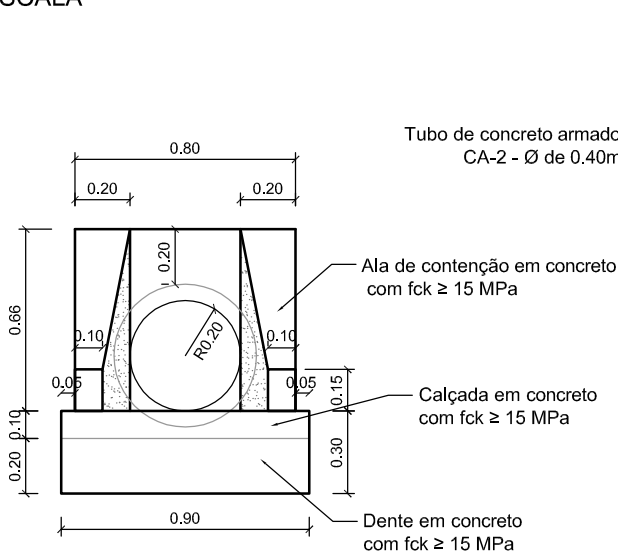


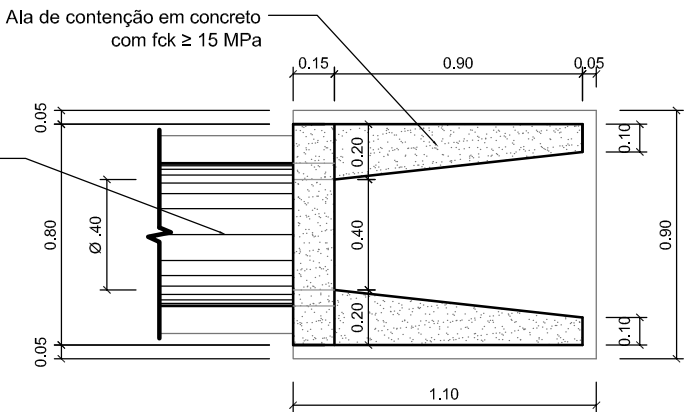
BUEIRO SIMPLES TUBULAR DE CONCRETO (BSTC) - Ø 0.40m

PROJETO BÁSICO
SEM ESCALA



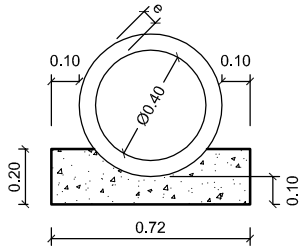
VISTA FRONTAL

Boca de bueiro simples de concreto Ø 0.40m



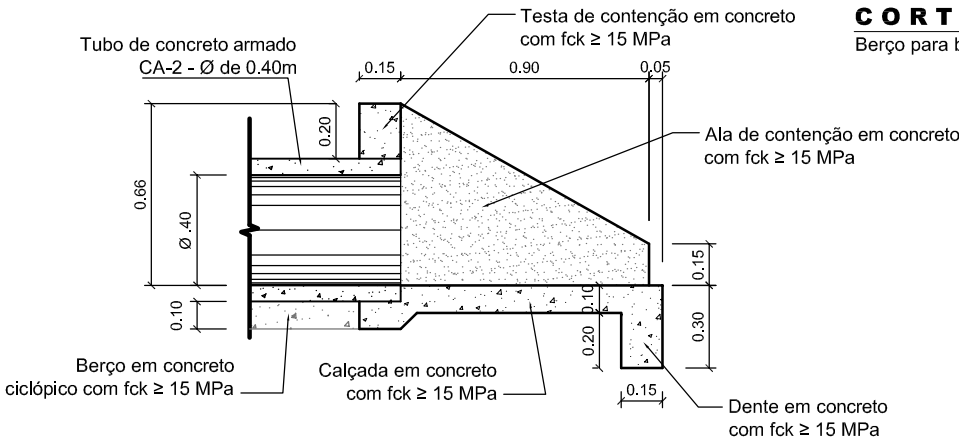
PLANTA BAIXA

Boca de bueiro simples de concreto Ø 0.40m



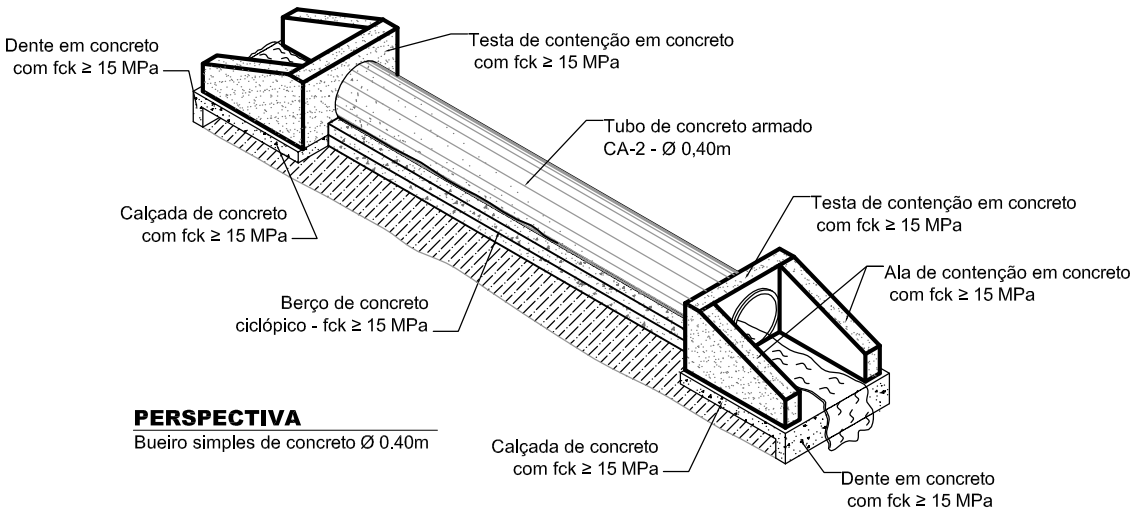
CORTE EM BUEIRO

Berço para bueiro simples de concreto Ø 0.40m



VISTA LATERAL

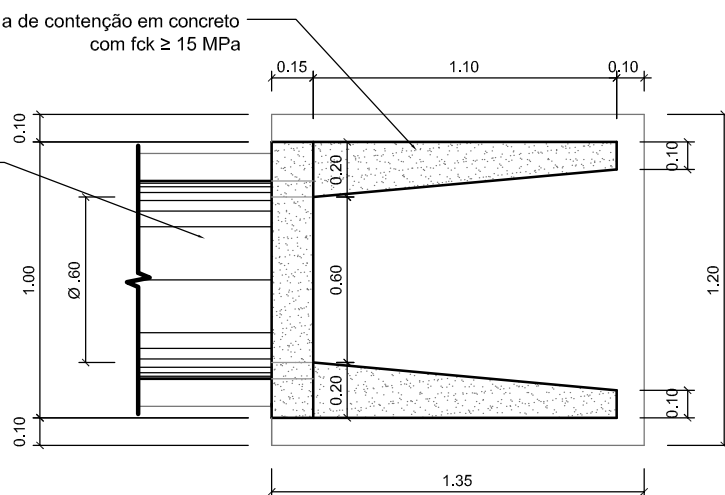
Boca de bueiro simples de concreto Ø 0.40m



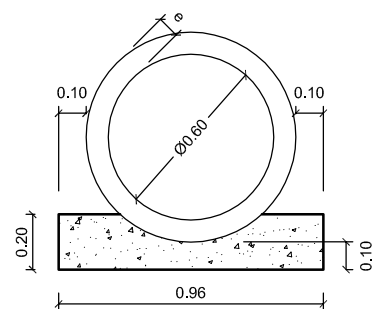
PERSPECTIVA

Bueiro simples de concreto Ø 0.40m

PROJETO BÁSICO
SEM ESCALA

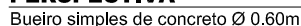


Boca de bueiro simples de concreto Ø 0.60m



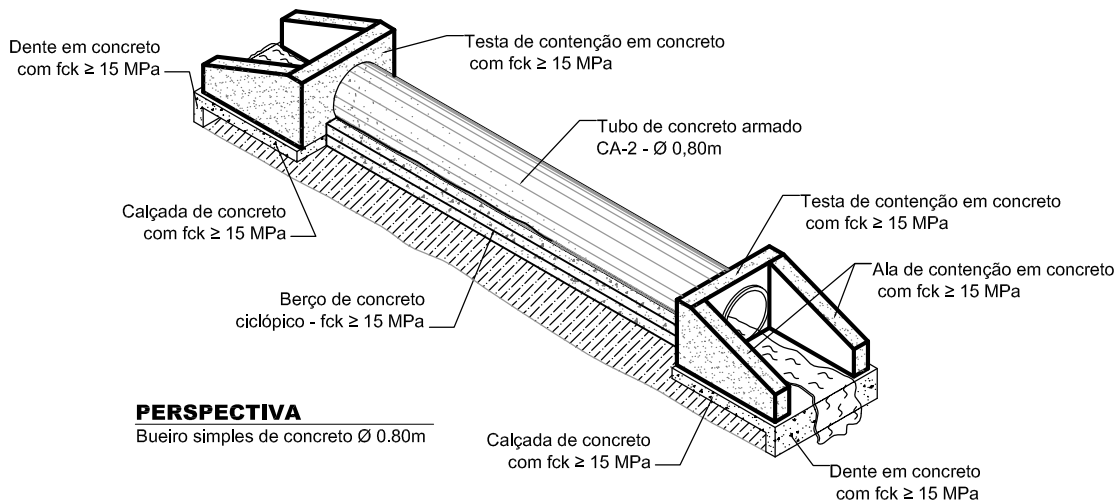
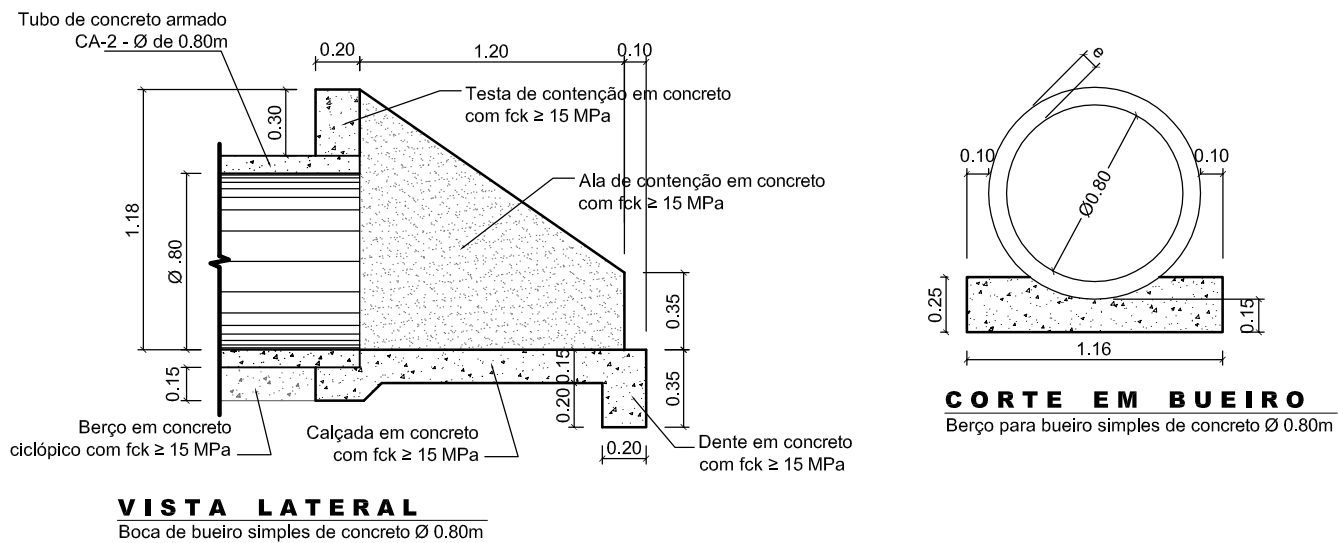
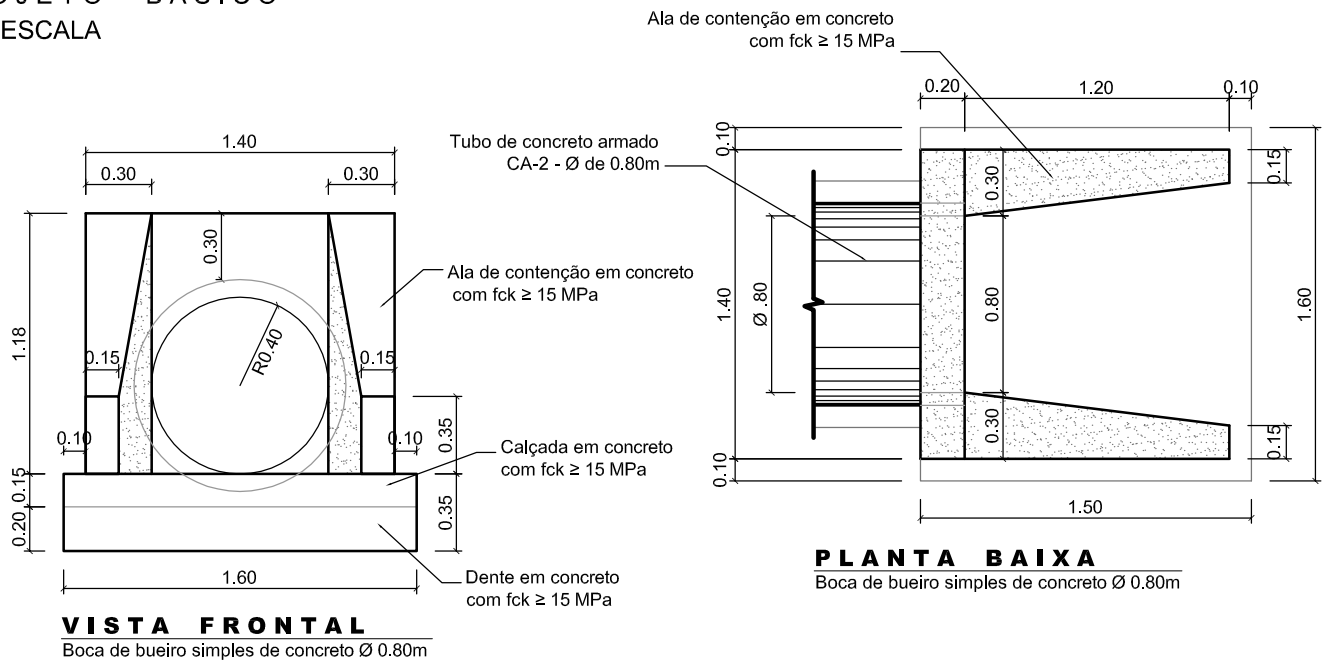
Berço para bueiro simples de concreto Ø 0.60m

Boca de bueiro simples de concreto Ø 0.60m



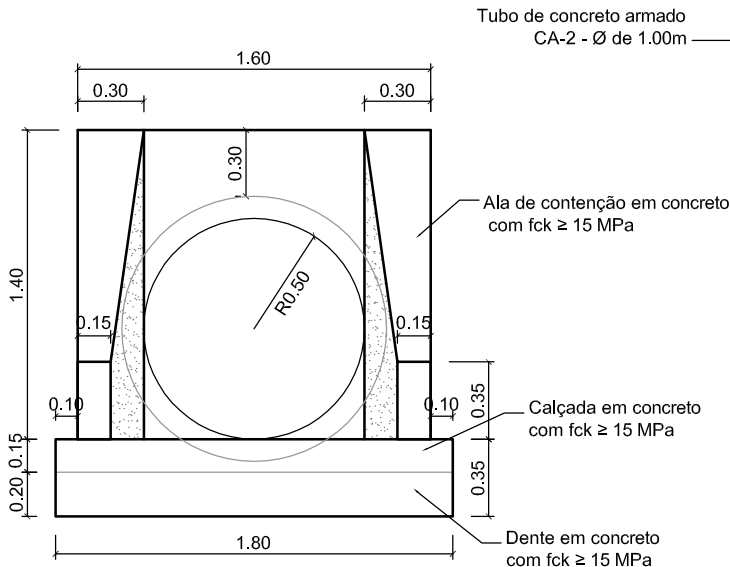
BUEIRO SIMPLES TUBULAR DE CONCRETO (BSTC) - Ø 0.80m

