

RESOLUTION 2012-73

A RESOLUTION FUNDING CAROTHERS PARKWAY SOUTH FROM FALCON CREEK SUBDIVISION TO THE HIGHLANDS AT LADD PARK SUBDIVISION

WHEREAS, the Carothers Parkway South Project is listed as a Short Term Priority Project within the City of Franklin Major Thoroughfare Plan; and

WHEREAS, The construction of the Carothers Parkway South shall generally include a 2-lane typical section with grading to accommodate the future 4-lane typical section with curb and gutter, sidewalk (east side only), lighting, drainage and other appurtenances as required; and

WHEREAS, The estimated construction cost associated with the Carothers Parkway South Project as a 2-lane typical section with grading to accommodate the future 4-lane section from the Falcon Creek Subdivision to Truman Drive in the Highlands at Ladd Park Subdivision is approximately \$12,764,722; and

WHEREAS, the Board of Mayor and Aldermen has adopted financial policies related to general fund reserves and debt issuance; and

WHEREAS, financial models have been developed to project the impact of various funding scenarios associated with the funding of the Carothers Parkway South Project.

NOW THEREFORE, BE IT RESOLVED by the Board of Mayor and Aldermen of the City of Franklin, Tennessee, that the Carothers Parkway South Project shall be funded for construction to include a 2-lane typical section with grading to accommodate the future 4-lane typical section with curb and gutter, sidewalk (east side only), lighting, drainage and other appurtenances as required.

IT IS SO RESOLVED AND DONE on this 8th day of January, 2013

ATTEST:

CITY OF FRANKLIN, TENNESSE

By: _____

ERIC S. STUCKEY
City Administrator

By: _____

Dr. Ken Moore
Mayor

Approved as to Form

By: _____


Shauna R. Billingsley
City Attorney



HISTORIC
FRANKLIN
TENNESSEE

December 10, 2012

TO: Board of Mayor and Aldermen

FROM: Eric S. Stuckey, City Administrator 
David Parker, P.E., City Engineer/CIP Executive
Paul Holzen, P.E., Director of Engineering
Dan Allen, P.E., Assistant Director of Engineering
Jonathan Marston, P.E., Staff Engineer 2

SUBJECT: South Carothers Parkway Extension Project Information & Options

Purpose

The purpose of this memorandum is to provide the Board of Mayor and Alderman (BOMA) with additional information and potential options for the South Carothers Parkway Extension Project.

Background

On July 10, 2007, the BOMA unanimously approved a professional services agreement (PSA) in an amount not to exceed \$1,420,000 with Sullivan Engineering, Inc. (SEI) for the design of the South Carothers Extension. The proposed extension of South Carothers Parkway, from Falcon Creek Subdivision to the Highlands at Ladd Park Subdivision, was to consist of a 4-lane, median divided roadway, with sidewalk and multi-use trail. This design was in keeping with previous iterations of Carothers Parkway.

On December 11, 2007 the BOMA unanimously approved Amendment 1 to the PSA with SEI in an amount of \$100,000. The purposed of this amendment was to modify the South Carothers Parkway Extension design to accommodate the proposed Nichols Bend development. This amendment was to be funded by the developer of Nichols Bend.

On September 9, 2008, the BOMA unanimously approved Amendment 2 to the PSA with SEI, in an amount of \$30,020, for hydraulic modeling of the Harpeth River. Amendment 3 to the PSA with SEI, at a cost of \$61,000 was approved unanimously by the BOMA on January 13, 2009. The purpose of Amendment 3 was to modify the design plans to allow for the detention requirements of the Nichols Bend development and to redesign of the proposed bridge over the Harpeth River to allow the inclusion of a Milcrofton water line.

On September 22, 2009, the BOMA approved COF Contract 2009-0052 with SEI, in an amount not to exceed \$242,570 for additional design services related to the South Carothers Parkway Extension. The additional design services approved within COF Contract 2009-0052 provide a continuous roadway from the South Carothers Parkway bridge over the Harpeth river to Long Lane.



On April 24, 2012, an option to authorize a 2-lane design of the South Carothers Parkway Extension was offered to the BOMA. Subsequently, COF Contract 2012-0078 with SEI, was presented to the BOMA on May 8, 2012. This contract provides for the redesign of South Carothers Parkway Extension as a 2-lane roadway. Two (2) options were offered for a 2-lane design. The first option, at a design cost of \$262,970, was for a 2-lane curb and gutter typical section, with sidewalk. The second option, at a design cost of \$406,350, was for a 2-lane typical section, with ditch drainage and no sidewalk. The BOMA ultimately chose option 1 for COF Contract 2012-0078.

On November 27, 2012 City Staff presented *preliminary* construction cost estimates (e.g. opinion of probable cost) for the redesigned, 2-lane typical section South Carothers Parkway Extension. Those estimates are as follows:

| | <u>North Only</u> | <u>South Only</u> | <u>Entire Project</u> |
|-------------|----------------------|----------------------|-----------------------|
| Roadway | \$ 5,047,542.83 | \$ 5,522,563.06 | \$ 10,120,436.04 |
| Lighting | \$ 234,260.68 | \$ 237,230.83 | \$ 471,267.08 |
| Bridge | \$ 0.00 | \$ 1,565,174.04 | \$ 1,565,174.04 |
| Contingency | <u>\$ 264,090.18</u> | <u>\$ 366,248.40</u> | <u>\$ 607,843.86</u> |
| Total | \$ 5,545,893.68 | \$ 7,691,216.32 | \$ 12,764,721.02 |

At this November 27, 2012 meeting, the BOMA requested that the estimated construction costs for a 4-lane typical section of South Carothers Parkway also be presented.

Financial Impact

SEI, the design consultant for the South Carothers Parkway Extension Project has prepared construction estimates for 2-lane & 4-lane typical sections. Also, for each typical section, the costs are broken down into their major components for: north segment construction only, south segment construction only, and entire project construction. You will notice that costs for the 2-lane section differ significantly from the costs presented on November 13, 2012. Additional information about the construction of detention ponds and recent bid information (i.e. McEwen Drive Temporary Connector & Hillsboro Road) was used to create a more up-to-date *estimate* of construction costs.

2-Lane Typical Section Estimates

| | <u>North Only</u> | <u>South Only</u> | <u>Entire Project</u> |
|----------------|------------------------|------------------------|------------------------|
| Add'l Design | \$ 0.00 | \$ 0.00 | \$ 0.00 |
| Roadway | \$ 2,537,681.74 | \$ 2,675,395.14 | \$ 4,944,708.96 |
| Sidewalk/Trail | \$ 125,003.12 | \$ 153,630.15 | \$ 278,633.27 |
| Bridge/Wall(s) | \$ 189,000.00 | \$ 1,643,432.74 | \$ 1,832,432.74 |
| Lighting | \$ 221,376.34 | \$ 224,183.13 | \$ 442,353.28 |
| *Miscellaneous | <u>\$ 2,839,918.65</u> | <u>\$ 2,968,466.76</u> | <u>\$ 5,547,267.37</u> |
| Total | \$ 5,912,979.85 | \$ 7,665,107.92 | \$ 13,045,395.62 |



4-Lane Typical Section Estimates

| | <u>North Only</u> | <u>South Only</u> | <u>Entire Project</u> |
|----------------|------------------------|------------------------|------------------------|
| Add'l Design | \$ 31,500.00 | \$ 44,100.00 | \$ 44,100.00 |
| Roadway | \$ 3,996,945.69 | \$ 3,896,921.09 | \$ 7,825,841.49 |
| Sidewalk/Trail | \$ 125,003.12 | \$ 153,630.15 | \$ 278,633.27 |
| Bridge/Wall(s) | \$ 189,000.00 | \$ 3,286,865.48 | \$ 3,475,865.48 |
| Lighting | \$ 277,430.46 | \$ 284,619.89 | \$ 502,790.03 |
| *Miscellaneous | <u>\$ 2,785,266.71</u> | <u>\$ 3,258,661.14</u> | <u>\$ 5,722,527.75</u> |
| Total | \$ 7,405,145.98 | \$ 10,924,797.75 | \$ 17,849,758.02 |

