BOGOTÁ | INSTITUTO DISTRITAL DE PATRIMONIO CULTURAL

MEMORIA DE CÁLCULO ESTRUCTURAL
PLAZOLETA DE LA SALA DE INTRODUCCION



Conservación y restauración del patrimonio construido
Estudios – Diseños – Obra - Interventoría

CONSULTORÍA PARA LA ELABORACIÓN DE LOS ESTUDIOS TÉCNICOS, DISEÑOS ARQUITECTÓNICOS Y DE INGENIERÍA, NECESARIOS Y COMPLEMENTARIOS PARA LAS OBRAS DE URBANISMO, REDES DE SUMINISTRO DE SERVICIOS PÚBLICOS Y CONSTRUCCIÓN DE LOS ACCESOS PRINCIPALES DEL PARQUE ARQUEOLÓGICO HACIENDA EL CARMEN, UBICADO EN LA LOCALIDAD DE USME BOGOTÁ D.C.

Bogotá, Diciembre de 2024

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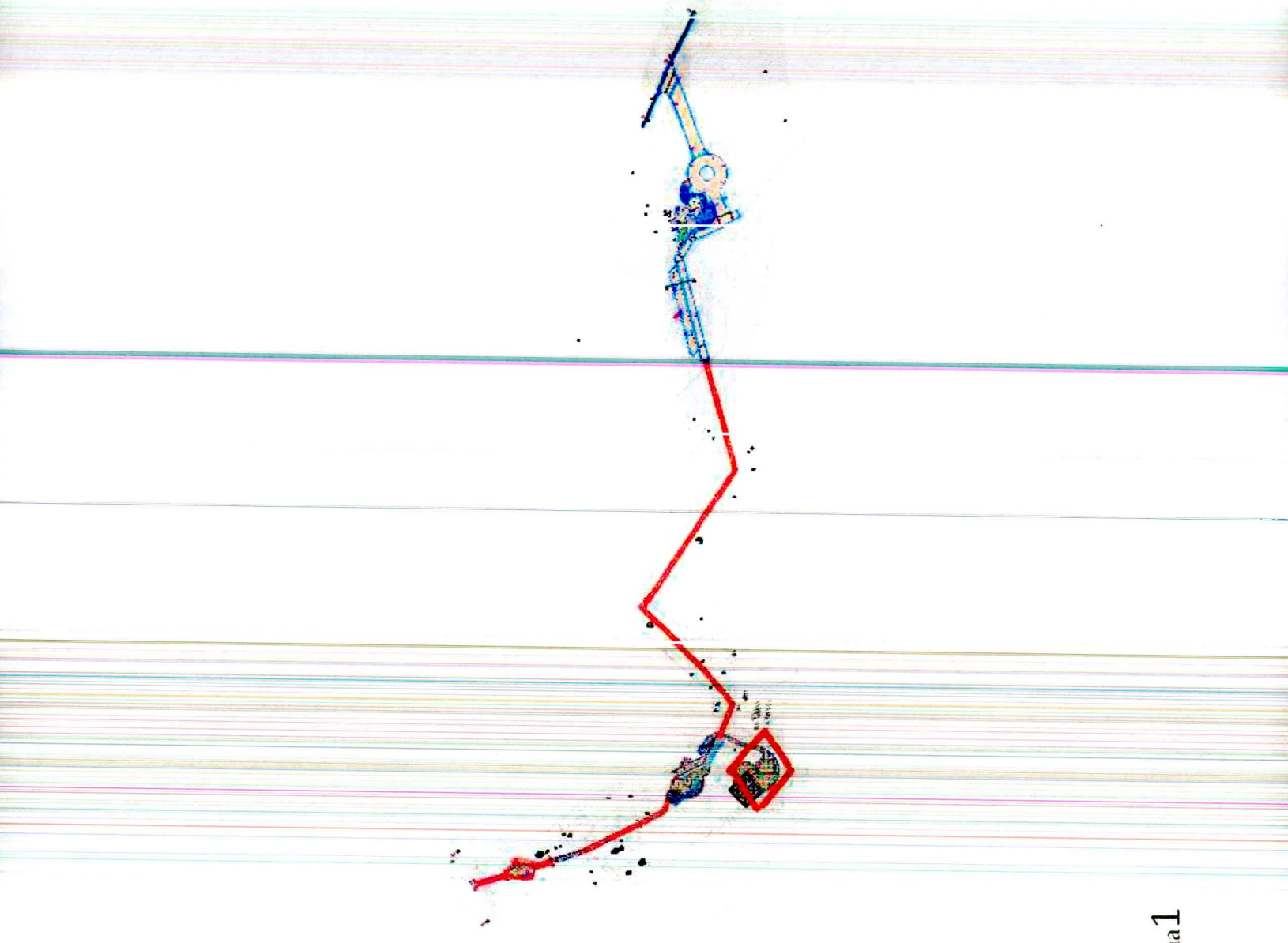
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PLAZOLETA SALA DE INTRODUCCION

GENERALIDADES

La sala de introducción se encuentra ubicada dentro del proyecto del parque arqueológico hacienda el Carmen, en la localidad de Usme de la ciudad de Bogotá.



Se proyecta un sobrepiso flotado aproximadamente 50cm sobre el terreno natural, se plantea un sistema de pórticos de acero para las cargas verticales, la cimentación son zapatas aisladas y pedestales en concreto reforzado, se han seguido las recomendaciones del estudio de suelos ES 23-4634 de la empresa Simétrica Ingenieros Civiles de enero de 2023. La plazoleta tiene un acabado en madera plástica.

La modelación se realiza en el software ETABS el cual tiene en cuenta el peso propio de los elementos.

Especificaciones:

Concretos:

f'c: 210 kg/cm² ó 3000 psi

Acero de refuerzo:

fy: 4200 kg/cm² ó 60000 psi $\varphi \geq 1/4"$

Acero estructural: A500 Lamina delgada.

A572 Gr 50. Perfiles Laminados.

En este informe está conformado por un (1) tomo de hojas de memoria, y los planos en donde se encuentran especificados todos los elementos y las dimensiones de la estructura.



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AVALUO DE CARGAS

Piso Flotado Plazoleta

Carga muerta: Vigueta metálica separada c/.40m PHR 152x63x2.5mm	0.0145 Ton/m²
Carga viva:	0.500
Carga de granizo:	0.100

El software tiene en cuenta el peso propio de los elementos estructurales

COMBINACIONES DE CARGA

CM: Carga muerta.

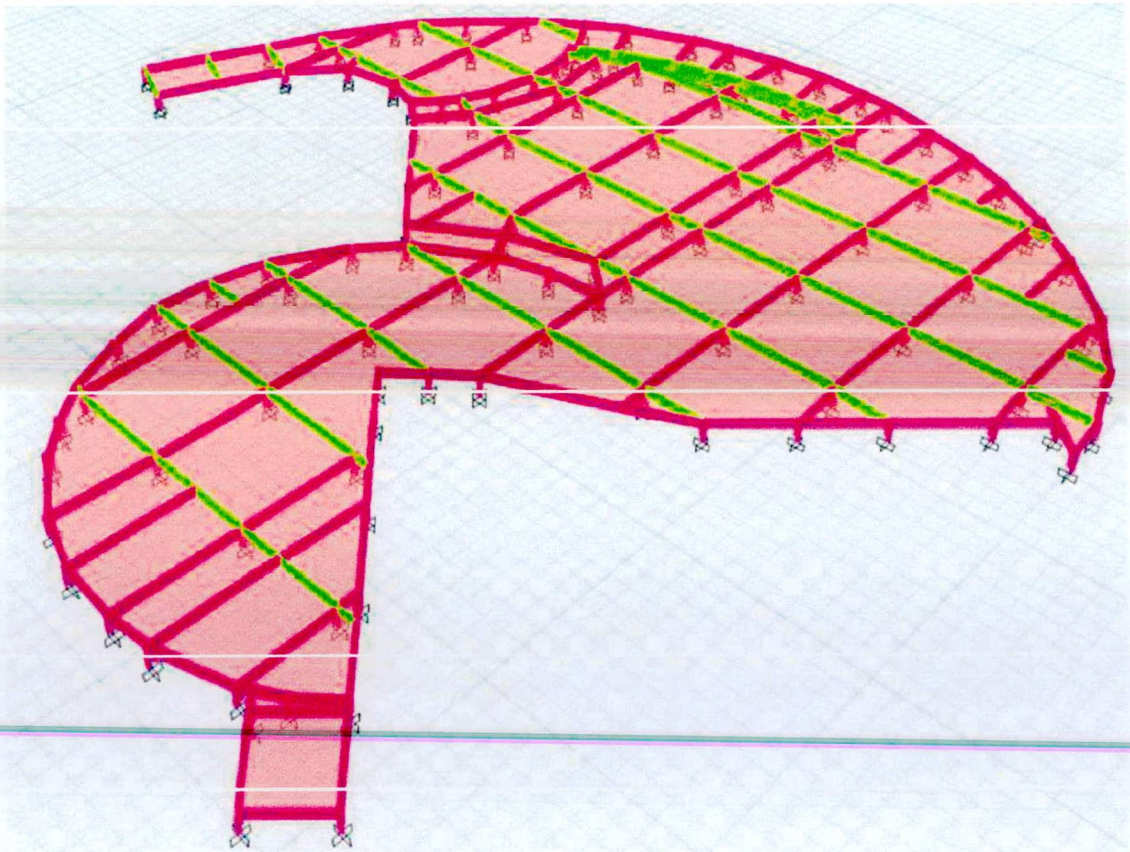
CV: Carga viva.

CG: Carga de Granizo.

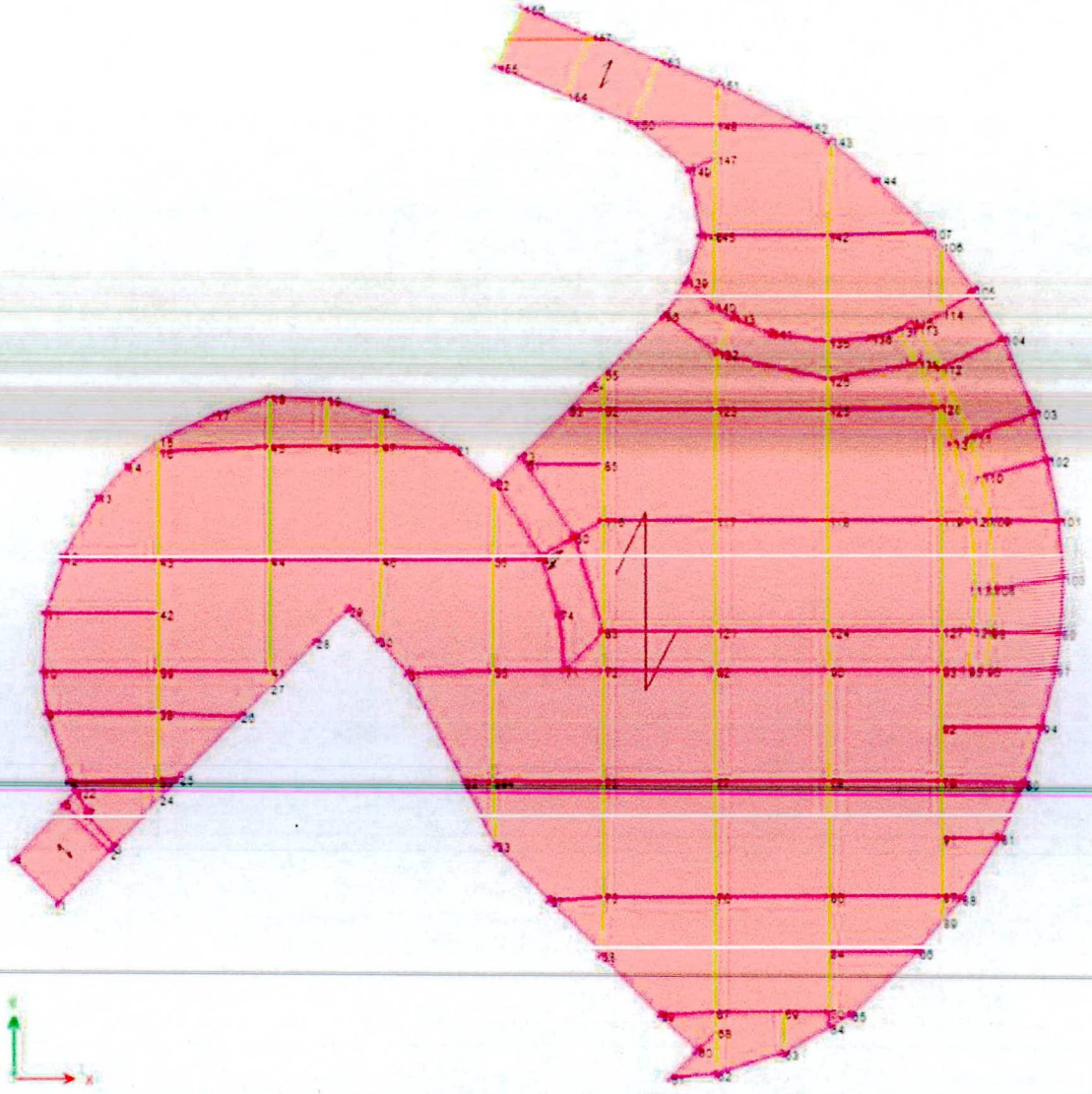
a) Para deformaciones y cimentación
1. 1.0 CM
2. 1.0 CM + 1.0 CV
3. 1.0 CM + 1.0 CG

b) Para diseño de elementos estructurales
4. 1.4 CM
5. 1.2 CM + 1.6 CV
6. 1.2 CM + 1.6 CV + 0.5 CG
7. 1.2 CM + 1.6 CG +1.0 CV

