

REQUEST AUTHORIZATION FOR MAYOR AND FINANCE OFFICER TO SIGN PROFESSIONAL SERVICES AGREEMENT OR AMENDMENT

Date: May 1, 2007

Project Name & Number: Elk Vale Water Reservoir
W07-1638

CIP #: 50321

Project Description: Investigation, evaluation and preliminary design for location, size and type of reservoir for the Low Level water service zone and/or an elevated reservoir and pump station for the North Rapid water service zone in the Elk Vale Road area.

Consultant:
Advanced Engineering and Environmental Services, Inc.

Original Contract Amount: \$103,780.00	Original Contract Date: May 7, 2007	Original Completion Date: October 1, 2007
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Amendment Number:

Amendment Description:

Current Contract Amount: _____	Current Completion Date: _____
Change Requested: _____	
New Contract Amount: _____ \$0.00	New Completion Date: _____

Funding Source This Request:

Amount	Dept.	Line Item	Fund	Comments
\$103,780.00	934	4223	602	Funding transferred from Utility Facility Fund
\$103,780.00	Total			

Agreement Review & Approvals

Project Manager _____	Date	Division Manager _____	Date
Department Director _____	Date	City Attorney _____	Date

ROUTING INSTRUCTIONS

Route two originals of the Agreement for review and signatures.
 Finance Office - Retain one original
 Project Manager - Retain second original for delivery to Consultant
 cc: Public Works
 Engineering
 Project Manager

FINANCE OFFICE USE ONLY

(Note to Finance: Please write date of Agreement in appropriate space in the Agreement document)

	Date	Initials	Approved	
Appropriation			Y	N
Cash Flow			Y	N

Elk Vale Water Reservoir Project No. W07-1638 Project Location

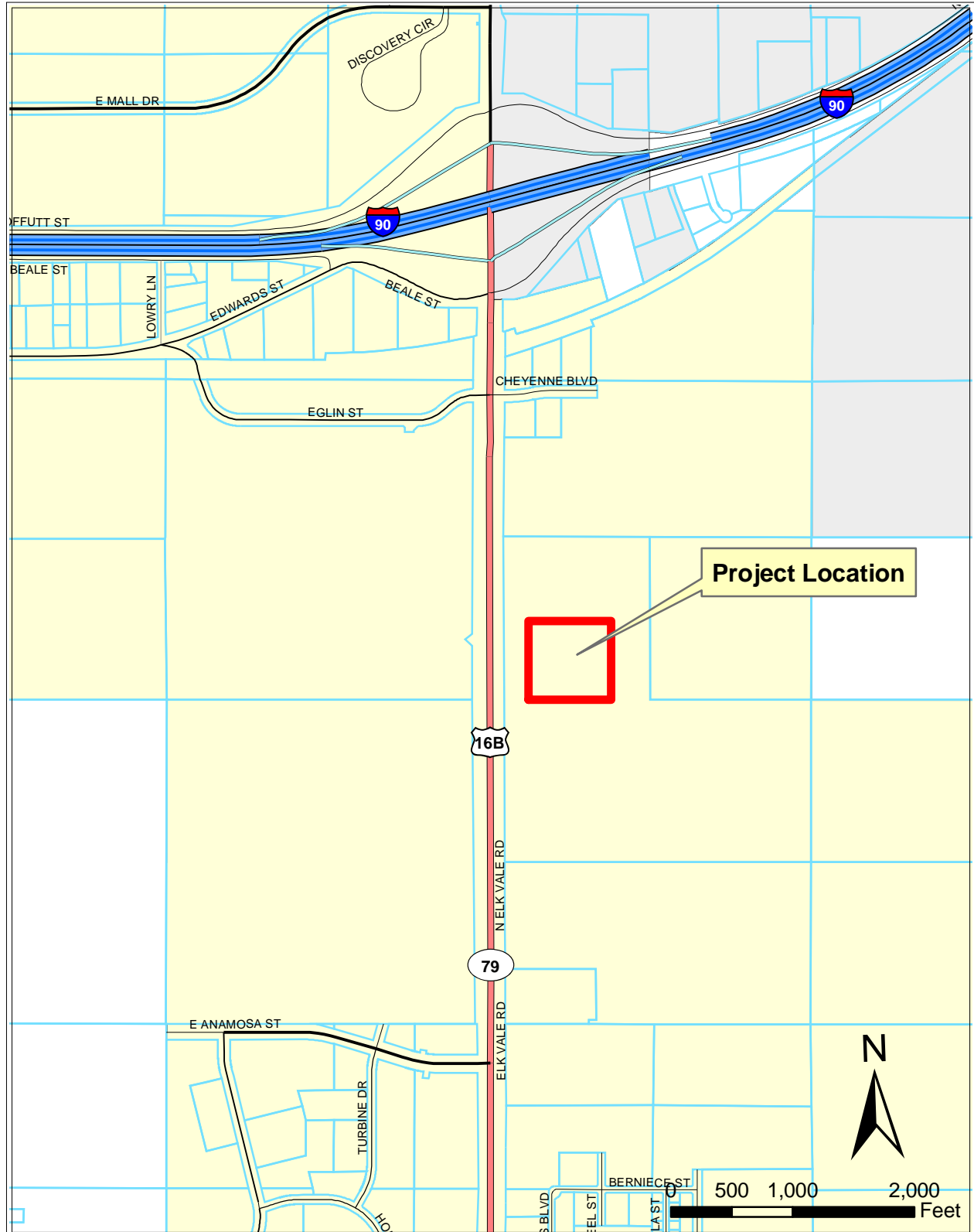


Figure 1

AGREEMENT
BETWEEN OWNER AND ENGINEER
FOR
PROFESSIONAL SERVICES

Elk Vale Water Reservoir
Project No. W07-1638

THIS IS AN AGREEMENT effective as of May 7, 2007 (“Effective Date”) between City of Rapid City, 300 Sixth Street, Rapid City, SD 57701 (“OWNER”) and Advanced Engineering and Environmental Services, Inc., 1815 Schafer Street, Suite 301, Bismarck, ND 58501 (“ENGINEER”).

OWNER intends to investigate, design, and construct water storage reservoir for the Low Level water service zone, and/or a water storage reservoir and pump station to service the North Rapid water service zone, in the Elk Vale Road area (“Project”), as further described in Exhibit E (Project Description and Scope of Services). OWNER and ENGINEER in consideration of their mutual covenants as set forth herein agree as follows:

ARTICLE 1 - SERVICES OF ENGINEER

1.01 Scope

A. ENGINEER shall provide the Basic and Additional Services set forth herein and in Exhibit A.

B. Upon this Agreement becoming effective, ENGINEER is authorized to begin Basic Services as set forth in Exhibit A.

C. If authorized by OWNER, ENGINEER shall furnish Resident Project Representative(s) with duties, responsibilities and limitations of authority as set forth in Exhibit D.

