



## Memorandum

April 17, 2013

To: Jim Dinley, Municipal Administrator  
From: Christopher Brewton, Utility Director  
Subject: **Amendment of Professional Services Agreement – Currents Consulting – Takatz Lake**

### **Request**

This is to request Assembly approval to authorize the Municipal Administrator to amend a Professional Services Agreement (PSA) between Currents Consulting (Engineer) and the City and Borough of Sitka (CBS) for engineering services for the Takatz Lake Hydroelectric Feasibility project, to include; geotechnical assessment of the project site and development of the generating facilities arrangement plan. The estimated cost for the study is \$315,000 and the amended PSA is attached.

### **Analysis:**

This task is the major engineering effort for the Takatz Lake FERC feasibility studies. This study will confirm the physical arrangement and location of the power generating facilities at Takatz Lake, based on the geotechnical information which will be available in 2013. A major goal of this study is to confirm whether the Takatz Lake project can be developed in phases, with Phase 1 including a lake tap, tunnel, powerhouse and transmission line. Phase 2 would include construction of a dam at the lake outlet, some years after the powerhouse is completed.

The study team includes a small group of capable engineers from Currents Consulting (Seattle, WA), McMillen LLC (Boise ID), and Kim de Rubertis' (Cashmere, WA). Paul Carson of Currents Consulting has provided engineering services for Takatz Lake for the past 4 years, in support of the FERC study program. He also has been assisting the City with the Blue Lake Expansion project since 1995. Paul will be the project engineer for this study.

McMillen LLC will provide civil engineering staff (Matt Moughamian) and the structural engineer (Paul Larson) for the study. Note that McMillen is the construction management firm for the Blue Lake Expansion Project.

Kim de Rubertis' is the City's geotechnical engineering consultant. He has provided dam safety inspections for our hydro projects and is currently on the FERC Board of Consultants for the Blue Lake Expansion. Kim will provide the geotechnical assessment for the Takatz Lake study.

### **Fiscal Note:**

Approximately \$900,000 in funds remains in the Takatz Lake Feasibility project. Estimated costs are approximately \$315,000, including contingency funds for additional work if required and for logistical delays.

### **Recommendation:**

The expertise and professional knowledge offered by Mr. Carson and the project team will be invaluable to the successful evaluation of the Takatz Lake generation facilities and the rates are very cost effective. I highly recommend approval of the Professional Services Agreement with Currents Consulting.

# **AGREEMENT TO PROVIDE PROFESSIONAL SERVICES TO THE CITY AND BOROUGH OF SITKA**

The **City and Borough of Sitka (“CBS”)** and **Currents Consulting (“Contractor”)** individually referred to as “Party” and collectively referred to as “Parties,” enter into this “Agreement To Provide Professional Services To The City and Borough Of Sitka” The terms, conditions, and consideration regarding this Agreement are set out below.

This Agreement consists of:

- Professional Services Agreement
- Appendix (A): Scope of Work – Blue Lake Expansion
- Appendix (A1): Scope of Work – Hatch Acres
- Appendix (A2): Scope of Work – Takatz Lake Feasibility
- Appendix (B): Compensation
- Appendix (C): Communication
- Appendix (D): Work Products
- Appendix (E): Schedule
- Appendix (F): Engineering Support Services Blue Lake Expansion Construction Management
- Appendix (G): Takatz Lake Generation Facilities Study

## **SECTION 1. DEFINITIONS**

For the purpose of this Agreement, the terms used herein shall have the following meaning:

- A. The term “CBS” shall mean “City and Borough of Sitka”.
- B. The term “Contractor” shall mean “Currents Consulting”.
- C. “CBS” Authorized Representative shall be the person listed in Section 21(B)(2) of this Agreement.
- D. “Days” shall mean calendar days.

## **SECTION 2. AGREEMENT TIME PERIOD**

- A. This Agreement becomes effective when signed and dated by both Parties, and covers the time period when professional services are provided by Contractor.
- B. Contractor shall perform for and on behalf of CBS regarding the services set out in the Scope of Services (attached as Appendix A) and proposed Scope of Work (attached as Appendix F). Except as expressly allowed under this Agreement, CBS need not grant the Contractor any extension in the time provided to complete the work under this Agreement. If the Contractor progress falls behind the project schedule, the Contractor shall commit additional resources to complete the work, or take such other additional steps as are reasonably necessary to assure the completion of the work at no additional cost to CBS.
- C. Contractor shall perform for and on behalf of CBS the scope of work in an expedient and reasonable manner.

### **SECTION 3. RESPONSIBILITY OF THE CONTRACTOR**

At all times during the Contractor's performance under this Agreement, the Contractor shall possess and exercise the level of competence, knowledge and skill presently maintained by other practicing members of the profession in good standing in the same or similar localities.

Contractor must certify that the firm is authorized to do business in Alaska and provide proof of insurance and licensing.

### **SECTION 4. SCOPE OF SERVICE**

The services to be performed by the Contractor shall include all services required to complete the scope of work set forth in attached Appendix and shall be in accordance with all applicable statutes, ordinances, rules and regulations.

