

ORDINANCE NO. 2013-201

AN ORDINANCE OF THE CITY OF DENTON, TEXAS AUTHORIZING THE CITY MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT FOR DESIGN AND ENGINEERING SERVICES WITH GRAHAM ASSOCIATES, INC. RELATING TO THE WIDENING OF AND IMPROVEMENT OF BONNIE BRAE ROAD FROM NORTH OF SCRIPTURE ROAD TO U.S. HIGHWAY 380 IN AN AMOUNT NOT-TO-EXCEED \$831,196.50; PROVIDING FOR THE EXPENDITURE OF FUNDS THEREFOR; AND PROVIDING AN EFFECTIVE DATE (FILE 5330-AWARDED TO GRAHAM ASSOCIATES, INC.).

WHEREAS, the professional services provider (the "Provider") mentioned in this ordinance is being selected as the most highly qualified on the basis of its demonstrated competence and qualifications to perform the proposed professional services; and

WHEREAS, the fees under the proposed Agreement are fair and reasonable, and are consistent with and not higher than the recommended practices and fees published by the professional associations applicable to the Provider's profession, and such fees do not exceed the maximum provided by law; NOW, THEREFORE,

THE COUNCIL OF THE CITY OF DENTON HEREBY ORDAINS:

SECTION 1. The City Manager, or his designee is hereby authorized to enter into a Professional Services Agreement with Graham Associates, Inc., Arlington, Texas to provide professional design and engineering services in the amount of \$831,196.50, relating to the widening and improvement of Bonnie Brae Road from North of Scripture Road to U.S. Highway 380; a copy of which Agreement is attached hereto and incorporated by reference herein.

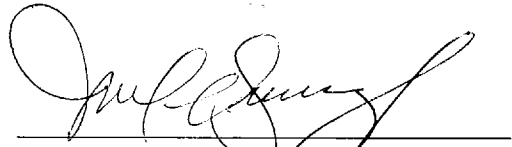
SECTION 2. The City Manager, or his designee is authorized to expend funds as required by the attached Agreement.

SECTION 3. The City Council of the City of Denton, Texas hereby expressly delegates the authority to take any actions that may be required or permitted to be performed by the City of Denton, Texas under File 5330 to the City Manager of the City of Denton, Texas, or his designee.

SECTION 4. The findings in the preamble of this ordinance are incorporated herein by reference.

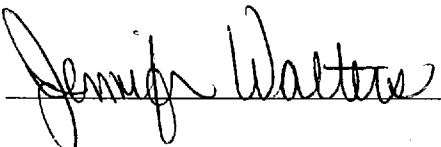
SECTION 5. This ordinance shall become effective immediately upon its passage and approval.

PASSED AND APPROVED this the 20th day of August, 2013.

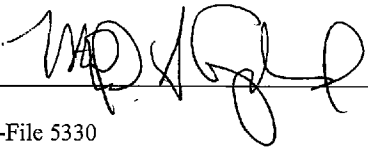


MARK A. BURROUGHS, MAYOR

ATTEST:
JENNIFER WALTERS, CITY SECRETARY

By: _____

APPROVED AS TO LEGAL FORM:
ANITA BURGESS, CITY ATTORNEY

By: _____

2-ORD-File 5330

**PROFESSIONAL SERVICES AGREEMENT
FOR ARCHITECT OR ENGINEER**

THIS AGREEMENT is made and entered into as of the 20th day of August, 2013, by and between the City of Denton, Texas, a Texas municipal corporation, with its principal office at 215 East McKinney Street, Denton, Denton County, Texas 76201, hereinafter called "Owner" and Graham Associates, Inc., with its corporate office at 600 Six Flags Drive, Suite 500, Arlington, Texas 76011 hereinafter called "Design Professional," acting herein, by and through their duly authorized representatives.

In consideration of the covenants and agreements herein contained, the parties hereto do mutually agree as follows:

**SECTION 1
EMPLOYMENT OF DESIGN PROFESSIONAL**

The Owner hereby contracts with the Design Professional, a licensed Texas architect or engineer, as an independent contractor. The Design Professional hereby agrees to perform the services as described herein and in the Proposal, the General Conditions, and other attachments to this Agreement that are referenced in Section 3, in connection with the Project. The Project shall include, without limitation, but shall not be limited to the following major components (for a more precise or comprehensive description of the Scope refer to **Exhibit 2**, Attachment E):

A. Conceptual Design Plans

Task 1: Bonnie Brae Street (From Scripture Street to University Drive) - Conceptual plans (30% Plans) for this section of the project shall be prepared to such detail as is necessary to resolve all conceptual issues. Conceptual plans must be approved by Owner prior to Design Professional commencing with the preparation of preliminary design construction plans.

B. Preliminary Design Construction Plans

Task 1: Bonnie Brae - Scripture Street to University Drive – Prepare 30% Plans, Specifications, and Estimate.

1. Preliminary plans title sheet with index of sheets.
2. Project layout.
3. Existing/proposed typical sections.
4. Preliminary plans summary sheets.
5. Alignment sheets.
6. Plan/profile sheets for all alignments (horizontal and vertical alignments final upon approval of 30% plans level).
7. Preliminary plans intersection layouts.

8. Drainage area maps.
9. Hydraulic computations.
10. Preliminary plans culvert layouts.
11. Preliminary plans storm sewer layouts.
12. Preliminary plans water and sanitary sewer layouts only.
13. Pavement design report.

C. Preliminary Right-of-Way Documents, 60% Plans for Bonnie Brae Street from Scripture Street to University Drive

Task 1: - Right-of-Way Determination for the project streets - In conformance with City and State standards, Design Professional shall survey, render field notes, and prepare detailed plans (right-of-way strip maps) and individual parcel exhibits for any additional right-of-way and/or easements, including temporary construction easements, needed. Design Professional shall also set control points, which shall be based on NAD-83, on both sides of the road. The required items are necessary for the acquisition of right-of-way required to construct Project. This information shall be required prior to acceptance of final construction plans.

Task 2: Bonnie Brae Street - Scripture Street to University Drive - At such time as Design Professional is directed by Owner, Design Professional shall prepare the following:

1. Title sheet with index of sheets.
2. Project layout.
3. Existing/proposed typical sections.
4. Plans summary sheets.
5. Plans traffic control plan.
6. Alignment sheets.
7. Plan/profile sheets for all alignments.
8. Intersection layouts.
9. Miscellaneous roadway details.
10. Drainage design.
11. Drainage area maps.
12. Hydraulic computations.
13. Water and sewer plan
14. Culvert layouts.
15. Storm sewer layouts.
16. Utility exhibits.
17. Traffic signal layouts.
18. Illumination layouts.
19. Signing layouts.
20. Pavement marking layouts and delineation.
21. Erosion Control layouts.
22. Cross-sections.

The preliminary plans will include water, sewer, and drainage improvements design, and preliminary work on utility relocations.

D. Final Construction Plans

Task 1: Final Design Construction Plans (90% Plans) – Bonnie Brae Street - Scripture Street to University Drive

1. Construction plans.
2. Bid proposal.
3. Special specifications as required.

Task 2: Right-of-Way

1. Prepare final right-of-way plans and documents for all streets on the project.

E. 100%Construction Plans, Right-of-Way, and Specifications

Task 1: 100% Bonnie Brae Street - Scripture Street to University Drive

1. Revise plans per Owner's review comments.
2. Revise specifications/bid documents per Owner's review comments.
3. Revise right-of-way documents per Owner's review comments.

F. Miscellaneous Requirements –

1. Design Professional shall furnish, upon request by Owner, one (1) set of film reproducibles of the "Final" approved and dated plans. Design Professional shall submit an electronic copy of the drawings in a format acceptable to the Owner.
2. The Design Professional shall also prepare Record Drawings utilizing the construction plans based upon redline markups reflecting any field changes. The Contractor shall prepare and supply the redline markups to the Design Professional after construction is complete. Design Professional shall submit one (1) set of film reproducibles and an electronic copy of the Record Drawings in a format acceptable to the Owner.

SECTION 2

COMPENSATION

Total compensation for the Design Professional contemplated under the terms of this agreement shall be \$831,196.50 for all services including reimbursable expenses. The Owner shall compensate the Design Professional as follows:

2.1 BASIC SERVICES

2.1.1 For Basic Services the total compensation shall be \$454,445.00.

2.1.2 Progress payments for Basic Services shall be paid monthly based on the actual work satisfactorily completed per month in each phase as a percentage of the overall compensation for that phase, with the following percentages of the total compensation for the Basic Services for each phase of the Project:

Schematic Design Phase	20%
Design and Development Phase	30%
Construction Documents Phase	30%
Bidding Phase	8 %
Construction Phase	<u>12%</u>
	100%

2.2 ADDITIONAL SERVICES

2.2.1 For Additional Services the total compensation shall be \$366,751.50. Compensation for Additional Services shall be based on actual services authorized and performed with lump sum or maximum not to exceed subtotals depending on the service provided all as shown in **Exhibit 2**, Attachment A. The schedule for the hourly rates is attached as **Exhibit 4**.

2.2.2 Compensation for Additional Services of consultants, including additional structural, mechanical and electrical engineering services, geotechnical services, right-of-way services, etc. shall be based on a multiple of 1.1 times the amounts billed to the Design Professional for such additional services.

2.3 REIMBURSABLE EXPENSES Reimbursable Expenses shall be a multiple of 1.05 times the expenses incurred by the Design Professional, the Design Professional's employees and consultants in the interest of the Project as defined in the General Conditions but not to exceed a total of \$10,000.00 without the prior written approval of the Owner. This amount does not include appraisals, escrow fees, abstract fees, title fees, FEMA review fees.

SECTION 3
ENTIRE AGREEMENT

This Agreement includes this executed agreement and the following documents all of which are attached hereto and made a part hereof by reference as if fully set forth herein:

- Exhibit 1. City of Denton General Conditions to Agreement for Architectural or Engineering Services.
- Exhibit 2. The Design Professional's Proposal
 - Attachments A through E:
 - Attachment A – Summary of Engineering Fees
 - Attachment B – Projected Plan Sheets
 - Attachment C – Organizational Chart
 - Attachment D – Estimate of Construction Costs
 - Attachment E – Scope of Services and Deliverables
- Exhibit 3. Project Schedule
- Exhibit 4. Schedule of Rates

This Agreement is signed by the parties hereto effective as of the date first above written.

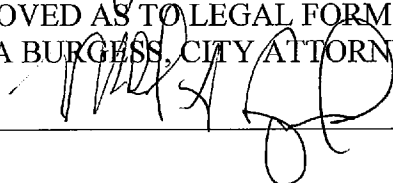
CITY OF DENTON, TEXAS
A Municipal Corporation

BY: 
GEORGE C. CAMPBELL
CITY MANAGER

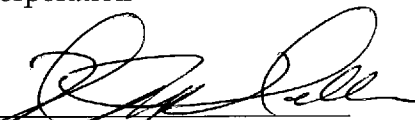
ATTEST:
JENNIFER WALTERS, CITY SECRETARY

BY: 

APPROVED AS TO LEGAL FORM:
ANITA BURGESS, CITY ATTORNEY

BY: 

GRAHAM ASSOCIATES, INC.
A Corporation

BY: 
W. JEFF WILLIAMS, P.E.
PRESIDENT

ATTEST:

BY: 

Exhibit 1

CITY OF DENTON GENERAL CONDITIONS TO

AGREEMENT FOR ARCHITECTURAL OR ENGINEERING SERVICES

ARTICLE 1. ARCHITECT OR ENGINEER'S RESPONSIBILITIES

1.1 The Architect or Engineer's services consist of those services for the Project (as defined in the agreement (the "Agreement") and proposal (the "Proposal") to which these General Conditions are attached) performed by the Architect or Engineer (hereinafter called the "Design Professional") or Design Professional's employees and consultants as enumerated in Articles 2 and 3 of these General Conditions as modified by the Agreement and Proposal (the "Services").

