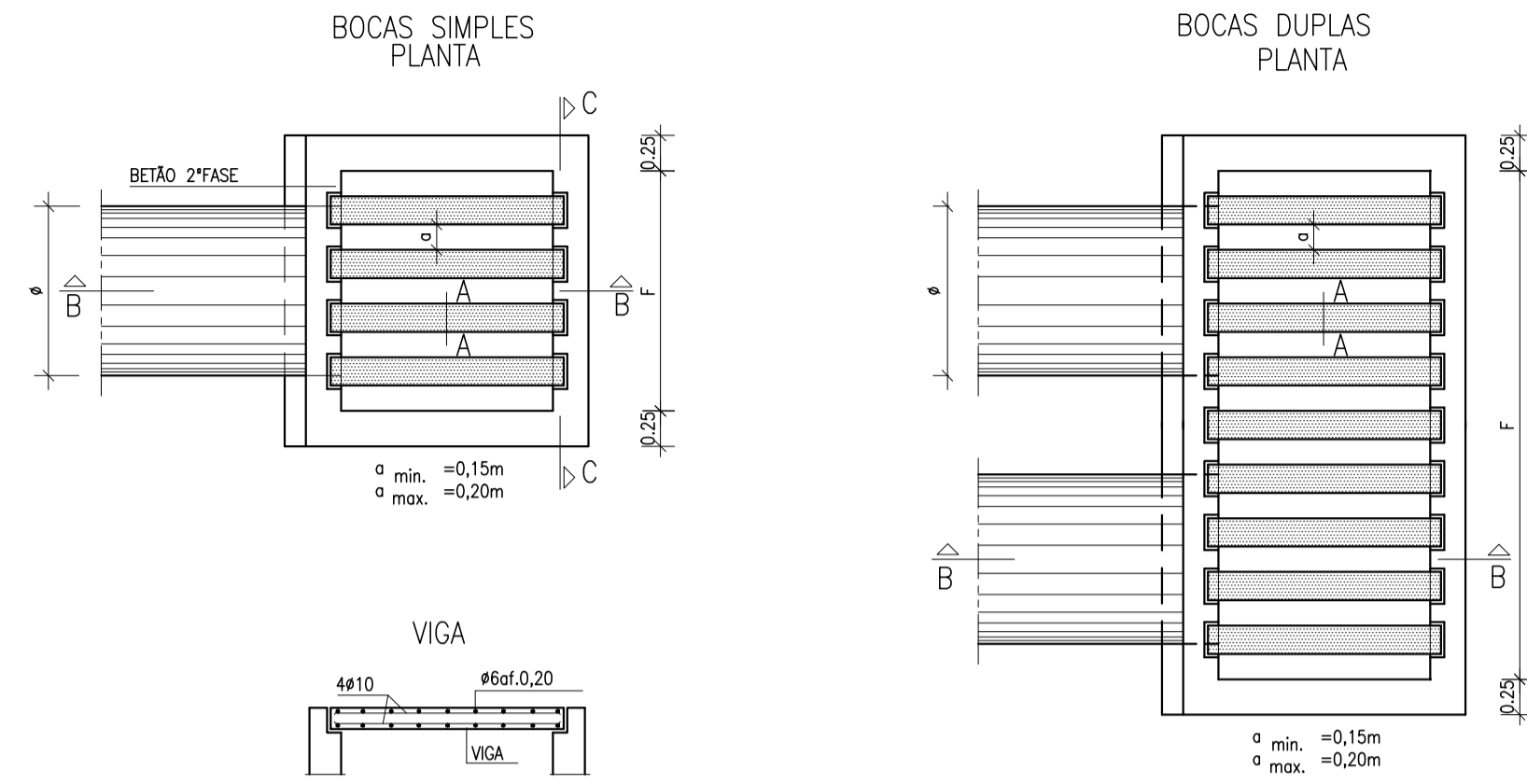
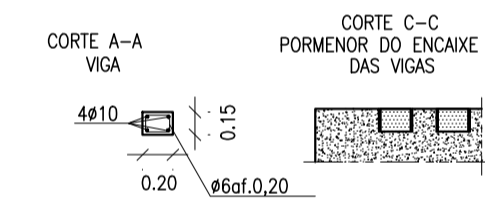
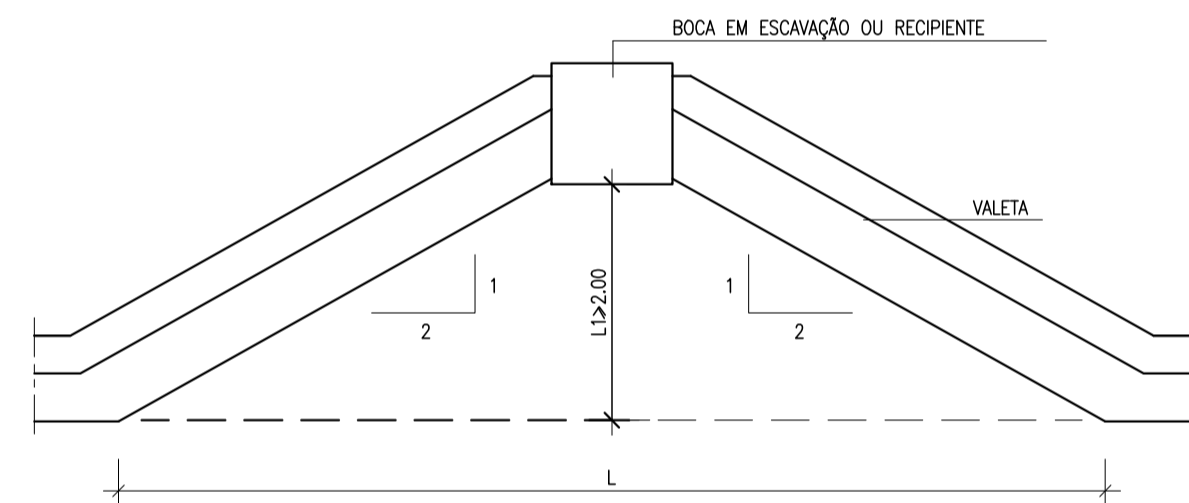


