

GENERAL NOTES

1. DESIGN CODE: IBC 2018 & NY STATE BUILDING CODE 2020
2. DESIGN LOADS: ASCE 7-16
3. WIND VELOCITY: 115 MPH EXPOSURE C
4. LAG SCREWS PER NDS SPECIFICATIONS
5. ALUMINUM ELEMENTS 6061-T6
6. PROVIDE PROTECTION AGAINST DISSIMILAR METALS USING ANTI-CORROSIVE PAINT OR NEOPRENE GASKETS.
7. ALL EXISTING ELEMENTS AND DIMENSIONS TO BE VERIFIED IN FIELD.
8. ALL DIMENSIONS TO BE VERIFIED PRIOR TO FABRICATION.

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SUNBELT RENTALS-
 SIGN 1 WALL SIGN-
 226 NY-17K,
 NEWBURGH, NY.

CLIENT:
 COMPLETE SIGNS

PROJECT NUMBER:
 43082A

DATE: 9/17/2024
 DRAWN BY: VM
 DESIGNED BY: VM

REVISIONS: NO.	DATE
1	
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SEP 18 2024



SUNBELT RENTALS, SIGN 2 WALL SIGN, 226 NY-17K, NEWBURGH, NY

CLIENT: COMPLETE SIGNS

PROJECT NUMBER: 43082B

DATE: 09-17-2024

DRAWN BY: JC

DESIGNED BY: JC

REVISIONS:
NO. DATE

1

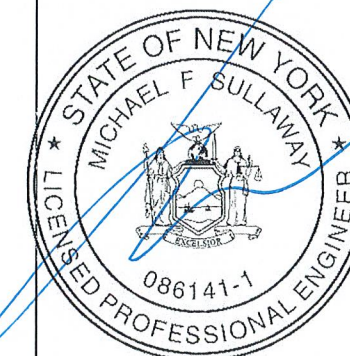
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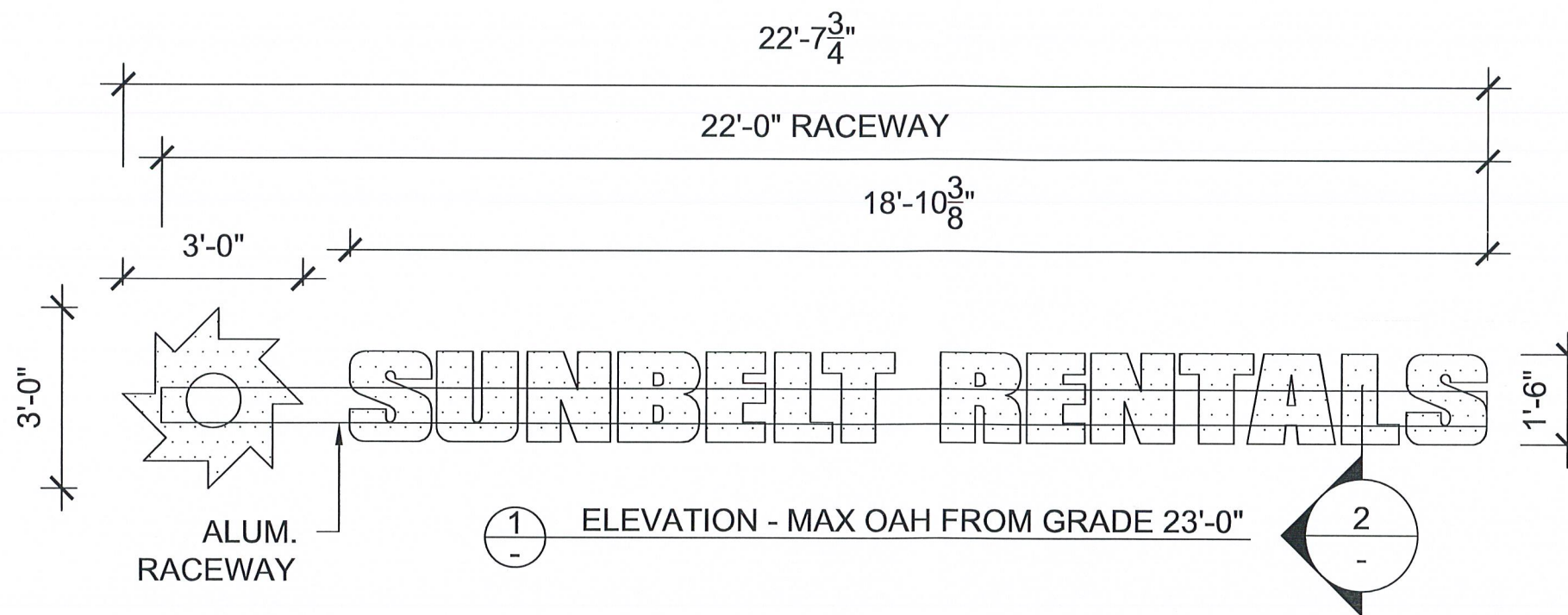
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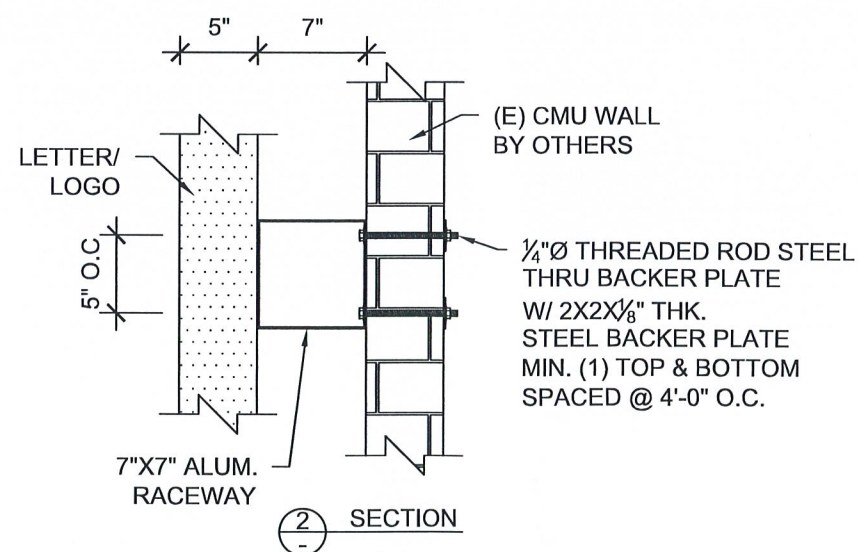
SEP 18 2024



