

# COUNCIL DECISION REQUEST

SUBJECT: Preliminary Engineering for the C. C. Cragin Raw Water Pipeline

MEETING DATE: 12-10-09

PAYSON GOAL: NEW:                      EXISTING: X

ITEM NO.:

TENTATIVE SCHEDULE:

SUBMITTED BY: LaRon G. Garrett, Pub. Wks. Dir. AMOUNT BUDGETED: \$8,785,000

SUBMITTAL TO AGENDA  
APPROVED BY TOWN MANAGER

EXPENDITURE REQUIRED: \$499,200

CONT. FUNDING REQUIRED: \$0

DKG

EXHIBITS (If Applicable, To Be Attached):

## POSSIBLE MOTION

I move to approve the contract with Sunrise Engineering, Inc. for the Preliminary Engineering Design of the C. C. Cragin Raw Water Pipeline and authorize the Mayor to sign the necessary contract documents.

## SUMMARY OF THE BASIS FOR POSSIBLE MOTION:

Town of Payson personnel have been working on bringing water from Blue Ridge Reservoir (Now called C. C. Cragin Reservoir) to Payson for over 30 years. We are now beginning to see the realization of this project. On October 22, 2009 the Town Council approved Sunrise Engineering, Inc. to be the engineer for the Preliminary Design of the C. C. Cragin Raw Water Pipeline and authorized staff to negotiate a final Scope of Services and Professional Fee. Negotiations area now complete and we are ready to approve the contract for the Preliminary Engineering Design of the C. C. Cragin Raw Water Pipeline. A copy of the Towns standard engineering contract with the negotiated Scope of Services and Fee is attached.

Staff recommends approval of this contract to allow the C. C. Cragin water project to move forward.

**PROS:** Approval will allow the Town to continue working towards making C. C. Cragin water a reality.

**CONS:** None

**PUBLIC INPUT (if any):** N/A

**BOARD/COMMITTEE/COMMISSION ACTIONS/RECOMMENDATIONS (if any) (give dates and attach minutes):** N/A

## FUNDING:

Acct: 662-5-5451-00-8600 Budget: \$8,785,000 Available <sup>8,285,800</sup> 8,785,000 Expense: 499,200 Remaining:

3A: Hope A Cribb Date: 12/2/09

DEC 10 2009 I.3



**AGREEMENT  
BETWEEN SUNRISE ENGINEERING, INC.  
AND THE TOWN OF PAYSON  
FOR PROFESSIONAL SERVICES IN CONNECTION WITH  
THE C. C. CRAGIN RAW WATER LINE PRELIMINARY DESIGN**

**THIS AGREEMENT** entered into this \_\_\_ day of \_\_\_\_\_, 2009 by and between **SUNRISE ENGINEERING, INC., 2152 S. Vineyard, Ste. 123, Mesa, Arizona 85210**, (hereinafter referred to as the "Engineers and Architects" or "E/A") and the Town of Payson, a municipal corporation, located at 303 North Beeline Highway, Payson, Arizona 85541 (hereinafter referred to as "Client").

**RECITALS**

- A. Client desires to engage E/A to provide professional services; and
- B. Client finds that the proposed Scope of Services and terms of this Agreement are acceptable; and
- C. E/A desires to provide said services and agrees to do so for the compensation and upon the terms and conditions as hereinafter set forth.

**NOW, THEREFORE**, based upon the mutual promises, covenants and conditions herein contained, the Parties do hereby agree as follows:

Section 1. Terms and Conditions

- A. Employment of the E/A. Client hereby engages E/A and E/A hereby agrees to perform the professional services as set forth herein.
- B. Scope of Services. E/A shall perform, in a proper and professional manner, the services set forth in the Scope of Services, marked Attachment "A", attached hereto, and by this reference incorporated herein as though set forth in full at this point. The work is generally described as:

Provide Preliminary Engineering Design for the C. C. Cragin Raw Water Line
- C. Time for Completion. The professional engineering design and reports for **THE C. C. CRAGIN RAW WATER LINE PRELIMINARY DESIGN** as defined in Attachment "A", Scope of Services, shall be completed within Three Hundred Sixty Five (365) calendar days from the date of execution of this contract. This time frame may be extended if mutually agreed to in writing by both parties.
- D. Extra Services. E/A shall provide extra services, not specifically called for in Attachment "A", Scope of Services, upon request or authorization of the Client at a fee to be determined at the time of the request. However, it is the intent that the Scope of Services, with modifications by the E/A in the Special Provisions, if any, is complete and sufficient to accomplish the purposes of this Agreement.
- E. Changes. If Client has requested modifications or changes in the extent of the Project, the time of performance of the services of E/A and the compensation therefore shall be adjusted appropriately and shall be incorporated in written amendments to this

Agreement. Notwithstanding the foregoing, E/A shall perform no modification, changes or additional work, except as and until authorized in writing by Client to do so.

F. Fees. Client shall pay E/A, for the services set forth in Attachment "A", Scope of Services, a Lump Sum of Four Hundred Ninety Nine Thousand, Two Hundred Dollars and NO/100, (\$499,200.00) for Tasks 1-4, 8, & 9 and Time and Materials for Tasks 5-7 and 10-15 per the fee schedule included in Attachment "A".

G. Payment. E/A will submit to Client monthly invoices based on a percentage of work completed along with all reimbursable expenses incurred. Client will be responsible for paying the invoice in full within thirty (30) days of receipt. If Client fails to make any payment due E/A for services performed as set forth in Attachment "A", Scope of Services, within thirty (30) days after receipt of E/A's bill therefore the amounts due E/A shall include a charge at the rate of 1.50% per month from said day; and in addition E/A may suspend services under this Agreement until it has been paid in full all amounts due it for services and expenses. E/A shall be entitled to actual costs for remobilizing on any work suspended for thirty (30) days or more on account of non-payment or a substantial portion of the fee within the time prescribed in this Agreement.

