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C. OPERATION & MAINTENANCE REQUIREMENTS

34. Cleaning. Beginning on the Effective Date, as an interim milestone, GWA shall clean 60 “unique miles” of Gravity Mains in each year, which is approximately 20 percent of GWA’s Gravity Mains. In calculating the number of “unique miles” each year, GWA shall count each individual pipe segment cleaned in that year, but shall not count an individual pipe segment multiple times even if that pipe segment was subject to repeated cleaning in that year. GWA shall clean its entire Gravity Main system every 5 years. This obligation shall terminate upon Termination of the Consent Decree.

35. Hot Spot Cleaning. As an interim milestone, GWA shall implement a Hot Spot Cleaning Program, as conditionally approved by EPA on July 11, 2019, with the focus on repeated, routine cleaning of sewer locations that have a history of blockages, FOG and grit build-up, and SSOs.

36. SSO Response Plan. GWA shall implement an SSO Response Plan as approved by EPA on September 9, 2020. The SSO Response Plan shall include, but not be limited to, standard operating procedures for timely response to SSOs, spill containment, site security, site cleanup, a standard method for the estimation of spill volumes, public notification, and reporting requirements. For any repeat SSO or SSO greater than 1,000 gallons from a Gravity Main, the SSO Response Plan shall require GWA to conduct a CCTV inspection downstream of the SSO location for purposes of determining the cause of the SSO.

37. SSO and Bypass Reporting Requirements. Within thirty (30) Days after the end of each calendar-year quarter (i.e., by January 30, April 30, July 30, and October 30) after the Effective Date, until termination of the Consent Decree, GWA shall submit to EPA and Guam EPA a summary of all SSOs and Bypasses that occurred during the quarter.

a. For each SSO, the reports shall provide: (a) a map showing the locations

1 of all SSOs occurring in the previous quarter in relation to the locations of drinking water wells
2 and Pump Stations; (b) the start and end date and time of each SSO; (c) the location of each SSO
3 including address, village, and manhole numbers; (d) the structure(s) from which each SSO
4 emerged (e.g., manhole, broken pipe, wet well, indoor plumbing, Lateral cleanout, etc.); (e) the
5 pipe size, length, and material; (f) the estimated volume of each SSO including gross volume,
6 amount recovered, and amount not recovered; (g) the cause of each SSO; (h) whether each SSO
7 entered a particular water of the United States, and if so, the name of the water body and whether
8 it entered via storm drains or other man-made conveyances; (i) the results and analysis of any
9 post-SSO CCTV results; and (j) the actions GWA took to control the SSO and prevent future
10 SSOs at the same location.
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13 b. For each Bypass, the reports shall provide: (a) the name of the treatment
14 facility and the part(s) of the facility bypassed; (b) the start and end date and time of the Bypass;
15 (c) a detailed explanation of the cause(s), and all available photographs, videos, and maps that
16 would aid in explaining its cause(s); (d) if a Bypass was in response to a storm event, local rain
17 gauge data for that event; (e) the following flows: Bypass; facility influent; and facility effluent;
18 and a description of how they were determined, including any calculations; (f) the results of any
19 samples taken of the Bypass or receiving water, or an explanation of why sampling was not
20 conducted; (g) the dates that GWA provided verbal and written notifications of the Bypass to
21 EPA and Guam EPA; and (h) the actions GWA took to control the Bypass and prevent future
22 Bypasses.
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25 38. Asset Management. Within six (6) months of the Effective Date, as an interim
26 milestone, GWA shall develop and implement an Asset Management Program, including a
27 complete and regularly updated asset registry; routine condition assessments; preventive
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1 maintenance schedules for all assets; and a system for maintenance tracking. GWA's Asset
2 Management Program shall meet the standards of the "International Standard ISO 55001 - Asset
3 management – Management systems – Requirements" (2014 edition or any subsequent revision).
4 GWA shall integrate the data from the Asset Management Program into GWA's long- and short-
5 term planning processes, including GWA's official capital improvement plan.

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7 **D. PRETREATMENT PROGRAM**

8 39. **Industrial Pretreatment Program.** As a compliance milestone, GWA shall
9 implement and enforce an Industrial Pretreatment Program that complies with 40 C.F.R. Part
10 403, and is approved by the Guam Legislature and by EPA.

11 a. Within nine (9) months of the Effective Date, as an interim milestone,
12 GWA shall submit to EPA, for review and comment, a proposed Industrial Pretreatment
13 Program. As part of the Industrial Pretreatment Program, GWA shall:

14 i. Submit a revised sewer use ordinance that provides GWA with the
15 authority to enforce the requirements of Sections 307(b) and (c) and 402(b)(8) of the Act, 33
16 U.S.C. §§ 1317(b) and (c), 1342(b)(8), and any regulations implementing those Sections;

17 ii. Identify and locate all possible Industrial Users, that might be
18 subject to the Pretreatment Program consistent with 40 C.F.R. § 403.8(f)(6);

19 iii. Conduct a technically-based local limit evaluation as required by
20 40 C.F.R. § 403.8(f)(4) and, if required, develop technically-based local limits as required in 40
21 C.F.R. § 403.5. This local limit evaluation shall include the analyses necessary to determine the
22 maximum headworks loadings for the Northern District and Hagåtña WWTPs and the maximum
23 pollutant levels protection of the Wastewater Collection System, as well as the method of
24 allocating allowable loadings to the Industrial Users (as defined in 40 C.F.R. § 403.3(j)), a
25 schedule of public hearings and outreach, and the ordinance adoption procedure;

1 iv. Implement control mechanisms (such as permits) to ensure that
2 Industrial Users comply with applicable Pretreatment Standards and requirements consistent with
3 40 C.F.R. § 403.8(f);

4 v. Develop and implement an enforcement response plan that
5 contains detailed procedures indicating how GWA will investigate and respond to instances of
6 Industrial User noncompliance in accordance with 40 C.F.R. § 403.8(f)(5);

7 vi. Develop a sampling program to sample and analyze the effluent of
8 its Industrial Users in accordance with 40 C.F.R. § 403.8(f)(2)(v);

9 vii. Conduct inspections and surveillance activities of Significant
10 Industrial Users, as defined in 40 C.F.R. § 403.3(v), at least once annually in order to identify,
11 independent of information supplied by the Industrial User, noncompliance with applicable
12 Pretreatment Standards in accordance with 40 C.F.R. § 403.8(f)(2)(v); and

13 viii. Demonstrate that GWA has sufficient resources and qualified
14 personnel to carry out the Industrial Pretreatment Program in accordance with 40 C.F.R. §
15 403.8(f)(3).

16 b. Within six (6) months of receipt of EPA's comments on the proposed
17 Industrial Pretreatment Program, GWA shall develop and submit to the Guam Legislature for
18 approval pursuant to Guam's Administrative Adjudication Act an Industrial Pretreatment
19 Program that complies with 40 C.F.R. Part 403 and addresses EPA's comments.

20 c. Within thirty (30) Days of the Guam Legislature's approval of the Part
21 403-compliant Industrial Pretreatment Program, GWA shall submit that program to EPA for
22 final review and approval.

23 40. Fats, Oils, and Grease Control Program. Within six (6) months of EPA's
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1 approval of the FOG control program manual, GWA shall develop and submit to the Guam
2 Legislature for approval pursuant to Guam's Administrative Adjudication Act a comprehensive
3 FOG control program to minimize the potential of SSOs caused by FOG that complies with 40
4 C.F.R. Part 403. GWA shall, as a compliance milestone, implement and enforce the Part 403-
5 compliant FOG control program approved by the Guam Legislature. Within 90 Days of the
6 Effective Date, as an interim milestone, GWA shall submit to EPA, for review and approval, a
7 FOG control program manual. The FOG control program shall meet the following requirements:
8

9 a. A Food Service Establishment shall not discharge its wastewater into the
10 Wastewater Collection System without a GWA permit issued in accordance with Guam
11 Administrative Rules and Regulations ("GAR") Title 28 and the FOG control program manual;
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13 b. At a minimum, GWA shall conduct an annual inspection of each GRD at
14 each FSE to verify that a properly-sized GRD has been installed, is operating, and has been
15 maintained in compliance with GAR Title 28 and the FOG control program manual. GWA's
16 annual inspections shall include physical inspection, including coring, of the GRD and review of
17 both GRD maintenance and grease hauling logs;
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19 c. For any FSE or other GRD permittee that has failed to properly install,
20 operate, and maintain a GRD, the FOG control program shall include an enforcement response
21 plan; and
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23 d. For any FSE not served by a GRD, GWA shall require the FSE to obtain a
24 permit and install, operate, and maintain a properly-sized GRD that meets the requirements of
25 GAR Title 28 and the FOG control program manual.

26 E. APPROVAL OF DELIVERABLES/PERMITS

27 41. Approval of Deliverables. After review of any plan, report, or other item that is
28 required to be submitted for EPA's review and approval pursuant to this Consent Decree, EPA

1 shall in writing: (a) approve the submission; (b) approve the submission upon specified
2 conditions; (c) approve part of the submission and disapprove the remainder; or (d) disapprove
3 the submission. EPA will use its best efforts to expeditiously review and take action on
4 deliverables that GWA submits.

5 42. If the submission is approved pursuant to Paragraph 41, GWA shall take all
6 actions required by the plan, report, or other document, in accordance with the schedules and
7 requirements of the plan, report, or other document, as approved. If the submission is
8 conditionally approved or approved in part pursuant to Paragraph 41(b) or (c), GWA shall, upon
9 written direction from EPA, take all actions required by the approved plan, report, or other item
10 that EPA determines are technically severable from any disapproved portions, subject to GWA's
11 right to dispute only the specified conditions or the disapproved portions, under Section IX
12 (Dispute Resolution).
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15 43. If the submission is disapproved in whole or in part pursuant to Paragraph 41(c)
16 or (d), the GWA shall, within thirty (30) Days or such other time as the Parties agree to in
17 writing, correct all deficiencies and resubmit the plan, report, or other item, or disapproved
18 portion thereof, for approval, in accordance with the preceding Paragraphs. If the resubmission
19 is approved in whole or in part, GWA shall proceed in accordance with the preceding Paragraph.
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21 44. Any stipulated penalties applicable to the original submission, as provided in
22 Section VII (Stipulated Penalties), shall accrue during the 30-Day period or other specified
23 period, but shall not be payable unless the resubmission is untimely or is disapproved in whole or
24 in part; provided that, if the original submission was so deficient as to constitute a material
25 breach of GWA's obligations under this Decree, the stipulated penalties applicable to the original
26 submission shall be due and payable notwithstanding any subsequent resubmission.
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1 45. If a resubmitted plan, report, or other item, or portion thereof, is disapproved in
2 whole or in part, EPA may again require the submitting Defendant to correct any deficiencies, in
3 accordance with the preceding Paragraphs, or may itself correct any deficiencies, subject to
4 Defendant's right to invoke Dispute Resolution and the right of EPA to seek stipulated penalties
5 as provided in the preceding Paragraphs.

6 46. In the event of unforeseen contingencies, GWA may make a written request to
7 EPA to change any schedule or deadline in any approved or conditionally approved submission.
8 Any such request must be submitted at least sixty (60) Days prior to the applicable deadline and
9 must include a proposed schedule or deadline, the basis for the request, and how GWA intends to
10 meet the proposed schedule or deadline, including supporting documentation. EPA will approve,
11 approve with conditions, or disapprove the request. If EPA approves or conditionally approves
12 the request, the new schedule or deadline will be applicable as of the date of EPA's approval or
13 conditional approval. Any dispute regarding EPA's decision on a request made under this
14 Paragraph shall be subject to Dispute Resolution pursuant to Section IX (Dispute Resolution).
15 Changes to milestones, schedules, or deadlines set forth in this Consent Decree may only be
16 made through a modification pursuant to Section XVI (Modification).

17 47. Permits. Where any obligation under this Section requires GWA to obtain a
18 federal, State, or local permit or approval, GWA shall submit timely and complete applications
19 and take all other actions necessary to obtain all such permits or approvals. GWA may seek
20 relief under the provisions of Section VIII (Force Majeure) for any delay in the performance of
21 any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or
22 approval required to fulfill such obligation, if GWA has submitted timely and complete
23 applications and has taken all other actions necessary to obtain all such permits or approvals.
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VI. REPORTING REQUIREMENTS

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2 48. Semi-annual Report. By January 31st and July 31st of each year after the Effective
3 Date of this Consent Decree, until termination of this Decree pursuant to Section XVII, GWA
4 shall submit to EPA by email a complete and accurate semi-annual report for the preceding six
5 months that shall address: the status of any construction activities; the status of all injunctive
6 relief compliance requirements set forth in Section V, including Paragraph references and
7 completion dates; completion of milestones; problems encountered or anticipated, together with
8 implemented or proposed solutions; a list of all required permits and the status of those permit
9 applications; operation and maintenance updates; and reports to Guam EPA. More specifically,
10 each of the semi-annual reports shall include:

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12 a. A discussion of the completion of milestones in the Pump Station work
13 plans in the form of a list that identifies by Pump Station name and project, satisfaction of the
14 acceptance criteria in Paragraph 31, and the completion date for all Pump Station improvements
15 scheduled in the applicable Pump Station Preliminary Work Plans.

16
17 b. A statement of the number of miles of Gravity Mains that GWA has
18 Rehabilitated and Replaced in the previous six months, in accordance with Paragraph 12.b. For
19 each Gravity Main Rehabilitated or Replaced, GWA shall provide the following information:
20 (1) the pipe identification number; (2) whether the pipe was Rehabilitated or Replaced; (3) the
21 length of the Gravity Main claimed as credit towards the mileage requirements and the length of
22 Rehabilitation or Replacement performed; (4) the pipe material; (5) the diameter of the pipe;
23 (6) the original installation date of the Gravity Main at issue; (7) the most recent condition
24 assessment of the Gravity Main prior to its Rehabilitation or Replacement; (8) a map depicting
25 the location of each Gravity Main Rehabilitated or Replaced; (9) the average annual rate of
26 Gravity Main Rehabilitation based on a two (2) year rolling average, the number of feet of
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1 Gravity Mains Rehabilitated, and the cumulative total feet of Gravity Main Rehabilitated since
2 the Effective Date; (10) the number of manholes associated with Rehabilitated Gravity Mains
3 and the number of manholes Rehabilitated; (11) the number of Laterals reconnected in
4 association with Gravity Main Rehabilitation and Replacement; (12) if GWA did not achieve its
5 Rehabilitation requirement in Paragraph 12.b, an explanation of why it did not achieve the
6 Rehabilitation requirement and a description of what changes to the work will be made in order
7 to correct the deficiency and achieve the Rehabilitation requirement in GWA's subsequent fiscal
8 years; (13) the Rehabilitation budget and dollars spent on Gravity Main Rehabilitation; (14) the
9 Gravity Main Rehabilitation projects targeted to be completed in GWA's next fiscal year; and
10 (15) an explanation of any revisions that were made to GWA's financial planning associated
11 with future Gravity Main Rehabilitation and Replacement projects.
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14 c. A list of all deliverables submitted to EPA and a description of the work
15 performed pursuant to all deliverables submitted to the United States and approved or
16 commented on by EPA, as well as a list of deliverables submitted to the United States but not yet
17 approved or commented on by EPA.
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19 d. The feet of Gravity Mains cleaned and percent of feet of Gravity Mains in
20 the Wastewater Collection System cleaned as part of the routine and hot spot cleaning programs
21 set forth in Paragraphs 34 and 35, reporting both unique footage and total footage (i.e., including
22 repeat cleanings) and the feet of Gravity Mains in the hot spot cleaning program and the range of
23 cleaning frequencies.
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25 e. A description of the activities to Repair, Rehabilitate, or Replace Acute
26 Defects pursuant to Paragraph 12.a, including the number of Acute Defects found; the number of
27 Acute Defects Repaired, Rehabilitated, and Replaced; and for Acute Defects that were not
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1 Repaired, Rehabilitated, or Replaced within 18 or 24 months from identification, as applicable,
2 an explanation of why they were not Repaired, Rehabilitated, or Replaced and description of the
3 actions or a schedule to Repair, Rehabilitate, or Replace the Acute Defect(s) as soon as possible.

4 f. A summary of the systematic review, pursuant to Paragraph 23.c, of Force
5 Main operating data, which at a minimum includes pump run times, discharge pump rates and
6 pump speed, pump suction and discharge pressures, flow rates, and performance indicators
7 (including excessive noise, vibrations, and leakage), all of which may have revealed Force Main
8 performance issues.

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10 g. A description of any non-compliance with the requirements of this
11 Consent Decree that occurred during the reporting period and an explanation of the violation's
12 likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such
13 violation. If GWA violates, or has reason to believe that it may violate, any requirement of this
14 Consent Decree, GWA shall notify the United States of such violation and its likely duration, in
15 writing, within ten (10) business days of the Day GWA first becomes aware of the violation,
16 with an explanation of the violation's likely cause and of the remedial steps taken, or to be taken,
17 to prevent or minimize such violation. If any event occurs, or may occur, that might delay the
18 performance of any obligation under this Consent Decree, GWA shall provide notice orally or by
19 electronic transmission to EPA and the United States, within 72 hours or two (2) business days
20 of when GWA first knew that such event might cause a delay, whichever period of time is
21 longer. Within seven (7) Days thereafter, GWA shall provide in writing to EPA an explanation
22 and description of the reasons for the delay; the anticipated duration of the delay; all actions
23 taken or to be taken to prevent, minimize or mitigate the delay or the effect thereof, and a
24 schedule for implementation of any such measures; and a statement as to whether, in the opinion
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1 of GWA, such event may cause or contribute to an endangerment to public health, welfare or the
2 environment.

3 h. Whenever any violation of this Consent Decree or any of the applicable
4 NPDES Permits or any other event affecting GWA's performance under this Consent Decree, or
5 the performance of its POTW, may pose an immediate threat to the public health or welfare or
6 the environment, GWA shall notify EPA orally and by e-mail as soon as possible, but no later
7 than 24 hours after GWA first knew of the violation or event. If the cause of a violation or event
8 cannot be fully explained at the time the report is due, GWA shall so state in the report. GWA
9 shall investigate the cause of the violation or event and shall then submit an amendment to the
10 report, including a full explanation of the cause of the violation or event, within thirty (30) Days
11 of the Day GWA becomes aware of the cause of the violation or event. Nothing in this
12 Paragraph relieves GWA of its obligation to provide the notice required by Section VIII (Force
13 Majeure).

14 49. Annual Meeting. At a mutually agreeable date in March of each year after the
15 Effective Date, the Parties shall meet, either in person or via teleconference, to review GWA's
16 compliance with the requirements of the Consent Decree and to discuss the status of the work
17 being performed by GWA pursuant to the Decree and interim milestones and compliance
18 milestones set forth in the Decree. Two weeks before the scheduled annual meeting, GWA shall
19 provide EPA a proposed agenda addressing issues to be discussed.

20 50. Each report submitted by GWA under this Section shall be signed by an official
21 of GWA and include the following certification:

22 I certify under penalty of law that this document and all
23 attachments were prepared under my direction or supervision in
24 accordance with a system designed to assure that qualified
25 personnel properly gather and evaluate the information submitted.

1 Based on my inquiry of the person or persons who manage the
2 system, or those persons directly responsible for gathering the
3 information, the information submitted is, to the best of my
4 knowledge and belief, true, accurate, and complete. I have no
5 personal knowledge that the information submitted is other than
6 true, accurate, and complete. I am aware that there are significant
7 penalties for submitting false information, including the possibility
8 of fine and imprisonment for knowing violations.

9 This certification requirement does not apply to emergency or similar notifications where
10 compliance would be impractical.