SHEET:
1 of 2



1 ELEVATION - MAX OAH FROM GRADE 23'-0" 2



GENERAL NOTES

1. DESIGN CODE: IBC 2018, NY STATE BUILDING CODE 2020
2. DESIGN LOADS: ASCE 7-16
3. WIND VELOCITY 115 MPH EXPOSURE C
4. PLATE STEEL ASTM A36
5. THREADED ROD STEEL ASTM A36
6. PROVIDE PROTECTION AGAINST DISSIMILAR METALS
7. ALL DIMENSIONS TO BE VERIFIED PRIOR TO FABRICATION
8. ALL EXISTING ELEMENTS AND DIMENSIONS TO BE VERIFIED IN FIELD

PROJECT: SUNBELT RENTALS
PROJ. NO.: 43082B
CLIENT: COMPLETE SIGNS

DATE: 11/2/2023
ENGINEER: JC

v5.5

units; pounds, feet unless noted otherwise

Applied Wind Loads; from ASCE 7-16

$p_{net} = \lambda K_{zt} P_{net30}$ (ASCE 30.4-1)
 $\lambda = 1.29$ (ASCE Fig. 30.4-1)
 $K_{zt} = 1.0$ (unless unusual landscape)
 $V = 115$ mph Exposure = c
 $Area = 1.88$ ft²
 $max. height = 23.00$ ft
 $p_{net30} = 23.80$ psf $p_{net} = 30.70$ psf
 $p_{net30} = -31.90$ psf $p_{net} = -41.15$ psf

Check 0.25" dia. Threaded Rod Steel- Raceway to wall (LRFD): $\phi = 0.75$

$P_{net} =$ See Above = 41.15 psf
 Governing Tributary Area = $A_{trib @ 3'-0" O.C. = ((4'-0") * (3'-0")) = 12.00$ ft²
 $Wind Load = WL = P_{net} * A_{trib} = 0.494$ kips
 $Dead Load = DL = 1.2 * 10 psf * A_{trib} = 0.144$ kips
 $arm =$ = 1.13 in (from AutoCAD)
 $MWL = WL * arm = 0.556$ k-in
 $arm = (5")/2 + (7") = 9.5$ in
 $MDL = DL * arm = 1.368$ k-in
 $Spacing =$ = 5 in
 $Additional tension due WL = TWL = MWL / spacing / 1 bolt = 0.111$ kips
 $Spacing =$ = 5 in
 $Additional tension due DL = TDL = MDL / spacing / 1 bolt = 0.274$ kips
 $#bolts =$ = 2 bolts
 $Tu = WL / \#bolts + TWL + TDL = 0.632$ kips
 $Vu = DL / \#bolts = 0.072$ kips
 $dia. =$ = 0.250 in
 $Abolt =$ = 0.049 in²
 $Fnt = (Fu * 0.75) = (58ksi * 0.75) = 43.50$ ksi
 $Fnv = (Fu * 0.45) = (58ksi * 0.45) = 26.10$ ksi
 $\phi Tn = \phi * Fnt * Abolt = 1.601$ kips **ok**
 $\phi Vn = \phi * Fnv * Abolt = 0.961$ kips **ok**
Combine check:
 $Fv = Vu / Abolt = 1.467$ ksi
 $F'nt = 1.3Fnt - Fnt * Fv / \phi Fnv \leq Fnt = 44$ ksi
 $\phi Tn = \phi * F'nt * Abolt = 1.601$ kips **ok**

