



August 4, 2022

Mr. Jerry Amacker

Purchasing Agent

Town of Vienna – Vienna Town Hall 127 Center Street S

Vienna, Virginia 22180

Via email : Jerry.Amacker@viennava.gov

Re: **BEAR BRANCH TRIBUTARY PHASE 2
STREAM RESTORATION – DESIGN**
(RFP 22-03).
AMT File No. P22-0253

Dear Mr. Amacker:

A. Morton Thomas and Associates, Inc. (AMT), is pleased to submit this proposal to the Town of Vienna for survey and civil engineering design services for your review and consideration in connection with the Bear Branch Tributary Phase 2 Stream Restoration project.

PROJECT UNDERSTANDING

Town of Vienna has requested a fee and scope proposal for survey, assessment engineering design, permitting, and construction services in accordance with RFP 22-03 for the three (3) reaches covering approximately 2,300 linear feet of Bear Branch Tributary Phase 2 from I-66 to Cottage Street, SW, along Walker Street SW as shown in Exhibit A. AMT will provide assessment of stream conditions; recommendations to restore degraded channels, enhance wetlands, improve storm drain outfalls/drainage ways and replace the existing pedestrian bridge in Reach 2; the development of stream restoration and storm drain outfall improvement designs; and provide construction administration, inspection, and permit acquisition services.

AMT will meet with community stakeholders to discuss local concerns and issues, assess the stream geomorphology, survey topography, trees, and stream cross sections, model the existing and proposed Hydrology and Hydraulic (H&H), conditions, determine the functional uplift potential, facilitate a site meeting to present assessment findings and restoration design concepts, prepare 30%, 75%, and Final Construction designs, associated cost estimates, and specifications. AMT will conduct public meetings, prepare easements, obtain permit approvals, and provide construction management and inspection services.

PROJECT GOALS

The Bear Branch Tributary – Phase 2 project will include the assessment of the existing stream and storm drain outfall systems and a determination of suitable solutions for reducing stream/bank erosion and to improve water quality. The general design objectives of this project are:

- Assessment of the stream banks and channel within the project limits to focus on the reduction of erosion and sediment production.
- Utilize "natural" channel design (NCD) techniques, where feasible, to reduce stream bank erosion, re-connect floodplains, enhance wetlands, and ultimately improve water quality.
- Restore/improve storm drain outfalls located along the stream within the project limits
- Enhance wetland areas along the stream corridor.
- Integrate an aesthetically pleasing and vibrant stream corridor that functions with the adjacent park.
- Maintain existing park amenities and minimize disruptions to Southside Park during construction.

- Provide cost effective, low maintenance, and lasting stream restoration improvements that will provide the best treatment, and benefit to society and the environment.

OPTIONAL GOALS

The Bear Branch Tributary – Phase 2 project may also include additional scope items to facilitate the design process and improve park conditions. The following scope items are additional contingency options to be included in the project scope as directed by the Town.

- Replace the existing pedestrian bridge in Reach 2.
- Work with Southside Park staff develop a functional pedestrian trail extending from the sidewalk connection in Reach 1 to the pedestrian bridge and playground on the other side of the stream to the parking lot by the baseball fields at the start of Reach 3 as shown in Exhibit B.
- Geotechnical Exploration to determine groundwater elevations, rock depth, and soil conditions to inform the design.

AMT proposes to provide services for the project as described in detail below.

SCOPE OF SERVICES

I. PROJECT MANAGEMENT & MEETINGS

A. Project Management: AMT will provide project management services throughout the design, permitting and construction process. Project management will include coordination with the Town, the design team, permitting agencies, Southside Park Superintendent and other stakeholders. Stakeholder and park staff coordination will occur under the direction of the Town. The following meetings are assumed for this project:

- Kickoff meeting with the Town prior to any survey or design work.
- Monthly progress meeting with the Town. AMT will prepare meeting minutes for all progress meetings.
- Site walk with the Town, after survey is complete and exhibits are prepared, to determine property impacts, limits of work, stream restoration design concepts, discuss storm drain channel erosion problems, habitat improvement needs, outfall mitigation approaches and repair methods, wetland enhancement opportunities, sanitary sewer avoidance, reforestation, site constraints and project access. It is expected that the Town arborist will attend this meeting and provide recommendations on tree impacts and protection.
- Office meeting after the site walk to review the scope of the project, review schedule, review outstanding data needs and identify any concerns.
- AMT will attend a review meeting and prepare meeting minutes for each of the major milestone submittals (Concept 30%, and Final Design 75%).
- AMT will coordinate with DEQ after the Concept 30% and Final Design 75% phases to allow for DEQ review and AMT will provide comment responses and adjust the design as necessary to meet DEQ requirements. Field meetings are expected at each of these DEQ milestones.

B. Project Scheduling

- AMT will work to complete the work necessary to obtain the required permits and complete the construction ready plans in 18 months. The final schedule will be developed by AMT and the Town cooperatively to allow for all necessary action items. AMT will provide a draft, itemized schedule with durations within 5 days following the notice to proceed (NTP).
- AMT will update the project schedule as necessary to track major milestones and update durations of events as they occur. Any changes in the schedule resulting from progress meetings will be updated as part of the meeting minutes.

C. Stakeholders Meetings and Public Outreach

- AMT will support the Town in the preparation for and presentation of materials at two (2) public outreach meetings.
- The first meeting will occur at the end of the 30% Concept Phase to present the findings of the assessments and outline the design approach and impacts to Southside Park and any private land within the potential limits of work. The goal of this meeting is to collect and understand community issues so that they may be factored into the project as well as educate the public about the means methods and reasons for the project.
- The second meeting will occur during the Final Design (75%) Phase to present the developed design and prepare the community for construction phases.
- AMT will prepare graphics and a slideshow presentation for the meeting in collaboration with the Town.
- Members of the AMT team will present to the community along with Town staff. The meetings may be in person or virtual. AMT will provide technical support for virtual meetings as necessary.

Submittals: Meeting minutes; Schedule updates; Graphics and slideshow (PowerPoint).

II. SURVEY SERVICES

A. Topographic Survey: The Town will provide background data for topography, soils, storm drains, land use, property line information, gas main plans and utility design plans and as-builts. AMT will review all background data. AMT will perform surveying services for 2,300 LF of stream, outfalls with surrounding topography and details of significant features within a minimum of 25-feet on each side of the storm drain outfall and within a minimum of 50-feet on each side of channel banks in support of the assessment, design and modeling efforts. The limits of survey are shown on Exhibit A. The survey will include two (2) benchmarks, 1-foot contours, and all major visible site improvements. Utilities will be shown based on visible above ground utility features and available record drawings. In addition, inverts of gravity flow storm drains and sanitary sewers within the limits of survey will be obtained, where readily accessible, and shown on the drawing. The wetland and waterway flags, described under the IV. Permitting section, will be surveyed.

B. Tree Survey: Tree survey will be performed by AMT for 12" DBH trees and greater with critical root zones (CRZ) extending into the potential limits of disturbance as required by Fairfax County Public Facilities Manual section 12-0507, Tree Inventory and Condition Analysis. Survey will include size, species, CRZ, and health condition. CRZ is defined as a circular area centered on the base of the tree, with a radius of one foot (1') for each inch of trunk diameter measured at 4.5 feet above grade (DBH). The CRZ radius shall be included in the tree table and the corresponding CRZ for each tree will be shown on the tree preservation sheets included in the project plans.

AMT will complete vegetation survey and mapping to evaluate forest type, general forest condition, description of the understory, and description of the presence and abundance of invasive plant species.

