

**Exhibit A**  
**Amendment No. 3**  
**Scope of Work**  
**City of Oregon City**  
**Hazelwood Drive Sewer Replacement**  
**Final Design and Services During Bidding and Construction**  
Project No. CI 16-005  
RH2 Project No. ORC 917.061  
April 2018

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## **Background**

On April 5, 2017, the City of Oregon City (City) entered into a Professional Services Agreement authorizing RH2 Engineering, Inc., (RH2) to provide engineering services for the Hazelwood Drive Sewer Replacement Project. The Phase 1 – Alternatives Analysis recommended that the existing under-sized sewer be replaced in an alternate alignment instead of through backyard easements into Hazelwood Drive between the residences located at 923 Hazelwood Drive and 1012 Hazelwood Drive. The sewer main in the backyard easements is to become a local collection sewer. The other sections of the existing under-sized sewer main are recommended to be replaced in the original alignments.

Initially, the agreement provided for the alternatives analysis to determine the preferred approach to replace and upsize the sewer and to provide preliminary engineering. The agreement was revised by Amendment No. 1 to perform addition geotechnical and environmental review for the segment in the recommended alternate alignment. The agreement was also revised by Amendment No. 2 to provide for preliminary design of this new segment in the alternate alignment and to design the upsized replacement sewer main in the other areas, to keep the project moving while the alternate alignment was evaluated.

Based on the alternatives analysis, the City wants to move forward with increasing the capacity of the downstream segments that are within existing street right-of-way and follow later with increasing the capacity of the upstream segments, parts of which are in sensitive areas and easements and will require additional permitting and construction easements. Design of the downstream segments, defined as “Schedule B,” consists of approximately 1,300 linear feet (LF) of gravity sewer main in Hazelwood Drive and is proposed to be designed and constructed by October 2018. *It is assumed that the Schedule B sewer will be constructed via a combination of open trench and trenchless (i.e., horizontal directional drill (HDD)) methods.* Design of the upstream segments, defined as “Schedule A,” consists of approximately 1,300 LF of gravity sewer main upstream of Hazelwood Drive and is expected to be constructed in 2019, allowing time for the required permitting and easement acquisition to be completed. *It is assumed that the Schedule A sewer will be constructed via a combination of open trench and trenchless (i.e., pipe bursting) methods.*

This amendment authorizes the above-noted revisions to the project scope of work and fee estimate by providing for final design, bidding services, and services during construction for the “Schedule B” (downstream) sewer main segments. It also provides for assistance in acquiring permits and easements for the “Schedule A” (upstream) segments. Design of the “Schedule A” segments was previously included under Amendment No. 2. A future amendment will be required for the bidding services and services during construction of the “Schedule A” work. The work authorized by this amendment will be performed and invoiced using the terms and conditions listed in the original agreement, plus previous amendments and/or agreements.

## **Amended Tasks for Phase 2 – Final Design**

**Retitle Task 3 from Final Design (Area A) to Final Design (Schedule A).**

**Replace the Task 3 Objective statement with the following:**

**Objective:** Prepare design plans, specifications, and an engineer's estimate of probable construction costs for the proposed sanitary sewer main improvements within ~~Area~~ **Schedule A**, up to an approximate 90-percent completion level. Perform utility coordination with private and franchise utilities. ***It is assumed that a future amendment will be provided to finalize the Schedule A design for bidding and construction.***

**Strike the first three (3) bullet items under the Task 3 Assumptions section.**

**Amend Task 3 to add the following additional services.**

- 3.7 Assist with Video Inspection: Assist and coordinate with City Public Works crews for the closed-circuit television (CCTV) video inspection of the Schedule A sewer main segments, including inspection of lateral and branch sewers (side launches) up to 50 feet from the main sewer line. Review video inspection reports and video footage and coordinate with the City to identify needed repairs. Incorporate the findings of any needed repairs into the design plans for review.
- 3.8 Assist with Permitting: Meet with the City's Public Works and Planning Department staff to determine required permits for upsizing the sewer main in easements and the drainage ditch between Warner Parrott Road and Hazelwood Drive. Assist with preparing permit applications and addressing questions from permitting agencies.
- 3.9 Assist with Easement Acquisition: Determine areas needed for temporary access and construction easements. Subcontract with a professional property appraiser to determine value and/or reasonable cost for the temporary construction easements and to prepare legal descriptions of easement areas. Support City Public Works staff with negotiations with affected property owners to acquire the needed easements.

