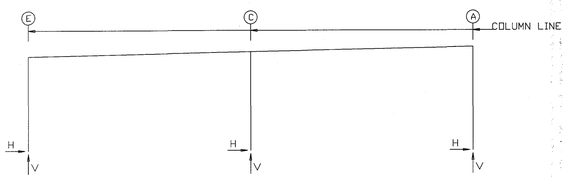
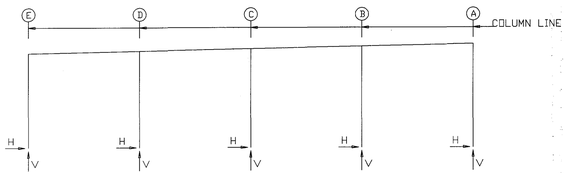
FRAME LINES: 2 3 4 5



FRAME LINES: 6



RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Column Reactions (k) Load ID	Hmax H	V Vmax	Load ID	Hmin H	V Vmin	Anc. Bolt Qty	Dia	Base Plate (in) Width	Length	Thick	Base EL. (in)
2*	E	3	5.3	17.9	5	-3.7	-2.1	4	0.750	6.000	9.000	0.375	0.0
		14	3.3	26.1	13	0.3	-12.0						
2*	A	12	2.7	0.6	10	-4.3	14.3	4	0.750	6.000	9.000	0.375	0.0
		15	-3.5	27.1	7	-0.2	-6.3						
2*	C	6	0.0	-11.5	6	0.0	-11.5	4	0.750	8.000	8.500	0.500	-6.0
		2	0.0	67.3									

2* Frame lines: 2 3 4 5

RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Column Reactions (k) Load ID	Hmax H	V Vmax	Load ID	Hmin H	V Vmin	Anc. Bolt Qty	Dia	Base Plate (in) Width	Length	Thick	Base EL. (in)
6	E	9	2.4	4.3	11	-2.1	-1.7	4	0.750	6.000	9.000	0.375	0.0
		19	0.9	7.8	6	0.8	-2.0						
6	A	12	1.8	-1.4	8	-2.1	4.2	4	0.750	6.000	9.000	0.375	0.0
		1	-1.0	8.7	7	-0.4	-2.2						
6	D	6	0.0	-3.2	6	0.0	-3.2	4	0.750	6.000	8.000	0.375	0.0
		16	0.0	16.1									
6	C	4	0.0	-2.7	4	0.0	-2.7	4	0.750	6.000	8.000	0.375	0.0
		17	0.0	16.1									
6	B	4	0.0	-3.3	4	0.0	-3.3	4	0.750	6.000	8.000	0.375	0.0
		18	0.0	16.0									

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	Dead Horiz	Dead Vert	Collateral Horiz	Collateral Vert	Live Horiz	Live Vert	Snow Horiz	Snow Vert	Wind_Left1 Horiz	Wind_Left1 Vert	Wind_Right1 Horiz	Wind_Right1 Vert
2*	E	0.5	3.3	0.4	2.3	1.6	9.3	3.3	19.5	-3.3	-6.8	2.5	-3.2
2*	A	-0.5	3.5	-0.4	2.3	-1.6	9.6	-3.3	20.9	-1.2	-6.1	2.6	-4.8
2*	C	0.0	8.4	0.0	6.3	0.0	25.1	0.0	52.6	0.0	-16.3	0.0	-10.6

Frame Line	Column Line	Wind_Left2 Horiz	Wind_Left2 Vert	Wind_Right2 Horiz	Wind_Right2 Vert	Wind_Long1 Horiz	Wind_Long1 Vert	Wind_Long2 Horiz	Wind_Long2 Vert	Seismic_Left Horiz	Seismic_Left Vert	Seismic_Right Horiz	Seismic_Right Vert
2*	E	-4.0	-4.1	2.0	-0.5	0.8	-11.1	0.2	-8.4	-5.0	-2.3	5.5	2.3
2*	A	-0.9	-3.4	2.8	-2.1	0.0	-6.5	0.2	-3.8	-4.2	1.8	4.2	-1.8
2*	C	0.0	-9.8	0.0	-4.0	0.0	-16.1	0.0	-9.5	0.0	0.5	0.0	-0.5

