# Tacoma Water New Fennel Creek Pump Station



State of Washington Capital Projects Advisory Review Board (CPARB) Project Review Committee (PRC)

# Application for Approval to Utilize Progressive Design-Build Project Delivery

Submitted by Tacoma Water February 20, 2024



## State of Washington **PROJECT REVIEW COMMITTEE (PRC) APPLICATION FOR PROJECT APPROVAL** To Use the Design-Build (DB) Alternative Contracting Procedure

The PRC will only consider complete applications: Incomplete applications may result in delay of action on your application. Responses to sections 1-7 and 9 should not exceed 20 pages (font size 11 or larger). Provide no more than six sketches, diagrams or drawings under Section 8.

#### Identification of Applicant

- a) Legal name of Public Body (your organization): City of Tacoma, Tacoma Public Utilities, dba **Tacoma Water**
- b) Mailing Address: 3628 S 35th St, Tacoma, WA 98409
- c) Contact Person Name: Alicia Flatt

Title: Civil Engineer/Project Manager

d) Phone Number: 253-320-1189

E-mail: aflatt@cityoftacoma.org

### 1. Brief Description of Proposed Project

- a) Name of Project: New Fennel Creek Pump Station
- b) County of Project Location: Pierce
- c) Please describe the project in no more than two short paragraphs. (See Attachment A for an example.)

Tacoma Water is requesting approval to utilize progressive design-build (PDB) delivery for the New Fennel Creek Pump Station (NFCPS) Project, which is part of the City's larger Pipeline 1 Pressurization Program. Pipeline 1 (P1) is comprised of 27 miles of large diameter pipeline that conveys drinking water; it is one of two water supply transmission mains serving the City of Tacoma. Pipeline 1 is not currently fully pressurized over its entire length, which creates the potential for contaminants to infiltrate into the pipeline and compromise the drinking water. Tacoma Water is implementing the Pipeline 1 Pressurization Program to comply with Washington State Department of Health (DOH) requirements.

Construction of the NFCPS and related improvements will facilitate temporary operation of P1 during future pipe replacement capital projects by enabling supply of drinking water to the Prairie Ridge, Tehaleh, and Cumberland service areas during shutdowns of large segments of the overall pipeline. Construction and start-up of the NFCPS and related improvements is critical to complete other work in the program, as it will enable the rehabilitation of up to 15 miles of the middle section of Pipeline 1. The project will additionally provide capacity for growth and improved fire flow in the adjacent service areas. The NFCPS will be constructed within the vicinity of the existing Fennel Creek 705 Pump Station (see Exhibit B). The new pump station will have an estimated capacity of 6,300 gpm initially, expandable to 8,500 gpm. The project also includes several corresponding remote-site improvements (e.g., pressure reducing valves and two inline valves on P1 to isolate sections of P1 to help implement the revised pump station operations). In conjunction with one of the inline valve's construction, forensic testing will be performed on a segment of existing centrifugally cast concrete cylinder pipe to help inform further P1 pressurization program improvements.

#### 2. Projected Total Cost for the Project: Project Budget

Α.	Project Budget	
	Costs for Professional Services (A/E, Legal etc.)	\$ 1,340,000
	Estimated project construction costs (including DB contingency @ 5%):	\$ 6,600,000
	Equipment and furnishing costs*	\$ 2,310,000
	Off-site costs*	\$ 100,000
	Contract administration costs (owner, cm etc.)	\$ 990,000
	Contingencies (Owner Project Contingency @ 5% of GMP)	\$ 345,000
	Other related project costs (briefly describe)**	\$ 50,000
	Sales Tax (@10.3% of A/E + Construction Costs)	\$ <u>781.770</u>
	Total	\$ 10,100,000

\*Equipment costs and off-site costs are a subset of estimated project construction costs Revised 7/27/2023 Page 2 of 20

#### \*\*Property acquisition costs

The above project budget information is preliminary and is subject to change. Tacoma Water reserves the right, at its discretion, to increase or decrease the project budget, scope and schedule as required to best suit the interests of Tacoma Water and this project.

#### **B.** Funding Status

Please describe the funding status for the whole project. <u>Note</u>: If funding is not available, please explain how and when funding is anticipated

Tacoma Water funds our Capital Improvement Plan (CIP) with a combination of bonds, low-interest loans, capital and operating reserves. The initial A/E design, PDB advisory services, project management services and the Design Builder's preconstruction services for this project will be funded with capital reserves. The remaining, post-GMP costs of PDB advisory services, project manager/ construction manager services, A/E design services and construction of the project will be funded by a combination of low interest loan funding, anticipated revenue bonds, and cash reserves.

A portion of the project construction is funded through a Public Works Board Construction Loan in the amount of \$3.5M at 1.39% interest rate. The loan obligations include constructing within 5-years of loan execution (March 17th 2023), competitive bidding for construction, and quarterly reporting.

#### 3. Anticipated Project Design and Construction Schedule

Please provide (See Attachment B for an example schedule.):

The anticipated project design and construction schedule, including:

- a) Procurement;
- b) Hiring consultants if not already hired; and
- c) Employing staff or hiring consultants to manage the project if not already employed or hired.

The Owner's Advisor Consultant (Brown and Caldwell) is intended to augment the Utility's staff and is being contracted to provide PDB procurement, PDB advisory, and PDB PM/CM services as required, in support of this project, throughout procurement, design and construction.

	Start	<u>Finish</u>	Duration
PRC Process	Jan 2024	April 2024	11 weeks
PDB Procurement	April 2024	Jan 2025	9 months
Develop RFQ Document	April 2024	June 2024	2 months
RFQ Submittal Deadline (Design-Builder SOQ)		July 2024	
Develop and Issue RFP Document	April 2024	Aug 2024	4 months
RFP Submittal Deadline (Contractor Proposal and Price Factors)		Oct 2024	
Design-Build Contract and Pre-GMP Fee Negotiations	Nov 2024	Dec 2024	1 month
Design-Build Agreement w/ Phase 1 Services Executed and NTP Issued (on or before)		Jan 2025	
Pre-GMP Design (0-60% Design)	Jan 2025	Dec 2025	12 months
Programming/Schematic Design (0-30% Design)	Jan 2025	June 2025	6 months
Design Development (30-60% Design)	Jul 2025	Oct 2025	4 months
Negotiate GMP Amendment	Nov 2025	Nov 2025	1 month
GMB Amendment Executed		Dec 2025	
Final Design, Permitting, & Construction	Jan 2026	Sept 2027	21 months
Phase 2 Design (60-100% Design)	Nov 2025	Apr 2026	6 months

Construction	Feb 2026	Sept 2027	20 months
Substantial Completion		Sept 2027	

The above project schedule is preliminary and is subject to change as the project design and construction methodology is developed. Tacoma Water reserves the right, at its discretion, to increase or decrease the project budget, scope and schedule as required to best suit the interests of Tacoma Water and this project.

