PW083110-23

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

Date: August 31, 2010

Project Name & Number: Water Reservoir Maintenance; Project No. W10-1879 **CIP #:** 50804

Project Description: Cleaning, interior and exterior investigation and examination, documentation, and preliminary design to address water seepage issues at the Robbinsdale, Arrowhead and Signal Hill 5MG Water Reservoirs.

Consultant: Stanley Consultants, Inc.

Original Contract Amount:	$81,200	Original Contract Date:	Sept. 7, 2010	Original Completion Date:	May 31, 2011

Addendum No:

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
$81,200.00	933	4223	602	
	Total			

Agreement Review & Approvals

Project Manager — Date: 8/25/10

Division Manager — Date: 8-25-10

Compliance Specialist — Date: 8/25/10

Department Director — Date: 8-25-10

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

Agreement Between City of Rapid City and Stanley Consultants, Inc. for Professional Services for Water Reservoirs Maintenance, Project No. W10-1879 / CIP No. 50804

AGREEMENT made September 7, 2010, between the City of Rapid City, SD (City) and Stanley Consultants, Inc., (Engineer), located at 5775 Wayzata Blvd, Suite 300, Minneapolis, MN 55416. City intends to obtain services for Water Reservoirs Maintenance, Project No. W10-1879, CIP No.50804. The scope of services is as described in Exhibit A.

The City and the Engineer agree as follows:

The Engineer shall provide professional engineering services for the City in all phases of the Project as defined in Exhibit A, serve as the City's professional engineering representative for the Project, and give professional engineering consultation and advice to the City while performing its services.

Section 1—Basic Services of Engineer

1.1 General

1.1.1 The Engineer shall perform professional services described in this agreement, which include customary engineering services. Engineer intends to serve as the City's professional representative for those services as defined in this agreement and to provide advice and consultation to the City as a professional. Any opinions of probable project cost, approvals, and other decisions provided by Engineer for the City are rendered on the basis of experience and qualifications and represent Engineer's professional judgment.

1.1.2 All work shall be performed by or under the direct supervision of a professional Engineer licensed to practice in South Dakota.

1.1.3 All documents including Drawings and Specifications provided or furnished by Engineer pursuant to this Agreement are instruments of service in respect of the Project and the Engineer shall retain an ownership therein. Reuse of any documents pertaining to this project by the City on extensions of this project or on any other project shall be at the solely at the City's risk. The City agrees to defend, indemnify, and hold harmless Engineer from all claims, damages, and expenses including attorney's fees arising out of such reuse of the documents by the City or by others acting through the City.

1.2 Scope of Work

The Engineer shall:

1.2.1 Consult with the City, other agencies, groups, consultants, and/or individuals to clarify and define requirements for the Project and review available data.

1.2.2 Perform the tasks described in the Scope of Services. (See Exhibit A.)

Section 2—Information Provided by City

The City will provide any information in its possession for the project at no cost to the Engineer.

Section 3—Notice to Proceed

The City will issue a written notification to the Engineer to proceed with the work. The Engineer shall not start work prior to receipt of the written notice. The Engineer shall not be paid for any work performed prior to receiving the Notice to Proceed.

Section 4—Mutual Covenants

4.1 **General**

4.1.1 The Engineer shall not sublet or assign any part of the work under this Agreement without written authority from the City.

4.1.2 The City and the Engineer each binds itself and partners, successors, executors, administrators, assigns, and legal representatives to the other party to this agreement and to the partners, successors, executors, administrators, assigns, and legal representatives of such other party, regarding all covenants, agreements, and obligations of this agreement.

4.1.3 Nothing in this agreement shall give any rights or benefits to anyone other than the City and the Engineer.

4.1.4 This agreement constitutes the entire agreement between the City and the 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.

4.1.5 The Engineer shall make such revisions in plans which may already have been completed, approved, and accepted by the City, as are necessary to correct errors or omissions in the plans, when requested to do so by the City, without extra compensation therefore.

4.1.6 If the City requests that previously satisfactorily completed and accepted plans or parts thereof be revised, the Engineer shall make the revisions requested by the City. This work shall be paid for as extra work.

4.1.7 If the City changes the location from the one furnished to the Engineer, or changes the basic design requiring new work for the portions so changed, the redesign will be paid for as extra work.

4.1.8 The City may at any time by written order make changes within the general scope of this Agreement in the work and services to be performed by the Engineer. Any changes which materially increase or reduce the cost of or the time required for the performance of the Agreement shall be deemed a change in the scope of work for which an adjustment shall be made in the Agreement price or of the time for performance, or both, and the Agreement shall be modified in writing accordingly. Additional work necessary due to the extension of project limits shall be paid for as extra work.

