

## RESOLUTION No. 2013-3038

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**A RESOLUTION AUTHORIZING THE CITY MANAGER TO ENTER INTO A PROFESSIONAL SERVICES AGREEMENT WITH BROWN AND CALDWELL, INC. TO COMPLETE A STORMWATER MASTER PLAN UPDATE IN THE AMOUNT OF \$198,698.00**

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### RECITALS:

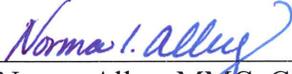
1. The Drainage Master Plan for the City of Newberg was last updated in September, 2001, by Thomas/Wright, Inc. An update is required to provide a comprehensive phased-drainage capital improvement plan in sync with the City's growth for the next 20 years.
2. The objectives of the proposed update include, but are not limited to, an assessment of the current stormwater conveyance system; development of a user friendly drainage model; incorporation of new regulatory requirements; planning for system expansion to meet future growth; and improving the overall efficiency in engineering, operations and maintenance of the existing and future improvements.
3. Through a qualification based Request for Proposals process, the City received a total of five (5) proposals from the following consultants on January 24, 2013: Brown and Caldwell, Cardno, David Evans and Associates, Herrera, and Keller Associates.
4. A four-member evaluation committee reviewed and scored each proposal based on four key categories: stormwater master plan experience, key personnel qualifications, proposed scope and understanding, and project delivery schedule. The committee ranked Brown and Caldwell as the most qualified firm for this project. Brown and Caldwell submitted a detailed proposal outlining the scope of work with a reasonable phase-by-phase cost breakdown, which is attached as Exhibit "A" and by this reference incorporated.

### THE CITY OF NEWBERG RESOLVES AS FOLLOWS:

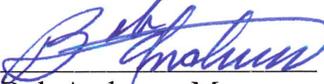
The City Council, acting as Contract Review Board for the City, does hereby authorize the city manager to enter into a Professional Services Agreement with Brown and Caldwell, Inc. to complete a Stormwater Master Plan Update in the amount of \$198,698.00.

- **EFFECTIVE DATE** of this resolution is the day after the adoption date, which is: April 2, 2013.

**ADOPTED** by the City Council of the City of Newberg, Oregon, this 1<sup>st</sup> day of April, 2013.

  
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Norma Alley, MMC, City Recorder

**ATTEST** by the Mayor this 1<sup>st</sup> day of April, 2013.

  
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Bob Andrews, Mayor

## Attachment A

# Scope of Work

The City of Newberg (City) is developing an updated Stormwater Master Plan that provides a clear understanding of existing stormwater infrastructure and an outline of stormwater projects to address both existing and future needs. In 2001, the City prepared a Drainage Master Plan to address capacity deficiencies in each of the three drainage basins (Hess Creek, Springbrook Creek, and Chehalem Creek). Since then, new development plans and changing environmental regulations have prompted the need to develop an updated Stormwater Master Plan. This Master Plan Update Project will include an update list of Capital Improvement Projects (CIPs) and a strategy for system maintenance that gives the City confidence in implementing the stormwater program over the next 10 years.

### **Task 1. Project Management**

**Objective:** To provide overall project coordination and ongoing communication with the City.

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

- *Kick-off meeting:* Conduct a kick-off meeting with the City and project team to confirm the project objectives. Prior to the meeting, Brown and Caldwell (BC) will prepare a data request list, documenting data needs from the City. At the kick-off meeting, BC will also present a draft table of contents for the Master Plan. While the draft table of contents may be refined during the project, the draft will provide a starting point for setting expectations of the Master Plan project. Other agenda items will include public and stakeholder involvement, schedule, and project communication.
- *Coordination meetings:* Bi-weekly check-in phone calls will be conducted for the project duration to discuss project progress and coordinate deliverables with the City.
- *Quality assurance/quality control (QA/QC):* The Project Manager will coordinate peer reviews to be conducted on project deliverables to result in the development of high quality products. Specifically, QC checks will be completed by technical experts as necessary during the course of the project.
- *Progress Reports/Invoicing:* BC will prepare monthly project progress reports and invoices.

**Deliverables:** The following deliverables are included in this task:

- Kick-off meeting agenda
- Data request list
- Kick-off meeting minutes
- Bi-Weekly phone calls
- Monthly project progress reports and invoices

**Assumptions:** The following assumptions were made for this task:

- Project coordination meetings will be conducted via telephone and attended by one or two BC staff.
- Additional project meetings are included in technical tasks below.