1.2 The Design Professional will perform all Services as an independent contractor to the prevailing professional standards consistent with the level of care and skill ordinarily exercised by members of the same profession currently practicing in the same locality under similar conditions, including reasonable, informed judgments and prompt timely actions (the "Degree of Care"). The Services shall be performed as expeditiously as is consistent with the Degree of Care necessary for the orderly progress of the Project. Upon request of the Owner, the Design Professional shall submit for the Owner's approval a schedule for the performance of the Services which may be adjusted as the Project proceeds, and shall include allowances for periods of time required for the Owner's review and for approval of submissions by authorities having jurisdiction over the Project. Time limits established by this schedule and approved by the Owner shall not, except for reasonable cause, be exceeded by the Design Professional or Owner, and any adjustments to this schedule shall be mutually acceptable to both parties.

ARTICLE 2 SCOPE OF BASIC SERVICES

2.1 **BASIC SERVICES DEFINED** The Design Professional's Basic Services consist of those described in Sections 2.2 through 2.6 of these General Conditions and include without limitation normal structural, civil, mechanical and electrical engineering services and any other engineering services necessary to produce a complete and accurate set of Construction Documents, as described by and required in Section 2.4. The Basic Services may be modified by the Agreement.

2.2 SCHEMATIC DESIGN PHASE

2.2.1 The Design Professional, in consultation with the Owner, shall develop a written program for the Project to ascertain Owner's needs and to establish the requirements for the Project.

2.2.2 The Design Professional shall provide a preliminary evaluation of the Owner's program, construction schedule and construction budget requirements, each in terms of the other, subject to the limitations set forth in Subsection 5.2.1.

2.2.3 The Design Professional shall review with the Owner alternative approaches to design and construction of the Project.

2.2.4 Based on the mutually agreed-upon program, schedule and construction budget requirements, the Design Professional shall prepare, for approval by the Owner, Schematic Design Documents consisting of drawings and other documents illustrating the scale and relationship of Project components. The Schematic Design shall contemplate compliance with all applicable laws, statutes, ordinances, codes and regulations.

2.2.5 The Design Professional shall submit to the Owner a preliminary detailed estimate of Construction Cost based on current area, volume or other unit costs and which indicates the cost of each category of work involved in constructing the Project and establishes an elapsed time factor for the period of time from the commencement to the completion of construction.

2.3 DESIGN DEVELOPMENT PHASE

2.3.1 Based on the approved Schematic Design Documents and any adjustments authorized by the Owner in the program, schedule or construction budget, the Design Professional shall prepare for approval by the Owner, Design Development Documents consisting of drawings and other documents to fix and describe the size and character of the Project as to architectural, structural, mechanical and electrical systems, materials and such other elements as may be appropriate, which shall comply with all applicable laws, statutes, ordinances, codes and regulations. Notwithstanding Owner's approval of the documents, Design Professional represents that the Documents and specifications will be sufficient and adequate to fulfill the purposes of the Project.

2.3.2 The Design Professional shall advise the Owner of any adjustments to the preliminary estimate of Construction Cost in a further Detailed Statement as described in Section 2.2.5.

2.4 CONSTRUCTION DOCUMENTS PHASE

2.4.1 Based on the approved Design Development Documents and any further adjustments in the scope or quality of the Project or in the construction budget authorized by the Owner, the Design Professional shall prepare, for approval by the Owner, Construction Documents consisting of Drawings and Specifications setting forth in detail requirements for the construction of the Project, which shall comply with all applicable laws, statutes, ordinances, codes and regulations.

2.4.2 The Design Professional shall assist the Owner in the preparation of the necessary bidding or procurement information, bidding or procurement forms, the Conditions of the contract, and the form of Agreement between the Owner and contractor.

2.4.3 The Design Professional shall advise the Owner of any adjustments to previous preliminary estimates of Construction Cost indicated by changes in requirements or general market conditions.

2.4.4 The Design Professional shall assist the Owner in connection with the Owner's responsibility for filing documents required for the approval of governmental authorities having jurisdiction over the Project.

2.5 CONSTRUCTION CONTRACT PROCUREMENT

2.5.1 The Design Professional, following the Owner's approval of the Construction Documents and of the latest preliminary detailed estimate of Construction Cost, shall assist the Owner in procuring a construction contract for the Project through any procurement method that is legally applicable to the Project including without

limitation, the competitive sealed bidding process. Although the Owner will consider the advice of the Design Professional, the award of the construction contract is in the sole discretion of the Owner.

2.5.2 If the construction contract amount for the Project exceeds the total construction cost of the Project as set forth in the approved Detailed Statement of Probable Construction Costs of the Project submitted by the Design Professional, then the Design Professional, at its sole cost and expense, will revise the Construction Documents as may be required by the Owner to reduce or modify the quantity or quality of the work so that the total construction cost of the Project will not exceed the total construction cost set forth in the approved Detailed Statement of Probable Construction Costs.

2.6 CONSTRUCTION PHASE - ADMINISTRATION OF THE CONSTRUCTION CONTRACT

2.6.1 The Design Professional's responsibility to provide Basic Services for the Construction Phase under this Agreement commences with the award of the Contract for Construction and terminates at the issuance to the Owner of the final Certificate for Payment, unless extended under the terms of Subsection 8.3.2.

2.6.2 The Design Professional shall provide detailed administration of the Contract for Construction as set forth below. For design professionals the administration shall also be in accordance with AIA document A201, General Conditions of the Contract for Construction, current as of the date of the Agreement as may be amended by the City of Denton special conditions, unless otherwise provided in the Agreement. For engineers the administration shall also be in accordance with the Standard Specifications for Public Works Construction by the North Central Texas Council of Governments, current as of the date of the Agreement, unless otherwise provided in the Agreement.

2.6.3 Construction Phase duties, responsibilities and limitations of authority of the Design Professional shall not be restricted, modified or extended without written agreement of the Owner and Design Professional.

2.6.4 The Design Professional shall be a representative of and shall advise and consult with the Owner (1) during construction, and (2) at the Owner's direction from time to time during the correction, or warranty period described in the Contract for Construction. The Design Professional shall have authority to act on behalf of the Owner only to the extent provided in the Agreement and these General Conditions, unless otherwise modified by written instrument.

2.6.5 The Design Professional shall observe the construction site at least one time a week, while construction is in progress, and as reasonably necessary while construction is not in progress, to become familiar with the progress and quality of the work completed and to determine if the work is being performed in a manner indicating that the work when completed will be in accordance with the Contract Documents. Design Professional shall provide Owner a written report subsequent to each on-site visit. On the basis of on-site observations the Design Professional shall keep the Owner informed of the progress and quality of the work, and shall exercise the Degree of Care and diligence in discovering and promptly reporting to the Owner any observable defects or deficiencies in the work of Contractor or any subcontractors. The Design Professional represents that he will follow Degree of Care in performing all Services under the Agreement. The Design Professional shall promptly correct any defective designs or specifications furnished by the Design Professional at no cost to the Owner. The Owner's approval, acceptance, use of or payment for all or any part of the Design Professional's Services hereunder or of the Project itself shall in no way alter the Design Professional's obligations or the Owner's rights hereunder.

2.6.6 The Design Professional shall not have control over or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the work. The Design Professional shall not be responsible for the Contractor's schedules or failure to carry out the work in accordance with the Contract Documents except insofar as such failure may result from Design Professional's negligent acts or omissions. The Design Professional shall not have control over or charge of acts or omissions of the Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the work.

2.6.7 The Design Professional shall at all times have access to the work wherever it is in preparation or progress.

2.6.8 Except as may otherwise be provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall communicate through the Design Professional. Communications by and with the Design Professional's consultants shall be through the Design Professional.

2.6.9 Based on the Design Professional's observations at the site of the work and evaluations of the Contractor's Applications for Payment, the Design Professional shall review and certify the amounts due the Contractor.

2.6.10 The Design Professional's certification for payment shall constitute a representation to the Owner, based on the Design Professional's observations at the site as provided in Subsection 2.6.5 and on the data comprising the Contractor's Application for Payment, that the work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to minor deviations from the Contract Documents correctable prior to completion and to specific qualifications expressed by the Design Professional. The issuance of a Certificate for Payment shall further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment shall not be a representation that the Design Professional has (1) reviewed construction means, methods, techniques, sequences or procedures, or (2) ascertained how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

2.6.11 The Design Professional shall have the responsibility and authority to reject work which does not conform to the Contract Documents. Whenever the Design Professional considers it necessary or advisable for implementation of the intent of the Contract Documents, the Design Professional will have authority to require additional inspection or testing of the work in accordance with the provisions of the Contract Documents, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Design Professional nor a decision made in good faith either to exercise or not exercise such authority shall give rise to a duty or responsibility of the Design Professional to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees or other persons performing portions of the work.

2.6.12 The Design Professional shall review and approve or take other appropriate action upon Contractor's submittals such as Shop Drawings, Product Data and Samples for the purpose of (1) determining compliance with applicable laws, statutes, ordinances and codes; and (2) determining whether or not the work, when completed, will be in compliance with the requirements of the Contract Documents. The Design Professional shall act with such reasonable promptness to cause no delay in the work or in the construction of the Owner or of separate contractors, while allowing sufficient time in the Design Professional's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities or for substantiating instructions for installation or performance of equipment or systems designed by the Contractor, all of which remain the responsibility of the Contractor to the extent required by the Contract Documents. The Design Professional's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Design Professional, of construction means, methods, techniques, sequences or procedures. The Design Professional's approval of a specific item shall not indicate approval of an assembly of which the item is a component. When professional certification of performance characteristics

of materials, systems or equipment is required by the Contract Documents, the Design Professional shall be entitled to rely upon such certification to establish that the materials, systems or equipment will meet the performance criteria required by the Contract Documents.

2.6.13 The Design Professional shall prepare Change Orders and Construction Change Directives, with supporting documentation and data if deemed necessary by the Design Professional as provided in Subsections 3.1.1 and 3.3.3, for the Owner's approval and execution in accordance with the Contract Documents, and may authorize minor changes in the work not involving an adjustment in the Contract Sum or an extension of the Contract Time which are not inconsistent with the intent of the Contract Documents.

2.6.14 On behalf of the Owner, the Design Professional shall conduct inspections to determine the dates of Substantial Completion and Final Completion, and if requested by the Owner shall issue Certificates of Substantial and Final Completion. The Design Professional will receive and review written guarantees and related documents required by the Contract for Construction to be assembled by the Contractor and shall issue a final certificate for Payment upon compliance with the requirements of the Contract Documents.

2.6.15 The Design Professional shall interpret and provide recommendations on matters concerning performance of the Owner and Contractor under the requirements of the Contract Documents on written request of either the Owner or Contractor. The Design Professional's response to such requests shall be made with reasonable promptness and within any time limits agreed upon.

2.6.16 Interpretations and decisions of the Design Professional shall be consistent with the intent of and reasonably inferable from the Contract Documents and shall be in writing or in the form of drawings. When making such interpretations and initial decisions, the Design Professional shall endeavor to secure faithful performance by both Owner and Contractor, and shall not be liable for results or interpretations or decisions so rendered in good faith in accordance with all the provisions of this Agreement and in the absence of negligence.

2.6.17 The Design Professional shall render written decisions within a reasonable time on all claims, disputes or other matters in question between the Owner and Contractor relating to the execution or progress of the work as provided in the Contract Documents.

2.6.18 The Design Professional (1) shall render services under the Agreement in accordance with the Degree of Care; (2) will reimburse the Owner for all damages caused by the defective designs the Design Professional prepares; and (3) by acknowledging payment by the Owner of any fees due, shall not be released from any rights the Owner may have under the Agreement or diminish any of the Design Professional's obligations thereunder.

2.6.19 The Design Professional shall provide the Owner with four sets of reproducible prints showing all significant changes to the Construction Documents during the Construction Phase.

ARTICLE 3 ADDITIONAL SERVICES

3.1 GENERAL

3.1.1 The services described in this Article 3 are not included in Basic Services unless so identified in the Agreement or Proposal, and they shall be paid for by the Owner as provided in the Agreement, in addition to the compensation for Basic Services. The services described under Sections 3.2 and 3.4 shall only be provided if authorized or confirmed in writing by the Owner. If services described under Contingent Additional Services in Section 3.3 are required due to circumstances beyond the Design Professional's control, the Design Professional shall notify the Owner in writing and shall not commence such additional services until it receives written approval from the Owner to proceed. If the Owner indicates in writing that all or part of such Contingent Additional Services are not required, the Design Professional shall have no obligation to provide those services. Owner will be responsible for compensating the Design Professional for Contingent Additional Services only if they are not required due to the negligence or fault of Design Professional.

