

AUSLEY McMULLEN

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April 2, 2018

VIA: ELECTRONIC FILING

Ms. Carlotta S. Stauffer
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Petition of Tampa Electric Company for Approval of Revised Underground Residential Distribution Tariff

Dear Ms. Stauffer:

Attached for filing in the above-styled matter is Tampa Electric Company's Petition for Approval of Revised Tariffs for Underground Residential Distribution.

Thank you for your assistance in connection with this matter.

Sincerely,


James D. Beasley

JDB/pp
Attachment

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Tampa Electric Company)
for Approval of Revised Underground)
Residential Distribution Tariff)
_____)

DOCKET NO. _____

FILED: April 2, 2018

**PETITION OF
TAMPA ELECTRIC COMPANY**

In accordance with Commission Rule 28-6078(2), F.A.C., Tampa Electric Company (“Tampa Electric” or “the company”) files this Petition for Approval of Revised Tariffs for Underground Residential Distribution. The revised tariff sheets containing updated Underground Residential Distribution (“URD”) charges that reflect the cost differential between overhead (“OH”) and underground (“UG”) distribution service are attached hereto in standard and legislative formats as Exhibits “A” and “B”, respectively. Form PSC/EAG 13, *Overhead/Underground Residential Differential Cost Data*, and supporting data and analyses for the proposed URD charges are provided in Exhibit “C”. In support thereof, the company says:

1. The name, address, telephone number and facsimile number of the petitioner are:

Tampa Electric Company
Post Office Box 111
Tampa, FL 33601
(813) 228-4111
(813) 228-1770 (fax)

2. Tampa Electric is an investor-owned public utility subject to the jurisdiction of the Commission under Chapter 366, Florida Statutes.

3. All notices, pleadings and correspondence required to be served on the Petitioner should be directed to:

James D. Beasley
J. Jeffrey Wahlen
Ausley & McMullen
Post Office Box 391
Tallahassee, FL 32302

Paula Brown, Manager
Regulatory Coordination
Tampa Electric Company
Post Office Box 111
Tampa, FL 33602

(850) 224-9115
(850) 222-7960 (fax)
jbeasley@ausley.com (email)
jwahlen@ausley.com (email)

(813) 228-1444
(813) 228-1770 (fax)
regdept@tecoenergy.com (email)

Background

4. Pursuant to Rule 25-6.078(3), F.A.C., on October 13, 2017, Tampa Electric filed with the Commission Clerk Form PSC/EDR 13-E, Schedule 1, containing an updated cost differential based on then current material and labor costs. The cost differential calculated in Schedule 1 varied from the differential cost approved by the Commission in 2017 by plus or minus 10% or more thus requiring Tampa Electric to file a written policy and supporting data and analyses as prescribed in subsections (1), (4) and (5) of Rule 6.078 on or before April 1, 2018.

5. The proposed charges and credits contained in Revised Tariff Sheet Nos. 5.510, 5.515, and 5.516 are based on current labor and material costs from the previous twelve-month period and are prepared in accordance with the requirements of Rules 25-6.064, 25-6.078, and 25-6.115, F.A.C.

Proposed “Per Lot” Charges for Low Density and High Density Subdivisions

6. Tampa Electric’s proposed differential charge for low density URD subdivisions is \$0.00 per lot, a decrease from the current charge of \$247.69 per lot. The decrease in the proposed low density “per lot” charge is primarily attributable to OH costs increasing at a higher rate than UG costs and a OH net present value (“NPV”) operational costs increasing at a higher rate than the NPV operational cost of the UG system.

7. The company’s proposed high density charge is \$0.00 per individually-metered lot which is the same as the current charge of \$0.00 per lot.

Proposed Charges for UG Services from OH Distribution Sources

8. For new single-phase UG services from OH distribution sources, the proposed Fixed Charge, representing fixed labor and material costs that are not impacted by the variable service length, has decreased from \$71.55 to \$71.36 for 2/0 UG service laterals and increased from \$103.92 to \$106.53 for 4/0 UG service laterals.

9. The proposed “Per Trench Foot” charges have decreased from \$11.06 to \$10.02 per foot for 2/0 cable and from \$10.92 to \$9.91 per foot for 4/0 cable. Cable costs increased for both OH and UG; however, the UG cable cost reductions were off-set by decreases in contractor UG labor cost resulting in a decrease in “Per Trench Foot” charges.

10. The proposed credit for avoiding a service pole has decreased from \$612.53 to \$592.39.

Proposed Charges for Conversion of Existing OH Services to UG

11. For converted single phase UG services, the proposed OH service removal charge has increased from \$112.75 to \$167.70 for service cable only and has increased from \$550.19 to \$752.94 when removal involves a service pole.

12. Tampa Electric is also proposing updated non-refundable deposit charges for binding estimates conversion of existing OH distribution facilities to UG.

13. Tampa Electric knows of no disputed issues of material fact relative to the tariff revisions proposed herein.

WHEREFORE, Tampa Electric requests that this Commission consent to the above described revised tariff sheets as set forth in Exhibit “A” under the provisions of Section 366.03(3), Florida Statutes.

Dated this 2nd day of April, 2018.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "James D. Beasley", is written over a horizontal line.

JAMES D. BEASLEY
J. JEFFRY WAHLEN
Ausley & McMullen
Post Office Box 391
Tallahassee, FL 32302
(850) 224-9115

ATTORNEYS FOR TAMPA ELECTRIC COMPANY

Exhibit "A"

Continued from Sheet No. 5.500

3.6.5.1 Single Meter Commercial Service

Mobile Home Parks will be supplied single-meter commercial service only where park owner or operator supplies (furnishes) electrical service as a part of his rental and/or general service charge to tenants. Resale of electric energy through park owned meters will not be permitted (See 2.2.1)

3.6.5.2 Individual Company Metered Service

Mobile Home Parks will be supplied through company installed individual meters for individual tenants and other types of service required in park under the provisions required on 3.4.3 and 3.4.4 and the subparts appertaining thereto.

3.6.6 Miscellaneous Types of Electric Service

Certain other types of electric service are available from the company. Information on such services not specifically covered in this Tariff may be obtained at the nearest company office. Such special cases will be given individual consideration.

3.7 SCHEDULE OF STANDARD CHARGES AND NON-REFUNDABLE DEPOSITS FOR COST ESTIMATES FOR UNDERGROUND ELECTRIC DISTRIBUTION SYSTEMS

3.7.1 Standard Charges

The Standard Charges listed here are Contributions In Aid of Construction (CIAC) which are referenced by other sections of these rules and regulations.

3.7.1.1 Residential Subdivision

Low Density Subdivisions per service lateral or dwelling unit...	\$0.00
High Density Subdivisions per service lateral or dwelling unit...	\$0.00

3.7.1.2 New Single-phase UG Service Laterals from Overhead Distribution Systems

Fixed Charge for 2/0 service lateral	\$71.36
Fixed Charge for 4/0 service lateral	\$106.53
Per trench foot charge for 2/0 service lateral	\$10.02
Per trench foot charge for 4/0 service lateral	\$9.91
Credit for service pole if otherwise required for overhead service	\$592.39

Continued to Sheet No. 5.515



Continued from Sheet No. 5.510

3.7.1.3 Single-phase UG Service Laterals Converted from Existing Overhead Service Drops

Removal charge for overhead service with no service pole	\$167.70
Removal charge for overhead service with a service pole	\$752.94
Fixed Charge for 2/0 service lateral	\$71.36
Fixed Charge for 4/0 service lateral	\$106.53
Per trench foot charge for 2/0 service lateral	\$10.02
Per trench foot charge for 4/0 service lateral	\$9.91
Credit for service pole if otherwise required for overhead service	\$592.39

Continued to Sheet No. 5.516

Continued from Sheet No. 5.515

3.7.2 Non-refundable Deposits for Estimates of CIAC for Conversion of Existing Overhead Distribution Facilities to Underground Facilities

Qualified applicants can request, upon payment of a non-refundable deposit as listed below, the conversion of overhead distribution facilities to underground in accordance with these Rules and Regulations for conversion areas of not less than one (1) city block in length along both sides of the main distribution system, or in the absence of city blocks, not less than five (5) contiguous building lots along both sides of the main distribution system, or in the absence of both, not the less than 600 pole-feet of the main distribution system, including all customers served along both sides of the main distribution system, and so as to result in a decrease in the number of non-lighting poles in the system.

Requests for conversions, except for individual residential service covered under Section 3.4.3.3, will be accompanied by a non-refundable amount as follows:

Density Class	Deposit Amount
Urban Commercial or Residential.....	\$9,896 per mile*
Rural Commercial or Residential.....	\$5,657 per mile*
High or Low Density Subdivision.....	\$ 47 per lot

* As measured along the existing overhead primary and secondary distribution system.

Exhibit "B"



Continued from Sheet No. 5.500

3.6.5.1 Single Meter Commercial Service

Mobile Home Parks will be supplied single-meter commercial service only where park owner or operator supplies (furnishes) electrical service as a part of his rental and/or general service charge to tenants. Resale of electric energy through park owned meters will not be permitted (See 2.2.1)

3.6.5.2 Individual Company Metered Service

Mobile Home Parks will be supplied through company installed individual meters for individual tenants and other types of service required in park under the provisions required on 3.4.3 and 3.4.4 and the subparts appertaining thereto.

3.6.6 Miscellaneous Types of Electric Service

Certain other types of electric service are available from the company. Information on such services not specifically covered in this Tariff may be obtained at the nearest company office. Such special cases will be given individual consideration.

3.7 SCHEDULE OF STANDARD CHARGES AND NON-REFUNDABLE DEPOSITS FOR COST ESTIMATES FOR UNDERGROUND ELECTRIC DISTRIBUTION SYSTEMS

3.7.1 Standard Charges

The Standard Charges listed here are Contributions In Aid of Construction (CIAC) which are referenced by other sections of these rules and regulations.

3.7.1.1 Residential Subdivision

Low Density Subdivisions per service lateral or dwelling unit...	<u>\$247.690.00</u>
High Density Subdivisions per service lateral or dwelling unit...	\$0.00

3.7.1.2 New Single-phase UG Service Laterals from Overhead Distribution Systems

Fixed Charge for 2/0 service lateral	<u>\$71.5536</u>
Fixed Charge for 4/0 service lateral	<u>\$103.92106.53</u>
Per trench foot charge for 2/0 service lateral	<u>\$11.0610.02</u>
Per trench foot charge for 4/0 service lateral	<u>\$10.929.91</u>
Credit for service pole if otherwise required for overhead service	<u>\$612.53592.39</u>

Continued to Sheet No. 5.515



~~FIFTEENTH~~ ~~SIXTEENTH~~ REVISED
SHEET NO. 5.515
CANCELS ~~FOURTEENTH~~
~~FIFTEENTH~~ REVISED SHEET NO.
5.515

Continued from Sheet No. 5.510

3.7.1.3 Single-phase UG Service Laterals Converted from Existing Overhead Service Drops

Removal charge for overhead service with no service pole	\$112.75 <u>167.70</u>
Removal charge for overhead service with a service pole	\$550.19 <u>752.94</u>
Fixed Charge for 2/0 service lateral	\$71. 55 <u>36</u>
Fixed Charge for 4/0 service lateral	\$403.92 <u>106.53</u>
Per trench foot charge for 2/0 service lateral	\$11.06 <u>10.02</u>
Per trench foot charge for 4/0 service lateral	\$10.92 <u>9.91</u>
Credit for service pole if otherwise required for overhead service	\$612.53 <u>592.39</u>

Continued to Sheet No. 5.516

ISSUED BY: ~~G. L. Gillette~~N. G. Tower,
President

DATE EFFECTIVE: ~~July 13, 2017~~



Continued from Sheet No. 5.515

3.7.2 Non-refundable Deposits for Estimates of CIAC for Conversion of Existing Overhead Distribution Facilities to Underground Facilities

Qualified applicants can request, upon payment of a non-refundable deposit as listed below, the conversion of overhead distribution facilities to underground in accordance with these Rules and Regulations for conversion areas of not less than one (1) city block in length along both sides of the main distribution system, or in the absence of city blocks, not less than five (5) contiguous building lots along both sides of the main distribution system, or in the absence of both, not the less than 600 pole-feet of the main distribution system, including all customers served along both sides of the main distribution system, and so as to result in a decrease in the number of non-lighting poles in the system.

Requests for conversions, except for individual residential service covered under Section 3.4.3.3, will be accompanied by a non-refundable amount as follows:

Density Class	Deposit Amount
Urban Commercial or Residential.....	\$9, 626-896 per mile*
Rural Commercial or Residential.....	\$5, 630-657 per mile*
High or Low Density Subdivision.....	\$ 46-47 per lot

* As measured along the existing overhead primary and secondary distribution system.

Exhibit "C"

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OVERHEAD VS UNDERGROUND SUMMARY SHEET

Single Occupancy Low Density 210 Lot Subdivision
Cost per Lot

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
Labor	\$669.93	\$1,143.34	\$473.41
Material	\$616.33	\$939.01	\$322.68
TOTAL	\$1,286.26	\$2,082.35	\$796.09
NPV Operational Cost Including Storm Restoration and Lost Pole Attachment Revenue	\$2,531.19	\$1,246.78	-\$1,284.41
TOTAL Including NPV Operational Cost	\$3,817.45	\$3,329.13	-\$488.32

COST PER SERVICE LATERAL OVERHEAD MATERIAL AND LABOR

Single Occupancy Low Density 210 Lot Subdivision
Cost per Lot

ITEM	MATERIAL	LABOR ¹	TOTAL
Service ²	\$76.69	\$74.75	\$151.44
Primary	\$13.86	\$41.78	\$55.64
Secondary	\$108.95	\$151.11	\$260.06
Initial Tree Trim	\$0.00	\$0.00	\$0.00
Poles	\$139.02	\$256.07	\$395.09
Transformers	\$202.22	\$80.56	\$282.78
Subtotal	\$540.74	\$604.27	\$1,145.01
Stores Handling ³	\$75.59	\$0.00	\$75.59
Subtotal	\$616.33	\$604.27	\$1,220.60
Engineering		\$65.66	\$65.66
TOTAL	\$616.33	\$669.93	\$1,286.26

¹ Includes Administration, General, Energy Delivery Supervision, & Transportation

² Includes Meter

³ 13.98% of all Material

COST PER SERVICE LATERAL UNDERGROUND MATERIAL AND LABOR

Single Occupancy Low Density 210 Lot Subdivision
Cost per Lot

ITEM	MATERIAL	LABOR¹	TOTAL
Service ²	\$200.72	\$169.23	\$369.95
Primary	\$232.71	\$72.22	\$304.93
Secondary	\$43.29	\$50.61	\$93.90
Transformers	\$347.12	\$78.25	\$425.37
Pri. and Sec. Trenching	\$0.00	\$363.90	\$363.90
Service Trenching	\$0.00	\$343.47	\$343.47
Subtotal	\$823.84	\$1,077.68	\$1,901.52
Stores Handling ³	\$115.17	\$0.00	\$115.17
Subtotal	\$939.01	\$1,077.68	\$2,016.69
Engineering		\$65.66	\$65.66
TOTAL	\$939.01	\$1,143.34	\$2,082.35

¹ Includes Administration, General, Energy Delivery Supervision, & Transportation

² Includes Meter

³ 13.98% of all Material

TYPICAL SINGLE OCCUPANCY LOW DENSITY 210 LOT SUBDIVISION LAYOUT

Overhead Design



TOWN ELECTRIC COMPANY
 7000 SQUARE FOOT ONE PHASE 20 KV CLASS 210
 SHEET 1 OF 1

TYPICAL SINGLE OCCUPANCY LOW DENSITY 210 LOT SUBDIVISION LAYOUT

Underground Design



THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF
 THE ENGINEER AND IS TO BE USED ONLY FOR THE PROJECT AND
 SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE
 REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR
 BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING
 PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION
 STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN
 PERMISSION OF THE ENGINEER.

TAYLOR ELECTRIC COMPANY
 1000 W. 10TH STREET
 WICHITA, KS 67202
 PHONE: 316-261-1111
 FAX: 316-261-1112
 WWW: WWW.TAYLOR-ELECTRIC.COM

**UNDERGROUND
 LOW DENSITY
 SUBDIVISION DESIGN**

SHEET 1 OF 1

2000 10/16/20 2007 10/16/20 210 LOTS

- NOTES**
1. EXISTING UTILITIES ARE SHOWN BY DASHED LINES.
 2. ALL UTILITIES ARE TO BE INSTALLED AT A MINIMUM 18" BELOW FINISHED GRADE.
 3. ALL UTILITIES ARE TO BE INSTALLED AT A MINIMUM 10' FROM CURBS.
 4. ALL UTILITIES ARE TO BE INSTALLED AT A MINIMUM 10' FROM BUILDINGS.
 5. ALL UTILITIES ARE TO BE INSTALLED AT A MINIMUM 10' FROM DRIVEWAYS.
 6. ALL UTILITIES ARE TO BE INSTALLED AT A MINIMUM 10' FROM LOT BOUNDARIES.
 7. ALL UTILITIES ARE TO BE INSTALLED AT A MINIMUM 10' FROM ADJACENT LOTS.
 8. ALL UTILITIES ARE TO BE INSTALLED AT A MINIMUM 10' FROM STREETS.
 9. ALL UTILITIES ARE TO BE INSTALLED AT A MINIMUM 10' FROM PARKS.
 10. ALL UTILITIES ARE TO BE INSTALLED AT A MINIMUM 10' FROM OTHER UTILITIES.

- 200 AMP SERVICE**
- TRANFORMER
 - HANDHOLE (ELECTRICAL)
 - SERVICE
 - 40' RESERVATION CABLE
 - 30' SERVICE CABLE
 - 40' SERVICE CABLE



OVERHEAD VS UNDERGROUND SUMMARY SHEET

Single Occupancy High Density 176 Lot Subdivision
Individually Metered
Cost per Lot

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
Labor	\$534.59	\$949.57	\$414.98
Material	\$466.82	\$646.98	\$180.16
TOTAL	\$1,001.41	\$1,596.55	\$595.14
NPV Operational Cost Including Storm Restoration and Lost Pole Attachment Revenue	\$1,870.62	\$589.89	-\$1,280.73
TOTAL Including NPV Operational Cost	\$2,872.03	\$2,186.44	-\$685.59

COST PER SERVICE LATERAL OVERHEAD MATERIAL AND LABOR

Single Occupancy High Density 176 Lot Subdivision
Individually Metered
Cost per Lot

ITEM	MATERIAL	LABOR¹	TOTAL
Service ²	\$83.30	\$85.84	\$169.14
Primary	\$10.77	\$29.88	\$40.65
Secondary	\$58.12	\$108.03	\$166.15
Initial Tree Trim			\$0.00
Poles	\$104.72	\$186.79	\$291.51
Transformers	\$152.65	\$62.77	\$215.42
Subtotal	\$409.56	\$473.31	\$882.87
Stores Handling ³	\$57.26	\$0.00	\$57.26
Subtotal	\$466.82	\$473.31	\$940.13
Engineering		\$61.28	\$61.28
TOTAL	\$466.82	\$534.59	\$1,001.41

¹ Includes Administration, General, Energy Delivery Supervision, & Transportation

² Includes Meter

³ 13.98% of all Material

COST PER SERVICE LATERAL UNDERGROUND MATERIAL AND LABOR

Single Occupancy High Density 176 Lot Subdivision
Individually Metered
Cost per Lot

ITEM	MATERIAL	LABOR ¹	TOTAL
Service ²	\$173.20	\$177.33	\$350.53
Primary	\$106.39	\$51.58	\$157.97
Secondary	\$39.15	\$55.78	\$94.93
Transformers	\$248.89	\$61.84	\$310.73
Pri. and Sec. Trenching		\$198.23	\$198.23
Service Trenching		\$343.53	\$343.53
Subtotal	\$567.63	\$888.29	\$1,455.92
Stores Handling ³	\$79.35	\$0.00	\$79.35
Subtotal	\$646.98	\$888.29	\$1,535.27
Engineering		\$61.28	\$61.28
TOTAL	\$646.98	\$949.57	\$1,596.55

¹ Includes Administration, General, Energy Delivery Supervision, & Transportation

² Includes Meter

³ 13.98% of all Material

OVERHEAD VS UNDERGROUND SUMMARY SHEET

Single Occupancy High Density 176 Lot Subdivision
Multi-Unit Meter Centers
Cost per Lot

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
Labor	NA	NA	NA
Material	NA	NA	NA
TOTAL	NA	NA	NA

Tampa Electric's URD policy does not include "per lot" charges for multi-unit meter centers. These installations are covered in Tariff Section 5 Subsection 3.4.4.

COST PER SERVICE LATERAL OVERHEAD MATERIAL AND LABOR

Single Occupancy High Density 176 Lot Subdivision
Multi-Unit Meter Centers
Cost per Lot

ITEM	MATERIAL	LABOR ¹	TOTAL
Service ²			\$0.00
Primary			\$0.00
Secondary			\$0.00
Initial Tree Trim			\$0.00
Poles			\$0.00
Transformers			\$0.00
Subtotal	\$0.00	\$0.00	\$0.00
Stores Handling ³			\$0.00
Subtotal	\$0.00	\$0.00	\$0.00
Engineering			\$0.00
TOTAL	\$0.00	\$0.00	\$0.00

¹ Includes Administration, General & Transportation

² Includes Meter

³ 13.98% of all Material

Tampa Electric's URD policy does not include "per lot" charges for multi-unit meter centers. These installations are covered in Tariff Section 5 Subsection 3.4.4.

COST PER SERVICE LATERAL UNDERGROUND MATERIAL AND LABOR

Single Occupancy High Density 176 Lot Subdivision
Multi-Unit Meter Centers
Cost per Lot

ITEM	MATERIAL	LABOR ¹	TOTAL
Service ²			\$0.00
Primary			\$0.00
Secondary			\$0.00
Transformers			\$0.00
Pri. and Sec. Trenching			\$0.00
Service Trenching			\$0.00
Subtotal	\$0.00	\$0.00	\$0.00
Stores Handling ³			\$0.00
Subtotal	\$0.00	\$0.00	\$0.00
Engineering			\$0.00
TOTAL	\$0.00	\$0.00	\$0.00

¹ Includes Administration, General & Transportation

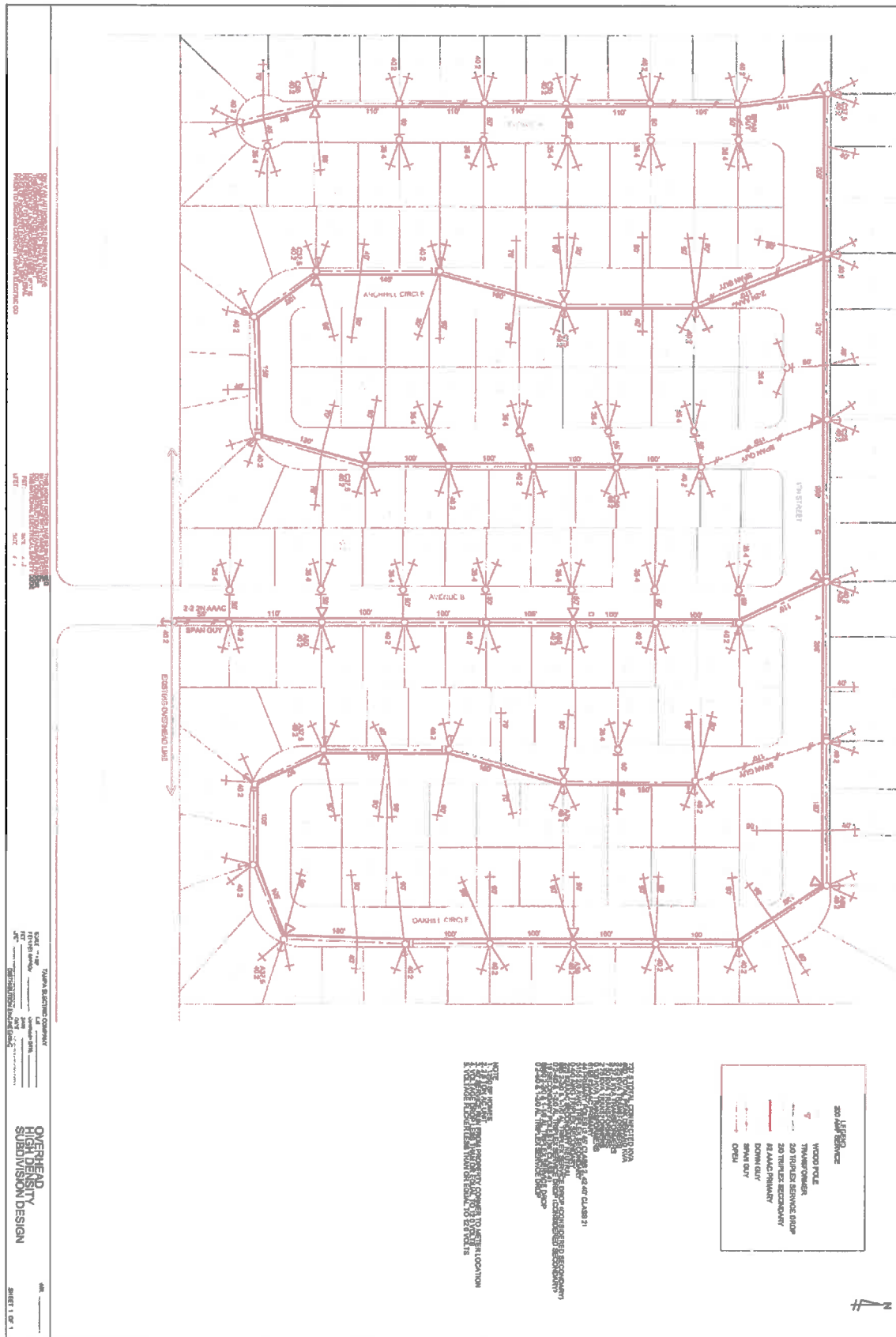
² Includes Meter

³ 13.98% of all Material

Tampa Electric's URD policy does not include "per lot" charges for multi-unit meter centers. These installations are covered in Tariff Section 5 Subsection 3.4.4.

TYPICAL SINGLE OCCUPANCY HIGH DENSITY 176 LOT SUBDIVISION LAYOUT

Overhead Design - Individually Metered



AVERAGE UNDERGROUND FEEDER COSTS

Underground \$/Ft..._____	Overhead \$/Ft..._____	Difference \$/Ft..._____
With Favorable Trenching \$/Ft..._____		\$/Ft..._____
Additional Trenching Cost* (Difficult Trenching) \$/Ft..._____		\$/Ft..._____

* Difficult trenching charges include underground cost of cable-in-conduit and rock trench adder.

Note: Above costs reflect adjustment of \$_____ for overhead estimates and \$_____ for underground estimates.

Feeder cost are not included in Tampa Electric "per lot" charges. Feeder installation policy addressed in Tampa Electric's Tariff Section 5 Subsection 3.4.1.1.

ACTUAL OPERATIONAL DISTRIBUTION EXPENSES IN 2017
For Overhead and Underground

	OVERHEAD	UNDERGROUND
Operational Expense - Distribution	\$69,933,038	\$28,760,743

JOINT TRENCHING WITH OTHER UTILITIES
In RESIDENTIAL DISTRIBUTION

2008 - 2017 ADDITIONS

<u>Date</u> <u>Closed</u>	<u>Location</u>	<u>Work</u> <u>Order</u> <u>Number</u>	<u>Footage</u>	<u>Total</u> <u>Amount</u> <u>Due From</u> <u>Other</u> <u>Utility</u>	<u>Total</u> <u>Amount</u> <u>Due To</u> <u>Other</u> <u>Utility</u>
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Tampa Electric did not engage in joint trenching during calendar year 2017.

