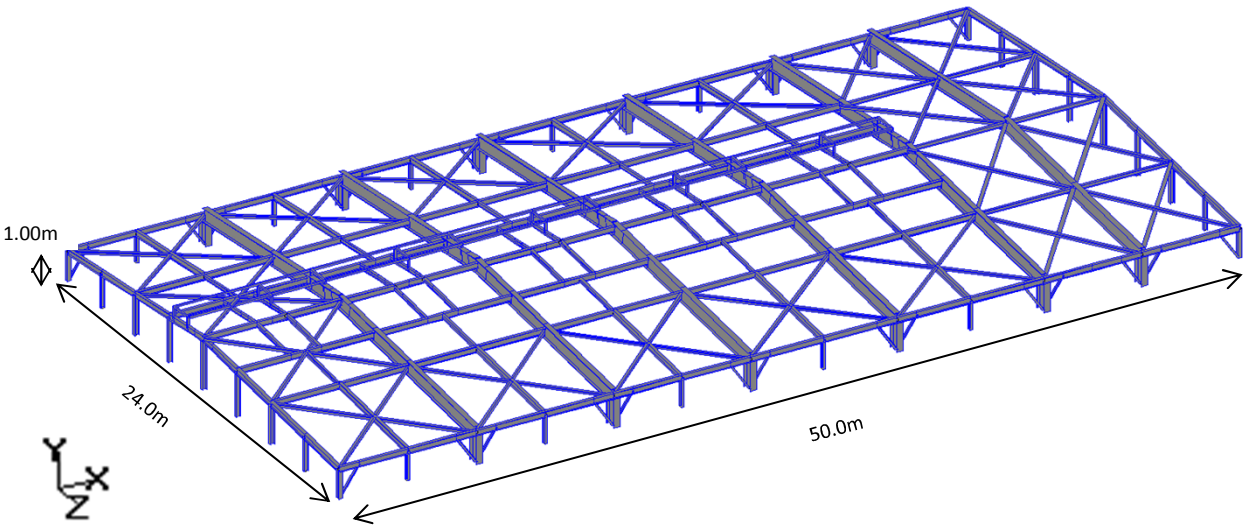


NO.	CALCULATION	REF
<p>9.1 Modeling Geometry</p> <p>1) Frame Analsis Modeling Description</p> <p>a. Program : STAAD Pro V8i</p> <p>b. Building Name : WorkShop & Storage</p> <p>c. Structure : Steel Structure</p> <p>d. Lateral Load Resisting System : Steel ordinary moment frame (Transverse Side, Z-axis) Steel ordinary braced frame (Longitude Side, X-axis)</p> <p>e. Building Size : Building Width - 24.0m Building Length - 50m Building Mean Roof Height - 9.1m</p>		

NO.	CALCULATION	REF
1.0	DESIGN INFORMATION	
1.1	DESCRIPTION <p>1) Location : The plant site is located in Mabu'un Village, Murung Pudak District, Tabalong Regency, South Kalimantan Province, Indonesia about 185km northeast of Banjarmasin.</p> <p>2) Structure : Reinforced Concrete Frames (Roof : Steel Frame)</p> <p>3) Intended Use : Workshop & Storage</p> <p>4) Building Width : 24.00 m</p> <p>5) Building Length : 50.00 m</p> <p>6) Mean Roof Height : 9.10 m</p> <p>7) Seismic Resisting System : Intermediate Moment Frame Steel Ordinary braced frame (X-dir) Steel Ordinary moment-resisting frame (Z-dir)</p>	
1.2	DESIGN CODES AND STANDARDS <p>1) Project Specification</p> <p>2) Steel : AISC 14th editions, LRFD method</p> <p>① Load and resistance facotr design (LRFD) method in accordance with AISC</p> <p>3) Reinforced Concrete : Ultimate Strength Design, USD</p> <p>① Ultimate strength design (USD) method in accordance with ACI 318M-11</p> <p>4) Design Loads</p> <p>① ANSI/ASCE7-10 "Minimum design loads for buildings and other structures"</p>	
1.3	MATERIAL SPECIFICATIONS <p>1) Steel Structure</p> <p>① Structural Steel : ASTM SECTION</p> <p>- ASTM A36 : $F_y = 245$ MPa $F_u = 400$ MPa</p> <p>- ASTM A572 Grade 50 : $F_y = 345$ MPa $F_u = 450$ MPa</p> <p>② Unit Weight : $w_s = 78.5$ kN/m³</p> <p>③ Modulus of Elasticity : $E_s = 200000$ MPa</p> <p>④ Structural Bolt : ASTM F1852 or F2280</p> <p>⑤ Anchor Bolt : ASTM A307 Grade C or equivalent.</p> <p>2) Reinforced Concrete Structure</p> <p>① Compressive Strength : $f_c = 25.0$ MPa</p> <p>② Unit Weight : $w_c = 25.0$ kN/m³</p> <p>③ Modulus of Elasticity : $E_c = 23500$ MPa</p> <p>④ Poison's Ratio for Concrete : $u = 0.2$</p> <p>⑤ Reinforcement Steel : SNI 07-2052 BJTS40</p> <p>- Minimum yield strength : $f_y = 390$ MPa</p> <p>- Modulus of elasticity : $E_s = 200000$ MPa</p>	