### **SECTION 5. OWNERSHIP OF DOCUMENTS**

All plans, drawings, calculations, supporting data and specifications, originals and tracings shall become the property of CBS. Such documents shall be transmitted to CBS prior to the time of final payment for the work under this Agreement. The Contractor shall be entitled to retain and reference record copies and electronic files of all documents.

All designs, drawings, specifications, notes, artwork, computer programs, reports and other work developed with Energy Authority grant funds are public domain. In particular, the following language is in place: "Except as otherwise specifically agreed, and without limiting any Intellectual Property requirements of a federal funding agency, the Energy Authority shall have unlimited rights to use and to disseminate any data produced or delivered in the performance of the contract."

### **SECTION 6. TERMINATION**



This Agreement may be terminated:

- A. By mutual consent of the Parties;
- B. For the convenience of CBS, provided that CBS notifies the Contractor of its intent to terminate under this paragraph in writing at least 10 days prior to the effective date of the termination; or
- C. For cause, by either Party where the other Party fails in any material way to perform its obligation under this Agreement; provided, however, that as a condition of the exercise of its right of termination under this subsection, the terminating Party shall notify the other Party of its intent to terminate this Agreement in writing, state with reasonable specificity the grounds, and allow the defaulting Party to cure the default within thirty (30) days of receiving the notice.
- D. Termination pursuant to this Section shall not affect the Parties continuing obligations under this Agreement.

#### **SECTION 7. DUTIES UPON TERMINATION**

- A. If CBS terminates this Agreement for convenience, CBS shall pay the Contractor the reasonable value of any services satisfactorily rendered prior to termination. Payment under this Section shall never exceed the total compensation possible under Section 9. CBS may terminate the work upon ten (10) days written notice to Contractor. Within ten (10) days after the Agreement terminates, Contractor shall deliver to CBS all finished and unfinished notes, reports, drawings and materials prepared by the Contractor which shall become the property of CBS.
- B. If this Agreement is terminated for cause, CBS shall pay the Contractor the reasonable value of the services satisfactorily rendered prior to termination less any damages suffered by CBS because of the Contractor's failure to perform satisfactorily. Any finished or unfinished documents or materials shall become the property of CBS at its option. Under no circumstances shall payment under this Section exceed the total compensation possible under Section 9.
- C. If the Contractor has received payments prior to termination in excess of the amount to which he is entitled under Subsection A or B of this Section, the excess amount shall be remitted to CBS within 30 days after receipt of CBS's notice to that effect.
- D. The Contractor shall not be entitled to compensation under this Section until the Contractor has delivered to CBS all documents, records, work products, materials and equipment owned by CBS, related to this Agreement and/or requested by CBS, as provided in Subsection A and B of this Section.
- E. CBS need not recognize any claim by the Contractor for reimbursable expenses or costs incurred after the time which the Contractor receives notice of termination under this Section.

## **SECTION 8. INDEMNIFICATION**

- A. The Contractor shall indemnify, defend, save, and hold CBS harmless from any claims, lawsuits or liability, including attorney's fees and costs, arising from any wrongful or negligent act, error or omission of the Contractor occurring during the course of or as a result of the Contractor's performance pursuant to this Agreement.
- B. The Contractor shall not indemnify, defend, save, and hold CBS harmless from any claims, lawsuits, liability, or attorney's fees and costs, arising from wrongful or negligent acts, errors or omissions solely by the City and Borough of Sitka occurring during the course of or as a result of the performance of this Agreement.
- C. Where claims, lawsuits, or liability, including attorney's fees and costs, arise from wrongful or negligent acts of both CBS and the Contractor, the Contractor shall indemnify, defend, save and hold CBS harmless from only that portion of claims, lawsuits or liability, including attorney's fees and costs, which result from the Contractor's wrongful or negligent acts occurring during the course of or as a result of the Contractor's performance pursuant to this Agreement.

## **SECTION 9. PAYMENT**

- A. For the Contractor's services, as described in Appendix (A), (C), (D) & (F) of this Agreement, compensation will be paid on a time and expense basis, as defined in Appendix (B) unless otherwise mutually agreed upon by both Parties prior to commencing additional work.
- B. The Contractor shall present invoice(s) to the CBS's Authorized Representative at 100 Lincoln St. Sitka Alaska 99835. Such invoice(s) shall describe the work for which payment is sought and shall document expenses and fees to the satisfaction of the CBS's Authorized Representative. Invoices shall not be submitted more frequently than once every 30 days.
- C. CBS's Authorized Representative shall approve, or not approve, and make payment on invoices within 30 days of receipt of invoice. If invoice is not approved the CBS must notify the consultant and may withhold payment on the portion not approved, payment must be made on the approved portion.
- D. The Contractor shall be entitled to no compensation under this Agreement beyond the amount of the CBS's express obligation under Subsection A above.
- E. For the purposes of Section 9 the invoices shall be presented to the CBS designated contacts.

