



## CONSOLIDATED COMMISSION ON UTILITIES

Guam Power Authority | Guam Waterworks Authority  
P.O. Box 2977 Hagåtña, Guam 96932 | (671) 648-3002 | guamccu.org

### GUAM WATERWORKS AUTHORITY WORK SESSION

CCU Conference Room  
8:30 a.m., September 17, 2024

#### \* AMENDED AGENDA

1. CALL TO ORDER
2. GWA ISSUES FOR DECISION
  - 2.1 [Resolution No. 30-FY2024 – Relative to Approving the Charge-Off of Guam Waterworks Authority Receivables Deemed Uncollectible](#)
  - 2.2 \* [Resolution No. 33-FY2024 - Relative to the Creation and Approval of Position Classification Specification for Water-Wastewater System Operations Project Engineer](#)
  - 2.3 [Resolution No. 34-FY2024 - Relative to Approval of Submission of Santa Rita Springs Rehabilitation Design to the Department of Interior, Bureau of Reclamation WaterSmart Planning and Project Design Grant Program.](#)
  - 2.4 [Resolution No. 35-FY2024 - Relative to Approval of Additional Funding for the Design of Dungca Beach Sewer Line Relocation Project, GWA Project No. 22001](#)
  - 2.5 [Resolution No. 36-FY2024 - Relative to Approval of Additional Funding for the Fujita Sewage Pump Station Rehabilitation and Redundant Force Main Design Project, GWA Project No. 22003](#)
  - 2.6 [Resolution No. 37-FY2024 - Relative to Approval of Additional Funding for the Hagatna Wastewater Treatment Plant Causeway and Facility Structural Analysis Project, GWA Project No. 22004](#)
3. [GWA GM REPORT](#)
  - 3.1 [Administration](#)
  - 3.2 [Compliance](#)
  - 3.3 [Engineering / Capital Improvement Program](#)
  - 3.4 [Financial](#)
  - 3.5 [Operations](#)
  - 3.6 Other
4. OTHER DISCUSSION
5. ANNOUNCEMENTS
  - 5.1 Next CCU Meetings: September 19, 2024 – GPA WS at 8:30 a.m.  
September 25, 2024 – CCU Regular Board Meeting at 5:30 p.m.
6. ADJOURNMENT



**Issues for Decision**

**Resolution No. 30-FY2024**

Relative to Approving the Charge-off of Guam Waterworks Authority Receivables Deemed Uncollectible

**What is the project’s objective and is it necessary and urgent?**

It is good accounting practice to regularly review accounts receivable to ensure the Allowance for Doubtful Accounts is appropriate and to write off accounts that are deemed uncollectible. If uncollectible receivables are not written off regularly, e.g., annually, Accounts Receivable and the related Allowance accounts become overstated.

The last write off was performed in August 2023 as per Resolution 30-FY2023.

**Where is the location?**

Not applicable.

**How much will it cost?**

The proposed amount to be charged off is \$1,071,981.

Account	Count	Amount
<b>Trade Receivables</b>	1,546	\$1,061,541
<b>Accounts Receivable, Others</b>	4	10,440
<b>Total</b>	1,540	\$1,071,981

The Trade Receivables are 96.51% Residential, 3.34% Commercial, and .05% Agricultural. The Accounts Receivable, Others is related to health insurance for two retirees, amounts owed for lost equipment for one inactive employee, and a sewage discharge fee. GWA updated procedures to require automatic payments from retirees’ bank accounts and non-trade receivables will be reviewed quarterly by the ACFO.

As receivables are written off, the Allowance is adjusted. The write off of receivables will not impact income as the amounts were expensed as the Allowance was adjusted, i.e., the write off will reduce the Accounts Receivable and the Allowance for Doubtful Accounts balances on the Statement of Net Position (aka Balance Sheet).

Note, if these receivables are eventually collected, the amounts will be recognized as Miscellaneous Income.

**When will it be completed?**

The write-offs will occur once the resolution is approved by the CCU.

**What is the funding source?**

Not applicable.

**The RFP/BID responses (if applicable):**

Not applicable.



**CONSOLIDATED COMMISSION ON UTILITIES**  
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**GWA RESOLUTION NO. 30-FY2024**

**RELATIVE TO APPROVING THE CHARGE-OFF OF GUAM WATERWORKS  
AUTHORITY RECEIVABLES DEEMED UNCOLLECTIBLE**

**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**, GWA Finance regularly reviews accounts receivable and recognizes that not all accounts will be collectible through the Allowance for Doubtful Accounts; and

**WHEREAS**, despite best efforts by GWA to collect outstanding balances, the age of certain receivables exceeds the statute of limitations per 7 GCA §11303 and §11304; and

**WHEREAS**, it is good accounting practice to regularly write off accounts that are deemed uncollectible; and

**WHEREAS**, after consideration of the aforementioned, management recommends GWA charge off \$1,071,981.00 as summarized herein and further detailed in Exhibit A:

Account	Count	Amount
<b>Accounts Receivable – Trade</b>	1,536	\$1,061,541
<b>Accounts Receivable – Others</b>	4	10,440
<b>Total</b>	1,540	\$1,071,981

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**NOW BE IT THEREFORE RESOLVED;** the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU affirms management’s recommendation to charge off these past due inactive receivables for accounts for which reasonable efforts were made to collect \$1,071,981.00; the breakdown by year is outlined in Exhibit A.

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

**DULY AND REGULARLY ADOPTED,** this 25<sup>th</sup> day of September 2024.

Certified by:

Attested by:

\_\_\_\_\_

\_\_\_\_\_

**JOSEPH T. DUENAS**  
Chairperson

**PEDRO ROY MARTINEZ**  
Secretary

**SECRETARY’S CERTIFICATE**

I, Pedro Roy Martinez, 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: \_\_\_\_\_

NAYS: \_\_\_\_\_

ABSENT: \_\_\_\_\_

ABSTAIN: \_\_\_\_\_

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**GUAM WATERWORKS AUTHORITY**  
**Accounts Receivable**  
**Recommended for Write-off**  
**As of July 31, 2024**  
**(Covering uncollected invoices older than July 31, 2020)**

	<u>2017</u>		<u>2018</u>		<u>2019</u>		<u>2020</u>		<u>TOTAL</u>	
	<u>Count</u>	<u>Amount</u>	<u>Count</u>	<u>Amount</u>	<u>Count</u>	<u>Amount</u>	<u>Count</u>	<u>Amount</u>	<u>Count</u>	<u>Amount</u>
Agriculture	-	\$0	-	\$0	-	\$0	2	\$568	2	\$568
Commercial 1	-	-	-	-	3	276	28	35,141	31	35,417
Commercial 3	-	-	-	-	-	-	2	1,104	2	1,104
Residential	1	\$7,286.56	1	52	292	155,714	1,207	861,399	1,501	1,024,452
Others	1	291					3	10,149	4	10,440
<b>Totals</b>	<b>2</b>	<b>\$7,578</b>	<b>1</b>	<b>\$52</b>	<b>295</b>	<b>\$155,991</b>	<b>1,242</b>	<b>\$908,361</b>	<b>1,540</b>	<b>\$1,071,981</b>



## Issues for Decision

### Resolution No. 33-FY2024

Relative to the Creation and Approval of Position Classification Specification for the Water-Wastewater Operations Engineer (Classified)

#### What is the project's objective and is it necessary and urgent?

The project's objective is to establish a Water-Wastewater Operations Engineer position at GWA that is 100% dedicated to supporting the operations division. This role will assist the Assistant General Manager of Operations (AGM-O) and the water and wastewater teams in addressing both large-scale and day-to-day operational challenges. By providing engineering expertise focusing exclusively on operations, the position is designed to fill the currently existing knowledge gap between CIP design/construction of GWA systems and the operation of those systems by certified operators. By bridging this gap with engineering expertise, the position will enhance the production, treatment, and distribution of water, as well as the collection and treatment of wastewater. The necessity and urgency for this position stems from several critical factors.

First, the position will significantly improve operational efficiency. With direct involvement, the engineer will provide hands-on technical guidance to address both routine and complex operational issues, improving troubleshooting, streamlining decision-making, and minimizing downtime across all water and wastewater systems. This will help ensure that operations run smoothly and effectively, addressing everything from minor maintenance issues to major system disruptions.

The role also brings essential technical expertise. By working closely with the operations teams, the engineer can perform field investigations, analyses, and recommend design or process modifications that will enhance the overall process or operational efficiency, quality, and reliability of water and wastewater services. This includes improvements in system performance, optimizing treatment processes, and ensuring better water distribution and wastewater collection.

Asset management is another key responsibility of this position. The engineer will assess and manage the maintenance and upgrades of critical facilities, ensuring that GWA's infrastructure, including pumps, pipelines, and treatment systems, is always operating at its highest capacity. This proactive approach will help extend the life of vital equipment, reduce the likelihood of costly breakdowns, and ensure consistent service delivery.

In addition, the position will be pivotal in strategic planning, supporting the AGM-O in resource allocation, prioritization of projects, and the timely execution of repairs and upgrades. The engineer's input will improve the operator's understanding of system design and operational capabilities, help avoid costly reworks and ensure that all operations meet the necessary standards and objectives. Their involvement will ensure that operations teams have the engineering support they need for both immediate challenges and long-term projects, enabling better planning for the future.

The urgency for this position is driven by (1) the opportunity to enhance the production, treatment, and distribution of water, as well as the collection and treatment of wastewater; and (2) to

**Issue for Decision - Resolution No. 33-FY2024**

Relative to the Creation and Approval of Position Classification Specification for the Water-Wastewater Operator Engineer (Classified)

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encourage the role of engineers as certified operators to improve recruitment/ retention in operational divisions; and (3) over the long-term enhance the quality of GWA operations through a more effective collaboration between engineers and operators. By focusing on optimizing processes and maximizing operational efficiency, GWA can continue to deliver consistent, high-quality services to its customers. The addition of a dedicated Water-Wastewater Operations Engineer will strengthen GWA's ability to maintain reliable systems, proactively manage infrastructure, and ensure seamless service delivery. This role is key to supporting GWA's long-term objectives of providing safe, efficient, and resilient water services that meet both current and future needs.

**Where is the location?**

The Water-Wastewater Operations – Engineer will be organizationally based within the Operations or Engineering Divisions of GWA.

**How much will it cost?**

There is no cost in creating the series of positions, however, the proposed salary range to fill the positions is as follows:

- o **Minimum: \$100,603 per annum / \$ 48.37 per hour**
- o **Maximum: \$104,687 per annum / \$ 50.33 per hour**

The proposed pay ranges are aligned with the 25th percentile of the 2022 market study and were approved by the CCU in May 2024. Compensation is structured using the Strategic Pay Plan Methodology, ensuring that the salary framework is competitive and reflective of industry standards.

**When will it be completed?**

Public Law 28-159, Section 7.0.3 (c) requires GWA to post a petition on their respective websites for ten (10) days (*Saturdays, Sundays, and government of Guam holidays excepted*). Once adopted by the CCU, the creation of the Water-Wastewater Operations – Engineer position will not be filled until thirty (30) days have elapsed from the date of filing the petition of the resolution with the Legislative Secretary and the Department of Administration.

**What is the funding source?**

Revenue generated by current service rates and fees for all water and wastewater customer classes.

**The RFP/BID responses (if applicable):**

N/A



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**GWA RESOLUTION NO. 33-FY2024**

**RELATIVE TO THE CREATION AND APPROVAL OF POSITION CLASSIFICATION  
SPECIFICATION FOR THE WATER-WASTEWATER OPERATIONS ENGINEER**

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

**WHEREAS**, the GWA is a Public Corporations established and existing under the laws of Guam; and

**WHEREAS**, the Guam Waterworks Authority (“GWA”) is responsible for the production, treatment, distribution, and management of Guam’s water supply, as well as the collection and treatment of wastewater, ensuring the continued delivery of safe and reliable water and wastewater services to the community; and

**WHEREAS**, the CCU recognizes the critical importance of maintaining operational efficiency, infrastructure integrity, and technical expertise to meet GWA's objectives and to support its growing water and wastewater demands; and

**WHEREAS**, the GWA has identified the need for a specialized Water-Wastewater Operations Engineer position dedicated to supporting the operational division, assisting the Assistant General Manager of Operations, and addressing both strategic and day-to-day technical needs in the water and wastewater systems; and

**WHEREAS**, there is an existing knowledge gap between the engineering design and construction of GWA’s water and wastewater systems and the operation of those systems by GWA certified operators which can be bridged by engineers with operations experience and qualifications; and



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**WHEREAS**, the creation of this position will enhance GWA’s ability to optimize the performance, maintenance, and management of its water and wastewater infrastructure, contributing to improved service delivery, reduced downtime, and the longevity of critical assets; and

**WHEREAS**, GWA Management desires to encourage the role of engineers as certified operators to improve recruitment/ retention in operational divisions, and over the long-term enhance the quality of GWA operations through a more effective collaboration between engineers and operators; and

**WHEREAS**, the GWA has conducted a comprehensive job evaluation, utilized the Strategic Pay Plan Methodology, and determined the appropriate compensation structure for this position based on industry standards and market data; and

**WHEREAS**, the GWA General Manager requests the CCU to approve the creation of the Water-Wastewater Operations Engineer in the Classified status and approve its job specification standard; and

**WHEREAS**, Public Law 34-131, Section 2, §6303 (d) and (2C) authorizes the creation of positions in Autonomous Agencies and Public Corporations; and

**WHEREAS**, GWA and GPA Personnel Rules and Regulations as amended by Public Law 28-159 Section 3 (C) authorizes the CCU to amend, modify or add a position to the list of certified, technical, and professional positions; and

**NOW BE IT THEREFORE RESOLVED**, the Consolidated Commission on Utilities, as the Governing Body of the Guam Waterworks Authority and the Guam Power Authority, does hereby approve and authorize the following:

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1. The creation of the Water-Wastewater Operations Engineer in the classified service and addition of the position to the Certified, Technical, and Professional (CTP) list of positions.
2. The adoption of the proposed minimum and maximum range of compensation, in accordance with the Strategic Pay Methodology as follows:

20 <sup>th</sup> Market Percentile (2017 Market Data – 5 Sub-Steps)											
Benchmark Position	Structural Adjustment- MIN						Structural Adjustment- MIN				
	JE Points	Base Salary	Hourly	Grade	Step	Sub-Step	Base Salary	Hourly	Grade	Step	Sub-Step
Water-Wastewater Operations Engineer	1020	\$100,603	\$48.37	O	1	D	\$104,687	\$50.33	O	2	D

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

**DULY AND REGULARLY ADOPTED**, this 25th day of September 2024.

Certified by: \_\_\_\_\_ Attested by: \_\_\_\_\_  
**JOSEPH T. DUENAS** **PEDRO ROY MARTINEZ**  
 Chairperson Secretary

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**SECRETARY’S CERTIFICATE**

I, Pedro Roy Martinez, 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: \_\_\_\_\_  
NAYS: \_\_\_\_\_  
ABSENT: \_\_\_\_\_  
ABSTAIN: \_\_\_\_\_

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## PETITION

The Guam Waterworks Authority (GWA) hereby petitions the Consolidated Commission on Utilities (CCU) the following:

### **WATER-WASTEWATER OPERATIONS ENGINEER**

This petition complies with Public Law 34-131, §6303(e) and (2C) as added and 4 GCA, Chapter 6, §6303 (d) (added by Public Law 28-112) The petition is also required by 4 GCA, §6205 and §6303 as public documents for the purposes of 5 GCA, Chapter 10, Article 1 (Sunshine Law). In addition, Public Law 28-159 to add the position to the Certified, Technical, and Professional (CTP) List.

For more information, please visit the Guam Waterworks Authority website at <http://www.guamwaterworks.org/careers/petition>

You may also contact GWA Human Resources Office at 671-300-6073.

  
THOMAS F. CRUZ, P.E.  
**GENERAL MANAGER, ACTING**  
**GUAM WATERWORKS AUTHORITY**

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**STAFF REPORT  
CREATION OF POSITION  
WATER-WASTEWATER OPERATIONS ENGINEER**

**I. REQUEST**

The Guam Waterworks Authority (GWA) petitions the Consolidated Commission on Utilities (CCU) to create the following position in the classified status following Public Law 28-112.

➤ **Water-Wastewater Operations Engineer**

**II. AUTHORITY**

Public Law 28-159, Section 3(c) Amendment of Certified, Technical and Professional Positions. The following information is provided according to 4 GCA, §6303 (d) Creation of positions in the Autonomous Agencies and Public Corporations:

- (1) The petition of any agency, department, or public corporation listed in 4 GCA, §4105(d) of this Title to create a position shall include:

*A. The justification for the new position:*

On January 24, 2023, the Consolidated Commission on Utilities (CCU) approved GWA Resolution No. 09-FY2023, which amended the classification specifications to better align the Engineering series and created the Engineer Intern position in the "unclassified" service. This petition seeks to establish an Engineer position within Operations that would significantly enhance GWA's capacity to improve efficiency, quality, and performance across its water and wastewater management and infrastructure services.

A dedicated Engineer within Operations would directly support the technical needs of the division by recommending design or process changes that boost efficiency and performance. This role would offer hands-on technical guidance to operations personnel, allowing for faster troubleshooting and more informed decision-making, ultimately leading to reduced downtime and more consistent service delivery.

Additionally, this Engineer would work closely with operations teams to assess and suggest improvements for facility maintenance, repairs, and upgrades, ensuring that GWA's assets are operating at their best. This collaborative approach would not only improve the reliability and safety of facilities but also help extend the life cycle of critical equipment.

The Engineer would also play a crucial role in evaluating designs and specifications to ensure that projects meet quality standards and align with operational needs. This involvement helps prevent costly reworks and enhances the overall integrity of GWA's infrastructure.

Moreover, their involvement in asset management would bring a strategic advantage, allowing GWA to better plan, prioritize, and allocate resources for maintenance and upgrades, leading to cost savings and more proactive management of assets.

Adding an Engineer dedicated to Operations is a strategic decision that enhances technical capabilities, streamlines processes, improves facility management, and ensures the highest standards of quality and efficiency are maintained. This role supports GWA's long-term objectives of delivering reliable, safe, and efficient water services to the community.

*The essential details concerning the creation of the position.*

Refer to the classification review in Section III below.

**B.** *An analysis of similarities and differences between the position to be created and positions listed pursuant to 4 GCA, §4101.1(d).*

The Guam Waterworks Authority's classification plan currently includes the following engineering positions: Engineer Intern, Junior Engineer, Associate Engineer, Senior Engineer, Project Engineer, Engineer Supervisor, P.E., Assistant Chief Engineer, P.E., and Assistant General Manager, P.E. (AGME) Unclassified. The proposed creation of the Water-Wastewater Operations Engineer position would require the incumbent to possess and maintain a valid Operator Level III or higher certification in one or more of the following types of water or wastewater systems:

- Water Treatment
- Water Distribution
- Wastewater Treatment
- Wastewater Collection

The Water-Wastewater Engineer in Operations the flexibility to assist Operations in all areas between Water and Wastewater

**C.** *The position description, see attached.*

**D.** *The proposed pay ranges and demonstration of compliance with 4 GCA, §6301 of this Title: GWA's and GPA's compensation plan as authorized by Public Law 28-159 and approved by the CCU in October 2007. The proposed compensation is in accordance with the Strategic Pay Plan Methodology.*

**E.** *A fiscal note as the term as described in 2 GCA, §9101 et seq., and any other pertinent information.*

**(2)** The petition shall be posted on the agency, department, or public corporation's website for ten (10) days (Saturdays, Sundays, and government of Guam holidays excepted). After the posting, the head shall forward the petition along with evidence of his compliance with 4 GCA, Chapter 6, §6303.1(a), to the governing board or commission who, if they approve the same shall approve the petition by resolution and file the petition and resolution for records with the Director of Administration and the Legislative Secretary.

**(3)** No new position may be filled until after compliance with the provision of this Section and thirty (30) days have elapsed from the date of filing with the Legislative Secretary.

**III. METHODOLOGY**

Information was gathered from various public utilities associated with the American Public Power Association (APPA), the American Waterworks Association (AWWA), and other utilities with comparable positions within the United States. The information collected was used to analyze and develop the proposed job standards as they apply to the work performed for the Commission, and for GWA and GPA Executive Management. The staff collaboratively reviewed the duties associated with the proposed creations as indicated in the position descriptions. In evaluating these positions, the Strategic Pay Job Evaluation Methodology was utilized to determine the job evaluation points based on a total of twelve (12) measurement factors: Education, Experience, Complexity, Scope of Work, Problem Solving, Freedom to Act/Supervision Received, Work Environment, Physical Demands, Impact of Discretionary Decisions, Human Relations Skills/Contact, Authority Exercised, and Supervisor/Managerial Responsibility.


Based on the compensation consulting firm of Alan Searle & Associates market research and on both GPA's and GWA's compensation models per respective industry, implementation ranges resulted as follows:


25 <sup>th</sup> Market Percentile (2022 Market Data – 5 Sub-Steps) - GWA											
Benchmark Position	Structural Adjustment- MIN						Structural Adjustment- MIN				
	JE Points	Base Salary	Hourly	Grade	Step	Sub-Step	Base Salary	Hourly	Grade	Step	Sub-Step
Water-Wastewater Operations Engineer	1020	\$100,603	\$48.37	O	1	D	\$104,687	\$50.33	O	2	D

**IV. RECOMMENDATION**

1. To approve the creation of the Legal Analyst and to update the position to the Certified, Technical, and Professional (CTP) list of positions.

  
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**Zina Pangelinan-Charfauros,**  
**GWA Personnel Services Administrator**

  
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**Christopher M. Budasi**  
**GWA Assistant General Manager,**  
**Administration & Support (AGMAS)**

  
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**Thomas F. Cruz, P.E.,**  
**GWA Acting General Manager**



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## **WATER-WASTEWATER OPERATIONS ENGINEER**

### **NATURE OF WORK IN THE CLASS:**

Under the direction of the Assistant General Manager of Operations. The employee in this class will perform a variety of technical guidance and analyses and ensure compliance with regulatory requirements. Assignments include Managing engineering projects from inception to completion in the Operations Division of the Authority.

### **ILLUSTRATIVE EXAMPLES OF WORK:**

*(Classification specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are not intended to reflect all duties performed within the position, as illustrated in the position description questionnaire).*

Leads and performs major planning and program studies and makes recommendations for water and wastewater system infrastructure in support of capital improvements to the Assistant General Manager - Operations (AGMO) and/or the Assistant General Manager - Engineering (AGME)

Manages assigned activities within the Capital Improvements Program, such as storm, sewer and water management, transportation planning, and pavement management programs.

Responsible for conducting comprehensive studies and assessments to determine the water needs of a specific area or project.

Analyzes data on population, water demand, and available water resources to develop appropriate water supply and treatment systems, including designing infrastructure such as dams, reservoirs, pumping stations, water treatment plants, and distribution networks.

Assists in the scope of engineering projects; prepares Request for Proposal (RFP); coordinates the bidding process for assigned projects; oversees and participates in the assembly and preparation of bid documents including drawings, calculations, specifications, plans and support materials; assures bid documents, notifications, awards and related materials are distributed to appropriate contractors, outside agencies, and personnel according to established time lines; evaluates and recommends professional engineering consultants and contracts awards.