JOINT TRENCHING WITH OTHER UTILITIES
In RESIDENTIAL DISTRIBUTION
(continued)

<u>Year</u>	<u>Footage Feet</u>	<u>Amount Due From Other Utility</u>	<u>Amount Due To Other Utility</u>
Total For 2008	0	\$0.00	\$0.00
Total For 2009	0	\$0.00	\$0.00
Total For 2010	0	\$0.00	\$0.00
Total For 2011	0	\$0.00	\$0.00
Total For 2012	0	\$0.00	\$0.00
Total For 2013	0	\$0.00	\$0.00
Total For 2014	0	\$0.00	\$0.00
Total For 2015	0	\$0.00	\$0.00
Total For 2016	0	\$0.00	\$0.00
Total For 2017	0	\$0.00	\$0.00
10-Year Total	0	\$0.00	\$0.00

Supporting Analyses and Data

Low Density Differential Cost	LD 1
Underground (UG) Design Cost	
Design Print – LD UG	LD 2
LD UG Summary	LD 3
LD UG Contractor Labor Cost Detail	LD 4
LD UG Major Materials	LD 5
Descriptive list of work orders required for the LD UG design	LD 6
Detailed Information on each LD UG work order	LD 9
Overhead (OH) Design	
Design Print – LD OH Cost	LD 26
LD OH Summary	LD 27
LD OH Major Materials	LD 28
Descriptive list of work orders required for the LD OH design	LD 29
Detailed Information on each LD OH work order	LD 30
High Density Differential Cost	HD 1
Underground (UG) Design Cost	
Design Print – HD UG	HD 2
HD UG Summary	HD 3
HD UG Contractor Labor Cost Detail	HD 4
HD UG Major Materials	HD 5
Descriptive list of work orders required for the HD UG design	HD 6
Detailed Information on each HD UG work order	HD 9
Overhead (OH) Design Cost	
Design Print – HD OH	HD 30
HD OH Summary	HD 31
HD OH Major Materials	HD 32
Descriptive list of work orders required for the HD OH design	HD 33
Detailed Information on each HD OH work order	HD 34
UG SERVICE COSTS FROM OH SOURCE- NON-SUBDIVISION	
OH Service	NS 1
Conversion of Existing OH Service	NS 2
Underground Service	NS 3
Non-refundable Deposits for Binding Estimates	NS 4

Supporting Analyses and Data Continued		
NPV LIFE-CYCLE OPERATIONAL EXPENSES		
Table I	Operational Expenses for 2017	OC 1
Table II	Primary Voltage System.	OC 2
Table III	Service Conductor	OC 2
Table IV	Allocation Factors	OC 2
Table V(A)	NPV Op. Cost Calc. – New OH Subdivision	OC 3
Table V(B)	NPV Op. Cost Calc. – New UG Subdivision	OC 4
Table VI (A)	NPV Op. Cost Calc. – New OH Services	OC 5
Table VI (B)	NPV Op. Cost Calc. – New UG Services.	OC 6
Table VII	NPV Op. Cost Calc. – Per Primary Mile and Per Service....	OC 7
Table VIII	NPV Op. Cost Calc. – Per Lot (LD and HD)	OC 7
Table IX	2017 O&M for Form 13	OC 8
LABOR ADJUSTMENTS		
	Labor overhead and material handling	LA 1

4/2018

LOW DENSITY MODEL

(210 lots)

Underground Costs (per lot)

With overheads filed in rate case

ITEM	MATERIAL		LABOR		TOTAL		EXPLANATION OF % CHANGE
	COST	% CHANGE	COST	% CHANGE	COST	% CHANGE	
SERVICE	200.72	5.40%	169.23	-10.84%	369.95	-2.70%	Underground material up, TEC & Contractor overhead down
PRIMARY	232.71	9.50%	72.22	-4.13%	304.93	5.93%	Underground material up, TEC & Contractor overhead down
SECONDARY	43.29	4.64%	50.61	-4.13%	93.80	-0.28%	Underground material up, TEC & Contractor overhead down
TRANSFORMERS	347.12	1.65%	78.25	-6.33%	425.37	0.08%	Underground material up, TEC & Contractor overhead down
TRENCHING							
PRIMARY & SECONDARY			363.90	-9.26%	363.90	-9.26%	Contractor overhead down
SERVICES			343.47	-10.10%	343.47	-10.10%	Contractor overhead down
SUB-TOTAL	823.84	4.84%	1,077.68	-9.02%	1,901.52	-3.49%	
STORES HANDLING	115.17	-4.27%			115.17	-4.27%	Material handling overhead down
SUB-TOTAL	939.01	3.63%	1,077.68	-9.02%	2,016.69	-3.54%	
ENGINEERING			65.66	0.00%	65.66	0.00%	
TOTAL	939.01	3.63%	1,143.34	-9.65%	2,082.35	-3.43%	
					1,248.78	Net Present Value of the Life Cycle Operational Cost Including Storm Restoration and Lost Pole Attachment Revenue	
Total with NPV Factor					3,329.13	Total Including NPV of Operational Cost	

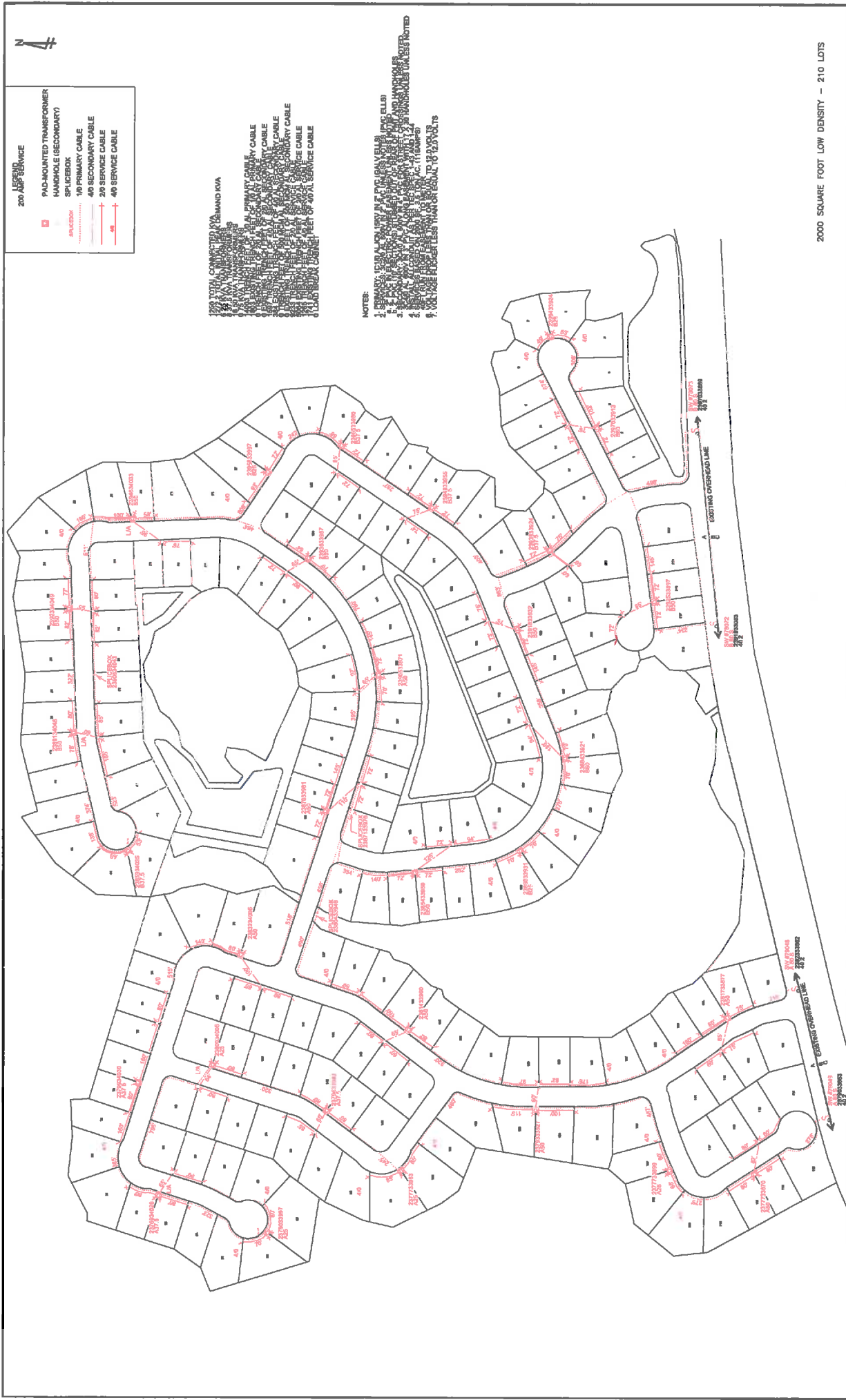
Overhead Costs (per lot)

ITEM	MATERIAL		LABOR		TOTAL		EXPLANATION OF % CHANGE
	COST	% CHANGE	COST	% CHANGE	COST	% CHANGE	
SERVICE	78.69	1.51%	74.75	-49.72%	151.44	-32.46%	Material up, TEC & Contractor overheads down, labor problem
PRIMARY	13.86	1.17%	41.78	-4.13%	55.64	-2.86%	Material up, TEC & Contractor overheads down
SECONDARY	108.95	-1.78%	151.11	-4.12%	260.06	-3.16%	Material down, TEC & Contractor overheads down
INITIAL TREE TRIM			0.00		0.00		
POLES	139.02	-0.52%	256.07	-4.12%	395.09	-2.88%	Material down, TEC & Contractor overheads down
TRANSFORMERS	202.22	5.57%	80.56	-4.12%	282.78	2.62%	Material up, TEC & Contractor overheads down
SUB-TOTAL	540.74	1.74%	604.27	-13.79%	1,145.01	-7.09%	
STORES HANDLING	75.59	-7.10%			75.59	-7.10%	Handling overhead down
SUB-TOTAL	616.33	0.57%	604.27	-13.79%	1,220.60	-7.09%	
ENGINEERING			65.66	0.00%	65.66	0.00%	
TOTAL	616.33	0.57%	669.93	-12.61%	1,286.26	-6.76%	
					2,531.19	Net Present Value of the Life Cycle Operational Cost Including Storm Restoration and Lost Pole Attachment Revenue	
Total with NPV Factor					3,817.46	Total Including NPV of Operational Cost	

Differential Costs (per lot)

ITEM	MATERIAL		LABOR		TOTAL	
	COST	% CHANGE	COST	% CHANGE	COST	% CHANGE
Differential (per lot)	322.88	10.03%	473.41	-2.10%	796.09	2.48%
NPV amount					-1,284.41	
Differential¹ (per lot)	0.00		0.00		-488.32	-297.15%

¹ Includes NPV of Operational Cost



LEGEND

200 AMP SERVICE	PAD-MOUNTED TRANSFORMER
150 AMP SERVICE	HANDHOLE (SECONDARY)
100 AMP SERVICE	SPLICEBOX
75 AMP SERVICE	10' PRIMARY CABLE
50 AMP SERVICE	40' SECONDARY CABLE
20' SERVICE CABLE	20' SERVICE CABLE
40' SERVICE CABLE	40' SERVICE CABLE

CONVERTED DEMAND KVA

120	1.0
125	1.0
130	1.0
135	1.0
140	1.0
145	1.0
150	1.0
155	1.0
160	1.0
165	1.0
170	1.0
175	1.0
180	1.0
185	1.0
190	1.0
195	1.0
200	1.0
205	1.0
210	1.0
215	1.0
220	1.0
225	1.0
230	1.0
235	1.0
240	1.0
245	1.0
250	1.0
255	1.0
260	1.0
265	1.0
270	1.0
275	1.0
280	1.0
285	1.0
290	1.0
295	1.0
300	1.0
305	1.0
310	1.0
315	1.0
320	1.0
325	1.0
330	1.0
335	1.0
340	1.0
345	1.0
350	1.0
355	1.0
360	1.0
365	1.0
370	1.0
375	1.0
380	1.0
385	1.0
390	1.0
395	1.0
400	1.0
405	1.0
410	1.0
415	1.0
420	1.0
425	1.0
430	1.0
435	1.0
440	1.0
445	1.0
450	1.0
455	1.0
460	1.0
465	1.0
470	1.0
475	1.0
480	1.0
485	1.0
490	1.0
495	1.0
500	1.0
505	1.0
510	1.0
515	1.0
520	1.0
525	1.0
530	1.0
535	1.0
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545	1.0
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555	1.0
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640	1.0
645	1.0
650	1.0
655	1.0
660	1.0
665	1.0
670	1.0
675	1.0
680	1.0
685	1.0
690	1.0
695	1.0
700	1.0
705	1.0
710	1.0
715	1.0
720	1.0
725	1.0
730	1.0
735	1.0
740	1.0
745	1.0
750	1.0
755	1.0
760	1.0
765	1.0
770	1.0
775	1.0
780	1.0
785	1.0
790	1.0
795	1.0
800	1.0
805	1.0
810	1.0
815	1.0
820	1.0
825	1.0
830	1.0
835	1.0
840	1.0
845	1.0
850	1.0
855	1.0
860	1.0
865	1.0
870	1.0
875	1.0
880	1.0
885	1.0
890	1.0
895	1.0
900	1.0
905	1.0
910	1.0
915	1.0
920	1.0
925	1.0
930	1.0
935	1.0
940	1.0
945	1.0
950	1.0
955	1.0
960	1.0
965	1.0
970	1.0
975	1.0
980	1.0
985	1.0
990	1.0
995	1.0

NOTES:

1. SEE PLAN FOR ALL OTHER NOTES (PAGE 10)
2. ALL SERVICE CABLES SHALL BE INSTALLED AT A MINIMUM OF 18" FROM ANY HANDHOLES
3. ALL SERVICE CABLES SHALL BE INSTALLED AT A MINIMUM OF 18" FROM ANY HANDHOLES UNLESS NOTED OTHERWISE
4. ALL SERVICE CABLES SHALL BE INSTALLED AT A MINIMUM OF 18" FROM ANY HANDHOLES UNLESS NOTED OTHERWISE
5. ALL SERVICE CABLES SHALL BE INSTALLED AT A MINIMUM OF 18" FROM ANY HANDHOLES UNLESS NOTED OTHERWISE
6. ALL SERVICE CABLES SHALL BE INSTALLED AT A MINIMUM OF 18" FROM ANY HANDHOLES UNLESS NOTED OTHERWISE
7. ALL SERVICE CABLES SHALL BE INSTALLED AT A MINIMUM OF 18" FROM ANY HANDHOLES UNLESS NOTED OTHERWISE

2000 SQUARE FOOT LOW DENSITY - 2110 LOTS

SHEET 1 OF 1

TAMPA ELECTRIC COMPANY	
DATE: 11/11/11	SCALE: 1" = 100'
PROJECT: 11111111	DATE: 11/11/11
DESIGNER: J. J. J.	DATE: 11/11/11
CHECKED: J. J. J.	DATE: 11/11/11
APPROVED: J. J. J.	DATE: 11/11/11
DISTRIBUTION ENGINEERING	

FROM THE CONTRACTOR/TAMPA ELECTRIC CO.

**UG Construction Cost Data Summary
Low Density (210-Lot) UG Subdivision Costs**

Line #	A Work Type/WR #	B Description	C (C + M) Material and Handling	D Material	E (F + L) Total Labor Plus Vehicles	F (G + H + I) Total Labor	G Base Labor	H (G x J x TLF) TEC Labor Overheads	I (G x K x CLF) Contract Labor Overheads	J TEC Work %	K Contractor Work %	L Vehicle	M (D x MHR) Material Handling	N (C+E) Total
1	Transformers													
2	924920	Install & Ground Transformers	83,085.24	\$72,894.58	11,747.30	10,308.84	5,989.52	3,878.28	482.04	60%	40%	\$1,437.46	10,190.86	94,832.54
3	Contractor	Prepare Pad Site	-	-	4,884.37	4,884.37	3,924.90	-	759.47	0%	100%	-	-	4,884.37
4			83,085.24	72,894.58	16,431.67	14,894.21	9,894.42	3,878.28	1,221.51			1,437.46	10,190.86	99,516.91
5														
6	Primary													
7	924957	Primary Line - OH-UG Takeoffs	1,277.21	\$1,120.58	1,648.89	1,446.95	837.80	544.30	64.85	60%	40%	\$201.74	158.85	2,825.90
8	925017	Primary Conduit (Material Only)	12,909.51	\$11,328.12	-	-	-	-	-			-	1,583.39	12,909.51
9	925022	Primary Cable	41,513.34	\$36,421.60	13,517.21	11,863.17	6,868.82	4,482.60	531.85	80%	40%	\$1,654.04	5,091.74	55,030.55
10			55,700.07	48,888.28	15,185.90	13,310.12	7,708.72	5,006.90	596.50			1,855.78	6,831.79	70,885.97
11	Secondary													
12	925024	Secondary Cable	7,141.11	\$6,265.23	10,829.15	9,328.51	5,401.32	3,509.13	418.06	80%	40%	\$1,300.64	875.88	17,770.26
13	925026	Secondary Conduit (Material Only)	3,221.09	\$2,826.01	-	-	-	-	-			-	395.08	3,221.09
14			10,362.20	9,091.24	10,829.15	9,328.51	5,401.32	3,509.13	418.06			1,300.64	1,270.98	20,991.34
15	Service													
16	925028	Service Cable	24,516.98	\$21,508.90	32,215.76	32,215.76	26,982.66	-	5,223.08	0%	100%	-	3,007.08	56,732.75
17	925029	Set Meters	8,707.84	\$7,839.80	3,321.74	2,915.28	1,687.88	1,086.65	130.65	60%	40%	\$408.47	1,068.04	12,029.58
18	925030	Service Conduit Material	14,818.58	\$13,001.02	-	-	-	-	-			-	1,817.54	14,818.58
19			48,043.39	42,150.72	35,537.51	35,131.04	28,680.66	1,086.65	5,353.73			408.47	5,892.87	83,580.90
20														
21	Trenching													
22	Contractor	Primary Trenching	-	-	53,706.22	53,706.22	44,998.83	-	8,707.29	0%	100%	-	-	53,706.22
23	Contractor	Secondary Trenching	-	-	6,390.98	6,390.98	5,354.82	-	1,036.18	0%	100%	-	-	6,390.98
24	TEC Inspection for Primary		-	-	18,321.55	15,483.83	-	-	-	100%	0%	857.72	-	16,321.55
25			-	-	76,418.75	75,561.03	50,353.75	-	8,743.45			857.72	-	76,418.75
26														
27	Contractor	Svc Trenching Pri. Prop	-	-	42,780.48	42,780.48	35,827.80	-	6,932.68	0%	100%	-	-	42,780.48
28	Contractor	Svc Trenching Rts-of-Wy	-	-	19,685.75	19,685.75	16,502.51	-	3,193.24	0%	100%	-	-	19,685.75
29	TEC Inspection for Service		-	-	9,872.92	9,164.72	-	-	-	100%	0%	508.20	-	9,872.92
30			-	-	72,129.14	71,620.94	52,330.31	-	10,125.91			508.20	-	72,129.14
31														
32	Engineering	Design/Inspection/Coordination	-	-	13,788.39	13,788.39	-	-	-			-	-	13,788.39
33														
34	Totals (Sum of lines 4, 10, 14, 18, 25, 30, and 32)		\$ 187,180.89	\$ 173,004.82	\$ 240,100.51	\$ 233,734.25	\$ 154,367.18	\$ 13,490.86	\$ 27,458.17			\$ 8,368.26	\$ 24,186.07	\$ 437,281.40
35	Cost per Lot (line 34 /210 lots)		\$ 939.00	\$ 939.00	\$ 1,143.34									\$ 2,082.34

Adjustment Factors	
TEC Operations Labor Overhead Factor	TLF = 1.0828
Contractor Labor Overhead Factor	CLF = 0.1935
Current year material handling charge rate	MHR = 0.1388

reflects removal of 8.55% for engineering which is a separate line item in this document
reflects removal of 7.28% for engineering which is a separate line item in this document

UG Contractor Labor Estimate - 210 lot low density

Prepare pad site (Primary Contractor Labor Costs)

	<u>Total</u>	<u>Cost</u>	<u>Pad sites</u>
Pad site preparation	Total	\$3,924.80	\$130.83
			30

Primary Trenching & Conduit (Primary Contractor Labor Costs)

	<u>Total</u>	<u>Cost</u>	<u>Feet</u>	
	\$36,407.80	\$2.60	14003	Machine Trenching Cost Only
	\$8,081.06	\$0.51	15806	2" Conduit Installation (both trenching and in existing trench)
	\$0.00	\$1.00	14003	Pull-tape Installation (used exact length for labor cost not 5% extra)
	\$530.07	\$174.89	3	1# splice box (30" x 48" x 18"), UG GR&S 6-21
Primary Trenching	Sub-total	\$44,998.93		

Secondary Trenching & Conduit (Primary Contractor Labor Costs)

	<u>Total</u>	<u>Cost</u>	<u>Feet</u>	
	\$4,152.20	\$2.60	1597	Machine Trenching Cost Only
	\$0.00	\$0.51	0	2" Conduit Installation
	\$172.80	\$0.54	320	3" Conduit Installation
	\$1,029.82	\$3.82	1661	4" Conduit Installation
	\$0.00	\$0.00	1597	Pull-tape Installation (used exact length not 5% extra)
Secondary Trenching	Sub-total	\$6,354.82		

Primary Contractor Labor **Total** **\$50,353.75**

Service Trenching & Conduit (Primary Contractor Labor Costs)

	<u>Total</u>	<u>Cost</u>	<u>Feet</u>	
	\$9,341.80	\$2.60	3593	Trenching Cost -Trenching feet required for 2" service conduit
	\$1,495.00	\$2.60	575	Trenching Cost -Trenching feet required for 3" service conduit
	\$4,415.07	\$0.51	8657	2" Conduit Installation
	\$1,250.64	\$0.54	2316	3" Conduit Installation
	\$0.00	\$0.00	10973	Pull-tape Installation (used exact length not 5% extra)
Svc Trenching Rts-of-Wy	Sub-total	\$16,502.51		

Service Trenching & Conduit on Private Property (Service Contractor Labor Costs)

	<u>Total</u>	<u>Cost</u>	<u>Feet</u>	
Svc Trenching Pri. Prop	Sub-total	\$36,827.80	\$5.99	6330
				Trenching & conduit labor cost - Trenching feet = 30 ft x 210 lots

Service Cable (Service Contractor Labor Costs)

	<u>Total</u>	<u>Cost</u>	<u>Feet</u>	
Service Cable Labor	Sub-total	\$26,992.68	\$1.68	17303
				Installing 2/0 or 4/0 Cable in existing conduit from source to meter

Service Contractor Labor **Total** **\$79,322.99**

Total Contractor Labor Cost \$129,676.74

Inspection (TECO Labor Cost)

	<u>TEC Labor</u>	<u>TEC Labor</u>	<u>TEC Vehicle</u>	<u>TEC Vehicle</u>	
	<u>Total</u>	<u>Rate</u>	<u>Feet/Qty</u>	<u>Rate</u>	<u>Total</u>
	\$10,861.35	\$87.26	14003	\$4.84	\$602.44
	\$1,238.70	\$87.26	1597	\$4.84	\$68.71
	\$3,232.89	\$87.26	4168	\$4.84	\$179.32
	\$130.89	\$43.63	3	\$2.42	\$7.26
Inspection costs for Primary Contractor	Sub-total	\$15,463.83			\$867.72

Inspection costs for Primary Contractor (TECO Labor Cost)
 Primary inspection chg = (mach. tmch ft / 900 ft per day)*(8 hr/day)*Contractor rate
 Secondary inspection chg = (mach. trch ft / 900 ft per day)*(8 hr/day)*Contractor rate
 Service ROW inspection chg = (machine trench ft / 900 ft per day)*(8 hr/day)*Contractor rate
 1# splice box (30" x 48" x 18"), UG GR&S 6-21

	<u>TEC Labor</u>	<u>TEC Labor</u>	<u>TEC Vehicle</u>	<u>TEC Vehicle</u>	
	<u>Total</u>	<u>Rate</u>	<u>Feet/Qty</u>	<u>Rate</u>	<u>Total</u>
	\$9,182.30	\$43.63	210	\$2.42	\$508.20
Inspection costs for Service Contractor	Sub-total	\$9,164.72			\$508.20

Inspection costs for Service Contractor (TECO Labor Cost)
 Service Private Property inspection = .5hr x # of lots x rate

Total TEC Inspection Cost \$24,628.55

Please modify the low density construction drawing legend as shown below.

UG Material List - 1501-2500 sq ft same trench 210 lot low density

1250	Total Connected KVA
1272.2	Total initial peak demand KVA
6	25 kVA Transformers
8	37.5 kVA Transformers
16	50 kVA Transformers
0	75 kVA Transformers
14003	Trench Feet of 1/0 AL Primary Cable
1803	Existing trench feet of 1/0 AL Primary Cable
0	Trench Feet of 2/0 AL Secondary Cable
0	Existing trench feet of 2/0 AL Secondary Cable
1597	Trench Feet of 4/0 AL Secondary Cable
384	Existing trench feet of 4/0 AL Secondary Cable
0	Trench Feet of 500 MCM AL Secondary Cable
0	Existing trench feet of 500 MCM AL Secondary Cable
9233	Trench Feet of 2/0 AL Service Cable
5064	Existing trench feet of 2/0 AL Service Cable
1265	Trench Feet of 4/0 AL Service Cable
1741	Existing trench feet of 4/0 AL Service Cable
0	Load Break Cabinet

Notes:

1. 1501-2500 SF Homes
2. 3.5 Ton AC Units
3. 40' Service run from property corner to meter location
4. Voltage drop less than or equal to 12.0 volts
5. Voltage flicker less than or equal to 12.0 volts

UG CU Totals (Material and Labor) - 2000 sq ft - 210 lot low density

Links allow this worksheet to summarize the material and CU entries from the ParkhurstPole worksheet through the BentTreePole worksheet. The totals are broken down into material construction units (CUs) for WorkPro work requests and labor inputs for the Contractor Labor worksheet.

Station All Stations - This information is used to create Work Requests to obtain costs.

Blue shading indicates fields to be updated. In WorkPro search for each Work Request Number shown in the blue areas. Then copy each work request which will create a new work request number to be entered.

Transfer the values from Qty and CU columns highlighted in yellow to the new WorkPro Work Requests to obtain new costs.

Those costs are then entered into the LDdifferentialMonth-Year.xls workbook to calculate the Low Density Differential cost.

Work Request

Number

924920

Transformers - Cost for: Material only, TEC labor & overhead, vehicle

Qty	CU	Definition	Total Connected KVA	
0	pku51a3n	25 kva, 6 tap 250mcm	0	
6	pku51c3n	25 kva, 8 tap 250mcm	150	150
0	pku51a4n	37.5 kva, 6 tap 250mcm	0	150
1	pku51b4n	37.5 kva, 6 tap 500mcm	37.5	187.5
0	pku51c4n	37.5 kva, 8 tap 250mcm	0	187.5
7	pku51d4n	37.5 kva, 8 tap 500mcm	262.5	450
0	pku51a5n	50 kva, 6 tap 250mcm	0	450
0	pku51b5n	50 kva, 6 tap 500mcm	0	450
0	pku51c5n	50 kva, 8 tap 250mcm	0	450
16	pku51d5n	50 kva, 8 tap 500mcm	800	1250
0	pku51a6n	75 kva, 6 tap 250mcm	0	1250
0	pku51b6n	75 kva, 6 tap 500mcm	0	1250
0	pku51c6n	75 kva, 8 tap 250mcm	0	1250
0	pku51d6n	75 kva, 8 tap 500mcm	0	1250
1	bushcover_arrest	open position on loop tx used as radial		1250
1	bushdummy_arrest	normal open tx in loop		
2	bushinsert_arrest	at adjacent tx to normal open in a loop		
33	grdmeg1/2	meggat ground, drive rods, 1 location, 1/2" rods		

Work Request

Number

924957

OH Primary - Cost for: Material only, TEC labor & overhead, vehicle

Qty	CU	Definition
4	PKE601WF1B	TEC material & labor to frame terminal pole CO & LA
4	FLOH103	Fuse
4	grdmeg1/2	meggat ground, drive rods, 1 location, 1/2" rods

Primary Trenching - Labor Only

Done by contractors

Used to determine contractor labor cost on the Contractor Labor worksheet

Qty	CU	Definition
14003		Trenching feet required for 2" primary conduit
1803		Existing trench feet used for 2" primary conduit
14003		Install Pulling Tape (blow in tape for pull - trench feet used to determine contractor cost)

Work Request

Number

925017

Primary Conduit - Cost for Material only

Material used by contractors to install the conduit system

Qty	CU	Definition
40	COND2G	Conduit, galvanized 2", 10' with coupling, for up terminal pole TEC # 2004389
16156	COND2_SCHA	2" PVC Schedule A conduit TEC # 2004488
16506	MULE TAPE	Pulling tape - actual length - does not need any 5% adder TEC # 2007414
88	ELL2G90	2" elbow 90 galv 9.5" radius TEC # 2004395
1	ELL2G45	2" elbow 45 galv 9.5" radius TEC # 2004394
178	COUP2P	Coupling, 2" PVC (2 per elbow) TEC # 2004507
33	GLUECONDF	2" & 3" pvc 1 qt for 500' fast dry
3	HH1PHPRI	1ø splice box (30" x 48" x 18"), UG GR&S 6-21

Work Request**Number**

925022

Primary Cable - Cost for: Material only, TEC labor & overhead, vehicle

Qty	CU	Definition	
4	PKU16WF	pothead, 38' 1c 1/0AL cable, 20' pvc, ground conn, wood pole	152
61	PKU11F	safebreak, 5' 1c 1/0AL cable, ground conn	305
0	PKU31P3	switch cubicle(lbc) 1ph, 200a deadfront, 3 position w/pad, grnd	
0	PKU31P4	switch cubicle(lbc) 1ph, 200a deadfront, 4 position w/pad, grnd	
0	FAULT1PA	fault indicator, 1ph 1/0-4/0 above grade, 400a	
15806	WIU1PF	cable, 1/0AL concentric neutral 15kV	15806
35	WIU1F	labor to pull ug cable in conduit	
Our checkl -Work request material 1/0AL concentric neutral 15kV cable total should be ==>			17060.9

Secondary Trenching - Labor Only - Done By Contractors

Used to determine contractor labor cost on the Contractor Labor worksheet

Qty	CU	Definition
0		Trenching feet required for 2" secondary conduit
0		Existing trench feet used for 2" secondary conduit
0		Trenching feet required for 3" secondary conduit used for 2/0 service cable
0		Existing trench feet used for 3" secondary conduit used for 2/0 service cable
0		Trenching feet required for 3" secondary conduit used for 4/0 service cable
320		Existing trench feet used for 3" secondary conduit used for 4/0 service cable
1597		Trenching feet required for 4" secondary conduit used for 4/0 service cable
64		Existing trench feet used for 4" secondary conduit used for 4/0 service cable
0		Trenching feet required for 4" secondary conduit used for 500 service cable
0		Existing trench feet used for 4" secondary conduit used for 500 service cable
1597		Install Pulling Tape (blow in tape for pull - trench feet used to determine contractor cost)

Work Request**Number**

925024

Secondary Cable & Hand Holes - Cost for: Material only, TEC labor & overhead, vehicle

Qty	CU	Definition	
0	wiu3sb	2c 2/0 1c 1 neutral, 600 v - added 5% here	This CU adds 5% and we want it to.
2171	wiu3sc	2c 4/0 1c 2/0 neutral, 600v - added 5% here	This CU adds 5% and we want it to.
0	wiu3sn	2c 500 1c 350 neutral, 600v - added 5% here	This CU adds 5% and we want it to.
0	insbus350/4	crab 4 position up to 350mcm	
0	insbus350/6	crab 6 position up to 350mcm	
0	insbus500/4	crab 4 position up to 500mcm	
69	insbus500/6	crab 6 position up to 500mcm	
0	insbus500/8	crab 8 position up to 500mcm	
23	wiu1f	labor to pull ug cable in conduit	
23	svhotbc	energize ug secondary in transformer	
23	svhoth	energize ug secondary in hand hole	
0	hsec	secondary h/h 12"x20", 3 or 4 2/0 or 4/0 svc w/ 2/0 or 4/0 sec	
23	hsecdg	secondary h/h 17"x30", 5 to 7 2/0 or 4/0 svc w/ 4/0 or 500 sec (any time 500 used)	

Work Request**Number**

925026

Secondary Conduit - Cost for Material Only

Material used by contractors to install the conduit system

Qty	CU	Definition
0	COND2_SCHA	2" conduit sched A bell end TEC # 2004488
340	COND3_SCHA	3" conduit sched A bell end TEC # 2004517
1871	COND4_PVC_SC	4" conduit sched A bell end TEC # 2004529
2326	MULE TAPE	Pulling tape, plus adding 5% extra here TEC # 2007414
0	ELL2P90	2" elbow 90 PVC 9.5" radius TEC # 2004511
0	ELL2P45	2" elbow 45 PVC 9.5" radius TEC # 2004510
4	ELL3P90	3" elbow 90 PVC 13" radius TEC # 2004524
0	ELL3P45	3" elbow 45 PVC 13" radius TEC # 2004523
42	ELL4P90	4" elbow 90 PVC 16" radius TEC # 2004538
0	ELL4G45	4" elbow 45 galv 16" radius TEC # 2004427
0	COUP2P	Coupling, 2" PVC (2 per elbow) TEC # 2004507
8	COUP3P	Coupling, 3" PVC (2 per elbow) TEC # 2004521
84	COUP4P	Coupling, 4" PVC (2 per elbow) TEC # 2004535
1	GLUECONDF	2" & 3" pvc 1 qt for 500' fast dry
8	GLUECONDM	4" & 6" pvc 1 qt for 250' medium dry

Work Request**Number**

925028

Service Cable - Cost for Material Only

Material used by contractors to install the conduit system

Qty	CU	Definition	
16177	wiu3sb	2c 2/0 & 1c 1 neutral, 600 v service cable	This CU adds 5% and we want it to.
3236	wiu3sc	2c 4/0 & 1c 2/0 neutral, 600 v service cable	This CU adds 5% and we want it to.

