PROFESSIONAL SERVICES AGREEMENT
BETWEEN THE CITY OF COPPELL, TEXAS, AND WALTER P MOORE
FOR THE ANDREW BROWN WEST PARK – DENTON CREEK STABILIZATION PROJECT

This Agreement for Professional Services, hereinafter called "Agreement," is entered into by the **City of Coppell, Texas**, a municipal corporation, duly authorized to act by the City Council of said City, hereinafter called "City," and **Walter P Moore,** a Texas corporation, acting through a duly authorized officer, hereinafter called "Consultant," relative to Consultant providing professional services to City. City and Consultant when mentioned collectively shall be referred to as the "Parties."

W I T N E S S E T H:

WHEREAS, City desires to obtain professional engineering services in connection with the **ANDREW BROWN WEST PARK – DENTON CREEK STABILIZATION PROJECT**, hereinafter called "Project";

For the mutual promises and benefits herein described, City and Consultant agree as follows:

1. **Term of Agreement.** This Agreement shall become effective on the date of its execution by both Parties, and shall continue in effect thereafter until terminated as provided herein.

2. **Services to be Performed by Consultant.** The Parties agree that Consultant shall perform such services as are set forth and described in **Exhibit A - Scope of Services** and incorporated herein as if written word for word. All services provided by Consultant hereunder shall be performed in accordance with the degree of care and skill ordinarily exercised under the same or similar circumstances by competent members of their profession in the locality. In case of conflict in the language of Exhibit A and this Agreement, this Agreement shall govern and control. Deviations from the Scope of Services or other provisions of this Agreement may only be made by written agreement signed by all Parties to this Agreement.

3. **Prompt Performance by Consultant**. Consultant shall perform all duties and services and make all decisions called for hereunder promptly and without unreasonable delay as is necessary to cause Consultant's services hereunder to be timely and properly performed. Notwithstanding the foregoing, Consultant agrees to use diligent efforts to perform the services described herein and further defined in any specific task orders, in a manner consistent with these task orders; however, the City understands and agrees that Consultant is retained to perform a professional service and such services must be bound, first and foremost, by the principles of sound professional judgment and reasonable diligence.

4. **Compensation of Consultant.** City agrees to pay to Consultant for satisfactory completion of all services included in this Agreement a total fee of $269,500.00 for the Project as set forth and described in **Exhibit B – Compensation/Pricing Schedule** and incorporated herein as if written word for word. Lump sum fees shall be billed monthly based on the percentage of completion. Hourly not to exceed fees shall be billed monthly based on hours of work that have been completed. Direct Costs for expenses such as mileage, copies, scans, sub-consultants, and similar costs are included in fees and shall be billed as completed.

Consultant agrees to submit statements to City for professional services no more than once per

month. These statements will be based upon Consultant's actual services performed and reimbursable expenses incurred, if any, and City shall endeavor to make prompt payments. Each statement submitted by Consultant to City shall be reasonably itemized to show the amount of work performed during that period. If City fails to pay Consultant within sixty (60) calendar days of the receipt of Consultant's invoice, Consultant may, after giving ten (10) days written notice to City, suspend professional services until paid.

Nothing contained in this Agreement shall require City to pay for any work that is unsatisfactory as reasonably determined by City or which is not submitted in compliance with the terms of this Agreement.

The Scope of Services shall be strictly limited. City shall not be required to pay any amount in excess of the original proposed amount unless City shall have approved in writing in advance (prior to the performance of additional work) the payment of additional amounts.

5. **City's Obligations.** City agrees that it will (i) designate a specific person as City's representative, (ii) provide Consultant with any previous studies, reports, data, budget constraints, special City requirements, or other pertinent information known to City, when necessitated by a project, (iii) when needed, assist Consultant in obtaining access to properties necessary for performance of Consultant's work for City, (iv) make prompt payments in response to Consultant's statements, and (v) respond in a timely fashion to requests from Consultant. Consultant is entitled to rely upon and use, without independent verification and without liability, all information and services provided by City or City's representatives.

6. **Ownership and Reuse of Documents**. Upon completion of Consultant's services and receipt of payment in full therefore, Consultant agrees to provide City with copies of all materials and documents prepared or assembled by Consultant under this Agreement and City may use them without Consultant's permission for any purpose relating to the Project. Any reuse of the documents not relating to the Project shall be at City's risk. Consultant may retain in its files copies of all reports, drawings, specifications and all other pertinent information for the work it performs for City.

7. **City Objection to Personnel**. If at any time after entering into this Agreement, City has any reasonable objection to any of Consultant's personnel, or any personnel, professionals and/or consultants retained by Consultant, Consultant shall promptly propose substitutes to whom City has no reasonable objection, and Consultant's compensation shall be equitably adjusted to reflect any difference in Consultant's costs occasioned by such substitution.

8. **Insurance**. Consultant shall, at its own expense, purchase, maintain and keep in force throughout the duration of this Agreement applicable insurance policies. Consultant shall submit to City proof of such insurance prior to commencing any work for City.

