

**CITY OF FORT BRAGG  
PROFESSIONAL SERVICES AGREEMENT  
WITH  
HDR ENGINEERING, INC.**

THIS AGREEMENT is made and entered into this 10<sup>th</sup> day of January, 2023 (“Effective Date”), by and between the CITY OF FORT BRAGG, a municipal corporation, 416 N. Franklin Street, Fort Bragg, California 95437 (“City”), and HDR ENGINEERING, INC., a Nebraska corporation, 2365 Iron Point Road, Suite 300, Folsom, California 95630 (“Consultant”).

**WITNESSETH:**

A. WHEREAS, City proposes to utilize the services of Consultant as an independent contractor to prepare a Water Systems Distribution Master Plan and to identify and prioritize critical water system improvements to the City of Fort Bragg’s treated water distribution system to ensure that a resilient system with adequate water facilities necessary to meet demand remains available to customers, as more fully described herein; and

B. WHEREAS, Consultant represents that it is a “design professional” as that term is defined by California Civil Code Section 2782.8 and has that degree of specialized expertise contemplated within California Government Code Section 37103, and holds all necessary licenses to practice and perform the services herein contemplated; and

C. WHEREAS, City and Consultant desire to contract for the specific services described in Exhibit “A” (the “Project”) and desire to set forth their rights, duties and liabilities in connection with the services to be performed; and

D. WHEREAS, no official or employee of City has a financial interest, within the provisions of Sections 1090-1092 of the California Government Code, in the subject matter of this Agreement.

E. WHEREAS, the legislative body of the City on January 9, 2023 by Resolution No. [REDACTED] authorized execution of this Agreement on behalf of the City in accordance with Chapter 3.20 of the City Municipal Code and/or other applicable law;

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions contained herein, the parties hereby agree as follows:

**1.0. SERVICES PROVIDED BY CONSULTANT**

1.1. Scope of Work. Consultant shall provide the professional services described in the Consultant’s Proposal (“Proposal”), attached hereto as **Exhibit A** and incorporated herein by this reference.

1.2. Professional Practices. All professional services to be provided by Consultant pursuant to this Agreement shall be provided by personnel experienced in their respective fields and in a manner consistent with the standards of care, diligence and skill ordinarily exercised by professional consultants in similar fields and circumstances in accordance with sound professional practices. Consultant also warrants that it is familiar with all laws that may affect its performance of this Agreement and shall advise City of any changes in any laws that may affect Consultant’s performance of this Agreement. Consultant shall keep itself informed of State and Federal laws and regulations which in any manner affect those employed by it or in any way affect

the performance of its service pursuant to this Agreement. The Consultant shall at all times observe and comply with all such laws and regulations. City officers and employees shall not be liable at law or in equity occasioned by failure of the Consultant to comply with this section.

1.3. Performance. Consultant agrees to perform all the work in accordance with the requirements of this agreement. If the work fails to comply, City in its discretion has the right to:

- (a) Meet with Consultant to review the quality of the work and resolve the matters of concern;
- (b) Require Consultant to repeat the work at no additional fee until it satisfies the requirements of this Agreement; and/or
- (c) Terminate the Agreement as hereinafter set forth.

1.4. Warranty. Consultant warrants that it shall perform the services required by this Agreement in compliance with all applicable Federal and California employment laws, including, but not limited to, those laws related to minimum hours and wages; occupational health and safety; fair employment and employment practices; workers' compensation insurance and safety in employment; and all other Federal, State and local laws and ordinances applicable to the services required under this Agreement. Consultant shall indemnify and hold harmless City from and against all claims, demands, payments, suits, actions, proceedings, and judgments of every nature and description including attorneys' fees and costs, presented, brought, or recovered against City for or on account of any liability under any of the above-mentioned laws, to the extent caused by Consultant's violation of such laws. To the extent that this Agreement may be funded by fiscal assistance from another governmental entity, Consultant and any subcontractors shall comply with all applicable rules and regulations to which City is bound by the terms of such fiscal assistance program.

1.5. Non-discrimination. In performing this Agreement, Consultant shall not engage in, nor permit its agents to engage in, discrimination in employment of persons because of their race, religion, color, national origin, ancestry, age, physical handicap, medical condition, marital status, sexual gender, sexual orientation, or disability except as permitted pursuant to Section 12940 of the Government Code. Such actions shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship. Consultant agrees to post in conspicuous places, available to employees and applicants for employment, a notice setting forth provisions of this non-discrimination clause.

Consultant shall, in all solicitations and advertisements for employees placed by, or on behalf of Consultant, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, ancestry, age, physical handicap, medical condition, marital status, sexual gender, sexual orientation, or disability. Consultant shall cause the paragraphs contained in this Section to be inserted in all subcontracts for any work covered by the Agreement, provided that the foregoing provisions shall not apply to subcontracts for standard commercial supplies or raw materials.

1.6. Non-Exclusive Agreement. Consultant acknowledges that City may enter into agreements with other consultants for services similar to the services that are subject to this Agreement or may have its own employees perform services similar to those services contemplated by this Agreement.

1.7. Delegation and Assignment. This is a personal service contract, and the duties set

forth herein shall not be delegated or assigned to any person or entity without the prior written consent of City. Consultant may engage a subcontractor(s) as permitted by law and may employ other personnel to perform services contemplated by this Agreement at Consultant's sole cost and expense. All insurance requirements contained in this Agreement are independently applicable to any and all subcontractors that Consultant may engage during the term of this Agreement.

1.8. Confidentiality. Employees of Consultant in the course of their duties may have access to financial, accounting, statistical, and personnel data of private individuals and employees of City. Consultant covenants that all data, documents, discussion, or other information developed or received by Consultant or provided for performance of this Agreement are deemed confidential and shall not be disclosed by Consultant without written authorization by City. City shall grant such authorization if disclosure is required by law. All City data shall be returned to City upon the termination of this Agreement, provided Consultant may retain an archival copy of the City data for its project files subject to confidential treatment. Consultant's covenant under this Section shall survive the termination of this Agreement.

## **2.0. COMPENSATION AND BILLING**

2.1. Compensation. Consultant's total compensation shall not exceed **Eight Hundred Eighteen Thousand Five Hundred Five Dollars (\$818,505.00)**.

2.2. Additional Services. Consultant shall not receive compensation for any services provided outside the scope of work specified in the Consultant's Proposal or which is inconsistent with or in violation of the provisions of this Agreement unless the City or the Project Manager for this Project, prior to Consultant performing the additional services, approves such additional services in writing. It is specifically understood that oral requests and/or approvals of such additional services or additional compensation shall be barred and are unenforceable. Should the City request in writing additional services that increase the hereinabove described "Scope of Work," an additional fee based upon the Consultant's standard hourly rates shall be paid to the Consultant for such additional services. The City Manager may approve contract change orders not exceeding a total of 10% of the approved contract or up to the contingency amount whichever amount is less for any one project.

2.3. Method of Billing. Consultant may submit invoices to the City for approval on a progress basis, but not more often than monthly. Said invoice shall be based on the total of all Consultant's services which have been completed in accordance with this Agreement. City shall pay Consultant's invoice within thirty (30) days from the date City receives said invoice. Each invoice shall describe in detail, the services performed, the date of performance, and the associated time for completion. Any additional services approved and performed pursuant to this Agreement shall be designated as "Additional Services" and shall identify the number of the authorized change order, where applicable, on all invoices.

2.4. Records and Audits. Records of Consultant's services relating to this Agreement shall be maintained in accordance with generally recognized accounting principles and shall be made available to City or its Project Manager for inspection and/or audit at mutually convenient times for a period of three (3) years from the date of final payment.

## **3.0. TIME OF PERFORMANCE**

3.1. Commencement and Completion of Work. The professional services to be performed pursuant to this Agreement shall commence within five (5) days from the issuance of Notice to Proceed. Said services shall be performed in strict compliance with the schedule set

forth in the Scope of Work attached hereto as **Exhibit A**. Consultant will complete the services in accordance with this Agreement by **March 29, 2024**. The Time of Completion may only be modified by a written amendment of the Agreement signed by both the City and the Consultant and in accordance with its terms.

3.2. Excusable Delays. Neither party shall be responsible for delays or lack of performance resulting from acts beyond the reasonable control of the party or parties. Such acts shall include, but not be limited to, acts of God, fire, strikes, material shortages, compliance with laws or regulations, riots, acts of war, epidemics, pandemics, quarantine restrictions, or any other conditions beyond the reasonable control of a party. If a delay beyond the control of the Consultant is encountered, a time extension may be mutually agreed upon in writing by the City and the Consultant. The Consultant shall present documentation satisfactory to the City to substantiate any request for a time extension.

#### **4.0. TERM AND TERMINATION**

4.1. Term. This Agreement shall commence on the Effective Date and expire on **June 29, 2024** unless previously terminated as provided herein or as otherwise agreed to in writing by the parties.

