

**CITY OF TUMWATER  
SERVICE PROVIDER AGREEMENT**

**DESCHUTES RIVER FLOOD REDUCTION STUDY**

THIS AGREEMENT is made and entered into in duplicate this \_\_\_\_\_ day of \_\_\_\_\_, 2022, by and between the CITY OF TUMWATER, a Washington municipal corporation, hereinafter referred to as the “CITY”, and STANTEC CONSULTING SERVICES INC., a New York corporation, hereinafter referred to as the “SERVICE PROVIDER”.

**WITNESSETH:**

WHEREAS, the CITY desires to have certain services and/or tasks performed as set forth below requiring specialized skills and other supportive capabilities; and

WHEREAS, sufficient CITY resources are not available to provide such services; and

WHEREAS, the SERVICE PROVIDER represents that the SERVICE PROVIDER is qualified and possesses sufficient skills and the necessary capabilities, including technical expertise, where required, to perform the services and/or tasks set forth in this Agreement.

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

**1. SCOPE OF SERVICES.**

The SERVICE PROVIDER shall perform such services and accomplish such tasks, including the furnishing of all materials and equipment necessary for full performance thereof, as are identified and designated as SERVICE PROVIDER responsibilities throughout this Agreement and as detailed in Exhibit “A” Scope of Services attached hereto and incorporated herein (the “Project”).

**2. TERM.**

The Project shall begin no earlier than August 15, 2022, and shall be completed no later than December 31, 2023. This Agreement may be extended for additional periods of time upon mutual written agreement of the parties.

3. TERMINATION.

Prior to the expiration of the Term, this Agreement may be terminated immediately, with or without cause, by the CITY. SERVICE PROVIDER reserves the right to terminate this Agreement at any time, in whole or in part, by sixty (60) days' written notice to the CITY.

4. COMPENSATION AND METHOD OF PAYMENT.

A. Payments for services provided hereunder shall be made following the performance of such services, unless otherwise permitted by law and approved in writing by the CITY.

B. No payment shall be made for any service rendered by the SERVICE PROVIDER except for services identified and set forth in this Agreement.

C. The CITY shall pay the SERVICE PROVIDER for work performed under this Agreement a total sum not to exceed **Two Hundred Seventy Seven Thousand Three Hundred and Sixty One Dollars. (\$277,361.00)** as reflected in Exhibit "A".

D. Upon execution of this Agreement, the SERVICE PROVIDER must submit IRS Form W-9 Request for Taxpayer Identification Number (TIN) and Certification unless a current Form W-9 is already on file with the CITY.

E. The SERVICE PROVIDER shall submit an invoice to the CITY for services rendered during the contract period. The CITY shall initiate authorization for payment after receipt of said invoice and shall make payment to the SERVICE PROVIDER within thirty (30) days thereafter.

F. When subcontracting services or purchasing goods from third parties, as identified and approved in this Agreement, the SERVICE PROVIDER must submit written documentation establishing that the goods and/or services have been provided and the third party has been paid in order to receive payment for such goods and/or services.

G. Invoices may be submitted immediately following performance of services, but in no event shall an invoice be submitted more than twenty (20) business days following the end of the contract term or the end of the calendar year, whichever is earlier.

5. INDEPENDENT CONTRACTOR RELATIONSHIP.

A. The parties intend that an independent contractor relationship will be created by this Agreement. Subject to paragraphs herein, the implementation of services pursuant to this Agreement will lie solely within the discretion of the SERVICE PROVIDER. No agent, employee, servant or representative of the SERVICE PROVIDER shall be deemed to be an employee, agent, servant or representative of the CITY for any purpose, and the employees of the SERVICE PROVIDER are not entitled to any of the benefits the CITY provides for its employees. The SERVICE PROVIDER will be solely and entirely responsible for all actual or alleged negligent acts and for all actual or alleged negligent acts of its employees, or representatives during the performance of this Agreement.

B. In the performance of the services herein contemplated the SERVICE PROVIDER is an independent contractor with the authority to control and direct the performance of the details of the work; however, the results of the work contemplated herein must meet the approval of the CITY and shall be subject to the CITY'S general rights of inspection and review to secure the satisfactory completion thereof.

C. As an independent contractor, the SERVICE PROVIDER shall be responsible for the reporting and payment of all applicable local, state, and federal taxes.

D. It is recognized that the SERVICE PROVIDER may or will be performing services during the Term for other parties; provided, however, that such performance of other services shall not conflict with or interfere with the SERVICE PROVIDER'S ability to perform the services. The SERVICE PROVIDER agrees to resolve any such conflicts of interest in favor of the CITY.

