Reviewed 2/15/2023 DL
Subject to field inspectors approvals.

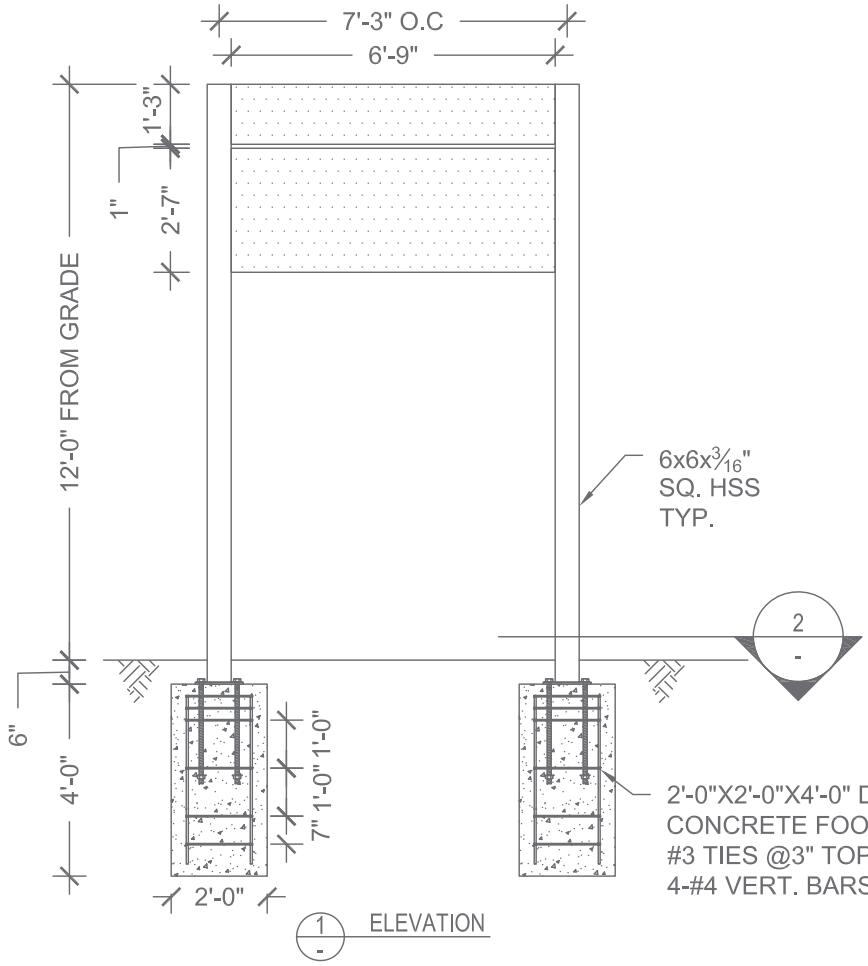
SULLAWAY ENGINEERING

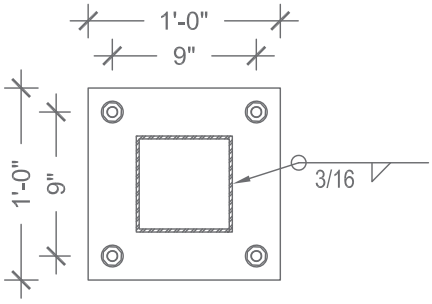
11545 W. BERNARDO COURT, SUITE 201
SAN DIEGO, CA 92127
PROJECTMANAGER@SULLAWAYENG.COM
PHONE: 1-858-312-5150 FAX: 1-858-777-3534

PROJECT: FERRUCCI JHS, 3213 WILDWOOD PARK DR., PUYALLUP, WA
PROJECT #: 38928-1
CLIENT: EVERGREEN SIGN CO

DATE: 2/13/2023
ENGINEER: TH
LAST REVISED:

THE APPROVED CONSTRUCTION PLANS AND ALL ENGINEERING DOCUMENTS **MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.**



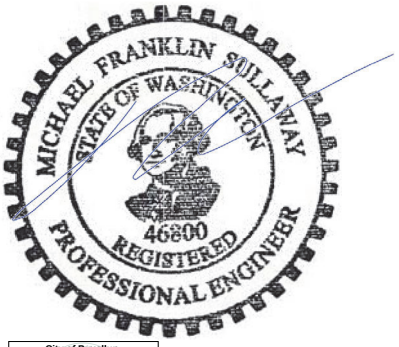


1'-0"x1'-0"x½" STEEL PLATE
W/ (4) ⅝"Ø THREADED ANCHOR RODS
MIN. EMBED.=23" INTO CONCRETE
W/NUT/WASHER/NUT @ EMBED. END

2 - BASE PLATE, TYP.

GENERAL NOTES

1. DESIGN CODE: IBC 2018 & WASHINGTON SBCC 2018
2. DESIGN LOADS: ASCE 7-16
3. WIND VELOCITY 100 MPH EXPOSURE C
4. CONCRETE 2500 PSI MINIMUM
5. SQ. HSS STEEL ASTM A500 GR. B, F_y= 46 KSI MIN.
6. PLATE STEEL ASTM A36
7. WELDING STRENGTH, Fexx = 70 KSI
8. THREADED ANCHOR ROD STEEL ASTM F1554 GR. 36
9. STEEL REINFORCEMENT IN CONCRETE ASTM A615 GR 60
10. PROVIDE MIN. 3" CLEAR COVER ON ALL STEEL EMBEDDED IN CONCRETE WHEN CAST AGAINST SOIL AND ALL STEEL EXPOSED TO SOIL
11. LATERAL SOIL BEARING PER IBC CLASS 4 (150 PSF/FT)
12. PROVIDE PROTECTION AGAINST DISSIMILAR METALS
13. ALL DIMENSIONS TO BE VERIFIED PRIOR TO FABRICATION
14. ALL EXISTING ELEMENTS AND DIMENSIONS TO BE VERIFIED IN FIELD.