### **Assumptions:**

- *The City will clean and inspect the Schedule A sewers mains with its CCTV video equipment.*
- *The City will lead the City permit process and pay for all permitting application costs.*
- *The City will lead the easement acquisition effort, including negotiations, preparation and review of all related legal documents, and proposals for easements.*
- *The level of effort required for permit and easement acquisition, including subcontracting requirements, have not been fully defined yet and are subject to change. The level of effort reflected in the Fee Estimate is a preliminary estimate based on RH2's experience on similar projects. Should a higher level of effort or additional services be required, RH2 will notify the City's project manager and will provide an amendment for review and approval.*

### **City Deliverables:**

- CCTV Video inspection report.

### **RH2 Deliverables:**

- Attendance at permit pre-application meeting.
- Easement appraisals.

- Easement legal descriptions.

**Add the following tasks:**

**Task 4 – Final Design (Schedule B)**

**Objective:** Prepare design plans, specifications, and an engineer's estimate of probable construction costs for the proposed sanitary sewer main improvements included within Schedule B for bidding and construction. Perform utility coordination with private and franchise utilities.

**Approach:**

- 4.1 Perform Additional Geotechnical Investigation: Subcontract and coordinate with a geotechnical drilling contractor to conduct eight (8) additional shallow boring explorations along the portion of the alignment within Hazelwood Drive that is planned to be constructed via HDD to determine the top elevation of the hard basalt layer along the alignment and anticipated conditions at the entry and exit pits. Observe field exploration as necessary. Subcontract with soil testing laboratory for soil properties analysis. Amend the geologic technical memorandum previously prepared as part of the alternatives analysis to incorporate the additional findings, and coordinate with design team and City to incorporate findings/recommendations into design.
- 4.2 Prepare 60-percent Design: Prepare preliminary design plans to the 60-percent design level with horizontal and vertical alignment details of the sanitary sewer main for City review. A preliminary opinion of probable construction cost will be developed for the preliminary design review submittal.
- 4.3 Attend 60-percent Review Meeting: Provide and present 60-percent design, including preliminary plan/profile sheets, details, engineer's estimate of probable construction cost, and updated project schedule for the City's review and comment. Attend one (1) review meeting with City staff and prepare meeting agenda and summary.
- 4.4 Perform Utility Coordination: Perform utility coordination work related to the following franchise and private utilities: power, communications, gas, cable television, and other private utilities that may be present within the project limits. Confirm utility owners within the project limits and assist utility owners with identifying and addressing potential utility conflicts.
- 4.5 Prepare 90-percent Plans and Specifications: Incorporate the City's 60-percent review comments and prepare 90-percent design plans. *The plans will include trench, bedding materials, backfill, compaction, and surface restoration, along with other supporting details and requirements for construction, testing, and permitting. It is assumed that the construction contractor will be responsible for preparing the final traffic control and erosion control plans in accordance with City and project phasing requirements.* Prepare construction contract documents to the 90-percent level, including both technical and non-technical construction contract requirements, general conditions, and special requirements. *Non-technical front-end specifications will be prepared using the City's most recent standard forms. Technical specifications will be in Oregon Department of Transportation/American Public Works Association format. This task will include a pre-bid meeting with potential contractors and will also include a determination of the need for special pre-bid qualifications for contractors, which will be incorporated into final bidding documents if warranted.* Prepare 90-percent engineer's estimate of probable construction costs for the proposed improvements.
- 4.6 Perform Internal Quality Control Review: Perform internal quality assurance and quality control (QA/QC) review of the plans and specifications at the 90-percent design stage.

