



September 26, 2017

Mr. Ross T. Bintner, PE
Engineering Services Manager
City of Edina
7450 Metro Blvd
Edina, MN 55439

**RE: Supplemental Letter Agreement
Water Treatment Plant 5 – Design and Bidding Phase Services
City of Edina, Minnesota**

Dear Mr. Bintner:

Thank you for the opportunity to provide this professional services proposal for services related to the Water Treatment Plant 5 Design and Bidding Phase Services for the City of Edina. The following letter provides a general overview of our understanding of the project and the proposed scope of services, anticipated timeline, and estimate of associated professional fees.

Project Understanding

The City of Edina is committed to advancing plans for design and construction of Water Treatment Plant 5. The Project primarily consists of the design of a new 3,000 gallon per minute (gpm) conventional gravity filtration Water Treatment Plant (WTP). The new WTP will be designed to treat the Owner's existing raw water source, which is comprised of existing Wells 5 and 18, and a planned future well. The project understanding is based on the comprehensive source water analysis, technology and alternative review, financial analysis, and recommendations represented in the WTP 5 Preliminary Design Report, dated September 2017, and completed as a precursor to project design.

Scope of Services

- A. The Project consists of the Preliminary Design, Final Design, and Bidding Phase Services for the new City of Edina WTP 5.
- B. The Scope of Services (including the attached detailed scope/hours worksheet) for Preliminary and Final Design is defined as follows:
 - 1. Water Treatment Plant Site
 - i. The new Water Treatment Plant is proposed to be located on the existing City of Edina property, located in the South West Corner of the Southdale shopping mall parking lot directly North of the existing Edina water tower, and on the east side of France Avenue.
 - 2. New Water Treatment Plant – 4.32 MGD Capacity

RE: Supplemental Letter Agreement

**Water Treatment Plant 5 – Source Water Analysis and Preliminary Design Report
City of Edina, Minnesota**

September 26, 2017

Page 2 of 10

- i. One (1) 30 minute detention tank
 - ii. Three (3) 1,000 gpm gravity filters
 - iii. Anticipated design loading rate of approximately 3.0 gpm/sf
3. Chemical feed systems which will include chemical conveyance systems (as required), chemical storage tanks, chemical containment and chemical feed equipment. Anticipated chemicals include:
 - a) Chlorine
 - b) Fluoride
 - c) Ammonia
 - d) Sodium Permanganate
 - e) Polymer
 - f) HMO
4. One (1) below grade reinforced concrete backwash reclamation basin with an above ground 300 gpm backwash reclamation plate settler system
5. Backwash supply and recycle pumps.
6. Process pipes, valves and meters.
7. Distribution systems pumps and a clearwell.
8. Pipe, valves, meters, controls, and other appurtenances required to connect the existing raw water supply pipelines to the new WTP and to connect the new WTP to the existing Distribution system.
9. Modifications to pump and motor systems of existing Wells No. 5 and No. 18 as required to provide raw water service to the future WTP 5.
10. Storm water management and water resources systems as required to comply with stormwater requirements.
11. Access road, parking lot, and associated site landscaping for new WTP site.
 - a) Provide necessary field surveys and topographic and utility mapping for design purposes as related to the Project. Utility mapping will be based upon information obtained from utility owners.
12. Architectural, structural and mechanical components associated with the new WTP which is planned to be approximately 9,080 square feet.
 - a) Develop structural plans for a stand-alone building structure, with no provisions for additional floors or building spaces not specifically required for the water treatment plant.
 - b) Develop a colored architectural rendering including plan and elevation views of the Water Treatment Plant and associated site layout and landscaping.
13. Mechanical components associated with WTP 5 including, but not limited to heating, cooling, ventilation, dehumidification, and general mechanical requirements.
14. Electrical components associated with WTP 5.
 - a) Facility electrical systems, as applicable, including electric service entrance and metering, lighting, ancillary building support systems, and general electrical requirements.
 - b) Standby generator sized to meet emergency and load management electrical requirements at the new WTP.

