

Technical drawing of a bridge structure, showing a plan view and a cross-section A-A.

Plan View:

- Overall length: 1200 m.
- Spans and supports:
 - Span 1: 121 m, 2 N83 ø16.0 C=389.
 - Span 2: 200 m, 2 N88 ø10.0 C=175.
 - Span 3: 139 m, 2 N66 ø10.0 C=287.
 - Span 4: 233 N9 ø6.3.
 - Span 5: 233 N10 ø6.3.
 - Span 6: 235 m, 1 N15 ø8.0 C=135.
 - Span 7: 145 m, 1 N16 ø8.0 C=153.
 - Span 8: 37 N1 ø15.
 - Span 9: 137 N1 ø5.0 C=120.
- Supports: P1, P2, P3, P4, P5.
- Dimensions: 20, 497.5, 552.5, 555, 383.5, 114, 28 N1 ø14, 19 N1 ø6, 28 N1 ø20, 28 N1 ø20, 37 N1 ø15, 137 N1 ø5.0 C=120.

Cross-section A-A:

- Width: 40 m.
- Height: 20 m.
- Labels: 2 N65 ø10.0 C=310, 2 N81 ø16.0 C=144, 2 N82 ø16.0 C=1200, 2 N83 ø16.0 C=389, 2 N88 ø10.0 C=175, 2 N66 ø10.0 C=287, 233 N9 ø6.3, 233 N10 ø6.3, 20, 497.5, 552.5, 555, 383.5, 114, 28 N1 ø14, 19 N1 ø6, 28 N1 ø20, 28 N1 ø20, 37 N1 ø15, 137 N1 ø5.0 C=120.

Technical drawing of a rectangular plate with dimensions and specifications. The drawing includes a top view and a side view.

Top View Dimensions:

- Overall width: 150
- Overall height: 24
- Top edge specifications: 2 N29 ø8.0 C=959
- Bottom edge specifications: 1 N22 ø8.0 C=170
- Left edge specifications: 1 N27 ø8.0 C=126
- Right edge specifications: 1 N28 ø8.0 C=106
- Internal dimensions: 915, 95, 104, 84
- Section line: SEÇÃO A-A, ESC 1:25

Side View Dimensions:

- Overall height: 40
- Overall width: 20
- Internal width: 17
- Bottom edge specifications: 44 N1 ø5.0 C=120

Other Dimensions and Labels:

- Top view internal dimensions: 352, 20, 428.75, 20 x 40, 22 N1 ø20
- Side view internal dimensions: 165, 85, 17
- Labels: P12, P13, V12, A

ESC 1:50

2 N34 ø8.0 C=692

670

1 N33 ø8.0 C=180

95

2 N35 ø8.0 C=166

144

1 N27 ø8.0 C=126

104

1 N28 ø8.0 C=106

84

2 N2 ø5.0 C=236

SEÇÃO A-A

ESC 1:25

352

f A

V14

P14

V17

P15

506.25

20

486.25

20 x 40

25 N1 ø20

486.25

20 x 40

486.25

25 N1 ø20

60

1 N30 ø8.0 C=231

150

1 N31 ø8.0 C=186

2 N32 ø8.0 C=1030

40

20

37

17

50 N1 ø5.0 C=12

ESC 1:25

2 N43 e8.0 C=340

170

2 N35 e8.0 C=166

24

144

1 N27 e8.0 C=126

24

104

2 N3 e5.0 C=221

2 N3 e5.0 C=221

SEÇÃO A-A

ESC 1:25

352

f A

P20

20

486.25

20 x 40

486.25

25 N1 e20

100

1 N41 e8.0 C=256

160

1 N41 e8.0 C=256

2 N32 e8.0 C=1030

P21

20

486.25

20 x 40

486.25

25 N1 e20

P22

20

40

20

37

50 N1 e5.0 C=12

[illegible][illegible]