4.2. Notice of Termination. The City reserves and has the right and privilege of canceling, suspending or abandoning the execution of all or any part of the work contemplated by this Agreement, with or without cause, at any time, by providing at least ten (10) days prior written notice to Consultant, provided termination for cause shall be subject to the cure opportunity below. The termination of this Agreement shall be deemed effective upon receipt of the notice of termination. In the event of such termination, Consultant shall immediately stop rendering services under this Agreement unless directed otherwise by the City. If the City suspends, terminates or abandons a portion of this Agreement, such suspension, termination or abandonment shall not make void or invalidate the remainder of this Agreement.

If the Consultant defaults in the performance of any of the terms or conditions of this Agreement, it shall have ten (10) days after service upon it of written notice of such default in which to cure the default by rendering a satisfactory performance. In the event that the Consultant fails to cure its default within such period of time, the City shall have the right, notwithstanding any other provision of this Agreement, to terminate this Agreement without further notice and without prejudice to any other remedy to which it may be entitled at law, in equity or under this Agreement.

The City shall have the right, notwithstanding any other provisions of this Agreement, to terminate this Agreement, at its option and without prejudice to any other remedy to which it may be entitled at law, in equity or under this Agreement, immediately upon service of written notice of termination on the Consultant, if the latter should:

- a. Be adjudged a bankrupt;
- b. Become insolvent or have a receiver of its assets or property appointed because of insolvency;
- c. Make a general assignment for the benefit of creditors;
- d. Default in the performance of any obligation or payment of any indebtedness under this Agreement;

- e. Suffer any judgment against it to remain unsatisfied or unbonded of record for thirty (30) days or longer; or
- f. Institute or suffer to be instituted any procedures for reorganization or rearrangement of its affairs.

4.3. Compensation. In the event of termination, City shall pay Consultant for reasonable costs incurred and professional services satisfactorily performed up to and including the date of City's written notice of termination within thirty-five (35) days after service of the notice of termination. Compensation for work in progress shall be prorated based on the percentage of work completed as of the effective date of termination in accordance with the fees set forth herein. In ascertaining the professional services actually rendered hereunder up to the effective date of termination of this Agreement, consideration shall be given to both completed work and work in progress, to complete and incomplete drawings, and to other documents pertaining to the services contemplated herein whether delivered to the City or in the possession of the Consultant. City shall not be liable for any claim of lost profits.

4.4. Documents. In the event of termination of this Agreement, all documents prepared by Consultant in its performance of this Agreement including, but not limited to, finished or unfinished design, development and construction documents, data studies, drawings, maps and reports, shall be delivered to the City within ten (10) days of delivery of termination notice to Consultant, at no cost to City. Any use of uncompleted documents without specific written authorization from Consultant shall be at City's sole risk and without liability or legal expense to Consultant.

## 5.0. INSURANCE

5.1. Minimum Scope and Limits of Insurance. Consultant shall obtain, maintain, and keep in full force and effect during the life of this Agreement all of the following minimum scope of insurance coverages with an insurance company admitted to do business in California, rated "A," Class X, or better in the most recent Best's Key Insurance Rating Guide, and approved by City:

- (a) Broad-form commercial general liability, in a form at least as broad as ISO form #CG 20 01 04 13, including premises-operations, products/ completed operations, broad form property damage, blanket contractual liability, independent contractors, personal injury or bodily injury with a policy limit of not less than One Million Dollars (\$1,000,000.00) per occurrence, Two Million Dollars (\$2,000,000.00) aggregate, combined single limits. If such insurance contains a general aggregate limit, it shall apply separately to this Agreement or shall be twice the required occurrence limit. If Consultant maintains higher limits than the specified minimum limits, City requires and shall be entitled to coverage for the high limits maintained by the Consultant.
- (b) Business automobile liability for owned vehicles, hired, and non-owned vehicles, with a policy limit of not less than One Million Dollars (\$1,000,000.00), combined single limits, each incident for bodily injury and property damage.
- (c) Workers' compensation insurance as required by the State of California and Employers Liability Insurance with a minimum limit of \$1,000,000 per accident for any employee or employees of Consultant. Consultant agrees

to waive, and to obtain endorsements from its workers' compensation insurer waiving subrogation rights under its workers' compensation insurance policy against the City, its officials, officers, agents, employees, and volunteers for losses arising from work performed by Consultant for the City and to require each of its subcontractors, if any, to do likewise under their workers' compensation insurance policies.

Before execution of this Agreement by the City, the Consultant shall file with the City Clerk the following signed certification:

I am aware of, and will comply with, Section 3700 of the Labor Code, requiring every employer to be insured against liability of Workers' Compensation or to undertake self-insurance before commencing any of the work.

The Consultant shall also comply with Section 3800 of the Labor Code by securing, paying for and maintaining in full force and effect for the duration of this Agreement, complete Workers' Compensation Insurance, and shall furnish a Certificate of Insurance to the City Clerk before execution of this Agreement by the City. The City, its officers and employees shall not be responsible for any claims in law or equity occasioned by failure of the consultant to comply with this section.

- (d) Professional errors and omissions ("E&O") liability insurance with policy limits of not less than Two Million Dollars (\$2,000,000.00), combined single limits, per occurrence and aggregate. If the policy is written as a "claims made" policy, the retro date shall be prior to the start of the contract work. Consultant shall obtain and maintain said E&O liability insurance during the life of this Agreement and for three years after completion of the work hereunder.

Neither the City nor any of its elected or appointed officials, officers, agents, employees, or volunteers makes any representation that the types of insurance and the limits specified to be carried by Consultant under this Agreement are adequate to protect Consultant. If Consultant believes that any such insurance coverage is insufficient, Consultant shall provide, at its own expense, such additional insurance as Consultant deems adequate.

5.2. Endorsements. The commercial general liability insurance policy and business automobile liability policy shall contain or be endorsed to contain the following provisions:

- (a) Additional insureds: "The City of Fort Bragg and its elected and appointed boards, officers, officials, agents, employees, and volunteers are additional insureds with respect to: liability arising out of activities performed by or on behalf of the Consultant pursuant to its contract with the City; products and completed operations of the Consultant; premises owned, occupied or used by the Consultant; automobiles owned, leased, hired, or borrowed by the Consultant."
- (b) Notice: "Consultant shall provide immediate written notice if (1) any of the required insurance policies is terminated; (2) the limits of any of the required policies are reduced; or (3) the deductible or self-insured retention is increased. In the event of any cancellation or reduction in coverage or limits of any insurance, Consultant shall forthwith obtain and submit proof

of substitute insurance. Should Consultant fail to immediately procure other insurance, as specified, to substitute for any canceled policy, the City may procure such insurance at Consultant's sole cost and expense."

- (c) Other insurance: "The Consultant's insurance coverage shall be primary insurance as respects the City of Fort Bragg, its officers, officials, agents, employees, and volunteers. Any other insurance maintained by the City of Fort Bragg shall be excess and not contributing with the insurance provided by this policy."
- (d) Any failure to comply with the reporting provisions of the policies shall not affect coverage provided to the City of Fort Bragg, its officers, officials, agents, employees, and volunteers.
- (e) The Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

5.3. Deductible or Self-Insured Retention. If any of such policies provide for a deductible or self-insured retention to provide such coverage, the amount of such deductible or self-insured retention shall be approved in advance by City. No policy of insurance issued as to which the City is an additional insured shall contain a provision which requires that no insured except the named insured can satisfy any such deductible or self-insured retention.

5.4. Certificates of Insurance. Consultant shall provide to City certificates of insurance showing the insurance coverages and required endorsements described above, in a form and content approved by City, prior to performing any services under this Agreement. The certificates of insurance and endorsements shall be attached hereto as **Exhibit B** and incorporated herein by this reference.

5.5. Non-limiting. Nothing in this Section shall be construed as limiting in any way, the indemnification provision contained in this Agreement, or the extent to which Consultant may be held responsible for payments of damages to persons or property.

## 6.0. GENERAL PROVISIONS

6.1. Entire Agreement. This Agreement constitutes the entire agreement between the parties with respect to any matter referenced herein and supersedes any and all other prior writings and oral negotiations. This Agreement may be modified only in writing, and signed by the parties in interest at the time of such modification. The terms of this Agreement shall prevail over any inconsistent provision in any other contract document appurtenant hereto, including exhibits to this Agreement.

6.2. Representatives. The City Manager or his or her designee shall be the representative of City for purposes of this Agreement and may issue all consents, approvals, directives and agreements on behalf of the City, called for by this Agreement, except as otherwise expressly provided in this Agreement.

Consultant shall designate a representative for purposes of this Agreement who shall be authorized to issue all consents, approvals, directives and agreements on behalf of Consultant called for by this Agreement, except as otherwise expressly provided in this Agreement.

