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Springfield, MO 65804
tothassociates.com
417.888.0645

March 31, 2021, Revision 4

Jessica Fett, Mitch Krysa
Independence Power and Light
17221 E. 23rd St. South
Independence, MO 64051

Re: Substation E Switchgear Replacement Project – Engineering Services Proposal

Dear Jessica and Mitch,

Toth has prepared an estimate of costs to perform engineering services at IPL's Substation E based on the RFP received on December 14th, 2020; which has been revised as requested to incorporate modifications in scope on February 1st, 2021 (Revision 3). The estimate is a not-to-exceed (NTE) amount with time billed to IPL on an hourly basis per the attached rates according to actual effort and expenses. A schedule of labor, equipment, and third-party entity costs are provided on the following page(s).

Toth accepts the City's terms and conditions as agreed upon per the pre-qualified A&E list (RFQ #20098).

Thank you for allowing Toth to provide a proposal for this work. Please contact me if you have any questions regarding this proposal.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joe Tierney', written in a cursive style.

Joe Tierney, PE
Vice President



IPL Substation E Switchgear Replacement Project - Engineering Cost Estimate

by Toth and Associates

Tasks	Project Team Blended Rate	Hours Required	Cost
1. Physical Demolition Design & Drafting:			
Sub E:			
Remove Existing Switchgear & 69kV PTs Including Control Cables to the Control House, Grounding Conductor, Switchgear Foundation, and 13kV Distribution Underground Cable Duct	\$148.00	120	\$17,760.00
Remove Existing Transformer Junction Boxes for T1 & T2 and Relevant Control Cables	\$148.00	24	\$3,552.00
Remove Existing 69kV E-N Line Relay Panel #4	\$148.00	40	\$5,920.00
Drafting	\$148.00	50	\$7,400.00
Sub N:			
Remove 69kV E-N Line Relay Panel #9	\$148.00	40	\$5,920.00
Drafting	\$148.00	20	\$2,960.00
Transmission Line:			
Remove Two 69kV Line Wood Poles (Cost Included with Physical Design In Section 2.)			
Subtotal - Physical Demolition Design & Drafting		294	\$43,512.00
2. Physical Design & Drafting:			
Sub E:			
Topographic Survey			\$3,520.00
Toth to Provide In-house Structural Design of Foundations for New 69kV PT Stand and Switchgear Based on Reactions Provided by Switchgear Manufacturer	\$148.00	44	\$6,512.00
Install 69kV PTs (Plan, Elevations, Conduit, Grounding & Bus Jumpers, Cable Schedule, Material List), Provide Specifications for Procurement	\$148.00	40	\$5,920.00
Oil Containment for Two Transformers (Specifications and Drawings)	\$148.00	44	\$6,512.00
Install New Switchgear: Plan, Elevations, Conduit, Grounding & Bus Jumpers, Cable Schedule, Material List, (Switchgear Specifications Cost Included in Section 5.)	\$148.00	200	\$29,600.00
Install One Line Relay Panel & One Relay Panel for Protection of Transformers, Specifications & Drawings	\$148.00	15	\$2,220.00
Drafting	\$148.00	88	\$13,024.00
Sub N:			
Install One Line Relay Panel for E-N Line Protection in Sub N Control Room, Specifications & Drawings	\$148.00	15	\$2,220.00
Drafting	\$148.00	8	\$1,184.00
Transmission Line:			
Remove Two Existing 69kV Wood Poles, Install Two New Weathered Steel Poles with Gang Operated Disconnect Switch at Sterling Road Junction, Provide Specifications for Poles and Switch			\$38,500.00
Subtotal - Physical Design & Drafting		454	\$109,212.00