PROJETO BÁSICO
SEM ESCALA

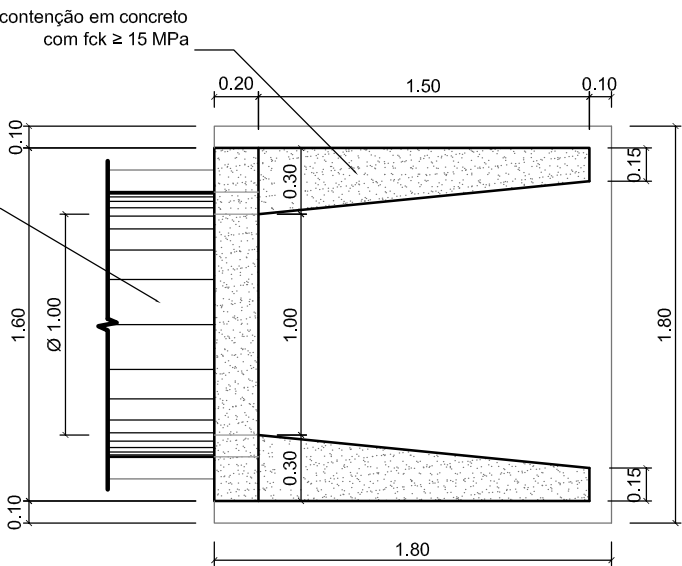


BUEIRO SIMPLES TUBULAR DE CONCRETO (BSTC) - Ø 1.00m

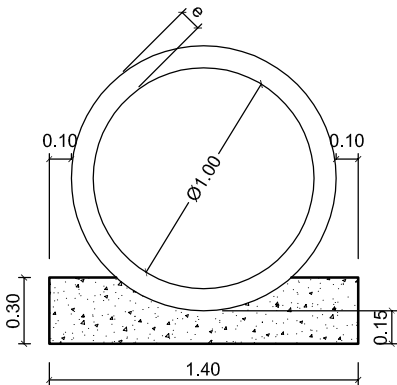
PROJETO BÁSICO
SEM ESCALA



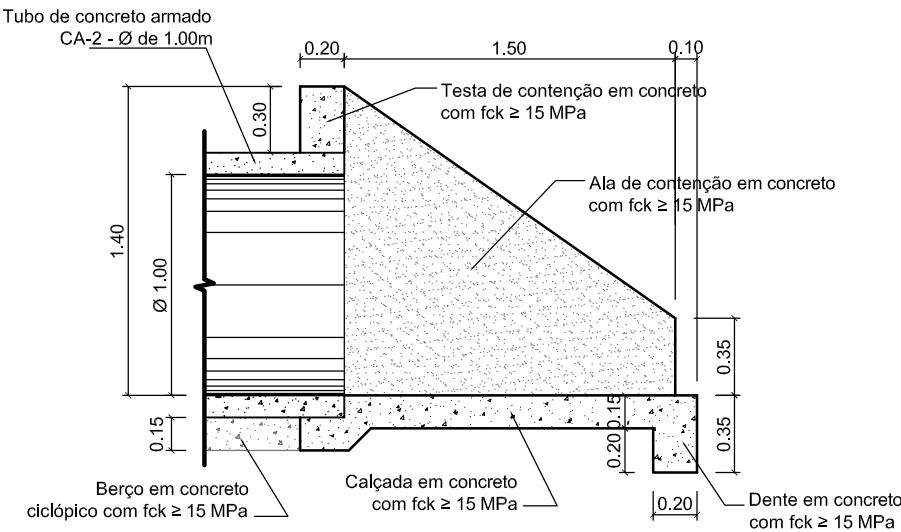
VISTA FRONTAL
Boca de bueiro simples de concreto Ø 1.00m



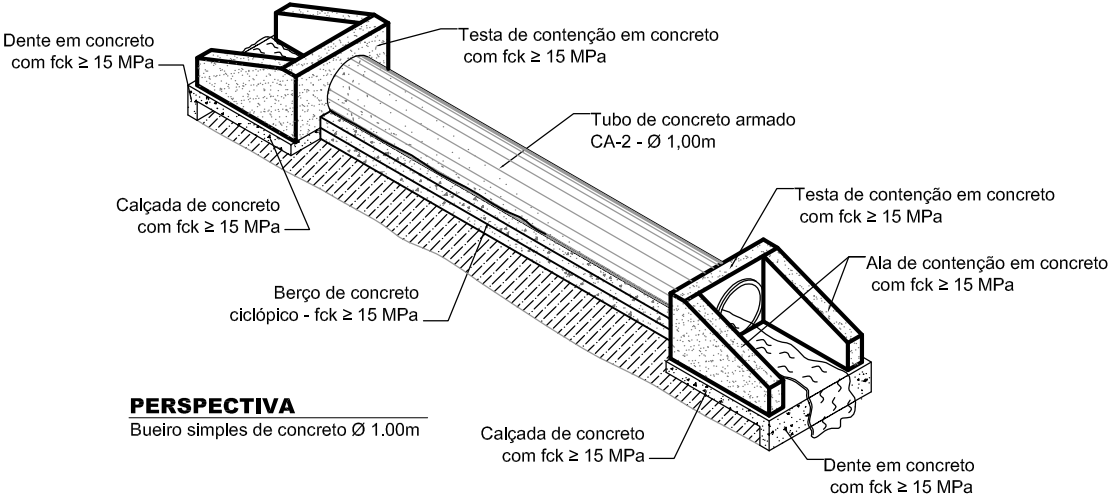
PLANTA BAIXA
Boca de bueiro simples de concreto Ø 1.00m



CORTE EM BUEIRO
Berço para bueiro simples de concreto Ø 1.00m



VISTA LATERAL
Boca de bueiro simples de concreto Ø 1.00m



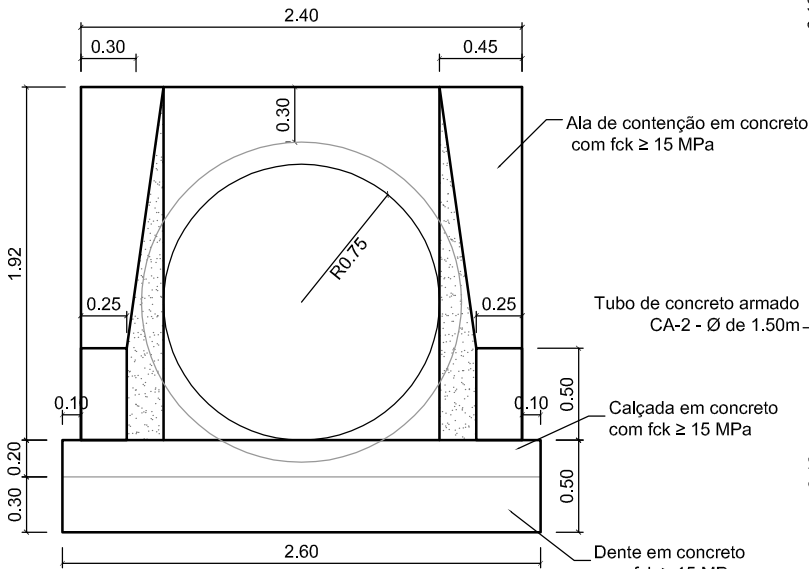
PERSPECTIVA
Bueiro simples de concreto Ø 1.00m

PROJETO BÁSICO
SEM ESCALA

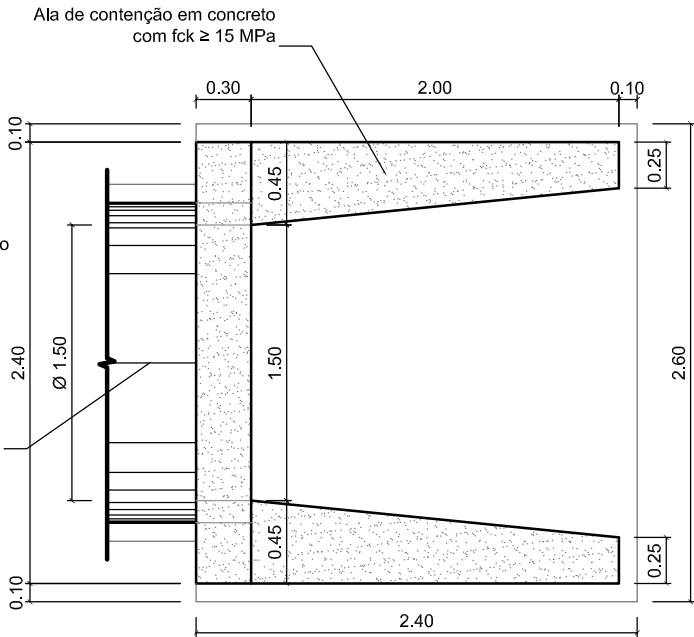


BUEIRO SIMPLES TUBULAR DE CONCRETO (BSTC) - Ø 1.50m

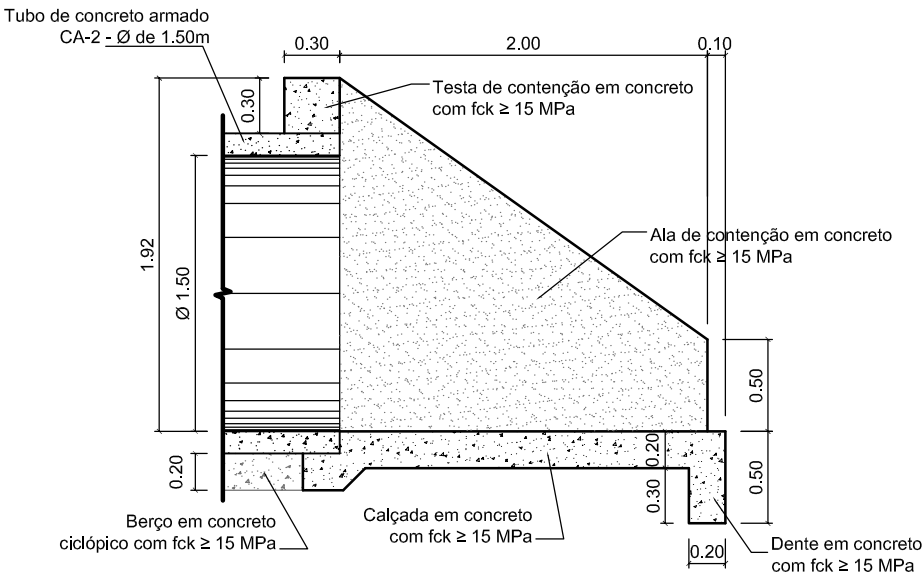
PROJETO BÁSICO
SEM ESCALA



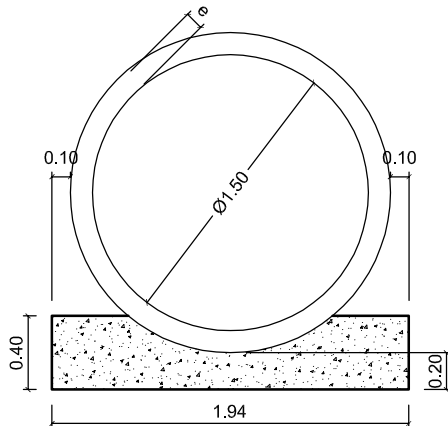
VISTA FRONTAL
Boca de bueiro simples de concreto Ø 1.50m



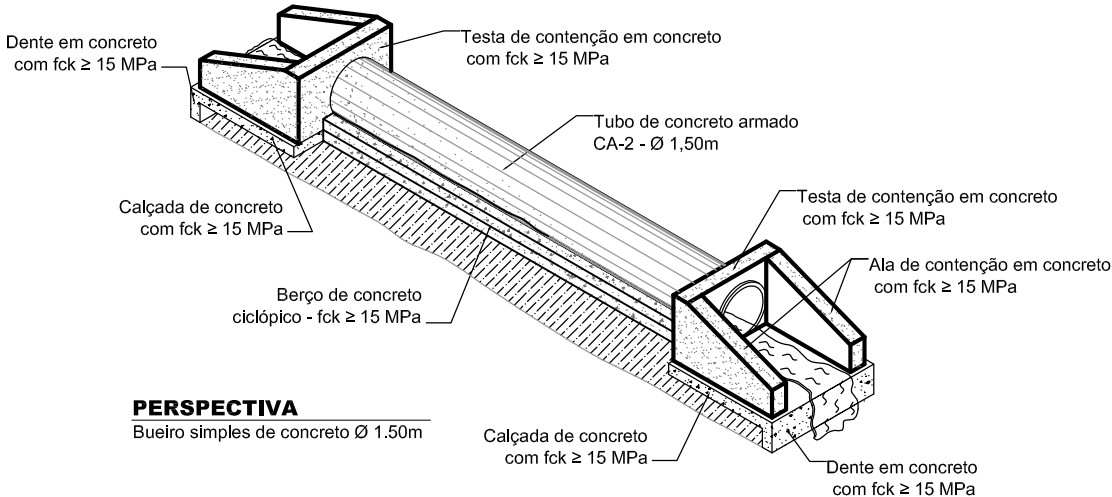
PLANTA BAIXA
Boca de bueiro simples de concreto Ø 1.50m



VISTA LATERAL
Boca de bueiro simples de concreto Ø 1.50m



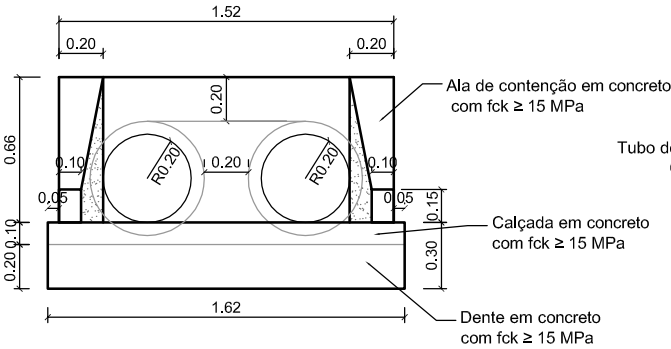
CORTE EM BUEIRO
Berço para bueiro simples de concreto Ø 1.50m



PERSPECTIVA
Bueiro simples de concreto Ø 1.50m

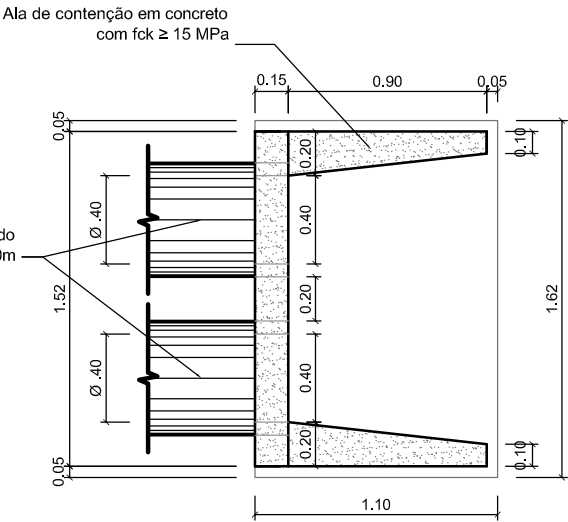
BUEIRO DUPLO TUBULAR DE CONCRETO (BDTC) - Ø 0.40m

PROJETO BÁSICO
SEM ESCALA



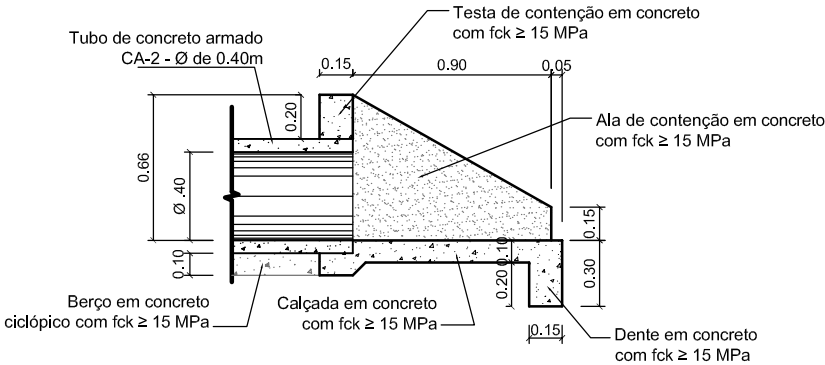
VISTA FRONTAL

Boca de bueiro duplo de concreto Ø 0.40m



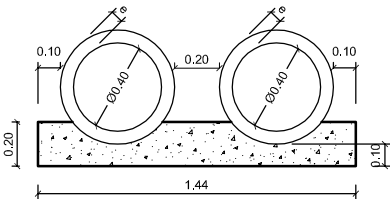
PLANTA BAIXA

Boca de bueiro duplo de concreto Ø 0.40m



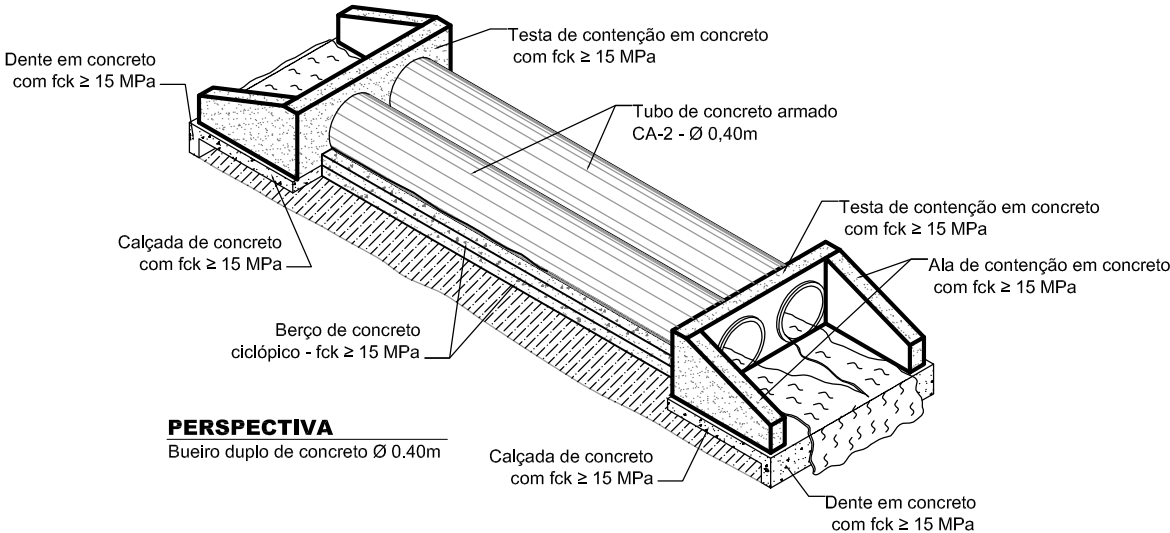
VISTA LATERAL

Boca de bueiro duplo de concreto Ø 0.40m



CORTE EM BUEIRO

Berço para bueiro duplo de concreto Ø 0.40m

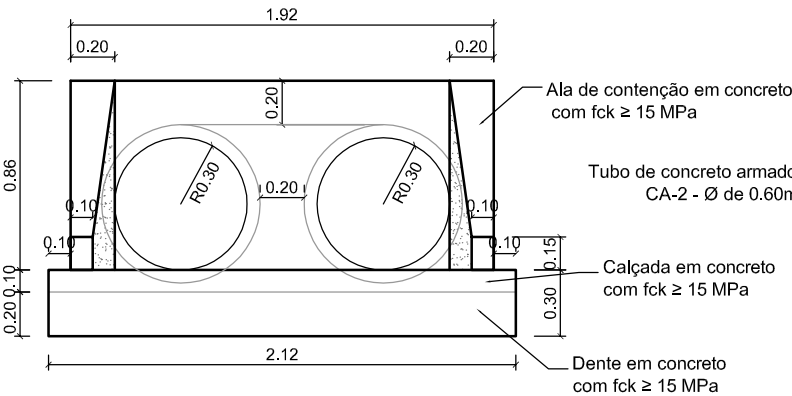


PERSPECTIVA

Bueiro duplo de concreto Ø 0.40m

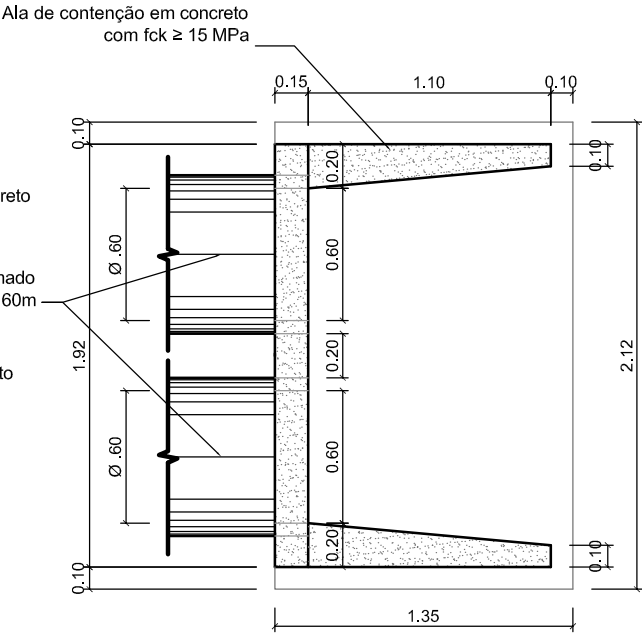
BUEIRO DUPLO TUBULAR DE CONCRETO (BDTC) - Ø 0.60m

