

## PROFESSIONAL SERVICES AGREEMENT

This **PROFESSIONAL SERVICES AGREEMENT** (the “Agreement”) is made and entered by and between **NEW BRAUNFELS UTILITIES**, a Texas municipally owned utility (“NBU”), and **GHD INC. DBA GHD CONSULTING INC.**, a California corporation authorized to transact business in the State of Texas (the “Professional”). For good and valuable consideration, the receipt and sufficiency of which is acknowledged, the parties agree as follows:

Section 1. Term of Agreement. This Agreement shall become effective the date on which the last party to this Agreement executes this Agreement and this Agreement shall not be binding until executed by all parties (the “Effective Date”). Once this Agreement is executed by both parties, this Agreement shall remain in effect until the completion date specified in Exhibit A, unless terminated as provided for in this Agreement. Subject to Section 271.904 of the Texas Local Government Code, as amended, Exhibit A shall provide, in either calendar days or by providing a final date, a time of completion prior to which the Professional shall have completed all tasks related to the Services (hereinafter defined).

Section 2. Scope of Services.

(A) The Professional shall perform the services described in Exhibit A (the “Services”) within the timeframe specified therein. The time limits for the Services stated in Exhibit A are of the essence of the Agreement. By executing this Agreement, the Professional confirms that the timeframe in Exhibit A is a reasonable period for performing the Services. The scope of work described in the Services constitutes the “Project.”

(B) The quality of Services provided hereunder shall be of the level of professional quality performed by professionals regularly rendering this type of service.

(C) The Professional shall perform the Services in compliance with all statutory, regulatory, and contractual requirements now or hereafter in effect as may be applicable to the rights and obligations set forth in the Agreement.

(D) The Professional may rely upon the accuracy of reports and surveys provided to it by NBU except when defects should have been apparent to a reasonably competent professional or when it has actual notice of any defects in the reports and surveys.

Section 3. Compensation.

(A) Amount. The Professional shall be paid the amount set forth in Exhibit B as described herein.

(B) Billing Period. NBU shall pay the Professional within thirty (30) days after receipt and approval of invoices and based upon work satisfactorily performed and completed to date. All invoices shall document and itemize all work completed to date. Each invoice statement shall include a record of time expended and work performed in sufficient detail to justify payment. In

the event any uncontested portions of any invoice are not paid within thirty (30) days of receipt and approval of the Professional's invoice, the Professional shall have the right to suspend work.

(C) Reimbursable Expenses. Any and all reimbursable expenses related to the Project shall be described in the Services defined in Exhibit A and accounted for in the total compensation amount in Exhibit B. If these items are not specifically accounted for in both Exhibit A and Exhibit B, NBU shall not be required to pay such amounts unless otherwise agreed to in writing by both parties or unless agreed to pursuant to Section 4 of this Agreement.

#### Section 4. Changes to the Project Work; Additional Work.

(A) Changes to Work. The Professional shall make such revisions to any work that has been completed as are necessary to correct any errors or omissions as may appear in such work. If NBU finds it necessary to make changes to previously satisfactorily completed work or parts thereof, the Professional shall make such revisions if requested and as directed by NBU and such services shall be considered as additional work and paid for as specified under the following paragraph.

(B) Additional Work. NBU retains the right to make changes to the Services at any time by a written contract amendment. Work that is clearly not within the general description of the Services under this Agreement must be approved in writing by NBU by contract amendment before the additional work is undertaken by the Professional. If the Professional is of the opinion that any work is beyond that contemplated in this Agreement and the Services described in Exhibit A and therefore constitutes additional work, the Professional shall promptly notify NBU of that opinion in writing. If NBU agrees that such work does constitute additional work, then NBU and the Professional shall execute a contract amendment for the additional work and NBU shall compensate the Professional for the additional work on the same basis of the rates for the Services contained in Exhibit B. If the changes deduct from the extent of the scope of work for the Services, the contract sum shall be adjusted accordingly. All such changes shall be executed under the conditions of the original Agreement. Any work undertaken by the Professional not previously approved as additional work shall be at risk of the Professional.

Section 5. Ownership of Documents. Upon completion or termination of this Agreement, all documents prepared by the Professional or furnished to the Professional by NBU shall be delivered to and become the property of NBU. All drawings, charts, calculations, plans, specifications and other data, including electronic files and raw data, prepared under or pursuant to this Agreement shall be made available, upon request, to NBU without restriction or limitation on the further use of such materials; however, such materials are not intended or represented to be suitable for reuse by NBU or others. Any reuse of the materials related to the Services without prior verification or adaptation by the Professional for the specific purpose intended will be at NBU's sole risk and without liability to the Professional. Where applicable, the Professional shall retain all pre-existing proprietary rights in the materials provided to NBU but shall grant to NBU a non-exclusive, perpetual, royalty-free license to use such proprietary information solely for the purposes for which the information was provided. The Professional may, at the Professional's expense, have copies made of the documents or any other data furnished to NBU under or pursuant to this Agreement.

Section 6. Personnel. The Professional shall provide adequate, experienced personnel, capable of and devoted to the successful completion of the Services to be performed under this Agreement. The Professional agrees that, upon commencement of the Services to be performed under this Agreement, key personnel will not be removed or replaced without prior written notice to NBU. If key personnel are not available to perform the Services for a continuous period exceeding thirty (30) calendar days, or are expected to devote substantially less effort to the Services than initially anticipated, the Professional shall immediately notify NBU of same and shall replace such personnel with personnel possessing substantially equal ability and qualifications.

Section 7. Licenses; Materials. The Professional shall maintain in current status all federal, state, and local licenses and permits required for the Professional to perform the Services and operate its business. NBU has no obligation to provide the Professional, its employees or subcontractors any business registrations or licenses required to perform the Services described in this Agreement. NBU has no obligation to provide tools, equipment, or materials to the Professional.

Section 8. Professional's Seal; Standard of Care. To the extent the Professional has a professional seal, the Professional shall place such seal on all final documents and data furnished by the Professional to NBU. Preliminary documents released from a license holder's control shall identify the purpose of the document, the engineer(s) of record and the engineer license number(s), and the release date on the title sheet of bound engineering reports, specifications, details, calculations or estimates, and each sheet of plans or drawings regardless of size or binding. As required by Section 271.904 of the Texas Local Government Code, as amended, all services provided under this Agreement will be performed with the professional skill and care ordinarily provided by competent engineers or architects, as applicable, practicing under the same or similar circumstances and professional license. The Professional shall perform its services as expeditiously as is prudent considering the ordinary professional skill and care of a competent engineer or architect, as applicable. The plans, specifications, and data provided by the Professional shall be adequate and sufficient to enable those performing the actual work to perform the work as and within the time contemplated by NBU and the Professional. NBU acknowledges that the Professional does not have control over the methods or means of work or the costs of labor, materials, or equipment. Unless otherwise agreed in writing, any estimates of costs by the Professional are for informational purposes only and are not guarantees.

Section 9. Indemnification.

**(A) GENERAL. TO THE EXTENT PERMITTED BY LAW, INCLUDING SECTION 271.904 OF THE TEXAS LOCAL GOVERNMENT CODE, THE PROFESSIONAL SHALL INDEMNIFY AND HOLD HARMLESS NBU AND EACH BOARD MEMBER, OFFICER, EMPLOYEE, AGENT, AND REPRESENTATIVE THEREOF (NBU AND ANY SUCH PERSON BEING HEREIN CALLED AN "INDEMNIFIED PARTY") FOR, FROM AND AGAINST ANY AND ALL LOSSES, CLAIMS, DAMAGES, LIABILITIES, COSTS AND EXPENSES (INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES AND COURT COSTS) INCURRED BY ANY INDEMNIFIED PARTY WHICH ARE:**

- i. DUE TO THE VIOLATION OF ANY ORDINANCE, REGULATION, STATUTE, OR OTHER LEGAL REQUIREMENT IN THE PERFORMANCE OF THIS AGREEMENT, BY THE PROFESSIONAL, ITS AGENT, EMPLOYEE, ANY CONSULTANT UNDER CONTRACT, OR ANY OTHER ENTITY OVER WHICH THE PROFESSIONAL EXERCISES CONTROL;**
- ii. CAUSED BY OR RESULTING FROM ANY NEGLIGENT OR INTENTIONAL ACT OR OMISSION IN VIOLATION OF PROFESSIONAL'S STANDARD OF CARE, BY THE PROFESSIONAL, ITS AGENT, ANY CONSULTANT UNDER CONTRACT, OR ANY OTHER ENTITY OVER WHICH THE PROFESSIONAL EXERCISES CONTROL;**
- iii. CAUSED BY OR RESULTING FROM ANY CLAIM ASSERTING INFRINGEMENT OR ALLEGED INFRINGEMENT OF A PATENT, TRADEMARK, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT IN CONNECTION WITH THE INFORMATION FURNISHED BY OR THROUGH THE PROFESSIONAL, ITS AGENT, ANY CONSULTANT UNDER CONTRACT, OR ANY OTHER ENTITY OVER WHICH THE PROFESSIONAL EXERCISES CONTROL;**
- iv. DUE TO THE FAILURE OF THE PROFESSIONAL, ITS AGENT, ANY CONSULTANT UNDER CONTRACT, OR ANY OTHER ENTITY OVER WHICH THE PROFESSIONAL EXERCISES CONTROL TO PAY THEIR CONSULTANTS OR SUBCONSULTANTS AMOUNTS DUE FOR SERVICES PROVIDED IN CONNECTION WITH THE PROJECT; OR**
- v. OTHERWISE ARISING OUT OF OR RESULTING FROM THE PERFORMANCE OF THE SERVICES UNDER THIS AGREEMENT, INCLUDING SUCH CLAIMS, DAMAGES, LOSSES OR EXPENSES ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE OR DEATH, OR TO INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY, INCLUDING LOSS OF USE RESULTING THEREFROM, BUT ONLY TO THE EXTENT SUCH CLAIMS, DAMAGES, LOSSES, COSTS AND EXPENSES ARE CAUSED BY OR RESULT FROM ANY NEGLIGENT OR INTENTIONAL ACTS OR OMISSIONS OF THE PROFESSIONAL, ITS AGENT, ANY CONSULTANT UNDER CONTRACT, OR ANY OTHER ENTITY OVER WHICH THE PROFESSIONAL EXERCISES CONTROL.**

**(B) REIMBURSEMENT OF NBU'S FEES IN DEFENSE OF CLAIMS. TO THE EXTENT NBU INCURS ATTORNEY'S FEES IN DEFENSE OF ANY CLAIM ASSERTED AGAINST NBU THAT ARISES OR RESULTS FROM THE ALLEGED ACTS OR OMISSIONS OF THE PROFESSIONAL DESCRIBED IN THIS SECTION, THE PROFESSIONAL SHALL REIMBURSE NBU ITS REASONABLE ATTORNEY'S FEES IN PROPORTION TO THE PROFESSIONAL'S LIABILITY FOUND AFTER A FINAL ADJUDICATION OF LIABILITY.**

The obligations of the Professional under this Section shall survive the termination of this Agreement.

