

1. Model geometry

This section provides model geometry information, including items such as joint coordinates, joint restraints, and element connectivity.

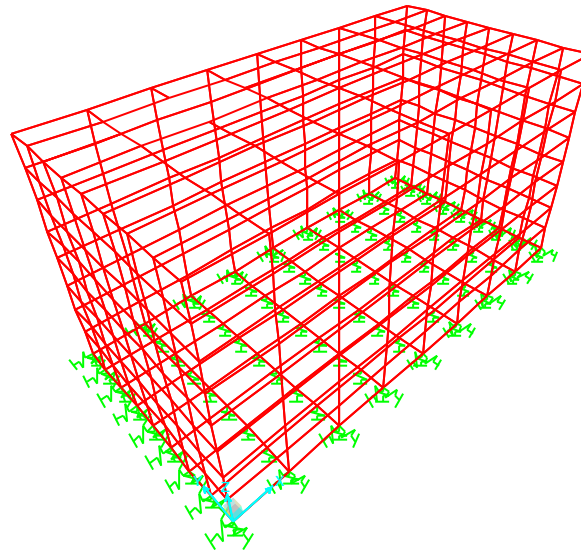


Figure 1: Finite element model

1.1. Joint coordinates

Table 1: Joint Coordinates

Table 1: Joint Coordinates

Joint	CoordSys	CoordType	GlobalX m	GlobalY m	GlobalZ m
2	GLOBAL	Cartesian	0.00000	0.00000	0.00000
3	GLOBAL	Cartesian	4.60000	0.00000	0.00000
4	GLOBAL	Cartesian	0.00000	2.30000	0.00000
5	GLOBAL	Cartesian	4.60000	2.30000	0.00000
6	GLOBAL	Cartesian	0.00000	0.00000	2.44000
7	GLOBAL	Cartesian	4.60000	0.00000	2.44000
8	GLOBAL	Cartesian	4.60000	2.30000	2.44000
9	GLOBAL	Cartesian	0.00000	2.30000	2.44000
10	GLOBAL	Cartesian	4.60000	2.01250	0.00000
11	GLOBAL	Cartesian	4.02500	2.01250	0.00000
12	GLOBAL	Cartesian	4.02500	2.30000	0.00000
13	GLOBAL	Cartesian	3.45000	2.01250	0.00000
14	GLOBAL	Cartesian	3.45000	2.30000	0.00000
15	GLOBAL	Cartesian	2.87500	2.01250	0.00000
16	GLOBAL	Cartesian	2.87500	2.30000	0.00000
17	GLOBAL	Cartesian	2.30000	2.01250	0.00000
18	GLOBAL	Cartesian	2.30000	2.30000	0.00000
19	GLOBAL	Cartesian	1.72500	2.01250	0.00000
20	GLOBAL	Cartesian	1.72500	2.30000	0.00000

Table 1: Joint Coordinates

Joint	CoordSys	CoordType	GlobalX m	GlobalY m	GlobalZ m
21	GLOBAL	Cartesian	1.15000	2.01250	0.00000
22	GLOBAL	Cartesian	1.15000	2.30000	0.00000
23	GLOBAL	Cartesian	0.57500	2.01250	0.00000
24	GLOBAL	Cartesian	0.57500	2.30000	0.00000
25	GLOBAL	Cartesian	0.00000	2.01250	0.00000
26	GLOBAL	Cartesian	4.60000	1.72500	0.00000
27	GLOBAL	Cartesian	4.02500	1.72500	0.00000
28	GLOBAL	Cartesian	3.45000	1.72500	0.00000
29	GLOBAL	Cartesian	2.87500	1.72500	0.00000
30	GLOBAL	Cartesian	2.30000	1.72500	0.00000
31	GLOBAL	Cartesian	1.72500	1.72500	0.00000
32	GLOBAL	Cartesian	1.15000	1.72500	0.00000
33	GLOBAL	Cartesian	0.57500	1.72500	0.00000
34	GLOBAL	Cartesian	0.00000	1.72500	0.00000
35	GLOBAL	Cartesian	4.60000	1.43750	0.00000
36	GLOBAL	Cartesian	4.02500	1.43750	0.00000
37	GLOBAL	Cartesian	3.45000	1.43750	0.00000
38	GLOBAL	Cartesian	2.87500	1.43750	0.00000
39	GLOBAL	Cartesian	2.30000	1.43750	0.00000
40	GLOBAL	Cartesian	1.72500	1.43750	0.00000
41	GLOBAL	Cartesian	1.15000	1.43750	0.00000
42	GLOBAL	Cartesian	0.57500	1.43750	0.00000
43	GLOBAL	Cartesian	0.00000	1.43750	0.00000
44	GLOBAL	Cartesian	4.60000	1.15000	0.00000
45	GLOBAL	Cartesian	4.02500	1.15000	0.00000
46	GLOBAL	Cartesian	3.45000	1.15000	0.00000
47	GLOBAL	Cartesian	2.87500	1.15000	0.00000
48	GLOBAL	Cartesian	2.30000	1.15000	0.00000
49	GLOBAL	Cartesian	1.72500	1.15000	0.00000
50	GLOBAL	Cartesian	1.15000	1.15000	0.00000
51	GLOBAL	Cartesian	0.57500	1.15000	0.00000
52	GLOBAL	Cartesian	0.00000	1.15000	0.00000
53	GLOBAL	Cartesian	4.60000	0.86250	0.00000
54	GLOBAL	Cartesian	4.02500	0.86250	0.00000
55	GLOBAL	Cartesian	3.45000	0.86250	0.00000
56	GLOBAL	Cartesian	2.87500	0.86250	0.00000
57	GLOBAL	Cartesian	2.30000	0.86250	0.00000
58	GLOBAL	Cartesian	1.72500	0.86250	0.00000
59	GLOBAL	Cartesian	1.15000	0.86250	0.00000
60	GLOBAL	Cartesian	0.57500	0.86250	0.00000
61	GLOBAL	Cartesian	0.00000	0.86250	0.00000
62	GLOBAL	Cartesian	4.60000	0.57500	0.00000
63	GLOBAL	Cartesian	4.02500	0.57500	0.00000
64	GLOBAL	Cartesian	3.45000	0.57500	0.00000
65	GLOBAL	Cartesian	2.87500	0.57500	0.00000
66	GLOBAL	Cartesian	2.30000	0.57500	0.00000
67	GLOBAL	Cartesian	1.72500	0.57500	0.00000
68	GLOBAL	Cartesian	1.15000	0.57500	0.00000
69	GLOBAL	Cartesian	0.57500	0.57500	0.00000
70	GLOBAL	Cartesian	0.00000	0.57500	0.00000
71	GLOBAL	Cartesian	4.60000	0.28750	0.00000
72	GLOBAL	Cartesian	4.02500	0.28750	0.00000
73	GLOBAL	Cartesian	3.45000	0.28750	0.00000
74	GLOBAL	Cartesian	2.87500	0.28750	0.00000

