

**PACKET A**

**WASHINGTON STATE  
DEPARTMENT OF TRANSPORTATION**

STATEMENT OF QUALIFICATIONS | FEBRUARY 22, 2023

**STORMWATER CONVEYANCE  
SYSTEM MAPPING**



**Jacobs**

Challenging today.  
Reinventing tomorrow.



## CRITERION 1: QUALIFICATIONS/EXPERTISE OF FIRMS ON TEAM

Jacobs is primed with the knowledge, skills, and abilities to continue providing field data collection and data processing, as demonstrated by our successful delivery of your stormwater conveyance mapping contract in 2018. For this contract, we have expanded our pool of locally based field leads and field staff to accommodate statewide fieldwork. Our field leads have been selected based on both their prior experience with your stormwater mapping program and their ability to safely lead field teams collecting data along highways. They will oversee field staff members who were specifically selected for their previous on-site data collection and WSDOT experience. Our management is equipped to provide accurate and timely cost information, allowing us to provide you with the information you need to maximize available funding and map as much of the system as feasible.

### A. EXPERTISE

#### Our Team's Combined Expertise

|                                      | Jacobs | PACE | OCI | Exeltech | Skillings | AAR Testing | i TEN Associates |
|--------------------------------------|--------|------|-----|----------|-----------|-------------|------------------|
| Years of experience                  | 75     | 13   | 18  | 30       | 40        | 30          | 20               |
| # of employees in WA (incl GPMA)     | 1,450  | 136  | 64  | 42       | 38        | 71          | 6                |
| # of employees nationwide            | 32,135 | 136  | 68  | 42       | 40        | 71          | 8                |
| WSDOT Experience                     | X      | X    | X   | X        | X         | X           | X                |
| Ecology Experience                   | X      | X    | X   |          | X         |             |                  |
| Eastern WA Office Location           | X      | X    | X   |          |           | X           |                  |
| Data Post-Processing                 | X      |      |     | X        |           |             | X                |
| Quality Assurance/Quality Control    | X      | X    | X   | X        | X         | X           | X                |
| High-Risk Safety Assessments         | X      | X    | X   | X        | X         | X           | X                |
| Stormwater Conveyance System Mapping | X      | X    | X   | X        | X         | X           | X                |
| GPS Data Collection                  | X      | X    | X   | X        |           | X           | X                |
| GIS Mapping                          | X      | X    | X   | X        |           | X           | X                |

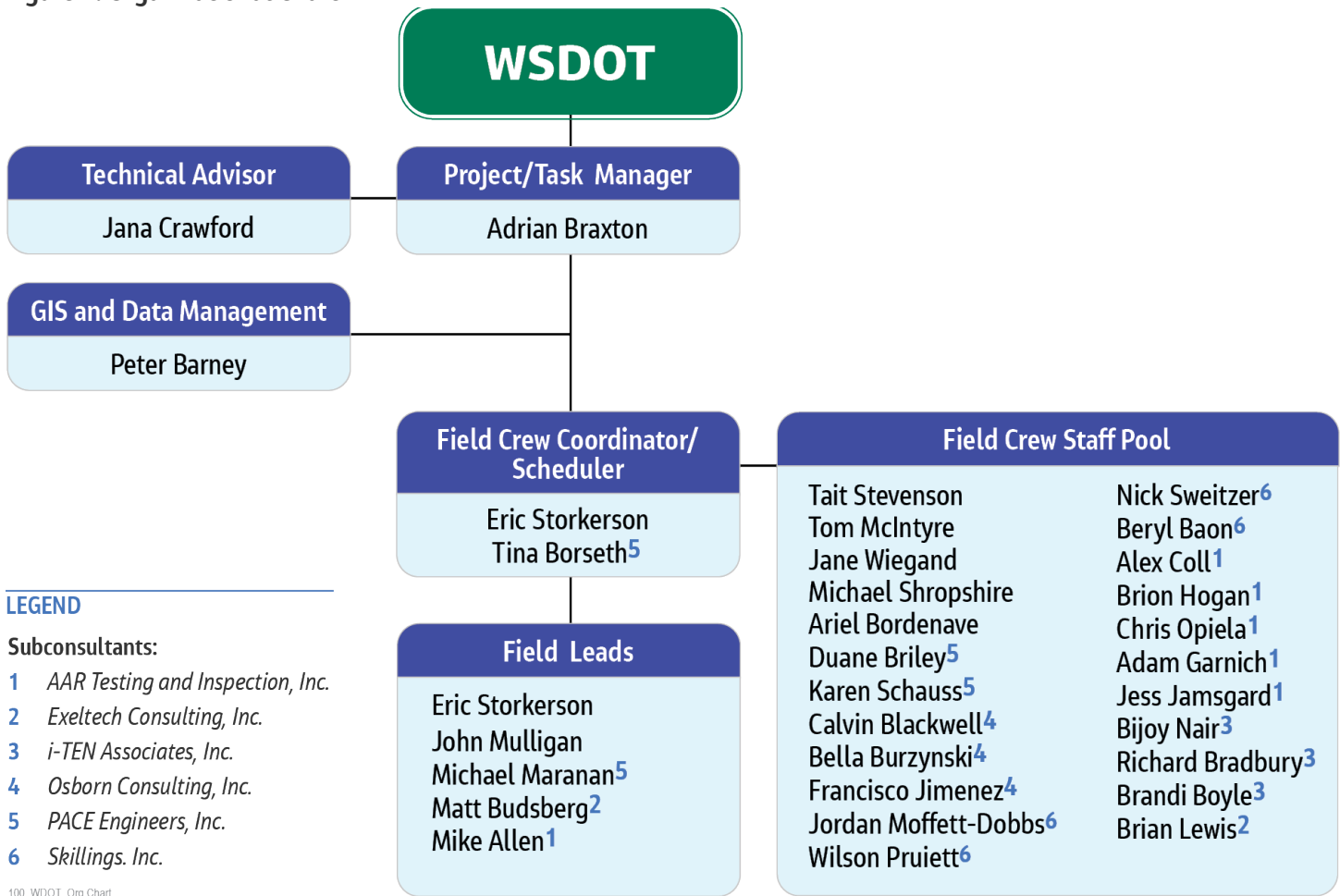
#### Benefits of Our Team Structure

Leveraging his years of experience comprising project management, on-site team management, and understanding of WSDOT processes, **Project Manager Adrian Braxton** will serve as your primary point-of-contact, setting expectations and managing the team's overall task and scope delivery. He is supported by **Technical Advisor Jana Crawford**, who brings first-hand experience delivering this work with WSDOT for your office. She will bridge institutional knowledge and expectations to maximize team performance. **GIS and Data Management SME Peter Barney** will bring his experience successfully implementing QA/QC on your previous stormwater conveyance mapping contract as well as best practices from other projects to help ensure WSDOT meets data requirements. Our **Field Crew Coordinators/Schedulers** and **Field Leads** are primed to lead, deploy, and oversee safe field data collection by our pool of **Field Crew** resources that spans the region.

## Organization Chart

The full structure of our team and our available resources are shown in the organizational chart below.

Figure 1: Organizational Chart



### LEGEND

#### Subconsultants:

- 1 AAR Testing and Inspection, Inc.
- 2 Exeltech Consulting, Inc.
- 3 i-TEN Associates, Inc.
- 4 Osborn Consulting, Inc.
- 5 PACE Engineers, Inc.
- 6 Skillings, Inc.

100\_WDOT\_Org Chart

## B. STAFFING AND OFFICE LOCATIONS

| JACOBS       |            |  |
|--------------|------------|--|
| Office       | # of Staff | Services   |
| Seattle, WA  | 87         | Engineering, environmental, inspection, quality, field, cultural/archaeology, GIS/mapping, project management, QA/QC, planning, design, project controls, coordination, geospatial information, consulting, other                                      |
| Bellevue, WA | 504        | Engineering, construction management, project controls, inspection, field, cultural/archaeology, environmental, QA/QC, GIS/mapping, planning, scientific, quality, project management, design, coordination, geospatial information, consulting, other |
| Yakima, WA   | 39         | Engineering, construction management, project controls, inspection, field, cultural/archaeology, environmental, QA/QC, GIS/mapping, planning, scientific, quality, project management, design, coordination, geospatial information, consulting, other |
| Spokane, WA  | 61         | Engineering, construction management, project controls, inspection, field, cultural/archaeology, environmental, GIS/mapping, planning, scientific, quality, project management, design, coordination, geospatial information, consulting, other        |



|                                     |     |   |
|-------------------------------------|-----|---|
| Portland, OR                        | 708 | Engineering, construction management, project controls, inspection, field, cultural/archaeology, environmental, planning, scientific, quality, project management, design, coordination, geospatial information, consulting, other  |
| Corvallis, OR                       | 251 | Engineering, construction management, project controls, inspection, field, cultural/archaeology, environmental, GIS/mapping, digital delivery, architecture, planning, scientific, quality, project management, design, coordination, geospatial information, consulting, other |
| Vancouver, WA                       | 40  | Project management, controls, inspection, quality, scientific, quality, project management, design, coordination, geospatial information, consulting, other   |
| Tacoma, WA                          | 11  | Engineering, project controls, quality, project management, other   |
| <b>PACE</b>                         |     |   |
| Kirkland                            | 69  | Land surveying, civil engineering, stormwater planning and design, hydraulic/hydrologic modeling, water resources, GIS, permitting, construction management and inspection, on-call consulting  |
| Everett                             | 29  | Land surveying, civil engineering, stormwater planning and design, hydraulic/hydrologic modeling, water resources, permitting, construction management and inspection, on-call consulting   |
| Wenatchee                           | 8   | Land surveying, civil engineering, stormwater planning and design, hydraulic/hydrologic modeling, water resources, permitting, construction management and inspection, on-call consulting   |
| Lake Oswego                         | 30  | Land surveying, civil engineering, stormwater planning and design, hydraulic/hydrologic modeling, water resources, permitting, construction management and inspection, on-call consulting   |
| <b>OSBORN CONSULTING, INC (OCI)</b> |     |   |
| Bellevue, WA                        | 37  | Civil Engineering, Stormwater Management, Field Inspection, Landscape Architecture, Natural Resources Engineering   |
| Seattle, WA                         | 14  | Civil Engineering, Stormwater Management, Field Inspection, Landscape Architecture, Natural Resources Engineering   |
| Bellingham, WA                      | 6   | Civil Engineering, Stormwater Management, Field Inspection, Landscape Architecture, Natural Resources Engineering   |
| Spokane, WA                         | 6   | Civil Engineering, Stormwater Management, Field Inspection, Landscape Architecture, Natural Resources Engineering   |
| Vancouver, WA                       | 1   | Civil Engineering, Stormwater Management, Field Inspection, Landscape Architecture, Natural Resources Engineering   |
| <b>EXELTECH</b>                     |     |   |
| Lacey, WA                           | 34  | Civil engineering, structural engineering, hydraulic engineering, stormwater design, bridge design/inspection/load rating, construction management and inspection, CADD, GIS  |
| Seattle, WA                         | 8   | Civil engineering, structural engineering, bridge design/inspection/load rating, landscape architecture/design, environmental documentation and permitting, construction management and inspection services, CADD, GIS  |
| Beaverton, OR                       | 2   | Civil engineering, structural engineering, bridge design/inspection/load rating, CADD   |
| <b>SKILLINGS</b>                    |     |   |
| Lacey, WA                           | 38  | Environmental, survey, engineering; stormwater planning, design, and infrastructure asset inventory services  |
| <b>AAR TESTING</b>                  |     |   |
| Redmond, WA                         | 50  | Quality Assurance, Quality Control, Geotechnical Services, and Inspection and Testing based off approved Plans  |
| Olympia, WA                         | 9   | Quality Assurance, Quality Control, Geotechnical Services, and Inspection and Testing based off approved Plans  |
| Wenatchee, WA                       | 12  | Quality Assurance, Quality Control, Geotechnical Services, and Inspection and Testing based off approved Plans  |
| <b>i TEN Associates</b>             |     |   |
| Portland, OR                        | 6   | GIS, CADD, BIM, mapping, and 3D laser scanning services   |



