SPAN (ft)	DESIGN WIND HEIGHT TO ℄ TRUSS (ft)	MAXIMUM DRILLED SHAFT AXIAL LOAD (kips)	MAXIMUM DRILLED SHAFT MOMENT (k-ft)	DRILLED SHAFT EMBEDMENT LENGTH (ft) AVERAGE N (BLOWS/12")			
				10	20	30	40
10	15	63	60	19	14	14	14
	20	77	93	23	14	14	14
	25	91	135	27	17	17	17
	30	107	184	31	20	20	20
	35	123	243	35	23	23	23
	40	140	311	39	27	27	27
	45	158	388	44	30	30	30
	50	177	474	49	33	33	33
	55	197	570	54	37	37	37
15	15	69	65	21	14	14	14
	20	85	99	25	14	14	14
	25	101	140	29	17	17	17
	30	119	190	34	20	20	20
	35	137	248	39	23	23	23
	40	157	316	44	27	27	27
	45	177	393	49	30	30	30
	50	198	480	54	33	33	33
	55	220	576	60	37	37	37
20	15	75	73	22	14	14	14
	20	92	106	27	15	14	14
	25	110	147	32	17	17	17
	30	130	197	37	20	20	20
	35	150	256	42	23	23	23
	40	171	324	47	27	27	27
	45	193	401	53	30	30	30
	50	217	487	59	33	33	33
	55	241	583	66	37	37	37
25	15	81	82	24	14	14	14
	20	100	116	29	16	14	14
	25	120	157	34	19	17	17
	30	141	207	40	21	20	20
	35	163	265	45	24	23	23
	40	186	333	51	27	27	27
	45	210	410	58	30	30	30
	50	236	497	64	34	33	33
	55	262	593	71	37	37	37
30	15	86	94	25	14	14	14
	20	107	127	31	17	14	14
	25	129	169	36	20	17	17
	30	152	218	42	23	20	20
	35	176	277	49	26	23	23
	40	201	345	55	29	27	27
	45	227	422	62	33	30	30
	50	254	508	69	36	33	33
	55	283	604	76	40	37	37

SPAN (ft)	DESIGN WIND HEIGHT TO ℄ TRUSS (ft)	MAXIMUM DRILLED SHAFT AXIAL LOAD (kips)	MAXIMUM DRILLED SHAFT MOMENT (k-ft)	DRILLED SHAFT EMBEDMENT LENGTH (ft) AVERAGE N (BLOWS/12")			
				10	20	30	40
35	15	92	108	27	15	14	14
	20	114	141	33	18	14	14
	25	138	182	39	21	17	17
	30	162	232	45	24	20	20
	35	188	291	52	27	23	23
	40	215	359	59	31	27	27
	45	244	436	66	35	30	30
	50	273	522	74	38	33	33
	55	304	618	82	42	37	37
40	15	97	124	28	16	14	14
	20	121	157	35	19	14	14
	25	147	198	41	22	17	17
	30	173	248	48	26	20	20
	35	201	307	55	29	23	23
	40	230	375	63	33	27	27
	45	260	452	71	37	30	30
	50	292	538	79	41	33	33
	55	324	634	87	45	37	37
45	15	103	142	30	16	14	14
	20	129	175	36	20	14	14
	25	156	216	43	23	17	17
	30	184	266	51	27	20	20
	35	214	325	59	31	23	23
	40	245	393	67	35	27	27
	45	277	470	75	39	30	30
	50	310	556	84	43	33	33
	55	345	652	93	48	37	37

1. DETERMINE DRILLED SHAFT DIAMETER AND MAXIMUM DRILLED SHAFT AXIAL LOAD (KIPS) FROM TABLE BASED ON SPAN LENGTH AND DESIGN WIND HEIGHT TO CENTERLINE OF TRUSS.
2. CONTACT THE HOUSTON DISTRICT LABORATORY FOR CONCISE DRILLED SHAFT EMBEDMENT LENGTH OR USE THE FOLLOWING ITERATIVE PROCEDURE.
3. MAKE AN INITIAL ESTIMATE OF THE DRILLED SHAFT EMBEDMENT LENGTH.
4. FROM SOIL EXPLORATION DATA, DETERMINE AN AVERAGE N VALUE (BLOWS/12") OF THE SOIL THROUGHOUT THE UPPER THIRD OF THE EMBEDMENT LENGTH. USE A WEIGHTED-AVERAGE OF THE BLOW COUNT OF INDIVIDUAL STRATA.
5. USE TABLE TO DETERMINE THE REQUIRED DRILLED SHAFT EMBEDMENT LENGTH BASED ON AXIAL LOAD AND AVERAGE N.
6. IF THE REQUIRED EMBEDMENT LENGTH DIFFERS SIGNIFICANTLY FROM THE INITIAL ESTIMATED EMBEDMENT LENGTH, RETURN TO STEP 3 WITH THE REQUIRED EMBEDMENT LENGTH DETERMINED IN STEP 5 AND REPEAT STEPS 3, 4 & 5.
7. THE EMBEDMENT LENGTH TABLE IS BASED UPON THE GREATEST EMBEDMENT LENGTH DERIVED FROM MOMENT, UPLIFT, OR THE AXIAL LOAD IN THE DRILLED SHAFT.

DESIGNER NOTE:
THIS SHEET IS FOR DESIGNER'S USE IN DETERMINING DRILLED SHAFT DIAMETER, LOADS AND EMBEDMENT. DO NOT INSERT INTO PLANSET.

FOUNDATION DATA AND EMBEDMENT LENGTH TABLE

(42" DIAMETER DRILLED SHAFT FOR ALL CASES)

Texas Department of Transportation
Houston District Bridge
Green Ribbon Project

CANTILEVER OVERHEAD SIGN STRUCTURE FOUNDATION DATA AND EMBEDMENT SELECTION TABLE

VERTICAL SCHEME

COSS-VS

FILE: STDN41.DGN	DN: HOU	CK: HOU	DW: HOU	CK: HOU
©TxDOT AUGUST 2011	DISTRICT	FED REG	PROJECT NO.	SHEET
REVISIONS	HOUSTON	6		
	COUNTY		CONTROL	SECT	JOB	HIGHWAY

STDN41C