Table 1: Joint Coordinates

Joint	CoordSys	CoordType	GlobalX m	GlobalY m	GlobalZ m
75	GLOBAL	Cartesian	2.30000	0.28750	0.00000
76	GLOBAL	Cartesian	1.72500	0.28750	0.00000
77	GLOBAL	Cartesian	1.15000	0.28750	0.00000
78	GLOBAL	Cartesian	0.57500	0.28750	0.00000
79	GLOBAL	Cartesian	0.00000	0.28750	0.00000
80	GLOBAL	Cartesian	4.02500	0.00000	0.00000
81	GLOBAL	Cartesian	3.45000	0.00000	0.00000
82	GLOBAL	Cartesian	2.87500	0.00000	0.00000
83	GLOBAL	Cartesian	2.30000	0.00000	0.00000
84	GLOBAL	Cartesian	1.72500	0.00000	0.00000
85	GLOBAL	Cartesian	1.15000	0.00000	0.00000
86	GLOBAL	Cartesian	0.57500	0.00000	0.00000
87	GLOBAL	Cartesian	0.00000	2.01250	0.30500
88	GLOBAL	Cartesian	0.00000	2.30000	0.30500
89	GLOBAL	Cartesian	0.00000	2.01250	0.61000
90	GLOBAL	Cartesian	0.00000	2.30000	0.61000
91	GLOBAL	Cartesian	0.00000	2.01250	0.91500
92	GLOBAL	Cartesian	0.00000	2.30000	0.91500
93	GLOBAL	Cartesian	0.00000	2.01250	1.22000
94	GLOBAL	Cartesian	0.00000	2.30000	1.22000
95	GLOBAL	Cartesian	0.00000	2.01250	1.52500
96	GLOBAL	Cartesian	0.00000	2.30000	1.52500
97	GLOBAL	Cartesian	0.00000	2.01250	1.83000
98	GLOBAL	Cartesian	0.00000	2.30000	1.83000
99	GLOBAL	Cartesian	0.00000	2.01250	2.13500
100	GLOBAL	Cartesian	0.00000	2.30000	2.13500
101	GLOBAL	Cartesian	0.00000	2.01250	2.44000
102	GLOBAL	Cartesian	0.00000	1.72500	0.30500
103	GLOBAL	Cartesian	0.00000	1.72500	0.61000
104	GLOBAL	Cartesian	0.00000	1.72500	0.91500
105	GLOBAL	Cartesian	0.00000	1.72500	1.22000
106	GLOBAL	Cartesian	0.00000	1.72500	1.52500
107	GLOBAL	Cartesian	0.00000	1.72500	1.83000
108	GLOBAL	Cartesian	0.00000	1.72500	2.13500
109	GLOBAL	Cartesian	0.00000	1.72500	2.44000
110	GLOBAL	Cartesian	0.00000	1.43750	0.30500
111	GLOBAL	Cartesian	0.00000	1.43750	0.61000
112	GLOBAL	Cartesian	0.00000	1.43750	0.91500
113	GLOBAL	Cartesian	0.00000	1.43750	1.22000
114	GLOBAL	Cartesian	0.00000	1.43750	1.52500
115	GLOBAL	Cartesian	0.00000	1.43750	1.83000
116	GLOBAL	Cartesian	0.00000	1.43750	2.13500
117	GLOBAL	Cartesian	0.00000	1.43750	2.44000
118	GLOBAL	Cartesian	0.00000	1.15000	0.30500
119	GLOBAL	Cartesian	0.00000	1.15000	0.61000
120	GLOBAL	Cartesian	0.00000	1.15000	0.91500
121	GLOBAL	Cartesian	0.00000	1.15000	1.22000
122	GLOBAL	Cartesian	0.00000	1.15000	1.52500
123	GLOBAL	Cartesian	0.00000	1.15000	1.83000
124	GLOBAL	Cartesian	0.00000	1.15000	2.13500
125	GLOBAL	Cartesian	0.00000	1.15000	2.44000
126	GLOBAL	Cartesian	0.00000	0.86250	0.30500
127	GLOBAL	Cartesian	0.00000	0.86250	0.61000
128	GLOBAL	Cartesian	0.00000	0.86250	0.91500

Table 1: Joint Coordinates

Joint	CoordSys	CoordType	GlobalX m	GlobalY m	GlobalZ m
129	GLOBAL	Cartesian	0.00000	0.86250	1.22000
130	GLOBAL	Cartesian	0.00000	0.86250	1.52500
131	GLOBAL	Cartesian	0.00000	0.86250	1.83000
132	GLOBAL	Cartesian	0.00000	0.86250	2.13500
133	GLOBAL	Cartesian	0.00000	0.86250	2.44000
134	GLOBAL	Cartesian	0.00000	0.57500	0.30500
135	GLOBAL	Cartesian	0.00000	0.57500	0.61000
136	GLOBAL	Cartesian	0.00000	0.57500	0.91500
137	GLOBAL	Cartesian	0.00000	0.57500	1.22000
138	GLOBAL	Cartesian	0.00000	0.57500	1.52500
139	GLOBAL	Cartesian	0.00000	0.57500	1.83000
140	GLOBAL	Cartesian	0.00000	0.57500	2.13500
141	GLOBAL	Cartesian	0.00000	0.57500	2.44000
142	GLOBAL	Cartesian	0.00000	0.28750	0.30500
143	GLOBAL	Cartesian	0.00000	0.28750	0.61000
144	GLOBAL	Cartesian	0.00000	0.28750	0.91500
145	GLOBAL	Cartesian	0.00000	0.28750	1.22000
146	GLOBAL	Cartesian	0.00000	0.28750	1.52500
147	GLOBAL	Cartesian	0.00000	0.28750	1.83000
148	GLOBAL	Cartesian	0.00000	0.28750	2.13500
149	GLOBAL	Cartesian	0.00000	0.28750	2.44000
150	GLOBAL	Cartesian	0.00000	0.00000	0.30500
151	GLOBAL	Cartesian	0.00000	0.00000	0.61000
152	GLOBAL	Cartesian	0.00000	0.00000	0.91500
153	GLOBAL	Cartesian	0.00000	0.00000	1.22000
154	GLOBAL	Cartesian	0.00000	0.00000	1.52500
155	GLOBAL	Cartesian	0.00000	0.00000	1.83000
156	GLOBAL	Cartesian	0.00000	0.00000	2.13500
157	GLOBAL	Cartesian	0.57500	0.00000	0.30500
158	GLOBAL	Cartesian	0.57500	0.00000	0.61000
159	GLOBAL	Cartesian	0.57500	0.00000	0.91500
160	GLOBAL	Cartesian	0.57500	0.00000	1.22000
161	GLOBAL	Cartesian	0.57500	0.00000	1.52500
162	GLOBAL	Cartesian	0.57500	0.00000	1.83000
163	GLOBAL	Cartesian	0.57500	0.00000	2.13500
164	GLOBAL	Cartesian	0.57500	0.00000	2.44000
165	GLOBAL	Cartesian	1.15000	0.00000	0.30500
166	GLOBAL	Cartesian	1.15000	0.00000	0.61000
167	GLOBAL	Cartesian	1.15000	0.00000	0.91500
168	GLOBAL	Cartesian	1.15000	0.00000	1.22000
169	GLOBAL	Cartesian	1.15000	0.00000	1.52500
170	GLOBAL	Cartesian	1.15000	0.00000	1.83000
171	GLOBAL	Cartesian	1.15000	0.00000	2.13500
172	GLOBAL	Cartesian	1.15000	0.00000	2.44000
173	GLOBAL	Cartesian	1.72500	0.00000	0.30500
174	GLOBAL	Cartesian	1.72500	0.00000	0.61000
175	GLOBAL	Cartesian	1.72500	0.00000	0.91500
176	GLOBAL	Cartesian	1.72500	0.00000	1.22000
177	GLOBAL	Cartesian	1.72500	0.00000	1.52500
178	GLOBAL	Cartesian	1.72500	0.00000	1.83000
179	GLOBAL	Cartesian	1.72500	0.00000	2.13500
180	GLOBAL	Cartesian	1.72500	0.00000	2.44000
181	GLOBAL	Cartesian	2.30000	0.00000	0.30500
182	GLOBAL	Cartesian	2.30000	0.00000	0.61000

