GUAM CONSOLIDATED COMMISSION ON UTILITIES

RESOLUTION NO. 46-FY2016

RELATIVE TO APPROVING THE DESIGN SERVICES FOR ASAN SPRINGS WATER SUPPLY FACILITIES

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the Asan Springs facility was taken out of commission more than ten (10) years ago due to issues with water contamination, since then the village of Asan has been served with water from the GWA system and water purchased from the Navy; and

WHEREAS, GWA management seeks to revitalize the Asan Springs facility to distribute the source water to the surrounding customers; and to reduce or eliminate the water purchased from the Navy; and

WHEREAS, GWA seeks to identify and evaluate different alternatives, which includes rehabilitation of the existing facility as well as the potential for construction of a new water treatment facility, and develop a detailed design for the appropriate solution, which will provide clean and potable water supply to the community while meeting water quality and public health standards; and

WHEREAS, GWA has advertised the Request for Proposal (RFP-11-ENG-2015) soliciting statements of qualification from experienced and qualified engineering firms for the preparation of design plans and specifications for the Asan Springs Water Supply Facilities; and

WHEREAS, the Asan Springs Water Supply Facilities design project includes site investigations, development of design plans and specifications, instrumentation and control upgrades, pump and pipe upgrades, water treatment system upgrades, and other general site upgrades; and

WHEREAS, RFP packages were picked up/downloaded by multiple parties, from which GWA received proposed submittals from five (5) firms before the RFP submittal deadline; and

WHEREAS, the GWA A-E Selection committee reviewed and evaluated the five (5) proposals (see EXHIBIT A – Evaluation Score) and generated a short list of the five (5) firms with a recommendation to award a contract to the firm HDR and any successor at interest thereto (see EXHIBIT B – GM Determination); and

WHEREAS, HDR and GWA negotiated the price for the services to be provided in the amount of Three Hundred Seventy Four Thousand Four Hundred Seventy Dollars ($374,470.00) (see EXHIBIT C – Fee Proposal); and

WHEREAS, GWA management seeks approval of the fee proposal amount of Three Hundred Seventy Four Thousand Four Hundred Seventy Dollars ($374,470.00), plus a ten percent (10%) contingency of Thirty Seven Thousand Four Hundred Forty Seven Dollars ($37,447.00) to bring the total authorized funding amount to a maximum of Four Hundred Eleven Thousand Nine Hundred Seventeen Dollars ($411,917.00); and

WHEREAS, funding for this project will be from the federal funds through the Department of Interior (DOI) and 2010 Bond Funds under CIP line item PW 05-15 "Rehabilitation of Asan Springs"; and

WHEREAS, GWA management recommends that a contract be entered into with HDR in the aforementioned base contract amount.

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the fee proposal submitted by HDR are fair and reasonable.
3. The CCU finds that the terms of the conditions set by GWA relative to the commencement of work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
4. The CCU hereby further authorizes the management of GWA to enter into a contract with HDR in the amount of Three Hundred Seventy Four Thousand Four Hundred Seventy Dollars ($374,470.00).
5. The CCU hereby further approves the total funding amount for this project of Three Hundred Seventy Four Thousand Four Hundred Seventy Dollars ($374,470.00), plus a ten percent (10%) contingency of Thirty Seven Thousand Four Hundred Forty Seven Dollars ($37,447.00) to bring the total authorized funding amount to a maximum of Four Hundred Eleven Thousand Nine Hundred Seventeen Dollars ($411,917.00).
6. The CCU hereby further approves the funding will be primarily from the federal funds through the Department of Interior (DOI) and 2010 Bond Funds under the CIP line items PW 05-15 "Rehabilitation of Asan Springs".

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 26th day of July 2016.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 4

NAYS: 0

ABSTENTIONS: 0

ABSENT: 1

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Exhibit A (1 of 1)

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building • 688 Route 15 • Mangilao, Guam 96913

January 21, 2016

To: Thomas F. Cruz, P.E., Chief Engineer

From: Gloria P. Bensan
Chairperson, Consultant Selection Board

Subject: RFP-11-ENG-2015
Design Services for Asan springs Water Supply Facilities
GWA Project No. W11-003-BND

The following information is intended to document the evaluation process undertaken for the referenced solicitation.

