CITY OF NEWPORT

TASK ORDER NO. 9
TO ENGINEERING SERVICES AGREEMENT
(CONSULTANT OF RECORD)
FOR THE BIG CREEK FORCE MAIN PROJECT

This TASK ORDER NO. 9 to the Engineering Services Agreement dated April 12, 2010, hereinafter called Agreement, between the City of Newport, (CITY), and Brown and Caldwell, Inc., (ENGINEER).

A. SCOPE OF SERVICES

CITY agrees to utilize the services of ENGINEER and ENGINEER agrees to perform the services set forth in Attachment A.

B. CITY'S RESPONSIBILITIES

CITY to provide ENGINEER with the following information:

- Sanitary sewer and pump station as-built drawings (paper and/or electronic versions as available).
- Easement locations for the existing sewers and pump station.
- Other activities as described in the detailed Scope of Services shown in Attachment A.

CITY shall provide timely review of submitted products (1-week turnaround or as otherwise agreed upon).

C. COMPENSATION

1. CITY shall pay ENGINEER according to the fee schedule set forth in Exhibit A to the Master Engineering Services Agreement.

2. CITY shall pay ENGINEER as complete compensation for the services as described in Attachment B, a fee not to exceed One hundred, seventy-four thousand, two-hundred and thirty-two Dollars **$174,232.**

D. SCHEDULE

ENGINEER shall complete the work in accordance with the schedule shown in Attachment C, attached hereto.

E. MISCELLANEOUS

All terms and conditions of the Agreement apply to this Task Order as though fully set forth therein. In the event of a conflict between this Task Order and the Agreement, the terms of this Task Order shall apply.

The parties do mutually agree to all mutual covenants and agreements contained within this Task Order No. 9.

CITY OF NEWPORT:

By: _____

Title: City Manager

Date: 1/9/13

BROWN AND CALDWELL, INC.:

By: _____

Title: Senior Associate

Date: January 9, 2013

Exhibit A

Scope of Services

The Scope of Services summarized below describes the engineering services to be performed for the City of Newport's (City) Big Creek Force Main Project.

Project Description

The Big Creek Pump Station (BCPS) is located on the south bank of Big Creek just to the east of Ocean View Drive. The existing pump station and two force mains are undersized for existing and projected future flows. Their replacement is required to provide conveyance capacity for both the existing flows and for future flows.

As currently configured, the existing BCPS has a design pumping capacity of approximately 903 gallons per minute or 1.3 million gallons per day (mgd). The older 6-inch diameter force main is no longer used due to the poor structural condition of this pipe. The existing 8-inch force main has a capacity of approximately 1.4 mgd. Existing flows are estimated at 2.3 mgd with 2040 flow projections of 3.5 mgd and full build-out projected flows at 6.8 mgd.

This project will prepare bid documents for construction of the Big Creek force main. The effort will include determining the appropriate sizing and phasing of the new Big Creek force main(s) improvements to help meet the City's long-term growth needs and provide satisfactory conveyance service. This project will include a geotechnical and survey effort in support of both the Big Creek force main and pump station (separate contract) design efforts. The general plan for these upgrades is documented in the Agate Beach Wastewater Collection System Improvements Project: Preliminary Engineering Report (Brown and Caldwell, June 2010).

Phase 1. General Design Activities

Objective: To provide engineering services in support of the design of the new force main.

Task 1. Project Management

Activities: This task includes the following activities:

- Prepare a Project Management Plan that includes design team roles and responsibilities, schedule, budget, a quality assurance/quality control (QA/QC) plan, and a staffing plan required for execution of the project.
- Hold weekly conference calls with the City's project manager to discuss the schedule and direction of the project.
- Document meeting decisions and action items, assign the activities to team members, and follow up to ensure timely resolution.
- Monitor project progress, including work completed, work remaining, budget expended, schedule, estimated cost of work remaining, and estimated cost at completion.
- Monitor project activities for potential changes, anticipate changes whenever possible, and with City approval, modify project tasks and subtask scope and budgets as required.

- Manage the quality control review of all work activities and project deliverables
- Prepare and submit monthly invoice with invoice summary report.

