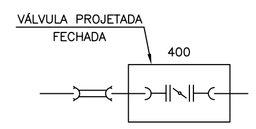
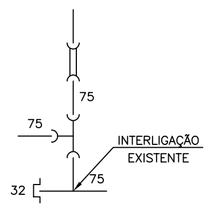
N2 ≅ N1195



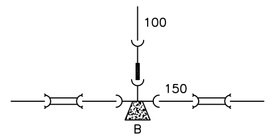
01 LCR F*F* JM DN400
02 E F*F* JE FB DN400
01 VÁL. BORB. F*F* FF DN400

N1223



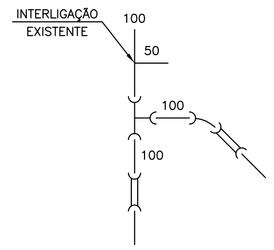
01 T PVC JE BBB DN75
01 LCR PVC JE DN75
01 K PVC SOLDÁVEL DN32

N666



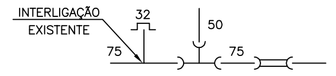
01 T F*F* JE BBB DN150x100
02 LCR F*F* JM DN150
01 AD PVC JExF*F* BP DN100x100

N163



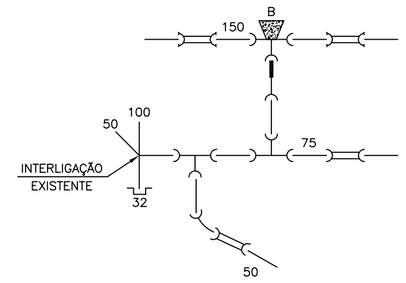
01 T PVC JE BBB DN100
02 LCR PVC JE DN100
01 C PVC JE PB 45° DN100

N319



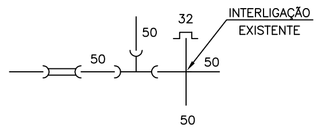
01 T PVC JE BBB DN75X50
01 LCR PVC JE DN75
01 K PVC SOLDÁVEL DN32

N165 ≅ N627



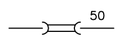
01 T PVC JE BBB DN75
01 T PVC JE BBB DN75X50
01 T F*F* JE BBB DN150x80
01 C PVC JE PB 45° DN50
01 LCR PVC JE DN50
01 LCR PVC JE DN75
02 LCR F*F* JM DN150
01 AD PVC JExF*F* BP DN75x80
01 K PVC SOLDÁVEL DN32

N330



01 T PVC JE BBB DN50
01 LCR PVC JE DN50
01 K PVC SOLDÁVEL DN32

N326/N1444

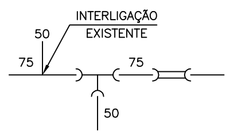


01 LCR PVC JE DN50

N1182/N1180

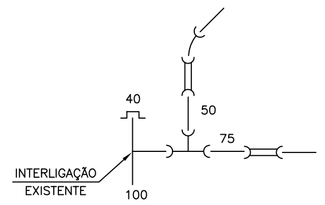
01 K PVC JE DN50

N311



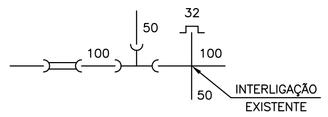
01 T PVC JE BBB DN75x50
01 LCR PVC JE DN75

N150



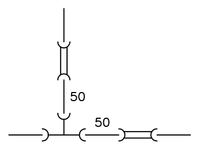
01 T F*F* JE BBB DN75x50
01 LCR PVC JE DN50
01 LCR PVC JE DN75
01 C PVC JE PB 45° DN50
01 K PVC SOLDÁVEL DN40

N162



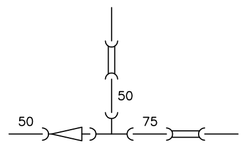
01 T PVC JE BBB DN100x50
01 LCR PVC JE DN100
01 K PVC SOLDÁVEL DN32

N289



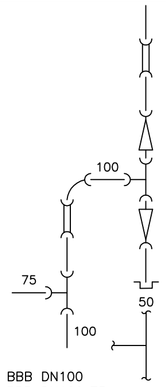
01 T PVC JE BBB DN50
02 LCR PVC JE DN50

N1160



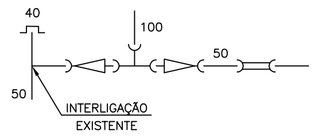
01 T PVC JE BBB DN75x50
01 LCR PVC JE DN50
01 LCR PVC JE DN75
01 RD PVC JE PB DN75x50

