

RESOLUTION NO. 18-1266

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BLACK DIAMOND, KING COUNTY, WASHINGTON AUTHORIZING THE MAYOR TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH RH2 ENGINEERING, INC. FOR THE SCADA/TELEMETRY DESIGN AND INSTALLATION FOR THE CITY'S WATER AND SEWER INFRASTRUCTURE**

**WHEREAS**, the City does not have the staff expertise or resources to design and install SCADA/Telemetry upgrades for the City's water and sewer infrastructure; and

**WHEREAS**, the City advertised for civil engineering services and received Statements of Qualifications from interested consultants on January 9, 2018; and

**WHEREAS**, RH2 Engineering, Inc. is familiar with the City's water and sewer systems, as well as the SCADA/Telemetry components of these systems; and

**WHEREAS**, Evolution Controls is subcontracting with RH2 and has provided maintenance on our existing SCADA system and has intimate knowledge with it's features and operation; and

**WHEREAS**, City staff recommends authorizing a professional services agreement with RH2 Engineering, Inc. for this project;

**NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BLACK DIAMOND, WASHINGTON, DOES RESOLVE AS FOLLOWS:**

**Section 1.** The Mayor is hereby authorized to execute a professional services agreement with RH2 Engineering, Inc. for the SCADA/Telemetry design and installation for the City's water and sewer infrastructure.

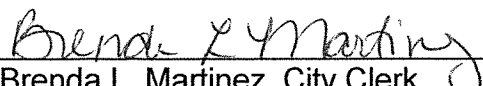
**Section 2.** Appropriate \$77,323 from Water and Sewer for this project.

**PASSED BY THE CITY COUNCIL OF THE CITY OF BLACK DIAMOND, WASHINGTON, AT A REGULAR MEETING THEREOF, THIS 6TH DAY OF SEPTEMBER 2018.**

CITY OF BLACK DIAMOND:

  
\_\_\_\_\_  
Carol Benson, Mayor

Attest:

  
\_\_\_\_\_  
Brenda L. Martinez, City Clerk

**CITY OF BLACK DIAMOND PROFESSIONAL SERVICES AGREEMENT  
FOR CIVIL ENGINEERING SERVICES**

This Professional Services Agreement ("Agreement") is entered into by and between:

CITY OF BLACK DIAMOND, WASHINGTON (the "City")

Physical Address: 24301 Roberts Drive

Mailing Address: PO Box 599

Black Diamond, WA 98010

Contact: Seth Boettcher

Phone: 360-886-5700

Fax : 360-886-2592

and

CONSULTANT ("Consultant")

Physical Address: 950 Pacific Avenue, Suite 1220

Tacoma, WA 98402

Mailing Address: Same as above

Contact: Geoffrey G. Dillard, PE

Phone: 253-327-1522

Fax: 425-951-5401

Tax Id No.: 91-1108443

for non-exclusive professional civil engineering services in connection with the following project:

City of Black Diamond Phase 2, Part A – Water System PLC Hardware and Software Upgrade.

WHEREAS, the City has conducted an RFQ and qualifications-based selection process for civil engineering services, and based on that process the City desires to work with the Consultant on City matters under the terms and conditions set forth herein; and

WHEREAS, the Consultant has agreed to provide the services described in Exhibit A (scope of work) under the terms and conditions set forth herein;

NOW, THEREFORE, in consideration of the mutual promises set forth herein, it is agreed by and between the parties as follows:

**TERMS AND CONDITIONS**

**1. Services by Consultant**

1.1 Consultant has been retained by the City to provide professional civil engineering services as generally described in the Scope of Work attached to this Agreement as Exhibit "A". The services performed by Consultant shall not exceed the Scope of Work nor shall the Consultant be entitled to a greater amount of compensation as that provided in this Agreement without the prior written authorization of the City.

1.2 The City may from time to time require changes or modifications in the Scope of Work. Such changes, including any decrease or increase in the amount of compensation, shall be agreed to by the parties and incorporated in written amendments to this Agreement.

1.3 Consultant represents and warrants that it, its staff to be assigned to the Project, and its subconsultants and their staff have the requisite training, skill, and experience necessary to provide the services required by this Agreement and are appropriately accredited and licensed by all applicable agencies and governmental entities. Services provided by Consultant and its subconsultants under this Agreement will be performed in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing in similar circumstances.

## 2. Schedule of Work

2.1 The City and the Consultant agree that work will begin on the tasks described in Exhibit A upon execution of this Agreement. The goal of this design effort will be to have tasks outlined in Exhibit A completed by December 31, 2019.

2.2 Additional time may be granted by the City for unforeseen delays or for extra work requested by the City.

## 3. Compensation

3.1 Rates. Compensation for the services provided according to the tasks outlined in Exhibit "A" shall be on a time and materials basis according to the list of billing rates and reimbursable expenses attached hereto as Exhibit "C" and shall not exceed Thirty-five thousand, two-hundred and seventy-five DOLLARS (\$35,275). This amount shall not be exceeded without the prior written authorization of the City in the form of a negotiated and executed Agreement amendment.

## 4. Payment

4.1 Consultant shall maintain time and expense records and provide them to the City monthly, along with monthly invoices, in a format acceptable to the City for work performed to the date of the invoice.

4.2 All invoices shall be paid by City warrant within sixty (60) days of actual receipt by the City of an invoice conforming in all respects to the terms of this Agreement.

4.3 Consultant shall keep cost records and accounts pertaining to this Agreement available for inspection by City representatives for three (3) years after final payment unless a longer period is required by a third-party agreement. Consultant shall make copies available to the City on request.