## **SECTION 10. AUDIT: ACCESS TO RECORDS**

- A. The Contractor shall maintain records of performances, communications, documents, correspondence and costs pertinent to this Agreement. CBS's Authorized Representatives shall have the right to examine such records and accounting procedures and practices.
- B. CBS's Authorized Representative shall have the right to examine all books, records, documents and other data of the Contractor related to the negotiation, pricing and performance Agreement, and any change or modification for the purpose of evaluating the accuracy, completeness and currency of the data submitted. The right of examination shall extend to all documents necessary to permit adequate evaluation of the data, computations and projections used.
- C. The materials described in this Section shall be made available at the business office of the Contractor at all reasonable times for inspection, audit or reproduction, for a minimum of three (3) years from the date of final payment under this Agreement and for such longer period, if any, as may be required by applicable statute or other provisions of this Agreement.
- D. If this Agreement is completely or partially terminated, records relating to the services terminated shall be made available to CBS by the Contractor for a minimum of three (3) years from the date of any resulting final settlement.
- E. Records which relate to claims or litigation or the settlement of claims arising out of the performance of this Agreement shall be made available to CBS by the Contractor until such claims or litigation have been concluded.

## **SECTION 11. RELATIONSHIP OF PARTIES**

The Contractor shall perform the obligations in this Agreement as an independent Contractor of CBS. CBS may administer the Agreement and monitor the Contractor's compliance with its obligations. CBS shall not supervise or direct the Contractor other than as provided in this Section.

## **SECTION 12. ASSIGNMENTS**

Unless otherwise allowed by this Agreement or in writing by CBS, any assignment by the Contractor of its interest in any part of this Agreement or any delegation of duties under this Agreement shall be void, and any attempt by the Contractor to assign any part of its interest or delegate duties under this Agreement shall give CBS the right immediately to terminate this Agreement without any liability for work performed.

CBS reserves the right to approve all sub-consultant agreements.

### **SECTION 13. NONDISCRIMINATION**

- A. The Contractor shall not discriminate against any employee or applicant for employment because of race, color religion, national origin, ancestry, age, sex or marital status or mental or physical handicap. The Contractor shall take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, national origin, ancestry, age, sex, or marital status or mental or physical handicap. Such action shall include, without limitation, employment, upgrading, demotion or transfer, recruitment or recruiting, advertising, lay-off or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship. The Contractor agrees to post, in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions for this nondiscrimination clause.
- B. The Contractor shall state in all solicitations or advertisements for employees to work on jobs relating to this Agreement, that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, ancestry, age, or marital status or mental or physical handicap.
- C. The Contractor shall include the provisions of Subsection A of this Section in every subcontract or purchase order under this Agreement, so as to be binding upon every such subcontractor or vendor of the Contractor under this Agreement.
- D. The Contractor shall comply with all applicable Federal, State and Municipal laws concerning the prohibition of discrimination.

### **SECTION 14. COPYRIGHTS AND RIGHTS IN DATA**

All documentation, including notes, drawings, reports and other technical information, hereinafter referred to as work products, produced under this Agreement, except items which have pre-existing copyrights, are the property of the CBS. Payments to the Contractor for services hereunder include full compensation for all work products produced by the Contractor and its subcontractor.

All such subject data furnished by the Contractor pursuant to this Agreement are instruments of the Contractor's services in respect to this particular project. It is understood that the Contractor does not represent such subject data to be suitable for reuse on any other project or for any other purpose. If the CBS reuses the subject data without the Contractor's specific written verification of adaption, such reuse will be at the risk of CBS, without liability to the Contractor. Any such verification of adaption requested in writing by CBS at CBS's sole option will entitle the Contractor to further compensation at rates agreed upon by CBS and Contractor.



## **SECTION 15. NOTICES**

Any notice required pertaining to this Agreement shall be in writing and either personally delivered or mailed by prepaid, first class, registered or certified mail, return receipt requested, to the following addresses:

**CITY AND BOROUGH OF SITKA:**

Attn: James Dinley  
City and Borough of Sitka  
100 Lincoln Street  
Sitka, Alaska 99835

**CONTRACTOR:**

Attn: Paul Carson  
Currents Consulting  
11045 Exeter Ave NE  
Seattle, WA 98125

## **SECTION 16. CLAIMS AND DISPUTES**

If the Contractor becomes aware, or reasonably should have become aware, of any act or occurrence which may form the basis of a claim, the Contractor shall immediately notify in writing the CBS's Authorized Representative. If the matter cannot be resolved within seven (7) days, the Contractor shall, within the next fourteen (14) days, submit a written notice of the claim. The Contractor shall, in presenting the claim, include the facts and circumstances surrounding the claim, the specific relief requested including any additional compensation claimed and the basis upon which it was calculated, and the provisions of this Agreement under which the claim is made. This procedure covers all claims by the Contractor for additional compensation or any extension of the time for performance or any dispute regarding a question of fact or interpretation of this Agreement. The Contractor agrees that unless these written notices are provided, the Contractor shall have no entitlement to additional time nor compensation for such act, event or condition.