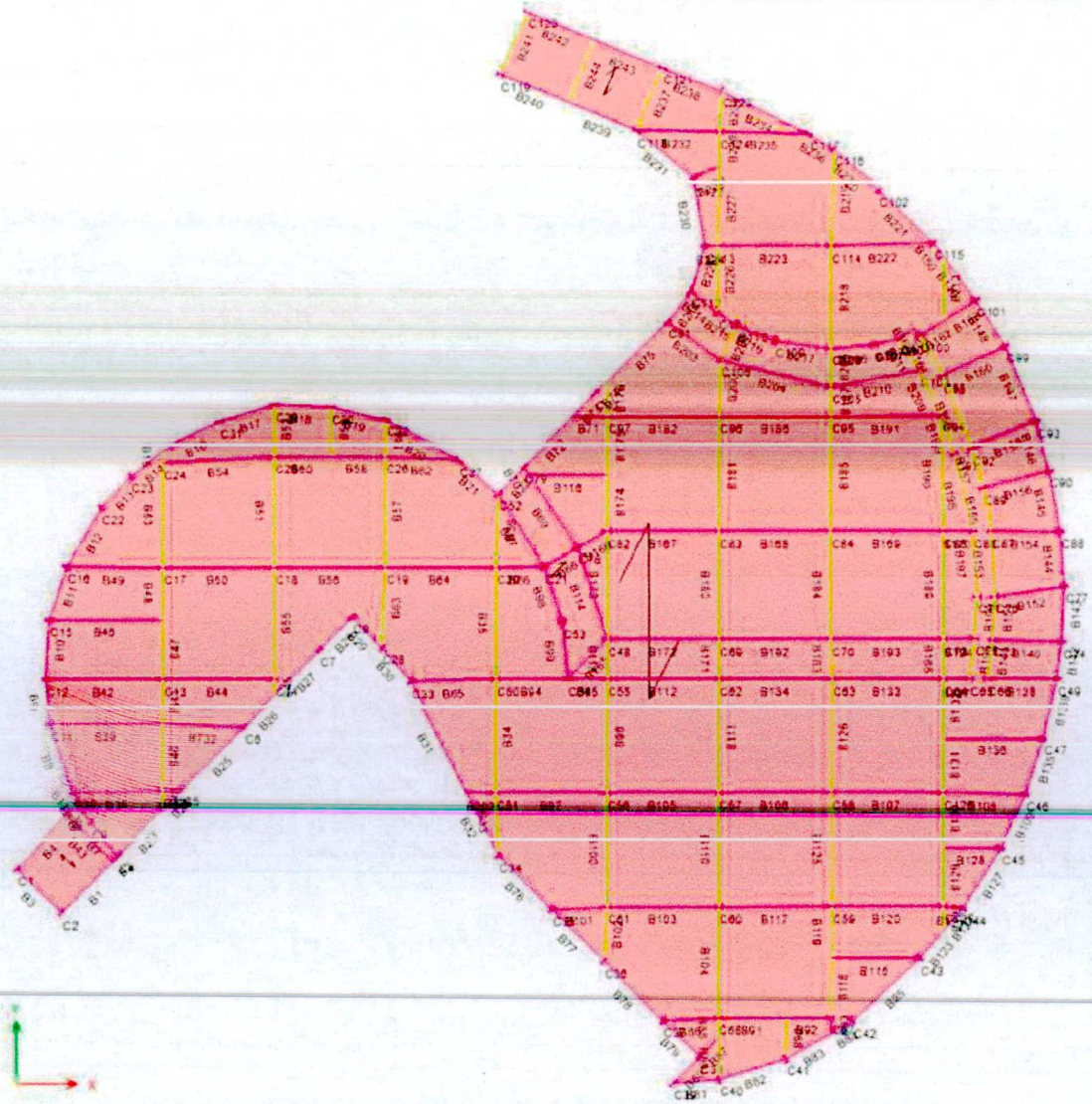
MODELACION ESTRUCTURAL



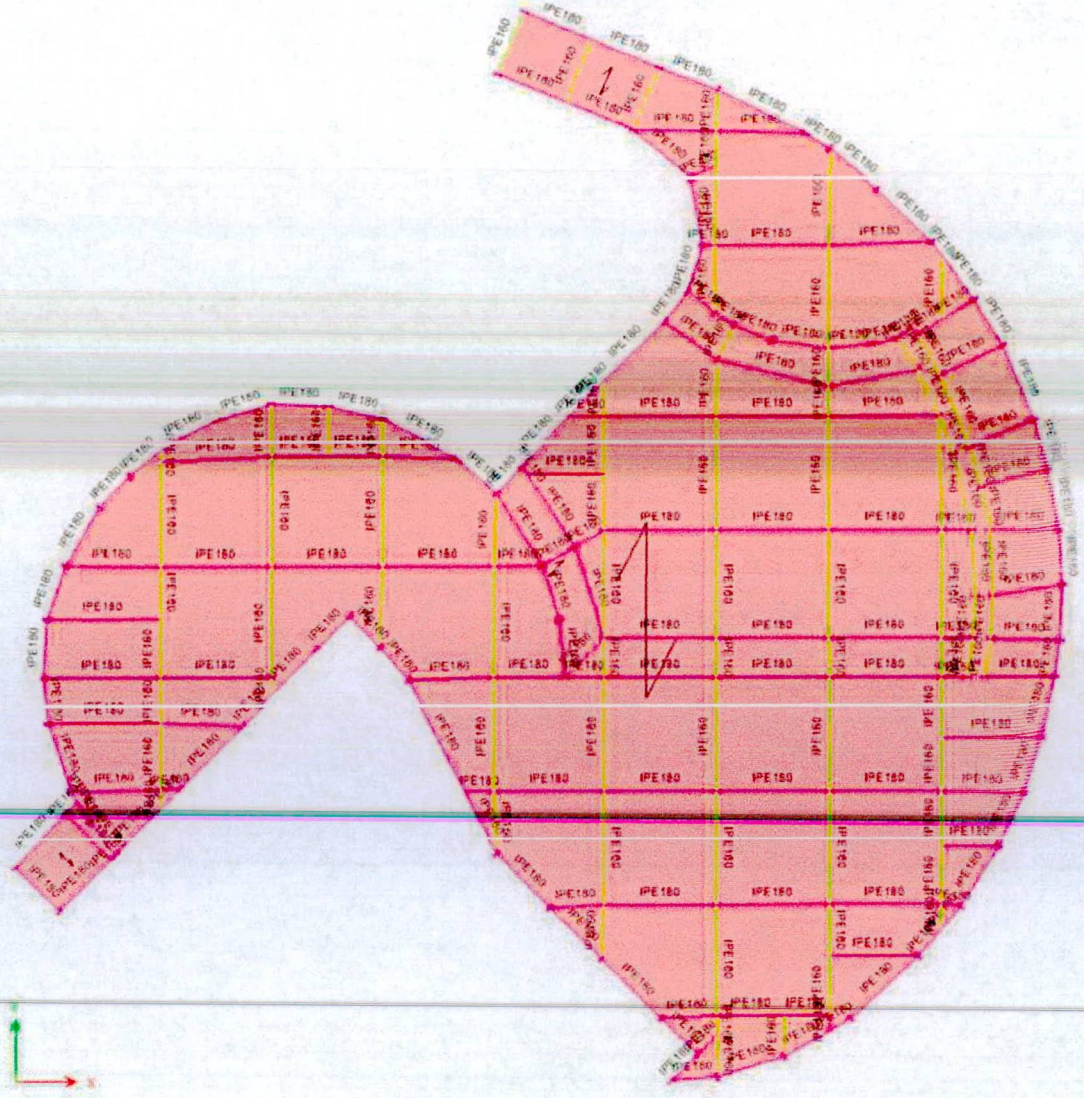
Esquema de modelación en 3D



Identificación de nudos



Identificación de elementos



Asignación de secciones

Las columnas son IPE180

CIMENTACION

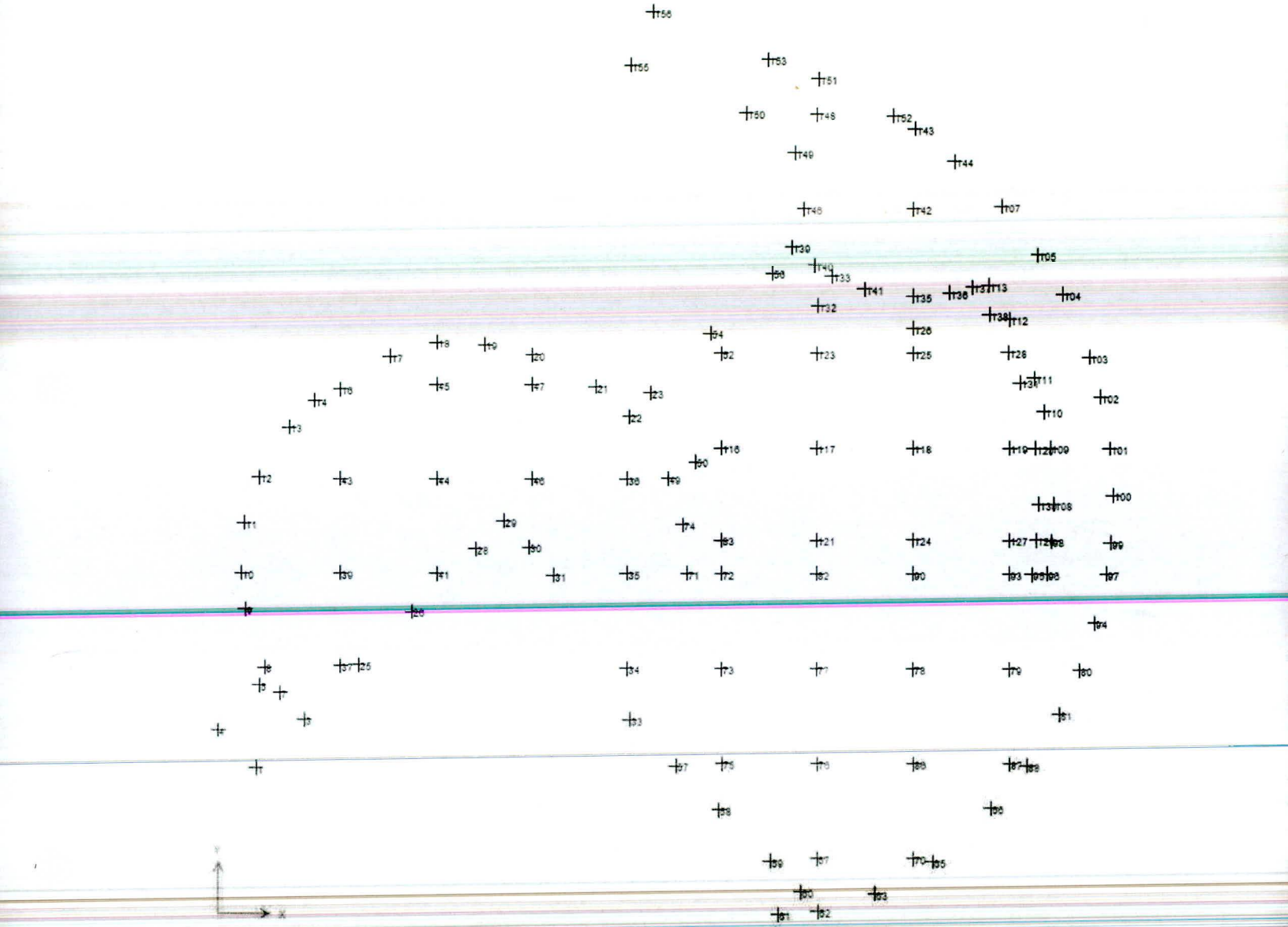


TABLE: Joint Reactions Esfuerzo admisible del suelo:

Story	Label	Output Case	FZ	9.3	peso propio	peso total	Area req	Lado
			tonf	ton/m²	cimiento	ton	m²	m
Base	1	Comb2	0.5256		0.513	1.039	0.112	0.60
Base	3	Comb2	1.0247		0.513	1.538	0.165	0.60
Base	4	Comb2	0.5029		0.513	1.016	0.109	0.60
Base	5	Comb2	0.6288		0.513	1.142	0.123	0.60
Base	7	Comb2	0.2076		0.513	0.721	0.077	0.60
Base	8	Comb2	1.1262		0.513	1.639	0.176	0.60
Base	9	Comb2	1.2616		0.513	1.775	0.191	0.60
Base	10	Comb2	1.023		0.513	1.536	0.165	0.60
Base	11	Comb2	1.341		0.513	1.854	0.199	0.60
Base	12	Comb2	0.9673		0.513	1.480	0.159	0.60
Base	13	Comb2	0.3763		0.513	0.889	0.096	0.60
Base	14	Comb2	0.8692		0.513	1.382	0.149	0.60
Base	16	Comb2	1.258		0.513	1.771	0.190	0.60
Base	17	Comb2	0.6085		0.513	1.122	0.121	0.60
Base	18	Comb2	0.5676		0.513	1.081	0.116	0.60
Base	19	Comb2	0.5562		0.513	1.069	0.115	0.60
Base	20	Comb2	0.4396		0.513	0.953	0.102	0.60
Base	21	Comb2	1.5727		0.513	2.086	0.224	0.60
Base	22	Comb2	0.846		0.513	1.359	0.146	0.60
Base	23	Comb2	0.9951		0.513	1.508	0.162	0.60
Base	25	Comb2	0.4822		0.513	0.995	0.107	0.60
Base	26	Comb2	1.3833		0.513	1.896	0.204	0.60
Base	28	Comb2	0.8542		0.513	1.367	0.147	0.60
Base	29	Comb2	0.6636		0.513	1.177	0.127	0.60
Base	30	Comb2	0.516		0.513	1.029	0.111	0.60
Base	31	Comb2	2.3235		0.513	2.837	0.305	0.60
Base	33	Comb2	1.2013		0.513	1.714	0.184	0.60
Base	34	Comb2	2.7495		0.513	3.263	0.351	0.60
Base	35	Comb2	3.7026		0.513	4.216	0.453	0.67
Base	36	Comb2	2.9927		0.513	3.506	0.377	0.61
Base	37	Comb2	2.0527		0.513	2.566	0.276	0.60
Base	39	Comb2	4.9675		0.513	5.481	0.589	0.77
Base	41	Comb2	1.8369		0.513	2.350	0.253	0.60
Base	43	Comb2	4.7936		0.513	5.307	0.571	0.76
Base	44	Comb2	4.8819		0.513	5.395	0.580	0.76
Base	45	Comb2	3.8444		0.513	4.357	0.469	0.68
Base	46	Comb2	4.6059		0.513	5.119	0.550	0.74
Base	47	Comb2	2.5725		0.513	3.086	0.332	0.60
Base	49	Comb2	1.1524		0.513	1.665	0.179	0.60
Base	50	Comb2	0.8424		0.513	1.355	0.146	0.60
Base	52	Comb2	2.8138		0.513	3.327	0.358	0.60
Base	54	Comb2	0.7342		0.513	1.247	0.134	0.60
Base	56	Comb2	1.2116		0.513	1.725	0.185	0.60
Base	57	Comb2	1.3942		0.513	1.907	0.205	0.60
Base	58	Comb2	0.6954		0.513	1.208	0.130	0.60
Base	59	Comb2	1.384		0.513	1.897	0.204	0.60
Base	60	Comb2	0.3116		0.513	0.825	0.089	0.60
Base	61	Comb2	0.1121		0.513	0.625	0.067	0.60
Base	62	Comb2	0.5811		0.513	1.094	0.118	0.60
Base	63	Comb2	0.6026		0.513	1.116	0.120	0.60
Base	65	Comb2	0.6639		0.513	1.177	0.127	0.60
Base	66	Comb2	1.0957		0.513	1.609	0.173	0.60
Base	67	Comb2	2.7528		0.513	3.266	0.351	0.60
Base	70	Comb2	2.1436		0.513	2.657	0.286	0.60
Base	71	Comb2	1.6156		0.513	2.129	0.229	0.60
Base	72	Comb2	2.3262		0.513	2.839	0.305	0.60
Base	73	Comb2	5.0932		0.513	5.606	0.603	0.78

Base	74	Comb2	0.3693	0.513	0.882	0.095	0.60
Base	75	Comb2	3.1884	0.513	3.701	0.398	0.63
Base	76	Comb2	5.0741	0.513	5.587	0.601	0.78
Base	77	Comb2	5.1029	0.513	5.616	0.604	0.78
Base	78	Comb2	5.1028	0.513	5.616	0.604	0.78
Base	79	Comb2	4.4794	0.513	4.992	0.537	0.73
Base	80	Comb2	0.9298	0.513	1.443	0.155	0.60
Base	81	Comb2	0.7104	0.513	1.223	0.132	0.60
Base	82	Comb2	3.4811	0.513	3.994	0.429	0.66
Base	83	Comb2	2.1247	0.513	2.638	0.284	0.60
Base	86	Comb2	4.6064	0.513	5.119	0.550	0.74
Base	87	Comb2	3.773	0.513	4.286	0.461	0.68
Base	88	Comb2	0.7525	0.513	1.266	0.136	0.60
Base	90	Comb2	3.4816	0.513	3.995	0.430	0.66
Base	93	Comb2	2.6805	0.513	3.194	0.343	0.60
Base	94	Comb2	1.3781	0.513	1.891	0.203	0.60
Base	95	Comb2	0.3297	0.513	0.843	0.091	0.60
Base	96	Comb2	0.7608	0.513	1.274	0.137	0.60
Base	97	Comb2	0.6803	0.513	1.193	0.128	0.60
Base	98	Comb2	0.731	0.513	1.244	0.134	0.60
Base	99	Comb2	0.656	0.513	1.169	0.126	0.60
Base	100	Comb2	0.7974	0.513	1.310	0.141	0.60
Base	101	Comb2	0.8335	0.513	1.347	0.145	0.60
Base	102	Comb2	0.7567	0.513	1.270	0.137	0.60
Base	103	Comb2	0.8165	0.513	1.330	0.143	0.60
Base	104	Comb2	1.0239	0.513	1.537	0.165	0.60
Base	105	Comb2	0.8165	0.513	1.330	0.143	0.60
Base	107	Comb2	1.6431	0.513	2.156	0.232	0.60
Base	108	Comb2	0.8573	0.513	1.370	0.147	0.60
Base	109	Comb2	1.0171	0.513	1.530	0.165	0.60
Base	110	Comb2	1.1043	0.513	1.617	0.174	0.60
Base	111	Comb2	1.3113	0.513	1.824	0.196	0.60
Base	112	Comb2	1.0877	0.513	1.601	0.172	0.60
Base	113	Comb2	0.8612	0.513	1.374	0.148	0.60
Base	116	Comb2	3.3989	0.513	3.912	0.421	0.65
Base	117	Comb2	5.0404	0.513	5.553	0.597	0.77
Base	118	Comb2	5.0459	0.513	5.559	0.598	0.77
Base	119	Comb2	3.1387	0.513	3.652	0.393	0.63
Base	120	Comb2	0.728	0.513	1.241	0.133	0.60
Base	121	Comb2	3.4184	0.513	3.931	0.423	0.65
Base	123	Comb2	3.9706	0.513	4.484	0.482	0.69
Base	124	Comb2	3.4184	0.513	3.931	0.423	0.65
Base	125	Comb2	3.4023	0.513	3.915	0.421	0.65
Base	126	Comb2	1.4272	0.513	1.940	0.209	0.60
Base	127	Comb2	2.2315	0.513	2.745	0.295	0.60
Base	128	Comb2	1.994	0.513	2.507	0.270	0.60
Base	129	Comb2	0.5496	0.513	1.063	0.114	0.60
Base	130	Comb2	0.1349	0.513	0.648	0.070	0.60
Base	131	Comb2	0.409	0.513	0.922	0.099	0.60
Base	132	Comb2	1.5924	0.513	2.105	0.226	0.60
Base	133	Comb2	0.7423	0.513	1.255	0.135	0.60
Base	135	Comb2	1.4371	0.513	1.950	0.210	0.60
Base	136	Comb2	0.9577	0.513	1.471	0.158	0.60
Base	137	Comb2	0.8703	0.513	1.383	0.149	0.60
Base	138	Comb2	0.9	0.513	1.413	0.152	0.60
Base	139	Comb2	0.3439	0.513	0.857	0.092	0.60
Base	140	Comb2	0.5143	0.513	1.027	0.110	0.60
Base	141	Comb2	1.23	0.513	1.743	0.187	0.60
Base	142	Comb2	4.3854	0.513	4.898	0.527	0.73
Base	143	Comb2	0.5688	0.513	1.082	0.116	0.60