4.4 If the services rendered do not meet the requirements of the Agreement, Consultant will correct or modify the work to comply with the Agreement. The City may withhold payment for such work until the work meets the requirements of the Agreement.

**5. Discrimination and Compliance with Laws**

5.1 Consultant agrees not to discriminate against any employee or applicant for employment or any other person in the performance of this Agreement because of race, creed, color, national origin, marital status, sex, age, disability, or other circumstance prohibited by federal, state, or local law or ordinance, except for a bona fide occupational qualification.

5.2 Consultant and its subconsultants shall comply with all federal, state, and local laws and ordinances applicable to the work to be done under this Agreement.

5.3 Any violation of this Section 5 shall be a material breach of this Agreement and grounds for immediate cancellation, termination, or suspension of the Agreement by the City, in whole or in part, and may result in Consultant's ineligibility to conduct further work for the City.

**6. Duration, Suspension, and Termination of Agreement**

6.1 This Agreement is an "Open End" Agreement that is signed by both parties, unless the City provides written notice of earlier termination pursuant to this Section 6, below.

6.2 The City reserves the right to terminate or suspend this Agreement at any time, without cause, by giving Consultant notice in writing no fewer than ten (10) days prior to the stated termination or suspension date. In the event of termination, all finished or unfinished reports, or other material prepared by Consultant pursuant to this Agreement, shall be submitted to the City. In the event the City terminates this Agreement prior to completion without cause, Consultant may complete such analyses and records as may be necessary to place its files in order. Consultant shall be entitled to compensation for any satisfactory work completed on the Project prior to the date of suspension or termination.

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**7. Standard of Care**

7.1 Consultant represents and warrants that it has the requisite training, skill, and experience necessary to provide the services under this Agreement and is appropriately accredited and licensed by all applicable agencies and governmental entities. Services Consultant provides under this Agreement will be performed in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing in similar

circumstances. Consultant understands and agrees that the services rendered pursuant to this Agreement are for the sole exclusive benefit of the City and that no third party shall have authority to authorize, approve, direct or control any of the services rendered to the City pursuant to this Agreement.

## **8. Ownership of Work Product**

8.1 Ownership of the originals of any reports, data, studies, surveys, charts, maps, drawings, specifications, figures, photographs, memoranda, and any other documents which are developed, compiled, or produced as a result of this Agreement, whether or not completed, shall be vested in the City and shall be submitted to the City upon termination of this Agreement. Consultant assigns to the City all of Consultant's right, title, and interest in any such documents. Any reuse of these materials by the City for projects or purposes other than those that fall within the scope of this Agreement and the Project to which it relates, without written concurrence by Consultant, will be at the sole risk of the City.

8.2 The City acknowledges Consultant's documents as instruments of professional service. Nevertheless, the documents prepared under this Agreement shall become the property of the City upon completion of the work. The City agrees to hold harmless and indemnify Consultant against all claims made against Consultant for damage or injury, including defense costs, arising out of the City's reuse of such documents beyond the use for which they were originally intended without the written authorization of Consultant.

8.3 Methodology, software, logic, and systems developed under this Agreement are the property of Consultant and the City, and may be used as either Consultant or the City see fit, including the right to revise or publish the same without limitation.

## **9. Indemnification/Hold Harmless**

9.1 Consultant shall defend, indemnify, and hold the City, its officers, officials, employees, volunteers, and agents harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising directly or indirectly out of or resulting from the acts, errors, or omissions of Consultant or its subconsultants in performance of this Agreement, except for injuries and damages caused by the sole negligence of the City. PROVIDED, HOWEVER, THAT IF ANY SUCH CLAIMS, INJURIES, DAMAGES, LOSSES OR SUITS RESULT FROM THE CONCURRENT NEGLIGENCE OF CONSULTANT AND THE CITY, IT IS EXPRESSLY AGREED THAT CONSULTANT'S OBLIGATIONS AND INDEMNITY UNDER THIS PARAGRAPH SHALL BE EFFECTIVE ONLY TO THE EXTENT OF CONSULTANT'S NEGLIGENCE.

9.2 The City's inspection or acceptance of any of the Consultant's work when completed shall not be grounds to avoid any of these covenants of indemnification.

9.3 IT IS FURTHER SPECIFICALLY AND EXPRESSLY UNDERSTOOD THAT THE INDEMNIFICATION PROVIDED HEREIN CONSTITUTES THE CONSULTANT'S WAIVER OF IMMUNITY UNDER INDUSTRIAL INSURANCE, TITLE 51 RCW, SOLELY FOR THE PURPOSES OF THIS INDEMNIFICATION. THE PARTIES FURTHER

ACKNOWLEDGE THAT THEY HAVE MUTUALLY NEGOTIATED THIS WAIVER. THE CONSULTANT'S WAIVER OF IMMUNITY UNDER THE PROVISIONS OF THIS SECTION DOES NOT INCLUDE, OR EXTEND TO, ANY CLAIMS BY THE CONSULTANT'S EMPLOYEES DIRECTLY AGAINST THE CONSULTANT.

9.4 The provisions of this Section 9 shall survive the expiration or termination of this Agreement.

## 10. Insurance

10.1 Consultant shall procure and maintain for the duration of the Agreement, and shall provide proof satisfactory to the City that such insurance is procured and maintained by each of its subconsultants, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by Consultant, its agents, representatives, or employees.

