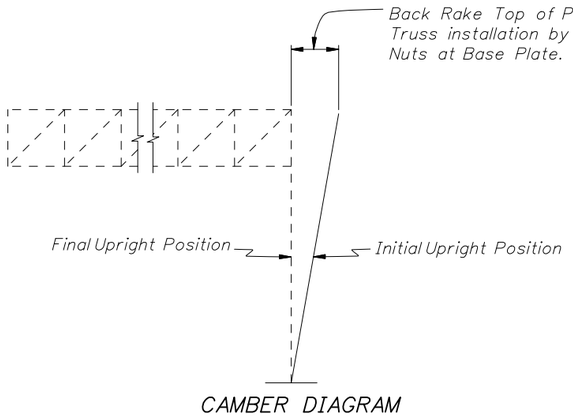
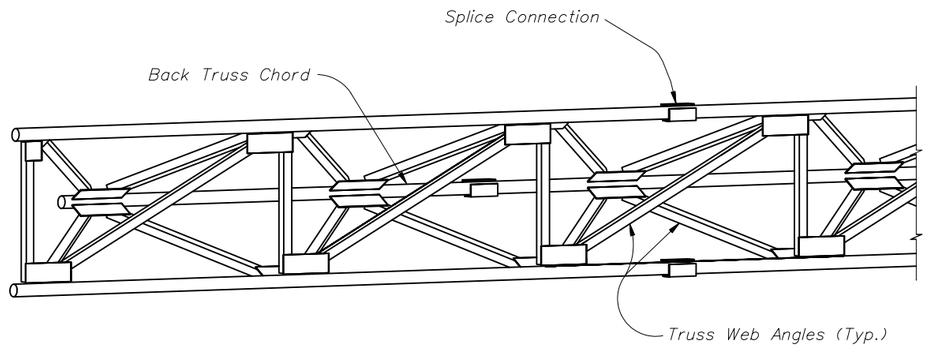
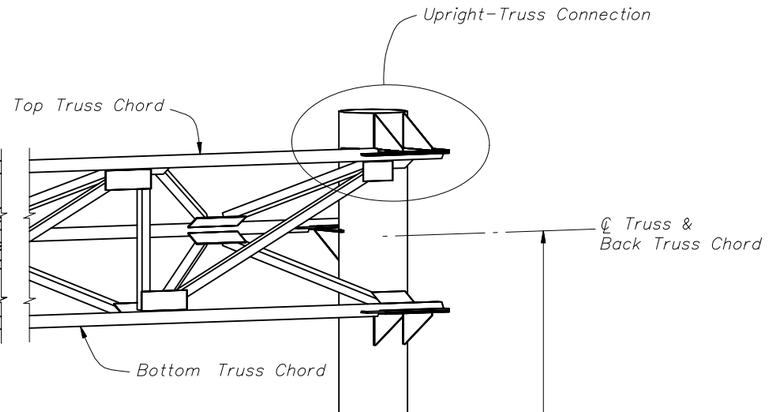