3.2 PROJECT REPRESENTATION BEYOND BASIC SERVICES

3.2.1 If more extensive representation at the site than is described in Subsection 2.6.5 is required, the Design Professional shall provide one or more Project Representatives to assist in carrying out such additional on-site responsibilities.

3.2.2 Project Representatives shall be selected, employed and directed by the Design Professional, and the Design Professional shall be compensated therefor as agreed by the Owner and Design Professional.

3.3 CONTINGENT ADDITIONAL SERVICES

3.3.1 Making material revisions in Drawings, Specifications or other documents when such revisions are:

1. inconsistent with approvals or instructions previously given by the Owner, including revisions made necessary by adjustments in the Owner's program or Project budget;
2. required by the enactment or revision of codes, laws or regulations subsequent to the preparation of such documents, or
3. due to changes required as a result of the Owner's failure to render decision in a timely manner.

3.3.2 Providing services required because of significant changes in the Project including, but not limited to, size, quality, complexity, or the Owner's schedule, except for services required under Subsection 2.5.2.

3.3.3 Preparing Drawings, Specifications and other documentation and supporting data, and providing other services in connection with Change Orders and Construction Change Directives.

3.3.4 Providing consultation concerning replacement of work damaged by fire or other cause during construction, and furnishing services required in connection with the replacement of such work.

3.3.5 Providing services made necessary by the default of the Contractor, by major defects or deficiencies in the work of the Contractor, or by failure of performance of either the Owner or Contractor under the Contract for Construction.

3.3.6 Providing services in evaluating an extensive number of claims submitted by the Contractor or others in connection with the work.

3.3.7 Providing services in connection with a public hearing, arbitration proceeding or legal proceeding except where the Design Professional is party thereto.

3.3.8 Providing services in addition to those required by Article 2 for preparing documents for alternate, separate or sequential bids or providing services in connection with bidding or construction prior to the completion of the Construction Documents Phase.

3.3.9 Notwithstanding anything contained in the Agreement, Proposal or these General Conditions to the contrary, all services described in this Article 3 that are caused or necessitated in whole or in part due to the negligent act or omission of the Design Professional shall be performed by the Design Professional as a part of the Basic Services under the Agreement with no additional compensation above and beyond the compensation due the Design Professional for the Basic Services. The intervening or concurrent negligence of the Owner shall not limit the Design Professional's obligations under this Subsection 3.3.9.

3.4 OPTIONAL ADDITIONAL SERVICES

3.4.1 Providing financial feasibility or other special studies.

3.4.2 Providing planning surveys, site evaluations or comparative studies of prospective sites.

3.4.3 Providing special surveys, environmental studies and submissions required for approvals of governmental authorities or others having jurisdiction over the Project.

3.4.4 Providing services relative to future facilities, systems and equipment.

3.4.5 Providing services to investigate existing conditions or facilities or to make measured drawings thereof.

3.4.6 Providing services to verify the accuracy of drawings or other information furnished by the Owner.

3.4.7 Providing coordination of construction performed by separate contractors or by the Owner's own forces and coordination of services required in connection with construction performed and equipment supplied by the Owner.

3.4.8 Providing detailed quantity surveys or inventories of material, equipment and labor.

3.4.9 Providing analyses of operating and maintenance costs.

3.4.10 Making investigations, inventories of materials or equipment, or valuations and detailed appraisals of existing facilities.

3.4.12 Providing assistance in the utilization of equipment or systems such as testing, adjusting and balancing, preparation of operation and maintenance manuals, training personnel for operation and maintenance and consultation during operation.

3.4.13 Providing interior design and similar services required for or in connection with the selection, procurement or installation of furniture, furnishings and related equipment.

3.4.14 Providing services other than as provided in Section 2.6.4, after issuance to the Owner of the final Certificate for Payment and expiration of the Warranty period of the Contract for Construction.

3.4.15 Providing services of consultants for other than architectural, civil, structural, mechanical and electrical engineering portions of the Project provided as a part of Basic Services.

3.4.16 Providing any other services not otherwise included in this Agreement or not customarily furnished in accordance with generally accepted architectural practice.

3.4.17 Preparing a set of reproducible record drawings in addition to those required by Subsection 2.6.19, showing significant changes in the work made during construction based on marked-up prints, drawings and other data furnished by the Contractor to the Design Professional.

3.4.18 Notwithstanding anything contained in the Agreement, Proposal or these General Conditions to the contrary, all services described in this Article 3 that are caused or necessitated in whole or in part due to the negligent act or omission of the Design Professional shall be performed by the Design Professional as a part of the Basic Services under the Agreement with no additional compensation above and beyond the compensation due the Design Professional for the Basic Services. The intervening or concurrent negligence of the Owner shall not limit the Design Professional's obligations under this Subsection 3.4.18.

ARTICLE 4 OWNER'S RESPONSIBILITIES

4.1 The Owner shall consult with the Design Professional regarding requirements for the Project, including (1) the Owner's objectives, (2) schedule and design constraints and criteria, including space requirements and relationships, flexibility, expendability, special equipment, systems and site requirements, as more specifically described in Subsection 2.2.1.

4.2 The Owner shall establish and update an overall budget for the Project, including the Construction Cost, the Owner's other costs and reasonable contingencies related to all of these costs.

4.3 If requested by the Design Professional, the Owner shall furnish evidence that financial arrangements have been made to fulfill the Owner's obligations under this Agreement.

4.4 The Owner shall designate a representative authorized to act on the Owner's behalf with respect to the Project. The Owner or such authorized representative shall render decisions in a timely manner pertaining to documents submitted by the Design Professional in order to avoid unreasonable delay in the orderly and sequential progress of the Design Professional's services.

4.5 Where applicable, the Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a written legal description of the site. The surveys and legal information shall include, as applicable, grades and lines of streets, alleys, pavements and adjoining property and structures; adjacent drainage; rights-of-way, restrictions, easements, encroachments, zoning, deed restrictions, boundaries and contours of the site; locations, dimensions and necessary data pertaining to existing buildings, other improvements and trees; and information concerning available utility services and lines, both public and private, above and below grade, including inverts and depths. All the information on the survey shall be referenced to a project benchmark.

4.6 Where applicable, the Owner shall furnish the services of geotechnical engineers when such services are requested by the Design Professional. Such services may include but are not limited to test borings, test pits, determinations of soil bearing values, percolation tests, evaluations of hazardous materials, ground corrosion and resistivity tests, including necessary operations for anticipating sub-soil conditions, with reports and appropriate professional recommendations.

4.6.1 The Owner shall furnish the services of other consultants when such services are reasonably required by the scope of the Project and are requested by the Design Professional and are not retained by the Design Professional as part of its Basic Services or Additional Services.

4.7 When not a part of the Additional Services, the Owner shall furnish structural, mechanical, chemical, air and water pollution tests, tests of hazardous materials, and other laboratory and environmental tests, inspections and reports required by law or the Contract Documents.

4.8 The Owner shall furnish all legal, accounting and insurance counseling services as may be necessary at any time for the Project, including auditing services the Owner may require to verify the Contractor's Applications for Payment or to ascertain how or for what purposes the Contractor has used the money paid by or on behalf of the Owner.

4.9 The services, information, surveys and reports required by Owner under Sections 4.5 through 4.8 shall be furnished at the Owner's expense, and the Design Professional shall be entitled to rely upon the accuracy and completeness thereof in the absence of any negligence on the part of the Design Professional.

4.10 The Owner shall give prompt written notice to the Design Professional if the Owner becomes aware of any fault or defect in the Project or nonconformance with the Contract Documents.

4.11 Design Professional shall propose language for certificates or certifications to be requested of the Design Professional or Design Professional's consultants and shall submit such to the Owner for review and approval at least fourteen (14) days prior to execution. The Owner agrees not to request certifications that would require knowledge or services beyond the scope of the Agreement.

ARTICLE 5 CONSTRUCTION COST

5.1 CONSTRUCTION COST DEFINED

5.1.1 The Construction Cost shall be the total cost or estimated cost to the Owner of all elements of the Project designed or specified by the Design Professional.

5.1.2 The Construction Cost shall include the cost at current market rates of labor and materials furnished by the Owner and equipment designed, specified, selected or specially provided for by the Design Professional, plus a reasonable allowance for the Contractor's overhead and profit. In addition, a reasonable allowance for contingencies shall be included for market conditions at the time of bidding and for changes in the work during construction.

5.1.3 Construction Cost does not include the compensation of the Design Professional and Design Professional's consultants, the costs of the land, rights-of-way, financing or other costs which are the responsibility of the Owner as provided in Article 4.

5.2 RESPONSIBILITY FOR CONSTRUCTION COST

5.2.1 Evaluations of the Owner's Project budget, preliminary estimates of Construction Cost and detailed estimates of Construction Cost prepared by the Design Professional represent the Design Professional's best judgment as a design professional familiar with the construction industry. It is recognized, however, that neither the Design Professional nor the Owner has control over the cost of labor, materials or equipment, over the Contractor's methods of determining bid prices, or over competitive bidding or market conditions. Accordingly, the Design Professional cannot and does not warrant or represent that bids or cost proposals will not vary from the Owner's Project budget or from any estimate of Construction Cost or evaluation prepared or agreed to by the Design Professional.

5.2.2 No fixed limit of Construction Cost shall be established as a condition of the Agreement by the furnishing, proposal or establishment of a Project budget, unless such fixed limit has been agreed upon in writing and signed by the parties thereto. If such a fixed limit has been established, the Design Professional shall be permitted to include contingencies for design, bidding and price escalation, to determine what materials, equipment, component systems and types of construction are to be included in the Contract Documents, to make reasonable adjustments in the scope of the Project and to include in the Contract Documents alternate bids to adjust the Construction Cost to the fixed limit. Fixed limits, if any, shall be increased in the amount of an increase in the Contract Sum occurring after execution of the Contract for Construction.

5.2.3 If the Procurement Phase has not commenced within 90 days after the Design Professional submits the Construction Documents to the Owner, any Project budget or fixed limit of Construction Cost shall be adjusted to reflect changes in the general level of prices in the construction industry between the date of submission of the Construction Documents to the Owner and the date on which proposals are sought.

ARTICLE 6 OWNERSHIP AND USE OF DOCUMENTS

6.1 The Drawings, Specifications and other documents prepared by the Design Professional for this Project are instruments of the Design Professional's service and shall become the property of the Owner upon termination or completion of the Agreement. The Design Professional is entitled to retain copies of all such documents. Such documents are intended only be applicable to this Project, and Owner's use of such documents in other projects shall be at Owner's sole risk and expense. In the event the Owner uses any of the information or materials developed pursuant to the Agreement in another project or for other purposes than are specified in the Agreement, the Design Professional is released from any and all liability relating to their use in that project.

6.2 Submission or distribution of documents to meet official regulatory requirements or for similar purposes in connection with the Project is not to be construed as publication in derogation of the Design Professional's reserved rights.

ARTICLE 7 TERMINATION, SUSPENSION OR ABANDONMENT

7.1 The Design Professional may terminate the Agreement upon not less than thirty days written notice should the Owner fail substantially to perform in accordance with the terms of the Agreement through no fault of the Design Professional. Owner may terminate the Agreement or any phase thereof with or without cause upon thirty (30) days prior written notice to the Design Professional. All work and labor being performed under the Agreement shall cease immediately upon Design Professional's receipt of such notice. Before the end of the thirty (30) day period, Design Professional shall invoice the Owner for all work it satisfactorily performed prior to the receipt of such notice. No amount shall be due for lost or anticipated profits. All plans, field surveys, and other data related to the Project shall become property of the Owner upon termination of the Agreement and shall be promptly delivered to the Owner in a reasonably organized form. Should Owner subsequently contract with a new Design Professional for continuation of services on the Project, Design Professional shall cooperate in providing information.

7.2 If the Project is suspended by the Owner for more than 30 consecutive days, the Design Professional shall be compensated for services satisfactorily performed prior to notice of such suspension. When the Project is resumed, the Design Professional's compensation shall be equitably adjusted to provide for expenses incurred in the interruption and resumption of the Design Professional's services.