10.2 Consultant shall procure and maintain the following types and amounts of insurance:

a. Automobile Liability insurance covering all owned, non-owned, hired, and leased vehicles. Coverage shall be written on Insurance Services Office (ISO) form CA 00 01 or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage. This insurance shall have a minimum combined single limit for bodily injury and property damage of \$1,000,000 per accident.

b. Commercial General Liability insurance shall be written on ISO occurrence form CG 00 01 or a substitute form providing equivalent liability coverage and shall cover liability arising from premises, operations, independent contractors, personal injury, and advertising injury. This insurance shall be written with limits no less than \$1,000,000 each occurrence, \$2,000,000 general aggregate.

c. Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

d. Professional Liability insurance appropriate to Consultant's profession, with limits no less than \$1,000,000 per claim and \$1,000,000 policy aggregate limit.

10.3 The Automobile Liability, Commercial General Liability, and Professional Liability insurance policies are to contain, or be endorsed to contain, the following provisions:

a. Consultant's insurance coverage shall be primary insurance vis-à-vis the City. Any insurance, self-insurance, or insurance pool coverage maintained by the City shall be excess over Consultant's insurance and shall not contribute with it.

b. Consultant's insurance shall be endorsed to state that coverage shall not be cancelled, except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the City.

10.4 The City shall be named as an additional insured under Consultant's Automobile Liability and Commercial General Liability insurance policies with respect to the work to be performed for the City pursuant to this Agreement.

10.5 Insurance shall be placed with insurers with a current A.M. Best rating of not less than A:VII.

10.6 Declaration pages issued by the insurance carriers for the policies mentioned in this Section 10 showing such insurance to be in force shall be filed with the City not less than ten (10) days following both parties signing this Agreement and before commencement of the work. In addition, the City may request, in writing, a full copy from Consultant of any insurance policy Consultant must procure and maintain pursuant to this Agreement and Consultant must provide such copy to the City within ten (10) days of Consultant's receipt of the City's request. Any policy or required insurance written on a claims-made basis shall provide coverage as to all claims arising out of the services performed under this Agreement and for three (3) years following completion of the services to be performed. It shall be a material breach of this Agreement for Consultant to fail to procure and maintain the insurance required by this Section 10 or to provide the proof of such insurance to the City as provided for in this Agreement.

#### **11. Assigning or Subcontracting**

11.1 Consultant shall not assign, transfer, subcontract, or encumber any rights, duties, or interests accruing from this Agreement without the express prior written consent of the City, which consent may be withheld at the sole discretion of the City.

#### **12. Independent Contractor**

12.1 Consultant and its subconsultants are, and shall be at all times during the term of this Agreement, independent contractors. As the Consultant is customarily engaged in an independently established trade which encompasses the specific service provided to the City hereunder, no agent, employee, representative or sub-consultant of the Consultant shall be or shall be deemed to be the employee, agent, representative or sub-consultant of the City. In the performance of the work, the Consultant is an independent contractor with the ability to control and direct the performance and details of the work, the City being interested only in the results obtained under this Agreement. None of the benefits provided by the City to its employees including, but not limited to, compensation, insurance, and unemployment insurance are available from the City to the employees, agents, representatives, or sub-consultants of the Consultant. The Consultant will be solely and entirely responsible for its acts and for the acts of its agents, employees, representatives and sub-consultants during the performance of this Agreement. The City may, during the term of this Agreement, engage other independent contractors to perform the same or similar work that the Consultant performs hereunder.

12.2 The Consultant shall take all precautions necessary and shall be responsible for the safety of its employees, agents, and sub-consultants in the performance of the work hereunder and shall utilize all protection necessary for that purpose. All work shall be done at the Consultant's own risk, and the Consultant shall be responsible for any loss of or damage to materials, tools, or other articles used or held by the Consultant for use in connection with the work.





work must meet the approval of the City and shall be subject to the City's general right of inspection to secure the satisfactory completion thereof. The Consultant agrees to comply with all federal, state, and municipal laws, rules, and regulations that are now effective or become applicable within the terms of this Agreement to the Consultant's business, equipment, and personnel engaged in operations covered by this Agreement or accruing out of the performance of such operations.

16.3 The failure of the City to insist upon strict performance of any of the covenants and agreements contained herein, or to exercise any option herein conferred in one or more instances, shall not be construed to be a waiver or relinquishment of said covenants, agreements, or options and the same shall be and remain in full force and effect.

#### **17. Extent of Agreement/Modification**

17.1 This Agreement, together with any attachments or addenda, represents the entire and integrated Agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement may only be amended, modified, or added to by written instrument properly signed by both parties. The parties acknowledge the general contract rule that a clause in a contract, such as this one, prohibiting oral modifications is itself generally subject to oral modification. However, in order to ensure certainty as to the terms and conditions of this Agreement, the parties waive this general contract rule.

#### **18. Conflict of Interest; Non-Collusion**

18.1 No officer, employee or agent of the City, nor any member of the immediate family of any such officer, employee or agent, shall have any personal financial interest, direct or indirect, in this Contract, either in fact or in appearance. The Consultant shall comply with all federal, state, and City conflict of interest laws, statutes and regulations. The Consultant represents that the Consultant presently has no interest and shall not acquire any interest, direct or indirect, in the project to which this Contract pertains which would conflict in any manner or degree with the performance of the Consultant's services and obligations hereunder. The contractor's officers, employees or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from the project applicant or any affiliate or agent of the project applicant.

18.2 The Consultant warrants and represents that the Consultant has not, nor has any other member, employee, representative, agent or officer of the Consultant, entered into or offered to enter into any combination, collusion or agreement with any person or entity to receive or pay, and that he has not received or paid, any sum of money or other consideration for the execution of this Contract other than the consideration offered pursuant to the terms and conditions hereof.