Frame Line	Column Line	Seismic_Long Horiz	Seismic_Long Vert	LWIND1_L2E Horiz	LWIND1_L2E Vert	LWIND1_R2E Horiz	LWIND1_R2E Vert	LWIND2_L2E Horiz	LWIND2_L2E Vert	LWIND2_R2E Horiz	LWIND2_R2E Vert	F1PAT_SL_1 Horiz	F1PAT_SL_1 Vert
2*	E	0.0	-19.6	-0.1	-1.9	-0.1	0.0	-0.1	-1.9	-0.1	0.0	0.7	10.7
2*	A	0.0	0.0	0.1	0.0	0.1	-1.9	0.1	0.0	0.1	-1.9	-0.7	-1.0
2*	C	0.0	0.0	0.0	-0.4	0.0	-0.4	0.0	-0.4	0.0	-0.4	0.0	13.2

Frame Line	Column Line	F1PAT_SL_2 Horiz	F1PAT_SL_2 Vert
2*	E	0.9	-1.0
2*	A	-0.9	10.8
2*	C	0.0	13.1

Frame Line	Column Line	Dead Horiz	Dead Vert	Collateral Horiz	Collateral Vert	Live Horiz	Live Vert	Snow Horiz	Snow Vert	Wind_Left1 Horiz	Wind_Left1 Vert	Wind_Right1 Horiz	Wind_Right1 Vert
6	E	0.1	1.1	0.1	0.7	0.4	2.8	0.8	5.9	-1.4	-2.6	1.5	-0.3
6	A	-0.1	1.3	-0.1	0.7	-0.4	3.0	-0.8	6.7	-1.0	-1.5	1.2	-2.2
6	D	0.0	1.9	0.0	1.4	0.0	5.8	0.0	12.1	0.0	-2.9	0.0	-3.5
6	C	0.0	1.9	0.0	1.4	0.0	5.7	0.0	12.0	0.0	-3.8	0.0	-2.4
6	B	0.0	2.0	0.0	1.4	0.0	5.7	0.0	11.9	0.0	-4.5	0.0	-1.4

Frame Line	Column Line	Wind_Left2 Horiz	Wind_Left2 Vert	Wind_Right2 Horiz	Wind_Right2 Vert	Wind_Long1 Horiz	Wind_Long1 Vert	Wind_Long2 Horiz	Wind_Long2 Vert	Seismic_Left Horiz	Seismic_Left Vert	Seismic_Right Horiz	Seismic_Right Vert
6	E	-1.9	-1.8	1.0	0.5	0.8	-1.9	0.3	-1.1	-3.2	-3.3	3.2	3.3
6	A	-0.7	-0.6	1.5	-1.3	-0.4	-2.1	-0.1	-1.2	-2.6	2.9	2.6	-2.9
6	D	0.0	-1.4	0.0	-1.9	0.0	-3.8	0.0	-2.3	0.0	3.9	0.0	-3.9
6	C	0.0	-2.2	0.0	-0.8	0.0	-3.9	0.0	-2.3	0.0	-0.1	0.0	0.1
6	B	0.0	-3.1	0.0	0.0	0.0	-3.5	0.0	-2.1	0.0	-3.5	0.0	3.5

Frame Line	Column Line	LWIND1_L2E Horiz	LWIND1_L2E Vert	LWIND1_R2E Horiz	LWIND1_R2E Vert	LWIND2_L2E Horiz	LWIND2_L2E Vert	LWIND2_R2E Horiz	LWIND2_R2E Vert	F2PAT_SL_1 Horiz	F2PAT_SL_1 Vert	F2PAT_SL_2 Horiz	F2PAT_SL_2 Vert
6	E	0.0	-0.8	-0.1	-0.1	0.0	-0.8	-0.1	-0.1	0.2	3.0	0.3	0.3
6	A	0.1	-0.1	0.1	-0.8	0.1	-0.1	0.1	-0.8	-0.3	0.3	-0.3	3.1
6	D	0.0	-0.5	0.0	0.0	0.0	-0.5	0.0	0.0	0.0	3.3	0.0	-0.2
6	C	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	-0.4	0.0	-0.4
6	B	0.0	0.1	0.0	-0.5	0.0	0.1	0.0	-0.5	0.0	-0.2	0.0	3.2