PROJETO BÁSICO
SEM ESCALA



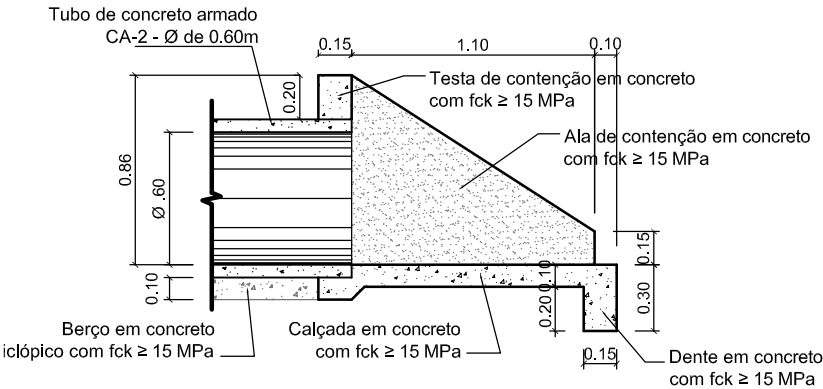
VISTA FRONTAL

Boca de bueiro duplo de concreto Ø 0.60m



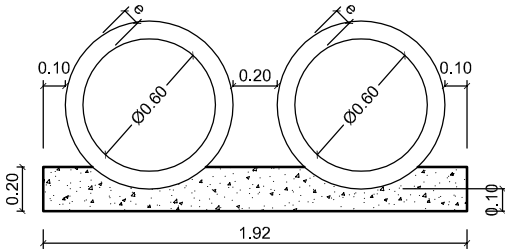
PLANTA BAIXA

Boca de bueiro duplo de concreto Ø 0.60m



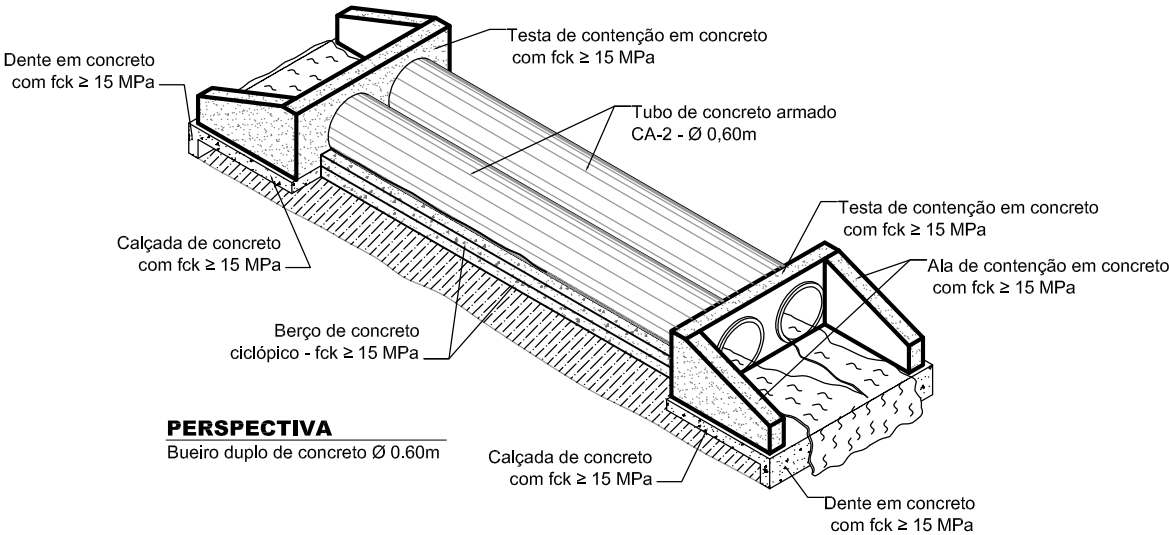
VISTA LATERAL

Boca de bueiro duplo de concreto Ø 0.60m



CORTE EM BUEIRO

Berço para bueiro duplo de concreto Ø 0.60m

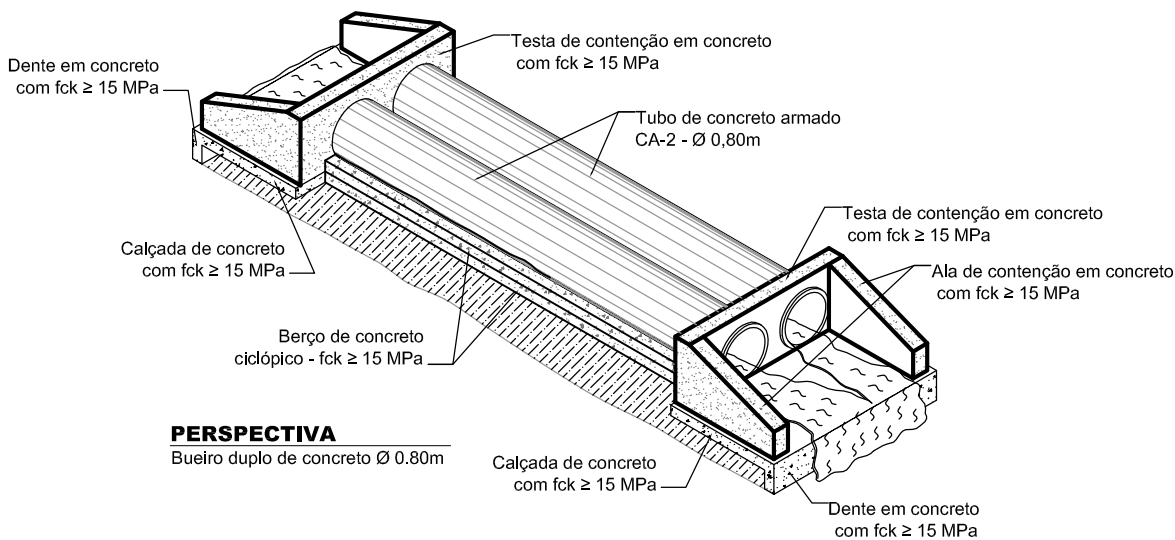
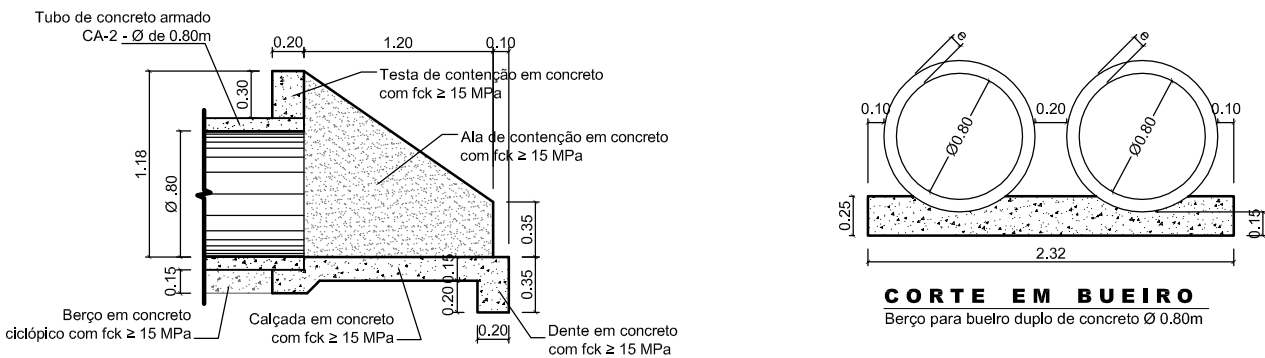
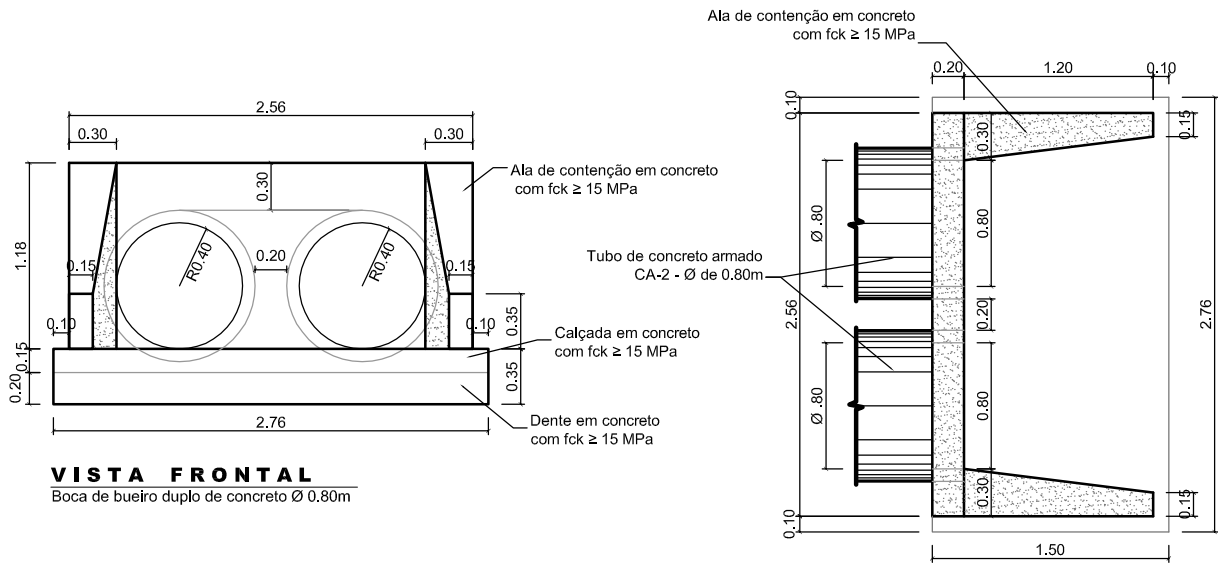


PERSPECTIVA

Bueiro duplo de concreto Ø 0.60m

BUEIRO DUPLO TUBULAR DE CONCRETO (BDTC) - Ø 0.80m

PROJETO BÁSICO
SEM ESCALA

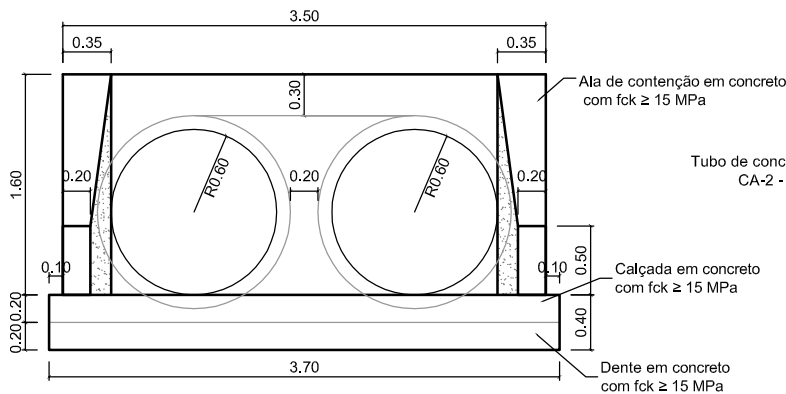


PROJETO BÁSICO
SEM ESCALA

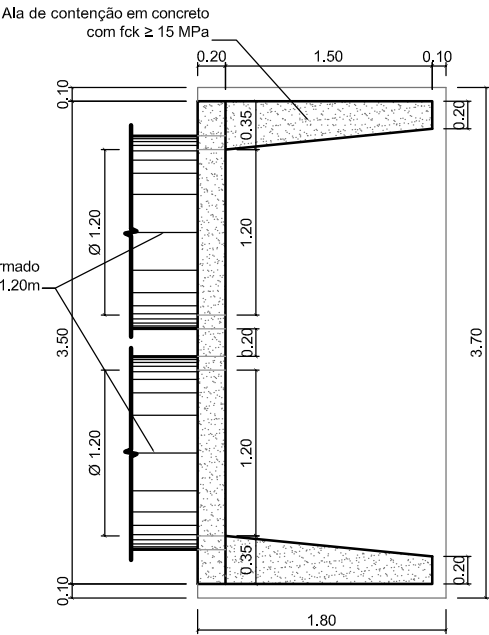


BUEIRO DUPLO TUBULAR DE CONCRETO (BDTC) - Ø 1.20m

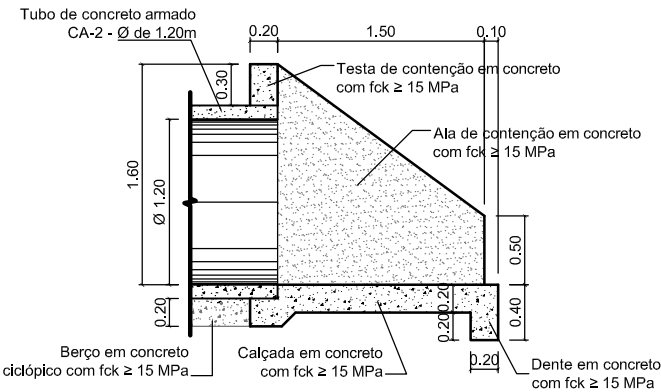
PROJETO BÁSICO
SEM ESCALA



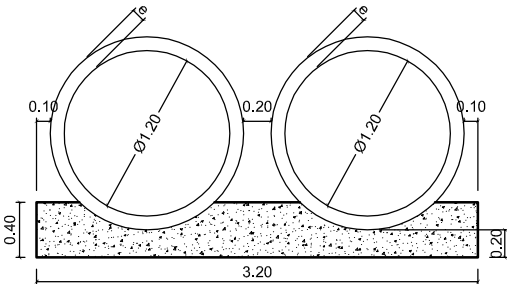
VISTA FRONTAL
Boca de bueiro duplo de concreto Ø 1.20m



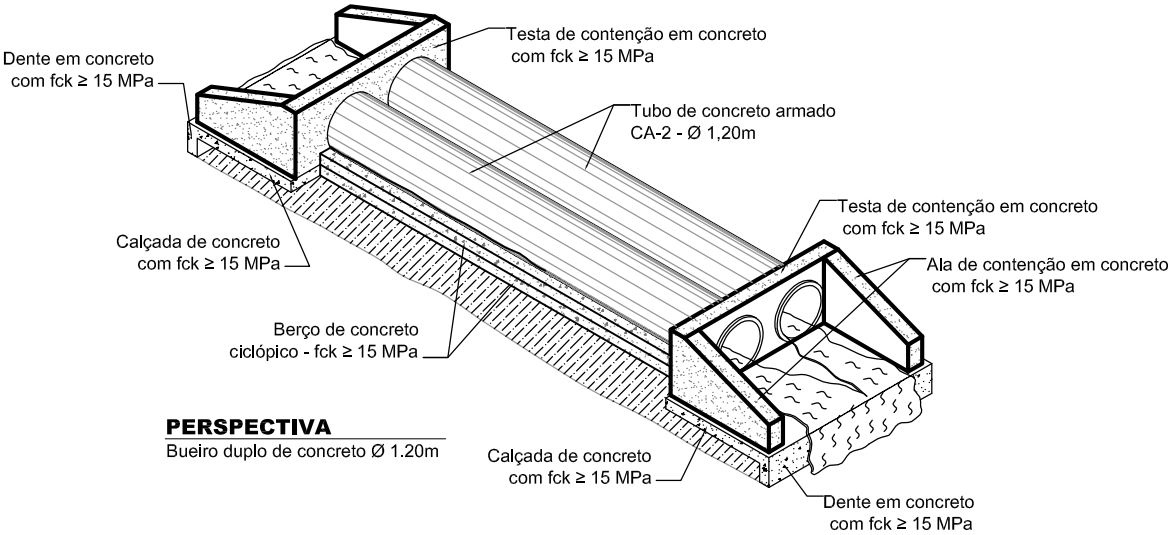
PLANTA BAIXA
Boca de bueiro duplo de concreto Ø 1.20m