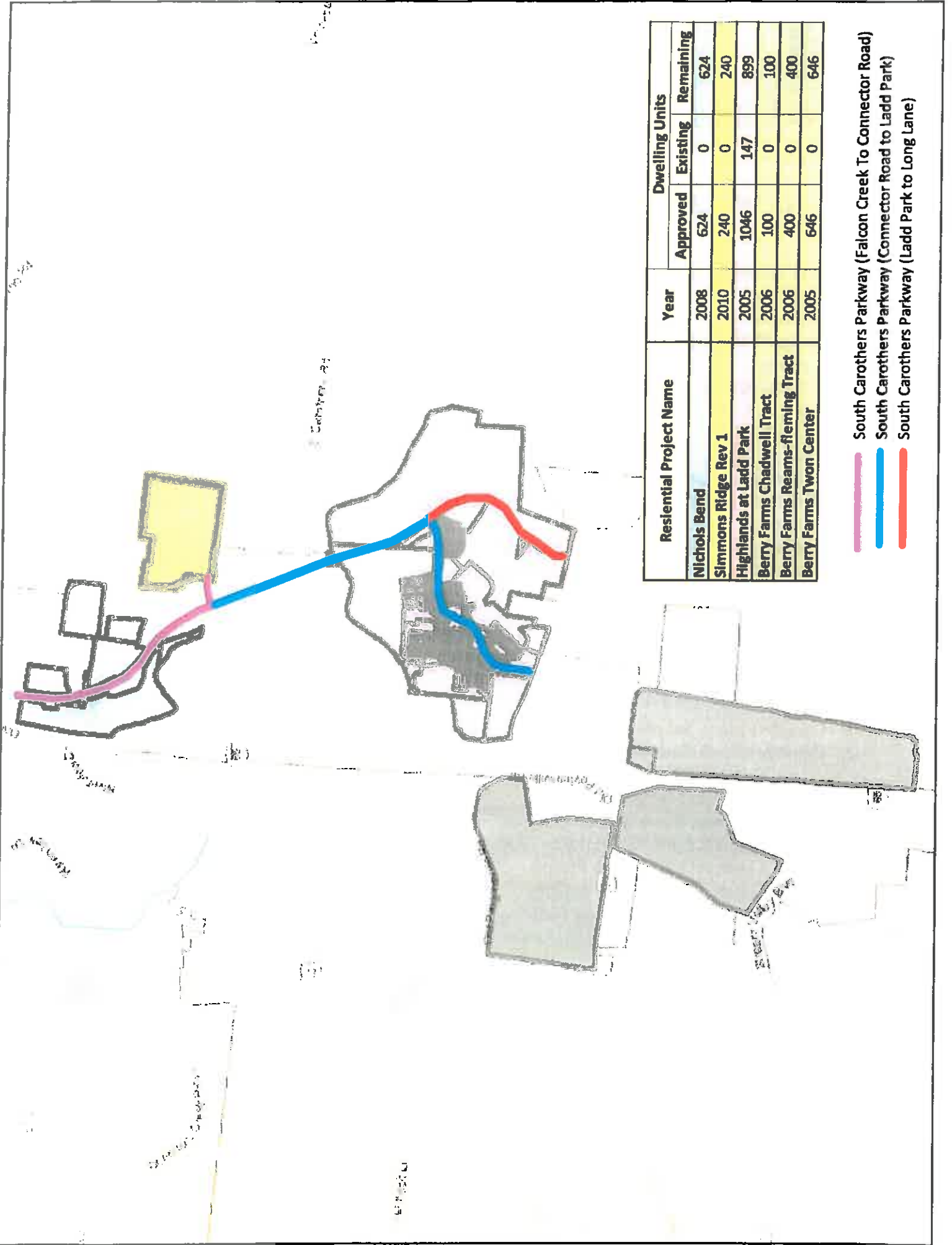
*Notes:

1. It is assumed that the borrow excavation can be obtained locally, on or near the construction site. However, if off site material is required, then the cost per unit would increase to \$18+/- per cubic yard in lieu of the \$7+/- used in the cost analysis. Please keep in mind, that from all indications, it appears the necessary borrow material is obtainable on site.
2. This cost includes the retention/detention ponds that are to be constructed as a part of the City's Agreement with Nichols Bend.

Recommendation

In order to prepare final plans and specifications for construction, staff needs final direction from the BOMA. The options are:

1. Complete plans, but place construction on hold indefinitely,
2. Construct South Carothers Parkway Extension as a 2-lane facility
 - a. Construct Full Length Project
 - b. Construct North Section Only
 - c. Construct South Section Only
3. Construct South Carothers Parkway Extension as a 4-lane facility
 - a. Construct Full Length Project
 - b. Construct North Section Only
 - c. Construct South Section Only



| Residential Project Name | Year | Dwelling Units | | |
|---------------------------------|------|----------------|----------|-----------|
| | | Approved | Existing | Remaining |
| Nichols Bend | 2008 | 624 | 0 | 624 |
| Simmons Ridge Rev 1 | 2010 | 240 | 0 | 240 |
| Highlands at Ladd Park | 2005 | 1046 | 147 | 899 |
| Berry Farms Chadwell Tract | 2006 | 100 | 0 | 100 |
| Berry Farms Reams-fleming Tract | 2006 | 400 | 0 | 400 |
| Berry Farms Twon Center | 2005 | 646 | 0 | 646 |

- South Carothers Parkway (Falcon Creek To Connector Road)
- South Carothers Parkway (Connector Road To Ladd Park)
- South Carothers Parkway (Ladd Park To Long Lane)

DATE 10/24/2012
 Project Length 1.05 L.M.

WILLIAMSON COUNTY
 SOUTH CAROTHERS PARKWAY
 FROM: CONNECTOR ROAD
 TO: FALCON CREST
 CITY OF FRANKLIN PROJECT # _____
 SULLIVAN ENGINEERING, INC PROJECT #12-005

| PROJECT QUANTITIES (COORDINATE WITH TABULATED DATA FOR ADDITIONAL FOOTNOTES) | | | | | |
|---|--|------|----------|--------------|--------------|
| ITEM NO. | ITEM DESCRIPTION | UNIT | EST QTY. | UNIT PRICE | TOTAL PRICE |
| 105-01 | CONSTRUCTION STAKES LINES AND GRADES | L.S. | 1 | \$90,576.39 | \$90,576.39 |
| 201-01 | CLEARING AND GRUBBING | L.S. | 1 | \$196,791.94 | \$196,791.94 |
| 202-01 | REMOVAL OF STRUCTURES AND OBSTRUCTIONS (INCLUDES BUT NOT LIMITED TO ITEMS SUCH AS SIGNS, FLEXIBLE DELINEATORS, FENCES, CONCRETE CURBS, MAILBOXES AND ALL OTHER ITEMS WITHIN THE GRADING LIMITS UNLESS OTHERWISE NOTED.) | L.S. | 1 | \$22,582.57 | \$22,582.57 |
| 203-01 | ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED, INCLUDES 13 C.Y. FOR CONSTRUCTION ENTRANCE) | C.Y. | 27657 | \$12.75 | \$352,626.75 |
| 203-03 | BORROW EXCAVATION (UNCLASSIFIED) | C.Y. | 116700 | \$7.07 | \$825,069.00 |
| 203-04 | PLACING & SPREADING TOPSOIL | C.Y. | 8858 | \$4.56 | \$40,392.48 |
| 203-05 | UNDERCUTTING (UNIT PRICE BIDS INCLUDES MINERAL AGGREGATE (SURGE STONE) BACKFILL) | C.Y. | 2766 | \$32.53 | \$89,968.22 |
| 203-06 | WATER | M.G. | 1345 | \$7.10 | \$9,549.50 |
| 203-07 | FURNISHING & SPREADING TOPSOIL | C.Y. | 15738 | \$17.23 | \$271,165.74 |
| 204-07 | BEDDING MATERIAL (PIPE) CLASS "B" | C.Y. | 2559 | \$29.36 | \$75,132.24 |
| 204-08 | FOUNDATION FILL MATERIAL | C.Y. | 1112 | \$49.10 | \$54,599.20 |
| 209-05 | SEDIMENT REMOVAL | C.Y. | 2246 | \$7.73 | \$17,361.58 |
| 209-08.02 | TEMPORARY SILT FENCE (WITH BACKING), (AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | L.F. | 11092 | \$3.71 | \$41,151.32 |
| 209-08.03 | TEMPORARY SILT FENCE (WITHOUT BACKING), (AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | L.F. | 11092 | \$1.16 | \$12,866.72 |
| 209-08.07 | ROCK CHECK DAM ("V-DITCH", 2'-/- DEPTH, OR AS DIRECTED BY THE ENGINEER, AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | EACH | 32 | \$359.83 | \$11,514.56 |
| 209-09.03 | SEDIMENT FILTER BAG (15' X 15') | EACH | 8 | \$529.64 | \$4,237.12 |
| 209-40.41 | CATCH BASIN FILTER ASSEMBLY (TYPE 1), (AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | EACH | 4 | \$387.20 | \$1,548.80 |
| 209-40.46 | CATCH BASIN FILTER ASSEMBLY (TYPE 6), (AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | EACH | 106 | \$406.70 | \$43,110.20 |
| 209-40.47 | CATCH BASIN FILTER ASSEMBLY (TYPE 7), (AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | EACH | 11 | \$660.00 | \$7,260.00 |
| 303-01 | MINERAL AGGREGATE TYPE A BASE GRADING "D", (INCLUDES XXX TONS FOR STONE WEDGE) | TON | 14793 | \$17.13 | \$253,404.09 |
| 303-01.01 | GRANULAR BACKFILL FOR STRUCTURES | TON | 5000 | \$19.52 | \$97,600.00 |
| 307-02.02 | ASPHALT CEMENT (PG70-22)(BPMB-HM) GRADING A-S | TON | 112 | \$857.10 | \$95,995.20 |
| 307-02.03 | AGGREGATE(BPMB-HM) GRADING AS | TON | 3323 | \$41.85 | \$139,067.55 |
| 307-02.01 | ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A | TON | 4388 | \$67.55 | \$296,409.40 |
| 307-02.08 | ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B-M2 | TON | 2156 | \$75.48 | \$162,734.88 |
| 402-01 | BITUMINOUS MATERIAL FOR PRIME COAT (PC), (INCLUDES 15 TONS FOR MAINTENANCE OF TRAFFIC) | TON | 44 | \$700.74 | \$30,832.56 |

