

## Exhibit A

# A-04 Scope of Services

The City of Oregon City (City) has requested Brown and Caldwell (Consultant) provide sewer inflow and infiltration (I/I) characterization services as part of the City's 2015 Sewer I/I Planning project. The work to be completed is described below.

## Phase 601 Project Management

<b>Objective</b>	To execute the scope within the constraints of the budget and schedule and any amendments thereto.
<b>Activities</b>	<p>The following activities will be performed as part of the project management phase:</p> <ul style="list-style-type: none"><li>• Prepare a project management plan and schedule to provide the project team with details regarding project scope and execution.</li><li>• Manage work done by the project team. This includes scheduling, workload planning, coordination, quality control, and invoicing.</li><li>• Establish and follow a project quality assurance/quality control plan.</li><li>• Prepare and submit a monthly invoice with backup documentation.</li><li>• Monitor project progress, including work completed, work remaining, budget expended, schedule, estimated cost of work remaining, and estimated cost at completion.</li><li>• Monitor project activities for potential changes, anticipate changes whenever possible, and with City approval, modify project task and subtask scope and budget as required.</li><li>• If requested, coordinate and prepare a presentation for City staff to provide information and solicit feedback for input on the inspection program.</li></ul>
<b>Deliverables</b>	Monthly invoices with progress reports
<b>Assumptions</b>	<p>Assumptions for this task include the following:</p> <ul style="list-style-type: none"><li>• The project duration will be approximately 10 months.</li><li>• Team planning meetings will be held every 2 months, or as needed, with City staff to update Consultant staff on progress and strategize for next steps. Each meeting is budgeted for 4 hours.</li><li>• Six team meetings have been budgeted.</li></ul>

## Phase 602 Smoke Testing

Consultant will assist the City with defining the elements and implementing smoke testing to further identify I/I locations and potential sources.

### Task 001 Planning and Coordination

*This Task to be authorized under Amendment 03.*

### Task 002 Smoke Testing

**Objective** To investigate and document various I/I sources through smoke testing activities and report on all findings.

**Activities** *The following activities are included for authorization under Amendment 3:*

- *Conduct smoke testing in the 11 metered sewer basins identified by Consultant.*
  - *Basin 1 – Linn Ave. and Glenwood, includes Linn Ave. approximately from Glenwood Ct. to Williams St.*
  - *Basin 2 – South 1st and High St., includes High St. from 1<sup>st</sup> St. to 3<sup>rd</sup> St. up 3<sup>rd</sup> St. to Madison*
  - *Basin 3 – Singer (City Hall), includes 6<sup>th</sup> St. through 4<sup>th</sup> St. up 5<sup>th</sup> St. to Hazel Ln.*

***Activities associated with the 8 basins below to be authorized under this Amendment 04.***

- Conduct smoke testing in 8 of the 11 metered sewer basins identified by Consultant. The 8 basins listed below are authorized for Consultant's subcontractor, SFE Global, in an amount not to exceed \$84,161.00 under this Amendment 4.
  - Basin 4 – Linn Ave. includes from Hazel Ln. up Charman St to Cherry Ave.
  - Basin 5 – Barclay Hills Pump Station, includes Duane St., a portion of Molalla Ave., and up to Cascade St. and Alden St.
  - Basin 6 – 7<sup>th</sup> and Washington, includes 7<sup>th</sup> St. up to Molalla Ave.
  - Basin 7 – 12<sup>th</sup> and Madison, includes 8<sup>th</sup> St. through 12<sup>th</sup> St. up to Roosevelt St.
  - Basin 8A – Ballet Studio, includes Madison St. up to McLoughlin St., 14<sup>th</sup> St. through 18<sup>th</sup> St. up past Division St.
  - Basin 8B – 15<sup>th</sup> and Polk, includes portions of 12<sup>th</sup> St. through 15<sup>th</sup> St., up and past Division St. to Dewey St.
  - Basin 9 – Settlers Pt. Pump Station, includes Frontier Pkwy., Prospector Ter. Silverfox Pkwy. Past Leland Rd. up Gentry Highland Ln. and Friars Ln.
  - Basin 10 - Settlers Pt. Pump Station, includes Clairmont Way from S. Berta Dr. to Leland Rd. and Whitney Ln.
  - Coordinate closely with the City to confirm that all necessary public outreach, including notification distribution, has been completed, within the required lead time, prior to start of smoke testing.
  - During smoke testing, crews will perform detailed visual inspection and document all instances of observed smoke.

- Record all incidents on the field sheet template previously approved by the City.
- Obtain photo documentation of all incidents.
- Record the GPS location of all incidents.
  - Field incident reports will be entered into an electronic database daily.
- Perform traffic control services previously approved by the City.
- Provide quality control oversight of smoke testing procedures.

**Deliverables** Smoke test results (MS Access database).

**Assumptions** Assumptions for this task include the following:

- Smoke testing work hours are Monday – Friday between 8 a.m. – 5 p.m.
- Subcontractor will have two working smoke testing units at all times to prevent delays should one become damaged.
- Sufficient liquid smoke to complete the entire project will be on hand at the beginning of the work.
- Subcontractor will operate and maintain all equipment, including safety gear, needed to complete the work.

### **Task 003 Reporting and Oversight**

**Objective** To report and document various I/I sources identified through smoke testing activities.

**Activities** The following activities are included in this task:

- Site visits during smoke testing (up to 3 days for two staff members).
- Up to three coordination meetings with City up to 2 hours each (these are in addition to the planning meetings included in Phase 601).

**Deliverables** Deliverables for this task include a brief Technical Memorandum.

**Assumptions** Assumptions for this task include the following:

- Technical Memorandum will include:
  - Summary of activities completed
  - Description of test procedures
  - Daily event logs
  - Photographs
  - Defect codes with pinpoint locations
  - Table summarizing any problem areas
  - Recommendations for next steps