



**Structural DesignSoft, Inc.**  
 5151 S Howell Ave. #F, Milwaukee, WI, 53154  
 (414) 294-4795

**ENGINEERING DEPT.**

Job No: S-123459

Job Title: Building : Bldg1 Revision : 0

Sheet No: 1

Description: Bldg1

Made By: Jack

CK'D By:

Date: 01-Jan-99

BUILDING DATA

-----  
 WIDTH ..... = 30.000 (FT)  
 LENGTH ..... = 160.00 (FT)  
 FRONT EAVE HT... = 8.500 (FT)  
 BACK EAVE HT.... = 8.500 (FT)  
 PEAK OFFSET .... = 15.000 (FT)  
 FRONT ROOF SLOPE = 0.375 /12

BUILDING CODE DATA

-----  
 BUILDING CODE .. = UBC-97  
 WIND EXPOSURE .. = C  
 SEISMIC ZONE ... =  
 DEAD LOAD ..... = 2.000 (PSF)  
 COLL LOAD ..... = 0.000 (PSF)  
 LIVE LOAD ..... = 30.000 (PSF)  
 WIND SPEED ..... = 80.000 (MPH)  
 GROUND SNOW .... = 10.000 (PSF)  
 ROOF SNOW ..... = 0.000 (PSF)

DESIGN PRESSURE - P = Ce Cq qs Iw

BASIC VELOCITY PRESSURE - qs = 16.384 (PSF)  
 WIND LOAD IMPORTANCE FACTOR - Iw = 1.0  
 GUST RESPONSE FACTOR - Ce = 1.060  
 INTERNAL PRESSURE COEFF. - GCpi = - 0.5

WIND COEFFICIENTS:

C1 = 0.800 C2 = -0.700 C3 = -0.700 C4 = -0.500

LOAD COMBINATIONS:

1 --> DEAD + LIVE  
 2 --> DEAD + WIND

PURLIN DESIGN DATA

-----  
 PURLIN SECTION.. = 4x2.5 Z 16 Ga Z SECTION  
 PURLIN SPACING . = 5.000 (FT) (HORIZONTAL)  
 DEFL. LIMIT (LL) = L/180.00  
 DEFL. LIMIT (WL) = L/120.00

PURLIN LAYOUT (FT)

-----

SPAN #	LEFT EXT.	BAY SIZE	RIGHT EXT.
1	0.000	10.000	0.000
2	0.000	10.000	1.000
3	0.500	10.000	0.000
4	0.000	10.000	0.500
5	0.500	10.000	0.000
6	0.000	10.000	0.500
7	0.500	10.000	0.000
8	0.000	10.000	0.500
9	0.500	10.000	0.000



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10	0.000	10.000	0.500
11	0.500	10.000	0.000
12	0.000	10.000	0.500
13	0.500	10.000	0.000
14	0.000	10.000	0.500
15	1.000	10.000	0.000
16	0.000	10.000	0.000

LOAD COMBINATION - 1 D+L (0.160 klf)

-----  
 Shears (Kip)  
 -----

SPAN No.	AT LEFT SUPPORT	RIGHT OF LEFT SUPP.	LEFT OF RIGHT SUPP.	AT RIGHT SUPPORT
1	0.631	-	-	1.814
2	1.814	-	-0.675	1.543
3	1.543	0.628	-	1.615
4	1.615	-	-0.717	1.596
5	1.596	0.719	-	1.601
6	1.601	-	-0.720	1.600
7	1.600	0.720	-	1.600
8	1.600	-	-0.720	1.600
9	1.600	0.720	-	1.600
10	1.600	-	-0.720	1.600
11	1.600	0.720	-	1.601
12	1.601	-	-0.719	1.596
13	1.596	0.717	-	1.615
14	1.615	-	-0.628	1.543
15	1.543	0.675	-	1.814
16	1.814	-	-	0.631

-----  
 Moment (kip-ft)  
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SPAN No.	AT LEFT SUPPORT	RIGHT OF LEFT SUPP.	MAX BETWN SUPPORT	DIST FR LEFT	LEFT OF RIGHT SUPP.	AT RIGHT SUPPORT
1	0.000	-	1.244	3.943	-	-1.691
2	-1.691	-	0.542	5.283	-0.880	-1.238
3	-1.238	-0.530	0.702	4.924	-	-1.359
4	-1.359	-	0.657	5.020	-0.948	-1.327
5	-1.327	-0.947	0.669	4.995	-	-1.335
6	-1.335	-	0.666	5.001	-0.953	-1.333
7	-1.333	-0.953	0.667	5.000	-	-1.334
8	-1.334	-	0.667	5.000	-0.953	-1.333
9	-1.333	-0.953	0.667	5.000	-	-1.334
10	-1.334	-	0.667	5.000	-0.953	-1.333
11	-1.333	-0.953	0.666	4.999	-	-1.335
12	-1.335	-	0.669	5.005	-0.947	-1.327
13	-1.327	-0.948	0.657	4.980	-	-1.359
14	-1.359	-	0.702	5.076	-0.530	-1.238
15	-1.238	-0.880	0.542	4.717	-	-1.691
16	-1.691	-	1.244	6.057	-	0.000

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 Member Design  
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SPAN No.	POSITIVE MOMENT	ALLOW MOMENT	MOMENT RATIO	NEGATIVE MOMENT	ALLOW MOMENT	MOMENT RATIO
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**Description:** Bldg1