**AGREED TO BY:**

CITY OF BLACK DIAMOND

By: *Carol Benson*  
Carol Benson  
Its: Mayor

Date: 9/7/18

CONSULTANT

By: *Geoffrey G. Dillard*  
Geoffrey G. Dillard, PE  
Its: Director

Date: August 27, 2018

Attest:

By: *Brenda L. Martinez*  
Brenda L. Martinez  
City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
David A. Linehan  
City Attorney

**EXHIBIT A**  
**Scope of Work**  
**City of Black Diamond**  
**Public Works Phase 2, Part A**  
**Water System PLC Hardware and Software Upgrade**  
May 2018

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## **Background**

The existing City of Black Diamond (City) supervisory control and data acquisition (SCADA) and telemetry system developed in 2005 to monitor and control the Lower Reservoir/Booster, Upper Reservoir, and eventually the Springs Pump Station is out of date and in need of modernization efforts. Any additions to the hardware or software would be considered unprofessional and would not be supported by any legitimate entity with experience in the local municipal water and wastewater community that specializes in SCADA, telemetry, and general instrumentation and controls (I&C) automation systems.

The City has retained RH2 Engineering, Inc., (RH2) to provide both programmable logic controller (PLC) hardware and software upgrades.

## **Task 1 – Project Management Services**

**Objective:** Provide project management services for PLC hardware and software upgrades.

**Approach:**

- 1.1 Provide project management services for RH2's subconsultant, Evolution Controls, during performance of PLC and operator interface terminal (OIT) upgrades for the Lower Reservoir/Booster and Upper Reservoir.

**Assumptions:**

- *RH2 will subcontract with Evolution Controls to perform Task 1 subtasks (Exhibit D).*
- *RH2 will perform the services described up to the amounts included in the attached Fee Estimate. If additional effort is needed, that extra work will be mutually determined by the City and RH2.*

**EXHIBIT B**

City of Black Diamond

Public Works Phase 2, Part A

Water System PLC Hardware and Software Upgrade

Fee Estimate

Description	Total Hours	Total Labor	Total Subconsultant	Total Expense	Total Cost
Classification					
Task 1 Project Management Services	14	\$ 2,989	\$ 31,790	\$ 496	\$ 35,275
<b>PROJECT TOTAL</b>	<b>14</b>	<b>\$ 2,989</b>	<b>\$ 31,790</b>	<b>\$ 496</b>	<b>\$ 35,275</b>

**EXHIBIT C**  
**RH2 ENGINEERING, INC.**  
**2018 SCHEDULE OF RATES AND CHARGES**

RATE LIST	RATE	UNIT
Professional I	\$138	\$/hr
Professional II	\$153	\$/hr
Professional III	\$164	\$/hr
Professional IV	\$175	\$/hr
Professional V	\$191	\$/hr
Professional VI	\$203	\$/hr
Professional VII	\$219	\$/hr
Professional VIII	\$230	\$/hr
Professional IX	\$230	\$/hr
Technician I	\$100	\$/hr
Technician II	\$107	\$/hr
Technician III	\$132	\$/hr
Technician IV	\$140	\$/hr
Administrative I	\$69	\$/hr
Administrative II	\$81	\$/hr
Administrative III	\$96	\$/hr
Administrative IV	\$114	\$/hr
Administrative V	\$131	\$/hr
CAD/GIS System	\$27.50	\$/hr
CAD Plots - Half Size	\$2.50	price per plot
CAD Plots - Full Size	\$10.00	price per plot
CAD Plots - Large	\$25.00	price per plot
Copies (bw) 8.5" X 11"	\$0.09	price per copy
Copies (bw) 8.5" X 14"	\$0.14	price per copy
Copies (bw) 11" X 17"	\$0.20	price per copy
Copies (color) 8.5" X 11"	\$0.90	price per copy
Copies (color) 8.5" X 14"	\$1.20	price per copy
Copies (color) 11" X 17"	\$2.00	price per copy
Technology Charge	2.50%	% of Direct Labor
Mileage	\$0.545	price per mile (or Current IRS Rate)
Subconsultants	10%	Sales Tax
Outside Services	at cost	

Rates listed are adjusted annually.

Evolution Controls, LLC

Office: 425-359-5322  
Mobile: 425-359-5322

AUTOMATION DESIGN, FABRICATION, PROGRAMMING & TESTING

Snohomish, WA  
AI@EvolutionControls.net

By: Al Friedli  
May 21<sup>st</sup>, 2018

RH2 Engineering

Attention: Geoff Dillard

Subject: City of Black Diamond Upgrade 2018

PHASE 2: PLC Hardware & Software Upgrade  
PART A: (Hardware and Software Packages)

Dear Geoff,

In response to your request for Evolution Controls to upgrade the City of Black Diamond water system MTU PLC Hardware and Software, I have prepared the following proposal for your review.

**OVERVIEW**

Below is an overview of the required MATERIALS associated with the scope of this project. Component specifics are provided in the SCOPE section later in this proposal along with EXCLUSIONS and COMPENSATION.

The existing City of Black Diamond SCADA & Telemetry system developed in 2005 to monitor and control the Lower Reservoir/Booster system, Upper Reservoir and eventually the Springs Pump Station is currently out of date and in need of modernization efforts. Any additions to the hardware or software would be considered unprofessional and would not be supported by any legitimate entity with experience in the local Municipal Water & Wastewater community that specializes in SCADA, Telemetry, and general I&C (instrumentation & controls) automation systems.

**SCOPE**

The below scope of work will provide the City of Black Diamond with the latest and greatest versions of both PLC hardware and software to ensure industry leading longevity, reliability and support.

