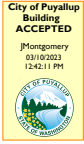


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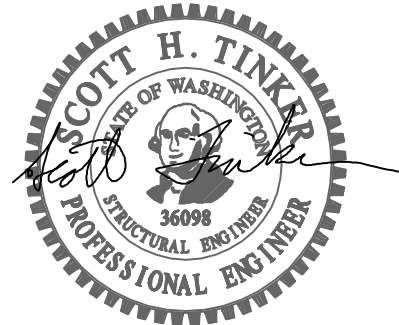


January 27, 2023

**STRUCTURAL CALCULATIONS**  
(Permit Submittal)

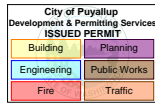
**CENTRAL PIERCE FIRE AND RESCUE**  
**TENANT IMPROVEMENT**  
1015 39<sup>th</sup> Avenue SE  
Puyallup, WA

Quantum Job Number: 19305.03



*Prepared for:*  
THE BENAROYA COMPANY | CENTERIS DATA CENTERS  
18300 Cascade Avenue S, STE 200  
Seattle, WA 98188

*Prepared by:*  
QUANTUM CONSULTING ENGINEERS  
1511 Third Avenue, Suite 323  
Seattle, WA 98101  
TEL 206.957.3900  
FAX 206.957.3901



**QUANTUM** | CONSULTING ENGINEERS

## STRUCTURAL DESIGN CRITERIA

SOUTH HILL BUSINESS & TECHNOLOGY CENTER  
SOUTH BUILDING – CENTRAL PIERCE FIRE AND RESCUE TENANT IMPROVEMENT  
1015 39<sup>TH</sup> AVE SE  
PUYALLUP, WA

QUANTUM JOB NUMBER: 19305.03

### CODE CRITERIA:

BUILDING CODE ..... 2018 INTERNATIONAL BUILDING CODE  
BUILDING DEPARTMENT ..... CITY OF PUYALLUP  
PARTITION LIVE LOAD HORIZONTAL ..... 5 PSF

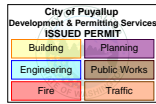
### MATERIALS CRITERIA:

#### STRUCTURAL STEEL:

WIDE-FLANGE SECTIONS: A-992 ..... Fy=50,000 PSI  
MISCELLANEOUS SECTIONS: A-36 ..... Fy=36,000 PSI  
TUBE SECTIONS: A-500 ..... Fy=46,000 PSI  
WELDING ..... Fy=70,000 PSI