VISTA LATERAL
Boca de bueiro duplo de concreto Ø 1.20m



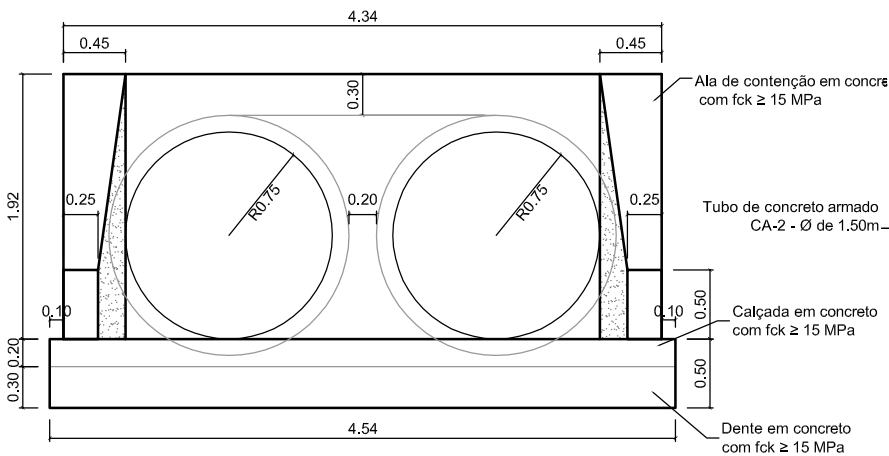
CORTE EM BUEIRO
Berço para bueiro duplo de concreto Ø 1.20m



PERSPECTIVA
Bueiro duplo de concreto Ø 1.20m

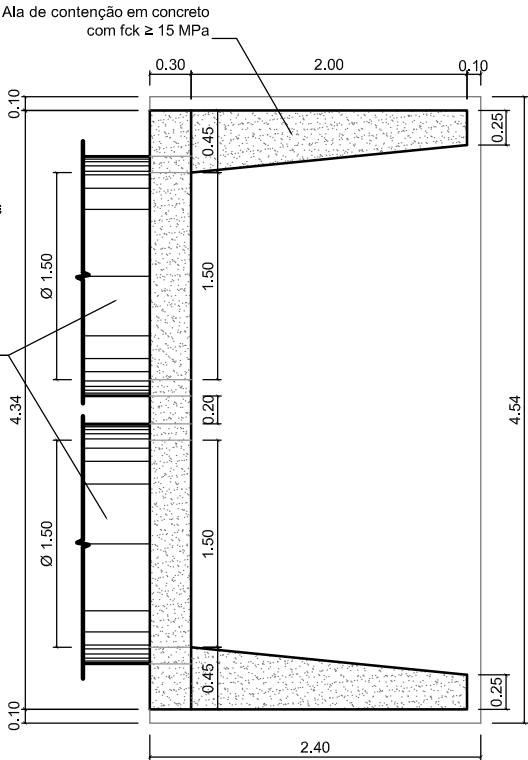
BUEIRO DUPLO TUBULAR DE CONCRETO (BDTC) - Ø 1.50m

PROJETO BÁSICO
SEM ESCALA



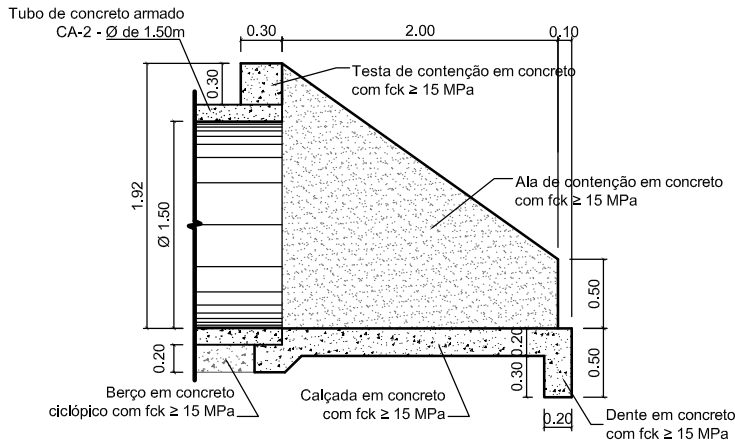
VISTA FRONTAL

Boca de bueiro duplo de concreto Ø 1.50m



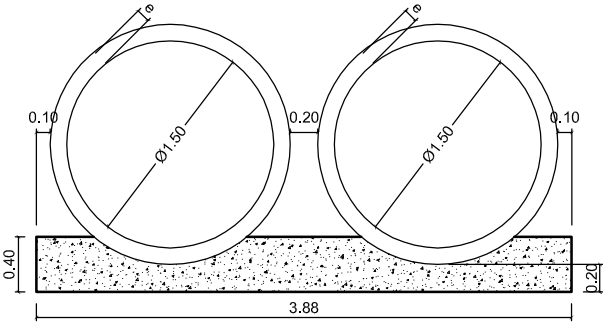
PLANTA BAIXA

Boca de bueiro duplo de concreto Ø 1.50m



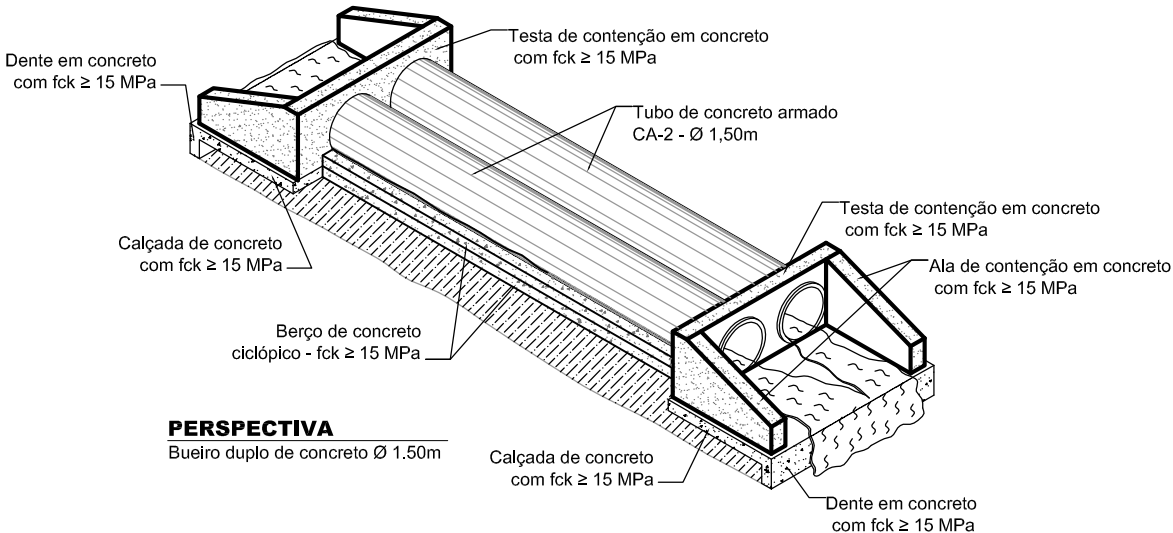
VISTA LATERAL

Boca de bueiro duplo de concreto Ø 1.50m



CORTE EM BUEIRO

Berço para bueiro duplo de concreto Ø 1.50m



PERSPECTIVA

Bueiro duplo de concreto Ø 1.50m

PROJETO BÁSICO
SEM ESCALA



Boca de bueiro triplo de concreto Ø 0.40m



Boca de bueiro triplo de concreto Ø 0.40m



Boca de bueiro triplo de concreto Ø 0.40m



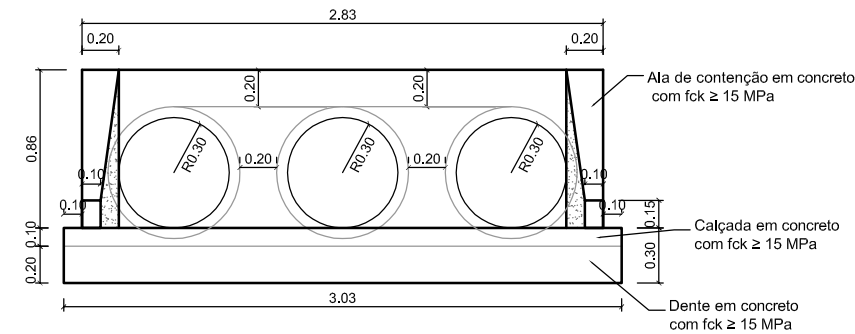
Berço para bueiro triplo de concreto Ø 0.40m



Bueiro triplo de concreto Ø 0.40m

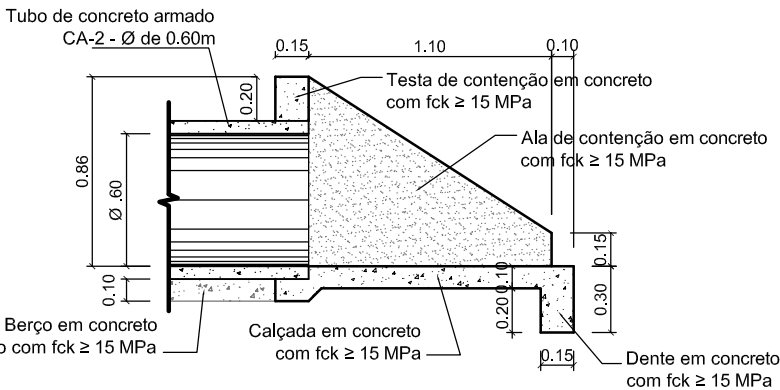
BUEIRO TRIPLO TUBULAR DE CONCRETO (BTTC) - Ø 0.60m

PROJETO BÁSICO
SEM ESCALA



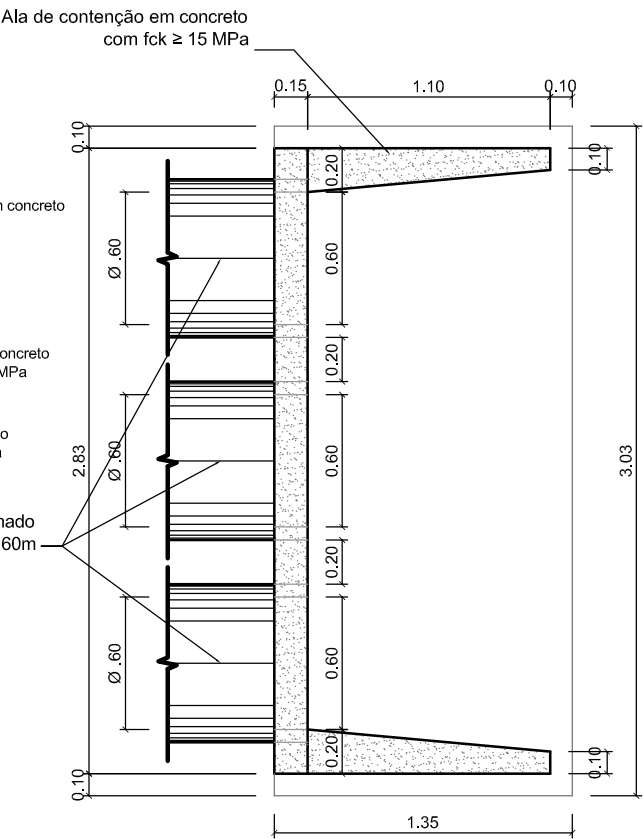
VISTA FRONTAL

Boca de bueiro triplo de concreto Ø 0.60m



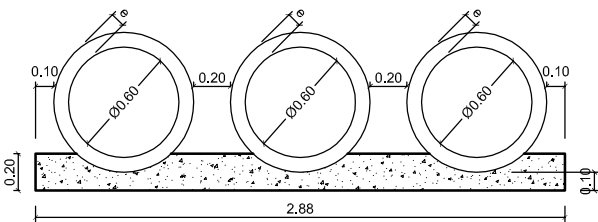
VISTA LATERAL

Boca de bueiro triplo de concreto Ø 0.60m



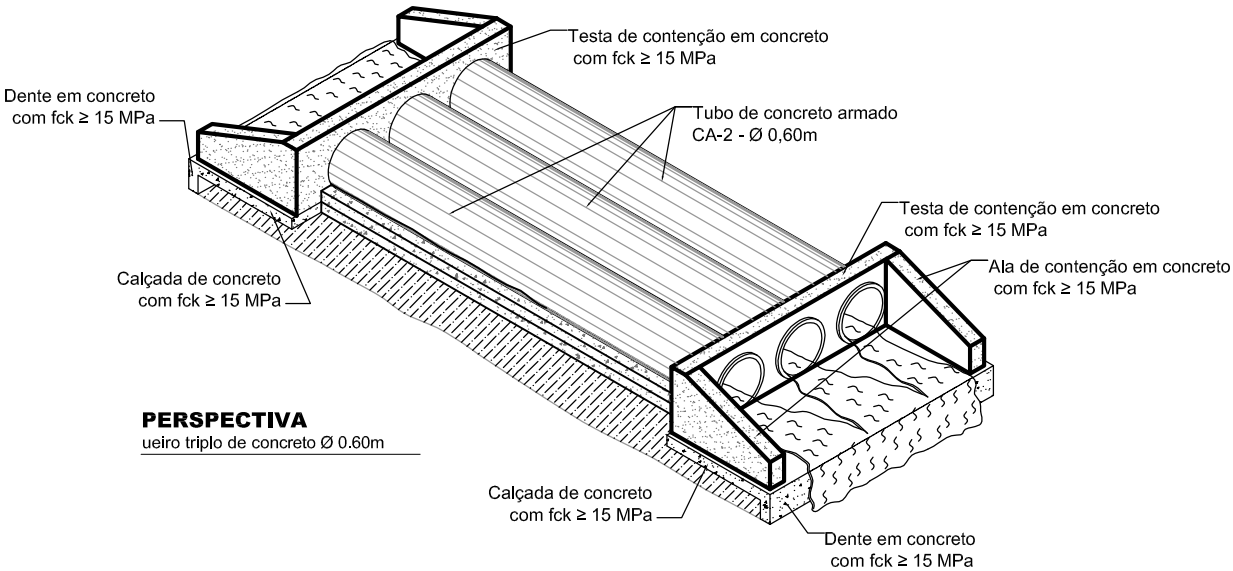
PLANTA BAIXA

Boca de bueiro triplo de concreto Ø 0.60m



CORTE EM BUEIRO

Berço para bueiro triplo de concreto Ø 0.60m



PERSPECTIVA

ueiro triplo de concreto Ø 0.60m

PROJETO BÁSICO
SEM ESCALA

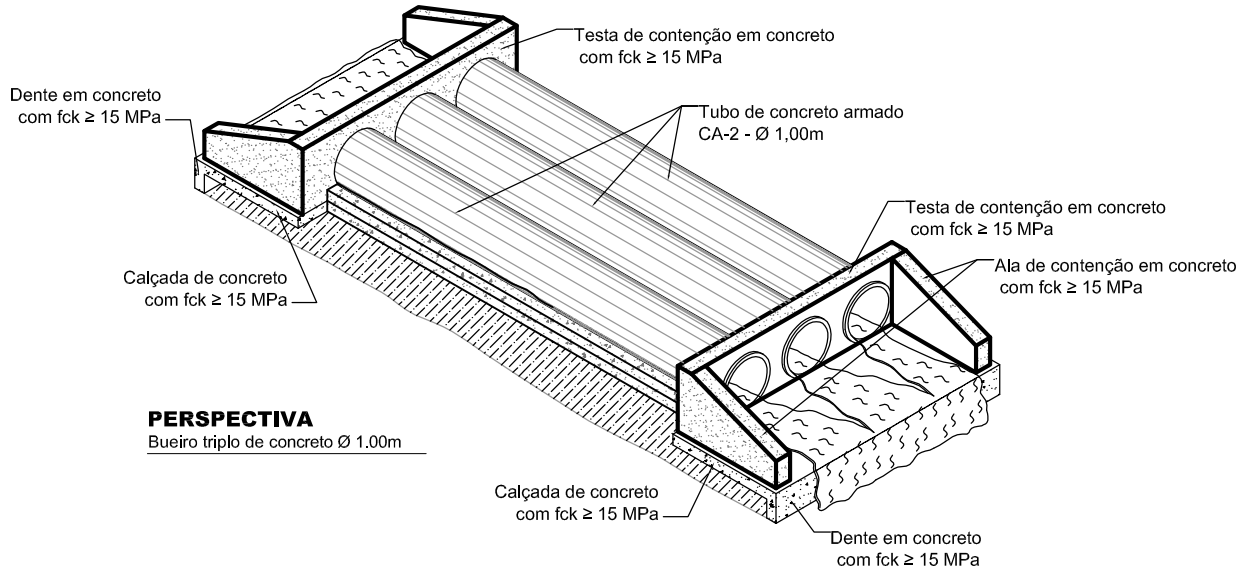
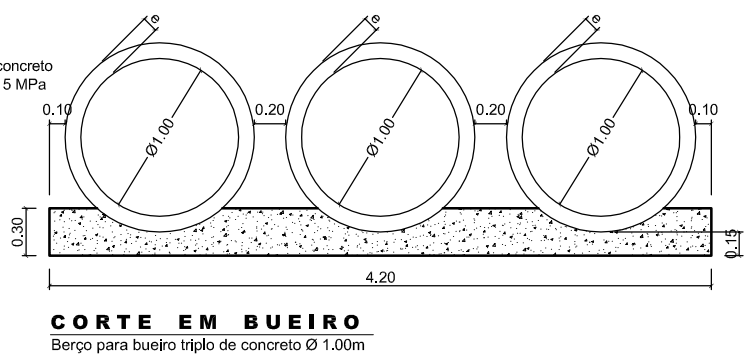
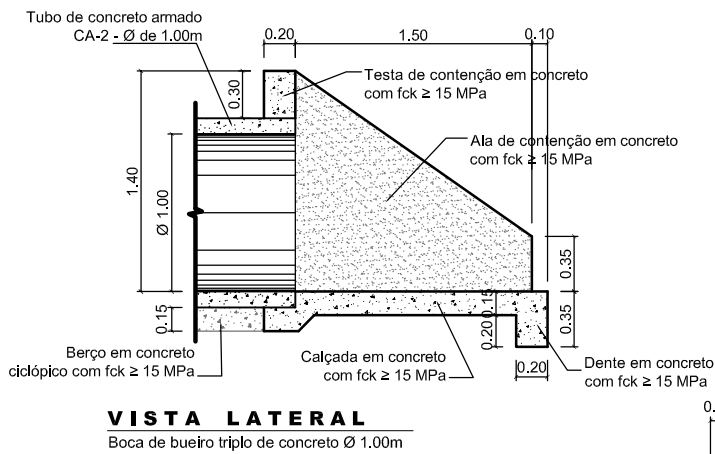
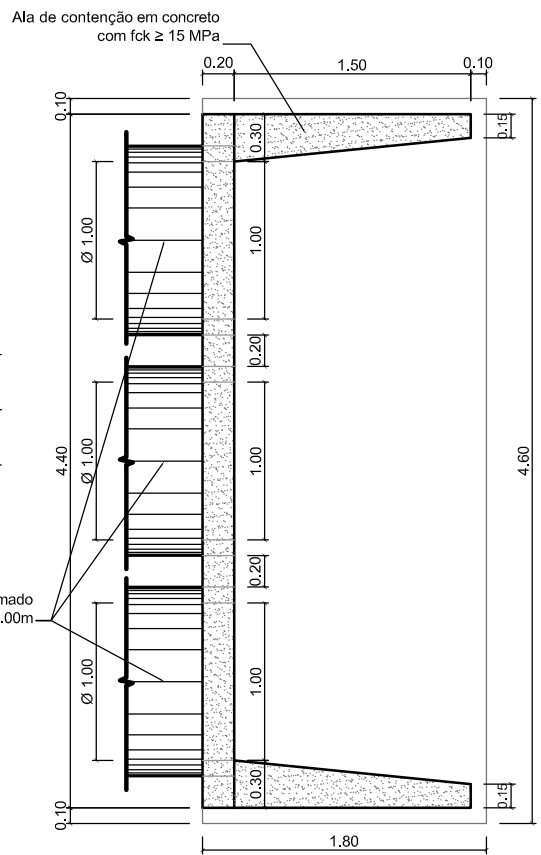
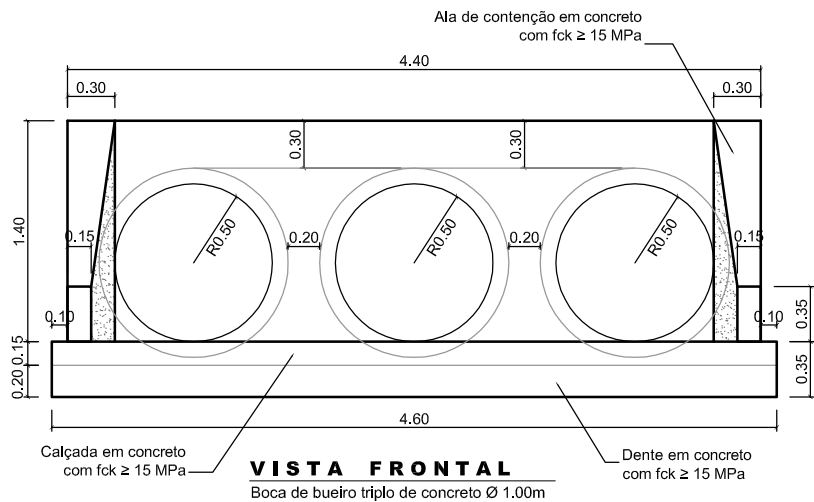


