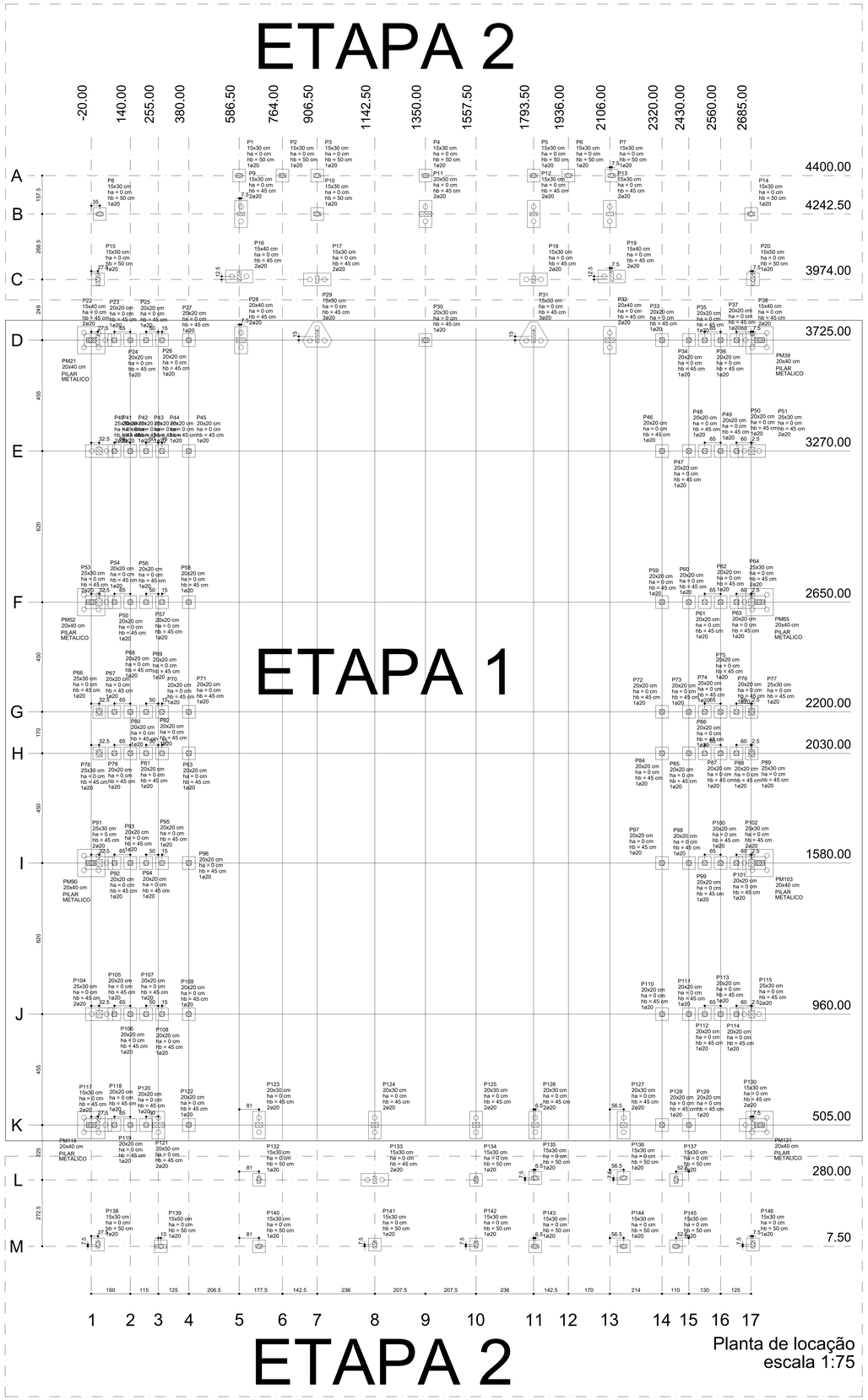
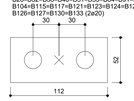