#### 4. Explain why the DB Contracting Procedure is Appropriate for this Project

Please provide a detailed explanation of why use of the contracting procedure is appropriate for the proposed project. Please address the following, as appropriate:

• If the construction activities are highly specialized <u>and</u> a DB approach is critical in developing the construction methodology (1) What are these highly specialized activities, and (2) Why is DB critical in the development of them?

Not applicable.

• If the project provides opportunity for greater innovation and efficiencies between designer and builder, describe these opportunities for innovation and efficiencies.

One of the primary benefits of design-build delivery is the ability of the contractor to collaborate directly with the Owner and designer to increase the efficiency and constructability of the project and in doing so, lower the overall development cost and reduce the project risks. In this project, the Design-Builder's early involvement will benefit the project by allowing the contractor to work closely with the designer and Tacoma Water to:

- Plan for work on a live transmission main, and coordinate between construction and outages for various improvements under the Project.
- Manage project complexity: improvements will need to be carefully modeled and configured to fit with the existing system.
- Plan for constructability, to minimize the risk of unexpected or longer than necessary outages to critical drinking water infrastructure.
- Provide contractor input for novel approaches to commissioning, construction sequencing, etc.
- Provide contractor input for design of the Cumberland valve, which is specialty work and contractor input will be beneficial to developing plans.
- Early contractor input will reduce risk for the NFCPS Project, which also provides risk mitigation for other projects in the P1 Program that are dependent on timely NFCPS completion.

Because the primary goal is to complete the NFCPS as early as possible, early Design-Builder involvement will allow opportunities for innovation, collaboration, exploration of existing conditions, efficiencies of design and logistics to reduce the owner's risk of schedule and cost impacts related to the cost of:

- Time in a volatile and ever-increasing/escalating construction market;
- Labor and material resources in the marketplace due to the heightened demand of both;
- Materials due to supply chain issues and shortages;
- Unforeseen site conditions that may manifest themselves on an undeveloped project site;
- If significant savings in project delivery time would be realized, explain how DB can achieve time savings on this project.

In addition to the potential risks and cost savings identified above, Tacoma Water has identified schedule as a critical project consideration and justification for selecting PDB delivery. The NFCPS must be operational before other projects in the P1 Program can be implemented. It is desirable to expedite the schedule as much as possible, and PDB delivery is anticipated to reduce overall project schedule. Additionally, equipment required for the project (e.g., electrical equipment including transformers, MCCs, and standby generators) are currently long lead items. PDB delivery provides the opportunity to utilize early works packages to select and order equipment early, reducing the overall project schedule relative to design-bid-build.

With respect to cost, another risk lies in the combination of the inflation rate and construction cost escalation. The combined rate of inflation and construction escalation in our region has been trending at approximately 8-10% or more per year. PDB delivery provides the opportunity to arrive at a construction price and obtain cost certainty earlier in the design process. This will minimize the impacts of time and, in doing so, maximize the value (savings) realized for the available budget.

#### 5. Public Benefit

In addition to the above information, please provide information on how use of the DB contracting procedure will serve the public interest. For example, your description must address, but is not limited to:

• How this contracting method provides a substantial fiscal benefit; or

The fiscal benefits of the PDB delivery method far outweigh those available through either GC/CM or the traditional D/B/B delivery methods.

- PDB allows Tacoma Water to collaborate with the DB team to provide a design solution that meets the project requirements, with opportunity for design-to-budget refinements to align with the available budget.
- PDB allows Tacoma Water and the DB to come to certainty on cost of construction earlier than either GC/CM or traditional D/B/B delivery methods.
- PDB reduces Tacoma Water's risk of added cost from change orders.
  - The DB hires and contracts with the A/E design team. As such, the responsibility for the accuracy and completeness of the construction documents falls on the DB and their design team and not on Tacoma Water. Errors and omissions in the construction documents are one of the leading causes for added cost and change orders in both GC/CM and D/B/B delivery.
  - Although the Owner's risk of added costs from change orders is reduced, it is not completely eliminated. The Owner is still at risk for costs related to unknown/latent conditions and/or Ownerdirected changes in scope after the GMP has been set.
- PDB allows Tacoma Water and the design team to work collaboratively and transparently with the Contractor to make educated/informed decisions on materials and systems based on cost effectiveness, durability and availability.

Additionally, utilizing PDB delivery is anticipated to result in project cost savings in the following ways:

- By utilizing early works packages for long lead equipment and potentially early sitework, the construction can be accelerated, reducing the total project duration and accruing scheduling and cost savings;
- In utilizing PDB delivery, there may be opportunity for greater efficiencies of project management and administration costs over the life of the project, compared to other delivery methods, that could result in additional savings to the project.
- How the use of the traditional method of awarding contracts in a lump sum (*the "design-bid-build method"*) is not practical for meeting desired quality standards or delivery schedules.

The PDB delivery method offers several attractive advantages and opportunities over the Design-Bid-Build (D/B/B) project delivery method. Some of those include:

- The potential to save significant time and money in the design and construction phasing of the project.
- The ability to have collaborative discussions that include Tacoma Water, the designer and the Contractor and make impactful, informed decisions during the design process. This includes minimizing customer impacts Tacoma Water anticipates that integrating the Contractor in the design process and early construction planning will help to minimize the duration and magnitude of service impacts to customers as a result of project implementation.
- The ability to establish certainty of total project cost (Guaranteed Maximum Price) significantly

earlier in the project schedule.

- Allows for Tacoma Water to hire both the general contractor and design team under one contract and involve both entities as a "team" to collaborate during programming, design, bidding and construction.
- Utilizing the combined strength of highly-qualified design and construction professionals, who have a contractual relationship, will provide for better communication and allow the opportunity to:
  - o more efficiently design with the project budget in mind,
  - o meet project design criteria and performance requirements,
  - o plan for early procurement and early bid packages and
  - o break ground much quicker.
- A significant reduction in Tacoma Water's "risk" due to errors/omissions in the construction documents.
- Allows the Contractor to inform Tacoma Water and the design team of forecasted market, materials and labor conditions and allow for the team to plan and design accordingly, avoiding potential cost/schedule impacts.