| PROJECT QUANTITIES (COORDINATE WITH TABULATED DATA FOR ADDITIONAL FOOTNOTES) | | | | | |
|--|---|------|----------|------------|--------------|
| ITEM NO. | ITEM DESCRIPTION | UNIT | EST QTY. | UNIT PRICE | TOTAL PRICE |
| 402-02 | AGGREGATE FOR COVER MATERIAL (PC), (INCLUDES 57 TONS FOR MAINTENANCE OF TRAFFIC) | TON | 173 | \$38.65 | \$6,686.45 |
| 403-01 | BITUMINOUS MATERIAL FOR TACK COAT (TC), (INCLUDES 1 TONS FOR MAINTENANCE OF TRAFFIC) | TON | 17 | \$684.68 | \$11,639.56 |
| 407-20.05 | SAW CUTTING ASPHALT PAVEMENT, (TO BE USED AS DIRECTED BY THE ENGINEER FOR CONNECTIONS AT EXISTING ROADWAYS. IF THE CONTRACTOR ELECTS TO SAW CUT FOR OTHER PURPOSES, PAYMENT SHALL BE DISALLOWED UNLESS PRE-APPROVED BY THE ENGINEER.) | L.F. | 651 | \$3.12 | \$2,031.12 |
| 411-02.10 | ACS MIX(PG70-22) GRADING D | TON | 1471 | \$95.64 | \$140,686.44 |
| 604-08.10 | RETAINING WALL, UNIT PRICE INCLUDES: ALL MATERIALS, LABOR, EXCAVATION, GRANULAR BACKFILL, CAP STONE, INCLUSIVE OF ALL APPURTENANCES FOR A COMPLETE SYSTEM.) | S.F. | 4000 | \$50.00 | \$200,000.00 |
| 611-01.03 | MANHOLES, 8' - 12' DEPTH (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 1 | \$5,650.00 | \$5,650.00 |
| 611-07.01 | CLASS "A" CONCRETE (PIPE END WALLS) | C.Y. | 48 | \$1,279.74 | \$61,427.52 |
| 611-07.02 | STEEL BAR REINFORCEMENT (PIPE END WALLS) | LB. | 4361 | \$1.88 | \$8,198.68 |
| 611-07.03 | STRUCTURAL STEEL (PIPE END WALLS) | LB. | 1578 | \$5.17 | \$8,158.26 |
| 611-12.01 | CATCH BASINS, TYPE 12, DEPTH 0' - 4' (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 2 | \$2,331.68 | \$4,663.36 |
| 611-12.02 | CATCH BASINS, TYPE 12, DEPTH 4' - 8' (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 80 | \$2,690.46 | \$215,236.80 |
| 611-12.03 | CATCH BASINS, TYPE 12, DEPTH 8' - 12' (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 16 | \$5,888.71 | \$94,219.36 |
| 611-14.02 | CATCH BASINS, TYPE 14, DEPTH 4' - 8' (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 12 | \$7,237.09 | \$86,845.08 |
| 611-14.02 | CATCH BASINS, TYPE 14, DEPTH 8' - 12' (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 1 | \$7,653.83 | \$7,653.83 |
| 611-42.01 | CATCH BASINS, TYPE 42, DEPTH 0' - 4' (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION, QUANTITY INCLUDES 6 STRUCTURES TO BE COORDINATED WITH STREETScape PLANS PREPARED BY EG&G, INC.) | EACH | 3 | \$2,331.68 | \$6,995.04 |
| 611-42.02 | CATCH BASINS, TYPE 42, DEPTH 4' - 8' (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 4 | \$2,690.46 | \$10,761.84 |
| 611-02.10 | JUNCTION BOX, TYPE 1 (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL AND APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 2 | \$3,133.89 | \$6,267.78 |
| 701-01.01 | CONCRETE SIDEWALK (4" THICKNESS W/ FIBER MESH AND 6" AGGREGATE CLASS "A" GRADING "D" BASE) | S.F. | 28105 | \$4.23 | \$118,884.15 |
| 701-02 | CONCRETE DRIVEWAY (APPROACH APRON WITHIN RIGHT-OF-WAY, 8" THICKNESS W/ FIBER MESH AND 4" AGGREGATE CLASS "A" GRADING "D" BASE) | S.F. | 2116 | \$6.33 | \$13,394.28 |
| 702-03 | CONCRETE COMBINED CURB & GUTTER | C.Y. | 475 | \$167.20 | \$79,420.00 |
| 705-02.02 | SINGLE GUARDRAIL (TYPE 2) | L.F. | 0 | \$17.62 | \$0.00 |
| 705-04.01 | GUARDRAIL TERMINAL ANCHOR (TYPE 11) | EACH | 0 | \$400.00 | \$0.00 |
| 705-04.29 | CRASH-CUSHION, NCHRP350 TC3 | EACH | 0 | \$2,724.56 | \$0.00 |
| 708-02.02 | MARKERS (CITY OF FRANKLIN AS SHOWN ON THE DETAIL SHEET) | EACH | 19 | \$235.82 | \$4,480.58 |