6. SERVICE PROVIDER EMPLOYEES/AGENTS.

The CITY may at its sole discretion require the SERVICE PROVIDER to remove an employee, agent or servant from employment on this Project. The SERVICE PROVIDER may however employ that individual on other non-CITY related projects.

7. HOLD HARMLESS INDEMNIFICATION.

A. SERVICE PROVIDER Indemnification. The SERVICE PROVIDER agrees to indemnify, defend and hold the CITY, its elected officials, officers, employees, agents, and volunteers harmless from any and all claims, demands, losses, actions and liabilities (including costs and all reasonable attorney fees) to or by any and all persons or entities, including, without limitation, their

respective agents, licensees, or representatives, arising from, resulting from, or connected with this Agreement to the extent caused by the negligent acts, errors or omissions of the SERVICE PROVIDER, its partners, shareholders, agents, employees, or by the SERVICE PROVIDER'S breach of this Agreement. The SERVICE PROVIDER expressly waives any immunity that may be granted to it under the Washington State Industrial Insurance Act, Title 51 RCW. The SERVICE PROVIDER'S indemnification shall not be limited in any way by any limitation on the amount of damages, compensation or benefits payable to or by any third party under workers' compensation acts, disability benefit acts or any other benefit acts or programs. This waiver has been mutually negotiated by the parties.

B. CITY Indemnification. The CITY agrees to indemnify, defend and hold the SERVICE PROVIDER, its officers, directors, shareholders, partners, employees, and agents harmless from any and all claims, demands, losses, actions and liabilities (including costs and reasonable attorney fees) to or by any and all persons or entities, including without limitation, their respective agents, licensees, or representatives, arising from, resulting from or connected with this Agreement to the extent solely caused by the negligent acts, errors, or omissions of the CITY, its employees or agents. No liability shall attach to the CITY by reason of entering into this Agreement except as expressly provided herein.

C. Survival. The provisions of this Section shall survive the expiration or termination of this Agreement with respect to any event occurring prior to such expiration or termination.

## 8. INSURANCE.

A. The SERVICE PROVIDER 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 SERVICE PROVIDER, their agents, representatives, employees or subcontractors.

B. The SERVICE PROVIDER shall provide a Certificate of Insurance evidencing:

1. Automobile Liability insurance with limits no less than \$1,000,000 combined single limit per accident for bodily injury and property damage.

2. Commercial General Liability insurance written on an occurrence basis with limits no less than \$2,000,000 combined single limit per occurrence and \$2,000,000 aggregate for personal injury, bodily injury and property damage. Coverage shall include but not be limited to: blanket contractual;

products/completed operations; broad form property damage; explosion, collapse and underground (XCU) if applicable; and employer's liability.

3. Professional Liability insurance written on an occurrence basis with limits of no less than \$2,000,000 per claim, and \$2,000,000 policy aggregate limit.

C. With the exception of Professional Liability, the CITY shall be named as an additional insured on the insurance policy, as respect to work performed by or on behalf of the SERVICE PROVIDER and a copy of the endorsement naming the CITY as additional insured shall be attached to the Certificate of Insurance.

D. The SERVICE PROVIDER'S insurance shall contain a clause stating that coverage shall apply separately to each insured against whom claim is made or suit is brought, except with respects to the limits of the insurer's liability.

E. Any payment of deductible or self-insured retention shall be the sole responsibility of the SERVICE PROVIDER.

F. The SERVICE PROVIDER'S insurance shall be primary insurance as respect to the CITY and the CITY shall be given written notice of any cancellation, suspension or material change in coverage within two (2) business days of SERVICE PROVIDER'S receipt of such notice.

## 9. TREATMENT OF ASSETS.

Upon full payment of all monies owed to SERVICE PROVIDER, title to all property furnished by the CITY shall remain in the name of the CITY and the CITY shall become the owner of the work product and other documents, if any, prepared by the SERVICE PROVIDER pursuant to this Agreement.

The CITY agrees, to the fullest extent permitted by law, to indemnify and hold the SERVICE PROVIDER harmless from any claim, liability or cost (including reasonable attorney's fees and defense costs) arising or allegedly arising out of any reuse or modification of the ASSETS by the CITY or any person or entity that obtains the ASSETS from or through the CITY.

## 10. COMPLIANCE WITH LAWS.

A. The SERVICE PROVIDER, in the performance of this Agreement, shall comply with all applicable federal, state or local laws and ordinances, including being licensed to do business in the City of Tumwater by

obtaining a Tumwater business license and any additional regulations for licensing, certification and operation of facilities, programs and accreditation, and licensing of individuals, and any other standards or criteria as described in this Agreement to assure quality of services.