NO.	CALCULATION	REF
10.0	Steel Member Design	
10.1	Member Stress Review	

Roof floor

SG1 W 12X26

[illegible]

NO.	CALCULATION	REF
10.0	Steel Member Design	
10.2	Design of Member	
1) SC1		
----- START OF DESIGN OUTPUT OF MEMBER 369 -----		
MEMBER NO: 369 CRITICAL RATIO: 0.953(PASS) LOAD: 209		
LOCATION (ft): 3.28 CONDITION: Eq. H1-1b		
SECTION: ST W24X104 (AISC SECTIONS)		
UNIT: KIP FEET		
ASTM A572 Fy = 345Mpa		
STRENGTH CHECKS:		
CRITICAL RATIO: 0.953(PASS) LOAD CASE: 209 LOCATION (ft): 3.28 CONDITION: Eq. H1-1b		
DESIGN FORCES: Fx: 62.32(C) Fy: -215.99 Fz: -0.01		
Mx: -6.38E-02 My: -2.26E-02 Mz: 7.09E+02		
SLENDERNESS: ACTUAL SLENDERNESS RATIO: 20.299 LOAD: 287 LOC.(ft): 0.000		
ALLOWABLE SLENDERNESS RATIO: 200.000		
FORCE & MOMENT CAPACITY UNIT: KIP FEET		
DETAILS: CAPACITY RATIO LOC LOAD CASE: CRITERIA:		
TENSION YIELDING: 978.613 0.000 0.000 201 Eq. D2-1		
TENSION RUPTURE: 1331.100 0.000 0.000 201 Eq. D2-2		
MAJOR COMPRESSION: 960.567 0.066 0.000 209 Eq. E7-1		
MINOR COMPRESSION: 944.568 0.067 0.000 209 Eq. E7-1		
FLEX TOR BUCK: 955.788 0.066 0.000 209 Eq. E7-1		
MAJOR SHEAR: 244.647 0.000 0.000 244 Eq. G2-1		
MINOR SHEAR: 256.486 0.842 0.000 209 Eq. G2-1		
MAJOR FLEXURE YIELD: 7.70E+02 0.920 3.281 209 Eq. F2-1		
MINOR FLEXURE YIELD: 1.66E+02 0.000 3.281 244 Eq. F6-1		
FLEX COMP INTER: N/A 0.033 0.000 209 Eq. H1-1b		
FLEX TENS INTER: N/A 0.920 3.281 209 Eq. H1-1b		
IN PLANE FLEX COMP: N/A 0.953 3.281 209 Eq. H1-1b		
OUT PLANE FLEX COMP: N/A 0.943 3.281 209 Eq. H1-2		
----- END OF DESIGN OUTPUT OF MEMBER 369 -----		