Utilizing the traditional D/B/B delivery method is not practical for this project, primarily due to the desire to expedite the project schedule, including leveraging early equipment procurement to complete the project more quickly and to enable other projects in the P1 program to begin. Additionally, Tacoma Water desires to obtain contractor input during design to reduce Owner risk and identify potential savings, and to obtain early cost certainty for construction pricing.

The traditional D/B/B project delivery method, where the design work is done "in a vacuum" with no contractor or subcontractor input on design, value engineering, constructability, schedule, logistics and the associated costs, is no longer a clear default for this type of project. DB delivery provides for earlier and greater certainty of cost, lower Owner risk and, in the current construction climate, is an advantageous delivery method in Washington State. The Tacoma Water team believes that DB, and more specifically PDB, is the appropriate delivery method for our project.

#### 6. Public Body Qualifications

Please provide:

• A description of your organization's qualifications to use the DB contracting procedure.

This will be the second PDB delivery project for Tacoma Water, and the first for most of the Tacoma Water staff assigned to this project. Tacoma Water has decided to utilize DB project delivery after researching the various project delivery options available to public agencies and, for many of the reasons listed in our responses above, Tacoma Water selected PDB as our preferred delivery method. This Project will benefit from the Tacoma Water New Warehouse/Shops Building Project, Tacoma Water's first PDB project that is currently in the PDB procurement phase. The NFCPS Project will be able to leverage and learn from the experiences of the Warehouse project team and adapt procurement and contract documents developed for the Warehouse project for NFCPS.

Tacoma Water will provide internal staff members who will participate in the roles of Executive Sponsor, Project Sponsor, Project Manager, Procurement Coordinator and Internal Legal Counsel for this project. Understanding that we need to augment our internal team with who are highly knowledgeable in PDB project delivery, Tacoma Water selected Brown and Caldwell as the Utility's Owner Advisor and Thaxton Parkinson, LLC as our DB external legal counsel.

An Owner Advisor (OA) consultant team from Brown and Caldwell led by Patrick Weber, P.E., DBIA, will support the TW NFCPS project team. Patrick has extensive experience supporting Owners with the procurement, delivery, and oversight of PDB projects.

Robynne Thaxton at Thaxton Parkinson, LLC has extensive experience in DB-focused construction law, developing DB contract documents, DB contract negotiations and DB teaching and training and will be providing those services for this project. In addition to the consultant services that they will be providing, we will be looking to the team of Brown and Caldwell and Thaxton Parkinson to mentor, teach, train and advise the Tacoma Water project team members on industry standards and best practices related to PDB

#### delivery.

For additional information on the qualifications of the individual project team members, please refer to the staff and consultant biographies listed below.

• A project organizational chart, showing all existing or planned staff and consultant roles.

<u>Note</u>: The organizational chart must show the level of involvement and main responsibilities anticipated for each position throughout the project (for example, full-time project manager). If acronyms are used, a key should be provided. (See Attachment C for an example.)

Please refer to Exhibit C for the Project Org Chart.

 Staff and consultant short biographies that demonstrate experience with DB contracting and projects (not complete résumés).

#### <u>Jessica Knickerbocker – Planning and Engineering Division Manager/Executive Sponsor</u> (Tacoma Water)

Jessica is a Project Delivery Manager and Professional Engineer with 20 years of experience and a history of achievement in utility infrastructure. Jessica is skilled in Project Management, Portfolio Management, Strategic Planning, and Change Management. Jessica is responsible for all aspects of Planning & Engineering at Tacoma Water and has been the Project Sponsor for over 100 Tacoma Water projects and managed 80 Environmental Services projects ranging from \$5K to \$60M. Jessica has worked for both private and public agencies and has been both owner and owner's representative. Throughout her career, Jessica has managed staff for all aspects of projects from design, permitting through construction. The following is a table of Jessica's recent project experience:

Project Name & Client	<b>Delivery Method</b>	Role	Timeframe
Cowlitz Falls Barrier Dam Repair Project, Tacoma Power	D/B/B	Resource Manager	2019-2020
Kosmos Flats Emergency Interim Remediation, Tacoma Power	Time & Materials	Project Manager	2019-2020
40 <sup>th</sup> Street GSI, Environmental Services	D/B/B	Engineer of Record	2016-2018
Point Defiance, Regional Stormwater Facility, Environmental Services	D/B/B	Project Manager	2011-2015

#### Terry Forslund – Engineering Manager/Project Sponsor (Tacoma Water)

Terry has more than 24 years of engineering and project management experience. As a consultant Terry worked on a GC/CM project on the UW-Tacoma campus. Other large project experience includes heavy civil design and construction on the Thea Foss and Wheeler Osgood Waterways Superfund Cleanup, project management for the addition and remodel of a vehicle maintenance and office building at the Tacoma Landfill, and 2 different implementations of enterprise project management software and enterprise permitting software. Between 2016 and 2022 Terry was Tacoma's Deputy Building Official in the building permitting department. The following is a representative table of Terry's project experience:

Project Name & Client	Delivery Method	Role	Timeframe
Landfill Administration Building and Shop Remodel – City of Tacoma	D/B/B	Project Manager	2007-2011
Solid Waste Recovery and Transfer Center – City of Tacoma	D/B/B	Project Engineer	2007-2011
Thea Foss and Wheeler Osgood Waterways Cleanup – City of Tacoma	D/B/B	Project Engineer	2002-2006
University of Washington-Tacoma Phase IIB, Cherry Parkes and Mattress Factory Buildings	GC/CM	Civil Engineer	2001-2003

#### Ali Polda. P.E., PMP – Principal Engineer/Program Manager (Tacoma Water)

Ali leads the Project Engineering team at Tacoma Water for the design and construction of water mains. He has over 15 years of engineering and project management experience. At Tacoma Water he has *Revised 7/27/2023* Page 7 of 20 worked on a PDB project as an Owner and led several multi-million-dollar projects as the PM. Prior to joining the Tacoma Water, Ali worked as a consultant on GC/CM and PDB projects including the \$350M plant expansion at Pierce County's primary wastewater facility. The following is a table of Ali's recent project experience:

Project Name & Client	Delivery Method	Role	Timeframe
Jefferson and Hood Street Surface Water Interceptor PDB, City of Tacoma, Washington	PDB	Owner	2020-2023
Taylor Way Rehabilitation, Tacoma Public Works	D/B/B	PM	2017-2021
Sound Transit Link Extension Water Main Replacement	D/B/B	РМ	2016-2022
Oakland Water Main Replacement	D/B/B	PM	2016-2020
Chambers Creek Regional Wastewater Treatment Plant Expansion, Pierce County	GC/CM	Engineer/CM	2014-2015
PepsiCo Industrial Reuse Project	PDB	PM	2014-2015

#### Alicia Flatt – Civil Engineer/Project Manager (Tacoma Water)

Alicia will be the Tacoma Water project manager for the scope of work. She has over 10 years of experience working in commercial development. As a private consultant, Alicia designed and assisted in managing multifamily and mixed-use projects, including a \$94M apartment complex in Arlington, VA (The Trove). Since 2017, Alicia has worked as a regulatory plan reviewer for commercial development, assisting private consultants through civil permitting, construction, and closeout of their projects. The following is a representative table of Alicia's experience:

Project Name & Client	Delivery Method	Role	Timeframe
Verizon 5G Tacoma Network	D/B/B	Regulatory PM	2020-2023
Tacoma Public Schools – Downing Elementary	P/D/B	Regulatory/Civil Engineering Advisor	2021-2023
Tacoma Public Schools – Hunt Middle School	P/D/B	Regulatory/Civil Engineering Advisor	2022-2023
Tacoma Public Schools – 2020 Capital Improvements Bonds (multiple projects)	P/D/B	Regulatory/Civil Engineering Advisor	2022-2023
Various Mixed-Use/Housing Projects in Tacoma and Puyallup	D/B/B	Regulatory/Civil Engineering Advisor	2017-2023
The Trove Apartments – 401 units (Arlington, VA)	GC/CM	Project Engineer/Interim PM	2015-2017
Dock 79 – 350 units (Washington, DC)	D/B/B (Master Plan Mixed-Use Development)	Project Engineer	2015-2017
Central United Methodist Church – 119 units mixed use development (Arlington, VA)	GC/CM	Project Engineer/Interim PM	2015-2017
Rosedall – 50 lot subdivision (Aldie, VA)	D/B/B	Project Engineer	2013-2015

#### Doreen Klaaskate – Engineering Procurement Coordinator (Tacoma Water)

Senior Buyer with the City of Tacoma Finance Department for five years prior to accepting a position with Tacoma Water. One of two Senior Buyers who procured all public works and improvement projects citywide. Doreen worked on Design-Build and GC/CM projects, has completed Design-Build training, has Contract Administration Certification through APWA, and Advanced Construction Procurement Certification through NIGP. Prior to joining the City of Tacoma Doreen worked for ten years at Metro Parks Tacoma doing agency-wide procurements. The following is a table of Doreen's recent project experience:

Project Name & Client	<b>Delivery Method</b>	Role	Time frame
Cushman 2 Unit 31, 32 Rebuild Project - Tacoma Power	DB	Senior Buyer	2021-2022
Jefferson & Hood Street Surface Water Interceptor Project – Environmental Services	PDB	Senior Buyer	2021-2022
Revitalizing Tacoma's Brewery District – Public	D/B/B	Senior Buyer	2021

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Works			
Cowlitz Falls Barrier Dam Repair Project – Tacoma Power	D/B/B	Senior Buyer	2021
Taylor Way Rehabilitation – Public Works	D/B/B	Senior Buyer	2019-2020
East 64th Street, Phase 1 Pacific to McKinley – Public Works	D/B/B	Senior Buyer	2019
Puyallup River Bridge F16A&B Replacement Design Build Project (Fishing Wars Memorial Bridge) – Public Works	DB	Senior Buyer	2017

### Phill Ringrose – Construction Manager (Tacoma Water)

Phill has over 27 years managing projects in all facets of the construction industry. Phill began his career at Parametrix as a survey Party Chief before transitioning into construction inspection and Construction Management overseeing projects in Washington and Oregon. Later, working at Tucci and Sons, Phill was a Project manager managing a multitude of construction projects across Western Washington, including large scale earthwork, private development, commercial construction, and large civil projects for government agencies such as WSDOT, US Air Force, City of Tacoma, and Pierce County. Phill also worked for a federal government contractor as a PM delivering projects to the Army Corps of Engineers, US Army, AMTRAK and US Forest Service. Since 2013, Phill has worked for the City of Tacoma, initially in Public Works as a Construction Manager and more recently for Tacoma Water. Phill continues to oversee the execution of large scale projects such as Port of Tacoma Road Rehabilitation, the Water Ditch Trail Phases 3 & 4, and the Hood Street Seismic Upgrades Project.

Project Name & Client	<b>Delivery Method</b>	Role	Timeframe
Seismic Upgrades Project, Tacoma Water	D/B/B	Construction Manager	2022
Taylor Way Rehabilitation, Tacoma Public Works	D/B/B	Construction Manager	2019-2021
Water Ditch Trail 3 & 4, Tacoma Public Works	D/B/B	Construction Manager	2016,2018
ADA and Platform Upgrades, AMTRAK	D/B/B	Project Manager	2012-2013
Nuclear Igloo Construction, US Air Force	D/B/B	Project Manager	2010
Yakima Firing Center Command Center Upgrades	D/B/B	Project Manager	2010
Repair Jensen Gym, US Army	D/B/B	Project Manager	2009

#### Martha Lantz. Internal Legal Counsel (Tacoma Water)

Martha advises the City of Tacoma and Tacoma Public Utilities on various matters, including public works procurement and contracting and is currently working with Tacoma Power on the Cushman 2 Unit 31, 32 Rebuild Project using the Design Build project delivery method. She has been a Deputy City Attorney for the City of Tacoma since 2009. Prior to joining the City Attorney's Office in Tacoma Martha served for 15 years as an Assistant Attorney General for the State of Washington, where she represented and advised several state agencies, including enforcement of the state's Public Works and Prevailing Wage Acts for the Department of Labor and Industries. Martha began her legal career in 1991 as a judicial clerk for Division II of the Washington State Court of Appeals.