Develops schedules and methods to accomplish assignments, ensuring work is completed in a timely and efficient manner

Manages the planning, design, and construction of water systems for new development and capital improvement projects, including securing funding and managing project budgets and schedules.

Performs various professional-level engineering work in the research, planning, design, and construction of capital infrastructure improvement and maintenance projects.

Completes a variety of engineering calculations and analyses including, but not limited to, hydraulics, pump and equipment capacities, equipment and system controls, and related matters in support of projects and technical studies.





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## **WATER-WASTEWATER OPERATIONS ENGINEER**

Prepares engineering designs for presentation to groups involved in the project; prepares specifications and cost estimates, sketches or project options, and results of research requirements; prepares final designs for capital improvement projects.

Prepares contract documents, specifications, and plans; Conducts field inspections of work done by contractors to ensure compliance with plans and specifications; Drafts and recommends approval of contract change orders.

Assists in identifying, evaluating, and providing improvement recommendations with preliminary and final designs and design criteria for assigned programs and/or projects.

Provides assistance in the preparation of short and long-range plans, schedules, estimates, budgets, detailed final plans, specifications, special conditions, and agreements.

Assist engineers with planning, design, and construction management of projects to construct, enlarge, and modify water and wastewater facilities.

Reviews and processes necessary permits, right-of-way agreements, and other documents related to the use of GWA property or right-of-way, or other government lands and right-of-way that are GWA's responsibility.

Design and oversee the implementation of water treatment systems, including processes such as coagulation, sedimentation, filtration, disinfection, and desalination.

Provides direct technical support to operations teams, including real-time troubleshooting and analysis of equipment and process issues, to minimize operational disruptions.

Evaluates current operational procedures and recommends technical or process changes to improve efficiency, quality, and performance optimization to meet regulatory compliance and performance standards.

Work closely with operations staff, engineers, and management to ensure alignment on maintenance, repair, and operational strategies. Facilitate effective communication across teams to drive coordinated responses to technical challenges.

Assesses equipment performance, recommending upgrades or replacements, and assisting in the prioritization of maintenance activities to extend asset life and reduce operational costs.

Provides presentations to management, government entities, the Consolidated Commissioners on Utilities, and customers.

Perform other duties as assigned or required.



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## **WATER-WASTEWATER OPERATIONS ENGINEER**

### **KNOWLEDGE, ABILITIES, AND SKILLS:**

Knowledge of one or more of the following disciplines: Civil, Environmental, Structural, Architectural, Mechanical, and/or Electrical engineering terminology and techniques.

Knowledge of modern methods, materials, and techniques used in the construction of water and wastewater systems and facilities.

Knowledge of basic surveying, drafting, computer-aided design techniques and technology; current developments and literature, and sources of information regarding engineering.

Knowledge of computer software applications, including word processing, spreadsheets, graphics, and databases.

Knowledge of U.S. Environmental Protective Agency (USEPA) and Guam Environmental Protective Agency (GEPA) Drinking Water and Clean Water (Wastewater) Regulations.

Knowledge of National Pollutant Discharge Elimination System (NPDES) permit program rules and regulations.

Knowledge of Guam Waterworks Authority (GWA) rules and regulations, and other operational guidelines and directives.

Knowledge of engineering designs, construction and maintenance principles and practices of engineering science and technology.

Knowledge of the principles and practices as applied to the field of municipal public works, including planning, development, design, and construction.

Ability to plan, supervise, direct and coordinate the work of professional, technical, and contract staff.

Ability to manage projects of varying sizes and budgets.

Ability to evaluate complex designs and consulting work.

Ability to perform feasibility and cost analyst studies.

Ability to prepare presentations to management, government entities, the Consolidated Commissioners on Utilities and customers.

Ability to interpret and apply complex, rules, regulations, laws, and ordinances.

Ability to perform complex engineering computations, calculus, geometry, and trigonometry rapidly and accurately.



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## **WATER-WASTEWATER OPERATIONS ENGINEER**

### **MINIMUM EXPERIENCE, EDUCATION, AND TRAINING:**

- A. Master's degree in Construction Administration/Management or Engineering from an accredited college or university and three (3) years of experience in capital improvement program management in water or wastewater experience **or** treatment facility design, pump and lift station design in municipal engineering; **or**
- B. Bachelor's degree in Construction Administration/Management or Engineering from an accredited college or university and five (5) years of experience in capital improvement program management in water or wastewater experience **or** treatment facility design, pump and lift station design in municipal engineering.

### **LICENSES, CERTIFICATES, AND SPECIAL REQUIREMENTS:**

Must possess and maintain a valid Operator Level III or higher Certification in one or more of the water/wastewater certifications, but not limited to the following:

- Water Collection
- Water Distribution
- Wastewater Treatment
- Wastewater Collection

### **NECESSARY SPECIAL QUALIFICATIONS**

Possession and maintain a valid driver's license

**ESTABLISHED:                    SEPTEMBER 2024**

**JE POINTS:                        1020**

**FLSA STATUS:                    EXEMPT**

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**JOSEPH T. DUENAS, Chairman**  
**Consolidated Commission on Utilities**



### **Issues for Decision**

#### **Resolution No. 34-FY2024**

Relative to CCU authorization/endorsement of the GWA application for Bureau of Reclamation WaterSMART Planning And Project Design Grant funding for the Santa Rita Springs Facility Rehabilitation Project.

#### **What is the project's objective and is it necessary and urgent?**

The objective is to obtain CCU approval and endorsement of submission of a federal grant application for the project to retain engineering services from experienced and qualified firms for the engineering design for GWA's Santa Rita Springs Facility Rehabilitation project. This project may be potentially partially funded through the Bureau of Reclamation (BOR) WaterSMART Planning And Project Design program. This project is necessary to reduce operational costs in the Santa Rita village and surrounding areas where a significant amount of purchased Navy water is used to supply customer demand. The project will incorporate design recommendations identified in the May 2020 WERI Study by Bourke, Jenson, Habana, and Lander intended to maximize spring capacity by increasing estimated flows by 250-1200 gallons per minute (gpm). A significant increase could be realized as GWA currently draws approximately 290 gpm.

The purpose of this CCU resolution is to authorize GWA to enter into a grant agreement with the United States Bureau of Reclamation. This is necessary and urgent as the endorsement is a requirement of the grant program prior to award issuance for the current grant cycle.

#### **How much will it cost?**

Additional design cost: \$0

Total additional funding request to include contingencies: \$0

#### **When will it be completed?**

Design work is anticipated to be completed within two (2) years. Additionally, grant period is for two (2) years.

#### **What is the funding source?**

Not applicable.

#### **The RFP/BID responses (if applicable):**

Not applicable.



**CONSOLIDATED COMMISSION ON UTILITIES**  
Guam Power Authority | Guam Waterworks Authority  
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

**GWA RESOLUTION NO. 34-FY2024**

**RELATIVE TO APPROVAL OF SUBMISSION OF SANTA RITA SPRINGS  
REHABILITATION DESIGN TO THE DEPARTMENT OF INTERIOR, BUREAU OF  
RECLAMATION WATERSMART PLANNING AND PROJECT DESIGN GRANT  
PROGRAM**

**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; and

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

**WHEREAS**, the United States Bureau of Reclamation is currently offering grant opportunities through the WaterSMART Planning and Project Design Grant Program. The WaterSMART Planning and Project Design Grant Program is a cost-shared program emphasizing planning and design projects; and

**WHEREAS**, the CCU supports the submission by the GWA of a grant application for the Santa Rita Springs Facility Rehabilitation Design to the WaterSMART Planning and Project Design Grant Program; and

**WHEREAS**, if selected for a WaterSMART Planning and Project Design Grant Program, the GWA will work with the United States Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement or grant;

**WHEREAS**, GWA management recommends that an agreement be entered into with the United States Bureau of Reclamation.

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**NOW BE IT THEREFORE RESOLVED;** the Consolidated Commission on Utilities does hereby approve the following:

1. The Board approves the submission of the application to the Bureau of Reclamation, WaterSMART Planning and Project Design Grant Program in the District for fiscal year 2024-25, fiscal year 2025-26, and fiscal year 2026-27.
2. In the event grant funding is provided by the United States Bureau of Reclamation, the Board authorizes the General Manager of the GWA or his designee to accept the grant and sign any contract for administration of the grant funds and delegate the Chief Financial Officer to act as a fiscal agent for any grant funding received.
3. This resolution shall take effect immediately.
4. The Secretary shall certify to the adoption of this resolution and henceforth and thereafter the same shall be in full force and effect.

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

**DULY AND REGULARLY ADOPTED,** this 25<sup>th</sup> day of September 2024.

Certified by:

Attested by:

\_\_\_\_\_  
**JOSEPH T. DUENAS**  
Chairperson

\_\_\_\_\_  
**PEDRO ROY MARTINEZ**  
Secretary

**SECRETARY’S CERTIFICATE**

I, Pedro Roy Martinez, 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

1 meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held  
2 at a place properly noticed and advertised at which meeting a quorum was present and the members  
3 who were present voted as follows:

4  
5 **AYES:** \_\_\_\_\_  
6 **NAYS:** \_\_\_\_\_  
7 **ABSENT:** \_\_\_\_\_  
8 **ABSTAIN:** \_\_\_\_\_

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### **Issues for Decision**

#### **Resolution No. 35- FY2024**

Relative to Approval of Additional Funding for the Design Services of Dungca Beach Sewer Line Relocation Project

#### **What is the project's objective and is it necessary and urgent?**

The project's objective is to abandon in place the existing sewer located along Dungca beach and redirect the sewage flow to and replace/re-route the existing 8-inch sewer line in Trankilo Road. This project was originally awarded in April of 2021 with a scope of work to achieve this objective. However, prior to completion of the original scope of work, it was determined that additional design services were needed to address several factors, including (1) erosion of the embankment along the access road to the Bayside Sewage Pump Station serving the Dungca Beach area; and (2) force main and pump station upgrades required by the recently entered 2024 Partial Consent Decree.

The change order to address these needed items amounts to an additional Six Hundred Eleven Thousand Two Hundred Fifty-Three Dollars (\$611,253.00) for additional design of the following: 1) stabilize the embankment and access road leading to GWA's Bayside Pump Station, 2) replacement of the existing 8-inch aging Force Main, 3) telecommunication line for future SCADA, 4) sewer manhole rehabilitation, 5) installation of flow metering and logging device at the Pump station to monitor/evaluate the capacity of the wet well, new 8" diameter sewer gravity to accommodate the existing and new sewage flows from Lagoon Drive and existing I & I and, 6) a new two-lane asphalt paved road over relocated gravity sewer lines within the existing 40-foot Right of Way to correct long-standing encroachment on private property, 7) modeling analysis of the 8" sewer line and Pump Station to receive from such future development and, 8) upsize of existing 8" to 10" sewer line for future developments.

#### **Where is the location?**

Along Trankilo Road, heading to Jimmy Dees Resort Bar, Agana Bay Condo and Villa Condo located at Tamuning.

#### **How much will it cost?**

The original contract scope for this project with one amendment was Six Hundred Thirty-Three Thousand Six Hundred Twenty-Five Dollars and Seventy-Five Cents (\$633,625.75). The additional funding requested for the work described above is Six Hundred Eleven Thousand Two Hundred Fifty-Three Dollars (\$611,253.00). A 10% contingency of Sixty-One Thousand One Hundred Twenty-Five Dollars (\$61,125.00). A total additional amount of Six Hundred Seventy-Two Thousand Three Hundred Seventy-Eight Dollars (\$672,378.00), bringing the total authorized funding amount to One Million Three Hundred Six Thousand Three Dollars and Seventy-Five Cents (\$1,306,003.75).

#### **When will it be completed?**

The construction project is anticipated to be completed within 36 months of the Notice to Proceed.

#### **What is the funding source?**

USEPA SRF M96902623

#### **The RFP/BID responses (if applicable):**

None





**CONSOLIDATED COMMISSION ON UTILITIES**  
Guam Power Authority | Guam Waterworks Authority  
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

**GWA RESOLUTION NO. 35-FY2024**

**RELATIVE TO APPROVAL OF ADDITIONAL FUNDING FOR THE DESIGN OF  
DUNGCA BEACH SEWER LINE RELOCATION PROJECT,  
GWA PROJECT NO. 22001**

**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 GWA is a Guam Public Corporation established and existing under the laws of Guam; and

**WHEREAS**, GWA advertised for design services via RFP-01-ENG-2020 for an engineering firm to design the Dungca Beach Sewer Line Relocation Phase I; and

**WHEREAS**, GWA subsequently executed a contract on April 26, 2021, for design services with the most qualified firm, GHD, in the amount of Five Hundred Ninety-Four Thousand Seven Hundred Thirty-Five Dollars and Twenty-Eight Cents (\$594,735.28); and

**WHEREAS**, Change Order #1 was executed in the amount of Thirty-Eight Thousand Eight Hundred Ninety Dollars and Forty- Seven Cents (\$38,890.47). The revised contract amount was adjusted to Six Hundred Thirty-Three Thousand Six Hundred Twenty-Five Dollars and Seventy-Five- Cents (\$633,625.75); and

**WHEREAS**, the current change order is needed for additional design of the following: 1) stabilize the embankment and access road leading to GWA’s Bayside Pump Station, 2) replacement of the existing 8-inch aging Force Main, 3) telecommunication line for future SCADA, 4) sewer manhole rehabilitation, 5) installation of flow metering and logging device at the Pump station to monitor/evaluate the capacity of the wet well, and new 8” diameter sewer

1 gravity to accommodate the new/existing sewage flows from Lagoon Drive and existing I & I  
2 and, 6) a new two-lane asphalt paved road over relocated gravity sewer lines within the existing  
3 40-foot Right of Way to correct long-standing encroachment on private property, 7) modeling  
4 analysis of the 8" sewer line and Pump Station to receive from such future development and, 8)  
5 upsize of existing 8" to 10" sewer line for future developments.

6  
7 **WHEREAS**, the additional work noted above has been negotiated with GHD and a fee  
8 proposal (Exhibit A) to perform these additional services is Six Hundred Eleven Thousand Two  
9 Hundred Fifty-Three Dollars (\$611,253.00) with a ten percent contingency of Sixty-One  
10 Thousand One Hundred Twenty-Five Dollars (\$61,125.00) for a total increase in funding of Six  
11 Hundred Seventy-Two Thousand, Three Hundred Seventy-Eight Dollars (\$672,378.00) for the  
12 work noted above as well as any unforeseen design requirements GWA may deem necessary and  
13

14 **WHEREAS**, the approval of the funding increase will bring the total authorized funding  
15 for the design services to One Million Three Hundred Six Thousand, Three Dollars and Seventy-  
16 Five Cents (\$1,306,003.75); and  
17

18 **WHEREAS**, funding for these additional design services will be from USEPA Grant  
19 Funds, as applicable; and  
20

21 **WHEREAS**, the approval of this resolution will enable the Dungca Beach Sewer Line  
22 Relocation to be completed within 36 months.  
23

24 **NOW BE IT THEREFORE RESOLVED**, the Consolidated Commission on Utilities  
25 does hereby approve the following:

- 26 1. The recitals set forth above hereby constitute the findings of the CCU.
- 27 2. The CCU finds that the requested funding authorization increases to be fair,  
28 reasonable, and necessary for the Dungca Beach Sewer Line Relocation design  
29 project.
- 30 3. The CCU hereby authorizes the management of GWA to execute a Change Order to  
31 the contract with GHD Inc., for a total contract amount of One Million Two Hundred

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Forty-Four Thousand, Eight Hundred Seventy-Eight Dollars and Seventy-Five Cents (\$1,244,878.75).

4. The CCU hereby further authorizes a ten percent (10%) contingency of the Change Order amount or Sixty-One Thousand One Hundred Twenty- Five Dollars (\$ 61,125.00), increasing the authorized funding amount to One Million Three Hundred Six Thousand Three Dollars and Seventy-Five Cents (\$1,306,003.75)

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

**DULY AND REGULARLY ADOPTED**, this 25<sup>th</sup> day of September 2024.

Certified by:

Attested by:

\_\_\_\_\_

\_\_\_\_\_

**JOSEPH T. DUENAS**

**PEDRO ROY MARTINEZ**

Chairperson

Secretary

//

**SECRETARY'S CERTIFICATE**

I, Pedro Roy Martinez, 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: \_\_\_\_\_

NAYS: \_\_\_\_\_

ABSENT: \_\_\_\_\_

ABSTAIN: \_\_\_\_\_

## EXHIBIT A



865 S Marine Corps Dr Suite 202  
Tamuning, Guam 96913  
USA  
www.ghd.com

Your ref: 003  
Our ref: 11228934

9 September 2024

**Guam Waterworks Authority**  
**Rylma Carino and George Watson**  
**Gloria B. Nelson Service Building**  
**688 Rt. 15**  
**Mangilao, Guam**

**Subject: Dungca Beach Sanitary Sewer Line Relocation- Amendment B**

Dear Mrs. Rylma Carino and Mr. George Watson,

GHD is pleased to submit this change proposal to amend our Scope of Work and Fee for the subject project.

The Scope of Work described under this amendment is to be completed under the Phase 1 design. The work is generally comprised of the following five (5) tasks:

- Task 3.1 Access Road Erosion Control
- Task 3.2 Replace Force Main From Pump Station to Route 30
- Task 3.3 Additional Telecommunication Conduits for Future SCADA from the Pump Station to Route 30
- Task 3.4 Sewer Manhole Partial Rehabilitation
- Task 3.5 Bayside Pump Station Flow Metering
- Task 3.6 New Trankilo Road Design
- Task 3.7. Analysis of Sewerline and PS for Future Developments
- Task 3.8. Upsize Sewerline for Future Developments

Design Task 3.1 will be prepared and submitted as an independent package with a 60% and 100% Deliverable schedule. The goal is to bid Task 3.1 prior to, or with the original Phase 1 package. Tasks 3.2, 3.3, and 3.4 will be directly incorporated into the original Phase 1 package and prepared towards the 100% Final Submittal. Task 3.5. will be prepared as an equipment and instructions package that is not part of the bid documents. If activated, Tasks 3.6 and 3.8 will be prepared and incorporated into the original Phase 1 package. Task 3.7 is an analysis that will be incorporated into the Basis of Design report.

**Background:**

An existing 20 foot wide utility easement connects Route 30 to the entrance of the Bayside Pump Station. A gravel access road within the easement is utilized daily by GWA operations staff to inspect the pump station, record flow data, and to perform any required maintenance work at the station. The gravel access road width varies from approximately 9.5 feet to 34 feet and is approximately 380 feet long. This access road is bordered by an existing stream to the south and a private, gated property to the north. GWA observed erosion of the edge of the gravel access road along the southern embankment that abuts the existing stream. GWA's concern over the condition of the access road has been increasing over time as erosion worsens, and especially after the notable effects of Typhoon Mawar in May 2023. GWA would like to stabilize the embankment and stream slope to help maintain adequate access to GWA's critical sewer infrastructure.

Since the original Dungca Beach Sanitary Sewer Line Relocation project will trench along the Bayside Pump Station access road to install the new 8" gravity main, GWA would like to take the opportunity to also replace the existing 6-inch force main, which is believed to be asbestos cement, to the limits of the Route 30 pavement edge, which is approximately 590 linear feet.

GWA, would also like to take the opportunity to install two empty 4-inch conduits in the access road while gravity main and force main work is being completed.

As GWA Operation's team had been investigating the upstream manholes leading to the Bayside Pump station in mid-May 2024, they observed heavy ground water intrusion in the manhole located directly west of the Bayside Pump Station. Their observations reveal water intrusion coming from a gap or crack between the outlet pipe and wall penetration of the manhole. GWA requests to include a detail and specifications to partially rehabilitate this manhole as part of Phase 1 to reduce groundwater intrusion into the sewer system. GWA expects to include the full rehabilitation of this manhole within the Phase 2 portion of this project.

In addition to concerns over maintaining access to the pump station and area piping, GWA would like to better understand the potential available capacity the pump station may have to accommodate additional connections. One customer that is interested in connecting to the pump station is the Agana Bay Condo which currently owns and operates a private lift station that pumps their sewage from the condominium to a terminal manhole on Route 30. GWA would like to understand if the Bayside Pump Station could handle the additional flows if the Agana Bay Condo sewage were to connect directly to the new GWA gravity line on Tan Marian Coatla Loop and eliminate the need of the condominium's lift station. To determine this, it is necessary to estimate the pump station capacity and the existing maximum flow into the pump station to determine if there is available excess capacity. This will require adequate flow metering and as was observed during a site visit in February 2024, the Bayside Pump Station is not equipped with a flow meter that automatically logs data. Installation of a flow meter and logging device that records data is recommended so that flow data can be gathered during the wet season and it can be determined if Agana Bay Condo's additional flow can be handled by Bayside Pump Station. GWA would like GHD to procure and configure an appropriate flow meter which will be installed and monitored by GWA staff.

As an additional measure, GWA would like to install in-line manhole flow meters in one or two of the upstream manholes. GHD will need to investigate the candidate manholes prior to recommending suitable flow meters. GWA requests GHD to procure suitable equipment. Installation and monitoring will be performed by GWA staff.

**Scope of Work:**

**Task 1:** Project Management and Administration. Includes coordination and meetings with Client, Design team, and relevant subconsultants

**Task 1 Deliverables:**

- Overall project schedule updates
- Monthly progress reports delivered along with monthly invoices
- Meeting minutes

**Task 1 Assumptions**

- Total of 13 Client meetings (4 months @ bi-weekly meetings, 3 months @ monthly, 2 review meetings,)
- All deliverables will be in electronic format. No hard copies will be provided.

**Task 2: Data Gathering and Site Investigations**

**2.1 Site Topographic Survey**

Guam Surveyors will update their Topographic survey map with the additional information along the existing access road, stream banks, stream mudline, retaining walls, and three upstream sewer manholes. See Figure A.

**2.2 Environmental Surveys**

EA will perform field surveys for protected species and habitat, including wetlands within and around the proposed project footprint. Wetland survey will be conducted in accordance with the procedures set forth by the U.S.ACE.

### **2.3 Geotechnical Investigation**

- a. GeoEngineering will perform additional soil sampling and borings along the eroded access road. GeoEngineering will perform 2 borings at 75 feet deep. Effort includes processing of boring permit, DPW permit, mobilization, laboratory testing and reporting.
- b. GeoEngineering will perform the utility locates (potholing) at the locations of their proposed (2) borings.

### **2.4 Archaeological Research and Site Visit**

- a. Based on meeting with the Guam SHPO on 6/3/24, SEARCH is to update the existing AMDP to discuss the new scope of work, new discoveries.
- b. SEARCH will perform (2) controlled excavation units on site. Effort of performing the excavation units, associated analysis, and reporting is included in this amendment.

### **2.5 Site field visits**

- a. Site field visit to observe and assess the current condition of the access road, embankment, existing structures along proposed length of trenching.
- b. Site visit to observe and note the pump station piping configuration to help determine a suitable flow metering and recording device.
- c. Site visit to observe and document the existing condition of the three sewer manholes along the shore, upstream of the Bayside Pump Station. Refer to Figure B.

### **2.6 Review as-built documents**

- a. Review existing 8" sewer force main and terminal manhole on Route 30
- b. Review drawings of existing utilities extending to Route 30

## **Task 2 Assumptions**

- Team will utilize the existing geotechnical investigation reports completed under this project and the Bayside Pump Station project, as well as any previous boring information that GWA has in this area. Depending on the road erosion control measures selected, it may be necessary to obtain additional geotechnical information which will be addressed under a scope amendment as required.
- All deliverables will be in electronic format. No hard copies will be provided.