## C. EXPERIENCE TOGETHER IN THE LAST THREE YEARS

The Jacobs' team provides field and management resources with unique and relevant skills, who have often worked together alongside WSDOT staff. These working relationships have yielded efficiencies that only come from collaboration and trusted partnerships. In the table below we demonstrate our effective collaboration on projects similar in size and scope and performed in the last three years.

| Partners    | Similar Projects Performed with Jacobs in the Last Three Years  | Dates           |
|-------------|---|-----------------|
| PACE        | <a href="#">Olympic Region GEC, WSDOT</a>   <b>Jacobs:</b> prime; overall project design, environmental compliance, scope, schedule, budget oversight   <b>PACE:</b> subconsultant; surveying, preliminary hydraulic design reports for fish passage projects, and stormwater retrofit assessments for these fish passage locations.        | 2021 to Present |
| OCI         | <a href="#">I-90 SR 18, WSDOT</a>   <b>Jacobs:</b> prime; overall project management, project controls, task order management   <b>OCI:</b> subconsultant; drainage   | 2018 to Present |
| Exeltech    | <a href="#">Natural Drainage Solutions – Longfellow and Thornton South Basins, Seattle Public Utilities</a>   <b>Jacobs:</b> prime; Project management and design   <b>Exeltech:</b> subconsultant; civil and structural design, site visits to observe existing conditions, bidding, and engineering support services during construction. | 2019 to 2024    |
| Skillings   | <a href="#">70th St East Bridge Replacement (Stage 1a SR167), WSDOT</a>   <b>Jacobs:</b> subconsultant (lead designer for design-build contractor)   <b>Skillings:</b> subconsultant; signing, utilities coordination   | 2019 to 2021    |
| AAR Testing | <a href="#">SR 509 Stage 1b, WSDOT</a>   <b>Jacobs:</b> subconsultant (lead designer for design-build contractor)   <b>AAR:</b> subconsultant; laboratory testing services  | 2021 to 2022    |

## D. CURRENT AVAILABILITY OF KEY STAFF AND RESOURCES

The table below illustrates preliminary hours per month of availability for key staff for the life of the contract. Our Field Crew Coordinator/Schedulers, Eric Storkerson and Tina Borseth, understand the capabilities of the firms on our team, and will monitor workloads so the right resources are available when WSDOT needs them.

| Team Member, Role  | 2023 |     |     |     | 2024 |     |     |     | 2025 |     |
|--|------|-----|-----|-----|------|-----|-----|-----|------|-----|
|  | Q1   | Q2  | Q3  | Q4  | Q1   | Q2  | Q3  | Q4  | Q1   | Q2  |
| Adrian Braxton, Project/Task Manager                           | 80   | 100 | 100 | 100 | 80   | 100 | 100 | 100 | 80   | 100 |
| Peter Barney, GIS and Data Management                          | 60   | 60  | 60  | 60  | 60   | 60  | 60  | 60  | 60   | 60  |
| Eric Storkerson, Field Crew Coordinator/Scheduler & Field Lead | 40   | 80  | 160 | 160 | 160  | 160 | 160 | 160 | 160  | 160 |
| Tina Borseth, Field Crew Coordinator/Scheduler                 | 100  | 100 | 100 | 100 | 100  | 100 | 100 | 100 | 100  | 100 |
| John Mulligan, Field Lead                                      | 40   | 120 | 120 | 120 | 120  | 120 | 120 | 120 | 120  | 120 |
| Michael Maranan, Field Lead                                    | 80   | 80  | 80  | 80  | 80   | 80  | 80  | 80  | 80   | 80  |
| Matt Budsberg, Field Lead                                      | 80   | 80  | 80  | 80  | 80   | 80  | 80  | 80  | 80   | 80  |
| Mike Allen, Field Lead   | 120  | 120 | 120 | 120 | 120  | 120 | 120 | 120 | 120  | 120 |

Note: Numbers represent hours per month in each quarter



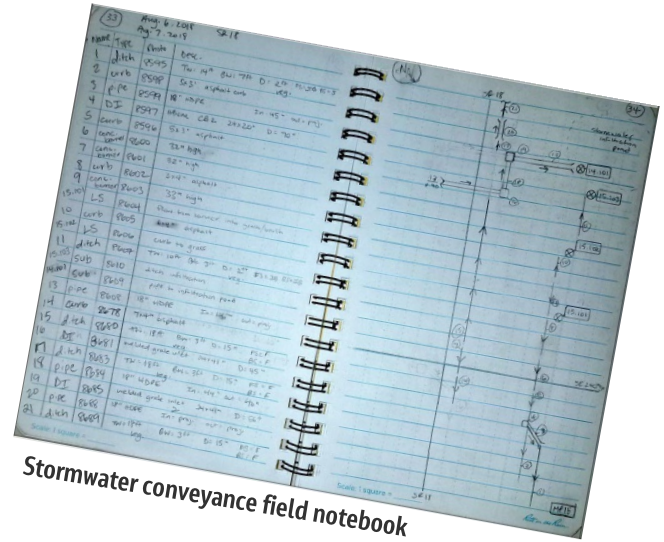
## E. SIMILAR RELEVANT PROJECT EXPERIENCE

### Jacobs

Jacobs has worked side-by-side with WSDOT on many projects, ranging from full, multiple General Engineering Consultant (GEC) contracts to small task order-based environmental contracts. Relevant projects include:

#### STORMWATER CONVEYANCE SYSTEM MAPPING | WSDOT | 2018 | \$534K |

In 2018, Jacobs was selected to help WSDOT map your stormwater conveyance systems within the boundaries of the NPDES General Stormwater Permit coverage area. Our focus was to coordinate with WSDOT and manage field teams that identified and mapped the network of drainage inlets, pipes, ditches, stormwater treatment and flow control facilities, and other structures that direct and manage stormwater. This project assisted WSDOT with NPDES stormwater conveyance mapping in WSDOT's NW region. To accomplish the work under tight timelines and schedule windows, our Jacobs team used three field crews consisting of three team members each for the accelerated duration of inventory work, lasting 12 to 14 weeks. WSDOT Environmental Services Office, Stormwater Group, provided coordination and direct guidance and support to the Jacobs field staff by acting as a fourth team member where needed for training and as needed throughout the project duration. Jacobs implemented a Health and Safety Plan to ensure that project risks are eliminated or mitigated through the identification of hazards, assessment of risk and the application of effective control measures. Through rigorous implementation of the Health and Safety Plan, Jacobs achieved a safe and healthy workplace for staff, and subconsultants to whom Jacobs has a legal and moral duty of care. Jacobs conducted a structured hazard identification and risk assessment process and developed and implemented safe working procedures for delivery of our services on the WSDOT Stormwater Inventory Project. Field data collection utilized ruggedized GPS tablets running ArcPad software so outputs were plug-and-play with WSDOT data needs. Jacobs crews uploaded data to a centralized WSDOT geodatabase after each day of field collection. Using ArcGIS, Jacobs created field map books that provided quick and easily useable snapshots of inventoried infrastructure.



*The joint delivery model used by WSDOT and the Jacobs team led to increased collaboration and real-time efficiency improvements for data collection.*

**ENVIRONMENTAL COMPLIANCE PROGRAM | BNSF | 2014-PRESENT | \$4.6M |** Since 2015, Jacobs has provided environmental compliance monitoring and management for the BNSF Structures and Engineering Services teams. Our work includes construction oversight and monitoring, including permit requirement reviews, field inspections, stormwater and water quality monitoring, GIS mapping, vegetation and habitat surveys, NPDES plan development and compliance, and agency reporting. Our Northwest Jacobs team has provided environmental compliance monitoring in locations throughout the west and northwest, from California to Montana. Value statement: This work often occurs on several projects at the same time in different locations. *Our experience with BNSF provides us the expertise and network to coordinate staff across the geography, ensuring project coverage through competing priorities and fluid construction schedules.*

**GEC ENVIRONMENTAL CONTRACTS, OLYMPIC AND SOUTH CENTRAL REGIONS | WSDOT | 2015-PRESENT | \$100M |** Jacobs is providing on-call and place-based resources needed to deliver projects at various stages of development and construction, for both Olympic and South Central Regions of WSDOT. Our Project development support includes fish passage and stream design; environmental documentation and permitting; stormwater design and hydraulics reports; transportation engineering; contract development support, and staff augmentation. Construction Administration Support includes DBB construction administration, inspection, and testing; DB submittal reviews, environmental documentation and permitting support; and quality verification inspection and testing. Relevant project work with WSDOT on these GECs include:



- **2021 SCR Culvert Inspections; SR-10, US-12, SR-24, I-90, SR-821.** Jacobs staff performed Level 2 culvert inspections of approximately 100 culverts on five highways identified by WSDOT using a hydraulic inspection vehicle explorer (HIVE) (see photo at right) equipped with a digital camera. To assess the interior of the culverts, the HIVE was connected to a cable and driven through the culvert, recording video footage of the interior of the culvert. Staff viewed live footage on a tablet as the HIVE progressed through the culvert and recorded additional footage of areas of interest. The video recordings of the culvert interior were assessed based on criteria provided by WSDOT to document the condition of the culvert. Inspection reports were completed in WSDOT's Highway Activity Tracking System. Jacobs also provided WSDOT with a summary table of the culvert inspections, including identification of culverts in critical condition.