E - 7
Members with
Sleder Elements

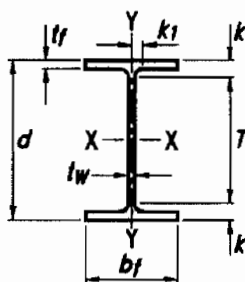


Table 1-1 (continued)
W Shapes
Dimensions

Shape	Area, A	Depth, d		Web			Flange				Distance					Work- able Gage
				Thickness, t _w		t _w 2	Width, b _f		Thickness, t _f		k		k ₁	T		
				in.	in.		in.	in.	in.	in.	k _{des}	k _{det}			in.	
	in. ²	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	
W24×370 ^h	109	28.0	28	1.52	1 1/2	3/4	13.7	13 5/8	2.72	2 3/4	3.22	3 5/8	19 1/16	20 3/4	5 1/2	
×335 ^h	98.4	27.5	27 1/2	1.38	1 3/8	1 1/16	13.5	13 1/2	2.48	2 1/2	2.98	3 3/8	1 1/2			
×306 ^h	89.8	27.1	27 1/8	1.26	1 1/4	5/8	13.4	13 3/8	2.28	2 1/4	2.78	3 3/16	1 7/16			
×279 ^h	82.0	26.7	26 3/4	1.16	1 3/16	5/8	13.3	13 1/4	2.09	2 1/16	2.59	3	1 7/16			
×250	73.5	26.3	26 3/8	1.04	1 1/16	9/16	13.2	13 1/8	1.89	1 7/8	2.39	2 13/16	1 3/8			
×229	67.2	26.0	26	0.960	15/16	1/2	13.1	13 1/8	1.73	1 3/4	2.23	2 5/8	1 5/16			
×207	60.7	25.7	25 3/4	0.870	7/8	7/16	13.0	13	1.57	1 9/16	2.07	2 1/2	1 1/4			
×192	56.3	25.5	25 1/2	0.810	13/16	7/16	13.0	13	1.46	1 7/16	1.96	2 3/8	1 1/4			
×176	51.7	25.2	25 1/4	0.750	3/4	3/8	12.9	12 7/8	1.34	1 5/16	1.84	2 1/4	1 3/16			
×162	47.7	25.0	25	0.705	1 1/16	3/8	13.0	13	1.22	1 1/4	1.72	2 1/8	1 3/16			
×146	43.0	24.7	24 3/4	0.650	5/8	5/16	12.9	12 7/8	1.09	1 1/16	1.59	2	1 1/8			
×131	38.5	24.5	24 1/2	0.605	5/8	5/16	12.9	12 7/8	0.960	15/16	1.46	1 7/8	1 1/8			
×117 ^c	34.4	24.3	24 1/4	0.550	9/16	5/16	12.8	12 3/4	0.850	7/8	1.35	1 3/4	1 1/8			
×104 ^c	30.6	24.1	24	0.500	1/2	1/4	12.8	12 3/4	0.750	3/4	1.25	1 5/8	1 1/16	↓	↓	
W24×103 ^c	30.3	24.5	24 1/2	0.550	9/16	5/16	9.00	9	0.980	1	1.48	1 7/8	1 1/8	20 3/4	5 1/2	
×94 ^c	27.7	24.3	24 1/4	0.515	1/2	1/4	9.07	9 1/8	0.875	7/8	1.38	1 3/4	1 1/16			
×84 ^c	24.7	24.1	24 1/8	0.470	1/2	1/4	9.02	9	0.770	3/4	1.27	1 11/16	1 1/16			
×76 ^c	22.4	23.9	23 7/8	0.440	7/16	1/4	8.99	9	0.680	1 1/16	1.18	1 9/16	1 1/16			
×68 ^c	20.1	23.7	23 3/4	0.415	7/16	1/4	8.97	9	0.585	9/16	1.09	1 1/2	1 1/16	↓	↓	
W24×62 ^c	18.2	23.7	23 3/4	0.430	7/16	1/4	7.04	7	0.590	9/16	1.09	1 1/2	1 1/16	20 3/4	3 1/2 ^g	
×55 ^{c,v}	16.2	23.6	23 5/8	0.395	3/8	3/16	7.01	7	0.505	1/2	1.01	1 7/16	1	20 3/4	3 1/2 ^g	
W21×201	59.2	23.0	23	0.910	15/16	1/2	12.6	12 5/8	1.63	1 5/8	2.13	2 1/2	1 5/16	18	5 1/2	
×182	53.6	22.7	22 3/4	0.830	13/16	7/16	12.5	12 1/2	1.48	1 1/2	1.98	2 3/8	1 1/4			
×166	48.8	22.5	22 1/2	0.750	3/4	3/8	12.4	12 3/8	1.36	1 3/8	1.86	2 1/4	1 3/16			
×147	43.2	22.1	22	0.720	3/4	3/8	12.5	12 1/2	1.15	1 1/8	1.65	2	1 3/16			
×132	38.8	21.8	21 7/8	0.650	5/8	5/16	12.4	12 1/2	1.04	1 1/16	1.54	1 15/16	1 1/8			
×122	35.9	21.7	21 5/8	0.600	5/8	5/16	12.4	12 3/8	0.960	15/16	1.46	1 13/16	1 1/8			
×111	32.7	21.5	21 1/2	0.550	9/16	5/16	12.3	12 3/8	0.875	7/8	1.38	1 3/4	1 1/8			
×101 ^c	29.8	21.4	21 3/8	0.500	1/2	1/4	12.3	12 1/4	0.800	13/16	1.30	1 11/16	1 1/16	↓	↓	

^c Shape is slender for compression with $F_y = 50$ ksi.

^g The actual size, combination, and orientation of fastener components should be compared with the geometry of the cross-section to ensure compatibility.

^h Flange thickness greater than 2 in. Special requirements may apply per AISC Specification Section A3.1c.

^v Shape does not meet the h/t_w limit for shear in Specification Section G2.1a with $F_y = 50$ ksi.