7.3 The Agreement may be terminated by the Owner upon not less than seven days written notice to the Design Professional in the event that the Project is permanently abandoned. If the Project is abandoned by the Owner for more than 90 consecutive days, the Design Professional or the Owner may terminate the Agreement by giving written notice.

7.4 Failure of the Owner to make payments to the Design Professional for work satisfactorily completed in accordance with the Agreement shall be considered substantial non-performance and cause for termination.

7.5 If the Owner fails to make payment to Design Professional within thirty (30) days of receipt of a statement for services properly and satisfactorily performed, the Design Professional may, upon seven days written notice to the Owner, suspend performance of services under the Agreement.

7.6 In the event of termination not the fault of the Design Professional, the Design Professional shall be compensated for services properly and satisfactorily performed prior to termination.

ARTICLE 8 PAYMENTS TO THE DESIGN PROFESSIONAL

8.1 DIRECT PERSONNEL EXPENSE

8.1.1 Direct Personnel Expense is defined as the direct salaries of the Design Professional's personnel engaged on the Project and the portion of the cost of their mandatory and customary contributions and benefits related thereto, such as employment taxes and other statutory employee benefits, insurance, sick leave, holidays, vacations, pensions and similar contributions and benefits.

8.2 REIMBURSABLE EXPENSES

8.2.1 Reimbursable Expenses are in addition to compensation for Basic and Additional Services and include expenses incurred by the Design Professional and Design Professional's employees and consultants in the interest of the Project, as identified in the following Clauses.

8.2.1.1 Expense of transportation in connection with the Project; expenses in connection with authorized out-of-town travel; long-distance communications; and fees paid for securing approval of authorities having jurisdiction over the Project.

8.2.1.2 Expense of reproductions (except the reproduction of the sets of documents referenced in Subsection 2.6.19), postage and handling of Drawings, Specifications and other documents.

8.2.1.3 If authorized in advance by the Owner, expense of overtime work requiring higher than regular rates.

8.2.1.4 Expense of renderings, models and mock-ups requested by the Owner.

8.2.1.5 Expense of computer-aided design and drafting equipment time when used in connection with the Project.

8.2.1.6 Other expenses that are approved in advance in writing by the Owner.

8.3 PAYMENTS ON ACCOUNT OF BASIC SERVICES

8.3.1 Payments for Basic Services shall be made monthly and, where applicable, shall be in proportion to services performed within each phase of service, on the basis set forth in Section 2 of the Agreement and the schedule of work.

8.3.2 If and to the extent that the time initially established in the Agreement is exceeded or extended through no fault of the Design Professional, compensation for any services rendered during the additional period of time shall be computed in the manner set forth in Section 2 of the Agreement.

8.3.3 When compensation is based on a percentage of Construction Cost and any portions of the Project are deleted or otherwise not constructed, compensation for those portions of the Project shall be payable to the extent services are performed on those portions, in accordance with the schedule set forth in Section 2 of the Agreement based on (1) the lowest bona fide bid or (2) if no such bid or proposal is received, the most recent preliminary estimate of Construction Cost or detailed estimate of Construction Cost for such portions of the Project.

8.4 PAYMENTS ON ACCOUNT OF ADDITIONAL SERVICES

8.4.1 Payments on account of the Design Professional's Additional Services and for Reimbursable Expenses shall be made monthly within 30 days after the presentation to the Owner of the Design Professional's statement of services rendered or expenses incurred.

8.5 PAYMENTS WITHHELD No deductions shall be made from the Design Professional's compensation on account of penalty, liquidated damages or other sums withheld from payments to contractors, or on account of the cost of changes in the work other than those for which the Design Professional is responsible.

ARTICLE 9 INDEMNITY

9.1 The Design Professional shall indemnify and save and hold harmless the Owner and its officers, agents, and employees from and against any and all liability, claims, demands, damages, losses, and expenses, including, but not limited to court costs and reasonable attorney fees incurred by the Owner, and including, without limitation, damages for bodily and personal injury, death and property damage, resulting from the negligent acts or omissions of the Design Professional or its officers, shareholders, agents, or employees in the performance of the Agreement.

9.2 Nothing herein shall be construed to create a liability to any person who is not a party to the Agreement, and nothing herein shall waive any of the parties' defenses, both at law or equity, to any claim, cause of action, or litigation filed by anyone not a party to the Agreement, including the defense of governmental immunity, which defenses are hereby expressly reserved.

ARTICLE 10 INSURANCE During the performance of the Services under the Agreement, Design Professional shall maintain the following insurance with an insurance company licensed or authorized to do business in the State of Texas by the State Insurance Commission or any successor agency that has a rating with Best Rate Carriers of at least an A- or above:

10.1 Comprehensive General Liability Insurance with bodily injury limits of not less than \$1,000,000 for each occurrence and not less than \$2,000,000 in the aggregate, and with property damage limits of not less than \$100,000 for each occurrence and not less than \$250,000 in the aggregate.

10.2 Automobile Liability Insurance with bodily injury limits of not less than \$500,000 for each person and not less than \$500,000 for each accident, and with property damage limits of not less than \$100,000 for each accident.

10.3 Worker's Compensation Insurance in accordance with statutory requirements, and Employers' Liability Insurance with limits of not less than \$100,000 for each accident including occupational disease.

10.4 Professional Liability Insurance with limits of not less than \$1,000,000 annual aggregate.

10.5 The Design Professional shall furnish insurance certificates or insurance policies to the Owner evidencing insurance in compliance with this Article 10 at the time of the execution of the Agreement. The General Liability and Automobile Liability Insurance policies shall name the Owner as an additional insured, the Workers' Compensation policy shall contain a waiver of subrogation in favor of the Owner, and each policy shall contain a provision that such insurance shall not be canceled or modified without thirty (30) days' prior written notice to Owner and Design Professional. In such event, the Design Professional shall, prior to the effective date of the change or cancellation, furnish Owner with substitute certificates of insurance meeting the requirements of this Article 10.

ARTICLE 11 MISCELLANEOUS PROVISIONS

11.1 The Agreement shall be governed by the laws of the State of Texas. Venue of any suit or cause of action under the Agreement shall lie exclusively in Denton County, Texas.

11.2 The Owner and Design Professional, respectively, bind themselves, their partners, successors, assigns and legal representatives to the other party to this Agreement and to the partners, successors, assigns and legal representatives of such other party with respect to all covenants of this Agreement. The Design Professional shall not assign its interests in the Agreement without the written consent of the Owner.

11.3 The term Agreement as used herein includes the executed Agreement, the Proposal, these General Conditions and other attachments referenced in Section 3 of the Agreement which together represent the entire and integrated agreement between the Owner and Design Professional and supersedes all prior negotiations, representations or agreements, either written or oral. The Agreement may be amended only by written instrument signed by both Owner and Design Professional. When interpreting the Agreement the executed Agreement, Proposal, these General Conditions and the other attachments referenced in Section 3 of the Agreement shall to the extent that is reasonably possible be read so as to harmonize the provisions. However, should the provisions of these documents be in conflict so that they can not be reasonably harmonized, such documents shall be given priority in the following order:

1. The executed Agreement
2. Attachments referenced in Section 3 of the Agreement other than the Proposal
3. These General Provisions
4. The Proposal

11.4 Nothing contained in the Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the Owner or Design Professional.

11.5 Upon receipt of prior written approval of Owner, the Design Professional shall have the right to include representations of the design of the Project, including photographs of the exterior and interior, among the Design Professional's promotional and professional materials. The Design Professional's materials shall not include the Owner's confidential or proprietary information if the Owner has previously advised the Design Professional in writing of the specific information considered by the Owner to be confidential or proprietary. The Owner shall provide professional credit for the Design Professional on the construction sign and in the promotional materials for the Project.

11.6 Approval by the Owner shall not constitute, nor be deemed a release of the responsibility and liability of the Design Professional, its employees, associates, agents, subcontractors, and subconsultants for the accuracy and competency of their designs or other work; nor shall such approval be deemed to be an assumption of such responsibility by the Owner for any defect in the design or other work prepared by the Design Professional, its employees, subcontractors, agents, and consultants.

11.7 All notices, communications, and reports required or permitted under the Agreement shall be personally delivered or mailed to the respective parties by depositing same in the United States mail to the address shown below signature block on the Agreement, certified mail, return receipt requested, unless otherwise specified herein. All notices shall be deemed effective upon receipt by the party to whom such notice is given, or within three (3) days after mailing.

11.8 If any provision of the Agreement is found or deemed by a court of competent jurisdiction to be invalid or unenforceable, it shall be considered severable from the remainder of the Agreement and shall not cause the remainder to be invalid or unenforceable. In such event, the parties shall reform the Agreement to replace such stricken provision with a valid and enforceable provision which comes as close as possible to expressing the intention of the stricken provision.

11.9 The Design Professional shall comply with all federal, state, and local laws, rules, regulations, and ordinances applicable to the work covered hereunder as they may now read or hereinafter be amended during the term of this Agreement.

11.10 In performing the Services required hereunder, the Design Professional shall not discriminate against any person on the basis of race, color, religion, sex, national origin or ancestry, age, or physical handicap.

11.11 The captions of the Agreement are for informational purposes only, and shall not in any way affect the substantive terms or conditions of the Agreement.



Graham Associates, Inc.
CONSULTING ENGINEERS & PLANNERS

Exhibit 2
The Design Professional's Proposal

May 27, 2013

Mr. Frank Payne, P.E.
City Engineer
City of Denton
901-A Texas Street
Denton, Texas 76209

RE: Proposal for Professional Services - Engineering Design of North Bonnie Brae Road from Scripture Street to University Drive

Dear Mr. Payne:

Graham Associates is pleased to present this proposal to provide professional services for the survey, right-of-way determination, design, and construction administration to widen and improve North Bonnie Brae Road from Scripture Street to University Drive. We are breaking the proposal into two sections:

1. From IH35E to Scripture Street
2. From Scripture Street to University Drive

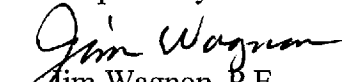
Our staff and sub-consultants proposed for the project are shown in the attached organizational chart (Attachment C). The summary of fees is shown in Attachment A, which includes both basic and additional services. The estimate of construction costs for North Bonnie Brae is shown in Attachment D. The proposed scope of services and deliverables are shown in Attachment E. Proposed schedules are shown attached as Exhibit 3. The schedule of rates is attached as Exhibit 4.

Graham Associates shall comply with the City of Denton's "General Conditions to Agreement for Architectural or Engineering Services". Our firm shall also meet or exceed the insurance requirements of Denton including a \$3 million professional liability insurance policy.

Payment for Basic Services listed in Exhibit 3 shall be made monthly based on proportion of services performed within each phase of work. Payment for Additional Services and reimbursable expenses listed in Attachment A shall be made monthly based on statement of services rendered or expenses incurred.

Please contact me if you need further information.