C. Property and Right-of-Way: AMT will establish the adjoining property lines and roadway right-of-way lines within the project limits. Effort will include property record research, recovery and survey of property corners and monuments, and survey computations of property lines and right-of-way lines. Property lines and roadway right-of-way lines will be shown on the topographic survey base drawing.

D. Utility Designating (ASCE CI/38-02 Quality Level B): AMT will identify and mark underground utilities, in accordance with ASCE CI/38-02 Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, Quality Level B, within the limits of disturbance of the engineering project. Conductive utilities will be marked utilizing geophysical prospecting techniques in conjunction with radio, audio and electromagnetic equipment. Utilities known to exist on site that are not detectable will be depicted on the submitted topographic survey CAD drawing according to available utility plats, as-built drawings and/or visual inspections on site. Utilities will be marked utilizing standard marking paint and/or flags. Utility paint markings will be surveyed and added to the topographic survey CAD drawing.

Survey Conditions and Understanding:

- All survey data shall be vertically referenced to the NAVD 88 Geoid 12B and horizontally referenced to the Virginia State Plane North NAD 83/2011, US Survey Foot.
- Survey will be prepared in AutoCAD 2018 utilizing AMT blocks and line styles at a scale as required for easement recordation, in National CAD standards, and in English units (U.S. Survey Foot).
- Limits of Survey and optional Subsurface Utility Designating will be as defined on the attached Exhibit A.
- Survey does not include providing services where hazardous materials or confined spaces, as defined by OSHA, are involved.
- The Town will provide verification that the community has been made aware of surveying and assessment activities prior to work on public and shared space areas.

Submittals: AutoCAD (.dwg) and PDF of the topography utility, property, and tree survey; Tree inventory database (ArcMap) or spreadsheet (Excel); Heatmap of tree density.

III. GEOMORPHIC AND HYDROLOGY ASSESSMENT SERVICES

AMT will review the Watershed Study (Fairfax), TR- 20, USGS SIR 2011-5143 and 2011-5144 information provided by the Town. Geomorphic data will be collected in conjunction with the survey services to ensure correct location and elevation. Information collected includes thalweg, representative cross sections, baseflow elevations, bankfull height, channel slope, top of bank, rock outcrop, debris in stream, existing grade control structures and rifle and pool channel features. Field sketches, site photographs and data forms will be developed as documentation for the stream condition assessment. The stream survey will be adequate to create cross-sections of the stream channel necessary for the HEC-RAS model.

AMT will generally follow the Rosgen Stream Classification System (levels I-III) for assessing the stream channel and valley. The length of stream to be assessed is approximately 2,300 linear feet from I-66 to Cottage Street, SW. All methods, data collection, and analysis will be completed as directed in the United States Department of Agriculture, Natural Resources Conservation Service, Part 654 Stream Restoration Design National Engineering Handbook, unless otherwise directed or agreed to by the Town. Bankfull elevation and discharge flow will be determined using RiverMorph software and field collected data.

To prevent redundancy, previously completed fieldwork associated with the 2020 SLAF grant application will not be repeated, but will instead be incorporated into the design plans accordingly (i.e. Streambank Erosion Assessment and soil bulk density sampling, etc.).

Hydrologic Analysis will be completed by developing a drainage area map and using TR-20/TR-55 (NRCS) methodology and USGS Regional Curves. The results of the hydrologic analysis will be used to calibrate the bankfull flow used in the stream design. The results will be compared to applicable published bankfull regional curves for similar physiographic regions. AMT will prepare a memo of the preliminary assessment data with geomorphic findings, current stream conditions, and bankfull flow, and storm flow results.

Submittals: PDF of memo.

IV. PERMITTING

AMT will identify and obtain the required permits necessary to perform the proposed construction based on the approved design documents. Permit approval shall be obtained prior to bidding and construction. The permitting effort required for this project is as follows:

A. Construction General Permit

It is expected that project disturbance will exceed 1-acre, as such a Stormwater Pollution Prevention Plan or SWPPP will be prepared for the project as is required to support the Construction General Permit. The Registration

Statement - General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10) will be prepared for submission and approval by the DEQ.

B. Clean Water Act Section 404/401 Joint Permit Application (JPA)

- U.S. Army Corps of Engineers (COE) Jurisdictional Determination Request (JDR)
 - AMT will review available digital sources of information including: USGS topographic maps; county soil surveys; National Wetland Inventory maps; aerial imagery
 - AMT will conduct the field delineation of the jurisdictional Waters of the United States (WoUS) and determine the stream classification (perennial or intermittent).
 - Wetlands will be defined using the Routine On-Site Determination Method as defined in the Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (1987 Manual) and modified by the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0) dated April 2012.
 - Wetlands and Waterways will be marked as defined in Section 328.3 (a) of Final Rule for Regulatory Programs of the U.S. Army Corps of Engineers (Federal Register Vol. 51, No. 219, November 13, 1986).
 - The nature of the connection of all WOUS delineated relative to core Resource Protection Area (RPA) components will be determined by the consultant in the field (and documented) to ascertain which wetlands are components of the RPA.
 - AMT will prepare and submit a WOUS Delineation Report including:
 - A brief report summarizing the consultant's findings, including data sheets.
 - A map with the jurisdictional boundaries located. The map will depict data points, photograph locations, and the Cowardin classification for each jurisdictional area.
 - Data Sheets, prepared for each hydrologic condition, plant community and representative soil conditions as prescribed by the 1987 Manual, the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0) dated April 2012 and suitable for COE review and approval, to support the WOUS boundary delineation.
 - AMT will conduct an on-site review with COE representatives for confirmation of the jurisdictional limits and to confirm the proposed impacts are acceptable and the Least Environmentally Damaging Practicable Alternative. AMT will follow all guidance and requirements of the latest 2017 State Program General Permit (17-SPGP-01). AMT will receive confirmation that the stream is jurisdictional, which is required for a permit from COE or DEQ.
- JPA Submittal – AMT will determine the impacts to wetland and WoUS, prepare the permit application and submit for approval. Subtasks for this approval include the following:
 - Complete the worksheet for the Virginia Water Protection Permit Program – Virginia Department of Environmental Quality (DEQ).
 - Resource Protection Area (RPA) delineation and evaluation.
 - JPA filing through VMRC for (NWP 27 Aquatic Habitat Restoration, Enhancement, and Establishment Activities).
 - Natural Channel Design Checklist completion
 - Wetland and WOS Impact exhibits
 - Maintenance and Monitoring Plan
 - Design Report
- AMT will respond to COE and DEQ comments and information requests from these agencies in order to gain approval of the NWP for this project

Submittals: PDF of JPA submittal; permit approvals.

C. U.S. Fish and Wildlife Service (USFWS) and Department of Wildlife Resources (DWR) Threatened and Endangered Species Coordination

AMT will complete the coordination for threatened and endangered species as required by the COE. The following threatened and endangered species as identified by DWR, may occur within two miles of the project area.

- Atlantic Sturgeon
- Northern Long Eared Bat
- Yellow Lance
- Little Brown Bat
- Tri-colored Bat
- Brook Floater
- Wood Turtle
- Peregrine Falcon
- Loggerhead Shrike
- Henslow's Sparrow
- Appalachian Grizzled Skipper
- Migrant Loggerhead Shrike

No field location species surveys are proposed for threatened and endangered animals within the project area. Species listed are proposed to be cleared administratively through reviewing agencies. A separate proposal will be provided if required by a regulatory review agency (DWR or USFWS).