4.1.9 Extra work, as authorized by the City, will be paid for separately and be in addition to the consideration of this Section.

4.1.10 For those projects involving conceptual or process development services, activities often cannot be fully defined during the initial planning. As the project does progress, facts and conditions uncovered may reveal a change in direction that may alter the scope of services. Engineer will promptly inform the City in writing of such situations so that changes in this agreement can be renegotiated.

4.1.11 This Agreement may be terminated (a) by the City with or without cause upon seven days' written notice to the Engineer and (b) by the Engineer for cause upon seven days' written notice to the City. If the City terminates the agreement without cause, the Engineer will be paid for all services rendered and all reimbursable expenses incurred prior to the date of termination.

If termination is due to the failure of the Engineer to fulfill its agreement obligations, the City may take over the work and complete it by agreement or otherwise. In such case, the Engineer shall be liable to the City for any additional cost occasioned thereby.

4.1.12 The City or its duly authorized representatives may examine any books, documents, papers, and records of the Engineer involving transactions related to this agreement for three years after final payment.

4.1.13 The City shall designate a representative authorized to act on the City's behalf with respect to the Project. The City or such authorized representative shall render decisions in a timely manner pertaining to documents submitted by the Engineer in order to avoid unreasonable delay in the orderly and sequential progress of the Engineer's services.

4.1.14 Costs and schedule commitments shall be subject to renegotiation for delays caused by the City's failure to provide specified facilities or information or for delays caused by unpredictable occurrences including without limitation, fires, floods, riots, strikes, unavailability of labor or materials, delays or defaults by suppliers of materials or services, process shutdowns, acts of God, or the public enemy, or acts of regulations of any governmental agency. Temporary delays of services caused by any of the above which results in additional costs beyond those outlined may require renegotiation of this agreement.

4.1.15 The City will give prompt written notice to the Engineer if the City becomes aware of any fault or defect in the Project or nonconformance with the Project Documents.

4.1.16 Unless otherwise provided in this Agreement, the Engineer and the Engineer's consultants shall have no responsibility for the discovery, presence, handling, removal or disposal of, or exposure of persons to hazardous materials in any form at the project site, including but not limited to asbestos products, polychlorinated biphenyl (PCB), or other toxic substances.

4.1.17 In the event asbestos or toxic materials are encountered at the jobsite, or should it become known in any way that such materials may be present at the jobsite or any adjacent areas that may affect the performance of Engineer's services, Engineer may, at their option and without liability for consequential or any other damages, suspend performance of services on the project until the City retains appropriate specialist CONSULTANT(S) or contractor(s) to identify, abate, and/or remove the asbestos or hazardous or toxic materials.

4.1.18 This agreement, unless explicitly indicated in writing, shall not be construed as giving Engineer the responsibility or authority to direct or supervise construction means, methods, techniques, sequences, or procedures of construction selected by any contractors or subcontractors or the safety precautions and programs incident to the work of any contractors or subcontractors.

4.1.19 Neither the City nor the Engineer, nor its Consultants, shall hold the other liable for any claim based upon, arising out of, or in any way

involving the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids, or gases, waste materials, or other irritants, contaminants, or pollutants.

4.1.20 Neither the City nor the Engineer, nor its Consultants, shall hold the other liable for any claim based upon, arising out of, or any way involving the specification or recommendation of asbestos, in any form, or any claims based upon use of a product containing asbestos.

4.1.21 Engineer hereby represents and warrants that it does not fail or refuse to collect or remit South Dakota or City sales or use tax for transactions which are taxable under the laws of the State of South Dakota.

4.2 City of Rapid City NonDiscrimination Policy Statement

In compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination act of 1975, the Americans with Disabilities Act of 1990, and other nondiscrimination authorities it is the policy of the City of Rapid City, 300 Sixth Street, Rapid City, SD 57701-5035, to provide benefits, services, and employment to all persons without regard to race, color, national origin, sex, disabilities/handicaps, age, or income status. No distinction is made among any persons in eligibility for the reception of benefits and services provided by or through the auspices of the City of Rapid City.

Engineer will permit access to any and all records pertaining to hiring and employment and to other pertinent data and records for the purpose of enabling the Commission, its agencies or representatives, to ascertain compliance with the above provisions.

This section shall be binding on all subcontractors or suppliers.

Section 5—Payments to the Engineer

5.1 Schedule of Pay Rates

The City will pay the Engineer for services rendered or authorized extra work according to the Engineer's hourly rate schedule. (See Exhibit B.)