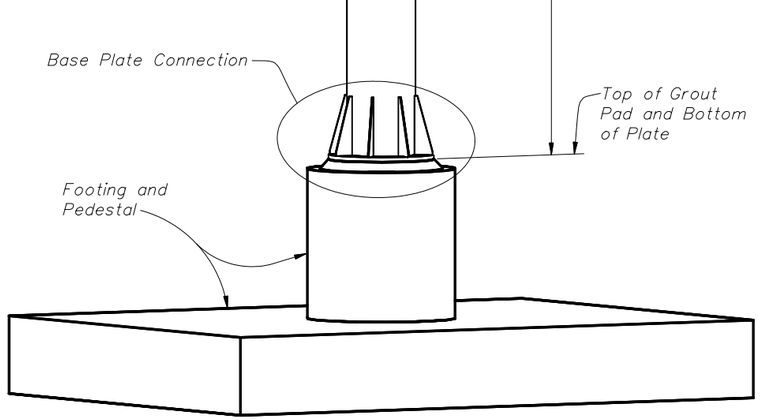
CAMBER DIAGRAM





CANTILEVER SIGN STRUCTURE NOTES

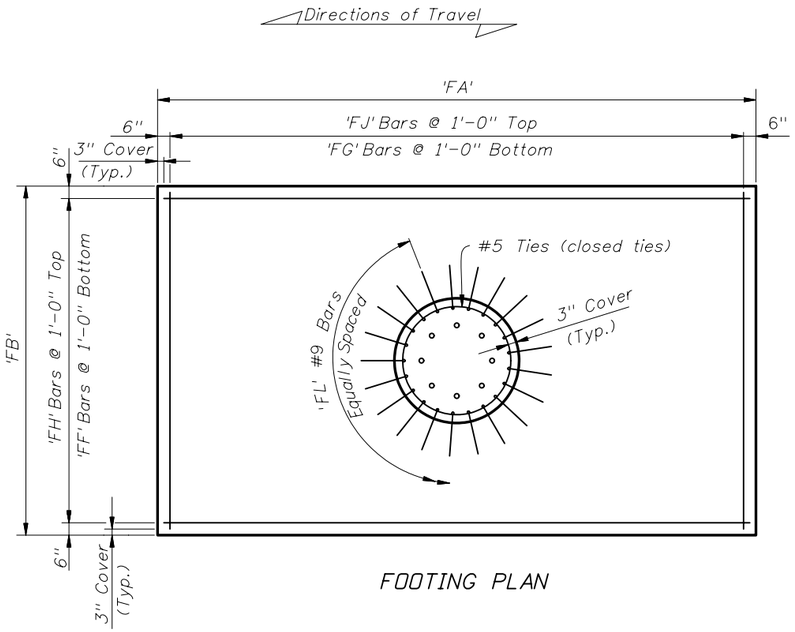
1) Design according to FDOT Structures Manual. Alternate Designs are not allowed.
2) Submit shop drawings for all work. Include:
   a. Field verification of all upright heights.
   b. Foundation elevations necessary to insure minimum vertical clearances as per traffic plans.
   c. Anchor bolt orientation with respect to centerline of truss and the direction of traffic.
   d. Show chord splices a minimum distance of 2 truss panel lengths apart. "SD" Panel from upright is the closet panel in which a chord splice may be used. See plans for Cantilever Sign Structure Data Table. Upright splices are not allowed.
3) Shop Fabrication, Assembly, Handling and Shipping:
   a. Do not begin fabrication before receiving shop drawing approval.
   b. Welding: Conform to American Welding Society Structural Welding Code (Steel) ANSI/AWS D1.1 (current edition).
   c. Shop assemble the entire structure after galvanizing and prior to shipment.
   d. If necessary, disassemble and secure components for shipment.
4) Sign Structure Materials:
   a. Upright and Chords (Steel Pipe): API -5L-X42 (42 ksi yield) or ASTM A500, Grade B.
   b. Steel Angles: ASTM A 709, Grade 36.
   c. Steel Plates: ASTM A 709, Grade 36.
   d. Weld Metal: E70XX.
   e. Bolts: ASTM A307 or ASTM A325 Type 1, (snug tight) with single, self-locking nuts or regular nuts with a galvanized, locking TRW "Palnut."
   f. Anchor Bolts: ASTM F1554, Grade 55 with ASTM A563 Grade A heavy-hex double nuts.
   g. Install all nuts per manufacturer's instructions.
   h. Bolt hole diameters: equal to the bolt diameter plus 1/16".
   i. Anchor bolt hole diameters: equal to the bolt diameter plus 1/2".
5) Galvanization; Nuts, bolts and washers: ASTM F2329. Other steel items: ASTM A123
6) Sign Panels: Aluminum. See Elevation drawing for sizes and locations.
7) Foundation Materials:
   a. Reinforcing Steel: ASTM A615, Grade 60.
   b. Concrete: Class IV, minimum 5.5 ksi compressive strength at 28-days for all environmental classifications.
   c. Grout: Minimum 5.0 ksi compressive strength at 28-days. Conform to Specification Section 934 using procedures outlined in Section 649-6.
8) Construct the Sign Structure foundation in accordance with FDOT Specification Section 455.
9) If a grout pad is not installed, place wire cloth screen vertically between the base plate and top of foundation, wrap horizontally around the base plate with a 3" min. lap. Use standard grade, plain weave, 2x2 mesh, galvanized steel wire-cloth with 0.063" dia. wire. Attach the screen to the base plate with stainless steel self-tapping 1/4" screws with stainless steel washers spaced at 9" centers.
10) Prior to erection, record the as-built anchor locations and provide to the Engineer.
11) After placement of the upright and prior to installation of the truss, adjust the leveling nuts beneath the base plate to achieve the back rake shown on the Camber Diagram.
12) Place backfill above the footing prior to installation of the sign panels. Do not remove or reduce in height without prior approval of the Engineer.
13) Install sign panels as shown on the Elevation drawing.
14) Payment: All costs associated with the Sign Structure, Sign Panels, Foundation and all incidental items will be paid for under the Sign Structure pay item.