- **Olympic Region Fish Passage Program.** Jacobs is currently providing direct project support for design-build and design-bid-build fish passage and barrier correction projects in the Olympic Region. In less than one year, Jacobs is managing the delivery of 68 Preliminary Hydraulic Designs; scoping PS&E for six fish passage performance management projects; designing three Project Engineer Office fish passage projects; and is supporting construction administration on existing fish passage projects for the 2022 construction season. Jacobs has developed an integrated, extension-of-staff methodology to environmental permitting and stream restoration design with WSDOT. Jacobs develops multidisciplinary illustrations, synopses, or drawings to guide workshops with Resource Co-Managers to engage all parties for feedback on complex project issues, goals, questions, and drive collaborative solutions. *Our staff are working side-by-side with the WSDOT hydraulics office and understand evolving design parameters and flexible delivery. Jacobs has demonstrated resources, including stream engineers, hydraulic engineers, fish biologists, geomorphologists, landscape architects, and permitting staff, who work collaboratively with WSDOT every day.*

## PACE

PACE provided comprehensive engineering services to WSDOT and other local agencies, including generating stormwater retrofit assessments, mapping, generating preliminary hydraulic design reports, and performing engineering reviews on hydraulic reports. Through a collaborative approach that integrated advanced technology and strategic planning, PACE could safely and efficiently deliver survey data from the field to WSDOT for immediate integration by the design team, resulting in the successful execution of the project.

**STORMWATER GIS MAPPING UPDATE | CITY OF BRIER | BRIER, WA | 2013-PRESENT | \$27.8K** | PACE upgraded the City's GIS database to meet NPDES permit requirements for stormwater mapping. Their survey team located municipal storm sewer outfalls and receiving waters, open conveyance, culverts, and structural stormwater facilities. They generated a GIS basemap from datasets provided by Snohomish County, U.S. Geological Survey, and other public agencies. This base map was the basis for future mapping, planning, and analysis operations and satisfied NPDES requirements. PACE field personnel used Microsoft Surface tablets to enter data into a personal geodatabase following a standard stormwater geodatabase schema (that PACE developed). They snapped all features to the correct start and endpoints and updated metadata for each stormwater feature class. They also provided onsite assistance and set up for the City's GIS databases and GIS software, provided training on using the data, and discussed potential uses of the GIS data. They linked coverage areas to respective as-built PDF sheets and assisted the City with its annual NPDES reporting. *By upgrading the City's GIS database and providing training and assistance on its use, PACE helped to ensure NPDES compliance and streamlined the process for the City's annual reporting.*

**OLYMPIC REGION GEC | WSDOT (OWNER), JACOBS (CLIENT) | WSDOT | 2021-PRESENT | \$146K** | PACE is providing engineering services for the Olympic Region, including generating stormwater retrofit assessments for the Gorst, Lilliwaup, Whiskey, and Kitsap project bundles; mapping fish passage projects; generating preliminary hydraulic design (PHDs) reports for the fish passage locations; and engineering review services on drainage construction documents and hydraulic reports. Their team provides drainage (temporary and permanent) and temporary erosion and sediment control (TESC) design services for the Port Angeles Project office. *PACE has improved the previous stormwater retrofit assessment template, which WSDOT now uses as an example for future projects.*



## OCI (DBE/WBE)

Osborn Consulting, Inc (OCI) has worked side-by-side with Jacobs on several WSDOT projects, including WSDOT's previous conveyance mapping contract. Relevant projects include:

**STORMWATER CONVEYANCE SYSTEM MAPPING | WSDOT | WA | 2017-2018 | \$138K** | As a subconsultant to Jacobs, OCI team members performed field inventory of stormwater infrastructure and conveyance systems along state right-of way in accordance with the SFI Field Procedure Manual. OCI provided field crew members for teams led by Jacobs personnel. They used a rugged field tablet to collect information to support compliance with the NPDES permit requirements. Information collected included photographs documenting the stormwater features, as well as ditch, drain inlet, pipe, curb, and barrier measurements.

**STORMWATER FACILITY INSPECTIONS, CITY OF KENMORE | KENMORE, WA | 2022 | \$9K** | OCI has provided surface water engineering and professional services to the City of Kenmore since 2013. OCI works collaboratively with City staff to quickly respond to task order requests. For a recent task order, OCI staff provided services for the City's annual stormwater facilities inspections, including ponds, detention vaults, swales, and detention tanks. Over the course of five weeks, OCI staff visited approximately 70 facilities and documented the conditions using Citiworks and site photos. For the stormwater vaults, water levels were measured and conditions of the structures, such as sediment level and pipe connections, were noted. *The OCI team has direct experience assisting public agencies with their stormwater inventory inspections and understands the processes required to collect similar information for the WSDOT stormwater conveyance system mapping project*

## Exeltech (DBE/MBE)

Exeltech has supported WSDOT projects in prime and subconsultant roles on 30 contracts over the past 20 years. Exeltech has positive working relationships with WSDOT staff and comprehensive understanding of WSDOT standards and procedures. Exeltech has provided civil and structural engineering, landscape design, construction management and inspection, and environmental documentation and permitting services for WSDOT projects statewide.

**RACE STREET COMPLETE STREET, CITY OF PORT ANGELES | PORT ANGELES, WA | 2020-2022 | \$636K** | As part of this project, Exeltech prepared an existing conditions base map that included City-provided data and Exeltech staff's field inventory of stormwater assets and asset performance within the project alignment. Project deliverables included a Drainage Report that addressed developed site conditions and hydrology, preservation of natural drainage systems, basin areas, onsite stormwater management and low-impact development, flow control, runoff treatment, conveyance system analysis, and source control of pollution. *Exeltech determined the Department of Ecology Stormwater Management Manual (DOE SWMM) minimum requirements for the project based on existing and developed site condition characteristics. Exeltech used site-specific analysis and design to preserve the hydrologic and structural performance of the affected project area, and designed Stormwater BMPs to mitigate runoff generated by the new surfaces created for this multi-modal corridor that will implement Complete Street principles. The project's Threshold Discharge Areas (TDAs) meet the new area exemptions for runoff treatment*

**2023 OVERLAY - 154TH PAVEMENT RESTORATION AND STORMWATER, CITY OF SEATAC | SEATAC, WA | 2022-2023 | \$181K** | Exeltech provided project and design oversight to update stormwater facilities. Site evaluation tasks included conducting a site visit to verify existing stormwater design features, identify stormwater features requiring video inspection, field location or verification of surface features between curbs or from edge of pavement to edge of pavement, ADA ramps requiring replacement, and approximate limits and types of pavement repairs anticipated for the project. *Exeltech's assessment of the performance of stormwater facilities in the project alignment identified deficiencies and supports the development of improvements that will be designed and constructed concurrent with the pavement restoration project to provide enhanced treatment and continued functionality.*





## Skillings (VBE)

Skillings has provided engineering, environmental and survey services in support of stormwater and infrastructure projects for 40 years. They have provided asset and resource inventories as part of capital improvement projects throughout the Pacific Northwest. They are very familiar with the Department of Ecology's Flow Control and Runoff Treatment BMPs. Skillings is often tasked with stormwater inventory and mapping as part of their design projects. They utilize the LAG Manual, WSDOT's Environmental Procedures Manual, and Ecology's Stormwater Manual on many their projects.

**BROOKDALE PIT POND CAPACITY ANALYSIS, PIERCE COUNTY | PIERCE COUNTY, WA | 2022-PRESENT | \$50K |** The Pierce County Planning and Public Works Surface Water Management Division (SWM) wanted to determine if there was sufficient capacity in the stormwater conveyance network of structures, pipes, and open channel ditches to convey the runoff to the ponds while meeting freeboard and surcharge requirements outlined in their Stormwater and Site Development Manual. The project team field-verified the existing conveyance and treatment system. While the County provided an existing system model, Skillings conducted field verification to evaluate and confirm system elements such as pipe sizes, catchbasins, off-site facilities, and illicit discharge to the system.

The quality of the initial work resulted in a subsequent contract in 2022 to develop a comprehensive assessment of the water quality facilities servicing the existing and future Brookdale Pit Pond and Carmarann Pond watershed. Skillings provided a comprehensive assessment of the flow. For field survey and verification, Skillings implemented a Safety Protocol Plan that outlined potential safety risks to staff and best practices for health and safety. The Safety Protocol Plan focused on educating staff of potential risks in the field and implementation of safety measures to mitigate the risk. This included use of PPE and application of safety practices. The Safety Protocol Plan also outlined risk and mitigation for objective hazards such as exposure to the elements (heat or snow) and procedures in the case of minor or major injuries. Skillings conducts weekly safety meetings with field staff to ensure it is a top priority. Skillings has used a variety of tools from sophisticated RTK survey to handheld GPS systems that download into a master project database. *This project shows Skillings' ability to analyze an entire conveyance and collection system for a watershed area. Our staff went out to the site, analyzed the system, inventoried assets, and confirmed the accuracy of our hydraulic models. The quality of Skillings' work resulted in subsequent awarded contract work for Pierce County.*

## AAR Testing (DBE/MBE)

AAR is well versed in WSDOT testing and sampling procedures and is approaching their sixth year of participation on GEC, providing qualified testing and inspection services to WSDOT in the South-Central Region (with Jacobs), North-Central Region, South-West Region, Eastern Region, and Olympic Region (with Jacobs). Their involvement in these contracts covers a broad range of services, including observation of all construction activities and materials testing. All the services were completed following WSDOT specifications using WSDOT forms, procedures, and protocol.