BOCAS EM ESCAVAÇÃO OU RECIPIENTE  
1:50



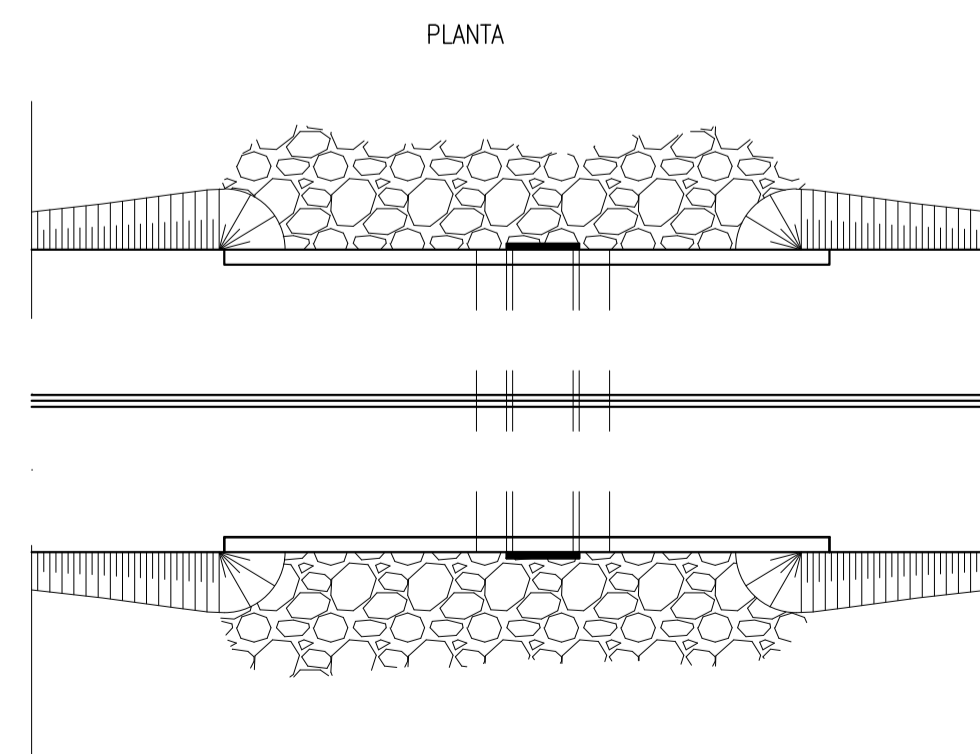
ESQUEMA DE IMPLANTAÇÃO DA BOCA QUANDO ASSOCIADA A VALETA REDUZIDA (com alargamento da berm) 1:50



