

SIGN CABINET AND CONNECTION TO POLES BY DENYSE

HSS 6"x6"x1/4" (4 REQ'D)

TRANSCO BREAK SAFE MODEL B525 (6061-T6 ALLOY) BRACKETS (2 REQ'D PER POLE) W/ FEMALE THREADED FERRULE 25.4mm (1) - 8UNC, 304 S.S. FERRULE, AISI 1038 ROD, AISI 1008 COIL (2 REQ'D PER BRACKET) BY TRANSCO

(4) #6 VERTICALS W/ #3 TIES @ 12" O.C. W/ (6) #3 TIES @ 4" O.C. @ TOP

NOTES
 1.) SEE MANUFACTURERS DRAWINGS FOR ADDITIONAL DETAILS AND DIMENSIONS.
 2.) SIGN CABINET AND CONNECTION BY DENYSE.

* CLIENT - DENYSE
 * 2018 IBC W/GA AMENDMENTS
 * RISK CATEGORY II
 * 135 MPH WIND SPEED, EXP. C
 * (4) POLES, (4) FOOTINGS

FRONT ELEVATION W/ CAISSON FOUNDATIONS (4 REQ'D) 1
 SCALE: N.T.S.



MBI COMPANIES INC.
 299 N. WEISGARBER RD.
 KNOXVILLE, TN 37919
 PHONE 865.584.0999
 SIGN-ENGINEER.COM

PROJECT:
 100 SW HWY 80, POOLER, GA 31322
 DRAWING TITLE:
 CITY OF POOLER

DRAWN BY: TSM
 CHECKED BY: DSA
 COMM. NO. 220966.010

DATE: 09/12/22		
REV #	DATE	DRAWN BY

DRAWING NO.
 DWG.
 1



GROUND SIGN DESIGN SPECIFICATIONS:

- REFER TO SIGN COMPANY'S DRAWINGS FOR MORE DETAILS. ALL DESIGNS, DETAILING FABRICATION AND CONSTRUCTION SHALL CONFORM TO:
 - 2018 IBC W/GA AMENDMENTS
 - ACI
 - AISC
 - AMERICAN WELDING SOCIETY
 - LOCAL BUILDING CODES & ORDINANCES
- CONCRETE: 2500 PSI @ 28 DAYS
- STD. STEEL PIPE SECTION: ASTM A53 GRADE B (Fy=35 KSI), U.N.O.
- STEEL PIPE SECTION (> 20" Ø): ASTM A252 GRADE 3 (Fy=42 KSI MIN.) U.N.O.
- HSS ROUND SECTION: ASTM A500 GRADE B (Fy=42 KSI) U.N.O.
- HSS SQUARE/RECTANGULAR SECTION: ASTM A500 GRADE B (Fy=46 KSI)
- W SHAPES: ASTM A992 (Fy = 50 KSI)
- ANCHOR BOLTS: ASTM F1554 GRADE 36 U.N.O. (ALTERNATES GRADE 55 & 105)
- CONNECTION BOLTS: ASTM A325
- THREADED RODS: ASTM A193 GRADE B7
- STEEL ANGLES, CHANNELS, STRUCTURAL SHAPES & PLATES ASTM A36
- REINFORCING: GRADE 60 ASTM A615
- PROVIDE A MINIMUM OF THREE INCHES OF CONCRETE COVER OVER EMBEDDED STEEL.
- THE CONTRACTOR (INSTALLER) IS RESPONSIBLE FOR THE MEANS & METHODS OF CONSTRUCTION IN REGARDS TO JOBSITE SAFETY.
- NO FIELD HEATING FOR BENDING OR CUTTING OF STEEL SHALL BE ALLOWED WITHOUT THE ENGINEER'S APPROVAL.
- WELDING ELECTRODES: E70XX
- ALLOWABLE SOIL BEARING PRESSURE ASSUMED: 2000 PSF
- ASSUMED HORIZONTAL (PASSIVE PRESSURE) ASSUMED AT 150 PSF/FT OF DEPTH. ISOLATED LATERAL BEARING FOUNDATIONS FOR SIGNS NOT ADVERSELY AFFECTED A 1/2" MOTION AT THE GROUND SURFACE DUE TO SHORT TERM LATERAL LOADS SHALL BE PERMITTED TO BE DESIGNED USING TWO TIMES THE TABULATED CODE VALUES.
- ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED RESIDUAL SOIL AND/OR ENGINEERED EARTH.
- FILL COMPACTED TO 98% OF ITS MAXIMUM DRY DENSITY AS PER ASTM D 698-70 (STANDARD PROCTOR) UNLESS NOTED OTHERWISE. THE SOIL BEARING CAPACITY IS TO BE VERIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION. IF ALLOWABLE BEARING AND/OR LATERAL PRESSURE IS LESS THAN THE ABOVE ASSUMED AND/OR CALCULATED PRESSURES, THE ENGINEER SHOULD BE CONTACTED FOR RE-EVALUATION.
- EXCAVATION SHALL BE FREE OF LOOSE SOIL BEFORE POURING CONCRETE.
- WELDERS SHALL BE CERTIFIED FOR THE TYPE OF WELDING.
- ADEQUATELY BRACE POLE(S) UNTIL CONCRETE HAS SET UP FOR 14 DAYS.
- GROUT UNDER BASE PLATES WITH NON-SHRINK GROUT.
- THIS ENGINEER DOES NOT WARRANT THE ACCURACY OF DIMENSIONS FURNISHED BY OTHERS.
- ALL EXPOSED STEEL SHALL BE PAINTED WITH AN ENAMEL PAINT TO INHIBIT CORROSION.
- THIS DESIGN IS FOR THE INDICATED ADDRESS ONLY, AND SHOULD NOT BE USED AT OTHER LOCATIONS WITHOUT WRITTEN PERMISSION OF THE ENGINEER.
- DESIGN OF DETAILS AND STRUCTURAL MEMBERS NOT SHOWN, BY OTHERS.