Pilar					Fundação					Bloco			
Nome	Seção (cm)	X (cm)	Y (cm)	Carga Máx. (tf)	Carga Mín. (tf)	Lado B (cm)	Lado H (cm)	h0 / ha (cm)	h1 / hb (cm)	ne	de (cm)	ca (cm)	Base tub. (cm)
P1	15x30	586.50	4400.00	0.5	0.4	52	52	0	50	1	20	-35	
P2	15x30	764.00	4400.00	0.9	0.8	52	52	0	50	1	20	-35	
P3	15x30	906.50	4400.00	2.6	2.3	52	52	0	50	1	20	-35	
P4	15x30	1350.00	4400.00	3.2	2.9	52	52	0	50	1	20	-35	
P5	15x30	1793.50	4400.00	2.6	2.3	52	52	0	50	1	20	-35	
P6	15x30	1936.00	4400.00	0.9	0.8	52	52	0	50	1	20	-35	
P7	15x30	2113.50	4400.00	0.5	0.4	52	52	0	50	1	20	-35	
P8	15x30	15.00	4242.50	7.5	6.9	52	52	0	50	1	20	-35	
P9	15x30	594.00	4242.50	13.7	12.7	112	52	0	45	2	20	-30	
P10	15x30	906.50	4242.50	11.7	10.2	52	52	0	50	1	20	-35	
P11	20x50	1350.00	4242.50	22.5	18.9	112	52	0	45	2	20	-30	
P12	15x30	1793.50	4242.50	11.9	10.4	112	52	0	45	2	20	-30	
P13	15x30	2106.00	4242.50	13.6	12.6	112	52	0	45	2	20	-30	
P14	15x30	2685.00	4242.50	7.4	6.8	52	52	0	50	1	20	-35	
P15	15x50	7.50	3974.00	9.0	7.9	52	52	0	50	1	20	-35	
P16	15x40	586.50	3986.50	15.0	13.2	112	52	0	45	2	20	-30	
P17	15x30	906.50	3974.00	14.7	12.3	112	52	0	45	2	20	-30	
P18	15x30	1793.50	3974.00	15.0	12.6	112	52	0	45	2	20	-30	
P19	15x40	2113.50	3986.50	15.3	13.5	112	52	0	45	2	20	-30	
P20	15x50	2692.50	3974.00	8.8	7.8	52	52	0	50	1	20	-35	
P21	20x40	-20.00	3725.00	0.3	0.2	112	112	0	50	4	20	-35	
P22	15x40	7.50	3725.00	15.5	14.9	112	52	0	45	2	20	-30	
P23	20x20	75.00	3725.00	3.4	3.1	52	52	0	45	1	20	-30	
P24	20x20	140.00	3725.00	2.0	1.7	52	52	0	45	1	20	-30	
P25	20x20	205.00	3725.00	2.1	1.9	52	52	0	45	1	20	-30	
P26	20x20	270.00	3725.00	2.3	2.0	52	52	0	45	1	20	-30	
P27	20x20	380.00	3725.00	3.3	3.1	52	52	0	45	1	20	-30	
P28	20x40	594.00	3725.00	16.8	16.1	112	52	0	45	2	20	-30	
P29	15x50	906.50	3740.00	30.0	27.9	120	104	0	45	3	20	-30	
P30	20x30	1350.00	3725.00	7.6	6.3	52	52	0	45	1	20	-30	
P31	15x50	1793.50	3740.00	29.7	27.5	120	104	0	45	3	20	-30	
P32	20x40	2106.00	3725.00	16.3	15.7	112	52	0	45	2	20	-30	
P33	20x20	2320.00	3725.00	3.3	3.0	52	52	0	45	1	20	-30	
P34	20x20	2430.00	3725.00	2.3	2.0	52	52	0	45	1	20	-30	
P35	20x20	2495.00	3725.00	2.1	1.9	52	52	0	45	1	20	-30	
P36	20x20	2560.00	3725.00	2.0	1.7	52	52	0	45	1	20	-30	
P37	20x20	2625.00	3725.00	3.3	3.1	52	52	0	45	1	20	-30	
P38	15x40	2692.50	3725.00	15.4	14.8	112	52	0	45	2	20	-30	
P39	20x40	2720.00	3725.00	0.3	0.2	112	112	0	50	4	20	-35	
P40	25x30	12.50	3270.00	15.9	15.5	112	52	0	45	2	20	-30	
P41	20x20	75.00	3270.00	3.4	2.9	52	52	0	45	1	20	-30	
P42	20x20	140.00	3270.00	2.9	2.5	52	52	0	45	1	20	-30	
P43	20x20	205.00	3270.00	3.1	2.6	52	52	0	45	1	20	-30	
P44	20x20	270.00	3270.00	3.6	3.0	52	52	0	45	1	20	-30	
P45	20x20	380.00	3270.00	3.4	3.0	52	52	0	45	1	20	-30	
P46	20x20	2320.00	3270.00	3.4	3.0	52	52	0	45	1	20	-30	
