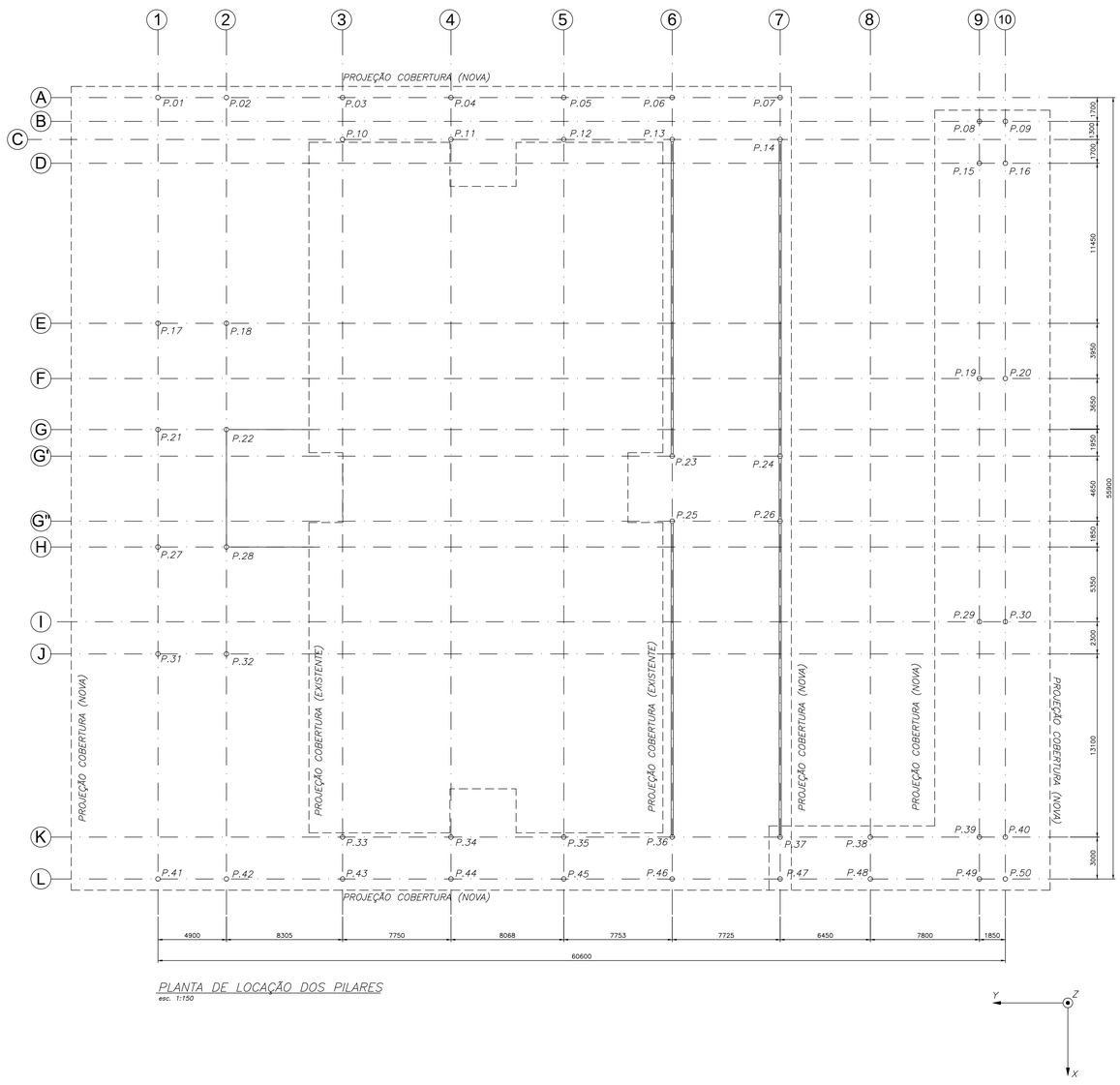
REAÇÕES para carregamento 1 (Unids: kg, kg*metro)						
PESO PRÓPRIO						
PILAR	Rx	Rz	Ry	Mx	Mz	My
1	-277,0	1.962,0	255,0	281,0	-117,0	1.524,0
2	-111,0	639,0	-233,0	-597,0	-166,0	960,0
3	-146,0	339,0	-62,0	-284,0	-121,0	468,0
4	2,0	581,0	-74,0	-302,0	-114,0	-7,0
5	3,0	584,0	-64,0	-279,0	-105,0	-10,0
6	-112,0	122,0	-75,0	-293,0	-103,0	249,0
7	-108,0	102,0	-23,0	-201,0	-92,0	260,0
8	-84,0	418,0	156,0	237,0	-9,0	217,0
9	-82,0	390,0	-158,0	-261,0	14,0	210,0
10	-202,0	1.163,0	142,0	261,0	-107,0	569,0
11	-7,0	446,0	26,0	59,0	-94,0	8,0
12	-5,0	445,0	29,0	55,0	-85,0	3,0
13	367,0	1.900,0	-62,0	-99,0	-53,0	-550,0
14	488,0	1.811,0	115,0	191,0	-73,0	-704,0
15	90,0	1.391,0	219,0	354,0	4,0	-77,0
16	89,0	1.345,0	-224,0	-389,0	-2,0	-79,0
17	316,0	7.483,0	161,0	264,0	8,0	-548,0
18	263,0	6.840,0	-132,0	-262,0	9,0	-475,0
19	-309,0	4.513,0	116,0	166,0	5,0	473,0
20	-304,0	4.272,0	-108,0	-175,0	-1,0	463,0
21	37,0	810,0	117,0	261,0	-38,0	-132,0
22	38,0	930,0	-127,0	-342,0	41,0	-134,0
23	-268,0	1.158,0	-95,0	-144,0	-74,0	624,0
