Underwriters Laboratory UL-90 Letter

Contact:
Name: Broadmoor, LLC
Address: 2740 N. Arnoult Road

City, State: Metairie, Louisiana 70002

Project: Riverine and Combatant Craft Operations Facility
Builder PO #:
Jobsite:

City, State: Stennis Space Center, Mississippi 39529
County, Country: Hancock, United States

The goods listed herein are purchased subject to the VP BUILDINGS terms and conditions of sale and the limitations contained therein.

Roof Covering

Shape	Location	Type	Thickness	Spacing
Maintenance Area	Wall: 2,Canopy: 2	SLR2	22	UL90 Uplift
Maintenance Area	Wall: 4,Canopy: 4	SLR2	22	UL90 Uplift
Maintenance Area	Roof: A	SLR2	22	UL90 Uplift
Maintenance Area	Roof: B	SLR2	22	UL90 Uplift
Clerestory Shape	Wall: 2,Canopy: 2	SLR2	22	UL90 Uplift
Clerestory Shape	Wall: 8,Canopy: 8	SLR2	22	UL90 Uplift
Clerestory Shape	Roof: A	SLR2	22	UL90 Uplift
Clerestory Shape	Roof: C	SLR2	22	UL90 Uplift
Clerestory Frames	Roof: A	SLR2	22	UL90 Uplift

SLR2 Roof UL-90 Certification

This is to certify that the VP Buildings SLR SYSTEM, when installed in accordance with VP Buildings Basic Erection Guide and Standard Erection Details (SEDs), will meet Underwriters Laboratories UL Class 90 Uplift Rating. The SLR system has been tested and is listed under Underwriters Laboratories Construction No. 90.

VP BUILDINGS, Inc.
3200 Players Club Circle, Memphis TN 38125-8843

By: _____

STATE OF LOUISIANA
STEPHEN L. CARR
REG. No. 24611
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

STEPHEN L. CARR
REGISTERED PROFESSIONAL
PE. 11895
ENGINEER
STATE OF MISSISSIPPI

REVIEWED FOR APPR. MDE 11FEB09

VP Buildings

3200 Players Club Circle
Memphis, TN 38125-8843

STRUCTURAL DESIGN DATA

Project: Riverine and Combatant Craft Operations Facility
Name: 08-28914 EP2
Builder PO #:
Jobsite:

City, State: Stennis Space Center, Mississippi 39529
County: Hancock
Country: United States

TABLE OF CONTENTS

"For Approval"

STATE OF LOUISIANA
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Letter of Certification

Contact:
Name: Broadmoor, LLC
Address: 2740 N. Arnoult Road

City, State: Metairie, Louisiana 70002
Country: United States

Project: Riverine and Combatant Craft Operations Facility
Builder PO #:
Jobsite:

City, State: Stennis Space Center, Mississippi 39529
County, Country: Hancock, United States

This is to certify that the above referenced VP BUILDINGS project has been designed for the applicable portions of the following Building Code and in accordance with the order documents which have stipulated the following applied environmental loads and conditions:

Overall Building Description

Shape	Overall Width	Overall Length	Floor Area (sq. ft.)	Wall Area (sq. ft.)	Roof Area (sq. ft.)	Max. Eave Height	Min. Eave Height 2	Max. Roof Pitch	Min. Roof Pitch	Peak Height
Maintenance Area	67/0/0	102/8/0	6879	8270	8076	22/2/0	22/2/0	4.000:12	4.000:12	33/4/0
****Clerestory Shape****	67/0/0	102/8/0	6879	8909	7933	36/6/6	22/2/0	4.000:12	4.000:12	36/6/6
Clerestory Frames	9/7/1	102/8/0	984	1076	1059	6/4/11	3/2/5	4.000:12		
Total For All Shapes			14742	18255	17068	** 'Clerestory Shape' is for supplemental use only **				

Loads and Codes - Shape: Maintenance Area

City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code
Building Use: Standard Occupancy Structure
Built Up: 05AISC - ASD
Cold Form: 04AISI - ASD
Rainfall: 10.00 inches per hour

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.685)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000
Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 27/9/0
Parts / Portions Zone Strip Width: 6/8/6
Basic Wind Pressure: 25.20,(Parts) 25.76 psf

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed (0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

Seismic Load
Mapped Spectral Response - Ss:11.80 %g
Mapped Spectral Response - S1:5.10 %g
Seismic Hazard / Use Group: Group 1
Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.3340
Bracing Seismic Period: 0.2043
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

Crane Schedule Information

Name	Type	Service Classification	Method of Operation	Capacity (Ton)	Bridge Span	Bridge Construction
2 T. FUTURE Monorail	Monorail Crane	C (Moderate Service)	Pendant Operated	2.00	N/A	N/A

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

Loads and Codes – Shape: Clerestory Shape

City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code
Building Use: Standard Occupancy Structure
Built Up: 05AISC – ASD
Cold Form: 04AISI – ASD
Rainfall: 10.00 inches per hour

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.696)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000
Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 14/8/1
Parts / Portions Zone Strip Width: 6/8/6
Basic Wind Pressure: 25.60,(Parts) 25.76 psf

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed
(0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

Seismic Load
Mapped Spectral Response – Ss:11.80 %g
Mapped Spectral Response – S1:5.10 %g
Seismic Hazard / Use Group: Group 1

Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.4180
Bracing Seismic Period: 0.2522
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

Loads and Codes – Shape: Clerestory Frames
City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code
Building Use: Standard Occupancy Structure
Built Up: 05AISC – ASD
Cold Form: 04AISI – ASD
Rainfall: 10.00 inches per hour

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf

Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.575)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000
Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 4/9/8
Parts / Portions Zone Strip Width: 3/0/0
Basic Wind Pressure: 21.13,(Parts) 25.76 psf

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed
(0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

Seismic Load
Mapped Spectral Response – Ss:11.80 %g
Mapped Spectral Response – S1:5.10 %g
Seismic Hazard / Use Group: Group 1

Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.0981
Bracing Seismic Period: 0.0648
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

The steel design is in accordance with VP BUILDINGS standard design practices, which have been established based upon pertinent procedures and recommendations of the following organizations:

American Institute of Steel Construction (AISC)
American Iron and Steel Institute (AISI)
American Welding Society (AWS)
American Society for Testing and Materials (ASTM)
Canadian Standards Association
CSA W59-Welded Steel Construction
Limit State Design of Steel Structures
Metal Building Manufacturers Association (MBMA)

VP Buildings is certified by:
- CSA A660 Certified (Design and Manufacturing)
- IAS Approved Fabricator
- Canadian Welding Bureau Div. 1 Certified

VP Buildings has designed the structural steel components of this building in accordance with the Building Code, Steel Specifications, and Standards indicated above. Steel components are designed utilizing the following steel grades unless noted otherwise:

3 Plate members fabricated from plate, bar, strip steel or sheets
ASTM A529, A572, A1011 – All Grade 55 ksi
Hot Rolled Shapes (W, S, C, Angles, etc)
ASTM A36, or ASTM A36Mod50, A529, A572, A588, A709, A992-All Grade 50 ksi
Tube and Pipe Sections ASTM A500, Grade B (Fy – 42 ksi pipe, Fy – 46 ksi tube)
Light Gage Sections ASTM A1011 SS Grade 55 ksi, A653 SS Grade 60 ksi
Round Rod Bracing ASTM A572 Grade 50 ksi

This certification DOES NOT apply to the design of the foundation or other on-site structures or components not supplied by VP BUILDINGS, nor does it apply to unauthorized modifications to framing systems provided by VP BUILDINGS.

Furthermore, it is understood that certification is based upon the premise that all components furnished by VP BUILDINGS will be erected or constructed in strict compliance with pertinent documents furnished by VP BUILDINGS.

Sincerely,

STEPHEN L. CARR
REG. No. 24811
REGISTERED
PROFESSIONAL ENGINEER

P.E. Prepared by: MDE Reviewed by: SLC

VP BUILDINGS
3200 Players Club Circle, Memphis TN 38125-8843

STATE OF MISSISSIPPI
STEPHEN L. CARR
REGISTERED PROFESSIONAL
PE. 11895
ENGINEER
CIVIL ENGINEERING

Building Loading – Summary Report

Shape: Maintenance Area

Loads and Codes – Shape: Maintenance Area

City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code Built Up: 05AISC – ASD Rainfall: 10.00 inches per hour
Building Use: Standard Occupancy Structure Cold Form: 04AISI – ASD

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.685)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000
Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 27/9/0
Parts / Portions Zone Strip Width: 6/8/6
Basic Wind Pressure: 25.20,(Parts) 25.76 psf

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed (0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

Seismic Load
Mapped Spectral Response – Ss:11.80 %g
Mapped Spectral Response – S1:5.10 %g
Seismic Hazard / Use Group: Group 1

Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.3340
Bracing Seismic Period: 0.2043
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

Deflection Conditions
Frames are vertically supporting:Ceiling with Flexible Finish
Frames are laterally supporting:Unreinforced Masonry Wall
Purlins are supporting:Ceiling with Flexible Finish
Girts are supporting:Unreinforced Masonry Wall

Crane Schedule Information

Name	Type	Service Classification	Method of Operation	Capacity (Ton)	Bridge Span	Bridge Construction
2 T. FUTURE Monorail	Monorail Crane	C (Moderate Service)	Pendant Operated	2.00	N/A	N/A

Name	Bridge Wt (k)	Trolley / Hoist Wt (k)	Wheel Spacing	Wheel Load (k)	No. of Wheels	Horz. Clear	Vert. Clear	Headroom	Crane Spacing	Note
2 T. FUTURE Monorail	0.00	0.50	0/6/0	2.54	2	1/0/0	0/0/0	2/7/2	0/10/14	

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

Design Load Combinations – Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 L>	D + AD + CG + L>
2	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <L	D + AD + CG + <L
3	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 S>	D + AD + CG + S>
4	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <S	D + AD + CG + <S
5	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 US1*	D + AD + CG + US1*
6	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 *US1	D + AD + CG + *US1
7	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W1>	D + AD + CG + W1>
8	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W1	D + AD + CG + <W1
9	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W2>	D + AD + CG + W2>
10	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W2	D + AD + CG + <W2
11	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W1>	D + AD + CU + W1>
12	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W1	D + AD + CU + <W1
13	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W2>	D + AD + CU + W2>
14	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W2	D + AD + CU + <W2

15	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 AL	D + AD + CG+AL
16	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W1>	D + AD + CG + L + W1>
17	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W1	D + AD + CG + L + <W1
18	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W2>	D + AD + CG + L + W2>
19	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W2	D + AD + CG + L + <W2
20	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W1>	D + AD + CG + S + W1>
21	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W1	D + AD + CG + S + <W1
22	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W2>	D + AD + CG + S + W2>
23	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W2	D + AD + CG + S + <W2
24	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.563 S + 0.750 AL	D + AD + CG + S+AL
25	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W1> + 0.750 AL	D + AD + CG + W1>+AL
26	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W1 + 0.750 AL	D + AD + CG + <W1+AL
27	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W2> + 0.750 AL	D + AD + CG + W2>+AL
28	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W2 + 0.750 AL	D + AD + CG + <W2+AL
29	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 E> + 0.700 EG+	D + AD + CG + E> + EG+
30	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <E + 0.700 EG+	D + AD + CG + <E + EG+
31	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 E> + 0.700 EG-	D + AD + CU + E> + EG-
32	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <E + 0.700 EG-	D + AD + CU + <E + EG-
33	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 E> + 0.525 EG+	D + AD + CG + E> + EG+
34	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <E + 0.525 EG+	D + AD + CG + <E + EG+
35	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB1>	D + AD + CG + WP + WB1>
36	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB1>	D + AD + CU + WP + WB1>
37	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB1>	D+AD+CG+L+WP+WB1>
38	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB1>	D+AD+CG+S+WP+WB1>
39	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB1	D + AD + CG + WP + <WB1
40	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB1	D + AD + CU + WP + <WB1
41	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB1	D+AD+CG+L+WP+<WB1
42	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB1	D+AD+CG+S+WP+<WB1
43	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB2>	D + AD + CG + WP + WB2>
44	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB2>	D + AD + CU + WP + WB2>
45	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB2>	D+AD+CG+L+WP+WB2>
46	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB2>	D+AD+CG+S+WP+WB2>
47	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB2	D + AD + CG + WP + <WB2
48	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB2	D + AD + CU + WP + <WB2
49	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB2	D+AD+CG+L+WP+<WB2
50	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB2	D+AD+CG+S+WP+<WB2
51	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 EB> + 0.700 EG+	D + AD + CG + EB> + EG+
52	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 EB> + 0.700 EG-	D + AD + CU + EB> + EG-
53	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 EB> + 0.525 EG+	D + AD + CG + EB> + EG+
54	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <EB + 0.700 EG+	D + AD + CG + <EB + EG+
55	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <EB + 0.700 EG-	D + AD + CU + <EB + EG-
56	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <EB + 0.525 EG+	D + AD + CG + <EB + EG+

Design Load Combinations – Bracing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 W1>	W1>
2	System	1.000	1.0 <W1	<W1
3	System	1.000	1.0 W2>	W2>
4	System	1.000	1.0 <W2	<W2
5	System	1.000	0.700 E>	E>
6	System	1.000	0.700 <E	<E

Design Load Combinations – Purlin

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L	D + CG + L
2	System	1.000	1.0 D + 1.0 CG + 1.0 S	D + CG + S
3	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
4	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
5	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 1)
6	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 6)
7	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 1)
8	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 6)
9	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 1 and 2)
10	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 2 and 3)
11	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 3 and 4)
12	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 4 and 5)

13	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 5 and 6)
14	System	1.000	1.0 D + 1.0 CG + 1.0 W1>	D + CG + W1>
15	System	1.000	1.0 D + 1.0 CG + 1.0 <W2	D + CG + <W2
16	System	1.000	0.600 D + 0.600 CU + 1.0 W1>	D + CU + W1>
17	System	1.000	0.600 D + 0.600 CU + 1.0 <W2	D + CU + <W2
18	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 W1>	D + CG + L + W1>
19	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 <W2	D + CG + L + <W2
20	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 W1>	D + CG + S + W1>
21	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 <W2	D + CG + S + <W2
22	System Derived	1.000	1.0 D + 1.0 CG + 0.525 EB> + 0.525 EG+	D + CG + EB> + EG+
23	System Derived	1.000	1.0 D + 1.0 CG + 0.700 EB> + 0.700 EG+	D + CG + EB> + EG+
24	System Derived	1.000	0.600 D + 0.600 CU + 0.700 EB> + 0.700 EG-	D + CU + EB> + EG-
25	System Derived	1.000	1.0 D + 1.0 CG + 0.525 <EB + 0.525 EG+	D + CG + <EB + EG+
26	System Derived	1.000	1.0 D + 1.0 CG + 0.700 <EB + 0.700 EG+	D + CG + <EB + EG+
27	System Derived	1.000	0.600 D + 0.600 CU + 0.700 <EB + 0.700 EG-	D + CU + <EB + EG-
28	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 WB1>	D + CG + WP + WB1>
29	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 WB1>	D + CU + WP + WB1>
30	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB1>	D + CG + L + WP + WB1>
31	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB1>	D + CG + S + WP + WB1>
32	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 <WB1	D + CG + WP + <WB1
33	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 <WB1	D + CU + WP + <WB1
34	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB1	D + CG + L + WP + <WB1
35	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB1	D + CG + S + WP + <WB1
36	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 WB2>	D + CG + WP + WB2>
37	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 WB2>	D + CU + WP + WB2>
38	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB2>	D + CG + L + WP + WB2>
39	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB2>	D + CG + S + WP + WB2>
40	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 <WB2	D + CG + WP + <WB2
41	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 <WB2	D + CU + WP + <WB2
42	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB2	D + CG + L + WP + <WB2
43	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB2	D + CG + S + WP + <WB2

Design Load Combinations – Girt

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 W1>	W1>
2	System	1.000	1.0 <W2	<W2
3	System	1.000	1.0 WP	WP
4	System	1.000	0.700 E>	E>
5	System	1.000	0.700 <E	<E

Design Load Combinations – Roof – Panel

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 L	D + L
2	System	1.000	1.0 D + 1.0 S	D + S
3	System	1.000	1.0 D + 1.0 US1*	D + US1*
4	System	1.000	1.0 D + 1.0 *US1	D + *US1
5	System	1.000	1.0 D + 1.0 W1>	D + W1>
6	System	1.000	1.0 D + 1.0 <W2	D + <W2
7	System	1.000	0.600 D + 1.0 W1>	D + W1>
8	System	1.000	0.600 D + 1.0 <W2	D + <W2

Design Load Combinations – Wall – Panel

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 W1>	W1>
2	System	1.000	1.0 <W2	<W2

Deflection Load Combinations – Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	240	1.0 L	L
2	System	1.000	0	240	1.0 S	S
3	System	1.000	0	240	1.0 US1*	US1*
4	System	1.000	0	240	1.0 *US1	*US1
5	System	1.000	0	240	0.700 W1>	W1>
6	System	1.000	0	240	0.700 <W1	<W1
7	System	1.000	0	240	0.700 W2>	W2>
8	System	1.000	0	240	0.700 <W2	<W2

9	System	1.000	0	240	0.700 WP	WP
10	System Derived	1.000	0	240	0.700 WB1>	WB1>
11	System Derived	1.000	0	240	0.700 <WB1	<WB1
12	System Derived	1.000	0	240	0.700 WB2>	WB2>
13	System Derived	1.000	0	240	0.700 <WB2	<WB2
14	System	1.000	200	0	0.700 W1>	W1>
15	System	1.000	200	0	0.700 <W1	<W1
16	System	1.000	200	0	0.700 W2>	W2>
17	System	1.000	200	0	0.700 <W2	<W2
18	System	1.000	200	0	0.700 WP	WP
19	System Derived	1.000	200	0	0.700 WB1>	WB1>
20	System Derived	1.000	200	0	0.700 <WB1	<WB1
21	System Derived	1.000	200	0	0.700 WB2>	WB2>
22	System Derived	1.000	200	0	0.700 <WB2	<WB2
23	System	1.000	50	0	1.0 E> + 1.0 EG-	E> + EG-
24	System	1.000	50	0	1.0 <E + 1.0 EG-	<E + EG-
25	System Derived	1.000	50	0	1.0 EB>	EB>
26	System Derived	1.000	50	0	1.0 <EB	<EB

Deflection Load Combinations – Purlin

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	240	0.700 W1>	W1>
2	System	1.000	240	0.700 <W2	<W2
3	System	1.000	240	0.700 WP	WP
4	System	1.000	240	1.0 S	S
5	System	1.000	240	1.0 US1*	US1*
6	System	1.000	240	1.0 *US1	*US1
7	System	1.000	240	1.0 L	L

Deflection Load Combinations – Girt

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	240	0.700 W1>	W1>
2	System	1.000	240	0.700 <W2	<W2
3	System	1.000	240	0.700 WP	WP
4	System	1.000	240	0.500 E>	E>
5	System	1.000	240	0.500 <E	<E

Deflection Load Combinations – Roof – Panel

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	150	150	1.0 S	S
2	System	1.000	150	150	1.0 US1*	US1*
3	System	1.000	150	150	1.0 *US1	*US1

User Applied Surface Loads (Local Coordinate System)

Side	Shape	Units	Type	Description	Mag	X-Loc	Y-Loc	Frm	Brc	Grt	Pur	Pnl	Supp.	Dir.	Loc.
4	LN	plf	W1>	Clerestory	126.00	0/0/0	21/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	W1>	Clerestory	126.00	102/0/0	21/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	W2>	Clerestory	218.00	0/0/0	21/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	W2>	Clerestory	218.00	102/0/0	21/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	<W1	Clerestory	153.00	0/0/0	21/0/0	Y	N	N	N	N	N	OUT	OF
4	LN	plf	<W1	Clerestory	153.00	102/0/0	21/0/0	Y	N	N	N	N	N	OUT	OF
4	LN	plf	<W2	Clerestory	61.00	0/0/0	21/0/0	Y	N	N	N	N	N	OUT	OF
4	LN	plf	<W2	Clerestory	61.00	102/0/0	21/0/0	Y	N	N	N	N	N	OUT	OF
A	LN	plf	CG	Clerestory	35.00	0/0/0	-9/6/0	Y	N	N	N	N	N	IN	OF
A	LN	plf	CG	Clerestory	35.00	102/8/0	-9/6/0	Y	N	N	N	N	N	IN	OF
A	RC	psf	D	Upper Roof	3.47	103/9/8	0/0/0	Y	N	N	N	N	N	IN	OF
A	RC	psf	D	Upper Roof	3.47	103/9/8	-9/11/5	Y	N	N	N	N	N	IN	OF
A	RC	psf	D	Upper Roof	3.47	0/0/0	-9/11/5	Y	N	N	N	N	N	IN	OF
A	RC	psf	D	Upper Roof	3.47	0/0/0	0/0/0	Y	N	N	N	N	N	IN	OF
A	RC	psf	D	Upper Roof	1.80	103/9/8	0/0/0	N	N	N	Y	N	N	IN	OF
A	RC	psf	D	Upper Roof	1.80	103/9/8	-9/11/5	N	N	N	Y	N	N	IN	OF
A	RC	psf	D	Upper Roof	1.80	0/0/0	-9/11/5	N	N	N	Y	N	N	IN	OF
A	RC	psf	D	Upper Roof	1.80	0/0/0	0/0/0	N	N	N	Y	N	N	IN	OF
A	RC	psf	L	Upper Roof	20.00	103/9/8	0/0/0	Y	N	N	N	N	N	IN	OF
A	RC	psf	L	Upper Roof	20.00	103/9/8	-9/11/5	Y	N	N	N	N	N	IN	OF
A	RC	psf	L	Upper Roof	20.00	0/0/0	-9/11/5	Y	N	N	N	N	N	IN	OF

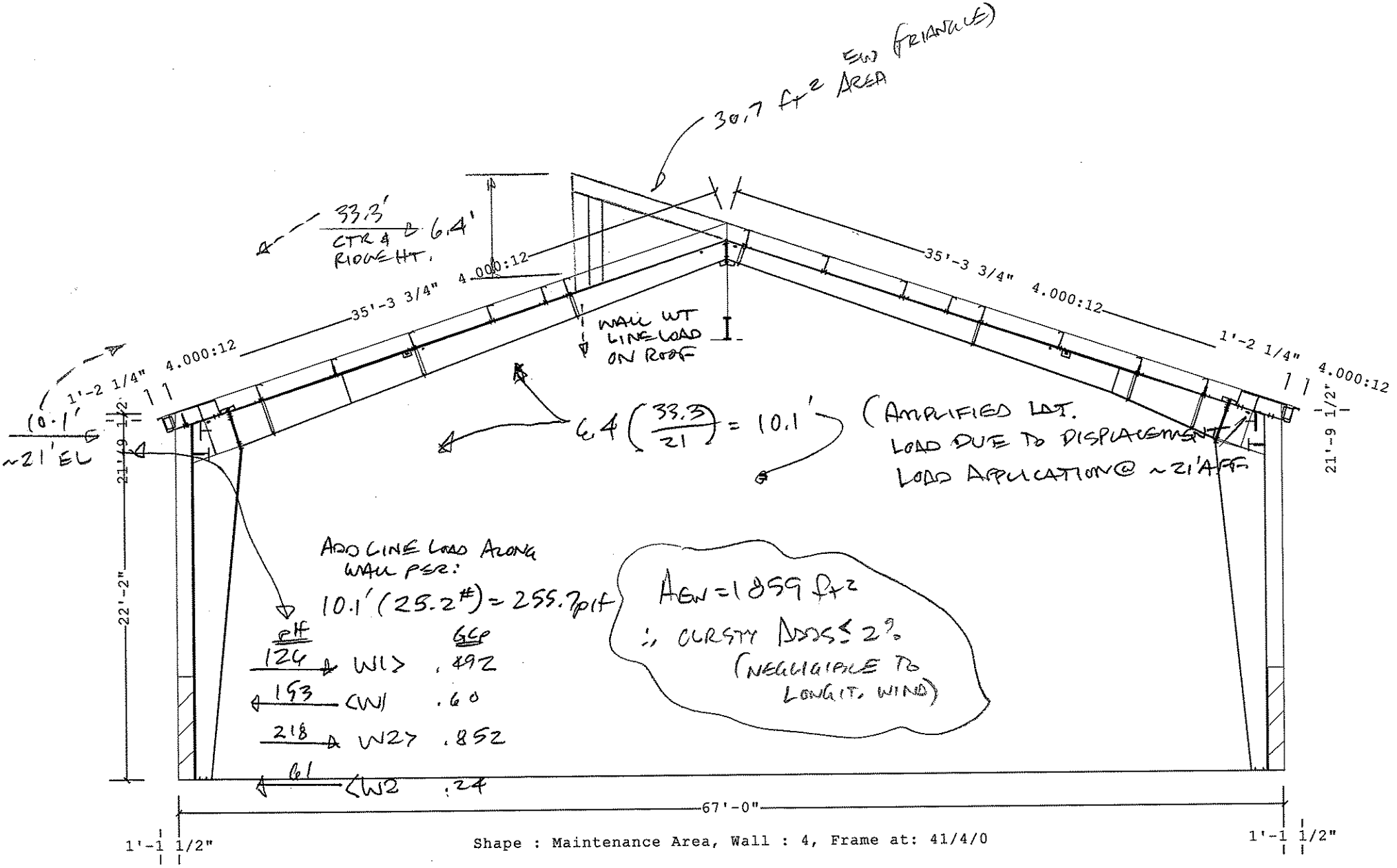
LATERAL WIND DUE TO UPPER SHAPE ABOVE ROOF LINE.

WALL WEIGHT

REPLACE LOADS AT ROOF OPENING CODED IN FOR THE CURRENT DRY.

A	RC	psf	L	Upper Roof	20.00	0/0/0	0/0/0	Y	N	N	N	N	N	IN	OF
A	RC	psf	S	Upper Roof	2.50	103/9/8	0/0/0	Y	N	N	N	N	N	IN	OF
A	RC	psf	S	Upper Roof	2.50	103/9/8	-9/11/5	Y	N	N	N	N	N	IN	OF
A	RC	psf	S	Upper Roof	2.50	0/0/0	-9/11/5	Y	N	N	N	N	N	IN	OF
A	RC	psf	S	Upper Roof	2.50	0/0/0	0/0/0	Y	N	N	N	N	N	IN	OF
A	RC	psf	W	Upper Roof	25.20	103/9/8	0/0/0	Y	N	N	N	N	N	IN	OF
A	RC	psf	W	Upper Roof	25.20	103/9/8	-9/11/5	Y	N	N	N	N	N	IN	OF
A	RC	psf	W	Upper Roof	25.20	0/0/0	-9/11/5	Y	N	N	N	N	N	IN	OF
A	RC	psf	W	Upper Roof	25.20	0/0/0	0/0/0	Y	N	N	N	N	N	IN	OF

NEXT (4) PAGES ARE WORK SHEETS TO ILLUSTRATE LOADING APPLIED & SOME HAND DESIGN OVERRIDES OF COMPUTER RESULTS



Shape : Maintenance Area, Wall : 4, Frame at: 41/4/0

Window support beam

```
 Design Data:
      AXIAL      =    -1.00 K
      SHEAR      =     1.00 K
      X MOMENT   =    95.00 "-K
      KLX        =    30.00 FT
      KLY        =    30.00 FT
      LB         =    30.00 FT
      RT         =     0.00
      CB         =     1.00
      CMX        =     1.00
      FLANGE FY  =    55.00 KSI
      WEB FY     =    55.00 KSI
      STRESS FACTOR  1.00
      UNBRACED POINT DESIGN
      WEB DESIGNED WITH NO STIFFENERS
      AISC PLATE/YEAR = 05AISC

      SECTION
      0.2500 X  8.0 FLG    0.1345 WEB     9.00 DEPTH
      AREA   =     5.14
      IX     =    83.47     SX =  18.55    RX =   4.03    ZX =  19.93
      IY     =    21.34     SY =   5.33    RY =   2.04    ZY =   8.04
      QS     =     0.78
      QA     =     1.00
      WEIGHT =    17.50 #/FT

      FORCES
      ACTUAL P =      1.00 K          ALLOWABLE P =     24.79 K
             MX =    95.00 "-K                  MX =   180.06 "-K
              V =     1.00 K                    V =    21.42 K
      COMBINED STRESS RATIO =  0.319
      SHEAR    STRESS RATIO =  0.047
```

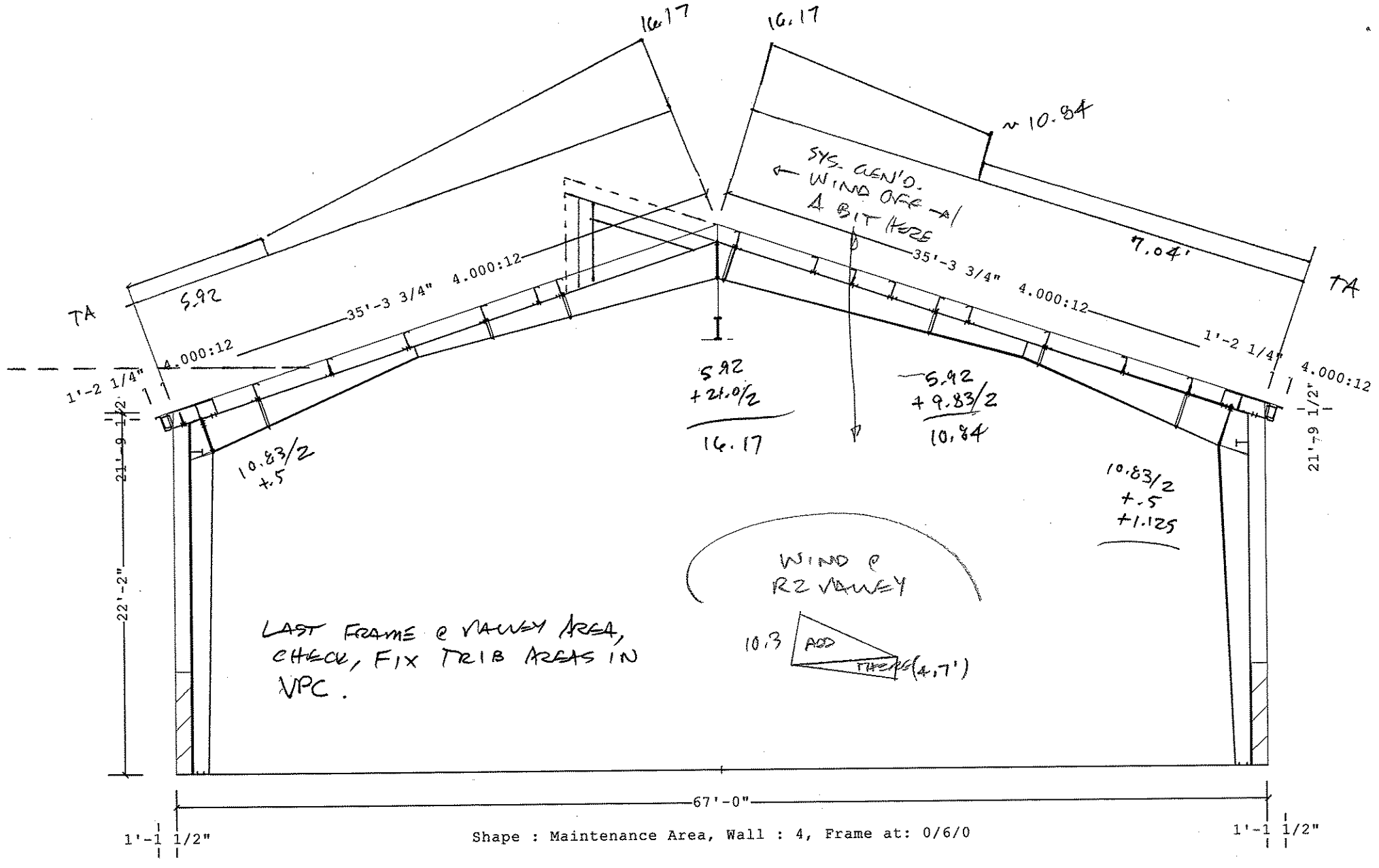
≤ 7' HIGH WALL @ CLERESTORY. ASSUME 10 psf DL FOR WINDOW, FRAMING, ETC.

7(10#) = 70plf, 30' SPAN ⇒ MX = 95 in-k

V = 1.1 k

- USED L/600 MAX Δ = 0.6",

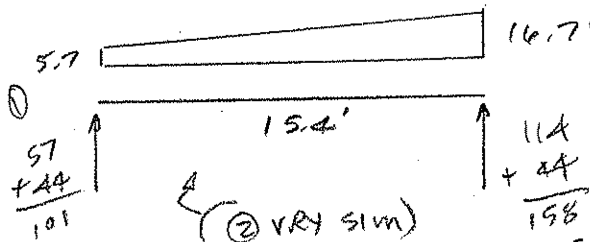
  IREQ'D = 73.



Shape : Maintenance Area, Wall : 4, Frame at: 0/6/0

① & ④ = V BM LEFT (W4 REF)
② = V BR RT (W3 REF)
③ = JBM 1 (W1 REF)
⑤ = JBM 2 (W1 REF)

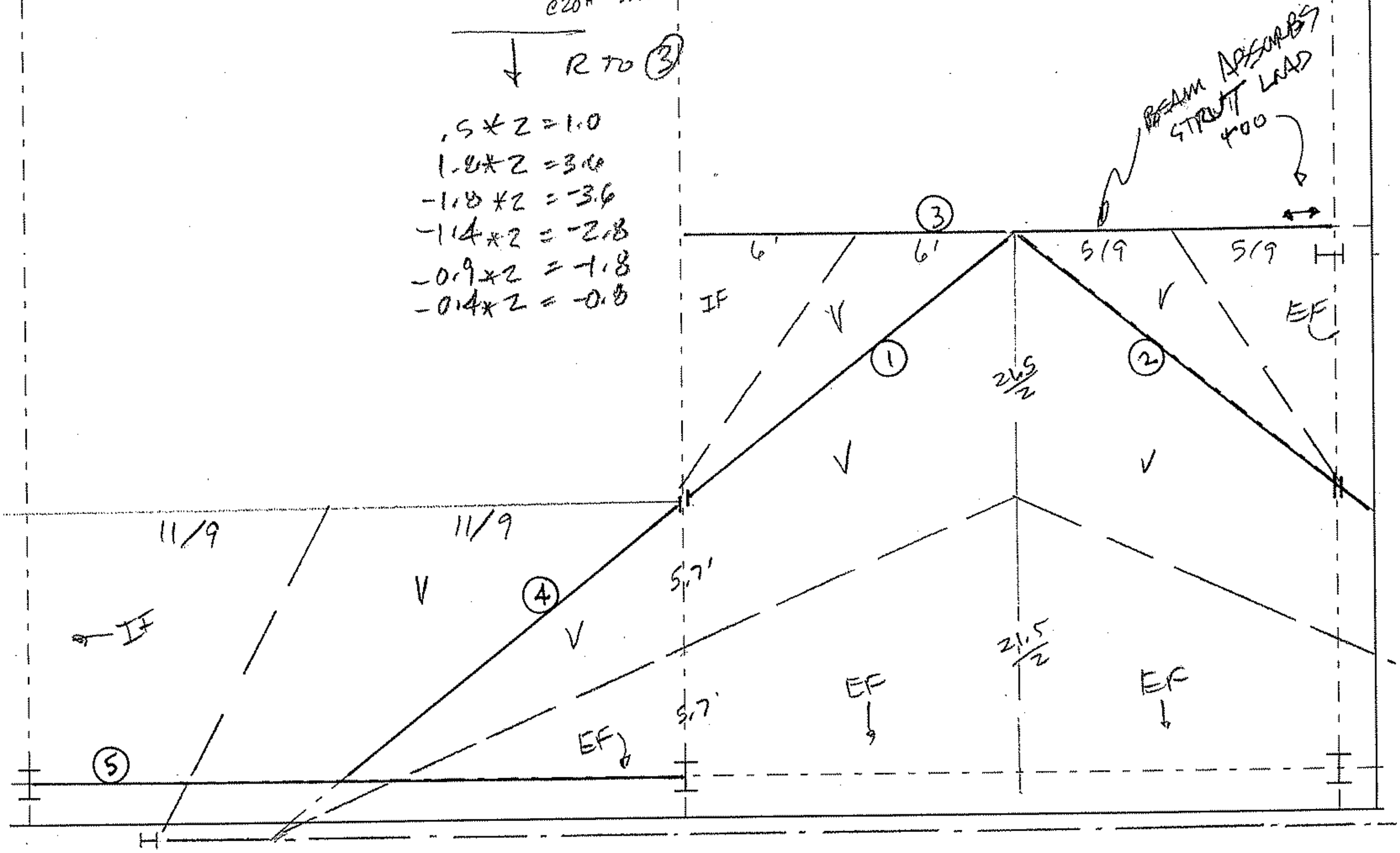
80	5#	84
118	20#	335
5.9'	25.9*	16.75
-104	.68 = 17.6	-295
-78	.51 = 13.2	-221
-49	.32 = 8.3	-139
-23	.15 = 3.9	-65



@5# .79k
@20# 3.16

↓ R TO ③

.5*2 = 1.0
1.8*2 = 3.6
-1.8*2 = -3.6
-1.4*2 = -2.8
-0.9*2 = -1.8
-0.4*2 = -0.8



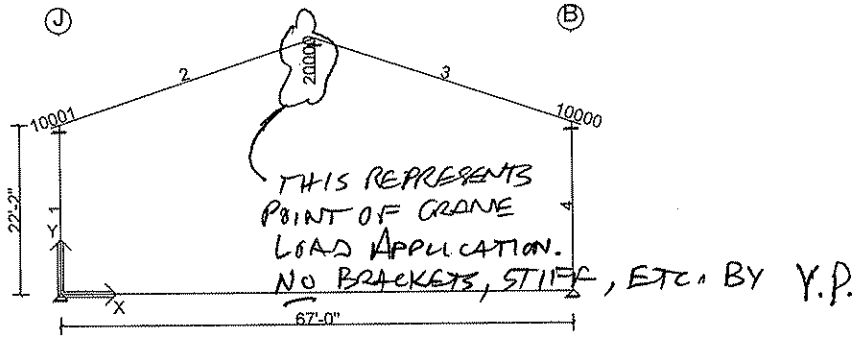
VALLEY LOADS & EPZ PORTION

User Defined Frame Point Loads for Cross Section: 9

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	Clerestory->Resolved From Plane	746.95	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	Clerestory->Resolved From Plane	1292.35	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	Clerestory->Resolved From Plane	-907.02	21/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	Clerestory->Resolved From Plane	-361.62	21/0/0	NA	NA	N	LEFT	1.000	OF
2	p	CG	Clerestory->Resolved From Plane	-206.78	9/6/0	NA	NA	N	DOWN	1.000	OF

User Defined Frame Line Loads for Cross Section: 9

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	Valley	-36.30	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	L	Valley	-209.20	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	L>	Valley	-209.20	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	<L	Valley	-209.20	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	S>	Valley	-26.20	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	<S	Valley	-26.20	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	S	Valley	-26.20	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	W1>	Valley	203.00	0/0/2	0.00	27/8/1	N	UP	1.000	OF
2	plf	<W1	Valley	158.00	0/0/2	0.00	27/8/1	N	UP	1.000	OF
2	plf	W2>	Valley	107.60	0/0/2	0.00	27/8/1	N	UP	1.000	OF
2	plf	<W2	Valley	63.20	0/0/2	0.00	27/8/1	N	UP	1.000	OF
2	plf	D	Upper Roof->Resolved From Plane	-20.49	0/0/0	-20.48	9/11/3	N	DOWN	1.000	OF
2	plf	L>	Upper Roof->Resolved From Plane	-118.22	0/0/0	-118.15	9/11/3	N	DOWN	1.000	OF
2	plf	<L	Upper Roof->Resolved From Plane	-118.22	0/0/0	-118.15	9/11/3	N	DOWN	1.000	OF
2	plf	L	Upper Roof->Resolved From Plane	-118.22	0/0/0	-118.15	9/11/3	N	DOWN	1.000	OF
2	plf	S>	Upper Roof->Resolved From Plane	-14.78	0/0/0	-14.77	9/11/3	N	DOWN	1.000	OF
2	plf	<S	Upper Roof->Resolved From Plane	-14.78	0/0/0	-14.77	9/11/3	N	DOWN	1.000	OF
2	plf	US1*	Upper Roof->Resolved From Plane	-14.78	0/0/0	-14.77	9/11/3	N	DOWN	1.000	OF
2	plf	*US1	Upper Roof->Resolved From Plane	-14.78	0/0/0	-14.77	9/11/3	N	DOWN	1.000	OF
2	plf	S	Upper Roof->Resolved From Plane	-14.78	0/0/0	-14.77	9/11/3	N	DOWN	1.000	OF
2	plf	W1>	Upper Roof->Resolved From Plane	114.39	0/0/0	114.33	9/11/3	N	UP	0.768	OF
2	plf	<W1	Upper Roof->Resolved From Plane	89.37	0/0/0	89.32	9/11/3	N	UP	0.600	OF
2	plf	W2>	Upper Roof->Resolved From Plane	60.77	0/0/0	60.74	9/11/3	N	UP	0.408	OF
2	plf	<W2	Upper Roof->Resolved From Plane	35.75	0/0/0	35.73	9/11/3	N	UP	0.240	OF
3	plf	W1>	Fix Valley	100.00	0/0/2	0.00	14/8/9	N	UP	1.000	OF
3	plf	<W1	Fix Valley	164.00	0/0/2	0.00	14/8/9	N	UP	1.000	OF
3	plf	W2>	Fix Valley	100.00	0/0/2	0.00	14/8/9	N	UP	1.000	OF
3	plf	<W2	Fix Valley	163.00	0/0/2	0.00	14/8/9	N	UP	1.000	OF
3	plf	WP	Fix Valley	180.00	0/0/2	0.00	14/8/9	N	UP	1.000	OF

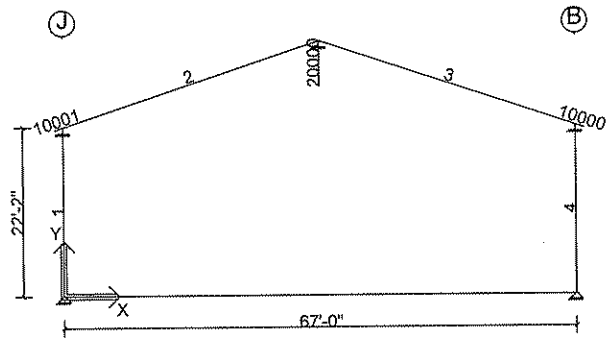


User Defined Frame Point Loads for Cross Section: 10

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	Clerestory->Resolved From Plane	2572.50	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	Clerestory->Resolved From Plane	4450.83	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	Clerestory->Resolved From Plane	-3123.75	21/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	Clerestory->Resolved From Plane	-1245.42	21/0/0	NA	NA	N	LEFT	1.000	OF
2	p	CG	Clerestory->Resolved From Plane	-714.58	9/6/0	NA	NA	N	DOWN	1.000	OF

User Defined Frame Line Loads for Cross Section: 10

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	Upper Roof->Resolved From Plane	-70.76	0/0/0	-70.76	9/11/3	N	DOWN	1.000	OF
2	plf	L>	Upper Roof->Resolved From Plane	-408.33	0/0/0	-408.33	9/11/3	N	DOWN	1.000	OF
2	plf	<L	Upper Roof->Resolved From Plane	-408.33	0/0/0	-408.33	9/11/3	N	DOWN	1.000	OF
2	plf	L	Upper Roof->Resolved From Plane	-408.33	0/0/0	-408.33	9/11/3	N	DOWN	1.000	OF
2	plf	S>	Upper Roof->Resolved From Plane	-51.04	0/0/0	-51.04	9/11/3	N	DOWN	1.000	OF
2	plf	<S	Upper Roof->Resolved From Plane	-51.04	0/0/0	-51.04	9/11/3	N	DOWN	1.000	OF
2	plf	US1*	Upper Roof->Resolved From Plane	-51.04	0/0/0	-51.04	9/11/3	N	DOWN	1.000	OF
2	plf	*US1	Upper Roof->Resolved From Plane	-51.04	0/0/0	-51.04	9/11/3	N	DOWN	1.000	OF
2	plf	S	Upper Roof->Resolved From Plane	-51.04	0/0/0	-51.04	9/11/3	N	DOWN	1.000	OF
2	plf	W1>	Upper Roof->Resolved From Plane	395.12	0/0/0	395.12	9/11/3	N	UP	0.768	OF
2	plf	<W1	Upper Roof->Resolved From Plane	308.69	0/0/0	308.69	9/11/3	N	UP	0.600	OF
2	plf	W2>	Upper Roof->Resolved From Plane	209.90	0/0/0	209.90	9/11/3	N	UP	0.408	OF
2	plf	<W2	Upper Roof->Resolved From Plane	123.47	0/0/0	123.47	9/11/3	N	UP	0.240	OF

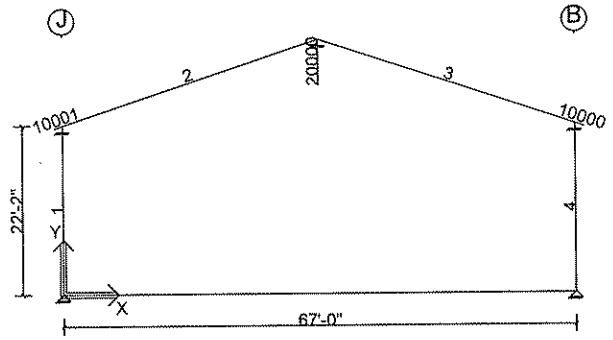


User Defined Frame Point Loads for Cross Section: 11

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	Clerestory->Resolved From Plane	3780.00	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	Clerestory->Resolved From Plane	6540.00	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	Clerestory->Resolved From Plane	-4590.00	21/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	Clerestory->Resolved From Plane	-1830.00	21/0/0	NA	NA	N	LEFT	1.000	OF
2	p	CG	Clerestory->Resolved From Plane	-1050.00	9/6/0	NA	NA	N	DOWN	1.000	OF

User Defined Frame Line Loads for Cross Section: 11

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	Upper Roof->Resolved From Plane	-103.98	0/0/0	-103.98	9/11/3	N	DOWN	1.000	OF
2	plf	L>	Upper Roof->Resolved From Plane	-600.00	0/0/0	-600.00	9/11/3	N	DOWN	1.000	OF
2	plf	<L	Upper Roof->Resolved From Plane	-600.00	0/0/0	-600.00	9/11/3	N	DOWN	1.000	OF
2	plf	L	Upper Roof->Resolved From Plane	-600.00	0/0/0	-600.00	9/11/3	N	DOWN	1.000	OF
2	plf	S>	Upper Roof->Resolved From Plane	-75.00	0/0/0	-75.00	9/11/3	N	DOWN	1.000	OF
2	plf	<S	Upper Roof->Resolved From Plane	-75.00	0/0/0	-75.00	9/11/3	N	DOWN	1.000	OF
2	plf	US1*	Upper Roof->Resolved From Plane	-75.00	0/0/0	-75.00	9/11/3	N	DOWN	1.000	OF
2	plf	*US1	Upper Roof->Resolved From Plane	-75.00	0/0/0	-75.00	9/11/3	N	DOWN	1.000	OF
2	plf	S	Upper Roof->Resolved From Plane	-75.00	0/0/0	-75.00	9/11/3	N	DOWN	1.000	OF
2	plf	W1>	Upper Roof->Resolved From Plane	580.59	0/0/0	580.59	9/11/3	N	UP	0.768	OF
2	plf	<W1	Upper Roof->Resolved From Plane	453.59	0/0/0	453.59	9/11/3	N	UP	0.600	OF
2	plf	W2>	Upper Roof->Resolved From Plane	308.43	0/0/0	308.43	9/11/3	N	UP	0.408	OF
2	plf	<W2	Upper Roof->Resolved From Plane	181.43	0/0/0	181.43	9/11/3	N	UP	0.240	OF

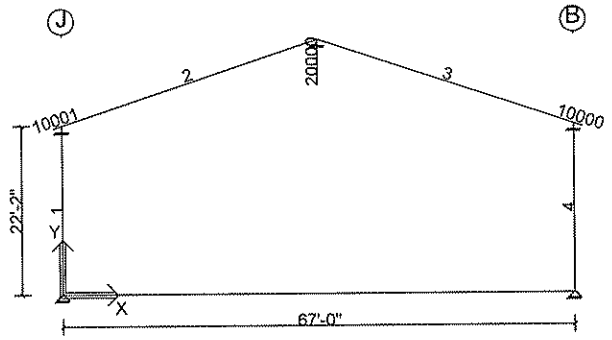


User Defined Frame Point Loads for Cross Section: 12

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	Clerestory->Resolved From Plane	3753.75	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	Clerestory->Resolved From Plane	6494.58	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	Clerestory->Resolved From Plane	-4558.12	21/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	Clerestory->Resolved From Plane	-1817.29	21/0/0	NA	NA	N	LEFT	1.000	OF
2	p	CG	Clerestory->Resolved From Plane	-1042.71	9/6/0	NA	NA	N	DOWN	1.000	OF

User Defined Frame Line Loads for Cross Section: 12

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	Upper Roof->Resolved From Plane	-103.26	0/0/0	-103.26	9/11/3	N	DOWN	1.000	OF
2	plf	L>	Upper Roof->Resolved From Plane	-595.83	0/0/0	-595.83	9/11/3	N	DOWN	1.000	OF
2	plf	<L	Upper Roof->Resolved From Plane	-595.83	0/0/0	-595.83	9/11/3	N	DOWN	1.000	OF
2	plf	L	Upper Roof->Resolved From Plane	-595.83	0/0/0	-595.83	9/11/3	N	DOWN	1.000	OF
2	plf	S>	Upper Roof->Resolved From Plane	-74.48	0/0/0	-74.48	9/11/3	N	DOWN	1.000	OF
2	plf	<S	Upper Roof->Resolved From Plane	-74.48	0/0/0	-74.48	9/11/3	N	DOWN	1.000	OF
2	plf	US1*	Upper Roof->Resolved From Plane	-74.48	0/0/0	-74.48	9/11/3	N	DOWN	1.000	OF
2	plf	*US1	Upper Roof->Resolved From Plane	-74.48	0/0/0	-74.48	9/11/3	N	DOWN	1.000	OF
2	plf	S	Upper Roof->Resolved From Plane	-74.48	0/0/0	-74.48	9/11/3	N	DOWN	1.000	OF
2	plf	W1>	Upper Roof->Resolved From Plane	576.56	0/0/0	576.56	9/11/3	N	UP	0.768	OF
2	plf	<W1	Upper Roof->Resolved From Plane	450.44	0/0/0	450.44	9/11/3	N	UP	0.600	OF
2	plf	W2>	Upper Roof->Resolved From Plane	306.29	0/0/0	306.29	9/11/3	N	UP	0.408	OF
2	plf	<W2	Upper Roof->Resolved From Plane	180.17	0/0/0	180.17	9/11/3	N	UP	0.240	OF

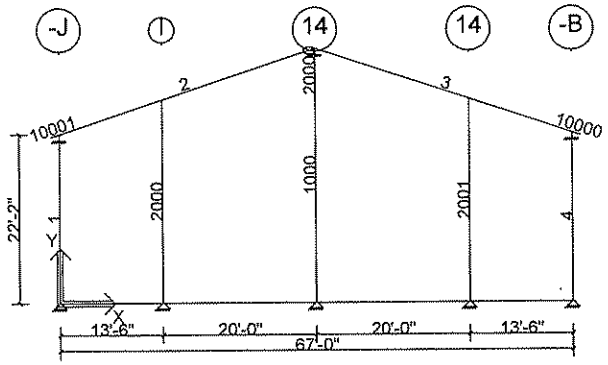


User Defined Frame Point Loads for Cross Section:

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	Clerestory->Resolved From Plane	2005.83	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	Clerestory->Resolved From Plane	3470.40	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	Clerestory->Resolved From Plane	-2435.65	21/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	Clerestory->Resolved From Plane	-971.07	21/0/0	NA	NA	N	LEFT	1.000	OF
2	p	CG	Clerestory->Resolved From Plane	-580.77	9/6/0	NA	NA	N	DOWN	1.000	OF

User Defined Frame Line Loads for Cross Section:

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	Upper Roof->Resolved From Plane	-57.51	0/0/0	-57.51	9/11/3	N	DOWN	1.000	OF
2	plf	L>	Upper Roof->Resolved From Plane	-331.87	0/0/0	-331.87	9/11/3	N	DOWN	1.000	OF
2	plf	<L	Upper Roof->Resolved From Plane	-331.87	0/0/0	-331.87	9/11/3	N	DOWN	1.000	OF
2	plf	L	Upper Roof->Resolved From Plane	-331.87	0/0/0	-331.87	9/11/3	N	DOWN	1.000	OF
2	plf	S>	Upper Roof->Resolved From Plane	-41.48	0/0/0	-41.48	9/11/3	N	DOWN	1.000	OF
2	plf	<S	Upper Roof->Resolved From Plane	-41.48	0/0/0	-41.48	9/11/3	N	DOWN	1.000	OF
2	plf	US1*	Upper Roof->Resolved From Plane	-41.48	0/0/0	-41.48	9/11/3	N	DOWN	1.000	OF
2	plf	*US1	Upper Roof->Resolved From Plane	-41.48	0/0/0	-41.48	9/11/3	N	DOWN	1.000	OF
2	plf	S	Upper Roof->Resolved From Plane	-41.48	0/0/0	-41.48	9/11/3	N	DOWN	1.000	OF
2	plf	W1>	Upper Roof->Resolved From Plane	321.13	0/0/0	321.13	9/11/3	N	UP	0.768	OF
2	plf	<W1	Upper Roof->Resolved From Plane	250.88	0/0/0	250.88	9/11/3	N	UP	0.600	OF
2	plf	W2>	Upper Roof->Resolved From Plane	170.60	0/0/0	170.60	9/11/3	N	UP	0.408	OF
2	plf	<W2	Upper Roof->Resolved From Plane	100.35	0/0/0	100.35	9/11/3	N	UP	0.240	OF



Shape: Clerestory Frames

Loads and Codes – Shape: Clerestory Frames

City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code
Building Use: Standard Occupancy Structure
Built Up: 05AISC – ASD
Cold Form: 04AISI – ASD
Rainfall: 10.00 inches per hour

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.575)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000
Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 4/9/8
Parts / Portions Zone Strip Width: 3/0/0
Basic Wind Pressure: 21.13,(Parts) 25.76 psf

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed (0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

Seismic Load
Mapped Spectral Response – Ss:11.80 %g
Mapped Spectral Response – S1:5.10 %g
Seismic Hazard / Use Group: Group 1

Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.0981
Bracing Seismic Period: 0.0648
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

Deflection Conditions
Frames are vertically supporting:Ceiling with Flexible Finish
Frames are laterally supporting:Underhung Crane
Purlins are supporting:Ceiling with Flexible Finish
Girts are supporting:Metal Wall Panels
Deflection Limit Override H/150

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

Design Load Combinations – Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 S>	D + CG + S>
4	System	1.000	1.0 D + 1.0 CG + 1.0 <S	D + CG + <S
5	System	1.000	1.0 D + 1.0 CG + 1.0 W1>	D + CG + W1>
6	System	1.000	1.0 D + 1.0 CG + 1.0 <W1	D + CG + <W1
7	System	1.000	1.0 D + 1.0 CG + 1.0 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 1.0 <W2	D + CG + <W2
9	System	1.000	0.600 D + 0.600 CU + 1.0 W1>	D + CU + W1>
10	System	1.000	0.600 D + 0.600 CU + 1.0 <W1	D + CU + <W1
11	System	1.000	0.600 D + 0.600 CU + 1.0 W2>	D + CU + W2>
12	System	1.000	0.600 D + 0.600 CU + 1.0 <W2	D + CU + <W2
13	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 W1>	D + CG + L + W1>
14	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 <W1	D + CG + L + <W1
15	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 W2>	D + CG + L + W2>
16	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 <W2	D + CG + L + <W2
17	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 W1>	D + CG + S + W1>
18	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 <W1	D + CG + S + <W1
19	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 W2>	D + CG + S + W2>
20	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 <W2	D + CG + S + <W2
21	System	1.000	1.0 D + 1.0 CG + 0.700 E> + 0.700 EG+	D + CG + E> + EG+
22	System	1.000	1.0 D + 1.0 CG + 0.700 <E + 0.700 EG+	D + CG + <E + EG+
23	System	1.000	0.600 D + 0.600 CU + 0.700 E> + 0.700 EG-	D + CU + E> + EG-
24	System	1.000	0.600 D + 0.600 CU + 0.700 <E + 0.700 EG-	D + CU + <E + EG-

25	System	1.000	1.0 D + 1.0 CG + 0.525 E> + 0.525 EG+	D + CG + E> + EG+
26	System	1.000	1.0 D + 1.0 CG + 0.525 <E + 0.525 EG+	D + CG + <E + EG+
27	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 WB1>	D + CG + WP + WB1>
28	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 WB1>	D + CU + WP + WB1>
29	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB1>	D + CG + L + WP + WB1>
30	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB1>	D + CG + S + WP + WB1>
31	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 <WB1	D + CG + WP + <WB1
32	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 <WB1	D + CU + WP + <WB1
33	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB1	D + CG + L + WP + <WB1
34	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB1	D + CG + S + WP + <WB1
35	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 WB2>	D + CG + WP + WB2>
36	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 WB2>	D + CU + WP + WB2>
37	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB2>	D + CG + L + WP + WB2>
38	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB2>	D + CG + S + WP + WB2>
39	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 <WB2	D + CG + WP + <WB2
40	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 <WB2	D + CU + WP + <WB2
41	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB2	D + CG + L + WP + <WB2
42	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB2	D + CG + S + WP + <WB2
43	System Derived	1.000	1.0 D + 1.0 CG + 0.700 EB> + 0.700 EG+	D + CG + EB> + EG+
44	System Derived	1.000	0.600 D + 0.600 CU + 0.700 EB> + 0.700 EG-	D + CU + EB> + EG-
45	System Derived	1.000	1.0 D + 1.0 CG + 0.525 EB> + 0.525 EG+	D + CG + EB> + EG+
46	System Derived	1.000	1.0 D + 1.0 CG + 0.700 <EB + 0.700 EG+	D + CG + <EB + EG+
47	System Derived	1.000	0.600 D + 0.600 CU + 0.700 <EB + 0.700 EG-	D + CU + <EB + EG-
48	System Derived	1.000	1.0 D + 1.0 CG + 0.525 <EB + 0.525 EG+	D + CG + <EB + EG+

Design Load Combinations – Bracing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 W1>	W1>
2	System	1.000	1.0 <W1	<W1
3	System	1.000	1.0 W2>	W2>
4	System	1.000	1.0 <W2	<W2
5	System	1.000	0.700 E>	E>
6	System	1.000	0.700 <E	<E

Design Load Combinations – Purlin

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L	D + CG + L
2	System	1.000	1.0 D + 1.0 CG + 1.0 S	D + CG + S
3	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 1)
4	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 6)
5	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 1)
6	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 6)
7	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 1 and 2)
8	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 2 and 3)
9	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 3 and 4)
10	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 4 and 5)
11	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 5 and 6)
12	System	1.000	1.0 D + 1.0 CG + 1.0 W1>	D + CG + W1>
13	System	1.000	1.0 D + 1.0 CG + 1.0 <W2	D + CG + <W2
14	System	1.000	0.600 D + 0.600 CU + 1.0 W1>	D + CU + W1>
15	System	1.000	0.600 D + 0.600 CU + 1.0 <W2	D + CU + <W2
16	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 W1>	D + CG + L + W1>
17	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 <W2	D + CG + L + <W2
18	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 W1>	D + CG + S + W1>
19	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 <W2	D + CG + S + <W2
20	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 WB1>	D + CG + WP + WB1>
21	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 WB1>	D + CU + WP + WB1>
22	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB1>	D + CG + L + WP + WB1>
23	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB1>	D + CG + S + WP + WB1>
24	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 <WB1	D + CG + WP + <WB1
25	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 <WB1	D + CU + WP + <WB1
26	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB1	D + CG + L + WP + <WB1
27	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB1	D + CG + S + WP + <WB1
28	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 WB2>	D + CG + WP + WB2>
29	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 WB2>	D + CU + WP + WB2>
30	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB2>	D + CG + L + WP + WB2>

31	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB2>	D + CG + S + WP + WB2>
32	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 <WB2	D + CG + WP + <WB2
33	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 <WB2	D + CU + WP + <WB2
34	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB2	D + CG + L + WP + <WB2
35	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB2	D + CG + S + WP + <WB2
36	System Derived	1.000	1.0 D + 1.0 CG + 0.525 EB> + 0.525 EG+	D + CG + EB> + EG+
37	System Derived	1.000	1.0 D + 1.0 CG + 0.700 EB> + 0.700 EG+	D + CG + EB> + EG+
38	System Derived	1.000	0.600 D + 0.600 CU + 0.700 EB> + 0.700 EG-	D + CU + EB> + EG-
39	System Derived	1.000	1.0 D + 1.0 CG + 0.525 <EB + 0.525 EG+	D + CG + <EB + EG+
40	System Derived	1.000	1.0 D + 1.0 CG + 0.700 <EB + 0.700 EG+	D + CG + <EB + EG+
41	System Derived	1.000	0.600 D + 0.600 CU + 0.700 <EB + 0.700 EG-	D + CU + <EB + EG-

Design Load Combinations – Girt

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 W1>	W1>
2	System	1.000	1.0 <W2	<W2
3	System	1.000	1.0 WP	WP

Design Load Combinations – Roof – Panel

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 L	D + L
2	System	1.000	1.0 D + 1.0 S	D + S
3	System	1.000	1.0 D + 1.0 W1>	D + W1>
4	System	1.000	1.0 D + 1.0 <W2	D + <W2
5	System	1.000	0.600 D + 1.0 W1>	D + W1>
6	System	1.000	0.600 D + 1.0 <W2	D + <W2

Design Load Combinations – Wall – Panel

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 W1>	W1>
2	System	1.000	1.0 <W2	<W2

Deflection Load Combinations – Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	240	1.0 L	L
2	System	1.000	0	240	1.0 S	S
3	System	1.000	0	240	0.700 W1>	W1>
4	System	1.000	0	240	0.700 <W1	<W1
5	System	1.000	0	240	0.700 W2>	W2>
6	System	1.000	0	240	0.700 <W2	<W2
7	System	1.000	0	240	0.700 WP	WP
8	System	1.000	100	0	0.700 W1>	W1>
9	System	1.000	100	0	0.700 <W1	<W1
10	System	1.000	100	0	0.700 W2>	W2>
11	System	1.000	100	0	0.700 <W2	<W2
12	System	1.000	100	0	0.700 WP	WP
13	System	1.000	100	0	0.600 E> + 0.600 EG-	E> + EG-
14	System	1.000	100	0	0.600 <E + 0.600 EG-	<E + EG-

Deflection Load Combinations – Purlin

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	240	0.700 W1>	W1>
2	System	1.000	240	0.700 <W2	<W2
3	System	1.000	240	0.700 WP	WP
4	System	1.000	240	1.0 S	S
5	System	1.000	240	1.0 L	L

Deflection Load Combinations – Girt

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	150	0.700 W1>	W1>
2	System	1.000	150	0.700 <W2	<W2
3	System	1.000	150	0.700 WP	WP

Deflection Load Combinations – Roof – Panel

No.	Origin	Factor	Def H	Def V	Application	Description

1	System	1.000	150	150	1.0 S	S

Reactions – Summary Report

Shape: Maintenance Area

Builder Contact: Mr. Roy Mouledous
Name: Broadmoor, LLC
Address: 2740 N. Arnoult Road

City, State Zip: Metairie, Louisiana 70002
Country: United States

Project: Riverine and Combatant Craft Operations Facility
Builder PO #:
Jobsite:

City, State Zip: Stennis Space Center, Mississippi 39529
County, Country: Hancock, United States

Loads and Codes – Shape: Maintenance Area

City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code
Building Use: Standard Occupancy Structure
Built Up: 05AISC – ASD
Cold Form: 04AISI – ASD
Rainfall: 10.00 inches per hour

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf

Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.685)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000
Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 27/9/0
Parts / Portions Zone Strip Width: 6/8/6
Basic Wind Pressure: 25.20,(Parts) 25.76 psf

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed
(0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

Seismic Load
Mapped Spectral Response – Ss:11.80 %g
Mapped Spectral Response – S1:5.10 %g
Seismic Hazard / Use Group: Group 1

Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.3340
Bracing Seismic Period: 0.2043
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

Load Type Descriptions

D	Material Dead Weight	C	Collateral Load
CG	Collateral Load for Gravity Cases	CU	Collateral Load for Wind Cases
L	Live Load	ASL^	Alternate Span Live Load, Shifted Right
^ASL	Alternate Span Live Load, Shifted Left	PL2	Partial Live, Full, 2 Spans
L>	Live – Notional Right	<L	Live – Notional Left
S	Snow Load	US1*	Unbalanced Snow Load 1, Shifted Right
*US1	Unbalanced Snow Load 1, Shifted Left	US2*	Unbalanced Snow Load 2, Shifted Right
*US2	Unbalanced Snow Load 2, Shifted Left	SD	Snow Drift Load
SS	Sliding Snow Load	RS	Rain Surcharge Load
PF1	Partial Load, Full, 1 Span	PH1	Partial Load, Half, 1 Span
PF2	Partial Load, Full, 2 Spans	PH2	Partial Load, Half, 2 Spans
S>	Snow – Notional Right	<S	Snow – Notional Left
MRS	Minimum Roof Snow	MRS>	Minimum Roof Snow – Notional Right
<MRS	Minimum Roof Snow – Notional Left	W	Wind Load
W1>	Wind Load, Case 1, Right	<W1	Wind Load, Case 1, Left
W2>	Wind Load, Case 2, Right	<W2	Wind Load, Case 2, Left
W3>	Wind Load, Case 3, Right	<W3	Wind Load, Case 3, Left
W4>	Wind Load, Case 4, Right	<W4	Wind Load, Case 4, Left
W5>	Wind Load, Case 5, Right	<W5	Wind Load, Case 5, Left
W6>	Wind Load, Case 6, Right	<W6	Wind Load, Case 6, Left
WP	Wind Load, Parallel to Ridge	WPR	Wind Load, ‖ Ridge, Right
WPL	Wind Load, ‖ Ridge, Left	WPA1	Wind Parallel – Ref A, Case 1
WPA2	Wind Parallel – Ref A, Case 2	WPB1	Wind Parallel – Ref B, Case 1
WPB2	Wind Parallel – Ref B, Case 2	WPC1	Wind Parallel – Ref C, Case 1

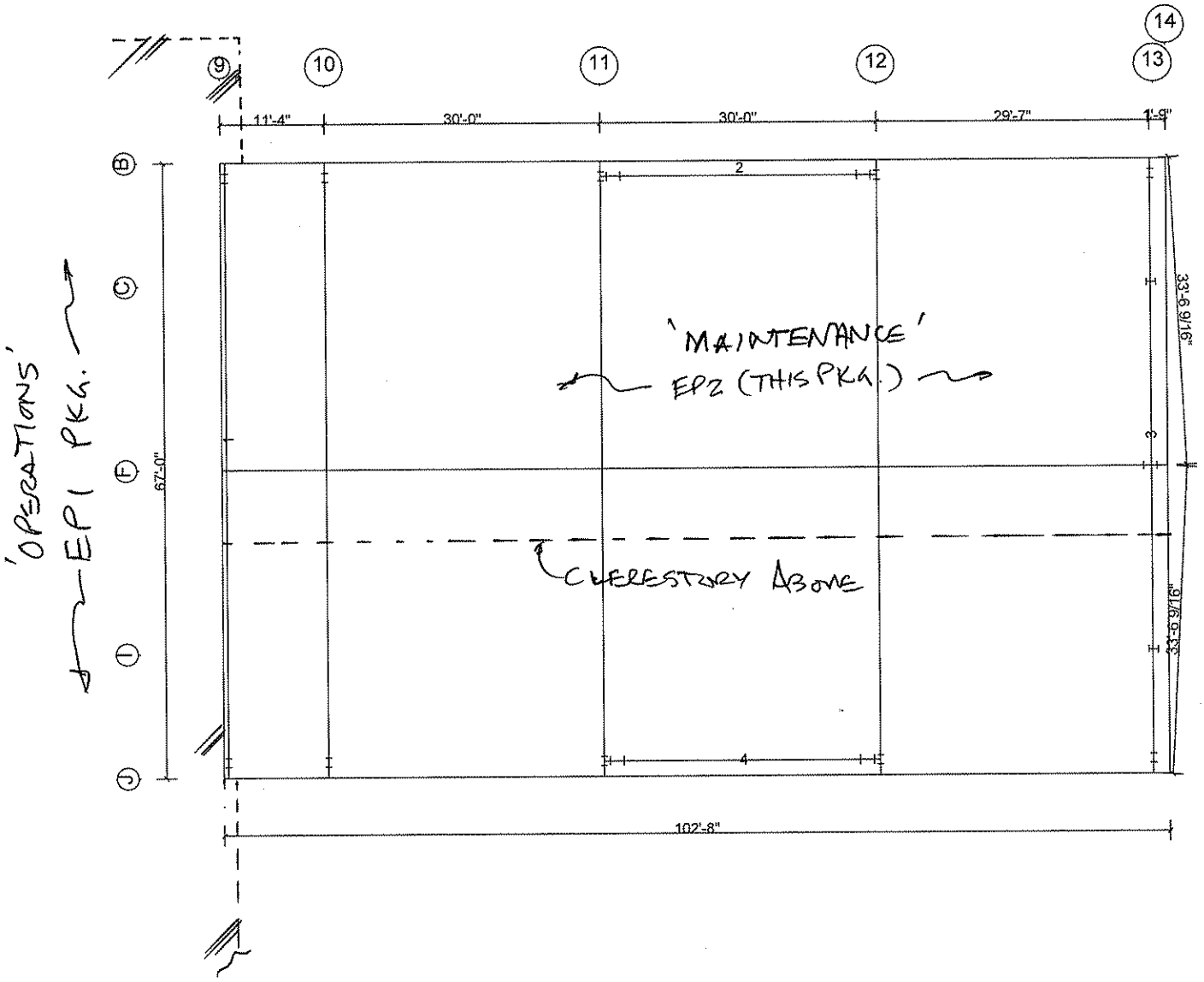
WPC2	Wind Parallel – Ref C, Case 2
WPD2	Wind Parallel – Ref D, Case 2
<WB1	Wind Brace Reaction, Case 1, Left
<WB2	Wind Brace Reaction, Case 2, Left
<WB3	Wind Brace Reaction, Case 3, Left
<WB4	Wind Brace Reaction, Case 4, Left
<WB5	Wind Brace Reaction, Case 5, Left
<WB6	Wind Brace Reaction, Case 6, Left
MWB	Minimum Wind Bracing Reaction
E>	Seismic Load, Right
EG	Vertical Seismic Effect
EG-	Vertical Seismic Effect, Subtractive
<EB	Seismic Brace Reaction, Left
FL*	Alternate Span Floor Live Load, Shifted Right
FD	Floor Dead Load
AL*>	Auxiliary Live Load, Right, Right
<AL*	Auxiliary Live Load, Left, Right
AL*	Aux Live, Right
AL*>(1)	Auxiliary Live Load, Right, Right, Aisle 1
<AL*(1)	Auxiliary Live Load, Left, Right, Aisle 1
AL*(1)	Aux Live, Right, Aisle 1
AL*>(2)	Auxiliary Live Load, Right, Right, Aisle 2
<AL*(2)	Auxiliary Live Load, Left, Right, Aisle 2
AL*(2)	Aux Live, Right, Aisle 2
AL*>(3)	Auxiliary Live Load, Right, Right, Aisle 3
<AL*(3)	Auxiliary Live Load, Left, Right, Aisle 3
AL*(3)	Aux Live, Right, Aisle 3
AL*>(4)	Auxiliary Live Load, Right, Right, Aisle 4
<AL*(4)	Auxiliary Live Load, Left, Right, Aisle 4
AL*(4)	Aux Live, Right, Aisle 4
AL*>(5)	Auxiliary Live Load, Right, Right, Aisle 5
<AL*(5)	Auxiliary Live Load, Left, Right, Aisle 5
AL*(5)	Aux Live, Right, Aisle 5
ALB	Aux Live Bracing Reaction
<ALB	Aux Live Bracing Reaction, Left
<WALB	Wind, Aux Live Bracing Reaction, Left
<ALB(1)	Aux Live Bracing Reaction, Left, Aisle 1
<WALB(1)	Wind, Aux Live Bracing Reaction, Left, Aisle 1
<ALB(2)	Aux Live Bracing Reaction, Left, Aisle 2
<WALB(2)	Wind, Aux Live Bracing Reaction, Left, Aisle 2
<ALB(3)	Aux Live Bracing Reaction, Left, Aisle 3
<WALB(3)	Wind, Aux Live Bracing Reaction, Left, Aisle 3
<ALB(4)	Aux Live Bracing Reaction, Left, Aisle 4
<WALB(4)	Wind, Aux Live Bracing Reaction, Left, Aisle 4
<ALB(5)	Aux Live Bracing Reaction, Left, Aisle 5
<WALB(5)	Wind, Aux Live Bracing Reaction, Left, Aisle 5
AD	Auxiliary Dead Load
U1	User Defined Load – 1
U3	User Defined Load – 3
U5	User Defined Load – 5
U7	User Defined Load – 7
U9	User Defined Load – 9
UB1	User Brace Reaction – 1
UB3	User Brace Reaction – 3
UB5	User Brace Reaction – 5
UB7	User Brace Reaction – 7
UB9	User Brace Reaction – 9
T	Temperature Load
WPD1	Wind Parallel – Ref D, Case 1
WB1>	Wind Brace Reaction, Case 1, Right
WB2>	Wind Brace Reaction, Case 2, Right
WB3>	Wind Brace Reaction, Case 3, Right
WB4>	Wind Brace Reaction, Case 4, Right
WB5>	Wind Brace Reaction, Case 5, Right
WB6>	Wind Brace Reaction, Case 6, Right
MW	Minimum Wind Load
E	Seismic Load
<E	Seismic Load, Left
EG+	Vertical Seismic Effect, Additive
EB>	Seismic Brace Reaction, Right
FL	Floor Live Load
*FL	Alternate Span Floor Live Load, Shifted Left
AL	Auxiliary Live Load
*AL>	Auxiliary Live Load, Right, Left
<*AL	Auxiliary Live Load, Left, Left
*AL	Aux Live, Left
*AL>(1)	Auxiliary Live Load, Right, Left, Aisle 1
<*AL(1)	Auxiliary Live Load, Left, Left, Aisle 1
*AL(1)	Aux Live, Left, Aisle 1
*AL>(2)	Auxiliary Live Load, Right, Left, Aisle 2
<*AL(2)	Auxiliary Live Load, Left, Left, Aisle 2
*AL(2)	Aux Live, Left, Aisle 2
*AL>(3)	Auxiliary Live Load, Right, Left, Aisle 3
<*AL(3)	Auxiliary Live Load, Left, Left, Aisle 3
*AL(3)	Aux Live, Left, Aisle 3
*AL>(4)	Auxiliary Live Load, Right, Left, Aisle 4
<*AL(4)	Auxiliary Live Load, Left, Left, Aisle 4
*AL(4)	Aux Live, Left, Aisle 4
*AL>(5)	Auxiliary Live Load, Right, Left, Aisle 5
<*AL(5)	Auxiliary Live Load, Left, Left, Aisle 5
*AL(5)	Aux Live, Left, Aisle 5
ALB>	Aux Live Bracing Reaction, Right
WALB>	Wind, Aux Live Bracing Reaction, Right
ALB>(1)	Aux Live Bracing Reaction, Right, Aisle 1
WALB>(1)	Wind, Aux Live Bracing Reaction, Right, Aisle 1
ALB>(2)	Aux Live Bracing Reaction, Right, Aisle 2
WALB>(2)	Wind, Aux Live Bracing Reaction, Right, Aisle 2
ALB>(3)	Aux Live Bracing Reaction, Right, Aisle 3
WALB>(3)	Wind, Aux Live Bracing Reaction, Right, Aisle 3
ALB>(4)	Aux Live Bracing Reaction, Right, Aisle 4
WALB>(4)	Wind, Aux Live Bracing Reaction, Right, Aisle 4
ALB>(5)	Aux Live Bracing Reaction, Right, Aisle 5
WALB>(5)	Wind, Aux Live Bracing Reaction, Right, Aisle 5
WALB	Wind, Aux Live Bracing Reaction
U0	User Defined Load
U2	User Defined Load – 2
U4	User Defined Load – 4
U6	User Defined Load – 6
U8	User Defined Load – 8
UB	User Brace Reaction
UB2	User Brace Reaction – 2
UB4	User Brace Reaction – 4
UB6	User Brace Reaction – 6
UB8	User Brace Reaction – 8
R	Rain Load
V	Shear

Overall Building Description

Shape	Overall Width	Overall Length	Floor Area (sq. ft.)	Wall Area (sq. ft.)	Roof Area (sq. ft.)	Max. Eave Height	Min. Eave Height 2	Max. Roof Pitch	Min. Roof Pitch	Peak Height
Maintenance Area	67/0/0	102/8/0	6879	8270	8076	22/2/0	22/2/0	4.000:12	4.000:12	33/4/0
** **Clerestory Shape** **	67/0/0	102/8/0	6879	8909	7933	36/6/6	22/2/0	4.000:12	4.000:12	36/6/6
Clerestory Frames	9/7/1	102/8/0	984	1076	1059	6/4/11	3/2/5	4.000:12		
Total For All Shapes			14742	18255	17068	** **'Clerestory Shape' is for supplemental use only** **				

Overall Shape Description

Roof 1	Roof 2	From Grid	To Grid	Width	Length	Eave Ht.	Eave Ht. 2	Pitch	Pitch 2	Dist. to Ridge	Peak Height
A	B	9-B	9-J	67/0/0	102/8/0	22/2/0	22/2/0	4.000:12	4.000:12	33/6/0	33/4/0



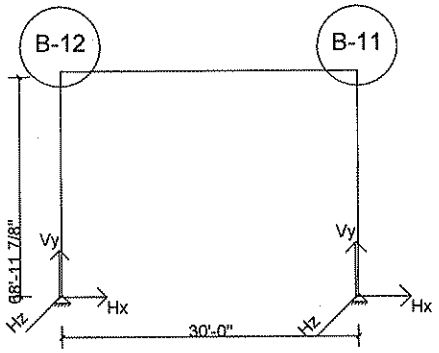
Wall: 2

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 L>	D + AD + CG + L>
2	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <L	D + AD + CG + <L
3	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 S>	D + AD + CG + S>
4	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <S	D + AD + CG + <S
5	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 US1*	D + AD + CG + US1*
6	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 *US1	D + AD + CG + *US1
7	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W1>	D + AD + CG + W1>
8	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W1	D + AD + CG + <W1
9	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W2>	D + AD + CG + W2>
10	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W2	D + AD + CG + <W2
11	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W1>	D + AD + CU + W1>
12	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W1	D + AD + CU + <W1
13	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W2>	D + AD + CU + W2>
14	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W2	D + AD + CU + <W2
15	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 AL	D + AD + CG+AL
16	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W1>	D + AD + CG + L + W1>
17	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W1	D + AD + CG + L + <W1
18	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W2>	D + AD + CG + L + W2>
19	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W2	D + AD + CG + L + <W2
20	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W1>	D + AD + CG + S + W1>
21	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W1	D + AD + CG + S + <W1
22	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W2>	D + AD + CG + S + W2>
23	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W2	D + AD + CG + S + <W2
24	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.563 S + 0.750 AL	D + AD + CG + S+AL
25	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W1> + 0.750 AL	D + AD + CG + W1>+AL
26	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W1 + 0.750 AL	D + AD + CG + <W1+AL
27	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W2> + 0.750 AL	D + AD + CG + W2>+AL
28	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W2 + 0.750 AL	D + AD + CG + <W2+AL
29	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 E> + 0.700 EG+	D + AD + CG + E> + EG+
30	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <E + 0.700 EG+	D + AD + CG + <E + EG+
31	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 E> + 0.700 EG-	D + AD + CU + E> + EG-
32	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <E + 0.700 EG-	D + AD + CU + <E + EG-
33	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 E> + 0.525 EG+	D + AD + CG + E> + EG+
34	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <E + 0.525 EG+	D + AD + CG + <E + EG+
35	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB1>	D + AD + CG + WP + WB1>
36	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB1>	D + AD + CU + WP + WB1>
37	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB1>	D+AD+CG+L+WP+WB1>
38	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB1>	D+AD+CG+S+WP+WB1>
39	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB1	D + AD + CG + WP + <WB1
40	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB1	D + AD + CU + WP + <WB1
41	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB1	D+AD+CG+L+WP+<WB1
42	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB1	D+AD+CG+S+WP+<WB1
43	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB2>	D + AD + CG + WP + WB2>
44	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB2>	D + AD + CU + WP + WB2>
45	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB2>	D+AD+CG+L+WP+WB2>
46	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB2>	D+AD+CG+S+WP+WB2>
47	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB2	D + AD + CG + WP + <WB2
48	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB2	D + AD + CU + WP + <WB2
49	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB2	D+AD+CG+L+WP+<WB2
50	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB2	D+AD+CG+S+WP+<WB2
51	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 EB> + 0.700 EG+	D + AD + CG + EB> + EG+
52	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 EB> + 0.700 EG-	D + AD + CU + EB> + EG-
53	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 EB> + 0.525 EG+	D + AD + CG + EB> + EG+
54	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <EB + 0.700 EG+	D + AD + CG + <EB + EG+
55	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <EB + 0.700 EG-	D + AD + CU + <EB + EG-
56	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <EB + 0.525 EG+	D + AD + CG + <EB + EG+

Wall: 2
Frame ID:Portal Frame

Frame Type:Portal Frame



Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section: B

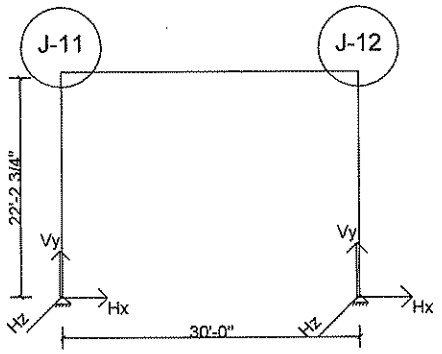
Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		30/0/0				
Grid1 - Grid2		B-12		B-11				
Base Plate W x L (in.)		13 x 19		13 x 19				
Base Plate Thickness (in.)		0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750				
Column Base Elev.		100'-1 1/2"		100'-1 1/2"				
Load Type	Desc.	Hx	Vy	Hx	Vy			
D	Frm	0.1	1.7	-0.1	1.7	-	-	-
AD	Frm	-	-	-	-	-	-	-
CG	Frm	-	-	-	-	-	-	-
L>	Frm	-	-	-	-	-	-	-
<L	Frm	-	-	-	-	-	-	-
S>	Frm	-	-	-	-	-	-	-
<S	Frm	-	-	-	-	-	-	-
US1*	Frm	-	-	-	-	-	-	-
*US1	Frm	-	-	-	-	-	-	-
W1>	Frm	-	-	-	-	-	-	-
<W1	Frm	-	-	-	-	-	-	-
W2>	Frm	-	-	-	-	-	-	-
<W2	Frm	-	-	-	-	-	-	-
CU	Frm	-	-	-	-	-	-	-
AL	Frm	-	-	-	-	-	-	-
L	Frm	-	-	-	-	-	-	-
S	Frm	-	-	-	-	-	-	-
E>	Frm	-	-	-	-	-	-	-
EG+	Frm	-	-	-	-	-	-	-
<E	Frm	-	-	-	-	-	-	-
EG-	Frm	-	-	-	-	-	-	-
WP	Frm	-	-	-	-	-	-	-
WB1>	Brc	4.2	6.4	4.0	-6.4	-	-	-
<WB1	Brc	-3.5	-5.6	-3.7	5.6	-	-	-
WB2>	Brc	2.4	3.7	2.3	-3.7	-	-	-
<WB2	Brc	-5.2	-8.3	-5.4	8.3	-	-	-
EB>	Brc	1.0	1.5	0.9	-1.5	-	-	-
<EB	Brc	-0.9	-1.5	-1.0	1.5	-	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing
Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	B-12	5.1	48	4.3	35	-	-	-	-	7.3	48	8.1	35	-	-	-	-
30/0/0	B-11	5.5	47	3.9	36	-	-	-	-	5.4	36	10.0	47	-	-	-	-

Wall: 4
Frame ID:Portal Frame

Frame Type:Portal Frame



Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section: J

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		30/0/0				
Grid1 - Grid2		J-11		J-12				
Base Plate W x L (in.)		13 x 19		13 x 19				
Base Plate Thickness (in.)		0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750				
Column Base Elev.		100'-1 1/2"		100'-1 1/2"				
Load Type	Desc.	Hx	Vy	Hx	Vy			
D	Frm	0.1	1.7	-0.1	1.7	-	-	-
AD	Frm	-	-	-	-	-	-	-
CG	Frm	-	-	-	-	-	-	-
L>	Frm	-	-	-	-	-	-	-
<L	Frm	-	-	-	-	-	-	-
S>	Frm	-	-	-	-	-	-	-
<S	Frm	-	-	-	-	-	-	-
US1*	Frm	-	-	-	-	-	-	-
*US1	Frm	-	-	-	-	-	-	-
W1>	Frm	-	-	-	-	-	-	-
<W1	Frm	-	-	-	-	-	-	-
W2>	Frm	-	-	-	-	-	-	-
<W2	Frm	-	-	-	-	-	-	-
CU	Frm	-	-	-	-	-	-	-
AL	Frm	-	-	-	-	-	-	-
L	Frm	-	-	-	-	-	-	-
S	Frm	-	-	-	-	-	-	-
E>	Frm	-	-	-	-	-	-	-
EG+	Frm	-	-	-	-	-	-	-
<E	Frm	-	-	-	-	-	-	-
EG-	Frm	-	-	-	-	-	-	-
WP	Frm	-	-	-	-	-	-	-
WB1>	Brc	-3.6	-5.8	-3.8	5.8	-	-	-
<WB1	Brc	3.2	4.9	3.0	-4.9	-	-	-
WB2>	Brc	-1.7	-2.7	-1.7	2.7	-	-	-
<WB2	Brc	5.2	8.0	5.0	-8.0	-	-	-
EB>	Brc	-0.9	-1.5	-1.0	1.5	-	-	-
<EB	Brc	1.0	1.5	0.9	-1.5	-	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing
Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	J-11	3.5	36	5.3	47	-	-	-	-	4.8	36	9.7	47	-	-	-	-
30/0/0	J-12	3.9	35	4.9	48	-	-	-	-	7.0	48	7.5	35	-	-	-	-

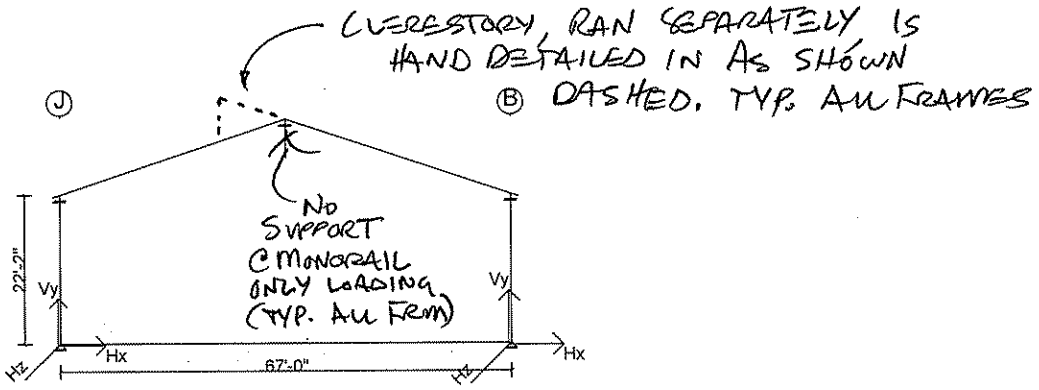
Wall: 4, Frame at: 0/6/0

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 L>	D + AD + CG + L>
2	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <L	D + AD + CG + <L
3	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 S>	D + AD + CG + S>
4	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <S	D + AD + CG + <S
5	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 US1*	D + AD + CG + US1*
6	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 *US1	D + AD + CG + *US1
7	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W1>	D + AD + CG + W1>
8	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W1	D + AD + CG + <W1
9	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W2>	D + AD + CG + W2>
10	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W2	D + AD + CG + <W2
11	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP	D + AD + CG + WP
12	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W1>	D + AD + CU + W1>
13	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W1	D + AD + CU + <W1
14	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W2>	D + AD + CU + W2>
15	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W2	D + AD + CU + <W2
16	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP	D + AD + CU + WP
17	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 AL	D + AD + CG+AL
18	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W1>	D + AD + CG + L + W1>
19	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W1	D + AD + CG + L + <W1
20	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W2>	D + AD + CG + L + W2>
21	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W2	D + AD + CG + L + <W2
22	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP	D + AD + CG + L + WP
23	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W1>	D + AD + CG + S + W1>
24	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W1	D + AD + CG + S + <W1
25	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W2>	D + AD + CG + S + W2>
26	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W2	D + AD + CG + S + <W2
27	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP	D + AD + CG + S + WP
28	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.563 S + 0.750 AL	D + AD + CG + S+AL
29	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W1> + 0.750 AL	D + AD + CG + W1>+AL
30	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W1 + 0.750 AL	D + AD + CG + <W1+AL
31	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W2> + 0.750 AL	D + AD + CG + W2>+AL
32	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W2 + 0.750 AL	D + AD + CG + <W2+AL
33	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 WP + 0.750 AL	D + AD + CG + WP+AL
34	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 E> + 0.700 EG+	D + AD + CG + E> + EG+
35	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <E + 0.700 EG+	D + AD + CG + <E + EG+
36	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 E> + 0.700 EG-	D + AD + CU + E> + EG-
37	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <E + 0.700 EG-	D + AD + CU + <E + EG-
38	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 E> + 0.525 EG+	D + AD + CG + E> + EG+
39	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <E + 0.525 EG+	D + AD + CG + <E + EG+

Wall: 4, Frame at: 0/6/0
Frame ID:Rigid Frame

Frame Type:Rigid Frame



Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section: 9

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		67/0/0				
Grid1 - Grid2		9-J		9-B				
Base Plate W x L (in.)		9 x 13		9 x 13				
Base Plate Thickness (in.)		0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750				
Column Base Elev.		100'-1 1/2"		100'-1 1/2"				
Load Type	Desc.	Hx	Vy	Hx	Vy			
D	Frm	0.8	2.5	-0.8	2.5	-	-	-
AD	Frm	0.0	0.1	-0.0	0.1	-	-	-
CG	Frm	0.7	1.8	-0.7	1.8	-	-	-
L>	Frm	3.3	8.4	-3.3	7.7	-	-	-
<L	Frm	3.3	8.4	-3.3	7.7	-	-	-
S>	Frm	0.4	1.1	-0.4	1.0	-	-	-
<S	Frm	0.4	1.1	-0.4	1.0	-	-	-
US1*	Frm	0.4	0.7	-0.4	1.1	-	-	-
*US1	Frm	0.3	0.7	-0.3	0.5	-	-	-
W1>	Frm	-3.9	-6.3	0.2	-4.5	-	-	-
<W1	Frm	-0.3	-4.8	4.0	-7.3	-	-	-
W2>	Frm	-4.1	-4.2	-0.5	-1.9	-	-	-
<W2	Frm	-0.5	-2.7	3.3	-4.8	-	-	-
WP	Frm	-1.1	-4.8	-0.4	-5.0	-	-	-
CU	Frm	-	-	-	-	-	-	-
AL	Frm	1.3	2.4	-1.3	2.4	-	-	-
L	Frm	2.6	6.6	-2.6	6.7	-	-	-
S	Frm	0.3	0.8	-0.3	0.9	-	-	-
E>	Frm	-0.2	-0.2	-0.2	0.2	-	-	-
EG+	Frm	0.0	0.1	-0.0	0.1	-	-	-
<E	Frm	0.2	0.2	0.2	-0.2	-	-	-
EG-	Frm	-0.0	-0.1	0.0	-0.1	-	-	-

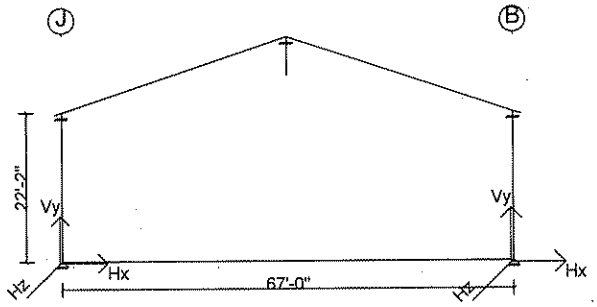
Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	9-J	3.6	14	4.9	1	-	-	-	-	4.8	12	12.7	1	-	-	-	-
67/0/0	9-B	4.9	1	3.5	13	-	-	-	-	5.8	13	12.1	1	-	-	-	-

Wall: 4, Frame at: 11/4/0
Frame ID:Rigid Frame

Frame Type:Rigid Frame



Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section: 10

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		67/0/0				
Grid1 - Grid2		10-J		10-B				
Base Plate W x L (in.)		9 x 13		9 x 13				
Base Plate Thickness (in.)		0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750				
Column Base Elev.		100'-1 1/2"		100'-1 1/2"				
Load Type	Desc.	Hx	Vy	Hx	Vy			
D	Frm	1.5	4.4	-1.5	4.4	-	-	-
AD	Frm	0.2	0.3	-0.2	0.3	-	-	-
CG	Frm	1.7	4.0	-1.7	3.8	-	-	-
L>	Frm	6.0	14.1	-6.0	14.1	-	-	-
<L	Frm	6.0	14.1	-6.0	14.1	-	-	-
S>	Frm	0.7	1.8	-0.7	1.8	-	-	-
<S	Frm	0.7	1.8	-0.7	1.8	-	-	-
US1*	Frm	1.0	1.5	-1.0	2.2	-	-	-
*US1	Frm	0.5	1.5	-0.5	0.8	-	-	-
W1>	Frm	-11.6	-15.7	-2.1	-8.6	-	-	-
<W1	Frm	3.3	-8.3	11.2	-15.8	-	-	-
W2>	Frm	-12.7	-10.2	-3.0	-1.9	-	-	-
<W2	Frm	2.2	-2.9	10.4	-9.1	-	-	-
WP	Frm	-0.0	-11.9	-1.7	-12.4	-	-	-
CU	Frm	-	-	-	-	-	-	-
AL	Frm	1.8	2.4	-1.8	2.4	-	-	-
L	Frm	6.0	14.1	-6.0	14.1	-	-	-
S	Frm	0.7	1.8	-0.7	1.8	-	-	-
E>	Frm	-0.6	-0.4	-0.6	0.4	-	-	-
EG+	Frm	0.1	0.2	-0.1	0.2	-	-	-
<E	Frm	0.6	0.4	0.6	-0.4	-	-	-
EG-	Frm	-0.1	-0.2	0.1	-0.2	-	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	10-J	11.7	14	10.4	19	-	-	-	-	12.9	12	22.8	1	-	-	-	-
67/0/0	10-B	10.1	20	10.2	13	-	-	-	-	13.0	13	22.6	1	-	-	-	-

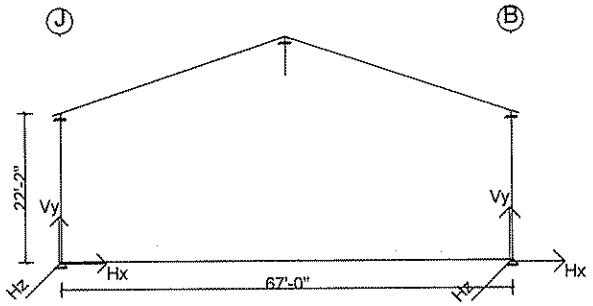
Wall: 4, Frame at: 41/4/0

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 L>	D + AD + CG + L>
2	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <L	D + AD + CG + <L
3	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 S>	D + AD + CG + S>
4	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <S	D + AD + CG + <S
5	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 US1*	D + AD + CG + US1*
6	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 *US1	D + AD + CG + *US1
7	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W1>	D + AD + CG + W1>
8	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W1	D + AD + CG + <W1
9	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W2>	D + AD + CG + W2>
10	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W2	D + AD + CG + <W2
11	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W1>	D + AD + CU + W1>
12	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W1	D + AD + CU + <W1
13	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W2>	D + AD + CU + W2>
14	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W2	D + AD + CU + <W2
15	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 AL	D + AD + CG+AL
16	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W1>	D + AD + CG + L + W1>
17	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W1	D + AD + CG + L + <W1
18	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W2>	D + AD + CG + L + W2>
19	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W2	D + AD + CG + L + <W2
20	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W1>	D + AD + CG + S + W1>
21	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W1	D + AD + CG + S + <W1
22	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W2>	D + AD + CG + S + W2>
23	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W2	D + AD + CG + S + <W2
24	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.563 S + 0.750 AL	D + AD + CG + S+AL
25	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W1> + 0.750 AL	D + AD + CG + W1>+AL
26	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W1 + 0.750 AL	D + AD + CG + <W1+AL
27	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W2> + 0.750 AL	D + AD + CG + W2>+AL
28	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W2 + 0.750 AL	D + AD + CG + <W2+AL
29	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 E> + 0.700 EG+	D + AD + CG + E> + EG+
30	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <E + 0.700 EG+	D + AD + CG + <E + EG+
31	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 E> + 0.700 EG-	D + AD + CU + E> + EG-
32	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <E + 0.700 EG-	D + AD + CU + <E + EG-
33	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 E> + 0.525 EG+	D + AD + CG + E> + EG+
34	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <E + 0.525 EG+	D + AD + CG + <E + EG+
35	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB1>	D + AD + CG + WP + WB1>
36	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB1>	D + AD + CU + WP + WB1>
37	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB1>	D+AD+CG+L+WP+WB1>
38	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB1>	D+AD+CG+S+WP+WB1>
39	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB1	D + AD + CG + WP + <WB1
40	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB1	D + AD + CU + WP + <WB1
41	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB1	D+AD+CG+L+WP+<WB1
42	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB1	D+AD+CG+S+WP+<WB1
43	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB2>	D + AD + CG + WP + WB2>
44	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB2>	D + AD + CU + WP + WB2>
45	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB2>	D+AD+CG+L+WP+WB2>
46	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB2>	D+AD+CG+S+WP+WB2>
47	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB2	D + AD + CG + WP + <WB2
48	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB2	D + AD + CU + WP + <WB2
49	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB2	D+AD+CG+L+WP+<WB2
50	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB2	D+AD+CG+S+WP+<WB2
51	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 EB> + 0.700 EG+	D + AD + CG + EB> + EG+
52	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 EB> + 0.700 EG-	D + AD + CU + EB> + EG-
53	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 EB> + 0.525 EG+	D + AD + CG + EB> + EG+
54	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <EB + 0.700 EG+	D + AD + CG + <EB + EG+
55	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <EB + 0.700 EG-	D + AD + CU + <EB + EG-
56	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <EB + 0.525 EG+	D + AD + CG + <EB + EG+

Wall: 4, Frame at: 41/4/0
Frame ID:Rigid Frame

Frame Type:Rigid Frame



Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section: 11

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		67/0/0				
Grid1 - Grid2		11-J		11-B				
Base Plate W x L (in.)		9 x 13		9 x 13				
Base Plate Thickness (in.)		0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 1.000		4 - 1.000				
Column Base Elev.		100'-1 1/2"		100'-1 1/2"				
Load Type	Desc.	Hx	Vy	Hx	Vy			
D	Frm	2.0	5.8	-2.0	5.8	-	-	-
AD	Frm	0.3	0.4	-0.3	0.4	-	-	-
CG	Frm	2.5	5.9	-2.5	5.6	-	-	-
L>	Frm	8.7	20.8	-8.7	20.8	-	-	-
<L	Frm	8.7	20.8	-8.7	20.8	-	-	-
S>	Frm	1.1	2.6	-1.1	2.6	-	-	-
<S	Frm	1.1	2.6	-1.1	2.6	-	-	-
US1*	Frm	1.4	2.2	-1.4	3.2	-	-	-
*US1	Frm	0.7	2.2	-0.7	1.2	-	-	-
W1>	Frm	-16.9	-23.0	-3.1	-12.6	-	-	-
<W1	Frm	4.9	-12.2	16.5	-23.1	-	-	-
W2>	Frm	-18.5	-14.9	-4.5	-2.8	-	-	-
<W2	Frm	3.3	-4.2	15.2	-13.3	-	-	-
CU	Frm	-	-	-	-	-	-	-
AL	Frm	1.7	2.4	-1.7	2.4	-	-	-
L	Frm	8.7	20.8	-8.7	20.8	-	-	-
S	Frm	1.1	2.6	-1.1	2.6	-	-	-
E>	Frm	-0.9	-0.5	-0.9	0.5	-	-	-
EG+	Frm	0.1	0.3	-0.1	0.3	-	-	-
<E	Frm	0.9	0.5	0.9	-0.5	-	-	-
EG-	Frm	-0.1	-0.3	0.1	-0.3	-	-	-
WP	Frm	1.7	-14.1	-3.4	-14.1	-	-	-
WB1>	Brc	-	-	-	-	-	-	-
<WB1	Brc	-	-	-	-	-	-	-
WB2>	Brc	-	-	-	-	-	-	-
<WB2	Brc	-	-	-	-	-	-	-
EB>	Brc	-	-	-	-	-	-	-
<EB	Brc	-	-	-	-	-	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing
Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

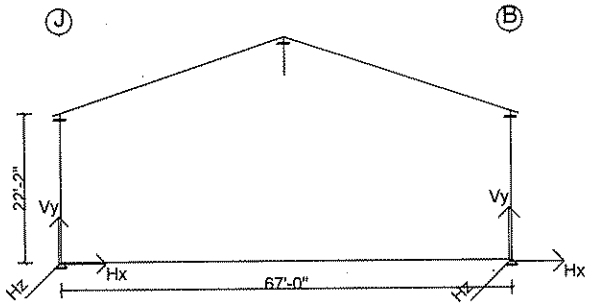
X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	11-J	17.1	13	15.0	17	-	-	-	-	19.2	11	32.9	1	-	-	-	-
67/0/0	11-B	14.7	18	15.1	12	-	-	-	-	19.4	12	32.6	1	-	-	-	-

Bracing

X-Loc	Grid	Description
0/0/0	11-J	Portal Frame is next to column. See portal frame section for reactions
67/0/0	11-B	Portal Frame is next to column. See portal frame section for reactions

Wall: 4, Frame at: 71/4/0
Frame ID:Rigid Frame

Frame Type:Rigid Frame



Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section: 12

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		67/0/0				
Grid1 - Grid2		12-J		12-B				
Base Plate W x L (in.)		9 x 13		9 x 13				
Base Plate Thickness (in.)		0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 1.000		4 - 1.000				
Column Base Elev.		100'-1 1/2"		100'-1 1/2"				
Load Type	Desc.	Hx	Vy	Hx	Vy			
D	Frm	2.0	5.8	-2.0	5.8	-	-	-
AD	Frm	0.3	0.4	-0.3	0.4	-	-	-
CG	Frm	2.5	5.8	-2.5	5.5	-	-	-
L>	Frm	8.6	20.6	-8.6	20.6	-	-	-
<L	Frm	8.6	20.6	-8.6	20.6	-	-	-
S>	Frm	1.1	2.6	-1.1	2.6	-	-	-
<S	Frm	1.1	2.6	-1.1	2.6	-	-	-
US1*	Frm	1.4	2.2	-1.4	3.2	-	-	-
*US1	Frm	0.7	2.2	-0.7	1.2	-	-	-
W1>	Frm	-17.1	-23.1	-3.0	-12.8	-	-	-
<W1	Frm	4.4	-12.5	16.5	-23.4	-	-	-
W2>	Frm	-18.5	-14.9	-4.4	-2.9	-	-	-
<W2	Frm	3.1	-4.4	15.1	-13.5	-	-	-
CU	Frm	-	-	-	-	-	-	-
AL	Frm	1.7	2.4	-1.7	2.4	-	-	-
L	Frm	8.6	20.6	-8.6	20.6	-	-	-
S	Frm	1.1	2.6	-1.1	2.6	-	-	-
E>	Frm	-0.9	-0.5	-0.9	0.5	-	-	-
EG+	Frm	0.1	0.3	-0.1	0.3	-	-	-
<E	Frm	0.9	0.5	0.9	-0.5	-	-	-
EG-	Frm	-0.1	-0.3	0.1	-0.3	-	-	-
WP	Frm	0.8	-16.4	-2.5	-15.5	-	-	-
WB1>	Brc	-	-	-	-	-	-	-
<WB1	Brc	-	-	-	-	-	-	-
WB2>	Brc	-	-	-	-	-	-	-
<WB2	Brc	-	-	-	-	-	-	-
EB>	Brc	-	-	-	-	-	-	-
<EB	Brc	-	-	-	-	-	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing
Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	12-J	17.1	13	14.6	17	-	-	-	-	19.4	11	32.7	1	-	-	-	-
67/0/0	12-B	14.6	18	15.1	12	-	-	-	-	19.7	12	32.4	1	-	-	-	-

Bracing

X-Loc	Grid	Description
0/0/0	12-J	Portal Frame is next to column. See portal frame section for reactions
67/0/0	12-B	Portal Frame is next to column. See portal frame section for reactions

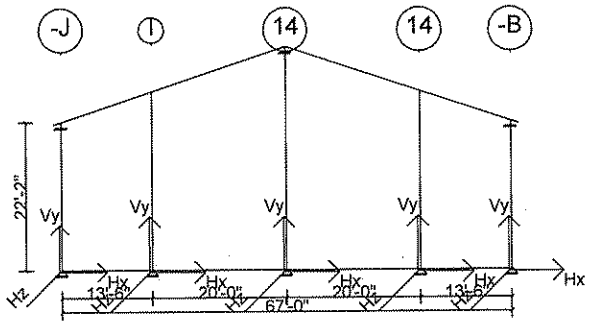
Wall: 4, Frame at: 100/11/0

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 L>	D + AD + CG + L>
2	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <L	D + AD + CG + <L
3	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 S>	D + AD + CG + S>
4	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <S	D + AD + CG + <S
5	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 US1*	D + AD + CG + US1*
6	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 *US1	D + AD + CG + *US1
7	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W1>	D + AD + CG + W1>
8	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W1	D + AD + CG + <W1
9	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W2>	D + AD + CG + W2>
10	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W2	D + AD + CG + <W2
11	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP	D + AD + CG + WP
12	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W1>	D + AD + CU + W1>
13	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W1	D + AD + CU + <W1
14	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W2>	D + AD + CU + W2>
15	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W2	D + AD + CU + <W2
16	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP	D + AD + CU + WP
17	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 AL	D + AD + CG+AL
18	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W1>	D + AD + CG + L + W1>
19	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W1	D + AD + CG + L + <W1
20	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W2>	D + AD + CG + L + W2>
21	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W2	D + AD + CG + L + <W2
22	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP	D + AD + CG + L + WP
23	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W1>	D + AD + CG + S + W1>
24	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W1	D + AD + CG + S + <W1
25	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W2>	D + AD + CG + S + W2>
26	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W2	D + AD + CG + S + <W2
27	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP	D + AD + CG + S + WP
28	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.563 S + 0.750 AL	D + AD + CG + S+AL
29	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W1> + 0.750 AL	D + AD + CG + W1>+AL
30	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W1 + 0.750 AL	D + AD + CG + <W1+AL
31	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W2> + 0.750 AL	D + AD + CG + W2>+AL
32	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W2 + 0.750 AL	D + AD + CG + <W2+AL
33	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 WP + 0.750 AL	D + AD + CG + WP+AL
34	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 E> + 0.700 EG+	D + AD + CG + E> + EG+
35	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <E + 0.700 EG+	D + AD + CG + <E + EG+
36	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 E> + 0.700 EG-	D + AD + CU + E> + EG-
37	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <E + 0.700 EG-	D + AD + CU + <E + EG-
38	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 E> + 0.525 EG+	D + AD + CG + E> + EG+
39	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <E + 0.525 EG+	D + AD + CG + <E + EG+

Wall: 4, Frame at: 100/11/0
Frame ID:CB1 EP

Frame Type:Continuous Beam, End Posts



Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section:

Type		Exterior Column		Interior Column			Interior Column			Interior Column			Exterior Column	
X-Loc		0/0/0		13/6/0			33/6/0			53/6/0			67/0/0	
Grid1 - Grid2		-J		14-I			F-14			C-14			-B	
Base Plate W x L (in.)		9 x 13		10 x 13			11 x 18			10 x 13			9 x 13	
Base Plate Thickness (in.)		0.375		0.375			0.375			0.375			0.375	
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750			4 - 0.750			4 - 0.750			4 - 0.750	
Column Base Elev.		100'-1 1/2"		100'-1 1/2"			100'-1 1/2"			100'-1 1/2"			100'-1 1/2"	
Load Type	Desc.	Hx	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Vy
D	Frm	0.5	2.7	-	-	0.7	-	-	3.1	-	-	0.7	-0.5	2.7
AD	Frm	-	-	-	-	-	-	-	0.4	-	-	-	-	-
CG	Frm	0.5	2.1	-	-	-	-	-	2.6	-	-	-	-0.5	2.0
L>	Frm	1.8	7.8	-	-	-	-	-	8.8	-	-	-	-1.8	7.8
<L	Frm	1.8	7.8	-	-	-	-	-	8.8	-	-	-	-1.8	7.8
S>	Frm	0.2	1.0	-	-	-	-	-	1.1	-	-	-	-0.2	1.0
<S	Frm	0.2	1.0	-	-	-	-	-	1.1	-	-	-	-0.2	1.0
US1*	Frm	0.2	0.4	-	-	-	-	-	1.8	-	-	-	-0.2	1.0
*US1	Frm	0.1	0.9	-	-	-	-	-	0.7	-	-	-	-0.1	0.3
W1>	Frm	-7.0	-10.4	-	5.7	-	-	7.9	-6.9	-	5.7	-	-3.9	-4.3
<W1	Frm	4.1	-5.0	-	-5.1	-	-	-7.1	-5.6	-	-5.1	-	7.1	-11.2
W2>	Frm	-8.3	-6.4	-	-	-	-	-	-5.7	-	-	-	-4.1	0.6
<W2	Frm	2.8	-1.0	-	-	-	-	-	-4.4	-	-	-	6.9	-6.3
WP	Frm	0.1	-11.5	-	-	-	-	-	-2.1	-	-	-	-1.4	-10.8
CU	Frm	-	-	-	-	-	-	-	-	-	-	-	-	-
AL	Frm	0.0	0.0	-	-	-	-	-	4.7	-	-	-	-0.0	0.0
L	Frm	1.8	7.8	-	-	-	-	-	8.8	-	-	-	-1.8	7.8
S	Frm	0.2	1.0	-	-	-	-	-	1.1	-	-	-	-0.2	1.0
E>	Frm	-0.5	-0.3	-	0.2	-	-	0.2	-	-	0.2	-	-0.5	0.3
EG+	Frm	0.0	0.1	-	-	-	-	-	0.1	-	-	-	-0.0	0.1
<E	Frm	0.5	0.3	-	-0.2	-	-	-0.2	-	-	-0.2	-	0.5	-0.3
EG-	Frm	-0.0	-0.1	-	-	-	-	-	-0.1	-	-	-	0.0	-0.1

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	-J	8.0	14	5.3	19	-	-	-	-	9.9	16	12.6	1	-	-	-	-
13/6/0	14-I	-	-	-	-	5.1	8	5.7	7	-	-	0.7	1	-	-	-	-

33/6/0	F-14	-	-	-	-	7.1	8	7.9	7	4.7	12	15.0	1	-	-	-	-
53/6/0	C-14	-	-	-	-	5.1	8	5.7	7	-	-	0.7	1	-	-	-	-
67/0/0	-B	5.4	20	6.8	13	-	-	-	-	9.6	13	12.5	1	-	-	-	-

Bracing - Summary Report

Shape: Maintenance Area

Loads and Codes - Shape: Maintenance Area

City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code Built Up: 05AISC - ASD Rainfall: 10.00 inches per hour
Building Use: Standard Occupancy Structure Cold Form: 04AISI - ASD

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf

Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.685)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000
Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 27/9/0
Parts / Portions Zone Strip Width: 6/8/6
Basic Wind Pressure: 25.20,(Parts) 25.76 psf

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed
(0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

Seismic Load
Mapped Spectral Response - Ss:11.80 %g
Mapped Spectral Response - S1:5.10 %g
Seismic Hazard / Use Group: Group 1

Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.3340
Bracing Seismic Period: 0.2043
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

Deflection Conditions
Frames are vertically supporting:Ceiling with Flexible Finish
Frames are laterally supporting:Unreinforced Masonry Wall
Purlins are supporting:Ceiling with Flexible Finish
Girts are supporting:Unreinforced Masonry Wall

Crane Schedule Information

Name	Type	Service Classification	Method of Operation	Capacity (Ton)	Bridge Span	Bridge Construction
2 T. FUTURE Monorail	Monorail Crane	C (Moderate Service)	Pendant Operated	2.00	N/A	N/A

Wall: 4

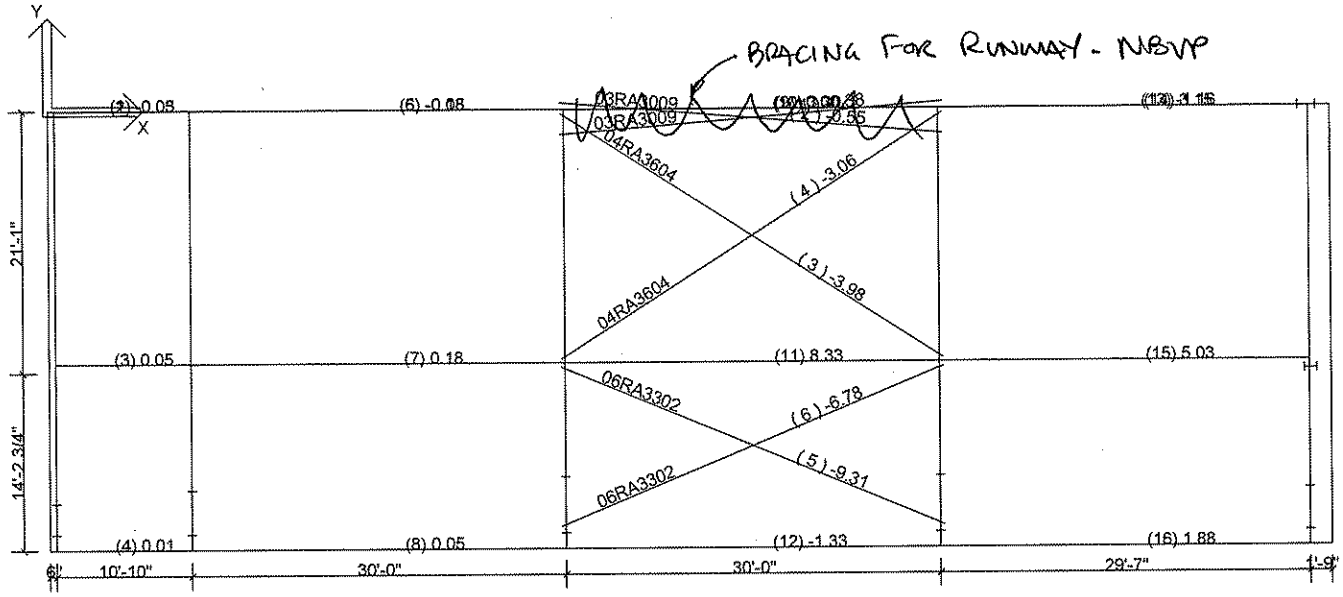
Name1	Name2	Type	Bracket Shape	Start Frame	Start Adjust.	End Frame	End Adjust.	Aisle	Start Elev.	From Left Edge	From Right Edge
2 T. FUTURE Monorail		Flexible Suspension - Hangers	NBVP	1	0/3/0	5	0/3/0	1	26/4/0	33/5/12	0/0/0

Type	Designed & Provided	Size	Size	Rail Size (lb/yd)	Vertical Deflection	Horizontal Deflection	Vertical Impact(%)	Lateral Impact(%)	Longitudinal Impact(%)
Wide Flange - Hot Rolled	NBVP	W 16		0	-	-	10.00	20.00	10.00

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

Design Load Combinations - Bracing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 W1>	W1>
2	System	1.000	1.0 <W1	<W1
3	System	1.000	1.0 W2>	W2>
4	System	1.000	1.0 <W2	<W2
5	System	1.000	0.700 E>	E>
6	System	1.000	0.700 <E	<E



Diagonal Bracing Member Design Summary: Roof A

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 0.375	30.73	2.0	-0.38	1.0000	1.0000	0.156	1.0<W1	passed	
2	R 0.375	30.73	2.0	-0.55	1.0000	1.0000	0.224	1.0W2>	passed	
3	R 0.5	36.32	35.4	-3.98	1.0000	1.0000	0.706	1.0<W2	passed	
4	R 0.5	36.32	35.4	-3.06	1.0000	1.0000	0.542	1.0W1>	passed	
5	R 0.75	33.18	28.0	-9.31	1.0000	1.0000	0.864	1.0<W2	passed	
6	R 0.75	33.18	28.0	-6.78	1.0000	1.0000	0.630	1.0W1>	passed	

Mem.	End	Diagonal Connection Design Information
1	Left	Slot: web thk = 1/8 in., F = 0.38k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot: web thk = 1/8 in., F = 0.38k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
2	Left	Slot: web thk = 1/8 in., F = 0.55k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot: web thk = 1/8 in., F = 0.55k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
3	Left	Slot: web thk = 1/8 in., F = 3.98k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot: web thk = 3/16 in., F = 3.98k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
4	Left	Slot: web thk = 3/16 in., F = 3.06k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot: web thk = 1/8 in., F = 3.06k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
5	Left	Slot w/ Backing Plate: web thk = 3/16 in., F = 9.31k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot w/ Backing Plate: web thk = 1/8 in., F = 9.31k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
6	Left	Slot: web thk = 1/8 in., F = 6.78k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web

	Right	punching shear OK, tensile fracture of web OK >> passed Slot: web thk = 3/16 in., F = 6.78k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed

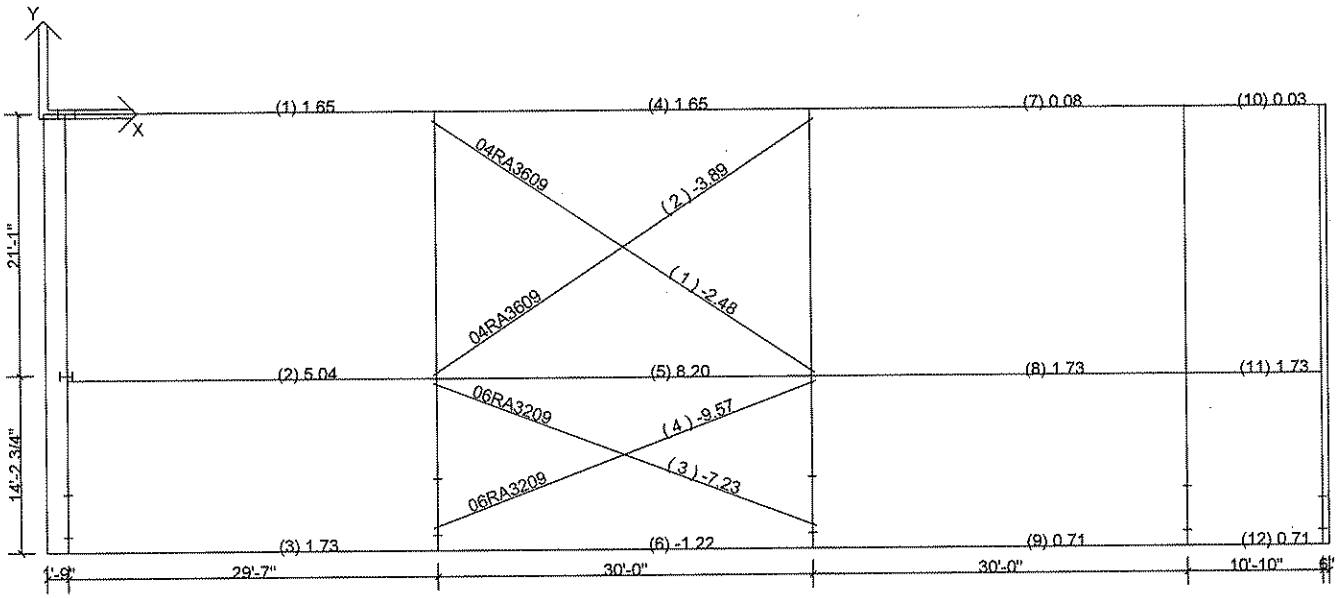
THESE NOT REQUIRED. ROOF B RIDGE PURLIN WILL SERVE AS A STRUT.

Strut Bracing Member Design Summary: Roof A

Mem. No.	Bracing Shape	Length (ft)	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Description
1	3P 5x0.1345x0.1345x8	10.83	-0.03	1.0000	1.0000	0.012	0.700<E	passed	Ridge Strut
2	3P 5x0.1345x0.1345x8	10.83	-0.05	1.0000	1.0000	0.018	0.700<E	passed	End Bay Strut
5	3P 8x1/4x0.1345x8	30.00	-0.08	1.0000	1.0000	0.135	0.700<E	passed	Ridge Strut
6	3P 8x1/4x0.1345x8	30.00	-0.15	1.0000	1.0000	0.135	0.700<E	passed	Unbraced Bay Strut
9	3P 8x1/4x0.1345x8	30.00	-0.00	1.0000	1.0000	0.135	1.0W1>	passed	Ridge Strut
10	3P 8x1/4x0.1345x8	30.00	3.30	1.0000	1.0000	0.151	1.0<W2	passed	Braced Bay Strut
13	3P 7x1/4x0.1345x8	29.58	-1.16	1.0000	1.0000	0.159	1.0W1>	passed	Ridge Strut
14	3P 7x1/4x0.1345x8	29.58	3.15	1.0000	1.0000	0.210	1.0<W2	passed	End Bay Strut

Mem.	End	Strut Connection Design Information
1	Left	Frame Clip 6.00x-15.34x0.375 w/ (2) 3/4 in. A325SC, clip tensile rupture & block shear OK, clip buckling OK, clip to web weld 3/8 fillet both sides, clip to flange weld 5/16 fillet both sides => weld FAILED => FAILED <=
	Right	Frame Clip 6.00x-15.21x0.375 w/ (2) 3/4 in. A325SC, clip tensile rupture & block shear OK, clip buckling OK, clip to web weld 3/8 fillet both sides, clip to flange weld 5/16 fillet both sides => weld FAILED => FAILED <=
2	Left	Frame Clip 6.00x-15.21x0.375
	Right	Frame Clip 6.00x-15.21x0.375
5	Left	Frame Clip 6.00x-15.21x0.375 w/ (2) 3/4 in. A325SC, clip tensile rupture & block shear OK, clip buckling OK, clip to web weld 3/8 fillet both sides, clip to flange weld 5/16 fillet both sides => weld FAILED => FAILED <=
	Right	Frame Clip 6.00x-15.21x0.375 w/ (2) 3/4 in. A325SC, clip tensile rupture & block shear OK, clip buckling OK, clip to web weld 3/8 fillet both sides, clip to flange weld 5/16 fillet both sides => weld FAILED => FAILED <=
6	Left	Frame Clip 6.00x-15.21x0.375
	Right	Frame Clip 6.00x-15.21x0.375
9	Left	Frame Clip 6.00x-15.21x0.375 w/ (2) 3/4 in. A325SC, clip tensile rupture & block shear OK, clip buckling OK, clip to web weld 3/8 fillet both sides, clip to flange weld 5/16 fillet both sides => weld FAILED => FAILED <=
	Right	Frame Clip 6.00x-15.21x0.375 w/ (2) 3/4 in. A325SC, clip tensile rupture & block shear OK, clip buckling OK, clip to web weld 3/8 fillet both sides, clip to flange weld 5/16 fillet both sides => weld FAILED => FAILED <=
10	Left	Frame Clip 6.00x-15.21x0.375
	Right	Frame Clip 6.00x-15.21x0.375
13	Left	Frame Clip 6.00x-15.21x0.375 w/ (2) 3/4 in. A325SC, clip tensile rupture & block shear OK, clip buckling OK, clip to web weld 3/8 fillet both sides, clip to flange weld 5/16 fillet both sides => weld FAILED => FAILED <=
	Right	Frame Clip 6.00x-15.21x0.375 w/ (2) 3/4 in. A325SC, clip tensile rupture & block shear OK, clip buckling OK, clip to web weld 3/8 fillet both sides, clip to flange weld 5/16 fillet both sides => weld FAILED => FAILED <=
14	Left	Frame Clip 6.00x-15.21x0.375
	Right	Frame Clip 6.00x-15.21x0.375

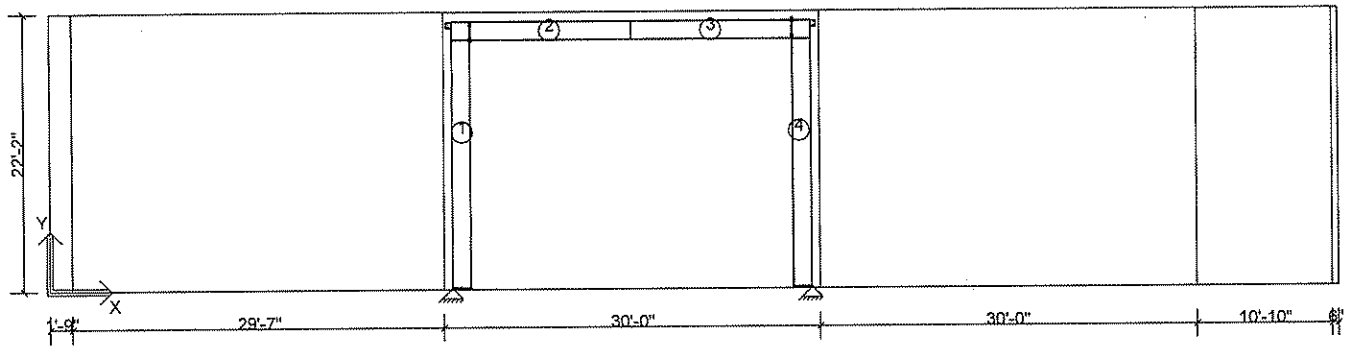
SYSTEM CANNOT "SEE" PURLIN JUST ACROSS RIDGE & GENERATES THESE IN ERROR.



Diagonal Bracing Member Design Summary: Roof B

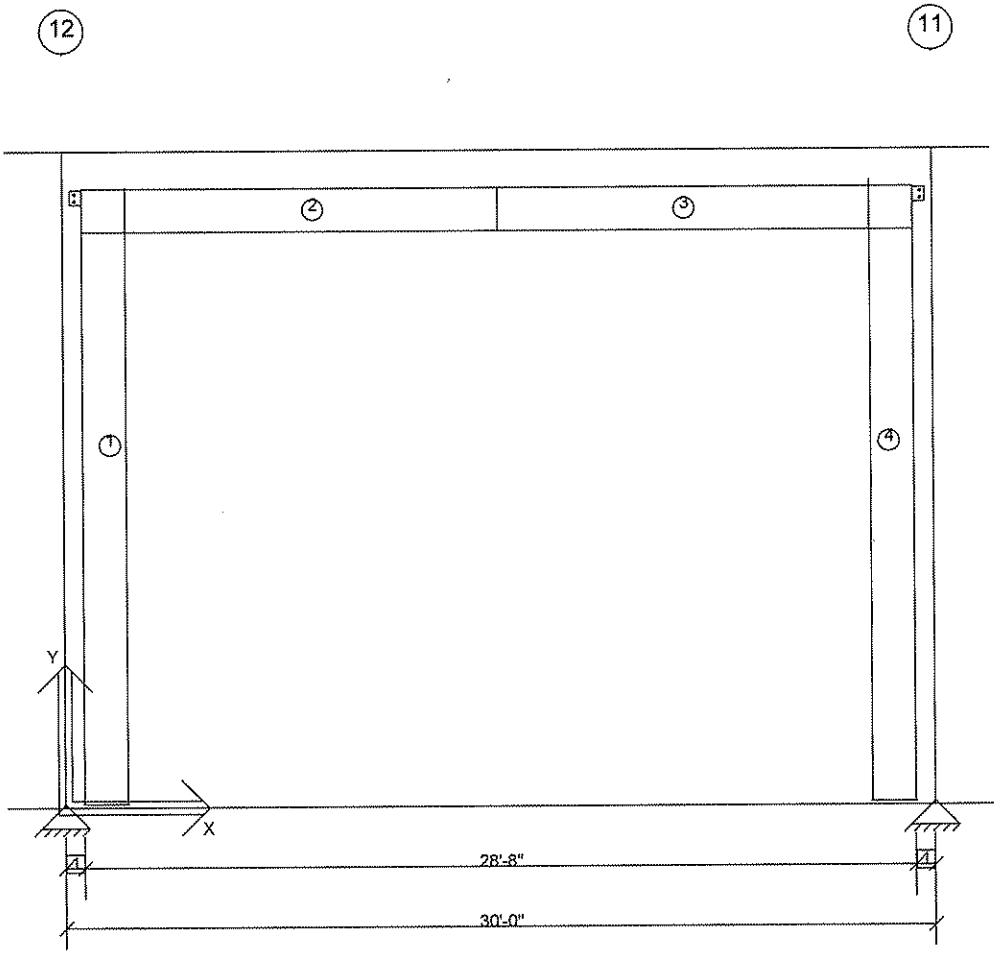
Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 0.5	36.72	36.9	-2.48	1.0000	1.0000	0.439	1.0W1>	passed	
2	R 0.5	36.72	36.9	-3.89	1.0000	1.0000	0.689	1.0<W2	passed	
3	R 0.75	32.76	26.3	-7.23	1.0000	1.0000	0.671	1.0W1>	passed	
4	R 0.75	32.76	26.3	-9.57	1.0000	1.0000	0.888	1.0<W2	passed	

Mem.	End	Diagonal Connection Design Information
1	Left	Slot: web thk = 1/8 in., F = 2.48k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot: web thk = 3/16 in., F = 2.48k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
2	Left	Slot: web thk = 3/16 in., F = 3.89k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot: web thk = 1/8 in., F = 3.89k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
3	Left	Slot: web thk = 3/16 in., F = 7.23k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot: web thk = 1/8 in., F = 7.23k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
4	Left	Slot w/ Backing Plate: web thk = 1/8 in., F = 9.57k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot w/ Backing Plate: web thk = 3/16 in., F = 9.57k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed



Location	Portal Frame to Main Frame Connection Design Information
Left Portal	Force = 10.62k, Seismic Factor = 1.00, Stress Increase = 1.00, MZE 5x6x3/8 w/ (2) 3/4 A325SC, Flange weld = 3/16 fillet both sides, buckling OK, web yielding/crippling OK => passed
Left Main	Force = 10.62k, Seismic Factor = 1.00, Stress Increase = 1.00, Haunch Connection, MZE 7x13x3/8 w/ (2) 3/4 A325SC, Flange weld 3/16 fillet both sides, Web weld 3/16 fillet one side, buckling OK => passed
Right Portal	Force = 8.20k, Seismic Factor = 1.00, Stress Increase = 1.00, MZE 5x6x3/8 w/ (2) 3/4 A325SC, Flange weld = 3/16 fillet both sides, buckling OK, web yielding/crippling OK => passed
Right Main	Force = 8.20k, Seismic Factor = 1.00, Stress Increase = 1.00, Haunch Connection, MZE 7x12-3/4x3/8 w/ (2) 3/4 A325SC, Flange weld 3/16 fillet both sides, Web weld 3/16 fillet one side, buckling OK => passed

Frame Cross Section: B



Dimension Key
1 8"
2 1'-3 1/2"

Frame Clearances
Horiz. Clearance between members 1(CX221) and 4(CX222): 25'-8"
Vert. Clearance at member 1(CX221): 19'-8 7/16"
Vert. Clearance at member 4(CX222): 19'-10 11/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
0/0/0	0/0/0	Portal Frame	0.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 L>	D + AD + CG + L>
2	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <L	D + AD + CG + <L
3	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 S>	D + AD + CG + S>
4	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <S	D + AD + CG + <S
5	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 US1*	D + AD + CG + US1*
6	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 *US1	D + AD + CG + *US1
7	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W1>	D + AD + CG + W1>
8	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W1	D + AD + CG + <W1
9	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W2>	D + AD + CG + W2>
10	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W2	D + AD + CG + <W2
11	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W1>	D + AD + CU + W1>
12	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W1	D + AD + CU + <W1
13	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W2>	D + AD + CU + W2>
14	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W2	D + AD + CU + <W2
15	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 AL	D + AD + CG+AL
16	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W1>	D + AD + CG + L + W1>
17	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W1	D + AD + CG + L + <W1
18	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W2>	D + AD + CG + L + W2>
19	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W2	D + AD + CG + L + <W2
20	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W1>	D + AD + CG + S + W1>
21	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W1	D + AD + CG + S + <W1
22	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W2>	D + AD + CG + S + W2>
23	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W2	D + AD + CG + S + <W2
24	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.563 S + 0.750 AL	D + AD + CG + S+AL
25	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W1> + 0.750 AL	D + AD + CG + W1>+AL
26	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W1 + 0.750 AL	D + AD + CG + <W1+AL
27	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W2> + 0.750 AL	D + AD + CG + W2>+AL
28	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W2 + 0.750 AL	D + AD + CG + <W2+AL
29	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 E> + 0.700 EG+	D + AD + CG + E> + EG+
30	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <E + 0.700 EG+	D + AD + CG + <E + EG+
31	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 E> + 0.700 EG-	D + AD + CU + E> + EG-
32	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <E + 0.700 EG-	D + AD + CU + <E + EG-
33	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 E> + 0.525 EG+	D + AD + CG + E> + EG+
34	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <E + 0.525 EG+	D + AD + CG + <E + EG+
35	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB1>	D + AD + CG + WP + WB1>
36	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB1>	D + AD + CU + WP + WB1>
37	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB1>	D+AD+CG+L+WP+WB1>
38	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB1>	D+AD+CG+S+WP+WB1>
39	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB1	D + AD + CG + WP + <WB1
40	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB1	D + AD + CU + WP + <WB1
41	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB1	D+AD+CG+L+WP+<WB1
42	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB1	D+AD+CG+S+WP+<WB1
43	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB2>	D + AD + CG + WP + WB2>
44	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB2>	D + AD + CU + WP + WB2>
45	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB2>	D+AD+CG+L+WP+WB2>
46	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB2>	D+AD+CG+S+WP+WB2>
47	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB2	D + AD + CG + WP + <WB2
48	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB2	D + AD + CU + WP + <WB2
49	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB2	D+AD+CG+L+WP+<WB2
50	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB2	D+AD+CG+S+WP+<WB2
51	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 EB> + 0.700 EG+	D + AD + CG + EB> + EG+
52	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 EB> + 0.700 EG-	D + AD + CU + EB> + EG-
53	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 EB> + 0.525 EG+	D + AD + CG + EB> + EG+
54	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <EB + 0.700 EG+	D + AD + CG + <EB + EG+
55	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <EB + 0.700 EG-	D + AD + CU + <EB + EG-
56	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <EB + 0.525 EG+	D + AD + CG + <EB + EG+

Frame Member Sizes

Mem.	Flg Width	Flg Thk	Web Thk	Depth1	Depth2	Length	Weight	Flg Fy	Web Fy	Splice	Codes	Shape

No.	(in.)	(in.)	(in.)	(in.)	(in.)	(ft)	(p)	(ksi)	(ksi)	Jt.1	Jt.2	
1	12.00	0.5000	0.1875	18.00	18.00	21.31	1155.0	55.00	55.00	BP	KN	3P
2	10.00	0.5000	0.1875	18.00	18.00	14.33	604.1	55.00	55.00	KN	SS	3P
3	10.00	0.5000	0.1875	18.00	18.00	14.33	604.1	55.00	55.00	SS	KN	3P
4	12.00	0.5000	0.1875	18.00	18.00	21.31	1158.8	55.00	55.00	BP	KN	3P

Total Frame Weight = 3522.0 (p) (Includes all plates)
Frame Pricing Weight = 3611.8 (p) (Includes all pieces)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
4	30/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section: B

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		30/0/0				
Grid1 - Grid2		B-12		B-11				
Base Plate W x L (in.)		13 x 19		13 x 19				
Base Plate Thickness (in.)		0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750				
Column Base Elev.		100'-1 1/2"		100'-1 1/2"				
Load Type	Desc.	Hx	Vy	Hx	Vy			
D	Frm	0.1	1.7	-0.1	1.7	-	-	-
AD	Frm	-	-	-	-	-	-	-
CG	Frm	-	-	-	-	-	-	-
L>	Frm	-	-	-	-	-	-	-
<L	Frm	-	-	-	-	-	-	-
S>	Frm	-	-	-	-	-	-	-
<S	Frm	-	-	-	-	-	-	-
US1*	Frm	-	-	-	-	-	-	-
*US1	Frm	-	-	-	-	-	-	-
W1>	Frm	-	-	-	-	-	-	-
<W1	Frm	-	-	-	-	-	-	-
W2>	Frm	-	-	-	-	-	-	-
<W2	Frm	-	-	-	-	-	-	-
CU	Frm	-	-	-	-	-	-	-
AL	Frm	-	-	-	-	-	-	-
L	Frm	-	-	-	-	-	-	-
S	Frm	-	-	-	-	-	-	-
E>	Frm	-	-	-	-	-	-	-
EG+	Frm	-	-	-	-	-	-	-
<E	Frm	-	-	-	-	-	-	-
EG-	Frm	-	-	-	-	-	-	-
WP	Frm	-	-	-	-	-	-	-
WB1>	Brc	4.2	6.4	4.0	-6.4	-	-	-
<WB1	Brc	-3.5	-5.6	-3.7	5.6	-	-	-
WB2>	Brc	2.4	3.7	2.3	-3.7	-	-	-
<WB2	Brc	-5.2	-8.3	-5.4	8.3	-	-	-
EB>	Brc	1.0	1.5	0.9	-1.5	-	-	-
<EB	Brc	-0.9	-1.5	-1.0	1.5	-	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	B-12	5.1	48	4.3	35	-	-	-	-	7.3	48	8.1	35	-	-	-	-
30/0/0	B-11	5.5	47	3.9	36	-	-	-	-	5.4	36	10.0	47	-	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	3.5	3.4

AD	0.0	0.0	0.0	0.0
CG	0.0	0.0	0.0	0.0
L>	0.0	0.0	0.0	0.0
<L	0.0	0.0	0.0	0.0
S>	0.0	0.0	0.0	0.0
<S	0.0	0.0	0.0	0.0
US1*	0.0	0.0	0.0	0.0
*US1	0.0	0.0	0.0	0.0
W1>	0.0	0.0	0.0	0.0
<W1	0.0	0.0	0.0	0.0
W2>	0.0	0.0	0.0	0.0
<W2	0.0	0.0	0.0	0.0
CU	0.0	0.0	0.0	0.0
AL	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0
E>	0.0	0.0	0.0	0.0
EG+	0.0	0.0	0.0	0.0
<E	0.0	0.0	0.0	0.0
EG-	0.0	0.0	0.0	0.0
WP	0.0	0.0	0.0	0.0
WB1>	8.2	8.2	0.0	0.0
<WB1	7.2	7.2	0.0	0.0
WB2>	4.8	4.8	0.0	0.0
<WB2	10.6	10.6	0.0	0.0
EB>	1.9	1.9	0.0	0.0
<EB	1.9	1.9	0.0	0.0

Base Plate Summary

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Num. Of Bolts	Bolt Diam. (in.)	Type	Welds to Flange	Welds to Web
0/0/0	B-12	1	0.375	13	19	4	0.750	A36	OS-0.1875	OS-0.1875
30/0/0	B-11	4	0.375	13	19	4	0.750	A36	OS-0.1875	OS-0.1875

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S3	19.77	17.000	N/A	N/A	N/A	0.5000	5.500	Both	F-FP,W-OS-0.1875
1	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*
4	1	S3	19.77	17.000	N/A	N/A	N/A	0.5000	5.500	Both	F-FP,W-OS-0.1875
4	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*

Bolted End-Plate Moment Connections (AISC DG-16) - Fy = 55 ksi

Mem. No.	Jt. No.	Type	End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
			Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	0.500	12.00	21.25	0.750	A325X/ST	3.00/7.00	52	Flush	2.00	31	Extended	3.50
2	1	KN(Face)	0.500	10.00	21.25	0.750	A325X/ST	3.00/7.00	52	Flush	2.00	31	Extended	3.50
3	2	KN(Face)	0.500	10.00	21.25	0.750	A325X/ST	3.00	31	Extended	3.50	52	Flush	2.00
4	2	KN(Face)	0.500	12.00	21.25	0.750	A325X/ST	3.00	31	Extended	3.50	52	Flush	2.00

Mem. No.	Jt. No.	Required Strength - Out				Available Strength - Out			Required Strength - In				Available Strength - In		
		Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)
1	2	35	-4.2	7.0	1002.4	Thin plate	212.1	941.3	48	-5.4	8.0	1293.2	Thick plate	159.0	1391.6
2	1	35	-4.2	7.0	1002.4	Thin plate	212.1	941.3	48	-5.4	8.0	1293.2	Thick plate	159.0	1391.6
3	2	47	-5.4	9.0	1293.9	Thick plate	159.0	1391.6	36	-4.2	6.1	995.3	Thin plate	212.1	941.3
4	2	47	-5.4	9.0	1293.9	Thick plate	159.0	1391.6	36	-4.2	6.1	995.3	Thin plate	212.1	941.3

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

Mem.	Loc.	Depth	Controlling Cases Axial +	Controlling Cases Shear	Required Strength Axial Pr	Required Strength Shear Vr	Required Strength Mom-x Mrx	Required Strength Mom-y Mry	Available Strength Axial Pc	Available Strength Shear Vc	Available Strength Mom-x Mcx	Available Strength Mom-y Mcy	Strength Ratios Axial +	Strength Ratios Shear

No.	ft	in.	Flexure		k	k	in-k	in-k	k	k	in-k	in-k	Flexure	
1	19.81	18.00	48	48	7.4	5.1	1222.2	0.0	487.8	32.4	3353.5	937.1	0.37	0.16
2	0.75	18.00	48	47	-5.4	-8.4	1293.2	0.0	337.9	32.4	3131.7	760.6	0.42	0.26
3	12.83	18.00	47	47	-5.4	-9.0	-1293.9	0.0	337.9	32.4	3131.7	760.6	0.42	0.28
4	19.81	18.00	47	47	-10.0	5.6	-1325.1	0.0	378.8	32.4	3353.5	937.1	0.41	0.17

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
1	19.81	237.67	237.7	237.7	15.19	15.19	995.77	144.01	110.64	24.00	118.55	36.15	1.04	11025.71	1.67	1.00	1.06	0.89	1.00
2	0.75	308.00	18.0	18.0	13.19	13.19	842.60	83.34	93.62	16.67	101.05	25.15	0.87	6380.92	1.00	1.00	1.07	0.98	0.88
3	12.83	308.00	308.0	308.0	13.19	13.19	842.60	83.34	93.62	16.67	101.05	25.15	0.87	6380.92	2.22	1.00	1.07	0.98	0.88
4	19.81	237.67	237.7	237.7	15.19	15.19	995.77	144.01	110.64	24.00	118.55	36.15	1.04	11025.71	1.66	1.00	1.06	0.89	0.90

Deflection Load Combinations - Framing

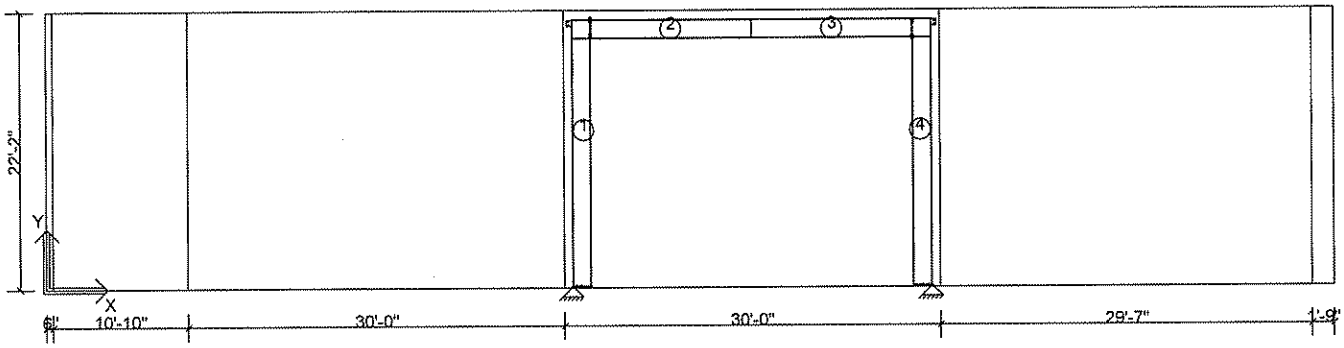
No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	240	1.0 L	L
2	System	1.000	0	240	1.0 S	S
3	System	1.000	0	240	1.0 US1*	US1*
4	System	1.000	0	240	1.0 *US1	*US1
5	System	1.000	0	240	0.700 W1>	W1>
6	System	1.000	0	240	0.700 <W1	<W1
7	System	1.000	0	240	0.700 W2>	W2>
8	System	1.000	0	240	0.700 <W2	<W2
9	System	1.000	0	240	0.700 WP	WP
10	System Derived	1.000	0	240	0.700 WB1>	WB1>
11	System Derived	1.000	0	240	0.700 <WB1	<WB1
12	System Derived	1.000	0	240	0.700 WB2>	WB2>
13	System Derived	1.000	0	240	0.700 <WB2	<WB2
14	System	1.000	200	0	0.700 W1>	W1>
15	System	1.000	200	0	0.700 <W1	<W1
16	System	1.000	200	0	0.700 W2>	W2>
17	System	1.000	200	0	0.700 <W2	<W2
18	System	1.000	200	0	0.700 WP	WP
19	System Derived	1.000	200	0	0.700 WB1>	WB1>
20	System Derived	1.000	200	0	0.700 <WB1	<WB1
21	System Derived	1.000	200	0	0.700 WB2>	WB2>
22	System Derived	1.000	200	0	0.700 <WB2	<WB2
23	System	1.000	50	0	1.0 E> + 1.0 EG-	E> + EG-
24	System	1.000	50	0	1.0 <E + 1.0 EG-	<E + EG-
25	System Derived	1.000	50	0	1.0 EB>	EB>
26	System Derived	1.000	50	0	1.0 <EB	<EB

Controlling Frame Deflection Ratios for Cross Section: B

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/210)	1.172	1	2	22	<WB2
Max. Vertical Deflection for Span 1	(L/55985)	-0.006	3	1	13	<WB2

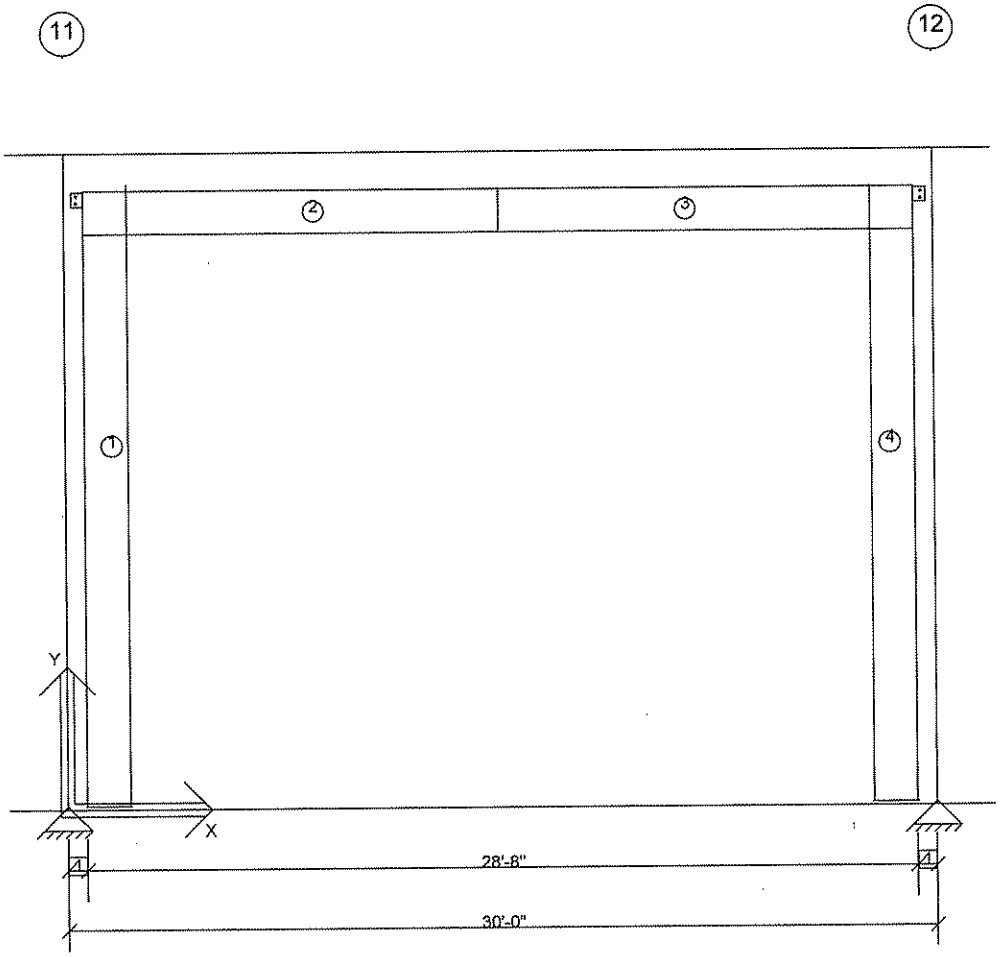
* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.



Location	Portal Frame to Main Frame Connection Design Information
Left Portal	Force = 7.40k, Seismic Factor = 1.00, Stress Increase = 1.00, MZE 5x6x3/8 w/ (2) 3/4 A325SC, Flange weld = 3/16 fillet both sides, buckling OK, web yielding/crippling OK => passed
Left Main	Force = 7.40k, Seismic Factor = 1.00, Stress Increase = 1.00, Haunch Connection, MZE 7x13x3/8 w/ (2) 3/4 A325SC, Flange weld 3/16 fillet both sides, Web weld 3/16 fillet one side, buckling OK => passed
Right Portal	Force = 10.21k, Seismic Factor = 1.00, Stress Increase = 1.00, MZE 5x6x3/8 w/ (2) 3/4 A325SC, Flange weld = 3/16 fillet both sides, buckling OK, web yielding/crippling OK => passed
Right Main	Force = 10.21k, Seismic Factor = 1.00, Stress Increase = 1.00, Haunch Connection, MZE 7x12-3/4x3/8 w/ (2) 3/4 A325SC, Flange weld 3/16 fillet both sides, Web weld 3/16 fillet one side, buckling OK => passed

Frame Cross Section: J



Dimension Key
1 8"
2 1'-3 1/2"

Frame Clearances
Horiz. Clearance between members 1(CX222) and 4(CX221): 25'-8"
Vert. Clearance at member 1(CX222): 19'-10 11/16"
Vert. Clearance at member 4(CX221): 19'-8 7/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
0/0/0	0/0/0	Portal Frame	0.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 L>	D + AD + CG + L>
2	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <L	D + AD + CG + <L
3	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 S>	D + AD + CG + S>
4	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <S	D + AD + CG + <S
5	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 US1*	D + AD + CG + US1*
6	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 *US1	D + AD + CG + *US1
7	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W1>	D + AD + CG + W1>
8	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W1	D + AD + CG + <W1
9	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W2>	D + AD + CG + W2>
10	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W2	D + AD + CG + <W2
11	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W1>	D + AD + CU + W1>
12	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W1	D + AD + CU + <W1
13	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W2>	D + AD + CU + W2>
14	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W2	D + AD + CU + <W2
15	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 AL	D + AD + CG+AL
16	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W1>	D + AD + CG + L + W1>
17	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W1	D + AD + CG + L + <W1
18	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W2>	D + AD + CG + L + W2>
19	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W2	D + AD + CG + L + <W2
20	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W1>	D + AD + CG + S + W1>
21	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W1	D + AD + CG + S + <W1
22	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W2>	D + AD + CG + S + W2>
23	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W2	D + AD + CG + S + <W2
24	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.563 S + 0.750 AL	D + AD + CG + S+AL
25	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W1> + 0.750 AL	D + AD + CG + W1>+AL
26	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W1 + 0.750 AL	D + AD + CG + <W1+AL
27	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W2> + 0.750 AL	D + AD + CG + W2>+AL
28	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W2 + 0.750 AL	D + AD + CG + <W2+AL
29	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 E> + 0.700 EG+	D + AD + CG + E> + EG+
30	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <E + 0.700 EG+	D + AD + CG + <E + EG+
31	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 E> + 0.700 EG-	D + AD + CU + E> + EG-
32	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <E + 0.700 EG-	D + AD + CU + <E + EG-
33	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 E> + 0.525 EG+	D + AD + CG + E> + EG+
34	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <E + 0.525 EG+	D + AD + CG + <E + EG+
35	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB1>	D + AD + CG + WP + WB1>
36	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB1>	D + AD + CU + WP + WB1>
37	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB1>	D+AD+CG+L+WP+WB1>
38	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB1>	D+AD+CG+S+WP+WB1>
39	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB1	D + AD + CG + WP + <WB1
40	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB1	D + AD + CU + WP + <WB1
41	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB1	D+AD+CG+L+WP+<WB1
42	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB1	D+AD+CG+S+WP+<WB1
43	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB2>	D + AD + CG + WP + WB2>
44	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB2>	D + AD + CU + WP + WB2>
45	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB2>	D+AD+CG+L+WP+WB2>
46	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB2>	D+AD+CG+S+WP+WB2>
47	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB2	D + AD + CG + WP + <WB2
48	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB2	D + AD + CU + WP + <WB2
49	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB2	D+AD+CG+L+WP+<WB2
50	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB2	D+AD+CG+S+WP+<WB2
51	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 EB> + 0.700 EG+	D + AD + CG + EB> + EG+
52	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 EB> + 0.700 EG-	D + AD + CU + EB> + EG-
53	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 EB> + 0.525 EG+	D + AD + CG + EB> + EG+
54	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <EB + 0.700 EG+	D + AD + CG + <EB + EG+
55	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <EB + 0.700 EG-	D + AD + CU + <EB + EG-
56	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <EB + 0.525 EG+	D + AD + CG + <EB + EG+

Frame Member Sizes

Mem.	Flg Width	Flg Thk	Web Thk	Depth1	Depth2	Length	Weight	Flg Fy	Web Fy	Splice	Codes	Shape

No.	(in.)	(in.)	(in.)	(in.)	(in.)	(ft)	(p)	(ksi)	(ksi)	Jt.1	Jt.2	
1	12.00	0.5000	0.1875	18.00	18.00	21.31	1158.8	55.00	55.00	BP	KN	3P
2	10.00	0.5000	0.1875	18.00	18.00	14.33	604.1	55.00	55.00	KN	SS	3P
3	10.00	0.5000	0.1875	18.00	18.00	14.33	604.1	55.00	55.00	SS	KN	3P
4	12.00	0.5000	0.1875	18.00	18.00	21.31	1155.0	55.00	55.00	BP	KN	3P

Total Frame Weight = 3522.0 (p) (Includes all plates)
Frame Pricing Weight = 3611.8 (p) (Includes all pieces)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
4	30/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section: J

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		30/0/0				
Grid1 - Grid2		J-11		J-12				
Base Plate W x L (in.)		13 x 19		13 x 19				
Base Plate Thickness (in.)		0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750				
Column Base Elev.		100'-1 1/2"		100'-1 1/2"				
Load Type	Desc.	Hx	Vy	Hx	Vy			
D	Frm	0.1	1.7	-0.1	1.7	-	-	-
AD	Frm	-	-	-	-	-	-	-
CG	Frm	-	-	-	-	-	-	-
L>	Frm	-	-	-	-	-	-	-
<L	Frm	-	-	-	-	-	-	-
S>	Frm	-	-	-	-	-	-	-
<S	Frm	-	-	-	-	-	-	-
US1*	Frm	-	-	-	-	-	-	-
*US1	Frm	-	-	-	-	-	-	-
W1>	Frm	-	-	-	-	-	-	-
<W1	Frm	-	-	-	-	-	-	-
W2>	Frm	-	-	-	-	-	-	-
<W2	Frm	-	-	-	-	-	-	-
CU	Frm	-	-	-	-	-	-	-
AL	Frm	-	-	-	-	-	-	-
L	Frm	-	-	-	-	-	-	-
S	Frm	-	-	-	-	-	-	-
E>	Frm	-	-	-	-	-	-	-
EG+	Frm	-	-	-	-	-	-	-
<E	Frm	-	-	-	-	-	-	-
EG-	Frm	-	-	-	-	-	-	-
WP	Frm	-	-	-	-	-	-	-
WB1>	Brc	-3.6	-5.8	-3.8	5.8	-	-	-
<WB1	Brc	3.2	4.9	3.0	-4.9	-	-	-
WB2>	Brc	-1.7	-2.7	-1.7	2.7	-	-	-
<WB2	Brc	5.2	8.0	5.0	-8.0	-	-	-
EB>	Brc	-0.9	-1.5	-1.0	1.5	-	-	-
<EB	Brc	1.0	1.5	0.9	-1.5	-	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	J-11	3.5	36	5.3	47	-	-	-	-	4.8	36	9.7	47	-	-	-	-
30/0/0	J-12	3.9	35	4.9	48	-	-	-	-	7.0	48	7.5	35	-	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	3.5	3.4

AD	0.0	0.0	0.0	0.0
CG	0.0	0.0	0.0	0.0
L>	0.0	0.0	0.0	0.0
<L	0.0	0.0	0.0	0.0
S>	0.0	0.0	0.0	0.0
<S	0.0	0.0	0.0	0.0
US1*	0.0	0.0	0.0	0.0
*US1	0.0	0.0	0.0	0.0
W1>	0.0	0.0	0.0	0.0
<W1	0.0	0.0	0.0	0.0
W2>	0.0	0.0	0.0	0.0
<W2	0.0	0.0	0.0	0.0
CU	0.0	0.0	0.0	0.0
AL	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0
E>	0.0	0.0	0.0	0.0
EG+	0.0	0.0	0.0	0.0
<E	0.0	0.0	0.0	0.0
EG-	0.0	0.0	0.0	0.0
WP	0.0	0.0	0.0	0.0
WB1>	7.4	7.4	0.0	0.0
<WB1	6.2	6.2	0.0	0.0
WB2>	3.4	3.4	0.0	0.0
<WB2	10.2	10.2	0.0	0.0
EB>	1.9	1.9	0.0	0.0
<EB	1.9	1.9	0.0	0.0

Base Plate Summary

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Num. Of Bolts	Bolt Diam. (in.)	Type	Welds to Flange	Welds to Web
0/0/0	J-11	1	0.375	13	19	4	0.750	A36	OS-0.1875	OS-0.1875
30/0/0	J-12	4	0.375	13	19	4	0.750	A36	OS-0.1875	OS-0.1875

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S3	19.77	17.000	N/A	N/A	N/A	0.5000	5.500	Both	F-FP,W-OS-0.1875
1	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*
4	1	S3	19.77	17.000	N/A	N/A	N/A	0.5000	5.500	Both	F-FP,W-OS-0.1875
4	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*

Bolted End-Plate Moment Connections (AISC DG-16) - Fy = 55 ksi

Mem. No.	Jt. No.	Type	End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
			Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	0.500	12.00	21.25	0.750	A325X/ST	3.00	31	Extended	3.50	52	Flush	2.00
2	1	KN(Face)	0.500	10.00	21.25	0.750	A325X/ST	3.00	31	Extended	3.50	52	Flush	2.00
3	2	KN(Face)	0.500	10.00	21.25	0.750	A325X/ST	3.00/7.00	52	Flush	2.00	31	Extended	3.50
4	2	KN(Face)	0.500	12.00	21.25	0.750	A325X/ST	3.00/7.00	52	Flush	2.00	31	Extended	3.50

Mem. No.	Jt. No.	Required Strength - Out				Available Strength - Out			Required Strength - In				Available Strength - In		
		Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)
1	2	47	-5.2	8.6	1244.6	Thick plate	159.0	1391.6	36	-3.8	5.5	896.9	Thin plate	212.1	941.3
2	1	47	-5.2	8.6	1244.6	Thick plate	159.0	1391.6	36	-3.8	5.5	896.9	Thin plate	212.1	941.3
3	2	35	-3.8	6.4	906.1	Thin plate	212.1	941.3	48	-5.2	7.7	1242.9	Thick plate	159.0	1391.6
4	2	35	-3.8	6.4	906.1	Thin plate	212.1	941.3	48	-5.2	7.7	1242.9	Thick plate	159.0	1391.6

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

Mem.	Loc.	Depth	Controlling Cases Axial +	Controlling Cases Shear	Required Strength Axial Pr	Required Strength Shear Vr	Required Strength Mom-x Mrx	Required Strength Mom-y Mry	Available Strength Axial Pc	Available Strength Shear Vc	Available Strength Mom-x Mcx	Available Strength Mom-y Mcy	Strength Ratios Axial +	Strength Ratios Shear

No.	ft	in.	Flexure		k	k	in-k	in-k	k	k	in-k	in-k	Flexure	
1	19.81	18.00	47	47	-9.7	-5.4	-1274.8	0.0	378.8	32.4	3353.5	937.1	0.39	0.17
2	0.75	18.00	47	47	-5.2	8.6	-1244.6	0.0	337.9	32.4	3131.7	760.6	0.41	0.27
3	12.83	18.00	48	47	-5.2	8.1	1242.9	0.0	337.9	32.4	3131.7	760.6	0.40	0.25
4	19.81	18.00	48	48	7.1	-4.9	1174.5	0.0	487.8	32.4	3353.5	937.1	0.36	0.15

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
1	19.81	237.67	237.7	237.7	15.19	15.19	995.77	144.01	110.64	24.00	118.55	36.15	1.04	11025.71	1.66	1.00	1.06	0.89	0.90
2	0.75	308.00	18.0	18.0	13.19	13.19	842.60	83.34	93.62	16.67	101.05	25.15	0.87	6380.92	1.00	1.00	1.07	0.98	0.88
3	12.83	308.00	308.0	308.0	13.19	13.19	842.60	83.34	93.62	16.67	101.05	25.15	0.87	6380.92	2.23	1.00	1.07	0.98	0.88
4	19.81	237.67	237.7	237.7	15.19	15.19	995.77	144.01	110.64	24.00	118.55	36.15	1.04	11025.71	1.67	1.00	1.06	0.89	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	240	1.0 L	L
2	System	1.000	0	240	1.0 S	S
3	System	1.000	0	240	1.0 US1*	US1*
4	System	1.000	0	240	1.0 *US1	*US1
5	System	1.000	0	240	0.700 W1>	W1>
6	System	1.000	0	240	0.700 <W1	<W1
7	System	1.000	0	240	0.700 W2>	W2>
8	System	1.000	0	240	0.700 <W2	<W2
9	System	1.000	0	240	0.700 WP	WP
10	System Derived	1.000	0	240	0.700 WB1>	WB1>
11	System Derived	1.000	0	240	0.700 <WB1	<WB1
12	System Derived	1.000	0	240	0.700 WB2>	WB2>
13	System Derived	1.000	0	240	0.700 <WB2	<WB2
14	System	1.000	200	0	0.700 W1>	W1>
15	System	1.000	200	0	0.700 <W1	<W1
16	System	1.000	200	0	0.700 W2>	W2>
17	System	1.000	200	0	0.700 <W2	<W2
18	System	1.000	200	0	0.700 WP	WP
19	System Derived	1.000	200	0	0.700 WB1>	WB1>
20	System Derived	1.000	200	0	0.700 <WB1	<WB1
21	System Derived	1.000	200	0	0.700 WB2>	WB2>
22	System Derived	1.000	200	0	0.700 <WB2	<WB2
23	System	1.000	50	0	1.0 E> + 1.0 EG-	E> + EG-
24	System	1.000	50	0	1.0 <E + 1.0 EG-	<E + EG-
25	System Derived	1.000	50	0	1.0 EB>	EB>
26	System Derived	1.000	50	0	1.0 <EB	<EB