- 4.7 Attend 90-Percent Review Meeting: Provide and present 90-percent design, including plans, specifications, engineer's estimate of probable construction cost, and updated project schedule for the City's review and comment. Attend one (1) review meeting with City staff and prepare meeting agenda and summary.
- 4.8 Prepare Final Plans and Specifications: Incorporate QA/QC comments and City's 90-percent review comments on the 90-percent plans and specifications into final construction contract documents for bidding and construction. Provide one (1) set of final documents in hard copy, half-size (11-inch by 17-inch) format for use in reproduction of bidding documents. *It is assumed the City will be responsible for printing and distributing bidding documents and bid advertisement.*

**Assumptions:**

- *It is anticipated that potential utility conflicts can be avoided with reasonable and timely cooperation from the impacted utility owners. Affected utilities will be responsible for potholing their facilities as requested to assist in developing designs that avoid their facilities to the extent practical and will be responsible for developing their relocation designs to accommodate the project.*
- *City utilities include water, sanitary sewer, and storm sewer facilities. It is assumed the City will locate its utilities by potholing or other means as deemed necessary to resolve conflicts in the construction of the project.*
- *City will provide timely response, with review comments transmitted electronically.*
- *It is recommended that at least one boring be completed at the north end of Tax Lot 200 (345 Warner Parrot Road – i.e. "church property") near the existing drainage ditch. The other borings are expected to be completed within the Hazelwood Drive right of way. The City will assist in obtaining the necessary right-of-entry and/or other agreement(s) necessary to complete the boring on Tax Lot 200.*

**RH2 Deliverables:**

- Electronic version (PDF) of the amended geologic technical memorandum.
- Electronic versions (PDF) of the plans and preliminary opinion of probable construction cost at the 60-percent design stage.
- Attendance at the 60-percent design review meeting, including preparation of meeting agenda and summary in electronic format (PDF).
- Notice of potential utility conflict letter(s) sent via USPS to each affected utility owner, and letter(s) with project plans and detailed redlines of potential conflict locations sent via email to each affected utility owner (if required due to utility conflict).
- Notice of utility conflict letter(s) sent via USPS to each affected utility owner, and letter(s) with project plans and utility relocation requirements sent via email to each affected utility owner (if required due to utility conflict).
- Notice of utility relocation time requirements letter(s) sent via USPS to each affected utility owner, and letter(s) with final project plans and project construction schedule sent via email to each affected utility owner (if required due to utility conflict).
- Electronic versions (PDF) of the construction contract documents, including plans, front-end documents and technical specifications, engineer's estimate of probable construction cost, and project schedule at the 90-percent design stage.

- Attendance at the 90-percent design review meeting, including preparation of meeting agenda and summary in electronic format (PDF).
- One (1) hard copy set (with plans in 11-inch by 17-inch format) and electronic versions (PDF) of the complete and final bid and construction contract documents for use in bidding and contractor selection.

## Task 5 – Services During Bidding (Schedule B)

**Objective:** Provide engineering services during the bidding phase of the project for securing a qualified contractor to construct the project.

**Approach:**

- 5.1 Respond to Bidder Questions and Prepare Addendum: Respond to questions from bidders and clarify, revise, or change construction plans, technical specifications, or construction contract conditions during the bidding process. Prepare an addendum determined necessary during the bidding process to plan holders. *It is assumed that one (1) addendum may be needed.*
- 5.2 Assist with Bid Opening and Bidder Evaluation: Review specialty contractor prequalification applications as part of the bid review process. Review subcontractors, suppliers, and others proposed by the prime contractor if required by the bidding documents. Develop bid tabulation and provide a letter of recommendation for award.

**Assumptions:**

- *The City will be the main point of contact during bidding, will be responsible for advertising the project for bids, and will produce and distribute the bidding documents.*

**RH2 Deliverables:**

- Up to one (1) addendum, as needed, in electronic format (PDF).
- Letter of recommendation for award in electronic format (PDF).

## Phase 3 – Services During Construction

### Task 6 – Services During Construction (Schedule B)

**Objective:** Provide construction contract administration services during project construction to support the City. *As the engineer of record, RH2 will provide periodic observation of the construction to review whether those elements of construction that are observed by RH2 conform to the project plans and specifications.*

**Approach:**

- 6.1 Attend Pre-construction Conference: Prepare for and attend a pre-construction conference with the contractor, City, RH2, and impacted or adjacent utilities. Prepare an agenda and meeting summary for the pre-construction conference.
- 6.2 Review Clarifications and Change Orders: Review written requests for information (RFIs) and change order proposals and provide written responses to the City.
- 6.3 Review Submittals: Review contractor submittals, shop drawings, and field testing per the project documents. Coordinate with the City regarding substitute and “or-equal” items proposed for use by the contractor.

