

**HIGHLINE WATER DISTRICT
King County, Washington**

RESOLUTION 15-9-29A

**RESOLUTION AUTHORIZING CONTRACT #15-50-12 WITH
RH2 ENGINEERING, INC. FOR WATER SYSTEM FACILITY ARC FLASH ANALYSIS**

WHEREAS, the Washington Cities Electrical Code and National Fire Protection Association (NFPA) 70E Electrical Safety in the Workplace, requires water system facilities with electrical distribution equipment to have appropriate arc flash labeling; and

WHEREAS, the District selected RH2 Engineering, Inc. (RH2) from the MRSC Consultant Roster to perform an arc flash analysis which is required by code for its water system facilities and to provide arc flash labeling for the electrical distribution equipment at each of the facilities; and

WHEREAS, the arc flash analysis will be performed and labeling provided for the following facilities:

- Pump Station No. 1 (Mansion Hill)
- Pump Station No. 2 (Des Moines)
- Pump Station No. 3 (Normandy Park)
- Pump Station No. 4 (McMicken Heights)
- Pump Station No. 6 (Crestview)
- Pump Station No. 7 (North Hill)
- Angle Lake Well
- Des Moines Well and Treatment Plant
- Tye Well and Treatment Plant
- District Headquarters

WHEREAS, the District's Engineer and General Manager have reviewed the September 2015 Scope of Work submitted by RH2 Engineering, Inc. and recommend approval of this resolution.

NOW, THEREFORE, BE IT RESOLVED:

1. The General Manager or designee is authorized to enter into Contract #15-50-12 with RH2 Engineering, Inc. (Attachment 1, incorporated herein by this reference), for a not-to-exceed amount of \$37,046.00 for the Water System Facility Arc Flash Analysis.

ADOPTED BY THE BOARD OF COMMISSIONERS of Highline Water District, King County, Washington, at an open public meeting held this **29th** day of **September 2015**.

BOARD OF COMMISSIONERS


George Landon, President


Todd Fultz, Commissioner


Kathleen Quong-Vermeire, Commissioner


Vince Koester, Secretary


Daniel Johnson, Commissioner

HIGHLINE WATER DISTRICT

AGREEMENT FOR CONSULTING SERVICES

THIS AGREEMENT is entered into between **HIGHLINE WATER DISTRICT**, King County, Washington, a municipal corporation and special purpose district organized and existing under the laws of the State of Washington (hereafter referred to as "the District"), and **RH2 ENGINEERING, INC.** (hereafter referred to as "the Consultant") in consideration of the mutual benefits, terms and conditions hereinafter specified.

1. Scope of Consulting Services. Consultant shall provide consulting services to the District under the terms of this Agreement for the following Project: **Water System Arc Flash Analysis** ("Project"). The scope of services is more fully described on **Exhibit A** attached hereto and incorporated herein by this reference.
2. Compensation and Payment. District shall pay Consultant for the time and materials devoted to the Project as consideration for the performance of the services set forth on **Exhibit A**, not to exceed the amount of Thirty Seven Thousand Forty-Six and 00/100 Dollars (\$37,046.00). Such compensation shall be payable in the following manner:
 - a. Consultant shall submit a detailed monthly billing for all services provided describing in reasonable and understandable detail the services rendered, fees charged and expenses incurred by Consultant during the previous month in accordance with a schedule of rates and charges set forth on **Exhibit(s) B and C**, including fees and expenses for additional services authorized by District as provided herein. District shall pay the invoice within sixty (60) days of receipt, except as to any disputed amounts.
 - b. Upon District's failure to pay within sixty (60) days of receipt the undisputed amount set forth in any monthly billing submitted to District by Consultant, such unpaid balance will bear interest at the rate of 1% per month until the amount of such unpaid balance, plus interest thereon shall be paid in full.
 - c. Consultant shall maintain accounts and records of fees billed and expenses incurred as described in this Section 2 in accordance with generally accepted accounting principles, and agrees to make such accounts, records and supporting documentation available to the District and its authorized representatives for inspection at mutually convenient times, both during the Project work and for three (3) years following the final payment for services rendered or termination of the Consultant's services under this Agreement.
3. Schedule of Work. Consultant shall commence the performance of its services under this Agreement upon receipt of notice to proceed from the District to do so and shall provide the services in accordance with the schedule on **Exhibit A**, subject to delays for causes beyond the reasonable control of Consultant or as otherwise agreed to by District.