Base	144	Comb2	0.7014	0.513	1.214	0.131	0.60
Base	146	Comb2	2.5923	0.513	3.105	0.334	0.60
Base	148	Comb2	2.1455	0.513	2.659	0.286	0.60
Base	149	Comb2	0.4997	0.513	1.013	0.109	0.60
Base	150	Comb2	1.8218	0.513	2.335	0.251	0.60
Base	151	Comb2	0.6704	0.513	1.183	0.127	0.60
Base	152	Comb2	1.5531	0.513	2.066	0.222	0.60
Base	153	Comb2	1.4869	0.513	2.000	0.215	0.60
Base	155	Comb2	1.0816	0.513	1.595	0.171	0.60
Base	156	Comb2	1.0744	0.513	1.587	0.171	0.60

DISEÑO DE ZAPATA CUADRADA CONCENTRICA

TIPO: 1 **CANT:**

Materiales

Dimension de la Zapata (m) 0.80 x 0.80 — Concreto 211 kg / cm²

Dimension de la Columna (m) 0.10 x 0.18 — Acero 4200 kg / cm²

Acartelamiento 0.00 m

Altura de la zapata 0.20 m

Carga Real de la Columna P = 5.6 T

Presion Admisible: 9.30 T / m² — Según Estudio de Suelos

Presion Neta: σ = 8.78 T / m² OK

Flexión: M = 0.3 t*m / m — Factor de Mayoración 1.4

Mu = 0.5 t*m / m

h = 20 cm

d = 13 cm

Cuantia = 0.0009 (Analisis)

Cuantia = 0.0018 (Mínima sobre la sección bruta de concreto)

Armadura Principal **TOTAL** As = 2.88 cm²

Colocar : 3 #4 L= 1.10 c/. 32.0 en cada dirección

Cortante: **1.** $V(d/_2)$ = 1.19 t

Vu = 1.67 t

a "d/2" del borde de la columna: d = 0.13 m

b = 0.31 m

v_u = 4.15 k/cm²

De acuerdo a C.11.11.2.1 ϕvc es el menor de:

(a) ϕvc_1 = 12.19 kg/cm²

(b) La columna es: interior

αs = 40.00

bo= 108.00 cm

ϕvc_2 = 20.05

ó (c) ϕvc_3 = 10.89 kg/cm²

por lo cual ϕvc_{def} = 10.89 kg/cm² OK

2. V (d) = 1.26 T

Vu = 1.77 T

a "d" del borde de la columna: d = 0.13 m

vu = 1.70 kg/cm²

De acuerdo a C.11.2.1.1 ϕvc es:

ϕvc = 5.77 kg/cm² OK

Transmisión de esfuerzos de la columna a la zapata:

Presión Producida: 0.044 T/cm²

De acuerdo a C.10.14.1 la resistencia al aplastamiento:

A1 = 0.018 m²

A2 = 0.64 m²

Presión Maxima: 0.233 T/cm² OK

Diseño de Elementos Metálicos

COLUMNAS

TABLE: Steel Column Envelope - AISC 360-16

Story	Label	UniqueName	Section	Moment Interaction Check	PMM Combo	V22 Ratio	V33 Ratio
Story1	C1	277	IPE180	0.018 = 0.005 + 0.012 + 0.001	Comb6	0.013	0
Story1	C2	278	IPE180	0.014 = 0.006 + 0.007 + 0.001	Comb6	0.011	0.000104
Story1	C3	279	IPE180	0.031 = 0.007 + 0.024 + 3.259E-04	Comb6	0.011	0.001
Story1	C4	280	IPE180	0.026 = 0.011 + 0.008 + 0.007	Comb6	0.001	0.001
Story1	C5	281	IPE180	0.031 = 0.005 + 0.012 + 0.014	Comb6	0.011	0.002
Story1	C6	282	IPE180	0.323 = 0.015 + 0.063 + 0.245	Comb6	0.042	0.057
Story1	C7	283	IPE180	0.04 = 0.009 + 0.021 + 0.009	Comb6	0.008	0.001
Story1	C8	284	IPE180	0.037 = 0.007 + 0.018 + 0.011	Comb6	0.003	0.002
Story1	C9	285	IPE180	0.021 = 0.002 + 0.013 + 0.006	Comb6	0.007	0.001
Story1	C10	286	IPE180	0.054 = 0.012 + 0.021 + 0.021	Comb6	0.023	0.005
Story1	C11	287	IPE180	0.059 = 0.014 + 0.03 + 0.015	Comb6	0.032	0.004
Story1	C12	288	IPE180	0.044 = 0.011 + 0.031 + 0.002	Comb6	0.03	0.0001856
Story1	C13	289	IPE180	0.196 = 0.055 + 0.124 + 0.017	Comb6	0.085	0.004
Story1	C14	290	IPE180	0.063 = 0.02 + 0.041 + 0.001	Comb6	0.008	0.0001221
Story1	C15	291	IPE180	0.065 = 0.015 + 0.033 + 0.017	Comb6	0.035	0.004
Story1	C16	292	IPE180	0.062 = 0.011 + 0.03 + 0.022	Comb6	0.026	0.004
Story1	C17	293	IPE180	0.152 = 0.053 + 0.086 + 0.013	Comb6	0.054	0.003
Story1	C18	294	IPE180	0.08 = 0.054 + 0.025 + 0.001	Comb6	0.001	0
Story1	C19	295	IPE180	0.074 = 0.051 + 0.022 + 0.001	Comb6	0.012	0
Story1	C20	296	IPE180	0.063 = 0.033 + 0.028 + 0.002	Comb6	0.014	0.0001144
Story1	C21	297	IPE180	0.035 = 0.012 + 0.013 + 0.009	Comb6	0.004	0.002
Story1	C22	298	IPE180	0.038 = 0.004 + 0.023 + 0.011	Comb6	0.012	0.001
Story1	C23	299	IPE180	0.046 = 0.01 + 0.021 + 0.015	Comb6	0.007	0.002
Story1	C24	300	IPE180	0.041 = 0.014 + 4.551E-04 + 0.027	Comb6	0.0001434	0.004
Story1	C25	301	IPE180	0.242 = 0.042 + 0.165 + 0.035	Comb6	0.125	0.008
Story1	C26	302	IPE180	0.058 = 0.028 + 0.027 + 0.003	Comb6	0.001	0.0002885
Story1	C27	304	IPE180	0.083 = 0.017 + 0.011 + 0.056	Comb6	0.006	0.012
Story1	C29	306	IPE180	0.037 = 0.006 + 0.028 + 0.004	Comb6	0.015	0.001
Story1	C30	307	IPE180	0.036 = 0.006 + 0.028 + 0.002	Comb6	0.014	0.0003115
Story1	C31	308	IPE180	0.039 = 0.007 + 0.029 + 0.004	Comb6	0.013	0.002
Story1	C32	309	IPE180	0.033 = 0.005 + 0.025 + 0.003	Comb6	0.012	0.0002974
Story1	C28	1	IPE180	0.021 = 0.006 + 0.012 + 0.004	Comb6	0.006	0.0002507
Story1	C33	2	IPE180	0.092 = 0.026 + 0.009 + 0.057	Comb6	0.017	0.014
Story1	C34	3	IPE180	0.027 = 0.013 + 0.002 + 0.012	Comb6	0.003	0.002
Story1	C35	4	IPE180	0.03 = 0.015 + 0.002 + 0.013	Comb6	0.007	0.003
Story1	C36	5	IPE180	0.023 = 0.008 + 0.004 + 0.011	Comb6	0.003	0.002
Story1	C37	6	IPE180	0.033 = 0.015 + 0.007 + 0.01	Comb6	0.01	0.002
Story1	C38	7	IPE180	0.011 = 0.003 + 0.008 + 0	Comb6	0.005	0.001
Story1	C39	8	IPE180	0.018 = 0.001 + 0.007 + 0.009	Comb6	0.005	0.001
Story1	C40	9	IPE180	0.024 = 0.006 + 0.003 + 0.015	Comb6	0.0003254	0.003
Story1	C41	10	IPE180	0.013 = 0.006 + 0.001 + 0.006	Comb6	0.0002054	0
Story1	C42	11	IPE180	0.022 = 0.007 + 0.008 + 0.007	Comb6	0.004	0.0003249
Story1	C43	12	IPE180	0.052 = 0.012 + 0.011 + 0.029	Comb6	0.0003576	0.005
Story1	C44	13	IPE180	0.07 = 0.008 + 0.021 + 0.041	Comb6	0.023	0.008
Story1	C45	14	IPE180	0.036 = 0.008 + 0.012 + 0.016	Comb6	0.002	0.002
Story1	C46	15	IPE180	0.044 = 0.01 + 0.017 + 0.017	Comb6	0.004	0.003
Story1	C47	16	IPE180	0.061 = 0.015 + 0.023 + 0.023	Comb6	0.013	0.004
Story1	C49	18	IPE180	0.021 = 0.007 + 0.012 + 0.001	Comb6	0.005	0.001
Story1	C50	19	IPE180	0.065 = 0.041 + 0.022 + 0.003	Comb6	0.012	0.001
Story1	C51	20	IPE180	0.058 = 0.03 + 0.026 + 0.002	Comb6	0.028	0.001
Story1	C52	21	IPE180	0.022 = 0.009 + 0.003 + 0.01	Comb6	0.002	0.001
Story1	C53	22	IPE180	0.016 = 0.004 + 0.009 + 0.003	Comb6	0.004	0.001
Story1	C54	23	IPE180	0.064 = 0.018 + 0.046 + 0.001	Comb6	0.036	0.0003202
Story1	C55	24	IPE180	0.042 = 0.026 + 0.016 + 4.165E-04	Comb6	0.023	0.0002473
Story1	C56	25	IPE180	0.066 = 0.056 + 0.007 + 0.002	Comb6	0.004	0.0001437
Story1	C57	26	IPE180	0.068 = 0.056 + 0.01 + 0.001	Comb6	0.005	0
Story1	C58	27	IPE180	0.071 = 0.056 + 0.014 + 0.001	Comb6	0.007	0

Story1	C59	28	IPE180	0.091 = 0.051 + 0.023 + 0.017	Comb6	0.006	0.004
Story1	C60	29	IPE180	0.068 = 0.056 + 0.012 + 3.301E-04	Comb6	0.007	0
Story1	C61	30	IPE180	0.06 = 0.035 + 0.022 + 0.003	Comb6	0.026	0.001
Story1	C62	31	IPE180	0.048 = 0.038 + 0.008 + 0.001	Comb6	0.004	0.0001385
Story1	C63	32	IPE180	0.049 = 0.038 + 0.01 + 1.948E-04	Comb6	0.005	0
Story1	C64	33	IPE180	0.081 = 0.029 + 0.029 + 0.023	Comb6	0.017	0.005
Story1	C65	34	IPE180	0.02 = 0.004 + 0.012 + 0.005	Comb6	0.003	0.001
Story1	C66	35	IPE180	0.022 = 0.008 + 0.008 + 0.006	Comb6	0.013	0.001
Story1	C67	36	IPE180	0.071 = 0.024 + 0.033 + 0.014	Comb6	0.018	0.004
Story1	C68	37	IPE180	0.049 = 0.03 + 0.015 + 0.004	Comb6	0.024	0.001
Story1	C48	17	IPE180	0.052 = 0.023 + 0.023 + 0.006	Comb6	0.029	0.001
Story1	C69	38	IPE180	0.046 = 0.038 + 0.008 + 2.749E-04	Comb6	0.004	0
Story1	C70	39	IPE180	0.048 = 0.038 + 0.009 + 0.001	Comb6	0.005	0.000121
Story1	C71	40	IPE180	0.015 = 0.001 + 0.01 + 0.003	Comb6	0.005	0.0004476
Story1	C72	41	IPE180	0.049 = 0.025 + 0.024 + 0	Comb6	0.013	0.0003606
Story1	C73	42	IPE180	0.015 = 0.008 + 0.004 + 0.004	Comb6	0.008	0.0004751
Story1	C74	43	IPE180	0.024 = 0.007 + 0.009 + 0.007	Comb6	0.003	0.001
Story1	C75	44	IPE180	0.017 = 0.006 + 0.01 + 0.001	Comb6	0.002	0.0002679
Story1	C76	58	IPE180	0.023 = 0.009 + 0.009 + 0.005	Comb6	0.015	0.001
Story1	C77	59	IPE180	0.027 = 0.009 + 0.015 + 0.003	Comb6	0.008	0.0002601
Story1	C78	47	IPE180	0.018 = 0.009 + 0.002 + 0.006	Comb6	0.007	0.001
Story1	C79	48	IPE180	0.04 = 0.011 + 0.004 + 0.026	Comb6	0.005	0.006
Story1	C80	49	IPE180	0.009 = 0.008 + 0.001 + 0.001	Comb6	0.0004486	0
Story1	C81	50	IPE180	0.039 = 0.013 + 0.008 + 0.018	Comb6	0.007	0.005
Story1	C82	51	IPE180	0.075 = 0.037 + 0.034 + 0.004	Comb6	0.038	0.001
Story1	C83	60	IPE180	0.062 = 0.056 + 0.006 + 3.732E-04	Comb6	0.003	0
Story1	C84	61	IPE180	0.063 = 0.056 + 0.007 + 0.001	Comb6	0.004	0
Story1	C85	62	IPE180	0.07 = 0.035 + 0.035 + 0.001	Comb6	0.027	0.0001551
Story1	C86	63	IPE180	0.024 = 0.008 + 0.01 + 0.006	Comb6	0.002	0.002
Story1	C87	64	IPE180	0.022 = 0.011 + 0.008 + 0.002	Comb6	0.011	0.0002203
Story1	C88	65	IPE180	0.031 = 0.009 + 0.011 + 0.012	Comb6	0.004	0.003
Story1	C89	66	IPE180	0.023 = 0.012 + 0.007 + 0.004	Comb6	0.004	0.001
Story1	C90	67	IPE180	0.019 = 0.008 + 0.006 + 0.004	Comb6	0.003	0.001
Story1	C91	160	IPE180	0.012 = 0.004 + 0.007 + 1.591E-04	Comb6	0.003	0.0001549
Story1	C92	161	IPE180	0.03 = 0.014 + 0.01 + 0.006	Comb6	0.015	0.002
Story1	C93	162	IPE180	0.023 = 0.009 + 0.013 + 0.001	Comb6	0.006	0.001
Story1	C94	163	IPE180	0.087 = 0.022 + 0.027 + 0.038	Comb6	0.018	0.008
Story1	C95	164	IPE180	0.044 = 0.038 + 0.005 + 0.001	Comb6	0.002	0.0002815
Story1	C96	165	IPE180	0.05 = 0.044 + 0.006 + 0	Comb6	0.003	0
Story1	C97	166	IPE180	0.074 = 0.031 + 0.028 + 0.014	Comb6	0.029	0.004
Story1	C98	167	IPE180	0.024 = 0.012 + 0.009 + 0.002	Comb6	0.014	0.001
Story1	C99	168	IPE180	0.03 = 0.011 + 0.015 + 0.004	Comb6	0.008	0.001
Story1	C100	169	IPE180	0.025 = 0.009 + 0.009 + 0.007	Comb6	0.012	0.002
Story1	C101	176	IPE180	0.02 = 0.009 + 0.011 + 0	Comb6	0.006	0
Story1	C103	172	IPE180	0.078 = 0.01 + 0.052 + 0.016	Comb6	0.041	0.004
Story1	C104	173	IPE180	0.027 = 0.01 + 0.012 + 0.006	Comb6	0.014	0.001
Story1	C105	174	IPE180	0.041 = 0.016 + 0.006 + 0.019	Comb6	0.002	0.005
Story1	C106	175	IPE180	0.031 = 0.017 + 0.003 + 0.01	Comb6	0.004	0.003
Story1	C107	177	IPE180	0.02 = 0.011 + 0.005 + 0.005	Comb6	0.001	0.001
Story1	C108	178	IPE180	0.031 = 0.016 + 0.005 + 0.01	Comb6	0.002	0.003
Story1	C109	179	IPE180	0.024 = 0.014 + 0.001 + 0.009	Comb6	0.002	0.002
Story1	C110	180	IPE180	0.019 = 0.008 + 0.001 + 0.01	Comb6	0.0001455	0.002
Story1	C111	181	IPE180	0.007 = 0.006 + 2.538E-04 + 0.002	Comb6	0.001	0.0002777
Story1	C112	182	IPE180	0.007 = 0.004 + 3.811E-04 + 0.003	Comb6	0.001	0.001
Story1	C113	183	IPE180	0.07 = 0.028 + 0.042 + 1.221E-04	Comb6	0.037	0
Story1	C114	184	IPE180	0.073 = 0.048 + 0.022 + 0.003	Comb6	0.019	0.001
Story1	C115	185	IPE180	0.067 = 0.018 + 0.015 + 0.034	Comb6	0.011	0.008
Story1	C102	45	IPE180	0.014 = 0.008 + 0.002 + 0.004	Comb6	0.001	0.001
Story1	C116	46	IPE180	0.01 = 0.006 + 0.001 + 0.003	Comb6	0.0003654	0.001
Story1	C117	52	IPE180	0.06 = 0.017 + 0.012 + 0.032	Comb6	0.012	0.008
Story1	C118	53	IPE180	0.038 = 0.02 + 0.006 + 0.013	Comb6	0.008	0.003
Story1	C119	54	IPE180	0.032 = 0.012 + 0.02 + 0	Comb6	0.013	0
Story1	C120	55	IPE180	0.032 = 0.012 + 0.02 + 0.001	Comb6	0.013	0.0002497
Story1	C121	56	IPE180	0.027 = 0.016 + 0.01 + 0.001	Comb6	0.012	0
Story1	C122	57	IPE180	0.014 = 0.005 + 0.004 + 0.004	Comb6	0.002	0.001
Story1	C123	170	IPE180	0.011 = 0.007 + 0.001 + 0.002	Comb6	0.002	0.0003967
Story1	C124	171	IPE180	0.041 = 0.024 + 0.011 + 0.007	Comb6	0.009	0.002
Story1	C125	429	IPE180	0.059 = 0.022 + 0.021 + 0.015	Comb6	0.002	0.004
Story1	C126	80	IPE180	0.093 = 0.049 + 0.033 + 0.01	Comb6	0.017	0.003
Story1	C127	81	IPE180	0.196 = 0.042 + 0.122 + 0.032	Comb6	0.093	0.007