## **Task 2 Deliverables**

- Topographic Survey Map
- Final Biological Report
- Final Wetland Delineation Report
- Addendum or Memo to the Geotechnical Report
- AMDP Addendum

## **Task 3: Design**

The design phase encompasses the following five components:

### **Task 3.1. Access Road Erosion Control**

This task entails the selection and design of temporary and permanent erosion control system for approximately 380 linear feet along the southern embankment of the existing gravel access road. Work includes consideration and evaluation of how the proposed new system will interface with the existing sheet pile and concrete retaining walls.

The following candidate erosion control systems will be considered:

- Riprap
- Erosion control mat
- Concrete retaining wall

- Sheet pile wall
- Gabion wall

Based on the field information collected and review of site conditions, GHD will prepare a brief analysis of candidate erosion control systems and summarize results in a memo. This will be a high-level screening evaluation based on generalized characteristics and relative cost ranking and permitting requirements. The candidate alternatives considered will be discussed with GWA staff who will select the preferred approach. The selected system will be prepared at a 60% and 100% design submittal. Depending on the site conditions and the alternative selected by GWA, additional geotechnical and design work may be required, which will be addressed under a separate scope amendment if needed.

The design work for the erosion control project will be prepared as a separate package from the Phase 1 work to allow for the permitting process to be completed separately. If the timing of the permitting process allows, the intent is for the erosion control portion to be incorporated into the Phase 1 bid set as an additive bid item. Another option is for the erosion control portion to be bid earlier as a separate project.

**Task 3.2. Replace Force Main From Pump Station to Route 30**

The existing 8 inch force main, which is understood to be asbestos cement pipe, has served its useful life and GWA would like to replace it while completing the other work along the access road. This design work will be incorporated into the Phase 1 design.

**Task 3.3. Additional Telecommunication Conduits From the Pump Station to Route 30**

While the other work is being completed along the access road, GWA would like to install two 4 inch, empty telecommunication conduits from the pump station to a new handhole along Trakilo street for future SCADA. These will be designed with pull boxes and pull strings so they can be utilized in the future as needed. This design work will be incorporated into the Phase 1 design.

**Task 3.4. Sewer Manhole Partial Rehabilitation**

Based on GWA Operation's team investigations, GWA would like to take measures to reduce the infiltration into the upstream manhole leading to the Bayside Pump station. This manhole receives continuous wastewater flow and leakage was observed between the outlet pipe and wall penetration of the manhole. GWA would like GHD to include in the Phase 1 design a detail and specifications as appropriate to partially rehabilitate this manhole reduce groundwater intrusion at this location. This is only intended as a partial mitigation as GWA expects to include the full rehabilitation of this manhole within the Phase 2 portion of the project.

**Task 3.5. Bayside Flow Metering**

- a. Bayside Metering, data logging and analysis

The Bayside Pump Station does not have regular monitoring and logging of flow, and GWA would like to install a flow meter and logging device that records data so that flow data can be gathered during the wet season and GWA can determine if excess capacity is available for additional hookups. GHD, working with ArcSine Engineering, will procure and configure an appropriate flow metering device to be installed on the discharge piping within the pump station and will prepare instructions for the installation. GHD will provide the equipment installation effort in the event GWA staff will not be available to perform this work. GWA will maintain the meter and gather data for subsequent analysis. GHD will organize and analyze up to 4 months of data received from the flow meters to determine if the Agana Bay Condominiums are able to connect to the GWA line and Bayside Pump Station.

GWA would also like to temporarily measure flow within appropriate manholes leading into the Bayside Pump Station using stand alone portable equipment. GHD will work with GWA to identify candidate manholes and will research potential flow monitoring equipment to be installed by GWA in target manholes. GHD will prepare a brief summary memo to confirm with GWA the appropriate manholes and the proposed monitoring equipment. GHD will procure one set of monitoring equipment for GWA's use and will provide instructions as appropriate. GWA will install and manage the temporary monitoring equipment to gather data that can be compared to the data from the pump station flow meter. The procurement budget for the manhole metering equipment is covered under Task 5.

- b. Installation of Pump Station Metering Equipment (Time and Materials)

Based on GWA's request, GHD is to provide labor to install the flow metering and logging equipment to be at the Bayside Pump Station in the event that GWA Operations staff is unavailable to perform the work. The specific equipment has not been determined at this time, therefore, this task is proposed to be expensed on a Time and Materials basis, as directed by GWA. The initial budget under this task is **\$8,050**. Additional budget may be requested in a subsequent amendment, as required based on the selected equipment and installation procedures.

### **Task 3.6. New Trankilo Road Design**

Approximately 450 feet of existing paved road on Trankilo Road, near the Bayside Pump Station access road, is on private land (Lot 2122-#1-REM-1-2, Lot 2122-#1-REM-1-1-R2, and Lot 2122-#1-REM-2-1). GWA has requested for GHD to design a new two-lane asphalt paved road within the existing 40 foot Right of Way. The road design is to meet the Guam DPW Transportation standards and Stormwater Management Manual guidelines. The design will include adjustment or relocation of existing water valve, fire hydrant, and telecommunication boxes as needed for the design of the new road. The design will include signing and striping. The existing asphalt pavement within the private lands is to be demolished and restored to an impervious surface. Existing road signage will be removed as necessary. Relocation effort for power poles, other utilities, or structures outside of the ROW is not included. GWA will take the lead in coordinating this design effort and approvals with Guam DPW.

GHD will prepare 60% design drawing sheets related only to the road design for coordination with GWA and Guam DPW. Upon receipt of the 60% comments, the design will be further advanced to a 100% Final level to coincide, and to be included, with the overall 100% Phase 1 design package submittal. The intent is to bid this portion of work as a bid additive under one construction contract with the sewerline project.

### **Task 3.7. Analysis of Sewerline and PS for Future Developments**

GWA noted there are at least five (5) undeveloped lots with potential for development (e.g. new homes, apartments, condominiums, or business) within the Trankilo Road sewer drainage area. GWA would like to understand the available additional capacity of the new 8" sewerline to receive flow from such future developments. GHD will evaluate the hydraulics of the 8" sewerline and will advise approximately how many additional units or single residences can be added to the line, as well as the infiltration/inflow (I&I) allowance. Similarly, GHD will evaluate the Bayside Pump Station's capacity to accept an assumed amount of additional flow from future developments. Note that analysis of the Pump Station's capacity is dependent on Task 3.5 of this change order to be in place.

### **Task 3.8. Upsize Sewerline for Future Developments**

GWA requested for a fee proposal to upsize the new Trankilo Road sewerline from the current design of 8" to either a 10" or 12", in the event that GWA determines the sewage flow that we are to accommodate for future developments exceed the design capacity of an 8" gravity pipe. This task will include updating calculations, review for conflicts, updating pipeline plans, profiles, details and sections as necessary.

### **Task 3 Assumptions**

- Assumes the erosion control system design can be configured to meet a NEPA Categorical Exclusion
- If GWA wishes to proceed with a sheet pile wall system or if the existing geotechnical information is otherwise inadequate for GWA's preferred erosion control system, additional geotechnical investigation may be required, and will be included under separate amendment.
- Does not include the design of a new pavement structure
- Does not include rehabilitation of any of the existing concrete retaining walls or sheet pile walls
- GWA to provide standard telecommunication conduit, duct bank and handhole details.
- One round of consolidated comments will be addressed for the 60% and 100% deliverables
- All deliverables will be in electronic format. No hard copies will be provided.
- The cost of flow monitoring equipment and installation is covered by Task 5.
- GWA will coordinate with Guam DPW on the design and approval of the new Trankilo Road



**Task 3 Deliverables**

- Draft and Final Alternatives Analysis Memo for Access Road Erosion Control System
- 60% Design Submittal (Drawings, Specs, BOD, Estimate) for Task 3.1 only
- 60% Preliminary Drawings for Task 3.6 only
- 100% Design Submittal (Drawings, Specs, BOD, Estimate) for Task 3.1 only
- 100% Final Design Submittal (Drawings, Specs, BOD, Estimate) for original scope and Tasks 3.2 to 3.4, 3.6, and 3.8 if directed.
- Brief Summary Memorandum confirming appropriate manholes used for flow monitoring
- Draft and Final equipment list and installation instructions for Task 3.5 only

**Task 4: Permitting**

**4.1 USACE Section 404 Application and GEPA Section 401 Application**

Prepare a Clean Water Act (CWA), Section 404 application (ENG Form 4345) required by the United States Environmental Protection Agency (USEPA) for submittal to the United States Army Corps of Engineers (USACE). EA will also prepare a CWA, Section 401 Water Quality Certification application required by the USEPA for submittal to the Guam Environmental Protection Agency (GEPA). The applications will describe the construction methodologies and best management practices to protect water quality.

**4.2 Biological Assessment**

Based on a list of species requested from the USFWS and NMFS, prepare a biological evaluation or assessment for those species that may be affected by the proposed project. Up to five species will be analyzed in detail. Potential marine species to be considered (depending on feedback from NOAA) include the green and hawksbill sea turtles, the coral *Acropora globiceps*, and the scalloped hammerhead shark. Potential terrestrial species include protected tree snails, the Mariana fruit bat, the Mariana common moorhen, and migratory birds. If the project does not merit a no effect determination for all potential species, a project-specific biological assessment may be required to support ESA, Section 7 consultation.

**4.3 BSP CZMA Consistency Determination**

Prepare a Coastal Zone Management Act (CZMA) Consistency Determination required by the National Oceanic and Atmospheric Administration (NOAA) and 15 CFR Part 930. Based on the review of existing data, will evaluate the consistency of components of the preferred alternative with existing programs, use requirements within the Coastal Zone, and compliance and consistency with the policies and procedures of the programs. Evaluate the proposed activities and prepare the Draft Coastal Zone Consistency Determination Package in accordance with the Procedures Guide for Achieving Federal Consistency with the Guam Coastal Management Program (GCMP) for client review and approval. Once the client comments are received, will revise the document and produce the Final Coastal Zone Consistency Determination Package for submission to BSP.

**4.4 NEPA Categorical Exclusion**

If an update to the NEPA documentation is required, we will work with the client to develop the project description and purpose and need statement. This will be presented to agencies during the NEPA pre-scoping meetings. We will gather relevant reports, documentation, and supporting information that could be used to describe the conditions within and near the project locations. Next, we will inventory the project areas. Resources involved may include cultural resources, floodplains, sensitive noise receptors, wetlands, threatened or endangered species or their habitat, water quality, social and economic characteristics of the population, and other environmental resources. We will support GWA in the preparation of the EPA Categorical Exclusion and Extraordinary Circumstances Review form (EPA checklist) and supporting documentation.

Three drafts of the categorical exclusion will be prepared: an internal review draft, an agency review draft, and a final. If, during preparation of the categorical exclusion, significant effects are determined likely to occur, the client will be informed and additional scope requested to prepare an environmental assessment.

**Task 4 Assumptions:**

- Initial determinations will be included in the draft document, but the lead agency will be responsible for the final determinations.
- Will prepare one draft, and one final document will be prepared.
- One round of consolidated comments will be addressed for each of the draft memos.
- GWA will conduct all public outreach
- GWA will coordinate with the Government and submit plans and applications
- Approval of the CatEX is contingent on successful consultation with applicable agencies such as SHPO, USFWS, and NMFS, which is beyond EA's control.
- No additional fieldwork or marine surveys will be conducted.
- All deliverables will be in electronic format. No hard copies will be provided.

**Task5: Equipment Procurement (Time and Materials)**

Based on GWA's request, GHD is to procure the flow metering and logging equipment to be installed at the Bayside Pump Station, as well as suitable meters to be used in the manholes. The specific equipment has not been determined at this time, therefore, this task is proposed to be expensed on a Time and Materials basis, as directed by GWA. The initial budget under this task is **\$7,480**. Additional budget may be requested in a subsequent amendment, as required based on equipment selection.

**Task 6: Time Extension**

Requesting contract time extension through **April 04, 2025** for design services.

**Proposed Schedule: See attached Design Schedule A.**

**Fee Schedule for Additional Design Services:**

TASKS	TOTALS
<b>Original Contract Amount</b>	\$594,735.28
<b>Contract Amount Prior to Change Proposal</b>	<b>\$633,625.75</b>
<b>Amendment B</b>	\$ 580,690.00
<b>Guam GRT (at 5.263%)</b>	\$30,563.00
<b>TOTAL CHANGE PROPOSAL COST</b>	<b>\$611,253.00</b>
<b>AMENDED CONTRACT AMOUNT</b>	<b>\$1,244,878.75</b>

Work that exceeds the scope of this proposal will be brought to your attention for review, approval and fee adjustment. The additional effort related to completing Phase 2 of the project will be provided in a separate amendment for GWA's review. Work performed will be billed monthly based on the estimated percent complete. We stand ready to provide the professional services necessary to assist GWA in this endeavor.

Regards,

---

**Jecelia Llegado, PE**  
 Project Manager  
 671-472-6792  
 Jecelia.Llegado@ghd.com

Attachments:

1. Dungca Beach Project Detailed Fee Schedule
2. Dungca Beach Project Fee Summary

Copy to: Matthew Kennedy  
Steve McHaney  
file

GWA Work Session - September 17, 2024 - ISSUES FOR DECISION



Dungca Beach Project CO-02  
11228934

Description	GHD	J Uno (Cost estimating)	EA (Environmental)	SEARCH (Arch)	ArcSine (Electrical)	Guam Surveyor (Survey)	GeoEngineering (Geotech+Utility Locations)	Subs Markup	Total Subcontractors	Total Disbursements	Estimated Project Total
<b>Task1</b>	<b>\$35,620</b>	<b>\$0</b>	<b>\$9,322</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,398</b>	<b>\$10,720</b>	<b>\$0</b>	<b>\$46,340</b>
Subtask 1.1 Project Schedule	\$2,370	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,370
Subtask 1.2 Progress Reports	\$2,370	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,370
Subtask 1.3 Meetings and Coordinations	\$30,880	\$0	\$9,322	\$0	\$0	\$0	\$0	\$1,398	\$10,720	\$0	\$41,600
<b>Task2</b>	<b>\$21,513</b>	<b>\$0</b>	<b>\$34,176</b>	<b>\$66,792</b>	<b>\$0</b>	<b>\$11,000</b>	<b>\$33,870</b>	<b>\$21,876</b>	<b>\$167,714</b>	<b>\$0</b>	<b>\$189,226</b>
Subtask 2.1 Site Topographic Survey	\$2,293	\$0	\$0	\$0	\$0	\$11,000	\$0	\$1,650	\$12,650	\$0	\$14,943
Subtask 2.2 Environmental Surveys	\$2,683	\$0	\$34,176	\$0	\$0	\$0	\$0	\$5,126	\$39,302	\$0	\$41,985
Subtask 2.3a Geotechnical Field Investigation and Reporting	\$3,828	\$0	\$0	\$0	\$0	\$0	\$22,100	\$3,315	\$25,415	\$0	\$29,243
Subtask 2.3b Utility Investigation for Borings	\$0	\$0	\$0	\$0	\$0	\$0	\$11,770	\$1,766	\$13,536	\$0	\$13,536
Subtask 2.4a Archaeological AMDP Update	\$3,285	\$0	\$0	\$12,010	\$0	\$0	\$0	\$1,802	\$13,812	\$0	\$17,097
Subtask 2.4b Archaeological Excavation Units, Analysis and Reporting	\$0	\$0	\$0	\$54,782	\$0	\$0	\$0	\$8,217	\$62,999	\$0	\$62,999
Subtask 2.5 General Site Field Visit	\$5,885	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,885
Subtask 2.6 Review As-built documents	\$3,540	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,540
<b>Task3</b>	<b>\$198,854</b>	<b>\$21,434</b>	<b>\$5,329</b>	<b>\$0</b>	<b>\$19,977</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,011</b>	<b>\$53,751</b>	<b>\$0</b>	<b>\$252,605</b>
Subtask 3.1 Access road erosion control	\$118,512	\$8,701	\$5,329	\$0	\$0	\$0	\$0	\$2,104	\$16,134	\$0	\$134,646
Subtask 3.2 Replacement of Force Main	\$8,480	\$3,009	\$0	\$0	\$0	\$0	\$0	\$451	\$3,460	\$0	\$11,940
Subtask 3.3 Telecommunication conduit and duct bank	\$3,185	\$1,783	\$0	\$0	\$0	\$0	\$0	\$267	\$2,050	\$0	\$5,235
Subtask 3.4 Sewer manhole partial rehabilitation	\$4,555	\$1,200	\$0	\$0	\$0	\$0	\$0	\$180	\$1,380	\$0	\$5,935
Subtask 3.5a Bayside Pump Station Flow Metering (LS)	\$13,130	\$0	\$0	\$0	\$12,977	\$0	\$0	\$1,947	\$14,924	\$0	\$28,054
Subtask 3.5b Installation (T&M)	\$790	\$0	\$0	\$0	\$7,000	\$0	\$0	\$1,050	\$8,050	\$0	\$8,840
Subtask 3.6 New Trankilo Road Design	\$28,108	\$4,642	\$0	\$0	\$0	\$0	\$0	\$696	\$5,338	\$0	\$33,446
Subtask 3.7 Analysis of Sewerline and PS for Future Developments	\$9,740	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,740
Subtask 3.8 Upsize Sewerline for Future Developments	\$12,355	\$2,100	\$0	\$0	\$0	\$0	\$0	\$315	\$2,415	\$0	\$14,770
<b>Task4</b>	<b>\$12,470</b>	<b>\$0</b>	<b>\$63,103</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,465</b>	<b>\$72,568</b>	<b>\$0</b>	<b>\$85,038</b>
Subtask 4.1 USACE Section 404 and GEPA Section 401 Application	\$3,118	\$0	\$6,481	\$0	\$0	\$0	\$0	\$972	\$7,453	\$0	\$10,571
Subtask 4.2 Biological Assessment	\$3,118	\$0	\$23,827	\$0	\$0	\$0	\$0	\$3,574	\$27,401	\$0	\$30,519
Subtask 4.3 BSP CAMA Consistency Determination	\$3,118	\$0	\$13,800	\$0	\$0	\$0	\$0	\$2,070	\$15,870	\$0	\$18,988
Subtask 4.4 NEPA Categorical Exclusion	\$3,118	\$0	\$18,995	\$0	\$0	\$0	\$0	\$2,849	\$21,844	\$0	\$24,962
<b>Task5</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,480</b>	<b>\$7,480</b>
Subtask 5.1 Flow meter and data logger equipment for Manholes (T&M)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,480	\$7,480
<b>Total Labor Hours</b>											
<b>Estimated Project Total</b>	<b>\$268,457</b>	<b>\$21,434</b>	<b>\$111,930</b>	<b>\$66,792</b>	<b>\$19,977</b>	<b>\$11,000</b>	<b>\$33,870</b>	<b>\$39,750</b>	<b>\$304,753</b>	<b>\$7,480</b>	<b>\$580,690</b>
<b>GRT @ 5.2632%</b>											<b>\$30,563</b>
<b>Project GRAND Total</b>											<b>\$611,253</b>



**Dungca Beach Project CO-02  
11228934**

Description		Sub Total
<b>CCR-3.A: Access Road Erosion Control</b>		<b>\$469,071</b>
Subtask 3.1 Access Road Erosion Control	\$134,645.78	
Portion of Subtask 1.1 Project schedule		
Portion of Subtask 1.2 Project Reports		
Portion of Subtask 1.3 Meetings and Coordination	\$36,707.00	
Subtask 2.1 Site Topographic Survey	\$14,942.50	
Subtask 2.2 Environmental Survey	\$41,984.90	
Subtask 2.3a Geo Technical Field Investigation & Reporting	\$29,242.50	
Subtask 2.3b Sub Contractor to Locate the Utilities	\$13,535.50	
Subtask 2.4a Archaeological Field Work	\$17,096.50	
Subtask 2.4b SEARCH to perform excavation of pits	\$62,999.30	
Subtask 2.5 General site visit	\$5,885.00	
Subtask 2.6 Review As-Built Documents	\$3,540.00	
Subtask 4.1 USACE Section 404 and GEPA Section 401 Application	\$10,570.65	
Subtask 4.2 Biological Assessment	\$30,518.55	
Subtask 4.3 BSP CAMA Consistency Determination	\$18,987.50	
Subtask 4.4 NEPA Categorical Exclusion	\$24,961.75	
CCR-3.A GRT @ 5.2632%	\$23,453.74	
<b>CCR-3.B: Replacement of Force Main</b>		<b>\$12,568</b>
Subtask 3.2 Replacement of Force Main	\$11,939.86	
CCR-3.B GRT @ 5.2632%	\$628.42	
<b>CCR-3.C: Telecommunication Conduit and Duct Bank</b>		<b>\$5,511</b>
Subtask 3.3 Telecommunication & Duct bank	\$5,235.15	
CCR-3.C GRT @ 5.2632%	\$275.54	
<b>CCR-3.D: Sewer Mahole Partial Rehabilitation</b>		<b>\$6,247</b>
Subtask 3.4 Sewer Manhole Rehabilitation	\$5,934.63	
CCR-3.D GRT @ 5.2632%	\$312.36	
<b>CCR-3.E: Bayside Flow Metering</b>		<b>\$38,835</b>
Subtask 3.5a Bayside SPS Flow Monitoring	\$28,053.55	
Subtask 3.5b Installation of Flow Monitoring (T & M)	\$8,840.00	
CCR-3.E GRT @ 5.2632%	\$1,941.79	
<b>CCR-3.F: New Trankilo Road Design</b>		<b>\$45,346</b>
Subtask 3.6 New Trankilo Road Design	\$33,445.62	
Portion of Subtask 1.1		
Portion of Subtask 1.2		
Portion of Subtask 1.3	\$9,633.30	
CCR-3.F GRT @ 5.2632%	\$2,267.33	
<b>CCR-3.G: Analysis of Sewerline and PS for Future Developments</b>		<b>\$10,253</b>
Subtask 3.7 Analysis of Sewer Line & PS for Future Development	\$9,740.00	
CCR-3.G GRT @ 5.2632%	\$512.64	
<b>CCR-3.H: Upsize Sewerline for Future Developments</b>		<b>\$15,548</b>
Subtask 3.8	\$14,770.48	
CCR-3.H GRT @ 5.2632%	\$777.41	
<b>CCR-3.I: Equipment Procurement</b>		<b>\$7,873</b>
Subtask 5.1 Flow Meter and Data Logger( Manhole) (T & M)	\$7,479.60	
CCR-3.I GRT @ 5.2632%	\$393.67	
<b>GRAND TOTAL</b>		<b>\$611,253</b>



## Issues for Decision

### Resolution No. 36- FY2024

Relative to Approval of Additional Funding for the Fujita Sewage Pump Station Rehabilitation and Redundant Force Main Design Project, GWA Project No. 22003

#### What is the project's objective and is it necessary and urgent?

The Fujita Sewage Pump Station (SPS) and force main conveys most of Tumon Bay's sewage flows out of the Tumon area and towards the Northern Wastewater Treatment Plant. The force main is approximately 7,100 feet long. Due to a lack of redundancy, the existing force main cannot be isolated or removed from service to perform repairs, maintenance, or condition assessments. The force main's condition is not fully known and failure of the force main could lead to service disruptions, which may impact the health of the community, environment, and negatively impact Guam's main tourist area.