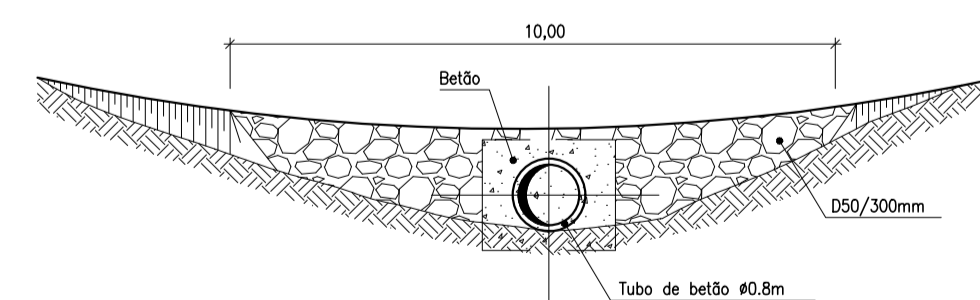
| #   | BOCAS SIMPLES |     | BOCAS DUPLAS |     | BOCAS TRIPLAS |   | G |
|-----|---------------|-----|--------------|-----|---------------|---|---|
|     | F             | F   | F            | F   | F             | F |   |
| 60  | 110           | 250 | 400          | 120 |               |   |   |
| 80  | 130           | 290 | 460          | 150 |               |   |   |
| 100 | 150           | 340 | 530          | 175 |               |   |   |
| 120 | 170           | 390 | 600          | 190 |               |   |   |
| 150 | 210           | 450 | 700          | 190 |               |   |   |
| 200 | 260           | 550 | 850          | 280 |               |   |   |
| 250 | 310           | 660 | 1.010        | 340 |               |   |   |

(dimensões em cm)

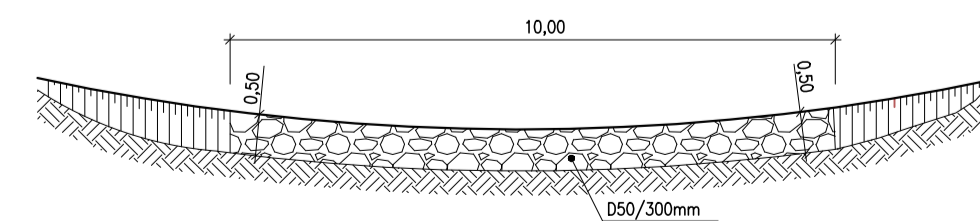
PASSAGENS HIDRÁULICAS EM CAMINHOS PARALELOS  
1:100