| PROJECT QUANTITIES (COORDINATE WITH TABULATED DATA FOR ADDITIONAL FOOTNOTES) | | | | | |
|--|---|------|----------|-------------|-------------|
| ITEM NO. | ITEM DESCRIPTION | UNIT | EST QTY. | UNIT PRICE | TOTAL PRICE |
| 707-08.11 | HIGH-VISIBILITY CONSTRUCTION FENCE, (INCLUDES 900 L.F. TO BE USED WITH EROSION CONTROL, UNIT PRICE BID INCLUDES COST OF ADJUSTMENTS NECESSARY AS THE CONSTRUCTION PHASES EVOLVE THROUGHOUT THE CONSTRUCTION PROJECT.) | L.F. | 1950 | \$2.38 | \$4,641.00 |
| 709-05.05 | MACHINED RIP-RAP (CLASS A-3), INCLUDES 100 TONS FOR CONSTRUCTION ENTRANCE, 00 TONS FOR CULVERT PROTECTION TYPE 1) | TON | 100 | \$35.17 | \$3,517.00 |
| 709-05.06 | MACHINED RIP-RAP (CLASS A-1), INCLUDES 00 TON FOR TEMPORARY SLOPE DRAINS, 00 TON FOR CULVERT PROTECTION TYPE 1) | TON | 250 | \$39.02 | \$9,755.00 |
| 709-05.09 | MACHINED RIP-RAP (CLASS "C"), | TON | 300 | \$41.23 | \$12,369.00 |
| 710-02 | AGGREGATE UNDERDRAINS (WITH PIPE) | L.F. | 13287 | \$5.18 | \$68,826.66 |
| 712-01 | TRAFFIC CONTROL (UNIT PRICE BID INCLUDES INSTALLATION AND REMOVAL COST OF ALL TEMPORARY PAVEMENT MARKINGS INCLUSIVE OF TEMPORARY MARKINGS ON THE FINAL ASPHALT TOPPING. THIS ITEM SHALL ALSO INCLUDE ALL TRAFFIC CONTROL FOR INSTALLATION OF TRAFFIC SIGNALS AS NOTED ON THE DESIGN DOCUMENTS AS REQUIRED TO COMPLETE THE PROJECT.) | L.S. | 1 | \$33,023.07 | \$33,023.07 |
| 712-04.10 | 28-INCH TEMPORARY FLEXIBLE TUBULAR DELINEATOR, (ESTIMATED QUANTITY IS BASED ON PHASE WHICH REQUIRES HIGHEST QUANTITY. UNIT PRICE BID INCLUDES COST OF ADJUSTMENTS NECESSARY AS THE CONSTRUCTION PHASES EVOLVE THROUGHOUT THE CONSTRUCTION PROJECT.) | EACH | 60 | \$50.00 | \$3,000.00 |
| 712-06 | SIGNS (CONSTRUCTION), (ESTIMATED QUANTITY IS BASED ON PHASE WHICH REQUIRES HIGHEST QUANTITY. UNIT PRICE BID INCLUDES COST OF ADJUSTMENTS NECESSARY AS THE CONSTRUCTION PHASES EVOLVE THROUGHOUT THE CONSTRUCTION PROJECT.) | S.F. | 321 | \$7.31 | \$2,346.51 |
| 712-06.01 | VERTICAL PANELS (ESTIMATED QUANTITY IS BASED ON PHASE WHICH REQUIRES HIGHEST QUANTITY. UNIT PRICE BID INCLUDES COST OF ADJUSTMENTS NECESSARY AS THE CONSTRUCTION PHASES EVOLVE THROUGHOUT THE DURATION OF THE PROJECT.) | S.F. | 4 | \$10.37 | \$41.48 |
| 712-06.11 | CONSTRUCTION IDENTIFICATION SIGNS | EACH | 2 | \$772.72 | \$1,545.44 |
| 712-07.03 | TEMPORARY BARRICADES (TYPE III), (UNIT PRICE BID INCLUDES SIGN (R11-2 AND TYPE "A" FLASHING LIGHTS, ESTIMATED QUANTITY IS BASED ON PHASE WHICH REQUIRES HIGHEST QUANTITY. UNIT PRICE BID INCLUDES COST OF ADJUSTMENTS NECESSARY AS THE CONSTRUCTION PHASES EVOLVE THROUGHOUT THE CONSTRUCTION PROJECT.) | L.F. | 90 | \$24.73 | \$2,225.70 |
| 713-16.04 | CHANGEABLE MESSAGE SIGN UNIT (MEETS MUTCD REQUIREMENTS FOR PORTABLE MESSAGE SIGNS, COORDINATE WITH PROJECT MANUAL. SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED IN THE PROJECT MANUAL. AT COMPLETION OF THE PROJECT THE SIGNS SHALL BECOME PROPERTY OF THE CITY OF FRANKLIN STREET DEPARTMENT. THE SIGNS SHALL BE IN LIKE NEW CONDITION, PROPER WORKING ORDER WITH ALL FACTORY MANUALS. A WARRANTY SHALL BE CONVEYED TO THE CITY OF FRANKLIN AT THE COMPLETION OF THE PROJECT FOR A PERIOD EQUAL TO THAT OF THE ORIGINAL AS FURNISHED BY THE MANUFACTURER.) | EACH | 2 | \$11,000.00 | \$22,000.00 |
| 713-16.40 | SIGNS (STOP, R1-1, UNIT PRICE BID INCLUDES SQUARE TUBE PERFORATED POST (P8), COORDINATE WITH PAVEMENT MARKING AND SIGNING SHEETS AS MULTIPLE SIGNS MAY BE ATTACHED TO ONE POST) | EACH | 3 | \$146.43 | \$439.29 |
| 713-16.41 | SIGNS (SPEED LIMIT-35 MPH, R2-1, UNIT PRICE BID INCLUDES SQUARE TUBE PERFORATED POST (P8), COORDINATE WITH PAVEMENT MARKING AND SIGNING SHEETS AS MULTIPLE SIGNS MAY BE ATTACHED TO ONE POST) | EACH | 6 | \$146.43 | \$878.58 |
| 713-16.42 | SIGNS (LANE TAPER, W4-2R, UNIT PRICE BID INCLUDES SQUARE TUBE PERFORATED POST (P8), COORDINATE WITH PAVEMENT MARKING AND SIGNING SHEETS AS MULTIPLE SIGNS MAY BE ATTACHED TO ONE POST) | EACH | 2 | \$146.43 | \$292.86 |

| PROJECT QUANTITIES (COORDINATE WITH TABULATED DATA FOR ADDITIONAL FOOTNOTES) | | | | | |
|--|---|----------|----------|--------------|----------------|
| ITEM NO. | ITEM DESCRIPTION | UNIT | EST QTY. | UNIT PRICE | TOTAL PRICE |
| 713-16.57 | SIGNS (BIKE, D11-1, UNIT PRICE BID INCLUDES SQUARE TUBE PERFORATED POST (P8), COORDINATE WITH PAVEMENT MARKING AND SIGNING SHEETS AS MULTIPLE SIGNS MAY BE ATTACHED TO ONE POST) | EACH | 2 | \$146.43 | \$292.86 |
| 716-12.01 | ENHANCED FLATLINE THERMO PAVEMENT MARKING (4" LINE, SSWL, SSSL, DSSL, SBYL & SBWL) | LIN. MI. | 5.7 | \$3,464.12 | \$19,745.48 |
| 716-02.04 | PLASTIC PVMNT MARKING (CHANNELIZATION STRIPING) | S.Y. | 0 | \$28.90 | \$0.00 |
| 716-02.05 | PLASTIC PAVEMENT MARKING (STOP LINE) | L.F. | 254 | \$10.94 | \$2,778.76 |
| 716-02.06 | PLASTIC PAVEMENT MARKING TURN LANE ARROW (LEFT OR RIGHT) | EACH | 6 | \$169.29 | \$1,015.74 |
| 716-02.09 | PLASTIC PVMNT MARKING (LONGITUDINAL CROSS-WALK), (QUANTITY IS CALCULATED FROM FACE OF CURB TO FACE OF CURB) | L.F. | 90 | \$33.66 | \$3,029.40 |
| 716-04.11 | PLASTIC PAVEMENT MARKING (BICYCLE SYMBOL W/RIDER) | EACH | 6 | \$358.00 | \$2,148.00 |
| 716-04.14 | PLASTIC PAVEMENT MARKING (LANE REDUCTION ARROW) | EACH | 2 | \$177.27 | \$354.54 |
| 717-01 | MOBILIZATION | L.S. | 1 | \$207,090.21 | \$207,090.21 |
| 740-10.03 | GEOTEXTILE (TYPE III)(EROSION CONTROL), (INCLUDES 172 S.Y. FOR CONSTRUCTION ENTRANCE, 00 S.Y. FOR CULVERT PROTECTION TYPE 1) | S.Y. | 172 | \$3.05 | \$524.60 |
| 740-11.03 | TEMPORARY SEDIMENT TUBE 18 INCH (TO BE USED FOR EROSION CONTROL AS DIRECTED BY THE ENGINEER, AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | L.F. | 300 | \$4.11 | \$1,233.00 |
| 801-01.07 | TEMPORARY SEEDING (WITH MULCH) | UNIT | 1119 | \$22.81 | \$25,524.39 |
| 801-03 | WATER (SEEDING & SODDING) | M.G. | 1096 | \$8.70 | \$9,535.20 |
| 803-01 | SODDING (NEW SOD, INSTALLATION SHALL BE INSTALLED ON TOPSOIL. TOPSOIL SHALL HAVE A MINIMUM DEPTH OF 6 INCHES) | S.Y. | 98383 | \$2.77 | \$272,520.91 |
| | LIGHTING | | | | \$5,047,542.83 |
| 714-09.09 | LUMINAIRE ((LIGHT EMITTING DIODE "LED" - COOPER #VSTB04LEDEUSL3BK47060AIS), W/6" +/- MOUNTING ARM A-BOLTS AND HARDWARE, (TO BE COORDINATED WITH PROJECT MANUAL FOR APPROVED PRODUCTS AND SPECIFICATIONS) | EACH | 37 | \$1,287.75 | \$47,646.75 |
| 773-90.01 | PHOTO CONTROL, RIPLEY LONGLIFE 6390L-BK MULTI-VOLT | EACH | 37 | \$48.93 | \$1,810.36 |
| 714-03.01 | 2" SCHEDULE 40 PVC, ELECTRICAL GRAY | L.F. | 5500 | \$4.65 | \$25,575.00 |
| 714-03.02 | 2" SCHEDULE 40 PVC, STANDARD RADIUS ELBOW | EACH | 148 | \$25.15 | \$3,722.20 |
| 714-03.04 | 3" SCHEDULE 80 PVC MIN 24" STANDARD RADIUS ELBOW | L.F. | 8 | \$23.51 | \$188.08 |
| 714-08.09 | SQUARE ALUMINUM LIGHTING POLE, 30', (BLACK, HAPCO #11-290-A5-D-30', ALUM POLE WITH BLACK ANODIZED FINISH, WITH A-BOLTS AND HARDWARE, OR APPROVED EQUAL) | EACH | 34 | \$1,707.85 | \$58,066.90 |
| | Round tapered Aluminum Lighting Pole, 30', with Single 6' Davit Arm, Black, Hapco # B41-176 | EACH | 3 | \$1,900.00 | \$5,700.00 |
| 714-08.28 | FOUNDATION PREPERATION (INCLUSIVE OF ALL RELATED ITEMS FOR ROADWAY LIGHT STANDARDS, CAST IN PLACE FOUNDATION, 22" DIAMETER, 6'-6" DEPTH. THIS DOES NOT INCLUDE CLASS "A" CONCRETE OR REINFORCING STEEL) | EACH | 37 | \$637.63 | \$23,592.31 |
| 714-08.43 | FOUNDATION FOR ROADWAY LIGHT STANDARDS (CLASS "A" CONCRETE FOR STREET LIGHT FOUNDATIONS)) | C.Y. | 23.5 | \$145.93 | \$3,429.30 |
| 730-12.03 | CONDUIT 3" DIAMETER (SCHEDULE 40 PVC, W/PULL STRING AND 2 @ 1" INNERDUCT SLEEVES, WITH #14 BARE COPPER LOCATE WIRE), (LOCATION TO BE COORDINATED WITH THE EXISTING FIBER OPTIC SYSTEM, HDPE MAY BE SUBSTITUTED FOR SCHEDULE 40 PVC.) | L.F. | 215 | \$6.68 | \$1,436.20 |
| | 3" Schedule 80 PVC, Electrical Gray, Service Riser | EACH | 80 | \$12.00 | \$960.00 |
| 773-90.06 | SMALL PULL BOX, CDR#PA10-1324-18-0299, QUAZITE #PG2436Z510MT, HIGHLINE #PHA243618SE1-32, 94 OLDCASTLE #243618PB7021 | EACH | 39 | \$396.21 | \$15,452.19 |
| 773-90.07 | NO. 2 REINFORCING STEEL BAR (FOR STREET LIGHT FOUNDATIONS) | L.F. | 1110 | \$0.60 | \$667.39 |
| 773-90.08 | NO. 4 REINFORCING STEEL BAR (FOR STREET LIGHT FOUNDATIONS) | L.F. | 1110 | \$0.77 | \$849.15 |
| 773-90.09 | MILBANK METERING PEDESTAL WITH SWITCHED LOAD CENTER, #CP3B1110A22SL1 | EACH | 2 | \$2,400.00 | \$4,800.00 |