Frame Line	Column Line	F2PAT_SL_3 Horiz	F2PAT_SL_3 Vert	F2PAT_SL_4 Horiz	F2PAT_SL_4 Vert	F2PAT_SL_5 Horiz	F2PAT_SL_5 Vert
6	E	0.2	2.7	-0.1	-0.4	0.2	0.3
6	A	-0.2	0.3	0.1	-0.4	-0.2	2.7
6	D	0.0	6.7	0.0	3.0	0.0	-0.6
6	C	0.0	3.0	0.0	6.8	0.0	3.0
6	B	0.0	-0.6	0.0	3.0	0.0	6.6

2* Frame lines: 2 3 4 5

ENDWALL COLUMN: BASIC COLUMN REACTIONS (k)

Frm Line	Col Line	Dead Vert	Collat Vert	Live Vert	Snow Vert	Wind_Left1 Horz	Wind_Left1 Vert	Wind_Right1 Horz	Wind_Right1 Vert	Wind_Left2 Horz	Wind_Left2 Vert	Wind_Right2 Horz	Wind_Right2 Vert	Wind Press Horz
1	E	0.9	0.6	2.3	4.9	0.0	-2.2	0.0	-1.3	0.0	-2.2	0.0	-1.3	-1.2
1	D	2.2	1.6	6.4	13.5	0.0	-6.0	0.0	-3.4	0.0	-6.0	0.0	-3.4	-2.3
1	C	1.9	1.3	5.4	11.3	1.5	-6.3	0.0	-1.0	1.5	-6.3	0.0	-1.0	-2.5
1	B	2.2	1.6	6.4	13.4	0.0	-4.7	2.2	-5.2	0.0	-4.7	2.2	-5.2	-2.5
1	A	1.0	0.6	2.5	5.6	0.0	-2.4	0.0	-1.5	0.0	-2.4	0.0	-1.5	-1.4

Frm Line	Col Line	Wind Suct Horz	Wind_Long1 Horz	Wind_Long1 Vert	Wind_Long2 Horz	Wind_Long2 Vert	Seis_Left Horz	Seis_Left Vert	Seis_Right Horz	Seis_Right Vert	E1PAT_SL_1- Horz	E1PAT_SL_1- Vert	E1PAT_SL_2- Horz	E1PAT_SL_2- Vert
1	E	1.4	0.0	-1.5	0.0	-0.9	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
1	D	2.6	0.0	-4.2	0.0	-2.5	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.2
1	C	2.7	0.0	-3.3	0.0	-1.9	7.0	-5.8	0.0	5.9	0.0	-0.6	0.0	-0.6
1	B	2.7	0.3	-4.5	0.2	-2.6	0.0	5.7	7.0	-5.8	0.0	0.2	0.0	3.8
1	A	1.5	0.0	-1.6	0.0	-0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7

Frm Line	Col Line	E1PAT_SL_3- Horz	E1PAT_SL_3- Vert	E1PAT_SL_4- Horz	E1PAT_SL_4- Vert	E1PAT_SL_5- Horz	E1PAT_SL_5- Vert	-LWIND1_L-- Horz	-LWIND1_L-- Vert	-LWIND1_R-- Horz	-LWIND1_R-- Vert	-LWIND2_L-- Horz	-LWIND2_L-- Vert	-LWIND2_R-- Horz	-LWIND2_R-- Vert
1	E	0.0	2.4	0.0	-0.2	0.0	0.1	0.0	-0.7	0.0	0.0	0.0	-0.7	0.0	0.0
1	D	0.0	7.1	0.0	2.8	0.0	-0.3	0.0	-0.6	0.0	0.0	0.0	-0.6	0.0	0.0
1	C	0.0	2.8	0.0	6.9	0.0	2.8	0.0	0.2	0.0	0.2	0.0	0.2	0.0	0.2
1	B	0.0	-0.3	0.0	2.8	0.0	7.1	0.0	-0.1	0.0	-0.6	0.0	-0.1	0.0	-0.6
1	A	0.0	0.1	0.0	-0.2	0.0	2.4	0.0	0.0	0.0	-0.7	0.0	0.0	0.0	-0.7