The design project's original goal was to design a redundant force main, which would allow a single force main to be out of service for repairs or maintenance without interrupting service. An initial assessment of accessible sections of the existing force main at air relief valves (ARV) identified a maximum force main wall thickness loss of eleven percent (11%) at one ARV and thirty-eight (38%) at another ARV. Additional force main assessment will be scheduled during the construction of the new force main, to take advantage of the trenching activities for the new force main.

The Fujita SPS is essential to GWA's wastewater operations and required to be rehabilitated within seven years of the Partial Consent Decree (PCD) effective date. As such, the assessment and rehabilitation design of the Fujita SPS in accordance with the recently approved PCD was added into the project scope as authorized by the CCU through Res. No. 04-FY2024 in November 2023. During the conduct of that work, the engineering team determined that in order to properly maintain the Fujita SPS, a way to shut down the station for wet well and general maintenance was necessary. The team concluded that the now-defunct Tumon SPS located on the existing Fujita SPS site could potentially be rehabilitated and used to accomplish this, while also adding marginal additional capacity to the Tumon basin without the need to purchase additional property or expand the site footprint.

The designer's proposal for the Tumon SPS assessment and rehabilitation design was negotiated to \$435,432.80. A 10% contingency is requested for future change orders, which may include the designer ordering long-lead items prior to a construction contract being awarded. This would increase total previously authorized funding of \$1,841,839.18 by an additional \$398,896.12 to a new authorized funding amount of \$2,240,735.30.

#### Where is the location?

The Fujita Sewage Pump Station is located at the Northeast corner of Pale San Vitores Road and Fujita Road, in Tumon. The Tumon Sewage Pump Station is located on the Fujita SPS site. The force main originates at the pump station, goes up Happy Landing Road to Route 1, across Route 1 to Hamburger Road, and then terminates near Route 16 SPS (see attached map).

**Issues for Decision - Resolution No. 36-FY2024**

Additional Funding for Fujita Sewage Pump Station Rehabilitation and Redundant Force Main Design Project  
Page 2

**How much will it cost?**

Original Contract Cost:	\$930,834.57
Additional Cost for Fujita SPS assessment and design, and additional FM condition assessment services	\$670,764.72
Additional Cost for Tumon SPS assessment and design	<u>\$435,432.80</u>
<b>Contract + change order:</b>	<b>\$2,037,032.09</b>
Ten percent contingency	<u>\$203,703.21</u>
<b>Total authorized amount</b>	<b>\$2,240,735.30</b>

**When will it be completed?**

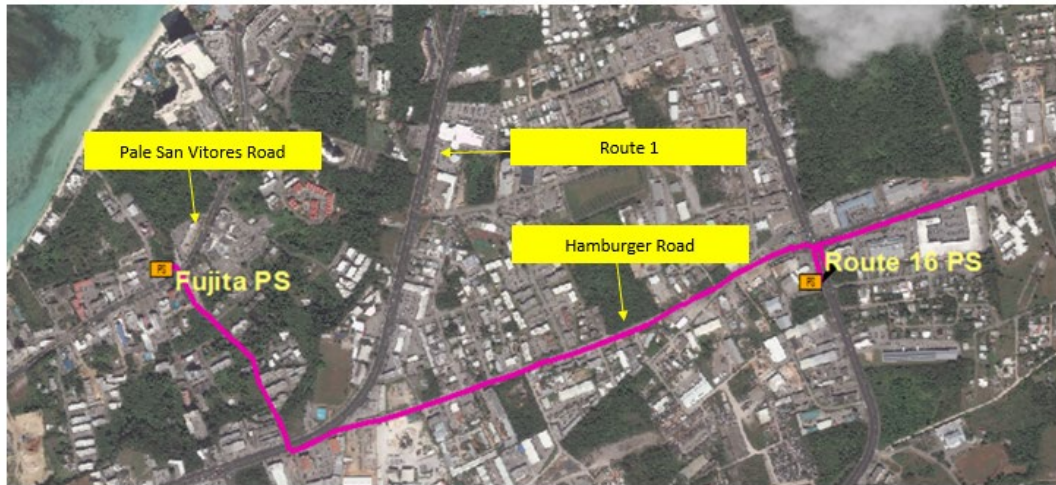
The Tumon SPS rehabilitation design as part of the Fujita SPS rehabilitation design is anticipated to be completed in August 2025. Construction procurement will begin upon completion of the design.

**What is the funding source?**

United States Environmental Protection Agency grants and potentially Bond funds.

**The RFP/BID responses (if applicable):**

NA



Fujita Sewer Pump Station and Force Main Locations



**CONSOLIDATED COMMISSION ON UTILITIES**  
Guam Power Authority | Guam Waterworks Authority  
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

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**GWA RESOLUTION NO. 36-FY2024**  
**RELATIVE TO APPROVAL OF ADDITIONAL FUNDING FOR THE FUJITA SEWAGE PUMP STATION REHABILITATION AND REDUNDANT FORCE MAIN DESIGN PROJECT, GWA PROJECT NO. 22003**

**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 is a Guam Public Corporation established and existing under the laws of Guam; and

**WHEREAS**, GWA's public wastewater collection/transmission system, consisting of gravity mains, manholes, laterals, force mains (FM), sewer pump stations (SPS), and other related appurtenances, are in need of repair, rehabilitation, or replacement; and

**WHEREAS**, GWA has received United States Environmental Protection Agency (USEPA) grant funding for the Fujita FM design project; and

**WHEREAS**, the Fujita FM serves most of the Tumon Bay area and is approximately 7,100 feet long; and

**WHEREAS**, the FM's condition is not known and failure of the FM could lead to service disruptions which may impact the health of the community, environment, and negatively impact Guam's main tourist area; and

**WHEREAS**, to address this concern GWA advertised a Request For Proposals on August 25, 2020, and entered into a contract for design services for a redundant FM with AECOM Technical Services, Inc., on October 5, 2022, in the amount of Nine Hundred Thirty Thousand Eight Hundred Thirty-Four Dollars and Fifty-Seven Cents (\$930,834.57), as shown in Exhibit A; and



1           **WHEREAS**, subsequent to the contract, GWA and the United States Environmental  
2 Protection Agency (USEPA) recently entered into a Partial Consent Decree (CD) which requires  
3 GWA to achieve certain milestones within our wastewater system to eliminate unauthorized  
4 discharges, such as Sanitary Sewer Overflows (SSOs); and

5  
6           **WHEREAS**, the Consent Decree with USEPA requires a Force Main Condition Assessment,  
7 Force Main Action Plan and Implementation of the Force Main Action Plan for the FM identified in  
8 Partial CD Table A (see Exhibit B) to be completed within nine (9) years of the Effective Date; and  
9 in which Fujita FM is listed in Table A; and

10  
11           **WHEREAS**, the Consent Decree with USEPA requires the rehabilitation of the SPS listed in  
12 Partial CD Table B, Tier 1 (see Exhibit C) within seven (7) years of the Effective Date; and in  
13 which, the Fujita SPS is listed as a Tier 1 station; and

14  
15           **WHEREAS**, to assist with the rehabilitation of the Fujita SPS as part of the Partial CD,  
16 GWA negotiated Change Order No. 1 (CO1) for the SPS rehabilitation assessment and design for  
17 Six Hundred Seventy Thousand Seven Hundred Sixty-Four Dollars and Seventy-Two Cents  
18 (\$670,764.72), as shown in Exhibit D; and

19  
20           **WHEREAS**, the additional funding for CO1, as well as a 15% contingency of Two Hundred  
21 Forty Thousand Two Hundred Thirty-Nine Dollars and Eighty-Nine Cents (\$240,239.89) was  
22 requested and approved as part of the GWA Resolution No. 04-FY2024 (Exhibit E), raising the total  
23 approved authorized contract amount to One Million Eight Hundred Forty-One Thousand Eight  
24 Hundred Thirty-Nine Dollars and Eighteen Cents (\$1,841,839.18); and

25  
26           **WHEREAS**, during the assessment and design of the Fujita SPS, the engineering team  
27 determined that in order to properly maintain the wet well, the station would need to be bypassed  
28 and shut down as there is no way to easily access and clean the wet well otherwise; and

29  
30           **WHEREAS**, the Fujita SPS property is also the site of the now-defunct Tumon SPS, which  
31 has been shut down and out of operation since the building of the Fujita SPS; and

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**WHEREAS**, the Tumon SPS presents a potential opportunity to add marginal additional capacity for the pump station to the highly critical Tumon service basin, while also allowing us to temporarily by-pass the Fujita SPS when needed to complete required maintenance, without expanding the site footprint or purchasing additional property; and

**WHEREAS**, to assist with the assessment and rehabilitation design of the old Tumon SPS, as well as the maintenance of the Fujita SPS and additional capacity to the Tumon basin, GWA negotiated a scope and fee for Change Order No. 2 (CO2) for Four Hundred Thirty-Five Thousand Four Hundred Thirty-Two Dollars and Eighty Cents (\$435,432.80), as shown in Exhibit F; and

**WHEREAS**, the current contract amount of One Million Six Hundred and One Thousand Five Hundred Ninety-Nine Dollars and Twenty-Nine Cents (\$1,601,599.29) plus CO2 amount of Four Hundred Thirty-Five Thousand Four Hundred Thirty-Two Dollars and Eighty Cents (\$435,432.80), brings the revised contract amount to Two Million Thirty-Seven Thousand Thirty-Two Dollars and Nine Cents (\$2,037,032.09); and

**WHEREAS**, given the importance of the rehabilitation of the Fujita SPS and the condensed time frame of the Partial CD projects, GWA requests a Ten Percent (10%) contingency of Two Hundred Three Thousand Seven Hundred Three Dollars and Twenty-One Cents (\$203,703.21); and

**WHEREAS**, the revised contract cost to include the Tumon SPS assessment and design rehabilitation as part of the Fujita SPS assessment and design is Two Million Thirty-Seven Thousand Thirty-Two Dollars and Nine Cents (\$2,037,032.09), plus a Ten Percent (10%) contingency of Two Hundred Three Thousand Seven Hundred Three Dollars and Twenty-One Cents (\$203,703.21) will bring the total authorized funding level to Two Million Two Hundred Forty Thousand Seven Hundred Thirty-Five Dollars and Thirty Cents (\$2,240,735.30); and

**WHEREAS**, funding for this design project will be from the USEPA grants. Only if necessary, GWA may use bond funds should USEPA Grant funding become unavailable.

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

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the requested funding authorization increases to be fair, reasonable, and necessary for the Fujita SPS rehabilitation design project.
3. The CCU hereby authorizes the management of GWA to execute Change Order No. 2 to the contract with AECOM Technical Services, Inc., for a total contract amount of Two Million Thirty-Seven Thousand Thirty-Two Dollars and Nine Cents (\$2,037,032.09).
4. The CCU hereby further authorizes a ten percent (10%) contingency of Two Hundred Three Thousand Seven Hundred Three Dollars and Twenty-One Cents (\$203,703.21), increasing the authorized funding amount to Two Million Two Hundred Forty Thousand Seven Hundred Thirty-Five Dollars and Thirty Cents (\$2,240,735.30).
5. The CCU hereby further authorizes the use of USEPA grants as the funding source. Only if necessary, GWA may use bond funds should USEPA Grant funding become unavailable.
6. The CCU further approves management to duly notify the Public Utilities Commission of this contract which exceeds One Million Dollars (\$1,000,000.00), and is funded by USEPA grant funds. Only if necessary, GWA may use bond funds should USEPA Grant funding become unavailable.

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

**DULY AND REGULARLY ADOPTED**, this 25<sup>th</sup> day of September 2024.

Certified by:

Attested by:

\_\_\_\_\_  
**JOSEPH T. DUENAS**  
Chairperson

\_\_\_\_\_  
**PEDRO ROY MARTINEZ**  
Secretary



## EXHIBIT A

### PROJECT OVERVIEW

#### (DESIGN SERVICES)

Project: **FUJITA SEWAGE PUMP STATION REDUNDANT FORCE MAIN**

Project Number: S20-003-EPA

Consultant: AECOM Technical Services, Inc.

Contract Amount: \$930,834.57

Contingency: -0-

Selection Notification: October 20, 2020

Request to Award: May 23, 2022

USEPA Approval: May 20, 2022

CCU Approval: N/A

PUC Approval: N/A

Notice of Award Decision: June 3, 2022

Fund Source: USEPA SRF Grant No. M96902619-1

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Other documents pertaining to the solicitation of this project are available at Engineering folder:  
<Z:\Project Information\CIP Projects - Wastewater\Fujita SPS Redundant FM\Design\Procurement>

Prepared by:

  
JOSEPHINE E. SMITH

**AGREEMENT  
BETWEEN OWNER AND ENGINEER  
FOR PROFESSIONAL SERVICES**

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**AGREEMENT  
BETWEEN OWNER AND ENGINEER  
FOR PROFESSIONAL SERVICES**

THIS IS AN AGREEMENT effective as of October 5, 2022 (“Effective Date”) between  
Guam Waterworks Authority (“Owner”) and  
AECOM Technical Services, Inc. (“Engineer”).

Owner's Project, of which Engineer's services under this Agreement are a part, is generally identified as follows:

**Fujita Sewage Pump Station Redundant Force Main  
GWA Project No. S20-003-EPA**

Other terms used in this Agreement are defined in Article 7.

Engineer's services under this Agreement are generally identified as follows:

- 1) **Identify redundant force main options and provide the design for the selected option.**
- 2) **After the redundant force main is placed in operation, investigate the condition of the original 14-inch force main to determine if repair, relocation, or replacement is needed in order to ensure force main redundancy. Identify options and provide the design for the selected option, including potential use of CIPP and if necessary, pump station upgrades.**

Owner and Engineer further agree as follows:

**ARTICLE 1 – SERVICES OF ENGINEER**

1.01 *Scope*

- A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.

**ARTICLE 2 – OWNER'S RESPONSIBILITIES**

2.01 *General*

- A. Owner shall have the responsibilities set forth herein and in Exhibit B.
- B. Owner shall pay Engineer as set forth in Article 4 and Exhibit C.
- C. Owner shall be responsible for all requirements and instructions that it furnishes to Engineer pursuant to this Agreement, and for the accuracy and completeness of all programs, reports, data, and other information furnished by Owner to Engineer pursuant to this Agreement. Engineer may use and rely upon such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement, subject to any express limitations or reservations applicable to the furnished items.



- D. Owner shall give prompt written notice to Engineer whenever Owner observes or otherwise becomes aware of:
1. any development that affects the scope or time of performance of Engineer's services;
  2. the presence at the Site of any Constituent of Concern; or
  3. any relevant, material defect or nonconformance in: (a) Engineer's services, (b) the Work, (c) the performance of any Constructor, or (d) Owner's performance of its responsibilities under this Agreement.

### **ARTICLE 3 – SCHEDULE FOR RENDERING SERVICES**

#### **3.01 Commencement**

- A. Engineer is authorized to begin rendering services as of the Effective Date.

#### **3.02 Time for Completion**

- A. Engineer shall complete its obligations within a reasonable time. Specific periods of time for rendering services, or specific dates by which services are to be completed, are provided in Exhibit A, and are hereby agreed to be reasonable.
- B. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer's services is impaired, or Engineer's services are delayed or suspended, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.
- C. If Owner authorizes changes in the scope, extent, or character of the Project or Engineer's services, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.
- D. Owner shall make decisions and carry out its other responsibilities in a timely manner so as not to delay the Engineer's performance of its services.
- E. If Engineer fails, through its own fault, to complete the performance required in this Agreement within the time set forth, as duly adjusted, then Owner shall be entitled, as its sole remedy, to the recovery of direct damages, if any, resulting from such failure.

### **ARTICLE 4 – INVOICES AND PAYMENTS**

#### **4.01 Invoices**

- A. *Preparation and Submittal of Invoices:* Engineer shall prepare invoices in accordance with its standard invoicing practices and the terms of Exhibit C. Engineer shall submit its invoices to Owner on a monthly basis. Invoices are due and payable within 45 days of receipt.

4.02 *Payments*

- A. *Application to Interest and Principal:* Payment will be credited first to any interest owed to Engineer and then to principal.
- B. *Failure to Pay:* If Owner fails to make any payment due Engineer for services and expenses within 45 days after receipt of Engineer's invoice, then:
  - 1. amounts due Engineer will be increased at the maximum rate of interest permitted by law from said forty-fifth day; and
  - 2. Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement until Owner has paid in full all amounts due for services, expenses, and other related charges. Owner waives any and all claims against Engineer for any such suspension.
- C. *Disputed Invoices:* If Owner disputes an invoice, either as to amount or entitlement, then Owner shall promptly advise Engineer in writing of the specific basis for doing so, may withhold only that portion so disputed, and must pay the undisputed portion subject to the terms of Paragraph 4.01.
- D. *Sales or Use Taxes:* If after the Effective Date any governmental entity takes a legislative action that imposes additional sales or use taxes on Engineer's services or compensation under this Agreement, then Engineer may invoice such additional sales or use taxes for reimbursement by Owner. Owner shall reimburse Engineer for the cost of such invoiced additional sales or use taxes; such reimbursement shall be in addition to the compensation to which Engineer is entitled under the terms of Exhibit C.

**ARTICLE 5 – OPINIONS OF COST**

5.01 *Opinions of Probable Construction Cost*

- A. Engineer's opinions (if any) of probable Construction Cost are to be made on the basis of Engineer's experience, qualifications, and general familiarity with the construction industry. However, because Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by Engineer. If Owner requires greater assurance as to probable Construction Cost, then Owner agrees to obtain an independent cost estimate.

5.02 *Designing to Construction Cost Limit*

- A. If a Construction Cost limit is established between Owner and Engineer, such Construction Cost limit and a statement of Engineer's rights and responsibilities with respect thereto will be specifically set forth in Exhibit F to this Agreement.

5.03 *Opinions of Total Project Costs*

- A. The services, if any, of Engineer with respect to Total Project Costs shall be limited to assisting the Owner in tabulating the various categories that comprise Total Project Costs. Engineer assumes no responsibility for the accuracy of any opinions of Total Project Costs.

**ARTICLE 6 – GENERAL CONSIDERATIONS**

6.01 *Standards of Performance*

- A. *Standard of Care:* The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with any services performed or furnished by Engineer.
- B. *Technical Accuracy:* Owner shall not be responsible for discovering deficiencies in the technical accuracy of Engineer's services. Engineer shall correct deficiencies in technical accuracy without additional compensation, unless such corrective action is directly attributable to deficiencies in Owner-furnished information.
- C. *Consultants:* Engineer may retain such Consultants as Engineer deems necessary to assist in the performance or furnishing of the services, subject to reasonable, timely, and substantive objections by Owner.
- D. *Reliance on Others:* Subject to the standard of care set forth in Paragraph 6.01.A, Engineer and its Consultants may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.
- E. *Compliance with Laws and Regulations, and Policies and Procedures:*
  - 1. Engineer and Owner shall comply with applicable Laws and Regulations.
  - 2. Engineer shall comply with any and all policies, procedures, and instructions of Owner that are applicable to Engineer's performance of services under this Agreement and that Owner provides to Engineer in writing, subject to the standard of care set forth in Paragraph 6.01.A, and to the extent compliance is not inconsistent with professional practice requirements.
  - 3. This Agreement is based on Laws and Regulations and Owner-provided written policies and procedures as of the Effective Date. The following may be the basis for modifications to Owner's responsibilities or to Engineer's scope of services, times of performance, or compensation:
    - a. changes after the Effective Date to Laws and Regulations;
    - b. the receipt by Engineer after the Effective Date of Owner-provided written policies and procedures;

- c. changes after the Effective Date to Owner-provided written policies or procedures.
- F. Engineer shall not be required to sign any document, no matter by whom requested, that would result in the Engineer having to certify, guarantee, or warrant the existence of conditions whose existence the Engineer cannot ascertain. Owner agrees not to make resolution of any dispute with the Engineer or payment of any amount due to the Engineer in any way contingent upon the Engineer signing any such document.
- G. The general conditions for any construction contract documents prepared hereunder are to be EJCDC® C-700 "Standard General Conditions of the Construction Contract" (2013 Edition), prepared by the Engineers Joint Contract Documents Committee, unless expressly indicated otherwise in Exhibit J or elsewhere in this Agreement.
- H. Engineer shall not at any time supervise, direct, control, or have authority over any Constructor's work, nor shall Engineer have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, or the safety precautions and programs incident thereto, for security or safety at the Site, nor for any failure of a Constructor to comply with Laws and Regulations applicable to that Constructor's furnishing and performing of its work. Engineer shall not be responsible for the acts or omissions of any Constructor.
- I. Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's, failure to furnish and perform the Work in accordance with the Construction Contract Documents.
- J. Engineer shall not be responsible for any decision made regarding the Construction Contract Documents, or any application, interpretation, clarification, or modification of the Construction Contract Documents, other than those made by Engineer or its Consultants.
- K. Engineer is not required to provide and does not have any responsibility for surety bonding or insurance-related advice, recommendations, counseling, or research, or enforcement of construction insurance or surety bonding requirements.
- L. Engineer's services do not include providing legal advice or representation.
- M. Engineer's services do not include (1) serving as a "municipal advisor" for purposes of the registration requirements of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) or the municipal advisor registration rules issued by the Securities and Exchange Commission, or (2) advising Owner, or any municipal entity or other person or entity, regarding municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms, or other similar matters concerning such products or issuances.
- N. While at the Site, Engineer, its Consultants, and their employees and representatives shall comply with the applicable requirements of Contractor's and Owner's safety programs of which Engineer has been informed in writing.

6.02 *Design Without Construction Phase Services*

- A. Engineer shall be responsible only for those Construction Phase services expressly required of Engineer in Exhibit A, Paragraph A1.05. With the exception of such expressly required services, Engineer shall have no design, Shop Drawing review, or other obligations during construction, and Owner assumes all responsibility for the application and interpretation of the Construction Contract Documents, review and response to Contractor claims, Construction Contract administration, processing of Change Orders and submittals, revisions to the Construction Contract Documents during construction, construction observation and review, review of Contractor's payment applications, and all other necessary Construction Phase administrative, engineering, and professional services. Owner waives all claims against the Engineer that may be connected in any way to Construction Phase administrative, engineering, or professional services except for those services that are expressly required of Engineer in Exhibit A.

6.03 *Use of Documents*

- A. All Documents are instruments of service, and Engineer shall retain an ownership and property interest therein (including the copyright and the right of reuse at the discretion of the Engineer) whether or not the Project is completed.
- B. If Engineer is required to prepare or furnish Drawings or Specifications under this Agreement, Engineer shall deliver to Owner at least one original printed record version of such Drawings and Specifications, signed and sealed according to applicable Laws and Regulations.
- C. Owner may make and retain copies of Documents for information and reference in connection with the use of the Documents on the Project. Engineer grants Owner a limited license to use the Documents on the Project, extensions of the Project, and for related uses of the Owner, subject to receipt by Engineer of full payment due and owing for all services relating to preparation of the Documents, and subject to the following limitations: (1) Owner acknowledges that such Documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project, on any other project, or for any other use or purpose, without written verification or adaptation by Engineer; (2) any such use or reuse, or any modification of the Documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Engineer or to its officers, directors, members, partners, agents, employees, and Consultants; (3) Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Consultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification of the Documents without written verification, completion, or adaptation by Engineer; and (4) such limited license to Owner shall not create any rights in third parties.
- D. If Engineer at Owner's request verifies the suitability of the Documents, completes them, or adapts them for extensions of the Project or for any other purpose, then Owner shall compensate Engineer at rates or in an amount to be agreed upon by Owner and Engineer.

