BRC CONSULTANTS
7211 WEST 24 AVE.
HIALEAH FL 33016
email: bryan@brcconsultants.us

JOB TITLE	ALUMINUM GATES		
JOB NO.		**SHEET NO.**	
CALCULATED BY	B.C.	**DATE**	
CHECKED BY	V.R.	**DATE**	

STRUCTURAL CALCULATIONS

FOR

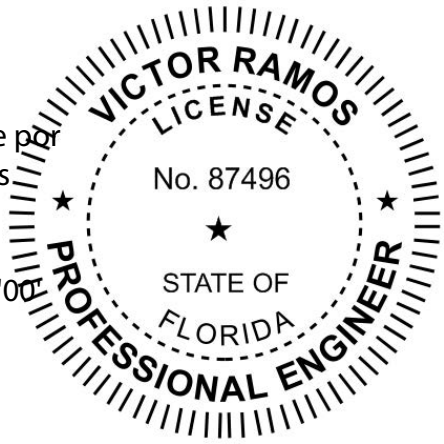
ALUMINUM GATES

9601 SW 67th AVENUE - PINECREST, FLORIDA 33156

To the best of my knowledge and professional judgement all calculations contained herein have been reviewed, and conform to the recommendation of ASCE/SEI 7-22, ACI 318-19, AISC 360-16, and the 2023 Florida Building Code, 8th Edition

Victor Ramos

Firmado digitalmente por Victor Ramos
Fecha: 2026.02.05 12:02:54 -04'00'



INDEX

BRC CONSULTANTS
7211 WEST 24 AVE.
HIALEAH FL 33016
email: bryan@brcconsultants.us

JOB TITLE ALUMINUM GATES

JOB NO. | **SHEET NO.**
CALCULATED BY B.C. | **DATE**
CHECKED BY V.R. | **DATE**

www.struware.com

Code Search

Code: Florida Building Code 2023

Occupancy:

Occupancy Group = R Residential

Risk Category & Importance Factors:

Risk Category =	II	
Wind Factor =	1.00	use 0.60 NOTE: Output will be nominal wind pressures
Snow Factor	1.00	
Seismic Importance factor =	1.00	

Type of Construction:

Fire Rating:

Roof =	0.0 hr
Floor =	0.0 hr

Building Geometry:

Roof angle (θ)	6.00 / 12	26.6 deg
Building length	143.8 ft	
Least width	110.9 ft	
Mean Roof Ht (h)	28.5 ft	
Parapet ht above grd	0.0 ft	
Minimum parapet ht	0.0 ft	
hb for Elevated bldg	0.0 ft	

Live Loads:

Roof
0 to 200 sf: 18 psf
200 to 600 sf: 21.6 - 0.018Area, but not less than 12 psf
over 600 sf: 12 psf

Roofs used for roof gardens 100 psf

Floor:

Typical Floor	50 psf
Partitions	15 psf
Corridors above first floor	80 psf
Lobbies & first floor corridors	100 psf
Stairs and exit ways	100 psf

BRC CONSULTANTS
7211 WEST 24 AVE.
HIALEAH FL 33016
email: bryan@brcconsultants.us

JOB TITLE ALUMINUM GATES

JOB NO. **SHEET NO.**
CALCULATED BY B.C. **DATE**
CHECKED BY V.R. **DATE**

Wind Loads :

ASCE 7 - 22

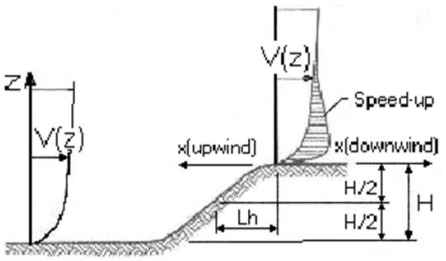
Ultimate Wind Speed	115 mph
Nominal Wind Speed	89.1 mph
Risk Category	II
Exposure Category	C
Enclosure Classif.	Enclosed Building
Internal pressure	+/-0.18
Bldg Directionality (Kd)	0.85
Kh MWFRS<=60	0.970
Kh all other	0.970
Type of roof	Hip

Topographic Factor (Kzt)

