GUIDED CUTTING TORCH. EDGE PREPARATION SHALL BE IN ACCORDANCE WITH MN/DOT 2471.3C4.

NOTE: ALL FRICTION FUSE BOLTS SHALL BE TORQUE WRENCH TIGHTENED IN THE FIELD IN THE PRESENCE OF THE ENGINEER OR HIS REPRESENTATIVE. NUTS SHALL HAVE BEEN RETAPPED AND BOLT THREADS SHALL HAVE BEEN CLEANED WITH A 1/4" OVERSIZED RETREADING DIE AFTER GALVANIZING. BEFORE TIGHTENING MAY BEGIN, THE TORQUE WRENCH SHALL BE CALIBRATED USING A BOLT-TENSION-CALIBRATOR USING TYPICAL BOLT-NUT-WASHER ASSEMBLIES OF EACH SIZE AND LOT TO BE USED. AS TO SHOW THE TORQUE NECESSARY TO OBTAIN THE FOLLOWING MINIMUM RESIDUAL TENSION IN EACH BOLT.

12,050# 19,200# 28,400# 39,250# 51,500# 56,450#
NOTES:
1. USE 3" STUB POSTS, RISER POSTS, STRINGERS, KNEE BRACES, LATERAL BRACES AND KNEE BRACE STUB POSTS. ALL SHALL CONFORM TO MN/DOT 3401.
2. FOR TYPE D SIGN POSTS LENGTHS AND SPACINGS, SEE SIGN DATA SHEET.
3. TYPE D SIGN PANELS SHALL BE BOLTED TO STRINGERS AT 24" MAXIMUM INTERVALS IN ACCORDANCE WITH THE TYPE D STRINGER AND PANEL-JOINT DETAIL (SEE STANDARD SIGNS MANUAL).
4. MOUNTING (PUNCH CODE) FOR TYPE C SIGN PANELS SHALL BE AS INDICATED IN THE STANDARD SIGNS MANUAL UNLESS OTHERWISE SPECIFIED.
5. ALL RISER (VERTICAL) U POSTS SHALL BE SPLICED. DRIVEN STUB POSTS SHALL BE AT LEAST 7' LONG.
6. USE STAINLESS STEEL 1/2" BOLTS, WASHERS AND NYLON INSERT LOCK NUTS AS SHOWN FOR ALL GROUND MOUNTED AND OVERHEAD MOUNTED SIGNS.
7. STAINLESS STEEL WASHER WITH SAME DIMENSIONS SHALL BE PROVIDED BETWEEN ALL NYLON WASHERS AND BOLT HEADS.
8. BRACING STUBS SHALL BE NO MORE THAN 4" ABOVE GROUND AND EMBEDDED AT LEAST 3'/4".
9. A-FRAME BRACKET SHALL BE STEEL CONFORMING TO MN/DOT 3306 AND GALVANIZED IN ACCORDANCE WITH MN/DOT 3394.
10. COLLARS SHALL BE USED TO SHIM OVERLAYS AND DEMOUNTABLE LEGEND AWAY FROM PANEL WHERE INTERFERENCE WITH BOLT HEADS IS ENCOUNTERED.
11. 2 POST TYPE C SIGNS SHALL BE REINFORCED WITH AT LEAST ONE LATERAL BRACE. INSTALLATIONS WHERE THE TOTAL PANEL HEIGHT IS 60" OR MORE SHALL HAVE TWO LATERAL BRACES LOCATED APPROXIMATELY AT THE QUARTER POINTS.
12. WHERE 2 SINGLE POST TYPE C SIGNS ARE INSTALLED SIDE BY SIDE, THEY SHALL BE REINFORCED LATERALLY BY AT LEAST 2 BRACES BOLTED AT EACH POST AND LOCATED APPROXIMATELY AT THE QUARTER POINTS.
13. WHERE 3 OR MORE TYPE C SIGNS ARE INSTALLED SIDE BY SIDE, THEY SHALL BE REINFORCED LATERALLY BY AT LEAST 2 BRACES BOLTED AT EACH POST AND POST SECTION AND LOCATED APPROXIMATELY AT THE QUARTER POINTS AS SHOWN IN MODIFIED TYPE C INSTALLATION.
**MOUNTING**

