ENDWALL COLUMN: BASIC COLUMN REACTIONS (k)

Frm Line	Col Line	Dead Vert	Collat Vert	Live Vert	Snow Vert	Wind Left1 Vert	Wind Right1 Vert	Wind Left2 Vert	Wind Right2 Vert	Wind Press Horz	Wind Suct Horz	Wind Long1 Vert	Wind Long2 Vert
1	C	0.8	0.4	2.8	5.8	-2.3	-1.3	-2.2	-1.3	-1.4	1.6	-1.8	-1.0
1	B	2.3	1.4	8.7	18.3	-7.2	-4.1	-7.3	-4.1	-3.8	4.1	-5.5	-3.2
1	A	0.8	0.4	2.8	5.9	-2.3	-1.4	-2.3	-1.4	-1.8	2.0	-1.8	-1.1

Frm Line	Col Line	Seis Left Vert	Seis Right Vert	E1PAT_SL_1-- Horz	E1PAT_SL_1-- Vert	E1PAT_SL_2-- Horz	E1PAT_SL_2-- Vert	-LWIND1_L-- Horz	-LWIND1_L-- Vert	-LWIND1_R-- Horz	-LWIND1_R-- Vert	-LWIND2_L-- Horz	-LWIND2_L-- Vert
1	C	0.0	0.0	0.0	3.4	0.0	-0.5	0.0	-0.6	0.0	0.0	0.0	-0.6
1	B	0.0	0.0	0.0	4.6	0.0	4.6	0.0	-0.2	0.0	-0.2	0.0	-0.2
1	A	0.0	0.0	0.0	-0.5	0.0	3.4	0.0	0.0	0.0	-0.6	0.0	0.0

Frm Line	Col Line	-LWIND2_R-- Horz	-LWIND2_R-- Vert
1	C	0.0	0.0
1	B	0.0	-0.2
1	A	0.0	-0.6

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
8	A	0.9	0.4	2.8	5.9	2.2	-3.1	0.0	-1.7	2.2	-3.1	0.0	-1.2	-1.8
8	B	2.1	1.3	8.7	18.3	0.0	-2.4	0.8	-7.8	0.0	-2.4	1.6	-8.4	-3.8
8	C	0.8	0.4	2.8	5.8	0.0	-1.4	0.0	-2.3	0.0	-1.4	0.0	-2.2	-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	E2PAT_SL_1-- Horz	E2PAT_SL_1-- Vert	E2PAT_SL_2-- Horz	E2PAT_SL_2-- Vert
8	A	2.0	0.8	-2.4	0.4	-1.4	1.5	-1.2	0.0	1.0	0.0	3.4	0.0	-0.4
8	B	4.1	0.0	-5.0	0.0	-2.9	0.0	1.2	1.5	-1.1	0.0	4.5	0.0	4.6
8	C	1.6	0.0	-1.8	0.0	-1.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	3.4

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
8	A	0.1	-0.7	0.1	0.0	0.1	-0.7	0.1	0.0
8	B	0.0	-0.2	0.0	-0.2	0.0	-0.2	0.0	-0.2
8	C	0.0	0.0	0.0	-0.6	0.0	0.0	0.0	-0.6

ANCHOR BOLT SUMMARY

Qty	Locate	Dia (in)	Type
O 24	Endwall	3/4"	
O 48	Frame	3/4"	

BUILDING BRACING REACTIONS

Wall Loc	Wall Line	Col Line	Reactions in plane of wall ± Reactions (k) Wind Horz	Wind Vert	Seismic Horz	Seismic Vert	Panel_Shear (lb/ft) Wind	Seis	Note
L_EW	1								(i)
F_SW	A	2,3	3.4	*	9.5	*			
R_EW	8	A,B	Bracing, see EW reactions						
B_SW	C	3,2	3.1	*	9.3	*			

(i)Bracing in roof to rigid frame

*See RF reactions table for vertical and horizontal reactions in plane of the rigid frame.