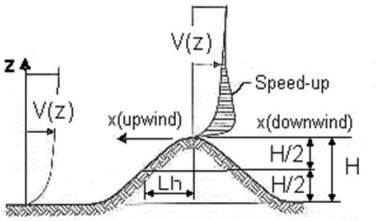
Topography		Flat
Hill Height	(H)	80.0 ft
Half Hill Length (Lh)		100.0 ft
Actual H/Lh	=	0.80
Use H/Lh	=	0.50
Modified Lh	=	160.0 ft
From top of crest: x =		50.0 ft
Bldg up/down wind?		downwind

H/Lh= 0.50 K_1 = 0.000
x/Lh = 0.31 K_2 = 0.792
z/Lh = 0.18 K_3 = 1.000

At Mean Roof Ht:
Kzt = $(1+K_1K_2K_3)^2$ = 1.00



ESCARPMENT



2D RIDGE or 3D AXISYMMETRICAL HILL

Gust Effect Factor

h = 28.5 ft
B = 110.9 ft
/z (0.6h) = 17.1 ft

Flexible structure if natural frequency < 1 Hz (T > 1 second).
If building h/B>4 then may be flexible and should be investigated.
h/B = 0.26 Rigid structure (low rise bldg)

G = 0.85 Using rigid structure default

Rigid Structure

$\bar{e}$ =	0.20	
ℓ =	500 ft	
z_{min} =	15 ft	
c =	0.20	
g_Q, g_v =	3.4	
L_z =	438.4 ft	
Q =	0.88	
I_z =	0.22	
G =	**0.86**	use G = 0.85

Flexible or Dynamically Sensitive Structure

Natural Frequency (η_1) =	0.7 Hz			
Damping ratio (β) =	0.01			
/b =	0.660			
/α =	0.156			
Vz =	100.5			
N_1 =	3.05			
R_n =	0.069			
R_h =	0.592	η =	0.914	h = 28.5 ft
R_B =	0.242	η =	3.556	
R_L =	0.063	η =	15.426	
g_R =	4.104			
R =	0.744			
Gf =	1.057			

BRC CONSULTANTS
7211 WEST 24 AVE.
HIALEAH FL 33016
email: bryan@brcconsultants.us

JOB TITLE ALUMINUM GATES
JOB NO. **SHEET NO.**
CALCULATED BY B.C. **DATE**
CHECKED BY V.R. **DATE**

Wind Loads - Other Structures: ASCE 7 - 22 Nominal Wind Pressures

Wind Factor = 0.60
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 115 mph
Kzt = 1.00 Exposure = C

A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)

		s/h =	0.98	**Case A & B**	
Dist to sign top (h)	6.0 ft	B/s =	1.08	C_f =	1.46
Height (s)	5.9 ft	Lr/s =	0.00	F = Kd qh G Cf As =	**18.3 As**
Width (B)	6.4 ft	Kz =	0.851	As =	37.0 sf
Wall Return (Lr) =		Kd qh =	14.7 psf	F =	676 lbs
Directionality (Kd)	0.85				
Percent of open area to gross area	0.0%	Open reduction factor =	1.00		

CaseC

Horiz dist from windward edge	Cf	F=KdqhGCfAs (psf)
0 to s	1.84	23.0 **As**
s to 2s	1.23	15.3 **As**

Case C reduction factors
Factor if s/h>0.8 = 0.82
Wall return factor for Cf at 0 to s = 1.00

B. Open Signs & Single-Plane Open Frames (openings 30% or more of gross area)

Height to centroid of Af (z)	15.0 ft			Kz =	0.851
				Base pressure (Kd qz) =	14.7 psf
Width (zero if round)	0.0 ft				
Diameter (zero if rect)	2.0 ft	D(qz)^.5 =	7.67	F = Kdqz G Cf Af =	**13.7 Af**
Percent of open area		I =	0.65	Solid Area: A_f =	10.0 sf
to gross area	35.0%	C_f =	1.1	F =	137 lbs
Directionality (Kd)	0.85				

C. Chimneys, Tanks, & Similar Structures

Height to centroid of Af (z)	15.0 ft	Kz =	0.851
Cross-Section	Round	Base pressure (Kd qz) =	16.4 psf
Directionality (Kd)	0.95	h/D =	15.00
Height (h)	15.0 ft	D(qz)^.5 =	4.16
Width (D)	1.0 ft		
Type of Surface	Rough (D'/D = 0.02)		