**TASK 1. HARDWARE & SOFTWARE:**

**1.1 PLC & OIT Upgrade for Lower Res (MCP) and Upper Res (RTU-1)**

- A. Provide new PLC's for replacement of existing outdated and unsupported models.
  - 1. Lower Reservoir Main Control Panel (MCP):
    - a) Provide Compact Logix L3 processor and required I/O modules as necessary for replacement of existing Allen Bradley SLC 5/05 and associated I/O Modules.
  - 2. Upper Reservoir (RTU-1)
    - a) Provide Compact Logix L30 PLC for replacement of existing Micrologix1500 PLC.
    - b) Utilize compatible existing I/O modules.
    - c) Provide ASCII module required to replace Micrologix1500 Communication Channel 0 to maintain existing DF1/RS232 Communications via leased line modem to springs pump station.
    - d) Provide new Panelview 800 to replace existing unsupported Panelview300.
  
- B. Provide Studio 5000 PLC programming software for new Compact Logix PLC's licensed and registered to the City of Black Diamond with one year support.

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circumstances. Consultant understands and agrees that the services rendered pursuant to this Agreement are for the sole exclusive benefit of the City and that no third party shall have authority to authorize, approve, direct or control any of the services rendered to the City pursuant to this Agreement.

## **8. Ownership of Work Product**

8.1 Ownership of the originals of any reports, data, studies, surveys, charts, maps, drawings, specifications, figures, photographs, memoranda, and any other documents which are developed, compiled, or produced as a result of this Agreement, whether or not completed, shall be vested in the City and shall be submitted to the City upon termination of this Agreement. Consultant assigns to the City all of Consultant's right, title, and interest in any such documents. Any reuse of these materials by the City for projects or purposes other than those that fall within the scope of this Agreement and the Project to which it relates, without written concurrence by Consultant, will be at the sole risk of the City.

8.2 The City acknowledges Consultant's documents as instruments of professional service. Nevertheless, the documents prepared under this Agreement shall become the property of the City upon completion of the work. The City agrees to hold harmless and indemnify Consultant against all claims made against Consultant for damage or injury, including defense costs, arising out of the City's reuse of such documents beyond the use for which they were originally intended without the written authorization of Consultant.

8.3 Methodology, software, logic, and systems developed under this Agreement are the property of Consultant and the City, and may be used as either Consultant or the City see fit, including the right to revise or publish the same without limitation.

## **9. Indemnification/Hold Harmless**

9.1 Consultant shall defend, indemnify, and hold the City, its officers, officials, employees, volunteers, and agents harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising directly or indirectly out of or resulting from the acts, errors, or omissions of Consultant or its subconsultants in performance of this Agreement, except for injuries and damages caused by the sole negligence of the City. PROVIDED, HOWEVER, THAT IF ANY SUCH CLAIMS, INJURIES, DAMAGES, LOSSES OR SUITS RESULT FROM THE CONCURRENT NEGLIGENCE OF CONSULTANT AND THE CITY, IT IS EXPRESSLY AGREED THAT CONSULTANT'S OBLIGATIONS AND INDEMNITY UNDER THIS PARAGRAPH SHALL BE EFFECTIVE ONLY TO THE EXTENT OF CONSULTANT'S NEGLIGENCE.

9.2 The City's inspection or acceptance of any of the Consultant's work when completed shall not be grounds to avoid any of these covenants of indemnification.

9.3 IT IS FURTHER SPECIFICALLY AND EXPRESSLY UNDERSTOOD THAT THE INDEMNIFICATION PROVIDED HEREIN CONSTITUTES THE CONSULTANT'S WAIVER OF IMMUNITY UNDER INDUSTRIAL INSURANCE, TITLE 51 RCW, SOLELY FOR THE PURPOSES OF THIS INDEMNIFICATION. THE PARTIES FURTHER

ACKNOWLEDGE THAT THEY HAVE MUTUALLY NEGOTIATED THIS WAIVER. THE CONSULTANT'S WAIVER OF IMMUNITY UNDER THE PROVISIONS OF THIS SECTION DOES NOT INCLUDE, OR EXTEND TO, ANY CLAIMS BY THE CONSULTANT'S EMPLOYEES DIRECTLY AGAINST THE CONSULTANT.

9.4 The provisions of this Section 9 shall survive the expiration or termination of this Agreement.

## 10. Insurance

10.1 Consultant shall procure and maintain for the duration of the Agreement, and shall provide proof satisfactory to the City that such insurance is procured and maintained by each of its subconsultants, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by Consultant, its agents, representatives, or employees.

10.2 Consultant shall procure and maintain the following types and amounts of insurance:

a. Automobile Liability insurance covering all owned, non-owned, hired, and leased vehicles. Coverage shall be written on Insurance Services Office (ISO) form CA 00 01 or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage. This insurance shall have a minimum combined single limit for bodily injury and property damage of \$1,000,000 per accident.

b. Commercial General Liability insurance shall be written on ISO occurrence form CG 00 01 or a substitute form providing equivalent liability coverage and shall cover liability arising from premises, operations, independent contractors, personal injury, and advertising injury. This insurance shall be written with limits no less than \$1,000,000 each occurrence, \$2,000,000 general aggregate.

c. Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

d. Professional Liability insurance appropriate to Consultant's profession, with limits no less than \$1,000,000 per claim and \$1,000,000 policy aggregate limit.

10.3 The Automobile Liability, Commercial General Liability, and Professional Liability insurance policies are to contain, or be endorsed to contain, the following provisions:

a. Consultant's insurance coverage shall be primary insurance vis-à-vis the City. Any insurance, self-insurance, or insurance pool coverage maintained by the City shall be excess over Consultant's insurance and shall not contribute with it.

b. Consultant's insurance shall be endorsed to state that coverage shall not be cancelled, except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the City.