### ASSEMBLY WEIGHTS

PARTITION DEAD LOAD ..... 8 PSF



**Central Pierce Fire & Rescue TI  
Partition Lateral Loading**

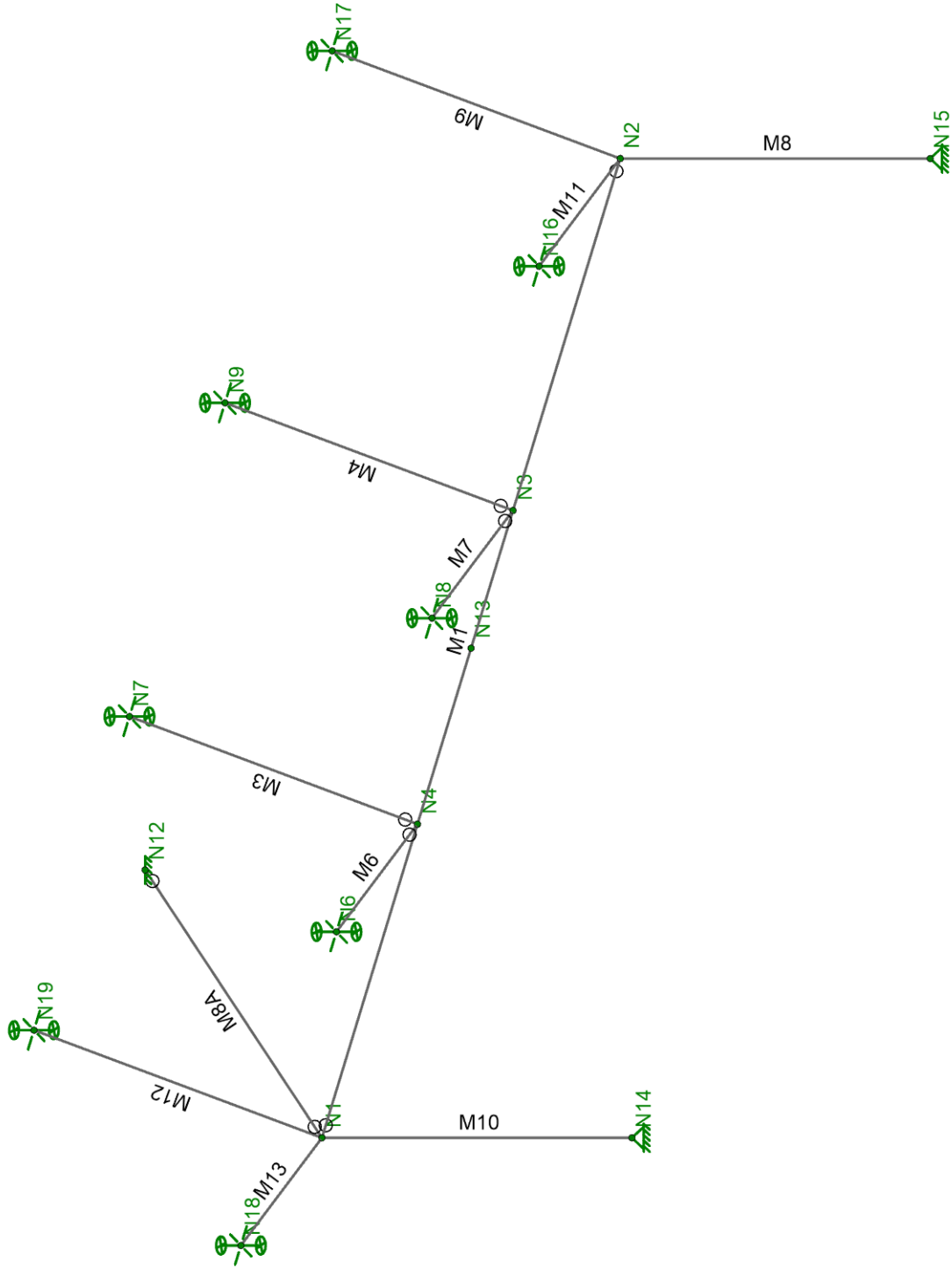
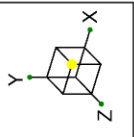
Seismic

Wall Unit Weight                      9.5 psf  
 Wall Height                              10.5 feet  
 Wall Length                              33 feet  
 Wall Weight                              3291.75 pounds

Seismic

Sds    0.83  
 ap     1  
 Rp     2.5  
 Ip     1  
 Cs    0.398 ASCE7 13.3-1  
 Unit seismic                              3.8 psf                      5 psf wind governs transverse  
 Seismic force for longitudinal  
 bracing                                      1311 pounds

City of Puyallup Development & Permitting Services ISSUED PERMIT	
Building	Planning
Engineering	Public Works
Fire	Traffic



South Hill- Operable Partition

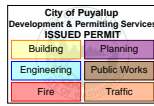
SK-1

Jan 23, 2023

23\_01\_20 Operable Partition - REV 1 revise to ...

Quantum

MDW



Company : Quantum  
 Designer : MDW  
 Job Number :  
 Model Name : South Hill- Operable Partition

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**Node Coordinates**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	N1	0	495.5	0	
2	N2	32	495.5	0	
3	N3	20.5	495.5	0	
4	N4	10.25	495.5	0	
5	N6	10.25	501.75	6.25	
6	N7	10.25	501.75	-6.25	
7	N8	20.5	501.75	6.25	
8	N9	20.5	501.75	-6.25	
9	N12	8.75	504.25	0	
10	N14	0	485	0	
11	N15	32	485	0	
12	N13	16	495.5	0	
13	N16	32	501.75	6.25	
14	N17	32	501.75	-6.25	
15	N18	0	501.75	6.25	
16	N19	0	501.75	-6.25	

**Node Boundary Conditions**

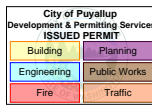
	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	N6	Reaction	TS1	Reaction	Reaction	Reaction	
2	N8	Reaction	TS1	Reaction	Reaction	Reaction	
3	N7	Reaction	TS1	Reaction	Reaction	Reaction	
4	N9	Reaction	TS1	Reaction	Reaction	Reaction	
5	N12	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	N14	Reaction	Reaction	Reaction			
7	N15	Reaction	Reaction	Reaction			
8	N16	Reaction	TS1	Reaction		Reaction	
9	N17	Reaction	TS1	Reaction		Reaction	
10	N18	Reaction	TS1	Reaction		Reaction	
11	N19	Reaction	TS1	Reaction		Reaction	

