

MEMÓRIA DE CÁLCULO

Obra: **CONSTRUÇÃO DE VESTIÁRIO – ENTRADA AO COMPLEXO AQUÁTICO DO CENTRO DE LAZER ORACI INACIO DE OLIVEIRA.**

Local: Rua Jose Lojudice,

Município: Magda-SP.

Interessada: Prefeitura Municipal de Magda-SP.

01. SERVIÇOS PRELIMINARES:

1.1: 02.09.030: **145,38m²**

1.2: 02.10.020: **145,38m²**

1.3: 02.08.020: $3,00 \times 1,50 = 4,50m^2$

02. INFRA-ESTRUTURA:

2.1: 06.02.020:
 $(4,95+14,65+3,38+1,80+7,95+1,40+2,82+5,85+1,85+1,95+9,70+9,45+9,70+5,85+1,85+1,95+2,82+1,40+7,95+1,80+3,38 = 102,45ML \times 0,20 \times 0,25 = 5,12M^3 + BLOCOS CONCRETO 0,60 \times 0,60 \times 0,50 \times 06UN = 1,08M^3$
total: **6,20m³**

2.2: 12.01.021: 36 brocas x 4,00 m = **144,00ml**

2.3: 09.01.020: $102,45ml \times 0,50cm = 51,22m^2$

2.4: 10.01.040: $6,20 \times 100kg/m^3 = 620,00kg$

2.5: 11.03.090: **6,20m³**

2.6: 11.16.040: **6,20m³**

2.7: 14.01.020: $102,45ml \times 0,15 \times 0,35 = 5,37m^3$

2.8: 32.16.010: $102,45ml \times 0,85cm = 87,08m^2$

03. SUPERESTRUTURA:

3.1: 09.01.030: 36 colunas x $3,00 \times 0,40 = 43,20m^2 + (viga respaldo 102,45 \times 0,30 = 30,73m^2)$
TOTAL: **73,93m²**

3.2: 10.01.040: 36 colunas de $0,15 \times 0,15 \times 3m$ altura = $2,43m^3 + (viga respaldo 102,45ml \times 0,20 \times 0,15 = 3,07m^3) + viga intermediaria (102,45ml \times 0,15 \times 0,15 = 2,30m^3) + (14 colunas da platibanda X $1,00 \times 0,15 \times 0,15 = 0,31m^3$) TOTAL: $8,11m^3 \times 80,00KG/M^3 = 648,80KG$$

3.3: 11.03.090: 36 colunas de $0,15 \times 0,15 \times 3m$ altura = $2,43m^3 + (viga respaldo 102,45ml \times 0,20 \times 0,15 = 3,07m^3) + viga intermediaria (102,45ml \times 0,15 \times 0,15 = 2,30m^3) + (14 colunas da platibanda X $1,00 \times 0,15 \times 0,15 = 0,31m^3$) TOTAL: **8,11m³**$

3.4: 11.16.060: **8,11m³**

3.5: 13.01.130: **145,38m²**

04. ALVENARIA:

4.1: 14.04.210:
 $3,65+18,25+3,38+4,71+1,80+1,40+2,82+1,95+1,85+1,33+2,00+2,53+3,97+14,65+1,00+1,00+2,53+3,97+1,85+1,95+2,00+2,82+1,40+4,71+1,80+3,38+1,50 = 94,20ML \times 3,00H = 282,60M^2 + 3,08+3,08 \times 2,30h = 14,16m^2$ TOTAL: **296,76M²**

4.2: 14.30.010: $(3,50+1,82+1,82 \times 1,80h = 12,85m^2) - (portas 0,60 \times 1,80 \times 3un = 3,24m^2) = 9,61m^2 \times 2un = 19,22m^2$