N292



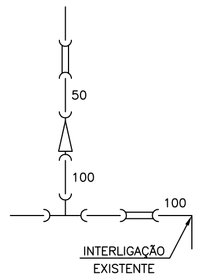
01 T PVC JE BBB DN100
01 T PVC JE BBB DN100x75
01 LCR PVC JE DN50
01 LCR PVC JE DN100
01 C PVC JE PB 90° DN100
02 RD PVC JE PB DN100x50
01 K PVC JE DN50

N293



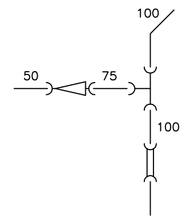
01 T PVC JE BBB DN100
01 LCR PVC JE DN50
02 RD PVC JE PB DN100x50
01 K PVC SOLDÁVEL DN40

N166 ≅ N290



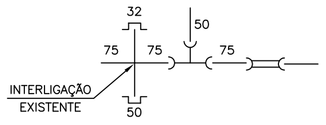
01 T PVC JE BBB DN100
01 LCR PVC JE DN50
01 LCR PVC JE DN100
01 RD PVC JE BB DN100x50

N146 ≅ N264



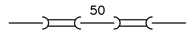
01 T PVC JE BBB DN100x75
01 LCR PVC JE DN100
01 RD PVC JE BB DN75x50

N298/N299/N317



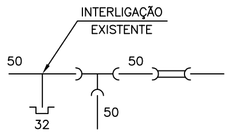
01 T PVC JE BBB DN75x50
01 LCR PVC JE DN75
01 K PVC SOLDÁVEL DN32
01 K PVC JE DN50

N322 ≅ N323



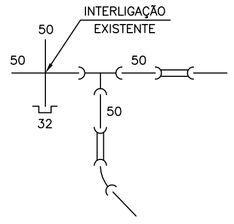
02 LCR PVC JE DN50

N285/N1439/N1468



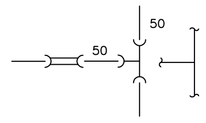
01 T PVC JE BBB DN50
01 LCR PVC JE DN50
01 K PVC SOLDÁVEL DN32

N284



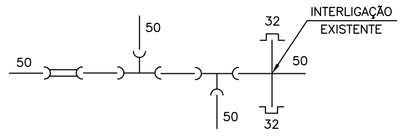
01 T F*F* JE BBB DN50
02 LCR PVC JE DN50
01 C PVC JE PB 45° DN50
01 K PVC SOLDÁVEL DN32

N275



01 T PVC JE BBB DN50
01 LCR PVC JE DN50

N267



02 T F*F* JE BBB DN50
01 LCR PVC JE DN50
02 K PVC SOLDÁVEL DN32

LEGENDA

- REDE PROJETADA–2025
- REDE EM SUBSTITUIÇÃO
  - DN 50 mm
  - DN 75 mm
  - DN 100 mm
  - DN 150 mm
  - DN ≥ 200 mm
- REDE EXISTENTE
- REDE A SER DESATIVADA
- CAIXA PARA PROTEÇÃO/MANUTENÇÃO
- BLOCOS DE ANCORAGEM

