

In accordance with ARTICLE 1 of the Master AGREEMENT between the City of Lake Elmo (“CITY”) and ***Advanced Engineering and Environmental Services, Inc.*** (“ENGINEER”), dated ***August 14, 2012*** (“AGREEMENT”), the ENGINEER agrees to provide Professional Engineering Support Services as follows:

PRODUCTION WELL NO. 4

PROJECT OVERVIEW: The Project includes Design and Construction Phase Engineering Services for the Production Well No. 4 improvements.

The City of Lake Elmo is constructing a new water supply well to meet the growing water supply demands from the community and to provide redundancy. Test Well No. 4 was completed in February of 2012 to confirm adequate production capacity and water quality for the proposed well site near 50th Street N and Lake Elmo Avenue. Upon the successful completion of Test well No. 4, a 1.38 Acre Site was purchased at 11250 50th Street North to locate the new Well and Pumphouse. The site includes a shared driveway with the property located directly north and contains adequate space to provide setback distances in accordance with the well criteria established by the Minnesota Department of Health.

Following completion of Production Well No. 4, or near its completion, it is anticipated that a Well House will be designed and constructed under separate contract. A third contract will be commissioned for a new 12-inch diameter trunk connecting watermain from the well location to connect with the existing watermain near the intersection of Lake Elmo Avenue and 43rd Street N.

Production Well No. 4 will be designed and constructed as a Jordan Formation well with the following goals:

1. Production Well that produces a high quality drinking water meeting all State safe water quality drinking standards, including safe standards for perflourochemicals (PFCs).
2. Production Well that produces a high quality drinking water that will not require secondary treatment such as filtration (acceptable concentration levels of iron and manganese).
3. High Capacity Production Well in excess of 1,000 gpm.

To determine the water quality and capacity concerns, Test Well No. 4 was completed in February of 2012 and a report of the results was prepared by SEH, Inc. The specific information collected from the test well is as follows:

1. Depth from surface to bottom of sand and gravel (top of Prairie du Chein Group) is 79 feet.
2. Depth from surface to bottom of Prairie du Chein Group (top of Jordan Formation) is 190 feet.
3. Depth from surface to bottom of Jordan Formation (top of St.Lawrence Formation) is 282 feet.

4. Initial static water level in test well was 41 feet.
5. 6-inch steel casing was installed to 210 feet.
6. Available drawdown estimated to be 165 feet.
7. Pumping water level at 300 gpm was estimated to reach equilibrium at 60 feet resulting in 19 feet of drawdown.
8. Specific capacity estimated to be approximately 15 gpm per foot of drawdown.
9. Iron: 0.363 mg/l (Secondary MCL 0.30 mg/l).
10. Turbidity: 4.9 NTU (MCL 0.3 NTU).
11. PFCs: Results are all below recommended HRLs and do not appear to be present in the proposed location.

SERVICES TO BE PROVIDED BY ENGINEER: Advanced Engineering and Environmental Services, Inc. (AE2S) shall provide the following Professional Engineering Services:

Design Phase Services

1. Attend a project kick-off meeting with City staff.
2. Provide assistance in obtaining a Conditional Use Permit from the City of Lake Elmo, Minnesota, if required.
3. Meet at the well site with Minnesota Department of Health (MDH) personnel for preliminary approval of well set-back distances.
4. Prepare a preliminary set of drawings that include General, and Civil. Drawings will be sufficiently detailed to understand project, but will lack details required of construction.
5. Prepare a preliminary list of specifications that cover the project. Specification format will meet the approval of the City of Lake Elmo and will include Lake Elmo standard general conditions and contract forms.
6. Prepare preliminary opinion of probable construction cost.
7. Review preliminary documents with City personnel at a preliminary design progress meeting and make changes as required.
8. Prepare final construction drawings and specifications based upon final/modified preliminary design documents. Final set of drawings and specifications shall include General and Civil drawings.
9. Prepare preliminary wellhead protection area delineation for the new well.
10. Prepare Part 1 and Part 2 of the wellhead protection plan for the new well.
11. Update the preliminary opinion of probable cost to reflect any modifications made during final design.
12. Review final construction documents with City personnel at a final design progress meeting and make changes as required.
13. Submit two (2) copies of the final bidding documents, and wellhead protection information to the Minnesota Department of Health (MDH) for review. Respond to questions and comments from the MDH and receive approval for the drawings and specifications.
14. Submit four (5) copies of the final bidding documents to the City Engineer and one copy in electronic format (PDF).
15. Assist City in consultations with governmental agencies.
16. Print construction drawings and specifications (Bidding Documents).