H. Reimbursables. Unless otherwise stated in Attachment "A", Scope of Services, charges for out-of-pocket expenses not directly furnished by E/A will be paid by Client at a rate of 1.10 times the cost of such expense, up to a maximum of Five Hundred Dollars, excluding subconsultants, in addition to the amount set forth in paragraph 2 (F) herein above. E/A shall not be entitled for payment for printing or copying that occurs during the normal course of work required to accomplish the Scope of Services, except as authorized by the Client. Printing, binding, copying and deliveries of inspection reports, field notes and record drawings for the Client shall not be considered reimbursable.

I. Ownership and Re-Use of Documents. All documents, including original drawings, estimates, specifications, field notes, inspection reports, testing results, record drawings and data are and shall be the property of the Client, and shall be provided to the Client upon request during the term of this Agreement, and without demand at the conclusion of this Agreement. Client will not reuse the documents for any other project unless E/A has given written authorization to do so.

J. Delays Beyond the Control of the E/A. It is agreed that events which are beyond the control of the E/A may occur which may delay the performance of the Scope of Services of this Agreement. In the event that the performance of the Scope of Services by the E/A is delayed beyond its control, the E/A shall notify, in writing, the Client of such delay and the reason therefore, and Client shall extend the time of performance appropriately.

K. Liability of E/A. E/A shall be liable only for damage caused by negligence of it, its employees, sub-consultants or subcontractors. E/A shall notify Client of the engagement of any and all subcontractors or consultants, and client shall have sufficient and adequate opportunity to review the qualifications of such subcontractors or consultants, and shall have the right to approve or disapprove their engagement. Client requires subcontractors or consultants of the E/A shall provide appropriate certificates of insurance to the client prior to their performing of any work relating to this Agreement.

L. Problems. Any problems relating to the services provided herein are to be brought to the attention of E/A as soon as encountered and, if possible, before E/A incurs

any obligations. E/A reserves the sole right to correct any errors it is responsible for, including, but not limited to, the selection of a subcontractor or sub-consultant and the negotiation of fees.

M. Indemnification. To the fullest extent permitted by law, the E/A shall defend, indemnify and hold harmless the Town of Payson, its agents, officers, officials and employees from and against all tortuous claims, damages, losses and expenses (including but not limited to attorney fees, court costs, and the cost of appellate proceedings), relating to, arising out of, or alleged to have resulted from the negligent acts, errors, mistakes or omissions of the E/A, its agents, employees, or any tier of E/A's sub-consultants in the performance of this Contract. E/A's duty to defend, hold harmless and indemnify the Town of Payson, its agents, officers, officials and employees shall arise in connection with any tortuous claim, damage, loss or expense that is attributable to bodily injury, sickness, disease, death or injury to, impairment, or destruction of property including loss of use resulting therefrom, caused by any E/A's negligent acts errors, mistakes, omissions, work or services in the performance of this Contract including any employee of the E/A, any tier of E/A's subcontractor or any other person for whose acts, errors, mistakes, omissions, work or services the E/A may be legally liable.

The amount and type of insurance coverage requirements set forth in Paragraph N herein will in no way be construed as limiting the scope of the indemnity in this paragraph.

N. Insurance. All insurance required herein shall be maintained in full force and effect until all work or service required to be performed under the terms of the Contract is satisfactorily completed and formally accepted; failure to do so may, at the sole discretion of the Town of Payson, constitute a material breach of this Contract.

The E/A's insurance shall be primary insurance as respects to the Town of Payson, and any insurance or self-insurance maintained by the Town of Payson shall not contribute to it.

Any failure to comply with the claim reporting provisions of the insurance policies or any breach of an insurance policy warranty shall not affect coverage afforded under the insurance policies to protect the Town of Payson.

The insurance policies, except Workers' Compensation, shall contain a waiver of transfer rights of recovery (subrogation) against the Town of Payson, its agents, officers, officials and employees for any claims arising out of the E/A's negligent acts, errors, mistakes, omissions, work or service.

The insurance policies may provide coverage which contain deductibles or self-insured retentions. Such deductible and/or self-insured retentions shall not be applicable with respect to the coverage provided to the Town of Payson under such policies. The E/A shall be solely responsible for the deductible and/or self insured retention and the Town of Payson, at its option, may require the E/A to secure payment of such deductibles or self-insured retentions by a Surety Bond or an irrevocable and unconditional letter of credit.

The insurance policies, except Workers' Compensation and Professional Liability, required by this Contract, shall name the Town of Payson, its agents, officers, officials and employees as Additional Insureds.

Required Coverage

General Liability.	\$1,000,000 / occurrence;	\$2,000,000 aggregate.
Workers' Compensation.	\$100,000 / accident;	\$100,000 disease; \$500,000 disease limit
Professional Liability	\$1,000,000 per claim.	

Prior to commencing work or services under this Contract, E/A shall furnish the Town of Payson with Certificates of Insurance, or formal endorsements as required by the Contract, issued by E/A's insurer(s), as evidence that policies providing the required coverage's, conditions and limits required by this Contract are in full force and effect.

In the event any insurance policy(ies) required by this Contract is(are) written on a "claims made" basis, coverage shall extend for two years past completion and acceptance of the Contractor's work or services as evidenced by annual Certificates of Insurance.

If a policy does expire during the life of the Contract, a renewal certificate must be sent to the Town of Payson fifteen (15) days prior to the expiration date.