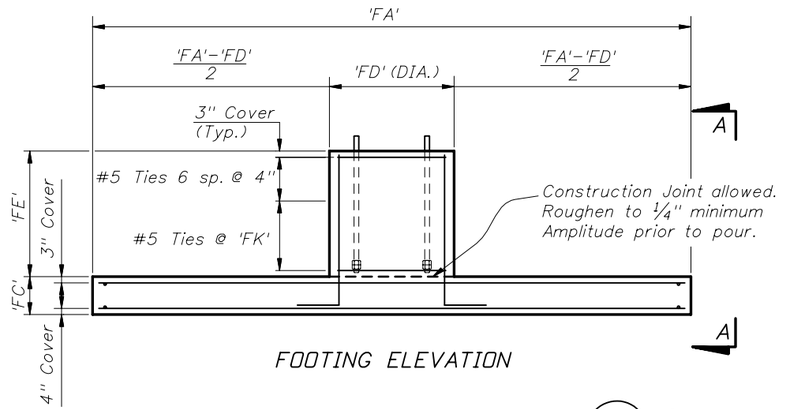
ISOMETRIC VIEW

*NOTE: Contractor shall verify these Dimensions prior to Fabrication of Upright.

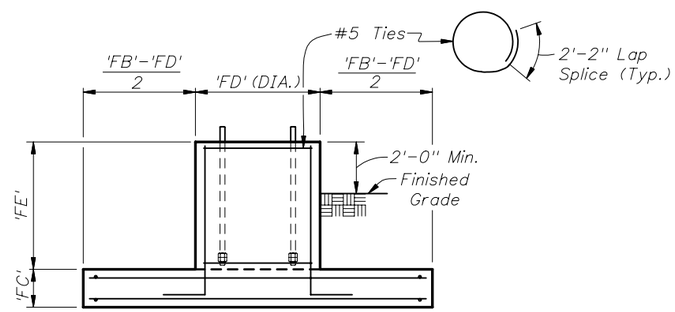
NOTE: See Plans for Cantilever Sign Structure Data Table.