EVALUATION COMMITTEE MEMBERS	
Name	**Title**
Brett Railey, P.E.	CIP Water Engineer Supervisor
Calvin Yam	Senior Engineer
Marc Lopez	Associate Engineer
Ron Topasna	O&M Manager, Water Production

Consultant	Evaluation Score				Total	Rank
1. EMPSCO Engineering Consultants	63	63	68	90	284	5
2. LYON	54	68	72	100	294	4
3. HDR	94	83	82	100	359	1
4. Duenas, Camacho & Associates	87	78	76	98	339	3
5. AECOM	91	86	89	77	343	2

Scores were evaluated based on sum of the individual scores. The recommendation of the evaluation committee is shown in the ranking above.

Please review and approve at your earliest convenience so that we may proceed with the notification letters.

Exhibit B (1 of 1)

GUAM WATERWORKS AUTHORITY
"Better Water. Better Lives."
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

MEMORANDUM

To: Miguel C. Bordallo, P.E., General Manager

From: Thomas F. Cruz, P.E., Chief Engineer

Subject: Evaluation Summary for RFP-11-ENG-2015
Design Services for Asan springs Water Supply Facilities
GWA Project No. W11-003-BND

Date: January 21, 2016

The Selection Committee has completed all necessary actions for selecting the most qualified consultant for the referenced solicitation. All proposals were reviewed and scored according to the conditions established in the solicitation and shortlisted firms were interviewed.

The committee recommends the following top three (3) firms in order of preference for the project:

1. HDR
2. AECOM
3. Duenas, Camacho & Associates

The evaluation summary sheet is attached for your information.

GENERAL MANAGER'S DETERMINATION

Consultant Firm Selected:

HDR

Remarks:

MIGUEL C. BORDALLO
General Manager

1.22.16
Date

MCB/gb

EXHIBIT C

July 18, 2016

Mr. Thomas F. Cruz, PE
Chief Engineer
The Guam Waterworks Authority
Engineering Division
Gloria B. Nelson Public Service Building
688 Rt. 15
Mangilao, Guam 96913

SUBJECT: Engineering Design Services, Asan Springs Rehabilitation Project
RFP-11-ENG-2015, GWA Project No. W11-003-BND

Dear Mr. Cruz,

Thank you for selecting HDR Engineering, Inc. (HDR), to provide professional services for the subject project. In response to the revised Scope of Work as discussed during the June 21, 2016 meeting with your engineering staff, HDR and its subconsultants are submitting this proposal to accomplish the work as outlined herein for restoring the Asan Springs Water Supply Facility (ASWSF) to drinking water production.

General Tasks and Approach

The general tasks proposed for this project are as follows:

Task 1	Project Management
Task 2	Initial Permitting
Task 3	Site Investigation
Task 4	General Design
Task 5	Detailed Design
Task 6	Bidding Process
Task 7	Engineering Services During Construction

The requested scope of services and preparation of this proposal were based on the revised requested scope of services as outlined in our June 16, 2016 meeting and include the following:

- Design of the rehabilitation of the facility will be based upon historical peak max flows that have been recorded in published documentation.
- Design will also include master planning for twice the max flows, for future expansion.
- Design will include master planning for any potential future GWUDI determination for the site.

Additionally, this proposal was prepared based upon our preliminary investigation of the Asan Springs site.

The actual scope of the design will be adjusted, as required, and the associated fees may be modified to reflect significant changes in the scope if the actual field conditions and resultant design differ from the design criteria listed above and the assumptions found at the end of this proposal document.

We are requesting that a lump sum payment be used for the requested services to be conducted in Tasks 1 through 6. For the services in Task 7, HDR is proposing that they be provided on a T&M basis with a Not to Exceed (NTE) fee. Task 7 was based upon a preliminary construction schedule of sixteen (16) months.

Scope of Work and Detailed Task Descriptions

The following describes a detailed scope of work HDR proposes for this project:

Task 1 - Project Management

a) General Project Management – This task will involve general project management of the project from Notice to Proceed (NTP) through the end of Task 6 as presented below and is anticipated to last approximately eight (8) months. This will also include all subconsultant coordination during this same time period.

b) Project Management Plan – In accordance with GWA's Program Management Manual, a Project Management Plan will be developed and will include the following: project description, project scope (from contract), project team including subconsultants, the anticipated project work plan with schedule, quality control plan, communication plan, documentation plan, and scope change tracking.