## Task 2. Data Development

**Objective:** To gather, examine, and interpret existing data, records, and reports.

**Activities:** Prior to the project kick-off meeting, BC will review existing information provided by City staff and also review information provided during the project. The information includes the following:

- *Flow data collection:* BC will review collected flow data and identify data for use in reviewing modeling results. This will be used to confirm modeling results are close to measured flow.
- *GIS database:* BC will review the City's existing storm drainage information provided by the City. A desktop analysis will be conducted to compare recorded manhole rim elevations in the City's GIS system with City provided LIDAR data. This comparison will be used to identify major discrepancies and where a datum inconsistency is likely. Where a standard offset is apparent, the GIS data will be adjusted to match the LIDAR elevations. Where inconsistent data gaps are present, BC will develop a priority list of field data needs and coordinate with City staff to collect the required data.
- *Staff interviews:* After establishing a baseline understanding of the storm drainage network and stormwater program information, BC will prepare a stormwater program questionnaire. Using the questionnaire, BC will conduct interviews with up to six City staff members, identified by the City's project manager. Interviews will be focused on identifying storm drainage and water quality problem areas, system deficiencies, and maintenance and operational needs for the stormwater program. Technical Memorandum (TM) No. 1 will be prepared to document the interviews and findings.

**Deliverables:** The following deliverables are included in this task:

- Stormwater questionnaire
- TM No. 1: Staff Interview Results

**Assumptions:** The following assumptions were made for this task:

- The City will provide up-to-date LIDAR data to be used in comparing GIS elevations.
- Flow monitoring will be completed by an independent contractor under separate, direct contract with the City. BC review of the data is for usefulness in the project and will not be a QA/QC review of the data.
- Field work to collect additional stormwater inventory data will be completed by City staff.

## Task 3. Flow Model Development

**Objective:** To develop a hydrologic/hydraulic model of the City's stormwater system (pipes, manholes, open channel conveyances, and drainage areas) to represent both existing and future flows.

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

- Using the GIS system inventory updated in Task 2, land use information provided by the City, and topography data, BC will establish drainage basin boundaries and hydrologic characteristics for areas draining to and through the City. A model of existing hydrologic and hydraulic conditions will be developed using the PC SWMM 2011. The modeled network will include storm system piping greater than 12 inches, manholes, and larger culverts associated with the identified creek systems and all



within the City boundaries. It will not include smaller storm pipe systems, driveway culverts, small roadside ditches, or catch basin leads. BC will prepare TM No. 2 to document the modeling methodology. At the end of the project model files will be provided to the City in PC SWMM and EPA SWMM format.

- Two modeled scenarios will be developed to represent existing land use information and future (build-out) land use to represent expected development conditions as defined by the City's planning documents. The models will include simulation of the 2-, 10-, 25-, and 100-year, 24-hour, Type IA storm events.
- Model validation will include a comparison of recorded flow information to modeled flows at up to four locations in the City. Additional validation will include a comparison to anecdotal information of observed flow conditions.
- Modeling results (basin boundaries, peak flows, and surcharge areas) will be documented as GIS shapefiles, so that the City has access to modeling data and results. Documentation of model development and modeling results will be added to TM 2 for the 60% submittal.
- BC will prepare for and present one training session for City staff on using the model to understand flow data and the impacts from capacity improvements. The training session is expected to last approximately 2 hours.
- BC will acquire and review HEC RAS models prepared for FEMA's Flood Insurance Study for Yamhill County to evaluate conditions in open channels of Chehalem Creek, Hess Creek, and Springbrook within the city limits.

**Deliverables:** The following deliverables are included in this task:

- TM No. 2: Modeling Methodology (30 percent submittal)
- TM No. 2: Updated Hydrologic and Hydraulic Modeling Results(60 percent submittal)
- One training session for City staff
- Electronic modeling files in PC SWMM and EPA SWMM format at project completion
- GIS shapefiles documenting existing and future flow rates at key locations

**Assumptions:** The following assumptions were made for this task:

- City staff will provide BC with flow data for model verification.
- City staff will provide BC with future population growth and land use projections.
- The fee estimate is based on modeling pipes 12 inches in diameter and larger.
- No changes or updates to the HEC RAS models are included in this scope of work.

#### **Task 4. System Analysis**

**Objective:** To identify current and future capacity issues and stormwater infrastructure needs.

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

- BC will work with City staff to establish design criteria for the performance of stormwater infrastructure. Design criteria will identify when system improvements are required in the form of either downstream capacity improvements or upstream flow control. Design criteria will be documented in TM No. 3 for City review.