5.2 Fee

The maximum amount of the fee for the services as detailed in Section 1.2 shall not exceed $81,200 unless the scope of the project is changed as outlined in Section 4. If expenses exceed the maximum amount, the Engineer shall complete the design as agreed upon here without any additional compensation. Sub task dollar amounts may be reallocated to other tasks as long as the total fee is not exceeded.

5.3 **Progress Payments**

Monthly progress payments shall be processed by the City upon receipt of the claim as computed by the Engineer based on work completed during the month at the rates established in Section 5.1 and approved by the City.

Net payment to the Engineer shall be due within forty-five (45) days of receipt by the City.

Section 6—Completion of Services

The Engineer shall complete services on or before May 31, 2011.

Section 7—Insurance Requirements

7.1 **Insurance Required**

The Engineer shall secure the insurance specified below. The insurance shall be issued by insurance company(s) acceptable to the City and may be in a policy or policies of insurance, primary or excess. Certificates of all required insurance including any policy endorsements shall be provided to the City prior to or upon the execution of this Agreement.

7.2 **Cancellation**

The Engineer will provide the City with at least 30 days' written notice of an insurer's intent to cancel or not renew any of the insurance coverage. The Contractor agrees to hold the City harmless from any liability, including additional premium due because of the Contractor's failure to maintain the coverage limits required.

7.3 **City Acceptance of Proof**

The City's approval or acceptance of certificates of insurance does not constitute City assumption of responsibility for the validity of any insurance policies nor does the City represent that the coverages and limits described in this agreement are adequate to protect the Engineer, its consultants or subcontractors interests, and assumes no liability therefore. The Engineer will hold the City harmless from any liability, including additional premium due, because of the Engineer's failure to maintain the coverage limits required.

7.4 **Specific Requirements**

7.4.1 Workers' compensation insurance with statutory limits required by South Dakota law. Coverage B-Employer's Liability coverage of not

less than $500,000 each accident, $500,000 disease-policy limit, and $500,000 disease-each employee.

7.4.2 Commercial general liability insurance providing occurrence form contractual, personal injury, bodily injury and property damage liability coverage with limits of not less than $1,000,000 per occurrence, $2,000,000 general aggregate, and $2,000,000 aggregate products and completed operations. If the occurrence form is not available, claims-made coverage shall be maintained for three years after completion of the terms of this agreement. The policy shall name the City and its representatives as an additional insured.

7.4.3 Automobile liability insurance covering all owned, nonowned, and hired automobiles, trucks, and trailers. The coverage shall be at least as broad as that found in the standard comprehensive automobile liability policy with limits of not less than $1,000,000 combined single limit each occurrence. The required limit may include excess liability (umbrella) coverage.

7.4.4 Professional liability insurance providing claims-made coverage for claims arising from the negligent acts, errors or omissions of the Engineer or its consultants, in the amount of $1,000,000 each occurrence and $1,000,000 annual aggregate. Coverage shall be maintained for at least three years after final completion of the services.

Section 8—Hold Harmless

The Engineer hereby agrees to hold the City harmless from any and all claims or liability including attorneys' fees arising out of the professional services furnished under this Agreement, and for bodily injury or property damage arising out of services furnished under this Agreement, providing that such claims or liability are the result of a negligent act, error or omission of the Engineer and/or its employees/agents arising out of the professional services described in the Agreement.

Section 9—Independent Business

The parties agree that the Engineer operates an independent business and is contracting to do work according to his own methods, without being subject to the control of the City, except as to the product or the result of the work. The relationship between the City and the Engineer shall be that as between an independent contractor and the City and not as an employer-employee relationship. The payment to the Engineer is inclusive of any use, excise, income or any other tax arising out of this agreement.

Section 10-Indemnification

If this project involves construction and Engineer does not provide consulting services during construction including, but not limited to, onsite monitoring, site visits, site observation, shop drawing review and/or design clarifications, City agrees to indemnify and hold harmless Engineer from any liability arising from the construction activities undertaken for this project, except to the extent such liability is caused by Engineer's negligence.

Section 11-Controlling Law and Venue

This Agreement shall be subject to, interpreted and enforced according to the laws of the State of South Dakota, without regard to any conflicts of law provisions. Parties agree to submit to the exclusive venue and jurisdiction of the State of South Dakota, 7th Judicial Circuit, Pennington County.

Section 12-Severability

Any unenforceable provision herein shall be amended to the extent necessary to make it enforceable; if not possible, it shall be deleted and all other provisions shall remain in full force and effect.