10.4 The City shall be named as an additional insured under Consultant's Automobile Liability and Commercial General Liability insurance policies with respect to the work to be performed for the City pursuant to this Agreement.

10.5 Insurance shall be placed with insurers with a current A.M. Best rating of not less than A:VII.

10.6 Declaration pages issued by the insurance carriers for the policies mentioned in this Section 10 showing such insurance to be in force shall be filed with the City not less than ten (10) days following both parties signing this Agreement and before commencement of the work. In addition, the City may request, in writing, a full copy from Consultant of any insurance policy Consultant must procure and maintain pursuant to this Agreement and Consultant must provide such copy to the City within ten (10) days of Consultant's receipt of the City's request. Any policy or required insurance written on a claims-made basis shall provide coverage as to all claims arising out of the services performed under this Agreement and for three (3) years following completion of the services to be performed. It shall be a material breach of this Agreement for Consultant to fail to procure and maintain the insurance required by this Section 10 or to provide the proof of such insurance to the City as provided for in this Agreement.

**11. Assigning or Subcontracting**

11.1 Consultant shall not assign, transfer, subcontract, or encumber any rights, duties, or interests accruing from this Agreement without the express prior written consent of the City, which consent may be withheld at the sole discretion of the City.

**12. Independent Contractor**

12.1 Consultant and its subconsultants are, and shall be at all times during the term of this Agreement, independent contractors. As the Consultant is customarily engaged in an independently established trade which encompasses the specific service provided to the City hereunder, no agent, employee, representative or sub-consultant of the Consultant shall be or shall be deemed to be the employee, agent, representative or sub-consultant of the City. In the performance of the work, the Consultant is an independent contractor with the ability to control and direct the performance and details of the work, the City being interested only in the results obtained under this Agreement. None of the benefits provided by the City to its employees including, but not limited to, compensation, insurance, and unemployment insurance are available from the City to the employees, agents, representatives, or sub-consultants of the Consultant. The Consultant will be solely and entirely responsible for its acts and for the acts of its agents, employees, representatives and sub-consultants during the performance of this Agreement. The City may, during the term of this Agreement, engage other independent contractors to perform the same or similar work that the Consultant performs hereunder.

12.2 The Consultant shall take all precautions necessary and shall be responsible for the safety of its employees, agents, and sub-consultants in the performance of the work hereunder and shall utilize all protection necessary for that purpose. All work shall be done at the Consultant's own risk, and the Consultant shall be responsible for any loss of or damage to materials, tools, or other articles used or held by the Consultant for use in connection with the work.



work must meet the approval of the City and shall be subject to the City's general right of inspection to secure the satisfactory completion thereof. The Consultant agrees to comply with all federal, state, and municipal laws, rules, and regulations that are now effective or become applicable within the terms of this Agreement to the Consultant's business, equipment, and personnel engaged in operations covered by this Agreement or accruing out of the performance of such operations.

16.3 The failure of the City to insist upon strict performance of any of the covenants and agreements contained herein, or to exercise any option herein conferred in one or more instances, shall not be construed to be a waiver or relinquishment of said covenants, agreements, or options and the same shall be and remain in full force and effect.

#### **17. Extent of Agreement/Modification**

17.1 This Agreement, together with any attachments or addenda, represents the entire and integrated Agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement may only be amended, modified, or added to by written instrument properly signed by both parties. The parties acknowledge the general contract rule that a clause in a contract, such as this one, prohibiting oral modifications is itself generally subject to oral modification. However, in order to ensure certainty as to the terms and conditions of this Agreement, the parties waive this general contract rule.

#### **18. Conflict of Interest; Non-Collusion**

18.1 No officer, employee or agent of the City, nor any member of the immediate family of any such officer, employee or agent, shall have any personal financial interest, direct or indirect, in this Contract, either in fact or in appearance. The Consultant shall comply with all federal, state, and City conflict of interest laws, statutes and regulations. The Consultant represents that the Consultant presently has no interest and shall not acquire any interest, direct or indirect, in the project to which this Contract pertains which would conflict in any manner or degree with the performance of the Consultant's services and obligations hereunder. The contractor's officers, employees or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from the project applicant or any affiliate or agent of the project applicant.

18.2 The Consultant warrants and represents that the Consultant has not, nor has any other member, employee, representative, agent or officer of the Consultant, entered into or offered to enter into any combination, collusion or agreement with any person or entity to receive or pay, and that he has not received or paid, any sum of money or other consideration for the execution of this Contract other than the consideration offered pursuant to the terms and conditions hereof.

**AGREED TO BY:**

CITY OF BLACK DIAMOND

By: Carol Benson  
Carol Benson

Its: Mayor

Date: 9/7/18

CONSULTANT

By: Geoffrey G. Dillard  
Geoffrey G. Dillard, PE

Its: Director

Date: August 27, 2018

Attest:

By: Brenda L. Martinez  
Brenda L. Martinez  
City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
David A. Linehan  
City Attorney



**EXHIBIT A**  
**Scope of Work**  
**City of Black Diamond**  
**Public Works Phase 2, Part B**  
**Water System PLC Hardware and Software Upgrade**  
May 2018

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## **Background**

The existing City of Black Diamond (City) supervisory control and data acquisition (SCADA) and telemetry system developed in 2005 to monitor and control the Lower Reservoir/Booster, Upper Reservoir, and eventually the Springs Pump Station is out of date and in need of modernization efforts. Any additions to the hardware or software would be considered unprofessional and would not be supported by any legitimate entity with experience in the local municipal water and wastewater community that specializes in SCADA, telemetry, and general instrumentation and controls (I&C) automation systems.