6.3. Project Managers. The Project Manager designated to work directly with Consultant in the performance of this Agreement will be **Chantell O’Neal**, Assistant Director – Engineering. It shall be the Consultant’s responsibility to assure that the Project Manager is kept informed of the progress of the performance of the services and the Consultant shall refer any decision, which must be made by City, to the Project Manager. Unless otherwise specified herein, any approval of City required hereunder shall mean the approval of the Project Manager.

Consultant designates **Arashdeep Singh, PE** as its Project Manager, who shall represent it and be its agent in all consultations with City during the term of this Agreement and who shall not be changed by Consultant without the express written approval by the City. Consultant or its Project Manager shall attend and assist in all coordination meetings called by City.

6.4. Notices. Any notices, documents, correspondence or other communications concerning this Agreement or the work hereunder may be provided by personal delivery, facsimile or if mailed, shall be addressed as set forth below and placed in a sealed envelope, postage prepaid, and deposited in the United States Postal Service. Such communication shall be deemed served or delivered: a) at the time of delivery if such communication is sent by personal delivery; b) at the time of transmission if such communication is sent by facsimile; and c) 72 hours after deposit in the U.S. Mail as reflected by the official U.S. postmark if such communication is sent through regular United States mail.

IF TO CONSULTANT:  
Holly Kennedy, Senior VP  
HDR Engineering, Inc.  
2365 Iron Point Road, Suite 300  
Folsom, CA 95630  
Tel: 925-209-0696

IF TO CITY:  
City Clerk  
City of Fort Bragg  
416 N. Franklin St.  
Fort Bragg, CA 95437  
Tel: 707-961-2823  
Fax: 707-961-2802

6.5. Attorneys’ Fees. In the event that litigation is brought by any party in connection with this Agreement, the prevailing party shall be entitled to recover from the opposing party all costs and expenses, including reasonable attorneys’ fees, incurred by the prevailing party in the exercise of any of its rights or remedies hereunder or the enforcement of any of the terms, conditions, or provisions hereof.

6.6. Governing Law. This Agreement shall be governed by and construed under the laws of the State of California without giving effect to that body of laws pertaining to conflict of laws. In the event of any legal action to enforce or interpret this Agreement, the parties hereto agree that the sole and exclusive venue shall be a court of competent jurisdiction located in Mendocino County, California. Consultant agrees to submit to the personal jurisdiction of such court in the event of such action.

6.7. Assignment. Consultant shall not voluntarily or by operation of law assign, transfer, sublet or encumber all or any part of Consultant's interest in this Agreement without City's prior written consent. Any attempted assignment, transfer, subletting or encumbrance shall be void and shall constitute a breach of this Agreement and cause for termination of this Agreement. Regardless of City's consent, no subletting or assignment shall release Consultant of Consultant's obligation to perform all other obligations to be performed by Consultant hereunder for the term of this Agreement.

6.8. Indemnification and Hold Harmless.



Consultant agrees to defend, indemnify, hold free and harmless the City, its elected and appointed officials, officers, agents and employees, at Consultant's sole expense, from and against any and all claims, demands, actions, suits or other legal proceedings arising out of, pertaining to, or relating to the negligence, recklessness, or willful misconduct of Consultant. The defense obligation provided for hereunder shall apply whenever any claim, action, complaint or suit asserts liability against the City, its elected and appointed officials, officers, agents and employees based upon the negligence, recklessness, or willful misconduct of the Consultant, its employees, and/or authorized subcontractors under this Agreement, whether or not the Consultant, its employees, and/or authorized subcontractors are specifically named or otherwise asserted to be liable. Notwithstanding the foregoing, the Consultant shall not be liable for the defense or indemnification of the City for claims, actions, complaints or suits arising out of the sole negligence, active negligence or willful misconduct of the City. Additionally, in no event shall the cost to defend charged to Consultant exceed Consultant's proportionate percentage of fault. This provision shall supersede and replace all other indemnity provisions contained either in the City's specifications or Consultant's Proposal, which shall be of no force and effect.

6.9. Independent Contractor. Consultant is and shall be acting at all times as an independent contractor and not as an employee of City. Consultant shall have no power to incur any debt, obligation, or liability on behalf of City or otherwise act on behalf of City as an agent. Neither City nor any of its agents shall have control over the conduct of Consultant or any of Consultant's employees, except as set forth in this Agreement. Consultant shall not, at any time, or in any manner, represent that it or any of its or employees are in any manner agents or employees of City. Consultant shall secure, at its sole expense, and be responsible for any and all payment of Income Tax, Social Security, State Disability Insurance Compensation, Unemployment Compensation, and other payroll deductions for Consultant and its officers, agents, and employees, and all business licenses, if any are required, in connection with the services to be performed hereunder. Consultant shall indemnify and hold City harmless from any and all taxes, assessments, penalties, and interest asserted against City by reason of the independent contractor relationship created by this Agreement. Consultant further agrees to indemnify and hold City harmless from any failure of Consultant to comply with the applicable worker's compensation laws. City shall have the right to offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this paragraph.

6.10. PERS Eligibility Indemnification. In the event that Consultant or any employee, agent, or subcontractor of Consultant providing services under this Agreement claims or is determined by a court of competent jurisdiction or the California Public Employees Retirement System (PERS) to be eligible for enrollment in PERS as an employee of the City, Consultant shall indemnify, defend, and hold harmless City for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City.

Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, Consultant and any of its employees, agents, and subcontractors providing service under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any claims to, any compensation, benefit, or any incident of employment by City, including but not limited to eligibility to enroll in PERS as an employee of City and entitlement to any contribution to be paid by City for employer contribution and/or employee contributions for PERS benefits.

6.11. Cooperation. In the event any claim or action is brought against City relating to

Consultant's performance or services rendered under this Agreement, Consultant shall render any reasonable assistance and cooperation which City might require and unless the claim or action is subject to Consultant's indemnification obligation, City will compensate Consultant for such assistance.

6.12. Ownership of Documents. All findings, reports, documents, information and data including, but not limited to, computer tapes or discs, preliminary notes, working documents, files and tapes furnished or prepared by Consultant or any of its subcontractors in the course of performance of this Agreement, shall be and remain the sole property of City. Consultant agrees that any such documents or information shall not be made available to any individual or organization without the prior consent of City, but shall be made available to the City within ten (10) days of request or within ten (10) days of termination. Any use of such documents for other projects not contemplated by this Agreement, and any use of incomplete documents, shall be at the sole risk of City and without liability or legal exposure to Consultant. City shall indemnify and hold harmless Consultant from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from City's use of such documents for other projects not contemplated by this Agreement or use of incomplete documents furnished by Consultant. Consultant shall deliver to City any findings, reports, documents, information, data, preliminary notes and working documents, in any form, including but not limited to, computer tapes, discs, files audio tapes or any other Project related items as requested by City or its authorized representative, at no additional cost to the City. Consultant or Consultant's agents shall execute such documents as may be necessary from time to time to confirm City's ownership of the copyright in such documents.

6.13. Public Records Act Disclosure. Consultant has been advised and is aware that this Agreement and all reports, documents, information and data, including, but not limited to, computer tapes, discs or files furnished or prepared by Consultant, or any of its subcontractors, pursuant to this Agreement and provided to City may be subject to public disclosure as required by the California Public Records Act (California Government Code Section 6250 *et seq.*). Exceptions to public disclosure may be those documents or information that qualify as trade secrets, as that term is defined in the California Government Code Section 6254.7, and of which Consultant informs City of such trade secret. The City will endeavor to maintain as confidential all information obtained by it that is designated as a trade secret. The City shall not, in any way, be liable or responsible for the disclosure of any trade secret including, without limitation, those records so marked if disclosure is deemed to be required by law or by order of the Court.

6.14. Conflict of Interest. Consultant and its officers, employees, associates and subconsultants, if any, will comply with all conflict of interest statutes of the State of California applicable to Consultant's services under this agreement, including, but not limited to, the Political Reform Act (Government Code Sections 81000, *et seq.*) and Government Code Section 1090. During the term of this Agreement, Consultant and its officers, employees, associates and subconsultants shall not, without the prior written approval of the City Representative, perform work for another person or entity for whom Consultant is not currently performing work that would require Consultant or one of its officers, employees, associates or subconsultants to abstain from a decision under this Agreement pursuant to a conflict of interest statute.

6.15. Responsibility for Errors. Consultant shall be responsible for its work and results under this Agreement. Consultant, when requested, shall furnish clarification and/or explanation as may be required by the City's representative, regarding any services rendered under this Agreement. If the clarification and/or explanation was required as a result of errors or omissions in Consultant's work, such clarification and/or explanation will be at no additional cost to the City. Otherwise, Consultant will be compensated for such clarification and/or correction. In the event that a negligent error or omission attributable to Consultant occurs, then Consultant shall, at no

cost to City, provide all necessary design drawings, estimates and other Consultant professional services necessary to rectify and correct the matter to the reasonable satisfaction of City and to participate in any meeting required with regard to the correction.