IPL Substation E Switchgear Replacement Project - Engineering Cost Estimate

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3. Electrical Control Design & Drafting:			
Sub E:			
Prepare Schematics, Wiring Diagrams, Cable Schedules for Replacing one (1) 69 kV line Protection Panel, Replacing Three (3) 69 kV PTs, and adding Three (3) 69 kV PTs.	\$148.00	140	\$20,720.00
Prepare Schematics, Wiring Diagrams, Cable Schedules for Relay Protection of Three (3) Power Transformers.	\$148.00	225	\$33,300.00
Prepare Specifications and Drawings for the Purchase of one (1) Relay Panel for One (1) 69kV Transmission Line and One (1) Relay Panel for Transformer Protection	\$148.00	20	\$2,960.00
Prepare Schematics, Wiring Diagrams, and Tab Sheets for SCADA and Communications	\$148.00	295	\$43,660.00
Calculate New Substation auxiliary AC and DC Loads, Verify Ratings of Existing AC and DC Supply Equipment, and Prepare Specifications for New Station Service Transformer, Transformer Fuse, and Battery/Charger	\$148.00	24	\$3,552.00
Drafting	\$148.00	177	\$26,196.00
Sub N:			
Prepare Schematics, Wiring Diagrams, Cable Schedules for Replacing One (1) 69 kV Line Protection Panel	\$148.00	135	\$19,980.00
Drafting	\$148.00	65	\$9,620.00
Subtotal - Electrical Control Design & Drafting		1081	\$159,988.00
4. Preparation of Protective Relay Settings:			
Relays for one (1) 69-kV line panel at Sub "E" and the same in Sub "N" (for a Sub "A" - Sub "K" type line panel at both ends, single breaker per line)	\$148.00	100	\$14,800.00
Three (3) SEL-501 & Two (2) SEL-787 Transformer Protection Relays	\$148.00	100	\$14,800.00
Relays for 13.8 kV: (8) Feeder Relays, (2) Bus Differential Relays, (4) Main Relays, (1) Tie Breaker Relay, including Design for Arc Flash Protection, and (4) Bitronics Meters	\$148.00	80	\$11,840.00
Subtotal - Protective Relay Settings		280	\$41,440.00
5. Switchgear Enclosure Specification & Drawing Review:			
Prepare Switchgear Enclosure Specification per the Details of RFP. Prepare One-line Diagram for MFG.	\$148.00	360	\$53,280.00
Drafting	\$148.00	8	\$1,184.00
Subtotal - Major Equipment Specification & Drawing Review		368	\$54,464.00
6. Structures Specification:			
Toth to provide In-house Structural Engineering of Structure & Foundation for 69kV PT Stand, Provide Specification for Steel Purchase, Evaluate Existing 69kV PT Stand for Use with New PTs	\$148.00	40	\$5,920.00
Transmission Line:			
Specifications for Two 69kV Steel Poles (Costs Included in Section 2.)			