Task 2. Geotechnical Services

Activities: Foundation Engineering, Inc. (FEI) will serve as the geotechnical engineer for the project. FEI will conduct field explorations and other design-support activities that include the following:

- Conduct a subsurface investigation by drilling five exploratory boreholes to a depth of approximately ±12.5 feet below grade along the proposed alignment. One borehole at the BCPS site will extend to a depth of ±40 feet below grade. Actual depths may be adjusted in the field depending on the encountered subsurface conditions. It is anticipated the foundation will be predominantly sand with shallow ground water due to the site's close proximity to Big Creek and the ocean.
- FEI anticipates sampling for the BCPS at 2½-foot intervals to ±15 feet and at 5-foot intervals thereafter. Samples along the force main will be taken at ±2½-foot intervals. Soil samples will be taken with a split-spoon as part of the Standard Penetration Test (SPT). Relatively undisturbed specimens may be obtained with thin-walled Shelby tubes if fine-grained soils are encountered. The soil samples will be retained for possible laboratory testing and observation in our office. We do not anticipate encountering bedrock and our cost estimate does not include rock coring.
- A 1-inch diameter standpipe piezometer will be installed in the boring at the BCPS to allow measurement of the current and future ground water levels. The installation will be capped with a flush monument. The piezometer will be read at the time of installation. FEI has assumed that they will also return to the site for a second reading after the ground water level has had time to stabilize.
- The other five boreholes will be backfilled with bentonite chips and capped with crushed rock and asphaltic concrete (AC) cold patch as appropriate to match the original ground surface. FEI has assumed the drill cuttings will be drummed and dumped at a nearby disposal site provided by the City. FEI will provide laboratory testing to determine natural water content, percent fines and/or Atterberg limit tests on selected samples to help classify soils and engineering properties.
- Interpret geotechnical conditions at the project site and prepare a technical memorandum (TM) to document findings that include information on excavation, shoring, dewatering, suitable backfill materials, base stabilization, and compaction.
- Provide miscellaneous geotechnical engineering support during design.

  FEI has assumed that a Right-of-Way permit will be required for along the force main route, but that the City will waive any fees. Traffic control will be provided as needed in accordance with the Oregon Temporary Traffic Control Handbook. FEI has assumed that traffic control will include signs and cones and two flaggers in case a lane closure is needed. However, if the borings can be drilled on the shoulders or parking areas away from traffic, traffic control will be reduced to one flagger and signs and cones or just signs and signs and cones, if appropriate. FEI will mark the exploration locations and request utility locates in advance of the

drilling. The actual traffic control needs will be established at that time. FEI may require assistance from the City to prevent vehicles from parking in shoulder areas where there are plans to drill.

Task 3. Environmental Permitting

Activities: Pacific Habitat Services, Inc. (PHS) will perform the wetland consulting services for the project. Based on a site visit to the pump station, PHS anticipates that all pump station improvements can be constructed above the ordinary high water (OHW) of the creek. If this holds true, then PHS will only need to perform a wetland delineation and have the delineation report approved by the Oregon Department of State Lands. If the final design has activities that must be performed below the OHW of the creek, then additional permitting effort will be required.

This task includes performing the wetland delineation field work, preparing the report, and communicating with the design team. PHS assumes that the DSL report submittal fee of $378 will be paid directly by the City. This task does not include permitting for the force main.

Task 4. Topographic Survey Activities

Activities: AKS Engineering and Forestry will perform the survey work associated with the BCPS and force main design. AKS will perform the following survey services for approximately 1 mile of right-of-way (ROW) from the BCPS southerly along Northwest Ocean View Drive, easterly on Northwest 16th Street, and southerly on Northwest Nye Street to Northwest 12th Street or the alternate alignment described in Task 6:

- Establish a permanent horizontal and vertical control network.
- Coordinate public utility locates.
- Elevate the project to an approved vertical datum (NGVD 29, NAVD 88, or City datum).
- Establish approximate ROW lines by locating existing monuments of record.
- Survey street features (curb, edge of pavement, crown, sidewalk, etc.), driveways, striping, signage, landscaping, necessary existing ground, trees 6 inches and greater, ditches, retaining walls, fences, utilities including water, gas, power, telephone, cable, sanitary sewer, storm sewer (including vaults, manholes with invert elevations, utility poles, and other structures), and other key features.
- Prepare a topographic/site/ROW map (for the preferred force main alignment) showing the above features, ROW, approximate property lines, tax lot information, and 1-foot contours.
- AKS will perform a topographic survey of the BCPS site including the existing BCPS (25 feet x 50 feet) and the area 100 feet east and 100 feet south of the existing pump station. AKS will establish approximate property lines, coordinate Public Locates, and field tie the building, utilities (including vaults, manholes with invert, utility poles, and other structures), street features, driveway, fencing, trees 6 inches and greater, extent of wetland delineation, and other key features.
- The topographic/site/ROW map will be prepared in a computerized format that can be used for design purposes. The survey will be completed upon selection of a preferred alignment from Task 6.

Task 5. Transient Analysis

Activities: This task includes the following activities:

- Perform a transient analysis to identify transient pressures in the force main and determine if transient mitigation measures are required. The identification and mitigation (if required) of transient pressures will improve the long-term performance and reliability of the force main. A thorough analysis of transients will establish critical hydraulic performance criteria that will be the basis for final design. Based on past project experience, it may be necessary to add air/vacuum release valve vault(s) to reduce the risk of increased pressures or vacuums to the force main system.
- Prepare a TM documenting the transient analysis and mitigation recommendations.

Task 6. Preliminary Design Report

Activities: Perform an engineering evaluation on the following two alignment configuration alternatives:

Alignment No. 1–Follows Ocean View Drive south to Northwest 16th Street, east to Northwest Nye Street, and south to near Northwest 12th Street

Alignment No. 2–Follows Ocean View Drive south to a location just south of Northwest 19th Street where the force main would follow an approximate southeast alignment to the intersection of Northwest Nye Street and Northwest 16th Street

The evaluation will consider the advantages and disadvantages of the two proposed alignments. The alignment and profile will be developed based on available geographic information system data. The report will be presented in a format acceptable to the Oregon Department of Environmental (DEQ) and will include the following sections:

- Executive summary
- Introduction
- Existing facilities
- Geotechnical information
- Environmental permitting
- Easement information
- Force main alignment alternatives and evaluation
- Recommended alignment and configuration
- Force main design criteria
- Constructability
- Preliminary cost estimate (selected alternative)
- Preliminary plan and profile drawings (selected alternative)

The report will include an evaluation of the appropriate sizing and phasing of the force main improvements corresponding to future improvements to the pump station. The report will document the design flows to be used in the design of the force main. The report will also include a Table of Contents for the required specifications.

One copy of the Preliminary Design Report will be submitted to DEQ for review and comment.

[The Preliminary Design Report will be appended during the design of the BCPS with the appended sections submitted to DEQ for review and comment.]

Phase 1 Deliverables

The deliverables included in Phase 1 General Design Activities are summarized below:

- Project Management Plan
- Geotechnical Technical Memorandum
- Transient Analysis TM (draft and final)
- Wetland Delineation Report
- Topographic Survey (pump station and preferred force main alignment)
- Preliminary Design Report (draft and final)
- Meeting notes as required

City's Role in Phase 1:

City's project manager will be available to attend weekly conference calls to discuss the schedule and progress of the project. City will be responsible for providing a dump site for drill cuttings. City will waive any Right-of-Way permits needed. City may be required to assist in prevention of vehicles parking on the shoulder areas where drilling may occur.

Phase 2. Force Main Design

Task 1. Project Management

Activities: **This task includes the following activities:**

- Prepare a Project Management Plan that includes design team roles and responsibilities, schedule, budget, a quality assurance/quality control (QA/QC) plan, and a staffing plan required for execution of the project.
- Hold weekly conference calls with the City's project manager to discuss the schedule and direction of the project.
- Document meeting decisions and action items, assign the activities to team members, and follow up to ensure timely resolution.
- Monitor project progress, including work completed, work remaining, budget expended, schedule, estimated cost of work remaining, and estimated cost at completion.
- Monitor project activities for potential changes, anticipate changes whenever possible, and with City approval, modify project tasks and subtask scope and budgets as required.