6.16. Prohibited Employment. Consultant will not employ any regular employee of City while this Agreement is in effect.

6.17. Order of Precedence. In the event of an inconsistency in this Agreement and any of the attached Exhibits, the terms set forth in this Agreement shall prevail. If, and to the extent this Agreement incorporates by reference any provision of any document, such provision shall be deemed a part of this Agreement. Nevertheless, if there is any conflict among the terms and conditions of this Agreement and those of any such provision or provisions so incorporated by reference, the conflict shall be resolved by giving precedence in the following order, if applicable: This Agreement, the City's Request for Proposals, the Consultant's Proposal.

6.18. Costs. Each party shall bear its own costs and fees incurred in the preparation and negotiation of this Agreement and in the performance of its obligations hereunder except as expressly provided herein.

6.19. No Third Party Beneficiary Rights. This Agreement is entered into for the sole benefit of City and Consultant and no other parties are intended to be direct or incidental beneficiaries of this Agreement and no third party shall have any right in, under or to this Agreement.

6.20. Headings. Paragraph and subparagraph headings contained in this Agreement are included solely for convenience and are not intended to modify, explain or to be a full or accurate description of the content thereof and shall not in any way affect the meaning or interpretation of this Agreement.

6.21. Construction. The parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises with respect to this Agreement, this Agreement shall be construed as if drafted jointly by the parties and in accordance with its fair meaning. There shall be no presumption or burden of proof favoring or disfavoring any party by virtue of the authorship of any of the provisions of this Agreement.

6.22. Amendments. Only a writing executed by the parties hereto or their respective successors and assigns may amend this Agreement.

6.23. Waiver. The delay or failure of either party at any time to require performance or compliance by the other of any of its obligations or agreements shall in no way be deemed a waiver of those rights to require such performance or compliance. No waiver of any provision of this Agreement shall be effective unless in writing and signed by a duly authorized representative of the party against whom enforcement of a waiver is sought. The waiver of any right or remedy in respect to any occurrence or event shall not be deemed a waiver of any right or remedy in respect to any other occurrence or event, nor shall any waiver constitute a continuing waiver.

6.24. Severability. If any provision of this Agreement is determined by a court of competent jurisdiction to be unenforceable in any circumstance, such determination shall not affect the validity or enforceability of the remaining terms and provisions hereof or of the offending provision in any other circumstance. Notwithstanding the foregoing, if the value of this Agreement, based upon the substantial benefit of the bargain for any party, is materially impaired, which determination made by the presiding court or arbitrator of competent jurisdiction shall be binding, then both parties agree to substitute such provision(s) through good faith negotiations.

6.25. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original. All counterparts shall be construed together and shall constitute one agreement.

6.26. Corporate Authority. The persons executing this Agreement on behalf of the parties hereto warrant that they are duly authorized to execute this Agreement on behalf of said parties and that by doing so the parties hereto are formally bound to the provisions of this Agreement.

6.27. Use of Recycled Paper Products. In the performance of this Agreement, Consultant shall use paper products and printing and writing paper that meets Federal Trade Commission recyclability standards as defined in 16 CFR 260.12.

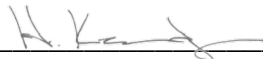
6.28. Estimates. Any estimates of project cost, value or savings provided by Consultant are intended to allow a comparative evaluation between alternatives and do not constitute a detailed evaluation or prediction of actual project costs, value or savings. Any such estimates are made on the basis of information available to Consultant and on the basis of Consultant's experience and qualifications, and represents its judgment as an experienced and qualified professional engineer. However, since Consultant has no control over the impact of various factors that impact the actual project cost, value or savings, Consultant does not guarantee that the actual project cost, value or savings will not vary from Consultant's estimates.

**IN WITNESS WHEREOF**, the parties hereto have caused this Agreement to be executed by and through their respective authorized officers, as of the date first above written.

CITY

CONSULTANT

By: \_\_\_\_\_  
Peggy Ducey  
Its: City Manager

By:  \_\_\_\_\_  
Holly Kennedy  
Its: Senior Vice President

ATTEST:

By: \_\_\_\_\_  
June Lemos, MMC  
City Clerk

APPROVED AS TO FORM:

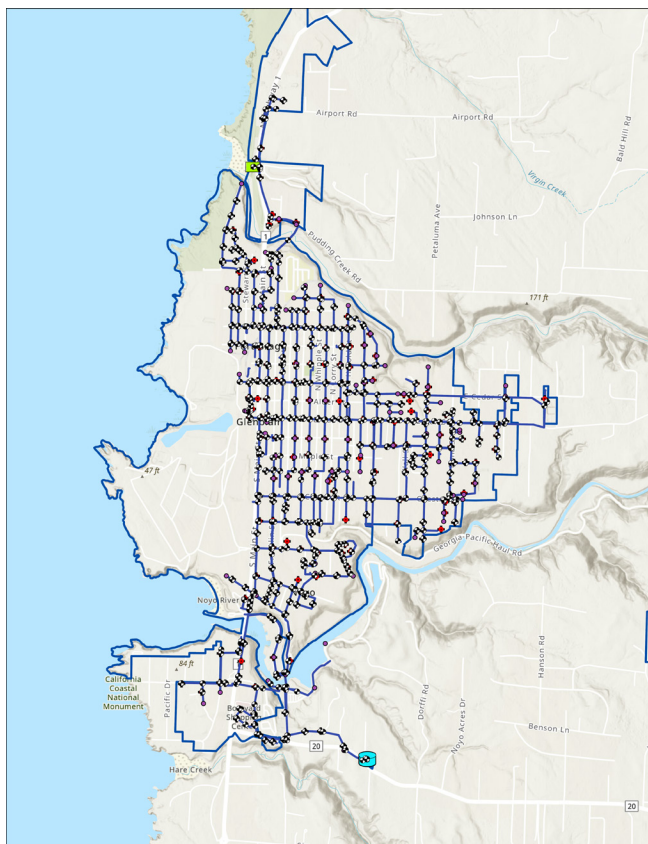
By: \_\_\_\_\_  
Keith F. Collins  
City Attorney

# E Scope of Work

## Understanding/Approach

The City of Fort Bragg (City), located on California's Mendocino Coast in Mendocino County, owns and operates a water distribution system that provides potable water service to approximately 7,000 residents through roughly 3,000 service connections (2,700 residential and 300 commercial/industrial).

The City receives water from three main sources: Newman Gulch, Waterfall Gulch, and the Noyo River. But tidal influence in the late summer causes the level of salination in the Noyo river to rise. The City has a small desalination plant that has been operational since 2021 to treat the brackish water before discharging it to raw water ponds where it is then sent to the City's water treatment plant for finished water treatment. A rough water system schematic is shown on Figure E-1.



**Figure E-1.** City of Fort Bragg Water System

The City's water distribution system contains four water tanks, three located at the water treatment plant that primarily gravity supply. The East Fort Bragg Pressure Zone (EFBPZ) contains elevations that are too high to be served via the gravity system and is served by a pump station located on Willow Street.

The City's last water master plan was finalized in April 1986, approximately 36 years ago, and was based on 1980 General Plan data that projected development through the year 2000. Many of the recommendations from the 1986 plan have been implemented.