4.3: 44.02.062: $3,00+3,00 \times 0,60cm = 3,60m^2$

05. ELEMENTOS METÁLICOS/ALUMÍNIO:

5.1: 23.09.050: **02un** wc acessível

5.2: 25.02.050: (4 portas de $0,90 \times 2,10 = 7,56m^2$) + (12 portas de $0,60 \times 1,60 = 11,52m^2$) + (0,80x1,60x2un = 2,56m²) TOTAL: **21,64M²**

5.3: 28.01.040: **11un**

06. COBERTURA:

6.1: 15.03.030: $115,90+6,03+6,97+5,36 = 134,26M2 \times 6kg/m2 = 805,56kg$
6.2: 16.12.020: $115,90+6,03+6,97+5,36 = 134,26M2$
6.3: 16.33.052: RUFO:
 $3,65+1,75+1,75+18,25+3,38+1,80+4,72+5,50+2,10+3,65+2,10+3,65+1,65+1,65+6,05+5,50+4,72+1,80+3,38$
 $= 76,05ML + CANTONEIRA DAS TELHAS:$
 $18,25+3,65+2,10+2,10+5,50+5,50+1,75+1,75+1,65+1,65+4,95+1,80 = 50,65ML. \quad TOTAL: 126,70ML$
6.4: 46.04.030: 7 pontos x 4m = **28,00ml**
6.5: 22.20.050:
 $3,08+5,80+1,80+4,71+3,50+1,95+1,85+5,85+1,20+1,33+2,00+2,97+0,60+2,82+1,32+1,25+3,20+3,20+1,85+1,80+7,80 \times 2un = 119,76ml$

07. INSTALAÇÕES HIDRÁULICAS:

7.1: 46.01.020: 40,00ml
7.2: 46.01.050: 30,00ml
7.3: 46.04.030: 30,00ml
7.4: 49.03.036: 4,00un
7.5: 49.04.010: 06un
7.6: 44.20.010: 10un
7.7: 44.20.110: 10un
7.8: 44.03.470: 1un
7.9: 44.03.380: 10un
7.10: 44.01.270: 8un
7.11: 44.01.610: 2un
7.12: 30.08.060: 2un
7.13: 30.01.010: 0,80cm x 4un = 3,20ml
7.14: 44.01.050: 6un
7.15: 47.02.020: 4un
7.16: 47.04.030: 8un
7.17: 44.20.120: 8un
7.18: 44.20.150: 9un
7.19: 43.02.080: 6un
7.20: 43.02.100: 3un
7.21: 48.02.400: 1un

8. INSTALAÇÕES ELÉTRICAS:

8.1: 38.13.010: 200,00ml
8.2: 37.03.200: 1,00un
8.3: 37.13.600: 5,00un
8.4: 37.13.660: 3,00un
8.5: 39.03.170: 250,00ml
8.6: 39.03.174: 100,00ml
8.7: 40.04.450: 12,00un
8.8: 41.31.070: 20,00un
8.9: 40.05.020: 8,00un

9. REVESTIMENTO:

9.1: 17.02.020: (CHAPISCO EXTERNO $18,25+3,38+3,65+3,38+1,80+1,80+4,72+4,72+14,65 = 56,35ML$ X 4,15H = 233,85M2) + (LAJE: 145,38M2) + (CHAPISCO INTERNO $1,65+3,08+3,08+1,65+4,00+1,33+1,33+1,20+7,80+2,00+2,00+2,82+2,82+1,40+1,40+7,80+3,50+1,95+1,85+1,85+1,80+1,60+1,60+7,80+1,60+1,00+1,00+1,50+1,50 = 72,31ML$ X 3,00H = 216,93M2 X 2WC = 433,86M2) TOTAL: **813,09M2**
9.2: 17.02.120: **813,09M2**