11 51. The reporting requirements of this Consent Decree do not relieve GWA of any
12 reporting obligations required by the Act or implementing regulations, or by any other federal,
13 State, or local law, regulation, permit, or other requirement.

14 52. Any information provided pursuant to this Consent Decree may be used by the
15 United States in any proceeding to enforce the provisions of this Consent Decree and as
16 otherwise permitted by law.

17 **VII. STIPULATED PENALTIES**

18 53. GWA shall be liable for stipulated penalties to the United States for violations of
19 this Consent Decree as specified below, unless excused under Section VIII (Force Majeure). A
20 violation includes failing to perform any obligation required by the terms of this Decree,
21 including any work plan or schedule approved under this Decree, according to all applicable
22 requirements of this Decree and within the specified time schedules established by or approved
23 under this Decree.

24 54. Interim Effluent Limits. The following stipulated penalties shall accrue per
25 violation for each violation of an interim effluent limit or monitoring requirement established
26 pursuant to Paragraph 33 (a violation of a weekly or monthly average limit, or a monitoring
27 requirement, shall be considered a single violation):
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<u>Penalty Per Violation</u>	<u>Period of Noncompliance</u>
\$500.....	Daily Maximum Limit or Monitoring Requirement
\$1,000	Weekly Average Limit
\$1,500	Monthly Average Limit

55. Gravity Main Rehabilitation or Replacement. GWA’s failure to meet a target to Rehabilitate or Replace Gravity Mains pursuant to Paragraph 12.b shall result in a stipulated penalty as follows:

<u>Feet Not Completed</u>	<u>Penalty Per Foot</u>
Up to and including 5000 feet	\$6
Over 5000 feet	\$12

56. For failure to clean the required minimum miles of Gravity Mains in any year as set forth in Paragraph 35, GWA shall be liable for a stipulated penalty of \$3,500 per mile below the annual performance requirement.

57. SSOs.

a. For each SSO that reaches waters of the United States, GWA shall pay a stipulated penalty in the amount of \$750 for SSOs under 1,000 gallons, \$1,000 for SSOs between 1,000 and 10,000 gallons, \$4,000 for SSOs between 10,000 and 100,000 gallons, and \$10,000 for SSOs over 100,000 gallons. For each SSO that does not reach waters of the United States, GWA shall pay a stipulated penalty in the amount of \$200 for SSOs under 1,000 gallons, \$750 for SSOs between 1,000 and 10,000 gallons, \$3,000 for SSOs between 10,000 and 100,000 gallons, and \$8,000 for SSOs over 100,000 gallons. Notwithstanding the foregoing, GWA shall not be liable for stipulated penalties under this Paragraph if GWA demonstrates that an SSO was caused by vandalism or a contractor not working for GWA; and GWA demonstrates that it has used all reasonable measures to prevent said SSO and properly respond, including limiting public contact.

1 b. For failure to respond to an SSO in accordance with the SSO Response
 2 Plan after approval by EPA pursuant to Paragraph 37, GWA shall pay a stipulated penalty of
 3 \$1,000 per SSO.

4 58. Compliance Milestones.

5 a. The following stipulated penalties shall accrue per violation per Day for
 6 each violation of the compliance milestones identified in subparagraph b of this Paragraph.
 7

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$750.....	1 st through 30 th Day
\$1,000.....	31 st through 60 th Day
\$1,500.....	61 st Day and beyond

11 b. List of Compliance Milestones.

12 (1) Failure to Repair, Rehabilitate, or Replace Acute Defects pursuant to Paragraph 12.a.

13 (2) Failure to submit a Long-Term Gravity Main Plan pursuant to Paragraph 13.a.

14 (2) Failure to complete Capacity Assurance Projects pursuant to Paragraph 15.

15 (3) Failure to complete implementation of the Force Main Action Plan pursuant to
 16 Paragraph 21.
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18 (4) Failure to complete any Pump Station Priority Project pursuant to Paragraph 25, or
 19 failure to complete any Pump Station improvement work pursuant to Paragraph 30.
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21 (5) Failure to submit a feasibility study for secondary treatment upgrades to the Hagåtña
 22 WWTP pursuant to Paragraph 32.

23 (6) Failure to implement an approved Industrial Pretreatment Program pursuant to
 24 Paragraph 39.
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26 (7) Failure to implement an approved FOG control program pursuant to Paragraph 40.

27 59. Interim Milestones.
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a. The following stipulated penalties shall accrue per violation per Day for each violation of the requirements identified in subparagraph b of this Paragraph.

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$500.....	1 st through 30 th Day
\$750.....	31 st through 60 th Day
\$1,000.....	61 st Day and beyond

b. List of Interim Milestones.

- (1) Failure to complete CCTV inspections, failure to assess CCTV inspections, or failure to submit a Gravity Main Condition Assessment Report pursuant to Paragraph 11. *www*
- (2) Failure to submit a Gravity Main Work Plan pursuant to Paragraph 2.c.
- (3) Failure to submit a Capacity Evaluation Report pursuant to Paragraph 15.
- (4) Failure to submit a Capacity Assurance Report pursuant to Paragraph 16.
- (5) Failure to submit a Force Main inventory pursuant to Paragraph 17.
- (6) Failure to complete a Force Main condition assessment pursuant to Paragraph 18.
- (7) Failure to submit:
 - a Force Main Assessment Report pursuant to Paragraph 19;
 - a Force Main Action Plan pursuant to Paragraph 20;
 - a Force Main Spill Contingency Plan pursuant to Paragraph 22;
 - a Force Main O&M Program pursuant to Paragraph 23.
- (8) Failure to submit Pump Station Preliminary Work Plans pursuant to Paragraph 27.
- (9) Failure to submit Pump Station condition assessments pursuant to Paragraph 29.
- (10) Failure to clean 60 “unique miles” of Gravity Mains annually pursuant to Paragraph 34.
- (11) Failure to implement the Hot Spot Cleaning Program pursuant to Paragraph 35.

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(12) Failure to develop and implement the Asset Management Program pursuant to Paragraph 38.

(13) Failure to submit a proposed Industrial Pretreatment Program pursuant to Paragraph 39.

(14) Failure to submit a FOG control program manual pursuant to Paragraph 4040.

60. Reporting and Implementation Requirements. The following stipulated penalties shall accrue per violation per Day for each violation of the reporting requirements of Paragraph 37 (SSO and Bypass reporting) or Section VI (Reporting Requirements), and for each failure to implement any deliverable approved or conditionally approved pursuant to Section V.E (Approval of Deliverables/Permits) that is not specifically listed in Paragraph 58.b (Compliance Milestones) or 59.b (Interim Milestones):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$500.....	1st through 30th Day
\$1,000.....	31st through 60th Day
\$1,250.....	61st Day and beyond

61. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

62. GWA shall pay any stipulated penalty within thirty (30) Days of receiving the United States' written demand.

63. The United States may, in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due it under this Consent Decree.

64. Stipulated penalties shall continue to accrue as provided in Paragraph 61, during

1 any Dispute Resolution, but need not be paid until the following:

2 a. If the dispute is resolved by agreement of the Parties or by a decision of
3 EPA that is not appealed to the Court, GWA shall pay accrued penalties determined to be owing,
4 together with interest, to the United States within thirty (30) Days of the Effective Date of the
5 agreement or the receipt of EPA's decision or order.

6 b. If the dispute is appealed to the Court and the United States prevails in
7 whole or in part, GWA shall pay all accrued penalties determined by the Court to be owing,
8 together with interest, within sixty (60) Days of receiving the Court's decision or order, except as
9 provided in subparagraph c of this Paragraph.

10 c. If any Party appeals the District Court's decision, GWA shall pay all
11 accrued penalties determined to be owing, together with interest, within fifteen (15) Days of
12 receiving the final appellate court decision.

13 65. GWA shall pay stipulated penalties owing to the United States by FedWire
14 Electronic Funds Transfer ("EFT") to the DOJ account, in accordance with instructions provided
15 to GWA by the Financial Litigation Unit ("FLU") of the United States Attorney's Office for the
16 District of Guam after the Effective Date. The payment instructions provided by the FLU will
17 include a Consolidated Debt Collection System ("CDCS") number, which GWA shall use to
18 identify all payments required to be made in accordance with this Consent Decree. The FLU
19 will provide the payment instructions to:
20
21
22

23 Taling M Taitano
24 Chief Financial Officer
25 Guam Waterworks Authority
26 Ste 200, Gloria B. Nelson Public Service Building
27 688 Route 15
28 Mangilao, Guam 96913
(671) 300-6860
tmtaitano@guamwaterworks.org

1 on behalf of GWA. GWA may change the individual to receive payment instructions on its
2 behalf by providing written notice of such change to DOJ and EPA in accordance with Section
3 XIII (Notices).

4 66. At the time of payment, GWA shall send notice that payment has been made: (i)
5 to EPA via email at cinwd_acctsreceivable@epa.gov or via regular mail at EPA Cincinnati
6 Finance Office, 26 W. Martin Luther King Drive, Cincinnati, Ohio 45268; and (ii) to DOJ via
7 email or regular mail in accordance with Section XIII; and (iii) to EPA in accordance with
8 Section XIII. Such notice shall state that the payment is for stipulated penalties owed pursuant to
9 the Consent Decree in *United States v. Guam Waterworks Authority and Government of Guam*,
10 shall state the violation(s) for which the penalties are being paid, and shall reference the civil
11 action number, CDCS Number and DOJ case number DJ 90-5-1-1-11696.

12
13
14 67. If GWA fails to pay stipulated penalties according to the terms of this Consent
15 Decree, GWA shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961,
16 accruing as of the date payment became due. Nothing in this Paragraph shall be construed to
17 limit the United States from seeking any remedy otherwise provided by law for GWA's failure to
18 pay any stipulated penalties.

19
20 68. The payment of penalties and interest, if any, shall not alter in any way
21 Defendant's obligation to complete the performance of the requirements of this Consent Decree.

22 69. Non-Exclusivity of Remedy. Stipulated penalties are not the United States'
23 exclusive remedy for violations of this Consent Decree. Subject to the provisions of Section XI
24 (Effect of Settlement/Reservation of Rights), the United States expressly reserves the right to
25 seek any other relief it deems appropriate for GWA's violation of this Decree or applicable law,
26 including but not limited to an action against Defendant(s) for statutory penalties, additional
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1 injunctive relief, mitigation or offset measures, and/or contempt. However, the amount of any
2 statutory penalty assessed for a violation of this Consent Decree shall be reduced by an amount
3 equal to the amount of any stipulated penalty assessed and paid pursuant to this Consent Decree.

4 **VIII. FORCE MAJEURE**

5 70. "Force majeure," for purposes of this Consent Decree, is defined as any event
6 arising from causes beyond the control of GWA, of any entity controlled by GWA, or of GWA's
7 contractors, that delays or prevents the performance of any obligation under this Consent Decree
8 despite best efforts of GWA to fulfill the obligation. The requirement that GWA exercise "best
9 efforts to fulfill the obligation" includes using best efforts to anticipate any reasonably
10 foreseeable potential force majeure event and best efforts to address the effects of any potential
11 force majeure event (a) as it is occurring and (b) following the potential force majeure, such that
12 the delay and any adverse effects of the delay are minimized to the maximum extent practicable.
13 "Force Majeure" does not include financial inability to perform any obligation under this
14 Consent Decree.
15

16
17 71. If any event occurs or has occurred that falls within Section VIII (Force Majeure)
18 of this Consent Decree that may delay the performance of any obligation under this Consent
19 Decree, GWA shall provide notice orally or by electronic transmission to EPA and the United
20 States, within 72 hours or two (2) business days of when GWA first knew that the alleged force
21 majeure event might cause a delay, whichever period of time is longer. Within seven (7) Days
22 thereafter, GWA shall provide in writing to EPA an explanation and description of the reasons
23 for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or
24 minimize the delay; a schedule for implementation of any measures to be taken to prevent or
25 mitigate the delay or the effect of the delay; GWA's rationale for attributing such delay to a force
26 majeure event; and a statement as to whether, in the opinion of GWA, such event may cause or
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1 contribute to an endangerment to public health, welfare or the environment. EPA may, in its
2 unreviewable discretion, extend the time for the written explanation. GWA shall include with
3 any notice all available documentation supporting the claim that the delay was attributable to a
4 force majeure. Failure to comply with the above requirements shall preclude GWA from
5 asserting any claim of force majeure for that event for the period of time of such failure to
6 comply, and for any additional delay caused by such failure. GWA shall be deemed to know of
7 any circumstance of which GWA, any entity controlled by GWA, or GWA's contractors knew or
8 should have known.
9

10 72. If EPA agrees that the delay or anticipated delay is attributable to a force majeure
11 event, the time for performance of the obligations under this Consent Decree that are affected by
12 the force majeure event will be extended by EPA for such time as is necessary to complete those
13 obligations. An extension of the time for performance of the obligations affected by the force
14 majeure event shall not, of itself, extend the time for performance of any other obligation. EPA
15 will notify GWA in writing of the length of the extension, if any, for performance of the
16 obligations affected by the force majeure event.
17
18

19 73. If EPA does not agree that the delay or anticipated delay has been or will be
20 caused by a force majeure event, EPA will notify GWA in writing of its decision.

21 74. If GWA elects to invoke the dispute resolution procedures set forth in Section IX
22 (Dispute Resolution), it shall do so no later than fifteen (15) Days after receipt of EPA's notice.
23 In any such proceeding, GWA shall have the burden of demonstrating by a preponderance of the
24 evidence that the delay or anticipated delay has been or will be caused by a force majeure event,
25 that the duration of the delay or the extension sought was or will be warranted under the
26 circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and
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1 that GWA complied with the requirements of Paragraphs 71 and 72. If GWA carries this burden,
2 the delay at issue shall be deemed not to be a violation by GWA of the affected obligation of this
3 Consent Decree identified to EPA and the Court.

4 **IX. DISPUTE RESOLUTION**

5 75. Unless otherwise expressly provided for in this Consent Decree, the dispute
6 resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising
7 under or with respect to this Consent Decree. Defendants' failure to seek resolution of a dispute
8 under this Section shall preclude Defendants from raising any such issue as a defense to an
9 action by the United States to enforce any obligation of Defendants arising under this Decree.
10

11 76. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under
12 this Consent Decree shall first be the subject of informal negotiations. The dispute shall be
13 considered to have arisen when either Defendant sends the United States a written Notice of
14 Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal
15 negotiations shall not exceed twenty (20) Days from the date the dispute arises, unless that
16 period is modified by written agreement by the relevant Parties. If the relevant Parties cannot
17 resolve a dispute by informal negotiations, then the position advanced by the United States shall
18 be delivered in writing and considered binding unless, within thirty (30) Days after the
19 conclusion of the informal negotiation period, the notifying Defendant invokes formal dispute
20 resolution procedures as set forth below.
21
22

23 77. Formal Dispute Resolution. The notifying Defendant shall invoke formal dispute
24 resolution procedures, within the time period provided in the preceding Paragraph, by serving on
25 the United States a written Statement of Position regarding the matter in dispute. The notifying
26 Defendant's Statement of Position shall not raise any issue not raised in its Notice of Dispute
27 described in Paragraph 76. The Statement of Position shall include, but need not be limited to,
28

1 any factual data, analysis, or opinion supporting the Defendant's position and any supporting
2 documentation relied upon by the Defendant.

3 78. The United States shall serve its Statement of Position within forty-five (45) Days
4 of receipt of the notifying Defendant's Statement of Position. The United States' Statement of
5 Position shall include, but need not be limited to, any factual data, analysis, or opinion
6 supporting that position and any supporting documentation relied upon by the United States.
7 The United States' Statement of Position shall be binding on the Defendant, unless the
8 Defendant files a motion for judicial review of the dispute in accordance with the following
9 Paragraph.
10

11 79. The notifying Defendant may seek judicial review of the dispute by filing with the
12 Court and serving on the United States, in accordance with Section XIII (Notices), a motion
13 requesting judicial resolution of the dispute. The motion must be filed within thirty (30) Days of
14 receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The
15 motion shall contain a written statement of the notifying Defendant's position on the matter in
16 dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set
17 forth the relief requested and any schedule within which the dispute must be resolved for orderly
18 implementation of the Consent Decree. The motion may not raise any issue not raised in GWA's
19 Statement of Position pursuant to Paragraph 77, unless the United States raises a new issue of
20 law or fact in its Statement of Position.
21
22

23 80. The United States shall respond to the notifying Defendant's motion within the
24 time period allowed by the Local Rules of this Court. The notifying Defendant may file a reply
25 memorandum, to the extent permitted by the Local Rules.
26

27 81. Standard of Review.
28

1 a. Disputes Regarding Schedules and Deadlines in Deliverables. In any
2 dispute for which the notifying Defendant seeks judicial review concerning the adequacy or
3 appropriateness of a schedule or deadline in a deliverable submitted for EPA's review and
4 approval, or for a schedule or deadline to which GWA seeks a change pursuant to Paragraph 476,
5 the notifying Defendant shall bear the burden of demonstrating by a preponderance of the
6 evidence that the notifying Defendant's position on the issues in dispute should prevail over the
7 United States' position because it is more consistent with the objectives of this Consent Decree.

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9 b. Other Disputes. Judicial review of all other disputes shall be governed by
10 applicable principles of law.

11 82. The invocation of dispute resolution procedures under this Section shall not, by
12 itself, extend, postpone, or affect in any way any obligation of the Defendant(s) under this
13 Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties
14 with respect to the disputed matter shall continue to accrue from the first Day of noncompliance,
15 but payment shall be stayed pending resolution of the dispute as provided in Paragraph 65. If the
16 notifying Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed
17 and paid as provided in Section VII (Stipulated Penalties).

18
19
20 **X. INFORMATION COLLECTION AND RETENTION**

21 83. The United States and its representatives, including attorneys, contractors, and
22 consultants, shall have the right of entry into any facility covered by this Consent Decree, at all
23 reasonable times, upon presentation of credentials, to:

- 24 a. monitor the progress of activities required under this Consent Decree;
25 b. verify any data or information submitted to the United States in
26 accordance with the terms of this Consent Decree;
27 c. obtain samples and, upon request, splits of any samples taken by a GWA
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1 or its representatives, contractors, or consultants;

2 d. obtain documentary evidence, including photographs and similar data; and

3 e. assess GWA's compliance with this Consent Decree.

4 84. Upon request, GWA shall provide EPA or its authorized representatives splits of
5 any samples taken by GWA. Upon request, EPA shall provide GWA splits of any samples taken
6 by EPA.