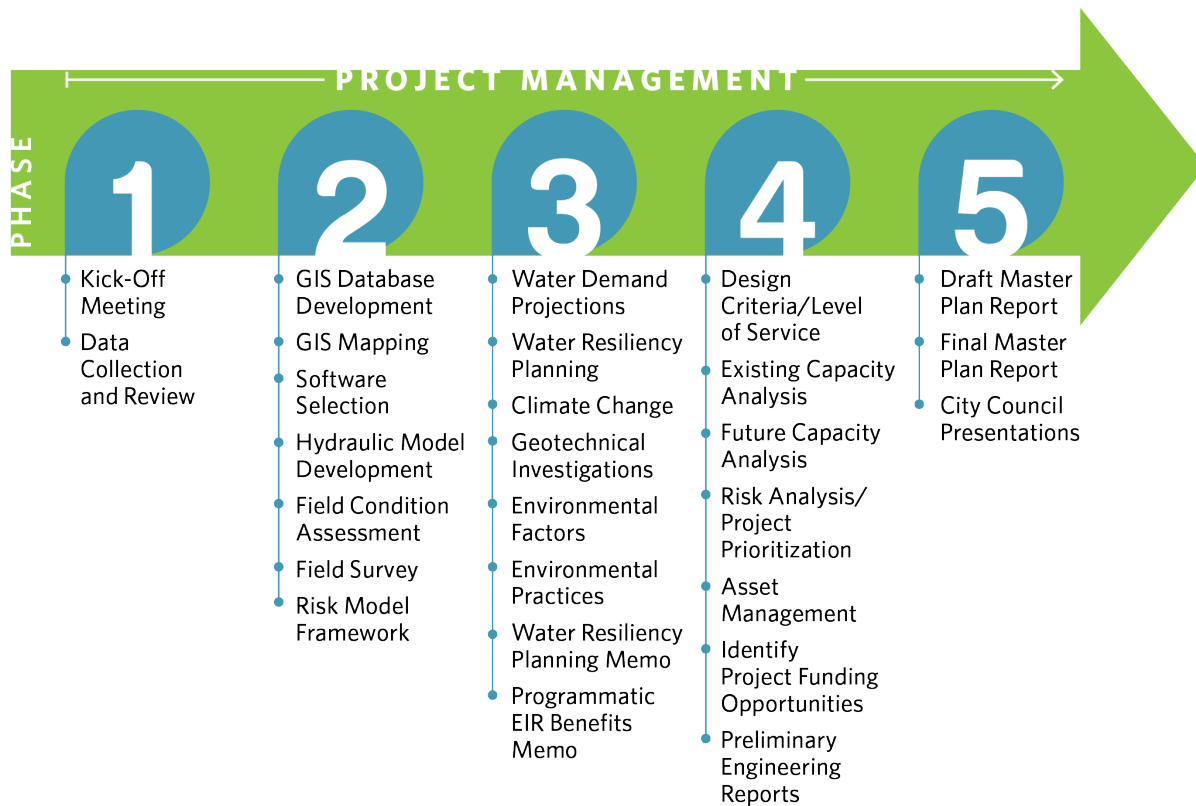
It is important to note that the City is located in an area of potential seismic activity and if the Pudding Creek or Noyo River Bridges are damaged and become unusable, evacuation routes would be cut off and there is a high probability that water infrastructure near these bridges could fail. For this reason, addressing water system risk and resiliency will be a key component of the water system master plan.

We understand that city would like to investigate other issues which include:

1. Identifying distribution system dead-ends so that they may be looped back into the system.
2. Locating shallow pipes which may be prone to damage from surface activity.
3. Investigating climate change implications for low lying areas in the harbor area.
4. Identifying water mains which cross private properties, creating difficulties in accessing them. Relocation shall be prioritized for pipes combined with shallow coverage.
5. Approximately 1/3 of the city's service area is industrial area, which may be re-zoned for development. The city would like to plan for expansion in these areas.

Recognizing the need to update the water master plan based on community changes, economic transition, resiliency, and new technology related to water system planning, the City is seeking to retain

**Figure E-2.** An example multi-step framework can improve overall master planning efficiency for the City.



the services of an Engineering Consultant to develop a comprehensive water system master plan that provides a roadmap for the City to address existing and future system needs necessary to provide adequate water service to its customers well into the future.

Our project approach relies heavily upon leveraging our project team’s significant experience on similar water planning projects combined with your team’s institutional knowledge and understanding of your systems needs and overall challenges. In our experience, successful projects rely on a partnership between Consultant and Client, leveraging your local experience with our national experience. Project status meetings combined with meetings following key task deliverables will allow the project team to meet the City’s expectations for depth and breadth of the analysis as well as stay informed throughout the planning process and be involved in key decisions so there are no “surprises” when the report is delivered.

Our approach also relies heavily on “actionable results.” Too often, master plans are delivered in a “static” format and tend to “sit on the shelf” with little or no implementation. Our implementation-

focused approach, described in detail in the following sections, will provide the City with actionable improvements that can be implemented based upon a design “trigger.” We also use Power BI dashboards and rely heavily on GIS integration to confirm our plans can be updated efficiently to react with changing external factors. Our detailed project information sheets and 30% design approach will provide adequate detail to allow key recommended projects to seamlessly transition from planning to design.

Details of our understanding and approach, organized by the tasks outlined in the City’s RFP, are provided below.

We understand the City has specific goals desired for the outcomes of this project, as reflected in the overall RFP. Our experience with projects in this nature suggest that tasks tend to shift as well as goals over the duration of the project. The strength of our team is the ability to react and adjust to deliver a plan that meets your goals and objectives within the desired budget.

## Approach and Work Plan

We have detailed our approach and scope of work in the following sections. We have organized the scope based on the four major tasks identified in the City's RFP and in Figure E-2 on page E-02.

We assume that if selected, there would be an opportunity to refine and adjust the scope, schedule, and budget prior to award of contract services.

### Task 1 – Master Plan

At the start of the project, it is crucial to get organized and gather the necessary data to get our team up-to-speed and quickly moving ahead in coordination with yours. With the numerous individuals involved in this process, we need to ensure that we streamline our efforts to reduce the impact on your team. Prior to our kickoff meeting, we will utilize an interactive tracking tool to assemble a list of data needs that can be used to track our requests. Of course, we will establish and coordinate a protocol that is workable for transfers of files, both large and small, that is convenient and secure.

Once our team has reviewed and analyzed your data, we will be ready to conduct a virtual or in-person meeting (as appropriate) to kick off the project. The objectives of this meeting are to establish the technical and management teams for the project, introduce the teams and stakeholders to the project and how it will be executed, discuss expectations and critical success factors, and review the schedule and next steps. Because you will have received our data requests prior to this meeting, we will also be able to use this meeting to go over our data requests while we have our technical specialists available and ready to engage directly with your team. This effort will utilize our time effectively and allow us to verify our understanding and information, while giving each of our teams the opportunity to ask follow-up questions, provide crucial understanding and details to fill potential data gaps, and determine direction to fill needed information quickly and efficiently.

The overall goal of Task 1 is to review existing data to gain a clear understanding of the system and then develop a draft and final master plan report, based on the results and findings of Tasks 2 through 4.

#### Advantages & Potential Analyses That Come With a Comprehensive and Accurate Water Distribution System GIS

- Prioritized maintenance and CIP planning
- Risk scoring (consequence & likelihood of failure)
- Strategic system renewal and deterioration forecasting
- Easier coordination with other utilities
- Establish level of service goals and track system performance

#### Key sub-tasks for Task 1 include:

- 1.a. Project Management/Meetings
  - vi. Kickoff Meeting (1)
  - vii. Project Meetings (12)
  - viii. City Council Meetings (3)
- 1.b. Data Collection and Review
- 1.c. Master Plan Report

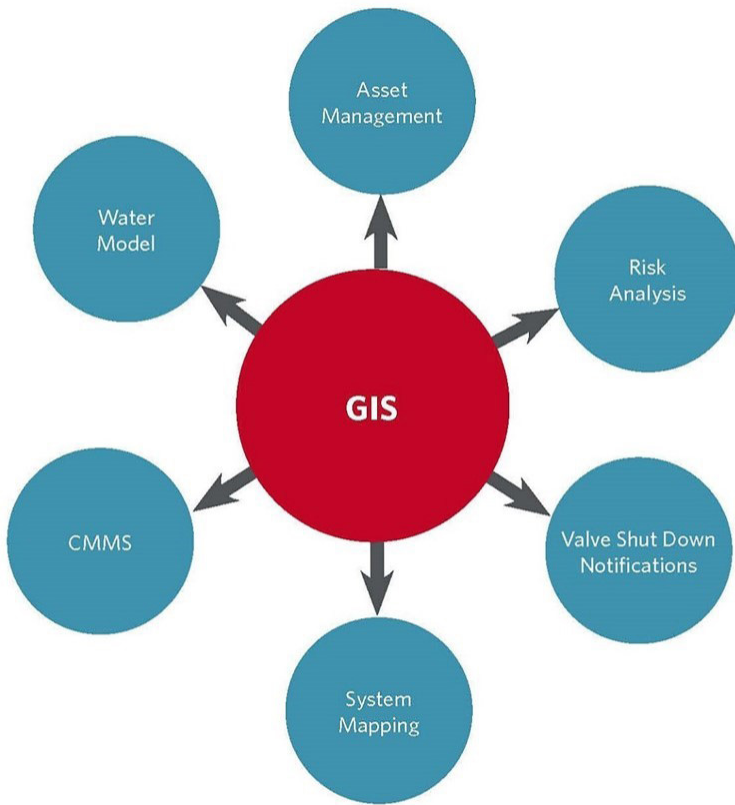
#### Task 1 Deliverables:

- Meeting agendas/meeting minutes for Kick Off Meeting and Project Meetings
- Draft Master Plan Report
- Presentation for up to three (3) City Council Meetings
- Final Master Plan Report in both digital and hard copy (3 bound) format

### Task 2 – Mapping and Modeling

The mapping and modeling task includes evaluating the City's existing mapping resources, recommending an appropriate software system for hydraulic modeling, and performing field work, as necessary to support an accurate water system GIS database.