c) The project schedule will be created in Microsoft Project and will outline the work plan with dates set for all critical milestones for the project. The schedule will be updated throughout the project and will be provided monthly at the bi-weekly meetings.

d) Progress reports will be generated on a monthly basis and will be included with the monthly payment invoices.

e) Bi-weekly progress meetings will be held with GWA Engineering personnel and GWA's PMO consultant at the GWA Engineering office, unless otherwise agreed upon, to provide updates on the status of the project.
f) A kick-off meeting will be conducted within two (2) weeks of receipt of the NTP with GWA Engineering personnel, GWA Operations and Maintenance personnel, GWA's PMO and HDR. The meeting will outline the project goals, project timeline, to discuss pertinent items related to the project and provide a listing of requested items to be provided by GWA to HDR.
g) Coordination meetings will be conducted with Guam Environmental Protection Agency (GEPA) throughout the design process to ensure GEPA requirements are satisfied and permitting can be obtained by the selected contractor.

Subtask 1.1 – QA/QC

a) Conduct internal HDR quality assurance/quality control reviews of all deliverables prior to submittal to GWA.
b) Prepare comment response logs showing received GWA responses to HDR deliverables and how HDR responded to them.
c) Maintain a tracking log showing of dates of internal QA/QC reviews, deliverable submittals, GWA comments, and HDR response logs.

Task 2 - Initial Permitting

The following permits and permitting documents are anticipated to be obtained before any work for this project can begin by HDR and it's subconsultants:

Subtask 2.1 – National Park Service (NPS) & Department of Defense (DOD) Coordination

a) Special Use Permit Application – HDR will assist GWA in preparing and obtaining a special use permit from the National Park Service for HDR and it's subconsultants to be able to conduct all work activities, including the limited digging and site investigative work (as outlined in Task 3 below), within the Asan Spring site and NPS owned property. HDR will prepare the application form with the requested description of the purpose, all activities planned to be conducted and the anticipated schedule for those activities. In addition, HDR will prepare the associated plans as requested in the application. HDR will deliver the application form filled out for GWA to finalize with necessary signatures before submission to NPS.
b) Standard Form 299 (SF299) Application – HDR will assist GWA with completing the SF299 application for submission to NPS.

Task 3 - Site Investigation

Subtask 3.1 – Vegetation Removal and Pressure Washing

- Vegetation will be cleared from the asphalt area around the two buildings on site to make it more accessible during the condition assessment as outlined in Task 4.
- Cleaning to remove algae on both the access road and within the site with a high-pressure washer will be performed. Limited cleaning also will be performed on the impoundment structure to make accessibility safe for our site activities throughout the project.

Subtask 3.2 – Impoundment Investigation by Divers

- Verification of the spring connection to the impoundment structure will be confirmed with divers. This information will assist with locating connection points for limited digging on the upgradient side as described below. Additionally, internal measurements of the impoundment, including location and sizes of all inlet and outlet openings will be obtained as part of this service. Pictures of any structural deficiencies that are able to be seen by the divers will be documented for further review by a structural engineer.

Subtask 3.3 – Site Digging

- Expose impoundment connection with spot excavations. HDR recognizes that it is unknown exactly how the impoundment structure is connected to the spring and how many connections there are. It is assumed that the spring is connected to the impoundment structure through a pipe(s), therefore digging will be limited to only spot locations at the connection to the impoundment. Digging will be performed to only to expose the top of the pipe(s). This work does not include a complete unearthing of the connection point(s). All spot excavations will be filled back in and restored to the original condition. This work will be accomplished with only manual labor and subject to the approval of the special permit by NPS. Only 4 days is included to accomplish this task.

Task 4 - General Design

Subtask 4.1 – Condition Assessment

a) Conduct a condition assessment of the site, existing structures, and installed mechanical and electrical equipment.
    - Structural assessment of impoundment structure will involve a visual inspection of the impoundment roof and exterior walls. Inspection of the interior will be visually conducted from existing roof openings. No entry into the basin, nor dewatering of the basin, will be conducted. Structural assessment of the existing buildings will involve a visual inspection only.

b) Summarize findings in a condition assessment report.
c) Prepare a boundary and topographical survey of the site, including:
    - Ground elevations.
    - Civil works, including roadways, drainages, and buried piping and structures
    - Location and elevations of existing building floors and roofs.
    - Location of major utilities that can be seen visually.
    - Current property boundaries to include Lot 300-D, Lot 407-1 and northern portion of Lot 300-1REM.
    - GWA-proposed future property boundaries/lease areas for Lot 499.
    - Boundary and topo of portion of Lot 407-1 and Lot 7 downhill from the site, including preparing a map for a drainage easement within these lots.
d) Prepare a site base map for use in permitting and design.