Respectfully Submitted,


Jim Wagon, P.E.
CEO

Graham Associates, Inc. TBPE Firm #F-1191

Summit Office Park
1300 Summit Ave., Suite 419
Ft. Worth, Texas 76102-4418
(817) 332-5756
Fax (817) 336-6909

Centerpoint Three
600 Six Flags Drive, Suite 500
Arlington, Texas 76011-6356
(817) 649-1914 • Metro (817) 640-8535
FAX (817) 633-5240

Chase Bank
3200 Broadway Blvd. Suite 268
Garland, Texas 75043-1571
(972) 840-6671
FAX (972)-840-6671

Summary of Engineering Fees
North Bonnie Brae Road - Scripture Street to University Drive
Exhibit 2, Attachment A
May 2013

Basic Services		FEE	Phase II North Bonnie Brae Scripture to University
1)	Schematics - Estimates (15%)		\$54,140.25
2)	Construction Plans		\$306,794.75
3)	North Bonnie Brae Traffic Control		\$18,250.00
4)	Utility Coordination		\$10,695.00
5)	Quality Assurance/Quality Control		\$5,350.00
6)	Bidding/Construction Administration		\$59,215.00
TOTAL BASIC SERVICES			\$454,445.00

Summary of Engineering Fees

North Bonnie Brae Road - Scripture Street to University Drive Exhibit 2, Attachment A May 2013

Additional Services		FEE	Phase II North Bonnie Brae Scripture to University
1)	Design Surveying	\$37,600.00	
* 2)	U.S.A.C.E. 404 Permitting	\$1,650.00	
3)	Traffic Signal Design	\$20,784.00	
4)	Geotechnical Analysis for Design	\$13,563.00	
5)	Right-of-Way	\$44,200.00	
6)	Environmental Assessment	NA	\$38,402.50
7)	Additional Services Contract Administration	\$172,800.00	
8)	Right of Way Acquisition Services	\$0.00	
9)	Geotechnical Materials and Construction Testing	\$37,752.00	
TOTAL ADDITIONAL SERVICES		\$366,751.50	
TOTAL BASIC SERVICES		\$454,445.00	
REIMBURSABLE EXPENSES		\$10,000.00	
TOTAL FEES		\$831,196.50	

Exhibit 2 - Attachment B ESTIMATED SHEET TOTALS

Scripture St to University Dr (US 180)

<u>Sheet Description</u>	<u>Number of Sheets</u>
Cover Sheet	1
Quantity Sheets	6
Survey Control Layout	4
Typical Sections	5
Erosion Control	5
Erosion Control Details	4
Traffic Control	25
Paving Plan/Profiles	12
Intersection Grading Plan	5
Driveways	4
Retaining Walls	5
Drainage Area Map	2
Runoff Computations	1
Inlet Computations	1
Storm Drainage Computations	3
Drainage Plan/Profiles	11
Drainage Laterals	5
Street Lights	5
Pavement Markings & Signage	4
Traffic Signals	7
Details	56

Subtotal Number of Sheets = 171

Cross-Section Plans

Cover	1
Cross-Sections	36

Subtotal Number of Sheets = 37

Right-Of-Way Strip Maps

<u>Sheet Description</u>	<u>Number of Sheets</u>
Cover Sheet	1
Parcel Summary	2
Right-Of-Way Map Sheets	5

Subtotal Number of Sheets = 8

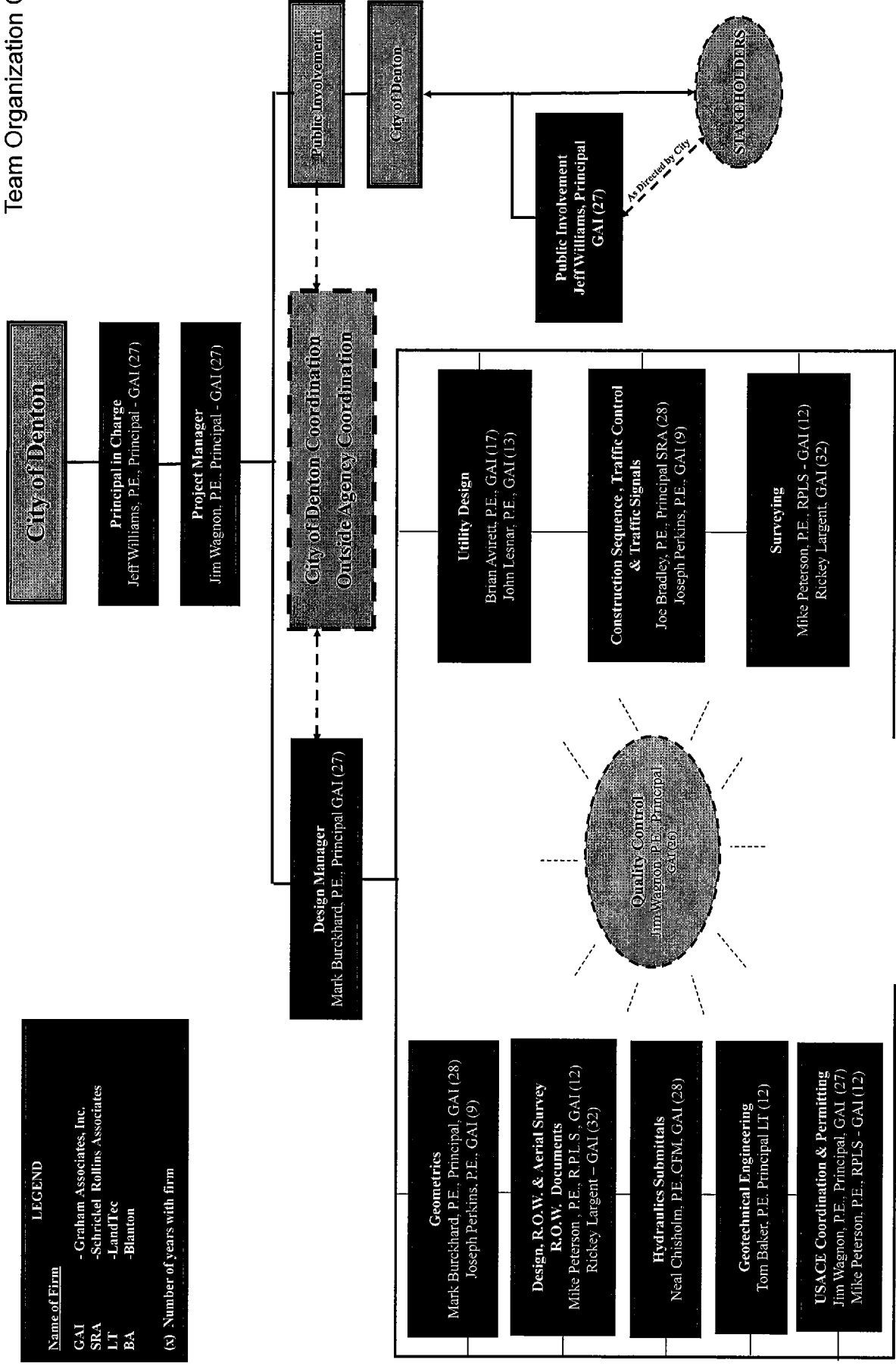
Total Number of Sheets = 216

North Bonnie Brae Capital Improvement Project

Exhibit 2
Attachment C

Team Organization Chart

LEGEND	
<u>Name of Firm</u>	
GAI	- Graham Associates, Inc.
SRA	- Schrieffel Rollins Associates
LT	- LandTec
BA	- Blanton
(x)	Number of years with firm



ATTACHMENT D

Bonnie Brae Street Scripture St. to University Dr. (US 180) Summary of Construction Costs May 2013

Paving, Traffic Control, Erosion Control, Retaining Walls	\$ 2,616,010.00
Traffic Signals	\$ 300,000.00
Drainage – (Replacing storm in Emery – Permanent Condition)	\$ 2,148,793.75
Street Lights	\$ 155,116.50
Pavement Markings	\$ 26,761.50
Water	\$ 404,250.00
Sewer	<u>\$ 175,796.25</u>
Total	\$ 5,826,728.00

PAVING
Bonnie Brae Street
Scripture St. to University Dr. (US 380)
May 1, 2013

Item	Description	Quantity	Unit	Unit Price	Item Cost
1	Preparing Right of Way	36	STA	\$ 2,250.00	\$ 81,000.00
2	Excavation	25,325	C.Y.	\$ 4.00	\$ 101,300.00
3	Embankment	10,130	C.Y.	\$ 3.00	\$ 30,390.00
4	Backfill	36	STA	\$ 85.00	\$ 3,060.00
5	Topsoil	20,890	S.Y.	\$ 0.75	\$ 15,667.50
6	Block Sodding	11,957	S.Y.	\$ 1.80	\$ 21,522.60
7	Seeding	8,933	S.Y.	\$ 0.30	\$ 2,679.90
8	Lime Slurry	634	TON	\$ 150.00	\$ 95,100.00
9	Lime Treatment 12"	31,700	S.Y.	\$ 3.00	\$ 95,100.00
10	Concrete Pavement 6" Drives	1,780	S.Y.	\$ 47.00	\$ 83,660.00
11	Concrete Pavement 10" Cross Streets	2,917	S.Y.	\$ 45.00	\$ 131,265.00
12	Concrete Pavement 11" Bonnie Brae	23,235	S.Y.	\$ 50.00	\$ 1,161,750.00
13	2" ACP Over 4" ACP	4,295	S.Y.	\$ 35.00	\$ 150,325.00
14	Concrete Street Header	160	L.F.	\$ 7.00	\$ 1,120.00
15	Barricades, Signs, & Traffic Handling	20	MO	\$ 4,500.00	\$ 90,000.00
16	Landscape Pavers	1,297	S.Y.	\$ 45.00	\$ 58,365.00
17	Retaining Wall (spreadfooting) w/Formliner	1,200	S.F.	\$ 56.00	\$ 67,200.00
18	Mono Curb	11,270	L.F.	\$ 2.00	\$ 22,540.00
19	Concrete Curb & Gutter	1,740	L.F.	\$ 8.00	\$ 13,920.00
20	Sidewalks	3,367	S.Y.	\$ 45.00	\$ 151,515.00
21	Curb Ramps	20	EA.	\$ 1,500.00	\$ 30,000.00
22	Erosion Control SWPPP	1	L.S.	\$ 75,000.00	\$ 75,000.00
23	Capital Improvement Signs	3	EA.	\$ 750.00	\$ 2,250.00
24	Remove Curb & Gutter	7,200	L.F.	\$ 1.90	\$ 13,680.00
25	Remove Existing Paving Asphalt	19,600	S.Y.	\$ 6.00	\$ 117,600.00

TOTAL \$ 2,616,010.00

Since Graham Associates, Inc. has no control over the costs of labor, materials or equipment, or over contractor's methods of determining prices, or over competitive bidding or market conditions, this opinion of probable cost is made on the basis of our professional experience and represents our best judgment as a firm familiar with the construction industry. We cannot guarantee that proposals, bids or the project costs will not vary from the opinion of probable cost prepared by Graham Associates.

TRAFFIC SIGNALS
Bonnie Brae Street
Scripture St. to University Dr. (US 380)
May 1, 2013

ITEM	DESCRIPTIONS	QUANTITY	UNITS	UNIT PRICE	ITEM COST
1	Permanent Traffic Signals	1	EA.	\$ 225,000.00	\$ 225,000.00
	University (US 380)				
2	Temporary Signals- University(US 380)	1	EA.	\$ 75,000.00	\$ 75,000.00
SUBTOTAL					\$ 300,000.00

Since Graham Associates, Inc. has no control over the costs of labor, materials or equipment, or over contractor's methods of determining prices, or over competitive bidding or market conditions, this opinion of probable cost is made on the basis of our professional experience and represents our best judgment as a firm familiar with the construction industry. We cannot guarantee that proposals, bids or the project costs will not vary from the opinion of probable cost prepared by Graham Associates.