| PROJECT QUANTITIES (COORDINATE WITH TABULATED DATA FOR ADDITIONAL FOOTNOTES) | | | | | |
|---|---|------|--------------|---------------------|-----------------------|
| ITEM NO. | ITEM DESCRIPTION | UNIT | EST QTY. | UNIT PRICE | TOTAL PRICE |
| 773-90.11 | RISER CONDUIT STAND-OFF BRACKET, NEHRWESS, BARFILED OR ALUMAFORM | EACH | 6 | \$124.11 | \$744.66 |
| 773-90.14 | CUTLER HAMMER #BR230, 2-POLE, 30AMP BREAKER | EACH | 2 | \$20.00 | \$40.00 |
| | #4 Conductor Reducer, Burndy #YC4L12 | EACH | 4 | \$20.00 | \$80.00 |
| 303-10.04 | MINERAL AGGREGATE (1/2" GRAVEL FOR SECONDARY BOX INSTALLATION) | C.Y. | 56 | \$49.81 | \$2,789.36 |
| 773-90.15 | #12 SOLID TYPE UF-B FOR LIGHT POST RISERS | L.F. | 4260 | \$0.50 | \$2,119.35 |
| 773-90.17 | #6 BARE SOFT DRAWN COPPER FOR LIGHT POST GROUNDING | L.F. | 340 | \$0.58 | \$197.20 |
| 773-90.16 | #10 COPPER, THHN OR THWN, GREEN, GROUND/GROUNDING CONDUCTOR | L.F. | 6050 | \$0.57 | \$3,471.19 |
| 773-90.16 | #4 BARE COPPER FOR LIGHT POLE GROUNDING | L.F. | 215 | \$1.12 | \$240.80 |
| 773-90.13 | #2 COPPER, THHN OR THWN, INCLUDES TWO (2) SERVICE CONDUCTORS | L.F. | 430 | \$2.91 | \$1,252.91 |
| 773-90.14 | #4 COPPER, THHN OR THWN, WHITE, FOR SERVICE GROUNDED CONDUCTOR | L.F. | 12100 | \$1.44 | \$17,393.75 |
| 773-90.20 | 8' GROUND ROD, 5/8" COPPER-CLAD STEEL, EQUAL TO BLACKBURN #6258 | EACH | 34 | \$55.36 | \$1,882.33 |
| 773-90.21 | GROUND BONDING CLAMP FOR 5/8" GROUND ROD | EACH | 34 | \$8.64 | \$293.89 |
| 773-90.22 | BREAKAWAY FUSE HOLDER FOR EACH POLE MOUNT, HOMAC #SLK-M | EACH | 142 | \$23.80 | \$3,379.60 |
| 773-90.23 | FUSE FOR BREAKAWAY FUSE HOLDER, LITTLEFUSE #FLM9 | EACH | 142 | \$7.22 | \$1,025.60 |
| 773-90.24 | PARALLEL BONDING CONNECTOR FOR POLE GROUNDS, ANDERSON #C-4-L OR EQUAL | EACH | 34 | \$6.86 | \$233.11 |
| 773-90.25 | SUBMERSIBLE SECONDARY CONNECTORS HOMAC RAB-4 OR CMC #SSBC350-4L1 | EACH | 68 | \$26.19 | \$1,780.92 |
| 773-90.26 | ABOVE GRADE CONNECTOR FOR #12 CONDUCTOR, RED WIRE NUT | EACH | 142 | \$0.33 | \$47.39 |
| 714-30.02 | MISCELLANEOUS ACTIVITIES, SUCH AS SERVICES AND FEES FOR PERMITS, MOBILIZATION, AND SCHEDULING | LOT | 1 | \$2,943.93 | \$2,943.93 |
| 714-30.01 | AS-BUILT MARK-UPS | SET | 1 | \$448.87 | \$448.87 |
| TOTAL ENGINEERING ESTIMATE | | | | | \$5,281,803.58 |
| TOTAL ROADWAY ENGINEERING ESTIMATE | | | | | \$5,047,542.83 |
| TOTAL LIGHTING ENGINEERING ESTIMATE | | | | | \$234,260.68 |
| CONTINGENCY ALLOWANCE | | | 5.00% | \$264,090.18 | |
| TOTAL ROADWAY ENGINEERING ESTIMATE | | | | | \$5,545,893.68 |

DATE 10/24/2012

WILLIAMSON COUNTY
 SOUTH CAROTHERS PARKWAY
 FROM: LONG LANE/TRUMAN DRIVE
 TO: CONNECTOR ROAD/OLD SOUTH CAROTHERS
 CITY OF FRANKLIN PROJECT # _____
 SULLIVAN ENGINEERING, INC PROJECT #12-005

Project Length
 1.05 L.M.