## **SECTION 17. SUCCESSORS AND ASSIGNS**

CBS and the Contractor each bind himself, his partners, successors, assigns and legal representatives to the other Party to this Agreement and to the partners, successors, assigns and legal representatives of such other Party with respect to all covenants of this Agreement.



## **SECTION 18. INSURANCE**

A. The Contractor shall at all times during the term of this Agreement, maintain in good standing the insurance described in Subsection B of this Section. Before rendering any services under this Agreement, the Contractor shall furnish the CBS with proof of insurance in accordance with Subsection B of this Section in a form acceptable to the CBS; such proof of insurance shall be incorporated as Appendix C of this Agreement.

B. Type of coverage:

- |    |   |             |
|----|---|-------------|
| 1. | <u>General Liability</u>                  | \$1,000,000 |
| 2. | <u>Workman's Compensation</u>             | Statutory,  |
| 3. | <u>Comprehensive Automotive Liability</u> | \$500,000   |
| 4. | <u>Professional Errors and Omissions</u>  | \$1,000,000 |

C. Insurance Notes

1. CBS shall be named as an additional named insured on the required general liability. CBS shall also be granted a full waiver of any rights of subrogation under all required policies including Workmen's Compensation policy. These requirements extend to all subcontractors.
2. All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to CBS by certified mail.

## **SECTION 19. PERMITS, LAWS AND TAXES**

The Contractor shall acquire and maintain in good standing all permits, licenses and other entitlement necessary to its performance under this Agreement. All actions taken by the Contractor under this Agreement shall comply with all applicable statutes, ordinances, rules and regulations. The Contractor shall pay all taxes pertaining to its performance under this Agreement.

## **SECTION 20. NON-WAIVER**

The failure of either Party at any time to enforce a provision of this Agreement shall in no way constitute a waiver of the provision, nor in any way affect the validity of this Agreement or any part of the Agreement, or the right of such Party to enforce each and every provision of the Agreement.

## **SECTION 21. AMENDMENT**

- A. This Agreement shall only be amended, modified or changed by a written amendment, executed by authorized representatives of the Parties, and such amendment shall be attached to this Agreement as an Appendix.
- B. For the purposes of any amendment, modifications or change to the terms and conditions of this Agreement, the only authorized representatives of the Parties are:
  - 1. For Contractor – Paul Carson, Principal
  - 2. For CBS – Jim Dinley, Municipal Administrator
- C. Any attempt to amend, modify or change this Agreement by either an unauthorized representative or unauthorized means, shall be void.

## **SECTION 22. SEVERABILITY**

Any provision of this Agreement decreed invalid by a court of competent jurisdiction shall not invalidate the remaining provisions of the Agreement.

## **SECTION 23. JURISDICTION - CHOICE OF LAW**

Any civil action rising from this Agreement shall be brought in the Alaska Superior Court First Judicial District at Sitka. The law of the State of Alaska shall govern the rights and obligations of the Parties under this Agreement.

## **SECTION 24. INTEGRATION**

This Agreement and all appendices and amendments embody the entire agreement of the Parties. There are no promises, terms, conditions or obligations other than those contained in this Agreement.

This Agreement shall supersede all previous communications, representations or agreements, either oral or written, between the Parties.

**IN WITNESS**, the Parties execute this Agreement in duplicate on the date shown below, and by their signatures, confirm they are authorized to sign this Agreement.

**CITY AND BOROUGH OF SITKA**

**CONTRACTOR**

\_\_\_\_\_  
James Dinley, City Administrator

\_\_\_\_\_  
Paul Carson

Date: \_\_\_\_\_

Date: \_\_\_\_\_

EIN NO. \_\_\_\_\_

**ATTEST:**

**CERTIFIED FUNDS AVAILABLE:**

\_\_\_\_\_  
Colleen Pellett, MMC  
Municipal Clerk

Fund Number: \_\_\_\_\_

Account Number: \_\_\_\_\_

Date: \_\_\_\_\_

Amount of Contract: **NTE \$1,097,027**  
**(renewable as required by the CBS)**

\_\_\_\_\_  
Jay Sweeney, Finance Director

**APPROVAL OF CONTRACT FORM**

Date: \_\_\_\_\_

\_\_\_\_\_  
Robin Koutchak  
Municipal Attorney

Date: \_\_\_\_\_



**Currents Consulting**  
**Professional Services Agreement - Appendices A-G**  
**To be attached to CBS's standard agreement**  
**April 17, 2013**

**Appendix (A) Scope of Work**

The CBS intends to Expand the Blue Lake Hydroelectric Project by increasing the generation capacity and raising the Blue Lake Dam collectively know as the Blue Lake Expansion Project. In that Paul Carson is very familiar with Sitka's hydroelectric system the CBS is contracting the services of Currents Consulting to assist Sitka with overseeing the engineering and construction of this project. The Scope of the engineering required to complete Blue Lake Expansion is outlined under General Engineering Firm Scope of Work Appendix A1. This scope will be performed by a general engineering firm selected by the CBS.