7
8 85. Until two years after the termination of this Consent Decree, GWA shall retain,
9 and shall instruct its contractors and agents to preserve, all non-identical copies of all documents,
10 records, or other information (including documents, records, or other information in electronic
11 form) in its or its contractors' or agents' possession or control, or that come into its or its
12 contractors' or agents' possession or control, and that document GWA's performance of its
13 obligations under this Consent Decree. This information-retention requirement shall apply
14 regardless of any contrary corporate or institutional policies or procedures. At any time during
15 this information-retention period, upon request by the United States, GWA shall provide copies
16 of any documents, records, or other information required to be maintained under this Paragraph.
17

18
19 86. At the conclusion of the information-retention period provided in the preceding
20 Paragraph, GWA shall notify the United States at least ninety (90) Days prior to the destruction
21 of any documents, records, or other information subject to the requirements of the preceding
22 Paragraph and, upon request by the United States, GWA shall deliver any such documents,
23 records, or other information to EPA. GWA may assert that certain documents, records, or other
24 information is privileged under the attorney-client privilege or any other privilege recognized by
25 federal law. If GWA asserts such a privilege, it shall provide the following: (a) the title of the
26 document, record, or information; (b) the date of the document, record, or information; (c) the
27
28

1 name and title of each author of the document, record, or information; (d) the name and title of
 2 each addressee and recipient; (e) a description of the subject of the document, record, or
 3 information; and (f) the privilege asserted by GWA. However, GWA may make no claim of
 4 privilege or protection regarding any data regarding GWA’s POTW, including all sampling,
 5 analytical, monitoring, scientific, chemical or engineering data. The United States reserves the
 6 right to challenge any claim of privilege regarding documents, records, or other information
 7 created or generated pursuant to the requirements of this Consent Decree.
 8

9 87. GWA may also assert that information required to be provided under this Section
 10 is protected as Confidential Business Information (“CBI”) under 40 C.F.R. Part 2. As to any
 11 information that GWA seeks to protect as CBI, it shall follow the procedures set forth in 40
 12 C.F.R. Part 2.
 13

14 88. This Consent Decree in no way limits or affects any right of entry and inspection,
 15 or any right to obtain information, held by the United States pursuant to applicable federal laws,
 16 regulations, or permits, nor does it limit or affect any duty or obligation of either Defendant to
 17 maintain documents, records, or other information imposed by applicable federal or State laws,
 18 regulations, or permits.
 19

20 **XI. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS**

21 89. This Consent Decree resolves only the civil claims of the United States for the
 22 violations alleged in the Complaint filed in this action through the date of lodging of this Consent
 23 Decree only with respect to the injunctive relief set forth in Section V (Compliance Measures).
 24 The United States specifically reserves all rights to seek civil penalties for each of the violations
 25 alleged in the Complaint and further injunctive relief for those alleged violations, including
 26 implementation of the approved Force Main Action Plan, completion of Tier 2, 3, and 4 Pump
 27 Station Projects, Gravity Main Replacement or Rehabilitation of at least 35 additional “unique
 28

1 miles,” additional wet and dry flow monitoring for the Tumon Basin, and upgrading the Hagåtña
2 WWTP to secondary treatment.

3 90. The United States reserves all legal and equitable remedies available to enforce
4 the provisions of this Consent Decree. This Consent Decree shall not be construed to limit the
5 rights of the United States to obtain penalties or injunctive relief under the Act or implementing
6 regulations, or under other federal laws, regulations, or permit conditions, except as expressly
7 stated in Paragraph 89. The United States further reserves all legal and equitable remedies to
8 address any imminent and substantial endangerment to the public health or welfare or the
9 environment arising at, or posed by, GWA’s Facility, whether related to the violations addressed
10 in this Consent Decree or otherwise.
11

12
13 91. GWA reserves all legal and equitable defenses to enforcement of the provisions of
14 this Consent Decree, subject to the procedures set forth in Sections VIII (Force Majeure) and IX
15 (Dispute Resolution).

16 92. In any subsequent administrative or judicial proceeding initiated by the United
17 States for injunctive relief, civil penalties, other appropriate relief relating to the Facility or a
18 GWA’s violations, GWA shall not assert, and may not maintain, any defense or claim based
19 upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion,
20 claim-splitting, or other defenses based upon any contention that the claims raised by the United
21 States in the subsequent proceeding were or should have been brought in the instant case, except
22 with respect to claims that have been specifically resolved pursuant to Paragraph 89. Nothing in
23 this Consent Decree shall constitute an admission of any fact or of any liability, or a waiver of
24 any right, except as expressly stated herein.
25

26
27 93. This Consent Decree is not a permit, or a modification of any permit, under any
28

1 federal, State, or local laws or regulations. The Defendants are responsible for achieving and
2 maintaining complete compliance with all applicable federal, State, and local laws, regulations,
3 and permits; and the Defendants' compliance with this Consent Decree shall be no defense to
4 any action commenced by the United States pursuant to any such laws, regulations, or permits,
5 except as set forth herein. The United States does not, by its consent to the entry of this Consent
6 Decree, warrant or aver in any manner that Defendants' compliance with any aspect of this
7 Consent Decree will result in compliance with provisions of the Act, 33 U.S.C. §§ 1251-1388, or
8 with any other provisions of federal, State, or local laws, regulations, or permits.
9

10 94. Nothing in this Consent Decree limits the rights or defenses available under CWA
11 Section 309(e), 33 U.S.C. § 1319(e), in the event that the laws of the Territory, as currently or
12 hereafter enacted, may prevent GWA from raising the revenues needed to comply with this
13 Decree.
14

15 95. This Consent Decree does not limit or affect the rights of the Defendants or of the
16 United States against any third parties, not party to this Consent Decree, nor does it limit the
17 rights of third parties, not party to this Consent Decree, against the Defendants, except as
18 otherwise provided by law.
19

20 96. This Consent Decree shall not be construed to create rights in, or grant any cause
21 of action to, any third party not party to this Consent Decree.
22

23 **XII. COSTS**

24 97. The Parties shall bear their own costs of this action, including attorneys' fees,
25 except that the United States shall be entitled to collect the costs (including attorneys' fees)
26 incurred in any action necessary to collect any stipulated penalties due but not paid by GWA.
27

28 **XIII. NOTICES**

98. Unless otherwise specified in this Decree, whenever notifications, submissions, or

1 communications are required by this Consent Decree, they shall be made in writing and
2 addressed as follows:

3 As to the United States by email: eescdcopy.enrd@usdoj.gov
4 Re: DJ # 90-5-1-1-11696

5 As to the United States by mail: EES Case Management Unit
6 Environment and Natural Resources Division
7 U.S. Department of Justice
8 P.O. Box 7611
9 Washington, D.C. 20044-7611
10 Re: DJ # 90-5-1-1-11696

11 As to EPA by email: ***

12 As to EPA by mail: Section Chief
13 Water Section
14 Enforcement Division (ENF -*.*)
15 U.S. Environmental Protection Agency, Region IX
16 75 Hawthorne Street
17 San Francisco, CA 94105

18 As to GWA: Theresa G. Rojas, Esq.
19 Legal Counsel
20 Guam Waterworks Authority
21 Ste. 200, Gloria B. Nelson Public Service Building
22 688 Route 15
23 Mangilao, Guam 96913
24 tgrojas@guamwaterworks.org

25 As to Government of Guam: Graham Botha
26 Deputy Attorney General
27 Office of the Attorney General of Guam
28 590 S. Marine Corps Drive, Ste. 801
Tamuning, Guam 96913
gbotha@oagguam.org

Jeffrey Moots
Legal Counsel
Office of the Governor of Guam
PO Box 2950
Hagåtña, Guam 96932
jeffrey.moots@guam.gov

99. Any Party may, by written notice to the other Parties, change its designated notice

1 recipient or notice address provided above.

2 100. Notices submitted pursuant to this Section shall be deemed submitted upon
3 mailing or sending via email, unless otherwise provided in this Consent Decree or by mutual
4 agreement of the Parties in writing.

5 **XIV. EFFECTIVE DATE**

6 101. The Effective Date of this Consent Decree shall be the date upon which this
7 Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted,
8 whichever occurs first, as recorded on the Court's docket.

9 **XV. RETENTION OF JURISDICTION**

10 102. The Court shall retain jurisdiction over this Consent Decree until termination of
11 the Consent Decree, for the purpose of resolving disputes arising under this Decree or entering
12 orders modifying this Decree, pursuant to Sections IX (Dispute Resolution) and XVI
13 (Modification), or effectuating or enforcing compliance with the terms of this Decree.

14 **XVI. MODIFICATION**

15 103. Nonmaterial modifications to this Consent Decree, including any attached
16 Appendices, made by agreement of the Parties must be in writing and are effective when signed
17 by the Parties. Material modifications to this Consent Decree, including any attached
18 Appendices, made by agreement of the Parties must be in a writing signed by the Parties, and are
19 effective upon approval by the Court.

20 104. Whether modifications are appropriately categorized as material or non-material
21 shall be decided on a case by case basis. If the parties cannot agree whether a particular
22 modification is material or non-material, the position of the United States will prevail.

23 105. Any request by Defendants for a modification pursuant to this Section XVI must
24 be accompanied by the basis for the request and a description of how GWA intends to comply
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1 with the proposed modified requirement, schedule or deadline, along with any supporting
 2 documentation. If applicable and appropriate to the modification request, a request for a
 3 modification may be based, among other things, on: (a) an integrated plan developed in
 4 accordance with Clean Water Act Section 402(s); or (b) a current Financial Capability
 5 Assessment (based on EPA’s Combined Sewer Overflows—Guidance for Financial Capability
 6 Assessment and Schedule Development, referenced at EPA 832-B-97-004 and dated February of
 7 1997, and EPA’s Financial Capability Assessment Framework, dated November 24, 2014, or
 8 subsequent versions thereof in effect on the Day that the request is submitted to EPA).

10 106. Any disputes concerning modification of this Decree shall be resolved pursuant to
 11 Section IX (Dispute Resolution), provided, however, that, instead of the burden of proof
 12 provided by Paragraph 81, the Party seeking the modification bears the burden of demonstrating
 13 that it is entitled to the requested modification in accordance with Federal Rule of Civil
 14 Procedure 60(b).
 15

16 **XVII. TERMINATION**

17 107. After GWA has completed the requirements of Section V (Compliance
 18 Requirements), has thereafter maintained continuous satisfactory compliance with this Consent
 19 Decree for a period of not less than twelve (12) consecutive months, and has paid any accrued
 20 stipulated penalties as required by this Consent Decree, GWA may serve upon the United States
 21 a Request for Termination, stating that GWA has satisfied those requirements, together with all
 22 necessary supporting documentation.
 23

24 108. Following receipt by the United States of GWA’s Request for Termination, the
 25 Parties shall confer informally concerning the Request and any disagreement that the Parties may
 26 have as to whether GWA has satisfactorily complied with the requirements for termination of
 27 this Consent Decree. If the United States agrees that the Decree may be terminated, the Parties
 28

1 shall submit, for the Court's approval, a joint motion or stipulation for termination of the Decree.

2 109. If the United States does not agree that the Decree may be terminated, GWA may
3 invoke Dispute Resolution under Section IX of this Consent Decree. However, GWA shall not
4 seek Dispute Resolution of any dispute regarding termination until sixty (60) Days after service
5 of its Request for Termination.

6 **XVIII. PUBLIC PARTICIPATION**

7
8 A. Consent Decree Lodging.

9 110. This Consent Decree shall be lodged with the Court for a period of not less than
10 thirty (30) Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United
11 States reserves the right to withdraw or withhold its consent if the comments regarding the
12 Consent Decree disclose facts or considerations indicating that the Consent Decree is
13 inappropriate, improper, or inadequate. The Defendants consent to entry of this Consent Decree
14 without further notice and agree not to withdraw from or oppose entry of this Consent Decree by
15 the Court or to challenge any provision of the Decree, unless the United States has notified the
16 Defendants in writing that it no longer supports entry of the Decree.

17
18 B. Public Outreach, Engagement, and Participation by GWA.

19 111. Fourteen (14) days prior to any public meeting held by the Guam's Consolidated
20 Commission on Utilities or Guam's Public Utilities Commission where projects required under
21 Section V (Compliance Requirements) of this Consent Decree may be discussed, GWA shall
22 post prominent notice on its website and social media pages of: (a) the time, date, and location of
23 the public meeting; (b) a list of the relevant meeting topics; and (c) a one (1) paragraph summary
24 of how the public may submit questions, comments, or concerns regarding the meeting topics to
25 GWA prior to the meeting. If any member of the public submits, at or before any such public
26 meeting, a comment regarding any of the projects required under Section V (Compliance
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1 Requirements) of this Consent Decree, GWA shall consider and respond to such comments (i)
2 orally at the public meeting; and (ii) in writing within thirty (30) days of the public meeting.

3 Within thirty (30) days of sending (by e-mail or paper mailing) a written response to such public
4 commenter, GWA shall prominently post on its website (a) a summary of the public comment;
5 and (b) its written response to the comment.

6 112. GWA shall on at least a monthly basis (i) post, to each of its social media pages,
7 one (1) status update about GWA's progress or completion of projects required under Section V
8 (Compliance Requirements) of this Consent Decree; and (ii) briefly summarize, in its internal
9 weekly employee newsletter/update, a status update regarding progress or completion of projects
10 required under Section V (Compliance Requirements). GWA should aim to provide
11 informational or educational project updates for projects that have an impact on human health
12 and the environment, and are of interest to the public. GWA may use its discretion in selecting
13 compliance projects to include in said updates.
14

15
16 113. Nothing herein is intended to limit additional public outreach, engagement, or
17 participation by GWA, Guam's Consolidated Commission on Utilities, or Guam's Public
18 Utilities Commission.
19

20 **XIX. SIGNATORIES/SERVICE**

21 114. Each undersigned representative of the Defendants and the Assistant Attorney
22 General for the Environment and Natural Resources Division of the Department of Justice
23 certifies that he or she is fully authorized to enter into the terms and conditions of this Consent
24 Decree and to execute and legally bind the Party he or she represents to this document.
25

26 115. This Consent Decree may be signed in counterparts, and its validity shall not be
27 challenged on that basis. The Defendants agree to accept service of process by the Court's
28 electronic filing service or by mail with respect to all matters arising under or relating to this

1 Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the
2 Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not
3 limited to, service of a summons. The Defendants need not file an answer to the Complaint in
4 this action unless or until the Court expressly declines to enter this Consent Decree, in which
5 case Defendant's answer would be due 30 Days following the Court's order.
6

7 **XX. INTEGRATION**

8 116. This Consent Decree constitutes the final, complete, and exclusive agreement and
9 understanding among the Parties with respect to the settlement embodied in the Decree and
10 supersedes all prior agreements and understandings, whether oral or written, concerning the
11 settlement embodied herein. Other than deliverables that are subsequently submitted and
12 approved pursuant to this Decree, the Parties acknowledge that there are no representations,
13 agreements, or understandings relating to the settlement other than those expressly contained in
14 this Consent Decree.
15

16 **XXI. JUDGMENT**

17 117. Upon approval and entry of this Consent Decree by the Court, this Consent
18 Decree shall constitute a judgment of the Court as to the United States and the Defendants. The
19 Parties recognize that final resolution of the claims set forth in the Complaint will require further
20 remedial action.
21

22 **XXII. HEADINGS**

23 118. Headings to the Sections and Subsections of this Consent Decree are provided for
24 convenience and do not affect the meaning or interpretation of the provisions of this Consent
25 Decree.
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XXIII. APPENDICES

119. The following Appendices are attached to and part of this Consent Decree:

“Appendix A” is a list of pipe segments that are inaccessible for CCTV inspection; and

“Appendix B” is a map of the Sewer Capacity Assurance Projects, Route 1 – Dededo.

Dated and entered this 9th day of August, 2024


FRANCES M. TYDINGCO-GATEWOOD
CHIEF JUDGE

1 THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v.*
2 *Guam Waterworks Authority and the Government of Guam*, Civil No. 24-00004.

3 FOR THE UNITED STATES OF AMERICA:

4 TODD KIM
5 Assistant Attorney General
6 Environment and Natural Resources Division
7 U.S. Department of Justice

8 **BETHANY** Digitally signed by
9 **ENGEL** BETHANY ENGEL
Date: 2024.01.30
16:57:07 -05'00'

9 Date _____
10 BETHANY ENGEL
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17 SHAWN N. ANDERSON
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1 THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v.*
2 *Guam Waterworks Authority and the Government of Guam*, Civil No. 24-00004.

3 FOR THE U.S. ENVIRONMENTAL PROTECTION
4 AGENCY:

5 **SYLVIA QUAST**

Digitally signed by SYLVIA
QUAST
Date: 2023.10.31 12:07:32
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7 Date

SYLVIA QUAST
Regional Counsel
U.S. Environmental Protection Agency, Region IX

9 OF COUNSEL:
10 JANET MAGNUSON
Assistant Regional Counsel
11 U.S. Environmental Protection Agency, Region IX
Office of Regional Counsel
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THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Guam Waterworks Authority and the Government of Guam*, Civil No. 24-00004.

FOR THE U.S. ENVIRONMENTAL PROTECTION
AGENCY OFFICE OF ENFORCEMENT AND
COMPLIANCE ASSURANCE:

JOSEPH THEIS Digitally signed by
JOSEPH THEIS
Date: 2023.12.08
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DATE

JOSEPH G. THEIS
Acting Director
Office of Civil Enforcement
Water Enforcement Division
U.S. Environmental Protection Agency

CHRISNA BAPTISTA Digitally signed by
CHRISNA BAPTISTA
Date: 2023.12.04
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DATE

CHRISNA BAPTISTA
Attorney Advisor
Office of Civil Enforcement
Water Enforcement Division
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THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Guam Waterworks Authority and the Government of Guam*, Civil No. 24-00004.

FOR THE GUAM WATERWORKS AUTHORITY:



Date

MIGUEL C. BORDALLO, P.E.
General Manager

1 THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States*
2 *v. Guam Waterworks Authority and the Government of Guam*, Civil No. 24-00004.

3 FOR THE GOVERNMENT OF GUAM:

4 *Joseph A. Guzman*

5 *for*

6 DOUGLAS B. MOYLAN

7 ATTORNEY GENERAL OF GUAM

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10 *10/23/23*

11 Date

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THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Guam Waterworks Authority and the Government of Guam*, Civil No. 24-00004..

FOR THE GOVERNMENT OF GUAM:

Date

DOUGLAS B. MOYLAN
ATTORNEY GENERAL OF GUAM

10/24/23
Date

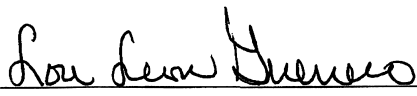

LOURDES A. LEON GUERRERO
GOVERNOR OF GUAM

Exhibit D

ATTACHMENT 1 TASK ORDER FORM

Indefinite Delivery/Indefinite Quantity (ID/IQ) Professional Project/Construction Management for
Islandwide Sewer Collection/Transmission System
Repair, Rehabilitation, and Replacement Project

Task Order No. [02], consisting of 6 pages.

In accordance with Paragraph 1.01 of the Agreement Between Owner and Engineer for Professional Services – Task Order Edition, dated [] ("Agreement"), Owner and Engineer agree as follows:

1. Background Data

- a. Effective Date of Task Order:
- b. Owner: Guam Waterworks Authority
- c. Engineer: Brown and Caldwell
- d. Specific Project (title): Sewer Gravity, Force Main, and Pump Station Assessment, Capacity Verification, and Design Services
- e. Specific Project (description): Provide GWA with gravity sewer, force main, and pump station assessment and design in Agat-Santa Rita and Umatac-Merizo.

2. Services of Engineer

- A. The specific services to be provided or furnished by Engineer under this Task Order are:

SCOPE OF WORK

This Task Order 2 ("TO No. 2") will be performed by Brown and Caldwell ("Engineer") under the GWA ID/IQ Project Management/Construction Management for Islandwide sewer Collection/Transmission System, Repair, Rehabilitation, and Replacement contract ("Contract"). TO No. 2 consists of the assessment and design of the Gravity Sewer, Force Main, and Pump Stations identified in Attachments A, B, and C for the Agat-Santa Rita and Umatac-Merizo areas.

The scope of work for TO No. 2 is outlined below and is further defined in Attachments D, E, and F.