Table 1-1 (continued)
W Shapes
Properties

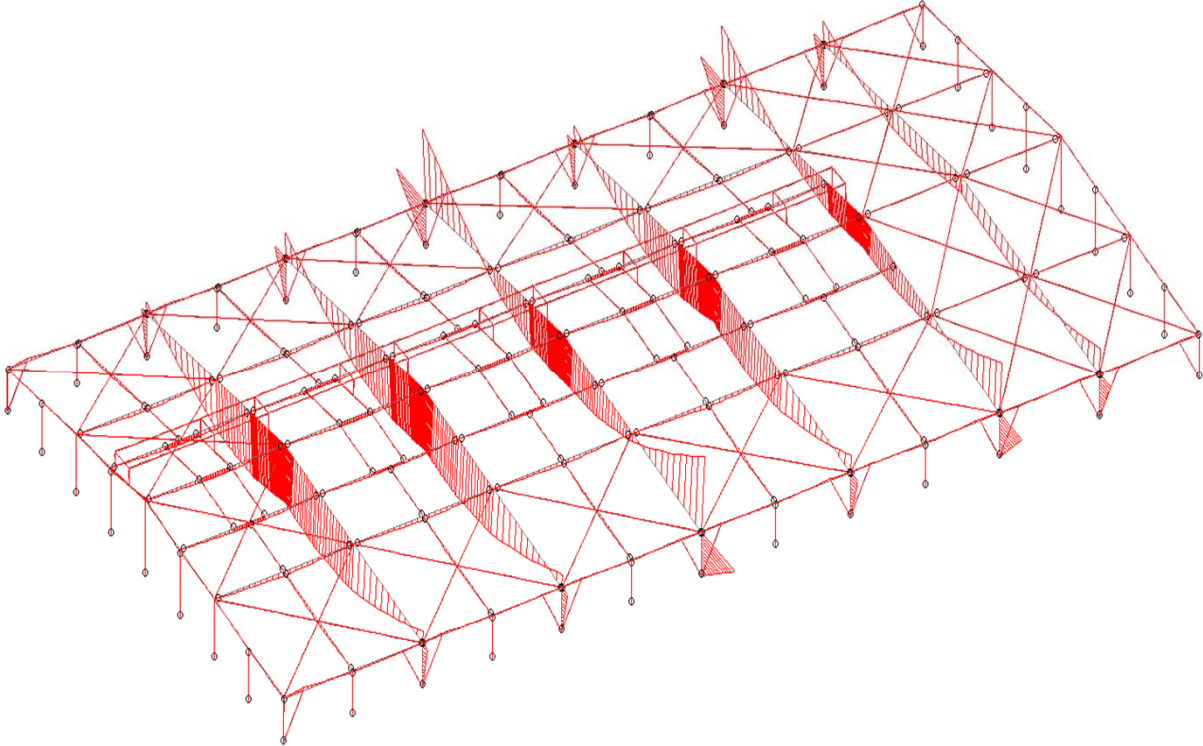


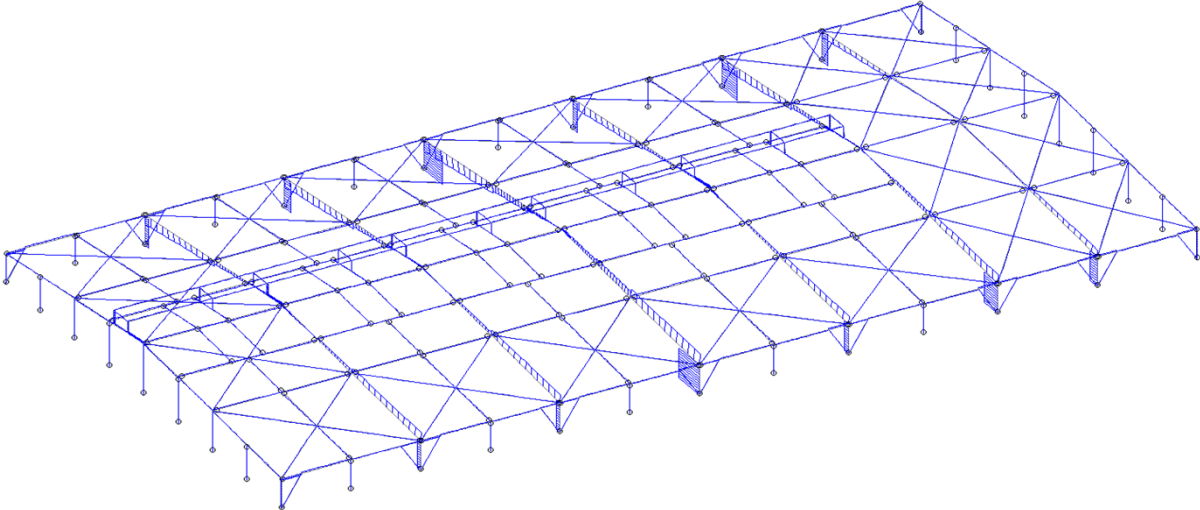
W24 - W21

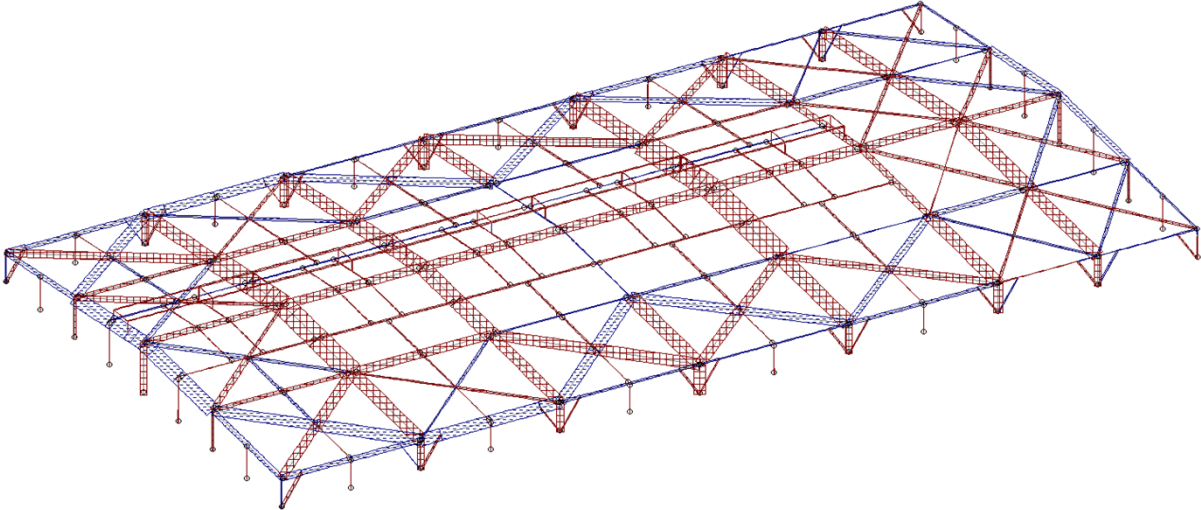
Nom- inal Wt.	Compact Section Criteria		Axis X-X				Axis Y-Y				r_{ts}	h_o	Torsional Properties	
	b_f	h	I	S	r	Z	I	S	r	Z			J	C_w
lb/ft	$2t_f$	t_w	in. ⁴	in. ³	in.	in. ³	in. ⁴	in. ³	in.	in. ³	in.	in.	in. ⁴	in. ⁶
370	2.51	14.2	13400	957	11.1	1130	1160	170	3.27	267	3.92	25.3	201	186000
335	2.73	15.6	11900	864	11.0	1020	1030	152	3.23	238	3.86	25.0	152	161000
306	2.94	17.1	10700	789	10.9	922	919	137	3.20	214	3.81	24.9	117	142000
279	3.18	18.6	9600	718	10.8	835	823	124	3.17	193	3.76	24.6	90.5	125000
250	3.49	20.7	8490	644	10.7	744	724	110	3.14	171	3.71	24.5	66.6	108000
229	3.79	22.5	7650	588	10.7	675	651	99.4	3.11	154	3.67	24.3	51.3	96100
207	4.14	24.8	6820	531	10.6	606	578	88.8	3.08	137	3.62	24.1	38.3	84100
192	4.43	26.6	6260	491	10.5	559	530	81.8	3.07	126	3.60	24.0	30.8	76300
176	4.81	28.7	5680	450	10.5	511	479	74.3	3.04	115	3.57	23.9	23.9	68400
162	5.31	30.6	5170	414	10.4	468	443	68.4	3.05	105	3.57	23.8	18.5	62600
146	5.92	33.2	4580	371	10.3	418	391	60.5	3.01	93.2	3.53	23.7	13.4	54600
131	6.70	35.6	4020	329	10.2	370	340	53.0	2.97	81.5	3.49	23.5	9.50	47100
