PROFESSIONAL SERVICES AGREEMENT BETWEEN CITY OF STANWOOD WASHINGTON AND SITE DEVELOPMENT ASSOCIATES FOR CONSULTANT SERVICES

THIS AGREEMENT ("Agreement') is made and entered into by and between the City of Stanwood, Washington, a Washington State municipal corporation ("City"), and __Site Development Associates, LLC a Washington limited liability company ("Consultant").

NOW, THEREFORE, in consideration of the terms, conditions, covenants and performances contained herein, the parties hereto agree as follows:

ARTICLE I. PURPOSE

The purpose of this Agreement is to provide the City with consultant services regarding 30% design of a lift station, force main and outfall for the Irvine Slough Stormwater Separation Project as described in Article II. The general terms and conditions of the relationship between the City and the Consultant are specified in this Agreement.

ARTICLE II. SCOPE OF SERVICES

The Scope of Services is attached hereto as **Exhibit "A"** and incorporated herein by this reference ("Scope of Services"). All services and materials necessary to accomplish the tasks outlined in the Scope of Services shall be provided by the Consultant unless noted otherwise in the Scope of Services or this Agreement. All such services shall be provided in accordance with the standards of the Consultant's profession. Any provisions in the Scope of Services inconsistent with the terms of this Agreement or superseded by the terms of this Agreement.

ARTICLE III. OBLIGATIONS OF THE CONSULTANT

III.1 **MINOR CHANGES IN SCOPE**. The Consultant shall accept minor changes, amendments, or revision in the detail of the Scope of Services as may be required by the City when such changes will not have any impact on the service costs or proposed delivery schedule. Extra work, if any, involving substantial changes and/or changes in cost or schedules will be addressed as follows:

Extra Work. The City may desire to have the Consultant perform work or render services in connection with each project in addition to or other than work provided for by the expressed intent of the Scope of Services in the scope of services. Such work will be considered as extra work and will be specified in a written supplement to the scope of services, to be signed by both parties, which will set forth the nature and the scope thereof. All proposals for extra work or services shall be prepared by the Consultant at no cost to the City. Work under a supplemental agreement shall not proceed until executed in writing by the parties.

III.2 **WORK PRODUCT AND DOCUMENTS**. The work product and all documents produced under this Agreement shall be furnished by the Consultant to the City, and upon completion of the work shall become the property of the City, except that the Consultant may retain one copy of the work product and documents for its records. The Consultant will be responsible for the accuracy of the work, even though the work has been accepted by the City.

In the event that the Consultant shall default on this Agreement or in the event that this Agreement shall be terminated prior to its completion as herein provided, all work product of the Consultant, along with a summary of work as of the date of default or termination, shall become the property of the City. Upon request, the Consultant shall tender the work product and summary to the City. Tender of said work product shall be a prerequisite to final payment under this Agreement. The summary of work done shall be prepared at no additional cost to the City.

Consultant will not be held liable for reuse of documents produced under this Agreement or modifications thereof for any purpose other than those authorized under this Agreement without the written authorization of Consultant.

III.3 **TERM.** The term of this Agreement shall commence on November 10, 2016 and shall terminate at midnight December 31, 2017. The parties may extend the term of this Agreement by written mutual agreement.

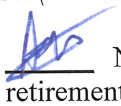
III.4 **NONASSIGNABLE.** The services to be provided by the Consultant shall not be assigned or subcontracted without the express written consent of the City. Services as assigned or subcontracted in the Scope of Work are hereby consented to by City.

III.5 **EMPLOYMENT.**

a. The term "employee" or "employees" as used herein shall mean any officers, agents, or employee of the of the Consultant.

b. Any and all employees of the Consultant, while engaged in the performance of any work or services required by the Consultant under this Agreement, shall be considered employees of the Consultant only and not of the City, and any and all claims that may or might arise under the Workman's Compensation Act on behalf of any said employees while so engaged, and any and all claims made by any third party as a consequence of any negligent act or omission on the part of the Consultant or its employees while so engaged in any of the work or services provided herein shall be the sole obligation of the Consultant.

c. Consultant represents, unless otherwise indicated below, that all employees of Consultant that will provide any of the work under this Agreement have not ever been retired from a Washington State retirement system, including but not limited to Teacher (TRS), School District (SERS), Public Employee (PERS), Public Safety (PSERS), law enforcement and fire fighters (LEOFF), Washington State Patrol (WSPRS), Judicial Retirement System (JRS), or otherwise. *(Please indicate No or Yes below)*



No employees supplying work have ever been retired from a Washington state retirement system.

_____ Yes employees supplying work have been retired from a Washington state retirement system.

In the event the Consultant indicates "no", but an employee in fact was a retiree of a Washington State retirement system, and because of the misrepresentation the City is required to defend a claim by the Washington State retirement system, or to make contributions for or on account of the employee, or reimbursement to the Washington State retirement system for benefits paid, Consultant hereby agrees to save, indemnify, defend and hold City harmless from and against all

expenses and costs, including reasonable attorney's fees incurred in defending the claim of the Washington State retirement system and from all contributions paid or required to be paid, and for all reimbursement required to the Washington State retirement system. In the event Consultant affirms that an employee providing work has ever retired from a Washington State retirement system, said employee shall be identified by Consultant, and such retirees shall provide City with all information required by City to report the employment with Consultant to the Department of Retirement Services of the State of Washington.

III.6 **INDEMNITY**.

a. **Indemnification / Hold Harmless.** Consultant shall defend, indemnify and hold the City, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or resulting from the acts, errors or omissions of the Consultant in performance of this Agreement, except for injuries and damages caused by the sole negligence of the City.

b. Should a court of competent jurisdiction determine that this Agreement is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Consultant and the City, its officers, officials, employees, and volunteers, the Consultant's liability, including the duty and cost to defend, hereunder shall be only to the extent of the Consultant's negligence.

c. 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. This waiver has been mutually negotiated by the parties.

d. Public Records Requests.
In addition to Paragraph IV.3 b, when the City provides the Consultant with notice of a public records request per Paragraph IV. 3 b, Consultant agrees to save, hold harmless, indemnify and defend the City its officers, agents, employees and elected officials from and against all claims, lawsuits, fees, penalties and costs resulting from the consultants violation of the Public Records Act RCW 42.56, or consultant's failure to produce public records as required under the Public Records Act.

e. The provisions of this section III.6 shall survive the expiration or termination of this agreement.

III.7 **INSURANCE**.

a. **Insurance Term**
The Consultant shall procure and maintain for the duration of the Agreement, 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 the Consultant, its agents, representatives, or employees. The City reserves the option to require subconsultants to procure and maintain insurance against the same claims in the same amounts as specified for Consultant.

b. **No Limitation**
Consultant's or subconsultant's maintenance of insurance as required by the agreement shall not be construed to limit the liability of the Consultant or the subconsultant to the coverage provided

by such insurance, or otherwise limit the City's recourse to any remedy available at law or in equity.

c. **Minimum Scope of Insurance - Consultant or Subconsultant, if required, shall obtain insurance of the types described below:**

(1). 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.

(2). Commercial General Liability insurance shall be written at least as broad on ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, stop-gap, independent contractors and personal injury and advertising injury. The City shall be named as an additional insured under the Consultant's Commercial General Liability insurance policy with respect to the work performed for the City using an additional insured endorsement at least as broad as ISO CG 20 26.

(3). Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

(4). Professional Liability insurance appropriate to the Consultant's profession.

d. **The minimum insurance limits shall be as follows:**
Consultant or subconsultant, if required, shall maintain the following insurance limits:

(1) Comprehensive General Liability. $1,000,000 combined single limit per occurrence for bodily injury personal injury and property damage; $2,000,000 general aggregate.

(2) Automobile Liability. $1,000,000 combined single limit per accident for bodily injury and property damage.

(3) Workers' Compensation. Workers' compensation limits as required by the Workers' Compensation Act of Washington.

(4) Professional Liability/Consultant's Errors and Omissions Liability. $1,000,000 per claim and $1,000,000 as an annual aggregate.

e. **Notice of Cancellation**. In the event that the Consultant or subconsultant, if applicable, receives notice (written, electronic or otherwise) that any of the above required insurance coverage is being cancelled and/or terminated, the Consultant or subconsultant shall immediately (within forty-eight (48) hours) provide written notification of such cancellation/termination to the City.

f. **Acceptability of Insurers**. Insurance to be provided by Consultant or subconsultant shall be with insurers with a current A.M.Best rating of no less than A:VII, or if not rated by Best, with minimum surpluses the equivalent of Best VII rating.

g. **Verification of Coverage**. In signing this agreement, the Consultant is acknowledging and representing that required insurance is active and current. Consultant or subconsultant if applicable shall furnish the City with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsement, evidencing the insurance requirements of the Consultant before commencement of the work. Further, throughout the term of this Agreement, the Consultant shall provide the City with proof of insurance upon request by the City.

h. **Insurance shall be Primary - Other Insurance Provision**. The Consultant's or subconsultant's (if applicable) insurance coverage shall be primary insurance as respect the City. The Consultant's or subconsultant's Automobile Liability and Commercial General Liability insurance policies are to contain, or be endorsed to contain that they shall be primary insurance as respect the City. Any Insurance, self-insurance, or self-insured pool coverage maintained by the City shall be excess of the Consultant's or subconsultant's insurance and shall not contribute with it.

i. **Claims-made Basis**. Unless approved by the City all insurance policies shall be written on an "Occurrence" policy as opposed to a "Claims-made" policy. The City may require an extended reporting endorsement on any approved "Claims-made" policy.

j. **Failure to Maintain Insurance** Failure on the part of the Consultant or subconsultant, if applicable, to maintain the insurance as required shall constitute a material breach of contract, upon which the City may, after giving five business days' notice to the Consultant to correct the breach, immediately terminate the contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the City on demand, or at the sole discretion of the City, offset against funds due the Consultant from the City.

k. **Public Entity Full Availability of Consultant Limits**
If the Consultant or subconsultant, if applicable, maintains higher insurance limits than the minimums shown above, the Public Entity shall be insured for the full available limits of Commercial General and Excess or Umbrella liability maintained by the Consultant or subconsultant, irrespective of whether such limits maintained by the Consultant or subconsultant are greater than those required by this contract or whether any certificate of insurance furnished to the Public Entity evidences limits of liability lower than those maintained by the Consultant or subconsultant.

III.8 **DISCRIMINATION PROHIBITED AND COMPLIANCE WITH EQUAL OPPORTUNITY LEGISLATION**. The Consultant agrees to comply with equal opportunity employment and not to discriminate against client, employee, or applicant for employment or for services because of race, creed, color, religion, national origin, marital status, sex, sexual orientation, age or handicap except for a bona fide occupational qualification with regard, but not limited to, the following: employment upgrading; demotion or transfer; recruitment or any recruitment advertising; layoff or terminations; rates of pay or other forms of compensation; selection for training, rendition of services. The Consultant further agrees to maintain (as appropriate) notices, posted in conspicuous places, setting forth the provisions of this nondiscrimination clause. The Consultant understands and agrees that if it violates this nondiscrimination provision, this Agreement may be terminated by the City, and further that the Consultant will be barred from performing any services for the City now or in the future, unless a showing is made satisfactory to the City that discriminatory practices have been terminated and that recurrence of such action is unlikely.

III.9 **UNFAIR EMPLOYMENT PRACTICES**. During the performance of this Agreement, the Consultant agrees to comply with RCW 49.60.180, prohibiting unfair employment practices.

III.10 **LEGAL RELATIONS**. The Consultant shall comply with all federal, state and local laws and ordinances applicable to work to be done under this Agreement. The Consultant represents that the firm and all employees assigned to work on any City project are in full compliance with the statutes of the State of Washington governing activities to be performed and that all personnel to be assigned to the work required under this Agreement are fully qualified and properly licensed to perform the work to which they will be assigned. This Agreement shall be interpreted and construed in accordance with the laws of Washington. Venue for any litigation commenced relating to this Agreement shall be in Snohomish County Superior Court.

III.11 **INDEPENDENT CONTRACTOR**.

a. The Consultant and the City understand and expressly agree that the Consultant is an independent contractor in the performance of each and every part of this Agreement. The Consultant expressly represents, warrants and agrees that his status as an independent contractor in the performance of the work and services required under this Agreement is consistent with and meets the six-part independent contractor test set forth in RCW 51.08.195 or as hereafter amended. The Consultant, as an independent contractor, assumes the entire responsibility for carrying out and accomplishing the services required under this Agreement. The Consultant shall make no claim of City employment nor shall claim any related employment benefits, social security, and/or retirement benefits.

b. The Consultant shall be solely responsible for paying all taxes, deductions, and assessments, including but not limited to federal income tax, FICA, social security tax, assessments for unemployment and industrial injury, and other deductions from income which may be required by law or assessed against either party as a result of this Agreement. In the event the City is assessed a tax or assessment as a result of this Agreement, the Consultant shall pay the same before it becomes due.

c. 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.

d. Prior to commencement of work, the Consultant shall obtain a business license from the City.

III.12 **CONFLICTS OF INTEREST.** The Consultant agrees to and shall notify the City of any potential conflicts of interest in Consultant's client base and shall obtain written permission from the City prior to providing services to third parties where a conflict or potential conflict of interest is apparent. If the City determines in its sole discretion that a conflict is irreconcilable, the City reserves the right to terminate this Agreement.

III.13 **CITY CONFIDENCES.** The Consultant agrees to and will keep in strict confidence, and will not disclose, communicate or advertise to third parties without specific prior written consent from the City in each instance, the confidences of the City or any information regarding the City or services provided to the City.

III.14 **SUBCONTRACTORS/SUBCONSULTANTS**.

a. The Consultant shall be responsible for all work performed by subcontractors/subconsultants pursuant to the terms of this Agreement.

b. The Consultant must verify that any subcontractors/subconsultants they directly hire meet the responsibility criteria for the project. Verification that a subcontractor/subconsultant has proper license and bonding, if required by statute, must be included in the verification process. The Consultant will use the following Subcontractors/Subconsultants or as set forth in Exhibit A:

1 Alliance
Northwest Hydraulic Consultants
CH2M Hill
GeoEngineers
Confluence Environmental

c. The Consultant may not substitute or add subcontractors/subconsultants without the written approval of the City.

d. All Subcontractors/Subconsultants shall have the same insurance coverages and limits as set forth in this Agreement and the Consultant shall provide verification of said insurance coverage.

ARTICLE IV. OBLIGATIONS OF THE CITY

IV.1 **PAYMENTS**.

a. The Consultant shall be paid by the City for services rendered under this Agreement as described in the Scope of Services and as provided in this section. In no event shall the compensation paid to Consultant under this Agreement exceed $470,500 (four hundred seventy thousand and five hundred dollars) without the written agreement of the Consultant and the City. Such payment shall be full compensation for work performed and services rendered and for all labor, materials, supplies, equipment and incidentals necessary to complete the work. In the event the City elects to expand the scope of services from that set forth in Exhibit A, the City shall pay Consultant a mutually agreed amount.

b. The Consultant shall submit a monthly invoice to the City for services performed in the previous calendar month in a format acceptable to the City. The Consultant shall maintain time and expense records and provide them to the City upon request.

c. The City will pay timely submitted and approved invoices received before the 20th of each month within thirty (30) days of receipt.

IV.2 **CITY APPROVAL**. Notwithstanding the Consultant's status as an independent contractor, results of the work performed pursuant to this Agreement must meet the approval of the City, which shall not be unreasonably withheld if work has been completed in compliance with the Scope of Services and City requirements.

IV.3 **MAINTENANCE/INSPECTION OF RECORDS**.

a. The Consultant shall maintain all books, records, documents and other evidence pertaining to the costs and expenses allowable under this Agreement in accordance with generally accepted accounting practices. All such books and records required to be maintained by this Agreement shall be subject to inspection and audit by representatives of the City and/or the

Washington State Auditor at all reasonable times, and the Consultant shall afford the proper facilities for such inspection and audit. Representatives of the City and/or the Washington State Auditor may copy such books, accounts and records where necessary to conduct or document an audit. The Consultant shall preserve and make available all such books of account and records for a period of three (3) years after final payment under this Agreement. In the event that any audit or inspection identifies any discrepancy in such financial records, the Consultant shall provide the City with appropriate clarification and/or financial adjustments within thirty (30) calendar days of notification of the discrepancy.

b. **Public Records**

The parties agree that this Agreement and records related to the performance of the Agreement are with limited exception, public records subject to disclosure under the Public Records Act RCW 42.56. Further, in the event of a Public Records Request to the City, the City may provide the Consultant with a copy of the Records Request and the Consultant shall provide copies of any City records in Consultant's possession, necessary to fulfill that Public Records Request. If the Public Records Request is large the Consultant will provide the City with an estimate of reasonable time needed to fulfill the records request.