Section 10. Insurance.

(A) General.

- i. Insurer Qualifications. Without limiting any obligations or liabilities of the Professional, the Professional shall purchase and maintain, at its own expense, hereinafter stipulated minimum insurance with insurance companies authorized to do business in the State of Texas with an A.M. Best, Inc. rating of A- VII or above with policies and forms satisfactory to NBU. Failure to maintain insurance as specified herein may result in termination of this Agreement at NBU's option.
- ii. No Representation of Coverage Adequacy. By requiring insurance, NBU does not represent that coverage and limits will be adequate to protect the Professional. NBU reserves the right to review any and all of the insurance policies and/or endorsements cited in this Agreement, but has no obligation to do so. Failure to demand such evidence of full compliance with the insurance requirements set forth in this Agreement or failure to identify any insurance deficiency will not relieve the Professional from, nor be construed or deemed a waiver of, its obligation to maintain the required insurance at all times during the performance of this Agreement.
- iii. Additional Insured. All insurance coverage and self-insured retention or deductible portions, except Workers' Compensation insurance and Professional Liability insurance, if applicable, shall name, to the fullest extent permitted by law for claims arising out of the performance of this Agreement, NBU, its agents, representatives, officers, directors, officials and employees as an Additional Insured (CG 2010 1001 and CG 2037 1001 or an equivalent on the general liability policy) as specified under the respective coverage sections of this Agreement.
- iv. Coverage Term. All insurance required herein shall be maintained in full force and effect until all the Services required to be performed under the terms of this Agreement are satisfactorily performed, completed and formally accepted by NBU, unless specified otherwise in this Agreement.
- v. Primary Insurance. The Professional's insurance shall be primary insurance with respect to performance of this Agreement and in the protection of NBU as an Additional Insured.
- vi. Claims Made. In the event any insurance policies required by this Agreement are written on a "claims made" basis, coverage will extend, either by keeping coverage in force or purchasing an extended reporting option, for three years after the conclusion of the term of this Agreement. Such continuing coverage will be evidenced by submission of annual certificates of insurance stating applicable coverage is in force and containing provisions as required herein for the three-year period.

- vii. Waiver. All policies (except for Professional Liability, if applicable), including Workers' Compensation insurance, will contain a waiver of rights of recovery (subrogation) against NBU, its agents, representatives, officials, officers and employees for any claims arising out of the Services performed by the Professional. The Professional shall arrange to have such subrogation waivers incorporated into each policy via formal written endorsement thereto.
- viii. Policy Deductibles and/or Self-Insured Retentions. The policies set forth in these requirements may provide coverage that contains deductibles or self-insured retention amounts. Such deductibles or self-insured retention shall not be applicable with respect to the policy limits provided to NBU. The Professional shall be solely responsible for any such deductible or self-insured retention amount.
- ix. Use of Subcontractors. The Professional shall not use subcontractors for all or any work under this Agreement without the prior written consent of NBU in its sole discretion. If any work under this Agreement is subcontracted in any way, the Professional shall execute written agreements with its subcontractors containing the indemnification provisions set forth in this Agreement and insurance requirements set forth herein protecting NBU and the Professional. The Professional shall be responsible for executing any agreements with its subcontractors and obtaining certificates of insurance verifying the insurance requirements.
- x. Evidence of Insurance. Prior to the Effective Date of this Agreement, the Professional shall provide suitable evidence of insurance to NBU, which confirms that all required insurance policies are in full force and effect. Evidence of insurance shall be in a form acceptable to NBU. Confidential information such as the policy premium may be redacted from the documents evidencing each insurance policy, provided that such redactions do not alter any of the information required by this Agreement. NBU will rely upon the requested information, including, but not limited to, certificates of insurance, endorsements, schedule of forms and endorsements, or other policy language as evidence of coverage but such acceptance and reliance will not waive or alter in any way the insurance requirements or obligations of this Agreement. If any of the policies required by this Agreement expire during the life of this Agreement, it will be the Professional's responsibility to forward renewal certificates and evidence of insurance to NBU five (5) days prior to the expiration date.

(B) Required Insurance Coverage. Any of the coverage set forth below may be waived by NBU in its sole discretion, but any such waiver must be signed by an authorized representative of NBU on or before the Effective Date of this Agreement.

- i. Commercial General Liability. The Professional shall maintain "occurrence" form Commercial General Liability insurance with an unimpaired limit of not less than \$1,000,000 for each occurrence and a \$2,000,000 General Aggregate Limit. The policy shall cover liability arising from premises, operations, independent contractors, products, completed operations, personal injury, and property damage.

The definition of insured contract cannot have any modifications as outlined in the ISO policy form CG 0001 0413. Third party action over coverage must not be specifically excluded. To the fullest extent allowed by law, for claims arising out of the performance of this Agreement, NBU, its agents, representatives, officers, officials and employees shall be cited as an Additional Insured. If any Excess insurance is utilized to fulfill the requirements of this subsection, such Excess insurance shall be “follow form” equal or broader in coverage scope than underlying insurance.

- ii. Auto Liability. The Professional shall maintain Automobile Liability insurance with a limit of \$1,000,000 combined single limit on the Professional’s owned or hired and non-owned vehicles, as applicable, assigned to or used in the performance of the Services by the Professional under this Agreement. To the fullest extent allowed by law, for claims arising out of the performance of this Agreement, NBU, its agents, representatives, officers, directors, officials and employees shall be cited as an Additional Insured. If any Excess insurance is utilized to fulfill the requirements of this subsection, such Excess insurance shall be “follow form” equal or broader in coverage scope than underlying insurance.
- iii. Professional Liability. The Professional shall maintain Professional Liability insurance covering negligent errors and omissions arising out of the Services performed by the Professional, or anyone employed by the Professional, or anyone for whose negligent acts, mistakes, errors and omissions the Professional is legally liable, with an unimpaired liability insurance limit of \$1,000,000 each claim and \$2,000,000 annual aggregate. In the event the Professional Liability insurance policy is written on a “claims made” basis, coverage shall extend for three years after the conclusion of the term of this Agreement, and the Professional shall be required to submit certificates of insurance and other requested information evidencing proper coverage is in effect as required above. Confidential information such as the policy premium or proprietary information may be redacted from the insurance information requested, provided that such redactions do not alter any of the information required by this Agreement.
- iv. Workers’ Compensation and Employer’s Liability Insurance. The Professional shall maintain Workers’ Compensation insurance to cover the Professional’s employees engaged in the performance of the Services under this Agreement and shall also maintain Employers Liability Insurance of not less than \$1,000,000 for each accident, \$1,000,000 disease for each employee and \$1,000,000 disease policy limit.

(C) Cancellation and Expiration Notice. Insurance required herein shall not expire, be canceled, or be materially changed without thirty (30) days’ prior written notice to NBU.

Section 11. Termination.

(A) For NBU's Convenience. This Agreement is for the convenience of NBU and, as such, may be terminated by NBU for any reason upon thirty (30) days' written notice by NBU to the Professional. Upon termination for convenience, the Professional will be paid for the Services performed to the termination date less any offsets to which NBU may be entitled under the terms of this Agreement. By written notice to NBU, the Professional may suspend work if the Professional reasonably determines that working conditions at the site (outside the Professional's control) are unsafe, or in violation of applicable laws, or in the event NBU has not made timely payment in accordance with this Agreement, or for other circumstances not caused by the Professional that are materially interfering with the normal progress of the work. The Professional's suspension of work hereunder shall be without prejudice to any other remedy of the Professional at law or equity.

(B) For Cause. If either party violates any provision or fails to perform any obligation of this Agreement and such party fails to cure its nonperformance within thirty (30) days after written notice of nonperformance is given by the non-defaulting party, such party will be in default. In the event of such default, the non-defaulting party may terminate this Agreement immediately for cause and will have all remedies that are available to it at law or in equity including, without limitation, the remedy of specific performance. If the nature of the defaulting party's nonperformance is such that it cannot reasonably be cured within thirty (30) days, then the defaulting party will have such additional period of time as may be reasonably necessary under the circumstances, provided the defaulting party immediately (i) provides written notice to the non-defaulting party and (ii) commences to cure its nonperformance and thereafter diligently continues to completion the cure of its nonperformance. In no event will any such cure period exceed ninety (90) days. Only one notice of nonperformance will be required during the term of this Agreement and in the event of a second breach or violation, the nondefaulting party may immediately terminate this Agreement without notice to the defaulting party. In the event of any termination for cause by NBU, payment will be made by NBU to the Professional for the undisputed portion of its fee due as of the termination date less any offsets to which NBU may be entitled under the terms of this Agreement.

(C) Non-Collusion. The Professional represents and warrants that the Professional has not given, made, promised or paid, nor offered to give, make, promise or pay any gift, bonus, commission, money or other consideration to any person as an inducement to or in order to obtain the work to be provided to NBU under this Agreement. If NBU determines that the Professional gave, made, promised, paid or offered any gift, bonus, commission, money, or other consideration to NBU or any of its officers, agents, or employees to secure this Agreement, NBU may elect to cancel this Agreement by written notice to the Professional. The Professional further agrees that the Professional shall not accept any gift, bonus, commission, money, or other consideration from any person (other than from NBU pursuant to this Agreement) for any of the Services performed by the Professional under or related to this Agreement. If any such gift, bonus, commission, money, or other consideration is received by or offered to the Professional, the Professional shall immediately report that fact to NBU and, NBU, at its sole option, may elect to cancel this Agreement by written notice to the Professional.