DRAINAGE
Bonnie Brae Street
Scripture St. to University Dr. (US 380)
May 1, 2013

Item	Description	Quantity	Unit	Unit Price	Item Cost
1	18" RCP (CL III)	425	L.F.	\$ 35.00	\$ 14,875.00
2	21" RCP (CL III)	575	L.F.	\$ 39.75	\$ 22,856.25
3	24" RCP (CL III)	165	L.F.	\$ 45.00	\$ 7,425.00
4	27" RCP (CL III)	255	L.F.	\$ 53.50	\$ 13,642.50
5	30" RCP (CL III)	380	L.F.	\$ 60.00	\$ 22,800.00
6	33" RCP (CL III)	250	L.F.	\$ 67.00	\$ 16,750.00
7	36" RCP (CL III)	380	L.F.	\$ 80.00	\$ 30,400.00
8	39" RCP (CL III)	20	L.F.	\$ 86.50	\$ 1,730.00
9	48" RCP (CL III)	255	L.F.	\$ 106.50	\$ 27,157.50
10	6' X 4' RCB	2,410	L.F.	\$ 250.00	\$ 602,500.00
11	8' X 5' RCB	430	L.F.	\$ 275.00	\$ 118,250.00
12	9' X 5' RCB	475	L.F.	\$ 435.00	\$ 206,625.00
13	10' X 5' RCB	1,395	L.F.	\$ 455.00	\$ 634,725.00
14	10' Recessed Curb Inlet	7	EA.	\$ 3,500.00	\$ 24,500.00
15	16' Recessed Curb Inlet	6	EA.	\$ 4,000.00	\$ 24,000.00
16	20' Recessed Curb Inlet	12	EA.	\$ 4,500.00	\$ 54,000.00
17	Y-Inlet	1	EA.	\$ 2,475.00	\$ 2,475.00
18	Manhole Type 1	12	EA.	\$ 5,250.00	\$ 63,000.00
19	Junction Box Type 1	8	EA.	\$ 8,000.00	\$ 64,000.00
20	Trench Safety	6,155	L.F.	\$ 1.50	\$ 9,232.50
21	5" Class "A" Concrete Rip-Rap	575	S.Y.	\$ 90.00	\$ 51,750.00
	12" Graded Rock Rip-Rap	225	S.Y.	\$ 45.00	\$ 10,125.00
22	Remove Existing Manhole	10	EA.	\$ 500.00	\$ 5,000.00
23	Remove Existing Curb Inlet	19	EA.	\$ 600.00	\$ 11,400.00
24	Remove Existing Storm Pipe	5,468	L.F.	\$ 18.75	\$ 102,525.00
25	Concrete Pavement Repair	150	L.F.	\$ 47.00	\$ 7,050.00

TOTAL \$ 2,148,793.75

Since Graham Associates, Inc. has no control over the costs of labor, materials or equipment, or over contractor's methods of determining prices, or over competitive bidding or market conditions, this opinion of probable cost is made on the basis of our professional experience and represents our best judgment as a firm familiar with the construction industry. We cannot guarantee that proposals, bids or the project costs will not vary from the opinion of probable cost prepared by Graham Associates.

STREET LIGHTS
Bonnie Brae Street
Scripture St. to University Dr. (US 380)
May 1, 2013

Item	Description	Quantity	Unit	Unit Price	Item Cost
1	35' White Concrete Street Light Pole	20	EA.	\$ 3,000.00	\$ 60,000.00
2	Pull Box	12	EA.	\$ 525.00	\$ 6,300.00
3	2" PVC Conduit	3,850	L.F.	\$ 4.15	\$ 15,977.50
4	2" Rigid Metal Conduit	300	L.F.	\$ 6.75	\$ 2,025.00
5	Street Light Pole Foundation	20	EA.	\$ 788.00	\$ 15,760.00
6	250 Watt Cobrahead Fixture	20	EA.	\$ 975.00	\$ 19,500.00
7	Electrical Service	2	EA.	\$ 825.00	\$ 1,650.00
8	#4 Bare Street Light Conductor	4,160	L.F.	\$ 2.45	\$ 10,192.00
9	#4 Insulated Street Light Conductor	8,320	L.F.	\$ 2.85	\$ 23,712.00

TOTAL \$ 155,116.50

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PAVEMENT MARKINGS
Bonnie Brae Street
Scripture St. to University Dr. (US 380)
May 1, 2013

Item	Description	Quantity	Unit	Unit Price	Item Cost
1	Type IB Double Line	170	L.F.	\$ 3.00	\$ 510.00
2	Type IB Edge Line	200	L.F.	\$ 1.50	\$ 300.00
3	Type IIIA Barrier Line	1,420	L.F.	\$ 2.00	\$ 2,840.00
4	Type IVA Barrier Line	200	L.F.	\$ 3.20	\$ 640.00
5	Type IA Broken Line	6,400	L.F.	\$ 1.50	\$ 9,600.00
6	Type VA Stop Bar	355	L.F.	\$ 6.10	\$ 2,165.50
7	Type IA Broken Line C/R RPM	80	EA.	\$ 4.00	\$ 320.00
8	Type IIIA Barrier Line C/R RPM	142	EA.	\$ 4.00	\$ 568.00
9	Type IB Double Line A/A RPM	17	EA.	\$ 4.00	\$ 68.00
10	Small Sign Assembly	19	EA.	\$ 450.00	\$ 8,550.00
11	Word, White, Per Letter	8	EA.	\$ 120.00	\$ 960.00
12	Symbol, White, Arrow	2	EA.	\$ 120.00	\$ 240.00

TOTAL \$ 26,761.50

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WATER
Bonnie Brae Street
Scripture St. to University Dr. (US 380)
May 1, 2013

Item	Description	Quantity	Unit	Unit Price	Item Cost
1	6" PVC Water Line	280	L.F.	\$ 33.75	\$ 9,450.00
2	8" PVC Water Line	680	L.F.	\$ 39.75	\$ 27,030.00
3	16" PVC Water Line	3,600	L.F.	\$ 48.00	\$ 172,800.00
4	Standard Fire Hydrant	14	EA.	\$ 1,800.00	\$ 25,200.00
5	6" Gate Valve	14	EA.	\$ 562.50	\$ 7,875.00
6	8" Gate Valve	8	EA.	\$ 750.00	\$ 6,000.00
7	16" Gate Valve	12	EA.	\$ 1,200.00	\$ 14,400.00
8	2" Air Release Valve	2	EA.	\$ 2,625.00	\$ 5,250.00
9	6" Blow Off Valve	2	EA.	\$ 4,500.00	\$ 9,000.00
10	Salvage Fire Hydrant	5	EA.	\$ 262.50	\$ 1,312.50
11	2" Water Service (Short)	21	EA.	\$ 975.00	\$ 20,475.00
12	2" Water Service (Long)	5	EA.	\$ 2,100.00	\$ 10,500.00
13	Driveway Repair	250	L.F.	\$ 12.00	\$ 3,000.00
14	Rock Cushion	100	C.Y.	\$ 22.50	\$ 2,250.00
15	Sodding	2,365	L.F.	\$ 1.50	\$ 3,547.50
16	Connect to Exist Water Line	6	EA.	\$ 1,125.00	\$ 6,750.00
17	Ductile Iron Fittings	11	TN.	\$ 5,625.00	\$ 61,875.00
18	Trench Safety	4,560	L.F.	\$ 1.50	\$ 6,840.00
19	Temporary Pavement Repair	460	L.F.	\$ 23.25	\$ 10,695.00

TOTAL \$ 404,250.00

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SEWER
Bonnie Brae Street
Scripture St. to University Dr. (US 380)
May 1, 2013

Item	Description	Quantity	Unit	Unit Price	Item Cost
1	8" PVC Sewer Pipe	1505	L.F.	\$ 29.25	\$ 44,021.25
2	15" PVC Sewer Pipe	695	L.F.	\$ 37.00	\$ 25,715.00
3	Manhole	10	EA.	\$ 4,000.00	\$ 40,000.00
4	Extra Depth Manhole	50	V.F.	\$ 90.00	\$ 4,500.00
5	Trench Safety	2200	L.F.	\$ 1.50	\$ 3,300.00
6	Temporary Pavement Repair	2020	L.F.	\$ 23.25	\$ 46,965.00
7	Concrete Encasement	170	L.F.	\$ 22.50	\$ 3,825.00
8	Remove Exist. Manhole	7	EA.	\$ 450.00	\$ 3,150.00
9	Tie to Exist S.S.	4	EA.	\$ 600.00	\$ 2,400.00
10	Rock Cushion	50	C.Y.	\$ 22.50	\$ 1,125.00
11	Sodding	180	L.F.	\$ 1.50	\$ 270.00
12	Abandon Exist M.H.	2	EA.	\$ 262.50	\$ 525.00

TOTAL \$ 175,796.25

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ATTACHMENT E

**SCOPE OF SERVICES, DELIVERABLES AND RESPONSIBILITIES OF OWNER
NORTH BONNIE BRAE STREET IMPROVEMENTS
FOR THE CITY OF DENTON**

GENERAL: The City of Denton North Bonnie Brae Street Improvements Project (the Project) will include preparation of construction plans and bid documents, opinions of probable construction costs, identification of right-of-way requirements and necessary ROW acquisitions, Owner utility relocation, franchise utility relocation coordination, permitting and construction phase services.

ARTICLE I

BASIC SERVICES: GAI shall render the following professional services in connection with the development of the Project:

A. Conceptual Design

1. Attend a kick-off meeting with the Owner to discuss the various aspects of the project including planning and design criteria, work program and schedule, procedures of communication, and assignments of personnel.
2. Obtain from the Owner, franchise utility providers, and the Texas Department of Transportation (TxDOT) all available record drawings, planning reports, traffic counts, zoning ordinances, and other data that may be pertinent in considering the development of the preliminary alignments and the final design of the proposed improvements.
3. Determine from a field reconnaissance of the project area the general layout of the land for the improvements including location of existing above ground utilities and drainage structures.
4. Develop a schematic layout with two (2) roadway route alternatives at critical locations along the alignment. Submit four (4) copies of the schematic layout to the Owner for review.
5. Attend meeting with Owner to discuss potential utility conflicts and the proposed relocation plan. GAI will meet with the Owner's Project Manager and Engineering staff first and utility staff later if necessary.
6. Attend a meeting with the Owner to discuss the alignment alternatives and recommendations.
7. Upon Owner approval of alignment and the schematic design GAI will develop a 30% construction plan set with paving plan/profile sheets, intersection layouts, right-of-way sheets, drainage area maps, culvert layouts, and hydraulic computation sheets for Bonnie Brae and the following intersections:
 - a) University

B. Preliminary Design (60%) - Upon review of the 30% plans by the Owner, GAI will prepare preliminary construction plans as follows:

1. Prepare preliminary paving plan and profile sheets showing curb lines, driveways, elevations at all points of vertical intersection and point of intersections in the paving plan; typical sections; cross sections; high and low points, vertical curve information, and pertinent AASHTO calculations.
2. Prepare a Pavement Design Report documenting the existing soil conditions and providing pavement design recommendations based on (at a minimum) a 40-year design life, 10% truck loading and traffic volumes as agreed upon with the Owner.
3. Prepare preliminary drainage sheets including drainage area maps, plan and profiles, and hydraulic computations.
4. Initiate coordination of utility relocations with utility owners, and prepare preliminary design of relocations of affected City water and sewer lines. GAI shall provide the design for the relocation of conflicting water and wastewater utilities.
5. Prepare layout, typical sections, foundation layout, abutment plan, and beam and bent plans.
6. Hydraulic Design of the Culverts
 - a) 60% Design Submittal: Update hydraulic design of culverts as necessary to reflect roadway design and to address Owner comments.
 - (i) Update hydraulic models of culverts as necessary to reflect 60% roadway design.
 - (ii) Preparation of Scour Analyses for each of the creek crossings.
 - (iii) Update the following sheets as necessary for 60% submittal:
 - (1) Drainage Area Maps
 - (2) Hydraulic Computations
 - (3) Culvert Layouts
7. Prepare plan/profile and construction details for retaining walls and necessary shoring design.
8. Prepare Construction Phasing Plan including pavement phasing, transition segments, and construction detour plans. Develop construction phasing typical cross sections at key locations.
9. Prepare traffic control plans based on the construction phasing in accordance with AASHTO and the City of Denton.
10. Prepare a preliminary estimate of probable construction cost and submit with four (4) sets of plans for review.

11. Meet with the Owner to discuss the preliminary design. GAI assumes that we will meet with the Owner three (3) times during the preliminary design phase.
 12. Submit preliminary plans to utility companies for review and comment. Attend a preliminary coordination meeting with the franchise utility companies.
 13. GAI will attend a coordination meeting with DCTA and TxDOT to coordinate plan approval and permits for the project.
- C. Final Design - Following Owner approval of preliminary plans, GAI shall prepare final plans with the following additional tasks:
1. Prepare final construction drawings for paving, MSE retaining walls, drainage, traffic signal, and City utility improvements.
 2. This includes the final hydraulic design of culverts including scour analyses for the proposed culverts as necessary, and preparation of plans, specifications, and estimates.
 - a) Final Design Submittal
 - (i) Provide final hydraulic models to reflect 90% roadway design.
 - (ii) Update the following sheets as necessary for 90% submittal:
 - (1) Drainage Area Maps
 - (2) Final Hydraulic Computations
 - (3) Final Culvert Layouts
 - (4) Detail Sheets (special and standard details)
 - (5) Notes
 - (6) Final grading layouts
 - (7) Quantities for bid proposal
 - (8) Technical specifications for culvert construction
 3. Prepare final technical specifications and bid documents for the project, including bid proposal forms (project quantities) of the improvements to be constructed. This Scope of Services assumes that the project will be prepared using standard bid documents provided by GAI.
 4. Provide quality control by independent review of plans and specifications by Senior Engineer, not on the design team.
 5. Prepare a final opinion of probable construction cost based on recent project unit bid prices.
 6. Furnish four (4) sets of drawings for review by the Owner at the 60% and 90% design stages, and meet with the Owner to review and discuss the plans. The review meetings will be conducted to address review comments and to take action on items

to produce the final construction documents. GAI assumes that we will meet with the Owner three (3) times during each part of the final design phase (60% and 90%).