ARTICLE V. GENERAL

V.1 **NOTICES**. Notices to the City shall be sent to the following address:

Shawn Smith, P.E.
City Engineer/Assistant PW Director
10220 270th Street NW
Stanwood, WA 98292

Notices to the Consultant shall be sent to the following address:

Site Development Associates
Andrew Reaves, P.E.
1724 W. marine View Drive; Suite 140
Everett, WA 98201

Receipt of any notice shall be deemed effective three (3) days after deposit of written notice in the U.S. mail with proper postage and address.

V.2 **TERMINATION**. The right is reserved by the City to terminate this Agreement in whole or in part at any time upon ten (10) calendar days' written notice to the Consultant.

If this Agreement is terminated in its entirety by the City for its convenience, the City shall pay the Consultant for satisfactory services performed through the date of termination in accordance with payment provisions of Section IV.1.

V.3 **DISPUTES**. The parties agree that, following reasonable attempts at negotiation and compromise, any unresolved dispute arising under this Agreement may be resolved by a mutually agreed-upon alternative dispute resolution of arbitration or mediation.

V.4 **EXTENT OF AGREEMENT/MODIFICATION**. This Agreement, together with attachments or addenda, represents the entire and integrated Agreement between the parties and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement may be amended, modified or added to only by written instrument properly signed by both parties.

V.5 **SEVERABILITY**

a. If a court of competent jurisdiction holds any part, term or provision of this Agreement to be illegal or invalid, in whole or in part, the validity of the remaining provisions shall not be affected, and the parties' rights and obligations shall be construed and enforced as if the Agreement did not contain the particular provision held to be invalid.

b. If any provision of this Agreement is in direct conflict with any statutory provision of the State of Washington, that provision which may conflict shall be deemed inoperative and null and void insofar as it may conflict, and shall be deemed modified to conform to such statutory provision.

V.6 **NONWAIVER**. A waiver by either party hereto of a breach by the other party hereto of any covenant or condition of this Agreement shall not impair the right of the party not in default to avail itself of any subsequent breach thereof. Leniency, delay or failure of either party to insist upon strict performance of any agreement, covenant or condition of this Agreement, or to exercise any right herein given in any one or more instances, shall not be construed as a waiver or relinquishment of any such agreement, covenant, condition or right.

V.7 **FAIR MEANING**. The terms of this Agreement shall be given their fair meaning and shall not be construed in favor of or against either party hereto because of authorship. This Agreement shall be deemed to have been drafted by both of the parties.

V.8 **GOVERNING LAW.** This Agreement shall be governed by and construed in accordance with the laws of the State of Washington.

V.9 **VENUE.** The venue for any action to enforce or interpret this Agreement shall lie in the Superior Court of Washington for Snohomish County, Washington.

V.10 **COUNTERPARTS**. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same Agreement.

V.11 **AUTHORITY TO BIND PARTIES AND ENTER INTO AGREEMENT**. The undersigned represent that they have full authority to enter into this Agreement and to bind the parties for and on behalf of the legal entities set forth below.

DATED this 10th, day of November, 2016.

CITY OF STANWOOD

By _____
Leonard Kelley, Mayor

Approved as to form:

_____
Grant Weed, City Attorney

Site Development Associates, LLC

By _____
Andrew Reaves, Principal Member/Manager

EXHIBT A

October 31, 2016

City of Stanwood
ATTN: Deborah Knight
10220 270th Street NW
Stanwood, WA 98292

Irvine Slough Stormwater Separation
Stormwater Lift Station Thirty Percent (30%) Design Scoping

Dear Deborah:

Thank you for selecting SDA's team for the next stage to resolving flooding issues in the City. Based on information gathered during our previous outreach and scoping phase of the project we have prepared the following scope and fee for 30% design and plans preparation of the Stormwater lift station.

Overview:

Initially we will need survey information in various locations in the City to provide enough information for SDA to make a determination the location of the lift station, discharge force main and outfall. After these infrastructure locations are determined, more in depth geotechnical investigations will begin, pump hydrology will be determined, design of the station itself will begin. Lastly, environmental permits and necessary mitigation will be identified and designed, and the permitting process will begin.

The following scope of services is intended to deliver a set of 30% design completion plan set for the pump station, discharge force main and outfall.

Task 201 – Project Management

During the design of the lift station, the management of the project design team specific to timing and design needs will be critical. During the surveying phase, SDA will manage the survey effort so as to minimize surveying locations that are not needed for this phase. We will be sure the strategy of the survey effort targets areas that are needed to begin design/siting of the lift station first. Some of the survey scope as outlined in the survey sub consultant scope can be avoided depending on where the station is sited, thus allowing us to be more targeted with our surveying efforts.

Involvement of the other sub consultants will be after the location of the lift station, force main and discharge location have been established. SDA will manage these efforts and report progress to the City on a weekly basis, or as often as is needed during the design effort. This task will include all meetings with the City and sub consultants necessary to completion of the 30% design plans.

Hourly Estimate $16,500

Task 202 – Project Surveying/Mapping

SDA will be subcontracting the surveying to a sub consultant in Bellevue called 1 Alliance Geomatics. We have worked with 1 Alliance in the past hand have been very impressed with their responsiveness, quality of work, and value. The order of priorities of the survey effort will be as follows:

1. Establish Horizontal and Vertical Control with the City to NAD 83/91 based on State Plane Coordinate System, North Zone (4601).
2. Take shots on the outer perimeter of the City, marine view drive, culvert under railroad tracks just north of SR 532, north end of 92nd at 276th, 102nd and 276th intersection, north end of 100th, 101st, 102nd, 103rd, and 104th, and Douglas slough at SR 532.
3. Take shots on the existing pump, invert of Irvine slough and the elevation of the bottom of the inlet and pump chambers. Data from 1 and 2 will allow conceptual inverts to be calculated of the gravity main into the existing pump.
4. Boundary and topo of SR 532 to edge of pavement only (No work in Traffic) with utility locates, 276th, Marine View Dr. Horizontal limits as of now are Pioneer Highway to 100' west of the Douglas slough crossing.
5. More comprehensive laser scan as-built of existing pump station, if results from 1 and 2 and design work make a re-work of the station possible/practical.
6. Pothole utilities along SR 532 as needed to establish accurate vertical data.

Deliverable for this task is a City wide survey as outlined above with all the previously provided GIS data incorporated into one database.

Hourly Estimate $48,200

Task 203 – Analysis of Existing Lift Station

The most cost effective IS4 list station design could be the modification and utilization of the existing lift station at the west end of Irvine Slough. The depth of the two chambers, geometry of the existing pumps and outfalls will need to be evaluated. The modification of the existing lift station will need to include the following:

- Isolation of Irvine Slough from the flood plain.
- The ability to excavate the inlet and pump bays to a deep enough elevation to allow for gravity conveyance entry of all future phases of the IS4 project.
- The ability to then construct new inlet and pump chambers at this lower depth, while not destroying the existing lift station. Increasing depth of inlet and pump chambers will most likely be in the form of a drop in utility vault base and sides.

Key information to how practical/possible this idea is will be depth of existing chambers in the station, and how much deeper they must be to allow for the existing station to be retrofitted. The first survey information we order will be the as-built of the existing station, and the elevations of the farthest reaches in the City basin. This will get us close to the needed additional excavation depth, thus we can analyze how we would dig and build new station chambers to this depth.

Deliverable for this task will be as follows:

- Plan view of the station, with needed infrastructure changes shown.
- Cross section of the station on a longitudinal and perpendicular plane, with needed infrastructure changes shown.
- Design memorandum outlining the process for evaluating the station, and conclusions drawn.

Hourly Estimate $12,500

Task 204 – Lift Station Siting

Upon receipt of survey data, SDA will work with the City of Stanwood to site the lift station. Siting and Design considerations will be as follows:

- Maximizing efficiency of the station with respect to future phases of the IS4 project conveyance design to the east and west, future CIP needs to the north, and Douglas Slough to the west.
- Maximize the capability of the lift station in phase 1 with existing drainage infrastructure, thus allowing the station to have some effective drainage removal capacity with minimal new gravity conveyance to the lift station.
- Discharge location as close to the lift station as practical, yet centrally located with future IS4 phases to control depth of the station wet well and future conveyance system designs.
- Cost of site purchase, and easements needed to enter/exit the site with conveyance infrastructure.
- Cost and timing of the permitting process and environmental concerns.

This task will also include time for SDA to spend some time in the field understanding how the City drains, and how to most effectively site the station to work with existing conveyance, so the phase 1 construction of the pump can potentially have an effect on downtown flooding.

Deliverable for this task shall be:

- Summary of locations evaluated.
- Design memorandum outlining the process for evaluating the chosen locations, and conclusions drawn.

If the effort resulting from Task 203 allows the use of the existing lift station, this task will no longer be needed. Additional budget will be needed, however, for design efforts to retrofit the existing lift station.

Hourly Estimate $14,000

Task 205 – Force Main Design

Included in this task will be the siting and design of the force main from the lift station to the outfall location. Considerations during this design task will be franchise and City utility locations, lift station and outfall locations, critical areas, and existing public r/w corridors available.

Deliverable for this task shall be:

- 30% plan set including plan and profile views of the station site.
- Plan and Profile of the force main and discharge location of sufficient detail to begin the permitting process.

Hourly Estimate $14,000

Task 206 – Hydraulic Modeling for Lift Station Design

As soon as the location of the lift station is established, the modeling effort for design of the station itself will begin. SDA has chosen NHC (Northwest Hydraulic Consultants) to manage and run this model, and provide the hydraulic inputs for the local basins SDA and the City determine will be served by the lift station. As they already have the model and are familiar with it, it seemed an efficient use of resources to keep them on the team.

Deliverable for this task will be hydraulic inputs to SDA allowing for design of the station.

Hourly Estimate $13,400

Task 207 – Lift Station Design

SDA has chosen CH2M to design the lift station. SDA will provide CH2M with the location of the station Invert Diameter in and out of the station, the drainage model for input, and the force main design out of the station. The process for the design of the lift station will proceed as follows:

- Project Management, to include monthly reporting and invoicing to SDA, Quality Assurance/Control.
- Modeling Review and Modeling Plan to include coordination with NHC, modeling Plan and Development.
- 10% Concept Development to include input on siting, selection of pump type and input on force main location/design, a 10% Technical Memorandum and Cost Estimate.
- 30% Design Development based on input from 10% design package. This will include preliminary structural designs, mechanical and electrical designs.

  The Deliverable from CH2M will be a drawing package to include:
  - General Notes
  - P&ID
  - Hydraulic Profile
  - Proposed Pump Station Civil Site Plan (SDA)
  - Structural Foundation Plan
  - Structural Floor Plan and Structural Roof Plan
  - Structural Design of Intake and Outlet Structure
  - Two (2) Structure Cross Sections
  - Pump Station mechanical Plan with Two (2) Cross Sections
  - Electrical One-Line Diagram
  - 30% Cost Estimate

Hourly Estimate $254,725

Task 208 – Geotechnical Assessment

SDA has selected GeoEngineers as the geotechnical firm for the Irvine Slough Separation Project.

The geotechnical deliverable at the 30% stage shall include the following:

- Preliminary Environmental Assessment (Phase 1 ESA) on potential sites and force main/Gravity Conveyance locations. This is to establish the potential risk for contaminated groundwater and soils.

- Geotechnical Assessment to include review of existing soils data, site visit and anticipated soil conditions.
- Subsidence Analysis to evaluate potential for current and continued settlement due to secondary consolidation of subsurface soils.

Hourly Estimate $32,775

Task 209 – Environmental Assessment/Planning/Permitting

SDA has selected Confluence Environmental Company for the Environmental/Permitting component of the IS4 project. The scope for the environmental component of the project will be dependent on where the station, force main and outfall locations are sited. The environmental scope and fee assumes the station will be just west of City hall with the force main and outfall as proposed in our initial design. I should note that this scope and fee is assuming the worst case scenario with respect to cost of this task, specifically the outfall occurring in the original proposed location near the existing Douglas slough outfall. If the siting of the station, force main, and outfall are different, this scope and fee will be adjusted. Included in the environmental scope is the following:

- Coordinate with SDA and the City of Stanwood during the environmental and permit review process.
- Prepare permit applications for an Army Corps Nationwide Permit (NWP) 43, WDFW HPA, Department of Ecology Section 401 Letter of Verification, and City of Stanwood shoreline substantial development permit, Floodplain Development Permit, and grading permit.
- Prepare an Endangered Species Act Biological Assessment.
- Prepare a SEPA checklist for the City of Stanwood to issue a Threshold Determination of Non-Significance.
- Conduct a site visit to gather data on existing conditions, including wetland and ordinary high water mark delineation as needed.
- Develop a mitigation plan as part of the permitting application package to address temporary and permanent impacts.
- Coordinate with regulatory agencies in advance of the application submittals, as well as follow up after application submittal.
- Respond to comments regarding application materials.
- Assumptions:
    - 30% design will be completed. Information such as, but not limited to, the impact footprint/ limits of disturbance, grading quantities, cross-sections, profiles, construction means and methods/BMPs.
    - SDA will provide CAD files/drafting support for permit drawings production.
    - SDA will prepare floodplain elevation information and/or certification if needed.
    - Mitigation will be needed for the new outfall location, and that mitigation will take place at and adjacent to the impact site.
    - Agency comments on application materials will be minimal. Additional studies or documentation may require additional scope.
    - The Corps will not require an Individual Corps Permit and will concur with the use of NWP 43.
    - The Department of Ecology will not require an Individual 401 Water Quality Certification.
    - The Biological Assessment will result in a Not Likely to Adversely Affect determination, and only informal consultation with the Federal Services will be needed.

- A SEPA DNS is the appropriate Threshold Decision.
- The City will provide payment when necessary for application submittal fees.
- The City will provide a review of the application materials prior to submittal.
- Confluence can begin work within one week of Notice to Proceed.

Hourly Estimate $34,500

Task 210 – 30% Plan Assembly/Presentation

This task will include the assembly of all parts of the plan set, a design memorandum, 30% cost estimate, 30% stakeholder meeting as well as meetings with City staff.

The deliverables for this task shall be the combination of all deliverables for all tasks, in summary, they include the following:

Task 202 – Project Surveying/Mapping:
- City wide survey as outlined above with all the previously provided GIS data incorporated into one database.

Task 203 – Analysis of Existing Lift Station:
- Plan view of the station, with needed infrastructure changes shown
- Cross section of the station on a longitudinal and perpendicular plane, with needed infrastructure changes shown.

Task 204 – Lift Station Siting:
- Summary of locations evaluated
- Design memorandum outlining the process for evaluating the chosen locations, and conclusions drawn

Task 205 – Force Main Design:
- 30% plan set including plan and profile views of the station site.
- Plan and Profile of the force main and discharge location of sufficient detail to begin the permitting process

Task 206 – Hydraulic Modeling for Lift Station Design:
- Hydraulic inputs summary

Task 207 – Lift Station Design:
- General Notes
- P&ID
- Hydraulic Profile
- Proposed Pump Station Civil Site Plan (SDA)
- Structural Foundation Plan
- Structural Floor Plan and Structural Roof Plan
- Structural Design of Intake and Outlet Structure
- Two (2) Structure Cross Sections
- Pump Station mechanical Plan with Two (2) Cross Sections
- Electrical One-Line Diagram
- 30% Cost Estimate

Task 208 – Geotechnical Assessment:
- Preliminary Environmental Assessment (Phase 1 ESA) on potential sites and force main/Gravity Conveyance locations.
- Geotechnical Assessment to include review of existing soils data, site visit and anticipated soil conditions.

- Subsidence Analysis to evaluate potential for current and continued settlement due to secondary consolidation of subsurface soils.