117	7.53	39.2	3540	291	10.1	327	297	46.5	2.94	71.4	3.46	23.4	6.72	40800
104	8.50	43.1	3100	258	10.1	289	259	40.7	2.91	62.4	3.42	23.3	4.72	35200
103	4.59	39.2	3000	245	10.0	280	119	26.5	1.99	41.5	2.40	23.6	7.07	16600
94	5.18	41.9	2700	222	9.87	254	109	24.0	1.98	37.5	2.40	23.4	5.26	15000
84	5.86	45.9	2370	196	9.79	224	94.4	20.9	1.95	32.6	2.37	23.3	3.70	12800
76	6.61	49.0	2100	176	9.69	200	82.5	18.4	1.92	28.6	2.34	23.2	2.68	11100
68	7.66	52.0	1830	154	9.55	177	70.4	15.7	1.87	24.5	2.30	23.1	1.87	9430
62	5.97	50.1	1550	131	9.23	153	34.5	9.80	1.38	15.7	1.75	23.2	1.71	4620
55	6.94	54.6	1350	114	9.11	134	29.1	8.30	1.34	13.3	1.71	23.1	1.18	3870
201	3.86	20.6	5310	461	9.47	530	542	86.1	3.02	133	3.55	21.4	40.9	62000
182	4.22	22.6	4730	417	9.40	476	483	77.2	3.00	119	3.51	21.2	30.7	54400
166	4.57	25.0	4280	380	9.36	432	435	70.0	2.99	108	3.48	21.1	23.6	48500
147	5.44	26.1	3630	329	9.17	373	376	60.1	2.95	92.6	3.45	20.9	15.4	41100
132	6.01	28.9	3220	295	9.12	333	333	53.5	2.93	82.3	3.42	20.8	11.3	36000
122	6.45	31.3	2960	273	9.09	307	305	49.2	2.92	75.6	3.40	20.7	8.98	32700
111	7.05	34.1	2670	249	9.05	279	274	44.5	2.90	68.2	3.37	20.6	6.83	29200
101	7.68	37.5	2420	227	9.02	253	248	40.3	2.89	61.7	3.35	20.6	5.21	26200