9. **Indemnification**. **CONSULTANT DOES HEREBY COVENANT AND AGREE TO RELEASE, INDEMNIFY AND HOLD HARMLESS CITY AND ITS OFFICIALS, OFFICERS, AGENTS, REPRESENTATIVES, EMPLOYEES AND INVITEES FROM AND AGAINST LIABILITY, CLAIMS, SUITS, DEMANDS AND/OR CAUSES OF ACTION, (INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEY'S FEES AND COSTS OF LITIGATION), WHICH MAY ARISE BY REASON OF DEATH OR INJURY TO PROPERTY OR PERSONS BUT ONLY TO THE EXTENT OCCASIONED BY THE NEGLIGENT ACT, ERROR OR OMISSION OF CONSULTANT, ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES,**

INVITEES OR OTHER PERSONS FOR WHOM CONSULTANT IS LEGALLY LIABLE WITH REGARD TO THE PERFORMANCE OF THIS AGREEMENT.

IN THE EVENT THAT CITY AND CONSULTANT ARE CONCURRENTLY NEGLIGENT, THE PARTIES AGREE THAT ALL LIABILITY SHALL BE CALCULATED ON A COMPARATIVE BASIS OF FAULT AND RESPONSIBILITY AND THAT NEITHER PARTY SHALL BE REQUIRED TO DEFEND OR INDEMNIFY THE OTHER PARTY FOR THAT PARTY'S NEGLIGENT OR INTENTIONAL ACTS, ERRORS OR OMISSIONS.

10. **Notices**. Any notices to be given hereunder by either Party to the other may be affected either by personal delivery, in writing, or by registered or certified mail to the following addresses:

Walter P Moore	City of Coppell
Ernest Fields, P.E.	Michael Garza, P.E.
Senior Principal	Director of Public Works
500 N. Akard, Suite 2300	265 Parkway Blvd
Dallas, TX 75201	Coppell, TX 75019

11. **Termination**. The obligation to provide further services under this Agreement may be terminated by either Party in writing upon thirty (30) calendar days' notice. In the event of termination by City, Consultant shall be entitled to payment for services rendered through receipt of the termination notice.

12. **Sole Parties and Entire Agreement**. This Agreement shall not create any rights or benefits to anyone except City and Consultant, and contains the entire agreement between the Parties. Oral modifications to this Agreement shall have no force or effect.

13. **Assignment and Delegation**. Neither City nor Consultant may assign their rights or delegate their duties without the written consent of the other Party. This Agreement is binding on City and Consultant to the extent permitted by law. Nothing herein is to be construed as creating any personal liability on the part of any City officer, employee or agent.

14. **Texas Law to Apply; Successors; Construction**. This Agreement shall be construed under and in accordance with the laws of the State of Texas. It shall be binding upon, and inure to the benefit of, the Parties hereto and their representatives, successors and assigns. Should any provisions in this Agreement later be held invalid, illegal or unenforceable, they shall be deemed void, and this Agreement shall be construed as if such provision had never been contained herein.

15. **Conflict of Interest.** Consultant agrees that it is aware of the prohibited interest requirements of the City Charter and the City's Code of Ordinances and will abide by the same. Consultant agrees that it is further aware of the vendor disclosure requirements set forth in Chapter 176, Local Government Code, as amended, and will abide by the same. In this connection, a lawful representative of Consultant shall execute the Conflict of Interest Questionnaire, Form CIQ.

16. **Venue**. The Parties herein agree that this Agreement shall be enforceable in Coppell, Texas, and if legal action is necessary to enforce it, exclusive venue shall lie in Dallas County, Texas.

17. **Mediation**. In the event of any disagreement or conflict concerning the interpretation of this Agreement, and such disagreement cannot be resolved by the signatories hereto, the signatories agree to submit such disagreement to non-binding mediation.

18. **Prevailing Party**. In the event a Party initiates or defends any legal action or proceeding to enforce or interpret any of the terms of this Agreement, the prevailing party in any such action or proceeding shall be entitled to recover its reasonable costs and attorney's fees (including its reasonable costs and attorney's fees on any appeal).

19. **Signatories**. City warrants and represents that the individual executing this Agreement on behalf of City has full authority to execute this Agreement and bind City to the same. Consultant warrants and represents that the individual executing this Agreement on its behalf has full authority to execute this Agreement and bind Consultant to same.

IN WITNESS WHEREOF, the Parties, having read and understood this Agreement, have executed such in duplicate copies, each of which shall have full dignity and force as an original, on the _____ day of _____, 20____.