17. Distribute Bidding Documents to prospective bidders.
18. Maintain planholders list.
19. Respond to bidder questions.
20. Issue addenda to bidding documents, if required.
21. Attend bid opening, and prepare bid tabulation sheets.
22. Evaluate bids and prepare contract award recommendation letter.

Construction Phase Services

1. Organize, coordinate, and jointly lead pre-construction conference and regular monthly progress meetings during construction. Provide and distribute meeting minutes.
2. Assist the City in procuring testing services as defined in the Contract Documents.
3. Provide one time construction staking for the well.
4. Review Contractor submittals (shop drawings) for products and equipment.
5. Issue contract document clarifications as required.
6. Process contract change order requests, if required.
7. Review contractor-submitted construction progress schedules.
8. Process contractor pay requests.
9. Provide periodic construction observation by design team members during construction of the well and during test pumping operations.
10. Provide Substantial Completion inspection and punch list for Contractor and issue Certificate of Substantial Completion when appropriate.
11. Provide Final Completion inspection for Contractor and issue Certificate of Final Completion when appropriate.
12. Review final submittal from Contractor with respect to conformance with the contract documents.
13. Process final pay requests and project close-outs.
14. Provide record drawings based upon Contractor's mark-up and field observation.

CITIES RESPONSIBILITIES: The City (or its Consultant) will provide the following:

1. Coordination with the public and presentation(s) to the City Council.
2. Provide as-built drawings for existing utilities and topography at proposed well site.
3. Provide necessary easements and easement information, if required.
4. Provide interface and authorization from state agencies, such as the Department of Natural Resources (DNR), Department of Health (MDH), Valley Branch Watershed District (VBWD), and Minnesota Pollution Control Agency (MPCA) with respect to the ability to construct and operate the proposed wells in the proposed locations.
5. Provide answers to specific project questions, provide requested information and make decisions regarding project direction during the course of the project.
6. Provide review, comments, and approval of preliminary and final design document submittals.
7. Pay all permit and plan review fees for agencies as required for review and approval of Project components.
8. Pay all costs associated with Advertisement for Construction Bids.
9. Attend bid opening.

10. Attend pre-construction conference and construction progress meetings.
11. Procure necessary testing services as defined by Contract Documents and bare cost associated with required testing.

TIMES FOR RENDERING SERVICES: ENGINEER shall perform its services and provide deliverables in accordance with the following schedule:

- Preliminary Design: February 28, 2013
- Final Design: March 26, 2013
- Authorize Advertisements for Bids: April 2, 2013
- Contract Award: May 7, 2013
- Substantial Completion: October 11, 2013
- Final Completion: October 25, 2013

Note that the project schedule is dependent on timely receipt of information required from the City.

CITY'S REPRESENTATIVE AND CONTRACT ADMINISTRATION: The CITY's representative with respect to services rendered by ENGINEER under this TASK ORDER shall be the City Engineer. Project correspondence must be addressed to:

Jack Griffin, P.E., City Engineer
City of Lake Elmo
3800 Laverne Avenue North
Lake Elmo, MN 55042
651.300.4264
Email: Jack.griffin@focusengineeringinc.com

COMPENSATION: Compensation to ENGINEER shall be on an hourly rate basis using the hourly billing rates provided in the ENGINEER's Proposal for the work, in a not to exceed amount of \$28,500. An outline of the primary scope items is provided in the following table:

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|--------------------------------|----------|
| 1. Design Phase Services | \$17,800 |
| 2. Construction Phase Services | \$10,700 |

Payment for Services shall be in accordance with ARTICLE 3.2 of the Master AGREEMENT. Invoices should be sent to the attention of the City Engineer.

TASK ORDER ASSUMPTIONS: The tasks and estimated fees presented in this proposal are based upon the following assumptions:

1. Work will be completed within the City's property, right-of-way, or on easements provided by the City.
2. This proposal does not include amending the City's Water Appropriation Permit.

3. Periodic field construction observation by project design team members for construction of the Production Well No. 4 assumes periodic site visits of not more than 30 hours total.

APPROVAL AND ACCEPTANCE: Approval and Acceptance of this Task Order, including the attachment(s) listed above, shall incorporate this document as part of the AGREEMENT. ENGINEER is authorized to begin performance of services upon receipt of a copy of this Task Order signed by CITY.

The Effective Date of this Task Order is **FEBRUARY 5, 2013**.

ADVANCED ENGINEERING AND
ENVIRONMENTAL SERVICES, INC.

CITY OF LAKE ELMO, MINNESOTA

By _____
(Authorized Principal of the Firm)

By _____
City Administrator