ESC 1:25

SEÇÃO A-A

ESC 1:25

24 298 37

3 N52 ± 0.0 C=355

352

A

P6

20 280.5

280.40

260.5

14 N1 ± 0.20

60 298

1 N50 ± 0.0 C=206

2 N51 ± 0.0 C=306

40 20

V1

17

10 N1 ± 0.0 C=120

[illegible]

Technical drawing of a rectangular plate with the following specifications and dimensions:

- Top Left:** ESC 1:50
- Top Right:** 2 N35 ø8.0 C=166
 - 144
 - 1 N27 ø8.0 C=126
 - 104
- Bottom Left:** 3 N56 ø8.0 C=121
 - 99
- Bottom Center:** 2 N6 ø5.0 C=356
- Bottom Right:** 2 N80 ø12.5 C=590
- Right Side:** SEÇÃO A-A
ESC 1:25
- Dimensions and Labels:**
 - Top edge: 352
 - Left edge: V3
 - Right edge: P3
 - Bottom edge: 561.25, 541.25, 28 N1 ø20, 578
 - Section A-A dimensions: 40 (width), 20 (height), 37 (height)
 - Bottom left corner: 15

Technical drawing of a reinforced concrete beam (Viga) showing top and side views.

Top View:

- Overall length: 352
- Reinforcement bars: 3 N59 ø8.0 C=895, 2 N58 ø8.0 C=230, 1 N42 ø8.0 C=190
- Spacing: 115, 95
- Section line: 1e2c

Side View (SEÇÃO A-A, ESC 1:25):

- Overall height: 40
- Overall width: 20
- Reinforcement bars: V8, P20, P17, V5, P11
- Dimensions: 52.6, 356.65, 20, 371.65, 20, 52.6, 356.65, 20, 371.65, 20
- Reinforcement bars: 3 N17 ø10.0 C=460, 2 N72 ø10.0 C=400
- Dimensions: 438, 18 N17 ø20, 19 N17 ø20

[illegible]

Technical drawing of a structural section A-A, showing a longitudinal view of a beam with various reinforcement bars and dimensions. The drawing includes a cross-section view on the right showing a rectangular profile with dimensions 60 and 20. The main view shows a beam with reinforcement bars 2N8, 1N86, 1N85, 4N60, 2N7, 2N8, 2x4N14, 2x4N13, 20x60, 31N5, 4N73, 1N74, and 6N75. Dimensions include 320, 235, 195, 124, 392, 615.8, 20, 120, 693.75, 553.75, 28, 230, and 17. The drawing is labeled "SEÇÃO A-A" and "ESC 1:25".

Technical drawing of a rectangular plate with dimensions and material specifications. The drawing includes a top view and a side view.

Top View Dimensions:

- Overall width: 24
- Overall height: 24
- Inner width: 232
- Inner height: 352
- Material: 3 N64 ø8.0 C=276

Side View Dimensions:

- Overall width: 20
- Overall height: 214.95
- Inner width: 20 x 40
- Inner height: 194.95
- Material: 2 N62 ø8.0 C=160

Material Specifications:

- 3 N64 ø8.0 C=276
- 2 N62 ø8.0 C=160
- 2 N63 ø8.0 C=232

Other Dimensions:

- 24
- 20
- 214.95
- 20 x 40
- 194.95
- 10 N1 c/20
- 55
- 1 N62 ø8.0 C=160
- 2 N63 ø8.0 C=232

V18 (20 x 40)

