



Arlington Public Schools

Procurement Office
2110 Washington Blvd., Arlington, VA 22204 • Phone: (703) 228-6123 • Fax: (703) 841-0681
www.apsva.us

SUBJECT: **Architecture/Engineering Services for Miscellaneous Task Work Order Contracts for Arlington Public Schools - Amendment 3 to Contract 58FY16.**

Haley & Aldrich, Inc.
7601 Lewinsville Road, Suite 101
McLean, VA 22102
Attn: David A. Schoenwolf, PE

By mutual agreement, Contract #58FY16, is renewed for one (1) year at (a) ~~existing prices~~ (b) the revised rate schedule (attached). The renewal shall be effective from July 1, 2019 and shall remain valid through June 30, 2020. This is renewal option three (3) of three (3) for this Contract. All other terms and conditions shall remain unchanged.

ACCEPTANCE:

ARLINGTON PUBLIC SCHOOLS

Authorized
Signature:

David J. Webb

Printed Name
and Title:

David J. Webb, C.P.M.
Purchasing Agent

Date:

June 11, 2019

HALEY & ALDRICH, INC.

Authorized
Signature:

David A. Schoenwolf

Printed Name
and Title:

David A. Schoenwolf

Date:

29 May 2019

APPENDIX D

FEE SCHEDULE

Haley & Aldrich, Inc.
1497 Chain Bridge Road Suite 304
McLean, VA 22101
FEI No. 04-2295689
Phone: (703) 336-6200

CATEGORIES OF LABOR, MATERIALS AND RATES for 1 July 2019 through 30 June 2020

CLASSIFICATIONS	HOURLY RATES
Principal Consultant	\$308.15
Technical Expert 3	\$308.15
Construction Manager	\$258.00
Program Manager	\$258.00
Technical Expert 2	\$258.00
Sr. Project Manager 2	\$248.33
Technical Expert 1	\$248.33
Senior Consultant	\$248.33
Sr. Construction Project Manager	\$207.88
Sr. Project Manager 1	\$207.88
Sr. Technical Specialist 2	\$207.88
Construction Project Manager	\$194.32
Project Manager	\$194.32
Sr. Technical Specialist 1	\$194.32
Project Coordinator	\$177.61
Technical Specialist	\$177.61
Sr. Engineer	\$162.94
Sr. Geologist	\$162.94
Sr. Scientist	\$162.94
Staff Engineer	\$141.03
Staff Geologist	\$141.03
Staff Scientist	\$141.03
Engineer 3 / Geologist 3 / Scientist 3	\$134.71
Engineer 2 / Geologist 2 / Scientist 2	\$120.14
Engineer 1 / Geologist 1 / Scientist 1	\$112.80
Sr. Technician	\$114.84
Sr. Technician	\$102.31
Technician	\$94.86
Sr. Graphics	\$141.03
Graphics	\$128.50
Project Support	\$88.75

235.64
" "
" "

REIMBURSABLE COSTS

EQUIPMENT USAGE AND BILLING FORM: See Attached Form

DESCRIPTION	RATE OF REIMBURSEMENT/UNIT
1. Mileage:	IRS Standard/Mile
2. Printing & Reproduction	See Attached document
3. Laboratory Charges	See Attached document
4. Field Supplies	See Attached document
5. Field Equipment	See Attached document
6. Small Tools	\$10/Day
7. Overtime hours will be charged at straight time rates.	
8. Shipping charges for water, soil and rock samples, field testing equipment, etc. Cost plus 10%	
9. Disposal costs	
a. Soil, rock, waste and/or water samples	\$0.30 per ounce (fluid measure, sample container size).
b. Rock core disposal	\$20.00 per box.
c. Drummed soils	Per quote

SUBCONSULTANTS
“List all of Your Subconsultants”

SUBCONSULTANT NAME – SPECIALITY

DMY	Drilling & Laboratory Testing
Free State Drilling	Drilling
Jay Kay Testing	Laboratory Testing
Northern Virginia Drilling	Geothermal Drilling

DESCRIPTION & HOURLY RATES: See attached documents

REIMBURSABLE COSTS: See attached documents

DESCRIPTION	UNIT	RATE OF REIMBURSEMENT
1. Copying Cost	Price Per Page	At Actual Cost
2. Mileage	Mile	IRS Standard
3. Per Diem	Person-Day	GSA Standard for N. Virginia

Item #	Equipment Description	Daily	Weekly	Month
51870	QED Well Wizard Dedicated Sampling Pump	\$43.73	\$130.35	\$330.00
51873	QED Micropurge Basics MP10 Controller	\$65.18	\$195.53	\$556.88
51874	QED Micropurge Basics MP10 H Controller	\$86.63	\$259.88	\$660.00
51875	QED Micropurge Basics MP10 UH Controller	\$86.63	\$259.88	\$660.00
51876	QED MP15 Control & Power Pack with CO2 Tank full	\$86.63	\$259.88	\$742.50
51878	QED Compressor 12V, Model 3020	\$22.28	\$65.18	\$185.63
51877	QED Compressor, MP40, Gasoline Powered	\$65.18	\$259.88	\$783.75
51882	QED MP-50 Compressor/Controller in one	\$86.63	\$259.88	\$742.50
94650	Nitrogen Regulator	\$9.08	\$22.28	\$61.88
51880	QED Micropurge Basics MP30 Drawdown Meter	\$26.40	\$78.38	\$222.75
Other Pumps & Controllers				
51890	Waterra Inertial HydroLift II Pump	\$65.18	\$195.53	\$556.88
51851	Whale Flow Controller	\$22.28	\$65.18	\$185.63
51689	Proactive Tsunami PVC High Performance Pump	\$22.28	\$65.18	\$185.63
51692	Proactive 12V SS Monsoon Pump 130ft Cable	\$51.98	\$134.48	\$342.38
51830	Proactive SS Mega Typhoon Pump 90ft Cable	\$86.63	\$259.88	\$742.50
51832	Proactive PVC Mega-Monsoon, 24V, 210ft Cable	\$41.25	\$126.23	\$556.88
51690	Power Booster 2 Low Flow Controller (PVC Tsunami)	\$13.20	\$39.60	\$111.38
51693	Power Booster 2 LCD Controller (used for SS Monsoon)	\$13.20	\$39.60	\$111.38
51700	Power Booster 3 LF Controller (PVC Mega Monsoon)	\$13.20	\$39.60	\$111.38
51894	2" Trash Pump, Honda WP20	\$30.53	\$91.58	\$259.88
	Jet Pump, Shallow well, 1/2 HP	\$28.88	\$61.88	\$123.75
Composite Samplers				
51776	ISCO 6700 Composite Sampler	\$43.73	\$130.35	\$371.25
51777	ISCO 6712 Composite Sampler	\$43.73	\$130.35	\$371.25
51780	ISCO 3710 Composite Sampler	\$43.73	\$130.35	\$371.25
51799	Global WS300 Wastewater Sampler	\$43.73	\$130.35	\$371.25
Samplers				
51437	Telescopic Dipper 6-18' w/ sample cup	\$9.08	\$26.40	\$74.25