VIGAS

TABLE: Steel Beam Envelope - AISC 360-16

Story	Label	UniqueName	Section	Moment Interaction Check	PMM Combo	V22 Ratio	V33 Ratio	Conn. V I-End	Conn. V J-End
								kgf	kgf
Story1	B1	68	IPE180	0.071 = 0 + 0.071 + 0	Comb6	0.038	0	748.46	0
Story1	B2	69	IPE180	0.022 = 0.001 + 0.021 + 0	Comb6	0.044	0	0	884.99
Story1	B3	6A	IPE180	0.002 = 0 + 0.002 + 0	Comb4	0.001	0	21.1	21.13
Story1	B4	6B	IPE180	0.064 = 0 + 0.064 + 0	Comb6	0.036	0	713.29	719.76
Story1	B7	6E	IPE180	0.01 = 1.718E-04 + 0.01 + 0	Comb6	0.012	0	198.87	244.45
Story1	B8	6F	IPE180	0.014 = 4.711E-04 + 0.014 + 0	Comb6	0.009	0	106.87	186.86
Story1	B9	70	IPE180	0.002 = 0.001 + 0.001 + 0	Comb6	0.002	0	21.6	30.21
Story1	B10	71	IPE180	0.003 = 0.001 + 0.002 + 0	Comb6	0.002	0	27.5	37.14
Story1	B11	72	IPE180	0.006 = 3.206E-04 + 0.006 + 0	Comb6	0.006	0	67.11	113.56
Story1	B12	73	IPE180	0.017 = 0 + 0.017 + 0	Comb6	0.012	0	134.58	240.84
Story1	B13	74	IPE180	0.014 = 1.22E-04 + 0.014 + 0	Comb6	0.019	0	312.21	391.62
Story1	B14	75	IPE180	0.084 = 0 + 0.084 + 1.581E-04	Comb6	0.047	0	935.87	0
Story1	B15	76	IPE160	4.154E-04 = 4.154E-04 + 0 + 0	Comb6	0.0001405	0	2.37	0
Story1	B16	77	IPE180	0.095 = 4.979E-04 + 0.095 + 1.361E-04	Comb6	0.028	0	0	565.89
Story1	B17	78	IPE180	0.021 = 0.001 + 0.02 + 3.973E-04	Comb6	0.018	0	332.5	371.47
Story1	B18	79	IPE180	0.024 = 3.106E-04 + 0.024 + 0	Comb6	0.021	0	418.52	412.37
Story1	B19	7A	IPE180	0.02 = 1.595E-04 + 0.02 + 0	Comb6	0.018	0	361.42	332.63
Story1	B20	7B	IPE180	0.025 = 1.431E-04 + 0.025 + 0	Comb6	0.014	0	280.67	159.75
Story1	B21	7C	IPE180	0.093 = 4.554E-04 + 0.086 + 0.006	Comb6	0.076	0.001	1530.83	843.77
Story1	B22	7D	IPE180	0.002 = 0.002 + 3.648E-04 + 0	Comb6	0.001	0	11.03	10.89
Story1	B23	7E	IPE180	0.029 = 0.002 + 0.027 + 0	Comb6	0.018	0	372.01	0
Story1	B24	7F	IPE180	0.012 = 0.001 + 0.011 + 4.344E-04	Comb6	0.006	0.0001318	0	117.69
Story1	B25	691	IPE180	0.042 = 0.007 + 0.035 + 0	Comb6	0.021	0	429.68	238.93
Story1	B26	693	IPE180	0.086 = 0.002 + 0.084 + 0.001	Comb6	0.03	0	600.14	0
Story1	B27	82	IPE180	0.103 = 0.001 + 0.102 + 0	Comb6	0.039	0.0001397	0	792.5
Story1	B28	83	IPE180	0.057 = 0.001 + 0.054 + 0.002	Comb6	0.036	0.0001394	527.64	726
Story1	B29	84	IPE180	0.016 = 0.002 + 0.014 + 0	Comb6	0.016	0	285.5	328.92
Story1	B30	85	IPE180	0.022 = 0.001 + 0.021 + 0	Comb6	0.023	0	393.53	453.57
Story1	B31	86	IPE180	0.483 = 0 + 0.483 + 0	Comb6	0.045	0	915.4	0
Story1	B32	87	IPE180	0.327 = 0.001 + 0.326 + 1.283E-04	Comb6	0.058	0	0	1170.96
Story1	B33	88	IPE160	0.003 = 1.666E-04 + 0.003 + 0	Comb6	0.002	0	38.25	34.01
Story1	B34	89	IPE160	0.009 = 0 + 0.009 + 0	Comb4	0.002	0	32.12	32.12
Story1	B35	8A	IPE160	0.009 = 0 + 0.009 + 0	Comb4	0.002	0	32.12	32.12
Story1	B36	8B	IPE160	0.007 = 3.78E-04 + 0.007 + 0	Comb6	0.003	0	52.34	51.98
Story1	B37	8C	IPE160	0.022 = 0.001 + 0.021 + 0.001	Comb6	0.011	0	0	181.6
Story1	B38	8D	IPE180	0.196 = 0 + 0.196 + 0	Comb6	0.076	0	1462.08	1519.21
Story1	B39	8E	IPE180	0.395 = 0 + 0.395 + 0	Comb6	0.1	0	1850.93	0
Story1	B40	8F	IPE160	0.524 = 0 + 0.524 + 3.253E-04	Comb6	0.07	0	1186.26	0
Story1	B41	90	IPE160	0.525 = 2.617E-04 + 0.524 + 0.001	Comb6	0.112	0	0	1890.4
Story1	B42	91	IPE180	0.265 = 0 + 0.265 + 0	Comb5	0.111	0	1551.1	2229.97
Story1	B44	93	IPE180	0.5 = 0.001 + 0.499 + 1.168E-04	Comb6	0.135	0	2718.75	2648.58
Story1	B45	94	IPE160	4.525E-04 = 4.525E-04 + 0 + 0	Comb6	0.0002619	0	0	4.42
Story1	B46	95	IPE180	0.42 = 0 + 0.42 + 0	Comb6	0.103	0	1996.02	0
Story1	B47	96	IPE160	0.39 = 0.001 + 0.389 + 0	Comb6	0.059	0	996.1	0
Story1	B48	97	IPE160	0.39 = 0.001 + 0.389 + 1.792E-04	Comb6	0.067	0	0	1138.31
Story1	B49	98	IPE180	0.182 = 0 + 0.182 + 0	Comb5	0.12	0	1242.07	2411.82
Story1	B50	99	IPE180	0.703 = 0.002 + 0.702 + 0	Comb6	0.193	0	3842.88	3874.26
Story1	B51	9A	IPE160	0.009 = 0.009 + 0 + 0	Comb6	0.002	0	32.25	32.25
Story1	B52	9B	IPE160	0.001 = 0.001 + 0.001 + 0	Comb6	0.001	0	13.71	13.72
Story1	B53	9C	IPE160	0.007 = 0 + 0.007 + 0	Comb4	0.002	0	29.96	29.96
Story1	B54	9D	IPE180	0.335 = 0 + 0.335 + 0	Comb5	0.154	0	1946.57	3097.3
Story1	B55	9E	IPE160	0.015 = 0.007 + 0.008 + 0	Comb6	0.002	0	32.16	32.16
Story1	B56	9F	IPE180	0.517 = 0.002 + 0.515 + 0	Comb6	0.146	0	2581.45	2943.97
Story1	B57	A0	IPE160	0.009 = 0 + 0.009 + 0	Comb4	0.002	0	32.12	32.12
Story1	B58	A1	IPE180	0.375 = 0.002 + 0.372 + 0.001	Comb6	0.135	0	0	2716.59
Story1	B59	A2	IPE160	0.001 = 2.322E-04 + 0.001 + 0	Comb6	0.001	0	0	13.44
Story1	B60	A3	IPE180	0.376 = 0.003 + 0.372 + 1.84E-04	Comb6	0.139	0	2794.32	0

Story1	B61	A4	IPE160	0.001 = 0.001 + 0.001 + 0	Comb6	0.001	0	11.36	11.36
Story1	B62	A5	IPE180	0.078 = 0.001 + 0.077 + 0	Comb6	0.056	0	1121.09	827.06
Story1	B63	A6	IPE160	0.009 = 0.001 + 0.007 + 0	Comb6	0.003	0	58.35	58.89
Story1	B64	A7	IPE180	0.568 = 0.002 + 0.566 + 0	Comb6	0.164	0	2676.28	3298.49
Story1	B65	A8	IPE180	0.302 = 0 + 0.302 + 0	Comb6	0.138	0	2268.11	2782.08
Story1	B66	A9	IPE180	0.053 = 0.002 + 0.051 + 0	Comb6	0.056	0	1129.76	962.85
Story1	B67	AA	IPE180	0.041 = 3.704E-04 + 0.041 + 0	Comb6	0.02	0	406.47	234.98
Story1	B68	AB	IPE180	0.002 = 0.002 + 4.991E-04 + 0	Comb6	0.001	0	14.31	14.37
Story1	B69	AC	IPE180	0.078 = 0 + 0.078 + 0	Comb6	0.026	0	0	531.9
Story1	B70	AD	IPE180	0.05 = 1.546E-04 + 0.05 + 1.125E-04	Comb6	0.056	0	1121.89	0
Story1	B71	AE	IPE180	0.017 = 0.001 + 0.016 + 0	Comb6	0.019	0	0	373.28
Story1	B72	AF	IPE180	0.078 = 0.001 + 0.077 + 2.721E-04	Comb6	0.022	0	446.93	0
Story1	B73	B0	IPE180	0.077 = 0 + 0.077 + 1.946E-04	Comb6	0.031	0	0	628.48
Story1	B74	B1	IPE180	0.04 = 0 + 0.039 + 4.101E-04	Comb6	0.027	0	541.05	0
Story1	B75	B2	IPE180	0.101 = 0 + 0.101 + 0	Comb6	0.041	0	0	819.5
Story1	B76	B3	IPE180	0.08 = 0 + 0.08 + 0	Comb6	0.042	0	696.75	844.56
Story1	B77	B4	IPE180	0.024 = 0 + 0.024 + 0	Comb6	0.016	0	172.78	314.18
Story1	B78	B5	IPE180	0.098 = 0 + 0.098 + 0	Comb6	0.046	0.001	726.07	920.87
Story1	B79	B6	IPE180	0.012 = 0 + 0.012 + 4.231E-04	Comb6	0.01	0	118.6	209.31
Story1	B80	B7	IPE180	0.002 = 2.523E-04 + 0.002 + 0	Comb6	0.003	0	41.24	65.3
Story1	B81	B8	IPE180	0.009 = 3.78E-04 + 0.008 + 0	Comb6	0.01	0	118.15	206.78
Story1	B82	B9	IPE180	0.05 = 0 + 0.05 + 0	Comb6	0.029	0	590.67	522.07
Story1	B83	BA	IPE180	0.037 = 0.001 + 0.036 + 3.629E-04	Comb6	0.019	0	384.93	0
Story1	B84	BB	IPE180	0.038 = 0.002 + 0.036 + 0.001	Comb6	0.026	0	0	532.59
Story1	B85	BC	IPE180	0.051 = 0 + 0.051 + 0	Comb6	0.023	0	470.96	255.08
Story1	B86	BD	IPE180	0.061 = 4.596E-04 + 0.061 + 0	Comb6	0.053	0	1063.6	1054.68
Story1	B87	BE	IPE180	0.006 = 0.001 + 0.005 + 0	Comb6	0.008	0	151.2	0
Story1	B88	BF	IPE160	0.016 = 1.897E-04 + 0.016 + 0	Comb6	0.008	0	0	130.8
Story1	B89	C0	IPE160	0.016 = 0 + 0.016 + 1.565E-04	Comb6	0.004	0	73.34	0
Story1	B90	C1	IPE160	0.001 = 2.509E-04 + 0.001 + 0	Comb6	0.001	0	11.27	0
Story1	B91	C2	IPE180	0.367 = 0.002 + 0.365 + 0	Comb6	0.141	0	2832.44	0
Story1	B92	C3	IPE180	0.349 = 0.002 + 0.347 + 1.586E-04	Comb6	0.129	0	0	2592.18
Story1	B93	C4	IPE180	0.001 = 0.001 + 0 + 0	Comb6	0.0002475	0	0	4.98
Story1	B94	C5	IPE180	0.077 = 0 + 0.077 + 0	Comb5	0.072	0	1068.9	1447.24
Story1	B95	C6	IPE180	0.032 = 0.001 + 0.031 + 0	Comb6	0.038	0	703.35	764.39
Story1	B96	C7	IPE160	0.009 = 0 + 0.009 + 0	Comb4	0.002	0	32.12	32.12
Story1	B97	C8	IPE180	0.706 = 0 + 0.706 + 0	Comb6	0.193	0	3532.82	3890.64
Story1	B98	C9	IPE180	0.032 = 2.586E-04 + 0.032 + 0	Comb6	0.024	0	486.21	440.38
Story1	B99	CA	IPE180	0.008 = 1.847E-04 + 0.007 + 0	Comb6	0.005	0	98.67	108.32
Story1	B100	CB	IPE160	0.009 = 0 + 0.009 + 0	Comb4	0.002	0	32.12	32.12
Story1	B101	CC	IPE180	0.067 = 2.689E-04 + 0.067 + 0	Comb6	0.061	0	1101.09	1234.26
Story1	B102	CD	IPE160	0.003 = 1.885E-04 + 0.003 + 0	Comb6	0.002	0	41.61	42.18
Story1	B103	CE	IPE180	0.693 = 0 + 0.693 + 0	Comb6	0.192	0	3565.66	3859.22
Story1	B104	CF	IPE160	0.009 = 0 + 0.009 + 0	Comb4	0.002	0	32.13	32.13
Story1	B105	D0	IPE180	0.714 = 0 + 0.714 + 0	Comb6	0.194	0	3906.41	3906.41
Story1	B106	D1	IPE180	0.714 = 0 + 0.714 + 0	Comb6	0.194	0	3906.27	3906.14
Story1	B107	D2	IPE180	0.714 = 0 + 0.714 + 0	Comb6	0.194	0	3906.55	3906.55
Story1	B108	D3	IPE180	0.139 = 0 + 0.139 + 0	Comb6	0.067	0	1349.59	1222.58
Story1	B109	D4	IPE180	0.008 = 3.648E-04 + 0.008 + 0	Comb6	0.007	0	145.13	83.6
Story1	B110	D5	IPE160	0.009 = 0 + 0.009 + 0	Comb4	0.002	0	32.12	32.12
Story1	B111	D6	IPE160	0.009 = 0 + 0.009 + 0	Comb4	0.002	0	32.12	32.12
Story1	B112	D7	IPE180	0.486 = 0 + 0.486 + 0	Comb6	0.132	0	2659.65	2659.65
Story1	B113	D8	IPE160	0.001 = 1.049E-04 + 0.001 + 0	Comb6	0.001	0	10.91	10.91
Story1	B114	D9	IPE180	0.048 = 2.952E-04 + 0.048 + 1.926E-04	Comb6	0.02	0	236.65	407.39
Story1	B115	DA	IPE180	0.182 = 0 + 0.182 + 0	Comb6	0.077	0	0	1192.69
Story1	B116	DB	IPE180	0.149 = 0.001 + 0.149 + 1.005E-04	Comb6	0.071	0	0	0
Story1	B117	DC	IPE180	0.714 = 0 + 0.714 + 0	Comb6	0.194	0	3906.47	3906.44
Story1	B118	DD	IPE160	0.293 = 1.08E-04 + 0.292 + 3.758E-04	Comb6	0.045	0	753.55	0
Story1	B119	DE	IPE160	0.293 = 0.001 + 0.292 + 1.432E-04	Comb6	0.051	0	0	856.18
Story1	B120	DF	IPE180	0.309 = 0 + 0.309 + 0	Comb6	0.167	0	2321.39	3357.9