Work Request**Number**

925029

Set Meter - Cost for: Material only, TEC labor & overhead, vehicle

Qty	CU	Definition
210	meterlabor	
210	1900006	meter, kwh 30a 240v

Service Trenching - Labor Only - Done By Contractors

Used to determine contractor labor cost on the Contractor Labor worksheet

Qty	CU	Definition
188		Number of 2/0 services installed in 2" conduit
0		Number of 2/0 services installed in 3" conduit
23		Number of 4/0 services installed in 3" conduit
5640		Trenching feet for 2" service conduit on private property-service contractor
1880		Trenching feet for 10' stub of 2" service conduit installed by primary contractor
1713		Trenching feet for 2" service conduit installed by primary contractor
5064		Existing trench feet used for 2" service conduit installed by primary contractor
8657		Install Pulling Tape for 2" conduit (blow in tape for pull - Primary Contractor)
0		Trenching feet for 3" service conduit on private property-service contractor for 2/0 service
0		Trenching feet for 10' stub of 3" service conduit installed by primary contractor for 2/0 service
0		Trenching feet for 3" service conduit installed by primary contractor for 2/0 service
0		Existing trench feet used for 3" service conduit installed by primary contractor for 2/0 service
0		Install Pulling Tape for 3" conduit for 2/0 service (blow in tape for pull - Primary Contractor)
690		Trenching feet for 3" service conduit on private property-service contractor for 4/0 service
230		Trenching feet for 10' stub of 3" service conduit installed by primary contractor for 4/0 service
345		Trenching feet for 3" service conduit installed by primary contractor for 4/0 service
1741		Existing trench feet used for 3" service conduit installed by primary contractor for 4/0 service
2316		Install Pulling Tape for 3" conduit for 4/0 service (blow in tape for pull - Primary Contractor)

Work Request**Number**

925030

Service Conduit - Cost for Material Only

Material used by contractors to install the conduit system

Qty	CU	Definition	Used by contractors to install conduit system
5640		Conduit for 2" service on private property-service contractor	
2820		Conduit for 10' stub of 2" service installed by primary contractor	
6777		Conduit for 2" service installed by primary contractor	
10537		Pulling Tape installed in 2" conduit by Primary Contractor)	
15237	COND2_SCHA	Total quantity of 2" conduit for work order - TEC # 2004488	
504	ELL2P90	2" elbow 90 PVC 9.5" radius TEC # 2004395	
0	ELL2P45	2" elbow 45 PVC 9.5" radius TEC # 2004394	
188	LOCKNUT2	2" galvanized Lock Nut TEC # 2004396	
2070	COND2FLEX2	2" Flexible PVC conduit TEC # 2004491	
188	ADAPT2F/M	2" PVC Adapter, male thread/female slip TEC # 2004493	
188	RISER2G7	2" PVC Service Riser TEC # 2004401	
1008	COUP2P	Coupling, 2" PVC (2 per elbow) TEC # 2004507	
690		Conduit for 3" service on private property-service contractor	
345		Conduit for 10' stub of 3" service installed by primary contractor	
2086		Conduit for 3" service installed by primary contractor	
2546		Pulling Tape installed in 3" conduit by Primary Contractor)	
3121	COND3_SCHA	Total quantity of 3" conduit for work order - TEC # 2004517	
69	ELL3P90	3" elbow 90 PVC 13" radius TEC # 2004524	
0	ELL3P45	3" elbow 45 PVC 13" radius TEC # 2004523	
23	RISER21/2G7	2-1/2" house riser TEC # 2004409	
23	LOCKNUT21/2	2-1/2" galvanized Lock Nut TEC # 2004408	
23	COND2FLEX3	3" Flexible PVC conduit TEC # 20	Used by contractors to install conduit system
23	ADAPT2F/F	2-1/2" PVC Adapter, male thread/female slip TEC # 2004462	
138	COUP3P	Coupling, 3" PVC (2 per elbow) TEC # 2004521	
37	GLUECONDF	2" & 3" pvc 1 qt for 500' fast dry	
13083	MULE TAPE	Total Pulling Tape installed in conduit by Primary Contractor) TEC # 2007414	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

Contact Name:
Tampa Electric

Distribution Services
Transformers 2000 Sq Ft

WR No. 924920

Date Sched: 3/23/18

Date Required: 3/23/18

Additional Information: URD filing for 1501-2500 sq ft low density

WR Description: LDUG 2000 sq ft TRANSFORMERS

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$72,894.58	\$0.00	\$72,894.58
OVERHEAD:	\$10,190.67	\$0.00	\$10,190.67
	\$83,085.25	\$0.00	\$83,085.25
LABOR HOURS:	148.52	0	148.52
LABOR COST:	\$5,969.52	\$0.00	\$5,969.52
OVERHEAD:	\$7,901.26	\$0.00	\$7,901.26
	\$13,870.78	\$0.00	\$13,870.78
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$96,956.03	\$0.00	\$96,956.03
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$96,956.03	\$0.00	\$96,956.03

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 924920

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?
INSTALL				
2	2003816 ARRESTER, UD, 10KV PARKING L/A, 8.40 KVR	\$144.07	\$288.14	Y
2	2003815 ARRESTER, URD, 10KV ELBOW L/A, 8.40 KVRM	\$65.00	\$130.00	Y
4	2003817 ARRESTER, URD, 10KV, BUSHING L/A, 8.40KV	\$0.00	\$0.00	Y
30	2077906 CLAMP, GROUND ROD COPPER 1/2 IN	\$1.50	\$45.00	N
60	2078000 CLAMP, TRANSFORMER GROUND 10-SOL - #1 ST	\$2.22	\$133.20	N
4	2077931 CONNECTOR, VICE CU #2 STR	\$2.31	\$9.24	N
90	2077939 COUPLER, GROUND ROD SECTIONAL, COPPER, T	\$4.23	\$380.70	N
30	2001315 PAD, CONCRETE 40" X 45" X 4" 25- 50KVA T	\$77.11	\$2,313.30	N
0	2001316 PAD, CONCRETE 44" X 52" X 4" 75-250KVA T	\$73.80	\$0.00	N
30	2007395 PADLOCK, RED BRASS BODY 1/4" BRASS SHACK	\$16.07	\$482.10	N
30	2007489 REPELLENT, FIRE ANT GRANULE 4 OZ BIFENTH	\$2.21	\$66.30	N
120	2077980 ROD,GROUND,1/2COPPER 10MI POINT& CHAMFER	\$13.72	\$1,646.40	N
60	2004031 STUD, GALVANIZED, 11 THREAD PER INCH ALL	\$2.47	\$148.20	N
90	2004904 TERMINAL, SLIP FIT AL 5/8 IN 8-POS #2-50	\$16.56	\$1,490.40	N
0	2004948 TERMINAL, SLIP FIT ALUMINUM STUD TYPE, 6	\$6.28	\$0.00	N
0	2004954 TERMINAL, SLIP FIT ALUMINUM STUD TYPE, 6	\$11.56	\$0.00	N
0	2004950 TERMINAL, SLIP FIT ALUMINUM STUD TYPE, 8	\$6.84	\$0.00	N
6	2001518 TX,PM,LP,1P,25 kVA,240/120,FR3,SS	\$1,897.44	\$11,384.64	Y
8	2001519 TX,PM,LP,1P,37.5 kVA,240/120,FR3,SS	\$1,988.15	\$15,905.20	Y
16	2001520 TX,PM,LP,1P,50 kVA,240/120,FR3,SS	\$2,398.05	\$38,368.80	Y
0	2001521 TX,PM,LP,1P,75 kVA,240/120,FR3,SS	\$2,829.19	\$0.00	Y
180	2004184 WIRE, COPPER, BARE, #4 SOFT DRAWN 7 STR	\$0.56	\$100.80	N
6	2078011 WIRE, COPPER, TIE, #6 SOLID SOFT DRAWN	\$0.36	\$2.16	N
	Total		\$72,894.58	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 924957

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
Term Poles - low density 2000 sq ft

Additional Information: Low density URD filing - 2000 sq ft homes
WR Description: LDUG 2000 sq ft TAKEOFFS

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$1,120.56	\$0.00	\$1,120.56
OVERHEAD:	\$156.67	\$0.00	\$156.67
	\$1,277.23	\$0.00	\$1,277.23
LABOR HOURS:	20.86	0	20.86
LABOR COST:	\$837.80	\$0.00	\$837.80
OVERHEAD:	\$1,108.90	\$0.00	\$1,108.90
	\$1,946.70	\$0.00	\$1,946.70
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$3,223.93	\$0.00	\$3,223.93
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$3,223.93	\$0.00	\$3,223.93

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 924957

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?
INSTALL				
4	2003651 ARRESTER, LIGHTNING DISTRIBUTION CLASS 8	\$36.16	\$144.64	Y
4	2077754 BOLT, MACHINE 5/8" X 10", GALV. FULL	\$0.98	\$3.92	N
4	2004661 BRACKET, "L" 11IN PROJECTED LGTH FOR MOU	\$8.59	\$34.36	N
4	2077906 CLAMP, GROUND ROD COPPER 1/2 IN	\$1.50	\$6.00	N
4	2077911 CLAMP, HOT LINE CU TO CU #6 SOL- 2 STR T	\$5.54	\$22.16	N
160	2078012 CONDUCTOR, COPPERWELD, 3 STR. #9, DSA 30	\$0.44	\$70.40	N
4	2077837 CONNECTOR, COMPRESSION H-BLOCK ACSR 2/0	\$0.59	\$2.36	N
8	2077930 CONNECTOR, VICE CU #4 STR	\$1.91	\$15.28	N
15	2077939 COUPLER, GROUND ROD SECTIONAL, COPPER, T	\$4.23	\$63.45	N
4	2003846 CUTOUT, 15KV, 100A FUSE HLDR, 300A UNVRS	\$55.50	\$222.00	Y
4	2077793 FUSE LINK, 80A UNVRS 100A CUTOUT 23" OA	\$5.85	\$23.40	N
4	2077822 KIT, ATTACHMENT, FOR ATTACHING "FLYING"	\$47.49	\$189.96	N
8	2077965 MOULDING, GROUND WIRE, PVC 1/2 IN X 8 FT	\$1.72	\$13.76	N
16	2077980 ROD, GROUND, 1/2 COPPER 10MI POINT & CHAMFER	\$13.72	\$219.52	N
4	2077789 SCREW, LAG PILOT POINT 3/8 X 3	\$0.26	\$1.04	N
40	2077997 STAPLE, SECURES 1/2" PVC MOULDING TO WOO	\$0.25	\$10.00	N
4	2077828 STIRRUP, AL BODY & CU BAIL 1/0-397	\$14.78	\$59.12	N
4	2078006 WASHER, FLAT, GALVANIZED, 2" X 2" X 1/8"	\$0.19	\$0.76	N
12	2004187 WIRE, 125' SPOOL, #2 BARE, STRANDED SOFT	\$0.98	\$11.76	N
4	2004184 WIRE, COPPER, BARE, #4 SOFT DRAWN 7 STR	\$0.56	\$2.35	N
12	2078011 WIRE, COPPER, TIE, #6 SOLID SOFT DRAWN	\$0.36	\$4.32	N
		Total	\$1,120.56	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925017

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
Primary conduit 2000 Sq Ft

Additional Information: Low density 2000 sq ft URD filing

WR Description: LDUG 2000 sq ft PRIMARY CONDUIT

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$11,326.12	\$0.00	\$11,326.12
OVERHEAD:	\$1,583.40	\$0.00	\$1,583.40
	\$12,909.52	\$0.00	\$12,909.52
LABOR HOURS:	210.96	0	210.96
LABOR COST:	\$8,478.43	\$0.00	\$8,478.43
OVERHEAD:	\$11,222.05	\$0.00	\$11,222.05
	\$19,700.48	\$0.00	\$19,700.48
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$32,610.00	\$0.00	\$32,610.00
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$32,610.00	\$0.00	\$32,610.00

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925017

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?
INSTALL				
33	2007227 CEMENT, PVC CLEAR FAST DRY QUART W/DAUBE	\$5.24	\$172.92	N
40	2004389 CONDUIT, GALVANIZED 2 IN 10 FT WITH COUP	\$4.28	\$171.20	Y
16156	2004488 CONDUIT, PVC 2 IN 20 FT BELL END	\$0.39	\$6,300.84	Y
178	2004507 COUPLING, PVC 2 IN SCH 40 TEMS 13.01	\$0.55	\$97.90	N
88	2004395 ELBOW, 2" 90 DEGREE , GALVANIZED, 24" MIN	\$28.56	\$2,513.28	N
1	2004394 ELBOW, GALV 2 INCH 45 DEG THD 15" RADIUS	\$15.35	\$15.35	N
3	2004719 HANDHOLE, SPLICING SINGLE PHASE PRIMARY	\$503.31	\$1,509.93	Y
18157	2007414 TAPE, PULLING, POLYSTER, RATED AT 1250#,	\$0.03	\$544.70	N
	Total		\$11,326.12	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925022

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
Primary cable - 2000 Sq Ft

Additional Information: URD Low Density 2000 PSC filing
WR Description: LDUG 2000 sq ft PRIMARY CABLE

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$36,421.60	\$0.00	\$36,421.60
OVERHEAD:	\$5,091.73	\$0.00	\$5,091.73
	\$41,513.33	\$0.00	\$41,513.33
LABOR HOURS:	170.92	0	170.92
LABOR COST:	\$6,868.92	\$0.00	\$6,868.92
OVERHEAD:	\$9,091.67	\$0.00	\$9,091.67
	\$15,960.59	\$0.00	\$15,960.59
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$57,473.92	\$0.00	\$57,473.92
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$57,473.92	\$0.00	\$57,473.92

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925022

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?
INSTALL				
0	2004577 ANCHOR, LEAD EXPANSION, MEDIUM DUTY, SIZ	\$0.65	\$0.00	N
0	2003157 BOLT, 1/2" - 13 X 1-1/2" 18-8 SS HEX HEA	\$2.59	\$0.00	N
0	2003167 BOLT, MACHINE GALV HEX HEAD 5/8 X 1-1/4"	\$0.18	\$0.00	N
17859	2004343 CABLE, ALUMINUM, 15KV, 1/C, 1/0 AWG SOLI	\$1.91	\$31,062.33	Y
4	2004514 CAP, CONDUIT 2"	\$11.51	\$46.04	N
4	2004453 CAP, END CABLE 600 V CABLE RANGE .940 -	\$1.69	\$6.76	N
4	2003752 CLAMP, CONDUIT GROUND 1-1/4 IN - 2 IN CO	\$7.73	\$30.92	N
0	2077906 CLAMP, GROUND ROD COPPER 1/2 IN	\$1.50	\$0.00	N
80	2004488 CONDUIT, PVC 2 IN 20 FT BELL END	\$0.39	\$31.20	Y
8	2077837 CONNECTOR, COMPRESSION H-BLOCK ACSR 2/0	\$0.59	\$4.72	N
0	2005009 CONNECTOR, LDBRK 8.3/14.4KV 200A 3POS	\$97.38	\$0.00	N
77	2077931 CONNECTOR, VICE CU #2 STR	\$2.31	\$177.87	N
0	2077939 COUPLER, GROUND ROD SECTIONAL, COPPER, T	\$4.23	\$0.00	N
0	2004982 ENCLOSURE, 200A AL SWITCH MOD/1 PH DUMMY	\$798.98	\$0.00	Y
0	2001315 PAD, CONCRETE 40" X 45" X 4" 25- 50KVA T	\$77.11	\$0.00	N
0	2007394 PADLOCK, GREEN TESS SOLID BRASS BODY P/N	\$16.65	\$0.00	N
0	2007489 REPELLENT, FIRE ANT GRANULE 4 OZ BIFENTH	\$2.21	\$0.00	N
0	2077980 ROD,GROUND,1/2COPPER 10MI POINT& CHAMFER	\$13.72	\$0.00	N
32	2004403 STRAP, GALV 2 IN 2 HOLE	\$0.22	\$7.04	N
61	2004883 TERMINATOR, LOADBREAK 200 AMP	\$30.70	\$1,872.70	Y
4	2004634 TERMINATOR, POTHEAD 15KV OUTDOOR W/STEM	\$32.39	\$129.56	Y
0	2078005 WASHER, FLAT, GALVANIZED, 2" X 2" X 1/8	\$0.23	\$0.00	N
0	2078006 WASHER, FLAT, GALVANIZED, 2" X 2" X 1/8"	\$0.19	\$0.00	N
8	2004184 WIRE, COPPER, BARE, #4 SOFT DRAWN 7 STR	\$0.56	\$4.48	N
		Total	\$36,421.60	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925024

Date Sched: 3/23/18

Date Required: 3/30/18

Contact Name:

Distribution Services
Sec Cable and Handholes 2000 sq ft

Additional Information: URD low density 2000 homes - PSC filing
WR Description: LDUG 2000 sq ft SECONDARY CABLE

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$6,265.23	\$0.00	\$6,265.23
OVERHEAD:	\$875.88	\$0.00	\$875.88
	\$7,141.11	\$0.00	\$7,141.11
LABOR HOURS:	134.4	0	134.4
LABOR COST:	\$5,401.32	\$0.00	\$5,401.32
OVERHEAD:	\$7,149.18	\$0.00	\$7,149.18
	\$12,550.50	\$0.00	\$12,550.50
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$19,691.61	\$0.00	\$19,691.61
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$19,691.61	\$0.00	\$19,691.61

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925024

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?	
INSTALL					
0	2004351	CABLE, CONVERSE, AL, UG, 600V, 2/C, 2/0,	\$0.96	\$0.00	Y
0	2004356	CABLE, RIDER,AL,UG,600V,2/C,500 MCM, 37	\$3.89	\$0.00	Y
2605	2004354	CABLE,SWEETBRIAR, AL,UG,600V,2/C,4/0 AWG	\$1.34	\$3,490.97	Y
0	2005021	CONNECTOR, 600V URD, 4 POSITION, CONDUCT	\$13.97	\$0.00	N
0	2005022	CONNECTOR, 600V URD, 6 POSITION, CONDUCT	\$12.08	\$0.00	N
69	2005024	CONNECTOR, 600V URD, 6 POSITION, CONDUCT	\$19.14	\$1,320.66	N
0	2005025	CONNECTOR, 600V, URD, 8 POSITION, CONDUCT	\$25.55	\$0.00	N
0	2005020	CONNECTOR, URD 600 V 4 POSITION #10-350M	\$9.62	\$0.00	N
0	2004730	HANDHOLE, NON-METALLIC CONST 12" TO 14"	\$43.26	\$0.00	N
23	2004734	HANDHOLE, SECONDARY URD 17" X 30"	\$61.47	\$1,413.81	N
23	2005212	MARKER, CURB LEXAN .040 THICK, ROUND 2.5	\$1.73	\$39.79	N
Total			\$6,265.23		



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925026

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
Secondary conduit-2000 sq ft

Additional Information: URD low density 2000 sq ft PSC filing

WR Description: LDUG 2000 sq ft SECONDARY CONDUIT

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$2,826.01	\$0.00	\$2,826.01
OVERHEAD:	\$395.06	\$0.00	\$395.06
	\$3,221.07	\$0.00	\$3,221.07
LABOR HOURS:	62.52	0	62.52
LABOR COST:	\$2,512.55	\$0.00	\$2,512.55
OVERHEAD:	\$3,325.60	\$0.00	\$3,325.60
	\$5,838.15	\$0.00	\$5,838.15
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$9,059.22	\$0.00	\$9,059.22
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$9,059.22	\$0.00	\$9,059.22

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925026

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?
INSTALL				
1	2007227 CEMENT, PVC CLEAR FAST DRY QUART W/DAUBE	\$5.24	\$5.24	N
8	2007228 CEMENT, PVC GRAY MEDIUM DRY QUART W/DAUB	\$6.03	\$48.24	N
0	2004488 CONDUIT, PVC 2 IN 20 FT BELL END	\$0.39	\$0.00	Y
340	2004517 CONDUIT, PVC P & C 3 IN 20 FT	\$0.53	\$180.20	Y
1871	2004529 CONDUIT, PVC, 4" X 20', DB-60-TC-6	\$1.01	\$1,889.71	Y
0	2004507 COUPLING, PVC 2 IN SCH 40 TEMS 13.01	\$0.55	\$0.00	N
8	2004521 COUPLING, PVC 3 IN SCH 40 TEMS 13.01	\$3.15	\$25.20	N
84	2004535 COUPLING, PVC 4 IN SCH 40 TEMS 13.01	\$3.72	\$312.48	N
0	2004511 ELBOW, CONDUIT PVC 2 IN SCH 40 90 DEG 9-	\$1.13	\$0.00	N
0	2004427 ELBOW, GALV 4 IN 45 DEG THD 16 IN RAD	\$39.91	\$0.00	N
0	2004510 ELBOW, PVC 2 IN 45 DEG 9-1/2 IN RAD SCH	\$0.88	\$0.00	N
0	2004523 ELBOW, PVC 3 IN 45 DEG 13 IN RAD SCH 40	\$3.19	\$0.00	N
4	2004524 ELBOW, PVC 3 IN 90 DEG 13 IN RAD SCH 40	\$3.48	\$13.92	N
42	2004538 ELBOW, PVC 4", 90 DEG., 16" RADIUS, SCHE	\$6.53	\$274.26	N
2559	2007414 TAPE, PULLING, POLYSTER, RATED AT 1250#,	\$0.03	\$76.76	N
		Total	\$2,826.01	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925028

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
Service Cable-2000 sq ft

Additional Information: Low density URD filing 2000 sq ft
WR Description: LDUG 2000 sq ft SERVICE CABLE

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$21,509.90	\$0.00	\$21,509.90
OVERHEAD:	\$3,007.08	\$0.00	\$3,007.08
	\$24,516.98	\$0.00	\$24,516.98
LABOR HOURS:	1.94	0	1.94
LABOR COST:	\$78.03	\$0.00	\$78.03
OVERHEAD:	\$103.26	\$0.00	\$103.26
	\$181.29	\$0.00	\$181.29
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$24,698.27	\$0.00	\$24,698.27
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$24,698.27	\$0.00	\$24,698.27

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925028

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?	
INSTALL					
16986	2004351	CABLE, CONVERSE, AL, UG, 600V, 2/C, 2/0,	\$0.96	\$16,306.46	Y
3883	2004354	CABLE, SWEETBRIAR, AL, UG, 600V, 2/C, 4/0 AWG	\$1.34	\$5,203.49	Y
Total			\$21,509.90		



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925029

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
Meter Labor- 2000 sq ft

Additional Information: Low density URD filing 2000 sq ft homes

WR Description: LDUG 2000 sq ft METERS

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	42	0	42
LABOR COST:	\$1,687.98	\$0.00	\$1,687.98
OVERHEAD:	\$2,234.21	\$0.00	\$2,234.21
	\$3,922.19	\$0.00	\$3,922.19
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$3,922.19	\$0.00	\$3,922.19
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$3,922.19	\$0.00	\$3,922.19

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925030

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
Service Conduit- 2000 sq ft

Additional Information: Low density URD filing for 2000 sq ft homes

WR Description: LDUG 2000 sq ft SERVICE CONDUIT

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$13,001.02	\$0.00	\$13,001.02
OVERHEAD:	\$1,817.56	\$0.00	\$1,817.56
	\$14,818.58	\$0.00	\$14,818.58
LABOR HOURS:	766.56	0	766.56
LABOR COST:	\$30,809.26	\$0.00	\$30,809.26
OVERHEAD:	\$40,779.14	\$0.00	\$40,779.14
	\$71,588.40	\$0.00	\$71,588.40
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$86,406.98	\$0.00	\$86,406.98
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$86,406.98	\$0.00	\$86,406.98

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925030

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?	
INSTALL					
188	2004493	ADAPTOR, 2" PVC, FEMALE SLIP TO MALE THR	\$0.32	\$60.16	N
23	2004492	ADPTR,COND PVC FMLE 2" SCH 40 SOCXFPT	\$0.46	\$10.58	N
37	2007227	CEMENT, PVC CLEAR FAST DRY QUART W/DAUBE	\$5.24	\$193.88	N
23	2004409	COND,SRVC RISER,TYPE IIPVC,40,2.5"X7"	\$6.50	\$149.50	N
15237	2004488	CONDUIT, PVC 2 IN 20 FT BELL END	\$0.39	\$5,942.43	Y
2070	2004491	CONDUIT, PVC 2 IN 250 FT ROLL FLEXIBLE	\$0.90	\$1,863.00	N
23	2004518	CONDUIT, PVC 3 IN X 250 FT ROLL FLEXIBL	\$1.75	\$40.25	N
3121	2004517	CONDUIT, PVC P & C 3 IN 20 FT	\$0.53	\$1,654.13	Y
188	2004401	CONDUIT, SERVICE RISER, PVC, 2"	\$4.68	\$879.84	N
754	2004507	COUPLING, PVC 2 IN SCH 40 TEMS 13.01	\$0.55	\$414.70	N
138	2004521	COUPLING, PVC 3 IN SCH 40 TEMS 13.01	\$3.15	\$434.70	N
504	2004511	ELBOW, CONDUIT PVC 2 IN SCH 40 90 DEG 9-	\$1.13	\$569.52	N
0	2004510	ELBOW, PVC 2 IN 45 DEG 9-1/2 IN RAD SCH	\$0.88	\$0.00	N
0	2004523	ELBOW, PVC 3 IN 45 DEG 13 IN RAD SCH 40	\$3.19	\$0.00	N
69	2004524	ELBOW, PVC 3 IN 90 DEG 13 IN RAD SCH 40	\$3.48	\$240.12	N
188	2004396	NUT, LOCK GALV 2 IN	\$0.54	\$101.52	N
23	2004408	NUT, LOCK GALV 2-1/2 IN	\$0.65	\$14.95	N
14391	2007414	TAPE, PULLING, POLYSTER, RATED AT 1250#,	\$0.03	\$431.74	N
Total			\$13,001.02		

OH Construction Cost Data Summary
Low Density (210-Lot) OH Subdivision Costs

Line #	A Work Type/WR #	B Description	C (C + M) Material and Handling	D Material	E (F + L) Total Labor Plus Vehicles	F (G + H + I) Total Labor	G Base Labor	H (G x J x TLF) TEC Labor Overheads	I (G x K x CLF) Contract Labor Overheads	J TEC Work %	K Contractor Work %	L Vehicle	M (D x MHR) Material Handling	N (C+E) Total
1	Transformers													
2	925037	Install & Ground Transformers	48,402.29	\$42,465.60	16,916.64	14,846.64	8,596.38	5,584.90	685.38	60%	40%	\$2,070.01	5,936.69	65,318.94
3														
4	Primary													
5	925038	Install Primary Line Includes Grounding Primary Takeoffs	3,316.46	\$2,909.69	8,774.62	7,700.91	4,458.92	2,896.87	345.12	60%	40%	\$1,073.71	406.77	12,091.08
6														
7	Poles													
8	925039	Install Poles and Guy Stubs Includes Haul Poles Out	33,276.02	\$29,194.61	53,774.17	47,194.08	27,325.94	17,753.12	2,115.03	60%	40%	\$6,580.09	4,081.41	87,050.19
9														
10	Secondary													
11	925040	Install Secondary Cable	28,077.58	\$22,879.08	31,733.84	27,850.72	16,125.90	10,476.67	1,248.14	60%	40%	\$3,883.12	3,198.50	57,811.41
12														
13	Services													
14	926547	Install Service Cable & Meters	10,356.10	\$16,104.72	15,898.37	13,777.44	7,977.30	5,182.89	617.44	60%	40%	\$1,920.93	2,251.44	34,054.53
15														
16														
17	Engineering	Design/Inspection/Coordination	-	-	13,788.39	13,788.39	-	-	-	100%	0%	-	-	13,788.39
18														
19	Tree Trim													
20														
21	Totals (Sum of lines 2, 5, 8, 11, 14, 17, and 19)			\$ 128,428.51	\$ 113,553.70	\$ 140,666.03	\$ 125,158.18	\$ 64,484.44	\$ 41,894.25	\$ 4,991.10		\$ 15,527.85	\$ 15,874.81	\$ 270,114.54
22	Cost per Lot (line 21 / 210 lots)			\$ 616.33		\$ 669.93								\$ 1,286.26

Adjustment Factors	
TEC Operations Labor Overhead Factor	TLF = 1.0628
Contractor Labor Overhead Factor	CLF = 0.1935
Current year material handling charge rate	MHR = 0.1398

Low Density - 210 Lots - Overhead Material List

This worksheet lists the totals for major materials to be listed on the associated work request print as requested by the PSC.