PROJECT: SUNBELT RENTALS
PROJ. NO.: 43082B
CLIENT: COMPLETE SIGNS

DATE: 11/2/2023
ENGINEER: JC

v5.5

units; pounds, feet unless noted otherwise

Check 2x2x0.125" Steel Backer plate for Bolt Bearing (LRFD): $\phi = 0.75$

$Fu =$ = 58 ksi
 $Lc =$ = 0.813 in
 $d =$ = 0.250 in
 $t =$ = 0.125 in
 $Vu =$ See Page#2 = 0.072 kip
 $Bearing Capacity = Min(1.2Lc * t * Fu, 2.4d * t * Fu) * \phi = 3.263$ kip **OK** (Eqn J.3-6a)

PROJECT:
 SUNBELT RENTALS,
 MONUMENT SIGN, 226
 NY-17K, NEWBURGH.,
 NY

CLIENT:
 COMPLETE SIGNS

PROJECT NUMBER:
 43082C

DATE: 11/02/2023

DRAWN BY: CT

REVISIONS: NO.	DATE
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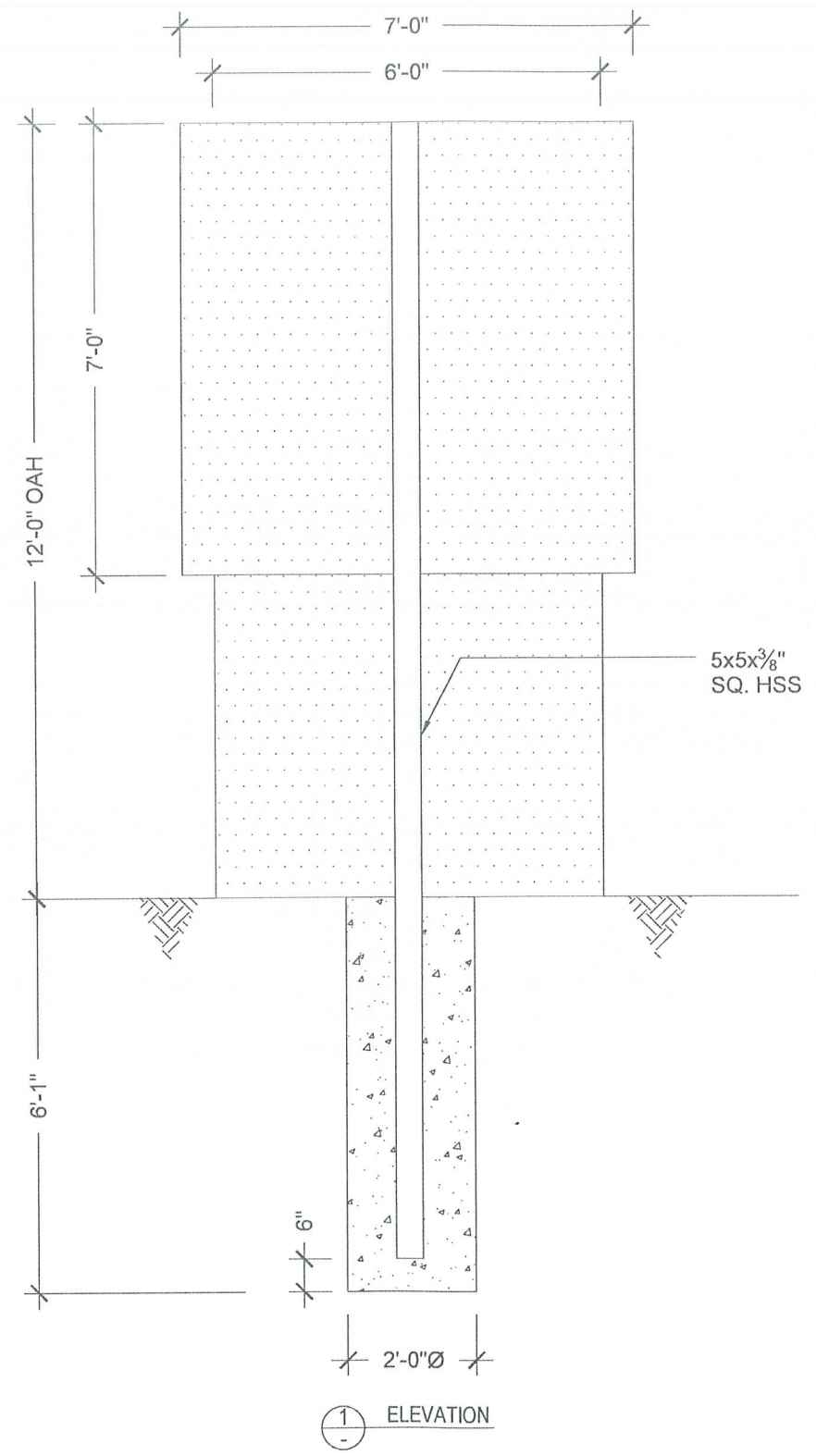
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SEP 18 2024