Table 1: Joint Coordinates

Joint	CoordSys	CoordType	GlobalX m	GlobalY m	GlobalZ m
183	GLOBAL	Cartesian	2.30000	0.00000	0.91500
184	GLOBAL	Cartesian	2.30000	0.00000	1.22000
185	GLOBAL	Cartesian	2.30000	0.00000	1.52500
186	GLOBAL	Cartesian	2.30000	0.00000	1.83000
187	GLOBAL	Cartesian	2.30000	0.00000	2.13500
188	GLOBAL	Cartesian	2.30000	0.00000	2.44000
189	GLOBAL	Cartesian	2.87500	0.00000	0.30500
190	GLOBAL	Cartesian	2.87500	0.00000	0.61000
191	GLOBAL	Cartesian	2.87500	0.00000	0.91500
192	GLOBAL	Cartesian	2.87500	0.00000	1.22000
193	GLOBAL	Cartesian	2.87500	0.00000	1.52500
194	GLOBAL	Cartesian	2.87500	0.00000	1.83000
195	GLOBAL	Cartesian	2.87500	0.00000	2.13500
196	GLOBAL	Cartesian	2.87500	0.00000	2.44000
197	GLOBAL	Cartesian	3.45000	0.00000	0.30500
198	GLOBAL	Cartesian	3.45000	0.00000	0.61000
199	GLOBAL	Cartesian	3.45000	0.00000	0.91500
200	GLOBAL	Cartesian	3.45000	0.00000	1.22000
201	GLOBAL	Cartesian	3.45000	0.00000	1.52500
202	GLOBAL	Cartesian	3.45000	0.00000	1.83000
203	GLOBAL	Cartesian	3.45000	0.00000	2.13500
204	GLOBAL	Cartesian	3.45000	0.00000	2.44000
205	GLOBAL	Cartesian	4.02500	0.00000	0.30500
206	GLOBAL	Cartesian	4.02500	0.00000	0.61000
207	GLOBAL	Cartesian	4.02500	0.00000	0.91500
208	GLOBAL	Cartesian	4.02500	0.00000	1.22000
209	GLOBAL	Cartesian	4.02500	0.00000	1.52500
210	GLOBAL	Cartesian	4.02500	0.00000	1.83000
211	GLOBAL	Cartesian	4.02500	0.00000	2.13500
212	GLOBAL	Cartesian	4.02500	0.00000	2.44000
213	GLOBAL	Cartesian	4.60000	0.00000	0.30500
214	GLOBAL	Cartesian	4.60000	0.00000	0.61000
215	GLOBAL	Cartesian	4.60000	0.00000	0.91500
216	GLOBAL	Cartesian	4.60000	0.00000	1.22000
217	GLOBAL	Cartesian	4.60000	0.00000	1.52500
218	GLOBAL	Cartesian	4.60000	0.00000	1.83000
219	GLOBAL	Cartesian	4.60000	0.00000	2.13500
4427	GLOBAL	Cartesian	4.60000	0.28750	0.30500
4428	GLOBAL	Cartesian	4.60000	0.28750	0.61000
4429	GLOBAL	Cartesian	4.60000	0.28750	0.91500
4430	GLOBAL	Cartesian	4.60000	0.28750	1.22000
4431	GLOBAL	Cartesian	4.60000	0.28750	1.52500
4432	GLOBAL	Cartesian	4.60000	0.28750	1.83000
4433	GLOBAL	Cartesian	4.60000	0.28750	2.13500
4434	GLOBAL	Cartesian	4.60000	0.28750	2.44000
4435	GLOBAL	Cartesian	4.60000	0.57500	0.30500
4436	GLOBAL	Cartesian	4.60000	0.57500	0.61000
4437	GLOBAL	Cartesian	4.60000	0.57500	0.91500
4438	GLOBAL	Cartesian	4.60000	0.57500	1.22000
4439	GLOBAL	Cartesian	4.60000	0.57500	1.52500
4440	GLOBAL	Cartesian	4.60000	0.57500	1.83000
4441	GLOBAL	Cartesian	4.60000	0.57500	2.13500
4442	GLOBAL	Cartesian	4.60000	0.57500	2.44000
4443	GLOBAL	Cartesian	4.60000	0.86250	0.30500

Table 1: Joint Coordinates

Joint	CoordSys	CoordType	GlobalX m	GlobalY m	GlobalZ m
4444	GLOBAL	Cartesian	4.60000	0.86250	0.61000
4445	GLOBAL	Cartesian	4.60000	0.86250	0.91500
4446	GLOBAL	Cartesian	4.60000	0.86250	1.22000
4447	GLOBAL	Cartesian	4.60000	0.86250	1.52500
4448	GLOBAL	Cartesian	4.60000	0.86250	1.83000
4449	GLOBAL	Cartesian	4.60000	0.86250	2.13500
4450	GLOBAL	Cartesian	4.60000	0.86250	2.44000
4451	GLOBAL	Cartesian	4.60000	1.15000	0.30500
4452	GLOBAL	Cartesian	4.60000	1.15000	0.61000
4453	GLOBAL	Cartesian	4.60000	1.15000	0.91500
4454	GLOBAL	Cartesian	4.60000	1.15000	1.22000
4455	GLOBAL	Cartesian	4.60000	1.15000	1.52500
4456	GLOBAL	Cartesian	4.60000	1.15000	1.83000
4457	GLOBAL	Cartesian	4.60000	1.15000	2.13500
4458	GLOBAL	Cartesian	4.60000	1.15000	2.44000
4459	GLOBAL	Cartesian	4.60000	1.43750	0.30500
4460	GLOBAL	Cartesian	4.60000	1.43750	0.61000
4461	GLOBAL	Cartesian	4.60000	1.43750	0.91500
4462	GLOBAL	Cartesian	4.60000	1.43750	1.22000
4463	GLOBAL	Cartesian	4.60000	1.43750	1.52500
4464	GLOBAL	Cartesian	4.60000	1.43750	1.83000
4465	GLOBAL	Cartesian	4.60000	1.43750	2.13500
4466	GLOBAL	Cartesian	4.60000	1.43750	2.44000
4467	GLOBAL	Cartesian	4.60000	1.72500	0.30500
4468	GLOBAL	Cartesian	4.60000	1.72500	0.61000
4469	GLOBAL	Cartesian	4.60000	1.72500	0.91500
4470	GLOBAL	Cartesian	4.60000	1.72500	1.22000
4471	GLOBAL	Cartesian	4.60000	1.72500	1.52500
4472	GLOBAL	Cartesian	4.60000	1.72500	1.83000
4473	GLOBAL	Cartesian	4.60000	1.72500	2.13500
4474	GLOBAL	Cartesian	4.60000	1.72500	2.44000
4475	GLOBAL	Cartesian	4.60000	2.01250	0.30500
4476	GLOBAL	Cartesian	4.60000	2.01250	0.61000
4477	GLOBAL	Cartesian	4.60000	2.01250	0.91500
4478	GLOBAL	Cartesian	4.60000	2.01250	1.22000
4479	GLOBAL	Cartesian	4.60000	2.01250	1.52500
4480	GLOBAL	Cartesian	4.60000	2.01250	1.83000
4481	GLOBAL	Cartesian	4.60000	2.01250	2.13500
4482	GLOBAL	Cartesian	4.60000	2.01250	2.44000
4483	GLOBAL	Cartesian	4.60000	2.30000	0.30500
4484	GLOBAL	Cartesian	4.60000	2.30000	0.61000
4485	GLOBAL	Cartesian	4.60000	2.30000	0.91500
4486	GLOBAL	Cartesian	4.60000	2.30000	1.22000
4487	GLOBAL	Cartesian	4.60000	2.30000	1.52500
4488	GLOBAL	Cartesian	4.60000	2.30000	1.83000
4489	GLOBAL	Cartesian	4.60000	2.30000	2.13500
4490	GLOBAL	Cartesian	4.02500	2.30000	0.30500
4491	GLOBAL	Cartesian	4.02500	2.30000	0.61000
4492	GLOBAL	Cartesian	4.02500	2.30000	0.91500
4493	GLOBAL	Cartesian	4.02500	2.30000	1.22000
4494	GLOBAL	Cartesian	4.02500	2.30000	1.52500
4495	GLOBAL	Cartesian	4.02500	2.30000	1.83000
4496	GLOBAL	Cartesian	4.02500	2.30000	2.13500
4497	GLOBAL	Cartesian	4.02500	2.30000	2.44000