1225.0	Total Connected KVA
1258.9	Total peak demand KVA
0	25 kVA Transformers
4	37.5 kVA Transformers
17	50 kVA Transformers
3	75 kVA Transformers
10130	#2AAAC Primary
65	Primary Poles
0	2/0 AWG Triplex Secondary
8000	4/0 AWG Triplex Secondary
2135	#2AAAC Secondary Neutral
1515	2-2/0 & 1-1/0 AL Triplex Service Drop (considered secondary)
545	2-4/0 & 1-2/0 AL Triplex Service Drop (considered secondary)
35	Secondary Poles
9360	2-2/0 & 1-1/0 AL Triplex Service Drop
0	2-4/0 & 1-2/0 AL Triplex Service Drop

Summary of assemblies (CU's) for Low Density 2000 sq ft Overhead Design - March 2018

Work Request #1	024015 - Transformers (enter these Construction Units into WorkPro)							
Assemblies ==>	25 KVA PKT11W3F	37.5 KVA PKT11W4F	50 KVA PKT11W5F	75 KVA PKT11W6F	Stirrup ALSTRP1/0	Spacer SEWC	Grounding GRDMEG1/2	
Total Quantities ==>	0	4	17	3	24	24	24	

Work Request #2	024015 - Primary							
Assemblies ==>	#2 AAAC WIOPA	1st span WIO1F	Add'l WIO1A	Fused cutout PKP102WB3A	Deadend & tap PKP101WA3A	2 way lateral PKP105WA4A	Fuse FLOH103	Grounding GRDMEG1/2
Total Quantities ==>	10130	19	43	2	7	2	2	5

Work Request #3	024015 - Poles and Guys												
Should be ==>	Pole haul	1ø tangent	1ø tangent	1ø Deadend	1ø angle <20	1ø angle <20	1ø angle >20	1ø angle >20	3 ø	Down guys	Pole hardware	Guy wire	Down guys
Assemblies ==>	POLE_HAUL	STP101_TAN_40C2	STP101_TAN_45C2	STP401_DE_40C2	STP101_ANG_40C2	STP101_ANG_45C2	STP301_RC_40C2	STP301_RC_45C2	STP104_TAN_45C2	PKG12W2H	PKG31W1H	GUYSTR3/8	PKG11W1H
Total Quantities ==>	65	12	1	11	20	1	17	1	2	56	2	70	0

Work Request #4	024015 - Secondary - From Secondary&Neutral worksheet										
Assemblies ==>	2/0 WIO3SB	4/0 WIO3SC	#2 Neutral WIOPA	1st span WIO1F	Add'l WIO1A	1st span WIOCF	Add'l WIOCA	Eyebolt SEW1DEN	Eyenuit SEG1DEN	DE+Bolt PKS11W	CABLEOPEN
Total Quantities ==>	0	8000	2135	9	2	33	20	4	12	30	12

More of Work Request #4	024015 - Secondary continued - From Secondary&Neutral worksheet and SlackSecondary (service cable) & Secondary Poles worksheet										
Assemblies ==>	Pole hardware PKG31W1H	Guy wire GUYSTR3/8	POLE_HAUL	35' Class 4 STS11C	35' Class 6 STS11B	30' Class 6 STS11A	Down guy PKG11W1H	PKS21G	CA2/0TPX	CA4/0TPX	SVLABOR
Total Quantities ==>	16	1390	35	35	0	0	0	34	1515	545	34

Work Request #5	024015 - Services			
Assemblies ==>	CA2/0TPX	CA4/0TPX	SVLABOR	METERLABOR
Total Quantities ==>	9360	0	0	210



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925037

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
LDOH 2000 sq ft Transformers

Additional Information: Used for Low Density 2000 sq ft 3.5 ton ac

WR Description: LDOH 2000 sq ft TRANSFORMERS

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$42,465.60	\$0.00	\$42,465.60
OVERHEAD:	\$5,936.68	\$0.00	\$5,936.68
	\$48,402.28	\$0.00	\$48,402.28
LABOR HOURS:	213.89	0	213.89
LABOR COST:	\$8,596.38	\$0.00	\$8,596.38
OVERHEAD:	\$11,378.17	\$0.00	\$11,378.17
	\$19,974.55	\$0.00	\$19,974.55
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$68,376.83	\$0.00	\$68,376.83
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$68,376.83	\$0.00	\$68,376.83

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925037

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?	
INSTALL					
24	2003646	ARRESTER, LIGHTNING DISTRIBUTION CLASS 1	\$25.65	\$615.60	Y
24	2077754	BOLT, MACHINE 5/8" X 10", GALV. FULL	\$0.98	\$23.52	N
48	2077755	BOLT, MACHINE 5/8" X 12", GALV. FULL	\$1.02	\$48.96	N
24	2003690	BRACKET, CUTOUT, ARRESTER & POTHEAD DWG	\$6.41	\$153.84	N
24	2004660	BRACKET,"L" 5-5/8"IN LENGTH FOR MTG CUTO	\$9.94	\$238.56	N
312	2004197	CABLE, HANDCOIL, COPPER, 600V, 2/0 AWG,	\$2.11	\$658.32	N
36	2004199	CABLE, HANDCOIL, COPPER, 600V, 4/0 AWG,	\$3.58	\$128.88	N
24	2077906	CLAMP, GROUND ROD COPPER 1/2 IN	\$1.50	\$36.00	N
24	2077911	CLAMP, HOT LINE CU TO CU #6 SOL- 2 STR T	\$5.54	\$132.96	N
48	2078000	CLAMP, TRANSFORMER GROUND 10-SOL - #1 ST	\$2.22	\$106.56	N
960	2078012	CONDUCTOR, COPPERWELD, 3 STR. #9, DSA 30	\$0.44	\$422.40	N
6	2003528	CONNECTOR, 2-BOLT AL MAIN 336-500MCM TAP	\$22.08	\$132.48	N
63	2077839	CONNECTOR, COMPRESSION H-BLOCK ACSR 1/0-	\$0.47	\$29.61	N
24	2077837	CONNECTOR, COMPRESSION H-BLOCK ACSR 2/0	\$0.59	\$14.16	N
3	2077845	CONNECTOR, COMPRESSION H-BLOCK ACSR 4/0	\$0.63	\$1.89	N
96	2077930	CONNECTOR, VICE CU #4 STR	\$1.91	\$183.36	N
72	2077939	COUPLER, GROUND ROD SECTIONAL, COPPER, T	\$4.23	\$304.56	N
42	2003516	COVER, SNAP-ON SQUEEZON CONNECTOR D DIE	\$0.40	\$16.80	N
24	2003846	CUTOUT, 15KV, 100A FUSE HLDR, 300A UNVRS	\$55.50	\$1,332.00	Y
17	2077806	FUSE LINK, 10A UNVRS 100A CUTOUT 23" OA	\$4.05	\$68.85	N
3	2077807	FUSE LINK, 15A UNVRS 100A CUTOUT 23" OA	\$3.39	\$10.17	N
4	2077805	FUSE LINK, 7A UNVRS 100A CUTOUT 23" OAL	\$3.77	\$15.08	N
48	2077965	MOULDING, GROUND WIRE, PVC 1/2 IN X 8 FT	\$1.72	\$82.56	N
24	2007368	PROTECTOR, WILD LIFE, SLIP-ON TYPE	\$4.78	\$114.72	N
96	2077980	ROD,GROUND,1/2COPPER 10MI POINT& CHAMFER	\$13.72	\$1,317.12	N
24	2077767	ROLLED BOLT, DOUBLE-ARMING, 5/8"X 16"	\$2.14	\$51.36	N
24	2077789	SCREW, LAG PILOT POINT 3/8 X 3	\$0.26	\$6.24	N
24	2077812	SPACER, CABLED SECONDARY	\$6.79	\$162.96	N
240	2077997	STAPLE, SECURES 1/2" PVC MOULDING TO WOO	\$0.25	\$60.00	N
24	2077826	STIRRUP, AL BODY & CU BAIL 2-4/0	\$8.72	\$209.28	N
4	2001368	TX,OH,37.5 KVA,7.62/13.2Y,120/240,FR3	\$1,258.10	\$5,032.40	Y
17	2001369	TX,OH,50 KVA,7.62/13.2Y,120/240,FR3	\$1,449.53	\$24,642.01	Y
3	2001370	TX,OH,75 KVA,7.62/13.2Y,120/240,FR3	\$1,984.79	\$5,954.37	Y
120	2078006	WASHER, FLAT, GALVANIZED, 2" X 2" X 1/8"	\$0.19	\$22.80	N
72	2078014	WIRE, ALUMINUM, TIE, #4 BARE ANNEALED	\$0.09	\$6.48	N
76	2004184	WIRE, COPPER, BARE, #4 SOFT DRAWN 7 STR	\$0.56	\$42.34	N
240	2078011	WIRE, COPPER, TIE, #6 SOLID SOFT DRAWN	\$0.36	\$86.40	N
Total			\$42,465.60		



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925038

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
LDOH 2000 sq ft Primary

Additional Information: Used for 2000 square foot design

WR Description: LDOH 2000 sq ft PRIMARY

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$2,909.69	\$0.00	\$2,909.69
OVERHEAD:	\$406.76	\$0.00	\$406.76
	\$3,316.45	\$0.00	\$3,316.45
LABOR HOURS:	110.96	0	110.96
LABOR COST:	\$4,458.92	\$0.00	\$4,458.92
OVERHEAD:	\$5,901.81	\$0.00	\$5,901.81
	\$10,360.73	\$0.00	\$10,360.73
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$13,677.18	\$0.00	\$13,677.18
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$13,677.18	\$0.00	\$13,677.18

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925038

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?
INSTALL				
5	2003646 ARRESTER, LIGHTNING DISTRIBUTION CLASS 1	\$25.65	\$128.25	Y
9	2077739 BOLT, EYE, 5/8 IN. X 10 IN., GALVANIZED	\$3.12	\$28.08	N
7	2077754 BOLT, MACHINE 5/8" X 10", GALV. FULL	\$0.98	\$6.86	N
2	2077780 BOLT, SPOOL, 5/8" X 10", GALV. SINGLE UP	\$3.33	\$6.66	N
5	2003681 BRACKET, "L", LIGHTNING ARRESTER 10 KV	\$6.00	\$30.00	N
2	2003685 BRACKET, FIBERGLASS STANDOFF VERTICAL PI	\$25.91	\$51.82	N
2	2004660 BRACKET,"L" 5-5/8"IN LENGTH FOR MTG CUTO	\$9.94	\$19.88	N
18	2077818 CLAMP, DEADEND ACSR OR AAC #2-4/0OR .30-	\$9.04	\$162.72	N
5	2077906 CLAMP, GROUND ROD COPPER 1/2 IN	\$1.50	\$7.50	N
16	2077911 CLAMP, HOT LINE CU TO CU #6 SOL- 2 STR T	\$5.54	\$88.64	N
10637	2004331 CONDUCTOR, BARE OVERHEAD, 2 AWG, AAAC, 7	\$0.13	\$1,382.75	Y
200	2078012 CONDUCTOR, COPPERWELD, 3 STR. #9, DSA 30	\$0.44	\$88.00	N
22	2077838 CONNECTOR, COMPRESSION H-BLOCK ACSR #2-1	\$0.36	\$7.92	N
16	2077837 CONNECTOR, COMPRESSION H-BLOCK ACSR 2/0	\$0.59	\$9.44	N
10	2077930 CONNECTOR, VICE CU #4 STR	\$1.91	\$19.10	N
15	2077939 COUPLER, GROUND ROD SECTIONAL, COPPER, T	\$4.23	\$63.45	N
2	2003846 CUTOUT, 15KV, 100A FUSE HLDR, 300A UNVRS	\$55.50	\$111.00	Y
4	2077765 DOUBLE-ARMING, GALVANIZED 5/8 "X 12"	\$2.35	\$9.40	N
2	2077794 FUSE LINK, 103A UNVRSL 100A CUTOUT 23" O	\$24.35	\$48.70	N
2	2077954 INSULATOR, PIN TYPE, 10KV, ANSI CLASS 55	\$3.31	\$6.62	N
2	2077952 INSULATOR, SPOOL, ANSI CLASS 53-3, TRANS	\$0.78	\$1.56	N
9	2077959 INSULATOR, SUSPENSION, POLYMER, 25KV, AP	\$11.86	\$106.74	N
10	2077965 MOULDING, GROUND WIRE, PVC 1/2 IN X 8 FT	\$1.72	\$17.20	N
9	2077783 NUT, EYE, STANDARD, 1-1/2" GALVANIZED FO	\$1.28	\$11.52	N
20	2077980 ROD,GROUND,1/2COPPER 10MI POINT& CHAMFER	\$13.72	\$274.40	N
7	2077789 SCREW, LAG PILOT POINT 3/8 X 3	\$0.26	\$1.82	N
50	2077997 STAPLE, SECURES 1/2" PVC MOULDING TO WOO	\$0.25	\$12.50	N
2	2077828 STIRRUP, AL BODY & CU BAIL 1/0-397	\$14.78	\$29.56	N
14	2077826 STIRRUP, AL BODY & CU BAIL 2-4/0	\$8.72	\$122.08	N
2	2003613 TIE, TOP, FORMED WIRE #2 ACSR OR #2 AAAC	\$3.13	\$6.26	N
22	2078006 WASHER, FLAT, GALVANIZED, 2" X 2" X 1/8"	\$0.19	\$4.18	N
4	2078014 WIRE, ALUMINUM, TIE, #4 BARE ANNEALED	\$0.09	\$0.36	N
67	2004184 WIRE, COPPER, BARE, #4 SOFT DRAWN 7 STR	\$0.56	\$37.52	N
20	2078011 WIRE, COPPER, TIE, #6 SOLID SOFT DRAWN	\$0.36	\$7.20	N
	Total		\$2,909.68	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925039

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
LDOH 2000 sq ft - POLES

Additional Information: Used for 2000 square foot design

WR Description: LDOH 2000 sq ft POLES

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$29,194.61	\$0.00	\$29,194.61
OVERHEAD:	\$4,081.41	\$0.00	\$4,081.41
	\$33,276.02	\$0.00	\$33,276.02
LABOR HOURS:	679.95	0	679.95
LABOR COST:	\$27,325.94	\$0.00	\$27,325.94
OVERHEAD:	\$36,168.60	\$0.00	\$36,168.60
	\$63,494.54	\$0.00	\$63,494.54
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$96,770.56	\$0.00	\$96,770.56
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$96,770.56	\$0.00	\$96,770.56

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925039

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?	
INSTALL					
114	2077764	3/4" BOLT, MACHINE 3/4" X 12", GALV.	\$1.62	\$184.68	N
56	2003632	ANCHOR, SCRW GALV 10" WING 1-1/4" ROD 8"	\$43.05	\$2,410.80	N
37	2077739	BOLT, EYE, 5/8 IN. X 10 IN., GALVANIZED	\$3.12	\$115.44	N
68	2077754	BOLT, MACHINE 5/8" X 10", GALV. FULL	\$0.98	\$66.64	N
44	2077755	BOLT, MACHINE 5/8" X 12", GALV. FULL	\$1.02	\$44.88	N
40	2077753	BOLT, MACHINE 5/8" X 8", GALV.	\$1.02	\$40.80	N
2	2077780	BOLT, SPOOL, 5/8" X 10", GALV. SINGLE UP	\$3.33	\$6.66	N
4	2003685	BRACKET, FIBERGLASS STANDOFF VERTICAL PI	\$25.91	\$103.64	N
18	2077818	CLAMP, DEADEND ACSR OR AAC #2-4/0OR .30-	\$9.04	\$162.72	N
19	2003508	CLAMP, SUSPENSION AL ANGLE RANGE .50 TO	\$12.87	\$244.53	N
40	2077924	CLEVIS, STEEL LESS INSULATOR 5/8 IN PIN	\$7.27	\$290.80	N
315	2078012	CONDUCTOR, COPPERWELD, 3 STR. #9, DSA 30	\$0.44	\$138.60	N
60	2077837	CONNECTOR, COMPRESSION H-BLOCK ACSR 2/0	\$0.59	\$35.40	N
63	2077930	CONNECTOR, VICE CU #4 STR	\$1.91	\$120.33	N
4	2077765	DOUBLE-ARMING, GALVANIZED 5/8 "X 12"	\$2.35	\$9.40	N
56	2003636	EXTENSION ROD, ANCHOR 1-1/4 X 72 6 FT	\$44.02	\$2,465.12	N
226	2077949	GRIP, GUY, FORMED WIRE 3/8 INTWISTED LOO	\$2.25	\$508.50	N
37	2077862	GUARD, LINE #2 ACSR & AAAC STR 6/1, 7	\$1.79	\$66.23	N
114	2077951	HOOK, GUY	\$2.67	\$304.38	N
40	2077954	INSULATOR, PIN TYPE, 10KV, ANSI CLASS 55	\$3.31	\$132.40	N
2	2077952	INSULATOR, SPOOL, ANSI CLASS 53-3, TRANS	\$0.78	\$1.56	N
58	2077961	INSULATOR, STRAIN FIBERGLASS 36 IN 15,00	\$15.53	\$900.74	N
37	2077959	INSULATOR, SUSPENSION, POLYMER, 25KV, AP	\$11.86	\$438.82	N
56	2077979	MARKER, GUY WIRE PLASTIC 8' IN LENGTH CO	\$4.37	\$244.72	N
36	2077974	PIN, POLE TOP, PRESSED STEEL 18" LONG, 1	\$7.58	\$272.88	N
60	2002857	POLE, WOOD, 40FT CLASS 2, CCA TREATED	\$268.91	\$16,134.60	Y
5	2002858	POLE, WOOD, 45 FT CLASS 2, CCA TREATED.	\$318.48	\$1,592.40	Y
31	2077767	ROLLED BOLT, DOUBLE-ARMING, 5/8"X 16"	\$2.14	\$66.34	N
114	2077790	SCREW, LAG 1/2" X 4", GALV., TWIST DRIVE	\$0.38	\$43.32	N
71	2077812	SPACER, CABLED SECONDARY	\$6.79	\$482.09	N
21	2003612	TIE, PREFORMED SIDE TIE #2 ACSR OR #2 A	\$2.18	\$45.78	N
19	2003613	TIE, TOP, FORMED WIRE #2 ACSR OR #2 AAAC	\$3.13	\$59.47	N
114	2078002	WASHER, CURVED, MALLEABLE, 3" X 3"	\$0.96	\$109.44	N
221	2078006	WASHER, FLAT, GALVANIZED, 2" X 2" X 1/8"	\$0.19	\$41.99	N
217	2078014	WIRE, ALUMINUM, TIE, #4 BARE ANNEALED	\$0.09	\$19.53	N
4774	2005879	WIRE, GUY, GALV STEEL, 3/8 IN 7 STR HS B	\$0.27	\$1,288.98	N
		Total		\$29,194.61	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925040

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
LDOH 2000 sq ft Secondary

Additional Information: Used for 2000 sq ft 3.5 TON AC design

WR Description: LDOH 2000 sq ft SECONDARY

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$22,879.08	\$0.00	\$22,879.08
OVERHEAD:	\$3,502.79	\$0.00	\$3,502.79
	\$26,381.87	\$0.00	\$26,381.87
LABOR HOURS:	401.21	0	401.21
LABOR COST:	\$16,125.90	\$0.00	\$16,125.90
OVERHEAD:	\$23,269.67	\$0.00	\$23,269.67
	\$39,395.57	\$0.00	\$39,395.57
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$65,777.44	\$0.00	\$65,777.44
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$65,777.44	\$0.00	\$65,777.44

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925040

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?	
INSTALL					
24	2077764	æBOLT, MACHINE 3/4" X 12", GALV.	\$1.62	\$38.88	N
8	2003632	ANCHOR,SCRW GALV 10" WING 1-1/4" ROD 8"	\$43.05	\$344.40	N
34	2077739	BOLT, EYE, 5/8 IN. X 10 IN., GALVANIZED	\$3.12	\$106.08	N
8	2077755	BOLT, MACHINE 5/8" X 12", GALV. FULL	\$1.02	\$8.16	N
8400	2004339	CABLE, OVERHEAD SECONDARY, TRIPLEX, 4/0	\$1.54	\$12,936.00	Y
1591	2004364	CABLE, SERVICE DROP AL 2-2/0 & 1-1/0 NEU	\$0.91	\$1,447.63	Y
627	2004366	CABLE, SERVICE DROP AL 2-4/0 & 1-2/0 NEU	\$1.34	\$839.91	Y
64	2077818	CLAMP, DEADEND ACSR OR AAC #2-4/0OR .30-	\$9.04	\$578.56	N
2242	2004331	CONDUCTOR, BARE OVERHEAD, 2 AWG, AAAC, 7	\$0.13	\$291.43	Y
192	2077839	CONNECTOR, COMPRESSION H-BLOCK ACSR 1/0-	\$0.47	\$90.24	N
30	2077837	CONNECTOR, COMPRESSION H-BLOCK ACSR 2/0	\$0.59	\$17.70	N
30	2077931	CONNECTOR, VICE CU #2 STR	\$2.31	\$69.30	N
128	2003516	COVER, SNAP-ON SQUEEZON CONNECTOR D DIE	\$0.40	\$51.20	N
8	2003636	EXTENSION ROD, ANCHOR 1-1/4 X 72 6 FT	\$44.02	\$352.16	N
32	2077949	GRIP, GUY, FORMED WIRE 3/8 INTWISTED LOO	\$2.25	\$72.00	N
24	2077951	HOOK, GUY	\$2.67	\$64.08	N
16	2077961	INSULATOR, STRAIN FIBERGLASS 36 IN 15,00	\$15.53	\$248.48	N
8	2077979	MARKER, GUY WIRE PLASTIC 8' IN LENGTH CO	\$4.37	\$34.96	N
46	2077783	NUT, EYE, STANDARD, 1-1/2" GALVANIZED FO	\$1.28	\$58.88	N
0	2002836	POLE, WOOD 30 FT CLASS 6 CCA TREATED NO	\$82.28	\$0.00	Y
35	2002842	POLE, WOOD, 35 FT, CLASS 4, CCA TREATED.	\$139.96	\$4,898.60	Y
35	2077767	ROLLED BOLT, DOUBLE-ARMING, 5/8"X 16"	\$2.14	\$74.90	N
24	2077790	SCREW, LAG 1/2" X 4", GALV., TWIST DRIVE	\$0.38	\$9.12	N
35	2077812	SPACER, CABLED SECONDARY	\$6.79	\$237.65	N
24	2078002	WASHER, CURVED, MALLEABLE, 3" X 3"	\$0.96	\$23.04	N
108	2078006	WASHER, FLAT, GALVANIZED, 2" X 2" X 1/8"	\$0.19	\$20.52	N
105	2078014	WIRE, ALUMINUM, TIE, #4 BARE ANNEALED	\$0.09	\$9.45	N
60	2004184	WIRE, COPPER, BARE, #4 SOFT DRAWN 7 STR	\$0.56	\$33.60	N
1726	2005879	WIRE, GUY, GALV STEEL, 3/8 IN 7 STR HS B	\$0.27	\$466.02	N
Total			\$23,422.84		



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 926547

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
LDOH 2000 sq ft SERVICE

Additional Information: Used for 2000 square foot design

WR Description: LDOH 2000 sq ft SERVICE

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$8,956.26	\$0.00	\$8,956.26
OVERHEAD:	\$1,252.09	\$0.00	\$1,252.09
	\$10,208.35	\$0.00	\$10,208.35
LABOR HOURS:	533.88	0	533.88
LABOR COST:	\$21,456.66	\$0.00	\$21,456.66
OVERHEAD:	\$28,400.04	\$0.00	\$28,400.04
	\$49,856.70	\$0.00	\$49,856.70
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$60,065.05	\$0.00	\$60,065.05
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$60,065.05	\$0.00	\$60,065.05

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 926547

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?	
INSTALL					
9828	2004364	CABLE, SERVICE DROP AL 2-2/0 & 1-1/0 NEU	\$0.91	\$8,943.48	Y
0	2004366	CABLE, SERVICE DROP AL 2-4/0 & 1-2/0 NEU	\$1.34	\$0.00	Y
2	2003770	CLAMP, MID SPAN ALUMINUM 1/4 IN - 1/2 IN	\$6.39	\$12.78	N
		Total	\$8,956.26		

4/2018

HIGH DENSITY MODEL

(176 lots)

Underground Costs (per lot)

ITEM	MATERIAL		LABOR		TOTAL		EXPLANATION OF % CHANGE
	COST	% CHANGE	COST	% CHANGE	COST	% CHANGE	
SERVICE	173.20	5.42%	177.33	-10.87%	350.53	-3.50%	Underground material costs up, TEC & Contractor overheads down
PRIMARY	106.39	8.75%	51.58	-3.79%	157.97	4.31%	Underground material costs up, TEC & Contractor overheads down
SECONDARY	39.15	4.74%	55.78	-4.11%	94.93	-0.65%	Underground material costs up, TEC & Contractor overheads down
TRANSFORMERS	248.89	2.87%	61.84	-6.36%	310.73	0.74%	Underground material costs up, TEC & Contractor overheads down
TRENCHING							
PRIMARY & SECONDARY			198.23	-8.85%	198.23	-8.85%	Contractor overheads down
SERVICES			343.53	-10.10%	343.53	-10.10%	Contractor overheads down
SUB-TOTAL	567.83	4.74%	886.29	-9.02%	1,455.92	-4.11%	
STORES HANDLING	79.35	-4.36%			79.35	-4.36%	Material handling overhead down
SUB-TOTAL	646.98	3.54%	886.29	-9.02%	1,535.27	-4.12%	
ENGINEERING			61.28	0.00%	61.28	0.00%	
TOTAL	646.98	3.54%	949.57	-8.49%	1,596.55	-3.97%	
					589.89	Net Present Value of the Life Cycle Operational Cost Including Storm Restoration and Lost Pole Attachment Revenue	
Total with NPV Factor					2,186.44	Total Including NPV of Operational Cost	

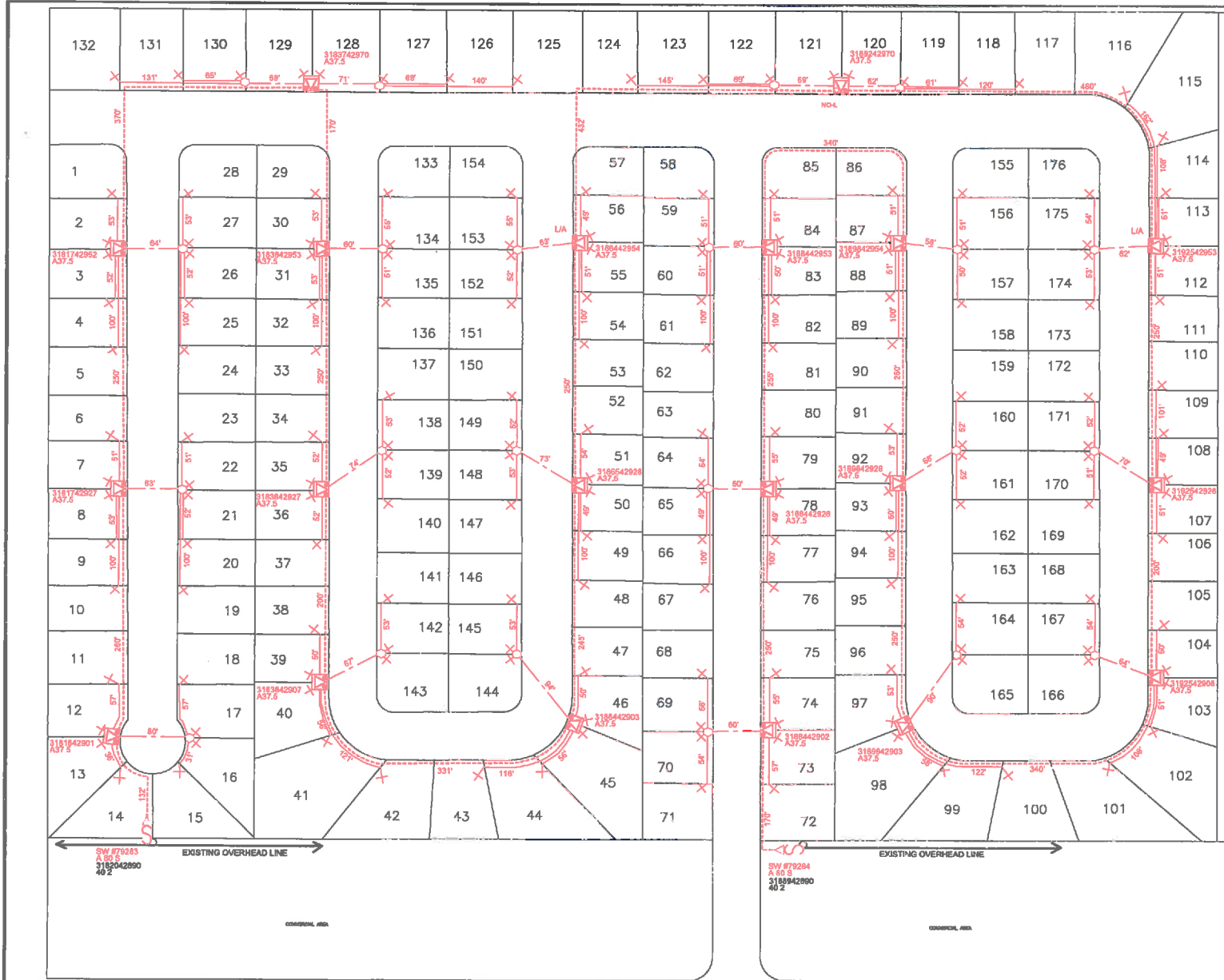
Overhead Costs (per lot)

ITEM	MATERIAL		LABOR		TOTAL		EXPLANATION OF % CHANGE
	COST	% CHANGE	COST	% CHANGE	COST	% CHANGE	
SERVICE	83.30	1.63%	85.84	-43.27%	169.14	-27.49%	Material up, TEC & Contractor overheads down, labor problem
PRIMARY	10.77	1.13%	29.88	-4.14%	40.65	-2.80%	Material up, TEC & Contractor overheads down
SECONDARY	58.12	0.82%	108.03	4.46%	166.15	3.08%	Material up, TEC & Contractor overheads down
INITIAL TREE TRIM			0.00		0.00		
POLES	104.72	-0.35%	186.79	-4.12%	291.51	-2.80%	Material costs down, TEC & Contractor overheads down
TRANSFORMERS	152.65	5.81%	62.77	-4.11%	215.42	2.58%	Material up, TEC & Contractor overheads down
SUB-TOTAL	409.56	2.39%	473.31	-13.34%	882.87	-6.69%	
STORES HANDLING	57.26	-6.50%			57.26	-6.50%	Material handling overhead down
SUB-TOTAL	466.82	1.21%	473.31	-13.34%	940.13	-6.68%	
ENGINEERING			61.28	0.00%	61.28	0.00%	
TOTAL	466.82	1.21%	534.59	-11.99%	1,001.41	-6.30%	
					1,870.62	Net Present Value of the Life Cycle Operational Cost Including Storm Restoration and Lost Pole Attachment Revenue	
Total with NPV Factor					2,872.03	Total Including NPV of Operational Cost	

Differential Costs (per lot)

ITEM	MATERIAL		LABOR		TOTAL	
	COST	% CHANGE	COST	% CHANGE	COST	% CHANGE
Differential (per lot)	180.16	10.09%	414.98	-3.54%	595.14	0.22%
NPV amount					-1,280.73	
Differential¹ (per lot)					-685.59	765.32%

¹ Includes NPV of Operational Cost



LEGEND

- 200 AMP SERVICE
- PAD-MOUNTED TRANSFORMER HANDHOLE (SECONDARY)
- 1/0 PRIMARY CABLE
- 4/0 SECONDARY CABLE
- 2/0 SERVICE CABLE

750 TOTAL CONNECTED KVA
 0.5% TOTAL REG. DEMAND KVA
 0.8% TOTAL TRANSFORMERS
 0.9% KVA TRANSFORMERS
 0.9% TOTAL KVA
 0.9% TOTAL PRIMARY CABLE
 0.9% TOTAL SECONDARY CABLE
 0.9% TOTAL SERVICE CABLE
 0.9% TOTAL HANDHOLES
 0.9% TOTAL LONG BREAK CABINETS

- NOTES:**
1. PRIMARY: 12/10 ALUMINUM 14' P.V.C. (D.V.E.L.S.)
 2. SERVICE: 200' ALUMINUM 14' P.V.C. (D.V.E.L.S.)
 3. 2" PVC TO ELECTRIC POWER (ELECTRIC) UNLESS NOTED
 4. 4" PVC TO ELECTRIC POWER (ELECTRIC) UNLESS NOTED
 5. SECONDARY CABLE: 4/0 ALUMINUM FOR STREET CROSSINGS UNLESS NOTED
 6. 2" PVC TO SECONDARY CABLE (ELECTRIC) UNLESS NOTED
 7. 4" PVC TO SECONDARY CABLE (ELECTRIC) UNLESS NOTED
 8. TOTAL KVA: 750 KVA (TOTAL KVA 804)
 9. TOTAL REG. DEMAND: 0.5% TOTAL KVA (TOTAL REG. DEMAND KVA 804)
 10. VOLTAGE FLICKER: LESS THAN OR EQUAL TO 12.5 VOLTS

ONLY AN AUTHORIZED REPRESENTATIVE
 OF TAMPA ELECTRIC COMPANY, INC.
 MAY SIGN AND SEAL THIS DRAWING.
 ANY OTHER SIGNATURE IS VOID.
 PRIOR TO DIGGING CONTACT TAMPA ELECTRIC CO.