Item #	Equipment Description	Daily	Weekly	Month
51711	Solinst101, Heron Dipper-T or SLOPE WLM 500'	\$26.40	\$78.38	\$222.75
51702	Solinst101, Heron Dipper-T or SLOPE WLM 1000'	\$39.60	\$117.15	\$334.13
51733	Global Water Sonic Water Level Indicator WL600	\$22.28	\$43.73	\$123.75
Oil/Water Interface Probes				
51744	Solinst122, Heron H.01L or Testwell Interface Probe (Specify Length)	\$39.60	\$121.28	\$363.00
Remediation Pumps				
51822	Spill Buddy Portable Product Skimming Pump- (50' or 100')	\$65.18	\$195.53	\$577.50
51823	Spill Buddy Pro Portable w/ Interface Tape 50' Hose	\$86.63	\$259.88	\$742.50
51824	Magnum Spill Buster Recovery System	\$173.25	\$433.13	\$742.50
51825	QED Hammerhead Pump- 2"	\$30.53	\$117.15	\$330.00
51829	QED Hammerhead Pump- 4"	\$43.73	\$173.25	\$495.00
	QED Ferrett In-Well Oil/ Water Separator	N/A	N/A	N/A
51872	QED LP1301 Pulse Pump	\$30.53	\$117.15	\$330.00
51863	QED LP1702 4" Eliminator Pump	\$43.73	\$173.25	\$495.00
Submersible Sampling Pumps				
51840	Grundfos Redi-Flo2 with Control Box (specify length)	\$82.50	\$252.45	\$742.50
51842	Grundfos Redi-Flo3 5, 115 V	\$61.05	\$173.25	\$495.00
51892	Grundfos Redi-Flo3 30, 220V	\$61.05	\$173.25	\$495.00
90251	Grundfos Cooling Shroud	\$0.00	\$0.00	\$0.00
51833	Turbine Digital Totalizer	\$17.33	\$43.73	\$152.63
Peristaltic Pumps				
51860	GeoPump2	\$22.28	\$65.18	\$185.63
51859	Solinst Model 410	\$22.28	\$65.18	\$185.63
54542 / 54541	Masterflex Environmental Sampling Pump	\$22.28	\$65.18	\$185.63
Bladder Pumps				
51865	QED SamplePro Portable Micropurge Pump 1.75"	\$43.73	\$130.35	\$330.00
54957	QED SamplePro Portable Micropurge Pump .75"	\$43.73	\$130.35	\$330.00

Item #	Equipment Description	Daily	Weekly	Month
51351	MIE pDR-1200	\$65.18	\$165.00	\$470.25
54669	Rechargeable Battery Module for pDR-1000	\$13.20	\$39.60	\$111.38
	Tripod w/ Environmental Enclosure	\$17.33	\$43.73	\$123.75
	Tripod w/ Environmental Enclosure and Strobe Light	\$17.33	\$43.73	\$148.50
Ambient High Volume Samplers				
51111	Andersen PM-10	\$108.90	\$325.05	\$763.13
52128	PM-10 Calibration Kit	\$30.53	\$91.58	\$259.88
51112	Andersen TSP	\$108.90	\$325.05	\$928.13
52129	TSP Calibration Kit	\$30.53	\$91.58	\$259.88
51113	Andersen Polyurethane Foam (PUF) Sampling System	\$65.18	\$216.98	\$618.75
52130	PUF Calibration Kit	\$30.53	\$91.58	\$259.88
51365	Cal Kit, SLPro- Partisol FRM	\$51.98	\$151.80	\$412.50
51114	BGI PQ100 Portable PM10/ TSP/PM2.5 Sampling Unit	\$108.90	\$325.05	\$928.13
Air Sampling Pumps				
51309	Gilian GilAir-3	\$17.33	\$43.73	\$152.63
61197	Gilian GilAir-5	\$17.33	\$43.73	\$152.63
90263	Cyclone Adapter for Gilian Pump	\$4.95	\$13.20	\$61.88
90187	Gilian Low Flow Module	\$4.95	\$13.20	\$61.88
51339	MSA ELF Escort Sampling Pump	\$17.33	\$43.73	\$152.63
51314	Gilian Gilibrator Air Flow Calibrator	\$22.28	\$65.18	\$165.00
51318...	BIOS DryCal DC-Lite (specify range)	\$22.28	\$65.18	\$165.00
51324...	BIOS Defender (specify range)	\$22.28	\$65.18	\$165.00
51329	SKC Universal PCXR8 Programmable Pump	\$17.33	\$43.73	\$152.63
51330	SKC Vac-U-Chamber - 1L	\$22.28	\$65.18	\$123.75
51331	SKC Vac-U-Chamber - 5L	\$22.28	\$65.18	\$123.75
51316	Gilian AirCon-2 High Vol Air Sampler, DC Program	\$34.65	\$103.95	\$297.00
51336	Gast 1532 High Volume Area Sampling Pump	\$17.33	\$56.93	\$173.25
51337	CS3 HVS3 High Volume Small Surface Sample	\$17.33	\$56.93	\$173.25
52095	Pump, Sensidyne HFS-513 AUC, Clock	\$17.33	\$43.73	\$152.63
Mercury Analyzers				
51173	Jerome 431X (vapor)	\$95.70	\$286.28	\$816.75
51174	Jerome J405 (vapor)	\$143.55	\$390.23	\$907.50