Round
C_f = 0.84
F = Kdqz G Cf Af = **11.8 Af**
A_f = 10.0 sf
F = 118 lbs

D. Trussed Towers

Height to centroid of Af (z)	15.0 ft	Kz =	0.851
ϵ =	0.27	Base pressure (Kd qz) =	14.7 psf
Tower Cross Section	square		
Member Shape	flat	Diagonal wind factor =	1.2
Directionality (Kd)	0.85	Round member factor =	1.000

Square (wind along tower diagonal)
Cf = 3.24
F = Kdqz G Cf Af = **40.5 Af**
Solid Area: Af = 10.0 sf
F = 405 lbs

Square (wind normal to face)
C_f = 2.70
F = Kdqz G Cf Af = **33.7 Af**
Solid Area: A_f = 10.0 sf
F = 337 lbs

DESIGN ALUMINUM POST (RT 3X3X0.125)

$W := 18.3 \cdot 6.4 = 117.12$ lb/ft

$L := 6$ ft

$M := \frac{W \cdot L^2}{8} = 527.04$ lb*ft

$Mu := \frac{M \cdot 12}{1000} = 6.32$ k*in

$V := \frac{W}{2} = 58.56$ lb

$Vu := \frac{V}{1000} = 0.059$ kip

$Sx := 1.32$ in^3

$Sy := 1.32$ in^3

$b := 3$ in

$t := 0.125$ in

$A := 1.44$ in^2

TENSION CHECK

$(\lambda) := \frac{[b - (2 \cdot t)]}{t} = 22$

$$Fb := \begin{cases} 9.1 & \text{if } (\lambda) \le 28.2 \\ (12 - 0.105 \cdot (\lambda)) & \text{if } 28.2 < (\lambda) \le 58 \\ \frac{346}{(\lambda)} & \text{otherwise} \end{cases} = 9.1 \text{ ksi}$$

$Sr := \frac{Mu}{Fb} = 0.695$

$Rf := \text{if}(Sr \le Sx, \text{"OK"}, \text{"NG"}) = \text{"OK"}$

SHEAR CHECK

$$(\lambda) := \frac{[b - (2 \cdot t)]}{t} = 22$$

$$Fbs := \begin{cases} 5.5 \text{ if } (\lambda) \le 47.5 \\ (7.3 - 0.038 \cdot (\lambda)) \text{ if } 47.5 < (\lambda) \le 126 \\ \frac{38.665}{(\lambda)^2} \text{ otherwise} \end{cases} = 5.5 \quad \text{ksi}$$

$$Ss := \frac{Vu}{A} = 0.041 \quad \text{ksi}$$

$$Rf := \text{if}(Ss \le Fbs, \text{"OK"}, \text{"NG"}) = \text{"OK"}$$

DEFLECTION CHECK

$H := 72 \quad \text{in}$

$Ix := 1.98 \quad \text{in}^4$

$$Def := \frac{W}{12} \cdot \frac{H^4}{384 \cdot 10100000 \cdot Ix} = 0.03416 \quad \text{in}$$

$$Def_P := \frac{(6 \cdot 12)}{360} = 0.2 \quad \text{in} \quad \text{OK}$$

DESIGN ALUMINUM FRAME (RT 3X3X0.125)

$W := 18.3$ psf

$FRAME := 0.25$ ft

$WL := W \cdot FRAME = 4.575$ lb /ft

$L := 6.4$ ft

$M := \frac{WL \cdot L^2}{8} = 23.42$ lb*ft

$Mu := \frac{M \cdot 12}{1000} = 0.281$ k*in

$V := \frac{WL \cdot L}{2} = 14.64$ lb

$Vu := \frac{V}{1000} = 0.015$ kip

$Sx := 1.32$ in^3

$Sy := 1.32$ in^3

$b := 3$ in

$t := 0.125$ in

$A := 1.44$ in^2

TENSION CHECK

$(\lambda) := \frac{[b - (2 \cdot t)]}{t} = 22$

$$Fb := \begin{cases} 13.6 & \text{if } (\lambda) \le 36.2 \\ (16 - 0.065 \cdot (\lambda)) & \text{if } 36.2 < (\lambda) \le 123 \\ \frac{982}{(\lambda)} & \text{otherwise} \end{cases} = 13.6 \text{ ksi}$$