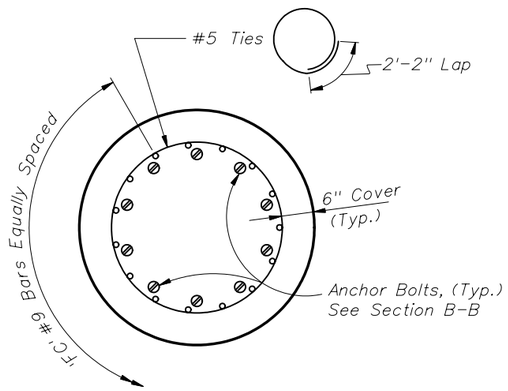
FOOTING PLAN



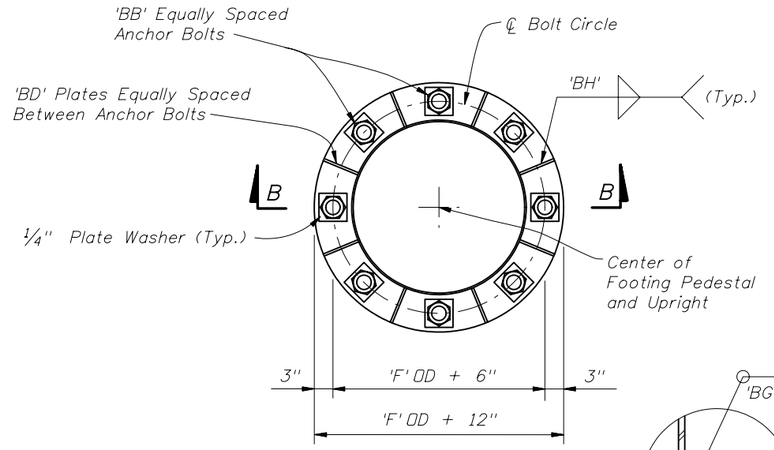
FOOTING ELEVATION



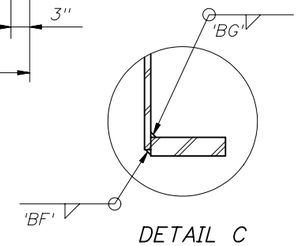
VIEW A-A



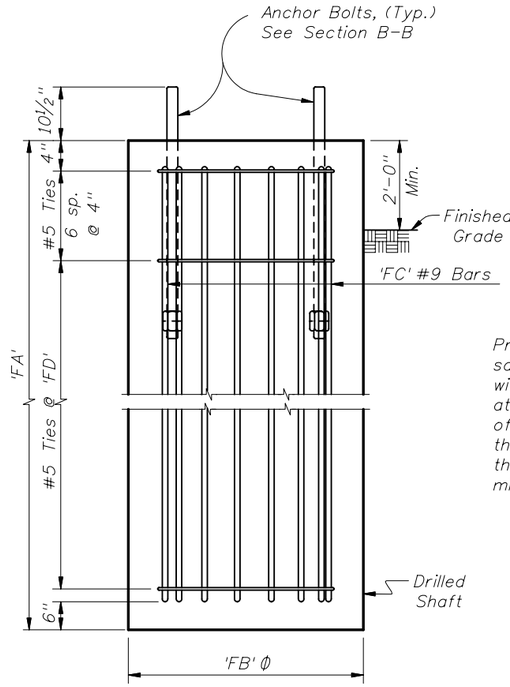
PLAN VIEW
DRILLED SHAFT



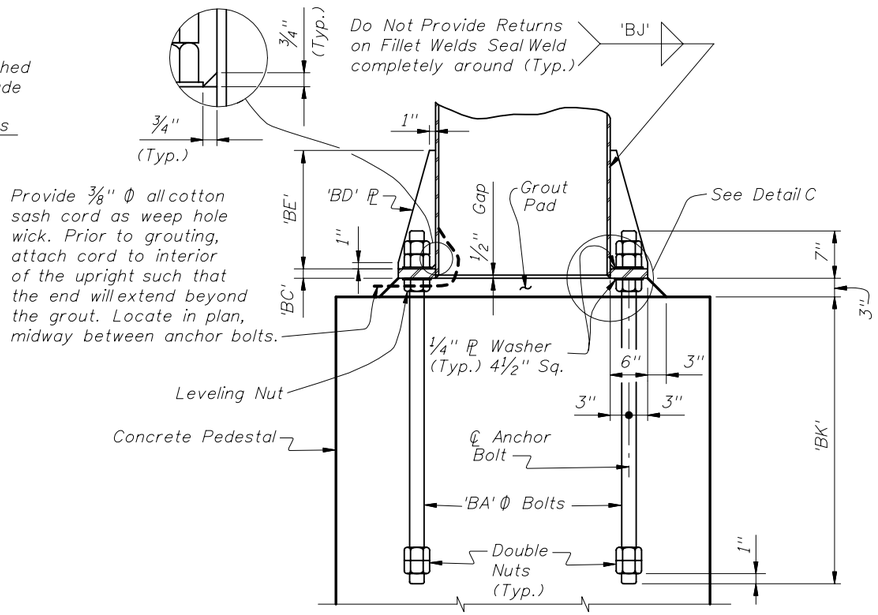
PLAN VIEW
(Base Plate)