**Hot Rolled Steel Properties**

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e <sup>6</sup> F <sup>-1</sup> ]	Density [k/ft <sup>3</sup> ]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.25	65	1.15
8	A913 Gr.65	29000	11154	0.3	0.65	0.49	65	1.1	80	1.1

**Member Primary Data**

	Label	I Node	J Node	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N1	N2	Header	Beam	Wide Flange	A992	Typical
2	M3	N4	N7	Sway Bracing	VBrace	Single Angle	A36 Gr.36	Typical
3	M4	N3	N9	Sway Bracing	VBrace	Single Angle	A36 Gr.36	Typical
4	M6	N4	N6	Sway Bracing	VBrace	Single Angle	A36 Gr.36	Typical
5	M7	N3	N8	Sway Bracing	VBrace	Single Angle	A36 Gr.36	Typical
6	M8A	N1	N12	Longitudinal	VBrace	Single Angle	A36 Gr.36	Typical
7	M8	N2	N15	HSS3.5X3.5X4	Column	Tube	A500 Gr.B Rect	Typical



Company : Quantum  
 Designer : MDW  
 Job Number :  
 Model Name : South Hill- Operable Partition

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**Member Primary Data (Continued)**

	Label	I Node	J Node	Section/Shape	Type	Design List	Material	Design Rule
8	M10	N1	N14	HSS3.5X3.5X4	Column	Tube	A500 Gr.B Rect	Typical
9	M9	N2	N17	Sway Bracing	VBrace	Single Angle	A36 Gr.36	Typical
10	M11	N2	N16	Sway Bracing	VBrace	Single Angle	A36 Gr.36	Typical
11	M12	N1	N19	Sway Bracing	VBrace	Single Angle	A36 Gr.36	Typical
12	M13	N1	N18	Sway Bracing	VBrace	Single Angle	A36 Gr.36	Typical

**Hot Rolled Steel Design Parameters**

	Label	Shape	Length [ft]	Lb y-y [ft]	Lcomp top [ft]	Lcomp bot [ft]	Function
1	M1	Header	32	10	Lbyy	10	Lateral
2	M3	Sway Bracing	8.839		Lbyy		Lateral
3	M4	Sway Bracing	8.839		Lbyy		Lateral
4	M6	Sway Bracing	8.839		Lbyy		Lateral
5	M7	Sway Bracing	8.839		Lbyy		Lateral
6	M8A	Longitudinal	12.374				Lateral
7	M8	HSS3.5X3.5X4	10.5		Lbyy		Lateral
8	M10	HSS3.5X3.5X4	10.5		Lbyy		Lateral
9	M9	Sway Bracing	8.839		Lbyy		Lateral
10	M11	Sway Bracing	8.839		Lbyy		Lateral
11	M12	Sway Bracing	8.839		Lbyy		Lateral
12	M13	Sway Bracing	8.839		Lbyy		Lateral

**Member Area Loads**

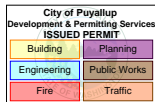
No Data to Print...							
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**Basic Load Cases**

	BLC Description	Category	Y Gravity	Nodal	Distributed
1	dead	DL	-1		
2	extended partition	LL			1
3	1/2 extended partition	OL1		1	1
4	lateral	WL			1
5	eq	EL		1	

**Load Combinations**

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	Deflection 1	Yes	Y	DL	1						
2	Deflection 2	Yes	Y	LL	1						
3	Deflection 3	Yes	Y	DL	1	LL	1				
4	IBC 16-8	Yes	Y	DL	1						
5	IBC 16-9	Yes	Y	DL	1	LL	1	LLS	1		
6	IBC 16-12 (a) (a)	Yes	Y	DL	1	WL	0.6				
7	IBC 16-12 (a) (b)	Yes	Y	DL	1	WL	-0.6				
8	IBC 16-13 (a) (a)	Yes	Y	DL	1	WL	0.45	LL	0.75	LLS	0.75
9	IBC 16-13 (a) (b)	Yes	Y	DL	1	WL	-0.45	LL	0.75	LLS	0.75
10	IBC 16-15 (a)	Yes	Y	DL	0.6	WL	0.6				
11	IBC 16-15 (b)	Yes	Y	DL	0.6	WL	-0.6				
12	1/2 extended	Yes	Y	DL	1	OL1	1				
13	IBC 16-12 (b) (a)	Yes	Y	DL	1	EL	0.7				
14	IBC 16-12 (b) (b)	Yes	Y	DL	1	EL	-0.7				
15	IBC 16-14 (a) (a)	Yes	Y	DL	1	EL	0.525	LL	0.75	LLS	0.75
16	IBC 16-14 (a) (b)	Yes	Y	DL	1	EL	-0.525	LL	0.75	LLS	0.75
17	IBC 16-16 (a)	Yes	Y	DL	0.6	EL	0.7				