6.04 *Electronic Transmittals*

- A. Owner and Engineer may transmit, and shall accept, Project-related correspondence, Documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website, in accordance with a mutually agreeable protocol.
- B. If this Agreement does not establish protocols for electronic or digital transmittals, then Owner and Engineer shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

6.05 *Insurance*

- A. Engineer shall procure and maintain insurance as set forth in Exhibit G. Engineer shall cause Owner to be listed as an additional insured on any applicable general liability insurance policy carried by Engineer.
- B. Owner shall procure and maintain insurance as set forth in Exhibit G. Owner shall cause Engineer and its Consultants to be listed as additional insureds on any general liability policies carried by Owner, which are applicable to the Project.
- C. Owner shall require Contractor to purchase and maintain policies of insurance covering workers' compensation, general liability, motor vehicle damage and injuries, and other insurance necessary to protect Owner's and Engineer's interests in the Project. Owner shall require Contractor to cause Engineer and its Consultants to be listed as additional insureds with respect to such liability insurance purchased and maintained by Contractor for the Project.
- D. Owner and Engineer shall each deliver to the other certificates of insurance evidencing the coverages indicated in Exhibit G. Such certificates shall be furnished prior to commencement of Engineer's services and at renewals thereafter during the life of the Agreement.
- E. All policies of property insurance relating to the Project, including but not limited to any builder's risk policy, shall allow for waiver of subrogation rights and contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insured thereunder or against Engineer or its Consultants. Owner and Engineer waive all rights against each other, Contractor, the Consultants, and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by any builder's risk policy and any other property insurance relating to the Project. Owner and Engineer shall take appropriate measures in other Project-related contracts to secure waivers of rights consistent with those set forth in this paragraph.

- F. All policies of insurance shall contain a provision or endorsement that the coverage afforded will not be canceled or reduced in limits by endorsement, and that renewal will not be refused, until at least 10 days prior written notice has been given to the primary insured. Upon receipt of such notice, the receiving party shall promptly forward a copy of the notice to the other party to this Agreement.
- G. At any time, Owner may request that Engineer or its Consultants, at Owner's sole expense, provide additional insurance coverage, increased limits, or revised deductibles that are more protective than those specified in Exhibit G. If so requested by Owner, and if commercially available, Engineer shall obtain and shall require its Consultants to obtain such additional insurance coverage, different limits, or revised deductibles for such periods of time as requested by Owner, and Exhibit G will be supplemented to incorporate these requirements.

6.06 *Suspension and Termination*

A. *Suspension:*

- 1. *By Owner:* Owner may suspend the Project for up to 90 days upon seven days written notice to Engineer.
- 2. *By Engineer:* Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement if Owner has failed to pay Engineer for invoiced services and expenses, as set forth in Paragraph 4.02.B, or in response to the presence of Constituents of Concern at the Site, as set forth in Paragraph 6.10.D.

B. *Termination:* The obligation to provide further services under this Agreement may be terminated:

- 1. For cause,
  - a. by either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.
  - b. by Engineer:
    - 1) upon seven days written notice if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional; or
    - 2) upon seven days written notice if the Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control, or as the result of the presence at the Site of undisclosed Constituents of Concern, as set forth in Paragraph 6.10.D.
    - 3) Engineer shall have no liability to Owner on account of such termination.
  - c. Notwithstanding the foregoing, this Agreement will not terminate under Paragraph 6.06.B.1.a if the party receiving such notice begins, within seven days of

receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. For convenience, by Owner effective upon Engineer's receipt of notice from Owner.
- C. *Effective Date of Termination:* The terminating party under Paragraph 6.06.B may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.
- D. *Payments Upon Termination:*
1. In the event of any termination under Paragraph 6.06, Engineer will be entitled to invoice Owner and to receive full payment for all services performed or furnished in accordance with this Agreement and all Reimbursable Expenses incurred through the effective date of termination. Upon making such payment, Owner shall have the limited right to the use of Documents, at Owner's sole risk, subject to the provisions of Paragraph 6.03.
  2. In the event of termination by Owner for convenience or by Engineer for cause, Engineer shall be entitled, in addition to invoicing for those items identified in Paragraph 6.06.D.1, to invoice Owner and receive payment of a reasonable amount for services and expenses directly attributable to termination, both before and after the effective date of termination, such as reassignment of personnel, costs of terminating contracts with Engineer's Consultants, and other related close-out costs, using methods and rates for Additional Services as set forth in Exhibit C.

#### 6.07 *Controlling Law*

- A. This Agreement is to be governed by the Laws and Regulations of the state in which the Project is located.

#### 6.08 *Successors, Assigns, and Beneficiaries*

- A. Owner and Engineer are hereby bound and the successors, executors, administrators, and legal representatives of Owner and Engineer (and to the extent permitted by Paragraph 6.08.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.
- B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, money that is due or may become due) in this Agreement without the written consent of the other party, except to the extent that any



assignment, subletting, or transfer is mandated by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

- C. Unless expressly provided otherwise in this Agreement:
1. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Constructor, other third-party individual or entity, or to any surety for or employee of any of them.
  2. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.
  3. Owner agrees that the substance of the provisions of this Paragraph 6.08.C shall appear in the Construction Contract Documents.

#### 6.09 *Dispute Resolution*

- A. Owner and Engineer agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice prior to invoking the procedures of Exhibit H or other provisions of this Agreement, or exercising their rights at law.
- B. If the parties fail to resolve a dispute through negotiation under Paragraph 6.09.A, then either or both may invoke the procedures of Exhibit H. If Exhibit H is not included, or if no dispute resolution method is specified in Exhibit H, then the parties may exercise their rights at law.

#### 6.10 *Environmental Condition of Site*

- A. Owner represents to Engineer that as of the Effective Date to the best of Owner's knowledge no Constituents of Concern, other than those disclosed in writing to Engineer, exist at or adjacent to the Site.
- B. If Engineer encounters or learns of an undisclosed Constituent of Concern at the Site, then Engineer shall notify (1) Owner and (2) appropriate governmental officials if Engineer reasonably concludes that doing so is required by applicable Laws or Regulations.
- C. It is acknowledged by both parties that Engineer's scope of services does not include any services related to unknown or undisclosed Constituents of Concern. If Engineer or any other party encounters, uncovers, or reveals an undisclosed Constituent of Concern, then Owner shall promptly determine whether to retain a qualified expert to evaluate such condition or take any necessary corrective action.
- D. If investigative or remedial action, or other professional services, are necessary with respect to undisclosed Constituents of Concern, or if investigative or remedial action beyond that reasonably contemplated is needed to address a disclosed or known Constituent of Concern, then Engineer may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until such portion of the Project is no longer affected.

- E. If the presence at the Site of undisclosed Constituents of Concern adversely affects the performance of Engineer's services under this Agreement, then the Engineer shall have the option of (1) accepting an equitable adjustment in its compensation or in the time of completion, or both; or (2) terminating this Agreement for cause on seven days notice.
- F. Owner acknowledges that Engineer is performing professional services for Owner and that Engineer is not and shall not be required to become an "owner," "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, which are or may be encountered at or near the Site in connection with Engineer's activities under this Agreement.

6.11 *Indemnification and Mutual Waiver*

- A. *Indemnification by Engineer:* To the fullest extent permitted by Laws and Regulations, Engineer shall indemnify and hold harmless Owner, and Owner's officers, directors, members, partners, agents, consultants, and employees, from losses, damages, and judgments (including reasonable consultants' and attorneys' fees and expenses) arising from third-party claims or actions relating to the Project, provided that any such claim, action, loss, damages, or judgment is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Engineer or Engineer's officers, directors, members, partners, agents, employees, or Consultants. **This indemnification provision is subject to and limited by the provisions, if any, agreed to by Owner and Engineer in Exhibit I, "Limitations of Liability."**
- B. *Indemnification by Owner:* Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Consultants as required by Laws and Regulations **and to the extent (if any) required in Exhibit I, "Limitations of Liability."**
- C. *Environmental Indemnification:* To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Consultants from all claims, costs, losses, damages, actions, and judgments (including reasonable consultants' and attorney's fees and expenses) caused by, arising out of, relating to, or resulting from a Constituent of Concern at, on, or under the Site, provided that (1) any such claim, cost, loss, damages, action, or judgment is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (2) nothing in this paragraph shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence or willful misconduct.
- D. *No Defense Obligation:* The indemnification commitments in this Agreement do not include a defense obligation by the indemnitor unless such obligation is expressly stated.
- E. *Percentage Share of Negligence:* To the fullest extent permitted by Laws and Regulations, a party's total liability to the other party and anyone claiming by, through, or under the other party for any cost, loss, or damages caused in part by the negligence of the party

and in part by the negligence of the other party or any other negligent entity or individual, shall not exceed the percentage share that the party's negligence bears to the total negligence of Owner, Engineer, and all other negligent entities and individuals.

- F. *Mutual Waiver:* To the fullest extent permitted by Laws and Regulations, Owner and Engineer waive against each other, and the other's employees, officers, directors, members, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to this Agreement or the Project, from any cause or causes.

#### 6.12 *Records Retention*

- A. Engineer shall maintain on file in legible form, for a period of five years following completion or termination of its services, all Documents, records (including cost records), and design calculations related to Engineer's services or pertinent to Engineer's performance under this Agreement. Upon Owner's request, Engineer shall provide a copy of any such item to Owner at cost.

#### 6.13 *Miscellaneous Provisions*

- A. *Notices:* Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.
- B. *Survival:* All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.
- C. *Severability:* Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Engineer, which agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- D. *Waiver:* A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.
- E. *Accrual of Claims:* To the fullest extent permitted by Laws and Regulations, all causes of action arising under this Agreement shall be deemed to have accrued, and all statutory periods of limitation shall commence, no later than the date of Substantial Completion.

### **ARTICLE 7 – DEFINITIONS**

#### 7.01 *Defined Terms*

- A. Wherever used in this Agreement (including the Exhibits hereto) terms (including the singular and plural forms) printed with initial capital letters have the meanings indicated in the text above, in the exhibits, or in the following definitions:

1. *Addenda*—Written or graphic instruments issued prior to the opening of bids which clarify, correct, or change the bidding requirements or the proposed Construction Contract Documents.
2. *Additional Services*—The services to be performed for or furnished to Owner by Engineer in accordance with Part 2 of Exhibit A of this Agreement.
3. *Agreement*—This written contract for professional services between Owner and Engineer, including all exhibits identified in Paragraph 8.01 and any duly executed amendments.
4. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Construction Contract.
5. *Basic Services*—The services to be performed for or furnished to Owner by Engineer in accordance with Part 1 of Exhibit A of this Agreement.
6. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Construction Contract Price or the Construction Contract Times, or other revision to the Construction Contract, issued on or after the effective date of the Construction Contract.
7. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth in the Construction Contract, seeking an adjustment in Construction Contract Price or Construction Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Construction Contract Documents or the acceptability of Work under the Construction Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Construction Contract.
8. *Constituent of Concern*—Asbestos, petroleum, radioactive material, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, State, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
9. *Construction Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
10. *Construction Contract Documents*—Those items designated as “Contract Documents” in the Construction Contract, and which together comprise the Construction Contract.

11. *Construction Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Construction Contract Documents.
12. *Construction Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve milestones, if any, in the Construction Contract; (b) achieve Substantial Completion; and (c) complete the Work.
13. *Construction Cost*—The cost to Owner of the construction of those portions of the entire Project designed or specified by or for Engineer under this Agreement, including construction labor, services, materials, equipment, insurance, and bonding costs, and allowances for contingencies. Construction Cost does not include costs of services of Engineer or other design professionals and consultants; cost of land or rights-of-way, or compensation for damages to property; Owner's costs for legal, accounting, insurance counseling, or auditing services; interest or financing charges incurred in connection with the Project; or the cost of other services to be provided by others to Owner. Construction Cost is one of the items comprising Total Project Costs.
14. *Constructor*—Any person or entity (not including the Engineer, its employees, agents, representatives, and Consultants), performing or supporting construction activities relating to the Project, including but not limited to Contractors, Subcontractors, Suppliers, Owner's work forces, utility companies, other contractors, construction managers, testing firms, shippers, and truckers, and the employees, agents, and representatives of any or all of them.
15. *Consultants*—Individuals or entities having a contract with Engineer to furnish services with respect to this Project as Engineer's independent professional associates and consultants; subcontractors; or vendors.
16. *Contractor*—The entity or individual with which Owner enters into a Construction Contract.
17. *Documents*—Data, reports, Drawings, Specifications, Record Drawings, building information models, civil integrated management models, and other deliverables, whether in printed or electronic format, provided or furnished in appropriate phases by Engineer to Owner pursuant to this Agreement.
18. *Drawings*—That part of the Construction Contract Documents that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date*—The date indicated in this Agreement on which it becomes effective, but if no such date is indicated, the date on which this Agreement is signed and delivered by the last of the parties to sign and deliver.
20. *Engineer*—The individual or entity named as such in this Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Construction Contract Price or the Construction Contract Times.

22. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
23. *Owner*—The individual or entity named as such in this Agreement and for which Engineer's services are to be performed. Unless indicated otherwise, this is the same individual or entity that will enter into any Construction Contracts concerning the Project.
24. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the services to be performed or furnished by Engineer under this Agreement are a part.
25. *Record Drawings*—Drawings depicting the completed Project, or a specific portion of the completed Project, prepared by Engineer as an Additional Service and based on Contractor's record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications, as delivered to Engineer and annotated by Contractor to show changes made during construction.
26. *Reimbursable Expenses*—The expenses incurred directly by Engineer in connection with the performing or furnishing of Basic Services and Additional Services for the Project.
27. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site during the Construction Phase. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative. The duties and responsibilities of the Resident Project Representative, if any, are as set forth in Exhibit D.
28. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
29. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Construction Contract Documents.
30. *Site*—Lands or areas to be indicated in the Construction Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
31. *Specifications*—The part of the Construction Contract Documents that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

32. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
  33. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Construction Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
  34. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
  35. *Total Project Costs*—The total cost of planning, studying, designing, constructing, testing, commissioning, and start-up of the Project, including Construction Cost and all other Project labor, services, materials, equipment, insurance, and bonding costs, allowances for contingencies, and the total costs of services of Engineer or other design professionals and consultants, together with such other Project-related costs that Owner furnishes for inclusion, including but not limited to cost of land, rights-of-way, compensation for damages to properties, Owner’s costs for legal, accounting, insurance counseling, and auditing services, interest and financing charges incurred in connection with the Project, and the cost of other services to be provided by others to Owner.
  36. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Construction Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Construction Contract Documents.
  37. *Work Change Directive*—A written directive to Contractor issued on or after the effective date of the Construction Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.
- B. *Day*:
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

## **ARTICLE 8 – EXHIBITS AND SPECIAL PROVISIONS**

### **8.01 Exhibits Included:**

- A. Exhibit A, Engineer’s Services.
- B. Exhibit B, Owner’s Responsibilities.
- C. Exhibit C, Payments to Engineer for Services and Reimbursable Expenses.

- D. Exhibit D, DELETED.
- E. Exhibit E, Notice of Acceptability of Work.
- F. Exhibit F, DELETED.
- G. Exhibit G, Insurance.
- H. Exhibit H, Dispute Resolution.
- I. Exhibit I, Limitations of Liability.
- J. Exhibit J, DELETED.
- K. Exhibit K, Amendment to Owner-Engineer Agreement.

8.02 *Total Agreement*

- A. This Agreement, (together with the exhibits included above) constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a written instrument duly executed by both parties. Amendments should be based whenever possible on the format of Exhibit K to this Agreement.

8.03 *Designated Representatives*

- A. With the execution of this Agreement, Engineer and Owner shall designate specific individuals to act as Engineer's and Owner's representatives with respect to the services to be performed or furnished by Engineer and responsibilities of Owner under this Agreement. Such an individual shall have authority to transmit instructions, receive information, and render decisions relative to this Agreement on behalf of the respective party whom the individual represents.

8.04 *Engineer's Certifications*

- A. Engineer certifies that it has not engaged in corrupt, fraudulent, or coercive practices in competing for or in executing the Agreement. For the purposes of this Paragraph 8.04:
  - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the selection process or in the Agreement execution;
  - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the selection process or the execution of the Agreement to the detriment of Owner, or (b) to deprive Owner of the benefits of free and open competition;
  - 3. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the selection process or affect the execution of the Agreement.



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

Owner: **Guam Waterworks Authority**

Engineer: **AECOM Technical Services, Inc.**

By: 

By: 

Print name: **MIGUEL C. BORDALLO, P.E.**

Print name: **MARTIN NAKASONE**

Title: **General Manager**

Title: **Area Manager, Hawaii-Pacific Islands**

Date Signed: October 5, 2022

Date Signed: 07 Jun 2022

Engineer License or Firm's Certificate No. (if required):

State of: Territory of Guam

Address for Owner's receipt of notices:  
Gloria B. Nelson Public Service Building  
688 Route 15, Mangilao, Guam 96913

Address for Engineer's receipt of notices:  
414 W. Soledad Ave.  
Suite 708  
Hagatna, Guam 96910

Certified Funds Available:

Approved as to Form:

By:   
TALING M. TAITANO, CPA, CGFM  
GWA Chief Financial Officer 

By:   
THERESA G. ROJAS, ESQ  
GWA General Counsel

Date Signed: 8/26/2022

Date Signed: 6/13/2022

Contract Amount: \$930,834.57

Amount Certified: \$930,834.57

Source of Funding: USEPA-SRF Grant M96902619-1

**\*\*Contingency to be identified as needed**

This is **EXHIBIT A**, consisting of 24 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated October 5, 2022.

**Engineer's Services**

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Article 1 of the Agreement is supplemented to include the following as an agreement of the parties.

Engineer shall provide the following Basic and Additional Services as set forth in AECOM's letter dated April 29, 2022 and as set forth in AECOM's April 29, 2022, Enclosures labeled: Appendix A: Scope of Work / Appendix B: Fee Detail; and / Appendix C: Tentative Project Schedule.

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Exhibit A – Engineer's Services

EJCDC® E-500, Agreement Between Owner and Engineer for Professional Services.

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Page 1



## APPENDIX A: SCOPE OF WORK

### I. PROJECT TITLE

FUJITA SEWAGE PUMP STATION (SPS) REDUNDANT FORCE MAIN (FM);  
GWA PROJECT NO. S20-003-EPA

### II. PROJECT BACKGROUND

The Fujita SPS is one of the largest capacity stations in the Northern District Wastewater Treatment Plant (WWTP) service area. It is located at the intersection of the Fujita and San Vitores Roads in Tumon. The Tumon area can be divided into 3 wastewater service areas (Ypao, Central Tumon, and Gun Beach). The Fujita SPS receives flow primarily from the Central Tumon Bay area. In geographical terms, the Central Tumon Basin encompasses the sector extending from the Pacific Star Hotel to the Lotte Hotel at Gogna Road and bounded to the north by the cliff line and to the south by the Tumon Bay shoreline. The Nikko Hotel also discharges its wastewater to the Central Tumon Basin. The Fujita SPS conveys flow through a single ductile iron force main towards the Route 16 SPS (see **Figure 1**). The FM has an approximate length of 6,623 LF and ranges in diameter from 14-in, 16-in, and 18-in. All the flow from the Route 16 SPS is conveyed towards the Southern Link SPS, which pumps wastewater to the Northern District WWTP.

Due to a lack of redundancy, the existing Fujita SPS FM cannot be isolated or removed from service to perform repairs, maintenance, or condition assessments. Failure of the FM could lead to service disruptions, which may impact the health of the community, environment, and negatively impact Guam's main tourist area. Also, given the location of the Fujita SPS in the collection system, incoming flows to the Fujita SPS cannot be easily diverted to allow the pump station to be taken out of service for major repair activities.

### III. PROJECT OBJECTIVES

The objectives of the PROJECT are as follows:

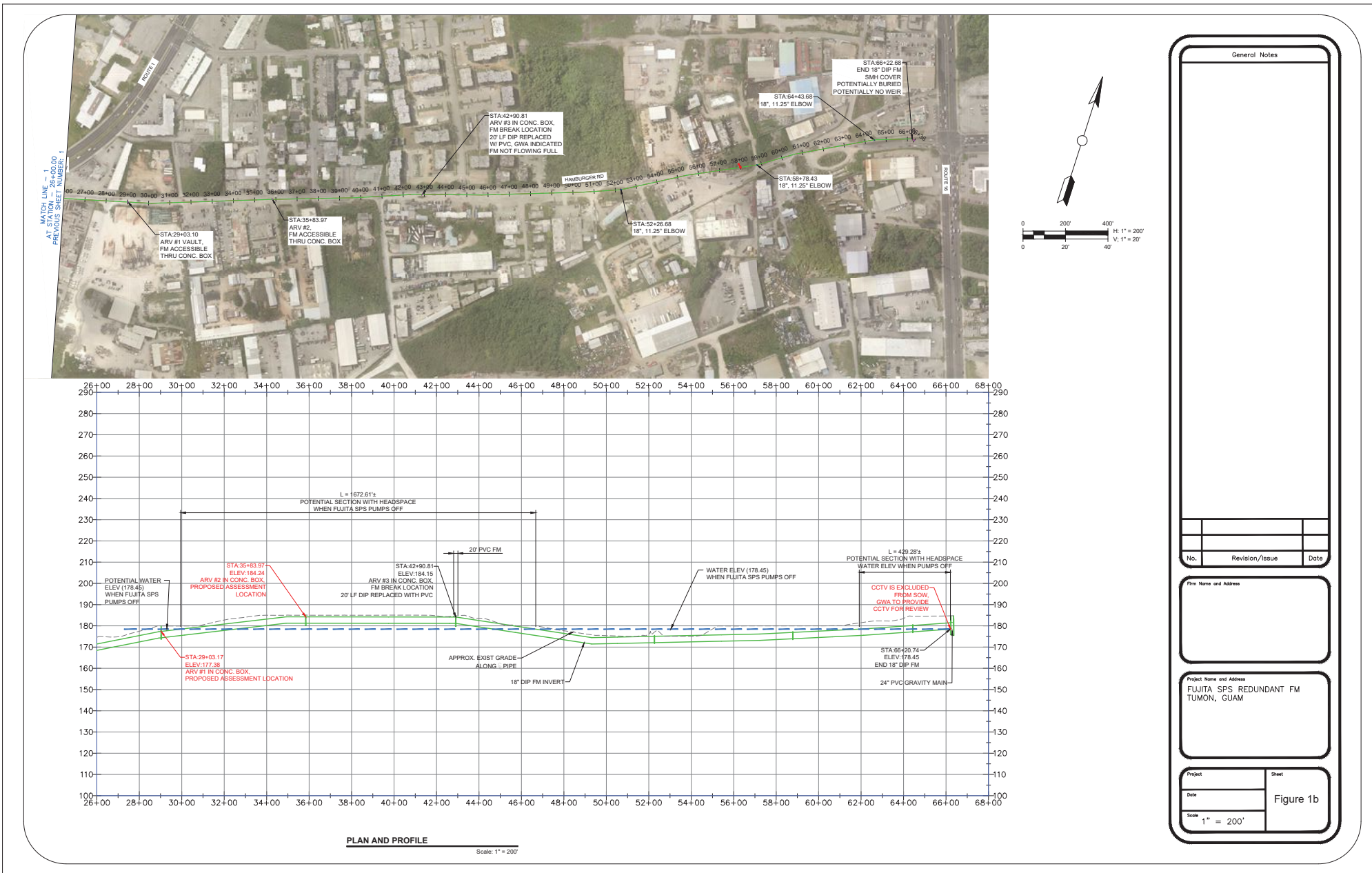
- Identify redundant force main options, including construction methods.
- Provide the design for the selected option, including potential use of CIPP and if necessary, pump station upgrades.
- After the redundant force main is placed in operation, investigate the condition of the original force main to determine if repair, relocation, or replacement is needed to ensure force main redundancy.
- The Fujita SPS must have two (2) force mains, each capable of transferring the current and future peak wet weather flow (PWWF).
- Projected PWWF and domestic sewage flow to be considered will be at least 20 years from the date of the DESIGN CONSULTANT Contract Agreement.