The City has retained RH2 Engineering, Inc., (RH2) to provide both programmable logic controller (PLC) hardware and software.

## **Task 1 – Project Management Services**

**Objective:** Provide project management services for RH2's subconsultant during implementation of PLC hardware and software upgrades, including programming, testing, and training.

### **Approach:**

- 1.1 Provide project management services for RH2's subconsultant, Evolution Controls, during PLC and operator interface terminal (OIT) upgrades for the Lower Reservoir/Booster and Upper Reservoir.
- 1.2 Provide PLC programming.
- 1.3 Provide OIT programming.
- 1.4 Provide SCADA programming.
- 1.5 Provide installation, startup, and testing services for PLC, SCADA, and telemetry services.
- 1.6 Provide operator training, support, and closeout services.

### **Assumptions:**

- *RH2 will subcontract with Evolution Controls to perform Task 1 subtasks (Exhibit D).*
- *Updates to the SCADA system are provided under a separate contract and are not included in this Scope of Work.*
- *RH2 will perform the services described up to the amounts included in the attached Fee Estimate. If additional effort is needed, that extra work will be mutually determined by the City and RH2.*

**EXHIBIT B**

City of Black Diamond  
Public Works Phase 2, Part B  
Water System PLC Hardware and Software Upgrade  
Fee Estimate

Description		Total Hours	Total Labor	Total Subconsultant	Total Expense	Total Cost
Classification						
Task 1	Project Management	16	\$ 3,427	\$ 38,065	\$ 556	\$ 42,048
<b>PROJECT TOTAL</b>		<b>16</b>	<b>\$ 3,427</b>	<b>\$ 38,065</b>	<b>\$ 556</b>	<b>\$ 42,048</b>

**EXHIBIT C**  
**RH2 ENGINEERING, INC.**  
**2018 SCHEDULE OF RATES AND CHARGES**

RATE LIST	RATE	UNIT
Professional I	\$138	\$/hr
Professional II	\$153	\$/hr
Professional III	\$164	\$/hr
Professional IV	\$175	\$/hr
Professional V	\$191	\$/hr
Professional VI	\$203	\$/hr
Professional VII	\$219	\$/hr
Professional VIII	\$230	\$/hr
Professional IX	\$230	\$/hr
Technician I	\$100	\$/hr
Technician II	\$107	\$/hr
Technician III	\$132	\$/hr
Technician IV	\$140	\$/hr
Administrative I	\$69	\$/hr
Administrative II	\$81	\$/hr
Administrative III	\$96	\$/hr
Administrative IV	\$114	\$/hr
Administrative V	\$131	\$/hr
CAD/GIS System	\$27.50	\$/hr
CAD Plots - Half Size	\$2.50	price per plot
CAD Plots - Full Size	\$10.00	price per plot
CAD Plots - Large	\$25.00	price per plot
Copies (bw) 8.5" X 11"	\$0.09	price per copy
Copies (bw) 8.5" X 14"	\$0.14	price per copy
Copies (bw) 11" X 17"	\$0.20	price per copy
Copies (color) 8.5" X 11"	\$0.90	price per copy
Copies (color) 8.5" X 14"	\$1.20	price per copy
Copies (color) 11" X 17"	\$2.00	price per copy
Technology Charge	2.50%	% of Direct Labor
Mileage	\$0.545	price per mile (or Current IRS Rate)
Subconsultants	15%	Cost +
Outside Services	at cost	

Rates listed are adjusted annually.

# Evolution Controls, LLC

Office: 425-359-5322  
Mobile: 425-359-5322

AUTOMATION DESIGN, FABRICATION, PROGRAMMING & TESTING

Snohomish, WA  
AI@EvolutionControls.net

By: AI Friedli  
May 21<sup>th</sup>, 2018

RH2 Engineering

Attention: Geoff Dillard

**Subject: City of Black Diamond Upgrade 2018**

**PHASE 2: PLC Hardware & Software Upgrade**  
**PART B: (Implementation: Programming, testing & Training)**

Dear Geoff,

In response to your request for Evolution Controls to upgrade the City of Black Diamond water system MTU PLC Hardware and Software, I have prepared the following proposal for your review.

## OVERVIEW

Below is an overview of the required **TASKS** associated with the scope of this project. Task specifics are provided in the SCOPE section later in this proposal along with EXCLUSIONS and COMPENSATION.

The existing City of Black Diamond SCADA & Telemetry system developed in 2005 to monitor and control the Lower Reservoir/Booster system, Upper Reservoir and eventually the Springs Pump Station is currently out of date and in need of modernization efforts. Any additions to the hardware or software would be considered unprofessional and would not be supported by any legitimate entity with experience in the local Municipal Water & Wastewater community that specializes in SCADA, Telemetry, and general I&C (instrumentation & controls) automation systems.

## SCOPE

The below scope of work will provide the City of Black Diamond with the latest and greatest versions of both PLC hardware and software to ensure industry leading longevity, reliability and support.

