

## AM NO. 10-054 (C11)

MEMO TO: City Council

FROM: John Marchione, Mayor

DATE: March 16, 2010

SUBJECT: **APPROVAL OF SUPPLEMENTAL CONSULTANT AGREEMENT NO. 1 FOR ENGINEERING SERVICES FOR THE SE REDMOND TRANSMISSION MAIN, BEAR CREEK CROSSING, PROJECT NO. 101227**

### I. RECOMMENDED ACTION:

Approve the attached Supplemental Consultant Agreement No. 1 with BHC Consultants, LLC, in an amount not to exceed \$250,000 including contingencies, and authorize the Mayor to sign the agreement.

### II. DEPARTMENT CONTACT PERSONS:

Bill Campbell, Director of Public Works	425-556-2733
Ron Grant, Assistant Public Works Director/City Engineer	425-556-2742
Jeff Thompson, Project Engineer	425-556-2884

### III. DESCRIPTION:

The Southeast (SE) Redmond Transmission Main, when completed, will transport water from the Education Hill Reservoirs to the SE Redmond Reservoir to provide adequate fire flows for future development. This 20-inch pipeline has been built in phases to date, including developer funded work and City capital improvement projects.

The purpose of this supplemental consultant agreement is to provide additional design funding to complete the final design of a new 20-inch pipeline from 180<sup>th</sup> Avenue NE and Avondale Road to the Millennium development along Union Hill Road. This supplemental consultant agreement will also consist of construction services, along with additional archeological work that needs to be started prior to the bidding process.

Previously, City Council approved a consultant agreement with BHC Consultants on July 1, 2008. The purpose of this effort was to design and construct the new waterline prior to the proposed Aegis development and wetland mitigation site work being performed on the Keller property.

The additional final design engineering is a result of the Aegis development and associated wetland bank projects being withdrawn. The City and its consultant have had to spend more time and budget on design changes and permitting than originally expected to satisfy all parties involved. The original design was performed to satisfy the Aegis development and wetland bank requirements. The modified design was completed to minimize the impact on the Keller's developable land.

Subsequently, the City Council approved the purchase of a parcel of land adjacent to the Avondale Road/180<sup>th</sup> Avenue NE intersection in May 2009, to allow staff to proceed with constructing this important link in our water system. The City is also in the process of negotiating an easement from the Keller's for the water pipeline to go across their property, of which the City Council has authorized the use of eminent domain.

As shown in Attachment A, the pipeline will cross Avondale Road, run through the City owned parcel and across the Keller's property, go under Bear Creek, and connect to the existing water line at the Millennium development along Union Hill Road. The City has performed archeological and geotechnical assessments, along with obtaining permits from Department of Ecology, Department of Fish and Wildlife, and the City itself.

**IV. IMPACT:**

A. Service Delivery: This project will construct a new 20-inch water line from 180<sup>th</sup> Avenue NE and Avondale Road to the Millennium development along Union Hill Road.

B. Fiscal:

Estimated Project Costs

Engineering Design Services

Preliminary Design (BHC) \$ 330,000

Final Design & Const. Support (Supplement No. 1) 250,000

City Administration 50,000

Miscellaneous 5,000

Design Total \$ 635,000

Project Funding

Water CIP \$635,000

**V. ALTERNATIVES:**

City Council could choose to not to approve the consultant agreement. However, this action would result in not completing the design in time to construct the project in the summer and early fall.

**VI. TIME CONSTRAINTS:**

The design must be completed in time for the project to be bid and awarded before June 2010. This project must be constructed during the summer and early fall when the groundwater is at its lowest.

**VII. LIST OF ATTACHMENTS:**

- A. Vicinity Map
- B. Supplemental Agreement No. 1

\_\_\_\_\_/s/\_\_\_\_\_  
William J. Campbell, Director of Public Works

3/8/10  
Date

Approved for Council Agenda \_\_\_\_\_/s/\_\_\_\_\_  
John Marchione, Mayor

3/8/10  
Date



AVONDALE ROAD

SE REDMOND  
TRANSMISSION  
MAIN

MILLENNIUM  
CORPORATE PARK

UNION HILL ROAD



City of Redmond, Washington  
03/16/2010

Attachment A - Vicinity Map

SE Redmond Transmission Main

**ATTACHMENT B**

**SE Redmond Transmission Main, Bear Creek Crossing  
Project No. 101227**

**SUPPLEMENTAL AGREEMENT NO. 1**

This SUPPLEMENTAL AGREEMENT, made and entered into this \_\_\_\_ day of \_\_\_\_\_, 2010, between the City of Redmond, Washington, hereinafter called the CITY, and BHC Consultants, LLC, hereinafter called the CONSULTANT, amends an earlier Agreement (AGREEMENT) dated July 18, 2008.

