CHECK PRINTS
01-NOV-2011 09:11
IP_PWP:dms55699\Overhead Traffic Signs 07.dgn

GROUND MOUNTED ☑ OVERHEAD SIGN TRUSS DESIGN TABLE

90 MPH WIND VELOCITY

SIGN PANEL AREA / SPAN	< 600 SQ.FT.		600-900 SQ.FT.		900-1100 SQ.FT.	
	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER
< 60 FT	1	15/16"	N/A	N/A	N/A	N/A
60 - 84 FT	1	1 7/16"	2	1 9/16"	3	1 1/2"
84 - 96 FT	1	1 7/8"	3	1 15/16"	4	1 13/16"
96 - 120 FT	2	2 13/16"	4	2 3/4"	5	2 11/16"

110 MPH WIND VELOCITY

SIGN PANEL AREA / SPAN	< 600 SQ.FT.		600-900 SQ.FT.		900-1100 SQ.FT.	
	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER
< 60 FT	1	15/16"	N/A	N/A	N/A	N/A
60 - 84 FT	3	1 7/16"	5	1 7/16"	6	1 7/16"
84 - 96 FT	3	1 13/16"	5	1 13/16"	6	1 3/4"
96 - 120 FT	5	2 1/2"	6	2 1/2"	8 *	2 1/2"

130 MPH WIND VELOCITY

SIGN PANEL AREA / SPAN	< 600 SQ.FT.		600-900 SQ.FT.		900-1100 SQ.FT.	
	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER
< 60 FT	5	7/8"	N/A	N/A	N/A	N/A
60 - 84 FT	5	1 3/8"	8 *	1 3/8"	9 *	1 3/8"
84 - 96 FT	6	1 11/16"	8 *	1 11/16"	9 *	1 5/8"
96 - 120 FT	7	2 3/8"	10 *	2 3/8"	11 *	2 3/8"

STRUCTURE MOUNTED ⊗ OVERHEAD SIGN TRUSS DESIGN TABLE

90 MPH WIND VELOCITY

SIGN PANEL AREA / SPAN	< 600 SQ.FT.		600-900 SQ.FT.		900-1100 SQ.FT.	
	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER
< 60 FT	1	15/16"	N/A	N/A	N/A	N/A
60 - 84 FT	2	1 7/16"	4	1 7/16"	4	1 7/16"
84 - 96 FT	2	1 13/16"	4	1 13/16"	5	1 3/4"
96 - 120 FT	4	2 9/16"	5	2 11/16"	7	2 1/2"

110 MPH WIND VELOCITY

SIGN PANEL AREA / SPAN	< 600 SQ.FT.		600-900 SQ.FT.		900-1100 SQ.FT.	
	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER
< 60 FT	3	7/8"	N/A	N/A	N/A	N/A
60 - 84 FT	4	1 3/8"	7	1 3/8"	8	1 3/8"
84 - 96 FT	5	1 11/16"	7	1 11/16"	8	1 11/16"
96 - 120 FT	7	2 3/8"	8	2 1/2"	10	2 3/8"

130 MPH WIND VELOCITY

SIGN PANEL AREA / SPAN	< 600 SQ.FT.		600-900 SQ.FT.		900-1100 SQ.FT.	
	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER	GROUP NO.	REQ. CAMBER
< 60 FT	6	7/8"	N/A	N/A	N/A	N/A
60 - 84 FT	7	1 5/16"	9	1 3/8"	10	1 5/16"
84 - 96 FT	8	1 7/8"	10	1 5/8"	11	1 5/8"
96 - 120 FT	10	2 1/4"	11	2 3/8"	N/A	N/A

OVERHEAD TRUSS MEMBER SIZES

MEMBER DIAMETER (IN.) x MEMBER THICKNESS (IN.)