4. Subcontractors. Consultant shall not subcontract or assign any portion of the work covered by this Agreement without the prior written approval of the District, such consent to be given in District's sole discretion. Subject to the provisions of the preceding sentence, this Agreement shall be binding upon and inure to the benefit of the respective successors and assigns of the parties hereto.
5. Independent Contractor. Consultant is an independent contractor and not an employee of the District. Consultant shall be responsible in full for payment of its employees, including insurance and deductions, and for payment to any subcontractors. No personnel employed by Consultant shall acquire any rights or status regarding the District. All of the services required hereunder shall be performed by Consultant or under its direction, and all personnel engaged therein shall be fully qualified under applicable state, federal and local laws to undertake the work performed by them.
6. Changes in Scope of Services. The District may require changes or modifications in the scope of services to be performed under this Agreement. Any such changes or modifications shall be in writing and signed by the parties to this Agreement. The compensation for the changes or modifications, whether a decrease or increase, shall be on the same terms and conditions as set forth in Paragraph 2 above or in a manner otherwise mutually agreed to by the parties.
7. Insurance. Consultant shall maintain throughout the performance of this Agreement the following types and amounts of insurance.
 - a. Comprehensive vehicle liability insurance covering personal injury and property damage claims arising from the use of motor vehicles with combined single limits of Two Million Dollars (\$2,000,000).
 - b. Commercial General Liability Insurance written on an occurrence basis with limits no less than Two Million Dollars (\$2,000,000) combined single limit per occurrence and Two Million Dollars (\$2,000,000) aggregate for personal injury, bodily injury and property damage. Coverage shall include, but not be limited to: blanket contractual; products/completed operations; broad form property damage; explosion, collapse and underground (XCU) if applicable; and employer's liability; and
 - c. Professional liability insurance (Errors and Omissions insurance) with limits no less than Two Million Dollars (\$2,000,000).

The insurance policies shall: (1) state that coverage shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability; (2) be primary to any insurance maintained by the District, except as respects losses attributable to the sole negligence of the District; and (3) shall state that the District will be given 45 days prior written notice of any cancellation, suspension, non-renewal or material change in coverage.

The District shall be named as an additional insured on the Commercial General Liability Insurance policy with regard to work and services performed by or on behalf of the Consultant and a copy of the endorsement naming the District as an additional insured shall be attached to the Certificate of Insurance.

Before commencing work and services, Consultant shall provide to the District a Certificate of Insurance and required endorsements evidencing the insurance described above. The District reserves the right to request and receive a certified copy of all required insurance policies.

The above insurance limits do not constitute a limit on Consultant's liability to the District. Any payment of deductible or self-insurance retention shall be the sole responsibility of Consultant.

Consultant shall be solely responsible for the safety of its employees and subcontractors at the Project work site, and shall comply with all applicable federal, state and local statutes, regulations and ordinances regarding safety.

