# Illinois Tollway Base Sheet Revisions

## Section M  Base Sheet Drawings

<table>
<thead>
<tr>
<th>Drawing</th>
<th>Modification Summary</th>
<th>Effective: 03-01-2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-OHS-720</td>
<td>OVERHEAD SIGN STRUCTURE SPAN TYPE SUMMARY AND TOTAL BILL OF MATERIAL</td>
<td>Update barrier shape to constant slope</td>
</tr>
<tr>
<td>M-OHS-722</td>
<td>OVERHEAD SIGN STRUCTURE ENTRANCE MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND TOTAL BILL OF</td>
<td>Update barrier shape to constant slope</td>
</tr>
<tr>
<td>M-OHS-723</td>
<td>OVERHEAD SIGN STRUCTURE EXIT MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND TOTAL BILL OF MATERIAL</td>
<td>Update barrier shape to constant slope</td>
</tr>
<tr>
<td>M-OHS-725</td>
<td>OVERHEAD SIGN STRUCTURE ENTRANCE MONOTUBE TYPE (STEEL) AET RAMP SUMMARY AND TOTAL BILL OF</td>
<td>Update barrier shape to constant slope</td>
</tr>
<tr>
<td>M-OHS-726</td>
<td>OVERHEAD SIGN STRUCTURE EXIT MONOTUBE TYPE (STEEL) AET RAMP SUMMARY AND TOTAL BILL OF</td>
<td>Update barrier shape to constant slope</td>
</tr>
<tr>
<td>M-OHS-727</td>
<td>OVERHEAD SIGN STRUCTURE MONOTUBE TYPE (STEEL) CASH-IPO RAMP SUMMARY AND TOTAL BILL OF</td>
<td>Update barrier shape to constant slope</td>
</tr>
<tr>
<td>M-OHS-729</td>
<td>OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE-SPAN STRUCTURE DETAILS SHEET 2</td>
<td>Increase base plate opening so that the 6&quot; typ. Dimension in the Base Plate Plan is now 3&quot; typ. Increase base plate thickness to 3&quot; to accommodate a larger opening Revised Structure Design Manual and Geotechnical Engineering Manual to the latest editions</td>
</tr>
<tr>
<td>M-OHS-729</td>
<td>OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE-SPAN STRUCTURE DETAILS SHEET 3</td>
<td>Increase the opening in the splice plate so that the bottom is in line with the bottom of the horizontal frame beam Increase opening of corner stiffener plate from 12&quot; to 18&quot; square hole and thickness from 3/4&quot; to 1&quot; Increase opening of horizontal and vertical stiffener plate from 12&quot; to 16&quot; square hole and thickness from 3/8&quot; to 1/2&quot; Increase handhole detail size from 7.5&quot;x12&quot; to 9&quot;x12&quot;</td>
</tr>
<tr>
<td>M-OHS-729</td>
<td>OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE-SPAN STRUCTURE DETAILS SHEET 5</td>
<td>Added IDOT to reference to the Standard Specification in note 4</td>
</tr>
<tr>
<td>M-OHS-729</td>
<td>OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE-SPAN STRUCTURE DETAILS SHEET 6</td>
<td>Added IDOT to reference to the Standard Specification in note 4</td>
</tr>
<tr>
<td>M-OHS-729</td>
<td>OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE-SPAN STRUCTURE DETAILS SHEET 8</td>
<td>Update barrier shape and details for constant slope</td>
</tr>
<tr>
<td>M-OHS-730</td>
<td>OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS SHEET 2</td>
<td>Increase base plate opening so that the 6&quot; typ. Dimension in the Base Plate Plan is now 3&quot; typ. Increase base plate thickness to 3&quot; to accommodate a larger opening Revised design specifications to the latest editions Added IDOT to reference to the Standard Specification in reinforcement bars note 1</td>
</tr>
<tr>
<td>M-OHS-730</td>
<td>OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS SHEET 3</td>
<td>Increase the opening in the splice plate so that the bottom is in line with the bottom of the horizontal frame beam Increase opening of corner stiffener plate from 12&quot; to 18&quot; square hole and thickness from 3/4&quot; to 1&quot; Increase opening of horizontal and vertical stiffener plate from 12&quot; to 16&quot; square hole and thickness from 3/8&quot; to 1/2&quot; Increase handhole detail size from 7.5&quot;x12&quot; to 9&quot;x12&quot;</td>
</tr>
<tr>
<td>M-OHS-730</td>
<td>OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS SHEET 4</td>
<td>Increase opening of vertical stiffener plate from 12&quot; to 16&quot; square hole and thickness from 3/8&quot; to 1/2&quot;</td>
</tr>
<tr>
<td>M-OHS-730</td>
<td>OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS SHEET 6</td>
<td>Added IDOT to reference to the Standard Specification in note 4</td>
</tr>
<tr>
<td>M-OHS-730</td>
<td>OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS SHEET 7</td>
<td>Added IDOT to reference to the Standard Specification in note 4</td>
</tr>
<tr>
<td>M-OHS-730</td>
<td>OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS SHEET 9</td>
<td>Update barrier shape and details for constant slope</td>
</tr>
</tbody>
</table>
**NOTE TO DESIGNER**