Item #	Equipment Description	Daily	Weekly	Month
51176	Jerome J505 (vapor)	\$286.28	\$779.63	\$1815.00
51177	Lumex RA-915+ (vapor)	\$577.50	\$1732.50	\$4400.00
51178	Lumex RP-91 Cold Vapor Option (water)	\$231.00	\$693.00	\$1980.00
51179	Lumex RP-91C Pyrolysis Option (soil/sediment)	\$346.50	\$1039.50	\$2970.00
Air Velocity Meters				
51182...	TSI VelociCalc Multi Function Ventilation Meter 9555, 9545, 9535	\$30.53	\$91.58	\$259.88
51186...	TSI VelociCalc Plus Ventilation Meter 8384, 8385, 8386	\$30.53	\$91.58	\$259.88
51191...	TSI VelociCalc Velocity Meter 8345, 8346	\$30.53	\$91.58	\$259.88
51196	TSI VelociCalc Rotating Vane Anemometer 8324	\$30.53	\$91.58	\$259.88
51194...	TSI VelociCheck Velocity Meter 8330, 8340	\$30.53	\$91.58	\$259.88
Indoor Air Quality (IAQ)				
51219	TSI Q-Trak	\$65.18	\$195.53	\$598.13
51218	TSI Q-TRAK PLUS with CO	\$65.18	\$195.53	\$598.13
52092	Metrosonics AQ5000	\$65.18	\$195.53	\$598.13
51220	TSI P-Trak Ultrafine Particle Counter	\$86.63	\$259.88	\$742.50
51223	Fluke 983 Particle Counter	\$86.63	\$259.88	\$742.50
51221	Delmhorst Moisture Meter BD-10	\$30.53	\$91.58	\$259.88
51222	Delmhorst Moisture Meter BD-2100	\$30.53	\$91.58	\$259.88
51224	Moisture Meter Protimeter (MMS)	\$30.53	\$91.58	\$259.88
51206	Manometer, 475-3-FM	\$9.08	\$30.53	\$115.50
51199	Manometer, 477-(0-6)-FM	\$9.08	\$30.53	\$115.50
51205	Infiltec DM1 Micro-Manometer	\$30.53	\$91.58	\$259.88
51370	Omniguard 4 Differential Pressure Recorder	\$43.73	\$130.35	\$371.25
51263	MultiRAE IR CO2 and PID Monitor	\$65.18	\$195.53	\$598.13
51261	IAQ RAE with VOCs	\$86.63	\$259.88	\$742.50
Detector Tube Hand Pumps & Chip Reader				
51372	Drager (CMS) Chip Measurement System	\$22.28	\$86.63	\$247.50
51373	Drager Accuro Hand Pump	\$9.08	\$30.53	\$115.50
51376	Sensidyne Piston Hand Pump	\$9.08	\$30.53	\$115.50
51377	RAE Piston Hand Pump Model LP-1200	\$9.08	\$30.53	\$115.50
Water Level Meters				
51701	Solinst101, Heron Dipper-T or SLOPE WLM 100'	\$22.28	\$43.73	\$123.75
51705	Solinst101, Heron Dipper-T or SLOPE WLM 200'	\$22.28	\$51.98	\$165.00
51708	Solinst101, Heron Dipper-T or SLOPE WLM 300'	\$26.40	\$78.38	\$222.75

Item #	Equipment Description	Daily	Weekly	Month
51366	Thermo Miran Sapphire	\$520.30	\$1270.50	\$3520.00
Single/ Specific Gas Monitors				
50104...	ToxiRAE II (specify sensor)	\$22.28	\$65.18	\$185.63
51152	Sperian Biosystems Toxi Vision IR (CO2)	\$43.73	\$130.35	\$371.25
52131	Industrial Scientific T82 Single Gas Monitor	\$22.28	\$65.18	\$185.63
51146	Arizona 631-X H2S Analyzer	\$165.00	\$478.50	\$1435.50
51150	J605 Gas Meter H2S Analyzzer w/ Comm	\$216.98	\$650.10	\$1856.25
51164	RKI FP-40 Formaldehyde Detector	\$43.73	\$130.35	\$371.25
51165	Diversified Research Alpha II Radon Monitor	\$43.73	\$130.35	\$371.25
51304	Gowmac Gas Leak Detector	\$43.73	\$130.35	\$371.25
51306	MGD-2002 Helium/Hydrogen Leak Detector	\$78.38	\$325.05	\$804.38
Landfill Monitors				
	RKI Eagle Gas Portable Monitor	\$82.50	\$259.88	\$701.25
51155	GEM 2000 Plus with H2S	\$130.35	\$390.23	\$990.00
51156	GEM 2000	\$95.70	\$277.20	\$792.00
90134	H2S Pod for GEM 2000	\$13.20	\$26.40	\$74.25
90167	Temp Probe for GEM 2000/GEM 2000 Plus	\$22.28	\$43.73	\$123.75
52091	GEM 500	\$86.63	\$259.88	\$742.50
51168	GA 90/94	\$82.50	\$259.88	\$701.25
Gas Chromatograph				
51169 Photovac Voyager	Photovac Voyager	\$346.50	\$866.80	\$2750.00
Aerosol Monitors				
51343	MIE DR-2000 DataRAM	\$130.35	\$390.23	\$990.00
51344	MIE DR-4000 DataRAM	\$130.35	\$390.23	\$990.00
51347	Temperature Conditioning Heater, 115V	\$9.08	\$26.40	\$74.25
51348	In-Line Impactor Head (PM10/ 2.5)	\$9.08	\$26.40	\$74.25
51346	Omni Directional Sampling Inlet	\$0.00	\$0.00	\$0.00
51359	TSI DustTRAK II 8530 Desktop	\$86.63	\$259.88	\$742.50
51360	TSI DustTRAK II 8532 Handheld	\$108.90	\$325.05	\$928.13
51361 / 51362	TSI DustTRAK DRX 8533/8534	\$130.35	\$390.23	\$990.00
51356	TSI DustTRAK Environmental Enclosure	\$13.20	\$39.60	\$111.38
51349	MIE pDR-1500	\$86.63	\$259.88	\$742.50
51350	MIE pDR-1000	\$65.18	\$165.00	\$470.25