8. Indemnification. Consultant shall defend, indemnify and hold harmless the District, its elected and appointed officers, employees and agents and volunteers from and against all claims, injuries, damages, liabilities, losses of suits, including attorneys' fees and costs, arising out of or relating to Consultant's errors and omissions under this Agreement, except for injuries or damages caused by the sole negligence of the District. For the purposes of this indemnification, Consultant specifically and expressly waives any immunity granted under the Washington Industrial Insurance Act, Title 51 RCW. This waiver has been mutually negotiated and agreed to by the parties. If a court of competent jurisdiction determines that this contract is subject to RCW 4.24.115, Consultant's obligation to defend, indemnify and hold harmless the District, its officers, employees, agents and volunteers shall be limited to the extent of Consultant's negligence. The provisions of this Section shall survive the expiration of termination of this Agreement.
9. Ownership of Documents. Consultant agrees to return to District upon termination of this Agreement all documents, logs, drawings, photographs and other written or graphic material, however produced, received from District and used by Consultant in performance of its services hereunder. All documents, logs, drawings, specifications, designs, mylars, surveys, survey data, reports and other work product (collectively referred to as "Work Product") produced by Consultant in connection with the services rendered under this Agreement shall be owned by District upon payment to Consultant. District shall own all copyrights to such Work Product and Consultant agrees to assign all ownership rights to such Work Product to the District upon payment to Consultant. Reuse of any such Work Product by the District for other than a specific project or modification in use by the District of any of the Work Product without the Consultant's prior written approval shall be at the District's sole risk.
10. Standard of Care. Consultant warrants that its services shall be performed with the level of care, skill and competence of the consulting profession in accordance with the standard for professional services at the time the services are rendered.
11. Right of Entry. District shall provide for the right of entry of Consultant and its subcontractors and all necessary equipment in order to complete the services under this Agreement.

12. Compliance with Codes and Standards. Consultant's Professional Services shall be consistent with the standard of care and shall incorporate those publicly known federal, state and local laws, regulations, codes and standards that are applicable at the time Consultant renders its services.
13. Discovery of Hazardous Materials. The Parties recognize that unanticipated hazardous materials or suspected hazardous materials may be discovered on District's property or on property included as part of the site of work but not owned by District. The discovery of unanticipated hazardous materials may delay the Consultant's provision of the services required herein. In that event, the parties may extend the Contract Completion Date by mutual agreement.
14. Termination. This Agreement may be terminated by either Party upon five (5) days written notice for any reason. In the event of termination, Consultant shall be entitled to compensation for all services performed and costs incurred through and including the date of termination, except as to any disputed amounts.
15. General Provisions.
- a. Notices. Any notice or demand desired or required to be given under this Agreement shall be in writing and deemed given when personally delivered, sent by facsimile machine, or deposited in the United States Mail (or with an express courier), postage prepaid, sent certified or registered mail, and addressed to the parties as set forth below or to such other address as either Party shall have previously designated by such a notice:

<u>To the District:</u> Highline Water District 23828 30th Ave. S. Kent, WA 98032 Attn: General Manager	<u>To the Consultant:</u> RH2 Engineering, Inc. 22722 29th Drive SE, Suite 210 Bothell, WA 98021 Attn: Chris Roberts, P.E. Project Manager
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- b. Entire Agreement. This Agreement and its exhibit attachments contain the entire understanding between the District and Consultant relating to the consulting services which are the subject of this Agreement. This Agreement merges all prior discussions, negotiations, letters of understanding or other promises whether oral or in writing. Subsequent modification or amendment of this Agreement shall be in writing and signed by the parties to this Agreement.
- c. Waiver. Waiver of any breach or default hereunder shall not constitute a continuing waiver or a waiver of any subsequent breach either of the same or of another provision of this Agreement.
- d. No Third Party Rights. This Agreement is made only for the benefit of the District and Consultant and successors in interest and no third party or person shall have any rights hereunder whether by agency, as a third party beneficiary, or otherwise.

- e. Jurisdiction/Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Washington. Any suit to enforce or relating to this Agreement shall be brought in King County Superior Court, King County, Washington.
- f. Severability. If any term, covenant or condition of this Agreement is held by a court of competent jurisdiction to be invalid, the remainder of this Agreement shall remain in effect.
- g. Effective Date. The effective date of this Agreement shall be the date that this Agreement has been signed by authorized representatives of both Parties hereto ("Effective Date").