The mapping and modeling task will be a critical component to the success of the water master plan project. The development of accurate and reliable water system data that will feed into a water system hydraulic model to support the capacity analysis, risk analysis, and subsequent capital project planning is a



**Figure E-3.** Focusing our efforts on GIS data development gives the City a tool to not only support this project, but also a number of future business needs.

key component. The City currently has water system information housed in three unique sources that are currently not integrated:

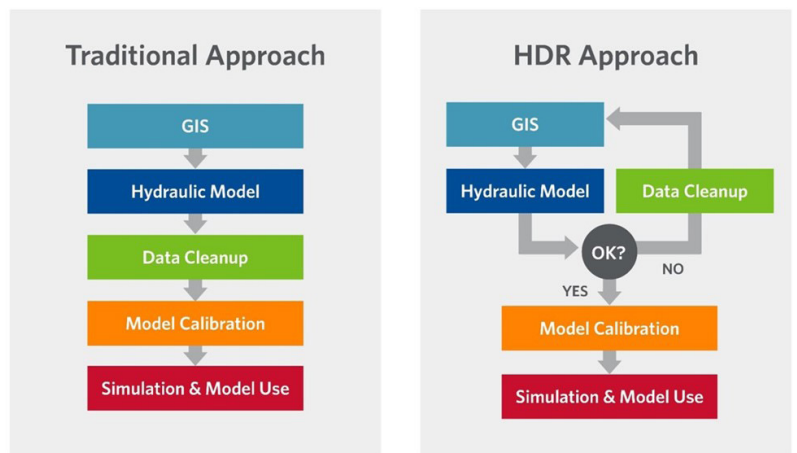
- The WaterCAD (now called WaterGEMS) water model, updated in 2019, was originally developed based on the City’s AutoCAD maps, supplemented with field survey data.
- The AutoCAD maps contain the current up-to-date and accurate information pertaining to the water distribution system.
- The City has a water system GIS, but it is not heavily used and was based on the AutoCAD maps described above.

This task presents an opportunity for the City to develop a central data repository for their water system data that will support the update/ and development of a water system hydraulic model.

GIS has become an important component to utility system planning in recent years. Our approach to utility planning is to leverage GIS data so that it can be used for your business needs beyond the limits of the specific project we are working on. This project presents a great opportunity for the City to start developing a GIS system not only for use on this project, but for other uses beyond the scope of this project. Our approach utilizes the open architecture format of GIS to support a number of future business needs for the City.

Our approach to development of GIS data relies heavily on the fact that our clients have limited resources and budgets. Therefore, our solutions are highly “scalable” and not all data has to be developed at once or developed with perfect precision. We design our databases so that a level of accuracy/confidence is established. For example, a level 1 may include data based upon a set of assumptions, whereas a level 4 is data that has been field verified and surveyed to sub inch accuracy. This allows the City to start with a base GIS framework that can be continuously improved as new data is acquired and added.

We will focus our GIS data development efforts on the data required to support this master plan but in such a manner that the accuracy can be improved over time and future areas can easily be added.



**Figure E-4.** Traditional approaches use the hydraulic modeling environment for data manipulation, which can create disconnects between the model database and the GIS database. HDR’s approach uses the GIS environment for model input data creation and update to avoid conflicts between the GIS data and the hydraulic model.



Once the GIS database has been developed, we will use that data to develop a water system hydraulic model. Our experience with hydraulic modeling is that when a model hasn't been updated recently (in this case since 2019) and a new accurate GIS database is available, it is more efficient to create a new model linked to the updated GIS database. We are recommending that we create a new model for the City in either WaterGEMS (the latest version of WaterCAD), which is a Bentley product, or InfoWater, which is an Innowyze product. Both software solutions use the EPANet hydraulic engine, so results will be similar and preference comes down to City preference, cost, and available features. We will prepare a software selection technical memorandum as part of this task. After the GIS data is developed for the water system, we will use that data to form the basis of our hydraulic model. Traditional approaches use the hydraulic modeling environment for data manipulation, which can create disconnects between the model database and GIS database. HDR has developed a proven project approach to GIS integration, shown in Figure E-3 above, that uses the GIS environment for model input data creation to accomplish a number of objectives:

- We can avoid conflicts between the GIS data and the hydraulic model.
- We can use the hydraulic model to QA/QC the GIS data resulting in a more accurate GIS database.
- It becomes easier to update the model in the future as data is added to or changed within the GIS database.

Task 2 also includes fieldwork including surveying, geotechnical evaluations, and potholing required to support the water system mapping. At the master planning stage, we typically let the preliminary results of the water system modeling, and risk analysis drive the need to perform fieldwork. That way we can focus our efforts on high risk assets and areas that do not make sense from a modeling and calibration standpoint. Our approach to data accuracy will clearly document the confidence level in each facility and we can recommend a plan for collecting data for this master plan effort as well as prioritizing future data collection. We have added a contingency for field survey and potholing.

**Table E-1. Consequences of Failure and Likelihood of Failure**

| Considerations for LoF | Considerations for CoF   |
|------------------------|--|
| Installation Date      | Size of Pipe   |
| Age and Material       | Pressure   |
| Shallow Pipes          | Land Use   |
| Seismic                | Proximity to Critical Infrastructure and Critical Customers Out of Service |
| Break History          | Near Water Bodies  |
| Soil Type              | Potential Environmental Impact   |

A final component to Task 2 will be the establishment of Risk IDs for water main facilities and risk criteria for use in the risk analysis which will be performed in Task 4. Assigning Risk IDs allow us to group facilities based on individual construction project characteristics (e.g., year of installation, material, leak history). The development of consequence of failure as shown in Table E-1 (CoF) and likelihood of failure (LoF) evaluation criteria will allow us to perform a risk analysis that evaluates how likely a facility is to fail and if it does fail, what is the overall consequence of not being able to use the failed asset.

**Key sub-tasks for Task 2 include:**

- 2.a. GIS Database Development
- 2.b. GIS Mapping
- 2.c. Software Selection
- 2.d. Hydraulic Model Development
- 2.e. Field Condition Assessment
- 2.f. Field Survey
- 2.g. Risk Model – Risk Analysis to be performed in Task 4
  - i. Establish Risk IDs
  - ii. Establish Risk Criteria (Consequence of Failure/Likelihood of Failure)

**Task 2 Deliverables:**

- Hydraulic Model Software selection technical memorandum
- GIS database development and system mapping to include:

- Mains
- Valves
- Hydrants
- Meter laterals
- Pumps
- Appurtenances
- Pressure Zone Boundaries
- Field Condition Assessment Data
- Field data collection plan for master plan and for future data collection. We have assumed \$150,000 of field collection services to support Task 2.
- Risk model development technical memorandum (definition of criteria). Note the Risk Analysis is completed in Task 4.

## Task 3 – Analyzing Environmental Variables

### Water Demand Projections

The focus of this task is the development of long range water demand projections and water efficiency strategies and the assessment and impact of applicable climate change related conditions.

Water use trends have been decreasing over the last several years. Determining how much of this decrease will be permanent is a challenging exercise in risk assessment. Accurately projecting future demands from your historical trends, including new development, and modeling them correctly, is essential to right sizing your system and optimizing when and where to spend your capital funds. The transformation in demands has altered traditional master plan thinking throughout the state, with a focus shifting away from system capacity expansion towards system reliability and asset management planning. Our experience tells us that your water system is in a similar situation.

We will use historic billing data to analyze past usage patterns and to establish an appropriate baseline for your existing system demand scenarios. However, the baseline developed may not reflect the current or previous year, based on events (e.g., drought, demand conservation, or unprecedented economic

event) that impacted the baseline or the current or previous year. We will also analyze the City’s billing data to develop minimum, average, and maximum day demand peaking factors for use in updating the model.

We will look at land uses within the City’s service area and sort by service pressure zone, looking at both existing and planned land use designations within the approved General Plan. The growth data, together with data from your billing system sorted by pressure zone, will be utilized to analyze and project demands and peaking factors at the Pressure Zone level, providing greater accuracy for the forecast and better demand data for use in the hydraulic model. In particular, we will look at the following potential growth sites:

- The Georgia Pacific (GP) Mill site
- North Fort Bragg industrial water line extension from Pudding Creek to the edge of the City Limits (Note: this project is planned for 2022/2023)
- Future development/annexation within the Harbor areas
- One additional future annexation area, as defined in the current LAFCO Municipal Services Review (most likely the Fort Bragg area)

### Resiliency Planning Elements

Cities, agencies, communities, businesses, and individuals are facing new and intensifying challenges from extreme weather events, increasing air temperatures, and increased precipitation variability as a result of climate change. The City of Fort Bragg has chosen to be proactive in response to these changes as part of their strategic planning. This step-by-step analysis utilizes historic climate trends to set the baseline for understanding projected future climate trends in air temperatures and precipitation so that the City’s risk/vulnerabilities related to water demand can be correlated to those that are anticipated to change at future time scales due to climate change.