- Small Whorled Pogonia Survey
 - A survey for the presence of potential populations of Small Whorled Pogonia will be made at the Bear Branch Stream Restoration site within the area shown in Exhibit A between I-66 and Cottage Street.
 - A background review will be conducted, which will include USGS topographic mapping and aerial (both visible and infrared spectrum) photography pertinent to evaluating existing conditions within the prescribed study area. Field surveys will be conducted during the 2023 field season (June 1 and July 20), at a time of year when Small Whorled Pogonia is deemed by the US Fish & Wildlife Service to be searchable within areas north of Caroline County, Virginia. Our report will include an evaluation of the potential for the occurrence of Small Whorled Pogonia at the site. A checklist of plant species encountered during the course of our field surveys will be included. Should any populations of Small Whorled Pogonia be found, photographs of representative individuals will be taken and their locations mapped using a submeter accuracy GNSS unit. If necessary, a copy of these reports will be sent to the U.S. Army Corps of Engineers during the waters of the U.S. permit processing.

Submittals: PDF of report; permit approvals.

D. Cultural Resource Assessment

AMT will conduct Virginia Department of Historic Resources (DHR) archival research in order to determine the presence of recognized cultural resources. Database archival research will be through the DHR Virginia Cultural Resources information System (VCRIS). A well-defined Area of Potential Effect (APE) will be overlain a current aerial image to accurately represent the potential impacts of the project on the surrounding community. Archaeological and architectural resources will be reviewed when identified to occur within an approximate distance of 500' from the APE. All identified cultural resources, including known and previously prepared Phase 1 Archaeological Surveys, and any designated Historic Districts will be mapped using the VCRIS. Individual resource reports will be collected and consolidated into a single document. The results of the VCRIS, along with the DHR project review application

will be submitted to DHR through the Electronic Project Information Exchange (ePIX). After an approximate 30 day review period by DHR, a letter either requesting additional studies (Phase 1) or a concurrence of no or negligible impacts to cultural resources will be provided by DHR. This task does not include field investigations, archaeological or cultural resource surveys. Additional studies and Memorandum of Understanding required by DHR or USACE, from Section 106 coordination, will occur using Contingent Item tasks if necessary.

Submittals: Memo of results.

V. DESIGN AND ENGINEERING SERVICES

The methodology for the stream design will be based on the five-level hierarchical framework for assessing stream functions, setting design goals, and evaluating performance described in the U.S. Fish and Wildlife Service (USFWS), Chesapeake Bay Field Office, Coastal Program - Stream Assessment and Restoration team document "A Function-Based Framework for Stream Assessments, Restoration Goals Performance Standards, and Standard Operating Procedures" and supplemental document "Draft Final Function Based Stream Restoration Process Guidelines" (June 2016).

The appropriate portions of the USFWS Natural Channel Design Review Checklist and Selected Morphological Characteristics form; Work Plan – Fluvial Geomorphic-Based Watershed Assessment & Natural Channel Design Method will be completed at this phase and will be finalized at the end of the design phases.

AMT will design the Erosion and Sediment Control Plans in accordance with The Virginia Erosion & Sediment Control Handbook.

AMT will perform design and engineering services for submittals at the following milestones:

- Concept Plan (30%)
- Final Design Plan (75%)
- Construction Documents (100%)

A. Concept Plan (30%)

The preliminary concept will include the following:

- Cover Sheet
- General Notes and Legend
- Existing conditions sheets
 - Tree inventory and condition survey
 - Notes on forest type, general forest condition, description of the understory, and description of the presence and abundance of invasive plant species
- Extent of project, including start and end of project with reach breaks.
- Soil map
- Design concept alternatives for each of the three (3) reaches showing alternate alignments and type of restoration/stabilization (Priority 1 through 4 or a combination).
- Typical cross sections
- Profiles for slope determination and structure locations.
- Preliminary grading plan for limits of disturbance evaluation.
- Limits of disturbance, access, staging and stockpile areas.
- Potential tree impacts for various alignment options.
- Potential stream and structure location and type.
- Structure details
- Habitat features – in stream, wetland and floodplain

- Outfall stabilization type and limits.
- Planting types and details.
- Wetland enhancement and creation areas.
- List of Specifications

The existing conditions HEC RAS model will be completed and preliminary proposed models developed along with a design narrative that will be combined with the Geomorphic and Hydrologic memo to create the draft Design Report. This draft report will be submitted with the Concept Plans and planning level cost estimate with a 30% contingency. We will identify any property easement needs, pursue all environmental permits described in Section IV. AMT will conduct a site walk with the Town and stakeholders to walk the stream and discuss the concept design to determine the preferred design approach.

Submittals: PDF of plans and sketches; PDF of report; meeting minutes.

B. Final Design Plan (75%)

AMT will address all 30% comments from the Town and stakeholders and will prepare the final detailed design and specification package for the stream and all selected contingencies. The Town has requested AMT to prepare and produce the full and complete specifications package. The current Fairfax County standards and specifications will be used as reference. An itemized estimate using all specification numbering will be completed at this phase holding a 10% contingency.

The Final Design and Construction Plan submission packages will include the following:

- Cover sheet
- Notes and legends
- Layout, property and easement plan
- Existing conditions plan
- Soil map
- Grading plan
- Tree preservation plan and inventory
- Geometry plan
- Profiles
- Cross sections
- Structure details and stakeout tables
- Outfall design and profiles
- Planting plan, specifications, and details
- Invasive species/noxious weed control plan
- Erosion & sediment control plan, narrative, sequence, and details
- Water Quality Impact Assessment for stream restoration within a Resource Protection Area (RPA)
- Hydrologic and hydraulic analysis
- No-Rise Certification, if possible
- Final Design Report
- Detailed cost estimate
- Specification package
- Completion of appropriate sections of the U.S. Fish and Wildlife Service Natural Channel Design Checklist

AMT will prepare the design report to include design narrative, geomorphology, and hydrology and hydraulics (existing and proposed). We will identify any property easement needs, pursue all environmental permits described in Section IV. The draft specification package will be created with all necessary specifications identified using the current Fairfax

County standards and specifications and previous Town of Vienna bid packages as reference. AMT will update the general construction estimate to include more unit items following the specifications and carry a 30% contingency.

Submittals: Three (3) full sized plan sets; PDF set of plans; PDF of Design Report; Word and PDF of specifications; and Excel and PDF of cost estimate.

C. Construction Documents (100%)

AMT will address any remaining comments from the Town, stakeholders and permit agencies. We will obtain all remaining permit approvals, finalize the SWPPP, and adjust the plans, specifications and estimate accordingly. Provide a no-rise/no-impact certification on the plans with the final H&H calculations. If the optimum design results in a raise in the BFE and the floodplain manager requires additional permitting then the contingency item for FEMA approval will be completed in this phase. AMT will draft the Operations & Maintenance (O&M) plan and incorporate into the Design Report appendices for future implementation by the Town post-construction, in accordance with the 401 certificate conditions for NWP 27.

Once all plans are approved and permits are secured, AMT will coordinate with the Town to establish the planned bid dates and finalize the bid documents.

Submittals: Three (3) full sized plan sets; PDF set of plans; PDF of Design Report; Word and PDF of specifications; and Excel and PDF of cost estimate.

VI. BIDDING AND CONSTRUCTION PHASE SERVICES

A. Bidding Phase Services

- Pre-Bid Meeting: Project manager and lead designer will attend the pre-bid meeting to speak to contractors about project and answer any questions.
- Respond to Contractor RFIs: AMT will respond to up to five (5) RFI's during the bidding process.
- Addendum Support: AMT will prepare up to two (2) addendums (Plan and/or specification changes) upon direction of the Town.
- AMT will assist the Town in evaluating the contractor bids and schedule of values.

B. Construction Phase Services

- AMT will prepare a pre-construction meeting agenda, and review the design requirements during the pre-construction meeting, along with answering any design-related questions from the contractor.
- Respond to RFI's and review contractor submittals of shop drawings, material certifications, samples, product information, and other submittals for conformance to the design requirements of the project.
- AMT will review plant selections and plantings by a certified nursery
- AMT will coordinate with the Town and Contractor on any field changes and change orders.
- AMT will attend a weekly progress meeting at the site unless limited progress was made on any given week.
- AMT will perform construction inspection services to support for the Town's inspection team on this project. It is anticipated that the active stream construction will take up to 6 months. AMT stream construction inspectors, engineers and scientists will spend an average of 40 hours per week for 22 weeks of active stream construction. Stream construction inspectors will be knowledgeable of stream restoration practices including Natural Channel Design and Rosgen III methodology.
- AMT will prepare weekly construction inspection documentation of the Contractor's grading, in-stream structures, E&S practices, soil, matting, and plant materials. The intent of the documentation is for the general acceptability of Contractor work.

- Upon substantial completion of the work, we will provide an A/E certification and assist in developing the project punch list for the Contractor. We will then assist the Town in reviewing the completion of the punch list work, for the final completion of the project within the allotted time frame (typically 30 days).

C. As-Built Services

AMT will prepare and submit a certified as-built survey of the completed stream restoration. The As-Built Survey will be prepared using the digital grading files and 3D surfaces from design. As-built for the stream restoration portion will contain the following:

- As-built of plan and profile with spot shots on structures, thalweg, and other features to develop contouring and an as-built 3D surface.
- As-built cross-sections will be surveyed and shown for each of the detailed cross-sections shown within the stream restoration plan set including where they tie into existing grade.
- Information for each stream structure included in the plan stakeout sheets.
- As-Built elevations shall be recorded at all grade breaks at intervals sufficient to demonstrate the functional capacity of all simple features. Complex features require additional shots at all grade breaks and outfall inverts.
- As-Built elevations shall be recorded at all critical locations on constructed permanent structures (e.g., in-stream and bank protection structures). All inverts, tops, manhole rims, walls, etc. shall be shown. Any elevation or dimension shown on the construction plan shall be verified and shown on the As-Built plan. As-Built elevations and dimensions shall be "Boxed" to denote As-Built.

D. Post Construction Monitoring

AMT will assist the Town in the monitoring and reporting of the stream restoration project once the project is complete. Post construction monitoring will include the following items:

- Development of monitoring documentation.
- Permanent cross-sections at three strategic locations throughout the project (one per stream reach), which will allow for comparison and adjustment in the post-construction and monitoring phase. Permanent cross sections will consist of monumented benchmarks (rebar mounted in concrete, capped with survey caps) installed by AMT during the establishment period of the project. Permanent cross-section locations will be documented during the post-construction As-Built survey.
- Annual inspections of the stream restoration project, which will include inspection of in-stream structures, critical erosion areas, planted riparian buffer vegetation. Each annual inspection will include site photographs and a discussion of project design versus as-built conditions versus current on-site conditions. Inspection reports will be completed by AMT, reviewed by the Town and sent to the Army Corp of Engineers in accordance with the 401 certificate conditions for NWP 27.
- Annual Technical Memorandum.
- Per the Army Corp of Engineers, annual inspection reports must be sent for a minimum of five years post-construction. AMT will provide inspection and reporting for five years upon project completion.

VII. OPTIONAL SERVICES (CONTINGENCY)

A. Pedestrian Bridge Replacement

AMT will provide recommendations for two (2) types of pedestrian bridges with pre-fabricated super structure and provide the structural design for the required abutments. The Geotechnical Exploration Contingency is recommended to inform the abutment design.

The bridge options will be described in the 30% Concept Phase with typical sections and brief description of bridge features and limitations. The bridge type will be selected by the Town following the 30% Concept Review Meeting and design of the bridge will be included in the 75% Final Design phase. Comments will be addressed and the final bridge design will be included in the 100% Construction Documents.

B. Pedestrian Trail Design

AMT will work with the Town and Southside Park staff to develop a functional pedestrian trail extending from the sidewalk connection in Reach 1 to the pedestrian bridge and playground on the other side of the stream to the parking lot by the baseball fields at the start of Reach 3 as shown in Exhibit B. The preliminary trail alignment options will be included in the 30% Plans. The preferred path location and type will be selected by the Town following the 30% Concept Review Meeting. The path design will be developed in the 75% Final Design Phase and all comments addressed for final path design in the Construction Documents (100%) Plans. The trail components will be included in the specifications and construction estimates at the appropriate level for each submittal.

The planting plans for the trail will be incorporated into the planting plans for the stream restoration project. The specification and construction estimate will be incorporated into the stream restoration packages. There is no additional community outreach associated with the pedestrian trail. It is expected that the Town will determine the preferred path type, size and materials used. No lighting design is included in this task.

C. Archaeological Phase 1 Study

All cultural resources management services proposed herein are pursuant to the National Historic Preservation Act of 1966 (as revised effective August 5, 2004), the Archaeological and Historic Preservation Act of 1974, Executive Order 11593, and relevant sections of 36CFR60 and 36CFR800. The Commonwealth Heritage Group (CHG) Principal Investigator and Project Archaeologist directing this survey meets the professional qualification standards of the Department of the Interior (48 FR 44738-9). The archaeological survey will be conducted with reference to the Guidelines for Conducting Historic Resource Survey in Virginia CVDHR 2011) and federal guidelines (Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation [United States Department of the Interior {USDI} 1983]) for conducting archaeological investigations. All artifacts generated in the course of survey and associated records will be curated according to the requirements specified in Curation of Federally Owned and Administered Archaeological Collections (36 CFR Part 79) and Virginia Department of Historic Resources' (VDHR) State Curation Standards.

Commonwealth Heritage Group (CHG) will provide Phase I level archaeological survey for the project area. The Phase I investigation will involve background research, field survey, lab analysis and records completion if archaeological sites are identified, and draft and final reporting. The fieldwork will involve:

FCPA and VDHR guidelines require Phase I systematic shovel test surveys at a maximum of 50 ft intervals along a grid to test for archeological resources where there is inadequate ground surface visibility. CHG has determined that 124 shovel tests will be necessary to complete the survey at the project site. The number and location of the shovel test surveys were determined as follows:

- performing shovel tests throughout the determined testable area along the 50 ft max spacing grid pattern,
- performing shovel tests to make sure the edges of the project area are tested,
- performing shovel tests on areas that may fall between transects, and
- performing shovel tests excavated around positive holes at 25 ft intervals until two consecutive shovel tests are negative.

All shovel test pits will be backfilled prior to completing the study. Shovel tests will not be excavated in areas of more than 15% slope, wetlands, ponded areas, areas previously disturbed by sanitary sewer construction, or areas that are determined to retain a low probability following the pedestrian survey. The soil excavated from all shovel tests will be passed through 1/4-inch mesh screen and all shovel tests will be approximately 0.45 meters in diameter.

Fieldwork conducted in the course of this survey is designed to provide the client with definitive information on the presence and type of cultural resources located in the project area. Following federal and state guidelines and

legislation, CHG will conduct the survey with the goal of not only identifying cultural resources but also making preliminary recommendations regarding their eligibility for nomination to the National Register of Historic Places (NRHP). It is understood that before any work can be completed in the field, FCPA cultural resource staff need to review and agree on the proposed work plan for the site.

Any archeological data and specimens collected during the Phase I survey will be transported to the lab in Chantilly, Virginia for processing and analysis. After processing and re-bagging, the entire artifact assemblage will be cataloged. Diagnostic artifacts will be grouped together based on type or ware and/or function and checked for cross-mends. Analysis of recovered artifacts will rely on standard reference works for the region and artifact type. All materials generated by this project will be curated according to the standards outlined in 36 CFR Part 79 ("Curation of Federally-Owned and Administered Archeological Collections") and returned to the Town of Vienna or curated at VDHR.

Upon completion of the background research, fieldwork, and artifact analysis, a technical report detailing the results of the field investigations will be drafted. The report will include the appropriate analyses and recommendations for subsequent investigations, if necessary. The report will meet the reporting standards issued by the Secretary of the Interior and will also follow the report production guidelines established by the VDHR. If additional work is recommended due to the findings of the study, a Phase II study will be performed as an optional task.

Submittals: PDF of report.

D. Archaeological Phase 2 Study

A Phase II Archaeological Study will be completed, and findings reported if an additional study is determined necessary in the finding of the Archaeological Phase I study. The objective of a Phase II Archaeological Evaluation is to evaluate the NRHP eligibility of an archaeological resource within the project area. CHG will assess the characteristics of the site against an appropriate historic context and assess eligibility for the Virginia Landmarks Register and the NRHP. Integrity is an important consideration when evaluating archaeological sites. One must also consider the rarity of the site type and the amount and kind of information it can provide, including how it contributes to the historic context. The evaluations focus on identifying when the site was occupied, its function, if there is an internal site structure, and the vertical and horizontal boundaries. One must evaluate the entire site, which means the site boundaries, the internal structure of the site and its integrity need to be evaluated in order to determine whether or not all of the site might be impacted by a project, and whether the portion of the site within the project area contributes to the eligibility of the site as a whole.

CHG will provide Phase II level archaeological evaluation of one archaeological resource no larger than one-half acre. The Phase II investigation will involve background research, field survey, lab analysis and records completion, and draft and final reporting.

CHG will conduct historic background research to investigate the history of site. The research will be used to develop an historic context for use in evaluating the NRHP eligibility of the site. If the site is from the historic period it will include deed and property ownership history research. CHG will conduct historic background research at the appropriate local repositories.

The fieldwork will involve:

Subsurface testing including shovel tests and test units. The goal of the shovel testing is to refine the site boundaries, test for features, and gain an understanding of artifact distribution and site stratigraphy. CHG will use the results from the shovel tests, along with surface indications, to locate the test units in places that will provide information on site integrity and collect controlled samples of artifacts.

- CHG will excavate 35 shovel tests along a grid at 25-ft intervals across the site.
- CHG will excavate up to three 3-by-3-ft test units.
- CHG proposes to excavate up to 3 features.

- CHG assumes that approximately 200 artifacts will be recovered and need processing.

Shovel testing methods will be identical to those outlined for the Phase I study. Test units will be excavated by natural strata. The soil from the test units will be screened through 1/4-inch hardware cloth. Recovered artifacts will be placed in labeled plastic bags by provenience. Excavation results and interpretations will be recorded on a standardized form. At least one profile from each test unit will be drawn to record stratigraphy. If features are encountered, to the extent possible, the surface of the features will be cleaned, recorded, and mapped. Small features (e.g. post-holes) will be excavated in their entirety and larger features (e.g. trash pits) will be sampled by excavating a portion (e.g., bisection, test unit excavation) of the feature. Feature fill will be screened through 1/4-inch hardware cloth. Recovered artifacts will be placed in bags labeled with provenience information. Appropriate project maps and soil profiles will be made. All excavations will be backfilled at the completion of the fieldwork. Artifacts recovered during the investigation will be processed at CHG's Chantilly, Virginia lab. Laboratory methods will be identical to those outlined for the Phase I study.

Upon completion of the background research, fieldwork, and artifact analysis, a technical report detailing the results of the evaluation will be drafted. The report will include the appropriate analyses and recommendations for subsequent investigations, if necessary. The report will meet the reporting standards issued by the Secretary of the Interior and will also follow the report production guidelines established by the VDHR.

E. Pollutant Removal Crediting

AMT will collect in-situ soil samples from eroding banks and submit samples to the lab for testing of bulk density, Nitrogen and Phosphorus. The results will be analyzed and used to update the pollutant removal credits for the project. AMT will develop an assessment of the water quality benefits of this project towards the Chesapeake Bay TMDL requirements for the Town of Vienna's MS4 requirements. This will include calculations for the five (5) methods available in the Chesapeake Bay program guidance, and all associated field investigations necessary to develop governing assumptions for these methods.

F. Geotechnical Exploration

Geotechnical exploration will be conducted at six (6) location throughout the project area to determine depth to rock, groundwater elevations, Atterburg Limits, pH, organic content, nutrients, and contaminants for the stream restoration project. If the Pedestrian Bridge Replacement Contingency is selected then this task will be used for two (2) borings and a report for the abutment design.

G. Easement Plats

AMT will prepare Easement sketches and/or metes and bounds descriptions for temporary and permanent easements as necessary at a cost per each easement. The Town will be responsible for preparation of easement legal document and recordation of easement. AMT will prepare and provide the easement plat to be attached to the legal document. A maximum of 5 temporary and permanent easements are estimated to complete this optional task.

H. FEMA Floodplain Permitting

AMT will complete a FEMA Conditional Letter of Map Revision (CLOMR) for acceptance by FEMA if the design results in a 100-yr storm water surface elevation increase over 1-ft. (CLOMR) or Letter of Map Revision (LOMR) as required to provide FEMA sufficient data necessary to revise the Flood Insurance Rate Map (FIRM) to reflect the proposed effects of the project. Submittal of the CLOMR will include:

- Narrative
- Vicinity Map
- FEMA Effective FIRM and FIS Data
- USGS Floodplain Data for the channel

- FEMA MT-2 Forms
- Hydraulic Models
- Floodplain Mapping
- Annotated FIRM and FIS Profile
- Notification to all affected property owners

The hydraulic model will be updated with the as-built information and a Letter of Map Revision (LOMR) will be submitted for FEMA acceptance. The consultant will then submit a LOMR to FEMA to request a formal revision of the FEMA floodplain to reflect the as-built conditions of the project. The LOMR submittal will include all updated items from the CLOMR acceptance process.

ASSUMPTIONS / EXCLUSIONS

1. The Town will make available all GIS shapefiles including topography contours, the base Technical Specifications template and any pertinent as-builts plans (as available).
2. The Town will provide a letter describing the purpose of the project and permission to be working on public land.
3. It may be necessary to enter private property to obtain necessary survey information. AMT will coordinate with the Town prior to any citizen outreach. It is AMT's responsibility to obtain any necessary permission to obtain access to private property.
4. Stormwater management will not be required for this project.
5. No utility relocation or design work is included in this proposal.
6. No Maintenance of Traffic design or permitting is included in this contract.
7. Floodplain studies include available FEMA mapping, however current FEMA mapping (FIRM Map No. 51059C0145E dated September 17, 2010) shows that there are no defined FEMA 100-year floodplain base elevations determined for the project site. Impacts from the proposed design are not expected to increase water surface elevations over 1-ft so we do not anticipate the need for floodplain map revisions (CLOMR).
8. Construction of Bear Branch Phase 1 will not occur at the same time as this Phase 2 construction project. Additional coordination will be necessary if construction of both projects is concurrent.
9. The existing metal bridge in Reach 3 in South end of the park connecting the basketball courts does not need to be replaced.
10. No assessment of the culvert between Reach 2 and 3 or recommendations are included in this proposal.
11. No mitigation is necessary for impacts to threatened and endangered bats.
12. No renderings of proposed designs will be developed.
13. No VMRC public hearing will be required for this project.
14. The COE and DEQ will not require an Individual Permit for this project.
15. All permit application fees will be reimbursed by the Town with prior approval.
16. No Value Engineering study will be required for this project as AMT will continually work to minimize construction costs wherever possible.

FEES

AMT will provide the services described above for the hourly not to exceed cost summarized below and as detailed in the attached cost summary sheets.

I. PROJECT MANAGEMENT & MEETINGS	\$25,578.22
II. SURVEY SERVICES	\$88,383.29
III. GEOMORPHIC AND HYDROLOGY ASSESSMENT SERVICES	\$24,971.61
IV. PERMITTING	\$26,033.33
V. DESIGN AND ENGINEERING SERVICES	\$131,317.86
VI. BIDDING AND CONSTRUCTION PHASE SERVICES	\$196,749.78
Direct Costs	\$4,709.26

Total Base Fee \$497,743.35

VII. OPTIONAL SERVICES (CONTINGENCY)

A. Pedestrian Bridge Replacement	\$20,300.81
B. Pedestrian Trail Design	\$25,212.96
C. Archaeological Phase 2 Study	\$26,487.17
D. Archaeological Phase 2 Study	\$38,501.74
E. Pollutant Removal Crediting	\$4,346.46
F. Geotechnical Exploration	\$25,000.00
G. Easement Plats	\$11,079.75
H. FEMA Floodplain Permitting	\$15,603.67

Total Contingency Fee \$166,532.57

Grand Total Fee \$664,275.92

We are available to start work immediately upon receipt of an executed and mutually acceptable agreement. We look forward to continuing working with the Town of Vienna. Please contact me at 301-591-8572 or via email at gfox@amtengineering.com if you have any questions or require additional information.

Sincerely,

A. Morton Thomas and Associates, Inc.



Gregory Fox, PE
Associate

Cc: Mike Wiercinski, President
Rick Higdon, Contracts Manager

**Price Proposal
Town of Vienna
CONSULTANT TOTAL PRICE SUMMARY**

PROJECT: **BEAR BRANCH TRIBUTARY PHASE 2 STREAM RESTORATION – DESIGN**
CONSULTANT: A. MORTON THOMAS & ASSOCIATES, INC.

1. DIRECT LABOR (Specify Labor Categories)	Estimated HOURS	HOURLY RATE	ESTIMATED COST	TOTALS
Project Manager	147	\$ 82.69	\$ 12,155.43	
Sr. Engineer/Sr. Landscape Architect	534	\$ 64.52	\$ 34,453.68	
Engineer/Landscape Architect	836	\$ 48.07	\$ 40,186.52	
Environmental Scientist	336	\$ 40.44	\$ 13,587.84	
CADD Technician	496	\$ 42.27	\$ 20,965.92	
Inspector	600	\$ 37.29	\$ 22,374.00	
Registered Surveyor	134	\$ 56.51	\$ 7,572.34	
1-Person Survey Crew	68	\$ 39.75	\$ 2,703.00	
2- Person Survey Crew	200	\$ 63.25	\$ 12,650.00	
3- Person Survey Crew	156	\$ 83.25	\$ 12,987.00	
Subsurface Utility Engineer Manager	4	\$ 43.61	\$ 174.44	
Subsurface Utility Technician	0	\$ 32.69	\$ -	
DIRECT LABOR TOTAL	3511.00			\$ 179,810.17
2. INDIRECT COSTS (SPECIFY INDIRECT COST POOLS)	RATE	x BASE =	ESTIMATED COST	
	149.27%	\$ 179,810.17	\$ 268,402.64	
INDIRECT COST TOTAL				\$ 268,402.64
3. PROFIT (1 + 2) x 10%				\$ 44,821.28
4. OTHER DIRECT COSTS	QTY	COST	ESTIMATED COST	
a. TRAVEL				
(1) TRANSPORTATION (PER MILE)	4,956	\$ 0.585	\$ 2,899.26	
(2) PER DIEM		\$ -	\$ -	
(check current County Travel Policy)				
TRAVEL SUBTOTAL			\$ 2,899.26	
b. EQUIPMENT, MATERIALS, SUPPLIES (Specify Categories)	QTY	COST	ESTIMATED COST	
(1) Printing	1	\$ 1,200.00	\$ 1,200.00	
(2) Lab Samples	6	\$ 85.00	\$ 510.00	
(3) Other		\$ -	\$ -	
EQUIPMENT SUBTOTAL			\$ 1,710.00	
c. SUBCONTRACTS			ESTIMATED COST	
(1) Terracon Consultants, Inc.			\$ 25,000.00	(contingent task only)
(2) Commonwealth Heritage Group (CHG)			\$ 64,988.91	(contingent task only)
			\$ -	
SUBCONTRACT SUBTOTAL			\$ 89,988.91	(in Contingency Items)
d. OTHER (Specify Categories)			ESTIMATED COST	
(1) Overnight Delivery - Letter Size Package	2	\$ 15.00	\$ 30.00	
(2) Overnight Delivery - Plan Size Package	2	\$ 35.00	\$ 70.00	
OTHER SUBTOTALS			\$ 100.00	
TOTAL OTHER DIRECT COSTS				\$ 4,709.26
5. TOTAL BASE BID				\$ 497,743.35
Contingency Items	\$ 166,532.57			\$ 166,532.57
6. TOTAL PRICE				\$ 664,275.92

BEAR BRANCH TRIBUTARY
PHASE 2 STREAM
RESTORATION – DESIGN

A. Morton Thomas, and Assoc.

8/4/2022

FEE PROPOSAL

A. MORTON THOMAS & ASSOCIATES, INC.

Town of Vienna

BEAR BRANCH TRIBUTARY PHASE 2STREAM RESTORATION – DESIGN

Date Prepared: August 4, 2022

AMT Project # P22-0253

Town of Vienna RFP 22-03

Work Tasks	Labor Class Titles												Phase Total Hours	Calculated Phase Total Cost With Un-Burdened Hourly Rates	Calculated Phase Total Cost With Burdened Hourly Rates	Company Responsible
	Project Manager	Sr. Engineer/Sr. Landscape Architect	Engineer/Landscape Architect	Environmental Scientist	CADD Technician	Inspector	Registered Surveyor	1-Person Survey Crew	2- Person Survey Crew	3- Person Survey Crew	Subsurface Utility Engineer Manager	Subsurface Utility Technician				
Unburdened Labor Rate	\$ 82.69	\$ 64.52	\$ 48.07	\$ 40.44	\$ 42.27	\$ 37.29	\$ 56.51	\$ 39.75	\$ 63.25	\$ 83.25	\$ 43.61	\$ 32.69				
I. PROJECT MANAGEMENT & MEETINGS																
I.A. PROJECT MANAGEMENT	41	34	3	3	0	0	0	0	0	0	0	0	81.00	\$ 5,849.50	\$ 16,039.15	AMT
I.B. PROJECT SCHEDULING	11	0	0	0	0	0	0	0	0	0	0	0	11.00	\$ 909.59	\$ 2,494.07	AMT
I.C. STAKEHOLDERS MEETINGS AND PUBLIC OUTREACH	12	8	8	0	16	0	0	0	0	0	0	0	44.00	\$ 2,569.32	\$ 7,045.00	AMT
II. SURVEY SERVICES																
II.A. TOPOGRAPHIC SURVEY	0	0	0	16	76	0	20	0	16	100	0	0	228.00	\$ 14,326.76	\$ 39,283.55	AMT
II.B. TREE SURVEY	0	42	32	56	10	0	16	24	0	56	0	0	236.00	\$ 13,455.58	\$ 36,894.80	AMT
II.C. PROPERTY AND RIGHT OF WAY	0	0	0	0	32	0	8	0	24	0	0	0	64.00	\$ 3,322.72	\$ 9,110.80	AMT
II.D. UTILITY DESIGNATION	0	0	0	0	0	0	0	24	0	0	4	0	28.00	\$ 1,128.44	\$ 3,094.15	AMT
III. GEOMORPHIC AND HYDROLOGY ASSESSMENT SERVICES																
GEOMORPHIC AND HYDROLOGY ASSESSMENT SERVICES	4	52	62	52	8	0	0	0	0	0	0	0	178.00	\$ 9,107.18	\$ 24,971.61	AMT
IV. PERMITTING																
A. CONSTRUCTION GENERAL PERMIT	2	0	16	18	3	0	0	0	0	0	0	0	39.00	\$ 1,789.23	\$ 4,906.01	AMT
B. CLEAN WATER ACT SECTION 404/401 JOINT PERMIT APPLICATION	0	61	0	39	11	0	0	0	0	0	0	0	111.00	\$ 5,977.85	\$ 16,391.09	AMT
C. USFWS AND DWR THREATENED AND ENDANGERED SPECIES PERMIT	1	8	2	0	0	0	0	0	0	0	0	0	11.00	\$ 694.99	\$ 1,905.64	AMT
D. CULTURAL RESOURCE ASSESSMENT	0	16	0	0	0	0	0	0	0	0	0	0	16.00	\$ 1,032.32	\$ 2,830.59	AMT
V. DESIGN AND ENGINEERING SERVICES																
A. CONCEPT PLAN (30%)	10	38	164	18	46	0	0	0	0	0	0	0	276.00	\$ 13,834.48	\$ 37,933.73	AMT
B. FINAL DESIGN PLAN (75%)	10	69	269	32	128	0	0	0	0	0	0	0	508.00	\$ 24,914.25	\$ 68,314.13	AMT
C. CONSTRUCTION DOCUMENTS (100%)	7	28	83	12	54	0	0	0	0	0	0	0	184.00	\$ 9,143.06	\$ 25,070.00	AMT
VI. BIDDING AND CONSTRUCTION PHASE SERVICES																
A. BIDDING PHASE SERVICES	9	18	16	10	0	0	0	0	0	0	0	0	53.00	\$ 3,079.09	\$ 8,442.77	AMT
B. CONSTRUCTION PHASE SERVICES	30	88	104	60	40	600	0	0	0	0	0	0	922.00	\$ 39,648.94	\$ 108,716.20	AMT
C. AS-BUILT SERVICES	6	16	40	0	64	0	80	0	160	0	0	0	366.00	\$ 20,797.34	\$ 57,025.68	AMT
D. POST CONSTRUCTION MONITORING	4	56	37	20	8	0	10	20	0	0	0	0	155.00	\$ 8,229.53	\$ 22,565.12	AMT
VII. OPTIONAL SERVICES (CONTINGENCY)																
A. PEDESTRIAN BRIDGE REPLACEMENT	5	64	56	0	4	0	0	0	0	0	0	0	129.00	\$ 7,403.73	\$ 20,300.81	AMT
B. PEDESTRIAN TRAIL DESIGN	16	38	60	0	60	0	0	0	0	0	0	0	174.00	\$ 9,195.20	\$ 25,212.96	AMT
C. ARCHAEOLOGICAL PHASE 1 STUDY															\$ 26,487.17	CHG
D. ARCHAEOLOGICAL PHASE 2 STUDY															\$ 38,501.74	CHG
E. POLLUTANT REMOVAL CREDITING	4	0	16	12	0	0	0	0	0	0	0	0	32.00	\$ 1,585.16	\$ 4,346.46	AMT
F. GEOTECHNICAL EXPLORATION															\$ 25,000.00	TERRA
G. EASEMENT PLATS	5	0	0	0	50	0	10	0	15	0	0	0	80.00	\$ 4,040.80	\$ 11,079.75	AMT
H. FEMA FLOODPLAIN PERMITTING	2	9	80	0	26	0	0	0	0	0	0	0	117.00	\$ 5,690.68	\$ 15,603.67	AMT
Subtotal Hours (Non Contingency)	147.00	534.00	836.00	336.00	496.00	600.00	134.00	68.00	200.00	156.00	4.00	0.00	4043.00	\$ 179,810.17	\$ 493,034.09	
Subtotal Cost (Non Contingency)	\$12,155.43	\$34,453.68	\$40,186.52	\$13,587.84	\$20,965.92	\$22,374.00	\$7,572.34	\$2,703.00	\$12,650.00	\$12,987.00	\$174.44	\$0.00		\$ 179,810.17	\$ 493,034.09	
Indirect Cost Total														\$ 268,402.64		
Profit														\$ 44,821.28		
Subtotal														\$ 493,034.09	\$ 493,034.09	
Total reimbursables and ODCs														\$4,709.26	\$4,709.26	\$ 4,709.26
Total Base Bid Fee	\$12,155.43	\$34,453.68	\$40,186.52	\$13,587.84	\$20,965.92	\$22,374.00	\$7,572.34	\$2,703.00	\$12,650.00	\$12,987.00	\$174.44	\$0.00	\$0.00	\$ 497,743.35	\$ 497,743.35	
	6.76%	19.16%	22.35%	7.56%	11.66%	12.44%	4.21%	1.50%	7.04%	7.22%	0.10%	0.00%				

Overhead Rate	149.27%
Profit Rate	10%

FEE CATEGORY	TOTAL AMT FEE	SUBCONSULTANT FEE	TOTAL FEE
BASE BID	\$493,034.09		\$493,034.09
CONTINGENCY	\$76,543.66	\$89,988.91	\$166,532.57
Directs			\$4,709.26
TOTAL	\$569,577.75	\$89,988.91	\$664,275.92

EXHIBIT A

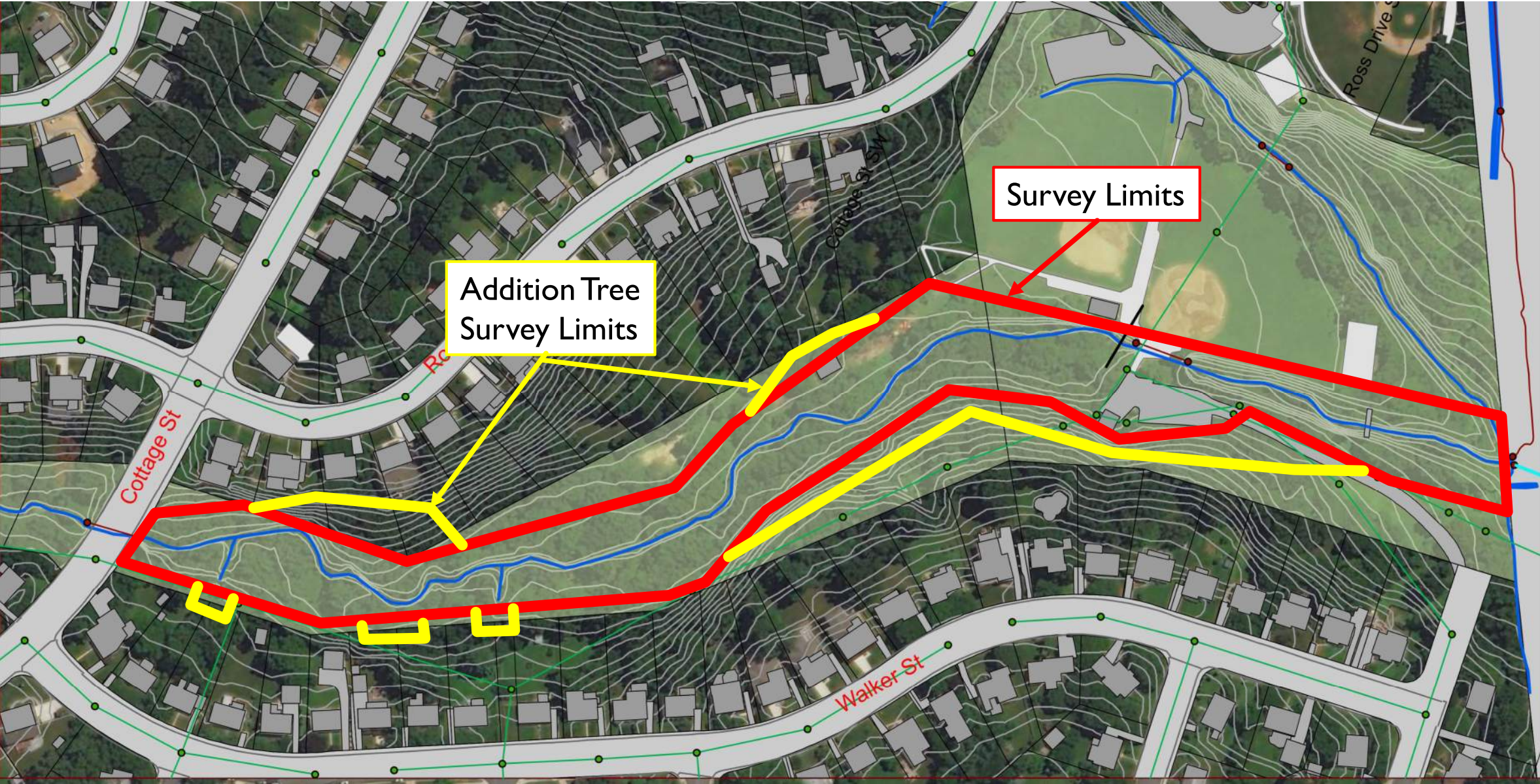


EXHIBIT B



**Price Proposal
Town of Vienna
CONSULTANT TOTAL PRICE SUMMARY**

PROJECT: **BEAR BRANCH TRIBUTARY PHASE 2 STREAM RESTORATION – DESIGN**
TASK: **CONTINGENCY - VII.C - Archaeological Phase 1 Study**
CONSULTANT: Commonwealth Heritage Group

1. DIRECT LABOR (Specify Labor Categories)	Estimated HOURS	HOURLY RATE	ESTIMATED COST	TOTALS
Project Manager	40	\$ 46.76	\$ 1,870.40	
Principal Investigator	124	\$ 36.46	\$ 4,521.04	
Archaeological Field Technician	80	\$ 18.00	\$ 1,440.00	
Graphics Specialist	32	\$ 32.56	\$ 1,041.92	
	0		\$ -	
	0		\$ -	
	0		\$ -	
	0		\$ -	
	0		\$ -	
	0		\$ -	
	0		\$ -	
	0		\$ -	
	0		\$ -	
DIRECT LABOR TOTAL	276.00			\$ 8,873.36
2. INDIRECT COSTS (SPECIFY INDIRECT COST POOLS)	RATE	x BASE =	ESTIMATED COST	
	1.40	\$ 8,873.36	\$12,422.70	
INDIRECT COST TOTAL				\$ 12,422.70
3. PROFIT (1 + 2) x 10%				\$ 2,129.61
4. OTHER DIRECT COSTS	QTY	COST		
a. TRAVEL			ESTIMATED COST	
(1) TRANSPORTATION (PER MILE)	200	\$ 0.625	\$ 125.00	
(2) PER DIEM	10	\$ 239.15	\$ 2,391.50	
(check current County Travel Policy)				
TRAVEL SUBTOTAL			\$ 2,516.50	
b. EQUIPMENT, MATERIALS, SUPPLIES (Specify Categories)	QTY	COST	ESTIMATED COST	
(1) Printing	500	\$ 0.05	\$ 25.00	
(2) Field/Lab Supplies	2	\$ 50.00	\$ 100.00	
(3) VDHR Box Curation Fee	1	\$ 350.00	\$ 350.00	
EQUIPMENT SUBTOTAL			\$ 475.00	
c. SUBCONTRACTS			ESTIMATED COST	
			\$ -	
			\$ -	
			\$ -	
SUBCONTRACT SUBTOTAL			\$ -	
d. OTHER (Specify Categories)			ESTIMATED COST	
(1) Overnight Delivery - Letter Size Package		\$ 15.00	\$ -	
(2) Overnight Delivery - Plan Size Package	2	\$ 35.00	\$ 70.00	
OTHER SUBTOTALS			\$ 70.00	
TOTAL OTHER DIRECT COSTS				\$ 3,061.50
CONTINGENCY (10% of Basic Services)	\$ 2,648.72		USE	\$ -
5. TOTAL PRICE				\$ 26,487.17

BEAR BRANCH TRIBUTARY
PHASE 2 STREAM
RESTORATION – DESIGN

Price Proposal
Town of Vienna
CONSULTANT TOTAL PRICE SUMMARY

PROJECT: **BEAR BRANCH TRIBUTARY PHASE 2 STREAM RESTORATION – DESIGN**
TASK: **CONTINGENCY - VII.D - Archaeological Phase 2 Study**
CONSULTANT: Commonwealth Heritage Group

1. DIRECT LABOR (Specify Labor Categories)	Estimated HOURS	HOURLY RATE	ESTIMATED COST	TOTALS
Project Manager	36	\$ 46.76	\$ 1,683.36	
Principal Investigator	160	\$ 36.46	\$ 5,833.60	
Archaeological Field Technician	168	\$ 18.00	\$ 3,024.00	
Historian	44	\$ 22.66	\$ 997.04	
Graphics Specialist	40	\$ 32.56	\$ 1,302.40	
	0		\$ -	
	0		\$ -	
	0		\$ -	
	0		\$ -	
	0		\$ -	
	0		\$ -	
	0		\$ -	
DIRECT LABOR TOTAL	448.00			\$ 12,840.40
2. INDIRECT COSTS (SPECIFY INDIRECT COST POOLS)	RATE	x BASE =	ESTIMATED COST	
	1.40	\$ 12,840.40	\$ 17,976.56	
INDIRECT COST TOTAL				\$ 17,976.56
3. PROFIT (1 + 2) x 10%				\$ 3,081.70
4. OTHER DIRECT COSTS	QTY	COST		
a. TRAVEL			ESTIMATED COST	
(1) TRANSPORTATION (PER MILE)	320	\$ 0.625	\$ 200.00	
(2) PER DIEM	16	\$ 241.13	\$ 3,858.08	
(check current County Travel Policy)				
TRAVEL SUBTOTAL			\$ 4,058.08	
b. EQUIPMENT, MATERIALS, SUPPLIES (Specify Categories)	QTY	COST	ESTIMATED COST	
(1) Printing	500	\$ 0.05	\$ 25.00	
(2) Field/Lab Supplies	2	\$ 50.00	\$ 100.00	
(3) VDHR Box Curation Fee	1	\$ 350.00	\$ 350.00	
EQUIPMENT SUBTOTAL			\$ 475.00	
c. SUBCONTRACTS			ESTIMATED COST	
			\$ -	
			\$ -	
			\$ -	
SUBCONTRACT SUBTOTAL			\$ -	
d. OTHER (Specify Categories)			ESTIMATED COST	
(1) Overnight Delivery - Letter Size Package		\$ 15.00	\$ -	
(2) Overnight Delivery - Plan Size Package	2	\$ 35.00	\$ 70.00	
OTHER SUBTOTALS			\$ 70.00	
TOTAL OTHER DIRECT COSTS				\$ 4,603.08
CONTINGENCY (10% of Basic Services)	\$ 3,850.17		USE	\$ -
5. TOTAL PRICE				\$ 38,501.74

BEAR BRANCH TRIBUTARY
PHASE 2 STREAM
RESTORATION – DESIGN