P47	20x20	2430.00	3270.00	3.6	3.0	52	52	0	45	1	20	-30	
P48	20x20	2495.00	3270.00	3.1	2.6	52	52	0	45	1	20	-30	
P49	20x20	2560.00	3270.00	2.9	2.5	52	52	0	45	1	20	-30	
P50	20x20	2625.00	3270.00	3.4	2.9	52	52	0	45	1	20	-30	
P51	25x30	2687.50	3270.00	15.9	15.5	112	52	0	45	2	20	-30	
P52	20x40	-20.00	2650.00	0.3	0.2	112	112	0	50	4	20	-35	
P53	25x30	12.50	2650.00	15.9	15.5	112	52	0	45	2	20	-30	
P54	20x20	75.00	2650.00	3.4	2.9	52	52	0	45	1	20	-30	
P55	20x20	140.00	2650.00	3.0	2.5	52	52	0	45	1	20	-30	
P56	20x20	205.00	2650.00	3.2	2.7	52	52	0	45	1	20	-30	
P57	20x20	270.00	2650.00	3.6	3.0	52	52	0	45	1	20	-30	
P58	20x20	380.00	2650.00	3.4	2.9	52	52	0	45	1	20	-30	
P59	20x20	2320.00	2650.00	3.4	2.9	52	52	0	45	1	20	-30	
P60	20x20	2430.00	2650.00	3.6	3.0	52	52	0	45	1	20	-30	
P61	20x20	2495.00	2650.00	3.2	2.7	52	52	0	45	1	20	-30	
P62	20x20	2560.00	2650.00	3.0	2.5	52	52	0	45	1	20	-30	
P63	20x20	2625.00	2650.00	3.4	2.9	52	52	0	45	1	20	-30	
P64	25x30	2687.50	2650.00	15.9	15.5	112	52	0	45	2	20	-30	
P65	20x40	2720.00	2650.00	0.3	0.2	112	112	0	50	4	20	-35	
P66	25x30	12.50	2200.00	8.6	8.3	52	52	0	45	1	20	-30	
P67	20x20	75.00	2200.00	1.9	1.6	52	52	0	45	1	20	-30	
P68	20x20	140.00	2200.00	1.5	1.3	52	52	0	45	1	20	-30	
P69	20x20	205.00	2200.00	1.6	1.4	52	52	0	45	1	20	-30	
P70	20x20	270.00	2200.00	2.0	1.7	52	52	0	45	1	20	-30	
P71	20x20	380.00	2200.00	1.9	1.6	52	52	0	45	1	20	-30	
P72	20x20	2320.00	2200.00	1.9	1.6	52	52	0	45	1	20	-30	
P73	20x20	2430.00	2200.00	2.0	1.7	52	52	0	45	1	20	-30	
P74	20x20	2495.00	2200.00	1.6	1.4	52	52	0	45	1	20	-30	
P75	20x20	2560.00	2200.00	1.5	1.3	52	52	0	45	1	20	-30	
P76	20x20	2625.00	2200.00	1.9	1.6	52	52	0	45	1	20	-30	
P77	25x30	2687.50	2200.00	8.6	8.3	52	52	0	45	1	20	-30	
P78	25x30	12.50	2030.00	8.5	8.2	52	52	0	45	1	20	-30	
P79	20x20	75.00	2030.00	1.9	1.6	52	52	0	45	1	20	-30	
P80	20x20	140.00	2030.00	1.5	1.3	52	52	0	45	1	20	-30	
P81	20x20	205.00	2030.00	1.6	1.3	52	52	0	45	1	20	-30	
P82	20x20	270.00	2030.00	2.0	1.7	52	52	0	45	1	20	-30	
P83	20x20	380.00	2030.00	1.9	1.6	52	52	0	45	1	20	-30	
P84	20x20	2320.00	2030.00	1.9	1.6	52	52	0	45	1	20	-30	
P85	20x20	2430.00	2030.00	2.0	1.7	52	52	0	45	1	20	-30	
P86	20x20	2495.00	2030.00	1.6	1.3	52	52	0	45	1	20	-30	
P87	20x20	2560.00	2030.00	1.5	1.3	52	52	0	45	1	20	-30	
P88	20x20	2625.00	2030.00	1.9	1.6	52	52	0	45	1	20	-30	
P89	25x30	2687.50	2030.00	8.5	8.2	52	52	0	45	1	20	-30	
P90	20x40	-20.00	1580.00	0.3	0.2	112	112	0	50	4	20	-35	
P91	25x30	12.50	1580.00	15.9	15.5	112	52	0	45	2	20	-30	
P92	20x20	75.00	1580.00	3.3	2.9	52	52	0	45	1	20	-30	
P93	20x20	140.00	1580.00	2.9	2.4	52	52	0	45	1	20	-30	
P94	20x20	205.00	1580.00	3.1	2.6	52	52	0	45	1	20	-30	
P95	20x20	270.00	1580.00	3.6	3.0	52	52	0	45	1	20	-30	
P96	20x20	380.00	1580.00	3.3	2.9	52	52	0	45	1	20	-30	
