

Company Info		Project Info	
R. C. E.		Project:	Foundation Project
3060 Thorntree; Suite 10		Location:	100 Enterprise Way
Chico, CA, 95973			Mytown, CA 10101
Phone: (530) 894-8833		Client:	Golden Nugget Casino
Fax: (530) 894-8882		Job No.:	Job 2002
E-mail: cj@r-c-e.com		Footing Id:	<b>F6 Continuous Footing</b>

Two footings connected by a wall...

**FOUNDATION PARAMETERS****Material Properties:**

	Conc. Strength f'c, psi	Conc. Type	Bot. Steel Cover, in.	Top Steel Cover, in.	Steel Yield Fy, ksi
Section: 1	2,000	HardRock	3.00	2.00	40
Section: 2	2,000	HardRock	3.00	2.00	40
Section: 3	2,000	HardRock	3.00	2.00	40

**Footing Section Geometry, (Stiffnesses based on computed effective stiffness, Ie):**

	Length, ft.	Width, ft.	Depth, inches
Section: 1	10.00	5.00	24.00
Section: 2	20.00	2.00	18.00
Section: 3	10.00	5.00	24.00

**Column & Wall Data:**

	Type	Center ft.	Length in.	Width in.	Col-f'c psi	Col-Fy ksi	Dowel Bars No. & Size
Column : 2	Other	5.00	8.00	8.00	n/a	n/a	n/a
Column : 3	Other	20.00	8.00	8.00	n/a	n/a	n/a
Column : 4	Other	35.00	8.00	8.00	n/a	n/a	n/a

  

	Type	Center ft.	Length ft.	Width in.	Height ft.	Density pcf	Use Stiffness?
Wall : 1	Conc.	20.00	18.00	8.00	8.00	150	Yes

**Soil Bearing Results, psf (actual / allowable):**

	Gravity Case	Wind Case	Seismic Case
Section: 1	1,804 / 3,000	2,134 / 3,990	2,200 / 3,990
Section: 2	1,903 / 3,000	2,147 / 3,990	2,206 / 3,990
Section: 3	1,825 / 3,000	2,138 / 3,990	2,201 / 3,990

**Beam Shear Stresses:**

Section: 1	.....	35.11 psi	Stirrups not required
Section: 2	.....	59.67 psi	Stirrups not required
Section: 3	.....	43.72 psi	Stirrups not required

**Punching Shear Stresses:**

Wall : 1	.....	4.86 psi
Column : 2	.....	33.08 psi
Column : 3	.....	30.45 psi
Column : 4	.....	31.76 psi

**Reinforcing Standards per ASTM-A615**

**Reinforcing Requirements per ACI Ultimate Strength Methods:**

Footing Sections:	Top Steel in <sup>2</sup> , Design	Bottom Steel in <sup>2</sup> , Design	Transverse in <sup>2</sup> /ft, Spacing	Stirrups in <sup>2</sup> , Spacing
Section: 1 Strength:..	0.25 2-#4	1.75 9-#4	0.12 #4 @ 20.3in.	Not Req'd...
Section: 2 Strength:..	0.00 0-#4	2.35 12-#4	0.00-....N/A....	Not Req'd...
Section: 3 Strength:..	0.25 2-#4	1.75 9-#4	0.12 #4 @ 20.0in.	Not Req'd...

Note: Strength = Steel Required for Strength..

**Loading Parameters:**

Concrete Design Ultimate Strength Load Cases Considered:

1.4DL	1.4DL + 1.7LL	1.4DL + 1.7LL + 1.7SL
1.05DL + 1.275LL + 1.275WL	1.05DL + 1.275LL - 1.275WL	0.9DL + 1.3WL
0.9DL - 1.3WL	1.05DL + 1.275LL + 1.0EQ	1.05DL + 1.275LL - 1.0EQ
0.9DL + 1.0EQ	0.9DL - 1.0EQ	

Soil Load Cases Considered:

1.0DL	1.0DL + 1.0LL	1.0DL + 1.0LL + 1.0SL
1.0DL + 1.0LL + 1.0WL	1.0DL + 1.0LL - 1.0WL	0.667DL + 1.0WL
0.667DL - 1.0WL	1.0DL + 1.0LL + 1.0EQ	1.0DL + 1.0LL - 1.0EQ
0.667DL + 1.0EQ	0.667DL - 1.0EQ	

Un-Factored Loads, ft-kips:

	Dead Load		Live Load		Wind Load		Seismic Load		Other Load	
	FY	MZ	FY	MZ	FY	MZ	FY	MZ	FY	MZ
Wall :1	20.00	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Column:2	20.00	0.00	30.00	0.00	25.00	0.00	30.00	0.00	0.00	0.00
Column:3	10.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Column:4	20.00	0.00	30.00	0.00	-25.00	0.00	-30.00	0.00	0.00	0.00

**Total Vertical Contact Forces:**

1.0DL	= 123.400 kips
1.0DL + 1.0LL	= 228.400 kips
1.0DL + 1.0LL + 1.0SL	= 228.400 kips
1.0DL + 1.0LL + 1.0WL	= 228.400 kips
1.0DL + 1.0LL - 1.0WL	= 228.400 kips
0.667DL + 1.0WL	= 100.090 kips
0.667DL - 1.0WL	= 100.090 kips
1.0DL + 1.0LL + 1.0EQ	= 228.400 kips
1.0DL + 1.0LL - 1.0EQ	= 228.400 kips
0.667DL + 1.0EQ	= 100.090 kips
0.667DL - 1.0EQ	= 100.090 kips
Envelope Case	= 228.400 kips