DETAIL C



ELEVATION
DRILLED SHAFT
(Alternate Foundation)



SECTION B-B

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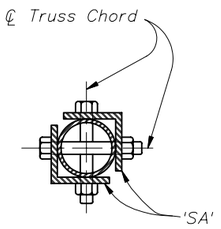
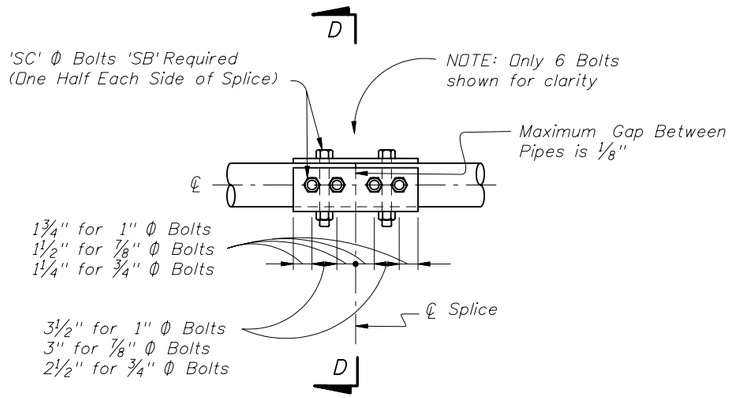
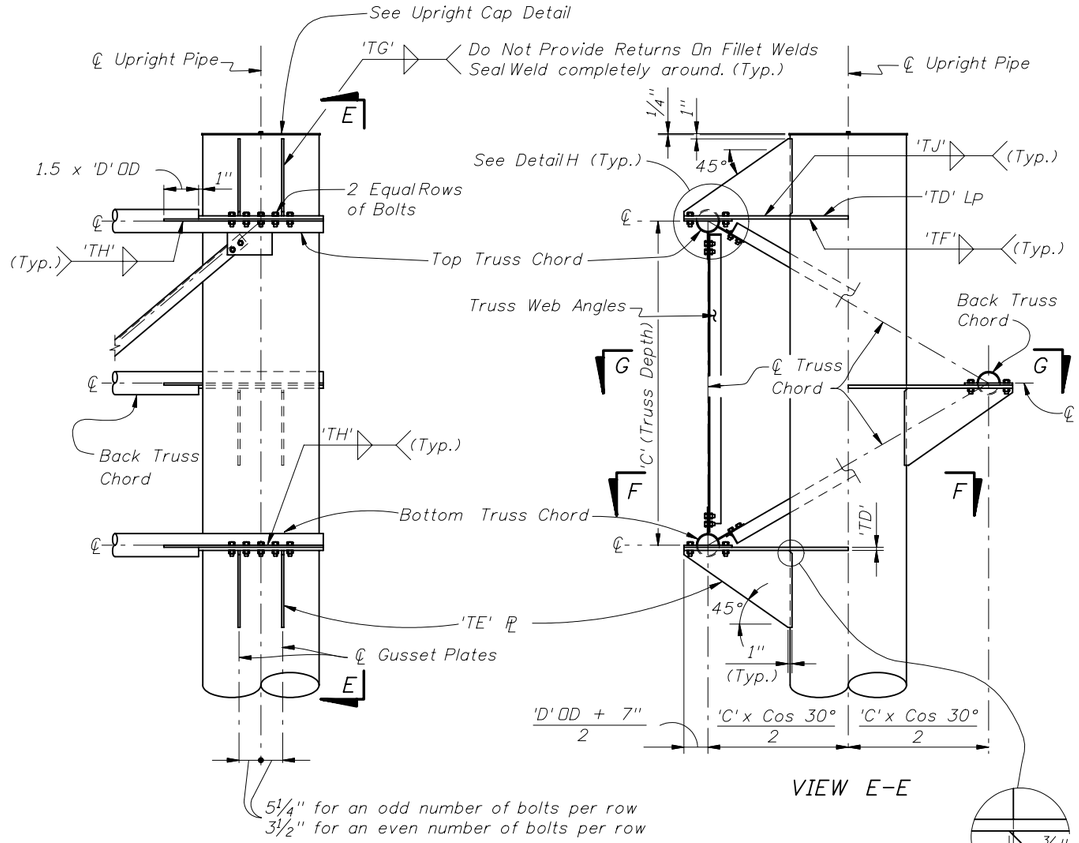