Task 209 – Environmental Assessment/Planning/Permitting:

- Coordinate with SDA and the City of Stanwood during the environmental and permit review process.
- Prepare permit applications for an Army Corps Nationwide Permit (NWP) 43, WDFW HPA, Department of Ecology Section 401 Letter of Verification, and City of Stanwood shoreline substantial development permit, Floodplain Development Permit, and grading permit.
- Prepare an Endangered Species Act Biological Assessment.
- Prepare a SEPA checklist for the City of Stanwood to issue a Threshold Determination of Non-Significance.
- Conduct a site visit to gather data on existing conditions, including wetland and ordinary high water mark delineation as needed.
- Develop a mitigation plan as part of the permitting application package to address temporary and permanent impacts.
- Coordinate with regulatory agencies in advance of the application submittals, as well as follow up after application submittal.
- Respond to comments regarding application materials.

Task 210 – 30% Plan Assembly/Presentation:

- Assembled and complete 30% plan set as outlined above.
- Design memorandum outlining the design as presented and conclusions drawn.

Hourly Estimate $26,800

Total Fee Summary:

PHASE 2 – FINAL DESIGN

Task 201 – Project Management	(hourly estimate)	$16,500
Task 202 – Project Surveying/Mapping	(hourly estimate)	$48,200
Task 203 – Analysis of Existing Lift Station	(hourly estimate)	$12,500
Task 204 – Siting Lift Station	(hourly estimate)	$14,000
Task 205 – Force Main Design	(hourly estimate)	$14,000
Task 206 – Hydraulic Modeling for Lift Station	(hourly estimate)	$13,400
Task 207 – Lift Station Design	(hourly estimate)	$254,725
Task 208 – Geotechnical Assessment	(hourly estimate)	$32,775
Task 209 – Environmental Planning/Permitting	(hourly estimate)	$34,500
Task 210 – 30% Plan Assembly/Preparation	(hourly estimate)	$26,800
	30% Design Subtotal	**$467,400**

The total estimate fee for 30% Design of the Lift Station, Force Main, and Outfall location for the Irvine Slough Stormwater Separation Project is $467,400. The fee for all sub-consultants includes a 15% markup for taxes and overhead. The fee will be billed hourly not to exceed. The above does not include reimbursable expenses. These are estimated to be $3,000, which is for mileage and reprographics.

Assumptions:

- The City will provide access as need to the existing lift station for SDA and 1-Alliance when needed.
- The City will make all arrangements for purchase of land/parcels needed to site the lift station, and easements to/from the station (if needed) once the locations are agreed upon.
- The City will assist with identifying stakeholders and their contact information and provide support to promote their involvement.

We look forward to beginning work on this project. Please let me know if you have any questions.

Sincerely,
SDA

Andrew Reaves, PE
Principal

Attachments (6):
Attachment 1 – 2016 SDA Rate Schedule
1 – 2016 1-Alliance Scope, Fee & Rate Schedule
1 – 2016 NHC Scope, Fee & Rate Schedule
1 – 2016 CH2M Scope, Fee & Rate Schedule
1 – 2016 GeoEngineers Scope, Fee & Rate Schedule
1 – 2016 Confluence Environmental Scope, Fee & Rate Schedule

2016 SDA Service Rate Schedule

SDA Services Rate Schedule

PRINCIPAL	$ 175.00 per hour
PROJECT MANAGER/SENIOR ENGINEER	$ 155.00 per hour
PROJECT ENGINEER	$ 140.00 per hour
DESIGN ENGINEER	$ 125.00 per hour
CADD TECHNICIAN	$ 90.00 per hour
WORD PROCESSOR/CLERICAL	$ 70.00 per hour

Reimbursable Expenses

MILEAGE	$0.50/mile
OUTSIDE CONSULTANTS	Cost + 15%
REPRODUCTION	Cost + 15%
BLACK AND WHITE COPIES	$0.10/copy
COLOR COPIES	$0.20/copy
SUPPLIES, OTHER	Cost + 15%

These standard rates are effective January 1, 2016, and are subject to update in 2017. Rates may vary on a project specific basis.

1-Alliance Scope & Rate Schedule

1 ALLIANCE
GEOMATICS
SURVEYING & MAPPING
MBE/DBE

18 October 2016
16-120

Andrew Reaves, PE
Site Development Associates, LLC
1724 W. Marine View Dr., Ste 140
Everett, WA 98201

Subject: Professional Services Proposal – Surveying and Mapping
City of Stanwood IS4 Stormwater Separation Project

Dear Andy,

1Alliance Geomatics is pleased to provide this proposal for professional surveying services in support of SDA and the City of Stanwood's IS4 Stormwater Separation Project.

1Alliance is a Washington State Certified MBE (#M4M0022928), Federally Certified DBE (#D4M0022928), King County Certified SCS firm (#1547), and City of Seattle registered MBE.

Based on our review of the provided documents 1 Alliance has determined the following Scope of Work (SOW) and Level of Effort (LOE) for this project.

Objective

The objective of this survey is to collect topographic and boundary information in support of the planning and initial design phase of the City of Stanwood's IS4 Stormwater Separation Project. It is understood that additional surveying may be required as the project design progresses.

Scope of Services

1. Survey Control

This task involves the recovery and/or establishment of survey control throughout the project site. Typically, survey control will be established using GPS together with traditional ground traverse methods. Sub tasks include:

- Establish both horizontal and vertical control pairs throughout the project site.
- The horizontal datum will be NAD83/91 based on the Washington State Plane Coordinate System, North Zone (4601).
- The vertical datum will be NAVD88 based on GPS and available monumentation.

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SURVEYING & MAPPING
MBE/DBE

2. Field Surveying and Mapping

This task involves the provision of field surveying and mapping sufficient to meet the objective. The total site equals approximately 16,000 linear feet and is focused on stormwater conveyance and spot elevations for engineering evaluation of the overall area. *See "Survey Needed" Exhibit for limits and details of survey scope. Sub tasks include:

- Roadway Surveying within the right-of-way for basic roadway features and elevations on an approximate 100 to 200 foot cross-sections to include Centerline, Edge of Pavement, and ditches.
- Topographic surveying efforts will focus on stormwater conveyance features, including: Ditches, Culverts, Storm structures and outfall pipes. The inverts and size of the pipes and diameter of manholes will be measured if the lids can be opened, and the pipes can be seen from the surface.
- Marked intersections will be surveyed with spot shots.
- Douglas Slough Cross-sections every 200 feet, or so.
- Sports fields will be surveyed with spot shots.
- 0.10 foot Relative accuracies are anticipated.

3. ROW and Boundary Surveying

This task involves conducting the necessary field and office work for the resolution of boundary for two selected areas. Recorded documents will be researched. Monuments will be researched and surveyed as possible. Field evidence will be collected. Boundaries will be referenced to the coordinate system used for mapping and will be included on the basemap deliverable.

4. Basemap Processing and Deliverable Production

This task involves receiving the data collected from the field surveying effort, processing the data, and generating a deliverable for submission to the team. Along with the standard quality checks and data processing, this task includes the preparation of an electronic basemap of the project area using the topographic, utility survey data, and boundary information.

5. Pump Station 3D Laser Scanning As-Built and Boundary Resolution for City-Owned Property

This task involves the provision of an as-built of the Pump Station, and a boundary/topo survey of the land to the north of the station owned by the city. 1 Alliance will use the Faro scanner and (probably) 10 to 14 scan locations. Using fixed targets, and locating them with conventional efforts, 1 Alliance will position the 3D scan data to the project coordinates. 1 Alliance will use Cyclone Software to register and reduce the scan data. As-Built deliverable is a plan view and a couple sections that show the station.

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CITY Responsibilities

1. The CITY shall provide Traffic Control, as necessary.
2. The CITY shall provide Right-of-Entry, as necessary.
3. The CITY shall provide Title Reports, as necessary.
4. The City shall provide City Storm GIS.

Deliverables

- AutoCAD Civil3D Basemap

Assumptions and Understandings

- Property corners will not be set.
- No Record of Survey (ROS) is included.
- Boundaries will be resolved but not monumented or recorded.
- A detailed roadway and or utility survey is not included in this scope of services.
- No entering of any manhole or catch basins will be done by the Consultant.
- Underground utility locates are not required at this time.
- Rights of entry will be provided by The City, as required.
- Traffic control will be provided by The City, if needed.
- Title Reports will be provided by The City for any parcels needing boundary resolution.

Fee Estimate

1 Alliance proposes to be compensated on a Time and Materials basis. The estimated hours and fee total are attached. The estimated total is $41,895.

Please review this scope of services and level of effort estimate to see if they meet the project's needs. 1Alliance Geomatics is prepared to commence work within 5 days after a signed notice to proceed. Please feel free to call if you have any questions or need additional information.

Sincerely,

1 Alliance Geomatics, LLC

T. Jason Nakamura, PLS
President

PROJECT		
	NUMBER	16-120
	NAME	IS4 Stormwater Separation
	CLIENT	Site Development Associates
	OWNER	City of Stanwood

1 ALLIANCE
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TASK			Principal	PM	PLS	CAD 3	TECH 5	TECH 3	TECH 1	FEE
			$ 175.00	$ 150.00	$ 125.00	$ 83.00	$ 95.00	$ 83.00	$ 63.00	
No	DESCRIPTION	HOURS								TASK
1	Survey Control	50	0	2	4	4	10	20	10	$ 4,372
2	Field Surveying and Mapping	206	0	2	4		20	100	80	$ 16,040
3	ROW and Boundary Surveying	74	0	2	16	16	10	20	10	$ 6,868
4	Basemap Processing of Deliverable	66	0	2	24	40				$ 6,620
5	Pump Station As-Build and Boundary	58	0	2	8	8	20	20	0	$ 5,524
14		0								
	TOTAL HOURS	454	0	10	56	68	60	160	100	
			TOTAL DIRECT BURDENED SALARY COSTS							$ 39,424

			OTHER DIRECT COSTS				
MILEAGE	(ONE WAY)	63	MILEAGE (TOTAL MILES)		$ 0.54		$ 1,871
number of field days		27.5	PER DIEM (DAYS)		$ 50		$ -
NOTES			LODGING (DAYS)		$ 75		$ -
			MATERIALS & SUPPLIES				$ 100
			3D Laser Scanning Hardware and Software				$ 500
			SUE LOCATES				$ -
			TOTAL OTHER DIRECT COSTS				$ 2,471
			GRAND TOTAL FEE ESTIMATE				$ 41,895

NHC Scope & Rate Schedule

EXHIBIT A

Scope of Work

City of Stanwood

Irvine Slough Stormwater Separation Project

Sub-Consultant, Northwest Hydraulic Consultants

October 2016

Background

Site Development Associates, LLC (SDA) requested Northwest Hydraulic Consultants, Inc. (NHC) services to support the final design phase of the Irvine Slough Stormwater Separation Project for the City of Stanwood (City). NHC's role will include running a set of hydrologic and hydraulic models previously developed, calibrated and applied as part of prior work (NHC, 2015) and a limited amount of consultation regarding the design of a new stormwater pump station. NHC's Scope of Work (SOW) is described as follows.

Task 1 - Project Coordination and Management

Approach:

Review invoices for budget compliance and provide monthly progress reports with budget summary.

NHC Deliverables:

- Monthly invoices and progress reports.

Task 2 - Meetings

NHC will send one staff to up to two team and/or stakeholder meetings (8 staff hours total).

Assumptions:

- No presentation materials will need to be developed for any meetings.
- This 8 hours of staff time includes 2 hours for each meeting, plus 1.5 hours of drive time, 30 minutes of pre-meeting coordination or post-meeting follow-up.

NHC Deliverables:

- Attendance at two (2) meetings.

Task 3 - Run IS4 Model and Query Results

NHC will run the modeling suite documented in NHC (2015) that is referred to here as the IS4 model. Up to two variations of the IS4 model will be simulated. For each model run a set of peak annual flood elevations will be extracted from up to three locations in the IS4 system and one location in Irvine Slough.

Assumptions:

- No additional model calibration or environmental data processing will be performed by NHC.
- Only 8 staff hours are included to setup and review the model input parameters. This is an adequate amount of time for NHC staff to input a design developed by others or to provide minor modifications to the IS4 scenarios included in NHC (2015). This will not allow for iterative conveyance system or pump station sizing.

NHC Deliverables:

- NHC will provide model results in the form of an email or short memorandum.

Task 4 - Pump Station Design Consultation

NHC's pump station experts will be available to SDA team staff (e.g. CH2MHill) for up to 8 hours to discuss design requirements that should be considered for a new or retrofitted IS4 pump station.

Assumptions:

- Consultation will be provided via telephone or email.

NHC Deliverables:

- None

Task 5 - Other On-Call Support (Optional)

NHC staff will make themselves available for additional on-call support. This may include additional stakeholder meetings, subsequent model iterations, or other discussions as they come up.

Assumptions:

- Budget assumes 8 hours of principal and 8 hours of Sr. Engineer time.

NHC Deliverables:

- None

Project Schedule

Initial model results will be provided mid-December 2016. The schedule for this project may be modified as mutually agreeable to NHC, SDA and the City.

Northwest Hydraulic Consultants Inc.
16300 Christensen Road, Suite 350
Seattle, WA 98188-3418
Tel. (206) 241-6000
Fax (206) 439-2420

Estimate of Professional Services

Prepared for: Site Development Associates, LLC
Project: Irvine Slough Stormwater Separation Project
Date: 10/19/2016
Project #: P02001858
Prepared By: D. Stuart

	Staff Hours							
TASK DESCRIPTION	Principal	Sr. Eng.	Jr. Eng.	Technician	Contract Admin.	Word Proc.	Total Hours	Total Labor
Task 1 - Project Coordination and Management	1	3			1		5	$865
Task 2 - Meetings		8					8	$1,320
Task 3 - Run IS4 Model and Query Results	3	10	16			1	30	$4,050
Task 4 - Pump Station Design Consultation	8	1					9	$2,085
Task 5 - Other On-Call Support (optional)	8	8					16	$3,240
Total Hours and Labor Cost	20	30	16	0	1	1	68	$11,560
Fully Burdened Rate ($/hr)	$240.00	$165.00	$100.00	$90.00	$130.00	$80.00		

Direct Expense Detail

	Units		Cost
Mileage	160	0.565	$90
Reproduction, Couriers, & Communication			$10
		subtotal	$100

Cost Summary

Total Labor	$11,560
Total Direct Expenses	$100
TOTAL COST	$11,660

CH2M Scope & Rate Schedule

Background

Irvine Slough is a drainage ditch roughly parallel to the south edge of State Route (SR) 532, from the Burlington Northern Santa Fe (BNSF) railway to its confluence with the Stillaguamish River west of Leque Road (98th Ave NW). Stormwater from the City of Stanwood's (City) historic downtown, north of SR 532, is gravity fed into Irvine Slough and pumped into the Stillaguamish River. Since 1990, Irvine Slough has been protected from floodwaters by a dam with a 36" culvert at 92nd Ave NW, to restrict floodwater from entering the Slough. The dam is designed to allow the City's stormwater system to continue to convey water into Irvine Slough without interruption during floods.

The Old Stilly Flood Gate, installed in 2007, and seven 3-ft tide gates south of Irvine Slough provide rapid post-crest drainage for farm fields, Marine Drive, and the BNSF tracks. These structures help protect the levees south of Stanwood from overtopping damage. However, these facilities do not act to lower the flood crest. Consequently, Irvine Slough continues to fill up with floodwater in major flood events impeding stormwater drainage from downtown Stanwood.

The 2004 *Stillaguamish River Comprehensive Flood Hazard Management Plan* identified the relocation of the City's stormwater pumps north of SR 532, in order to reopen Irvine Slough as a floodwater conveyance channel, as the hydraulically preferred alternative to reduce flooding potential from the Stillaguamish River.

The Washington State Legislature set aside funds in 2013 to study alternatives to reduce lowland flooding in the City with the primary goals of identifying alternatives to separate the City's downtown and upland stormwater system from Irvine Slough and develop alternatives to improve flood conveyance to accelerate floodwater drainage.

The *Irvine Slough Stormwater Separation Study* (December 2015) identified the need for a large stormwater pump station and outfall to pump water from the City's stormwater system directly to the Stillaguamish, and a series of pipe conveyance improvements to deliver stormwater runoff from the City to the stormwater pump station.