Bueiro triplo de concreto Ø 0.80m

BUEIRO TRIPLO TUBULAR DE CONCRETO (BTTC) - Ø 1.00m

PROJETO BÁSICO

SEM ESCALA



PROJETO BÁSICO
SEM ESCALA



Boca de bueiro triplo de concreto Ø 1.20m



Boca de bueiro triplo de concreto Ø 1.20m



Boca de bueiro triplo de concreto Ø 1.20m



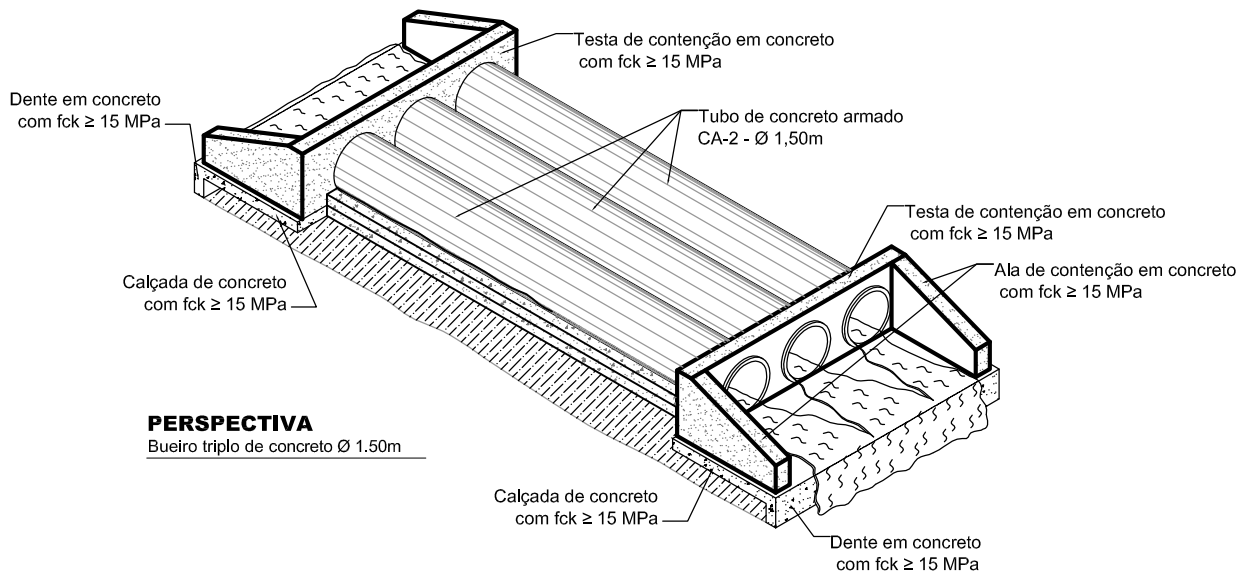
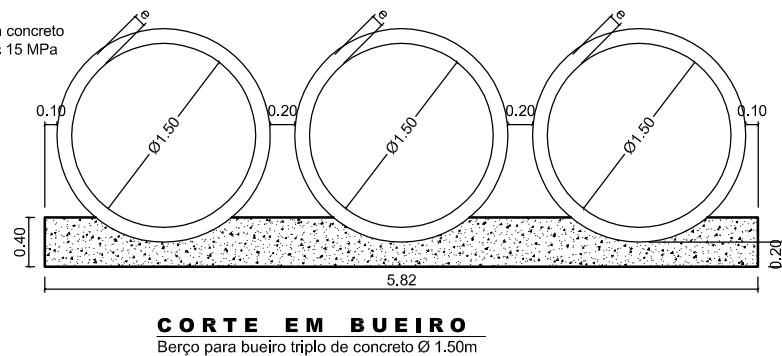
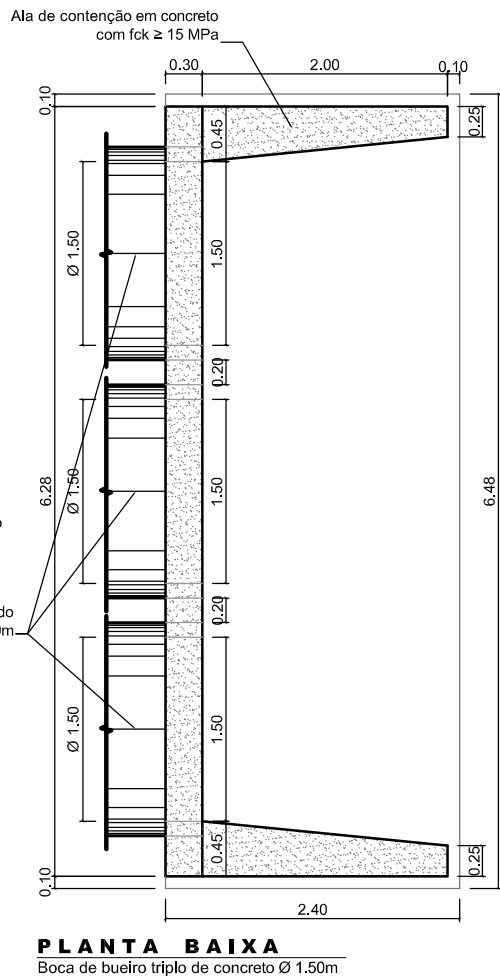
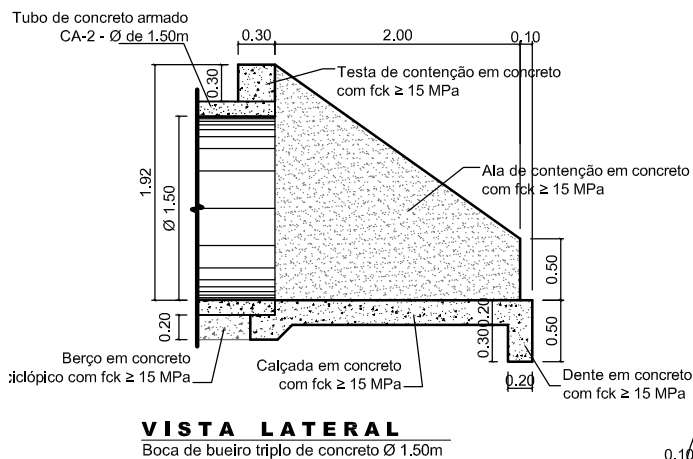
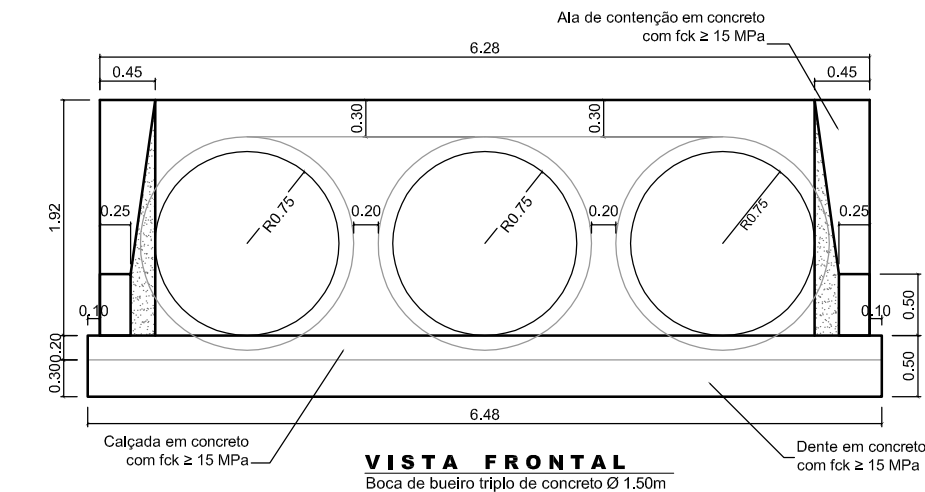
Berço para bueiro triplo de concreto Ø 1.20m



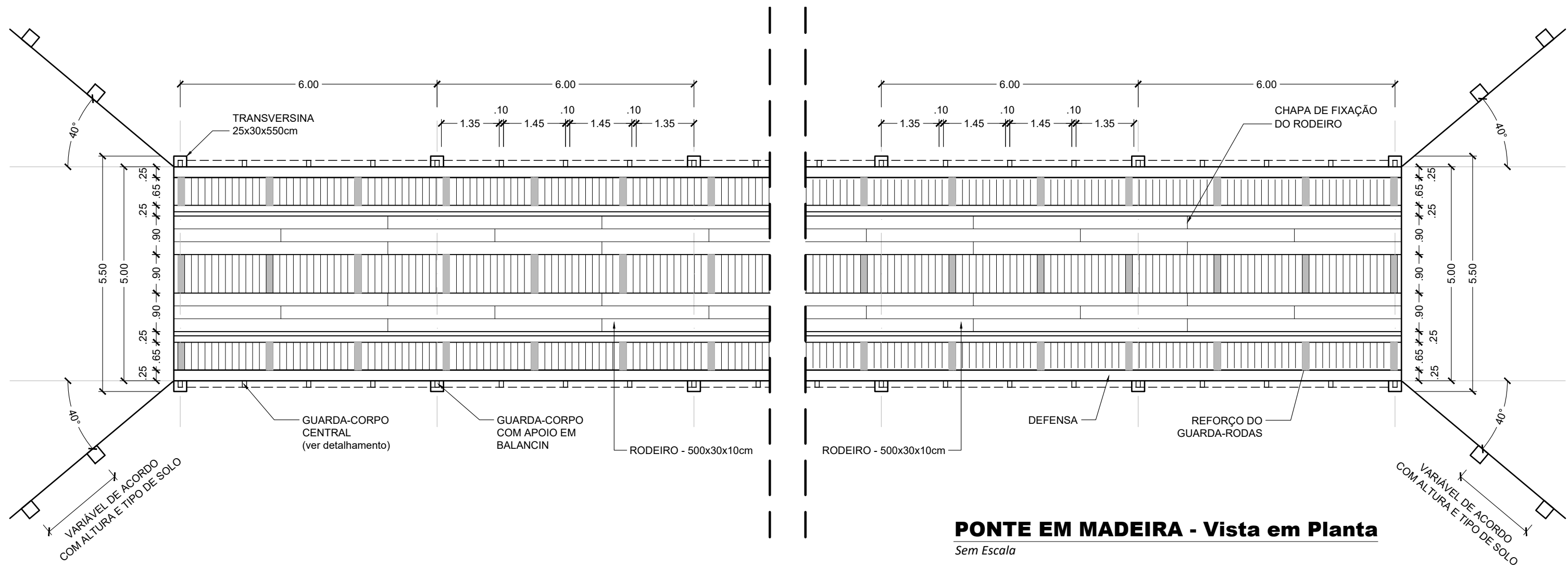
Bueiro triplo de concreto Ø 1.20m

BUEIRO TRIPLO TUBULAR DE CONCRETO (BTTC) - Ø 1.50m

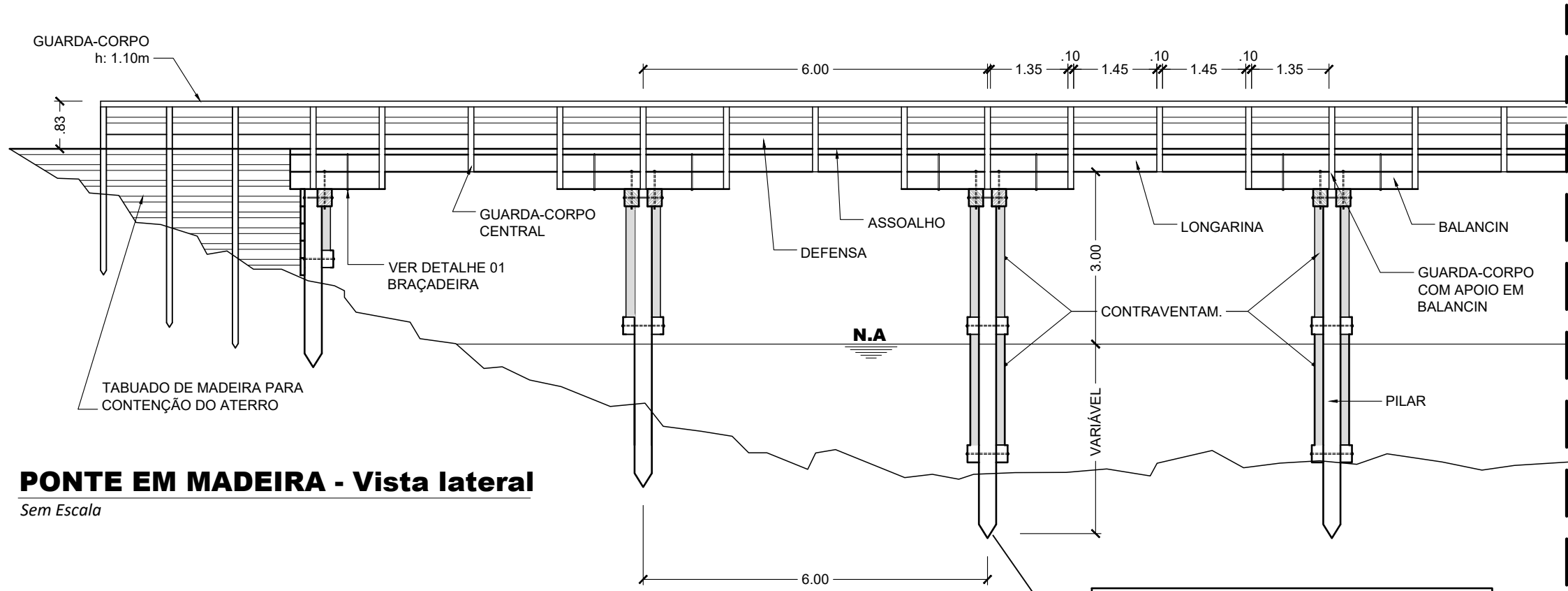
PROJETO BÁSICO
SEM ESCALA



OBS.: 1 - DIMENSÕES EM METROS.
2 - O ESPAÇAMENTO ENTRE O ASSOALHO DEVERÁ SER DE 01 cm

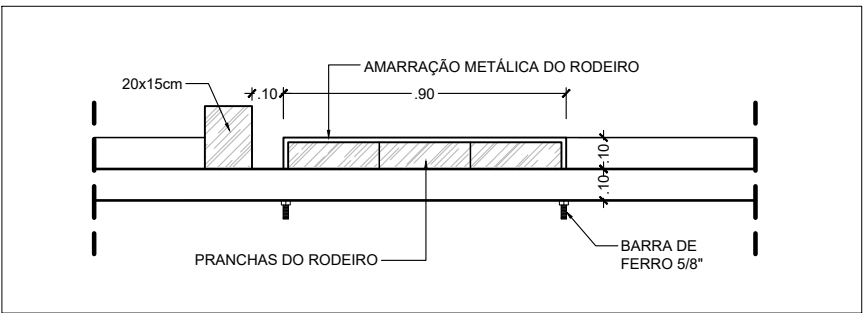
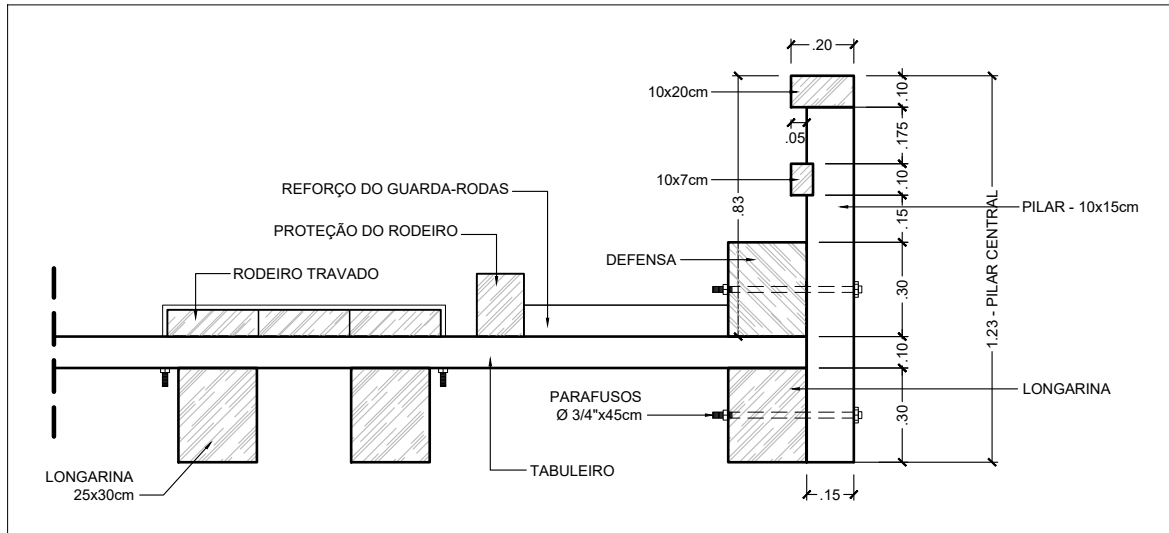