24	-271,0	1.593,0	92,0	201,0	24,0	512,0
25	324,0	1.211,0	-96,0	-150,0	33,0	-568,0
26	160,0	1.493,0	95,0	213,0	-31,0	-256,0
27	0,0	945,0	102,0	229,0	39,0	-9,0
28	-4,0	1.049,0	-103,0	-294,0	-33,0	4,0
29	93,0	4.466,0	123,0	244,0	-18,0	-247,0
30	99,0	4.703,0	-75,0	-76,0	7,0	-253,0
31	-175,0	7.377,0	115,0	211,0	-6,0	261,0
32	-141,0	6.778,0	-100,0	-233,0	-9,0	213,0
33	174,0	1.285,0	97,0	233,0	77,0	-636,0
34	9,0	525,0	12,0	37,0	68,0	-23,0
35	1,0	513,0	15,0	37,0	57,0	7,0
36	-288,0	1.811,0	-56,0	-124,0	30,0	697,0
37	-157,0	2.478,0	63,0	132,0	24,0	369,0
38	28,0	699,0	-61,0	-91,0	21,0	-65,0
39	24,0	1.380,0	173,0	294,0	22,0	-257,0
40	3,0	1.638,0	-219,0	-327,0	22,0	-222,0
41	84,0	2.048,0	193,0	378,0	81,0	-848,0
42	12,0	730,0	-123,0	-387,0	123,0	-528,0
43	126,0	387,0	-16,0	-126,0	87,0	-517,0
44	2,0	659,0	-30,0	-156,0	81,0	-7,0
45	-4,0	673,0	-23,0	-133,0	73,0	17,0
46	13,0	322,0	-33,0	-153,0	71,0	21,0
47	-126,0	285,0	94,0	155,0	18,0	313,0
48	1,0	680,0	-56,0	-132,0	27,0	-15,0
49	168,0	164,0	58,0	76,0	3,0	-474,0
50	170,0	282,0	-140,0	-264,0	28,0	-476,0

