

RESOLUTION NO. 2433

A RESOLUTION OF THE CITY OF WILSONVILLE ACTING IN ITS CAPACITY AS ITS LOCAL CONTRACT REVIEW BOARD AUTHORIZING THE EXECUTION OF A PROFESSIONAL SERVICES AGREEMENT WITH MURRAY, SMITH AND ASSOCIATES TO PROVIDE ENGINEERING AND CONSULTING SERVICES FOR THE WASTEWATER COLLECTION SYSTEM PROJECTS.

WHEREAS, the adopted City of Wilsonville FY 2012-13 and FY 2013-14 Budgets include funding for the preparation of a Wastewater Collection System Master Plan and other Wastewater Projects (the Project); and

WHEREAS, Wilsonville Code (WC) Section 2.310 designates the City Council as the City of Wilsonville's Local Contract Review Board and the City Manager as the City's "Contracting Agency" for purposes assigned under the State of Oregon Public Contracting Code; and

WHEREAS, WC Section 2.315 applies to personal service contracts, including engineering services that are required to complete the Project; and

WHEREAS, State of Oregon Public Contracting Code ORS Chapter 279.100 – 125 contracting requirements apply to architectural, engineering, land surveying, and related services; and

WHEREAS, to prepare for the Project, the City completed a competitive qualifications-based selection process in accordance with ORS 279.110; and

WHEREAS, the City solicited Requests for Qualifications (RFQ) for professional consulting services and received six responses; and

WHEREAS, following screening and evaluation of qualifications, three consulting firms were interviewed, and Murray, Smith and Associates (MSA) was selected as the firm best qualified to provide the engineering services for the Project;

WHEREAS, the Project was separated into phases for which the Phase 1 Professional Services Agreement was authorized through Resolution No. 2380 at the October 1, 2012 City Council meeting; and

WHEREAS, MSA has successfully performed the services for the Phase 1 contract, affirming their selection as the firm best qualified for the Project; and

WHEREAS, a work scope and a fair and reasonable fee has been negotiated for Phase 2 services that will complete the Wastewater Collection System Master Plan – CIP #2088; and

WHEREAS, ORS 279C.115 allows for direct contracting for this Phase 2 work because it is a continuation of the Project as described in the original RFQ and anticipated as documented in the October 1, 2012 staff report for Resolution No. 2380; and

WHEREAS, additional future phases to complete the Project are anticipated (as described in the original RFQ) and will be presented to the City Council for their consideration.

NOW, THEREFORE, THE CITY OF WILSONVILLE RESOLVES AS FOLLOWS:

1. The City Council serving in the role of Local Contract Review Board adopts the above recitals as findings and incorporates them by reference as if fully set forth herein.
2. The City Council recognizes the Phase 2 work is a continuation of the Wastewater Collection System Master Plan and other Wastewater Projects.
3. The City Council serving in its role as Local Contract Review Board does hereby approve and authorize the City Manager to execute a Professional Services Agreement for Phase 2 services for Wastewater Collection System Master Plan and other Wastewater Projects in the amount, of \$141,851 between the City of Wilsonville and Murray, Smith and Associates, a copy of which is marked Exhibit A, attached hereto and incorporated herein.
4. This resolution shall be effective upon adoption.

ADOPTED by the City of Wilsonville at a regular meeting thereof this 15th day of July, 2013 and filed with the Wilsonville City Recorder this date.

TIM KNAPP, MAYOR

ATTEST:

Sandra C. King, MMC, City Recorder

SUMMARY OF VOTES:

Mayor Knapp	Yes
Council President Starr	Yes
Councilor Goddard	Yes
Councilor Fitzgerald	Yes
Councilor Stevens	Yes

Attachment : City of Wilsonville Professional Services Agreement w/ Scope & Cost attachments

**CITY OF WILSONVILLE
PROFESSIONAL SERVICES AGREEMENT
WASTEWATER COLLECTION SYSTEM PROJECT**

This Professional Services Agreement ("Agreement") is made and entered into on this ____ day of July, 2013 ("Effective Date") by and between the **City of Wilsonville**, a municipal corporation of the State of Oregon (hereinafter referred to as the "City"), and **Murray, Smith and Associates, Inc.** (hereinafter referred to as "Consultant").

RECITALS:

WHEREAS, the City requires services which Consultant is capable of providing, under terms and conditions hereinafter described; and

WHEREAS, Consultant represents that Consultant is qualified to perform the services described herein on the basis of specialized experience and technical expertise; and

WHEREAS, Consultant is prepared to provide such services as the City does hereinafter require.

NOW, THEREFORE, in consideration of these mutual promises and the terms and conditions set forth herein, the parties agree as follows:

AGREEMENT:

Section 1. Term

The term of this Agreement shall be from the Effective Date until all services required to be performed hereunder ("Services") are completed and accepted, unless earlier terminated in accordance herewith. Consultant shall diligently perform the Services according to the requirements and deliverable dates identified in the Scope of Services, attached hereto as **Exhibit A** and incorporated by reference herein. Except in the event of an extension of time, agreed to in writing by the City, all Services must be completed no later than March 31, 2014.

Section 2. Consultant's Services

2.1. Consultant will perform professional engineering services for the analysis, planning, permitting, and design of the City's wastewater collection system, as more particularly described in the Scope of Services, attached hereto as **Exhibit A** and incorporated by reference herein, for the Wastewater Collection System Master Plan and Wastewater Collection System Project Phase 2 ("Project").

2.2. All written documents, drawings, and plans submitted by Consultant in conjunction with the Services shall bear the signature, stamp, or initials of Consultant's authorized Project Manager. Any documents submitted by Consultant which do not bear the signature, stamp, or initials of Consultant's authorized Project Manager, will not be relied upon by the City. Interpretation of plans and answers to questions regarding the Services or Scope of Services given by Consultant's Project Manager may be verbal or in writing, and may be relied upon by the City, whether given verbally or in writing. If requested by the City to be in writing, Consultant's Project Manager will provide such written documentation.

2.3. Consultant will not be responsible for damages, be in default, or be deemed to be in default by reason of delays in performance due to reasons beyond Consultant's reasonable control, including but not limited to strikes, lockouts, severe acts of nature, or other unavoidable delays or acts of third parties not under Consultant's direction and control ("Force Majeure"). In the case of the happening of any Force Majeure event, the time for completion of the Services will be extended accordingly by the City, in writing. Lack of labor, supplies, materials, or the cost of any of the foregoing shall not be deemed a Force Majeure event.

2.4. The existence of this Agreement between the City and Consultant shall not be construed as the City's promise or assurance that Consultant will be retained for future services beyond the Scope of Services described herein.

2.5. Consultant shall maintain the confidentiality of any confidential information that is exempt from disclosure under state or federal law to which Consultant may have access by reason of this Agreement. Consultant warrants that Consultant's employees assigned to work on the Services provided in this Agreement shall be clearly instructed to maintain this confidentiality. All agreements with respect to confidentiality shall survive the termination or expiration of this Agreement.

Section 3. City's Responsibilities

3.1. The scope of the City's responsibilities, including those of the City's Project Manager, are also set forth in the Scope of Services. The City will designate a Project Manager to facilitate day-to-day communication between Consultant and the City, including timely receipt and processing of invoices, requests for information, and general coordination of City staff to support the Project.

3.2. The City hereby certifies that sufficient funds are available and authorized to finance the Compensation Amount set forth in **Section 4** of this Agreement.

Section 4. Compensation

4.1. Except as otherwise set forth in this **Section 4**, the City agrees to pay Consultant a not to exceed price of ONE HUNDRED FORTY ONE THOUSAND EIGHT HUNDRED FIFTY-ONE DOLLARS (\$141,851) for performance of the Services ("Compensation Amount") identified in **Exhibit A**. Any compensation in excess of the Compensation Amount will require express written agreement by the City and Consultant. Any Tasks identified within **Exhibits A or B** as a Contingency Task shall require written authorization (email is acceptable) from the City Project Manager before Consultant shall perform services against that Task. Without such authorization(s) the Non-Contingency Not To Exceed Compensation Amount is reduced to ONE HUNDRED THIRTY-SEVEN THOUSAND SIXTY-NINE DOLLARS (\$137,069). **Exhibit B** provides an estimate of the hours required for each Task.

4.2. During the course of Consultant's performance, if the City or its Project Manager specifically requests Consultant to provide additional services that are beyond the Scope of Services described on **Exhibit A**, Consultant shall provide such additional services and bill the City at the hourly rates outlined on Consultant's Rate Schedule, as set forth in **Exhibit B**. Compensation above the amount shown in **Subsection 4.1** above requires a written Change Order, executed in compliance with the provisions of **Section 19**.

4.3. Unless expressly set forth on Consultant's Rate Schedule as a reimbursable expense item that is not included in the fixed Compensation Amount of **Subsection 4.1**, or as an additional charge for which a written Change Order has been approved, in accordance with **Subsection 4.2** and the

requirements of **Section 19**, Consultant shall only be entitled to the Compensation Amount specified in **Subsection 4.1**.