P97	20x20	2320.00	1580.00	3.3	2.9	52	52	0	45	1	20	-30	
P98	20x20	2430.00	1580.00	3.6	3.0	52	52	0	45	1	20	-30	
P99	20x20	2495.00	1580.00	3.1	2.6	52	52	0	45	1	20	-30	
P100	20x20	2560.00	1580.00	2.9	2.4	52	52	0	45	1	20	-30	
P101	20x20	2625.00	1580.00	3.3	2.9	52	52	0	45	1	20	-30	
P102	25x30	2687.50	1580.00	15.9	15.5	112	52	0	45	2	20	-30	
P103	20x40	2720.00	1580.00	0.3	0.2	112	112	0	50	4	20	-35	
P104	25x30	12.50	960.00	15.6	15.1	112	52	0	45	2	20	-30	
P105	20x20	75.00	960.00	3.4	3.0	52	52	0	45	1	20	-30	
P106	20x20	140.00	960.00	3.0	2.5	52	52	0	45	1	20	-30	
P107	20x20	205.00	960.00	3.2	2.7	52	52	0	45	1	20	-30	
P108	20x20	270.00	960.00	3.7	3.0	52	52	0	45	1	20	-30	
P109	20x20	380.00	960.00	3.4	3.0	52	52	0	45	1	20	-30	
P110	20x20	2320.00	960.00	3.5	3.0	52	52	0	45	1	20	-30	
P111	20x20	2430.00	960.00	4.0	3.3	52	52	0	45	1	20	-30	
P112	20x20	2495.00	960.00	2.4	2.0	52	52	0	45	1	20	-30	
P113	20x20	2560.00	960.00	1.9	1.6	52	52	0	45	1	20	-30	
P114	20x20	2625.00	960.00	2.7	2.4	52	52	0	45	1	20	-30	
P115	25x30	2687.50	960.00	16.4	15.8	112	52	0	45	2	20	-30	
P116	20x40	-20.00	505.00	0.3	0.2	112	112	0	50	4	20	-35	
P117	15x30	7.50	505.00	13.4	12.9	112	52	0	45	2	20	-30	
P118	20x20	75.00	505.00	3.5	3.2	52	52	0	45	1	20	-30	
P119	20x20	140.00	505.00	2.1	1.8	52	52	0	45	1	20	-30	
P120	20x20	205.00	505.00	3.8	3.4	52	52	0	45	1	20	-30	
P121	20x50	255.00	505.00	14.3	13.1	112	52	0	45	2	20	-30	
P122	20x20	380.00	505.00	3.5	3.2	52	52	0	45	1	20	-30	
P123	20x30	667.50	505.00	19.1	18.5	112	52	0	45	2	20	-30	
P124	20x30	1142.50	505.00	21.2	20.6	112	52	0	45	2	20	-30	
P125	20x30	1557.50	505.00	15.0	14.5	112	52	0	45	2	20	-30	
P126	20x30	1800.00	505.00	14.0	13.6	112	52	0	45	2	20	-30	
P127	20x30	2162.50	505.00	12.3	11.9	112	52	0	45	2	20	-30	
P128	20x20	2320.00	505.00	4.8	4.4	52	52	0	45	1	20	-30	
P129	20x20	2430.00	505.00	9.0	8.3	52	52	0	45	1	20	-30	
P130	15x30	2692.50	505.00	16.6	15.7	112	52	0	45	2	20	-30	
P131	20x40	2720.00	505.00	0.3	0.2	112	112	0	50	4	20	-35	
P132	15x30	667.50	280.00	10.4	9.0	52	52	0	50	1	20	-35	
P133	15x30	1142.50	280.00	11.8	10.4	112	52	0	45	2	20	-30	
P134	15x30	1557.50	280.00	7.6	6.5	52	52	0	50	1	20	-35	
P135	15x30	1800.00	287.50	10.3	9.3	52	52	0	50	1	20	-35	
P136	15x30	2162.50	287.50	9.7	8.7	52	52	0	50	1	20	-35	
P137	15x30	2377.50	280.00	6.9	5.9	52	52	0	50	1	20	-35	
P138	15x30	7.50	15.00	6.5	6.0	52	52	0	50	1	20	-35	
P139	15x50	265.00	7.50	9.7	8.6	52	52	0	50	1	20	-35	
P140	15x30	667.50	7.50	10.7	9.9	52	52	0	50	1	20	-35	
P141	15x30	1142.50	15.00	9.5	8.7	52	52	0	50	1	20	-35	
P142	15x30	1557.50	15.00	6.2	5.6	52	52	0	50	1	20	-35	
P143	15x30	1800.00	7.50	8.3	7.7	52	52	0	50	1	20	-35	
P144	15x30	2162.50	7.50	7.5	6.9	52	52	0	50	1	20	-35	
P145	15x30	2377.50	7.50	7.4	6.9	52	52	0	50	1	20	-35	
P146	15x30	2692.50	15.00	7.4	6.9	52	52	0	50	1	20	-35	