This base sheet shows a typical non-standard structure and is not standard issue. It requires completion by the designer prior to insertion into a contract. Abbreviation fields are not standard and are not shown in the Illinois Tollway Manual. The designer shall accept the responsibility of the design of this sheet and its completion and insertion into a contract. All work to be performed shall be performed prior to inspection of the sheet into the plan set.

SITE GROUNDING ELECTRICAL SYSTEM TO BE PROVIDED AS DETAILED, REFERENCE SITE SHEET-M709.

Installations not within dimensional limits shown require special analyses for all components.

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEA RANCE REQUIREMENTS.

**NOTE:**

WORK THIS SHEET WITH STANDARD F4

---

### SUMMARY

<table>
<thead>
<tr>
<th>STRUCTURE NUMBER</th>
<th>STATION</th>
<th>DESIGN TYPE</th>
<th>L</th>
<th>ELEV. A</th>
<th>PROPOSED MINIMUM VERTICAL CLEARANCE</th>
<th>D</th>
<th>M</th>
<th>H</th>
<th>MATERIAL OR SELECTED SIZE</th>
<th>TOTAL</th>
<th>FOUNDATION FOR OVERHEAD SIGN STRUCTURE</th>
<th>REINFORCEMENT BARS, EPOXY COATED</th>
<th>PROTECTIVE COAT (SQ.YD.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL BILL OF MATERIAL**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OVERHEAD SIGN STRUCTURE, CANTILEVER TYPE (STEEL)</td>
<td>FOOT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OVERHEAD SIGN STRUCTURE, CANTILEVER TYPE (STEEL)</td>
<td>FOOT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FOUNDATION FOR OVERHEAD SIGN STRUCTURE, CANTILEVER TYPE</td>
<td>CUBIC YD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>REINFORCEMENT BARS, EPOXY COATED</td>
<td>POUND</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PROTECTIVE COAT</td>
<td>SQ.YD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SIGN STRUCTURE WALKWAY</td>
<td>FOOT</td>
<td></td>
</tr>
</tbody>
</table>
NOTE TO DESIGNER

THESE SHEETS SHOW TYPICAL NEW CONSTRUCTION BUT IT IS NOT CONSIDERED DRAWING, IT IS MEANT FOR ILLUSTRATION AND AS A GUIDELINE. IT MUST BE FURNISHED AS PER THE ILLINOIS TOLLWAY DESIGN MANUAL. ALL DESIGNER VOLUNTARY TO PROVIDE THE DESIGNER WITH THE RESPONSIBILITY OF THE DESIGN AND COMPLETION OF THE DESIGN INTO A CONTRACT. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN AND COMPLETION OF THE DESIGN INTO A CONTRACT. THE DESIGNER SHALL NOT BE LIABLE FOR THE DESIGNS PROVIDED.