Project Description

Phase I of this work includes the preparation of 30% plans so that the project can be permitted by various stakeholders.

This scope of work describes the services to be rendered by CH2M HILL for the City's stormwater modeling, pumping arrangement/configuration alternatives analysis and 30% level design of a pump station and outfall to pump water from the stormwater system to the Stillaguamish. Upgrades to the existing ditches in the stormwater system and new gravity main to the Stillaguamish are not a part of the CH2M scope.

General Project Assumptions

CH2M's work scope closely ties in with other subconsultants on the project team. Coordination and defined limits of scope will be critical for the timely completion of this work. The level of effort assumes that the tasks outlined below will be carried out sequentially. In addition, it is assumed that SDA will complete all coordination between the subconsultants and with City staff.

- The design work on this project will last 30 weeks from authorization to proceed and be completed in calendar year 2017.

- The design approach will be based on interactive workshops and informal deliverables [sketches, a few drawings (maximum of 10), catalog cuts, workshop meeting minutes, and the like] as opposed to formal, comprehensive documentation such as reports and extensive drawings. A technical memorandum will be prepared for Tasks 2 and 3 to document the design decisions made, document design criteria from Task 2 and the recommended pump selection. Owner review workshops will be conducted as described in the Tasks. Review workshops will be documented in the form of meeting minutes by SDA. SDA will distribute to the team.
- The building architecture (materials, construction) of all new facilities will be similar but will not match existing structures.
- Conventional spread foundations will be required for all new facilities. Over excavation, preload, piles, or underdrain systems are not required.
- Building sprinkler systems are not required for pump station.
- The pump station does not have to be ADA compliant.
- Uplift due to high groundwater levels, if any, will be addressed with thickened base slabs or pressure relief valves in slabs. No underdrain systems or tension systems will be required.
- Any investigation and remediation of possible hazardous waste, asbestos, lead paint or other types of contamination will be conducted as a separate contract.
- No corrosion control provisions will be required other than materials selection and coatings.
- It is assumed that hazardous locations (NFPA 820) are not applicable and therefore documentation of corrosive locations is not included in CH2M's scope.
- The existing secondary or emergency electrical power supply system is adequate to handle any new loads. No additional secondary or emergency power source will be provided.
- CH2M will reasonably rely upon the accuracy, completeness, and timeliness of information provided by SDA and/or the City of Stanwood.
- The design will be completed in AutoCAD 2015 and any information received from SDA will be required to be compatible with AutoCAD. CH2M will include our own title blocks for all prepared drawings. Drawing numbers will be defined by CH2M unless the City of Stanwood provides numbering requirements prior to the 10% development of drawings.
- Draft Submittals of drawings will be submitted in PDF (half size). AutoCAD files will be made available in the final submittal. All submittals will be completed electronically. Hard copies of submittals will not be provided for the workshops.
- SDA will be responsible for the timely collection of comments from reviewers, and resolving conflicting comments, and shall submit one set of consolidated comments to CH2M for each deliverable. For budgeting purposes, the review period on submittals is assumed to be two weeks.
- SDA will be owner of the CAD drawing list.
- SDA will gather and provide direction on the following items within 30 calendar after contract execution:
    - Provide overall project objectives
    - Define communication procedures both verbal and written
    - Identify City standard design criteria and preferences. Provide City preferred equipment types, suppliers and vendors.

- Equipment and materials – Provide City preferences on indoor versus outdoor locations for equipment, preferred equipment types and suppliers, local control/local disconnect preferences (lockable MCCs versus local disconnect switches), preferences regarding the use of adjustable frequency drives etc.
- Civil - Identify local stormwater control agency, document restrictions as they pertain to the proposed project, define permitting requirements; identify any local public work standards as they pertain to roads, stormwater, sewer etc.; any local restriction regarding dust control, demolition, construction traffic/noise, excess earthwork disposal, any existing floodplain restrictions, etc.
- Electrical - Define redundancy requirements.

- The following activities are not included in CH2M's scope of services
  - A topographic survey. It is assumed that this will be conducted by SDA's subconsultant and CH2M will be provided the survey prior to CH2M beginning any modeling development or design. The survey is a significant milestone that is needed for the design to progress efficiently and the fee is based on this assumption. It is assumed the CH2M will review the surveyor's scope of work to ensure the information to be provided is adequate.
  - Geotechnical investigation and/or reports. Geotechnical services will be provided by SDA's subconsultant. CH2M will review the results of the geotechnical investigation.
  - Permitting. This will be conducted by Confluence under SDA. CH2M will provide up to 12 hours of support for the Permitting.
  - Landscape plans.
  - General (cover, vicinity map, legend, abbreviations, etc.) plans.
  - Site plans, demo and TESC.
  - HVAC or heating. This will be deferred to the 60% design.
  - Instrumentation and controls design. This will be deferred to the 60% design.
  - Definition or documentation of concepts for special systems (telephone, data highway {control system, LAN, office automation} and fire alarm system.
  - Electrical design information for utility review. Duct bank layout and electrical manholes and hand holes.
  - Site lighting.
  - Specifications.
  - Review of applicable codes with local code officials and fire marshal. Since the design will be completed at a later date, the codes in effect during the next phase of design will be reviewed and included then. This subtask is deferred.
  - Response to agency comments outside of the City of Stanwood.
  - Meeting with the local code official to review floor plans.
  - Preparation of energy calculations.
  - Preparation of meeting agendas and meeting minutes.
  - Attendance at public meetings or assistance with the preparation of public meeting materials.

- Services during bidding and construction.

Task 1 - Project Management

Perform project management, administration, and coordination of work effort involved in all phases and tasks. This task will continue throughout the duration of the project. It will include the work necessary to develop the project management plan, overall project coordination with SDA and project team, and project closeout. This task also includes the QA/QC reviews throughout the design.

Task 1.1 - Monthly Reporting and Invoicing

Invoices and progress reports will be provided to SDA on a monthly basis. Monthly progress reports will include a summary of work performed by CH2M for that period.

Task 1.2 - Quality Assurance/Control Reviews

CH2M will develop a quality management plan that will be the guideline for performing quality reviews. These reviews will be conducted with each deliverable in the Tasks identified in the Scope.

Deliverables

- Monthly Invoices and progress reports detailing the work covered during the last period and a breakdown of invoice amounts by task. Progress reports will be submitted electronically along with the monthly invoice.

Meetings

- Bi-weekly phone call or email check-ins between the CH2M project manager and the SDA project manager to report project status.

Assumptions

- Project duration is assumed to be an 8 month design duration for a total of 8 months of invoices.
- CH2M will not prepare or maintain the project schedule.

Task 2 - Modeling

Task 2.1 - NHC Coordination

Prior to commencing design of the pumping station, the pumping requirements and demands must be defined. CH2M will coordinate with NHC, who has the current model of the basin, to determine how best to utilize the model to determine the pump station requirements and boundary conditions.

Deliverables

- None

Meetings

- Two hour conference call between the CH2M modeler, CH2M project manager, NHC, and SDA. Call to discuss extents of NHC's current model, establish method of model file sharing, and define method(s) of further model development as required.

Assumptions

- NHC will provide an overview of the model and will release the SWMM model to CH2M for pump station analysis.
- NHC will remain on the project team to make adjustments to the HEC RAS model that provides the time series and boundary conditions to the SWMM model.

Task 2.2 - Model Review and Modeling Plan

Upon delivery of the model from NHC (Task 2.1), CH2M will conduct model testing to verify functionality for Task 2.3 (up to 16 hours) and develop a brief modeling plan defining the model inputs and boundary conditions, model elements to be adjusted for the analysis, design storms and performance criteria. A workshop consisting of the hydraulic modeler, pump station designer and senior reviewer will be conducted to identify scenarios for the modeling analysis.

Deliverables

- Modeling Plan

Meetings

- Coordination conference calls with NHC to discuss the state of the model and any changes that need to be made for the duration of the task. It is assumed that the first meeting will include two CH2M staff while the rest of the meetings (total of 5) will include one CH2M staff. 6 total conference calls are assumed for a total time of 8 hours for the duration of this task.

Assumptions

- Up to 16 hours is allotted for model review and testing
- Modeling plan will be no more than 3 pages
- Model development workshop will be up to 2 hours in length and consist of 3 CH2M staff.

Task 2.3 - Model Development and Technical Memorandum

CH2M will then modify the model to analyze one (1) selected alternative scenario (24 hours). The modified model will then be used to develop a series of influent hydrographs to the pump station under the various design storm events. From this data, CH2M will then prepare a technical memorandum that outlines the modeling process and provide a recommendation for the pump station sizing.

Deliverables

- Draft Technical Memorandum of the model process and pump station sizing recommendation.
- Final Technical Memorandum that incorporates client comments.

Assumptions

- One modeling scenario will be developed and run totaling up to 24 hours to build and summarize results.
- After the City review period, the Final Technical Memorandum will be prepared and submitted. The fee assumes minor comments that require no more than one model modification and simulation (up to 8 hours).

Task 3 – 10% Concept Development

With the results of the modeling study complete, CH2M will perform an alternative analysis that includes two major alternatives for the pump station layout. Additionally the pump station design criteria will be included in the technical memorandum. This will be submitted to the City for review. Advancing the design to 30% will be dependent on the selection of a preferred alternative from the 10% concept.

The project includes a below grade concrete structure and an above grade building. Building will house the mechanical and electrical equipment and controls. The pump station will include emergency backup power. A gravity bypass during low tide will be evaluated for feasibility. The design flows will be determined as part of Task 2 and the pump station will include provisions to allow a phased expansion approach.

The 10% concept development will include the following options:

- Pump Station Siting – Irvine Slough Stormwater Separation Study recommended a new pump station to be located near the existing City Hall. SDA will lead the effort to determine if an alternative site is better suited. SDA will provide the preferred pump station location. CH2M will provide up to 2 hours of assistance to SDA in these discussions.
- Pump Station Type (Submersible vs. wetwell/drywell)
- Force Main Routing and Configuration Options – two options will be presented. SDA will provide the plan and profile information based on CH2M's modeling.

Task 3.1 - Alternative Analysis

The end products from this task will include sketches and preliminary drawings which will provide sufficient information for City and design team coordination and review.

Based on the pump station site, the following activities will be completed:

- Determine building and wetwell structure sizes, location, and orientation;
- layout roadways/truck access corridors and define maneuvering requirements (design vehicle);
- Locate storm water management facilities.
- Generally locate utility and piping corridors (horizontal and vertical) at the pump station site. Off-site utilities are not included for this task.

Schematic design for mechanical will include the following:

- Select and size pumps. Prepare sizing calculations and obtain review. Establish level of redundancy required for the pump station.
- Prepare equipment list with sizing for major equipment. Coordinate with the owner on preferences of equipment manufacturer and processes.
- Prepare preliminary hand sketches for equipment arrangements.
- Review concepts and draft work products with and seek approval from quality control reviewer.

Deliverables

- Draft Alternative Analysis Technical Memo with conceptual sketches and PDF overlays for pump station configuration.
- Final Alternative Analysis Technical Memo

Assumptions

- Alternative Analysis Memo to include conceptual section views of alternatives with major building features, equipment, and major piping shown. Details to be added during the 30% Design Phase.
- After the City review period, the Final Alternative Analysis Memo will be prepared and submitted. Assumes minor comments that do not require a major concept modification.
- Flood plain impacts and constraints will not be evaluated.

Task 3.2 – Technical Memorandum

The purpose of this task is to use the data and guidelines developed in the 10% Concept Development Task, develop and evaluate design concepts, and agree upon a single design concept. The end products from this task will include sketches and preliminary drawings which will provide sufficient information for City and design team coordination and review. An interactive workshop with the SDA and City staff will be conducted (Task 3.4) identified below.

Deliverables

- Draft Technical Memo
- Final Technical Memo

Assumptions

After the City review period, the Final Technical Memorandum will be prepared and submitted. The 30% design will be based on the design criteria and preferred alternative outlined in the design criteria of the technical memo. The fee assumes that major concepts are not modified as part of the City review.

Task 3.3 - 10% Cost Estimate

CH2M will prepare an AACE Class 4 estimate for each of the alternatives proposed in the Alternative Analysis Memo.

Deliverables

- Draft Estimate (Submitted with Draft Technical Memo)
- Final Estimate (Submitted with Final Technical Memo)

Meetings

- None

Assumptions

The AACE Class 4 estimate is a concept study estimate. Heavy Civil and structural costs will be itemized by line item. Major equipment will be identified and the manufacturers contacted for budgetary quotes.

Major piping and valves will be itemized by line item and values taken from current R.S. Means guides. Minor piping, conduit, power and control wiring will be covered by industry standard lump sum placeholders.

Task 3.4 - 10% Workshop

CH2M will attend a 10% workshop with SDA and City staff. It is assumed up to 3 CH2M staff will attend the meeting. The 10% workshop will be performed after the Draft Alternative Analysis and Technical memos have been submitted. The workshop will give the City the opportunity to discuss the alternatives and review opinions and needs from their staff that can be incorporated into final 10% documents. The end result of the 10% workshop will be a single alternative to progress to the 30% design.

Deliverables

- 10% Workshop meeting agenda
- 10% Workshop meeting notes

Meetings

CH2M assumes a 2 hour meeting at the City of Stanwood office to review the draft documents. CH2M will have the pump station design lead, modeling lead, and the project manager in attendance.

CH2M will document the workshop summary and design decisions and submit to SDA for the City's use and for record keeping.

Assumptions

Assumes that all client interested parties are in attendance and that when agreed upon during the workshop, a single alternative can be progressed into the 30% design.

Task 4 – 30% Design Development

The purpose of this task is to utilize the conceptual decisions of the project that were made in the previous tasks and to complete and finalize the preliminary calculations of the previous tasks in order to develop the project design to achieve a 30% design. Structures, equipment, major pump station piping are all finalized during this phase to allow final detailing of the same in the next phase of design to be scoped at a later date. Drawings and other materials that may be required exhibits for environmental permit applications will be available at the conclusion of this phase. The majority of the quality control review and approval will occur prior to the finalization of the work products from design development phase.

The 30% design begins after the 10% workshop with a singular concept to develop into a 30% design submittal package. The building and wet well/dry well design will be modeled in 3D during this stage and the associated plans and sections will be prepared. The engineer's opinion of probable cost will be refined during this time to reflect the further development of the design.

Specific activities, and work products from this tasks are described in the following subtasks.

Task 4.1 - 30% Design Drawings

Subtask 4.1.1: Design Management

- Update workplan.
- Conduct initial constructability review.
- Conduct initial operability review.

Subtask 4.1.2: Civil and Site Development

- No work included in CH2M's Scope.

Subtask 4.1.3: Structural

- Coordinate with I&C and electrical disciplines to size and locate electrical and control rooms.
- Coordinate with geotechnical engineer to establish foundation design criteria for proposed facilities. Review geotechnical report and discuss foundation design approach with geotechnical engineer and senior structural reviewer.
- Document structural design concept and structure. Finalize materials of construction (cast-in-place versus precast concrete, roof structures, etc.).
- Preliminary framing plan for buildings and other structures.
- Prepare 3-D electronic models or preliminary floor plan for all major structures.
- Review design development and draft work products with and seek approval from quality control reviewer.

Subtask 4.1.4: Mechanical

- Calculate the hydraulic profile for all-major gravity process pipelines and hydraulic structures. Establish maximum and minimum water surface elevations for all process structures.
- Prepare 3-D electronic models or building and structure layouts (plans and major section(s)).
- Assemble catalog cuts for all major process equipment. Complete equipment data sheets or equipment list on all major equipment items.
- Coordinate with I&CS in the finalization of P&IDs
- Final ancillary equipment sizing
- Preliminary line sizing calculations.
- Final equipment selection (type, size, weight, arrangement) of pumps.
- Select preliminary piping materials.
- Final major equipment sizing calculations.
- Review design development and draft work products with and seek approval from quality control reviewer.