GROUP NO.	POSTS	CHORDS	TRUSS STRUTS	TRUSS DIAGONALS	INTERIOR DIAGONALS	POST STRUTS	POST DIAGONALS
1	12.75 X 0.25	4.0 X 0.226	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154	3.5 X 0.216	3.5 X 0.216
2	12.75 X 0.25	4.5 X 0.237	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154	3.5 X 0.216	3.5 X 0.216
3	14.00 X 0.25	4.5 X 0.237	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154	3.5 X 0.216	3.5 X 0.216
4	14.00 X 0.25	5.563 X 0.258	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154	3.5 X 0.216	3.5 X 0.216
5	16.00 X 0.25	5.563 X 0.258	2.875 X 0.203	2.875 X 0.203	2.375 X 0.154	3.5 X 0.216	3.5 X 0.216
6	18.00 X 0.25	5.563 X 0.258	2.875 X 0.203	2.875 X 0.203	2.875 X 0.203	3.5 X 0.216	4.0 X 0.226
7	18.00 X 0.25	5.563 X 0.375	2.875 X 0.203	2.875 X 0.203	2.875 X 0.203	3.5 X 0.216	4.0 X 0.226
8	18.00 X 0.312	5.563 X 0.375	2.875 X 0.203	3.5 X 0.216	2.875 X 0.203	3.5 X 0.216	4.5 X 0.237
9	18.00 X 0.375	5.563 X 0.375	2.875 X 0.203	3.5 X 0.216	2.875 X 0.203	3.5 X 0.216	5.563 X 0.258
10	18.00 X 0.375	5.563 X 0.50	2.875 X 0.203	3.5 X 0.216	2.875 X 0.203	3.5 X 0.216	5.563 X 0.258
11	18.00 X 0.438	5.563 X 0.50	2.875 X 0.203	4.0 X 0.226	2.875 X 0.203	3.5 X 0.216	6.625 X 0.432

HOW TO USE TABLES:

1. DETERMINE IF TRUSS IS GROUND MOUNTED OR STRUCTURE MOUNTED.
2. FIND WIND VELOCITY USING WIND MAP ON GENERAL NOTES SHEET (SHT. NO. 1 OF 16) AND CHOOSE APPROPRIATE SECTION IN TABLE.
3. DETERMINE DESIGN SIGN AREA AND SELECT THE APPROPRIATE COLUMN. (DESIGN SIGN AREA = SUM OF ACTUAL SIGN PANEL AREAS X 1.3)
4. DETERMINE SPAN LENGTH AND CHOOSE APPROPRIATE ROW.
5. FIND CORRESPONDING GROUP NUMBER IN THE "OVERHEAD TRUSS MEMBER SIZES" TABLE AND APPLY MEMBER SIZES ACCORDINGLY. FILL IN THE "OVERHEAD TRUSS DATA TABLE" WITH THE APPROPRIATE DESIGN INFORMATION (SEE SHT NO. 12 OF 16).

NOTES:

ALL MEMBERS LISTED IN THE OVERHEAD TRUSS MEMBER SIZES TABLE SHALL BE STEEL PIPE OR TUBE AND SHALL HAVE A MINIMUM YIELD STRENGTH (Fy) OF 42 KSI.

TUBE OR A.N.S.I. PIPE SECTIONS PROVIDING EQUAL OR GREATER STRENGTH THAN ANY MEMBER DESIGNATED IN THE TABLE MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

ALL DESIGNS MUST BE CONFIRMED ON THE FABRICATION DRAWINGS AND APPROVED BY LA DOTD BEFORE FABRICATION IS INITIATED.

ALL STRUCTURE MOUNTED TRUSSES SHALL USE PLATE "B". (SEE SHT. NO. 6 OF 16.)

* FOR GROUND MOUNTED TRUSSES, GROUP NOS. 8 THROUGH 11 SHALL USE PLATE "B" AND FOOTING "B" ONLY. (SEE SHT. NO. 8 OF 16)

☑ GROUND MOUNTED TRUSSES USED ON EMBANKMENTS ≥ 10 FT. HIGH SHALL BE DESIGNED USING THE STRUCTURE MOUNTED DESIGN TABLES.

⊗ A DESIGN REQUEST MUST BE SUBMITTED FOR ALL TRUSSES WHOSE SIGN CENTERS ARE MORE THAN 50 FT. ABOVE THE SURROUNDING GROUNDLINE.

STATE OF LOUISIANA
KURT M. BRAUNER
License No. 30567
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
8/29/11

FOR INFORMATIONAL PURPOSES ONLY

SHEET NUMBER

PARISH | FEDERAL PROJECT | STATE PROJECT

DESIGNED C. PORTER
CHECKED K. BRAUNER
DETAILED I.KOURILOVA
CHECKED K. BRAUNER
DATE JAN. 2011
SHEET 7 OF 16

REVISION DESCRIPTION | BY | NO. | DATE

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

OVERHEAD TRUSS DESIGN TABLES (STEEL)

BD.2.7.1.0.7 - OVERHEAD TRAFFIC SIGNS

DOTD

BRIDGE AND STRUCTURAL DESIGN