Section 13—Funds Appropriation

If funds are not budgeted or appropriated for any fiscal year for services provided by the terms of this agreement, this agreement shall impose no obligation on the City for payment. This agreement is null and void except as to annual payments herein agreed upon for which funds have been budgeted or appropriated, and no right of action or damage shall accrue to the benefit of the Engineer, its successors or assignees, for any further payments. For future phases of this or any project, project components not identified within this contract shall not constitute an obligation by the City until funding for that component has been appropriated.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

City of Rapid City:

_____
MAYOR

DATE: _____

Engineer:

_____
Stanley Consultants, Inc.

DATE: 8/25/10

ATTEST:

_____
FINANCE OFFICER

Reviewed By:

_____
Dan Coon, PROJECT MANAGER

DATE: _____

Exhibit "A"

WATER RESERVOIRS MAINTENANCE – SCOPE OF WORK

CITY PROJECT NO. W10-1879, CIP NO. 50804

Project Kickoff & Data Gathering

STANLEY CONSULTANTS will attend a project kickoff meeting with the City of Rapid City via teleconference and review project scope, expectations, scheduling, record drawings, maintenance records, and operation and maintenance procedures available for the reservoirs prior to mobilization. It is anticipated that the work for the Robbinsdale Reservoir and the Signal Hill 5MG Reservoir will begin in late October or early November of 2010. It is further anticipated that the work for the Arrowhead Reservoir will occur in the first quarter of 2011.

ROBBINSDALE RESERVOIR

A. Dive Team Mobilization

After reviewing available record drawings and holding the project kickoff meeting, STANLEY CONSULTANTS will plan and mobilize its underwater dive team and equipment to the project site. During the mobilization period, SCI will create the Activities Hazard Analysis (AHA) and Dive Operations Plan (DOP). These documents identify:

- Personnel and equipment requirements
- Safety procedures required by OSHA
- Emergency facilities locations and contact numbers
- Establish the lines of communication to be followed in the event of an emergency
- Identify project specific tasks and hazards
- Contingency planning in the event of an emergency
- Regulatory requirements (OSHA, ASCE and AWWA)

The AHA and DOP will be submitted to the City for review before departing for the project site.

B. Interior Investigation of Robbinsdale Reservoir

The interior investigation will be performed in three phases: Sediment Cleaning, Leak Location Investigation, and Structural Observations.

The follow parameters are applicable for all three phases of the interior investigation:

- Dive operations will be performed in accordance with:
  - American Water Works Association ANSI/AWWA Standard C 652-02
  - OSHA 29 CFR Part 1910 Subpart T – Commercial Diving Operations
  - ASCE's Underwater Investigations Standard Practice Manual
- Prior to entering tank, a pre-dive meeting will be held with the water utility representatives. This meeting will review:
  - The configuration of the reservoir
  - Disinfection procedures
  - Underwater appurtenances
  - Schedule constraints, diving operations
  - Safety procedures
  - Inspection requirements
  - Logistics
  - Communications
- Reservoir should be removed from service and isolated from the system while divers are in the tank by closing all inlet/outlet valves. Lockout and Tagout procedures will be used on applicable controls.

- Access and removal of reservoir hatches will be the responsibility of the City.
- Egress onto the top of the reservoir will be provided by boom type man lifts.
- Egress into the reservoir will be provided by interior ladders.
- In the event of an emergency a tripod lift will be used for removal of injured personnel unable to exit the reservoir on their own ability and as a backup to the ladders.
- The reservoir should be as full as possible with water, while leaving room for access.
- The City will be responsible for the initial water quality testing and post-inspection testing of chlorine residual and turbidity.
- Interior work will be performed by qualified engineer-divers using surface supplied air diving equipment with voice communication.
- All equipment entering the reservoir will be cleaned and disinfected with a chlorine solution that has a minimum strength of 200mg/L prior to entering the tank.
- Interior work will be recorded with underwater video equipment onto DVD format.
- All diving will be conducted using a totally encapsulated diving dress, including diver hard hat with sealed neck dam, and a dry suit in good repair.
- Full face masks and band masks will only be used in emergency situations. SCUBA equipment will not be used.

During all portions of work performed in the water, City water operations staff will be invited to observe STANLEY CONSULTANTS' progress of the work via real-time video monitoring equipment outside each tank.

B.1 Sediment Cleaning

It is anticipated that sediment has accumulated on the bottom of the tank. This material will need to be removed prior to performing the Leak Location Investigation and Structural Observations of the bottom of the tank. Sediment and debris will be removed in a manner that does not compromise the tank integrity, or disrupt the use and quality of the water. Water, debris (or other waste materials) disposal and any necessary permitting will be the responsibility of the City. It is anticipated that STANLEY CONSULTANTS' dive team will require no more than one day to clean the Robbinsdale tank.