(D) Agreement Subject to Appropriation. This Agreement is subject to appropriation of funds. The provisions of this Agreement for payment of funds by NBU shall be effective when funds are appropriated for purposes of this Agreement and are actually available for payment. NBU shall be the sole judge and authority in determining the availability of funds under this Agreement and NBU shall keep the Professional fully informed as to the availability of funds for the Agreement. The obligation of NBU to make any payment pursuant to this Agreement is a current expense of NBU, payable exclusively from such annual appropriations, and is not a general obligation or indebtedness of NBU. If sufficient funds are not appropriated to pay the amounts as set forth in this Agreement during any immediately succeeding fiscal year, this Agreement shall terminate at the end of the then-current fiscal year and NBU and the Professional shall be relieved of any subsequent obligation under this Agreement.

Section 12. Miscellaneous.

(A) Independent Contractor. The Professional acknowledges that the Professional is an independent contractor of NBU and is not an employee, agent, official or representative of NBU. The Professional shall not represent, either expressly or through implication, that the Professional is an employee, agent, official or representative of NBU. Income taxes, self-employment taxes, social security taxes and the like shall be the sole responsibility of the Professional.

(B) Governing Law; Venue. This Agreement and all of the transactions contemplated herein shall be governed by and construed in accordance with the laws of the State of Texas. The provisions and obligations of this Agreement are performable in Comal County, Texas such that exclusive venue for any action arising out of this Agreement shall be in Comal County, Texas.

(C) Compliance with Laws. The Professional shall comply with all federal, state and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts, administrative, or regulatory bodies in any matter affecting the performance of this Agreement, including, without limitation, worker's compensation laws, minimum and maximum salary and wage statutes and regulations, and licensing laws and regulations. When required, the Professional shall furnish satisfactory proof of compliance to NBU.

(D) Amendments. This Agreement may only be amended, modified, or supplemented by a written amendment signed by persons duly authorized to enter into contracts on behalf of NBU and the Professional.

(E) Provisions Required by Law. Each and every provision of law and any clause required by law to be in the Agreement shall be read and enforced as though it were included herein and, if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Agreement shall promptly be physically amended to make such insertion or correction.

(F) Severability. If any term or provision of this Agreement is held to be invalid, illegal, or unenforceable in any respect under applicable law, the legality, validity or enforceability of the remaining terms or provisions of this Agreement shall not be affected thereby, and this Agreement

shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

(G) Entire Agreement; Interpretation; Parol Evidence. This Agreement and the related Exhibits constitute the entire agreement of the parties with respect to the subject matter, and all previous agreements, whether oral or written, entered into prior to this Agreement are hereby revoked and superseded thereby. No representations, inducements or oral agreements have been made by any of the parties except as expressly set forth in this Agreement. This Agreement shall be construed and interpreted according to its plain meaning, and no presumption shall be deemed to apply in favor of, or against the party drafting the Agreement.

(H) No Assignment. Neither party shall have the right to assign that party's interest in this Agreement without the prior written consent of the other party. Any purported assignment in violation of this Section shall be null and void.

(I) Subcontractors. The Professional shall not transfer any portion of the work related to the Services under this Agreement to any subcontractor without the prior written consent of NBU, which consent shall not be unreasonably withheld. The approval or acquiescence of NBU in the subletting of any work shall not relieve the Professional of any responsibility for work done by such subcontractor. Failure to pay subcontractors in a timely manner pursuant to any subcontract shall be a material breach of this Agreement by the Professional.

(J) Waiver. No waiver by any party of any of the provisions of this Agreement shall be effective unless explicitly set forth in writing and signed by the party so waiving. No waiver of any breach or violation of any term of this Agreement shall be deemed or construed to constitute a waiver of any other breach or violation, whether concurrent or subsequent, and whether of the same or of a different type of breach or violation. No failure to exercise, or delay in exercising, any right, remedy, power, or privilege arising from this Agreement shall operate or be construed as a waiver thereof; nor shall any single or partial exercise of any right, remedy, power, or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, remedy, power, or privilege.

(K) Attorneys' Fees. In the event either party brings any action for any relief, declaratory or otherwise, arising out of this Agreement or on account of any breach or default hereof, the prevailing party will be entitled to receive from the other party reasonable attorneys' fees and reasonable costs and expenses, which will be deemed to have accrued on the commencement of such action.

(L) Liens. All materials or services provided under this Agreement shall be free of all liens and, if NBU requests, a formal release of all liens shall be delivered to NBU.

(M) Offset.

- i. Offset for Damages. In addition to all other remedies at law or equity, NBU may offset from any money due to the Professional any amount the Professional owes to NBU for damages resulting from breach or deficiencies in performance or breach

of any obligation under this Agreement, including but not limited to all costs, expenses, fines, fees, and charges associated with obtaining performance from alternative sources, shipping, handling, materials, equipment rental, travel expenses and associated costs.

- ii. Offset for Delinquent Fees or Taxes. NBU may offset from any money due to the Professional any amount the Professional owes to NBU for delinquent fees, including any interest or penalties.

(N) Notices. Any notice or other communication required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been duly given if (i) delivered to the party at the address set forth below, (ii) deposited in the U.S. Mail, registered or certified, return receipt requested, to the address set forth below, or (iii) given to a recognized and reputable overnight delivery service, to the address set forth below:

If to NBU:

New Braunfels Utilities  
Attn: Director of Business Planning  
263 Main Plaza  
New Braunfels, TX 78130

With copy to:

Purchasing Manager  
New Braunfels Utilities  
355 FM 306  
New Braunfels, TX 78130

If to the Professional:

GHD Consulting Inc.  
Attn: Christopher Benjamin  
11451 Katy Fwy, Suite 400  
Houston, TX 770079

or at such other address, and to the attention of such other person or officer, as any party may designate by providing thirty (30) days' prior written notice of such change to the other party in the manner set forth in this Section. Notices shall be deemed received (i) when delivered to the party, (ii) three business days after being placed in the U.S. Mail, properly addressed, with sufficient postage or (iii) the following business day after being given to a recognized overnight delivery service, with the person giving the notice paying all required charges and instructing the delivery service to deliver on the following business day. If a copy of a notice is also given to a party's counsel or other recipient, the provisions above governing the date on which a notice is deemed to have been received by a party shall mean and refer to the date on which the party, and

not its counsel or other recipient to which a copy of the notice may be sent, is deemed to have received the notice.

(O) Confidentiality of Records. The Professional shall establish and maintain procedures and controls that are acceptable to NBU for the purpose of ensuring that information contained in its records or obtained from NBU or from others in carrying out the Professional's obligations under this Agreement shall not be used or disclosed by it, its agents, officers, or employees, except as required to perform the Professional's duties under this Agreement. Persons requesting such information should be referred to NBU. The Professional also agrees that any information pertaining to individual persons shall not be divulged other than to employees or officers of the Professional as needed for the performance of duties under this Agreement.

(P) Right to Audit. NBU shall have the right to examine and audit the books and records of the Professional with regard to the Services, or any subsequent changes, at any reasonable time. Such books and records shall be maintained in accordance with generally accepted principles of accounting and shall be adequate to enable determination of: (1) the substantiation and accuracy of any payments required to be made under this Agreement; and (2) compliance with the provisions of this Agreement.

(Q) Paragraph Headings; Construction. The paragraph headings contained in this Agreement are for convenience only and shall in no way enlarge or limit the scope or meaning of the various and several paragraphs hereof. Both parties have participated in the negotiation and preparation of this Agreement and this Agreement shall not be construed either more or less strongly against or for either party.

(R) Binding Effect. Except as limited herein, the terms and provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, devisees, personal and legal representatives, successors and assigns.

(S) Gender. Within this Agreement, words of any gender shall be held and construed to include any other gender, and words in the singular number shall be held and construed to include the plural, unless the context otherwise requires.

(T) Multiple Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, and all of which shall constitute but one and the same instrument.

(U) Exhibits. Except as specified in Subsection (V) of this Section, all exhibits to this Agreement are incorporated herein by reference for all purposes wherever reference is made to the same.

(V) Conflicting Terms. In the case of any conflicts between the terms of this Agreement and the Exhibits, the statements in the body of this Agreement shall govern. The Exhibits are intended to detail the technical scope of services, fee schedule, and the term of the contract only and shall not dictate Agreement terms.

(W) Relationship of Parties. Nothing contained in this Agreement shall be deemed or construed by the parties hereto or by any third party to create the relationship of principal and agent or of partnership or of joint venture or of any association whatsoever between the parties, it being expressly understood and agreed that no provision contained in this Agreement nor any act or acts of the parties hereto shall be deemed to create any relationship between the parties other than the relationship of independent parties contracting with each other solely for the purpose of effecting the provisions of this Agreement.

(X) No Third-Party Beneficiaries. This Agreement is for the sole benefit of the parties hereto and their respective assigns and nothing herein, express or implied, is intended to or shall confer upon any other person or entity any legal or equitable right, benefit, or remedy of any nature whatsoever under or by reason of this Agreement.

(Y) Non-Exclusive Contract. This Agreement is entered into with the understanding and agreement that it is for the sole convenience of NBU. NBU reserves the right to obtain like goods and services from another source when necessary.

Section 13. Force Majeure. If the performance of any covenant or obligation to be performed hereunder by any party is delayed as a result of circumstances that are beyond the reasonable control of such party (which circumstances may include, without limitation, acts of God, war, acts of civil disobedience, epidemic, pandemic, fire or other casualty, shortage of materials, adverse weather conditions (such as, by way of illustration and not of limitation, severe rain storms or below freezing temperatures, or tornados), labor action, strikes or similar acts, moratoriums or regulations or actions by governmental authorities), the time for such performance shall be extended by the amount of time of such delay, but no longer than the amount of time reasonably occasioned by the delay. In no event will any delay or failure of performance caused by any force majeure condition extend this Agreement beyond its stated Term unless both parties agree in writing to such extension in an amendment to this Agreement. The party claiming delay of performance as a result of any of the foregoing force majeure events shall deliver written notice of the commencement of any such delay resulting from such force majeure event not later than seven (7) days after the claiming party becomes aware of the same, and if the claiming party fails to so notify the other party of the occurrence of a force majeure event causing such delay and the other party shall not otherwise be aware of such force majeure event, the claiming party shall not be entitled to avail itself of the provisions for the extension of performance contained in this subsection.