Item #	Equipment Description	Daily	Weekly	Month
Photoionization Detectors				
51237	MiniRAE 2000 with 10.6 eV Lamp	\$65.18	\$173.25	\$598.13
51237 / 90160	MiniRAE 2000 with 11.7eV Lamp	\$87.45	\$238.43	\$783.75
51238	MiniRAE 3000 with 10.6 eV Lamp	\$65.18	\$173.25	\$598.13
51238 / 90160	MiniRAE 3000 with 11.7eV Lamp	\$87.45	\$238.43	\$783.75
51252	TE 580B OVM with 10.6 eV Lamp	\$65.18	\$173.25	\$598.13
51252 / 90132	TE 580B OVM with 11.8 eV Lamp	\$87.45	\$238.43	\$783.75
51241	ppBRAE with 10.6 eV Lamp	\$108.90	\$303.60	\$907.50
51242	ppBRAE 3000 10.6 eV Lamp	\$108.90	\$303.60	\$907.50
51242 / 90160	ppBRAE 3000 11.7 eV Lamp	\$130.35	\$368.78	\$1093.13
51244	UltraRAE Specific Compound Monitor	\$103.95	\$303.60	\$907.50
51246	UltraRAE 3000 Specific Compound Monitor	\$103.95	\$303.60	\$907.50
	RAE Sepfilter Tubes for UltraRAE must be purchased separately. Please call for pricing.			
Flame Ionization Detectors				
52090	PE Photovac MicroFID	\$74.25	\$216.98	\$660.00
51226	Foxboro TVA 1000 Vapor Analyzer- PID/FID	\$108.90	\$303.60	\$907.50
Multi-Gas Monitors				
51262	MultiRAE PLUS Five Gas Monitor	\$65.18	\$173.25	\$598.13
51257	VRAE	\$43.73	\$130.35	\$371.25
51259	QRAE II	\$43.73	\$130.35	\$371.25
61243	QRAE PLUS	\$43.73	\$130.35	\$371.25
51105	RKI Eagle	\$43.73	\$130.35	\$371.25
51264	AreaRAE Monitor	\$86.63	\$259.88	\$742.50
51265	AreaRAE Remote Basic Host Controller	\$86.63	\$259.88	\$742.50
51281	MSA Watchman	\$43.73	\$130.35	\$371.25
51281	RKI GX-2003	\$43.73	\$130.35	\$371.25
51269	EntryRAE LEL/O2/H2S/CO 10.6eV	\$43.73	\$130.35	\$371.25
51295	Industrial Scientific iTX	\$43.73	\$130.35	\$371.25
51282	MSA Orion	\$43.73	\$130.35	\$371.25
51286	MSA Sirius	\$65.18	\$173.25	\$598.13
51292	MSA Altair Multi-gas Meter	\$43.73	\$130.35	\$371.25

Item #	Equipment Description	Daily	Weekly	Month
51787	Solinst Discrete Sampler	\$30.53	\$91.58	\$247.50
	Wildco Gravity Corer	\$26.40	\$103.95	\$297.00
51788	Eckman Dredge Sampler 6X6X6	\$26.40	\$103.95	\$297.00
51792	Petite Ponar Grab SS 6X6	\$26.40	\$103.95	\$297.00
51790	Standard Ponar Dredge Sampler 9X9	\$26.40	\$103.95	\$297.00
51798	Global SS201 Stormwater Sampler	\$34.65	\$103.95	\$297.00
51797	Global SS505 Discrete Stormwater Sampler 1 L	\$34.65	\$103.95	\$297.00
51793	Bomb Sampler SS 2.5X10" 500mL Capacity	\$30.53	\$91.58	\$247.50
Stream Flow Probes				
51805	Marsh McBirney Flo-Dar Sensor	\$130.35	\$390.23	\$928.13
51804	Marsh McBirney Flo-Tote Sensor	\$91.58	\$273.08	\$779.63
51810	Marsh-McBirney Flo-Mate 2000 (No sensor disconnect)	\$61.05	\$182.33	\$519.75
51811	Marsh-McBirney Flo-Mate 2000 (w/ sensor disconnect)	\$61.05	\$182.33	\$519.75
51812	Wading Rod- Flow Mate 2000 (Top Setting)	\$0.00	\$0.00	\$0.00
51813	Wading Rod- Flow Mate 2000 (Standard)	\$0.00	\$0.00	\$0.00
51814	Suspension Cable, 20ft.	\$0.00	\$0.00	\$0.00
51818	Greyline PDFM-IV Portable Doppler Flow Meter	\$86.63	\$259.88	\$742.50
51820	EESiFlo EASZ-10P Portable Flow Meter	\$65.18	\$173.25	\$598.13
51806	Global FP 101 Water Flow Probe	\$30.53	\$91.58	\$259.88
51807	Global FP 201 Water Flow Probe	\$30.53	\$91.58	\$259.88
Dataloggers & Transducers				
54659...	Solinst Level Logger 3001 LT	\$74.25	\$169.13	\$482.63
51912	Solinst Level Logger 3001 Barologger	\$30.53	\$91.58	\$259.88
51917	Solinst Level Logger 3001 LTC	\$86.63	\$259.88	\$742.50
61316	Solinst Optical Reader	\$9.08	\$26.40	\$74.25
52050...	In-Situ LevelTroll 700	\$74.25	\$195.53	\$536.25
52025	In-Situ BaroTroll	\$74.25	\$169.13	\$482.63
	Global WL15X Water Level Logger	\$74.25	\$195.53	\$536.25
	Geothermal Temperature Datalogger	\$30.00	\$120.00	\$360.00
51933	Micro-Diver	\$74.25	\$169.13	\$482.63
51927...	Mini-Diver	\$74.25	\$169.13	\$482.63
52026	Baro-Diver	\$30.53	\$91.58	\$259.88
51923	CTD-Diver	\$86.63	\$259.88	\$742.50
52085	YSI Level Scout	\$74.25	\$195.53	\$536.25

Item #	Equipment Description	Daily	Weekly	Month
Communication Kits				
52009	In-Situ RuggedReader	\$22.28	\$86.63	\$247.50
51942	Archer	\$22.28	\$86.63	\$247.50
Multi-Parameter Water Quality Meters				
	YSI EcoNet Data Acquisition System	\$130.35	\$390.23	\$742.50
51680	YSI 6920 MPS - Datalogging	\$130.35	\$390.23	\$907.50
51679	YSI 6820 MPS	\$130.35	\$390.23	\$907.50
51629	YSI 6920 V2 Sonde with Optical DO and Turbidity	\$130.35	\$390.23	\$907.50
51682	YSI 600 XLM MPS with Datalogging	\$86.63	\$259.88	\$742.50
54672	YSI 600XL MPS	\$86.63	\$259.88	\$742.50
51657	YSI 556 Multi-Parameter System	\$86.63	\$259.88	\$742.50
51659	YSI Pro Professional	\$86.63	\$259.88	\$742.50
51664	Horiba U-22 Water Quality System	\$86.63	\$259.88	\$742.50
51665 / 51669	Horiba U-50 Series (U-52 and U-53)	\$86.63	\$259.88	\$742.50
51677	Hanna 9828	\$65.18	\$173.25	\$660.00
51676	Hydrolab Quanta MP Checker	\$86.63	\$259.88	\$742.50
51624	YSI 600 OMS with Rhodamine WT Sensor	\$173.25	\$519.75	\$1485.00
61181	QED Micropurge Basics MP20 Flow Cell	\$86.63	\$259.88	\$742.50
51673	QED Micropurge Basics MP20 DT Flow Cell	\$108.90	\$325.05	\$928.13
51675	Insitu Troll 9500	\$86.63	\$259.88	\$742.50
51642	YSI 30 Conductivity, Salinity & Temp Meter	\$22.28	\$51.98	\$148.50
51648	YSI 60 pH & Temperature meter (specify length)	\$22.28	\$65.18	\$185.63
51650	YSI 63 pH, Conductivity, Salinity & Temp Meter (specify length)	\$22.28	\$65.18	\$185.63
51643	YSI 85 DO, Salinity, Conductivity & Temp Meter (specify length)	\$26.40	\$78.38	\$226.88
51598	Hanna 991301 pH, conductivity, TDS and Temp	\$17.33	\$43.73	\$123.75
51683	Myron 6P UltraMeter	\$22.28	\$65.18	\$185.63
51595	Hanna 9025 Meter	\$17.33	\$56.93	\$165.00
51614	Orion 250A Meter	\$17.33	\$56.93	\$165.00
51603	Hydac 910 Meter	\$17.33	\$43.73	\$123.75
Dissolved Oxygen Meters				
51640...	YSI 550	\$22.28	\$65.18	\$185.63
51655...	YSI 550A	\$22.28	\$65.18	\$185.63