ENDWALL COLUMN: ANCHOR BOLTS & BASE PLATES

Frm Line	Col Line	Anc. Bolt Qty	Anc. Bolt Dia	Base Plate (in) Width	Base Plate (in) Length	Base Plate (in) Thick	Grout (in)
1	C	4	0.750	6.000	7.875	0.375	0.0
1	B	4	0.750	8.000	7.875	0.375	0.0
1	A	4	0.750	6.000	7.875	0.375	0.0
8	A	4	0.750	6.000	9.875	0.375	0.0
8	B	4	0.750	6.000	9.875	0.375	0.0
8	C	4	0.750	6.000	9.875	0.375	0.0

DESIGN INFORMATION

1. All loading conditions are examined and only the maximum / minimum H or V and the corresponding H or V are reported.
2. Positive reactions are shown in the sketch. Foundation loads are in opposite directions.
3. Bracing reactions are in the plane of the brace with the H pointing away from the braced bay. The vertical reaction is downward.
4. Building reactions are based on the following building data:

DESIGN CRITERIA

Width (ft) = 55
Length (ft) = 180
Eave Height (ft) = 17
Roof Slope (rise/12) = 1.0:12
Building Code = IBC 09
Local Code (State/Prov) = IBC 09
Dead Load (psf) = 2.660
Collateral Load (psf) = 3
Roof Live Load (psf) = 20.00
Frame Live Load (psf) = 20

Snow:
Ground Snow Load (psf) = 60.00
Snow Importance = 1.00
Thermal Coefficient = 1.00
Snow Exposure Factor = 1.00
Slippery Roof = N
Roof Snow Load (psf) = 42

Wind:
Basic Wind Speed (mph) = 98 mph
Occupancy Category = II - Normal
Importance - Wind = 1.00
Wind Exposure = B
Enclosure Classification = C
---Internal Pressure Coefficients---
Pressure = 0.18
Suction = -0.18
-----Components & Cladding-----
Design Pressure:
Pressure (psf) = 15.80
Suction (psf) = -21.03

Equivilant Lateral Brace Force Procedure.

Steel systems not specifically detailed for seismic resistance.

SEISMIC CRITERIA

Seismic Importance = 1.00
Occupancy Category = II - Normal

Mapped Spectral Response Accelerations
Ss = 0.3100
S1 = 0.0800

---Spectral Response Coefficients---
Sds = 0.3207
Sd1 = 0.1280

Site Class = D
Seismic Design Category = B

-------Base Shear-------
Expanded Formula = 0.667*Ie*Fa*Ss*W/R
Longitudinal Base Shear =18.83
Transverse Base Shear =19.04

--Seismic Response Coefficients--
Frame = 0.107
FSW = 0.107
BSW = 0.107

--Response Modification Factors--
Frame = 3
FSW = 3
BSW = 3

DEFLECTION LIMITS

ENDWALL COLUMN L/ 120
ENDWALL RAFTER (LIVE) L/ 240
ENDWALL RAFTER (WIND) L/ 240
WALL GIRTS L/ 90
PURLIN (LIVE) L/ 240
PURLIN (WIND) L/ 240
WALL PANEL L/ 90
ROOF PANEL (LIVE) L/ 120
ROOF PANEL (WIND) L/ 120
Main Frame (HORIZ) L/ 60
Main Frame (VERT) L/ 240
WIND BENT L/ 60
Main Frame (CRANE) L/ 100
Main Frame (SEISMIC) L/ 50
WIND BENT (SEISMIC) L/ 50
PARTITION COLUMN L/ 120
PARTITION GIRT L/ 120
PARTITION PANEL L/ 120

CORE ENGINEERING SYSTEMS
404 Sarah Furnace Road - Imler, PA 16655 (814) 276 - 9611

ALLAGASH BREWING WAREHOUSE

55'-0" x 180'-0" x 17'-0" x 21'-7"

DATE: 7/30/15 | REVIS | DWN: BJC | ENG: AJR

F.O. 19026

CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/15/15

ALLAGASH BREWING WAREHOUSE

REVISION HISTORY

REV.	DESCRIPTION	DATE
01	SEE CO-01	8-12-15

DRAWING STATUS

☐ FOR APPROVAL: THESE DRAWINGS, BEING FOR APPROVAL, ARE BY DEFINITION NOT FINAL, AND ARE FOR CONCEPTUAL REPRESENTATION ONLY. THEIR PURPOSE IS TO CONFIRM FRAMING INTERPRETATION OF THE PROJECT DOCUMENTS. ONLY DRAWINGS ISSUED "FOR CONSTRUCTION" CAN BE CONSIDERED AS COMPLETE.

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■ FOR CONSTRUCTION: FINAL DRAWINGS.

STATE OF MAINE
DENNIS L. ZONTS
No. 12885
LICENSED
PROFESSIONAL ENGINEER
AUG 11 2015