$Sr := \frac{Mu}{Fb} = 0.021$

$Rf := \text{if}(Sr \le Sx, \text{"OK"}, \text{"NG"}) = \text{"OK"}$

SHEAR CHECK

$$(\lambda) := \frac{[b - (2 \cdot t)]}{t} = 22$$

$$Fbs := \begin{cases} 5.5 \text{ if } (\lambda) \le 47.5 \\ (7.3 - 0.038 \cdot (\lambda)) \text{ if } 47.5 < (\lambda) \le 126 \\ \frac{38.665}{(\lambda)^2} \text{ otherwise} \end{cases} = 5.5 \quad \text{ksi}$$

$$Ss := \frac{Vu}{A} = 0.01 \quad \text{ksi}$$

$$Rf := \text{if}(Ss \le Fbs, \text{"OK"}, \text{"NG"}) = \text{"OK"}$$

DEFLECTION CHECK

$H := 77 \quad \text{in}$

$Ix := 1.98 \quad \text{in}^4$

$$Def := \frac{W}{12} \cdot \frac{H^4}{384 \cdot 10100000 \cdot Ix} = 0.00698 \quad \text{in}$$

$$Def_P := \frac{(6.4 \cdot 12)}{360} = 0.21 \text{ in} \quad \text{OK}$$

Stainless-Steel Titen HD Allowable Tension and Shear Loads in 8" Medium-Weight and Normal-Weight Grout-Filled CMU

Size in. (mm)	Drill Bit Diameter in.	Minimum Embedment Depth in. (mm)	Critical Edge Distance c_{crit} in. (mm)	Minimum Edge Distance c_{min} in. (mm)	Critical Spacing Distance in. (mm)	Values for 8" Medium-Weight or Normal-Weight Grout-Filled CMU			
						Tension Load		Shear Load	
						Ultimate lb. (kN)	Allowable lb. (kN)	Ultimate lb. (kN)	Allowable lb. (kN)
Anchor Installed in the Face of the CMU Wall (See Figure 1)									
¼ (6.4)	¼	2½ (64)	4 (102)	1¼ (32)	4 (102)	1,325 (5.9)	265 (1.2)	1,400 (6.2)	280 (1.3)
⅜ (9.5)	⅜	2¾ (70)	12 (305)	4 (102)	8 (203)	2,125 (9.5)	425 (1.9)	2,850 (12.7)	570 (2.5)
½ (12.7)	½	3½ (89)	12 (305)	4 (102)	8 (203)	3,325 (14.8)	665 (3.0)	4,950 (22.0)	990 (4.4)
⅝ (15.9)	⅝	4½ (114)	12 (305)	4 (102)	8 (203)	3,850 (17.1)	770 (3.4)	4,925 (21.9)	985 (4.4)
¾ (19.1)	¾	5½ (140)	12 (305)	4 (102)	8 (203)	5,200 (23.1)	1,040 (4.6)	4,450 (19.8)	890 (4.0)

REACTIONS TITEN HD R= 676 / 7 = 96.57 lb

ANCHOR 3/8" T_titen= 425 lb V_titen= 570 lb

T= R/T_titen = 0.23

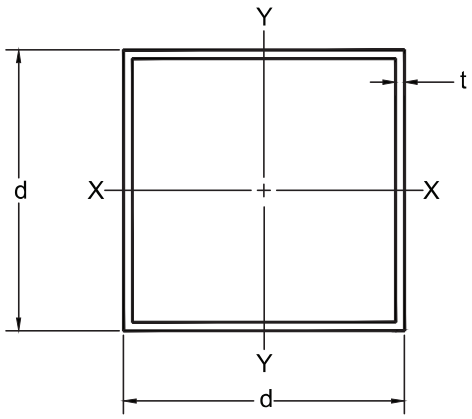
V= R/V_titen = 0.17

IF R/T_titen + R/V_titen < 1 "OK"

0.23 + 0.17 = 0.4 < 1 "OK"

Table 23

SQUARE TUBES (Continued)