Item #	Equipment Description	Daily	Weekly	Month
51661	YSI 95	\$22.28	\$65.18	\$185.63
51639	YSI 55	\$22.28	\$74.25	\$185.63
51594	Hanna 9142	\$22.28	\$74.25	\$185.63
51619	Hach LDO Luminescent Dissolved Oxygen	\$34.65	\$103.95	\$297.00
Turbidity Meters				
52104	Lamotte 2020e	\$22.28	\$69.30	\$198.00
51610	Lamotte 2020we	\$22.28	\$69.30	\$198.00
52105	Hach 2100P	\$22.28	\$69.30	\$198.00
51617	Hach 2100Q	\$22.28	\$69.30	\$198.00
51622	HF Scientific DRT-15	\$22.28	\$69.30	\$198.00
51616	Global WQ770	\$22.28	\$69.30	\$198.00
51612	Hanna 98703	\$22.28	\$69.30	\$198.00
51620	Hach TSS Meter	\$43.73	\$130.35	\$371.25
Item #	Equipment Description	Daily	Weekly	Monthly
Water Analysis Instruments				
51589	Hach Spectrophotometer Model DR/2010	\$51.98	\$155.93	\$371.25
	Hach Spectrophotometer Model DR/2400	\$51.98	\$155.93	\$371.25
51591	Hach Spectrophotometer Model DR/2800	\$51.98	\$155.93	\$371.25
51583	HACH DR/890 Colorimeter	\$43.73	\$130.35	\$371.25
51608	Lamotte TC-3000e Tri-Meter	\$22.28	\$69.30	\$198.00
Respiratory				
51399	TSI Portacount Plus Respirator Fit Tester	\$143.55	\$390.23	\$907.50
51424	TSI Portacount Pro Respirator Fit Tester (8030)	\$143.55	\$390.23	\$907.50
51433	N95 Companion Kit	\$71.78	\$195.53	\$453.75
51428	TSI Portacount Pro+ Respirator Fit Tester (8038)	\$143.55	\$390.23	\$907.50
51388	Particle Generator	\$71.78	\$195.53	\$453.75
Fall Protection				
61170	Tripods Rescue System (tripod and winch)	\$86.63	\$303.60	\$990.00
51524	Confined Space Blower	\$30.53	\$91.58	\$259.88
Sound Level Meters/Dosimeters				
51426	Quest NoisePro DLX Type 2	\$30.53	\$91.58	\$259.88
52097	Quest Q-300/400/500 Datalogging Noise Dosimeter	\$30.53	\$91.58	\$259.88
51393	Quest SoundPro DL Sound Level Meter	\$30.53	\$91.58	\$259.88
51421	Casella D-Badge Noise Dosimeter	\$30.53	\$91.58	\$259.88
61171	Casella Acoustic Calibrator	\$9.08	\$22.28	\$61.88

Item #	Equipment Description	Daily	Weekly	Month
51419	Edge 5 Noise Dosimeter	\$30.53	\$91.58	\$259.88
51403	Larson Davis System 824A Sound Level Meter	\$65.18	\$195.53	\$556.88
52117	PCB Piezotronics ICP 2-Axis Accelerometer(works with 824 meter)	\$22.28	\$65.18	\$185.63
51391	Quest 2700/1900 Sound Level Meter	\$30.53	\$91.58	\$259.88
51405	Quest 2900 Sound Level Meter	\$30.53	\$91.58	\$259.88
54653	QC-10 Calibrator	\$9.08	\$22.28	\$61.88
54652	Octave Band Filter - OB100	\$22.28	\$65.18	\$185.63
54651	Octave Band Filter - OB300	\$22.28	\$65.18	\$185.63
Heat Stress Monitors				
51427	Quest Temp II	\$30.53	\$91.58	\$259.88
51408	Quest Temp 34 Datalogging Thermal Environmental Monitor	\$30.53	\$91.58	\$259.88
51420	HeatStrain Monitor QUESTEMP 3	\$43.73	\$130.35	\$371.25
Survey Equipment				
51463	GPS, Trimble Geo XH (Handheld)	\$173.25	\$519.75	\$1237.50
51465	GPS, Trimble Geo XT (Handheld)	\$173.25	\$519.75	\$1237.50
51483	Trimble Zephyr External L1/L2 GPS antenna (use with XH)	\$30.53	\$91.58	\$99.00
51482	Trimble Hurricane external GPS antenna (use with XT)	\$9.08	\$43.73	\$82.50
51468	Meridian Magellan GPS	\$9.08	\$22.28	\$61.88
Item #	Equipment Description	Daily	Weekly	Monthly
51469	Topcon AT-G7 Survey Set	\$22.28	\$65.18	\$185.63
	Topcon Pulse Total Station GPT-6000C	\$130.35	\$390.23	\$907.50
51533	Schonstedt GA72 CD Magnetometer	\$34.65	\$103.95	\$297.00
61261	Schonstedt MAC 51B Pipe & Cable Locator	\$34.65	\$103.95	\$396.00
51470	Two Way Radios	\$9.08	\$30.53	\$115.50
51471	Laser Level (tripod, rod, laser level)	\$43.73	\$130.35	\$371.25
Weather Equipment				
51502	Davis Vantage Pro2 Weather Station	\$39.60	\$117.15	\$334.13
52100	Davis Vantage Pro Weather Station	\$39.60	\$117.15	\$334.13
94679	Tripod, Weather Station	\$4.95	\$13.20	\$37.13
51506	Kestrel 4500 Weather Meter	\$26.40	\$78.38	\$222.75
51507	Spectrum Electronics Thunderbolt 300 Series Storm Detector	\$17.33	\$51.98	\$148.50
Radiation Detectors				