THIS WORK ORDER HAS BEEN DESIGNED
 BY: _____ DATE: _____
 THE NATIONAL ELECTRICAL SAFETY CODE.
 FET: _____ DATE: _____
 LFET: _____ DATE: _____

TAMPA ELECTRIC COMPANY
 BOARD: _____
 PREPARED BY: _____
 FET: _____
 LFET: _____
 DATE: _____

**UNDERGROUND
 HIGH DENSITY
 SUBDIVISION DESIGN**

Revised 3/23/18

UG Construction Cost Data Summary
High Density (176-Lot) UG Subdivision Costs

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Line #	Work Type/WR #	(D+M) Material and Handling	Material	(F+L) Total Labor Plus Vehicles	(G+H+I) Total Labor	Base Labor	(G x J x TLF) Operations Labor Overheads	(G x K x CLF) Contract Labor Overheads	TEC Work %	Contractor Work %	Vehicle	(D x MHR) Material Handling	(C+E) Total
1	Transformers												
2	925091 Install Transformer	48,387.50	\$42,452.62	5,235.11	4,594.52	\$2,660.28	1,728.33	205.91	60%	40%	\$640.60	5,934.88	53,622.61
3	925095 Ground Transformer	1,540.33	\$1,351.40	2,526.27	2,217.14	\$1,283.75	834.03	99.36	60%	40%	\$309.13	188.93	4,066.59
4	Contracto Prepare Pad Site	-	-	3,122.91	3,122.91	\$2,616.60	-	506.31	0%	100%	-	-	3,122.91
5		49,927.82	43,804.02	10,884.29	9,934.57	6,560.63	2,562.36	811.58			949.72	6,123.80	60,812.11
6	Primary												
7	925096 Primary Line - OH-UG Takeoffs	519.52	\$455.80	570.04	500.28	\$289.67	188.19	22.42	60%	40%	\$89.75	63.72	1,089.66
8	925097 Ground OH to UG Take-offs	154.03	\$135.14	252.62	221.71	\$128.37	83.40	9.94	60%	40%	\$30.91	18.89	408.65
9	925098 Primary Conduit (Material Only)	4,723.03	\$4,143.74	-	-	-	-	-			-	579.29	4,723.03
10	925100 Primary Cable	15,946.08	\$13,990.24	8,254.80	7,244.70	\$4,194.77	2,725.26	324.68	60%	40%	\$1,010.10	1,955.84	24,200.88
11		21,342.66	18,724.92	9,077.46	7,966.69	4,612.81	2,996.85	357.03			1,110.76	2,617.74	30,420.12
12	Secondary												
13	925103 Secondary Cable	5,279.50	\$4,631.95	9,816.59	8,615.38	\$4,988.41	3,240.87	386.10	60%	40%	\$1,201.21	647.55	15,096.09
14	925104 Secondary Conduit (Material Only)	2,573.60	\$2,257.94	-	-	-	-	-			-	315.66	2,573.60
15		7,853.10	6,889.89	9,816.59	8,615.38	4,988.41	3,240.87	386.10			1,201.21	963.21	17,669.69
16	Service												
17	925106 Service Cable	17,612.92	\$15,452.64	28,426.88	28,426.88	\$23,818.08	-	4,608.80	0%	100%	-	2,160.28	46,039.80
18	925108 Set Meters	7,298.00	\$6,402.88	2,783.94	2,443.28	\$1,414.69	919.10	109.50	60%	40%	\$340.66	895.12	10,081.94
19	925110 Service Conduit (Material Only)	8,834.10	\$8,627.92	-	-	-	-	-			-	1,206.18	9,834.10
20		34,745.02	30,483.44	31,210.82	30,870.16	25,232.77	919.10	4,718.30			340.66	4,261.58	65,955.84
21	Trenching												
22	Contractor Primary Trenching	-	-	20,990.14	20,990.14	\$17,587.05	-	3,403.09	0%	100%	-	-	20,990.14
23	Contractor Secondary Trenching	-	-	5,121.95	5,121.95	\$4,291.54	-	830.41	0%	100%	-	-	5,121.95
24	TEC Inspection for Primary	-	-	8,776.11	8,314.91	\$8,314.91	-	-	0%	0%	\$461.20	-	8,776.11
25		-	-	34,888.21	34,427.01	30,193.50	-	4,233.51			461.20	-	34,888.21
26													
27	Contractor Svc Trenching Pri. Prop	-	-	35,667.51	35,667.51	\$29,884.80	-	5,782.71	0%	100%	-	-	35,667.51
28	Contractor Svc Trenching Rts-of-Wy	-	-	16,688.33	16,688.33	\$13,982.68	-	2,705.65	0%	100%	-	-	16,688.33
29	TEC Inspection for Service	-	-	8,104.80	7,678.88	\$7,678.88	-	-	0%	0%	\$425.92	-	8,104.80
30		-	-	60,460.64	60,034.72	51,546.36	-	8,488.36			425.92	-	60,460.64
31													
32	Engineering Design/Inspection/Coordination	-	-	10,785.62	-	-	-	-			-	-	10,785.62
33													
34	Totals (Sum of lines 5, 11, 15, 20, 25, 30, and 32)	113,868.61		167,123.63	151,848.53	123,134.48	9,719.17	18,994.87			4,489.47	13,986.34	280,992.23
35	Cost "Per Lot" (Line 34/ 176 lots)	646.98		949.57									1,596.55

Adjustment Factors		
TEC Labor Overhead Factor (excludes engineering)	TLF =	1.0828
Contractor Labor Overhead Factor	CLF =	0.1935
Current year material handling charge rate	MHR =	0.1398

reflects removal of 8.55% for engineering costs which is a separate line item on this document
reflects removal of 7.28% for engineering costs which is a separate line item on this document

High Density - 176 lot - Contractor Labor - Underground Estimate

- Update the contractor labor rates on this page. The numbers to be updated are highlighted in blue.
 - Hover over the red comment symbol in the corner of the cell. That refers to the source of the information.
The contractor labor rates come from the E.D. Field Construction Department - the Conduit Coordinators - Mike Capperelli, Steve Furry, Jerry Manning, Bill Baxter.
 - Transfer the contractors costs to the HDifferentialMonth-Year.xls file. The numbers are highlighted in yellow.
 - Hover over the red comment symbol in the corner of the cell that refers to the destination of the contractor cost.
 - In 2006 TEC added pad site preparation cost, a contractor cost.

Prepare pad site (Primary Contractor Labor Costs)

	Total	Cost	Pad sites
Pad site preparation	Total	\$2,616.60	\$100.83 20

Primary Trenching & Conduit (Primary Contractor Labor Costs)

	Total	Cost	Feet	
	\$14,703.00	\$2.60	5655	Trenching Cost
	\$2,684.05	\$0.51	5655	Conduit Installation - 2"
	\$0.00	\$0.00	5655	Pull-tape Installation (used exact length for labor cost not 5% extra)
Primary Trenching	Total	\$17,687.05		

Secondary Trenching & Conduit (Primary Contractor Labor Costs)

	Total	Cost	Feet	
	\$3,382.60	\$2.60	1301	Trenching Cost
	\$0.00	\$0.51	0	Conduit Installation - 2"
	\$146.34	\$0.51	271	Conduit Installation - 3"
	\$762.60	\$0.00	1230	Conduit Installation - 4"
	\$0.00	\$0.00	1501	Pull-tape Installation (used exact length not 5% extra)
Secondary Trenching	Total	\$4,291.54		

Service Trenching & Conduit (Primary Contractor Labor Costs)

	Total	Cost	Feet	
	\$9,786.40	\$2.60	3764	Trenching feet required for 2" service conduit
	\$0.00	\$2.60	0	Trenching feet required for 3" service conduit
	\$4,196.28	\$0.51	8228	Conduit Installation - 2"
	\$0.00	\$0.54	0	Conduit Installation - 3"
	\$0.00	\$0.00	8228	Pull-tape Installation (used exact length not 5% extra)
Service Trenching Rts-of-Wy	Sub-total	\$13,982.68		

Service Trenching & Conduit on Private Property (Service Contractor Labor Costs)

	Total	Cost	Feet	
Service Trenching Pri. Prop	Sub-total	\$29,884.80	\$5.66 5280	Trenching feet and conduit = 30ft x 176

Service Cable (Service Contractor Labor Costs)

	Total	Cost	Feet	
Service Cable Labor	Sub-total	\$23,818.08	\$1.68 15268	Installing 2/0 or 4/0 Cable in existing conduit
Service Labor	Total	\$67,886.56		

Inspection (TECO Labor Cost)

TEC Labor	TEC Labor	TEC Vehicle	TEC Vehicle	
Total	Rate	Feet/Qty	Rate	Total
\$4,386.27	\$87.26	5655	\$4.84	\$243.29
\$1,009.11	\$87.26	1301	\$4.84	\$55.97
\$2,919.53	\$87.26	3764	\$4.84	\$161.94
Sub-total	\$8,314.91			\$461.20

Inspection costs for Primary Contractor (TECO Labor Cost)
 Primary Inspection chg = (mach. trnch ft / 900 ft per day)*(8 hr/day)*Contractor rate
 Secondary Inspection chg = (mach. trnch ft / 900 ft per day)*(8 hr/day)*Contractor rate
 Service ROW Inspection chg = (machine trench ft / 900 ft per day)*(8 hr/day)*Contractor rate

TEC Labor	TEC Labor	TEC Vehicle	TEC Vehicle	
Total	Rate	Feet/Qty	Rate	Total
\$7,678.88	\$87.26	176	\$2.42	\$425.92
Sub-total	\$7,678.88			\$425.92

Inspection costs for Service Contractor (TECO Labor Cost)
 Service Private Property Inspection = .5hr x # of lots x rate

High Density - 176 Lots - Underground Material List

This worksheet lists the totals for major materials to be listed on the associated work request print as requested by the PSC.

750 Total Connected KVA
804 Total peak demand KVA
0 25 kVA Transformers
20 37.5 kVA Transformers
0 50 kVA Transformers
0 75 kVA Transformers
5655 Trench Feet of 1/0 AL Primary Cable
0 Existing trench feet of 1/0 AL Primary Cable
0 Trench Feet of 2/0 AL Secondary Cable
0 Existing trench feet of 2/0 AL Secondary Cable
1301 Trench Feet of 4/0 AL Secondary Cable
200 Existing trench feet of 4/0 AL Secondary Cable
Trench Feet of 500 MCM AL Secondary Cable
0 Existing trench feet of 500 MCM AL Secondary Cable
9044 Trench Feet of 2/0 AL Service Cable
4464 Existing trench feet of 2/0 AL Service Cable
0 Trench Feet of 4/0 AL Service Cable
0 Existing trench feet of 4/0 AL Service Cable
0 Load Break Cabinet

Notes:

1. 1250 SF Homes
2. 2.5 Ton AC Units
3. 40' Service run from property corner to meter location
4. Voltage drop less than or equal to 12.0 volts
5. Voltage flicker less than or equal to 12.0 volts

High Density - 176 Lots - Underground Material CU List

This worksheet summarizes the entries from the other worksheets (from PoleAveA through PoleOakHill) and provides the Contractor Labor worksheet with input totals to calculate contractor costs.

Station All Stations - This information is used to create Work Requests to obtain costs. Transfer the values from Qty and CU columns highlighted in yellow to the WorkPro Work Requests to obtain costs. Those costs are then entered into the HDdifferential.xls workbook to calculate the High Density Differential cost.

<=== Blue shading indicates fields to be updated.

Work Request

Number

925091

Transformer Material CUs

Qty	CU	Definition	Total Connected KVA	
0	pku51a3n	25 kva, 6 tap 250mcm	0	
0	pku51c3n	25 kva, 8 tap 250mcm	0	0
0	pku51a4n	37.5 kva, 6 tap 250mcm	0	0
0	pku51b4n	37.5 kva, 6 tap 500mcm	0	0
0	pku51c4n	37.5 kva, 8 tap 250mcm	0	0
20	pku51d4n	37.5 kva, 8 tap 500mcm	750	750
0	pku51a5n	50 kva, 6 tap 250mcm	0	750
0	pku51b5n	50 kva, 6 tap 500mcm	0	750
0	pku51c5n	50 kva, 8 tap 250mcm	0	750
0	pku51d5n	50 kva, 8 tap 500mcm	0	750
0	pku51a6n	75 kva, 6 tap 250mcm	0	750
0	pku51b6n	75 kva, 6 tap 500mcm	0	750
0	pku51c6n	75 kva, 8 tap 250mcm	0	750
0	pku51d6n	75 kva, 8 tap 500mcm	0	750
1	bushcover	Cover hot Tx bushing - at open position on loop tx, or at radial Tx		
1	bushdummy	Parking bushing at normal open tx in loop		

Work Request

Number

925095

Ground Pad Mounted Tx - Material CUs

Qty	CU	Definition
20	grdmeg1/2	megger ground, drive rods, 1 location, 1/2" rods

Work Request

Number

925096

Primary Overhead - Material CUs

Qty	CU	Definition
2	PKE601WF1B	TEC material & labor to frame terminal pole CO & LA
2	FLOH103	Fuse

Work Request

Number

925097

Megger Ground at Terminal Pole

Qty	CU	Definition
2	grdmeg1/2	megger ground, drive rods, 1 location, 1/2" rods

Primary Trenching - Labor Only - Done By Contractors

Used to determine contractor labor cost on the Contractor Labor worksheet

Qty	CU	Definition
5655		Trenching feet required for 2" primary conduit
0		Existing trench feet used for 2" primary conduit
5655		Install Pulling Tape (blow in tape for pull - trench feet used to determine contractor cost)

Work Request

Number

925100

Primary Cable

Qty	CU	Definition	
2	pku16wf	pothead, 38' 1c 1/0AL cable, 20' pvc, ground conn, wood pole	76
40	pku11f	safebreak, 5' 1c 1/0AL cable, ground conn	200
0	pku31p3	switch cubicle(lbc) 1ph, 200a deadfront, 3 position w/pad, gmd	
0	pku31p4	switch cubicle(lbc) 1ph, 200a deadfront, 4 position w/pad, gmd	
0	fault1pa	fault indicator, 1ph 1/0-4/0 above grade, 400a	
5655	wiu1pf	cable, 1/0AL concentric neutral 15kV - round up to add extra	6524.1
21	wiu1f	labor to pull ug cable in conduit	

Work Request**Number**

925098

Primary Conduit - Material Only

Material used by contractors to install the conduit system

Qty	CU	Definition
20	5512000	Conduit, galvanized 2", 10' with coupling, for up terminal pole
5875	5522000	2" conduit
6095	5853530	Pulling tape - actual length
48	5512220	2" elbow 90 galv 9.5" radius
8	5512210	2" elbow 45 galv 9.5" radius
112	5522180	Coupling, 2" PVC (2 per elbow)
12	gluecondf	2"&3" pvc 1 qt for 500' fast dry

Secondary Trenching - Labor Only - Done By Contractors

Used to determine contractor labor cost on the Contractor Labor worksheet

Qty	CU	Definition
0		Trenching feet required for 2" secondary conduit
0		Existing trench feet used for 2" secondary conduit
71		Trenching feet required for 3" secondary conduit
200		Existing trench feet used for 3" secondary conduit
1230		Trenching feet required for 4" secondary conduit
0		Existing trench feet used for 4" secondary conduit
1501		Install Pulling Tape (blow in tape for pull - trench feet used to determine contractor cost)

Work Request**Number**

925103

Secondary Cable & Hand Holes

Qty	CU	Definition
0	wiu3sb	2c 2/0 1c 1 neutral, 600 v - added 5% here
1691	wiu3sc	2c 4/0 1c 2/0 neutral, 600v - added 5% here
0	wiu3sn	2c 500 1c 350 neutral, 600v - added 5% here
0	insbus350/4	crab 4 position up to 350mcm
0	insbus350/6	crab 6 position up to 350mcm
0	insbus500/4	crab 4 position up to 500mcm
66	insbus500/8	crab 6 position up to 500mcm
0	insbus500/8	crab 8 position up to 500mcm
22	wiu1f	labor to pull ug cable in conduit
22	svhottr	energize ug secondary in transformer
22	svhothh	energize ug secondary in hand hole
0	hhsec	secondary h/h 12"x20", 3 or 4 2/0 or 4/0 svc w/ 2/0 or 4/0 sec
22	hhseclg	secondary h/h 17"x30", 5 to 7 2/0 or 4/0 svc w/ 4/0 or 500 sec (any time 500 used)

Work Request**Number**

925104

Secondary Conduit - Material Only

Material used by contractors to install the conduit system

Qty	CU	Definition
0	5522000	2" conduit sched A bell end
291	5523000	3" conduit sched A bell end
1410	5524000	4" conduit sched A bell end
1901	5853530	Pulling tape, plus adding 5% extra here
0	5522220	2" elbow 90 PVC 9.5" radius
0	5522210	2" elbow 45 PVC 9.5" radius
8	5523220	3" elbow 90 PVC 13" radius
0	5523210	3" elbow 45 PVC 13" radius
36	5524220	4" elbow 90 PVC 16" radius
0	5514300	4" elbow 90 galv 30" radius
0	5514210	4" elbow 45 galv 16" radius
0	5522180	Coupling, 2" PVC (2 per elbow)
16	5523180	Coupling, 3" PVC (2 per elbow)
72	5524180	Coupling, 4" PVC (2 per elbow)
1	gluecondf	2"&3" pvc 1 qt for 500' fast dry
6	gluecondm	4"&6" pvc 1 qt for 250' medium dry

Work Request

Number

925108

Set Meter

Qty	CU	Definition
176	meterlabor	
176	1900006	meter, kwh 30a 240v

Service Trenching - Labor Only - Done By Contractors

Used to determine contractor labor cost on the Contractor Labor worksheet

Qty	CU	Definition
176	Number of 2/0 services	
5280	Trenching feet for 2" service conduit on private property-service contractor	
1760	Trenching feet for 10' stub of 2" service conduit installed by primary contractor	
2004	Trenching feet for 2" service conduit installed by primary contractor	
4464	Existing trench feet used for 2" service conduit installed by primary contractor	
8228	Install Pulling Tape for 2" conduit (blow in tape for pull - Primary Contractor)	
0	Trenching feet for 3" service conduit on private property-service contractor	
0	Trenching feet for 10' stub of 3" service conduit installed by primary contractor	
0	Trenching feet for 3" service conduit installed by primary contractor	
0	Existing trench feet used for 3" service conduit installed by primary contractor	
0	Install Pulling Tape for 3" conduit (blow in tape for pull - Primary Contractor)	

13508

1760 Work Request

15268 Number

925106

Service Cable Material Only

Material used by contractors to install the conduit system

Qty	CU	Definition	
15268	wiu3sb	2c 2/0 & 1c 1 neutral, 600 v service cable	16031.4
0	wiu3sc	2c 4/0 & 1c 2/0 neutral, 600 v service cable	0

Work Request

15268 Number

925110

Service Conduit Material Only

Material used by contractors to install the conduit system

Qty	CU	Definition
5280	Conduit for 2" service on private property-service contractor	
3520	Conduit for 10' stub of 2" service installed by primary contractor	
6468	Conduit for 2" service installed by primary contractor	
11748	Pulling Tape installed in 2" conduit by Primary Contractor)	
15268	5522000	Total 2" conduit for work order quantity
448	5522220	2" elbow 90 PVC 9.5" radius
0	5522210	2" elbow 45 PVC 9.5" radius
176	5512260	2" galvanized Lock Nut
176	5522030	2" Flexible PVC conduit
176	5522050	2" PVC Adapter, male thread/female slip
176	5512370	2" PVC Service Riser
896	5522180	Coupling, 2" PVC (2 per elbow)
0	Conduit for 3" service on private property-service contractor	
0	Conduit for 10' stub of 3" service installed by primary contractor	
0	Conduit for 3" service installed by primary contractor	
0	Pulling Tape installed in 3" conduit by Primary Contractor)	
0	5523000	Total 3" conduit for work order quantity
0	5523220	3" elbow 90 PVC 13" radius
0	5523210	3" elbow 45 PVC 13" radius
0	5512770	2-1/2" house riser
0	5523220	3" elbow 90 PVC 13" radius at house riser
0	5512670	2-1/2" galvanized Lock Nut Used by contractors to install conduit system
0	5523030	3" Flexible PVC conduit
0	5521000	2-1/2"PVC Adapter, male thread/female slip
0	5523180	Coupling, 3" PVC (2 per elbow)
31	gluecondf	2"&3" pvc 1 qt for 500' fast dry
11748	5853530	Total Pulling Tape installed in conduit by Primary Contractor)



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

Contact Name:
Tampa Electric

Distribution Services
HDUG Transformers

District: CSA
WR No. 925091
Date Sched: 3/23/18
Date Required: 3/23/18

Additional Information: Full PSC Filing 10/2010
WR Description: HDUG 1250 sq ft TRANSFORMERS

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$42,452.62	\$0.00	\$42,452.62
OVERHEAD:	\$5,934.88	\$0.00	\$5,934.88
	\$48,387.50	\$0.00	\$48,387.50
LABOR HOURS:	66.21	0	66.21
LABOR COST:	\$2,660.28	\$0.00	\$2,660.28
OVERHEAD:	\$3,521.13	\$0.00	\$3,521.13
	\$6,181.41	\$0.00	\$6,181.41
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$54,568.91	\$0.00	\$54,568.91
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$54,568.91	\$0.00	\$54,568.91

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925091

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?
INSTALL				
1	2004816 BUSHING, PARKING, 15KV, INSULATED	\$32.53	\$32.53	N
20	2077906 CLAMP, GROUND ROD COPPER 1/2 IN	\$1.50	\$30.00	N
40	2078000 CLAMP, TRANSFORMER GROUND 10-SOL - #1 ST	\$2.22	\$88.80	N
2	2077931 CONNECTOR, VICE CU #2 STR	\$2.31	\$4.62	N
1	2004817 COVER, BUSHING 15 KV PDMT EQUIP W/FLEXIB	\$25.11	\$25.11	N
20	2001315 PAD, CONCRETE 40" X 45" X 4" 25- 50KVA T	\$77.11	\$1,542.20	N
20	2007395 PADLOCK, RED BRASS BODY 1/4" BRASS SHACK	\$16.07	\$321.40	N
20	2007489 REPELLENT, FIRE ANT GRANULE 4 OZ BIFENTH	\$2.21	\$44.20	N
40	2004031 STUD, GALVANIZED, 11 THREAD PER INCH ALL	\$2.47	\$98.80	N
9	2004948 TERMINAL, SLIP FIT ALUMINUM STUD TYPE, 6	\$6.28	\$56.52	N
6	2004954 TERMINAL, SLIP FIT ALUMINUM STUD TYPE, 6	\$11.56	\$69.36	N
45	2004950 TERMINAL, SLIP FIT ALUMINUM STUD TYPE, 8	\$6.84	\$307.80	N
20	2001519 TX,PM,LP,1P,37.5 kVA,240/120,FR3,SS	\$1,988.15	\$39,763.00	Y
120	2004184 WIRE, COPPER, BARE, #4 SOFT DRAWN 7 STR	\$0.56	\$67.20	N
3	2078011 WIRE, COPPER, TIE, #6 SOLID SOFT DRAWN	\$0.36	\$1.08	N
		Total	\$42,452.62	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925095

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
HDUG GRD Transformers

Additional Information: Full PSC Filing 10/2010

WR Description: HDUG 1250 sq ft GROUND TRANSFORMERS

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$1,351.40	\$0.00	\$1,351.40
OVERHEAD:	\$188.93	\$0.00	\$188.93
	\$1,540.33	\$0.00	\$1,540.33
LABOR HOURS:	31.94	0	31.94
LABOR COST:	\$1,283.75	\$0.00	\$1,283.75
OVERHEAD:	\$1,699.17	\$0.00	\$1,699.17
	\$2,982.92	\$0.00	\$2,982.92
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$4,523.25	\$0.00	\$4,523.25
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$4,523.25	\$0.00	\$4,523.25

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925095

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?
INSTALL				
60 2077939	COUPLER, GROUND ROD SECTIONAL, COPPER, T	\$4.23	\$253.80	N
80 2077980	ROD,GROUND,1/2COPPER 10MI POINT& CHAMFER	\$13.72	\$1,097.60	N
	Total		\$1,351.40	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925096

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
HDUG FRAME OH Takeoff

Additional Information: Full PSC Filing 10/2010

WR Description: HDUG 1250 sq ft TAKEOFFS

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$455.80	\$0.00	\$455.80
OVERHEAD:	\$63.72	\$0.00	\$63.72
	\$519.52	\$0.00	\$519.52
LABOR HOURS:	7.21	0	7.21
LABOR COST:	\$289.67	\$0.00	\$289.67
OVERHEAD:	\$383.43	\$0.00	\$383.43
	\$673.10	\$0.00	\$673.10
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$1,192.62	\$0.00	\$1,192.62
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$1,192.62	\$0.00	\$1,192.62

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925096

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?
INSTALL				
2	2003651 ARRESTER, LIGHTNING DISTRIBUTION CLASS 8	\$36.16	\$72.32	Y
2	2077754 BOLT, MACHINE 5/8" X 10", GALV. FULL	\$0.98	\$1.96	N
2	2004661 BRACKET, "L" 11IN PROJECTED LGTH FOR MOU	\$8.59	\$17.18	N
2	2077906 CLAMP, GROUND ROD COPPER 1/2 IN	\$1.50	\$3.00	N
2	2077911 CLAMP, HOT LINE CU TO CU #6 SOL- 2 STR T	\$5.54	\$11.08	N
80	2078012 CONDUCTOR, COPPERWELD, 3 STR. #9, DSA 30	\$0.44	\$35.20	N
2	2077837 CONNECTOR, COMPRESSION H-BLOCK ACSR 2/0	\$0.59	\$1.18	N
4	2077930 CONNECTOR, VICE CU #4 STR	\$1.91	\$7.64	N
0	2077939 COUPLER, GROUND ROD SECTIONAL, COPPER, T	\$4.23	\$0.00	N
2	2003846 CUTOUT, 15KV, 100A FUSE HLDR, 300A UNVRS	\$55.50	\$111.00	Y
2	2077794 FUSE LINK, 103A UNVRSL 100A CUTOUT 23" O	\$24.35	\$48.70	N
2	2077822 KIT, ATTACHMENT, FOR ATTACHING "FLYING"	\$47.49	\$94.98	N
4	2077965 MOULDING, GROUND WIRE, PVC 1/2 IN X 8 FT	\$1.72	\$6.88	N
0	2077980 ROD, GROUND, 1/2 COPPER 10MI POINT & CHAMFER	\$13.72	\$0.00	N
2	2077789 SCREW, LAG PILOT POINT 3/8 X 3	\$0.26	\$0.52	N
20	2077997 STAPLE, SECURES 1/2" PVC MOULDING TO WOO	\$0.25	\$5.00	N
2	2077828 STIRRUP, AL BODY & CU BAIL 1/0-397	\$14.78	\$29.56	N
2	2078006 WASHER, FLAT, GALVANIZED, 2" X 2" X 1/8"	\$0.19	\$0.38	N
6	2004187 WIRE, 125' SPOOL, #2 BARE, STRANDED SOFT	\$0.98	\$5.88	N
2	2004184 WIRE, COPPER, BARE, #4 SOFT DRAWN 7 STR	\$0.56	\$1.18	N
6	2078011 WIRE, COPPER, TIE, #6 SOLID SOFT DRAWN	\$0.36	\$2.16	N
		Total	\$455.80	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925097

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Dist Svcs
HDUG GRD takeoff POLE

Additional Information: Full PSC Filing 10/2010

WR Description: HDUG 1250 sq ft GROUND TAKEOFFS

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$135.14	\$0.00	\$135.14
OVERHEAD:	\$18.89	\$0.00	\$18.89
	\$154.03	\$0.00	\$154.03
LABOR HOURS:	3.19	0	3.19
LABOR COST:	\$128.37	\$0.00	\$128.37
OVERHEAD:	\$169.92	\$0.00	\$169.92
	\$298.29	\$0.00	\$298.29
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$452.32	\$0.00	\$452.32
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$452.32	\$0.00	\$452.32

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925097

Page 1 of 1

Material Number		Description	Unit Price	Total Cost	Asset?
INSTALL					
6	2077939	COUPLER, GROUND ROD SECTIONAL, COPPER, T	\$4.23	\$25.38	N
8	2077980	ROD,GROUND,1/2COPPER 10MI POINT& CHAMFER	\$13.72	\$109.76	N
Total				\$135.14	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925098

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Engineering
HDUG Pri Conduit Material

Additional Information: Full PSC Filing 10/2010

WR Description: HDUG 1250 sq ft PRIMARY CONDUIT

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$4,143.74	\$0.00	\$4,143.74
OVERHEAD:	\$579.30	\$0.00	\$579.30
	<u>\$4,723.04</u>	<u>\$0.00</u>	<u>\$4,723.04</u>
LABOR HOURS:	0	0	0
LABOR COST:	\$0.04	\$0.00	\$0.04
OVERHEAD:	\$0.07	\$0.00	\$0.07
	<u>\$0.11</u>	<u>\$0.00</u>	<u>\$0.11</u>
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
SUBTOTAL:	<u>\$4,723.15</u>	<u>\$0.00</u>	<u>\$4,723.15</u>
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
SUBTOTAL:	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
SUBTOTAL:	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
TOTALS:	<u>\$4,723.15</u>	<u>\$0.00</u>	<u>\$4,723.15</u>

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925098

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?	
INSTALL					
12	2007227	CEMENT, PVC CLEAR FAST DRY QUART W/DAUBE	\$5.24	\$62.88	N
20	2004389	CONDUIT, GALVANIZED 2 IN 10 FT WITH COUP	\$4.28	\$85.60	Y
5935	2004488	CONDUIT, PVC 2 IN 20 FT BELL END	\$0.39	\$2,314.65	Y
108	2004507	COUPLING, PVC 2 IN SCH 40 TEMS 13.01	\$0.55	\$59.40	N
46	2004395	ELBOW, 2" 90 DEGREE ,GALVANIZED, 24" MIN	\$28.56	\$1,313.76	N
8	2004394	ELBOW, GALV 2 INCH 45 DEG THD 15" RADIUS	\$15.35	\$122.80	N
6155	2007414	TAPE, PULLING, POLYSTER, RATED AT 1250#,	\$0.03	\$184.65	N
		Total	\$4,143.74		