O. Termination of Contract. This Agreement may be terminated by either Party at any time upon thirty (30) days prior written notice to the other Party. Upon such termination, Client shall pay E/A all monies owed under this Agreement for all work performed up to the effective date of termination. Unless sooner terminated, this Agreement shall terminate fourteen (14) calendar days after completion of construction. In the event of such cancellation, all work performed by E/A up to that time, including but not limited to field information, studies and rough or final drafts of working papers, shall be delivered to the Client by E/A.

P. Publicity. No information relative to the Project shall be released by E/A for publication, advertising, or for any other purpose without the prior written approval of the Client.

Q. Supplementary Conditions. Supplementary Conditions, if any, shall apply to this Agreement, as set forth in Attachment "B" - Supplementary Conditions, which is attached hereto and incorporated herein by this reference as though set forth in full at this point.

R. Entire Agreement. This Agreement, with attachments, represents the entire understanding between Client and E/A in respect to the Project, all prior understanding and agreements are merged herein and this Agreement may only be modified by an instrument in writing executed with the same formalities as this instrument.

S. Successors and Assigns. Client and E/A each binds himself and his partners, successors, executors, administrators and assigns to the other party to this Agreement and to the partners, successors, executors, administrators and assigns of such other party, in respect to all covenants of this Agreement. Except as above, neither Client nor E/A shall assign, sublet or transfer its interest in this Agreement without the written consent of the other; however, E/A may employ others to assist him in carrying out its duties under this Agreement. Nothing herein shall be construed as giving any rights or benefits hereunder to anyone other than Client and E/A.

T. Non-Appropriation/Non-Receipt. Nothing herein shall be construed as obligating the Town to expend, or as involving the Town in any contract or other obligation for the future payment of money in excess of appropriations authorized by law and

administratively allocated for this work. Nor shall anything herein be construed as obligating the Town to expend, or as involving the Town in any contract or other obligation for the future payment of money if the Town does not have sufficient revenues for this expenditure.

U. Business License. The E/A shall provide the Town with a copy of its Town of Payson business license. If the E/A is exempt from the Town's business licensing requirements, it shall still provide the Town with the items required under Section 110.03(C)-(D) of the Town Code.

V. Scrutinized Business Operations. Pursuant to A.R.S. §35-391.06, the Parties hereby warrant and represent that they do not have, nor any of their subcontractors have, and during the term of the Contract will not have a scrutinized business operation in either Sudan or Iran.

W. Authorized Presence Requirements/Government Procurement (A.R.S. §41-4401).

W.1 Consultant and any Sub-consultant employed by Consultant warrants their compliance with all Federal immigration laws and regulations that relate to their employees and Arizona Revised Statutes Section 23-214(A).

W.2 A breach of the warranty under Section W.1 above shall be deemed a material breach of this Contract and shall be subject to penalties up to and including termination of the Contract.

W.3 The Town retains the legal right to inspect the papers of the Consultant or Sub-consultant who works on this Contract to ensure that the Consultant or Sub-consultant is complying with Section W.1.

X. Dispute Resolution. This Agreement shall be governed and construed in accordance with the internal laws of the State of Arizona. In particular, this Agreement is subject to the provisions of A.R.S. § 38-511, the terms of which are incorporated herein, and which provides for cancellation of contracts by the municipality for certain conflicts of interest. With the written consent of both Parties, any dispute, controversy, claim, or cause of action arising out of or related to this Agreement may, but in no event need, be settled by submission to binding arbitration in accordance with the rules of the American Arbitration Association and the Arizona Uniform Arbitration Act, A.R.S. § 12-1501, et seq. Judgment upon any award rendered by the arbitrator(s), if filed in Arizona Superior Court, shall be filed in the Superior Court of Gila County, Arizona; or any such dispute, controversy, claim, or cause of action may be litigated in the Superior Court of Gila County, Arizona. The venue for any such dispute shall be Gila County, Arizona, and both Parties consent in advance to such venue and jurisdiction and waive any right to object that Gila County is an inconvenient or improper forum based upon lack of venue. Neither Party shall be entitled to recover from the other party any of its attorneys' fees, costs, or expert witness fees incurred in any such dispute, controversy, claim, or cause of action, but each party shall bear its own attorneys' fees without contribution from the other party, whether the same is resolved through arbitration, litigation in a court, or otherwise.

**WITNESS WHEREOF**, E/A and Client have executed this Agreement on the day and year first above written.

Town of Payson  
303 N. Beeline Highway  
Payson, AZ 85541  
Telephone: (928) 474-5242  
FAX: (928) 474-7052

By: \_\_\_\_\_  
Mayor

Attest: \_\_\_\_\_  
Town Clerk

Sunrise Engineering, Inc.  
2152 S. Vineyard, Ste. 123  
Mesa, AZ 85210  
Telephone: 480-768-8600  
FAX: 480-768-8609

By: \_\_\_\_\_

Title: \_\_\_\_\_

### APPROVAL AS TO FORM

The Town of Payson Legal Department has reviewed this contract and approved it as to form. When reviewing this contract for form, the Legal Department considers whether the following situations have been addressed:

- I. Identification of parties;
- II. Offer and acceptance;
- III. Existence of contract consideration (we do not review to determine if consideration is adequate);
- IV. That certain provisions specifically required by statute are included (i.e., provisions concerning non-availability of funds and conflict of interest, A.R.S. § 38-511).

We have not reviewed the contract for other issues. Therefore, approval as to form should not be considered as approval of the appropriateness of the terms or conditions of the contract or the underlying transaction. In addition, approval as to the form should not be considered approval of the underlying policy considerations addressed by the contract.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2009.