City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

2/13/2023

PRSG20230064

SULLAWAY ENGINEERING

PROJECT: FERRUCCI JHS | DATE: 2/13/23
PROJ. NO.: 38928-1 | ENGINEER: TH
CLIENT: EVERGREEN SIGN CO

V5.5

units; pounds, feet unless noted otherwise

Applied Wind Loads; from ASCE 7-16

$F=q_z*G*C_f*A_f$ with $q_z = 0.00256K_zK_{zt}K_dV^2$ (29.3.2 & 29.4)

C_f= 1.604 (Fig. 29.3-1) 2 pole Cf factor= 0.87 7.25 max. height= 12.50

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= 100 mph

G= 0.85 (26.9) weight= 0.379 kips

s/h= 0.100 M_{DL}= 0.00 k-ft

B/s= 5.40

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	0.25	0.85	18.50	25.22	0.00	0	0			
	2	4.54	0.85	18.50	25.22	8.08	204	926			
	3	9.88	0.85	18.50	25.22	20.02	505	4985			
	4	11.21	0.85	18.50	25.22	0.08	2	24			
	5	11.88	0.85	18.50	25.22	9.69	244	2901			
					sums:	37.88	955	8.84	(M_w)	k-ft	arm= 9.3
	two pole distribution factor *b*s (asce fig. 29.4-1):				x 0.53		508	4.70			
			P_u=	0.45	kip		M=	4.70	k-ft		$M=\sqrt{M_{DL}^2+M_w^2}$
	$M_u=\sqrt{1.2M_{DL}^2+1.0M_W^2}$ =		4.70	k-ft							

Pole Design section; tube

$M_u \le \phi M_n$ with $M_n = f_yZ$ f_y= 46 ksi ϕ= 0.9

H	M_u(k-ft)	Z req'd. (in)	Size(in)	t (in)	Z	Use
at 6" below grade	4.70	1.36	3	0.174	2.0	6x6x3/16" SQ.HSS, ϕMn = 27.8 k-ft

Footing Design footprint: rectangle

ω= 1.3 IBC 1605.3.2 IBC Table 1806.2, sections 1806.3.4, 1807.3.2 S=(1.3x2x150psf/ft)

P= 0.40 kip S1 = S x d / 3 A = 2.34 x P / (S1 x b) S= 400

S1= 426 d =0.5xA (1+ (1+4.36x h/A) ^.5) IBC 1807.3.2.1

A= 0.77

footing: **2' - 0" by 2' - 0 " 3' - 2" deep**

4' - 0" deep OK

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

PRSG20230064

SULLAWAY ENGINEERING

PROJECT: FERRUCCI JHS
PROJ. NO.: 38928-1
CLIENT: EVERGREEN SIGN CO

DATE: 2/13/23
ENGINEER: TH

units; pounds, feet unless noted otherwise

Check 0.625" dia. Threaded Anchor Rods, F1554 Gr.36

Mu =	at 6" below grade	=	4.70	k-ft	(See Page#2)	
Vu =	at 6" below grade	=	0.508	kips	(See Page#2)	
n =		#bolts per row =	2			
s =		=	9	in		
Tu per bolt =		Mu/s/n =	3.133	kips		
Vu per bolt =		Vu/n =	0.254	kips		

Per AISC J3:

d(bolt) =	0.625 in	Fu =	58 ksi	ϕ =	0.75	
A(bolt) =		=	0.307	in^2		
Fnt =		0.75*Fu =	43.50	ksi		
Fnv =		0.45*Fu =	26.10	ksi		
ϕRnt =		ϕ*Fnt * A(bolt) =	10.01	kips	**OK**	
ϕRnv =		ϕ*Fnv * A(bolt) =	6.01	kips	**OK**	

Combined Tension & Shear Check:

frv =	V per bolt / A(bolt) =	0.83	ksi		
F'nt =	1.3Fnt - Fnt/ϕFnv*frv ≤ Fnt =	43.50	ksi		
ϕRnt =	ϕF'nt*A(bolt) =	10.01	kips	**OK**	

Embedment Length Calculation:

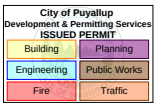
D=	(Dia. of smaller anchor or rebar)=	0.500	in	
lap length=	40*D=	20	in	
min. embed=	3"+lap length=	23	in	

Check 12x12x0.5" Steel Base Plate, A36

arm =	1.650 in	b =	12.00 in	t =	0.5 in	
Mplate =		T per bolt * n * arm =	10.339	k-in	(T= See above, n=2)	
Z=		bt^2/4=	0.750	in^3		
ϕMn =		ϕ*Fy*Z = 0.9*36ksi*Z =	24.300	k-in	**OK**	

Check Vertical Rebar

2*Tu per bolt/#bars	1.57 k		fy =	60	ksi
# of bars (within embed. length):	4		db =	0.500	in
bar #:	4		Ab =	0.1963	in^2
Tc = ϕ fy Ab =	8.84 k	**OK**	ϕ =	0.75	



PRSG20230064