Frm Line	Col Line	Wind Press Horz	Wind Suct Horz	E2PAT_SL_1- Horz	E2PAT_SL_1- Vert	E2PAT_SL_2- Horz	E2PAT_SL_2- Vert	E2PAT_SL_3- Horz	E2PAT_SL_3- Vert	E2PAT_SL_4- Horz	E2PAT_SL_4- Vert	E2PAT_SL_5- Horz	E2PAT_SL_5- Vert
6	B	-3.2	3.4	0.0	3.8	0.0	0.2	0.0	7.1	0.0	2.8	0.0	-0.3
6	C	-3.1	3.4	0.0	-0.6	0.0	-0.6	0.0	2.8	0.0	6.9	0.0	2.8
6	D	-3.0	3.3	0.0	0.2	0.0	3.8	0.0	-0.3	0.0	2.8	0.0	7.1

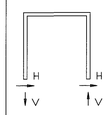
Frm Line	Col Line	-LWIND1_L-- Horz	-LWIND1_L-- Vert	-LWIND1_R-- Horz	-LWIND1_R-- Vert	-LWIND2_L-- Horz	-LWIND2_L-- Vert	-LWIND2_R-- Horz	-LWIND2_R-- Vert
6	B	0.0	-0.6	0.0	0.0	0.0	-0.6	0.0	0.0
6	C	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1
6	D	0.0	0.0	0.0	-0.6	0.0	0.0	0.0	-0.6

ENDWALL COLUMN: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Column Reactions (k) Load ID	Hmax H	V Vmax	Load ID	Hmin H	V Vmin	Anc. Bolt Qty	Dia	Base Plate (in) Width	Length	Thick	Base EL. (in)
1	E	20	1.4	-1.6	21	-1.2	-1.0	4	0.750	6.000	8.000	0.375	0.0
		2	0.0	6.4	20	1.4	-1.6						
1	D	20	2.6	-4.7	21	-2.3	-2.9	4	0.750	6.000	8.000	0.375	0.0
		2	0.0	17.3	20	2.6	-4.7						
1	C	20	2.7	-5.2	21	-2.5	-2.2	4	0.750	6.000	8.000	0.375	0.0
		2	0.0	14.6	20	2.7	-5.2						
1	B	22	2.7	-3.9	21	-2.5	-3.2	4	0.750	6.000	8.000	0.375	0.0
		2	0.0	17.3	22	2.7	-3.9						
1	A	20	1.5	-1.8	21	-1.4	-1.0	4	0.750	6.000	8.000	0.375	0.0
		2	0.0	7.2	20	1.5	-1.8						
6	B *	22	3.4	-4.7	21	-3.2	-3.0						
		2	0.0	17.2	22	3.4	-4.7						
6	C *	22	3.4	-4.0	21	-3.1	-2.5						
		2	0.0	14.5	22	3.4	-4.0						
6	D *	22	3.3	-4.8	21	-3.0	-3.0						
		2	0.0	17.2	22	3.3	-4.8						

*See Rigid Frame Interior Column Reactions

WIND BENT REACTIONS



Loc	Wall Line	Col Line	± Reactions (k) Wind Horz	Wind Vert	Seismic Horz	Seismic Vert	Anc. Bolt Qty	Dia	Base Plate (in) Width	Length	Thick
F_SW	A	3	3.1	6.0	9.7	18.7	4	0.750	8.000	16.000	0.375
F_SW	A	4	3.1	6.0	9.7	18.7	4	0.750	8.000	16.000	0.375