- R6-1, R1-1 & (R6-3 OR R6-30)
  - Punching for R6-1(48"x18")
  - Punching for R6-1(36"x12")

- M1-1 [45"x36" OR 36"x36"
  - Punching for R6-3 or R6-3A(30"x24")

- M3-1A [24"x15"] OR M3-1A [20"x15"] OR M3-3A OR M3-3A[24"x12"] AND M3-1 [48"x24"
  - Punching for R2-4b

- Type C & D Sign

**Structural Details**

- Punching for M2-1A [24"x20"] OR M3-1A, M3-2A, M3-2A, M3-3A OR M3-3A[24"x20"] AND M3-1 [48"x18"
  - Punching for M3-1A, M3-2A, M3-2A, M3-3A OR M3-3A[24"x12"] AND M3-1 [48"x18"

- Punching for M3-1A, M3-1A, M3-2A, M3-2A, M3-3A OR M3-3A[24"x12"] AND M3-1 [48"x18"
  - Punching for M3-1A, M3-2A, M3-2A, M3-3A OR M3-3A[24"x12"] AND M3-1 [48"x18"

- Punching for M3-1A, M3-2A, M3-2A, M3-3A OR M3-3A[24"x12"] AND M3-1 [48"x18"

**STATE PROJ. NO.**

**SHEET NO. 52**

**OF 73 SHEETS**
DETAIL A STRINGER ALTERNATES

1. FOR DETAILS AND NOTES NOT SHOWN SEE "C" & "D" SIGN DETAILS.
2. FOR BACK TO BACK MOUNTINGS, ROTATE STRINGERS FOR ONE PANEL 180° FROM WHAT IS SHOWN SUCH THAT PANELS CAN BE MOUNTED AT SAME ELEVATION.
3. DETAIL A STRINGER MAY BE ONE OF THE THREE DESIGNS DETAILED OR AN APPROVED EQUAL.

TYPE C SIGNS MOUNTED ON O-POSTS, OH SIGN POSTS OR SIGNAL STANDARDS

NOTES:

STATE PROJ. NO.:
SHEET NO. 53 OF 73 SHEETS

Revised 3-13-00
SEE TYPE C SIGNS SHEET 53.

VIEW A-A

2" I D GALV. SEAMLESS STRUCTURAL STEEL PIPE (MN/DOT 3362)

MEDIAN ISLAND ON BRIDGE

PIPE SLEEVE SEE BRIDGE PLAN

PIPE STOP

ELEVATION

NOTES:
FOR NOTES AND DETAILS NOT SHOWN, SEE TYPE C & D SIGN DETAILS - SHEETS 50-52.

TYPE C SIGNS MOUNTED ON BRIDGE MEDIAN ISLAND

Revised 9-20-00

STATE PROJ. NO. SHEET NO. 54 OF 73 SHEETS
**Type C & D Signs**

Mounted on Bridge Rail

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**TABLE “A”**

<table>
<thead>
<tr>
<th>SIGN NO.</th>
<th>X (IN.)</th>
<th>Y (IN.)</th>
<th>Z (IN.)</th>
<th>L (FT.)</th>
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<tr>
<td>C-25</td>
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<td>D-15</td>
<td>8</td>
<td>42</td>
<td>48</td>
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**NOTES:**

1. All pipe material shall conform to ASTM Designation A53, Grade B, Schedule 40.
2. All steel for structural items shall conform to MVDOT 3306 (Structural Steel) unless otherwise noted.
3. For Notes and Details not shown, see Type C and D Sign Details.
**SPECIFIC NOTES:**

1. SEE SIGN DATA SHEET FOR NUMBER AND SPACING OF POSTS. SPACING AND LOCATION CAN BE ADJUSTED WHERE NECESSARY.
2. POST CLIPS SHALL BE INSTALLED ON BOTH SIDES OF EACH POST AT EACH PANEL JOINT AS INDICATED.