Walter P Moore	**CITY OF COPPELL, TEXAS**
By: _____	By: _____
Signature	Signature
Ernest Fields, P.E.	_____
Printed Name	Printed Name
Senior Principal	_____
Title	Title
August 30, 2024	_____
Date	Date

SCOPE OF CIVIL ENGINEERING SERVICES

PROJECT DESCRIPTION

The project includes stabilization of three sections of streambank along Denton Creek in Coppell, Texas. Erosion has been observed at multiple locations near Andrew Brown Park West just upstream of Denton Tap Road. The following improvements will be included:

Location A: The south bank of the channel has experienced slope movement creating safety concerns and potential damage to the park trail. A gabion wall and/or other streambank stabilization devices will be designed to stabilize the slope and to protect the existing trail. A consideration for the design will be to relocate the trail.

Location B: The south bank of the channel is experiencing erosion that threatens the existing trail upstream of Denton Tap bridge. A gabion wall and/or other streambank stabilization devices will be constructed to stabilize the slope and to protect the existing trail. A consideration for the design will be to relocate the trail.

Limits of study are shown in Exhibit C. Should the City of Coppell (CITY) wish to include design of additional repair recommendations, additional services will be required.

The scope of services for this project will generally be to provide surveying, geotechnical investigation, USACE Section 404 Permitting, structural design, grading plan, cost estimates, erosion control and prepare construction plans, details and special specifications and bidding documents required for construction of these improvements. Limited construction phase services are also included in the project services.

PRE-PROJECT SERVICES

I. Emergency repair support

A. Provide engineering support to the CITY as it pertains to the coordination of a temporary emergency repair in the spring of 2024.

BASIC SERVICES

II. Schematic and Preliminary Engineering Design

A. Project Management and Oversight

1. Provide Project Management services including project coordination and communications with CITY, subconsultant coordination, monthly status updates, and maintaining a project schedule, assuming a 180 (calendar) day task order duration.

2. Attend meetings with CITY which will include the project kickoff and 60% design review.

3. QA/QC – Perform internal review of 30% and 60% submittals.

B. Data Collection

1. Site Visits – Perform engineering field visit for the project location during development of design.

2. Existing Data Review - coordinate with CITY staff to obtain record documents, as-builts, utility plans, street plans, plats, existing easement information, and the like for the project area.

C. Schematic Design Plans (30%)

1. Provide a schematic plan view of the improvements needed to correct erosion and to stabilize the channel. Determine general dimensions of the heights and lengths of the improvements.

2. Provide an initial construction cost estimate of the improvements for budgetary purposes.

D. Preliminary Design (60%)

1. Prepare Preliminary Plans

a) Establish preliminary horizontal and vertical alignment of repairs.

b) Prepare cross-sections of proposed erosion protection indicating the general orientation of the improvements with respect to the channel.

c) Establish design concepts for repair of areas of poor drainage and erosion.

d) Locate utility crossings, adjacent utilities, and other improvements within a limit of twenty feet beyond the proposed improvement at each site.

(1) Contact franchise utility companies such as gas, telephone, cable TV, and electricity to obtain record information for horizontal and vertical data for their facilities. Identify which utilities must be protected or relocated.

(2) Tie locations of exposed utilities to the local control network. When underground utilities are uncovered, tie locations to the local control network.

e) Establish preliminary easement needs including permanent and temporary construction easements. Show all existing easements on the plans.

f) Document and photograph current channel conditions and identify potential locations of construction access and staging.

2. Prepare a preliminary opinion of probable cost for the proposed solution. The purpose of the opinion is to confirm that the project is in general accordance with the construction budget. It is not a guarantee of the construction cost.

3. Submit to CITY electronic copy (pdf) of preliminary plan drawings. 60% plans submittal will contain Cover Sheet, Temporary Erosion Control and Tree Protection, General Notes, Typical Details, Plan, and Sections of the proposed structure.

4. Meet with CITY to review and discuss the preliminary plan drawings and engineering comments.

5. Distribute one set of preliminary drawings to local utility companies to obtain information regarding impacts to their facilities.

III. H&H Modeling and Documentation

A. Data Collection

1. Obtain topographic LiDAR data to supplement field survey.

2. Obtain existing hydraulic model of Denton Creek from City of Coppell

B. Existing Conditions

1. Add cross-sections to existing hydraulic model in locations relevant to proposed project.

2. Pre-Project conditions hydraulic results will be reviewed and velocities defined for the impacted reaches of the creek.

C. Proposed Conditions

1. Using the existing conditions models as a base, update cross-section geometries to reflect preliminary proposed design. It is anticipated that no changes to hydrology will be required.

2. Coordinate with Civil Engineer on necessary modifications to the Post-Project design to arrive at a final engineering design.

3. Update the Post-Project Conditions HEC-RAS model to confirm that the proposed solution does not adversely affect stream hydraulics (100-year water surface elevation, valley storage, or stream velocities).

D. Documentation

1. Prepare a memo describing the source of the hydraulic data, the changes incorporated into the models to represent proposed conditions, and documenting changes to water surface elevation, velocity, and channel volume below the 100-year water surface elevation. Describe design improvements implemented to offset any impacts caused by the project.