- BC will use the hydraulic models from Task 3 to analyze the functionality of the existing stormwater system to convey both current and future predicted flows. Capacity problem areas will be compared to flooding reports. TM No. 3 will be expanded to include documentation of problem areas.
- BC will conduct an analysis to identify opportunities to retrofit the storm drainage infrastructure. TM No. 3 will be expanded to describe storage and water quality retrofit opportunities and the impacts on long-term infrastructure needs.
- BC will conduct a future system analysis to identify capacity upgrades or new trunklines needed to support this future growth. The City has approved an Urban Growth Boundary Amendment to support the development of the South Industrial Area. Other areas of significant future growth are expected northeast of the City TM No. 3 will be expanded to document future infrastructure needs.

**Deliverables:** The following deliverables are included in this task:

- TM No. 3: Design Criteria (30 percent submittal)
- TM No. 3: Including Problem Areas (60 percent submittal)
- TM No. 3: Including Retrofit Strategies and Future Infrastructure Needs (90 percent submittal)

**Assumption:** The future growth analysis will focus on identifying conceptual locations for public infrastructure facilities. Design of stormwater systems within individual development areas will be the responsibility of the developer.

## **Task 5. Maintenance and Program Evaluation**

**Objective:** To develop a long-term maintenance strategy and staffing plan.

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

- Through staff interviews conducted in Task 2, BC will develop an understanding of the City's current maintenance practices. BC will document maintenance obligations from the City's TMDL Plan. BC will develop a proposed maintenance strategy based on the City's current program, with adjustments to improve program efficiencies through adjusted schedules, frequencies, and/or improved tracking methods. Through a discussion with City staff, BC will prepare TM No. 4 to present the preferred maintenance strategy and schedule.
- BC will develop a staffing plan for the stormwater program. The staffing plan will include field maintenance activities, as well as recordkeeping, TMDL reporting, and overall program management to give a total overview of stormwater program needs. BC will develop staffing recommendations using the same format and methodology that was used in the SSMP. TM No. 4 will be expanded to document the staffing plan.

**Deliverables:** The following deliverables are included in this task:

- TM No. 4: Maintenance Strategy (60 percent submittal)
- TM No. 4: Including Staffing Plan (90 percent submittal)

**Assumption:** City staff will provide information about current maintenance activities, schedules, frequencies, and costs.

**Task 6. Project Prioritization****Objective:** To establish a 20-year Stormwater CIP.**Activities:** The following activities are included in this task:

- *CIP strategy meeting:* After completion of Task 4, the project team will conduct a CIP Strategy Meeting with City staff to facilitate discussion of the City's realistic goals and expectations for a CIP program. The Strategy Meeting will also be used to discuss preliminary project alternatives and establish project prioritization criteria, so that the proposed CIP reflects the values of the community and top-rated needs (i.e., maintenance versus replacement versus retrofit).
- *CIP development:* CIP development will be conducted to create a list of capital projects that address critical needs and top priorities. When possible, problem areas will be combined into single projects that serve multiple objectives, such as integrating enhanced water quality treatment with necessary capacity improvements. Project fact sheets will be developed for each major project, showing project information, sketches, costs, and a proposed schedule on a single page.
- *CIP cost estimation:* Planning level cost estimates will be prepared for each project. Costs will include capital expenses and annual expenses for activities associated with maintenance. Recent bid documents and unit cost estimates for local clients that have already been compiled will be utilized in this task.
- *Project prioritization:* Using the rating criteria established in the CIP Strategy Meeting rank projects based on City priorities. Projects will be categorized as short-term (0 to 5 years), medium-term (5 to 10 years), or long-term (10 to 20 years) targets based on priority, funding availability, and design considerations.
- *Funding analysis:* BC will prepare a preliminary funding analysis to compare the proposed project and activity schedule to current stormwater program revenue. The analysis will include a comparison of up to three project schedule alternatives based on City's current stormwater utility rate. The funding analysis will be presented in spreadsheet format, to aid in future budget discussions.

**Deliverables:** The following deliverables are included in this task:

- CIP prioritization criteria
- CIP project sheets (maps, sketches, descriptions, and cost estimates)
- CIP prioritization and proposed schedule, funding analysis spreadsheet

**Assumptions:** The following assumptions were made for this task:

- The City will participate in the CIP strategy meeting and project prioritization.
- Cost estimates will be provided in 2013 dollars.

