

AMENDMENT NO. 5

CONTRACT NO. 37106

FOR

Fanno Basin Pump Station Pressure Main – Multnomah Section

This Contract was made and entered by and between Brown and Caldwell, hereinafter called Contractor, and the City of Portland, a municipal corporation of the State of Oregon, by and through its duly authorized representatives, hereinafter called City.

1. Additional work is necessary as described in Exhibit A of this amendment.
2. Additional compensation is necessary and shall not exceed \$881,379. The project task budget amounts are adjusted as indicated in the attached modification to Exhibit A, Section IV – Payment Schedule. The new not-to-exceed total contract amount is \$2,939,523.

All other terms and conditions shall remain unchanged and in full force and effect.

CONTRACTOR SIGNATURE:

This contract amendment may be signed in two (2) or more counterparts, each of which shall be deemed an original, and which, when taken together, shall constitute one and the same contract amendment.

The parties agree the City and Contractor may conduct this transaction by electronic means, including the use of electronic signatures.

BROWN AND CALDWELL

By: _____

Date: _____

Name: Bryan K. PaulsonTitle: Vice President

EXHIBIT A

Contract No. 37106 Amendment/Change Order No. 5Contract Title: FANNO BASIN PUMP STATION PRESSURE MAIN – MULTNOMAH SECTION

CITY OF PORTLAND SIGNATURES:

By: n/a Date: _____
Purchasing AgentBy: _____ Date: _____
Elected Official

Approved:

By: _____ Date: _____
Office of City Auditor

Approved as to Form:

By: APPROVED AS TO FORM Date: 12/10/09
Office of City Attorney *Johna Henry*
CITY ATTORNEY

EXHIBIT A
Amendment No. 5 – Contract No. 37106**Fanno Basin Pump Station Pressure Main – Multnomah Section****II GENERAL PROJECT DESCRIPTION**

This project has evolved from the initially envisioned scope of work that included the evaluation of the existing Multnomah Section of the Fanno pressure line with the potential for replacing all or part of the pressure line into a much larger scope of work. A new primary project number, E09045 FANNO BASIN SYSTEM IMPROVEMENTS has been established to manage and track all of the various project elements that have needed to be developed, and now include the following list of projects that are included in Brown and Caldwell's (B&C) amended scope of work:

Project No.	Project Name
E08294	FABA PS FM: Multnomah Section Replacement
E09050	FABA Surge Tanks
E09051	FABA Pump Station Expansion
E09052	Burlingame Trunk Sewer Improvements
E09168	Multnomah Stormwater Improvements

Additional Work Pending

There is anticipated future work, in addition to the work added by this amendment, that will be required on several of these projects, but that is not yet sufficiently developed well enough to be definitively scoped and budgeted. Such future work will need to be negotiated at a later date, and will only be authorized by written contract amendments under the City of Portland's PTE contract requirements and regulations. The future work will include, but may not be limited to the following:

- Final design of the FABA PS Expansion, Project E09051, which will include design review submittals for BES review and comment at 60% and 100% design development.
- Services during bidding, services during construction, and project closeout assistance for the FABA PS Expansion, Project E09051.
- Services during bidding, services during construction, and project closeout assistance for the Multnomah Stormwater Improvements, Project E09168.

III CONTRACTOR'S SCOPE OF WORK (SOW)

The following additions and modifications to the originally authorized and previously amended Scope of Work are necessary for the continued development of the primary project E09045 Fanno Basin System Improvements: The SOW has been reorganized to clarify the different BES projects that are being prosecuted under this contract, and project tasks that have been developed within each separate project.

PROJECT E08294 FABA Pump Station Force Main Replacement – Multnomah Section

E08294 – TASK 1.0 Project Management

Project management tasks have been added to the SOW for each of the other secondary projects.

E08294 – TASK 2.0 Conduct Additional Evaluations

No changes to the previously approved SOW and budget for this task.

E08294 – TASK 3.0 Final Design Recommendations

No changes to the previously approved SOW and budget for this task.

E08294 – TASK 4.0 Public Outreach Services

Add additional public outreach services to support the Burlingame Trunk Sewer Improvements element of the Fanno Basin System Improvements program, BES Project No. E09052. Jeanne Lawson Associates (JLA), as a sub-consultant to B&C, will serve as the direct community outreach contact for stakeholders in the Burlingame Trunk Sewer Improvements Project area. JLA will collaborate with the assigned BES Community Outreach Coordinator for the Fanno Basin System Improvements Program project elements. JLA will make use of outreach already planned for those projects.

It is assumed that the additional public outreach services described below will be required for a period of approximately 14-months. The planned additional public outreach services are described as follows:

Project Management:

- Collaborate on a public outreach Work Plan with BES Outreach staff
- Attend PM/Construction meetings as necessary, up to 1 per week. Meetings during design on an as-needed basis with BES outreach coordinator and/or project manager.
- Meet with the assigned BES outreach coordinator to address related Fanno Basin System Improvement Program projects as needed.
- Submit monthly invoices to B&C

Development, Management, and Distribution of Public Information Materials:

▪ Burlingame Project Flyers:

Prepare and submit proposed draft text for 4-5 flyers (use a standard BES template that includes the project website). Flyers will include a design update around January 2010, a traffic control plan update around May/June 2010, a construction starts soon flyer around July 2010, potentially a mid-construction update around October/November 2010, and a construction completed update around January 2011. Assumes JLA can print door-to-door flyers in-house; mailings will go through P&D and postage costs are not included in the amended task budget. Flyer timing will be coordinated with BES outreach coordinator.

- Provide content for larger Fanno (Multnomah/Garden Home/Pump Station) newsletters. Assume 2-3 newsletters will be sent during this contract period. JLA will create draft Burlingame content for each newsletter that corresponds to the other of the Fanno Basin System Improvement Program projects at that time. Draft and final language will be submitted to the BES outreach coordinator for review.
- Provide media releases if necessary. Assume 3 media releases during the scope of this contract. Media releases will be coordinated with BES outreach coordinator and project manager and will be sent to the BES public information officer (PIO) to be distributed to media outlets.
- Draft articles for local neighborhood newsletters, as requested or opportunity warrants. SWNI, Maplewood Neighborhood Association (NA), Multnomah NA, Multnomah BA, Ash Creek NA, and South Burlingame NA will all receive an offer to be provided updates for their newsletters at the beginning of this contract period. Assume 2 updates during the course of this contract. Timing will be coordinated with the BES outreach coordinator.
- Draft and distribute project/construction email updates to a list of interested residents, businesses, and neighborhood association contacts. Include relevant BES project staff on these updates. Assume every other week during construction.
- Update (through the BES PIO) web content for the Burlingame Trunk Sewer Improvements project; update emails can be used to regularly keep the content up to date. The Burlingame Trunk Sewer Improvement project information on the web will have project background, scope, timeline, construction impacts, goals, and contact information.
- Various services may also be included in this task, such as identification of signage during construction, coordination of flyers at local stores/restaurants. These elements will be discussed with BES outreach coordinator on an as needed basis for planning purposes.