2. Prepare graphic exhibits to show the areas of proposed modifications and the limits of the 100-year floodplain associated with the proposed project.

3. Submit a draft memorandum, models, and documentation to the City of Coppell, accompanying the 60% level engineering construction plans.

4. Following receipt of Drainage Study and Construction Plans comments, address comments and submit final drainage study to accompany final construction drawings submittal.

5. Address up to two rounds of comments, including changes in alignment of proposed improvements, to obtain City of Coppell acceptance of documentation

E. Documentation & Review

1. Provide a memo documenting that the proposed project does not adversely affect stream hydraulics. The report will include a written narrative and summary output tables.

2. Provide hydraulic workmap exhibits showing existing and proposed floodplains.

3. Respond to comments from CITY.

IV. Final Engineering Design

A. Project Management and Oversight

1. Provide Project Management services including project coordination and communications with CITY, subconsultant coordination, monthly status updates, and maintaining a project schedule, assuming a 180 (calendar) day task order duration.

2. Attend meetings with CITY which will include the 90% design review.

3. QA/QC – Perform internal review of 90% and 100% submittals.

B. Final Design (90% and 100% Sealed Submittals)

1. Meet with CITY to discuss the preliminary design submittal and incorporate comments from into final design plans.

2. Finalize plan for proposed improvements.

3. Revise preliminary plans and incorporate comments from CITY.

4. Incorporate comments from the utility companies. If necessary, coordinate with utility companies to locate and uncover utilities which conflict with the proposed erosion control structure. Tie the location of uncovered utilities to the local control network.

5. Incorporate standard details into the plans and prepare additional details as required.

6. Prepare final technical specifications for the erosion control structures.

C. Revise the quantity estimate and prepare a revised estimate of probable construction cost based on the final design of the project.

D. Update hydraulic model and documentation to reflect final design.

E. Assist in preparing final bid documents. CITY will provide standard contract documents for preparation of the project manual. The following information to be supplied by the Engineer shall include:

1. One copy of the finalized technical specifications.

2. Project specific information for use with CITY standard construction agreement form, including the notice to contractors, bid proposal and contract bid schedule forms.

3. Electronic (pdf) set of final drawings.

F. Coordinate between owners and CITY regarding this access and CITY preparation of temporary access and construction easements, if required. Engineer will provide the Contractor and CITY with site access information and agreement concepts.

G. Provide necessary Storm Water Pollution Prevention Concept Plans in accordance with CITY requirements.

V. Construction Administration

A. The Engineer will assist CITY in the advertisement for bids--prepare Notice to Bidders for required newspaper advertising --and place notice with Texas Contractor magazine and Dodge Report.

B. Attend the pre-bid conference.

C. Attend the bid opening and provide tabulation and analysis of the bids received and furnish recommendations on the award of the contract or the appropriate action to be taken by CITY.

1. Evaluate the lowest and second lowest bidder. Bid evaluation will include the contractor's:

a) Past work history
b) Financial resources
c) Physical resources to produce the project

2. Provide a summary of the bid analysis to CITY for use in selection and award of the construction project.

D. Assist CITY staff in conducting one pre-construction conference with the Contractor.

E. Assist CITY in arranging for testing of materials and laboratory control during construction, which is to be conducted at CITY's expense.

F. Perform two site visits to the site each month (maximum of 12 total visits) to observe the progress and the quality of work and to attempt to determine if the work is proceeding in accordance with the Contract Documents. If the Engineer is requested to visit the site more frequently, the requested visits shall be considered an Additional Service. In performing the services above, the Engineer

will endeavor to protect CITY against defects and deficiencies; however, it is understood that the Engineer does not guarantee the Contractor's performance, nor is the Engineer responsible for supervision of the Contractor's operation and employees. The Engineer shall not be responsible for the acts or omissions of any person at the Project sites or otherwise performing any of the work of the Project.

G. Review concrete mix design, samples, catalog data, shop drawings, laboratory tests, shop mill tests of material and test equipment and other submittal information to assure conformity with construction plans. Provide written responses to requests for information or clarification.

H. Attend coordination meetings with contractors, inspection personnel, and City representatives.

I. The Engineer will, with assistance from CITY Inspector on the project(s), prepare and process monthly and final pay requests from the Contractor(s) to CITY.

J. Interpret intent of the drawings and technical specifications for CITY and the Contractor. Respond to contractor's verbal technical questions.

K. Conduct, in company with CITY representative, a final review of the Project for conformance with the design concept of the Project and general compliance with the Contract Documents.

L. Revise the construction drawings in accordance with the information furnished by construction Contractor reflecting the changes in the Project made during construction. The Engineer shall submit one set of "as-builts" to the Engineering Inspector for review and approval. Upon approval, CITY shall have the drawings processed in the following quantities and formats:

1. Electronic (pdf) set of plans shall be submitted to the Engineering Department from Design Engineer.
2. Updated digital files of the new construction for use in CITY computerized mapping system.