GENERAL NOTES

- DESIGN CODE: IBC 2018 & NEW YORK STATE BUILDING CODE 2020
- DESIGN LOADS: ASCE 7-16
- WIND VELOCITY 115 MPH EXPOSURE C
- CONCRETE 2500 PSI MINIMUM.
- SQ. HSS STEEL ASTM A500 GR. B, $F_y = 46$ KSI MIN.
- PROVIDE MIN. 3" CLEAR COVER ON ALL STEEL EMBEDDED IN CONCRETE WHEN CAST AGAINST SOIL
- LATERAL SOIL BEARING PER IBC CLASS 4 (150 PSF/FT)
- PROVIDE PROTECTION AGAINST DISSIMILAR METALS
- ALL DIMENSIONS TO BE VERIFIED PRIOR TO FABRICATION

v5.5

units; pounds, feet unless noted otherwise

Applied Wind Loads; from ASCE 7-16

$F = q_z * G * C_f * A_f$ with $q_z = 0.00256 K_z K_{zt} K_d V^2$ (29.3.2 & 29.4)
 $C_f = 1.533$ (Fig. 29.3-1) max. height= 12.00
 $K_{zt} = 1.0$ (26.8.2) (=1.0 unless unusual landscape)
 $K_z =$ from table 28.3-1 Exposure= c
 $K_d = 0.85$ for signs (table 26.6-1)
 $V = 115$ mph
 $G = 0.85$ (26.9) weight= 0.790 kips
 $s/h = 1.000$ $M_{DL} = 0.00$ k-ft
 $B/s = 0.58$

Pole Loads	structure component	height at section c.g.	K_z	q_z	pressure $q_z * G * C_f$	A_f	shear	Wind Moment M_w	
	1	2.50	0.850	24.5	31.88	30.00	956	2391	
	2	8.50	0.850	24.5	31.88	49.00	1562	13278	
					sums:	79.00	2519	15.67	(M_w) k-ft arm= 6.2
					for s/h=1, add 10% (asce fig. 29.4-1):	x 1.10		17.24	
			$P_u = 0.95$ kip				$M = 17.24$ k-ft		$M = \sqrt{M_{DL}^2 + M_w^2}$
			$M_u = \sqrt{1.2M_{DL}^2 + 1.0M_w^2} = 17.24$ k-ft						

Pole Design section; tube

$M_u \leq \phi M_n$ with $M_n = f_y Z$ $f_y = 46$ ksi $\phi = 0.9$

H	M_u (k-ft)	Z req'd. (in)	Size(in)	t (in)	Z	USE
at grade	17.24	5.00	5	0.174	5.9	5x5x3/8" Sq. HSS, $\phi M_n = 36.5$ k-ft

Footing Design footprint: round

$\omega = 1.3$ IBC 1605.3.2 IBC Table 1806.2, sections 1806.3.4, 1807.3.2 $S = (1.3 \times 2 \times 150 \text{ psf/ft})$
 $P = 1.96$ kip $S1 = S \times d / 3$ $A = 2.34 \times P / (S1 \times b)$ $S = 400$
 $S1 = 807$ $d = 0.5 \times A (1 + (1 + 4.36 \times h/A)^{.5})$ IBC 1807.3.2.1
 $A = 2.85$
 footing: **2' - 0" dia.** **6' - 1" deep**