Designation	d	t	Wt/ft	A	I_x, I_y	S_x, S_y	r_x, r_y	J	Z_x, Z_y	b/t
	in.	in.	lb/ft	in^2	in^4	in^3	in.	in^4	in^3	-
RT 2.75 x 2.75 x 0.125	2.750	0.125	1.54	1.31	1.51	1.10	1.07	2.26	1.29	20.0
RT 2.75 x 2.75 x 0.188	2.750	0.188	2.27	1.93	2.12	1.54	1.05	3.16	1.85	12.6
RT 3 x 3 x 0.095	3.000	0.095	1.30	1.10	1.55	1.04	1.19	2.33	1.20	29.6
RT 3 x 3 x 0.125	3.000	0.125	1.69	1.44	1.98	1.32	1.17	2.97	1.55	22.0
RT 3 x 3 x 0.188	3.000	0.188	2.49	2.11	2.80	1.87	1.15	4.18	2.23	14.0
RT 3 x 3 x 0.25	3.000	0.250	3.23	2.75	3.49	2.33	1.13	5.20	2.84	10.0
RT 3 x 3 x 0.375	3.000	0.375	4.63	3.94	4.61	3.08	1.08	6.78	3.90	6.0
RT 3.5 x 3.5 x 0.125	3.500	0.125	1.98	1.69	3.21	1.83	1.38	4.81	2.14	26.0
RT 3.5 x 3.5 x 0.25	3.500	0.250	3.82	3.25	5.76	3.29	1.33	8.58	3.97	12.0
RT 3.5 x 3.5 x 0.375	3.500	0.375	5.51	4.69	7.74	4.42	1.28	11.4	5.52	7.3
RT 4 x 4 x 0.125	4.000	0.125	2.28	1.94	4.85	2.43	1.58	7.27	2.82	30.0
RT 4 x 4 x 0.188	4.000	0.188	3.37	2.87	6.96	3.48	1.56	10.4	4.10	19.3
RT 4 x 4 x 0.25	4.000	0.250	4.41	3.75	8.83	4.41	1.53	13.2	5.28	14.0
RT 4 x 4 x 0.375	4.000	0.375	6.39	5.44	12.0	6.02	1.49	17.9	7.42	8.7
RT 4 x 4 x 0.5	4.000	0.500	8.23	7.00	14.6	7.29	1.44	21.4	9.25	6.0
RT 5 x 5 x 0.125	5.000	0.125	2.87	2.44	9.66	3.86	1.99	14.5	4.46	38.0
RT 5 x 5 x 0.188	5.000	0.188	4.26	3.62	14.0	5.59	1.97	20.9	6.53	24.6
RT 5 x 5 x 0.25	5.000	0.250	5.59	4.75	17.9	7.16	1.94	26.8	8.47	18.0
RT 5 x 5 x 0.375	5.000	0.375	8.16	6.94	24.9	9.96	1.89	37.1	12.1	11.3
RT 6 x 6 x 0.125	6.000	0.125	3.45	2.94	16.9	5.64	2.40	25.3	6.47	46.0
RT 6 x 6 x 0.188	6.000	0.188	5.14	4.37	24.6	8.21	2.37	36.9	9.53	29.9
RT 6 x 6 x 0.25	6.000	0.250	6.76	5.75	31.7	10.6	2.35	47.5	12.4	22.0
RT 6 x 6 x 0.375	6.000	0.375	9.92	8.44	44.7	14.9	2.30	66.7	17.8	14.0
RT 6 x 6 x 0.5	6.000	0.500	12.9	11.0	55.9	18.6	2.25	83.2	22.8	10.0
RT 8 x 8 x 0.188	8.000	0.188	6.91	5.87	59.8	14.9	3.19	89.6	17.2	40.6
RT 8 x 8 x 0.25	8.000	0.250	9.11	7.75	77.7	19.4	3.17	116	22.5	30.0
RT 8 x 8 x 0.375	8.000	0.375	13.5	11.4	111	27.8	3.12	166	32.7	19.3
RT 8 x 8 x 0.5	8.000	0.500	17.6	15.0	141	35.3	3.07	211	42.3	14.0

1. Users are encouraged to check availability with suppliers.
2. Dimensional tolerances are given in *Aluminum Standards and Data*.
3. Weights are for 6061 with a density of 0.098 lb/in^3.