**I-5 STEILACOOM-DUPONT RD TO THORNE LANE CORRIDOR IMPROVEMENTS, WSDOT (OWNER) GUY F. ATKINSON CONSTRUCTION (CLIENT) | JBLM, WA | 2018-2022 | \$230K |** AAR inspected over 10,000 linear feet of stormwater pipe and 100s of stormwater structures that were installed during the construction of this project. *AAR accurately tracked and documented quality assurance and acceptance of the materials utilized on this project, which resulted in timely close out.*

**SR 520, MONTLAKE TO LAKE WASHINGTON I/C & BRIDGE REPLACEMENT, WSDOT (OWNER) GRAHAM CONTRACTING (CLIENT) | LTD, I-5 AT MONTLAKE | 2019-PRESENT | \$262K |** AAR is responsible for accepting the materials used on both temporary and permanent drainage systems including 10,000 linear feet of stormwater pipe as well as 200+ drainage structures. *AAR inspectors observed the construction of the systems, monitored pipe pressure tests, and witnessed all quality hold points.*



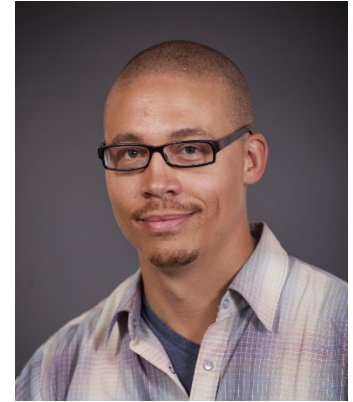
## i-TEN Associates (DBE)

**CLEAN WATER PROGRAM STORMWATER INVENTORY, CLARK COUNTY | VANCOUVER, WA | 2010-2013 | \$430K** | i-TEN is providing GIS Mapping services to Clark County, Washington for the Clark County Clean Water Storm Water Inventory Update Project to enable the Clark County Public Works clean water program to build a complete inventory of its storm water infrastructure. The creation of this inventory is critical for the County to meet the National Pollutant Discharge Elimination System (NPDES) permit requirements under the Clean Water Act. i-TEN project tasks include research, data entry and quality control for the development of the GIS inventory from more than 9,000 project as-builts and plans, including residential sub-division developments, private non-residential development, and capital improvement projects. Key deliverables are to complete the mapping of county-wide point sources (facilities) and outfalls larger than 24 inches, create a streamlined data receipt and entry system process for the storm water inventory, and Quality control of existing data to ensure that it meets the data quality and completeness standards. *i-TEN's project team was able to quickly integrate and augment county's clean water and GIS teams to come up with a plan to develop this time critical inventory of the stormwater system and put in place at business process to keep the storm water inventory system updated into the future.*



## CRITERION 2: QUALIFICATIONS OF PROJECT MANAGER

Adrian is an experienced project manager and environmental compliance professional with a proven track record managing field teams and projects. He has over 22 years of experience in environmental permitting compliance, roadway and structures construction inspection, Design-Build project delivery, and management of commitments tracking programs. He brings specialized knowledge and abilities gained performing project management, Design-Build contract administration and managing field work on highway, tunnel, and bridge construction projects. Adrian's expertise is working on WSDOT infrastructure projects, and he lives the importance of safety in these high-risk environments.



**WSDOT experience.** With 16 years of WSDOT experience, Adrian brings strong working knowledge of WSDOT programs, field work, construction oversight, and project administration practices. On the Alaskan Way Viaduct Bored Tunnel Project (2011-2016), Adrian served as the environmental compliance quality verification lead, scheduling and conducting audits and field reviews of the Design-Builder's work activities to ensure compliance with permit commitments. As the WSDOT Quality Manager on Phase 3 of the Oso Slide Emergency Repair Project (2014), Adrian managed inspection staff and the Construction Audit Tracking System to document compliance with quality standards throughout the construction and closeout phase. As Quality Manager on the WSDOT Rail Tacoma Freight House Square Project (2016), Adrian managed staff support and materials tracking to ensure compliance with WSDOT requirements.

### A. EXAMPLES OF PRIOR EXPERIENCE

**ENVIRONMENTAL COMPLIANCE ON-CALL, BNSF | 2020-2023 | PROJECT MANAGER.** Scope and responsibilities relevant to this contract: Adrian manages environmental compliance inspection staff to ensure permit compliance in the field and verifies commitments tracking from construction through closeout. He verifies effective best management practices (BMPs) are implemented, compliance inspections are carried out, noncompliance issues are resolved and reported properly to relevant agencies. He advises and mentors staff on inspection and reporting procedures to ensure compliance with applicable permits, such as NPDES, Section 401 Water Quality, Hydraulic Project Approval etc. *Adrian manages reporting, staffing and resources to ensure compliance with environmental requirements on multiple projects at once showing that he can manage all scope elements of the WSDOT Stormwater Inventory Project.*

**OLYMPIC REGION GENERAL ENGINEERING CONSULTANT (GEC), WSDOT | 2022-2023 | PROJECT MANAGER.** Scope and responsibilities relevant to this contract: Adrian serves as a task order project manager overseeing the asbestos good faith inspection (GFI) services for the WSDOT GEC program. Adrian manages and schedules resources and technical services as requested by WSDOT to provide onsite inspection, sampling, testing and reports detailing the presence of asbestos containing materials at WSDOT facilities and structures throughout the Olympic Region. Adrian manages the subconsultant staff as well as implementation of QC/QA procedures to ensure the field work and associates reports comply with WSDOT specifications and industry standards governing asbestos GFIs. *Adrian is a project manager who has experience managing scheduling, staff, budget, scope, quality, reporting and safety on WSDOT projects. Accountability, adaptability, and responsiveness are all qualities that Adrian possesses which are critical in project delivery.*

### B. FAMILIARITY WITH RELEVANT STATE AND FEDERAL REGULATIONS AND/OR PROCEDURES

Serving as the Project Manager and Environmental Compliance Lead on projects throughout the state of Washington, Adrian is familiar with State and Federal regulations that govern stormwater systems, water quality, and environmental protection such as Section 401 Water Quality, Section 402 NPDES, Section 404 Clean Water Act.



## C. ABILITY TO MANAGE SCHEDULE, SCOPE, BUDGET, AND CHANGES

### STATEWIDE ENVIRONMENTAL COMPLIANCE ON-CALL, BNSF | 2020-PRESENT | ENVIRONMENTAL COMPLIANCE/PROJECT MANAGER.

**Project schedule:** Active construction projects are always facing schedule challenges related to work activities, equipment downtime, environmental impacts or unforeseen conditions that arise onsite. On the BNSF Cowlitz River Bridge project, the sequence of bridge demolition activities that needed to be completed during the in-water work window had been pushed back due to equipment failure and Covid related delays. Adrian worked with the contractor and project team to develop a modified activity sequence and submitted a request to the permitting agencies to request a deviation to the in-water work window. The request was granted, and the project was allowed to proceed, eliminating the need to come back a year later to finish during the next in-water work window. Adrian's proposal and coordination with permitting agency and project team saved months of delay, and additional budget that would have been expended for remobilization.

**Scope of work/scope creep:** Managing environmental compliance monitoring on the BNSF Cowlitz River Bridge Project, the project scope was to provide weekly inspection, reporting and assessment of BMP implementation. Due to schedule delays, coordination with permitting agencies was needed in order to keep the project moving forward. Coordination with permitting agencies was out of scope work, however the client asked Adrian to conduct this critical communication. Adrian discussed the level of effort that would likely be required in advance with the client, received written direction to proceed, tracked the out-of-scope work and submitted an amendment to the budget to cover the additional effort. Advance communication with the client was critical in assuring the budget was managed as expected and out of scope work was tracked with transparency.

**Budget issues:** While managing environmental compliance on the BNSF Cowlitz River Bridge Project, Adrian uses a staffing plan matrix that projects anticipated staffing hours, direct costs and equipment usage throughout the contract term. This tool tracks the budget accurately from week to week to identify early on if a potential budget shortfall may develop. During in-water work, additional onsite personnel were needed for monitoring permit compliance. Adrian entered these additional staff into the staffing plan matrix and saw that the anticipated budget would be exceeded in the short term. Adrian provided notification to the client/permittee on how the increased compliance staff would impact the budget so that the issue could be addressed well in advance, whether by reducing staff later or supplementing with client team members. This method provides a clear up-to-date picture of how project expenditures coincide with expected costs.

**Changes that arise throughout the life of the project:** Heavy bridge construction projects involving in-water work require consistent oversight and monitoring to ensure the work is completed safely and in compliance with all applicable permits. Adapting to change was essential on the BNSF Cowlitz River Bridge Project, as the project team worked to adjust to varying site conditions, river levels and ensure proper BMP implementation. During the third in-water work window, the contractor needed to construct work area isolation in the river to build a causeway in order to demolish the existing bridge structure. Due to higher than anticipated river levels, the required fish exclusion could not be safely conducted within the isolated work area. To build the causeway and still mitigate impacts to protected fish species, Adrian developed a modified fish exclusion monitoring procedure and presented this proposal to the client/permittee and permitting agency. This modification was approved by the permitting agency and work proceeded to build the causeway while also mitigating impacts to fish. As the Environmental Compliance PM, Adrian implemented adaptive management techniques to ensure that BMPs were optimized to mitigate risk and keep the work moving forward. Opting for a proactive rather than reactive approach, Adrian participates in weekly meetings with the project team to review the schedule and assess the likely compliance risks in advance in order to anticipate the changes that might occur.

*Adrian is a project manager with the experience to adapt to changes during the project, come up with creative solution to challenges, manage budget, out of scope work and staffing needs.*

### OLYMPIC REGION GEC ASBESTOS GOOD FAITH INSPECTION SURVEYS, WSDOT | 2022-PRESENT | PROJECT MANAGER.

**Project schedule:** This project required quick turnaround on completion of asbestos surveys in the field to provide final reports to WSDOT in time for inclusion in their bid documents for projects that were to be advertised in late 2022. To expedite the work in the field, Adrian expedited the kickoff meeting with the subconsultant and WSDOT as soon as the



contract was executed and turned around pre-activity work plans and safety submittals to allow work to get under way as quickly as possible. Adrian reviewed and submitted levels of effort for each asbestos GFI location and provided quality review of final reports prior to submission to WSDOT, minimizing the time between each step in the process.

