



## MEMÓRIA DE CÁLCULO

**Obra:** Melhoramento de Vias Públicas - Calçamento em Bloquetes Sextavados;

**Local:** Rua Arnaldo Martinho Dias, Rua Joaquim Emídio Ferreira e Travessa Irene Leite de Oliveira, Bairro Areado e Rua Sucupira, Bairro Honorato;

**Cidade:** Lajinha/MG.

### 1. INSTALAÇÕES INICIAIS DA OBRA

1.1 - IIO-PLA-005 – FORNECIMENTO E COLOCAÇÃO DE PLACA DE OBRA EM CHAPA GALVANIZADA.

TOTAL: 01 unidade.

### 2. DRENAGEM

2.1 - DRE-SAR-005 – SARJETA TIPO 1 – 50X5 CM, I = 3%, PADRÃO DEER-MG.

#### - Rua Arnaldo Martinho Dias:

$=5,22+5,19+5,04+5,04+7,40+7,40+6,31+6,31+5,32+5,32+3,25+9,03+5,62+5,62+5,55+5,55+14,45+14,45+20,22+20,22+4,99+4,99+4,99+4,99+9,22+5,96+7,0+10,0+10,0+8,90+8,90+5,04+5,04+4,55+4,55+6,71+6,71+7,70+7,70 = 290,45 \text{ m}$

#### - Travessa Irene Leite de Oliveira:

$=6,08+6,08+30,0+30,0+8,51+8,51+4,15+4,15+3,25+3,25+3,83+3,83+5,37+5,37+4,81+4,81 = 132 \text{ m}$

#### - Rua Joaquim Emídio Ferreira:

$=12,37+12,37+12,43+12,43+15,10+15,10+14,27+14,27+13,77+13,77+12,12+12,12+13,74+13,74+6,20+6,20 = 200 \text{ m}$

#### - Rua Sucupira:

$=5,37+4,72+4,26+5,15+4,47+5,08+6,66+7,41+5,24+6,01+5,88+7,45+14,79+14,78+11,48+11,95+8,53+9,34+11,29+11,84+7,53+7,98+6,86+7,30+10,93+11,08+6,26+5,79+6,47+5,63+8,40+9,16+5,21$



# PREFEITURA DE LAJINHA

$$+5,97+5,37+5,95+5,83+5,55+5,13 = 294,10 \text{ m}$$

$$\text{TOTAL: } 290,45 + 132,0 + 200 + 294,10 = \mathbf{916,55 \text{ m}}$$

### 3. OBRAS VIÁRIAS

#### 3.1 – OBR-VIA-125 – REGULARIZAÇÃO DO SUBLEITO COM PROCTOR NORMAL.

##### - Rua Arnaldo Martinho Dias:

$$\begin{aligned} &= (5,19+5,22) \times 11/2 + (5,04+5,04) \times 6,70/2 + (7,40+7,40) \times 6,70/2 + \\ &(6,31+6,31) \times 5,50/2 + (5,32+5,32) \times 5,0/2 + (3,25+6,0+9,03) \times 7,50/2 \\ &+(5,62+5,62) \times 6,0/2 + (5,55+5,55) \times 6,0/2 + (14,45+14,45) \times 6,0/2 + \\ &(20,22+20,22) \times 6,0/2 + (4,99+4,99) \times 6,0/2 + (4,99+4,99) \times 6,0/2 + \\ &(9,22+5,96+7,0) \times 6,0/2 + (10,0+10,0) \times 6,0/2 + (8,90+8,90) \times 6,0/2 + \\ &(5,04+5,04) \times 5,0/2 + (4,55+4,55) \times 5,0/2 + (6,71+6,71) \times 4,0/2 + \\ &(7,70+7,70) \times 4,0/2 = 890,92 \text{ m}^2 \end{aligned}$$

##### - Travessa Irene Leite de Oliveira:

$$\begin{aligned} &= (6,08+6,08) \times 6,0/2 + (30,0+30,0) \times 4,0/2 + (8,51+8,51) \times 4,0/2 + \\ &(4,15+4,15) \times 4,0/2 + (3,25+3,25) \times 4,0/2 + (3,83+3,83) \times 4,0/2 + \\ &(5,37+5,37) \times 4,0/2 + (4,81+4,81) \times 4,0/2 = 276,16 \text{ m}^2 \end{aligned}$$

##### - Rua Joaquim Emídio Ferreira:

$$\begin{aligned} &= (12,37+12,37) \times 8,24/2 + (12,43+12,43) \times 8,24/2 + (15,10+15,10) \times 8,24 \\ &/2 + (14,27+14,27) \times 8,24/2 + (13,77+13,77) \times 8,24/2 + (12,12+12,12) \times 8, \\ &24 + (13,74+13,74) \times 8,24 + (6,20+6,20) \times 8,24/2 = 824 \text{ m} \end{aligned}$$

##### - Rua Sucupira:

$$\begin{aligned} &= (5,37+4,72) \times 4,0/2 + (4,26+5,15) \times 4,0/2 + (4,47+5,08) \times 4,0/2 + (6,66+7, \\ &41) \times 4,0/2 + (5,24+6,01) \times 4,0/2 + (5,88+7,45) \times 4,0/2 + (14,79+14,78) \times 4, \\ &0/2 + (11,48+11,95) \times 4,0/2 + (8,53+9,34) \times 4,0/2 + (11,29+11,84) \times 4,0/2 + \\ &(7,53+7,98) \times 4,0/2 + (6,86+7,30) \times 4,0/2 + (10,93+11,08) \times 4,0/2 + (6,26+ \\ &5,79) \times 4,0/2 + (6,47+5,63) \times 4,0/2 + (8,40+9,16) \times 4,0/2 + (5,21+4,0) \times 4,0/ \\ &2 + (5,97+5,37) \times 4,0/2 + (5,95+5,83) \times 4,0/2 + (5,55+5,13) \times 4,0/2 = \\ &614,37 \text{ m}^2 \end{aligned}$$

$$\text{TOTAL: } 890,92 + 276,16 + 824 + 614,37 = \mathbf{2.605,45 \text{ m}^2}$$