BUILDING BRACING REACTIONS

Loc	Wall Line	Col Line	± Reactions (k) Wind Horz	Wind Vert	Seismic Horz	Seismic Vert	Panel Shear (lb/ft) Wind	Seis	Note
L_EW	1	C,B	2.2	1.8	5.4	4.5			
F_SW	A	3,4							(a)
R_EW	6								(h)
B_SW	E	5,4	3.0	2.4	9.6	7.5			
		3,2	3.0	2.4	9.6	7.5			

(a)Wind bent in bay
(h)Rigid frame at endwall

ANCHOR BOLT SUMMARY

Qty	Locate	Dia (in)	Type	Proj (in)
O 20	Jamb	1/2"	A307	1.50
O 32	Endwall	3/4"	A307	2.00
O 56	Frame	3/4"	A307	2.00
O 8	WindCol	3/4"	A307	2.00

NOTES FOR REACTIONS

The following Design Data is per Package Steel Systems, Inc.'s standard design practices and established procedures and recommendations of the following Organizations and/or Specifications.

American Institute of Steel Construction (AISC 2005)
American Welding Society Structural Welding Code (AWS D1.1)
North American United States (NAUS07)

1. For maximum reactions tables, all loading conditions are examined and only the maximum/minimum horizontal or vertical reactions along with the corresponding horizontal or vertical for those load IDs are reported.
2. Positive reactions are shown in the sketch. Foundation loads are in the opposite directions.
3. Bracing reactions are in the plane of the brace with the horizontal pointing away from the braced bay. The vertical reaction can be downward or upward.
4. Reactions given are based on the design data below. Reactions are not furnished for loads not listed.
5. The endwall column reactions do NOT include wind and seismic reactions from endwall bracing. Reactions given in the bracing reactions table should be combined with the appropiate basic column reactions as necessary to determine the maximum reactions for foundation design.
6. The rigid frame maximum reactions include wind and seismic reactions from sidewall bracing. Reactions given in the bracing reactions table should not be combined with the appropiate basic column reactions as necessary to determine the maximum reactions for foundation design.
7. Foundation construction and design is not the responsibility of Package Steel Systems, Inc. The embedment of the anchor bolts in concrete is the responsibility of the foundation designer.
8. Suggested anchor rod diameter, quantity, minimum projection and placement are shown. All anchor rods are assumed to be ASTM F1544 Grade 36 or equal. Anchor rods (not by PSS) shall be set to a tolerance of +-1/8" in both elevation and location.
9. Column base plates are designed not to exceed a bearing pressure of 1050 pounds per sq. inch (0.35f'c where f'c= 3000 psi) unless noted otherwise.
10. Basic design wind pressure is furnished. For components and cladding not specifically designed and/or furnished by PSS, the design pressures and suctions shall be increased based on tributary area and location. Confirmation of the design loads and adequacy to resist such loads shall be the responsibility of a licensed design professional by others.

Building Reactions are based on the following information:

Building Code/Edition: IBC 09

Building Size:

Width (ft.)	95	
Length (ft.)	115	
Back Side Eave Height (ft.)	20	
Front Side Eave Height (ft.)	21.98	
Back Side Roof Slope	0.25:12	
Front Side Roof Slope		

Roof Dead, Collateral, & Live Loads:

Dead Load	5.00	psf
Collateral Load	5.00	psf
Live Load	20.00	psf
Live Load Reduction Taken	No	

Wind Loads:

Basic Wind Speed (3 Second Gust)	100	mph
Wind Exposure	B	
Building Enclosure (O/C/P)	Closed	
Wind Importance Factor (Iw)	1.00	
Internal Pressure Coeff. (GCpi)	0.18	

Snow Loads:

Ground Snow (Pg)	60.00	psf
Flat Roof Snow (Pf)	42.00	psf
Snow Exposure Factor (Ce)	1.00	
Snow Thermal Factor (Ct)	1.00	
Snow Importance Factor (Is)	1.00	
Sloped Roof Factor (Cs)	1.00	