WHEREAS the CITY desires to supplement the original AGREEMENT;

NOW THEREFORE, it is mutually agreed that the terms, stipulations, and conditions of the original AGREEMENT shall be binding upon the parties hereto except insofar as amended by this SUPPLEMENTAL AGREEMENT as follows:

**I**

Section II, SCOPE OF WORK, is amended by the additional tasks summarized in Exhibit A-1 attached hereto.

**II**

Section IV, TIME FOR BEGINNING AND COMPLETION, is amended to change the completion date for all work to read December 31, 2011.

**III**

Section V, PAYMENT, shall be amended to compensate the CONSULTANT for the work described in Exhibit A-1.

A breakdown of the CONSULTANT'S cost proposal is attached hereto as Exhibit B-1. By this reference the exhibit is made a part of this SUPPLEMENTAL AGREEMENT.

Summarized below are the costs as listed in the original AGREEMENT and as modified by this SUPPLEMENTAL AGREEMENT.

<b>Summary</b>			
<b>Description</b>	<b>Original Agreement</b>	<b>Supplement No. 1</b>	<b>Total</b>
Labor Cost	\$213,494	\$133,260	\$346,754
Reimbursables	\$88,516	\$93,473	\$181,989
Total	\$302,010	\$226,733	\$528,743
Contingency	\$27,990	\$23,267	\$51,257
<b>Grand Total</b>	<b>\$330,000</b>	<b>\$250,000</b>	<b>\$580,000</b>

**EXECUTION**

IN WITNESS WHEREOF, the parties have executed this SUPPLEMENTAL AGREEMENT by having their representatives affix their signatures below.

*BHC Consultants, LLC*

CITY OF REDMOND

By \_\_\_\_\_

By \_\_\_\_\_  
John Marchione, Mayor

\_\_\_\_\_  
(Title)

Attested:

By \_\_\_\_\_  
City Clerk

Approved as to Form:

By \_\_\_\_\_  
City Attorney

## EXHIBIT A-1

### SCOPE OF SERVICES SE Redmond Transmission Main, Bear Creek Crossing Construction Services

#### Task A: Project Management

1. Coordinate with City staff by regular status reports, status meetings, telephone communication, and e-mail during the course of the project.
2. Prepare monthly invoices and submit to City for payment.

#### Task B: Additional Design Services

1. Provide additional design services to complete the final design documents, including:
  - a. Avondale Road Improvements:
    - i. Abandon existing 12-inch sewer and convey sewage to existing 24-inch sewer.
    - ii. Replace a portion of the existing 238 Zone piping and abandon PRV piping.
    - iii. Abandon 6-inch sewer stub that served house demolished at 9004 Avondale Road.
  - b. Millennium Corporate Park PRV Station Power Feed Alternatives Analysis and Final Design
    - i. Evaluate two options. A small solar option with panel and batteries and inverter will be rough sized for the sump operation. A PRV turbine option will be rough sized for the sump pump based on normal low flows through the vault.
    - ii. Prepare plans and specs for the chosen option.
  - c. Millennium Corporate Park PRV Pressure Relief Analysis and Design Alternatives:
    - i. Evaluate two alternatives for discharging pressure relief flows.
  - d. Additional landscape design services:
    - i. Shoreline Exemption Application drawing submittal
    - ii. Tree Preservation Plan:
      1. Safeway site tree replacement mitigation option; field work, drawing set up, meeting with City.
      2. Request for exception, revised calculations for new tree survey
    - iii. Permit drawing revisions:
      1. Added/revised Plans to show restoration with native grasses at Wetland A and Bear Creek buffer construction impacts