Controlling Frame Deflection Ratios for Cross Section: J

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/218)	-1.127	4	2	22	<WB2
Max. Vertical Deflection for Span 1	(L/58318)	-0.006	3	1	13	<WB2

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Shape: Clerestory Frames

Loads and Codes - Shape: Clerestory Frames

City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code
Building Use: Standard Occupancy Structure
Built Up: 05AISC - ASD
Cold Form: 04AISI - ASD
Rainfall: 10.00 inches per hour

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf

Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.575)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000
Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 4/9/8
Parts / Portions Zone Strip Width: 3/0/0
Basic Wind Pressure: 21.13,(Parts) 25.76 psf

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed
(0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

Seismic Load
Mapped Spectral Response - Ss:11.80 %g
Mapped Spectral Response - S1:5.10 %g
Seismic Hazard / Use Group: Group 1

Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.0981
Bracing Seismic Period: 0.0648
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

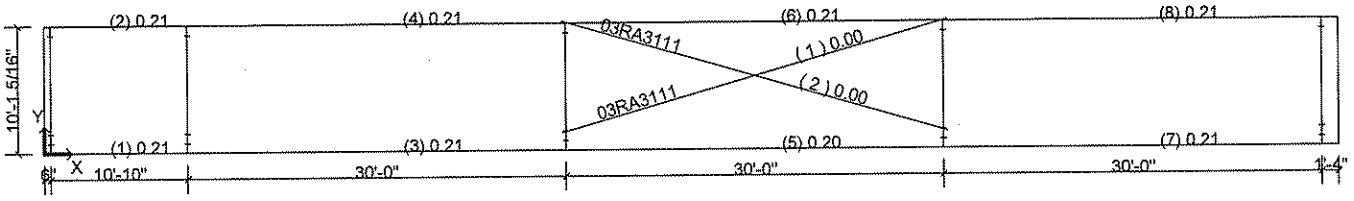
Deflection Conditions
Frames are vertically supporting:Ceiling with Flexible Finish
Frames are laterally supporting:Underhung Crane
Purlins are supporting:Ceiling with Flexible Finish
Girts are supporting:Metal Wall Panels
Deflection Limit Override H/150

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

Design Load Combinations - Bracing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 W1>	W1>
2	System	1.000	1.0 <W1	<W1
3	System	1.000	1.0 W2>	W2>
4	System	1.000	1.0 <W2	<W2
5	System	1.000	0.700 E>	E>
6	System	1.000	0.700 <E	<E

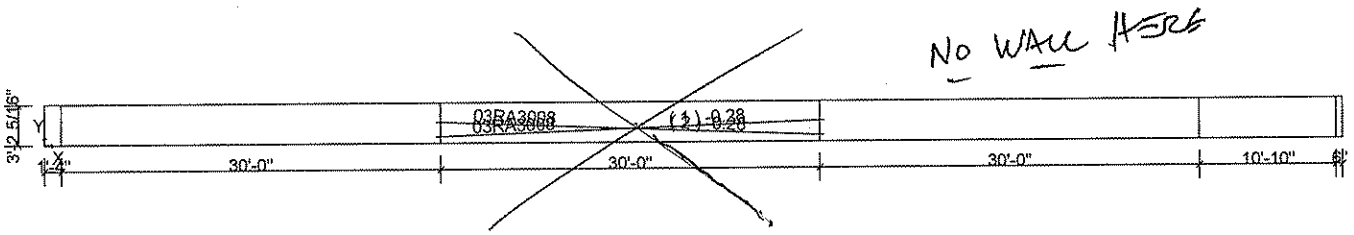
CLERESTORY ROOF AREA



Diagonal Bracing Member Design Summary: Roof A

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 0.375	31.85	16.9	0.00	1.0000	1.0000	0.002	1.0W2>	passed	
2	R 0.375	31.85	16.9	0.00	1.0000	1.0000	0.002	1.0<W2	passed	

Mem.	End	Diagonal Connection Design Information
1	Left	Slot: web thk = 1/8 in., F = 0.00k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot: web thk = 1/8 in., F = 0.00k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
2	Left	Slot: web thk = 1/8 in., F = 0.00k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot: web thk = 1/8 in., F = 0.00k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed

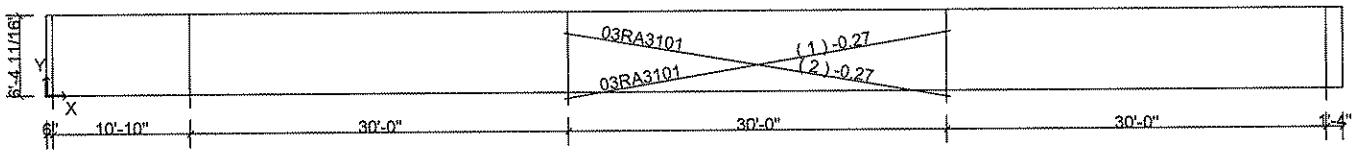


Diagonal Bracing Member Design Summary: Sidewall 2

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 0.375	30.65	6.1	-0.28	1.0000	1.0000	0.114	1.0<W1	passed	
2	R 0.375	30.65	6.1	-0.28	1.0000	1.0000	0.114	1.0W2>	passed	

Mem.	End	Diagonal Connection Design Information
1	Left	Slot: web thk = 1/8 in., F = 0.28k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot: web thk = 1/8 in., F = 0.28k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
2	Left	Slot: web thk = 1/8 in., F = 0.28k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot: web thk = 1/8 in., F = 0.28k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed

CLERESTORY WALL



Diagonal Bracing Member Design Summary: Sidewall 4

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 0.375	31.06	13.9	-0.27	1.0000	1.0000	0.111	1.0W2>	passed	
2	R 0.375	31.06	13.9	-0.27	1.0000	1.0000	0.111	1.0<W1	passed	

Mem.	End	Diagonal Connection Design Information
1	Left	Slot: web thk = 1/8 in., F = 0.27k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot: web thk = 1/8 in., F = 0.27k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
2	Left	Slot: web thk = 1/8 in., F = 0.27k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed
	Right	Slot: web thk = 1/8 in., F = 0.27k, E factor = 1.000, stress increase = 1.000, slot offset = 2 in., web/flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK >> passed

Secondary - Summary Report

Loads and Codes - Shape: Maintenance Area

City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code
Building Use: Standard Occupancy Structure
Built Up: 05AISC - ASD
Cold Form: 04AISI - ASD
Rainfall: 10.00 inches per hour

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.685)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000
Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 27/9/0
Parts / Portions Zone Strip Width: 6/8/6
Basic Wind Pressure: 25.20,(Parts) 25.76 psf

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed (0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

Seismic Load
Mapped Spectral Response - Ss:11.80 %g
Mapped Spectral Response - S1:5.10 %g
Seismic Hazard / Use Group: Group 1

Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.3340
Bracing Seismic Period: 0.2043
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

Design Load Combinations - Purlin

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L	D + CG + L
2	System	1.000	1.0 D + 1.0 CG + 1.0 S	D + CG + S
3	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
4	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
5	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 1)
6	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 6)
7	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 1)
8	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 6)
9	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 1 and 2)
10	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 2 and 3)
11	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 3 and 4)
12	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 4 and 5)
13	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 5 and 6)
14	System	1.000	1.0 D + 1.0 CG + 1.0 W1>	D + CG + W1>
15	System	1.000	1.0 D + 1.0 CG + 1.0 <W2	D + CG + <W2
16	System	1.000	0.600 D + 0.600 CU + 1.0 W1>	D + CU + W1>
17	System	1.000	0.600 D + 0.600 CU + 1.0 <W2	D + CU + <W2
18	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 W1>	D + CG + L + W1>
19	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 <W2	D + CG + L + <W2
20	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 W1>	D + CG + S + W1>
21	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 <W2	D + CG + S + <W2
22	System Derived	1.000	1.0 D + 1.0 CG + 0.525 EB> + 0.525 EG+	D + CG + EB> + EG+
23	System Derived	1.000	1.0 D + 1.0 CG + 0.700 EB> + 0.700 EG+	D + CG + EB> + EG+
24	System Derived	1.000	0.600 D + 0.600 CU + 0.700 EB> + 0.700 EG-	D + CU + EB> + EG-
25	System Derived	1.000	1.0 D + 1.0 CG + 0.525 <EB + 0.525 EG+	D + CG + <EB + EG+
26	System Derived	1.000	1.0 D + 1.0 CG + 0.700 <EB + 0.700 EG+	D + CG + <EB + EG+
27	System Derived	1.000	0.600 D + 0.600 CU + 0.700 <EB + 0.700 EG-	D + CU + <EB + EG-
28	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 WB1>	D + CG + WP + WB1>
29	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 WB1>	D + CU + WP + WB1>
30	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB1>	D + CG + L + WP + WB1>
31	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB1>	D + CG + S + WP + WB1>

32	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 <WB1	D + CG + WP + <WB1
33	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 <WB1	D + CU + WP + <WB1
34	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB1	D + CG + L + WP + <WB1
35	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB1	D + CG + S + WP + <WB1
36	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 WB2>	D + CG + WP + WB2>
37	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 WB2>	D + CU + WP + WB2>
38	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB2>	D + CG + L + WP + WB2>
39	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB2>	D + CG + S + WP + WB2>
40	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 <WB2	D + CG + WP + <WB2
41	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 <WB2	D + CU + WP + <WB2
42	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB2	D + CG + L + WP + <WB2
43	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB2	D + CG + S + WP + <WB2

Design Load Combinations - Girt

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 W1>	W1>
2	System	1.000	1.0 <W2	<W2
3	System	1.000	1.0 WP	WP
4	System	1.000	0.700 E>	E>
5	System	1.000	0.700 <E	<E

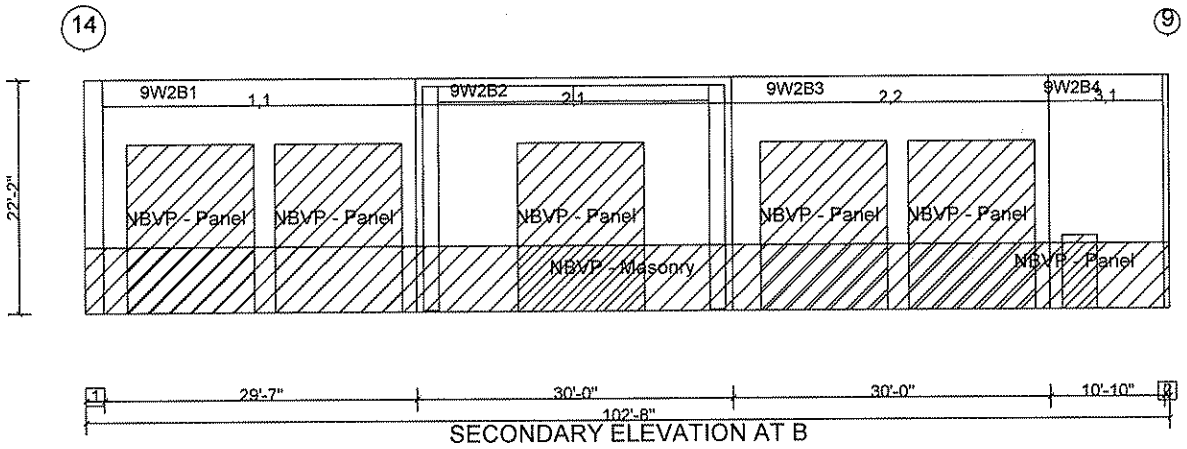
Deflection Load Combinations - Purlin

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	240	0.700 W1>	W1>
2	System	1.000	240	0.700 <W2	<W2
3	System	1.000	240	0.700 WP	WP
4	System	1.000	240	1.0 S	S
5	System	1.000	240	1.0 US1*	US1*
6	System	1.000	240	1.0 *US1	*US1
7	System	1.000	240	1.0 L	L

Deflection Load Combinations - Girt

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	240	0.700 W1>	W1>
2	System	1.000	240	0.700 <W2	<W2
3	System	1.000	240	0.700 WP	WP
4	System	1.000	240	0.500 E>	E>
5	System	1.000	240	0.500 <E	<E

Wall: 2



Dimension Key
1 1'-9"
2 6"

Spandrel(Id=1,1)
Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
25000	8.00	0.3125	0.1345	17.00	17.00	14.33	348.3	55.00	55.00	SS	SS	3P
25001	8.00	0.3125	0.1345	17.00	17.00	14.74	358.7	55.00	55.00	SS	SS	3P

Total Frame Weight = 707.0 (p) (Includes all plates)
Frame Pricing Weight = 707.0 (p) (Includes all pieces)

Spandrel Beam Connection Design (ASD)

			Connection Plate				Bolt Group						Edge	Weld	Beam Cope		
Mem. Id	Jt. No.	Type	Thick. in.	Height in.	Length in.	Fy ksi	Diam. in.	Spec/Jt.	Bolts n	Rows r	Gage in.	Pitch in.	'a' in.	Size in.	Side	C in.	Depth in.
1,1	1	ST	0.375	10.00	4.50	55	0.750	A325X/ST	3	1	0.00	3.00	2.50	(2)-0.1250	FI	4.25	0.31
1,1	2	ST	0.375	10.00	4.50	55	0.750	A325X/ST	3	1	0.00	3.00	2.50	(2)-0.1250	FO	3.69	3.00

		Required Strength							Available Strength Ratio					Min. Thickness	
Mem.	Jt.	Load	Axial	Shear	Beam Moment	Pr	Angle	Bolt Group	Bolt Shear	Bearing	Rupture	Max. Ratio	Description	Beam Web	Column
Id	No.	Case	k	k	in-k	k	Deg.	C	%	%	%	%		in.	in.
1,1	1	1	0.00	-4.86	0.00	4.86	0.0	1.99	0.18	0.23	0.12	0.40	OK->ClipLocalBuckling	0.0310	0.1875
1,1	2	1	0.00	-4.82	0.00	4.82	0.0	1.99	0.18	0.23	0.15	0.47	OK->ColumnWebRupture	0.0307	0.0884

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
25000	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
25001	29/7/0	0/0/0	No	Yes	No	0/0/0	0/0/0	0.0000

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
25000	14.79	17.00	1	1	0.0	-4.9	-427.8	0.0	237.7	12.2	417.2	228.2	1.03	0.40
25001	0.00	17.00	1	1	0.0	4.8	-427.8	0.0	237.7	12.2	417.2	228.2	1.03	0.40

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
25000	14.79	355.00	355.0	355.0	7.20	7.20	397.35	26.67	46.75	6.67	50.73	10.07	0.18	1856.72	1.14	1.00	1.02	0.81	1.00
25001	0.00	355.00	355.0	355.0	7.20	7.20	397.35	26.67	46.75	6.67	50.73	10.07	0.18	1856.72	1.14	1.00	1.02	0.81	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	240	240	0.700 W1>	W1>
2	System	1.000	240	240	0.700 <W2	<W2
3	System	1.000	240	240	0.700 WP	WP
4	System	1.000	240	240	0.500 E>	E>
5	System	1.000	240	240	0.500 <E	<E

Controlling Frame Deflection Ratios for Cross Section: Spandrel(Id=1,1)

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Vertical Deflection for Span 1	(L/1039)	0.341	25001	1	1	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Spandrel(Id=2,1)
Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
25000	8.00	0.3750	0.1345	12.00	12.00	14.95	379.3	55.00	55.00	SS	SS	3P
25001	8.00	0.3750	0.1345	12.00	12.00	14.95	379.1	55.00	55.00	SS	SS	3P

Total Frame Weight = 758.4 (p) (Includes all plates)
Frame Pricing Weight = 758.4 (p) (Includes all pieces)

Spandrel Beam Connection Design (ASD)

			Connection Plate				Bolt Group						Edge	Weld	Beam Cope		
Mem. Id	Jt. No.	Type	Thick. in.	Height in.	Length in.	Fy ksi	Diam. in.	Spec/Jt.	Bolts n	Rows r	Gage in.	Pitch in.	'a' in.	Size in.	Side	C in.	Depth in.
2,1	1	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	3.66	3.00
2,1	2	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	3.69	3.00

		Required Strength							Available Strength Ratio					Min. Thickness	
Mem. Id	Jt. No.	Load Case	Axial k	Shear k	Beam Moment in-k	Pr k	Angle Deg.	Bolt Group C	Bolt Shear %	Bearing %	Rupture %	Max. Ratio %	Description	Beam Web in.	Column in.
2,1	1	1	0.00	-4.87	0.00	4.87	0.0	1.03	0.36	0.45	0.24	0.47	OK->ColumnWebRupture	0.0601	0.0884
2,1	2	1	0.00	-4.87	0.00	4.87	0.0	1.03	0.36	0.45	0.24	0.47	OK->ColumnWebRupture	0.0601	0.0884

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
25000	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
25001	30/0/0	0/0/0	No	Yes	No	0/0/0	0/0/0	0.0000

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
25000	15.00	12.00	1	1	0.0	-4.9	-438.7	0.0	247.9	18.2	430.2	349.2	1.02	0.27
25001	0.00	12.00	1	1	0.0	4.9	-438.7	0.0	247.9	18.2	430.2	349.2	1.02	0.27

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
25000	15.00	360.00	360.0	360.0	7.51	7.51	218.74	32.00	36.46	8.00	39.13	12.05	0.29	1081.20	1.14	1.00	1.07	0.96	1.00
25001	0.00	360.00	360.0	360.0	7.51	7.51	218.74	32.00	36.46	8.00	39.13	12.05	0.29	1081.20	1.14	1.00	1.07	0.96	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	240	240	0.700 W1>	W1>
2	System	1.000	240	240	0.700 <W2	<W2
3	System	1.000	240	240	0.700 WP	WP
4	System	1.000	240	240	0.500 E>	E>
5	System	1.000	240	240	0.500 <E	<E

Controlling Frame Deflection Ratios for Cross Section: Spandrel(Id=2,1)

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Vertical Deflection for Span 1	(L/550)	0.653	25001	1	1	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Spandrel(Id=2,2)
Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
25000	8.00	0.3750	0.1345	12.00	12.00	14.95	379.3	55.00	55.00	SS	SS	3P
25001	8.00	0.3750	0.1345	12.00	12.00	14.95	379.1	55.00	55.00	SS	SS	3P

Total Frame Weight = 758.4 (p) (Includes all plates)
Frame Pricing Weight = 758.4 (p) (Includes all pieces)

Spandrel Beam Connection Design (ASD)

			Connection Plate				Bolt Group						Edge	Weld	Beam Cope		
Mem. Id	Jt. No.	Type	Thick. in.	Height in.	Length in.	Fy ksi	Diam. in.	Spec/Jt.	Bolts n	Rows r	Gage in.	Pitch in.	'a' in.	Size in.	Side	C in.	Depth in.
2,2	1	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	3.66	3.00
2,2	2	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	3.69	3.00

		Required Strength							Available Strength Ratio					Min. Thickness	
Mem. Id	Jt. No.	Load Case	Axial k	Shear k	Beam Moment in-k	Pr k	Angle Deg.	Bolt Group C	Bolt Shear %	Bearing %	Rupture %	Max. Ratio %	Description	Beam Web in.	Column in.
2,2	1	1	0.00	-4.87	0.00	4.87	0.0	1.03	0.36	0.45	0.24	0.47	OK->ColumnWebRupture	0.0601	0.0884
2,2	2	1	0.00	-4.87	0.00	4.87	0.0	1.03	0.36	0.45	0.24	0.47	OK->ColumnWebRupture	0.0601	0.0884

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
25000	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
25001	30/0/0	0/0/0	No	Yes	No	0/0/0	0/0/0	0.0000

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
25000	15.00	12.00	1	1	0.0	-4.9	-438.7	0.0	247.9	18.2	430.2	349.2	1.02	0.27
25001	0.00	12.00	1	1	0.0	4.9	-438.7	0.0	247.9	18.2	430.2	349.2	1.02	0.27

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
25000	15.00	360.00	360.0	360.0	7.51	7.51	218.74	32.00	36.46	8.00	39.13	12.05	0.29	1081.20	1.14	1.00	1.07	0.96	1.00
25001	0.00	360.00	360.0	360.0	7.51	7.51	218.74	32.00	36.46	8.00	39.13	12.05	0.29	1081.20	1.14	1.00	1.07	0.96	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	240	240	0.700 W1>	W1>
2	System	1.000	240	240	0.700 <W2	<W2
3	System	1.000	240	240	0.700 WP	WP
4	System	1.000	240	240	0.500 E>	E>
5	System	1.000	240	240	0.500 <E	<E

Controlling Frame Deflection Ratios for Cross Section: Spandrel(Id=2,2)

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Vertical Deflection for Span 1	(L/550)	0.653	25001	1	1	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Spandrel(Id=3,1)
Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
25000	5.00	0.1345	0.1345	9.00	9.00	5.37	45.4	55.00	55.00	SS	SS	3P
25001	5.00	0.1345	0.1345	9.00	9.00	5.37	45.3	55.00	55.00	SS	SS	3P

Total Frame Weight = 90.7 (p) (Includes all plates)
Frame Pricing Weight = 90.7 (p) (Includes all pieces)

Spandrel Beam Connection Design (ASD)

			Connection Plate				Bolt Group						Edge	Weld	Beam Cope		
Mem. Id	Jt. No.	Type	Thick. in.	Height in.	Length in.	Fy ksi	Diam. in.	Spec/Jt.	Bolts n	Rows r	Gage in.	Pitch in.	'a' in.	Size in.	Side	C in.	Depth in.
3,1	1	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	3.66	3.00
3,1	2	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	3.69	2.75

		Required Strength							Available Strength Ratio					Min. Thickness	
Mem. Id	Jt. No.	Load Case	Axial k	Shear k	Beam Moment in-k	Pr k	Angle Deg.	Bolt Group C	Bolt Shear %	Bearing %	Rupture %	Max. Ratio %	Description	Beam Web in.	Column in.
3,1	1	1	0.00	-1.96	0.00	1.96	0.0	1.03	0.14	0.18	0.16	0.47	OK->ColumnWebRupture	0.0241	0.0884
3,1	2	1	0.00	-2.05	0.00	2.05	0.0	1.03	0.15	0.19	0.16	0.54	OK->ColumnWebRupture	0.0253	0.0884

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
25000	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
25001	10/10/0	0/0/0	No	Yes	No	0/0/0	0/0/0	0.0000

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
25000	5.42	9.00	1	1	0.0	-2.0	-65.6	0.0	83.1	20.9	156.3	39.0	0.42	0.09
25001	0.00	9.00	1	1	0.0	2.1	-65.6	0.0	83.1	20.9	156.3	39.0	0.42	0.10

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
25000	5.42	130.00	130.0	130.0	2.52	2.52	33.89	2.80	7.53	1.12	8.53	1.72	0.02	55.09	1.14	1.00	1.13	0.67	1.00
25001	0.00	130.00	130.0	130.0	2.52	2.52	33.89	2.80	7.53	1.12	8.53	1.72	0.02	55.09	1.14	1.00	1.13	0.67	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	240	240	0.700 W1>	W1>
2	System	1.000	240	240	0.700 <W2	<W2
3	System	1.000	240	240	0.700 WP	WP
4	System	1.000	240	240	0.500 E>	E>
5	System	1.000	240	240	0.500 <E	<E

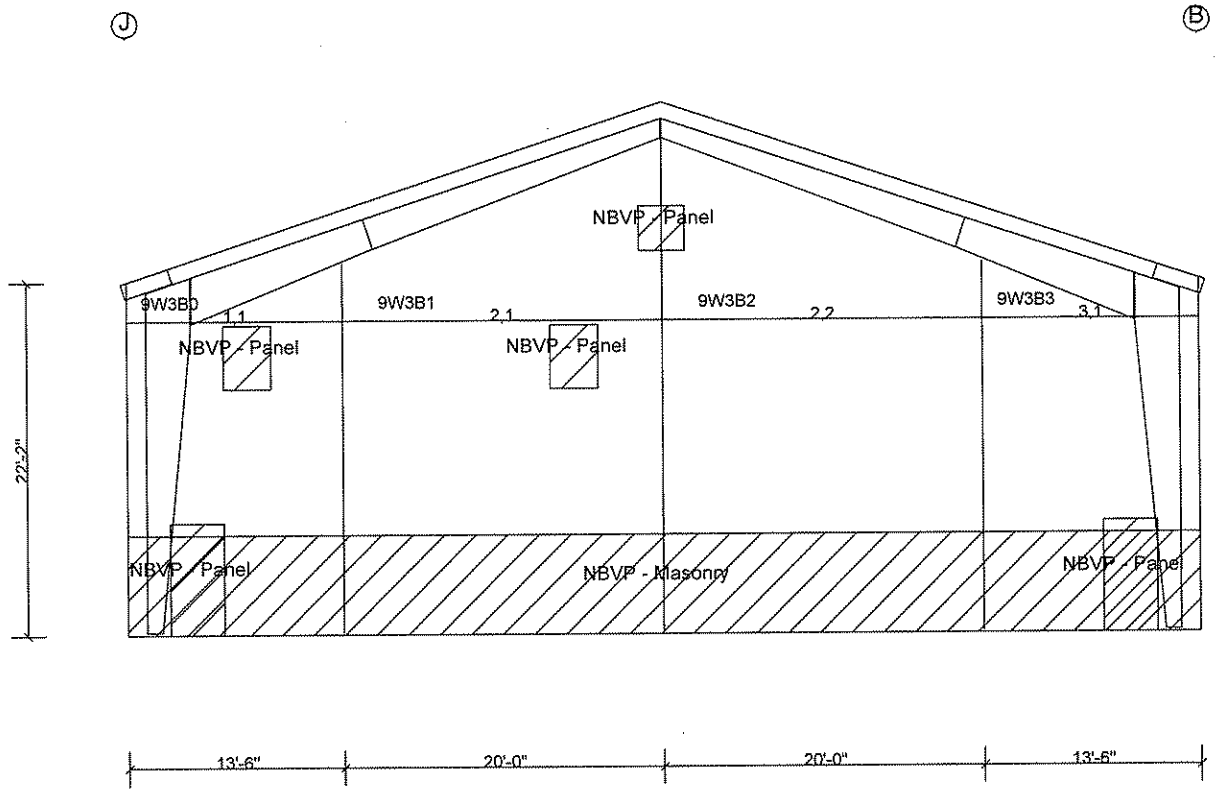
Controlling Frame Deflection Ratios for Cross Section: Spandrel(Id=3,1)

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Vertical Deflection for Span 1	(L/1583)	0.082	25000	2	1	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Wall: 3


J
B
NBVP - Panel
9W3B0
1,1
9W3B1
2,1
9W3B2
2,2
9W3B3
3,1
NBVP - Panel
NBVP - Panel
22'-2"
NBVP - Panel
NBVP - Masonry
NBVP - Panel
13'-6"
20'-0"
20'-0"
13'-6"

Spandrel(Id=1,1)
Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
25000	5.00	0.1345	0.1345	11.00	11.00	6.75	63.9	55.00	55.00	SS	SS	3P
25001	5.00	0.1345	0.1345	11.00	11.00	6.70	62.8	55.00	55.00	SS	SS	3P

Total Frame Weight = 126.7 (p) (Includes all plates)
Frame Pricing Weight = 126.7 (p) (Includes all pieces)

Spandrel Beam Connection Design (ASD)

			Connection Plate				Bolt Group						Edge	Weld	Beam Cope		
Mem. Id	Jt. No.	Type	Thick. in.	Height in.	Length in.	Fy ksi	Diam. in.	Spec/Jt.	Bolts n	Rows r	Gage in.	Pitch in.	'a' in.	Size in.	Side	C in.	Depth in.
1,1	1		0.000	0.00	0.00	0	0.000		0	0	0.00	0.00	0.00	(0)-0.0000		0.00	0.00
1,1	2	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	4.19	2.81

		Required Strength							Available Strength Ratio					Min. Thickness	
Mem. Id	Jt. No.	Load Case	Axial k	Shear k	Beam Moment in-k	Pr k	Angle Deg.	Bolt Group C	Bolt Shear %	Bearing %	Rupture %	Max. Ratio %	Description	Beam Web in.	Column in.
1,1	1	-1	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	SIM TO JOINT 2	0.0000	0.0000
1,1	2	1	0.00	-3.04	0.00	3.04	0.0	1.03	0.22	0.28	0.17	0.66	OK->ColumnWebRupture	0.0375	0.0884

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
25000	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
25001	13/6/0	0/0/0	No	Yes	No	0/0/0	0/0/0	0.0000

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
25000	6.75	11.00	1	1	0.0	-2.8	-118.1	0.0	92.0	18.3	124.6	39.0	0.95	0.15
25001	0.00	11.00	1	1	0.0	3.0	-118.1	0.0	92.0	18.3	124.6	39.0	0.95	0.17

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
25000	6.75	162.00	162.0	162.0	2.79	2.79	53.55	2.80	9.74	1.12	11.18	1.73	0.02	82.77	1.14	1.00	1.15	0.62	1.00
25001	0.00	162.00	162.0	162.0	2.79	2.79	53.55	2.80	9.74	1.12	11.18	1.73	0.02	82.77	1.14	1.00	1.15	0.62	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	240	240	0.700 W1>	W1>
2	System	1.000	240	240	0.700 <W2	<W2
3	System	1.000	240	240	0.700 WP	WP
4	System	1.000	240	240	0.500 E>	E>
5	System	1.000	240	240	0.500 <E	<E

Controlling Frame Deflection Ratios for Cross Section: Spandrel(Id=1,1)

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Vertical Deflection for Span 1	(L/1112)	0.146	25000	2	1	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Spandrel(Id=2,1)
Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
25000	8.00	0.2500	0.1345	9.00	9.00	9.95	171.8	55.00	55.00	SS	SS	3P
25001	8.00	0.2500	0.1345	9.00	9.00	9.95	171.5	55.00	55.00	SS	SS	3P

Total Frame Weight = 343.3 (p) (Includes all plates)
Frame Pricing Weight = 343.3 (p) (Includes all pieces)

Spandrel Beam Connection Design (ASD)

			Connection Plate				Bolt Group						Edge	Weld	Beam Cope		
Mem. Id	Jt. No.	Type	Thick. in.	Height in.	Length in.	Fy ksi	Diam. in.	Spec/Jt.	Bolts n	Rows r	Gage in.	Pitch in.	'a' in.	Size in.	Side	C in.	Depth in.
2,1	1	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	4.18	2.81
2,1	2	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	4.69	2.88

		Required Strength							Available Strength Ratio					Min. Thickness	
Mem. Id	Jt. No.	Load Case	Axial k	Shear k	Beam Moment in-k	Pr k	Angle Deg.	Bolt Group C	Bolt Shear %	Bearing %	Rupture %	Max. Ratio %	Description	Beam Web in.	Column in.
2,1	1	1	0.00	-5.63	0.00	5.63	0.0	1.03	0.41	0.52	0.45	0.66	OK->ColumnWebRupture	0.1044	0.0884
2,1	2	1	0.00	-6.52	0.00	6.52	0.0	1.03	0.48	0.60	0.53	0.85	OK->CopedBeamFlexure	0.1237	0.0884

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
25000	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
25001	20/0/0	0/0/0	No	Yes	No	0/0/0	0/0/0	0.0000

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
25000	10.00	9.00	1	1	0.0	-5.6	-364.3	0.0	169.7	21.4	387.0	159.5	0.94	0.26
25001	0.00	9.00	1	1	0.0	6.5	-364.3	0.0	169.7	21.4	387.0	159.5	0.94	0.30

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
25000	10.00	240.00	240.0	240.0	5.14	5.14	83.47	21.34	18.55	5.33	19.93	8.04	0.09	408.37	1.14	1.00	1.07	0.78	1.00
25001	0.00	240.00	240.0	240.0	5.14	5.14	83.47	21.34	18.55	5.33	19.93	8.04	0.09	408.37	1.14	1.00	1.07	0.78	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	240	240	0.700 W1>	W1>
2	System	1.000	240	240	0.700 <W2	<W2
3	System	1.000	240	240	0.700 WP	WP
4	System	1.000	240	240	0.500 E>	E>
5	System	1.000	240	240	0.500 <E	<E

Controlling Frame Deflection Ratios for Cross Section: Spandrel(Id=2,1)

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Vertical Deflection for Span 1	(L/379)	0.633	25001	1	1	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Spandrel(Id=2,2)
Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
25000	8.00	0.2500	0.1345	9.00	9.00	9.95	171.5	55.00	55.00	SS	SS	3P
25001	8.00	0.2500	0.1345	9.00	9.00	9.95	171.8	55.00	55.00	SS	SS	3P

Total Frame Weight = 343.4 (p) (Includes all plates)
Frame Pricing Weight = 343.4 (p) (Includes all pieces)

Spandrel Beam Connection Design (ASD)

			Connection Plate				Bolt Group						Edge	Weld	Beam Cope		
Mem. Id	Jt. No.	Type	Thick. in.	Height in.	Length in.	Fy ksi	Diam. in.	Spec/Jt.	Bolts n	Rows r	Gage in.	Pitch in.	'a' in.	Size in.	Side	C in.	Depth in.
2,2	1	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	4.67	2.88
2,2	2	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	4.19	2.81

		Required Strength							Available Strength Ratio					Min. Thickness	
Mem. Id	Jt. No.	Load Case	Axial k	Shear k	Beam Moment in-k	Pr k	Angle Deg.	Bolt Group C	Bolt Shear %	Bearing %	Rupture %	Max. Ratio %	Description	Beam Web in.	Column in.
2,2	1	1	0.00	-6.52	0.00	6.52	0.0	1.03	0.48	0.60	0.53	0.84	OK->CopedBeamFlexure	0.1233	0.0884
2,2	2	1	0.00	-5.63	0.00	5.63	0.0	1.03	0.41	0.52	0.45	0.66	OK->ColumnWebRupture	0.1045	0.0884

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
25000	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
25001	20/0/0	0/0/0	No	Yes	No	0/0/0	0/0/0	0.0000

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
25000	10.00	9.00	1	1	0.0	-6.5	-364.3	0.0	169.7	21.4	387.0	159.5	0.94	0.30
25001	0.00	9.00	1	1	0.0	5.6	-364.3	0.0	169.7	21.4	387.0	159.5	0.94	0.26

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
25000	10.00	240.00	240.0	240.0	5.14	5.14	83.47	21.34	18.55	5.33	19.93	8.04	0.09	408.37	1.14	1.00	1.07	0.78	1.00
25001	0.00	240.00	240.0	240.0	5.14	5.14	83.47	21.34	18.55	5.33	19.93	8.04	0.09	408.37	1.14	1.00	1.07	0.78	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	240	240	0.700 W1>	W1>
2	System	1.000	240	240	0.700 <W2	<W2
3	System	1.000	240	240	0.700 WP	WP
4	System	1.000	240	240	0.500 E>	E>
5	System	1.000	240	240	0.500 <E	<E

Controlling Frame Deflection Ratios for Cross Section: Spandrel(Id=2,2)

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Vertical Deflection for Span 1	(L/379)	0.633	25001	1	1	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Spandrel(Id=3,1)
Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
25000	5.00	0.1345	0.1345	10.00	10.00	6.70	59.7	55.00	55.00	SS	SS	3P
25001	5.00	0.1345	0.1345	10.00	10.00	6.75	60.8	55.00	55.00	SS	SS	3P

Total Frame Weight = 120.5 (p) (Includes all plates)
Frame Pricing Weight = 120.5 (p) (Includes all pieces)

Spandrel Beam Connection Design (ASD)

			Connection Plate				Bolt Group						Edge	Weld	Beam Cope		
Mem.	Jt.	Type	Thick.	Height	Length	Fy	Diam.	Spec/Jt.	Bolts	Rows	Gage	Pitch	'a'	Size	Side	C	Depth
Id	No.		in.	in.	in.	ksi	in.		n	r	in.	in.	in.	in.		in.	in.
3,1	1	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	4.18	2.81
3,1	2		0.000	0.00	0.00	0	0.000		0	0	0.00	0.00	0.00	(0)-0.0000		0.00	0.00

		Required Strength							Available Strength Ratio					Min. Thickness	
Mem.	Jt.	Load	Axial	Shear	Beam Moment	Pr	Angle	Bolt Group	Bolt Shear	Bearing	Rupture	Max. Ratio	Description	Beam Web	Column
Id	No.	Case	k	k	in-k	k	Deg.	C	%	%	%	%		in.	in.
3,1	1	1	0.00	-2.87	0.00	2.87	0.0	1.03	0.21	0.26	0.19	0.66	OK->ColumnWebRupture	0.0354	0.0884
3,1	2	-1	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	SYM TO JOINT 1	0.0000	0.0000

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
25000	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
25001	13/6/0	0/0/0	No	Yes	No	0/0/0	0/0/0	0.0000

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
25000	6.75	10.00	1	1	0.0	-2.9	-111.1	0.0	87.6	20.3	114.3	39.0	0.97	0.14
25001	0.00	10.00	1	1	0.0	2.7	-111.1	0.0	87.6	20.3	114.3	39.0	0.97	0.13

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
25000	6.75	162.00	162.0	162.0	2.65	2.65	43.06	2.80	8.61	1.12	9.82	1.73	0.02	68.23	1.13	1.00	1.14	0.65	1.00
25001	0.00	162.00	162.0	162.0	2.65	2.65	43.06	2.80	8.61	1.12	9.82	1.73	0.02	68.23	1.13	1.00	1.14	0.65	1.00

Deflection Load Combinations - Framing

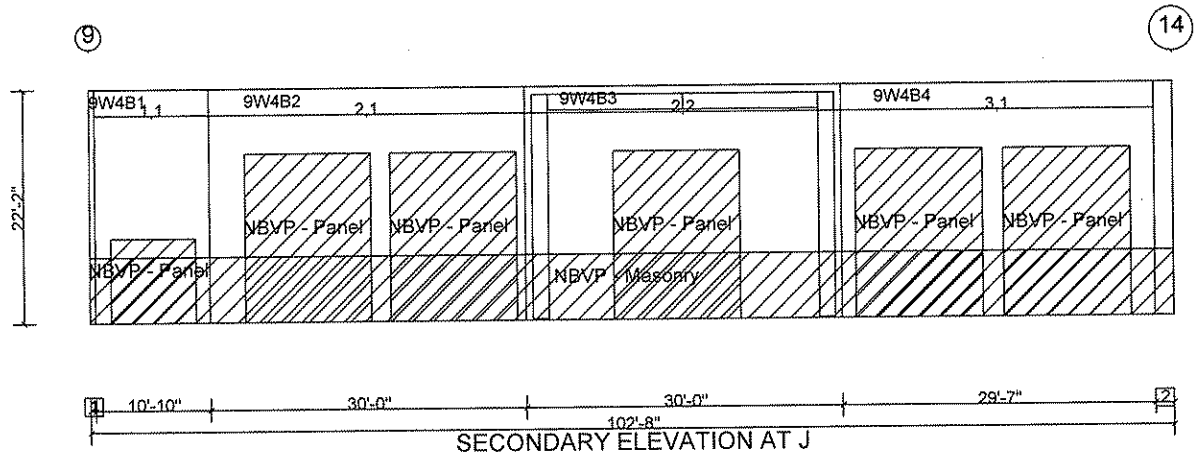
No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	240	240	0.700 W1>	W1>
2	System	1.000	240	240	0.700 <W2	<W2
3	System	1.000	240	240	0.700 WP	WP
4	System	1.000	240	240	0.500 E>	E>
5	System	1.000	240	240	0.500 <E	<E

Controlling Frame Deflection Ratios for Cross Section: Spandrel(Id=3,1)

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Vertical Deflection for Span 1	(L/947)	0.171	25001	1	1	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Wall: 4



SECONDARY ELEVATION AT J

Dimension Key
1 6"
2 1'-9"

Spandrel(Id=1,1)

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
25000	5.00	0.1345	0.1345	9.00	9.00	5.37	45.3	55.00	55.00	SS	SS	3P
25001	5.00	0.1345	0.1345	9.00	9.00	5.36	45.3	55.00	55.00	SS	SS	3P

Total Frame Weight = 90.7 (p) (Includes all plates)
Frame Pricing Weight = 90.7 (p) (Includes all pieces)

Spandrel Beam Connection Design (ASD)

			Connection Plate				Bolt Group						Edge	Weld	Beam Cope		
Mem. Id	Jt. No.	Type	Thick. in.	Height in.	Length in.	Fy ksi	Diam. in.	Spec/Jt.	Bolts n	Rows r	Gage in.	Pitch in.	'a' in.	Size in.	Side	C in.	Depth in.
1,1	1	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	3.67	2.75
1,1	2	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	3.69	3.00

		Required Strength							Available Strength Ratio					Min. Thickness	
Mem. Id	Jt. No.	Load Case	Axial k	Shear k	Beam Moment in-k	Pr k	Angle Deg.	Bolt Group C	Bolt Shear %	Bearing %	Rupture %	Max. Ratio %	Description	Beam Web in.	Column in.
1,1	1	1	0.00	-2.05	0.00	2.05	0.0	1.03	0.15	0.19	0.16	0.54	OK->ColumnWebRupture	0.0253	0.0884
1,1	2	1	0.00	-1.96	0.00	1.96	0.0	1.03	0.14	0.18	0.16	0.47	OK->ColumnWebRupture	0.0241	0.0884

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
25000	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
25001	10/10/0	0/0/0	No	Yes	No	0/0/0	0/0/0	0.0000

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
25000	5.42	9.00	1	1	0.0	-2.1	-65.6	0.0	83.1	20.9	156.3	39.0	0.42	0.10
25001	0.00	9.00	1	1	0.0	2.0	-65.6	0.0	83.1	20.9	156.3	39.0	0.42	0.09

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
25000	5.42	130.00	130.0	130.0	2.52	2.52	33.89	2.80	7.53	1.12	8.53	1.72	0.02	55.09	1.14	1.00	1.13	0.67	1.00
25001	0.00	130.00	130.0	130.0	2.52	2.52	33.89	2.80	7.53	1.12	8.53	1.72	0.02	55.09	1.14	1.00	1.13	0.67	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	240	240	0.700 W1>	W1>
2	System	1.000	240	240	0.700 <W2	<W2
3	System	1.000	240	240	0.700 WP	WP
4	System	1.000	240	240	0.500 E>	E>
5	System	1.000	240	240	0.500 <E	<E

Controlling Frame Deflection Ratios for Cross Section: Spandrel(Id=1,1)

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Vertical Deflection for Span 1	(L/1583)	0.082	25000	2	1	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Spandrel(Id=2,1)
Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
25000	8.00	0.3750	0.1345	12.00	12.00	14.95	379.3	55.00	55.00	SS	SS	3P
25001	8.00	0.3750	0.1345	12.00	12.00	14.95	379.1	55.00	55.00	SS	SS	3P

Total Frame Weight = 758.3 (p) (Includes all plates)
Frame Pricing Weight = 758.3 (p) (Includes all pieces)

Spandrel Beam Connection Design (ASD)

			Connection Plate				Bolt Group						Edge	Weld	Beam Cope		
Mem. Id	Jt. No.	Type	Thick. in.	Height in.	Length in.	Fy ksi	Diam. in.	Spec/Jt.	Bolts n	Rows r	Gage in.	Pitch in.	'a' in.	Size in.	Side	C in.	Depth in.
2,1	1	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	3.66	3.00
2,1	2	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	3.63	3.00

		Required Strength							Available Strength Ratio					Min. Thickness	
Mem.	Jt.	Load	Axial	Shear	Beam Moment	Pr	Angle	Bolt Group	Bolt Shear	Bearing	Rupture	Max. Ratio	Description	Beam Web	Column
Id	No.	Case	k	k	in-k	k	Deg.	C	%	%	%	%		in.	in.
2,1	1	1	0.00	-4.87	0.00	4.87	0.0	1.03	0.36	0.45	0.24	0.47	OK->ColumnWebRupture	0.0601	0.0884
2,1	2	1	0.00	-4.87	0.00	4.87	0.0	1.03	0.36	0.45	0.24	0.47	OK->ColumnWebRupture	0.0601	0.0884

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
25000	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
25001	30/0/0	0/0/0	No	Yes	No	0/0/0	0/0/0	0.0000

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
25000	15.00	12.00	1	1	0.0	-4.9	-438.7	0.0	247.9	18.2	430.2	349.2	1.02	0.27
25001	0.00	12.00	1	1	0.0	4.9	-438.7	0.0	247.9	18.2	430.2	349.2	1.02	0.27

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
25000	15.00	360.00	360.0	360.0	7.51	7.51	218.74	32.00	36.46	8.00	39.13	12.05	0.29	1081.20	1.14	1.00	1.07	0.96	1.00
25001	0.00	360.00	360.0	360.0	7.51	7.51	218.74	32.00	36.46	8.00	39.13	12.05	0.29	1081.20	1.14	1.00	1.07	0.96	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	240	240	0.700 W1>	W1>
2	System	1.000	240	240	0.700 <W2	<W2
3	System	1.000	240	240	0.700 WP	WP
4	System	1.000	240	240	0.500 E>	E>
5	System	1.000	240	240	0.500 <E	<E

Controlling Frame Deflection Ratios for Cross Section: Spandrel(Id=2,1)

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Vertical Deflection for Span 1	(L/550)	0.653	25000	2	1	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Spandrel(Id=2,2)

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
25000	8.00	0.3750	0.1345	12.00	12.00	14.95	379.3	55.00	55.00	SS	SS	3P
25001	8.00	0.3750	0.1345	12.00	12.00	14.95	379.1	55.00	55.00	SS	SS	3P

Total Frame Weight = 758.3 (p) (Includes all plates)
Frame Pricing Weight = 758.3 (p) (Includes all pieces)

Spandrel Beam Connection Design (ASD)

			Connection Plate				Bolt Group						Edge	Weld	Beam Cope		
Mem. Id	Jt. No.	Type	Thick. in.	Height in.	Length in.	Fy ksi	Diam. in.	Spec/Jt.	Bolts n	Rows r	Gage in.	Pitch in.	'a' in.	Size in.	Side	C in.	Depth in.
2,2	1	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	3.66	3.00
2,2	2	ST	0.375	7.00	4.50	55	0.750	A325X/ST	2	1	0.00	3.00	2.50	(2)-0.1250	FO	3.63	3.00

		Required Strength							Available Strength Ratio					Min. Thickness	
Mem. Id	Jt. No.	Load Case	Axial k	Shear k	Beam Moment in-k	Pr k	Angle Deg.	Bolt Group C	Bolt Shear %	Bearing %	Rupture %	Max. Ratio %	Description	Beam Web in.	Column in.
2,2	1	1	0.00	-4.87	0.00	4.87	0.0	1.03	0.36	0.45	0.24	0.47	OK->ColumnWebRupture	0.0601	0.0884
2,2	2	1	0.00	-4.87	0.00	4.87	0.0	1.03	0.36	0.45	0.24	0.47	OK->ColumnWebRupture	0.0601	0.0884

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
25000	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
25001	30/0/0	0/0/0	No	Yes	No	0/0/0	0/0/0	0.0000

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
25000	15.00	12.00	1	1	0.0	-4.9	-438.7	0.0	247.9	18.2	430.2	349.2	1.02	0.27
25001	0.00	12.00	1	1	0.0	4.9	-438.7	0.0	247.9	18.2	430.2	349.2	1.02	0.27

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
25000	15.00	360.00	360.0	360.0	7.51	7.51	218.74	32.00	36.46	8.00	39.13	12.05	0.29	1081.20	1.14	1.00	1.07	0.96	1.00
25001	0.00	360.00	360.0	360.0	7.51	7.51	218.74	32.00	36.46	8.00	39.13	12.05	0.29	1081.20	1.14	1.00	1.07	0.96	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	240	240	0.700 W1>	W1>
2	System	1.000	240	240	0.700 <W2	<W2
3	System	1.000	240	240	0.700 WP	WP
4	System	1.000	240	240	0.500 E>	E>
5	System	1.000	240	240	0.500 <E	<E

Controlling Frame Deflection Ratios for Cross Section: Spandrel(Id=2,2)

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Vertical Deflection for Span 1	(L/550)	0.653	25000	2	1	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Spandrel(Id=3,1)
Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
25000	8.00	0.3125	0.1345	17.00	17.00	14.74	358.9	55.00	55.00	SS	SS	3P
25001	8.00	0.3125	0.1345	17.00	17.00	14.33	348.3	55.00	55.00	SS	SS	3P

Total Frame Weight = 707.2 (p) (Includes all plates)
Frame Pricing Weight = 707.2 (p) (Includes all pieces)

Spandrel Beam Connection Design (ASD)

			Connection Plate				Bolt Group						Edge	Weld	Beam Cope		
Mem.	Jt.	Type	Thick.	Height	Length	Fy	Diam.	Spec/Jt.	Bolts	Rows	Gage	Pitch	'a'	Size	Side	C	Depth
Id	No.		in.	in.	in.	ksi	in.		n	r	in.	in.	in.	in.		in.	in.
3,1	1	ST	0.375	10.00	4.50	55	0.750	A325X/ST	3	1	0.00	3.00	2.50	(2)-0.1250	FO	3.66	3.00
3,1	2	ST	0.375	10.00	4.50	55	0.750	A325X/ST	3	1	0.00	3.00	2.50	(2)-0.1250	FI	4.25	0.31

		Required Strength							Available Strength Ratio					Min. Thickness	
Mem.	Jt.	Load	Axial	Shear	Beam Moment	Pr	Angle	Bolt Group	Bolt Shear	Bearing	Rupture	Max. Ratio	Description	Beam Web	Column
Id	No.	Case	k	k	in-k	k	Deg.	C	%	%	%	%		in.	in.
3,1	1	1	0.00	-4.82	0.00	4.82	0.0	1.99	0.18	0.23	0.15	0.47	OK->ColumnWebRupture	0.0307	0.0884
3,1	2	1	0.00	-4.86	0.00	4.86	0.0	1.99	0.18	0.23	0.12	0.40	OK->ClipLocalBuckling	0.0310	0.1875

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
25000	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
25001	29/7/0	0/0/0	No	Yes	No	0/0/0	0/0/0	0.0000

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
25000	14.79	17.00	1	1	0.0	-4.8	-427.8	0.0	237.7	12.2	417.2	228.2	1.03	0.40
25001	0.00	17.00	1	1	0.0	4.9	-427.8	0.0	237.7	12.2	417.2	228.2	1.03	0.40

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
25000	14.79	355.00	355.0	355.0	7.20	7.20	397.35	26.67	46.75	6.67	50.73	10.07	0.18	1856.72	1.14	1.00	1.02	0.81	1.00
25001	0.00	355.00	355.0	355.0	7.20	7.20	397.35	26.67	46.75	6.67	50.73	10.07	0.18	1856.72	1.14	1.00	1.02	0.81	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	240	240	0.700 W1>	W1>
2	System	1.000	240	240	0.700 <W2	<W2
3	System	1.000	240	240	0.700 WP	WP
4	System	1.000	240	240	0.500 E>	E>
5	System	1.000	240	240	0.500 <E	<E

Controlling Frame Deflection Ratios for Cross Section: Spandrel(Id=3,1)

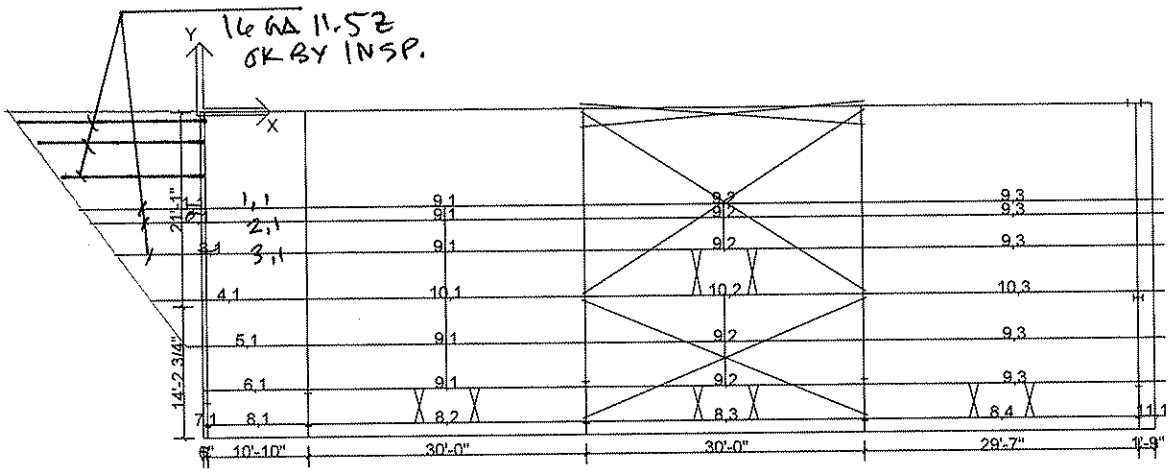
Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Vertical Deflection for Span 1	(L/1039)	0.341	25001	1	1	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Roof: A

< 20' SPANS, SIMPLE
16 GA 11.5Z
OK BY INSP.