Currents Consulting's scope for the engineering phase is to assist and advise the CBS in:

- Defining the tasks
- Developing task order invitations
- Reviewing task order proposals
- Reviewing the work products
- Make recommendations to the CBS as requested that will achieve the goal of producing a well engineered cost efficient end product.

Currents Consulting's scope for the construction phase is to assist and advise the CBS in:

- Managing construction contracts
- Reviewing Submittals
- Fabrication shop and construction site inspections
- Developing Project operations manuals and related materials

**Appendix (A1) Hatch Energy Scope of Work**

The CBS has awarded a general engineering contract to Hatch Energy for design and construction support services for the Blue Lake Expansion Project. The CBS anticipates the following specific task orders will be issued for the engineering services. In each case the CBS will outline the task scope, and issue a Task Order Invitation for each task. Hatch Energy will prepare a detailed task scope and estimate of the man-hours, required information or data from the CBS necessary to complete the task, milestones and cost to perform the task as dictated by the Task Order Invitation. The task order will be issued

only after approval of the engineering consultant's detailed scope and budget for each task order.

1. Task 1 (Design development study and report):
  - a) Review of existing information
  - b) Geotechnical investigations
  - c) Definition of the selected project arrangement with feasibility level drawings
  - d) Design criteria for the project features
  - e) Feasibility level cost estimate
  - f) Schedule for the selected project
  - g) Interim progress submittals, draft and final reports.
2. Task 2 (Engineering, equipment specifications and bid document preparation for equipment procurement):
  - a. Turbines and generators packages
  - b. Switchyard transformers and equipment
  - c. Valves and gates
  - d. Cranes and hoists
  - e. Controls and switchgear
  - f. Ancillary equipment
  - g. Fabrication and supply cost estimate
3. Task 3 (Engineering, detailed design, specifications and bid document preparation for project construction):
  - a. Dam raise and spillway
  - b. Plunge pool modifications
  - c. Howell Bungler valve modifications (possible)
  - d. Access roads (dam construction and reservoir clearing related)
  - e. Reservoir Clearing
  - f. Tunnel modifications and surge chamber addition
  - g. Intake gate and gate shaft
  - h. Decommissioning of existing intake gates and hoists
  - i. Access roads and site civil preparation
  - j. Fish Valve turbine replacement
  - k. Penstock extension
  - l. New powerhouse, including excavation, powerhouse structure, tailrace, switchgear, controls, turbines, generators, ancillary equipment, and appurtenances
  - m. Substation and switchyard modification
  - n. Existing powerhouse decommissioning
  - o. Existing utilities relocation

- p. Decommissioning of Pulp Mill Feeder Unit
- q. Construction cost estimate
- r. Supporting Design Reports as required for FERC submittal
- s. Non-FERC permitting (i.e. construction permitting)

4. Task 4 (Engineering services during construction):

- a. Review procurement contract submittals.
- b. Provide as-built drawings
- c. Provide engineering as required by construction management firm.

The Tasks are laid out as discreet events so that in the case that this contract is terminated by either party, the engineering may be continued by a third party using all the work completed at the time of termination.

## **Appendix (B) Compensation**

### Compensation

Compensation for Currents Consulting will be based on actual hours, expenses and the cost of third party services.

- 1) Hourly rates for Paul Carson are \$155.00/hr for engineering, which is expressed in US dollars. Rates will be adjusted to include an annual 2.5% increase effective each year, with the first increase occurring on January 1, 2011.
- 2) Overtime will be billed at straight time rate.
- 3) Internal expenses, such as IT (computer, standard software, etc.) are included in the hourly rate and will not be charged separately.
- 4) External expenses (express mail, travel, meals, etc.) billed at cost plus 5% mark-up.
- 5) Sub-consultants' invoices will be marked up 5%.
- 6) Compensation for field services during construction involves housing, subsistence and other assignment costs, which will be negotiated at the time that services are required.

## **Appendix (C) Communication**

### Communication Organization

Communications between the Contractor and the CBS shall include the CBS's Project Manager, Dean Orbison for the CBS and Paul Carson for the contractor.



All communications regarding scope, schedule or budget shall be directed to the CBS's Project Manager. All communications requesting agreement or confirmation of technical decisions or conclusions shall be directed to the CBS's Project Manager.

Communications directly between the Contractor, the general engineering consultant, CBS staff or the CBS's individual consultants may take place, provided that all such communications are appropriately copied to the CBS's Project Manager.

#### Direction of Work

Contractor's work shall be directed and requested by the CBS's Project Manager. Requests and direction will be submitted to the contractor in writing usually by e-mail. The contractor shall acknowledge each request and provide a short proposal to perform the work and timetable to complete it. POs will be issued by the CBS in the form of a general retainer for the work performed.

#### Reporting

Contractor shall provide a monthly report summarizing work performed during the month, and status of the work in progress. This report is to be submitted with all monthly invoices.

### **Appendix (D) Work Products**

#### Work Products / Deliverables

Work performed under this contract need not be stamped by a professional engineer.

All deliverables must be submitted in the electronic format that it was generated (i.e. WORD, Excel, ACAD), so that it may be modified, a pdf format for publication, and paper copies when and as requested by the CBS.