PONTE EM MADEIRA - Vista em Planta
Sem Escala

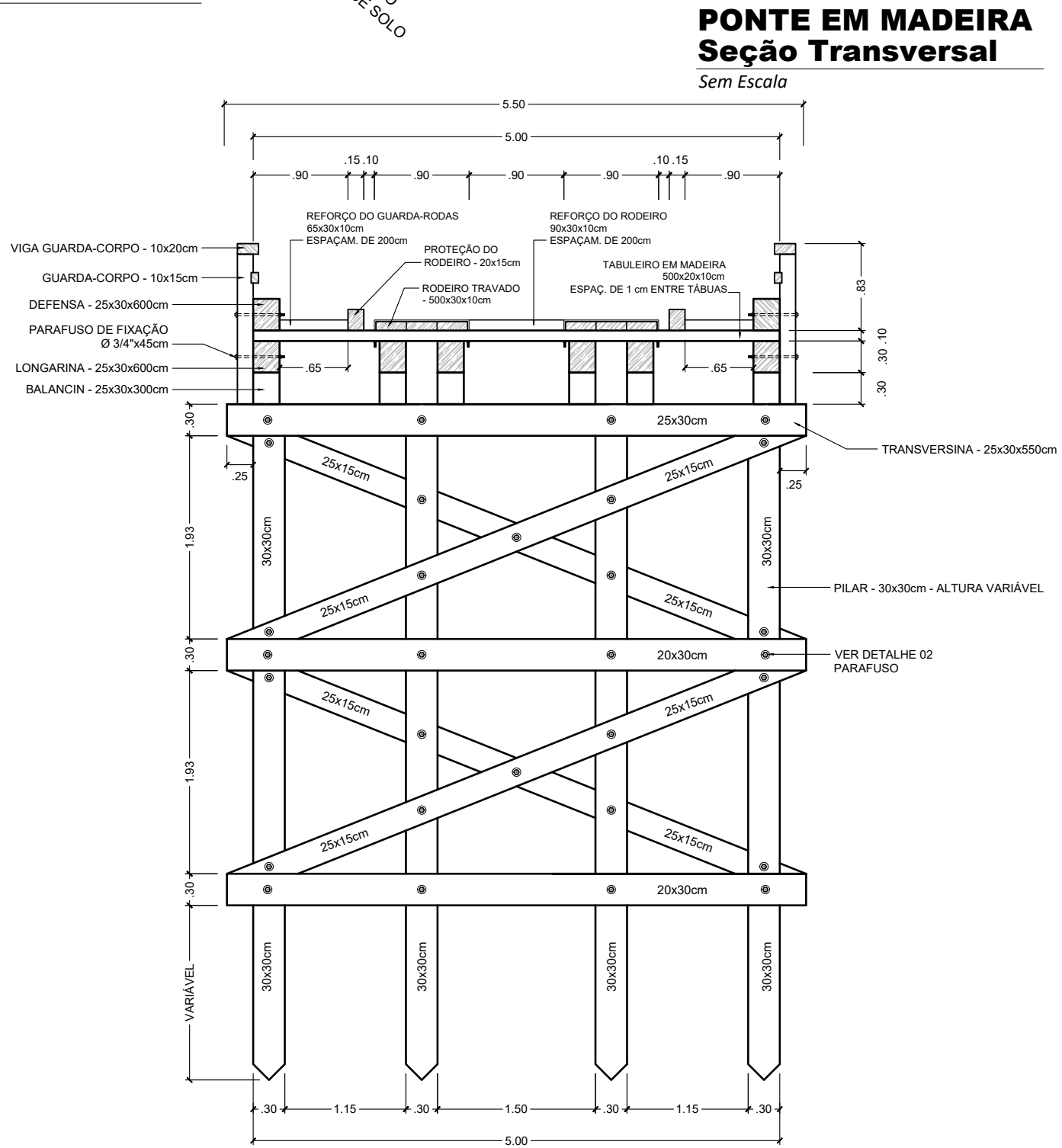


PONTE EM MADEIRA - Vista lateral
Sem Escala

PONTE EM MADEIRA
Detalhamento Guarda-corpo Central
Sem Escala



PONTE EM MADEIRA
Detalhamento fixação do Rodeiro
Sem Escala



DETALHAMENTOS GENÉRICOS
PONTE EM MADEIRA
01/02



Sem Escala



Sem Escala



Sem Escala



Sem Escala

OBS.: 1 - DIMENSÕES EM METROS.
2 - O ESPAÇAMENTO ENTRE O ASSOALHO DEVERÁ SER DE 01 cm



Sem Escala



Sem Escala

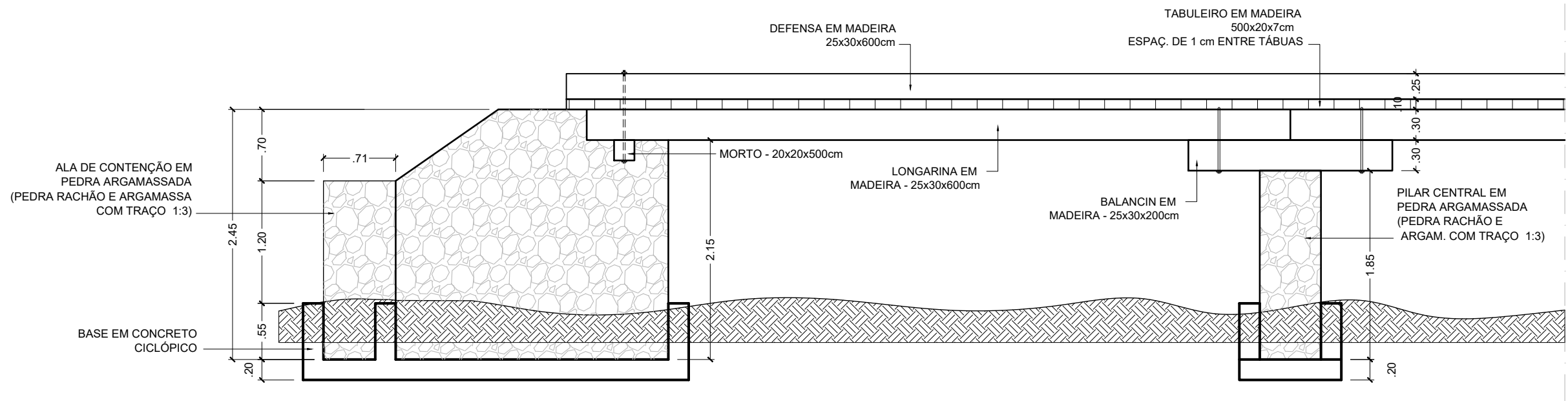


Sem Escala

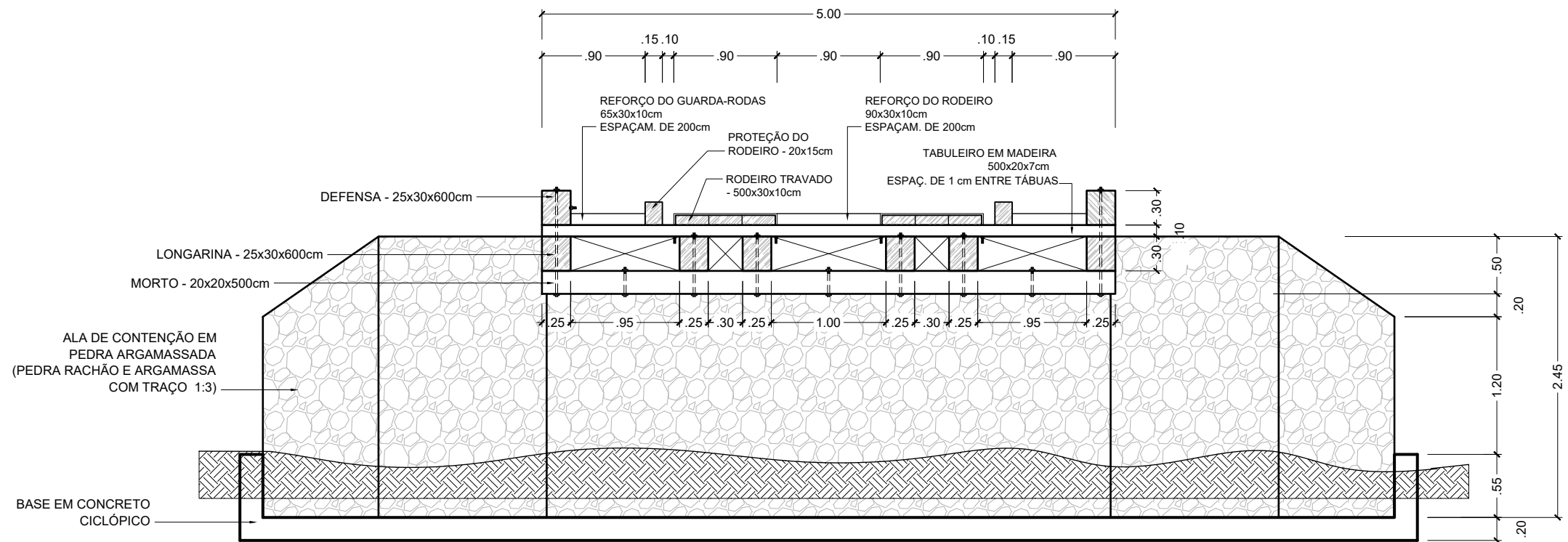
2 - O ESPAÇAMENTO ENTRE O ASSOALHO DEVERÁ SER DE 01 cm



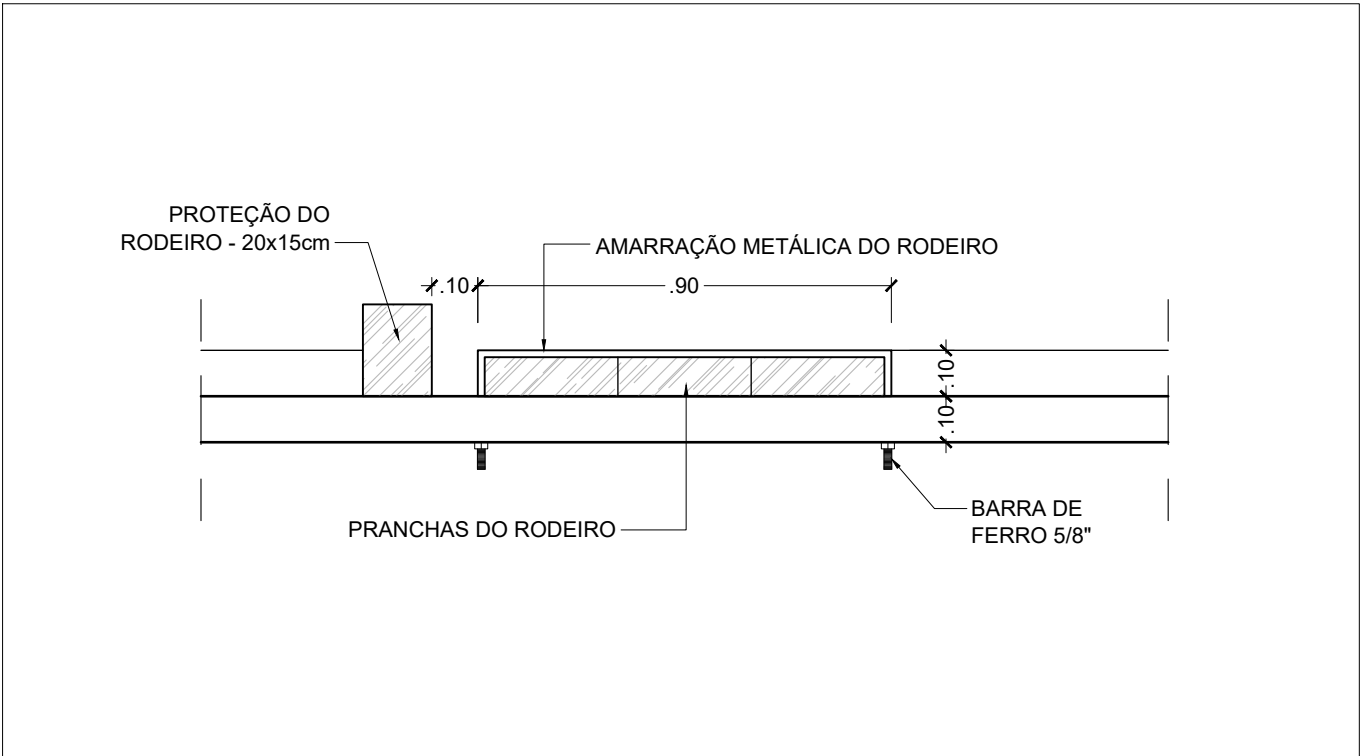
OBS.: 1 - DIMENSÕES EM METROS.
2 - O ESPAÇAMENTO ENTRE O ASSOALHO DEVERÁ SER DE 01 cm



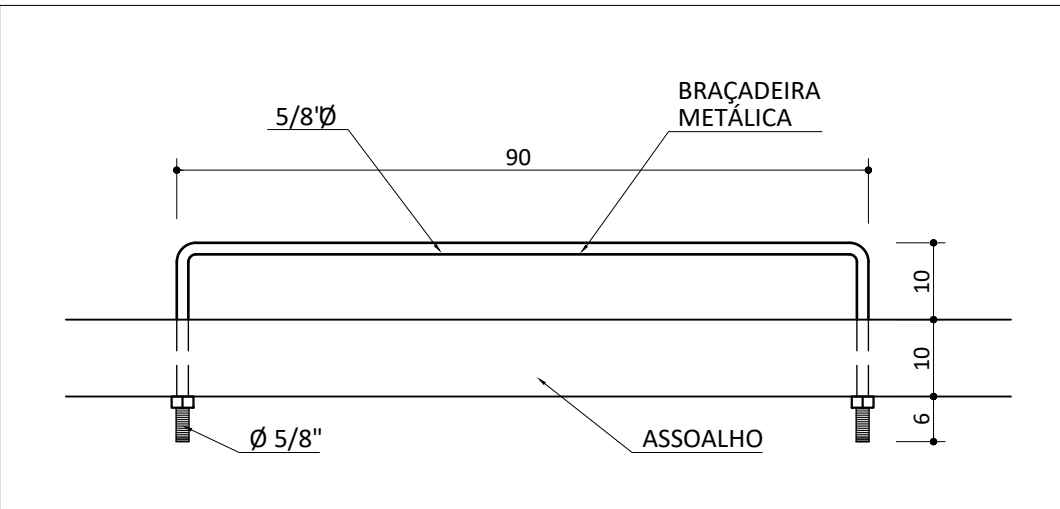
PONTE MISTA EM PEDRA ARGAM.
Vista lateral
Sem Escala