IPL Substation E Switchgear Replacement Project - Engineering Cost Estimate
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Subtotal - Structures Specification		40	\$5,920.00
7. Meetings - Virtual & In-Person:			
Initial Coordination Meeting (Site Visit), 2 People	\$148.00	20	\$2,960.00
Permitting Review (Virtual)	\$148.00	3	\$444.00
30% Plan Review (Virtual), 2 People, 4.5 Hours Each	\$148.00	9	\$1,332.00
70% Plan Review (Virtual), 2 People, 4.5 Hours Each	\$148.00	9	\$1,332.00
Pre-bid Meeting & Site Visit, 2 People, 10 Hours Each	\$148.00	20	\$2,960.00
Pre-construction Brief at the Substation Site, 1 Person	\$148.00	10	\$1,480.00
Progress Meetings, Bi-weekly (Virtual), 2 People, 1 Hour Each Bi-weekly for 18 Weeks	\$148.00	18	\$2,664.00
Pre-energization/Energization Work, 2 People, 1 Day Each	\$148.00	20	\$2,960.00
Witness Testing Site Visit, 2 People, 40 Hours Each	\$148.00	80	\$11,840.00
Subtotal - Meetings		189	\$27,972.00
8, 9, 10. Construction Specification & Bidding Documents:			
Review IPL's Bid Package, Construction Specs, Support IPL during Bidding (Answer Questions from Bidders, Evaluate Bids, Provide Recommendation), Answer Contractor's Questions During & After Construction	\$148.00	360	\$53,280.00
Subtotal - Construction Specification & Bidding Documents		360	\$53,280.00
12. Develop Energization Test Procedure:			
Prepare an energization test procedure with preliminary items to be checked.	\$148.00	60	\$8,880.00
Subtotal - Develop Energization Test Procedure		60	\$8,880.00
13. Review of Testing and Functional Performance Testing			
Final Review of Testing and Functional Performance Testing Prior to the Energization of the Equipment.	\$148.00	24	\$3,552.00
Subtotal - Develop Energization Test Procedure		24	\$3,552.00
14. Record Drawings	\$148.00	154	\$22,792.00
15. Develop Engineer's Estimate for Construction Costs, Including All Labor & Material	\$148.00	27	\$3,996.00
Subtotal - All Items Above = Base Estimate			\$535,008.00
Geotechnical On-site Study (by Subconsultant; GeoEngineers, Terracon, GTS, etc.) to Evaluate Soil-bearing Capacity for Capacitor Bank Foundation			\$10,000.00
Project Total - Not To Exceed Amount			\$545,008.00

IPL Substation E Switchgear Replacement Project - Engineering Cost Estimate

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Optional Items:			
11. On-Site Construction Observation - Optional	\$183.00	640	\$117,120.00
Substation E Dead-end Replacement: Provide design, drawings, and specifications to remove the six wood pole dead-end structures with guys in the substation for the two 69kV lines exiting east, install new direct bury wood pole equivalents (preferred method), reconnect phases and shield wires, jumpers, and grounding to return lines to service. Alternate structures may be proposed if modifications are required. - Optional	\$148.00	142	\$21,016.00
Notes, Assumptions, and Clarifications:			
1. The Project Team Blended Rate includes all labor required (engineering, drafting, quality control, project management, admin, etc.).			
2. This proposal assumes that existing drawings will be made available to Toth for use in developing removal drawings of existing facilities, installation of switchgear (one-line, plans, elevations, grounding, conduit), modification/removal of existing relay panels, and installation of new relay panels in the control buildings/enclosures/block houses.			
3. Costs include production of 30% and 70% review drawings, as well as Issued for Construction (IFC) drawings.			
4. Costs include work required to support the listed tasks, such as analysis of existing station's facilities, studies to support sequencing of construction, coordination with feeder designs, coordination with IPL for material procurement and construction specification development, coordination with material vendors, status reporting, and attending bi-weekly construction review teleconferences.			
5. Oil containment design includes a moat design or coordination with 3rd party for liner solution (cost of liner solution is not included in this estimate, it is considered part of the construction costs). If a more advanced oil containment design is desired, additional time will be needed to complete this work.			
6. Drawings of the substation were not provided with the RFP for this scope of work. Scope of work that cannot reasonably be determined from the RFP contents are not included in this estimate.			
7. Pricing for Item 11. "On-Site Construction Observation" is based on 40 hours/week of observation. The amount of observation per week can be adjusted as desired to reduce the cost. The hourly rate includes mileage, hotel, and other overhead direct charges related to observation.			
8. Analysis of the following items are excluded from this bid:			
a. Ground grid evaluation and design.			
9. This proposal assumes that there are three (3) new transformer protection panels required, and nine (9) transformer protection relays.			
10. Review of manufacturer's drawings includes review of one drawing revision for general conformance to the specifications. Manufacturers are responsible for their own quality control and developing drawings to meet specifications.			

JOE TIERNEY P.E.