**Scope of work/scope creep:** Adrian's strategy to minimize the impact of scope creep is to develop a work plan, review it regularly with staff and WSDOT, and collaborate early on potential changes. When the project scope is accurately defined and integrated into an actionable work plan, it helps to keep staff working in accordance with the approved project parameters. Adrian conducts regular meetings and work plan review with field staff to identify any issues or concerns with delivery. During development of the site-specific level of effort for an asbestos GFI at the Wishkah River Bridge, staff recognized that the project may impact lead-based paint on the structure. Adrian transmitted this information to WSDOT, noting that testing of paint for lead content was outside the scope of the task order and only potential asbestos containing materials would be sampled and tested during the GFI survey. WSDOT was notified in advance of the potential need for additional testing work outside the scope of the task order.

**Budget issues:** To avoid budget issues, a site-specific level of effort (LOE) was developed and submitted to WSDOT prior to conducting the GFI in the field. The LOE detailed the scope of the asbestos GFI along with estimated cost to perform the field work, testing and development of the final report. This pre-activity estimate ensured that budget was tracked as the overall project effort was completed. Adrian provides monthly progress reports that detail project expenditures, forecasts remaining effort, and describes any issues that may impact the budget.

**Changes that arise throughout the life of the project:** Adrian uses a Change Management process to formally document and address project changes. For example, as the initial round of GFIs were being completed, WSDOT requested GFIs at additional locations. Adrian heard the need, facilitated the adjustment of field activities, and documented the change.

*Adrian is a project manager with experience delivering WSDOT projects, proactively managing scope, schedule, budget, and change management.*

## D. LICENSES AND ACCREDITATIONS

Engineer-In-Training (EIT), Washington State, 2013, #33386 □ A.A., Applied Science in Electronics Engineering Technology, ITT Technical Institute 1999 □ Certified Erosion & Sediment Control Lead (CESCL), #EF8182330.



## CRITERION 3: KEY TEAM MEMBER QUALIFICATIONS

We specifically built our team to provide focused attention, accountability, and expertise around the positions.

### Peter Barney | GIS and Data Management

Peter is a GIS Analyst with over 12 years of experience in the field. He is skilled in industry-standard ESRI ArcGIS software. He has collaborated closely with teams of engineers, surveyors, biologists, and archaeologists. He has been involved in the planning and execution of projects in the role of GIS Professional Associate: creating, modifying, analyzing, storing, and editing data for figures, maps and map sets, and online presentation. He has provided spatial database development and management, including SDSFIE data standards. He has maintained a fleet of sub-meter GPS units, processed GPS-collected data, and provided technical expertise for GPS technology. He works on projects in the transportation, power, oil and gas, water, land management, and defense industries.

#### WHY PETER IS RIGHT FOR THE ROLE:

*Peter acted as GIS lead on WSDOT's 2018 Stormwater conveyance project and is familiar with WSDOT guidelines and standards.*

### Project Experience

**Stormwater Conveyance System Mapping, WSDOT | 2018 | GIS LEAD.** Peter assisted in the management of a large, complex field data collection effort. He created ArcPad GPS projects, communicated with and advised field crew leaders, uploaded and downloaded data through Sharepoint, performed post-processing and differential correction with Trimble Positions, and led a thorough QC effort.

**Second Creek Wastewater Pipeline, Metro Wastewater Recovery | 2019-Present | GIS LEAD.** Peter led the GIS field data collection, presentation, and mapping for this multi-year, ongoing pipeline project. He provided templates for ESRI field data collection apps using disconnected editing. He used ESRI Portal to store, edit, and map the field collected data over proposed infrastructure improvements. He created an online client-facing ESRI Hub to present multiple datasets with automated updating.

**Washington State Fish Passage Culvert Rehabilitation, WSDOT | 2022-Present | GIS LEAD.** Peter is the GIS lead for this multi-year, ongoing culvert inventory and assessment project. He coordinates with project managers, field crew, and hydrologists to perform GPS data collection, raster data processing and analysis, and field and report mapping. Data are shared using ESRI's ArcGIS Online.

**Understanding WSDOT and Public Agency Regulations/Procedures.** Peter is familiar with WSDOT guidelines and standards having acted as GIS lead on two WSDOT project involving stormwater and GPS field data collection.

### Eric Storkerson | Field Crew Coordinator/ Scheduler & Field Lead

Eric has 20 years of experience in leading field crews and monitoring large-scale infrastructure projects. Eric is currently the Environmental Field Lead on several projects throughout Puget Sound, managing compliance, inspections and resources across multiple sites. Eric's deep history and experience as a coordinator is valued, from WSDOT infrastructure projects to remediation sites. Eric has worked extensively with stormwater line installations, GIS mapping, wetland restoration, erosion and sediment control, and other residential and public infrastructure operations. Through a highly varied client base, Eric has acquired considerable experience across Washington State coordinating resources on sediment and groundwater multi-media compliance sampling,

#### WHY ERIC IS RIGHT FOR THE ROLE:

Eric has over 20 years of experience leading and scheduling field crews and monitoring operations. This includes mentoring junior staff and educating construction teams to minimize risks and manage environmental issues and hazards. Eric's experience performing this work for WSDOT in the past will allow quicker start up and proactive awareness of potential challenges and issues. Eric will utilize his skills leading teams and past experience to ensure scheduling of field crews is completed as efficiently as possible, teams are prepared, and that work is completed safely and accurately.



subsurface investigations, installation and monitoring programs, air monitoring and sampling, data gathering and mapping, regulatory interaction and reporting, and strong client representation.

## Project Experience

**Stormwater Conveyance System Mapping, WSDOT | 2017-2018 | FIELD LEAD.** Eric oversaw a field team to provide GIS mapping of the WSDOT stormwater conveyance network. Eric led teams in the field to electronically map stormwater drains, drainage inlets, curbs, ditches, vaults, pipes, and all other conveyance methods utilized by WSDOT within State controlled right-of-way. These activities were a part of the ongoing efforts by WSDOT to keep current records of their stormwater assets, to identify illicit discharges, and comply with permit requirements.

**Statewide Environmental Compliance On-Call, BNSF | 201-2019 | ENVIRONMENTAL COMPLIANCE/FIELD LEAD.** Eric supervised a team assigned to monitor Federal permit required compliance tasks on behalf of our client to eliminate the potential for permit violations. Tasks included erosion and sediment control setup and monitoring, water/noise parameter monitoring, ensuring client activities were conducted in an environmentally safe manner, and photo/report documentation. All bridges were completed successfully without deviating from permit requirements.

**Understanding WSDOT and Public Agency Regulations/Procedures.** Serving as the Environmental Compliance Field Lead on projects throughout the state of Washington, Eric is familiar with State and Federal regulations that govern stormwater systems, water quality, and environmental protection such as Section 401 Water Quality, Section 402 NPDES, Section 404 Clean Water Act. Additionally, Eric has specialized training in relevant skillset including First Aid & CPR, 40-hour Hazardous Waste Ops/ 8-hour Refresher, OSHA 10-Hr Construction Outreach, OSHA 30-Hr Construction Outreach, CESCL Certification (#81225), Railroad Safety Certification (E-Railsafe, Contractor Orientation, Railroad Education), United States Army Corps of Engineers, Construction Quality Management of for Contractors Certification, Hazardous Waste Supervisor, DOT Hazardous Materials Transportation, SH&E Site Safety Program Management, and Engineer-in-Training (Washington, No. 37546).

## Tina Borseth | Field Crew Coordinator/Scheduler

Tina has nine years of experience in civil engineering. She is an essential part of PACE's design-build and heavy civil teams, providing superior document control, meeting management, and helping the team stay on track. Her daily tasks include coordinating project work, maintaining project schedules, creating reports, organizing meetings, taking minutes, filing permit documents, managing project documents, and tracking project budgets. She has successfully managed large multidisciplinary teams on several high-profile WSDOT projects, including the SR 167 to SR 509 Design-Build, Olympic Region GEC, and I-90/SR 18 Interchange Improvements Design-Build projects.

### WHY TINA IS RIGHT FOR THE ROLE:

Tina's strength is her ability to manage tasks efficiently and effectively. She can quickly and accurately produce reports and coordinate seamlessly with internal and external staffing resources. Tina's ability to complete tasks accurately and rapidly saves her team hours each week, and her completion-focused attitude is invaluable.

## Project Experience

**SR 3- Chico Creek and Tributary Removal, WSDOT | 2019 | LEAD COORDINATOR.** Tina served as the Lead Coordinator for this project that replaced the SR 3 crossing of Chico Creek with a full-span 200-foot bridge and a Chico Way crossing with a new 39-foot, full-span bridge. PACE provided preliminary and final hydraulic designs, sediment mobility, large woody material placement, stakeholder and agency coordination, permit support, a multi-phase stream diversion plan, and construction support.

**Stormwater Dig and Repair | 2019 | LEAD COORDINATOR.** Tina served as the Lead Coordinator for this project, which provided on-call professional engineering services for repairing stormwater conveyance piping throughout the City's Urban Growth Area since 2010. Services included sub-basin hydrologic modeling; condition and capacity evaluation; hydraulic modeling of conveyance system; alternatives analysis; preparing bid documents; right-of-way permits; clearing and grading



permits; Construction Stormwater Pollution Prevention Plans (CSWPPP); traffic Control plans; and SEPA checklist for the City's in-house environmental review.

**Understanding WSDOT and Public Agency Regulations/Procedures.** Tina has served as the Project Coordinator for several high-profile WSDOT design-build projects. This experience has given her a thorough understanding of WSDOT's regulations and record-keeping and reporting procedures.

## Michael Maranan | Field Lead

Michael is a Project Engineer with 19 years of experience providing design and inspection services for public and private utilities, including stormwater collection, conveyance, water quality, and detention systems. As a construction inspector, he spends considerable time inspecting work and resolving conflicts with contractors. His experience includes inspecting publicly owned catch basins, stormwater facilities, and illicit discharge detection and elimination (IDDE) screening per the NPDES Phase II Permit. Michael thoroughly understands local codes and jurisdiction requirements and performs inspections to meet these provisions. His experience also includes preparing temporary traffic control plans for several clients. Michael complies with safety protocol onsite to protect pedestrians and vehicular traffic. In addition, Michael has been part of 14 projects within the last five years where he developed and implemented traffic control plans to support inspection services.