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925100

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Dist Svcs
HDUG PRIMARY

Additional Information: Full PSC Filing 10/2010
WR Description: HDUG 1250 sq ft PRIMARY CABLE

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$13,990.24	\$0.00	\$13,990.24
OVERHEAD:	\$1,955.84	\$0.00	\$1,955.84
	\$15,946.08	\$0.00	\$15,946.08
LABOR HOURS:	104.36	0	104.36
LABOR COST:	\$4,194.77	\$0.00	\$4,194.77
OVERHEAD:	\$5,552.20	\$0.00	\$5,552.20
	\$9,746.97	\$0.00	\$9,746.97
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$25,693.05	\$0.00	\$25,693.05
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$25,693.05	\$0.00	\$25,693.05

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925100

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?	
INSTALL					
6570	2004343	CABLE, ALUMINUM, 15KV, 1/C, 1/0 AWG SOLI	\$1.91	\$12,548.89	Y
2	2004514	CAP, CONDUIT 2"	\$11.51	\$23.02	N
2	2004453	CAP, END CABLE 600 V CABLE RANGE .940 -	\$1.69	\$3.38	N
2	2003752	CLAMP, CONDUIT GROUND 1-1/4 IN - 2 IN CO	\$7.73	\$15.46	N
0	2004488	CONDUIT, PVC 2 IN 20 FT BELL END	\$0.39	\$0.00	Y
2	2077837	CONNECTOR, COMPRESSION H-BLOCK ACSR 2/0	\$0.59	\$1.18	N
44	2077931	CONNECTOR, VICE CU #2 STR	\$2.31	\$101.64	N
8	2004403	STRAP, GALV 2 IN 2 HOLE	\$0.22	\$1.76	N
40	2004883	TERMINATOR, LOADBREAK 200 AMP	\$30.70	\$1,228.00	Y
2	2004633	TERMINATOR, POTHEAD 15KV OUTDOOR 1/0 JCN	\$32.33	\$64.66	Y
4	2004184	WIRE, COPPER, BARE, #4 SOFT DRAWN 7 STR	\$0.56	\$2.24	N
Total			\$13,990.23		



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925103

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Dist Svcs
HDUG SECONDARY

Additional Information: Full PSC Filing 10/2010

WR Description: HDUG 1250 sq ft SECONDARY CABLE

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$4,631.95	\$0.00	\$4,631.95
OVERHEAD:	\$647.54	\$0.00	\$647.54
	\$5,279.49	\$0.00	\$5,279.49
LABOR HOURS:	124.13	0	124.13
LABOR COST:	\$4,988.41	\$0.00	\$4,988.41
OVERHEAD:	\$6,602.65	\$0.00	\$6,602.65
	\$11,591.06	\$0.00	\$11,591.06
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$16,870.55	\$0.00	\$16,870.55
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$16,870.55	\$0.00	\$16,870.55

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925103

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?	
INSTALL					
2029	2004354	CABLE, SWEETBRIAR, AL, UG, 600V, 2/C, 4/0 AWG	\$1.34	\$2,719.13	Y
45	2005022	CONNECTOR, 600V URD, 6 POSITION, CONDUCT	\$12.08	\$543.60	N
12	2005025	CONNECTOR, 600V, URD, 8 POSITION, CONDUCT	\$25.55	\$306.60	N
18	2004730	HANDHOLE, NON-METALLIC CONST 12" TO 14"	\$43.26	\$778.68	N
4	2004734	HANDHOLE, SECONDARY URD 17" X 30"	\$61.47	\$245.88	N
22	2005212	MARKER, CURB LEXAN .040 THICK, ROUND 2.5	\$1.73	\$38.06	N
Total			\$4,631.95		



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925104

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Dist Svcs
HDUG SEC CONDUIT

Additional Information: Full PSC Filing 10/2010

WR Description: HDUG 1250 sq ft SECONDARY CONDUIT

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$2,257.94	\$0.00	\$2,257.94
OVERHEAD:	\$315.66	\$0.00	\$315.66
	\$2,573.60	\$0.00	\$2,573.60
LABOR HOURS:	0	0	0
LABOR COST:	\$0.02	\$0.00	\$0.02
OVERHEAD:	\$0.04	\$0.00	\$0.04
	\$0.06	\$0.00	\$0.06
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$2,573.66	\$0.00	\$2,573.66
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$2,573.66	\$0.00	\$2,573.66

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925104

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?
INSTALL				
1	2007227 CEMENT, PVC CLEAR FAST DRY QUART W/DAUBE	\$5.24	\$5.24	N
6	2007228 CEMENT, PVC GRAY MEDIUM DRY QUART W/DAUB	\$6.03	\$36.18	N
291	2004517 CONDUIT, PVC P & C 3 IN 20 FT	\$0.53	\$154.23	Y
1410	2004529 CONDUIT, PVC, 4" X 20', DB-60-TC-6	\$1.01	\$1,424.10	Y
16	2004521 COUPLING, PVC 3 IN SCH 40 TEMS 13.01	\$3.15	\$50.40	N
72	2004535 COUPLING, PVC 4 IN SCH 40 TEMS 13.01	\$3.72	\$267.84	N
8	2004524 ELBOW, PVC 3 IN 90 DEG 13 IN RAD SCH 40	\$3.48	\$27.84	N
36	2004538 ELBOW, PVC 4", 90 DEG., 16" RADIUS, SCHE	\$6.53	\$235.08	N
1901	2007414 TAPE, PULLING, POLYSTER, RATED AT 1250#,	\$0.03	\$57.03	N
		Total	\$2,257.94	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925106

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Dist Svcs
HDUG SERVICE CABLE

Additional Information: Full PSC Filing 10/2010

WR Description: HDUG 1250 sq ft SERVICE CABLE

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$15,452.64	\$0.00	\$15,452.64
OVERHEAD:	\$2,160.28	\$0.00	\$2,160.28
	\$17,612.92	\$0.00	\$17,612.92
LABOR HOURS:	1.53	0	1.53
LABOR COST:	\$61.61	\$0.00	\$61.61
OVERHEAD:	\$81.55	\$0.00	\$81.55
	\$143.16	\$0.00	\$143.16
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$17,756.08	\$0.00	\$17,756.08
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$17,756.08	\$0.00	\$17,756.08

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925106

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?
INSTALL				
16097 2004351	CABLE, CONVERSE, AL, UG, 600V, 2/C, 2/0,	\$0.96	\$15,452.64	Y
		Total	\$15,452.64	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925108

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Dist Svcs
HDUG SET METERS

Additional Information: Full PSC Filing 10/2010
WR Description: HDUG 1250 sq ft METERS

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	35.2	0	35.2
LABOR COST:	\$1,414.69	\$0.00	\$1,414.69
OVERHEAD:	\$1,872.48	\$0.00	\$1,872.48
	\$3,287.17	\$0.00	\$3,287.17
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$3,287.17	\$0.00	\$3,287.17
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$3,287.17	\$0.00	\$3,287.17

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925110

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Dist Svcs
HDUG SERVICE CONDUIT

Additional Information: Full PSC Filing 10/2010

WR Description: HDUG 1250 sq ft SERVICE CONDUIT

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$8,627.92	\$0.00	\$8,627.92
OVERHEAD:	\$1,206.18	\$0.00	\$1,206.18
	\$9,834.10	\$0.00	\$9,834.10
LABOR HOURS:	0	0	0
LABOR COST:	\$0.12	\$0.00	\$0.12
OVERHEAD:	\$0.17	\$0.00	\$0.17
	\$0.29	\$0.00	\$0.29
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$9,834.39	\$0.00	\$9,834.39
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$9,834.39	\$0.00	\$9,834.39

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925110

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?	
INSTALL					
176	2004493	ADAPTOR, 2" PVC, FEMALE SLIP TO MALE THR	\$0.32	\$56.32	N
31	2007227	CEMENT, PVC CLEAR FAST DRY QUART W/DAUBE	\$5.24	\$162.44	N
15330	2004488	CONDUIT, PVC 2 IN 20 FT BELL END	\$0.39	\$5,978.70	Y
176	2004491	CONDUIT, PVC 2 IN 250 FT ROLL FLEXIBLE	\$0.90	\$158.40	N
176	2004401	CONDUIT, SERVICE RISER, PVC, 2"	\$4.68	\$823.68	N
896	2004507	COUPLING, PVC 2 IN SCH 40 TEMS 13.01	\$0.55	\$492.80	N
448	2004511	ELBOW, CONDUIT PVC 2 IN SCH 40 90 DEG 9-	\$1.13	\$506.24	N
176	2004396	NUT, LOCK GALV 2 IN	\$0.54	\$95.04	N
11810	2007414	TAPE, PULLING, POLYSTER, RATED AT 1250#,	\$0.03	\$354.30	N
Total			\$8,627.92		

Revised 3/17/17

OH Construction Cost Data Summary
High Density (176-Lot) OH Subdivision Costs

A	B	C	D	E	F	G	H	I	J	K	L	M	N	
Line #	Work Type/WR #	Description	(D+M) Material and Handling	Material	(F+L) Total Labor Plus Vehicles	(G+H+I) Total Labor	Base Labor	(G x J x TLF) Operations Labor Overheads	(G x K x CLF) Contract Labor Overheads	TEC Work %	Contractor Work %	Vehicle	(D x MHR) Material Handling	(C+E) Total
1	Transformers													
2	925111	Install & Ground Transformers	30,623.07	26,867.06	11,047.01	9,695.24	5,613.66	3,647.08	434.50	60%	40%	\$1,351.77	3,756.01	41,670.08
3														
4	Primary													
5	925112	Install Primary Line	2,163.33	1,895.36	5,259.12	4,615.59	2,672.48	1,736.26	206.85	60%	40%	\$643.53	264.97	7,419.45
6		includes Grounding Primary Takeoffs												
7	Poles													
8	925113	Install Poles and Guy Stubs	21,006.73	18,430.19	32,875.91	28,853.05	16,706.26	10,853.72	1,293.06	60%	40%	\$4,022.87	2,576.54	53,882.65
9		Includes Haul Poles Out												
10	Secondary													
11	925114	Install Secondary Cable	11,658.48	10,228.53	19,013.79	16,687.17	9,862.07	6,277.25	747.84	60%	40%	\$2,326.63	1,429.95	30,872.27
12														
13	Services													
14	927142	Install Service Cable	9,412.24	8,257.80	12,016.86	10,546.41	6,106.50	3,967.27	472.64	60%	40%	\$1,470.45	1,154.44	21,429.10
15	927163	Install Meters	7,293.00	\$6,402.88	3,091.31	2,443.28	1,414.69	919.10	109.50	60%	40%	648.03	895.12	10,389.32
16			16,710.24	14,660.68	15,108.17	12,989.70	7,521.19	4,886.37	582.14			2,118.48	2,049.56	31,818.42
17														
18	Engineering	Design/Inspection/Coordination	-	-	10,785.62					100%	0%		-	10,785.62
19														
20	Tree Trim													
21														
22	Totals (Sum of lines 2, 5, 8, 11, 16, 18, and 20)		82,159.86	72,081.82	94,089.63	72,840.74	42,175.66	27,400.68	3,264.40			10,463.27	10,077.04	176,248.49
23	Cost "Per Lot" (Line 34/ 176 lots)		466.81		534.60									1,001.41

Adjustment Factors	
TEC Labor Overhead Factor (excludes engineering)	TLF = 1.0828
Contractor Labor Overhead Factor	CLF = 0.1935
Current year material handling charge rate	MHR = 0.1398

reflects removal of 8.55% for engineering costs which is a separate line item on this document
reflects removal of 7.28% for engineering costs which is a separate line item on this document

High Density - 176 Lots - Overhead Material List

This worksheet lists the totals for major materials to be listed on the associated work request print as requested by the PSC.

737.5 Total Connected KVA
800 Total peak demand KVA
2 25 kVA Transformers
5 37.5 kVA Transformers
7 50 kVA Transformers
2 75 kVA Transformers
0 100 kVA Transformers
6165 #2AAAC Primary
44 Primary Poles
5155 2/0 AWG Triplex Secondary
0 4/0 AWG Triplex Secondary
225 #2AAAC Secondary Neutral
965 2-2/0 & 1-1/0 AL Triplex Service Drop (considered secondary)
0 2-4/0 & 1-2/0 AL Triplex Service Drop (considered secondary)
19 Secondary Poles
8960 2-2/0 & 1-1/0 AL Triplex Service Drop
0 2-4/0 & 1-2/0 AL Triplex Service Drop

Summary of assemblies (CU's) for High Density Overhead Design - March 2018

Work Request #1	- Transformers (enter these Construction Units into WorkPro)							
Assemblies =>	25 KVA PKT11W3F	37.5 KVA PKT11W4F	50 KVA PKT11W5F	75 KVA PKT11W6F	100 KVA PKT11W7F	Stirrup ALSTRP10	Spacer SEWC	Grounding GRDMEG1/2
Total Quantities =>	2	5	7	2	0	16	16	16

Work Request #2	- Primary								
Assemblies =>	#2 AAAC WIOPA	1st span WIO2F	Additional WIO2A	1st span WIO1F	Additional WIO1A	Fused cutouts PKP208WB3A	DE & TAP PKP101WA3A	Fuses FLOH103	Grounding GRDMEG1/2
Total Quantities =>	6165	1	7	3	32	1	4	2	3

Work Request #3	- Poles and Guys												
Should be =>	Pole haul	2o Deadend	2 o tangent	2 o Corner	1o Deadend	1o angle <20	1o angle <20	1o Tangent	1o angle >20	3 o	Down guys	Pole hardware	Guy wire
Assemblies =>	POLE_HAUL	STP402_DE_40C2	STP103_TAN_40C2	STP302_RC_40C2	STP401_DE_40C2	STP101_ANG_40C2	STP101_ANG_45C2	STP101_TAN_40C2	STP301_RC_40C2	STP104E4B	PKG12W2H	PKG31W1H	GUYSTR3/8
Total Quantities =>	44	1	6	1	4	5	2	13	11	1	29	4	340

Work Request #4	- Secondary - From Secondary&Neutral worksheet												
Assemblies =>	35' CL 4 STB11C	0 POLE_HAUL	2/0 WIO3SB	4/0 WIO3SC	#2 Neutral C2AAAC	Labor WIOCF	Labor WIOCA	Eyebolt SEW1DEN	Eyebolt SEG1DEN	DE+Bolt PKS11W	CABLEOPEN	Pole hardware PKG31W1H	Guy wire GUYSTR3/8
Total Quantities =>	0	0	3155	0	225	6	37	2	2	8	14	8	565

More of Work Request #4	- Secondary continued - From Secondary&Neutral worksheet and SlackSecondary (service cable) & Secondary Poles worksheet									
Assemblies =>	POLE_HAUL	35' Class 4 STB11C	Deadend PKS21G	Clamp CLMIDSPAN	2/0 triplex CA20TPX	4/0 triplex CA40TPX	0 SVLABOR	Down guys PKG11W1H	Pole hardware PKG31W1H	Guy wire GUYSTR3/8
Total Quantities =>	19	19	35	3	965	0	19	1	2	50

Work Request #5	- Services			
Assemblies	2/0 triplex CA20TPX	4/0 triplex CA40TPX	Clamp CLMIDSPAN	SVLABOR
Quantities	8960	0	26	0

Work Request #5	- Set Meter
Assemblies	METERLABOR
Quantities	176



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925111

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Tampa Electric

Distribution Services
HDOH TRANSFORMER

Additional Information: Full PSC Filing 10/2010

WR Description: HDOH 1250 sq ft TRANSFORMERS

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$26,867.06	\$0.00	\$26,867.06
OVERHEAD:	\$3,756.03	\$0.00	\$3,756.03
	\$30,623.09	\$0.00	\$30,623.09
LABOR HOURS:	139.67	0	139.67
LABOR COST:	\$5,613.66	\$0.00	\$5,613.66
OVERHEAD:	\$7,430.26	\$0.00	\$7,430.26
	\$13,043.92	\$0.00	\$13,043.92
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$43,667.01	\$0.00	\$43,667.01
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$43,667.01	\$0.00	\$43,667.01

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925111

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?
INSTALL				
16	2003646 ARRESTER, LIGHTNING DISTRIBUTION CLASS 1	\$25.65	\$410.40	Y
14	2077754 BOLT, MACHINE 5/8" X 10", GALV. FULL	\$0.98	\$13.72	N
32	2077755 BOLT, MACHINE 5/8" X 12", GALV. FULL	\$1.02	\$32.64	N
16	2003690 BRACKET, CUTOUT, ARRESTER & POTHEAD DWG	\$6.41	\$102.56	N
16	2004660 BRACKET,"L" 5-5/8"IN LENGTH FOR MTG CUTO	\$9.94	\$159.04	N
208	2004197 CABLE, HANDCOIL, COPPER, 600V, 2/0 AWG,	\$2.11	\$438.88	N
24	2004199 CABLE, HANDCOIL, COPPER, 600V, 4/0 AWG,	\$3.58	\$85.92	N
16	2077906 CLAMP, GROUND ROD COPPER 1/2 IN	\$1.50	\$24.00	N
16	2077911 CLAMP, HOT LINE CU TO CU #6 SOL- 2 STR T	\$5.54	\$88.64	N
32	2078000 CLAMP, TRANSFORMER GROUND 10-SOL - #1 ST	\$2.22	\$71.04	N
640	2078012 CONDUCTOR, COPPERWELD, 3 STR. #9, DSA 30	\$0.44	\$281.60	N
4	2003528 CONNECTOR, 2-BOLT AL MAIN 336-500MCM TAP	\$22.08	\$88.32	N
42	2077839 CONNECTOR, COMPRESSION H-BLOCK ACSR 1/0-	\$0.47	\$19.74	N
16	2077837 CONNECTOR, COMPRESSION H-BLOCK ACSR 2/0	\$0.59	\$9.44	N
2	2077845 CONNECTOR, COMPRESSION H-BLOCK ACSR 4/0	\$0.63	\$1.26	N
64	2077930 CONNECTOR, VICE CU #4 STR	\$1.91	\$122.24	N
48	2077939 COUPLER, GROUND ROD SECTIONAL, COPPER, T	\$4.23	\$203.04	N
24	2003516 COVER, SNAP-ON SQUEEZON CONNECTOR D DIE	\$0.40	\$9.60	N
16	2003846 CUTOUT, 15KV, 100A FUSE HLDR, 300A UNVRS	\$55.50	\$888.00	Y
7	2077806 FUSE LINK, 10A UNVRS 100A CUTOUT 23" OA	\$4.05	\$28.35	N
2	2077807 FUSE LINK, 15A UNVRS 100A CUTOUT 23" OA	\$3.39	\$6.78	N
2	2077804 FUSE LINK, 5A UNVRS 100A CUTOUT 23" OAL	\$3.63	\$7.26	N
5	2077805 FUSE LINK, 7A UNVRS 100A CUTOUT 23" OAL	\$3.77	\$18.85	N
32	2077965 MOULDING, GROUND WIRE, PVC 1/2 IN X 8 FT	\$1.72	\$55.04	N
16	2007368 PROTECTOR, WILD LIFE, SLIP-ON TYPE	\$4.78	\$76.48	N
64	2077980 ROD,GROUND,1/2COPPER 10MI POINT& CHAMFER	\$13.72	\$878.08	N
16	2077767 ROLLED BOLT, DOUBLE-ARMING, 5/8"X 16"	\$2.14	\$34.24	N
16	2077789 SCREW, LAG PILOT POINT 3/8 X 3	\$0.26	\$4.16	N
16	2077812 SPACER, CABLED SECONDARY	\$6.79	\$108.64	N
140	2077997 STAPLE, SECURES 1/2" PVC MOULDING TO WOO	\$0.25	\$35.00	N
2	2001367 TX,OH,25 kVA,7.62/13.2Y,120/240,FR3	\$1,025.98	\$2,051.96	Y
5	2001368 TX,OH,37.5 kVA,7.62/13.2Y,120/240,FR3	\$1,258.10	\$6,290.50	Y
7	2001369 TX,OH,50 kVA,7.62/13.2Y,120/240,FR3	\$1,449.53	\$10,146.71	Y
2	2001370 TX,OH,75 kVA,7.62/13.2Y,120/240,FR3	\$1,984.79	\$3,969.58	Y
80	2078006 WASHER, FLAT, GALVANIZED, 2" X 2" X 1/8"	\$0.19	\$15.20	N
48	2078014 WIRE, ALUMINUM, TIE, #4 BARE ANNEALED	\$0.09	\$4.32	N
50	2004184 WIRE, COPPER, BARE, #4 SOFT DRAWN 7 STR	\$0.56	\$28.22	N
160	2078011 WIRE, COPPER, TIE, #6 SOLID SOFT DRAWN	\$0.36	\$57.60	N
	Total		\$26,867.05	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925112

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:
Tampa Electric

Distribution Services
HDOH PRIMARY

Additional Information: Full PSC Filing 10/2010
WR Description: HDOH 1250 sq ft PRIMARY

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$1,895.36	\$0.00	\$1,895.36
OVERHEAD:	\$264.97	\$0.00	\$264.97
	\$2,160.33	\$0.00	\$2,160.33
LABOR HOURS:	66.49	0	66.49
LABOR COST:	\$2,672.48	\$0.00	\$2,672.48
OVERHEAD:	\$3,537.31	\$0.00	\$3,537.31
	\$6,209.79	\$0.00	\$6,209.79
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$8,370.12	\$0.00	\$8,370.12
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$8,370.12	\$0.00	\$8,370.12

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925112

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?
INSTALL				
3	2003646 ARRESTER, LIGHTNING DISTRIBUTION CLASS 1	\$25.65	\$76.95	Y
2	2077738 BOLT, 5/8" X 8" EYE GALV RTS 12,400 LBS.	\$2.19	\$4.38	N
4	2077739 BOLT, EYE, 5/8 IN. X 10 IN., GALVANIZED	\$3.12	\$12.48	N
2	2077744 BOLT, MACHINE 1/2 INCH X 7 INCH	\$0.51	\$1.02	N
4	2077754 BOLT, MACHINE 5/8" X 10", GALV. FULL	\$0.98	\$3.92	N
1	2077756 BOLT, MACHINE 5/8" X 14", GALV. FULL	\$1.26	\$1.26	N
3	2003681 BRACKET, "L", LIGHTNING ARRESTER 10 KV	\$6.00	\$18.00	N
2	2004660 BRACKET,"L" 5-5/8"IN LENGTH FOR MTG CUTO	\$9.94	\$19.88	N
8	2077818 CLAMP, DEADEND ACSR OR AAC #2-4/0OR .30-	\$9.04	\$72.32	N
3	2077906 CLAMP, GROUND ROD COPPER 1/2 IN	\$1.50	\$4.50	N
9	2077911 CLAMP, HOT LINE CU TO CU #6 SOL- 2 STR T	\$5.54	\$49.86	N
3	2077813 CLAMP, SLACK SPAN DEADEND #2 ACSR - 2/0	\$9.11	\$27.33	N
6473	2004331 CONDUCTOR, BARE OVERHEAD, 2 AWG, AAAC, 7	\$0.13	\$841.53	Y
120	2078012 CONDUCTOR, COPPERWELD, 3 STR. #9, DSA 30	\$0.44	\$52.80	N
11	2077838 CONNECTOR, COMPRESSION H-BLOCK ACSR #2-1	\$0.36	\$3.96	N
7	2077837 CONNECTOR, COMPRESSION H-BLOCK ACSR 2/0	\$0.59	\$4.13	N
6	2077930 CONNECTOR, VICE CU #4 STR	\$1.91	\$11.46	N
9	2077939 COUPLER, GROUND ROD SECTIONAL, COPPER, T	\$4.23	\$38.07	N
1	2002955 CROSSARM, FIR 5 FT 4-3/4 X 5-3/4 (30 PCS	\$26.61	\$26.61	N
2	2003846 CUTOUT, 15KV, 100A FUSE HLDR, 300A UNVRS	\$55.50	\$111.00	Y
2	2077794 FUSE LINK, 103A UNVRS 100A CUTOUT 23" O	\$24.35	\$48.70	N
1	2003866 GAIN, POLE FOR 5' BRACELESS ARM WITHOUT	\$31.63	\$31.63	N
1	2077954 INSULATOR, PIN TYPE, 10KV, ANSI CLASS 55	\$3.31	\$3.31	N
2	2003882 INSULATOR, POLYMER VERTICAL LINE POST 25	\$40.55	\$81.10	N
4	2077959 INSULATOR, SUSPENSION, POLYMER, 25KV, AP	\$11.86	\$47.44	N
6	2077965 MOULDING, GROUND WIRE, PVC 1/2 IN X 8 FT	\$1.72	\$10.32	N
5	2077783 NUT, EYE, STANDARD, 1-1/2" GALVANIZED FO	\$1.28	\$6.40	N
1	2077971 PIN, CROSSARM 5/8" X 6-1/2" BOLT, 1" LEA	\$4.72	\$4.72	N
12	2077980 ROD,GROUND,1/2COPPER 10MI POINT& CHAMFER	\$13.72	\$164.64	N
3	2077789 SCREW, LAG PILOT POINT 3/8 X 3	\$0.26	\$0.78	N
30	2077997 STAPLE, SECURES 1/2" PVC MOULDING TO WOO	\$0.25	\$7.50	N
2	2077828 STIRRUP, AL BODY & CU BAIL 1/0-397	\$14.78	\$29.56	N
7	2077826 STIRRUP, AL BODY & CU BAIL 2-4/0	\$8.72	\$61.04	N
2	2004029 STUD-LINEPOST INSULATOR 3/4"X5/8 7"BOLT	\$2.97	\$5.94	N
4	2078005 WASHER, FLAT, GALVANIZED, 2" X 2" X 1/8	\$0.23	\$0.92	N
13	2078006 WASHER, FLAT, GALVANIZED, 2" X 2" X 1/8"	\$0.19	\$2.47	N
2	2008135 WASHER, LOCK T316SS 1/2 IN	\$0.18	\$0.36	N
3	2004184 WIRE, COPPER, BARE, #4 SOFT DRAWN 7 STR	\$0.56	\$1.68	N
15	2078011 WIRE, COPPER, TIE, #6 SOLID SOFT DRAWN	\$0.36	\$5.40	N
	Total		\$1,895.36	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925113

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Tampa Electric

Distribution Services
HDOH POLES

Additional Information: Full PSC Filing 10/2010
WR Description: HDOH 1250 sq ft POLES

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$18,430.19	\$0.00	\$18,430.19
OVERHEAD:	\$2,576.54	\$0.00	\$2,576.54
	\$21,006.73	\$0.00	\$21,006.73
LABOR HOURS:	415.69	0	415.69
LABOR COST:	\$16,706.26	\$0.00	\$16,706.26
OVERHEAD:	\$22,112.40	\$0.00	\$22,112.40
	\$38,818.66	\$0.00	\$38,818.66
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$59,825.39	\$0.00	\$59,825.39
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$59,825.39	\$0.00	\$59,825.39

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925113

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?	
INSTALL					
62	2077764	3/4" BOLT, MACHINE 3/4" X 12", GALV.	\$1.62	\$100.44	N
29	2003632	ANCHOR, SCRW GALV 10" WING 1-1/4" ROD 8"	\$43.05	\$1,248.45	N
20	2077739	BOLT, EYE, 5/8 IN. X 10 IN., GALVANIZED	\$3.12	\$62.40	N
40	2077754	BOLT, MACHINE 5/8" X 10", GALV. FULL	\$0.98	\$39.20	N
45	2077755	BOLT, MACHINE 5/8" X 12", GALV. FULL	\$1.02	\$45.90	N
19	2077753	BOLT, MACHINE 5/8" X 8", GALV.	\$1.02	\$19.38	N
1	2077780	BOLT, SPOOL, 5/8" X 10", GALV. SINGLE UP	\$3.33	\$3.33	N
8	2003685	BRACKET, FIBERGLASS STANDOFF VERTICAL PI	\$25.91	\$207.28	N
7	2077818	CLAMP, DEADEND ACSR OR AAC #2-4/0OR .30-	\$9.04	\$63.28	N
13	2003508	CLAMP, SUSPENSION AL ANGLE RANGE .50 TO	\$12.87	\$167.31	N
19	2077924	CLEVIS, STEEL LESS INSULATOR 5/8 IN PIN	\$7.27	\$138.13	N
105	2078012	CONDUCTOR, COPPERWELD, 3 STR. #9, DSA 30	\$0.44	\$46.20	N
25	2077837	CONNECTOR, COMPRESSION H-BLOCK ACSR 2/0	\$0.59	\$14.75	N
21	2077930	CONNECTOR, VICE CU #4 STR	\$1.91	\$40.11	N
2	2077765	DOUBLE-ARMING, GALVANIZED 5/8 "X 12"	\$2.35	\$4.70	N
29	2003636	EXTENSION ROD, ANCHOR 1-1/4 X 72 6 FT	\$44.02	\$1,276.58	N
120	2077949	GRIP, GUY, FORMED WIRE 3/8 INTWISTED LOO	\$2.25	\$270.00	N
22	2077862	GUARD, LINE #2 ACSR & AAAC STR 6/1, 7	\$1.79	\$39.38	N
3	2077863	GUARD, LINE 2/0 ACSR & AAAC STR 6/1, 7	\$2.46	\$7.38	N
62	2077951	HOOK, GUY	\$2.67	\$165.54	N
35	2077954	INSULATOR, PIN TYPE, 10KV, ANSI CLASS 55	\$3.31	\$115.85	N
1	2077952	INSULATOR, SPOOL, ANSI CLASS 53-3, TRANS	\$0.78	\$0.78	N
33	2077961	INSULATOR, STRAIN FIBERGLASS 36 IN 15,00	\$15.53	\$512.49	N
19	2077959	INSULATOR, SUSPENSION, POLYMER, 25KV, AP	\$11.86	\$225.34	N
29	2077979	MARKER, GUY WIRE PLASTIC 8' IN LENGTH CO	\$4.37	\$126.73	N
27	2077974	PIN, POLE TOP, PRESSED STEEL 18" LONG, 1	\$7.58	\$204.66	N
42	2002857	POLE, WOOD, 40FT CLASS 2, CCA TREATED	\$268.91	\$11,294.22	Y
2	2002858	POLE, WOOD, 45 FT CLASS 2, CCA TREATED.	\$318.48	\$636.96	Y
23	2077767	ROLLED BOLT, DOUBLE-ARMING, 5/8"X 16"	\$2.14	\$49.22	N
62	2077790	SCREW, LAG 1/2" X 4", GALV., TWIST DRIVE	\$0.38	\$23.56	N
48	2077812	SPACER, CABLED SECONDARY	\$6.79	\$325.92	N
7	2003612	TIE, PREFORMED SIDE TIE #2 ACSR OR #2 A	\$2.18	\$15.26	N
28	2003613	TIE, TOP, FORMED WIRE #2 ACSR OR #2 AAAC	\$3.13	\$87.64	N
62	2078002	WASHER, CURVED, MALLEABLE, 3" X 3"	\$0.96	\$59.52	N
156	2078006	WASHER, FLAT, GALVANIZED, 2" X 2" X 1/8"	\$0.19	\$29.64	N
146	2078014	WIRE, ALUMINUM, TIE, #4 BARE ANNEALED	\$0.09	\$13.14	N
2776	2005879	WIRE, GUY, GALV STEEL, 3/8 IN 7 STR HS B	\$0.27	\$749.52	N
Total			\$18,430.19		