B.2 Leak Location Investigation

Once sediment and debris materials have been removed, a leak location investigation will be performed on the tank to determine the location of the leak(s). This information will be used to determine the quantity of repairs, repair methods, and estimate of construction costs to repair the leaks. The addition of water required to fill the tank, and the isolation of the tank from the system during the leak location investigation will be the responsibility of the City. STANLEY CONSULTANTS will use approved, food coloring dyes to identify sources of leakage. Cracks and areas of leakage will be surveyed, measured, and photographed.

B.3 Structural Observations

Engineer-divers will perform a close visual and tactile examination to detect and document structural deficiencies, damage, and deterioration of the structure. Data collected during the inspection will be used for the design of repairs. Physical geometry of the structure will be measured and compared with the available record drawings.

C. Exterior Investigation of Robbinsdale Reservoir

STANLEY CONSULTANTS will inspect the exposed exterior of the Robbinsdale tank. Inspections will include the visual observation of the exterior wall, roof and appurtenances. Exterior walls will be sounded to determine the integrity of the concrete.

STANLEY CONSULTANTS will remove up to twelve (12) small (approximately 8" by 8") areas of the concrete cover over the exterior wall reinforcing in the Robbinsdale tank and examine the reinforcing for corrosion damage. The concrete will be repaired after the inspections are complete with a dry-pack sand-cement mortar or epoxy grout prior to leaving the site.

STANLEY CONSULTANTS will employ the services of a local Contractor to provide equipment, materials and labor needed to assist STANLEY CONSULTANTS with the tank inspection.

STANLEY CONSULTANTS will provide sketches defining the limits of deteriorated concrete and corroded reinforcing observed during the exterior inspections.

D. Structural Analysis of Robbinsdale Reservoir

Based on photographs provided by the City and on observations made by STANLEY CONSULTANTS, the Robbinsdale tank is experiencing significant horizontal cracking in the exterior face of the above grade portion of the tank wall. The cracks are clearly visible from a distance of approximately 20'. There is evidence of past water seepage through these cracks due to the presence of efflorescence and rust stains on the wall below the cracks,

The size and orientation of these cracks are not consistent with minor cracking associated with dimensional changes in the wall due to concrete shrinkage and temperature variations. The nature of these cracks indicate the possibility of an overload condition occurring sometime in the past that may have resulted in flexural cracking and permanent deformation of the vertical wall reinforcing.

STANLEY CONSULTANTS will evaluate the design of the Robbinsdale tank based on available records, field measurements and inspections. The purpose of the structural analysis is to evaluate the design and detailing of the tank to determine if a potential structural deficiency exists under service conditions. If the analysis indicates that the tank is potentially structurally deficient, additional repair options (i.e. wall strengthening) will be considered during the preliminary design phase to address this deficiency.

E. Existing Conditions Report of Robbinsdale Reservoir

Reporting for the Robbinsdale facility will include the following:

- DVD video documentation of the interior and exterior observations, both above and below the waterline. The video will include the conditions of internal walls, floors, roofs, hatches, welds, overflow structures, sediment and any identified discrepancies.
- A description of concrete condition denoting problem areas such as cracking, spalling or deterioration.
- Description of hatch condition, vent and screen condition, ladder condition and overflow structure condition.

F. Preliminary Design of Robbinsdale Reservoir

- **Preliminary Repair Options:**
  Based on the results of the Investigations and Analyses of Existing Conditions, STANLEY CONSULTANTS will develop up to four (4) options for repairs needed to the tank to reduce the release of water from the reservoir. The options considered during preliminary design will be tailored to suit the problems observed with the tank. Each option will include a preliminary opinion of probable cost. The development of these costs will be used to evaluate the cost effectiveness of each option. The preliminary cost estimates for each option will consider the constraints and conditions unique to the tank. Specialty contractors will be consulted if required to develop preliminary unit prices for the various repair options considered.

- **Exterior Coating Options:**
  STANLEY CONSULTANTS will develop up to two (2) options for improving the exterior appearance of the Robbinsdale tank. Each option will include a preliminary opinion of probable cost. The development of these costs will be used to evaluate the cost effectiveness of each option. The preliminary cost estimates for each option will consider the constraints and conditions unique to the tank. Specialty contractors will be consulted if required to develop preliminary unit prices for the various coating options considered.