ESC 1:50

2 N9 ø8.0 C=1198
1176

2 N10 ø8.0 C=254
61 232

1 N8 ø8.0 C=1044
1022

1 N6 ø8.0 C=126
104

1 N7 ø8.0 C=140
55

SEÇÃO A-A
ESC 1:25

40

20

P22 P19 P15 Pg P5

20 400.85 20 194.95 20 325.62 20 328.13 20

20 x 40 20 x 40 20 x 40 20 x 40

400.95 194.95 325.62 328.13

21 N1 c20 10 N1 c20 17 N1 c20 17 N1 c20

2 N11 ø10.0 C=429 1 N2 ø8.0 C=215 55 1 N3 ø8.0 C=191 100 1 N4 ø8.0 C=203

65 N1 ø5.0 C=120

V1	V2	V3			
V4	V5	V6			
V7	V8	V9			
V10	V11	V12			
V13	V14	V15			
V16	V17				
AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (m)	C.TOTAL (m)
CA50	3	5.0	325	2	63000
	2	5.0	2	236	472
	3	5.0	4	221	884
	4	5.0	4	144	888
	5	5.0	101	160	16160
CA50	6	5.0	2	356	712
	7	5.0	2	372	744
	8	5.0	2	279	558
	9	6.3	6	CORR	2088
	10	6.3	6	CORR	3330
	11	6.3	3	CORR	1500
	12	6.3	4	96	384
	13	6.3	16	CORR	10784
	14	6.3	16	CORR	4028
	15	8.0	1	135	135
	16	8.0	1	153	153
	17	8.0	2	2176	4352
	18	8.0	3	584	1752
	19	8.0	2	112	224
	20	8.0	2	288	976
	21	8.0	1	140	140
	22	8.0	2	170	340
	23	8.0	2	287	574
	24	8.0	1	254	254
	25	8.0	1	234	234
	26	8.0	2	915	1830
	27	8.0	5	126	630
	28	8.0	3	106	318
	29	8.0	2	959	1918
	30	8.0	1	231	313
	31	8.0	1	186	186
	32	8.0	4	1030	4120
	33	8.0	2	180	360
	34	8.0	2	692	1384
	35	8.0	8	166	1328
	36	8.0	3	1113	939
	37	8.0	3	341	1023
	38	8.0	1	205	205
	39	8.0	2	935	1870
	40	8.0	3	331	993
	41	8.0	2	256	512
	42	8.0	2	390	780
	43	8.0	2	340	680
	44	8.0	1	211	211
	45	8.0	2	208	416
	46	8.0	2	719	1438
	47	8.0	2	159	318
	48	8.0	2	184	368
	49	8.0	1	64	64
	50	8.0	2	206	412
	51	8.0	4	306	1224
	52	8.0	5	1775	8875
	53	8.0	1	223	223
	54	8.0	1	213	213
	55	8.0	2	1704	3408
	56	8.0	3	121	363
	57	8.0	3	460	1380
	58	8.0	4	460	1840
	59	8.0	3	895	2685
	60	8.0	4	139	556
	61	8.0	4	596	2384
	62	8.0	1	160	160
	63	8.0	2	232	464
	64	8.0	2	232	464
	65	10.0	2	338	1052
	66	10.0	2	375	390
	67	10.0	2	764	1528
	68	10.0	2	891	1782
	69	10.0	2	358	716
	70	10.0	2	400	800
	71	10.0	4	644	2576
	72	10.0	4	644	2576
	73	10.0	6	702	4212
	74	12.5	1	424	424
	75	12.5	1	534	534</

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	239.2	64.4
	8.0	406.2	176.3
	10.0	145.6	98.7
	12.5	49.7	52.6
	16.0	65.9	114.4
CA60	5.0	830.5	140.8
PESO TOTAL (kg)			
CA50	506.4		
CA60	140.8		

Volume de concreto (C-25) = 10.73 m³
Área de forma = 132.08 m²

RUA CUIABÁ- BAIRRO PROGRESSO - MUNICÍPIO DE TIO HUGO - RS



PREFEITURA MUNICIPAL DE TIO HUGO

RESPONSÁVEL TÉCNICO

JEAN BERARDI MANICA
ENG° CIVIL CREA-RS 133.545-D

DESENHO	
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Jean Berard

AREA:

1/50

1/5

PROJETO:

FERRAGEM VIGAS
RESPALDO

FERP

Agosto/2017

F-06

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