Stakeholder Outreach:

- Identify leaders of stakeholder groups; make contact about the project with key relevant stakeholders and/or NA Chair's that have been involved in the current Fanno projects; this could be a joint meeting with BES, JLA, and stakeholder. This list of stakeholders includes, but is not limited to, Maplewood, Multnomah, Ashcreek, Hillsdale, South Burlingame NA, Multnomah Business Association (BA), SWNI, Inc.
- Go door to door in the project area with pre-construction flyers and conduct research. This research will include (and will ultimately be compiled into an excel spreadsheet); collect contact information for each business and interested resident including name, business / apartment name, address, phone, and email.
- Gather level of interest from stakeholders, determine need and potential locations for signage based on available arterials into and out of the project area, collect information about multi-family complexes (units/management/ communication channels), potential traffic conflicts, etc.
- Door to door outreach throughout construction, as needed for nighttime work, significant impacts, changes to project, road closures, or other issues.
- Assist/attend NA and BA meetings, as appropriate.
- Coordinate and initiate discussions with Project Team on related agency issues, i.e. TriMet, Parks, US Postal Service, etc.
- *Deliverables include:*
 - *The construction and regular maintenance of a spreadsheet that tracks all relevant contact information and the nature of conversations with residents, businesses, and stakeholders. This spreadsheet will be shared with BES outreach coordinator on a regular basis to update him on the nature of contacts and conversations in the area.*

Public Meetings Coordination and Point of Contact for Public:

- Serve as main point of contact for public; address/resolve issues with stakeholders, coordinate with Construction Manager, receive project phone calls and emails.
- When appropriate, coordinate a table at any larger Fanno System Improvement Program project open houses/meetings.
- Hold two drop-in construction related events – coordinate details with BES outreach staff.

E08294 – TASK 5.0 Final Design

Additional work was required to produce several alternate sets of plan and profile drawings for the proposed pressure line replacement in support of BES proposals to the Portland Water Bureau (PWB) for variances to the separation requirements of the Oregon Administrative Rules (OAR) 333-61-0050, and OAR 340-052 Appendix A. The purpose of the OAR variance proposals was to decrease the construction cost of the project, increase construction production while maintaining adequate separation between the existing water mains and the proposed sewer pressure lines for the protection of the public water supply.

The additional work also included multiple revisions to the traffic control drawings to reflect an alignment change and the inclusion of a new pressure line discharge structure in the Multnomah Section contract documents.

The Final Design scope is also adjusted to include architectural design services originally planned to be done as a part of E09051 – Task 6.0 30% Document Preparation.

E08294 – TASK 6.0 Services During Bidding

No changes to the previously approved SOW and budget for this task.

E08294 – TASK 7.0 Services During Construction

The following activities are included in services during construction:

- Review and evaluate submittals and shop drawings required to construct the project.
 - The estimated level of effort for task budgeting purposes assumes the project will include 25 major and 29 minor submittals.
- Respond to selected contractor Requests for Information (RFIs) and Requests for Clarification (RFCs) as requested by the Owner's Representative.
 - The estimated level of effort for task budgeting purposes assumes the project will include 25 RFIs or RFCs.
- Review required construction change orders and prepare design modifications and sketches to support the Owner's Representative.
- Perform periodic construction site visits project as requested by the Owner's Representative, and/or as required to provide the Engineer of Record certification letter to DEQ, as described below.

E08294 – TASK 8.0 Project Closeout Assistance

Provide a certification letter to DEQ as the Engineer of Record, if supported by observations made during periodic site visits, and other information collected while providing services during construction, to document that the project was constructed in substantial conformance with the design plans and specifications.

E08294 – TASK 11.0 Fanno Pump Station Expansion Analyses

Reallocate the remaining E08294 – Task 11.0 budget amount that was authorized in Amendment 4 to project E09051 FABA Pump Station Expansion to provide professional services through 30% design for the pump station expansion project.

E08294 – TASK 12.0 Basin Planning Assistance

No changes to the previously approved SOW and budget for this task.

E08294 – TASK 13.0 Fanno Basin Pressure Main Extension

Modeling by the BES Systems Analysis division has determined that modifications to the existing Burlingame Trunk Sewer downstream of the Fanno pressure line discharge structure at SW 31st & SW Multnomah will be a more effective solution than extending the parallel pressure lines farther east on SW Multnomah Blvd.

Delete the previously amended scope of work for this Task and reallocate the remaining E08294 – Task 13.0 budget amount to project E09052 Burlingame Trunk Sewer Improvements to provide professional services for the design to enlarge a reach of the Burlingame Trunk Sewer downstream of the proposed new discharge structure, and the design of rehabilitation improvements for the Burlingame Trunk Sewer downstream of Barbur Blvd.

An updated and revised SOW description for project E09052 is included in a following section of this amendment.

E08294 – TASK 14.0 Multnomah Boulevard Stormwater Improvements

Reallocate the SOW and remaining E08294 – Task 14.0 budget amount to project E090168 Multnomah Stormwater Improvements.

An updated and revised SOW description for project E09052 is included in a following section of this amendment.

E08294 – TASK 15.0 Floodplain Restoration Design and Permitting

The floodplain restoration design and permitting are being prosecuted within project E09051 FABA Pump Station Expansion, Task 7.0 Floodplain Restoration. Reallocate the SOW and remaining E08294 – TASK 15.0 budget amount to project E09051.

Additional work needed to continue the development of the floodplain restoration design and permitting, and an updated and revise SOW description for project E09051 is included in a following section of this amendment.

Project E09050 FABA Surge Tanks**E09050 – TASK 1.0 Project Management**

Project management activities specific to the design of the surge tank system element of the project will be conducted in accordance with the scope of work described in Project E08294 Task 1.0 – Project Management. Labor and expenses incurred for the FABA Surge Tank Facility design will be invoiced separately using BES Project No. E09050.