Item #	Equipment Description	Daily	Weekly	Month
51515	Ludlum MODEL 3 Survey Meter	\$30.53	\$91.58	\$259.88
51516	Ludlum MODEL 3 Survey Meter with 44-9 G-M Detector	\$30.53	\$91.58	\$259.88
51514	Ludlum MODEL 5 Geiger Counter	\$30.53	\$91.58	\$259.88
XRFs				
51551	Thermo Niton XRF	\$577.50	\$1732.50	\$4950.00
51548	Innov-X Portable XRF Analyzer	\$577.50	\$1732.50	\$4950.00
Soil Sampling Equipment				
90193	Hand Auger Kit (auger head, t-handle, 3 extensions)	\$13.20	\$39.60	\$111.38
51563	Power Auger Kit	\$69.30	\$329.18	\$1072.50
90218	Soil Sample Kit	\$26.40	\$78.38	\$288.75
51529	Scale, Analytical	\$4.95	\$13.20	\$37.13
90262	Split Core Sampler 2 x 6	\$4.95	\$13.20	\$37.13
51570	AMS Soil Gas Vapor System	\$69.30	\$329.18	\$1072.50
90271	Geoprobe Hand Tool System	\$86.63	\$259.88	\$742.50
	KVA Roatary Hefty System	\$69.30	\$329.18	\$1072.50
51557	Hammer Drill	\$43.73	\$130.35	\$371.25
51578	Durham Geo Slope Indicator Double Ring Infiltrometer Set	\$65.18	\$173.25	\$515.63
51580	Nilsson Model 400 Soil Resistance Meter	\$65.18	\$173.25	\$556.88
51225	Kelway HB-2 Soil Acidity & Moisture Tester	\$13.20	\$39.60	\$119.63
51615	Petro Flag, PF-MTR HydrcarbSoil	\$43.73	\$130.35	\$371.25
51623	L2000DX Analyzer	\$65.18	\$173.25	\$598.13
Generators				
51509	Generator 3,000-5,000 watts	\$39.60	\$117.15	\$334.13
51510	Generator , Small, Honda EU2000I	\$39.60	\$117.15	\$334.13
Cameras				
51442	Digital Camera	\$43.73	\$130.35	\$371.25
51552	FLIR BCAM SD Infra-Red Camera	\$95.70	\$121.28	\$816.75
Item #	Equipment Description	Daily	Weekly	Monthly
51406	Well-Vu Downhole Camera	\$108.90	\$325.05	\$948.75
51390	InSight Vision Digital Xpress Plus	\$108.90	\$325.05	\$948.75
51394	RIDGID SeeSnake Micro-Inspection Camera	\$9.08	\$30.53	\$115.50
Boats				
51445	Inflatable Boat, Model 330	\$43.73	\$130.35	\$371.25

Item #	Equipment Description	Daily	Weekly	Month
51446	Carolina Skiff Flat-Bottom Motor Boats: 16', 18' and 19'	\$231.00	\$693.00	\$1980.00
51448	Boston Whaler 14ft Boat with 45 HP Motor	\$173.80	\$520.30	\$1485.00
	Scout 202 Sportfish, 20' Motor Boat	\$231.00	\$693.00	\$1980.00
51452	Rowboat	\$30.53	\$91.58	\$259.88
52119	Trolling Motor, rowboat	\$13.20	\$39.60	\$111.38
Miscellaneous				
51378	AllerAir 5000 Vocab Area Air Filter	\$17.33	\$43.73	\$152.63
51383	Fiberglass Tape Measure 300'	\$4.95	\$13.20	\$37.13
51436	Measuring Wheel	\$4.95	\$13.20	\$37.13
51542	Wobble Light	\$9.08	\$26.40	\$74.25
51538	Ultraviolet Light	\$9.08	\$26.40	\$74.25
51540	Extech Heavy Duty Light Meter	\$9.08	\$26.40	\$74.25
51539	Fisher Control Co. Light Meter	\$9.08	\$26.40	\$74.25
51537	F.W. Bell 5080 Gauss/Tesla Meter	\$22.28	\$65.18	\$165.00
51684	Smith-Root LR-24 Electrofisher	\$173.25	\$433.13	\$1237.50
	Pick Up Truck	\$85.00	\$340.00	\$1020.00
	Power Analyzers and Electrical Diagnostic Tools	Per quote		

FIELD TESTING	UNIT RATES	UNIT
Drill Rig Mobilization (Truck)	\$748.00	each
Drill Rig Mobilization (ATV)	\$863.00	each
Drill Rig Onsite/Offsite Mobilization (ATV)	\$345.00	each
Drill Rig Minimum Daily Charge	\$2,013.00	day
Drill Rig Moving/Difficult Moving/ Standby/Cleanup/Site Clearing	\$248.00	crew-hour
Additional Mobilization (> 50 miles one way)	\$5.00	mile
Site Reconnaissance/Meeting/Boring Layout/Groundwater Reading	\$104.00	hour
Public Utility Clearance (< 1 hour)	\$92.00	site
Drilling Permit (VDOT, MDSHA, DCRA/DDOE, DDOT, etc.)	per quote	each
Night Work Surcharge	\$1,150.00	crew-shift
Saturday Work Surcharge	\$1,035.00	crew-shift
2-1/4" or 3-1/4" HSA SPT Borings (0'-40')	\$17.00	foot
2-1/4" or 3-1/4" HSA SPT Borings (40'-80')	\$18.00	foot
2-1/4" or 3-1/4" HSA SPT Borings (80'-120')	\$20.00	foot
2-1/4" or 3-1/4" HSA SPT Borings (120'-160')	\$24.00	foot
2-1/4" or 3-1/4" Auger Probe Borings (0'-40')	\$12.00	foot
4-1/4" HSA SPT Borings (0'-40')	\$21.00	foot
4-1/4" HSA SPT Borings (40'-80')	\$23.00	foot
4-1/4" HSA SPT Borings (80'-120')	\$26.00	foot
4-1/4" Auger Probe Borings (0'-40')	\$15.00	foot
6-1/4" HSA SPT Borings (0'-40')	\$23.00	foot
6-1/4" HSA SPT Borings (40'-80')	\$26.00	foot
6-1/4" HSA SPT Borings (80'-120')	per quote	foot
3-1/2" Mud Rotary SPT Borings (0'-40')	\$19.00	foot
3-1/2" Mud Rotary SPT Borings (40'-80')	\$21.00	foot
3-1/2" Mud Rotary SPT Borings (80'-120')	\$25.00	foot
3-1/2" Mud Rotary SPT Borings (120'-160')	\$29.00	foot
Hard Drilling Surcharge (>50 BPF)	\$5.00	foot
Grout Boreholes	\$11.00	foot
NQ Rock Coring (0'-100')	\$60.00	foot
NQ Rock Coring (100'-160')	\$67.00	foot
NW Casing Advancing (0'-80')	\$53.00	foot
NW Casing Advancing (0>80')	per quote	foot
Cardboard Waxed Corebox (2.5' x 4 slots)	\$18.00	each
Wooden Corebox (5' x 4 slots)	per quote	each
Wooden Corebox (4' x 4 slots)	per quote	each
Setup Charge (Mud Rotary, Rock Coring, or Casing Advancer)	\$156.00	each