HDR’s team of three atmospheric scientists have over 65+ years of combined experience in climate and weather hazard analysis for water management. The following approach is designed to provide the

necessary decision support that will aid in prioritizing resilient actions to the environmental threats posed by the varying climate

Communities that develop strategic plans for climate resilience will not only reduce service failures, improve financial efficiencies, and reduce liability, they will make their cities and towns more economically attractive to investment through their resiliency efforts. The cost of not taking action to mitigate climate hazards goes well beyond just those associated with the hazards themselves. In previous HDR studies, we have been able to conclusively prove that the benefit-to-cost ratio of resilient actions is a ratio of 6-to-1 for every dollar spent.

HDR has performed climate change risk and vulnerability assessments across a variety of infrastructure types and scale, including community, system, and site-level. We will use the climate investigations developed for the City in Task 3b as a starting place for a system-based climate resilience investigation as part of this project.

Through these analyses, HDR proposes to utilize the product of threat likelihood (probability) and the consequences of failure to produce a high level understanding of system risk to climate threats now and into the future (i.e. 2035, 2050, 2070, 2100). Considerations will be made for infrastructure criticality and community socio-economic goals. A prioritization schema will be developed to provide decision support for resilient actions.

For the geotechnical desktop assessment, HDR will review publicly available information on historic seismic data, review published flood maps, and records of historical pipe repairs. The desktop assessment will help identify areas of concern related to geotechnically sensitive areas and environmental factors. Additional testing may be performed for quantitative analysis of soils. Soils testing is not included in HDR's scope.

## Environmental Sciences

HDR will review the options to prepare Programmatic California Environmental Quality Act (CEQA) document(s) for the City's utility master plans and CIP Program. CEQA allows for the preparation of programmatic Environmental Impact Reports (EIR) when a project includes a series of related actions that can be characterized as one large project and

should be looked at as a whole. The benefits of such documents are that they allow an examination of a project and promote "tiering" when later activities within the program are undertaken.

The use of tiering can expedite environmental review by eliminating repetitive analysis of issues and potential impacts adequately addressed in the program EIR. Tiering allows for the preparation of focused subsequent environmental documents once the appropriate level of project information and design is available. Typically these benefits are realized through time and money savings. Furthermore, preparing a comprehensive programmatic EIR for such plans often reduces risks to jurisdictions regarding timing project by project environmental reviews. By establishing overarching strategies and mitigation options for similar project types, the CEQA compliance process can be streamlined. HDR will prepare a memo that identifies the benefits of preparing Programmatic EIR(s) for the City utility master plans and CIP Program. The memo will also outline the risks associated with preparation of project by project documents vs preparation of a Programmatic EIR. Estimated costs associated with preparation of individual CEQA documents, including the array of different document types (e.g., exemptions, initial studies, mitigated negative declarations, EIRs), compared to the preparation of a programmatic EIR and tiered, focused subsequent documents will also be provided in the memo. HDR will prepare a Draft Memo for the City's review. Upon receipt of the City's comments, HDR will incorporate the City's comments and will prepare and submit a Final Memo.

### Key sub-tasks for Task 3 include:

#### 3.a. Water Demand Projections

- i. GP Mill Site
- ii. North Fort Bragg Industrial Water Line
- iii. Harbor Areas
- iv. One additional future annexation area

#### 3.b. Water Resiliency Planning – Review General Plan (inland and coastal) Element 7

- i. Climate Change: Impacts and Projections
- ii. Climate Change: Risk and Vulnerability Assessments
- ii. Geotechnical Desktop Assessment

1. Seismic
  2. Landslides
  3. Slope instability
  4. Tsunami
  5. Flood
  6. Fire
- iii. Environmental Factors
7. Soil Corrosiveness
  8. PH
  9. Ground Water
- iv. Environmental Practices
10. Water Efficiency
  11. Conservation
  12. Working with local watershed groups to capitalize on the protection of sensitive fish and other members of the native river community
- 3.c. Technical Report Preparation
- 3.d. Cost/Benefits of Preparing a Programmatic EIR Memo

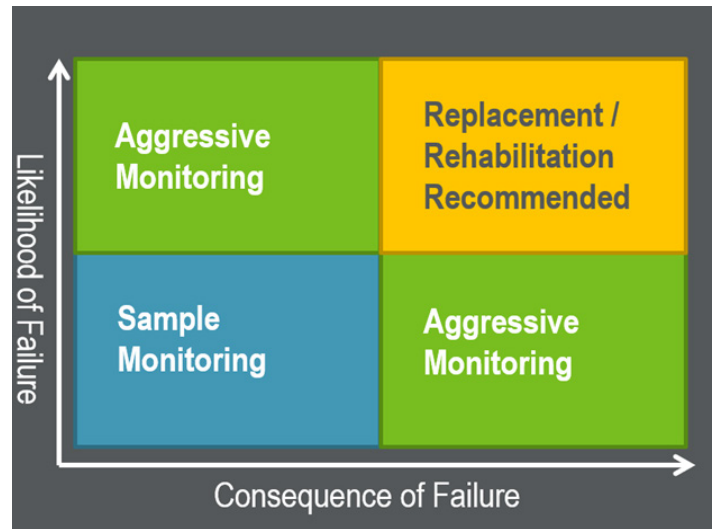
### Task 3 – Deliverables

- Technical Report including analysis of future water demand, resiliency planning, and consideration of environmental factors. The report should recommend strategies for Climate Change and other disaster preparedness, address water efficiency and conservation in keeping with environmental constructs and ethical practices, discuss new, innovative, or emerging pipe/water system technologies.
- Prepare a memo analyzing the cost/benefits of preparing a Programmatic EIR for City utility master plans and proposed Capital Improvement Projects (CIP) and risks of the timing of the environmental review on a project-by-project basis without a comprehensive environmental document.

### Task 4 – Capital Project Planning

Task 4 includes the bulk of the analysis work related to the water system master plan and we will use the model and findings from previous tasks to identify water system improvements necessary to provide adequate levels of service for both existing and future needs. Recommended system improvements will be prioritized based on a Risk Analysis and associated

risk model that assigned a Business Risk Exposure (BRE) score to each asset to confirm that resources are spent wisely on high risk assets. Recognizing that not all assets are created equal, we use a risk based approach to prioritizing assets for repair, rehabilitation, and replacement. High LoF/high CoF assets rise to the top of the list, while low LoF/Low CoF are at the bottom of the list. See figure below.



**Figure E-5. Consequences of Failure and Likelihood of Failure**

One of the primary strategies needed to successfully develop a comprehensive CIP that the City can confidently rely on year after year is to be able to provide the right balance that considers replacing aging infrastructure as well as meeting growth and redevelopment, capacity, and reliability needs. Developing a repeatable process that can be updated internally by staff enables the City to efficiently respond to and adapt the CIP whenever capital planning needs change, without having to rely on outside resources. This approach can leverage the City's Asset Management Program recommendations, developed as part of this task, to align the CIP with the recommended performance metrics and service levels.

Through this project work, the City will be able to develop a repeatable, data-driven asset management project to support maintenance decisions and capital planning. The foundation of this will be development of a complete and reliable asset registry, an understanding of the overall condition of the infrastructure, and an assessment of capacity issues and reliability risks from the hydraulic modeling. These data sets can be leveraged to make defensible

capital decisions and focus maintenance activities to enhance the City's efforts and capital dollars.

This can be achieved through alignment of these analyses with the City's priorities and key performance metrics. HDR will work with the City to develop or enhance level of service metrics and establish a process that the City can follow to align risk modeling, condition assessments and modeling results with key levels of service in order drive priorities. This will result in a repeatable and defensible process that can easily be explained and justified to stakeholders and decision makers.

HDR will conduct workshops to work with the City to define level of service goals and key performance metrics. These will be factored into the risk assessment and capital planning effort for prioritization and scheduling of capital projects. HDR will document this process so that they City can continue to update their capital improvement program as new data is obtained and as needs change over time.

We have found that a distinct advantage of an Asset Management Program for our clients is the shift from "reactive" or unplanned to "proactive" or planned maintenance activities results in a significant cost savings.

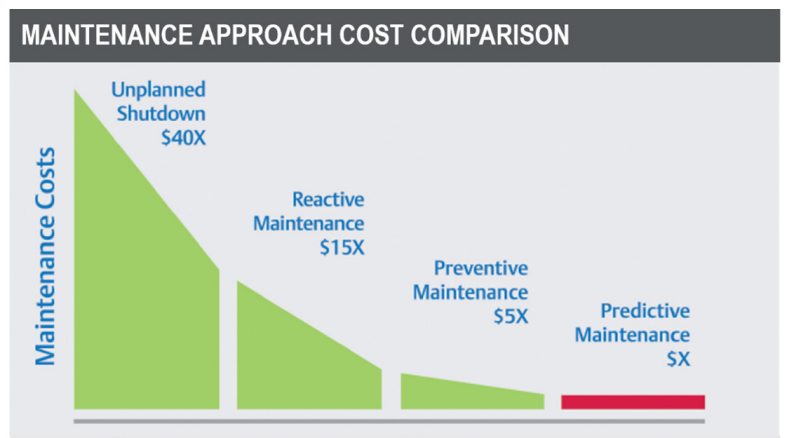
## Reactive Vs. Proactive

Our team is committed to providing the City actionable improvements. Too often projects are identified that cannot actually be implemented. This disconnect is commonly the result of lack of detail on the triggers and drivers for identified projects, a disconnect with available funding, or an inability to finish projects due to emergency repairs of aging assets. Figure E-6 provides an illustration of this problem.