Assumptions:

Progress phone calls and other project meetings requested by BES PM, directly related to the surge tank system design, will average two per month (does not include workshops scheduled by the Contractor or specified in other tasks) for a total of nine meetings.

Deliverables:

- An Updated PMP
- Project E09050 monthly invoices and progress reports

E09050 – TASK 2.0 Quality Assurance / Quality Control (QA/QC)

Ensure that internal QA/QC procedures are applied at appropriate intervals for all project deliverables, including but not necessarily limited to:

- Providing input by appropriate senior staff as required during design.
- Providing quality control checks on drawings, technical specifications, and construction cost estimates.
- Conducting senior staff reviews of work products and deliverables.

E09050 – TASK 3.0 Permitting Coordination

Assist BES with identifying all permits and other regulatory approvals required for the project, obtaining and preparing permit applications, developing all required supporting materials for the permit applications. BES will pay all required permit application fees and other associated charges.

E09050 – TASK 4.0 Preliminary Design Report

The previously approved SOW for this task is described in Task 9.2 of amendment 4 to contract number 37106 with B&C.

E09050 – TASK 5.0 Preliminary Design to 30%

The previously approved SOW for this task is described in Task 9.3.1 of amendment 4 to contract number 37106 with B&C.

Additional work is required to support a Value Engineering workshop conducted by BES to review the preliminary and 30% design package for the proposed Surge Tanks Facility. Activities include preparation of a preliminary engineering report, compilation of data and handouts for the VE team, participation at the start and end of VE session, and preparation of response to VE suggestions.

EXHIBIT A

Additional work is also required to coordinate site grading plan design alternatives that are required to support the preparation of the Flood Plain Analysis Report that is a critical element of the Washington County Land Use review application process. During the evaluation of the alternate site grading options it was determined that additional structural design effort is required to add a foundation wall for the future pump station building to the surge tank package to protect a portion of a realigned side-channel of the Fanno Creek system on the pump station site.

E09050 – TASK 6.0 60% Design

The previously approved SOW for this task is described in Task 9.3.2 of amendment 4 to contract number 37106 with B&C.

E09050 – TASK 7.0 90% Design

The previously approved SOW for this task is described in Task 9.3.3 of amendment 4 to contract number 37106 with B&C.

E09050 – TASK 8.0 100% Design

The preparation of a 100% design review package will address BES 90% design review comments on the drawings, technical specifications, and the construction cost estimate and construction schedule.

E09050 – TASK 9.0 Final Design

The previously approved SOW for this task is described in Task 9.3.4 of amendment 4 to contract number 37106 with B&C, and modified by this contract amendment to state that the final document preparation will address BES 100% review comments and recommendations.

E09050 – TASK 10.0 Services during Bidding

Assist the City of Portland and BES in the advertising, bidding and award of the project up to the level of effort included in the task budget amount, including but not necessarily limited to the following:

- Prepare addenda, answer questions and provide clarifications during the bidding period.
- Perform evaluations and make recommendations as required should the City decide to pre-purchase any materials for the project.

BES will submit questions and clarification requests, send out Addenda, and arrange meetings to discuss bidding issues.

Deliverables:

- Proposed addenda items
- Design Clarifications
- Bid Evaluation Report

E09050 – TASK 11.0 Services during Construction

The following activities are included in services during construction:

- Review and evaluate submittals and shop drawings required to construct the project.
 - The estimated level of effort for task budgeting purposes assumes the project will include 97 major and 67 minor submittals.
- Respond to selected contractor Requests for Information (RFIs) and Requests for Clarification (RFCs) as requested by the Owner's Representative.
 - The estimated level of effort for task budgeting purposes assumes the project will include 60 RFIs or RFCs.
- Review required construction change orders and prepare design modifications and sketches to support the Owner's Representative.
- Perform periodic construction site visits project as requested by the Owner's Representative, and/or as required to provide the Engineer of Record certification letter to DEQ, as described below.

E09050 – TASK 12.0 Project Closeout Assistance

Provide support and guidance to the Owner's Representative during all phases of startup including (assumes 80 hours of time):

- Field testing
- Operational readiness testing
- Functional acceptance testing

Prepare an Operations and Maintenance manual for the new facilities that meets DEQ requirements.

Prepare a certification letter to DEQ as the Engineer of Record, if supported by observations made during periodic site visits, and other information collected while providing services during construction, to document that the project was constructed in substantial conformance with the design plans and specifications.

Project E09051 FABA Pump Station Expansion**E09051 – TASK 1.0 Project Management**

Project management activities specific to the design of the FABA pump station expansion element of the project will be conducted in accordance with the scope of work described in Project E08294 Task 1.0 – Project Management. Labor and expenses incurred for the FABA PS Expansion design will be invoiced separately using BES Project No. E09051.

Assumptions:

Progress phone calls and other project meetings requested by BES PM, directly related to the FABAs pump station expansion design, will average two per month (does not include workshops scheduled by the Contractor or specified in other tasks) for a total of nine meetings.

Deliverables:

- An Updated PMP
- Project E09051 monthly invoices and progress reports

E09051 – TASK 2.0 Data Collection and Review

The previously approved SOW for this task is described in Task 11.6 of amendment 4 to contract number 37106 with B&C.

E09051 – TASK 3.0 Alternatives Development

The previously approved SOW for this task is described in Task 11.7 of amendment 4 to contract number 37106 with B&C.

E09051 – TASK 4.0 Permitting Assistance

The previously approved SOW for this task is described in Task 11.8 of amendment 4 to contract number 37106 with B&C.

E09051 – TASK 5.0 Preliminary Design Report

The previously approved SOW for this task is described in Task 11.9 of amendment 4 to contract number 37106 with B&C.

E09051 – TASK 6.0 30% Document Preparation

The previously approved SOW for this task is described in Task 11.10 of amendment 4 to contract number 37106 with B&C.

When BES has accepted the preliminary design report and the 30% design documents the Contractor will prepare a scope and fee proposal to complete final design of the proposed FABAs PS Expansion project for BES's consideration for a subsequent amendment to the contract to complete design and prepare contract documents. The scope of work to provide final design, services during bidding, services during construction, and project closeout assistance will also be established, and only authorized by written contract amendment under the City of Portland's PTE contract requirements and regulations.