Story1	B121	E0	IPE180	0.136 = 0.002 + 0.132 + 0.001	Comb6	0.103	0	2077.06	1747.16
Story1	B122	E1	IPE160	0.001 = 0.001 + 2.485E-04 + 0	Comb6	0.0004201	0	0	7.09
Story1	B123	E2	IPE180	0.017 = 0.001 + 0.016 + 2.328E-04	Comb6	0.013	0	253.13	0
Story1	B124	E3	IPE180	0.017 = 0.001 + 0.016 + 3.235E-04	Comb6	0.007	0	0	144.17
Story1	B125	E4	IPE160	0.009 = 0 + 0.009 + 0	Comb4	0.002	0	32.12	32.12
Story1	B126	E5	IPE160	0.009 = 0 + 0.009 + 0	Comb4	0.002	0	32.12	32.12
Story1	B127	E6	IPE180	0.019 = 0 + 0.019 + 0	Comb6	0.013	0	257.81	143.48
Story1	B128	E7	IPE180	0.058 = 1.28E-04 + 0.058 + 0	Comb6	0.048	0	0	782.2
Story1	B129	E8	IPE160	0.184 = 0.001 + 0.183 + 0	Comb6	0.029	0	486.7	0
Story1	B130	E9	IPE160	0.184 = 4.116E-04 + 0.183 + 0	Comb6	0.032	0	0	533.2
Story1	B131	EA	IPE160	0.419 = 1.686E-04 + 0.419 + 0	Comb6	0.069	0	1171.56	0
Story1	B132	EB	IPE160	0.419 = 0 + 0.419 + 0	Comb6	0.066	0	0	1117.19
Story1	B133	EC	IPE180	0.486 = 0 + 0.486 + 0	Comb6	0.132	0	2660.45	2660.43
Story1	B134	ED	IPE180	0.486 = 0 + 0.486 + 0	Comb6	0.132	0	2660.05	2660.08
Story1	B135	EE	IPE180	0.007 = 0.001 + 0.007 + 0	Comb6	0.006	0	119.73	70.53
Story1	B136	EF	IPE180	0.375 = 0 + 0.374 + 0.001	Comb6	0.111	0.001	0	1993.64
Story1	B137	F0	IPE180	0.008 = 1.997E-04 + 0.008 + 0	Comb6	0.016	0	313.12	313.44
Story1	B138	F1	IPE180	0.08 = 0 + 0.08 + 0	Comb6	0.049	0.001	991.18	902.72
Story1	B139	F2	IPE180	0.007 = 0.001 + 0.005 + 0	Comb6	0.005	0	97.4	58.92
Story1	B140	F3	IPE180	0.046 = 0 + 0.046 + 0	Comb6	0.029	0	532.05	592.26
Story1	B141	F4	IPE160	0.008 = 0 + 0.008 + 0	Comb6	0.009	0	148.32	136.01
Story1	B142	F5	IPE180	0.011 = 0.001 + 0.009 + 0.001	Comb6	0.018	0.0002681	84.12	360.91
Story1	B143	F6	IPE180	0.002 = 0.001 + 0.002 + 0	Comb6	0.001	0	28.36	22.41
Story1	B144	F7	IPE180	0.003 = 0.001 + 0.002 + 0	Comb6	0.002	0	36.36	26.52
Story1	B145	F8	IPE180	0.029 = 1.347E-04 + 0.028 + 1.175E-04	Comb6	0.033	0.000337	661.82	504.73
Story1	B146	F9	IPE180	0.004 = 1.995E-04 + 0.004 + 0	Comb6	0.004	0	78.38	45.63
Story1	B147	FA	IPE180	0.027 = 0 + 0.027 + 0	Comb6	0.015	0	306.43	169.44
Story1	B148	FB	IPE180	0.01 = 1.181E-04 + 0.01 + 0	Comb6	0.01	0	191.75	107.81
Story1	B149	FC	IPE180	0.028 = 2.654E-04 + 0.028 + 0	Comb6	0.011	0	0	220.3
Story1	B150	FD	IPE180	0.023 = 2.293E-04 + 0.023 + 0	Comb6	0.02	0	411.85	0
Story1	B151	FE	IPE160	0.002 = 1.77E-04 + 0.002 + 0	Comb6	0.002	0	30.39	27.13
Story1	B152	FF	IPE180	0.098 = 0 + 0.098 + 0	Comb6	0.058	0	1159.93	1164.34
Story1	B153	100	IPE160	0.009 = 2.431E-04 + 0.009 + 0	Comb6	0.005	0	82.74	71.96
Story1	B154	101	IPE180	0.06 = 0 + 0.06 + 0	Comb6	0.036	0	719.72	726.36
Story1	B155	102	IPE160	0.019 = 2.486E-04 + 0.019 + 1.42E-04	Comb6	0.017	0	294.34	250.11
Story1	B156	103	IPE180	0.004 = 0 + 0.004 + 0	Comb6	0.003	0	41.37	60.83
Story1	B157	104	IPE160	0.023 = 3.122E-04 + 0.023 + 0	Comb6	0.025	0	261.4	424.12
Story1	B158	105	IPE180	0.096 = 0 + 0.096 + 0	Comb6	0.059	0	1180.6	1000.26
Story1	B159	106	IPE160	0.061 = 1.774E-04 + 0.061 + 0	Comb6	0.033	0	369.36	549.42
Story1	B160	107	IPE180	0.099 = 0 + 0.099 + 0	Comb6	0.056	0	1038.12	1129.77
Story1	B161	108	IPE160	0.016 = 1.39E-04 + 0.015 + 0	Comb6	0.015	0	216.67	259.55
Story1	B162	109	IPE180	0.073 = 0.001 + 0.072 + 0	Comb6	0.047	0	951.96	0
Story1	B163	10A	IPE180	0.073 = 0.001 + 0.072 + 0	Comb6	0.041	0	0	819.37
Story1	B164	10B	IPE180	3.461E-04 = 2.05E-04 + 0 + 0	Comb6	0.004	0	0	83.35
Story1	B165	10C	IPE180	0.009 = 0.001 + 0.009 + 0	Comb6	0.008	0	98.47	170.78
Story1	B166	10D	IPE180	0.019 = 0.001 + 0.018 + 0	Comb6	0.027	0	442.03	544.15
Story1	B167	10E	IPE180	0.705 = 0 + 0.705 + 0	Comb6	0.192	0	3858.21	3858.14
Story1	B168	10F	IPE180	0.705 = 0 + 0.705 + 0	Comb6	0.192	0	3858.11	3858.15
Story1	B169	110	IPE180	0.707 = 0 + 0.707 + 0	Comb6	0.193	0	3867.12	3875.27
Story1	B170	111	IPE180	0.02 = 3.496E-04 + 0.02 + 0	Comb6	0.036	0	718.78	604.67
Story1	B171	112	IPE160	0.001 = 1.64E-04 + 0.001 + 0	Comb6	0.001	0	10.9	10.9
Story1	B172	113	IPE180	0.477 = 0 + 0.477 + 0	Comb6	0.13	0	2611.71	2611.71
Story1	B173	114	IPE160	0.008 = 0 + 0.008 + 0	Comb4	0.002	0	31.3	31.3
Story1	B174	115	IPE160	0.272 = 0.001 + 0.271 + 0	Comb6	0.044	0	742.53	0
Story1	B175	116	IPE160	0.271 = 4.124E-04 + 0.271 + 0	Comb6	0.044	0	0	746.66
Story1	B176	117	IPE160	0.001 = 1.683E-04 + 0.001 + 0	Comb6	0.001	0	10.21	0
Story1	B177	118	IPE180	0.003 = 2.337E-04 + 0.002 + 0.001	Comb6	0.006	0.0002225	123.19	0
Story1	B178	119	IPE180	0.004 = 2.524E-04 + 0.004 + 0.001	Comb6	0.005	0	0	95.62
Story1	B179	11A	IPE180	0.005 = 3.351E-04 + 0.004 + 0.001	Comb6	0.004	0.000195	86.89	0
Story1	B180	11B	IPE160	0.008 = 0 + 0.008 + 0	Comb4	0.002	0	31.3	31.3

Story1	B181	11C	IPE160	0.009 = 0 + 0.009 + 0	Comb4	0.002	0	32.12	32.12
Story1	B182	11D	IPE180	0.613 = 0 + 0.613 + 0	Comb6	0.163	0	3146.52	3286.16
Story1	B183	11E	IPE160	0.001 = 0 + 0.001 + 0	Comb4	0.001	0	10.9	10.9
Story1	B184	11F	IPE160	0.008 = 0 + 0.008 + 0	Comb4	0.002	0	31.3	31.3
Story1	B185	120	IPE160	0.009 = 0 + 0.009 + 0	Comb4	0.002	0	32.13	32.13
Story1	B186	121	IPE180	0.497 = 0 + 0.497 + 0	Comb6	0.139	0	2796.51	2648.29
Story1	B187	122	IPE160	0.001 = 3.53E-04 + 3.032E-04 + 0	Comb6	0.000464	0	7.83	7.83
Story1	B188	123	IPE160	0.001 = 3.656E-04 + 0.001 + 0	Comb6	0.001	0	10.91	10.91
Story1	B189	124	IPE160	0.008 = 0 + 0.008 + 0	Comb4	0.002	0	31.3	31.3
Story1	B190	125	IPE160	0.017 = 0 + 0.017 + 0	Comb6	0.003	0	57.44	57.82
Story1	B191	126	IPE180	0.466 = 0 + 0.466 + 0	Comb6	0.128	0	2566.56	2561.66
Story1	B192	127	IPE180	0.477 = 0 + 0.477 + 0	Comb6	0.13	0	2611.71	2611.71
Story1	B193	128	IPE180	0.477 = 0 + 0.477 + 0	Comb6	0.13	0	2611.71	2611.71
Story1	B194	129	IPE180	0.022 = 0 + 0.022 + 0	Comb6	0.033	0	661.86	578.56
Story1	B195	12A	IPE160	0.006 = 1.559E-04 + 0.006 + 0	Comb6	0.006	0	93.87	93.9
Story1	B196	12B	IPE160	0.004 = 2.06E-04 + 0.004 + 0	Comb6	0.004	0	72.02	67.57
Story1	B197	12C	IPE160	0.015 = 1.906E-04 + 0.015 + 0	Comb6	0.008	0	133.42	120.63
Story1	B198	12D	IPE160	0.046 = 1.448E-04 + 0.046 + 0	Comb6	0.019	0	327.86	288.98
Story1	B199	12E	IPE160	0.026 = 1.728E-04 + 0.026 + 0	Comb6	0.017	0	288.68	281.12
Story1	B200	12F	IPE160	0.002 = 1.736E-04 + 0.002 + 0	Comb6	0.001	0	25.29	25.22
Story1	B201	130	IPE160	0.005 = 1.033E-04 + 0.005 + 0	Comb6	0.006	0	99.81	95.89
Story1	B202	131	IPE180	0.026 = 2.664E-04 + 0.025 + 0	Comb6	0.036	0	0	725.4
Story1	B203	132	IPE180	0.078 = 0 + 0.078 + 0	Comb6	0.047	0	952.54	954.52
Story1	B204	133	IPE180	0.272 = 0 + 0.272 + 0	Comb6	0.07	0	1415.69	1327.46
Story1	B205	134	IPE160	0.001 = 0 + 0.001 + 0	Comb4	0.001	0	10.31	10.31
Story1	B206	135	IPE180	0.037 = 2.075E-04 + 0.037 + 0	Comb6	0.041	0	820.51	809.9
Story1	B207	136	IPE180	0.013 = 2.772E-04 + 0.012 + 0	Comb6	0.023	0	456.66	453.09
Story1	B208	137	IPE180	0.021 = 4.948E-04 + 0.021 + 0	Comb6	0.025	0	500.32	0
Story1	B209	138	IPE160	0.016 = 0 + 0.016 + 0	Comb6	0.014	0	236.46	195.28
Story1	B210	139	IPE180	0.087 = 0 + 0.087 + 0	Comb5	0.049	0	826.74	989.37
Story1	B211	13A	IPE160	0.025 = 1.208E-04 + 0.024 + 0.002	Comb6	0.013	0.0003214	220.94	21.75
Story1	B212	13B	IPE160	0.002 = 0 + 0.002 + 0	Comb4	0.001	0	0	0
Story1	B213	13C	IPE180	0.005 = 0.001 + 0.004 + 0	Comb6	0.005	0	69.85	95.94
Story1	B214	13D	IPE180	0.008 = 0 + 0.008 + 0	Comb6	0.012	0	154.54	235.3
Story1	B215	13E	IPE180	0.004 = 1.037E-04 + 0.004 + 1.026E-04	Comb6	0.014	0	278.34	272.9
Story1	B216	13F	IPE180	0.031 = 3.461E-04 + 0.031 + 0	Comb6	0.036	0	713.01	729.47
Story1	B217	140	IPE180	0.069 = 0.001 + 0.068 + 0	Comb6	0.058	0	1136	1171.46
Story1	B218	141	IPE160	0.007 = 0 + 0.007 + 0	Comb4	0.002	0	29.56	29.56
Story1	B219	142	IPE160	0.009 = 0 + 0.009 + 0	Comb6	0.003	0	49.12	48.84
Story1	B220	143	IPE180	0.026 = 3.244E-04 + 0.026 + 0	Comb6	0.023	0	454.92	234.87
Story1	B221	144	IPE180	0.026 = 0 + 0.026 + 0	Comb6	0.016	0	331.25	181.86
Story1	B222	145	IPE180	0.335 = 0 + 0.335 + 0	Comb6	0.103	0	2080.98	1964.1
Story1	B223	146	IPE180	0.889 = 0 + 0.889 + 0	Comb6	0.202	0	0	4069.03
Story1	B224	147	IPE180	0.194 = 0.003 + 0.19 + 0	Comb6	0.192	0	3871.01	0
Story1	B225	148	IPE180	0.004 = 4.977E-04 + 0.004 + 0	Comb6	0.005	0	56.17	91.48
Story1	B226	149	IPE160	0.003 = 2.301E-04 + 0.003 + 0	Comb6	0.001	0	23.99	0
Story1	B227	14A	IPE160	0.071 = 1.322E-04 + 0.07 + 1.735E-04	Comb6	0.01	0	0	0
Story1	B228	14B	IPE160	0.071 = 1.679E-04 + 0.071 + 2.497E-04	Comb6	0.019	0	0	327.94
Story1	B229	14C	IPE180	0.013 = 3.559E-04 + 0.013 + 0	Comb6	0.02	0	364.62	0
Story1	B230	14D	IPE180	0.007 = 1.143E-04 + 0.007 + 0	Comb6	0.005	0	60.62	98.84
Story1	B231	14E	IPE180	0.021 = 0 + 0.021 + 0	Comb6	0.014	0	162.19	286.29
Story1	B232	14F	IPE180	0.11 = 0 + 0.11 + 0	Comb6	0.05	0	980.82	1000.24
Story1	B233	150	IPE160	0.004 = 0 + 0.004 + 0	Comb6	0.005	0	45.36	76.97
Story1	B234	151	IPE180	0.047 = 0 + 0.047 + 0	Comb6	0.02	0	405.7	226.5
Story1	B235	152	IPE180	0.22 = 0 + 0.22 + 0	Comb6	0.095	0	1920.11	1731.96
Story1	B236	153	IPE180	0.011 = 0 + 0.011 + 0	Comb6	0.018	0.001	356.98	341.89
Story1	B237	154	IPE160	0.003 = 0 + 0.003 + 0	Comb6	0.001	0	25.24	25.24
Story1	B238	155	IPE180	0.042 = 0 + 0.042 + 0	Comb6	0.029	0	593.33	523.76
Story1	B239	156	IPE180	0.3 = 0.002 + 0.298 + 0	Comb6	0.082	0	0	1646.67
Story1	B240	157	IPE180	0.3 = 0.002 + 0.298 + 0	Comb6	0.082	0	1646.46	0