ARTICLE 2 - OWNER'S RESPONSIBILITIES

2.01 General

A. OWNER shall have the responsibilities set forth herein and in Exhibit B.

ARTICLE 3 - TIMES FOR RENDERING SERVICES

3.01 General

A. ENGINEER's services and compensation under this Agreement have been agreed to in anticipation of the orderly and continuous progress of the Project through completion. Unless specific periods of time or specific dates for providing services are specified in this Agreement, ENGINEER's obligation to render services hereunder will be for a period which may reasonably be required for the completion of said services.

B. If OWNER has requested changes in the scope, extent, or character of the Project, the time of performance of ENGINEER's services, rates, and compensation shall be adjusted equitably.

C. For purposes of this Agreement the term "day" means a calendar day of 24 hours.

3.02 Suspension

A. If OWNER fails to give prompt authorization to proceed with any phase of services after completion of the

immediately preceding phase, or if ENGINEER's services are delayed through no fault of ENGINEER, ENGINEER may, after giving seven days written notice to OWNER, suspend services under this Agreement.

B. If ENGINEER's services, as described in Exhibit A, are delayed or suspended in whole or in part by OWNER, ENGINEER shall be entitled to equitable adjustment of rates and amounts of compensation provided for elsewhere in this Agreement to reflect, reasonable costs incurred by ENGINEER in connection with, among other things, such delay or suspension and reactivation.

C. If OWNER's services, as described in Exhibit B, are delayed or suspended in whole or in part by ENGINEER, OWNER shall be entitled to equitable adjustment of rates and amounts of compensation provided for elsewhere in this Agreement to reflect, reasonable costs incurred by OWNER in connection with, among other things, such delay or suspension and reactivation.

ARTICLE 4 - PAYMENTS TO ENGINEER

4.01 Methods of Payment for Services and Reimbursable Expenses of ENGINEER

A. *For Basic Services.* OWNER shall pay ENGINEER for Basic Services performed or furnished under Exhibit A, Part 1, as set forth in Exhibit C.

B. *For Additional Services.* OWNER shall pay ENGINEER for Additional Services performed or furnished under Exhibit A, Part 2, as set forth in Exhibit C.

C. *For Reimbursable Expenses.* In addition to payments provided for in paragraphs 4.01.A, Construction and Post-Construction, and 4.01.B, OWNER shall pay ENGINEER for Reimbursable Expenses incurred by ENGINEER and ENGINEER's Consultants as set forth in Exhibit C.

4.02 Other Provisions Concerning Payments

A. *Preparation of Invoices.* Invoices will be prepared in accordance with ENGINEER's standard invoicing practices and will be submitted to OWNER by ENGINEER, unless otherwise agreed. The amount billed in each invoice will be calculated as set forth in Exhibit C.

B. *Payment of Invoices.* Invoices are due and payable within 45 days of receipt. If OWNER fails to make any payment due ENGINEER for services and expenses within 45 days after receipt of ENGINEER's

invoice therefor, the amounts due ENGINEER will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said forty-fifth day. In addition, ENGINEER may, after giving seven days written notice to OWNER, suspend services under this Agreement until ENGINEER has been paid in full all amounts due for services, expenses, and other related charges. Payments will be credited first to interest and then to principal.

C. *Disputed Invoices.* In the event of a disputed or contested invoice, only that portion so contested may be withheld from payment, and the undisputed portion will be paid. IN the event of such, partial payment of the undisputed portion shall in no way be considered a waiver of the disputed portion.

D. *Payments Upon Termination.*

1. In the event of any termination under paragraph 6.06, ENGINEER will be entitled to invoice OWNER and will be paid in accordance with Exhibit C for all services performed or furnished and all Reimbursable Expenses incurred through the effective date of termination.

2. **Not Used.**

E. *Records of ENGINEER's Costs.* Records of ENGINEER's costs pertinent to ENGINEER's compensation under this Agreement shall be kept in accordance with generally accepted accounting practices. To the extent necessary to verify ENGINEER's charges and upon OWNER's timely request, copies of such records will be made available to OWNER at cost.

F. **Not Used.**

G. **Not Used.**

ARTICLE 5 - OPINIONS OF COST

5.01 Opinions of Probable Construction Cost

A. ENGINEER's opinions of probable Construction Cost provided for herein are to be made on the basis of ENGINEER's experience and qualifications and represent ENGINEER's best judgment as an experienced and qualified professional generally familiar with the industry. However, since ENGINEER has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions,

ENGINEER cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by ENGINEER. If OWNER wishes greater assurance as to probable Construction Cost, OWNER shall employ an independent cost estimator as provided in Exhibit B.

5.02 Designing to Construction Cost Limit

A. **Not Used.**

5.03 Opinions of Total Project Costs

A. ENGINEER assumes no responsibility for the accuracy of opinions of Total Project Costs.

ARTICLE 6 - GENERAL CONSIDERATIONS

6.01 Standards of Performance

A. The standard of care for all professional engineering and related services performed or furnished by ENGINEER under this Agreement will be the care and skill ordinarily used by members of ENGINEER's profession practicing under similar circumstances at the same time and in the same locality. ENGINEER makes no warranties, express or implied, under this Agreement or otherwise, in connection with ENGINEER's services.

B. ENGINEER shall be responsible for the technical accuracy of its services and documents resulting therefrom, and OWNER shall not be responsible for discovering deficiencies therein.

C. ENGINEER shall perform or furnish professional engineering and related services in all phases of the Project to which this Agreement applies. ENGINEER shall serve as OWNER's prime professional for the Project. ENGINEER may employ such ENGINEER's Consultants as ENGINEER deems necessary to assist in the performance or furnishing of the services. ENGINEER shall not be required to employ any ENGINEER's Consultant unacceptable to ENGINEER.

D. ENGINEER and OWNER shall comply with applicable Laws or Regulations and OWNER-mandated standards. This Agreement is based on these requirements as of its Effective Date. Changes to these requirements after the Effective Date of this Agreement may be the basis for modifications to OWNER's responsibilities or to ENGINEER's scope of services, times of performance, or compensation.