E09051 – TASK 7.0 Floodplain Restoration

The previously approved SOW for this task is described in Task 15.0 of amendment 4 to contract number 37106 with B&C.

Additional work needed to continue the development of the floodplain restoration design and permitting, and includes the subtasks described below:

E09051 – TASK 7.1 Project Management

VIGIL-AGRIMIS, INC (VAI) will continue to prepare and submit monthly invoices for review and approval by Brown and Caldwell. The invoices will include a description of work completed and hourly expenditures by VAI employees. VAI will attend design team meetings as required. It is anticipated that at least three design team meetings will be necessary. Additional meetings will be considered outside of this scope and subsequent contract amendment would be required.

Deliverables:

- Monthly invoices to B&C

E09051 – TASK 7.5 Wetland Delineation and Site Assessment

VAI will determine the presence and extent of wetlands on property impacted by the project. The wetland delineation will be performed using the procedures defined in the Corps of Engineers Wetland Delineation Manual (Experimental Laboratory, 1987). This methodology is acceptable for determining wetland limits by both the US Army Corps of Engineers and the Oregon Department of State Lands. Wetland boundaries will be flagged and all paired plot locations (per DSL guidelines) and use Global Positioning System (GPS) surveying to determine the location of the boundaries in space. A Wetland Delineation Report will be prepared following the Oregon Department of State Lands guidelines for preparing wetland delineations. The wetland delineation report will be submitted to DSL for verification and concurrence, which will be required prior to DSL's issuance of a Removal-Fill Permit for the project.

Additional data will be collected in the field to incorporate the Shaver property into the Natural Resource Assessment being prepared for the project.

Deliverables:

- Wetland Delineation, 3 hard copies and one electronic copy
- Natural Resource Site Assessment, 3 hard copies and one electronic copy

E09051 – TASK 7.6 60% Drawings, Specifications and Cost Estimate

The previously approve SOW for 60% design of the required floodplain restoration was described in Task 15.2 of amendment 4 to contract number 37106 with B&C, and is modified as follows:

VAI will incorporate mitigation design elements for the vegetative corridor and wetland impacts into the plans and specifications that are being developed for the relocation of the side channel. After the wetland delineation is completed, impacts to wetlands will be identified and mitigation will be developed according to DSL's Compensatory Wetland Mitigation guidelines. VAI will incorporate these mitigation elements in to the 60% drawings. VAI will prepare 60% specifications, and a construction cost estimate based on the 60% plans and specifications.

VAI will attend one coordination meetings with BES and the resource agencies (DSL, Corps, and Clean Water Services) to review mitigation elements.

EXHIBIT ADeliverables:

- 60% drawings (half-size, 5 sets),
- Specifications, and
- Cost Estimate

E09051 – TASK 7.7 90% Drawings, Specifications, and Cost Estimate

The previously approved SOW for 90% design of the required floodplain restoration was described in Task 15.2 of amendment 4 to contract number 37106 with B&C, and is modified as follows:

VAI will respond to comments from Clean Water Services and BES review of the 60% drawings, specifications, and cost estimate and prepare approximately 90% complete drawings, specifications, and cost estimate.

Any permit conditions received from the agencies will be incorporated into the design. VAI will attend two coordination meetings for the 90% design phase.

Deliverables:

- 90% drawings (1 set full size and 5 sets half size),
- Specifications, and
- Cost estimate

E09051 – TASK 7.8 Final Drawings, Specifications, and Cost Estimate

The previously approved SOW for final design plans and specifications for the required floodplain restoration work was described in Task 15.2 of amendment 4 to contract number 37106 with B&C, and is modified as follows:

VAI will respond to comments from BES review of the 90% drawings, specifications, and cost estimate and prepare final drawings, specifications, and cost estimate. The plans and specifications will be stamped by an Oregon Professional Engineer.

Any additional permit conditions received from the agencies will be incorporated into the design.

Deliverables:

- Final drawings (1 set stamped and signed full-size),
- Specifications, and
- Construction Cost Estimate

E09051 – TASK 8.0 Land Use Review (LUR) Legal Support

Christie White, Attorney at Law, will assist the City and VAI with the land use application and review process.

As an administrative accommodation, and as directed by the City of Portland, Brown and Caldwell agrees to process the payment to Christie White. It is understood and acknowledged by the City of Portland that Christie White shall not be under the direction or control of Brown and Caldwell at any time.

City of Portland agrees that Brown and Caldwell shall have no responsibility or liability for Christe White's work product or services performed at the direction of City of Portland or for any claims arising out of Christe White's performance.

E09051 – TASK 9.0 Final Design

The scope of work and cost for Final Design will be negotiated following the completion and BES acceptance of a Preliminary Design Report, and the 30% design plans and technical specifications, and will only be authorized by written contract amendment under the City of Portland's PTE contract requirements and regulations.

E09051 – TASK 10.0 Services during Bidding

The scope of work and cost for services during bidding will be negotiated at a later date, and will only be authorized by written contract amendment under the City of Portland's PTE contract requirements and regulations.

E09051 – TASK 11.0 Services during Construction

The scope of work and cost for services during construction will be negotiated at a later date, and will only be authorized by written contract amendment under the City of Portland's PTE contract requirements and regulations.

E09051 – TASK 12.0 Project Closeout Assistance

The scope of work and cost for project closeout assistance will be negotiated at later date, and will only be authorized by written contract amendment under the City of Portland's PTE contract requirements and regulations.

Project E09052 Burlingame Trunk Sewer Improvements

The previously authorized SOW for this project element was described in Task 13.0 FABA PS – Force Main Extension Preliminary & Final Design in amendment 4 to contract number 37106 with B&C. Modeling conducted by the BES Systems Analysis division has determined that modifications and improvements to the existing Burlingame trunk sewer downstream of the FABA pump station pressure line discharge structure at SW 31st & Multnomah will be a more effective solution than extending the proposed parallel 30-inch pressure lines farther east in SW Multnomah Blvd.

BES project E09052 has been renamed to be the Burlingame Trunk Sewer Improvements, and additional work is being included for the design of rehabilitation improvements for the Burlingame trunk sewer downstream of SW Barbur Blvd.

Delete the previously authorized SOW for this project element described in Task 13.0 of amendment 4, and replace it with the following SOW description.