RH2 ENGINEERING, INC.
("CONSULTANT")

By _____
Typed Name Tony Pardi, P.E.
Its President, Principal in Charge
Dated _____

HIGHLINE WATER DISTRICT
("DISTRICT")

By _____
Typed Name Matt Everett
Its General Manager
Dated _____

EXHIBIT A
Scope of Work
Highline Water District
Water System Facility Arc Flash Analysis
September 2015

ATTACHMENT - 1

Background

The Highline Water District (District) has ten water system facilities with electrical distribution equipment that are lacking appropriate arc flash labeling as defined by the Washington Cities Electrical Code and National Fire Protection Association (NFPA) 70E: Electrical Safety in the Workplace. The District has requested the services of RH2 Engineering, Inc., (RH2) to perform an arc flash analysis where required by code for its water system facilities, and to provide arc flash hazard labeling for the electrical distribution equipment at each of the facilities. The arc flash analysis is comprised of three separate studies that are compiled to form the overall arc flash analysis and include: a short circuit study, a protective device coordination study, and an arc flash hazard study. The arc flash analysis shall be performed and labeling provided for the following facilities:

- Pump Station No. 1 (Mansion Hill)
- Pump Station No. 2 (Des Moines)
- Pump Station No. 3 (Normandy Park)
- Pump Station No. 4 (McMicken Heights)
- Pump Station No. 6 (Crestview)
- Pump Station No. 7 (North Hill)
- Angle Lake Well
- Des Moines Well and Treatment Plant
- Tyee Well and Treatment Plant
- District Headquarters

Additionally, the District has nine reservoirs with electrical distribution equipment that most likely will not require an arc flash analysis as the electrical distribution equipment meets the exception requirements of the Washington Cities Electrical Code. RH2 will visit these reservoirs during the site visit and data collection portion of the analysis to review whether each of these facilities meet the exception requirements. If any of the reservoirs do not meet the exception requirements, then a contract amendment will be necessary to include these facilities in the arc flash analysis.

Task 1 – Arc Flash Analysis

Objective: Perform electrical short circuit, protective device coordination, and arc flash analysis for the electrical distribution equipment at the facilities listed in the background section. Prepare a short circuit, protective device coordination, and arc flash analysis report which summarizes the calculations and recommendations for protective device settings and Personal Protective Equipment (PPE) requirements. Produce arc flash hazard labels and install the labels on the front of the electrical distribution equipment.

Approach:

- 1.1 Perform site visits and collect information regarding the electrical distribution equipment and overcurrent protection devices. Review electrical as-built drawings and Operations & Maintenance (O&M) manuals. Coordinate with the electrical utility, Puget Sound Energy (PSE), to obtain PSE's transformer data regarding the installed utility transformers and substation data. Coordinate with generator manufacturers for facilities where generators are installed to obtain generator design data. RH2 will rely on the accuracy and completeness of the data provided by others for this work.
- 1.2 Model each facilities electrical distribution system, based on the data collected in subtask 1.1 using SKM Power Tools software, and perform short circuit, protective device coordination, and arc flash calculations.
- 1.3 Prepare an arc flash analysis report which summarizes the results of the short circuit, protective device coordination, and arc flash calculations for each facility. The report shall include recommended overcurrent device settings where adjustable overcurrent devices are installed.
- 1.4 Produce arc flash hazard warning labeling, for installation by District staff, which shall meet the requirements of NFPA 70E. Coordinate with District staff or District's electrician to adjust overcurrent device settings, per the recommendations in the report.

Provided by District:

- Access to facilities to review and collect data regarding the electrical distribution equipment. Electrical equipment will need to be temporarily de-energized to obtain model numbers off of the overcurrent protection devices.
- Electrical as-built drawings and O&M manuals for each of the facilities, if available.
- Installation of arc flash hazard labeling provided by RH2.
- Either qualified District staff or a licensed electrician to adjust the overcurrent device settings at the facilities based on the recommendations in the arc flash analysis report.

RH2 Deliverables:

- Arc flash analysis report in electronic PDF.
- Arc flash hazard labeling for installation on the front of the electrical equipment at each facility.

Project Schedule

RH2 shall begin the data collection subtask 1.1 as soon as contract authorization is received. The data collection, software modeling, report, and arc flash labeling will take approximately 45 to 60 calendar days to complete depending on how quickly data is received from PSE.