D. Bidding and Construction Administration Phase – Assist Owner in securing bids. Issue a Notice to Bidders to prospective contractors in GAI's database of prospective bidders, and to selected plan rooms. Provide a copy of the Notice to Bidders for Owner to use in notifying construction news publications and publishing appropriate legal notice. The cost for publications shall be paid by the Owner. GAI will prepare two (2) separate bid packages for the project, with the following to be provided for each bid package.

1. Print thirty (30) sets of 11" x 17" Plans and Bid Documents and distribute to selected plan rooms, and to prospective bidders that respond to the Notice to Bidders.
2. Assist Owner by responding to questions and interpreting bid documents. Prepare and issue addenda to the bid documents to plan holders if necessary.
3. Attend one pre-bid meeting to answer questions related to the bid documents.
4. Assist Owner in the opening, tabulating, and analyzing the bids received. Review the qualification information provided by the apparent low bidder. Recommend award of contract or other actions as appropriate to be taken by the Owner.
5. Assist Owner in the preparation of Construction Contract Documents. Provide ten (10) sets of Construction Contract Documents which include information from the apparent low bidder's bid documents, legal documents, and addenda bound in the documents for execution by the Owner and construction contractor. Distribute five (5) copies of these documents to the contractor with a notice of award that includes directions for the execution of these documents by the construction contractor. Provide Owner with the remaining five (5) copies of these documents for use during construction. Additional sets of documents can be provided as an additional service.
6. Furnish contractor copies of the drawings and specifications for construction pursuant to the General Conditions of the Construction Contract.
7. Attend one (1) pre-construction meeting per bid project to discuss the project schedule for construction.
8. GAI design team staff will make (48) visits to the site to observe the progress and the quality of work and to attempt to determine in general if the work is proceeding in accordance with the construction contract documents. In this effort GAI will endeavor to protect the Owner against defects and deficiencies in the work of Contractor and will report any observed deficiencies to the Owner.
9. Review Contractor shop drawings and other project related submittals. Notify the Contractor of non-conforming work observed during site visits. Review quality related documents provided by the Contractor such as test reports, equipment installation reports or other documentation required by the construction contract documents.

10. Interpret the drawings and specifications for the Owner and Contractor. Investigations, analyses, and studies requested by the Contractor and approved by the Owner, for substitutions of equipment and/or materials or deviations from the drawings and specifications are an additional service.
11. Prepare documentation for contract modifications required to implement modifications in the design of the project. Receive and evaluate notices of Contractor claims and make recommendations to the Owner on the merit and value of the claim on the basis of information submitted by the Contractor or available in project documentation.
12. Revise the construction drawings in accordance with the information furnished by Contractor reflecting changes in the project made during construction. One (1) set of mylar reproducible prints of "Record Drawings" and electronic files shall be provided by GAI to the Owner for each set of construction drawings.

ARTICLE II

ADDITIONAL SERVICES (DESIGN PHASE):

A. Design Surveying

1. Establish horizontal and vertical control for the project from existing TxDOT control monuments. Establish adequate control points and benchmarks for construction of the project. Cross-tie all survey control to City of Denton benchmarks.
2. Provide a topographic survey of the project. The topographic survey shall extend the entire length of Bonnie Brae Street from IH-35E Northbound Frontage Road to University Drive. The survey corridor shall be 200' wide, extending 100' on each side of the proposed roadway centerline, and shall extend a minimum of 200' along all intersecting streets. The survey shall consist of roadway cross sections taken at 50' intervals, locating all existing features such as water valves (including top of nut elevation), curb & gutter, asphalt, driveways, culverts, headwalls, mailboxes, geotechnical boring locations, sanitary and storm sewer manholes (including invert elevations with flowlines, sizes and material types), trees with 6" or greater diameter at 4' height, tops and toes of slopes, visible utilities, utilities marked by others, power poles, telephone risers, and all other visible features.
3. Provide additional topographic surveying at two creek crossings for hydraulic modeling. The limits of the survey will extend 500' upstream and downstream from the existing crossings. Trees will not be surveyed in these areas.

B. USACE 404 Permitting

1. Perform Section 404 Jurisdictional Determination based on USACE guidelines.
2. Prepare a Non-Jurisdictional Determination Letter.

C. Traffic Signals

1. Prepare permanent traffic signal plans for North Bonnie Brae Street and IH-35E and at Hickory, Oak, Scripture and University (US 380) all intersections with Bonnie Brae:
 - a) Signal Layouts
 - b) Phase Diagrams
 - c) Wiring Diagrams
 - d) Quantities and Charts
 - e) Standard Details
 - f) Specifications
2. Temporary traffic signals shall be provided for the I.H. 35 frontage road Hickory, Oak, Scripture, and University (380) all intersections with Bonnie Brae. The construction plans shall include:
 - a) Temporary signal layouts
 - b) Quantities and Charts
 - c) Standard Details

D. Geotechnical Engineering and Pavement Design (LandTec)

1. Pavement and Utility Borings: Drill 15 borings to depths of 15 feet. (Estimate 225 linear feet of drilling). Borings from retaining wall will supplement the pavement and utility borings.
2. Obtain soil samples and perform Texas Cone Penetrometer (TCP) and Split Spoon Tests (SPT) as appropriate for the soils encountered.
3. Perform Dynamic Cone Penetrometer (DCP) tests to evaluate pavement subgrade strength and develop California Bearing Ratio (CBR) values; Effective Modulus of Subgrade Reaction, k , values, and, resilient modulus values for the anticipated pavement subgrade soils.
4. Observe for groundwater seepage during drilling and record level.
5. Backfill boreholes with cuttings upon completion (not grouted).
6. Coordinate the clearance of underground utility locations in accordance with the Texas 811 One Call requirement and as-built information obtained by prime as part of the project at a minimum.
7. Coordinate with the local municipality while drilling on or adjacent to public roads, including traffic control and barricades as necessary.

8. Selected laboratory testing will be conducted on samples that are considered to be reasonably representative of the materials obtained from the field exploration. The tests will evaluate and classify the soils, identify subsurface site characteristics, and provide data for analysis. The tests include
 - a) Soil classification tests including Atterberg limits (liquid and plastic limits) and Sieve Analysis tests
 - b) Unit dry weight and moisture content tests
 - c) Unconfined Compressive Strength tests on soil and rock
 - d) Unconsolidated Undrained (UU) Triaxial strength tests
 - e) Direct Shear and/or Consolidated Undrained Strength tests
 - f) Consolidation tests
 - g) Optimum Moisture-Density Curves (Standard and/or Modified Proctors)
 - h) Swell tests
 - i) Atterberg Limits / pH series tests on pavement subgrade soils with one or more stabilization additives including Lime, Cement and Cem-Lime®.
 - j) Soluble Sulfate tests (subgrade soils upper 4 feet)
9. An engineering analysis and evaluation of the field and laboratory data will be performed for the project, based on available project concepts. Information to be provided is as follows:
 - a) Plan of borings illustrating the approximate location of each boring and scale to which the drawing is made
 - b) A log of each boring indicating the boring number, location (northing, easting and elevation as provided by Graham Associates, Inc.), depth of strata, soil description, field penetration tests including Standard Penetration tests (SPT's) and/or Texas Cone Penetrometer (TCP), laboratory tests, and groundwater information
 - c) Description of the field exploration and laboratory testing program
 - d) Laboratory test results and analysis of results
 - e) Discussion of subsurface soil and groundwater conditions

- f) Recommendations for roadway and embankment fill material including soil type, compaction and moisture content requirements, placement and testing during construction
- g) Provide subgrade and pavement design for Bonnie Brae Street and sections of the intersecting streets using field and laboratory test data, traffic volume and desired pavement design life. Pavement design analysis will be performed using the AASHTO pavement design procedure, specifically using WinPAS software and will match the design procedures used for the City of Fort Worth.
- h) Ten (10) copies of the geotechnical engineering report will be provided to the design team along with PDF and CD versions.

E. Environmental Services (Blanton & Associates & GAI)

The following environmental services shall be performed in support of the Bonnie Brae Street Improvements Project:

1. Compile existing data and perform an initial desktop analysis of environmental conditions of the project area. Prepare maps and other data necessary for site visit.
2. Conduct site visit. Verify and characterize the City's mapped Environmentally Sensitive Areas (ESAs) in the area affected by the proposed project. Perform a preliminary jurisdictional determination to identify and delineate boundaries of waters of the U.S., including wetlands. Make note of areas of potential environmental contamination within the project area that may warrant further investigation. Evaluate the project area for federally listed threatened or endangered species habitat.
3. Prepare a draft of the North Central Texas Council of Government's (NCTCOG) Environmental Review Checklist for the Owner's review and comment. Incorporate comments and submit the revised checklist to the NCTCOG through the Owner for review and comment.
4. Coordinate with cultural resources sub-consultant. Review and provide comments on draft cultural resources report.
5. Coordination with NCTCOG. This task would include answering questions and providing additional information through the Owner if requested by the reviewing agencies. This task assumes a maximum of three requests for clarification and information. Contested application proceedings and requests for multiple site visits are not included in this task.
6. If the preliminary jurisdictional determination results indicate that the impact to the waters of the U.S. exceeds 0.1 acre but is less than 0.5 acre, or if a jurisdictional wetland is identified within the affected area, then GAI will prepare a draft preconstruction notification (PCN) for coverage of road crossings. Submit the draft

PCN to the Owner for review and comment. Incorporate comments and submit the revised PCN to the U.S. Army Corps of Engineers (USACE) for verification. This task assumes that any required compensatory mitigation for impacts to waters of the U.S. would be satisfied by the Owner's purchase of mitigation bank credits. Preparation of a detailed mitigation plan is not included in this task.

7. Historical Land Use Review – Perform an investigation into prior ownership and past land uses on the subject property. GAI will attempt to identify obvious uses of the subject property from the present back to the property's first developed use, or back to 1940, whichever is earlier. To accomplish this task, GAI will review the following records (if available):
 - (i) Interviews with City representatives and property owners/tenants.
 - (ii) Historical aerial photography.
 - (iii) City directory abstracts.
 - (iv) Sanborn fire insurance maps.
 - (v) Recorded environmental easements or liens on the subject property.
8. Regulatory Agency Records Review – GAI will review information found in federal and state regulatory records for the subject property, including records related to environmental-related permits, notices-of-violation, and incidents involving use, disposal, or accidental release of hazardous substances, petroleum products, or other waste materials. Local records, if available, related to the subject property will also be reviewed for indications of environmental concern.
9. Site Reconnaissance Visit – GAI will perform a site reconnaissance visit to the subject property. Existing environmental conditions will be documented on the site. GAI will look for potential indicators of environmental concerns such as stained soils or other surfaces, stressed vegetation, exposed piping, and evidence of improper use or disposal of regulated substances. GAI will document the condition of each property using photographs. Copies of photographs will be included in the report.
10. Report Preparation – Following the completion of Tasks a) through b), a report will be prepared for the subject property documenting our findings. The report will contain a narrative of our findings, recommendations for additional environmental investigations, as needed, and copies of all data obtained relevant to each subject property. The report will contain appropriate maps, figures, and photographs.
11. Conduct an archaeological evaluation and submit a Request for State Historic Preservation Officer (SHPO) Consultation Form to the Texas Historical Commission (THC). In addition to the information available through online databases, a review of projects conducted by AR Consultants (ARC) and other contract archaeological firms in or near the project area as well as information that may not be available from Texas Archeological Studies Association (TASA) but will be available from the University of North Texas will be synthesized in the evaluation. Additionally, an employee of ARC will visit the project area to take photographs and conduct a windshield survey

of the study area. A letter report is to be provided to the Owner that presents the findings of the research and recommendations regarding the archaeological potential for the project and how to proceed. Once the Owner comments on the letter report, ARC will submit a letter report to the THC for their 30-day review period. The evaluation will include a database search of the following resources: Texas Archaeological Site Atlas, historic maps, USGS maps, aerial photographs, geological maps, county soil surveys, Denton County Appraisal District.