Table 1: Joint Coordinates

Joint	CoordSys	CoordType	GlobalX m	GlobalY m	GlobalZ m
4498	GLOBAL	Cartesian	3.45000	2.30000	0.30500
4499	GLOBAL	Cartesian	3.45000	2.30000	0.61000
4500	GLOBAL	Cartesian	3.45000	2.30000	0.91500
4501	GLOBAL	Cartesian	3.45000	2.30000	1.22000
4502	GLOBAL	Cartesian	3.45000	2.30000	1.52500
4503	GLOBAL	Cartesian	3.45000	2.30000	1.83000
4504	GLOBAL	Cartesian	3.45000	2.30000	2.13500
4505	GLOBAL	Cartesian	3.45000	2.30000	2.44000
4506	GLOBAL	Cartesian	2.87500	2.30000	0.30500
4507	GLOBAL	Cartesian	2.87500	2.30000	0.61000
4508	GLOBAL	Cartesian	2.87500	2.30000	0.91500
4509	GLOBAL	Cartesian	2.87500	2.30000	1.22000
4510	GLOBAL	Cartesian	2.87500	2.30000	1.52500
4511	GLOBAL	Cartesian	2.87500	2.30000	1.83000
4512	GLOBAL	Cartesian	2.87500	2.30000	2.13500
4513	GLOBAL	Cartesian	2.87500	2.30000	2.44000
4514	GLOBAL	Cartesian	2.30000	2.30000	0.30500
4515	GLOBAL	Cartesian	2.30000	2.30000	0.61000
4516	GLOBAL	Cartesian	2.30000	2.30000	0.91500
4517	GLOBAL	Cartesian	2.30000	2.30000	1.22000
4518	GLOBAL	Cartesian	2.30000	2.30000	1.52500
4519	GLOBAL	Cartesian	2.30000	2.30000	1.83000
4520	GLOBAL	Cartesian	2.30000	2.30000	2.13500
4521	GLOBAL	Cartesian	2.30000	2.30000	2.44000
4522	GLOBAL	Cartesian	1.72500	2.30000	0.30500
4523	GLOBAL	Cartesian	1.72500	2.30000	0.61000
4524	GLOBAL	Cartesian	1.72500	2.30000	0.91500
4525	GLOBAL	Cartesian	1.72500	2.30000	1.22000
4526	GLOBAL	Cartesian	1.72500	2.30000	1.52500
4527	GLOBAL	Cartesian	1.72500	2.30000	1.83000
4528	GLOBAL	Cartesian	1.72500	2.30000	2.13500
4529	GLOBAL	Cartesian	1.72500	2.30000	2.44000
4530	GLOBAL	Cartesian	1.15000	2.30000	0.30500
4531	GLOBAL	Cartesian	1.15000	2.30000	0.61000
4532	GLOBAL	Cartesian	1.15000	2.30000	0.91500
4533	GLOBAL	Cartesian	1.15000	2.30000	1.22000
4534	GLOBAL	Cartesian	1.15000	2.30000	1.52500
4535	GLOBAL	Cartesian	1.15000	2.30000	1.83000
4536	GLOBAL	Cartesian	1.15000	2.30000	2.13500
4537	GLOBAL	Cartesian	1.15000	2.30000	2.44000
4538	GLOBAL	Cartesian	0.57500	2.30000	0.30500
4539	GLOBAL	Cartesian	0.57500	2.30000	0.61000
4540	GLOBAL	Cartesian	0.57500	2.30000	0.91500
4541	GLOBAL	Cartesian	0.57500	2.30000	1.22000
4542	GLOBAL	Cartesian	0.57500	2.30000	1.52500
4543	GLOBAL	Cartesian	0.57500	2.30000	1.83000
4544	GLOBAL	Cartesian	0.57500	2.30000	2.13500
4545	GLOBAL	Cartesian	0.57500	2.30000	2.44000
4546	GLOBAL	Cartesian	0.57500	0.28750	2.44000
4547	GLOBAL	Cartesian	0.57500	0.57500	2.44000
4548	GLOBAL	Cartesian	0.57500	0.86250	2.44000
4549	GLOBAL	Cartesian	0.57500	1.15000	2.44000
4550	GLOBAL	Cartesian	0.57500	1.43750	2.44000
4551	GLOBAL	Cartesian	0.57500	1.72500	2.44000

Table 1: Joint Coordinates

Joint	CoordSys	CoordType	GlobalX m	GlobalY m	GlobalZ m
4552	GLOBAL	Cartesian	0.57500	2.01250	2.44000
4553	GLOBAL	Cartesian	1.15000	0.28750	2.44000
4554	GLOBAL	Cartesian	1.15000	0.57500	2.44000
4555	GLOBAL	Cartesian	1.15000	0.86250	2.44000
4556	GLOBAL	Cartesian	1.15000	1.15000	2.44000
4557	GLOBAL	Cartesian	1.15000	1.43750	2.44000
4559	GLOBAL	Cartesian	1.15000	2.01250	2.44000
4560	GLOBAL	Cartesian	1.72500	0.28750	2.44000
4561	GLOBAL	Cartesian	1.72500	0.57500	2.44000
4562	GLOBAL	Cartesian	1.72500	0.86250	2.44000
4563	GLOBAL	Cartesian	1.72500	1.15000	2.44000
4564	GLOBAL	Cartesian	1.72500	1.43750	2.44000
4565	GLOBAL	Cartesian	1.72500	1.72500	2.44000
4566	GLOBAL	Cartesian	1.72500	2.01250	2.44000
4567	GLOBAL	Cartesian	2.30000	0.28750	2.44000
4568	GLOBAL	Cartesian	2.30000	0.57500	2.44000
4569	GLOBAL	Cartesian	2.30000	0.86250	2.44000
4570	GLOBAL	Cartesian	2.30000	1.15000	2.44000
4571	GLOBAL	Cartesian	2.30000	1.43750	2.44000
4572	GLOBAL	Cartesian	2.30000	1.72500	2.44000
4573	GLOBAL	Cartesian	2.30000	2.01250	2.44000
4574	GLOBAL	Cartesian	2.87500	0.28750	2.44000
4575	GLOBAL	Cartesian	2.87500	0.57500	2.44000
4576	GLOBAL	Cartesian	2.87500	0.86250	2.44000
4577	GLOBAL	Cartesian	2.87500	1.15000	2.44000
4578	GLOBAL	Cartesian	2.87500	1.43750	2.44000
4579	GLOBAL	Cartesian	2.87500	1.72500	2.44000
4580	GLOBAL	Cartesian	2.87500	2.01250	2.44000
4581	GLOBAL	Cartesian	3.45000	0.28750	2.44000
4582	GLOBAL	Cartesian	3.45000	0.57500	2.44000
4583	GLOBAL	Cartesian	3.45000	0.86250	2.44000
4584	GLOBAL	Cartesian	3.45000	1.15000	2.44000
4585	GLOBAL	Cartesian	3.45000	1.43750	2.44000
4586	GLOBAL	Cartesian	3.45000	1.72500	2.44000
4587	GLOBAL	Cartesian	3.45000	2.01250	2.44000
4588	GLOBAL	Cartesian	4.02500	0.28750	2.44000
4589	GLOBAL	Cartesian	4.02500	0.57500	2.44000
4590	GLOBAL	Cartesian	4.02500	0.86250	2.44000
4591	GLOBAL	Cartesian	4.02500	1.15000	2.44000
4592	GLOBAL	Cartesian	4.02500	1.43750	2.44000
4593	GLOBAL	Cartesian	4.02500	1.72500	2.44000
4594	GLOBAL	Cartesian	4.02500	2.01250	2.44000

1.2. Element connectivity

Table 2: Connectivity - Area

Table 2: Connectivity - Area				
Area	Joint1	Joint2	Joint3	Joint4
8	5	10	11	12

Table 2: Connectivity - Area

Area	Joint1	Joint2	Joint3	Joint4
9	12	11	13	14
10	14	13	15	16
11	16	15	17	18
12	18	17	19	20
13	20	19	21	22
14	22	21	23	24
15	24	23	25	4
16	10	26	27	11
17	11	27	28	13
18	13	28	29	15
19	15	29	30	17
20	17	30	31	19
21	19	31	32	21
22	21	32	33	23
23	23	33	34	25
24	26	35	36	27
25	27	36	37	28
26	28	37	38	29
27	29	38	39	30
28	30	39	40	31
29	31	40	41	32
30	32	41	42	33
31	33	42	43	34
32	35	44	45	36
33	36	45	46	37
34	37	46	47	38
35	38	47	48	39
36	39	48	49	40
37	40	49	50	41
38	41	50	51	42
39	42	51	52	43
40	44	53	54	45
41	45	54	55	46
42	46	55	56	47
43	47	56	57	48
44	48	57	58	49
45	49	58	59	50
46	50	59	60	51
47	51	60	61	52
48	53	62	63	54
49	54	63	64	55
50	55	64	65	56
51	56	65	66	57
52	57	66	67	58
53	58	67	68	59
54	59	68	69	60
55	60	69	70	61
56	62	71	72	63
57	63	72	73	64
58	64	73	74	65
59	65	74	75	66
60	66	75	76	67
61	67	76	77	68
62	68	77	78	69

Table 2: Connectivity - Area

Area	Joint1	Joint2	Joint3	Joint4
63	69	78	79	70
64	71	3	80	72
65	72	80	81	73
66	73	81	82	74
67	74	82	83	75
68	75	83	84	76
69	76	84	85	77
70	77	85	86	78
71	78	86	2	79
72	4	25	87	88
73	88	87	89	90
74	90	89	91	92
75	92	91	93	94
76	94	93	95	96
77	96	95	97	98
78	98	97	99	100
79	100	99	101	9
80	25	34	102	87
81	87	102	103	89
82	89	103	104	91
83	91	104	105	93
84	93	105	106	95
85	95	106	107	97
86	97	107	108	99
87	99	108	109	101
88	34	43	110	102
89	102	110	111	103
90	103	111	112	104
91	104	112	113	105
92	105	113	114	106
93	106	114	115	107
94	107	115	116	108
95	108	116	117	109
96	43	52	118	110
97	110	118	119	111
98	111	119	120	112
99	112	120	121	113
100	113	121	122	114
101	114	122	123	115
102	115	123	124	116
103	116	124	125	117
104	52	61	126	118
105	118	126	127	119
106	119	127	128	120
107	120	128	129	121
108	121	129	130	122
109	122	130	131	123
110	123	131	132	124
111	124	132	133	125
112	61	70	134	126
113	126	134	135	127
114	127	135	136	128
115	128	136	137	129
116	129	137	138	130