REAÇÕES para carregamento 2 (Unids: kg, kg*metro)						
PERMANENTE						
PILAR	Rx	Rz	Ry	Mx	Mz	My
1	-112,0	676,0	95,0	96,0	-51,0	706,0
2	-44,0	198,0	-105,0	-263,0	-72,0	456,0
3	-81,0	34,0	-47,0	-157,0	-56,0	255,0
4	-2,0	247,0	-33,0	-131,0	-50,0	0,0
5	-2,0	247,0	-26,0	-117,0	-45,0	-2,0
6	-55,0	35,0	-35,0	-131,0	-45,0	120,0
7	-64,0	-75,0	10,0	-51,0	-36,0	150,0
8	-26,0	107,0	48,0	72,0	-3,0	65,0
9	-25,0	92,0	-49,0	-84,0	5,0	63,0
10	-105,0	473,0	48,0	94,0	-49,0	299,0
11	-1,0	157,0	11,0	26,0	-42,0	-3,0
12	0,0	156,0	15,0	30,0	-37,0	-6,0
13	170,0	780,0	-44,0	-69,0	-26,0	-254,0
14	277,0	860,0	80,0	133,0	-35,0	-402,0
15	24,0	360,0	65,0	103,0	1,0	-18,0
16	23,0	332,0	-67,0	-118,0	0,0	-18,0
17	192,0	2.685,0	63,0	122,0	2,0	-323,0
18	164,0	2.461,0	-36,0	-56,0	6,0	-286,0
19	-84,0	1.090,0	37,0	49,0	2,0	132,0
20	-81,0	962,0	-33,0	-57,0	0,0	127,0
21	20,0	190,0	63,0	154,0	-18,0	-71,0
22	21,0	234,0	-62,0	-155,0	21,0	-72,0
23	-123,0	438,0	-74,0	-103,0	-28,0	283,0
24	-150,0	734,0	71,0	164,0	16,0	282,0
25	149,0	455,0	-76,0	-111,0	8,0	-262,0
26	95,0	704,0	74,0	172,0	-20,0	-155,0
27	-4,0	253,0	54,0	135,0	18,0	7,0
28	-5,0	292,0	-50,0	-132,0	-17,0	12,0
29	16,0	1.080,0	39,0	71,0	-5,0	-53,0
30	18,0	1.057,0	-23,0	-29,0	3,0	-55,0
31	-119,0	2.566,0	43,0	93,0	-1,0	191,0
32	-100,0	2.354,0	-26,0	-50,0	-6,0	163,0
33	89,0	495,0	32,0	77,0	35,0	-327,0
34	3,0	160,0	4,0	13,0	30,0	-5,0
35	-1,0	153,0	8,0	18,0	25,0	9,0
36	-136,0	720,0	-37,0	-82,0	16,0	329,0
37	-90,0	1.193,0	23,0	49,0	14,0	211,0
38	9,0	241,0	-15,0	-18,0	11,0	-17,0
39	14,0	386,0	75,0	128,0	10,0	-84,0
40	10,0	387,0	-64,0	-92,0	11,0	-75,0
41	19,0	697,0	72,0	135,0	36,0	-360,0
42	-6,0	223,0	-56,0	-175,0	53,0	-229,0
43	67,0	17,0	-22,0	-91,0	41,0	-273,0
44	3,0	244,0	-14,0	-71,0	35,0	-7,0
45	0,0	250,0	-9,0	-57,0	31,0	5,0
46	10,0	81,0	-16,0	-73,0	31,0	1,0
47	-71,0	-82,0	29,0	41,0	11,0	177,0
48	0,0	270,0	-22,0	-56,0	14,0	-2,0
49	49,0	85,0	32,0	39,0	5,0	-136,0
50	47,0	60,0	-50,0	-102,0	16,0	-130,0