By \_\_\_\_\_  
Samuel I. Streichman, Town Attorney

# EXHIBIT 'A' SCOPE OF SERVICES

	Scope of Work For	
	C.C. Cragin Reservoir Raw Water Pipeline Preliminary Design	

## OVERALL PROJECT DESCRIPTION

The Town of Payson has secured a 3,000 ac-ft annual allocation of water from the C.C. Cragin Reservoir. The Town plans to divert its allocation of water from the existing Hydroelectric Power Plant, operated by the Salt River Project (SRP), on the downstream side of the power generation turbine. The water will be diverted into a new raw water pipeline (Phase I) and delivered to a new water treatment plant (Phase II). Once the water is treated to drinking water standards it will be delivered via a treated water pipeline (Phase III) into the Town's drinking water system. The scope of work for this contract includes the preliminary design and studies for the raw water pipeline (Phase I) and support services as needed for other phases of the project.

## SCOPE OF WORK FOR THIS CONTRACT:

Raw Water Pipeline Preliminary Design: This new pipeline will deliver raw water from the SRP Power Plant to the new water treatment plant. The pipeline is anticipated to be 18-inches in diameter, approximately 12-miles long and generally follow Houston Mesa Road. The scope of work has been divided into the following categories:

1. **INITIAL PROJECT SCOPING & KICK-OFF MEETINGS:** Meeting with the Town of Payson Staff and their consultants to prepare the scope for the raw water pipeline, overview the existing project conditions review the preferred waterline alignment, alternatives, water sharing, operational agreements and constraints, schedules, and status of environmental assessment efforts by SWCA and other stakeholders. The meeting goal will be to set the priorities and preferences for the evaluation of project alternatives, future connections and service points, and design criteria.

**FEE FOR TASK 1: \$19,600.00**

**FEE TYPE: LUMP SUM**

2. **SURVEY & BASE MAPPING:** This portion of the scope will provide the necessary survey, base mapping, utility information and property ownership for the pipeline corridor. The level of effort for this mapping varies for this contract based on the Phase (I, II & III). A brief description of the scope of work is as follows:
  - 2.1. Survey Control (Phase I, II & III): Establish horizontal and vertical control along the entire pipeline alignment.
  - 2.2. Aerial photography and digitized mapping (Phase I, II & III): Set aerial panels. Limits for the aerial mapping shall be 1800-feet wide and the additional areas outlined in Exhibit A. Digitized mapping shall be prepared for 100-feet wide on either side of both the raw and treated water pipeline alignment and the additional areas outlined in Exhibit A. Supplemental ground survey will be provided where tree canopies conceal ground information. Finished digitized mapping will show 2-foot contour intervals and surface features along the pipeline alignment and 1-foot contours at the proposed treatment plant site and stream crossings (1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> crossings).
  - 2.3. Utility mapping (Phase I & II Only): Research existing utility company mapping. Collect existing visible utility surface features (pedestals, power poles, valves, etc.).

	Scope of Work For	
	C.C. Cragin Reservoir Raw Water Pipeline Preliminary Design	

Show existing utility (overhead and underground) information based on utility company mapping and ground survey shots. Collect additional ground shot information at culvert (invert & culvert size), low water (dimensions), bridge crossing (stream bed information) and SRP generating facility. Utility potholing will be provided by the Town if required.

- 2.4. Boundary & right-of-way mapping (Phase I & II Only): Research existing recorded property boundary and right-of-way information at the Gila County Recorder's Office. Locate existing visible survey monuments and property corner information along the pipeline corridor. Show the existing boundary and right-of-way information on the base mapping.

**FEE FOR TASK 2: \$98,800.00**

**FEE TYPE: LUMP SUM**

3. **RAW WATERLINE PRELIMINARY DESIGN REPORT:** The purpose of this report is to perform the necessary design and analysis for the raw water pipeline that will be incorporated into the preliminary plans for the project. The scope of work for this report is as follows:

- 3.1. Hydraulic Analysis: Perform a hydraulic analysis of the proposed raw water pipeline to determine line size and hydraulic characteristics to convey the water right (3500-acft) owned by the Town.

- Develop hydraulic model of pipeline alignment and alternatives in WATERCAD modeling program.
- Analyze two (2) pipeline flows scenarios (5,000 ac-ft/yr and 3,500 ac-ft/yr) based on SRP-Town of Payson agreement.
- Analyze one (1) pipeline alignment alternatives within the model.
- Analyze future service connection points and other potential users.
  - Determine available pressure and flow to service future connection points along the alignment.
- Verify pipeline sizing based on flow demand and model results.

- 3.2. Transient Surge Pressure Analysis: Prepare a transient analysis to determine appropriate protections for high up-surge and low down-surge pressures for the alignment based on a 3,500 ac-ft/yr flow rate and one turbine location.

- Develop one (1) transient analysis model in LIQT modeling program to analyze one (1) flow rate for the final pipeline alignment and turbine location for the following four (4) scenarios (4 model runs):
  - Scenario #1 – Flow control valve normal opening
  - Scenario #2 – Flow control valve normal closing
  - Scenario #3 – Rapid flow control valve closure at existing generating station
  - Scenario #4 – Line break

	Scope of Work For	
	C.C. Cragin Reservoir Raw Water Pipeline Preliminary Design	

- Determine pressure criteria of surge protection devices based on the results of the four scenarios.
  - Determine max surge pressure design criteria and based on the results of the four scenarios.
  - Determine isolation valving, bypass and drain locations.
  - Determine type, size and location of air/vacuum relief valves for filling and draining of the pipeline.
  - Determine thrust restraint requirements.
- 3.3. Pipe Material Selection Analysis: Based on results of hydraulic and transient analysis perform a pipe material selection analysis. Show locations where different pipe classes or types can be used.