SPECIAL SERVICES

I. Field Survey – WPM will contract with Weaver Consultants Group for these services. Each location shall include as follows:

A. PREPARATION OF BATHYMETRIC SURVEY

1. Establish a horizontal and vertical control network and control baselines for the project area using GPS. (NAD83 (2011) Texas State Plane, North Central Zone, FIPS 4202, US FEET and NAVD88) and will tie into a FEMA ERM if possible.
2. Due to thick woods and brush, it will be necessary to cut line to the creek bank and water's edge as necessary to acquire topographical survey data at appropriate intervals.
3. Perform topographic survey to map edge of water, top of slope, and current water elevation.
4. Perform bathymetric survey on a semi-regular grid spacing using remote-controlled GPS depth-sounder boat.

5. Develop CAD surface model of creek bottom based on bathymetric data.
6. Collect ordinary high-water markings as provided by other third-party experts.
7. This survey will be performed only within the limits of Areas A, B, and C as shown on the attached Exhibit C.

Deliverables: 3D CAD file with surface model of existing creek bottom

B. PREPARATION OF TOPOGRAPHIC SURVEY
1. Establish a horizontal and vertical control network and control baselines for the project area using GPS, or provided previous design control. WCG will attempt to reestablish original site control as provided by client.
a) If on Texas State Plane system, a Grid to Surface scale factor will be provided.
b) Benchmark information will be provided for benchmarks used in this effort.
2. All existing visible improvements on and immediately adjacent to project limits, including edges of pavement, curb, gutter, abutments, rip rap, natural ground elevations, visible erosion damage, grade breaks, fences, etc.
3. Due to thick woods and brush, it will be necessary to cut line to navigate the project area. Trees 6" and larger within the limited topographic survey areas shown on Exhibit A.
4. Elevations within limits of observed topographic features, breaklines, tops and toes of ground, erosion/scour areas, as necessary to produce an accurate and representative 3D CAD surface suitable for engineering design purposes.
5. Location of visible on-site utilities including tops and flow lines of inlets, manholes, and water valves.
6. Property boundary lines will be shown in their approximate location based on boundary corners found in the field. Not a boundary survey.
7. Produce, review, and deliver 3D TIN surface in Civil 3D for client's use in engineering plan set.
8. This survey will be performed only within the limits of Areas A, B, and C, and/or to fill in the "Gap Areas" between Areas A-C and the bridge.

Deliverables: 3D CAD file with surface model of existing ground

II. Geotechnical Engineering – WPM will contract with Reed Engineering for these services.

Field Investigation – Considering the scope of services, the type of structures, and anticipated site geology, it is recommended subsurface conditions be evaluated with a total of seven sample borings including five truck-mounted rig borings and two borings drilled with portable, hand-held drilling equipment.

A. The truck-mounted rig borings will be extended 5 feet into unweathered shale, or to a depth of 30 feet, whichever occurs first. Boring depths of 30 feet are estimated for the truck-mounted rig borings. The borings drilled with portable, hand-held drilling equipment will be extended to the limiting depth of the equipment. Boring depths of 15 feet are estimated for the hand-drilled borings. The truck-mounted rig borings will be sampled continuously to a depth of six feet, and at maximum five-foot intervals thereafter. Samples of cohesive soils will be

obtained using three-inch diameter pushed tubes. Cohesionless soils (sands and gravels) will be sampled and evaluated in-situ by use of the Standard Penetration test (SPT). Unweathered shale, if encountered, will be evaluated in-situ using the Texas Department of Transportation (TxDOT) cone penetrometer. The hand-drilled borings will be sampled continuously to completion using pushed tubes. Observations will be made in the open borings subsequent to drilling to evaluate ground water conditions. Borings will be backfilled with drill cuttings at the completion of field operations. Settlement of boreholes may occur over time. Reed Engineering Group, Ltd. will not be responsible for any settlement of boreholes that may occur after initial backfilling. Precautions will be taken during the field investigation to avoid damage to underground utilities and structures. However, Reed Engineering Group, Ltd. will not be liable for damage to utilities or structures not identified on plans provided to us, or improperly located in the field by other parties. Reasonable precautions will also be taken to avoid damage to surface improvements (such as concrete flatwork, landscaping, and irrigation systems). However, Reed Engineering Group, Ltd. will not be liable for damage to surface improvements that may occur during the course of the field investigation. Borings will be field-located using GPS (Global Positioning System) technology. The accuracy of our unit is reportedly within plus or minus one meter.

B. Laboratory Investigation – Samples will be visually classified by the project engineer or engineering geologist in accordance with the Unified Soil Classification System (USCS). Each sample of cohesive soil will be evaluated for consistency by use of a pocket penetrometer test. Selected samples will be subjected to classification tests and tests to evaluate strength and deformation characteristics. Anticipated classification tests consist of Atterberg Limits, moisture content, and partial grain size determinations. Strength and deformation will be evaluated by use of unconfined compression tests.