### **Task C: Archaeological Services to Complete Design and During Construction**

1. Conduct additional survey in the APE, which will consist of excavating approximately 20 shovel probes at 5 to 10 m intervals. The previous cultural resource assessment and any plan maps or other relevant information will be reviewed before conducting the fieldwork to determine where the probes will be located and to gain an understanding of the sediments likely to be encountered. The probes will be excavated by hand in 20 cm levels and the matrix screened through 1/4-inch hardware cloth. Cultural material will be documented but not collected. Sediments, evidence of disturbance, and other characteristics of the probes will also be recorded. Other field records will include photographs, maps, and written descriptions of the work completed and field conditions. A technical report to DAHP standards will be prepared that details the survey expectations, field methods, results, and management recommendations. The draft report will be submitted to the client for review and the final, incorporating comments, submitted for dispersal to the appropriate agencies, including the DAHP and concerned Tribes.
2. If cultural material is found, a Washington State Site Inventory Form or Isolate Form(s) will be completed to DAHP standards. The form(s) will be attached to the survey report as an appendix.
3. Prepare a monitoring and discovery plan specifying protocols for prefield briefing of the construction crew, on-site archaeological monitoring, and steps to be taken in case of a discovery of cultural material or human remains. The monitoring and discovery plan will incorporate information from the archaeological survey and depositional context, and include steps required by state law and a list of contacts. The draft plan will be submitted by the client to relevant agencies for comments, which will be incorporated in the final plan as appropriate.
4. Provide an archaeological monitor for up to 45 days of continuous monitoring of ground disturbance during construction. The monitor will keep daily written and photographic records of the work conducted and any finds. He or she will give the construction crew a pre-work briefing of the kinds of cultural material that could be encountered and the procedures to be followed in case of a find. The monitor will coordinate with the construction foreman or project manager and the City of Redmond to see that required notification of any finds is completed in a timely manner.
5. A report of the monitoring work, including any finds, will be prepared once the monitoring is completed.

### **Task D: Geotechnical Services During Construction**

The purpose of GeoEngineers services is to provide sufficient observation and consultation to evaluate whether construction activities for the SE Redmond Water Transmission Main comply with the intent of the project plans and specifications and the recommendations provided in the geotechnical report. Task D includes the following tasks:



1. Review plans/submittals, including preparation of review comments to the project team, for:
  - a. Dewatering
  - b. Shoring, excavation, and trenching
  - c. Microtunnel and jack and bore pits
  - d. Microtunneling.

It is assumed that each submittal reviewed will necessitate ½ day effort for the project manager and ½ day effort for the project engineer.

2. Attend project kickoff meeting with construction team. A partial day for the project manager is assumed.
3. Observe trenchless construction operations:
  - a. Installation of microtunnel and jack and bore pits. Four (4) partial-day site visits are assumed.
  - b. Microtunneling at Bear Creek crossing. Two (2) weeks of half-day site visits, for a total of ten (5) full-days is assumed.
  - c. Microtunneling or jack and bore at three ditch crossings. Five (5) half-day visits for each ditch crossing, for a total of fifteen (15) half-days is assumed.
  - d. Dewatering (to be completed in conjunction with aforementioned site visits).
4. Submit written field reports for each site visit that we make and transmit them to the parties that you designate. These field reports will present the results of our field observations along with recommendations we develop regarding geotechnical construction activities.
5. Provide geotechnical consultation on design and construction issues as they arise.
6. Submit a summary letter at the conclusion of our services, including our opinion as to whether the geotechnical elements have been constructed in accordance with the intent of our recommendations.

The services and estimated fees on this project include engineer's time to supervise our field staff and review daily field reports, equipment charges, time and mileage for traveling to the site, staff support, accounting and administration. The estimated fees should be considered to be approximate because the level of effort and actual time of involvement will be influenced by several factors that are not under our direct control. These include the contractor's actual time of performance, efficiency of the crews, the weather, etc. Part time or intermittent site visits will be charged on a time and expenses basis at the requested level of effort.

#### **Task E: Landscape Architect Services During Construction**

1. Submittal review.
2. Site inspections:
  - a. Restoration planting pre-construction meeting.

- b. Review construction scope and possible changes to restoration areas from earth work construction.
- c. Downed woody habitat structures:
  - i. Selection of trees during clearing including length/cutting/breaking criteria.
  - ii. Placement at buffer restoration areas.
- d. Bear Creek buffer restoration planting:
  - i. Clearing/removal of native soils and noxious weed roots.
  - ii. Imported topsoil material, placement and soil preparation.
  - iii. Irrigation connections, layout and operation.
  - iv. Plant quality and layout.
- e. Wetland buffer restoration seeding:
  - i. Topsoil import, soil preparation and seeding.
- f. Substantial completion inspection and punch list.
- g. Final inspection.
- 3. Close out:
  - a. As-built Restoration Planting Plan for 5-year monitoring period.
- 4. Office coordination and review.