Section 14. Dispute Resolution. In accordance with the provisions of Subchapter I, Chapter 271 of the Texas Local Government Code, as amended, the parties agree that, prior to instituting any lawsuit or other proceeding arising from a dispute under this agreement, the parties shall first attempt to resolve the dispute by taking the steps described in this Section. First, the dissatisfied party shall deliver to the other party a written notice substantially describing the nature of the dispute, which notice shall request a written response to be delivered to the dissatisfied party not less than five (5) days after receipt of the notice of dispute. Second, if the response does not reasonably resolve the dispute, in the opinion of the dissatisfied party, the dissatisfied party shall give five (5) days' written notice to that effect to the other party whereupon each party shall appoint a person having authority over the activities of the respective parties who shall promptly meet, in

person, in an effort to resolve the dispute. Third, if those persons cannot or do not resolve the dispute, then the parties shall each appoint a person from the highest tier of managerial responsibility within each respective party, who shall then promptly meet, in person, in an effort to resolve the dispute.

Section 15. Disclosure of Business Relationships/Affiliations; Conflict of Interest Questionnaire. The Professional represents that it is in compliance with the applicable filing and disclosure requirements of Chapter 176 of the Texas Local Government Code, as amended.

Section 16. Information Technology

(A) Limited Access. If necessary for the fulfillment of the Agreement, NBU may provide the Professional with non-exclusive, limited access to NBU's information technology infrastructure. The Professional understands and agrees to abide by NBU policies, standards, regulations and restrictions regarding access and usage of NBU's information technology infrastructure. The Professional shall reasonably enforce such policies, standards, regulations and restrictions with all the Professional's employees, agents or any tier of subcontractor granted access in the performance of this Agreement, and shall be granted and authorize only such access as may be necessary for the purpose of fulfilling the requirements of the Agreement. The Professional's employees, agents and subcontractors must receive prior, written approval from NBU before being granted access to NBU's information technology infrastructure and data and NBU, in its sole determination, shall determine accessibility and limitations thereto. The Professional agrees that the requirements of this Section shall be incorporated into all subcontractor agreements entered into by the Professional. It is further agreed that a violation of this Section shall be deemed to cause irreparable harm that justifies injunctive relief in court. A violation of this Section may result in immediate termination of this Agreement without notice.

(B) Data Confidentiality. All data, regardless of form, including originals, images and reproductions, prepared by, obtained by or transmitted to the Professional in connection with this Agreement is confidential, proprietary information owned by NBU. Except as specifically provided in this Agreement, the Professional shall not intentionally disclose data generated in the performance of the Services to any third party without the prior, written consent of NBU.

(C) Data Security. Personal identifying information, financial account information, or restricted NBU information, whether electronic format or hard copy, is confidential and must be secured and protected at all times to avoid unauthorized access. At a minimum, the Professional must encrypt or password-protect electronic files. This includes data saved to laptop computers, computerized devices or removable storage devices.

(D) Compromised Security. In the event that data collected or obtained by the Professional in connection with this Agreement is believed to have been compromised or in the event of a Security Incident, as defined by Section 2054.603 of the Texas Government Code, the Professional shall notify NBU within twenty-four (24) hours of discovery of such compromise or Security Incident. **TO THE EXTENT PERMITTED BY SECTION 271.904 OF THE TEXAS LOCAL GOVERNMENT CODE, AS AMENDED, THE PROFESSIONAL SHALL INDEMNIFY AND HOLD NBU HARMLESS FROM ANY CLAIMS RESULTING FROM AN ACT OF NEGLIGENCE, INTENTIONAL TORT, INTELLECTUAL**

**PROPERTY INFRINGEMENT, OR FAILURE TO PAY A SUBCONTRACTOR OR SUPPLIER COMMITTED IN CONNECTION WITH THE PERFORMANCE OF THIS AGREEMENT BY THE PROFESSIONAL, ITS OFFICERS, EMPLOYEES, CONSULTANTS, AGENTS, ANY TIER OF SUBCONTRACTOR, OR ANY ENTITY OVER WHICH THE PROFESSIONAL EXERCISES CONTROL.**

(E) Survival. The obligations of the Professional under this Section shall survive the termination of this Agreement.

Section 17. Prohibition on Contracts with Companies Boycotting Israel. The Professional hereby verifies that it and its parent company, wholly-or majority owned subsidiaries, and other affiliates, if any, does not boycott Israel and, to the extent this Agreement is a contract for goods or services, will not boycott Israel during the term of this Agreement as described in Chapter 2271 of the Texas Government Code, as amended.

The foregoing verification is made solely to comply with Section 2271.002 of the Texas Government Code, as amended, and to the extent such Section does not contravene applicable federal and State law. As used in the foregoing verification, “boycott Israel” means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes. The Professional understands “affiliate” to mean an entity that controls, is controlled by, or is under common control with the Professional and exists to make a profit.

Section 18. Contracts with Companies Engaged in Business with Iran, Sudan or Foreign Terrorist Organizations Prohibited. The Professional represents that neither it nor any of its parent company, wholly-or majority-owned subsidiaries, and other affiliates is a company identified on a list prepared and maintained by the Texas Comptroller of Public Accounts under Section 2252.153 or Section 2270.0201, Texas Government Code, as amended, and posted on any of the following pages of such officer’s internet website:

<https://comptroller.texas.gov/purchasing/docs/sudan-list.pdf>,  
<https://comptroller.texas.gov/purchasing/docs/iran-list.pdf>, or  
<https://comptroller.texas.gov/purchasing/docs/fto-list.pdf>.

The foregoing representation is made solely to comply with Section 2252.152, Texas Government Code, as amended, and to the extent such Section does not contravene applicable federal or State law and excludes the Professional and each of its parent company, wholly-or majority-owned subsidiaries, and other affiliates, if any, that the United States government has affirmatively declared to be excluded from its federal sanctions regime relating to Sudan or Iran or any federal sanctions regime relating to a foreign terrorist organization. The Professional understands “affiliate” to mean an entity that controls, is controlled by, or is under common control with the Professional and exists to make a profit.

Section 19. Prohibition on Contracts with Companies in China, Iran, North Korea, or Russia. If the Professional is granted direct or remote access to or control of critical infrastructure in the State of Texas under this Agreement, the Professional represents the following:

- (A) it is not owned by or the majority of stock or other ownership interest in the Professional is not held or controlled by:
- i. individuals who are citizens of China, Iran, North Korea, Russia, or a country designated by the Governor of Texas as a threat to critical infrastructure under Section 2275.0103 of the Texas Government Code, as amended (“designated country”); or
  - ii. a company or other entity, including a governmental entity, that is owned or controlled by citizens of or is directly controlled by the government of China, Iran, North Korea, Russia, or a designated country; or
- (B) it is not headquartered in China, Iran, North Korea, Russia, or a designated country.

The foregoing representation is made solely to comply with Chapter 2275 of the Texas Government Code, as amended, and to the extent such Section does not contravene applicable federal or State law. As used in the foregoing verification, “critical infrastructure” means a communication infrastructure system, cybersecurity system, electric grid, hazardous waste treatment system, or water treatment facility. “Affiliate,” with respect to a company entering into an agreement in which the critical infrastructure is electric grid equipment, has the meaning assigned by the protocols of the independent organization certified under Section 39.151, Utilities Code, for the ERCOT power region.

Section 20. Prohibition on Contracts with Companies Boycotting Energy Companies. The Professional hereby verifies that it and its parent company, wholly-or majority owned subsidiaries, and other affiliates, if any, do not boycott energy companies and, to the extent this Agreement is a contract for goods or services, will not boycott energy companies during the term of this Agreement as described in Chapter 2276 of the Texas Government Code, as amended.

The foregoing verification is made solely to comply with Section 2276.002 of the Texas Government Code, as amended, and to the extent such Section does not contravene applicable federal and State law. As used in the foregoing verification, “boycott energy companies” has the meaning used in Section 809.001 of the Texas Government Code, as amended. The Professional understands “affiliate” to mean an entity that controls, is controlled by, or is under common control with the Professional and exists to make a profit.

Section 21. Prohibition on Contracts with Companies that Discriminate Against Firearm and Ammunition Industries. The Professional hereby verifies that it and its parent company, wholly-or majority owned subsidiaries, and other affiliates, if any, do not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and, to the extent this Agreement is a contract for goods or services, will not discriminate against a firearm entity or firearm trade association during the term of this Agreement as described in Chapter 2274 of the Texas Government Code, as amended.

The foregoing verification is made solely to comply with Section 2274.002 of the Texas Government Code, as amended, and to the extent such Section does not contravene applicable federal and State law. As used in the foregoing verification, “discriminate against a firearm entity



or firearm trade association” has the meaning used in Section 2274.001(3) of the Texas Government Code, as amended. The Professional understands “affiliate” to mean an entity that controls, is controlled by, or is under common control with the Professional and exists to make a profit.

Section 22. Texas Public Information Act. The Professional recognizes that NBU is subject to the disclosure requirements of the Texas Public Information Act (the “PIA”). As part of its obligations within this Agreement, the Professional agrees, at no additional cost to NBU, to cooperate with NBU for any particular needs or obligations arising out of the NBU’s obligations under the PIA. This acknowledgement and obligation are in addition to and complimentary to the NBU’s audit rights in Section 12(P).

This provision applies if the Agreement has a stated expenditure of at least \$1 million in public funds for the purchase of goods or services by NBU or results in the expenditure of at least \$1 million in public funds for the purchase of goods or services by NBU in a fiscal year of NBU.

The Professional must (1) preserve all contracting information related to the Agreement as provided by the records retention requirements applicable to NBU for the duration of the Agreement; (2) promptly provide to NBU any contracting information related to the Agreement that is in the custody or possession of the Professional on request of NBU; and (3) on completion of the Agreement, either:

- (i) provide at no cost to NBU all contracting information related to the Agreement that is in the custody or possession of the Professional; or
- (ii) preserve the contracting information related to the Agreement as provided by the records retention requirements applicable to NBU.

The requirements of Subchapter J, Chapter 552, Texas Government Code, may apply to this Agreement and the Professional agrees that the Agreement can be terminated if the Professional knowingly or intentionally fails to comply with a requirement of that subchapter.

Section 23. Electronic Signatures. Pursuant to Chapter 322 of the Texas Business and Commerce Code, as amended, the parties agree to the use of electronic signatures herein and that the use of an electronic signature, whether digital or encrypted, is intended to have the same force and effect as a manual signature. Electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record, including facsimile or e-mail electronic signatures. Each party further agrees that if it agrees to conduct a transaction by electronic means in this Agreement, it may refuse to conduct other transactions by electronic means and that such right may not be waived by this Agreement.