E. OWNER shall be responsible for all requirements, programs, instructions, reports, data, and other information furnished by OWNER to ENGINEER pursuant to this Agreement. ENGINEER may at its own risk, use such requirements, reports, data, and information in performing or furnishing services under this Agreement.

F. OWNER shall make decisions and carry out its other responsibilities in a timely manner.

G. **Not Used.**

H. ENGINEER shall not be required to sign any documents, no matter by whom requested, that would result in the ENGINEER's having to certify, guarantee or warrant the existence of conditions whose existence the ENGINEER cannot ascertain. OWNER agrees not to make resolution of any dispute with the ENGINEER or payment of any amount due to the ENGINEER in any way contingent upon the ENGINEER's signing any such certification.

I. **Not Used.**

J. **Not Used.**

K. **Not Used.**

L. **Not Used.**

6.02 Authorized Project Representatives

A. Contemporaneous with the execution of this Agreement, ENGINEER and OWNER shall designate specific individuals to act as ENGINEER's and OWNER's representatives with respect to the services to be performed or furnished by ENGINEER and responsibilities of OWNER under this Agreement. Such individuals shall have authority to transmit instructions, receive information, and render decisions relative to the Project on behalf of each respective party. Where South Dakota State law dictates, project decisions will be made by the Rapid City Common Council.

6.03 Design without Construction Phase Services

A. **Not Used.**

B. **Not Used.**

6.04 Use of Documents

A. All Documents are instruments of service in respect to this Project, and ENGINEER shall retain an ownership and property interest therein (including the right

of reuse at the discretion of the ENGINEER) whether or not the Project is completed.

B. Copies of OWNER-furnished data are limited to the printed copies (also known as hard copies) that are delivered to the ENGINEER pursuant to Exhibit B. Files in electronic media format of text, data, graphics, or of other types that are furnished by OWNER to ENGINEER are only for convenience of ENGINEER. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk.

C. Copies of Documents that may be relied upon by OWNER are limited to the printed copies (also known as hard copies) that are signed or sealed by the ENGINEER. Files in electronic media format of text, data, graphics, or of other types that are furnished by ENGINEER to OWNER are only for convenience of OWNER. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk.

D. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files. ENGINEER shall not be responsible to maintain documents stored in electronic media format after acceptance by OWNER.

E. When transferring documents in electronic media format, ENGINEER makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by ENGINEER at the beginning of this Project.

F. OWNER may make and retain copies of Documents for information and reference in connection with use on the Project by OWNER. Such Documents are not intended or represented to be suitable for reuse by OWNER or others on extensions of the Project or on any other project. Any such reuse or modification without written verification or adaptation by ENGINEER, as appropriate for the specific purpose intended, will be at OWNER's sole risk and without liability or legal exposure to ENGINEER or to ENGINEER's Consultants. OWNER shall indemnify and hold harmless ENGINEER and ENGINEER's Consultants from all claims, damages, losses, and expenses, including attorneys' fees arising out of or resulting therefrom.

G. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

H. Any verification or adaptation of the Documents for extensions of the Project or for any other project will entitle ENGINEER to further compensation at rates to be agreed upon by OWNER and ENGINEER.

6.05 Insurance

A. ENGINEER shall maintain insurance coverage for Workers' Compensation, General Liability, and Automobile Liability and will provide certificates of insurance to OWNER upon request.

B. Not Used.

C. OWNER shall require Contractor to purchase and maintain general liability and other insurance as specified in the Contract Documents and to cause ENGINEER and ENGINEER's Consultants to be listed as additional insureds with respect to such liability and other insurance purchased and maintained by Contractor for the Project

D. Not Used.

E. All policies of property insurance shall contain provisions to the effect that ENGINEER's and ENGINEER's Consultants' interests are covered and that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder.

F. At any time, OWNER may request that ENGINEER, at OWNER's sole expense, provide additional insurance coverage, increased limits, or revised deductibles. If so requested by OWNER, with the concurrence of ENGINEER, and if commercially available, ENGINEER shall obtain and shall require ENGINEER's Consultants to obtain such additional insurance coverage, different limits, or revised deductibles for such periods of time as requested by OWNER.

6.06 Termination

A. The obligation to provide further services under this Agreement may be terminated:

1. For cause,

a. By either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.

b. By ENGINEER:

1) upon seven days written notice if ENGINEER believes that ENGINEER is being requested by OWNER to furnish or perform services contrary to ENGINEER's responsibilities as a licensed professional; or

2) upon seven days written notice if the ENGINEER's services for the Project are delayed or suspended for more than 90 days for reasons beyond ENGINEER's control.

3) ENGINEER shall have no liability to OWNER on account of such termination.

c. Notwithstanding the foregoing, this Agreement will not terminate as a result of such substantial failure if the party receiving such notice begins, within seven days of receipt of such notice, to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. For convenience,

a. By OWNER effective upon the receipt of notice by ENGINEER.

B. The terminating party under paragraphs 6.06.A.1 or 6.06.A.2 may set the effective date of termination at a time up to 30 days later than otherwise provided to allow ENGINEER to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.

C. In the event the Agreement is terminated for cause or for convenience by either party, ENGINEER shall deliver to OWNER all work products related to the project to date.

6.07 Controlling Law

A. This Agreement is to be governed by the law of the State of South Dakota. Any legal action arising out of

or relating to this Agreement shall be brought only in the Circuit Court of the State of South Dakota, Seventh Judicial Circuit, located in Rapid City, Pennington County, South Dakota.

6.08 Successors, Assigns, and Beneficiaries

A. OWNER and ENGINEER each is hereby bound and the partners, successors, executors, administrators and legal representatives of OWNER and ENGINEER (and to the extent permitted by paragraph 6.08.B the assigns of OWNER and ENGINEER) are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements and obligations of this Agreement.

B. Neither OWNER nor ENGINEER may assign, sublet, or transfer any rights under or interest (including, but without limitation, moneys that are due or may become due) in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

C. Unless expressly provided otherwise in this Agreement:

1. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by OWNER or ENGINEER to any Contractor, Contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them.

2. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of OWNER and ENGINEER and not for the benefit of any other party. The OWNER agrees that the substance of the provisions of this paragraph 6.08.C shall appear in the Contract Documents.

6.09 Dispute Resolution

Not Used.

6.10 Hazardous Environmental Condition

A. OWNER represents to Engineer that to the best of its knowledge a Hazardous Environmental Condition does not exist.

B. OWNER has disclosed to the best of its knowledge to ENGINEER the existence of all Asbestos, PCB's, Petroleum, Hazardous Waste, or Radioactive Material located at or near the Site, including type, quantity and location.