**GENERAL NOTE:**

1. TYPE EA OR EO SIGN PANEL SHALL BE LEFT JUSTIFIED FOR LEFT EXITS AND RIGHT JUSTIFIED FOR RIGHT EXITS ON TYPE A OR OH SIGN PANEL.
**GENERAL NOTE:**
1. For details and reinforcements not shown see standard sign sheet ST-5.

**SPECIFIC NOTES:**
1. ½" bituminous felt joint if adjacent pavement is concrete.
2. *13 S-bars placed symmetrical about the centerline of the post, bend in the field to fit.
3. All quantities depend upon field verification of footing elevations.

---

### ADDITIONAL REINFORCEMENT

<table>
<thead>
<tr>
<th>NO. OF BARS</th>
<th>LENGTH (FT)</th>
<th>WEIGHT (LBS)</th>
<th>BAR SPACING</th>
<th>CONCRETE (CU.YD.)</th>
<th>POST STEEL</th>
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<tbody>
<tr>
<td>*13 BARS A' LONG</td>
<td>8</td>
<td>6.92</td>
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<td>5 SPACES 12&quot;=3'-0&quot;</td>
<td>SPACE</td>
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<td>*13 BARS B' LONG</td>
<td>8</td>
<td>6.50</td>
<td>35</td>
<td>5 SPACES 12&quot;=3'-0&quot;</td>
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<tr>
<td>TOTAL</td>
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---

**MEDIAN BARRIER FOOTING**

(Spread)
NOTES:
1. ALL STRUCTURAL STEEL PER Mn/DOT 3306.
   GALVANIZED PER MnDOT 3394.
2. ALL FASTENERS PER A325.
   GALVANIZED PER Mn/DOT 3392.
3. HB-HEX BOLT.
4. HDG-HOT DIP GALVANIZED.

SAFETY CABLE FOR OH SIGNS
DESIGN B

STATE PROJ. NO.  SHEET NO. 58 OF 73 SHEETS
SPECIFIC NOTES:

1. Dimension Y is constant and based on the deepest sign panel above that walkway, when standard sign panels and CMS are mounted on the same span, dimension Y shall be governed by the CMS.

2. Minimum clearance will be measured from the highest elevation of fiber optic, illumination, and movable poles, or if insurmountable curbs are used, the highest elevation between curb lines.

GENERAL NOTES:

DESIGN SPECIFICATIONS:

TRUSS, POST, & HARDWARE:

AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS DATED 1999.

LOADING:

Wind load 90 M.P.H. normal to sign face in combination with other loads outlined in the design specifications.

UNIT STRESSES:

MATERIALS:

FINISH:

1. CMS EXCEPT Mn/DOT 3392 OR Mn/DOT 3394 as applicable.

2. Circular Mn/DOT 2461 (mix 3Y43) TYPE 1, STEEL.

3. FEDERAL SPECIFICATIONS RR-G-661b.

4. Mn/DOT 3301.

5. Mn/DOT 3322.

6. Mn/DOT 3385.

7. Mn/DOT 3391.2B.

8. Mn/DOT 3392.

9. Mn/DOT 3393.

10. Mn/DOT 3394.

11. Mn/DOT 2471.

12. Mn/DOT 2564 and the applicable special provisions.

13. Mn/DOT 2471, Mn/DOT 2564 and the applicable special provisions.

14. All components shall be galvanized after fabrication, except reinforcement bars, lower portion of anchor rods, aluminum, and other non ferrous materials, galvanizing shall conform to Mn/DOT 3393 and Mn/DOT 3394 as applicable. Bearing surfaces must be smooth.

15. Fabrication of structural metals shall be in accordance with Mn/DOT 2471, Mn/DOT 2564 and the applicable special provisions.