REAÇÕES para carregamento 3 (Unids: kg, kg*metro)						
SOBRECARGA						
PILAR	Rx	Rz	Ry	Mx	Mz	My
1	-283,0	1.714,0	241,0	244,0	-129,0	1.785,0
2	-112,0	502,0	-265,0	-667,0	-181,0	1.152,0
3	-204,0	89,0	-118,0	-397,0	-141,0	643,0
4	-5,0	624,0	-84,0	-332,0	-125,0	-1,0
5	-4,0	625,0	-66,0	-296,0	-115,0	-5,0
6	-140,0	89,0	-87,0	-330,0	-114,0	303,0
7	-161,0	-190,0	26,0	-130,0	-92,0	379,0
8	-69,0	272,0	123,0	181,0	-7,0	174,0
9	-66,0	233,0	-125,0	-212,0	12,0	166,0
10	-266,0	1.196,0	123,0	237,0	-124,0	756,0
11	-2,0	397,0	27,0	66,0	-105,0	-9,0
12	1,0	394,0	38,0	75,0	-95,0	-16,0
13	429,0	1.972,0	-111,0	-175,0	-66,0	-644,0
14	700,0	2.176,0	202,0	338,0	-88,0	-1.017,0
15	51,0	895,0	164,0	259,0	3,0	-28,0
16	49,0	825,0	-168,0	-299,0	-1,0	-28,0
17	484,0	6.800,0	160,0	308,0	4,0	-816,0
18	414,0	6.232,0	-92,0	-143,0	14,0	-722,0
19	-213,0	2.800,0	94,0	126,0	5,0	342,0
20	-206,0	2.469,0	-86,0	-147,0	0,0	330,0
21	52,0	481,0	160,0	391,0	-46,0	-179,0
22	53,0	594,0	-157,0	-392,0	53,0	-183,0
23	-310,0	1.107,0	-188,0	-261,0	-72,0	715,0
24	-379,0	1.857,0	180,0	415,0	41,0	713,0
25	378,0	1.150,0	-191,0	-280,0	21,0	-663,0
26	241,0	1.781,0	187,0	436,0	-50,0	-392,0
27	-9,0	642,0	138,0	342,0	45,0	19,0
28	-13,0	740,0	-126,0	-333,0	-43,0	31,0
29	12,0	2.960,0	103,0	187,0	-14,0	-89,0
30	17,0	2.884,0	-63,0	-80,0	8,0	-95,0
31	-299,0	6.497,0	110,0	234,0	-1,0	481,0
32	-251,0	5.961,0	-66,0	-128,0	-14,0	411,0
33	225,0	1.251,0	80,0	195,0	89,0	-827,0
34	7,0	404,0	10,0	33,0	76,0	-14,0
35	-3,0	386,0	19,0	46,0	64,0	23,0
36	-345,0	1.822,0	-93,0	-207,0	39,0	832,0
37	-229,0	3.016,0	57,0	125,0	36,0	534,0
38	23,0	611,0	-37,0	-45,0	28,0	-47,0
39	67,0	907,0	188,0	322,0	26,0	-278,0
40	56,0	910,0	-161,0	-232,0	26,0	-254,0
41	49,0	1.767,0	182,0	342,0	90,0	-911,0
42	-16,0	568,0	-142,0	-443,0	134,0	-579,0
43	169,0	45,0	-56,0	-230,0	103,0	-689,0
44	8,0	616,0	-36,0	-181,0	89,0	-19,0
45	1,0	632,0	-23,0	-144,0	79,0	11,0
46	24,0	204,0	-42,0	-185,0	79,0	3,0
47	-181,0	-207,0	74,0	104,0	28,0	447,0
48	1,0	682,0	-55,0	-140,0	36,0	-8,0
49	131,0	218,0	81,0	99,0	13,0	-372,0
50	126,0	156,0	-126,0	-257,0	40,0	-357,0