Deliverables:

One (1) Hard copy of Condition Assessment Report and Boundary and Topographical Surveys
One (1) Electronic copy of Condition Assessment Report and Boundary and Topographical Surveys

Subtask 4.2 –Process Identification

a) Prepare conceptual layouts and qualitative costs for two water treatment system options.
b) Conduct two (2) workshops with the GWA to review the methodologies, findings, design basis, and recommendations. Each workshop will be one-hour in duration.
    - The first workshop is to review the two developed options and receive GWA comments for further refinement.
    - The second workshop is to review the refinements to the two options and select one to carry forward to Task 5 (Detailed Design).

Task 5 - Detailed Design

a) Prepare a 30% design submittal consisting of drawings, table of specifications, and the major equipment list, and draft Preliminary Engineering Report.
b) Prepare a 60% design submittal consisting of drawings and major equipment specifications (include spare parts and maintenance items).
c) Prepare a 90% design submittal consisting of drawings, major and minor equipment specifications, and draft construction schedule.
d) Prepare a final design submittal consisting of bid ready drawings and specifications, final construction schedule, all engineering calculations, and a final Engineering Report.

Subtask 5.1 – Cost Estimating and Value Engineering

a) Prepare construction cost estimates using the following schedule.

- Class 5 cost estimate for Subtask 3.2 (10%).
- Class 5 estimate for Task 4 30% submittal
- Class 4 estimate for Task 4 60% submittal
- Class 3 estimate for Task 4 90% submittal
- Class 2 estimate for Task 4 Final submittal

Deliverables:

- Three (3) Hard copy sets of the design plans will be produced on half size 11"x17" sheets for 30%, 60% and 90% submittals.
- Five (5) Hard copy sets of the design plans will be produced on full size 22"x34" sheets for the final submittal.
- Three (3) Hard copy sets of specifications and cost estimates will be provided for 30%, 60% and 90% submittals.
- Five (5) Hard copy sets of specifications and cost estimates will be provided for the final submittal.
- One (1) Electronic copy of the sets of design plans, specifications and cost estimates will be provided at all design submittals.

Subtask 5.2 – Design Review Workshops

a) Conduct a design review workshop with GWA for the 30%, 60%, 90%, and final submittals.
b) For each workshop, prepare agenda, notes, and action item tracking lists.
c) 30%, 90% and Final submittal workshops to be performed utilizing HDR's videoconferencing capabilities at HDR's office.
d) Each workshop will be one-hour in duration.

Subtask 5.3 - Archaeological Monitoring and Discovery Plan (AMDP) – One AMDP will be developed to cover the design package. The AMDP will be based upon consultation with the Guam Historic Preservation Office (GHPO) and the requirements given based upon the scope of the Asan Springs design.

Deliverable:

One (1) hard copy of the AMDP will be submitted.

Task 6 - Bidding Process

- A pre-bid meeting will be conducted with GWA, the PMO and interested bidding contractors. A meeting agenda and sign in sheets will be prepared and made available during the meeting. Meeting minutes will be prepared from this meeting and will be provided to GWA for review and incorporated into the bid documents.

- Requests for clarification will be compiled with appropriate responses in coordination with GWA and addenda will be prepared as needed.
- HDR will attend the bid evaluation conference.
- HDR will review, evaluate and certify the bid tabulations.
- HDR will prepare a letter recommendation for the construction contract award.

Task 7 - Construction Services

At this time, the extent of the impoundment rehabilitation, rehabilitation of the pump station and chlorine building structures and equipment, and the water treatment process is unknown. An initial assumption for construction duration is 16 months. A Not to Exceed (NTE) fee has been prepared and includes the following services to be performed:

- Weekly construction progress meetings will be attended at the request of GWA.
- Performing field observations as required and submit field reports documenting any findings. Field observations are estimated to be required on a weekly basis.
- Archaeological monitoring services will be provided for any ground disturbance activities as required by GHPO and are estimated at 16 hours. Data collection will be based upon recording and collecting small samples of artifacts, with no more than five (5) artifacts being collected, processed, analyzed and temporarily curated. Archaeological monitoring investigations will be conducted at the rates specified per hour and all sites and features will be recorded and evaluated to the extent that can be accomplished by a single archaeological monitor and in the case the work is too much for one monitor, an additional monitor can be added upon the written approval of GWA at the same hourly rate presented in the proposal. A minimum four (4) hours is required for each callout.
- HDR will review contractor submittals, RFI's, Change Orders and schedule and provide responses/comments as necessary.
- HDR will perform a final inspection and submit a punch list of items to GWA.