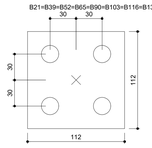
Estacas	
de (cm)	Quantidade
20	203

B1=B2=B3=B4=B5=B6
B7=B8=B10=B14=B15
B20=B23=B24=B25
B26=B27=B30=B33
B34=B35=B38=B37
B41=B42=B43=B44
B45=B46=B47=B48
B49=B50=B54=B55
B56=B57=B58=B59
B60=B61=B62=B63
B66=B67=B68=B69
B70=B71=B72=B73
B74=B75=B76=B77
B78=B79=B80=B81
B82=B83=B84=B85
B86=B87=B88=B89
B92=B93=B94=B95
B96=B97=B98=B99
B100=B101=B105
B106=B107=B108
B109=B110=B111
B112=B113=B114
B118=B119=B120
B122=B128=B129
B132=B134=B135
B136=B137=B138
B139=B140=B141
B142=B143=B144
B145=B146 (1e20)

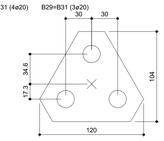
B9=B11=B12=B13=B16=B17=B18=B19=B22
B28=B32=B36=B40=B51=B53=B64=B91=B102
B104=B115=B117=B121=B123=B124=B125
B126=B127=B130=B133 (2e20)



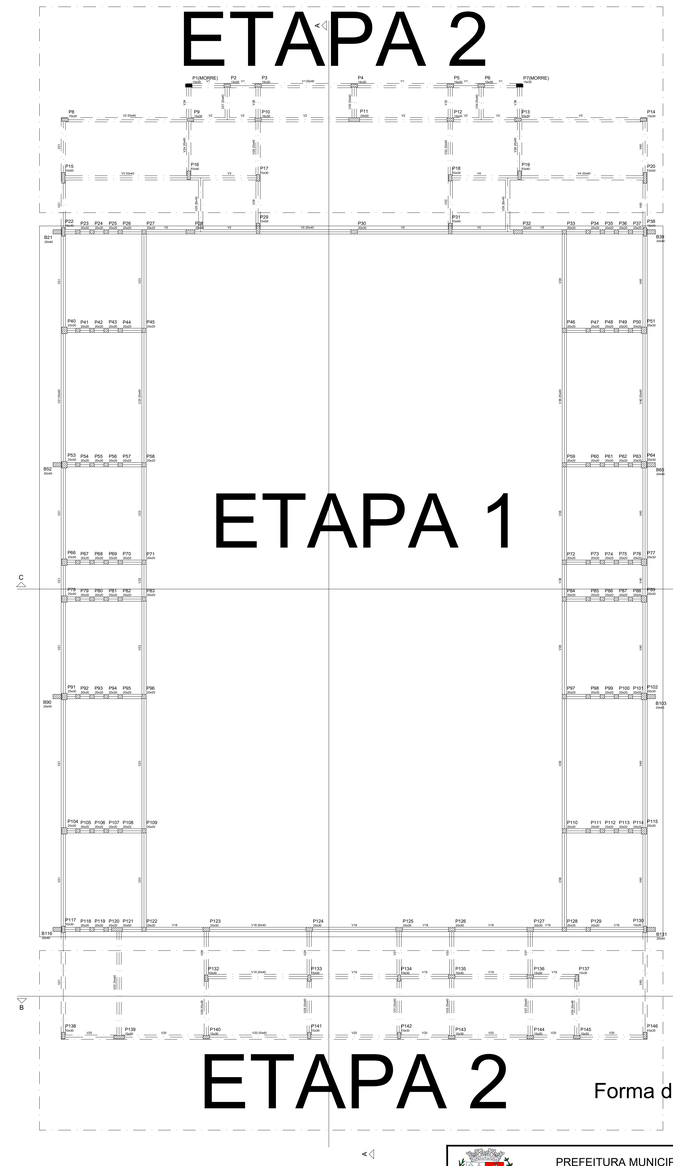
B21=B39=B52=B65=B90=B103=B116=B131 (4e20)