NOTE TO DESIGNER

THESE SHEETS SHOW TYPICAL NEW CONSTRUCTION BUT IT IS NOT CONSIDERED DRAWING, IT IS MEANT FOR ILLUSTRATION AND AS A GUIDELINE. IT MUST BE FURNISHED AS PER THE ILLINOIS TOLLWAY DESIGN MANUAL. ALL DESIGNER VOLUNTARY TO PROVIDE THE DESIGNER WITH THE RESPONSIBILITY OF THE DESIGN AND COMPLETION OF THE DESIGN INTO A CONTRACT. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN AND COMPLETION OF THE DESIGN INTO A CONTRACT. THE DESIGNER SHALL NOT BE LIABLE FOR THE DESIGNS PROVIDED.

NOTE TO DESIGNER

THESE SHEETS SHOW TYPICAL NEW CONSTRUCTION BUT IT IS NOT CONSIDERED DRAWING, IT IS MEANT FOR ILLUSTRATION AND AS A GUIDELINE. IT MUST BE FURNISHED AS PER THE ILLINOIS TOLLWAY DESIGN MANUAL. ALL DESIGNER VOLUNTARY TO PROVIDE THE DESIGNER WITH THE RESPONSIBILITY OF THE DESIGN AND COMPLETION OF THE DESIGN INTO A CONTRACT. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN AND COMPLETION OF THE DESIGN INTO A CONTRACT. THE DESIGNER SHALL NOT BE LIABLE FOR THE DESIGNS PROVIDED.
AET RAMP ENTRANCE MONOTUBE PLAN

AET RAMP ENTRANCE MONOTUBE ELEVATION

NOTE TO DESIGNER

This base sheet shows typical new construction but it is not standard drawing. It requires completion by the designer prior to insertion into a contract. Specification rules and the "Standards Manual" are available on the Illinois Tollway website. The designer shall accept the responsibility of the design of this sheet upon its completion and insertion into a contract. All "Note to Designer" notes shall be removed prior to insertion of the sheet and the plan set.

Replace this "Note to Designer" with the grounding electrode system detail.

See the Illinois Tollway Structure Design Manual for minimum vertical clearance.

The grounding electrode system to be provided as detailed. Reference base sheet M-ITS-1101.

TOTAL BILL OF MATERIAL

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OVERHEAD SIGN STRUCTURE, AET RAMP ENTRANCE MONOTUBE TYPE (STEEL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FOUNDATION FOR OVERHEAD SIGN STRUCTURE, RAMP MONOTUBE TYPE</td>
<td>SQ. YD.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CONCRETE STRUCTURES</td>
<td>CU. YD.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>REINFORCEMENT BARS, EPOXY COATED</td>
<td>POUNDS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PROTECTIVE COAT</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE:

Work this sheet with standard F15 Sheet 2 of Standard Fit

DATE: 3-01-2019
NOTE TO DESIGNER

THIS SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IS NOT STANDARD DRAWING. IT REQUIRED COMPLETION BY THE DESIGN PRIOR TO INSERTION INTO A CONTRACT. SHEET STANDARD DRAWINGS ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN PRIOR TO INSERTION INTO A CONTRACT. ALL NOTE TO DESIGNER BOXES MIGHT BE REMOVED PRIOR TO INSERTION INTO THE SHEET INTO THE PLAN SET.

REPLACE THIS NOTE TO DESIGNER WITH SITE GROUNDING ELECTRODE SYSTEM DETAIL.

SEE THE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE.

NOTE TO DESIGNER

SHEET M-OHS-727 MONOTUBE TYPE (STEEL)

NOTE TO DESIGNER

SUMMARY

NOTE TO DESIGNER

TOTAL BILL OF MATERIAL

NOTE TO DESIGNER

TOTAL BILL OF MATERIAL

NOTE TO DESIGNER

TOTAL BILL OF MATERIAL
NOTES:
1. See Sheet 2 of this series for View A-A and design summary table.
2. Camber is provided at top of structure.
3. Prior to fabricating gantry frame, the contractor shall verify locations of lane control signs and Type 2 DMS with engineer.
4. Frame span shall be in the configuration shown with columns 1 and 2 columns.
5. Prior to fabricating gantry frame, the contractor shall field verify location of concrete median barrier transition on roadway cross-section.
6. This base sheet shows typical new construction but it is not standard. It provides completion of the structure prior to inspection and a contract. Specifications and the standard standards manual are available on the Illinois Tollway website. The designer shall accept the responsibility of the design of this sheet upon its completion and inspection and a contract. All work to designer base shall be removed prior to inspection of the sheet into the plan set.
7. See Sheet 6 of this series for Type II shoulder foundation.

NOTE TO DESIGNER:
This base sheet shows typical new construction but it is not standard. It provides completion of the structure prior to inspection and a contract, specifications and the standard standards manual are available on the Illinois Tollway website. The designer shall accept the responsibility of the design of this sheet upon its completion and inspection and a contract. All work to designer base shall be removed prior to inspection of the sheet into the plan set.

OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
SINGLE SPAN STRUCTURE DETAILS

MATERIAL SPECIFICATIONS FOR STRUCTURAL STEEL AND FASTENERS

<table>
<thead>
<tr>
<th>ELEMENT OF STRUCTURE</th>
<th>SPECIFICATION</th>
<th>F (KSI)</th>
<th>LBS/1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS/3 SQ YD HSS 30x30x0.625</td>
<td>ASTM A500 Grade C</td>
<td>50</td>
<td>62</td>
</tr>
<tr>
<td>FRAME COLUMN</td>
<td>ASTM A500 Grade D</td>
<td>46</td>
<td>58</td>
</tr>
<tr>
<td>TOP FLUSH F (KSI)</td>
<td>ASTM A500 Grade B</td>
<td>58</td>
<td>65</td>
</tr>
<tr>
<td>LOCK NUTS</td>
<td>ASTM A527 Type 1</td>
<td>--</td>
<td>105</td>
</tr>
<tr>
<td>WASHERS</td>
<td>ASTM A567</td>
<td>--</td>
<td>60</td>
</tr>
<tr>
<td>STEEL ANCHORS</td>
<td>ASTM A325</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Frame Column</td>
<td>ASTM A445</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>SHOAEDER</td>
<td>ASTM A193</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

BEAMS (HSS) STRUCTURAL STEEL TUBE (HSS) FRAME TABLE

<table>
<thead>
<tr>
<th>SPAN</th>
<th>FRAME COLUMN</th>
<th>FRAME BEAM</th>
<th>CAMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>40'-0&quot;</td>
<td>MS 28X24X6/25</td>
<td>MS 28X24X6/25</td>
<td>3/16&quot;</td>
</tr>
<tr>
<td>40'-0&quot;</td>
<td>MS 28X24X6/25</td>
<td>MS 28X24X6/25</td>
<td>5/16&quot;</td>
</tr>
<tr>
<td>40'-0&quot;</td>
<td>MS 30X25X6/25</td>
<td>MS 30X25X6/25</td>
<td>3/16&quot;</td>
</tr>
</tbody>
</table>
**GENERAL NOTES:**

1. All exposed concrete edges shall have a 3" x 45° chamfer. Exposed metal corners, channels, or welded edges shall be covered with a minimum of the top solid colored ground level.

**REINFORCEMENT BARS:**

1. Reinforcement bars, including reinforcement bars, made using smooth or deformed steel, shall conform to the requirements of ASTM Standard Specifications for Reinforcing Steel—Curved and Angle Deviation Diagram.