C. Engineering Services – The results of the field and laboratory investigations will be evaluated and presented with recommendations in a bound report. The report will address the following:

1. description of the soil and ground water conditions as they relate to the performance and construction of the project.
2. foundation alternatives to include constructability and magnitude of anticipated movement;
3. lateral earth pressures for design of retaining walls;
4. recommendations for design or permanent soil nails or rock anchors, including allowable pull-out; and
5. earthwork and testing recommendations.

III. USACE Section 404 Permitting – WPM will contract with VRX for these services.

A. Delineations of the boundaries of wetlands and other features will be conducted within the approximate City of Coppell Andrew Brown Park West Erosion project areas as shown on Exhibit C.

1. VRX will perform a field investigation of the proposed project areas to determine the extent of observed water features. VRX will follow the 1987 U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual and March 2010 USACE Regional Supplement to the Corps of Engineers Wetland

Delineation Manual to delineate wetlands, other regulations (e.g., 33 CFR 328.3(e)), guidance to delineate non-wetland water features, and in accordance with the Supreme Court's decision in Sackett v. EPA and amendments to 40 CFR 120.2 and 33 CFR 328.3 regarding the revised definition of waters of the U.S.

2. Water features will be flagged and mapped using a Global Positioning System (GPS). The GPS system is capable of sub-meter accuracy.

B. Waters of the U.S. Delineation Report – Information gathered during the delineation will be incorporated into the Water Feature Delineation Report. This report will be prepared in accordance with USACE guidelines and shall include the following:

1. General purpose statement regarding the Water Feature Delineation Report.
2. Methods Used:
    a) Description of the approach used to delineate wetlands and other water features.
    b) Description of the conventions used to map the limits of wetlands and other water features.
3. Results of the Delineation:
    a) Vicinity map depicting the locations of the sites and showing the limits of the site investigated.
    b) Approximate size of areas evaluated for WOTUS.
    c) Name and characterization of the nearest waterway.
    d) Description of physical features of the properties.
    e) Information on existing site conditions for present and past land uses.
    f) Characterization of hydrology.
    g) Identification of named waterways.
    h) Characterization of vegetative communities and dominant species.
    i) Characterization of soils.
    j) Description of riparian or upland buffer features.
    k) Photographs with the date that the photos were taken.
    l) 100-year floodplain map with project area defined.
    m) Aerial photograph with project areas defined.
    n) USGS 7.5-minute topographic quad with project areas defined.
4. Conclusions:
    a) Description of size/dimensions of WOTUS, such as linear feet and approximate distance between ordinary high-water marks for open waters (streams).
    b) Map depicting potential WOTUS with the type (e.g., forested wetland) within the project area.

C. Impact Assessment & Permitting Scenario Letter – VRX will review design plans provided by Walter P. Moore to evaluate impacts to WOTUS, as identified and delineated in the Water Feature Delineation Report. VRX will calculate impacts and provide appropriate Section 404 permitting scenarios. The particular type of permit will be determined as design plans are developed. A letter will be provided addressing the impacts assessment and the permit scenario for the project.

D. USACE Nationwide Permit Preconstruction Notification – If necessary, VRX shall provide Walter P. Moore with a PCN for the project, including the following, as appropriate:
    1. The purpose of, and need for, the project.
    2. A delineation, proposed determination, and characterization of wetlands and other water features, and a description of the project's likely impacts on the aquatic environment, including a brief characterization of each impact to WOTUS.
    3. Maps clearly showing all known temporary and permanent elements of the project.
    4. Detailed plan, profile, and cross-sections views of all work (with ordinary high-water mark or wetland boundary shown)
    5. A written discussion of alternatives considered and rationale for selected alternative.
    6. An assessment of the adverse and/or beneficial effects of the proposed project.
    7. Documentation that the amount of area impacted is the minimum necessary to accomplish the project, anticipated impacts due to changes in preconstruction contours, and documentation that changes would not result in more than minimal adverse impacts on the aquatic environment.
    8. A discussion of threatened and/or endangered species for the project area.
    9. A discussion documenting whether any cultural resources would be affected by, or are in the vicinity of, the permit area. Cultural resources within the project corridor will be assessed using the Texas Historical Commission's (THC) electronic Texas Review and Compliance (eTRAC) system. Note, if investigation by an archeologist is required, VRX will request this as additional services and will subcontract this activity.
    10. Information on hydrology and hydraulics.

E. Compensatory Mitigation – If the USACE requires compensatory mitigation, the mitigation plan will include the following, as appropriate:
    1. A discussion of the goals and objectives.
    2. A discussion of efforts to avoid and minimize impacts to WOTUS.
    3. A discussion of the alternatives that were considered for the proposed project.
    4. A discussion of the direct and indirect permanent and temporary adverse project impacts to WOTUS both on-site and off-site.
    5. A table summarizing the WOTUS impacts.
    6. A functional analysis discussion of the WOTUS that would be adversely impacted by the proposed project.
    7. Proposed mitigation banking credits.