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 925114

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Dist Eng
HDOH SECONDARY

Additional Information: Full PSC Filing 10/2010

WR Description: HDOH 1250 sq ft SECONDARY

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$10,228.53	\$0.00	\$10,228.53
OVERHEAD:	\$1,429.95	\$0.00	\$1,429.95
	\$11,658.48	\$0.00	\$11,658.48
LABOR HOURS:	240.42	0	240.42
LABOR COST:	\$9,662.07	\$0.00	\$9,662.07
OVERHEAD:	\$12,788.70	\$0.00	\$12,788.70
	\$22,450.77	\$0.00	\$22,450.77
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$34,109.25	\$0.00	\$34,109.25
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$34,109.25	\$0.00	\$34,109.25

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/23/2018

Dist: CSA

WR No. 925114

Page 1 of 1

Material Number	Description	Unit Price	Total Cost	Asset?	
INSTALL					
11	2077764	â€¢BOLT, MACHINE 3/4" X 12", GALV.	\$1.62	\$17.82	N
1	2003632	ANCHOR,SCRW GALV 10" WING 1-1/4" ROD 8"	\$43.05	\$43.05	N
10	2077739	BOLT, EYE, 5/8 IN. X 10 IN., GALVANIZED	\$3.12	\$31.20	N
1	2077755	BOLT, MACHINE 5/8" X 12", GALV. FULL	\$1.02	\$1.02	N
5413	2004338	CABLE, OVERHEAD SECONDARY, TRIPLEX, 2/0	\$0.98	\$5,304.54	Y
1013	2004364	CABLE, SERVICE DROP AL 2-2/0 & 1-1/0 NEU	\$0.91	\$922.10	Y
43	2077818	CLAMP, DEADEND ACSR OR AAC #2-4/0OR .30-	\$9.04	\$388.72	N
3	2003770	CLAMP, MID SPAN ALUMINUM 1/4 IN - 1/2 IN	\$6.39	\$19.17	N
236	2004331	CONDUCTOR, BARE OVERHEAD, 2 AWG, AAAC, 7	\$0.13	\$30.72	Y
129	2077839	CONNECTOR, COMPRESSION H-BLOCK ACSR 1/0-	\$0.47	\$60.63	N
8	2077837	CONNECTOR, COMPRESSION H-BLOCK ACSR 2/0	\$0.59	\$4.72	N
8	2077931	CONNECTOR, VICE CU #2 STR	\$2.31	\$18.48	N
86	2003516	COVER, SNAP-ON SQUEEZON CONNECTOR D DIE	\$0.40	\$34.40	N
1	2003636	EXTENSION ROD, ANCHOR 1-1/4 X 72 6 FT	\$44.02	\$44.02	N
12	2077949	GRIP, GUY, FORMED WIRE 3/8 INTWISTED LOO	\$2.25	\$27.00	N
11	2077951	HOOK, GUY	\$2.67	\$29.37	N
10	2077961	INSULATOR, STRAIN FIBERGLASS 36 IN 15,00	\$15.53	\$155.30	N
1	2077979	MARKER, GUY WIRE PLASTIC 8' IN LENGTH CO	\$4.37	\$4.37	N
37	2077783	NUT, EYE, STANDARD, 1-1/2" GALVANIZED FO	\$1.28	\$47.36	N
19	2002842	POLE, WOOD, 35 FT, CLASS 4, CCA TREATED.	\$139.96	\$2,659.24	Y
19	2077767	ROLLED BOLT, DOUBLE-ARMING, 5/8"X 16"	\$2.14	\$40.66	N
11	2077790	SCREW, LAG 1/2" X 4", GALV., TWIST DRIVE	\$0.38	\$4.18	N
19	2077812	SPACER, CABLED SECONDARY	\$6.79	\$129.01	N
11	2078002	WASHER, CURVED, MALLEABLE, 3" X 3"	\$0.96	\$10.56	N
50	2078006	WASHER, FLAT, GALVANIZED, 2" X 2" X 1/8"	\$0.19	\$9.50	N
57	2078014	WIRE, ALUMINUM, TIE, #4 BARE ANNEALED	\$0.09	\$5.13	N
16	2004184	WIRE, COPPER, BARE, #4 SOFT DRAWN 7 STR	\$0.56	\$8.96	N
657	2005879	WIRE, GUY, GALV STEEL, 3/8 IN 7 STR HS B	\$0.27	\$177.39	N
Total			\$10,228.52		



Estimate Summary

Design Number 1

Printed Date: 3/27/2018

District: CSA

WR No. 927142

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Distribution Services
HDOH SERVICE

Additional Information: Full PSC Filing 10/2010
WR Description: HDOH 1250 sq ft SERVICE

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$8,257.80	\$0.00	\$8,257.80
OVERHEAD:	\$1,154.45	\$0.00	\$1,154.45
	\$9,412.25	\$0.00	\$9,412.25
LABOR HOURS:	151.94	0	151.94
LABOR COST:	\$6,106.50	\$0.00	\$6,106.50
OVERHEAD:	\$8,082.57	\$0.00	\$8,082.57
	\$14,189.07	\$0.00	\$14,189.07
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$23,601.32	\$0.00	\$23,601.32
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$23,601.32	\$0.00	\$23,601.32

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).



Work Request Material Summary

Includes Truck Stock

Design Number 1

Printed Date: 3/27/2018

Dist: CSA

WR No. 927142

Page 1 of 1

Material Number		Description	Unit Price	Total Cost	Asset?
INSTALL					
9408	2004364	CABLE, SERVICE DROP AL 2-2/0 & 1-1/0 NEU	\$0.86	\$8,090.88	Y
0	2004366	CABLE, SERVICE DROP AL 2-4/0 & 1-2/0 NEU	\$1.29	\$0.00	Y
26	2003770	CLAMP, MID SPAN ALUMINUM 1/4 IN - 1/2 IN	\$6.42	\$166.92	N
			Total	\$8,257.80	



Estimate Summary

Design Number 1

Printed Date: 3/23/2018

District: CSA

WR No. 927163

Date Sched: 3/23/18

Date Required: 3/23/18

Contact Name:

Dist Svcs
HDOH METERS

Additional Information: Full PSC Filing 10/2010
WR Description: HDOH 1250 sq ft METERS

INSTALLATION:	Capital	Oper./Maint.	Total
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	35.2	0	35.2
LABOR COST:	\$1,414.69	\$0.00	\$1,414.69
OVERHEAD:	\$1,872.48	\$0.00	\$1,872.48
	\$3,287.17	\$0.00	\$3,287.17
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$3,287.17	\$0.00	\$3,287.17
REMOVAL:			
MATERIAL:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TRANSFER:			
LABOR HOURS:	0	0	0
LABOR COST:	\$0.00	\$0.00	\$0.00
OVERHEAD:	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00
VEHICLE:	\$0.00	\$0.00	\$0.00
CONTRACTOR:	\$0.00	\$0.00	\$0.00
ADDITIONAL ITEMS:	\$0.00	\$0.00	\$0.00
SUBTOTAL:	\$0.00	\$0.00	\$0.00
TOTALS:	\$3,287.17	\$0.00	\$3,287.17

THIS FORM IS NOT TO BE USED FOR CONTRIBUTION IN AID CONSTRUCTION (CIAC).

Differential costs for single phase (1Ø) services from an overhead source

OVERHEAD SERVICE

OH Service Cable - Material Per Foot Cost

This cost includes all service clamps, connectors and connector covers required. The per foot cost is a material only number.

<u>Action</u>	<u>Description</u>	<u>Material</u>		<u>(Material Handling) Overhead</u>		<u>OH Service Material Cost Per Foot</u>
install	76' - 1Ø - 2/0 AWG Triplex	\$82.86	+	\$11.58	= \$96.80 + 76 =	\$1.24
install	76' - 1Ø - 4/0 AWG Triplex	\$129.01	+	\$18.03	= \$150.33 + 76 =	\$1.93

OH Service Cable - Fixed Cost

Fixed Cost = TEC labor plus Contractor labor cost to install the service cable, includes labor plus overheads and vehicle plus the Net Present Value of Operation Cost with Storm Cost.

OH Service - Net Present Value of Operation Cost with Storm Cost	\$110.66
Labor cost to install 2/0 triplex service cable	\$126.27
Labor cost to install 4/0 triplex service cable	\$126.27

OH SERVICE CABLE - Cost Table

<u>OH Description</u>	<u>Installation Cost</u>		
		<u>Fixed</u>	<u>Per Foot</u>
1Ø - 2/0 AWG Triplex	\$110.66	+\$226.65=	\$236.93
1Ø - 4/0 AWG Triplex	\$110.66	+\$242.15=	\$236.93

OH Service - Poles

This is the cost to haul a service pole to the site and install an overhead service pole.

<u>Action</u>	<u>Description</u>	<u>Total</u>
install	Accessible 35' wood pole	\$592.39
	Average cost to install a service pole	\$592.39

Conversion Cost - Conversions of single phase (1Ø) OH Services to UG Services

The "Conversion Cost" is the sum of: 1) the cost to remove whatever overhead facilities exist;

2) the cost of the remaining book value for those overhead facilities.

After paying the cost to remove and the book value, the Customer essentially becomes a new Customer and is charged the differential cost for his new underground service. The OH Service Cable Removal Cost and the Handy Whitman depreciation tables below are used to calculate the Conversion Cost. The total cost for a customer to convert his overhead service to underground service is the applicable Differential Cost for the new underground service plus the conversion cost.

1) the cost to remove whatever overhead facilities exist

<u>Action</u>	<u>Average length service</u>	<u>Total Removal Cost</u>	<u>System %</u>	<u>System Average Cost</u>
remove	1Ø - #2 AWG Triplex	\$73.14	10%	\$7.31
remove	1Ø - 2/0 AWG Triplex	\$73.14	70%	\$51.20
remove	1Ø - 4/0 AWG Triplex	\$73.14	20%	\$14.63
System Average cost to remove average length 1Ø service				\$73.14
<u>Action</u>	<u>Service length with a service pole</u>	<u>Total Removal Cost</u>	<u>System %</u>	<u>System Average Cost</u>
remove	1Ø - #2 AWG Triplex	\$127.55	10%	\$12.75
remove	1Ø - 2/0 AWG Triplex	\$127.55	70%	\$89.28
remove	1Ø - 4/0 AWG Triplex	\$127.55	20%	\$25.51
remove	35' wood pole, drive hook	\$210.74	100%	\$210.74
System Average cost to remove average long 1Ø service with service pole				\$338.29

2) the cost of the remaining book value for those overhead facilities.

Book Value Assumptions:

- 1. Average depreciation 0.036
- 2. Age of pole & service, yrs. 11
- 3. Handy Whitman Ratio, total dist.plant, 2007/2017 0.69

Book Value = (System Value Today) x (Handy Whitman Ratio) x (1 - (Std Dep. x Age))

<u>Action</u>	<u>Average length service</u>	<u>Total Installation Cost</u>	<u>System %</u>	<u>System Average Cost</u>
install	1Ø - #2 AWG Triplex	\$192.76	10%	\$19.28
install	1Ø - 2/0 AWG Triplex	\$220.71	70%	\$154.50
install	1Ø - 4/0 AWG Triplex	\$273.31	20%	\$54.66
System Average cost to install average length 1Ø service				\$228.44
Book Value for average length 1Ø service				\$94.56
<u>Action</u>	<u>Service length that requires a service pole</u>	<u>Total Installation Cost</u>	<u>System %</u>	<u>System Average Cost</u>
install	1Ø - #2 AWG Triplex	\$339.15	10%	\$33.91
install	1Ø - 2/0 AWG Triplex	\$394.56	70%	\$276.19
install	1Ø - 4/0 AWG Triplex	\$496.12	20%	\$99.22
install	35' wood pole, cable spacer	\$461.90	100%	\$461.90
	Haul pole to job site	\$130.49	100%	\$130.49
System Average cost to install average long 1Ø service with service pole				\$1,001.72
Book Value for average long 1Ø service with service pole				\$414.65

1Ø Conversion Cost from OH to UG service

1Ø Average Service - 100 ft or less(Svc without pole) = (book value + removal)

1Ø Average Long Service- Greater than 100 ft (svc with one pole) = (book value + removal)

<u>Remove Cost</u>	<u>Book value Cost</u>	<u>Conversion Cost</u>
\$73.14	\$94.56	\$167.70
\$338.29	\$414.65	\$752.94

UNDERGROUND SERVICE

UG Service from an OH Source - Per Foot Cost

This is the material cost of the conduit and cable in the trench, plus the contractor labor to dig the trench and install the conduit and cable in the trench, plus the cost of the TEC inspector.

<u>Action</u>	<u>Description</u>	<u>UG Cable Material Cost Per Foot</u>		<u>UG Conduit Material Cost Per Foot</u>		<u>Teco Inspection Labor Per Foot</u>		<u>Contractor labor Machine Trench Per Foot</u>		<u>UG Cable Machine Trench Total Cost Per Foot</u>
install	1Ø - 2/0 AWG Triplex	\$1.15	+	\$0.59	+	\$1.16	+	\$8.35	=	\$11.26
install	1Ø - 4/0 AWG Triplex	\$1.53	+	\$0.79	+	\$1.16	+	\$8.35	=	\$11.84

UG SERVICE CABLE TO METER FROM OH SOURCE - Fixed Cost

This is the cost for the material down the pole and the material at the house riser to the meter can, plus the contractor cost to install the conduit, cable and make the connection on the pole, plus the Net Present Value of Operation Cost with Storm Cost.

UG Service - Net Present Value of Operation Cost with Storm Cost

<u>Action</u>	<u>Description</u>	<u>Material</u>		<u>\$100.39 (Material Handling) Overhead</u>		<u>Contractor Labor</u>		<u>NPV OC + SC</u>		<u>Total Fixed Cost</u>
install	1Ø - 2/0 AWG Tpx - 2" conduit	\$76.33	+	\$10.67	+	\$120.90	+	\$100.39	=	\$308.29
install	1Ø - 4/0 AWG Tpx - 3" conduit	\$107.19	+	\$14.98	+	\$120.90	+	\$100.39	=	\$343.47

UG Service Cable from an OH Source - Cost Table

<u>UG Service Cable from an OH Source to a meter can Cable & Conduit With Machine Trench</u>		<u>Fixed</u>	<u>Installation Cost Per Foot</u>	<u>OH Service Equivalent Description</u>	<u>Installation Cost</u>		<u>Service Differential Cost</u>	
					<u>Fixed</u>	<u>Per Foot</u>	<u>Fixed</u>	<u>Per Foot</u>
	1Ø - 2/0 AWG Triplex	\$308.29	\$11.26	1Ø - 2/0 AWG Triplex	\$236.93	\$1.24	\$71.36	\$10.02
	1Ø - 4/0 AWG Triplex	\$343.47	\$11.84	1Ø - 4/0 AWG Triplex	\$236.93	\$1.93	\$108.53	\$9.91

Differential costs for single phase (1Ø) services from an overhead source

<u>Fixed Charge</u>	<u>Cost/ft</u>	<u>1Ø UG Secondary or 1Ø UG service in conduit from OH source (Base Charge + service length times Cost/ft)</u>
\$71.36	\$10.02	1Ø 2/0 AWG, 100 ft or less, machine trench, /ft (differential) - a service 100' or less is one that would not have a service pole if it was overhead
\$106.53	\$9.91	1Ø 4/0 AWG, 100 ft or less, machine trench, /ft (differential) - a service 100' or less is one that would not have a service pole if it was overhead
(\$521.03)	\$10.02	1Ø 2/0 AWG, greater than 100 ft, machine trench, /ft (differential) - a service greater than 100' is one that would require a service pole if it was overhead
(\$485.86)	\$9.91	1Ø 4/0 AWG, greater than 100 ft, machine trench, /ft (differential) - a service greater than 100' is one that would require a service pole if it was overhead

Tariff Sheet No. 5.516 (3.7.2)

Density Class		Current Deposit 2017	CPI -U			Proposed Deposit 2018
			2015	2016	2017	
Urban commercial or residential (\$/mile)	\$	9,561	0.10%	1.30%	2.10%	\$ 9,896
Rural commercial or residential (\$/mile)	\$	5,466	0.10%	1.30%	2.10%	\$ 5,657
Per Lot Subdivisions (\$/lot)	\$	45	0.10%	1.30%	2.10%	\$ 47

Table I
OPERATING COSTS

		2015 Actual \$	2016 Actual \$	2017 Actual \$	3-Yr Average \$	OH Ratio	UG Ratio	3-Yr Average Allocated Overhead \$	3-Yr Average Allocated Underground \$
Overhead - Blanket Account									
D-CRR-Voltage-OH (NEW)	New SAP/Funding project								
	CRR-02630, CRR-02879	\$34,226	\$46,177	\$126,412	\$68,938	100.0%	0.0%	\$68,938	\$0
PRE - Dist Line - Fault Indicators	PRE-05080	\$257,568	\$172,262	\$250,315	\$226,715	100.0%	0.0%	\$226,715	\$0
Distr - Maint - Corrective - OH Line	CRR-02682, CRR-03641, PRE-04820	\$11,853,173	\$12,492,808	\$9,071,353	\$11,139,111	100.0%	0.0%	\$11,139,111	\$0
Distribution - Maint - OH System Improvements		\$0	\$0	\$0	\$0	100.0%	0.0%	\$0	\$0
Distribution - Maint - Mgmt & Coordination		\$0	\$0	\$0	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Preventative - OH Line	PRE-02805, PRE-02827	\$2,602,586	\$4,852,428	\$6,321,911	\$4,592,308	100.0%	0.0%	\$4,592,308	\$0
Distr - Maint - Trouble - OH Storm	CRR-02625, CRR-07052	\$1,279,340	\$1,586,273	\$3,889,120	\$2,251,578	100.0%	0.0%	\$2,251,578	\$0
Distr - Maint - Pole Inspect & Change-Outs	PRE-02624	\$21,652,324	\$29,189,331	\$25,618,395	\$25,486,683	100.0%	0.0%	\$25,486,683	\$0
Distr - Maint - Damage Replacement - OH Line	CRR-02629, CRR-07072	\$1,168,707	\$1,205,163	\$1,240,937	\$1,204,269	100.0%	0.0%	\$1,204,269	\$0
Distr - Maint - Capacitors	PRE-02631, CRR-02628	\$820,853	\$532,395	\$748,303	\$633,784	100.0%	0.0%	\$633,784	\$0
Distr - Maint - Trouble - Non-Storm		\$0	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0
Distr - Maint - Tree Trimming - Planned		\$0	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0
Distr - Env - Train/Permit/Inspect/Audit/Protect		\$0	\$0	\$0	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Tree Trimming - Unplanned		\$0	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0
Distr - Maint - Pole Reinforcements	PRE-03670	\$27,792	\$0	\$232,391	\$86,728	100.0%	0.0%	\$86,728	\$0
Distr - Maint - Pole CLAs & Change-Outs	PRE-03640	\$628,247	\$1,370,240	\$620,420	\$872,969	100.0%	0.0%	\$872,969	\$0
Distr - Maint - Infrared Thermography		\$0	\$0	\$0	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Services - OH Line	CRR-02680	\$599,392	\$833,061	\$825,826	\$751,760	0.0%	0.0%	\$0	\$0
Subtotal		\$40,719,008	\$52,280,136	\$48,945,383	\$47,019,189				
Underground - Blanket Account									
D-CRR-Voltage-UG	CRR-03814	\$32,813	\$331	\$393	\$11,112	0.0%	100.0%	\$0	\$11,112
D-PRE-Transformers-UG	PRE-03623	\$445,831	\$485,277	\$5,792,966	\$2,241,358	0.0%	100.0%	\$0	\$2,241,358
Distr - Maint - Corrective - UG Line	CRR-02644, CRR-03642	\$9,584,715	\$9,578,832	\$11,149,781	\$10,097,776	0.0%	100.0%	\$0	\$10,097,776
Distribution - Maint - UG System Improvements		\$0	\$0	\$0	\$0	0.0%	100.0%	\$0	\$0
Distribution - Maint - Mgmt & Coordination		\$0	\$0	\$0	\$0	0.0%	100.0%	\$0	\$0
Distr - Maint - Preventative - UG Line	PRE-02809, PRE-02646	\$1,143,025	\$1,025,091	\$1,115,881	\$1,094,686	0.0%	100.0%	\$0	\$1,094,686
Distr - Maint - Network Corrective	CRR-02636	\$386,306	\$240,413	\$261,404	\$296,041	0.0%	100.0%	\$0	\$296,041
Distr - Maint - Network Preventative	PRE-04357	\$213,836	\$48,820	-\$10,542	\$84,036	0.0%	100.0%	\$0	\$84,036
Distr - Maint - Capacitors - UG	CRR-02651, PRE-03813	\$5,911	\$3,287	\$21,669	\$10,282	0.0%	100.0%	\$0	\$10,282
Distr - Maint - UG Cable Rplcmt - Planned	CRR-02649	\$2,653,289	\$3,719,963	\$3,428,731	\$3,267,331	0.0%	100.0%	\$0	\$3,267,331
Distr - Maint - Trouble - UG Storm	CRR-02645	\$374,295	\$226,400	\$803,417	\$468,037	0.0%	100.0%	\$0	\$468,037
Distr - Maint - Damage Replacement - UG Line	CRR-02652	\$641,961	\$718,093	\$682,148	\$684,067	0.0%	100.0%	\$0	\$684,067
Distr - Maint - UG Cable Rplcmt - Unplanned		\$0	\$0	\$0	\$0	0.0%	100.0%	\$0	\$0
Distr - Maint - Services - UG Line	CRR-02679	\$947,454	\$911,653	\$1,054,181	\$971,098	0.0%	0.0%	\$0	\$0
Subtotal		\$16,409,248	\$16,958,141	\$24,310,029	\$16,973,335				
Overhead - O&M Account									
D-CRR-Voltage-OH (NEW)	CRR-02630, CRR-02879	\$21,166	\$36,013	\$49,248	\$35,476	100.0%	0.0%	\$35,476	\$0
Distr - Maint - Corrective - OH Line	CRR-02658, CRR-02682	\$5,663,607	\$6,702,048	\$5,549,490	\$5,971,714	100.0%	0.0%	\$5,971,714	\$0
Distribution - Maint - OH System Improvements		\$0	\$0	\$0	\$0	100.0%	0.0%	\$0	\$0
Distribution - Maint - Mgmt & Coordination		\$0	\$0	\$0	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Preventative - OH Line	PRE-02627, PRE-02667, PRE-02668	\$361,010	\$338,407	\$177,398	\$292,272	100.0%	0.0%	\$292,272	\$0
Distr - Maint - Trouble - OH Storm	CRR-02625, CRR-02877	\$965,131	\$1,701,574	\$3,374,032	\$1,980,246	100.0%	0.0%	\$1,980,246	\$0
Distr - Maint - Pole Inspect & Change-Outs	PRE-04039, PRE-02859	\$2,220,839	\$3,037,900	\$906,781	\$2,055,067	100.0%	0.0%	\$2,055,067	\$0
Distr - Maint - Damage Replacement - OH Line	CRR-02861, CRR-02629	\$108,021	\$154,903	\$109,588	\$124,170	100.0%	0.0%	\$124,170	\$0
Distr - Maint - Capacitors	CRR-02628, CRR-02857	\$221,207	\$182,804	\$238,305	\$214,105	100.0%	0.0%	\$214,105	\$0
Distr - Maint - Trouble - Non-Storm	CRR-02876	\$2,125,185	\$1,971,141	\$2,298,168	\$2,131,831	0.0%	0.0%	\$0	\$0
CRR - Dist Line - Storms - OH - Restoration	CRR-10852	\$0	\$4,473	\$408,147	\$137,873	0.0%	0.0%	\$0	\$0
Distr - Maint - Tree Trimming - Planned	PRE-04067	\$10,633,612	\$10,947,625	\$6,994,398	\$9,525,212	0.0%	0.0%	\$0	\$0
Distr - Env - Train/Permit/Inspect/Audit/Protect	OPS-04740, PRE-04060	\$135,371	\$129,867	\$24,955	\$96,731	100.0%	0.0%	\$96,731	\$0
Distr - Maint - Tree Trimming - Unplanned	CRR-03621	\$1,037,807	\$1,415,113	\$1,443,955	\$1,298,958	0.0%	0.0%	\$0	\$0
Distr - Maint - Pole Reinforcements		\$0	\$0	\$0	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Pole CLAs & Change-Outs	PRE-04082	\$0	\$0	\$0	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Infrared Thermography		\$0	\$0	\$0	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Services - OH Line	CRR-02680, CRR-02871	\$632,489	\$748,690	\$771,285	\$716,815	0.0%	0.0%	\$0	\$0
Subtotal		\$24,025,225	\$27,368,456	\$22,347,728	\$24,544,994				
Underground - O&M Account									
D-PRE-Transformers-UG	PRE-03623	\$1,533	\$834	\$2,330	\$1,566	0.0%	100.0%	\$0	\$1,566
Distr - Maint - Corrective - UG Line	CRR-02860, CRR-02644	\$1,258,737	1,500,889	\$1,524,122	\$1,427,916	0.0%	100.0%	\$0	\$1,427,916
Distribution - Maint - UG System Improvements		\$0	\$0	\$0	\$0	0.0%	100.0%	\$0	\$0
Distribution - Maint - Mgmt & Coordination		\$0	\$0	\$0	\$0	0.0%	100.0%	\$0	\$0
Distr - Maint - Preventative - UG Line	PRE-02869, PRE-02809, PRE-02646, PRE-02870	\$54,630	\$197,377	\$197,174	\$148,727	0.0%	100.0%	\$0	\$148,727
Distr - Maint - Network Corrective	CRR-02636, CRR-02863	\$43,624	\$3,992	\$9,010	\$18,875	0.0%	100.0%	\$0	\$18,875
Distr - Maint - Network Preventative	PRE-02864	\$593,541	\$503,523	\$405,693	\$500,919	0.0%	100.0%	\$0	\$500,919
Distr - Locals Facilities	PRE-04063	\$1,026,830	\$997,422	\$782,820	\$939,057	0.0%	100.0%	\$0	\$939,057
Distr - Maint - UG Cable Rplcmt - Planned	CRR-03835, CRR-02849	\$70,422	\$97,466	\$80,912	\$82,933	0.0%	100.0%	\$0	\$82,933
Distr - Maint - Trouble - UG Storm	CRR-02876	\$60,778	\$76,868	\$115,240	\$84,295	0.0%	100.0%	\$0	\$84,295
D-CRR-Capacitors-UG	CRR-02651	\$1,838	\$0	\$4,698	\$2,179	0.0%	100.0%	\$0	\$2,179
D-CRR-Storms-UG	CRR-02645	\$0	\$1,429	\$683	\$704	0.0%	100.0%	\$0	\$704
Distr - Maint - Damage Replacement - UG Line	CRR-02862, CRR-02652	\$71,029	\$5,697	\$26,921	\$34,549	0.0%	100.0%	\$0	\$34,549
Distr - Maint - UG Cable Rplcmt - Unplanned		\$0	\$0	\$0	\$0	0.0%	100.0%	\$0	\$0
Distr - Maint - Services - UG Line	CRR-02879, CRR-02872	\$487,461	\$543,889	\$340,185	\$457,172	0.0%	0.0%	\$0	\$0
Subtotal		\$3,670,523	\$3,929,366	\$3,498,788	\$3,698,327			\$57,332,863	\$21,497,430

Table II
PRIMARY VOLTAGE SYSTEM

	2015 Actual \$	2016 Actual \$	2017 Actual \$	3-Yr Average \$	OH Ratio	UG Ratio	Allocated Overhead \$	Allocated Underground \$	
Distribution - Maint - Trouble Calls - Non-storm									
Blanket	\$0	\$0	\$0	\$0	77.2%	22.8%	\$0	\$0	
O&M	\$2,125,185	\$1,971,141	\$2,298,168	\$2,131,831	77.2%	22.8%	\$1,645,774	\$486,058	
Operating Cost Total from Table I							\$57,332,863	\$21,497,430	
							(A) 3 Yr Avg Annual Operational Cost	\$58,978,637	\$21,983,487
Distr - Maint - Tree Trimming - Planned									
Blanket	\$0	\$0	\$0	\$0	94.9%	5.1%	\$0	\$0	
O&M	\$10,633,612	\$10,947,625	\$6,984,398	\$8,525,212	94.9%	5.1%	\$9,043,535	\$481,676	
Distr - Maint - Tree Trimming - Unplanned									
Blanket	\$0	\$0	\$0	\$0	94.9%	5.1%	\$0	\$0	
O&M	\$1,037,807	\$1,415,113	\$1,443,955	\$1,298,958	94.9%	5.1%	\$1,233,272	\$65,686	
							(B) 3 Yr Avg Annual Line Clearance Cost	\$10,276,807	\$547,363
Annual Estimated Storm Costs									
Storm Damage Annual Accrual									
Percent for Distribution Lines & Substations									
Percent for Substations									
Percent for Distribution Lines									
Overall Distribution Percent									
Storm Cost Distribution Lines	\$710,000	\$8,948,000	\$92,818,327	\$ 34,158,776	96.0%	4.0%	\$32,792,425	\$1,366,351	
							(C) Estimated Annual Storm Cost	\$32,792,425	\$1,366,351
Pole Attachment Revenue	\$4,281,491	\$4,315,418	\$4,375,284	\$4,324,064	100.0%	0.0%	\$4,324,064	\$0	
							(D) 2010 Annual Pole Attachment Revenue	\$4,324,064	\$0

Table III
SERVICE CONDUCTOR

	2015 Actual \$	2016 Actual \$	2017 Actual \$	3-Yr Average \$	OH Ratio	UG Ratio	Allocated Overhead \$	Allocated Underground \$	
Distr - Maint - Services - OH Line									
Blanket	\$596,392	\$833,061	\$825,826	\$751,760	100.0%	0.0%	\$751,760	\$0	
O&M	\$632,469	\$746,690	\$771,285	\$716,815	100.0%	0.0%	\$716,815	\$0	
Distr - Maint - Services - UG Line									
Blanket	\$947,454	\$911,653	\$1,054,181	\$971,096	0.0%	100.0%	\$0	\$971,096	
O&M	\$487,461	\$543,869	\$340,185	\$457,172	0.0%	100.0%	\$0	\$457,172	
							(A) 3 Yr Avg Annual Operational Cost	\$1,468,574	\$1,428,268