Subtask 4.1.5: Electrical

- Determine the location and size of motor control center (MCC) to be provided and equipment to be powered out of the MCC. Prepare preliminary one-line diagrams for proposed pump station. Coordinate with lead process engineer to size equipment motors.
- Prepare electrical load calculations.
- Size electrical room and prepare a preliminary layout of the major electrical equipment located in the electrical room. Determine equipment requiring uninterruptable power supplies (UPS) and locations of UPS equipment. Coordinate with I&C discipline to determine space requirements and locations for control equipment. Locate major I/O termination panels, TJB's, and control panels.
- Provide a new self-contained generator and integral fuel storage system for backup power for the new facilities, systems and components.
- Review design development and draft work products with and seek approval from quality control reviewer.

Deliverables

- Draft 30% Design Drawings (outlined in Task Assumptions)
- Final 30% Design Drawings (outlined in Task Assumptions)

Meetings

- None

Assumptions

CH2M's scope includes the site gravity main, influent valve and metering vault, wet well, pump station and backup power. It also includes the structural review and design of the influent intake and outfall structures.

Mechanical, civil (as included in CH2M's scope), and structural details are not included.
The force main plan and profile will be included in SDA's scope. CH2M will provide the design elements needed based on the modeling. In addition, CH2M will provide electrical structures to be located on the site plan for SDA's use. This may include the transformer, power supply and generator.

The following drawings are assumed for a 30% design package:

- General Notes
- P&ID
- Hydraulic Profile
- Proposed Pump Station Civil Site Plan (SDA)
- Structural Foundation Plan
- Structural Floor Plan
- Structural Roof Plan
- Structural Design of Intake Structure
- Structural Design of Outfall Structure
- Structure Sections (2)
- Pump Station Mechanical Plan
- Pump Station Mechanical Sections (2)
- Electrical One-Line Diagram

Task 4.2 - 30% Cost Estimate

CH2M will prepare an AACE Class 3 estimate for the 30% design. Engineer's opinion of probable cost will include the items designed by CH2M.

Deliverables

- Draft AACE Class 3 Estimate
- Final AACE Class 3 Estimate

Meetings

- None

Assumptions

It is assumed the 30% cost estimate will be compiled and owned by SDA.

Task 4.3 - 30% Workshop

CH2M will attend a 30% workshop with SDA and City staff. It is assumed up to 3 CH2M staff will attend the meeting. The 30% workshop will be performed after the 30% Design Drawings have been submitted. The workshop will give the City the opportunity to discuss the comments on the draft 30% submittal that can be incorporated into Final 30% Design Drawing Package.

Deliverables

- 30% Workshop Agenda
- 30% Workshop Notes

Meetings

CH2M assumes a 2 hour meeting at the City of Stanwood office to review the 30% comments.

CH2M will document the workshop summary and design decisions and submit to SDA for the City's use, record keeping and distribution to the team.

Assumptions

Assumes that all client interested parties are in attendance and that when agreed upon during the workshop, a single alternative can be finalized for the 30% design submittal.

Task 5 – Permitting Support

Provide support as required to SDA for permitting. This may include figures or other data. The level of effort assumes 38 hours of engineering support for this task.

Task 6 – Geotechnical Support

Review geotechnical report and recommendations. Review site specific geotechnical conditions for pump station site and structures. Using the geotechnical data and results of investigations, prepare foundation recommendations. Verify constructability (shoring and bracing requirements, dewatering issues). The level of effort assumes 48 hours of engineering support for this task.

Task 7 – Survey Support

Provide support as required to SDA for survey. Review scope of surveyor scope of work. Review data received from surveyor. The level of effort assumes 33 hours of engineering support for this task.

Site Development Associates
City of Stanwood Irvine Slough Stormwater PS

CH2M Hill

Task ID	Task Name	PIC	PM	QA/QC	P. Mech	Modeler	Sr. Modeling	Electrical	Sr. Elec	Struct	Sr. Struct	I&C	Cost Est.	AA	Contracts	PA	CADD	CH2M	TOTAL
Task 1	**Project Management**																		
	Monthly Reporting, Schedule and Progress Reports	8	54											16	6	16		100	$ 15,053.49
Task Total																			$ 15,053.49
Task 2	**Hydraulic Modeling**																		
02.10	NHC Coordination Meeting		4			6	4											14	$ 1,996.33
02.20	Model Review and Modeling Plan		4		4	64	24											96	$ 12,033.94
02.30	Model Development and Technical Memo		4		8	24	14							8				58	$ 7,991.79
	Direct Expenses																		$ 1,000.00
Task Total																			$ 23,022.06
Task 3	**Conceptual Design Phase (10%)**																		
03.10	Alternatives Analysis		8	16	36	60		16	8	12	12	12					80	260	$ 38,991.23
03.20	Conceptual Cost Estimates (Class 4)		2		6								20					28	$ 5,751.23
03.30	Technical Memorandum		8	4	8		8	8		8	4	8		8			32	96	$ 15,112.20
03.40	QA/QC Conceptual Design Documents		2	8							4			8				22	$ 3,762.32
03.50	Conceptual Design Workshop		16		16		8							8				48	$ 8,190.23
	Direct Expenses																		$ 1,500.00
Task Total																			$ 73,307.21
Task 4	**Schematic Design Phase (30% Design)**																		
04.10	Schematic Design Drawings		12	16	80	120		32	12	40	10		2				140	464	$ 65,898.82
04.20	QA/QC Schematic Design		12	24										8				44	$ 8,511.71
04.30	Schematic Design Cost Estimate (Class 3)		2		8	8				8			20					46	$ 7,914.79
04.40	Schematic Design Workshop		16		16	8			4		4							48	$ 8,225.95
	Direct Expenses																		$ 500.00
Task Total																			$ 91,051.28
Task 5	**Permitting Support**																		
05.10	Permitting Support		8	4	6	8								4			8	38	$ 5,739.68
	Direct Expenses																		$ 500.00
Task Total																			$ 6,239.68
Task 6	**Geotechnical Support**																		
06.10	Geotechnical Support		4	4	12	16								4			8	48	$ 7,001.45
	Direct Expenses																		$ 500.00
Task Total																			$ 7,501.45
Task 7	**Survey Support**																		
07.10	Survey Support		8	1	6	6								4			8	33	$ 4,842.86
	Direct Expenses																		$ 500.00
Task Total																			$ 5,342.86
Totals																			$ 221,500.00

CH2M HILL ENGINEERS, INC.

Bill Rates April 1, 2016 thru March 31, 2017

Employee	Bill Rate
Technologist Professional 2	$228.41
Technologist Professional 3	$236.54
Project Management 3	$235.98
Project Management 3	$206.20
Contracts Professional 6	$200.02
Water Engineer 5	$190.99
Electrical Engineer 2	$112.91
Engineer 1	$93.60
Project Assistant 6	$102.80
Project Accounting Support 7	$93.97
Estimating Professional 6	$211.60
Structural Engineer 2	$127.52
Water Engineer 4	$167.69
Project Management 2	$197.30
Structural Engineer 4	$178.05
Technologist Professional 2	$231.29
Designer 5	$138.52

GeoEngineers Scope & Rate Schedule

GeoEngineers
Plaza 600 Building
600 Stewart Street, Suite 1700
Seattle, Washington 98101
206.728.2674

October 28, 2016

Site Development Associates, LLC
1724 West Marine View Drive, Suite 140
Everett, Washington 98201

Attention: Jonathan Turcott and Andy Reaves

Subject: Proposal for Phase I Environmental Site Assessment, Preliminary Geotechnical Assessment, and Preliminary Subsidence Assessment
Irvine Slough Stormwater Separation System Design Support
Stanwood, Washington
File No. 03711-014-00

INTRODUCTION

GeoEngineers, Inc. (GeoEngineers) is pleased to present this proposal to conduct preliminary environmental, geotechnical, and subsidence assessments to support Irvine Slough Stormwater Separation System (IS4) design. We understand that Site Development Associates, LLC (SDA) is completing design for siting of the lift station and analysis for force main routing associated with a new stormwater system planned by the City of Stanwood (City). Initial assessment of general environmental and geotechnical conditions is needed at locations where the lift station and force main routes may potentially be established. These locations were identified by SDA as the blue outlined areas on the PDF figure transmitted to GeoEngineers on September 28, 2016 (designated herein as the Subject Properties). We understand that the Subject Properties are located entirely within the City limits.

A general assessment of potential subsidence over a relatively large area within and north of the City is also needed to evaluate potential system capacity and operational considerations. SDA identified this area as bounded by 286th Street NW on the north, the Pioneer Highway on the east, and dikes associated with the Stillaguamish River on the west and south (herein designated as the Subsidence Area). The general subsidence assessment is needed based on anecdotal information relayed by SDA that farmland north of the City has experienced on-going ground subsidence.

The proposed work responds to SDA's request for preliminary environmental, geotechnical, and subsidence information during our August 10, 2016 meeting and discussed during subsequent correspondence. We understand that SDA, through coordination with the City, will provide access to the Subject Properties for site reconnaissance purposes. These assessments exclude subsurface investigations and other field work except for visual observations during site reconnaissance field visits and one boring to be completed at the

proposed location of the stormwater pump station. Field visits in the immediate vicinity of the Subject Properties and within the Subsidence Area will be limited to visual observation from publically-accessible land, and we will not enter areas that are privately-owned or where access is privately-controlled.

The following sections describe our proposed work scope for environmental, geotechnical, and subsurface assessments. We understand that reports and related information associated with this work will be used by the SDA team for design purposes only, and that work products and other project information will not be relied upon or otherwise used by other parties or for used for legal purposes.

PRELIMINARY ENVIRONMENTAL ASSESSMENT

GeoEngineers will conduct a Phase I environmental site assessment (ESA) of the Subject Properties. The purpose of this Phase I ESA is to identify Recognized Environmental Conditions (RECs)[1] in connection with the Subject Properties. We will perform these services in general accordance with ASTM International (ASTM) Standard E 1527-13 for Phase I ESAs and the U.S. Environmental Protection Agency's (EPA's) Federal Standard 40 CFR Part 312 "Standards and Practices for All Appropriate Inquiries (AAI)." The services described below will be completed by, or under the direction of, an environmental professional as described in 40 CFR Part 312. Our specific scope of services for the Phase I ESA is as follows:

1. Review readily available geotechnical reports, environmental reports and/or other relevant documents pertaining to environmental conditions at the Subject properties.
2. Review the results of a federal, state, local and tribal environmental database search provided by an outside environmental data service for listings of properties with known or suspected environmental concerns on or near the Subject Properties within the search distances specified by ASTM. Our database and file review search will include a check for and review of publications or reports on EPA and Washington State Department of Ecology (Ecology) websites concerning areawide soil and groundwater contamination on or adjacent to the Subject Properties.
3. Review regulatory agency files regarding listed properties of potential environmental concern relative to the Subject Properties.
4. Identify a key site manager with specific knowledge of past and present property use and request that the key site manager meet a GeoEngineers' representative on-site for an interview during the visual site reconnaissance and/or an interview by telephone if he or she is not available during the site reconnaissance. Identify and interview others familiar with the use and history of the Subject Properties, as available and appropriate, including representatives of current occupants that likely use, store, treat, handle or dispose of hazardous substances now or in the past.
5. Interview current owners or occupants of neighboring properties only as necessary to gather information or fill site use data gaps regarding the Subject Properties or if the Subject Properties are undeveloped or abandoned and no owner or occupant interviews can be conducted.
6. Interview past owners and occupants of the Subject Properties as necessary to gather information or fill property use data gaps regarding property use history.

[1] Recognized Environmental Conditions are defined in ASTM E1527-13 as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property; (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not recognized environmental conditions."

7. Interview a representative of the local fire department, health department, other City representative(s), and/or Ecology as necessary to gather information or fill data gaps regarding the history of the Subject Properties and surrounding properties relative to the likely presence of hazardous substances.
8. Review historical aerial photographs, fire insurance maps, building department records, City directories, chain-of-title reports, and land use and tax assessor records, as available and appropriate, to identify past development history on and adjacent to the Subject Properties relative to the possible use, generation, storage, release or disposal of hazardous substances. We will attempt to identify uses of the Subject Properties from the present back to the time that records show no apparent structures on the property, back to the time that the property was first used for residential, agricultural, commercial, industrial or governmental purposes, or back to 1940, whichever is earliest.
9. Review current United States Geological Survey (USGS) topographic maps to identify the physiographic setting of the Subject Properties and provide a statement on the local geologic, soil and groundwater conditions based on our general experience and sources such as geologic maps and soil surveys.
10. Conduct a visual reconnaissance of the Subject Properties and adjacent properties to identify visible evidence of RECs.
11. Identify the source(s) of potable water for the Subject Properties and current heating and sewage disposal system(s) used at the Subject Properties, if any, and their age if readily available.
12. Identify data gaps relative to the Phase I ESA study findings.
13. Provide a written summary of the Phase I ESA results and identified RECs2, if present, along with our opinion and recommendations regarding the potential for contamination by hazardous substances at the Subject Properties and the significance of any data gaps identified.

We request that you work with the City or other parties to complete the brief questionnaire at the end of this proposal and provide a copy of the completed questionnaire to us as soon as possible.

Our scope of services does not include an environmental compliance audit or an evaluation for the presence of lead-based paint, toxic mold, polychlorinated biphenyls (PCBs) in light ballasts, radon, lead in drinking water, asbestos-containing building materials or urea-formaldehyde insulation in on-site structures or debris or other potentially hazardous building materials. Soil, sediment, surface water, groundwater, or soil gas sampling and chemical analysis are not included as part of this Phase I ESA scope of services.

We request that you and/or the City or other parties provide the names and phone numbers of key individuals with knowledge of property use history of the Subject Properties and notify us if tax parcel maps do not accurately reflect the boundaries of the Subject Properties. Additionally, we request that you provide us with the following helpful information, if readily available, prior to the start of our study: 1) copies of any past ESA and/or audit reports; 2) environmental permits; 3) registrations for underground and aboveground storage tanks; 4) material data safety sheets for hazardous substances used or stored on the Subject Properties (if any); 5) community right-to-know plans pertaining to the Subject Properties; 6) safety plans pertaining to on-site facilities; 7) reports regarding geotechnical and/or hydrogeologic conditions; 8) notices of environmental violations and/or environmental liens or property use restrictions, including title reports

[2] The following definitions are provided in ASTM E 1527-13: HREC: a past release that has been remediated to the satisfaction of the responsible regulatory agency; CREC: a past release that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in-place subject to the implementation of the required controls. A de minimis condition is not a REC.

that may reflect this information; 9) specialized knowledge or experience and commonly known information of which you are aware regarding the Subject Properties and related environmental conditions; and 10) explanation for any significant difference between purchase price and market value, if the Subject Properties are not known to be contaminated.

PRELIMINARY GEOTECHNICAL ASSESSMENT

The purpose of our preliminary geotechnical services is to review available geologic and subsurface information as a basis for completing a preliminary geotechnical assessment of the anticipated conditions. A detailed geotechnical design phase and subsurface exploration program will be completed during project design.

Our preliminary geotechnical assessment will include the following tasks:

1. Review geologic maps, topographical maps, public databases and geotechnical engineering studies, as available and appropriate. We assume that the City of Stanwood will provide existing geotechnical reports for our review.
2. Complete a brief site visit to evaluate existing surficial conditions, exposed slopes and soils, photographic documentation, and shallow excavation with hand tools where feasible to evaluate near surficial soils, if practical.
3. Provide a description of the geologic and anticipated soil conditions, particularly as they relate to earthwork and foundation considerations from a geotechnical perspective.
4. Drill one deep boring at the proposed location of the stormwater pump station, on the east side of 94th Drive NW and north of SR 532. We anticipate drilling the boring to a depth of about 80 to 90 feet to evaluate the upper soft alluvial deposits and potential liquefiable soils. A tracked hollow-stem auger drill rig will be subcontracted to GeoEngineers to access the site area.

   The boring will be continuously monitored by a geotechnical engineer or geologist from our firm who will examine and classify the soils encountered, obtain representative soil samples, observe groundwater conditions, and prepare a detailed log of the exploration.
5. Evaluate pertinent physical and engineering characteristics of the soils including completion of laboratory testing (grain size analyses, Atterberg Limits and moisture content).
6. Provide preliminary construction considerations for the pump station including temporary slopes, shoring parameters, and construction dewatering considerations.
7. Provide preliminary design parameters including lateral earth pressures, buoyancy and uplift, foundation support, and excavation backfill.
8. Provide seismic design information including a discussion of liquefaction potential.
9. Prepare a geotechnical memorandum presenting our findings, conclusions and preliminary recommendations together with the results of our field and laboratory testing program.