4.4. Except for amounts withheld by the City pursuant to this Agreement, Consultant will be paid for Services for which an itemized invoice is received by the City within thirty (30) days of receipt, unless the City disputes such invoice. In that instance, the undisputed portion of the invoice will be paid by the City within the above timeframe. The City will set forth its reasons for the disputed claim amount and make good faith efforts to resolve the invoice dispute with Consultant as promptly as is reasonably possible.

4.5. The City will be responsible for the direct payment of required fees payable to governmental agencies, including but not limited to plan checking, land use, zoning, and all other similar fees resulting from this Project, that are not specifically covered by **Exhibit A**.

4.6. Consultant's per hour compensation rates shown within **Exhibit B** are all inclusive and include, but are not limited to, salaries or wages plus fringe benefits and contributions, including payroll taxes, workers' compensation insurance, liability insurance, profit, pension benefits, and similar contributions and benefits, technology and/or software charges, office expenses, and all other indirect and overhead charges. Unless otherwise documented, all Direct Costs, including subcontractor costs, shall be charged at cost, without markup. Consultant's per hour compensation rates and direct cost rates shown within **Exhibit B** are fixed values for the duration of this Agreement, unless otherwise negotiated in writing between the City and Consultant subsequent to this Agreement.

Section 5. City's Project Manager

The City's Project Manager is Mike Ward. The City shall give Consultant prompt written notice of any redesignation of its Project Manager. The City's Project Manager can be reached by telephone at (503) 570-1546 and via email at ward@ci.wilsonville.or.us.

Section 6. Consultant's Project Manager

Consultant's Project Manager is Matt Hickey. In the event that Consultant's designated Project Manager is changed, Consultant shall give the City prompt written notification of such redesignation. Consultant's Project Manager will not be changed without the written consent of the City, which consent shall not be unreasonably withheld. In the event the City receives any communication from Consultant that is not from Consultant's designated Project Manager, the City may request verification by Consultant's Project Manager, which verification must be promptly furnished. Consultant's Project Manager can be reached by telephone at (503) 225-9010 and via email at MLH@msa-ep.com.

Section 7. Project Information

Except for confidential information designated by the City as information not to be shared, Consultant agrees to share Project information with, and to fully cooperate with, those corporations, firms, contractors, public utilities, governmental entities, and persons involved in or associated with the Project. No information, news, or press releases related to the Project, whether made to representatives of newspapers, magazines, or television and radio stations, shall be made without the written authorization of the City's Project Manager.

Section 8. Duty to Inform

If, at any time during the performance of this Agreement or any future phase of this Agreement for which Consultant has been retained, Consultant becomes aware of actual or potential problems, faults, or defects in the Project or Scope of Services, or any portion thereof; or of any nonconformance with federal, state, or local laws, rules, or regulations; or if Consultant has any objection to any decision or order made by the City with respect to such laws, rules, or regulations, Consultant shall give prompt written notice thereof to the City's Project Manager. Any delay or failure on the part of the City to provide a written response to Consultant shall neither constitute agreement with nor acquiescence to Consultant's statement or claim, nor constitute a waiver of any of the City's rights.

Section 9. Consultant Is Independent Contractor

9.1. Consultant is an independent contractor for all purposes and shall be entitled to no compensation other than the Compensation Amount provided for under **Section 4** of this Agreement. Consultant will be solely responsible for determining the manner and means of accomplishing the end result of Consultant's Services. The City does not have the right to control or interfere with the manner or method of accomplishing said Services. The City, however, will have the right to specify and control the results of Consultant's Services so such Services meet the requirements of the Project.

9.2. Consultant may request that some consulting Services be performed on the Project by persons or firms other than Consultant, through a subcontract with Consultant. Consultant acknowledges that if such Services are provided to the City pursuant to a subcontract(s) between Consultant and those who provide such services, Consultant may not utilize any subcontractor(s), or in any way assign its responsibility under this Agreement, without first obtaining the express written consent of the City, which consent may be given or denied in the City's sole discretion. For all Services performed under subcontract to Consultant, as approved by the City, Consultant shall only charge the compensation rates shown on an approved Rate Schedule. Rate Schedules for named or unnamed subcontractors, and Consultant markups of subcontractor billings, will only be recognized by the City as set forth in Consultant's Rate Schedule, unless documented and approved, in writing, by the City pursuant to a modification to Consultant's Rate Schedule, per **Section 19** of this Agreement. In all cases, processing and payment of billings from subcontractors is solely the responsibility of Consultant.

9.3. Consultant shall be responsible for, and defend, indemnify and hold the City harmless against, any liability, cost, or damage arising out of Consultant's use of such subcontractor(s) and subcontractor's negligent acts, errors, or omissions. Unless otherwise agreed to, in writing, by the City, Consultant shall require that all of Consultant's subcontractors also comply with and be subject to the provisions of this **Section 9** and meet the same insurance requirements of Consultant under this Agreement.

9.4. Consultant shall make prompt payment for any claims for labor, materials, or services furnished to Consultant by any person in connection with this Agreement, as such claims become due. Consultant shall not permit any liens or claims to be filed or prosecuted against the City on account of any labor or material furnished to or on behalf of Consultant. If Consultant fails, neglects, or refuses to make prompt payment of any such claim, the City may pay such claim to the subcontractor furnishing the labor, materials, or services and offset the amount of the payment against funds due or to become due to Consultant under this Agreement. The City may also recover any such amounts directly from Consultant.

9.5. Should Consultant elect to utilize employees on any aspect of this Agreement, Consultant must comply with all wage and hour laws. Consultant shall make all required workers'

compensation and medical care payments on time. Consultant shall be fully responsible for payment of all employee withholdings required by law, including but not limited to taxes, including payroll, income, Social Security (FICA), and Medicaid. Consultant shall also be fully responsible for payment of salaries, benefits, taxes, Industrial Accident Fund contributions, and all other charges on account of any employees. Consultant shall pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167. All costs incident to the hiring of assistants or employees shall be Consultant's responsibility. Consultant shall defend, indemnify, and hold the City harmless from claims for payment of all such expenses. Unless otherwise expressly set forth on **Exhibit B** as a reimbursable expense item, specific costs associated with items set forth in this subsection shall be deemed as fully and conclusively included in the rate upon which Consultant's Compensation Amount is based.

9.6. No person shall be discriminated against by Consultant or any subcontractor in the performance of this Agreement on the grounds of sex, gender, race, color, creed, marital status, age, disability, or national origin. Any violation of this provision shall be grounds for cancellation, termination, or suspension of the Agreement, in whole or in part, by the City.

Section 10. Indemnity and Insurance

10.1. Consultant acknowledges responsibility for liability arising out of the performance of this Agreement, and shall defend, indemnify, and hold the City harmless from any and all liability, settlements, loss, costs, and expenses in connection with any action, suit, or claim resulting or allegedly resulting from Consultant's negligent acts, omissions, errors, or willful or reckless misconduct provided pursuant to this Agreement, or from Consultant's failure to perform its responsibilities as set forth in this Agreement. The review, approval, or acceptance by the City, its Project Manager, or any City employee of documents or other work performed, prepared, or submitted by Consultant shall not be considered a negligent act, error, omission, or willful misconduct on the part of the City, and none of the foregoing shall relieve Consultant of its responsibility to perform in full conformity with the City's requirements, as set forth in this Agreement, and to indemnify the City as provided above and to reimburse the City for any and all costs and damages suffered by the City as a result of Consultant's failure to adhere to the standards of performance and care described in **Subsection 10.2**. Consultant shall defend the City (using legal counsel reasonably acceptable to the City) against any claim that alleges negligent acts, omissions, errors, or willful or reckless misconduct by Consultant.

10.2. Consultant's Standard of Care and Insurance Requirements.

10.2.1. Standard of Care: In the performance of professional services, Consultant agrees to use at least that degree of care and skill exercised under similar circumstances by reputable members of Consultant's profession practicing in the Portland metropolitan area. Consultant will re-perform any services not meeting this standard without additional compensation. Consultant's re-performance of any services, even if done at the City's request, shall not be considered as a limitation or waiver by the City of any other remedies or claims it may have arising out of Consultant's failure to perform in accordance with the applicable standard of care of this Agreement and within the prescribed timeframe.

10.2.2. Insurance Requirements: Consultant shall maintain insurance acceptable to the City in full force and effect throughout the term of this Agreement. Such insurance shall cover all risks arising directly or indirectly out of Consultant's activities or work hereunder.

The policy or policies of insurance maintained by Consultant shall provide at least the following limits and coverages:

10.2.2.1. *Commercial General Liability Insurance.* Consultant shall obtain, at Consultant's expense, and keep in effect during the term of this Agreement, Comprehensive General Liability Insurance covering Bodily Injury and Property Damage on an "occurrence" form (1996 ISO or equivalent). This coverage shall include broad form Contractual Liability insurance for the indemnities provided under this Agreement. The following minimum insurance amounts must be carried and maintained at all times:

<i>Coverage</i>	<i>Limit</i>
General Aggregate	\$2,000,000
Products-Completed Operations Aggregate	2,000,000
Each Occurrence	2,000,000
Fire Damage (any one fire)	50,000
Medical Expense (any one person)	10,000

10.2.2.2. *Professional Errors and Omissions Coverage.* Consultant agrees to carry Professional Errors and Omissions Liability insurance on a policy form appropriate to the professionals providing the Services hereunder with a limit of no less than \$2,000,000 per claim. Consultant shall maintain this insurance for damages alleged to be as a result of errors, omissions, or negligent acts of Consultant. Such policy shall have a retroactive date effective before the commencement of any work by Consultant on the Services covered by this Agreement.