PASSAGEM NÃO GALGÁVEL  
1:100

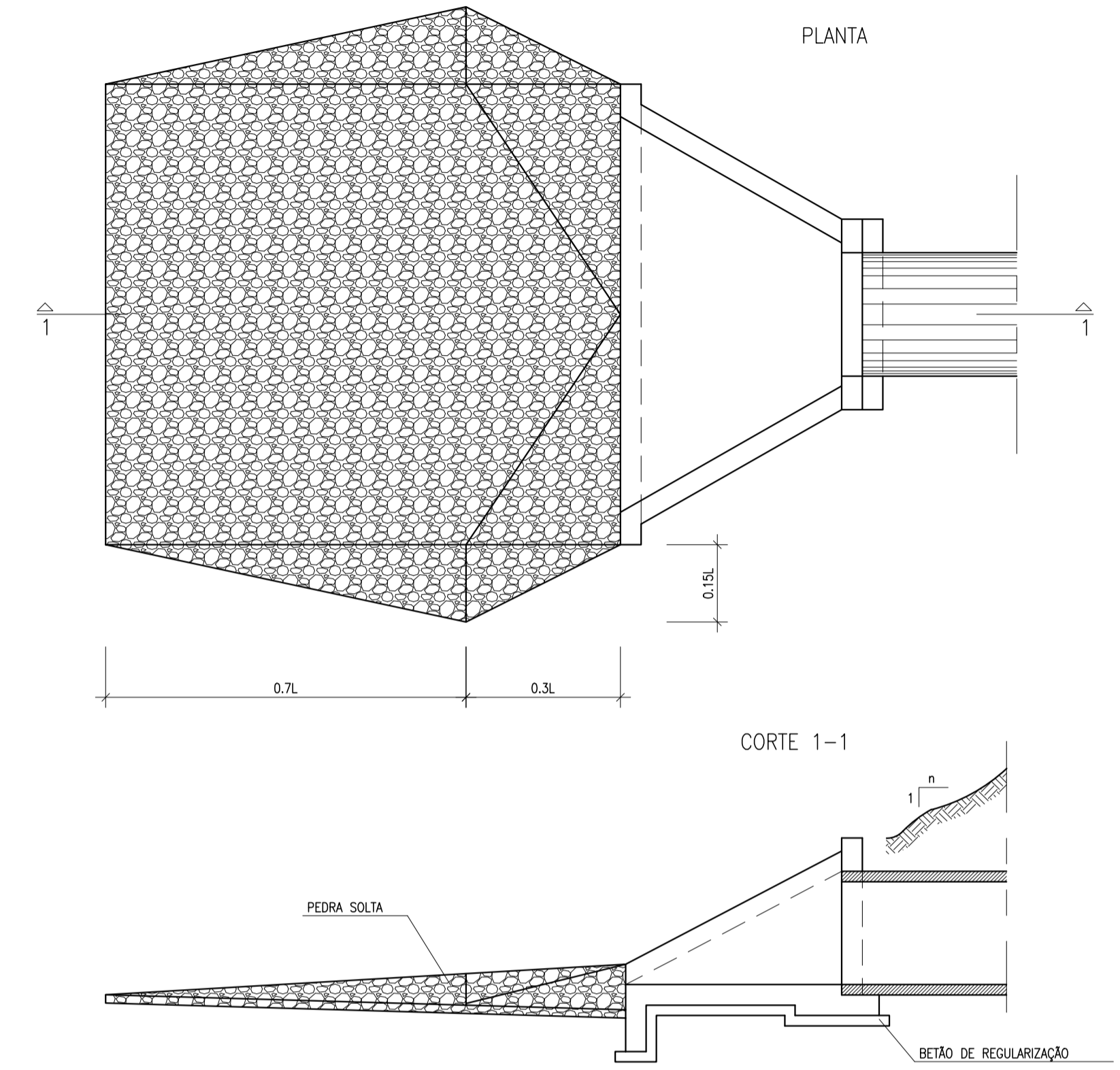


PASSAGEM GALGÁVEL  
1:100



| PASSAGEM HIDRÁULICA | COMPRIMENTO L (m) | ESPESSURA E (m) | DIÂMETRO MÉDIO D50 (m) | DIÂMETRO MÁX D100 (m) | DIÂMETRO MIN D0 (m) |
|---------------------|-------------------|-----------------|------------------------|-----------------------|---------------------|
| PH 28.01            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 28.02            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 28.03            | 10.000            | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH 28.04            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 29.01            | 6.000             | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH 14 RD            | 14.000            | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH 30.01            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 30.02            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 30.03            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 30.04            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 30.05            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 31.01            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 31.02            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 31.03            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 32.01            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 33.01A           | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 33.01            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 33.02            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 33.03            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 33.04            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 34.01A           | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 34.02            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 34.02A           | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 34.03            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 34.03A           | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 34.04            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 34.05            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 35.01            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 35.02            | 6.000             | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH 35.03            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 36.01            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 36.01A           | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 36.02            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 36.03            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 36.04            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 37.01            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 37.01A           | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 37.02            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 37.03            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 37.03A           | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH NS RA            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 37.04            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH NS RD            | 10.000            | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH 38.01 A          | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH NS RC            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH NS RCD           | 8.000             | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH 38.01            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 38.02            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 38.03            | 6.000             | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH 38.04            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 39.01            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 39.02            | 10.000            | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH 40.01            | 10.000            | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH 40.02            | 12.000            | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH 40.03            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 40.04            | 8.000             | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH 41.01            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 41.02            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 41.03            | 6.000             | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH 42.02            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 42.03            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 43.01            | 6.000             | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH 43.02            | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH N6 RD            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH N6 R43-1B        | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH N6 RCD           | 6.000             | 1.00            | 0.420                  | 0.680                 | 0.270               |
| PH N6 R43-1         | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH N6 RAB           | 2.000             | 0.35            | 0.150                  | 0.250                 | 0.100               |
| PH 44.01            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 47.01            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |
| PH 47.02            | 4.000             | 0.70            | 0.280                  | 0.450                 | 0.180               |

DISSIPADOR DE ENERGIA COM ENROCAMENTO DE PROTEÇÃO  
1:50



| MATERIAIS             | BETÕES                |                  |               |                   |                |              |
|-----------------------|-----------------------|------------------|---------------|-------------------|----------------|--------------|
|                       | Classe de Resistência | Classe Exposição | Teor Cloretos | Dmax. Inerte (mm) | Classe CONSIST | Recobr. (mm) |
| REG. DE FUNDAÇÕES     | C16/20                | X0 (P)           | cl 1.0        | -                 | -              | -            |
| PEÇAS DE BETÃO ARMADO | C25/30                | XC2 (P)          | cl 0.4        | 22                | S3             | 40           |

CLASSES DE EXPOSIÇÃO DE ACÓRDO COM A NORMA NP EN 206-1  
AÇO A500 NR SD EM VARÕES DE BETÃO ARMADO

NOTA

VARIÁVEL (\*) A DEFINIR NO PROJECTO

DIMENSÕES EM METROS (QUANDO NÃO ESPECIFICADAS)