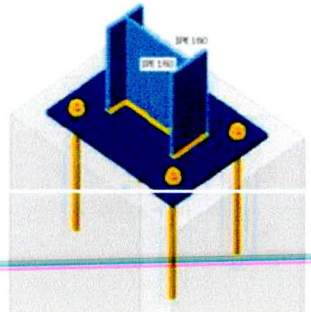
Story1	B241	158	IPE160	0.003 = 0 + 0.002 + 0	Comb6	0.001	0	21.46	19.53
Story1	B242	159	IPE180	0.299 = 0.002 + 0.298 + 0	Comb6	0.082	0	1645.16	0
Story1	B243	15A	IPE180	0.299 = 0.002 + 0.298 + 0	Comb6	0.082	0	0	1645.32
Story1	B244	15B	IPE160	0.004 = 1.573E-04 + 0.003 + 0	Comb6	0.002	0	0	0
Story1	B732	692	IPE180	0.137 = 0.009 + 0.127 + 0.001	Comb6	0.066	0	0	1321.86
Story1	B456	732	IPE180	0.008 = 0.001 + 0.005 + 0.002	Comb6	0.013	0.0002296	252.11	106.66
Story1	B43	6C	IPE180	0.002 = 0 + 0.002 + 0	Comb4	0.001	0	22.35	0

Diseño de conexiones metálicas

1. Placa base IPE180

Elementos estructurales

Nombre	Sección transversal	β – Dirección [°]	γ - Inclinación [°]	α - Rotación [°]	Desplazamiento ex [mm]	Desplazamiento ey [mm]	Desplazamiento ez [mm]	Fuerza en
IPE180	1 - CON1(IPE180)	0.0	-90.0	0.0	0	0	0	Nodo



Secciones

Nombre	Material
1 - CON1(IPE180)	A572 Gr.50

Anclajes

Nombre	Conjunto de tornillo	Diámetro [mm]	fu [MPa]	Área bruta [mm²]
1/2 A325	1/2 A325	13	827.4	127

Nombre	Elemento	N [kN]	Vy [kN]	Vz [kN]	Mx [kNm]	My [kNm]	Mz [kNm]
LE1	IPE180	-77.7	0.0	1.0	0.0	0.0	0.0

Verificación

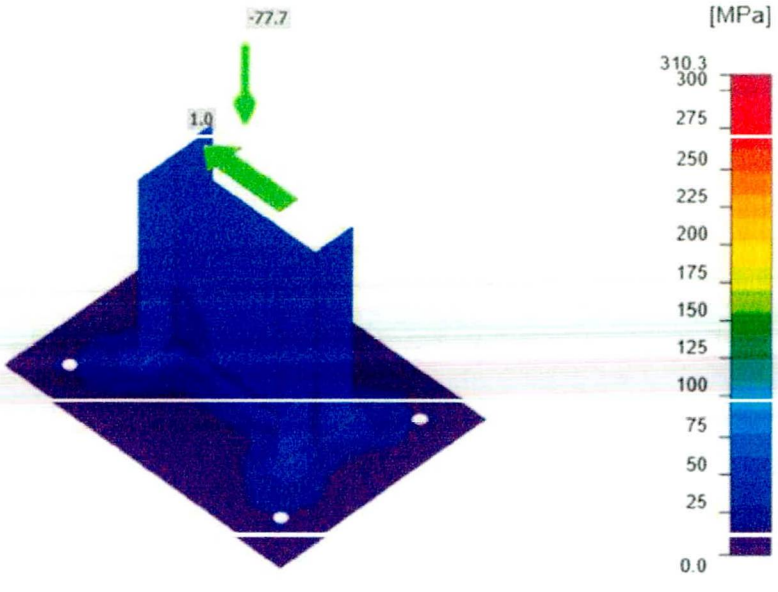
Resumen

Nombre	Valor	Estado de la verificación
Análisis	100.0%	OK
Placas	0.0 < 5.0%	OK
Anclajes	4.4 < 100%	OK
Soldaduras	32.2 < 100%	OK
Bloque de hormigón	8.9 < 100%	OK
Cortante	4.8 < 100%	OK
Pandeo	No calculado	

Placas

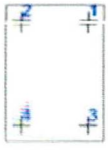
Nombre	f_y [MPa]	Espesor [mm]	Cargas	σ_{Ed} [MPa]	ε_{Pl} [%]	σc_{Ed} [MPa]	Estado de la verificación
IPE180-bfl 1	344.7	8.0	LE1	53.0	0.0	0.0	OK
IPE180-tfl 1	344.7	8.0	LE1	53.6	0.0	0.0	OK
IPE180-w 1	344.7	5.3	LE1	39.6	0.0	0.0	OK
BP1	344.7	10.0	LE1	47.5	0.0	0.0	OK

Verificación de deformación. LE1



Tensión equivalente. LE1

Anclajes

Forma	Ítem	Cargas	N_f [kN]	V [kN]	ϕN_{cbg} [kN]	ϕV_{cp} [kN]	Ut_t [%]	Ut_s [%]	Ut_{ts} [%]	Estado
	A1	LE1	0.6	0.0	51.8	98.9	4.4	0.0	0.5	OK
	A2	LE1	0.6	0.0	51.8	98.9	4.4	0.0	0.5	OK
	A3	LE1	0.6	0.0	51.8	98.9	4.4	0.0	0.5	OK
	A4	LE1	0.6	0.0	51.8	98.9	4.4	0.0	0.5	OK

Datos de diseño

Calidad	ϕN_{sa} [kN]	ϕV_{sa} [kN]
1/2 A325 - 1	53.1	29.6

Weld sections

Ítem	Borde	Xu	T_h [mm]	L_s [mm]	L [mm]	L_c [mm]	Cargas	F_n [kN]	ϕR_n [kN]	Ut [%]	Estado
BP1	IPE180-bfl 1	E70xx	◢2.8◣	◢4.0◣	91	23	LE1	6.3	19.5	32.1	OK
		E70xx	◢2.8◣	◢4.0◣	91	23	LE1	6.2	19.8	31.3	OK
BP1	IPE180-tfl 1	E70xx	◢2.8◣	◢4.0◣	91	23	LE1	6.3	19.8	31.6	OK
		E70xx	◢2.8◣	◢4.0◣	91	23	LE1	6.3	19.5	32.2	OK
BP1	IPE180-w 1	E70xx	◢2.8◣	◢4.0◣	171	21	LE1	2.5	19.7	12.7	OK
		E70xx	◢2.8◣	◢4.0◣	171	21	LE1	2.5	19.7	12.7	OK

Explicación del símbolo

T_h	Espesor de garganta de soldadura
L_s	Tamaño de la soldadura
L	Longitud de la soldadura
L_c	Longitud del elemento crítico de la soldadura
F_n	Fuerza en el elemento crítico de la soldadura
ϕR_n	Resistencia de la soldadura, AISC 360-10 J2.4
Ut	Utilización

Bloque de hormigón

Ítem	Cargas	A_1 [mm2]	A_2 [mm2]	σ [MPa]	Ut [%]	Estado
CB 1	LE1	55092	115238	1.5	8.9	OK

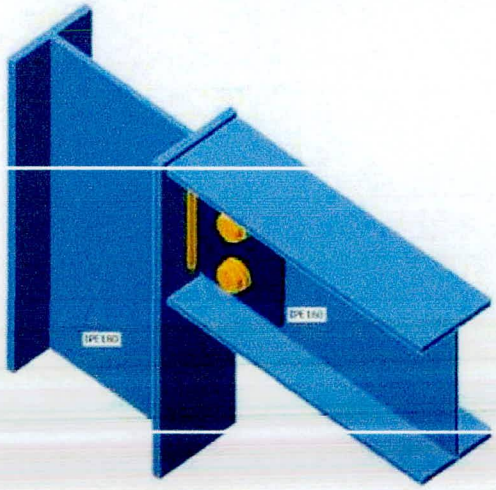
Explicación del símbolo

A_1	Área cargada
A_2	Área de soporte
σ	Tensión media en el hormigón
Ut	Utilización

Cortante en el plano de contacto

Ítem	Cargas	V [kN]	ϕV_r [kN]	μ [-]	Ut [%]	Estado
BP1	LE1	1.0	21.0	0.40	4.8	OK

2. IPE160 A IPE180





Secciones

Nombre	Material
2 - IPE180	A572 Gr.50
3 - IPE160	A572 Gr.50

Tornillos

Nombre	Conjunto de tornillo	Diámetro [mm]	fu [MPa]	Área bruta [mm²]
1/2 A325	1/2 A325	13	827.4	127

Nombre	Elemento	N [kN]	Vy [kN]	Vz [kN]	Mx [kNm]	My [kNm]	Mz [kNm]
LE1	IPE160	0.0	0.0	-37.8	0.0	0.0	0.0

Verificación

Resumen

Nombre	Valor	Estado de la verificación
Análisis	100.0%	OK
Placas	0.0 < 5.0%	OK
Tornillos	53.5 < 100%	OK
Soldaduras	75.9 < 100%	OK
Pandeo	No calculado	

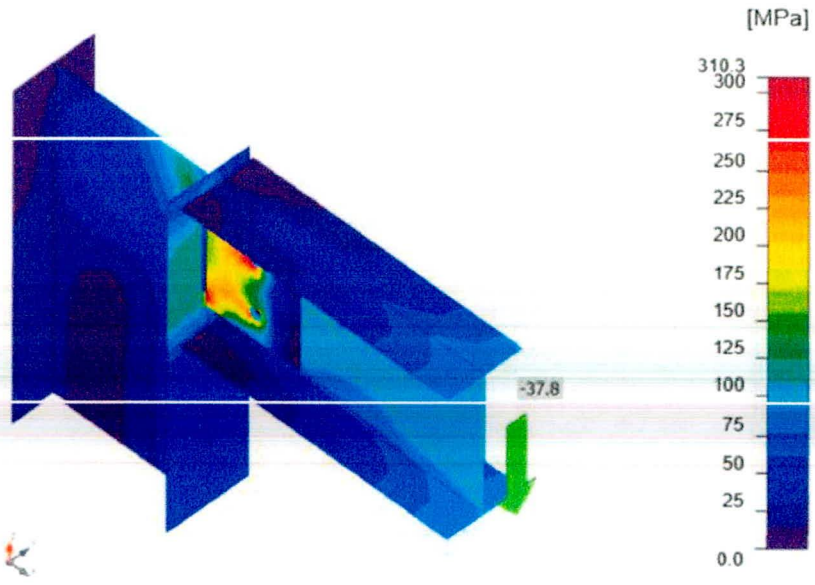
Placas

Nombre	f_y [MPa]	Espesor [mm]	Cargas	σ_{Ed} [MPa]	ε_{Pl} [%]	σc_{Ed} [MPa]	Estado de la verificación
IPE180-bfl 1	344.7	8.0	LE1	24.5	0.0	0.0	OK
IPE180-tfl 1	344.7	8.0	LE1	129.6	0.0	0.0	OK
IPE180-w 1	344.7	5.3	LE1	153.4	0.0	0.0	OK
IPE160-bfl 1	344.7	7.4	LE1	88.7	0.0	0.0	OK
IPE160-tfl 1	344.7	7.4	LE1	88.0	0.0	0.0	OK
IPE160-w 1	344.7	5.0	LE1	280.8	0.0	25.0	OK
FP2	344.7	6.0	LE1	307.3	0.0	25.1	OK

Datos de diseño

Material	f_y [MPa]	ε_{lim} [%]
A572 Gr.50	344.7	5.0

Verificación de deformación. LE1



Tensión equivalente. LE1

Tornillos

Forma	Ítem	Calidad	Cargas	F_t [kN]	V [kN]	$\Phi R_{n,portante}$ [kN]	Ut_t [%]	Ut_s [%]	Ut_{ts} [%]	Estado
1	B1	1/2 A325 - 1	LE1	6.0	18.8	51.2	10.2	53.3	-	OK
2	B2	1/2 A325 - 1	LE1	1.3	18.9	51.2	2.3	53.5	-	OK

Datos de diseño

Calidad	$\Phi R_{n,tracción}$ [kN]	$\Phi R_{n,cortante}$ [kN]
1/2 A325 - 1	58.9	35.3

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Weld sections

Ítem	Borde	Xu	T_h [mm]	L_s [mm]	L [mm]	L_c [mm]	Cargas	F_n [kN]	ϕR_n [kN]	Ut [%]	Estado
IPE180-tfl 1	FP2	E70xx	◢2.8◣	◢4.0◣	119	10	LE1	6.9	9.1	75.9	OK
		E70xx	◢2.8◣	◢4.0◣	119	10	LE1	6.2	8.3	75.2	OK

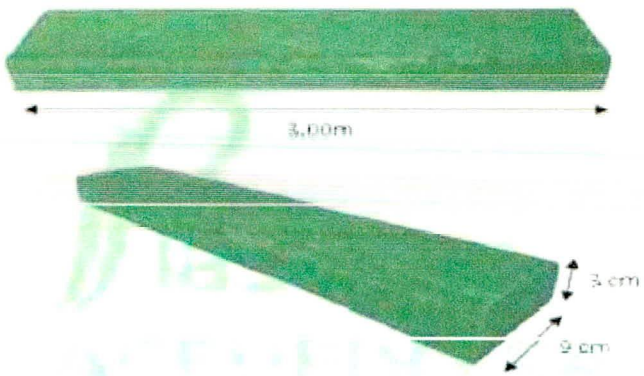
Explicación del símbolo

T_h	Espesor de garganta de soldadura
L_s	Tamaño de la soldadura
L	Longitud de la soldadura
L_c	Longitud del elemento crítico de la soldadura
F_n	Fuerza en el elemento crítico de la soldadura
ϕR_n	Resistencia de la soldadura, AISC 360-10 J2.4
Ut	Utilización

PISO SENDEROS

FICHA TÉCNICA VARETA PLÁSTICA

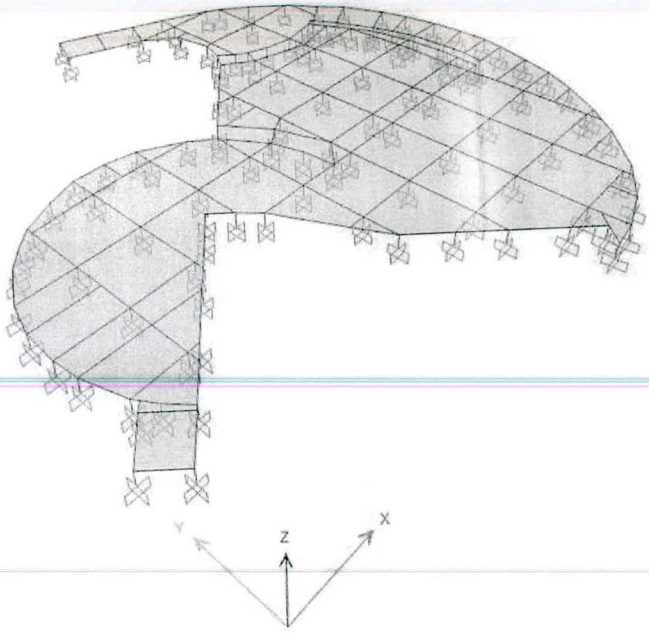
Codigo	3.3	VARETA MADERA PLÁSTICA



ESPECIFICACIONES						
REFERENCIA						FECHA
Vareta	Ancho		Largo		Espesor	27 de marzo de 2021
	9 cm	x	3,00m	x	3 cm	MATERIAL
BENEFICIOS						Polietileno y Polipropileno
- Material anti corrosivo - Se puede clavar, apuntillar, atornillar, grapar, etc. - No requiere aislantes para usos electricos. - Sustituye el uso de otros materiales como el metal o madera. - No requiere mantenimiento. - Repele la humedad. - Resistente a la intemperie, bajo cualquier condición meteorológica.						PESO: 7 kg CAPACIDAD: 400 Kilos Aprox. VIDA ÚTIL: 15-20 AÑOS PLÁSTICOS ACEVEDO S.A.S

Anexos

ETABS®



Plazoleta

Model File: SalaIntroducción, Revision 0
10/12/2024

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1 Structure Data

This chapter provides model geometry information, including items such as story levels, point coordinates, and element connectivity.

