

IN WITNESS WHEREOF, the parties hereto have executed this Supplement No.6 on this 27th day of July, 2017.

SNOHOMISH COUNTY

[Signature]
Signature

KEN KLEIN
Executive Director
Title

OTAK, INC.

[Signature]
Signature

Senior Vice President
Title

**CONTRACT TEMPLATE ONLY
REVIEWED AND APPROVED:**

Rebecca J. Guadamud
Deputy Prosecuting Attorney
Date: 11/26/14

**CONTRACT TEMPLATE ONLY
REVIEWED AND APPROVED:**

Keith Mitchell
County Risk Manager
Date: 12/5/14

COUNCIL USE ONLY	
Approved:	<u>7-26-17</u>
Docfile:	<u>D-8</u>

EXHIBIT A-1b

Supplemental Scope of Work

Background

The purpose of the North Creek Trail Project is to design and build a 2.5 mile regional trail facility between SR 524 and North Creek Park at 183rd Street SE. The trail will be part of a coordinated regional system that will eventually connect the Sammamish River/Burke-Gilman Trail in King County with the Snohomish County Regional Interurban Trail in Everett.

The following scope of work describes additional storm drainage analysis/re-design, structural foundation re-design, additional driveway profiles, environmental/regulatory compliance services, and the separation of bid packages requested by the COUNTY.

1.0 STORM DRAINAGE ANALYSIS AND RE-DESIGN

Storm drainage facilities for the entire trail alignment will be re-designed to respond to updated geotechnical exploration results indicating very low infiltration capacity and numerous locations with high groundwater. These conditions will require additional flow control facilities and an emphasis on alternative drainage solutions to maximize LID opportunities. Work will include storm drainage analysis to determine alternatives, selection of preferred drainage alternatives, updating of construction documents and preparation of an updated Drainage Report.

1.1 Project Coordination and Meetings

The CONSULTANT will participate in project coordination and meetings with COUNTY to determine storm drainage alternatives, to select preferred drainage alternative, and to review revised storm drainage systems. It is anticipated that a total of six (6) coordination meetings will be held during the re-design period.

1.2 Storm Drainage Analysis and Alternatives

Storm drainage facilities for the entire trail alignment will be re-designed to respond to updated geotechnical exploration results indicating very low infiltration capacity and numerous locations with high groundwater. These conditions will require additional flow control facilities and an emphasis on alternative drainage solutions to maximize LID. Work will include storm drainage analysis to determine alternatives and selection of preferred drainage alternatives.

1.3 LID Evaluation and Code Review

As part of the storm drainage analysis completed per Task 1.2, the CONSULTANT will conduct an LID evaluation and code review to determine alternative for LID solutions. Work will include review of old and new (proposed) Snohomish County Drainage Code. The objective is to maximize LID opportunities for the project.

1.4 Update Hydraulics Models (WWHM and PCSWWM)

The CONSULTANT will update the hydrologic and hydraulic analysis for the project and update the hydraulic models (WWHM and PCSWWM) to evaluate storm drainage alternatives and to model the preferred storm drainage layout for the project.

1.5 Downstream Analysis

The CONSULTANT will complete downstream analysis for the revised storm drainage system in accordance with Snohomish County requirements. The results of the downstream analysis will be documented in Task 1.6.

1.6 Prepare Updated Drainage Report (90% and Final)

The CONSULTANT will prepare an updated Drainage Report for the revised storm drainage system. The Drainage Report will be submitted at 90% and will be finalized based on the 100% Design and review comments from the COUNTY regarding the 90% Drainage Report.

Deliverables

- Drainage Report (90% and Final)

1.7 Storm Drainage System Re-Design – LID and Flow Control Facilities

Storm drainage facilities for the entire trail alignment will be re-designed. LID and flow control facilities will include modifications to up to six (6) detention vaults, modified infiltration trenches, raingarden, and the addition of up to 25,000 SF of pervious pavement or sidewalk to maximize LID. Construction documents will be updated to show the revised storm drainage system. The revised Plans will be submitted at 90% and will be finalized based on the 100% Design and review comments from the COUNTY regarding the 90% Plans.

Deliverables

- Updated Storm Drainage Plans – LID and Flow Control Facilities (90% and Final)

1.8 Storm Drainage System Re-Design - Conveyance

Storm drainage facilities for the entire trail alignment will be re-designed. Conveyance systems will be modified to work with updated LID and flow control facilities modified per Task 1.7. Construction documents will be updated to show the revised storm drainage conveyance. The revised Plans will be submitted at 90% and will be finalized based on the 100% Design and review comments from the COUNTY regarding the 90% Plans.

Deliverables

- Updated Storm Drainage Plans – Conveyance (90% and Final)

1.9 Update Storm Drainage System Specifications

The CONSULTANT will prepare updated storm drainage system Specification for the revised storm drainage system. The Specifications will be submitted at 90% and will be finalized based on the 100% Design and review comments from the COUNTY regarding the 90% Specifications.

Deliverables

- Updated Storm Drainage System Specifications (90% and Final)

1.10 Update Storm Drainage Construction Cost Estimates

Engineering estimates of anticipated construction costs will be prepared for the updated storm drainage system at the 90% and 100% levels. Estimates will be prepared using historical unit prices from similar projects, other current cost data, and recent COUNTY projects. The Engineer's Estimate will be based on the Summary of Quantities.