NOTAS

1. PRESSÃO DE SERVIÇO PARA DIMENSIONAMENTO DOS BLOCOS DE ANCORAGEM: A=30mca, B=50mca, C=70mca, D=90mca, E=100mca.

LISTA DE MATERIAIS

DESCRIÇÃO	MATERIAL	DIÂMETRO	QUANTIDADE	UNIDADE
REDUÇÃO JE PB	F*F*	150x100	11	PÇ
REDUÇÃO JE PB	F*F*	200x150	10	PÇ
REDUÇÃO JE PB	F*F*	250x150	1	PÇ
REDUÇÃO JE PB	F*F*	250x200	3	PÇ
REDUÇÃO JE PB	F*F*	300x150	2	PÇ
REDUÇÃO JE PB	F*F*	300x200	1	PÇ
CAP SOLDÁVEL	PVC	20	1	PÇ
CAP SOLDÁVEL	PVC	25	3	PÇ
CAP SOLDÁVEL	PVC	32	30	PÇ
CAP SOLDÁVEL	PVC	40	28	PÇ
CAP JE	PVC	50	149	PÇ
CAP JE	PVC	75	11	PÇ
CAP JE	PVC	100	20	PÇ
REGISTRO FF C/ CUNHA BORRACHA E CORPO CURTO PN10	F*F*	150	41	PÇ
REGISTRO FF C/ CUNHA BORRACHA E CORPO CURTO PN10	F*F*	200	6	PÇ
REGISTRO FF C/ CUNHA BORRACHA E CORPO CURTO PN10	F*F*	250	6	PÇ
VÁLVULA BORBOLETA FF PN10	F*F*	400	1	PÇ
ADAPTADOR JE BP	PVCxF*F*	75x80	17	PÇ
ADAPTADOR JE BP	PVCxF*F*	100x100	21	PÇ
EXTREMIDADE JE FB PN10	F*F*	150	26	PÇ
EXTREMIDADE JE FB PN10	F*F*	200	10	PÇ
EXTREMIDADE JE FB PN10	F*F*	250	10	PÇ
EXTREMIDADE JE FB PN10	F*F*	400	2	PÇ
PARAFUSO C/ PORCA E ARRUELA PARA FLANGE PN10 20x90mm (de aço galv. a fogo, conf. NBR 7675)	AÇO GALV.	–	464	CJ
PARAFUSO C/ PORCA E ARRUELA PARA FLANGE PN10 24x100mm (de aço galv. a fogo, conf. NBR 7675)	AÇO GALV.	–	32	CJ
ARRUELA PARA FLANGE PN10	BORRACHA	150	28	UN
ARRUELA PARA FLANGE PN10	BORRACHA	200	12	UN
ARRUELA PARA FLANGE PN10	BORRACHA	250	10	UN
ARRUELA PARA FLANGE PN10	BORRACHA	300,0000	2	UN
ARRUELA PARA FLANGE PN10	BORRACHA	400	2	UN
TUBO DE PVC RÍGIDO JE CLASSE 15 COM ANEL DE BORRACHA (ABNT, NBR–5647)	PVC	50	5005	m
TUBO DE PVC RÍGIDO JE CLASSE 15 COM ANEL DE BORRACHA (ABNT, NBR–5647)	PVC	75	2828	m
TUBO DE PVC RÍGIDO JE CLASSE 15 COM ANEL DE BORRACHA (ABNT, NBR–5647)	PVC	100	1747	m
TUBO DE PVC RÍGIDO DEF*F* JE – PN 1MPa (ABNT, NBR–7665)	F*F*	150	1224	m
TUBO DE PVC RÍGIDO DEF*F* JE – PN 1MPa (ABNT, NBR–7665)	F*F*	200	723	m
TUBO DE PVC RÍGIDO DEF*F* JE – PN 1MPa (ABNT, NBR–7665)	F*F*	250	2120	m
TUBO DE PVC RÍGIDO DEF*F* JE – PN 1MPa (ABNT, NBR–7665)	F*F*	300,0000	267	m

ESTE DESENHO É PROPRIEDADE DA COMPANHIA ESPÍRITO SANTENSE DE SANEAMENTO – CESAN E NÃO PODE SER COPIADO SEM SUA AUTORIZAÇÃO.

NÚMEROS	TÍTULOS
PRINCIPAIS DESENHOS DE REFERÊNCIA	

Nº	LOCAL	DISCRIMINAÇÃO	DES.	DIV.	GER.	DATA
REVISÃO						

CANCELA E SUBSTITUI O DESENHO NÚMERO:

CANCELADO E SUBSTITUÍDO PELO DESENHO NÚMERO:

CENTRO DE DOCUMENTAÇÃO
RECEBIDO: / /
Nº DOC.: ASS.:
APROVAÇÃO CESAN:
ASS.: MATR.:
UNID.: DATA: / /
ESTA APROVAÇÃO NÃO ISENTA A CONTRATADA DE SUAS RESPONSABILIDADES LEGAIS.

EMITENTE: GANEM Engenharia Ltda
PROJETADO: LORENA SANTOS PEREIRA — CREA: 019602/D REGIÃO: ES
COORDENADOR: ANA CLAUDIA JACOB — CREA: 6668/D REGIÃO: ES
DESENHO: CRISTINA
DATA: NOVEMBRO/11
Nº DES. PROJETISTA:
RESPONSÁVEL TÉCNICO: JULIO CESAR ALI GANEM
CREA: 24918/D REGIÃO: MG ART Nº: DATA:

EMISSÃO CESAN	DATAS
PROJETADO:	
CREA:	
DESENHADO:	
VERIFICADO:	
DIVISÃO: ENGª LUCIANA CALLEGARI SPAVIER	
GERÊNCIA: ENGª Mª DA GLÓRIA BYRRO AUBIN	

CESAN

MUNICÍPIO: CARIACICA | DISTRITO: DIVERSOS | BAIRRO: DIVERSOS

NOME DO EMPREENDIMENTO: SISTEMA DE ABASTECIMENTO DE ÁGUA DA GRANDE VITÓRIA

TÍTULO: ANÁLISE OPERACIONAL DO SISTEMA
SETOR NOVA ROSA DA PENHA
REDE DE DISTRIBUIÇÃO DE ÁGUA
DETALHE DE NÓS E LISTA DE MATERIAIS (ANO 2025)

ESCALA:	FOLHA:	Nº CESAN	REV:
SEM ESCALA	02/17	C–045–000–80–5–XX–0551	02