Table 2: Connectivity - Area

Area	Joint1	Joint2	Joint3	Joint4
117	130	138	139	131
118	131	139	140	132
119	132	140	141	133
120	70	79	142	134
121	134	142	143	135
122	135	143	144	136
123	136	144	145	137
124	137	145	146	138
125	138	146	147	139
126	139	147	148	140
127	140	148	149	141
128	79	2	150	142
129	142	150	151	143
130	143	151	152	144
131	144	152	153	145
132	145	153	154	146
133	146	154	155	147
134	147	155	156	148
135	148	156	6	149
136	2	86	157	150
137	150	157	158	151
138	151	158	159	152
139	152	159	160	153
140	153	160	161	154
141	154	161	162	155
142	155	162	163	156
143	156	163	164	6
144	86	85	165	157
145	157	165	166	158
146	158	166	167	159
147	159	167	168	160
148	160	168	169	161
149	161	169	170	162
150	162	170	171	163
151	163	171	172	164
152	85	84	173	165
153	165	173	174	166
154	166	174	175	167
155	167	175	176	168
156	168	176	177	169
157	169	177	178	170
158	170	178	179	171
159	171	179	180	172
160	84	83	181	173
161	173	181	182	174
162	174	182	183	175
163	175	183	184	176
164	176	184	185	177
165	177	185	186	178
166	178	186	187	179
167	179	187	188	180
168	83	82	189	181
169	181	189	190	182
170	182	190	191	183

Table 2: Connectivity - Area

Area	Joint1	Joint2	Joint3	Joint4
171	183	191	192	184
172	184	192	193	185
173	185	193	194	186
174	186	194	195	187
175	187	195	196	188
176	82	81	197	189
177	189	197	198	190
178	190	198	199	191
179	191	199	200	192
180	192	200	201	193
181	193	201	202	194
182	194	202	203	195
183	195	203	204	196
184	81	80	205	197
185	197	205	206	198
186	198	206	207	199
187	199	207	208	200
188	200	208	209	201
189	201	209	210	202
190	202	210	211	203
191	203	211	212	204
192	80	3	213	205
193	205	213	214	206
194	206	214	215	207
195	207	215	216	208
196	208	216	217	209
197	209	217	218	210
198	210	218	219	211
199	211	219	7	212
4360	3	71	4427	213
4361	213	4427	4428	214
4362	214	4428	4429	215
4363	215	4429	4430	216
4364	216	4430	4431	217
4365	217	4431	4432	218
4366	218	4432	4433	219
4367	219	4433	4434	7
4368	71	62	4435	4427
4369	4427	4435	4436	4428
4370	4428	4436	4437	4429
4371	4429	4437	4438	4430
4372	4430	4438	4439	4431
4373	4431	4439	4440	4432
4374	4432	4440	4441	4433
4375	4433	4441	4442	4434
4376	62	53	4443	4435
4377	4435	4443	4444	4436
4378	4436	4444	4445	4437
4379	4437	4445	4446	4438
4380	4438	4446	4447	4439
4381	4439	4447	4448	4440
4382	4440	4448	4449	4441
4383	4441	4449	4450	4442
4384	53	44	4451	4443

Table 2: Connectivity - Area

Area	Joint1	Joint2	Joint3	Joint4
4385	4443	4451	4452	4444
4386	4444	4452	4453	4445
4387	4445	4453	4454	4446
4388	4446	4454	4455	4447
4389	4447	4455	4456	4448
4390	4448	4456	4457	4449
4391	4449	4457	4458	4450
4392	44	35	4459	4451
4393	4451	4459	4460	4452
4394	4452	4460	4461	4453
4395	4453	4461	4462	4454
4396	4454	4462	4463	4455
4397	4455	4463	4464	4456
4398	4456	4464	4465	4457
4399	4457	4465	4466	4458
4400	35	26	4467	4459
4401	4459	4467	4468	4460
4402	4460	4468	4469	4461
4403	4461	4469	4470	4462
4404	4462	4470	4471	4463
4405	4463	4471	4472	4464
4406	4464	4472	4473	4465
4407	4465	4473	4474	4466
4408	26	10	4475	4467
4409	4467	4475	4476	4468
4410	4468	4476	4477	4469
4411	4469	4477	4478	4470
4412	4470	4478	4479	4471
4413	4471	4479	4480	4472
4414	4472	4480	4481	4473
4415	4473	4481	4482	4474
4416	10	5	4483	4475
4417	4475	4483	4484	4476
4418	4476	4484	4485	4477
4419	4477	4485	4486	4478
4420	4478	4486	4487	4479
4421	4479	4487	4488	4480
4422	4480	4488	4489	4481
4423	4481	4489	8	4482
4424	5	12	4490	4483
4425	4483	4490	4491	4484
4426	4484	4491	4492	4485
4427	4485	4492	4493	4486
4428	4486	4493	4494	4487
4429	4487	4494	4495	4488
4430	4488	4495	4496	4489
4431	4489	4496	4497	8
4432	12	14	4498	4490
4433	4490	4498	4499	4491
4434	4491	4499	4500	4492
4435	4492	4500	4501	4493
4436	4493	4501	4502	4494
4437	4494	4502	4503	4495
4438	4495	4503	4504	4496

Table 2: Connectivity - Area

Area	Joint1	Joint2	Joint3	Joint4
4439	4496	4504	4505	4497
4440	14	16	4506	4498
4441	4498	4506	4507	4499
4442	4499	4507	4508	4500
4443	4500	4508	4509	4501
4444	4501	4509	4510	4502
4445	4502	4510	4511	4503
4446	4503	4511	4512	4504
4447	4504	4512	4513	4505
4448	16	18	4514	4506
4449	4506	4514	4515	4507
4450	4507	4515	4516	4508
4451	4508	4516	4517	4509
4452	4509	4517	4518	4510
4453	4510	4518	4519	4511
4454	4511	4519	4520	4512
4455	4512	4520	4521	4513
4456	18	20	4522	4514
4457	4514	4522	4523	4515
4458	4515	4523	4524	4516
4459	4516	4524	4525	4517
4460	4517	4525	4526	4518
4461	4518	4526	4527	4519
4462	4519	4527	4528	4520
4463	4520	4528	4529	4521
4464	20	22	4530	4522
4465	4522	4530	4531	4523
4466	4523	4531	4532	4524
4467	4524	4532	4533	4525
4468	4525	4533	4534	4526
4469	4526	4534	4535	4527
4470	4527	4535	4536	4528
4471	4528	4536	4537	4529
4472	22	24	4538	4530
4473	4530	4538	4539	4531
4474	4531	4539	4540	4532
4475	4532	4540	4541	4533
4476	4533	4541	4542	4534
4477	4534	4542	4543	4535
4478	4535	4543	4544	4536
4479	4536	4544	4545	4537
4480	24	4	88	4538
4481	4538	88	90	4539
4482	4539	90	92	4540
4483	4540	92	94	4541
4484	4541	94	96	4542
4485	4542	96	98	4543
4486	4543	98	100	4544
4487	4544	100	9	4545
4488	6	164	4546	149
4489	149	4546	4547	141
4490	141	4547	4548	133
4491	133	4548	4549	125
4492	125	4549	4550	117

Table 2: Connectivity - Area

Area	Joint1	Joint2	Joint3	Joint4
4493	117	4550	4551	109
4494	109	4551	4552	101
4495	101	4552	4545	9
4496	164	172	4553	4546
4497	4546	4553	4554	4547
4498	4547	4554	4555	4548
4499	4548	4555	4556	4549
4500	4549	4556	4557	4550
4503	4552	4559	4537	4545
4504	172	180	4560	4553
4505	4553	4560	4561	4554
4506	4554	4561	4562	4555
4507	4555	4562	4563	4556
4508	4556	4563	4564	4557
4511	4559	4566	4529	4537
4512	180	188	4567	4560
4513	4560	4567	4568	4561
4514	4561	4568	4569	4562
4515	4562	4569	4570	4563
4516	4563	4570	4571	4564
4517	4564	4571	4572	4565
4518	4565	4572	4573	4566
4519	4566	4573	4521	4529
4520	188	196	4574	4567
4521	4567	4574	4575	4568
4522	4568	4575	4576	4569
4523	4569	4576	4577	4570
4524	4570	4577	4578	4571
4525	4571	4578	4579	4572
4526	4572	4579	4580	4573
4527	4573	4580	4513	4521
4528	196	204	4581	4574
4529	4574	4581	4582	4575
4530	4575	4582	4583	4576
4531	4576	4583	4584	4577
4532	4577	4584	4585	4578
4533	4578	4585	4586	4579
4534	4579	4586	4587	4580
4535	4580	4587	4505	4513
4536	204	212	4588	4581
4537	4581	4588	4589	4582
4538	4582	4589	4590	4583
4539	4583	4590	4591	4584
4540	4584	4591	4592	4585
4541	4585	4592	4593	4586
4542	4586	4593	4594	4587
4543	4587	4594	4497	4505
4544	212	7	4434	4588
4545	4588	4434	4442	4589
4546	4589	4442	4450	4590
4547	4590	4450	4458	4591
4548	4591	4458	4466	4592
4549	4592	4466	4474	4593
4550	4593	4474	4482	4594