1.1 Story Data

Table 1.1 - Story Definitions

Tower	Name	Height m	Master Story	Similar To	Splice Story	Splice Height m	Color
T1	Story1	0.5	Yes	None	No		Green

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2 Properties

This chapter provides property information for materials, frame sections, shell sections, and links.

2.1 Materials

Table 2.1 - Material Properties - General

Material	Type	SymType	Grade	Color	Notes
3000Psi	Concrete	Isotropic	f'c 3000 psi	Magenta	
4000Psi	Concrete	Isotropic	f'c 4000 psi	Magenta	
A416Gr270	Tendon	Uniaxial	Grade 270	Gray8Dark	
A500GrB46	Steel	Isotropic	Grade B, Fy 46 (HSS Rect.)	Blue	
A572Gr50	Steel	Isotropic	Grade 50	Gray8Dark	
A615Gr60	Rebar	Uniaxial	Grade 60	Yellow	
A992Fy50	Steel	Isotropic	Grade 50	Red	

2.2 Frame Sections

Table 2.2 - Frame Section Property Definitions - Summary (Part 1 of 4)

Name	Material	Shape	Color	Area m2	J m4	I33 m4	I22 m4	I23 m4	IMajor m4
Cajor100x150x2.5	A500GrB46	Steel Tube	16744448	0.0012	4E-06	4E-06	2E-06		
IPE160	A572Gr50	Steel I/Wide Flange	65408	0.002	3.54E-08	9E-06	1E-06		
IPE180	A572Gr50	Steel I/Wide Flange	Magenta	0.0024	4.73E-08	1.3E-05	1E-06		
IPE200	A572Gr50	Steel I/Wide Flange	Blue	0.0029	6.92E-08	1.9E-05	1E-06		
IPE220	A572Gr50	Steel I/Wide Flange	Cyan	0.0033	9.03E-08	2.8E-05	2E-06		
IPE240	A572Gr50	Steel I/Wide Flange	Red	0.0039	1.3E-07	3.9E-05	3E-06		
IPE270	A572Gr50	Steel I/Wide Flange	Magenta	0.0046	1.59E-07	5.8E-05	4E-06		
IPE300	A572Gr50	Steel I/Wide Flange	Yellow	0.0054	1.99E-07	8.4E-05	6E-06		
IPE330	A572Gr50	Steel I/Wide Flange	Gray8Dark	0.0063	2.81E-07	0.000118	8E-06		
IPE360	A572Gr50	Steel I/Wide Flange	Blue	0.0073	3.74E-07	0.000163	1E-05		
IPE400	A572Gr50	Steel I/Wide Flange	Green	0.0085	1E-06	0.000231	1.3E-05		
PHR120x60x2.5	A500GrB46	Steel Channel	Yellow	0.0006	1.205E-09	1E-06	2.115E-07		
PHR150x75x2.5	A500GrB46	Steel Channel	16744576	0.0007	1.517E-09	3E-06	4.182E-07		

Table 2.2 - Frame Section Property Definitions - Summary (Part 2 of 4)

Name	IMinor m4	MajorAngle deg	As2 m2	As3 m2	S33Pos m3	S33Neg m3	S22Pos m3	S22Neg m3	Z33 m3	Z22 m3
Cajor100x150x2.5			0.0007	0.0005	5.2E-05	5.2E-05	4.2E-05	4.2E-05	6.2E-05	4.7E-05
IPE160			0.0008	0.001	0.000109	0.000109	1.7E-05	1.7E-05	0.000124	2.6E-05
IPE180			0.001	0.0012	0.000146	0.000146	2.2E-05	2.2E-05	0.000166	3.5E-05
IPE200			0.0011	0.0014	0.000194	0.000194	2.8E-05	2.8E-05	0.000221	4.5E-05
IPE220			0.0013	0.0017	0.000252	0.000252	3.7E-05	3.7E-05	0.000285	5.8E-05
IPE240			0.0015	0.002	0.000324	0.000324	4.7E-05	4.7E-05	0.000367	7.4E-05
IPE270			0.0018	0.0023	0.000429	0.000429	6.2E-05	6.2E-05	0.000484	9.7E-05
IPE300			0.0021	0.0027	0.000557	0.000557	8.1E-05	8.1E-05	0.000628	0.000125
IPE330			0.0025	0.0031	0.000713	0.000713	9.9E-05	9.9E-05	0.000804	0.000154
IPE360			0.0029	0.0036	0.000904	0.000904	0.000123	0.000123	0.001019	0.000191
IPE400			0.0034	0.0041	0.001157	0.001157	0.000146	0.000146	0.001307	0.000229
PHR120x60x2.5			0.0003	0.0003	2.3E-05	2.3E-05	1.3E-05	5E-06	2.6E-05	9E-06
PHR150x75x2.5			0.0004	0.0003	3.6E-05	3.6E-05	2.1E-05	8E-06	4.1E-05	1.4E-05

Table 2.2 - Frame Section Property Definitions - Summary (Part 3 of 4)

1352

Name	R33 m	R22 m	Cw m6	Fillet Radius m	CG Offset 3 m	CG Offset 2 m	PNA Offset 3 m	PNA Offset 2 m	SC Offset 3 m	SC Offset 2 m	Area Modifier
Cajor100x150x2.5	0.05679	0.04168		0.005	0	0	0	0			1
IPE160	0.06575	0.01843	3.959E-09	0.009	0	0	0	0			1
IPE180	0.07423	0.02056	7.431E-09	0.009	0	0	0	0			1
IPE200	0.08257	0.02232	1.299E-08	0.012	0	0	0	0			1
IPE220	0.0911	0.02477	2.267E-08	0.012	0	0	0	0			1
IPE240	0.09977	0.02695	3.739E-08	0.015	0	0	0	0			1
IPE270	0.11231	0.03025	7.058E-08	0.015	0	0	0	0			1
IPE300	0.12463	0.03351	1.259E-07	0.015	0	0	0	0			1
IPE330	0.13712	0.03548	1.991E-07	0.018	0	0	0	0			1
IPE360	0.1496	0.03788	3.136E-07	0.018	0	0	0	0			1
IPE400	0.16545	0.03949	4.9E-07	0.021	0	0	0	0			1
PHR120x60x2.5	0.04798	0.01897	5.106E-10		0.01407	0	0.02755	0	0.05078	0	1
PHR150x75x2.5	0.06023	0.02381	1.591E-09		0.01782	0	0.03504	0	0.06391	0	1

Table 2.2 - Frame Section Property Definitions - Summary (Part 4 of 4)

Name	As2 Modifier	As3 Modifier	J Modifier	I33 Modifier	I22 Modifier	Mass Modifier	Weight Modifier
Cajor100x150x2.5	1	1	1	1	1	1	1
IPE160	1	1	1	1	1	1	1
IPE180	1	1	1	1	1	1	1
IPE200	1	1	1	1	1	1	1
IPE220	1	1	1	1	1	1	1
IPE240	1	1	1	1	1	1	1
IPE270	1	1	1	1	1	1	1
IPE300	1	1	1	1	1	1	1
IPE330	1	1	1	1	1	1	1
IPE360	1	1	1	1	1	1	1
IPE400	1	1	1	1	1	1	1
PHR120x60x2.5	1	1	1	1	1	1	1
PHR150x75x2.5	1	1	1	1	1	1	1

2.3 Shell Sections

Table 2.3 - Area Section Property Definitions - Summary

Name	Type	Element Type	Material	Total Thickness m	Deck Material	Deck Depth m
DeckMadera	Deck	Membrane	3000Psi	0.01667		
Maderaplastica	Slab	Membrane	3000Psi	0.01667		
Plank1	Slab	Membrane	4000Psi	0.2		
Teja	Deck	Membrane	3000Psi	0.02		
Wall1	Wall	Shell-Thin	4000Psi	0.25		

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3 Assignments

This chapter provides a listing of the assignments applied to the model.

3.1 Frame Assignments

Table 3.1 - Frame Assignments - Summary (Part 1 of 2)

UniqueName	Story	Label	Design Type	Length m	Auto Select	Analysis Section	Design Section	Axis Angle deg	Max Station Spacing m	Min Number Stations	Releases
68	Story1	B1	Beam	1.9437		IPE180	IPE180		0.5		Yes
69	Story1	B2	Beam	0.224		IPE180	IPE180		0.5		Yes
6A	Story1	B3	Beam	1.6946		IPE180	IPE180		0.5		Yes
6B	Story1	B4	Beam	1.948		IPE180	IPE180		0.5		Yes
6E	Story1	B7	Beam	1.1103		IPE180	IPE180		0.5		Yes
6F	Story1	B8	Beam	1.9485		IPE180	IPE180		0.5		Yes
70	Story1	B9	Beam	1.1454		IPE180	IPE180		0.5		Yes
71	Story1	B10	Beam	1.6015		IPE180	IPE180		0.5		Yes
72	Story1	B11	Beam	1.5274		IPE180	IPE180		0.5		Yes
73	Story1	B12	Beam	1.8581		IPE180	IPE180		0.5		Yes
74	Story1	B13	Beam	1.1518		IPE180	IPE180		0.5		Yes
75	Story1	B14	Beam	1.0683		IPE180	IPE180		0.5		Yes
76	Story1	B15	Beam	0.3047		IPE160	IPE160		0.5		Yes
77	Story1	B16	Beam	1.7115		IPE180	IPE180		0.5		Yes
78	Story1	B17	Beam	1.5198		IPE180	IPE180		0.5		Yes
79	Story1	B18	Beam	1.5289		IPE180	IPE180		0.5		Yes
7A	Story1	B19	Beam	1.5248		IPE180	IPE180		0.5		Yes
7B	Story1	B20	Beam	2.2342		IPE180	IPE180		0.5		Yes
7C	Story1	B21	Beam	1.4133		IPE180	IPE180		0.5		Yes
7D	Story1	B22	Beam	0.9955		IPE180	IPE180		0.5		Yes
7E	Story1	B23	Beam	1.6739		IPE180	IPE180		0.5		Yes
7F	Story1	B24	Beam	0.7819		IPE180	IPE180		0.5		Yes
691	Story1	B25	Beam	2.3783		IPE180	IPE180		0.5		Yes
693	Story1	B26	Beam	1.0836		IPE180	IPE180		0.5		Yes
82	Story1	B27	Beam	1.7366		IPE180	IPE180		0.5		Yes
83	Story1	B28	Beam	1.26		IPE180	IPE180		0.5		Yes
84	Story1	B29	Beam	1.1582		IPE180	IPE180		0.5		Yes
85	Story1	B30	Beam	1.1772		IPE180	IPE180		0.5		Yes
86	Story1	B31	Beam	3.3137		IPE180	IPE180		0.5		Yes
87	Story1	B32	Beam	1.8283		IPE180	IPE180		0.5		Yes
88	Story1	B33	Beam	1.6241		IPE160	IPE160		0.5		Yes
89	Story1	B34	Beam	2.9996		IPE160	IPE160		0.5		Yes
8A	Story1	B35	Beam	2.9993		IPE160	IPE160		0.5		Yes
8B	Story1	B36	Beam	2.0025		IPE160	IPE160		0.5		Yes
8C	Story1	B37	Beam	0.5088		IPE160	IPE160		0.5		Yes
8D	Story1	B38	Beam	2.3999		IPE180	IPE180		0.5		Yes
8E	Story1	B39	Beam	3.0252		IPE180	IPE180		0.5		Yes
8F	Story1	B40	Beam	1.8027		IPE160	IPE160		0.5		Yes
90	Story1	B41	Beam	1.1394		IPE160	IPE160		0.5		Yes
91	Story1	B42	Beam	3.1426		IPE180	IPE180		0.5		Yes
93	Story1	B44	Beam	3		IPE180	IPE180		0.5		Yes
94	Story1	B45	Beam	0.4457		IPE160	IPE160		0.5		Yes
95	Story1	B46	Beam	3.0538		IPE180	IPE180		0.5		Yes
96	Story1	B47	Beam	1.599		IPE160	IPE160		0.5		Yes
97	Story1	B48	Beam	1.4002		IPE160	IPE160		0.5		Yes
98	Story1	B49	Beam	2.5797		IPE180	IPE180		0.5		Yes
99	Story1	B50	Beam	3		IPE180	IPE180		0.5		Yes

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UniqueName	Story	Label	Design Type	Length m	Auto Select	Analysis Section	Design Section	Axis Angle deg	Max Station Spacing m	Min Number Stations	Releases
9A	Story1	B51	Beam	2.9995		IPE160	IPE160		0.5		Yes
9B	Story1	B52	Beam	1.3306		IPE160	IPE160		0.5		Yes
9C	Story1	B53	Beam	2.8487		IPE160	IPE160		0.5		Yes
9D	Story1	B54	Beam	3.0015		IPE180	IPE180		0.5		Yes
9E	Story1	B55	Beam	3.0035		IPE160	IPE160		0.5		Yes
9F	Story1	B56	Beam	3		IPE180	IPE180		0.5		Yes
A0	Story1	B57	Beam	2.9999		IPE160	IPE160		0.5		Yes
A1	Story1	B58	Beam	1.4725		IPE180	IPE180		0.5		Yes
A2	Story1	B59	Beam	1.2629		IPE160	IPE160		0.5		Yes
A3	Story1	B60	Beam	1.5297		IPE180	IPE180		0.5		Yes
A4	Story1	B61	Beam	0.9387		IPE160	IPE160		0.5		Yes
A5	Story1	B62	Beam	2.0093		IPE180	IPE180		0.5		Yes
A6	Story1	B63	Beam	2.1698		IPE160	IPE160		0.5		Yes
A7	Story1	B64	Beam	3		IPE180	IPE180		0.5		Yes
A8	Story1	B65	Beam	2.3244		IPE180	IPE180		0.5		Yes
A9	Story1	B66	Beam	1.3024		IPE180	IPE180		0.5		Yes
AA	Story1	B67	Beam	2.33		IPE180	IPE180		0.5		Yes
AB	Story1	B68	Beam	1.0315		IPE180	IPE180		0.5		Yes
AC	Story1	B69	Beam	2.3325		IPE180	IPE180		0.5		Yes
AD	Story1	B70	Beam	0.2817		IPE180	IPE180		0.5		Yes
AE	Story1	B71	Beam	0.9794		IPE180	IPE180		0.5		Yes
AF	Story1	B72	Beam	1.7861		IPE180	IPE180		0.5		Yes
B0	Story1	B73	Beam	0.9065		IPE180	IPE180		0.5		Yes
B1	Story1	B74	Beam	0.4719		IPE180	IPE180		0.5		Yes
B2	Story1	B75	Beam	2.2534		IPE180	IPE180		0.5		Yes
B3	Story1	B76	Beam	2.059		IPE180	IPE180		0.5		Yes
B4	Story1	B77	Beam	1.9654		IPE180	IPE180		0.5		Yes
B5	Story1	B78	Beam	2.2766		IPE180	IPE180		0.5		Yes
B6	Story1	B79	Beam	1.373		IPE180	IPE180		0.5		Yes
B7	Story1	B80	Beam	1.0083		IPE180	IPE180		0.5		Yes
B8	Story1	B81	Beam	1.2455		IPE180	IPE180		0.5		Yes
B9	Story1	B82	Beam	1.8662		IPE180	IPE180		0.5		Yes
BA	Story1	B83	Beam	1.3793		IPE180	IPE180		0.5		Yes
BB	Story1	B84	Beam	0.6772		IPE180	IPE180		0.5		Yes
BC	Story1	B85	Beam	2.4723		IPE180	IPE180		0.5		Yes
BD	Story1	B86	Beam	1.4837		IPE180	IPE180		0.5		Yes
BE	Story1	B87	Beam	0.7288		IPE180	IPE180		0.5		Yes
BF	Story1	B88	Beam	0.5347		IPE160	IPE160		0.5		Yes
C0	Story1	B89	Beam	1.1277		IPE160	IPE160		0.5		Yes
C1	Story1	B90	Beam	1.1042		IPE160	IPE160		0.5		Yes
C2	Story1	B91	Beam	1.7997		IPE180	IPE180		0.5		Yes
C3	Story1	B92	Beam	1.2003		IPE180	IPE180		0.5		Yes
C4	Story1	B93	Beam	0.4248		IPE180	IPE180		0.5		Yes
C5	Story1	B94	Beam	1.9265		IPE180	IPE180		0.5		Yes
C6	Story1	B95	Beam	1.0735		IPE180	IPE180		0.5		Yes
C7	Story1	B96	Beam	2.9999		IPE160	IPE160		0.5		Yes
C8	Story1	B97	Beam	3		IPE180	IPE180		0.5		Yes
C9	Story1	B98	Beam	1.5404		IPE180	IPE180		0.5		Yes
CA	Story1	B99	Beam	1.5584		IPE180	IPE180		0.5		Yes
CB	Story1	B100	Beam	2.9997		IPE160	IPE160		0.5		Yes
CC	Story1	B101	Beam	1.4829		IPE180	IPE180		0.5		Yes
CD	Story1	B102	Beam	1.473		IPE160	IPE160		0.5		Yes
CE	Story1	B103	Beam	3		IPE180	IPE180		0.5		Yes
CF	Story1	B104	Beam	3		IPE160	IPE160		0.5		Yes