### IV. PROJECT LIMITS

Given the various alternatives for this project, a figure was developed in conjunction with GWA to define project areas to assist the development of the fee proposal. The project limits are shown in **Figure 2** and is summarized as follows:

- The existing Fujita SPS site (Project Area 1) is located at the intersection of Fujita Road and Pale San Vitores Road in Tumon, Guam.
- The existing Fujita SPS FM alignment runs along the following route:
  - Pale San Vitores Road/Route 14 (Project Area 2),
  - Happy Landing Road/Old San Vitores Road (Project Area 3),
  - Marine Corps Drive/Route 1 (Project Area 4),
  - Hamburger Road/Route 27 (Project Area 5)
  - Army Drive/Route 16 (Project Area 6).





Fujita Sewer Pump Station Redundant Force Main  
 GWA Project No. S20-003-EPA  
 Guam Waterworks Authority  
 RFP-03-ENG-2020

**AECOM**

Issue Status: Proposal

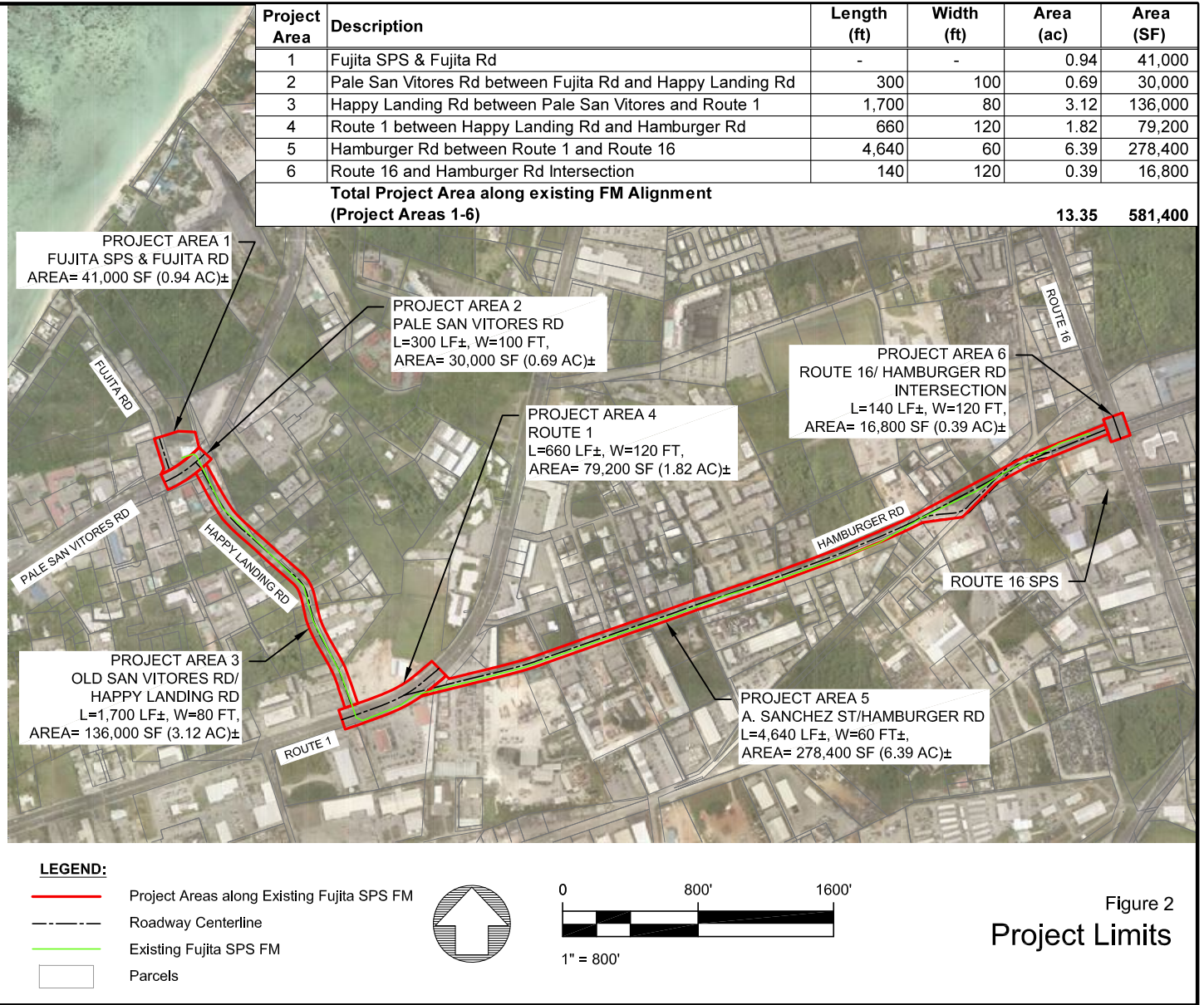


Figure 2  
Project Limits



**V. SERVICES**

**A. GENERAL REQUIREMENTS**

Unless otherwise agreed upon between GWA and the DESIGN CONSULTANT, the DESIGN CONSULTANT shall meet the following general requirements.

1. Responsibility of the DESIGN CONSULTANT
  - a. The DESIGN CONSULTANT shall be responsible for the professional and technical accuracy and the coordination of all surveys, drawings, specifications, and other work of materials furnished under a contract. The DESIGN CONSULTANT without additional cost to the GWA, shall correct and revise all errors or deficiencies the work.
  - b. Neither the GWA's review, approval, or acceptance of non-payment for any of the service required under this contract shall be construed to operate as a waiver of any rights under this contract or of any cause of action arising out of DESIGN CONSULTANT's performance of this contract, and the land surveyor shall be and remain liable to GWA for all costs of any kind which were incurred by GWA as a result of their negligent performance of any of the services furnished under this contract.
  - c. DESIGN CONSULTANT is responsible for securing approvals for entry onto private property, if required.
2. Responsibility of GWA
  - a. To furnish the DESIGN CONSULTANT with the available as-built drawings and any conducted closed-circuit television (CCTV) of existing facilities covered by the PROJECT that are available in GWA files, draft engineering details, current wastewater system hydraulic model, flow monitoring data, maintenance, and operation records.
  - b. GWA shall provide, if requested, access to GWA facilities. GWA operations staff may or may not be available to provide limited traffic control, manual operation of pumps, opening of manholes and vaults, and site access to GWA facilities as requested.
3. Comply with the Guam Board of Registration for Professional Engineers, Architects and Land Surveyors ("PEALS") Law and related laws. Additionally, the DESIGN CONSULTANT shall provide professional engineering design services consistent with the Standard of Care in the Agreement as it relates to wastewater collection and pumping systems, instrumentation control and monitoring systems, wastewater piping, and shore infrastructures.
4. Design Parameters:

The design shall be in accordance with the applicable criteria, regulations, and standards of the following and all parties which have interest or relevance in this PROJECT:

  - a. American Association of State and Highway Transportation Officials (AASHTO)
  - b. American Concrete Institute (ACI)
  - c. American National Standard Institution (ANSI)
  - d. American Society for Testing and Materials (ASTM) International
  - e. American Water Works Association (AWWA)



- f. Association for the Advancement of Cost Engineering International (AACE)
- g. Guam Building Code/International Building Code (IBC)
- h. Guam Department of Public Works
- i. Guam Environmental Protection Agency (GEPA)
- j. Guam Fire Department (GFD)
- k. Guam Historic Resources Division (GHRD) / State Historic Preservation Office (SHPO)
- l. Guam Waterworks Authority (GWA)
- m. National Association of Sewer Service Companies (NASSCO)
- n. National Environmental Policy Act (NEPA)
- o. National Fire Protection Association (NFPA)
- p. National Sanitation Foundation (NSF)
- q. United States Army Corp of Engineers (USACE)
- r. United States Environmental Protection Agency (USEPA)
- s. US Fish and Wildlife Services (USFWS)

All standards shall be of the most current edition, unless otherwise specified, adopted by Guam law, or as approved by GWA.

5. Contract design drawings shall be completed in AutoCAD 2019 or an earlier version and be able to translate into an Environmental Systems Research Institute (ESRI) geographic information systems (GIS) mapping format. For GIS data, GWA uses the following projection:

- a. Projection: World Geodetic System (WGS) 1984, Universal Transverse Mercator (UTM) Zone 55 North (WGS\_1984\_UTM\_Zone\_55N)
- b. False\_Easting: 500000.00000000
- c. False\_Northing: 0.00000000
- d. Central\_Meridian: 147.00000000
- e. Scale\_Factor: 0.99960000
- f. Latitude\_Of\_Origin: 0.00000000
- g. Linear Unit: Meter.

6. Submittals, General Requirements

- a. All computations, specifications, reports and other written or typewritten documents shall be done on 8-1/2" by 11" sheets. Figures and maps included in reports shall be on 8-1/2" by 11" or 11" by 17" sheets, with exceptions to be approved by GWA. Documents shall be submitted neatly bound with appropriate covers as required by GWA.
- b. All engineering plans shall be done on 11" by 17" and 22" by 34" sheets.
- c. All electronic files shall be submitted on CDs, DVDs, or flash drives in Microsoft Word, Microsoft Excel, Adobe Acrobat, AutoCAD or ESRI GIS formats, or in other electronic file formats as approved by GWA.





7. Construction Cost Limitations

The PROJECT shall be designed to permit construction of the complete system within a construction budget to be provided by the GWA after acceptance of the "Design Criteria". If the DESIGN CONSULTANT during the preliminary cost analysis finds that the improvements cannot be built within the allotted amount, the matter shall be brought to the attention of the General Manager immediately. The General Manager may upon receipt of such notification, authorize a change in scope of materials as required to reduce the estimated construction cost to an amount within the funds available as authorized by law or he may elect to adjust the estimated construction budget. DESIGN CONSULTANT shall prepare a detailed construction cost estimate for the system.

**B. SCOPE OF SERVICES**

The DESIGN CONSULTANT shall comply with the Guam Board of Registration for Professional Engineers, Architects and Land Surveyors (PEALS) Law and related laws. The DESIGN CONSULTANT shall provide professional engineering design services consistent with the Standard of Care required under the Agreement as it relates to wastewater collection and pumping systems, instrumentation control and monitoring systems, wastewater piping, and shore infrastructures and ensure that all required services can be performed at a high-quality standard. The procurement of services of subconsultant design firms to meet the requirements of this PROJECT is included. GWA reserves the right to review and approve the DESIGN CONSULTANT and subconsultants.

Scope of consultant services shall be first conducted during the assessment, preliminary design, design, and construction of a redundant force main (Phase I). After construction of Phase I is complete, the services shall be repeated for the assessment and rehabilitation or relocation of the existing force main (Phase II). Construction may be further phased, dependent on funding availability.

The scope of DESIGN CONSULTANT services anticipated for this PROJECT includes, but is not limited to:

1. Project Management
2. Civil Engineering
3. Structural Engineering
4. Mechanical Engineering
5. Geotechnical Investigation and Engineering
6. Land Surveying
7. Electrical/Power Engineering
8. Instrumentation & Control Engineering
9. Supervisory Control and Data Acquisition (SCADA)
10. Archaeological Monitoring and Data Recovery Plan
11. Condition Assessment
12. Hydraulic Modeling and Analysis
13. Construction Cost Estimating
14. Scheduling
15. Permitting



- 16. Bidding Support
- 17. Engineering Support During Construction

Exclusions to the scope of services include the following:

- 1. Flow monitoring
- 2. Manhole and pipe inspections
- 3. Support studies for NEPA documentation
- 4. Record Drawing (As-built Preparation).

**C. SCOPE OF WORK**

1. TASK 1 – PROJECT MANAGEMENT

The Task 1 is expected to span the entire life of the PROJECT, from the contract Notice to Proceed (NTP) date through post- construction and final commissioning. This task shall be on a lump sum basis. The fee is based on a period of performance of 31 months from NTP. Assumed durations include 10 months for preliminary design, 7 months for design; 2 months for bidding; 19 months for construction.

a. Subtask 1.1 - Project Management Plan

DESIGN CONSULTANT shall prepare a Project Management Plan that includes:

- (1) Project Description
- (2) Scope of Work (from contract)
- (3) Work Plan
- (4) Progress Evaluation
- (5) Quality Assurance and Quality Control Plan
- (6) Risk Management
- (7) Scope Change
- (8) Communication Plan
- (9) Documentation Plan
- (10) Subcontractors and Organizational chart

b. Subtask 1.2 - Project Schedule

DESIGN CONSULTANT shall submit a project schedule that meets required milestones for approval. Update schedule at all phases of the PROJECT, including monthly meetings, dates for completion of engineering design studies, permitting, milestone tasks, and dates for review periods. The schedule shall be based on the proposed target dates. DESIGN CONSULTANT shall notify GWA if the target dates can be accomplished.

c. Subtask 1.3- Progress Reports

DESIGN CONSULTANT shall submit monthly progress/status reports to support monthly billings. Reports must reflect monthly invoices and earned value reporting including include projected spending and earned value curves.



d. Subtask 1.4 – Meetings and Coordination

Attend regularly scheduled meetings and coordinate with entities within and, as appropriate, outside the PROJECT team. Identify and facilitate milestone meetings.

- (1) Coordinate and communicate with local and federal agencies, including GEPA, DPW, GHRD/SHPO, USFWS throughout the course of the PROJECT to ensure review and permitting process adheres to the project schedule.
- (2) Facilitate and record kickoff and regular project meetings.
- (3) Design review (30%, 60%, 90% and 100%) meetings shall be covered under Task 3.

e. Deliverables:

- (1) Project Management Plan
- (2) Project Schedule
- (3) Progress Reports
- (4) Meeting Minutes.

2. TASK 2 - PRELIMINARY DESIGN

Task 2 will be on a lump sum basis.

a. Subtask 2.1 - Research and Field Investigation

The DESIGN CONSULTANT shall gather data and conduct research and field investigations to assess the existing force main, nearby gravity lines and manholes, the main pump facility, and related structures and components to achieve high quality design solutions and alternatives. Field investigation will include both ground level reconnaissance and confined space-entry. Efforts may include, but are not limited to, the following:

- (1) Review as-built/record drawings
- (2) Review easement locations and property records
- (3) Review maintenance history
- (4) Review pump station and force main inspection data
- (5) Review pump station operation data
- (6) Review flow monitoring data
- (7) Review current and future flow projections from GWA's hydraulic flow models. Currently GWA's hydraulic models are being updated and will be provided to the DESIGN CONSULTANT for use for the PROJECT.
- (8) Review other documents and information relevant to the PROJECT.
- (9) Interviews with GWA staff
- (10) Perform assessments and other permitting-related activities, as required by the appropriate archaeological and environmental regulatory agencies.
- (11) Prepare and submit permits as needed for the site investigation work.



- (12) Conduct condition assessment of the pump station pipes, valves, fittings, and force main.
  - (a) The condition assessment will be performed in one phase. The preliminary condition assessment will take advantage of existing location where the existing FM is accessible. A follow-up assessment will be performed during the construction of the redundant FM and take advantage of access to the existing FM is excluded from the scope of work.
  - (b) The condition assessment will include measurement of soil resistivity, dissolved sulfide, ultrasonic testing, visual inspection, soil sampling review of historical records, and interviews with GWA operators.
  - (c) Prepare a report that presents a presents the collected field data and provides conclusions on the condition of the FM. Recommendations for corrective action will be incorporated into the design.
- (13) Review inspection data of pipes and manholes to be provided by GWA.
- (14) Location and layout of nearby existing utilities within the proposed force main locations to avoid utility conflicts will be based on the best available data and a topographic survey.
- (15) Evaluate redundant force main options based on the findings and recommend the most feasible alternative to move forward with design.
- (16) Investigate the current condition of existing force main. If repair/relocation is needed, then provide options and recommend the most feasible alternative to move forward with design.
- (17) Geotechnical Exploration

The geotechnical scope of work is to obtain information on the subsurface materials to formulate a summary of the soil/rock conditions for the proposed WWPS improvement project. To accomplish these objectives, the scope will include:

  - (a) Research and review of available in-house soils boring data and geologic information in the vicinity of the project site.
  - (b) Coordinate staking of borehole locations and verification of the presence and locations of underground utilities.
  - (c) Mobilization/demobilization of a truck mounted drill rick and two operators to and from the project site
  - (d) Traffic control management (flagmen, signs, and barricades).
  - (e) GEPA and DPW permitting associated with geotechnical exploration.
  - (f) Decontamination of the drilling equipment and supplies prior to field exploration work



- (g) Drilling and sampling of 12 test borings to depths of about 15 to below the existing ground surface for logging and analyses. Drilling and sampling of one test boring to the depth of about 40 feet at the Fujita SPS site for a potential structure. The borings will be drilled in an accessible area using a truck-mounted drill rig.
  - (h) Laboratory testing of selected samples obtained during the filed exploration as an aid in classifying the materials and evaluating their engineering properties.
  - (i) Analyses of the field and laboratory data to formulate geotechnical engineering recommendations pertaining to the design of foundations, earthwork, and pavements for the proposed project.
  - (j) Preparation of a formal geotechnical engineering report summarizing the work on the project and presenting geotechnical findings and recommendations.
  - (k) Coordination, quality assurance, client/design team consultation, drafting word processing and clerical support.
  - (l) Review of plans and specifications for general conformance with the geotechnical recommendations.
- (18) Archaeological monitoring services will be provided to support the geotechnical investigation as required by the Guam SHPO to monitor impacts of the PROJECT on cultural resources in the PROJECT area. This will be performed as additional services once identified as required by SHPO.
- (19) Exclusions:
- (a) Inspections of pipes and manholes conducted in accordance with NASSCO standards.
  - (b) Pot-holing services
  - (c) Support studies (e.g., biological surveys, cultural resource surveys, etc.) for NEPA documentation.
- (20) Notwithstanding anything in this Agreement, the DESIGN CONSULTANT 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 Fujita SPS.
- b. Subtask 2.2 – Easement and Land Acquisition Assistance
- (1) Research and verification of existing and required new easements is necessary for the force main design. Land acquisition may also be required for the force main design. DESIGN CONSULTANT will be responsible for developing the necessary plans for:
    - (a) obtaining new easements,
    - (b) revising existing easements, or
    - (c) obtaining property transfers.



- (2) The DESIGN CONSULTANT will assist GWA in the preparation of plans under the direction of a professional land surveyor licensed in Guam. GWA will be responsible for the submission and recording of property transfers with the Department of Land Management.
- c. Subtask 2.3 - Design Alternatives Report
  - (1) The DESIGN CONSULTANT shall develop a Design Alternatives Report (DAR) that includes, as a minimum, the following information:
    - (a) A list of all data gathered and analyzed from Data Research
    - (b) A summary of findings and conclusions from Field Investigation
    - (c) The alternatives analysis shall include, but not be limited to, the following items:
      - 1. Additional investigation requirements
      - 2. Cultural resource and historical survey requirements
      - 3. Construction cost estimates
      - 4. Construction schedules
      - 5. Construction implementation (equipment staging, traffic control, sewer bypass requirements, pump station modifications, etc.)
      - 6. Land acquisition requirements
      - 7. Permitting requirements
      - 8. Horizontal Directional Drilling
  - (2) At least (2) design alternatives, with a recommendation from the DESIGN CONSULTANT

GWA will decide on the final design alternative. As part of the SRF Grant conditions, the DAR will be forwarded to USEPA for concurrence.

- d. Subtask 2.4 – Basis of Design Report
 

Develop a Basis of Design (BOD) Report that will include key information pertaining to any related geotechnical, civil, structural, electrical, and instrumentation design criteria for the modification of Fujita SPS, to be submitted for review and approval by GWA. Design will be in accordance with the applicable standards noted above. The Basis of Design Report at the minimum shall address the following:

  - (1) Geotechnical
    - (a) Geotechnical considerations
    - (b) Geotechnical investigation and report.
  - (2) Civil and Process Mechanical
    - (a) Review latest Water Resource Master Plan updates
    - (b) Current and projected flow rates
    - (c) Redundant force main to accommodate existing and projected flow rates and existing pump capacities
      - 1. Modifying the existing pumps is excluded from this scope of work.



- (d) Changes to hydraulic system curves, pump capacities, electrical demands, and generator requirements
  - (e) Maintaining pump station operations while connecting the redundant force main and valves
  - (f) Ease of redirecting flow between existing and redundant force mains
  - (g) Surrounding infrastructure, utility, and easement considerations
  - (h) Plan and profiles, by-pass pumping (if required), and traffic control
  - (i) Construction Cost Estimates - Develop a Class 4 cost estimate according to the AACE International Cost Estimates Classification System. All cost will be in current US dollars and escalated to the estimated midpoint of construction.
- (3) Structural
- (a) Conformance with seismic and wind loads for Guam
  - (b) Structural modifications
- (4) Electrical and Instrumentation and Control
- (a) Adjustment of existing instrumental controls, VFDs, etc. to accommodate new system curves and capacities
- (5) Architectural and Mechanical (ventilation and plumbing)
- (a) These services are excluded from the scope of work.
- (6) Permitting
- (a) This scope of work assumes that USEPA will prepare a Categorical Exclusion for NEPA compliance and that no local environmental documentation or other NEPA documentation will be required.
  - (b) This scope of work assumes all meetings will be virtual between DESIGN CONSULTANT, GWA, GEPA and/or USEPA.
  - (c) DESIGN CONSULTANT will support USEPA preparation of a NEPA Categorical Exclusion as requested. Support may include revision of the project description, alternatives, BMPs, affected environment, and potential environmental impacts (based on the Alternatives Screen Report) as necessary to provide USEPA with input for the Categorical Exclusion. DESIGN CONSULTANT will coordinate with GWA, GEPA, and USEPA to provide supporting analysis and documentation as requested.
  - (d) DESIGN CONSULTANT will attend and, if requested, present at meetings with local and federal agencies and other interested parties, such as GWA, DPW, Guam EPA, USEPA, and interested members of the community. The scope of work includes up to five (5) online meetings with interested agencies and other interested stakeholders to discuss the environmental review process and analysis.