B. The SERVICE PROVIDER specifically agrees to pay any applicable CITY business and occupation (B&O) taxes which may be due on account of this Agreement.

11. NONDISCRIMINATION.

A. The CITY is an equal opportunity employer.

B. Nondiscrimination in Employment. In the performance of this Agreement, the SERVICE PROVIDER will not discriminate against any employee or applicant for employment on the grounds of race, creed, religion, color, national origin, citizenship or immigration status, families with children status, sex, marital status, honorably discharged veteran or military status, the presence of any sensory, mental, or physical disability or the use of a trained dog guide or service animal by a person with a disability, sexual orientation, genetic information, age or other basis prohibited by state or federal law; provided that the prohibition against discrimination in employment because of disability shall not apply if the particular disability prevents the proper performance of the particular worker involved. Such action shall include, but not be limited to: employment, upgrading, demotion or transfers, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and programs for training including apprenticeships. "Race" is inclusive of traits historically associated or perceived to be associated with race including, but not limited to, hair texture and protective hairstyles. For purposes of this subsection, "protective hairstyles" includes, but is not limited to, such hairstyles as afros, braids, locks, and twists. It is not an unfair practice when a distinction or differential treatment on the basis of citizenship or immigration status is authorized by federal or state law, regulation, rule or government contract.

C. Nondiscrimination in Services. The SERVICE PROVIDER will not discriminate against any recipient of any services or benefits provided for in this Agreement on the grounds of race, creed, religion, color, national origin, citizenship or immigration status, families with children status, sex, marital status, honorably discharged veteran or military status, the presence of any sensory, mental or physical disability or the use of a trained dog guide or service animal by a person with a disability, sexual orientation, genetic information, age or other basis prohibited by state or federal law. "Race" is inclusive of traits historically associated or perceived to be associated with race including, but not limited to, hair texture and protective hairstyles. For purposes of this subsection, "protective hairstyles"

includes, but is not limited to, such hairstyles as afros, braids, locks, and twists. It is not an unfair practice when a distinction or differential treatment on the basis of citizenship or immigration status is authorized by federal or state law, regulation, rule or government contract.

D. If any assignment and/or subcontract have been authorized by the CITY, said assignment or subcontract shall include appropriate safeguards against discrimination. The SERVICE PROVIDER shall take such action as may be required to ensure full compliance with the provisions in the immediately preceding paragraphs herein.

E. Nondiscrimination in Benefits. **The provisions of this subsection are only applicable to contracts with an estimated value of \$50,000 or more.** Pursuant to Tumwater Municipal Code (TMC) Chapter 3.46, the SERVICE PROVIDER shall provide employee benefits or an equivalent sum to the domestic partners of their employees involved in the SERVICE PROVIDER'S operations applicable to this Agreement if such benefits are provided to employees' spouses as more particularly set forth in Chapter 3.46 of the TMC, a copy of which is attached hereto as Exhibit "B".

## 12. ASSIGNMENT/SUBCONTRACTING.

A. The SERVICE PROVIDER shall not assign its performance under this Agreement or any portion of this Agreement without the written consent of the CITY, and it is further agreed that said consent must be sought in writing by the SERVICE PROVIDER not less than thirty (30) days prior to the date of any proposed assignment. The CITY reserves the right to reject without cause any such assignment.

B. Any work or services assigned hereunder shall be subject to each provision of this Agreement and proper bidding procedures where applicable as set forth in local, state and/or federal statutes, ordinances and guidelines.

C. Any technical service subcontract not listed in this Agreement, must have express advance approval by the CITY.

## 13. NON-APPROPRIATION OF FUNDS.

If sufficient funds are not appropriated or allocated for payment under this Agreement for any future fiscal period, the CITY will not be obligated to make payments for services or amounts incurred after the end of the current fiscal period, and this Agreement will terminate upon the completion of all remaining services for which funds are allocated. No penalty or expense shall accrue to the CITY in the event this provision applies.

14. CHANGES.

Either party may request changes to the Scope of Services and performance to be provided hereunder, however, no change or addition to this Agreement shall be valid or binding upon either party unless such change or addition be in writing and signed by both parties. Such amendments shall be attached to and made part of this Agreement.

15. MAINTENANCE AND INSPECTION OF RECORDS.

A. The SERVICE PROVIDER at such times and in such forms as the CITY may require, shall furnish to the CITY such statements, records, reports, data, and information as the CITY may request pertaining to matters covered by this Agreement.