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**IN WITNESS WHEREOF**, the parties hereto have executed this Agreement on this the \_\_\_\_ day of \_\_\_\_\_, 2023.

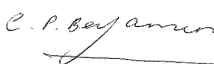
**NBU:**

**NEW BRAUNFELS UTILITIES,**  
a Texas municipally owned utility

By: \_\_\_\_\_  
Name: Ryan Kelso  
Title: Interim Chief Executive Officer

**PROFESSIONAL:**

**GHD INC.,**  
**DBA GHD Consulting Inc.,**  
a California corporation authorized  
to transact business in the State of Texas

By:  \_\_\_\_\_  
Name: Christopher Benjamin  
Title: Principal

## Exhibit A

### Services

The Professional shall provide all labor, material, and equipment necessary to provide program management, asset management, engineering related services, and other professional support services (collectively the “Services”) for the Five-Year Asset Management Plan Creation and Implementation Program (the “Project”).

#### **Background**

New Braunfels Utilities (“NBU”) provides electric, water, and wastewater services. NBU is commencing a multi-year, phased implementation of an Asset Management (“AM”) program to develop and implement leading AM principles and practices focused on improving NBU’s overall efficiencies and effectiveness in delivering services to its customers. AM practices include managing all phases of the asset lifecycle over numerous disciplines for each of the following NBU service departments (each a “department” and collectively referenced herein as the “departments” or “NBU departments”):

1. Fleet & Facilities;
2. Water Operations;
3. Water Treatment and Compliance;
4. Electric Operations;
5. Substation;
6. Information Technology; and
7. Systems Control.

Phase 1 of the program was completed in 2020 and included the development of the Strategic Asset Management Plan (“SAMP”) or “Roadmap.”

The Project will be completed over a three-year period. The general goals and objectives of the Project are presented below.

The Professional will guide NBU in the planning and development of an AM program by providing the following services:

- a. utilize lessons learned (e.g. knowledge gained regarding implementation challenges) from other similar agencies/utilities facing similar issues to New Braunfels Utilities in

- developing an asset management program;
- b. achieve consensus among a diverse group of internal stakeholders (operations, engineering, fleet, facilities, water utility, sewer utility, electric utility, information technology, strategic planning, etc.) in developing an asset management program;
  - c. provide detailed recommendations for a five-year plan to fully establish an AM program based on industry standards and NBU input for the NBU departments;
  - d. develop and create appropriate metrics and analytics to support NBU's AM program;
  - e. revise NBU's current Strategic Asset Management Plan and Roadmap, which NBU will provide upon request, as needed to support the new three-year plan recommendation and AM plan implementation;
  - f. create AM databases within Geographic Information System ("GIS") and Asset Management System ("AMS"). NBU currently uses Cityworks for asset management as well as for a work order system;
  - g. create a working AMS based on detailed recommendations developed in 1.c above;
  - h. Provide assistance and training in maintaining NBU AMS after creation;
  - i. Provide NBU with standardized training documents, workflows, standard operating procedures, and step-by-step guides related to asset management practices for each related department;
  - j. Conduct asset management-related training for all NBU departments. At a minimum, the training should include education and training on planning best practices, as well as how to do the following:
    - 1. Maintain the AMS per department;
    - 2. Input new assets (as determined by NBU staff in each NBU department as they are created);
    - 3. Run reports regularly based on industry standards for Water, Sewer, and Electric Utilities, as well as Fleet & Facilities, Substation, Information Technology, Systems Control, and all other NBU support services as requested by NBU; and
    - 4. Automate work order creation within NBU's AMS.
  - k. Provide advice and guidance on industry standards and best appropriate practices in specific areas of asset management, such as asset condition/performance assessment,

risk analysis, capital improvement project (“CIP”) planning, tactical asset management plan (“TAMP”) development, maintenance practices and other related asset management practices.

**SERVICES**

The following tables summarize the tasks included in the Services and the implementation schedule.

**Table 1 – Summary of Tasks**

Task No.	Task Name
Task 1	Program Management
Task 2	Computerized Maintenance Management System and Data Audit/Gap Assessment
Task 3	Update Strategic Asset Management Plan with Department Roadmaps
Task 4	Asset Data and Information Standards
Task 5	Business Process Mapping
Task 6	Levels of Service Framework
Task 7	Surface Water Treatment Plant Tactical Asset Management Plan
Task 8	Fleet Tactical Asset Management Plan Update
Task 9	Water Linear Tactical Asset Management Plan
Task 10	Asset Condition Assessment Protocols
Task 11	Asset Management Technical Support

**Table 2 – Estimated Implementation Schedule**

Task	Subtask Description	Estimated Start Date	Estimated Completion Date
1	Program Management	1/1/24	12/31/26
2	Computerized Maintenance Management Plan and Data Audit/Gap Assessment	1/1/24	12/31/24
3	Update Strategic Asset Management Plan with Department Roadmaps	1/1/24	12/31/24

**Table 2 – Estimated Implementation Schedule (continued)**

<b>Task</b>	<b>Subtask Description</b>	<b>Estimated Start Date</b>	<b>Estimated Completion Date</b>
4	Asset Data and Information Standards	1/1/24	12/31/25
5	Business Process Mapping	5/1/24	4/30/25
6	Levels of Service Framework	5/1/24	4/30/25
7	Surface Water Treatment Plant Tactical Asset Management Plan	10/31/24	10/31/25
8	Fleet Tactical Asset Management Plan Update	10/31/24	10/31/25
9	Water Linear Tactical Asset Management Plan	10/31/25	4/30/26
10	Asset Condition Assessment Protocols	10/31/24	10/31/26
11	Asset Management Technical Support	1/1/24	12/31/26

The following is a detailed description and work breakdown structure for each task included in the Services.

## **1. TASK 1 – PROGRAM MANAGEMENT**

The Professional shall provide the following project management services described herein.

### **1.1. SCHEDULE**

The Professional shall develop a baseline schedule (“Baseline Schedule”) for the Project based on Exhibit A within 120 days after the Effective Date of the Agreement, to include specific dates on which each Deliverable is due from the Professional. The Baseline Schedule shall be provided to the NBU Project Manager via email, and upon approval and acceptance by NBU, the deadlines established in the Baseline Schedule will be a substantive part of this Agreement. The Professional will prepare updated schedules for the Project which will be provided on a monthly basis on or before the 25th day of each month for NBU to monitor progress and each of which is subject to

acceptance and approval by NBU. The Professional shall commence work on the Services on the date referenced in Table 2, and notwithstanding any other provision of this Agreement to the contrary, all Services will be completed on or before December 31, 2026, unless otherwise specified herein. Each task will be completed according to the schedule in Table 2 of this Exhibit A.

## **1.2. QUALITY CONTROL**

The Professional shall develop a quality assurance/quality control program for the Project, which shall be included in a Project Work Plan and provided to NBU's Project Manager via email within 30 days of the Effective Date.

## **1.3. PROGRESS REPORTS**

The Professional shall provide NBU with electronic monthly project progress reports and submit written invoices on or before the 25th day of each month for the previous month's effort. Progress reports shall be provided to the NBU Reliability and Resiliency Manager via email.

## **1.4. MEETING AGENDA/MINUTES**

The Professional shall provide meeting agenda one (1) day prior to meetings, and provide a copy of the documented meeting minutes and action item logs to NBU's Project Manager within one (1) week after meetings.

## **1.5. PROJECT CONTROLS**

The Professional shall manage Project integration, scope, schedule, cost, quality, staff resources, sub-consultants, communications, risk analysis and management, and procurements as NBU directs, including, but not limited to, the following:

- 1.5.1.** Assign a senior advisor to oversee quality assurance;
- 1.5.2.** Develop cost estimates using recent bid tabs from similar projects or vendor prices;
- 1.5.3.** Use Microsoft Project or similar to manage the schedule; and
- 1.5.4.** Coordinate communication with sub consultants through emails and meetings.

## **1.6. BIWEEKLY PROGRESS MEETINGS**

The Professional shall conduct 1-hr bi-weekly progress meetings throughout the Project for a total of 65 (sixty-five) meetings over 30 (thirty) months.

## **2. TASK 2 – COMPUTERIZED MAINTENANCE MANAGEMENT PLAN AND DATA AUDIT/GAP ASSESSMENT**

- a. The Professional shall evaluate the extent to which assets are maintained based on leading practices and at a minimum, compliance with manufacturer's guidelines.
- b. The Professional shall evaluate the extent to which Cityworks has been configured and the supporting GIS (asset records) have been developed.
- c. The Professional shall evaluate the extent to which Cityworks has been configured and the supporting GIS (asset records) and whether to implement additional asset management applications, such as Operational Insights, Cityworks application for risk analysis.
- d. The Professional shall review Cityworks activity data and evaluate the extent to which assets are being maintained adequately in accordance with maintenance plans and warranty requirements.
- e. The Professional shall develop and present recommendations to address significant opportunity gaps that are identified.

The Professional shall summarize the recommendations as to NBU as a whole, and the following identified departments: Fleet & Facilities, Water Operations, Water Treatment and Compliance, Electrical Operations, Substations, Information Technology, and Systems Control.

### **2.1. CONDUCT SITE VISIT/PERFORM AUDIT / CITYWORKS AUDIT**

The Professional will spend one week onsite to meet with NBU personnel over a series of workshops and perform the Cityworks data audit. Additional meetings over the course of the week may be needed based on the mutual evaluation of task needs. The week onsite will be spent reviewing the maintenance plans/documents provided by NBU (a subset of critical assets at NBU) and comparing the requirements of maintenance plans with the configuration of Cityworks. The Professional will conduct a meeting at the conclusion of the site visit to summarize site activities completed.



### **2.1.1. WORKSHOP NO. 1**

The Professional will conduct a workshop at the beginning of the week onsite for the audit. The workshop's purpose is to understand which groups are using Cityworks, and of those groups using the software, how extensively it is used. While the Professional will perform an overall audit of Cityworks, NBU will ask each department to identify up to three critical assets to provide a sample subset of data the Professional can then use to perform a more thorough review. The review will include asset configuration, work order template configuration (reactive and preventative), dashboards, and reporting mechanisms.