EXHIBIT B

Highline Water District

Water System Facility

Arc Flash Analysis

Estimate of Time and Expense

	Description	Total Hours	Total Labor	Total Expense	Total Cost
Task 1	Arc Flash Analysis				
1.1	Perform site visits, data collection, and utility coordination	74	\$ 10,956	\$ 418	\$ 11,374
1.2	Perform arc flash software modeling and calculations of electrical distribution systems	104	\$ 16,178	\$ 404	\$ 16,582
1.3	Prepare arc flash analysis report	46	\$ 7,196	\$ 328	\$ 7,524
1.4	Produce arc flash labeling	10	\$ 1,288	\$ 277	\$ 1,565
	Subtotal	234	\$ 35,618	\$ 1,428	\$ 37,046
PROJECT TOTAL		234	\$ 35,618	\$ 1,428	\$ 37,046

EXHIBIT C
RH2 ENGINEERING, INC.
SCHEDULE OF RATES AND CHARGES

2015 HOURLY RATES

CLASSIFICATION		RATE	CLASSIFICATION		RATE
Professional	IX	\$208.00	Technician	IV	\$134.00
Professional	VIII	\$208.00	Technician	III	\$126.00
Professional	VII	\$199.00	Technician	II	\$94.00
			Technician	I	\$89.00
Professional	VI	\$184.00			
Professional	V	\$176.00	Administrative	V	\$125.00
Professional	IV	\$166.00	Administrative	IV	\$105.00
			Administrative	III	\$90.00
Professional	III	\$155.00	Administrative	II	\$75.00
Professional	II	\$146.00	Administrative	I	\$63.00
Professional	I	\$134.00			

IN-HOUSE SERVICES

In-house copies (each)	8.5" X 11"	\$0.09	CAD Plots	Large	\$25.00
In-house copies (each)	8.5" X 14"	\$0.14	CAD Plots	Full Size	\$10.00
In-house copies (each)	11" X 17"	\$0.20	CAD Plots	Half Size	\$2.50
In-house copies (color) (each)	8.5" X 11"	\$0.90	CAD System	Per Hour	\$27.50
In-house copies (color) (each)	8.5" X 14"	\$1.20	GIS System	Per Hour	\$27.50
In-house copies (color) (each)	11 X 17"	\$2.00	Technology Charge	2.5% of Direct Labor	
			Mileage	Current IRS Rate	

OUTSIDE SERVICES

Outside direct costs for permit fees, reports, maps, data, reprographics, couriers, postage, and non-mileage related travel expenses that are necessary for the execution of the project and are not specifically identified elsewhere in the contract will be invoiced at cost.

All Subconsultant services are billed at cost plus 15%

CHANGES IN RATES

Rates listed here are adjusted annually. The current schedule of rates and charges is used for billing purposes. Payment for work accomplished shall be based on the hourly rates and expenses in effect at the time of billing as stated in this Exhibit.

Agenda Item No.: 5.1
Agenda Date: 9/29/2015
Reviewed By: [Signature]

SUBJECT: Resolution Authorizing Contract #15-50-12 with RH2 Engineering, Inc., for Water System Facility Arc Flash Analysis

CATEGORY	
<i>Executive</i>	<input type="checkbox"/>
<i>Administrative</i>	<input type="checkbox"/>
<i>Engineering/Operations</i>	<input checked="" type="checkbox"/>

FINANCIAL			
<i>Expenditures?</i>	Yes	<input checked="" type="checkbox"/>	No <input type="checkbox"/> N/A <input type="checkbox"/>
<i>Budgeted?</i>	Yes	<input checked="" type="checkbox"/>	No <input type="checkbox"/>
<i>Amount:</i> \$ <u>37,046.00</u>			

ATTACHMENTS:

1. Resolution 15-9-29A
2. Attachment 1 – Contract 15-50-12

COMMENTS:

The District selected RH2 Engineering, Inc., to provide a scope of work for a Water System Facility Arc Flash Analysis

The District's Engineer and General Manager have reviewed the September 2015 Scope of Work from RH2 Engineering, Inc. and recommend approval of this resolution.