Index 700-040 Cantilever Sign Structure

Design Criteria

AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals (LRFDLTS); ***Structures Manual (SM),*** Volume 3, FDOT Modifications to LRFDLTS; ***Structures Manual (SM)*** Introduction, I.6 References; ***Structures Design Guidelines (SDG)***; ***FDOT Design Manual (FDM)***

Design Assumptions and Limitations

The maximum span length of Cantilever Sign Structures is 50 feet. See the notes on ***Index 700-040***, ***FDM 230***, ***FDM 261***, ***Structures Manual (SM)***, Volume 3 and the ***SDG*** for additional information.

Use ***Index 700-040*** in conjunction with ***Index 700-030*** and the ***Cantilever Overhead Sign*** Mathcad 15 computer program located on the **Structures Design Programs Library** website.

Plan Content Requirements

See the ***FDM 940***.

Complete the appropriate "*Cantilever Sign Structures Data Table"*. There is a choice of two tables, one for a sign structure with a spread footing foundation and the other for a sign structure with a drilled shaft foundation. Much of the data for inclusion in the table may be found in the ***Cantilever Overhead Sign*** output. Include Design Wind Speed and soils information.

Cantilever Sign Structures Data Table (Spread Footing Foundation):

CANTILEVER SIGN STRUCTURES DATA TABLE										Table Date 07-01-14
SIGN NO.	STATION	DIMENSIONS				PANELS	MEMBER SIZES			BACKRAKE
		A	B		C	N	D (CHORD)	E (WEB)	F (UPRIGHT)	G
		ft	ft	in	in	#	O. D. x Wall Thk. (in)	Angle (in)	O. D. x Wall Thk. (in)	in

NOTES [Notes Date 7-01-13]:
1. Work these Data Tables with Index 700-040.
2. Design Wind Speed = ___ mph.
3. Upright wall thickness given is a minimum dimension.

FOUNDATION NOTES [Notes Date 7-01-12]:
1. Design based on Borings taken sealed by _____.
2. Assumptions and Values used in design:
   Soil Type _____
   Soil Layer Thickness = ___ ft.
   Soil Friction Angle = ___ deg.
   Soil Weight = ___ pcf
   Design Water Table is ___ ft. below surface

CANTILEVER SIGN STRUCTURES DATA TABLE (CONT.)																										Table Date 01-01-11
SIGN NO.	GUSSET PLATES															TRUSS CONNECTION									SPLICE			
	GA	GB	GC		GD		GE		GF		GG		GH		GJ	GK	TA	TB	TC	TD	TE	TF	TG	TH	TJ	SA	SB	SC	SD
	in	in	ft	in	ft	in	ft	in	ft	in	ft	in	ft	in	ft	in	in	in	#	#	in	in	in	in	in	in	Angle (in)	#	in	#

CANTILEVER SIGN STRUCTURES DATA TABLE (CONT.)																													Table Date 01-01-11
SIGN NO.	BASE CONNECTION										ANCHOR		FOOTING DIMENSIONS										FOOTING REINF.				PED. REINF.	
	BA	BB	BC	BD	BE		BF	BG	BH	BJ	BK		FA		FB		FC		FD		FE		FF	FG	FH	FJ	FK	FL
	in	#	in	in	ft	in	in	in	in	in	ft	in	ft	in	ft	in	ft	in	ft	in	ft	in	size	size	size	size	in	# / Size

Cantilever Sign Structures Data Table (Drilled Shaft Foundation):

CANTILEVER SIGN STRUCTURES DATA TABLE										Table Date 07-01-14
SIGN NO.	STATION	DIMENSIONS				PANELS	MEMBER SIZES			BACKRAKE
		A	B		C	N	D (CHORD)	E (WEB)	F (UPRIGHT)	G
		ft	ft	in	in	#	O. D. x Wall Thk. (in)	Angle (in)	O. D. x Wall Thk. (in)	in

NOTES [Notes Date 7-01-13]:
1. Work these Data Tables with Index 700-040.
2. Design Wind Speed = ___ mph.
3. Upright wall thickness given is a minimum dimension.

FOUNDATION NOTES [Notes Date 7-01-12]:
1. Design based on Borings taken sealed by _____.
2. Assumptions and Values used in design:
   Soil Type _____
   Soil Layer Thickness = ___ ft.
   Soil Friction Angle = ___ deg.
   Soil Weight = ___ pcf
   Design Water Table is ___ ft. below surface

CANTILEVER SIGN STRUCTURES DATA TABLE (CONT.)																										Table Date 01-01-11
SIGN NO.	GUSSET PLATES																TRUSS CONNECTION									SPLICE			
	GA	GB	GC		GD		GE		GF		GG		GH		GJ	GK	TA	TB	TC	TD	TE	TF	TG	TH	TJ	SA	SB	SC	SD
	in	in	ft	in	ft	in	ft	in	ft	in	ft	in	ft	in	ft	in	in	in	#	#	in	in	in	in	in	in	Angle (in)	#	in	#

CANTILEVER SIGN STRUCTURES DATA TABLE (CONT.)																								Table Date 07-01-15
SIGN NO.	BASE CONNECTION										ANCHOR		FOOTING - DRILLED SHAFT											
	BA	BB	BC	BD	BE		BF	BG	BH	BJ	BK		FA		FB		FC	FD	FE		FF	FG		
	in	#	in	in	ft	in	in	in	in	in	ft	in	ft	in	ft	in	# / Size	#	in	#	in			

Payment

Item number	Item Description	Unit Measure
700-4-11C	Overhead Static Sign Structure (F&I, Cantilever)	EA

See ***Standard Plans Instruction*** for ***Index 700-030*** for sign panel.

See the ***BOE*** and ***Specification 700*** for additional information on payment, pay item use and compensation.