2.1.1.1 The Professional will work with NBU to identify up to three critical assets per department (Fleet & Facilities, Water Operations, Water Treatment and Compliance, Electric Operations, Substation, Information Technology, and Systems Control) that NBU considers representative for purposes of this evaluation.

2.1.1.2 After the workshop, NBU will provide the Professional with operations and maintenance (“O&M”) manuals and warranty documents for the identified critical assets.

### **2.1.2. WORKSHOP NO. 2**

The Professional will conduct workshop No. 2 at the end of the last day of the onsite audit week. The purpose of the workshop is to provide NBU with a review of the work completed while onsite, discuss some of the findings, highlights, next steps, and provide a timeline.

## **2.2. REVIEW GIS DATA MODEL**

Cityworks relies on the GIS for its asset register. The Professional will review the GIS data and its data model will be included in the onsite work. This review will examine content and structure as it relates to:

- a. the existing features, objects, fields, domains, and relationship classes; and
- b. the completeness of the asset register to accurately manage work activities within Cityworks and therefore properly track asset management fields such as condition and remaining useful life.

As part of this evaluation, the Professional will provide guidance on horizontal and vertical data structure (e.g. hierarchy, naming convention) in the GIS for use in Cityworks as well as how to

build the geodatabase and provide a framework. The framework will be provided to NBU in MS Excel, and included as part of the final Gap Assessment Report deliverable. Assistance with populating the missing information falls under Task 11.

### **2.3. PREPARE GAP ASSESSMENT**

The Professional will perform an evaluation of the information obtained from subtask 2.1 and subtask 2.2 and summarize observations, identify opportunity gaps, and provide recommendations in the following areas (collectively “Gap Assessment”):

- a. Cityworks configuration and its capability to support best-in-class maintenance practices and asset management;
- b. GIS/geodatabase development including the nature of the asset records, schema, and field standardization to support asset management;
- c. NBU’s preventive maintenance programs as reflected in Cityworks;
- d. potential maintenance dashboards and the opportunity to support NBU in achieving best-in-class maintenance practices;
- e. clarity around roles and responsibilities with respect to maintenance planning, tracking, and reporting; and
- f. an implementation strategy for recommendations.

A draft report incorporating the current conditions and future state will be prepared and provided to NBU for review and comment. The report will identify findings for NBU, and then identify findings by the following departments: Fleet & Facilities, Water Operations, Water Treatment and Compliance, Electric Operations, Substation, Information Technology, and Systems Control.

### **2.4. PRESENTATION TO NBU OF OUTCOMES AND RECOMMENDATIONS**

The Professional will conduct a two-hour summary presentation of the draft report and present via MS Teams to key stakeholders at NBU on the task findings, conclusions, opportunity gaps, recommendations, and implementation strategy. The Professional will incorporate NBU’s review comments on the draft report and provide a final report. The information in the assessment will support the roadmap development for the SAMP developed in Task 3.

**2.5. DELIVERABLES.** The Professional shall provide the following deliverables to NBU:

- 2.5.1 Two 2-hr workshops, including agendas and materials.

2.5.2 Draft and Final CMMS and GIS Gap Assessment.

2.5.3 Conduct a two-hour remote CMMS Gap Assessment Findings Presentation.

### **3. TASK 3 - UPDATE STRATEGIC ASSET MANAGEMENT PLAN WITH DEPARTMENT ROADMAPS**

The Professional will review and update the SAMP dated March 2020, update the overall 2020 SAMP Roadmap, and develop individual Department Level Roadmaps that roll-up into the overall Roadmap for the following NBU departments:

- a. Fleet & Facilities;
- b. Water Operations;
- c. Water Treatment and Compliance;
- d. Electric Operations;
- e. Substation;
- f. Information Technology; and
- g. Systems Control

#### **3.1. ROADMAP DEVELOPMENT WORKSHOPS**

The Professional will conduct up to two 2- to 4-hour workshops per department (total of 7 departments). The first workshop will review and update the results of the 2019 AM Practices Gap Assessment to gain input into NBU department priorities, and gain input into the overall AM Implementation program. The second workshop will be to review and gain input into the Draft Departmental Roadmaps and prioritize implementation tasks.

The Professional will update the 2020 SAMP to an overall 2024 SAMP and will include an NBU enterprise-wide AM implementation strategy and roadmap. Roadmaps will be comprised of implementation tasks specific for each department, and will include:

- a. current state – Where are we now?
- b. future state – Where do we want to be when this project is complete and why?
- c. best appropriate practice for NBU – What is the industry standard? What are NBU's gaps?
- d. detailed implementation plan and roadmap to fill the gaps and create a functioning AM Program;
- e. internal and external resource and staff requirements for each implementation task; and
- f. identification of roadmap deliverables and outcomes.

### **3.2. PRESENTATION OF FINAL ROADMAPS**

The Professional will conduct two 1-hour presentations of the Final 2024 SAMP Roadmap and Departmental Roadmaps for key stakeholders.

**3.3. DELIVERABLES.** The Professional shall provide the following deliverables to NBU:

3.4.1 Eight 2- to 4-hour Roadmap Development Workshops (one for each department), including presentation material, agenda, and minutes.

3.4.2 Eight 2- to 4-hour Draft Roadmap Review Workshops (one for each department), including presentation material, agenda, and minutes.

3.4.3 Draft and Final 2024 NBU SAMP Roadmap.

3.4.4 Draft and Final 2024 Department Roadmaps for each department.

3.4.5 Two 1-hour presentations of the Final 2024 SAMP Roadmap and Department Roadmaps, including presentation material, agenda, and minutes.

## **4. TASK 4 - ASSET DATA AND INFORMATION STANDARDS**

### **4.1. DATA STANDARD AND INFORMATION REQUIREMENTS DOCUMENT**

The Professional will develop a Data Standards and Information Requirements Document that includes specific and common to all requirements for each of the following four areas: Electric, Water, Wastewater, and Fleet & Facilities. The standards will:

- a. define the protocol for asset definition and required attributes including primary, secondary, and tertiary data attributes;
- b. define the protocol for the asset hierarchy structure that is consistently followed for service group and asset type;
- c. establish a review process and review frequency;
- d. define organization-wide asset management terminology to ensure a common understanding;
- e. define the protocol for asset data related to asset condition (based on 2021 AM Framework);
- f. define the protocols for asset data related to asset performance, reliability, and utilization (based on the 2021 AM Framework);
- g. define the protocol for asset data related to consequence of failure and risk (based on 2021

AM Framework);

- h. define the protocol for asset data related to management strategy groups (based on the 2021 AM Framework);
- i. define how asset information will be updated to increase the level of trust in the accuracy and the frequency of the data audits; and
- j. define the process for attaching external materials (drawings, O&M, safety procedures, etc.) to the assets and for updating that information.

## **4.2. CITYWORKS CONFIGURATION DOCUMENT**

The Professional will develop a Configuration Guide for Cityworks based on the data standards developed in subtask 4.1. The Configuration Guide will include the following sections and include configuration recommendations/requirements needed to implement the data standards:

- a. Business Process Designs/Procedures (developed in subtask 5.2)
- b. Reporting Key Performance Indicators (“KPI” or “KPIs”)
  - 1. Reports/KPI
  - 2. Saved searches
  - 3. Inbox Setup
  - 4. Cityworks Analytics
- c. Technical Profile
  - 1. System Architecture
  - 2. Server Architecture
  - 3. Cityworks Databases
  - 4. Application Names and URLs
- d. Cityworks Configuration
  - 1. Domains & Employees
  - 2. Plugins
    - i. Operational Insights
    - ii. Workload
- e. Materials
- f. Equipment
- g. Contractors

- h. Assets & ArcGIS
  - 1. Asset Management Attribute Requirements and Configuration
  - 2. GIS Services
  - 3. Preferences
- i. Service Requests
- j. Work Orders
- k. Inspections
- l. Security
  - 1. Service Requests
  - 2. Work Order
  - 3. Inspection
  - 4. Auditing
- m. Server Setup
  - 1. Server Roles
  - 2. Site Setup
  - 3. Work Management Screen Changes
- n. Mobile Considerations
- o. Crew Considerations

Once the draft Configuration Guide has been completed, the Professional will review it with NBU and, if necessary, make changes to meet NBU's overall needs. Although the guide will exist as a living document that may change during the implementation and testing, it will serve as the roadmap for the overall Cityworks AM setup.

**4.3. DELIVERABLES.** The Professional shall provide the following deliverables to NBU:

- 4.3.1 Up to eight 4-hour workshops, including presentation, agenda, and handout materials.
- 4.3.2 Draft and Final Data and Information Standards.
- 4.3.3 Draft and Final Configuration Guide.

## **5. TASK 5 - BUSINESS PROCESS MAPPING**

### **5.1. EXISTING PROCESS MAP DEVELOPMENT**

The Professional will conduct interviews with NBU stakeholders to gain understanding of

current, or existing business processes. Stakeholder interviews will include a cross-section of staff from select end-user staff to management to help assess what the staff perceive as the strengths, weaknesses, and business process gaps, and allow for identification of potential system architectural improvements and intended future uses for Cityworks.

Interviews will cover the following topics:

- a. work practices and business processes (that do or do not utilize existing technology at NBU);
- b. technology/information systems usage, plans, practices, and integration;
- c. organizational structure, roles/responsibilities, and succession planning;
- d. staff levels and workload demands;
- e. financial management;
- f. performance measurement and management; and
- g. functional area interrelationships.

Interviews will be in person (onsite) to facilitate up to 5 days (8-hrs per day) of existing workflow mapping sessions, broken down by departments, with the goal of meeting with a cross-section of staff during those meetings. Table 2 is a summary of the proposed sessions:

**Table 3 – Business Process Mapping Summary**

Day	Department	Estimated Number of Workflows
Day 1	Water Operations	10
Day 2	Water Treatment & Compliance / Systems Control	13
Day 3	Fleet & Facilities	12
Day 4	Electric Operations / Substation	10
Day 5	GIS/IT/AM	15
<b>Total</b>		60

Over the 5-day work session, the Professional will produce up to 60 existing workflows (MS Visio and PDF), with MS Word annotation. The draft workflows will be provided to NBU for review. The Professional will incorporate comments into the draft existing workflows and use to

produce the proposed workflows for subtask 5.2. Previously discussed GIS updates and IT requested processes will be documented during the Day 5 mapping session.