16. All mating to be continuous. All contact surfaces must be completely sealed.

17. Inspection and after galvanizing per Mn/DOT 1501 and Mn/DOT 2471.
**CANTILEVER SPAN**

**TABLE 1 - POST IDENTIFICATION**

<table>
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<th>POST IDENTIFICATION NUMBER</th>
<th>POST IDENTIFICATION DESIGN</th>
<th>MIN. YIELD, IN.</th>
<th>MIN. TENSION, TST</th>
<th>OUTSIDE WALL DIAMETER, IN.</th>
<th>THICKNESS, IN.</th>
<th>THICKNESS, IN.</th>
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<td>2.85</td>
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</tbody>
</table>

**POST IDENTIFICATION NOTES**

POST MATERIAL SHALL CONFORM TO ONE OF THE FOLLOWING SPECIFICATIONS:

- ASTM A53, Grade B
- ASTM A709, Grade 36

CONTRACTOR SHALL PREPARE THE POST IDENTIFICATION TABLE DESIGN THAT THE POST MATERIAL MEETS THE REQUIREMENTS OF ONE OF THE ABOVE SPECIFICATIONS AND THE MINIMUM YIELD STRENGTH.

NO SPAXELS OR ANY KIND WILL BE PERMITTED IN POSTS INTENDED FOR USE IN CANTILEVER TRUSS STRUCTURES (BRIDGE TYPE BC).

ONE OF TWO POSTS FOR SIMPLE SPAN STRUCTURES (BRIDGE TYPE A) MAY INCLUDE ONE MELODIOUS CIRCUMFERENTIAL POST SPAXEL CONFORMING TO A Post Design R A2 in the Upper 1/3 of the Post Length. Back-Up Rings for These Welded Splasels Shall Be Commercial Products, But Welds Require Radiographic Inspection ASTM/ASME 2479B.

ALL RADIOGRAPHIC INSPECTIONS AND MAGNETIC PARTICLE TESTING REPORTS AND RADIOGRAPHIC FILMS SHALL BECOME THE PROPERTY OF THE DEPARTMENT.

SEE DRAWING ST-4 FOR BASEPLATE DETAILS.

**WALKWAY SUPPORT QUANTITIES**

QUANTITIES INCLUDE ANCHORAGE ASSEMBLY AND TRUSS CONNECTION PLATES. PAY LENGTH OF POSTS FROM THE BOTTOM OF THE BASE PLATE ELEV. TO THE TOP OF THE TRUSS. POST QUANTITIES ARE BASED ON GRADE 35 STEEL, NO ADJUSTMENTS WILL BE MADE IN THE QUANTITIES FOR THE USE OF GRADE 50 STEEL POSTS.

**REVIEWED 12/23/99**
DRAWING ST-5

INTERIM DESIGN B

STANDARD OVERHEAD SIGN SUPPORTS

TRUSS TYPE A

SIGN TRUSS DETAILS

NOTES:

- ALL SECTIONS SHALL BE MADE IN MULTIPLES OF 6'-0", EXCEPT THOSE SHOWN TO BE CANTILEVERED. WHERE A SINGLE UNIT LENGTH IS NOT POSSIBLE, A SECTIONS SHALL BE SUPPLIED AS A SINGLE UNIT LENGTH AS POSSIBLE.
- NECESSARY. CHORD LENGTHS EXCEEDING 40'-0" MAY BE
- SUPPLIED AS SHOWN, BUT END BRACING PANEL MAY BE COMPLETE PENETRATION, WITH DOUG-1 AND 1-WASH TESTED PER 2471.3M.

- UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE 100% UT AND MT TESTING PER 2471.3M.
- CHORD SPLICE WELD SHALL BE COMPLETE PENETRATION, SPICED, AS SHOWN, IN THE END BRACING PANEL ONLY.
- WELDED CHORD SPLICES ARE NOT PERMITTED EXCEPT IN CANTILEVERED TRUSSES AS NOTED BELOW.
- BEING LIMITED TO PRODUCE STRUT BA AS INDICATED WHERE THE WALKWAY IS OMITTED, PROVIDE FOR WALKWAY ATTACHMENT.