We have had a high level of success with detailed information sheets to provide adequate detail for recommended projects. While it is necessary to forecast timing for projects to assist with financial planning, assumptions related to population and demand growth that may trigger these improvements inevitably change over time, especially for long-range improvements. Therefore, it is important to not only forecast timing of a recommended improvement, but also to identify the demand condition that triggers the improvement. These project information sheets

contain necessary detail to support environmental review and permitting process and support obtaining project funding from various State and Federal sources.

This leads to another key component of Task 4, the identification of project funding opportunities and funding streams. Our funding strategy roadmap will identify ideas to make the most of available funding while lessening federal compliance requirements. This will help reduce overall project costs and administrative requirements. We have successfully helped obtain SRF funding for clients across the country, including the City of Santa Cruz and Sacramento Regional County Sanitation District.



**Figure E-6.** Illustration of the impact of unplanned or reactive maintenance activities.

Beyond the SRF process, our team has expertise in each of the required environmental considerations, working relationships with applicable resource agencies, and the resources to execute the required environmental analysis and documentation. Our approach will provide the City with a transparent process and efficient execution of compliance actions. Potential funding sources that will be explored include:

- State Revolving Fund (SRF)
- Water Infrastructure and Finance Innovation Act (WIFIA)

Our recent experience with WIFIA has led to \$3.3 billion in financing to support \$6.8 billion of infrastructure investment for our Clients (see Figure E-7 on page E-11).

## Key sub-tasks for Task 4 include:

- 4.a. Existing Capacity Analysis
- 4.b. Future Capacity Analysis
- 4.c. Risk Analysis/Project Prioritization
- 4.d. Asset Management
  - i. Analyze existing asset management practices for the water distribution system
  - ii. Prioritize future asset management procedures (tracking, evaluating, and replacing aging infrastructure).
- 4.e. Identify project funding opportunities
- 4.f. Project Practicability Report
- 4.g. Preliminary Engineering Reports (30% Design) for up to three projects

## Task 4 Deliverables:

- Technical Memorandum (TM) summarizing results and findings of the capacity analysis including proposed pipeline replacement projects. Recommended project will consider emerging technology.
- Technical Memorandum summarizing the results of the risk based analysis including likelihood of failure versus consequence of failure analysis to develop risk scores for each water asset.
- Based on the results of the capacity evaluation and the risk evaluation, a prioritized list of replacement, repair, and rehabilitation projects will be developed that include an evaluation of the feasibility of implementation and funding options.
- Preliminary Engineering Reports will be developed for recommended projects that contain adequate detail to support the environmental and funding process. Reports will include:
  - Schedule
  - Cost
  - Mapping
  - Detailed Project Descriptions
  - Funding Sources
  - Grant Funding Analysis
  - Project Priority Ranking
  - Environmental and Permitting Requirements to Support Funding
- Design Trigger

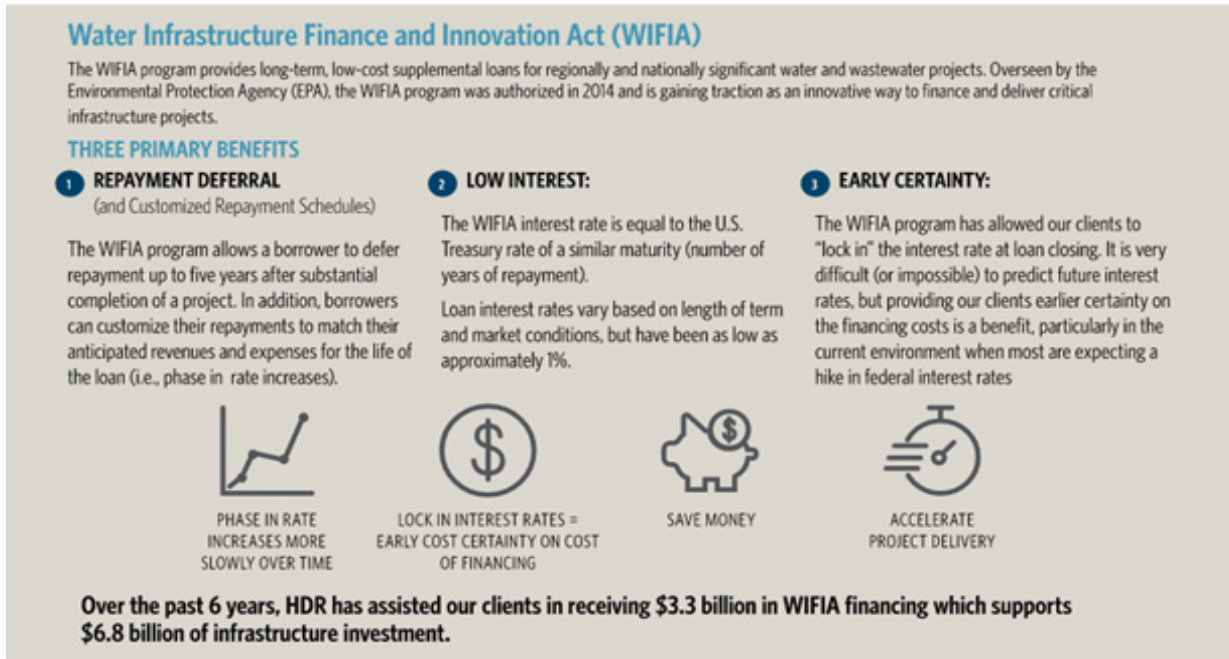
## Alternate Tasks

### **A.1 - Preparation of CEQA/NEPA determinations and associated studies needed for grant applications.**

HDR has supported several jurisdictions with the preparation of environmental constraints analyses, initial environmental reviews, technical studies, and identification of CEQA/NEPA documentation strategies for grant applications. Often, early environmental review as part of the grant application process can be beneficial for scoring purposes as well as for demonstrating the project's applicability for the grant program and ultimately leads to successful grant award. HDR has a wide range of technical environmental experts that can conduct air quality, biological resources, climate, cultural resources, energy, hazardous waste, hydrologic, traffic, visual, and wildfire assessments to support grant applications. HDR has successfully prepared several CEQA-Plus documents as part of the Clean Water State Revolving Fund Grant Process. HDR is very familiar with the CEQA-Plus requirements and has local experts to address the federal cross-cutting regulations. HDR is also intricately familiar with federal grant programs, specifically the FEMA Hazard Mitigation Grant Program. HDR has NEPA experts locally in Northern California as well as across the country to assist with NEPA documentation in support of federal grant applications. HDR can assist with preparation of CEQA/NEPA documents, conducting technical studies, and early environmental reviews for the City as part of grant application processes. HDR can work with the City to define the environmental review needs as part of the grants being pursued. Once the environmental review needs are defined, HDR will provide a separate scope of work and fee.

### **A.2 - Preparation of Programmatic EIR for CIP projects associated with Utility Master Plans.**

As described above, under Task 2, there are benefits to prepare a programmatic EIR (PEIR) for CIP Projects associated with Utility Master Plans. HDR has prepared PEIRs for several jurisdictions successfully. Within the PEIRs that we have prepared we have typically described the program as a whole, identified the list of projects, analyzed the full range of projects included in the program, and also



**Figure E-7. WIFIA Infrastructure Financing**

evaluated at a project-level of analysis those projects that are more defined at the time of preparation of the PEIR. This allows for additional efficiencies and reduces the number of tiered and subsequent CEQA documents that are necessary to finish CEQA compliance, ultimately saving time and money. HDR would recommend this approach for the City's PEIR if there are CIP projects that can be defined at a low level of detail and still have full analysis of potential environmental impacts, while other CIP projects that may be in the early planning phase and have a higher level of detail to meet CEQA review requirements. This programmatic/project-level approach informs a whole decision-making process under CEQA with necessary legal sufficiency; it also informs better design in the next phase of work. HDR can work with the City to define the appropriate approach for the CIP Program PEIR. The agreed-upon approach will inform the scope of work for the PEIR. Therefore, if the City elects to prepare a PEIR for the CIP Program, HDR will provide a separate scope of work and fee.

**EXHIBIT B**  
**CERTIFICATES OF INSURANCE AND ENDORSEMENTS**