VICE PRESIDENT, PROFESSIONAL ENGINEER | jtierney@tothassociates.com

Registrations:

Arkansas P.E. #15673
Idaho P.E. #18491
Illinois P.E. #062.066431
Kansas P.E. #26627
Minnesota P.E. #56683
Missouri P.E. #PE-2014012028
Nebraska P.E. #E-17861
Ohio P.E. #PE.84894
Oklahoma P.E. #27147
Oregon P.E. #89319PE
Texas P.E. #131458
Washington P.E. #56605
Wisconsin P.E. #46667-6

Education:

Bachelor of Science in Electrical Engineering
University of Missouri – Columbia

Experience:

Joe possesses over 15 years of experience in the engineering field and has designed numerous switch stations and substations for electric cooperatives in multiple states. His substation design experience includes projects ranging in scope from smaller projects such as feeder additions, transformer upgrades, oil circuit breaker replacements, voltage conversions, and temporary wood pole substations, to larger projects such as greenfield switch stations and substations with voltages ranging from 4.16 kV to 230 kV, and single substation design capacities up to 672 MVA. Whether the project is large or small, his attention to detail is evident, as he draws from an extensive knowledge pool to produce quality designs that are accurate, thorough, and exemplary.

Joe works with each client to understand their preferences and standards to incorporate those elements into the overall design; which ultimately leads to a facility that is familiar to the client's personnel while giving functionality and operational flexibility to the client's system. Joe has worked on projects setup with traditional delivery methods, as well as design-build style projects, and understands the critical-path tasks that must be accomplished to complete projects on-time and within budget.

Affiliations and Honors

- Institute of Electrical and Electronics Engineers Member
- IEEE Power & Energy Society Member

Representative Project Experience:

- Franklin County PUD – Franklin Substation Rebuild
- City of Independence, MO – Sub K Rebuild
- Umatilla Electric Cooperative – East Wilson Substation Expansion
- Umatilla Electric Cooperative – Blalock Substation Transformer Addition
- Umatilla Electric Cooperative – Juniper Canyon West Substation
- Umatilla Electric Cooperative – Heritage Trail Substation
- Umatilla Electric Cooperative – Hermiston Butte Substation Distribution Upgrade
- Umatilla Electric Cooperative – Hermiston East Substation Transformer Addition
- Umatilla Electric Cooperative – Oregon Trail Substation
- Umatilla Electric Cooperative – Quarry Substation
- Umatilla Electric Cooperative – Cottonwood Substation
- Umatilla Electric Cooperative – Hermiston Butte Substation Upgrade
- Umatilla Electric Cooperative – Hermiston East Substation
- Umatilla Electric Cooperative – Blalock, East Wilson, and Freeway Substation Upgrades
- Umatilla Electric Cooperative – Tumbleweed Substation
- Umatilla Electric Cooperative – Juniper Canyon Substation
- Umatilla Electric Cooperative – Foster Substation
- Umatilla Electric Cooperative – Port of Morrow Substation
- Umatilla Electric Cooperative – Chemical Substation
- Western Farmers Electric Cooperative – Payne Switch Station
- Western Farmers Electric Cooperative – Dover Switch Station
- Western Farmers Electric Cooperative – Twin Lakes Switch Station
- People's Electric Cooperative – Monte Vista Station
- C&L Electric Cooperative Corporation – Sheridan South Substation



DAVID FORREST P.E.

STATION DEPARTMENT MANAGER, PROFESSIONAL ENGINEER |

Registrations:

Missouri P.E. #2012000753
Arkansas P.E. #15306
California P.E. #20358
Oregon P.E. #88546
Colorado P.E. #0046900
Illinois P.E. #062065106
Oklahoma P.E. #26069
North Carolina P.E. #043526

Education:

*Bachelor of Science Degree in Electrical Engineering;
Magna Cum Laude*
University of Missouri – Rolla

Experience:

David has accumulated nearly 30 years of work experience in the electrical industry. He has designed the physical aspects and the protection and control schemes, as well as developed relay settings for a variety of situations, playing an integral role in the engineering of over 50 station projects in four states. Designs range from breaker additions to complete new station facilities for urban and rural distribution substations, industrial substations, bulk power stations, and transmission switching stations. He has experience in the many aspects of station design – from site selection to commissioning – plus equipment procurement and project management. David has led the TOTH station design team since 2013.