- THE WALKWAY SUPPORT IS SHOWN TO BE CANTILEVERED END OF CHORDS.
- MAY BE SINGLE UNIT WHENEVER POSSIBLE. WHEN CANTILEVER TRUSSES SHALL BE SUPPLIED AS A COMPLETE PANEL.
- ENTERPRISE. TRUSSES SHALL BE SHOP ASSEMBLED AND MATCHED TO BRING TRUSS INTO CORRECT CAMBER AND ALIGNMENT.
- PROVIDE 2'-6" BRASS, STAINLESS STEEL OR STEEL WELD SIMILAR TO ST. WELDS ARE TO BE MACHINED TO MATCH MARKED.

- ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT. SEE DRAWING ST-4 FOR POST CONNECTION DETAILS.

- PROVIDE 3'-0" SPACING AT 60" INTERIOR MARKS, 3'-0" TYPICAL SPACING 6'-0", EXCEPT THAT THE BRACING PANEL NEAREST EACH POST MAY VARY TO MAKE UP THE NEEDED SECTION LENGTH. WELDED CHORD SPLICES ARE NOT PERMITTED EXCEPT IN CANTILEVERED TRUSSES AS NOTED HEREIN.

- CANTILEVER TRUSSES SHALL BE SUPPLIED AS A SINGLE UNIT LENGTH AS POSSIBLE. WHEN CANTILEVER TRUSSES LENGTH EXCEEDS ADJUSTMENTS MAY BE SUPPLIED AS SHOWN. WELDED CHORD SPACES MAY BE COMPLETE PENETRATION, WITH DOUG-1 AND 1-WASH TESTED PER 2471.3M.
- UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE 100% UT AND MT TESTING PER 2471.3M.
- CHORD SPLICE WELD SHALL BE COMPLETE PENETRATION, SPICED, AS SHOWN, IN THE END BRACING PANEL ONLY.
- TRUSS LENGTH EXCEEDS 40'-0" CHORDS MAY BE CANTILEVER END OF CHORDS.
- BEING LIMITED TO PRODUCE STRUT BA AS INDICATED WHERE THE WALKWAY IS OMITTED, PROVIDE FOR WALKWAY ATTACHMENT.

- PROVIDE 2'-6" BRASS, STAINLESS STEEL OR STEEL WELD SIMILAR TO ST. WELDS ARE TO BE MACHINED TO MATCH MARKED.

- ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT. SEE DRAWING ST-4 FOR POST CONNECTION DETAILS.

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- PROVIDE 2'-6" BRASS, STAINLESS STEEL OR STEEL WELD SIMILAR TO ST. WELDS ARE TO BE MACHINED TO MATCH MARKED.

- ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT. SEE DRAWING ST-4 FOR POST CONNECTION DETAILS.

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- UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE 100% UT AND MT TESTING PER 2471.3M.
- CHORD SPLICE WELD SHALL BE COMPLETE PENETRATION, SPICED, AS SHOWN, IN THE END BRACING PANEL ONLY.
- TRUSS LENGTH EXCEEDS 40'-0" CHORDS MAY BE CANTILEVER END OF CHORDS.
- BEING LIMITED TO PRODUCE STRUT BA AS INDICATED WHERE THE WALKWAY IS OMITTED, PROVIDE FOR WALKWAY ATTACHMENT.

- PROVIDE 2'-6" BRASS, STAINLESS STEEL OR STEEL WELD SIMILAR TO ST. WELDS ARE TO BE MACHINED TO MATCH MARKED.

- ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT. SEE DRAWING ST-4 FOR POST CONNECTION DETAILS.

- PROVIDE 3'-0" SPACING AT 60" INTERIOR MARKS, 3'-0" TYPICAL SPACING 6'-0", EXCEPT THAT THE BRACING PANEL NEAREST EACH POST MAY VARY TO MAKE UP THE NEEDED SECTION LENGTH. WELDED CHORD SPLICES ARE NOT PERMITTED EXCEPT IN CANTILEVERED TRUSSES AS NOTED HEREIN.