- Manage the quality control review of all work activities and project deliverables.
- Prepare and submit monthly invoice with invoice summary report.

Task 2. Preparation of Draft Plans and Specifications

Activities: This task includes the following activities:
Prepare draft plans and specifications to the 50 and 90 percent design levels. The draft documents will provide the information necessary for construction of the new force main. Draft plans and specifications will be prepared that illustrate the plan and profile of the new force main and appurtenances.
Assumptions used in developing the scope and budget for the design of the force main include:

- Force main drawings include one vault for air/vacuum release valve installation.
- The documents will be prepared in Construction Specifications Institute (17 Division) format.
- Three sets of draft plans and specifications will be submitted to the City for review and comment.
- One set of draft plans and specifications will be submitted to DEQ for review and comment.
- An Erosion Sediment Control Plan will be prepared and included with the design drawings for the contractor's use in acquiring the required 1200-C National Pollutant Discharge Elimination System stormwater permit.

Task 3. Review Meetings

Activities: Formal project review meetings will be held jointly with the City at the 50 and 90 percent completion levels. Key project team members will meet to review progress and comment on deliverables.

Task 4. Cost Estimating

Activities: Prepare and update construction cost estimates for the 50 and 90 percent completion levels. The updated construction cost estimates will be provided prior to each of the review meetings.

Task 5. QA/QC and Constructability Review

Activities: Provide QA/QC throughout the life of the project and include peer review, calculation checks, and cross-checks between disciplines for the plans and specifications.

A constructability review will be performed that reviews design concepts and construction requirements related to constructability of the force main at the 50 percent design level. Provide a summary of major constructability issues and suggest means to minimize the potential impacts of issues including the following:

- Required construction staging and material lay-down areas.
- Noise and dust abatement recommendations.
- Potential impacts to existing utility systems.
- Appropriate excavation and dewatering requirements.

Task 6. Final Plans and Specifications

Activities: This task includes the following activities:

- Prepare final (100 percent) plans and specifications for soliciting construction bids and obtain the necessary construction permits for the project. Prepare and submit camera-ready bid documents to Willamette Print and Blueprint or to City's preferred vendor for advertising the bid package.
- Submit one set of the final plans and specifications to DEQ for review and comment.

Phase 2 Deliverables

The deliverables included in Phase 2 Force Main Design are summarized below.

- Draft plans (11- by 17-inch) and specifications (8-1/2- by 11-inch).
- Cost estimates at the 50 and 90 percent design levels.
- Final (100 percent) plans and specifications (one set of camera-ready full-size drawings and specifications, one set of half-size (11- by 17-inch) drawings, and one electronic copy of plans and specification files).
- One set of the final plans and specifications will be submitted to DEQ at the 50, 90, and final levels of design for review and comment.
- Meeting notes as required.

Phase 2 Assumptions

The following assumptions have been made with regard to the services described herein:

- Peak projected flows (~2040) of approximately 3.5 mgd.
- Future full build-out flows (~6 mgd).
- No odor control system.
- The City will manage and pay for all design review and City permitting costs.
- Environmental and cut-fill permits are not required.
- No public involvement effort is required.
- The force main and pump station projects will be advertised and bid separately.

City's Role in Phase 2:

City staff will be available to provide operational details about the existing force main and to provide input into requirements for the new facilities. City engineering, operations, and maintenance staff will participate in deliverable review meetings and provide information as necessary for the final design services. The City will arrange and pay for the advertisement and distribution of bid documents. City will pay for all plan review costs including DEQ and City of Newport design review fees.

Notes:

This Scope of Services does not include Engineering During Bidding or Engineering During Construction services. These activities can be estimated at a later date.