Compensation

HDR proposes to perform the services as outlined according to the following:

Tasks 1-6	Lump Sum of $312,923
Task 7	NTE Sum of $66,065
Total HDR NTE Fee	**$374,470**

A summary of the fee in the requested GWA format is attached for both the lump sum fee and the time and materials fee. Also included is the proposed schedule of rates.

Delivery Schedule

HDR proposes to complete Tasks 1-6 as presented in this proposal within eight (8) months, after a signed contract and Notice to Proceed (NTP) are received by HDR. Task 6 is assumed to follow and be completed within 30 days from GWA's receipt of the 100% design plans and specs. Task 7 will be delivered over a period of 16 months from the time the construction contractor receives a contract and NTP.

Proposal Assumptions, Exclusions and Limitations

Only the services described in our proposal are included. The following assumptions, exclusions and limitations were made in preparation of this scope and fee proposal:

- It is our understanding from GWA, that a Categorical Exclusion to perform all of the services as listed in Tasks 1-6 has been obtained and has been accepted by the Department of Interior's (DOI) Office of Insular Affairs (OIA), as required as part of the grant condition.
- It is our understanding from GWA, that this Categorical Exclusion takes into account the most recent published endangered species listing, which has a published date after the letters received from the United States Fish and Wildlife services to obtain the Categorical Exclusion for design.
- It is our understanding from GWA, that it is believed a Categorical Exclusion for construction will be obtained and that no further environmental analysis is needed to obtain the exclusion.
- It our understanding from GWA that the site is believed to not be a wetland, therefore no USACE permitting is required and is not included in this proposal.
- This proposal does not include paying for or obtaining any Federal or Local permits required for this project, except for what is outlined in Task 2 It is assumed any other required permits that need to be obtained, will be done by the selected construction contractor as part of the building permit process.
- The prior evaluation summarized in the report "Comprehensive Engineering Evaluation and Assessment Report: PW05-15 Facility Plan/Design Services for Asan Springs Water Supply Facilities, GWA Project No. W11-003-BND (July 12, 2013) is used as reference data but HDR's evaluation is not based on the prior work.
- It is our understanding from GWA that the Asan Springs supply is a groundwater source and is not required to be designed as a Ground Water Under the Direct Influence of Surface Water (GWUDI) at this time, but as part of Task 4 and 5, will have been masterplanned for the future, in the event that the site groundwater is determined to be GWUDI and additional treatment methods are needed to be installed.

- It is our understanding from GWA that it is believed that the Asan Springs supply can be permitted by GEPA without any further water quality analysis, therefore none is included in this proposal.
- Because the site is considered to be a non-GWUDI source, no filtration or advanced disinfection processes are included in this proposal.
- GWA will resolve the parcel ownership issues with the National Park Service with the only support from HDR to include the survey and mapping of the lease area as outlined in Task 4.1.
- GWA will be responsible for obtaining all rights of entry into or over Federal Government property.
- The design of ASWSF improvements will provide an overall facility design life of 25 years.
- The existing reservoir and buildings may require structural refurbishment but not complete replacement.
- The equipment and piping in the existing pump station needs to be renovated and/or replaced. This equipment includes pumps, piping, valving, power supplies and distribution, controls, and HVAC.
- All of the electrical and HVAC equipment in the existing chlorination building needs to be replaced. None of this equipment will be reused. There is no other mechanical equipment in the building currently.
- No new buildings or land are required for this project.
- No site clearing or grading will occur.
- The only ground disturbance activities will be minor surface digging for the installation of small diameter water sample lines and electrical conduits.
- Unless noted otherwise, submittals to GWA will be by email as PDF files.
- Historic American Engineering Record (HAER) Record – HDR understands that a HAER has been completed for the site and assumes that GWA has coordinated approval of HAER with both the Guam Historic Preservation Office and with the National Park Service.
- Given the age of the existing impoundment structure being 1916, this scope was prepared with the assumption that the structure is not registered as a historic structure.
- It is our understanding that GWA will perform all consultations with the Federal and local agencies concerning any property that could be eligible for inclusion on the National or Guam list of historic places that are not included in the above referenced HAER, but may be inadvertently discovered including human remains.
- GWA will be responsible for the removal and disposal of any UXO or munition constituents inadvertently discovered on the property.
- This scope does not account for designing any water or sewer improvements outside of the Asan Springs site's existing fenced boundary.
- This proposal assumes that access to the inside of the impoundment structure can be obtained utilizing a ladder within the current man openings and doesn't include use of any other methods.