10.2.2.3. *Business Automobile Liability Insurance.* If Consultant will be using a motor vehicle in the performance of the Services herein, Consultant shall provide the City a certificate indicating that Consultant has business automobile liability coverage for all owned, hired, and non-owned vehicles. The Combined Single Limit per occurrence shall not be less than \$2,000,000.

10.2.2.4. *Workers' Compensation Insurance.* Consultant and all employers providing work, labor, or materials under this Agreement that are subject employers under the Oregon Workers' Compensation Law shall comply with ORS 656.017, which requires them to provide workers' compensation coverage that satisfies Oregon law for all their subject workers or employees that are exempt under ORS 656.126. Out-of-state employers must provide Oregon workers' compensation coverage for their workers who work at a single location within Oregon for more than thirty (30) days in a calendar year. Consultants who perform work without the assistance or labor of any employee need not obtain such coverage. This shall include Employer's Liability Insurance with coverage limits of not less than \$500,000 each accident.

10.2.2.5. *Insurance Carrier Rating.* Coverages provided by Consultant must be underwritten by an insurance company deemed acceptable by the City. The City reserves the right to reject all or any insurance carrier(s) with a financial rating that is unacceptable to the City.

10.2.2.6. *Certificates of Insurance.* As evidence of the insurance coverage required by this Agreement, Consultant shall furnish a Certificate of Insurance to the City. This Agreement shall not be effective until the required certificates and the Additional Insured Endorsements have been received and approved by the City. Consultant agrees that it will not terminate or change its coverage during the term of this Agreement without giving the City at least thirty (30) days' prior advance notice.

10.2.2.7. *Additional Insured Endorsements.* The City will be named as an additional insured with respect to Consultant's liabilities hereunder in insurance coverages. The following is included as additional insured: The City of Wilsonville, its elected and appointed officials, officers, agents, employees, and volunteers. Except professional liability and workers' compensation coverage, all policies shall provide an Additional Insured Endorsement.

10.2.3. The coverage provided by these policies shall be primary, and any other insurance carried by the City is excess. Consultant shall be responsible for any deductible amounts payable under all policies of insurance. In the event a dispute arises between the City and Consultant for which Consultant has obtained insurance, the maximum amount that may be withheld by the City for all such claims shall be no more than the amount of the applicable insurance deductible. Insurance policies must be "Occurrence" policies. Consultant will be required to maintain such policies in full force and effect through any warranty period.

Section 11. Delay Damages

Time is of the essence in the performance of this Agreement. Therefore, if Services are not completed within the time required by **Section 1**, Consultant will be in default of this Agreement and the remedies set forth in **Section 12** will apply. Notwithstanding the cure period allowed in **Section 12**, if Consultant cures the delay within the cure period allowed, as a part of the cure, the City will be entitled to a reduction in the Contract Sum of \$100 per day for every day Consultant is late before the delay is cured. Nothing contained herein shall preclude the City from seeking any other damages available, both at law and in equity, for failure to timely complete the Project beyond the ten (10) day cure period. The \$100 is a sum agreed upon between Consultant and the City as a reasonable sum for the delay days that occur during the cure period since a delay of ten (10) days or less might result in damages that are difficult to ascertain or to prove.

Section 12. Early Termination; Default

12.1. This Agreement may be terminated prior to the expiration of the agreed upon terms:

12.1.1. By mutual written consent of the parties;

12.1.2. By the City, for any reason, and within its sole discretion, effective upon delivery of written notice to Consultant by mail or in person; and

12.1.3. By Consultant, effective upon seven (7) days' prior written notice in the event of substantial failure by the City to perform in accordance with the terms through no fault of Consultant, where such default is not cured within the seven (7) day period by the City. Withholding of disputed payment is not a default by the City.

12.2. If the City terminates this Agreement, in whole or in part, due to default or failure of Consultant to perform Services in accordance with the Agreement, the City may procure, upon reasonable terms and in a reasonable manner, services similar to those so terminated. In addition to any other remedies the City may have, both at law and in equity, for breach of contract, Consultant shall be liable for all costs and damages incurred by the City as a result of the default by Consultant, including, but not limited to, all costs incurred by the City in procuring services from others as needed to complete this Agreement. This Agreement shall be in full force to the extent not terminated by written notice from the City to Consultant. In the event of a default, the City will provide Consultant with written

notice of the default and a period of ten (10) days to cure the default. If Consultant notifies the City that it wishes to cure the default but cannot, in good faith, do so within the ten (10) day cure period provided, then the City may elect, in its sole discretion, to extend the cure period to an agreed upon time period, or the City may elect to terminate this Agreement and seek remedies for the default, as provided above. In order to invoke the ten (10) day cure period allowed for a failure to complete the Project within the time allowed, Consultant agrees that the Contract Sum will be reduced by \$100 a day until the delay is cured and the Services are complete, as described in **Section 11**.

12.3. If the City terminates this Agreement for its own convenience not due to any default by Consultant, payment of Consultant shall be prorated to, and include the day of, termination and shall be in full satisfaction of all claims by Consultant against the City under this Agreement.

12.4. Termination under any provision of this section shall not affect any right, obligation, or liability of Consultant or the City that accrued prior to such termination. Consultant shall surrender to the City items of work or portions thereof, referred to in **Section 16**, for which Consultant has received payment or the City has made payment. The City retains the right to elect whether or not to proceed with actual construction of the Project.

Section 13. Suspension of Work

The City may suspend, delay, or interrupt all or any part of the work for such time as the City deems appropriate for its own convenience by giving written notice thereof to Consultant. An adjustment in the time of performance or method of compensation shall be allowed as a result of such delay or suspension unless the reason for the delay is within Consultant's control. The City shall not be responsible for work performed by any subcontractors after notice of suspension is given by the City to Consultant. Should the City suspend, delay, or interrupt the work and the suspension is not within Consultant's control, then the City shall extend the time of completion by the length of the delay.

Section 14. Subcontractors and Assignments

14.1. Unless expressly identified in **Exhibit A or B** of this Agreement or subsequently approved by the City, and subject to **Section 9** of this Agreement, Consultant shall neither subcontract with others for any of the work prescribed herein, nor assign any of Consultant's rights acquired hereunder, without obtaining prior written approval from the City. Work may be performed by persons other than Consultant, provided Consultant advises the City of the names of such subcontractors and the work which they intend to perform, and the City specifically agrees in writing to such subcontracting. Consultant acknowledges such services will be provided to the City pursuant to a subcontract(s) between Consultant and subcontractor(s) and no privity of contract exists between the City and the subcontractor(s). Unless otherwise specifically provided by this Agreement, the City incurs no liability to third persons for payment of any compensation provided herein to Consultant. Any attempted assignment of this Agreement without the written consent of the City shall be void. Except as otherwise specifically agreed, all costs for services performed by others on behalf of Consultant shall not be subject to additional reimbursement by the City.

14.2. The City shall have the right to enter into other agreements for the Project, to be coordinated with this Agreement. Consultant shall cooperate with the City and other firms, engineers or subcontractors on the Project so that all portions of the Project may be completed in the least possible time and within normal working hours. Consultant shall furnish other engineers, subcontractors and affected public utilities, whose designs are fitted into Consultant's design, detail drawings giving full information so that conflicts can be avoided.

Section 15. Access to Records

The City shall have access, upon request, to such books, documents, receipts, papers, and records of Consultant as are directly pertinent to this Agreement for the purpose of making audit, examination, excerpts, and transcripts for a period of four (4) years, unless within that time the City specifically requests an extension. This clause shall survive the expiration, completion, or termination of this Agreement.

Section 16. Property of the City

16.1. Originals or certified copies of the original work forms, including but not limited to documents, drawings, tracings, surveying records, mylars, papers, diaries, inspection reports, and photographs, performed or produced by Consultant under this Agreement shall be the exclusive property of the City and shall be delivered to the City prior to final payment. Any statutory or common law rights to such property held by Consultant as creator of such work shall be conveyed to the City upon request without additional compensation. Upon the City's approval, and provided the City is identified in connection therewith, Consultant may include Consultant's work in its promotional materials. Drawings may bear a disclaimer releasing Consultant from any liability for changes made on the original drawings and for reuse of the drawings subsequent to the date they are turned over to the City.

16.2. Consultant shall not be held liable for any damage, loss, increased expenses, or otherwise, caused by or attributed to the reuse by the City or its designees of all work performed by Consultant pursuant to this Agreement without the express written permission of Consultant.

Section 17. Laws of Oregon

This Agreement shall be governed by the laws of the State of Oregon. All contractual provisions required by ORS Chapter 279A and 279C to be included in public agreements are hereby incorporated by reference and shall become a part of this Agreement as if fully set forth herein.

Section 18. Adherence to Law

Consultant shall adhere to all applicable federal and state laws, including but not limited to laws, rules, regulations, and policies concerning employer and employee relationships, workers' compensation, and minimum and prevailing wage requirements. Any certificates, licenses, or permits that Consultant is required by law to obtain or maintain in order to perform work described on **Exhibit A** shall be obtained and maintained throughout the term of this Agreement.