Seismic Loads:

Seismic Importance (Ie)	1.00
Seismic Design Category (A/B/C/D)	C
Site Class-Type	E
Seismic Response Coeff. (Sds)	0.486
Seismic Response Coeff. (Sd1)	0.182
Response Modification (MF)	3.00
Response Modification (BF)	3.00
Design Base Shear (V) = Longit.	38.46 kips
Design Base Shear (V) = Transv.	39.87 kips
Analysis Procedure: Equivalent Lateral Force	

Auxiliary Load(s):

(4) 400# Unit Heaters Suspended off Purlins

Acronyms:

AUXx = Auxiliary Load - Case x
C= Closed
CL= Collateral Load
DL= Dead Load
FxUNB_LL= Unbalanced Live Load for Frame IDx
LL= Max. of (Live or Snow)
LLR= Live Load Unbalanced
LnWndL= Longitudinal Wind Load - Left
LnWndR= Longitudinal Wind Load - Right
mph= miles per hour

O= Open
BF= Braced Frame
MF= Moment Frame
P= Partially Enclosed
psf= pounds per square foot
SEIS= Seismic
WLx= Wind Left - Case x
WP= Wind Pressure
WRx= Wind Right - Case x
WS= Wind Suction

Loading Conditions are as follows:

1 Dead+Collateral+Snow
2 Dead+Collateral+Snow+Slide_Snow
3 Dead+Collateral+0.75Snow+0.75Wind_Right1
4 0.6Dead+Wind_Left1
5 0.6Dead+Wind_Left2
6 0.6Dead+Wind_Long1+LWIND1_L2E
7 0.6Dead+Wind_Long1+LWIND1_R2E
8 1.07Dead+1.07Collateral+0.7Seismic_Left
9 1.07Dead+1.07Collateral+0.7Seismic_Right
10 1.05Dead+1.05Collateral+0.75Live+0.52Seismic_Left
11 0.53Dead+0.7Seismic_Left
12 0.53Dead+0.7Seismic_Right
13 0.53Dead+0.7Seismic_Long
14 Dead+Collateral+Snow/2+F1PAT_SL_1
15 Dead+Collateral+Snow/2+F1PAT_SL_2
16 Dead+Collateral+Snow/2+F2PAT_SL_3
17 Dead+Collateral+Snow/2+F2PAT_SL_4
18 Dead+Collateral+Snow/2+F2PAT_SL_5
19 Dead+Collateral+Snow/2+F2PAT_SL_1
20 0.6Dead+Wind_Left2+Wind_Suction
21 0.6Dead+Wind_Pressure+Wind_Long1
22 0.6Dead+Wind_Right2+Wind_Suction

STATE OF MAINE
ZACK R. McCAIN III
No. 6869
LICENSED
PROFESSIONAL ENGINEER
12/21/15

REV.	DESCRIPTION:	DATE:	DRAFT	ENG.
3				
2				
1	BUILDING HAS BEEN REDESIGNED DUE TO SEISMIC SOIL SITE CLASS CHANGE.	12/21/15	TMZ	ZRM
0	INITIAL DRAWING: RELEASED FOR CONSTRUCTION	CURRENT REVISION: 1		

PACKAGE STEEL SYSTEMS, INC.		Biskup Construction Inc.	
PROJECT	Moongate Properties	ANCHOR BOLT REACTIONS & NOTES	
ID	1511-038	DESIGN: ZRM	DESIGN CHECK: ZRM
PROJECT	1039 Riverside Street	DRAFT: TMZ	DRAFT CHECK: TMZ
ADDRESS	Portland, ME 04103	DATE: 12/03/15	DRAWING: ABLT-2

PACKAGE

STATE OF MAINE DEPARTMENT OF PROFESSIONAL & FINANCIAL REGULATION
Reviewed for Code Compliance Inspection Division
Date: 02/29/16