NO.		CALCULATION																				REF	
8.0 BASIC LOAD CASES AND LOAD COMBINATIONS																							
2) Load Combinations For Concrete Design, Foundation Design																							
	Load Combination	Dead	Live		WIND				Earthquake						Crane								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
		D	LL	LR	WX+	WX-	WZ+	WZ-	EX+	EX-	EZ+	EZ-	EY+	EY-	CS1	CS2	CS3	CS4	CF1	CF2	CF3	CF4	
Normal Condition	LC #201	1.40																					
	LC #202	1.20	1.60	0.50																			
	LC #203	1.20	1.60	0.50															1.60				
	LC #204	1.20	1.60	0.50															1.60				
	LC #205	1.20	1.60	0.50															1.60				
	LC #206	1.20	1.60	0.50															1.60				
	LC #207	1.20	1.00	1.60																			
	LC #208	1.20	1.00	1.60															1.00				
	LC #209	1.20	1.00	1.60															1.00				
	LC #210	1.20	1.00	1.60															1.00				
Wind Condition	LC #211	1.20	1.00	1.60																		1.00	
	LC #212	1.00	0.75	0.75																			
	LC #213	1.20		1.60	0.50																		
	LC #214	1.20		1.60		0.50																	
	LC #215	1.20		1.60			0.50																
	LC #216	1.20		1.60				0.50															
	LC #217	1.20	1.00	0.50	1.00																		
	LC #218	1.20	1.00	0.50		1.00																	
	LC #219	1.20	1.00	0.50			1.00																
	LC #220	1.20	1.00	0.50	1.00														1.00				
	LC #221	1.20	1.00	0.50	1.00														1.00				
	LC #222	1.20	1.00	0.50	1.00														1.00				
	LC #223	1.20	1.00	0.50	1.00																	1.00	
	LC #224	1.20	1.00	0.50		1.00													1.00				
	LC #225	1.20	1.00	0.50		1.00													1.00				
	LC #226	1.20	1.00	0.50		1.00													1.00				
	LC #227	1.20	1.00	0.50		1.00																1.00	
	LC #228	1.20	1.00	0.50			1.00												1.00				
	LC #229	1.20	1.00	0.50			1.00												1.00				
	LC #230	1.20	1.00	0.50			1.00															1.00	
	LC #231	1.20	1.00	0.50			1.00															1.00	
	LC #232	1.20	1.00	0.50				1.00											1.00				
	LC #233	1.20	1.00	0.50				1.00											1.00				
	LC #234	1.20	1.00	0.50				1.00														1.00	
	LC #235	1.20	1.00	0.50				1.00														1.00	
Seismic Condition	LC #236	1.20	1.00						1.00					1.00									
	LC #237	1.20	1.00							1.00					1.00								
	LC #238	1.20	1.00								1.00					1.00							
	LC #239	1.20	1.00									1.00		1.00									
	LC #240	1.20	1.00						1.00						1.00								
	LC #241	1.20	1.00							1.00						1.00							
	LC #242	1.20	1.00								1.00						1.00						
LC #243	1.20	1.00									1.00						1.00						