E09052 – TASK 1.0 Project Management

Project management activities specific to the design of the Burlingame Trunk Sewer Improvement element of the project will be conducted in accordance with

the scope of work described in Task 1.0. Labor and expenses incurred under Task 13.0 will be invoiced separately using BES Project No. E09052.

Assumptions:

Progress phone calls and other project meetings requested by the BES PM, directly related to the Burlingame Trunk Sewer Improvement design, will average two per month (does not include workshops scheduled by the Contractor or specified in other tasks) for a total of nine meetings.

Deliverables:

- An Updated PMP
- Monthly invoices and progress reports

E09052 – TASK 2.0 Data Collection and Review

The objective of this subtask is to collect and review general data, geotechnical data, utility data, base maps, and preliminary survey data.

Activities to be performed by the Contractor include, but may not necessarily be limited to:

E09052 – TASK 2.1 Burlingame Trunk Sewer Enlargement:

- Collect and organize pertinent project information including existing utility information, GIS base map data, survey information and data.
- Review the pertinent project information and determine what other information is needed to complete the preliminary and final design.

It is assumed that BES will provide available City utility information, GIS base mapping, and project survey information and data.

E09052 – TASK 2.2 Burlingame Trunk Sewer Rehabilitation:

- Perform a site walkthrough and delineate the area requiring topographic survey in order to develop an accurate base map for use in detailed design of sewer rehabilitation and to develop the traffic control plan, bypass pumping plan, and access/staging plan for construction.
- Review record drawings, easement documentation, existing CCTV, and hydraulic modeling results (i.e., pre-rehabilitation flow conditions and expected post-rehabilitation flow conditions).
- Additional CCTV, manhole entries, and laser profiling will be performed to confirm design parameters such as ovality, hole size (to determine if surcharging will affect design), and inside circumference of the existing pipe.

Assumptions:

It is assumed that City of Portland survey crews will perform the topographic survey based on the delineation provided by the Contractor. BES will provide available information regarding previous studies, maps, plans, and specifications for existing facilities or sites. BES will also provide

geotechnical information necessary to complete the design. BES will coordinate with ODOT and PBOT for the traffic control required for the Contractor to perform manhole inspections, CCTV cleaning, and laser profiling. Cleaning prior to CCTV and laser profiling will be performed by the Contractor's laser profiling subcontractor. PBOT will provide surveyors and BES will provide inspection staff. The Contractor will provide a design team member to be present during the survey and inspection activities. BES will provide TV inspection of any portion of the Burlingame Trunk Sewer within the limits of the project that have not been previously inspected.

Deliverables:

- Preliminary base maps for use in meetings, workshops, and design
- CCTV and laser profiling reports and video
- Draft & Final meeting minutes

E09052 – TASK 3.0 Hydraulic Modeling

The objective of this subtask is to model the performance of the extended force main.

Activities to be performed by the Contractor include, but may not necessarily be limited to:

- Perform updated hydraulic model runs for Fanno Basin Pump Station (FABA PS) and the proposed parallel 30-inch Fanno pressure lines including the proposed welded steel pipe Garden Home Section, and the ductile iron pipe (DIP) Multnomah Section. Conduct model runs for dry weather and peak wet weather flow conditions.

Assumptions:

It is assumed that BES will provide applicable hydraulic criteria and reports.

Deliverables:

- Draft and Final technical memorandum summarizing the hydraulic modeling results

E09052 – TASK 4.0 Alternatives Development

The objective of this subtask was to develop and evaluate alignment alternatives for a potential extension of the parallel pressure within the SW Multnomah Boulevard Right-of-Way (ROW) from SW 31st Ave. to a discharge manhole identified by the BES Asset System section along the west side of Interstate 5 (I-5).

The Contractor performed the following work to develop and evaluate alignment alternatives:

EXHIBIT A**E09052 – TASK 4.1 Develop Alignment Alternatives**

- Develop alignment alternatives for the proposed force main extension in the SW Multnomah Blvd. ROW. Consider the location of existing utilities, driveways, and adjacent improvements.
- Develop alternatives for crossing SW Barbur Blvd. with the proposed force main extension. Consider the location of existing utilities, driveways, business access requirements, traffic detours, and construction options.
- Develop alternatives for extending the proposed force main from Barbur Blvd. down the access road to the designated existing discharge manhole along the west side of I-5.

E09052 – TASK 4.2 Evaluate Alignment Alternatives

- Coordinate with BES to identify and develop appropriate evaluation criteria.
- Evaluate the alignment alternatives on a reach-by-reach basis based on selected evaluation criteria including costs, third party impacts, risks, operation, and maintenance.
- Evaluate the alignment alternatives based on the various means and methods that could be used in the construction of the force main extension.

E09052 – TASK 4.3 Re-evaluate Gravity Sewer Alignment Alternatives

In response to BES questions and concerns regarding constructability issues B&C developed preliminary designs and cost estimates for multiple gravity sewer alignment options in SW Multnomah Blvd. The work included traffic control plans, CIPP material and thickness alternatives. The CIPP design options were used by BES in hydraulic modeling of the sewer system to evaluate the effectiveness of the options to minimize the depth and duration of predicted surcharge conditions during peak flow events.

E09052 – TASK 4.4 Select a Recommended Alignment Alternative

Meet with the appropriate BES staff to review the proposed alignment alternatives, the initial evaluation, and select a preferred alignment alternative for final design.

Assumptions:

It is assumed that there will be two alignment alternative development meetings, and one alignment selection meeting.

Deliverables:

- Draft and final meeting minutes.
- Draft and final Alternative Development and Selection TM.

E09052 – TASK 5.0 Permitting Assistance

The objective of this subtask is to identify the permitting requirements associated with the construction of the proposed 30-inch DIP force main across Barbur Blvd.

to the identified discharge manhole immediately west of I-5.

The Contractor will perform the following work to assist BES with the application for necessary permits:

- Identify all required permits for each alternative under consideration.
- Participate in a field visit in order to document current site conditions.
- Meet with key stakeholder, including the Portland Bureau of Transportation, Multnomah County, and the Oregon Department of Transportation.
- All findings with regard to the applicable permits will be included in the Preliminary Design Report (PDR).

Assumptions:

It is assumed that BES will contract with a separate firm to lead the efforts to prepare and submit the required permit applications for this project. BES will provide all available records and project documentation, and will identify and facilitate stakeholder coordination meetings.

Deliverables:

- Draft and final meeting minutes.
- The Permitting Requirements section of the PDR.