B. The SERVICE PROVIDER shall maintain books, records and documents, which sufficiently and properly reflect all direct and indirect costs related to the performance of this Agreement and shall maintain such accounting procedures and practices as may be necessary to assure proper accounting of all funds paid pursuant to this Agreement. These records shall be subject at all reasonable times to inspection, review, or audit, by the CITY, its authorized representative, the State Auditor, or other governmental officials authorized by law to monitor this Agreement.

C. To ensure the CITY'S compliance with the Public Records Act, RCW 42.56, the SERVICE PROVIDER shall retain all books, records, documents and other material relevant to this agreement, for six (6) years after its expiration. The SERVICE PROVIDER agrees that the CITY or its designee shall have full access and right to examine any of said materials at all reasonable times during said period.

D. Notwithstanding the foregoing, the CITY's right to inspect, copy and audit shall not extend to the composition of the SERVICE PROVIDER'S rates and fees, percentage mark-ups or multipliers but shall apply only to their application to the applicable units.

16. POLITICAL ACTIVITY PROHIBITED.

None of the funds, materials, property or services provided directly or indirectly under the Agreement shall be used for any partisan political activity, or to further the election or defeat of any candidate for public office.



17. PROHIBITED INTEREST.

No member, officer, or employee of the CITY shall have any interest, direct or indirect, in this Agreement or the proceeds thereof.

18. NOTICE.

Notice provided for in this Agreement shall be sent by certified mail to the addresses designated for the parties on the signature page of this Agreement.

19. ATTORNEYS FEES AND COSTS.

If any legal proceeding is brought for the enforcement of this Agreement, or because of a dispute, breach, default, or misrepresentation in connection with any of the provisions of this Agreement, the prevailing party shall be entitled to recover from the other party, in addition to any other relief to which such party may be entitled, reasonable attorney's fees and other costs incurred in that action or proceeding.

20. JURISDICTION AND VENUE.

A. This Agreement has been and shall be construed as having been made and delivered within the State of Washington. It is agreed by each party hereto that this Agreement shall be governed by laws of the State of Washington, both as to interpretation and performance.

B. Any action of law, suit in equity, or judicial proceeding for the enforcement of this Agreement or any provisions thereof shall be instituted and maintained in the superior court of Thurston County, Washington.

21. SEVERABILITY.

A. If, for any reason, any part, term or provision of this Agreement is held by a court of the United States to be illegal, void or unenforceable, the validity of the remaining provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular provision held to be invalid.

B. If it should appear that any provision hereof is in conflict with any statutory provision of the State of Washington, said provision which may conflict therewith shall be deemed inoperative and null and void insofar as it may be in conflict therewith, and shall be deemed modified to conform to such statutory provisions.

22. ENTIRE AGREEMENT.

The parties agree that this Agreement is the complete expression of the terms hereto and any oral representations or understandings not incorporated herein are excluded. Further, any modification of this Agreement shall be in writing and signed by both parties. Failure to comply with any of the provisions stated herein shall constitute material breach of contract and cause for termination. It is also agreed by the parties that the forgiveness of the nonperformance of any provision of this Agreement does not constitute a waiver of the provisions of this Agreement. This Agreement may be executed in any number of counterparts, which counterparts shall collectively constitute the entire Agreement.

23. WAIVER OF CONSEQUENTIAL DAMAGES.

Neither the CITY nor the SERVICE PROVIDER shall be liable to the other or shall make any claim for any incidental, indirect or consequential damages arising out of or connected to this Agreement or the performance of the services on this Project. This mutual waiver includes, but is not limited to, damages related to loss of use, loss of profits, loss of income, loss of markets, unrealized energy savings, diminution of property value or loss of reimbursement or credits from governmental or other agencies.

\*\*\*Signatures on next page\*\*\*

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed the day and year first hereinabove written.

CITY:

CITY OF TUMWATER  
555 Israel Road SW  
Tumwater, WA 98501

SERVICE PROVIDER:

Stantec Consulting Services, Inc.  
601 SW 2<sup>nd</sup> Ave STE 1400  
Portland, OR 972304-3128  
Tax ID #: 602-529-295  
Phone Number: 503-830-9669

\_\_\_\_\_  
DEBBIE SULLIVAN  
Mayor

\_\_\_\_\_  
Signature (Notarized – see below)  
Printed Name: \_\_\_\_\_  
Title: \_\_\_\_\_

ATTEST:

\_\_\_\_\_  
Melody Valiant, City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Karen Kirkpatrick, City Attorney