Maximum Secondary Designs for Shape Maintenance Area on Side A

CHG. TO SPAN FL9 TO FL10. SAME/SIM TO 6,1 2→ DESIGN

Des Id	Len (ft)	Description	Design Status	Detail Lap (in.)	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	Interior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	24.47	11.50x0.120 Z Sim	No	0							1.90	0.00	0.00	0.00	16						
2,1	23.29	11.50x0.120 Z Sim	Yes	0							0.98	0.00	0.00	0.00	16						
3,1	20.67	11.50x0.120 Z Sim	No	0							2.12	0.35	1.12	0.00	16						
4,1	16.88	11.50x0.082 Z Sim	Yes	0							0.94	0.37	0.70	0.00	16						
5,1	13.08	11.50x0.065 Z Sim	Yes	0							0.14	0.59	0.59	0.00	16						
6,1	11.33	11.50x0.065 Z Sim	Yes	0							0.01	0.46	0.46	0.00	16						
7,1	0.50	11.50x0.065 Z Sim	Yes	0							0.00	0.01	0.01	0.00	16						
8,1	10.83	11.50x0.065 Z Sim	Yes	0							0.43	0.01	0.28	0.00	16						
8,2	30.00	11.50x0.120 Z Sim	Yes	0							0.80	0.00	0.00	0.00	16						
8,3	30.00	11.50x0.120 Z Sim	Yes	0							0.80	0.00	0.00	0.00	16						
8,4	29.58	11.50x0.120 Z Sim	Yes	0							1.02	0.00	0.00	0.00	19						
9,1	30.00	11.50x0.120 Z Con	Yes	24							1.02	0.00	0.00	0.00	19	0.68	0.12	0.36	0.00	16	24
9,2	30.00	11.50x0.082 Z Con	Yes	24	0.53	0.10	0.35	0.00	16	24	1.00	0.37	0.74	0.00	16	0.51	0.10	0.34	0.00	16	24
9,3	32.46	11.50x0.120 Z Con	Yes	24	0.66	0.12	0.35	0.00	16	24	0.96	0.00	0.00	0.00	19						
10,1	30.00	11.50x0.120 Z Con	Yes	24							1.02	0.00	0.00	0.00	19	0.52	0.07	0.27	0.00	16	24
10,2	30.00	11.50x0.120 Z Con	Yes	24	0.20	0.03	0.45	0.00	41	24	0.42	0.06	0.95	0.00	41	0.27	0.04	0.53	0.00	41	24
10,3	32.46	11.50x0.120 Z Con	Yes	24	0.39	0.06	0.53	0.00	41	24	0.96	0.00	0.00	0.00	19						
11,1	2.87	11.50x0.065 Z Sim	Yes	0							0.04	0.00	0.03	0.00	16						

Maximum Secondary Deflections for Shape Maintenance Area on Side A

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	1.46	(L/201)	11.50	1	W1>
2	1	0.71	(L/392)	11.00	1	W1>
3	1	-0.15	(L/889)	14.34	1	W1>
4	1	-0.04	(L/2938)	10.04	1	W1>
5	1	0.04	(L/3252)	7.75	1	W1>
6	1	0.05	(L/2562)	6.00	1	W1>
7	1	-	-	-	-	-
8	1	0.05	(L/2590)	5.50	1	W1>
8	2	1.06	(L/339)	25.83	1	W1>
8	3	1.06	(L/339)	55.83	1	W1>

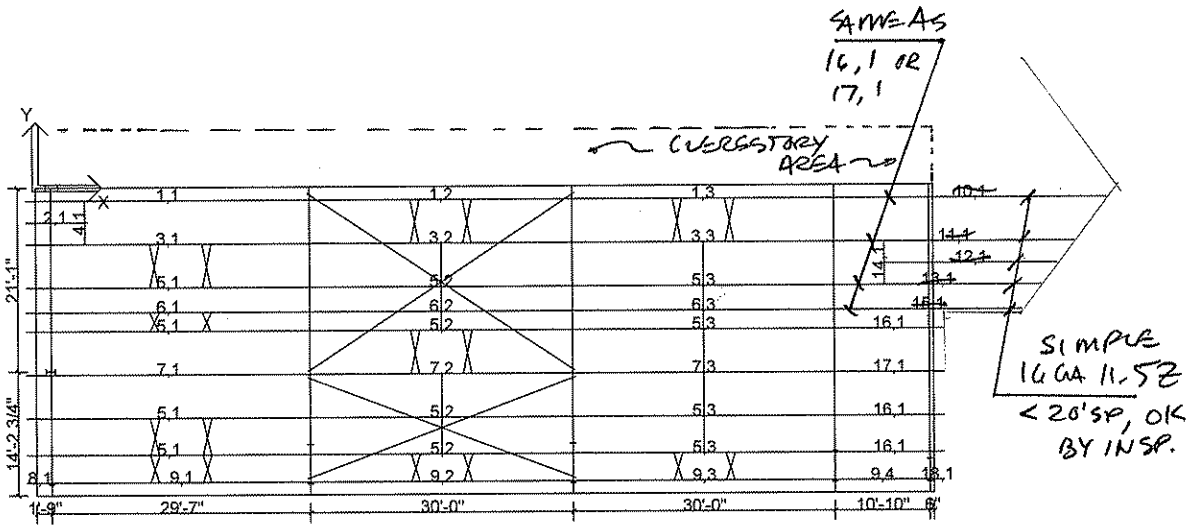
8	4	1.04	(L/341)	85.83	1	W1>
9	1	-0.66	(L/547)	13.00	7	L
9	2	0.07	(L/5473)	34.00	7	L
9	3	-0.61	(L/585)	76.50	7	L
10	1	-0.65	(L/553)	13.00	7	L
10	2	-0.12	(L/2892)	50.50	3	WP
10	3	-0.60	(L/590)	76.50	7	L
11	1	-	-	-	-	-

Purlin Anchorage Forces for Shape Maintenance Area, Roof A, Panel Type is SLR2, Pitch = 4.000:12

Bay	Thickness	Force(k)	Ld Case	# Purlins	Length	Simple?	Diaphragm Width	Allowable Defl	Actual Defl
1	0.065	-8.53	1	8	24.41	Y	35.31	0.814	0.000
2	0.120	-14.22	1	7	30.00	N	35.31	1.000	0.000
3	0.082	-14.22	1	7	30.00	N	35.31	1.000	0.000
4	0.120	-15.38	1	8	32.46	N	35.31	1.082	0.000

Frm-Line	Force(k)	Anch. Allow	Required Clips	Actual Clips	Diaphragm Allow	Diaphragm Shr	Stress
1	0.02	0.00	0	0	0.017	0.000	0.000
2	0.16	0.00	0	0	0.017	0.000	0.000
3	0.33	0.00	0	0	0.017	0.000	0.000
4	0.35	0.00	0	0	0.017	0.000	0.000
5	0.20	0.00	0	0	0.017	0.000	0.000

Roof: B



Maximum Secondary Designs for Shape Maintenance Area on Side B

Des Id	Len (ft)	Description	Design Status	Detail Lap (in.)	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	Interior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	32.46	11.50x0.082 Z Con	Yes	48							1.01	0.00	0.00	0.00	16	0.75	0.28	0.62	0.00	16	48
1,2	30.00	11.50x0.082 Z Con	Yes	48	0.86	0.23	0.60	0.00	16	48	0.82	0.35	0.63	0.00	16	0.60	0.11	0.40	0.00	16	48
1,3	30.00	11.50x0.120 Z Con	Yes	48	0.77	0.13	0.41	0.00	16	48	0.87	0.00	0.00	0.00	19						
2,1	6.75	11.50x0.065 Z Sim	Yes	0							0.15	0.26	0.28	0.00	16						
3,1	32.46	11.50x0.120 Z Con	Yes	24							0.99	0.00	0.00	0.00	19	0.75	0.13	0.40	0.00	16	24
3,2	30.00	11.50x0.082 Z Con	Yes	48	0.51	0.11	0.39	0.00	16	24	1.00	0.42	0.84	0.00	16	0.53	0.11	0.40	0.00	16	24
3,3	30.00	11.50x0.120 Z Con	Yes	24	0.54	0.14	0.41	0.00	16	24	0.74	0.00	0.00	0.00	19						
4,1	5.00	8.50x0.059 C Sim	Yes	0							0.34	0.05	0.08	0.00	16						
5,1	32.46	11.50x0.082 Z Con	Yes	24							1.02	0.00	0.74	0.00	19	0.54	0.29	0.61	0.00	19	24
5,2	30.00	11.50x0.082 Z Con	Yes	48	0.63	0.18	0.44	0.00	16	24	0.88	0.32	0.65	0.00	16	0.45	0.09	0.30	0.00	16	24
5,3	30.00	11.50x0.120 Z Con	Yes	24	0.58	0.10	0.31	0.00	16	24	0.97	0.00	0.00	0.00	19						
6,1	32.46	11.50x0.065 Z Con	Yes	24							0.90	0.00	0.64	0.00	19	0.45	0.33	0.56	0.00	19	24
6,2	30.00	11.50x0.065 Z Con	Yes	48	0.45	0.27	0.53	0.00	19	24	0.67	0.47	0.81	0.00	19	0.46	0.27	0.54	0.00	19	24
6,3	30.00	11.50x0.065 Z Con	Yes	24	0.46	0.33	0.57	0.00	19	24	0.93	0.00	0.66	0.00	19						
7,1	32.46	11.50x0.120 Z Con	Yes	24							0.96	0.00	0.00	0.00	19	0.37	0.06	0.52	0.00	41	24
7,2	30.00	11.50x0.120 Z Con	Yes	48	0.26	0.03	0.52	0.00	41	24	0.40	0.06	0.93	0.00	41	0.23	0.03	0.49	0.00	41	24
7,3	30.00	11.50x0.120 Z Con	Yes	24	0.51	0.07	0.26	0.00	16	24	1.02	0.00	0.00	0.00	19						
8,1	2.87	11.50x0.065 Z Sim	Yes	0							0.04	0.00	0.03	0.00	16						
9,1	29.58	11.50x0.120 Z Sim	Yes	0							0.94	0.00	0.00	0.00	19						
9,2	30.00	11.50x0.120 Z Sim	Yes	0							0.95	0.00	0.00	0.00	19						
9,3	30.00	11.50x0.120 Z Sim	Yes	0							0.95	0.00	0.00	0.00	19						
9,4	10.83	11.50x0.065 Z Sim	Yes	0							0.37	0.00	0.24	0.00	16						
~~10,1~~	~~31.21~~	~~11.50x0.120 Z Sim~~	No	0							1.85	0.00	0.00	0.00	16						
~~11,1~~	~~27.41~~	~~11.50x0.120 Z Sim~~	No	0							1.14	0.00	0.00	0.00	16						
12,1	19.76	11.50x0.065 Z Sim	Yes	0							0.65	0.01	0.43	0.00	16						
~~13,1~~	~~23.62~~	~~11.50x0.120 Z Sim~~	Yes	0							0.85	0.00	0.00	0.00	16						
14,1	5.00	8.50x0.059 C Sim	Yes	0							0.47	0.07	0.11	0.00	16						
~~15,1~~	~~21.46~~	~~11.50x0.082 Z Sim~~	Yes	0							0.94	0.33	0.76	0.00	16						
16,1	12.46	11.50x0.065 Z Sim	Yes	0							0.06	0.43	0.44	0.00	16						
17,1	12.46	11.50x0.065 Z Sim	Yes	0							0.29	0.00	0.50	0.00	37						
18,1	1.62	11.50x0.065 Z Sim	Yes	0							0.01	0.00	0.00	0.00	16						

Maximum Secondary Deflections for Shape Maintenance Area on Side B

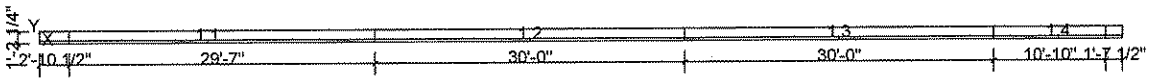
Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	0.90	(L/394)	15.88	1	W1>
1	2	-0.15	(L/2443)	40.96	3	WP
1	3	0.70	(L/515)	78.96	1	W1>
2	1	-	-	-	-	-
3	1	0.68	(L/523)	15.88	1	W1>
3	2	-0.07	(L/5377)	58.46	1	W1>
3	3	0.73	(L/490)	78.96	1	W1>
4	1	-	-	-	-	-
5	1	-0.79	(L/450)	15.88	7	L
5	2	0.08	(L/4794)	36.96	7	L
5	3	-0.64	(L/567)	78.96	7	L
6	1	-0.55	(L/640)	15.88	7	L
6	2	0.06	(L/5964)	57.46	7	L
6	3	-0.61	(L/588)	78.96	7	L
7	1	-0.60	(L/596)	15.88	7	L
7	2	-0.16	(L/2304)	43.96	3	WP
7	3	-0.66	(L/547)	78.96	7	L
8	1	-	-	-	-	-
9	1	0.96	(L/369)	15.00	1	W1>
9	2	0.97	(L/372)	44.58	1	W1>
9	3	0.97	(L/372)	74.58	1	W1>
9	4	0.04	(L/2948)	95.08	1	W1>
10	1	2.55	(L/147)	16.00	1	W1>
11	1	1.23	(L/267)	14.00	1	W1>
12	1	0.13	(L/1355)	13.07	1	W1>
13	1	0.68	(L/420)	12.00	1	W1>
14	1	-	-	-	-	-
15	1	-0.07	(L/1957)	6.50	1	W1>
16	1	0.04	(L/2942)	5.50	1	W1>
17	1	0.04	(L/3012)	5.50	1	W1>
18	1	-	-	-	-	-

Purlin Anchorage Forces for Shape Maintenance Area, Roof B, Panel Type is SLR2, Pitch = 4.000:12

Bay	Thickness	Force(k)	Ld Case	# Purlins	Length	Simple?	Diaphragm Width	Allowable Defl	Actual Defl
1	0.082	-21.57	1	10	32.46	N	35.31	1.082	0.000
2	0.082	-19.91	1	9	30.00	N	35.31	1.000	0.000
3	0.120	-19.91	1	9	30.00	N	35.31	1.000	0.000
4	0.065	-12.05	1	10	31.21	Y	35.31	1.040	0.000

Frm-Line	Force(k)	Anch. Allow	Required Clips	Actual Clips	Diaphragm Allow	Diaphragm Shr	Stress
1	0.34	0.00	0	0	0.017	0.000	0.000
2	0.48	0.00	0	0	0.017	0.000	0.000
3	0.37	0.00	0	0	0.017	0.000	0.000
4	0.18	0.00	0	0	0.017	0.000	0.000
5	0.03	0.00	0	0	0.017	0.000	0.000

Wall: 2 - Canopy 1



Maximum Secondary Designs for Shape Maintenance Area on Side 2

Des Id	Len (ft)	Description	Design Status	Detail Lap (in.)	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	Interior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	32.46	11.50x0.082 Z Sim	Yes	0							0.91	0.00	0.00	0.00	16						
1,2	30.00	11.50x0.082 Z Sim	Yes	0							0.95	0.00	0.00	0.00	16						
1,3	30.00	11.50x0.082 Z Sim	Yes	0							0.95	0.00	0.00	0.00	16						
1,4	12.46	11.50x0.065 Z Sim	Yes	0							0.21	0.00	0.00	0.00	16						

Maximum Secondary Deflections for Shape Maintenance Area on Side 2

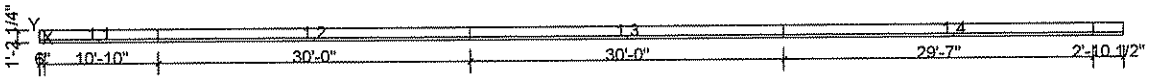
Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	0.73	(L/485)	17.88	1	W1>
1	2	0.79	(L/455)	47.46	1	W1>
1	3	0.79	(L/455)	77.46	1	W1>
1	4	0.00	(L/7121)	97.96	1	W1>

Purlin Anchorage Forces for Shape Maintenance Area, Roof Wall: 2 - Canopy 1, Panel Type is SLR2, Pitch = 4.000:12

Bay	Thickness	Force(k)	Ld Case	# Purlins	Length	Simple?	Diaphragm Width	Allowable Defl	Actual Defl

Frm-Line	Force(k)	Anch. Allow	Required Clips	Actual Clips	Diaphragm Allow	Diaphragm Shr	Stress

Wall: 4 - Canopy 1



Maximum Secondary Designs for Shape Maintenance Area on Side 4

Des Id	Len (ft)	Description	Design Status	Detail Lap (in.)	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)	Interior % Bnd	Interior % Shr	Interior % Cmb	Interior % Wcp	Interior Ld Cs	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)
1,1	11.33	11.50x0.065 Z Sim	Yes	0							0.23	0.00	0.00	0.00	16						
1,2	30.00	11.50x0.082 Z Sim	Yes	0							0.95	0.00	0.00	0.00	16						
1,3	30.00	11.50x0.082 Z Sim	Yes	0							0.95	0.00	0.00	0.00	16						
1,4	32.46	11.50x0.082 Z Sim	Yes	0							0.87	0.00	0.00	0.00	16						

Maximum Secondary Deflections for Shape Maintenance Area on Side 4

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	0.00	(L/6302)	6.00	1	W1>
1	2	0.79	(L/455)	26.33	1	W1>
1	3	0.79	(L/455)	56.33	1	W1>
1	4	0.70	(L/505)	85.83	1	W1>

Purlin Anchorage Forces for Shape Maintenance Area, Roof Wall: 4 - Canopy 1, Panel Type is SLR2, Pitch = 4.000:12

Bay	Thickness	Force(k)	Ld Case	# Purlins	Length	Simple?	Diaphragm Width	Allowable Defl	Actual Defl

Frm-Line	Force(k)	Anch. Allow	Required Clips	Actual Clips	Diaphragm Allow	Diaphragm Shr	Stress

Loads and Codes - Shape: Clerestory Frames

City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code
Building Use: Standard Occupancy Structure
Built Up: 05AISC - ASD
Cold Form: 04AISI - ASD
Rainfall: 10.00 inches per hour

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.575)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000
Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 4/9/8
Parts / Portions Zone Strip Width: 3/0/0
Basic Wind Pressure: 21.13,(Parts) 25.76 psf

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed (0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

Seismic Load
Mapped Spectral Response - Ss:11.80 %g
Mapped Spectral Response - S1:5.10 %g
Seismic Hazard / Use Group: Group 1

Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.0981
Bracing Seismic Period: 0.0648
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

Design Load Combinations - Purlin

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L	D + CG + L
2	System	1.000	1.0 D + 1.0 CG + 1.0 S	D + CG + S
3	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 1)
4	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 6)
5	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 1)
6	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 6)
7	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 1 and 2)
8	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 2 and 3)
9	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 3 and 4)
10	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 4 and 5)
11	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2(Spans 5 and 6)
12	System	1.000	1.0 D + 1.0 CG + 1.0 W1>	D + CG + W1>
13	System	1.000	1.0 D + 1.0 CG + 1.0 <W2	D + CG + <W2
14	System	1.000	0.600 D + 0.600 CU + 1.0 W1>	D + CU + W1>
15	System	1.000	0.600 D + 0.600 CU + 1.0 <W2	D + CU + <W2
16	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 W1>	D + CG + L + W1>
17	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 <W2	D + CG + L + <W2
18	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 W1>	D + CG + S + W1>
19	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 <W2	D + CG + S + <W2
20	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 WB1>	D + CG + WP + WB1>
21	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 WB1>	D + CU + WP + WB1>
22	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB1>	D + CG + L + WP + WB1>
23	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB1>	D + CG + S + WP + WB1>
24	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 <WB1	D + CG + WP + <WB1
25	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 <WB1	D + CU + WP + <WB1
26	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB1	D + CG + L + WP + <WB1
27	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB1	D + CG + S + WP + <WB1
28	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 WB2>	D + CG + WP + WB2>
29	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 WB2>	D + CU + WP + WB2>
30	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB2>	D + CG + L + WP + WB2>
31	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB2>	D + CG + S + WP + WB2>
32	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 <WB2	D + CG + WP + <WB2

33	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 <WB2	D + CU + WP + <WB2
34	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB2	D + CG + L + WP + <WB2
35	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB2	D + CG + S + WP + <WB2
36	System Derived	1.000	1.0 D + 1.0 CG + 0.525 EB> + 0.525 EG+	D + CG + EB> + EG+
37	System Derived	1.000	1.0 D + 1.0 CG + 0.700 EB> + 0.700 EG+	D + CG + EB> + EG+
38	System Derived	1.000	0.600 D + 0.600 CU + 0.700 EB> + 0.700 EG-	D + CU + EB> + EG-
39	System Derived	1.000	1.0 D + 1.0 CG + 0.525 <EB + 0.525 EG+	D + CG + <EB + EG+
40	System Derived	1.000	1.0 D + 1.0 CG + 0.700 <EB + 0.700 EG+	D + CG + <EB + EG+
41	System Derived	1.000	0.600 D + 0.600 CU + 0.700 <EB + 0.700 EG-	D + CU + <EB + EG-

Design Load Combinations - Girt

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 W1>	W1>
2	System	1.000	1.0 <W2	<W2
3	System	1.000	1.0 WP	WP

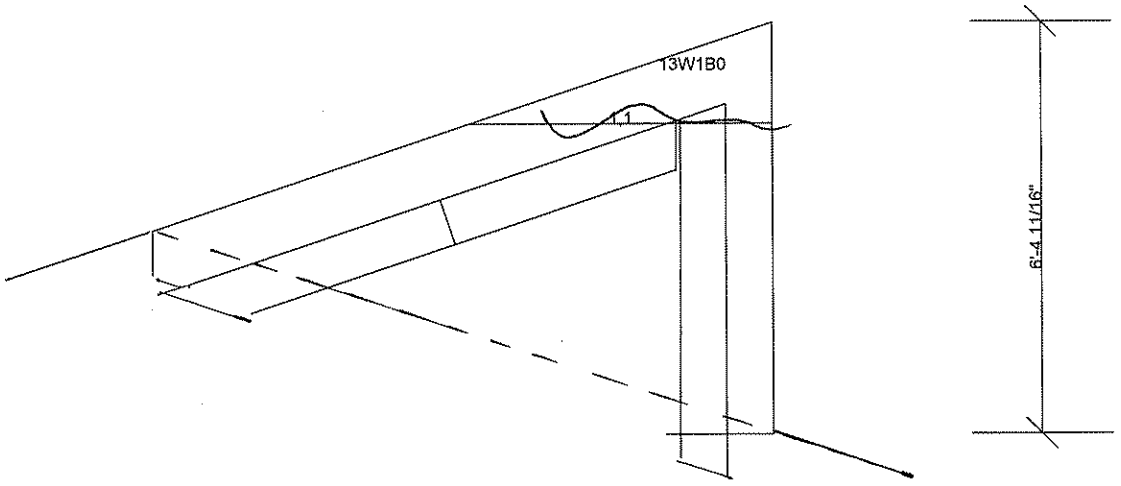
Deflection Load Combinations - Purlin

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	240	0.700 W1>	W1>
2	System	1.000	240	0.700 <W2	<W2
3	System	1.000	240	0.700 WP	WP
4	System	1.000	240	1.0 S	S
5	System	1.000	240	1.0 L	L

Deflection Load Combinations - Girt

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	150	0.700 W1>	W1>
2	System	1.000	150	0.700 <W2	<W2
3	System	1.000	150	0.700 WP	WP

Wall: 1



Dimension Key
1 3'-2 5/16"
2 1'-7 5/8"

NOT USED

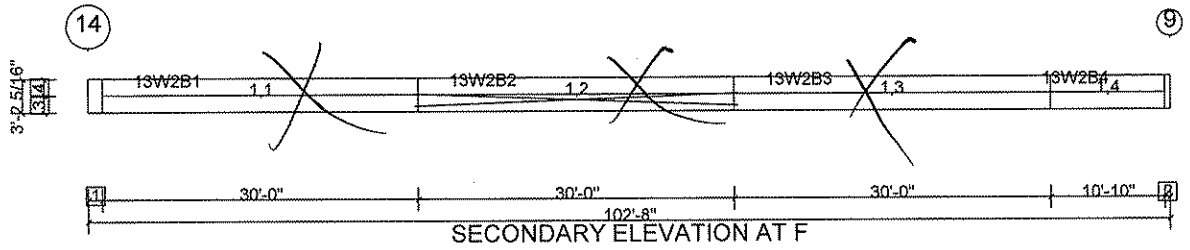
Maximum Secondary Designs for Shape Clerestory Frames on Side 1

Des Id	Len (ft)	Description	Design Status	Detail Lap (in.)	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)	Interior % Bnd	Interior % Shr	Interior % Cmb	Interior % Wcp	Interior Ld Cs	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)
1,1	4.69	8.50x0.059 Z Sim	Yes	0							0.09	0.00	0.06	0.00	1						

Maximum Secondary Deflections for Shape Clerestory Frames on Side 1

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	-	-	-	-	-

Wall: 2



SECONDARY ELEVATION AT F

Dimension Key
1 1'-4"
2 6"
3 1'-7 9/16"
4 1'-6 3/4"

No WALL HERE

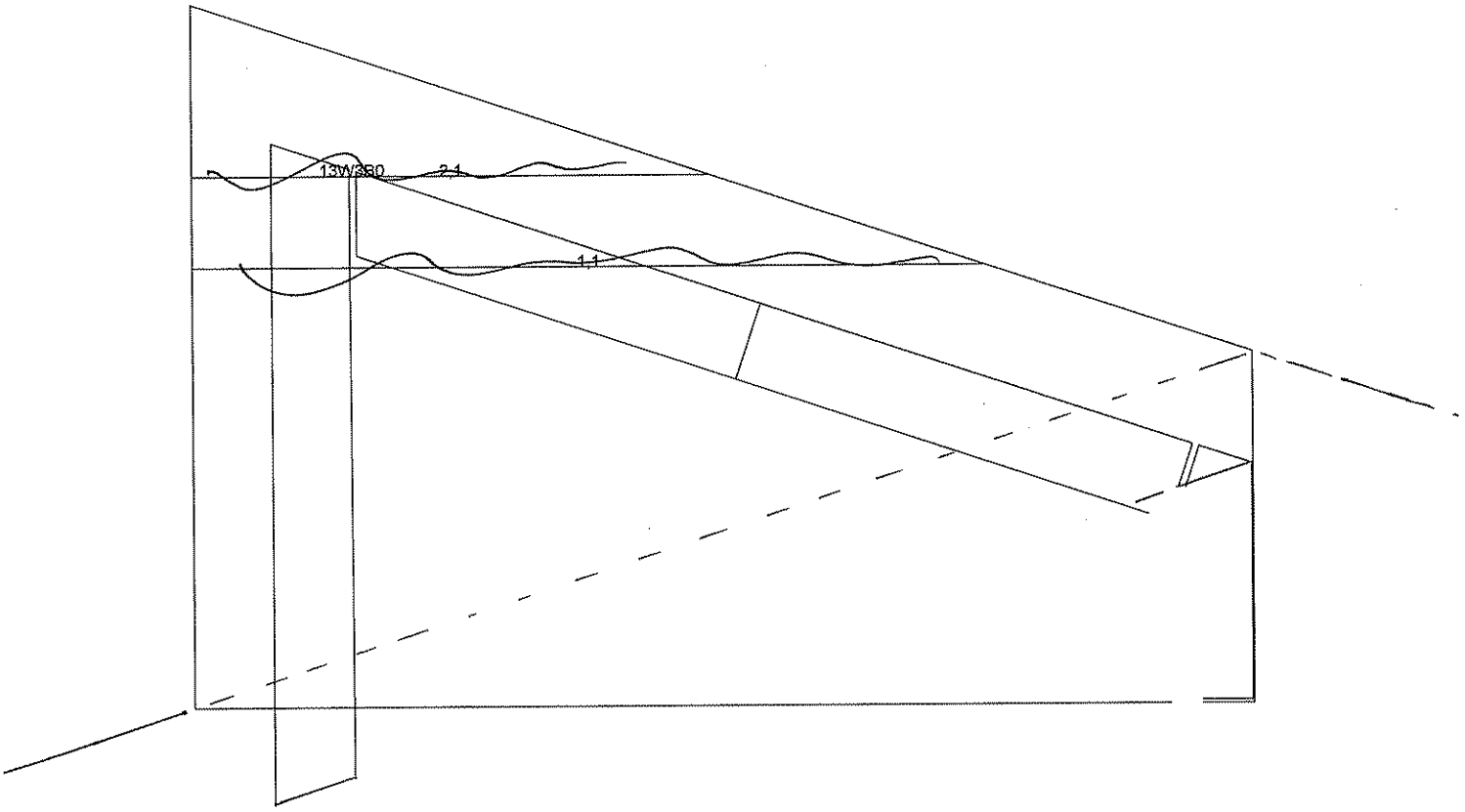
Maximum Secondary Designs for Shape Clerestory Frames on Side 2

Des Id	Len (ft)	Description	Design Status	Detail Lap (in.)	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)	Interior % Bnd	Interior % Shr	Interior % Cmb	Interior % Wcp	Interior Ld Cs	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)
1,1	30.00	8.50x0.082 Z Sim	Yes	0							0.87	0.00	0.00	0.00	1						
1,2	30.00	8.50x0.082 Z Sim	Yes	0							0.87	0.00	0.00	0.00	1						
1,3	30.00	8.50x0.082 Z Sim	Yes	0							0.87	0.00	0.00	0.00	1						
1,4	10.83	8.50x0.059 Z Sim	Yes	0							0.23	0.00	0.00	0.00	1						

Maximum Secondary Deflections for Shape Clerestory Frames on Side 2

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	1.43	(L/252)	15.00	1	W1>
1	2	1.43	(L/252)	45.00	1	W1>
1	3	1.43	(L/252)	75.00	1	W1>
1	4	0.04	(L/3187)	95.50	1	W1>

Wall: 3



Dimension Key
1 4'-0"
2 9 15/16"
3 1'-6 3/4"

NOT USED

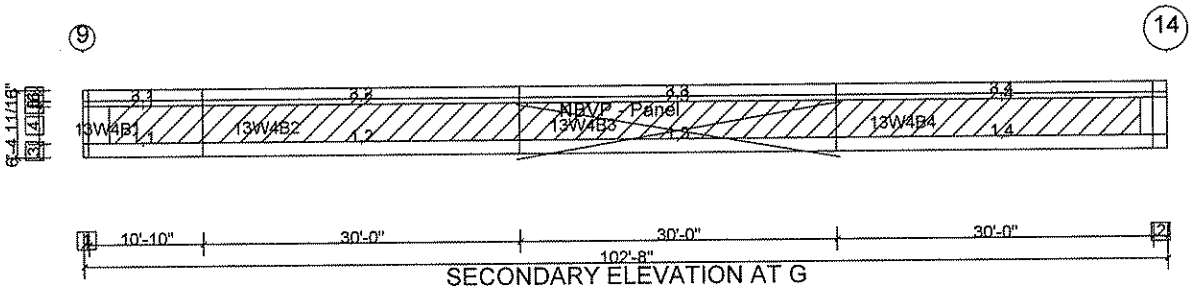
Maximum Secondary Designs for Shape Clerestory Frames on Side 3

Des Id	Len (ft)	Description	Design Status	Detail Lap (in.)	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)	Interior % Bnd	Interior % Shr	Interior % Cmb	Interior % Wcp	Interior Ld Cs	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)
1,1	7.17	8.50x0.059 Z Sim	Yes	0							0.17	0.00	0.10	0.00	1						
2,1	4.69	8.50x0.059 Z Sim	Yes	0							0.03	0.00	0.00	0.00	1						

Maximum Secondary Deflections for Shape Clerestory Frames on Side 3

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	0.00	(L/6613)	3.50	1	W1>
2	1	-	-	-	-	-

Wall: 4



(WALL @ CLERESTORY WINDOWS)

Dimension Key

1 6"
2 1'-4"
3 1'-3 15/16"
4 3'-6 1/4"
5 6 3/16"
6 1'-0 5/16"

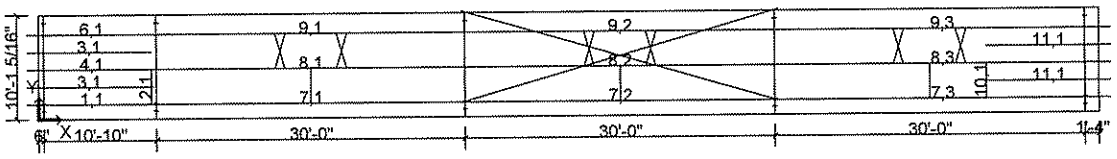
Maximum Secondary Designs for Shape Clerestory Frames on Side 4

Des Id	Len (ft)	Description	Design Status	Detail Lap (in.)	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)	Interior % Bnd	Interior % Shr	Interior % Cmb	Interior % Wcp	Interior Ld Cs	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)
1,1	11.33	8.50x0.059 C Sim	Yes	0							0.33	0.00	0.20	0.00	1						
1,2	30.00	8.50x0.120 C Sim	Yes	0							0.91	0.00	0.00	0.00	1						
1,3	30.00	8.50x0.120 C Sim	Yes	0							0.91	0.00	0.00	0.00	1						
1,4	31.33	8.50x0.105 C Sim	Yes	0							1.03	0.00	0.00	0.00	1						
2,1	11.33	8.50x0.059 C Sim	Yes	0							0.27	0.00	0.17	0.00	1						
2,2	30.00	8.50x0.092 C Sim	Yes	0							0.98	0.00	0.00	0.00	1						
2,3	30.00	8.50x0.092 C Sim	Yes	0							0.98	0.00	0.00	0.00	1						
2,4	31.33	8.50x0.092 C Sim	Yes	0							0.97	0.00	0.00	0.00	1						
3,1	11.33	8.50x0.059 Z Sim	Yes	0							0.11	0.00	0.00	0.00	1						
3,2	30.00	8.50x0.059 Z Sim	Yes	0							0.72	0.00	0.00	0.00	1						
3,3	30.00	8.50x0.059 Z Sim	Yes	0							0.72	0.00	0.00	0.00	1						
3,4	31.33	8.50x0.059 Z Sim	Yes	0							0.72	0.00	0.00	0.00	1						

Maximum Secondary Deflections for Shape Clerestory Frames on Side 4

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	0.06	(L/2091)	6.00	1	W1>
1	2	1.54	(L/234)	26.33	1	W1>
1	3	1.54	(L/234)	56.33	1	W1>
1	4	1.73	(L/208)	86.33	1	W1>
2	1	0.05	(L/2510)	6.00	1	W1>
2	2	1.65	(L/218)	26.33	1	W1>
2	3	1.65	(L/218)	56.33	1	W1>
2	4	1.64	(L/220)	86.33	1	W1>
3	1	0.00	(L/6686)	6.00	1	W1>
3	2	0.98	(L/366)	26.33	1	W1>
3	3	0.98	(L/366)	56.33	1	W1>
3	4	0.97	(L/370)	86.33	1	W1>

Roof: A



(ROOF OVER CLERESTORY AREA)

Maximum Secondary Designs for Shape Clerestory Frames on Side A

Des Id	Len (ft)	Description	Design Status	Detail Lap (in.)	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	Interior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	12.46	11.50x0.065 Z Sim	Yes	0							0.10	0.55	0.55	0.00	14						
2,1	3.40	8.50x0.059 C Sim	Yes	0							0.52	0.12	0.15	0.00	14						
3,1	12.00	11.50x0.065 Z Sim	Yes	0							0.03	0.28	0.28	0.00	14						
4,1	12.46	11.50x0.065 Z Sim	Yes	0							0.08	0.44	0.44	0.00	14						
5,1	3.40	8.50x0.059 C Sim	Yes	0							0.32	0.07	0.09	0.00	14						
6,1	12.46	11.50x0.065 Z Sim	Yes	0							0.07	0.35	0.36	0.00	14						
7,1	30.00	11.50x0.082 Z Con	Yes	24							0.92	0.00	0.59	0.00	17	0.64	0.22	0.47	0.00	14	24
7,2	30.00	11.50x0.082 Z Con	Yes	24	0.56	0.18	0.45	0.00	14	24	0.92	0.33	0.75	0.00	14	0.47	0.09	0.35	0.00	14	24
7,3	32.46	11.50x0.120 Z Con	Yes	24	0.68	0.12	0.36	0.00	14	24	0.79	0.00	0.00	0.00	17						
8,1	30.00	11.50x0.082 Z Con	Yes	36							0.93	0.00	0.00	0.00	17	0.76	0.30	0.57	0.00	14	36
8,2	30.00	11.50x0.065 Z Con	Yes	24	0.69	0.24	0.54	0.00	14	24	1.00	0.58	0.91	0.00	14	0.54	0.10	0.40	0.00	14	24
8,3	32.46	11.50x0.120 Z Con	Yes	48	0.76	0.14	0.41	0.00	14	48	0.76	0.00	0.00	0.00	17						
9,1	30.00	11.50x0.120 Z Con	Yes	24							0.89	0.00	0.00	0.00	17	0.72	0.13	0.38	0.00	14	24
9,2	30.00	11.50x0.082 Z Con	Yes	24	0.49	0.11	0.37	0.00	14	24	0.99	0.40	0.83	0.00	14	0.52	0.11	0.39	0.00	14	24
9,3	32.46	11.50x0.120 Z Con	Yes	24	0.76	0.14	0.40	0.00	14	24	0.95	0.00	0.00	0.00	17						
10,1	3.40	8.50x0.059 C Sim	Yes	0							0.55	0.13	0.16	0.00	14						
11,1	12.00	11.50x0.065 Z Sim	Yes	0							0.07	0.28	0.28	0.00	14						
12,1	3.40	8.50x0.059 C Sim	Yes	0							0.34	0.08	0.10	0.00	14						

Maximum Secondary Deflections for Shape Clerestory Frames on Side A

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	0.06	(L/2171)	7.13	1	W1>
2	1	-	-	-	-	-
3	1	0.00	(L/4284)	6.63	1	W1>
4	1	0.04	(L/3576)	7.13	1	W1>
5	1	-	-	-	-	-
6	1	0.04	(L/3276)	7.13	1	W1>
7	1	0.83	(L/436)	13.00	1	W1>
7	2	-0.13	(L/2740)	53.50	1	W1>
7	3	0.84	(L/429)	77.00	1	W1>
8	1	0.82	(L/438)	13.00	1	W1>
8	2	-0.11	(L/3144)	53.50	1	W1>
8	3	0.75	(L/479)	76.50	1	W1>
9	1	0.70	(L/513)	13.00	1	W1>
9	2	-0.09	(L/4214)	55.50	1	W1>
9	3	0.77	(L/466)	76.50	1	W1>
10	1	-	-	-	-	-
11	1	0.00	(L/6209)	4.50	1	W1>
12	1	-	-	-	-	-

Purlin Anchorage Forces for Shape Clerestory Frames, Roof A, Panel Type is SLR2, Pitch = 4.000:12

Bay	Thickness	Force(k)	Ld Case	# Purlins	Length	Simple?	Diaphragm	Allowable Defl	Actual Defl

							Width		
1	0.065	-2.75	1	3	12.46	Y	10.11	0.415	0.000
2	0.082	-6.17	1	3	30.00	N	10.11	1.000	0.000
3	0.082	-6.17	1	3	30.00	N	10.11	1.000	0.000
4	0.120	-6.86	1	3	32.46	N	10.11	1.082	0.000

Frm-Line	Force(k)	Anch. Allow	Required Clips	Actual Clips	Diaphragm Allow	Diaphragm Shr	Stress
1	0.01	0.00	0	0	0.017	0.000	0.000
2	0.17	0.00	0	0	0.017	0.000	0.000
3	0.30	0.00	0	0	0.017	0.000	0.000
4	0.28	0.00	0	0	0.017	0.000	0.000
5	0.17	0.00	0	0	0.017	0.000	0.000

Framing - Summary Report

Loads and Codes - Shape: Maintenance Area

City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code
Building Use: Standard Occupancy Structure
Built Up: 05AISC - ASD
Cold Form: 04AISI - ASD
Rainfall: 10.00 inches per hour

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.685)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000
Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 27/9/0
Parts / Portions Zone Strip Width: 6/8/6
Basic Wind Pressure: 25.20,(Parts) 25.76 psf

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed
(0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

Seismic Load
Mapped Spectral Response - Ss:11.80 %g
Mapped Spectral Response - S1:5.10 %g
Seismic Hazard / Use Group: Group 1

Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.3340
Bracing Seismic Period: 0.2043
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

Deflection Conditions
Frames are vertically supporting:Ceiling with Flexible Finish
Frames are laterally supporting:Unreinforced Masonry Wall
Purlins are supporting:Ceiling with Flexible Finish
Girts are supporting:Unreinforced Masonry Wall

Crane Schedule Information

Name	Type	Service Classification	Method of Operation	Capacity (Ton)	Bridge Span	Bridge Construction
2 T. FUTURE Monorail	Monorail Crane	C (Moderate Service)	Pendant Operated	2.00	N/A	N/A

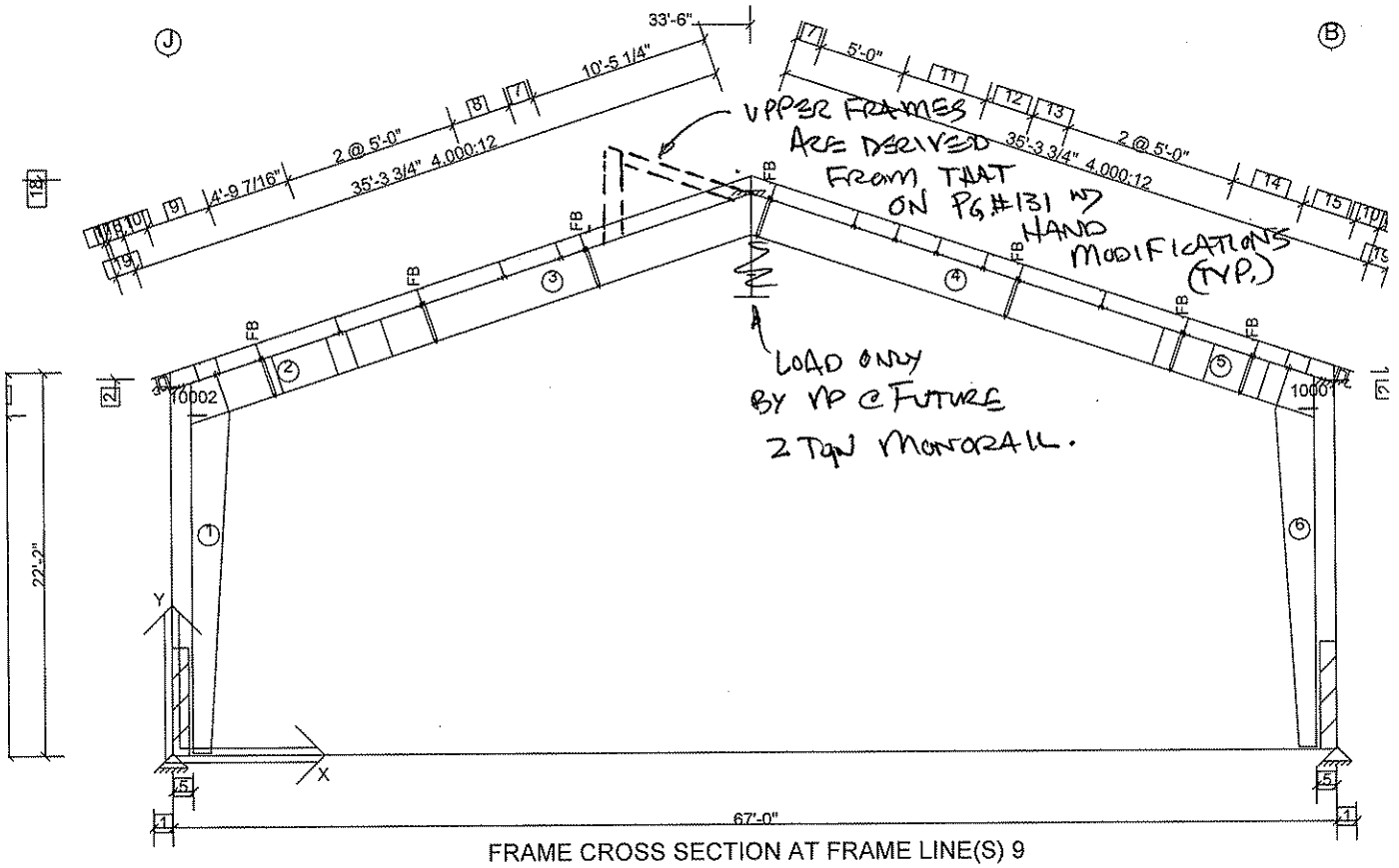
Wall: 4

Name1	Name2	Type	Bracket Shape	Start Frame	Start Adjust.	End Frame	End Adjust.	Aisle	Start Elev.	From Left Edge	From Right Edge
2 T. FUTURE Monorail		Flexible Suspension - Hangers	NBVP	1	0/3/0	5	0/3/0	1	26/4/0	33/5/12	0/0/0

Type	Designed & Provided	Size	Size	Rail Size (lb/yd)	Vertical Deflection	Horizontal Deflection	Vertical Impact(%)	Lateral Impact(%)	Longitudinal Impact(%)
Wide Flange - Hot Rolled	NBVP	W 16		0	-	-	10.00	20.00	10.00

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

Wall: 4, Frame at: 0/6/0
Frame Cross Section: 9



FRAME CROSS SECTION AT FRAME LINE(S) 9

Dimension Key
1 1'-1 1/2"
2 21'-9 1/2"
3 33'-5 3/4" BL to CL of Runway Beam
4 33'-6 1/4" BL to CL of Runway Beam
5 1'-2"
6 2'-5 3/4"
7 1'-5 13/16"
8 3'-5 5/16"
9 3'-8 3/4"
10 1'-5 3/16"
11 2 @ 2'-6"
12 2'-10 3/16"
13 2'-1 13/16"
14 4'-2 11/16"
15 3'-2"
16 11 1/4"
17 3"
18 33'-4" Ridge Ht.
19 1'-2 1/4" 4.000:12

Frame Clearances
Horiz. Clearance between members 1(CX200) and 6(CX201): 60'-3"

Vert. Clearance at member 1(CX200): 19'-10 1/4"
Vert. Clearance at member 6(CX201): 19'-8 1/8"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
0/6/0	5/11/0	Rigid Frame	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 L>	D + AD + CG + L>
2	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <L	D + AD + CG + <L
3	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 S>	D + AD + CG + S>
4	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <S	D + AD + CG + <S
5	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 US1*	D + AD + CG + US1*
6	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 *US1	D + AD + CG + *US1
7	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W1>	D + AD + CG + W1>
8	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W1	D + AD + CG + <W1
9	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W2>	D + AD + CG + W2>
10	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W2	D + AD + CG + <W2
11	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP	D + AD + CG + WP
12	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W1>	D + AD + CU + W1>
13	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W1	D + AD + CU + <W1
14	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W2>	D + AD + CU + W2>
15	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W2	D + AD + CU + <W2
16	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP	D + AD + CU + WP
17	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 AL	D + AD + CG+AL
18	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W1>	D + AD + CG + L + W1>
19	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W1	D + AD + CG + L + <W1
20	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W2>	D + AD + CG + L + W2>
21	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W2	D + AD + CG + L + <W2
22	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP	D + AD + CG + L + WP
23	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W1>	D + AD + CG + S + W1>
24	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W1	D + AD + CG + S + <W1
25	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W2>	D + AD + CG + S + W2>
26	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W2	D + AD + CG + S + <W2
27	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP	D + AD + CG + S + WP
28	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.563 S + 0.750 AL	D + AD + CG + S+AL
29	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W1> + 0.750 AL	D + AD + CG + W1>+AL
30	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W1 + 0.750 AL	D + AD + CG + <W1+AL
31	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W2> + 0.750 AL	D + AD + CG + W2>+AL
32	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W2 + 0.750 AL	D + AD + CG + <W2+AL
33	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 WP + 0.750 AL	D + AD + CG + WP+AL
34	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 E> + 0.700 EG+	D + AD + CG + E> + EG+
35	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <E + 0.700 EG+	D + AD + CG + <E + EG+
36	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 E> + 0.700 EG-	D + AD + CU + E> + EG-
37	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <E + 0.700 EG-	D + AD + CU + <E + EG-
38	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 E> + 0.525 EG+	D + AD + CG + E> + EG+
39	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <E + 0.525 EG+	D + AD + CG + <E + EG+

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
10001	5.00	0.1345	0.1345	11.50	11.50	1.62	34.4	55.00	55.00	SS	SS	3P
10002	5.00	0.1345	0.1345	11.50	11.50	1.62	34.4	55.00	55.00	SS	SS	3P
1	8.00	0.2500	0.1644	12.00	26.00	21.42	555.0	55.00	55.00	BP	KN	3P
2	5.00	0.2500	0.1345	27.00	27.00	9.37	180.4	55.00	55.00	KN	SS	3P
3	5.00	0.3125	0.1345	27.00	27.00	24.71	572.2	55.00	55.00	SS	SP	3P
4	5.00	0.3125	0.1345	27.00	27.00	25.00	578.8	55.00	55.00	SP	SS	3P
5	5.00	0.2500	0.1345	27.00	27.00	9.08	175.8	55.00	55.00	SS	KN	3P
6	8.00	0.2500	0.1644	12.00	26.00	21.42	560.4	55.00	55.00	BP	KN	3P

Total Frame Weight = 2691.5 (p) (Includes all plates)
Frame Pricing Weight = 2860.6 (p) (Includes all pieces)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
6	67/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
10001	67/0/0	22/2/0	Yes	Yes	Yes	0/0/0	0/0/0	0.0000

10002 0	0/0/0 33/5/12	22/2/0 33/3/15	Yes Yes	Yes Yes	Yes Yes	0/0/0 0/0/0	0/0/0 0/0/0	0.0000 0.0000

Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section: 9

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		67/0/0				
Grid1 - Grid2		9-J		9-B				
Base Plate W x L (in.)		9 x 13		9 x 13				
Base Plate Thickness (in.)		0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750				
Column Base Elev.		100'-1 1/2"		100'-1 1/2"				
Load Type	Desc.	Hx	Vy	Hx	Vy			
D	Frm	0.8	2.5	-0.8	2.5	-	-	-
AD	Frm	0.0	0.1	-0.0	0.1	-	-	-
CG	Frm	0.7	1.8	-0.7	1.8	-	-	-
L>	Frm	3.3	8.4	-3.3	7.7	-	-	-
<L	Frm	3.3	8.4	-3.3	7.7	-	-	-
S>	Frm	0.4	1.1	-0.4	1.0	-	-	-
<S	Frm	0.4	1.1	-0.4	1.0	-	-	-
US1*	Frm	0.4	0.7	-0.4	1.1	-	-	-
*US1	Frm	0.3	0.7	-0.3	0.5	-	-	-
W1>	Frm	-3.9	-6.3	0.2	-4.5	-	-	-
<W1	Frm	-0.3	-4.8	4.0	-7.3	-	-	-
W2>	Frm	-4.1	-4.2	-0.5	-1.9	-	-	-
<W2	Frm	-0.5	-2.7	3.3	-4.8	-	-	-
WP	Frm	-1.1	-4.8	-0.4	-5.0	-	-	-
CU	Frm	-	-	-	-	-	-	-
AL	Frm	1.3	2.4	-1.3	2.4	-	-	-
L	Frm	2.6	6.6	-2.6	6.7	-	-	-
S	Frm	0.3	0.8	-0.3	0.9	-	-	-
E>	Frm	-0.2	-0.2	-0.2	0.2	-	-	-
EG+	Frm	0.0	0.1	-0.0	0.1	-	-	-
<E	Frm	0.2	0.2	0.2	-0.2	-	-	-
EG-	Frm	-0.0	-0.1	0.0	-0.1	-	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	9-J	3.6	14	4.9	1	-	-	-	-	4.8	12	12.7	1	-	-	-	-
67/0/0	9-B	4.9	1	3.5	13	-	-	-	-	5.8	13	12.1	1	-	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	5.2	5.0
AD	0.0	0.0	0.2	0.2
CG	0.0	0.0	3.6	3.6
L>	0.0	0.0	16.1	16.1
<L	0.0	0.0	16.1	16.1
S>	0.0	0.0	2.0	2.0
<S	0.0	0.0	2.0	2.0
US1*	0.0	0.0	1.8	1.8
*US1	0.0	0.0	1.2	1.2
W1>	3.7	3.7	10.8	10.8
<W1	3.7	3.7	12.1	12.1
W2>	4.6	4.6	6.1	6.1
<W2	2.8	2.8	7.4	7.4
WP	1.5	1.5	9.8	9.8
CU	0.0	0.0	0.0	0.0
AL	0.0	0.0	5.0	4.7
L	0.0	0.0	13.4	13.4

S	0.0	0.0	1.7	1.7
E>	0.5	0.5	0.0	0.0
EG+	0.0	0.0	0.2	0.2
<E	0.5	0.5	0.0	0.0
EG-	0.0	0.0	0.2	0.2

Base Plate Summary

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Num. Of Bolts	Bolt Diam. (in.)	Type	Welds to Flange	Welds to Web
0/0/0	9-J	1	0.375	9	13	4	0.750	A36	OS-0.1875	OS-0.1875
67/0/0	9-B	6	0.375	9	13	4	0.750	A36	OS-0.1875	OS-0.1875

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S9	19.02	25.078	152.54	N/A	N/A	0.3125	3.500	Both	W-OS-0.1875
2	1	S1	3.31	26.500	197.03	1.50	39.75	0.1875	2.000	Opposite Fillet	Std
2	2	S1	6.63	26.500	197.03	1.50	39.75	0.1875	2.000	Opposite Fillet	Std
3	1	S1	2.14	26.375	196.10	1.50	39.56	0.1875	2.000	Opposite Fillet	Std
5	1	S1	3.07	26.500	197.03	1.50	39.75	0.1875	2.000	Opposite Fillet	Std
5	2	S1	6.38	26.500	197.03	1.50	39.75	0.1875	2.000	Opposite Fillet	Std
6	1	S9	19.02	25.896	157.52	N/A	N/A	0.3125	3.500	Both	W-OS-0.1875

Brackets Part Summary

Mem. No.	Loc. (ft)	Total Length (in.)	Bracket Cut (in.)	Bracket Depth (in.)	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Hole Pitch (in.)	Stiffener or Plate	Part

Brackets Design Summary (vertical live load is with the impact factor)

Mem. No.	Loc. (ft)	Vert. Live Load (k)	Vert. Dead Load (k)	Lateral Impact (k)	Longitudinal Impact (k)	CL Dist to Flange (in.)	Member Depth1 (in.)	Member Depth2 (in.)	Web Thk (in.)	Flg Thk (in.)	Flg Width (in.)