Company : Quantum  
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**Load Combinations (Continued)**

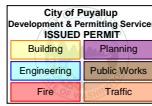
	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
18	IBC 16-16 (b)	Yes	Y	DL	0.6	EL	-0.7				

**Load Combination Design**

	Description	CD	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
1	Deflection 1		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Deflection 2		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Deflection 3		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	IBC 16-8	0.9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	IBC 16-9		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	IBC 16-12 (a) (a)	1.6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	IBC 16-12 (a) (b)	1.6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	IBC 16-13 (a) (a)	1.6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	IBC 16-13 (a) (b)	1.6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	IBC 16-15 (a)	1.6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	IBC 16-15 (b)	1.6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	1/2 extended	1.6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	IBC 16-12 (b) (a)	1.6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	IBC 16-12 (b) (b)	1.6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	IBC 16-14 (a) (a)	1.6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	IBC 16-14 (a) (b)	1.6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17	IBC 16-16 (a)	1.6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	IBC 16-16 (b)	1.6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

**Envelope Node Reactions**

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N6	max	0	18	0	18	0.003	11	0.071	8	0	9	0	18
2		min	-0.002	12	-0.127	10	-0.146	6	-0.041	11	0	10	0	1
3	N8	max	0.002	9	0	18	0.002	11	0.07	8	0	7	0	18
4		min	-0.001	6	-0.133	10	-0.15	10	-0.045	11	0	8	0	1
5	N7	max	0.001	11	0	18	0.144	7	0.043	8	0	6	0	18
6		min	-0.003	8	-0.127	11	-0.002	10	-0.067	9	0	9	0	1
7	N9	max	0.001	12	0	18	0.151	11	0.044	10	0	8	0	18
8		min	0	10	-0.133	11	-0.003	10	-0.072	9	0	7	0	1
9	N12	max	0.917	14	0.957	14	0	15	0	11	0	11	0	18
10		min	-0.916	13	-0.892	17	0	16	0	6	0	6	0	1
11	N14	max	0	15	3.033	15	0.002	11	0	18	0	18	0	18
12		min	0	16	-0.229	18	-0.002	10	0	1	0	1	0	1
13	N15	max	0	15	3.125	12	0.001	11	0	18	0	18	0	18
14		min	0	14	0.66	17	-0.002	10	0	1	0	1	0	1
15	N16	max	0	8	0	18	0	2	0	18	0	15	0	18
16		min	0	14	-0.118	6	-0.131	6	0	1	0	18	0	1
17	N17	max	0	9	0	18	0.131	7	0	18	0	18	0	18
18		min	0	14	-0.118	7	0	2	0	1	0	15	0	1
19	N18	max	0	8	0	17	0	2	0	18	0	8	0	18
20		min	0	14	-0.109	6	-0.122	6	0	1	0	11	0	1
21	N19	max	0	9	0	17	0.121	7	0	18	0	6	0	18
22		min	0	2	-0.109	7	0	2	0	1	0	11	0	1
23	Totals:	max	0.917	14	5.536	12	0.518	11						
24		min	-0.917	17	1.371	18	-0.518	6						



Company : Quantum  
 Designer : MDW  
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**Envelope Node Displacements**