STATE OF OREGON

COUNTY OF MULTNOMAH

I certify that I know or have satisfactory evidence that \_\_\_\_\_(name) is the person who appeared before me, and said person acknowledged that (he/she) signed this instrument, on oath stated that (he/she) was authorized to execute the instrument and acknowledged it as the \_\_\_\_\_(title) of \_\_\_\_\_(company) to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated:\_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for the State of Washington,  
My appointment expires:\_\_\_\_\_

EXHIBIT "A"



**Stantec Consulting Services Inc.**  
601 SW Second Avenue, Suite 1400  
Portland OR 97204-3128

July 8, 2022

Project/File: City of Tumwater Deschutes River Flood Reduction Study

**Dan Smith**  
City of Tumwater  
555 Israel Road SW  
Tumwater, WA 98501

Dear Dan Smith,

**Reference: Deschutes River Flood Reduction Study**

### **Project Understanding**

The Stantec/Cardno Team was selected for the 2022 Pioneer Park Project which focuses on Deschutes River Flooding at Pioneer Park and associated meander bend migration issues. This effort is an add on to the Pioneer Park work and extends the project modeling domain to consider flooding along the Deschutes River from SE Henderson Blvd to the Deschutes River Falls near SE Capitol Blvd (Study Area). Flooding in the Study Area was the subject of modeling by Cardno from 2014 to 2016 working for the LOTT Clean Water Alliance (LOTT) to assess flooding concerns and strategies to develop a new sewerage treatment facility in the Deschutes River Valley. Construction of the sewerage facility has not been completed as contemplated in the studies. Documents associated with this effort include:

- Deschutes Valley Master Plan, Geomorphic and Hydrologic Analysis (June 18, 2014, Revision)
- Deschutes Valley Master Plan, Existing Conditions Hydraulic Modeling (June 18, 2015, Revision)
- Deschutes Valley Property Master Plan, Hydraulic Modeling Interim Project Summary (August 17, 2016)

The study area for the prior work with LOTT extended from the Deschutes River Falls 3,800 feet upriver near SE M Street above the Valley Athletic Club. The Study Area for this effort is approximately 14,000 feet along the Deschutes River Alignment and the modeling domain will extend above Henderson Blvd making the modeling reach approximately 15,000 feet. Much of the added reach of the Deschutes River Valley that will be modeled is occupied by the Tumwater Valley Golf Club, Deschutes Valley Park, open space, and Pioneer Park. Modeling for the LOTT effort was completed with the River2D Model based on hydrology from U.S. Geological Survey (USGS) gage at the E Street Bridge. We propose to utilize HEC-RAS 2D Modeling Platform for this effort extending the model for Pioneer Park through the Study Area.

Project goals include:

1. Develop an understanding of current and future flooding and erosion risk within the Lower Deschutes River Study Area (Henderson Boulevard Bridge to Tumwater Falls)
2. Determine redevelopment feasibility within the Study Area including consideration of changes to current development standards, zoning modifications, mitigation needs, and required permits

**Reference:** Deschutes River Flood Reduction Investigation (Henderson Blvd Bridge to Tumwater Falls)

3. Identify conceptual alternatives to mitigate flooding and erosion within the project area to improve ecosystem functions and support redevelopment on key parcels.

This effort will include the following tasks:

- **Task 1: Project Administration/Management**
- **Task 2: Literature Review and Project Conceptualization**
  - Past H/H Reports/Studies Summary
  - Current Zoning, Land Use, and Development Standards Review
  - Summary of Regulatory Changes necessary to facilitate desired changes within the study area
  - GIS Mapping of land ownership for flood mitigation and redevelopment
  - Stakeholder Meeting 1 (*Tumwater Parks and Community Development*)
- **Task 3: Data Gathering and Gap Analysis**
  - Field Survey of River and Floodplains
- **Task 4: Hydraulic Modeling and Reporting**
  - Existing Conditions Modeling
  - Stakeholder Meeting 2 (*Landowners*)
  - Proposed Conditions Modeling
    - Up to (3) Conceptual Alternatives focused on flood attenuation through floodplain reconnection within and above the study area
      - Identify areas for building related redevelopment in target parcels
      - Identify areas for multi-use park development where flooding would occur in winter and parks would be useable in summer
- **Task 5: Flood Reduction and Redevelopment Concepts**
  - Develop up to (3) Conceptual Plans and Order of Magnitude Costs for Ranking for Presentation Purposes
  - Complete Alternative Ranking Matrix based on Costs and Benefits of the Alternatives and Select a Preferred Alternative
  - Stakeholder Meeting 3 (*TBD*)
  - Develop the Conceptual Plan of the Preferred Alternative for Presentation Purposes
  - Identify required Permits and complete a Preliminary Planning Level Cost Estimates for the Preferred Alternative
  - Complete Flood Reduction and Redevelopment Report
  - Stakeholder Meeting 4 (*TBD*)