- (e) The scope of work assumes field surveys and modeling for NEPA compliance (e.g., biological resources, wetlands, archaeological/cultural resources, traffic, noise, etc.) is not required as requested by GWA. If field surveys or modeling are required later, they can be added to the scope of work for an additional fee.
  - (f) This scope of work assumes the Notice of Intent and Storm Water Pollution Prevention Plan to support the National Pollutant Discharge Elimination System (NPDES) Construction General Permit will be prepared by the construction contractor and is not part of this scope of work.
- (7) Deliverables:
- Provide deliverables in accordance with GWA Guidelines.
- (a) Public easement plat
  - (b) Flow analysis and collected flow data
  - (c) Geotechnical report
  - (d) Design Alternatives Report
  - (e) Basis of Design Report (BODR)
  - (f) Pre-Design workshop with GWA project team to review approach, methodologies, findings, and determine design basis
  - (g) Four hard copies and a digital copy of the deliverables listed above was assumed.
- e. Task 2 includes travel for one civil engineer, one structural engineer and one corrosion engineer to conduct the site investigation.

### 3. TASK 3 – DESIGN

Task 3 will be on a lump sum basis. After the final BODR is approved, the DESIGN CONSULTANT shall perform the following tasks to achieve the Final Design documents. Design shall conform with GWA Design Guidelines.

#### a. Subtask 3.1 – Meetings

The DESIGN CONSULTANT shall conduct monthly design review meetings with GWA to review the design process, each design discipline status and issues, and project schedule. And conduct design workshops at each milestone of development at 30%, 60%, 90%, and 100%. Prepare and submit all design review meeting agendas and minutes to GWA project team.

#### b. Subtask 3.2 – Permitting

DESIGN CONSULTANT shall incorporate permitting requirements during design and provide support to obtain the required construction permits signatures and approvals ready for construction. In addition, the DESIGN CONSULTANT shall:

- (1) Identify all permits required. Assist owner in preparing and obtaining all preconstruction permits. Permitting agencies may include the USACE, GEPA, Coastal Management, Department of Parks and Recreation, and the USFWS.





- (2) Comply with the NEPA in accordance with grant conditions.
  - (a) This scope of work assumes that USEPA will prepare a Categorical Exclusion for NEPA compliance and that no local environmental documentation will be required. If USEPA later determines that a NEPA Environmental Assessment would be required (or an Environmental Impact Assessment is required by GEPA), this scope of work can be modified as necessary to provide additional documentation for an additional fee.
  - (b) DESIGN CONSULTANT will support USEPA preparation of a NEPA Categorical Exclusion as requested. Support may include revision of the project description, alternatives, BMPs, affected environment, and potential environmental impacts (based on the Alternatives Screen Report) as necessary to provide USEPA with input for the Categorical Exclusion. DESIGN CONSULTANT will coordinate with GWA, GEPA, and USEPA to provide supporting analysis and documentation as requested.
- (3) The scope of work assumes archival research and preparation of an Archaeological Monitoring and Data Recovery Plan (AMDRP) is required. The Guam SHPO may require preparation of an AMDRP prior to any ground disturbance.
- (4) Coordinate with relevant agencies such as the GEPA, DPW, etc. at the 60%, 90%, and 100% submittals. This includes submitting design documents and maintaining communication throughout the duration of the PROJECT and incorporating any relevant regulation requirements in the design.
- (5) Exclusions:
  - (a) Permit fees; to be paid by the CONTRACTOR.

c. Subtask 3.3 - Design Documents

DESIGN CONSULTANT shall:

- (1) Coordinate with and incorporate information from Program Manager.
- (2) Conduct appropriate boundary and topographic surveys as necessary. This task will include data collection, horizontal and vertical control and boundary study, topographic survey, computation, AutoCAD mapping, translation to GIS mapping format, field check and utility inverts.
- (3) Finalize equipment and instrument list.
- (4) Finalize the engineering report developed from the BODR that documents all disciplines design basis, engineering calculation, final cost estimate, control narrative and supportive data. Three hard copies and a digital copy.



- (1) Prepare progress (30%) plans, specifications, Class 3, (AACE) construction cost estimate, and contract documents, conforming to the GWA and Program Management Design Guidelines as to what should be included in this submittal. Additionally, include profiles, by-pass pumping (if required), and traffic control. Four hard copies of the design documents (2 sets of 36"x24" sized drawings and 2 sets of 11"x17" sized drawings) and a digital copy of the design documents are required.
- (2) Allow three weeks for GWA to review 30% design. Incorporate adjudicated comments into the design and submit a formal response to each comment.
- (3) Prepare progress (60%) plans, specifications, Class 2, (AACE) construction cost estimate, and contract documents, conforming to the GWA and Program Management Design Guidelines as to what should be included in this submittal. Additionally, include profiles, by-pass pumping (if required), and traffic control. Four hard copies of the design documents (2 sets of 36"x24" sized drawings and 2 sets of 11"x17" sized drawings) and a digital copy of the design documents are required.
- (4) Allow three weeks for GWA to review 60% design. Incorporate adjudicated comments into the design and submit a formal response to each comment.
- (5) Prepare progress (90%) plans, specification, Class 1 (AACE) construction cost estimate, and contract documents, conforming to the GWA Design Guidelines. Four hard copies of the design documents (2 sets of 34"x22" sized drawings and 2 sets of 11"x17" sized drawings) and a digital copy of the design documents are required. A copy of the documents will be provided to USEPA for review.
- (6) Allow three weeks for GWA to review 90% design. Incorporate adjudicated comments into the design and submit a formal response to each comment.
- (7) Prepare final (100%) "Issued for Bid" plans, specifications, and contract documents, conforming to GWA and Program Management Design Guidelines. Four hard copies of the design documents (2 sets of 34"x22" sized drawings and 2 sets of 11"x17" sized drawings) an AutoCAD 2019, 2020 GWA GIS Mapping and a digital copy of the design documents are required. A copy of the documents will be provided to USEPA for review.
- (8) Follow all laws of Guam relative to procurements.
- (9) Utilize GWA's latest procurement templates and ensure that no conflict exists between the procurement templates and any material or subject in the documents being produced. GWA's templates will control in the event of conflict such as between liquidated damages provisions, payment terms, etc.
- (10) Prepare permit applications for all local authorities, highway departments, and other pipeline utilities.
- (11) Provide digital copies of the final design documents



- (12) All cost estimates shall conform to the guidelines of the AACE. During the design process, DESIGN CONSULTANT shall immediately notify the GWA when any design decision causes a significant cost increase to the PROJECT.
- (13) Provide deliverables in accordance with GWA Guidelines. One hardcopy set of submittals and an electronic copy shall be submitted for all deliverables, not previously specified.
- (14) Final design drawings shall also be submitted via electronic PDF and AutoCAD 2019 or earlier version.
- (15) The design will not be considered complete until all comments have been addressed and the design is completed and submitted to GWA for final approval.
- (16) It is anticipated that GWA will use a design-bid-build procurement method. Construction documents must be finalized prior to commencement of the formal bidding process, which has a target start date of January 2022.

4. TASK 4 - CONTRACT BIDDING SUPPORT

Task 4 will be on a time and materials basis. The DESIGN CONSULTANT shall provide the following services:

- a. Pre-Bid Meeting agenda and sign-in sheets, coordinate and facilitate the meeting with GWA, and record meeting minutes.
- b. Compile request for clarification, provide input and prepare addenda as needed
- c. Attend bid evaluation conference
- d. Review, evaluate and certify bid tabulations
- e. Make recommendation for construction contract award.

5. TASK 5 - ENGINEERING SUPPORT DURING CONSTRUCTION

Task 5 will be on a time and materials basis.

The DESIGN CONSULTANT shall:

- a. Coordinate preparation of final (100%) "Issued for Construction" conformed plans and specifications incorporating addenda and changes during the bid phase with the CONSTRUCTION MANAGER (CM).
- b. Assist in preconstruction and partnering conferences.
- c. Attend weekly progress meetings, if requested by the CM or GWA.
  - (1) Ten (10) progress meetings are included in this scope of work. If additional meetings are required, a separate scope and fee will be provided.
- d. Review contractor submittals (e.g., product data, shop drawings, design calculations, samples, test results, and other data) required to be submitted by the contractor for conformance with contract documents, if requested by the CM.



- (1) Twenty (20) submittal reviews are included in this scope of work. It is assumed each submittal will have 3 reviews iterations. If additional submittals are required for review, a separate scope and fee will be provided.
- e. Evaluate substitution requests to determine acceptability of substitute materials and equipment proposed by contractor, if requested by the CM.
  - (1) Five (5) substitution request reviews are included in this scope of work. It is assumed each substitution request will have 3 reviews iterations. If additional substitution requests are required for review, a separate scope and fee will be provided.
- f. Site visits by qualified personnel to ensure construction complies with basis of design is excluded from the scope of work and assumed to be provided by others (e.g., CM).
- g. Review requests for additional information, change orders, schedule of values, and contractor's schedule and provide responses/comments, if requested by the CM.
  - (1) Fifteen (15) reviews are included in this scope of work. If additional reviews are required, a separate scope and fee will be provided.
- h. Limited Condition Assessment During Construction
  - (1) It is assumed the current condition of existing force main can be assessed during the excavation for the redundant FM. The condition assessment will be limited to visual observations and photo documentation and provided to the DESIGN CONSULTANT. The DESIGN CONSULTANT shall review limits of rehabilitation or replacement of the existing force main based the limited condition assessment during construction.
- i. Modifications to the contract documents based on the condition assessment of the existing force main during the construction is included in the scope of work. The modifications are limited to the Civil plans and specifications.
- j. Exclusions:
  - (1) Perform preliminary and final inspections and submit punch list. To be provided by the CM.
  - (2) Provide Final Record Drawings based on marked-up construction drawings. To be provided by the Contractor.
  - (3) A complete condition assessment to include travel for a corrosion engineer, soil testing and pipe thickness testing, etc. is excluded from the scope of work. If GWA requires a complete condition assessment of the existing conditions or it is determined during construction that a complete condition assessment is warranted, a separate fee proposal will be provided.
  - (4) Archaeological services during construction are excluded from the scope of work.



- k. GWA agrees that in accordance with generally accepted construction practices, the construction contractor will be required to assume sole and complete responsibility for job site conditions during construction of the project, including safety of all persons and property, and that this requirement shall be made to apply continuously and not be limited to normal working hours. The DESIGN CONSULTANT shall not have control over or charge of, and shall not be responsible for, construction means, methods, techniques, sequences, or procedures, as these are solely the responsibility of the construction contractor. DESIGN CONSULTANT shall not have the authority to stop the work of the construction contractor. In no event shall DESIGN CONSULTANT be liable for the acts or omissions of any construction contractors, their subcontractors, any of their agents or employees, or any other persons or entities performing any work related to this project, or for the failure of any of them to carry out construction work under contract with GWA.

**D. DESIGN AND CONSTRUCTION PERIOD**

The DESIGN CONSULTANT shall recommend a construction contract period for this facility based upon required completion dates, actual availability of labor, materials, equipment, and shipping. The following tentative schedule shall be finalized after award of this design services contract. Actual project completion date to be determined based on selected design.

<u>Action Item</u>	<u>Date</u>
Execution of Contract, Initial NTP	6/2022
Complete design	5/2023
GWA submit 100% construction plans, specifications and bid documents to USEPA	5/2023
USEPA approval of construction plans, specifications and bid documents	5/2023
GWA issue IFB and advertise for construction	5/2023
Open bids, evaluate and select apparent low bidder	6/2023
Award contract/ Notice-to-Proceed to Contractor	7/2023
Anticipated project completion	1/2025

Progress payments shall be made monthly by percent complete on lump sum tasks and unit costs or rates for time and materials tasks deemed acceptable to GWA and the DESIGN CONSULTANT.

A project schedule is provided as Attachment C.

GWA Work Session - September 17, 2024 - ISSUES FOR DECISION

APPENDIX B: FEE DETAIL

Fujita Sewer Pump Station Redundant Force Main

Guam Waterworks Authority

Task Description	Personnel Hours								Budget					Notes/Assumptions	
	Rate (\$/HR)	\$282	\$263	\$217	\$196	\$183	\$109	\$84	Total Hours	Labor	Subconsultants	Other Direct Costs	Taxes		Total
	Principal	Engineer IV	Engineer III	Engineer II	Engineer I	CADD Technician	Clerical								
<b>Task 1 - Project Management (Lump Sum)</b>															
1.1 Project Management Plan	-	-	-	16	-	-	-	32	48	\$ 5,824	\$ -	\$ 12	\$ 307	\$ 6,143.04	Includes preparation and maintenance of plan.
1.2 Project Schedule	-	-	-	11	-	-	-	-	11	\$ 2,161	\$ -	\$ 30	\$ 115	\$ 2,306.15	Assumed 10 months for Pre-design and Design.
1.3 Progress Reports and Administration	10	-	-	42	-	-	-	42	94	\$ 14,590	\$ -	\$ 20	\$ 769	\$ 15,378.91	Assumed 10 months for Pre-design and Design. Include contract administration, budget tracking, invoicing, etc.
1.4 Regular Progress Meetings	-	-	-	44	-	-	-	22	66	\$ 10,487	\$ -	\$ 30	\$ 553	\$ 11,069.95	Assumed 10 monthly meetings for pre-design and design phase. Meetings for permitting coordination, design review, bidding support, and construction support are included in separate tasks.
<b>Subtotal</b>	<b>10</b>	<b>-</b>	<b>-</b>	<b>113</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>96</b>	<b>219</b>	<b>\$ 33,062</b>	<b>\$ -</b>	<b>\$ 92</b>	<b>\$ 1,744</b>	<b>\$ 34,898.04</b>	
<b>Task 2 - Preliminary Design</b>															
2.1 Research and Field Investigation	8	48	8	96	16	16	8	8	200	\$ 40,820	\$ 128,157	\$ 9,270	\$ 9,376	\$ 187,623.64	
2.1.1 Gather and review data.	8	8	8	24	16	16	-	-	80	\$ 15,480	\$ -	\$ 320	\$ 831	\$ 16,631.28	GWA to provide available record drawings, property records, maintenance history, inspection data, flow monitoring data. Excluded from scope of work: Pipeline and manhole inspection, and pot-holing.
2.1.2 Field Investigation	-	32	-	32	-	-	-	-	64	\$ 14,707	\$ -	\$ 8,580	\$ 1,225	\$ 24,511.90	Includes travel for 2 staff for 4 days, site visits and interviews with GWA.
2.1.3 Condition Assessment	-	8	-	32	-	-	-	-	40	\$ 8,391	\$ 110,910	\$ 190	\$ 6,285	\$ 125,776.71	Subconsultants: V&A and APEC. Includes travel for 1 subconsultant to perform condition assessment, testing, sampling, and report preparation.
2.1.4 Environmental surveys	-	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	Excluded from SOW.
2.1.5 AMDRP	-	-	-	8	-	-	-	8	16	\$ 2,242	\$ 17,247	\$ 180	\$ 1,035	\$ 20,703.76	Subconsultant: SEARCH; Includes archival research, preparation of AMDRP support in DAR and preparation of monitoring reports. Daily monitoring rate is separate from this item.
2.2 Easement and Land Acquisition Assistance	-	-	-	8	-	-	-	-	8	\$ 1,572	\$ 14,572	\$ 120	\$ 855	\$ 17,119.54	Subconsultant: Guam Surveyor
2.3 Design Alternatives Report	-	24	40	96	-	-	24	40	224	\$ 39,828	\$ -	\$ 3,500	\$ 2,279	\$ 45,607.43	
2.3.1 Hydraulic Modeling	-	12	24	48	-	-	-	-	84	\$ 17,797	\$ -	\$ 3,300	\$ 1,110	\$ 22,206.25	GWA to provide Hydraulic Model (InfoSWMM) currently being updated by others. Hydraulic model to be updated based on field investigation data. Includes review of model setup. Assumed maximum of 3 scenarios.
2.3.2 Alternatives Analysis and Report	-	12	16	48	-	-	24	40	140	\$ 22,032	\$ -	\$ 200	\$ 1,169	\$ 23,401.18	Include up to 3 alternatives for analysis
2.4 Basis of Design Report	20	26	18	101	50	-	24	24	239	\$ 47,368	\$ 113,710	\$ 780	\$ 8,514	\$ 170,371.43	Improvements along existing FM alignment; Includes Surveying, Geotech, Archaeological Monitoring.
2.4.1 Topographic Survey	-	-	-	32	-	-	-	-	32	\$ 6,286	\$ 59,110	\$ 20	\$ 3,441	\$ 68,857.18	Subconsultant: Guam Surveyor
2.4.2 Geotechnical Investigation and Report	-	8	-	8	-	-	-	-	16	\$ 3,677	\$ 49,600	\$ 30	\$ 2,804	\$ 56,110.69	Subconsultant: GeoEngineering & Testing; Assumed 12 borings. Includes permitting, traffic control, drilling, lab testing, and report. Excludes Archaeological Monitoring.
2.4.3 Archaeological Monitoring for Geotech Investigation	-	-	-	5	-	-	-	-	5	\$ 982	\$ 5,000	\$ -	\$ 315	\$ 6,297.00	Subconsultant: SEARCH; Assumed SHPO to require support to Geotech; 5 work days.
2.4.4 Engineering Basis of Design	16	16	16	48	48	-	16	160	160	\$ 31,727	\$ -	\$ 670	\$ 1,704	\$ 34,100.93	Includes Civil, Struc, Mechanical, Process, Elec, and I&C disciplines.
2.4.6 Pre-Design Workshop	4	2	2	8	2	-	8	26	26	\$ 4,696	\$ -	\$ 60	\$ 250	\$ 5,005.74	1 virtual meeting, 2 hours; no travel.
<b>Subtotal</b>	<b>28</b>	<b>98</b>	<b>66</b>	<b>301</b>	<b>66</b>	<b>40</b>	<b>72</b>	<b>671</b>	<b>\$ 129,588</b>	<b>\$ 256,440</b>	<b>\$ 13,670</b>	<b>\$ 21,024</b>	<b>\$ 420,722.05</b>		

APPENDIX B: FEE DETAIL

Fujita Sewer Pump Station Redundant Force Main

Guam Waterworks Authority

Task Description	Rate (\$/HR)	Personnel Hours							Budget					Notes/Assumptions	
		\$282	\$263	\$217	\$196	\$183	\$109	\$84	Total Hours	Labor	Subconsultants	Other Direct Costs	Taxes		Total
		Principal	Engineer IV	Engineer III	Engineer II	Engineer I	CADD Technician	Clerical							
<b>Task 3 - Design (Lump Sum)</b>															
3.1 Design Meetings and Workshops	6	12	-	24	6	-	24	72	\$ 12,671	\$ -	\$ 110	\$ 672	\$ 13,453.03	Assumed 3 design workshops at 2 hours; 60%, 90%, 100%; no travel.	
3.2 Permitting	1	-	-	44	16	20	12	93	\$ 15,035	\$ -	\$ 1,100	\$ 849	\$ 16,983.61	Includes support for USEPA CATEX preparation and permit agency design reviews and meetings.	
3.2.1 Permit Agency Review	-	-	-	16	-	-	-	16	\$ 3,143	\$ -	\$ 1,010	\$ 218	\$ 4,371.60	DPW, GEPA, GPA, SHPO, etc. Permit fees are excluded from the SOW.	
3.2.2 NEPA CATEX Support	1	-	-	4	16	20	12	53	\$ 7,177	\$ -	\$ 50	\$ 380	\$ 7,607.20	Update project description, alternatives, BMPs, description of affected environment and potential impacts as necessary to support USEPA preparation of a NEPA Categorical Exclusion; coordinate with GWA, GEPA, and USEPA to provide supporting analysis and documentation as requested.	
3.2.3 Meetings and Coordination with local and federal agencies	-	-	-	24	-	-	-	24	\$ 4,715	\$ -	\$ 40	\$ 250	\$ 5,004.81	Virtual Meetings, no travel.	
3.3 Design	172	182	42	493	287	740	80	1,941	\$ 342,258	\$ -	\$ 3,070	\$ 18,164	\$ 363,492.41		
3.3.1 30% Design	50	53	12	144	85	222	24	535	\$ 100,708	\$ -	\$ -	\$ 5,297	\$ 106,005.17	Includes Civil, Arch, Struc, Mechanical, Process, Elec, and I&C disciplines.	
3.3.1.1 Civil	-	19	-	18	61	95	-	193	\$ 30,041	\$ -	\$ -	\$ 1,580	\$ 31,621.68		
3.3.1.2 Architectural	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -		
3.3.1.3 Structural	-	6	-	17	-	32	-	55	\$ 8,413	\$ -	\$ -	\$ 442	\$ 8,855.01		
3.3.1.4 Process	-	4	-	16	-	31	-	51	\$ 7,581	\$ -	\$ -	\$ 399	\$ 7,979.32		
3.3.1.5 Mechanical	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -		
3.3.1.6 Electrical	22	-	-	37	-	40	-	99	\$ 17,842	\$ -	\$ -	\$ 938	\$ 18,780.65		
3.3.1.7 Instrumentation	8	-	-	24	-	24	-	56	\$ 9,592	\$ -	\$ -	\$ 505	\$ 10,096.54		
3.3.1.8 Specifications	8	8	8	8	8	-	24	64	\$ 11,141	\$ -	\$ -	\$ 586	\$ 11,726.69		
3.3.1.9 Cost Estimate	4	8	4	8	16	-	-	40	\$ 8,593	\$ -	\$ -	\$ 453	\$ 9,045.43		
3.3.1.9 QA/QC	8	8	-	16	-	-	-	32	\$ 7,505	\$ -	\$ -	\$ 395	\$ 7,899.85		
3.3.1 60% Design	50	53	12	144	85	222	24	590	\$ 100,708	\$ -	\$ 860	\$ 5,342	\$ 106,910.40	Includes Civil, Struc, Process, Elec, and I&C disciplines.	
3.3.1.1 Civil	-	19	-	18	61	95	-	193	\$ 30,041	\$ -	\$ 580	\$ 1,611	\$ 32,232.19		
3.3.1.2 Architectural	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	Excluded from SOW.	
3.3.1.3 Structural	-	6	-	17	-	32	-	55	\$ 8,413	\$ -	\$ -	\$ 442	\$ 8,855.01		
3.3.1.4 Process	-	4	-	16	-	31	-	51	\$ 7,581	\$ -	\$ -	\$ 399	\$ 7,979.32		
3.3.1.5 Mechanical	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	Excluded from SOW.	
3.3.1.6 Electrical	22	-	-	37	-	40	-	99	\$ 17,842	\$ -	\$ -	\$ 938	\$ 18,780.65		
3.3.1.7 Instrumentation	8	-	-	24	-	24	-	56	\$ 9,592	\$ -	\$ -	\$ 505	\$ 10,096.54		
3.3.1.8 Specifications	8	8	8	8	8	-	24	64	\$ 11,141	\$ -	\$ 270	\$ 600	\$ 12,010.89		
3.3.1.9 Cost Estimate	4	8	4	8	16	-	-	40	\$ 8,593	\$ -	\$ 10	\$ 453	\$ 9,055.96		
3.3.1.10 QA/QC	8	8	-	16	-	-	-	32	\$ 7,505	\$ -	\$ -	\$ 395	\$ 7,899.85		
3.3.2 90% Design	50	53	12	144	85	222	24	590	\$ 100,708	\$ -	\$ 980	\$ 5,349	\$ 107,036.71	Includes Civil, Struc, Process, Elec, and I&C disciplines.	
3.3.2.1 Civil	-	19	-	18	61	95	-	193	\$ 30,041	\$ -	\$ 610	\$ 1,612	\$ 32,263.76		
3.3.2.2 Architectural	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	Excluded from SOW.	
3.3.2.3 Structural	-	6	-	17	-	32	-	55	\$ 8,413	\$ -	\$ -	\$ 442	\$ 8,855.01		
3.3.2.4 Process	-	4	-	16	-	31	-	51	\$ 7,581	\$ -	\$ -	\$ 399	\$ 7,979.32		
3.3.2.5 Mechanical	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	Excluded from SOW.	
3.3.2.6 Electrical	22	-	-	37	-	40	-	99	\$ 17,842	\$ -	\$ -	\$ 938	\$ 18,780.65		
3.3.2.7 Instrumentation	8	-	-	24	-	24	-	56	\$ 9,592	\$ -	\$ -	\$ 505	\$ 10,096.54		
3.3.2.8 Specifications	8	8	8	8	8	-	24	64	\$ 11,141	\$ -	\$ 360	\$ 605	\$ 12,105.63		
3.3.2.9 Cost Estimate	4	8	4	8	16	-	-	40	\$ 8,593	\$ -	\$ 10	\$ 453	\$ 9,055.96		
3.3.2.10 QA/QC	8	8	-	16	-	-	-	32	\$ 7,505	\$ -	\$ -	\$ 395	\$ 7,899.85		
3.3.3 Final Design	22	23	6	61	32	74	8	226	\$ 40,134	\$ -	\$ 1,230	\$ 2,176	\$ 43,540.13	Includes Civil, Struc, Process, Elec, and I&C disciplines.	
3.3.3.1 Civil	-	6	-	6	20	32	-	64	\$ 9,902	\$ -	\$ 770	\$ 561	\$ 11,233.01		
3.3.3.2 Architectural	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	Excluded from SOW.	
3.3.3.3 Structural	-	2	-	6	-	11	-	19	\$ 2,906	\$ -	\$ -	\$ 153	\$ 3,058.91		
3.3.3.4 Process	-	1	-	5	-	10	-	16	\$ 2,337	\$ -	\$ -	\$ 123	\$ 2,460.21		
3.3.3.5 Mechanical	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	Excluded from SOW.	
3.3.3.6 Electrical	7	-	-	12	-	13	-	32	\$ 5,751	\$ -	\$ -	\$ 303	\$ 6,054.00		
3.3.3.7 Instrumentation	3	-	-	8	-	8	-	19	\$ 3,291	\$ -	\$ -	\$ 173	\$ 3,464.49		
3.3.3.8 Specifications	2	2	4	4	4	-	8	24	\$ 4,145	\$ -	\$ 440	\$ 241	\$ 4,825.90		
3.3.3.9 Cost Estimate	2	4	2	4	8	-	-	20	\$ 4,297	\$ -	\$ -	\$ 227	\$ 4,543.77		
3.3.3.10 QA/QC	8	8	-	16	-	-	-	32	\$ 7,505	\$ -	\$ -	\$ 395	\$ 7,899.85		
<b>Subtotal</b>	<b>179</b>	<b>194</b>	<b>42</b>	<b>561</b>	<b>309</b>	<b>760</b>	<b>116</b>	<b>2,106</b>	<b>\$ 369,964</b>	<b>\$ -</b>	<b>\$ 4,280</b>	<b>\$ 19,685</b>	<b>\$ 393,929.05</b>		