Bolted End-Plate Moment Connections (AISC DG-16) - Fy = 55 ksi

			End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
Mem. No.	Jt. No.	Type	Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	0.375	8.00	30.25	0.750	A325X/ST	3.00	32	Extended	3.25/2.00	12	Flush	2.00/2.00
2	1	KN(Face)	0.375	6.00	30.25	0.750	A325X/ST	3.00	32	Extended	3.25/2.00	12	Flush	2.00/2.00
3	2	SP	0.375	6.00	32.09	0.750	A325X/ST	3.00	11	Flush	0.00	31	Extended	3.63
4	1	SP	0.375	6.00	32.09	0.750	A325X/ST	3.00	11	Flush	0.00	31	Extended	3.63
5	2	KN(Face)	0.375	6.00	32.50	0.750	A325X/ST	3.00	32	Extended	3.25/2.00	31	Extended	3.25/2.00
6	2	KN(Face)	0.375	8.00	32.50	0.750	A325X/ST	3.00	32	Extended	3.25/2.00	31	Extended	3.25/2.00

		Required Strength - Out				Available Strength - Out			Required Strength - In				Available Strength - In		
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)
1	2	2	-8.1	9.5	1052.9	Thin plate	212.1	970.6	12	2.6	4.0	581.5	Thin plate	159.0	604.0
2	1	2	-8.1	9.5	1052.9	Thin plate	212.1	970.6	12	2.6	4.0	581.5	Thin plate	159.0	604.0
3	2	13	4.0	1.2	229.6	Thin plate	106.0	504.6	1	-4.3	2.3	839.9	Thin plate	159.0	837.5
4	1	13	4.0	1.2	229.6	Thin plate	106.0	504.6	1	-4.3	2.3	839.9	Thin plate	159.0	837.5
5	2	1	-7.9	8.7	1071.4	Thin plate	212.1	970.6	13	3.8	4.6	598.7	Thin plate	159.0	833.7
6	2	1	-7.9	8.7	1071.4	Thin plate	212.1	970.6	13	3.8	4.6	598.7	Thin plate	159.0	833.7

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Design Note
2	2/8/10	30/1/13	FB3044	
3	4/8/0	20/4/6	FB3044	
3	14/7/2	10/5/4	FB3044	
4	1/2/0	1/5/13	FB3044	
4	16/2/0	16/5/13	FB3044	
5	1/2/0	26/5/13	FB3044	
5	5/4/11	30/8/9	FB3044	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
10001	2.42	11.50	1	1	0.1	0.3	-6.5	0.0	94.2	17.5	204.7	39.0	0.03	0.02
10002	2.42	11.50	1	1	0.1	-0.2	-5.4	0.0	88.2	17.5	204.7	39.0	0.03	0.01
1	19.78	26.00	2	2	-12.9	-4.5	-1079.5	0.0	57.1	14.0	1382.1	250.2	0.84	0.32
2	0.74	27.00	2	2	-8.1	9.5	-1052.9	0.0	104.3	10.7	1275.2	95.9	0.86	0.89
3	19.46	27.00	1	2	-5.2	7.5	894.9	0.0	61.2	7.4	931.5	132.8	1.00	1.00
4	0.79	27.00	2	1	-5.1	-7.2	833.7	0.0	61.2	7.4	931.5	132.8	0.88	0.96
5	7.55	27.00	1	1	-7.9	-7.4	-1071.4	0.0	104.3	10.7	1275.2	95.9	0.88	1.00
6	19.78	26.00	1	1	-12.3	4.6	-1088.6	0.0	57.1	14.0	1382.7	250.2	0.83	0.33

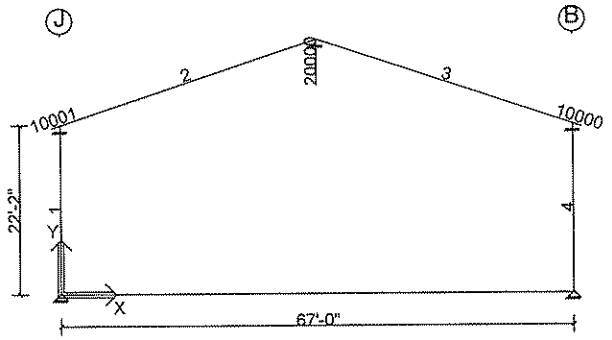
Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
10001	2.42	28.99	29.0	29.0	2.86	2.86	59.32	2.80	10.32	1.12	11.88	1.73	0.02	90.56	1.00	1.00	1.15	0.60	1.00
10002	2.42	28.99	29.0	29.0	2.86	2.86	59.32	2.80	10.32	1.12	11.88	1.73	0.02	90.56	1.00	1.00	1.15	0.60	1.00
1	19.78	237.35	237.4	237.4	8.19	8.19	890.25	21.34	68.48	5.34	78.23	8.17	0.12	3537.90	1.65	1.00	1.00	0.65	0.83
2	0.74	386.08	18.9	18.9	6.06	6.06	655.82	5.21	48.58	2.09	57.05	3.24	0.07	932.68	1.00	1.00	1.00	0.94	0.59
3	19.46	386.08	126.4	126.4	6.67	6.67	762.10	6.52	56.45	2.61	65.09	4.03	0.12	1160.17	1.01	1.00	1.00	1.00	0.68
4	0.79	386.08	126.4	126.4	6.67	6.67	762.10	6.52	56.45	2.61	65.09	4.03	0.12	1160.17	1.01	1.00	1.00	1.00	0.76
5	7.55	386.08	25.9	25.9	6.06	6.06	655.82	5.21	48.58	2.09	57.05	3.24	0.07	932.68	1.09	1.00	1.00	0.94	0.59
6	19.78	237.35	237.4	237.4	8.19	8.19	890.25	21.34	68.48	5.34	78.23	8.17	0.12	3537.90	1.65	1.00	1.00	0.65	0.83

User Defined Frame Point Loads for Cross Section: 9

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	Clerestory->Resolved From Plane	746.95	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	Clerestory->Resolved From Plane	1292.35	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	Clerestory->Resolved From Plane	-907.02	21/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	Clerestory->Resolved From Plane	-361.62	21/0/0	NA	NA	N	LEFT	1.000	OF
2	p	CG	Clerestory->Resolved From Plane	-206.78	9/6/0	NA	NA	N	DOWN	1.000	OF

User Defined Frame Line Loads for Cross Section: 9

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	Valley	-36.30	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	L	Valley	-209.20	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	L>	Valley	-209.20	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	<L	Valley	-209.20	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	S>	Valley	-26.20	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	<S	Valley	-26.20	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	S	Valley	-26.20	0/0/2	-0.00	27/8/1	N	DOWN	1.000	OF
2	plf	W1>	Valley	203.00	0/0/2	0.00	27/8/1	N	UP	1.000	OF
2	plf	<W1	Valley	158.00	0/0/2	0.00	27/8/1	N	UP	1.000	OF
2	plf	W2>	Valley	107.60	0/0/2	0.00	27/8/1	N	UP	1.000	OF
2	plf	<W2	Valley	63.20	0/0/2	0.00	27/8/1	N	UP	1.000	OF
2	plf	D	Upper Roof->Resolved From Plane	-20.49	0/0/0	-20.48	9/11/3	N	DOWN	1.000	OF
2	plf	L>	Upper Roof->Resolved From Plane	-118.22	0/0/0	-118.15	9/11/3	N	DOWN	1.000	OF
2	plf	<L	Upper Roof->Resolved From Plane	-118.22	0/0/0	-118.15	9/11/3	N	DOWN	1.000	OF
2	plf	L	Upper Roof->Resolved From Plane	-118.22	0/0/0	-118.15	9/11/3	N	DOWN	1.000	OF
2	plf	S>	Upper Roof->Resolved From Plane	-14.78	0/0/0	-14.77	9/11/3	N	DOWN	1.000	OF
2	plf	<S	Upper Roof->Resolved From Plane	-14.78	0/0/0	-14.77	9/11/3	N	DOWN	1.000	OF
2	plf	US1*	Upper Roof->Resolved From Plane	-14.78	0/0/0	-14.77	9/11/3	N	DOWN	1.000	OF
2	plf	*US1	Upper Roof->Resolved From Plane	-14.78	0/0/0	-14.77	9/11/3	N	DOWN	1.000	OF
2	plf	S	Upper Roof->Resolved From Plane	-14.78	0/0/0	-14.77	9/11/3	N	DOWN	1.000	OF
2	plf	W1>	Upper Roof->Resolved From Plane	114.39	0/0/0	114.33	9/11/3	N	UP	0.768	OF
2	plf	<W1	Upper Roof->Resolved From Plane	89.37	0/0/0	89.32	9/11/3	N	UP	0.600	OF
2	plf	W2>	Upper Roof->Resolved From Plane	60.77	0/0/0	60.74	9/11/3	N	UP	0.408	OF
2	plf	<W2	Upper Roof->Resolved From Plane	35.75	0/0/0	35.73	9/11/3	N	UP	0.240	OF
3	plf	W1>	Fix Valley	100.00	0/0/2	0.00	14/8/9	N	UP	1.000	OF
3	plf	<W1	Fix Valley	164.00	0/0/2	0.00	14/8/9	N	UP	1.000	OF
3	plf	W2>	Fix Valley	100.00	0/0/2	0.00	14/8/9	N	UP	1.000	OF
3	plf	<W2	Fix Valley	163.00	0/0/2	0.00	14/8/9	N	UP	1.000	OF
3	plf	WP	Fix Valley	180.00	0/0/2	0.00	14/8/9	N	UP	1.000	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	240	1.0 L	L
2	System	1.000	0	240	1.0 S	S
3	System	1.000	0	240	1.0 US1*	US1*

4	System	1.000	0	240	1.0 *US1	*US1
5	System	1.000	0	240	0.700 W1>	W1>
6	System	1.000	0	240	0.700 <W1	<W1
7	System	1.000	0	240	0.700 W2>	W2>
8	System	1.000	0	240	0.700 <W2	<W2
9	System	1.000	0	240	0.700 WP	WP
10	System	1.000	200	0	0.700 W1>	W1>
11	System	1.000	200	0	0.700 <W1	<W1
12	System	1.000	200	0	0.700 W2>	W2>
13	System	1.000	200	0	0.700 <W2	<W2
14	System	1.000	200	0	0.700 WP	WP
15	System	1.000	50	0	1.0 E> + 1.0 EG-	E> + EG-
16	System	1.000	50	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 9

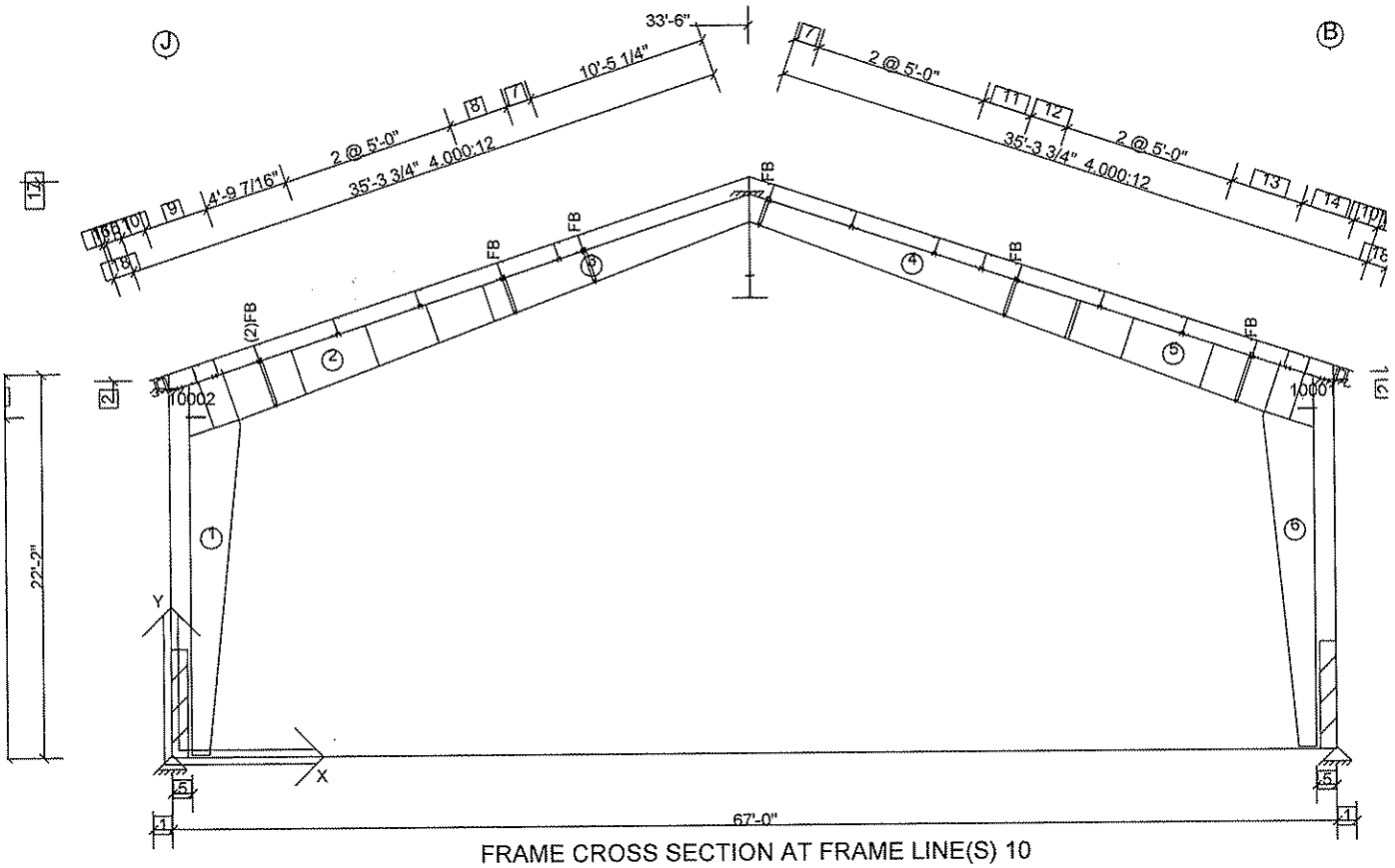
Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/303)	0.815	1	2	12	W2>
Max. Vertical Deflection for Span 1	(L/796)	-0.941	4	1	1	L

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Wall: 4, Frame at: 11/4/0

Frame Cross Section: 10



FRAME CROSS SECTION AT FRAME LINE(S) 10

Dimension Key

1 1'-1 1/2"
2 21'-9 1/2"
3 33'-5 3/4" BL to CL of Runway Beam
4 33'-6 1/4" BL to CL of Runway Beam
5 1'-2"
6 2'-5 3/4"
7 1'-5 13/16"
8 3'-5 5/16"
9 3'-8 3/4"
10 1'-5 3/16"
11 2'-10 3/16"
12 2'-1 13/16"
13 4'-2 11/16"
14 3'-2"
15 11 1/4"
16 3"
17 33'-4" Ridge Ht.
18 1'-2 1/4" 4.000:12

Frame Clearances

Horiz. Clearance between members 1(CX202) and 6(CX203): 58'-10 1/4"
Vert. Clearance at member 1(CX202): 19'-3 7/16"

Vert. Clearance at member 6(CX203): 19'-3 7/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
11/4/0	20/5/0	Rigid Frame	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 L>	D + AD + CG + L>
2	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <L	D + AD + CG + <L
3	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 S>	D + AD + CG + S>
4	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <S	D + AD + CG + <S
5	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 US1*	D + AD + CG + US1*
6	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 *US1	D + AD + CG + *US1
7	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W1>	D + AD + CG + W1>
8	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W1	D + AD + CG + <W1
9	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W2>	D + AD + CG + W2>
10	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W2	D + AD + CG + <W2
11	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP	D + AD + CG + WP
12	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W1>	D + AD + CU + W1>
13	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W1	D + AD + CU + <W1
14	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W2>	D + AD + CU + W2>
15	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W2	D + AD + CU + <W2
16	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP	D + AD + CU + WP
17	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 AL	D + AD + CG+AL
18	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W1>	D + AD + CG + L + W1>
19	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W1	D + AD + CG + L + <W1
20	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W2>	D + AD + CG + L + W2>
21	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W2	D + AD + CG + L + <W2
22	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP	D + AD + CG + L + WP
23	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W1>	D + AD + CG + S + W1>
24	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W1	D + AD + CG + S + <W1
25	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W2>	D + AD + CG + S + W2>
26	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W2	D + AD + CG + S + <W2
27	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP	D + AD + CG + S + WP
28	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.563 S + 0.750 AL	D + AD + CG + S+AL
29	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W1> + 0.750 AL	D + AD + CG + W1>+AL
30	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W1 + 0.750 AL	D + AD + CG + <W1+AL
31	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W2> + 0.750 AL	D + AD + CG + W2>+AL
32	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W2 + 0.750 AL	D + AD + CG + <W2+AL
33	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 WP + 0.750 AL	D + AD + CG + WP+AL
34	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 E> + 0.700 EG+	D + AD + CG + E> + EG+
35	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <E + 0.700 EG+	D + AD + CG + <E + EG+
36	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 E> + 0.700 EG-	D + AD + CU + E> + EG-
37	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <E + 0.700 EG-	D + AD + CU + <E + EG-
38	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 E> + 0.525 EG+	D + AD + CG + E> + EG+
39	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <E + 0.525 EG+	D + AD + CG + <E + EG+

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
10001	5.00	0.1345	0.1345	11.50	11.50	1.62	34.4	55.00	55.00	SS	SS	3P
10002	5.00	0.1345	0.1345	11.50	11.50	1.62	34.4	55.00	55.00	SS	SS	3P
1	8.00	0.5000	0.1875	12.00	34.00	21.42	957.5	55.00	55.00	BP	KN	3P
2	6.00	0.3750	0.1644	34.00	28.00	14.37	429.1	55.00	55.00	KN	SS	3P
3	6.00	0.2500	0.1345	28.00	18.00	19.71	412.5	55.00	55.00	SS	SP	3P
4	6.00	0.2500	0.1345	18.00	28.00	20.00	418.4	55.00	55.00	SP	SS	3P
5	6.00	0.3750	0.1644	28.00	34.00	14.08	419.9	55.00	55.00	SS	KN	3P
6	8.00	0.5000	0.1875	12.00	34.00	21.42	957.5	55.00	55.00	BP	KN	3P

Total Frame Weight = 3663.8 (p) (Includes all plates)
Frame Pricing Weight = 3903.1 (p) (Includes all pieces)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
6	67/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
10001	67/0/0	22/2/0	Yes	Yes	Yes	0/0/0	0/0/0	0.0000

10002	0/0/0	22/2/0	Yes	Yes	Yes	0/0/0	0/0/0	0.0000
0	33/5/12	33/3/15	Yes	Yes	Yes	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section: 10

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		67/0/0				
Grid1 - Grid2		10-J		10-B				
Base Plate W x L (in.)		9 x 13		9 x 13				
Base Plate Thickness (in.)		0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750				
Column Base Elev.		100'-1 1/2"		100'-1 1/2"				
Load Type	Desc.	Hx	Vy	Hx	Vy			
D	Frm	1.5	4.4	-1.5	4.4	-	-	-
AD	Frm	0.2	0.3	-0.2	0.3	-	-	-
CG	Frm	1.7	4.0	-1.7	3.8	-	-	-
L>	Frm	6.0	14.1	-6.0	14.1	-	-	-
<L	Frm	6.0	14.1	-6.0	14.1	-	-	-
S>	Frm	0.7	1.8	-0.7	1.8	-	-	-
<S	Frm	0.7	1.8	-0.7	1.8	-	-	-
US1*	Frm	1.0	1.5	-1.0	2.2	-	-	-
*US1	Frm	0.5	1.5	-0.5	0.8	-	-	-
W1>	Frm	-11.6	-15.7	-2.1	-8.6	-	-	-
<W1	Frm	3.3	-8.3	11.2	-15.8	-	-	-
W2>	Frm	-12.7	-10.2	-3.0	-1.9	-	-	-
<W2	Frm	2.2	-2.9	10.4	-9.1	-	-	-
WP	Frm	-0.0	-11.9	-1.7	-12.4	-	-	-
CU	Frm	-	-	-	-	-	-	-
AL	Frm	1.8	2.4	-1.8	2.4	-	-	-
L	Frm	6.0	14.1	-6.0	14.1	-	-	-
S	Frm	0.7	1.8	-0.7	1.8	-	-	-
E>	Frm	-0.6	-0.4	-0.6	0.4	-	-	-
EG+	Frm	0.1	0.2	-0.1	0.2	-	-	-
<E	Frm	0.6	0.4	0.6	-0.4	-	-	-
EG-	Frm	-0.1	-0.2	0.1	-0.2	-	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	10-J	11.7	14	10.4	19	-	-	-	-	12.9	12	22.8	1	-	-	-	-
67/0/0	10-B	10.1	20	10.2	13	-	-	-	-	13.0	13	22.6	1	-	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	9.1	8.8
AD	0.0	0.0	0.6	0.6
CG	0.0	0.0	7.8	7.8
L>	0.0	0.0	28.3	28.3
<L	0.0	0.0	28.3	28.3
S>	0.0	0.0	3.6	3.6
<S	0.0	0.0	3.6	3.6
US1*	0.0	0.0	3.7	3.7
*US1	0.0	0.0	2.3	2.3
W1>	13.7	13.7	24.2	24.2
<W1	14.5	14.5	24.1	24.1
W2>	15.6	15.6	12.1	12.1
<W2	12.6	12.6	12.0	12.0
WP	1.8	1.8	24.3	24.3
CU	0.0	0.0	0.0	0.0
AL	0.0	0.0	5.0	4.8
L	0.0	0.0	28.3	28.3

S	0.0	0.0	3.6	3.6
E>	1.3	1.3	0.0	0.0
EG+	0.0	0.0	0.4	0.4
<E	1.3	1.3	0.0	0.0
EG-	0.0	0.0	0.4	0.4

Base Plate Summary

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Num. Of Bolts	Bolt Diam. (in.)	Type	Welds to Flange	Welds to Web
0/0/0	10-J	1	0.375	9	13	4	0.750	A36	OS-0.1875	OS-0.1875
67/0/0	10-B	6	0.375	9	13	4	0.750	A36	OS-0.1875	OS-0.1875

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S9	18.42	33.060	176.32	N/A	N/A	0.3750	3.500	Both	W-OS-0.1875
1	2	S11 (S10)		Alternate	Web	Thick.=	0.2500	0.3750	3.500	Opposite Fillet	W-BS-0.1875
2	1	S1	4.12	31.246	190.06	1.50	46.87	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
2	2	S1	8.64	29.045	176.68	1.75	50.83	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
3	1	S1	0.04	27.500	204.46	1.50	41.25	0.1875	2.000	Opposite Fillet	Std
3	2	S1	3.48	25.711	191.16	1.50	38.57	0.1875	2.000	Opposite Fillet	Std
4	1	S1	19.75	27.393	203.67	1.50	41.09	0.1875	2.000	Opposite Fillet	Std
5	1	S1	3.23	28.859	175.54	1.50	43.29	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
5	2	S1	8.07	31.272	190.22	1.75	54.73	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
6	1	S9	18.42	33.060	176.32	N/A	N/A	0.3750	3.500	Both	W-OS-0.1875
6	2	S11 (S10)		Alternate	Web	Thick.=	0.2500	0.3750	3.500	Opposite Fillet	W-BS-0.1875

Brackets Part Summary

Mem. No.	Loc. (ft)	Total Length (in.)	Bracket Cut (in.)	Bracket Depth (in.)	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Hole Pitch (in.)	Stiffener or Plate	Part

Brackets Design Summary (vertical live load is with the impact factor)

Mem. No.	Loc. (ft)	Vert. Live Load (k)	Vert. Dead Load (k)	Lateral Impact (k)	Longitudinal Impact (k)	CL Dist to Flange (in.)	Member Depth1 (in.)	Member Depth2 (in.)	Web Thk (in.)	Flg Thk (in.)	Flg Width (in.)

Bolted End-Plate Moment Connections (AISC DG-16) - Fy = 55 ksi

Mem. No.	Jt. No.	Type	End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
			Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	0.500	8.00	39.50	0.750	A325X/ST	3.00	31	Extended	3.50	31	Extended	3.50
2	1	KN(Face)	0.500	6.00	39.50	0.750	A325X/ST	3.00	31	Extended	3.50	31	Extended	3.50
3	2	SP	0.375	6.00	22.87	0.750	A325X/ST	3.00	11	Flush	0.00	31	Extended	3.75
4	1	SP	0.375	6.00	22.87	0.750	A325X/ST	3.00	11	Flush	0.00	31	Extended	3.75
5	2	KN(Face)	0.500	6.00	39.50	0.750	A325X/ST	3.00	31	Extended	3.50	31	Extended	3.50
6	2	KN(Face)	0.500	8.00	39.50	0.750	A325X/ST	3.00	31	Extended	3.50	31	Extended	3.50

		Required Strength - Out				Available Strength - Out			Required Strength - In				Available Strength - In		
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)
1	2	2	-15.2	14.9	1948.3	Thin plate	159.0	2112.1	12	6.8	10.0	1695.9	Thin plate	159.0	2112.1
2	1	2	-15.2	14.9	1948.3	Thin plate	159.0	2112.1	12	6.8	10.0	1695.9	Thin plate	159.0	2112.1
3	2	14	0.9	2.1	129.2	Thin plate	106.0	355.7	22	1.5	1.2	442.1	Thin plate	159.0	607.1
4	1	14	0.9	2.1	129.2	Thin plate	106.0	355.7	22	1.5	1.2	442.1	Thin plate	159.0	607.1
5	2	20	-12.5	11.4	2001.2	Thin plate	159.0	2093.5	13	8.9	9.4	1610.1	Thin plate	159.0	2093.5
6	2	20	-12.5	11.4	2001.2	Thin plate	159.0	2093.5	13	8.9	9.4	1610.1	Thin plate	159.0	2093.5

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Design Note
2	2/2/8	30/1/13	(2)FB4050	
3	4/8/0	15/4/6	FB3034	
3	9/7/2	10/5/4	FB3014	
4	1/2/0	1/5/13	FB2104	
4	16/2/0	16/5/13	FB3040	

5	10/4/11	30/8/9	FB4050	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
10001	2.42	11.50	1	1	0.3	0.8	-17.8	0.0	94.2	17.5	204.7	39.0	0.09	0.04
10002	2.42	11.50	1	1	0.3	-0.8	-17.8	0.0	88.2	17.5	204.7	39.0	0.09	0.04
1	16.17	30.33	14	2	7.6	-8.4	1493.6	0.0	445.5	18.3	2948.3	536.5	0.52	0.52
2	3.19	32.93	19	21	-5.7	11.2	-1538.6	0.0	64.6	11.1	1806.6	229.9	0.81	1.03
3	2.33	26.79	13	21	7.7	6.9	-555.7	0.0	215.7	7.4	711.7	111.8	0.80	0.97
4	19.76	28.00	7	20	2.6	-7.1	-519.8	0.0	221.1	7.1	791.2	111.9	0.66	1.00
5	10.39	33.18	20	20	-12.2	-10.8	-1782.1	0.0	69.8	11.0	1955.2	230.0	1.00	0.98
6	19.40	34.00	1	1	-23.1	8.5	-1972.9	0.0	118.6	16.2	3687.5	537.6	0.48	0.52

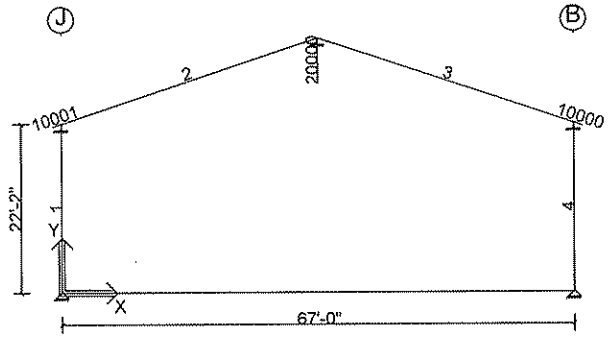
Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
10001	2.42	28.99	29.0	29.0	2.86	2.86	59.32	2.80	10.32	1.12	11.88	1.73	0.02	90.56	1.00	1.00	1.15	0.60	1.00
10002	2.42	28.99	29.0	29.0	2.86	2.86	59.32	2.80	10.32	1.12	11.88	1.73	0.02	90.56	1.00	1.00	1.15	0.60	1.00
1	16.17	232.80	232.8	232.8	13.50	13.50	2174.59	42.68	143.38	10.67	159.67	16.26	0.73	9497.22	1.43	1.00	1.00	1.00	1.00
2	3.19	381.59	26.5	26.5	9.79	9.79	1648.32	13.51	100.13	4.50	115.79	6.97	0.26	3578.98	1.06	1.00	1.00	1.00	0.71
3	2.33	381.59	177.5	177.5	6.54	6.54	731.67	9.01	54.63	3.00	63.04	4.62	0.08	1585.23	1.02	1.00	1.00	0.84	1.00
4	19.76	381.59	170.7	170.7	6.70	6.70	810.66	9.01	57.90	3.00	67.05	4.62	0.09	1733.72	1.05	1.00	1.00	0.84	1.00
5	10.39	381.59	170.7	170.7	9.83	9.83	1677.86	13.51	101.14	4.50	117.03	6.97	0.26	3635.02	1.56	1.00	1.00	1.00	0.70
6	19.40	232.80	232.8	232.8	14.19	14.19	2806.18	42.68	165.07	10.67	185.05	16.29	0.74	11975.75	1.66	1.00	1.00	1.00	0.76

User Defined Frame Point Loads for Cross Section: 10

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	Clerestory->Resolved From Plane	2572.50	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	Clerestory->Resolved From Plane	4450.83	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	Clerestory->Resolved From Plane	-3123.75	21/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	Clerestory->Resolved From Plane	-1245.42	21/0/0	NA	NA	N	LEFT	1.000	OF
2	p	CG	Clerestory->Resolved From Plane	-714.58	9/6/0	NA	NA	N	DOWN	1.000	OF

User Defined Frame Line Loads for Cross Section: 10

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	Upper Roof->Resolved From Plane	-70.76	0/0/0	-70.76	9/11/3	N	DOWN	1.000	OF
2	plf	L>	Upper Roof->Resolved From Plane	-408.33	0/0/0	-408.33	9/11/3	N	DOWN	1.000	OF
2	plf	<L	Upper Roof->Resolved From Plane	-408.33	0/0/0	-408.33	9/11/3	N	DOWN	1.000	OF
2	plf	L	Upper Roof->Resolved From Plane	-408.33	0/0/0	-408.33	9/11/3	N	DOWN	1.000	OF
2	plf	S>	Upper Roof->Resolved From Plane	-51.04	0/0/0	-51.04	9/11/3	N	DOWN	1.000	OF
2	plf	<S	Upper Roof->Resolved From Plane	-51.04	0/0/0	-51.04	9/11/3	N	DOWN	1.000	OF
2	plf	US1*	Upper Roof->Resolved From Plane	-51.04	0/0/0	-51.04	9/11/3	N	DOWN	1.000	OF
2	plf	*US1	Upper Roof->Resolved From Plane	-51.04	0/0/0	-51.04	9/11/3	N	DOWN	1.000	OF
2	plf	S	Upper Roof->Resolved From Plane	-51.04	0/0/0	-51.04	9/11/3	N	DOWN	1.000	OF
2	plf	W1>	Upper Roof->Resolved From Plane	395.12	0/0/0	395.12	9/11/3	N	UP	0.768	OF
2	plf	<W1	Upper Roof->Resolved From Plane	308.69	0/0/0	308.69	9/11/3	N	UP	0.600	OF
2	plf	W2>	Upper Roof->Resolved From Plane	209.90	0/0/0	209.90	9/11/3	N	UP	0.408	OF
2	plf	<W2	Upper Roof->Resolved From Plane	123.47	0/0/0	123.47	9/11/3	N	UP	0.240	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	240	1.0 L	L
2	System	1.000	0	240	1.0 S	S
3	System	1.000	0	240	1.0 US1*	US1*
4	System	1.000	0	240	1.0 *US1	*US1
5	System	1.000	0	240	0.700 W1>	W1>
6	System	1.000	0	240	0.700 <W1	<W1
7	System	1.000	0	240	0.700 W2>	W2>
8	System	1.000	0	240	0.700 <W2	<W2
9	System	1.000	0	240	0.700 WP	WP
10	System	1.000	200	0	0.700 W1>	W1>
11	System	1.000	200	0	0.700 <W1	<W1
12	System	1.000	200	0	0.700 W2>	W2>
13	System	1.000	200	0	0.700 <W2	<W2
14	System	1.000	200	0	0.700 WP	WP
15	System	1.000	50	0	1.0 E> + 1.0 EG-	E> + EG-
16	System	1.000	50	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 10

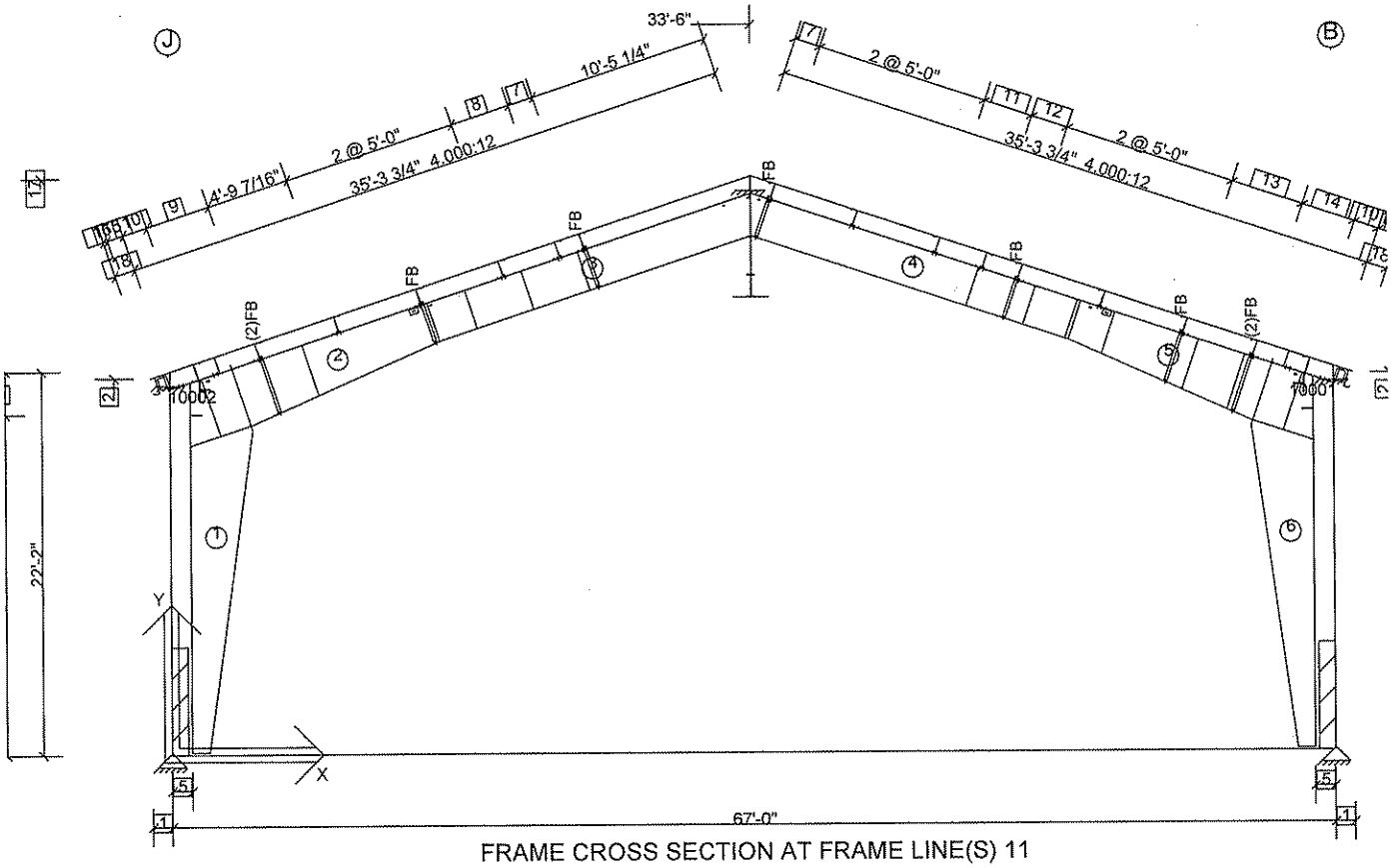
Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description

Max. Horizontal Deflection	(H/204)	1.197	1	2	12	W2>
Max. Vertical Deflection for Span 1	(L/868)	-0.853	4	1	1	L

* Negative horizontal deflection is left
* Negative vertical deflection is down
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Wall: 4, Frame at: 41/4/0

Frame Cross Section: 11



FRAME CROSS SECTION AT FRAME LINE(S) 11

Dimension Key

1 1'-1 1/2"
2 21'-9 1/2"
3 33'-5 3/4" BL to CL of Runway Beam
4 33'-6 1/4" BL to CL of Runway Beam
5 1'-2"
6 2'-5 3/4"
7 1'-5 13/16"
8 3'-5 5/16"
9 3'-8 3/4"
10 1'-5 3/16"
11 2'-10 3/16"
12 2'-1 13/16"
13 4'-2 11/16"
14 3'-2"
15 11 1/4"
16 3"
17 33'-4" Ridge Ht.
18 1'-2 1/4" 4.000:12

Frame Clearances

Horiz. Clearance between members 1(CX204) and 6(CX205): 57'-6 1/4"
Vert. Clearance at member 1(CX204): 18'-9 11/16"

Vert. Clearance at member 6(CX205): 18'-9 11/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
41/4/0	30/0/0	Rigid Frame	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 L>	D + AD + CG + L>
2	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <L	D + AD + CG + <L
3	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 S>	D + AD + CG + S>
4	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <S	D + AD + CG + <S
5	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 US1*	D + AD + CG + US1*
6	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 *US1	D + AD + CG + *US1
7	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W1>	D + AD + CG + W1>
8	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W1	D + AD + CG + <W1
9	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W2>	D + AD + CG + W2>
10	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W2	D + AD + CG + <W2
11	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W1>	D + AD + CU + W1>
12	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W1	D + AD + CU + <W1
13	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W2>	D + AD + CU + W2>
14	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W2	D + AD + CU + <W2
15	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 AL	D + AD + CG+AL
16	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W1>	D + AD + CG + L + W1>
17	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W1	D + AD + CG + L + <W1
18	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W2>	D + AD + CG + L + W2>
19	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W2	D + AD + CG + L + <W2
20	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W1>	D + AD + CG + S + W1>
21	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W1	D + AD + CG + S + <W1
22	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W2>	D + AD + CG + S + W2>
23	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W2	D + AD + CG + S + <W2
24	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.563 S + 0.750 AL	D + AD + CG + S+AL
25	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W1> + 0.750 AL	D + AD + CG + W1>+AL
26	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W1 + 0.750 AL	D + AD + CG + <W1+AL
27	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W2> + 0.750 AL	D + AD + CG + W2>+AL
28	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W2 + 0.750 AL	D + AD + CG + <W2+AL
29	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 E> + 0.700 EG+	D + AD + CG + E> + EG+
30	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <E + 0.700 EG+	D + AD + CG + <E + EG+
31	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 E> + 0.700 EG-	D + AD + CU + E> + EG-
32	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <E + 0.700 EG-	D + AD + CU + <E + EG-
33	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 E> + 0.525 EG+	D + AD + CG + E> + EG+
34	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <E + 0.525 EG+	D + AD + CG + <E + EG+
35	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB1>	D + AD + CG + WP + WB1>
36	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB1>	D + AD + CU + WP + WB1>
37	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB1>	D+AD+CG+L+WP+WB1>
38	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB1>	D+AD+CG+S+WP+WB1>
39	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB1	D + AD + CG + WP + <WB1
40	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB1	D + AD + CU + WP + <WB1
41	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB1	D+AD+CG+L+WP+<WB1
42	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB1	D+AD+CG+S+WP+<WB1
43	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB2>	D + AD + CG + WP + WB2>
44	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB2>	D + AD + CU + WP + WB2>
45	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB2>	D+AD+CG+L+WP+WB2>
46	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB2>	D+AD+CG+S+WP+WB2>
47	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB2	D + AD + CG + WP + <WB2
48	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB2	D + AD + CU + WP + <WB2
49	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB2	D+AD+CG+L+WP+<WB2
50	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB2	D+AD+CG+S+WP+<WB2
51	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 EB> + 0.700 EG+	D + AD + CG + EB> + EG+
52	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 EB> + 0.700 EG-	D + AD + CU + EB> + EG-
53	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 EB> + 0.525 EG+	D + AD + CG + EB> + EG+
54	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <EB + 0.700 EG+	D + AD + CG + <EB + EG+
55	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <EB + 0.700 EG-	D + AD + CU + <EB + EG-
56	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <EB + 0.525 EG+	D + AD + CG + <EB + EG+

Frame Member Sizes

Mem.	Flg Width	Flg Thk	Web Thk	Depth1	Depth2	Length	Weight	Flg Fy	Web Fy	Splice	Codes	Shape

No.	(in.)	(in.)	(in.)	(in.)	(in.)	(ft)	(p)	(ksi)	(ksi)	Jt.1	Jt.2	
10001	5.00	0.1345	0.1345	11.50	11.50	1.62	34.4	55.00	55.00	SS	SS	3P
10002	5.00	0.1345	0.1345	11.50	11.50	1.62	34.4	55.00	55.00	SS	SS	3P
1	8.00	0.5000	0.1875	12.00	42.00	21.42	1032.3	55.00	55.00	BP	KN	3P
2	6.00	0.3750	0.1875	42.00	28.00	14.37	479.4	55.00	55.00	KN	SS	3P
3	6.00	0.2500	0.1345	28.00	28.00	19.71	460.8	55.00	55.00	SS	SP	3P
4	6.00	0.2500	0.1345	28.00	28.00	20.00	467.4	55.00	55.00	SP	SS	3P
5	6.00	0.3750	0.1875	28.00	42.00	14.08	468.7	55.00	55.00	SS	KN	3P
6	8.00	0.5000	0.1875	12.00	42.00	21.42	1032.3	55.00	55.00	BP	KN	3P

Total Frame Weight = 4009.8 (p) (Includes all plates)
Frame Pricing Weight = 4346.1 (p) (Includes all pieces)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
6	67/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
10001	67/0/0	22/2/0	Yes	Yes	Yes	0/0/0	0/0/0	0.0000
10002	0/0/0	22/2/0	Yes	Yes	Yes	0/0/0	0/0/0	0.0000
0	33/5/12	33/3/15	Yes	Yes	Yes	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section: 11

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		67/0/0				
Grid1 - Grid2		11-J		11-B				
Base Plate W x L (in.)		9 x 13		9 x 13				
Base Plate Thickness (in.)		0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 1.000		4 - 1.000				
Column Base Elev.		100'-1 1/2"		100'-1 1/2"				
Load Type	Desc.	Hx	Vy	Hx	Vy			
D	Frm	2.0	5.8	-2.0	5.8	-	-	-
AD	Frm	0.3	0.4	-0.3	0.4	-	-	-
CG	Frm	2.5	5.9	-2.5	5.6	-	-	-
L>	Frm	8.7	20.8	-8.7	20.8	-	-	-
<L	Frm	8.7	20.8	-8.7	20.8	-	-	-
S>	Frm	1.1	2.6	-1.1	2.6	-	-	-
<S	Frm	1.1	2.6	-1.1	2.6	-	-	-
US1*	Frm	1.4	2.2	-1.4	3.2	-	-	-
*US1	Frm	0.7	2.2	-0.7	1.2	-	-	-
W1>	Frm	-16.9	-23.0	-3.1	-12.6	-	-	-
<W1	Frm	4.9	-12.2	16.5	-23.1	-	-	-
W2>	Frm	-18.5	-14.9	-4.5	-2.8	-	-	-
<W2	Frm	3.3	-4.2	15.2	-13.3	-	-	-
CU	Frm	-	-	-	-	-	-	-
AL	Frm	1.7	2.4	-1.7	2.4	-	-	-
L	Frm	8.7	20.8	-8.7	20.8	-	-	-
S	Frm	1.1	2.6	-1.1	2.6	-	-	-
E>	Frm	-0.9	-0.5	-0.9	0.5	-	-	-
EG+	Frm	0.1	0.3	-0.1	0.3	-	-	-
<E	Frm	0.9	0.5	0.9	-0.5	-	-	-
EG-	Frm	-0.1	-0.3	0.1	-0.3	-	-	-
WP	Frm	1.7	-14.1	-3.4	-14.1	-	-	-
WB1>	Brc	-	-	-	-	-	-	-
<WB1	Brc	-	-	-	-	-	-	-
WB2>	Brc	-	-	-	-	-	-	-
<WB2	Brc	-	-	-	-	-	-	-
EB>	Brc	-	-	-	-	-	-	-
<EB	Brc	-	-	-	-	-	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	11-J	17.1	13	15.0	17	-	-	-	-	19.2	11	32.9	1	-	-	-	-
67/0/0	11-B	14.7	18	15.1	12	-	-	-	-	19.4	12	32.6	1	-	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	11.9	11.7
AD	0.0	0.0	0.9	0.8
CG	0.0	0.0	11.4	11.4
L>	0.0	0.0	41.5	41.5
<L	0.0	0.0	41.5	41.5
S>	0.0	0.0	5.3	5.3
<S	0.0	0.0	5.3	5.3
US1*	0.0	0.0	5.4	5.4
*US1	0.0	0.0	3.4	3.4
W1>	20.1	20.1	35.5	35.5
<W1	21.4	21.4	35.3	35.4
W2>	23.0	23.0	17.7	17.7
<W2	18.5	18.5	17.5	17.5
CU	0.0	0.0	0.0	0.0
AL	0.0	0.0	5.0	4.8
L	0.0	0.0	41.5	41.5
S	0.0	0.0	5.3	5.3
E>	1.8	1.8	0.0	0.0
EG+	0.0	0.0	0.6	0.6
<E	1.8	1.8	0.0	0.0
EG-	0.0	0.0	0.6	0.6
WP	1.6	1.6	28.2	28.2
WB1>	0.0	0.0	0.0	0.0
<WB1	0.0	0.0	0.0	0.0
WB2>	0.0	0.0	0.0	0.0
<WB2	0.0	0.0	0.0	0.0
EB>	0.0	0.0	0.0	0.0
<EB	0.0	0.0	0.0	0.0

Base Plate Summary

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Num. Of Bolts	Bolt Diam. (in.)	Type	Welds to Flange	Welds to Web
0/0/0	11-J	1	0.375	9	13	4	1.000	A36	OS-0.1875	OS-0.1875
67/0/0	11-B	6	0.375	9	13	4	1.000	A36	OS-0.1875	OS-0.1875

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S9	17.71	40.373	215.32	N/A	N/A	0.3750	3.500	Both	W-OS-0.1875
1	2	S11 (S10)		Alternate	Web	Thick.=	0.2500	0.5000	3.500	Opposite Fillet	W-BS-0.1875
2	1	S1	4.26	36.217	193.16	1.25	45.27	0.1875	2.000	Opposite Fillet	Std
3	1	S1	0.04	27.500	204.46	1.00	27.50	0.1875	2.000	Opposite Fillet	Std
3	2	S1	2.33	27.500	204.46	1.00	27.50	0.1875	2.000	Opposite Fillet	Std
3	3	S1	5.77	27.500	204.46	1.50	41.25	0.1875	2.000	Opposite Fillet	Std
3	4	S1	9.21	27.500	204.46	1.50	41.25	0.1875	2.000	Opposite Fillet	Std
4	1	S1	13.77	27.500	204.46	1.50	41.25	0.1875	2.000	Opposite Fillet	Std
4	2	S1	17.20	27.500	204.46	1.50	41.25	0.1875	2.000	Opposite Fillet	Std
4	3	S1	19.75	27.500	204.46	1.00	27.50	0.1875	2.000	Opposite Fillet	Std
5	1	S1	2.08	29.770	158.77	1.00	29.77	0.1875	2.000	Opposite Fillet	Std
5	2	S1	7.14	35.894	191.44	1.75	62.81	0.1875	2.000	Opposite Fillet	Std
5	3	S1	9.95	39.296	209.58	1.25	49.12	0.1875	2.000	Opposite Fillet	Std
6	1	S9	17.71	40.373	215.32	N/A	N/A	0.3750	3.500	Both	W-OS-0.1875
6	2	S11		Alternate	Web	Thick.=	0.2500	0.5000	3.500	Opposite Fillet	W-BS-0.1875

Brackets Part Summary

Mem. No.	Loc. (ft)	Total Length (in.)	Bracket Cut (in.)	Bracket Depth (in.)	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Hole Pitch (in.)	Stiffener or Plate	Part

Brackets Design Summary (vertical live load is with the impact factor)

Mem.	Loc.	Vert. Live	Vert. Dead	Lateral	Longitudinal	CL Dist to	Member	Member	Web Thk	Flg Thk	Flg Width

No.	(ft)	Load (k)	Load (k)	Impact (k)	Impact (k)	Flange (in.)	Depth1 (in.)	Depth2 (in.)	(in.)	(in.)	(in.)