**Reference:** Deschutes River Flood Reduction Investigation (Henderson Blvd Bridge to Tumwater Falls)

We understand that the City of Tumwater has secured \$300,000 of project funding from the Department of Ecology (DOE) which will cover \$27,000 of Tumwater project costs and \$273,000 for the Stantec Team. We propose to complete this work in parallel with the Pioneer Park effort to facilitate an understanding of how alternatives at Pioneer Park may affect the downstream study area and how downstream scenarios may impact the park.

### **Task 1: Project Administration/Management**

This task includes project management duties and meetings. Communication with the City's project manager will occur at to-be-determined intervals throughout the project and allow the Project Team (Stantec) to report on project status and coordinate project-related items.

- 1.1. Joe Richards will serve as the Project Manager and Principal in Charge. He will be responsible for overseeing and directing all aspects of project management. Kelly Swindle will serve as deputy PM. Delegation of PM responsibility may be undertaken at times to facilitate efficient delivery of the effort.
- 1.2. A site visit will be held following existing conditions modeling to confirm/validate model results and gather stakeholder information for flood reduction and development alternatives. See Task 3 for survey effort and additional site work.
- 1.3. Virtual meetings will be held including a kickoff meeting and up to (4) virtual stakeholder outreach meetings. These meetings may be changed to in-person for key staff based on budget availability and needs.
- 1.4. A Quality Assurance Project Plan (QAPP) will be completed in accordance with Stantec and Ecology standards.

#### **Task Assumptions**

- > For budgeting purposes, it is assumed that two (2) to four (4) Stantec employees will attend site visits.
- > The duration of the project for budgeting purposes, assuming 7-1-2022 notice to proceed (NTP) will continue until 6-30-2023 (approximately 12-month duration).
- > For budgeting purposes meeting duration is assumed to be no more than two (2) hours in duration with (1) hour of Prep and (1) hour of follow-up for (3) Stantec Staff Members unless otherwise noted and virtual.
- > Review and finalization of the QAPP will occur through a single round of submittal, review, and redline reconciliation to finalize the document.

#### **Task Deliverables**

- > Stantec will provide monthly project management work summary and invoices over the term of this work assignment. Invoicing will be completed at the top task level only. Stantec will maintain frequent communication with the City, including phone calls and emails.
- > Meeting Agenda and Minutes for all stakeholder meetings described above.
- > Quality Assurance Project Plan (QAPP)

**Reference:** Deschutes River Flood Reduction Investigation (Henderson Blvd Bridge to Tumwater Falls)

## **Task 2: Literature Review & Project Conceptualization**

Stantec will be responsible for reviewing existing and available reports covering the study area focused on redevelopment, flooding, water quality, erosion, and aquatic habitat.

- 2.1. Review and summarize previously completed H/H reports, studies, and design package completed within the study area.
  - 2.1.1. Deschutes Valley Master Plan studies/reports/plans (listed previously)
  - 2.1.2. As-built and/or design plans for Henderson Blvd Bridge and Tumwater Falls Dam
- 2.2. Review and summary of land use options and zoning within the project area based on current local, regional, state, and federal regulations; and a comprehensive review and summarization of necessary permits to develop in the project area.
- 2.3. GIS Mapping of land ownership for flood mitigation and redevelopment

### **Task Assumptions**

- > Report, studies and design packages will be provided to Stantec by the City.
- > The FEMA model of this area is available for download without additional charge to project or a need for a request to FEMA headquarters for the information.

### **Task Deliverables**

- > No Deliverables for Literature Review – results from this task will be included in the Flood Reduction and Redevelopment Report under Task 5. Interim information can be provided upon request.
- > GIS Map of land ownership for flood mitigation and redevelopment.



Reference: Deschutes River Flood Reduction Investigation (Henderson Blvd Bridge to Tumwater Falls)

### **Task 3: Data Gathering and Gap Analysis**

Stantec will complete data gathering and a gap analysis to support the overall project effort as described below:

#### 3.1. Review Available Data and Complete Gap Analysis

##### 3.1.1. Best-available LiDAR

3.1.2. All other hydraulic related data including but not limited to FEMA approved hydraulic models of the Deschutes River, the previous River2D model, and land cover classification datasets.