Mr. Ross T. Bintner, PE
Engineering Services Manager

RE: Supplemental Letter Agreement

**Water Treatment Plant 5 – Source Water Analysis and Preliminary Design Report
City of Edina, Minnesota**

September 26, 2017

Page 3 of 10

15. Instrumentation and Control (I&C) components associated with the new WTP.
 - a) Perform instrumentation and control system configuration engineering.
 - b) Coordinate with existing treatment system instrumentation and control methods, as appropriate, to address compatibility issues.

C. Preliminary Design Phase Services

1. Upon written authorization from Owner, Engineer shall:

- a) Coordinate, prepare for, and conduct a project team kick-off meeting attended by OWNER, ENGINEER, and ENGINEER's Consultants having a duration of four (4) hours.
- b) Prepare Preliminary Design Phase documents consisting of final design criteria, preliminary drawings, outline specifications, and written descriptions of the Project.
- c) Meet with OWNER and project stakeholders, as appropriate, to review the preliminary water treatment facility floor plan, site layout, and architectural rendering.
- d) Provide necessary field surveys and topographic and utility mapping for design purposes as related to WTP 5. Utility mapping will be based upon information obtained from utility owners.
- e) Advise Owner if additional reports, data, information, or services are necessary and assist Owner in obtaining such reports, data, information, or services.
- f) Prepare a preliminary water treatment facility layout based on previously completed study and report services for the use by Project Team during Preliminary Design. Layout will also include preliminary architectural design and layout of the water treatment facility.
- g) Based on the information contained in the Preliminary Design Phase Report, prepare a revised opinion of probable Construction Cost, and assist Owner in collating the various cost categories which comprise Total Project Costs.
- h) Perform preliminary structural engineering design calculations for water treatment facility structures, and roof system. Preliminary design calculations are to address type, configuration, support system requirements, and construction methods.

Mr. Ross T. Bintner, PE
Engineering Services Manager

RE: Supplemental Letter Agreement

**Water Treatment Plant 5 – Source Water Analysis and Preliminary Design Report
City of Edina, Minnesota**

September 26, 2017

Page 4 of 10

- i) Perform preliminary process engineering calculations to size the proposed major treatment system components and chemical feed systems to meet OWNER and regulatory requirements.
- j) Perform preliminary engineering calculations to size proposed pumping systems and associated electrical system(s).
- k) Perform preliminary mechanical calculations for water treatment facility heating, cooling, ventilation, and dehumidification systems.
- l) Perform preliminary engineering calculations to size and layout water treatment facility low and high voltage building electrical systems, as applicable, including electric service entrance and metering, lighting, heating, cooling, ventilation, dehumidification, pumping, and general electrical requirements.
- m) Perform preliminary standby power generator sizing calculations per pumping system and OWNER requirements. Based on preliminary generator sizing calculations, select a generator to satisfy pumping system and facility needs.
- n) Identify site power source(s) from local power utility and perform preliminary electrical service calculations and layout preliminary power grid for water treatment facility site.
- o) Perform preliminary instrumentation and control system configuration engineering. Coordinate with existing treatment system instrumentation and control methods, as appropriate, to address compatibility issues.
- p) Develop a revised water treatment facility floor plan and site layout based on completed preliminary calculations. Preliminary layouts to address the treatment system components, chemical feed systems, pumping systems, mechanical systems, low and high voltage site and facility electrical systems, instrumentation and controls, personnel areas, site and structure access, and standby power generation and associated fuel system requirements.
- q) Prepare preliminary site design and conceptual layouts for the Project site. Considerations to include, but not be limited to; site access, parking and loading/unloading zones, stormwater management, landscaping, and preliminary design of sustainable site design features.
- r) Develop a preliminary colored architectural rendering including plan and elevation views of the water treatment facility and associated site layout and landscaping.