Bolted End-Plate Moment Connections (AISC DG-16) - Fy = 55 ksi

Mem. No.	Jt. No.	Type	End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
			Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	0.500	8.00	47.50	0.750	A325X/ST	3.00	31	Extended	3.50	31	Extended	3.50
2	1	KN(Face)	0.500	6.00	47.50	0.750	A325X/ST	3.00	31	Extended	3.50	31	Extended	3.50
3	2	SP	0.375	6.00	33.14	0.750	A325X/ST	3.00	11	Flush	0.00	31	Extended	3.56
4	1	SP	0.375	6.00	33.14	0.750	A325X/ST	3.00	11	Flush	0.00	31	Extended	3.56
5	2	KN(Face)	0.500	6.00	47.50	0.750	A325X/ST	3.00	31	Extended	3.50	31	Extended	3.50
6	2	KN(Face)	0.500	8.00	47.50	0.750	A325X/ST	3.00	31	Extended	3.50	31	Extended	3.50

Mem. No.	Jt. No.	Required Strength - Out				Available Strength - Out			Required Strength - In				Available Strength - In		
		Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)
1	2	17	-8.8	12.8	2424.3	Thin plate	159.0	2628.8	11	10.5	14.3	2366.0	Thin plate	159.0	2628.8
2	1	17	-8.8	12.8	2424.3	Thin plate	159.0	2628.8	11	10.5	14.3	2366.0	Thin plate	159.0	2628.8
3	2	11	10.6	0.9	145.0	Thin plate	106.0	579.7	37	0.4	1.6	770.7	Thin plate	159.0	988.4
4	1	11	10.6	0.9	145.0	Thin plate	106.0	579.7	37	0.4	1.6	770.7	Thin plate	159.0	988.4
5	2	18	-18.4	15.7	2727.7	Thin plate	159.0	2613.5	12	13.7	13.2	2264.5	Thin plate	159.0	2613.5
6	2	18	-18.4	15.7	2727.7	Thin plate	159.0	2613.5	12	13.7	13.2	2264.5	Thin plate	159.0	2613.5

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Design Note
2	1/8/12	30/1/13	(2)FB4100	
2	11/6/3	20/4/6	FB4020	
3	9/7/2	10/5/4	FB3054	
4	1/2/0	1/5/13	FB3054	
4	16/2/0	16/5/13	FB3054	
5	6/2/0	26/5/13	FB4070	
5	10/4/11	30/8/9	(2)FB4104	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

Mem. No.	Loc. ft	Depth in.	Controlling Cases		Required Strength				Available Strength				Strength Ratios	
			Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
10001	2.42	11.50	1	1	0.4	1.1	-26.0	0.0	94.2	17.5	204.7	39.0	0.13	0.06
10002	2.42	11.50	1	1	0.4	-1.1	-26.0	0.0	88.2	17.5	204.7	39.0	0.13	0.06
1	18.94	42.00	2	2	-33.7	-11.5	-2614.1	0.0	124.5	13.0	4556.0	539.9	0.60	0.88
2	1.20	42.00	2	17	-22.4	12.8	-2577.3	0.0	217.9	12.8	4129.4	234.7	0.68	1.00
3	0.00	28.00	13	2	0.8	10.4	1007.2	0.0	221.1	10.3	1500.5	111.9	0.67	1.01
4	15.78	28.00	13	37	-1.2	-7.3	-738.1	0.0	41.9	7.1	844.3	111.9	0.79	1.03
5	11.57	42.00	18	18	-18.4	-14.0	-2727.7	0.0	217.9	21.0	4129.4	234.7	0.70	0.98
6	18.94	42.00	1	1	-33.4	11.5	-2622.5	0.0	124.5	13.0	4556.3	539.9	0.60	0.89

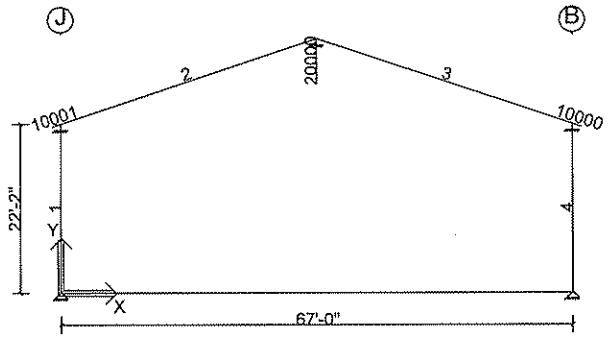
Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
10001	2.42	28.99	29.0	29.0	2.86	2.86	59.32	2.80	10.32	1.12	11.88	1.73	0.02	90.56	1.00	1.00	1.15	0.60	1.00
10002	2.42	28.99	29.0	29.0	2.86	2.86	59.32	2.80	10.32	1.12	11.88	1.73	0.02	90.56	1.00	1.00	1.15	0.60	1.00
1	18.94	227.27	227.3	227.3	15.69	15.69	4521.56	42.69	215.31	10.67	244.80	16.36	0.76	18380.37	1.66	1.00	1.00	1.00	0.70
2	1.20	374.22	29.1	29.1	12.23	12.23	3045.98	13.52	145.05	4.51	173.42	7.11	0.30	5857.48	1.00	1.00	1.00	1.00	0.54
3	0.00	374.22	119.1	60.0	6.70	6.70	810.66	9.01	57.90	3.00	67.05	4.62	0.09	1733.72	1.48	1.00	1.00	0.84	1.00
4	15.78	374.23	180.0	180.0	6.70	6.70	810.66	9.01	57.90	3.00	67.05	4.62	0.09	1733.71	1.29	1.00	1.00	0.84	0.72
5	11.57	374.23	14.0	14.0	12.23	12.23	3045.98	13.52	145.05	4.51	173.42	7.11	0.30	5857.48	1.03	1.00	1.00	1.00	0.54
6	18.94	227.27	227.3	227.3	15.69	15.69	4521.56	42.69	215.31	10.67	244.80	16.36	0.76	18380.37	1.66	1.00	1.00	1.00	0.70

User Defined Frame Point Loads for Cross Section: 11

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	Clerestory->Resolved From Plane	3780.00	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	Clerestory->Resolved From Plane	6540.00	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	Clerestory->Resolved From Plane	-4590.00	21/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	Clerestory->Resolved From Plane	-1830.00	21/0/0	NA	NA	N	LEFT	1.000	OF
2	p	CG	Clerestory->Resolved From Plane	-1050.00	9/6/0	NA	NA	N	DOWN	1.000	OF

User Defined Frame Line Loads for Cross Section: 11

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	Upper Roof->Resolved From Plane	-103.98	0/0/0	-103.98	9/11/3	N	DOWN	1.000	OF
2	plf	L>	Upper Roof->Resolved From Plane	-600.00	0/0/0	-600.00	9/11/3	N	DOWN	1.000	OF
2	plf	<L	Upper Roof->Resolved From Plane	-600.00	0/0/0	-600.00	9/11/3	N	DOWN	1.000	OF
2	plf	L	Upper Roof->Resolved From Plane	-600.00	0/0/0	-600.00	9/11/3	N	DOWN	1.000	OF
2	plf	S>	Upper Roof->Resolved From Plane	-75.00	0/0/0	-75.00	9/11/3	N	DOWN	1.000	OF
2	plf	<S	Upper Roof->Resolved From Plane	-75.00	0/0/0	-75.00	9/11/3	N	DOWN	1.000	OF
2	plf	US1*	Upper Roof->Resolved From Plane	-75.00	0/0/0	-75.00	9/11/3	N	DOWN	1.000	OF
2	plf	*US1	Upper Roof->Resolved From Plane	-75.00	0/0/0	-75.00	9/11/3	N	DOWN	1.000	OF
2	plf	S	Upper Roof->Resolved From Plane	-75.00	0/0/0	-75.00	9/11/3	N	DOWN	1.000	OF
2	plf	W1>	Upper Roof->Resolved From Plane	580.59	0/0/0	580.59	9/11/3	N	UP	0.768	OF
2	plf	<W1	Upper Roof->Resolved From Plane	453.59	0/0/0	453.59	9/11/3	N	UP	0.600	OF
2	plf	W2>	Upper Roof->Resolved From Plane	308.43	0/0/0	308.43	9/11/3	N	UP	0.408	OF
2	plf	<W2	Upper Roof->Resolved From Plane	181.43	0/0/0	181.43	9/11/3	N	UP	0.240	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	240	1.0 L	L
2	System	1.000	0	240	1.0 S	S
3	System	1.000	0	240	1.0 US1*	US1*
4	System	1.000	0	240	1.0 *US1	*US1
5	System	1.000	0	240	0.700 W1>	W1>
6	System	1.000	0	240	0.700 <W1	<W1
7	System	1.000	0	240	0.700 W2>	W2>
8	System	1.000	0	240	0.700 <W2	<W2
9	System	1.000	0	240	0.700 WP	WP
10	System Derived	1.000	0	240	0.700 WB1>	WB1>
11	System Derived	1.000	0	240	0.700 <WB1	<WB1
12	System Derived	1.000	0	240	0.700 WB2>	WB2>
13	System Derived	1.000	0	240	0.700 <WB2	<WB2
14	System	1.000	200	0	0.700 W1>	W1>
15	System	1.000	200	0	0.700 <W1	<W1
16	System	1.000	200	0	0.700 W2>	W2>
17	System	1.000	200	0	0.700 <W2	<W2
18	System	1.000	200	0	0.700 WP	WP
19	System Derived	1.000	200	0	0.700 WB1>	WB1>

20	System Derived	1.000	200	0	0.700 <WB1	<WB1
21	System Derived	1.000	200	0	0.700 WB2>	WB2>
22	System Derived	1.000	200	0	0.700 <WB2	<WB2
23	System	1.000	50	0	1.0 E> + 1.0 EG-	E> + EG-
24	System	1.000	50	0	1.0 <E + 1.0 EG-	<E + EG-
25	System Derived	1.000	50	0	1.0 EB>	EB>
26	System Derived	1.000	50	0	1.0 <EB	<EB

Controlling Frame Deflection Ratios for Cross Section: 11

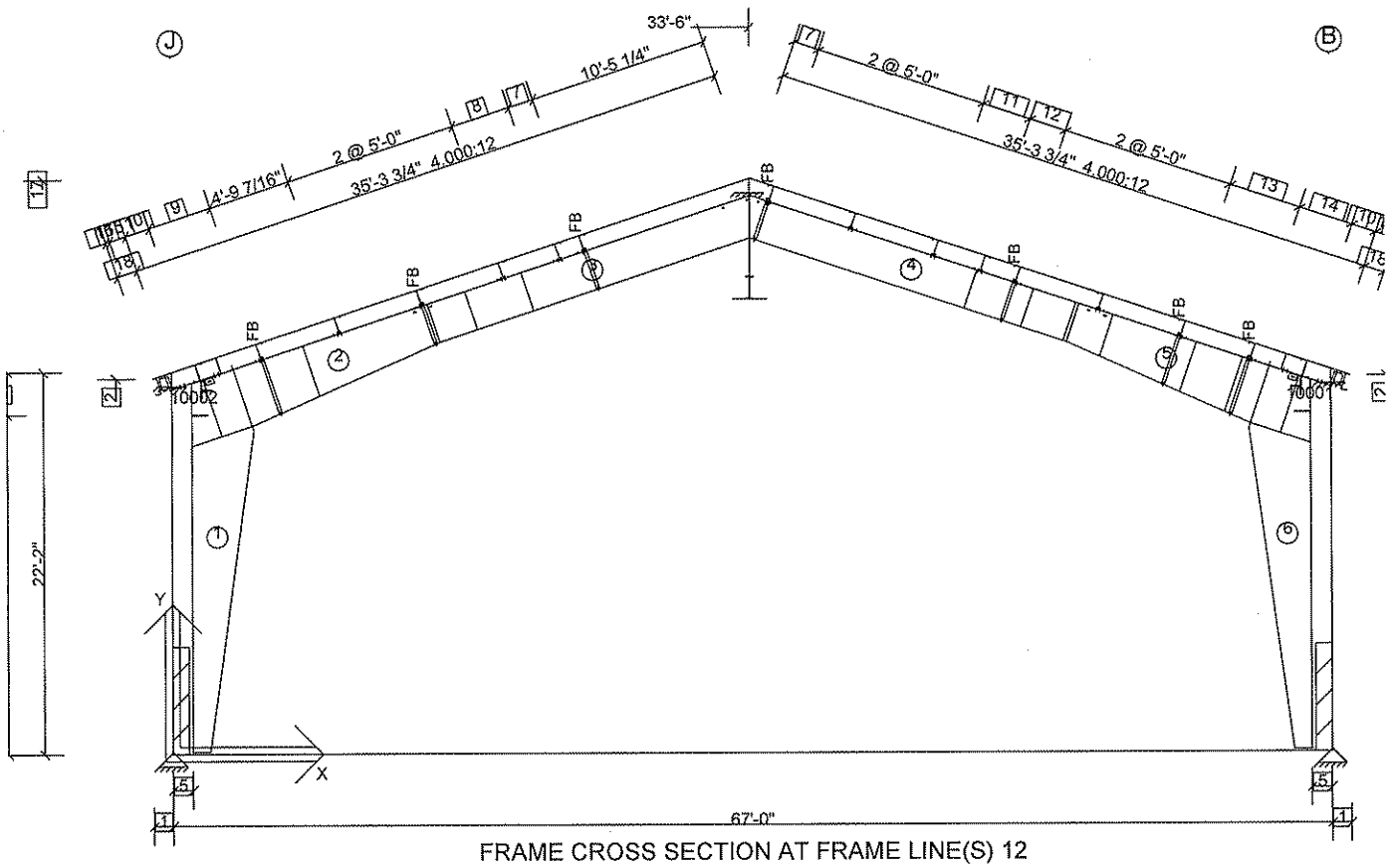
Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/206)	1.171	1	2	16	W2>
Max. Vertical Deflection for Span 1	(L/996)	-0.735	4	1	1	L

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Wall: 4, Frame at: 71/4/0

Frame Cross Section: 12



FRAME CROSS SECTION AT FRAME LINE(S) 12

Dimension Key

1 1'-1 1/2"
2 21'-9 1/2"
3 33'-5 3/4" BL to CL of Runway Beam
4 33'-6 1/4" BL to CL of Runway Beam
5 1'-2"
6 2'-5 3/4"
7 1'-5 13/16"
8 3'-5 5/16"
9 3'-8 3/4"
10 1'-5 3/16"
11 2'-10 3/16"
12 2'-1 13/16"
13 4'-2 11/16"
14 3'-2"
15 11 1/4"
16 3"
17 33'-4" Ridge Ht.
18 1'-2 1/4" 4.000:12

Frame Clearances

Horiz. Clearance between members 1(CX206) and 6(CX207): 57'-6 1/4"
Vert. Clearance at member 1(CX206): 18'-9 11/16"

Vert. Clearance at member 6(CX207): 18'-9 11/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
71/4/0	29/9/8	Rigid Frame	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 L>	D + AD + CG + L>
2	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <L	D + AD + CG + <L
3	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 S>	D + AD + CG + S>
4	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <S	D + AD + CG + <S
5	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 US1*	D + AD + CG + US1*
6	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 *US1	D + AD + CG + *US1
7	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W1>	D + AD + CG + W1>
8	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W1	D + AD + CG + <W1
9	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W2>	D + AD + CG + W2>
10	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W2	D + AD + CG + <W2
11	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W1>	D + AD + CU + W1>
12	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W1	D + AD + CU + <W1
13	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W2>	D + AD + CU + W2>
14	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W2	D + AD + CU + <W2
15	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 AL	D + AD + CG+AL
16	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W1>	D + AD + CG + L + W1>
17	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W1	D + AD + CG + L + <W1
18	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W2>	D + AD + CG + L + W2>
19	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W2	D + AD + CG + L + <W2
20	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W1>	D + AD + CG + S + W1>
21	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W1	D + AD + CG + S + <W1
22	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W2>	D + AD + CG + S + W2>
23	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W2	D + AD + CG + S + <W2
24	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.563 S + 0.750 AL	D + AD + CG + S+AL
25	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W1> + 0.750 AL	D + AD + CG + W1>+AL
26	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W1 + 0.750 AL	D + AD + CG + <W1+AL
27	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W2> + 0.750 AL	D + AD + CG + W2>+AL
28	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W2 + 0.750 AL	D + AD + CG + <W2+AL
29	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 E> + 0.700 EG+	D + AD + CG + E> + EG+
30	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <E + 0.700 EG+	D + AD + CG + <E + EG+
31	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 E> + 0.700 EG-	D + AD + CU + E> + EG-
32	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <E + 0.700 EG-	D + AD + CU + <E + EG-
33	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 E> + 0.525 EG+	D + AD + CG + E> + EG+
34	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <E + 0.525 EG+	D + AD + CG + <E + EG+
35	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB1>	D + AD + CG + WP + WB1>
36	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB1>	D + AD + CU + WP + WB1>
37	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB1>	D+AD+CG+L+WP+WB1>
38	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB1>	D+AD+CG+S+WP+WB1>
39	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB1	D + AD + CG + WP + <WB1
40	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB1	D + AD + CU + WP + <WB1
41	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB1	D+AD+CG+L+WP+<WB1
42	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB1	D+AD+CG+S+WP+<WB1
43	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 WB2>	D + AD + CG + WP + WB2>
44	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 WB2>	D + AD + CU + WP + WB2>
45	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB2>	D+AD+CG+L+WP+WB2>
46	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB2>	D+AD+CG+S+WP+WB2>
47	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP + 1.0 <WB2	D + AD + CG + WP + <WB2
48	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP + 1.0 <WB2	D + AD + CU + WP + <WB2
49	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB2	D+AD+CG+L+WP+<WB2
50	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB2	D+AD+CG+S+WP+<WB2
51	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 EB> + 0.700 EG+	D + AD + CG + EB> + EG+
52	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 EB> + 0.700 EG-	D + AD + CU + EB> + EG-
53	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 EB> + 0.525 EG+	D + AD + CG + EB> + EG+
54	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <EB + 0.700 EG+	D + AD + CG + <EB + EG+
55	System Derived	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <EB + 0.700 EG-	D + AD + CU + <EB + EG-
56	System Derived	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <EB + 0.525 EG+	D + AD + CG + <EB + EG+

Frame Member Sizes

Mem.	Flg Width	Flg Thk	Web Thk	Depth1	Depth2	Length	Weight	Flg Fy	Web Fy	Splice	Codes	Shape

No.	(in.)	(in.)	(in.)	(in.)	(in.)	(ft)	(p)	(ksi)	(ksi)	Jt.1	Jt.2	
10001	5.00	0.1345	0.1345	11.50	11.50	1.62	34.4	55.00	55.00	SS	SS	3P
10002	5.00	0.1345	0.1345	11.50	11.50	1.62	34.4	55.00	55.00	SS	SS	3P
1	8.00	0.5000	0.1875	12.00	42.00	21.42	1032.3	55.00	55.00	BP	KN	3P
2	6.00	0.3750	0.1875	42.00	28.00	14.37	479.4	55.00	55.00	KN	SS	3P
3	6.00	0.2500	0.1345	28.00	28.00	19.71	460.8	55.00	55.00	SS	SP	3P
4	6.00	0.2500	0.1345	28.00	28.00	20.00	467.4	55.00	55.00	SP	SS	3P
5	6.00	0.3750	0.1875	28.00	42.00	14.08	468.7	55.00	55.00	SS	KN	3P
6	8.00	0.5000	0.1875	12.00	42.00	21.42	1032.3	55.00	55.00	BP	KN	3P

Total Frame Weight = 4009.8 (p) (Includes all plates)
Frame Pricing Weight = 4326.4 (p) (Includes all pieces)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
6	67/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
10001	67/0/0	22/2/0	Yes	Yes	Yes	0/0/0	0/0/0	0.0000
10002	0/0/0	22/2/0	Yes	Yes	Yes	0/0/0	0/0/0	0.0000
0	33/5/12	33/3/15	Yes	Yes	Yes	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section: 12

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		67/0/0				
Grid1 - Grid2		12-J		12-B				
Base Plate W x L (in.)		9 x 13		9 x 13				
Base Plate Thickness (in.)		0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 1.000		4 - 1.000				
Column Base Elev.		100'-1 1/2"		100'-1 1/2"				
Load Type	Desc.	Hx	Vy	Hx	Vy			
D	Frm	2.0	5.8	-2.0	5.8	-	-	-
AD	Frm	0.3	0.4	-0.3	0.4	-	-	-
CG	Frm	2.5	5.8	-2.5	5.5	-	-	-
L>	Frm	8.6	20.6	-8.6	20.6	-	-	-
<L	Frm	8.6	20.6	-8.6	20.6	-	-	-
S>	Frm	1.1	2.6	-1.1	2.6	-	-	-
<S	Frm	1.1	2.6	-1.1	2.6	-	-	-
US1*	Frm	1.4	2.2	-1.4	3.2	-	-	-
*US1	Frm	0.7	2.2	-0.7	1.2	-	-	-
W1>	Frm	-17.1	-23.1	-3.0	-12.8	-	-	-
<W1	Frm	4.4	-12.5	16.5	-23.4	-	-	-
W2>	Frm	-18.5	-14.9	-4.4	-2.9	-	-	-
<W2	Frm	3.1	-4.4	15.1	-13.5	-	-	-
CU	Frm	-	-	-	-	-	-	-
AL	Frm	1.7	2.4	-1.7	2.4	-	-	-
L	Frm	8.6	20.6	-8.6	20.6	-	-	-
S	Frm	1.1	2.6	-1.1	2.6	-	-	-
E>	Frm	-0.9	-0.5	-0.9	0.5	-	-	-
EG+	Frm	0.1	0.3	-0.1	0.3	-	-	-
<E	Frm	0.9	0.5	0.9	-0.5	-	-	-
EG-	Frm	-0.1	-0.3	0.1	-0.3	-	-	-
WP	Frm	0.8	-16.4	-2.5	-15.5	-	-	-
WB1>	Brc	-	-	-	-	-	-	-
<WB1	Brc	-	-	-	-	-	-	-
WB2>	Brc	-	-	-	-	-	-	-
<WB2	Brc	-	-	-	-	-	-	-
EB>	Brc	-	-	-	-	-	-	-
<EB	Brc	-	-	-	-	-	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	12-J	17.1	13	14.6	17	-	-	-	-	19.4	11	32.7	1	-	-	-	-
67/0/0	12-B	14.6	18	15.1	12	-	-	-	-	19.7	12	32.4	1	-	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	11.9	11.6
AD	0.0	0.0	0.9	0.8
CG	0.0	0.0	11.4	11.4
L>	0.0	0.0	41.3	41.3
<L	0.0	0.0	41.3	41.3
S>	0.0	0.0	5.2	5.2
<S	0.0	0.0	5.2	5.2
US1*	0.0	0.0	5.4	5.4
*US1	0.0	0.0	3.4	3.4
W1>	20.1	20.1	35.9	35.9
<W1	20.9	20.9	35.9	35.9
W2>	22.9	22.9	17.8	17.8
<W2	18.2	18.2	17.8	17.8
CU	0.0	0.0	0.0	0.0
AL	0.0	0.0	5.0	4.8
L	0.0	0.0	41.3	41.3
S	0.0	0.0	5.2	5.2
E>	1.8	1.8	0.0	0.0
EG+	0.0	0.0	0.6	0.6
<E	1.8	1.8	0.0	0.0
EG-	0.0	0.0	0.6	0.6
WP	1.7	1.7	31.9	31.9
WB1>	0.0	0.0	0.0	0.0
<WB1	0.0	0.0	0.0	0.0
WB2>	0.0	0.0	0.0	0.0
<WB2	0.0	0.0	0.0	0.0
EB>	0.0	0.0	0.0	0.0
<EB	0.0	0.0	0.0	0.0

Base Plate Summary

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Num. Of Bolts	Bolt Diam. (in.)	Type	Welds to Flange	Welds to Web
0/0/0	12-J	1	0.375	9	13	4	1.000	A36	OS-0.1875	OS-0.1875
67/0/0	12-B	6	0.375	9	13	4	1.000	A36	OS-0.1875	OS-0.1875

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S9	17.71	40.373	215.32	N/A	N/A	0.3750	3.500	Both	W-OS-0.1875
1	2	S11 (S10)		Alternate	Web	Thick.=	0.2500	0.5000	3.500	Opposite Fillet	W-BS-0.1875
2	1	S1	4.26	36.217	193.16	1.25	45.27	0.1875	2.000	Opposite Fillet	Std
3	1	S1	0.04	27.500	204.46	1.00	27.50	0.1875	2.000	Opposite Fillet	Std
3	2	S1	2.33	27.500	204.46	1.00	27.50	0.1875	2.000	Opposite Fillet	Std
3	3	S1	5.77	27.500	204.46	1.50	41.25	0.1875	2.000	Opposite Fillet	Std
4	1	S1	13.77	27.500	204.46	1.50	41.25	0.1875	2.000	Opposite Fillet	Std
4	2	S1	17.20	27.500	204.46	1.50	41.25	0.1875	2.000	Opposite Fillet	Std
4	3	S1	19.75	27.500	204.46	1.00	27.50	0.1875	2.000	Opposite Fillet	Std
5	1	S1	2.08	29.770	158.77	1.00	29.77	0.1875	2.000	Opposite Fillet	Std
5	2	S1	7.14	35.894	191.44	1.75	62.81	0.1875	2.000	Opposite Fillet	Std
5	3	S1	9.95	39.296	209.58	1.25	49.12	0.1875	2.000	Opposite Fillet	Std
6	1	S9	17.71	40.373	215.32	N/A	N/A	0.3750	3.500	Both	W-OS-0.1875
6	2	S11		Alternate	Web	Thick.=	0.2500	0.5000	3.500	Opposite Fillet	W-BS-0.1875

Brackets Part Summary

Mem. No.	Loc. (ft)	Total Length (in.)	Bracket Cut (in.)	Bracket Depth (in.)	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Hole Pitch (in.)	Stiffener or Plate	Part

Brackets Design Summary (vertical live load is with the impact factor)

Mem. No.	Loc. (ft)	Vert. Live Load (k)	Vert. Dead Load (k)	Lateral Impact (k)	Longitudinal Impact (k)	CL Dist to Flange (in.)	Member Depth1 (in.)	Member Depth2 (in.)	Web Thk (in.)	Flg Thk (in.)	Flg Width (in.)

Bolted End-Plate Moment Connections (AISC DG-16) - Fy = 55 ksi

Mem. No.	Jt. No.	Type	End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
			Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	0.500	8.00	47.50	0.750	A325X/ST	3.00	31	Extended	3.50	31	Extended	3.50
2	1	KN(Face)	0.500	6.00	47.50	0.750	A325X/ST	3.00	31	Extended	3.50	31	Extended	3.50
3	2	SP	0.375	6.00	33.14	0.750	A325X/ST	3.00	11	Flush	0.00	31	Extended	3.56
4	1	SP	0.375	6.00	33.14	0.750	A325X/ST	3.00	11	Flush	0.00	31	Extended	3.56
5	2	KN(Face)	0.500	6.00	47.50	0.750	A325X/ST	3.00	31	Extended	3.50	31	Extended	3.50
6	2	KN(Face)	0.500	8.00	47.50	0.750	A325X/ST	3.00	31	Extended	3.50	31	Extended	3.50

Mem. No.	Jt. No.	Required Strength - Out				Available Strength - Out			Required Strength - In				Available Strength - In		
		Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)
1	2	17	-8.3	12.5	2342.6	Thin plate	159.0	2628.8	11	10.9	14.4	2412.4	Thin plate	159.0	2628.8
2	1	17	-8.3	12.5	2342.6	Thin plate	159.0	2628.8	11	10.9	14.4	2412.4	Thin plate	159.0	2628.8
3	2	11	10.9	0.7	150.2	Thin plate	106.0	579.7	37	1.6	1.5	748.3	Thin plate	159.0	988.4
4	1	11	10.9	0.7	150.2	Thin plate	106.0	579.7	37	1.6	1.5	748.3	Thin plate	159.0	988.4
5	2	18	-18.2	15.5	2705.1	Thin plate	159.0	2613.5	12	13.8	13.5	2266.0	Thin plate	159.0	2613.5
6	2	18	-18.2	15.5	2705.1	Thin plate	159.0	2613.5	12	13.8	13.5	2266.0	Thin plate	159.0	2613.5

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Design Note
2	1/8/12	30/1/13	FB4100	
2	11/6/3	20/4/6	FB4020	
3	9/7/2	10/5/4	FB3054	
4	1/2/0	1/5/13	FB3054	
4	16/2/0	16/5/13	FB3054	
5	6/2/0	26/5/13	FB4070	
5	10/4/11	30/8/9	FB4104	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

Mem. No.	Loc. ft	Depth in.	Controlling Cases		Required Strength				Available Strength				Strength Ratios	
			Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
10001	2.42	11.50	1	1	0.4	1.1	-25.8	0.0	94.2	17.5	204.7	39.0	0.13	0.06
10002	2.42	11.50	1	1	0.4	-1.1	-25.8	0.0	88.2	17.5	204.7	39.0	0.13	0.06
1	18.94	42.00	2	2	-33.5	-11.4	-2596.3	0.0	124.5	13.0	4556.2	539.9	0.59	0.88
2	1.20	42.00	2	11	-22.2	-13.5	-2559.7	0.0	217.9	12.8	4129.4	234.7	0.67	1.00
3	0.00	28.00	13	37	1.0	7.2	1014.9	0.0	221.1	10.3	1500.5	111.9	0.68	1.01
4	15.78	28.00	13	2	-1.2	-7.3	-747.0	0.0	41.9	7.1	839.9	111.9	0.82	1.03
5	11.57	42.00	18	18	-18.2	-13.8	-2705.1	0.0	217.9	21.0	4129.4	234.7	0.70	0.97
6	18.94	42.00	1	1	-33.2	11.4	-2604.6	0.0	124.5	13.0	4556.4	539.9	0.59	0.88

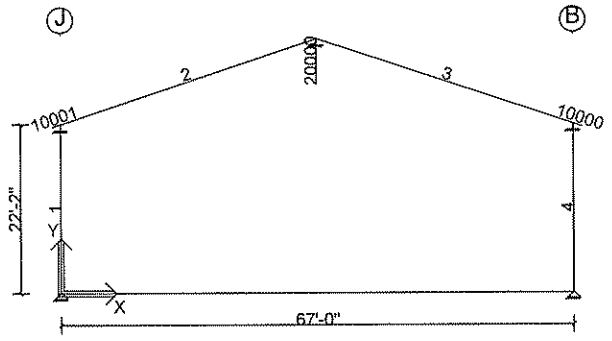
Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
10001	2.42	28.99	29.0	29.0	2.86	2.86	59.32	2.80	10.32	1.12	11.88	1.73	0.02	90.56	1.00	1.00	1.15	0.60	1.00
10002	2.42	28.99	29.0	29.0	2.86	2.86	59.32	2.80	10.32	1.12	11.88	1.73	0.02	90.56	1.00	1.00	1.15	0.60	1.00
1	18.94	227.27	227.3	227.3	15.69	15.69	4521.56	42.69	215.31	10.67	244.80	16.36	0.76	18380.37	1.66	1.00	1.00	1.00	0.70
2	1.20	374.22	29.1	29.1	12.23	12.23	3045.98	13.52	145.05	4.51	173.42	7.11	0.30	5857.48	1.00	1.00	1.00	1.00	0.54
3	0.00	374.22	119.1	60.0	6.70	6.70	810.66	9.01	57.90	3.00	67.05	4.62	0.09	1733.72	1.48	1.00	1.00	0.84	1.00
4	15.78	374.23	180.0	180.0	6.70	6.70	810.66	9.01	57.90	3.00	67.05	4.62	0.09	1733.71	1.28	1.00	1.00	0.84	0.72
5	11.57	374.23	14.0	14.0	12.23	12.23	3045.98	13.52	145.05	4.51	173.42	7.11	0.30	5857.48	1.03	1.00	1.00	1.00	0.54
6	18.94	227.27	227.3	227.3	15.69	15.69	4521.56	42.69	215.31	10.67	244.80	16.36	0.76	18380.37	1.66	1.00	1.00	1.00	0.70

User Defined Frame Point Loads for Cross Section: 12

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	Clerestory->Resolved From Plane	3753.75	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	Clerestory->Resolved From Plane	6494.58	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	Clerestory->Resolved From Plane	-4558.12	21/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	Clerestory->Resolved From Plane	-1817.29	21/0/0	NA	NA	N	LEFT	1.000	OF
2	p	CG	Clerestory->Resolved From Plane	-1042.71	9/6/0	NA	NA	N	DOWN	1.000	OF

User Defined Frame Line Loads for Cross Section: 12

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	Upper Roof->Resolved From Plane	-103.26	0/0/0	-103.26	9/11/3	N	DOWN	1.000	OF
2	plf	L>	Upper Roof->Resolved From Plane	-595.83	0/0/0	-595.83	9/11/3	N	DOWN	1.000	OF
2	plf	<L	Upper Roof->Resolved From Plane	-595.83	0/0/0	-595.83	9/11/3	N	DOWN	1.000	OF
2	plf	L	Upper Roof->Resolved From Plane	-595.83	0/0/0	-595.83	9/11/3	N	DOWN	1.000	OF
2	plf	S>	Upper Roof->Resolved From Plane	-74.48	0/0/0	-74.48	9/11/3	N	DOWN	1.000	OF
2	plf	<S	Upper Roof->Resolved From Plane	-74.48	0/0/0	-74.48	9/11/3	N	DOWN	1.000	OF
2	plf	US1*	Upper Roof->Resolved From Plane	-74.48	0/0/0	-74.48	9/11/3	N	DOWN	1.000	OF
2	plf	*US1	Upper Roof->Resolved From Plane	-74.48	0/0/0	-74.48	9/11/3	N	DOWN	1.000	OF
2	plf	S	Upper Roof->Resolved From Plane	-74.48	0/0/0	-74.48	9/11/3	N	DOWN	1.000	OF
2	plf	W1>	Upper Roof->Resolved From Plane	576.56	0/0/0	576.56	9/11/3	N	UP	0.768	OF
2	plf	<W1	Upper Roof->Resolved From Plane	450.44	0/0/0	450.44	9/11/3	N	UP	0.600	OF
2	plf	W2>	Upper Roof->Resolved From Plane	306.29	0/0/0	306.29	9/11/3	N	UP	0.408	OF
2	plf	<W2	Upper Roof->Resolved From Plane	180.17	0/0/0	180.17	9/11/3	N	UP	0.240	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	240	1.0 L	L
2	System	1.000	0	240	1.0 S	S
3	System	1.000	0	240	1.0 US1*	US1*
4	System	1.000	0	240	1.0 *US1	*US1
5	System	1.000	0	240	0.700 W1>	W1>
6	System	1.000	0	240	0.700 <W1	<W1
7	System	1.000	0	240	0.700 W2>	W2>
8	System	1.000	0	240	0.700 <W2	<W2
9	System	1.000	0	240	0.700 WP	WP
10	System Derived	1.000	0	240	0.700 WB1>	WB1>
11	System Derived	1.000	0	240	0.700 <WB1	<WB1
12	System Derived	1.000	0	240	0.700 WB2>	WB2>
13	System Derived	1.000	0	240	0.700 <WB2	<WB2
14	System	1.000	200	0	0.700 W1>	W1>
15	System	1.000	200	0	0.700 <W1	<W1
16	System	1.000	200	0	0.700 W2>	W2>
17	System	1.000	200	0	0.700 <W2	<W2
18	System	1.000	200	0	0.700 WP	WP
19	System Derived	1.000	200	0	0.700 WB1>	WB1>

20	System Derived	1.000	200	0	0.700 <WB1	<WB1
21	System Derived	1.000	200	0	0.700 WB2>	WB2>
22	System Derived	1.000	200	0	0.700 <WB2	<WB2
23	System	1.000	50	0	1.0 E> + 1.0 EG-	E> + EG-
24	System	1.000	50	0	1.0 <E + 1.0 EG-	<E + EG-
25	System Derived	1.000	50	0	1.0 EB>	EB>
26	System Derived	1.000	50	0	1.0 <EB	<EB

Controlling Frame Deflection Ratios for Cross Section: 12

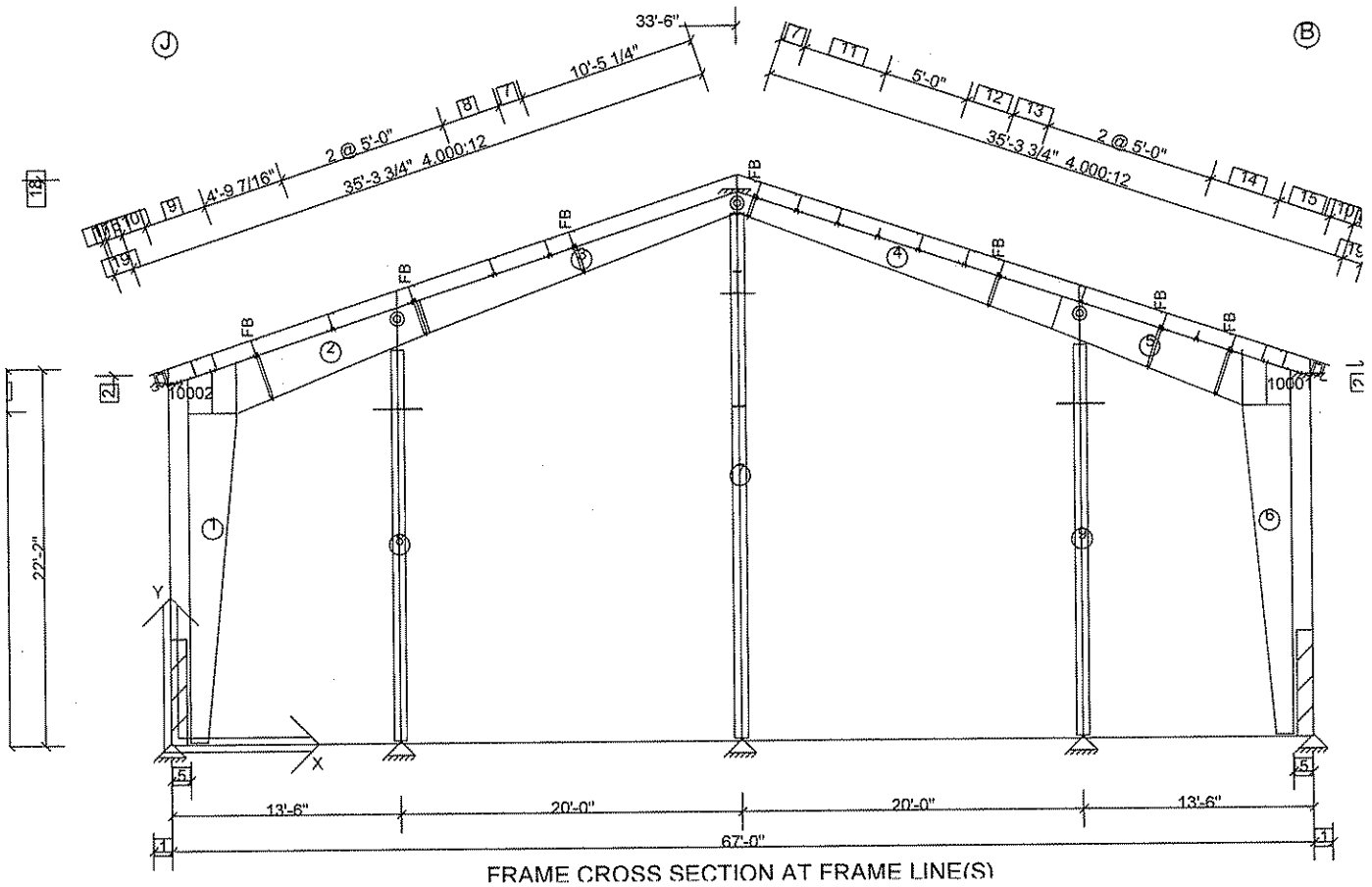
Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/205)	1.176	1	2	16	W2>
Max. Vertical Deflection for Span 1	(L/1003)	-0.730	3	2	1	L

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Wall: 4, Frame at: 100/11/0

Frame Cross Section:



FRAME CROSS SECTION AT FRAME LINE(S)

Dimension Key

1 1'-1 1/2"
2 21'-9 1/2"
3 33'-5 3/4" BL to CL of Runway Beam
4 33'-6 1/4" BL to CL of Runway Beam
5 1'-2"
6 2'-5 3/4"
7 1'-5 13/16"
8 3'-5 5/16"
9 3'-8 3/4"
10 1'-5 3/16"
11 2 @ 2'-6"
12 2'-10 3/16"
13 2'-1 13/16"
14 4'-2 11/16"
15 3'-2"
16 11 1/4"
17 3"
18 33'-4" Ridge Ht.
19 1'-2 1/4" 4.000:12

Frame Clearances

Horiz. Clearance between members 1(CX208) and 6(CX209): 59'-0"

Vert. Clearance at member 1(CX208): 19'-3 3/16"
Vert. Clearance at member 6(CX209): 19'-3 3/16"
Vert. Clearance at member 7(EPX200): 31'-1 1/8"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
100/11/0	16/6/8	CB1 EP	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 L>	D + AD + CG + L>
2	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <L	D + AD + CG + <L
3	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 S>	D + AD + CG + S>
4	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <S	D + AD + CG + <S
5	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 US1*	D + AD + CG + US1*
6	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 *US1	D + AD + CG + *US1
7	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W1>	D + AD + CG + W1>
8	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W1	D + AD + CG + <W1
9	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 W2>	D + AD + CG + W2>
10	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 <W2	D + AD + CG + <W2
11	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 WP	D + AD + CG + WP
12	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W1>	D + AD + CU + W1>
13	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W1	D + AD + CU + <W1
14	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 W2>	D + AD + CU + W2>
15	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 <W2	D + AD + CU + <W2
16	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 1.0 WP	D + AD + CU + WP
17	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 1.0 AL	D + AD + CG+AL
18	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W1>	D + AD + CG + L + W1>
19	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W1	D + AD + CG + L + <W1
20	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 W2>	D + AD + CG + L + W2>
21	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 <W2	D + AD + CG + L + <W2
22	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 L + 0.750 WP	D + AD + CG + L + WP
23	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W1>	D + AD + CG + S + W1>
24	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W1	D + AD + CG + S + <W1
25	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 W2>	D + AD + CG + S + W2>
26	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 <W2	D + AD + CG + S + <W2
27	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.750 S + 0.750 WP	D + AD + CG + S + WP
28	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.563 S + 0.750 AL	D + AD + CG + S+AL
29	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W1> + 0.750 AL	D + AD + CG + W1>+AL
30	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W1 + 0.750 AL	D + AD + CG + <W1+AL
31	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 W2> + 0.750 AL	D + AD + CG + W2>+AL
32	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 <W2 + 0.750 AL	D + AD + CG + <W2+AL
33	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.375 WP + 0.750 AL	D + AD + CG + WP+AL
34	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 E> + 0.700 EG+	D + AD + CG + E> + EG+
35	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.700 <E + 0.700 EG+	D + AD + CG + <E + EG+
36	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 E> + 0.700 EG-	D + AD + CU + E> + EG-
37	System	1.000	0.600 D + 0.600 AD + 0.600 CU + 0.700 <E + 0.700 EG-	D + AD + CU + <E + EG-
38	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 E> + 0.525 EG+	D + AD + CG + E> + EG+
39	System	1.000	1.0 D + 1.0 AD + 1.0 CG + 0.525 <E + 0.525 EG+	D + AD + CG + <E + EG+

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
10001	5.00	0.1345	0.1345	11.50	11.50	1.62	34.4	55.00	55.00	SS	SS	3P
10002	5.00	0.1345	0.1345	11.50	11.50	1.62	34.4	55.00	55.00	SS	SS	3P
1	8.00	0.3750	0.1644	12.00	34.00	21.42	777.6	55.00	55.00	BP	KN	3P
2	5.00	0.3125	0.1644	34.00	24.00	14.37	336.7	55.00	55.00	KN	SS	3P
3	5.00	0.2500	0.1345	24.00	14.00	19.71	341.6	55.00	55.00	SS	SP	3P
4	5.00	0.2500	0.1345	14.00	24.00	20.00	346.5	55.00	55.00	SP	SS	3P
5	5.00	0.3125	0.1644	24.00	34.00	14.08	330.7	55.00	55.00	SS	KN	3P
6	8.00	0.3750	0.1644	12.00	34.00	21.42	779.8	55.00	55.00	BP	KN	3P
7	10.00	0.3750	0.1644	17.00	17.00	30.97	1109.1	55.00	55.00	BP	CP	3P
8	9.00	0.3125	0.1345	12.00	12.00	26.54	574.3	55.00	55.00	BP	SS	3P
9	9.00	0.3125	0.1345	12.00	12.00	26.54	574.7	55.00	55.00	BP	SS	3P

Total Frame Weight = 5239.9 (p) (Includes all plates)
Frame Pricing Weight = 5487.0 (p) (Includes all pieces)

Frame Member Releases

Member	Joint 1	Joint 2
7	No	Yes
8	No	Yes
9	No	Yes

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
6	67/0/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
7	33/6/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
8	13/6/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
0	13/6/0	26/8/0	Yes	No	No	0/0/0	0/0/0	0.0000
9	53/6/0	0/1/8	Yes	Yes	No	0/0/0	0/0/0	0.0000
0	53/6/0	26/8/0	Yes	No	No	0/0/0	0/0/0	0.0000
10001	67/0/0	22/2/0	Yes	Yes	Yes	0/0/0	0/0/0	0.0000
10002	0/0/0	22/2/0	Yes	Yes	Yes	0/0/0	0/0/0	0.0000
0	33/5/12	33/3/15	Yes	Yes	Yes	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section:

Type		Exterior Column		Interior Column			Interior Column			Interior Column			Exterior Column	
X-Loc		0/0/0		13/6/0			33/6/0			53/6/0			67/0/0	
Grid1 - Grid2		-J		14-I			F-14			C-14			-B	
Base Plate W x L (in.)		9 x 13		10 x 13			11 x 18			10 x 13			9 x 13	
Base Plate Thickness (in.)		0.375		0.375			0.375			0.375			0.375	
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750			4 - 0.750			4 - 0.750			4 - 0.750	
Column Base Elev.		100'-1 1/2"		100'-1 1/2"			100'-1 1/2"			100'-1 1/2"			100'-1 1/2"	
Load Type	Desc.	Hx	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Vy
D	Frm	0.5	2.7	-	-	0.7	-	-	3.1	-	-	0.7	-0.5	2.7
AD	Frm	-	-	-	-	-	-	-	0.4	-	-	-	-	-
CG	Frm	0.5	2.1	-	-	-	-	-	2.6	-	-	-	-0.5	2.0
L>	Frm	1.8	7.8	-	-	-	-	-	8.8	-	-	-	-1.8	7.8
<L	Frm	1.8	7.8	-	-	-	-	-	8.8	-	-	-	-1.8	7.8
S>	Frm	0.2	1.0	-	-	-	-	-	1.1	-	-	-	-0.2	1.0
<S	Frm	0.2	1.0	-	-	-	-	-	1.1	-	-	-	-0.2	1.0
US1*	Frm	0.2	0.4	-	-	-	-	-	1.8	-	-	-	-0.2	1.0
*US1	Frm	0.1	0.9	-	-	-	-	-	0.7	-	-	-	-0.1	0.3
W1>	Frm	-7.0	-10.4	-	5.7	-	-	7.9	-6.9	-	5.7	-	-3.9	-4.3
<W1	Frm	4.1	-5.0	-	-5.1	-	-	-7.1	-5.6	-	-5.1	-	7.1	-11.2
W2>	Frm	-8.3	-6.4	-	-	-	-	-	-5.7	-	-	-	-4.1	0.6
<W2	Frm	2.8	-1.0	-	-	-	-	-	-4.4	-	-	-	6.9	-6.3
WP	Frm	0.1	-11.5	-	-	-	-	-	-2.1	-	-	-	-1.4	-10.8
CU	Frm	-	-	-	-	-	-	-	-	-	-	-	-	-
AL	Frm	0.0	0.0	-	-	-	-	-	4.7	-	-	-	-0.0	0.0
L	Frm	1.8	7.8	-	-	-	-	-	8.8	-	-	-	-1.8	7.8
S	Frm	0.2	1.0	-	-	-	-	-	1.1	-	-	-	-0.2	1.0
E>	Frm	-0.5	-0.3	-	0.2	-	-	0.2	-	-	0.2	-	-0.5	0.3
EG+	Frm	0.0	0.1	-	-	-	-	-	0.1	-	-	-	-0.0	0.1
<E	Frm	0.5	0.3	-	-0.2	-	-	-0.2	-	-	-0.2	-	0.5	-0.3
EG-	Frm	-0.0	-0.1	-	-	-	-	-	-0.1	-	-	-	0.0	-0.1

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	-J	8.0	14	5.3	19	-	-	-	-	9.9	16	12.6	1	-	-	-	-
13/6/0	14-I	-	-	-	-	5.1	8	5.7	7	-	-	0.7	1	-	-	-	-
13/6/0	26/8/0	-	-	-	-	4.7	8	5.3	7	0.7	1	-	-	-	-	-	-
33/6/0	F-14	-	-	-	-	7.1	8	7.9	7	4.7	12	15.0	1	-	-	-	-
53/6/0	C-14	-	-	-	-	5.1	8	5.7	7	-	-	0.7	1	-	-	-	-
53/6/0	26/8/0	-	-	-	-	4.8	8	5.3	7	0.7	1	-	-	-	-	-	-
67/0/0	-B	5.4	20	6.8	13	-	-	-	-	9.6	13	12.5	1	-	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	9.9	8.5
AD	0.0	0.0	0.4	0.4
CG	0.0	0.0	6.7	6.7
L>	0.0	0.0	24.4	24.4
<L	0.0	0.0	24.4	24.4
S>	0.0	0.0	3.1	3.1
<S	0.0	0.0	3.1	3.1
US1*	0.0	0.0	3.2	3.2
*US1	0.0	0.0	2.0	2.0
W1>	10.9	10.9	21.5	21.5
<W1	11.2	11.2	21.8	21.8
W2>	12.4	12.4	11.4	11.4
<W2	9.7	9.7	11.7	11.7
WP	1.3	1.3	24.4	24.4
CU	0.0	0.0	0.0	0.0
AL	0.0	0.0	5.0	4.8
L	0.0	0.0	24.4	24.4
S	0.0	0.0	3.1	3.1
E>	1.1	1.1	0.0	0.0
EG+	0.0	0.0	0.4	0.4
<E	1.1	1.1	0.0	0.0
EG-	0.0	0.0	0.4	0.4

Base Plate Summary

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Num. Of Bolts	Bolt Diam. (in.)	Type	Welds to Flange	Welds to Web
0/0/0	-J	1	0.375	9	13	4	0.750	A36	OS-0.1875	OS-0.1875
13/6/0	14-I	8	0.375	10	13	4	0.750	A36	OS-0.1875	OS-0.1875
33/6/0	F-14	7	0.375	11	18	4	0.750	A36	OS-0.1875	OS-0.1875
53/6/0	C-14	9	0.375	10	13	4	0.750	A36	OS-0.1875	OS-0.1875
67/0/0	-B	6	0.375	9	13	4	0.750	A36	OS-0.1875	OS-0.1875

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S3	19.35	33.250	N/A	N/A	N/A	0.3125	3.500	Both	F-FP,W-OS-0.1875
1	2	S11 (S10)		Alternate	Web	Thick.=	0.1875	0.1875	3.500	Opposite Fillet	W-OS-0.1875
6	1	S3	19.35	33.250	N/A	N/A	N/A	0.3125	3.500	Both	F-FP,W-OS-0.1875
6	2	S11 (S10)		Alternate	Web	Thick.=	0.1875	0.1875	3.500	Opposite Fillet	W-OS-0.1875

Brackets Part Summary

Mem. No.	Loc. (ft)	Total Length (in.)	Bracket Cut (in.)	Bracket Depth (in.)	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Hole Pitch (in.)	Stiffener or Plate	Part

Brackets Design Summary (vertical live load is with the impact factor)

Mem. No.	Loc. (ft)	Vert. Live Load (k)	Vert. Dead Load (k)	Lateral Impact (k)	Longitudinal Impact (k)	CL Dist to Flange (in.)	Member Depth1 (in.)	Member Depth2 (in.)	Web Thk (in.)	Flg Thk (in.)	Flg Width (in.)

Bolted End-Plate Moment Connections (AISC DG-16) - Fy = 55 ksi

Mem. No.	Jt. No.	Type	End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
			Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	0.375	8.00	39.09	0.750	A325X/ST	3.00	12	Flush	2.00	31	Extended	4.13
2	1	KN(Face)	0.375	6.00	39.34	0.750	A325X/ST	3.00	12	Flush	2.00	31	Extended	4.13
3	2	SP	0.375	6.00	17.53	0.750	A325X/ST	3.00	31	Extended	3.63	12	Flush (0)	2.00
4	1	SP	0.375	6.00	17.53	0.750	A325X/ST	3.00	31	Extended	3.63	12	Flush (0)	2.00
5	2	KN(Face)	0.375	6.00	41.96	0.750	A325X/ST	3.00	31	Extended	4.06	31	Extended	4.06
6	2	KN(Face)	0.375	8.00	41.71	0.750	A325X/ST	3.00	31	Extended	4.06	31	Extended	4.06
7	2	CP	0.375	6.00	18.00	0.500	A325/	0.00	11	Flush	0.00	11	Flush	0.00

		Required Strength - Out				Available Strength - Out			Required Strength - In				Available Strength - In		
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Shear (k)	Moment (in-k)
1	2	19	-0.9	4.8	746.4	Thin plate	159.0	795.2	12	3.4	7.0	971.0	Thin plate	159.0	1076.4
2	1	19	-0.9	4.8	746.4	Thin plate	159.0	795.2	12	3.4	7.0	971.0	Thin plate	159.0	1076.4
3	2	1	-0.3	7.3	390.7	Thin plate	159.0	426.5	16	10.2	1.7	222.8	Thin plate	159.0	304.6
4	1	1	-0.3	7.3	390.7	Thin plate	159.0	426.5	16	10.2	1.7	222.8	Thin plate	159.0	304.6
5	2	20	-6.4	6.8	985.4	Thin plate	159.0	1035.3	13	5.7	7.0	986.7	Thin plate	159.0	1077.9
6	2	20	-6.4	6.8	985.4	Thin plate	159.0	1035.3	13	5.7	7.0	986.7	Thin plate	159.0	1077.9
7	2	0		0.0	0.0		0.0	0.0	0		0.0	0.0		0.0	0.0

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Design Note
2	1/3/3	30/1/13	FB4044	
2	11/0/10	20/4/6	FB3024	
3	9/7/2	10/5/4	FB2104	
4	1/2/0	1/5/13	FB2074	
4	16/2/0	16/5/13	FB3010	
5	6/2/0	26/5/13	FB4024	
5	10/4/11	30/8/9	FB4050	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
10001	2.42	11.50	1	1	0.2	0.7	-15.6	0.0	94.2	17.5	204.7	39.0	0.08	0.04
10002	2.42	11.50	1	1	0.2	-0.7	-15.6	0.0	88.2	17.5	204.7	39.0	0.08	0.04
1	12.93	26.67	14	16	5.0	5.4	844.6	0.0	338.6	13.9	1855.0	338.9	0.46	0.50
2	12.98	24.27	13	2	5.0	7.9	-506.0	0.0	218.1	15.2	1003.4	134.2	0.52	0.74
3	0.00	24.00	13	1	5.0	-7.3	-501.9	0.0	186.8	8.3	889.8	95.5	0.58	0.50
4	15.98	22.06	14	2	-2.2	7.2	-446.7	0.0	24.2	9.1	512.5	95.3	0.85	0.49
5	0.00	24.00	12	1	2.6	-7.8	-489.8	0.0	229.9	15.4	953.7	134.1	0.52	0.73
6	19.40	34.00	13	16	9.7	-4.2	1007.6	0.0	368.5	10.8	2532.9	340.1	0.41	0.39
7	15.35	17.00	7	12	0.6	-7.9	-745.7	0.0	335.7	22.5	900.8	425.6	0.83	0.35
8	13.27	12.00	7	7	-0.7	-5.7	-448.4	0.0	56.4	17.8	473.3	269.0	0.91	0.32
9	13.27	12.00	7	7	-0.7	-5.7	-448.9	0.0	56.4	17.8	473.3	269.0	0.91	0.32

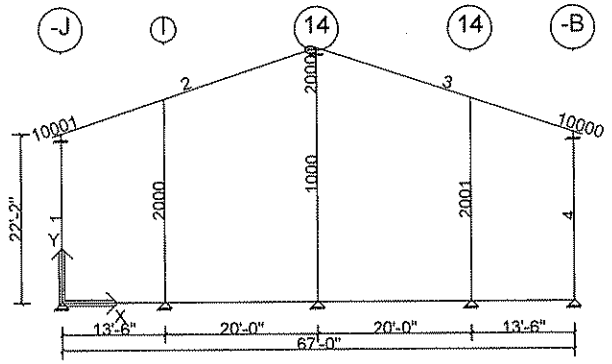
Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
10001	2.42	28.99	29.0	29.0	2.86	2.86	59.32	2.80	10.32	1.12	11.88	1.73	0.02	90.56	1.00	1.00	1.15	0.60	1.00
10002	2.42	28.99	29.0	29.0	2.86	2.86	59.32	2.80	10.32	1.12	11.88	1.73	0.02	90.56	1.00	1.00	1.15	0.60	1.00
1	12.93	232.80	232.8	232.8	10.26	10.26	1275.43	32.01	95.66	8.00	106.48	12.18	0.32	5531.67	1.36	1.00	1.00	0.90	1.00
2	12.98	382.30	117.5	117.5	7.01	7.01	629.56	6.52	51.88	2.61	60.41	4.07	0.14	935.47	1.01	1.00	1.00	1.00	1.00
3	0.00	382.30	119.2	119.2	5.66	5.66	498.01	5.21	41.50	2.09	48.26	3.23	0.07	735.13	1.17	1.00	1.00	0.94	1.00
4	15.98	382.31	180.0	180.0	5.40	5.40	409.84	5.21	37.15	2.09	42.91	3.22	0.07	620.15	1.70	1.00	1.00	0.94	0.82
5	0.00	382.31	120.1	120.1	6.97	6.97	613.36	6.52	51.11	2.61	59.47	4.06	0.14	914.46	1.02	1.00	1.00	1.00	1.00
6	19.40	232.80	232.8	232.8	11.47	11.47	2199.64	32.01	129.39	8.00	146.31	12.22	0.33	9048.60	1.48	1.00	1.00	0.90	1.00
7	15.35	379.05	368.4	368.4	10.17	10.17	577.11	62.51	67.89	12.50	73.20	18.86	0.38	4319.02	1.13	1.00	1.06	0.82	1.00
8	13.27	318.50	318.5	318.5	7.15	7.15	208.63	37.97	34.77	8.44	37.22	12.71	0.19	1296.69	1.00	1.00	1.07	0.80	0.99
9	13.27	318.50	318.5	318.5	7.15	7.15	208.63	37.97	34.77	8.44	37.22	12.71	0.19	1296.69	1.00	1.00	1.07	0.80	0.99

User Defined Frame Point Loads for Cross Section:

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	Clerestory->Resolved From Plane	2005.83	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	Clerestory->Resolved From Plane	3470.40	21/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	Clerestory->Resolved From Plane	-2435.65	21/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	Clerestory->Resolved From Plane	-971.07	21/0/0	NA	NA	N	LEFT	1.000	OF
2	p	CG	Clerestory->Resolved From Plane	-580.77	9/6/0	NA	NA	N	DOWN	1.000	OF

User Defined Frame Line Loads for Cross Section:

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	Upper Roof->Resolved From Plane	-57.51	0/0/0	-57.51	9/11/3	N	DOWN	1.000	OF
2	plf	L>	Upper Roof->Resolved From Plane	-331.87	0/0/0	-331.87	9/11/3	N	DOWN	1.000	OF
2	plf	<L	Upper Roof->Resolved From Plane	-331.87	0/0/0	-331.87	9/11/3	N	DOWN	1.000	OF
2	plf	L	Upper Roof->Resolved From Plane	-331.87	0/0/0	-331.87	9/11/3	N	DOWN	1.000	OF
2	plf	S>	Upper Roof->Resolved From Plane	-41.48	0/0/0	-41.48	9/11/3	N	DOWN	1.000	OF
2	plf	<S	Upper Roof->Resolved From Plane	-41.48	0/0/0	-41.48	9/11/3	N	DOWN	1.000	OF
2	plf	US1*	Upper Roof->Resolved From Plane	-41.48	0/0/0	-41.48	9/11/3	N	DOWN	1.000	OF
2	plf	*US1	Upper Roof->Resolved From Plane	-41.48	0/0/0	-41.48	9/11/3	N	DOWN	1.000	OF
2	plf	S	Upper Roof->Resolved From Plane	-41.48	0/0/0	-41.48	9/11/3	N	DOWN	1.000	OF
2	plf	W1>	Upper Roof->Resolved From Plane	321.13	0/0/0	321.13	9/11/3	N	UP	0.768	OF
2	plf	<W1	Upper Roof->Resolved From Plane	250.88	0/0/0	250.88	9/11/3	N	UP	0.600	OF
2	plf	W2>	Upper Roof->Resolved From Plane	170.60	0/0/0	170.60	9/11/3	N	UP	0.408	OF
2	plf	<W2	Upper Roof->Resolved From Plane	100.35	0/0/0	100.35	9/11/3	N	UP	0.240	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	240	1.0 L	L
2	System	1.000	0	240	1.0 S	S
3	System	1.000	0	240	1.0 US1*	US1*
4	System	1.000	0	240	1.0 *US1	*US1
5	System	1.000	0	240	0.700 W1>	W1>
6	System	1.000	0	240	0.700 <W1	<W1
7	System	1.000	0	240	0.700 W2>	W2>
8	System	1.000	0	240	0.700 <W2	<W2
9	System	1.000	0	240	0.700 WP	WP
10	System	1.000	200	0	0.700 W1>	W1>
11	System	1.000	200	0	0.700 <W1	<W1
12	System	1.000	200	0	0.700 W2>	W2>
13	System	1.000	200	0	0.700 <W2	<W2
14	System	1.000	200	0	0.700 WP	WP
15	System	1.000	50	0	1.0 E> + 1.0 EG-	E> + EG-
16	System	1.000	50	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section:

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description

Max. Horizontal Deflection	(H/204)	1.198	1	2	12	W2>
Max. Vertical Deflection for Span 1	(L/945)	0.392	2	2	6	<W1
Max. Vertical Deflection for Span 2	(L/880)	0.421	5	1	7	W2>

* Negative horizontal deflection is left
* Negative vertical deflection is down
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Vertical Frame Clearances Wall: 4

Frame	Required	at Bottom of Beam Left	Left Bracket Length	at Bottom of Beam Right	Right Bracket Length	Hoist Room	Clear Lift
1	0/0/0	3/7/5	2/3/10	3/7/5	2/3/10	2/7/2	23/8/14
2	0/0/0	4/4/13	3/1/2	4/4/13	3/1/2	2/7/2	23/8/14
3	0/0/0	3/6/4	2/2/9	3/6/4	2/2/9	2/7/2	23/8/14
4	0/0/0	3/6/4	2/2/9	3/6/4	2/2/9	2/7/2	23/8/14
5	0/0/0	4/9/0	3/5/5	4/9/0	3/5/5	2/7/2	23/8/14

Horizontal Frame Clearances Wall: 4

Frame	Required	at Bottom of Beam Left	at Bottom of Beam Right
1	1/0/0	0/0/0	0/0/0
2	1/0/0	0/0/0	0/0/0
3	1/0/0	0/0/0	0/0/0
4	1/0/0	0/0/0	0/0/0
5	1/0/0	0/0/0	0/0/0

THIS INFO IS MEANINGLESS, IT REFERS TO A CRANE SYSTEM WHICH IS UNDEFINED BEYOND CAPACITY/LOADING.