Section 19. Modification/Change Orders

Any modification of the provisions of this Agreement shall not be enforceable unless reduced to writing and signed by both the City and Consultant. A modification is a written document, contemporaneously executed by the City and Consultant, which increases or decreases the cost to the City over the agreed Compensation Amount in **Section 4** of this Agreement, or changes or modifies the Scope of Services or the time for performance. No modification shall be binding or effective until executed, in writing, by both Consultant and the City. In the event Consultant receives any communication of whatsoever nature from the City, which communication Consultant contends gives rise to any modification of this Agreement, Consultant shall, within five (5) days after receipt, make a written request for modification to the City's Project Manager in the form of a Change Order. Consultant's failure to submit such written request for modification in the form of a Change Order shall be the basis for refusal by the City to treat said communication as a basis for modification or to allow such modification. In connection with any

22.4. Severability. If any provision of this Agreement is found to be void or unenforceable, it is the intent of the parties that the rest of the Agreement shall remain in full force and effect, to the greatest extent allowed by law.

22.5. Entire Agreement. This Agreement, including all documents attached to this Agreement and all documents incorporated by reference herein, represents the entire agreement between the parties.

22.6. Authority. Each party signing on behalf of Consultant and the City hereby warrants actual authority to bind their respective party.

The Consultant and the City hereby agree to all provisions of this Agreement.

CONSULTANT:

CITY:

MURRAY, SMITH AND ASSOCIATES, INC.

CITY OF WILSONVILLE

By: _____

By: _____

(Print Name) _____

(Print Name) _____

As Its: _____

As Its: _____

Employer I.D. No. _____

APPROVED AS TO FORM

ATTESTED TO:

Barbara A. Jacobson, Assistant City Attorney
City of Wilsonville, Oregon

Sandra C. King, MMC, City Recorder
City of Wilsonville, Oregon

I:\contract\doc\wwtp coll sys\psa wastewater coll sys phase 2-msa


WORK PLAN

The work program is organized to reflect the development of a complete Wastewater Collection Master Plan as identified in Phase III of the City's Wastewater Collection System Projects assignment. Work tasks are outlined as follows:

Task 1 – Project Management

- A. *Project Kick-off Meeting and Project Schedule*
- B. *Progress Reports and Billings*
- C. *Progress/Work Meetings*
- D. *Quality Assurance/Quality Control (QA/QC)*

Task 2 – Data Collection and Review

- A. *Information Compilation and Review*
- B. *Current Plan Evaluations and General Planning Criteria Review*

Task 3 – Planning and System Analysis Criteria

- A. *Population and Land Use*
- B. *Planning Criteria, Population Projections and Regulatory Requirements*
 - 1. *Planning Criteria*
 - 2. *Review Design Storm Frequency*
 - 3. *Population Forecasts*
 - 4. *Equivalent Dwelling Units and Tax Lot Review*
 - 5. *Regulatory Requirements and Planning Basis*
- C. *Hydraulic Criteria*

Task 4 – Existing Sewer Collection System Description and Evaluation

- A. *Technical Description and Evaluation of Facilities*
- B. *System Inventory and Existing System Conditions*
- C. *Conceptual Analysis of Unserved Areas*
- D. *Collection System Map*
- E. *Review Basin Delineation*

Task 5 – Wastewater Characterization and Forecasting

- A. *Wastewater Evaluations*
- B. *Flow Forecasts*
- C. *Flow Monitoring Analysis*

Task 6 – Infiltration and Inflow Evaluation

- A. *Develop Plan for Additional Flow Monitoring*
- B. *I&I Review Flow Measurements*
- C. *I&I Summary*
- D. *I&I Reduction Plan*

Task 7 – System Analysis

- A. *Wastewater System Model Development*
- B. *Model Calibration*
- C. *HGL analysis*

Task 8 – Develop Wastewater Alternatives

- A. *Develop Preliminary Alternatives*
- B. *Wastewater Alternatives Analysis Workshop*
- C. *Environmental Review of Alternatives*
- D. *Evaluation of Sewage Collection and Conveyance Alternatives*

Task 9 – Evaluate Alternatives

- A. *Operational Alternatives*
- B. *Infrastructure alternatives*
- C. *Explore the Option of Removing Mains and Trunks from Creeks*

Task 10 – Selection of Preferred Alternatives**Task 11 – Capital Improvements Plan and Implementation Program**

- A. *Capital Improvements Plan*
- B. *Improvement Prioritization and CIP Coordination*
- C. *Funding Review*

Task 12 – Report Preparation**Task 13 – Final Plan Review and Formal Adoption**

- A. *Final Review Process*
- B. *Prepare Final Recommended System Plan and Conduct Public Hearings*
- C. *Submit Final Adopted Plan*

Task 14 – Coordinate with Rate Consultant

- A. *Meet with Rate Consultant*
- B. *Prepare CIP Relative to Growth and Existing Development*
- C. *Assist with Meetings and Presentations*

Task 15 – Public Participation, Presentations, and Meetings

A detailed description of project tasks and sub-tasks is provided below:

Task 1 – Project Management

Under this task, effective project management will be provided to see that all of the City's project goals and expectations are met and exceeded with respect to budgets, schedule and final products. Work includes project work planning, monthly progress reports, updated schedules, agenda preparation and minutes for various project meetings. Subtasks include:

- A. *Project Kick-off Meeting and Project Schedule* – Conduct a project kick-off meeting with City staff to collect all relevant information, and identify known problems, concerns and interests. Review work program, end products and key milestones. Included in the kick-off meeting is a review of the final project schedule, milestones and key delivery dates. This task includes meeting with DEQ prior to beginning the project.
- B. *Progress Reports and Billings* – Prepare and submit for review and City approval, monthly progress reports and invoices for work completed.
- C. *Progress/Work Meetings* – Schedule and attend progress meetings at appropriate intervals throughout the project to report on the work and receive City input. It is anticipated that progress meetings will be conducted every month for a period of 8 months.
- D. *Quality Assurance/Quality Control (QA/QC)* – Provide in-house reviews and checking of various interim and final work products.

Task 2 - Data Collection and Review

Under this task, relevant data will be collected and the City's wastewater sewer basins will be reviewed. Urban growth expansion area basins will be reviewed. Also under this task, current and prior planning will be evaluated and general planning criteria reviewed. Detailed subtasks are as follows:

- A. *Information Compilation and Review* – Compile and review currently available data and information relative to the wastewater sewer system. Anticipated information items include prior City studies, plans and reports as outlined in subtask B below, as well as available planning guidance documents and design standards, operation and maintenance reports, inspection records, pump station data, flow monitoring data, record drawings, mapping and GIS information, land use information, population forecast data and other pertinent information.
- B. *Current Plan Evaluations and General Planning Criteria Review* – Included in this subtask is a review and evaluation of existing previous and related wastewater system master plans, reports, studies, codes, regulations, etc. It is anticipated that the following documents will be included in this evaluation work:
 - Sewer collection system maintenance reports
 - Intergovernmental Agreements
 - City of Wilsonville Sanitary Sewer Plan Update (previously obtained information),
 - City of Wilsonville , Comprehensive Plan
 - City of Wilsonville Water System Master Plan, (previously obtained information),
 - OAR 660 Division 11, Public Facilities Planning
 - Urban Growth Boundary expansion study areas, (previously obtained information)
 - Wilsonville zoning map
 - City of Wilsonville collection and trunk sewer system map showing rim and invert elevations and pipe sizes

Task 3 - Planning and Analysis Criteria

Under this task a summary of project-specific planning criteria regarding land use, population, and wastewater collection performance requirements will be developed. Anticipated subtasks include:

- A. *Population and Land Use* – Review and update prior evaluations and descriptions of the study area boundary relative to the proposed wastewater facilities plan. Consider City land use and population forecasts for the 10-year and 20-year time frames and build-out of the Urban Growth Boundary and Urban Planning Areas (UPA). It is anticipated population estimates will be based on the recently completed Water Master Plan.
- B. *Planning Criteria, Population Projections and Regulatory Requirements* – Under this subtask project-specific planning criteria regarding wastewater collection and conveyance requirements will be determined. Sub-elements include:
 - i. *Planning Criteria* – Identify planning criteria that are specifically applicable to the development of the Wastewater Master Plan. Confirm planning service area and build-out assumptions with City staff. Work with City staff to establish wastewater and I/I unit flow rates for redevelopment and new development, and I/I increases due to system degradation. The MSA team will establish existing and future development status for all tax lots within the planning service area and link the tax lots to pipes. Development status will be based on recently completed Water Master Plan. Work for this task will build on Phase I Wastewater Collection System Projects and include further analysis to include subbasins not previously analyzed.
 - ii. *Review Design Storm Frequency* – Work with City staff to review the design storm frequency developed during Phase I that will be used as the level of service for the

conveyance system. Determine latest directives from EPA and DEQ regarding possible higher level of service.