| PROJECT QUANTITIES (COORDINATE WITH TABULATED DATA FOR ADDITIONAL FOOTNOTES) | | | | | |
|--|---|------|----------|--------------|----------------|
| ITEM NO. | ITEM DESCRIPTION | UNIT | EST QTY. | UNIT PRICE | TOTAL PRICE |
| 105-01 | CONSTRUCTION STAKES LINES AND GRADES | L.S. | 1 | \$90,576.39 | \$90,576.39 |
| 201-01 | CLEARING AND GRUBBING | L.S. | 1 | \$196,791.94 | \$196,791.94 |
| 202-01 | REMOVAL OF STRUCTURES AND OBSTRUCTIONS (INCLUDES BUT NOT LIMITED TO ITEMS SUCH AS SIGNS, FLEXIBLE DELINEATORS, FENCES, CONCRETE CURBS, MAILBOXES AND ALL OTHER ITEMS WITHIN THE GRADING LIMITS UNLESS OTHERWISE NOTED.) | L.S. | 1 | \$22,582.57 | \$22,582.57 |
| 203-01 | ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED, INCLUDES 25 C.Y. FOR CONSTRUCTION ENTRANCE) | C.Y. | 94253 | \$12.75 | \$1,201,725.75 |
| 203-03 | BORROW EXCAVATION (UNCLASSIFIED) | C.Y. | 41969 | \$7.07 | \$296,720.83 |
| 203-04 | PLACING & SPREADING TOPSOIL | C.Y. | 8021 | \$4.56 | \$36,575.76 |
| 203-05 | UNDERCUTTING (UNIT PRICE BIDS INCLUDES MINERAL AGGREGATE (SURGE STONE) BACKFILL) | C.Y. | 9425 | \$32.53 | \$306,605.01 |
| 203-06 | WATER | M.G. | 1597 | \$7.10 | \$11,338.70 |
| 203-07 | FURNISHING & SPREADING TOPSOIL | C.Y. | 11170 | \$17.23 | \$192,459.10 |
| 204-07 | BEDDING MATERIAL (PIPE) CLASS "B" | C.Y. | 2630 | \$29.36 | \$77,216.80 |
| 209-05 | SEDIMENT REMOVAL | C.Y. | 1546 | \$7.73 | \$11,950.58 |
| 209-08.02 | TEMPORARY SILT FENCE (WITH BACKING), (AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | L.F. | 11060 | \$3.71 | \$41,032.60 |
| 209-08.03 | TEMPORARY SILT FENCE (WITHOUT BACKING), (AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | L.F. | 11060 | \$1.16 | \$12,829.60 |
| 209-08.07 | ROCK CHECK DAM ("V-DITCH", 2+/- DEPTH, OR AS DIRECTED BY THE ENGINEER, AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | EACH | 28 | \$359.83 | \$10,075.24 |
| 209-09.03 | SEDIMENT FILTER BAG (15' X 15') | EACH | 10 | \$529.64 | \$5,296.40 |
| 209-40.41 | CATCH BASIN FILTER ASSEMBLY (TYPE 1), (AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | EACH | 7 | \$387.20 | \$2,710.40 |
| 209-40.46 | CATCH BASIN FILTER ASSEMBLY (TYPE 6), (AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | EACH | 98 | \$406.70 | \$39,856.60 |
| 209-40.47 | CATCH BASIN FILTER ASSEMBLY (TYPE 7), (AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | EACH | 13 | \$660.00 | \$8,580.00 |
| 209-65.03 | TEMPORARY DIVERSION CHANNEL | L.F. | 0 | \$3.44 | \$0.00 |
| 303-01 | MINERAL AGGREGATE TYPE A BASE GRADING "D", (INCLUDES XXX TONS FOR STONE WEDGE) | TON | 17571 | \$17.13 | \$300,991.23 |
| 307-02.02 | ASPHALT CEMENT (PG70-22)(BPMB-HM) GRADING A-S | TON | 132 | \$857.10 | \$113,137.20 |
| 307-02.03 | AGGREGATE(BPMB-HM) GRADING AS | TON | 3941 | \$41.85 | \$164,930.85 |
| 307-02.01 | ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A | TON | 5205 | \$67.55 | \$351,597.75 |
| 307-02.08 | ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B-M2 | TON | 2557 | \$75.48 | \$193,002.36 |
| 402-01 | BITUMINOUS MATERIAL FOR PRIME COAT (PC), (INCLUDES 15 TONS FOR MAINTENANCE OF TRAFFIC) | TON | 81 | \$700.74 | \$56,759.94 |
| 402-02 | AGGREGATE FOR COVER MATERIAL (PC), (INCLUDES 57 TONS FOR MAINTENANCE OF TRAFFIC) | TON | 203 | \$38.65 | \$7,845.95 |

| PROJECT QUANTITIES (COORDINATE WITH TABULATED DATA FOR ADDITIONAL FOOTNOTES) | | | | | |
|--|---|------|----------|-------------|--------------|
| ITEM NO. | ITEM DESCRIPTION | UNIT | EST QTY. | UNIT PRICE | TOTAL PRICE |
| 403-01 | BITUMINOUS MATERIAL FOR TACK COAT (TC), (INCLUDES 1 TONS FOR MAINTENANCE OF TRAFFIC) | TON | 31 | \$684.68 | \$21,225.08 |
| 411-02.10 | ACS MIX(PG70-22) GRADING D | TON | 3132 | \$95.64 | \$299,544.48 |
| 611-07.01 | CLASS "A" CONCRETE (PIPE END WALLS) | C.Y. | 41 | \$1,279.74 | \$52,469.34 |
| 611-07.02 | STEEL BAR REINFORCEMENT (PIPE END WALLS) | LB. | 3860 | \$1.88 | \$7,256.80 |
| 611-07.03 | STRUCTURAL STEEL (PIPE END WALLS) | LB. | 1820 | \$5.17 | \$9,409.40 |
| 611-12.01 | CATCH BASINS, TYPE 12, DEPTH 0' - 4' (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENAMCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 1 | \$2,331.68 | \$2,331.68 |
| 611-12.02 | CATCH BASINS, TYPE 12, DEPTH 4' - 8' (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENAMCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 95 | \$2,690.46 | \$255,593.70 |
| 611-12.03 | CATCH BASINS, TYPE 12, DEPTH 8' - 12' (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENAMCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 8 | \$5,888.71 | \$47,109.68 |
| 611-12.04 | CATCH BASINS, TYPE 12, DEPTH 12'+ (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENAMCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 2 | \$7,440.95 | \$14,881.90 |
| 611-14.02 | CATCH BASINS, TYPE 14, DEPTH 4' - 8' (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENAMCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 11 | \$7,237.09 | \$79,607.99 |
| 611-42.01 | CATCH BASINS, TYPE 42, DEPTH 0' - 4', (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL, CASTINGS, BRICK WORK AND APPURTENAMCES NECESSARY FOR A COMPLETE INSTALLATION, QUANTITY INCLUDES 6 STRUCTURES TO BE COORDINATED WITH STREETSCAPE PLANS PREPARED BY EG&G, INC.) | EACH | 4 | \$2,331.68 | \$9,326.72 |
| 611-02.10 | JUNCTION BOX, TYPE 1 (COMPLETE IN-PLACE, INCLUSIVE OF ALL EXCAVATION, BACKFILL AND APPURTENAMCES NECESSARY FOR A COMPLETE INSTALLATION) | EACH | 3 | \$3,133.89 | \$9,401.67 |
| 701-01.01 | CONCRETE SIDEWALK (4" THICKNESS W/ FIBER MESH AND 6" AGGREGATE CLASS "A" GRADING "D" BASE) | S.F. | 30415 | \$4.23 | \$128,655.45 |
| 701-02 | CONCRETE DRIVEWAY (APPROACH APRON WITHIN RIGHT-OF-WAY, 8" THICKNESS W/ FIBER MESH AND 4" AGGREGATE CLASS "A" GRADING "D" BASE) | S.F. | 5358 | \$6.33 | \$33,916.14 |
| 702-01.01 | EXTRUDED MOUNTABLE CURB | L.F. | 500 | \$8.44 | \$4,220.00 |
| 702-03 | CONCRETE COMBINED CURB & GUTTER | C.Y. | 715 | \$167.20 | \$119,548.00 |
| 705-02.02 | SINGLE GUARDRAIL (TYPE 2) | L.F. | 1200 | \$17.62 | \$21,144.00 |
| 705-04.01 | GUARDRAIL TERMINAL ANCHOR (TYPE 11) | EACH | 4 | \$400.00 | \$1,600.00 |
| 705-04.29 | CRASH-CUSHION, NCHRP350 TC3 | EACH | 4 | \$2,724.56 | \$10,898.24 |
| 708-02.02 | MARKERS (CITY OF FRANKLIN AS SHOWN ON THE DETAIL SHEET) | EACH | 11 | \$235.82 | \$2,594.02 |
| 707-08.11 | HIGH-VISIBILITY CONSTRUCTION FENCE, (INCLUDES 900 L.F. TO BE USED WITH EROSION CONTROL, UNIT PRICE BID INCLUDES COST OF ADJUSTMENTS NECESSARY AS THE CONSTRUCTION PHASES EVOLVE THROUGHOUT THE CONSTRUCTION PROJECT.) | L.F. | 2150 | \$2.38 | \$5,117.00 |
| 709-05.05 | MACHINED RIP-RAP (CLASS A-3), INCLUDES 200 TONS FOR CONSTRUCTION ENTRANCE, 00 TONS FOR CULVERT PROTECTION TYPE 1) | TON | 200 | \$35.17 | \$7,034.00 |
| 709-05.09 | MACHINED RIP-RAP (CLASS "C"), | TON | 300 | \$41.23 | \$12,369.00 |
| 710-02 | AGGREGATE UNDERDRAINS (WITH PIPE) | L.F. | 14211 | \$5.18 | \$73,612.98 |
| 712-01 | TRAFFIC CONTROL (UNIT PRICE BID INCLUDES INSTALLATION AND REMOVAL COST OF ALL TEMPORARY PAVEMENT MARKINGS INCLUSIVE OF TEMPORARY MARKINGS ON THE FINAL ASPHALT TOPPING. THIS ITEM SHALL ALSO INCLUDE ALL TRAFFIC CONTROL FOR INSTALLATION OF TRAFFIC SIGNALS AS NOTED ON THE DESIGN DOCUMENTS AS REQUIRED TO COMPLETE THE PROJECT.) | L.S. | 1 | \$33,023.07 | \$33,023.07 |