Deliverables

- Engineer's Estimate – 90% and Final - based on unit price bid items

2.0 STRUCTURAL ENGINEERING – FOUNDATION RE-DESIGN

2.1 Foundation Re-Design – North Creek Bridge Crossing

Detailed geotechnical exploration, completed after 60% design, resulted in fairly poor soil conditions within the footprint of the proposed North Creek Bridge Crossing. Larger and deeper foundations are required, along with more significant reinforcing in the substructure and superstructure. The CONSULTANT will re-design/update the bridge foundations completed at 60% design to accommodate the anticipated soil conditions along with updated seismic considerations.

2.2 Foundation Re-Design – Boardwalks

Detailed geotechnical exploration, completed after 60% design, resulted in fairly poor soil conditions within the footprints of the various boardwalk structures proposed along the alignment. Deeper and larger diameter foundations (pin piles) are required along with additional seismic resisting elements for each boardwalk. The CONSULTANT will re-design/update the foundations completed at 60% design to accommodate the anticipated soil conditions.

2.3 Foundation Re-Design – Retaining Walls

Detailed geotechnical exploration and analysis, completed after 60% design, revealed slope instability as result of fairly poor soil conditions within the footprints of several walls along the project alignment, particularly Walls 15, 17, and 18. The CONSULTANT will re-design/update the foundations and/or retaining wall type to accommodate the anticipated soil conditions.

3.0 DRIVEWAY PROFILES

3.1 Provide Driveway Profiles for all Driveways (18 Additional)

The CONSULTANT will provide existing and proposed driveway profiles for all driveways on the project. Previously profiles were provided only for driveways with significant grade adjustments. Providing profiles for all driveways will result in 18 additional driveway profiles.

4.0 ENVIRONMENTAL SUPPORT

4.1 Background Data Review and Analysis

The CONSULTANT will review all environmental baseline information previously prepared for the project, in order to prepare a Critical Areas Study for the project. Existing information on wetlands, streams, fish and wildlife conservation areas, special flood hazard areas, critical aquifer recharge areas, and geologically hazardous areas will be reviewed and assessed for inclusion in the Draft and Final Critical Areas Study. Information will be derived from project documents prepared by the COUNTY, project documents previously prepared by the CONSULTANT or its subconsultants, and information available through public agencies and entities such as Washington Department of Fish and Wildlife, the National Wetland Inventory, the U.S. Geological Service, the National Marine Fisheries Service, etc.

Assumptions:

- Existing documentation on special flood hazard areas will be provided, and no new work will be conducted to assess and characterize such areas.
- Existing documentation on critical aquifer recharge areas will be provided, and no new work will be conducted to assess and characterize such areas.
- Existing documentation on geologically hazardous areas will be provided, and no new work will be conducted to assess and characterize such areas.

4.2 Conduct Fieldwork

The CONSULTANT will provide field review of the wetland delineation and stream characterization work previously conducted for the project within the proposed trail alignment corridor. Field review will include verification of wetland boundaries and stream alignments where possible, as well as collecting data on wetlands in order to update wetland ratings forms and wetland categories per Washington Department of Ecology's *Washington State Wetland Rating System for Western Washington: 2014 Update*. In addition, the CONSULTANT will provide verification of wetland boundaries and stream alignments and update the wetland ratings forms and wetland categories on the proposed compensatory mitigation site on Waxen Road.

Assumptions:

- All fieldwork will be conducted by two CONSULTANT scientists, and will not exceed eight (8) days of effort. If additional work is required, the CONSULTANT will notify the COUNTY immediately.
- Fieldwork will not include characterization of special flood hazard areas, critical aquifer recharge areas, or geologically hazardous areas.
- The COUNTY will provide GPS data for wetland delineation flagging and Ordinary High Water Mark (OHWM) flagging present in the project corridor, or the COUNTY will provide GPS data so that field verification of delineated wetland edges and stream alignments is possible. GPS data will include wetland delineations on the proposed mitigation site.
- Snohomish County will prepare an updated Critical Areas Study for the North Creek Trail Alignment and the Mitigation Site at Waxen Road.
- Snohomish County will prepare a Conceptual Mitigation and Monitoring Plan and will prepare final Construction Documents (PS&E) for the Mitigation.

5.0 SEPARATE BID PACKAGES

5.1 Create Three Separate Bid Packages – PS&E

The CONSULTANT will incorporate final review comments into the current North Creek Trail design. Once final review comments have been reviewed and incorporated, the CONSULTANT will break the project into three separate bid packages, to better facilitate phasing and construction funding. The project will be broken at logical break points to create a northern, central and southern phase, separated near Sprague Drive. This proposed phasing will place the North Creek Bridge into the central package. Separating the project will include creation of

three separate sets of construction documents including plans, technical specifications, and engineer's cost estimates/summary of quantities.

Deliverables:

- 100% Civil Design Plans:
 - Package A – SR 524 to Winesap Road
 - Package B – North Creek Bridge – Winesap Road to Waxen Road
 - Package C – Waxen Road to 183rd Street SE
- 100% Special Provisions:
 - Package A – SR 524 to Winesap Road
 - Package B – North Creek Bridge – Winesap Road to Waxen Road
 - Package C – Waxen Road to 183rd Street SE
- 100% Engineer's Estimate and Summary of Quantities:
 - Package A – SR 524 to Winesap Road
 - Package B – North Creek Bridge – Winesap Road to Waxen Road
 - Package C – Waxen Road to 183rd Street SE

North Creek Trail
Hour/Fee Estimate - Supplement No. 6
Otak, Inc.
Otak Project # 22313

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