Table 2: Connectivity - Area

Area	Joint1	Joint2	Joint3	Joint4
4551	4594	4482	8	4497

Table 3: Area Section Assignments

Table 3: Area Section Assignments

Area	Section	MatProp
8	ASEC1	Default
9	ASEC1	Default
10	ASEC1	Default
11	ASEC1	Default
12	ASEC1	Default
13	ASEC1	Default
14	ASEC1	Default
15	ASEC1	Default
16	ASEC1	Default
17	ASEC1	Default
18	ASEC1	Default
19	ASEC1	Default
20	ASEC1	Default
21	ASEC1	Default
22	ASEC1	Default
23	ASEC1	Default
24	ASEC1	Default
25	ASEC1	Default
26	ASEC1	Default
27	ASEC1	Default
28	ASEC1	Default
29	ASEC1	Default
30	ASEC1	Default
31	ASEC1	Default
32	ASEC1	Default
33	ASEC1	Default
34	ASEC1	Default
35	ASEC1	Default
36	ASEC1	Default
37	ASEC1	Default
38	ASEC1	Default
39	ASEC1	Default
40	ASEC1	Default
41	ASEC1	Default
42	ASEC1	Default
43	ASEC1	Default
44	ASEC1	Default
45	ASEC1	Default
46	ASEC1	Default
47	ASEC1	Default
48	ASEC1	Default
49	ASEC1	Default
50	ASEC1	Default
51	ASEC1	Default
52	ASEC1	Default

Table 3: Area Section Assignments

Area	Section	MatProp
53	ASEC1	Default
54	ASEC1	Default
55	ASEC1	Default
56	ASEC1	Default
57	ASEC1	Default
58	ASEC1	Default
59	ASEC1	Default
60	ASEC1	Default
61	ASEC1	Default
62	ASEC1	Default
63	ASEC1	Default
64	ASEC1	Default
65	ASEC1	Default
66	ASEC1	Default
67	ASEC1	Default
68	ASEC1	Default
69	ASEC1	Default
70	ASEC1	Default
71	ASEC1	Default
72	ASEC1	Default
73	ASEC1	Default
74	ASEC1	Default
75	ASEC1	Default
76	ASEC1	Default
77	ASEC1	Default
78	ASEC1	Default
79	ASEC1	Default
80	ASEC1	Default
81	ASEC1	Default
82	ASEC1	Default
83	ASEC1	Default
84	ASEC1	Default
85	ASEC1	Default
86	ASEC1	Default
87	ASEC1	Default
88	ASEC1	Default
89	ASEC1	Default
90	ASEC1	Default
91	ASEC1	Default
92	ASEC1	Default
93	ASEC1	Default
94	ASEC1	Default
95	ASEC1	Default
96	ASEC1	Default
97	ASEC1	Default
98	ASEC1	Default
99	ASEC1	Default
100	ASEC1	Default
101	ASEC1	Default
102	ASEC1	Default
103	ASEC1	Default
104	ASEC1	Default
105	ASEC1	Default
106	ASEC1	Default

Table 3: Area Section Assignments

Area	Section	MatProp
107	ASEC1	Default
108	ASEC1	Default
109	ASEC1	Default
110	ASEC1	Default
111	ASEC1	Default
112	ASEC1	Default
113	ASEC1	Default
114	ASEC1	Default
115	ASEC1	Default
116	ASEC1	Default
117	ASEC1	Default
118	ASEC1	Default
119	ASEC1	Default
120	ASEC1	Default
121	ASEC1	Default
122	ASEC1	Default
123	ASEC1	Default
124	ASEC1	Default
125	ASEC1	Default
126	ASEC1	Default
127	ASEC1	Default
128	ASEC1	Default
129	ASEC1	Default
130	ASEC1	Default
131	ASEC1	Default
132	ASEC1	Default
133	ASEC1	Default
134	ASEC1	Default
135	ASEC1	Default
136	ASEC1	Default
137	ASEC1	Default
138	ASEC1	Default
139	ASEC1	Default
140	ASEC1	Default
141	ASEC1	Default
142	ASEC1	Default
143	ASEC1	Default
144	ASEC1	Default
145	ASEC1	Default
146	ASEC1	Default
147	ASEC1	Default
148	ASEC1	Default
149	ASEC1	Default
150	ASEC1	Default
151	ASEC1	Default
152	ASEC1	Default
153	ASEC1	Default
154	ASEC1	Default
155	ASEC1	Default
156	ASEC1	Default
157	ASEC1	Default
158	ASEC1	Default
159	ASEC1	Default
160	ASEC1	Default

Table 3: Area Section Assignments

Area	Section	MatProp
161	ASEC1	Default
162	ASEC1	Default
163	ASEC1	Default
164	ASEC1	Default
165	ASEC1	Default
166	ASEC1	Default
167	ASEC1	Default
168	ASEC1	Default
169	ASEC1	Default
170	ASEC1	Default
171	ASEC1	Default
172	ASEC1	Default
173	ASEC1	Default
174	ASEC1	Default
175	ASEC1	Default
176	ASEC1	Default
177	ASEC1	Default
178	ASEC1	Default
179	ASEC1	Default
180	ASEC1	Default
181	ASEC1	Default
182	ASEC1	Default
183	ASEC1	Default
184	ASEC1	Default
185	ASEC1	Default
186	ASEC1	Default
187	ASEC1	Default
188	ASEC1	Default
189	ASEC1	Default
190	ASEC1	Default
191	ASEC1	Default
192	ASEC1	Default
193	ASEC1	Default
194	ASEC1	Default
195	ASEC1	Default
196	ASEC1	Default
197	ASEC1	Default
198	ASEC1	Default
199	ASEC1	Default
4360	ASEC1	Default
4361	ASEC1	Default
4362	ASEC1	Default
4363	ASEC1	Default
4364	ASEC1	Default
4365	ASEC1	Default
4366	ASEC1	Default
4367	ASEC1	Default
4368	ASEC1	Default
4369	ASEC1	Default
4370	ASEC1	Default
4371	ASEC1	Default
4372	ASEC1	Default
4373	ASEC1	Default
4374	ASEC1	Default

Table 3: Area Section Assignments

Area	Section	MatProp
4375	ASEC1	Default
4376	ASEC1	Default
4377	ASEC1	Default
4378	ASEC1	Default
4379	ASEC1	Default
4380	ASEC1	Default
4381	ASEC1	Default
4382	ASEC1	Default
4383	ASEC1	Default
4384	ASEC1	Default
4385	ASEC1	Default
4386	ASEC1	Default
4387	ASEC1	Default
4388	ASEC1	Default
4389	ASEC1	Default
4390	ASEC1	Default
4391	ASEC1	Default
4392	ASEC1	Default
4393	ASEC1	Default
4394	ASEC1	Default
4395	ASEC1	Default
4396	ASEC1	Default
4397	ASEC1	Default
4398	ASEC1	Default
4399	ASEC1	Default
4400	ASEC1	Default
4401	ASEC1	Default
4402	ASEC1	Default
4403	ASEC1	Default
4404	ASEC1	Default
4405	ASEC1	Default
4406	ASEC1	Default
4407	ASEC1	Default
4408	ASEC1	Default
4409	ASEC1	Default
4410	ASEC1	Default
4411	ASEC1	Default
4412	ASEC1	Default
4413	ASEC1	Default
4414	ASEC1	Default
4415	ASEC1	Default
4416	ASEC1	Default
4417	ASEC1	Default
4418	ASEC1	Default
4419	ASEC1	Default
4420	ASEC1	Default
4421	ASEC1	Default
4422	ASEC1	Default
4423	ASEC1	Default
4424	ASEC1	Default
4425	ASEC1	Default
4426	ASEC1	Default
4427	ASEC1	Default
4428	ASEC1	Default