## **5.2. PROPOSED PROCESS MAP DEVELOPMENT**

Upon completion of subtask 5.1, the Professional will collate the information gathered during the existing workflow sessions and identify points of ineffectiveness, non-compliance, deficiency, inefficiency (e.g., paper-based processes), or frustration (e.g., delay, insufficient information, negative result impact, bottlenecks, and communication challenges). The Professional will subsequently conduct a performance gap analysis against the initial existing workflows. This analysis is based on comparing current NBU productivity to generally accepted industry-leading practices.

The Professional will identify improvement recommendations by streamlining or eliminating activities, improving coordination, adding potential software integrations/customizations/modules, and/or reinforcement/shifts in organizational responsibility, as appropriate. The improvement recommendations will serve to focus discussion on the key elements of improvement. The Professional will prepare draft proposed workflows to serve as base workflows during workshops. The Professional will conduct three (3) days of onsite half-day workshops (total of 6) to review the proposed workflows with NBU staff and receive feedback. Final proposed workflows and annotation documentation will be provided to NBU in MS Visio, MS Word, and PDF formats.

**5.3. DELIVERABLES.** The Professional shall provide the following deliverables to NBU:

5.3.1 Up to five 8-hour (on-site) workshops for existing Workflow development, conducted by two of the Professional's Cityworks and GIS Implementation team members.

5.3.2 Draft existing Workflows in MSVisio, and accompanying annotation documentation in MSWord.

5.3.3 Allowance for up to six 4-hour workshops (on-site) for proposed Workflow Review and Feedback, conducted by two of the Professional's Cityworks and GIS Implementation team members.

5.3.4 Final proposed Workflows in MSVisio and accompanying annotation documentation in MSWord. The Workflows and annotation documentation will both be provided in pdf.



## **6. TASK 6 - LEVELS OF SERVICE FRAMEWORK**

### **6.1. REVIEW EXISTING KPIS AND IDENTIFY NEW KPIS**

The Professional will conduct up to eight 2-hr interviews with department stakeholders to identify and review existing KPIs. For each KPI, the Professional will identify data and information required to support and update the KPI. The Professional will compare the results of the interviews with industry best practices and make recommendations for adding and modifying KPIs.

### **6.2. DRAFT AND FINAL LEVEL OF SERVICE FRAMEWORK TECHNICAL MEMO**

The Professional will develop a Draft Level of Service (“LOS”) Framework Technical Memorandum (“Draft LOS TM”). The Draft LOS TM will include a summary of the existing and proposed KPIs and the following:

- a. KPI type, definition, attribute data and formulas;
- b. ownership;
- c. Target and Goal values;
- d. threshold values for determining compliance versus non-compliance;
- e. alignment to the 2021 AM Framework LOS Value Statements; and
- f. KPI and LOS roll-up methodology for Dashboard Reporting.

The Professional will present the Draft LOS TM in a 1.5-hr workshop to obtain comments and input from NBU staff. The Professional will incorporate comments and develop a final LOS technical memorandum (“TM”).

### **6.3. LOS REPORTING DASHBOARD**

The Professional will develop a LOS Reporting Dashboard based on the final LOS TM. The dashboard will be developed in PowerBI. The Professional will document the logic used in the dashboard and will provide a data map and associated data library. NBU will host the LOS Reporting Dashboard once the task is complete.

**6.4. DELIVERABLES.** The Professional shall provide the following deliverables to NBU:

- 6.4.1 Conduct eight 2-hr interviews (virtual) with Department stakeholders to review existing KPIs, including agenda, meeting materials, and minutes.

6.4.2 Draft and Final LOS Framework Technical Memo.

6.4.3 LOS Reporting Dashboard (in PowerBI).

## **7. TASK 7 – SURFACE WATER TREATMENT PLANT TACTICAL ASSET MANAGEMENT PLAN**

### **7.1. DEVELOP TAMP ASSET REGISTER**

The Professional will develop the Asset Register that will be used to develop the TAMP. The Asset Register will be based on existing asset data, record drawings, O&M manuals, and staff knowledge. Missing assets and asset data attributes will be identified by NBU and the Professional.

### **7.2. ASSIGN CONDITION AND PERFORMANCE SCORES**

Based on the draft Asset Register, the Professional will interview NBU staff and assign initial condition and performance scores. Condition and Performance scores will be reviewed with staff during the COF scoring workshop (Subtask 7.3). A group of assets will be selected for in-field condition assessment based on criticality and initial risk profile.

### **7.3. ASSIGN CONSEQUENCE OF FAILURE (COF) WORKSHOP**

Using the consequence of failure (“COF”) scoring matrix developed in the 2021 AM Framework, the Professional will develop initial assignments of COF scopes for assets. The Professional will facilitate up to one three-hour workshop to review and confirm COF scores.

### **7.4. ASSIGN MANAGEMENT STRATEGY GROUPS WORKSHOP**

A Management Strategy Group (singular “MSG” or plural “MSGs”) defines default attributes for an asset and provides a set of inputs to the investment modeling process via three treatment options: (1) replacement, (2) rehabilitation, and (3) operations and maintenance. The Professional will develop the initial MSG information for assets. The Professional will conduct one 2-hour workshop to review assigned MSGs to assets in the asset register.

For each MSG, the following will be included, when applicable:

- a. asset attributes – install date, size units, physical effective life, and replacement cost;
- b. replacement management strategies;
- c. rehabilitation management strategies; and

d. maintenance management strategies.

Asset valuation will be based on the estimated replacement cost of the assets in today's costs. Replacement costs will be based on similar bid tabs from the region (if available), RS Means cost estimating guides, staff knowledge, and manufacturers' quotes for special/unique assets. Replacement and rehabilitation cost estimates will be assigned to assets using MSGs.

After the MSG workshop, there may be additional information for NBU to collect and provide to the Professional for the completion of MSGs. During the workshop, the Professional will define the information needed in order to complete the MSGs. Task 11 will be used to collect additional information if required.

## **7.5. DEVELOP RISK MITIGATION STRATEGIES AND CALCULATE RISK**

The Professional will develop a Business Risk Exposure ("BRE") profile for the SWTP assets and identify risk mitigation strategies. The Professional will also identify and recommend risk mitigation strategies, descriptions, and adjustment factors.

## **7.6. LEVELS OF SERVICE**

The Professional will identify existing and future Levels of Service ("LOS") performance measures for the SWTP assets. The Professional will identify and recommend any additional LOS performance measures and KPIs based on best practices.

## **7.7. DEVELOP CAPITAL AND O&M INVESTMENT STRATEGIES**

The Professional will use a decision support system ("DSS") to model different management strategies for estimating future investment cost requirements. The Professional will model different management strategies to support the development of capital and O&M investment recommendations and develop short and long-term investment needs.

## **7.8. DEVELOP TACTICAL ASSET MANAGEMENT PLAN**

The Professional will develop a Draft and Final TAMP to include the following sections as applicable:

- a. Introduction;
- b. Description of System/Department;
- c. Levels of Service and KPIs;

- d. State of the Assets:
  - 1. Inventory, Condition and Remaining Life;
- e. Business Risk Exposure;
- f. Infrastructure Improvement Plan:
  - 1. Operation and Maintenance Strategies and Practices;
  - 2. Capital Rehabilitation and Replacement Strategies;
  - 3. CIP Investment Prioritization and Future Planning; and
- g. Appendices.

## **7.9. TAMP TEMPLATE AND REPORTING DASHBOARD**

The Professional will develop a TAMP Template and Reporting Dashboard. The template will be developed as a set of instructions and procedure/protocol to be used in developing TAMPs for departments and asset classes. The reporting dashboard will be based on the template and developed in PowerBI (or equivalent). The Professional will document the logic used in the dashboard and will provide a data map and associated data library. NBU will host the TAMP Reporting Dashboard once the task is complete.

**7.10. DELIVERABLES.** The Professional shall provide the following deliverables to NBU:

- 7.10.1 Agenda and materials for three 3-hour subject matter expert (“SME”) engagement workshops to obtain input for COF, condition, MSGs, and overall review of the asset register.
- 7.10.2 Draft and Final TAMP
- 7.10.3 Agenda, minutes, and materials for 2-hour Draft TAMP review meeting
- 7.10.4 Draft and Final Tactical Asset Management Plan Template
- 7.10.5 SWTP TAMP Reporting Dashboard (PowerBI or equivalent)

## **8. TASK 8 - FLEET TACTICAL ASSET MANAGEMENT PLAN UPDATE**

### **8.1. DEVELOP FLEET TAMP ASSET REGISTER**

The Professional will review the existing Asset Register that will be used to develop the TAMP. The Asset Register will be based on existing asset data and staff knowledge. Missing assets and asset data attributes will be identified by NBU and the Professional.

## **8.2. ASSIGN CONDITION AND PERFORMANCE SCORES**

Based on the draft Asset Register, the Professional will interview NBU staff and assign initial condition and performance scores. Condition and Performance scores will be reviewed with staff during the COF scoring workshop.

## **8.3. ASSIGN CONSEQUENCE OF FAILURE (“COF”) WORKSHOP**

Using the COF scoring matrix developed in the 2021 AM Framework, the Professional will develop initial assignments of COF scores for Fleet assets. The Professional will facilitate up to one 2-hour workshop to review and confirm COF scores.

## **8.4. ASSIGN MANAGEMENT STRATEGY GROUPS WORKSHOP**

The Professional will develop the initial MSG information for assets, and conduct one 2-hour workshop to review assigned MSGs to assets in the asset register.

For each MSG, the following will be included, when applicable:

- a. asset attributes – install date, size units, physical effective life, and replacement cost;
- b. replacement management strategies;
- c. rehabilitation management strategies; and
- d. maintenance management strategies.

Asset valuation will be based on the estimated replacement cost of the assets in today’s costs. Replacement costs will be based on similar bid tabs from the region (if available), RS Means cost estimating guides, staff knowledge, and manufacturers’ quotes for special/unique assets. Replacement and rehabilitation cost estimates will be assigned to assets using MSGs.

During the workshop, the Professional will define the information needed in order to complete the MSGs.

## **8.5. DEVELOP RISK MITIGATION STRATEGIES AND CALCULATE RISK**

The Professional will develop a Business Risk Exposure (“BRE”) profile for the Fleet assets and identify risk mitigation strategies, identify any high-risk assets, and identify and recommend risk mitigation strategies, descriptions, and adjustment factors.