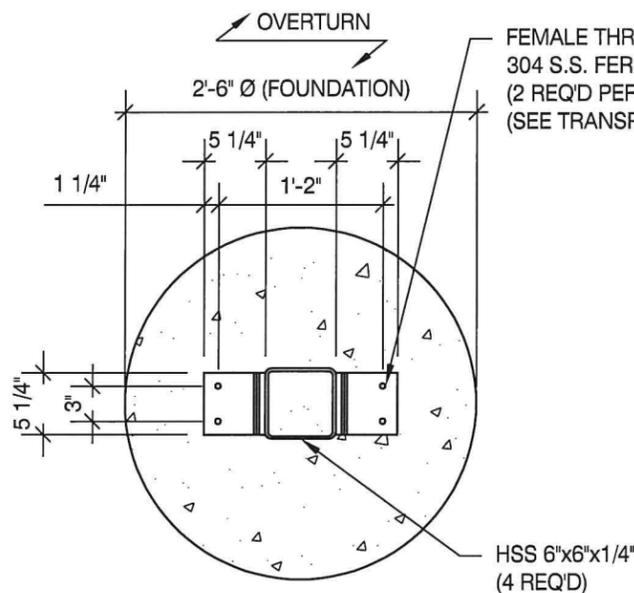
WIND DATA				DEFLECTION ANALYSIS			
Building Code	2018 IBC with GA A Importance Factor, I	1.0	Damping Ratio, β	0.005	Deflection Limit	H/60	
Wind Load Criteria	ASCE 7-16	Directionality Factor, K_d (2)	0.85	Natural Frequency, n_1	2.27 Hz	Deflection at 0.7"W	1.20 in
Wind Speed, V	135 mph	Topography Factor, K_z	1.0	Gust Effect Factor, G	0.85	Deflection Ratio	H/139
Exposure Category	C	Base Pressure, $y(q_z/K_z)$	23.8 psf	ASD Wind Load Factor, γ (3)	0.6		
Wind Pressure Override per Jurisdiction Requirement	0 psf	Notes: (1) Loading values in chart below are based upon average K_z values for each segment. Actual values are calculated on hidden sheet using derived V-M equations. Chart is provided for information purposes only. (2) Wind directionality (K_z) factor is 0.95 for Single Pole (Round) segments instead of 0.85. The C_e value from Fig. 6-21 has been increased by 0.95/0.85 to account for this variation. (3) Wind pressures listed below have already been multiplied by the ASD Wind Load Factor, γ .					