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- PROVIDE 2'-6" BRASS, STAINLESS STEEL OR STEEL WELD SIMILAR TO ST. WELDS ARE TO BE MACHINED TO MATCH MARKED.

- ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT. SEE DRAWING ST-4 FOR POST CONNECTION DETAILS.

- PROVIDE 3'-0" SPACING AT 60" INTERIOR MARKS, 3'-0" TYPICAL SPACING 6'-0", EXCEPT THAT THE BRACING PANEL NEAREST EACH POST MAY VARY TO MAKE UP THE NEEDED SECTION LENGTH. WELDED CHORD SPLICES ARE NOT PERMITTED EXCEPT IN CANTILEVERED TRUSSES AS NOTED HEREIN.

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- UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE 100% UT AND MT TESTING PER 2471.3M.
- CHORD SPLICE WELD SHALL BE COMPLETE PENETRATION, SPICED, AS SHOWN, IN THE END BRACING PANEL ONLY.
- TRUSS LENGTH EXCEEDS 40'-0" CHORDS MAY BE CANTILEVER END OF CHORDS.
STANDARD OVERHEAD SIGN SUPPORTS
TRUSS TYPE C

SIGN TRUSS DETAILS

**TOP VIEW**

- **WELDED BUTT SPLICE PERMITTED ON CANTILEVER**
- **END OF CANTILEVER LARGER THAN 30'-0"**

**ELEVATION**

- **6'-0" TYPICAL SPACING**
- **3'-0" TYPICAL SPACING**

**SECTION A-A**

- **PLATE F**

**SECTION B-B**

- **TOP VIEW**

**SECTION C-C**

- **PLATE F**

**NOTES:**

- **TRUSSES SHOULD BE SUPPLIED AS A SINGLE UNIT WHENEVER POSSIBLE**
- **CANTILEVER TRUSSES SHALL BE SUPPLIED AS A SINGLE UNIT WHENEVER POSSIBLE**
- **TRUSSES LENGTHS EXCEEDING 60'-0" MIGHT BE SPACED AS SHOWN IN THE END BRACING PANEL ONLY**
- **SIMPLE SPANS**
- **CANTILEVER SPANS**
- **ALL OTHER DETAILS SHOWN ARE FOR THE FREE ENDS OF THE CANTILEVER SPANS. ALL OTHER DETAILS FOR CANTILEVER TRUSSES SHALL BE AS SHOWN FOR THE SIMPLE SPANS.**

**BOTTOM VIEW**

- **CANTILEVER END**

**BOTTOM VIEW SIMPLE SPAN**

- **TYPICAL SPACING**
- **6'-0" TYPICAL SPACING**
- **3'-0" TYPICAL SPACING**

**WALKWAY SUPPORT CONNECTIONS AT 6'-0" CTRS.**

**DETAILS FOR CANTILEVER TRUSSES SHALL BE SHOP ASSEMBLED AND MATCHED**

**ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT.**

**SEE DRAWING ST-3 FOR POST CONNECTION DETAILS.**

**REVISED 2/8/00**

**STATE PROJ. NO.**

**SHEET NO. 65 OF 73 SHEETS**
MOUNTING DETAILS FOR SIGN LIGHTING

NOTES:
1. SEE SPECIAL PROVISIONS FOR SIGN LIGHTING FIXTURE REQUIREMENTS.
2. HIGH IMPACT RESISTANT POLYCARBONATE SHIELD SHALL BE PROVIDED FOR ALL SIGN LIGHTING FIXTURES INSTALLED ON TYPE OH SIGNS (BRIDGE MOUNTED).
3. WIRING BETWEEN THE SIGN POST AND THE SAFETY SWITCH SHALL BE RUN IN ½" R.S.C.