- 6.4 Perform Periodic Field Observations: Provide observation of the construction work in progress per the plans, specifications, and City Standards. *It is assumed that construction observation will include, on average, approximately thirty-two (32) hours per week for eight (8) weeks of construction plus oversight. RH2 will coordinate with the contractor and City inspectors to provide construction observation at critical stages of construction and as requested by the City. The Contractor will retain and coordinate with testing firm(s) for any special inspections. Meet with the City and contractor weekly to review contractor's progress. Assist the City with project closeout services, including production of a punch list and review of punch list completion. Prepare recommendation for project acceptance.*
- 6.5 Prepare Record Drawings: Provide record drawings representative of the as-constructed project. *Record drawings will be completed based upon contractor and City inspector red-lined markups to as-bid drawings. Record drawings will be completed per City standards.*

**Assumptions:**

- *RH2 will provide construction contract administration and observations, including periodic site visits to monitor progress, respond to questions and address issues, confirm pay requests, and other on-call requests from the City. An average of thirty-two (32) hours per week for eight (8) weeks has been assumed for field visits and observations.*
- *Submittal review is assumed to be ten (10) submittals with 25-percent resubmittal, including the project schedule and schedule updates.*
- *The contractor will be responsible for providing construction survey and staking for field control and as-built surveying for use in preparing as-built drawings.*
- *Construction phase services defined in this task are variable in nature and depend in part on the contractor awarded the project. RH2's estimate is based upon an experienced and reasonable contractor being awarded the construction contract. RH2 recommends the City budget the amount shown in the estimate plus a contingency amount. The contingency would cover additional services if a more intensive level of observation and construction support is necessary.*

**RH2 Deliverables:**

- Pre-construction conference administration and documentation, including pre-construction conference meeting agenda and summary in electronic format (PDF).
- Clarifications and change orders review and documentation, if required, in electronic format (PDF).
- Submittal and shop drawings review and documentation in electronic format (PDF).
- Weekly construction meeting agenda and summary in electronic format (PDF).
- Construction observation and correspondence with the City and contractor, as needed, within the budgeted hours authorized. Construction observation reports from site visits to be provided to the City at progress meetings.
- Punch list in electronic format (PDF).
- Letter recommending substantial completion and project acceptance in electronic format (PDF).
- Record drawings in PDF and AutoCAD® DWG format, including external references, prepared in accordance with City standards.

EXHIBIT B  
City of Oregon City  
Hazelwood Drive Sewer Replacement  
Amendment No. 3  
Project No. CI 16-005  
Estimate of Time and Expense

Description		Staff Engineer	Project Engineer	Environmental Specialist	Engr Geologist	Project Manager	Principal	Administrative Support	Total Hours	Total Labor	Total Subconsultant	Total Expense	Total Cost
	Classification Rate	Professional II \$151.00	Professional VII \$207.00	Professional V \$182.00	Professional VII \$207.00	Professional VII \$207.00	Professional VIII \$216.00	Administrative III \$94.00					

Phase 2 Final Design

Task 3	Final Design (Schedule A) - Amended Task	20	10	8	-	4	-	-	42	\$ 7,374	\$ 5,750	\$ 206	\$ 13,330
3.7	Assist with Video Inspection	4	2			-	-	-	6	\$ 1,018	\$ -	\$ 25	\$ 1,043
3.8	Assist with Permitting	10	4	8		2	-	-	24	\$ 4,208	\$ -	\$ 116	\$ 4,324
3.9	Assist with Easement Acquisition	6	4			2	-	-	12	\$ 2,148	\$ 5,750	\$ 65	\$ 7,963

Task 4	Final Design (Schedule B) - New Task	184	58	-	4	24	8	28	306	\$ 49,946	\$ 4,025	\$ 5,095	\$ 59,066
4.1	Perform Additional Geotechnical Investigation	12	2		4	1	-	4	23	\$ 3,637	\$ 4,025	\$ 102	\$ 7,764
4.2	Prepare 60-percent Design	60	16			2	-	-	78	\$ 12,786	\$ -	\$ 1,690	\$ 14,476
4.3	Attend 60-percent Review Meeting	4	3			3	-	-	10	\$ 1,846	\$ -	\$ 57	\$ 1,903
4.4	Perform Utility Coordination	8	2			1	-	2	13	\$ 2,017	\$ -	\$ 215	\$ 2,232
4.5	Prepare 90-percent Plans and Specifications	80	24			4	-	16	124	\$ 19,380	\$ -	\$ 2,325	\$ 21,705
4.6	Perform Internal Quality Control Review	-	-			8	8	-	16	\$ 3,384	\$ -	\$ 165	\$ 3,549
4.7	Attend 90-percent Review Meeting	4	3			3	-	-	10	\$ 1,846	\$ -	\$ 57	\$ 1,903
4.8	Prepare Final Plans and Specifications	16	8			2	-	6	32	\$ 5,050	\$ -	\$ 484	\$ 5,534