### WHY MICHAEL IS RIGHT FOR THE ROLE:

Michael has inventoried and inspected over 130 MS4 drainage facilities for the City of Kenmore since 2016. He checked the facilities to comply with NPDES permit requirements. Facilities include drainage ponds, tanks, catch basins, swales, and dispersal trenches. Michael is well trained in evaluating such facilities following WSDOT and Ecology Operations & Maintenance Requirements.

## Project Experience

**On-Call Surface Water Projects | 2016-Present | SURFACE WATER FACILITIES INSPECTOR.** Michael provided inspections for City maintained and privately maintained storm drainage facilities of concern and reported the results to City staff by updating the city's asset management software. He inspects existing facilities and identifies if maintenance is needed (i.e., structural damage, erosion, safety, or other environmental concerns in and around the facilities).

**On-Call Stormwater Dig & Repair | 2014 | INSPECTOR/DESIGN ENGINEER.** Michael provided field reconnaissance and reviewed reports and video inspections to assess the conditions of the drainage system and provided cost-effective alternatives in rehabilitating/replacing the problem sections.

**37<sup>th</sup> Avenue Drainage Improvements | 2014 | LEAD INSPECTOR.** Michael was the Lead Inspector for installing a buried drainage system along 37<sup>th</sup> Avenue NE in Lake Forest Park. He scheduled and performed site inspections from pre-construction through final approval and other routine tasks. Michael provided record-keeping and delivered our files to the City at project completion.

**Understanding WSDOT and Public Agency Regulations/Procedures.** Michael has spent significant time in the field inspecting publicly owned catch basins, stormwater facilities, and illicit discharge detection and elimination (IDDE) screening per the NPDES Phase II Permit. He thoroughly understands local codes, WSDOT, and jurisdiction requirements and performs inspections to meet these provisions.





## John Mulligan | Field Lead

John has a diverse background in environmental compliance management and team leadership in the Pacific Northwest. John is the directing biologist for WSDOT projects, managing both Jacobs and contractor field crews on fish barrier replacement projects. John is also currently the Environmental Compliance Manager for the WSDOT Northwest Region Fish Passage Design-Build project. His work includes managing staff and field resources on multiple projects, compliance and permit reviews with agencies, and tracking and reporting compliance.

### WHY JOHN IS RIGHT FOR THE ROLE:

His ability to coordinate with environmental staff, design engineers, construction managers, tribal staff, and regulators translates to consistent and predictable schedules and coordination.

### Project Experience

**Shoalwater Bay Restoration Project, USACE | 2022 | FIELD LEAD.** John provided environmental management and technical support in a lead role on this shoreline restoration project. John consistently exceeded client expectations, working collaboratively with a multidisciplinary project delivery team. Daily coordination with the Corps as the federal lead, Shoalwater Bay Tribe and WDFW was critical to the success of the project. John managed permit compliance, scheduling staff, managing construction schedules and activities to maintain environmental compliance throughout the life of the project.

**Pacific Northwest Environmental Compliance On-Call, BNSF | 2018-Present | ENVIRONMENTAL COMPLIANCE FIELD LEAD.** John is responsible for ensuring environmental compliance for 5 heavy bridges with complex permit requirements throughout all construction phases. Heavy bridges crossed the Wind River, White Salmon River, Little White Salmon River/Drano Lake, Cowlitz River and Rock Creek, all bearing Endangered Species Act listed salmonids. John's work as field lead is to coordinate staffing of compliance inspections, managing communication and updates to regulatory agencies, and completing on-site oversight activities.

**Understanding WSDOT and Public Agency Regulations/Procedures.** John brings extensive coordination experience with WSDOT from his supervisory biologist and Design-Build roles, including collaboration with other state and federal agencies, including WDFW and Department of Ecology.

## Matt Budsberg | Field Lead

Matt has developed positive working relationships with WSDOT staff as a team member on the WSDOT I-405 Widening and Express Toll Lanes Design-Build/Renton to Bellevue project. He has 20 years of experience providing planning, design, and overseeing construction for all types of site improvements, including roadways; stormwater mitigation, storage, treatment, and conveyance utilizing Green Stormwater infrastructure; grading; paving; utility systems; parking; and non-motorized paths. Matt is proficient in all phases of project delivery, from field investigation and existing conditions assessment through alternatives analysis, design, and preparation of PS&E.

### WHY MATT IS RIGHT FOR THE ROLE:

Matt will map existing stormwater assets, how they connect to convey highway runoff, and where the water goes. Matt's expertise in stormwater infrastructure design and his thorough understanding of environmental regulations helps clients to assess and implement effective stormwater management solutions.

### Project Experience

**Aurora Avenue Median Islands, Turn-Pockets, Landscape and Bioretention Beds, and Irrigation Retrofit Project Design Service, City of Shoreline | 2022-2023 | CIVIL DESIGNER AND STORMWATER TASK LEAD.** Matt conducted site visits, inventoried, and assessed the performance of stormwater assets. Matt is developing stormwater redesign and retrofit options.



**Race Street Complete Street, City of Port Angeles | 2020-2022 | CIVIL DESIGNER AND STORMWATER TASK LEAD.** Matt conducted site visits, inventoried existing stormwater assets and performance, and developed design and specifications for roadway and paving improvements that included stormwater management, a new shared use path, sidewalks, illumination, landscaping, water main replacement, and opinion of probable cost.

**2023 Overlay - 154th Pavement Restoration and Stormwater, City of Seatac | 2022-2023 | CIVIL DESIGNER AND STORMWATER TASK LEAD.** Matt conducted site visits to assess stormwater assets and performance and led the development of the project stormwater report.

**Understanding WSDOT and Public Agency Regulations/Procedures.** Matt is familiar with WSDOT and public agency regulations/procedures through his experience supporting local agencies' transportation and stormwater/water quality projects conducted in compliance with local, state, and federal regulations and procedures. This includes the WSDOT Stormwater Management Program Plan, WSDOT Environmental Procedures Manual, WSDOT Design Manual, WSDOT Right-of-Way Manual, WSDOT Standard Specifications, WSDOT Local Agency Guidelines, NPDES stormwater program, and other regulations and procedures. Matt is proficient in AutoCAD Civil3D, Western Washington Hydrology Model (WWHM), Stormshed, and Bentley OpenFlow WaterCAD programs.

## Mike Allen | Field Lead

Mike has over 15 years of experience as a construction inspector. His experience covers a wide range of disciplines from lab work to managing large complex projects including infrastructure, environmental, transit, government, and private sector clients. His background in soils, concrete, masonry, stormwater, and general construction have been used extensively. In addition to his technical qualifications, he has developed outstanding working relationships with our clients due to his excellent communication skills and attention to detail.

### WHY MIKE IS RIGHT FOR THE ROLE:

Mike takes great pride in his work. He works very hard at maintaining relationships with the client while still making sure that quality is achieved on every project he is on.

## Project Experience

**I-5 Steilacoom Dupont Rd. To Thorne Lane, WSDOT | 2018 – 2022. QUALITY INSPECTION/MONITORING.** Mike was responsible for all QA inspections on pressure tests, stormwater conveyance system, pavement, rebar, bridge deck placements and material acceptance. This project had over 10,000 linear feet and 300+ stormwater structures on both sides of I-5 at JBLM that Mike was responsible for inspecting and making sure that all standards were followed during the duration of the project.

**SR 520 Montlake to Lake Washington I/C & Bridge Replacement, WSDOT | 2019-Present. LEAD QUALITY INSPECTION/MONITORING.** Mike currently serves as Lead responsible for all site quality assurance inspections while managing and overseeing the testing team on site. He has been responsible for maintaining inspections of 10,000 linear feet of stormwater as well as 200+ drainage structures.

**Understanding WSDOT and Public Agency Regulations/Procedures.** Mike is fluent in WSDOT specifications and standards and currently holds his WSDOT inspector certification.



## CRITERION 4: FIRM'S PROJECT MANAGEMENT SYSTEM

1

### Client Expectation Survey



- Sets project goals/objectives with WSDOT
- Defines how we are expected to perform
- Establishes communication protocol

2

### Project Management Plan



- Documents all critical project management information in one location
- Quickly brings team up to speed

3

### Quality Management Plan



- Defines review procedures for all deliverables to ensure end product meets the WSDOT's standards
- QA/QC process is clearly documented at every step and is audited

4

### Project Controls



- Earned Value system to track project schedules, budgets, and staffing
- Monthly progress reports and invoices
- Monthly update of estimate to complete (ETC)

5

### Operational Project Reviews



- Monthly project review with PM accounting, and project controls staff
- Focus on problem identification, prevention, resolution

6

### Continuous Improvement



- Deliver, measure, and demonstrate value to WSDOT by increasing your return on investment

7

### Client Satisfaction Survey



- Periodic feedback mechanism
- Ensures we are performing in accordance with expectations

8

### Audits



- Periodic project audits to ensure all identified project management tasks identification above are consistently done

101\_WDOT\_Project Management Approach

We know WSDOT has specific performance standards and expects consultants to provide superior project management, deliver quality design work, and adhere to standards. Jacobs is a project-centric organization that focuses on sustained client loyalty; our staff and our team partners have a proven history of delivering to your standard for nearly three decades. Technical advisor, Jana Crawford, and project manager, Adrian Braxton have diverse delivery experience from managing WSDOT projects over the past 16 years. They bring a strong understanding of the management systems needed to deliver this project. Jacobs has a disciplined project management system we use on all projects. This system establishes our standards, procedures, and protocols and focuses on driving predictability and certainty into project delivery to foster success of our project teams through consistent use of best practices. Our project managers complete formal training through Jacobs' project management advancement program, and are accredited to manage projects for Jacobs, which provides WSDOT with consistent, transparent, and quality project delivery.