**Task 7. Master Plan Documentation****Objective:** To submit project documentation and prepare Master Plan.**Activities:** The following activities are included in this task:

- Project documentation will be submitted for City review at the 30, 60, and 90 percent levels. These submittals will consist of TMs, maps, figures, and technical documentation as described in Tasks 1 through 6.

- The 30 percent submittal will include a proposed SWMP outline, TM No. 1 (Staff Interviews), TM No. 2 (Model Selection and Methodology), and TM No. 3 (Design Criteria).
- The 60 percent submittal will include revised TM No. 2 (Hydrologic and Hydraulic Modeling), TM No. 3 (Problem Areas), and TM No. 4 (Maintenance Strategy).
- The 90 percent submittal will include TM No. 2 (Retrofit Strategies and Future Infrastructure Needs), TM No. 4 (Staffing plan), and CIP Project Sheets.
- BC will meet with City staff following the 30, 60, and 90 percent submittals to receive and discuss City comments.
- BC will incorporate all TMs prepared throughout the project into a concise Master Plan that reflects stormwater program goals and projects and activities over the next 10 to 20 years. An Executive Summary will highlight the major findings and recommendations from the Master Plan. Detailed technical information, such as modeling data and cost estimates, will be included as appendices. BC will prepare a Draft Master Plan for Staff and Council Review and a Final Master Plan, incorporating City and Council comments.
- BC will prepare final project documentation and transmit project files, models, and documentation to the City.

**Deliverables:** The following deliverables are included in this task:

- 30 percent submittal TMs
- 30 percent submittal review meeting
- 60 percent submittal TMs
- 60 percent submittal review meeting
- 90 percent submittal TMs
- 90 percent submittal review meeting
- Draft Master Plan in electronic format
- Final Master plan in electronic PDF
- Printed and bound copies of the final Master Plan
- Electronic project files
- Stormwater inventory GIS files in electronic format
- Hydrologic and hydraulic modeling files in electronic format

**Assumptions:** The following assumptions were made for this task:

- The City's Project Manager will coordinate City review of 30, 60, and 90 percent submittals and provide consolidated direction to BC at review meetings.
- Five final copies of the Master Plan will be produced. Draft copies will be distributed electronically.

## **Task 8. Public and Council Review**

**Objective:** To present the Master Plan to the public and City council.

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



- Following the 60 percent submittal, BC will prepare materials for a public information meeting to present the Master Plan goals and objectives. The meeting will be used to solicit feedback from the public concerning program priorities and perceived infrastructure trouble spots.
- Following the 90 percent submittal, BC will prepare a revised presentation and materials to present the Master Plan findings and recommendations at a City council work session. The presentation will be aimed at educating the council about the City's stormwater-related obligations and the opportunities to integrate stormwater maintenance and projects with other City programs.
- BC will attend a City council meeting when the final SWMP is considered for adoption.

**Deliverables:** The following deliverables are included in this task:

- Materials and Presentation at one public information meeting.
- Materials and Presentation at one council work session.
- Attendance at one City council meeting.

**Assumption:** City staff will coordinate logistics for the public information meeting, including securing a meeting location, establishing meeting date and time, advertising the meeting to the public, and preparing sign-in sheets and other meeting documentation materials.

Newberg, City of (OR) -- Newberg SW Master Plan Update														
Phase	Phase Description	Harper, James A	Gage, Eva D	Maxwell, Alissa M	Wieland, Angela M	Keeley, Janice M	Hansen, James R	Reininga, Krista	Whirty, Nathan S	Total Hours per Phase	Total Labor per Phase	Travel	Total Expense	Total Cost per Phase
001	Project Management	\$185 36	\$81 20	\$130 48	\$130 8	\$120 0	\$185 12	\$185 12	\$100 0	136	20,000	200	200	20,200
002	Data Development	8	2	40	24	44	0	0	40	158	19,242	200	200	19,442
003	Flow Model Development	20	8	80	8	260	4	0	28	408	50,528	0	0	50,528
004	System Analysis	14	8	80	16	60	8	0	8	194	25,198	0	0	25,198
005	Maintenance and Program Eval	4	6	12	76	0	8	0	0	106	14,146	0	0	14,146
006	Project Prioritization	32	0	96	8	20	0	0	16	172	23,440	0	0	23,440
007	Master Plan Documentation	40	18	132	12	30	0	0	20	252	33,178	300	300	33,478
008	Public Review/Council	24	6	48	0	0	0	0	8	86	11,966	300	300	12,266

**GRAND TOTAL**      178      68      536      152      414      32      12      120      1,512      197,698      1,000      1,000      198,698

Hours and Dollars are rounded to nearest whole number.