Node Label	X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1 N1 max	0.01	15	0	18	0.112	6	7.515e-4	6	8.479e-4	7	5.207e-5	18
2 min	-0.007	18	-0.006	15	-0.112	7	-7.451e-4	7	-1.628e-4	10	-8.018e-5	15
3 N2 max	0.01	15	-0.001	17	0.122	6	8.308e-4	6	9.898e-4	8	5.578e-5	18
4 min	-0.007	18	-0.006	12	-0.122	7	-8.346e-4	7	0	2	-8.297e-5	15
5 N3 max	0.01	15	-0.03	18	0.191	8	2.886e-3	9	2.648e-4	8	5.804e-4	12
6 min	-0.007	18	-0.165	12	-0.191	9	-3.061e-3	8	-2.641e-4	9	1.054e-4	18
7 N4 max	0.01	15	-0.028	18	0.183	8	2.998e-3	9	3.894e-4	9	-1.33e-4	17
8 min	-0.007	18	-0.149	12	-0.183	9	-2.692e-3	6	-3.878e-4	8	-7.832e-4	12
9 N6 max	0	12	0.127	10	0	6	0	11	0	10	2.413e-3	9
10 min	0	18	-0.297	9	0	11	0	8	0	9	-1.903e-3	6
11 N7 max	0	8	0.127	11	0	10	0	9	0	9	2.016e-3	9
12 min	0	11	-0.297	8	0	7	0	8	0	6	-1.579e-3	6
13 N8 max	0	6	0.133	10	0	10	0	11	0	8	1.841e-3	7
14 min	0	9	-0.313	9	0	11	0	8	0	7	-1.952e-3	8
15 N9 max	0	10	0.133	11	0	10	0	9	0	7	2.051e-3	9
16 min	0	12	-0.312	8	0	11	0	10	0	8	-2.225e-3	8
17 N12 max	0	13	0	17	0	16	0	6	0	6	0	18
18 min	0	14	0	14	0	15	0	11	0	11	0	1
19 N14 max	0	16	0	18	0	10	9.608e-4	6	8.479e-4	7	5.216e-5	18
20 min	0	15	0	15	0	11	-9.631e-4	7	-1.628e-4	10	-8.032e-5	15
21 N15 max	0	14	0	17	0	10	1.035e-3	6	9.898e-4	8	5.588e-5	18
22 min	0	15	0	12	0	11	-1.035e-3	7	0	2	-8.311e-5	15
23 N13 max	0.01	15	-0.033	18	0.198	8	2.935e-3	9	3.209e-5	7	4.79e-6	13
24 min	-0.007	18	-0.181	12	-0.198	9	-2.892e-3	8	-3.165e-5	10	-5.065e-5	12
25 N16 max	0	14	0.118	6	0	6	8.561e-4	11	0	18	1.128e-3	15
26 min	0	8	-0.125	7	0	2	-2.766e-3	6	0	15	3.943e-5	2
27 N17 max	0	14	0.118	7	0	2	2.768e-3	7	0	15	3.943e-5	2
28 min	0	9	-0.124	6	0	7	-8.55e-4	10	0	18	-1.072e-3	14
29 N18 max	0	14	0.109	6	0	6	7.243e-4	11	0	11	1.12e-3	15
30 min	0	8	-0.115	7	0	2	-2.637e-3	6	0	8	3.935e-5	2
31 N19 max	0	2	0.109	7	0	2	2.638e-3	7	0	11	3.951e-5	2
32 min	0	9	-0.115	6	0	7	-7.266e-4	10	0	6	-1.063e-3	14

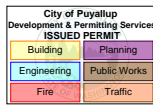
**Envelope AISC 15TH (360-16): ASD Member Steel Code Checks**

Member	Shape	Code Check	Loc [ft]	LC	Shear	Check	Loc [ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mny/om [k-ft]	Mnz/om [k-ft]	Cb	Eqn
1 M1	W21X55	0.1	16	12	0.023	0	y	9	168.306	485.03	45.908	272.125	1	H1-1b	
2 M3	L2.5x2.5x3	0.197	8.839	7	0.005	8.839	y	9	2.797	19.423	0.581	0.981	1.5	H2-1	
3 M4	L2.5x2.5x3	0.208	8.839	7	0.005	0	y	8	2.797	19.423	0.581	0.981	1.5	H2-1	
4 M6	L2.5x2.5x3	0.201	8.839	6	0.005	0	y	9	2.797	19.423	0.581	0.981	1.5	H2-1	
5 M7	L2.5x2.5x3	0.205	8.839	6	0.005	8.839	y	8	2.797	19.423	0.581	0.981	1.5	H2-1	
6 M8A	L4X4X4	0.212	5.929	13	0.003	12.374	y	6	8.066	41.605	2.088	2.988	1.136	H2-1	
7 M8	HSS3.5X3.5X4	0.072	10.5	12	0	10.5	z	8	43.266	80.156	8.034	8.034	1	H1-1b*	
8 M10	HSS3.5X3.5X4	0.07	10.5	15	0	10.5	z	9	43.266	80.156	8.034	8.034	1.667	H1-1b*	
9 M9	L2.5x2.5x3	0.109	4.235	7	0.002	8.839	y	15	2.797	19.423	0.581	0.877	1.136	H2-1	
10 M11	L2.5x2.5x3	0.109	4.235	6	0.002	8.839	y	15	2.797	19.423	0.581	0.877	1.136	H2-1	
11 M12	L2.5x2.5x3	0.104	4.235	7	0.002	8.839	y	6	2.797	19.423	0.581	0.877	1.136	H2-1	
12 M13	L2.5x2.5x3	0.105	4.235	6	0.003	8.839	y	8	2.797	19.423	0.581	0.877	1.136	H2-1	