#### Jodi Collins. Financial Stewardship (Tacoma Water)

Jodi Collins has worked in governmental finance and accounting for 22 years and is the Financial Stewardship Manager for Tacoma Water. She assisted with the development of the biennial capital budget and ten-year CIP for the Water utility and the Regional Water Supply System (RWSS) during this time, developing a decision-making framework in support of a responsible plan that is well documented with a transparent approval process. In addition, she led the development of the submittal for the Drinking Water Infrastructure Needs Survey and Assessment in support of access to DWSRF loans. She led the financing plans in support of funding the capital budget and CIP, balancing the use of revenue bonds, Public Works Trust Fund Loans, Drinking Water State Revolving Fund Loans and cash reserves in support of strong fiscal planning and stable rates for Tacoma Water and Regional Water Supply System customers. She successfully led the utilities through the audits required by the

Single Audit Act for Federal Funding recipients and ensured that all of the accounting, monitoring and reporting were submitted correctly and timely.

#### Patrick Weber. P.E., PMP, DBIA – PDB Advisor (Brown and Caldwell)

Patrick has 17 years of engineering experience in planning, design, and oversight of water and wastewater projects. Patrick provides Owner's Advisor services for delivery method evaluation, procurement, design oversight, and construction oversight of alternative delivery projects around the country, focused primarily on progressive design-build (PDB). Patrick has provided OA services for more than 12 PDB projects, including five PDB OA projects in the Puget Sound region. He has experience applying PDB principles to the particular challenges of utility conveyance projects.

Project	Project Size	Delivery Method	Role(s) Held	Time Involved
ESI Section 8 Rehabilitation, King County, Washington	\$60M	PBD	Owner Advisor	2023-current
M Street Trunk Rehabilitation, King County, Washington	\$20M	PDB	Owner Advisor	2023-current
Coyote Pumping Plant Electrical Upgrades, Valley Water, California	\$18M	PDB	Owner Advisor	2022-current
CSO Storage Basin Project, Middletown, Ohio	\$45M	PDB	Owner Advisor	2022-current
Mill Creek WWTP High-Rate Treatment Pump Station, Metropolitan Sewer District of Greater Cincinnati, Ohio	\$140M	PDB	Owner Advisor	2022-current
Little Miami WWTP Solids and Odor Improvements, Metropolitan Sewer District of Greater Cincinnati, Ohio	\$145M	PDB	Owner Advisor	2021-current
Jefferson and Hood Street Surface Water Interceptor PDB, City of Tacoma, Washington	\$30M	PDB	Owner Advisor	2017-2022
Pure Water Soquel Program, Soquel Creek Water District, California	\$100M	PDB, OMAR	Owner Advisor	2019-2022
Everett Reservoir 3 Structural Improvements, City of Everett, Washington	\$3M	PDB	Owner Advisor	2020-2022
Lakeside Redirect Conveyance Improvements, Middletown, Ohio	\$13M	PDB	Owner Advisor	2018-2021
Mill Creek WWTP Diversion Chamber, Metropolitan Sewer District of Greater Cincinnati, Ohio	\$37M	PDB	Owner Advisor	2018-2021
Reservoir 6 Roof Replacement, City of Everett, Washington	\$4.8M	FPDB	Procurement Support	2013-2015

#### David McBride, P.E. – Project Manager (Brown and Caldwell)

David will be providing Program Consultant Services in support of the Tacoma Water PM and CM staff during design and construction. David is a registered Civil Engineer in WA and has over 30 years of experience in the design and construction industry, guiding numerous projects from concept and planning to design, construction, and operation. David's experience includes leading and preparing feasibility studies, general water and sewer plans, engineering reports, water quality and reuse evaluations, and a range of water and wastewater treatment facilities designs. David has specialized experience in process mechanical design, civil design, fluid mechanics, outfall studies, fate and transport hydrodynamics, alternative delivery contracting and procurement approaches, construction administration, environmental, planning, and construction permitting, and funding applications support. The following is a table of David's recent and relevant project experience:

Project	Project Value	Delivery Method	Role	Time Involved
Annacis Island Wastewater Treatment Plant: Stage 5 Phase 2 Expansion Design, Metro Vancouver (Canada)	\$350M	GC/CM	Project Engineer	2018-2020
Chambers Creek Regional Wastewater Treatment Plant	\$375M	GC/CM	Resident Engineer/Construction	2011-2021

Expansion Services During Construction, Pierce County, Washington			Administration	
Chambers Creek Regional WWTP Expansion Side Stream Treatment Facilities Design, Pierce County, Washington	\$9M	GC/CM	Facility Design Lead	2011-2016
Food Waste Preprocessing and Digestion Demonstration Project, City of Tacoma, Washington	\$450K	DB	Project Manager	2012-2014
Well 1 Reservoir and Booster Pump Station, City of Orting, Washington	\$6M	DBB	Project Manager	2004-2006

#### Robynne Thaxton JD. FDBIA – External Legal Counsel (Thaxton Parkinson. PLLC)

Robynne is a leading expert in construction law and alternative procurement both in Washington State and on a national basis. Robynne served on the Washington State Capitol Projects Advisory Review Board since 2019 and is co-chair of the CPARB Board Development Committee. In addition, she served on the National Design Build Institute of America Board of Directors from 2010 to 2016 and was named to the inaugural class of DBIA Designated Fellows. She is the current Chair of the DBIA National Progressive Design-Build Committee, which is responsible for drafting the DBIA Best Practices documents for progressive design-build, and the former chair of the DBIA National Education Committee as well as the Legal and Legislation Committee, where she was instrumental in drafting and revising the DBIA form contracts and subcontracts. She served as the President of the Northwest Region for DBIA from 2008 to 2010 and chaired the NW Region Legal Committee from 2003 to 2020. Robynne was named as a Washington Super Lawyer in 2010 to 2023 and is the 2021 recipient of the DBIA Distinguished Leadership award. She is also a frequent lecturer for universities and industry organizations. Robynne has developed a specific expertise in the area of progressive design-build and is one of only a few approved instructors for DBIA's Progressive Design-Build Best Practices class. The following is a table of Robynne's recent DB project experience:

Project	Project Value	Delivery Method	Tasks Performed	Time Involved
Sound Transit Operations Maintenance Facility South	\$1.2B	DB	Attorney	12/23 - current
Toronto Transit Commission, Bloor- Yonge Subway expansion	\$2B	PDB	Consultant	5/22 - current
WSDOT/Thurston Fish Passages Project	\$500 M	PDB	Consultant	1/24 -current
WSDOT/Kitsap Fish Passages Project	\$400M	PDB	Consultant	11/22 - current
City of Washougal 32 <sup>nd</sup> St. Underpass	\$30M	Alt Delivery	Attorney/Consultant	10/23 to current
Pasco Public Facilities District Aquatics Facility	\$30M	PDB	Attorney/Consultant	4/23 - current
City of Wenatchee Confluence Parkway Project	\$180M	PDB	Attorney/Consultant	5/22 - current
Wenatchee Valley YMCA	\$28M	PDB	Attorney/Consultant	3/22 - current
Spokane County Operations Center	\$20M	PDB	Attorney/Consultant	2/23 - current
City of Spokane Valley City Hall	\$13M	PDB	Attorney/Consultant	5/22 - current
Renovation				
Kedren Health Care	\$200M	PDB	Consultant	1/22 - current
Grant PUD Power Delivery Facility	\$100M	PDB	Attorney/Consultant	2/23 - current
Benton County Justice Center	\$35M	PDB	Attorney/Consultant	6/22 - current
Benton County Three Rivers Behavioral Counseling	\$16.5	PDB	Attorney/Consultant	3/23 - current
WWU, Coast Salish House of Healing	\$3.5M	PDB	Consultant	11/22 - current
Blue Mountain Community College, Farm II Project	\$11M	PDB	Consultant	2/22 - current
Haines Borough, AK, Lutak Dock Replacement	\$25M	PDB	Consultant	3/22 - 1/23
WSDOT US101/SR 109 Fish Barriers Project	\$190M	PDB	Consultant	3/20 - 1/21
City of Pasco, Zone 3 Water Storage Facility	\$29M	PDB	Consultant	5/21 - current

• Provide the <u>experience and role</u> on previous DB projects delivered under RCW 39.10 or equivalent experience for each staff member or consultant in key positions on the proposed project. (See Attachment D for an example. The applicant shall use the abbreviations as identified in the example in the attachment.)

Please refer to the project experience tables included with the staff and consultant biographies above.

• The qualifications of the existing or planned project manager and consultants. <u>Note</u>: For Design-Build projects, you must have personnel who are independent of the Design-Build team, knowledgeable in the Design-Build process, and able to oversee and administer the contract.

Please refer to the information provided in the staff and consultant biographies above.

• If the project manager is interim until your organization has employed staff or hired a consultant as the project manager indicate whether sufficient funds are available for this purpose and how long it is anticipated the interim project manager will serve.

Alicia Flatt is Tacoma Water's project manager for this Project, and is anticipated to serve in that role for the duration of design and construction, supported by the Tacoma Water project team and the Owner's Advisor consultant team.

A brief summary of the construction experience of your organization's project management team that is
relevant to the project.

Tacoma Water regularly executes capital projects through the use of a Project Manager in conjunction with a Project Team made up of subject matter experts, including Maintenance, Construction, and Warehouse employees. Tacoma Water anticipates high staff engagement in the New Fennel Creek Pump Station project, as the majority of the staff on the project team will also be stakeholders in the completed facility.

The Tacoma Water staff on this project have not had experience in design-build project delivery. Other City of Tacoma divisions have successfully completed DB projects, hence support departments such as Purchasing and Legal are familiar with DB procurement and contract execution. Realizing the need to augment their team with experienced consultants to mentor their staff, plan, manage and execute the work, Tacoma Water has hired very experienced Owner's Advisor, Brown and Caldwell, and DB external legal counsel, Thaxton Parkinson LLC. The in-depth DB experience of those consultant team members is indicated in their biographies that are included earlier in this application.

 A description of the controls your organization will have in place to ensure that the project is adequately managed.

This project will be managed through a cross-functional team from Tacoma Water, the City of Tacoma, the Owner's Advisor, Brown and Caldwell and external legal counsel Thaxton Parkinson LLC. Refer to the Organization Chart (Exhibit C) for the team reporting structure.

The following high-level summaries articulate our organizational controls:

Project Management and Decision Making

- Authority and decision-making responsibility will be provided by Tacoma Water's Project Manager, Alicia Flatt, with implementation by the project team including representation from Engineering and Finance and advisement from Brown and Caldwell. This role will be supported by a program manager, Ali Polda, a Project Engineering Sponsor, Terry Forslund, and Executive Sponsor, Jessica Knickerbocker.
- The Owner's Advisor, Brown and Caldwell, will meet weekly with Tacoma Water's Project Manager, to discuss and manage project needs, milestones, develop strategy recommendations and courses of action for implementation the project.
- For Brown and Caldwell, David McBride will be the Project Manager and primary point of contact with Tacoma Water and the PDB team on project related issues during design and construction. Patrick Weber will be the PDB advisor.

#### Selection Committee

- The PDB Selection Committee will include Tacoma Water Planning and Engineering, and other leadership or administrative personnel with procurement, design or construction knowledge and experience. The Selection Committee will review the PDB Team Statements of Qualifications and Proposals and make recommendations of the scoring and shortlisting of DB Proposers.
- The Selection Committee will make the recommendation for PDB selection to the Sponsors, Tacoma Water Leadership and the Public Utility Board.

• Brown and Caldwell will plan, facilitate and monitor the selection process but will not be a scoring member of the Selection Committee.

#### **Communications**

- The Utility will use a variety of well-established formal and informal tools to provide effective communications with all of those involved in the project.
- At the appropriate time, the Utility will advertise the RFQ and post the RFQ on the Utility's website. During the RFQ phase, PDB proposers will be encouraged to submit questions that may be addressed by addendum. In addition to the written RFQ, the Utility will hold a Pre-submittal Meeting during the RFQ phase.
- During the RFP phase, the Selection Committee will meet with the shortlisted teams in PDB led proprietary meetings to discuss project objectives, project approach, project procedures and project specific ideas that will allow the DB team to complete their Proposal. Selection Committee will provide appropriate input and feedback to the DB teams during the proprietary meetings.
- Once a "most qualified" PDB team is selected and under contract, the Utility and Brown and Caldwell will meet with the PDB team at regularly scheduled meetings during the design and construction phases and partake in interim reviews of the program, design, costs and schedule to ensure the Utility's expectations and vision of the finished project are achieved.

#### Project Progress

- Progress will be reported weekly by the DB team to the Brown and Caldwell and Tacoma Water's Project Manager who will report to the Program Manager.
- Formal updates will be provided to the Tacoma Water Leadership, the Executive Sponsors, and other stakeholders as determined by the Utility.
- Regular project status updates will be communicated to the Utility's project stakeholders to make sure that the end users are informed.

#### **Budget Monitoring**

- The Tacoma Water team will be managing and tracking the program finances and weighing the cost estimates against budget on a regular basis throughout the project.
- Financial reporting will be provided on a regular basis to the Tacoma Water Project Manager and Tacoma Water's Financial Stewardship Department and may be provided to the Public Utility Board as requested.
- The Utility will maintain its own project contingency and reserves to address any Owner-driven scope changes, changes resulting from unforeseen/latent conditions related to sitework or demolition and appropriate resultant change orders.

