

The drawing illustrates the reinforcement layout for a reinforced concrete slab, divided into two main sections: the top reinforcement (top half) and the bottom reinforcement (bottom half). The layout is defined by a grid of dimensions and bar specifications.

Top Reinforcement (Top Half):

- Horizontal Dimensions:** 444, 170, 170, 170, 170, 456, 305, 519.
- Bar Specifications:** 2 N14 ø16.0 - 490, 1 N32 ø25.0 - 1200, 1 N32 ø25.0 - 1200, 1 N32 ø25.0 - 1200, 1 N32 ø25.0 - 1200, 1 N31 ø25.0 - 545, 2 N37 ø25.0 - 1040, 2 N36 ø25.0 - 1180, 2 N15 ø16.0 - 565.
- Vertical Dimensions:** 265, 280, 275, 290, 285, 220, 75.
- Bar Specifications:** 3 N28 ø25.0 c/20 - 540, 2 N28 ø25.0 c/20 - 540 (2ªcamada), 3 N29 ø25.0 c/20 - 515, 2 N30 ø25.0 c/40 - 510, 3 N31 ø25.0 c/20 - 545, 1 N35 ø25.0 - 475, 2 N34 ø25.0 - 410 (2ªcamada), 2x3 N3 ø10.0 - 1200 (armadura pele), 2x3 N3 ø10.0 - 1200 (armadura pele), 2x3 N3 ø10.0 - 1200 (armadura pele), 2x3 N4 ø10.0 - 745 (armadura pele), 2ø2ªcamada.

Bottom Reinforcement (Bottom Half):

- Horizontal Dimensions:** 260, 165, 165, 165, 165, 165, 149 N1 c/5, 240, 110, 160, 747, 1052.
- Bar Specifications:** 6 N1 c/17.5, 19 N1 c/20, 52 N1 c/5, 22 N1 c/7.5, 23 N1 c/20, 22 N1 c/7.5, 21 N1 c/20, 22 N1 c/7.5, 21 N1 c/20, 22 N1 c/7.5, 149 N1 c/5, 64 N1 c/5, 48 N2 c/5, 26 N1 c/17.5, 22 N2 c/5.
- Vertical Dimensions:** 60, 652, 822, 255, 225, 225, 170, 160, 747, 1052.
- Bar Specifications:** 1 N23 ø25.0 - 480, 1 N24 ø25.0 - 680, 2 N25 ø25.0 - 850, 1 N7 ø16.0 - 344, 1 N9 ø16.0 - 350, 1 N11 ø16.0 - 345, 2 N12 ø16.0 c/45 - 410, 2 N38 ø25.0 c/70 - 560, 1 N26 ø25.0 - 775, 2 N27 ø25.0 - 1080.

The drawing includes a scale bar at the bottom left, indicating a length of 0.00.

Technical drawing of a reinforced concrete slab (Linha de Cimento Portland) showing reinforcement details, dimensions, and material specifications.

Reinforcement Details:

- Top Reinforcement:**
 - 2 N16 ø16.0 - 480 (434)
 - 2 N45 ø25.0 - 880 (495)
 - 2 N46 ø25.0 - 975 (470)
 - 2 N47 ø25.0 - 890 (390)
 - 2 N17 ø16.0 - 500 (454)
 - 3 N38 ø25.0 c/20 - 560 (295)
 - 1 N38 ø25.0 - 560 (2ªcamada) (315)
 - 2 N29 ø25.0 c/40 - 515 (280)
 - 3 N31 ø25.0 c/20 - 545 (285)
 - 1 N31 ø25.0 - 545 (2ªcamada) (305)
- Bottom Reinforcement:**
 - 2x3 N3 ø10.0 - 1200 (armadura pele)
 - 1ø2ªcamada (75)
 - 2x3 N3 ø10.0 - 1200 (armadura pele)
 - 1ø2ªcamada (75)
 - 2x3 N5 ø10.0 - 998 (armadura pele)

Dimensions and Spacing:

- 0.00 (Elevation)
- 260, 165, 160, 165, 260 (Horizontal dimensions)
- 50, 5, 5 (Vertical dimensions)
- 25 N1 c/20, 52 N1 c/5, 22 N1 c/7.5, 23 N1 c/20, 22 N1 c/7.5, 16 N1 c/10, 22 N1 c/20, 22 N1 c/7.5, 52 N1 c/5, 19 N1 c/20, 15 N1 c/7.5 (Reinforcement spacing and quantities)
- 1 N39 ø25.0 - 490 (597)
- 1 N40 ø25.0 - 625 (818)
- 1 N9 ø16.0 - 350 (255)
- 1 N42 ø25.0 - 460 (622)
- 1 N43 ø25.0 - 650 (844)
- 2 N41 ø25.0 - 846
- 4 N8 ø16.0 - 873
- 4 N10 ø16.0 - 844
- 2 N44 ø25.0 - 872

Material Specifications:

- P155(J)
- P156
- P157
- P158

Technical drawing showing the cross-section of a reinforced concrete slab with reinforcement details. The drawing includes dimensions, reinforcement specifications, and section markers.

Reinforcement Details:

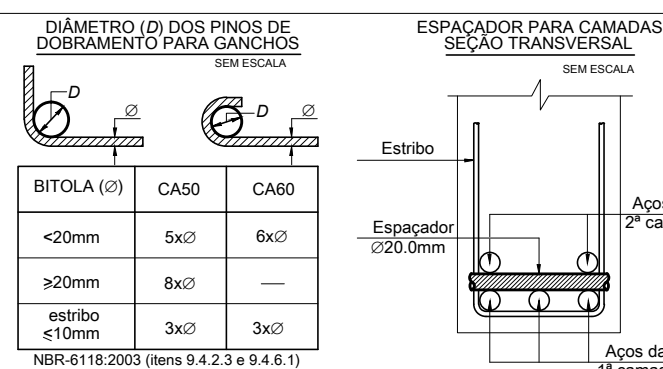
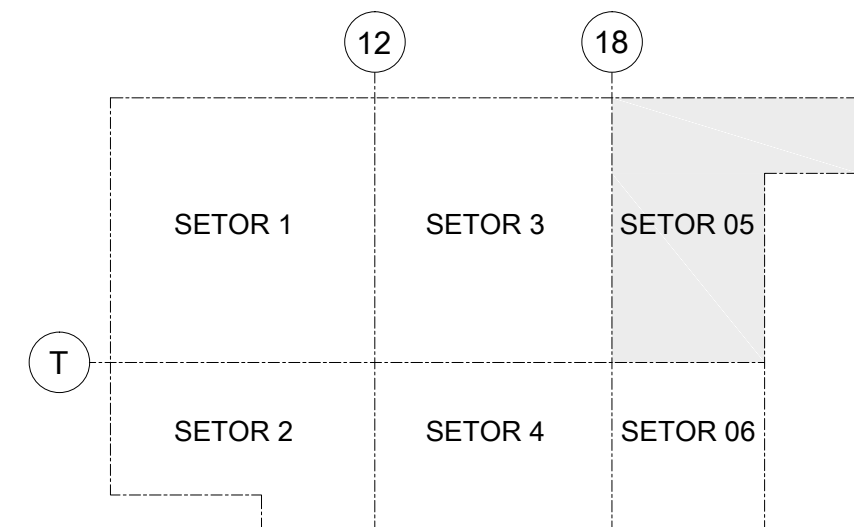
- Top Reinforcement:**
 - 2 N16 ø16.0 - 480 (434)
 - 2 N45 ø25.0 - 880 (495)
 - 2 N46 ø25.0 - 975 (470)
 - 2 N49 ø25.0 - 870 (370)
 - 2 N18 ø16.0 - 520 (474)
- Bottom Reinforcement:**
 - 3 N38 ø25.0 c/20 - 560 (295)
 - 1 N38 ø25.0 - 560 (2ªcamada) (315)
 - 2 N29 ø25.0 c/40 - 515 (280)
 - 3 N50 ø25.0 c/20 - 550 (290)
 - 1 N50 ø25.0 - 550 (2ªcamada) (310)
 - 2x3 N3 ø10.0 - 1200 (armadura pele)
 - 2x3 N5 ø10.0 - 998 (armadura pele)
- Other Details:**
 - 1ø2ªcamada
 - 75
 - 0.00
 - P210(J)
 - P211
 - P212
 - P213
 - 25 N1 c/20
 - 52 N1 c/5
 - 22 N1 c/7.5
 - 23 N1 c/20
 - 22 N1 c/7.5
 - 16 N1 c/10
 - 22 N1 c/20
 - 22 N1 c/7.5
 - 52 N1 c/5
 - 19 N1 c/20
 - 22 N1 c/5
 - 1 N39 ø25.0 - 490 (597)
 - 1 N40 ø25.0 - 625 (818)
 - 2 N41 ø25.0 - 846
 - 4 N8 ø16.0 - 873
 - 4 N10 ø16.0 - 844
 - 2 N44 ø25.0 - 872
 - 2 N48 ø25.0 c/80 - 570