FOOTING LOAD: 1

D..... Dead load
Lr..... Live roof load
W..... Wind load

$D\_frame := 1.69 \cdot 36.17 = 61.127$ lb

$D\_sheets := 0.098 \cdot 0.125 \cdot 6.4 \cdot 1.92 = 0.151$ lb

$D := (D\_frame + D\_sheets) = 61.278$ lb

$W := 18.3 \cdot 1.8 \cdot 2.9 = 95.526$

Project Title:
Engineer:
Project ID:
Project Descr:

General Footing

Project File: 9601 SW 67th AVE GATE.ec6

LIC# : KW-06017891, Build:20.25.06.16 BRC CONSULTANTS (c) ENERCALC, LLC 1982-2026

DESCRIPTION: F-1

Code References

Calculations per ACI 318-14, IBC 2018, CBC 2019
Load Combinations Used : ASCE 7-22

General Information

Material Properties

f'c : Concrete 28 day strength	=	3.0	ksi
fy : Rebar Yield	=	60.0	ksi
Ec : Concrete Elastic Modulus	=	3,122.0	ksi
Concrete Density	=	150.0	pcf
φ Values Flexure	=	0.90	
Shear	=	0.750	

Analysis Settings

Min Steel % Bending Reinf.	=	
Min Allow % Temp Reinf.	=	0.00180
Min. Overturning Safety Factor	=	1.50 : 1
Min. Sliding Safety Factor	=	1.50 : 1
Add Ftg Wt for Soil Pressure	:	Yes
Use ftg wt for stability, moments & shears	:	Yes
Add Pedestal Wt for Soil Pressure	:	No
Use Pedestal wt for stability, mom & shear	:	No

Soil Design Values

Allowable Soil Bearing	=	2.0	ksf
Soil Density	=	110.0	pcf
Increase Bearing By Footing Weight	=	Yes	
Soil Passive Resistance (for Sliding)	=	250.0	pcf
Soil/Concrete Friction Coeff.	=	0.30	

Increases based on footing Depth

Footing base depth below soil surface	=	ft
Allow press. increase per foot of depth	=	ksf
when footing base is below	=	ft

Increases based on footing plan dimension

Allowable pressure increase per foot of depth	=	ksf
when max. length or width is greater than	=	ft

Dimensions

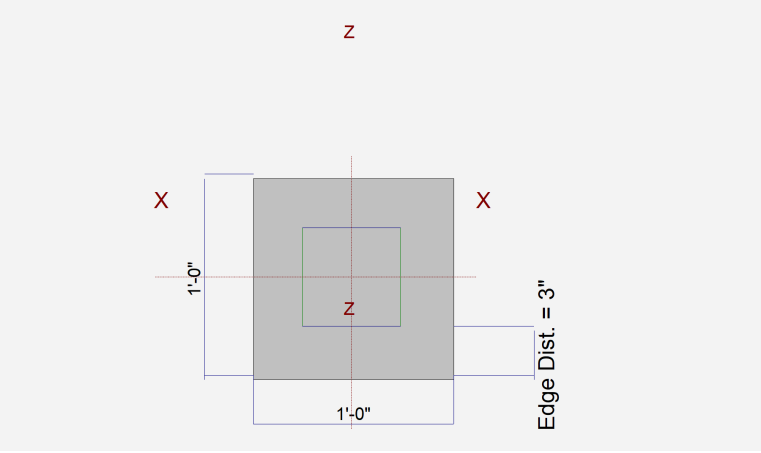
Width parallel to X-X Axis	=	1.0 ft
Length parallel to Z-Z Axis	=	1.0 ft
Footing Thickness	=	16.0 in

Pedestal dimensions...

px : parallel to X-X Axis	=	in
pz : parallel to Z-Z Axis	=	in
Height	=	in

Bandwidth Distribution Check (ACI 15.4.4.2)

Direction Requiring Closer Separation	n/a
# Bars required within zone	n/a
# Bars required on each side of zone	n/a



Bottom Reinforcing

Bars parallel to X-X Axis (resisting Z Flexure)

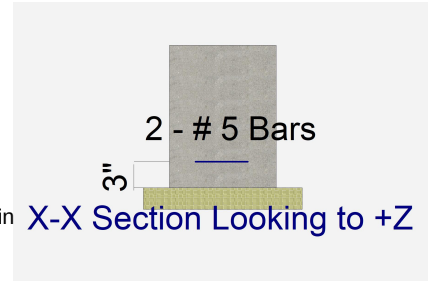
Number of Bars	=		2.0
Reinforcing Bar Size	=	#	5