C. If a Hazardous Environmental Condition is encountered or alleged, ENGINEER shall have the obligation to notify OWNER and, to the extent of applicable Laws and Regulations, appropriate governmental officials.

D. It is acknowledged by both parties that ENGINEER's scope of services does not include any services related to a Hazardous Environmental Condition. In the event ENGINEER or any other party encounters a Hazardous Environmental Condition, ENGINEER may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until OWNER: (i) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the Hazardous Environmental Condition; and (ii) warrants that the Site is in full compliance with applicable Laws and Regulations.

E. OWNER acknowledges that ENGINEER is performing professional services for OWNER and that ENGINEER is not and shall not be required to become an "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1990 (CERCLA), which are or may be encountered at or near the Site in connection with ENGINEER's activities under this Agreement.

F. If ENGINEER's services under this Agreement cannot be performed because of a Hazardous Environmental Condition, the existence of the condition shall justify ENGINEER's terminating this Agreement for cause on 30 days notice.

6.11 Allocation of Risks

A. Indemnification

1. **Not Used.**

2. **Not Used.**

3. To the fullest extent permitted by law, ENGINEER's total liability to OWNER and anyone claiming by, through, or under OWNER for any cost, loss, or damages caused in part by the negligence of ENGINEER and in part by the negligence of OWNER

or any other negligent entity or individual, shall not exceed the percentage share that ENGINEER's negligence bears to the total negligence of OWNER, ENGINEER, and all other negligent entities and individuals.

4. **Not Used.**

5. **Not Used.**

6.12 Limits of Liability

A. **Not Used.**

6.13 Notices

A. Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, or by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.

6.14 Survival

A. All express representations, indemnifications, or limitations of liability included in this Agreement will survive its completion or termination for any reason.

6.15 Severability

A. Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and ENGINEER, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

6.16 Waiver

A. Non-enforcement of any provision by either party shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

6.17 Headings

A. The headings used in this Agreement are for general reference only and do not have special significance.

ARTICLE 7 – DEFINITIONS

7.01 Defined Terms

A. Wherever used in this Agreement (including the Exhibits hereto) and printed with initial or all capital letters, the terms listed below have the meanings indicated, which are applicable to both the singular and plural thereof:

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Documents.

2. *Additional Services*--The services to be performed for or furnished to OWNER by ENGINEER in accordance with Exhibit A, Part 2 of this Agreement.

3. *Agreement*--This "Standard Form of Agreement between OWNER and ENGINEER for Professional Services," including those Exhibits listed in Article 8 hereof.

4. *Application for Payment*--The form acceptable to ENGINEER which is to be used by Contractor in requesting progress or final payments for the completion of its Work and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

5. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

6. *Basic Services*--The services to be performed for or furnished to OWNER by ENGINEER in accordance with Exhibit A, Part 1, of this Agreement.

7. *Bid*--The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

8. *Bidding Documents*--The advertisement or invitation to Bid, instructions to bidders, the Bid form and attachments, the Bid bond, if any, the proposed Contract Documents, and all Addenda, if any.

9. *Change Order*--A document recommended by ENGINEER, which is signed by Contractor and OWNER to authorize an addition, deletion or revision

in the Work, or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Construction Agreement.

10. *Construction Agreement*--The written instrument which is evidence of the agreement, contained in the Contract Documents, between OWNER and Contractor covering the Work.

11. *Construction Contract*--The entire and integrated written agreement between the OWNER and Contractor concerning the Work.

12. *Construction Cost*--The cost to OWNER of those portions of the entire Project designed or specified by ENGINEER. Construction Cost does not include costs of services of ENGINEER or other design professionals and consultants, cost of land, rights-of-way, or compensation for damages to properties, or OWNER's costs for legal, accounting, insurance counseling or auditing services, or interest and financing charges incurred in connection with the Project, or the cost of other services to be provided by others to OWNER pursuant to Exhibit B of this Agreement. Construction Cost is one of the items comprising Total Project Costs.

13. *Contract Documents*--Documents that establish the rights and obligations of the parties engaged in construction and include the Construction Agreement between OWNER and Contractor, Addenda (which pertain to the Contract Documents), Contractor's Bid (including documentation accompanying the Bid and any post-Bid documentation submitted prior to the notice of award) when attached as an exhibit to the Construction Agreement, the notice to proceed, the bonds, appropriate certifications, the General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Construction Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and ENGINEER's written interpretations and clarifications issued on or after the Effective Date of the Construction Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents.

14. *Contract Price*--The moneys payable by OWNER to Contractor for completion of the Work in accordance with the Contract Documents and as stated in the Construction Agreement.

15. *Contract Times*--The numbers of days or the dates stated in the Construction Agreement to:

(i) achieve Substantial Completion, and (ii) complete the Work so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment.

16. *Contractor*--An individual or entity with whom OWNER enters into a Construction Agreement.

17. *Correction Period*--The time after Substantial Completion during which Contractor must correct, at no cost to OWNER, any Defective Work, normally one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee or specific provision of the Contract Documents.

18. *Defective*--An adjective which, when modifying the word Work, refers to Work that is unsatisfactory, faulty, or deficient, in that it does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER's recommendation of final payment.

19. *Documents*--Data, reports, Drawings, Specifications, Record Drawings, and other deliverables, whether in printed or electronic media format, provided or furnished in appropriate phases by ENGINEER to OWNER pursuant to this Agreement.

20. *Drawings*--That part of the Contract Documents prepared or approved by ENGINEER which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings are not Drawings as so defined.

21. *Effective Date of the Construction Agreement*--The date indicated in the Construction Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Construction Agreement is signed and delivered by the last of the two parties to sign and deliver.

22. *Effective Date of the Agreement*--The date indicated in this Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

23. *ENGINEER's Consultants*--Individuals or entities having a contract with ENGINEER to furnish services with respect to this Project as ENGINEER's independent professional associates, consultants,

subcontractors, or vendors. The term ENGINEER includes ENGINEER's Consultants.

24. *Field Order*--A written order issued by ENGINEER which directs minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

25. *General Conditions*--That part of the Contract Documents which sets forth terms, conditions, and procedures that govern the Work to be performed or furnished by Contractor with respect to the Project.

26. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCB's, Petroleum, Hazardous Waste, or Radioactive Materials in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

27. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

28. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, standards, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

29. PCB's--Polychlorinated biphenyls.

30. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

31. *Radioactive Materials*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

32. *Record Drawings*--The Drawings as issued for construction on which the ENGINEER, upon completion of the Work, has shown changes due to Addenda or Change Orders and other information which ENGINEER considers significant based on record documents furnished by Contractor to ENGINEER and which were annotated by Contractor to show changes made during construction.

33. *Reimbursable Expenses*--The expenses incurred directly by ENGINEER in connection with the performing or furnishing of Basic and Additional Services for the Project for which OWNER shall pay ENGINEER as indicated in Exhibit C.

34. *Resident Project Representative*--The authorized representative of ENGINEER, if any, assigned to assist ENGINEER at the Site during the Construction Phase. The Resident Project Representative will be ENGINEER's agent or employee and under ENGINEER's supervision. As used herein, the term Resident Project Representative includes any assistants of Resident Project Representative agreed to by OWNER. The duties and responsibilities of the Resident Project Representative are as set forth in Exhibit D.

35. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

36. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to ENGINEER to illustrate some portion of the Work.

37. *Site*--Lands or areas indicated in the Contract Documents as being furnished by OWNER upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands furnished by OWNER which are designated for use of Contractor.

38. *Specifications*--That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

39. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

40. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements the General Conditions.

41. *Total Project Costs*--The sum of the Construction Cost, allowances for contingencies, the total costs of services of ENGINEER or other design professionals and consultants, cost of land, rights-of-way, or compensation for damages to properties, or OWNER's costs for legal, accounting, insurance counseling or auditing services, or interest and financing charges incurred in connection with the Project, or the cost of other services to be provided by others to OWNER pursuant to Exhibit B of this Agreement.

42. *Work*--The entire completed construction or the various separately identifiable parts thereof required to be provided under the Contract Documents with respect to this Project. Work includes and is the result of performing or furnishing labor, services, and documentation necessary to produce such construction and furnishing, installing, and incorporating all materials and all equipment into such construction, all as required by the Contract Documents.

43. *Work Change Directive*--A written directive to Contractor issued on or after the Effective Date of the Construction Agreement and signed by OWNER upon recommendation of the ENGINEER, ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change directed or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

44. *Written Amendment*--A written amendment of the Contract Documents signed by OWNER and Contractor on or after the Effective Date of the Construction Agreement and normally dealing with the non-engineering or non-technical rather than strictly construction-related aspects of the Contract Documents.

ARTICLE 8 - EXHIBITS AND SPECIAL PROVISIONS

8.01 Exhibits Included

A. Exhibit A, "ENGINEER's Services," consisting of three pages.

B. Exhibit B, "OWNER's Responsibilities," consisting of two pages.

C. Exhibit C, "Payments to Engineer for Services and Reimbursable Expenses," consisting of one page and Appendix 1 to Exhibit C, "2007 Hourly Fee and Expense Schedule" consisting of one page.

D. Exhibit D, **Not Used.**

E. Exhibit E, "Project Description and Scope of Services", consisting of two pages.

F. Exhibit F, **Not Used.**

G. Exhibit G, **Not Used.**

H. Exhibit H, **Not Used.**

I. Exhibit I, **Not Used.**

J. Exhibit J, **Not Used.**

8.02 Total Agreement

A. This Agreement (consisting of pages 1 to 11 inclusive, together with the Exhibits identified above) constitutes the entire agreement between OWNER and ENGINEER and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

OWNER:

Jim Shaw, Mayor

By: _____

Title: Mayor

Date Signed: _____

ENGINEER:

Brett M. Jochim, PE (AE2S)

By: _____

Title: Chief Operating Officer

Date Signed: _____

ATTEST: _____

Name: Jim Preston

Title: Finance Officer

ATTEST: _____

Name: Russell R. Sorenson, PE

Title: Operations Manager

Address for giving notices:

City of Rapid City

300 Sixth Street

Rapid City, SD 57701

Address for giving notices:

Advanced Engineering and Environmental Services,
Inc.

1815 Schafer Street, Suite 301

Bismarck, ND 58501

Designated Representative (paragraph 6.02.A):

Dan Coon, P.E.

Title: Project Manager

Phone Number: (605) 394-4154

Facsimile Number: (605) 394-6636

E-Mail Address: dan.coon@rcgov.org

Designated Representative (paragraph 6.02.A):

Deon Stockert, PE

Title: Drinking Water Manager

Phone Number: (701) 221-0530

Facsimile Number: (701) 221-0531

E-Mail Address: deon.stockert@ae2s.com

This is **EXHIBIT A**, consisting of eight pages, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated May 7, 2007.

ENGINEER's Services

Article 1 of the Agreement is amended and supplemented to include the following agreement of the parties. ENGINEER shall provide Basic and Additional Services as set forth below.

PART 1 -- BASIC SERVICES

A1.01 Hydraulic Model Analysis Phase

A. In connection with completing the Assignment, **as described in Exhibit E**, the ENGINEER shall:

1. Consult with OWNER to define and clarify OWNER's requirements for the Project and available data.
2. Advise OWNER as to the necessity of OWNER's providing data or services of the types described in Exhibit B which are not part of ENGINEER's Basis Services, and assist OWNER in obtaining such data and services.
3. Identify and evaluate solutions available to OWNER and after consultation with OWNER, recommend to OWNER those solutions which, in ENGINEER's judgment, meet OWNER's requirements.
4. Prepare a Report, or Compendium of Technical Memoranda, which will, as appropriate, contain narratives, sketches and conceptual criteria with appropriate exhibits to address the agreed-to requirements, considerations involves, and those alternate solutions available to OWNER which ENGINEER recommends.
5. Arrange and conduct meetings, as outlined in Exhibit E, to further define the intended improvements as generally described in the Agreement.
6. Perform or provide the following additional tasks as deliverables: None identified (beyond those presented in Exhibit E) on the effective date of the Agreement.
7. Revise the Report in response to OWNER's and other parties' comments, as appropriate, and furnish fifteen (15) final copies of the revised Report to the OWNER.