**FEE FOR TASK 3: \$124,900.00**

**FEE TYPE: LUMP SUM**

4. **SRP TAILRACE CONNECTION DESIGN:** The scope of work for this item includes the preliminary design and plans for the connection to the existing SRP generating station tailrace. This design must be in conformance with the water rights transfer agreement between SRP and the Town of Payson. The Scope of work will include the following:
- Meet with SRP and obtain as-builts and input regarding structure design and metering.
  - Review existing as-built drawings of SRP generating facility and tailrace.
  - Establish new structure profile in relation to tail water elevation.
  - Evaluate delivery schedules and associated flow rates.
  - Prepare preliminary plans of major structural components.
  - Prepare preliminary cost estimate of proposed intake structure.
  - Develop operational and metering strategy for intake structure.
  - Obtain SRP preliminary review comments regarding proposed intake structure and metering.
  - Revise preliminary design based on SRP comments. Final design to be completed by Design-Build team.

**FEE FOR TASK 4: \$21,200.00**

**FEE TYPE: LUMP SUM**

	Scope of Work For	
	C.C. Cragin Reservoir Raw Water Pipeline Preliminary Design	

5. **TELEMETRY/SCADA DESIGN:** This contract assumes that the telemetry and SCADA design for the project is being performed by a third party consultant for the Town of Payson. Any consulting services requested by the Town for telemetry and SCADA will be provided on a time and material basis in accordance with the rates and fees shown in Exhibit B.

**FEE FOR TASK 5: T&M (if requested)      FEE TYPE: TIME & MATERIAL**

6. **DRAINAGE AND SCOUR ANALYSIS & STREAM CROSSING DESIGN:** The scope of work for this item is not included in this contract. This contract assumes that these services will be provided by the future Design-Build team. Any consulting services requested by the Town for drainage or scour analysis will be provided on a time and material basis in accordance with the rates and fees shown in Exhibit B.

**FEE FOR TASK 6: T&M (if requested)      FEE TYPE: TIME & MATERIAL**

7. **HYDROELECTRIC POWER GENERATION STUDY:** The scope of work for this item includes a very preliminary analysis for a new hydroelectric facility using the head within the raw water pipeline to generate electricity. Any consulting services provided to the Town for hydroelectric services will be provided on a time and material basis in accordance with the rates and fees shown in Exhibit B. In general the scope of work may include the following items at the discretion of the Town.

- A. Meet with the Town staff to discuss potential hydroelectric generating options that may exist for the raw water pipeline. Evaluate the existing head available and required at the future treatment plant.
- B. Review potential sites for turbine location with regard to land and proximity to existing power lines.
- C. Prepare a preliminary opinion of cost for a hydroelectric facility based on the conceptual information outlined above.
- D. Estimate power output and potential power sales rates and incorporate into a net present worth for the hydroelectric generating portion of the project.

**FEE FOR TASK 7: T&M      FEE TYPE: TIME & MATERIAL**

	Scope of Work For	
	C.C. Cragin Reservoir Raw Water Pipeline Preliminary Design	

8. **GEOTECHNICAL ANALYSIS:** This portion of the project scope includes a preliminary geotechnical analysis for Phase I only to estimate subsurface conditions within the project limits. The scope of work for the final analysis is as follows:

- A. Obtain Gila County and Forest Service permission to conduct our field work.
- B. Conduct a visual geologic reconnaissance of the project alignment.
- C. Review available geologic literature and aerial photographs of the project alignment.
- D. Mark out the exploration locations in the field and notify Arizona Blue Stake of our activities prior to the work.
- E. Arrange for appropriate traffic control measures to be utilized during our field work.
- F. Drill up to three borings using a truck-mounted two-wheel drive drill rig at the planned drainage crossings. These borings will be advanced using hollow-stem augering techniques or rock coring techniques, whichever is more appropriate, and will extend up to about 20 feet deep. A Ninyo & Moore employee will collect ring samples and bulk samples for laboratory testing, and will be responsible for preparation of field logs.
- G. Excavate up to 13 test pits using a trackhoe-sized excavator. These test pits will be located about every mile and will extend up to about 10 feet deep or until equipment refusal is met; whichever is shallower. A Ninyo & Moore employee will collect ring samples and bulk samples for laboratory testing, and will be responsible for preparation of field logs.
- H. Conduct up to 13 seismic refraction lines. These lines will be located about every mile (between the test pits excavations) and will be spaced such that we can evaluate to a depth of about 10 feet deep.
- I. Perform laboratory testing to evaluate the index, strength and chemical characteristics of the subsurface soils encountered.
- J. Prepare an initial geotechnical report. The report will contain the results of the field and laboratory analyses, with presentations of the engineering parameters for planning and preliminary recommendations for construction. In addition, the reports will contain a vicinity map depicting the project limits, plans showing the exploration locations, narrative descriptions of the surface and subsurface conditions, and laboratory test results. Preliminary geotechnical recommendations related to excavation characteristics, side slope stability, shoring, subgrade support for pipeline, bedding, backfilling, foundation design for drainage crossings/culverts, and the re-use of on-site soils for engineered fill will also be included in this report.