Affiliations and Honors

- Institute of Electrical and Electronics Engineers Member

Representative Project Experience:

- City of Nixa, MO – Feeder Protection Coordination
- Mississippi County Electric Cooperative – Lepanto North Substation
- Southwestern Electric Cooperative, Inc. – Hookdale Substation
- Western Farmers Electric Cooperative – Bradley Transmission Breaker Addition
- Rich Mountain Electric Cooperative, Inc. – Weyerhaeuser Substation
- Southwest Arkansas Electric Cooperative – Gin City Substation
- Southwest Arkansas Electric Cooperative – Lake Erling Circuit Switcher Addition
- Prairie Power, Inc. – Tolono Substation
- Prairie Power, Inc. – St. Joseph Substation
- Prairie Power, Inc. – Loda Substation
- Western Farmers Electric Cooperative – Payne Switch Station
- Rich Mountain Electric Cooperative, Inc. – Crystal Hill Substation
- Rich Mountain Electric Cooperative, Inc. – Potter Substation

MARK OLSON P.E.

PROFESSIONAL ENGINEER | molson@tothassociates.com

Registrations:

Missouri P.E. #2019011812

Oregon P.E. #94935PE

Wyoming P.E. #PE 15940

Education:

Bachelor of Science in Electrical Engineering;

Summa Cum Laude

South Dakota School of Mines & Technology

Experience:

Mark is a professional electrical engineer with over 10 years of experience in the engineering field. At TOTH, he is responsible for many aspects of substation design, including project management and equipment procurement. His previous work experience includes time at a US Army Corps of Engineers hydropower plant, Bechtel Marine Propulsion Corporation working in support of the Naval Nuclear Propulsion Program, and Black and Veatch, where he focused on substation electrical, physical, and protection and control design. His background provides extensive knowledge into many aspects of the electrical engineering field, including a focus on the engineering, procurement, and construction of transmission and distribution substations ranging in voltages from 12.47 kV to 345 kV. Mark draws from this knowledge base and collaborates with a team of engineers to provide quality designs that are delivered on time and within budget.

Representative Project Experience:

- Umatilla Electric Cooperative – Westland Substation 115 kV Additions
- Umatilla Electric Cooperative – Oregon Trail Substation 115 kV Breaker Addition
- Umatilla Electric Cooperative – Foster West Substation
- Umatilla Electric Cooperative – Buttercreek North Substation
- City of Independence, MO – Substation K Rebuild
- Umatilla Electric Cooperative – Hermiston East Substation Transformer Addition
- Umatilla Electric Cooperative – Oregon Trail Substation
- American Transmission Company – Port Washington Switchyard Upgrades*
- American Transmission Company – West Marinette Substation Upgrades*
- American Transmission Company – Highway V Substation Rebuild*
- American Transmission Company – North Appleton Substation*

* Denotes professional experience prior to joining TOTH



JEFF WOOLDRIDGE P.E.

PROFESSIONAL ENGINEER | jwooldridge@tothassociates.com

Registrations:

Missouri P.E. #2007020348

Education:

Bachelor of Science in Electrical Engineering
Missouri University of Science & Technology

Experience:

Jeff has provided services as a protection and planning engineer on variety of projects. His experience has included transmission relay settings and logic programming, transmission relay coordination studies, distribution protection coordination, relay settings and logic review, NERC audit preparation and participation, SCADA points list creation and documentation with RTAC and communications processor programming, distribution load flow studies, transmission misoperation analysis and reporting, and power quality recording and analysis. Jeff has experience with AutoCAD, ASPEN OneLiner, CAPE, SKM Power Tools, and SEL relay programming and event report analysis software, among other software programs.