- iii. *Population Forecasts* – Population forecasts will be identified for 10-year, 20-year planning periods and “build-out” based on information and projections provided by the City’s Planning Department and Comprehensive Plan and recently completed Water Master Plan.
- iv. *Equivalent Dwelling Units and Tax Lot Review* – Calculate the total number of existing equivalent dwelling units (EDUs) in the system, identify from City-supplied records the total number of wastewater sewer connections, including a breakdown of the residential, commercial, and industrial services, and present estimates of future EDU projections. Also, tax lots will be flagged for redevelopment or development based on existing build-out and planning guidance. The model will incorporate GIS information so land use assumptions can be populated at the tax lot level and then incorporated in to the wastewater system modeling. Work for this task will build on Phase I Wastewater Collection System Projects and include further analysis to include subbasins not previously analyzed.
- v. *Regulatory Requirements and Planning Basis* – Review all applicable regulatory requirements that must be met for recommended improvements for wastewater collection and conveyance. The anticipated regulations include those applicable to surface and storm water discharges, erosion control, groundwater protection, and wetland or waterway impacts. Work under this task will primarily involve the establishment of planning criteria for the proposed facilities plan.

C. *Hydraulic Design Criteria* – Work under this task includes determining the hydraulic design criteria that will be used to evaluate the system under various hydraulic conditions and be used to determine when existing pipes need to be upsized and used to determine the sizing requirements for new pipes.

Task 4 - Existing System Description and Evaluation

The purpose of this task is to evaluate the wastewater collection and conveyance system. Work will include the following:

- A. *Technical Description and Evaluation of Facilities* – MSA will present a technical description and evaluation of all wastewater collection and conveyance facilities in the study area. Descriptions and evaluations will be prepared to meet DEQ guidelines. Existing and anticipated regulatory requirements as they may impact the facilities will be identified and described. The evaluations will be performed in close consultation with City operations staff so that all deficiencies of the existing facilities are identified and that the staff is included in the evaluation process and the development of recommended improvements. Special attention will be focused on the Boeckman Creek Basin , Kinsman Basin the basins conveying sewage to the Memorial Park Pump Station and other known areas with capacity issues and high I&I.
- B. *System Inventory and Existing System Conditions* – Based on the data collected, all collection system elements under the jurisdiction of the City will be inventoried. Included in this subtask are meetings with City Staff will review and verify data and conduct site inspections of major components to generally quantify conditions. The City’s existing wastewater sewer system will be described and include the following community, system infrastructure, regulatory and financial background information.
 - 1. *Community Background* – The existing customer base and land use; residential, commercial and industrial customers; political jurisdictions and agreements; population and history of the City’s wastewater sewer system will be reviewed for discussions and documentation.

2. *Wastewater Sewer System Infrastructure Background* – Information and mapping of the physical features of the existing system will be prepared as will an explanation of how the system is currently operated (Operational Strategy). This will also include information on city-wide sewer discharge volumes based on historical City records and WWTP flow data. Included in the documentation will be a discussion of existing reserve capacity, evaluation of future urban area service potential and a discussion of the computer model, maps and system expansion strategies.
 3. *Existing Pump Station Inventory and Evaluation* – The City has 12 additional sewage pump stations besides the three (3) pump stations reviewed during Phase I (Memorial Park, River Village and Town Center Loop). As part of the master planning work, MSA will review and inventory the existing pump stations relative to capacity, year built, operations and general condition.
 4. *Charbonneau Area Evaluation* – It is understood the Charbonneau area has piping that is in poor condition and may contribute significant I&I to the system. The master planning work will include a general discussion of condition of the system based on City provided data and I&I will be estimated based on pump station run time and flow data.
 5. *Federal, State and Local Rules and Regulations* – A discussion of the Federal, State and local rules and regulations that relate to the City’s wastewater sewer system will be provided as part of plan documentation.
 6. *Funding/Budget* – A description and discussion of City’s existing funding mechanisms encompassing operations and maintenance (O & M) and capital improvements plan (CIP) will be included in the documentation as will a discussion of the City’s system development charge (SDC).
- C. *Conceptual Analysis of Unserved Areas within the Urban Growth Boundary and the UPA’s* – Work under this subtask includes development of conceptual planning of facilities needed in the UPA’s. This planning will include the basin definition, population and flow projections and the identification of service alternatives with the ultimate development of recommended system improvements. A key focus of this analysis is to determine what reserve capacity may exist, and what potential future urban areas can most efficiently and cost effectively be served by extension of the existing or planned City system.
- D. *Collection System Map* – MSA will develop a comprehensive map of the City’s wastewater collection system. The City will provide its current system map in electronic format. This map will be utilized and updated as necessary. The map will include the collection system, pumping station, force main and treatment facilities. It is anticipated that mapping will include digital topography, rights-of-way, tax lots, land use, zoning and other important features. The mapping will include illustrating unserved areas within the UGB as applicable. Updates to the mapping will include corrections and modifications to City GIS data as needed and linking model results to the system map. Other mapping resources and data will be used as necessary to develop an accurate base map. The map will be provided to the City in hard copy and will be used to present plan recommendations for system improvements. Editable electronic files of the map, in the format the map was created in, will also be provided to the City.
- E. *Review Basin Delineation* – The City has recently completed an updated water system model which includes basin delineation. Included in this subtask is reviewing the delineation of wastewater service basins with City staff. This work will begin with confirming the previous basin configurations developed as part of the previous master plan and expanding the delineations to include unserved basins within the UGB and areas in the Urban Reserve.

Task 5 – Wastewater Characterization and Forecasting

Under this task, existing and future wastewater and flows will be characterized. Flows will be forecast for a 10-

and 20-year time frames and UGB build-out. Work under this task will include the following:

- A. *Wastewater Evaluations* – At least five (5) years of historical records of flow obtained from City records will be evaluated for the master plan. The records will be tabulated in spreadsheet and graphical form to show averages, minimum and maximum (peak) flows. The City will collect and compile data from City records in accordance with instructions and in formats as prepared by MSA.

For Phase III, the effort will be limited to collecting, tabulating and evaluating new treatment plant and pump station flow data collected since the Phase I evaluation work was completed (approximately December 2012).

- B. *Flow Forecasts* – Wastewater flow forecasts will be developed based on the established population projections and planning criteria. These forecasts will consider the land uses as identified in the City's current planning documents and/or buildable lands inventory. Flow projections will include average daily, maximum daily, and peak hourly flow rates for both wet and dry weather flow conditions. The forecasts will be quantified on per capita and per acre unit flow bases, and be broken out by the City's identified land use types.

- C. *Flow Monitoring Analysis*-- Under this subtask, the existing flow monitoring data will be evaluated to determine if the data is reasonably accurate and if more flow monitoring data is needed. Previous work under Phase I included gathering previously collected data by the City and evaluating this data. This data included data from pump stations and flow monitors for a period of five (5) years and data from seven (7) monitoring stations with electronic data collected since May 2012. Pump station records were also collected and reviewed along with the flow monitoring data. WWTP flows time series were queried in Access to identify yearly and monthly and daily maximum flows.

For Phase III, additional flow monitoring data collected since Phase I work will be reviewed. The work under this task will include accuracy review including evaluation of monitors in the same basin and determine if data is consistent within the basin. Also, the additional data collected for flow monitors will be plotted on a scatter graph to assess whether the data is consistent among the various meters relative to the storm events during the monitoring. The data will be correlated to the storm events that occurred during the flow monitoring to determine if the 5-year storm was captured with the monitoring and assess relative accuracy of the various meters. Data from storm events will be used in the calibration of the model. A time series will be developed for each flow monitor and rainfall gauge site to identify periods of both dry and wet weather flow suitable for model calibration. This task will identify any significant gaps for recommending placing additional flow monitors.

Based on the review of the existing data, recommendations will be made relative to placement of and numbers of additional flow meters. It is anticipated recommendations will be provided for approximately 5 meter locations. The monitoring plan will focus on un-monitored areas and areas with I/I rates greater than approximately 2,000 gallons per acre per day (gpad) based on current flow data available.

Task 6 - Infiltration and Inflow (I&I) Evaluation

Work under this task will include the following:

- A. *I&I Review* – MSA will evaluate the existing wastewater collection system to identify significant I&I problems and develop recommended programs and improvements to reduce I&I. Any existing information related to I&I in the system including television inspection logs and reports, smoke testing results, I&I repair project plans and specifications and any other relevant data will be obtained from the City and reviewed. The flow characterization information previously developed will also be reviewed. In-depth interviews of City staff will be conducted to obtain first-hand information on the system from operation and maintenance personnel. From these interviews, as much information as possible will be obtained on known deficient areas. Known areas of infiltration and potential sources of inflow such as manholes, roof

drains, area drains, yard drains, catch basins, pipe defects, shallow service laterals, and any other deficiencies may be determined. Based on this work, and utilizing the wastewater collection system base map, MSA will develop an I&I map delineating drainage basins and identifying those areas suspected to be contributing the most I&I.

Flow Measurements – The data obtained from the additional flow monitoring recommendations described above will be evaluated to identify sub-basins that are contributing the relatively largest I&I rates. The flow data will also be used to provide the necessary information to better direct additional fieldwork, including smoke testing, internal television inspections and continuous flow monitoring to be performed by the City.