NO.	CALCULATION		REF																																												
8.0	BASIC LOAD CASES AND LOAD COMBINATIONS																																														
8.1	BASIC LOAD CASES																																														
	<table><tr><th>Load Case</th><th>Description</th></tr><tr><td>1</td><td>Dead Load - D</td></tr><tr><td>2</td><td>Live Load - LL</td></tr><tr><td>3</td><td>Roof Live Load - LR</td></tr><tr><td>4</td><td>Wind Load X +direction - WX+</td></tr><tr><td>5</td><td>Wind Load X -direction - WX-</td></tr><tr><td>6</td><td>Wind Load Z +direction - WZ+</td></tr><tr><td>7</td><td>Wind Load Z -direction - WZ-</td></tr><tr><td>8</td><td>Earthquake Load X +direction - EX+</td></tr><tr><td>9</td><td>Earthquake Load X -direction - EX-</td></tr><tr><td>10</td><td>Earthquake Load Z +direction - EZ+</td></tr><tr><td>11</td><td>Earthquake Load Z -direction - EZ-</td></tr><tr><td>12</td><td>Earthquake Load Y +direction - EY+</td></tr><tr><td>13</td><td>Earthquake Load Y -direction - EY-</td></tr><tr><td>14</td><td>Crane Empty Load - CS1</td></tr><tr><td>15</td><td>Crane Empty Load - CS2</td></tr><tr><td>16</td><td>Crane Empty Load - CS3</td></tr><tr><td>17</td><td>Crane Empty Load - CS4</td></tr><tr><td>18</td><td>Crane Operating Load - CF1</td></tr><tr><td>19</td><td>Crane Operating Load - CF2</td></tr><tr><td>20</td><td>Crane Operating Load - CF3</td></tr><tr><td>21</td><td>Crane Operating Load - CF4</td></tr></table>	Load Case	Description	1	Dead Load - D	2	Live Load - LL	3	Roof Live Load - LR	4	Wind Load X +direction - WX+	5	Wind Load X -direction - WX-	6	Wind Load Z +direction - WZ+	7	Wind Load Z -direction - WZ-	8	Earthquake Load X +direction - EX+	9	Earthquake Load X -direction - EX-	10	Earthquake Load Z +direction - EZ+	11	Earthquake Load Z -direction - EZ-	12	Earthquake Load Y +direction - EY+	13	Earthquake Load Y -direction - EY-	14	Crane Empty Load - CS1	15	Crane Empty Load - CS2	16	Crane Empty Load - CS3	17	Crane Empty Load - CS4	18	Crane Operating Load - CF1	19	Crane Operating Load - CF2	20	Crane Operating Load - CF3	21	Crane Operating Load - CF4		
Load Case	Description																																														
1	Dead Load - D																																														
2	Live Load - LL																																														
3	Roof Live Load - LR																																														
4	Wind Load X +direction - WX+																																														
5	Wind Load X -direction - WX-																																														
6	Wind Load Z +direction - WZ+																																														
7	Wind Load Z -direction - WZ-																																														
8	Earthquake Load X +direction - EX+																																														
9	Earthquake Load X -direction - EX-																																														
10	Earthquake Load Z +direction - EZ+																																														
11	Earthquake Load Z -direction - EZ-																																														
12	Earthquake Load Y +direction - EY+																																														
13	Earthquake Load Y -direction - EY-																																														
14	Crane Empty Load - CS1																																														
15	Crane Empty Load - CS2																																														
16	Crane Empty Load - CS3																																														
17	Crane Empty Load - CS4																																														
18	Crane Operating Load - CF1																																														
19	Crane Operating Load - CF2																																														
20	Crane Operating Load - CF3																																														
21	Crane Operating Load - CF4																																														

NO.	CALCULATION	REF
<p data-bbox="196 320 424 349">9.5 Member Force</p> <p data-bbox="244 365 544 394">1) Bending Moment Diagram</p>	 <p>The image shows a 3D wireframe model of a building structure, likely a workshop storage building. The structure is composed of a grid of nodes connected by red lines, representing the structural members. Red shaded areas are overlaid on the structure, indicating the distribution of bending moments. The structure appears to have a sloped roof and multiple internal supports or columns. The red shading is concentrated on the roof and the vertical supports, showing the variation of bending moments across the structure.</p>	

NO.	CALCULATION	REF
	<p data-bbox="240 365 481 392">2) Shear Force Diagram</p>  <p>The image shows a 3D wireframe model of a complex truss structure, likely for a roof or bridge. The structure is composed of numerous interconnected members forming a grid-like pattern with diagonal bracing. It is supported by several vertical columns at the base. The model is rendered in blue lines on a white background.</p>	

NO.	CALCULATION	REF
	<p data-bbox="240 365 470 392">3) Axial Force Diagram</p>  <p>The diagram shows a 3D wireframe model of a truss structure, likely a roof or bridge component. The structure is composed of numerous members, with some highlighted in red and others in blue. The red members form a complex, interconnected network, while the blue members provide additional support and stability. The structure is supported by several vertical columns at its base. The overall shape is elongated and tapers towards one end.</p>	