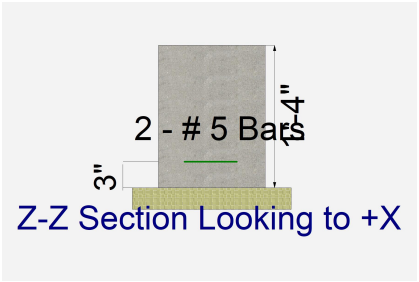
Bars parallel to Z-Z Axis (resisting X Flexure)

Number of Bars	=		2.0
Reinforcing Bar Size	=	#	5

Rebar Centerline to Edge of Concrete...

at Bottom of footing	=	3.0 in





Top Reinforcing

Bars parallel to X-X Axis (resisting Z Flexure)

Number of Bars	=	3.0
Reinforcing Bar Size	=	5

Bars parallel to Z-Z Axis (resisting X Flexure)

Number of Bars	=	2.0
Reinforcing Bar Size	=	5

Rebar Centerline to Edge of Concrete...

at Top of footing	=	3.0 in

Project Title:
Engineer:
Project ID:
Project Descr:

General Footing

Project File: 9601 SW 67th AVE GATE.ec6

LIC# : KW-06017891, Build:20.25.06.16 BRC CONSULTANTS

DESCRIPTION: F-1

Applied Loads

		D	Lr	L	S	W	E	H	
P : Column Load	=	0.060				-0.0950			k
OB : Overburden	=								ksf
M-xx	=								k-ft
M-zz	=								k-ft
V-x	=								k
V-z	=								k

DESIGN SUMMARY

Design OK

	Min. Ratio	Item	Applied		Capacity		Governing Load Combination
PASS	0.1775	Soil Bearing	0.3550	ksf	2.0	ksf	+D-W about Z-Z axis
PASS	n/a	Overturning - X-X	0.0	k-ft	0.0	k-ft	No Overturning
PASS	n/a	Overturning - Z-Z	0.0	k-ft	0.0	k-ft	No Overturning
PASS	n/a	Sliding - X-X	0.0	k	0.0	k	No Sliding
PASS	n/a	Sliding - Z-Z	0.0	k	0.0	k	No Sliding
PASS	1.642	Uplift	-0.0950	k	0.1560	k	+0.60D+W
PASS	0.000604	Z Flexure (+X) Bot Tens	0.02088	k-ft/ft	34.574	k-ft/ft	+1.20D-W
PASS	0.000604	Z Flexure (-X) Bot Tens	0.02088	k-ft/ft	34.574	k-ft/ft	+1.20D-W
PASS	0.557	Min Steel X Flexure Bottom	0.346	in2/ft	0.620	in2/ft	n/a
PASS	0.000604	X Flexure (+Z) Bot Tens	0.02088	k-ft/ft	34.574	k-ft/ft	+1.20D-W
PASS	0.000604	X Flexure (-Z) Bot Tens	0.02088	k-ft/ft	34.574	k-ft/ft	+1.20D-W
PASS	0.557	Min Steel Z Flexure Bottom	0.346	in2/ft	0.620	in2/ft	n/a
PASS	0.000101	Z Flexure (+X) Top Tens	0.005125	k-ft/ft	50.589	k-ft/ft	+0.90D+W
PASS	0.000101	Z Flexure (-X) Top Tens	0.005125	k-ft/ft	50.589	k-ft/ft	+0.90D+W
PASS	0.372	Min Steel X Flexure Top	0.346	in2/ft	0.930	in2/ft	n/a
PASS	0.000148	X Flexure (+Z) Top Tens	0.005125	k-ft/ft	34.574	k-ft/ft	+0.90D+W
PASS	0.000148	X Flexure (-Z) Top Tens	0.005125	k-ft/ft	34.574	k-ft/ft	+0.90D+W
PASS	0.557	Min Steel Z Flexure Top	0.346	in2/ft	0.620	in2/ft	n/a
PASS	n/a	1-way Shear (+X)	0.0	psi	82.158	psi	n/a
PASS	0.0	1-way Shear (-X)	0.0	psi	0.0	psi	n/a
PASS	n/a	1-way Shear (+Z)	0.0	psi	82.158	psi	n/a
PASS	n/a	1-way Shear (-Z)	0.0	psi	82.158	psi	n/a
PASS	n/a	2-way Punching	0.1323	psi	82.158	psi	+1.40D