- 1. Phase 1 – Gravity Sewer
 - A. Project Management
 - B. Gravity main Condition Inspection and Assessment
 - C. Agat-Santa Rita/Umatac-Merizo Condition Assessment Report
 - D. Additional Gravity Main Condition Assessment Report
 - E. Acute and Short-Term Gravity Main Work Plan
 - F. Capacity Verification
 - G. Long-Term Gravity Main Work Plan

- H. Preliminary Engineering/Basis of Design
 - I. 30% Design
 - J. 60% Design
 - K. 90% Design
 - L. 100% Design
 - M. Construction Bid Support and Support During Construction
2. Phase 2 – Force Mains
- A. Project Management
 - B. Force Main Inspection
 - C. Force Main Assessment Report
 - D. Force Main Capacity Verification
 - E. Preliminary Design/Basis of Design Report
 - F. 30% Design
 - G. 60% Design
 - H. 90 % Design
 - I. 100% Design
 - J. Construction Bid Support and Support During Construction
3. Phase 3 – Pump Stations
- A. Project Management
 - B. Pump Station Preliminary Plan
 - C. Pump Station Condition Assessment
 - D. Pump Station Capacity Verification
 - E. Preliminary/Basis of Design
 - F. 30% Design
 - G. 60% Design
 - H. 90% Design
 - I. 100% Design
 - J. Support During Construction

The scope of work for each phase in Attachments D, E, and F indicate Engineer Responsibilities, Owner Responsibilities, and Deliverables.

The execution of TO No. 2 authorizes the Engineer to proceed with items 1.A to 1.H, 2.A to 2.E, and 3.A to 3.E above and as defined in Attachments D, E, and F. Engineer shall begin work on the remaining scope items list above only after an amendment to TO No. 2 is executed, which will be negotiated between the Owner and the Engineer.

- B. All of the services included above comprise Basic Services for purposes of Engineer’s compensation under this Task Order.

3. Additional Services

Additional Services that may be authorized or necessary under this Task Order are set forth as Additional Services in Part 2—Additional Services, of Exhibit A, “Engineer’s Services for Task Order,” of the Agreement modified for this specific Task Order, and attached to and incorporated as part of this Task Order.

4. Owner's Responsibilities

Owner shall have those responsibilities set forth in Article 2 and Exhibit B of the Agreement, under this Task Order, subject to the following: None

5. Task Order Schedule

In addition to any schedule provisions provided in Exhibit A under this Task Order or elsewhere, the parties shall meet the following schedule:

<u>Party</u>	<u>Action</u>	<u>Schedule</u>
Engineer	Conduct and complete require CCTV inspections of Gravity Mains and provide data to Owner for submittal to USEPA.	By March 7, 2025
Engineer	Conduct meetings and Assist Owner with review and assessment of CCTV.	Within 30 days of completion of CCTV
Engineer	Assist Owner with compiling and reporting CCTV assessment, through the Gravity Main Condition Assessment Report to be delivered to USEPA.	Within 12 months of Effective Date of Task Order.
Owner	Assist Engineer with requested data, as necessary.	Within 14 days of receipt from Engineer.
Owner	Submit any additional CCTV completed to Engineer, for assessment and reporting.	Within 14 days of receipt of additional CCTV data.
Engineer	Conduct and complete assessment of pump stations and ejector stations and their associated force mains within scope.	Within 180 days of Effective Date of Task Order.

6. Payments to Engineer

- A. Owner shall pay Engineer for services rendered under this Task Order based on the attached approved Task Order No. 2 Scope of Work and Fee

Description of Service	Amount	Basis of Compensation
1. Phase 1 – Gravity Sewer		
a. Task 1 – Project Management	\$146,423	Lump Sum
b. Task 2 – Gravity Main Condition Inspection and Assessment	\$557,873	Lump Sum
c. Task 3 – Agat-Santa Rita/Umatac-Merizo Condition Assessment Report	\$103,133	Lump Sum
d. Task 4 – Additional Gravity Main Condition Assessment Report	\$179,057	T&M
e. Task 5 – Acute and Short-Term Gravity Main	\$94,378	Lump Sum

Work Plan		
f. Task 6 – Capacity Verification	\$34,536	Lump Sum
g. Task 7 – Long-Term Gravity Main Work Plan	\$107,331	Lump Sum
h. Task 8 – Preliminary Engineering/Basis of Design	\$1,046,118	T&M
2. Phase 2 – Force Main		
a. Project Management	\$143,811	Lump Sum
b. Force Main Inspection	\$259,887	Lump Sum
c. Force Main Assessment Report	\$68,233	Lump Sum
d. Force Main Capacity Verification	\$32,643	Lump Sum
e. Preliminary Design/Basis of Design Report	\$251,192	T&M
3. Phase 3 – Pump Station		
a. Project Management	\$131,564	Lump Sum
b. Pump Station Preliminary Plan	\$73,986	Lump Sum
c. Pump Station Condition Assessment	\$167,781	Lump Sum
d. Pump Station Capacity Verification	\$34,490	Lump Sum
e. Preliminary Design/Basis of Design Report	\$331,813	T&M
TOTAL COMPENSATION (lines 1, 2, and 3)	\$3,764,249	
GRT (5.263%)	\$198,113	
Grand Total Task Order 2	\$3,962,362	

Compensation items and totals based in whole or in part on Hourly Rates or Direct Labor are estimates only. Lump sum amounts and estimated totals included in the breakdown by phases incorporate Engineer’s labor, overhead, profit, reimbursable expenses (if any), and Consultants’ charges, if any. For lump sum items, Engineer may alter the distribution of compensation between individual phases (line items) to be consistent with services actually rendered, but shall not exceed the total lump sum compensation amount unless approved in writing by the Owner.

B. The terms of payment are set forth in Article 4 of the Agreement and in the applicable governing provisions of Exhibit C of the Agreement.

7. Consultants retained as of the Effective Date of the Task Order: Not Applicable

8. Other Modifications to Agreement and Exhibits:

a. The following replaces and supersedes Agreement, Article 6, Paragraph 6.02.A:

For each design performed or furnished, Engineer shall be responsible for Design Services during Construction as well as all duties required in performance of the Engineer as the Construction/Project manager as defined in the Scope of Work and/or Task Order. Engineer, as

both designer and Construction/Project Manager, shall be responsible for design and Shop Drawing review, review and response to Requests for Information and 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.

- b. The following replaces and supersedes Agreement, Article 7, Paragraph 7.01.A.15

Construction Management – Represent the owner’s interest and provide technical expertise in the oversight of the project, directly for the owner. Primary duties shall be to observe and monitor contractor activities at a construction site to meet a project’s goals, plans, specifications, schedule, and safety standards as defined in the Task Order.

9. Attachments: ATTACHMENT A – October 9, 2024, Brown and Caldwell, Task Order No. 2 Scope of Work and Fee Proposal.

10. Other Documents Incorporated by Reference: Not Applicable

11. Terms and Conditions

Execution of this Task Order by Owner and Engineer shall make it subject to the terms and conditions of the Agreement (as modified above), which Agreement is incorporated by this reference. Engineer is authorized to begin performance upon its receipt of a copy of this Task Order signed by Owner.

The Effective Date of this Task Order is []

OWNER: Guam Waterworks Authority

ENGINEER:

By: _____

By: _____

Print Name: MIGUEL C. BORDALLO, P.E.

Print Name: _____

Title: General Manager

Title: _____

Engineer License or Firm’s
Certificate No. (if required): _____
State of: _____

DESIGNATED REPRESENTATIVE FOR TASK ORDER:

DESIGNATED REPRESENTATIVE FOR TASK ORDER:

Name: _____

Name: _____

Title:

Address: _____
E-Mail Address: _____
Phone: _____

Title: _____
Address: _____
Email Address: _____
Phone: _____

Engineering Department Approval:

By: _____
BRETT RAILEY, P.E.
GWA Acting Asst. General Manager - Engineering

Certified Funds Available:

Approved as to Form:

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

By: _____
THERESA G. ROJAS, ESQ.
GWA Legal Counsel

Contract Amount: \$ 3,962,362.00
Contingency: \$ _____
Amount Certified: \$ 3,962,362.00
Funding Source: Bond, IFCLP

Attachment A

Task Order No. 2 - Sewer Gravity, Force Main, and Pump Station Assessment, Capacity Verification, and Design Services

Task Order 2 - Phase 1: Gravity Sewer Mains

This document accompanies Task Order 2 of S22-02-BND Indefinite Delivery/Indefinite Quantity (ID/IQ) Professional Project/Construction Management for Island-wide Sewer Collection/Transmission system Repair, Rehabilitation, and Replacement Project.

Phase 1 of Task Order 2 of the Sewer Repair, Rehabilitation, and Replacement Indefinite Delivery/Indefinite Quantity (IDIQ) consists of:

- Gravity sewer CCTV condition assessment
- Assessment reporting
- Hydraulic modelling
- Capacity Evaluation
- Design services through construction for the replacement of gravity sewer segments identified in the 2018 WRMPU with capacity issues, and trenchless rehabilitation for segments with significant structural defects.

Elements of this phase are further described below and are separated into individual tasks. Assumptions, inclusions, and exclusions are listed in the subtasks below.

Task 1 - Project Management

1. Project Management Plan: Prepare a Project Management Plan (PMP) that includes the following elements:
 - a. Project Description
 - b. Scope of work
 - c. Work Plan
 - d. Typical monthly progress report
 - e. Quality Assurance and Quality Control Plan
 - f. Communication Plan
 - g. Documentation Plan
 - h. Subcontractors and organizational chart
2. Project Schedule: Submit a schedule that meets required milestones. Update schedule at all phases of the project, including monthly meetings, dates for completion of engineering design studies, milestone tasks, and dates for review periods. The schedule may include program development (owner's requirements) and environmental permit approvals. The schedule will be based on the proposed target dates.
3. Progress Reports: Submit monthly progress/status reports to support monthly billings.
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. Prepare meeting minutes.
5. Coordinate and communicate with local and federal agencies, including Guam Environmental Protection Agency (GEPA), Department of Public Works (DPW), Department of Parks and Recreation (DPR), US Fish and Wildlife Services (USFWS) throughout the course of the project to ensure review and permitting process adheres to project schedule.

Task 2: Gravity Main Condition Inspection and Assessment

Perform closed-circuit television (CCTV) inspection and assessment documentation, in accordance with the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Condition Program (PACP), on gravity sewer mainline segments listed in Attachments A, B, and C, (approximately 24,000 lf). Additionally, inspect, assess, and document all accessible manholes along the gravity sewer lines in Attachments A, B, and C in accordance with NASSCO's Manhole Assessment and Condition Program (MACP). Phase 1 includes the following:

1. Conduct field sewer CCTV and Manhole inspections
 - a. Obtain sufficient condition data and an understanding of the gravity sewer pipe system failure modes.
 - b. Prior to work, secure DPW Highway Encroachment permit.
 - c. Provide roadway traffic control.
2. CCTV Inspection and Cleaning
 - a. Perform the inspection in accordance with NASSCO PACP.
 - b. Television inspection equipment shall have accurate footage counter that will display on the monitor and record the camera distance from the centerline of the starting manhole. The camera shall be of the remotely operated pan and tilt type. The rotating camera and light head configuration shall have the capability of panning 360° with pan and tilt capability, providing a full view of the pipe to ensure complete inspection of the mainline pipe and service laterals.
 - c. Prior to performing CCTV inspection activities, consultant shall clean the sewer lines(s) to be televised.
 - d. Just prior to performing the video inspection procedure, water must be introduced into the nearest upstream manhole until observed at the nearest downstream manhole. This will ensure that any pipe segments with bellies are easily identified during CCTV inspection.
 - e. Fats, Oil, and Grease (FOG) shall be evacuated, as much as practical, from the pipeline and the pipeline kept clear of any FOG during the CCTV inspection process.
 - f. Main Line Inspection
 - i. Prior to the beginning of each CCTV inspection, manhole identification numbers, as provided by GWA, shall be displayed in the title and shall become a part of the video record.
 - ii. Perform the inspection on all mainline sections from manhole to manhole
 - iii. The interior of the pipe shall be carefully inspected to determine the location and extent of all NASSCO defects.
 - iv. Immediately notify GWA of any identified acute defects (NASSCO Structural Grade 5 defects).
 - v. Identify locations where clean water is leaking into the sewers.
 - vi. Locate service connections

Assumptions

1. Sewer manholes are easily accessible and are not buried, paved over, or welded.
2. Access to sewer easements is maintained and accessible with CCTV and cleaning vehicles/equipment.
3. GIS locations of assets to be inspected are generally accurate.
4. Cleaning required for CCTV inspection can be achieved with a maximum of three passes with standard jetting equipment. Removal of encrustations is excluded.
5. Cleaning debris can be disposed at the Umatac-Merizo WWTP and/or the Tupalao Septic Receiving Station.
6. More than one attempt from each direction to CCTV a segment is excluded if hindered by reasons beyond Consultant's control.

Consultant Responsibilities/Deliverables:

1. Furnish a video file of each CCTV inspection in standard NASSCO PACP/MACP format
2. Furnish pictures of each manhole inspection in standard NASSCO MACP format
3. Furnish PACP/MACP inspection reports in PDF format, including NASSCO ratings
4. Furnish a summary sheet, in excel format, of all inspections

GWA Responsibilities:

1. Provide updated GIS, with current Asset IDs, for all gravity sewer main pipelines and manholes included in the work area.
2. If needed, clear access paths for sewer lines within sewer easements.
3. Assist, as necessary, in securing the DPW highway encroachment permit.

Task 3 – Agat-Santa Rita/Umatac-Merizo Condition Assessment Report

Prepare and submit a Gravity Main Condition Assessment Report for the gravity sewer pipelines and manholes in Attachments A, B, and C. This task will involve analyzing the CCTV data from Phase 1 and determining the structural and operational conditions, failure modes, and make recommendations for additional cleaning need (if any), maintenance, repair, rehabilitation, or replacement of system assets, as needed.

Evaluate the sewer assets' likelihood of failure (LoF) and consequence of failure (CoF), and provide recommendations for repair or rehabilitation timeline. Consultant shall work with GWA to develop risk criteria.

Include an Association of Cost Engineering International (ACEI) Class 5 Conceptual opinion of Probable Construction Cost (OPCC) estimate for repairs, rehabilitation, and replacements.

Upon completion of the Condition Assessment Report, provide a GIS shapefile containing structural and operational defects and condition ratings. Additionally, the GIS shapefile will include modifications to the sewer collection system connectivity based upon discrepancies observed in the field. Discrepancies will be recorded separately and summarized in a brief GIS discrepancy report.

Assumptions

1. Likelihood of Failure criteria will be based solely upon the structural condition rating determined during condition assessment.
2. Report will be prepared in consultant's standard template format, unless otherwise requested.

Consultant Responsibilities/Deliverables

1. Draft Condition Assessment Report. Submit an electronic PDF file of the draft report for review and comment. The report will include the following:
 - a. NASSCO PACP structural and operational overall condition ratings for gravity sewer lines.
 - b. NASSCO MACP structural and operational overall condition ratings for manholes.
 - c. Identify and prioritize sewer lines and manholes for rehabilitation, repair, or replacement, including acute defects.
 - d. Provide maps showing the sewer lines and manholes prioritized for repair, rehabilitation, and replacement.
 - e. Provide estimated cost for the sewer lines and manholes recommended for repair, rehabilitation, or replacement
 - f. Work with GWA to develop CoF criteria, weights, and rankings.
 - g. Final Condition Assessment Report. The final report will address client comments on draft and will be submitted as an electronic PDF file.
2. GIS Database shapefile that includes the following asset attribute information:
 - a. NASSCO PACP structural and operational condition ratings for gravity sewer mains
 - b. NASSCO MACP structural and operational condition ratings for manholes

GWA Responsibilities

1. Provide Condition Assessment Report Template, if available.
2. Provide comments on the Draft Condition Assessment Report.
3. Provide input and make final decision on risk criteria and ratings for consequence of failure analysis

Task 4 – Additional Gravity Main Condition Assessment Report

The intent of this task is to develop a Gravity Main Condition Assessment report for gravity sewer assets outside the Phase 1 and Phase 2 areas. Additional sewer segments beyond the areas contained in Attachments A, B, and C of Phases 1 and 2 shall be as specified and directed by GWA. Under this Phase, consultant will review GWA provided CCTV videos and completed PACP/MACP inspection forms to evaluate conditions, perform a LoF and CoF analyses, and make recommendations for repair, rehabilitation, and/or replacement. Consultant does not take responsibility for the accuracy and completeness of the information contained in the NASSCO Inspection Forms.

Assumptions

1. Assessments for assets outside Attachments A, B, and C are limited to 100,000 LF of gravity sewer pipe and associated manholes.
2. NASSCO Inspection Forms will be provided as PDF files and in GIS Shapefile database.
 - a. Consultant will rely on the completed NASSCO Inspection Forms to perform the LoF and CoF analyses. It is acknowledged that conditions may have changed since the date of inspection, but the assessment and recommendation shall be based on the inspection data provided.
 - b. CCTV videos will be reviewed to determine the appropriate remedy - repair, rehabilitation, or replacement.
3. Consultant is not liable for the accuracy and completeness of the information contained in the furnished NASSCO Inspection Forms.
4. CoF criteria defined in Task 2 will be applied to this task.
5. All CCTV videos and NASSCO Inspection Forms to be included in this report will be provided to Consultant by May 9, 2025, which is nine (9) months after the Effective Date of GWA's Consent Decree.
6. The Final Condition Assessment report for gravity mains will be submitted by February 9, 2026, which is nine (9) months after receiving the last NASSCO Inspection Form and 18 months from the Consent Decree Effective Date.
7. The party performing the CCTV inspection will identify and report to GWA, any acute defects during data collection. Consultant is not liable for the failure to report acute defects of assets outside of Attachments A, B, and C.

Consultant Responsibilities/Deliverables

1. Draft Condition Assessment Report. Submit an electronic PDF file of the draft report for review and comment. The report will include the following:
 - a. NASSCO PACP structural and operational overall condition ratings for gravity sewer lines
 - b. NASSCO MACP structural and operational overall condition ratings for manholes.
 - c. LoF and CoF analyses for each asset.
 - d. Identify and prioritize sewer lines and manholes for rehabilitation, repair, or replacement
 - e. Provide maps showing the sewer lines and manholes prioritized for repair, rehabilitation, and replacement
 - f. Provide estimated cost for the sewer lines and manholes recommended for repair, rehabilitation, or replacement

2. Final Condition Assessment Report. Final report will address client comments on draft and will be submitted as an electronic PDF file.

GWA Responsibilities

1. Provide GIS database with completed NASSCO PACP and MACP structural and operational condition grades for each asset.
2. Provide PDF files of completed NASSCO PACP and MACP forms to be included in this Condition Assessment Report.
3. Provide CCTV video files for all assets that are included in this task.

Task 5 – Acute and Short-Term Gravity Main Work Plan

Upon GWA approval of the Gravity Main Condition Assessment reports, prepare and submit a Gravity main Work Plan for review and approval that organizes all necessary Gravity Main Repair, Rehabilitation, and Replacement work recommended in the Assessment Reports. The Gravity Main Work Plan shall include a prioritization list and project packages that prioritizes segments with acute defects, segments that eliminate SSOs, and segments that reduce I&I.

Assumptions

1. Prioritization and packaging will be based on LoF and CoF results from the Condition Assessment Report(s).
2. Prioritization and packaging is limited to the assets contained in the Condition Assessment Report(s). Assets not included in the Condition Assessment Report(s) are excluded from CIP packaging.

Consultant Responsibilities

1. Acute and Short-Term Gravity Main Work Plan
 - a. Using the results and recommendations in the Gravity Main Assessment Report(s), develop a 5-year CIP program that prioritizes all acute defects and short-term repair, rehabilitation, and replacement work.
 - i. Acute defects shall be prioritized first and scheduled to be completed no later than 24 months after they are identified.
 - ii. Work with GWA on identifying project financing mechanisms, budgets, and schedule to develop project packages.
 - iii. Perform an AACEI Class 5 cost estimate for project packages.
 - iv. Develop a design and construction schedule for the CIP program such that the projects included in this Gravity Main Work Plan are completed within 5-years of the report submittal date.