Mr. Ross T. Bintner, PE
Engineering Services Manager

RE: Supplemental Letter Agreement

**Water Treatment Plant 5 – Source Water Analysis and Preliminary Design Report
City of Edina, Minnesota**

September 26, 2017

Page 5 of 10

- s) Evaluate the integration of responsible, sustainable, and resilient design features throughout the project; including, but not limited to: electrical and mechanical systems, treatment processes, building/architectural design, and exterior landscaping consistent with the Owner's vision for the project.
- t) Meet with OWNER and other project stakeholders, as appropriate, to review the revised preliminary water treatment facility floor plan, site layout, and architectural rendering.
- u) Meet with representatives of the OWNER and the Minnesota Department of Health to review the revised preliminary water treatment facility floor plan, site layout, and preliminary process system design.
- v) Prepare a preliminary design of modifications to existing Wells No. 5 and No. 18, as required to compliment WTP 5. Well No. 18 is anticipated to remain a vertical turbine pumping system within the existing wellhouse. Preliminary design will include the evaluation of converting Well No. 5 to a submersible pumping system and eliminating the existing wellhouse structure. Decisions regarding Well No. 5 will be confirmed at the completion of the Preliminary Design Phase. Preliminary design will include confirmation of the existing raw water transmission pipeline systems and recommend modifications, if any.
- w) Develop an outline of anticipated specifications sections for the Project.
- x) 30 Percent Design Completion Milestone:
 - i. Prepare and submit to OWNER three (3) review copies of a draft Preliminary Design submittal which will include preliminary detailed site layout, access, and utility maps, major treatment system component sizing calculations, a summary of water treatment facility structural components and construction methods, preliminary pumping system hydraulic design calculations, mechanical system calculations, standby power generation, low voltage building electrical calculations, electrical service calculations, interior and exterior architectural layout and landscaping components, instrumentation and control system information, preliminary water treatment facility layout drawings, a colored architectural rendering, a preliminary outline of specification sections, and a summary of Final Design criteria.
 - ii. Coordinate, prepare for, and conduct a project team meeting attended by OWNER, ENGINEER, and ENGINEER's Consultants having a duration of four (4) hours to discuss technical aspects of the Preliminary Design.

Mr. Ross T. Bintner, PE
Engineering Services Manager

RE: Supplemental Letter Agreement

**Water Treatment Plant 5 – Source Water Analysis and Preliminary Design Report
City of Edina, Minnesota**

September 26, 2017

Page 6 of 10

2. Engineer's services under the Preliminary Design Phase will be considered complete on the date when the revised Preliminary Design Phase documents, revised opinion of probable Construction Cost, and any other deliverables have been delivered to Owner.

D. Final Design Phase Services

1. After acceptance by Owner of the Preliminary Design Phase documents, revised opinion of probable Construction Cost as determined in the Preliminary Design Phase, and any other deliverables subject to any Owner-directed modifications or changes in the scope, extent, character, or design requirements of or for the Project, and upon written authorization from Owner, Engineer shall:
 - a) Prepare final Drawings and Specifications indicating the scope, extent, and character of the Work to be performed and furnished by Contractor. If appropriate, Specifications shall conform to the 2004 Master Format of the Construction Specifications Institute.
 - b) 60 Percent Design Completion Milestone:
 - a. Prepare and submit to OWNER three (3) copies of a draft 60 percent Final Design submittal including Drawings and Specifications indicating the scope, extent, and character of the Work to be performed and furnished by Contractor, an updated opinion of Total Project Costs, and an updated Project schedule.
 - b. Coordinate, prepare for, and conduct a project team meeting attended by OWNER, ENGINEER, and ENGINEER's Consultants having a duration of four (4) hours to discuss the technical aspects of the submittal prior to completion of the 60 percent Final Design submittal.
 - c) 95 Percent Design Completion Milestone:
 - a. Prepare and submit to OWNER three (3) copies of the 95 percent Final Design submittal including Drawings and Specifications and a revised Architectural Rendering indicating the scope, extent, and character of the Work to be performed and furnished by Contractor, an updated opinion of Total Project Costs, and an updated Project schedule.
 - b. Coordinate, prepare for, and conduct a project team meeting attended by OWNER, ENGINEER, and ENGINEER's Consultants having a duration of four (4) hours to discuss the technical aspects of Final Design prior to completion of the 95 percent Final Design submittal.
 - d) Prepare 100 percent Final Design Drawings and Specifications and submit three (3) copies of Final Plans and Specification to OWNER along with an updated opinion of Total Project Costs.