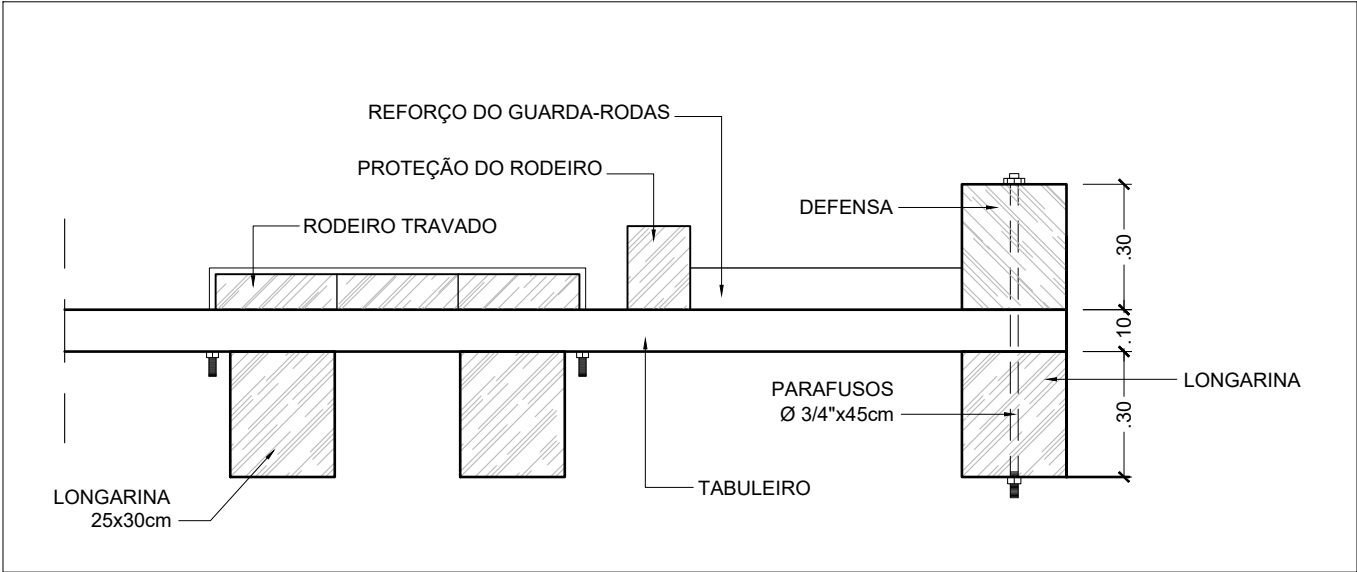
PONTE MISTA EM PEDRA ARGAM.
Corte Esquemático
Sem Escala



PONTE MISTA EM PEDRA ARGAM.
Detalhe de fixação do rodeiro
Sem Escala

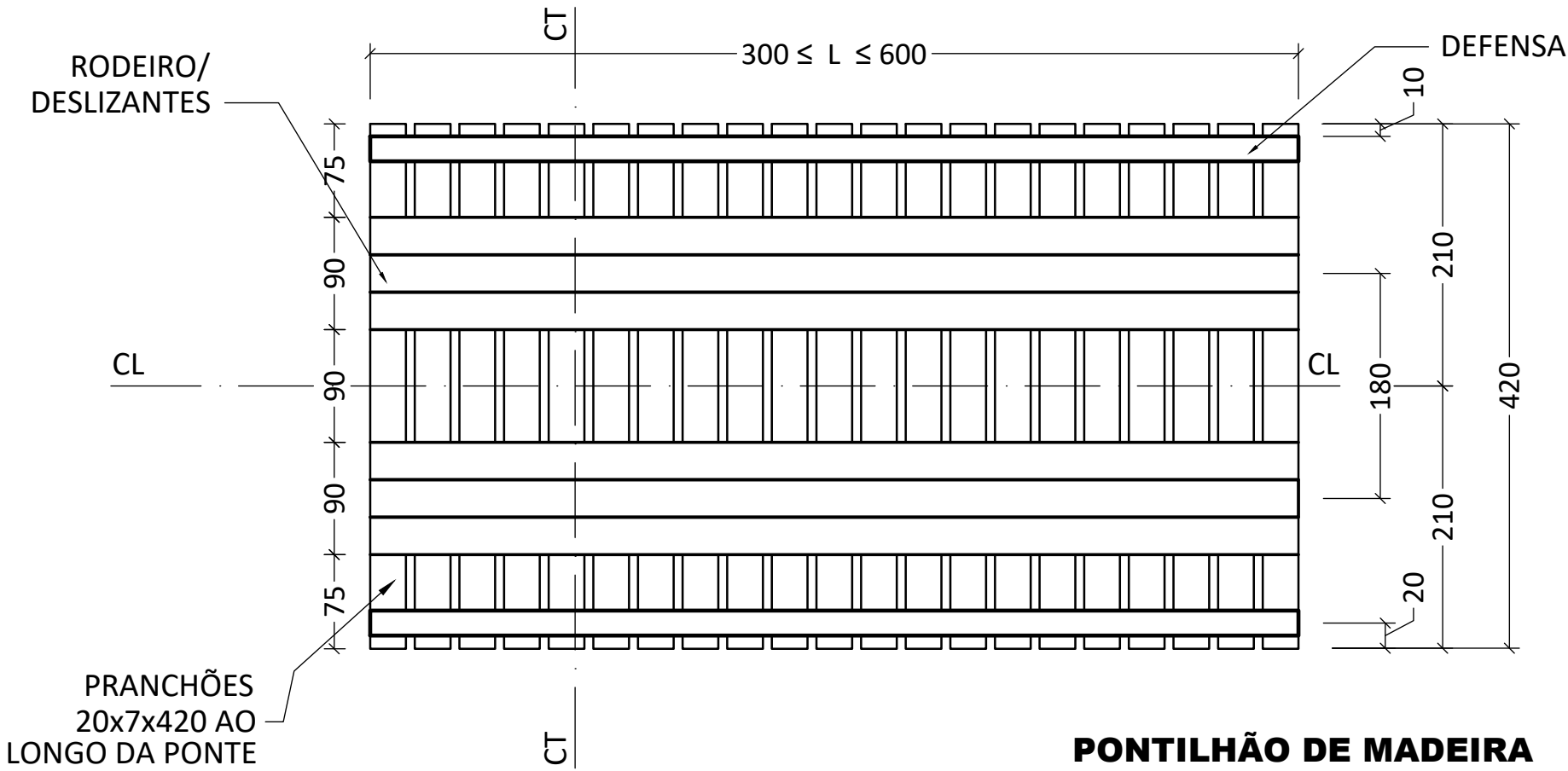


PONTE MISTA EM PEDRA ARGAM.
Detalhe de fixação do rodeiro
Sem Escala



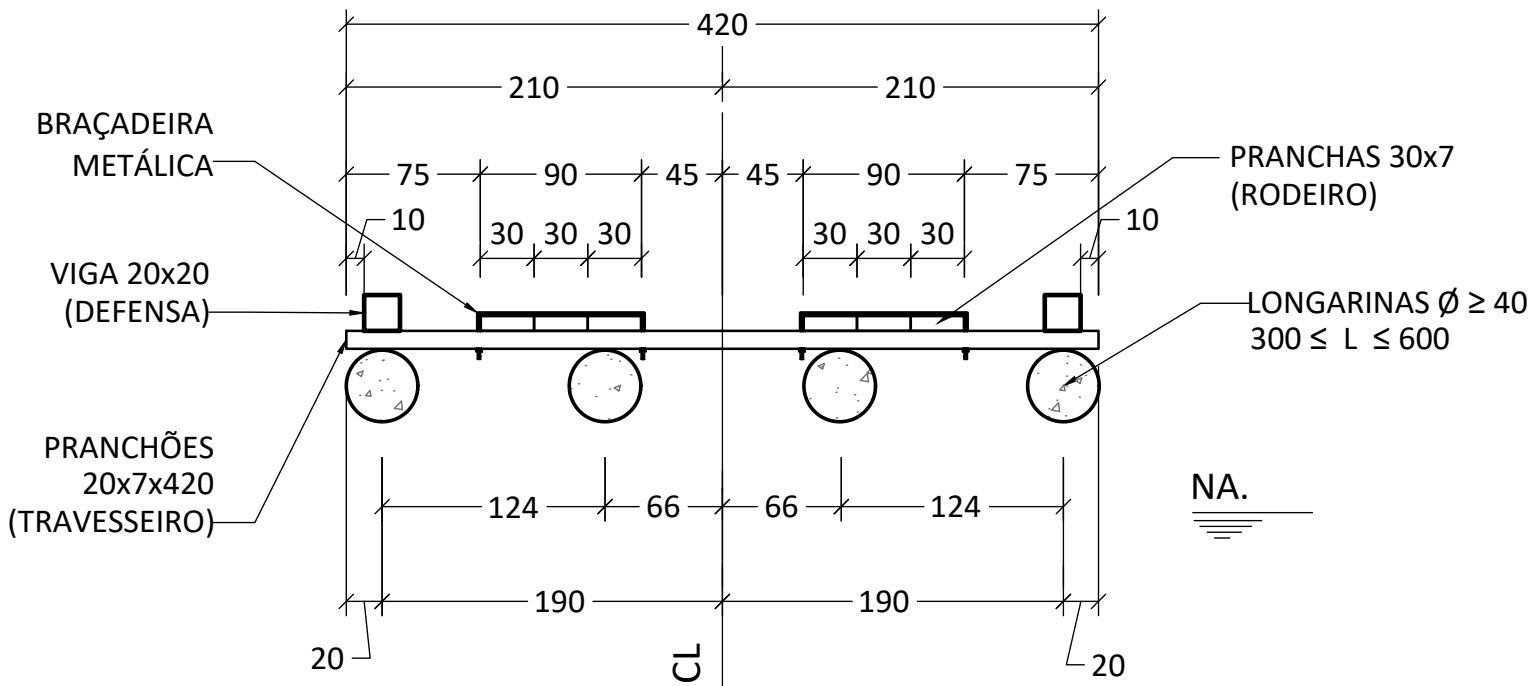
PONTE MISTA EM PEDRA ARGAM.
Detalhe do rodeiro
Sem Escala

OBS.: 1 - DIMENSÕES EM METROS.
2 - O ESPAÇAMENTO ENTRE OS PRANCHÕES DE 05 cm



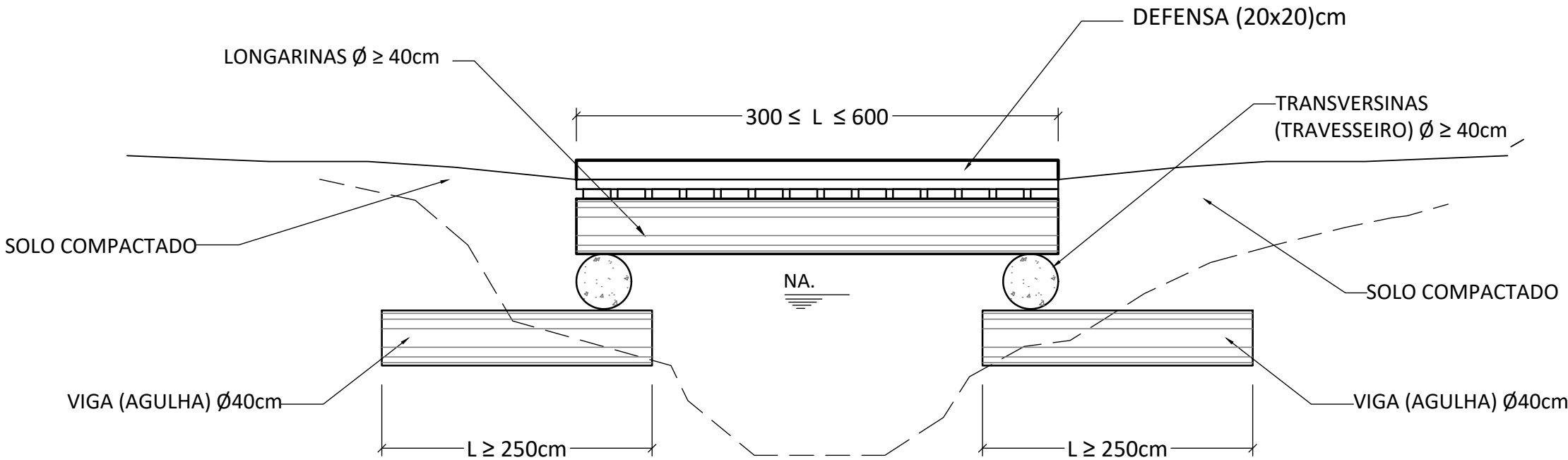
PONTILHÃO DE MADEIRA
Vista em Planta

Sem Escala



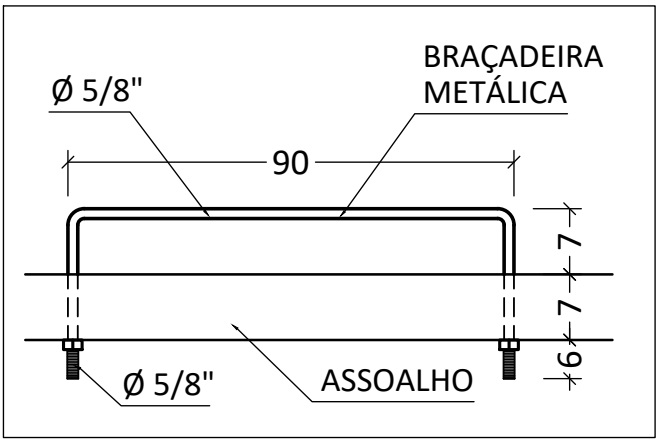
PONTILHÃO DE MADEIRA
Corte Transversal

Sem Escala



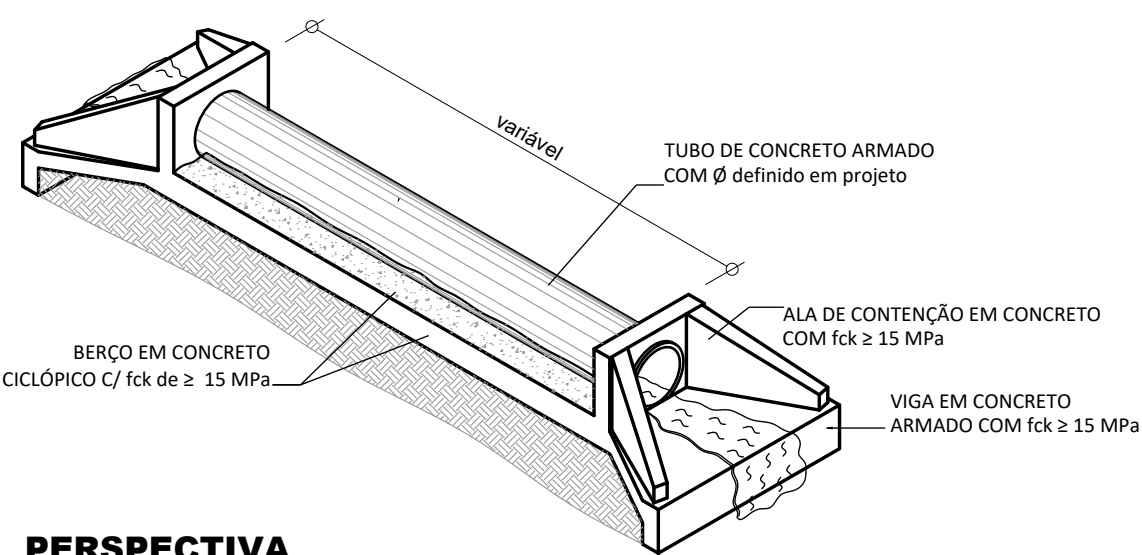
PONTILHÃO DE MADEIRA
Corte Longitudinal

Sem Escala

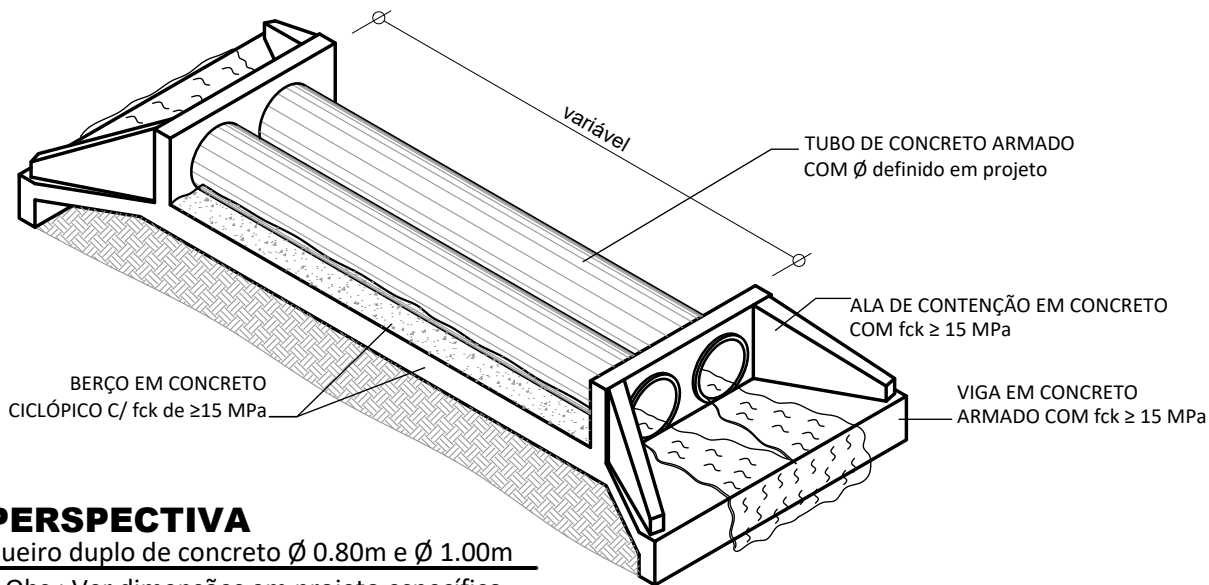


PONTILHÃO DE MADEIRA
Detalhamento de braçadeira metálica do rodeiro

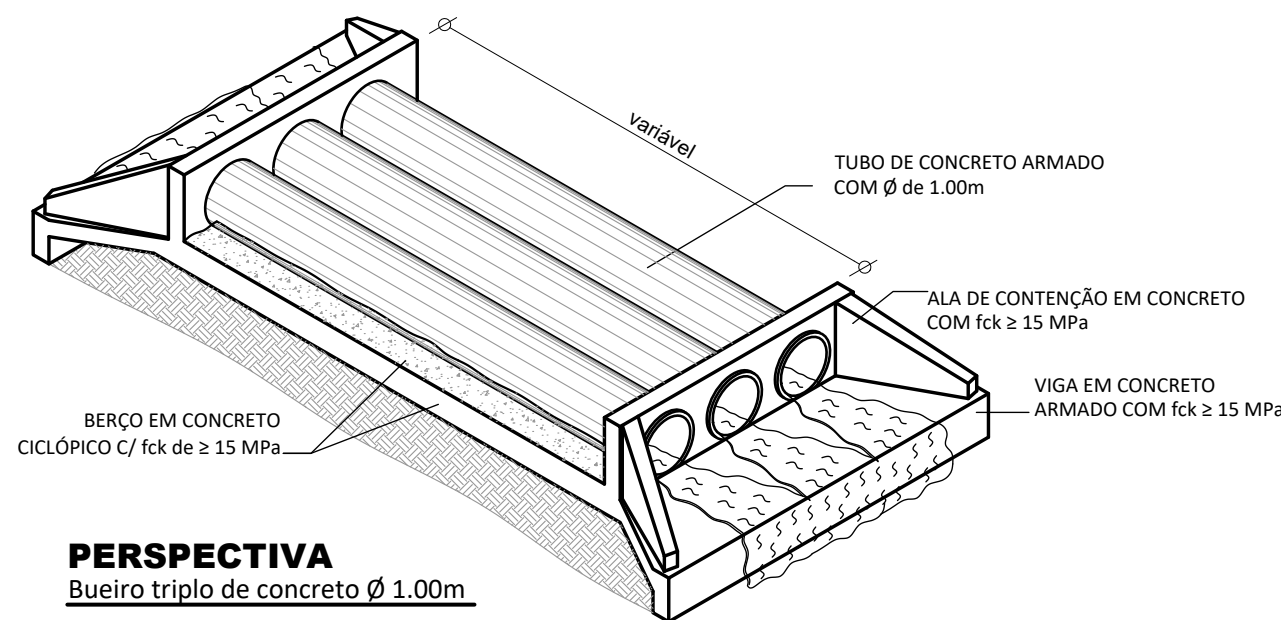
Sem Escala



PERSPECTIVA
Bueiro simples de concreto Ø 0.60m, Ø 0.80m e Ø 1.00m
Obs.: Ver dimensões em projeto específico