- This proposal excludes performing any geotechnical borings or analysis.
- This proposal excludes performing any structural corings of the structures as part of the condition assessment.

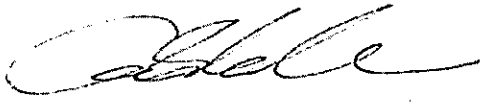
GWA will be responsible for providing the following in addition to items identified in Task 2:

- Any asbuilt documents in the possession of GWA for any of the structures located on site.
- Latest GIS information to include both water and wastewater infrastructure.
- Latest calibrated water model.
- Design head requirements for the booster pumps to be installed at Asan Springs to deliver water to both the recently completed Agana Heights reservoir and the proposed new Piti reservoir.
- Providing GWA standard details.
- Providing GWA standard upfront Sections A, B, C of specification documents.

We are again thankful for the opportunity to serve GWA again on this very important project. If there are any questions, please feel free to call Nick Manley in our Guam office at 671-989-5558.

Sincerely,

HDR Engineering, Inc..



Aaron Meilleur
Vice-President

Design Services for Asan Springs Water Treatment Facility
GWA Project No. W11-003-BND
Lump Sum Fee Worksheet

		HDR											Subconsultants						
Task Number	Task Description	Principal Engineer	Project Manager	QA/QC	Senior Water Process Engineer	Senior Engineer - Structural	Senior Engineer - Electrical	Project Engineer	Senior Biologist	CAD	Accounting	Clerical	APEC	Coffman	PSET	DCA	Search	RLB	Sum Total
	Hourly Labor Rates/Unit Prices	$250	$190	$250	$250	$200	$200	$140	$140	$135	$95	$70	-	-	-	-	-	-	
1.0	**Project Management**																		
1.1	General Project Management	8	64	0	0	0	0	0	0	0	9	0							$15,015
1.2	Develop Project Management Plan	0	16	0	0	0	0	0	0	0	0	0							$3,040
1.3	Develop Project Schedule and Updates	0	10	0	0	0	0	0	0	0	0	0							$1,900
1.4	Develop Monthly Progress Reports	0	9	0	0	0	0	0	0	0	0	0							$1,710
1.5	Bi-weekly Meetings with GWA	0	32	0	0	0	0	0	0	0	0	0							$6,080
1.6	Project Kick-off Meeting	1	2	0	1	1	1	0	0	0	0	0							$1,280
1.7	GEPA Coordination	0	20	0	0	0	0	0	0	0	0	0							$3,800
	SUBTOTAL	9	153	0	1	1	1	0	0	0	9	0	$0	$0	$0	$0	$0	$0	**$32,825**
2.0	**Initial Permitting**																		
2.1	National Park Service	0	4	0	0	0	0	0	4	0	0	0							$1,320
	SUBTOTAL	0	4	0	0	0	0	0	4	0	0	0	$0	$0	$0	$0	$0	$0	**$1,320**
3.0	**Site Investigation**																		
3.1	Vegetation Clearing and Water Blasting	0	0	0	0	0	0	0	0	0	0	0	$6,232						$6,232
3.2	Verification of Spring Connection - Divers	0	8	0	0	0	0	0	0	0	0	0	$4,910						$6,430
3.3	Verification of Spring Connection - Digging	0	4	0	0	0	0	0	0	0	0	0	$11,700						$12,460
	SUBTOTAL	0	12	0	0	0	0	0	0	0	0	0	$22,842	$0	$0	$0	$0	$0	**$25,122**
4.0	**General Design**																		
4.1	Structure/Equipment Condition Assessment	0	16	0	0	48	0	0	0	0	0	0		$5,000					$17,640
4.2	Condition Assessment Report	0	4	4	6	20	8	20	0	0	0	0							$11,660
4.3	Topographical Survey	0	1	0	0	0	0	0	0	0	0	0				$17,640			$17,830
4.4	Prepare base map	0	1	0	0	0	0	4	0	12	0	0							$2,370
4.5	Prepare Conceptual Layouts	0	2	1	2	0	0	8	0	16	0	0							$4,410
4.6	GWA Workshops (2)	0	4	0	2	0	0	2	0	0	0	0							$1,540
	SUBTOTAL	0	28	5	10	76	8	34	0	28	0	0	$0	$5,000	$0	$17,640	$0	$0	**$57,050**
5.0	**Detailed Design**																		
5.1	30% Drawings	0	4	4	4	8	8	20	0	40	0	0		$21,000					$35,160
5.2	Table of Specifications	0	1	1	0	0	0	1	0	0	0	0							$580
5.3	Major Equipment List	0	1	1	1	0	2	0	0	0	0	0							$1,090
5.4	Preliminary Engineering Report	0	8	3	2	8	8	24	0	0	0	0							$9,330
5.5	60% Drawings	0	1	6	2	8	32	70	0	60	0	0							$28,090
5.6	Major Equipment Specifications	0	1	4	2	8	12	20	0	0	0	0							$8,490
5.7	90% Drawings	0	1	8	2	8	32	68	0	20	0	0							$22,910
5.8	Major and Minor Specifications	0	1	5	2	8	8	20	0	0	0	0							$7,940
5.9	Draft Construction Schedule	0	1	0	1	0	0	2	0	0	0	0							$720
5.10	Final drawings	0	8	4	1	4	8	24	0	16	0	0							$10,690
5.11	Final specifications	0	2	4	2	4	2	6	0	0	0	0							$3,920