A1.02 Preliminary Design Phase

A. In connection with completing the Assignment, **as described in Exhibit E**, the ENGINEER shall:

1. Consult with OWNER to define and clarify OWNER's requirements for the Project and available data.
2. Advise OWNER as to the necessity of OWNER's providing data or services of the types described in Exhibit B which are not part of ENGINEER's Basis Services, and assist OWNER in obtaining such data and services.
3. Identify and evaluate solutions available to OWNER and after consultation with OWNER, recommend to OWNER those solutions which, in ENGINEER's judgment, meet OWNER's requirements.
4. Prepare a Report, or Compendium of Technical Memoranda, which will, as appropriate, contain narratives, sketches and conceptual criteria with appropriate exhibits to address the agreed-to requirements, considerations involves, and those alternate solutions available to OWNER which ENGINEER recommends. This Report may be accompanied by ENGINEER's opinion of Total Project Costs for each element as appropriate, including, but not necessarily limited to, the following: opinion of probable Construction Cost, allowance for

contingencies and for the estimated total costs of design, professional, and related services provided by ENGINEER or others, and, on the basis of information furnished by OWNER, allowances for other items and services included within the definition of Total Project Costs.

5. Perform or provide the following additional tasks as deliverables: None identified (beyond those presented in Exhibit E) on the effective date of the Agreement.

6. Revise the Report in response to OWNER's and other parties' comments, as appropriate, and furnish fifteen (15) final copies of the revised Report to the OWNER.

7. Arrange and conduct meetings, as outlined in Exhibit E, with the Project Team to further define the intended improvements as generally described in the Agreement.

8. Develop preliminary improvement concepts resulting from the above meetings and project work.

9. Advise OWNER if additional reports, data, information, or services are necessary and assist OWNER in obtaining such reports, data, information, or services.

10. Based on the information contained in the Preliminary Design Phase, develop an opinion of probable construction costs and total project costs.

11. Furnish the Preliminary Design Phase documents to and review them with OWNER.

B. ENGINEER's services under the Preliminary Design Phase will be considered complete on the date when final copies of the Preliminary Design Phase documents have been delivered to OWNER.

PART 2 -- ADDITIONAL SERVICES

A2.01 Additional Services Requiring OWNER's Authorization

A. If authorized in writing by OWNER, ENGINEER shall furnish or obtain from others Additional Services of the types listed below. These services will be paid for by OWNER as indicated in Article 4 of the Agreement.

1. Preparation of applications and supporting documents (in addition to those furnished under Basic Services) for private or governmental grants, loans or advances in connection with the Project; preparation or review of environmental assessments and impact statements; review and evaluation of the effects on the design requirements for the Project of any such statements and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.

2. Services to make measured drawings of or to investigate existing conditions or facilities, or to verify the accuracy of drawings or other information furnished by OWNER.

3. Services resulting from significant changes in the scope, extent, or character of the portions of the Project designed or specified by ENGINEER or its design requirements including, but not limited to, changes in size, complexity, OWNER's schedule, character of construction, or method of financing; and revising previously accepted studies, reports, Drawings, Specifications, or Contract Documents when such revisions are required by changes in Laws and Regulations enacted subsequent to the Effective Date of this Agreement or are due to any other causes beyond ENGINEER's control.

4. Services resulting from OWNER's request to evaluate additional Hydraulic Model Analysis Phase and Preliminary Design Phase alternative solutions beyond those identified in Exhibit E.

5. Services required as a result of OWNER's providing incomplete or incorrect Project information with respect to Exhibit B.

6. Providing renderings or physical models for OWNER's use beyond those identified in Exhibit E.

7. Undertaking additional investigations and studies including, but not limited to, detailed consideration of operations, maintenance, and overhead expenses; the preparation of feasibility studies, cash flow and economic evaluations, rate schedules, and appraisals; assistance in obtaining financing for the Project; evaluating processes available for licensing, and assisting OWNER in obtaining process licensing; detailed quantity surveys of materials, equipment, and labor; and audits or inventories required in connection with construction performed by OWNER beyond those identified in Exhibit E.

8. Furnishing services of ENGINEER's Consultants for other than Basic Services.

9. **Not Used.**

10. Services during out-of-town travel required of ENGINEER other than for visits to the Site or OWNER's office beyond those identified in Exhibit E.

11. Preparing for, coordinating with, participating in and responding to structured independent review processes, including, but not limited to, construction management, cost estimating, project peer review, value engineering, and constructability review requested by OWNER; and performing or furnishing services required to revise studies, reports, Drawings, Specifications, or other Bidding Documents as a result of such review processes beyond those identified in Exhibit E.

12. **Not Used.**

13. **Not Used.**

14. **Not Used.**

15. **Not Used.**

16. **Not Used.**

17. Providing assistance in resolving any Hazardous Environmental Condition in compliance with current Laws and Regulations.

18. **Not Used.**

19. **Not Used.**

20. Preparing to serve or serving as a consultant or witness for OWNER in any litigation, arbitration or other dispute resolution process related to the Project.

21. Providing more extensive services required to enable ENGINEER to issue notices or certifications requested by OWNER under paragraph 6.01.G of the Agreement.

22. Other services performed or furnished by ENGINEER not otherwise provided for in this Agreement.

This is **EXHIBIT B**, consisting of two pages, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated May 7, 2007.

OWNER's Responsibilities

Article 2 of the Agreement is amended and supplemented to include the following agreement of the parties.

B2.01 In addition to other responsibilities of OWNER as set forth in this Agreement, OWNER shall:

A. Provide ENGINEER with all criteria and full information as to OWNER's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which OWNER will require to be included in the Drawings and Specifications; and furnish copies of OWNER's standard forms, conditions, and related documents for ENGINEER to include in the Bidding Documents, when applicable.

B. Furnish to ENGINEER any other available information pertinent to the Project including reports and data relative to previous designs, or investigation at or adjacent to the Site.

C. Following ENGINEER's assessment of initially-available Project information and data and upon ENGINEER's request, furnish or otherwise make available such additional Project related information and data as is reasonably required to enable ENGINEER to complete its Basic and Additional Services.

D. Give prompt written notice to ENGINEER whenever OWNER observes or otherwise becomes aware of a Hazardous Environmental Condition or of any other development that affects the scope or time of performance of ENGINEER's services, or any defect or nonconformance in ENGINEER's services or in the work of any Contractor.

E. Authorize ENGINEER to provide Additional Services as set forth in Part 2 of Exhibit A of the Agreement as required.

F. Arrange for safe access to and make all provisions for ENGINEER to enter upon public and private property as required for ENGINEER to perform services under the Agreement.

G. Examine all alternate solutions, studies, reports, sketches, Drawings, Specifications, proposals, and other documents presented by ENGINEER (including obtaining advice of an attorney, insurance counselor, and other advisors or consultants as OWNER deems appropriate with respect to such examination) and render in writing timely decisions pertaining thereto.

H. Provide reviews, approvals, and permits from all governmental authorities having jurisdiction to approve all phases of the Project designed or specified by ENGINEER and such reviews, approvals, and consents from others as may be necessary for completion of each phase of the Project.