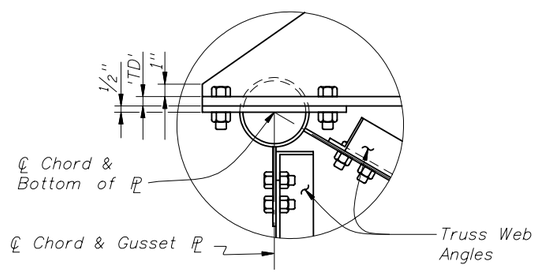
SECTION D-D



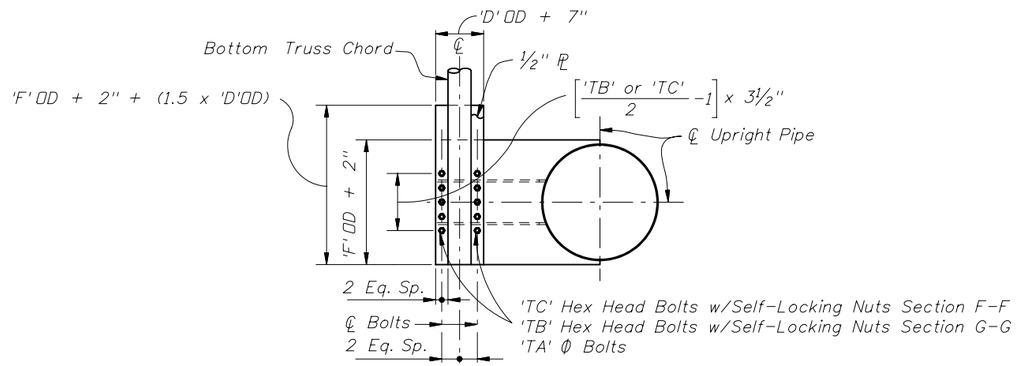
SPLICE CONNECTION DETAIL



UPRIGHT-TRUSS CONNECTION DETAIL
(Web Members from back Truss Chord omitted for clarity)