2. Reinforcement bars designed "X" shall be post-tensioned.


4. Reinforcement bars with holes shall be pass-throughive.

5. Cover from the face of the concrete to the face of reinforcement bars shall be 2" for all other surfaces unless otherwise shown.

6. Cover from the face of the concrete to the face of reinforcement bars shall be 2" for all other surfaces unless otherwise shown.

7. Cover from the face of the concrete to the face of reinforcement bars shall be 2" for all other surfaces unless otherwise shown.

8. Cover from the face of the concrete to the face of reinforcement bars shall be 2" for all other surfaces unless otherwise shown.

9. Cover from the face of the concrete to the face of reinforcement bars shall be 2" for all other surfaces unless otherwise shown.

10. Cover from the face of the concrete to the face of reinforcement bars shall be 2" for all other surfaces unless otherwise shown.

11. Cover from the face of the concrete to the face of reinforcement bars shall be 2" for all other surfaces unless otherwise shown.

12. Cover from the face of the concrete to the face of reinforcement bars shall be 2" for all other surfaces unless otherwise shown.

13. Cover from the face of the concrete to the face of reinforcement bars shall be 2" for all other surfaces unless otherwise shown.

14. Cover from the face of the concrete to the face of reinforcement bars shall be 2" for all other surfaces unless otherwise shown.

**CONSTRUCTION SPECIFICATIONS:**

1. Illinois Tollway Supplemental Specifications issued March 2019 to the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction.

2. Illinois Department of Transportation Supplemental Specifications and Recurring Specifications, Illinois Tollway Standard Specifications for Road and Bridge Construction.


**STANDARD SPECIFICATIONS:**


2. AASHTO LRFD Bridge Design Specifications, Sixth Edition with Current Interim Standards.


**DETAILED SPECIFICATIONS:**


2. AASHTO LRFD Bridge Design Specifications, Sixth Edition with Current Interim Standards.


**NOTE TO DESIGNER:**

1. **BASE PLATE TABLE - TYPE E**

<table>
<thead>
<tr>
<th>Span (ft)</th>
<th>&quot;D&quot;</th>
<th>&quot;E&quot;</th>
<th>x1</th>
<th>x2</th>
<th>Anchors Bolt Diameter</th>
<th>No. Anchor Bolt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0'0&quot;</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>4</td>
<td>5</td>
<td>5/16&quot;</td>
<td>20</td>
</tr>
<tr>
<td>3'-0&quot;</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>4</td>
<td>5</td>
<td>5/16&quot;</td>
<td>20</td>
</tr>
<tr>
<td>6'-0&quot;</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>4</td>
<td>5</td>
<td>5/16&quot;</td>
<td>20</td>
</tr>
<tr>
<td>9'-0&quot;</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>4</td>
<td>5</td>
<td>5/16&quot;</td>
<td>20</td>
</tr>
</tbody>
</table>

   NOTE: TYPE E IS ONLY APPLICABLE TO 4040+75.00 STATION CONNECTION. OTHERWISE, USE TYPE E, TYPE N. FIELD RECORD DIMENSIONS AND BOLTS SPACING PRIOR TO MOUNTING ADDITIONAL EQUIPMENT. REMOVE THIS TABLE AND NOTE IF NOT USED.

2. **BASE PLATE TABLE - TYPE N**

<table>
<thead>
<tr>
<th>Span (ft)</th>
<th>&quot;D&quot;</th>
<th>&quot;E&quot;</th>
<th>x1</th>
<th>x2</th>
<th>Anchors Bolt Diameter</th>
<th>No. Anchor Bolt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0'0&quot;</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>4</td>
<td>5</td>
<td>5/16&quot;</td>
<td>20</td>
</tr>
<tr>
<td>3'-0&quot;</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>4</td>
<td>5</td>
<td>5/16&quot;</td>
<td>20</td>
</tr>
<tr>
<td>6'-0&quot;</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>4</td>
<td>5</td>
<td>5/16&quot;</td>
<td>20</td>
</tr>
<tr>
<td>9'-0&quot;</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>4</td>
<td>5</td>
<td>5/16&quot;</td>
<td>20</td>
</tr>
</tbody>
</table>