APPENDIX B: FEE DETAIL

Fujita Sewer Pump Station Redundant Force Main

Guam Waterworks Authority

Task Description	Rate (\$/HR)	Personnel Hours							Budget					Notes/Assumptions	
		\$282	\$263	\$217	\$196	\$183	\$109	\$84	Total Hours	Labor	Subconsultants	Other Direct Costs	Taxes		Total
<b>Task 4 - Bid Support (T&amp;M)</b>															
4.1 Prebid Conference	-	-	-	8	-	-	4	12	\$ 1,907	\$ -	\$ 10	\$ 101	\$ 2,017.50		
4.2 Addenda/IFB Drawings	4	6	8	8	8	24	24	82	\$ 12,107	\$ -	\$ 380	\$ 657	\$ 13,143.34	Assumed issuance of bid addendum for Contract Documents	
4.3 Bid Review	4	-	-	8	-	-	-	12	\$ 2,700	\$ -	\$ -	\$ 142	\$ 2,841.97		
<b>Subtotal</b>	<b>8</b>	<b>6</b>	<b>8</b>	<b>24</b>	<b>8</b>	<b>24</b>	<b>28</b>	<b>106</b>	<b>\$ 16,713</b>	<b>\$ -</b>	<b>\$ 390</b>	<b>\$ 900</b>	<b>\$ 18,002.81</b>		
<b>Task 5 - Engineering Support During Construction (T&amp;M)</b>															
5.1 Project Management and Close-out	-	-	-	48	-	-	40	88	\$ 12,739	\$ -	\$ 40	\$ 672	\$ 13,450.84	Assumed 21 months for Bid and Construction.	
5.2 Attend CM Meetings, if requested	-	-	-	10	-	-	-	10	\$ 1,964	\$ -	\$ -	\$ 103	\$ 2,067.79	Assumed 10 progress meetings	
5.3 Shop Drawing/Submittal Review	12	-	24	24	-	-	-	60	\$ 13,309	\$ -	\$ 130	\$ 707	\$ 14,146.13	Assumed 20 submittal reviews.	
5.4 Substitution Review	3	-	3	9	-	-	-	15	\$ 3,265	\$ -	\$ 110	\$ 178	\$ 3,553.02	Assumed 5 substitution reviews.	
5.5 Compliance site visit, if requested.	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	Excluded from SOW	
5.6 RFI/RFC	6	-	6	18	-	-	-	30	\$ 6,531	\$ -	\$ 230	\$ 356	\$ 7,116.57	Assumed 15 RFI reviews.	
5.7 Archaeological Monitoring	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	Excluded from the SOW.	
5.8 Follow-up Condition Assessment	-	-	-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	Excluded from the SOW.	
5.9 Modify existing FM rehab/replace Civil Plans/Specs for Phase 2	10	16	4	26	24	32	8	120	\$ 21,552	\$ -	\$ 250	\$ 1,147	\$ 22,948.26		
<b>Subtotal</b>	<b>31</b>	<b>16</b>	<b>37</b>	<b>135</b>	<b>24</b>	<b>32</b>	<b>48</b>	<b>323</b>	<b>\$ 59,360</b>	<b>\$ -</b>	<b>\$ 760</b>	<b>\$ 3,162</b>	<b>\$ 63,282.62</b>		
<b>Total</b>	<b>256</b>	<b>314</b>	<b>153</b>	<b>1,134</b>	<b>407</b>	<b>856</b>	<b>360</b>	<b>3,425</b>	<b>\$ 608,688</b>	<b>\$ 256,440</b>	<b>\$ 19,192</b>	<b>\$ 46,515</b>	<b>\$ 930,834.57</b>		

<b>Lump Sum</b>	<b>\$ 849,549.14</b>
<b>T&amp;M</b>	<b>\$ 81,285.43</b>
<b>Total</b>	<b>\$ 930,834.57</b>

AECOM (Prime)	\$ 674,394.73
All Subs	\$ 256,439.84
Guam Surveyor	\$ 73,682.48
V&A	\$ 106,750.00
APEC	\$ 4,160.00
GeoEngineering & Testing	\$ 49,600.00
SEARCH	\$ 22,247.36





This is **EXHIBIT B**, consisting of 3 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated October 5, 2022.

## **Owner's Responsibilities**

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

B2.01 In addition to other responsibilities of Owner as set forth in this Agreement, Owner shall at its expense:

- A. Provide Engineer with all criteria and full information as to Owner's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations.
- B. Give instructions to Engineer regarding Owner's procurement of construction services (including instructions regarding advertisements for bids, instructions to bidders, and requests for proposals, as applicable), Owner's construction contract practices and requirements, insurance and bonding requirements, electronic transmittals during construction, and other information necessary for the finalization of Owner's bidding-related documents (or requests for proposals or other construction procurement documents), and Construction Contract Documents. Furnish copies (or give specific directions requesting Engineer to use copies already in Engineer's possession) of all design and construction standards, Owner's standard forms, general conditions (if other than EJCDC® C-700, Standard General Conditions of the Construction Contract, 2013 Edition), supplementary conditions, text, and related documents and content for Engineer to include in the draft bidding-related documents (or requests for proposals or other construction procurement documents), and draft Construction Contract Documents, when applicable. Owner shall have responsibility for the final content of (1) such bidding-related documents (or requests for proposals or other construction procurement documents), and (2) those portions of any Construction Contract other than the design (as set forth in the Drawings, Specifications, or otherwise), and other engineering or technical matters; and Owner shall seek the advice of Owner's legal counsel, risk managers, and insurance advisors with respect to the drafting and content of such documents.
- C. Furnish to Engineer any other available information pertinent to the Project including reports and data relative to previous designs, construction, or investigation at or adjacent to the Site.
- D. Following Engineer's assessment of initially-available Project information and data and upon Engineer's request, obtain, furnish, or otherwise make available (if necessary through title searches, or retention of specialists or consultants) such additional Project-related information and data as is reasonably required to enable Engineer to complete its Basic and Additional Services. Such additional information or data would generally include the following:
  1. Property descriptions.
  2. Zoning, deed, and other land use restrictions.

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**Exhibit C – Compensation Packet BC-1: Basic Services (other than RPR) – Lump Sum Method of Payment**  
**EJCDC® E-500, Agreement Between Owner and Engineer for Professional Services.**

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**Page 1**

3. Utility and topographic mapping and surveys.
  4. Property, boundary, easement, right-of-way, and other special surveys or data, including establishing relevant reference points.
  5. Explorations and tests of subsurface conditions at or adjacent to the Site; geotechnical reports and investigations; drawings of physical conditions relating to existing surface or subsurface structures at the Site; hydrographic surveys, laboratory tests and inspections of samples, materials, and equipment; with appropriate professional interpretation of such information or data.
  6. Environmental assessments, audits, investigations, and impact statements, and other relevant environmental, historical, or cultural studies relevant to the Project, the Site, and adjacent areas.
  7. Data or consultations as required for the Project but not otherwise identified in this Agreement.
- E. Arrange for safe access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform services under the Agreement.
- F. Recognizing and acknowledging that Engineer's services and expertise do not include the following services, provide, as required for the Project:
1. Accounting, bond and financial advisory (including, if applicable, "municipal advisor" services as described in Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) and the municipal advisor registration rules issued by the Securities and Exchange Commission), independent cost estimating, and insurance counseling services.
  2. Legal services with regard to issues pertaining to the Project as Owner requires, Contractor raises, or Engineer reasonably requests.
  3. Such auditing services as Owner requires to ascertain how or for what purpose Contractor has used the money paid.
- G. Provide the services of an independent testing laboratory to perform all inspections, tests, and approvals of samples, materials, and equipment required by the Construction Contract Documents (other than those required to be furnished or arranged by Contractor), or to evaluate the performance of materials, equipment, and facilities of Owner, prior to their incorporation into the Work with appropriate professional interpretation thereof. Provide Engineer with the findings and reports generated by testing laboratories, including findings and reports obtained from or through Contractor.
- H. Provide reviews, approvals, and permits from all governmental authorities having jurisdiction to approve all phases of the Project designed or specified by Engineer and such reviews, approvals, and consents from others as may be necessary for completion of each phase of the Project.

- I. Advise Engineer of the identity and scope of services of any independent consultants employed by Owner to perform or furnish services in regard to the Project, including, but not limited to, cost estimating, project peer review, value engineering, and constructability review.
- J. If Owner designates a construction manager or an individual or entity other than, or in addition to, Engineer to represent Owner at the Site, define and set forth as an attachment to this Exhibit B the duties, responsibilities, and limitations of authority of such other party and the relation thereof to the duties, responsibilities, and authority of Engineer.
- K. If more than one prime contract is to be awarded for the Work designed or specified by Engineer, then designate a person or entity to have authority and responsibility for coordinating the activities among the various prime Contractors, and define and set forth the duties, responsibilities, and limitations of authority of such individual or entity and the relation thereof to the duties, responsibilities, and authority of Engineer as an attachment to this Exhibit B that is to be mutually agreed upon and made a part of this Agreement before such services begin.
- L. Inform Engineer in writing of any specific requirements of safety or security programs that are applicable to Engineer, as a visitor to the Site.
- M. Examine all alternative solutions, studies, reports, sketches, Drawings, Specifications, proposals, and other documents presented by Engineer (including obtaining advice of an attorney, risk manager, insurance counselor, financial/municipal advisor, and other advisors or consultants as Owner deems appropriate with respect to such examination) and render in writing timely decisions pertaining thereto.
- N. Inform Engineer regarding any need for assistance in evaluating the possible use of Project Strategies, Technologies, and Techniques, as defined in Exhibit A.
- O. Advise Engineer as to whether Engineer's assistance is requested in identifying opportunities for enhancing the sustainability of the Project.
- P. Place and pay for advertisement for Bids in appropriate publications.
- Q. Furnish to Engineer data as to Owner's anticipated costs for services to be provided by others (including, but not limited to, accounting, bond and financial, independent cost estimating, insurance counseling, and legal advice) for Owner so that Engineer may assist Owner in collating the various cost categories which comprise Total Project Costs.
- R. Attend and participate in the pre-bid conference, bid opening, pre-construction conferences, construction progress and other job related meetings, and Site visits to determine Substantial Completion and readiness of the completed Work for final payment.
- S. Authorize Engineer to provide Additional Services as set forth in Part 2 of Exhibit A of the Agreement, as required.

This is **EXHIBIT C**, consisting of 3 page, referred to in and part of the Agreement between Owner and Engineer for Professional Services dated October 5, 2022.

**Payments to Engineer for Services and Reimbursable Expenses**  
**COMPENSATION PACKET BC-1: Basic Services – Lump Sum**

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Article 2 of the Agreement is supplemented to include the following agreement of the parties:

**ARTICLE 2 – OWNER’S RESPONSIBILITIES**

**C2.01 Compensation for Basic Design Services – Lump Sum Method of Payment**

- A. Owner shall pay Engineer for Basic Design Services set forth in Exhibit A as follows:
1. A Lump Sum amount of \$930,834.57 based on the following estimated distribution of compensation:  
  
See attached Design Fee Proposal, April 29, 2022.  
  
Engineer may alter the distribution of compensation between individual phases noted herein to be consistent with services actually rendered, but shall not exceed the total Lump Sum amount unless approved in writing by the Owner.
  2. The Lump Sum includes compensation for Engineer’s services and services of Engineer’s Consultants, if any. Appropriate amounts have been incorporated in the Lump Sum to account for labor costs, overhead, profit, expenses (other than any expressly allowed Reimbursable Expenses), and Consultant charges.
  3. The portion of the Lump Sum amount billed for Engineer’s services will be based upon Engineer’s estimate of the percentage of the total services actually completed during the billing period.
  4. The basis of any adjustment under this Article may include at the request of the Owner, cost and pricing data pursuant to 2 GAR §3118 and will also be subject to 2 GAR § 5107 Fiscal Responsibility.
- B. *Period of Service:* The compensation amount stipulated in Compensation Packet BC-1 is conditioned on a period of service not exceeding \_\_\_\_months. If such period of service is extended, the compensation amount for Engineer's services shall be appropriately adjusted.

**Payments to Engineer for Services and Reimbursable Expenses**  
**COMPENSATION PACKET BC-2: Basic Services – Standard Hourly Rates**

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Article 2 of the Agreement is supplemented to include the following agreement of the parties:

**ARTICLE 2 – OWNER’S RESPONSIBILITIES**

*C2.01 Compensation For Basic Post-Design Services – Standard Hourly Rates Method of Payment*

- A. Owner shall pay Engineer for Basic Post-Design Services set forth in Exhibit A as follows:
1. An amount equal to the cumulative hours charged to the Project by each class of Engineer’s personnel times Standard Hourly Rates for each applicable billing class for all services performed on the Project, plus Reimbursable Expenses and Engineer’s Consultants’ charges, if any.
  2. The Standard Hourly Rates charged by Engineer constitute full and complete compensation for Engineer’s services, including labor costs, overhead, and profit; the Standard Hourly Rates do not include Reimbursable Expenses or Engineer’s Consultants’ charges.
  3. Engineer’s Standard Hourly Rates are indicated in the negotiated Fee Proposal dated April 29, 2022 and included in the total compensation for services under Paragraph C2.01.
  4. The total compensation for services under Paragraph C2.01 is estimated to be \$930,834.57 based on the following estimated distribution of compensation:
    - a. See attached Revised Design Fee Proposal, April 29, 2022.
  5. Engineer may alter the distribution of compensation between individual phases of the work noted herein to be consistent with services actually rendered, but shall not exceed the total estimated compensation amount unless approved in writing by Owner.
  6. The total estimated compensation for Engineer’s services included in the breakdown by phases as noted in Paragraph C2.01.A.3 incorporates all labor, overhead, profit, Reimbursable Expenses, and Engineer’s Consultants’ charges.
  7. The amounts billed for Engineer’s services under Paragraph C2.01 will be based on the cumulative hours charged to the Project during the billing period by each class of Engineer’s employees times Standard Hourly Rates for each applicable billing class, plus Reimbursable Expenses and Engineer’s Consultants’ charges.

*C2.02 Compensation For Reimbursable Expenses*

- A. Owner shall pay Engineer for all Reimbursable Expenses.

- B. Reimbursable Expenses include the following: transportation (including mileage), lodging, and subsistence incidental thereto; providing and maintaining field office facilities including furnishings and utilities; toll telephone calls, mobile phone charges, and courier charges; reproduction of reports, Drawings, Specifications, bidding-related or other procurement documents, Construction Contract Documents, and similar Project-related items; and Consultants' charges. In addition, if authorized in advance by Owner, Reimbursable Expenses will also include expenses incurred for the use of highly specialized equipment.
- C. The amounts payable to Engineer for Reimbursable Expenses will be the Project-related internal expenses actually incurred or allocated by Engineer, plus all invoiced external Reimbursable Expenses allocable to the Project, the latter multiplied by a factor of 1.0.

C2.03 *Estimated Compensation Amounts:*

- 1. Engineer's estimate of the amounts that will become payable for specified services are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to Engineer under the Agreement.
  - 2. When estimated compensation amounts have been stated herein and it subsequently becomes apparent to Engineer that the total compensation amount thus estimated will be exceeded, Engineer shall give Owner written notice thereof, allowing Owner to consider its options, including suspension or termination of Engineer's services for Owner's convenience. Upon notice, Owner and Engineer promptly shall review the matter of services remaining to be performed and compensation for such services. Owner shall either exercise its right to suspend or terminate Engineer's services for Owner's convenience, agree to such compensation exceeding said estimated amount, or agree to a reduction in the remaining services to be rendered by Engineer, so that total compensation for such services will not exceed said estimated amount when such services are completed. If Owner decides not to suspend the Engineer's services during the negotiations and Engineer exceeds the estimated amount before Owner and Engineer have agreed to an increase in the compensation due Engineer or a reduction in the remaining services, then Engineer shall be paid for all services rendered hereunder.
- D. To the extent necessary to verify Engineer's charges and upon Owner's timely request, Engineer shall make copies of such records available to Owner at cost.

This is **EXHIBIT D** has been deleted.



This is **EXHIBIT E**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated October 5, 2022.



**NOTICE OF ACCEPTABILITY OF WORK**

**PROJECT:** Fujita Sewage Pump Station Redundant Force Main  
GWA Project No. S20-003-EPA

**OWNER:** Guam Waterworks Authority

**CONTRACTOR:**

**OWNER'S CONSTRUCTION CONTRACT IDENTIFICATION:**

**EFFECTIVE DATE OF THE CONSTRUCTION CONTRACT:**

**ENGINEER:**  
**NOTICE DATE:**

**To:** \_\_\_\_\_  
**Owner**

**And To:** \_\_\_\_\_  
**Contractor**

**From:** \_\_\_\_\_  
**Engineer**

The Engineer hereby gives notice to the above Owner and Contractor that Engineer has recommended final payment of Contractor, and that the Work furnished and performed by Contractor under the above Construction Contract is acceptable, expressly subject to the provisions of the related Contract Documents, the Agreement between Owner and Engineer for Professional Services dated \_\_\_\_\_, and the following terms and conditions of this Notice:

**CONDITIONS OF NOTICE OF ACCEPTABILITY OF WORK**

The Notice of Acceptability of Work ("Notice") is expressly made subject to the following terms and conditions to which all those who receive said Notice and rely thereon agree:

1. This Notice is given with the skill and care ordinarily used by members of the engineering profession practicing under similar conditions at the same time and in the same locality.
2. This Notice reflects and is an expression of the Engineer's professional opinion.
3. This Notice is given as to the best of Engineer's knowledge, information, and belief as of the Notice Date.
4. This Notice is based entirely on and expressly limited by the scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Contractor's work) under Engineer's Agreement with Owner, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under such Agreement.
5. This Notice is not a guarantee or warranty of Contractor's performance under the Construction Contract, an acceptance of Work that is not in accordance with the related Contract Documents, including but not limited to defective Work discovered after final inspection, nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Construction Contract Documents, or to otherwise comply with the Construction Contract Documents or the terms of any special guarantees specified therein.
6. This Notice does not relieve Contractor of any surviving obligations under the Construction Contract, and is subject to Owner's reservations of rights with respect to completion and final payment.

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

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

Dated: \_\_\_\_\_

**EXHIBIT F** has been DELETED.

This is **EXHIBIT G**, consisting of 1 page, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated October 5, 2022.

**Insurance**

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Paragraph 6.05 of the Agreement is supplemented to include the following agreement of the parties:

G6.05 *Insurance*

A. The limits of liability for the insurance required by Paragraph 6.05.A of the Agreement are as follows:

1. By Engineer:

- a. Workers' Compensation: Statutory
- b. Employer's Liability:
  - Bodily Injury, each accident: \$100,000
  - Bodily injury by disease, each employee: \$100,000
  - Bodily injury/disease, aggregate: \$200,000
- c. General Liability --
  - 1) Each Occurrence (Bodily Injury and Property Damage): \$1,000,000
  - 2) General Aggregate: \$2,000,000
- d. Excess or Umbrella Liability
  - Per Occurrence: \$2,000,000
  - General Aggregate: \$4,000,000
- e. Automobile Liability --Combined Single Limit (Bodily Injury and Property Damage): \$ 500,000
- f. Professional Liability:
  - Each Claim Made \$2,000,000
  - Annual Aggregate \$4,000,000

To maintain, and cause to maintain throughout the life of the contract and up until the project is completely constructed, insurance for the Engineer and the named subs-consultants, in the amounts and types specified below which name Guam Waterworks Authority as an additional insured for the project in a separate endorsement:

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**Exhibit G – Insurance.**

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1.

2.

3.

B. *Additional Insureds:*

1. The following individuals or entities are to be listed on Engineer's general liability policies of insurance as additional insureds:

**Guam Waterworks Authority**

2. The Owner shall be listed on Engineer's general liability policy as provided in Paragraph 6.05.B.