I. Provide, on it's own behalf, as required for the Project:

1. Accounting, bond and financial advisory, independent cost estimating, and insurance counseling services.
2. Legal services with regard to issues pertaining to the Project as OWNER requires, Contractor raises, or ENGINEER reasonably requests.
3. Such auditing services as OWNER requires to ascertain how or for what purpose Contractor has used the moneys paid.
4. Placement and payment for advertisement for Bids in appropriate publications.

J. Advise ENGINEER of the identity and scope of services of any independent consultants employed by OWNER to perform or furnish services in regard to the Project, including, but not limited to, cost estimating, project peer review, value engineering, and constructability review.

K. Furnish to ENGINEER data as to OWNER's anticipated costs for services to be provided by others for OWNER so that ENGINEER may make the necessary calculations to develop and periodically adjust ENGINEER's opinion of Total Project Costs.

L. OWNER designated Construction Manager: **Not Used.**

M. If more than one prime contract is to be awarded for the Work designed or specified by ENGINEER, designate a person or entity to have authority and responsibility for coordinating the activities among the various prime Contractors, and define and set forth the duties, responsibilities, and limitations of authority of such individual or entity and the relation thereof to the duties, responsibilities, and authority of ENGINEER as an attachment to this Exhibit B that is to be mutually agreed upon and made a part of this Agreement before such services begin.

N. Attend the pre-bid conference, bid opening, pre-construction conference, construction progress and other Project related meetings, and Substantial Completion and final payment inspections.

O. Provide the services of an independent testing laboratory, as Owner deems necessary to perform additional inspections, tests, and approvals of Samples, materials, and equipment, or to evaluate the performance of materials, equipment, and facilities of OWNER, prior to their incorporation into the Work with appropriate professional interpretation thereof.

P. Provide inspection or monitoring services by an individual or entity other than ENGINEER (and disclose the identity of such individual or entity to ENGINEER) as OWNER determines necessary to verify:

1. That Contractor is complying with any Laws and Regulations applicable to Contractor's performing and furnishing the Work.

2. That Contractor is taking all necessary precautions for safety of persons or property and complying with any special provisions of the Contract Documents applicable to safety. Provide ENGINEER with the findings and reports generated by the entities providing services pursuant to paragraphs B2.01.O and P.

R. Perform or provide the following additional services: None identified on the Effective Date of this Agreement.

This is **EXHIBIT C**, consisting of one page, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated May 7, 2007.

Payments to ENGINEER for Services and Reimbursable Expenses

Article 4 of the Agreement is amended and supplemented to include the following agreement of the parties:

ARTICLE 4 -- PAYMENTS TO THE ENGINEER

C4.01 *Hourly to a Maximum Method*

A. OWNER shall pay ENGINEER for Basic Services as set forth in Exhibit A as follows:

1. An amount equal to the cumulative hours charged to the Project by each class of ENGINEER's employees times Standard Hourly Rates for each applicable billing class for all services performed on the Project, plus Reimbursable Expenses and ENGINEER's Consultant's charges, if any.

2. ENGINEER's Reimbursable Expenses Schedule and Standard Hourly Rates are attached to this Exhibit C as Appendix 1.

3. The total compensation maximum, including all Reimbursable Expenses, for services under Paragraph C4.01 is \$103,780.00 based on the following assumed distribution of compensation.

- a. Hydraulic Model
Analysis Phase \$ 34,721.00
- b. Preliminary Design Phase \$ 69,059.00

4. ENGINEER may alter the distribution of compensation between individual phases noted herein to be consistent with services actually rendered, but shall not exceed the total compensation amount unless approved in writing by OWNER.

5. The amounts billed for ENGINEER's services under paragraph C4.01 will be based on the cumulative hours charged to the Project during the billing period by each class of ENGINEER's employees times Standard Hourly Rates for each applicable billing class, plus

Reimbursable Expenses and ENGINEER's Consultant's charges.

6. **Not Used.**

C4.02 *For Additional Services Requiring OWNER's Authorization in Advance*

A. OWNER shall pay ENGINEER for services and reimbursable expenses for Additional Services set forth in Article A2.01 per the Hourly Fee and Expense Schedule included in Appendix 1 of Exhibit C.

C4.03 **Not Used.**

This is **Appendix 1 to EXHIBIT C**, consisting of one page, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated May 7, 2007.

2007 Hourly Rate and Reimbursable Expense Schedule

The Hourly Rate and Reimbursable Expense Schedule is subject to review and adjustment annually as of January 1. Hourly Rates and Reimbursable Expenses on the Effective Date of the Agreement are:

Labor Rates

Engineer I	\$80.00
Engineer II	\$90.00
Engineer III	\$105.00
Engineer IV	\$120.00
Engineer V	\$130.00
Engineer VI	\$140.00
Engineer VII	\$152.00
Project Manager	\$130.00
Technical Expert I	\$160.00
Technical Expert II	\$175.00
Technical Expert III	Negotiable
I&C Technician I	\$76.00
I&C Technician II	\$86.00
I&C Technician III	\$96.00
I&C Technician IV	\$106.00
I&C Technician V	\$118.00
I&C Technician VI	\$128.00
Land Surveyor I	\$68.00
Land Surveyor II	\$78.00
Land Surveyor III	\$90.00
Land Surveyor IV	\$100.00
Land Surveyor V	\$112.00
Land Surveyor VI	\$130.00
Engineering Technician I	\$44.00
Engineering Technician II	\$55.00
Engineering Technician III	\$67.00
Engineering Technician IV	\$78.00
Engineering Technician V	\$88.00
Engineering Technician VI	\$102.00
Engineering Technician VII	\$122.00
Webmaster	\$80.00
IT System Administrator	\$110.00
CPA	\$115.00
Financial Analyst	\$115.00
Senior Consultant	\$130.00

Administrative I	\$40.00
Administrative II	\$50.00
Administrative III	\$60.00
Administrative IV	\$70.00
Administrative V	\$78.00

Reimbursable Expense Rates

Transportation (4x4)	\$0.55/mile
Transportation (Auto)	\$0.50/mile
Survey Vehicle	\$0.65/mile
Photocopies	\$0.10/copy
Plots – Color Bond	\$1.25/s.f.
Plots – Monochrome Bond/Vellum	\$0.75/s.f.
Plots – Film/Photo High Gloss	\$2.00/s.f.
Digital Imaging	\$10.00/day
Computer/CADD	\$10.00/hour
Laser Printouts	\$0.20/page
Color Laser Printouts/Copies	\$0.95/page
Fax – Receiving	\$1.00/page
Fax – Sending	\$1.00/page
Projector	\$25.00/hour
Total Station	\$10.00/hour
Total Station – Robotic	\$35.00/hour
Pro-XR GPS	\$15.00/hour
Fast Static/RTK GPS	\$50.00/hour
All Terrain Vehicle/Boat	\$100.00/day
Hydrant Pressure Recorders	\$10.00/day
Telemetry Radio	\$50.00/site
Pressure Recorder	\$5.00/day
Outside Services*	cost *1.15
Out of Pocket Expenses**	cost*1.15
Rental Car	cost*1.20

* Includes laboratory testing, architectural and engineering consultants, surveying, etc.