REAÇÕES para carregamento 4 (Unids: kg, kg*metro)						
VENTO						
PILAR	Rx	Rz	Ry	Mx	Mz	My
1	717,0	-4.328,0	-609,0	-615,0	327,0	-4.528,0
2	284,0	-1.265,0	672,0	1.687,0	460,0	-2.923,0
3	519,0	-230,0	302,0	1.010,0	359,0	-1.633,0
4	14,0	-1.596,0	213,0	842,0	318,0	2,0
5	11,0	-1.600,0	167,0	749,0	291,0	13,0
6	357,0	-228,0	222,0	838,0	290,0	-776,0
7	413,0	485,0	-69,0	325,0	233,0	-969,0
8	143,0	-233,0	-255,0	-437,0	13,0	-395,0
9	172,0	-680,0	283,0	418,0	-26,0	-437,0
10	675,0	-3.040,0	-309,0	-597,0	315,0	-1.921,0
11	4,0	-1.015,0	-68,0	-168,0	267,0	22,0
12	-3,0	-1.007,0	-97,0	-192,0	240,0	41,0
13	-1.097,0	-5.045,0	284,0	448,0	166,0	1.647,0
14	-1.790,0	-5.567,0	-515,0	-863,0	224,0	2.601,0
15	-126,0	-2.209,0	-413,0	-707,0	-13,0	62,0
16	-124,0	-2.187,0	399,0	656,0	-3,0	63,0
17	-1.230,0	-17.210,0	-406,0	-781,0	-10,0	2.075,0
18	-1.053,0	-15.775,0	231,0	358,0	-36,0	1.835,0
19	547,0	-7.146,0	-238,0	-323,0	-13,0	-881,0
20	538,0	-6.353,0	219,0	371,0	-1,0	-865,0
21	-131,0	-1.214,0	-406,0	-991,0	116,0	453,0
22	-135,0	-1.499,0	397,0	992,0	-134,0	464,0
23	793,0	-2.833,0	480,0	667,0	183,0	-1.830,0
24	970,0	-4.750,0	-461,0	-1.062,0	-104,0	-1.824,0
25	-967,0	-2.942,0	489,0	716,0	-53,0	1.696,0
26	-617,0	-4.555,0	-478,0	-1.115,0	128,0	1.002,0
27	24,0	-1.623,0	-349,0	-867,0	-114,0	-47,0
28	33,0	-1.870,0	320,0	843,0	110,0	-79,0
29	-30,0	-7.573,0	-262,0	-477,0	36,0	223,0
30	-42,0	-7.374,0	160,0	205,0	-19,0	240,0
31	761,0	-16.448,0	-277,0	-593,0	4,0	-1.226,0
32	640,0	-15.093,0	165,0	319,0	35,0	-1.047,0
33	-571,0	-3.179,0	-201,0	-492,0	-227,0	2.101,0
34	-17,0	-1.033,0	-25,0	-84,0	-193,0	35,0
35	9,0	-988,0	-49,0	-118,0	-162,0	-59,0
36	883,0	-4.660,0	239,0	529,0	-99,0	-2.128,0
37	585,0	-7.716,0	-146,0	-320,0	-91,0	-1.366,0
38	-59,0	-1.562,0	95,0	114,0	-72,0	119,0
39	-170,0	-2.320,0	-481,0	-825,0	-66,0	706,0
40	-142,0	-2.331,0	413,0	593,0	-67,0	645,0
41	-122,0	-4.462,0	-459,0	-862,0	-228,0	2.309,0
42	42,0	-1.431,0	360,0	1.120,0	-339,0	1.469,0
43	-430,0	-119,0	143,0	587,0	-260,0	1.750,0
44	-21,0	-1.577,0	92,0	457,0	-226,0	47,0
45	-2,0	-1.616,0	58,0	364,0	-201,0	-29,0
46	-62,0	-522,0	106,0	469,0	-200,0	-8,0
47	462,0	529,0	-188,0	-267,0	-72,0	-1.143,0
48	-3,0	-1.746,0	139,0	355,0	-92,0	18,0
49	-334,0	-559,0	-209,0	-259,0	-33,0	947,0
50	-321,0	-402,0	322,0	652,0	-102,0	910,0



PLANTA DE LOCAÇÃO DOS PILARES
esc. 1:150

Notas gerais:
1 - Todas as cotas em milímetros (exceto indicado).
2 - Conferir medidas "in loco".
3 - As dimensões dos pilares apresentados no desenho são apenas ilustrativos, podendo ser alterados.
4 - As cargas apresentadas foram consideradas nas bases dos pilares.

Revisão	Data	Assinatura	Observação
03	30/07/2017		Revisão geral
02	26/06/2017		Criação dos eixos G' e G"
01	28/05/2017		Revisão geral
00	24/04/2017		Emissão inicial

3M ENGENHARIA E CONSULTORIA
Soluções em Engenharia

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COBERTURA RODOVIÁRIA

PROPRIETÁRIO:

ASS. PROP.:

OBRA: COBERTURA RODOVIÁRIA

ASS ENG°:
Marconi Viana Porta

LOCAL: RODOVIÁRIA SÃO SIMÃO
SÃO SIMÃO–GO

CREA–MG:
97196/D

CONTEÚDO: LOCAÇÃO DE PILARES E PLANO DE CARGAS

DATA: JUL/2017

ESCALAS: indicadas

PROJETO N°: —

FOLHA: 01/07