Progress submittals shall also be submitted in Adobe Acrobat .pdf format. As needed, the underlying documents shall be edited as needed to provide easily readable .pdf format documents.

#### Use of Deliverables

The CBS retains the right to use all work products paid for by the CBS to continue the development and construction of the Blue Lake Expansion Project. The work products may be released to third parties to continue the work if necessary.

### **Appendix (E) Schedule**

The Scope of Work will be performed as the Project progresses to completion. The Project is scheduled for completion in late 2014 or early 2015.

## **Appendix (F) Blue Lake Expansion Project-Construction Management**

These services are proposed for the construction management phase of the project, beginning with the advertisement for bid for Contract No. 9 – General Construction and extending through startup of the four generating units at Blue Lake.

### **Firm Qualifications – Currents Consulting**

Currents Consulting is a sole proprietorship currently consisting of one individual – Paul Carson. I have 34 years experience in the hydroelectric industry, having worked on more than 30 hydroelectric developments in my career. Several of these projects are similar in many respects to the Blue Lake Expansion, including Navajo Dam, Swan Lake, Green Lake, and the Eklutna Energy Recovery Station. Please see my resume for more details on these projects.

I am also very familiar with the design of the Blue Lake Expansion, via my role as a staff-extension reviewer of the Hatch Associates Consultants design of the project.

### **Experience in Construction Management**

I have worked on numerous projects in a construction management capacity including shop drawing reviews, vendor shop inspections, site construction inspection, site testing, startup and owner's operator training. Major projects where I have served in this role include: Swan Lake Hydro; Round Butte Fish Passage; Green Lake; Rocky Reach Fish Passage. I am very familiar with the overall construction management process, how it relates to suppliers of equipment and to the on-site construction contractors. Again, please look over my resume which describes some of my major construction management experience.

### **Proposed Staff Organization**

Our proposed staff includes only Paul Carson as an individual engineer, at this time. It is possible that my firm may add staff in the future and that staff might be available for work to support the City of Sitka. The employment of staff other than Paul Carson on the Blue Lake Project would only be provided following written approval of these individuals by the City of Sitka project manager.

### **Confirmed Availability**

I confirm an availability of 75 hours per month through the duration of the project, except for during the Generation Outage period. During the 8-week Generation Outage in 2014 I will commit to residing in Sitka and being available 60 hours per week, if the City's staff wants me to assist in the two-shift-per-day construction management effort during this outage period.

### **Per Diem Rates**

We propose to bill all travel costs (and per-diem) at our actual costs, plus 5% as detailed above. If Sitka or the Construction Management services firm has housing available in Sitka, I will stay at that housing instead of in a hotel.

### **Proposed Scope of Work**

Specific Scope Items:

- ***Manage SharePoint Web Site:*** Review contractor, construction manager and Hatch postings to the web site, such as submittals, RFIs, Memos and contract documents. Serve as the quality control reviewer regarding the format, naming, content and organization of the web site.
- ***Train CM Staff or City Staff to Manage SharePoint:*** As new staff come on board the project, train them in how to manage the submittals, RFIs, and other documents on the site. This could be someone like Jessica Stockel at the City or an employee of the CM Services firm. This training would involve management of the first 100 or so submittals, broken out across contracts 3, 4, 5, 8 and 9. Once the City or CM Services staff has a handle on this work, I would become less involved, providing ongoing Quality Assurance only.
- ***Review of Contractor Submittals:*** As requested by the City, provide technical review of both the Contractors' submittals and the proposed response developed by Hatch and/or the CM Services firm. Note that my proposed 75 hour per month availability assumes I am not reviewing all submittals in detail. Our budget assumes that the "heavy lifting" for the civil-structural submittals will be provided by the CM Services firm and the detailed review for electrical submittals will be provided by the City Electric Department.
- ***Shop Inspection Services:*** When requested by the City, travel to supplier's shops for inspection of on-going manufacture and to witness shop tests. This may include T. Bailey (Anacortes, WA), CHG Buildings (Redmond, WA), Benchmark Industrial Services, (Portland, OR), Gilkes-Ebco (Vancouver, BC), or other supplier's facilities where the City needs inspection support.
- ***Site Testing and Inspections:*** As needed, and as requested by the City, travel to Sitka and represent the City during equipment checkout, testing, and commissioning. Work would include development of testing checklists, review of vendor test plans, coordination with suppliers' Site Representatives, and preparation of test summaries for the City's records.
- ***Generation Outage Support:*** Travel to Sitka and be on-site during the 8-week Generation Outage. Provide support in any area requested by the City or the CM Services firm. This support could include: backup of Sitka staff during night shift work, direct inspection of the work at the site, generating unit construction (FVU) and testing (BLU and FVU), support for office engineer or Resident Project Representative, if requested. This proposed scope assumes Paul Carson will be on-site up to 60 hours per week for the 8-week period.
- ***Plant Operations Manual:*** Serve as lead author for development of a plant operations manual similar to the O&M manual for the Green Lake project.