**Task F: Request for Information (RFI) Reviews**

- 1. Respond to City and Contractor questions during the course of construction. This effort includes technical interpretation of the contract drawings and specifications and providing written clarification of the contract documents. The fee for this task assumes fifteen (15) RFIs.

**Task G: Submittal Reviews**

- 1. Review shop drawings, diagrams, catalog data, schedules and samples, the results of tests and inspections, and other data, which the Contractor is required to submit per the Contract Documents. These will be reviewed for general conformance with the project design concept and general compliance with the information given in the Contract Documents. Such review is not intended as an approval of the submittals if they deviate from the Contract Documents or contain errors, omissions and inconsistencies, nor is it intended to relieve the Contractor of their full responsibility for Contract performance, nor is the review intended to ensure or guarantee lack of inconsistencies, errors, and/or omissions between the submittals and the Contract requirements. A written response to Contractor's submittals will be included with reviewed submittals. The fee for this task assumes twenty five (25) submittals. It assumes there will be no more than one re-submittal for each submittal and that the cost to review re-submittals after the first re-submittal is extra work not included in this scope of work. The City may deduct cost of the extra work from amounts payable to the Contractor, per specification requirements.

### **Task H: Construction Meetings and Periodic Field Observation**

1. Attend weekly coordination meetings with the City and the Contractor. Prepare draft meeting minutes and attendees list and submit in PDF format to the City for review within 5 working days of construction meeting. Incorporate City comments and submit final meeting minutes and attendees list within 5 days of receiving City comments. Attendance at twenty (20) construction meetings is assumed.
2. The Project Manager and Engineering staff will provide periodic observation of the construction on an as-needed basis or as requested by the City's project manager to review and respond to design related issues. The fee estimate for this task is based on ten (10) site visits.

### **Task I: Change Proposal Assistance**

1. Assist the City in the development of change proposals as requested by the City's project manager. The fee for this task assumes three (3) Change Proposals.

### **Task J: Record Drawings**

1. Post Construction Survey:
  - a. Field locate Millennium Corporate Park PRV Site, Avondale Road Improvements, and SE Redmond Transmission Main.  
Assumptions:
    - Contractor is to provide all surveying for construction.
    - The transmission main is to be constructed per the plans and specifications. It is the Contractor's responsibility to identify any deviations or changes from the plans and specifications.
  - b. Prepare Base map in Auto-Cad format for insertion into original mapping.
2. Review the record drawings submitted by the Contractor to confirm that they comply with the intent of the project specifications. Revise design drawings to incorporate record drawing survey and revisions identified by the Contractor and the City's inspection staff. Print record drawing hard copies in accordance with City of Redmond standards.

**Exhibit B-1**

**Consultant Fee Determination**

Project Name: SE Redmond Transmission Main  
Project Number: 101227  
Consultant: **BHC Consultants**

**NEGOTIATED HOURLY RATES**

<b><u>Classification</u></b>	<b><u>Hours</u></b>	<b><u>Rate</u></b>	<b><u>Cost</u></b>
Project Principal (Ron Dorn)	192	\$201	\$38,592
Sr. Structural Engineer (Jim Lutz)	56	\$201	11,256
Project Manager (Adam Schuyler)	392	\$148	58,016
Project Engineer (Peter Cunningham)	68	\$104	7,072
CAD Support (Patti Simon)	108	\$125	13,500
Clerical Support (Melanie Robinson)	67	\$72	4,824
Subtotal:	883		\$133,260

**REIMBURSABLES**

Mileage	\$450
Reproduction (copies, plots, etc.)	1000
Miscellaneous	250
Subtotal:	\$1,700

**SUBCONSULTANT COSTS (See Exhibit C)**

	\$91,773
Subtotal:	\$91,773

<b>TOTAL</b>	\$226,733
<b>CONTINGENCY</b>	23,267
<b>GRAND TOTAL</b>	\$250,000

**EXHIBIT C-1**

**Subcontracted Work  
City of Redmond  
SE Redmond Transmission Main, Bear Creek Crossing  
BHC Consultants**

The CITY permits subcontracts for the following portions of the work of the AGREEMENT:

<b>SUBCONSULTANT</b>	<b>WORK DESCRIPTION</b>	<b>AMOUNT</b>
Casne	E&IC	\$ 9,500.00
Cascadia	Archaeological	\$ 25,549.00
Van de Vanter Group	Landscape Architect	\$ 17,120.00
KPG	Post Construction Survey	\$ 5,150.00
GeoEngineers	Geotechnical	\$ 34,454.00
		<hr/>
	Total =	\$ 91,773.00