** Includes toll telephone, shipping, postage, subsistence, technical literature, equipment rental, etc.

This is **EXHIBIT E**, consisting of two pages, referred to in and part of the **Agreement between OWNER and ENGINEER for Professional Services** dated May 7, 2007.

Project Description and Scope of Services

The City of Rapid City is pursuing a project to investigate, design, and construct a water storage reservoir for the Low Level water service zone, and/or a water storage reservoir and pump station to service the North Rapid water service zone in the Elk Vale area (Elk Vale Water Reservoir Project No. W07-1638). The contemplated project generally consists of the evaluation, design, and construction of a reservoir for the Low Level water service zone, an elevated reservoir and pump station for the North Rapid water service, and necessary piping and appurtenances. The scope of services for this phase of the project consists of the following:

HYDRAULIC MODEL ANALYSIS PHASE

The Hydraulic Model Analysis Phase is comprised of the primary tasks identified below:

1. Review of Existing Reports – The ENGINEER will obtain and review existing reports and studies as they relate to reservoir sizing, location, and overflow elevations, including:
 - a. Rapid City Distribution System Hydraulic Model
 - b. Water System Expansion East Rapid City
 - c. Preliminary Design Report for East Mall Drive
 - d. Northeast Area Analysis Final Report
 - e. Green Valley Area Report
 - f. Red Rock Water Storage Reservoir Facilities Plan
 - g. Green Valley SRF Loan Facility Plan
 - h. East Anamosa Street Corridor Report

As a result of these reviews, the ENGINEER will extract and compile a summary of the relevant information from each study pertaining to the project area.
2. Project Kick-off Meeting – The ENGINEER will conduct a project kick-off meeting at the OWNER's facilities. The meeting will address the goals and objectives of the project, a review of the key project issues, a review of the project schedule and budget, consideration of the project team members and the roles of each member, and the development of the communication protocol for the project.
3. Service Area Identification – The ENGINEER will identify, evaluate, and finalize the service area for both proposed reservoirs, including:
 - a. Use information provided by the OWNER to allocate demands for the project areas,
 - b. Use existing demand projections, provided by the OWNER to project future demand based on current allocation, current peaking factors, and anticipated land use projection/zoning information, and;
 - c. Evaluate reservoir sizing options.
4. Hydraulic Analysis – The ENGINEER will utilize the hydraulic model to analyze various design components for both of the proposed reservoirs, including:
 - a. Reservoir flow circulation for environmental conditions,
 - b. HWL elevation for optimum service,
 - c. Future interface with North Rapid High Level Pressure Zone,
 - d. Reservoir operation for existing and future demands and for seasonal demands,
 - e. Necessary pipe connections for reservoirs (size and preliminary alignment), and;
 - f. Reservoir inlet and outlet piping configurations to minimize water short circuiting and water quality issues.

The analysis will include a review of the interaction of the Elk Vale and North Rapid High Level Pressure Zones and the operation of each of the reservoirs. The analysis will include a review of the maximum day demands and fire flow demands and the impacts of these two scenarios on existing and future pressure zone operations.

PRELIMINARY DESIGN PHASE

The Preliminary Design Phase is comprised of the primary tasks identified below:

1. Project Website Development, Maintenance, and Operation – At the start of the project the ENGINEER will setup a project website to allow for centralization of reports and data collected during the meetings. The website will include FTP capabilities and tabs for project management, meeting agendas, meeting minutes, project team information, and deliverables for the project. The website will be reviewed monthly and update as necessary.
2. Review and Evaluate Reservoir Size and Location Alternatives – To evaluate the sites that are feasible for the construction of the proposed future reservoirs, the ENGINEER will complete a review and evaluation of the proposed reservoir sites. This evaluation will include:
 - a. The completion of a cursory geotechnical evaluation for up to three (3) sites to determine feasibility of constructing a reservoir on the sites. A summary of the findings will be provided in a Letter Report to the City.
3. Property Acquisition – The ENGINEER will make initial contact with preferred site location property owner(s) to discuss the proposed project and discuss future property acquisition.
4. Preliminary Tank Material and Configuration Evaluation – The ENGINEER will conduct a preliminary evaluation of tank materials and configurations that will establish and satisfy structural, aesthetic, and cost objectives; and provide recommendations for reservoir materials and configuration (e.g. steel, precast-prestressed concrete, etc.). A matrix will be developed to allow for the evaluated data to be used in the decision-making process. This matrix will be used throughout the Preliminary Engineering phase to assist in reservoir selections.
5. Life-Cycle Cost Analysis – The ENGINEER will perform, or obtain existing applicable life-cycle cost analysis for up to three (3) alternative reservoirs (e.g. steel, precast-prestressed concrete, etc.). This analysis will be based on bid summaries from similar projects, cost information provided by suppliers, and engineering/construction publications. The results of the life-cycle cost analysis will be incorporated into the planning matrix.
6. Preliminary Design Report – The findings of all hydraulic model analysis and preliminary design tasks shall be documented in the Preliminary Design Report. The ENGINEER will prepare and submit fifteen (15) copies of the Preliminary Design Report to the City. Following the City's review, and incorporation of comments, the ENGINEER will print the final report and provide a CD of the electronic files to the City.
7. Presentation of Findings – ENGINEER shall prepare presentations and present findings as follows:
 - a. Committee/Council – The ENGINEER will provide one (1) presentation to staff and council.
8. Summary of Deliverables
 - a. Cursory Geotechnical Review Letter Report
 - b. Preliminary Engineering Report
9. Summary of Project Meetings
 - a. The Project Team will conduct bi-monthly update meetings via telephone or video conferencing.
 - b. Project Kick-off Meeting
 - c. Property Owner Meetings
 - d. Presentation of Preliminary Design Report (one meeting)