| PROJECT QUANTITIES (COORDINATE WITH TABULATED DATA FOR ADDITIONAL FOOTNOTES) | | | | | |
|--|---|----------|----------|--------------|--------------|
| ITEM NO. | ITEM DESCRIPTION | UNIT | EST QTY. | UNIT PRICE | TOTAL PRICE |
| 712-04.10 | 28-INCH TEMPORARY FLEXIBLE TUBULAR DELINEATOR, (ESTIMATED QUANTITY IS BASED ON PHASE WHICH REQUIRES HIGHEST QUANTITY. UNIT PRICE BID INCLUDES COST OF ADJUSTMENTS NECESSARY AS THE CONSTRUCTION PHASES EVOLVE THROUGHOUT THE CONSTRUCTION PROJECT.) | EACH | 60 | \$50.00 | \$3,000.00 |
| 712-05.01 | WARNING LIGHTS (TYPE A) | EACH | 0 | \$32.62 | \$0.00 |
| 712-06 | SIGNS (CONSTRUCTION), (ESTIMATED QUANTITY IS BASED ON PHASE WHICH REQUIRES HIGHEST QUANTITY. UNIT PRICE BID INCLUDES COST OF ADJUSTMENTS NECESSARY AS THE CONSTRUCTION PHASES EVOLVE THROUGHOUT THE CONSTRUCTION PROJECT.) | S.F. | 641 | \$7.31 | \$4,685.71 |
| 712-06.11 | CONSTRUCTION IDENTIFICATION SIGNS | EACH | 2 | \$772.72 | \$1,545.44 |
| 712-07.03 | TEMPORARY BARRICADES (TYPE III), (UNIT PRICE BID INCLUDES SIGN (R11-2 AND TYPE "A" FLASHING LIGHTS, ESTIMATED QUANTITY IS BASED ON PHASE WHICH REQUIRES HIGHEST QUANTITY. UNIT PRICE BID INCLUDES COST OF ADJUSTMENTS NECESSARY AS THE CONSTRUCTION PHASES EVOLVE THROUGHOUT THE CONSTRUCTION PROJECT.) | L.F. | 204 | \$24.73 | \$5,044.92 |
| 713-16.04 | CHANGEABLE MESSAGE SIGN UNIT (MEETS MUTCD REQUIREMENTS FOR PORTABLE MESSAGE SIGNS, COORDINATE WITH PROJECT MANUAL. SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED IN THE PROJECT MANUAL. AT COMPLETION OF THE PROJECT THE SIGNS SHALL BECOME PROPERTY OF THE CITY OF FRANKLIN STREET DEPARTMENT. THE SIGNS SHALL BE IN LIKE NEW CONDITION, PROPER WORKING ORDER WITH ALL FACTORY MANUALS. A WARRANTY SHALL BE CONVEYED TO THE CITY OF FRANKLIN AT THE COMPLETION OF THE PROJECT FOR A PERIOD EQUAL TO THAT OF THE ORIGINAL AS FURNISHED BY THE MANUFACTURER.) | EACH | 2 | \$11,000.00 | \$22,000.00 |
| 713-16.40 | SIGNS (STOP, R1-1, UNIT PRICE BID INCLUDES SQUARE TUBE PERFORATED POST (P8), COORDINATE WITH PAVEMENT MARKING AND SIGNING SHEETS AS MULTIPLE SIGNS MAY BE ATTACHED TO ONE POST) | EACH | 3 | \$146.43 | \$439.29 |
| 713-16.41 | SIGNS (SPEED LIMIT-35 MPH, R2-1, UNIT PRICE BID INCLUDES SQUARE TUBE PERFORATED POST (P8), COORDINATE WITH PAVEMENT MARKING AND SIGNING SHEETS AS MULTIPLE SIGNS MAY BE ATTACHED TO ONE POST) | EACH | 4 | \$146.43 | \$585.72 |
| 713-16.57 | SIGNS (BIKE, D11-1, UNIT PRICE BID INCLUDES SQUARE TUBE PERFORATED POST (P8), COORDINATE WITH PAVEMENT MARKING AND SIGNING SHEETS AS MULTIPLE SIGNS MAY BE ATTACHED TO ONE POST) | EACH | 4 | \$146.43 | \$585.72 |
| 716-12.01 | ENHANCED FLATLINE THERMO PAVEMENT MARKING (4" LINE, SSWL, SSYL, DSYL, SBYL & SBWL) | LIN. MI. | 3.4 | \$3,464.12 | \$11,778.01 |
| 716-02.06 | PLASTIC PAVEMENT MARKING TURN LANE ARROW (LEFT OR RIGHT) | EACH | 4 | \$169.29 | \$677.16 |
| 716-02.09 | PLASTIC PVMNT MARKING (LONGITUDINAL CROSS-WALK), (QUANTITY IS CALCULATED FROM FACE OF CURB TO FACE OF CURB) | L.F. | 300 | \$33.66 | \$10,098.00 |
| 717-01 | MOBILIZATION | L.S. | 1 | \$207,090.21 | \$207,090.21 |
| 740-10.03 | GEOTEXTILE (TYPE III)(EROSION CONTROL), (INCLUDES 343 S.Y. FOR CONSTRUCTION ENTRANCE, 00 S.Y. FOR CULVERT PROTECTION TYPE 1) | S.Y. | 343 | \$3.05 | \$1,046.15 |
| 740-11.03 | TEMPORARY SEDIMENT TUBE 18 INCH (TO BE USED FOR EROSION CONTROL AS DIRECTED BY THE ENGINEER, AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT DURING THE LIFE OF THIS CONTRACT SHALL BE AT THE CONTRACTORS EXPENSE.) | L.F. | 300 | \$4.11 | \$1,233.00 |
| 801-01.07 | TEMPORARY SEEDING (WITH MULCH) | UNIT | 775 | \$22.81 | \$17,677.75 |
| 801-03 | WATER (SEEDING & SODDING) | M.G. | 845 | \$8.70 | \$7,351.50 |
| 803-01 | SODDING (NEW SOD, INSTALLATION SHALL BE INSTALLED ON TOPSOIL. TOPSOIL SHALL HAVE A MINIMUM DEPTH OF 6 INCHES) | S.Y. | 76767 | \$2.77 | \$212,644.59 |
| | LIGHTING | | | | |