PRELIMINARY SUBSIDENCE ASSESSMENT

We understand that property owners of the farmland located on the north side of the City indicated that ongoing subsidence may be occurring in these areas, including possible observed settlement around structures and site facilities. Our services are requested to review available data and complete additional research to develop a qualitative opinion of whether subsidence may be occurring, and if so, potential causes of the subsidence, and the potential for additional subsidence. We propose to complete the following tasks:

1. Review available data regarding the general causes of geologic subsidence in similar environments with the region. This will include a half-day site visit with interviews of property owners, if feasible, and review of publicly-available topographic and surface elevation data, as applicable.
2. Review subsurface soil and groundwater conditions obtained during the environmental and geotechnical task reviews, and evaluate the potential for ongoing settlement due to secondary consolidation of the anticipated subsurface soils.
3. Complete a literature review of potential natural causes of subsidence related to river system dynamics and man-made adjustments to the systems that could affect subsidence.
4. Write a brief technical memorandum outlining the possible contributing factors for potential subsidence, and our opinion of the potential for additional subsidence.

We note that quantitative confirmation of land subsidence would require high-resolution (0.1 foot accuracy or greater) survey data over a time period spanning multiple years. This effort is not proposed as part of the current work scope but can be further considered and discussed with you as the project progresses.

TERMS, FEE ESTIMATE, AND SCHEDULE

We will begin the work after receiving authorization to proceed and will plan to complete the environmental and geotechnical assessment within approximately 3 to 4 weeks. The time that it takes to complete a Phase I ESA is highly dependent on the availability of information from outside sources; if we do not receive requested information from others before the report is due to you, we will indicate missing information as a "data gap" if appropriate. We will discuss logistics and scheduling for completing the Preliminary Subsidence Evaluation for your notice to proceed.

Services	Estimated Fee
Preliminary Environmental Assessment	$ 6,000
Preliminary Geotechnical Evaluation	
Geotechnical Field Labor, Analyses, and Report	9,000
Subcontracted Drilling, Locate, Lab Testing and Expenses	8,500
Preliminary Subsidence Assessment	5,000
Total	**$28,500**

We will complete the work on a lump sum basis. Our services will be completed in accordance with the terms described in our General Conditions, which are attached and form a part of this proposal. Please review our General Conditions carefully and advise us if you have any questions or desire to modify the terms of our agreement. We will endeavor to keep you apprised of project status and conditions that may significantly affect our scope and estimate.

LIMITATIONS

GeoEngineers' Scope of Services specifically excludes the investigation, detection or assessment of the presence of Biological Compounds that are deemed Pollutants in or around any structure. Accordingly, our report will not include interpretations, recommendations, findings or conclusions for the purpose of detecting, assessing or abating Biological Pollutants. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

Our services are for the exclusive use of Site Development Associates, LLC. There are no intended third party beneficiaries arising from the services described in this proposal and no party other than the party executing this proposal shall have the right to legally rely on the product of our services without prior written permission of GeoEngineers.

This proposal is valid for a period of 60 days commencing from the first date listed above and subject to renegotiation by GeoEngineers, Inc., after the expiration date.

We appreciate the opportunity to assist you with this project. Please call if you have any questions regarding this proposal.

Sincerely,
GeoEngineers, Inc.

Richard F. Moore, LEG, LHG
Associate Environmental Geologist

Debra C. Overbay, PE
Associate Geotechnical Engineer

RFM:DCO:leh:cam

Attachments:
Phase I ESA User Questionnaire
General Conditions—Standard 2016

1 electronic copy submitted

The parties hereto have made, executed and agreed to this Agreement as of the day and year first above written. By signature below, Client accepts the scope of services and all terms described herein. In addition, Client's signature shall constitute as authorization to proceed on the date listed below Client's printed/typed name unless such authorization has been otherwise provided in writing.

Site Development Associates, LLC
ORGANIZATION

* SIGNATURE

DATE

TYPED OR PRINTED NAME

*Individual with contracting authority.

PHASE I ESA USER QUESTIONNAIRE
IRVINE SLOUGH STORMWATER SEPARATION SYSTEM DESIGN SUPPORT
STANWOOD, WASHINGTON
FILE NO. 03711-014-00

In order to qualify for one of the federal landowner liability protections, and to enable us to fully address the objectives of the Phase I ESA, please complete the questionnaire below to the best of your knowledge and provide the additional information requested.

1. Are you aware of any environmental cleanup liens against the Subject Properties that are filed or recorded under federal, tribal and state or local law?

   ☐ YES ☐ NO ☐ DON'T KNOW Explain:

2. Are you aware of any Activity and Use Limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the Subject Properties and/or have been filed or recorded in a registry under federal, tribal, state or local law?

   ☐ YES ☐ NO ☐ DON'T KNOW Explain:

3. As the user of this Phase I ESA, do you have any specialized knowledge or experience related to the Subject Properties or nearby properties? For example are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

   ☐ YES ☐ NO ☐ DON'T KNOW Explain:

4. Does the purchase price being paid for the Subject Properties reasonable reflect the fair market value of the property?

   ☐ YES ☐ NO ☐ DON'T KNOW Explain:

   a. If you conclude that there is a difference and you answered NO above, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

      ☐ YES ☐ NO ☐ DON'T KNOW Explain:

5. Are you aware of commonly known or reasonably ascertainable information about the Subject Properties that would help us identify conditions indicative or releases or threatened releases? For example,

   a. Do you know the past uses of the property?

      ☐ YES ☐ NO ☐ DON'T KNOW Explain:

   b. Do you know of specific chemicals that are present or once were present on the property?

      ☐ YES ☐ NO ☐ DON'T KNOW Explain:

   c. Do you know of spills or other chemical releases that have taken place at the property?

      ☐ YES ☐ NO ☐ DON'T KNOW Explain:

   d. Do you know of any environmental cleanups that have taken place at the property?

      ☐ YES ☐ NO ☐ DON'T KNOW Explain:

6. Based on your knowledge and experience related to the Subject Properties, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

   ☐ YES ☐ NO ☐ DON'T KNOW Explain:

User Questionnaire Completed By (Name and Organization): _____

_____

Date: _____

List of Requested Information, If Available

- Names and phone numbers of key individuals with knowledge of property use history.
- A map showing the boundaries of the Subject Properties.
- Tax ID numbers for parcels included within the Subject Properties.
- Copies of any past environmental site assessment and/or audit reports or risk assessment studies.
- Environmental permits.
- Registrations for underground and aboveground storage tanks (if any).
- Material data safety sheets for hazardous substances used or stored on-site (if any).
- Community right-to-know plans pertaining to the Subject Properties.
- Safety plans pertaining to on-site facilities.
- Reports regarding geotechnical and/or hydrogeologic conditions at or near the Subject Properties.
- Notices or other correspondence from any governmental agency relating to past or current violations of environmental laws with respect to the Subject Properties or relating to environmental liens encumbering the property.
- Recorded Activity Use Limitations (AULs)
- Chain-of-Title or other Title Report documents

GENERAL CONDITIONS

Definitions

The words and phrases listed below have the following meanings when used in this Agreement:

"Agreement" means the complete agreement between Client and GeoEngineers, and consists of all of the following: 1) The Services Agreement or Proposal, including the Scope of Services contained within it; 2) These General Conditions and its attached Schedule of Charges, as applicable; 3) Any documents expressly incorporated by reference into the Services Agreement or Proposal or General Conditions; 4) Any modifications to this Agreement, if mutually agreed to by the parties in writing.

"Client" means the individual(s) or entity that has entered into this Agreement with GeoEngineers.

"GeoEngineers" means GeoEngineers, Inc., a Washington corporation, and any of its employees, officers and directors. GeoEngineers is sometimes referred to as "us," "we" or "our" throughout this Agreement.

"Hazardous Materials" means any toxic substances, chemicals, radioactivity, pollutants or other materials, in whatever form or state, known or suspected to impair the environment in any way whatsoever. Hazardous Materials include, but are not limited to, those substances defined, designated or listed in any federal, state or local law, regulation or ordinance concerning hazardous wastes, toxic substances or pollution.

"Scope of Services" means the sum total of all of our activities and all of the Instruments of Service undertaken or provided pursuant to this Agreement.

"Excluded Services" means those services that we are not providing under this Agreement, which includes any services recommended to Client and which Client chooses not to include in our Scope of Services.

Integrated Written Agreement

This Agreement represents the entire and integrated agreement between Client and GeoEngineers and supersedes all prior communications, negotiations, representations or agreements, either written or oral between the parties. No agreement or understanding varying or extending this Agreement shall bind either party, other than by a subsequent written agreement, signed by Client and GeoEngineers.

GeoEngineers has made no promise or inducements to Client to enter into this agreement other that what is explicitly provided in the agreement. Client is not relying on any representations made by GeoEngineers outside of those embodied in this Agreement.

Conflicts

Any alteration to these General Conditions or appended terms and conditions by Client shall be void and not included as part of this Agreement unless mutually agreed to in writing by both parties. In the event of conflict between these General Conditions and any terms appended by the Client that are agreed to by the parties and incorporated as part of this Agreement, the terms of these General Conditions shall prevail.

Standard of Care and Warranty Disclaimer

GeoEngineers will endeavor to perform its professional services with that degree of care and skill ordinarily exercised under similar conditions by professional consultants practicing in the same discipline at the same time and location. No warranty or guarantee, either express or implied, is made or intended by this Agreement or by any report, opinion, or other Instrument of Service provided pursuant to this Agreement.

Client Furnished Information and Obligations

Client will provide GeoEngineers with the following: a description of the property; the locations of any underground utilities, facilities or structures on or adjacent to the property which could impact our work; and the nature and location of any known or suspected hazardous materials that may exist on the property. Client understands that GeoEngineers is not responsible for damages to underground utilities, facilities or structures known by Client to exist and not specifically or correctly identified to us, and Client agrees to indemnify GeoEngineers for these damages to the extent provided in the INDEMNIFICATION section of these GENERAL CONDITIONS. GeoEngineers is neither responsible nor liable for the creation, existence, or presence of any hazardous materials, including asbestos, present at the work site prior to or during the performance of this Agreement, except any hazardous materials generated solely by us, our agents or subcontractors.

Additionally, the Client shall furnish, at the Client's expense, all information, requirements, reports, data, surveys, and instructions required by this Agreement. GeoEngineers may use such information, requirements, reports, data, surveys and instructions in performing the services and is entitled to rely upon their accuracy and completeness.

Permits and Agency Arrangement

If included in the Scope of Services, GeoEngineers will assist Client in applying for necessary permits and licenses. Client may, upon written acceptance by GeoEngineers, designate GeoEngineers as its agent for the purposes of drafting permit and/or license applications. GeoEngineers' agency authority under this arrangement shall be limited solely to the completion and submission of the permit and/or license applications. GeoEngineers will rely upon data collected by and information provided by Client in preparing the applications. GeoEngineers shall not be responsible for errors or inaccuracies contained in data and information supplied by Client. Client shall assume full responsibility for reviewing, understanding and signing all permit and license applications drafted by GeoEngineers.

GeoEngineers cannot and does not guarantee that permits or approvals will be issued by the governing authorities, and will not be subject to any claims, losses or damages allegedly incurred as a result of Client's failure to obtain the necessary permits and approvals.

Client waives any claim against GeoEngineers relating to errors or inaccuracies in data and information provided by Client and permit-related project delays caused by other parties, including, but not limited to Client, project opponents, and permitting or licensing agencies.

Rights of Entry

Unless otherwise agreed to in writing, Client will provide for right of entry and any authorizations needed for us to enter upon property to perform our Services under this Agreement.

Surface and Subsurface Disturbance

GeoEngineers will take reasonable precautions to minimize surface and subsurface disturbance. However, in the normal course of exploratory work some surface disturbance may occur, the restoration of which is not part of this Agreement unless specifically included in our Scope of Services.

Discovery of Hazardous Materials

"Unanticipated hazardous materials" are any hazardous materials that may exist at the project site, but which this Agreement does not identify as present and whose existence is not reasonably anticipated. The discovery of unanticipated hazardous materials will constitute a changed condition that will require renegotiation of the Scope of Services or termination of this Agreement.

The discovery of unanticipated hazardous materials may necessitate that we take immediate protective measures. If we discover unanticipated hazardous materials, we will notify Client as soon as practicable. Based on our professional judgment, we may also implement protective measures in the field. Client will pay the cost of any such additional protective measures.

Client is responsible for reporting releases of hazardous substances to appropriate government agencies as required by law.

Client waives any claim against GeoEngineers relating to the discovery of unanticipated hazardous materials and will indemnify GeoEngineers to the extent provided in the INDEMNIFICATION section of these GENERAL CONDITIONS.

Off-site Disposal of Hazardous Materials

Client acknowledges that GeoEngineers is not and shall not be required to be in any way an 'arranger', 'operator', or 'transporter' of hazardous materials present or near the project site, as these terms are defined in applicable Federal or State Statutes. In addition, Client shall sign all manifests for the disposal of substances affected by regulated contaminants.

However, if the parties mutually agree that GeoEngineers sign such manifests and/or to hire for Client a contractor to transport, treat, or dispose of the hazardous materials, GeoEngineers shall do so only as Client's agent. Client agrees to defend, indemnify, and hold harmless GeoEngineers, its officers, directors, employees and agents from any claim, suit, arbitration, or administrative proceeding, damages, penalties or liability that arise from the executing of such manifests on Client's behalf.

Further, GeoEngineers will, at Client's request, help Client identify appropriate alternatives for off-site treatment, storage, or disposal of such substances, but GeoEngineers shall not make any independent determination about the selection of a treatment, storage, or disposal facility.

Unanticipated and Changed Conditions

Actual subsurface conditions may vary from those encountered at the specific locations where GeoEngineers conducts its surveys or explorations. We can only base our site data, interpretations and recommendations on information reasonably available to us. Practical and reasonable limitations on available data will result in some level of uncertainty, and therefore risk, with respect to the interpretation of environmental, geological and geotechnical conditions even when we have followed the standard of care.

The discovery of unanticipated or changed conditions may require renegotiation of the Scope of Services or termination of services. GeoEngineers reserves the right to solely determine the continued adequacy of this Agreement in light of any discovery of conditions that were not reasonably anticipated or known at the time of this Agreement. If we determine that renegotiation is necessary, GeoEngineers and Client will in good faith enter into renegotiation of this Agreement to permit us to continue to meet Client's needs. If Client and GeoEngineers cannot agree on new terms, we reserve the right to terminate this Agreement and receive payment from Client for all services performed and expenses incurred up to and including the date of termination. Underground utilities that are not properly indicated on plans and specifications provided to GeoEngineers by others or not reasonably located by the utility owner will be considered a changed condition under this clause.

Site Safety

GeoEngineers will maintain a safety program for our employees. GeoEngineers specifically disclaims any authority or responsibility for general job site safety and for the safety of persons who are not employed by us. GeoEngineers is not responsible for the job safety or site safety of the general project and is not responsible for compliance with safety programs and related OSHA and state regulations that apply to other entities or persons. Client is independently responsible for requiring that its construction or remediation contractors take responsibility for general job site safety.

Construction and Remediation Observation

The conclusions and recommendations for construction or remediation in our reports are based on limited sampling and the interpretations of variable subsurface conditions. Therefore, our conclusions and recommendations shall be deemed preliminary unless or until we are requested by Client to validate our assumptions and finalize our conclusions and recommendations by reviewing preconstruction design documents and observing actual construction or remediation activities on site. If our Scope of Services does not include preconstruction plan review and construction/remediation observation, then any reliance by Client or any other party on our preliminary assumptions, conclusions or recommendations is at the risk of that party and without liability to GeoEngineers.

Our job site activities do not change any agreement between Client and any other party. Only Client has the right to reject or stop work of its contractors or agents. Our presence on site does not in any way guarantee the completion, quality or performance of the work by any other party retained by Client to provide field or construction/remediation services. We are not responsible for, and do not have control or charge of, the specific means, methods, techniques, sequences or procedures selected by any contractor or agent of Client or any third party to this Agreement.