**Envelope Member Section Deflections - Service**

Member	Sec	x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC	
1 M1	1	max	0.01	15	0	18	0.112	6	0.001	6	NC	18	NC	18
2		min	-0.007	18	-0.006	15	-0.112	7	-0.001	7	NC	1	NC	1



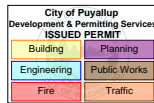


Company : Quantum  
 Designer : MDW  
 Job Number :  
 Model Name : South Hill- Operable Partition

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**Envelope Member Section Deflections - Service (Continued)**

Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC	
3		2	max	0.01	15	-0.023	18	0.171	8	0.002	9	NC	18	NC	18
4			min	-0.007	18	-0.125	12	-0.171	9	-0.002	6	3203.152	12	6056.143	9
5		3	max	0.01	15	-0.033	18	0.198	8	0.003	9	NC	18	NC	18
6			min	-0.007	18	-0.181	12	-0.198	9	-0.003	8	2186.087	12	4324.896	9
7		4	max	0.01	15	-0.024	18	0.176	6	0.002	9	NC	18	NC	18
8			min	-0.007	18	-0.131	12	-0.176	7	-0.002	8	3055.54	12	5917.928	9
9		5	max	0.01	15	-0.001	17	0.122	6	0.001	6	NC	18	NC	18
10			min	-0.007	18	-0.006	12	-0.122	7	-0.001	7	NC	1	NC	1
11	M3	1	max	0.091	11	0.091	10	0.01	15	0.001	9	NC	18	NC	18
12			min	-0.21	8	-0.21	9	-0.007	18	0	10	NC	1	NC	1
13		2	max	0.091	11	0.014	10	0.012	15	0	12	NC	18	NC	18
14			min	-0.21	8	-0.129	9	-0.006	18	0	11	5143.834	6	NC	1
15		3	max	0.09	11	0.003	11	0.018	9	0.001	8	NC	18	NC	18
16			min	-0.21	8	-0.123	8	-0.013	6	0	7	2448.709	6	6553.002	6
17		4	max	0.09	11	0.064	11	0.02	9	0.001	6	NC	18	NC	18
18			min	-0.21	8	-0.187	8	-0.017	6	-0.001	9	2532.97	8	4852.915	8
19		5	max	0.09	11	0.09	11	0	15	0.001	6	NC	18	NC	16
20			min	-0.21	8	-0.21	8	0	7	-0.001	9	NC	1	5129.435	15
21	M4	1	max	0.095	11	0.095	10	0.01	15	0	10	NC	18	NC	18
22			min	-0.221	8	-0.221	9	-0.007	18	0	9	NC	1	NC	1
23		2	max	0.095	11	0.013	10	0.007	11	0	6	NC	18	NC	18
24			min	-0.221	8	-0.14	9	-0.014	8	-0.001	9	4312.877	8	5406.362	8
25		3	max	0.094	11	0.002	11	0.016	11	0.001	6	NC	18	NC	18
26			min	-0.221	8	-0.134	8	-0.03	8	-0.001	9	2200.304	8	2899.648	8
27		4	max	0.094	11	0.066	11	0.019	7	0.001	8	NC	18	NC	18
28			min	-0.221	8	-0.198	8	-0.028	8	-0.001	9	2364.547	8	2963.487	8
29		5	max	0.094	11	0.094	11	0	10	0.002	8	NC	18	NC	16
30			min	-0.221	8	-0.221	8	0	12	-0.001	9	NC	1	5067.336	15
31	M6	1	max	0.091	10	0.091	11	0.007	18	0	11	NC	18	NC	18
32			min	-0.21	9	-0.21	8	-0.01	15	-0.001	8	NC	1	NC	1
33		2	max	0.091	10	0.012	11	0.005	10	0	7	NC	18	NC	18
34			min	-0.21	9	-0.134	8	-0.025	9	-0.001	8	4291.813	9	5577.629	9
35		3	max	0.09	10	0.001	10	0.014	10	0.001	7	NC	18	NC	18
36			min	-0.21	9	-0.128	9	-0.038	9	-0.001	8	2239.298	9	3382.278	9
37		4	max	0.09	10	0.063	10	0.018	10	0.001	9	NC	18	NC	17
38			min	-0.21	9	-0.189	9	-0.032	9	-0.001	8	2439.592	9	4398.295	7
39		5	max	0.09	10	0.09	10	0	9	0.002	9	NC	18	NC	16
40			min	-0.21	9	-0.21	9	0	10	-0.001	6	NC	1	5129.435	15
41	M7	1	max	0.095	10	0.095	11	0.007	18	0	8	NC	18	NC	18
42			min	-0.221	9	-0.221	8	-0.01	15	0	11	NC	1	NC	1
43		2	max	0.095	10	0.014	11	0.006	18	0	9	NC	18	NC	18
44			min	-0.221	9	-0.137	8	-0.01	13	0	10	4790.65	7	NC	1
45		3	max	0.094	10	0.002	10	0.013	8	0.001	9	NC	18	NC	18
46			min	-0.221	9	-0.131	9	-0.019	7	-0.001	6	2311.363	9	5363.186	8
47		4	max	0.094	10	0.066	10	0.018	8	0.001	9	NC	18	NC	16
48			min	-0.221	9	-0.197	9	-0.021	7	-0.001	6	2409.835	9	4106.572	8
49		5	max	0.094	10	0.094	10	0	9	0.001	7	NC	18	NC	16
50			min	-0.221	9	-0.221	9	0	10	-0.001	8	NC	1	5067.336	15
51	M8A	1	max	0.004	13	0.005	18	0.112	6	0.001	6	NC	18	NC	18
52			min	-0.004	14	-0.011	15	-0.112	7	0	11	NC	1	NC	1
53		2	max	0.003	13	-0.003	2	0.065	10	0	6	NC	2	NC	18
54			min	-0.003	14	-0.048	15	-0.108	7	0	11	3749.458	1	1853.178	6
55		3	max	0.002	13	-0.002	2	0.033	10	0	6	NC	2	NC	2
56			min	-0.002	14	-0.061	15	-0.09	7	0	11	2671.489	1	1017.411	6
57		4	max	0.001	13	-0.001	2	0.012	10	0	6	NC	2	NC	18