FIELD TESTING (cont.)	UNIT RATE	UNIT
Additional Split Spoon Samples	\$29.00	each
Shelby Tube Samples	\$138.00	each
Bag Sample of Auger Cuttings	\$46.00	each
Hauling Water	\$173.00	day
Pavement Coring Machine Mobilization	\$144.00	each
Asphalt Pavement Coring, Minimum	\$58.00	each
Asphalt Pavement Coring, ≤ 4" diameter	\$14.00	inch
Asphalt Pavement Coring, 6" diameter	\$19.00	inch
Asphalt Pavement Coring, 8" diameter	\$29.00	inch
Asphalt Pavement Coring, ≥ 10" diameter	per quote	inch
Patching Pavement Core with Cold Asphalt Mix	\$41.00	each
Concrete Pavement Coring, Minimum	\$80.00	each
Concrete Pavement Coring, ≤ 4" diameter	\$22.00	inch
Concrete Pavement Coring, 6" diameter	\$27.00	inch
Concrete Pavement Coring, 8" diameter	\$41.00	inch
Concrete Pavement Coring, ≥ 10" diameter	per quote	inch
Patching Pavement Core with Concrete Mix	\$41.00	each
Monitoring Well (1"/1.25" PVC), excluding drilling and pipe	\$14.00	foot
Monitoring Well (2" PVC), excluding drilling and pipe	\$23.00	foot
Monitoring Well (4" PVC), excluding drilling and pipe	\$28.00	foot
Monitoring Well Protective Cover	\$225.00	each
Well Box with 2' Pad	\$230.00	each
Well Development	\$248.00	hour
Flush Joint Threaded/Slotted Screen, 1"/1.25" PVC	\$10.00	foot
Flush Joint Threaded/Slotted Screen, ≥ 2" PVC	per quote	foot
Conduit Pipe/Piezometer, 1"/1.25" PVC, no sand or bentonite	\$6.00	foot
Infiltration Pipe, 4" PVC	\$7.00	foot
Infiltration Pipe, 5" PVC	\$9.00	foot
Infiltration Pipe, 6" PVC	\$10.00	foot
Inclinometer Installation	per quote	foot
Decontamination Pad Set-Up	\$518.00	each
Decontamination	\$259.00	hour
Plastic Sheeting	\$115.00	hour

FIELD TESTING (cont.)	UNIT RATE	UNIT
Hazmat 55 Gallon Drums	\$87.00	each
Drum Disposal	per quote	each
Traffic Control	per quote	each
Bulldozer/Backhoe Rental and Operator	per quote	each
Per Diem	per quote	each
PERSONNEL		
Principal Geotech Engineer	\$220.60	hour
Sr.Geotech Engineer/Geologist	\$156.76	hour
Project Geotech Engineer/Geologist	\$115.27	hour
Staff Geotech Engineer/Geologist	\$90.37	hour
Administrative	\$76.59	hour
CADD Technician	\$76.83	hour
LABORATORY TESTING		
Soil		
Moisture Content Test (ASTM D2216)	\$11.50	test
Sieve Analysis (ASTM D422)	\$80.50	test
Atterberg Limits Test (ASTM D4318)	\$80.50	test
Hydrometer Analysis (ASTM D422)	\$80.50	test
USDA Textural Soil Classification (Sieve Analysis and Hydrometer)	\$161.00	test
Specific Gravity (ASTM D854)	\$57.50	test
Standard Proctor Test (ASTM D698/VTM-1)	\$155.25	test
One Point Proctor Test (VTM-12)	\$97.75	test
Modified Proctor Test (ASTM D1557)	\$184.00	test
California Bearing Ratio with Standard Proctor (ASTM D1883/VTM-8)	\$402.50	test
pH and Resistivity	\$253.00	test
Concrete/Mortar/Grout		
Compressive Strength of Concrete Cylinders-4"x8" (ASTM C39)	\$13.23	test
Compressive Strength of Concrete Cylinders-6"x12" (ASTM C39)	\$15.53	test
Compressive Strength of Mortar Cubes (ASTM C170) (set of three)	\$40.25	test
Compressive Strength of Grout Specimen (ASTM C1019)	\$17.25	test

GEOTECHNICAL EXPLORATION	UNIT RATES
MOBILIZATION DEMOBILIZATION OF PERSONNEL AND EQUIPMENT	
ATV DRILL RIG FIRST 100 MILES ROUND TRIP	\$680.00
ATV DRILL RIG GREATER THAN 100 MILES ROUND TRIP, PER MILE	\$4.00
STANDARD SOIL BORING, HOLLOW STEM AUGERS	
DAILY DRILLING RATE INCLUDES MOBILIZATION	\$2,325.00
AUGER PROBE WITHOUT SPT SAMPLES	
0' - 50' PER LINEAR FOOT	\$11.00
50' - 100' PER LINEAR FOOT	\$13.00
AUGER BORING DRILLING WITH STANDARD PENETRATION TESTS ACCORDANCE WITH ASTM D-1586	
MINIMUM BORING CHARGE LESS THAN 10' IN DEPTH	\$140.00
CONTINUOUS SPT SAMPLING ON TWO FOOT INTERVALS	\$20.00
0' - 50' PER LINEAR FOOT	\$13.25
50' - 100' PER LINEAR FOOT	\$15.25
Over 100'	
DRILLING IN HARD SOIL > 50 BPF	\$3.00
DRILLING IN HARD SOIL > 100 BPF	\$4.00
EXTRA SPLIT SPOON SAMPLES PER AMPLE	\$20.00
BULK BAG SAMPLE & JAR SAMPLE FOR MOISTURE	\$30.00
SHELBY TUBE (UNDISTURBED SAMPLE)	
0' - 50'	\$122.00
50' - 100'	\$142.00
FIXED PISTON & GUS SAMPLER @ ATTEMPT	
0' - 50'	\$224.00
50' - 100'	\$244.00
PITCHER BARREL SAMPLER IN MUD ROTARY BORINGS	
HOURLY RATES TWO MAN CREW	
HAND CLEARING	\$230.00