#### Schedule

- The proposed project milestone schedule will be provided in the DB RFQ/RFP documents.
- The selected DB team will work with the Tacoma Water project team to produce a more detailed project schedule that will show subcategories for design, permitting, phasing, bidding and construction.
- Weekly Project Progress Meetings will include 3 week look-ahead schedule forecasts of activities. Monthly PDB construction progress updates with a narrative will be a project requirement.
- The Brown and Caldwell Project Manager will review the baseline construction schedule and advise on monthly construction schedule updates.
- A brief description of your planned DB procurement process.

Tacoma Water intends to utilize our Owner's Advisor, Brown and Caldwell, and external legal counsel, Thaxton Parkinson LLC, as external consultants who are highly knowledgeable in PDB project delivery to advise us in the PDB selection and contracting process. Our PDB procurement/selection process will *Revised 7/27/2023* Page 13 of 20 be based primarily on a number of PDB firm and team member qualifications, experience, past performance and project-specific approach factors plus pricing factors. Due to the qualifications-based selection, design efforts by the Proposers will be discouraged.

Tacoma Water will conduct the PDB procurement process consistent with the process and criteria requirements of RCW 39.10. Tacoma Water will follow the required two-part procurement process for PDB, starting with issuance of a Request for Qualifications (RFQ). Once Statements of Qualifications (SOQs) are submitted, Tacoma Water will review and score SOQs in accordance with the criteria identified in the RFQ. Based on SOQ scoring, Tacoma Water will select finalists to submit proposals, which is anticipated to include up to three finalists. The selected finalists will receive a Request for Proposals (RFP), which will identify the submittal requirements for proposals, to include management and technical information, proposed pricing for preconstruction and design services, and one or more price-related factors applicable to the construction scope. During the proposal period, it is anticipated that an interactive proprietary meeting and/or interview will be held with each finalist. Tacoma Water will then conduct proposal scoring according to the criteria laid out in the RFQ and RFP to identify the highest ranked firm to enter into negotiations for a PDB contract. Tacoma Water will require proposers to submit their past performance with firms certified with Washington State OMWBE, veteran firms, and small businesses with the RFQ and will require a robust inclusion plan be submitted with the RFP.

Verification that your organization has already developed (or provide your plan to develop) specific DB contract terms.

Robynne Thaxton of Thaxton Parkinson, PLLC, will partner with Tacoma Public Utilities Legal Counsel to assist Tacoma Water in preparation of the contract terms and the DB Agreement. Tacoma Water staff, working with Brown and Caldwell and Thaxton Parkinson will prepare and customize the RFQ/RFP documents to meet specific project needs.

#### 7. Public Body (your organization) Construction History:

Provide a matrix summary of your organization's construction activity for the past six years outlining project data in content and format per the attached sample provided: (See Attachment E. The applicant shall use the abbreviations as identified in the example in the attachment.)

- Project Number, Name, and Description
- Contracting method used
- Planned start and finish dates
- Actual start and finish dates
- Planned and actual budget amounts
- Reasons for budget or schedule overruns
- Small-, minority-, women-, and veteran-owned business participation planned and actual utilization Please refer to Exhibit D.

#### 8. Preliminary Concepts, sketches or plans depicting the project

To assist the PRC with understanding your proposed project, please provide a combination of up to six concepts, drawings, sketches, diagrams, or plan/section documents which best depict your project. In electronic submissions these documents must be provided in a PDF or JPEG format for easy distribution. Some examples are included in attachments E1 thru E6. At a minimum, please try to include the following:

- An overview site plan (indicating existing structure and new structures)
- Plan or section views which show existing vs. renovation plans particularly for areas that will remain occupied during construction.
   <u>Note</u>: applicant may utilize photos to further depict project issues during their presentation to the PRC
   We have provided a map of planned project improvements and an aerial view of the anticipated pump station site in Exhibits A and B.

#### 9. Resolution of Audit Findings On Previous Public Works Projects

If your organization had audit findings on any project identified in your response to Question 7, please specify the project, briefly state those findings, and describe how your organization resolved them.

Tacoma Water has not received audit findings on the projects identified in our response to Question 7.

#### **10. Subcontractor Outreach**

Revised 7/27/2023

Please describe your subcontractor outreach and how the public body will encourage small-, minority-, women-, and veteran-owned business participation.

The City of Tacoma established an Equity in Contracting Program which offers access to contracting and procurement opportunities, as well as guidance and technical assistance, to historically underutilized businesses interested in providing supplies, services and public works support to the City of Tacoma. The Equity in Contracting office assists all public works projects in the City, including Tacoma Water projects, and will assist with this project as well. Tacoma has a long history working to engage historically underutilized and disadvantaged businesses:

- The City of Tacoma established an MWBE program in 1990.
- In 1993, the City established goals for MBEs and WBEs and included in the Highly Underutilized Business (HUB) program.
- In 2000, the City passed Ordinance 26726, establishing a race-neutral and gender-neutral HUB program
- In 2013, the HUB program was renamed the Small Business Enterprise (SBE) program.
- In 2018, Resolution 40124 was adopted creating the Community Workforce Task Force to assess approaches to race and gender conscious subcontracting requirements and community workforce agreements.
- In 2019, the City passed Ordinance 28625 renaming the SBE program the Equity in Contracting (EIC) program.
- Additional information about the EIC Program may be found online at <u>https://www.cityoftacoma.org/government/city\_departments/community\_and\_economic\_developmen\_t/equity\_in\_contracting</u>.

For the Fennel Creek Pump Station project, and as an element to be scored in the SOQ, the Design-Builders will be required to provide statistics on their past success related to inclusion of MBE/WBE/DBE/SBE (M/W/D/SBE) and small and Veteran-owned businesses on previous projects. Additionally, and as a scored element of their proposals, the shortlisted Design-Builders will be required to provide a project-specific outreach and inclusion plan that describes their approach to increasing opportunities, encouraging and ensuring the participation of MBE/WBE/DBE/SBE and small and Veteran-owned businesses on the project. The successful Design-Builder will be required to collaborate with Tacoma Water to develop and provide a detailed project specific outreach and inclusion plan with special attention to recruiting, mentoring and providing opportunities to ensure the participation of M/W/D/SBE and Veteran-owned businesses on the project. Outreach efforts will include, but not be limited to:

- The Design-Builder will be required to demonstrate that consideration of M/W/D/SBE and Veteranowned business participation will be included in the development and organization of their bid packages, including providing an inclusion plan describing the procurement approach for each bid package and an identified participation target for the utilization of M/W/D/SBE and Veteran-owned firms. This plan will require City of Tacoma review and approval prior to implementation.
- Ongoing engagement with community: This will be further defined with the selected Design-Build contractor once they are under contract. The City of Tacoma Equity in Contracting (EIC) office will consult with the Design-Builder regarding community organizations that may be helpful in the realization of the Design Builders inclusion plan.

