

**PROJECT UNIT COST ANALYSIS**

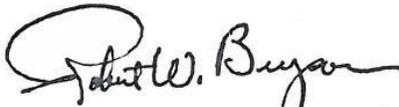
**ESTIMATE OF QUANTITIES**

PROJECT ID 2984-16-91  
W. LLOYD ST. - N. 60TH ST. TO N. SHERMAN BLVD.  
LOCAL STREET  
MILWAUKEE COUNTY

| Item No. | Std. Bid Item No. | Description                                    | Unit | Quantity | Excluded Costs | City Unit    | City Total   |
|----------|-------------------|--|------|----------|----------------|--------------|--------------|
| 71032    | SPV.0060          | Opticom Phase Selector Card                    | Each | 6        | \$ 10,552.50   | \$ 1,911.93  | \$ 11,471.56 |
| 71033    | SPV.0060          | Opticom 711 Detector                           | Each | 2        | \$ 845.04      | \$ 671.37    | \$ 1,342.74  |
| 71034    | SPV.0060          | Opticom 721 Detector                           | Each | 6        | \$ 2,739.00    | \$ 708.00    | \$ 4,248.00  |
| 71035    | SPV.0060          | Opticom Confirmation Light Assembly            | Each | 15       | \$ 626.25      | \$ 219.79    | \$ 3,296.82  |
| 71040    | SPV.0060          | Vehicular Microwave Detection System           | Each | 2        | \$ 8,400.00    | \$ 6,254.81  | \$ 12,509.62 |
| 71052    | SPV.0060          | Solid State Controller Installed               | Each | 6        | \$ 51,385.02   | \$ 11,881.69 | \$ 71,290.16 |
| 71057    | 658.0215          | Backplates Signal Face 3 Section 12-inch       | Each | 11       | \$ 363.00      | \$ 62.56     | \$ 688.14    |
| 71062    | 658.0110          | Traffic Signal Face 3-12 Inch Vertical         | Each | 58       | \$ 15,026.64   | \$ 489.18    | \$ 28,372.63 |
| 71065    | 658.0500          | Pedestrian Push Buttons                        | Each | 9        | \$ 288.00      | \$ 142.42    | \$ 1,281.82  |
| 71066    | 658.0412          | Pedestrian Signal Face 12-Inch                 | Each | 2        | \$ 324.02      | \$ 333.57    | \$ 667.13    |
| 71067    | SPV.0060          | Pedestrian Countdown Signal Face 12-Inch       | Each | 2        | \$ 329.18      | \$ 336.35    | \$ 672.69    |
| 71081    | 658.1110          | Programmable Traffic Signal Face 3-12 Vertical | Each | 3        | \$ 5,044.38    | \$ 2,127.59  | \$ 6,382.77  |
| 71101    | 678.0200          | Fiber Optic Splice Enclosure                   | Each | 6        | \$ 2,250.00    | \$ 512.21    | \$ 2,425.53  |
| 71102    | 678.0300          | Fiber Optic Splice                             | Each | 6        | \$ -           | \$ 72.31     | \$ 433.86    |
| 71103    | SPV.0060          | Fiber Optic Patch Panel                        | Each | 6        | \$ 3,600.00    | \$ 862.71    | \$ 5,176.24  |
| 71104    | SPV.0060          | Ethernet Switch                                | Each | 6        | \$ 4,195.50    | \$ 1,617.26  | \$ 9,703.56  |
| 71112    | 678.0072          | Install Fiber Optic Cable Outdoor Plant 72-CT  | LF   | 4,050    | \$ 7,087.50    | \$ 2.75      | \$ 11,137.80 |
| 71154    | 655.0900          | Traffic Signal EVP Detector Cable              | LF   | 1,030    | \$ 422.30      | \$ 3.25      | \$ 3,351.50  |
| 71161    | SPV.0090          | Cable Service 3 #4/1 #8 LTP                    | LF   | 505      | \$ 1,196.85    | \$ 4.84      | \$ 2,445.58  |
| 71170    | 655.0250          | Cable Traffic Signal 9-14 AWG                  | LF   | 270      | \$ 170.10      | \$ 3.49      | \$ 942.58    |
| 71171    | 655.0260          | Cable Traffic Signal 12-14 AWG                 | LF   | 950      | \$ 760.00      | \$ 3.67      | \$ 3,490.64  |
| 71172    | SPV.0090          | Cable Traffic Signal 17-14 AWG                 | LF   | 970      | \$ 1,105.80    | \$ 4.04      | \$ 3,919.68  |
| 71173    | SPV.0090          | Cable Traffic Signal 20-14 AWG                 | LF   | 880      | \$ 1,214.40    | \$ 4.30      | \$ 3,783.67  |
| 71177    | SPV.0060          | Install Secondary Riser                        | Each | 1        | \$ 6.18        | \$ 114.59    | \$ 114.59    |
| 71190    | SPV.0060          | Mast Arm Fabricated                            | Each | 3        | \$ 3,675.00    | \$ 2,709.97  | \$ 8,129.91  |
| 71191    | SPV.0060          | Mast Arm Pole                                  | Each | 3        | \$ 5,498.37    | \$ 2,543.21  | \$ 7,629.62  |
| 71195    | SPV.0060          | Signal Standard 5'                             | Each | 1        | \$ 563.25      | \$ 1,080.95  | \$ 1,080.95  |
| 71197    | SPV.0060          | Signal Standard 14'                            | Each | 25       | \$ 17,706.75   | \$ 1,237.29  | \$ 30,932.16 |
| 71198    | SPV.0060          | Signal Standard 1' Extension                   | Each | 3        | \$ 181.80      | \$ 119.30    | \$ 357.90    |
| 71700    | SPV.0060          | Signal Housing Relocated                       | Each | 34       | \$ -           | \$ 215.85    | \$ 7,338.89  |
| 73288    | 638.2602          | Removing Signs Type II                         | Each | 131      | \$ -           | \$ 6.06      | \$ 793.42    |
| 73289    | 638.3000          | Removing Small Sign Supports                   | Each | 72       | \$ -           | \$ 10.09     | \$ 726.79    |
| 73291    | SPV.0060          | Socket 3' RSP                                  | Each | 106      | \$ 3,658.06    | \$ 57.39     | \$ 6,083.75  |
| 73292    | SPV.0060          | Socket (Concrete Install)                      | Each | 5        | \$ 107.90      | \$ 53.55     | \$ 267.75    |
| 73295    | SPV.0060          | Sign Pipe 2"                                   | Each | 111      | \$ 5,994.00    | \$ 62.26     | \$ 6,910.32  |
| 73299    | 637.2220          | Signs Type II Reflective SH                    | SF   | 870      | \$ 5,315.70    | \$ 13.42     | \$ 11,673.21 |

**LFA CONSTRUCTION COST \$ 271,074.18**  
**LFA EXCLUDED COST \$ 160,632.49**  
**STATE REVIEW COST (15%) \$ 40,661.13**  
**TOTAL PROJECT COST \$ 311,735.31**

APPROVED BY:



ROBERT W. BRYSON  
CHIEF TRAFFIC AND LIGHTING ENGINEER

TRANSPORTATION SECTION  
TRAFFIC AND LIGHTING DESIGN UNIT  
JOSEPH C. BLAKEMAN  
REVISED: JULY 9, 2015

\* Please note that the Total City Cost includes the embedded costs of mobilization, traffic control, mounting hardware, material removal, and construction staking electrical installations which are included in the times used for calculating City Unit Costs on the attached worksheets.