Last Updated: 7/18/2016

5.12	Final Engineering Report with calculations	0	8	4	1	8	0	12	0	0	0	0					$10,818		$6,050
5.13	Final construction schedule	0	1	0	1	0	1	2	0	0	0	0							$920
5.14	Archaelogical Monitoring and Discovery Plan	0	1	0	0	0	0	0	0	0	0	0							$11,008
5.15	10% construction cost estimate	0	1	0	1	0	0	0	0	0	0	0							$440
5.16	30% construction cost estimate (Class 3)	0	0	0	1	1	1	1	0	0	0	0						$2,500	$3,290
5.17	60% construction cost estimate (Class 2)	0	0	0	1	1	1	1	0	0	0	0						$3,500	$4,290
5.18	90% construction cost estimate (Class 2)	0	0	0	1	1	1	1	0	0	0	0						$2,000	$2,790
5.19	Final construction cost estimate (Class 2)	0	0	0	1	1	1	1	0	0	0	0						$500	$1,290
5.2	30% design workshop	0	2	0	1	0	0	0	0	0	0	0							$630
5.21	60% design workshop	0	2	0	1	0	0	0	0	0	0	0							$630
5.22	90% design workshop	0	2	0	1	0	0	0	0	0	0	0							$630
5.23	Final design workshop	0	2	0	1	0	0	0	0	0	0	0							$630
	SUBTOTAL	0	48	44	30	68	117	273	0	136	0	0	$0	$21,000	$0	$0	$10,818	$8,500	**$161,518**
6.0	**Bidding Process**																		
6.1	Pre-Bid Meeting	0	3	0	0	0	0	0	0	0	0	0							$570
6.2	Response to requests for clarification	0	4	0	2	2	2	0	0	0	0	0							$2,060
6.3	Prepare addenda	0	4	0	0	2	0	0	0	0	0	0		$2,200					$3,360
6.4	Bid evaluation conference	0	2	0	0	0	0	0	0	0	0	0							$380
6.5	Review, evaluate, and certify bid tabulations	0	4	0	0	0	0	0	0	0	0	0							$760
6.6	Lettter of recommendation	0	2	0	0	0	0	0	0	0	0	0							$380
	SUBTOTAL	0	19	0	2	4	2	0	0	0	0	0	$0	$2,200	$0	$0	$0	$0	**$7,510**

Airfare		$2,500
Hotel/Rental Car		$2,220
Per Diem		$540
Mileage Reimbursement		$0
Printing, Scanning and Binding		$1,000