#### **CAUTION TO APPLICANTS**

The definition of the project is at the applicant's discretion. The entire project, including all components, must meet the criteria of RCW 39.10.300 to be approved.

#### SIGNATURE OF AUTHORIZED REPRESENTATIVE

In submitting this application, you, as the authorized representative of your organization, understand that: (1) the PRC may request additional information about your organization, its construction history, and the proposed project; and (2) your organization is required to submit information requested by the PRC. You agree to submit this information in a timely manner and understand that failure to do so may delay action on your application.

The PRC strongly encourages all project team members to read the <u>Design-Build Best Practices Guidelines</u> as developed by CPARB and attend any relevant applicable training. If the PRC approves your request to use the DB contracting procedure, you also agree to provide additional information if requested.

The 2021 Legislature updated <u>RCW 39.10.330(8)</u> stating that Design-Build contracts must require the awarded firm to track and report to the public body and to the office of minority and women's business enterprises (OMWBE) its utilization of the OMWBE certified businesses and veteran certified businesses. By submitting this application, you agree to include these reporting requirements in project contracts.

I have carefully reviewed the information provided and attest that this is a complete, correct and true application.

DocuSigned by:	
Signature: Ilicia Flatt	
Name: (please print) <u>Alicia Flatt</u>	(public body personnel)
Title: Civil Engineer, PE	
Date: February 20th, 2024	

#### Exhibit A – New Fennel Creek Pump Station Site Map



Exhibit B – Map of Improvements Included in the Project





#### Exhibit C – Project Org Chart



Revised 7/27/2023

# EXHIBIT D

**Tacoma Water Construction History** 

													Goals						uals		
	Project Description	Delivery	Architect/	Planned	Planned	Actual	Actual	Planned	Actual	Specification Num	er MBE	WBE	SBE/DBE SBE	HUB	UDBE	MBE	WBE	SBE/DBE	SBE	HUB	UDBE
Project Name		Method	General Contractor	Start	Finish	Start	Finish	Budget	Cost	Reason for Budget or Schedule Over-run											
								\$	\$												1
Pinnacle Ridge Reservoir and Pump Station	New 5MG steel tank and booster pump station	DBB	RH2/ Ceccanti, Inc.	2022	2024	2022		\$9M		Equipment lead time delays have extended project schedule. TW22-0084F	2%	1%	2%			1.49%	2.64%	5.64%	N/A	N/A	N/A
South Tacoma Pump Station and Hood Street Reservoir Seismic Upgrades Project	Upgrade two pump station buildings, historic chlorine building, and reservoir to be seismically resilient	DBB	Jacobs/ Combined Construction	2021	2022	2021	2022	\$4.5M	\$5.6M	Project substantially completed on time; damage during construction resulted in City replacing equipment that was at end of life and beyond repair. TW21-0047F	4%	1%	5%			7.91%	0.84%	7.91%	N/A	N/A	N/A
Swan Creek Crossing	The restoration of fish passage in Swan Creek by the removal of earthen and concrete fill material, installation of a 150' pipeline support bridge, and restoration of the stream channel and banks	DBB	Pacific Forest Resources, Inc./ Quigg Bros, Inc.	2019	2019	2019	2019	\$600K	\$640K	Misc Force Account Work WS19-0112F			20%			N/A	N/A	N/A	*	N/A	N/A
Deep Creek Pipeline Protection Project	Create 472 linear feet of new creek channel through the excavation of approximately 4,100 cubic yards of material excavated along existing water pipeline (protected in place)	DBB	Cardno & Southworth and Sons, Inc.	2018	2018	2018	2018	320К	320К	N/A WS18-0148F			0%			N/A	N/A	N/A	N/A	N/A	N/A
Hood Street Corrosion Control and Fluoridation Facility and South Tacoma Pump Station Aeration System	New building, corrosion control treatment system, fluoridation treatment system, and piping modifications; addition of diffused aeration to existing facility	DBB	HDR/ McClure & Sons Inc	2012	2013	2012	2013	\$4.75M	\$4.82M	Unexpected sanitary sewer and power-related costs. A \$202,000 grant brought the project under budget (to \$4.62M) WQ12-0142F				11%		N/A	N/A	N/A	N/A	*	N/A
Taylor Way Water Main Replacement	Install 8,000 feet of 12" to 20" water main along a major arterial road in the Port of Tacoma.	DBB	Tappani	2017	2020	2017	2021	\$3.7M	\$4.0M	Cost overruns associated with unknown utility conflicts and resulting constructability issues. Schedule overruns associated with supply chain, and limited work hours due to Port traffic.					13%	N/A	N/A	N/A	N/A	N/A	*
Oakland Water Main Replacement	Install 7,700 feet of 6" to 12" water main along residential streets in the Oakland neighborhood.	DBB	R. L Alia	2016	2020	2016	2020	\$1.3M	\$1.2M	N/A ES17-0314F			22%			N/A	N/A	N/A	*	N/A	N/A
Sound Transit Link Extension Water Main Replacement	Install 11,000 feet of 6" to 16" water main along dense urban corridor (downtown Tacoma) in conjunction with Light Rail construction.	DBB	Walsh	2016	2022	2016	2022	\$4.5M	\$4.8M	Cost overruns from scope increase for additional design and survey, unknown utility conflicts, traffic control, slower production in dense urban corridor. Schedule overruns from supply chain, unknown utility conflicts, design changes, limited work hours.		ad Goals were established in support of federal funding on this project.									
Green River Filtration Facility	New floc/sed basins, filters, clearwells, chemical systems, solids handling, piping, and other building modifications	GC/CM	MWH/ Hoffman	2012	2015	2012	2015	\$210M	\$187M	WQ10-0846F	10%	6%				;	*	N/A	N/A	N/A	N/A

\* This data was not available at the time of submittal of this application. It will be provided as part of our PRC presentation.