ELECTRICAL SERVICE CONNECTION FROM POST TO TRUSS

SIGN LIGHTING CIRCUIT

SECTION A-A

INSTALL A SAFETY SWITCH ON THE VERTICAL WALKWAY SUPPORT BETWEEN THE SIGN POST AND FIRST LIGHTING FIXTURE TO TURN OFF ALL THE FIXTURES IN THE CIRCUIT.

SIDE VIEW

FACE OF SIGN PANEL

SIGN TRUSS

TYPE "LB" CONDUIT FITTING PLUG UNUSED OPENINGS

SUPPORT THE ½" DIAM. CONDUIT TO BOTTOM OF WALKWAY GRATING BY MEANS OF A L-BOLT WITH A FLAT PLATE.

DRILL ½" DIAM. HOLE IN CONDUIT COVER FOR DRAIN.

POST WITHOUT HANDHOLES

POST WITH HANDHOLES

ELECTRICAL DETAILS

DRAWING ST-11

STANDARD OVERHEAD SIGN SUPPORTS INTERIM DESIGN B

REVISED 12/21/99

STATE PROJ. NO. SHEET NO. 69 OF 73 SHEETS
240/480 V. CIRCUIT

TYPICAL CIRCUIT DIAGRAMS

120/240 V. CIRCUIT

ELECTRICAL DETAILS

1. WHEN SIGN LIGHTING SYSTEMS HAVE BEEN COMPLETED, THE CONTRACTOR SHALL, WITHOUT FURTHER COMPENSATION, CONDUCT BURNING AND RESISTANCE TESTS FOR FINAL ACCEPTANCE. THE RESISTANCE TO GROUND OF EACH UNGROUNDED CONDUCTOR SHALL BE NOT LESS THAN 8 MEGOHMS.

2. ALL FITTINGS, HUBS, UNIONS, BUSHINGS, ETC., SHALL BE SUPPLIED AS PART OF CONDUIT. CONDUIT ENTERING SIGN POSTS SHALL HAVE INSULATED GROUNDING BUSHINGS INSTALLED BEFORE PULLING WIRE.

3. CONDUIT ON STRUCTURE SHALL BE SURFACE MOUNTED, STRAPPED AT EVERY ANGLE BRACE WITH U-BOLT TYPE CLAMPS.

4. SUCCESSIVE LIGHTING FIXTURES SHALL BE CONNECTED ON ALTERNATE SIDES OF THE 3-WIRE CIRCUIT.

5. THE CABLE SHEATH SHALL EXTEND AT LEAST 4" ABOVE THE TOP OF THE CONDUIT END AND THE TAPE ARMOR OF ARMORED CABLE SHALL BE CONNECTED TO THE GROUNDING BOLT IN THE SIGN POSTS.

6. WIRING FROM THE SAFETY SWITCH TO LIGHTING FIXTURES SHALL BE 1/C NO. 12 AWG AND SHALL BE RUN IN 3/4" R.S.C. ALL SPIKING SHALL BE ACCOMPLISHED WITH A WIRE NUT AND WATERPROOF COATING, ALL CONDUIT CONNECTIONS SHALL BE RAIN TIGHT.
SIGN A-1
SB T.H. 77
STA. 369+00

POST TYPE W6X20
POST LENGTH L1 16.0 FT.
POST LENGTH L2 18.0 FT.
PILE FOOTING P 12.0 FT.

SB T.H. 77
EL. = 100.00

SB T.H. 77
EL. = 100.00

DC T.D. 1/2
2 1/4
27th St
3

CERTIFIED BY
LICENSED PROFESSIONAL ENGINEER

DRAWN BY:
CHECKED BY: RAS

OF 73 SHEETS

STATE PROJ. NO.
SHEET NO. 71 OF 73 SHEETS
1. Low steel is bottom of panel mounting posts on the tallest panel.
2. Structure is designed for future walkway.
NOTES:
1. LOW STEEL IS BOTTOM OF PANEL MOUNTING POSTS ON THE TALLEST PANEL.
2. STRUCTURE IS DESIGNED FOR FUTURE WALKWAY.