- B. *I&I Summary* – The results of the I&I review and flow measurements will be compiled into a database that summarizes the flow data and develops I&I flow factors by sub-basin and the system as a whole. These flow factors, which are expressed on a flow rate, pipe size, and pipeline reach length basis, will be used to characterize the nature of the I&I problem and focus an I&I reduction program, if necessary, to the areas with the greatest deficiencies. MSA will work with City staff to determine the I&I rate in gpad that is unacceptable and should be corrected. I&I contributions that cause surcharge in piping segments will be considered unacceptable, and other areas where I&I is very high may also be considered excessive and result in recommended pipe repairs.
- C. *I&I Reduction Plan* – An I&I reduction plan will be recommended based upon the evaluation of the flow measurements and the nature of the I&I. Work under this subtask will include a general discussion of I&I reduction measures and cost estimates relative to cost per foot for various pipe improvement techniques. It is anticipated a cost/benefit analysis relative to I&I reduction and actual estimated costs and estimated percent of I&I reduction in specific basins will not be included in this plan.

Task 7 – System Analysis

Work under this task will include the following:

- A. *Develop Model* – This task will include working toward a complete model of the City’s wastewater collection system. As part of the master planning work, MSA’s team will update the existing conditions model based on reviews with City staff regarding current planning criteria, system configuration, operations and system characterization.

Modeling will provide a snap shot of the ability of the collection system to convey existing and future flows. The MSA team will apply the design storm to the calibrated trunk model and basin models for existing and future conditions. The MSA team will produce model results tables for pipes (peak flow, design full-pipe flow) and nodes (maximum HGL, minimum freeboard). The model results tables will be linked to GIS data to produce characterization maps.

The updated model will be run to determine relative capacities and identify potential restrictions and system improvement needs using the HGL approach described above.

This task will include updating the model of the current system with projected flows and run the model with proposed piping upgrades included. The evaluation of existing systems and proposed improvements will be completed considering both current and forecasted flows resulting from infill development and new service areas.

- B. *Model Calibration* – This task will include calibrating the model to the dry weather flows by scaling the applied dry weather flow estimates to match the flow monitoring data. The model will also be calibrated to the wet weather flow by adjusting the model parameters until satisfactory agreement is seen between the measured and simulated wet weather flow at each flow monitor location. For Phase III, additional calibration will be conducted for subbasins that were not previously analyzed under Phase I.

Model characterization will include acquiring or generating a design storm suitable for use with the model, based on input from the City or using the 24-hour rainfall intensity value from DEQ. From this data a synthetic hyetograph will be generated. Characterization will include defining and running any relevant future conditions scenarios that incorporate combinations of population increase and expansion of the service area. The dry weather and wet weather calibrated flows will then be adjusted based on these scenarios.

- A. *HGL Analysis* – Work under this task will include developing a hydraulic model of the collection system. For the purposes of this proposal it is anticipated that the system will be analyzed using the hydraulic grade line (HGL) analysis method where the HGL is the projected elevation of the water surface at the specific location in the collection system. The HGL is generated by the computer model based on the design flow conditions and the hydraulic conveyance capacity of the downstream collection system. To assess the capacity of a sewer line segment, the HGL is compared to the elevations of the pipeline features such as pipe invert, the ratio of the flow depth to the pipe diameter (d/D), the top of pipe, the ground surface at the manhole lid, etc. To identify the severity of the capacity limitation, a classification is developed and referred to as the “HGL status”. This series of classifications ranges from “OK” (HGL is below the top of the pipe) to “DS” (manhole overflow), with intermediate levels indicating various degrees of manhole surcharging.

Task 8 – Develop Wastewater Alternatives

The purpose of this task is to identify potential wastewater collection and conveyance alternatives for each basin with capacity deficiencies and select the most viable alternatives for further analysis. Anticipated subtasks include:

- B. *Preliminary Alternatives Analysis* – Based upon the previously completed analysis of the collection system and the ultimate service area of the system, improvements to the collection and transmission systems to provide the required ultimate capacity will be recommended. These improvements will include gravity sewer upsizing, parallel pipes, alternative alignments, adjustment to trunk system control structures, I&I reductions and pumping stations and force mains as necessary to collect and convey wastewater. The alternatives will be evaluated using the system model. Special attention will be given to the Boeckman Creek Basin, the Kinsman Basin and the basins feeding into the Memorial Park Pump Station.
- C. *Wastewater Alternatives Analysis Workshop* – Under this subtask, the MSA team will meet with City staff and key stakeholders to review the potential sewer system improvement alternatives.
- D. *Alternatives Development* – Under this subtask, a description of each alternative will be prepared. For each alternative, preliminary sizing of the major components will be accomplished and the advantages and disadvantages of each identified. Based upon discussions with the City and including the environmental review as described under below, these potential alternatives will be screened to develop primary alternatives for each identified area with capacity issues which will receive further detailed analysis.

Environmental Review – Under this subtask, an appropriately scaled environmental impact review will be conducted throughout the development of the facility plan to identify significant environmental issues and/or fatal flaws with the various project alternatives under consideration. The review will consider a number of relevant factors including but not limited to: land use, noise, air quality, wetland and vegetation, water quality, and cultural resources. The following subtasks will be performed:

Environmental Screening – The purpose of this subtask is to confirm the project’s environmental strategy, to identify and screen the various conveyance and collection alternatives being considered in the development of the facility plan, and to determine those alternatives that are feasible for meeting the regulatory requirements and design criteria previously established. This

work will include meeting with DEQ and any other agency requested by DEQ or the City to review the project. This task will also include obtaining existing, readily available, published information and/or readily available information that can be secured from agencies within the project time frame regarding existing environmental conditions. This information will be used to identify environmental constraints and opportunities for development of alternatives.

Environmental Evaluations – The environmental review for the facility plan must be adequate to meet DEQ requirements. Furthermore, since local, state and/or federal agency permitting may be required, the environmental review should be conducted in anticipation of permitting requirements. In cooperation with City staff and other agency staff, the project team will conduct environmental evaluations of the various project alternatives potentially including but not necessary limited to the following: ability to meet present and future regulatory requirements, environmental impacts to surface water and groundwater, land use and zoning, flood plain and wetlands, vegetation, cultural resources, location relative to other facilities and service areas, traffic and access, soils and seismic hazards, site availability for purchase or long-term lease, impacts on public services and utilities, biological resources, air quality and noise. The evaluations will be documented in the report. Preparation of a formal NEPA environmental assessment is not included in this scope.

Task 9 – Evaluate Alternatives

Under this task, key wastewater system alternatives will be evaluated in further detail. Based upon the previous development and description of each alternative, prepare for each an estimate of capital cost, operation and maintenance costs. From these values, a present worth cost for each alternative will be prepared. An evaluation matrix for evaluating the primary alternatives will be prepared. This matrix will include the cost factors developed plus non-monetary factors including public impacts, construction risks and the environmental considerations as developed in Task 8.

- A. *Alternatives Analysis* – Using the data collected and the hydraulic model, alternatives to improve system deficiencies, eliminate system restrictions and accommodate future service areas will be developed and evaluated. These alternatives will include gravity sewers, pumping stations and force mains as necessary to adequately collect and convey wastewater under current and future flow conditions. The proposed upgrades will address future system demands, infrastructure needs, regulatory issues, and implementation requirements. Each alternative ultimately recommended will include a detailed description, cost analysis, layout drawings and other appropriate material.
- B. *Infrastructure Alternatives* – Detailed improvement alternatives for collection and trunk systems will also be developed. Alternatives for expanding the collection system to serve future sewer demand within the UGB will be developed, including line upsizing, need for lift stations, and normal sewer system appurtenances. This work will consider pump stations, and major trunk sewers. Alternatives will be evaluated based on a ranking system that includes cost and may include non-cost factors such as public impacts, construction risk, and environmental considerations. All alternatives will be developed in close coordination with designated City staff.
- C. *Explore the Option of Removing Mains and Trunks from Creeks* – Evaluating alternatives will include reviewing the feasibility of removing existing trunk sewers from creek beds. There are a few of trunk sewers along creeks and sensitive areas in the City’s system. Work under this subtask includes reviewing the current areas with sewers along creek beds including site visits to each sewer and evaluation of topography in the area of the sewers and the grades and slopes of the trunk sewers and the sewers entering these trunks. Alternative alignments will be reviewed including evaluation of available right-of-way, easements, topography, maintenance access and reducing vulnerability and City liability. It is anticipated that approximately 1 trunk line along Boeckman Creek will be reviewed and approximately 2 alternatives involving removing pipes from along the creek will be detailed in the plan. If additional pipes along creeks are to be evaluated, it will be outside this scope of work.

Task 10 – Selection of Preferred Alternatives

Under this task, the alternatives that are technically sound, protective of the environment, respective of the surrounding community, and cost-effective in conveying wastewater and meet City goals and objectives, will be selected. This selection will be a collaborative process involving the City and interested residents. The selected alternatives will be described in further detail and will include a capital cost estimate, and an operation and maintenance cost estimate. General sizing for each collection and conveyance section will be developed. A schematic of each selected preferred alternative will be prepared and shown on the updated wastewater system map.