E09052 – TASK 6.0 Draft and Final Preliminary Design Report (PDR)

The objective of this subtask will be to prepare a draft and final PDR summarizing the alternatives, design criteria, and recommendations developed in subtask 13.3, and the permitting issues identified in subtask 13.4.

E09052 – TASK 6.1 Prepare a Draft PDR

Prepare a draft PDR which will contain, but may not necessarily be limited to the following:

- Procurement, constructability, and schedule issues associated with the implementation of all recommendations.
- Preliminary plan and profile drawings for the proposed Burlingame Trunk Sewer Enlargement on the preferred alignment.
- Finalize the hydraulic capacity requirements that will affect the finished product as well as determining the size of bypass pumping systems and capacity of downstream systems to accept bypassed flow.
- Review with BES staff, requirements regarding acceptable CIPP installation practices, including acceptable materials of construction, installation methods, host pipe preparation requirements, and minimum design parameters.
- Document all criteria to be used in developing detailed Contract Documents and obtain consensus with BES regarding the design requirements. Topics addressed in the report will include:
 - Existing trunk and manhole condition

- o Field investigation results
- o Design criteria
- o Hydraulic and flow projections provided by BES
- o Methods of rehabilitation and prescriptive contractor access/staging areas
- o Flow diversion and bypass pumping options
- o Traffic control requirements necessary for construction

Assumptions:

It is assumed that BES will make the appropriate staff available to review and provide comments and suggestions on the draft PDR.

It is also assumed that the BES project manager will consolidate and compile the BES staff review comments into a single memorandum that will be provided to the Contractor.

It is assumed that BES modeling staff will perform the capacity evaluation after the sizing of the liner has been completed in order to verify that the reduced inside diameter meets the Burlingame Trunk's capacity requirements. BES modeling staff will also provide design flows to be conveyed by the proposed bypass pumping systems. One meeting will be held to determine design criteria and a second meeting will be held to review the PDR.

Deliverables:

- Draft PDR

E09052 – TASK 6.2 Prepare a Final PDR

Incorporate or otherwise appropriately address all BES comments and recommendations from the review of the draft PDR into a final PDR.

Deliverables:

- Written responses to all BES review comments and suggestions.
- Final PDR

E09052 – TASK 7.0 Burlingame Trunk Sewer Improvements – 30% Design

Prepare design plans, sections, and details developed to approximately 30% complete for the proposed sewer enlargement and sewer rehabilitation.

Conduct a 30% design review workshop with appropriate BES staff and other interested stakeholders. The workshop will include a discussion of the basis of design, and present the 30% design documents package. Solicit and discuss staff suggestions during the workshop on ways to improve operation and maintenance (O&M) performance, and reduce costs.

Deliverables:

- Draft plan & profile drawings for the proposed sewer enlargement and sewer rehabilitation.

- Draft typical trench sections.
- Table of Contents.
- A preliminary construction cost estimate and construction schedule.

E09052 – TASK 8.0 Burlingame Trunk Sewer Improvements – 60% Design

Prepare design plans, sections, and details developed to approximately 60% complete for the proposed sewer enlargement and sewer rehabilitation. Incorporate or appropriately address BES review comments and suggestions from the 30% design review.

Assumptions:

It is assumed that BES will make available the appropriate BES staff, and other stakeholders to review and comment on the 60% design review package.

It is also assumed that the BES project manager will consolidate and compile the BES staff review comments from the 60% review into a single memorandum that will be provided to the Contractor for a written response.

It is assumed that the Contractor will attend three meetings with BES/ODOT to assist in preparation of the Traffic Control Plan. Five copies of 60% drawings and specification will be provided by the Contractor. BES will make initial contact with ODOT and PBOT to facilitate development of the Traffic Control Plans and specifications and obtain required approval from ODOT, PBOT and/or other agencies as needed. A Flow Diversion Plan will be developed to a conceptual level for each sliplining setup showing the alignment of bypass pipeline from the upstream collection to the downstream discharge manholes. It is anticipated that at least four setups will be required.

Deliverables:

- Updated plan & profile drawings for the proposed sewer enlargement and sewer rehabilitation.
- Updated typical trench sections.
- Draft civil design of the connection to the existing force main discharge structure, and proposed construction access/staging areas.
- Draft traffic control drawings.
- Draft flow diversion plan drawings.
- Draft erosion control drawings.
- Draft surface restoration drawings.
- Draft technical specifications.
- Updated construction cost estimate and schedule.

E09052 – TASK 9.0 Burlingame Trunk Sewer Improvements – 90% Design

Prepare 90% design plans, sections, details, a proposed construction sequencing specifications section, required technical specifications, construction cost estimate, and construction schedule. Incorporate or otherwise

appropriately address BES review comments and suggestions from the 60% design review.

Assumptions:

It is assumed that BES will make available the appropriate BES staff, and other stakeholders to review and comment on the 90% design review package.

It is also assumed that the BES project manager will consolidate and compile the BES staff review comments from the 90% review into a single memorandum that will be provided to the Contractor for a written response.

Deliverables:

- Updated drawings
- Updated technical specifications
- Update construction cost estimate and construction schedule.

E09052 – TASK 10.0 Burlingame Trunk Sewer Improvements – Final Design

Prepare final design plans, sections, details, a proposed construction sequencing specifications section, required technical specifications, construction cost estimate, and construction schedule. Incorporate or otherwise appropriately address BES review comments and suggestions from the 90% design review.

Assumptions:

It is assumed that BES will assemble the final bid document package, and arrange for all reproduction required for bidding the project. The Contractor will provide ten copies of 100% drawings and specifications for final quality control confirmation review and approval. One camera-ready set of drawings and specifications will be provided to BES for printing during bid phase.

Deliverables:

- Plan & profile drawings for the proposed sewer enlargement and sewer rehabilitation.
- Typical trench sections and details.
- Civil design drawings for the connection to the existing force main discharge structure, and proposed construction access/staging areas.
- Mechanical plans and sections.
- Traffic control drawings.
- Flow diversion drawings.
- Erosion control drawings.
- Surface restoration drawings.
- Final, proposed work sequence specification section.
- Final technical specifications.
- Final construction cost estimate and schedule.
- One full-size set of sealed final drawings.

EXHIBIT A

- One unbound and collated copy of all final specification sections.
- Electronic files for all deliverables.