**FEE FOR TASK 8: \$49,900.00**

**FEE TYPE: LUMP SUM**

	Scope of Work For	
	C.C. Cragin Reservoir Raw Water Pipeline Preliminary Design	

9. **PRELIMINARY PLANS:** Prepare preliminary plans of the proposed raw water pipeline from the C.C. Cragin (SRP) Power Plant to the proposed water treatment plant site. The scope of work anticipated for this portion of the project is as follows:
- 9.1. Perform pipeline alignment analysis to determine best location within the existing road alignment to stay within established rights-of-way, avoid existing utilities and identify culvert crossings.
  - 9.2. Perform pipeline alignment analysis for several locations. This scope will include a field investigation and analysis of several options that are not within Houston Mesa Road. The following alternative routes will be considered in this scope:
    - Following near the East Verde River from the tailrace to Houston Mesa Road to maintain downhill alignment for the new pipeline.
    - Possible alignment west of Whispering Pines.
    - Possible alignment to avoid 2<sup>nd</sup> & 3<sup>rd</sup> crossing of the East Verde River.
  - 9.3. Prepare preliminary raw waterline plans. Plans will be prepared in accordance with Bureau of Reclamation "Feasibility Design Guidelines".
    - Cover, sheet index, general notes
    - Design criteria sheet
    - Plan & profile sheets (40 Scale)
    - Pipeline details (valves, drains, air/vac valves, PRV's)
    - SRP tailrace structure connection plan sheets (see scope item #4)
    - Stream crossing details (see scope item #6)
  - 9.4. Prepare cost estimates for pipeline portion of project and incorporate cost estimates for intake structure.
  - 9.5. Perform a constructability review of the preliminary plans for the entire project by a senior level engineer and a contractor with the expertise in this type of project. Incorporate issues identified.

**FEE FOR TASK 9: \$184,800.00**

**FEE TYPE: LUMP SUM**

	Scope of Work For	
	C.C. Cragin Reservoir Raw Water Pipeline Preliminary Design	

10. **WATER TREATMENT PLANT CONSULTING SERVICES:** Provide as-needed consulting services for the new water treatment plant (Phase II) of the overall project. These services are intended to provide the Town with an overview of the size, configuration and operation of the proposed treatment plant. Any consulting services provided to the Town for water treatment plant consulting services will be provided on a time and material basis in accordance with the rates and fees shown in Exhibit B. In general the scope of work may include the following items at the discretion of the Town.

- A. Develop overall operation/treatment schematic for the proposed water treatment plant showing incoming and outgoing flows to and from the plant.
- B. Determine requirements for feeding raw water to the treatment plant (i.e. raw water storage tank or directly from pipeline).
- C. Provide recommendation for location and interval of water samples to be collected and analyzed by the Town from the CC Cragin Reservoir. Review water samples collected to determine a baseline and any fluctuations that may exist in the water quality.
- D. Develop a short list of potential microfiltration types/brands with preliminary pricing for treatment of the water based on the water quality of the samples collected from the reservoir.
- E. Determine preliminary size of water treatment plant required. Provide overview floor plan and building size to house the equipment and operation.
- F. Provide overall site plan of treatment plant site. Show the following:
  - o Building size and configuration
  - o Parking and access
  - o Raw and finished water storage
- G. Provide recommendation for water treatment building construction type and develop preliminary elevations of the water treatment plant improvements.
- H. Identify requirements (size, location & configuration) for backwash water and clean in place disposal from the treatment plant.
- I. Develop alternatives for discharge and use of water that is not required by the treatment plant.
- J. Determine size, location and configuration of treated water storage facility.
- K. Review water quality data provided by the Town from with the existing water system and verify if buffering of the water treatment plant water is required.
- L. Provide schematic of how communities could be served that are near the treatment plant.

**FEE FOR TASK 10: T&M**

**FEE TYPE: TIME & MATERIAL**

	Scope of Work For	
	C.C. Cragin Reservoir Raw Water Pipeline Preliminary Design	

**11. DESIGN-BUILD TRANSITION:** Provide as-needed consulting services for the design-build transition of the project. Any consulting services provided to the Town for Design-Build transition services will be provided on a time and material basis in accordance with the rates and fees shown in Exhibits B & C. In general the scope of work may include the following items at the discretion of the Town.

- 11.1. Design-Build Kick-off Meeting: Facilitate a design-build phase kick-off meeting with the Town to:
  - Identify goals and priorities for the Town
  - Identify risk and pricing options
  - Identify key Design-Build issues
- 11.2. Risk Assessment: Perform a Risk Assessment to determine where the risks are within the project and develop strategies and contingencies to plan for and/or transfer risk to the Design-Build Team.
- 11.3. Contract Pricing Strategies: Evaluate and make recommendations to the Town regarding the contract format and pricing strategies based upon the engineering and risk assessments of the project. Recommendations will include:
  - One-step RFQ Design-Build procurement options
  - Design-Build Qualifications
  - Pricing formats and best-value approaches (lump sum or quantities based)
- 11.4. Design-Build Innovation: Develop appropriate limits for innovation in the design-build process for the project. Town will be able to specify appropriate goals for innovation in the solicitation of the design-build team by providing guidance towards the correct areas of focus (material selection, size, alignment, life cycle costs, logistics, constructability and value engineering) to the proposers.
- 11.5. Design-Build RFP: Prepare a One-step Design-Build RFP that complies with Title 34-603 of the Arizona Revised Statutes.
- 11.6. Ranking & Selection: Assist the Town in the ranking and selection of the design-build team submittals. Services include:
  - Assist the Town in Design-Build team submittal evaluation
  - Selection committee orientation and preparation
  - Selection committee training and preparation
  - Facilitate contractor interviews with selection committee
  - Facilitate contractor negotiations – post contractor selection

**FEE FOR TASK 11: T&M**

**FEE TYPE: TIME & MATERIAL**

	Scope of Work For	
	C.C. Cragin Reservoir Raw Water Pipeline Preliminary Design	

**12. STAKEHOLDER COORDINATION & PUBLIC MEETINGS:** Work with the Town, utility companies, area landowners and agencies having jurisdiction (AHJ) and address stipulations, requirements and concerns that will impact the design, construction and operation of the Raw Water Pipeline. Agency and area stakeholders include:

- |                              |                    |
|------------------------------|--------------------|
| Town of Payson               | Local Communities: |
| Salt River Project           | -Mesa Del Caballo  |
| Gila County                  | -Wonder Valley     |
| Tonto National Forest        | -Beaver Valley     |
| Bureau of Reclamation        | -Whispering Pines  |
| U.S. Army Corps of Engineers | -Verde Glen        |
| Area Utility Companies       | -Rim Trail         |

Scope of work shall include a monthly stakeholder meeting for the duration of the preliminary design. Stakeholder meeting will be used to provide project updates, receive comments from stakeholders and share information regarding the project. This scope also includes one public meeting to provide information and solicit input with local communities. Any consulting services for Stakeholder Coordination and Public Meetings will be provided on a time and material basis in accordance with the rates and fees shown in Exhibits B & C.