Deliverables

1. Draft Acute Defects Gravity Main Work Plan in electronic format.
2. Final Acute Defects Gravity Main Work Plan in electronic format.
3. Final Microsoft Project (.msp) file for Acute Defects schedule.
4. Draft Gravity Main Work Plan in electronic format.
5. Final Gravity Main Work Plan in electronic format.
6. Final Microsoft Project (.msp) file for 5-year Gravity Main CIP schedule.

GWA Responsibilities

1. Review and comment on Draft Gravity Main Work Plan within 30 days.
2. Identify and establish financing mechanisms and budgets to implement 5-year CIP program.

Task 6 – Capacity Verification

Review the DRAFT Capacity Evaluation Report (completed under separate project) for the gravity main sewer lines identified in Attachments A, B, and C based on the latest flow metering data. The Capacity Evaluation Report shall be supplemented with a technical memorandum (TM) documenting this verification. The TM will validate the capacity of sewer mains within the areas shown in Attachments A, B, and C and identify current or future flow bottlenecks within the project scope. This TM shall include a hydraulic assessment and a Flow Model update to determine hydraulic capacity of the project scope areas and confirm areas of the scope of work expected to cause or contribute to SSOs that will be eliminated through repair/rehabilitation/replacement under this Task Order.

Assumptions

1. Flow model calibration used as the basis for the Storm Technical Memorandum and recent work in the Central Basin shall be relied on for this Task; flow metering for the segments in Attachments A, B, and C is excluded.

Consultant Responsibilities/Deliverables

1. Perform a hydraulic assessment of the gravity sewer mains identified in Attachments A, B, and C using existing data.
 - a. Submit a Flow Model update for the gravity sewer mains identified in Attachments A, B, and C.
 - b. Flow Model will incorporate physical changes to the wastewater collection system, changes to capacity, and new data gathered through December 31, 2022
 - c. Flow Model will incorporate newly collected survey data for the sewer segments, such as invert elevations, pipe sizes, and pipe material.
2. Draft and Final Capacity Assurance Report(s) that includes the results of the hydraulic assessment and flow model.

GWA Responsibilities

1. Provide requested information related to the gravity sewer model, including changes to the system since 2012.

Task 7 – Long-Term Gravity Main Work Plan

Upon approval of the Gravity Main Condition Assessment Report(s) and after reviewing the Draft Capacity Evaluation Report, develop a long-term Gravity Main Work Plan that:

1. Identifies and schedules the design and construction of all necessary Long-Term Gravity Main Rehabilitation and Replacement work based on the Condition Assessment Report and GWA's Draft Capacity Evaluation Report
2. Meets the capacity criterion established in the Storm Technical Memorandum dated January 4, 2023.
3. Proposes an annual commitment of Gravity Main rehabilitation or replacement of at least three (3) miles per year.
4. The Long-Term Gravity Main Work Plan shall also consider the results from GWA's Capacity Evaluation Report

Assumptions

1. Work Plan will be submitted in consultant's standard deliverable format.

Consultant Responsibilities/Deliverables

1. Draft Long Term Gravity Main Plan
 - a. Assets will be prioritized based on LoF and CoF results from the Condition Assessment Report(s).

- b. Develop distinct Capital Improvement Project (CIP) summaries that describe logical grouping of main repair/rehabilitation/replacement projects, scopes of work, design, and construction packages. CIP summaries and packages shall consider: financing constraints, economic feasibility, type of construction, and proximity of assets.
 - c. Draft Long Term Gravity Main Plan shall include maps indicating the locations and assets included in each CIP project.
 - d. Consultant shall evaluate alternative contracting methods (design-bid-build, design-build, etc) to successfully execute the Long-Term Gravity Main Work Plan and provide a recommendation.
 - e. Consultant shall perform an AACEI Class 5 estimate for each recommended CIP.
 - f. Cost estimate shall include adjustments for inflation to the year the CIP is scheduled to be contracted.
 - g. The draft Long-Term Gravity Main Work Plan will be submitted in two documents:
 - h. Brief Technical Memorandum outlining the prioritization considerations, and:
 - i. CIP packaging method.
2. Final Long Term Gravity Main Plan
 - a. Incorporate GWA's comments from the Draft Long Term Gravity Main Plan into a Final Long Term Gravity Main Plan.

GWA Responsibilities

1. Provide financing information to inform the packaging and scheduling of CIPs.
2. Review and comment on Draft Long-Term Gravity Main Work Plan.

Task 8 –Preliminary Engineering/Basis of Design

Define objective, design criteria, and methodology that shall be used to prepare the design to repair, rehabilitate, or replace gravity sewer mains and manholes within Attachments A, B, and C, or as directed by GWA.

Assumptions (applicable to Tasks 8 through 12)

1. Sewer lines within Attachments A, B, and C identified in the 2018 Water Resources Master Plan (WRMP) that have inadequate capacity can be upsized using open-cut replacement methods. Other sewer lines within the Task Order scope can be rehabilitated using trenchless technologies, such as CIPP.
 - a. Approximately 11,000 LF of pipe identified in the 2018 WRMP must be upsized due to capacity issues. Replacement for this pipe will be open-cut excavation.
 - b. Approximately 13,000 LF of other pipe sections will be CIPP.
2. All lines identified in Attachment A, B, and C are in existing right of way or an easement. Review of easements and property records are excluded. Any pipeline realignment is assumed to be within existing ROW or utility easements.
3. Design will show existing water, storm, and telecommunication utilities, but will not show any relocation or re-alignment for any conflicts.
4. Design is scoped as a design-bid-build method of delivery.
5. Open-cut replacement design assumes maximum depth of 17 feet and excavatable soil conditions. Unusual soil conditions or consolidated formation excavation are not considered.
6. Dewatering performance specification is included but means and methods will be provided by contractor.
7. Geotechnical investigations conducted to design the gravity sewer repair, rehabilitation, or replacement will also include gathering data relative to the design portions of Phase 2 (Forcemains) and Phase 3 (Pump stations) of Task Order 2, unless otherwise stated by GWA.
8. Planimetric and topographic field survey conducted to design the gravity sewer repair, rehabilitation, or replacement will also include gathering data relative to the design portions of

Phase 2 (Forcemains) and Phase 3 (Pump stations) of Task Order 2, unless otherwise stated by GWA.

Exclusions (applicable to Tasks 8 through 12)

1. Permitting and land acquisition for pipe realignment.
2. Permitting and environmental study requirements for stream crossings.
3. Landscaping, including tree cutting, relocation, or vegetation restoration.
4. Stream restoration.
5. Property and land acquisition.
6. Biological Assessments. If required by USFWS or Guam Department of Agriculture, a biological assessment will be added through a task order amendment.
7. Preparation of an Archaeological Monitoring and Discovery Plan (AMDP) and archaeological monitoring is excluded to conduct geotechnical investigations. Consultant shall first consult with the Guam State Historic Preservation Office (SHPO) to determine archaeological requirements. The task order shall be amended as necessary based on SHPO's requirements.

Consultant Responsibilities/Deliverables

Under this task, Consultant shall conduct, as necessary:

1. Research and field investigations: Engineer shall gather data and conduct field investigations to identify existing conditions of the task order scope and aid in identifying optimal solutions. Efforts may include, but are not limited to:
 - a. Review of record drawings
 - b. Interviews with GWA staff
 - c. Consult with SHPO and environmental regulatory agencies to determine permitting requirements for geotechnical investigations.
 - d. Conduct field investigations and utility clearances to confirm location and layout of existing utilities within the proposed locations to avoid utility conflicts.
 - e. Perform geotechnical explorations, including desktop studies, and reporting.
 - i. Geotechnical desktop survey using available existing information to provide preliminary guidance for the project and inform the selection of an appropriate geotechnical investigation.
 - ii. Field exploration and soil testing to characterize materials and determine engineering properties of the identified lines in Attachment A, B, and C.
 - 1) Soil borings will be conducted (one for every 1,000 LF) of pipeline and at each pump station. Borings will be further refined after the geotechnical desktop survey.
 - iii. Preparation of Geotechnical Report. The report will include recommendations, summary of surface and subsurface conditions, seismicity, laboratory test data, and a site plan showing the exploratory locations and proposed alignments.
 - iv. Geotechnical consultation services to support design development. This shall include ongoing consultation with the project team during design, plan, and specification review, and as requested, attendance of design team meetings.
 - v. Geotechnical studies and explorations under this Phase will include information to perform the design activities in Phase 2 and Phase 3 of Task Order No. 2, which are the design of force mains and pump stations, respectively.
 - f. Perform planimetric and topographic field survey to include surface features, buildings, driveways, roadways visible infrastructure and utilities, and location of the right of way or easements.
 - i. The planimetric and topographic field survey under this Phase will be used in the development of the design documents for Phase 2 and Phase 3 of Task Order No. 2, which are the design of force mains and pump stations, respectively.

- g. Identify demolition, grading, and operational requirements.
2. Basis of Design Report (BODR)
 - a. After the research and field investigation phase, prepare a BODR to include the following:
 - i. Projected flow rates
 - ii. Design objectives
 - iii. Route/alignment evaluation
 - iv. Design Criteria
 - v. Design Methodology
 - vi. Easement Requirements
 - vii. Description of existing wastewater system
 - viii. Models and Results from Capacity Evaluation Report
 - ix. Surrounding infrastructure, utility, and easement considerations.
 - x. Proposed construction schedule with major work items.
 - xi. Construction Cost Estimates – Develop a Class 4 cost estimate according to the AACE International Cost Estimates Classification System.

Deliverables

1. Geotechnical Report
2. Basis of Design Report
3. Pre-Design workshop with GWA project team to review approach, methodologies, findings, and determine design basis, including agenda, minutes, and documentation of comments.

GWA Responsibilities

1. Attend Pre-Design workshop.
2. Provide as-builts of existing water and wastewater infrastructure within Attachments A, B, and C.
3. Assist, as needed, with agency coordination and obtaining permits.
4. Review and provide comment(s) on BODR within 30-days.

Phase 9 - 30% Design Documents

Upon approval of the BODR, prepare 30% design drawings to refine and agree upon the general arrangement of the proposed design.

Consultant Responsibilities

1. Conduct monthly design review meetings with GWA to review the design process, status, issues, decision points, and project schedule.
2. 30% Preliminary Design Documents to include the following:
 - a. Multidisciplinary plans
 - b. Specification list
 - c. Erosion Control Plan
 - d. By-pass pumping plan (if required)
 - e. Traffic Control plan
 - f. Class 3 AACEI Preliminary Construction Cost estimate.
3. Initiate communication with Guam Environmental Protection Agency, Departments of Public Works, and other relevant agencies to identify all required permits. Task order will be amended to conduct studies or analyses required by local and Federal agencies.
4. Coordinate with relevant agencies, such as GEPA and DPW, throughout the design process. Incorporate any relevant regulation requirements into the design.

Deliverables

1. 3 sets (11" x 17") hard copies of the design documents
2. Digital copy of the design documents and cost estimate.

GWA Responsibilities

1. Review and comment on the 30% design submittal and provide comments within 30 days.
2. Provide access to GWA property and easements.
3. Provide as-builts of existing water and wastewater infrastructure within Attachments A, B, and C.
4. Assist, as needed, with agency coordination and obtaining permits.

Task 10 – 60% Design

Refined multidisciplinary plans and specifications to obtain approval from GWA on the complete arrangement of the proposed design.

Consultant Responsibilities/Deliverables

1. 60% Design Documents
 - a. Refined multidisciplinary plans and specifications, addressing comments from the 30% design submittal
 - i. Detail Drawings
 - ii. Plan and Profile Sheets
 - iii. GWA Standard Details/ BC Standard Details
 - iv. Draft specification sections, with review by BC's Subject Matter Experts
 - v. GWA and BC's QA/QC comments on the 30% design submittal shall be reflected on the plans.
2. Class 2 AACEI cost estimate.
 - a. Continuous coordination with relevant agencies, including DPW and GEPA.

Deliverables

1. 4 sets (11" x 17") hard copies of the design documents
2. Draft specification sections.
3. 30% Design comment log
4. Digital copy of the design documents and cost estimate.

GWA Responsibilities

1. Review and comment on the 60% design submittal and provide comments within 30 days.
2. Assist, as needed, with agency coordination and obtaining permits.

Task 11 – 90% Design

Completion of all construction documents with the appropriate level of detail, addressing comments from the 60% design submittal

Consultant Responsibilities/Deliverables

1. 90% Design Documents
 - a. Plan Sheets
 - b. Plan and Profile
 - c. Detail Drawings
 - d. Revised specifications
 - e. BC Standard Detail Drawing/ GWA Standard Details
 - f. GWA and BC's QA/QC comments on the 60% design submittal shall be reflected on the plans.
2. Review and prepare contract documents.
3. Class 1 AACEI construction cost estimate

4. Continuous coordination with relevant agencies.

Submittals

1. 4 sets (11" x 17") hard copies of the design documents
2. Revised specifications
3. Digital copy of the design documents and cost estimate
4. 60% Design comment log.

GWA Responsibilities

1. Review and comment on the 90% design submittal and provide comments within 30 days.
2. Assist, as needed, with agency coordination and obtaining permits.
3. Provide front-end document template suited for construction delivery method.

Task 12 – 100% Design

Completion of final documents prepared for bidding.

Consultant Responsibilities/Deliverables

1. 100% Design Documents
 - a. Final set of drawings for bidding to include the following:
 - i. Plan Sheets
 - ii. Plan and Profile
 - iii. Detail Drawings
 - iv. BC Standard Detail Drawing/ Client Standard Details
 - v. GWA and BC's QA/QC comments on the 90% design submittal shall be reflected on the plans.
 - b. Finalized Specifications
2. Final construction cost estimate based on quantity takeoffs and requirements of the 100% design plans and specifications.
3. Final coordination and submittal of 100% design documents to relevant agencies.

Deliverables

1. 4 sets (11" x 17") hard copies of the design documents
2. 1 set (24" x 36") hard copy of design documents
3. Digital copy of the design documents and cost estimate.

GWA Responsibilities

1. Provide final approval of design documents and construction costs.

Task 13 – Construction Bid Support and Support During Construction

Provide technical assistance to GWA during construction bidding phase. This task includes technical support in reviewing all submittals and requests submitted by the Contractor during construction.

Consultant Responsibilities/Deliverables

1. Prepare answers to bidders' Requests for Information (RFIs) regarding the bid packages during the bidding phase.
2. Assist GWA in preparing contract solicitation addenda.
3. Coordinate the Pre-Bid Conference, including the preparation of meeting agenda, sign-in sheets, and record minutes and providing formal responses to technical questions.

4. Assist with reviewing construction proposals received. This shall include a bid analysis, review of bid proposal prices, and conformance with contract requirements and the Guam Procurement Code. A letter of recommendation of award shall be prepared.
5. Prepare final "Issued for construction" conformed plans and specifications incorporating addenda and changes during the bid phase.
6. Review shop drawings, design calculations, samples, test results and other data required to be submitted by the contractor for conformance with the contract documents. Document and provide responses to GWA. This shall include assisting the review of the Quality Control Plan for complete content.
7. The design consultant shall chair and record the meeting minutes with any other governmental agencies.
8. Review requests for clarification or interpretation submitted by contractor and provide responses to GWA.
9. Evaluate substitution requests to determine acceptability of substitute materials and equipment proposed by the contractor and provided recommendations to GWA.
10. If requested by the construction or project manager, attend the construction kick off meeting and construction/final inspections.
11. Perform preliminary and final inspections and submit punch list.
12. Provide Final Record Drawings based on marked-up construction drawings (i.e., as-builts).

GWA Responsibilities

1. Provide Engineer with necessary information such as RFIs submitted by the Contractor.

Task Order 2 - Phase 2: Sewer Force Main

This document accompanies Task Order 2 of S22-02-BND Indefinite Delivery/Indefinite Quantity (ID/IQ) Professional Project/Construction Management for Island-wide Sewer Collection/Transmission system Repair, Rehabilitation, and Replacement Project.

Phase 2 of the Sewer Repair, Rehabilitation, and Replacement Indefinite Delivery/Indefinite Quantity (IDIQ) Task order 2 involves the assessment, capacity analysis, and design of the force mains associated with Pump Station (PS) 16, and PS 17, located in Umatac and Merizo. Elements of this phase are further described below and are separated into individual tasks below.

Task 1 - Project Management

1. Project Management Plan: Prepare a Project Management Plan (PMP) that includes the following items:
 - a. Project Description
 - b. Scope of work
 - c. Work Plan
 - d. Typical monthly progress report and invoicing
 - e. Quality Assurance and Quality Control Plan
 - f. Communication Plan
 - g. Documentation Plan
 - h. Subcontractors and organizational chart
2. Project Schedule: Submit a schedule that meets required milestones. Update schedule at all phases of the project, including monthly meetings, dates for completion of engineering design studies, milestone tasks, and dates for review periods. The schedule may include program development (owner's requirements) and environmental permit approvals. The schedule should be based on the proposed target dates.
3. Progress Reports: Submit monthly progress/status reports to support monthly billings.
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. Prepare meeting minutes.
 - a. Coordinate and communicate with local and federal agencies, including Guam Environmental Protection Agency (GEPA), Department of Public Works (DPW), Department of Parks and Recreation (DPR), US Fish and Wildlife Services (USFWS) throughout the course of the project to ensure review and permitting process adheres to project schedule.
 - b. Meetings will include:
 - i. Project Kickoff Meeting
 - ii. Monthly Update Meetings
 - iii. Report Deliverable Workshop

Task 2 -Force Main Condition Assessment

Consultant shall complete a Force Main condition assessment for the force mains from PS 16 and PS 17. This assessment shall include the force main and appurtenances, such as valves, air relief valves, drains, connection, and connection. At a minimum, the assessment shall:

1. Inspect and determine functionality.

2. Identify effects, such as inoperable valves, exposed corrosion, leaks, cracks, or other conditions that contribute to the failure of the Force Main.
3. Evaluate all metallic appurtenances to determine if corrosion protective measures are necessary.
4. Conduct an external pipe inspection of the exterior of each Force Main wherever the pipe segment is exposed to assess structural damage and the integrity of protective coatings using visual inspection and technology suitable to the pipe. Suitable technology shall be no less than ultrasonic testing, magnetic flux leakage, or broadband electromagnetic testing, or a technology approved by GWA.
5. Conduct pressure monitoring for the PS 17 Force Main to measure the maximum predicted transient pressure that can be expected under normal, peak flow, and emergency conditions.
6. Review operating data available from GWA.
7. Determine the Force Main's probable time of failure based on the condition assessment.

Assumptions

1. The force mains and infrastructure for accessing the interior of the force mains are in suitable condition to allow for the inspections described in this proposal to be performed without undue risk to BC personnel, BC subcontractor personnel, and equipment provided and used to deliver services under this task order.
2. The force main is accessible for the Piper device without addition of fitting or valves or other modifications to the existing plumbing tree and that the device can be deployed through removal of the bonnet from an existing check valve.
3. GWA will grant access to use water from sources within the project area for the purposes of inspection operations. Water usage and/or permit fees have been excluded from the proposed fee.
4. GWA shall provide a local disposal site for water and/or materials removed by BC from the pipelines. Disposal fees have been excluded from the proposed fee.
5. DPW Building permit not required.
6. Both pumps at PS 16 and PS 17 are operable and the INGU Pipers tool can be deployed within the pump stations' valve vault box by removing one check-valve and inserting the Pipers tool.
7. A retrieval device can be installed at the terminating manhole of the force main.
8. One pump at both PS can be temporarily shut down so that the inspection equipment may be deployed.
9. Force mains will be inspected by BC using the INGU Pipers screening level to acquire the following data:
 - Acoustic
 - Pressure
 - Magnetometer

Consultant Responsibilities

1. Review Available Information, including, but not limited to:
 - a. Record documents of the force mains, as-built drawings, and specifications
 - b. Record documents related to prior force main and infrastructure repair, rehabilitation, and replacement
 - c. GIS data for force mains, access structures, connections, and other assets.
 - d. Operations and maintenance records for the force mains.