E09052 – TASK 11.0 Services during Bidding

Assist the City of Portland and BES in the advertising, bidding and award of the project up to the level of effort included in the task budget amount, including but not necessarily limited to the following:..

- Prepare addenda, answer questions and provide clarifications during the bidding period.
- Perform evaluations and make recommendations as required should the City decide to pre-purchase any materials for the project.

BES will submit questions and clarification requests, send out Addenda, and arrange meetings to discuss bidding issues.

Deliverables:

- Proposed addenda items
- Design Clarifications
- Bid Evaluation Report

E09052 – TASK 12.0 Services during Construction

The following activities are included in services during construction:

- Review and evaluate submittals and shop drawings required to construct the project.
 - The estimated level of effort for task budgeting purposes assumes the project will include 30 major and 30 minor submittals.
- Respond to selected contractor Requests for Information (RFIs) and Requests for Clarification (RFCs) as requested by the Owner's Representative.
 - The estimated level of effort for task budgeting purposes assumes the project will include 25 RFIs or RFCs.
- Review required construction change orders and prepare design modifications and sketches to support the Owner's Representative.

Perform periodic construction site visits project as requested by the Owner's Representative.

E09052 – TASK 13.0 Project Closeout Assistance

The scope of work and cost for any required project closeout assistance will be negotiated at later date, and will only be authorized by written contract amendment under the City of Portland's PTE contract requirements and regulations.

Project E09168 Multnomah Stormwater Improvements

The scope of work and costs for project E09168 – Multnomah Stormwater Improvements was previously authorized and described in Task 14.0 of amendment 4 to contract 37106 with B&C. The purpose of this description is to incorporate the project number that was subsequently opened for this element of the project with other Fanno Basin System Improvement projects.

E09168 – TASK 1.0 Conceptual Design

The previously approved SOW for this task is described in Task 14.2 of amendment 4 to contract number 37106 with B&C.

E09168 – TASK 2.0 Final Design

The previously approved SOW for this task is described in Task 14.3 of amendment 4 to contract number 37106 with B&C.

Additional work is required to provide an estimated 80-hrs for a landscape architect to prepare planting plans and support other design tasks as directed for selected stormwater improvement sites.

E09168 – TASK 3.0 Project Management

The previously approved SOW for this task is described in Task 14.1 of amendment 4 to contract number 37106 with B&C.

E09168 – TASK 4.0 Services during Bidding

The scope of work and cost for services during bidding will be negotiated at a later date, and will only be authorized by written contract amendment under the City of Portland's PTE contract requirements and regulations.

E09168 – TASK 5.0 Services during Construction

The scope of work and cost for services during construction will be negotiated at a later date, and will only be authorized by written contract amendment under the City of Portland's PTE contract requirements and regulations.

E09168 – TASK 6.0 Project Closeout Assistance

The scope of work and cost for project closeout assistance will be negotiated at later date, and will only be authorized by written contract amendment under the City of Portland's PTE contract requirements and regulations.

Amendment No. 5 – Contract No. 37106

Fanno Basin Pump Station Pressure Main, Multnomah Section

IV Payment Schedule – Project & Project Task Budget Adjustments

Amended Contract No. 37106 with Brown and Caldwell BES Project Numbers & Amended Budget Amounts				
Project Number	Project Names	Currently Amended Budget Amounts	Amendment No. 5 Amounts	Adjusted Project Budget Amounts
E08294	FABA PS FM: Multnomah Section	\$ 597,338	\$ 265,940	\$ 863,278
E09050	FABA Surge Tanks	\$ 402,909	\$ 354,550	\$ 757,459
E09051	FABA PS Expansion	\$ 518,745	\$ 112,576	\$ 631,321
E09052	Burlingame Trunk Sewer Improvements	\$ 389,627	\$ 141,813	\$ 531,440
E09168	Multnomah Stormwater Improvements	\$ 149,525	\$ 6,500	\$ 156,025
TOTALS		\$ 2,058,144	\$ 881,379	\$ 2,939,523

Separate Task & Budget Summary tables for each of the secondary projects listed above are included on the following pages.

E08294 FABA PS FM: Multnomah				
Task #	Task Name/Description	Current Budget Amount	Amendment No. 5 Amounts	Adjusted Task Budget Amounts
1.0	Project Management	\$ 39,860	\$ 5,740	\$ 45,600
2.0	Conduct Additional Evaluations	\$ 46,581	\$ 0	\$ 46,581
3.0	Final Design Recommendation	\$ 18,815	\$ 0	\$ 18,815
4.0	Public Outreach Services	\$ 67,120	\$ 35,633	\$ 102,753
5.0	Final Design	\$ 311,423	\$ 165,217	\$ 476,640
6.0	Services During Bidding	\$ 11,100	\$ 0	\$ 11,100
7.0	Services During Construction	\$ 0	\$ 57,350	\$ 57,350
8.0	Project Closeout Assistance	\$ 0	\$ 2,000	\$ 2,000
9.0	Not Used			
10.0	Fanno Pump Station Analysis	\$ 36,659	\$ 0	\$ 36,659
11.0	Fanno Pump Station Expansion Analysis	\$ 54,122	\$ 0	\$ 54,122
12.0	Basin Planning Assistance	\$ 11,658	\$ 0	\$ 11,658
TOTALS		\$ 597,338	\$ 265,940	\$ 863,278

E09050 FABA Surge Tanks				
Task #	Task Name/Description	Current Budget Amount	Amendment No. 5 Amounts	Adjusted Task Budget Amounts
1.0	Project Management	\$ 13,895	\$ 21,190	\$ 35,085
2.0	QA/QC	\$ 6,152	\$ 0	\$ 6,152
3.0	Permitting Coordination	\$ 2,832	\$ 0	\$ 2,832
4.0	Preliminary Design Report	\$ 40,407	\$ 26,500	\$ 66,907
5.0	Preliminary Design to 30%	\$ 76,948	\$ 55,000	\$ 131,948
6.0	60% Design	\$ 125,601	\$ 6,000	\$ 131,601
7.0	90% Design	\$ 73,137	\$ 0	\$ 73,137
8.0	100% Design	\$ 46,946	\$ 0	\$ 46,946
9.0	Final Design	\$ 16,991	\$ 0	\$ 16,991
9.0	Services During Bidding	\$ 0	\$ 11,500	\$ 11,500
10.0	Services During Construction	\$ 0	\$ 181,660	\$ 181,660
11.0	Project Closeout Assistance	\$ 0	\$ 52,700	\$ 52,700
TOTALS		\$ 402,909	\$ 354,550	\$ 757,459

Note:

Bold task names indicate tasks added by Amendment No. 5 to Contract 37106 with B&C.