IV. Aerial Drone Creekbank LiDAR Survey – WPM will contract with Smartdrone for these services.

A. In field collection (aerial & RTK check shots)
B. Set OPUS corrected control point (if none given)
C. Set orthomosaic ground elevation targets.
D. Deliverables:
    1. 1' Contours as DWG file,
    2. Orthomosaic (<2cm ALTA Horizontal Accuracy, TIF)
    3. 2D Planimetrics & Linework

ADDITIONAL SERVICES

Additional Services to be performed by Engineer, if authorized by CITY, which are not included in the above-described basic services, are described as follows:

A. Assisting CITY with public meetings or hearings to inform residents;

B. Performing title searches and examination of deed records;

C. Preparing applications and supporting documents for government grants, loans, or planning advances and providing data for detailed applications;

D. Providing full time site inspection during construction of the project;

E. Performing designs for trench safety and retaining walls, etc. which are not included in the above Scope of Services;

F. Revisions to plans as result of revisions after completion of original final design (unless to correct error on original plans);

G. Appearing before regulatory agencies or courts as an expert witness in any litigation with third parties or condemnation proceedings arising from the development or construction of the Project, including preparation of engineering data and reports for assistance to CITY;

H. Assisting CITY in claims disputes with the Contractor(s);

I. Assisting CITY in the defense or prosecution of litigation in connection with or in addition to those services contemplated by this Agreement. Such services, if any, shall be furnished by Engineer on a fee basis negotiated by the respective parties outside of and in addition to this Agreement;

J. Providing ROW surveys or dedications, easement documents, boundary surveys, plats, elevation certificates, environmental assessments and surveys, and SUE;

K. Providing environmental support services including the design and implementation of ecological baseline studies, environmental monitoring, impact assessment and analyses, permitting assistance other than listed in the above Scope of Services, and other assistance required to address environmental issues;

L. Any Corps of Engineers work including but not limited to meetings with the Corps of Engineers staff, wetlands mitigation, Individual Permitting or any other work not listed in the Scope of Services;

M. Attending homeowners and/or Council meetings including preparation of all displays, reports, or other data for use at such meetings;

N. Preparation of plans and/or specifications related to the relocation of utilities;

O. Fees for permits and advertising;

P. Flood plain reclamation plans;

Q. Consulting services by others not included in proposal;

R. Inspection and testing services during construction;

S. Preparation and processing monthly or final construction pay estimates.

T. Determination of a floodway or Preparation of a Request for Letter of Map Revision or Conditional Letter of Map Revision, or any work pertaining to it.

U. Mussel Survey & Relocation

Exhibit B

City of Coppell
Andrew Brown Park West Stream Stabilization
Fee Schedule

Pre-project Services	
Emergency Repair Support	$8,500
Basic Services Fee	
30% Submittal	
Project Management (Cost Estimate, Meetings, QC, etc.)	$15,510
Schematic Design	$29,800
Schematic Drafting	$16,500
60% Submittal	
Project Management (Cost Estimate, Meetings, QC, etc.)	$13,380
Preliminary Design	$27,615
Preliminary Drafting	$7,920
90% Submittal & 100% Sealed Submittal	
Project Management (Cost Estimate, Meetings, QC, etc.)	$13,600
Final Design	$16,770
Final Drafting	$6,600
Hydraulic Modeling & Memo	$30,260
Construction Administration	
Project Management (Meetings, Submittal Reviews, etc)	$7,100
As-Builts	$1,665
Site Visits	$4,150
Final Walk Through	$1,710
Basic Services Fee	**$192,580**