Note that I will expect to rely on text contributions from Sitka Electric Department staff (for electrical device and system operation) and from the CM services firm (for structure monitoring and system operation). Also, I would like to rely on either Sitka staff or staff of the CM Services firm for document formatting, CADD figure development, and document publishing support, to develop this manual.

#### General Scope Items:

- **Electric Department Staff Support.** Provide support to City Staff as a staff extension of the Electric Department. I am agreeable to providing any support needed for interaction with contractors, the CM Services firm, the FERC, the FERC Board of Consultants, City staff and the public.

#### Estimated Costs

Our estimated costs for the duration of the Project are included in Table 2 below. Note that this is a general estimate, based on an estimated level of support that the City will require. Note also that I do expect the CM Services firm to provide an energetic and very competent home office engineering staff that can lead the review of civil-structural shop drawing submittals and can lead the effort to resolve construction issues and respond to civil-related RFIs. In a similar manner, I expect that the bulk of the electrical engineering support, shop drawing reviews, site electrical inspections etc. will be provided by Bob Dryden, or a similarly qualified electrical engineer at the CM services firm. If these two assumptions are not valid, then the level of support I have assumed may be too low. In any event, I will provide the support the City desires, nothing more.

Table 2. Estimated Cost for Construction Management Support Services.

2012 Services, May 1 through December 31	Months	Hrs/mo	\$ /hr	Estimated Cost		
				Labor	Expenses	Total
SharePoint web site management, Services During Bidding Phase, Bid Evaluation, Review of Submittals, Supplier shop drawing submittal reviews, shop inspections, City staff support	8	60	\$163	\$78,240	\$7,824	\$86,064
<b>2013 Services, January 1 to December 31</b>						
SharePoint web site management, Construction management support, shop inspections, site inspections, submittal reviews	12	70	\$167	\$140,280	\$14,028	\$154,308
<b>2014 Services, Jan 1 to Aug 31 and Nov 1 to Dec 31</b>						
SharePoint web site quality assurance, Construction management support, shop inspections, site inspections, submittal reviews	10	75	\$171	\$128,250	\$12,825	\$141,075
<b>2014 Generation Outage, September 1 to October 31</b>						
On-site City staff support during the 8-week outage, 60 hrs per week	2	240	\$171	\$82,080	\$13,080	\$95,080
<b>2015 Startup and Contract Closeout Assistance</b>						
Assist with startup of BLU units 4 and 5, and FVU. Assist with closeout of Contract 9. Serve as lead author for the Plant Operations Manual development	3.5	80	\$175	\$49,000	\$6,500	\$55,500
<b>Total Estimated Work Hours =</b>		<b>2830</b>		<b>Total Estimated Cost=</b>		<b>\$532,027</b>

## **Appendix (G) Takatz Lake Generation Facilities Study**

### **Scope of Work**

This study effort will define a recommended arrangement of Project Generating Facilities for the Takatz Lake Hydroelectric Project, FERC Project No. 13234-000. This study seeks to confirm the specific arrangement of the Project's power intake, tunnel-penstock, powerhouse, and support facilities in the powerhouse area. The study will confirm, to the extent possible, whether the project can be developed in a phased approach, using a lake tap of Takatz Lake for the power intake.

The study work will also include development of draft FERC Exhibit A (Project Description) and Exhibit B (Project Operations) sections of a draft preliminary license application document (PAD). This work will not include Exhibit F or G drawings, but will provide pre-feasibility level drawings that could be used to develop the Exhibit F drawings.

Information for the Project transmission line to Sitka will be taken from selected transmission line feasibility studies as prepared by Commonwealth Associates, Inc.

### **TASKS**

#### **1. Review of Existing Documents**

Review of the following existing (and forthcoming) documents:

- a. Alaska Power Administration. Plan of Development, Takatz Creek Project, Alaska. US Department of Interior, January 1968 62 pages
- b. Alaska Power Administration. Takatz Creek Project, Alaska, Appendix A – Water and Power, Appendix B – Designs and Estimates. US Department of Interior, September 1967. 80 and 82 pages.
- c. US Department of Interior. Geologic Reconnaissance of a Possible Powersite at Takatz Creek, Southeastern Alaska. Geological Survey Bulletin 1211-D. 22 pages. US Bureau of Reclamation.
- d. Commonwealth Associates, Inc. Takatz Overhead Transmission Line Alternative Feasibility Review Report Summary. February 2011, 49 pages.
- e. Currents Consulting. Project Capacity Analysis, March 2011, 87 pages.
- f. Preliminary topographic and bathymetric maps as prepared by TerraSond, 2012.
- g. Currents Consulting, Request for Proposal for Completion of Bathymetric Survey and Geophysical Survey, December 2012, 10 pages.
- h. Bathymetric Survey and Geophysical Survey Reports (consultant as yet not selected- survey in August 2013, report in fall, 2013).

Deliverables:

- a. Annotated bibliography of reviewed documents. Annotation shall include a short discussion of the primary information taken from each reference.