Mr. Ross T. Bintner, PE
Engineering Services Manager

RE: Supplemental Letter Agreement

Water Treatment Plant 5 – Source Water Analysis and Preliminary Design Report

City of Edina, Minnesota

September 26, 2017

Page 7 of 10

- e) Submit three (3) copies of the Final Plans and Specifications to governmental authorities for review and approval. OWNER shall bear all costs associated with plan review and associated fees from governmental authorities.
 - f) Present Final Plans and Specifications and updated opinion of Total Project Costs to the City of Edina and Edina City Council.
 - g) Provide technical criteria, written descriptions, and design data for Owner's use in filing applications for permits from or approvals of governmental authorities having jurisdiction to review or approve the final design of the Project; assist Owner in consultations with such authorities; and revise the Drawings and Specifications in response to directives from such authorities.
 - h) Advise Owner of any adjustments to the opinion of probable Construction Cost known to Engineer.
 - i) Perform or provide the following additional Final Design Phase tasks or deliverables:
 - a. Include preliminary and final design of limited security provisions for the Project. Security features are to include intrusion alarms, electric operated controls on all exterior doors, and strategic site lighting. Additional items may include video surveillance, motion detection equipment, site perimeter fencing, and/or access control.
 - b. Perform comprehensive review of building codes, fire codes, mechanical/plumbing codes, and electrical codes as required and as applicable to the Project. Provide a summary of all pertinent code requirements to ENGINEER and utilize all pertinent code requirements when designing components of the Project.
 - j) Prepare and furnish Bidding Documents for review by Owner, its legal counsel, and other advisors, and assist Owner in the preparation of other related documents.
 - k) Revise the Bidding Documents in accordance with comments and instructions from the Owner, as appropriate, and submit four (2) final copies of the Bidding Documents, a revised opinion of probable Construction Cost, and any other deliverables to Owner within 30 calendar days after receipt of Owner's comments and instructions.
2. Engineer's services under the Final Design Phase will be considered complete on the date when the required submittals have been delivered to Owner.

Mr. Ross T. Bintner, PE
Engineering Services Manager

RE: Supplemental Letter Agreement

**Water Treatment Plant 5 – Source Water Analysis and Preliminary Design Report
City of Edina, Minnesota**

September 26, 2017

Page 8 of 10

3. In the event that the Work designed or specified by Engineer is to be performed or furnished under more than one prime contract, or if Engineer's services are to be separately sequenced with the work of one or more prime Contractors (such as in the case of fast-tracking), Owner and Engineer shall, prior to commencement of the Final Design Phase, develop a schedule for performance of Engineer's services during the Final Design, Bidding or Negotiating, Construction, and Post-Construction Phases in order to sequence and coordinate properly such services as are applicable to the work under such separate prime contracts.
4. The number of prime contracts for Work designed or specified by Engineer upon which the Engineer's compensation has been established under this Agreement is one (1). If more prime contracts are awarded, Engineer shall be entitled to an equitable increase in its compensation under this Agreement. The established Prime Contract is as follows:

Contract No.1 – Edina Water Treatment Plant 5

E. Bidding Phase Services

1. After acceptance by Owner of the Bidding Documents and the most recent opinion of probable Construction Cost as determined in the Final Design Phase, and upon written authorization by Owner to proceed, Engineer shall provide the following services for Contract No.1 – Edina Water Treatment Plant 5.
 - a) Assist Owner in advertising for and obtaining bids or proposals for the Work and, where applicable, maintain a record of prospective bidders to whom Bidding Documents have been issued, attend pre-Bid conferences, if any, and receive and process contractor deposits or charges for the Bidding Documents.
 - b) Issue Addenda as appropriate to clarify, correct, or change the Bidding Documents.
 - c) Provide information or assistance needed by Owner in the course of any negotiations with prospective contractors.
 - d) Consult with Owner as to the acceptability of subcontractors, suppliers, and other individuals and entities proposed by prospective contractors for those portions of the Work as to which such acceptability is required by the Bidding Documents.
 - e) Perform or provide the following additional Bidding or Negotiating Phase tasks or deliverables:

Mr. Ross T. Bintner, PE
Engineering Services Manager

RE: Supplemental Letter Agreement

**Water Treatment Plant 5 – Source Water Analysis and Preliminary Design Report
City of Edina, Minnesota**

September 26, 2017

Page 9 of 10

- f) Evaluate and determine the acceptability of substitute or “or-equal” materials and equipment proposed by Contractor(s) during the Bidding Phase.
 - b) Facilitate a Pre-Bid Meeting for prospective Contractors to review site conditions and discuss project elements prior to bidding.
 - c) Attend the Bid opening, prepare Bid tabulation sheets, and assist Owner in evaluating Bids or proposals and in assembling and awarding contracts for the Work.
2. The Bidding or Negotiating Phase will be considered complete upon commencement of the Construction Phase or upon cessation of negotiations with prospective contractors (except as may be required if Exhibit F is a part of this Agreement).

All additional Scope of Service items identified in the Master Agreement for Professional Engineering Services in Paragraphs 2.2 Preliminary Design Phase, 2.3 Final Design Phase, and 2.4 Bidding or Negotiating Phase (dated March 7, 2017) are acknowledged as components of this Agreement and included in scope defined in this Supplemental Letter Agreement.

Proposed Professional Fees

AE2S proposes to provide the professional services consistent with the Scope of Services outlined above on an hourly (plus expenses) basis in amount of Nine Hundred and Eleven Thousand Dollars (\$911,000).

Water Treatment Plant 5 – Design and Bidding Phase Services	Professional Fees
<i>Preliminary Design Phase</i>	\$268,000
<i>Final Design Phase</i>	\$605,000
<i>Bidding Phase Services</i>	\$38,000
Total Professional Services =	\$911,000

Compensation shall not exceed \$911,000 without written authorization from the OWNER.

AE2S proposes to provide the above professional engineering services in accordance with the Master Agreement for Professional Engineering Services between the City of Edina and Advanced Engineering and Environmental Services, Inc. (AE2S), dated March 7, 2017.

Mr. Ross T. Bintner, PE
Engineering Services Manager

RE: Supplemental Letter Agreement

**Water Treatment Plant 5 – Source Water Analysis and Preliminary Design Report
City of Edina, Minnesota**

September 26, 2017

Page 10 of 10

Anticipated Project Schedule

AE2S proposes to complete of the proposed Scope of Services in accordance with the following proposed schedule:

- | | |
|-----------------------------|-------------------|
| ▪ Project Initiation - | October 3, 2017 |
| ▪ Preliminary Design - | November 30, 2017 |
| ▪ Final Design - | March 15, 2018 |
| ▪ Bid Opening - | April 2018 |
| ▪ Construction Initiation - | May 2018 |
| ▪ Final Completion - | July 2019 |

Acceptance

Should this proposal satisfactorily establish the scope of services desired by the City of Edina and you approve the fees/terms/conditions/schedule, please sign and date both copies of this letter proposal in the space provided. Please retain one (1) copy for your records and return the other to AE2S. Acceptance of this proposal will serve as our Notice to Proceed.

AE2S truly appreciates the opportunity to work with you on this important project for the City of Edina. Should you have any questions or comments regarding this proposal for professional services or the project in general, please feel free to contact me.

Submitted in Service,

Accepted this _____ day of _____, 20____

AE2S

City of Edina



By: _____

Grant L. Meyer, P.E.
Client Program Leader

Title: _____



Aaron Vollmer, P.E.
Operations Manager

Attachments:

1. Detailed Scope and Fee Breakdown