- **Review Meeting:**
  STANLEY CONSULTANTS' project manager and senior structural engineer will attend, in person, a meeting with City staff to discuss the proposed repair and coating options for the tank. Prior to this meeting, STANLEY CONSULTANTS will submit a draft of the Preliminary Design Report for City review. The purpose of this meeting is to discuss the City's review comments on the Draft Report and identify which options will be recommended for final design.

- **Preliminary Design Report:**
  STANLEY CONSULTANTS will prepare a report outlining the options identified, evaluated, and recommended for the reservoir. The evaluation will discuss the technical benefits, cost-effectiveness and impact of each option on the City's water operations during construction. The report will be prepared and submitted in two stages. The Draft Report will be submitted prior to the Review Meeting for City review. STANLEY CONSULTANTS will revise the Draft Report and issue a Final Report incorporating changes mutually agreed upon during the Review Meeting.

SIGNAL HILL 5MG RESERVOIR

A. Interior Investigation of Signal Hill 5MG Reservoir

- City personnel will drain and clean the reservoir prior to STANLEY CONSULTANTS' arrival on site.
- The City will be responsible for all aspects of the reservoir draining and cleaning, including proper water and waste disposal.
- STANLEY CONSULTANTS will provide the services of a structural engineer to inspect the interior of the drained and cleaned tank in conjunction with City personnel
- The City will also be responsible for the following:
  a. Access and removal of reservoir hatches.
  b. Access onto the top of the reservoir.
  c. Access into the reservoir by interior ladders.
  d. In the event of an emergency a tripod lift will be used for removal of injured personnel unable to exit the reservoir on their own ability and as a backup to the ladders.
  e. Air quality monitoring of confined spaces.
  f. Ventilation of confined spaces.
  g. Confined space entry permits.
  h. Notification of emergency responders prior to confined space entries.

B. Existing Conditions Report of Signal Hill 5MG Reservoir

- STANLEY CONSULTANTS will develop a technical memo documenting findings and potential repair options for the reservoir.

C. Preliminary Design of Signal Hill 5MG Reservoir

- **Preliminary Repair Options**
  Based on the results of the Investigation and Analysis of Existing Conditions, STANLEY CONSULTANTS will develop up to four (4) options for repairs needed to the tank to reduce the release of water from the reservoirs. The options considered during preliminary design will be tailored to suit the problems observed with the tank. Each option will include a preliminary opinion of probable cost. The development of these costs will be used to evaluate the cost effectiveness of each option. The preliminary cost estimates for each option will consider the constraints and conditions unique to each tank. Specialty contractors will be consulted if required to develop preliminary unit prices for the various repair options considered.

- **Review Meeting**

STANLEY CONSULTANTS' project manager and senior structural engineer will attend, via teleconference or video conference, a meeting with City staff to discuss the proposed repair options for the tank. Prior to this meeting, STANLEY CONSULTANTS will submit a draft of the Preliminary Design Report for City review. The purpose of this meeting is to discuss the City's review comments on the Draft Report and identify which options will be recommended for final design.

- **Preliminary Design Report**
  STANLEY CONSULTANTS will prepare a report outlining the options identified, evaluated, and recommended for the reservoir. The evaluation will discuss the technical benefits, cost-effectiveness, and impact of each option on the City's water operations during construction. The report will be prepared and submitted in two stages. The Draft Report will be submitted prior to the Review Meeting for City review. STANLEY CONSULTANTS will revise the Draft Report and issue a Final Report incorporating changes mutually agreed upon during the Review Meeting.

ARROWHEAD RESERVOIR

A. Interior Investigation of Arrowhead Reservoir

- City personnel will drain and clean the reservoir prior to STANLEY CONSULTANTS' arrival on site.
- The City will be responsible for all aspects of the reservoir draining and cleaning, including proper water and waste disposal.
- STANLEY CONSULTANTS will provide the services of a structural engineer to inspect the interior of the drained and cleaned tank in conjunction with City personnel
- STANLEY CONSULTANTS will employ the services of a Contractor specializing in the design, construction, and rehabilitation of wire/strand wound pre-stressed concrete tanks to assist in the inspection of the tank.
- The City will also be responsible for the following:
  a. Access and removal of reservoir hatches.
  b. Access onto the top of the reservoir.
  c. Access into the reservoir by interior ladders.
  d. In the event of an emergency a tripod lift will be used for removal of injured personnel unable to exit the reservoir on their own ability and as a backup to the ladders.
  e. Air quality monitoring of confined spaces.
  f. Ventilation of confined spaces.
  g. Confined space entry permits.
  h. Notification of emergency responders prior to confined space entries.