##### 3.1.3. Scope Development for Acquisition of Additional Data as Identified

##### 3.1.4. As-built and/or design plan for the Henderson Blvd Bridge and Tumwater Falls Dam

#### 3.2. Complete Study Area field survey

3.1.1. The survey will consist of 10 transects. Transects will be taken at approximately every 1,000 feet outside of the area not part of the existing River2D model. The survey will cover the channel area below top of bank only and Lidar data will be used in overbank areas.

3.1.2. Taking field measurements of the Henderson Blvd Bridge as needed. Field measurements include but are not limited to pier widths, pier spacing, and abutment spacing.

3.1.3. Formatting survey data to be GIS-compatible.

#### **Task Assumptions**

- > High-resolution LiDAR is available via the Washington LiDAR Portal and is adequate for HEC-RAS 2D modeling
- > If the Washington LiDAR Portal does not have adequate LiDAR data, Stantec will utilize the USGS "The National Map - Data Deliver" for LiDAR acquisition
- > The FEMA model of this area is available for download without additional charge to project or a need for a request to FEMA headquarters for the information
- > As-built and/or design plan information is available for the Henderson Blvd Bridge
- > As-built and/or design plan information is available for the Tumwater Falls Dam
- > If as-built and/or design plan information is not available for the Henderson Blvd Bridge or Tumwater Falls Dam, Stantec will use engineering judgment and field survey to determine required dimensions of bridge and dam
- > There are not access restrictions to the Deschutes River at this location
- > No special access or permit acquisition will be required to access Deschutes River at this location

#### **Task Deliverables**

- > No deliverables for this Task - Data gathering and gap analysis documentation will be part of the Flood Reduction and Redevelopment Report under Task 5.
- > Interim information can be provided including Sketches of survey results, GIS-compatible data of survey results, XYZ information for the 10 transects

Reference: Deschutes River Flood Reduction Investigation (Henderson Blvd Bridge to Tumwater Falls)

## **Task 4: Hydraulic Modeling and Reporting**

Stantec will be response for

### 4.1. Creating a HEC-RAS 2D model of the Existing Conditions

- Model will be calibrated to the 1996 flood event. Stantec will utilize the gaging information from Gage 12080010 on E Street Bridge and the Hydraulics Report Deschutes Watershed, WA – PMR Detailed Analysis, April 2014, prepared by STARR. Calibration will include potential modification/adjustments to Manning's  $n$  roughness values, only.
- Stantec will utilize the peak flow rates from the Technical Memorandum "Deschutes Valley Master Plan Geomorphic and Hydrologic Analyses" (Revised June 18, 2014) without modification. Flowrates for 2-year (bankfull), 25-year, 50-year, and 100 year will be utilized.
- Stantec will add climate change 2-year and 100-year flows from the UW Climate Change Center to assess future hydrology.
- Stantec will assume "uniform flow" of the peak discharges and no estimation or development of a flow hydrograph will be performed as part of this task.
- Landcover for initial overbank Manning's  $n$  value estimation will be digitized using best-available aerial imagery and the 2019 National Land Cover Database (NLCD).
- Channel  $n$  values will match the existing, effective FEMA hydraulic model of the Deschutes River. If the existing, effective FEMA hydraulic model of the Deschutes River is not available, Stantec will utilize guidance from USGS Water-Supply Paper (WSP) 2339 to estimate channel  $n$  values.

4.2. Potential Erosion Area Evaluation – Stantec will review the results of the Existing Conditions HEC-RAS and identify areas of potential erosion through visual observation and by using shear as a surrogate for erosion risk. Hydraulic model output maps with shear distributions will be produced.

4.3. Modifying the Existing Conditions model for up to (3) Proposed Model Flood Reduction/Redevelopment scenarios. The models will be used to evaluate flood reduction and redevelopment potential.

2.1.1. Up to (3) Proposed Model Scenarios will be proposed by Stantec to the City. Stantec will not proceed with modeling of any Proposed Model Scenario until the City has agreed to each concept.

2.1.2. This task will include three (3) iterations for each Proposed Model Scenario (a maximum of (9) iterations). Iterations include slightly modifying the Proposed Model Scenario in an effort to better refine the potential flood reduction for up to (3) feasible alternatives.

### 4.4. Flood Reduction Modeling Summaries

2.1.1. Exhibits illustrating existing condition water surface elevation, velocity, and shear stress exhibits of the HEC-RAS results for existing and Proposed Model Scenario simulations.

2.1.2. Exhibits illustrating the changes to water surface elevation, velocity, and shear of the existing conditions for the proposed scenario simulations.