Technical drawing of a reinforced concrete slab cross-section showing reinforcement details. The drawing includes top and bottom reinforcement bars with their respective diameters, spacings, and lengths. Key dimensions include 449, 395, 315, 75, 112.5, 15, 24, 165, 100, 270, 844, and 844. Reinforcement bars are labeled with codes like 2 N54 ø25.0, 3 N50 ø25.0, 2 N20 ø16.0, 2x3 N3 ø10.0, 2x3 N6 ø10.0, P160, P136, P109, 15 N1 c/7.5, 24 N1 c/20, 1 N21 ø20.0, and 3 N22 ø20.0. A section line A-A is indicated.

[illegible]

Resumo dos Materiais

AÇO	DIAM	C.TOTAL (m)	PESO (kg)
CA50	6.3	3763.8	921
	8.0	131.6	51.9
	10.0	1354.5	835.1
	16.0	598.5	944.6
	20.0	61.2	150.9
	25.0	1063.7	4098.5
PESO TOTAL (kg)		Vol. concreto = 47.54 m³ Área formas = 366.63 m²	
CA50	7002		



Notas:

01 NBR6118:2007 - Classe de Agressividade Ambiental = II.
02 NBR6118:2007 - Concreto com $f_{ck}=25\text{MPa}$ - Aço CA-50.
03 NBR6118:2007 - Cobrimento para vigas, em todas as faces: 3,0cm.
04 Unidades: diâmetro do aço em milímetro; espaçamento e comprimento em centímetro;

00	09/07/12	Emissão inicial.	Dionísio
REVISÃO	DATA	MODIFICAÇÕES	RESP.

	Proger Engenharia Ltda		Av. Pres. Vargas, 590 – grupo 1309 a 1311 Centro, Rio de Janeiro, RJ CEP:20.071-000 Tel./Fax:(21)242.0811/Cel.:(21)9987.9477 donisio@progerengenharia.com.br donisio@donisio.eng.br http://www.progerengenharia.com.br
	PROJETOS ESTRUTURAIS – CONSULTORIA - GERENCIAMENTO DIONÍSIO AUGUSTO AMARAL DE NEVES E SOUZA Engenheiro Civil – CREA-RJ 52.791-D IMB/FAB – Professor		
CLIENTE:	PÁTIOMIX LINHARES SHOPPING CENTER SPE S.A.		DESENHO:
			407-arm03_31_0.dwg
OBRA:	SHOPPING PÁTIOMIX LINHARES Linhores – ES		ESCALA:
			Seções: 1:25 vigas: 1:100
			DATA – REVISÃO: 09/07/12 – RO
PROJETO ESTRUTURAL	PROJETO:		E407
TETO DO SUBSOLO – VIGAS – SETOR 5 – 01/03		ARMAÇÕES	ARMO3-31