B. Exterior Investigation of Arrowhead Reservoir

- City personnel will remove the exterior grout from the area of the reservoir in which there is obvious water seepage.
- STANLEY CONSULTANTS will provide the services of a structural engineer to inspect the exterior of the tank in conjunction with City personnel.
- STANLEY CONSULTANTS will employ the services of a Contractor specializing in the design, construction and rehabilitation of wire/strand wound pre-stressed concrete tanks to assist in the exterior inspection of the Arrowhead tank.
- The City will also be responsible for the following:
  a. Access onto the top of the reservoir.
  b. Lift equipment and operators necessary to access the exposed exterior walls of the reservoir.
  c. Additional grout removal if deemed necessary by STANLEY CONSULTANT's structural engineer during exterior inspection.
  d. Repair of grout removed during exterior inspection.

C. **Existing Conditions Report of Arrowhead Reservoir**

- STANLEY CONSULTANTS will develop a technical memo documenting findings and potential repair options for the reservoir.

D. **Preliminary Design of Arrowhead Reservoir**

- **Preliminary Repair Options**
  Based on the results of the Study and Analysis of Existing Conditions, STANLEY CONSULTANTS will develop up to four (4) options for repairs needed to the tank to reduce the release of water from the reservoir. The options considered during preliminary design will be tailored to suit the problems observed with the tank. Each option will include a preliminary opinion of probable cost. The development of these costs will be used to evaluate the cost effectiveness of each option. The preliminary cost estimates for each option will consider the constraints and conditions unique to the tank. Specialty contractors will be consulted if required to develop preliminary unit prices for the various repair options considered.

- **Exterior Coating Options**
  STANLEY CONSULTANTS will develop up to two (2) options for improving the exterior appearance of the Arrowhead tank. Each option will include a preliminary opinion of probable cost. The development of these costs will be used to evaluate the cost effectiveness of each option. The preliminary cost estimates for each option will consider the constraints and conditions unique to the tank. Specialty contractors will be consulted if required to develop preliminary unit prices for the various coating options considered.

- **Review Meeting**
  STANLEY CONSULTANTS' project manager and senior structural engineer will attend, via teleconference or video conference, a meeting with City staff to discuss the proposed repair and coating options for the tank. Prior to this meeting, STANLEY CONSULTANTS will submit a draft of the Preliminary Design Report for City review. The purpose of this meeting is to discuss the City's review comments on the Draft Report and identify which options will be recommended for final design.

- **Preliminary Design Report**
  STANLEY CONSULTANTS will prepare a report outlining the options identified, evaluated, and recommended for the reservoir. The evaluations will discuss the technical benefits, cost-effectiveness, and impact of each option on the City's water operations during construction. The report will be prepared and submitted in two stages. The Draft Report will be submitted prior to the Review Meeting for City review. STANLEY CONSULTANTS will revise the Draft Report and issue a Final Report incorporating changes mutually agreed upon during the Review Meeting.

CITY OF RAPID CITY, SOUTH DAKOTA
WATER RESERVOIRS MAINTENANCE
Engineering Services

Stanley Classification (SC Class)	PROJECT PRINCIPAL 19	PROJECT MANAGER 13	SENIOR STRUCTURAL ENGINEER 13	SENIOR DIVER/PE QA/QC 15	DIVER/PE COST EST 10	DIVER TENDER 7	CLERICAL 6	TOTAL HOURS	Project Fee
Hourly Rate	$214	$137	$137	$159	$111	$87	$78		
Task									
Kickoff Meeting/Project Management	2	42	2		2			48	$ 6,700
Dive Team Mobilization					24			24	$ 2,672
Robbinsdale - Tank Cleaning				8	12	16		36	$ 4,000
Robbinsdale - Interior Investigation and Leak Location Investigation			8	10	14	20		52	$ 5,988
Robbinsdale - Exterior Investigation			16					16	$ 2,200
Robbinsdale - Report of Existing Conditions			10	10	24	24		68	$ 7,725
Robbinsdale - Structural Analysis			24	2				26	$ 3,618
Robbinsdale - Preliminary Design		6	32	4	16		10	70	$ 8,702
SMG Reservoir - Inspect & Preliminary Design		2	36	1			8	47	$ 6,011
Arrowhead Reservoir - Inspect & Preliminary Design		2	36	1			8	47	$ 6,011
Labor Total (Hours)	2	54	164	36	92	60	26	434	
Labor Total ($)	$427	$7,425	$22,550	$5,727	$10,244	$5,216	$2,039		$53,628
Expenses Total									$27,572
Project Total									$81,200

