PROFESSIONAL SERVICES
SUPPLEMENTAL AGREEMENT #1
FOR
30/24-INCH STATE HIGHWAY 45 PUMP STATION DISCHARGE LINE

STATE OF TEXAS §
§
COUNTY OF TRAVIS §

This Supplemental Agreement #1 to a contract for Professional Services is made by and between the City of Pflugerville, Texas ("City") and Black & Veatch Corporation (“Consultant"). City and Consultant may be referred to herein singularly as “Party” or collectively as the “Parties.”

WHEREAS, the City and Consultant executed an Agreement for Professional Services (“Agreement") on the 2nd day of July, 2024 for the 30/24-inch State Highway 45 Pump Station Discharge Line project (“Project”) in the amount of $342,796.30; and

WHEREAS, the City and Consultant desire to enter into a Supplemental Agreement #1 for Professional Services for the Project in the amount of $774,078.76, on the February 25, 2025 to add Design and Bid Phase Services to the Agreement; and

NOW, THEREFORE, premises considered, the City and the Consultant agree that said Agreement is amended as follows:

I.

Article III. Scope of Services and Exhibit A, shall be amended as set forth in the attached addendum to Exhibit A.

Article IV. Compensation to Consultant and Exhibit C (Fee Schedule), shall be amended by increasing by $774,078.76 the amount payable under the Agreement for a total of $1,116,875.06, as shown by the attached Addendum to Exhibit C (Fee Schedule).

Except as amended hereby and as previously amended as indicated above, the terms of the Agreement shall remain unchanged and in full force and effect.

EXECUTED and **AGREED** to as of the dates indicated below.

CITY OF PFLUGERVILLE		**CONSULTANT**	
		Joseph R Aillet	
(Signature)		*(Signature)*	
Printed Name:	Sereniah Breland	Printed Name:	Joseph R. Aillet
Title:	City Manager	Title:	Associate Vice President
Date:		Date:	02/13/2025

APPROVED AS TO FORM:

Charles E. Zech
City Attorney
DENTON NAVARRO RODRIGUEZ BERNAL SANTEE & ZECH, P.C.
Stan Springerley, Senior Associate Attorney

EXHIBIT C - FEE SCHEDULE

Original Agreement	$342,796.30
Amendment #1	$774,078.76
Total Contract Value	$1,116,875.06

ATTACHMENT A
AMENDMENT #1
SCOPE OF SERVICES

Owner: City of Pflugerville
Consultant: Black & Veatch Corporation
Project: WA2404 - 30/24-inch State Highway 45 Pump Station Discharge Line

1. Project Description. The Scope of Services described in this attachment is to be performed for the WA2404 - 30/24-inch State Hwy 45 PS Discharge Line project. The objective of the 30/24-inch State Highway 45 Pump Station Discharge Line project is to design and construct a new 30- and 24-inch diameter water line along the northern frontage road of State Highway 45. This project will connect the future State Highway 45 Pump Station to 960' Pressure Zone. This project will provide additional pumping capacity to serve growth in the 960' Pressure Zone.

   The project includes the design elements listed below:

   - Approximately 6,500 LF of 24"/30" diameter water transmission main pump station discharge.
   - Approximately 700 LF of 30" diameter water transmission main pump station suction.
   - Approximately 600 LF of water transmission main stub-out from pump station suction. The suction stub-out size will be provided by others.
   - Approximately 40 LF of 15" wastewater main extension at two locations (80 LF total).

2. Scope of Services Description. The engineering services provided under this amendment include design, preparation of construction documents, and bid and preaward services. These services are further defined in specific phases of the work that follow. Work will start upon execution of this Agreement.

   a. <u>Task 1 - Project Management and Administration.</u>

      Provide management and administration of the project. Prepare project management documents including project execution plan, budget, schedule, drafting standards manual, safety and constructability design reviews, and quality assurance and quality control plan. Review ongoing activities. Monitor schedule and budget. Review progress with Owner on a regular basis. Discuss issues with the Owner as they are noted. The anticipated project duration to complete services is 10 months.

      i. Preliminary and General Work

         1. Project Execution Plan (PEP). Prepare a PEP that identifies project goals and procedures to maintain the Project Team focus on delivering project on schedule and within budget.

2. Project Management. Plan, organize, staff, direct, manage, coordinate, and report work tasks of project team including subconsultants.

3. Reporting and Invoicing. Prepare and submit monthly Project Summary Reports and submit with each monthly invoice. Project Summary Report will include Project Budget Summary, Summary of Work completed to date, and upcoming project activities.

ii. Project Meetings

1. Kickoff Meeting. One (1) project kickoff meeting with the design team and Owner representatives. For budget purposes, one (1), 2-hr in-person meeting held at the Owners office for up to 4 personnel is included.

2. Progress Meetings. Participate in informal meetings with the Owner to review progress and exchange ideas and information. One meeting per month is included. Prepare agenda and distribute minutes for project meetings. For budgeting purposes, eight (8), 1-hr virtual meetings are included.

3. Design Review Workshops. BV will conduct workshops with the Owner to review the 30%, 60%, and 95% design submittals. For budgeting purposes, three (3), 2-hr in-person meetings held at the Owners office for up to 4 personnel is included.

4. Internal Project Meetings. Conduct weekly internal coordination meetings during design phase.

iii. Quality Management.

1. Quality Control Plan. Develop a Quality Control Plan (QCP) to guide the Project Team and COA through Quality Management (QM) activities.

2. Quality Management. Perform quality management activities on Consultant's tasks including on-going discipline coordination, technical review, document review, quality assurance/quality control activities, checking and activities as defined in the QCP.

3. Quality Control Reviews. Perform Interim Quality Control reviews of Consultant's 30%, 60%, 95%, and Final deliverables.

b. Task 2 – Survey Services.

i. Survey Areas

1. Pipeline Route. The pipeline route to be surveyed is approximately 6,500 linear feet (LF) as shown in Figure C-001 dated 1/10/2025 included in Attachment A-1.

ii. Work Included. Engage the services of a professional land surveyor registered in the State of Texas to provide surveying and subsurface utility engineering services. Attachment A-2 presents the services to be provided through the subcontract. Engineer and Engineer's sub-consultant will utilize available existing data and collect current field data and prepare a site survey that includes the following:

1. Project Survey. Provide a survey and prepare a project survey base map in electronic and paper form that is to be used as a basis for the engineering design of new project facilities in the survey areas. Include the following:

a. Identify the vertical datum and the horizontal control system used for survey.

b. Establish and identify elevation benchmarks and horizontal control monuments. Provide location descriptions for each monument.

c. Reference survey ground control for survey to current NAD horizontal state plane coordinates and current NAVD 88 benchmark elevations. Provide a surveyed conversion for local and historical datums.

d. For pipeline route surveys, establish and identify control monuments near the beginning and end of the pipeline and at regular intervals along the alignment corridor as required for the survey.

e. Conduct research at city and county offices for local survey control, street centerline information, and boundary information.

f. Perform land boundary surveying.

g. Determine, locate, and identify property boundaries, platted lot lines, easements, and rights-of-way.

h. Perform surveying using methods sufficient to provide survey deliverables that meet accuracy and presentation standards that are in accordance with standard professional surveying practice. State department of transportation standards for abbreviations and symbols used during field survey data collection and for survey presentation shall be followed, unless approved otherwise by Engineer.

i. Perform ground-based topographic surveying. Provide both aerial surveying and ground-based topographic surveying sufficient for use in engineering design drawings that are at a scale of 1 inch = 20' feet with 1-foot contour intervals.

j. For route surveys, such as pipelines, provide a corridor ground survey width of approximately 110 feet and 25 feet beyond end points. Provide ground survey

along temporary and permanent easements outside the pipeline survey corridor.

k. Label contour elevations at a 10-foot interval and minor contour elevations at an interval dependent on the steepness of the slope and as appropriate.

l. As part of the ground-based topographical survey identify all visible improvements, natural and artificial site topography, contours, utilities, drainage courses, rock outcroppings, banks or slope lines, highways, streets, curb and gutters, signs, traffic control signs, fencing, gates, culverts, driveways, landscaping, structures, creeks, rivers, ponds, septic fields, railroads, etc. Locate and identify the type and size of all trees in landscaped, developed, and generally clear areas, and all trees 8 inches in diameter and larger in wooded areas. Identify type of materials where applicable.

m. Identify spot elevations and show contours for surfaces surveyed.

n. Research and identify the FEMA 100-year floodplain elevation within and immediately adjacent to the survey areas for the Project.

2. Easements, Land Parcels, and Property Owner Information:
   a. List of the parcel identification numbers and property owner names and addresses for the tracts in the survey areas. Property owner names and site address to be added to the survey base map.

   b. Prepare initial title report, including identification of encumbrances, for the property information on the survey map and easement documents. Prepare an updated title report including any changes from the initial report prior to the Owner recording and acquiring easements and land parcels.

   c. Prepare legal descriptions for land parcels and easements currently in possession of the Owner. Each legal description shall include the area in square feet and acres.

   d. Prepare temporary easement, permanent easement, and land parcel legal descriptions for each easement and land parcel that is to be acquired by the Owner. The legal description of each easement or land parcel to be acquired shall include an exhibit identifying and dimensioning the easement with respect to the written description for existing properties. Each legal description and exhibit shall include the area in square feet and acres.

3. Geotechnical Borings Locates:
   a. Locate project geotechnical borings.

4. Subsurface Utility Engineering:
   a. Perform research and identify utilities, including utility types, sizes, materials, locations, direction, and elevations from utility records, visible observations, utility field locations, and other information available. Contact utilities and have locations of subsurface utilities marked on the ground. For subsurface utilities that are marked by utility companies, the survey shall locate those markings and identify them as such on the survey drawings. For utilities that are accessible from manholes and catch basins (wastewater and storm sewer lines, culverts, electrical lines and ducts, etc.) locate and identify invert elevations, pipe diameters, manhole interior dimensions, manhole lid sizes, rim elevations, and catch basin interior dimensions. Utility research and documentation shall meet or exceed CI/ASCE 38-02 Quality Level C (QLC).

b. Based the results of the QLC utility research, provide CI/ASCE 38-02 Quality Level B and Quality Level A field location to determine the horizontal and vertical location of utilities at critical locations along the pipeline route.

5. Site Survey Deliverables:
   a. Engineer will utilize site survey deliverables to support project work. In addition, the following site survey deliverables will be made available to Owner at the completion of the Work:
      i. Signed and sealed (by a professional land surveyor) reproducible AutoCAD drawings of the survey no larger than ANSI D (22”x34”) on bond paper.
      ii. Electronic drawing files in AutoDesk AutoCAD Civil 3D “.DWG” file format using Black & Veatch drawing standards.
      iii. ASCII text files of site survey data.
      iv. Copy of survey field books, including detailed hand sketches and photos describing the survey areas for the project and information collected.
      v. Title reports, including encumbrances, for easements and land parcels in the site survey area.
      vi. Signed and sealed (by licensed surveyor) legal descriptions and exhibits for easements and land parcels that are to be acquired.

c. Task 3 – Geotechnical Services.

i. Provide, through a subcontract, geotechnical engineering services including exploratory work and laboratory and field testing based on preliminary drawings and designs, and including professional interpretations of exploratory and test data. Attachment A-3 presents the services to be provided through the subcontract. The services will include:

1. Initial geotechnical exploratory work, such as soil borings, penetration tests, soundings, subsurface explorations, laboratory tests of soils and rock samples that are required to provide information for design, and other field and laboratory tests and analyses that are required to provide design information.

2. An initial geotechnical report by a qualified geologist or geotechnical firm interpreting the data collected from the exploratory work and testing and making assessments of the site conditions that can be anticipated from this initial exploratory work. Submit electronic copy of the report to the Owner.

ii. After final design has proceeded to the point where it can be accomplished, provide, through a subcontract, a final geotechnical report evaluating the initial geotechnical investigation, field and laboratory test results, and the initial geotechnical report. The final evaluation shall be based on the actual design, including sizes, locations, and loadings of structures; types, and extent of excavations; and shall consider both design parameters and constructability. If, in the opinion of the reviewing professional or Engineer, additional geotechnical data are required for the preparation of the final report, these data shall be provided under an amendment to the Agreement and the subcontract. The final report shall indicate the anticipated performance of the subsurface material to be encountered on the project both during and after construction, under the loading conditions, use, and types of excavations anticipated. Submit electronic copy to the Owner.

d. Task 4 – Design and Construction Contract Documents.

i. Owner-Furnished Front-End Documents. Obtain and review Owner-furnished front-end documents, general conditions, special conditions, standard specifications, and standard details. Meet with Owner to resolve review comments, and revise Engineer's standard documents accordingly.

ii. Permitting. Meet with representatives of utilities, government agencies and highway departments (TxDOT) to obtain requirements for public protection to be included in contract documents. Eight (8) hours have been included for this task.

iii. Public Information Program and Developer Coordination. Assist Owner with the public information program and coordination with developers. A total of two (2) trips to Owner offices or other location designated by the Owner and total of eight (8) hours are included for this effort including time for preparation. Additional trips and time, if required, will be provided as supplementary services.

iv. Storm Water Pollution Prevention Plan. Design temporary erosion and sedimentation controls, and prepare storm water pollution prevention plan for implementation by the Contractor during construction.

v. Corrosivity Analysis
   1. Consultant shall provide services of a corrosion engineer for the project elements included in the detailed design. The corrosion engineer shall coordinate with the geotechnical engineer regarding soil sampling and analysis methods. The corrosion engineer shall also coordinate with the consultant regarding all applicable water quality constituents affecting the project design.
   2. Corrosion engineer shall conduct field soil resistivity testing at the project site.
   3. Corrosion engineer shall conduct a review for the potential of stray current and induced AC interference.
   4. Corrosion engineer shall provide a soil corrosivity assessment/analysis report to include all test data, observations, conclusions, and recommendations for corrosion control, materials of construction, coating/lining options, and stray current/AC mitigation (if necessary). Recommendations for corrosion control will be based upon sound corrosion engineering practices, Owner, AWWA, and AMPP Standards.
   5. Consultant shall incorporate all corrosivity requirements into the final design of the project, including the design and selection of appropriate equipment/pipe materials and coatings that are compatible with the environment. BV to review the selection of appropriate equipment/pipe materials and coatings for compatibility with source of water and associated chemicals to provide long service life for the project.

vi. Design – General

As part of the Basic Design Services, the Engineer shall produce interim documents for the purpose of review by Owner's staff and Engineer's quality control. The interim documents shall serve as milestones wherein certain features shall be fixed after a period of Owner review. The purpose of the interim documents and fixing certain features shall be to communicate the design progress and avoid later

revisions that would impact design efficiency and Project cost and schedule. Changes made after fixing features will be considered Supplemental Services.

As part of the Design Services, Engineer may develop Opinions of Probable Construction Cost (OPCC). All OPCC developed will follow the recommendations of the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice No. 18R and accepted industry guidelines with regard to methodology and accuracy. Since Engineer has no control over the cost of labor, material, or equipment furnished by others not under contract to Engineer, Engineer's opinion of probable cost for construction of the work will be made on the basis of experience and qualifications as an Engineer. Engineer does not guarantee or warranty that proposals, bids, or actual project costs will not vary from Engineer's opinions of probable cost.

Anticipated Drawing List is included in Attachment A-4.

Anticipated Specification List is included in Attachment A-5.

Drawings will be prepared based on ENGINEER's drafting standards on 22" x 34" size sheets. The OWNER's applicable standard details available and current at the time of the work will be utilized. Where applicable OWNER standard details are not available, ENGINEER's standard details will be utilized. OWNER will provide the General Conditions and Special Conditions which will be standard OWNER documents for competitive sealed proposal solicitation. The technical specifications will be based on OWNER's standard specifications. ENGINEER will prepare special provisions to OWNER standard specifications to meet project specific requirements. ENGINEER's standard technical specifications will be used for work not covered by OWNER's standard specifications.

1. Detailed design – Construction contract documents Level 1 (30%)

    a. Detailed design is to commence only after Owner has accepted the design criteria included in the Technical Considerations TM prepared as part of Preliminary Design. The construction contract documents shall be prepared for selection of private construction contractors on a competitive sealed proposal basis. Prepare documents for one construction contract. Construction contract documents Level 1 progress review meeting deliverables are as follows:

        - Project Manual table of contents
        - Design drawings listed in the anticipated sheet list included in Attachment A-4
        - Metes and bounds for required easements
        - Geotechnical investigation report
        - ACEE Class 4 opinion of probable construction cost
        - Project schedule update

    b. Provide one hard copy set and one electronic copy of drawings and specifications to Owner for review.

c. Attend one meeting with Owner to receive and discuss Owner's review comments.

d. Revise documents to reflect decisions taken at this level and incorporate into next phase submittal..

2. Detailed design - Construction documents Level 2 (60%)
   a. Level 2 design shall commence only after Owner has accepted Level 1 deliverables. Level 2 progress review meeting deliverables are as follows:

      - Project manual including draft Owner front-end and technical specifications, draft special provisions and draft special special specifications
      - Design drawings listed in the anticipated sheet list included in Attachment A-4
      - ACEE Class 3 opinion of probable construction cost update
      - Constructability review
      - Project schedule update
      - Project trend register update.

   b. Provide one hard copy set and one electronic set of drawings and specifications to Owner for review.

   c. Attend one meeting with Owner to receive and discuss Owner's review comments.

   d. Revise documents to reflect decisions taken at this level and incorporate into next phase submittal.

3. Detailed design - Construction documents Level 3 (95%)

   a. Level 3 design shall commence only after Owner has accepted Level 2 deliverables. Level 3 progress review meeting deliverables are as follows:

      - Final review set of CAD drawings
      - Final review set of specifications and construction contract documents
      - ACEE Class 2 opinion of probable construction cost update
      - Constructability review
      - Project schedule update
      - Project trend register update.

   b. Provide one hard copy set and one electronic copy of documents for Owner review.

   c. Attend one meeting with Owner to receive and discuss Owner's final review comments.

d. Refine documents according to mutual agreement.

vii. Regulatory Agency Submittal

1. Provide one electronic copy of final documents for Owner to submit to regulatory agencies (TCEQ) for approval.

2. Meet with Owner to review and address comments.

viii. Regulatory / Funding Assistance

1. ENGINEER will assist the OWNER with preparation of Loan Application for SRF funding through WIFIA including preparation of WIFIA PEA Environmental Questionnaire by subconsultant. OWNER will pay any associated fees, and ENGINEER will provide detailed project information where necessary. Continue to Support the OWNER to address SRF or WIFIA questions throughout the development of the project. A total of 20 person-hours are budgeted for this effort plus questionnaire preparation by subconsultant. Attachment A-6 presents the questionnaire preparation services to be provided through the subcontract.

ix. Permits Acquisition

1. Provide in the specifications a list of the permits that must be obtained by the construction contractor(s). It is understood that the construction Contractors must obtain the following permits for this project:

- Street cuts
- Street closings
- Erosion control
- Public safety support
- Utility services

2. Provide assistance to Owner in obtaining the following permits from government agencies and from utility and pipeline companies:

- Texas Department of Transportation
- Texas Commission on Environmental Quality
- Mandeville Water Corporation

3. Assistance for the above permits will include:

- Preparation of applications, exhibits, drawings, and specifications as necessary for Owner's execution and submittal.
- Furnishing additional information about the project design.
- Meet with OWNER and permitting or regulatory agencies to discuss their review comments. Up to two meetings with Owner and agency meetings are

anticipated.

- The level of effort included is 20 person-hours.
- Permit fees are by OWNER and are not included in this Scope of Services.

b. Task 5 – Bid and Preaward Services.

i. Bid Services. The Owner plans to solicit competitive sealed proposals for selection of the construction contractor. The Owner will utilize the CivCast online bidding site to distribute bidding documents. Consultant will assist the Owner with the following bid services.

1. Front End Documents. Assist and advise Owner to finalize front end documents and identify:

- Project advertisement date
- Date to receive bids
- Format of bid sets
- Concerns about sensitivity of documents and methods of distribution
- Reproduction and distribution needs for associated documents such as
  - Geotechnical report
  - Reference documents
  - Addenda

2. Owner Support During Bidding. Support Owner's procedures for distribution of construction contract documents by providing these services that are included:

- Provide for Owner's use in reproducing bidding documents one electronic copy of:
  - Construction contract drawings
  - Technical specifications
  - Front end documents
  - Geotechnical report
  - Addenda
- Owner will handle all aspects of bidding document distribution via the CivCast online bidding site.
- Support Owner in distribution of construction contract bidding documents, geotechnical report, and addenda to prospective bidders and suppliers via the CivCast site.

3. Prebid Conference. Assist Owner in conducting a prebid conference to:

- Confirm the types of information required by the contract documents and the format in which bids should be presented.
- Review special project requirements and contract documents in general.
- Receive requests for interpretations that will be issued to plan holders.
- Prepare minutes of conference and issue to plan holders.

4. Interpretation of bidding documents. Interpret bidding documents. Prepare and issue addenda to the construction contract documents when required.

5. Bid Opening. Assist Owner during bid opening. Answer questions, make preliminary tabulation of bids, and review questionnaires and bids for completeness.

ii. Preaward Services Included in Engineering Services Contract. The estimated level of effort for preaward services involving a well-qualified bidder and suppliers includes the following services:

1. Qualifications of Apparent Successful Bidder. Review and evaluate the qualifications of the apparent successful bidder and the proposed major or specialty subcontractors. The review and evaluation will include financial resources, and check references on previous experience.

2. Bid Tabulations. Prepare and distribute formal bid tabulation sheets, evaluate bids, and make written recommendations to Owner concerning contract award.

3. As Bid Construction Contract Documents. Refine construction contract documents according to addenda.

4. Prepare and distribute two sets of conforming copies of the construction contract documents. These services will include review of the Contractor's bonds and forwarding to Owner for approval, furnishing the Contractor unsigned construction contract documents, and transmitting the construction contract documents to Owner for signature and distribution. Engineer's review of bonds is only for the purpose of determining if the Contractor provided the bonds required by the contract documents, and is not a legal review to determine if the Contractor's bonds comply with all applicable requirements. Distribute two sets of the construction contract documents to the successful bidder.

COMPENSATION

CONSULTANT proposes to perform the services described in this scope of services on a time and material basis for a not to exceed budget of $774,078.76. A detailed level of effort (LOE) and subconsultant proposals used to develop the requested compensation are included as attachments to this scope of services.

A-1
PRELIMINARY ALIGNMENT

BLACK & VEATCH

Black & Veatch Corporation
5420 LBJ FREEWAY
SUITE 400
DALLAS, TEXAS 75240
WWW.BV.COM
FIRM NO. F-258

SUBCONSULTANT:

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF CHRIS DORMIER, P.E. 87689 ON 01/10/2025.

IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMITTING PURPOSES.

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TEXAS

WA2404 30"/24" STATE HWY 45 PUMP STATION DISCHARGE LINE

A	XX/XX/24 PRELIMINARY PLANNING UPDATE
REVISIONS AND RECORD OF ISSUE	
DESIGNED:	CPD
DETAILED:	AAM
CHECKED:	XX
APPROVED:	XX
DATE:	XX/XX/2024
PROJECT NO.:	420413

CIVIL

OVERALL MAP

C-001

1 OF 9

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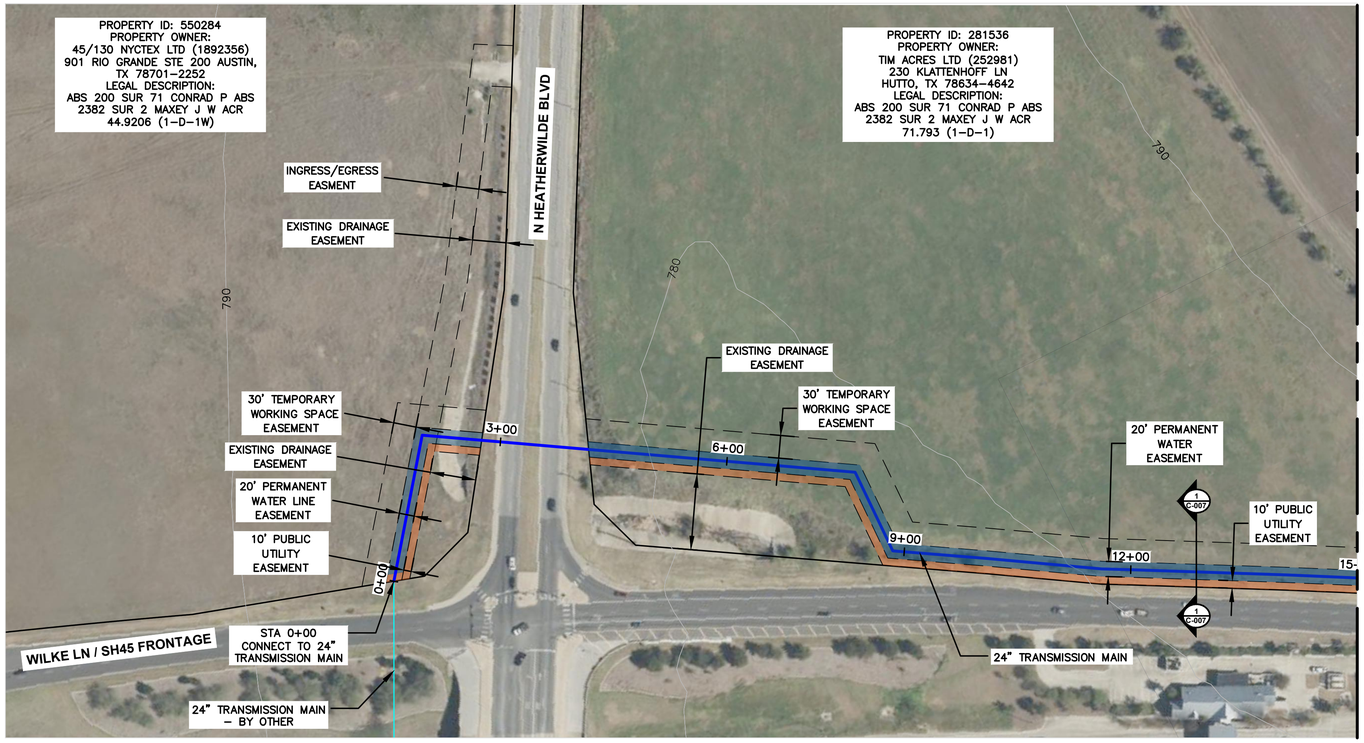
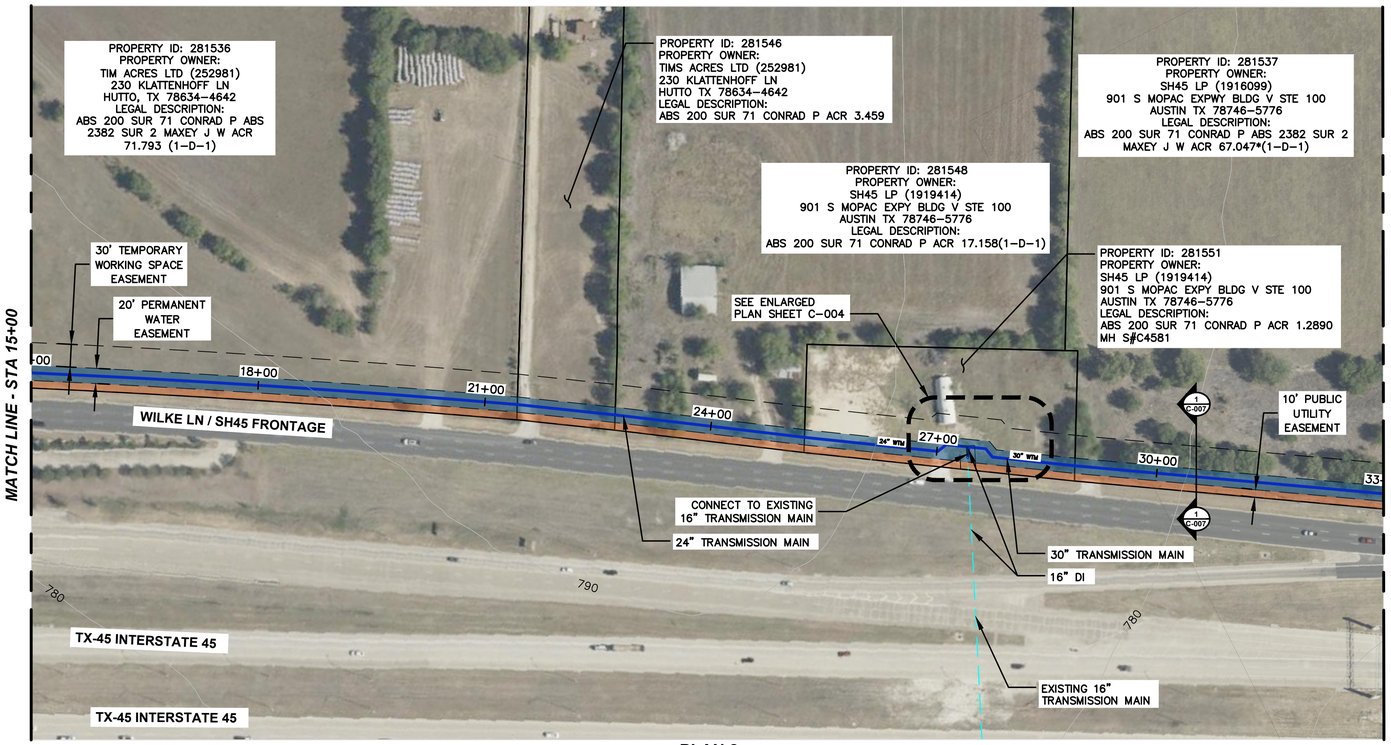


PLAN 1



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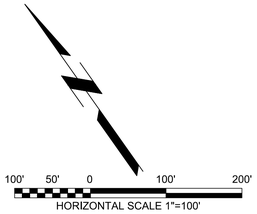

LEGEND

- PROPERTY LINES
- NEW WATER TRANSMISSION MAIN
- NEW WATER TRANSMISSION MAIN – BY OTHERS
- NEW WASTEWATER LINE
- EXISTING WATER TRANSMISSION MAIN
- EXISTING WASTEWATER LINE
- PERMANENT WATER EASEMENT
- PERMANENT PUBLIC UTILITY EASEMENT
- 740 EXISTING CONTOURS

BLACK & VEATCH

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DESIGNED:	CPD
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APPROVED:	XX
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PROJECT NO.:	420413

CIVIL

PLAN STA 0+00 TO STA 33+00

C-002

2 OF 9

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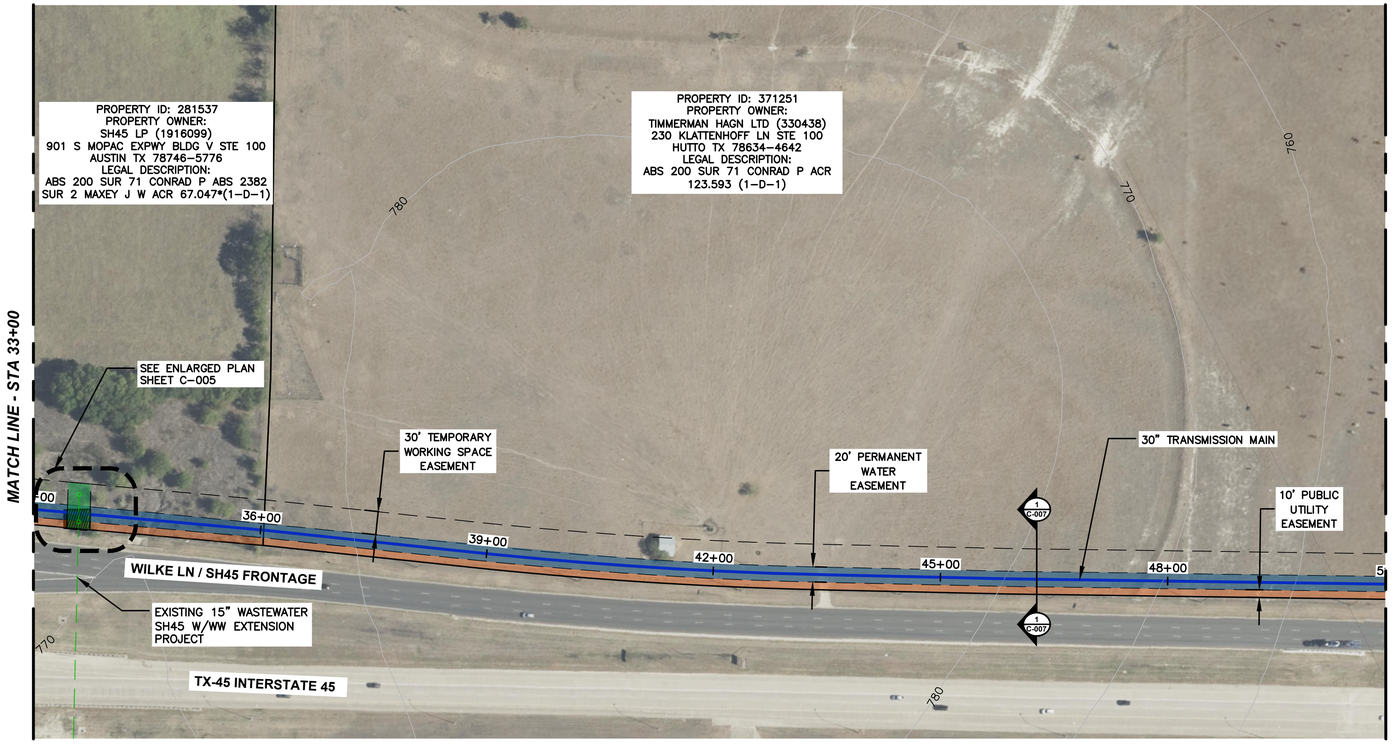
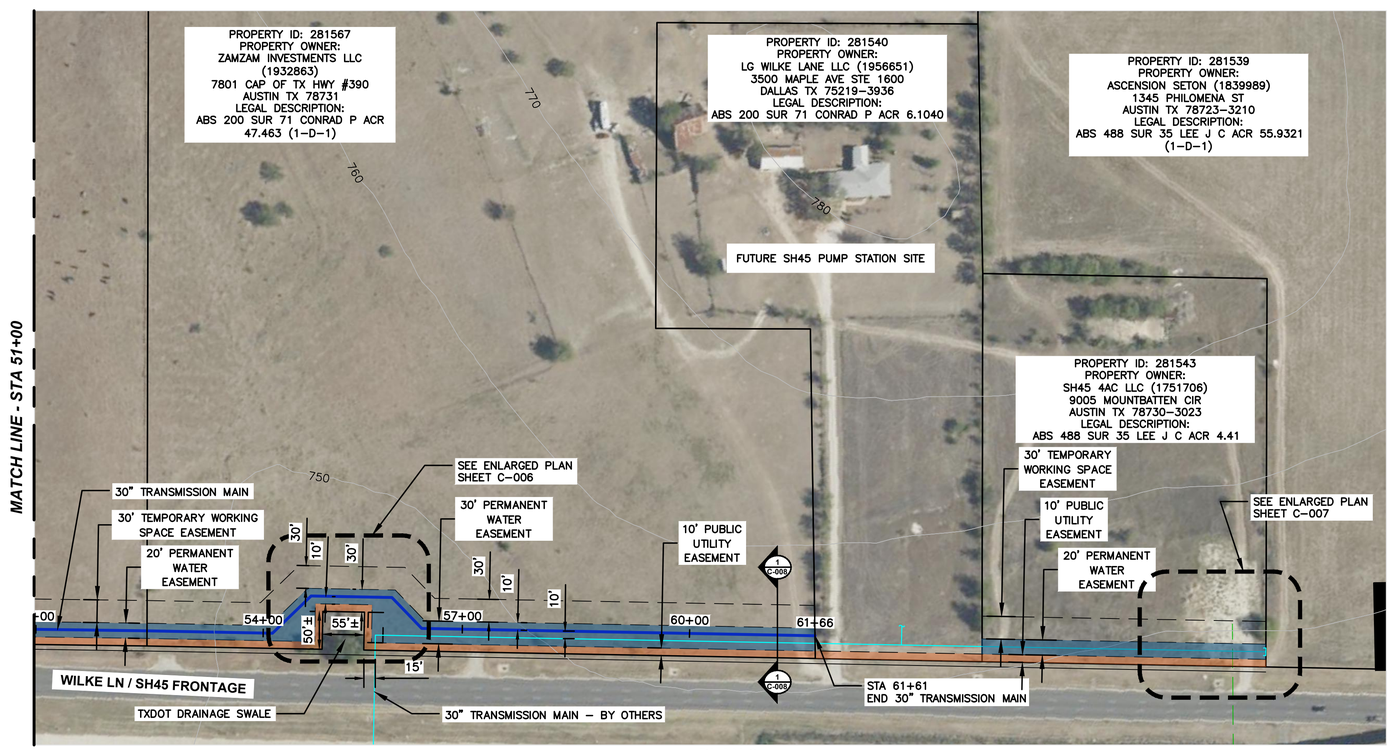


PLAN 1



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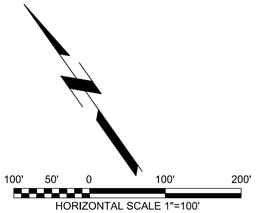

LEGEND

- PROPERTY LINES
- NEW WATER TRANSMISSION MAIN
- NEW WATER TRANSMISSION MAIN – BY OTHERS
- NEW WASTEWATER LINE
- EXISTING WATER TRANSMISSION MAIN
- EXISTING WASTEWATER LINE
- PERMANENT WATER EASEMENT
- PERMANENT WASTEWATER EASEMENT
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WA2404 30"/24" STATE HWY 45 PUMP STATION DISCHARGE LINE

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REVISIONS AND RECORD OF ISSUE

DESIGNED:	CPD
DETAILED:	AAM
CHECKED:	XX
APPROVED:	XX
DATE:	XX/XX/2024
PROJECT NO.:	420413

CIVIL

PLAN STA 33+00 TO STA 61+61

C-003

3 OF 9

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A-2

SURVEY PROPOSAL - MCGRAY & MCGRAY

SUE - THE RIOS GROUP

McGRAY & McGRAY LAND SURVEYORS, INC.

3301 HANCOCK DRIVE, SUITE 6
AUSTIN, TEXAS 78731
[512] 451-8591 FAX [512] 451-8791

TRANSMITTAL

TO:	Black & Veatch Attn: Chris Dormier, PE 4009 Banister Lane, Suite 412 Austin, TX 78704	**DATE:**	January 30, 2025
FROM:			Patsy Trevino for Chris Conrad
RE:			Second Revised Proposal for Surveying Services for the SH 45 Pump Station Discharge Line Project, Pflugerville, Texas
PHONE:	(512) 271-2753		
EMAIL:	DormierCP@bv.com		

WE ARE SENDING YOU ___X___ Attached _____ Under separate cover the following items:

COPIES	DESCRIPTION
1	Second Revised Proposal

☐ For Your Approval ☒ For Your Information
☐ As Requested ☐ For Review and Comment

REMARKS: Thank you,
Chris

TBPELS Survey Firm #10095500

SENT VIA: ☐Delivery Service ☐FedEx ☐Mail ☐Fax ☒Email ☐Other:

If you received this message incomplete or illegible, or if enclosures are not as noted, please notify us at once

McGRAY & McGRAY
LAND SURVEYORS, INC.

January 30, 2025

Chris Dormier, P.E.
Black & Veatch
4009 Banister Lane, Suite 412
Austin, TX 78704
(512) 271-2753

VIA EMAIL
DormierCP@BV.com

RE: Second Revised Proposal for Surveying Services for the SH 45 Pump Station Discharge Line Project, Pflugerville, Texas

Dear Mr. Dormier:

We appreciate the opportunity to present you with this second revised proposal for the above-referenced project. The following represents our understanding of the area to survey and scope of services. Our fee proposal follows.

Area to Survey:

- The area highlighted in "Yellow" and "Green" on Exhibit "A", located north of Wilke Lane and east of N. Heatherwilde Blvd.

Survey Control:

- Horizontal Control: The survey will be provided in Texas State Plane, NAD 83, grid coordinates with a note defining the grid to surface conversion factor.
- Vertical Control: Elevations will be obtained using NAVD 88 and at least two (2) benchmarks will be established onsite, and descriptions will be provided on the drawing.

Scope of Services:

Design Surveying Services:

1. Perform a topographic survey of the permanent and temporary easement areas (limits of construction) and 25' beyond, as shown on attached Exhibit "A".
2. Cross sections shall be taken at 50-foot intervals along with break lines as required, to provide a digital topographic design file at 1-foot interval contours.
3. Locate and identify all above ground features within the survey limits including buildings, fences, sidewalks, driveways, handicap ramps, guardrails, signs, visible utilities including: manholes, water meters, water valves with top of nut elevations, telecom boxes, utility poles and mailboxes.

4. Locate and identify types of existing pavement surfaces for streets and driveways.
5. Invert elevations and size/type of utility and drainage pipes and culverts shall be identified for all manholes and culverts.
6. Trees 8-inches and larger in diameter shall be measured, identified and tagged with a point number.

Fees:

Design Surveying Services (Non-Taxable):

2 Man Crew:	74 hrs @	$190.00 /hr.= $	14,060.00
Field Crew Coordinator:	7 hrs @	$91.35 /hr.= $	639.45
Surveyor-in-Training:	35 hrs @	$115.53 /hr.= $	4,043.55
Survey Technician:	74 hrs @	$95.38 /hr.= $	7,058.12
RPLS:	6 hrs @	$188.06 /hr.= $	1,128.36
Project Manager:	2 hrs @	$201.50 /hr.= $	403.00
		TOTAL = $	**27,332.48**

Boundary Surveying Services:

- A boundary survey will be conducted for the proposed waterline easements, temporary work space easement and ingress/egress easement. A plat and legal description of each easement, shown on Exhibit "A", will be prepared (up to 13 parcels).

Fees:

Boundary Surveying Services (Taxable*):

2 Man Crew:	85 hrs @	$190.00 /hr.= $	16,150.00
Field Crew Coordinator:	10 hrs @	$91.35 /hr.= $	913.50
Surveyor-in-Training:	116 hrs @	$115.53 /hr.= $	13,401.48
Survey Technician:	211 hrs @	$95.38 /hr.= $	20,125.18
RPLS:	12 hrs @	$188.06 /hr.= $	2,256.72
Project Manager:	7 hrs @	$201.50 /hr.= $	1,410.50
		TOTAL = $	**54,257.38**

Geotechnical Boreholes:

- Locate a maximum of four (4) geotechnical boreholes, which will take no more than two (2) mobilizations.

Fees:

Geotechnical Borehole Location (Non-Taxable):

2 Man Crew:	6 hrs @	$190.00 /hr.= $	1,140.00
Field Crew Coordinator:	0.5 hrs @	$91.35 /hr.= $	45.68
Survey Technician:	4 hrs @	$95.38 /hr.= $	381.52
RPLS:	0.5 hrs @	$188.06 /hr.= $	94.03
Project Manager:	0.5 hrs @	$201.50 /hr.= $	100.75
		TOTAL = $	**1,761.98**

Subsurface Utility Engineering (SUE) Services:

1. McGray will contract The Rios Group (TRG) to perform QL-A, QL-B, and QL-C services. TRG will also provide QL-D research and develop a map that will define the existing utilities. Their proposal for these services is attached.
2. McGray will locate QL-B (Utility Designations Marks) and QL-C (Visible Utilities) as defined by TRG.
3. McGray will locate the QL-A locations as defined by TRG.

Fees:

SUE Surveying Services (Non-Taxable):

2 Man Crew:	36 hrs @	$190.00 /hr.= $	6,840.00
Field Crew Coordinator:	4 hrs @	$91.35 /hr.= $	365.40
Surveyor-in-Training:	10 hrs @	$115.53 /hr.= $	1,155.30
Survey Technician:	20 hrs @	$95.38 /hr.= $	1,907.60
RPLS:	4 hrs @	$188.06 /hr.= $	752.24
Project Manager:	2 hrs @	$201.50 /hr.= $	403.00
		TOTAL = $	**11,423.54**

Subsurface Utility Engineering Services:

- The fee for these services is **$23,967.10**, as defined in their attached proposal.

Summary:

Design Surveying Services Total:	$	27,332.48
*Boundary Surveying Services Total:	$	54,257.38
Geotechnical Borehole Locations Total:	$	1,761.98
SUE Surveying Services Total:	$	11,423.54
Subsurface Utility Engineering Services (TRG) Total:	$	23,967.10
GRAND TOTAL:	**$**	**118,742.48**

*Since this project includes taxable services, we will need to receive a Texas Sales and Use Tax Resale Certificate for those services prior to starting the project. If one is not available, sales tax will be charged.

Optional Grand Total (with 8.25% sales tax)*

Sales Tax on Boundary Surveying	$	4,476.23
GRAND TOTAL	**$**	**123,218.71**

Any changes to the location or size of the alignment, as shown on Exhibit "A", may result in additional charges. This proposal does not include a survey of the SH 45 Pump Station Site, as it is not part of the survey request at this time.

Once we receive notice to proceed, we will visit with you to establish a schedule for this project.

Thank you for including us on this project. We look forward to the opportunity to work with you. If you think we have omitted any service you require or misinterpreted your request, please let me or Joe Webber know.

Sincerely,

Chris I. Conrad, RPLS
Vice President
TBPELS Survey Firm #10095500

Authorized to Proceed by:

Signature Date

Print Name Title

CIC:JDW:pft
Encl.

EXHIBIT "A"

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

City of Plugerville, Texas
WA2404- 30/24-inch State Highway 45 Pump Station Discharge Line
Right-Of- Entry Exhibit

ROE1 | 0

BLACK & VEATCH
ANSI D 8/19/2024

THE RIOS GROUP

September 18, 2024

Joe Webber, RPLS, PLS
McGray & McGray Land Surveyors
3301 Hancock Drive, Suite 6
Austin, Texas 78731
512.406.1939
Joew@mcgray.com

RE: Subsurface Utility Engineering
City of Pflugerville – Wilkie Lane WL
Pflugerville, Texas

Dear Mr. Webber:

The Rios Group, Inc. (TRG) is pleased to submit a cost proposal for Subsurface Utility Engineering (SUE) for the above-referenced project. This proposal is based on information provided via email on September 11, 2024.

Introduction

TRG will perform SUE services for this project in general accordance with the recommended practices and procedures described in ASCE publication ASCE/UESI/CI 38-22 "Standard Guideline for Investigating and Documenting Existing Utilities". SUE Quality Level definitions and data limitations are included in Exhibit C, attached to this proposal.

Scope of Work

Based on information provided by McGray & McGray land Surveyors (Client), TRG has developed a proposed scope for SUE services on this project. This scope may be modified, with Client and TRG concurrence, during the performance of work if warranted by changing or unexpected field conditions.

The scope of this proposal includes QLB and QLA SUE services.

To Include:

In general, QLB SUE services are requested within the limits of the Wilkie Lane WL project as shown in Yellow and Green on Exhibit B, attached to this proposal. QLB SUE services provided will be inclusive of QLC and QLD. The limits extend along Wilkie Lane, adjacent to the Interstate TX-45 Toll Road, from the flyover near SH 130 down to Heatherwilde Blvd. TRG has made the following assumptions for the QLB SUE Services on this project:

- Any necessary Right-Of-Entry (ROE) permits and access to the site will be provided by the Client prior to the start of fieldwork.

- TRG will perform records research and acquire available existing utility records within the project limits. This will include contacting the applicable One Call agency and associated utility owners/municipalities to request records and reviewing available utility record information obtained.
- TRG will attempt to designate the following utilities within this area: potable water, reclaimed water, chilled water, natural gas/crude oil/refined product pipelines, communication duct banks, fiber optic, cable television, telephone, traffic signal cables, street lighting, TxDOT CTMS cables, and electric.
- Wastewater and storm drain facilities will be inverted at manholes and will be depicted as QLC information.
- TRG will attempt to designate utility service lines, however, because these lines are often non-conductive and not shown on records TRG cannot guarantee all service lines will be included in the final deliverables.
- The following facilities/items are specifically excluded from the scope of work of this proposal: private service lines, irrigation lines, overhead utilities.
- TRG will attempt to provide Electronic Depth readings calculated by TRG's geophysical equipment. If Electronic Depth readings can be obtained, they will be provided every 50 feet. However, due to the inconsistency with Electronic Depth readings, TRG cannot guarantee the accuracy of the information. Data will be provided for informational purposes only.

This proposal also includes up to four (4) QLA SUE test holes at locations that will be provided by the Client following a review of the QLB SUE information. TRG has made the following assumptions related to test hole excavations on this project:

- Test holes will be excavated using vacuum excavation equipment.
- All test holes will be accessible to truck/trailer-mounted vacuum excavation equipment. Any improvements required to access test hole locations (clearing, grading, mat installation, etc.) will be provided by others at no cost to TRG).
- Right-Of-Way (ROW) permits from the City of Pflugerville (City) will not be required.
- Designed traffic control plans will not be required.
- Traffic control measures will not be required.
- Pavement coring/repair will not be required.
- The following items are specifically excluded from this scope of work: flowable fill for backfill of test holes, full-section pavement repair (including sidewalks)
- Due to the risk of damage, TRG will not attempt to probe or excavate test holes on AC water lines unless approval is obtained from the owner in advance.
- Excavation in rock, or to a depth greater than 18 feet, is considered beyond the scope of this proposal.

The survey of SUE field markings and test hole locations is not included in this scope of work. It is assumed that the Client will provide SUE survey data for use in preparing the final deliverables.

Deliverables

TRG will provide the following as a final deliverable to the Client:

- A utility file in CAD format depicting all SUE data documented on the project. The Client will provide TRG with any necessary background files for use in completing the final deliverables.
- A summary sheet of all test hole coordinate data and depth information.
- 8.5" x 11" Test Hole Data Forms for all test hole locations completed. These forms will be signed and sealed by a Professional Engineer and delivered to the Client in electronic PDF form.
- 11" x 17" SUE Plan Sheets depicting all SUE data documented on the project. These plans will be signed and sealed by a Professional Engineer and delivered to the Client in electronic PDF form.
- A Utility Report containing metadata (e.g. scope of work, work limits, dates of performance, survey control, etc.), information about the Utility Investigation not otherwise conveyed in other project deliverables, and recommendations to address data deficiencies.

Schedule

TRG can mobilize within three (3) weeks of receiving Notice-To-Proceed (NTP). TRG estimates that the QLB SUE work can be completed in twenty-five (25) working days, broken down as follows:

- QLB field work – 5 days
- QLB deliverable preparation – 20 days, upon receipt of the survey data from the client's surveyor.

TRG estimates that the QLA SUE work can be completed in twenty-three (23) working days, broken down as follows:

- Layout test holes – 1 day
- QLA field work – 2 days
- QLA deliverable preparation – 20 days, upon receipt of the survey data from the client's surveyor.

Estimated Fee

The total estimated cost to complete the work described herein is **Twenty-Three Thousand Nine Hundred Sixty-Seven Dollars and 10/100 ($23,967.10)**. An itemized breakdown of cost is provided in Exhibit A. Please note that these pricings are based on estimated quantities, and that only actual quantities will be invoiced – up to the total Contract amount.

We look forward to working with you on this project. If there are any questions, please do not hesitate to call at 512.580.5440.

Respectfully,

The Rios Group, Inc.

Derik Melton
Project Manager

THE RIOS GROUP

Estimate for Subsurface Utility Engineering
City of Pflugerville - Wilkie Lane WL
Pflugerville, Texas

EXHIBIT A

Hourly Office Labor	*Rate*	*Assumed Quantity*	*Unit of Measure*	*Sub-Total*
Supervisory Engineer	$ 199.62	2	HR	$ 399.24
Senior SUE Project Manager	$ 199.53	4	HR	$ 798.12
SUE Project Manager	$ 164.17	6	HR	$ 985.02
Professional Engineer	$ 176.50		HR	$ -
Assistant Project Manager	$ 115.10	12	HR	$ 1,381.20
Engineer in Training	$ 117.93		HR	$ -
CADD Technician	$ 83.03	40	HR	$ 3,321.20
Senior CADD Technician	$ 105.19		HR	$ -
Engineering Technician	$ 66.37	4	HR	$ 265.48
Field Manager	$ 129.21	4	HR	$ 516.84
Administrative Specialist	$ 93.21		HR	$ -
Sub-Total				**$ 7,667.10**

QL"B" SUE Designating	*Rate*	*Assumed Quantity*	*Unit of Measure*	*Sub-Total*
One Designating Person	$ 168.00	45	HR	$ 7,560.00
Two Person Designating Crew	$ 262.00	10	HR	$ 2,620.00
Sub-Total				**$ 10,180.00**

QL"A" SUE Test Holes				
Unit Rate - Depth	*Outside Pavement Rate*	*Assumed Quantity*	*Unit Of Measure*	*Sub-Total*
0 - 5 feet	$ 1,380.00	2	EA	$ 2,760.00
5 - 8 feet	$ 1,680.00	2	EA	$ 3,360.00
8 - 13 feet	$ 2,100.00	0	EA	$ -
13 - 20 feet	$ 2,700.00	0	EA	$ -
Over 20 feet	$ 3,200.00	0	EA	$ -
Pavement Coring	$ 390.00	0	EA	$ -
Test Hole Total		4		
Sub-Total				**$ 6,120.00**
Total Estimated Cost				**$ 23,967.10**

EXHIBIT "B"

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

City of Plugerville, Texas

WA2404- 30/24-inch State Highway 45 Pump Station Discharge Line
Right-Of- Entry Exhibit

ROE1 | 0

BLACK & VEATCH

THE RIOS GROUP

EXHIBIT C
DEFINITIONS & DATA LIMITATIONS

Subsurface Utility Engineering (SUE) Quality Level Definitions

The Rios Group (TRG) performs SUE services in general accordance with the recommended practices and procedures described in ASCE publication ASCE/UESI/CI 38-22 "Standard Guideline for Investigating and Documenting Existing Utilities". The core aspect of this standard is affixing a professionally judged value (a Utility Quality Level) to buried and hidden Utility Segments and Utility Features that identify the reliability and nonquantifiable locational uncertainty of documented Utility infrastructure data. The four quality levels, as defined in the standard, are:

- **Utility Quality Level D (QLD)** – A value assigned to a Utility Segment or Utility Feature not visible at the ground surface whose estimated position is judged through Utility records, information from others, or from visual clues such as pavement cuts, obvious trenches, or existence of service.

  A QLD data attribute is assigned to a Utility Segment or Utility Feature after review and compilation of existing records, oral recollections, One-Call or "private-locate" markings, managed data repositories, context with other achieved Utility Quality Levels, and/or other evidence of existence. QLD data is more uncertain than QLC, QLB, and QLA. QLD data is less uncertain than utilities documented without any Utility Quality Level barring a Professional's statement of fact to the contrary.

- **Utility Quality Level C (QLC)** – A value assigned to a Utility Segment not visible at the ground surface whose estimated position is judged through correlating Utility records or similar evidence to Utility Features, visible aboveground and/or underground. The Utility Anchor Point on the Utility Features shall be tied to the Project Survey Datum with an accuracy of 0.2 ft (60 mm) horizontal.

  A QLC value judgement is assigned to a Utility Segment by using visible Utility Features to approximate the position of a Utility Segment between or in proximity to the visible Utility Features and in context with other achieved Utility Quality Levels. QLC only pertains to the underground Utility Segment(s), not the Utility Feature(s). QLC data is more certain than QLD and is more uncertain than QLB and QLA

- **Utility Quality Level B (QLB)** – A value assigned to a Utility Segment or Subsurface Utility Feature whose existence and horizontal position is based on Geophysical Methods combined with professional judgement and whose location is tied to the Project Survey Datum.

A QLB value is assigned to a Utility Segment when the following conditions are met: (1) the Utility Segment was detected through the application of appropriate Geophysical Methods; (2) the geophysical signal was judged to be reliable. (3) the interpreted position was judged based on knowledge and use of geophysical science, Utility design and installation practices, available records, visual features, and influence of site conditions; and (4) the source Designation has been tied to the Project Survey Datum with an accuracy of 0.2 ft (60mm) horizontally. QLB is more uncertain than QLA and more certain than QLC or QLD.

- **Utility Quality Level A (QLA)** – A value assigned to that portion (x-, y-, and z-geometry) of a Utility Segment or subsurface Utility Feature that is directly exposed and measured and whose location and dimensions are tied to the Project Survey Datum. The Utility Segment or subsurface Utility Feature shall be tied to Project Survey Datum with an accuracy of 0.1 ft (30 mm) vertical and to 0.2 ft (60 mm) horizontal for measurements of the outside limits of the Utility Feature or Utility Segment that is exposed.

  Other measurable, observable, and judged Utility Attributes are also recorded. If obtained by means of a Test Hole observation, a verification effort is made, and professional judgement is used to assert that the exposed infrastructure is indeed the sought target. The assignment of QLA conveys the lowest level of relative (nonquantifiable) uncertainty of measurable and judged Attributes and locations. QLA is more certain than QLB, QLC, or QLD.

Acronyms and Special Definitions

3D three-dimensional
CAD Computer-Aided Design
EOI End of Information
GIS geographic information system
GPR ground penetrating radar
ROE Right of Entry
ROW Right of Way
SAF Surface Adjustment Factor

Anchor Point: A defined point on a Utility Feature or a Utility Segment. (ASCE 38-22)

Attribute: A defined characteristic of a Utility Feature, Utility Segment, or of a singular point on a Utility Feature or Utility Segment. (ASCE 38-22)

Deliverable: The sealed results from a Subsurface Utility Engineering investigation that typically includes a Utility Report, Utility Drawings, and other relevant Utility data for inclusion in digital or paper formats, and/or within databases and/or three-dimensional models. (ASCE 38-22)

Designating: The application and interpretation of shallow earth Geophysical Methods to infer (with or without surface markings) the existence and the approximate horizontal position and,

when possible and part of the Scope of Work, Depth of a subsurface Utility Segment and/or Utility Feature. (ASCE 38-22)

Electronic Depth (ED): Depth obtained by electromagnetic receiver that has a varying level of accuracy based on many factors including soil conditions, connection type, overhead interference, etc. ED reports to the center of the induced magnetic field.

Encasement: A structure that encloses and protects utility facilities and surrounding infrastructure, environment, and the public. E.G. Concrete cap, casing pipe, tile, ducts, tunnel.

Geophysical Method: Application of an established shallow-earth Geophysical Method (such as seismic, acoustic, gravitational, magnetic, electrical, and electromagnetic) to observe the physical response of the subsurface Utility infrastructure and cultural features, as well as anomalies within those responses. (ASCE 38-22)

Locating: The process of exposing and verifying a Utility for purposes of determining its function, type, position, outside dimensions, and other observable Attributes at its exposed points. (ASCE 38-22)

Low Wire Sag: Lowest elevation on the lowest wire at a crossing overhead utility.

Overhead attachment point: Elevation where overhead line is attached to above ground structure such as a pole.

Subsurface Utility Engineering (SUE): The specialty practice of civil engineering's Utility Engineering branch that includes the investigation, analysis, judgment, and documentation of existing Utility networks. (ASCE 38-22)

Test Hole: A small, limited excavation, made to determine, measure, and record data about a buried Utility Segment or Utility Feature. (ASCE 38-22)

Utility: A privately, publicly, or cooperatively owned pipeline, cable(s), and/or conduits, facility, or system for producing, transmitting, or distributing communications, traffic control cables and structures, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, stormwater, or any other similar commodity, including any fire or police signal system or street lighting system. The term Utility shall also mean the Utility owner/operator inclusive of any wholly owned or controlled subsidiary. (ASCE 38-22)

Utility Feature: A physical component of a Utility. Examples include valves, hydrants, reducers, switches, thrust blocks, vaults, and transformers. (ASCE 38-22)

Utility Investigation: Any or all of a variety of office and field activities undertaken to understand and document the existence of, location, and Attributes of existing Utility facilities within the project limits. (ASCE 38-22)

Utility Quality Level: The value, assigned by the Professional, of a Utility Segment or subsurface Utility Feature that identifies the relative (nonquantifiable) uncertainty of a Utility Segment's or subsurface Utility Feature's existence and actual location to that of its documented location. (ASCE 38-22)

Utility Report: A report or sufficient notes contained within a Utility Drawing, sealed by a Professional, that (1) contains information about the Utility Investigation that might otherwise not be conveyed, (2) assists the end user in understanding the subsurface Utility landscape and risks, (3) provides recommendations to address data deficiencies, and (4) complements the Utility Drawing Deliverables. (ASCE 38-22)

Utility Segment: A continuous portion of a Utility for which the Utility Quality Level is constant, and the Attributes, other than Depth, are substantially identical. (ASCE 38-22)

Vault: A concrete box underground that is used for utility purpose.

General Data Limitations

SUE services are performed in accordance with ASCE/UESI/CI 38-22 guideline, generally accepted engineering principles and practices at the time of service. However, a possibility exists that abandoned, forgotten, non-detectable, undocumented, or newly installed utilities may not get mapped using standard records research and surface geophysical survey procedures. While the ASCE 38-22 standard guidelines mitigate these issues, utilities possessing characteristics mentioned below can be missed while following standard Utility Designating and Locating procedures:

1. Utilities lacking apparent available records and without apparent surface features.
2. Utilities with record information which is illegible, misleading, or incomplete.
3. Utilities which are inaccurately reported or inaccurately represented by the utility owner as being a significant distance from the true position.
4. Abandoned utilities without apparent surface features.
5. Utilities buried excessively deep, beyond detection limits of standard utility designating equipment.
6. Non-conductive utilities buried in clay soil without apparent surface features.
7. Non-conductive lines buried away from the tracer wire (e.g., HDPE Gas)
8. Facilities installed after the SUE effort has been completed.

A common problem occurs when the project involves facility owners and operators with insufficient records and non-conductive buried facilities (a situation often encountered with public works installations), infrastructure for oil and natural gas wells installed prior to 1960, and irrigation systems that utilize non-conductive water mains. Facilities mapped under these circumstances are often depicted as QLD during the utility designating field effort to keep operations and budgets at a practical level. As the design project progresses, some depicted facilities may have to be upgraded to a higher quality level through more advanced geophysical prospecting and utility locating methods to properly identify and assess utility conflicts for design and construction.

Designers, utility coordinators, and contractors must realize the CI/ASCE 38-22 utility mapping effort is an iterative acquisition and interpretation process. Unless subsequent endeavors are made to upgrade designated quality levels, facilities depicted at lower quality levels, such as QLD, may be completely in error. In addition, depicted facilities and corresponding data are pertinent at the time in which field investigation operations are completed and are subject to change.

Final utility plans and data are for design purposes only and reflect utility conditions at the time surveyed. The SUE consultant cannot be held responsible for utility scenario changing after completion of field operations.

Users of this data set must understand and adhere to the limitations associated with the designated quality levels assigned to the depicted facilities. QLC and QLD depictions are based on interpolations, extrapolations, and available record data; this data can be erroneous and should not be used alone for design development and bidding purposes. Additional utility designating and locating field efforts to upgrade data to QLB and QLA are strongly recommended for areas where accurate final design and construction planning and bidding is required.

It is strongly recommended that users of this data, especially project engineers-of-record, become familiar with the ASCE 38-22 standard guidelines and the corresponding data limitations inferred by the designated quality levels prior to employing the data set for design purposes. In addition, a utility report should always accompany the existing utility CADD file to ensure proper interpretation and usage of the data set. Any questions regarding the SUE data or utility report should be directed to the SUE professional engineer-of-record.

A-3
GEOTECHNICAL PROPOSAL - HVJ

Geotechnical Investigation Scope

Field Investigation: Black and Veatch (BV) requested HVJSCTx to drill three (3) additional borings under Phase 2 investigation of City of Pflugerville, State Highway 45 Pump Station Discharge Project. A summary of Phase 2 borings is presented below:

Proposed Location	Number of Boring	Depth (feet)	Total Depth (feet)
Between Heatherwide and SH 130	2	25	50
	1	50	50
		TOTAL	**100**

Boring locations may be adjusted in the field based on access and utilities. Adjustments to boring locations will need to be coordinated with BV. The soil samples will be obtained using Shelby tubes (in general accordance with ASTM D1587) and/or split-spoon samplers (in general accordance with ASTM D1586). Field-testing of soil samples will include pocket penetrometer in the cohesive soils and Standard Penetration Test (SPT) in the cohesionless soils. Samples will be collected at the 2-ft intervals to a depth of 15 feet and at 5-ft intervals thereafter. If bedrock is encountered at this site, continuous rock coring will be performed in accordance with ASTM D2113 using a minimum core run of 5 feet. Rock Quality Designation (RQD) and percent recovery will be determined in the field. Groundwater measurements in open boreholes will be performed when water is first encountered during drilling and at completion. Upon completion of drilling, the soil borings will be properly backfilled with bentonite to match the existing ground surface.

Laboratory Testing: After completion of field investigation, BV will be contacted to re-examine soil and rock samples in the soil laboratory, as necessary. The laboratory testing services proposed for the project are summarized in the table below. The actual testing program will be evaluated after the field investigation is complete.

Laboratory Test	Standard Method	Quantity
Water content	ASTM D2216	16
Atterberg Limits	ASTM D4318	8
Percent passing No 200-sieve	ASTM 1140	8
Particle size determinations	ASTM D6913	2
Unconfined compressive strength	ASTM 2166	6
Unconfined compressive strength for intact rock	ASTM D7012, Method C	9
Slake Durability Test	ASTM D 4644	3
Swelling Potential	ASTM D 4546	1

Engineering Report Deliverable

Results of the field and laboratory data for both Phase 1 (received NTP in October 2024) and Phase 2 (scope of work included in this document) will be incorporated in a Geotechnical Data Report. As suggested by BV, one (1) GDR will be submitted for the proposed project. The data report will be prepared by an engineer specializing in soil mechanics after reviewing available design, boring and laboratory data. In general, the following items will be included in the report:

1) Vicinity and geology maps of the project site,
2) Plan of borings,

3) Brief description of geological formation,
4) Boring logs,
5) Laboratory test results summary; and
6) Groundwater and generalized subsurface conditions.

Assumptions

The following assumptions were made in developing the scope and fee estimate for this project:

- Boring locations were provided by BV. If boring location adjustments are required, the revised locations will be mutually agreed upon by BV and HVJSCTx.
- Boring locations are accessible with a truck-mounted drill rig.
- Right of Entry Permits will be required to access the site and provided by the owner/BV.
- HVJSCTx will be responsible for avoiding conflicts with utility facilities by contacting the One Texas calling facility. Locating private utilities are not included in our scope of work.
- Surveying of the boring locations will be done by others, if required.
- Street cut permits are not anticipated, therefore not included in the budget.
- Drilling operations will be performed between the hours of 8:00 AM to 5:00 PM.

Geotechnical Investigation
City of Pflugerville Water Line - PER
HVJ SCTx Proposal No. AGT 24 10173.1 (PHASE 2)

Geotechnical Field Investigation - Drilling and Soil Sampling					
Mobilization/Demobilization - Austin	1	@	$700.00	per mobilization	$700.00
Drilling & Sampling- Soils *(assuming 8 feet soil and then rock)*	24	@	$28.00	per foot	$672.00
Drilling & Sampling- Rock	76	@	$40.00	per foot	$3,040.00
Shelby Tube (Thin Wall)	6	@	$22.00	each	$132.00
Standard Penetration Tests (SPT)	4	@	$22.00	each	$88.00
Backfilling , cuttings, bentonite	100	@	$12.00	per foot	$1,200.00
Logging, marking borings EIT	18	hr @	$104.00	per hour	$1,872.00
Drilling Crew - Stand By	2	hr @	$250.00	each	$500.00
Utility Clearance/Drilling Coordination-EIT	8	hr @	$104.00	per	$832.00
Support Truck	2	@	$145.00	each day	$290.00
Vehicle Trip	3	@	$145.00	each	$435.00
				Sub Total	**$9,761.00**
Laboratory Testing - Standard					
Moisture Content	16	@	$30.00	each	$480.00
Atterberg Limits	8	@	$90.00	each	$720.00
Percent Passing #200 Sieve	8	@	$55.00	each	$440.00
Particle size determinations (Sieve and Hydrometer)	2	@	$255.00	each	$510.00
Unconfined Compressive Strength of Soil	6	@	$75.00	each	$450.00
Unconfined Compressive Strength of Rock	9	@	$85.00	eac	$765.00
Slake Durability	3	@	$200.00	each	$600.00
Swelling	1	@	$290.00	each	$290.00
				Sub Total	**$4,255.00**
Geotechnical Engineering & Reporting					
Principal, PE	1	hr @	$280.00	hr	$280.00
Senior Engineer, PE	4	hr @	$185.00	hr	$740.00
Project Engineer, PE	6	hr @	$145.00	hr	$870.00
Staff Engineer II, EIT	12	hr @	$104.00	hr	$1,248.00
Project Administrator	1	hr @	$65.00	hr	$65.00
				Sub-Total	**$3,203.00**
				TOTAL	**$17,219.00**

A-4
DRAWING LIST

Facility or Area Numbers	
Number	**Facility or Area Name**
NA	NA

Discipline Breakdown			
Disc Code	***Discipline Description***	***Count***	
G	General	6	
DTL	Details	5	
C	Civil	18	
ENV	E&S/Tree Protection	14	
A	Architectural	0	
S	Structural	0	
M	Process Mechanical	0	
H	HVAC	0	
P	Plumbing	0	
F	Fire Protection	0	
E	Electrical	0	Total
I	Instrumentation	0	43

Submittal Breakdown	
Discipline Description	***Count***
Preliminary Design Report	0
Level 1	21
Level 2	27
Level 3	43
Issued for Construction	43

DRAWINGS LIST

Sequence Number	Discipline	Area Num (If Applicable)	Sheet Number	Sheet Name	Responsible Discipline or Sub	Lead Professional or Firm	Responsible Lead	Designate the authoring application by placing an "X" in the cells below. Revit	AutoCAD	Designate sheets for each submittal by placing a "X" in the cells below. PDR/BDM/PER	Submittal 1, Level 1, 30%	Submittal 2, Level 2, 60%	Submittal 3, Level 3, 90%	Final, 100%
1	G			COVER SHEET	G	BV					X	X	X	X
2	G			CIVIL - INDEX OF DRAWINGS	G	BV					X	X	X	X
3	G			GENERAL NOTES	G	BV						X	X	X
4	G			LEGEND AND ABBREVIATIONS	G	BV						X	X	X
5	G			SITE LAYOUT	G	BV					X	X	X	X
6	G			CONDENSED PROFILE	G	BV						X	X	X
7	ENV			EROSION AND SEDIMENTATION (E&S) CONTROL NOTES	ENV	BV						X	X	X
8	ENV			E&S DETAILS	ENV	BV						X	X	X
9	ENV			TREE PROTECTION DETAILS	ENV	BV						X	X	X
10	ENV			TREE LIST	ENV	BV							X	X
11	ENV			E&S SITE LAYOUT	ENV	BV							X	X
12	ENV			EROSION CONTROL AND TREE PROTECTION PLAN 0+00 - 8+00	ENV	BV							X	X
13	ENV			EROSION CONTROL AND TREE PROTECTION PLAN 8+00 - 16+00	ENV	BV							X	X
14	ENV			EROSION CONTROL AND TREE PROTECTION PLAN 16+00 - 24+00	ENV	BV							X	X
15	ENV			EROSION CONTROL AND TREE PROTECTION PLAN 24+00 - 32+00	ENV	BV							X	X
16	ENV			EROSION CONTROL AND TREE PROTECTION PLAN 32+00 - 40+00	ENV	BV							X	X
17	ENV			EROSION CONTROL AND TREE PROTECTION PLAN 40+00 - 48+00	ENV	BV							X	X
18	ENV			EROSION CONTROL AND TREE PROTECTION PLAN 48+00 - 56+00	ENV	BV							X	X
19	ENV			EROSION CONTROL AND TREE PROTECTION PLAN 56+00 - 64+00	ENV	BV							X	X
20	ENV			EROSION CONTROL AND TREE PROTECTION PLAN 64+00 - 68+00	ENV	BV							X	X
21	C			WATER PLAN AND PROFILE 0+00 - 4+00	C	BV					X	X	X	X
22	C			WATER PLAN AND PROFILE 4+00 - 8+00	C	BV					X	X	X	X
23	C			WATER PLAN AND PROFILE 8+00 - 12+00	C	BV					X	X	X	X
24	C			WATER PLAN AND PROFILE 12+00 - 16+00	C	BV					X	X	X	X
25	C			WATER PLAN AND PROFILE 16+00 - 20+00	C	BV					X	X	X	X
26	C			WATER PLAN AND PROFILE 20+00 - 24+00	C	BV					X	X	X	X
27	C			WATER PLAN AND PROFILE 24+00 - 28+00	C	BV					X	X	X	X
28	C			WATER PLAN AND PROFILE 28+00 - 32+00	C	BV					X	X	X	X
29	C			WATER PLAN AND PROFILE 32+00 - 36+00	C	BV					X	X	X	X
30	C			WATER PLAN AND PROFILE 36+00 - 40+00	C	BV					X	X	X	X
31	C			WATER PLAN AND PROFILE 40+00 - 44+00	C	BV					X	X	X	X
32	C			WATER PLAN AND PROFILE 44+00 - 48+00	C	BV					X	X	X	X
33	C			WATER PLAN AND PROFILE 48+00 - 52+00	C	BV					X	X	X	X
34	C			WATER PLAN AND PROFILE 52+00 - 56+00	C	BV					X	X	X	X
35	C			WATER PLAN AND PROFILE 56+00 - 60+00	C	BV					X	X	X	X
36	C			WATER PLAN AND PROFILE 60+00 - 64+00	C	BV					X	X	X	X
37	C			WATER PLAN AND PROFILE 64+00 - 68+00	C	BV					X	X	X	X
38	C			WASTEWATER PLAN AND PROFILE 0+00 - 0+50	C	BV					X	X	X	X
39	DTL			DETAILS 1	DTL	BV							X	X
40	DTL			DETAILS 2	DTL	BV							X	X
41	DTL			DETAILS 3	DTL	BV							X	X
42	DTL			DETAILS 4	DTL	BV							X	X
43	DTL			DETAILS 5	DTL	BV							X	X
							TOTAL	0	0	0	21	27	43	43

A-5
SPECIFICATION LIST

Specification List

Instructions: Add "x" to cells with green fill to indicate specification sections to be used. "N/A" column will be automatically updated as sections are noted to be

		L1	L2	L3	IFC
01 - BIDDING AND CONTRACT DOCUMENTS					
	Table of Contents	x	x	x	x
01-1.0	Invitation for Bids			x	x
01-2.0	Instructions to Bidders			x	x
01-3.0	Proposal and Bid Schedule			x	x
01-4.0	Tax Code Compliance			x	x
01-5.0	Nonresident Bidders			x	x
01-6.0	Conflict of Interest Questionnaire			x	x
01-7.0	Non-Collusion Certification			x	x
01-8.0	Bid Bond			x	x
01-8.1	Insurance			x	x
01-9.0	Notice of Award			x	x
01-10.0	Notice to Proceed			x	x
01-11.0	City of Pflugerville Standard Capital Improvement Project (CIP) Construction Agreement between City and Contractor			x	x
01-12.0	Performance Bond			x	x
01-13.0	Payment Bond			x	x
01-14.0	General Conditions for City of Pflugerville CIP Construction Contracts			x	x
01-15.0	Prevailing Wage Rates			x	x
01-16.0	Statement of Bidders Experience			x	x
02 - STANDARD CAPITAL IMPROVEMENT PROJECT REQUREMENTS AND SPECIFICATIONS					
CAPITAL IMPROVEMENT PROJECT REQUIREMENTS					
CIP1	Definition of Terms			x	x
CIP2	Abbreviations			x	x
CIP3	Summary of Work			x	x
CIP4	Site Conditions and Use			x	x
CIP5	Contractor Use of Premises			x	x
CIP6	Control of Work			x	x
CIP7	Control of Materials			x	x
CIP8	Legal Relations and Responsibilities to the Public			x	x
CIP9	Environmental Protection Procedures			x	x
CIP10	Submittals			x	x
CIP11	Trench Safety Requirements			x	x
CIP12	Testing of Pipelines and Manholes			x	x
CIP13	Summary of Testing (Miscellaneous)			x	x
CIP14	Project Closeout			x	x
CIP15	Project Identification Signage			x	x
CIP16	Warranty			x	x
CIP17	Inspection of Projects			x	x
GENERAL SPECIFICATIONS					
				x	x
G1	Barricades, Signs, and Traffic Handling			x	x
G2	Site Preparation			x	x
G3	Site Clearing			x	x
G4	Pipe Excavation, Trenching, Embedment, Encasement and Backfilling			x	x
G5	Granular Fill Materials			x	x
G6	Sedimentation and Temporary Erosion Control			x	x
G7	Loaming, Hydroseeding and Permanent Erosion Control			x	x
G8	Miscellaneous Work and Clean-up			x	x
STREET AND DRAINAGE SPECIFICATIONS					
SD1	Hot Mix Asphaltic Concrete Pavement			x	x
SD2	Road Excavation			x	x
SD3	Embankment			x	x
SD4	Flexible Base			x	x
SD5	Striping			x	x
CONCRETE SPECIFICATIONS					
C1	Concrete Structures			x	x
C2	Concrete for Structures			x	x
C3	Riprap			x	x
C4	Concrete Curb and Gutter			x	x
C5	Concrete Sidewalks, Driveways and Flatwork			x	x
C6	Membrane Curing			x	x
C7	Reinforcing Steel			x	x
C8	Reinforced Concrete Pipe			x	x
C9	Flowable Backfill			x	x
WATER SPECIFICATIONS					
W1	Ductile Iron Pipe and Fittings			x	x
W2	PVC Water Pipe			x	x
W3	Valves, Hydrants, and Appurtenances			x	x
W4	Encasement Pipe			x	x
WW SPECIFICATIONS					
WW1	Concrete Manholes (Wastewater)			x	x
WW2	Polyvinyl Chloride (PVC) Pipe – Wastewater			x	x
WW3	Connections to and Work on the Existing Wastewater System			x	x
03 - SPECIAL PROVISIONS TO STANDARD CIP REQUIREMENT AND SPECIFICATIONS					
SP-CIP2	Testing of Pipelines and Manholes		x	x	x
SP-W1	Ductile Iron Pipe and Fittings		x	x	x
04-SPECIAL SPECIFICATIONS					
03740	Concrete Repair and Modifications		x	x	x
SS-WW4	Jacking/Boring Pipe		x	x	x
05 TxDOT STANDARD SPECIFICATIONS					
Item 502	Barricades, Signs and Traffic Handling			x	x
Item 506	Temporary Erosion, Sedimentation, and Environmental Controls			x	x
Item 512	Portable Concrete Traffic Barrier			x	x
Item 545	Crash Cushion Attenuators			x	x
Item 6001	Special Specification – Portable Changeable Message Sign			x	x
06 - SUPPLEMENTARY INFORMATION					
	Geotechnical Investication Report	x	x	x	x

A-6
WIFIA NEPA CHECKLIST PROPOSAL - HICKS & COMPANY

1504 WEST 5TH STREET AUSTIN, TEXAS 78703 TEL: 512 / 478.0858 FAX: 512 / 474.1849

HICKS & COMPANY
ENVIRONMENTAL
ARCHEOLOGICAL
AND PLANNING
CONSULTANTS

November 21, 2024

Chris Dormier, P.E.
Engineering Manager, Black & Veatch Water
Black & Veatch
4009 Banister Lane, Suite 412
Austin, TX 78704

RE: Environmental Services Addendum Scope of Services – WIFIA NEPA Checklist
City of Pflugerville Water Line, 6,500 Linear Feet, 30/24-inch Diameter
Pflugerville, Travis County, Texas

Mr. Swartz,

Please find attached a Scope of Services and fee estimate for work to be performed by Hicks & Company for the City of Pflugerville 6,500 linear foot, 30/24-inch diameter water line project located west of State Highway (SH) 130 and parallel to SH 45. We appreciate the opportunity to provide services to Black & Veatch. If you have any questions or need further assistance, please contact me at (512) 478-0858 or pfrost@hicksenv.com.

Sincerely,

Pat Frost

Pat Frost, P.G.
Senior Project Manager/Professional Geoscientist
Hicks & Company

Attachments
Scope of Services
Fee Estimate
WIFIA PEA Questionnaire Template

Addendum Scope of Services
WIFIA NEPA Checklist
City of Pflugerville 6,500 linear foot, 30/24-inch Water Line
November 21, 2024

General Understanding of the Project

The Water Infrastructure Finance and Innovation Act of 2014 (WIFIA) established a federal credit program (referenced hereafter as the WIFIA program) administered by the U.S. Environmental Protection Agency (EPA). The WIFIA program accelerates investment in water and wastewater infrastructure of national and regional significance by offering loans to borrowers. WIFIA authorizes EPA to provide direct loans and loan guarantees to eligible borrowers for water infrastructure projects. The City of Pflugerville is seeking funds from the EPA WIFIA program. Each proposed WIFIA project must be assessed for its impact on the environment under the guidelines set forth by the National Environmental Policy Act (NEPA). This is accomplished through the completion of a WIFIA Programmatic Environmental Assessment (PEA) Environmental Questionnaire (EQ). This questionnaire is used for most WIFIA funded projects and supports the PEA "tiering" framework, the PEA's associated preliminary Finding of No Significant Impact (FONSI), and project specific NEPA documentation for the WIFIA program.

The City of Pflugerville has proposed to install 6,500 linear feet of 30/24-inch water line along the north side of State Highway (SH) 45 from near SH 130 northwest to near North Heatherwilde Boulevard. The total length of the route is approximately 6,500 linear feet.

General Description of Environmental Services

Black & Veatch has requested submittal of an Addendum Scope of Services (Scope of Services) from Hicks & Company Environmental/Archeological Consultants (Hicks & Company) to complete a WIFIA PEA EQ (Appendix A) meeting the WIFIA program requirements and in compliance with NEPA. Tasks for completing this Scope of Services are listed below.

TASK 1. Preparation of WIFIA PEA Environmental Questionnaire

The WIFIA PEA EQ will be prepared to comply with the WIFIA program requirements and NEPA. Major parts of the PEA EQ, Appendix A documentation are noted below. The WIFIA Questionnaire includes 18 questions of which six are numbered 1 through 6 and twelve are lettered A through L. Questions 1 through 6 cover the project description and information related to environmental permits for the project. The document will include a project description and summary table of environmental permits needed or obtained for the project. The remaining twelve questions are detailed below with their respective alpha-numeric number.

A. Land Use

Completion of two Section A questions on impacts to land use to include:

- Review of land use with respect to conversions of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), to non-agricultural use as defined under the Farmland Protection Act 7 U.S.C. 4201 et seq.
- Review of potential conflicts with any applicable land use plan, policy, act, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, habitat conservation plan, specific plan, local plan, or zoning ordinance).

B. Air Quality

Completion of four Section B questions with relation to air quality to include:

- Conflicts with or delays in implementation of any applicable federal, state, or local air quality plan.
- Violations of and federal air quality standards or contributions to an existing or projected air quality violation (including protected areas designated as mandatory Federal "Class I").
- Increases in any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- Releases of objectionable odors.

C. Noise and Vibration

Completion of four Section C questions related to noise and vibration to include:

- Generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; or generation of noise resulting in public health impacts.
- Permanent increases in ambient noise levels in the project vicinity above levels existing without the project.
- Temporary or periodic increases in ambient noise levels in the project vicinity above levels existing without the project.
- Generation of vibration that could increase the risk of structural damage.

D. Geology and Soils

Completion of three Section D questions related to geology and soil to include:

- Exposure of people or structures to hazards from unstable soils, landslide, lateral spreading, subsidence, liquefaction or collapse.
- Increase in soil erosion or loss of top soil.
- Loss of economic viable mineral deposits, scientifically significant paleontological resources, or unique geological features.

E. Water Resources

Completion of 11 Section E questions related to water resources to include:

- Violations of any federal water quality standards or waste discharge requirements, including degradation of water quality.
- Depletion or contamination of groundwater supplies (including sole-source aquifers) or negatively interfere with groundwater recharge.
- Alteration of the drainage pattern of a water resource that would result in an increase in erosion or flooding on- or off-site.
- Soil erosion or stormwater runoff that increases sediment, pollutants, or contaminates into streams, rivers, or other water resources.
- Floodplain modification, development within, or redirection, as defined by Executive Order 11988.
- Increase in flood risk affecting loss on human safety, health, and welfare.
- Loss, degradation, or destruction of wetlands and waterbodies through direct removal, filling, hydrological interruption, or other means.

- Alteration of wild and scenic rivers as defined by the Wild and Scenic River Act 16 U.S.C. 1271 et seq.
- Conflicts with the Rivers and Harbors Act, 33 U.S.C. 403.
- Conflicts with the Coastal Barrier Resources Act, 16 U.S.C. 3501 et seq.
- Conflicts with the enforceable policies of a state's federally approved coastal management program (the Coastal Zone Management Act, 16 U.S.C. 1451 et seq.).

F. Biological Resources

Completion of 12 Section F questions related to biological resources to include:

- Jeopardizes the continued existence of any federally threatened or endangered species as identified by the U.S. Fish and Wildlife Service (USFWS) or National Marines Fisheries Service (NMFS) in the Endangered Species Act 16 U.S.C. Ch. 35 § 1531 et seq.
- Adversely modify, fragment, or degrade of critical habitat by the USFWS or NMFS.
- Modification, fragmentation, or degradation of biological sensitive areas other than designated critical habitat.
- Harm to fauna, including mammals, birds, reptiles, amphibians, fish, and invertebrates.
- Changes in vegetation type (native to the region), particularly if the vegetation type in the region is already highly fragmented because of human activity.
- Potential to injure or disturb marine mammals in U.S. waters as protected under Marine Mammal Protection Act as defined under 16 U.S.C 1361-1407.
- Reduction in the quality or quantity of Essential Fish Habitat as designated in accordance with the Magnuson Stevens Fisheries Conservation and Management Act.
- Disturbances to Bald or Golden Eagles as defined under 16 U.S.C. 668 et seq.
- Disturbances to migratory birds as defined under 16 U.S.C. 703-712 as amended.
- Conflicts with the provisions of an adopted Habitat Conservation Plan as approved under section 10 (a) (1) (B) of the ESA or other federal habitat conservation plan.
- Introduction or spread of invasive species as identified under Executive Order 13112.
- Loss of or damage to wildlife resources due to the control or modification of any stream or other body of water protected by the Fish and Wildlife Coordination Act 16 U.S.C. 661-667e.

G. Cultural Resources

Completion of five Section G questions related to cultural resources to include:

- Potential adverse effects to federally listed and eligible historical properties, including prehistoric and historic sites, historic districts and traditional cultural properties, as defined in 36 CFR part 800.
- Modification of unique paleontological resources or site or unique geologic features.
- Disturbance of human remains, including those interred outside of formal cemeteries.
- Conflicts with Native American Graves Protection and Repatriation Act, as defined in 25 U.S.C. § 3001 et seq.
- Conflicts with the Archaeological Resources Protection Act, as defined in 16 U.S.C. §§ 470AA-MM.

H. Socioeconomic and Environmental Justice

Completion of four Section H questions related socioeconomic and environmental justice to include:

- Changes to the demographics around project location, such as population growth.

- Modifications to economic factors such as per capita income, unemployment rate, or poverty.
- Alterations to social assets, such as housing or public services.
- Disproportionate high and adverse human health environmental effects on minority population and low-income populations as defined under Executive Order 12898.

I. Transportation and Traffic

Completion of one Section I question related to changes in transportation and traffic to include:

- Changes to traffic patterns around the project area including, but not limited to, the arrival and departure of construction workers, vehicles hauling equipment and materials to the site, road closures or detours, and slower movement and larger turning radii of truck going to project site.

J. Utilities and Community Services

Completion of two Section J questions related to utilities and community services to include:

- Changes to electric, cable, gas, sewer, water, stormwater, and other existing utility services.
- Changes to community services, such as open space, recreational and cultural facilities.

K. Hazardous and Toxic Materials and Waste

Completion of three Section K questions related to hazardous and toxic materials and waste to include:

- Accidental releases, spills, or improper storage and disposal of hazardous materials.
- Conflicts with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Solid Waste Disposal Act, Toxic Substances Control Act, and Emergency Planning and Community Right-to-Know Act.
- Generation or increase in the amount of sewage sludge that is not in compliance with EPA standards for the use or disposal of sewage sludge.

L. Human Health and Safety

Completion of three Section L questions related to human health and safety to include:

- Creating occupational health hazards for workers during construction or operation.
- Creating or contributing to environmental health or public health risks and safety risks that may disproportionately affect children, consistent with Executive Order 13045.
- Creating or contributing to public health risk of immediate injury or long-term health hazards.

General identification and description of any other reasonably foreseeable environmental effects from the proposed action not previously identified above will be reviewed as applicable.

TASK 2. Document Production

This task includes word processing, document formatting, design and production of figures, and final production of document copies.

Project Management and Support

Additional time is included for project management, coordination, meetings, communications, and project support to ensure overall project efficiency. All documentation submittals will be reviewed by task leads and an overall QA/QC manager for the project.

Study Area

The study area will be designated by construction zone limits shown on geo-referenced digital shapefiles, KMZ, and/or PDF files provided by Black & Veatch.

Deliverables

- WIFIA PEA EQ with supporting documentation as needed.

Schedule

Deliverables will be submitted according to a schedule mutually determined by Black & Veatch and Hicks & Company.

Other Assumptions

1. Design maps and plans will be provided in a Geographic Information System (GIS)-compatible format by Black & Veatch.
2. If substantial changes occur with the project design to require reevaluations after field investigations or a majority of baseline data collection has occurred, such reevaluations will be supplemental to this Scope of Services.
3. Costs are included for estimating projected fees; billing will be based on the attached cost estimate.

HICKS & COMPANY ENVIRONMENTAL/ARCHEOLOGICAL CONSULTANTS
FEE ESTIMATE - November 21, 2024

LABOR	Sr. Envl Scientist III $156.81	Sr. Envl Scientist I $134.83	Envl Scientist III $126.03	Envl Scientist II $121.64	Envl Scientist I $106.98	TOTAL
TASK 5 - WFIA PEA Environmental Questionnaire						
Questions 1 - 6: Project Descriptoin and Information	2			4		6.0
A. Land Use				2		2.0
B. Air Quality	1					1.0
C. Noise and Vibration	2					2.0
D. Geology and Soils				3		3.0
E. Water Resources	1			4		5.0
F. Biological Resources	1			4		5.0
G. Cultural Resources			4			4.0
H. Socioeconomic and Environmental Justice	2	4				6.0
I. Transportation and Traffic				1		1.0
J. Utilities and Community Services				1		1.0
K. Hazardous and Toxic Materials and Waste				4		4.0
L. Human Health and Safety				1		1.0
GIS Support					20	20.0
Draft PEA Envl Document Preparation	2	10				12.0
Project Management/Coordination	8					8.0
Task 5 Labor Hours	19.0	14.0	4.0	24.0	20.0	**81.0**
Task 5 Subtotal	**$ 2,979.39**	**$ 1,887.62**	**$ 504.12**	**$ 2,919.36**	**$ 2,139.60**	**$ 10,430.09**
Category Total Hours	**19.0**	**14.0**	**4.0**	**24.0**	**20.0**	**81.0**
Category Total Cost	**$ 2,979.39**	**$ 1,887.62**	**$ 504.12**	**$ 2,919.36**	**$ 2,139.60**	**$ 10,430.09**
TOTAL LABOR						**$ 10,430.09**

DIRECT EXPENSES	Unit	Rate	Quantity		TOTAL
TOTAL DIRECT EXPENSES					**$ -**
TOTAL COST				**$**	**10,430.09**

WIFIA PEA QUESTIONNAIRE AND SUPPORTING DOCUMENT CHECKLIST

VERSION: August 2023

The Programmatic Environmental Assessment (PEA) Environmental Questionnaire helps verify the applicability of the PEA for a Water Infrastructure Finance and Innovation Act (WIFIA)-funded project. Compliance with other federal and state environmental laws and regulations is required, as appropriate and applicable. These could include, for example, those requiring site-specific consultations with other federal, state, Tribal governments and agencies (such as consultation under the Endangered Species Act (ESA) or National Historic Preservation Act (NHPA)); completing National Environmental Policy Act (NEPA)-like requirements of the state; or complying with certain state requirements for water and wastewater systems.

Completing the PEA questionnaire can be an iterative process. The document may be revised after its initial submittal following project changes or clarifying questions made by EPA.

The borrower should submit a completed PEA questionnaire (attached as Appendix A) including all relevant information and supporting documents listed in this checklist.

Appendix A Question	Checklist Item or Instructions	Included
General Guidance	• All questions have been answered fully based on all available information. • All resource impacts have been evaluated and check boxes are filled in for each row. • All supporting documentation is referenced and attached. • Borrowers may use the excel formatted PEA Questionnaire when documenting multiple projects. • Additional pages are attached as necessary.	☐ ☐ ☐ ☐
Question 4: Project Description	• Describe <u>each</u> project component or subproject outlined in the WIFIA Application Section E. o Note if components are new, replacements, or rehabilitations. o Provide length of right(s)-of-way, or specific volumes/capacities. o Indicate if the project or components are still in the early phases of design and if specific details are not yet available. • Note project phases (if applicable). • Provide location descriptions for <u>each</u> project component or subproject outlined in the WIFIA Application Section E. o Provide Street address or nearest intersection. o Describe the previous or current site use. o Describe the existing landcover/vegetation. o Provide Site coordinates in Decimal Degrees. • Provide project overview map, showing all project components in one map. • Provide maps of each project component, including:	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Appendix A Question	Checklist Item or Instructions	Included
	○ Additional maps for clarity. ○ Maps labeled appropriately, with relevant streets and roadways. ○ Map surroundings should be visible. ○ Provide ArcGIS Project Shapefiles of project components, as appropriate.	☐ ☐ ☐ ☐
Sections A through M: Impact Assessment	Assess anticipated impacts for each environmental resource. For each resource check the appropriate box if there are no impacts, less than significant impacts, or potentially significant impact as described in each resource section in the PEA. • ***No Impact***: Mark the "*no impact"* box if there is no potential for the project to affect a resource (e.g., the project falls outside a coastal zone). This may include when the activity type has no potential to affect a resource or when the resource type is not present or when the resource is present but not be affected. • ***Less Than Significant Impact***: Mark the "*less than significant impact"* box if the incorporation of mitigation measures will reduce an effect from "*potentially significant impact"* to "*less than significant impact*". • ***Potentially Significant Impact***: Mark the "*potentially significant impact"* box if impacts remain significant despite the incorporation of mitigation measures, or if impacts fall outside the scope of those considered in the PEA. Check this box for a proposed action that is likely to have significant effects or when the significance of the effects is unknown. • ***Narrative Description:*** Provide narrative responses to for each resource. ○ For each box checked "no impact", identify whether the activity type has no potential to affect a resource, the resource type is not present at that project location, or the resource is present at that project location but not be affected. ○ Provide a narrative for each box checked "less than significant impact" or "potentially significant impact". Narrative descriptions may be included in the space provided, additional pages may be added, or the excel formatted PEA Questionnaire may be used. ○ Include a description of the impact(s) (both construction and operational impacts), provide acreages or linear footage of impacts as appropriate to describe the amount of impact, if known. ○ Include a description of associated mitigation measures, Best Management Practices (BMPs), and/or Standard Operating Procedures (SOPs) to avoid, minimize or compensate for impacts. ○ Provide adequate supporting references and citations for impact and mitigation assessments.	

APPENDIX A: ENVIRONMENTAL QUESTIONNAIRE FOR WIFIA CREDIT ASSISTANCE PROJECTS

This questionnaire will be used for most WIFIA funded projects and supports the PEA "tiering" framework, the PEA's associated preliminary Finding of No Significant Impact (FONSI), and project specific NEPA documentation for the WIFIA program. WIFIA credit assistance to Clean Water and Drinking Water State Revolving Fund (SRF) programs should use the questionnaire in Appendix B.

1. **WIFIA Project name:**
   Click or tap here to enter text.

2. **WIFIA Borrower:**
   Click or tap here to enter text.

3. **Identify which project type(s) best describe the Project: (Check all that apply):**

☐ Wastewater Projects
☐ Drinking Water Projects
☐ Energy Efficiency Enhancement Projects
☐ Repair, Rehabilitation, and Replacement Projects
☐ Brackish or Seawater Desalination Projects
☐ Drought Prevention, Reduction, or Mitigation Projects
☐ Acquisition of Real Property Projects
☐ Other [Please explain]

4. **Project Description:** *Describe each project component or subcomponent outlined in the WIFIA Application Section E. Answer the questions below about project location for each component or subproject. Attach or provide project maps of the entire project, each project component and ArcGIS project shapefiles, as applicable.*

*Note: Create additional tables for all components. The Excel formatted PEA Questionnaire may be alternatively used for projects with multiple components.

Component Name: Click or tap here to enter text.
Description: Click or tap here to enter text.
Component is: ☐ New ☐ Replacements ☐ Rehabilitation **Stage of design:** ☐ Planning/Early Design ☐ 30% Design ☐ 60% Design ☐ 90% Design ☐ Final Design ☐ Construction
If under construction, *what work has already been completed? Please include work such as ground disturbance, tree removal, and building demolition, and corresponding measurements.* Click or tap here to enter text.
Street address or nearest intersection:

Click or tap here to enter text.
Site coordinates (Latitude/Longitude in Decimal Degrees): Click or tap here to enter text.
Describe the current/past site use: Click or tap here to enter text.
Describe landcover or vegetation: Click or tap here to enter text.

Component Name: Click or tap here to enter text.
Description: Click or tap here to enter text.
Component is: ☐ New ☐ Replacements ☐ Rehabilitation **Stage of design:** ☐ Planning/Early Design ☐ 30% Design ☐ 60% Design ☐ 90% Design ☐ Final Design ☐ Construction
If under construction, *what work has already been completed? Please include work such as ground disturbance, tree removal, and building demolition, and corresponding measurements.* Click or tap here to enter text.
Street address or nearest intersection: Click or tap here to enter text.
Site coordinates (Latitude/Longitude in Decimal Degrees): Click or tap here to enter text.
Describe the current/past site use: Click or tap here to enter text.
Describe landcover or vegetation: Click or tap here to enter text.

5. Describe any environmental permits or approvals necessary for the proposed project (e.g., federal, state, local) and describe the status of any permits and approvals. Please add additional rows if other environmental approvals are anticipated. Include supporting documentation as attachments, list the file names below. (List may not be exhaustive. Add any additional authorizations or approvals required.)

*Note: The excel formatted PEA Questionnaire may be alternatively used for projects with multiple components.

Permits/Authorization	**Responsible Agency**	**Status/Applicability**	**Date Issued/ Application Date/Expected Approval Date**
Clean Water Act Section 404 permit for impacts to wetlands and waters of the U.S.	USACE/State	☐ Received ☐ Application Submitted ☐ To Be Submitted ☐ Not Applicable ☐ Unclear if needed at this time	

Clean Water Act Section 401 Water Quality Certification	EPA/State	☐ Received ☐ Application Submitted ☐ To Be Submitted ☐ Not Applicable ☐ Unclear if needed at this time	
Section 10 of the Rivers and Harbors Act of 1899 and/or Section 103 of the Marine Protection, Research, and Sanctuaries Act (may be included in the Section 404 Clean Water Act application, referenced above) for impacts to Navigable Waters	USACE	☐ Received ☐ Application Submitted ☐ To Be Submitted ☐ Not Applicable ☐ Unclear if needed at this time	
Clean Water Act Section 402	State/EPA	☐ Received ☐ Application Submitted ☐ To Be Submitted ☐ Not Applicable ☐ Unclear if needed at this time	
Section 408 (Section 14 of the Rivers and Harbors Act of 1899) Permission for alteration of USACE owned or operated assets	USACE	☐ Received ☐ Application Submitted ☐ To Be Submitted ☐ Not Applicable ☐ Unclear if needed at this time	
Floodplain Permit	State/Local	☐ Received ☐ Application Submitted ☐ To Be Submitted ☐ Not Applicable ☐ Unclear if needed at this time	
Farmland Policy Protection Act	USDA	☐ Received ☐ Application Submitted ☐ To Be Submitted ☐ Not Applicable ☐ Unclear if needed at this time	

Coastal Zone permit or approval	State Coastal Zone Management Agency	☐ Received ☐ Application Submitted ☐ To Be Submitted ☐ Not Applicable ☐ Unclear if needed at this time	

*Note: Additional rows may be added as necessary

6. Identify the estimated amount of ground-disturbing work for each project component or element, include the estimated maximum depth of ground-disturbance and area of ground disturbance. Note: The excel formatted PEA Questionnaire may be alternatively used as well.

Project Component	**Estimated Volume of Ground Disturbance**	**Estimated maximum Depth of Excavation**	**Estimated Area of Ground Disturbance (including length and width)**

*Note: add additional lines as needed.

A. LAND USE:	IMPACT ANTICIPATED NO IMPACT	LESS THAN SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT
1. Conversions of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), to non-agricultural use as defined under the Farmland Protection Act 7 U.S.C. 4201 et seq.	☐	☐	☐
2. Conflicts with any applicable land use plan, policy, act, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, habitat conservation plan, specific plan, local plan, or zoning ordinance).	☐	☐	☐
PEA EXAMPLES TO REDUCE LAND USE IMPACTS:	**NOT APPLICABLE**	**NOT INCORPORATED**	**INCORPORATED**
i. Compatibility with state and local government and private programs and policies.	☐	☐	☐
ii. Measures agreed upon in coordination with stakeholders.	☐	☐	☐

NARRATIVE DESCRIPTION: *Please provide a narrative description of the impacts (including construction and operation impacts) associated with any items with checked boxes in the less than significant impact or potentially significant impact columns. Please note for any items with checked boxes in the no impact column whether the activity type has no potential to affect a resource, the resource type is not present at that project location, or the resource is present at that project location but not be affected. Identify and describe any mitigation measures, BMPs and/or SOPs that may avoid, minimize or compensate for the impacts, including those that reduce impacts to less than significant. Examples that were considered within the PEA are listed in, but not limited to, the table above. References to existing supporting documentation (document name, section, page number) may be included as well as a summary of the relevant information.*

Click or tap here to enter text.

B. AIR QUALITY:	IMPACT ANTICIPATED		
	NO IMPACT	LESS THAN SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT
1. Conflicts with or delays in implementation of any applicable federal, state, or local air quality plan.	☐	☐	☐
2. Violations of any federal air quality standards or contributions to an existing or projected air quality violation (including protected areas designated as mandatory Federal "Class I").	☐	☐	☐
3. Increases in any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	☐	☐	☐
4. Releases of objectionable odors, such as hydrogen sulfide.	☐	☐	☐
PEA EXAMPLES TO REDUCE AIR QUALITY IMPACTS:	**NOT APPLICABLE**	**NOT INCORPORATED**	**INCORPORATED**
i. Odor minimizing facility design or emission control devices.	☐	☐	☐
ii. Use of energy efficient technologies, such as anti-idling measures for construction vehicles.	☐	☐	☐
iii. Use of dust suppression techniques, such as water for dust suppression, reducing vehicle speeds, cover truck loads during transit, rumble strips, truck washing stations during construction.	☐	☐	☐

NARRATIVE DESCRIPTION: *Please provide a narrative description of the impacts (including construction and operation impacts) associated with any items with checked boxes in the less than significant impact or potentially significant impact columns. Please note for any items with checked boxes in the no impact column whether the activity type has no potential to affect a resource, the resource type is not present at that project location, or the resource is present at that project location but not be affected. Identify and describe any mitigation measures, BMPs and/or SOPs that may avoid, minimize or compensate for the impacts, including those that reduce impacts to less than significant. Examples that were considered within the PEA are listed in, but not limited to, the table above. References to existing supporting documentation (document name, section, page number) may be included as well as a summary of the relevant information.*

Click or tap here to enter text.

C. NOISE AND VIBRATION:	IMPACT ANTICIPATED		
	NO IMPACT	LESS THAN SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT
1. Generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; or generation of noise resulting in public health impacts.	☐	☐	☐
2. Permanent increases in ambient noise levels in the project vicinity above levels existing without the project.	☐	☐	☐
3. Temporary or periodic increases in ambient noise levels in the project vicinity above levels existing without the project.	☐	☐	☐
4. Generation of vibration that could increase the risk of structural damage.	☐	☐	☐
PEA EXAMPLES TO REDUCE NOISE IMPACTS:	**NOT APPLICABLE**	**NOT INCORPORATED**	**INCORPORATED**
i. Compliance with local ordinances and land use designations.	☐	☐	☐
ii. Placing intakes and exhausts facing away from sensitive receivers.	☐	☐	☐
iii. Attenuation of fan noise and pump and motor noise.	☐	☐	☐
iv. Use of general noise reduction measures.	☐	☐	☐

NARRATIVE DESCRIPTION: *Please provide a narrative description of the impacts (including construction and operation impacts) associated with any items with checked boxes in the less than significant impact or potentially significant impact columns. Please note for any items with checked boxes in the no impact column whether the activity type has no potential to affect a resource, the resource type is not present at that project location, or the resource is present at that project location but not be affected. Identify and describe any mitigation measures, BMPs and/or SOPs that may avoid, minimize or compensate for the impacts, including those that reduce impacts to less than significant. Examples that were considered within the PEA are listed in, but not limited to, the table above. References to existing supporting documentation (document name, section, page number) may be included as well as a summary of the relevant information.*

Click or tap here to enter text.

D. GEOLOGY AND SOILS:	IMPACT ANTICIPATED		
	NO IMPACT	LESS THAN SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT
1. Exposure of people or structures to hazards from unstable soils, landslide, lateral spreading, subsidence, liquefaction or collapse.	☐	☐	☐
2. Increase in soil erosion or loss of topsoil.	☐	☐	☐
3. Loss of economic viable mineral deposits, scientifically significant paleontological resources, or unique geological features.	☐	☐	☐
PEA EXAMPLES TO REDUCE IMPACTS TO GEOLOGY AND SOIL:	**NOT APPLICABLE**	**NOT INCORPORATED**	**INCORPORATED**
i. Use of erosion control and site stabilization BMPs.	☐	☐	☐
ii. Implementation of a stormwater pollution prevention plan and fugitive dust control plan.	☐	☐	☐
iii. Implementation of effective site selection and design.	☐	☐	☐

NARRATIVE DESCRIPTION: *Please provide a narrative description of the impacts (including construction and operation impacts) associated with any items with checked boxes in the less than significant impact or potentially significant impact columns. Please note for any items with checked boxes in the no impact column whether the activity type has no potential to affect a resource, the resource type is not present at that project location, or the resource is present at that project location but not be affected. Identify and describe any mitigation measures, BMPs and/or SOPs that may avoid, minimize or compensate for the impacts, including those that reduce impacts to less than significant. Examples that were considered within the PEA are listed in, but not limited to, the table above. References to existing supporting documentation (document name, section, page number) may be included as well as a summary of the relevant information.*

Click or tap here to enter text.

E. WATER RESOURCES:	IMPACT ANTICIPATED		
	NO IMPACT	LESS THAN SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT
1. Violations of any federal water quality standards or waste discharge requirements, including degradation of water quality.	☐	☐	☐
2. Depletion or contamination of groundwater supplies (including sole-source aquifers) or negatively interfere with groundwater recharge.	☐	☐	☐
3. Alteration of the drainage pattern of a water resource that would result in an increase in erosion or flooding on- or off-site.	☐	☐	☐
4. Soil erosion or stormwater runoff that increases sediment, pollutants, or contaminates into streams, rivers, or other water resources.	☐	☐	☐
5. Floodplain modification, development within, or redirection, as defined by Executive Order 11988.	☐	☐	☐
6. Increase in flood risk affecting loss on human safety, health, and welfare.	☐	☐	☐
7. Loss, degradation, or destruction of wetlands and waterbodies through direct removal, filling, hydrological interruption, or other means.	☐	☐	☐
8. Alteration of wild and scenic rivers as defined by the Wild and Scenic River Act 16 U.S.C. 1271 et seq.	☐	☐	☐
9. Conflicts with the Rivers and Harbors Act, 33 U.S.C. 403.	☐	☐	☐
10. Conflicts with the Coastal Barrier Resources Act, 16 U.S.C. 3501 et seq.	☐	☐	☐
11. Conflicts with the enforceable policies of a state's federally approved coastal management program (the Coastal Zone Management Act, 16 U.S.C. 1451 et seq.).	☐	☐	☐

PEA EXAMPLES TO REDUCE IMPACTS TO WATER RESOURCES:		NOT APPLICABLE	NOT INCORPORATED	INCORPORATED
i.	Use of appropriate erosion and sediment control measures, BMPs, and site stabilization.	☐	☐	☐
ii.	Implementation of effective site selection and design.	☐	☐	☐

NARRATIVE DESCRIPTION: *Please provide a narrative description of the impacts (including construction and operation impacts) associated with any items with checked boxes in the less than significant impact or potentially significant impact columns. Please note for any items with checked boxes in the no impact column whether the activity type has no potential to affect a resource, the resource type is not present at that project location, or the resource is present at that project location but not be affected. Identify and describe any mitigation measures, BMPs and/or SOPs that may avoid, minimize or compensate for the impacts, including those that reduce impacts to less than significant. Examples that were considered within the PEA are listed in, but not limited to, the table above. References to existing supporting documentation (document name, section, page number) may be included as well as a summary of the relevant information.*

Click or tap here to enter text.

F. BIOLOGICAL RESOURCES:	IMPACT ANTICIPATED		
	NO IMPACT	LESS THAN SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT
1. Jeopardizes the continued existence of any federally threatened or endangered species as identified by the U.S. Fish and Wildlife Service (USFWS) or National Marines Fisheries Service (NMFS) in the Endangered Species Act 16 U.S.C. Ch. 35 § 1531 et seq.	☐	☐	☐
2. Adversely modify, fragment, or degrade of critical habitat by the USFWS or NMFS.	☐	☐	☐
3. Modification, fragmentation, or degradation of biological sensitive areas other than designated critical habitat.	☐	☐	☐
4. Harm to fauna, including mammals, birds, reptiles, amphibians, fish, and invertebrates.	☐	☐	☐
5. Changes in vegetation type (native to the region), particularly if the vegetation type in the region is already highly fragmented because of human activity.	☐	☐	☐
6. Potential to injure or disturb marine mammals in U.S. waters as protected under Marine Mammal Protection Act as defined under 16 U.S.C 1361-1407.	☐	☐	☐
7. Reduction in the quality or quantity of Essential Fish Habitat as designated in accordance with the Magnuson Stevens Fisheries Conservation and Management Act.	☐	☐	☐
8. Disturbances to Bald or Golden Eagles as defined under 16 U.S.C. 668 et seq.	☐	☐	☐
9. Disturbances to migratory birds as defined under 16 U.S.C. 703-712 as amended.	☐	☐	☐
10. Conflicts with the provisions of an adopted Habitat Conservation Plan as approved under section 10 (a) (1) (B) of the ESA or other federal habitat conservation plan.	☐	☐	☐
11. Introduction or spread of invasive species as identified under Executive Order 13112.	☐	☐	☐
12. Loss of or damage to wildlife resources due to the control or modification of any stream or other body of water protected by the Fish and Wildlife Coordination Act 16 U.S.C. 661-667e	☐	☐	☐

PEA EXAMPLES TO REDUCE IMPACTS TO BIOLOGICAL RESOURCES:		NOT APPLICABLE	NOT INCORPORATED	INCORPORATED
i.	Implementation of avoidance and minimization measures, and BMPs.	☐	☐	☐
ii.	Adoption of recommendations and conservation measures from USFWS, NMFS and/or the National Oceanic and Atmospheric Administration.	☐	☐	☐
iii.	Prevention of spills and leaks from vehicles and equipment.	☐	☐	☐
iv.	Implementation of measures to minimize soil compaction and the transportation of noxious, invasive and pest species.	☐	☐	☐

NARRATIVE DESCRIPTION: *Please provide a narrative description of the impacts (including construction and operation impacts) associated with any items with checked boxes in the less than significant impact or potentially significant impact columns. Please note for any items with checked boxes in the no impact column whether the activity type has no potential to affect a resource, the resource type is not present at that project location, or the resource is present at that project location but not be affected. Identify and describe any mitigation measures, BMPs and/or SOPs that may avoid, minimize or compensate for the impacts, including those that reduce impacts to less than significant. Examples that were considered within the PEA are listed in, but not limited to, the table above. References to existing supporting documentation (document name, section, page number) may be included as well as a summary of the relevant information.*

Click or tap here to enter text.

G. CULTURAL RESOURCES:	IMPACT ANTICIPATED		
	NO IMPACT	LESS THAN SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT
1. Potential adverse effects to federally listed and eligible historical properties, including prehistoric and historic sites, historic districts and traditional cultural properties, as defined in 36 CFR part 800.	☐	☐	☐
2. Modification of unique paleontological resources or site or unique geologic features.	☐	☐	☐
3. Disturbance of human remains, including those interred outside of formal cemeteries.	☐	☐	☐
4. Conflicts with Native American Graves Protection and Repatriation Act, as defined in 25 U.S.C. § 3001 et seq.	☐	☐	☐
5. Conflicts with the Archaeological Resources Protection Act, as defined in 16 U.S.C. §§ 470AA-MM	☐	☐	☐
PEA EXAMPLES TO REDUCE IMPACTS TO CULTURAL RESOURCES:	**NOT APPLICABLE**	**NOT INCORPORATED**	**INCORPORATED**
i. Implementation of effective site selection and design.	☐	☐	☐
ii. Implementation of avoidance and minimization measures identified in consultation with the State Historic Preservation (SHPO) and/or Tribal Historic Preservation Officer (THPO).	☐	☐	☐
iii. Conduct surveys prior to construction.	☐	☐	☐
iv. Development of an unanticipated discoveries plan.	☐	☐	☐

NARRATIVE DESCRIPTION: *Please provide a narrative description of the impacts (including construction and operation impacts) associated with any items with checked boxes in the less than significant impact or potentially significant impact columns. Please note for any items with checked boxes in the no impact column whether the activity type has no potential to affect a resource, the resource type is not present at that project location, or the resource is present at that project location but not be affected. Identify and describe any mitigation measures, BMPs and/or SOPs that may avoid, minimize or compensate for the impacts, including those that reduce impacts to less than significant. Examples that were considered within the PEA are listed in, but not limited to, the table above. References to existing supporting documentation (document name, section, page number) may be included as well as a summary of the relevant information.*

Click or tap here to enter text.

H. SOCIOECONOMIC AND ENVIRONMENTAL JUSTICE:	IMPACT ANTICIPATED		
	NO IMPACT	LESS THAN SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT
1. Changes to the demographics around project location, such as population growth.	☐	☐	☐
2. Modifications to economic factors such as per capita income, unemployment rate, or poverty.	☐	☐	☐
3. Alterations to social assets, such as housing or public services.	☐	☐	☐
4. Disproportionate high and adverse human health environmental effects on minority population and low-income populations as defined under Executive Order 12898.	☐	☐	☐
PEA EXAMPLES TO REDUCE SOCIOECONMIC AND ENVIRONMENTAL JUSTICE IMPACTS:	**NOT APPLICABLE**	**NOT INCORPORATED**	**INCORPORATED**
i. Implementation of construction mitigation measures.	☐	☐	☐
ii. Measures identified as a result of conducting meaningful public engagement to environmental justice communities.	☐	☐	☐

NARRATIVE DESCRIPTION: *Please provide a narrative description of the impacts (including construction and operation impacts) associated with any items with checked boxes in the less than significant impact or potentially significant impact columns. Please note for any items with checked boxes in the no impact column whether the activity type has no potential to affect a resource, the resource type is not present at that project location, or the resource is present at that project location but not be affected. Identify and describe any mitigation measures, BMPs and/or SOPs that may avoid, minimize or compensate for the impacts, including those that reduce impacts to less than significant. Examples that were considered within the PEA are listed in, but not limited to, the table above. References to existing supporting documentation (document name, section, page number) may be included as well as a summary of the relevant information.*

Click or tap here to enter text.

I. TRANSPORTATION AND TRAFFIC:	IMPACT ANTICIPATED		
	NO IMPACT	LESS THAN SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT
1. Changes to traffic patterns around the project area including, but not limited to, the arrival and departure of construction workers, vehicles hauling equipment and materials to the site, road closures or detours, and slower movement and larger turning radii of truck going to project site.	☐	☐	☐
PEA EXAMPLES TO REDUCE TRANSPORATION AND TRAFFIC IMPACTS:	**NOT APPLICABLE**	**NOT INCORPORATED**	**INCORPORATED**
i. Mitigation measures identified in coordination with local agencies.	☐	☐	☐
ii. Use of warning signage, flag persons.	☐	☐	☐
iii. Use of lane closures and detours as necessary.	☐	☐	☐

NARRATIVE DESCRIPTION: *Please provide a narrative description of the impacts (including construction and operation impacts) associated with any items with checked boxes in the less than significant impact or potentially significant impact columns. Please note for any items with checked boxes in the no impact column whether the activity type has no potential to affect a resource, the resource type is not present at that project location, or the resource is present at that project location but not be affected. Identify and describe any mitigation measures, BMPs and/or SOPs that may avoid, minimize or compensate for the impacts, including those that reduce impacts to less than significant. Examples that were considered within the PEA are listed in, but not limited to, the table above. References to existing supporting documentation (document name, section, page number) may be included as well as a summary of the relevant information.*

Click or tap here to enter text.

J. UTILITIES AND COMMUNITY SERVICES:	IMPACT ANTICIPATED		
	NO IMPACT	LESS THAN SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT
1. Changes to electric, cable, gas, sewer, water, stormwater, and other existing utility services.	☐	☐	☐
2. Changes to community services, such as open space, recreational and cultural facilities.	☐	☐	☐
PEA EXAMPLES TO REDUCE IMPACTS TO UTILTIES AND COMMUNITY SERVICES:	**NOT APPLICABLE**	**NOT INCORPORATED**	**INCORPORATED**
i. Identification and avoidance of utilities.	☐	☐	☐
ii. Coordination with service providers and minimization of service interruption.	☐	☐	☐
iii. Mitigation measures identified in coordination with park and recreational resource managers/agencies.	☐	☐	☐

NARRATIVE DESCRIPTION: *Please provide a narrative description of the impacts (including construction and operation impacts) associated with any items with checked boxes in the less than significant impact or potentially significant impact columns. Please note for any items with checked boxes in the no impact column whether the activity type has no potential to affect a resource, the resource type is not present at that project location, or the resource is present at that project location but not be affected. Identify and describe any mitigation measures, BMPs and/or SOPs that may avoid, minimize or compensate for the impacts, including those that reduce impacts to less than significant. Examples that were considered within the PEA are listed in, but not limited to, the table above. References to existing supporting documentation (document name, section, page number) may be included as well as a summary of the relevant information.*

Click or tap here to enter text.

K. HAZARDOUS AND TOXIC MATERIALS AND WASTE:	IMPACT ANTICIPATED		
	NO IMPACT	LESS THAN SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT
1. Accidental releases, spills, or improper storage and disposal of hazardous materials.	☐	☐	☐
2. Conflicts with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Solid Waste Disposal Act, Toxic Substances Control Act, and Emergency Planning and Community Right-to-Know Act.	☐	☐	☐
3. Generation or increase in the amount of sewage sludge that is not in compliance with EPA standards for the use or disposal of sewage sludge.	☐	☐	☐
PEA EXAMPLES TO REDUCE HAZARDOUS AND TOXIC MAERIALS AND WASTE IMPACTS:	**NOT APPLICABLE**	**NOT INCORPORATED**	**INCORPORATED**
i. Mitigation measures identified through compliance with applicable hazardous and toxic materials laws and regulations.	☐	☐	☐
ii. Implementation of environmental protection measures, BMPs, and Standard Operating Procedures (SOPs).	☐	☐	☐
iii. Development or Adoption of an Emergency Plan/Emergency Response Plan (or similar).	☐	☐	☐

NARRATIVE DESCRIPTION: *Please provide a narrative description of the impacts (including construction and operation impacts) associated with any items with checked boxes in the less than significant impact or potentially significant impact columns. Please note for any items with checked boxes in the no impact column whether the activity type has no potential to affect a resource, the resource type is not present at that project location, or the resource is present at that project location but not be affected. Identify and describe any mitigation measures, BMPs and/or SOPs that may avoid, minimize or compensate for the impacts, including those that reduce impacts to less than significant. Examples that were considered within the PEA are listed in, but not limited to, the table above. References to existing supporting documentation (document name, section, page number) may be included as well as a summary of the relevant information.*

Click or tap here to enter text.

L. HUMAN HEALTH AND SAFETY:	IMPACT ANTICIPATED		
	NO IMPACT	LESS THAN SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT
1. Creating occupational health hazards for workers during construction or operation.	☐	☐	☐
2. Creating or contributing to environmental health or public health risks and safety risks that may disproportionately affect children, consistent with Executive Order 13045.	☐	☐	☐
3. Creating or contributing to public health risk of immediate injury or long-term health hazards.	☐	☐	☐
PEA EXAMPLES TO REDUCE HUMAN HEALTH AND SAFETY IMPACTS:	**NOT APPLICABLE**	**NOT INCORPORATED**	**INCORPORATED**
i. Implementation of a health and safety plan.	☐	☐	☐
ii. Limiting site access to authorized personnel only.	☐	☐	☐
iii. Implementation of fugitive dust minimization measures.	☐	☐	☐

NARRATIVE DESCRIPTION: *Please provide a narrative description of the impacts (including construction and operation impacts) associated with any items with checked boxes in the less than significant impact or potentially significant impact columns. Please note for any items with checked boxes in the no impact column whether the activity type has no potential to affect a resource, the resource type is not present at that project location, or the resource is present at that project location but not be affected. Identify and describe any mitigation measures, BMPs and/or SOPs that may avoid, minimize or compensate for the impacts, including those that reduce impacts to less than significant. Examples that were considered within the PEA are listed in, but not limited to, the table above. References to existing supporting documentation (document name, section, page number) may be included as well as a summary of the relevant information.*

Click or tap here to enter text.

M. OTHER ENVIRONMENTAL EFFECTS	IMPACT ANTICIPATED		
	NO IMPACT	LESS THAN SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT IMPACT
1. Click or tap here to enter text.	☐	☐	☐
2. Click or tap here to enter text.	☐	☐	☐
3. Click or tap here to enter text.	☐	☐	☐
4. Click or tap here to enter text.	☐	☐	☐
5. Click or tap here to enter text.	☐	☐	☐

*Note: Additional rows may be added as necessary

NARRATIVE DESCRIPTON: *Please identify and describe any other reasonably foreseeable environmental effects from the proposed action not previously identified in Tables A to L that may have less than significant impacts or potentially significant impacts. These effects may include effects that are later in time or farther removed in distance from the proposed action. Identify and describe any mitigation measures, BMPs, and/or SOPs that may avoid, minimize or compensate for the impacts, including those that reduce impacts to less than significant. In addition, provide all mitigation measures, BMPs, and/or SOPs not identified previously in the document that will be included in the project. References to existing supporting documentation (document name, section, page number) may be included as well as a summary of the relevant information.*

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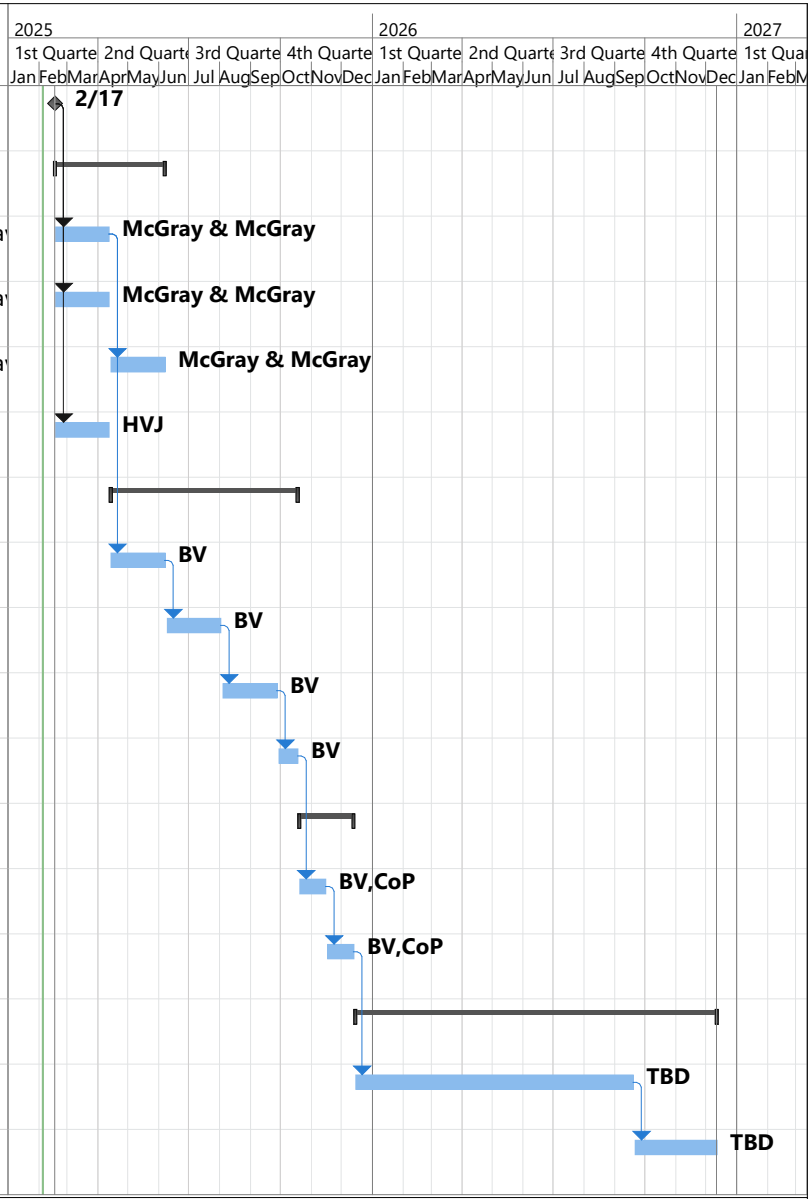
A-7
LEVEL OF EFFORT

		Staffing Summary											Hours	Labor	Subcontract Summary			Subcontracts	Travel Expenses	Field/Misc Expenses	Project Total
	Client Position	Client Director	Project Manager	Project Engineer 1	Project Engineer 2	Geotechnical 5	Technician	Project Controls	Finance	Administration	QC Lead	Corrosion Engineer			Hicks & Company	HVJ	McGray & McGray				
	Discipline	PM&S - Project Management	PM&S - Project Management	EDS - Civil	EDS - Civil	EDS - Civil	EDS - Virtual Design & Data Solutions	PM&S - Project Controls	PM&S - Project Accounting	PM&S - Project Admin Support	PM&S - Quality	EDS - Civil									
	Sub-Discipline	PM - PD/CD	PM - PM	Civil - Distribution	Civil - Distribution	Civil - Geotechnical	VDDS - Civil Site/Conveyance	PJC - General	Accounting - General	Admin - Gen	Qual - Gen	Civil - Geotechnical									
	Additional Information																				
	HOURS\COST TOTALS IN USD $:	55	398	470	454	34	1,337	43	43	43	96	170	3,143		$ 10,430.09	$ 27,019.00	$ 118,742.48	$ 156,191.57			
	BILLING RATE IN USD $\MARKUP:	$ 398.18	$ 285.54	$ 145.21	$ 173.73	$ 285.82	$ 166.57	$ 142.55	$ 133.90	$ 111.43	$ 262.98	$ 285.82			5.00%	5.00%	5.00%				
	CONTRACT TOTALS IN USD $:	$ 21,899.81	$ 113,643.21	$ 68,247.56	$ 78,871.78	$ 9,717.90	$ 222,699.67	$ 6,129.55	$ 5,757.69	$ 4,791.41	$ 25,246.05	$ 48,589.48		$ 605,594.11	$ 10,951.59	$ 28,369.95	$ 124,679.60	$ 164,001.15	$ 4,483.50	$ -	$ 774,078.76
Task	**Description**																				
Task 1	**Task 1 - Project Management and Administration**																				
1/.01	Preliminary and General Work	8.00	66.00		5.00			43.00	43.00	43.00			208.00	$ 39,578.07							$ 39,578.07
1/.02	Project Meetings	10.00	38.00	37.00	37.00								122.00	$ 26,632.70					$ 577.50		$ 27,210.20
1/.03	Quality Management	2.00	6.00	9.00							96.00		113.00	$ 29,062.48							$ 29,062.48
	Task 1 Subtotals	**20.00**	**110.00**	**46.00**	**42.00**			**43.00**	**43.00**	**43.00**	**96.00**		**443.00**	$ 95,273.25					$ 577.50		$ 95,850.75
Task 2	**Task 2 - Survey, SUE and Easement Services**																				
2/.01	Project Survey		4.00	8.00									12.00	$ 2,303.80			$ 28,699.10	$ 28,699.10			$ 31,002.91
2/.02	Easements, Land Parcels, and Property Owner Information		4.00	8.00									12.00	$ 2,303.80			$ 56,970.25	$ 56,970.25			$ 59,274.05
2/.03	Geotechnical Boring Locates																$ 1,850.08	$ 1,850.08			$ 1,850.08
2/.04	Subsurface Utility Engineering		4.00	16.00									20.00	$ 3,465.46			$ 37,160.17	$ 37,160.17			$ 40,625.64
	Task 2 Subtotals		**12.00**	**32.00**									**44.00**	$ 8,073.07			**$ 124,679.60**	$ 124,679.60			$ 132,752.67
Task 3	**Task 3 - Geotechical Services**																				
3/.01	Geotechnical Field Investigations		2.00			2.00							4.00	$ 1,142.71		$ 10,249.05		$ 10,249.05			$ 11,391.76
3/.02	Laboratory Testing					4.00							4.00	$ 1,143.28		$ 4,467.75		$ 4,467.75			$ 5,611.03
3/.03	Geotechnical Data Report		2.00	4.00		2.00							8.00	$ 1,723.54		$ 3,363.15		$ 3,363.15			$ 5,086.69
	Task 3 Subtotals		**4.00**	**4.00**		**8.00**							**16.00**	$ 4,009.54		**$ 18,079.95**		$ 18,079.95			$ 22,089.49
Task 4	**Task 4 - Design Services**																				
4/.01	Owner-Furnished Front-End Documents		25.00										25.00	$ 7,138.39							$ 7,138.39
4/.02	Permitting		4.00	4.00									8.00	$ 1,722.97							$ 1,722.97
4/.03	Public Information and Developer Coordination	4.00	4.00										8.00	$ 2,734.86					$ 262.50		$ 2,997.36
4/.04	Storm Water Pollution Prevention Plan		3.00		63.00		27.00						93.00	$ 16,298.67							$ 16,298.67
4/.05	Corrosivity Analysis		5.00		27.00							170.00	202.00	$ 54,707.77		$ 10,290.00		$ 10,290.00	$ 2,068.50		$ 67,066.27
4/.06	Detailed Design - Level 1 Documents (30%)	4.00	41.00	86.00	83.00		454.00						668.00	$ 115,828.10					$ 262.50		$ 116,090.60
4/.07	Detailed Design - Level 2 Documents (60%)	4.00	41.00	86.00	83.00		405.00						619.00	$ 107,666.33					$ 262.50		$ 107,928.83
4/.08	Detailed Design - Level 3 Documents (95%)	4.00	41.00	82.00	83.00		369.00						579.00	$ 101,089.10					$ 262.50		$ 101,351.60
4/.09	Detailed Design - Final Documents	4.00	41.00	50.00	43.00		52.00						190.00	$ 36,691.76							$ 36,691.76
4/.10	Regulatory Agency Submittal		3.00	4.00									7.00	$ 1,437.44							$ 1,437.44
4/.11	Regulatory / Funding Assistance	4.00	17.00										21.00	$ 6,446.82	$ 10,951.59				$ 10,951.59		$ 17,398.41
4/.12	Permits Acquisition		5.00	18.00									23.00	$ 4,041.41							$ 4,041.41
	Task 4 Subtotals	**24.00**	**230.00**	**330.00**	**382.00**		**1,307.00**					**170.00**	**2,443.00**	$ 455,803.62	**$ 10,951.59**	**$ 10,290.00**			$ 21,241.59	$ 3,118.50	$ 480,163.72
Task 5	**Task 5 - Bid and Pre-award Services**																				
5/.02	Front End Documents	1.00	2.00										3.00	$ 969.25							$ 969.25
5/.03	Owner Support During Bidding		8.00	24.00									32.00	$ 5,769.27					$ 262.50		$ 6,031.77
5/.04	Prebid Conference	2.00	2.00		5.00								9.00	$ 2,236.06							$ 2,236.06
5/.05	Interpretation of Bidding Documents		8.00	4.00	25.00	26.00							63.00	$ 14,639.61							$ 14,639.61
5/.06	Bid Opening		2.00	2.00									4.00	$ 861.49							$ 861.49
5/.08	Qualifications of Apparent Successful Bidder	8.00	12.00										20.00	$ 6,611.86							$ 6,611.86
5/.09	Bid Tabulations		2.00	4.00									6.00	$ 1,151.90							$ 1,151.90
5/.10	As Bid Construction Documents		4.00	16.00			30.00						50.00	$ 8,462.46					$ 262.50		$ 8,724.96
5/.11	Prepare and Distribute Conformed Documents		2.00	8.00									10.00	$ 1,732.73					$ 262.50		$ 1,995.23
	Task 5 Subtotals	**11.00**	**42.00**	**58.00**	**30.00**	**26.00**	**30.00**						**197.00**	$ 42,434.63					$ 787.50		$ 43,222.13

ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1	Design NTP	0 days	Mon 2/17/25	Mon 2/17/25		
2	**Survey**	**80 days**	**Mon 2/17/25**	**Fri 6/6/25**		
3	Topographic Survey	40 days	Mon 2/17/25	Fri 4/11/25	1	McGray & McGra
4	SUE	40 days	Mon 2/17/25	Fri 4/11/25	1	McGray & McGra
5	Easements	40 days	Mon 4/14/25	Fri 6/6/25	3	McGray & McGra
6	Geotech	40 days	Mon 2/17/25	Fri 4/11/25	1	HVJ
7	**Design**	**135 days**	**Mon 4/14/25**	**Fri 10/17/25**		
8	Level 1 - 30%	40 days	Mon 4/14/25	Fri 6/6/25	3	BV
9	Level 2 - 60%	40 days	Mon 6/9/25	Fri 8/1/25	8	BV
10	Level 3 - 95%	40 days	Mon 8/4/25	Fri 9/26/25	9	BV
11	Final Documents	15 days	Mon 9/29/25	Fri 10/17/25	10	BV
12	**Bid and Award**	**40 days**	**Mon 10/20/2**	**Fri 12/12/25**		
13	Bid	20 days	Mon 10/20/2	Fri 11/14/25	11	BV,CoP
14	Award	20 days	Mon 11/17/2	Fri 12/12/25	13	BV,CoP
15	**Construction**	**260 days**	**Mon 12/15/2**	**Fri 12/11/26**		
16	Substantial	200 days	Mon 12/15/2	Fri 9/18/26	14	TBD
17	Final	60 days	Mon 9/21/26	Fri 12/11/26	16	TBD



Project: Design-Bid Schedule
Date: Wed 2/5/25

Task	Inactive Task	Manual Summary Rollup	External Milestone
Split	Inactive Milestone	Manual Summary	Deadline
Milestone	Inactive Summary	Start-only	Progress
Summary	Manual Task	Finish-only	Manual Progress
Project Summary	Duration-only	External Tasks	