**FEE FOR TASK 12: T&M**

**FEE TYPE: TIME & MATERIAL**

**13. ENVIRONMENTAL ASSESSMENT COORDINATION:** Work with the Town and their consultant SWCA, to review the environmental assessment completed to date and address associated stipulations that will impact the design, construction and operation of the Raw Water Pipeline. Some of these issues may include location of material storage and staging areas, pipeline alignment considerations and drainage crossing configurations. Our project team will coordinate the efforts of the raw water pipeline design between the Town, SWCA and USFS. Scope of work will include meeting attendance, meeting minutes, creating exhibits and sharing information regarding the project. Any consulting services for Environmental Assessment Coordination will be provided on a time and material basis in accordance with the rates and fees shown in Exhibits B & C.

**FEE FOR TASK 13: T&M**

**FEE TYPE: TIME & MATERIAL**

	Scope of Work For	
	C.C. Cragin Reservoir Raw Water Pipeline Preliminary Design	

14. **FUNDING COORDINATION:** Our team will prepare the Town with the reporting information required (i.e. ARRA) to these funding sources so that the funding agencies are satisfied with the progress of the project. Also, we will work with the Town to monitor and meet deadlines for submittals, funding use and purchases so the Town does not jeopardize already acquired funding sources. Any consulting services for Funding Coordination will be provided on a time and material basis in accordance with the rates and fees shown in Exhibit B.

**FEE FOR TASK 14: T&M**

**FEE TYPE: TIME & MATERIAL**

15. **MEETINGS AND PROJECT MANAGEMENT:** The scope of work included in this task is for the project meetings and management, which is as follows:

- Attend un-scheduled meetings, as requested by the Town.
- Prepare and maintain project schedule.
- Prepare written monthly project progress update for the scope of work outlined within this contract.
- Coordinate activities of the project team.

Any consulting services for additional meetings and project management will be provided on a time and material basis in accordance with the rates and fees shown in Exhibits B & C.

**FEE FOR TASK 15: T&M**

**FEE TYPE: TIME & MATERIAL**

**SCOPE OF WORK CONDITIONS & EXCLUSIONS**

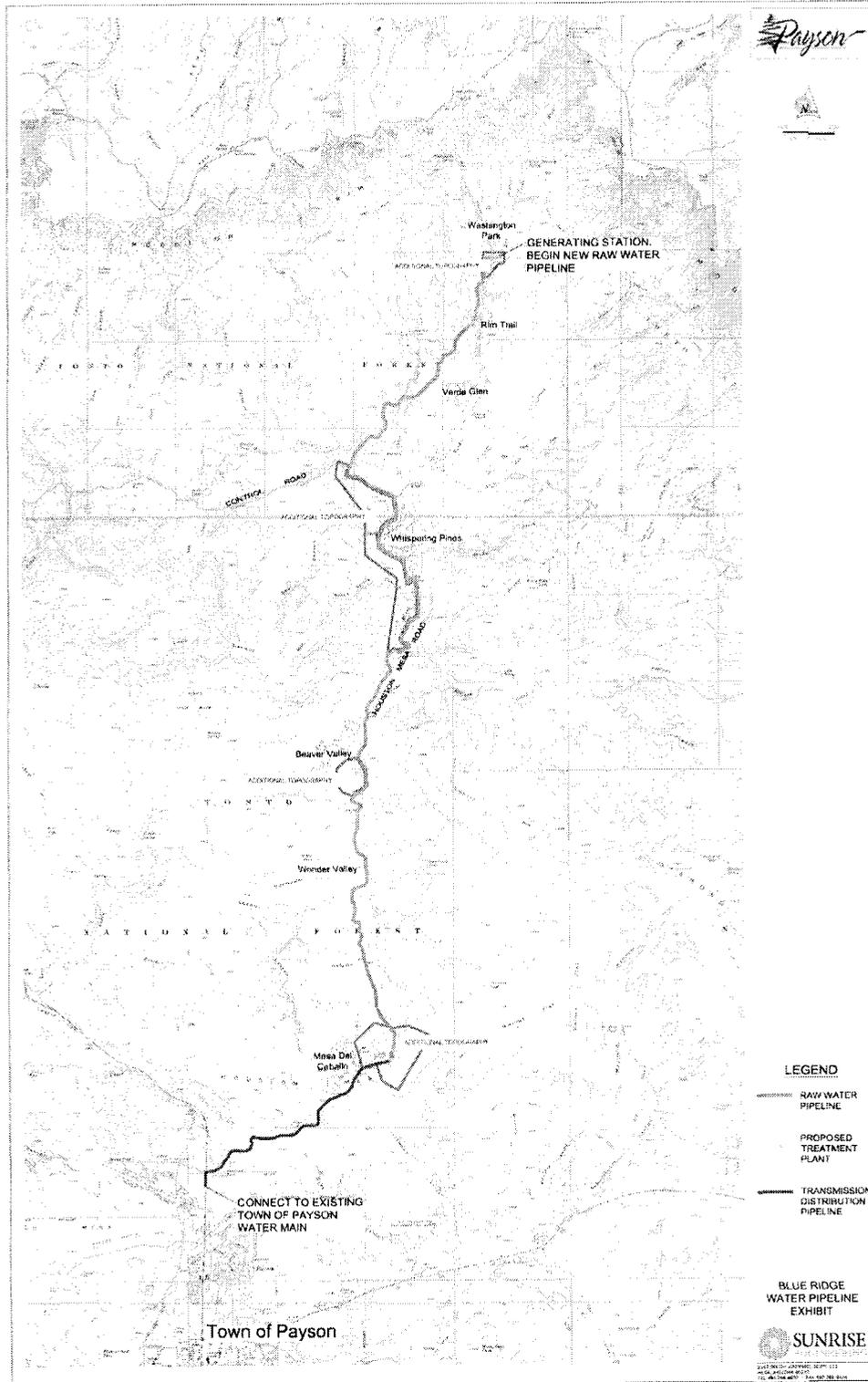
- A. The scope of work for this contract is limited to the items listed above. If additional items are added to the contract, they will be performed in accordance with rates & fees shown in Exhibits B & C.
- B. Reproduction and mileage costs shall be billed as a reimbursable expense in addition to the contract cost in accordance with the rates and fees shown in Exhibits B & C.
- C. The fee schedules shown in Exhibits B and C can be revised to the current annual fee schedule on the anniversary of the contract execution for providing Time and Material services.