Exhibit "B" – Page 1

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Exhibit "B" – Page 2

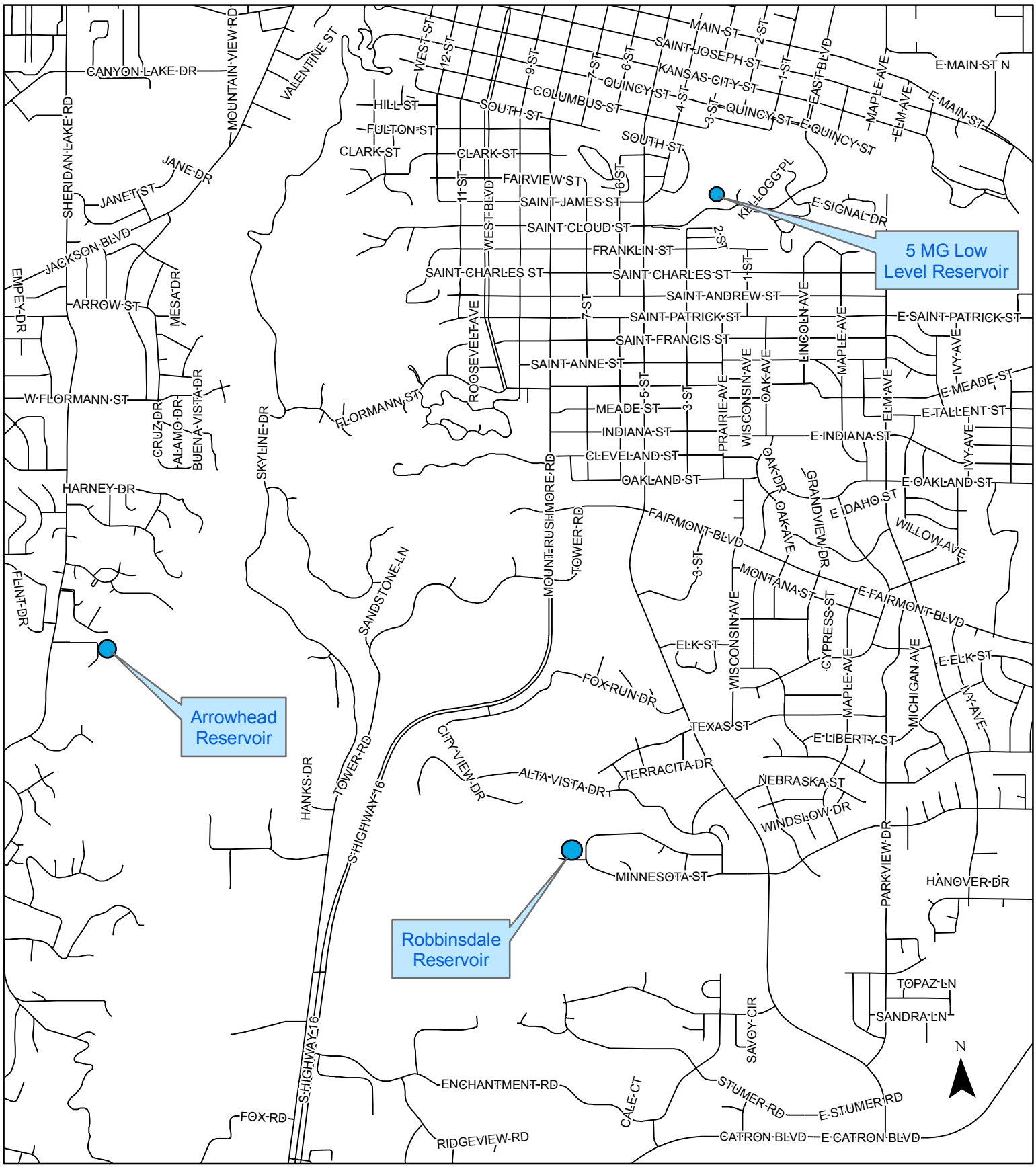
Hourly Fees
United States
Office-Based Members
Fiscal Year 2010-2011

Classification	Hourly Rates
SC-1	$38.00
SC-2	45.00
SC-3	54.00
SC-4	62.00
SC-5	71.00
SC-6	79.00
SC-7	87.00
SC-8	95.00
SC-9	103.00
SC-10	111.00
SC-11	119.00
SC-12	129.00
SC-13	138.00
SC-14	148.00
SC-15	159.00
SC-16	171.00
SC-17	184.00
SC-18	198.00
SC-19	214.00
SC-20	228.00
SC-21	248.00
SC-22	271.00

The hourly rates shown herein will be in effect for the duration of the contract as specified in Section 6.

PW083110-23

Exhibit



Water Reservoir Maintenance
Project No. W10-1879