**Reference:** Deschutes River Flood Reduction Investigation (Henderson Blvd Bridge to Tumwater Falls)

#### Task Assumptions

- > Model extents will be from 1,000 feet upstream of the Henderson Blvd Bridge to 500 feet downstream of the Tumwater Falls for 2D modeling within the Study Area. Determining the impact of removing flow from the hydrograph at locations above the 2D modeling domain will be completed through extending the 2D model upstream using the FEMA 1D Model and establishing off channel storage nodes.
- > The HEC-RAS Model will reflect existing condition land use, only. No assumptions of future development and land use changes will be applied to this model.

#### Task Deliverables

- > Input and output files of the HEC-RAS models
- > Maximum depth, water surface elevation, velocity and shear stress exhibits for existing conditions model
- > Exhibits illustrating the changes in water surface elevation, velocity, and shear of the existing conditions for the flood reduction and redevelopment concepts.
- > Flood Reduction Modeling results will be detailed under Task 5 Flood Reduction and Redevelopment Report

Reference: Deschutes River Flood Reduction Investigation (Henderson Blvd Bridge to Tumwater Falls)

## **Task 5: Flood Reduction and Redevelopment Concepts**

For this task Stantec will develop conceptual plans for up to (3) feasible flood reduction and redevelopment concepts, rank the concepts based on opportunities and costs, select an alternative and further refine it for presentation purposes, and complete reporting for the project.

5.1. Complete up to (3) feasible conceptual alternative plans based on the results of hydraulic modeling under Task 4. This task will be focused on City Parks Property (Pioneer Park and the Golf Course) and specific parcels controlled by the city as listed below for redevelopment activities:

- 09470021000, 09470045000, 09470003000, 09470046000, 09470051001

5.2. Complete Alternative Ranking Matrix based on Costs and Benefits of the Alternatives and Select a Preferred Alternative.

5.3. Develop Conceptual Plan of the Preferred Alternative for Presentation Purposes

5.1.1. Identify required permits and complete preliminary planning level cost estimate for the preferred alternative

5.4. Complete Flood Reduction and Redevelopment Report to present the results of the effort as described under Tasks 2 through 5.

### **Task Assumptions**

- > Conceptual plans are developed as figures and maps in GIS or another similar program
- > No engineering plans will be developed
- > Review and finalization of the Flood Reduction and Redevelopment Report will occur through a single round of submittal, review, and redline reconciliation to finalize the document.

### **Task Deliverables**

- > Flood Reduction and Redevelopment Report

## **Proposed Schedule**

Task/Deliverable	Completion Date
Notice to Proceed	07/01/2022
Literature Review and Project Conceptualization	09/30/2022
Data Gathering and Gap Analysis	09/30/2022
Field Survey	08/31/2022
Existing Conditions Modeling	09/30/2022

**Reference:** Deschutes River Flood Reduction Investigation (Henderson Blvd Bridge to Tumwater Falls)

Task/Deliverable	Completion Date
Proposed Modeling Scenarios	12/15/2022
Conceptual Alternatives	03/15/2023
Preferred Alternative Development	04/28/2023
Flood Reduction and Redevelopment Report	06/30/2023

# Deschutes River Flood Reduction Study

Client:	City of Tumwater
PM:	Richards, Joe
PTL:	Whitten, Zach

[illegible]



**Stantec Consulting Services Inc.**  
601 SW Second Avenue, Suite 1400  
Portland OR 97204-3128

## **Proposed Budget**

Top Task/Deliverable	Top Task Budget
Task 1: Project Administration/Management	\$38,042
Task 2: Literature Review and Project Conceptualization	\$29,374
Task 3: Data Collection and Gap Analysis	\$18,323
Task 4: Hydraulic Modeling and Reporting	\$91,797
Task 5: Flood Reduction and Redevelopment Report	\$99,825
<b>Total Project Cost</b>	<b>\$277,361</b>

Respectfully,

**STANTEC CONSULTING SERVICES INC.**

**Joe Richards** PE, CWRE  
Stantec  
Principal Engineer  
Mobile: 503-830-9669  
joe.richards@stantec.com

**SERVICE PROVIDER RETIREMENT STATUS FORM**

Complete this form for each owner, and each employee, independent contractor or person providing service to the City of Tumwater.

**I have retired from a Washington State Retirement System using the 2008 Early Retirement Factor?**

☐ Yes

☐ No

I verify the information above is true and correct.

<b>Name of Owner, Employee, Independent Contractor or Person:</b> (Please print)	<b>Social Security Number</b> (If answering "yes" above)
<b>Signature</b>	<b>Date</b>