- e. Force Mains flow rate data, such as expected nominal flow rates, and flow rate hydrographs over 2-weeks of normal operations
 - f. Access to GWA staff knowledgeable about the force mains' operational and maintenance issues, prior inspections, previous rehabilitations and other GWA and third-party work in the project area.
2. Inspection Planning, In-Person Workshop
- a. BC will perform inspection planning services that includes conducting site visits and preparation of a Work Plan describing the means and methods for the inspections to be performed during the project. BC will include a planned schedule for when the inspections are to be performed and the duration of the inspections.
 - b. BC will organize and lead an in-person/remote workshop at GWA facilities. BC Project Management and Technical staff will attend and present at the workshop, with additional BC technical staff attending remotely. The workshop is to be attended by GWA designated sewer collections system operations and maintenance staff, plus GWA engineering and management staff.
 - c. The purpose of the workshop will be to inform GWA staff of planned BC work efforts, anticipated results, schedule, clarify roles and responsibilities, and to coordinate GWA and BC communication requirements. During the workshop, BC will engage with GWA staff to provide comments, ask questions about the inspection means and methods to be used for this project, and provide guidance to BC as GWA sees necessary.
3. Permitting
- a. Permitting is assumed to be minimal for this project and limited to Highway Encroachment Permit.
 - b. BC will prepare and submit necessary traffic control plans.
4. Force Main Inspections using Pipers Technology
- a. BC will execute the force main inspections according to the Work Plan, using the INGU Pipers tool.
 - b. Field services, such as the physical Pipers deployment/capture and traffic control, will be provided by BC and its subcontractors under BC supervision and GWA operator presence, as determined by GWA.
 - c. Equipment required for the deployment and capture of the Pipers tool will be provided by BC and its subcontractors under BC supervision.
 - d. Pipers setup, Pipers data acquisition, and Pipers data download and field QC verification of the data will be performed by BC staff.
 - e. Pre-Inspection Planning and Meeting
 - i. Conduct a pre-project planning meeting with BC staff and its subcontractors to plan, prepare, and coordinate the execution of the force main pipeline inspections.
 - ii. BC will use the Pipers tool to collect the following data:
 - 1. Acoustic data for detection and location of pipeline leaks
 - 2. Acoustic data for detection and location of air pockets or entrained air within the pipeline.
 - 3. Pressure data for detection of changes in vertical pipeline alignment and presence of deposits within the pipeline.
 - 4. Magnetometer data for qualitative detection and location of pipeline features, changes in pipe material, or areas of potential wall loss.
5. Data Acquisition, QC Review, and Validation
- a. BC and its subcontractors will conduct the Pipers inspections of the force main pipelines.

- b. Deployment and Capture
 - i. Pipers inspection tools and Pipers dummy devices to be physically deployed and captured through existing force main infrastructure.
 - ii. BC staff will prepare the Pipers tools to acquire data described in 4.e.ii above.
 - iii. BC staff will oversee deployment of the Pipers dummy device in the first force main pipeline at the upstream deployment site.
 - iv. Once notification is received from the capture team that the Pipers dummy device has been successfully captured, the first Pipers inspection tool will be deployed.
 - v. Once notification is received from the capture team that the first Pipers inspection tool has been successfully captured, the second Pipers inspection tool will be deployed.
- c. Data Acquisition and Data Validation
 - i. Once the second Pipers inspection tool is retrieved, data will be downloaded and QC-reviewed to verify the validity of the data.
 - ii. If data are not valid, BC staff will notify deployment team that redeployment is necessary for either or both tools. Data Acquisition steps above will be repeated, as necessary.
 - iii. Once valid data are verified for the first force main pipeline, repeat the above for the second force main pipeline.
 - iv. Once data are validated for both force main pipelines, capture team will notify deployment team that the inspections are successful, and demobilization may begin.

Deliverables

1. Inspection planning meeting agenda and minutes.
2. Draft and Final Inspection Work Plan.

GWA Responsibilities

1. Obtain USEPA approval of Inspection Work Plan.
2. Participate in site visits.
3. Provide access to the pump stations.
4. Operate pumps, as requested by BC, to deploy and retrieve Pipers tool.

Task 3 – Force Main Condition Assessment Report

Prepare and submit a Force Main Condition Assessment report for the PS 16 and PS 17 force mains. This task will involve analyzing the INGU Pipers data from Task 2. Report will include a description of the field efforts, field observations, and data results. Report will also include a discussion of the results, potential impact of the findings, and recommendations for additional inspections and next steps.

Consultant Responsibilities

1. Data Analysis and Reporting

- a. BC staff will assemble and transmit data to INGU. INGU will analyze the acquired data and report results to BC. Draft report on results in PDF format will be delivered to BC for QC-review and comments. INGU Draft Report will include:
 - i. Leak Detection – Report of positive identification of leak, detected within the measurement sensitivity of Pipers, and approximate longitudinal position along the pipeline. Listing of detected leaks and locations in table format within PDF report.
 - ii. Air/Gas Pocket Detection – Report of positive identification of air pockets or entrained air, detected within the measurement sensitivity of Pipers, and approximate linear location along the pipeline. Listing of detected air pockets or entrained air and locations in table format within PDF report.
 - iii. Pressure Data – Report on measured pressure as a function of longitudinal position along the force main pipeline. Graphic comparison of pressure data and expected force main elevations (per record drawings) vs. longitudinal position.
 - iv. Magnetic inspection
 - 1) Report of identified magnetic features, detected within the measurement sensitivity of the Pipers, and approximate longitudinal positions.
 - 2) Determination whether identified magnetic features are attributable to reductions in pipe wall metal content (e.g., wall-thinning due to corrosion or erosion), or additions in metal content (e.g., repair clamp sleeves installed on the exterior of the pipe).
 - 3) Determination whether identified magnetic features are attributable to force main features such as joints, valves, etc.
 - 4) Listing of magnetic and pipeline features and locations in table format within PDF report.
 - v. Overview Graph – Graphic comparison of force main elevations vs longitudinal position along the force main with pressure data, location of leaks, location of air pockets and entrained air, and location of magnetic features.
 - vi. BC will review the INGU Draft Report and provide comments and corrections. These comments and corrections will be incorporated into an INGU Final Report submitted to BC.
2. Draft Assessment Report
 - a. Develop and deliver a Draft Report for GWA review and comment. Report will include:
 - i. Description of the field efforts
 - ii. Observations during field efforts
 - iii. Data results of the inspections.
 - iv. Discussion of the results
 - v. Potential impact of the findings
 - vi. Recommendations for additional inspections/next steps. A copy of the INGU Final Report will be included.
 - b. In-Person Workshop
 - i. Organize and lead an in-person/remote workshop at GWA facilities to jointly review the Draft Report and discuss BC findings. During the workshop, BC will engage with GWA staff to provide comments, ask questions about the inspection findings, and give guidance to BC as GWA sees necessary.
 - ii. BC Project Management and Technical staff will attend and present at the workshop. The workshop is to be attended by GWA designated sewer collections system operations and maintenance staff, plus GWA engineering and management staff.

3. Final Report
 - a. Compile GWA Draft Report review comments, incorporate input, then develop and deliver a Final Report.

GWA Responsibilities

1. Review and provide comments on Draft Condition Assessment Report
2. Attend and participate in an in-person/remote workshop
3. Approve the Final Condition Assessment Report

Deliverables

1. Prepare and submit a Draft Condition Assessment Report describing results of the inspections for GWA review and comment
2. Organize and lead an in-person/virtual workshop at GWA facilities to review the Draft Condition Assessment Report and discuss findings.
3. Prepare and submit a Final Report describing the results of the project inspection efforts, including INGU's analysis of the acquired data

Task 4 – Force Main Capacity Verification

Perform a hydraulic analysis for PS 16 and PS 17 force mains. This verification shall include updating flow models and an analysis on future flow discharge from the pump stations to determine required hydraulic capacity of the force mains. The Technical Memorandum (TM) shall include recommendations to upgrade the capacity of the force mains, if necessary.

Assumptions

1. Flow metering for PS 16 and PS 17 force mains is excluded.

Consultant Responsibilities/Deliverables

1. Perform a hydraulic assessment of PS 16 and PS 17 force mains.
2. Submit a Flow Model.
 - a. Flow Model will be calibrated according to the Chartered Institution of Water and Environmental Management (CIWEM) Code of Practice for the Hydraulic Modelling of Urban Drainage Systems Version 01 and consistent with the Storm Technical Memorandum.
 - b. Flow Model will incorporate physical changes to the wastewater collection system, changes to capacity, and new data gathered through December 31, 2022
 - c. Flow Model will be updated with newly collected survey data for the force mains, such as invert elevations, pipe sizes, and pipe material.
3. Draft and Final Hydraulic TMs that include the results of the hydraulic assessment and flow model.

GWA Responsibilities

1. Provide requested information related to the force main sewer model, including changes to the system since 2012.

Task 5 –Preliminary Engineering/Basis of Design

Define objective, design criteria, and methodology that shall be used to prepare the design to repair, rehabilitate, or replace PS 16 and PS 17 sewer force mains and appurtenances.

Assumptions (applicable to Tasks 5 through 10)

1. The force mains for PS 16 and PS 17 are in existing right of way or an easement. Review of easements and property records are excluded. Any realignments will be within existing ROW or utility easements.
2. Design will show existing water, storm, and telecommunication utilities, but will not show any relocation or re-alignment for any conflicts.
3. Design is scoped as a design-bid-build method of delivery.
4. For budgeting purposes, both force mains are assumed to need to open-cut replacement either due to capacity issues or severe structural defects. Design assumes excavatable soil conditions. Unusual soil conditions or consolidated formation excavation are not considered.
5. Dewatering performance specification is included but means and methods will be provided by contractor.
6. Geotechnical investigations for the force main design will be accomplished under Phase 1 of Task Order 2 (Gravity Sewer), unless otherwise stated by GWA.
7. Planimetric and topographic field survey for the force main design will be accomplished under Phase 1 of Task Order 2 (Gravity Sewer), unless otherwise stated by GWA.

Exclusions (applicable to Tasks 5 through 10)

1. Permitting and land acquisition for pipe realignment.
2. Permitting and environmental study requirements for stream crossings.
3. Landscaping, including tree cutting, relocation, or vegetation restoration.
4. Stream restoration work.
5. Property and land acquisition.
6. Biological Assessments. If required by USFWS or Guam Department of Agriculture, a biological assessment will be added through a task order amendment.
7. Preparation of an Archaeological Monitoring and Discovery Plan (AMDP) and archaeological monitoring is excluded to conduct geotechnical investigations. Consultant shall first consult with the Guam State Historic Preservation Office (SHPO) to determine archaeological requirements for performing geotechnical investigations. The task order shall be amended as necessary based on SHPO's requirements.
8. Construction management services.

Consultant Responsibilities/Deliverables

Under this task, Consultant shall conduct, as necessary:

1. Research and field investigations: Engineer shall gather data and conduct field investigations to identify existing conditions of the task order scope and aid in identifying optimal solutions. Efforts may include, but are not limited to:
 - a. Review of record drawings
 - b. Interviews with GWA staff
 - c. Consult with SHPO and environmental regulatory agencies to determine permitting requirements for geotechnical investigations.

- d. Conduct field investigations and utility clearances to confirm location and layout of existing utilities within the proposed locations to avoid utility conflicts.
 - e. Geotechnical investigations
 - f. Perform planimetric and topographic field survey to include surface features, buildings, driveways, roadways visible infrastructure and utilities, and location of the right of way or easements.
 - g. The planimetric and topographic field survey under this Phase will be used in the development of the design documents for Phase 2 and Phase 3 of Task Order No. 2, which are the design of force mains and pump stations, respectively.
 - h. Identify demolition, grading, and operational requirements.
2. Basis of Design Report (BODR)
- a. After the research and field investigation phase, prepare a BODR to include the following:
 - i. Projected flow rates
 - ii. Design objectives
 - iii. Route/alignment evaluation
 - iv. Design Criteria
 - v. Design Approach
 - vi. Easement Requirements
 - vii. Description of existing wastewater system
 - viii. Models and Results from Capacity Evaluation Report
 - ix. Surrounding infrastructure, utility, and easement considerations.
 - x. Proposed construction schedule with major work items.
 - xi. Construction Cost Estimates – Develop a Class 4 cost estimate according to the AACE International Cost Estimates Classification System.
3. Conduct a pre-design workshop to review approach, methodologies, findings, and determine design basis. Prepare workshop agenda, minutes, and documentation of comments.

Deliverables

1. Geotechnical Report
2. Basis of Design Report
3. Pre-Design workshop agenda, minutes, and documentation of comments.

GWA Responsibilities

1. Attend Pre-Design workshop.
2. Provide as-builts of existing water and wastewater infrastructure within Attachments A, B, and C.
3. Provide access to GWA facilities related to PS 16 and PS 17 force mains.
4. Assist, as needed, with agency coordination and obtaining permits.
5. Review and provide comment(s) on BODR within 30-days.

Task 6 –30% Design Documents

Upon approval of the BODR, prepare 30% design drawings to refine and agree upon the general arrangement of the proposed design.

Consultant Responsibilities/Deliverables

1. Conduct monthly design review meetings with GWA to review the design process, status, issues, decision points, and project schedule.
2. 30% Preliminary Design Documents to include the following:
 - a. Multidisciplinary plans
 - b. Specification list
 - c. Erosion Control Plan
 - d. By-pass pumping plan (if required)
 - e. Traffic Control plan
 - f. Class 3 AACEI Preliminary Construction Cost estimate.
3. Initiate communication with Guam Environmental Protection Agency, Departments of Public Works, and other relevant agencies to identify all required permits. Task order will be amended to conduct studies or analyses required by local and Federal agencies.
4. Coordinate with relevant agencies, such as GEPA and DPW, throughout the design process. Incorporate any relevant regulation requirements into the design.

Submittals

1. 4 sets (11" x 17") hard copies of the 30% design documents
2. Digital copy of the 30% design documents

GWA Responsibilities

1. Review and comment on the 30% design submittal and provide comments within 30 days.
2. Provide access to GWA property and easements.
3. Provide as-builts of existing water and wastewater infrastructure within Attachments A, B, and C.
4. Assist, as needed, with agency coordination and obtaining permits.

Task 7 – 60% Design

Refined multidisciplinary plans and specifications to obtain approval from the client on the complete arrangement of the proposed design.

Consultant Responsibilities

1. 60% Design Documents
 - a. Refined multidisciplinary plans and specifications, addressing comments from the 30% design submittal
 - i. Detail Drawings
 - ii. Plan and Profile Sheets
 - iii. GWA Standard Details/ BC Standard Details
 - iv. Draft specification sections, with review by BC's subject matter experts
 - v. GWA and BC's QA/QC comments on the 30% design submittal shall be reflected on the plans.
2. Cost estimate update and shall be a Class 2 estimate in accordance with the AACE International Cost Estimate Classification System.
3. Continuous coordination with relevant agencies.

Deliverables

1. 4 sets (11" x 17") hard copies of the 60% design documents
2. Draft specification sections.
3. 30% Design comment log
4. Digital copy of the 60% design documents and cost estimate.

GWA Responsibilities

1. Review and comment on the 60% design submittal and provide comments within 30 days.
2. Assist, as needed, with agency coordination and obtaining permits.

Task 8 – 90% Design

Completion of all construction documents with the appropriate level of detail, addressing comments from the 60% design submittal

1. 90% Design Documents
 - a. Plan Sheets
 - b. Plan and Profile
 - c. Detail Drawings
 - d. Revised specifications
 - e. BC Standard Detail Drawing/ GWA Standard Details
 - f. GWA and BC's QA/QC comments on the 60% design submittal shall be reflected on the plans.
2. Review and prepare contract documents.
3. Class 1 AACEI construction cost estimate
4. Continuous coordination with relevant agencies.

Submittals

1. 4 sets (11" x 17") hard copies of the 90% design documents
2. Revised specifications
3. Digital copy of the 90% design documents and cost estimate
4. 60% Design comment log.

GWA Responsibilities

1. Review and comment on the 90% design submittal and provide comments within 30 days.
2. Assist, as needed, with agency coordination and obtaining permits.
3. Provide front-end document template suited for construction delivery method.

Task 9 – 100% Design

Completion of final documents prepared for bidding.

Consultant Responsibilities/Deliverables

1. 100% Design Documents
 - a. Final set of drawings for bidding to include the following:
 - i. Plan Sheets
 - ii. Plan and Profile

- iii. Detail Drawings
 - iv. BC Standard Detail Drawing/ Client Standard Details
 - v. GWA and BC's QA/QC comments on the 90% design submittal shall be reflected on the plans.
- b. Finalized Specifications
2. Final construction cost estimate based on quantity takeoffs and requirements of the 100% design plans and specifications.
 3. Final coordination and submittal of 100% design documents to relevant agencies.

Deliverables

1. 4 sets (11" x 17") hard copies of the design documents
2. 1 set (24" x 36") hard copy of design documents
3. Digital copy of the design documents and cost estimate.

GWA Responsibilities

1. Provide final approval of design documents and construction costs.

Task 10 – Construction Bid Support and Support During Construction

Provide technical assistance to GWA during construction bidding phase. This task includes technical support in reviewing all submittals and requests submitted by the Contractor during construction.

Consultant Responsibilities/Deliverables

1. Prepare answers to bidders' Requests for Information (RFIs) regarding the bid packages during the bidding phase.
2. Assist GWA in preparing contract solicitation addenda.
3. Coordinate the Pre-Bid Conference, including the preparation of meeting agenda, sign-in sheets, and record minutes and providing formal responses to technical questions.
4. Assist with reviewing construction proposals received. This shall include a bid analysis, review of bid proposal prices, and conformance with contract requirements and the Guam Procurement Code. A letter of recommendation of award shall be prepared.
5. Prepare final "Issued for construction" conformed plans and specifications incorporating addenda and changes during the bid phase.
6. Review shop drawings, design calculations, samples, test results and other data required to be submitted by the contractor for conformance with the contract documents. Document and provide responses to GWA. This shall include assisting the review of the Quality Control Plan for complete content.
7. The design consultant shall chair and record the meeting minutes with any other governmental agencies.
8. Review requests for clarification or interpretation submitted by contractor and provide responses to GWA.
9. Evaluate substitution requests to determine acceptability of substitute materials and equipment proposed by the contractor and provided recommendations to GWA.
10. If requested by the construction or project manager, attend the construction kick off meeting and construction/final inspections.
11. Perform preliminary and final inspections and submit punch list.

12. Provide Final Record Drawings based on marked-up construction drawings (i.e., as-builts).

GWA Responsibilities

1. Provide Engineer with necessary information such as RFIs submitted by the Contractor.

Task Order 2 - Phase 3: Sewage Pump Stations

This document accompanies Task Order 2 of contract S22-02-BND Indefinite Delivery/Indefinite Quantity (ID/IQ) Professional Project/Construction Management for Islandwide Sewer Collection/Transmission system Repair, Rehabilitation, and Replacement Project.

Phase 3 of the Sewer Repair, Rehabilitation, and Replacement Indefinite Delivery/Indefinite Quantity (IDIQ) Task order 2 involves Pump Station (PS) 16, PS 17, Ejector Station (ES) 3, and ES 6. For those PS and ES, this phase consists of pump station condition assessment, hydraulic modelling, and design services through construction. Elements of this phase are further described below and are separated into individual tasks.