Affiliations and Honors:

- Grainger Power Engineering Award
- Missouri Society of Professional Engineers

Transmission Relay Logic and Settings Experience:

- Monte Vista, OK – 3-Terminal 138kV Ring Bus – All 138kV Relay Panels
- Claremore, MO – 69kV Cap bank resize & SEL-487V protection redesign*
- Columbus, KS – 5-Terminal 69kV Ring Bus – All 69kV Relay Panels*
- Marietta – 3-Terminal 138kV Ring Bus with Autotransformer, Two 138kV Lines and Two 138kV Cap Banks – All 138kV and 69kV Relay Panels*
- Hugo, OK – Two New 138kV Breaker-and-a-Half Line Panels*
- Many individual 34.5kV thru 161kV Line, Transformer, and Bus Protection Panels during time at Empire District Electric Company*

Transmission Relay Coordination Study Experience:

- Nixa, MO – 69kV Coordination Study – All 69kV Line Panels
- Monte Vista, OK. – 138kV Area Coordination Study and scenarios for protection of three and four terminal line arrangements with comm. Scheme.
- Cleveland, OK – Area Coordination Study - Addition of 345/16kV Autotransformer*

Relay Settings and Logic Review Experience:

- Asbury, MO – 5-Terminal 161kV Ring Bus – All relay panel logic and settings – Asbury 349 Substation*
- Webb City, MO – Two 161kV line panels and an autotransformer panel – All relay panel logic and settings – Fir Road 417 Substation*
- Ozark, MO – Two 69kV line panels, 69kV Bus Diff, and two Transformer Panels – All relay panel logic and settings – Ozark 330 Substation*
- Empire District Service Territory – many 12kV distribution circuits – Worst Performing Circuit Review*
- Documentation of Relay Connections, Control, Lockouts, Trip, Close Supervision, and Functional Description for all GRDA Relay Panels, 69kV and up, for Line protection, Bus Protection, and Transformer Protection*

SCADA Points List, RTU and Comm. Processor Experience:

- SEL-2032 and/or SEL-RTAC Programming with SCADA Points List Documentation for Many Empire District Electric System Substations, including Joplin #59 Substation, Bolivar #602 Substation, Bolivar #367 Substation, Joplin #477 Substation, Quapaw #377 Substation, Fir Road #417 Substation, Marionville #437 Substation, Republic #359 Substation, Fairland #363 Substation, Ozark #434 Substation, Ozark #415 Substation, and Hockerville #404 Substation*

Distribution Load Flow Study Experience:

- City of Bolivar, MO – All 12kV Substations and Circuits, including proposal of new circuits and optimized cap bank locations*
- City of Ozark, MO – All 12kV Substations and Circuits, including proposal of new circuits and optimized cap bank locations*
- City of Republic, MO – All 12kV Substations and Circuits, including proposal of new circuits and new substation location*
- City of Joplin, MO – All 4kV Downtown Substations and Circuits, including optimized cap bank locations and proposal for future 12kV conversion*

*Denotes professional experience prior to joining TOTH



MELANIE PARKER, P.E.

ELECTRICAL ENGINEER, PROFESSIONAL ENGINEER | mparker@tothassociates.com

Registrations:

Illinois P.E. # 062070502
Missouri P.E. # 2018000256

Education:

Bachelor of Science in Electrical Engineering
Missouri University of Science & Technology

Master of Science in Engineering Management
Missouri University of Science & Technology

Experience:

Melanie serves as an Electrical Engineer with over six years of electrical engineering experience. Her substation design experience includes protection and controls design for substations with voltages ranging from 12.5 kV to 345 kV.

Representative Project Experience:

- City of Lebanon – Relay Replacements
- Franklin County PUD – Franklin Substation Rebuild
- C&L Electric Cooperative Corporation – Sheridan South Substation
- Southwestern Electric Cooperative – Maple Grove Substation
- Ameren Illinois – Gateway Program Remote Ends *
- Ameren Illinois – West Mount Vernon, IL Substation *
- Ameren Illinois – Greenville, IL Substation *

* Work performed prior to working at TOTH



JOSEPH WHITTINGTON E.I.