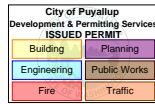


Company : Quantum  
 Designer : MDW  
 Job Number :  
 Model Name : South Hill- Operable Partition

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**Envelope Member Section Deflections - Service (Continued)**

Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC	
58		min	-0.001	14	-0.042	15	-0.052	7	0	11	3749.458	9	771.713	6	
59	5	max	0	18	0	18	0	18	0	18	NC	18	NC	18	
60		min	0	1	0	1	0	1	0	1	NC	1	661.196	6	
61	M8	1	max	0.006	12	0.007	18	0.122	7	0	2	NC	18	NC	18
62		min	0.001	17	-0.01	15	-0.122	6	-0.001	8	NC	1	NC	1	
63	2	max	0.004	12	0.005	18	0.094	7	0	2	NC	18	NC	18	
64		min	0.001	17	-0.008	15	-0.094	6	-0.001	8	NC	1	NC	1	
65	3	max	0.003	12	0.004	18	0.064	7	0	2	NC	18	NC	18	
66		min	0.001	17	-0.005	15	-0.064	6	-0.001	8	NC	1	NC	1	
67	4	max	0.001	12	0.002	18	0.032	7	0	2	NC	18	NC	18	
68		min	0	17	-0.003	15	-0.032	6	-0.001	8	NC	1	NC	1	
69	5	max	0	18	0	18	0	18	0	2	NC	18	NC	18	
70		min	0	1	0	1	0	1	-0.001	8	NC	1	NC	1	
71	M10	1	max	0.006	15	0.007	18	0.112	7	0	10	NC	18	NC	18
72		min	0	18	-0.01	15	-0.112	6	-0.001	7	NC	1	NC	1	
73	2	max	0.004	15	0.005	18	0.087	7	0	10	NC	18	NC	18	
74		min	0	18	-0.008	15	-0.087	6	-0.001	7	NC	1	NC	1	
75	3	max	0.003	15	0.003	18	0.06	7	0	10	NC	18	NC	18	
76		min	0	18	-0.005	15	-0.059	6	-0.001	7	NC	1	NC	1	
77	4	max	0.001	15	0.002	18	0.03	7	0	10	NC	18	NC	18	
78		min	0	18	-0.003	15	-0.03	6	-0.001	7	NC	1	NC	1	
79	5	max	0	18	0	18	0	18	0	10	NC	18	NC	18	
80		min	0	1	0	1	0	1	-0.001	7	NC	1	NC	1	
81	M9	1	max	0.085	7	0.084	6	0.01	15	0.001	15	NC	18	NC	18
82		min	-0.088	6	-0.088	7	-0.007	18	0	2	NC	1	NC	1	
83	2	max	0.084	7	0.024	10	0.002	2	0.001	15	NC	2	NC	18	
84		min	-0.088	6	-0.072	7	-0.021	14	0	2	3905.481	15	4871.713	15	
85	3	max	0.084	7	-0.002	2	0.001	2	0.001	14	NC	2	NC	18	
86		min	-0.088	6	-0.042	12	-0.026	14	0	2	2782.563	15	3149.194	15	
87	4	max	0.084	7	0.023	11	0.001	2	0.001	14	NC	2	NC	18	
88		min	-0.088	6	-0.072	6	-0.018	14	0	2	3905.111	15	3289.705	15	
89	5	max	0.084	7	0.084	7	0	18	0.001	14	NC	18	NC	16	
90		min	-0.088	6	-0.088	6	0	11	0	2	NC	1	5067.283	15	