   NOTE: TYPE N IS ONLY APPLICABLE TO 4040+75.00 STATION CONNECTION. OTHERWISE, USE TYPE E, TYPE N. FIELD RECORD DIMENSIONS AND BOLTS SPACING PRIOR TO MOUNTING ADDITIONAL EQUIPMENT. REMOVE THIS TABLE AND NOTE IF NOT USED.
SECTION K-K

VERTICAL SUPPORT TABLE

<table>
<thead>
<tr>
<th>Width</th>
<th>Number of Vertical Supports Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less Than</td>
<td>Equal To</td>
</tr>
<tr>
<td>8'-0&quot;</td>
<td>8'-0&quot;</td>
</tr>
<tr>
<td>14'-0&quot;</td>
<td>14'-0&quot;</td>
</tr>
<tr>
<td>20'-0&quot;</td>
<td>20'-0&quot;</td>
</tr>
<tr>
<td>26'-0&quot;</td>
<td>26'-0&quot;</td>
</tr>
</tbody>
</table>

NOTES:

1. CONNECTION DETAIL IS APPLICABLE TO DMS AND LANE CONTROL SIGN.
2. VERIFY VERTICAL SUPPORT MEMBER LENGTH PRIOR TO FABRICATION.
3. DMS MANUFACTURER AND LANE CONTROL SIGN MANUFACTURER SHALL DESIGN, PROVIDE AND INSTALL HORIZONTAL MOUNTING MEMBERS. VERTICAL SPACING BETWEEN HORIZONTAL MEMBERS MUST BE DESIGNED BY MANUFACTURER. VERIFY VERTICAL SPACING WITH Holes ON VERTICAL SUPPORT.
4. PROVIDE HIGH LENGTH BOLTS WITH WASHERS AND LOCK NUTS TO ATTACH DMS AND LANE CONTROL SIGN TO VERTICAL SUPPORT MEMBERS.
5. GALVANIZE ALL NON-STAINLESS STEEL PARTS.
7. LOCK NUTS SHALL BE STAINLESS STEEL, CONFORMING TO THE REQUIREMENTS OF ASTM A194 GRADE 8H.
8. BOLT DETAIL SIGN BRACKET ROD NOT SHOWN FOR CLARITY.

NOTE TO DESIGNER:

1. PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET EXPERTISE REQUIRED COMPLETION OF THE DESIGN PRIOR TO INSERTION INTO THE Plan SET. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED PRIOR TO INSERTION INTO A CONTRACT. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO THE PLAN SET.
2. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED PRIOR TO INSERTION INTO THE PLAN SET.

SINGLE SPAN OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS
SHOULDER FOUNDATION TYPE I

SHOULDER FOUNDATION TYPE II SCHEDULE

REINFORCENENT BAR SCHEDULE

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS
### General Notes
1. All exposed concrete edges shall have a 1" x 4" chamfer, except main gusset welds. Chamfers on internal edges shall be contoured to a minimum of the top yellow dashed ground level.
2. Reinforcement bars, including reinforcement steel, prestressing steel, and embeddable rebar, shall be contoured to the requirements of the AASHTO Standard Specifications for Highway Bridges and the AASHTO Standard Specifications for Structural Supports for Highway Signs, Railroads, and Rails.
3. Reinforcement bars designated "E" shall be epoxy-coated.
4. Reinforcement bars shall be used in accordance with the latest edition of the Illinois Department of Transportation Standard Specifications for Highway and Bridge Construction.
5. Reinforcement bars shall be ordered in the minimum quantity of steel required for the design.
6. Reinforcement bars used for connections are out-to-out.
7. Cover from the face of concrete to the face of reinforcement bars shall be 2" for surfaces formed against earth and 2" for all other surfaces except concrete.