Further, a duty to provide contract administration or contract management services may not be imputed from GeoEngineers' professional actions or affirmative conduct when on the job site.

Sample Retention and Disposal

We will discard nonhazardous samples 60 days after they are obtained, unless Client makes prior arrangements to store or deliver the samples. Samples containing hazardous materials regulated under federal, state or local environmental laws are the property and responsibility of Client. Client will arrange for lawful disposal, treatment and transportation of contaminated samples at Client's expense, unless Client makes other written agreements regarding their disposal.

Identification of Other Contaminants

Sampling and Analysis Plans (SAPs) typically specify the contaminants of interest (COIs) on a site and the standard EPA/state agency analytical methods (Standard Methods) to be used by laboratories for determining the estimated concentration of such COIs in soil and water samples. GeoEngineers' instructions notwithstanding, application of Standard Methods by an analytical laboratory may occasionally result in the inadvertent identification of contaminants that are not COIs. If in the course of GeoEngineers' laboratory data validation review non-COI contaminants are identified with COI-equivalent data quality and analytical values at or above regulatory action levels, GeoEngineers will disclose such results to Client with appropriate recommendations, which may include recommendations for reporting to regulatory agencies. Client actions subsequent to any such disclosure shall be at Client's sole risk, and Client shall indemnify and hold harmless GeoEngineers from any claims, liabilities, damages or costs arising from the discovery of regulated non-COIs to the extent provided in the INDEMNIFICATION SECTION in these GENERAL CONDITIONS.

Confidential Information

Unless otherwise agreed to in writing by the parties, each party expressly undertakes to retain in confidence, and to require its employees and consultants to retain in confidence, all data and/or information of the other party that is not generally known to the public, whether of a technical, business or other nature, that has been identified as being proprietary and/or confidential or that by the nature of the circumstances surrounding the disclosure reasonably ought to be treated as proprietary and confidential ("Confidential Information"). Each party agrees not to use the Confidential Information of the other party except pursuant to this Agreement. The receiving party will not disclose any item of Confidential Information to any person other than its employees, agents or contractors who need to know the same in the performance of their duties except as may be required by law or judicial order. The receiving party will protect and maintain the confidentiality of all Confidential Information of the disclosing party with reasonable care, including but not limited to informing all employees, agents or contractors to whom Confidential Information is disclosed of the confidentiality obligations imposed by this Agreement. Confidential Information does not include any data or information which the receiving party can prove (a) was in the receiving party's lawful possession prior to its disclosure by the disclosing party; (b) is later lawfully obtained by the receiving party from a third party not under an obligation of confidentiality; (c) is independently developed by the receiving party; or (d) is, or later becomes, available to the public through no breach of an obligation of confidentiality. Notwithstanding the foregoing, GeoEngineers may use the Client's name and logo in connection with identifying its prior customers and projects.

Instruments of Service and Proprietary Methodologies

Reports, field data, laboratory data, analyses, calculations, estimates, designs and other documents prepared by GeoEngineers are Instruments of Service and remain our property. We will retain final project records for a period of 20 years from completion of our services.

Neither Client nor any other party may modify or use the Instruments of Service for additions or alterations to this project, or for other projects, or otherwise outside the scope of this Agreement, without our prior written permission. GeoEngineers is not responsible for such modification or reuse (unless such modification or reuse is expressly authorized by GeoEngineers in writing). Client

will defend, indemnify, and hold GeoEngineers harmless against any claims, damages, or losses relating to such modification or reuse to the extent of the INDEMNIFICATION section in these GENERAL CONDITIONS.

GeoEngineers grants Client a limited license to utilize its Instruments of Service for the purposes described in the scope of services, and for maintenance of the Project thereafter, subject to any limitations expressed in the Instruments of Service. GeoEngineers may withdraw or terminate that limited license at any time if Client fails to comply with this Agreement, including but not limited to the circumstance in which Client fails to timely pay outstanding invoices. In the event that GeoEngineers withdraws the limited license, Client herein acknowledges that Client is prohibited from using the Instruments of Service for any purpose from that date forward. GeoEngineers will not be responsible nor liable, and Client will hold GeoEngineers harmless for any damages or injury flowing, or allegedly flowing, from Client's inability to utilize the Instruments of Service as a result of the circumstances described herein. Client herein agrees that injunctive or other relief is appropriate if GeoEngineers believes that Client is utilizing the Instruments of Service in a manner contrary to this paragraph or as otherwise described in the preceding paragraphs under this Article titled "Instruments of Service and Proprietary Methodologies." This paragraph shall survive the termination of this Agreement.

GeoEngineers may provide Client with Instruments of Service that include pre-existing content or data which are generated at least in part by or derived from proprietary and or patented methodologies and systems. GeoEngineers may also apply proprietary and or patented methodologies and systems in fulfilling the terms of this agreement, and may also make temporarily available to Client a working knowledge of such proprietary and or patented methodologies and systems during the term of this agreement.

Notwithstanding anything to the contrary, GeoEngineers shall retain ownership over all intellectual property rights including, but not limited to, inventions, patents, copyrights, know how, trade secrets, and trademarks in such Instruments of Service and their associated data and in the proprietary and or patented methodologies and systems. Subject to full payment by Client to GeoEngineers of all amounts owed hereunder and the terms of any licensing agreement between the parties, GeoEngineers grants to Client a nonexclusive, nontransferable license to use the Instruments of Service. Client shall not distribute, rent, lease, service bureau, sell, sublicense, or otherwise transfer the Instruments of Service or their data or content, unless previously agreed to in writing by GeoEngineers, and shall not decompile, reverse engineer, disassemble, reverse translate, or in any way derive any trade secrets or source code from the Instruments of Service. Unless otherwise specified in writing between the parties, no such Client use of Instruments of Service shall give rise to any right in the Client to use the proprietary and or patented methodologies and systems referred to herein. During and only during the term of this agreement, GeoEngineers grants to Client a nonexclusive, nontransferable license to employ such proprietary and or patented methodologies and systems as have been disclosed to Client by GeoEngineers pursuant to fulfilling the terms of this agreement.

Data stored in electronic media format can deteriorate or be modified inadvertently or otherwise. When transferring documents in electronic media format, we make no representations as to long-term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by us.

We shall not be responsible for any alterations, modifications or additions made in the electronic data by the Client or any reuse of the electronic data by the Client or any other party for this project or any other project without our consent. Client shall defend, indemnify and hold us harmless against any claims, damages or losses arising out of the reuse of the electronic data without our written consent and arising out of alterations, modifications, or additions to the electronic data made by anyone other than GeoEngineers to the extent of the INDEMNIFICATION section in these GENERAL CONDITIONS.

All documents, including the electronic files that are transferred by us to Client are Instruments of Service of GeoEngineers and created for this project only, and no representation or warranty is made, either express or implied, concerning the files and data.

Billing and Payment

We will bill for our services monthly. Payment is due on receipt of the invoice unless otherwise agreed to in writing. Client will notify GeoEngineers within 20 days of receipt of invoice of amounts in dispute. A service charge of 1-1/2% per month shall apply to any undisputed amounts that are more than 30 calendar days past due and amounts in dispute where Client has not notified GeoEngineers within the 20-day period. In addition to any past due amount, Client will pay all of our reasonable expenses necessary for collection of any past due amounts including, but not limited to, attorneys' fees and expenses, filing fees, lien costs and our staff time. Collection efforts for past due amounts by GeoEngineers shall not be subject to the DISPUTES clause of these GENERAL CONDITIONS.

Payment of invoices shall not be subject to any discounts or set-offs by the Client, unless agreed to in writing by GeoEngineers. Payment to GeoEngineers for services rendered and expenses incurred shall be due and payable regardless of any subsequent suspension or termination of this Agreement by either party. Payment to GeoEngineers shall not be withheld, postponed or made contingent on the construction, completion or success of the project or upon receipt by the Client of offsetting reimbursement or credit from other parties.

Adjustment for Increased Costs

GeoEngineers reserves the right to invoice Client for additional charges incurred in the event of an unanticipated increase in project-related taxes, fees or similar levies; or if GeoEngineers must modify project-related services, facilities or equipment to comply with new laws or regulations or changes to existing laws or regulations that become effective after execution of this Agreement.

GeoEngineers revises its Schedule of Charges annually. Therefore, we reserve the right to modify our Schedule of Charges applicable to our services if performance of this Agreement extends beyond 12 months, or if changes in the project schedule result in our services extending into the next calendar year.

Scope of Services and Additional Services

Our engagement under this Agreement includes only those services specified in the Scope of Services. GeoEngineers has no duty to provide services beyond those explicitly described in the scope of services, or as may be added to the scope of services via a signed directive by the Client, as described more fully in the next paragraph. Client understands and agrees that GeoEngineers' scope will not be expanded by, and no duties or responsibilities may be imputed from GeoEngineers' actions or affirmative conduct when onsite.

If agreed to in writing by the Client and GeoEngineers, GeoEngineers shall provide additional services which shall become part of the Scope of Services and subject to the terms of this agreement. Such services shall be paid for by the Client in accordance with GeoEngineers' then prevailing Schedule of Charges unless otherwise agreed to in writing by the parties.

Client agrees it will not hold us liable and expressly waives any claim against GeoEngineers for 1) not performing additional services that Client instructed us not to perform, 2) not performing additional services that were not specifically requested in writing by Client and agreed to by both parties, 3) not performing recommended additional services that Client has not authorized us to perform.

Termination of Services

Termination for Cause

Either party may terminate this Agreement upon at least seven (7) days written notice, in the event of substantial failure by the other party to perform in accordance with this Agreement through no fault of the terminating party. Such termination is not effective if the failure is cured before expiration of the period specified in the written notice. Upon termination for cause by either party, all invoices for services performed up to the date of termination are immediately due and payable.

Termination for Convenience

Either party may terminate this Agreement for convenience upon seven (7) days written notice to the other. In the event that Client requests early termination of our services for convenience, we reserve the right to complete such analyses and records as are necessary to place our files in order and to complete a report on the services performed to date. Charges for these termination activities are in addition to all charges incurred up to the date of termination. Upon termination for convenience by either party, all invoices for services performed up to the date of termination and termination fees defined herein are immediately due and payable.

Suspension of Services

If the project or GeoEngineers' services are suspended by the Client for more than thirty (30) calendar days, consecutive or in the aggregate, over the term of this Agreement, GeoEngineers shall be compensated for all services performed and reimbursable expenses incurred prior to the receipt of notice of suspension. In addition, upon resumption of services, the Client shall compensate GeoEngineers for expenses incurred as a result of the suspension and resumption of its services, and GeoEngineers' schedule and fees for the remainder of the project shall be equitably adjusted.

If GeoEngineers' services are suspended for more than ninety (90) days, consecutive or in the aggregate, GeoEngineers may terminate this Agreement subject to the terms in the "Termination for Convenience" clause.

If Client is in breach of the payment terms, states their intention not to pay forthcoming invoices, or otherwise is in material breach of this Agreement, GeoEngineers may suspend performance of services upon five (5) calendar days' notice to Client or terminate this Agreement according to the "Termination for Cause" clause. In the event of suspension, GeoEngineers shall have no liability to the Client, and the Client agrees to make no claim for any delay or damage as a result of such suspension caused by Client's breach of this Agreement. In addition, we may withhold submittal of any work product if Client is in arrears at any time during the performance of services under this Agreement. Upon receipt of payment in full of all outstanding sums due from Client, or curing of such other breach which caused GeoEngineers to suspend services, GeoEngineers shall resume services and submit any withheld work product, and there shall be an equitable adjustment to the remaining project schedule and fees as a result of such suspension. Any suspension by GeoEngineers exceeding 30 calendar days shall, at GeoEngineers' option, make this Agreement subject to renegotiation or termination according to the "Termination for Cause" clause in this Agreement.

In the event Client has paid a retainer to GeoEngineers, GeoEngineers shall be entitled to apply the retainer to cover any sums due from Client up to the date of suspension. Prior to resuming services after such suspension, Client shall remit to GeoEngineers sufficient funds to replenish the retainer to its full prior amount.

Delays

The Client agrees that GeoEngineers is not responsible for damages arising directly or indirectly from any delays for causes beyond GeoEngineers' control. Such causes include, but are not limited to, strikes or other labor disputes; severe weather disruptions or other natural disasters; fires, riots, terrorist acts, wars or other emergencies or acts of God; failure of any government agency to act in a timely manner, failure of performance by the Client or the Client's Contractors or other Consultants; or unanticipated discovery of any hazardous materials or differing site conditions. In addition, if the delays resulting from any such causes increase the cost or time required by GeoEngineers to perform its services in an orderly and efficient manner, GeoEngineers shall be entitled to an equitable adjustment in schedule and/or compensation.

Indemnification

GeoEngineers will indemnify and hold the Client harmless from and against any claims, liabilities, damages and costs (including reasonable attorney fees and costs of defense) arising out of death or bodily injury to persons or damage to property to the extent proven to be caused by or resulting from the sole negligence of GeoEngineers, its agents or its employees. For any such claims, liabilities, damages or costs caused by or resulting from the concurrent negligence of GeoEngineers and other parties, including the Client, the duty to indemnify shall apply only to the extent of GeoEngineers' proven negligence.

The Client will defend, indemnify and hold GeoEngineers, including its subsidiaries and affiliates, harmless from and against any and all claims (including without limitation, claims by third parties and claims for economic loss), liabilities, damages, fines, penalties and costs (including without limitation reasonable attorney fees and costs of defense) arising out of or in any way related to this project or this Agreement, provided that Client's indemnification obligations shall not apply to the extent of the proven negligence of GeoEngineers, its officers, agents and employees.

Client's indemnification obligation shall include, but is not limited to, all claims against GeoEngineers by an employee or former employee of Client, and Client expressly waives all immunity and limitation of liability under any industrial insurance act, worker's compensation act, disability benefit act, or employee benefit act of any jurisdiction which would otherwise be applicable in the case of such claim. Client's waiver of immunity by the provisions of this paragraph extends only to claims against GeoEngineers by Client's current or former employees and does not include or extend to any claims by Client's employees or former employees directly against Client.

Client's duty to defend in this paragraph means that Client shall assume the defense of such claim using legal counsel selected or approved by GeoEngineers and GeoEngineers shall be entitled to participate in the strategy and direction of the defense. In the course of defending a claim under this paragraph, Client shall not compromise or settle the claim without GeoEngineers' consent unless: (i) such settlement or compromise only involves monetary relief that is paid in full by Client, (ii) GeoEngineers is not liable for any such settlement or compromise, and (iii) there is no finding or admission that GeoEngineers is or was liable under any legal theory for damages relating to the claim.

By entering into this Agreement, Client acknowledges that this Indemnification provision has been reviewed, understood and is a material part of the Agreement, and that Client has had an opportunity to seek legal advice regarding this provision.

Limitation of Remedies

GeoEngineers' aggregate liability responsibility to Client, including that of our subsidiaries and affiliates, officers, directors, employees, agents or subconsultants, is limited to $20,000 or the amount of GeoEngineers' fee under this Agreement, whichever is greater. This limitation of remedy applies to all lawsuits, claims or actions, whether identified as arising in tort, contract or other legal theory, (including without limitation, GeoEngineers' indemnity obligations in the previous paragraph) related to our services under this Agreement and any continuation or extension of our services.

If Client desires a higher limitation, GeoEngineers may agree, at Client's request, to increase the limitation of remedy amount to a greater sum in exchange for a negotiated increase in our fee. Any additional charge for a higher limit is consideration for the greater risk assumed by us and is not a charge for additional professional liability insurance. Any agreement to increase the limitation of remedy amount must be made in writing and signed by both parties in advance of the provision of services under this Agreement.

By entering into this Agreement, Client acknowledges that this Limitation of Remedies Clause has been reviewed, understood and is a material part of this Agreement, and that Client has had an opportunity to seek legal advice regarding this provision.

Insurance

GeoEngineers maintains Workers' Compensation and Employer's Liability Insurance as required by state law. We also maintain comprehensive general, auto, professional and environmental impairment liability insurance. We will provide copies of certificates evidencing these policies at the request of the Client.