#### 3.2 – OBR-VIA-215- EXECUÇÃO DE CALÇAMENTO EM BLOQUETE

##### - Rua Arnaldo Martinho Dias:



## PREFEITURA DE LAJINHA

$$= (5,19+5,22) \times 9,76/2 + (5,04+5,04) \times 5,46/2 + (7,40+7,40) \times 5,46/2 + (6,31+6,31) \times 4,26/2 + (5,32+5,32) \times 3,76/2 + (3,25+6,0+9,03) \times 6,26/2 + (5,62+5,62) \times 4,76/2 + (5,55+5,55) \times 4,76/2 + (14,45+14,45) \times 4,76/2 + (20,22+20,22) \times 4,76/2 + (4,99+4,99) \times 4,76/2 + (4,99+4,99) \times 4,76/2 + (9,22+5,96+7,0) \times 4,76/2 + (10,0+10,0) \times 4,76/2 + (8,90+8,90) \times 4,76/2 + (5,04+5,04) \times 3,76/2 + (4,55+4,55) \times 3,76/2 + (6,71+6,71) \times 2,76/2 + (7,70+7,70) \times 2,76/2 = 707,10 \text{ m}^2$$

### - Travessa Irene Leite de Oliveira:

$$= (6,08+6,08) \times 4,76/2 + (30,0+30,0) \times 2,76/2 + (8,51+8,51) \times 2,76/2 + (4,15+4,15) \times 2,76/2 + (3,25+3,25) \times 2,76/2 + (3,83+3,83) \times 2,76/2 + (5,37+5,37) \times 2,76/2 + (4,81+4,81) \times 2,76/2 = 194,32 \text{ m}^2$$

### - Rua Joaquim Emídio Ferreira:

$$= (12,37+12,37) \times 7,0/2 + (12,43+12,43) \times 7,0/2 + (15,10+15,10) \times 7,0/2 + (14,27+14,27) \times 7,0/2 + (13,77+13,77) \times 7,0/2 + (12,12+12,12) \times 7,0/2 + (13,74+13,74) \times 7,0/2 + (6,20+6,20) \times 7,0/2 = 700 \text{ m}$$

### - Rua Sucupira:

$$= (5,37+4,72) \times 2,76/2 + (4,26+5,15) \times 2,76/2 + (4,47+5,08) \times 2,76/2 + (6,66+7,41) \times 2,76/2 + (5,24+6,01) \times 2,76/2 + (5,88+7,45) \times 2,76/2 + (14,79+14,78) \times 2,76/2 + (11,48+11,95) \times 2,76/2 + (8,53+9,34) \times 2,76/2 + (11,29+11,84) \times 2,76/2 + (7,53+7,98) \times 2,76/2 + (6,86+7,30) \times 2,76/2 + (10,93+11,08) \times 2,76/2 + (6,26+5,79) \times 2,76/2 + (6,47+5,63) \times 2,76/2 + (8,40+9,16) \times 2,76/2 + (5,21+4,0) \times 2,76/2 + (5,97+5,37) \times 2,76/2 + (5,95+5,83) \times 2,76/2 + (5,55+5,13) \times 2,76/2 = 429,56 \text{ m}^2$$

$$\text{TOTAL: } 707,10 + 194,32 + 700 + 429,56 = 2030,98 \text{ m}^2$$

## 4. URBANIZAÇÃO E OBRAS COMPLEMENTARES

4.1- UBR-MFC-005 – MEIO FIO PRÉ-MOLDADO TIPO A (12X16,7X35 CM).

### - Rua Arnaldo Martinho Dias:

$$= 5,22+5,19+5,04+5,04+7,40+7,40+6,31+6,31+5,32+5,32+3,25+9,03+5,62+5,62+5,55+5,55+14,45+14,45+20,22+20,22+4,99+4,99+4,99+4,99+9,22+5,96+7,0+10,0+10,0+8,90+8,90+5,04+5,04+4,55+4,55+6,71+6,71+7,70+7,70+4,0 = 294,45 \text{ m}$$



# PREFEITURA DE LAJINHA

## - Travessa Irene Leite de Oliveira:

=6,08+6,08+30,0+30,0+8,51+8,51+4,15+4,15+3,25+3,25+3,83+3,83+5,37+5,37+4,81+4,81+4,0 = 136 m

## - Rua Joaquim Emídio Ferreira:

=12,37+12,37+12,43+12,43+15,10+15,10+14,27+14,27+13,77+13,77+12,12+12,12+13,74+13,74+6,20+6,20+8,24 = 208,24 m

## - Rua Sucupira:

=5,37+4,72+4,26+5,15+4,47+5,08+6,66+7,41+5,24+6,01+5,88+7,45+14,79+14,78+11,48+11,95+8,53+9,34+11,29+11,84+7,53+7,98+6,86+7,30+10,93+11,08+6,26+5,79+6,47+5,63+8,40+9,16+5,214,0+5,97+5,37+5,95+5,83+5,55+5,13 = 298,10 m

**TOTAL:** 294,45 + 136 + 208,24 + 298,10 = **936,79 m**

Lajinha/MG, 07 de fevereiro de 2019

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**THAÍS BOECHAT DE LIMA**  
**ENGENHEIRA CIVIL CREA/MG – 212.895/D**