**TASK 1. PROJECT MANAGEMENT, HARDWARE & SOFTWARE:**

**1.1 PLC & OIT Upgrade for Lower Res (MCP) and Upper Res (RTU-1)**

- A. Coordinate with City operators and representatives as necessary to ensure a well-organized and well documented project implementation procedure is achieved.
- B. Update existing Bill of Materials and Control Panel Wire Diagrams currently on file from the Systems Interface Inc 2005 Project:
  - 1. MCP: Lower Reservoir Main Control Panel
  - 2. RTU-1: Upper Reservoir Remote Telemetry Unit
- C. Install replacement PLC's for outdated and unsupported models.
  - 1. Lower Reservoir Main Control Panel (MCP):
    - a) Replace existing Allen Bradley SLC 5/05 with the latest Allen-Bradley Compact Logix L3 processor and required I/O modules as required. (PLC components/hardware not provided in this scope).
  - 2. Upper Reservoir (RTU-1)
    - a) Replace Existing Micrologix1500 PLC with appropriate Compact Logix L30 PLC and utilize compatible existing I/O modules. (PLC components/hardware not provided in this scope).
    - b) Install, configure and test ASCII module required to maintain existing DF1/RS232 Communications via leased line modem to springs pump station. (Communication components/hardware not provided in this scope).
    - c) Install new Panelview 800 to replace existing unsupported Panelview300. See TASK 3 for details. (OIT components/hardware not provided in this scope).
- D. Convert and update existing RSlogix500 PLC program file to new CompactLogix PLC compatible Studio 5000 PLC file as detailed below in TASK 2.
- E. Update SCADA Software application as necessary to support new PLC file database.
- F. Assemble PLC & OIT components in shop for firmware updates and hardware testing including 48hr "burn-in" to insure component integrity.
- G. Coordinate, manage and document operational testing in EC facility to ensure the new PLC Programs and Village Pump Station PLC additions are fully functional prior to delivery in an effort to minimize down time and manual operations during on site installation.

## **TASK 2. PLC PROGRAMMING:**

### **2.1 Existing PLC File conversion, updates and improvements:**

This task includes all control logic, monitoring and alarm programming required to replace the currently unsupported and outdated PLC in operation at the city Water Facilities so that all existing PLC controlled operations, process monitoring and alarming will function within the new PLC with the existing instrumentation, field wiring and plant process control monitoring and logic. The new PLC program file will contain the latest industry leading programming standards utilizing AOI's and UDT's developed, tested and optimized by Evolution Controls. The programming will be done with Studio5000 software with forethought, structure and organization to accommodate future troubleshooting and modifications. EC will provide descriptions of control for sections of code that control individual pieces of equipment, as well as individual rung descriptions as needed to insure a complete understanding of the workings of each subroutine.

The below listed RSLogix500 PLC files will be update to the latest Studio5000 PLC file to be compatible with the new upgraded PLC hardware as detailed above in section 1.4 and also to support modernization features associated with the new SCADA application as detailed below in TASK 4:

#### **A. Lower Reservoir MCP**

Note: EC will also verify and update programming to support existing backup autodialer to operate as emergency backup to SCADA Win911 alarm dialer in the event of loss of communication between PLC & SCADA system or if unacknowledged alarm exists for an extensive amount of time (30 minutes or as requested by lead operator).

#### **B. Upper Reservoir RTU-1**

Note: EC will also modify program file as necessary to accommodate ASCII module required to support existing DF1/RS232 serial communications via leased line modem to the Springs Booster RTU.

## **TASK 3. OIT PROGRAMMING:**

### **3.1 Upper Reservoir RTU-1**

- A. The existing Upper Reservoir RTU Operator Interface Module is no longer supported. Evolution Controls will convert existing Panelbuilder program application to the latest Panelview800 compatible application to support data display and data entry parameters as is currently in operation.

**TASK 4. SCADA PROGRAMMING:**

1. N/A – The SCADA software and application improvements are anticipated to be executed under a separate contract as determined by the City, RH2 and Village developer administration.

**TASK 5. INSTALLATION, STARTUP & TESTING:**

IMPORTANT: The below scope is a shared effort with the SCADA & Telemetry upgrade portion of the project to be executed under a separate contract. It is anticipated that 75% of the below tasks are associated with the PLC upgrade portion of this project and included in this scope. The other 25% is not included in the total cost of this scope.

**5.2 New PLC, SCADA & Telemetry Installation & Testing**

- A. Evolution Controls will coordinate with City staff to confirm the preferred date and time to support installation and testing of new PLC's and SCADA system in parallel with old SCADA system. A specific implantation plan will be developed and provided to the City for approval.
- B. As previously mentioned above, all system functionality will be simulated and thoroughly tested in the EC shop in an effort to minimize down time for installation and testing on site. All system operations will be thoroughly tested with live equipment operations and instrumentation process variable data.
- C. Upon the completion of the new PLC installation at both Lower Res and Upper Res facilities, all PLC I/O will be verified to the furthest point justifiable from the instrument or equipment component all the way through the new SCADA displays, alarming and data collection.
- D. Evolution Controls will coordinate with and assist Accu-Comm as necessary to optimize the radio communication network to ensure data transmission reliability.

**5.3 Village Pump Station Testing**

- A. EC will coordinate with the Village Pump Station Programmer RH2) to test all new SCADA data collection values associated with the Village Pump Station including communication failure detection and alarming.

**TASK 6. OPERATOR TRAINING, SUPPORT & CLOSEOUT**

IMPORTANT: The below scope is a shared effort with the SCADA & Telemetry upgrade portion of the project to be executed under a separate contract. It is

anticipated that 25% of the below tasks are associated with the PLC upgrade portion of this project and included in this scope. The other 75% is not included in the total cost of this scope.

- A. Evolution Controls will provide operator training of all SCADA features including the following:
1. Navigation and understanding of the new SCADA software functionality and unique features that are not currently part of the existing SCADA system.
  2. Configuration and Alarm Management of the new Win911 Alarm notification software.
  3. Configuration and File Management of the new Dream Reports software program.