GEOTECHNICAL EXPLORATION	UNIT RATES
WATER HAULING	\$225.00
SITE CLEANING	\$225.00
STEAM CLEANING	\$225.00
CORING PAVEMENTS	
ASPHALT WITH AUGER	N/C
ASPHALT WITH 6" CORE (10" IN DEPTH)	\$127.00
COMPACTING & PATCHING PAVEMENT WITH ASPHALT @ CONCRETE WITH 6" CORE	\$30.50
COMPACTING & PATCHING PAVEMENT WITH CONCRETE @	\$35.50
ROCK CORING	
NX CORING SET-UP CHARGE – Each Location	\$225.00
NX CORING PER LINEAR FOOT 0' - 50'	\$50.75
NX CORING PER LINEAR FOOT 50' - 100'	\$61.00
NW CASING ADVANCER	
CASING CAVING FORMATIONS FOR SOIL BORING OR ROCK CORING	
3" NW CASING PER LINEAR FOOT 0' - 50'	\$34.50
3" NW CASING PER LINEAR FOOT 50' - 100'	\$44.50
OBSERVATION WELL MONITORING GROUND WATER LEVEL	
(NON-ENVIRONMENTAL) 2" SCHEDULE 40 PVC 10' SCREEN AND RISER	
ADDED TO THE COST OF DRILLING AND SAMPLING	\$22.25
PROTECTIVE STICK-UP COVERS LOCKING	\$250.00
LOCKING FLUSHMOUNT COVER	\$270.00
PERMITS AND COMPLETION LOGS (STATE OF MARYLAND)	\$275.00
WELL ABANDONMENT REPORTS	\$75.00
SLOPE INCLINOMETERS INSTALLED IN PER DRILLED 4.25 AUGER BORING	\$24.25



GEOTECHNICAL EXPLORATION	UNIT RATES
PER DIEM FOR EACH CREW, PER DAY OUT OF TOWN	GSA Per Diem
POLLUTION LIABILITY INSURANCE - IF PROJECT REQUIRED	N/C
WAIVER OF SUBROGATION - IF REQUIRED	N/C
MISS UTILITY CALL	\$55.00
ALL ENVIRONMENTAL DRILLING AND SAMPLING WILL BE QUOTED ON A SITE SPECIFIC WORK PLAN	

TEST	AASHTO	ASTM	DESCRIPTION	RATE
Atterberg Limits	T-89/90*	D-4318	Liquid and plastic limit	\$60.00
California Bearing Ratio (CBR)	T-193*	D-1883	California bearing ratio (CBR) of laboratory-compacted soil	\$105.00 per pt
Consolidation	T-216	D-2435	One-dimensional consolidation properties of soils	\$450.00
Grain Size (Standard)	T-88*	D-422, D-6913	Particle-size analysis (gradation) of soil	\$60.00
Grain Size with Hydrometer	T-88*	D-422, D-7928	Particle-size analysis (gradation) of soil with hydrometer	\$140.00
Moisture Content	T-265*	D-2216	Determination of water (moisture) content of soil	\$8.00
Organic Content	T-267	D-2974	Determination of organic content of soil. Loss of ignition (LOI).	\$35.00
Percent Fines	T-11*	D-1140	Percent of material finer than the #200 sieve	\$45.00
pH	T-289	D-4972	Determination of pH of soil	\$25.00
Pick-Up of Samples	-	-	Pick-up samples from client	FREE
Proctor (Modified)	T-180*	D-1557	Moisture-density relationship of soil	\$135.00
Proctor (Standard)	T-99*	D-698	Moisture-density relationship of soil	\$115.00
Shrinkage Limit	T-289	D-427	Determination of shrinkage limit of soil (by mercury)	\$40.00
Specific Gravity	T-100	D-854	Determination of specific gravity of soil	\$45.00
Swell (or Settlement) Potential	-	D-4546 (C)	One-dimensional swell or settlement potential of soil	\$200.00
Tube Density	-	-	Measurement of in-situ density of soil (w/moisture content)	\$40.00
Unconfined Compressive Strength	T-208	D-2166	Unconfined compressive strength of cohesive soil	\$115.00
USCS Classification	-	D-2487	Unified soil classification (gradation/atterberg). ASTM	\$120.00
USDA	-	-	Hydrometer test to determine soil texture (USDA)	\$80.00
Verification of Non-Plasticity	T-89/90*	D-4318	Verification of non-plasticity	\$40.00
Void Ratio	-	-	Determination of void ratio of soil and specific gravity	\$85.00

GEOHERMAL TEST WELL	UNIT RATES	UNIT
Mobilization/Demobilization	\$1,815.00	LS
Mud Rotary Drilling/Hr	\$544.00	Hr.
Mud Rotary Drilling/Day	\$5,434.00	Day
Air Rotary Drilling/Hr	\$544.00	Hr.
Air Rotary Drilling/Day	\$5,434.00	Day
4" Mud Rotary Drilling	\$10.30	LF
5" Mud Rotary Drilling	\$10.30	LF
6" Mud Rotary Drilling	\$10.30	LF
8" Mud Rotary Drilling	\$20.60	LF
4" Air Rotary Drilling	\$10.90	LF
5" Air Rotary Drilling	\$10.90	LF
6" Air Rotary Drilling	\$10.90	LF
8" Air Rotary Drilling	\$20.60	LF
4" Air Hammer Drilling	\$10.90	LF
5" Air Hammer Drilling	\$10.90	LF
6" Air Hammer Drilling	\$10.90	LF
8" Air Hammer Drilling	\$20.60	LF
4" Steel Casing Install	\$15.70	LF
5" Steel Casing Install	\$15.70	LF
6" Steel Casing Install	\$15.70	LF
8" Steel Casing Install	\$30.20	LF
Install and grout 1" HDPE borehole loop	\$6.70	LF
Install and grout 1 1/4" HDPE borehole loop	\$7.40	LF
Install and grout 1 1/2" HDPE borehole loop	\$9.00	LF
48 hr Formation Thermal Conductivity Test	\$3,864.00	LS
Install 4" Diameter PVC Pump Sleeve (porter shroud)	\$5.60	LF
Install 2" HDPE Line	\$5.60	LF
Install 4" submersible well pump	\$12,650.00	LS



GEOHERMAL TEST WELL	UNIT RATES	UNIT
24-hr Pump Test	\$4,200.00	LS
Well Development	\$172.50	Hr.
Additional Air Compressor/Day	\$920.00	Day
Bag Filter/Day	\$115.00	Day
Water Storage/Settling Tanks	\$345.00	Day
Rig & Equipment Set Up/Day	\$1,725.00	Day
Pull Pump & Pipe	\$3,018.75	LS
Borehole Grouting/surface restoration	\$5.00	SF
Directed Standby (rush hour restriction)	\$2,300.00	Ea
Miss Utility Clearance	\$111.00	Ea
Private Utility Locator	\$906.00	Ea
Nighttime weekend, holiday surcharge	\$2,875.00	Day
ALL RIG TIME INCLUDES CREW LABOR		

