

Technical drawing of a roof plan showing a rectangular building layout. The drawing includes dimensions, room numbers, and structural details.

Dimensions and Room Numbers:

- Top section: 215, 3 N1 ϕ 10 C=230, 2 N2 ϕ 12.5 C=520, 213, 2 N5 ϕ 10 C=135, 58, 2 N4 ϕ 10 C=795, 780, 150, 2 N7 ϕ 10 C=165, 77, 2 N6 ϕ 10 C=175, 20/50, 20/50, 20/50, 20/50.
- Bottom section: 1 N9 ϕ 10 C=335, 400, 2 N8 ϕ 10 C=415, 50, 1 N6 ϕ 10 C=175, 950, 2 N10 ϕ 10 C=965, 1 N11 ϕ 10 C=185, 15.

Structural Details:

- Door types: A, B, C.
- Window types: N1, N2, N3, N4, N5, N6, N7, N8, N9, N10, N11.
- Room numbers: P72, P65, P55, P51, P43.

Technical drawing of a rectangular plate. The top view shows a rectangle with a width of 15 and a height of 45. There are two holes, each with a diameter of 10, spaced 12.5 apart. The distance from the center of each hole to the nearest edge is 3. The side view shows a rectangle with a width of 15 and a height of 45. There are two holes, each with a diameter of 10, spaced 12.5 apart. The distance from the center of each hole to the nearest edge is 3.

The drawing shows a rectangular floor plan with various structural details:

- Top Wall Details:**
 - Left corner: 3 N1 ϕ 10 C=190, dimension 160.
 - Right corner: 3 N4 ϕ 10 C=200, dimension 170.
 - Center: 2 N2 ϕ 10 C=575, dimension 169.
- Internal Vertical Elements:**
 - Two vertical sections labeled 1 N3 ϕ 10 C=175, each with a width of 77.
- Room Dimensions:** The three rooms are each 20/50 units wide by 50 units deep.
- Bottom Wall Details:**
 - Left corner: P74, 3 ϕ 10.
 - Middle: P69, 3 ϕ 10.
 - Right corner: P61, 3 ϕ 10.
 - Far right: P56, 3 ϕ 10.
- Room Internal Features:**
 - Each room has a central horizontal element labeled N9 C/15 with a width of 17 ϕ 5.
 - Below each room is a horizontal section labeled 3 ϕ 10.
- Bottom Section Details:**
 - Left: 1 N6 ϕ 10 C=235, dimension 220.
 - Center: 1 N7 ϕ 10 C=165, dimension 321.
 - Right: 1 N8 ϕ 10 C=220, dimension 205.
 - Bottom center: 2 N5 ϕ 10 C=840, dimension 810.
- Orientation:** A North arrow points towards the top-left of the page.

Technical drawing of a rectangular plate. The top view shows a rectangle with a width of 15 and a height of 45. The front view shows a rectangle with a width of 15 and a height of 45. The top view also shows two holes, each with a diameter of 10, spaced 3 units apart from the center. The front view shows a hole with a diameter of 10, spaced 3 units apart from the center.

Technical drawing of a roof plan showing a rectangular building layout. The drawing includes dimensions and structural details.

Dimensions:

- Overall width: 148' 0" (148' 0" / 148' 0")
- Overall length: 150' 0" (150' 0" / 150' 0")
- Internal width segments: 3' 0" + 2' 5" + 4' 0" + 4' 0" + 2' 0" + 3' 0" = 18' 0"
- Internal length segments: 89' 0" + 98' 0" + 48' 0" = 235' 0"
- Internal width segments (bottom): 3' 0" + 2' 5" + 4' 0" + 4' 0" + 2' 0" + 3' 0" = 18' 0"
- Internal length segments (bottom): 126' 0" + 44' 0" = 170' 0"

Structural Details:

- Roof pitch: 20/50
- Roof type: P80, P78, P76
- Roof material: N10, N15, N7, N9, N6, N8
- Roof material details:
 - N10: 30' 0" x 15' 0" (30' 0" / 15' 0")
 - N15: 15' 0" x 15' 0" (15' 0" / 15' 0")
 - N7: 10' 0" x 355' 0" (10' 0" / 355' 0")
 - N9: 10' 0" x 195' 0" (10' 0" / 195' 0")
 - N6: 10' 0" x 520' 0" (10' 0" / 520' 0")
 - N8: 10' 0" x 430' 0" (10' 0" / 430' 0")

Technical drawing of a rectangular plate. The main view shows a rectangle with a width of 15 and a height of 45. A detail view of the top edge shows a series of four semi-circular indentations, each with a diameter of 10. The distance between the centers of the first and last indentations is 30. The distance from the left edge to the center of the first indentation is 4. The distance from the center of the last indentation to the right edge is 3.

220
2 N1 10
C=250

220
3 N1 10
C=250

20/40

2 10 5 10 3 10

4 10

295
2 N3 10
C=310

382
2 N2 10
C=410

Technical drawing of a rectangular plate. The top view shows a rectangle with a width of 15 and a height of 35. There are two horizontal slots, each with a width of 3 and a depth of 10. The bottom view shows a rectangle with a width of 15 and a height of 35. There are two horizontal slots, each with a width of 3 and a depth of 10. The drawing is labeled with dimensions and hole specifications.

Technical drawing of a reinforced concrete slab (P5) showing reinforcement details. The drawing includes a plan view and a cross-section view.

Plan View:

- Overall dimensions: 810m (width) x 258m (length).
- Reinforcement bars:
 - Top: 3 N1 ϕ 10 C=250
 - Bottom: 2 N2 ϕ 12.5 C=545
 - Top: 3 N3 ϕ 10 C=180
 - Bottom: 2 N4 ϕ 10 C=840
 - Top: 3 N5 ϕ 10 C=180
 - Bottom: 1 N6 ϕ 10 C=200
- Stirrups: P72 (top), P55 (bottom).
- Dimensions: 235, 258, 150, 185, 810.

Cross-section View:

- Slab thickness: 200mm.
- Reinforcement bars: N1, N2, N3, N4, N5, N6.
- Stirrups: P72, P55.
- Dimensions: 20/50, 20/50, 20/50.

Technical drawing of a rectangular plate. The top view shows a rectangle with a width of 15 and a height of 45. The front view shows a rectangle with a width of 15 and a height of 45. The front view also shows two holes, each with a diameter of 10, spaced 12.5 apart. The holes are located 3 units from the top and bottom edges of the plate.

Technical drawing of a rectangular plate. The top view shows a rectangle with a width of 15 and a height of 45. The front view shows a rectangle with a width of 15 and a height of 45. The top view also shows two holes: a larger hole with a diameter of 12.5 and a smaller hole with a diameter of 10. The holes are positioned symmetrically along the width of the plate.

Technical drawing of a reinforced concrete slab (P.15) showing reinforcement details. The drawing includes dimensions for slab width (58, 198, 128), reinforcement bar spacing (113, 20/50), and bar counts (3 N2, 3 N3, 2 N1, 2 N5, 2 N4). It also shows the slab thickness (42) and the location of reinforcement bars (N6, N5, N4) relative to the slab edges and supports.

Technical drawing of a rectangular plate. The top view shows a rectangle with a width of 15 and a height of 45. The front view shows a rectangle with a width of 15 and a height of 45. The front view also shows two holes, each with a diameter of 10, located at the top and bottom edges. The distance from the top edge to the center of the top hole is 3, and the distance from the bottom edge to the center of the bottom hole is 4.

1. DIMENSÕES EM CENTÍMETROS, ELEVAÇÕES EM METROS
2. CONCRETO ESTRUTURAL:
Fck>= 20 MPa (ESTACAS TIPO RAIZ) - ARGAMASSA;
CONSUMO DE CIMENTO>=600,0kg/m³; RELAÇÃO A/C ENTRE 0,5 E 0,6;
AGREGADO - AREIA.
Fck>= 30 MPa (DEMAIS ELEMENTOS ESTRUTURAIS); CONSUMO DE CIMENTO
CONSUMO DE CIMENTO >=320,0kg/m³.
3. FATOR ÁGUA/CIMENTO MÁXIMO: 0,60
4. CLASSE DE AGRESSIVIDADE II - URBANA
5. MÓDULO DE ELASTICIDADE INICIAL A 28 DIAS IGUAL A 30670 MPa
6. REALIZAR OS PROCEDIMENTOS DE CURA, RETIRADA DE FORMAS E DO
ESCORAMENTO CONFORME NBR 14931:2004 E MEMORIAL DESCRITIVO.
PROCEDER COM A CURA OMIDA POR NO MÍNIMO 07 (SETE) DIAS OU
UTILIZAR A CURA QUÍMICA DOS ELEMENTOS DE CONCRETO.
7. A EXECUÇÃO DA ESTRUTURA DEVERÁ CONTAR COM O ACOMPANHAMENTO DE UM
TECNOLOGISTA DE CONCRETO
8. O ENGENHEIRO RESPONSÁVEL PELA OBRA DEVERÁ OBEDECER AS
RECOMENDAÇÕES DAS NORMAS TÉCNICAS APLICÁVEIS, DEDICANDO ESPECIAL
ATENÇÃO AS SEGUINTE ATIVIDADES:
 - 8.1. CONCRETO: PREPARO, CONTROLE, RECEBIMENTO, TRANSPORTE,
LANÇAMENTO, ADENSAMENTO E CURA
 - 8.2. FORMA: CONFERÊNCIA DAS MEDIDAS E POSIÇÕES, LIMPEZA,
ESTANQUEIDADE, SATURAÇÃO DAS FÓRMAS ABSORVENTES (RETIRAR
EXCESSO DE ÁGUA), CUIDADO COM O USO DOS DESMOLDANTES
E RETIRADA DAS FÓRMAS
 - 8.3. ARMADAÇO: LIMPEZA, MONTAGEM, COBRIMENTO (USO DE ESPACADORES
PLÁSTICOS ADEQUADOS), E GARANTIA DA POSIÇÃO DAS ARMADURAS
ANTES E DURANTE A CONCRETAGEM
9. COBRIMENTO MÍNIMO DA ARMADURA:
LAJES=2,0cm; VIGAS E PILARES=2,5cm; BLOCOS=5,0CM; ESTACAS=4,0cm.
OBRA COM RÍGIDO CONTROLE DE QUALIDADE.
10. RECOMENDA-SE QUE OS MATERIAIS (AÇO E CONCRETO) UTILIZADOS
NESTE PROJETO SEJAM SUBMETIDOS A ENSAIOS TECNOLÓGICOS
11. PREVER DRENAGEM E/OU IMPERMEABILIZAÇÃO PARA AS CORTINAS
(CONTENCÕES).
12. CONFERIR MEDIDAS NO LOCAL.

RESUMO DE AÇO			
AÇO	BIT mm	COMPR m	PESO kgf
60A	5	378	58
50A	6.3	26	6
50A	10	257	159
50A	12.5	41	39
Peso Total		60A =	58 kgf
Peso Total		50A =	204 kgf

<div>REVISOES</div> <div> <div>MINISTÉRIO PÚBLICO DO ESTADO DE MINAS GERAIS</div> <div>SEDE DAS PROMOTORIAS DE JUSTIÇA DE JUIZ DE FORA</div> </div>	
<div>ENDERECO:</div> <div>RUA JOSÉ CALIL AHOAGI, LOTE F, BAIXADA DO PARAIBUNA</div>	<div>ÁREA TERRENO:</div> <div>2.996,30m2</div>
<div>PROPRIETÁRIO:</div>	<div>ÁREA CONSTRUÍDA:</div> <div>7.266,36m2</div>
<div>PROCURADORIA GERAL DE JUSTIÇA DO ESTADO DE MINAS GERAIS</div>	<div>CNPJ:</div> <div>20.971.057/0001-45</div>

PROJETO DE ESTRUTURA DE CONCRETO ARMADO		
EMPRESA: ENGENHEIRO FABRÍCIO SILVA LIMA CREA: 80.082/D-MG EFICÁCIA PROJETOS E CONSULTORIA LTDA		CNPJ: 06.301.115/0001-00
RESPONSÁVEL TÉCNICO: NELSON URIAS PINTO GARIGLIO DA SILVA		CREA: 82.624/D-MG
CONTEÚDO: ARMAÇÃO DE VIGAS - 2o PAVIMENTO - 11/13		DATA: 31/07/20 ESCALA: INDICADA
		FOLHA: 64/126

CONFIGURACAO DAS PENAS - FORMATO A1 (441 x 594mm)						
RED	YELLOW	GREEN	CYAN	BLUE	MAGENTA	WHITE
0.25	0.50	0.13	0.30	0.40	1.0	0.80
						0.18