| PROJECT QUANTITIES (COORDINATE WITH TABULATED DATA FOR ADDITIONAL FOOTNOTES) | | | | | |
|--|--|------|----------|------------|-------------|
| ITEM NO. | ITEM DESCRIPTION | UNIT | EST QTY. | UNIT PRICE | TOTAL PRICE |
| 714-09.09 | LUMINAIRE ((LIGHT EMITTING DIODE "LED" - COOPER #VSTB04LEDEUSL3BK47060AIS), W/6"±- MOUNTING ARM A-BOLTS AND HARDWARE, (TO BE COORDINATED WITH PROJECT MANUAL FOR APPROVED PRODUCTS AND SPECIFICATIONS)) | EACH | 43 | \$1,287.75 | \$55,373.25 |
| 773-90.01 | PHOTO CONTROL, RIPLEY LONGLIFE 6390L-BK MULTI-VOLT | EACH | 43 | \$48.93 | \$2,103.94 |
| 773-90.06 | SMALL PULL BOX, CDR#PA10-1324-18-0299, QUAZITE #PG2436Z510MT, HIGHLINE #PHA243618SE1-32, 94 OLDCASTLE #243618PB7021 | EACH | 39 | \$345.59 | \$13,478.06 |
| 714-03.01 | 2" SCHEDULE 40 PVC, ELECTRICAL GRAY | L.F. | 6275 | \$4.65 | \$29,178.75 |
| 714-03.02 | 2" SCHEDULE 40 PVC, STANDARD RADIUS ELBOW | EACH | 160 | \$25.15 | \$4,024.00 |
| 714-03.04 | 3" SCHEDULE 80 PVC MIN 24" STANDARD RADIUS ELBOW | L.F. | 8 | \$23.51 | \$188.08 |
| 714-08.09 | SQUARE ALUMINUM LIGHTING POLE, 30', (BLACK, HAPCO #11-290-A5-D-30', ALUM POLE WITH BLACK ANODIZED FINISH, WITH A-BOLTS AND HARDWARE, OR APPROVED EQUAL) | EACH | 31 | \$1,707.85 | \$52,943.35 |
| | Round tapered Aluminum Lighting Pole, 30', with Single 6' Davit Arm, Black, Hapco # B41-176 | EACH | 3 | \$1,900.00 | \$5,700.00 |
| 714-08.28 | FOUNDATION PREPERATION (INCLUSIVE OF ALL RELATED ITEMS FOR ROADWAY LIGHT STANDARDS, CAST IN PLACE FOUNDATION, 22" DIAMETER, 6'-6" DEPTH. THIS DOES NOT INCLUDE CLASS "A" CONCRETE OR REINFORCING STEEL) | EACH | 43 | \$637.63 | \$27,418.09 |
| 714-08.43 | FOUNDATION FOR ROADWAY LIGHT STANDARDS (CLASS "A" CONCRETE FOR STREET LIGHT FOUNDATIONS)) | C.Y. | 28 | \$145.93 | \$4,085.97 |
| 730-12.03 | CONDUIT 3" DIAMETER (SCHEDULE 40 PVC, W/PULL STRING AND 2 @ 1" INNERDUCT SLEEVES, WITH #14 BARE COPPER LOCATE WIRE), (LOCATION TO BE COORDINATED WITH THE EXISTING FIBER OPTIC SYSTEM, HDPE MAY BE SUBSTITUTED FOR SCHEDULE 40 PVC.) | L.F. | 215 | \$6.68 | \$1,436.20 |
| | 3" Schedule 80 PVC, Electrical Gray, Service Riser | EACH | 80 | \$12.00 | \$960.00 |
| 773-90.07 | NO. 2 REINFORCING STEEL BAR (FOR STREET LIGHT FOUNDATIONS) | L.F. | 1290 | \$0.60 | \$775.61 |
| 773-90.08 | NO. 4 REINFORCING STEEL BAR (FOR STREET LIGHT FOUNDATIONS) | L.F. | 1290 | \$0.77 | \$986.85 |
| 773-90.09 | MILBANK METERING PEDESTAL WITH SWITCHED LOAD CENTER, #CP3B1110A22SL1 | EACH | 2 | \$2,400.00 | \$4,800.00 |
| 773-90.11 | RISER CONDUIT STAND-OFF BRACKET, NEHRWESS, BARFILED OR ALUMAFORM | EACH | 6 | \$124.11 | \$744.66 |
| 773-90.14 | CUTLER HAMMER #BR230, 2-POLE, 30AMP BREAKER | EACH | 5 | \$20.00 | \$100.00 |
| 303-10.04 | MINERAL AGGREGATE (½" GRAVEL FOR SECONDARY BOX INSTALLATION) | C.Y. | 56 | \$49.81 | \$2,789.36 |
| 773-90.15 | #12 SOLID TYPE UF-B FOR LIGHT POST RISERS | L.F. | 4440 | \$0.50 | \$2,208.90 |
| 773-90.17 | #6 BARE SOFT DRAWN COPER FOR LIGHT POST GROUNDING | L.F. | 310 | \$0.58 | \$179.80 |
| 773-90.18 | #8 COPPER, THHN OR THWN, INCLUDES TWO (2) CIRCUIT CONDUCTORS | L.F. | 13805 | \$0.87 | \$11,941.33 |
| 773-90.16 | #10 COPPER, THHN OR THWN, GREEN, GROUND/GROUNDING CONDUCTOR | L.F. | 6903 | \$0.57 | \$3,960.60 |
| 773-90.20 | 8' GROUND ROD, 5/8" COPPER-CLAD STEEL, EQUAL TO BLACKBURN #6258 | EACH | 31 | \$55.36 | \$1,716.24 |
| 773-90.21 | GROUND BONDING CLAMP FOR 5/8" GROUND ROD | EACH | 31 | \$8.64 | \$267.96 |
| 773-90.22 | BREAKAWAY FUSE HOLDER FOR EACH POLE MOUNT, HOMAC #SLK-M | EACH | 148 | \$23.80 | \$3,522.40 |
| 773-90.23 | FUSE FOR BREAKAWAY FUSE HOLDER, LITTLE FUSE #FLM9 | EACH | 148 | \$7.22 | \$1,068.93 |
| 773-90.24 | PARALLEL BONDING CONNECTOR FOR POLE GROUNDS, ANDERSON #C-4L OR EQUAL | EACH | 31 | \$6.86 | \$212.54 |
| 773-90.25 | SUBMERSIBLE SECONDARY CONNECTORS HOMAC RAB-4 OR CMC #SSBC350-4LI | EACH | 62 | \$26.19 | \$1,623.78 |
| 773-90.26 | ABOVE GRADE CONNECTOR FOR #12 CONDUCTOR, RED WIRE NUT | EACH | 148 | \$0.33 | \$49.40 |
| 714-30.02 | MISCELLANEOUS ACTIVITIES, SUCH AS SERVICES AND FEES FOR PERMITS, MOBILIZATION, AND SCHEDULING | LOT | 1 | \$2,943.93 | \$2,943.93 |
| 714-30.01 | AS-BUILT MARK-UPS | SET | 1 | \$448.87 | \$448.87 |
| BRIDGE | | | | | |
| 204-02.01 | DRY EXCAVATION (BRIDGES) | CY | 173 | \$18.24 | \$3,155.52 |
| 204-02.10 | DRILLED CAISSON - EARTH (54" DIA.) | LF | 66 | \$402.00 | \$26,532.00 |
| 204-02.20 | DRILLED CAISSON - ROCK (48" DIA.) | LF | 36 | \$1,051.20 | \$37,843.20 |
| 204-05 | ROCK DRILLING (BRIDGES) | LF | 48 | \$22.77 | \$1,092.96 |
| 303-01.02 | GRANULAR BACKFILL (BRIDGES) | TON | 30 | \$43.32 | \$1,299.60 |

| PROJECT QUANTITIES (COORDINATE WITH TABULATED DATA FOR ADDITIONAL FOOTNOTES) | | | | | |
|--|--|------|----------|-------------|--------------|
| ITEM NO. | ITEM DESCRIPTION | UNIT | EST QTY. | UNIT PRICE | TOTAL PRICE |
| 604-02.03 | EPOXY COATED REINFORCING STEEL | LB | 135408 | \$1.01 | \$136,762.08 |
| 604-03.01 | CLASS A CONCRETE (BRIDGES) | CY | 346 | \$383.00 | \$132,518.00 |
| 604-03.02 | STEEL BAR REINFORCEMENT (BRIDGES) | LB | 48302 | \$0.88 | \$42,505.76 |
| 604-03.04 | PAVEMENT AT BRIDGE ENDS | SY | 188 | \$184.64 | \$34,712.32 |
| 604-03.35 | CLASS L CONCRETE (BRIDGE DECK) | CY | 550 | \$370.13 | \$203,571.50 |
| 604-04 | CONCRETE STAINING | SY | 589 | \$67.52 | \$39,769.28 |
| 604-04.01 | APPLIED TEXTURE FINISH (NEW STRUCTURES) | SY | 1839 | \$6.75 | \$12,413.25 |
| 604-05.31 | BRIDGE DECK GROOVING (MECHANICAL) | SY | 1352 | \$2.17 | \$2,933.84 |
| 606-02.03 | STEEL PILES (10-INCH) | LF | 327 | \$42.17 | \$13,789.59 |
| 606-02.06 | PILE TIPS (STEEL PILES, 10-INCH) | EA | 22 | \$102.07 | \$2,245.54 |
| 615-01.12 | PRESTRESSED CONCRETE BULB TEE BEAM (6" WEB)(BT-72) | LF | 2059 | \$230.40 | \$474,393.60 |
| 620-03.11 | CONCRETE PARAPET (MODIFIED STD-11-1) | LF | 454 | \$275.60 | \$125,122.40 |
| 620-03.12 | CONCRETE PARAPET (CONCRETE POSTS WITH STRUCTURAL TUBING) | LF | 454 | \$243.80 | \$110,685.20 |
| 620-03.13 | CONCRETE PARAPET (CURB MOUNTED BARRIER RAIL) | LF | 468 | \$318.00 | \$148,824.00 |
| 710-09.01 | 6" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM | LF | 131 | \$20.90 | \$2,737.90 |
| 710-09.02 | 6" PIPE UNDERDRAIN | LF | 38 | \$11.10 | \$421.80 |
| 714-01.01 | STRUCTURAL LIGHTING | LS | 1 | \$10,000.00 | \$10,000.00 |
| 920-10 | ROCK CORES (2" DIA.) | LF | 55 | \$33.54 | \$1,844.70 |

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| SWUB-TOTAL ENGINEERING ESTIMATE | \$7,324,967.93 |
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| TOTAL ROADWAY ENGINEERING ESTIMATE | \$5,522,563.06 |
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| TOTAL LIGHTING ENGINEERING ESTIMATE | \$237,230.83 |
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| TOTAL BRIDGE ENGINEERING ESTIMATE | \$1,565,174.04 |
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| CONTINGENCY ALLOWANCE | 5.00% | \$366,248.40 |
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| TOTAL ROADWAY ENGINEERING ESTIMATE | \$7,691,216.32 |
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