HDR SUBTOTAL (Tasks 1-6)		**$203,605**
Total Subcontractor Subtotal		$88,000
Subconsultant Markup (10%)		$8,800
Total Subtotal Fee (Task 1-6)		$300,405
GUAM GRT TAX (4.167%)		$12,518
TOTAL LUMP SUM FEE (Task 1-6)		**$312,923**

		HDR													Subconsultants						
Task Number	Task Description	Principal Engineer	Project Manager	Technical Advisor - QA/QC	Senior Water Process Engineer	Senior Engineer - Structural	Senior Engineer - Electrical	Senior Hydrologist	Project Engineer	Project Hydrologist	GIS Analyst	Operations Specialist	Accounting	Clerical	APEC	Coffman	PSET	DCA	Search	RLB	Sum Total
	Hourly Labor Rates/Unit Prices	$250	$190	$250	$250	$200	$200	$200	$140	$140	$125	$225	$95	$70	-	-	-	-	-	-	
7.0	**Construction Services**																				
7.1	General Project Management	0	16	0	0	0	0	0	0	0	0	0	0	0							$3,040
7.2	Weekly progress meetings	0	64	0	0	0	0	0	0	0	0	0	0	0							$12,160
7.3	Weekly field observations	0	64	0	0	0	0	0	0	0	0	0	0	0							$12,160
7.4	Archaeological monitoring	0	0	0	0	0	0	0	0	0	0	0	0	0					$2,000		$2,000
7.5	Review submittals	0	0	0	0	16	0	0	4	16	0	0	0	0		$4,950					$10,950
7.6	Review RFIs	0	8	0	0	8	8	0	1	8	0	0	0	0							$5,980
7.7	Review change orders	0	4	0	0	2	2	0	0	0	0	0	0	0							$1,560
7.8	Review construction schedule	0	4	0	0	0	0	0	0	0	0	0	0	0							$760
7.9	Conduct final inspection and punchlist	0	8	0	0	0	0	0	0	0	0	0	0	0							$1,520
7.1	Equipment start-up and testing	0	8	0	0	0	0	0	0	0	0	0	0	0		$1,200					$2,720
7.11	Facility commissioning tests	0	2	0	0	0	0	0	0	0	0	0	0	0							$380
7.12	O&M manual with Standard Operating Procedures	0	0	0	0	0	0	0	24	0	0	0	0	0							$3,360
7.13	Operator training	0	0	0	0	0	0	0	0	0	0	0	0	0							$0
7.14	Prepare logs, checklists, performance/maintain. Sched.	0	0	0	0	0	0	0	12	0	0	0	0	0							$1,680
	SUBTOTAL	0	178	0	0	26	10	0	41	24	0	0	0	0	$0	$6,150	$0	$0	$2,000	$0	**$58,270**
												Printing, Scanning and Binding									$0
HDR SUBTOTAL																					**$50,120**
Total Subcontractor Subtotal																					$8,150
Subconsultant Markup (10%)																					$815
Total Subtotal Fee																					$59,085
GUAM GRT TAX (4.167%)																					$2,462
TOTAL TIME AND MATERIALS FEE																					$61,547
TOTAL LUMP SUM FEE (FROM PAGE 2)																					$312,923
GRAND TOTAL FEE																					**$374,470**

Category	Assigned Hourly Rate
Principal Engineer	$250
Technical Advisor/QAQC	$250
Project Manager	$190
Senior Water Process Engineer	$250
Senior Engineer	$190
Mechanical Engineer (Coffman)	$150
Electrical Engineer (Coffman)	$150
Project Engineer	$140
CAD Designer	$135
GIS Analyst	$125
Archaeological Monitor (SEARCH)	$125
Technical Editor	$100
Accounting	$95
Administration	$70

Reimbursable Expenses:

Printing	
22"x34" Large Format Print	$1/sheet
Scanning	
22"x34" Large Format Scan	$1/sheet
Mileage	Reimbursed at the effective IRS allowable rate (Currently $0.54/mile)

Compensation for services shall be at the hourly billing rates identified in the schedule above. If additional labor categories are used on the project, they and their billing rates will be submitted to GWA for approval. Billing rates are subject to annual adjustments for changes in salary. In addition to compensation for labor, the CONSULTANT shall be reimbursed for subcontractor costs and other direct costs associated with the project.

Notes:
1. Subconsultants are charged at cost plus ten percent (10%).
2. The Guam Revenue Tax (GRT) in effect at the time of billing will be applied to each monthly invoice total for work.