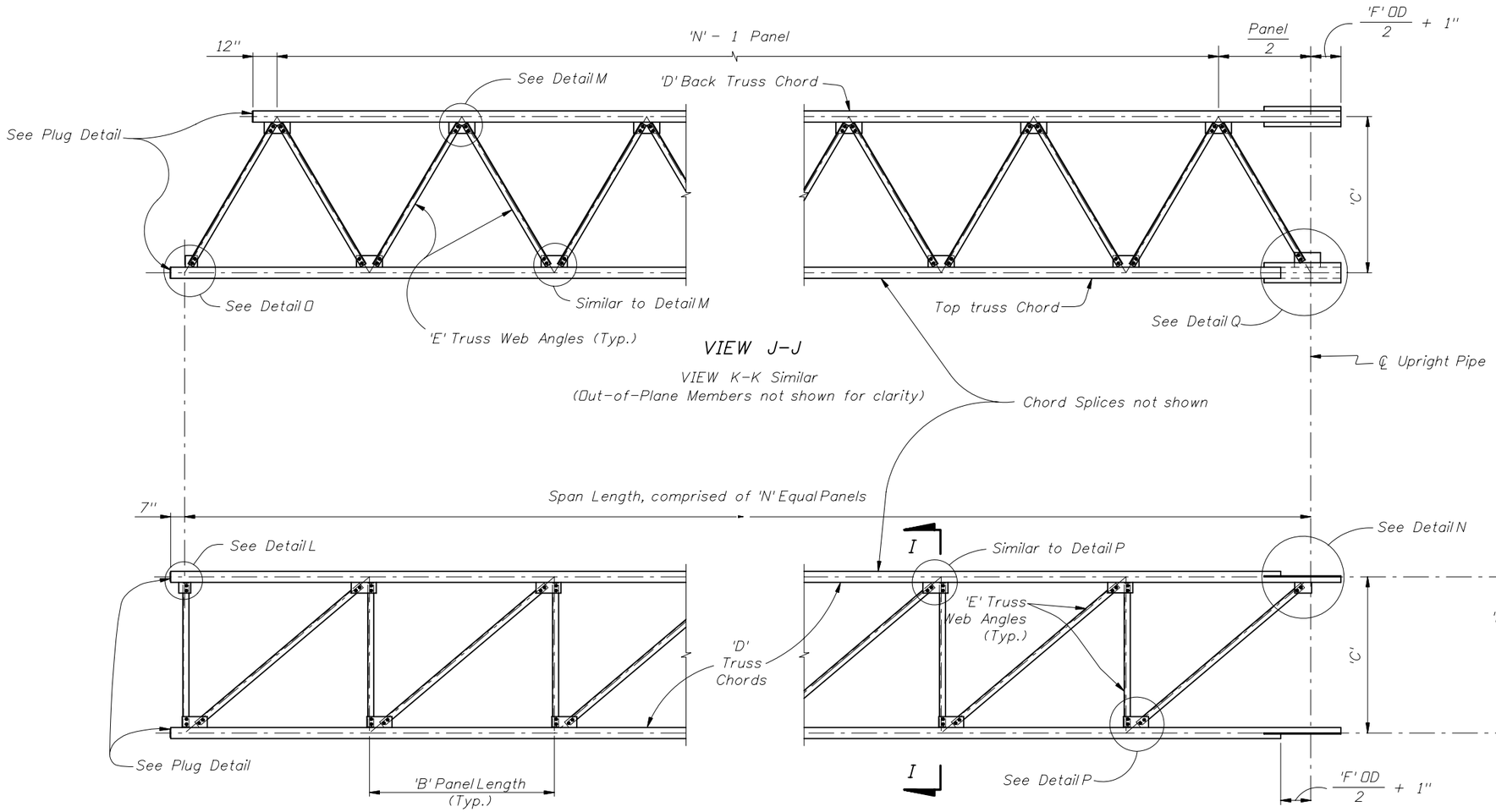


DETAIL H



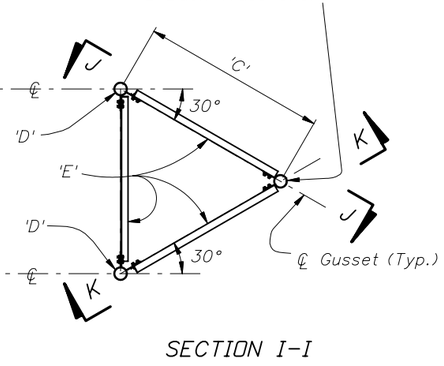
SECTION F-F, SECTION G-G SIMILAR
(With Gusset Plate & Angles omitted for clarity)

NOTE:
Abbreviation
OD ~ Outside Diameter



VIEW J–J

VIEW K–K Similar
(Out-of-Plane Members not shown for clarity)



SECTION I–I

FRONT OF TRUSS ELEVATION

(Back Truss Chord and attached Angles not shown for clarity)

NOTE:
Abbreviation
OD ~ Outside Diameter

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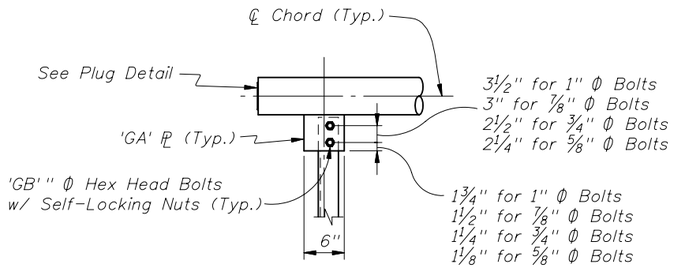