ENGINEER | jwhittington@tothassociates.com

Registrations:

Engineer Intern

Education:

Bachelor of Science in Electrical Engineering
Missouri University of Science & Technology

Experience:

Joseph is an electrical engineer who works in the substation design department at TOTH. He has experience on building and analyzing models of grounding systems using SES software packages. He has implemented NESC, RUS, NEC, and IEEE guides regarding Lightning Protection, Bus Design, Grounding System Design, Low-Voltage Wiring, and Conduit System Design.

Representative Project Experience:

- Umatilla Electric Cooperative –
New Cottonwood 230 kV Substation
- Umatilla Electric Cooperative – New Quarry 230 kV Substation
- Umatilla Electric Cooperative –
New Heritage Trail 115 kV Substation
- Umatilla Electric Cooperative –
Line Addition to Hermiston Butte Substation
- People's Electric Cooperative – New 138 kV Switching Station

Unit Fee Schedule

1a. Base Hourly Rates

The following "Base" hourly charges will be applicable for services provided:

Billing Level	01.01.2021 Base Hourly Rate
Clerical-Aide	\$66.68
Clerical-1	\$75.02
Clerical-2	\$81.52
Technician-Aide	\$88.40
Technician-1	\$103.73
Technician-2	\$128.19
Technician-3	\$159.43
CAD-1	\$75.31
CAD-2	\$95.35
CAD-3	\$115.19
Line Staker-Assistant	\$75.02
Line Staker-1	\$132.63
Line Staker-2	\$154.81
Line Staker-3	\$184.06
ROW Specialist-1	\$142.29
ROW Specialist-2	\$159.43
ROW Administrator	\$176.22
Survey Tech	\$112.03
Surveyor PLS	\$151.17
Construction Review-1	\$155.00
Construction Review-2	\$176.22
Construction Review-3	\$202.50
Rate Analyst-1	\$174.86
Rate Analyst-2	\$202.75
Project Manager	\$176.22
Engineer-1	\$129.95
Engineer-2	\$156.84
Engineer-3	\$186.91
Engineer PE-1	\$159.08
Engineer PE-2	\$183.73
Engineer PE-3	\$208.38
Engineer Principal	\$226.13

1b. Expenses

- MILEAGE and LODGING* - will be charged at the allowable rate as established by IRS.
 - MEALS* - current TA allowance to include 3 meals: \$31.00
- * Daily expenses for salaried employees may be billed at direct cost for lodging and meals.

Unit Fees - Supplemental Items

2. Total Billing

Total Billing will be equal to the following:

Base Hourly rate for Normal working Hours X Hours directly worked

+ Overtime rate of 1.5 X Base Hourly Rate X Overtime Hours

+ Directly Attributed Expenses

Bills are due and payable within 10 days after receipt of statement unless otherwise so provided. A fee of .67% per month shall be charged for unpaid bills beginning 15 days from receipt of statement by client.

3. Overtime Work

Overtime rates will apply to hours worked beyond the normal 8-hour day or 40-hour week as well as to work performed during holidays. Overtime rates will only be charged when the client has approved overtime work.

4. Directly Attributed Expenses

"Directly Attributed Expenses" (DAE) will include items such as outside printing directly required for the job. A 10% adder will be permitted on Directly Attributed Expenses.

5. Subcontracted Services

When supplemental labor (labor that is subcontracted for) is utilized, the above listed base rates will apply to time worked by the supplemental employees.

6. Other

The appropriate personnel at the appropriate skill level will be utilized.

Only hours directly attributable to the job will be charged to the job.

The Engineer reserves the right to adjust the Unit Fee Schedule and charges from time to time to compensate for increases in costs.