Task 11 – Capital Improvements Plan and Implementation Program

The purpose of this task is to summarize the recommended Capital Improvements Plan and develop recommendations for implementation and annual budgeting to support the recommended work. Anticipated subtasks include:

- A. *Capital Improvements Program* - A proposed Capital Improvements Plan (CIP) will be developed for the recommended improvements based on the recommendations developed in Task 10. The CIP will consist of a description of each recommended improvement, including its reason for the improvement, the location, a budget level project cost estimate, and the recommended schedule for implementing the improvement. The CIP will identify key regulatory dates or other critical dates when specific improvements may be required. Corresponding figures will be generated showing the improvement along with a unique identifier that will also be populated in the hydraulic model.

Budget-level project cost estimates will be generated using unit costs developed for pipelines, manholes, lift stations and other typical system components. The unit costs will include appropriate allowances and contingency factors. Cost index referencing will be provided for future cost estimate updating.

The projects in the CIP will also be presented in a tabulated and prioritized list with annual recommended improvements. Immediate improvements will be included in the City's current 5-year Capital Improvements Program, with other improvements programmed into subsequent planning horizons. Prior to development of the prioritized list, the associated risks and costs of each project in the CIP will be reviewed with City staff to establish prioritization guidance.

- B. *Funding Review* – Funding alternatives will be identified which may be utilized to assist the City with financing of the projects. Potential funding alternatives include:
- Business Oregon, including the Community Development Block Grant program, the Water/Wastewater program, and the Special Public Works Funds
 - Oregon DEQ's Clean Water State Revolving Fund
 - General Obligation Bonds
 - Sewer Revenue Bonds
 - Sewer Utility Revenues
 - System Development Charges
 - Local Improvement Districts
 - Developer funding or public/private partnership (see Task 11 for further expansion on this concept)

Task 12 – Report Preparation

Under this task, a report documenting the results of the work will be prepared, including illustrations of existing facilities and proposed improvements. A draft report will be prepared for review and comment by the City, the DEQ, and other interested parties. Fifteen copies of the report will be delivered to the City. Upon City authorization, a final report incorporating all comments will be prepared. Twenty copies will be delivered to the City with similar standards as draft plan.

Wastewater Master Plan Documentation – Under this task MSA will prepare a written master plan detailing all findings and suggestions from the planning process. Included in this subtask is development of an updated comprehensive Wastewater Master Plan document that includes text narrative, tables, figures and maps that describes and presents findings and recommendations. For budgeting purposes, it is assumed that five (5) draft plan copies will be provided, followed by 20 final plan copies. Plan copies will also be provided in electronic format. Final plan documents will incorporate City input and review comments. Key elements of this documentation work include:

1. *Project Purpose, Background and Need Statement* – Develop a summary description of the overall purpose of the Sanitary Sewer Master Plan, the background on the wastewater collection, treatment and disposal system, and the need for the plan.
2. *Recommended Plan* – A clear description and documentation of the recommended improvements plan will be presented allowing the City to meet the goal of providing sewer service to existing and future users within the unserved areas within the UGB. The plan will include the recommended system operational strategy and include other recommended operational and maintenance improvements.
3. *A Detailed and Prioritized Capital Improvement Plan* – This is the key element of the planning document and represents the culmination of all previous tasks. To this end annual project cost summaries tabulated for the 10-year and 20-year planning horizons and at saturation development will be developed. This table outlines and tabulate proposed plans and alternatives developed and prioritized jointly by the entire project team. The recommended physical improvements will encompass collection and transmission improvements. Detailed mapping, narrative project descriptions, and cost tables will be included. Costs will be based on the current year and will be indexed to the most applicable ENR index for future construction.
4. *Executive Summary, Conclusions and Recommendations* – An executive summary will be completed as part of the plan documentation work and will provide a brief and concise summary of the findings of the master plan including a statement of the project purpose and goals behind the preparation of the master plan. It will include conclusions and summaries as well as a detailed list of the recommendations for the master plan, including project descriptions and cost estimates.
5. *Implementation* – Provide an implementation strategy for the recommended plan. Details will include graphs, cost tables and description of sufficient detail to give the City information to schedule and plan phased improvements depending on demand and as areas are developed within the UGB.
6. *Document Preparation* – The documentation will be completed to a level of sufficient detail to illustrate system infrastructure needs for unserved areas in the City UGB and potential developable lands in the Urban Reserve areas. This master plan will give City staff sufficient information to:
 - *Determine if the wastewater system has the capacity to serve the development*
 - *Determine the required system improvements to serve the development, including line size, gravity service or lift stations;*
 - *Determine the approximate cost of the required improvements; and*
 - *Determine how the required improvements fit within the overall plan for expanding the system.*
7. *Appendices* – The master plan appendix will include data, modeling results, reference list, maps, other reports, and any other material necessary to provide full background information relied upon in developing the master plan recommendations. If appropriate, the appendices may be bound in a separate volume.

Task 13 – Final Plan Review and Formal Adoption

Under this task a final review of the master plan will be completed in anticipation of formal adoption of the plan. Included in this task is coordinating a final review and presentations to the Planning Commission and City Council. Subtasks include:

- A. *Final Review Process* – Upon completion of the draft plan a meeting will be held with City staff to present 5 copies of the draft plan and address City comments. Meeting minutes will be developed to reflect discussions and comments. Responses to the City’s comments will be prepared and, where applicable, incorporated into the final documents. The schedule allows the City a four (4) week review period for the final review process. City comments will be incorporated into the final plan document.
- B. *Prepare Final Recommended System Plan* – Prepare and submit 10 bound copies of final recommended plan, and 25 copies of a simple executive summary brochure, to City staff to begin public hearing process. Provide the master plan document in a user-friendly, interactive PDF or Web-based electronic format on a CD. Assist City staff in presenting the final plan to Planning Commission and Council including one workshop. Under this subtask the final plan will be submitted to the Oregon Department of Environmental Quality (DEQ).
- C. *Submit Final Adopted Plan* – Submit 25 bound copies, and 50 copies of a simple executive summary brochure, of the adopted Master Plan to the City, within two (2) weeks of final adoption.

Task 14 – Coordinate with Financial Consultant (Contingency Task)

This task includes reviewing CIP costs with the City’s rate consultant relative to system development charge, based on the costs of any new capital projects identified as part of the previous tasks. This task will be performed only upon further authorization by the City.

- A. *Meet with Rate Consultant* – This subtask includes two (2) meetings with the rate and City staff. The first meeting will include discussion regarding information needed from MSA to complete the SDC and rate updates and the second meeting will include follow up discussion relative to the financial consultant’s assessment of the cost allocations.
- B. *Allocation of CIP to SDCs* – This subtask includes allocating the benefit of each proposed CIP to future growth and to existing development. For projects that benefit both existing and future customers, the relative percentage will be allocated between future growth and existing development. This allocation will be consistent with the City’s System Development Charge (SDC) approach and methodology.

Assist with Meetings & Presentations

1. Up to one (1) meeting with interested parties, to include members of a citizens’ advisory committee and/or the local development community, to present and discuss SDC findings.
2. Up to one (1) meeting/presentations with the City Council.

Task 15 – Public Participation, Presentations, and Meetings

MSA proposes to assist the City with public meetings as may be needed. It is anticipated that the City will form a Wastewater Master Plan Community Task Force. The scope of work assumes preparation for and attendance at three (3) Task Force meetings. It is also anticipated that four (4) hearings with the Planning Commission and the City Council will be conducted. The hearings will consist of reviewing the findings and conclusions related to existing wastewater system capacities and potential collection and conveyance options, and reviewing the recommendations of the study. Upon completion of the draft plan, MSA will make a presentation to the City Council to review key plan findings and recommendations. A similar presentation will be made on the final plan. A summary of the public participation will be included in the report as an appendix. MSA will also meet with City staff and other agencies as necessary during the course of the study to review progress and develop consensus on the study recommendations.

USE OF CITY PERSONNEL

It is anticipated that City staff will play a key role in the development of the wastewater master planning work. Involvement will include the following:

1. Providing data as outlined in Task 2.
2. Participating in project meetings and in interviews related to system facilities inventory work and condition reviews of Task 3.A.
3. Providing input as service areas are further identified, defined and configured.
4. Providing input on removing mains and trunks from creeks.
5. Facilitating site visits to key sites regarding removing mains and trunks from creeks
6. Providing input and feedback as alternatives are developed, analyzed, screened, selected and recommended.
7. Reviewing and commenting on master planning documentation when submitted for review.
8. Assisting in preparation and presentation strategies for the Planning Commission presentation and the City Council public hearing and other presentations.

WORK PLAN AND SCHEDULE

The preparation of a draft Wastewater Master Plan will be completed in approximately eight (8) months from the City issuing Notice to Proceed.

ESTIMATED LEVEL OF EFFORT

Based on the work plan outlined above, the following level of effort is suggested in order to accomplish the City's needs associated with the Master Planning effort.