91	M11	1	max	0.084	6	0.085	7	0.007	18	0.001	14	NC	18	NC	18
92		min	-0.088	7	-0.088	6	-0.01	15	0	2	NC	1	NC	1	
93	2	max	0.084	6	0.024	11	-0.002	2	0.001	14	NC	2	NC	17	
94		min	-0.088	7	-0.072	6	-0.024	15	0	2	3905.855	14	5398.281	14	
95	3	max	0.084	6	-0.002	2	-0.001	2	0.001	15	NC	2	NC	17	
96		min	-0.088	7	-0.042	12	-0.028	15	0	2	2782.867	14	3603.437	14	
97	4	max	0.084	6	0.023	10	-0.001	2	0.001	15	NC	2	NC	17	
98		min	-0.088	7	-0.072	7	-0.019	15	0	2	3905.635	14	4098.768	14	
99	5	max	0.084	6	0.084	6	0	11	0.001	15	NC	18	NC	16	
100		min	-0.088	7	-0.088	7	0	2	0	2	NC	1	5067.283	15	
101	M12	1	max	0.078	7	0.078	6	0.01	15	0.001	7	NC	18	NC	18
102		min	-0.081	6	-0.081	7	-0.007	18	0	10	NC	1	NC	1	
103	2	max	0.077	7	0.02	10	0.002	2	0.001	7	NC	2	NC	18	
104		min	-0.081	6	-0.069	7	-0.021	14	0	2	3906.713	9	4917.953	15	
105	3	max	0.077	7	-0.002	2	0.001	2	0.001	7	NC	2	NC	18	
106		min	-0.081	6	-0.042	15	-0.026	14	0	2	2783.564	9	3186.838	15	
107	4	max	0.077	7	0.019	11	0.001	2	0.001	7	NC	2	NC	18	
108		min	-0.081	6	-0.069	6	-0.018	14	0	2	3906.837	9	3348.682	15	
109	5	max	0.077	7	0.077	7	0	8	0.001	14	NC	18	NC	16	
110		min	-0.081	6	-0.081	6	0	7	0	2	NC	1	5243.42	15	
111	M13	1	max	0.078	6	0.078	7	0.007	18	0.001	7	NC	18	NC	18
112		min	-0.081	7	-0.081	6	-0.01	15	0	10	NC	1	NC	1	



Company : Quantum  
 Designer : MDW  
 Job Number :  
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**Envelope Member Section Deflections - Service (Continued)**

Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [rad]	LC	(n) L/y' Ratio	LC	(n) L/z' Ratio	LC
113	2	max	0.077	6	0.02	11	-0.002	2	0.001	7	NC	2	NC	17
114		min	-0.081	7	-0.069	6	-0.024	15	0	2	3907.215	7	5471.205	14
115	3	max	0.077	6	-0.002	2	-0.001	2	0.001	7	NC	2	NC	17
116		min	-0.081	7	-0.042	15	-0.028	15	0	2	2783.971	7	3667.307	14
117	4	max	0.077	6	0.019	10	-0.001	2	0.001	9	NC	2	NC	17
118		min	-0.081	7	-0.069	7	-0.019	15	0	2	3907.539	7	4219.617	14
119	5	max	0.077	6	0.077	6	0	11	0.001	15	NC	18	NC	16
120		min	-0.081	7	-0.081	7	0	6	0	2	NC	1	5243.42	15