## **8.6. LEVELS OF SERVICE**

The Professional will identify existing and future LOS performance measures for the Fleet assets.

Task 6 will be an input into this subtask.

### **8.7. DEVELOP CAPITAL AND O&M INVESTMENT STRATEGIES**

The Professional will use a DSS to model different management strategies for estimating future investment cost requirements. The Professional will model different management strategies to support the development of capital and O&M investment recommendations and develop short and long-term investment needs.

### **8.8. DEVELOP TACTICAL ASSET MANAGEMENT PLAN**

The Professional will develop a Draft and Final TAMP for the Fleet assets, to include the following sections, as applicable:

- a. Introduction;
- b. Description of System/Department;
- c. Levels of Service and KPIs;
- d. State of the Assets:
  1. Inventory, Condition, and Remaining Life;
- e. Business Risk Exposure;
- f. Infrastructure Improvement Plan:
  1. Operation and Maintenance Strategies and Practices;
  2. Capital Rehabilitation and Replacement Strategies;
  3. CIP Investment Prioritization and Future Planning; and
- g. Appendices.

### **8.9. FLEET TAMP REPORTING DASHBOARD**

The Professional will develop a Fleet TAMP Reporting Dashboard. The reporting dashboard will be based on the template and developed in PowerBI (or equivalent). The Professional will document the logic used in the dashboard and will provide a data map and associated data library. NBU will host the Fleet TAMP Reporting Dashboard once the task is complete.

**8.10. DELIVERABLES.** The Professional shall provide the following deliverables to NBU:

- 8.10.1 Agenda and materials for two 2-hour SME engagement workshops to obtain input for COF, condition, MSGs, and overall review of the asset register.

8.10.2 Draft and Final Fleet TAMP.

8.10.3 Agenda, minutes, and materials for 2-hour Draft Fleet TAMP review meeting.

8.10.4 Fleet TAMP Reporting Dashboard (PowerBI or equivalent).

## **9. TASK 9 – WATER LINEAR TACTICAL ASSET MANAGEMENT PLAN**

### **9.1. DEVELOP WATER LINEAR ASSET REGISTER**

The Professional will review the existing Asset Register that will be used to develop the TAMP. The Asset Register will be based on existing asset data and staff knowledge. Missing assets and asset data attributes will be identified by NBU and the Professional. Task 11 will be used if any additional data and information is required, including any field data collection.

### **9.2. ASSIGN CONDITION AND PERFORMANCE SCORES**

Based on the draft Asset Register, the Professional will interview NBU staff and assign initial condition and performance scores. Condition and Performance scores will be reviewed with staff during the COF scoring workshop.

### **9.3. ASSIGN CONSEQUENCE OF FAILURE (COF) WORKSHOP**

Using the COF scoring matrix developed in the 2021 AM Framework, the Professional will develop initial assignments of COF scores and facilitate up to one 2-hour workshop to review and confirm COF scores.

### **9.4. ASSIGN MANAGEMENT STRATEGY GROUPS WORKSHOP**

The Professional will develop the initial MSG information for assets, and conduct one 2-hour workshop to review assigned MSGs to assets in the asset register.

For each MSG, the following will be included, when applicable:

- a. asset attributes – install date, size units, physical effective life, and replacement cost;
- b. replacement management strategies;
- c. rehabilitation management strategies; and
- d. maintenance management strategies.

Asset valuation will be based on the estimated replacement cost of the assets in today's costs.

Replacement costs will be based on similar bid tabs from the region (if available), RS Means cost estimating guides, staff knowledge, and manufacturers' quotes for special/unique assets. Replacement and rehabilitation cost estimates will be assigned to assets using MSGs.

After the MSG workshop, there may be additional information for NBU to collect and provide to the Professional for the completion of MSGs. During the workshop, the Professional will define the information needed in order to complete the MSGs.

#### **9.5. DEVELOP RISK MITIGATION STRATEGIES AND CALCULATE RISK**

The Professional will develop a BRE profile for the Water Linear assets and identify risk mitigation strategies. The Professional will identify any high risk assets, and identify and recommend risk mitigation strategies, descriptions, and adjustment factors.

#### **9.6. LEVELS OF SERVICE**

The Professional will identify existing and future LOS performance measures for the Water Linear assets. Task 6 will be an input into this subtask.

#### **9.7. DEVELOP CAPITAL AND O&M INVESTMENT STRATEGIES**

The Professional will use a DSS to model different management strategies for estimating future investment cost requirements. The Professional will model different management strategies to support the development of capital and O&M investment recommendations and develop short and long term investment needs.

#### **9.8. DEVELOP TACTICAL ASSET MANAGEMENT PLAN**

The Professional will develop a Draft and Final TAMP for the Water Linear assets, to include the following sections, as applicable:

- a. Introduction;
- b. Description of System/Department;
- c. Levels of Service and KPIs;
- d. State of the Assets:
  1. Inventory, Condition and Remaining Life;
- e. BRE
- f. Infrastructure Improvement Plan:



1. Operation and Maintenance Strategies and Practices;
  2. Capital Rehabilitation and Replacement Strategies;
  3. CIP Investment Prioritization and Future Planning; and
- g. Appendices.

## **9.9. WATER LINEAR TAMP REPORTING DASHBOARD**

The Professional will develop a Water Linear TAMP Reporting Dashboard. The reporting dashboard will be based on the template and developed in PowerBI (or equivalent). The Professional will document the logic used in the dashboard and will provide a data map and associated data library. NBU will host the Water Linear TAMP Reporting Dashboard once the task is complete.

**9.10. DELIVERABLES.** The Professional shall provide the following deliverables to NBU:

- 9.10.1 Agenda and materials for two 2-hour SME engagement workshops to obtain input for COF, condition, MSGs, and overall review of the asset register.
- 9.10.2 Draft and Final Water Linear TAMP.
- 9.10.3 Agenda, minutes, and materials for 2-hour Draft Water Linear TAMP review meeting.
- 9.10.4 Water Linear TAMP Reporting Dashboard (PowerBI or Equivalent).

## **10. TASK 10 - ASSET CONDITION ASSESSMENT PROTOCOLS**

### **10.1. REVIEW EXISTING CONDITION ASSESSMENT PRACTICES**

The Professional will review existing condition and performance assessment approaches, protocols, and procedures used by NBU. The Professional will compare existing practices to industry practices and make recommendations for improvements. The Professional will conduct two 1-hr engagement sessions with department SMEs to review existing condition and performance assessment processes.

### **10.2. DEVELOP CONDITION ASSESSMENT PROTOCOLS**

The Professional shall develop condition assessment protocol technical memorandums (TMs) for the following asset groups:

- a. Facilities and Vertical Water and Wastewater Assets; and
- b. Linear Water and Wastewater Assets.

The Professional will develop draft and final Condition Assessment Protocol TMs for each of the two areas listed above. Condition Assessment Protocol Documents shall include:

- c. identification of existing industry standards;
- d. condition and performance scoring process;
- e. useful life tables;
- f. Standard Operating Procedure for condition and performance scoring (Level 1, 2 and 3); and
- g. Business Process Mapping (developed under Task 5).

**10.3. DELIVERABLES.** The Professional shall provide the following deliverables to NBU:

10.3.1 Two 1-hr Condition Assessment SME Engagement Workshops.

10.3.2 Draft and Final Condition Assessment Protocol TMs (total of two), including Water and Wastewater Facilities and Water and Wastewater Linear.

## **TASK 11 – ASSET MANAGEMENT TECHNICAL SUPPORT**

The Professional shall provide technical support for the development of the asset register. This will be an ongoing support task throughout the AM Program implementation.

Asset Management Technical Support will include:

- a. review of record drawings, O&M manuals, spreadsheets, and other data and information sources;
- b. population of asset management required data as defined in Task 3 Data Standards and Information task from a variety of sources including staff workshops, on-site data collection, record drawings, O&M manuals, etc.;
- c. assist with field data collection or data verification efforts for the asset register.
- d. develop asset hierarchies, asset classes management strategy groups and other asset organizational structure attributes;
- e. asset attribute information including replacement costs, O&M costs, AM data as defined in the 2021 AM Framework;
- f. other asset register development and data population technical support identified during

Phase 1 implementation;

- g. assist with Cityworks upgrades;
- h. technical reviews of asset management-related software;
- i. assessments for asset management-related projects;
- j. cost estimates for asset management-related activities;
- k. develop of asset-related data in support of asset management;
- l. performance and condition assessments;
- m. CIP process implementation support and execution;
- n. Water Engineering services;
- o. Sewer Engineering services; and
- p. Electric Engineering services.

Exhibit B

Compensation

NBU shall pay the Professional for the Services during the term of this Agreement in an amount not to exceed \$1,304,771.60.

<b>Level of Effort Cost Summary</b>		
<b>Five-Year Asset Management Plan Creation and Implementation Program</b>		
<b>Task</b>	<b>Subtask Description</b>	<b>Total</b>
1	Program Management	\$124,762.80
2	Computerized Maintenance Management System and Data Audit/Gap Assessment	\$78,481.40
3	Update Strategic Asset Management Plan with Department Roadmaps	\$131,186.40
4	Asset Data and Information Standards	\$92,232.20
5	Business Process Mapping	\$80,394.80
6	Levels of Service Framework	\$86,506.20
7	Surface Water Treatment Plant Tactical Asset Management Plan	\$185,057.60
8	Fleet Tactical Asset Management Plan Update	\$61,476.00
9	Water Linear Tactical Asset Management Plan	\$196,443.60
10	Asset Condition Assessment Protocols	\$81,677.40
11	Asset Management Technical Support	\$152,378.20
	Maximum Reimbursable Expenses	\$34,175.00
	<b>Total</b>	<b><u>\$1,304,771.60</u></b>

For purposes of this Agreement, “Reimbursable Expenses” are defined as those reasonable and necessary out-of-pocket expenses for travel, hotel rooms, and meals actually incurred by the Professional to perform the Services, which will not exceed the amount set out in this Exhibit. NBU will look to the Domestic Maximum Per Diem Rates for Comal County, Texas recognized by the IRS, published by the General Services Administration at [www.gsa.gov](http://www.gsa.gov). All requests for reimbursement must be supported by documentation satisfactory to NBU in its reasonable determination.