City of Wilsonville
Wastewater Collection System Master Plan

	LABOR CLASSIFICATION (HOURS)								ESTIMATED FEES				Grand Total
	\$179	\$179	\$160	\$160	\$130	\$115	\$115	\$65	Total MSA Hours	Labor	Subconsultant \$125	MSA Expenses	
	Principal Helton	Principal Bowers	Assoc. Hickey	Assoc. Carr	Eng. VI Besaw	Eng. IV	Tech.	Clerical			David J. Collins Engineering		
Task 1 – Project Management													
<i>A. Project Kick-off and Project Schedule</i>		4	4	4	4	2		1	19	\$ 2,811		\$ 25	\$ 2,836
<i>B. Progress Reports and Billings</i>			14	4		4			22	\$ 3,340		\$ 25	\$ 3,365
<i>C. Progress/Work Meetings</i>		6	18	18	8	4		4	58	\$ 8,594	\$ 260	\$ 150	\$ 9,004
<i>D. Quality Assurance/Quality Control (QA/QC)</i>	4	8	8	4					24	\$ 4,068			\$ 4,068
Task 1 Subtotal	4	18	44	30	12	10	0	5	123	\$ 18,813	\$ 260	\$ 200	\$ 19,273
Task 2 – Data Collection and Review													
<i>A. Information Compilation and Review</i>			2		4	4	2		12	\$ 1,530		\$ 50	\$ 1,580
<i>B. Current Plan Evaluations and General Planning Criteria Review</i>	0		2		4	2			8	\$ 1,070		\$ 25	\$ 1,095
Task 2 Subtotal	0	0	4	0	8	6	2	0	20	\$ 2,600	\$ -	\$ 75	\$ 2,675
Task 3 – Planning and Analysis Criteria													
<i>A. Population and Land Use</i>			2	2	4				8	\$ 1,160		\$ 25	\$ 1,185
<i>B. Planning Criteria, Population Projections and Regulatory Requirements</i>													
<i>1. Planning Criteria</i>			3	2	2				7	\$ 1,060			\$ 1,060
<i>2. Review Design Storm Frequency</i>			1		2				3	\$ 420	\$ 132		\$ 552
<i>3. Population Forecasts</i>			1		4				5	\$ 680			\$ 680
<i>4. Equivalent Dwelling Units and Tax Lot Review</i>			2		8				10	\$ 1,360			\$ 1,360
<i>5. Regulatory Requirement and Planning Basis</i>			1	2	1	4			8	\$ 1,070			\$ 1,070
<i>C. Hydraulic Criteria</i>			2	1	4				7	\$ 1,000			\$ 1,000
Task 3 Subtotal	0	0	12	7	25	4	0	0	48	\$ 6,750	\$ 132	\$ 25	\$ 6,907
Task 4 - Existing Sewer Collection System Description and Evaluation													
<i>A. Technical Description and Evaluation of Facilities</i>		1	2	1	4	4			12	\$ 1,639		\$ 25	\$ 1,664
<i>B. System Inventory and Existing System Conditions</i>													
<i>1. Community Background</i>			2		2	2			6	\$ 810		\$ 25	\$ 835
<i>2. Sewer System Infrastructure Background</i>			2		2	2			6	\$ 810		\$ 25	\$ 835
<i>3. Existing Pump Station Inventory and Evaluation</i>			2	6	4	8			20	\$ 2,720		\$ 25	\$ 2,745
<i>4. Charbemeau Area Evaluation</i>			2	1	2	4			9	\$ 1,200		\$ 25	\$ 1,225
<i>5. Federal, State and Local Rules and Regulations</i>			2	1		4			7	\$ 940		\$ 25	\$ 965
<i>6. Funding/Budget</i>			2	1		2			5	\$ 710		\$ 25	\$ 735
<i>C. Conceptual Analysis of Unserved Areas</i>			2	1	8	4			15	\$ 1,980		\$ 25	\$ 2,005
<i>D. Collection System Map</i>		1	2	1	4	4	10		22	\$ 2,789		\$ 650	\$ 3,439
<i>E. Review Basin Delineation</i>			2		4	2			8	\$ 1,070		\$ 25	\$ 1,095
<i>F. Conceptual Analysis of Unserved Areas within the Urban Growth Boundary</i>			4	2	4				10	\$ 1,480		\$ 25	\$ 1,505
Task 4 Subtotal	0	2	24	14	34	36	10	0	120	\$ 16,148	\$ -	\$ 900	\$ 17,048
Task 5 - Wastewater Characterization and Forecasting													
<i>A. Wastewater Evaluations</i>			1		4				5	\$ 680		\$ 25	\$ 705
<i>B. Flow Forecasts</i>			2		8	8			18	\$ 2,280	\$ 750	\$ 25	\$ 3,055
<i>C. Flow Monitoring Analysis</i>			2		6				8	\$ 1,100		\$ 20	\$ 1,120
Task 5 Subtotal	0	0	5	0	18	8	0	0	31	\$ 4,060	\$ 750	\$ 50	\$ 4,860
Task 6 - Infiltration and Inflow Evaluation													
<i>A. I&I Review & Flow Measurements</i>			2		4	1			7	\$ 955		\$ 25	\$ 980
<i>B. I&I Summary</i>			2		4	1			7	\$ 955		\$ 25	\$ 980
<i>C. I&I Reduction Plan</i>		0	2	1	2	2			7	\$ 970		\$ 25	\$ 995
Task 6 Subtotal	0	0	6	1	10	4	0	0	21	\$ 2,880	\$ -	\$ 75	\$ 2,955
Task 7 - System Analysis													
<i>A. Develop Collection System Model</i>		1	6	2	12	2			23	\$ 3,249	\$ 500	\$ 200	\$ 3,949
<i>B. Model Calibration</i>			2		8				10	\$ 1,360	\$ -	\$ 200	\$ 1,560
<i>C. HGL Analysis</i>	1		4	1	40				46	\$ 6,179		\$ 50	\$ 6,229
Task 7 Subtotal	1	1	12	3	60	2	0	0	79	\$ 10,788	\$ 500	\$ 450	\$ 11,738
Task 8 - Develop Alternatives													
<i>A. Preliminary Alternatives Analysis</i>	1	1	6	4	4	12			28	\$ 3,858	\$ 750	\$ 25	\$ 4,633
<i>B. Wastewater System Improvements Alternatives Workshop</i>		1	6	4	4	2			17	\$ 2,529		\$ 25	\$ 2,554
<i>C. Alternatives Development</i>		1	6	2	4	16			29	\$ 3,819		\$ 25	\$ 3,844
<i>D. Environmental Review</i>			3	2	4	6	0	0	15	\$ 2,010	\$ -	\$ 50	\$ 2,060
Task 8 Subtotal	1	3	21	12	16	36	0	0	89	\$ 12,216	\$ 750	\$ 75	\$ 13,041
Task 9 - Evaluation of Alternatives													
<i>A. Alternatives Analysis</i>	1		8	6	24	2			41	\$ 5,769	\$ 750	\$ 150	\$ 6,669
<i>B. Infrastructure Alternatives</i>			4	2	6	2			14	\$ 1,970		\$ 20	\$ 1,990
<i>C. Explore the Option of Removing Mains and Trunks from Creeks</i>			4	2	8	10			24	\$ 3,150		\$ -	\$ 3,150
Task 9 Subtotal	1	0	16	10	38	14	0	0	79	\$ 10,889	\$ 750	\$ 170	\$ 11,809
Task 10 - Selection of Preferred Alternatives													
Task 10 Subtotal	1	2	8	6	8	4	0	0	29	\$ 4,277		\$ 25	\$ 4,302
Task 11 - Capital Improvements Plan and Implementation Program													
<i>A. Capital Improvements Plan</i>	1	2	8	8	24	40	20		103	\$ 13,117		\$ 500	\$ 13,617
<i>B. Funding Review</i>			2	4		2			8	\$ 1,190		\$ 25	\$ 1,215
Task 11 Subtotal	1	2	10	12	24	42	20	0	111	\$ 14,307	\$ -	\$ 525	\$ 14,832
Task 12 - Report Preparation													
Task 12 Subtotal	1	2	16	8	8	48	24	12	119	\$ 14,477		\$ 1,062	\$ 15,539
Task 13 - Final Plan Review and Formal Adoption													
<i>A. Final Review Process</i>	1	1	4	2	2	2			12	\$ 1,808		\$ 25	\$ 1,833
<i>B. Prepare Final Recommended System Plan</i>		1	4	2	1	1	2		11	\$ 1,614		\$ 526	\$ 2,140
<i>C. Submit Final Adopted Plan</i>			2	2			2	2	6	\$ 770		\$ 50	\$ 820
Task 13 Subtotal	1	2	10	6	3	3	2	2	29	\$ 4,192	\$ -	\$ 601	\$ 4,793
Task 14 – Coordinate with Rate Consultant (Contingency Task)													
<i>A. Meet with Rate Consultant</i>			4	2	4				10	\$ 1,480		\$ 20	\$ 1,500
<i>B. Provide CIP costs relative to growth and existing development</i>	1	2	4	2	3	1			13	\$ 2,002		\$ -	\$ 2,002
<i>C. Meetings & Presentations</i>			4	4					8	\$ 1,280		\$ -	\$ 1,280
Task 14 Subtotal	1	2	12	8	7	1	0	0	31	\$ 4,762	\$ -	\$ 20	\$ 4,782
Task 15 - Public Participation, Presentations, and Meetings													
Task 15 Subtotal	1	2	16	16	4	8	0	0	47	\$ 7,097	\$ -	\$ 200	\$ 7,297
TOTAL - ALL TASKS	13	36	216	133	275	226	58	19	976	\$ 134,256	\$ 3,142	\$ 4,453	\$ 141,851