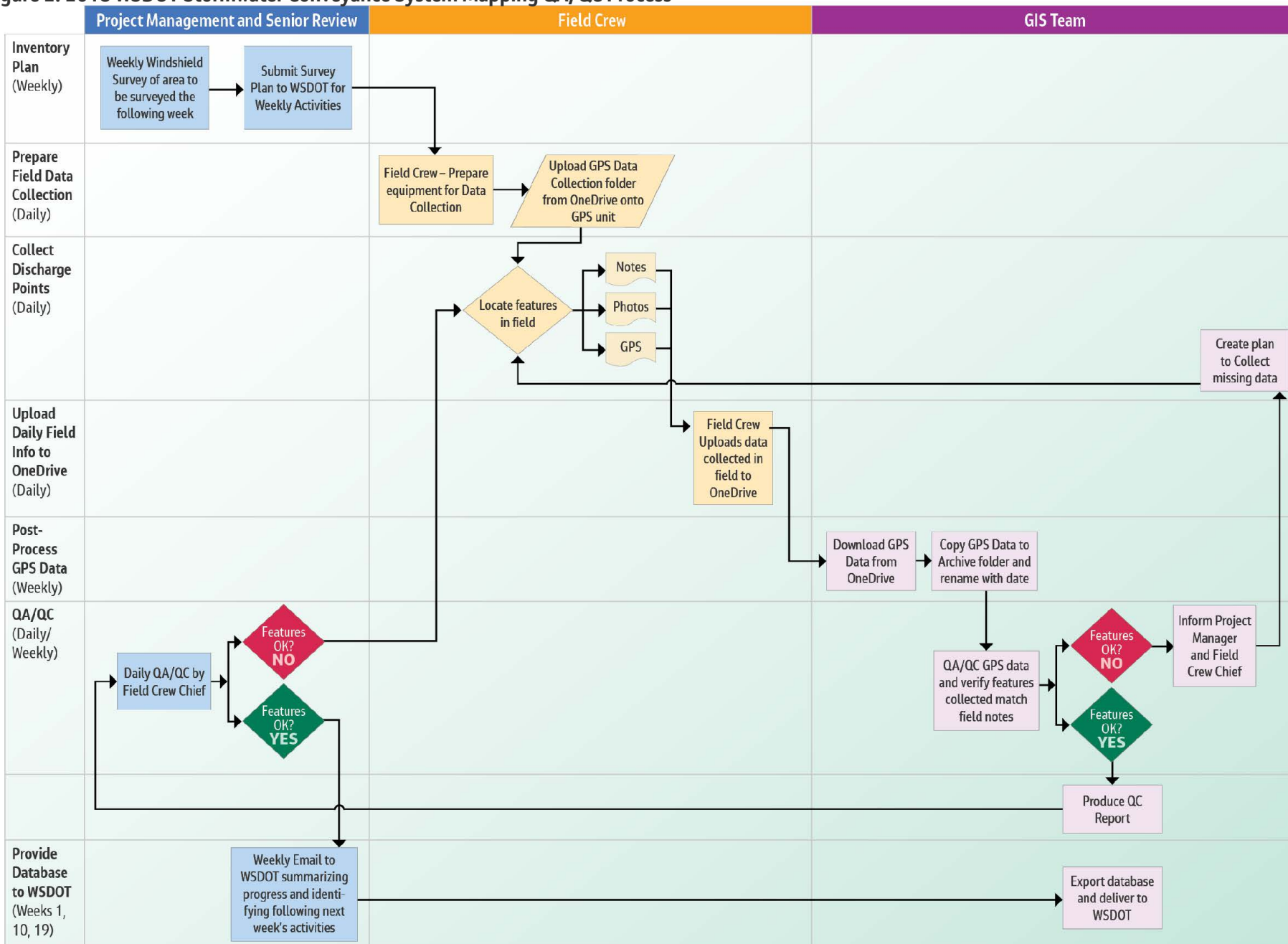
**QUALITY ASSURANCE/QUALITY CONTROL PROCESSES.** Paramount to executing an effective QA/QC process is work planning and the effective defining and sequencing of deliverables. In conjunction with project manager, Adrian Braxton, our program GIS and Data Management SME Peter Barney will develop a QA/QC plan that is tailored to the deliverables of this project. The plan will define the schedule and scope for all quality checking and review activities, and the requirements for an objective, comprehensive check, and review of the deliverables. Peter is responsible for the execution of this plan. The fundamental tenets of our project specific QA/QC process are:

- Perform the work correctly the first time
- Check all deliverables with a qualified second set of eyes using a defined process (all field-collected spatial and tabular data will be checked by a qualified analyst who is not part of the field team at WSDOT's preferred interval)
- Audit for compliance against defined criteria

**Where We've Done It.** Under the 2018 WSDOT Stormwater Inventory contract, Peter checked all data on a weekly basis before delivery. Both spatial and tabular data were QA/QCed. GPS data were compared line-by-line to field notes for accuracy. **Figure 2** on page 19 reflects our previous QA/QC process, successfully implemented during our 2018 stormwater conveyance mapping effort. This process will serve as the foundation of our QA/QC process on this contract.



Figure 2. 2018 WSDOT Stormwater Conveyance System Mapping QA/QC Process



103\_WDOT\_QA and QC Flowchart



**SCOPE/BUDGET TRACKING PROCESS.** For each task order, we develop internal project execution plans (PEP) aligned to the work plan that confirm the scope of work, budget, project team, schedule, roles and responsibilities, communication protocols, work breakdown structure, quality plan, risk management, change management, and safety protocols that will govern our work. The PEP provides the foundation for all measurement and monitoring of scope and budget and ties in with the project schedule by producing an earned value metric to track progress against the deliverables. The PEP is web-based and available to all internal and external team members. On a monthly basis, Adrian will participate in internal operational project reviews (OPR) with, task order managers, senior management, and our internal project controls to review status of all elements of the PEP.

**SCOPE MONITORING.** We will divide the program scope into a logical selection of task orders with assigned WBS of subtasks. Each task order and WBS includes a responsibility matrix, assumptions, activities, and deliverables. We will track each of these key components on a project baseline schedule and in periodic meetings with the WSDOT project manager. This enables us to break the program into manageable pieces, anticipate and mitigate scope creep, feed percentage complete into the schedule, and keep you fully informed on our progress.

**BUDGET MONITORING.** Adrian will use Jacobs' toolbox of web-based resources to manage the project finances. Project financial information is updated weekly, allowing Adrian to clearly see charges expended on the project. On a monthly basis we review project expenditures, status physical percent complete, and forecast an estimate to complete (ETC) for each WBS of each task order, which allows us to monitor the health of each project in the program.

**Where We've Done It.** While managing environmental compliance on the BNSF Cowlitz River Bridge Project, Adrian used a staffing plan matrix that projects anticipated staffing hours, direct costs, and equipment usage throughout the contract term. This tool tracks the budget accurately from week to week to identify early on if a potential budget shortfall may develop. During in-water work, additional onsite personnel were needed for monitoring permit compliance. Adrian entered these additional staff into the staffing plan matrix and saw that the anticipated budget would be exceeded in the short term. Adrian provided notification to the client/permittee on how the increased compliance staff would impact the budget so that the issue could be addressed well in advance, whether by reducing staff later or supplementing with client team members. This method provides a clear up-to-date picture of how project expenditures coincide with expected costs.

**SCHEDULING PROGRAM/PROCESS.** Jacobs uses various software, including Excel, Access, Microsoft Project, and Primavera to support project scheduling needs. Schedules are built with the understanding that they will be used to communicate time and logic elements of the project with the consultant team and WSDOT. The schedule will define all work activities, durations, and constraints, including all external interfaces, at the task level. It will also provide "rollups" of work items so they can be understood and used by all project participants.

**Where We've Done It.** Adrian has successfully used scheduling software Microsoft Project as well as Excel and Access platforms to manage workflows and schedule staff for the BNSF Cowlitz River Bridge Project and WSDOT Olympic Region GEC tasks. Adrian will develop the baseline schedule and milestones using Microsoft Project, and track staffing using Excel.

**INTERACTION WITH INTERNAL TEAM.** Effective, targeted communication is critical for efficient, timely project delivery. We have structured our team based on our successful delivery of a similar task order for WSDOT in 2018, with some modifications due to the broad geographic scope and duration of this project. The tools we use to promote clear communication with our internal project team include:

- Our senior management team will work with Adrian to conduct programmatic reviews of the project, define the goals, milestones, and program sequence, update the schedule, and build task order delivery teams.
- Adrian will work closely with WSDOT to understand upcoming work area/corridors and will communicate regularly with Field Crew Coordinator/Scheduler(s) to utilize field staff as geographically close to the work area as possible.
- Field Crew Coordinator/Scheduler(s) will coordinate with Field Leads and Field Crew staff to build and maintain a schedule ensuring four crews are mapping during mid-March through mid-November.



- Field Leads will perform inventory work, communicate upcoming work areas and associated safety risks with Field Crew staff, ensure safety plans are complete and facilitate weekly safety meetings, communicate and resolve any issues in the field, and perform initial QC and daily data transfers.
- Field crew staff will perform field work with a focus on quality and safety.
- GIS and Data Management staff will manage all GIS data, set up of field forms, coordinate integration with WSDOT GIS, and perform QC reviews of the data.
- Training will be held at the start of each field season to confirm expectations, goals, and objectives, quality plans, standard operating procedures, communication protocols, staff roles and responsibilities, and performance measures.
- Coordination meetings will be held regularly between Adrian and WSDOT's project manager to review project progress and budget and provide opportunities to proactively identify and address any concerns.
- Electronic systems. Given our team is working in a hybrid remote/office setting, we will use email, file transfer protocol sites, Microsoft Teams, ArcGIS Online, and SharePoint sites to communicate with the project team, set up meetings, share ideas, disseminate information, facilitate reviews, and share electronic documents.

**INTERACTION WITH CLIENTS.** We view WSDOT and Jacobs' relationship in managing and delivering projects as a partnership. We know that for us to be successful we need to be aligned. We have selected a project advisor and senior management team that have effectively worked with WSDOT for 20+ years and know how to effectively coordinate the team, schedule, and needs of the program. Adrian will be the primary point of contact for all task order and contractual discussions and consultant team management. He will work with you, in collaboration with the senior management team to establish the program's scope, schedule, and budget. Our team members will integrate and interact with WSDOT staff following communications protocols established in our PEP, including the means, methods, and frequency of our interactions with WSDOT's staff.

**INTERACTION WITH STAKEHOLDERS.** Our team is experienced in conducting outreach and coordinating with external stakeholders, both public and private. We don't anticipate this scope of work to require external coordination but can coordinate with your staff to quickly pivot and provide these services as needed.