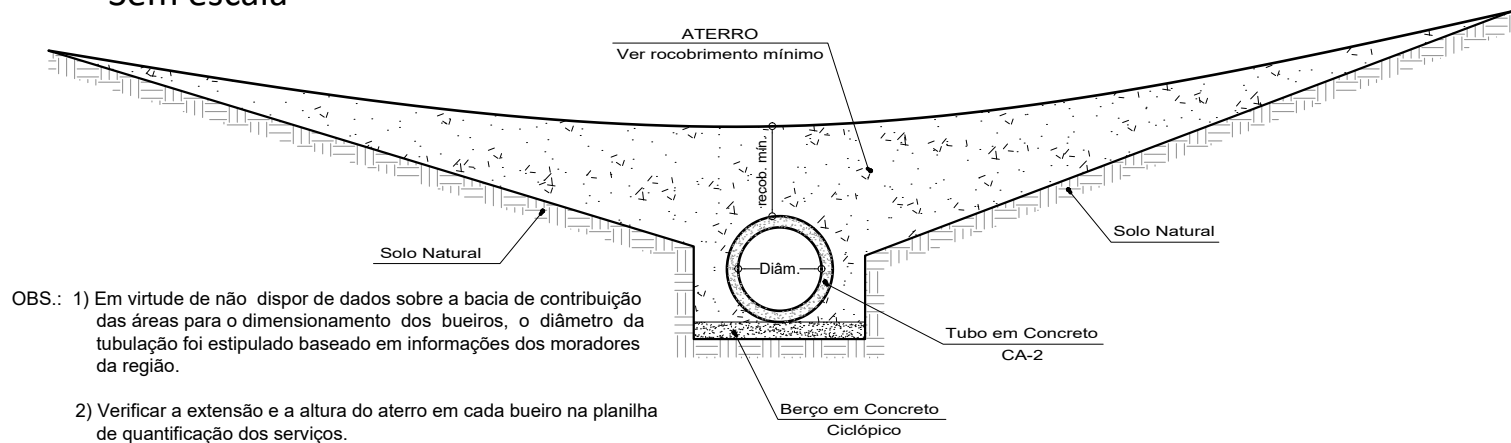


PERSPECTIVA
Bueiro duplo de concreto Ø 0.80m e Ø 1.00m
Obs.: Ver dimensões em projeto específico



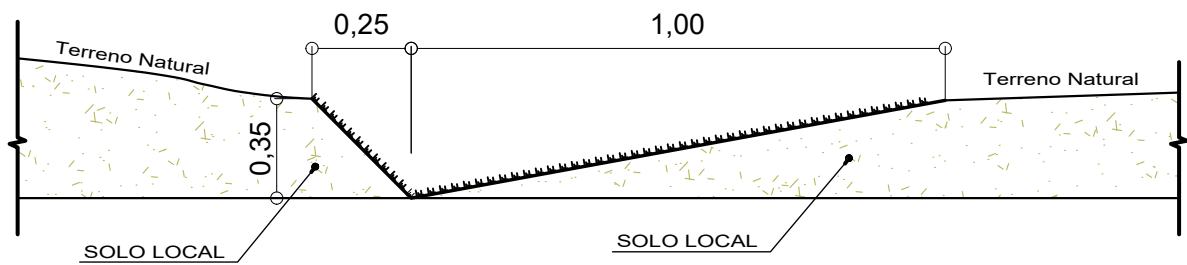
PERSPECTIVA
Bueiro triplo de concreto Ø 1.00m

DETALHE GENÉRICO 01 (aterro sobre bueiros)
Sem escala



OBS.: 1) Em virtude de não dispor de dados sobre a bacia de contribuição das áreas para o dimensionamento dos bueiros, o diâmetro da tubulação foi estipulado baseado em informações dos moradores da região.
2) Verificar a extensão e a altura do aterro em cada bueiro na planilha de quantificação dos serviços.

DETALHE GENÉRICO 02 (bigodes)
Sem escala



OBS.: Em trechos com pouca declividade as saídas devem ser executadas a cada 100,00m ao longo da estrada, reduzindo-se a cada 50,00m nos casos de maiores declividades.

OBSERVAÇÕES:

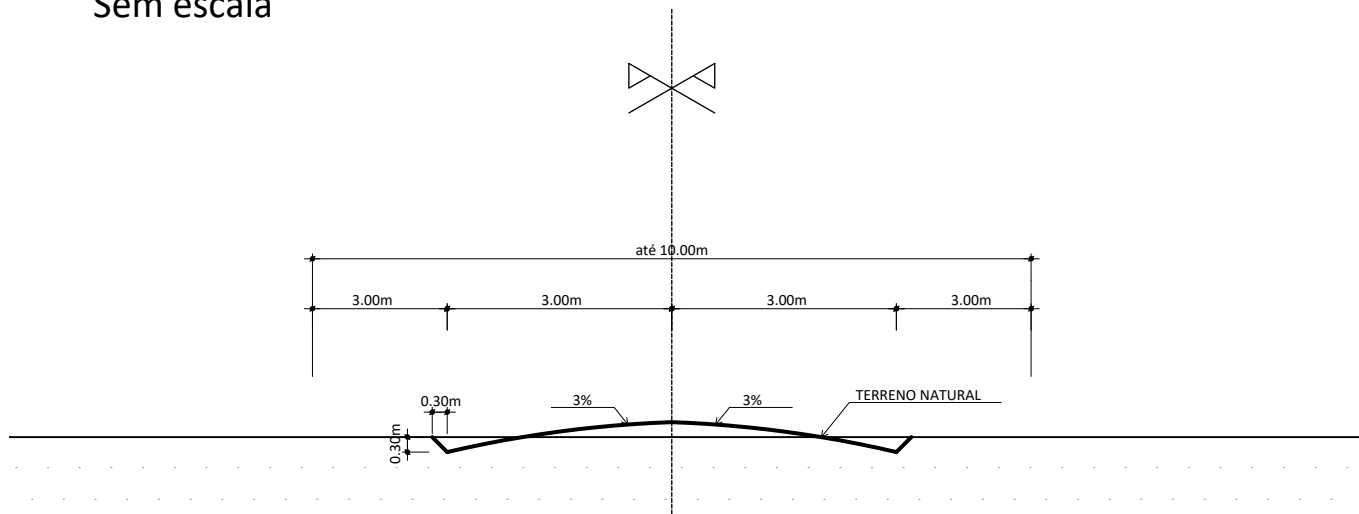
1 - Os detalhes dos bueiros são genéricos, devendo ser observados os respectivos comprimentos apresentados em planilhas e as medidas constantes em detalhes específicos de cada tipo de bueiro, parte integrante desse projeto básico.

PADRONIZAÇÃO DE OBRA DE ARTE CORRENTE (BUEIROS)

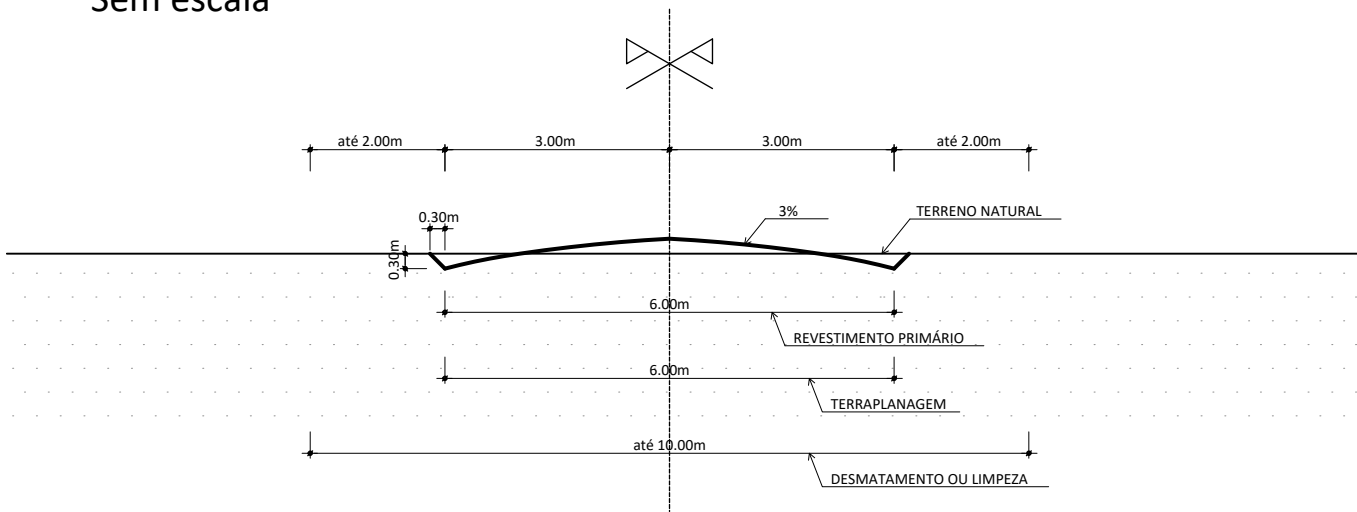
OBRA DE ARTE	COMPRIM.	RECOBRIMENTO
Bueiro Ø 60cm	7,00 m	0,40 m
Bueiro Ø 80cm	8,00 m	0,60 m
Bueiro Ø 100cm	9,00 m	0,80 m

Recobrimento: aterro mínimo sobre geratriz superior

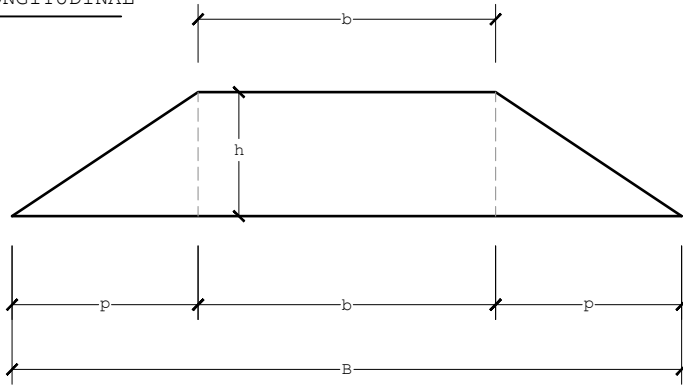
SEÇÃO PADRÃO COM GREIDE COLADO
Sem escala



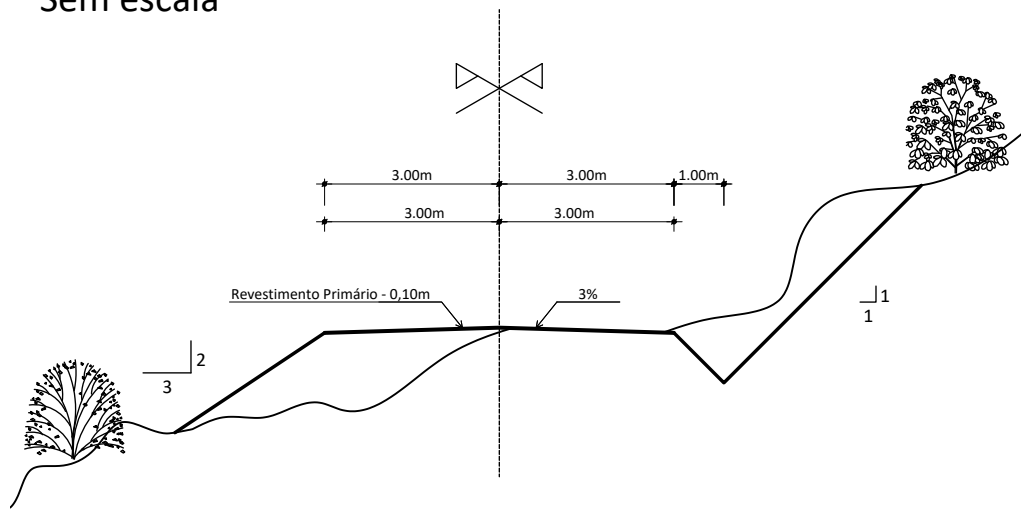
SEÇÃO PADRÃO COM REVESTIMENTO PRIMÁRIO
Sem escala



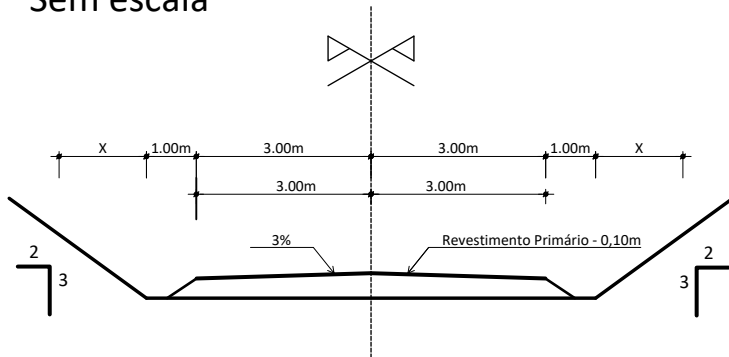
SEÇÃO LONGITUDINAL



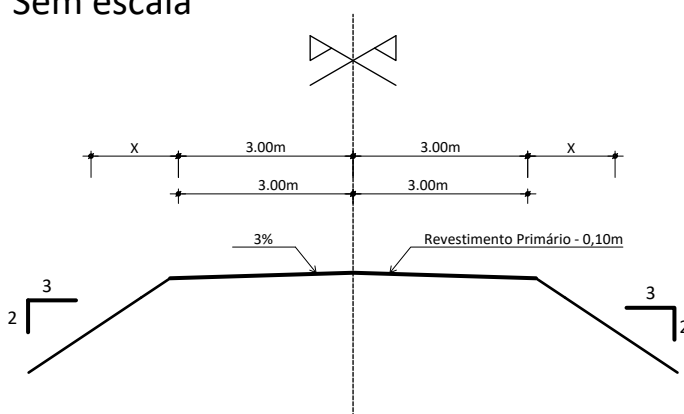
SEÇÃO MISTA COM CORTE E ATERRO
Sem escala



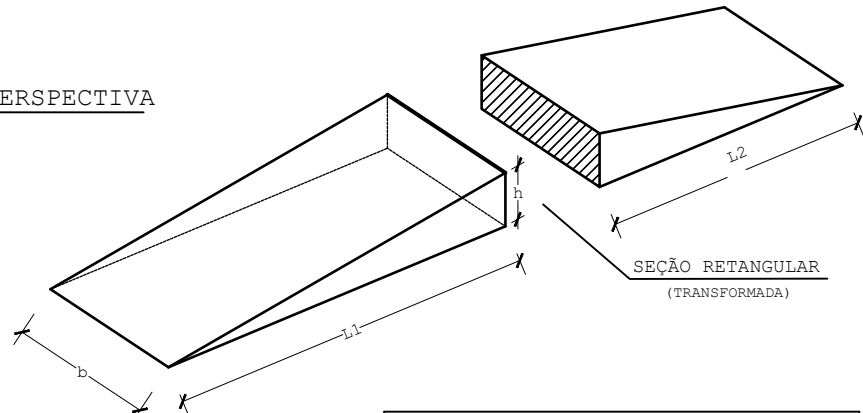
SEÇÃO EM CORTE
Sem escala



SEÇÃO EM ATERRO
Sem escala



PERSPECTIVA



LEGENDA
b = BASE MENOR DA SEÇÃO
h = ALTURA MÁXIMA ATERRO
L1 e L2 = EXTENSÃO DO ATERRO
x = ALTURA DAS CAMADAS (0,30m)
A _{esp} = ÁREA DE ESPALHAMENTO
B = BASE MAIOR DA SEÇÃO
V _a = VOLUME DO ATERRO

FÓRMULAS
$V_a = \frac{h}{2} \cdot (L_1 + \frac{L_2}{2}) \cdot (b + 3h)$
$A_{esp} = \frac{h}{x} \cdot (L_1 + \frac{L_2}{2}) \cdot (b + 3h)$
$p = \frac{3h}{2}$

DETALHAMENTOS GENÉRICOS
Obras de Artes Correntes, Aterros e Perfis de Estradas