## **2. Team Meeting – Concept Review, Site Visit Planning**

Meeting preparation: Following review of existing data, prepare sketches and drawing markups (from prior studies) of proposed generating facilities locations and arrangements. Coordinate input from geotechnical and civil-structural staff to arrive at a tentative arrangement of facilities.

Team meeting: Meet in Seattle area to finalize sketches and drawing markups. Plan the summer 2013 site visit. Develop itinerary, site work tasks, and schedule of the 2013 site visit.

## **3. Preliminary Facilities Layout**

Prepare revised sketches and preliminary drawings showing consultant's preliminary preferred arrangement of the power intake, tunnels, powerhouse and local support facilities. This layout shall be based on reviews of the information existing in early 2013 and the team's concept review meeting. These drawings and sketches may be used in the field for orientation, markup and review of the site layout, during the site visit,

Deliverables:

- a. Site plan drawings and graphics suitable for use in the field. Intent shall be to have drawings that can serve as a guide for the site inspection and which can be marked up during the site visit.
- b. List of physical locations that the study team wants to visit.
- c. Proposed schedule and itinerary for site work.

## **4. Site Visit**

Travel to Sitka and the Project site in August or September 2013. Visit the site and observe conditions in the following areas: a) upper lake sediment delta; b) power intake area; c) dam site; d) tunnel alignment including valve chamber; e) lower tunnel alignment; f) powerhouse site including dock and support facilities area; g) transmission corridor – (overflight only to observe the transmission corridor).

Deliverables:

- a. Site visit – general report;
- b. Photographs and narrated video of site observation (on electronic media).

## **5. Geotechnical Assessment**

Evaluate the geotechnical feasibility of a lake tap development for the power conduit. Provide opinion on the risk of slumping or underwater landslides of the sediment delta. Evaluate the suitability of the dam site for a single dam constructed to el. 990. (i.e., no saddle dam). Evaluate the risk of landslides and avalanches in the powerhouse area and areas with exposed project facilities. Summarize the existing geotechnical data and the information gained during the site visit. Provide a recommendation for the general scope of future geotechnical site investigations that may be needed to prove the feasibility of the Phased development of the project.

Deliverables:

- a. Geotechnical report, draft and final versions. Include pertinent drawings and text from prior geotechnical reports such that this 2013 report can serve as a stand-alone document for CBS and general readers.
- b. Drawing showing geotechnical findings, based on surface observations.
- c. Recommended geotechnical field explorations and associated phasing required for the project development.
- d. Clear identification of geotechnical risks and measures required to mitigate these risks.

## **6. Finalize Facilities Layout**

Prepare drawings similar to FERC Exhibit F drawings showing general arrangement plans, sections and elevations of the power generating facilities. Include the dock and powerhouse support facilities. AutoCAD format. Use topographic and bathymetric survey drawings as backgrounds for site plans and layouts. Include up to 3 drawing sheets showing the transmission corridor plan and typical structure drawings, as provided by Commonwealth Associates.

Deliverables:

- a. Draft drawings
- b. Final Drawings
- c. Electronic files in AutoCAD format

## **7. Report**

Prepare draft report summarizing the study effort. Provide a clear description of the suggested project arrangement, with options considered, but discarded, etc. Provide clear statements regarding how the preferred arrangement was selected. Include a statistical summary of main project dimensions, capacities, etc. Meet

with City and Borough staff to review draft report. Revise draft report and provide final report.

Deliverables:

- a. Draft report
- b. Meeting in Sitka with CBS staff to review draft report
- c. Final draft report.
- d. Final report
- e. Electronic copies of report, drawings, figures, photos, etc. in native format (MS Word, AutoCAD, jpg, etc).
- f. Electronic copies of report in .pdf format, with bookmarking.

#### **8. Draft FERC Exhibits A and B**

Prepare draft Exhibit A and B in format suitable for submission to the FERC as part of a Preliminary Application Document. This will not include drawings.

Deliverables:

- a. Preliminary draft Exhibits
- b. Final Draft Exhibits.
- c. Electronic copies of text, drawings, figures, photos, etc. in native format (MS Word, AutoCAD, jpg, etc).
- d. Electronic copies of draft Exhibits in .pdf format, with bookmarking.

#### **9. Support by Commonwealth Associates**

Commonwealth Associates will provide support for this study in the following areas:

- a. Provide draft report text for description of transmission facilities.
- b. Provide draft text for the FERC Exhibits A and B.
- c. Review final draft of overall report to ensure consistency of our report with past reports and studies provided by Commonwealth Associates.



## SCHEDULE

1. April 10, 2013 – submit price proposal for work
2. June 1, 2013 – Notice to Proceed, begin office studies
3. August, 2013 – Site visit
4. November, 2013 – Draft report
5. December, 2013 – Review meeting with City staff
6. January 31, 2014 – Submit final report.

## PROJECT TEAM

Project Engineer – Paul Carson, Currents Consulting

Lead Civil Engineer – Mort McMillen or Matt Moughmian, McMillen LLC

Geotechnical Engineer – Kim de Rubertis

Lead CADD technician - Robert Guerrero, McMillen LLC

Transmission Line Support – Dean Scott, Commonwealth Associates