## CRITERION 5: PROJECT DELIVERY APPROACH

Jacobs brings the knowledge, skills, and abilities to complete the field data collection effort necessary for your stormwater conveyance mapping project, as demonstrated by our successful delivery of a similar task order for WSDOT in 2018. We will help WSDOT collect the data necessary to understand the stormwater assets currently in place, how and where those assets connect, and the resultant discharge point. We understand the importance of high-quality data associated with this project as it may be utilized by WSDOT to meet its NPDES Permit mapping requirement, to guide maintenance operations, and/or to inform future projects under WSDOT’s Stormwater Retrofit Program and Complete Streets initiative.

### A – APPROACH TO DEVELOPING A WORK PLAN

**Work plan development.** Jacobs will develop a work plan that identifies the tasks to be performed within the project, defines the significant risks and control measures associated with the specific work, task and location. Work plan development will include identification of deliverables, resources, step-by-step plan, schedule and a process to review the work plan and make updates.

**Work plan decision making.** A key component for success is identifying and engaging decision makers early in the development of the work plan. Adrian will develop the work plan with valuable input from staff previously involved in this work for WSDOT in 2018 as well as direction received from WSDOT in the RFQ and through an iterative review process. The decision-making effort will be controlled by the level of decision needed and will follow an escalation path as described in Part B below.

**Elements of the proposed work plan.** The milestone schedule for our proposed work plan is shown in **Figure 3** on page 23 and summarized below.

#### Contract Management

Upon award, Adrian will work with WSDOT to execute the contract and get early task orders scoped. The timeline shown in **Figure 3** is based on our successful delivery of a similar task order for WSDOT in 2018. Early task orders will focus on confirming the program goals and schedule and determining applicable corridors and necessary equipment. The vision, goals, and schedule developed by the team will drive development of the work plan and any necessary updates to critical path items and associated timelines.

Our management is equipped to provide you accurate and timely cost information, allowing us to provide you with the information you need to maximize available funding and map as much of the system as feasible. We have a proven history of delivering this type of work with you. With our wide range of natural resources, hydrology, geographic information systems (GIS), global positioning systems (GPS), and data management skills, we have the key capabilities to continue performing this work.

#### Start-Up

Our team will update standards and guidance (i.e., Health and Safety Plan, QA/QC Plan, and SFI Field Procedure Manuals) in preparation for training and field work. The team will work closely with WSDOT to identify necessary updates to manual content. Once these documents are updated and finalized, onboarding training will commence with a strong focus on safety. Concurrently, the team will work to procure equipment necessary to complete the field work.

Throughout the project, our Field Crew Coordinator/Scheduler(s) will utilize the available pool of field crew staff to ensure four crews are mapping during mid-March through mid-November to take advantage of the longer daylight hours and favorable weather conditions. Adrian will work closely with WSDOT to understand upcoming work area/corridors and will communicate regularly with Field Crew Coordinator/Scheduler(s) to utilize field staff as geographically close to the work area as possible.



Figure 3. Work Plan

| Milestone Activity  | 2023 |   |   |   |   |   |   |   |   |           |           | 2024      |   |   |   |   |   |   |   |   |           |           | 2025      |   |   |   |   |
|---|------|---|---|---|---|---|---|---|---|-----------|-----------|-----------|---|---|---|---|---|---|---|---|-----------|-----------|-----------|---|---|---|---|
|   | M    | A | M | J | J | A | S | O | N | D         | J         | F         | M | A | M | J | J | A | S | O | N         | D         | J         | F | M | A | M |
| <b>Contract Management</b>  |      |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |
| Contract Award  | █    |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |
| Contract Execution  |      | █ |   |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |
| Negotiate Scope and Budget  |      |   | █ |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |
| Determine Corridors and Equipment Needs   |      |   | █ |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |
| Regular Coordination w/ WSDOT on Budget   |      |   | █ | █ | █ | █ | █ | █ | █ | █         | █         | █         | █ | █ | █ | █ | █ | █ | █ | █ | █         | █         | █         | █ | █ | █ | █ |
| <b>Start-Up</b>   |      |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |
| Update Manuals  |      |   | █ |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |
| Procure Necessary Equipment   |      |   | █ |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |
| Provide Onboarding Training   |      |   | █ |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |
| <b>Field Inventory</b>  |      |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |
| 3 Field Leads (base staffing); In field mid-March through mid-November; In office or field mid-November through mid-March |      |   |   | █ | █ | █ | █ | █ | █ | █         | █         | █         | █ | █ | █ | █ | █ | █ | █ | █ | █         | █         | █         | █ | █ | █ | █ |
| 9 Field Crew Members; Field only  |      |   |   | █ | █ | █ | █ | █ | █ | █         | █         | █         | █ | █ | █ | █ | █ | █ | █ | █ | █         | █         | █         | █ | █ | █ | █ |
| Daily Data Transfers by Leads   |      |   |   | █ | █ | █ | █ | █ | █ | █         | █         | █         | █ | █ | █ | █ | █ | █ | █ | █ | █         | █         | █         | █ | █ | █ | █ |
| Provide Necessary Training for Field Crew   |      |   |   |   |   |   |   |   |   | as needed | as needed | as needed |   |   |   |   |   |   |   |   | as needed | as needed | as needed |   |   |   |   |
| <b>Close-Out</b>  |      |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |
| Stop Work to Compile Data   |      |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   | █ |
| Finalize Work Products and Submit Deliverable   |      |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   | █ |
| Close-out Task Order  |      |   |   |   |   |   |   |   |   |           |           |           |   |   |   |   |   |   |   |   |           |           |           |   |   |   | █ |

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## Field Inventory

Due to the broad geographic scope and duration of this project, we have made some modifications to the team since 2018 to better serve you. We have identified more locally based staff across the state. We have also increased our field crew pool, allowing us to transition teams throughout the duration of the project to keep staff fresh and alert. To accommodate these transitions while minimizing startup time, we are utilizing a few of our staff that worked on this task under the previous contract and we will record all onboarding training (e.g., safety, equipment operation best practice and field procedure training) and will make them electronically available to new team members.

We selected our Field Leads based on both their prior experience with your stormwater mapping program and their ability to safely lead field teams collecting data along highways. They will oversee junior field crew staff, who have 1 to 5 years of experience, bringing previous experience working with WSDOT and/or experience collecting geospatial data along highways. Understanding the importance of safety associated with this type of work, Field Leads will schedule weekly safety meetings prior to beginning work each week.

We plan to provide a field crew consisting of:

- Three (3) Field Leads performing field work year-round and/or office-based tasks mid-November through mid-March
  - One (1) Field Lead performing field work mid-March through mid-November
  - One (1) Field Lead performing field work as back-up, when needed
- Nine (9) Field Crew Staff serving as field crew between mid-March and mid-November from a total pool of ~23 Field Crew Staff

Jacobs has experienced field surveyors that understand proper field procedures and the hardware expertise required to make a project successful. Our field staff will work closely with office staff to optimize data collection processes, data processing, data transfer and data accuracy.

## Close-Out

The team will stop field work with adequate time to finalize work products, submit final deliverables, and close-out the task order based on our previous experience delivering a similar task order for WSDOT in 2018. The team will provide a compiled data set of all data collected in accordance with the updated SFI Field Procedure Manual.

## B – APPROACH TO RESOLVING ISSUES

Project governance is key to resolving issues. We structured our team to provide clear and consistent direction through the project organizational structure. Adrian and his Field Crew Leads will work closely to resolve issues at the lowest project level (e.g., field crew scheduling due to illness, etc.). For issues that cannot be addressed at the field staff level, Adrian will consult with Technical Advisor Jana Crawford to strategize resolution or mitigation. The team will routinely discuss safety, budget, and schedule—including any potential issues—during weekly coordination with WSDOT, or more immediately, if necessary.

## C – ASSUMPTIONS FOR WORK BREAKDOWN STRUCTURE

### Start-up:

- WSDOT will provide basic training material information and Jacobs will modify as needed prior to delivery
- Jacobs will record all trainings and make them electronically available to project staff
- WSDOT will provide a template or draft Health and Safety Plan, QA/QC Plan, and SFI Field Procedure Manual and will coordinate necessary revisions with Jacobs

### Field Inventory:

- WSDOT will provide Check-out and Check-in procedures for Field Leads to follow during daily data transfers
- WSDOT will coordinate with Jacobs as early as possible on the equipment necessary for the project
- Jacobs will be responsible for obtaining necessary equipment (as agreed by both parties) by rental, loan from WSDOT, or purchase to complete this project



**D – KEY ISSUES AND CRITICAL MILESTONES FOR THE PROJECT**

Our team will address the following key issues proactively with effective communication/coordination and training. Our team will then implement the resolution steps below to address key issues. We will address critical milestones in the project schedule and training, as well as through regular coordination between the Field Crew Leads and Jacobs' Project Manager, Adrian Braxton.

| Key Issues   |   |
|--|---|
| Issue  | Resolution  |
| Scheduling to ensure 4 crews mid-March through mid-November                                | Field Crew Coordinator/Scheduler(s) will utilize the available pool of field crew staff to ensure four crews are mapping during mid-March through mid-November to take advantage of the longer daylight hours and favorable weather conditions.   |
| Minimize travel  | Jacobs' Project Manager will work closely with WSDOT to understand upcoming work area/corridors and will communicate regularly with Field Crew Coordinator/Scheduler(s) to utilize field staff as geographically close to the work area as possible.  |
| IT or vehicle issues in the field  | Field teams will trouble shoot issues as they arise. Field Leads will elevate issues as needed to the GIS Support person as needed, who will work to troubleshoot the issue and/or coordinate with Adrian on resolution. If unable to resolve at the project level, Adrian will communicate the issue and suggested solution(s) to WSDOT. |
| Roadside work in high-risk highway setting   | Field Crew Leads will immediately notify Jacobs' Project Manager, who will implement the site-specific safety plan module from the Work Plan. Assess safe access requirements and coordinate with WSDOT as needed if traffic control or safety hazed mitigation is warranted.   |
| Critical Milestones  |   |
| Milestone  | Reason why milestone is critical  |
| Field staff trained and ready to start field work each March                               | Ensure full utilization of longer daylight hours to accomplish more mapping   |
| Daily data transfers, as well as uploading photographs and field notes to server for QA/QC | Allow adequate time for QA/QC of collected data   |
| Stop work prior to final close-out   | Allow adequate time to finalize work products, submit final deliverables, and close-out the task order.   |

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