9.3: 17.02.220: 813,09M2 - REVESTIMENTO INTERNO
 $1,65+3,08+3,08+1,65+4,00+1,33+1,33+1,20+7,80+2,00+2,00+2,82+2,82+1,40+1,40+7,80+3,50+1,95+1,85+1,85+1,80 = 56,31\text{ML} \times 3,00\text{H} \times 2\text{WC} = 337,86\text{M}^2 = \mathbf{475,23\text{M}^2}$
 9.4: 18.11.042: REVESTIMENTO INTERNO
 $1,65+3,08+3,08+1,65+4,00+1,33+1,33+1,20+7,80+2,00+2,00+2,82+2,82+1,40+1,40+7,80+3,50+1,95+1,85+1,85+1,80 = 56,31\text{ML} \times 3,00\text{H} \times 2\text{WC} = \mathbf{337,86\text{M}^2}$
 9.5: 18.06.410: **337,86m²**
 9.6: 18.12.020: $3,65 \times 3,40\text{h} = \mathbf{12,41\text{m}^2}$
 9.7: 17.28.030: $3,81 \times 4,65 = \mathbf{17,71\text{m}^2}$

10. PISOS:

10.1: 17.01.040: $5,08+38,12+3,33+12,48+12,48+3,33+38,12+5,08+3,60+3,60=125,22\text{M}^2 \times 0,05\text{CM} = \mathbf{6,26\text{M}^3}$
 10.2: 17.01.020: $125,22\text{M}^2 \times 0,02\text{CM} = \mathbf{2,50\text{M}^3}$
 10.3: 18.06.102: $5,08+38,12+3,33+12,48+12,48+3,33+38,12+5,08+3,60+3,60=\mathbf{125,22\text{M}^2}$

11. CALÇADA EXTERNA:

11.1: 17.01.040: $31,95+31,95 = 63,90\text{M}^2 \times 0,05\text{cm} = \mathbf{3,19\text{m}^3}$
 11.2: 19.03.090: $3,65 \times 1,00 = 3,65\text{m}^2 + 8,65 \times 1,60=13,84\text{M}^2$ TOTAL: **17,49M²**

12. VIDROS e SOLEIRAS:

12.1: 26.02.040: $(2,50 \times 0,50 \times 2\text{UN} = 2,50\text{M}^2) + (3,00 \times 0,50 = 1,50 \times 2\text{UN} = 3,00\text{M}^2) + (0,90 \times 0,40 \times 2\text{UN}=0,72\text{M}^2) + (5,80 \times 1,70\text{H} = 9,86\text{M}^2)$ TOTAL: **16,08M²**
 12.2: 19.01.062: $2,50+2,50+0,90+0,90+3,00+3,00+5,80 = \mathbf{18,60\text{ML}}$

13. PINTURA:

13.1: 33.10.030: $(\text{PINTURA EXTERNO } 18,25+3,38+3,65+3,38+1,80+1,80+4,72+4,72+14,65 = 56,35\text{ML} \times 4,15\text{H} = 233,85\text{M}^2) + (\text{LAJE: } 145,38\text{M}^2) = \mathbf{379,23\text{M}^2}$
 13.2: 33.10.041: $(7,80+1,60+1,60+1,60+1,60+7,80+1,00+1,00+1,00+1,00+1,50+1,50 \times 3\text{H}=87,00\text{M}^2) + (5,80+5,80 \times 1\text{H} = 11,60\text{M}^2)$ TOTAL: **98,60M²**
 13.3: 33.03.220: $4,65 \times 3,81 \times 2\text{lad} = \mathbf{35,43\text{m}^2}$
 13.4: 33.02.060: $(7,80+1,60+1,60+1,60+1,60+7,80+1,00+1,00+1,00+1,00+1,50+1,50 \times 3\text{H}=87,00\text{M}^2) + (5,80+5,80 \times 1\text{H} = 11,60\text{M}^2)$ TOTAL: **98,60M²**
 13.5: 33.12.011: $0,90 \times 2,10 \times 2\text{un} \times 2\text{lad} = \mathbf{7,56\text{m}^2}$

14.SERVIÇOS COMPLEMENTARES:

14.1: 55.01.020: 145,38m²

General Salgado, 16 de dezembro de 2021.

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 Arquiteto
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