NO.	CALCULATION	REF
10.0	Steel Member Design	
2)	SC2	
----- START OF DESIGN OUTPUT OF MEMBER 396 -----		
MEMBER NO: 396 CRITICAL RATIO: 0.348(PASS) LOAD: 247		
LOCATION (ft): 5.25 CONDITION: Eq. H1-1b		
SECTION: ST W8X35 (AISC SECTIONS)		
UNIT: KIP FEET		
STRENGTH CHECKS:		
CRITICAL RATIO: 0.348(PASS) LOAD CASE: 247 LOCATION (ft): 5.25 CONDITION: Eq. H1-1b		
DESIGN FORCES: Fx: 5.52(C) Fy: -0.01 Fz: 2.77		
Mx: -4.47E-03 My: 1.45E+01 Mz: 3.02E-02		
SLENDERNESS: ACTUAL SLENDERNESS RATIO: 46.461 LOAD: 287 LOC.(ft): 0.000		
ALLOWABLE SLENDERNESS RATIO: 200.000		
FORCE & MOMENT CAPACITY UNIT: KIP FEET		
DETAILS:	CAPACITY	RATIO LOC LOAD CASE: CRITERIA:
TENSION YIELDING:	329.402	0.000 0.000 201 Eq. D2-1
TENSION RUPTURE:	448.050	0.000 0.000 201 Eq. D2-2
MAJOR COMPRESSION:	317.242	0.045 0.000 211 Eq. E3-1
MINOR COMPRESSION:	294.459	0.048 0.000 211 Eq. E3-1
FLEX TOR BUCK:	314.167	0.045 0.000 211 Eq. E4-1
MAJOR SHEAR:	101.566	0.027 5.249 247 Eq. G2-1
MINOR SHEAR:	53.668	0.004 5.249 216 Eq. G2-1
MAJOR FLEXURE YIELD:	9.25E+01	0.004 2.625 217 Eq. F2-1
MINOR FLEXURE YIELD:	4.29E+01	0.338 5.249 247 Eq. F6-1
FLEX COMP INTER:	N/A	0.348 5.249 247 Eq. H1-1b
FLEX TENS INTER:	N/A	0.339 5.249 247 Eq. H1-1b
----- END OF DESIGN OUTPUT OF MEMBER 396 -----		

NO.	CALCULATION																				REF			
8.0 BASIC LOAD CASES AND LOAD COMBINATIONS																								
2) Load Combinations For Concrete Design, Foundation Design																								
	Load Combination	Dead	Live		WIND				Earthquake						Crane									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
		D	LL	LR	WX+	WX-	WZ+	WZ-	EX+	EX-	EZ+	EZ-	EY+	EY-	CS1	CS2	CS3	CS4	CF1	CF2	CF3	CF4		
Seismic Condition	LC #244	1.20	1.00						1.00					1.00		1.20								
	LC #245	1.20	1.00						1.00					1.00			1.20							
	LC #246	1.20	1.00						1.00					1.00			1.20							
	LC #247	1.20	1.00						1.00					1.00				1.20						
	LC #248	1.20	1.00						1.00						1.00	1.20								
	LC #249	1.20	1.00						1.00						1.00		1.20							
	LC #250	1.20	1.00						1.00					1.00			1.20							
	LC #251	1.20	1.00						1.00					1.00			1.20							
	LC #252	1.20	1.00							1.00				1.00		1.20								
	LC #253	1.20	1.00							1.00				1.00			1.20							
	LC #254	1.20	1.00							1.00				1.00			1.20							
	LC #255	1.20	1.00							1.00				1.00			1.20							
	LC #256	1.20	1.00							1.00					1.00	1.20								
	LC #257	1.20	1.00							1.00					1.00		1.20							
	LC #258	1.20	1.00							1.00					1.00		1.20							
	LC #259	1.20	1.00							1.00					1.00		1.20							
	LC #260	1.20	1.00								1.00			1.00		1.20								
	LC #261	1.20	1.00									1.00		1.00			1.20							
	LC #262	1.20	1.00										1.00		1.00		1.20							
	LC #263	1.20	1.00											1.00		1.00		1.20						
	LC #264	1.20	1.00											1.00			1.00	1.20						
	LC #265	1.20	1.00											1.00			1.00		1.20					
	LC #266	1.20	1.00											1.00			1.00	1.20						
	LC #267	1.20	1.00											1.00			1.00	1.20						
	LC #268	1.20	1.00												1.00	1.00	1.20							
	LC #269	1.20	1.00												1.00	1.00		1.20						
	LC #270	1.20	1.00												1.00	1.00		1.20						
LC #271	1.20	1.00												1.00	1.00		1.20							
LC #272	1.20	1.00												1.00		1.00	1.20							
LC #273	1.20	1.00												1.00		1.00		1.20						
LC #274	1.20	1.00												1.00		1.00	1.20							
LC #275	1.20	1.00												1.00		1.00	1.20							
Wind Condition	LC #276	0.90			1.00																			
	LC #277	0.90				1.00																		
	LC #278	0.90					1.00																	
	LC #279	0.90						1.00																
Seismic Condition	LC #280	0.90							1.00															
	LC #281	0.90								1.00														
	LC #282	0.90									1.00													
	LC #283	0.90										1.00												
	LC #284	0.90							1.00															
	LC #285	0.90								1.00														
	LC #286	0.90									1.00													
	LC #287	0.90										1.00												