Scope of Work  
For  
C.C. Cragin Reservoir  
Raw Water Pipeline Preliminary Design



EXHIBIT A



	<b>Scope of Work</b> For	
	C.C. Cragin Reservoir Raw Water Pipeline Preliminary Design	

**EXHIBIT B**

**SUNRISE ENGINEERING, INC.**

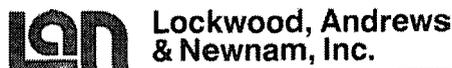
**Arizona Offices  
2009 Fee Schedule**

<u>CODE</u>	<u>CLASSIFICATION</u>	<u>RATE</u>		<u>CODE</u>	<u>CLASSIFICATION</u>	<u>RATE</u>
110	Engineer (E.I.T.) I	\$79	<i>per hour</i>	710	Admin I	\$45 <i>per hour</i>
120	Engineer (E.I.T.) II	\$89		720	Admin II	\$55
130	Engineer III	\$105		730	Admin III	\$65
140	Engineer IV	\$119		910	Survey Tech I	\$42
150	Engineer V	\$145		920	Survey Tech II	\$59
160	Principal Engineer	\$169		931	Survey CAD Tech	\$97
255	Project Manager I	\$99		940	Survey Crew Chief	\$105
260	Project Manager II	\$129		950	Survey Manager	\$115
310	Engineering Tech I	\$75		951	Registered Surveyor	\$125
320	Engineering Tech II	\$79		960	Chief of Survey	\$135
330	Engineering Tech III	\$95		MILE	Mileage	\$0.55 <i>per mile</i>
340	Engineering Tech IV	\$105				
410	CAD Tech I	\$59				
420	CAD Tech II	\$69				
430	CAD Tech III	\$75				
440	CAD Tech IV	\$79				

*Subconsultants and other direct expenses as incurred plus 10% handling fee*

	Scope of Work For	
	C.C. Cragin Reservoir Raw Water Pipeline Preliminary Design	

**EXHIBIT C**



**FEE SCHEDULE**

**A. PERSONNEL SERVICES**

1. Regular Time	<b>RATE/HOUR</b>
<b>CLASSIFICATION</b>	
<b>ENGINEERING</b>	
Principal .....	\$200.00
Senior Project Manager .....	165.00
Project Manager .....	150.00
Project Engineer .....	105.00
Staff Engineer/Engineer-In-Training .....	90.00

<b>SPECIAL</b>	
Senior Designer .....	80.00
Project Drafter .....	66.00
Administrative Typist/Clerical (identifiable work, legal descriptions, reports, specifications, etc.) .....	66.00
Deliveries (by outside service) .....	At Actual Cost

2. Overtime Premium  
Regular time fees apply to all client authorized overtime except for overtime work performed by non-exempt employees and Survey crews, which will be billed at 1.5 times the regular time rate per hour.

**B. TRAVEL & TRANSPORTATION EXPENSES**

1. Travel expenses, lodging and subsistence .....	At Actual Cost
2. Auto or Truck .....	I.R.S Allowable Rate/mile
3. Equipment Rental .....	At Actual Cost

**C. OTHER REIMBURSABLE COSTS**

1. Long distance communications and postage .....	At Actual Cost
2. Filing fees and permits .....	At Actual Cost
3. Prints, reproductions and photo work .....	At Actual Cost
4. Special stenographic and drafting supplies .....	At Actual Cost

**D. OUTSIDE CONSULTANTS**

All outside consultants required in the course of the work will be charged at actual cost plus 10%.

**E. SALES TAX**

The above fees and charges do not include sales tax in those states where sales tax applies to professional services or gross receipts. The amount of applicable sales tax, if any, is additive to gross charges.

Fees and all other charges will be billed monthly as the work progresses, and the amount of each billing shall be due and payable ten (10) days after the date of such billing. Any portion of a billing not paid within thirty (30) days of the billing shall be considered delinquent and shall bear a delinquency charge of one and one-half (1 1/2) percent per month (annual percentage rate 18 percent) on the unpaid balance, but in no event shall said delinquency charge or the payment thereof extend the due date.

Should legal action be necessary to enforce the provisions of any contract or agreement entered into in which this schedule is a part, the client agrees to pay all attorney's fees and court costs incurred in the prosecuting thereof.

All fees set forth in any contract or agreement entered into, in which this schedule is a part, are subject to reasonable escalation as required to offset inflationary increases in our cost of doing business.

**EXHIBIT 'B'**  
**SUPPLEMENTARY CONDITIONS**

NONE