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UniqueName	Story	Label	Design Type	Length m	Auto Select	Analysis Section	Design Section	Axis Angle deg	Max Station Spacing m	Min Number Stations	Releases
D0	Story1	B105	Beam	3		IPE180	IPE180		0.5		Yes
D1	Story1	B106	Beam	3		IPE180	IPE180		0.5		Yes
D2	Story1	B107	Beam	3.0004		IPE180	IPE180		0.5		Yes
D3	Story1	B108	Beam	2.1997		IPE180	IPE180		0.5		Yes
D4	Story1	B109	Beam	1.5293		IPE180	IPE180		0.5		Yes
D5	Story1	B110	Beam	2.9997		IPE160	IPE160		0.5		Yes
D6	Story1	B111	Beam	2.9999		IPE160	IPE160		0.5		Yes
D7	Story1	B112	Beam	2.9996		IPE180	IPE180		0.5		Yes
D8	Story1	B113	Beam	1.0698		IPE160	IPE160		0.5		Yes
D9	Story1	B114	Beam	2.6088		IPE180	IPE180		0.5		Yes
DA	Story1	B115	Beam	2.3963		IPE180	IPE180		0.5		Yes
DB	Story1	B116	Beam	2.0902		IPE180	IPE180		0.5		Yes
DC	Story1	B117	Beam	3		IPE180	IPE180		0.5		Yes
DD	Story1	B118	Beam	1.5963		IPE160	IPE160		0.5		Yes
DE	Story1	B119	Beam	1.4042		IPE160	IPE160		0.5		Yes
DF	Story1	B120	Beam	3		IPE180	IPE180		0.5		Yes
E0	Story1	B121	Beam	0.534		IPE180	IPE180		0.5		Yes
E1	Story1	B122	Beam	0.6874		IPE160	IPE160		0.5		Yes
E2	Story1	B123	Beam	0.9369		IPE180	IPE180		0.5		Yes
E3	Story1	B124	Beam	0.8246		IPE180	IPE180		0.5		Yes
E4	Story1	B125	Beam	2.9991		IPE160	IPE160		0.5		Yes
E5	Story1	B126	Beam	2.9999		IPE160	IPE160		0.5		Yes
E6	Story1	B127	Beam	1.9172		IPE180	IPE180		0.5		Yes
E7	Story1	B128	Beam	1.5465		IPE180	IPE180		0.5		Yes
E8	Story1	B129	Beam	1.5696		IPE160	IPE160		0.5		Yes
E9	Story1	B130	Beam	1.4295		IPE160	IPE160		0.5		Yes
EA	Story1	B131	Beam	1.4646		IPE160	IPE160		0.5		Yes
EB	Story1	B132	Beam	1.5353		IPE160	IPE160		0.5		Yes
EC	Story1	B133	Beam	3.0004		IPE180	IPE180		0.5		Yes
ED	Story1	B134	Beam	3		IPE180	IPE180		0.5		Yes
EE	Story1	B135	Beam	1.5855		IPE180	IPE180		0.5		Yes
EF	Story1	B136	Beam	2.6794		IPE180	IPE180		0.5		Yes
F0	Story1	B137	Beam	0.6943		IPE180	IPE180		0.5		Yes
F1	Story1	B138	Beam	1.8832		IPE180	IPE180		0.5		Yes
F2	Story1	B139	Beam	1.5796		IPE180	IPE180		0.5		Yes
F3	Story1	B140	Beam	1.8562		IPE180	IPE180		0.5		Yes
F4	Story1	B141	Beam	1.0609		IPE160	IPE160		0.5		Yes
F5	Story1	B142	Beam	1.0028		IPE180	IPE180		0.5		Yes
F6	Story1	B143	Beam	1.5018		IPE180	IPE180		0.5		Yes
F7	Story1	B144	Beam	1.4878		IPE180	IPE180		0.5		Yes
F8	Story1	B145	Beam	1.664		IPE180	IPE180		0.5		Yes
F9	Story1	B146	Beam	1.3118		IPE180	IPE180		0.5		Yes
FA	Story1	B147	Beam	2.1779		IPE180	IPE180		0.5		Yes
FB	Story1	B148	Beam	1.4628		IPE180	IPE180		0.5		Yes
FC	Story1	B149	Beam	1.4797		IPE180	IPE180		0.5		Yes
FD	Story1	B150	Beam	0.4514		IPE180	IPE180		0.5		Yes
FE	Story1	B151	Beam	1.1647		IPE160	IPE160		0.5		Yes
FF	Story1	B152	Beam	1.8819		IPE180	IPE180		0.5		Yes
100	Story1	B153	Beam	1.7848		IPE160	IPE160		0.5		Yes
101	Story1	B154	Beam	1.8665		IPE180	IPE180		0.5		Yes
102	Story1	B155	Beam	1.1811		IPE160	IPE160		0.5		Yes
103	Story1	B156	Beam	1.8465		IPE180	IPE180		0.5		Yes
104	Story1	B157	Beam	1.0993		IPE160	IPE160		0.5		Yes
105	Story1	B158	Beam	1.8586		IPE180	IPE180		0.5		Yes

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UniqueName	Story	Label	Design Type	Length m	Auto Select	Analysis Section	Design Section	Axis Angle deg	Max Station Spacing m	Min Number Stations	Releases
106	Story1	B159	Beam	2.0299		IPE160	IPE160		0.5		Yes
107	Story1	B160	Beam	1.8725		IPE180	IPE180		0.5		Yes
108	Story1	B161	Beam	1.2397		IPE160	IPE160		0.5		Yes
109	Story1	B162	Beam	0.7651		IPE180	IPE180		0.5		Yes
10A	Story1	B163	Beam	1.047		IPE180	IPE180		0.5		Yes
10B	Story1	B164	Beam	0.235		IPE180	IPE180		0.5		Yes
10C	Story1	B165	Beam	1.5118		IPE180	IPE180		0.5		Yes
10D	Story1	B166	Beam	0.9234		IPE180	IPE180		0.5		Yes
10E	Story1	B167	Beam	3		IPE180	IPE180		0.5		Yes
10F	Story1	B168	Beam	3		IPE180	IPE180		0.5		Yes
110	Story1	B169	Beam	3		IPE180	IPE180		0.5		Yes
111	Story1	B170	Beam	0.8056		IPE180	IPE180		0.5		Yes
112	Story1	B171	Beam	1.0698		IPE160	IPE160		0.5		Yes
113	Story1	B172	Beam	3		IPE180	IPE180		0.5		Yes
114	Story1	B173	Beam	2.925		IPE160	IPE160		0.5		Yes
115	Story1	B174	Beam	1.5043		IPE160	IPE160		0.5		Yes
116	Story1	B175	Beam	1.4957		IPE160	IPE160		0.5		Yes
117	Story1	B176	Beam	0.97		IPE160	IPE160		0.5		Yes
118	Story1	B177	Beam	0.463		IPE180	IPE180		0.5		Yes
119	Story1	B178	Beam	0.6619		IPE180	IPE180		0.5		Yes
11A	Story1	B179	Beam	0.2844		IPE180	IPE180		0.5		Yes
11B	Story1	B180	Beam	2.925		IPE160	IPE160		0.5		Yes
11C	Story1	B181	Beam	2.9997		IPE160	IPE160		0.5		Yes
11D	Story1	B182	Beam	3		IPE180	IPE180		0.5		Yes
11E	Story1	B183	Beam	1.07		IPE160	IPE160		0.5		Yes
11F	Story1	B184	Beam	2.9249		IPE160	IPE160		0.5		Yes
120	Story1	B185	Beam	3		IPE160	IPE160		0.5		Yes
121	Story1	B186	Beam	3		IPE180	IPE180		0.5		Yes
122	Story1	B187	Beam	0.8		IPE160	IPE160		0.5		Yes
123	Story1	B188	Beam	1.0698		IPE160	IPE160		0.5		Yes
124	Story1	B189	Beam	2.925		IPE160	IPE160		0.5		Yes
125	Story1	B190	Beam	3.0399		IPE160	IPE160		0.5		Yes
126	Story1	B191	Beam	2.9552		IPE180	IPE180		0.5		Yes
127	Story1	B192	Beam	3		IPE180	IPE180		0.5		Yes
128	Story1	B193	Beam	3		IPE180	IPE180		0.5		Yes
129	Story1	B194	Beam	0.8531		IPE180	IPE180		0.5		Yes
12A	Story1	B195	Beam	1.1021		IPE160	IPE160		0.5		Yes
12B	Story1	B196	Beam	1.1315		IPE160	IPE160		0.5		Yes
12C	Story1	B197	Beam	1.772		IPE160	IPE160		0.5		Yes
12D	Story1	B198	Beam	2.1429		IPE160	IPE160		0.5		Yes
12E	Story1	B199	Beam	1.0327		IPE160	IPE160		0.5		Yes
12F	Story1	B200	Beam	1.5241		IPE160	IPE160		0.5		Yes
130	Story1	B201	Beam	1.022		IPE160	IPE160		0.5		Yes
131	Story1	B202	Beam	0.7838		IPE180	IPE180		0.5		Yes
132	Story1	B203	Beam	1.7572		IPE180	IPE180		0.5		Yes
133	Story1	B204	Beam	3.0497		IPE180	IPE180		0.5		Yes
134	Story1	B205	Beam	1.0248		IPE160	IPE160		0.5		Yes
135	Story1	B206	Beam	1.1312		IPE180	IPE180		0.5		Yes
136	Story1	B207	Beam	0.7436		IPE180	IPE180		0.5		Yes
137	Story1	B208	Beam	0.4573		IPE180	IPE180		0.5		Yes
138	Story1	B209	Beam	1.3449		IPE160	IPE160		0.5		Yes
139	Story1	B210	Beam	2.4025		IPE180	IPE180		0.5		Yes
13A	Story1	B211	Beam	1.006		IPE160	IPE160		0.5		Yes
13B	Story1	B212	Beam	1.7492		IPE160	IPE160		0.5		Yes

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UniqueName	Story	Label	Design Type	Length m	Auto Select	Analysis Section	Design Section	Axis Angle deg	Max Station Spacing m	Min Number Stations	Releases
13C	Story1	B213	Beam	1.0287		IPE180	IPE180		0.5		Yes
13D	Story1	B214	Beam	0.9288		IPE180	IPE180		0.5		Yes
13E	Story1	B215	Beam	0.6165		IPE180	IPE180		0.5		Yes
13F	Story1	B216	Beam	1.1042		IPE180	IPE180		0.5		Yes
140	Story1	B217	Beam	1.5288		IPE180	IPE180		0.5		Yes
141	Story1	B218	Beam	2.768		IPE160	IPE160		0.5		Yes
142	Story1	B219	Beam	2.5415		IPE160	IPE160		0.5		Yes
143	Story1	B220	Beam	1.6015		IPE180	IPE180		0.5		Yes
144	Story1	B221	Beam	2.0363		IPE180	IPE180		0.5		Yes
145	Story1	B222	Beam	2.7371		IPE180	IPE180		0.5		Yes
146	Story1	B223	Beam	3.0325		IPE180	IPE180		0.5		Yes
147	Story1	B224	Beam	0.3649		IPE180	IPE180		0.5		Yes
148	Story1	B225	Beam	1.2773		IPE180	IPE180		0.5		Yes
149	Story1	B226	Beam	1.7991		IPE160	IPE160		0.5		Yes
14A	Story1	B227	Beam	2.0689		IPE160	IPE160		0.5		Yes
14B	Story1	B228	Beam	0.9311		IPE160	IPE160		0.5		Yes
14C	Story1	B229	Beam	0.7421		IPE180	IPE180		0.5		Yes
14D	Story1	B230	Beam	1.7977		IPE180	IPE180		0.5		Yes
14E	Story1	B231	Beam	1.9761		IPE180	IPE180		0.5		Yes
14F	Story1	B232	Beam	2.2169		IPE180	IPE180		0.5		Yes
150	Story1	B233	Beam	1.1219		IPE160	IPE160		0.5		Yes
151	Story1	B234	Beam	2.6052		IPE180	IPE180		0.5		Yes
152	Story1	B235	Beam	2.3856		IPE180	IPE180		0.5		Yes
153	Story1	B236	Beam	0.7795		IPE180	IPE180		0.5		Yes
154	Story1	B237	Beam	1.8407		IPE160	IPE160		0.5		Yes
155	Story1	B238	Beam	1.6886		IPE180	IPE180		0.5		Yes
156	Story1	B239	Beam	1.9825		IPE180	IPE180		0.5		Yes
157	Story1	B240	Beam	1.9825		IPE180	IPE180		0.5		Yes
158	Story1	B241	Beam	1.84		IPE160	IPE160		0.5		Yes
159	Story1	B242	Beam	1.9809		IPE180	IPE180		0.5		Yes
15A	Story1	B243	Beam	1.9809		IPE180	IPE180		0.5		Yes
15B	Story1	B244	Beam	1.8404		IPE160	IPE160		0.5		Yes
692	Story1	B732	Beam	2.2355		IPE180	IPE180		0.5		Yes
732	Story1	B456	Beam	0.5547		IPE180	IPE180		0.5		Yes
6C	Story1	B43	Beam	1.7475		IPE180	IPE180		0.5		Yes
277	Story1	C1	Column	0.5		IPE180	IPE180	45		3	
278	Story1	C2	Column	0.5		IPE180	IPE180	45		3	
279	Story1	C3	Column	0.5		IPE180	IPE180	45		3	
280	Story1	C4	Column	0.5		IPE180	IPE180	45		3	
281	Story1	C5	Column	0.5		IPE180	IPE180	45		3	
282	Story1	C6	Column	0.5		IPE180	IPE180	45		3	
283	Story1	C7	Column	0.5		IPE180	IPE180	45		3	
284	Story1	C8	Column	0.5		IPE180	IPE180	45		3	
285	Story1	C9	Column	0.5		IPE180	IPE180	36		3	
286	Story1	C10	Column	0.5		IPE180	IPE180	24		3	
287	Story1	C11	Column	0.5		IPE180	IPE180	11		3	
288	Story1	C12	Column	0.5		IPE180	IPE180			3	
289	Story1	C13	Column	0.5		IPE180	IPE180			3	
290	Story1	C14	Column	0.5		IPE180	IPE180			3	
291	Story1	C15	Column	0.5		IPE180	IPE180	-10		3	
292	Story1	C16	Column	0.5		IPE180	IPE180	-21		3	
293	Story1	C17	Column	0.5		IPE180	IPE180			3	
294	Story1	C18	Column	0.5		IPE180	IPE180			3	
295	Story1	C19	Column	0.5		IPE180	IPE180			3	

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