Task 1 - Project Management

1. Project Management Plan: Prepare a Project Management Plan (PMP) that includes the following items:
 - a. Project Description
 - b. Scope of work (from contract)
 - c. Work Plan
 - d. Typical monthly progress report
 - e. Quality Assurance and Quality Control Plan
 - f. Communication Plan
 - g. Documentation Plan
 - h. Subcontractors and organizational chart
2. Project Schedule: Submit a schedule that meets required milestones. Update schedule at all phases of the project, including monthly meetings, dates for completion of engineering design studies, milestone tasks, and dates for review periods. The schedule may include program development (owner's requirements) and environmental permit approvals. The schedule should be based on the proposed target dates.
3. Progress Reports: Submit monthly progress/status reports to support monthly billings.
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. Prepare meeting minutes.
 - a. Coordinate and communicate with local and federal agencies, including Guam Environmental Protection Agency (GEPA), Department of Public Works (DPW), Department of Parks and Recreation (DPR), US Fish and Wildlife Services (USFWS) throughout the course of the project to ensure review and permitting process adheres to project schedule.

Task 2 - Pump Station Preliminary Plan

Develop and submit a work plan for PS 16, PS 17, ES 3, and ES 6 that establishes a preliminary design schedule that prioritizes Pump Station improvements based on current known conditions for each of these four Pump Stations.

The work plan shall include an estimated scope of work for each pump station to bring each pump station into compliance with the acceptance criteria delineated in the Consent Decree (CD), schedule of the condition assessment, and schedule of key implementation dates.

Assumptions

1. GWA will conduct EPA Coordination.

Consultant Responsibilities/Deliverables

1. Preliminary Work Plan shall include an estimated scope of work for each pump station based on the known conditions to bring each pump station into compliance with the acceptance criteria set under CD Paragraph V.A 31. Consultant shall:
 - a. Review existing condition assessment information and prior studies.
 - b. Review of existing operations plans, operational data, and asset management data.
 - c. Review available engineering drawings.
 - d. Interview pump station operators, maintenance, and engineering staff.
2. The preliminary work plan shall include a schedule for a pump station condition assessment that identifies key implementation dates for the following milestones:
 - a. Execute design contract
 - b. Complete Condition Assessment
 - c. Issue a notice to proceed with design
 - d. Execute construction contract
 - e. Issue a notice to proceed with construction
 - f. Complete Construction
3. Scheduling shall be in accordance with the timeline mentioned in Consent Decree Paragraph V.A 30.

Deliverables:

1. Draft Pump Station Preliminary Work Plan.
2. Final Pump Station Preliminary Work Plan.

GWA Responsibilities

3. Provide all data, drawings, and information relating to the pump stations.
4. Provide opportunities to interview GWA operation staff.
5. Review and provide comments for the Engineer to adjust work plans if necessary.

Task 3 – Sewage Pump Station Condition Assessment

Assess the condition of PS 16, PS 17, ES 3, and ES 6 through observation, direct inspection, investigation, and monitoring. This task will develop and utilize the assessment to identify operation issues, evaluate the overall performance of the system, update station condition profiles, and assess the rate of deterioration of the pump station assets.

Assumptions

1. GWA has adequate records of pump information, such as manufacturer, year installed, and pump characteristics.
2. Assessment of generators is limited to determining generator’s capacity for normal and peak-flow operations, and fuel storage capacity.

Exclusions

1. Coordination with USEPA.
2. Removal or extraction of pump station components, such as pumps.

Consultant Responsibilities

1. Inspect each pump station and ejector station using modern industry standard technologies, tool, and practices, to perform:
 - a. Structural Assessment
 - b. Mechanical Assessment
 - c. Electrical Assessment
 - d. Civil Assessment
2. Comprehensive analysis of the pump's characteristics including:
 - a. Designed Horsepower
 - b. Power Demands
 - c. Designed Flows
 - d. Installation Date
 - e. Preferred Operating Region
3. Comprehensive analysis of the pump station's characteristics including:
 - a. Average flows
 - b. Overall Power Demand
 - c. Wet Well Capacity
 - d. System Curve
 - e. Piping and valve condition
 - f. Results from the Force Main Condition Assessment in Phase 2 shall be mentioned and incorporated into the pump station condition assessment report.
4. Upon completion of the condition assessments, prepare and submit a pump station condition assessment report for PS 16, PS 17, ES 3, and ES 6. Report will include:
 - a. Description of the field efforts
 - b. Observations during field efforts
 - c. Data results of the inspections.
 - d. Discussion of the results
 - e. Potential impact of the findings
 - f. Recommendations for additional inspections/next steps

Deliverables

5. Prepare and submit a Draft Condition Assessment Report describing results of the inspections for GWA review and comment.
1. Prepare and submit a Final Condition Assessment Report that incorporates comments from the Draft report.

GWA Responsibilities

1. Review and provide comments on Draft Condition Assessment Report.
2. Provide comments from EPA to Engineer for any adjustments to the assessment.
3. Provide access to pump stations.
4. Provide assistance, as requested, to conduct assessments, such as operate pumps.

Task 4 – Pump Station Capacity Verification

Perform a hydraulic analysis for PS 16, PS 17, ES 3, and ES 6. This verification shall include updates to the flow model, and an analysis on future flow discharge from the pump station. This report shall include recommendations to upgrade the capacity of the pump stations, if necessary.

Exclusions

1. Flow metering is excluded.

Consultant Responsibilities/Deliverables

1. Perform a hydraulic assessment of PS 16, PS 17, ES 3, and ES 6.
2. Submit a Flow Model.
 - a. Flow Model will be calibrated according to the Chartered Institution of Water and Environmental Management (CIWEM) Code of Practice for the Hydraulic Modelling of Urban Drainage Systems Version 01 and consistent with the Storm Technical Memorandum.
 - b. Flow Model will incorporate physical changes to the wastewater collection system, changes to capacity, and new data gathered through December 31, 2022
 - c. Flow Model will be updates with newly collected survey data and additional information provided by GWA.
3. Draft and Final Hydraulic TMs that includes the results of the hydraulic assessment and flow model.

GWA Responsibilities

1. Provide requested information related to the PS and ES hydraulic model, including changes to the system since 2012.
2. Provide additional information needed to incorporate into the hydraulic model.

Task 5 – Preliminary Engineering/Basis of Design

Define objective, design criteria, and methodology that shall be used to prepare the design to repair or replace pump stations as necessary. The preliminary design considers all issues stated in the sewage pump station work plan.

Assumptions (applicable to Tasks 5 through 10)

1. For budgeting purposes, all electrical, mechanical, and control components will be replaced.
2. All work will only be done within the fenced area of the existing pump stations and ejector stations, and ROW.
3. Civil design will have sufficient information from the gravity sewer and force main design work to proceed directly into 60% design. Coordination of pump stations scope will be accomplished throughout the 30% design stages of TO Phase 1 (Gravity Sewer) and Phase 2 (Force Mains).
4. Existing structures, such as the pump station building and below-grade structures, are in structurally sound condition and do not require major renovation
5. Geotechnical investigations for the force main design will be accomplished under Phase 1 of Task Order 2 (Gravity Sewer), unless otherwise stated by GWA.
6. Planimetric and topographic field survey for the force main design will be accomplished under Phase 1 of Task Order 2 (Gravity Sewer), unless otherwise stated by GWA.
7. Geotechnical services will consist of one boring at each pump station.
8. All pump stations are identified in Attachment B.

Exclusions (applicable to Tasks 5 through 9)

1. Stormwater improvements.
2. Potholing and/or subsurface utility investigations.
3. Stream restoration work.
4. Property and land acquisition.
5. Biological assessments. If required by USFWS or Guam Department of Agriculture, a biological assessment will be added through a task order amendment.
6. Preparation of an Archaeological Monitoring and Discovery Plan (AMDP) and archaeological monitoring is excluded to conduct geotechnical investigations. Consultant shall first consult with the Guam State Historic Preservation Office (SHPO) to determine archaeological requirements for performing geotechnical investigations. The task order shall be amended as necessary based on SHPO's requirements.

Consultant Responsibilities/Deliverables

Under this task, Consultant shall conduct, as necessary:

1. Research and field investigations: Engineer shall gather data and conduct field investigations to identify existing conditions of the task order scope and aid in identifying optimal solutions. Efforts may include, but are not limited to:
 - a. Review of record drawings
 - b. Interviews with GWA staff
 - c. Consult with SHPO and environmental regulatory agencies to determine permitting requirements for geotechnical investigations.
 - d. Conduct field investigations and utility clearances to confirm location and layout of existing utilities within the proposed locations to avoid utility conflicts.
 - e. Geotechnical investigations
 - i. The geotechnical investigations performed under Phase 1 (Gravity Sewer) will be used in the development of the design documents for this Phase.
 - f. Perform planimetric and topographic field survey to include surface features, buildings, driveways, roadways visible infrastructure and utilities, and location of the right of way or easements.
 - i. The planimetric and topographic field survey performed under Phase 1 (Gravity Sewer) will be used in the development of the design documents for this Phase.
 - g. Identify demolition, grading, and operational requirements.
2. Basis of Design Report (BODR)
 - a. After the research and field investigation phase, prepare a BODR to include the following:
 - i. Projected flow rates
 - ii. Design objectives
 - iii. Design Criteria
 - iv. Design Approach
 - v. Easement Requirements
 - vi. Description of existing wastewater pump station
 - vii. Models and Results from GWA's Capacity Evaluation Report to determine pump station pumping requirements
 - viii. Surrounding infrastructure, utility, and easement considerations.
 - ix. Proposed construction schedule with major work items.

- x. Construction Cost Estimates – Develop a Class 4 cost estimate according to the AACE International Cost Estimates Classification System.
3. Conduct a pre-design workshop to review approach, methodologies, findings, and determine design basis. Prepare workshop agenda, minutes, and documentation of comments.

Deliverables

1. Geotechnical Report
2. Basis of Design Report
3. Pre-Design workshop agenda, minutes, and documentation of comments.

GWA Responsibilities

1. Attend Pre-Design workshop.
2. Provide as-builts of existing water and wastewater infrastructure within Attachments A, B, and C.
3. Provide access to GWA facilities.
4. Assist, as needed, with agency coordination and obtaining permits.
5. Review and provide comment(s) on BODR within 30-days.

Task 6 –30% Design Documents

Upon approval of the BODR, prepare 30% design drawings to refine and agree upon the general arrangement of the proposed design.

Consultant Responsibilities/Deliverables

1. Conduct monthly design review meetings with GWA to review the design process, status, issues, decision points, and project schedule.
2. 30% Preliminary Design Documents to include the following:
 - a. Multidisciplinary plans
 - b. Specification list
 - c. Erosion Control Plan
 - d. By-pass pumping plan (if required)
 - e. Traffic Control plan
 - f. Class 3 AACEI Preliminary Construction Cost estimate.
3. Initiate communication with Guam Environmental Protection Agency, Departments of Public Works, and other relevant agencies to identify all required permits. Task order will be amended to conduct studies or analyses required by local and Federal agencies.
4. Coordinate with relevant agencies, such as GEPA and DPW, throughout the design process. Incorporate any relevant regulation requirements into the design.

Submittals

1. 4 sets (11" x 17") hard copies of the design documents
2. Digital copy of the design documents
3. Digital copy of the BODR.

GWA Responsibilities

1. Review and comment on the 30% design submittal and provide comments within 30 days.
2. Provide access to GWA property and easements.
3. Provide as-builts of existing water and wastewater infrastructure within Attachments A, B, and C.
4. Assist, as needed, with agency coordination and obtaining permits.

Task 7 – 60% Design

Refined multidisciplinary plans and specifications to obtain approval from the client on the complete arrangement of the proposed design.

Consultant Responsibilities

1. 60% Design Documents
 - a. Refined multidisciplinary plans and specifications, addressing comments from the 30% design submittal
 - b. Detail Drawings
 - c. Plan and Profile Sheets
 - d. GWA Standard Details/ BC Standard Details
 - e. Draft specification sections, with review by BC's subject matter experts
 - f. GWA and BC's QA/QC comments on the 30% design submittal shall be reflected on the plans.
 - g. Cost estimate update and shall be a Class 2 estimate in accordance with the AACE International Cost Estimate Classification System.
 - h. Continuous coordination with relevant agencies.

Deliverables

1. 4 sets (11" x 17") hard copies of the design documents
2. Draft specification sections.
3. 30% Design comment log
4. Digital copy of the design documents and cost estimate.

GWA Responsibilities

1. Review and comment on the 60% design submittal and provide comments within 30 days.
2. Assist, as needed, with agency coordination and obtaining permits.

Task 8 – 90% Design

Completion of all construction documents with the appropriate level of detail, addressing comments from the 60% design submittal

1. 90% Design Documents
 - a. Plan Sheets
 - b. Plan and Profile
 - c. Detail Drawings
 - d. Revised specifications
 - e. BC Standard Detail Drawing/ GWA Standard Details
 - f. GWA and BC's QA/QC comments on the 60% design submittal shall be reflected on the plans.

2. Review and prepare contract documents, including front-end contract documents.
3. Class 1 AACEI construction cost estimate
4. Continuous coordination with relevant agencies.

Submittals

1. 4 sets (11" x 17") hard copies of the design documents
2. Revised specifications
3. Digital copy of the design documents and cost estimate
4. 60% Design comment log.

GWA Responsibilities

1. Review and comment on the 90% design submittal and provide comments within 30 days.
2. Assist, as needed, with agency coordination and obtaining permits.
3. Provide front-end document template suited for construction delivery method.

Task 9 – 100% Design

Completion of final documents prepared for bidding.

Consultant Responsibilities/Deliverables

1. 100% Design Documents
 - a. Final set of drawings for bidding to include the following:
 - i. Plan Sheets
 - ii. Plan and Profile
 - iii. Detail Drawings
 - iv. BC Standard Detail Drawing/ Client Standard Details
 - v. GWA and BC's QA/QC comments on the 90% design submittal shall be reflected on the plans.
 - b. Finalized Specifications
2. Final construction cost estimate based on quantity takeoffs and requirements of the 100% design plans and specifications.
3. Final coordination and submittal of 100% design documents to relevant agencies.

Deliverables

1. 4 sets (11" x 17") hard copies of the design documents
2. 1 set (24" x 36") hard copy of design documents
3. Digital copy of the design documents and cost estimate.

GWA Responsibilities

1. Provide final approval of design documents and construction costs.

Task 10 – Construction Bid Support and Support During Construction

Provide technical assistance to GWA during construction bidding phase. This task includes technical support in reviewing all submittals and requests submitted by the Contractor during construction.


Consultant Responsibilities/Deliverables

1. Prepare answers to bidders' Requests for Information (RFIs) regarding the bid packages during the bidding phase.
2. Assist GWA in preparing contract solicitation addenda.
3. Coordinate the Pre-Bid Conference, including the preparation of meeting agenda, sign-in sheets, and record minutes and providing formal responses to technical questions.
4. Assist with reviewing construction proposals received. This shall include a bid analysis, review of bid proposal prices, and conformance with contract requirements and the Guam Procurement Code. A letter of recommendation of award shall be prepared.
5. Prepare final "Issued for construction" conformed plans and specifications incorporating addenda and changes during the bid phase.
6. Review shop drawings, design calculations, samples, test results and other data required to be submitted by the contractor for conformance with the contract documents. Document and provide responses to GWA. This shall include assisting the review of the Quality Control Plan for complete content.
7. The design consultant shall chair and record the meeting minutes with any other governmental agencies.
8. Review requests for clarification or interpretation submitted by contractor and provide responses to GWA.
9. Evaluate substitution requests to determine acceptability of substitute materials and equipment proposed by the contractor and provided recommendations to GWA.
10. If requested by the construction or project manager, attend the construction kick off meeting and construction/final inspections.
11. Perform preliminary and final inspections and submit punch list.
12. Provide Final Record Drawings based on marked-up construction drawings (i.e., as-builts).