Mutual Waiver of Consequential Damages

In no event will either party be liable to the other for any special, indirect, incidental or consequential damages of any nature arising out of or related to the performance of this Agreement, whether founded in negligence, strict liability, warranty or breach of contract. In addition, Client expressly waives any and all claims against GeoEngineers for any liquidated damages liability that may be incurred by or assessed against Client.

Disputes

Any dispute, controversy or claim arising out of our related to this Agreement or its breach that is not resolved through negotiation between the parties, must be referred to mediation before pursuing any other dispute remedy. Each party shall bear its own costs and attorneys' fees arising out of the mediation and the costs of the mediation shall be divided equally between the attending parties.

If the matter has not been resolved through the mediation process, either or both parties may elect to pursue resolution through litigation. The parties submit to the jurisdiction of the State of Washington and agree that any legal action or proceeding arising out of or relating to this Agreement must be brought in the Superior Court in King County, Washington.

Client expressly agrees that before Client can bring a claim or cause of action against GeoEngineers as provided above, based on professional negligence or breach of the professional standard of care, Client will obtain the written opinion of a licensed or registered professional practicing in the same licensing jurisdiction as the project in dispute. The professional who prepares the written opinion must be licensed or registered in the discipline or technical specialty that is the basis for the dispute. The written opinion of the licensed or registered professional must indicate that, in the professional opinion of the writer, GeoEngineers violated the prevailing standard of care in delivery of its services. Further, the written opinion must describe the basis for that opinion and a conclusion that the alleged failure to comply with the standard of care was the cause of all or part of the alleged damages. The written opinion must be made available to GeoEngineers for review and comment at least 10 days before the claim or cause of action can be submitted to litigation. The parties agree that this clause was mutually negotiated and is an integral part of the consideration for this Agreement.

Choice of Law

This Agreement is governed by and subject to interpretation pursuant to the laws of the State of Washington.

Biological Pollutants

Our Scope of Services specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts.

Our Instruments of Service will not include any interpretations, recommendations, findings or conclusions pertaining to Biological Pollutants. Accordingly, Client agrees that GeoEngineers will have no liability for any claims alleging a failure to investigate, detect, prevent, assess, or make recommendations for preventing, controlling, or abating Biological Pollutants. Furthermore, Client agrees to defend, indemnify, and hold harmless GeoEngineers from all claims by any third party concerning Biological Pollutants to the extent of the INDEMNIFICATION section in these GENERAL CONDITIONS.

Claims Assistance for Client

If a construction contractor or other party files a claim against Client, relating to services performed by GeoEngineers and Client requires additional information or assistance to evaluate or defend against such claims, we will make our personnel available for consultation with Client's staff and for testimony, if necessary. We will make such essential personnel available upon reasonable notice from Client and Client will reimburse GeoEngineers for such consultation or testimony, including travel costs, at the rates that apply for other services under this Agreement. We will provide services in connection with any such claims pursuant to a written supplement, if necessary, extending this Agreement.

Time Bar to Legal Action

The parties agree that all legal actions by either party against the other concerning our services pursuant to this Agreement or for failure to perform in accordance with the applicable standard of care, however denominated, including but not limited to claims sounding in tort or in contract, and arising out of any alleged loss or any alleged error, will become barred two (2) years from the completion of GeoEngineers' services.

No Third Party Rights

Nothing in this Agreement or as a consequence of any of the services provided gives any rights or benefits to anyone other than Client and GeoEngineers. All duties and responsibilities undertaken pursuant to this Agreement are for the sole and exclusive benefit of Client and GeoEngineers and not for the benefit of any other party. No third party shall have the right to rely on the product of GeoEngineers' services without GeoEngineers' prior written consent and the third party's agreement to be bound to the same terms and conditions as the Client.

Assignment of Contract or Claims

Neither the Client nor GeoEngineers may delegate, assign, sublet, or transfer the duties, interests or responsibilities set forth in this Agreement, or any cause of action or claim relating to the services provided under this Agreement, to other entities without the written consent of the other party.

Survival

These terms and conditions survive the completion of the services under this Agreement and the termination of this Agreement, whether for cause or for convenience.

Severability

If any provision of this Agreement is ever held to be unenforceable, all remaining provisions will continue in full force and effect. Client and GeoEngineers agree that they will attempt in good faith to replace any unenforceable provision with one that is valid and enforceable, and which conforms as closely as possible with the original intent of any unenforceable provision.

Equal Opportunity Employment

GeoEngineers is an Equal Opportunity and Affirmative Action Employer. GeoEngineers shall abide by, and shall require that any subcontractors or vendors hired by GeoEngineers abide by, the requirements of 41 CFR 60-1.4(a), 60-300.5(a) and 60-741.5(a) which are incorporated as part of this Agreement. These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability or veteran status.

Schedule of Charges – 2016

COMPENSATION

Our compensation will be determined on the basis of time and expenses in accordance with the following schedule unless a lump sum amount is so indicated in the proposal or services agreement. Current rates are:

Professional Staff		
Staff 1 Scientist/Analyst	$	106/hour
Staff 1 Engineer	$	111/hour
Staff 2 Scientist/Analyst	$	122/hour
Staff 2 Engineer	$	128/hour
Staff 3 Scientist/Analyst	$	140/hour
Staff 3 Engineer	$	145/hour
Scientist/Analyst 1	$	162/hour
Engineer 1	$	168/hour
Scientist/Analyst 2	$	168/hour
Engineer 2	$	172/hour
Senior Engineer/Scientist/Analyst 1	$	185/hour
Senior Engineer/Scientist/Analyst 2	$	205/hour
Associate	$	215/hour
Principal	$	234/hour
Senior Principal	$	261/hour
Technical Support Staff		
Administrator 1	$	73/hour
Administrator 2	$	84/hour
Administrator 3	$	95/hour
CAD Technician	$	95/hour
CAD Designer	$	109/hour
CAD Design Coordinator	$	119/hour
Technician	$	82/hour
Senior Technician	$	97/hour
Lead Technician	$	106/hour
Software Development Staff		
Database Architect/Analyst	$	174/hour
Senior Database Architect/Analyst	$	196/hour
Business Analyst	$	174/hour
Senior Business Analyst	$	196/hour
Software Architect/Developer	$	196/hour
Senior Software Architect Developer	$	217/hour
IT Project Manager	$	217/hour
Senior IT Project Manager	$	245/hour

Contracted professional and technical services will be charged at the applicable hourly rates listed above. Staff time spent in depositions, trial preparation and court or hearing testimony will be billed at one and one-half times the above rates. Time spent in either local or inter-city travel, when travel is in the interest of this contract, will be charged in accordance with the foregoing schedule. Rates for data storage and web-based access will be provided on a project-specific basis.

Equipment

Air Quality Equipment, per day	$	150.00
Air Sparging Field Test, per day	$	500.00
Asbestos Sample Kit, per day	$	25.00
Blastmate, per week	$	300.00
Crack Gauges, per gauge	$	25.00
D&M Sampler, per day (1 day min.)	$	80.00
Dive Boat (plus fuel), per day	$	750.00
Electrical Tape, per day	$	25.00
Environmental Exploration Equipment, per day	$	150.00
Field Data Acquisition Equipment, per day	$	50.00
Flow Meter, per day	$	40.00
Gas Detection and Oxygen Meters, per day (1 day min.)	$	100.00
Generator, per day (1 day min.)	$	100.00
Geotechnical Exploration Equipment, per day	$	125.00
Groundwater Development and Sampling Pump, per day (1 day min.)	$	100.00
Groundwater Monitoring Equipment, per day	$	220.00
Hydrolab Multi Probe, per day	$	125.00
Inclinometer, per day (1 day min.)	$	200.00
Interface Probe, per day	$	50.00
Nuclear Density Gauge, per hour (4 hour daily min.)	$	10.00
Peristaltic Pump, per day	$	50.00
pH Meter, per day	$	15.00
PID, FID or OVA, per day	$	100.00
Saximeter, per day	$	25.00
Scuba Diving, per day/per diver	$	250.00
Single Channel Data Logger w/Transducer, per day	$	100.00
Strain Gauge Readout, per day	$	40.00
Tedlar Bags & Air Sampling Equipment, per sample	$	15.00
Turbidity Testing Equipment, per day	$	30.00
Underwater Camera - Video, per day	$	150.00
Vapor Extraction Field Test, per day	$	500.00
Vehicle usage, per mile, or $50/day, whichever is greater	$	0.65
Water Quality Equipment, per day	$	125.00

Specialized and miscellaneous field equipment, at current rates, list available upon request.

OTHER SERVICES, SUPPLIES AND SPECIAL TAXES

Charges for services, equipment, supplies and facilities not furnished in accordance with the above schedule, and any unusual items of expense not customarily incurred in our normal operations, are charged at cost plus 15 percent. This includes shipping charges, subsistence, transportation, printing and reproduction, miscellaneous supplies and rentals, surveying services, drilling equipment, construction equipment, watercraft, aircraft, and special insurance which may be required. Taxes required by local jurisdictions for projects in specific geographic areas will be charged to projects at direct cost.

Per diem may be charged in lieu of subsistence and lodging.

Routinely used field supplies stocked in-house by GeoEngineers, at current rates, list available upon request.

In-house testing for geotechnical soil characteristics at current rates, list available upon request.

Associated Project Costs (APC)

Computer hardware and software, telephone and fax communications, printing and photocopying and routine postage via USPS will be charged at a flat rate of 6 percent of labor charges. These charges are labeled as Associated Project Costs (APC).

All rates are subject to change upon notification.

Laboratory Schedule of Charges – 2016

Type of Test		Unit Price
Soil Index and Classification Tests		
Soil Description (ASTM D 2488)	$	16
Moisture Content		
Oven (ASTM D 2216)	$	19
Moisture/Density		
Rings	$	32
Shelby Tubes, waxed chunk	$	42
Tubes (liners), chunk	$	42
Particle Size Analysis		
Percent Passing No. 200 (D 1140)	$	60
Sieve (ASTM D 422, D 6913, C 136 includes minus 200 Wash, Dry Sieve)	$	95
Hydrometer Only (ASTM D 422, minus #10 fraction)	$	135
Combined Sieve and Hydrometer (ASTM D 422-63)	$	210
Organic Content (ASTM D 2974)	$	70
Specific Gravity (ASTM D 854)	$	70
Soil Resistivity (ASTM G 187)	$	45
pH of Soil (ASTM D 4972 / G 51)	$	40
Soluble Sulfates (US EPA 375.4)	$	45
Sulfides	$	42
Ductile Iron Pipe Research Association 10 Point Soil Evaluation Procedure (ANSI/ANSW C105/A21.5). Includes evaluation of resistivity, pH, Redox potential, sulfides and moisture)	$	140
Atterberg Limits (ASTM D 4318)	$	125
Nonplastic	$	70
Compaction (ASTM D 698/D 1557, AASHTO T 99/T 180, Methods A, B and C)		
1 point	$	105
3 point	$	210
Shrinkage Factors of Soils by Wax Method (ASTM D 4943)	$	65
Strength and Consolidation Tests		
Triaxial Compression		
Unconfined Comp. Strength – UCS (ASTM D 2166)	$	105
Unconsolidated Undrained – UU (ASTM D 2850)	$	220
Unconsolidated Undrained (back pressure saturation)	$	420
Consolidated Undrained – CU (ASTM D 4767) with pore pressure measurement	$	575
Consolidated Drained – CD (Army Corps of Engineers EM 1110-2-1906 Appendix X)	$	600
Consolidated Undrained or Consolidated Drained (3 points, staged)	$	1,500
Consolidation (ASTM D 2435)		
With 2 timed load increments	$	525
Additional timed load increments, each	$	55
One-Dimensional Swell (ASTM D 4546)		
Methods A and B	$	370
Method C	$	630
CBR, 1 point with Proctor (ASTM D 1883)	$	400
Additional points, each	$	100

Type of Test		Unit Price
Permeability Tests		
Constant or falling head in rigid wall permeameter (ASTM D 2434, D 5856)	$	275
In triaxial cell with back pressure saturation (ASTM D 5084)	$	700
Soil Sample Preparation		
Extrusion – Extrude and log (visual classification) Shelby tube sample	$	65
Remolding – Remolding a soil sample to desired moisture and density	$	42 - 105
Soil – Cement/Lime Treatment	$	Hourly - negotiated
Aggregate and Rock Tests		
Unconfined Compression Test (ASTM D 7012)		
One test only	$	75
More than one test	$	60
Percent of Fracture (WSDOT 103)	$	58
Sand Equivalent (AASHTO T 176)	$	75
Specific Gravity, Fine/Coarse Aggregate (ASTM C 127, C 128)	$	75/120
Point Load Test or Rock Core (ASTM D5731)	$	60
Concrete, Mortar and Grout Tests		
Concrete Cyl (strip, log, cure, break, report)	$	35
Cast by others (strip, log, cure, break, report)	$	35
Mortar Cyl (strip, log, cure, break, report)	$	35
Grout Cyl (strip, log, cure, break, report)	$	35
Grout Cubes (strip, log, cure, break, report)	$	30

*Please contact us regarding test procedures which are not listed or for tests on contaminated soils. Negotiated unit rates or hourly rates will be charged for these procedures.

**Not WABO-certified.

Confluence Environmental Scope & Rate Schedule

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October 28, 2016

Andy Reaves
SDA
1724 W Marine View Drive, Suite 140
Everett, WA 98201

Re: Irvine Slough Stormwater Separation Project Environmental Compliance Scope and Budget

Dear Mr. Reaves:

Confluence Environmental Company (CEC) is pleased to provide you with this scope of work and cost estimate to conduct environmental compliance activities for the Irvine Slough Stormwater Separation Project. We understand that there are three potential alternatives that are currently under consideration. As requested by SDA, this scope addresses the permits and environmental review/approvals needed for the largest scale of those options (e.g. includes a new outfall into the Stillaguamish River). As such, options that represent less impact or a smaller footprint may require a smaller level of effort.

Confluence will perform the following elements under this scope:

- Coordinate with SDA and the City of Stanwood during the environmental and permit review process.
- Prepare permit applications for an Army Corps Nationwide Permit (NWP) 43, a WDFW HPA, a Department of Ecology Section 401 Letter of Verification, and City of Stanwood shoreline substantial development permit, Floodplain Development Permit, and grading permit.
- Prepare an Endangered Species Act Biological Assessment.
- Prepare a SEPA checklist for the City of Stanwood to issue a Threshold Determination of Non-Significance.
- Conduct a site visit to gather data on existing conditions, including wetland and ordinary high water mark delineation as needed.
- Develop a mitigation plan as part of the permitting application package to address temporary and permanent impacts.
- Coordinate with regulatory agencies and Tribal authorities in advance of the application submittals, as well as follow up after application submittal.
- Respond to comments regarding application materials.

The following assumptions are included in this scope:

- 30% design will be completed. Information such as, but not limited to, the impact footprint/ limits of disturbance, grading quantities, cross-sections, profiles, construction means and methods/BMPs.

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- SDA will provide CAD files/drafting support for permit drawings production.
- SDA will prepare floodplain elevation information and/or certification if needed.
- Mitigation will be needed for the new outfall location, and that mitigation will take place at and adjacent to the impact site.
- Agency comments on application materials will be minimal. Additional studies or documentation may require additional scope.
- The Corps will not require an Individual Corps Permit and will concur with the use of NWP 43.
- The Department of Ecology will not require an Individual 401 Water Quality Certification.
- The Biological Assessment will result in a Not Likely to Adversely Affect determination, and only informal consultation with the Federal Services will be needed.
- A SEPA DNS is the appropriate Threshold Decision.
- The City will provide payment when necessary for application submittal fees.
- The City will provide a review of the application materials prior to submittal.
- Confluence can begin work within one week of Notice to Proceed.

The cost estimate for this work is not to exceed $30,000.

If you have any comments or questions, please feel free to give me a call or email me.

Respectfully yours,

SCOTT WHITE
Principal Environmental Planner/Partner
scott.white@confenv.com

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2016 Standard Rates

Title	Name	2016 Standard Rate
Principal Planner	Scott White	$195
Senior Scientist	Chris Berger	$165
Senior Scientist	Kerrie McArthur	$165
Senior Scientist	Grant Novak	$165
Project Biologist	Hans Hurn	$ 105
Staff Biologist	Alyson Rae	$ 70