Attachment B

Cost Estimate

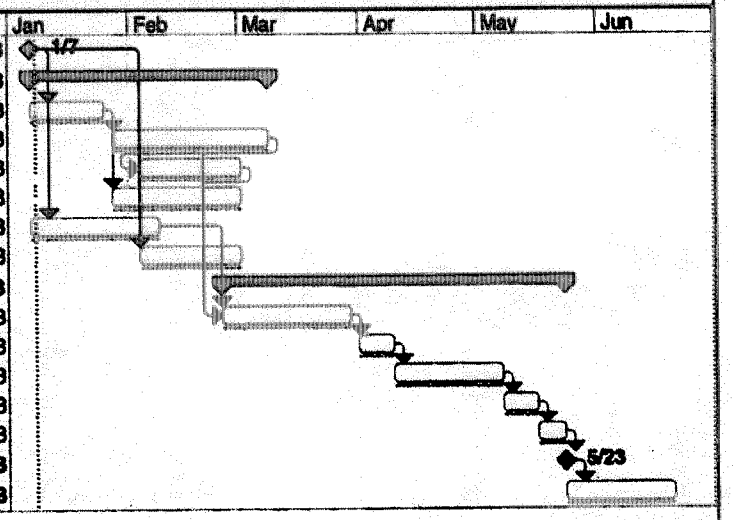
City of Newport - Big Creek Force Main Project

Phase	Phase Description	Total Labor Hours	Total Labor Effort	APC	Total ODCs	Total Sub Cost	Total Expense Effort	Total Effort
110	Project Management - PDR	22	3,416	176	50	0	351	3,767
120	Geotechnical Services	5	752	40	0	18,000	18,940	19,692
130	Environmental Permitting	5	752	40	0	4,000	4,240	4,992
140	Survey Services	2	228	16	0	30,000	31,516	31,744
150	Transient Analysis	60	7,702	480	0	0	480	8,182
160	Preliminary Design Report	154	20,613	1,232	100	0	1,457	22,070
210	Project Management - FM Design	30	5,512	240	50	0	415	5,927
220	Draft Plans and Specifications	366	44,635	2,928	0	0	2,928	47,563
230	Review Meetings	24	4,192	192	200	0	517	4,709
240	Cost Estimating	40	6,116	320	0	0	320	6,436
250	QA/QC and Constructability Review	27	5,294	216	0	0	216	5,510
260	Final Plans and Specifications	106	12,792	848	0	0	848	13,640
	GRAND TOTAL	841	112,004	6,728	400	52,000	62,228	174,232

City of Newport
Big Creek Force Main Design Project

Attachment C

ID	Task Name	Duration	Start	Finish
1	**Notice to Proceed**	**0 days**	**Mon 1/7/13**	**Mon 1/7/13**
2	**Phase 1 General Design Activities**	**45 days**	**Mon 1/7/13**	**Fri 3/8/13**
3	Force Main Alignment Evaluation	15 days	Mon 1/7/13	Fri 1/25/13
4	Geotechnical Services	30 days	Mon 1/28/13	Fri 3/8/13
5	Topographic Survey	20 days	Mon 2/4/13	Fri 3/1/13
6	Transient Analysis	25 days	Mon 1/28/13	Fri 3/1/13
7	Preliminary Design Report	25 days	Mon 1/7/13	Fri 2/8/13
8	Environmental Permitting	20 days	Mon 2/4/13	Fri 3/1/13
9	**Phase 2 Force Main Design**	**64 days**	**Mon 2/25/13**	**Thu 5/23/13**
10	50% Plans and Specifications	25 days	Mon 2/25/13	Fri 3/29/13
11	City Review	7 days	Mon 4/1/13	Tue 4/9/13
12	90 Percent Plans and Specifications	20 days	Wed 4/10/13	Tue 5/7/13
13	City Review	7 days	Wed 5/8/13	Thu 5/16/13
14	100 % (Final) Plans and Specifications	5 days	Fri 5/17/13	Thu 5/23/13
15	**Phase 1 and 2 Complete**	**0 days**	**Thu 5/23/13**	**Thu 5/23/13**
16	**Bid Project**	**20 days**	**Fri 5/24/13**	**Thu 6/20/13**



City of Newport
Big Creek Force Main Design Project
Date: Tue 1/8/13

Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone
Rolled Up Progress
Split
External Tasks
Project Summary
Group By Summary
Deadline