GEOMETRY INPUT (1)												Support Pole Loads						Footing Loads					
Monument: Yes																							
Section	Location	Type	Height ft	Width ft	Horiz. Offset ft	Area sq ft	Top Elev. ft	Centroid ft	K_z	C_e	Wind Press. psf	Trib. Factor	Shear kips	Moment k-ft	Trib. Factor	Shear kips	Moment k-ft						
1	Base	Subgrade	0.25			0.0	0.3	0.1	0.85	1.46	25.1	1.0	0.0	0.0	1.0	0.0	0.0						
2		Multiple Poles w/ Cabinet	13.88	5.05		70.1	14.1	7.9	0.85	1.57	27.0	1.0	1.9	14.9	1.0	1.9	14.9						
Overall Height: 13.88 ft												Summation based upon averages above: 1.9 14.9 1.9 14.9						Actual base reactions based upon V-M equations: 1.9 15.0 1.9 15.0					

SUPPORT POLE DESIGN SUMMARY												MATERIAL = STEEL				Unity Ratios				Interaction Ratios		Status
Base Elev. ft	Section	Axis	Required Strength Values (ASD)				Allowable Strength Values (ASD)															
			V_r kips	M_r kip-ft	T_r kip-ft	P_r kips	V_c kips	M_c kip-ft	T_c kip-ft	P_c kips	V_r/V_c	M_r/M_c	T_r/T_c	P_r/P_c	P-M	P-M-V-T						
0.00	HSS6X6X1/4	Strong	1.9	15.0	1.9	1.0	45.5	25.7	21.2	38.9	4.2%	58.2%	9.0%	2.5%	60.7%	0.0%	✓					

FOUNDATION DESIGN SUMMARY										Status	Allowable Soil Pressure
Type	Diameter ft	Width ft	Thickness ft	Length ft	Depth ft	Volume CY	Reinforcing				
✓ Caisson	2.50	--	--	--	6.50	1.18	(4) #6 Vert. w/ #3 Ties @ 12 in o.c. and (6) @ 4 in o.c. Top			OK	300 psf/ft

CALCULATIONS BASED ON WORST-CASE TRIBUTARY AREA

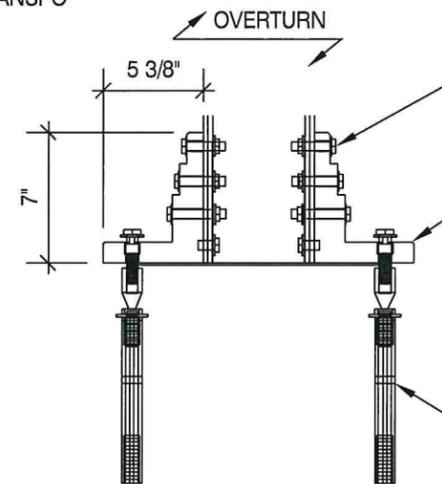


BOLT PATTERN

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1

FEMALE THREADED FERRULE 25.4mm (1) - 8UNC, 304 S.S. FERRULE, AISI 1038 ROD, AISI 1008 COIL (2 REQ'D PER BRACKET) BY TRANSPO (SEE TRANSPO SPEC SHEETS)



TRANSPO HARDWARE DETAIL

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2

1/2" Ø HEX HEAD BOLTS ASTM A153 OR ASTM B695 GALV. FINISH (SEE TRANSPO SPEC SHEETS)

TRANSPO BREAK SAFE MODEL B525 (6061-T6 ALLOY) BRACKETS (SEE TRANSPO SPEC SHEETS) (2 REQ'D PER POLE)

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