GWA Responsibilities

1. Provide Engineer with necessary information such as RFIs submitted by the Contractor.

Attachment A

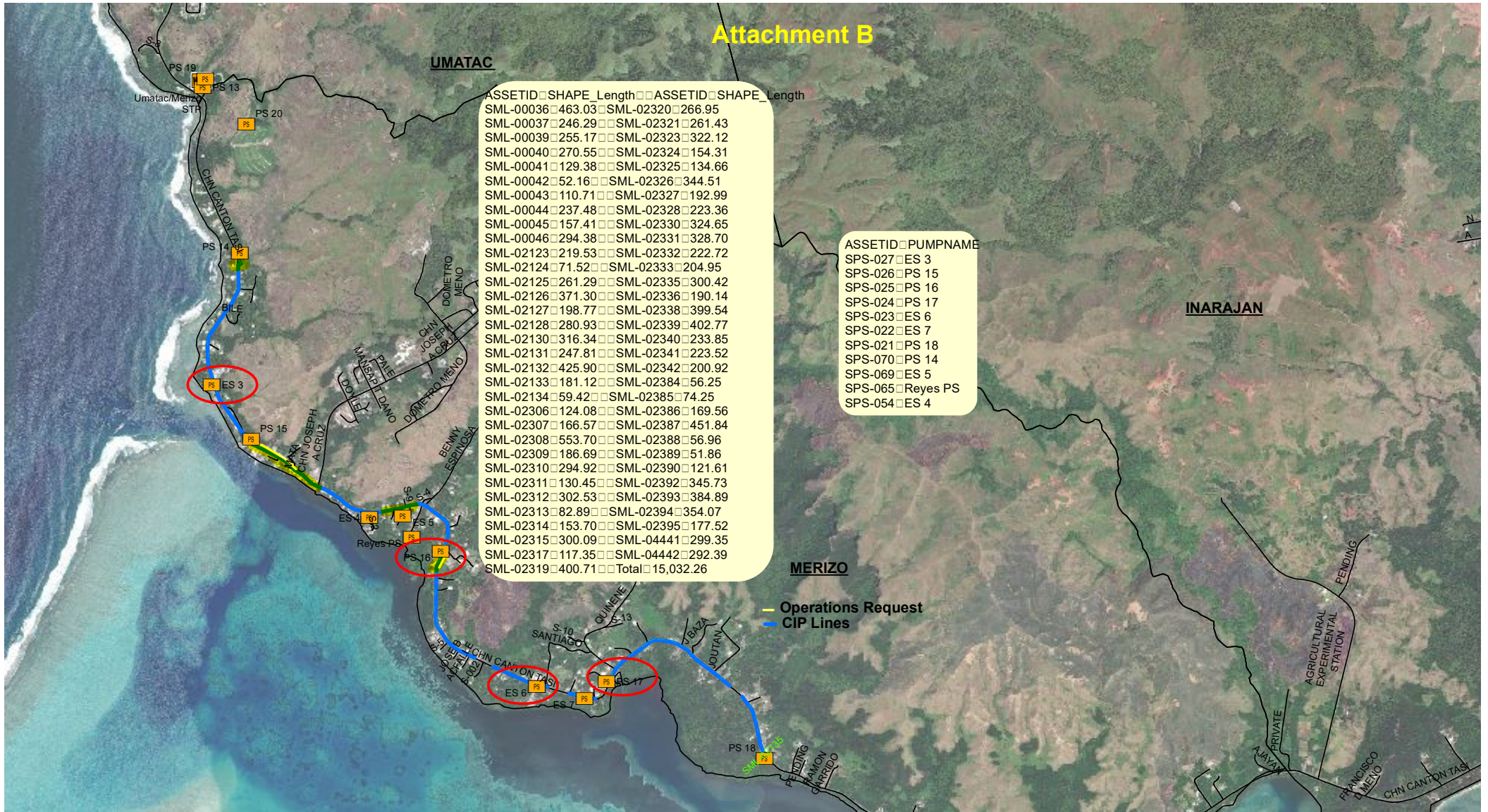
CIP Lines 
Operations Request 

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Attachment B

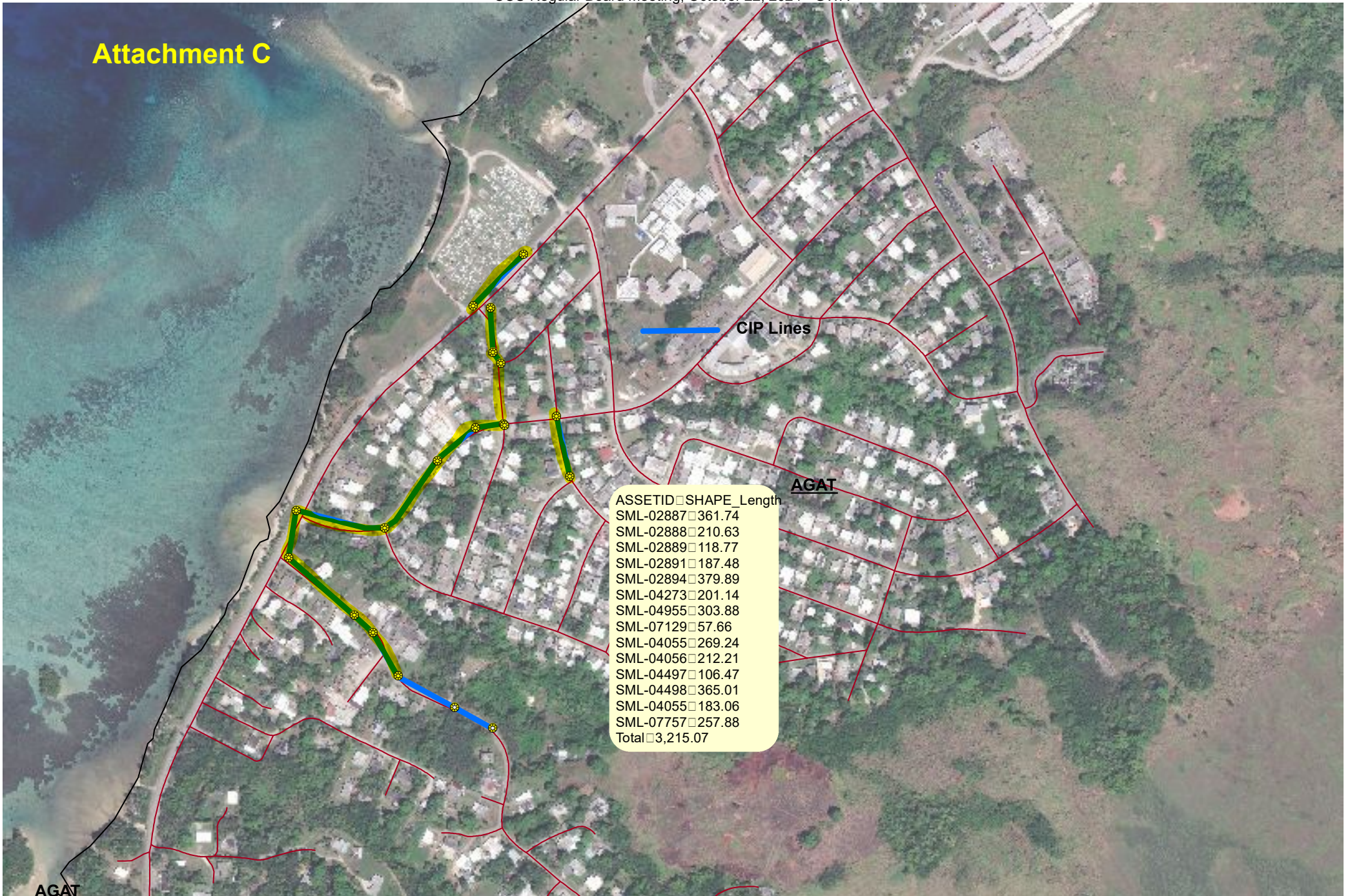


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SML-00041	129.38	SML-02325	134.66
SML-00042	52.16	SML-02326	344.51
SML-00043	110.71	SML-02327	192.99
SML-00044	237.48	SML-02328	223.36
SML-00045	157.41	SML-02330	324.65
SML-00046	294.38	SML-02331	328.70
SML-02123	219.53	SML-02332	222.72
SML-02124	71.52	SML-02333	204.95
SML-02125	261.29	SML-02335	300.42
SML-02126	371.30	SML-02336	190.14
SML-02127	198.77	SML-02338	399.54
SML-02128	280.93	SML-02339	402.77
SML-02130	316.34	SML-02340	233.85
SML-02131	247.81	SML-02341	223.52
SML-02132	425.90	SML-02342	200.92
SML-02133	181.12	SML-02384	56.25
SML-02134	59.42	SML-02385	74.25
SML-02306	124.08	SML-02386	169.56
SML-02307	166.57	SML-02387	451.84
SML-02308	553.70	SML-02388	56.96
SML-02309	186.69	SML-02389	51.86
SML-02310	294.92	SML-02390	121.61
SML-02311	130.45	SML-02392	345.73
SML-02312	302.53	SML-02393	384.89
SML-02313	82.89	SML-02394	354.07
SML-02314	153.70	SML-02395	177.52
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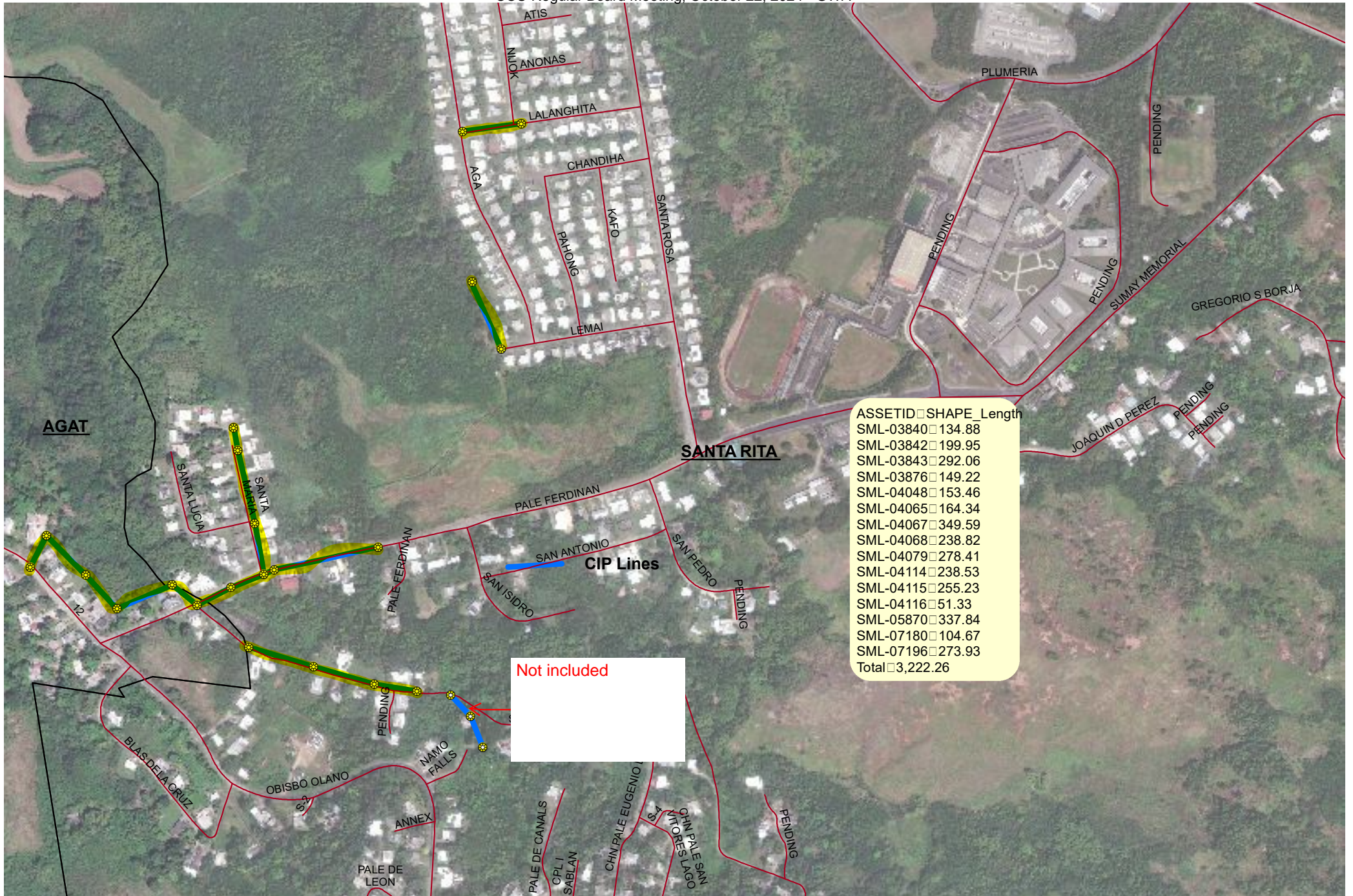
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SPS-021	PS 18
SPS-070	PS 14
SPS-069	ES 5
SPS-065	Reyes PS
SPS-054	ES 4

— Operations Request
 — CIP Lines

Attachment C



AGAT



Guam Waterworks Authority
Indefinite Delivery/Indefinite Quantity (ID/IQ) Professional Project/Construction
GWA Project No. S22-02-BND
Task Order No. 2 - Sewer Gravity, Force Main, and Pump Station Assessment, Capacity Verification, and Design Services

Task Order 2 Budget Summary

Phase	Tasks	BC Fee	Expenses	Subconsultants	Subtotal	Tax	Grand Total
Phase 1	Tasks 1 - 8	\$1,074,484	\$6,644	\$1,187,721	\$2,268,849	\$119,410	\$2,388,259
Phase 2	Tasks 1 - 5	\$569,739	\$21,027	\$165,000	\$755,766	\$39,776	\$795,542
Phase 3	Tasks 1 - 5	\$702,685	\$36,949	\$0	\$739,634	\$38,927	\$778,561
Total For All Three Phases Through the Preliminary Engineering/BODR Tasks							\$3,962,362
Phase 1	Tasks 9 - 13	\$1,278,937	\$1,100	\$473,550	\$1,753,587	\$92,292	\$1,845,879
Phase 2	Tasks 6 - 10	\$795,717	\$1,100	\$0	\$796,817	\$41,937	\$838,754
Phase 3	Tasks 6 - 10	\$1,093,242	\$2,200	\$0	\$1,095,442	\$57,654	\$1,153,096
Total For All Three Phases From 30% to Construction Support Services Tasks							\$3,837,729
Grand Total for Task Order 2							\$7,800,091

**Guam Waterworks Authority
Indefinite Delivery/Indefinite Quantity (ID/IQ) Professional Project/Construction Management
for Islandwide Sewer Collection/Transmission System Repair, Rehabilitation, and
GWA Project No. S22-02-BND**

Task Order No. 2 - Sewer Gravity, Force Main, and Pump Station Assessment, Capacity Verification, and Design Services

Phase 1: Gravity Sewer Mains

Task	Description	BC Fee	Expenses	Subconsultants	Subtotal	
1	Project Management	\$146,423	\$0	\$0	\$146,423	
2	CCTV Assessment	\$66,404	\$1,694	\$489,775	\$557,873	
3	A/SR/UM Gravity Condition Assessment Report	\$102,583	\$550	\$0	\$103,133	
4	Additional Condition Assessment Reporting	\$177,957	\$1,100	\$0	\$179,057	
5	Acute/Short-Term Work Plan	\$93,828	\$550	\$0	\$94,378	
6	Capacity Assurance Report	\$33,436	\$1,100	\$0	\$34,536	
7	Long-Term Work Plan	\$106,781	\$550	\$0	\$107,331	
8	Preliminary Design/Basis of Design Report	\$347,072	\$1,100	\$697,946	\$1,046,118	
Tasks 1 to 8 Totals		\$1,074,484	\$6,644	\$1,187,721	\$2,268,849	
Tasks 1 to 8 TAX					\$119,410	
Tasks 1 to 8 Grand Total					\$2,388,259	
9	30% Design	\$483,201	\$0	\$473,550	\$956,751	
10	60% Design	\$329,831	\$0	\$0	\$329,831	
11	90% Design	\$226,029	\$0	\$0	\$226,029	
12	100% Design	\$146,230	\$0	\$0	\$146,230	
13	Services During Construction	\$93,646	\$1,100	\$0	\$94,746	
Tasks 9 to 13 Totals		\$1,278,937	\$1,100	\$473,550	\$1,753,587	
Tasks 9 to 13 Tax					\$92,292	
Tasks 9 to 13 Grand Total					\$1,845,879.00	
Phase 1: Totals		\$2,353,421	\$7,744	\$1,661,271	\$4,022,436.00	
		Tax				\$211,702
		Phase 1 Grand Total				\$4,234,138

Guam Waterworks Authority
Indefinite Delivery/Indefinite Quantity (ID/IQ) Professional Project/Construction Management
for Islandwide Sewer Collection/Transmission System Repair, Rehabilitation, and
GWA Project No. S22-02-BND

Task Order No. 2 - Sewer Gravity, Force Main, and Pump Station Assessment, Capacity Verification, and Design Services

Phase 2: Sewer Force Mains

Task	Description	BC Fee	Expenses	Subconsultants	Subtotal	
1	Project Management	\$143,811	\$0	\$0	\$143,811	
2	Forcemain Inspection	\$76,060	\$18,827	\$165,000	\$259,887	
3	Forcemain Assessment Report	\$67,683	\$550	\$0	\$68,233	
4	Forcemain Capacity Verification	\$32,093	\$550	\$0	\$32,643	
5	Preliminary Design/Basis of Design Report	\$250,092	\$1,100	\$0	\$251,192	
Tasks 1 to 5 Totals		\$569,739	\$21,027	\$165,000	\$755,766.00	
Tasks 1 to 5 TAX					\$39,776	
Tasks 1 to 5 Grand Total					\$795,542	
6	30% Design	\$228,648	\$0	\$0	\$228,648	
7	60% Design	\$198,883	\$0	\$0	\$198,883	
8	90% Design	\$165,635	\$0	\$0	\$165,635	
9	100% Design	\$113,090	\$0	\$0	\$113,090	
10	Services During Construction	\$89,461	\$1,100	\$0	\$90,561	
Tasks 6 to 8 Totals		\$795,717	\$1,100	\$0	\$796,817.00	
Tasks 6 to 10 TAX					\$41,937	
Tasks 6 to 10 Grand Total					\$838,754	
Phase 2: Totals		\$1,365,456	\$22,127	\$165,000	\$1,552,583	
		Tax				\$81,713
		Phase 2 Grand Total				\$1,634,296

Guam Waterworks Authority
Indefinite Delivery/Indefinite Quantity (ID/IQ) Professional Project/Construction Management
for Islandwide Sewer Collection/Transmission System Repair, Rehabilitation, and
GWA Project No. S22-02-BND

Task Order No. 2 - Sewer Gravity, Force Main, and Pump Station Assessment, Capacity Verification, and Design Services

Phase 3: Pump Stations

Task	Description	BC Fee	Expenses	Subconsultants	Subtotal	
1	Project Management	\$131,564	\$0	\$0	\$131,564	
2	Pump Station Preliminary Plan	\$72,842	\$1,144	\$0	\$73,986	
3	Pump Station Condition Assessment	\$133,626	\$34,155	\$0	\$167,781	
4	Pump Station Capacity Verification	\$33,940	\$550	\$0	\$34,490	
5	Preliminary Design/Basis of Design	\$330,713	\$1,100	\$0	\$331,813	
Tasks 1 to 5 Totals		\$702,685	\$36,949	\$0	\$739,634	
Tasks 1 to 5 TAX					\$38,927	
Tasks 1 to 5 Grand Total					\$778,561	
6	30% Design	\$366,143	\$0	\$0	\$366,143	
7	60% Design	\$264,282	\$0	\$0	\$264,282	
8	90% Design	\$204,556	\$0	\$0	\$204,556	
9	100% Design	\$156,419	\$0	\$0	\$156,419	
10	Bid Support/Svs During Construction	\$101,842	\$2,200	\$0	\$104,042	
Tasks 6 to 8 Totals		\$1,093,242	\$2,200	\$0	\$1,095,442	
Tasks 6 to 10 TAX					\$57,654	
Tasks 6 to 10 Grand Total					\$1,153,096	
Phase 2: Totals		\$1,795,927	\$39,149	\$0	\$1,835,076.00	
		Tax				\$96,581
		Phase 3 Grand Total				\$1,931,657

Exhibit E

This is **EXHIBIT K**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services – Task Order Edition** dated July 12, 2024.

Amendment to Owner-Engineer Agreement No. 1

1. Background Data:

- a. Effective Date of Task Order: July 12, 2024
- b. Owner: Guam Waterworks Authority
- c. Engineer: Brown and Caldwell
- d. Specific Project: Indefinite Delivery/Indefinite Quantity (IDIQ) for Professional Project/Construction Management for Islandwide Sewer Collection/Transmission System Repair, Rehabilitation, and Replacement

2. Nature of Amendment

This Amendment No. 1 to the IDIQ for Professional Project/Construction Management for Islandwide Sewer Collection/Transmission System Repair, Rehabilitation, and Replacement Owner-Engineer Agreement (“IDIQ”) contract will increase the contract amount by \$3,951,894 to allow for the partial execution of Task Order No. 2. The total contract amount is, therefore, \$4,851,894 through this Amendment No.1 to the IDIQ Owner-Engineer Agreement.

Task Order No. 2 of this IDIQ includes the condition assessment and design of gravity sewer, force mains, and pump stations in Santa Rita, Agat, Umatac, and Merizo. Task Order No. 2 is necessary to address Consent Decree requirements. Initially, only the condition assessment (including CCTV/cleaning) and preliminary engineering tasks of Task Order No. 2 will be executed for an amount of \$3,962,362.

An additional amendment will be necessary to execute the design, bid support services, and engineering support services tasks of Task Order No. 2. Actual amount of these remaining tasks of Task Order No. 2 will be renegotiated after further defining the design scope through the initial execution of this task order.

3. Task Order Summary (Reference only)

Through this Amendment No. 1 to the IDIQ Owner-Engineer Agreement, this contract includes the following Task Orders:

- 1. Task Order No. 1 – D/B Contract Support, NASSCO Training, Tamuning-Tumon HS PM/CM
- 2. Task Order No. 2 – Agat-SR, Umatac-Merizo Gravity Sewer, Force Main, and Pump Station Condition Assessment and Design

Summary of Task Orders and Cost

Exhibit K – Amendment to Task Order
EJCDC® E-505, Agreement Between Owner and Engineer for Professional Services – Task Order Edition.
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<u>Task Order</u>	<u>Contract Document</u>	<u>Amount</u>
Task Order No. 1	Original Task Order	\$989,532
Task Order No. 2	Original Task Order	\$3,962,362
IDIQ Owner-Engineer Contracted Amount		\$4,951,894

4. Agreement Summary

IDIQ Contract Amount	
Original Agreement Contract Amount	\$1,000,000
Amendment No. 1 Net Increase	\$3,951,894
Revised Agreement Contract Amount Through Amendment No. 1	\$4,951,894

The foregoing Task Order Summary is for reference only and does not alter the terms of the Task Order, including those set forth in Exhibit C.

Owner and Engineer hereby agree to modify the above-referenced Task Order as set forth in this Amendment. All provisions of the Agreement and Task Order not modified by this or previous Amendments remain in effect. The Effective Date of this Amendment is **XXXXX**.

OWNER:	ENGINEER:
By: _____	By: _____
Title: _____	Title: <u>Senior Vice President</u>
Date	Date
Signed: _____	Signed: _____