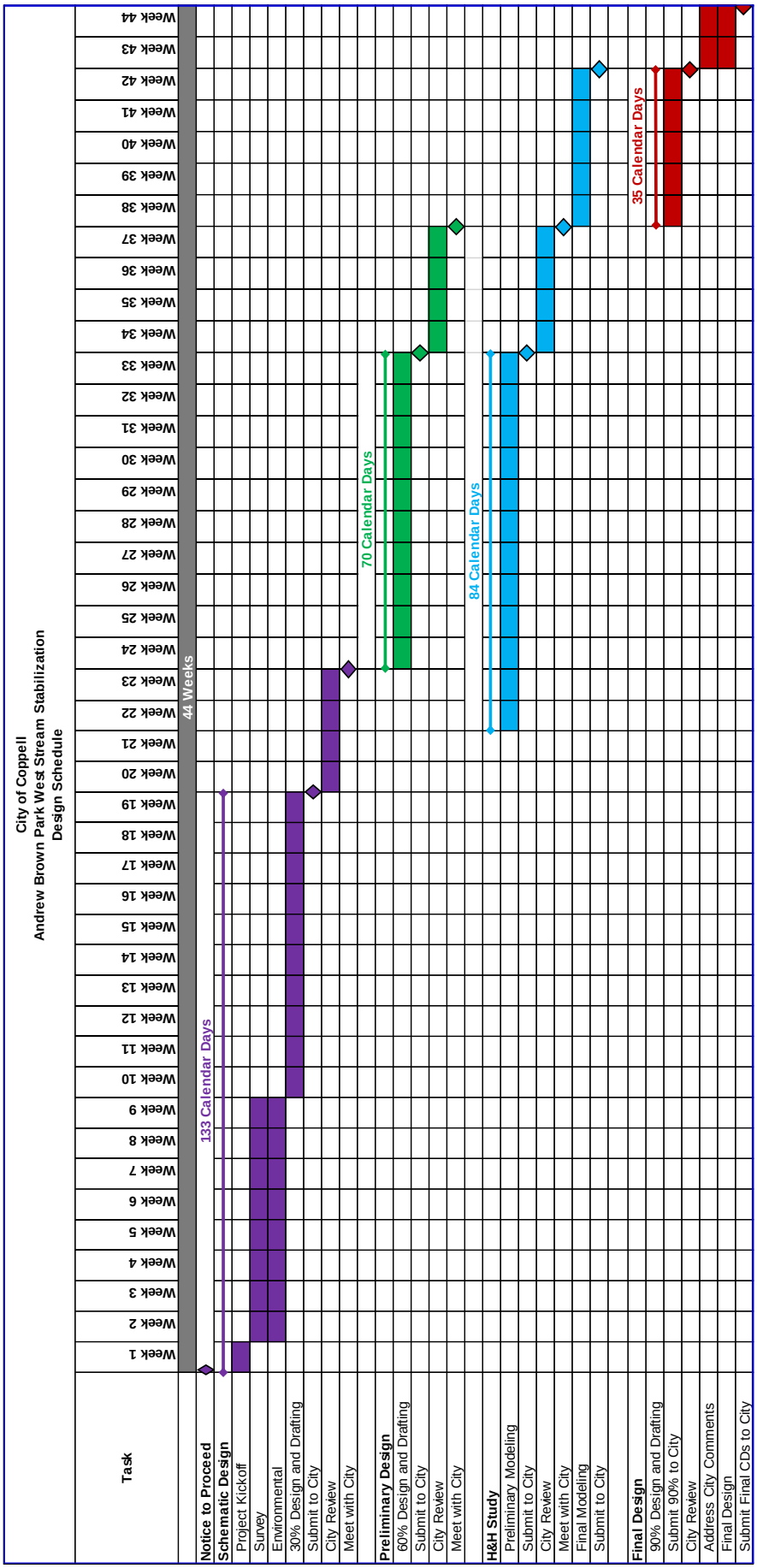
Basic Services Fee Summary	
Schematic Engineering	$61,810
Preliminary Engineering	$48,915
Final Engineering	$67,230
Construction Admin	$14,625
Special Services	
Geotechnical Study	$8,000
Topographic Survey	$27,920
Topo Survey Gap Areas	$8,900
Environmental Delineation & Impact Assessment	$23,000
Reimbursables	$600
TOTAL FEE	**$269,500**

Exhibit C


Exhibit C
Stabilization Area A
Stabilization Area B
N Denton Tap Rd
W Natches Trace
Denton Crk Trl
700 ft
Google Earth

GEOTECH:
Provide design recommendations for soil nail and rock anchor retaining walls. Provide values for equivalent fluid pressure, angle of shear plane, unit weight of soil, sliding coefficient, allowable bearing capacity, pullout capacity, cohesion, internal friction angle, and shear strength. Include lateral load capacity of soil strata and scope for global stability analysis. Field stake boring locations for survey. Provide sealed report to be included in the project submittal.

ENVIRONMENTAL:
Delineate boundaries of WOTUS within the approximate survey limits. Stake ordinary high water mark locations for survey. Conduct impact assessment for proposed design and include appropriate permitting scenarios. Provide sealed report to be included in project the submittal. NOTE: Endangered freshwater mussels mentioned by client.


City of Coppell
Andrew Brown Park West Stream Stabilization
Design Schedule
Task
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18
Week 19
Week 20
Week 21
Week 22
Week 23
Week 24
Week 25
Week 26
Week 27
Week 28
Week 29
Week 30
Week 31
Week 32
Week 33
Week 34
Week 35
Week 36
Week 37
Week 38
Week 39
Week 40
Week 41
Week 42
Week 43
Week 44
Notice to Proceed
44 Weeks
Schematic Design
133 Calendar Days
Project Kickoff
Survey
Environmental
30% Design and Drafting
Submit to City
City Review
Meet with City
Preliminary Design
70 Calendar Days
60% Design and Drafting
Submit to City
City Review
Meet with City
H&H Study
84 Calendar Days
Preliminary Modeling
Submit to City
City Review
Meet with City
Final Modeling
Submit to City
Final Design
35 Calendar Days
90% Design and Drafting
Submit 90% to City
City Review
Address City Comments
Final Design
Submit Final CDs to City