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**Date:** 01-Jan-99

1	1.244	2.050	0.607	-1.691	2.050	0.825
2	0.542	2.050	0.265	-1.691	2.050	0.825
3	0.702	2.050	0.343	-1.359	2.050	0.663
4	0.657	2.050	0.321	-1.359	2.050	0.663
5	0.669	2.050	0.326	-1.335	2.050	0.651
6	0.666	2.050	0.325	-1.335	2.050	0.651
7	0.667	2.050	0.325	-1.334	2.050	0.650
8	0.667	2.050	0.325	-1.334	2.050	0.650
9	0.667	2.050	0.325	-1.334	2.050	0.650
10	0.667	2.050	0.325	-1.334	2.050	0.650
11	0.666	2.050	0.325	-1.335	2.050	0.651
12	0.669	2.050	0.326	-1.335	2.050	0.651
13	0.657	2.050	0.321	-1.359	2.050	0.663
14	0.702	2.050	0.343	-1.359	2.050	0.663
15	0.542	2.050	0.265	-1.691	2.050	0.825
16	1.244	2.050	0.607	-1.691	2.050	0.825

Member Deflection (In)

SPAN No.	DEAD LOAD	LIVE LOAD	LIVE LOAD LIMIT
1	0.024	0.3572	0.667
2	0.006	0.0886	0.667
3	0.011	0.1591	0.667
4	0.009	0.1398	0.667
5	0.010	0.1450	0.667
6	0.010	0.1436	0.667
7	0.010	0.1440	0.667
8	0.010	0.1439	0.667
9	0.010	0.1439	0.667
10	0.010	0.1440	0.667
11	0.010	0.1436	0.667
12	0.010	0.1450	0.667
13	0.009	0.1398	0.667
14	0.011	0.1591	0.667
15	0.006	0.0886	0.667
16	0.024	0.3572	0.667

LOAD COMBINATION - 2 D+W (0.010 klf)

Shears (Kip)

SPAN No.	AT LEFT SUPPORT	RIGHT OF LEFT SUPP.	LEFT OF RIGHT SUPP.	AT RIGHT SUPPORT
1	0.039	-	-	0.114
2	0.114	-	-0.042	0.096
3	0.096	0.039	-	0.101
4	0.101	-	-0.045	0.100
5	0.100	0.045	-	0.100
6	0.100	-	-0.045	0.100
7	0.100	0.045	-	0.100
8	0.100	-	-0.045	0.100
9	0.100	0.045	-	0.100
10	0.100	-	-0.045	0.100
11	0.100	0.045	-	0.100
12	0.100	-	-0.045	0.100
13	0.100	0.045	-	0.101



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14	0.101	-	-0.039	0.096
15	0.096	0.042	-	0.114
16	0.114	-	-	0.039

Moment (kip-ft)

SPAN No.	AT LEFT SUPPORT	RIGHT OF LEFT SUPP.	MAX BETWN SUPPORT	DIST FR LEFT	LEFT OF RIGHT SUPP.	AT RIGHT SUPPORT
1	0.000	-	0.078	3.943	-	-0.106
2	-0.106	-	0.034	5.283	-0.055	-0.077
3	-0.077	-0.033	0.044	4.924	-	-0.085
4	-0.085	-	0.041	5.020	-0.059	-0.083
5	-0.083	-0.059	0.042	4.995	-	-0.083
6	-0.083	-	0.042	5.001	-0.060	-0.083
7	-0.083	-0.060	0.042	5.000	-	-0.083
8	-0.083	-	0.042	5.000	-0.060	-0.083
9	-0.083	-0.060	0.042	5.000	-	-0.083
10	-0.083	-	0.042	5.000	-0.060	-0.083
11	-0.083	-0.060	0.042	4.999	-	-0.083
12	-0.083	-	0.042	5.005	-0.059	-0.083
13	-0.083	-0.059	0.041	4.980	-	-0.085
14	-0.085	-	0.044	5.076	-0.033	-0.077
15	-0.077	-0.055	0.034	4.717	-	-0.106
16	-0.106	-	0.078	6.057	-	0.000

Member Design

SPAN No.	POSITIVE MOMENT	ALLOW MOMENT	MOMENT RATIO	NEGATIVE MOMENT	ALLOW MOMENT	MOMENT RATIO
1	-0.106	2.727	0.039	0.078	2.727	0.029
2	-0.106	2.727	0.039	0.034	2.727	0.012
3	-0.085	2.727	0.031	0.044	2.727	0.016
4	-0.085	2.727	0.031	0.041	2.727	0.015
5	-0.083	2.727	0.031	0.042	2.727	0.015
6	-0.083	2.727	0.031	0.042	2.727	0.015
7	-0.083	2.727	0.031	0.042	2.727	0.015
8	-0.083	2.727	0.031	0.042	2.727	0.015
9	-0.083	2.727	0.031	0.042	2.727	0.015
10	-0.083	2.727	0.031	0.042	2.727	0.015
11	-0.083	2.727	0.031	0.042	2.727	0.015
12	-0.083	2.727	0.031	0.042	2.727	0.015
13	-0.085	2.727	0.031	0.041	2.727	0.015
14	-0.085	2.727	0.031	0.044	2.727	0.016
15	-0.106	2.727	0.039	0.034	2.727	0.012
16	-0.106	2.727	0.039	0.078	2.727	0.029

Member Deflection (In)

SPAN No.	DEAD LOAD	WIND LOAD	WIND LOAD LIMIT
1	0.024	0.0000	1.000
2	0.006	0.0000	1.000
3	0.011	0.0000	1.000
4	0.009	0.0000	1.000
5	0.010	0.0000	1.000
6	0.010	0.0000	1.000



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**Date:** 01-Jan-99

7	0.010	0.0000	1.000
8	0.010	0.0000	1.000
9	0.010	0.0000	1.000
10	0.010	0.0000	1.000
11	0.010	0.0000	1.000
12	0.010	0.0000	1.000
13	0.009	0.0000	1.000
14	0.011	0.0000	1.000
15	0.006	0.0000	1.000
16	0.024	0.0000	1.000