Table IV
ALLOCATION FACTORS

Line Clearance								
2016 No. of company owned distribution poles	307,286	94.9%						
2016 No. of Terminal Poles on System	15,538	5.1%						
Distribution - Maint - Trouble Calls - Non-storm								
No Outage Events (N)	2018 Entire System	2018 Overhead System	2018 Underground System					
Outage Sys Avg Duration (L-Bar)	9,514	7,731	1,783					
Trouble Calls Weighted Avg Proportion (N) X (L-Bar)	177.04	168.21	215.32					
Allocation Percentage	1,684,359	1,300,432	383,816					
		77.2%	22.8%					
Service Count (Based on Metered Accounts)								
Overhead Single & Three Phase (Excluding Multi-Family)				No of Services (Based on Metered Accounts)				
Underground Single Phase (Excluding Multi-Family)				238,878				
				256,077				

Table V (A)
NET PRESENT VALUE LIFECYCLE COST CALCULATION
(Primary Voltage System - Installation of Facilities In Subdivisions)

Assumptions:
 Inflation Rate 2.10 %
 Discount Rate 6.81 %
 Book Life 35 Yrs
 Pole Attach Revenue Increase 1.4 %

Overhead System								
Yr	(A) 3 Yr Avg Annual Operational Cost (\$)	(D) 3 Yr Avg Annual Pole Attachment Revenue (\$)	(A)+(D) 3 Yr Avg Annual Operational Cost Incl Lost Attachment Revenue(\$)	(B) 3 Yr Avg Annual Line Clearance Cost (\$)	(C) Estimated Annual Storm Cost (\$)	(A)+(B)+(C)+ (D) NPV Incl Storm (\$)	(A)+(B)+(D) NPV Excl Storm (\$)	(C) NPV Storm Only (\$)
1	\$ 58,978,637	\$ (4,324,064)	\$ 54,654,573	\$ -	\$ 32,792,425	\$ 87,446,997	\$54,654,573	\$32,792,425
2	60,217,188	(4,384,050)	\$ 55,833,138	-	33,481,066	\$ 83,619,702	\$52,273,325	\$31,346,377
3	61,481,749	(4,444,868)	\$ 57,036,881	-	34,184,168	\$ 79,959,714	\$49,995,618	\$29,964,096
4	62,772,866	(4,506,530)	\$ 58,266,336	-	34,902,035	\$ 76,459,730	\$47,816,960	\$28,642,770
5	64,091,096	(4,569,047)	\$ 59,522,049	-	35,634,978	\$ 73,112,764	\$45,733,055	\$27,379,710
6	65,437,009	(4,632,432)	\$ 60,804,577	-	36,383,313	\$ 69,912,137	\$43,739,791	\$26,172,347
7	66,811,187	(4,696,696)	\$ 62,114,491	-	37,147,362	\$ 66,851,459	\$41,833,234	\$25,018,225
8	68,214,221	(4,761,851)	\$ 63,452,370	-	37,927,457	\$ 63,924,618	\$40,009,622	\$23,914,996
9	69,646,720	(4,827,910)	\$ 64,818,810	-	38,723,934	\$ 61,125,771	\$38,265,354	\$22,860,417
10	71,109,301	(4,894,886)	\$ 66,214,415	-	39,537,136	\$ 58,449,327	\$36,596,985	\$21,852,341
11	72,602,597	(4,962,791)	\$ 67,639,806	-	40,367,416	\$ 55,889,940	\$35,001,222	\$20,888,719
12	74,127,251	(5,031,637)	\$ 69,095,614	-	41,215,132	\$ 53,442,499	\$33,474,910	\$19,967,589
13	75,683,923	(5,101,439)	\$ 70,582,484	-	42,080,649	\$ 51,102,112	\$32,015,033	\$19,087,078
14	77,273,286	(5,172,209)	\$ 72,101,077	-	42,964,343	\$ 48,864,103	\$30,618,707	\$18,245,395
15	78,896,025	(5,243,961)	\$ 73,652,064	13,747,338	43,866,594	\$ 52,189,775	\$34,748,947	\$17,440,828
16	80,552,841	(5,316,708)	\$ 75,236,133	14,036,032	44,787,793	\$ 49,902,276	\$33,230,536	\$16,671,740
17	82,244,451	(5,390,465)	\$ 76,853,986	14,330,789	45,728,336	\$ 47,714,942	\$31,778,375	\$15,936,567
18	83,971,584	(5,465,245)	\$ 78,506,340	14,631,735	46,688,632	\$ 45,623,392	\$30,389,580	\$15,233,812
19	85,734,988	(5,541,062)	\$ 80,193,926	14,939,002	47,669,093	\$ 43,623,437	\$29,061,391	\$14,562,047
20	87,535,422	(5,617,930)	\$ 81,917,492	15,252,721	48,670,144	\$ 41,711,070	\$27,791,166	\$13,919,904
21	89,373,666	(5,695,866)	\$ 83,677,801	15,573,028	49,692,217	\$ 39,882,459	\$26,576,381	\$13,306,078
22	91,250,513	(5,774,882)	\$ 85,475,631	15,900,061	50,735,753	\$ 38,133,940	\$25,414,620	\$12,719,320
23	93,166,774	(5,854,995)	\$ 87,311,780	16,233,963	51,801,204	\$ 36,462,009	\$24,303,572	\$12,158,436
24	95,123,276	(5,936,219)	\$ 89,187,058	16,574,876	52,889,029	\$ 34,863,314	\$23,241,028	\$11,622,286
25	97,120,865	(6,018,569)	\$ 91,102,296	16,922,948	53,999,699	\$ 33,334,651	\$22,224,873	\$11,109,778
26	99,160,403	(6,102,062)	\$ 93,058,341	17,278,330	55,133,693	\$ 31,872,956	\$21,253,086	\$10,619,870
27	101,242,772	(6,186,714)	\$ 95,056,058	17,641,175	56,291,500	\$ 30,475,298	\$20,323,732	\$10,151,566
28	103,368,870	(6,272,539)	\$ 97,096,331	18,011,640	57,473,622	\$ 29,138,874	\$19,434,962	\$9,703,912
29	105,539,616	(6,359,556)	\$ 99,180,061	18,389,884	58,680,568	\$ 27,861,004	\$18,585,005	\$9,275,999
30	107,755,948	(6,447,779)	\$ 101,308,169	18,776,072	59,912,860	\$ 26,639,126	\$17,772,171	\$8,866,955
31	110,018,823	(6,537,227)	\$ 103,481,597	19,170,369	61,171,030	\$ 25,470,788	\$16,994,839	\$8,475,949
32	112,329,218	(6,627,915)	\$ 105,701,304	19,572,947	62,455,621	\$ 24,353,648	\$16,251,462	\$8,102,185
33	114,688,132	(6,719,861)	\$ 107,968,271	19,983,979	63,767,189	\$ 23,285,462	\$15,540,559	\$7,744,903
34	117,096,583	(6,813,083)	\$ 110,283,500	20,403,643	65,106,300	\$ 22,264,090	\$14,860,714	\$7,403,376
35	119,555,611	(6,907,598)	\$ 112,648,013	20,832,119	66,473,533	\$ 21,287,480	\$14,210,571	\$7,076,910
					SUM	\$ 1,656,250,864	\$ 1,066,015,959	\$ 590,234,906

NPV = (Annual Cost)/(1+(Discount Rate/100))^(Year -1)

Table V (B)
NET PRESENT VALUE LIFECYCLE COST CALCULATION
(Primary Voltage System - Installation of Facilities In Subdivisions)

Assumptions:
 Inflation Rate 2.10 %
 Discount Rate 6.81 %
 Book Life 35 Yrs
 Pole Attach Revenue Increase 1.4 %

Underground System						
Yr	(A)	(B)	(C)	(A)+(B)+(C) NPV Incl Storm (\$)	(A)+(B) NPV Excl Storm (\$)	(C) NPV Storm Only (\$)
	3 Yr Avg Annual Operational Cost (\$)	3 Yr Avg Annual Line Clearance Cost (\$)	Estimated Annual Storm Cost (\$)			
1	\$ 21,983,487	\$ -	\$ 1,366,351	\$ 23,349,839	\$ 21,983,487	\$ 1,366,351
2	22,445,141	-	1,395,044	22,320,181	21,014,082	\$1,306,099
3	22,916,489	-	1,424,340	21,335,928	20,087,424	\$1,248,504
4	23,397,735	-	1,454,251	20,395,078	19,201,629	\$1,193,449
5	23,889,087	-	1,484,791	19,495,716	18,354,895	\$1,140,821
6	24,390,758	-	1,515,971	18,636,014	17,545,499	\$1,090,514
7	24,902,964	-	1,547,807	17,814,221	16,771,795	\$1,042,426
8	25,425,926	-	1,580,311	17,028,668	16,032,210	\$996,458
9	25,959,871	-	1,613,497	16,277,755	15,325,237	\$952,517
10	26,505,028	-	1,647,381	15,559,955	14,649,440	\$910,514
11	27,061,634	-	1,681,976	14,873,807	14,003,444	\$870,363
12	27,629,928	-	1,717,297	14,217,917	13,385,934	\$831,983
13	28,210,157	-	1,753,360	13,590,950	12,795,655	\$795,295
14	28,802,570	-	1,790,181	12,991,630	12,231,405	\$760,225
15	29,407,424	732,210	1,827,775	12,709,856	11,983,154	\$726,701
16	30,024,980	747,586	1,866,158	12,149,389	11,454,733	\$694,656
17	30,655,504	763,286	1,905,347	11,613,638	10,949,614	\$664,024
18	31,299,270	779,315	1,945,360	11,101,511	10,466,769	\$634,742
19	31,956,554	795,680	1,986,212	10,611,968	10,005,216	\$606,752
20	32,627,642	812,390	2,027,923	10,144,012	9,564,016	\$579,996
21	33,312,823	829,450	2,070,509	9,696,692	9,142,272	\$554,420
22	34,012,392	846,868	2,113,990	9,269,097	8,739,125	\$529,972
23	34,726,652	864,652	2,158,384	8,860,357	8,353,756	\$506,602
24	35,455,912	882,810	2,203,710	8,469,642	7,985,380	\$484,262
25	36,200,486	901,349	2,249,987	8,096,156	7,633,249	\$462,907
26	36,960,696	920,277	2,297,237	7,739,140	7,296,646	\$442,495
27	37,736,871	939,603	2,345,479	7,397,867	6,974,886	\$422,982
28	38,529,345	959,335	2,394,734	7,071,644	6,667,314	\$404,330
29	39,338,461	979,481	2,445,024	6,759,805	6,373,306	\$386,500
30	40,164,569	1,000,050	2,496,369	6,461,718	6,092,262	\$369,456
31	41,008,025	1,021,051	2,548,793	6,176,776	5,823,611	\$353,165
32	41,869,193	1,042,493	2,602,318	5,904,399	5,566,808	\$337,591
33	42,748,447	1,064,386	2,656,966	5,644,032	5,321,328	\$322,704
34	43,646,164	1,086,738	2,712,763	5,395,148	5,086,674	\$308,474
35	44,562,733	1,109,559	2,769,731	5,157,238	4,862,367	\$294,871
	SUM			\$ 424,317,742	\$ 399,724,621	\$ 24,593,121

Table VI (A)
NET PRESENT VALUE LIFECYCLE COST CALCULATION
(Services)

Assumptions:

Inflation Rate	2.10 %
Discount Rate	6.81 %
Book Life	35 Yrs
Pole Attach Revenue Increase	1.4 %

Overhead System											
Yr	(A)	(D)	(A)+(D)	(B)	(C)	(A)+(B)+(C)+(D)	(A)+(B)+(D)	(C)			
	3 Yr Avg Annual Operational Cost (\$)	3 Yr Avg Annual Pole Attachment Revenue (\$)	3 Yr Avg Annual Operational Cost Incl Lost Attachment Revenue(\$)	3 Yr Avg Annual Line Clearance Cost (\$)	Estimated Annual Storm Cost (\$)	NPV Incl Storm (\$)	NPV Excl Storm (\$)	NPV Storm Only (\$)			
1	\$ 1,468,574	\$ -	\$ 1,468,574	\$ -	\$ -	\$ 1,468,574	\$1,468,574	\$0			
2	1,499,414	-	1,499,414	-	-	1,403,815	\$1,403,815	\$0			
3	1,530,902	-	1,530,902	-	-	1,341,911	\$1,341,911	\$0			
4	1,563,051	-	1,563,051	-	-	1,282,736	\$1,282,736	\$0			
5	1,595,875	-	1,595,875	-	-	1,226,172	\$1,226,172	\$0			
6	1,629,388	-	1,629,388	-	-	1,172,101	\$1,172,101	\$0			
7	1,663,606	-	1,663,606	-	-	1,120,415	\$1,120,415	\$0			
8	1,698,541	-	1,698,541	-	-	1,071,008	\$1,071,008	\$0			
9	1,734,211	-	1,734,211	-	-	1,023,780	\$1,023,780	\$0			
10	1,770,629	-	1,770,629	-	-	978,634	\$978,634	\$0			
11	1,807,812	-	1,807,812	-	-	935,479	\$935,479	\$0			
12	1,845,776	-	1,845,776	-	-	894,228	\$894,228	\$0			
13	1,884,538	-	1,884,538	-	-	854,795	\$854,795	\$0			
14	1,924,113	-	1,924,113	-	-	817,101	\$817,101	\$0			
15	1,964,519	-	1,964,519	-	-	781,069	\$781,069	\$0			
16	2,005,774	-	2,005,774	-	-	746,626	\$746,626	\$0			
17	2,047,896	-	2,047,896	-	-	713,702	\$713,702	\$0			
18	2,090,901	-	2,090,901	-	-	682,230	\$682,230	\$0			
19	2,134,810	-	2,134,810	-	-	652,146	\$652,146	\$0			
20	2,179,641	-	2,179,641	-	-	623,388	\$623,388	\$0			
21	2,225,414	-	2,225,414	-	-	595,899	\$595,899	\$0			
22	2,272,147	-	2,272,147	-	-	569,621	\$569,621	\$0			
23	2,319,863	-	2,319,863	-	-	544,503	\$544,503	\$0			
24	2,368,580	-	2,368,580	-	-	520,492	\$520,492	\$0			
25	2,418,320	-	2,418,320	-	-	497,540	\$497,540	\$0			
26	2,469,105	-	2,469,105	-	-	475,600	\$475,600	\$0			
27	2,520,956	-	2,520,956	-	-	454,627	\$454,627	\$0			
28	2,573,896	-	2,573,896	-	-	434,580	\$434,580	\$0			
29	2,627,948	-	2,627,948	-	-	415,416	\$415,416	\$0			
30	2,683,135	-	2,683,135	-	-	397,097	\$397,097	\$0			
31	2,739,480	-	2,739,480	-	-	379,586	\$379,586	\$0			
32	2,797,009	-	2,797,009	-	-	362,848	\$362,848	\$0			
33	2,855,747	-	2,855,747	-	-	346,847	\$346,847	\$0			
34	2,915,717	-	2,915,717	-	-	331,552	\$331,552	\$0			
35	2,976,947	-	2,976,947	-	-	316,932	\$316,932	\$0			
						SUM \$	26,433,050	\$	26,433,050	\$	-

NPV = (Annual Cost)/(1+(Discount Rate/100))^(Year -1)

Table VI (B)
NET PRESENT VALUE LIFECYCLE COST CALCULATION
(Services)

Assumptions:
 Inflation Rate 2.10 %
 Discount Rate 6.81 %
 Book Life 35 Yrs
 Pole Attach Revenue Increase 1.4 %

Underground System						
Yr	(A)	(B)	(C)	(A)+(B)+(C)	(A)+(B)	(C)
	<u>3 Yr Avg</u> <u>Annual</u> <u>Operational</u> <u>Cost (\$)</u>	<u>3 Yr Avg</u> <u>Annual Line</u> <u>Clearance</u> <u>Cost (\$)</u>	<u>Estimated</u> <u>Annual Storm</u> <u>Cost (\$)</u>	<u>NPV Incl Storm</u> <u>(\$)</u>	<u>NPV Excl Storm</u> <u>(\$)</u>	<u>NPV Storm</u> <u>Only (\$)</u>
1	\$ 1,428,268	\$ -	\$ -	\$ 1,428,268	\$ 1,428,268	\$0
2	1,458,261	-	-	1,365,285	1,365,285	\$0
3	1,488,885	-	-	1,305,080	1,305,080	\$0
4	1,520,151	-	-	1,247,530	1,247,530	\$0
5	1,552,074	-	-	1,192,518	1,192,518	\$0
6	1,584,668	-	-	1,139,931	1,139,931	\$0
7	1,617,946	-	-	1,089,664	1,089,664	\$0
8	1,651,923	-	-	1,041,613	1,041,613	\$0
9	1,686,613	-	-	995,681	995,681	\$0
10	1,722,032	-	-	951,774	951,774	\$0
11	1,758,195	-	-	909,804	909,804	\$0
12	1,795,117	-	-	869,684	869,684	\$0
13	1,832,814	-	-	831,334	831,334	\$0
14	1,871,304	-	-	794,675	794,675	\$0
15	1,910,601	-	-	759,632	759,632	\$0
16	1,950,723	-	-	726,134	726,134	\$0
17	1,991,689	-	-	694,114	694,114	\$0
18	2,033,514	-	-	663,506	663,506	\$0
19	2,076,218	-	-	634,247	634,247	\$0
20	2,119,819	-	-	606,279	606,279	\$0
21	2,164,335	-	-	579,544	579,544	\$0
22	2,209,786	-	-	553,987	553,987	\$0
23	2,256,191	-	-	529,558	529,558	\$0
24	2,303,571	-	-	506,206	506,206	\$0
25	2,351,946	-	-	483,884	483,884	\$0
26	2,401,337	-	-	462,546	462,546	\$0
27	2,451,765	-	-	442,149	442,149	\$0
28	2,503,252	-	-	422,652	422,652	\$0
29	2,555,821	-	-	404,014	404,014	\$0
30	2,609,493	-	-	386,198	386,198	\$0
31	2,664,292	-	-	369,168	369,168	\$0
32	2,720,242	-	-	352,889	352,889	\$0
33	2,777,367	-	-	337,328	337,328	\$0
34	2,835,692	-	-	322,453	322,453	\$0
35	2,895,242	-	-	308,233	308,233	\$0
				SUM \$ 25,707,565	\$ 25,707,565	\$ -

Table VII
Net Present Value of Operational Costs
Per Mile & Per Service Calculations

<u>Overhead</u>			
Primary Voltage System	Incl Storm	Excl Storm	Storm Only
NPV Life Cycle Cost	\$1,656,250,864	\$1,066,015,959	\$590,234,906
System Miles OH	6,256	6,256	6,256
NPV Life Cycle Cost / Mile	\$264,745.98	\$170,398.97	\$94,347.01
Services	Incl Storm	Excl Storm	Storm Only
NPV Life Cycle Cost	\$26,433,050	\$26,433,050	\$0
Number of Services	238,878	238,878	238,878
NPV Life Cycle Cost / Service	\$110.66	\$110.66	\$0.00
<u>Underground</u>			
Primary Voltage System	Incl Storm	Excl Storm	Storm Only
NPV Life Cycle Cost	\$424,317,742	\$399,724,821	\$24,593,121
System Miles OH	5,270	5,270	5,270
NPV Life Cycle Cost / Mile	\$80,515.70	\$75,849.07	\$4,666.63
Services	Incl Storm	Excl Storm	Storm Only
NPV Life Cycle Cost	\$25,707,565	\$25,707,565	\$0
Number of Services	256,077	256,077	256,077
NPV Life Cycle Cost / Service	\$100.39	\$100.39	\$0.00
<u>Differential</u>			
Primary Voltage System	Incl Storm	Excl Storm	Storm Only
NPV Life Cycle Cost / Mile	-\$184,230.28	-\$94,549.90	-\$89,680.38
Services	Incl Storm	Excl Storm	Storm Only
NPV Life Cycle Cost / Service	-\$10.27	-\$10.27	\$0.00

Table VIII
Net Present Value of Operational Costs
Per Lot Calculations

<u>Low Density Subdivision</u>						
<u>Overhead</u>						
	Number of Lots	Miles of Line	Incl Storm \$ / Lot	Excl Storm \$ / Lot	Storm Only \$ / Lot	
Primary Voltage System ¹	210	1.92	\$2,420.53	\$1,557.93	\$862.60	
Services	NA	NA	\$110.66	\$110.66	\$0.00	
Primary & Service			\$2,531.19	\$1,668.59	\$862.60	
<u>Underground</u>						
Primary Voltage System ¹	210	2.99	\$1,146.39	\$1,079.95	\$66.44	
Services	NA	NA	\$100.39	\$100.39	\$0.00	
Primary & Service			\$1,246.78	\$1,180.34	\$66.44	
Primary & Service			Differential	-\$1,284.41	-\$488.25	-\$796.16
<u>High Density Subdivision</u>						
<u>Overhead</u>						
	Number of Lots	Miles of Line	Incl Storm \$ / Lot	Excl Storm \$ / Lot	Storm Only \$ / Lot	
Primary Voltage System ¹	176	1.17	\$1,759.96	\$1,132.77	\$627.19	
Services	NA	NA	\$110.66	\$110.66	\$0.00	
Primary & Service			\$1,870.62	\$1,243.43	\$627.19	
<u>Underground</u>						
Primary Voltage System ¹	176	1.07	\$489.50	\$461.13	\$28.37	
Services	NA	NA	\$100.39	\$100.39	\$0.00	
Primary & Service			\$589.89	\$561.52	\$28.37	
Primary & Service			Differential	-\$1,280.73	-\$681.91	-\$598.82

Note

1. Formula = (NPV Life Cycle Cost / Mile) x (Miles of Line) / (Number of Lots)

Table IX
2017 O&M - FORM 13

	2017 Actual \$	OH Ratio	UG Ratio	2017 Allocated Overhead \$	2017 Allocated Underground \$
Overhead - Blanket Account					
D-CRR-Voltage-OH (NEW)	\$126,412	100.0%	0.0%	\$126,412	\$0
PRE - Dist Line - Fault Indicators	\$250,315	100.0%	0.0%	\$250,315	\$0
Distr - Maint - Corrective - OH Line	\$9,071,353	100.0%	0.0%	\$9,071,353	\$0
Distribution - Maint - OH System Improvements	\$0	100.0%	0.0%	\$0	\$0
Distribution - Maint - Mgmt & Coordination	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Preventative - OH Line	\$8,321,911	100.0%	0.0%	\$8,321,911	\$0
Distr - Maint - Trouble - OH Storm	\$3,889,120	100.0%	0.0%	\$3,889,120	\$0
Distr - Maint - Pole Inspect & Change-Outs	\$25,618,395	100.0%	0.0%	\$25,618,395	\$0
Distr - Maint - Damage Replacement - OH Line	\$1,240,937	100.0%	0.0%	\$1,240,937	\$0
Distr - Maint - Capacitors	\$748,303	100.0%	0.0%	\$748,303	\$0
Distr - Maint - Trouble - Non-Storm	\$0	0.0%	0.0%	\$0	\$0
Distr - Maint - Tree Trimming - Planned	\$0	0.0%	0.0%	\$0	\$0
Distr - Env - Train/Permit/Inspect/Audit/Protect	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Tree Trimming - Unplanned	\$0	0.0%	0.0%	\$0	\$0
Distr - Maint - Pole Reinforcements	\$232,391	100.0%	0.0%	\$232,391	\$0
Distr - Maint - Pole CLAs & Change-Outs	\$620,420	100.0%	0.0%	\$620,420	\$0
Distr - Maint - Infrared Thermography	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Services - OH Line	\$825,826	0.0%	0.0%	\$0	\$0
Subtotal	\$48,945,383				
Underground - Blanket Account					
D-CRR-Voltage-UG	\$393	0.0%	100.0%	\$0	\$393
D-PRE-Transformers-UG	\$5,792,966	0.0%	100.0%	\$0	\$5,792,966
Distr - Maint - Corrective - UG Line	\$11,149,781	0.0%	100.0%	\$0	\$11,149,781
Distribution - Maint - UG System Improvements	\$0	0.0%	100.0%	\$0	\$0
Distribution - Maint - Mgmt & Coordination	\$0	0.0%	100.0%	\$0	\$0
Distr - Maint - Preventative - UG Line	\$1,115,881	0.0%	100.0%	\$0	\$1,115,881
Distr - Maint - Network Corrective	\$261,404	0.0%	100.0%	\$0	\$261,404
Distr - Maint - Network Preventative	-\$10,542	0.0%	100.0%	\$0	-\$10,542
Distr - Maint - Capacitors - UG	\$21,669	0.0%	100.0%	\$0	\$21,669
Distr - Maint - UG Cable Rplcmnt - Planned	\$3,428,731	0.0%	100.0%	\$0	\$3,428,731
Distr - Maint - Trouble - UG Storm	\$803,417	0.0%	100.0%	\$0	\$803,417
Distr - Maint - Damage Replacement - UG Line	\$692,148	0.0%	100.0%	\$0	\$692,148
Distr - Maint - UG Cable Rplcmnt - Unplanned	\$0	0.0%	100.0%	\$0	\$0
Distr - Maint - Services - UG Line	\$1,054,181	0.0%	0.0%	\$0	\$0
Subtotal	\$24,310,029				
Overhead - O&M Account					
D-CRR-Voltage-OH (NEW)	\$49,248	100.0%	0.0%	\$49,248	\$0
Distr - Maint - Corrective - OH Line	\$5,549,490	100.0%	0.0%	\$5,549,490	\$0
Distribution - Maint - OH System Improvements	\$0	100.0%	0.0%	\$0	\$0
Distribution - Maint - Mgmt & Coordination	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Preventative - OH Line	\$177,398	100.0%	0.0%	\$177,398	\$0
Distr - Maint - Trouble - OH Storm	\$3,374,032	100.0%	0.0%	\$3,374,032	\$0
Distr - Maint - Pole Inspect & Change-Outs	\$806,781	100.0%	0.0%	\$806,781	\$0
Distr - Maint - Damage Replacement - OH Line	\$109,586	100.0%	0.0%	\$109,586	\$0
Distr - Maint - Capacitors	\$238,305	100.0%	0.0%	\$238,305	\$0
Distr - Maint - Trouble - Non-Storm	\$2,289,168	0.0%	0.0%	\$0	\$0
CRR - Dist Line - Storms - OH - Restoration	\$409,147	0.0%	0.0%	\$0	\$0
Distr - Maint - Tree Trimming - Planned	\$8,984,398	0.0%	0.0%	\$0	\$0
Distr - Env - Train/Permit/Inspect/Audit/Protect	\$24,955	100.0%	0.0%	\$24,955	\$0
Distr - Maint - Tree Trimming - Unplanned	\$1,443,955	0.0%	0.0%	\$0	\$0
Distr - Maint - Pole Reinforcements	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Pole CLAs & Change-Outs	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Infrared Thermography	\$0	100.0%	0.0%	\$0	\$0
Distr - Maint - Services - OH Line	\$771,285	0.0%	0.0%	\$0	\$0
Subtotal	\$22,347,728				
Underground - O&M Account					
D-PRE-Transformers-UG	\$2,330	0.0%	100.0%	\$0	\$2,330
Distr - Maint - Corrective - UG Line	\$1,524,122	0.0%	100.0%	\$0	\$1,524,122
Distribution - Maint - UG System Improvements	\$0	0.0%	100.0%	\$0	\$0
Distribution - Maint - Mgmt & Coordination	\$0	0.0%	100.0%	\$0	\$0
Distr - Maint - Preventative - UG Line	\$197,174	0.0%	100.0%	\$0	\$197,174
Distr - Maint - Network Corrective	\$9,010	0.0%	100.0%	\$0	\$9,010
Distr - Maint - Network Preventative	\$405,693	0.0%	100.0%	\$0	\$405,693
Distr - Locate Facilities	\$792,820	0.0%	100.0%	\$0	\$792,820
Distr - Maint - UG Cable Rplcmnt - Planned	\$80,912	0.0%	100.0%	\$0	\$80,912
Distr - Maint - Trouble - UG Storm	\$115,240	0.0%	100.0%	\$0	\$115,240
D-CRR-Capacitors-UG	\$4,698	0.0%	100.0%	\$0	\$4,698
D-CRR-Storms-UG	\$683	0.0%	100.0%	\$0	\$683
Distr - Maint - Damage Replacement - UG Line	\$26,921	0.0%	100.0%	\$0	\$26,921
Distr - Maint - UG Cable Rplcmnt - Unplanned	\$0	0.0%	100.0%	\$0	\$0
Distr - Maint - Services - UG Line	\$340,185	0.0%	0.0%	\$0	\$0
Subtotal	\$3,498,788				
				\$58,549,332	\$26,415,451
Distribution - Maint - Trouble Calls - Non-storm					
Blanket	\$0	77.2%	22.8%	\$0	\$0
O&M	\$2,299,168	77.2%	22.8%	\$1,774,958	\$524,210
Distr - Maint - Tree Trimming - Planned					
Blanket	\$0	94.9%	5.1%	\$0	\$0
O&M	\$6,994,398	94.9%	5.1%	\$6,640,701	\$353,697
Distr - Maint - Tree Trimming - Unplanned					
Blanket	\$0	94.9%	5.1%	\$0	\$0
O&M	\$1,443,955	94.9%	5.1%	\$1,370,936	\$73,019
Distr - Maint - Services - OH Line					
Blanket	\$825,826	100.0%	0.0%	\$825,826	\$0
O&M	\$771,285	100.0%	0.0%	\$771,285	\$0
Distr - Maint - Services - UG Line					
Blanket	\$1,054,181	0.0%	100.0%	\$0	\$1,054,181
O&M	\$340,185	0.0%	100.0%	\$0	\$340,185
				\$69,933,038	\$26,760,743

ENERGY DELIVERY
"2018" ADDER STUDY
 Provided by ED Business Planning

	<u>Toolkit/PDR</u>
	Distribution CIAC
Total Corporate Accounting FRINGE Rates per Activity A&G (for PSTEW)	74.00%
Other "Operating Labor" related adders:	
Non-Productive Time*	13.00%
Energy Delivery (Supervisory/Administrative)	16.65%
Energy Delivery Engineering	0.00%
Small Tools *	4.63%
TOTAL Other "Labor" related Adders	34.28%
TOTAL Fully Loaded "Labor" adders	108.28%
Fleet* as a % of Labor (rate of settled labor w/ fringe)	17.57%
Fleet* as a % of Labor (rate excluding 37% fringe)	24.08%
"Material" related adders:	
Stores Carrying Cost (ED Stores Clearing) *	5.76%
Stores Carrying Cost (WH Space, Taxes, Insurance & Obsolete Mat)	2.99%
Stores Carrying Cost (Cost of Money - PDR only)	0.00%
Self Help *	5.23%
TOTAL "Material" related Adders	13.98%
Other "Contractor" related adders:	
Energy Delivery (Supervisory/Administrative/Engineering)	19.35%
TOTAL Fully Loaded "Contractor" adder	19.35%

* When determining final bill true up or calculating pay-after invoice using actual results, exclude these items, which will already be included in actuals