B29=B31 (3e20)



Legenda dos blocos
escala 1:25



Forma do BALDRAME
escala 1:100

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	20x40	0	0
V2	20x40	0	0
V3	20x40	0	0
V4	20x40	0	0
V5	20x40	0	0
V6	20x40	0	0
V7	20x40	0	0
V8	20x40	0	0
V9	20x40	0	0
V10	20x40	0	0
V11	20x40	0	0
V12	20x40	0	0
V13	20x40	0	0
V14	20x40	0	0
V15	20x40	0	0
V16	20x40	0	0
V17	20x40	0	0
V18	20x40	0	0
V19	20x40	0	0
V20	20x40	0	0
V21	20x40	0	0
V22	20x40	0	0
V23	20x40	0	0
V24	20x40	0	0
V25	20x40	0	0
V26	20x40	0	0
V27	20x40	0	0
V28	20x40	0	0
V29	20x40	0	0
V30	20x40	0	0
V31	20x40	0	0
V32	20x40	0	0
V33	20x40	0	0
V34	20x40	0	0
V35	20x40	0	0
V36	20x40	0	0
V37	20x40	0	0
V38	20x40	0	0
V39	20x40	0	0
V40	20x40	0	0

Características dos materiais	
fck (kgf/cm²)	Ecs (kgf/cm²)
250	238000

PREFEITURA MUNICIPAL DE TURVOLÂNDIA
CNPJ: 18.712.141/0001-00
Praça Dom Otávio, nº 240 - Centro - CEP: 37.496-000.

DEPARTAMENTO DE ENGENHARIA MUNICIPAL

PROJETO ESTRUTURAL

FOLHA 01-06

ASSUNTO: CONSTRUÇÃO 2ª ETAPA POLIESPORTIVO

ENDEREÇO DA OBRA:

PROPRIETARIO : PREFEITURA MUNICIPAL DE TURVOLÂNDIA/MG.
LOCAL: RUA JOÃO BATISTA GERMANO DE MORAIS, S/Nº .
BAIRRO: CENTRO
CIDADE: TURVOLÂNDIA/MG.

DESCRIÇÃO DO PROJETO:
DETALHAMENTO FUNDAÇÃO

ESCALA:	DATA:	REVISÃO:	ART Nº
INDICADA	15/01/2026	01	MG20264623166

ÁREAS

ÁREA DO TERRENO: 5.457,00 m².

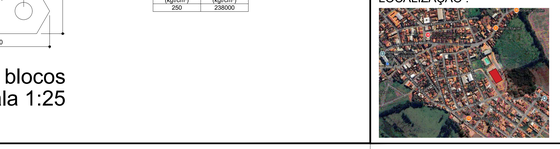
ÁREA JÁ EDIFICADA - 1ª ETAPA: 874,80m².

ÁREA À EDIFICAR - 2ª ETAPA: 272,70m².

ÁREA TOTAL A EDIFICAR: 1.147,50m².

PROPRIETÁRIO: MUNICÍPIO DE TURVOLÂNDIA
JOSÉ NELSON MARTINS - PREFEITO MUNICIPAL

LOCALIZAÇÃO :



ENGENHEIRO RESPONSÁVEL DO PROJETO
CIBELES A. DE FREITAS CARVALHO
CREA SP 5070445TA/O MG

APROVAÇÃO DO MUNICÍPIO: