


Technical drawing of a roof plan showing a rectangular structure with various dimensions and annotations. The drawing includes a central rectangular area with a dashed line indicating a section cut. Dimensions are given in feet and inches. Annotations include '2 N2 10 C=260', '2 N1 6.3 C=280', '2 N3 10 C=280', '2 N5 C/20 29 6.3', '2 10', '2 6.3', '2 10', '2 10', '2 N4 10 C=655', 'B39', 'B31', '20/40', and '41'. The drawing is oriented with North (N) at the top.



 29 N5 ϕ 6.3 C=114

Technical drawing of a rectangular plate with the following specifications:

- Overall width: 328
- Overall height: 16
- Top hole: 2 N1 ϕ 5 C=360
- Top hole offset from right edge: 20
- Top hole offset from left edge: 50
- Bottom hole: 2 N2 ϕ 10 C=355
- Bottom hole offset from right edge: 15
- Bottom hole offset from left edge: 5
- Plate thickness: 2 ϕ 5
- End view labels: V35 and V25

Technical drawing of a rectangular plate. The drawing includes two views: a top view and a side view. The top view is a rectangle with a width of 20 and a height of 10. The side view is a rectangle with a width of 15 and a height of 45. The material specification is 20 N3 ϕ 5 C=133.

11 N3 ϕ 5 C=133

The technical drawing consists of three orthographic projections of a mechanical component:

- Top View (Top):** A rectangular plate with overall dimensions of 268 mm by 31 mm. It features two sets of holes: four N1 x 10 holes spaced at C=330 mm, and two larger 20/50 mm holes. A centerline is indicated.
- Front View (Bottom):** Shows the profile of the plate with a total width of 265 mm. It includes two sets of holes: two N2 x 10 holes spaced at C=295 mm, and two 15 mm diameter holes at the ends. A centerline is shown.
- Side View (Middle):** A narrow vertical section showing the thickness of the plate as 2 ± 0.10 mm. It indicates the positions of the holes along the length.

Technical drawing of a rectangular plate. The drawing shows two views: a top view and a side view. The top view is a rectangle with a width of 10 and a height of 2. The side view is a rectangle with a width of 15 and a height of 45. The material specification is 16 N3 ϕ 5 C=133.

Technical drawing of a mechanical part, likely a bracket or support, showing dimensions and section A-A.

Dimensions:

- Top horizontal dimension: 46
- Top horizontal dimension: 2 N1 ϕ 10 C=360
- Top horizontal dimension: 20/50
- Top horizontal dimension: 2 ϕ 10
- Top horizontal dimension: 16 ϕ 5
- Top horizontal dimension: 2 ϕ 10
- Top horizontal dimension: 15
- Top horizontal dimension: 45
- Top horizontal dimension: 16 N3 ϕ 5 C=133
- Top horizontal dimension: 2 ϕ 10
- Top horizontal dimension: 42
- Top horizontal dimension: 2 N2 ϕ 10 C=320

Section A-A:

- Section A-A is indicated by a dashed line and the label "A-A" at the bottom.
- Section A-A shows a cross-section of the part, with dimensions 2 ϕ 10 and 2 ϕ 10.


[illegible]

Technical drawing of a mechanical part showing three views: front, top, and side.

Front View: A rectangle with a width of 328 and a height of 16. It features a central hole with a diameter of 5. The distance from the left edge to the center of the hole is 2. The hole is labeled $N1 \ \phi \ 5$ and $C=360$.

Top View: A rectangle with a width of 325 and a height of 15. It features a central hole with a diameter of 5. The distance from the left edge to the center of the hole is 2. The hole is labeled $2 \ \phi \ 5$.

Side View: A rectangle with a width of 20 and a height of 5. It features a central hole with a diameter of 5. The distance from the left edge to the center of the hole is 20. The hole is labeled $N3 \ C/15$ and $20 \ \phi \ 5$.



Technical drawing of a reinforced concrete slab (B40) showing reinforcement details. The drawing includes dimensions for various reinforcement bars (N1, N2, N3, N4, N5) and their spacing (C). Key dimensions include 96, 159, 77, 20/40, 31, 42, and 200. The slab is labeled B40 and B32.

31 N5 ϕ 6.3 C=114

Technical drawing of a rectangular plate. The top view shows a plate with overall dimensions of 543 mm by 20 mm. The material is specified as N1 with a yield strength of 10 and a tensile strength of 605. The bottom view shows a plate with overall dimensions of 545 mm by 20 mm. The material is specified as N2 with a yield strength of 10 and a tensile strength of 575. The plate has a central slot with a width of 20 mm and a depth of 5 mm. The slot is located 20 mm from the left and right edges. The plate is shown in two views: a top view and a bottom view. The top view is labeled with dimensions 543, 20, and 20/50. The bottom view is labeled with dimensions 545, 20, and 20/50. The material specifications are N1 10 C=605 for the top view and N2 10 C=575 for the bottom view. The plate is shown with a central slot and a width of 20 mm. The slot is located 20 mm from the left and right edges. The plate is shown in two views: a top view and a bottom view. The top view is labeled with dimensions 543, 20, and 20/50. The bottom view is labeled with dimensions 545, 20, and 20/50. The material specifications are N1 10 C=605 for the top view and N2 10 C=575 for the bottom view.

33 N3 Ø 5 C=133

Technical drawing of a mechanical part, likely a shaft or axle, showing dimensions and tolerances.

Top View (Plan View):

- Overall length: 362
- Central section diameter: $\phi 10$
- Central section length: 125
- End section diameter: $\phi 10$
- End section length: 10
- Overall diameter: $\phi 10$
- Overall tolerance: C=390

Side View (Elevation View):


- Overall length: 265
- Central section diameter: $\phi 6.3$
- Central section length: 17
- End section diameter: $\phi 6.3$
- End section length: 10
- Overall diameter: $\phi 6.3$
- Overall tolerance: C=280

Other Dimensions and Tolerances:

- Top view diameter: $\phi 10$
- Top view tolerance: C=155
- Side view diameter: $\phi 6.3$
- Side view tolerance: C=280
- End view diameter: $\phi 10$
- End view tolerance: C=390

Notes:

- 20/40
- V8
- V1



[illegible]

Technical drawing of a rectangular plate. The top view shows a rectangle with a central hole. The hole has a diameter of $\phi 10$. The distance from the center of the hole to the top and bottom edges is 2. The distance from the center of the hole to the left and right edges is 10. The side view shows a rectangle with a height of 35 and a width of 15. The drawing is labeled with the dimensions 29 N5 $\phi 6.3$ C=114.

1. DIMENSÕES EM CENTÍMETROS, ELEVACÕES 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 OVIDA 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
TECNOLÓGISTA 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 FORMAS ABSORVENTES (RETIRAR
EXCESSO DE ÁGUA), CUIDADO COM O USO DOS DESMOLDANTES
E RETIRADA DAS FORMAS
 - 8.3. ARMADO: 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
(CONTENÇÕES).
12. CONFERIR MEDIDAS NO LOCAL.

RESUMO AÇO CA 50-60			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60A	5	241	37
50A	6.3	144	35
50A	10	203	125
Peso Total		60A =	37 kg
Peso Total		50A =	160 ka

REVISÕES

ENDEREÇO:	ÁREA TERRENO:
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PROPRIETÁRIO:	7.266,56m2 CNPJ: 20.971.057/0001-45
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PROJETO DE ESTRUTURA DE CONCRETO ARMADO

EMPRESA:	CNPJ:
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RESPONSÁVEL TÉCNICO:	CREA:
NELSON URIAS PINTO GARIGLIO DA SILVA	82.624/D-MG

CONTEÚDO: ARMAÇÃO DE VIGAS - FUNDAÇÃO E 1o PAVIMENTO 07/10	DATA:	FOLHA:
	31/07/20	
	ESCALA:	50/126

CONFIGURACAO DAS PENAS - FORMATO A1 (601 x 900mm)						
RED	YELLOW	GREEN	CYAN	BLUE	MAGENTA	WHITE
0.25	0.50	0.13	0.30	0.40	1.0	0.80
						0.18