Table 3: Area Section Assignments

Area	Section	MatProp
4429	ASEC1	Default
4430	ASEC1	Default
4431	ASEC1	Default
4432	ASEC1	Default
4433	ASEC1	Default
4434	ASEC1	Default
4435	ASEC1	Default
4436	ASEC1	Default
4437	ASEC1	Default
4438	ASEC1	Default
4439	ASEC1	Default
4440	ASEC1	Default
4441	ASEC1	Default
4442	ASEC1	Default
4443	ASEC1	Default
4444	ASEC1	Default
4445	ASEC1	Default
4446	ASEC1	Default
4447	ASEC1	Default
4448	ASEC1	Default
4449	ASEC1	Default
4450	ASEC1	Default
4451	ASEC1	Default
4452	ASEC1	Default
4453	ASEC1	Default
4454	ASEC1	Default
4455	ASEC1	Default
4456	ASEC1	Default
4457	ASEC1	Default
4458	ASEC1	Default
4459	ASEC1	Default
4460	ASEC1	Default
4461	ASEC1	Default
4462	ASEC1	Default
4463	ASEC1	Default
4464	ASEC1	Default
4465	ASEC1	Default
4466	ASEC1	Default
4467	ASEC1	Default
4468	ASEC1	Default
4469	ASEC1	Default
4470	ASEC1	Default
4471	ASEC1	Default
4472	ASEC1	Default
4473	ASEC1	Default
4474	ASEC1	Default
4475	ASEC1	Default
4476	ASEC1	Default
4477	ASEC1	Default
4478	ASEC1	Default
4479	ASEC1	Default
4480	ASEC1	Default
4481	ASEC1	Default
4482	ASEC1	Default

Table 3: Area Section Assignments

Area	Section	MatProp
4483	ASEC1	Default
4484	ASEC1	Default
4485	ASEC1	Default
4486	ASEC1	Default
4487	ASEC1	Default
4488	ASEC1	Default
4489	ASEC1	Default
4490	ASEC1	Default
4491	ASEC1	Default
4492	ASEC1	Default
4493	ASEC1	Default
4494	ASEC1	Default
4495	ASEC1	Default
4496	ASEC1	Default
4497	ASEC1	Default
4498	ASEC1	Default
4499	ASEC1	Default
4500	ASEC1	Default
4503	ASEC1	Default
4504	ASEC1	Default
4505	ASEC1	Default
4506	ASEC1	Default
4507	ASEC1	Default
4508	ASEC1	Default
4511	ASEC1	Default
4512	ASEC1	Default
4513	ASEC1	Default
4514	ASEC1	Default
4515	ASEC1	Default
4516	ASEC1	Default
4517	ASEC1	Default
4518	ASEC1	Default
4519	ASEC1	Default
4520	ASEC1	Default
4521	ASEC1	Default
4522	ASEC1	Default
4523	ASEC1	Default
4524	ASEC1	Default
4525	ASEC1	Default
4526	ASEC1	Default
4527	ASEC1	Default
4528	ASEC1	Default
4529	ASEC1	Default
4530	ASEC1	Default
4531	ASEC1	Default
4532	ASEC1	Default
4533	ASEC1	Default
4534	ASEC1	Default
4535	ASEC1	Default
4536	ASEC1	Default
4537	ASEC1	Default
4538	ASEC1	Default
4539	ASEC1	Default
4540	ASEC1	Default

Table 3: Area Section Assignments

Area	Section	MatProp
4541	ASEC1	Default
4542	ASEC1	Default
4543	ASEC1	Default
4544	ASEC1	Default
4545	ASEC1	Default
4546	ASEC1	Default
4547	ASEC1	Default
4548	ASEC1	Default
4549	ASEC1	Default
4550	ASEC1	Default
4551	ASEC1	Default

2. Material properties

This section provides material property information for materials used in the model.

Table 4: Material Properties 02 - Basic Mechanical Properties**Table 4: Material Properties 02 - Basic Mechanical Properties**

Material	UnitWeight Tonf/m3	UnitMass Tonf-s2/m4	E1 Tonf/m2	G12 Tonf/m2	U12	A1 1/C
4000Psi	2.4028E+00	2.4501E-01	2487006.2 3	1036252.6 0	0.200000	9.9000E-06
A572Gr50	7.8490E+00	8.0038E-01	20389019. 16	7841930.4 5	0.300000	1.1700E-05
A615Gr60	7.8490E+00	8.0038E-01	20389019. 16			1.1700E-05

Table 5: Material Properties 03a - Steel Data**Table 5: Material Properties 03a - Steel Data**

Material	Fy Tonf/m2	Fu Tonf/m2	FinalSlope
A572Gr50	35153.48	45699.53	-0.100000

Table 6: Material Properties 03b - Concrete Data**Table 6: Material Properties 03b - Concrete Data**

Material	Fc Tonf/m2	FinalSlope
4000Psi	2812.28	-0.100000

Table 7: Material Properties 03e - Rebar Data

Table 7: Material Properties 03e - Rebar Data

Material	Fy Tonf/m2	Fu Tonf/m2	FinalSlope
A615Gr60	42184.18	63276.27	-0.100000

3. Section properties

This section provides section property information for objects used in the model.

3.1. Frames

Table 8: Frame Section Properties 01 - General, Part 1 of 4

Table 8: Frame Section Properties 01 - General, Part 1 of 4

SectionName	Material	Shape	t3 m	t2 m	Area m2	TorsConst m4	I33 m4	I22 m4
COL 45X45	4000Psi	Rectangular	0.450000	0.450000	0.202500	0.005775	0.003417	0.003417
COL 50X50	4000Psi	Rectangular	0.500000	0.500000	0.250000	0.008802	0.005208	0.005208
COL 70X45	4000Psi	Rectangular	0.450000	0.700000	0.315000	0.012774	0.005316	0.012863
VIG 45X65	4000Psi	Rectangular	0.650000	0.450000	0.292500	0.011297	0.010298	0.004936
VIG 5X5	4000Psi	Rectangular	0.050000	0.050000	0.002500	8.802E-07	5.208E-07	5.208E-07

Table 8: Frame Section Properties 01 - General, Part 2 of 4

Table 8: Frame Section Properties 01 - General, Part 2 of 4

SectionName	AS2 m2	AS3 m2
COL 45X45	0.168750	0.168750
COL 50X50	0.208333	0.208333
COL 70X45	0.262500	0.262500
VIG 45X65	0.243750	0.243750
VIG 5X5	0.002083	0.002083

Table 8: Frame Section Properties 01 - General, Part 3 of 4

Table 8: Frame Section Properties 01 - General, Part 3 of 4

SectionName	S33 m3	S22 m3	Z33 m3	Z22 m3	R33 m	R22 m
COL 45X45	0.015188	0.015188	0.022781	0.022781	0.129904	0.129904
COL 50X50	0.020833	0.020833	0.031250	0.031250	0.144338	0.144338
COL 70X45	0.023625	0.036750	0.035438	0.055125	0.129904	0.202073
VIG 45X65	0.031688	0.021938	0.047531	0.032906	0.187639	0.129904
VIG 5X5	0.000021	0.000021	0.000031	0.000031	0.014434	0.014434

Table 8: Frame Section Properties 01 - General, Part 4 of 4

Table 8: Frame Section Properties 01 - General, Part 4 of 4

SectionName	AMod	A2Mod	A3Mod	JMod	I2Mod	I3Mod	MMod	WMod
COL 45X45	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
COL 50X50	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
COL 70X45	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
VIG 45X65	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
VIG 5X5	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

Table 9: Frame Section Properties 02 - Concrete Column, Part 1 of 2

Table 9: Frame Section Properties 02 - Concrete Column, Part 1 of 2

SectionName	RebarMatL	RebarMatC	ReinfConfig	LatReinf	Cover m	NumBars3D ir	NumBars2D ir
COL 45X45	A615Gr60	A615Gr60	Rectangular	Ties	0.040000	4	4
COL 50X50	A615Gr60	A615Gr60	Rectangular	Ties	0.040000	4	4
COL 70X45	A615Gr60	A615Gr60	Rectangular	Ties	0.040000	6	4

Table 9: Frame Section Properties 02 - Concrete Column, Part 2 of 2

Table 9: Frame Section Properties 02 - Concrete Column, Part 2 of 2

SectionName	BarSizeL	BarSizeC	SpacingC m	NumCBars2	NumCBars3
COL 45X45	#7	#3	0.100000	3	3
COL 50X50	#7	#3	0.100000	3	3
COL 70X45	#7	#3	0.100000	3	3

Table 10: Frame Section Properties 03 - Concrete Beam, Part 1 of 2

Table 10: Frame Section Properties 03 - Concrete Beam, Part 1 of 2

SectionName	RebarMatL	RebarMatC	TopCover m	BotCover m
VIG 45X65	A615Gr60	A615Gr60	0.050000	0.050000
VIG 5X5	A615Gr60	A615Gr60	0.050000	0.050000

Table 10: Frame Section Properties 03 - Concrete Beam, Part 2 of 2

Table 10: Frame Section Properties 03 - Concrete Beam, Part 2 of 2

SectionName	TopLeftArea m2	TopRightArea m2	BotLeftArea m2	BotRightArea m2
VIG 45X65	0.000000	0.000000	0.000000	0.000000
VIG 5X5	0.000000	0.000000	0.000000	0.000000

3.2. Areas

Table 11: Area Section Properties, Part 1 of 3

Table 11: Area Section Properties, Part 1 of 3								
Section	Material	AreaType	Type	DrillDOF	Thickness m	BendThick m	F11Mod	
ASEC1	A572Gr50	Shell	Shell-Thin	Yes	0.250000	0.250000	1.000000	
placa 0.18	4000Psi	Shell	Shell-Thin	Yes	0.180000	0.180000	1.000000	
PLACA RAMPA	4000Psi	Shell	Shell-Thin	Yes	0.150000	0.150000	1.000000	
PLACA TANQUE	4000Psi	Shell	Shell-Thin	Yes	0.120000	0.120000	1.000000	
PLACA TANQUE AGUA	4000Psi	Shell	Shell-Thin	Yes	0.250000	0.250000	1.000000	

Table 11: Area Section Properties, Part 2 of 3

Table 11: Area Section Properties, Part 2 of 3								
Section	F22Mod	F12Mod	M11Mod	M22Mod	M12Mod	V13Mod	V23Mod	MMod
ASEC1	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
placa 0.18	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
PLACA RAMPA	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
PLACA TANQUE	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
PLACA TANQUE AGUA	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

Table 11: Area Section Properties, Part 3 of 3

Table 11: Area Section Properties, Part 3 of 3	
Section	WMod
ASEC1	1.000000
placa 0.18	1.000000
PLACA RAMPA	1.000000
PLACA TANQUE	1.000000
PLACA TANQUE AGUA	1.000000

3.3. Solids

Table 12: Solid Property Definitions

Table 12: Solid Property Definitions				
SolidProp	Material	MatAngleA Degrees	MatAngleB Degrees	MatAngleC Degrees
SOLID1	4000Psi	0.000	0.000	0.000

4. Load patterns

This section provides loading information as applied to the model.

4.1. Definitions

Table 13: Load Pattern Definitions

LoadPat	DesignType	SelfWtMult	AutoLoad
DEAD	DEAD	1.000000	
VIVA	LIVE	0.000000	
PRESION TIERRA	OTHER	0.000000	
PRESION AGUA	OTHER	0.000000	
NIVEL FREATICO	OTHER	0.000000	

5. Load cases

This section provides load case information.

5.1. Definitions

Table 14: Load Case Definitions

Case	Type	InitialCond	ModalCase	BaseCase	DesActOpt	DesignAct
DEAD	LinStatic	Zero			Prog Det	Non-Composite
MODAL	LinModal	Zero			Prog Det	Other
PERMANENTE	LinStatic	Zero			Prog Det	Other
VIVA	LinStatic	Zero			Prog Det	Short-Term Composite
VIENTO	LinStatic	Zero			Prog Det	Other
VIVA CUB	LinStatic	Zero			Prog Det	Other
SPECX	LinRespSpec		MODAL		Prog Det	Short-Term Composite
SPECY	LinRespSpec		MODAL		Prog Det	Short-Term Composite
SPECX-UDD	LinRespSpec		MODAL		Prog Det	Short-Term Composite
SPECY-UDD	LinRespSpec		MODAL		Prog Det	Short-Term Composite
TANQUES	LinStatic	Zero			Prog Det	Other
PRESION TIERRA	LinStatic	Zero			Prog Det	Other
PRESION AGUA	LinStatic	Zero			Prog Det	Other
NF	LinStatic	Zero			Prog Det	Other
NIVEL FREATICO	LinStatic	Zero			Prog Det	Other

5.2. Static case load assignments

Table 15: Case - Static 1 - Load Assignments

Table 15: Case - Static 1 - Load Assignments

Case	LoadType	LoadName	LoadSF
DEAD	Load pattern	DEAD	1.000000
VIVA	Load pattern	VIVA	1.000000
PRESION TIERRA	Load pattern	PRESION TIERRA	1.000000
PRESION AGUA	Load pattern	PRESION AGUA	1.000000
NIVEL FREATICO	Load pattern	NIVEL FREATICO	1.000000

5.3. Response spectrum case load assignments

Table 16: Case - Response Spectrum 1 - General

Table 16: Case - Response Spectrum 1 - General

Case	ModalCombo	GMCf1 Cyc/sec	GMCf2 Cyc/sec	PerRigid	DirCombo	DampingType	ConstDamp
SPECX	CQC	1.0000E+0 0	0.0000E+0 0	SRSS	SRSS	Constant	0.0500
SPECY	CQC	1.0000E+0 0	0.0000E+0 0	SRSS	SRSS	Constant	0.0500
SPECX-UDD	CQC	1.0000E+0 0	0.0000E+0 0	SRSS	SRSS	Constant	0.0200
SPECY-UDD	CQC	1.0000E+0 0	0.0000E+0 0	SRSS	SRSS	Constant	0.0200

Table 17: Case - Response Spectrum 2 - Load Assignments

Table 17: Case - Response Spectrum 2 - Load Assignments

Case	LoadType	LoadName	CoordSys	Function	Angle Degrees	TransAccSF m/sec2
SPECX	Acceleration	U1	GLOBAL	NSR10	0.000	10.98720
SPECX	Acceleration	U2	GLOBAL	NSR10	0.000	3.29616
SPECY	Acceleration	U2	GLOBAL	NSR10	0.000	11.87010
SPECY	Acceleration	U1	GLOBAL	NSR10	0.000	3.56100
SPECX-UDD	Acceleration	U1	GLOBAL	UDD	0.000	10.98720
SPECX-UDD	Acceleration	U2	GLOBAL	UDD	0.000	3.29620
SPECY-UDD	Acceleration	U2	GLOBAL	UDD	0.000	11.87010
SPECY-UDD	Acceleration	U1	GLOBAL	UDD	0.000	3.56103

Table 18: Function - Response Spectrum - User

Table 18: Function - Response Spectrum - User

Name	Period Sec	Accel	FuncDamp
UNIFRS	0.000000	1.000000	0.050000
UNIFRS	1.000000	1.000000	
NSR10	0.000000	1.133000	0.050000
NSR10	0.993100	1.133000	
NSR10	1.200000	0.937500	
NSR10	1.600000	0.703100	
NSR10	2.000000	0.562500	
NSR10	2.400000	0.468800	
NSR10	2.800000	0.401800	
NSR10	3.200000	0.351600	
NSR10	3.600000	0.312500	
NSR10	4.000000	0.281300	
NSR10	4.400000	0.255700	
NSR10	4.800000	0.234400	
NSR10	5.200000	0.216300	
NSR10	5.600000	0.200900	
UDD	0.000000	0.080000	0.020000
UDD	0.100000	0.144000	
UDD	0.250000	0.240000	
UDD	1.625000	0.240000	
UDD	2.200000	0.177000	
UDD	2.800000	0.139000	
UDD	3.600000	0.108000	
UDD	4.400000	0.089000	
UDD	5.200000	0.075000	
UDD	6.000000	0.065000	
UDD	7.800000	0.050100	

6. Load combinations

This section provides load combination information.

Table 19: Combination Definitions

Table 19: Combination Definitions

ComboName	ComboType	CaseName	ScaleFactor
COMB1(ELU)	Linear Add	DEAD	1.400000
COMB1(ELU)		PERMANENTE	1.400000
COMB2(ELU)	Linear Add	DEAD	1.200000
COMB2(ELU)		VIVA	1.600000
COMB3(ELU)	Linear Add	DEAD	1.200000
COMB3(ELU)		PRESION AGUA	1.700000
COMB3(ELU)		PRESION TIERRA	1.600000
COMB3(ELU)		NIVEL FREATICO	1.700000
SERV	Linear Add	DEAD	1.000000
SERV		PRESION AGUA	1.000000
SERV		VIVA	1.000000

Table 19: Combination Definitions

ComboName	ComboType	CaseName	ScaleFactor
SERV		PRESION TIERRA	1.000000
SERV		NIVEL FREATICO	1.000000