Loads and Codes - Shape: Clerestory Frames

City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code
Building Use: Standard Occupancy Structure
Built Up: 05AISC - ASD
Cold Form: 04AISI - ASD
Rainfall: 10.00 inches per hour

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.575)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000
Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 4/9/8
Parts / Portions Zone Strip Width: 3/0/0
Basic Wind Pressure: 21.13,(Parts) 25.76 psf

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed (0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

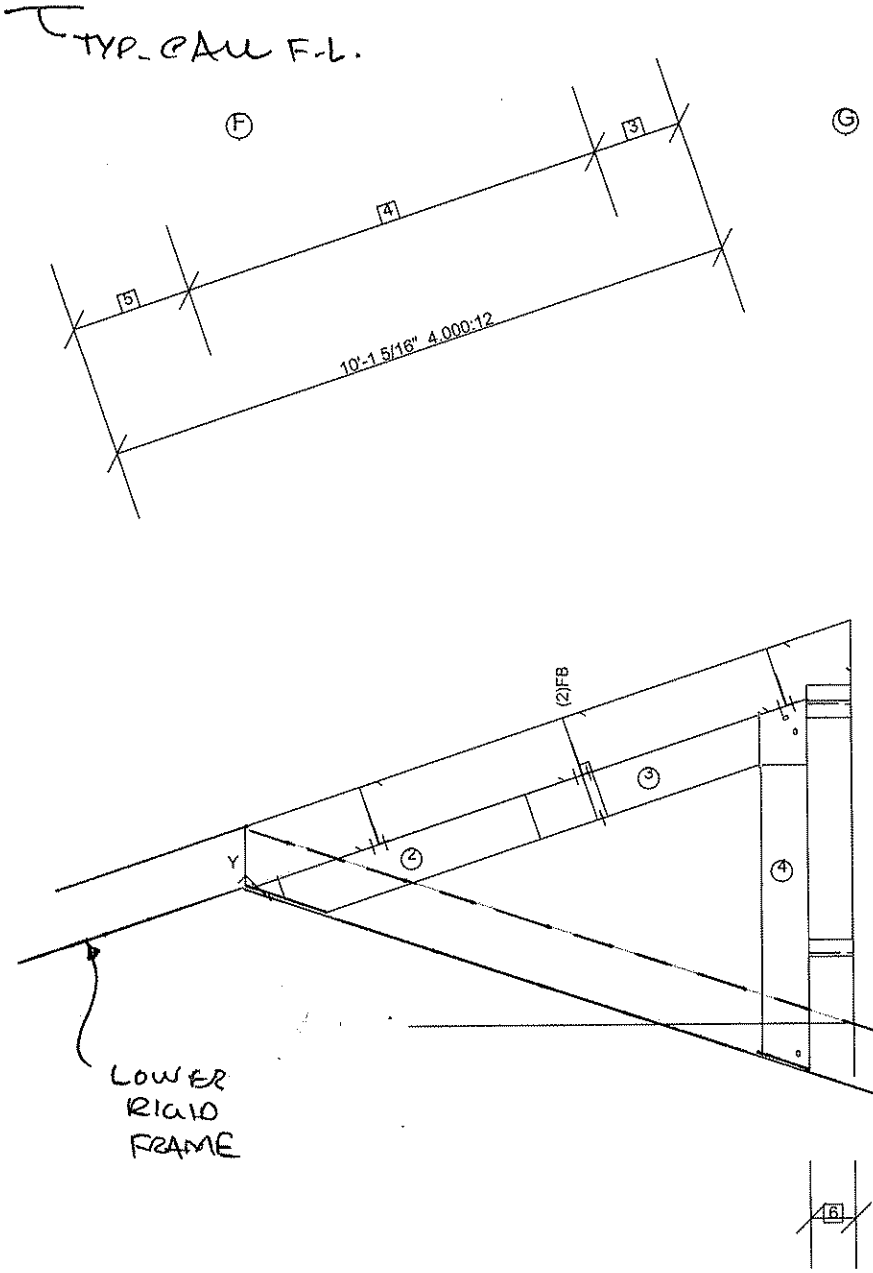
Seismic Load
Mapped Spectral Response - Ss:11.80 %g
Mapped Spectral Response - S1:5.10 %g
Seismic Hazard / Use Group: Group 1

Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.0981
Bracing Seismic Period: 0.0648
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

Deflection Conditions
Frames are vertically supporting:Ceiling with Flexible Finish
Frames are laterally supporting:Underhung Crane
Purlins are supporting:Ceiling with Flexible Finish
Girts are supporting:Metal Wall Panels
Deflection Limit Override H/150

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

Wall: 2, Frame at: 61/4/0
Frame Cross Section: 11



Dimension Key
1 1'-7 9/16"
2 1'-6 3/4"
3 1'-4 13/16"
4 2 @ 3'-4 3/4"
5 1'-10 15/16"
6 8 1/2"
7 1'-3 15/16"
8 3'-6 1/4"
9 6 3/16"
10 1'-0 5/16"

Frame Clearances

Horiz. Clearance between members 1(CX215) and 4(CX216): 7'-4 3/8"
Vert. Clearance at member 1(CX215): 1'-7 1/4"
Vert. Clearance at member 4(CX216): 4'-0 3/4"
Finished Floor Elevation = 133'-4" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
61/4/0	30/0/0	Clerestory RF	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 S>	D + CG + S>
4	System	1.000	1.0 D + 1.0 CG + 1.0 <S	D + CG + <S
5	System	1.000	1.0 D + 1.0 CG + 1.0 W1>	D + CG + W1>
6	System	1.000	1.0 D + 1.0 CG + 1.0 <W1	D + CG + <W1
7	System	1.000	1.0 D + 1.0 CG + 1.0 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 1.0 <W2	D + CG + <W2
9	System	1.000	0.600 D + 0.600 CU + 1.0 W1>	D + CU + W1>
10	System	1.000	0.600 D + 0.600 CU + 1.0 <W1	D + CU + <W1
11	System	1.000	0.600 D + 0.600 CU + 1.0 W2>	D + CU + W2>
12	System	1.000	0.600 D + 0.600 CU + 1.0 <W2	D + CU + <W2
13	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 W1>	D + CG + L + W1>
14	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 <W1	D + CG + L + <W1
15	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 W2>	D + CG + L + W2>
16	System	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 <W2	D + CG + L + <W2
17	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 W1>	D + CG + S + W1>
18	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 <W1	D + CG + S + <W1
19	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 W2>	D + CG + S + W2>
20	System	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 <W2	D + CG + S + <W2
21	System	1.000	1.0 D + 1.0 CG + 0.700 E> + 0.700 EG+	D + CG + E> + EG+
22	System	1.000	1.0 D + 1.0 CG + 0.700 <E + 0.700 EG+	D + CG + <E + EG+
23	System	1.000	0.600 D + 0.600 CU + 0.700 E> + 0.700 EG-	D + CU + E> + EG-
24	System	1.000	0.600 D + 0.600 CU + 0.700 <E + 0.700 EG-	D + CU + <E + EG-
25	System	1.000	1.0 D + 1.0 CG + 0.525 E> + 0.525 EG+	D + CG + E> + EG+
26	System	1.000	1.0 D + 1.0 CG + 0.525 <E + 0.525 EG+	D + CG + <E + EG+
27	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 WB1>	D + CG + WP + WB1>
28	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 WB1>	D + CU + WP + WB1>
29	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB1>	D + CG + L + WP + WB1>
30	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB1>	D + CG + S + WP + WB1>
31	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 <WB1	D + CG + WP + <WB1
32	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 <WB1	D + CU + WP + <WB1
33	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB1	D + CG + L + WP + <WB1
34	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB1	D + CG + S + WP + <WB1
35	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 WB2>	D + CG + WP + WB2>
36	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 WB2>	D + CU + WP + WB2>
37	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 WB2>	D + CG + L + WP + WB2>
38	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 WB2>	D + CG + S + WP + WB2>
39	System Derived	1.000	1.0 D + 1.0 CG + 1.0 WP + 1.0 <WB2	D + CG + WP + <WB2
40	System Derived	1.000	0.600 D + 0.600 CU + 1.0 WP + 1.0 <WB2	D + CU + WP + <WB2
41	System Derived	1.000	1.0 D + 1.0 CG + 0.750 L + 0.750 WP + 0.750 <WB2	D + CG + L + WP + <WB2
42	System Derived	1.000	1.0 D + 1.0 CG + 0.750 S + 0.750 WP + 0.750 <WB2	D + CG + S + WP + <WB2
43	System Derived	1.000	1.0 D + 1.0 CG + 0.700 EB> + 0.700 EG+	D + CG + EB> + EG+
44	System Derived	1.000	0.600 D + 0.600 CU + 0.700 EB> + 0.700 EG-	D + CU + EB> + EG-
45	System Derived	1.000	1.0 D + 1.0 CG + 0.525 EB> + 0.525 EG+	D + CG + EB> + EG+
46	System Derived	1.000	1.0 D + 1.0 CG + 0.700 <EB + 0.700 EG+	D + CG + <EB + EG+
47	System Derived	1.000	0.600 D + 0.600 CU + 0.700 <EB + 0.700 EG-	D + CU + <EB + EG-
48	System Derived	1.000	1.0 D + 1.0 CG + 0.525 <EB + 0.525 EG+	D + CG + <EB + EG+

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
~~1~~	~~5.00~~	~~0.1345~~	~~0.1345~~	~~9.00~~	~~9.00~~	~~2.18~~	~~33.0~~	55.00	55.00	BP	KN	3P
2	5.00	0.1345	0.1345	9.00	9.00	4.68	41.6	55.00	55.00	KN	SS	3P
3	5.00	0.1345	0.1345	9.00	9.00	4.68	38.6	55.00	55.00	SS	KN	3P
4	5.00	0.1345	0.1345	9.00	9.00	6.15	66.1	55.00	55.00	BP	KN	3P

Total Frame Weight = 179.2 (p) (Includes all plates)
Frame Pricing Weight = 213.2 (p) (Includes all pieces)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
4	9/7/1	-1/0/2	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.

Reactions - Unfactored Load Type at Frame Cross Section: 11

Type		Exterior Column			Exterior Column					
X-Loc		0/0/0			9/7/1					
Grid1 - Grid2		11-F			11-G					
Base Plate W x L (in.)		8 x 10			8 x 10					
Base Plate Thickness (in.)		0.375			0.375					
Anchor Rod Qty/Diam. (in.)		4 - 0.750			4 - 0.750					
Column Base Elev.		133'-4"			132'-3 7/8"					
Load Type	Desc.	Hx	Hz	Vy	Hx	Hz	Vy			
D	Frm	0.1	-	0.6	-0.1	-	0.8	-	-	-
CG	Frm	0.1	-	0.6	-0.1	-	0.8	-	-	-
L>	Frm	0.5	-	2.6	-0.5	-	3.2	-	-	-
<L	Frm	0.5	-	2.6	-0.5	-	3.2	-	-	-
S>	Frm	0.1	-	0.3	-0.1	-	0.4	-	-	-
<S	Frm	0.1	-	0.3	-0.1	-	0.4	-	-	-
W1>	Frm	3.2	-	0.1	1.4	-	-4.3	-	-	-
<W1	Frm	-1.3	-	-2.8	-0.1	-	-3.4	-	-	-
W2>	Frm	3.1	-	1.1	1.5	-	-3.1	-	-	-
<W2	Frm	-1.4	-	-1.8	0.0	-	-2.3	-	-	-
CU	Frm	-	-	-	-	-	-	-	-	-
L	Frm	0.5	-	2.6	-0.5	-	3.2	-	-	-
S	Frm	0.1	-	0.3	-0.1	-	0.4	-	-	-
E>	Frm	0.1	-	0.1	0.0	-	-0.1	-	-	-
EG+	Frm	-	-	0.0	-	-	0.0	-	-	-
<E	Frm	-0.1	-	-0.1	-0.0	-	0.1	-	-	-
EG-	Frm	-	-	-0.0	-	-	-0.0	-	-	-
WP	Frm	0.0	-	-1.9	-0.4	-	-1.7	-	-	-
WB1>	Brc	-	0.3	-0.0	-	0.3	-0.1	-	-	-
<WB1	Brc	-	-	0.0	-	-	0.1	-	-	-
WB2>	Brc	-	0.3	-0.0	-	0.3	-0.1	-	-	-
<WB2	Brc	-	-	0.0	-	-	0.1	-	-	-
EB>	Brc	-	0.2	-0.0	-	0.2	-0.1	-	-	-
<EB	Brc	-	-	0.0	-	-	0.1	-	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions based on 2nd order structural analysis using the Direct Analysis Method

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	11-F	1.3	12	3.4	5	-	-	0.3	35	2.4	10	4.0	15	-	-	-	-
9/7/1	11-G	0.9	29	1.5	11	-	-	0.3	35	3.8	9	4.8	1	-	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	1.4	1.4
CG	0.0	0.0	1.4	1.4
L>	0.0	0.0	5.8	5.8
<L	0.0	0.0	5.8	5.8
S>	0.0	0.0	0.7	0.7
<S	0.0	0.0	0.7	0.7
W1>	4.6	4.6	4.2	4.2
<W1	1.4	1.4	6.2	6.2
W2>	4.6	4.6	2.0	2.0
<W2	1.4	1.4	4.0	4.0
CU	0.0	0.0	0.0	0.0
L	0.0	0.0	5.8	5.8
S	0.0	0.0	0.7	0.7

E>	0.2	0.2	0.0	0.0
EG+	0.0	0.0	0.1	0.1
<E	0.2	0.2	0.0	0.0
EG-	0.0	0.0	0.1	0.1
WP	0.3	0.3	3.7	3.7
WB1>	0.0	0.0	0.0	0.1
<WB1	0.0	0.0	0.0	0.1
WB2>	0.0	0.0	0.0	0.1
<WB2	0.0	0.0	0.0	0.1
EB>	0.0	0.0	0.0	0.1
<EB	0.0	0.0	0.0	0.1

Base Plate Summary

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Num. Of Bolts	Bolt Diam. (in.)	Type	Welds to Flange	Welds to Web
0/0/0	11-F	1	0.375	8	10	4	0.750	A36	OS-0.1875	OS-0.1875
9/7/1	11-G	4	0.375	8	10	4	0.750	A36	OS-0.1875	OS-0.1875

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S9	1.37	8.675	64.50	N/A	N/A	0.1875	2.000	Both	W-OS-0.1875
4	1	S3	5.08	8.731	N/A	N/A	N/A	0.1875	2.000	Both	F-FP,W-OS-0.1875

Bolted End-Plate Moment Connections (AISC DG-16) - Fy = 55 ksi

Mem. No.	Jt. No.	Type	End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
			Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	0.375	6.00	10.00	0.750	A325X/ST	3.00	11	Flush	2.00	11	Flush	2.00
2	1	KN(Face)	0.375	6.00	10.00	0.750	A325X/ST	3.00	11	Flush	2.00	11	Flush	2.00
3	2	KN(Face)	0.375	6.00	10.36	0.750	A325X/ST	3.00	11	Flush	0.00	11	Flush	0.00
4	2	KN(Face)	0.375	6.00	10.61	0.750	A325X/ST	3.00	11	Flush	0.00	11	Flush	0.00

Mem. No.	Jt. No.	Required Strength - Out Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Available Strength - Out Design Proc.	Shear (k)	Moment (in-k)	Required Strength - In Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Available Strength - In Design Proc.	Shear (k)	Moment (in-k)
1	2	5	-2.5	0.5	72.9	Thin plate	106.0	140.1	10	1.0	2.1	17.0	Thin plate	106.0	140.1
2	1	5	-2.5	0.5	72.9	Thin plate	106.0	140.1	10	1.0	2.1	17.0	Thin plate	106.0	140.1
3	2	1	0.4	3.4	35.2	Thin plate	106.0	143.6	9	-1.9	2.7	46.8	Thin plate	106.0	149.8
4	2	1	0.4	3.4	35.2	Thin plate	106.0	143.6	9	-1.9	2.7	46.8	Thin plate	106.0	149.8

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Design Note
3	0/11/6	4/9/9	(2)FB2050	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

Mem. No.	Loc. ft	Depth in.	Controlling Cases Axial + Flexure	Controlling Cases Shear	Required Strength Axial Pr k	Required Strength Shear Vr k	Required Strength Mom-x Mrx in-k	Required Strength Mom-y Mry in-k	Available Strength Axial Pc k	Available Strength Shear Vc k	Available Strength Mom-x Mcx in-k	Available Strength Mom-y Mcy in-k	Strength Ratios Axial + Flexure	Strength Ratios Shear
~~1~~	~~1.64~~	~~9.00~~	~~7~~	~~5~~	~~-2.4~~	~~-3.4~~	~~-63.2~~	~~0.0~~	~~49.1~~	~~20.9~~	~~169.5~~	~~39.0~~	~~0.40~~	~~0.16~~
2	0.27	9.00	5	2	-2.5	2.8	-72.9	0.0	48.0	20.9	169.5	39.0	0.46	0.14
3	0.00	9.00	1	1	-0.6	-3.4	49.7	0.0	48.0	20.9	169.5	39.0	0.30	0.16
4	5.11	9.00	9	32	3.8	-1.6	52.1	0.0	76.4	20.9	169.5	39.0	0.33	0.08

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
1	1.64	19.72	19.7	19.7	2.52	2.52	33.89	2.80	7.53	1.12	8.53	1.72	0.02	55.09	1.65	1.00	1.13	0.67	0.88
2	0.27	93.35	6.5	6.5	2.52	2.52	33.89	2.80	7.53	1.12	8.53	1.72	0.02	55.09	1.00	1.00	1.13	0.67	0.89
3	0.00	93.35	61.0	61.0	2.52	2.52	33.89	2.80	7.53	1.12	8.53	1.72	0.02	55.09	1.16	1.00	1.13	0.67	0.89
4	5.11	61.37	61.4	61.4	2.52	2.52	33.89	2.80	7.53	1.12	8.53	1.72	0.02	55.09	1.34	1.00	1.13	0.67	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	240	1.0 L	L
2	System	1.000	0	240	1.0 S	S
3	System	1.000	0	240	0.700 W1>	W1>
4	System	1.000	0	240	0.700 <W1	<W1
5	System	1.000	0	240	0.700 W2>	W2>
6	System	1.000	0	240	0.700 <W2	<W2
7	System	1.000	0	240	0.700 WP	WP
8	System	1.000	100	0	0.700 W1>	W1>
9	System	1.000	100	0	0.700 <W1	<W1
10	System	1.000	100	0	0.700 W2>	W2>
11	System	1.000	100	0	0.700 <W2	<W2
12	System	1.000	100	0	0.700 WP	WP
13	System	1.000	100	0	0.600 E> + 0.600 EG-	E> + EG-
14	System	1.000	100	0	0.600 <E + 0.600 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 11

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/417)	-0.055	1	2	8	W1>
Max. Vertical Deflection for Span 1	(L/2699)	0.036	3	1	3	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms. Therefore, these deflections may be considerably overstated.

Covering - Expanded Report

Shape: Maintenance Area

Loads and Codes - Shape: Maintenance Area

City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code Built Up: 05AISC - ASD Rainfall: 10.00 inches per hour
Building Use: Standard Occupancy Structure Cold Form: 04AISI - ASD

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf

Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.685)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000
Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 27/9/0
Parts / Portions Zone Strip Width: 6/8/6
Basic Wind Pressure: 25.20,(Parts) 25.76 psf

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed (0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

Seismic Load
Mapped Spectral Response - Ss:11.80 %g
Mapped Spectral Response - S1:5.10 %g
Seismic Hazard / Use Group: Group 1

Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.3340
Bracing Seismic Period: 0.2043
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

Deflection Conditions
Frames are vertically supporting:Ceiling with Flexible Finish
Frames are laterally supporting:Unreinforced Masonry Wall
Purlins are supporting:Ceiling with Flexible Finish
Girts are supporting:Unreinforced Masonry Wall

WALL PANELS FOR THIS BUILDING ARE MOSTLY ATTACHED TO BLOCK VIA SECONDARY BY OTHERS & NOT VP. PANEL LOAD CHART FOLLOWS PG# 141. IT SHOULD BE USED TO DETERMINE THE MAXIMUM SPACING OF THAT SECONDARY.

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

Covering Design Loads - Wall: 1

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Need Lower and Upper Girt	40.71	0/0/0	41.000	0.99	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	0/0/0	48.000	0.63	IN	1.180
End Zone	psf	W1>	Need Lower and Upper Girt	40.71	14/3/10	41.000	0.99	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	14/3/10	48.000	0.63	IN	1.180
Interior Area	psf	W1>	Need Lower Girt	32.98	6/8/6	39.000	0.85	OUT	-1.280
Interior Area	psf	<W2	Need Lower Girt	30.40	6/8/6	48.000	0.63	IN	1.180

Covering Design Loads - Wall: 2

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Need Lower and Upper Girt	40.71	0/0/0	41.000	0.99	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	0/0/0	48.000	0.63	IN	1.180
End Zone	psf	W1>	Need Lower and Upper Girt	40.71	95/11/10	41.000	0.99	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	95/11/10	48.000	0.63	IN	1.180
Interior Area	psf	W1>	Need Lower Girt	32.98	6/8/6	39.000	0.85	OUT	-1.280
Interior Area	psf	<W2	Need Lower Girt	30.40	6/8/6	48.000	0.63	IN	1.180

Covering Design Loads - Wall: 3

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Need Lower and Upper Girt	40.71	0/0/0	41.000	0.99	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	0/0/0	48.000	0.63	IN	1.180
End Zone	psf	W1>	Need Lower and Upper Girt	40.71	60/3/10	41.000	0.99	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	60/3/10	48.000	0.63	IN	1.180
Interior Area	psf	W1>	Need Lower Girt	32.98	6/8/6	39.000	0.85	OUT	-1.280

Interior Area	psf	<W2	Need Lower Girt	30.40	6/8/6	48.000	0.63	IN	1.180

Covering Design Loads - Wall: 4

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Need Lower and Upper Girt	40.71	0/0/0	41.000	0.99	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	0/0/0	48.000	0.63	IN	1.180
End Zone	psf	W1>	Need Lower and Upper Girt	40.71	95/11/10	41.000	0.99	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	95/11/10	48.000	0.63	IN	1.180
Interior Area	psf	W1>	Need Lower Girt	32.98	6/8/6	39.000	0.85	OUT	-1.280
Interior Area	psf	<W2	Need Lower Girt	30.40	6/8/6	48.000	0.63	IN	1.180

Covering Design Loads - Roof: A

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
Entire Surface	psf	L	Standard Spacing is Adequate	21.80	-21/0/0	86.000	0.25	IN	1.000
Entire Surface	psf	S	Standard Spacing is Adequate	2.50	-21/0/0	86.000	0.03	IN	1.000
Entire Surface	psf	*US1	Standard Spacing is Adequate	2.50	-21/0/0	86.000	0.03	IN	1.000
Entire Surface	psf	*US1	Standard Spacing is Adequate	14.03	-21/0/0	86.000	0.16	IN	1.000
Corner Zone in Extension	psf	W1>	Non-std Spacing: 2/6/0 Required	93.53	-7/6/1	99.000	0.94	OUT	-3.700
Corner Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	-7/6/1	86.000	0.17	IN	0.500
Side Zone in Extension	psf	W1>	Standard Spacing is Adequate	54.88	-6/8/6	57.000	0.96	OUT	-2.200
Side Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	-6/8/6	86.000	0.17	IN	0.500
Corner Zone in Extension	psf	W1>	Non-std Spacing: 2/6/0 Required	93.53	-6/8/6	99.000	0.94	OUT	-3.700
Corner Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	-6/8/6	86.000	0.17	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	46.64	0/0/0	57.000	0.82	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	19.32	0/0/0	86.000	0.22	IN	0.680
Side Zone in Extension	psf	W1>	Standard Spacing is Adequate	54.88	-6/8/6	57.000	0.96	OUT	-2.200
Side Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	-6/8/6	86.000	0.17	IN	0.500
Corner Zone in Extension	psf	W1>	Non-std Spacing: 2/6/0 Required	93.53	-6/8/6	99.000	0.94	OUT	-3.700
Corner Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	-6/8/6	86.000	0.17	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	46.64	0/0/0	57.000	0.82	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	19.32	0/0/0	86.000	0.22	IN	0.680
Side Zone in Extension	psf	W1>	Standard Spacing is Adequate	54.88	-15/11/0	57.000	0.96	OUT	-2.200
Side Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	-15/11/0	86.000	0.17	IN	0.500
Corner Zone	psf	W1>	Non-std Spacing: 3/6/0 Required	74.98	95/11/10	75.000	1.00	OUT	-2.980
Corner Zone	psf	<W2	Standard Spacing is Adequate	19.32	95/11/10	86.000	0.22	IN	0.680
Corner Zone in Extension	psf	W1>	Non-std Spacing: 2/6/0 Required	93.53	102/8/0	99.000	0.94	OUT	-3.700
Corner Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	102/8/0	86.000	0.17	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	46.64	102/8/0	57.000	0.82	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	19.32	102/8/0	86.000	0.22	IN	0.680
Side Zone in Extension	psf	W1>	Standard Spacing is Adequate	54.88	102/8/0	57.000	0.96	OUT	-2.200
Side Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	102/8/0	86.000	0.17	IN	0.500
Corner Zone	psf	W1>	Non-std Spacing: 3/6/0 Required	74.98	102/8/0	75.000	1.00	OUT	-2.980
Corner Zone	psf	<W2	Standard Spacing is Adequate	19.32	102/8/0	86.000	0.22	IN	0.680
Corner Zone in Extension	psf	W1>	Non-std Spacing: 2/6/0 Required	93.53	102/8/0	99.000	0.94	OUT	-3.700
Corner Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	102/8/0	86.000	0.17	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	46.64	97/1/2	57.000	0.82	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	19.32	97/1/2	86.000	0.22	IN	0.680
Corner Zone	psf	W1>	Non-std Spacing: 3/6/0 Required	74.98	6/8/6	75.000	1.00	OUT	-2.980
Corner Zone	psf	<W2	Standard Spacing is Adequate	19.32	6/8/6	86.000	0.22	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	46.64	6/8/6	57.000	0.82	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	19.32	6/8/6	86.000	0.22	IN	0.680
Interior Area	psf	W1>	Standard Spacing is Adequate	26.02	0/0/8	57.000	0.46	OUT	-1.080
Interior Area	psf	<W2	Standard Spacing is Adequate	19.32	0/0/8	86.000	0.22	IN	0.680

Covering Design Loads - Roof: B

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.

Entire Surface	psf	L	Standard Spacing is Adequate	21.80	-1/1/8	86.000	0.25	IN	1.000
Entire Surface	psf	S	Standard Spacing is Adequate	2.50	-1/1/8	86.000	0.03	IN	1.000
Entire Surface	psf	US1*	Standard Spacing is Adequate	2.50	-1/1/8	86.000	0.03	IN	1.000
Entire Surface	psf	US1*	Standard Spacing is Adequate	14.08	-1/1/8	86.000	0.16	IN	1.000
Corner Zone	psf	W1>	Non-std Spacing: 3/6/0 Required	74.98	5/6/14	75.000	1.00	OUT	-2.980
Corner Zone	psf	<W2	Standard Spacing is Adequate	19.32	5/6/14	86.000	0.22	IN	0.680
Corner Zone in Extension	psf	W1>	Non-std Spacing: 2/6/0 Required	93.53	-1/1/8	99.000	0.94	OUT	-3.700
Corner Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	-1/1/8	86.000	0.17	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	46.64	0/0/0	57.000	0.82	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	19.32	0/0/0	86.000	0.22	IN	0.680
Side Zone in Extension	psf	W1>	Standard Spacing is Adequate	54.88	0/0/0	57.000	0.96	OUT	-2.200
Side Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	0/0/0	86.000	0.17	IN	0.500
Corner Zone	psf	W1>	Non-std Spacing: 3/6/0 Required	74.98	0/0/0	75.000	1.00	OUT	-2.980
Corner Zone	psf	<W2	Standard Spacing is Adequate	19.32	0/0/0	86.000	0.22	IN	0.680
Corner Zone in Extension	psf	W1>	Non-std Spacing: 2/6/0 Required	93.53	0/0/0	99.000	0.94	OUT	-3.700
Corner Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	0/0/0	86.000	0.17	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	46.64	5/6/14	57.000	0.82	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	19.32	5/6/14	86.000	0.22	IN	0.680
Side Zone in Extension	psf	W1>	Standard Spacing is Adequate	54.88	110/2/1	57.000	0.96	OUT	-2.200
Side Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	110/2/1	86.000	0.17	IN	0.500
Corner Zone in Extension	psf	W1>	Non-std Spacing: 2/6/0 Required	93.53	110/2/1	99.000	0.94	OUT	-3.700
Corner Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	110/2/1	86.000	0.17	IN	0.500
Side Zone in Extension	psf	W1>	Standard Spacing is Adequate	54.88	109/2/2	57.000	0.96	OUT	-2.200
Side Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	109/2/2	86.000	0.17	IN	0.500
Corner Zone in Extension	psf	W1>	Non-std Spacing: 2/6/0 Required	93.53	109/2/2	99.000	0.94	OUT	-3.700
Corner Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	109/2/2	86.000	0.17	IN	0.500
Side Zone in Extension	psf	W1>	Standard Spacing is Adequate	54.88	103/9/8	57.000	0.96	OUT	-2.200
Side Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	103/9/8	86.000	0.17	IN	0.500
Corner Zone	psf	W1>	Non-std Spacing: 3/6/0 Required	74.98	102/8/0	75.000	1.00	OUT	-2.980
Corner Zone	psf	<W2	Standard Spacing is Adequate	19.32	102/8/0	86.000	0.22	IN	0.680
Corner Zone in Extension	psf	W1>	Non-std Spacing: 2/6/0 Required	93.53	102/8/0	99.000	0.94	OUT	-3.700
Corner Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	102/8/0	86.000	0.17	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	46.64	102/8/0	57.000	0.82	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	19.32	102/8/0	86.000	0.22	IN	0.680
Side Zone in Extension	psf	W1>	Standard Spacing is Adequate	54.88	102/8/0	57.000	0.96	OUT	-2.200
Side Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	102/8/0	86.000	0.17	IN	0.500
Corner Zone	psf	W1>	Non-std Spacing: 3/6/0 Required	74.98	102/8/0	75.000	1.00	OUT	-2.980
Corner Zone	psf	<W2	Standard Spacing is Adequate	19.32	102/8/0	86.000	0.22	IN	0.680
Corner Zone in Extension	psf	W1>	Non-std Spacing: 2/6/0 Required	93.53	102/8/0	99.000	0.94	OUT	-3.700
Corner Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	102/8/0	86.000	0.17	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	46.64	97/1/2	57.000	0.82	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	19.32	97/1/2	86.000	0.22	IN	0.680
Interior Area	psf	W1>	Standard Spacing is Adequate	26.02	102/8/0	57.000	0.46	OUT	-1.080
Interior Area	psf	<W2	Standard Spacing is Adequate	19.32	102/8/0	86.000	0.22	IN	0.680
Interior Area in Extension	psf	W1>	Standard Spacing is Adequate	21.39	102/8/0	57.000	0.38	OUT	-0.900
Interior Area in Extension	psf	<W2	Standard Spacing is Adequate	14.68	102/8/0	86.000	0.17	IN	0.500

Covering Design Loads - Wall: 2 - Canopy: 1

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
Entire Surface	psf	L	Standard Spacing is Adequate	21.80	0/0/0	74.000	0.29	IN	1.000
Entire Surface	psf	S	Standard Spacing is Adequate	5.34	0/0/0	74.000	0.07	IN	1.000
Entire Surface	psf	US1*	Standard Spacing is Adequate	5.34	0/0/0	74.000	0.07	IN	1.000

Corner Zone	psf	W1>	No Resolution Available	93.53	0/0/0	-1.000		OUT	-3.700
Corner Zone	psf	<W2	Standard Spacing is Adequate	14.68	0/0/0	74.000	0.20	IN	0.500
Corner Zone	psf	W1>	No Resolution Available	93.53	98/2/10	-1.000		OUT	-3.700
Corner Zone	psf	<W2	Standard Spacing is Adequate	14.68	98/2/10	74.000	0.20	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	54.88	6/8/6	57.000	0.96	OUT	-2.200
Side Zone	psf	<W2	Standard Spacing is Adequate	14.68	6/8/6	74.000	0.20	IN	0.500

Covering Design Loads - Wall: 4 - Canopy: 1

Zone	Units	Type	Description	Actual	Loc	Allow.	Ratio	Dir.	Coef.
Entire Surface	psf	L	Standard Spacing is Adequate	21.80	0/0/0	74.000	0.29	IN	1.000
Corner Zone	psf	W1>	No Resolution Available	93.53	0/0/0	-1.000		OUT	-3.700
Corner Zone	psf	<W2	Standard Spacing is Adequate	14.68	0/0/0	74.000	0.20	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	54.88	6/8/6	57.000	0.96	OUT	-2.200
Side Zone	psf	<W2	Standard Spacing is Adequate	14.68	6/8/6	74.000	0.20	IN	0.500

22 GA FP12 BY VP/ON HATS/ON BLOCK

Panel Data

Wall/Roof	Type	Thickness	Finish	Color	Direction	Gable Dir	Max. Length
Wall: 1	~~Panel Rib~~	~~26~~	KXL	Standard Color	Not Applicable	Peak Out	41/0/0
Location: 2	Open		Exposed to wind				
Location: 3	Open		Exposed to wind				
Wall: 2	~~Panel Rib~~	~~26~~	KXL	Standard Color	Left to Right	Left to Right	41/0/0
Location: 2	NBVP - Masonry	11 1/4"		Supported by others=no			
Location: 3	NBVP - Panel	1/16"		Supported by others=no			
Location: 4	NBVP - Panel	1/16"		Supported by others=no			
Location: 5	NBVP - Panel	1/16"		Supported by others=no			
Location: 6	NBVP - Panel	1/16"		Supported by others=no			
Location: 7	NBVP - Panel	1/16"		Supported by others=no			
Location: 8	NBVP - Panel	1/16"		Supported by others=no			
Canopy: 1	SLR2	22	AEP	Standard Color	System Generated	Not Applicable	40/0/0
Wall: 3	~~Panel Rib~~	~~26~~	KXL	Standard Color	Left to Right	Left to Right	41/0/0
Location: 2	NBVP - Masonry	11 1/4"		Supported by others=no			
Location: 3	NBVP - Panel	1/16"		Supported by others=no			
Location: 4	NBVP - Panel	1/16"		Supported by others=no			
Location: 5	NBVP - Panel	1/16"		Supported by others=no			
Location: 6	NBVP - Panel	1/16"		Supported by others=no			
Location: 7	NBVP - Panel	1/16"		Supported by others=no			
Wall: 4	~~Panel Rib~~	~~26~~	KXL	Standard Color	Left to Right	Left to Right	41/0/0
Location: 2	NBVP - Masonry	11 1/4"		Supported by others=no			
Location: 3	NBVP - Panel	1/16"		Supported by others=no			
Location: 4	NBVP - Panel	1/16"		Supported by others=no			
Location: 5	NBVP - Panel	1/16"		Supported by others=no			
Location: 6	NBVP - Panel	1/16"		Supported by others=no			
Location: 7	NBVP - Panel	1/16"		Supported by others=no			
Location: 8	NBVP - Panel	1/16"		Supported by others=no			
Canopy: 2	SLR2	22	AEP	Standard Color	System Generated	Not Applicable	40/0/0
Roof: A	SLR2	22	AEP	Standard Color	System Generated	Not Applicable	40/0/0
Roof: B	SLR2	22	AEP	Standard Color	System Generated	Not Applicable	40/0/0

Abbreviation Definitions

Codes	Definition
LE	From Left Edge
RE	From Right Edge
FL	From Frame
FS	From Start Dim

Location Data

Wall/Roof	Start Dim.	Bottom Elev.	Top Elev.	End Dim.	Bottom Elev.	Top Elev.	First Pitch	Second Pitch	Ridge Distance	Ridge Height	psf
Wall: 1 Location: 2	0/0/0 LE	0/0/0	15/11/6	21/0/0 FS	0/0/0	22/11/5					
Wall: 1 Location: 3	21/0/0 LE	0/0/0	0/0/0	0/0/0 RE	0/0/0	0/0/0					
Wall: 2 Location: 2	Full Width	0/0/0	6/2/12		0/0/0	6/2/12					50.00
Wall: 2 Location: 3	4/0/0 LE	0/0/0	16/0/0	12/0/0 FS	0/0/0	16/0/0					1.00
Wall: 2 Location: 4	18/0/0 LE	0/0/0	16/0/0	12/0/0 FS	0/0/0	16/0/0					1.00
Wall: 2 Location: 5	41/0/0 LE	0/0/0	16/0/0	12/0/0 FS	0/0/0	16/0/0					1.00
Wall: 2 Location: 6	64/0/0 LE	0/0/0	16/0/0	12/0/0 FS	0/0/0	16/0/0					1.00
Wall: 2 Location: 7	78/0/0 LE	0/0/0	16/0/0	12/0/0 FS	0/0/0	16/0/0					1.00

FLUSH PANEL - Allowable Wind Load vs. Span (psf)

ANY (1) SPAN OR (2) SPAN PANELS

Panel Designation:	Pressure Direction	Simple Span Condition-Maximum Span						
		2.0 ft.	2.5 ft.	3.0 ft.	3.5 ft.	4.0 ft.	4.5 ft	5.0 ft.
FP12 –24 Ga. Steel [1]	Inward	99	60	35	22	15	10	8
	Outward	29	29	29	29	29	23	18
FP12 –22 Ga. Steel [1]	Inward	155	88	51	32	21	15	11
	Outward	45	45	45	45	45	35	27
FP12 –.032 Al. [1]	Inward	67	34	20	12	8	6	4
	Outward	18	18	18	18	18	14	10

*Allowable loads **do not** include a 4/3 stress increase for wind load cases.*

Table Notes:
1. ASTM E-72, Ting (9/91)

3 SPAN & MORE PANELS

Panel Designation:	Pressure Direction	3 Span Condition - Maximum Span						
		2.0 ft.	2.5 ft.	3.0 ft.	3.5 ft.	4.0 ft.	4.5 ft	5.0 ft.
FP12 –24 Ga. Steel [1]	Inward	143	92	64	47	36	28	21
	Outward	29	29	29	29	29	28	22
FP12 –22 Ga. Steel [1]	Inward	223	143	99	73	56	40	29
	Outward	45	45	45	45	45	38	31
FP12 –.032 Al. [1]	Inward	116	74	52	33	22	16	11
	Outward	18	18	18	18	18	18	16

*Allowable loads **do not** include a 4/3 stress increase for wind load cases.*

Table Notes:
1. ASTM E-72, Ting (9/91)

Wall: 2 Location: 8	92/6/0 LE	0/0/0	7/0/0	3/4/0 FS	0/0/0	7/0/0					1.00
Wall: 3 Location: 2	Full Width	0/0/0	6/2/12		0/0/0	6/2/12					50.00
Wall: 3 Location: 3	2/8/0 LE	0/0/0	7/0/0	3/4/0 FS	0/0/0	7/0/0					1.00
Wall: 3 Location: 4	6/0/0 LE	15/5/0	19/5/0	3/0/0 FS	15/5/0	19/5/0					1.00
Wall: 3 Location: 5	26/6/0 LE	15/5/0	19/5/0	3/0/0 FS	15/5/0	19/5/0					1.00
Wall: 3 Location: 6	32/1/2 LE	24/0/4	26/10/0	2/9/12 FS	24/0/4	26/10/0					1.00
Wall: 3 Location: 7	61/0/0 LE	0/0/0	7/0/0	3/4/0 FS	0/0/0	7/0/0					1.00
Wall: 4 Location: 2	Full Width	0/0/0	6/2/12		0/0/0	6/2/12					50.00
Wall: 4 Location: 3	2/0/0 LE	0/0/0	8/0/0	8/0/0 FS	0/0/0	8/0/0					1.00
Wall: 4 Location: 4	14/8/0 LE	0/0/0	16/0/0	12/0/0 FS	0/0/0	16/0/0					1.00
Wall: 4 Location: 5	28/6/0 LE	0/0/0	16/0/0	12/0/0 FS	0/0/0	16/0/0					1.00
Wall: 4 Location: 6	49/8/0 LE	0/0/0	16/0/0	12/0/0 FS	0/0/0	16/0/0					1.00
Wall: 4 Location: 7	72/8/0 LE	0/0/0	16/0/0	12/0/0 FS	0/0/0	16/0/0					1.00
Wall: 4 Location: 8	86/8/0 LE	0/0/0	16/0/0	12/0/0 FS	0/0/0	16/0/0					1.00

Fastener Data

Wall/Roof	Type	Length	Spacing	Washers	Insul. Block	Mod. Ctrl.	Ice Damming
Wall: 1	Color Match Carbon	Standard Option	Standard Option	No	None	No	No
Location: 2	Not Applicable						
Location: 3	Not Applicable						
Wall: 2	Color Match Carbon	Standard Option	Standard Option	No	None	No	No
Location: 2	Not Applicable						
Location: 3	Not Applicable						
Location: 4	Not Applicable						
Location: 5	Not Applicable						
Location: 6	Not Applicable						
Location: 7	Not Applicable						
Location: 8	Not Applicable						
Canopy: 1	Stainless Steel Capped	Standard Option	UL90 Uplift	Yes	Thermal Block	No	No
Wall: 3	Color Match Carbon	Standard Option	Standard Option	No	None	No	No
Location: 2	Not Applicable						
Location: 3	Not Applicable						
Location: 4	Not Applicable						
Location: 5	Not Applicable						
Location: 6	Not Applicable						
Location: 7	Not Applicable						
Wall: 4	Color Match Carbon	Standard Option	Standard Option	No	None	No	No
Location: 2	Not Applicable						
Location: 3	Not Applicable						
Location: 4	Not Applicable						
Location: 5	Not Applicable						
Location: 6	Not Applicable						
Location: 7	Not Applicable						
Location: 8	Not Applicable						
Canopy: 2	Stainless Steel Capped	Standard Option	UL90 Uplift	Yes	Thermal Block	No	No
Roof: A	Stainless Steel Capped	Standard Option	UL90 Uplift	Yes	Thermal Block	No	No
Roof: B	Stainless Steel Capped	Standard Option	UL90 Uplift	Yes	Thermal Block	No	No

Shape: Clerestory Frames

Loads and Codes - Shape: Clerestory Frames

City: Stennis Space Center **County:** Hancock **State:** Mississippi **Country:** United States
Building Code: 2006 International Building Code Built Up: 05AISC - ASD Rainfall: 10.00 inches per hour
Building Use: Standard Occupancy Structure Cold Form: 04AISI - ASD

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Live Load
Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: 130.00 mph
Primaries Wind Exposure (Factor): B (0.575)
Parts Wind Exposure Factor: 0.701

Wind Enclosure: Enclosed
Wind Importance Factor: 1.000
Topographic Factor: 1.0000

Snow Load
Ground Snow Load: 5.00 psf
Design Snow (Sloped): 2.50 psf
Snow Exposure Category (Factor): 1 Fully Exposed (0.90)
Snow Importance: 1.000
Thermal Category (Factor): Heated (1.00)
Ground / Roof Conversion: 0.70

Seismic Load
Mapped Spectral Response - Ss:11.80 %g
Mapped Spectral Response - S1:5.10 %g
Seismic Hazard / Use Group: Group 1

Seismic Importance: 1.000
Seismic Performance / Design Category: B
Framing Seismic Period: 0.0981

Hurricane Prone Region
Windborne Debris Region
Impact Resistant Covering
Base Elevation: 0/0/0
Primary Zone Strip Width: 4/9/8
Parts / Portions Zone Strip Width: 3/0/0
Basic Wind Pressure: 21.13,(Parts) 25.76 psf

% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Unobstructed, Slippery Roof

Bracing Seismic Period: 0.0648
Framing R-Factor: 3.0000
Bracing R-Factor: 3.0000
Soil Profile Type: Stiff soil (D, 4)
Diaphragm Condition: Flexible
Frame Redundancy Factor:1.0000
Brace Redundancy Factor:1.0000
Frame Seismic Factor (Cs): 0.0420 x W
Brace Seismic Factor (Cs): 0.0420 x W

Deflection Conditions
Frames are vertically supporting:Ceiling with Flexible Finish
Frames are laterally supporting:Underhung Crane
Purlins are supporting:Ceiling with Flexible Finish
Girts are supporting:Metal Wall Panels
Deflection Limit Override H/150

Per Article 2.9 in the Builder Agreement, VP Buildings assumes that the Builder has called the local Building Official or Project Engineer to obtain all code and loading information for this specific building site.

Covering Design Loads - Wall: 1

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Need Lower Girt	40.71	0/0/0	56.000	0.73	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	0/0/0	66.000	0.46	IN	1.180
End Zone	psf	W1>	Need Lower Girt	40.71	6/7/1	56.000	0.73	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	6/7/1	66.000	0.46	IN	1.180
Interior Area	psf	W1>	Need Lower Girt	32.98	3/0/0	56.000	0.59	OUT	-1.280
Interior Area	psf	<W2	Need Lower Girt	30.40	3/0/0	66.000	0.46	IN	1.180

Covering Design Loads - Wall: 2

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Need Lower Girt	40.71	0/0/0	56.000	0.73	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	0/0/0	66.000	0.46	IN	1.180
End Zone	psf	W1>	Need Lower Girt	40.71	99/8/0	56.000	0.73	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	99/8/0	66.000	0.46	IN	1.180
Interior Area	psf	W1>	Need Lower Girt	32.98	3/0/0	56.000	0.59	OUT	-1.280
Interior Area	psf	<W2	Need Lower Girt	30.40	3/0/0	66.000	0.46	IN	1.180

Covering Design Loads - Wall: 3

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Need Lower Girt	40.71	0/0/0	56.000	0.73	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	0/0/0	66.000	0.46	IN	1.180
End Zone	psf	W1>	Need Lower Girt	40.71	6/7/1	56.000	0.73	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	6/7/1	66.000	0.46	IN	1.180
Interior Area	psf	W1>	Need Lower Girt	32.98	3/0/0	56.000	0.59	OUT	-1.280
Interior Area	psf	<W2	Need Lower Girt	30.40	3/0/0	66.000	0.46	IN	1.180

Covering Design Loads - Wall: 4

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Need Lower Girt OK	40.71	0/0/0	56.000	0.73	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	0/0/0	66.000	0.46	IN	1.180
End Zone	psf	W1>	Need Lower Girt	40.71	99/8/0	56.000	0.73	OUT	-1.580
End Zone	psf	<W2	Need Lower Girt	30.40	99/8/0	66.000	0.46	IN	1.180
Interior Area	psf	W1>	Need Lower Girt	32.98	3/0/0	56.000	0.59	OUT	-1.280
Interior Area	psf	<W2	Need Lower Girt	30.40	3/0/0	66.000	0.46	IN	1.180

Covering Design Loads - Roof: A

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
Entire Surface	psf	L	Standard Spacing is Adequate	21.80	-1/1/8	91.000	0.24	IN	1.000
Entire Surface	psf	S	Standard Spacing is Adequate	4.30	-1/1/8	91.000	0.05	IN	1.000
Corner Zone	psf	W1>	Non-std Spacing: 3/3/0 Required	77.55	0/0/0	80.000	0.97	OUT	-3.080
Corner Zone	psf	<W2	Standard Spacing is Adequate	16.74	0/0/0	91.000	0.18	IN	0.580
Corner Zone in Extension	psf	W1>	Non-std Spacing: 2/6/0 Required	93.53	0/0/0	99.000	0.94	OUT	-3.700

Corner Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	0/0/0	91.000	0.16	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	44.06	0/0/0	57.000	0.77	OUT	-1.780
Side Zone	psf	<W2	Standard Spacing is Adequate	16.74	0/0/0	91.000	0.18	IN	0.580
Side Zone in Extension	psf	W1>	Standard Spacing is Adequate	54.88	0/0/0	57.000	0.96	OUT	-2.200
Side Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	0/0/0	91.000	0.16	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	44.06	100/9/8	57.000	0.77	OUT	-1.780
Side Zone	psf	<W2	Standard Spacing is Adequate	16.74	100/9/8	91.000	0.18	IN	0.580
Side Zone in Extension	psf	W1>	Standard Spacing is Adequate	54.88	102/8/0	57.000	0.96	OUT	-2.200
Side Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	102/8/0	91.000	0.16	IN	0.500
Corner Zone	psf	W1>	Non-std Spacing: 3/3/0 Required	77.55	102/8/0	80.000	0.97	OUT	-3.080
Corner Zone	psf	<W2	Standard Spacing is Adequate	16.74	102/8/0	91.000	0.18	IN	0.580
Corner Zone in Extension	psf	W1>	Non-std Spacing: 2/6/0 Required	93.53	102/8/0	99.000	0.94	OUT	-3.700
Corner Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	102/8/0	91.000	0.16	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	44.06	0/0/0	57.000	0.77	OUT	-1.780
Side Zone	psf	<W2	Standard Spacing is Adequate	16.74	0/0/0	91.000	0.18	IN	0.580
Side Zone in Extension	psf	W1>	Standard Spacing is Adequate	54.88	0/0/0	57.000	0.96	OUT	-2.200
Side Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	0/0/0	91.000	0.16	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	44.06	100/9/8	57.000	0.77	OUT	-1.780
Side Zone	psf	<W2	Standard Spacing is Adequate	16.74	100/9/8	91.000	0.18	IN	0.580
Side Zone	psf	W1>	Standard Spacing is Adequate	44.06	102/8/0	57.000	0.77	OUT	-1.780
Side Zone	psf	<W2	Standard Spacing is Adequate	16.74	102/8/0	91.000	0.18	IN	0.580
Side Zone in Extension	psf	W1>	Standard Spacing is Adequate	54.88	102/8/0	57.000	0.96	OUT	-2.200
Side Zone in Extension	psf	<W2	Standard Spacing is Adequate	14.68	102/8/0	91.000	0.16	IN	0.500
Side Zone	psf	W1>	Standard Spacing is Adequate	44.06	10/10/8	57.000	0.77	OUT	-1.780
Side Zone	psf	<W2	Standard Spacing is Adequate	16.74	10/10/8	91.000	0.18	IN	0.580
Interior Area	psf	W1>	Standard Spacing is Adequate	36.33	1/10/8	57.000	0.64	OUT	-1.480
Interior Area	psf	<W2	Standard Spacing is Adequate	16.74	1/10/8	91.000	0.18	IN	0.580

Panel Data

Wall/Roof	Type	Thickness	Finish	Color	Direction	Gable Dir	Max. Length
~~Wall: 1~~	~~Panel Rib~~	~~26~~	~~KXL~~	~~Standard Color~~	~~Left to Right~~	~~Left to Right~~	~~41/0/0~~
~~Wall: 2~~	~~Panel Rib~~	~~26~~	~~KXL~~	~~Standard Color~~	~~Left to Right~~	~~Left to Right~~	~~41/0/0~~
Wall: 3	~~Panel Rib~~	~~26~~	KXL	Standard Color	Left to Right	Left to Right	41/0/0
Wall: 4	~~Panel Rib~~	~~26~~	KXL	Standard Color	Left to Right	Left to Right	41/0/0
Location: 2	NBVP - Panel	1/16"		Supported by others=no			
Roof: A	SLR2	22	AEP	Standard Color	System Generated	Not Applicable	40/0/0

22 GA FP12

Abbreviation Definitions

Codes	Definition
LE	From Left Edge
RE	From Right Edge
FL	From Frame
FS	From Start Dim

Location Data

Wall/Roof	Start Dim.	Bottom Elev.	Top Elev.	End Dim.	Bottom Elev.	Top Elev.	First Pitch	Second Pitch	Ridge Distance	Ridge Height	psf
Wall: 4 Location: 2	2/6/0 LE	1/4/0	4/10/2	97/8/0 FS	1/4/0	4/10/2					1.00

Fastener Data

Wall/Roof	Type	Length	Spacing	Washers	Insul. Block	Mod. Ctrl.	Ice Damming
Wall: 1	Color Match Carbon	Standard Option	Standard Option	No	None	No	No
Wall: 2	Color Match Carbon	Standard Option	Standard Option	No	None	No	No
Wall: 3	Color Match Carbon	Standard Option	Standard Option	No	None	No	No
Wall: 4	Color Match Carbon	Standard Option	Standard Option	No	None	No	No
Location: 2	Not Applicable						
Roof: A	Stainless Steel Capped	Standard Option	UL90 Uplift	Yes	Thermal Block	No	No