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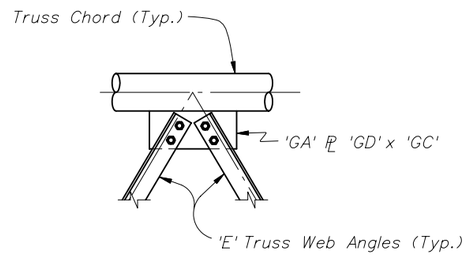

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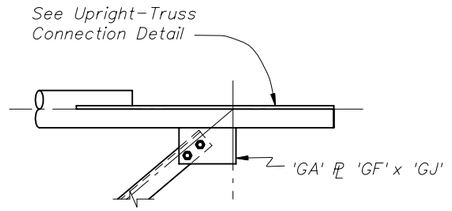

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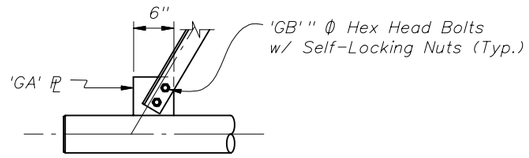
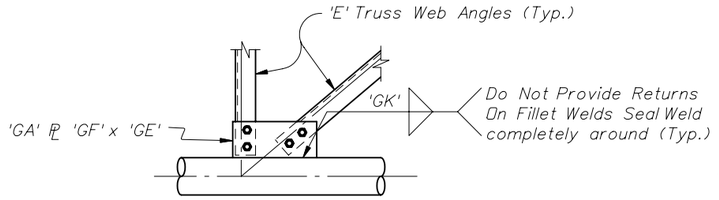
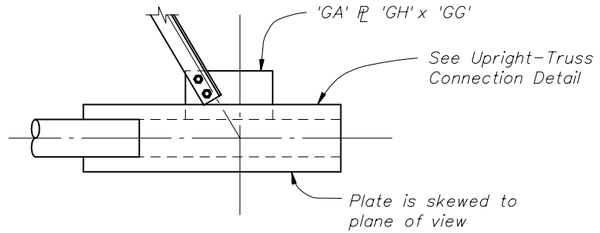


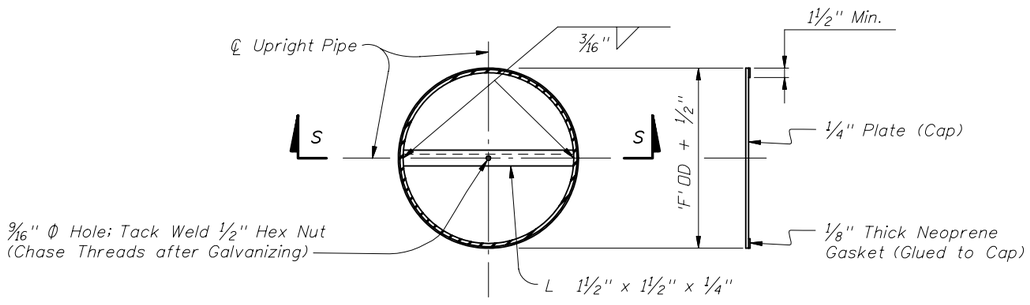
DETAIL O



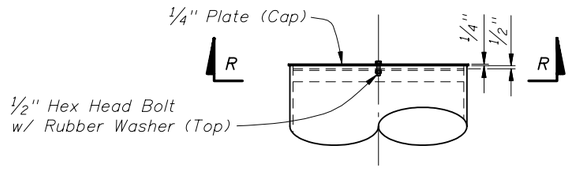
DETAIL P



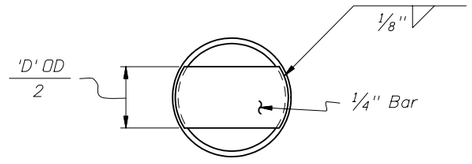
DETAIL Q



SECTION R-R SECTION S-S
(Showing Cap plate only)



UPRIGHT CAP DETAIL



PLUG DETAIL

NOTE:
Abbreviation
OD ~ Outside Diameter

2008 FDOT Design Standards

CANTILEVER SIGN STRUCTURE

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