Task 5	Services During Bidding (Schedule B) - New Task	24	8	-	-	3	-	-	35	\$ 5,901	\$ -	\$ 148	\$ 6,049
5.1	Respond to Bidder Questions and Prepare Addendum	12	4			2	-	-	18	\$ 3,054	\$ -	\$ 76	\$ 3,130
5.2	Assist with Bid Opening and Bidder Evaluation	12	4			1	-	-	17	\$ 2,847	\$ -	\$ 71	\$ 2,918

Subtotal for Phase 2 Final Design Tasks	228	76	8	4	31	8	28	383	\$ 63,221	\$ 9,775	\$ 5,449	\$ 78,445
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Phase 3 Services During Construction

Task 6	Services During Construction (Schedule B)	312	33	-	-	13	-	-	358	\$ 56,634	\$ -	\$ 2,244	\$ 58,878
6.1	Attend Pre-construction Conference	6	3			3	-	-	12	\$ 2,148	\$ -	\$ 70	\$ 2,218
6.2	Review Clarifications and Change Orders	16	6			2			24	\$ 4,072	\$ -	\$ 102	\$ 4,174
6.3	Review Submittals	20	6			-			26	\$ 4,262	\$ -	\$ 108	\$ 4,370
6.4	Perform Periodic Field Observations	256	16			8			280	\$ 43,624	\$ -	\$ 1,594	\$ 45,218
6.5	Prepare Record Drawings	14	2			-	-	-	16	\$ 2,528	\$ -	\$ 371	\$ 2,899

Subtotal for Phase 3 Services During Construction Tasks	312	33	-	-	13	-	-	358	\$ 56,634	\$ -	\$ 2,244	\$ 58,878
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AMENDMENT NO. 3 TOTAL	540	109	8	4	44	8	28	741	\$ 119,855	\$ 9,775	\$ 7,693	\$ 137,323
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**EXHIBIT C**  
**RH2 ENGINEERING, INC.**  
**2018 SCHEDULE OF RATES AND CHARGES**

<b>RATE LIST</b>	<b>RATE</b>	<b>UNIT</b>
Professional I	\$139	\$/hr
Professional II	\$151	\$/hr
Professional III	\$162	\$/hr
Professional IV	\$172	\$/hr
Professional V	\$182	\$/hr
Professional VI	\$191	\$/hr
Professional VII	\$207	\$/hr
Professional VIII	\$216	\$/hr
Professional IX	\$216	\$/hr
Technician I	\$93	\$/hr
Technician II	\$98	\$/hr
Technician III	\$131	\$/hr
Technician IV	\$139	\$/hr
Administrative I	\$65	\$/hr
Administrative II	\$78	\$/hr
Administrative III	\$94	\$/hr
Administrative IV	\$109	\$/hr
Administrative V	\$130	\$/hr
CAD/GIS System	\$27.50	\$/hr
CAD Plots - Half Size	\$2.50	price per plot
CAD Plots - Full Size	\$10.00	price per plot
CAD Plots - Large	\$25.00	price per plot
Copies (bw) 8.5" X 11"	\$0.09	price per copy
Copies (bw) 8.5" X 14"	\$0.14	price per copy
Copies (bw) 11" X 17"	\$0.20	price per copy
Copies (color) 8.5" X 11"	\$0.90	price per copy
Copies (color) 8.5" X 14"	\$1.20	price per copy
Copies (color) 11" X 17"	\$2.00	price per copy
Technology Charge	2.50%	% of Direct Labor
Mileage	\$0.545	price per mile (or Current IRS Rate)
Subconsultants	15%	Cost +
Outside Services	at cost	

Rates listed are adjusted annually.