### Construction Specifications
1. Illinois Tollway Supplemental Specifications issued March 2015 to the Illinois Department of Transportation Standard Specifications for Highway and Bridge Construction.
2. Illinois Department of Transportation Supplemental Specifications and Recurring Construction.
3. Illinois Tollway Standard Specifications for Road and Bridge Construction.

### Design Loading
- **Wind Load Criteria**
  - Basic Wind Speed: 100 mph
  - Wind Importance Factor: 1.0
  - Design Wind Pressure: 4-6 P.S.F.
  - Design Loading: 50 P.S.F.

### Equipment Loads
- **Lane Control Sign**
  - 460 lb. max., 0'-0" x 6'-1" x 1'-0" (max)

### Design Stresses for Reinforced Concrete

### Design Summary

### Base Plate Table - Type N

#### Design Loading
- **Wind Load Criteria**
  - Basic Wind Speed: 100 mph
  - Wind Importance Factor: 1.0

#### Equipment Loads
- **Lane Control Sign**
  - 460 lb. max., 0'-0" x 6'-1" x 1'-0" (max)

#### Design Stresses for Reinforced Concrete

#### Design Specification
5. AASHTO LRFD Bridge Design Specifications, Sixth Edition with current interim.

#### Design Loading
- Wind Load Criteria
  - Basic Wind Speed: 100 mph
  - Wind Importance Factor: 1.0
  - Design Wind Pressure: 4-6 P.S.F.
  - Design Loading: 50 P.S.F.

#### Equipment Loads
- Lane Control Sign
  - 460 lb. max., 0'-0" x 6'-1" x 1'-0" (max)

#### Design Stresses for Reinforced Concrete

#### Design Specification
5. AASHTO LRFD Bridge Design Specifications, Sixth Edition with current interim.

#### Design Loading
- Wind Load Criteria
  - Basic Wind Speed: 100 mph
  - Wind Importance Factor: 1.0
  - Design Wind Pressure: 4-6 P.S.F.
  - Design Loading: 50 P.S.F.

#### Equipment Loads
- Lane Control Sign
  - 460 lb. max., 0'-0" x 6'-1" x 1'-0" (max)

#### Design Stresses for Reinforced Concrete

#### Design Specification
5. AASHTO LRFD Bridge Design Specifications, Sixth Edition with current interim.
NOTE: WHEN INSPECTION ACCESS ALLOWED ON ONLY ONE SIDE OF MEMBER, PLACE HOLE ON SAME SIDE AS OTHER HANDHOLES.

NOTE: SEE SHEET 3 OF THIS SERIES FOR SECTION F-F.

NOTE TO DESIGNER:

THIS SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION OF THE DESIGN PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER MUST ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET AND VERIFY ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION INTO THE PLAN SET.
EXIT SIGN PANELS RETROFITTING NEW MOUNTING DETAILS FOR SIGN PANEL AREA.

Adequacy to support the additional shall be checked for structural existing truss and support members.

Exhibit notes:

1. All material is aluminum in accordance with Section 733 of the Latest Exit Standard Specifications, unless otherwise noted.
2. New sign support members shall be spaced with existing sign supports. Spacing shall not exceed 6'-0".
3. Standard shall also be utilized for retrofitting other sign panels with existing sign supports that do not conform to standard. New sign support members shall be within the unsupported height plus one foot.

Note to designer:

Existing signs and supports members shall be checked for structural adequacy to support the additional sign panel area.

Notes:

(1) A-N WF 4 x 1.79

PARTIAL REAR ELEVATION OF SIGN PANELS AND SUPPORT MEMBERS

MOUNTING DETAILS FOR RETROFITTING NEW EXIT SIGN PANELS

DATE

M-OMS-731