E09051 FABA PS Expansion				
Task #	Task Name/Description	Current Budget Amount	Amendment No. 5 Amounts	Adjusted Task Budget Amounts
1.0	Project Management	\$ 20,297	\$ 0	\$ 20,297
2.0	Data Collection and Review	\$ 7,846	\$ 0	\$ 7,846
3.0	Alternatives Development	\$ 50,595	\$ 0	\$ 50,595
4.0	Permitting	\$ 14,560	\$ 0	\$ 14,560
5.0	Preliminary Design Report	\$ 83,108	\$ 0	\$ 83,108
6.0	30% Document Preparation	\$ 206,916	(\$ 36,174)	\$ 170,742
7.0	Floodplain Restoration	\$ 135,423	\$ 78,750	\$ 214,173
8.0	LUR Legal Support	\$ 0	\$ 70,000	\$ 70,000
9.0	Final Design	\$ 0	\$ 0	\$ 0
10.0	Services During Bidding	\$ 0	\$ 0	\$ 0
11.0	Services During Construction	\$ 0	\$ 0	\$ 0
12.0	Project Closeout Assistance	\$ 0	\$ 0	\$ 0
TOTALS		\$ 518,745	\$ 112,576	\$ 631,321

Note:

Bold task names indicate tasks added by Amendment No. 5 to Contract 37106 with B&C.

E09052 Burlingame Trunk Sewer Improvements				
Task #	Task Name/Description	Current Budget Amount	Amendment No. 5 Amounts	Adjusted Task Budget Amounts
1.0	Project Management	\$ 17,943	\$ 6,230	\$ 24,173
2.0	Data Collection and Review	\$ 3,286	\$ 0	\$ 3,286
3.0	Hydraulic Modeling	\$ 5,797	\$ 0	\$ 5,797
4.0	Alternatives Development	\$ 14,800	\$ 0	\$ 14,800
5.0	Permitting	\$ 4,466	\$ 0	\$ 4,466
6.0	Preliminary Design Report	\$ 12,551	\$ 0	\$ 12,551
7.0	30% Document Preparation	\$ 103,612	\$ 0	\$ 103,612
8.0	60% Document Preparation	\$ 174,972	\$ 0	\$ 174,972
9.0	90% Document Preparation	\$ 32,023	\$ 61, 773	\$ 93,796
10.0	Final Design	\$ 20,177	\$ 0	\$ 20,177
11.0	Services During Bidding	\$ 0	\$ 11,500	\$ 11,500
12.0	Services During Construction	\$ 0	\$ 62,310	\$ 62,310
13.0	Project Closeout Assistance	\$ 0	\$ 0	\$ 0
TOTALS		\$ 389,627	\$ 141,813	\$ 531,440

Note:

Bold task names indicate tasks added by Amendment No. 5 to Contract 37106 with B&C.

E09168 Multnomah Stormwater Improvements				
Task #	Task Name/Description	Current Budget Amount	Amendment No. 5 Amounts	Adjusted Task Budget Amounts
1.0	Conceptual Design	\$ 32,008	\$ 0	\$ 32,008
2.0	Final Design	\$ 102,655	\$ 6,500	\$ 109,155
3.0	Project Management	\$ 14,862	\$ 0	\$ 14,862
4.0	Services During Bidding	\$ 0	\$ 0	\$ 0
5.0	Services During Construction	\$ 0	\$ 0	\$ 0
6.0	Project Closeout Assistance	\$ 0	\$ 0	\$ 0
TOTALS		\$ 149,525	\$ 6,500	\$ 156,025

Note:

Bold task names indicate tasks added by Amendment No. 5 to Contract 37106 with B&C.

The hourly rates shown in the following table shall apply for Jean Lawson Associates, Inc. (JLA), and Christe White, Attorney at Law, and shall be full compensation for all overhead costs, routine expenses, and profit as described in Section IV of the original contract.

Firm	Classification / Staff	Maximum Hourly Rates
Jean Lawson Associates, Inc.	Senior Associate 2	\$ 160.12
	Senior Associate 1	\$ 148.43
	Public Involvement Specialist 7	\$ 140.20
	Public Involvement Specialist 6	\$ 126.95
	Public Involvement Specialist 5	\$ 113.76
	Public Involvement Specialist 4	\$ 101.56
	Public Involvement Specialist 3	\$ 89.42
	Public Involvement Specialist 2	\$ 77.22
	Public Involvement Specialist 1	\$ 64.99
	Administrative Manager	\$ 117.99
	Clerical 2	\$ 51.61
	Clerical 1	\$ 42.68
Christe White Attorney at Law	Christe White	\$370

EXHIBIT A

M/W/ESB Participation:

The following table summarizes the Contractor's proposed subconsultant M/W/ESB participation, as of the time this contract amendment was prepared.

Subconsultant	M/W/ESB Certifications	Scope/Type of Work	Currently Amended Subcontract Amounts	Proposed Amendment No. 5 Subcontract Amounts
Jeanne Lawson Associates	WBE, DBE	Public Involvement	\$ 63,134	\$ 97,860
Design Data Concepts ⁽¹⁾	ESB, MBE, WBE, DBE	CADD	\$ 4,087	\$ 4,087
Garry Struthers Associates	MBE	Traffic Control	\$ 72,500	\$ 72,500
Thurston Associates	DBE, WBE	Survey	\$ 16,000	\$ 16,000
Shur Architects	ESB	Architecture	\$ 116,195	\$ 124,195
Superelevation	MBE, DBE, SDB	CADD, Traffic Control	\$ 245,099	\$ 271,099
Vigil-Agrimis	MBE	Environmental Mitigation Design & Permitting	\$ 128,974	\$ 203,974
Christe White, PC	WBE in process	LUR related Legal Services	\$ 0	\$ 70,000
M/W/ESB Total Amounts			\$ 645,989	\$ 859,715
Amended Contract Amounts			\$ 2,058,144	\$ 2,939,523
M/W/ESB Percentage of the amended Contract Amount			31.4%	29.2%

1. Design Data Concepts was unable to continue on the project team, and the CADD work was re-allocated to Superelevation as authorized by amendment 4.