12. If a survey is required, secure an archaeological survey permit from the Texas Historical Commission (THC). This will require obtaining the signature of an official with the City of Denton.
13. Conduct a comprehensive cultural resources pedestrian survey of the proposed roadway. Besides the systematic survey of the proposed route, it is assumed that 75 or more shovel tests will be excavated in order to meet the guidelines for pedestrian surveys published by the Texas Historical Commission. Each shovel test will be 30 cm in diameter and will be excavated in 10 cm levels. Soil from the shovel tests will be passed through ¼" mesh shaker screens. If the clay content of the sample is too high, the soils will be manually broken and inspected.

Due to the depth that the roadway will be excavated and the shallow depth of the A-horizon above the pre-Holocene sediments that are described by the Soil Conservation Service, it is not expected that mechanical trenching will be necessary.

14. Site boundaries, i.e. the limits of any archaeological sites or structures that are recognized during survey and testing will be defined on the horizontal plane and deposit depth will also be defined as necessary.
15. Perform detailed artifact analysis if artifacts are recovered and then prepare a draft technical report.
16. Records and artifacts will be prepared for curation at the Texas Archeological Research Laboratory (TARL) at The University of Texas. The cost of records curation is included in the proposed cost, but if artifacts are recovered, their preparation for curation and the cost of perpetual curation will be negotiated with TARL and will be an additional services item.
17. The draft written report will be submitted to the Owner. After comments have been addressed, it will be submitted to the THC and Corps of Engineers (COE) for review and comment. The report will meet the standards for cultural resource reports prepared by the Council of Texas Archeologists (n.d.) and adopted by the THC. The THC will serve as the official reviewer for the COE, but a copy of the draft report and cover letter will be submitted to the COE for their review.
18. Revisions of the draft report will be prepared after it has been reviewed and review comments have been addressed. Once a final draft has been prepared, it will be resubmitted to the Owner for review and then again to the THC and COE.

19. Curation of records and artifacts will be completed in order to satisfy the permit requirements.
20. The final technical report will be printed and the necessary copies submitted to the Owner, the COE, and the THC. One copy of the final report and an archival quality CD will be submitted to the THC as required by the permit and five copies of the final technical report and an archival quality CD with the report will delivered to the Owner.

F. Additional Service Construction Administration

The Scope of Services for Full Time Resident Representation services includes (1) one full time inspector (based on 40 hours per week) for construction duration up to 12 months.

A. GAI shall have a Resident Project Representative on the Site. The duties, responsibilities and the limitations of authority of the Resident Project Representative, and designated assistants, are as follows:

1. Resident Project Representative is GAI's agent at the site, will act as directed by and under the supervision of GAI, and will confer with GAI regarding Resident Project Representative's actions. Resident Project Representative's dealings in matters pertaining to the on-site Work shall in general be with GAI and contractor, keeping Owner advised as necessary. Resident Project Representative's dealings with subcontractors shall only be through or with full knowledge and approval of contractor. Resident Project Representative shall generally communicate with Owner with the knowledge of and under the direction of GAI.

B. Duties and Responsibilities of Resident Project Representative:

1. Schedules: Review the progress schedule, schedule of shop drawing submittals and schedules of values prepared by contractor and consult with GAI concerning acceptability.
2. Conferences and Meetings: Attend meetings with contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.
3. Liaison:
 - a. Serve as GAI's liaison with contractor, working principally through contractor's superintendent and assist in understanding the intent of Contract Documents; and assist GAI in serving as Owner's liaison with contractor when contractor's operations affect Owner's on-site operations.

- b. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
- 4. Shop Drawings and Samples:
 - a. Record date of receipt of shop drawings and samples.
 - b. Receive samples which are furnished at the site by contractor, and notify GAI of availability of samples for examination.
 - c. Advise GAI and contractor of the commencement of any Work requiring a shop drawing or sample if the submittal has not been approved by GAI.
- 5. Review of Work, Rejection of Defective Work, Inspections and Tests:
 - a. Conduct on-site observations of the Work in progress to determine if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Report to GAI whenever Resident Project Representative believes that any Work will not produce a completed Project that conforms generally to the Contract Documents or will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise GAI of Work the Resident Project Representative believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
 - c. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to GAI.
- 6. Interpretation of Contract Documents: Report to GAI when clarifications and interpretations of the Contract Documents are needed and transmit to contractor clarifications and interpretations as issued by GAI.
- 7. Request for Revisions: Consider and evaluate contractor's suggestions for revisions to Drawings or Specifications and report with Resident Project Representative's recommendations to GAI. Transmit to contractor in writing decisions as issued by GAI.
- 8. Records:
 - a. Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and Samples, reproductions of original Contract Documents, including all Work Change Directives, Addenda, Change Orders, Field Orders, Written Amendments, additional Drawings

issued subsequent to the execution of the Contract, GAI's clarifications and interpretations of the Contract Documents, progress reports, submittals and correspondence received from and delivered to contractor and other Project related documents.

9. Reports:

- a. Furnish to GAI periodic reports as required of progress of the work and of contractor's compliance with the progress schedule and schedule of Shop Drawings and Sample submittals.
- b. Consult with GAI in advance of scheduled major tests, inspections or start of important phases of the Work.
- c. Draft proposed Written Amendments, Change Orders and Work Change Directives, obtaining backup material from contractor and recommend to GAI Written Amendments, Change Orders, Work Change Directives, and Field Orders.
- d. Report immediately to GAI and Owner the occurrence of any accident.

10. Payment Requests: Review Applications for Payment with contractor for compliance with the established procedure for their submission and forward with recommendations to Owner, noting particularly the relationship of the payment requested to the schedule of values, Work completed and materials and equipment at the Site but not incorporated in the Work.

11. Certificates, Maintenance and Operation Manuals: During the course of the Work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to GAI for review and forwarding to Owner prior to final payment for the Work.

12. Completion:

- a. Before GAI issues a Certificate of Substantial Completion, submit to contractor a list of observed items requiring completion or correction.
- b. Observe whether contractor has performed inspections required by laws or regulations, ordinances, codes or order applicable to the Work, including but not limited to those to be performed by public agencies having jurisdiction over the Work.
- c. Conduct a final inspection in the company of GAI, Owner and contractor and prepare a final list of items to be completed or corrected.

- d. Observe whether all items on final list have been completed or corrected and make recommendations to GAI concerning acceptance.

13. Limitations of Authority of Resident Project Representative:

- a. Shall not authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items), unless authorized by GAI.
- b. Shall not exceed limitations of GAI's authority as set forth in Agreement or the Contract Documents.
- c. Shall not undertake any of the responsibilities of contractor, subcontractor, suppliers, or contractor's superintendent.
- d. Shall not advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction unless such advice or directions are specifically required by the Contract Documents.
- e. Shall not advise on, issue directions regarding or assume control over safety precautions and programs in connection with the Work or any activities or operations of Owner or contractor.
- f. Shall not accept shop drawing or sample submittals from anyone other than the contractor.
- g. Shall not participate in specialized field or laboratory tests or inspections conducted by others, except as specifically authorized by GAI.

14. GAI shall provide the following Public Involvement services:

- a. GAI will prepare a project web site that may be accessed through the City of Denton website. The site will include information about the project, project schedule, and comment area. Content will be discussed with the City PM prior to posting.
- b. GAI will attend up to three (3) public meetings at the concept, design and construction phases of the project. GAI will provide project exhibits and prepare presentations for each meeting. This scope assumes that the Owner will pay for advertising and mailings associated with each public meeting.

G. Right-of-Way Services (Crossland Acquisitions)

1. Pre-Acquisition Services:

- a) Hire a title company to provide preliminary ownership and easement information.
- b) Work with surveyor in development of right of way maps and legal descriptions of needed property rights.
- c) Provide detailed right of way cost estimates on a parcel by parcel basis.
- d) Assist in preparing and obtaining any Rights of Entry necessary for surveying, geotechnical investigations and environmental services.

2. Title Services:

- a) Review preliminary title commitment or preliminary title search information provided by the title company.
- b) Secure title commitments and updates in accordance with insurance rules and requirements for parcel payment submissions.
- c) Secure title insurance for all parcels acquired, insuring acceptable title in the name of the City of Denton. Written approval by the City of Denton will be required for any exceptions to coverage.
- d) Attend closings and provide closing services in conjunction with Title Company.
- e) Record all original instruments immediately after closing at the respective County Clerk's Office

3. Initial Appraisal:

- a) Appraiser must be approved by the City of Denton.
- b) Secure written permission from the owner to enter the property from which land is to be acquired. If Agent, after diligent effort, is unable to secure the necessary letter of permission from the property owner, a waiver must be obtained, in writing from the City of Denton. Maintain permission letters with appraisal reports.
- c) Prepare and conduct personal pre-appraisal contact with interest owner(s) for each parcel.
- d) Contact property owners or their designated representative to offer opportunity to accompany the appraiser on the appraiser's inspection of subject property. Maintain record of contact in file.
- e) Prepare complete appraisal report for each parcel to be acquired utilizing a format approved by the City of Denton. These reports shall conform to the City of Denton policies and procedures along with the Uniform Standards of Professional Appraisal Practice.
- f) As necessary, prepare written notification to the City of Denton of any environmental concerns within the needed right of way to be acquired which could require remediation.
- g) All completed appraisals will be administratively reviewed and approved by the City of Denton.
- h) As necessary, the appraiser will appear and or testify as an Expert Witness in eminent domain proceedings and be available for pre-hearing or pre-trial meetings as directed by the City of Denton.

4. Right of Entry:

- a) Prepare Right of Entry packets to include Landowner Bill of Rights, maps and paperwork to be executed.
- b) Mail merge ROE letters and labels for envelopes and file folders. The agents will prepare and stuff envelopes for out of town owners or owners who have indicated that they want to receive all of their initial information via mail.
- c) The agent will initiate negotiator and contact logs and attend landowner meetings for ROE documents. The agent will research additional contact information for nonresponsive landowners.

5. Negotiation Services:

- a) Analyze appraisal reports and confirm approved value prior to making offer for each parcel.
- b) Analyze preliminary title report to determine potential title problems and propose methods to cure title deficiencies.
- c) Prepare the initial offer letter and any other documents required or requested by the City of Denton in a form acceptable to the City of Denton.
- d) Contact each property owner or owner's designated representative and present the written offer in person where practical. When owners do not wish to have offers delivered in person, they will be mailed via certified mail with return receipt for documentation of delivery/receipt. Maintain follow-up contacts and secure the necessary instruments upon acceptance of the offer for the closing.
- e) Provide a copy of the appraisal report for the subject property exclusively to the property owner or authorized representative at the time of the offer. Maintain original signed Receipt of Appraisal.
- f) Respond to property owner inquiries verbally and/or in writing within two business days.
- g) Prepare a separate negotiator contact report for each parcel file for each contact.
- h) Maintain parcel files of original documentation related to the purchase of the real property or property interests.
- i) Present counteroffers in a form as directed by the City of Denton. Transmit any written counteroffer from property owners including supporting documentation, and Agent's recommendation with regard to the counteroffer.
- j) Prepare final offer letter as necessary.
- k) Appear and provide Expert Witness testimony when requested.

6. Relocation Services:

- a) Notify all property owners and potential displacees of eligibility for relocation assistance and provide them with a Relocation Assistance Brochure at time of initial contact. If possible, advise displacee of preliminary relocation benefits at this time.
- b) Contact and provide relocation assistance to property owners and tenants affected by acquisition of right of way.
- c) For residential relocations; locate, evaluate, and maintain files on comparable available housing.
- d) Calculate replacement housing supplement benefits.
- e) Compute and submit request for relocation housing/rental supplement to the City of Denton along with supporting documentation.
- f) Provide 90-day notice to vacate simultaneously with the delivery of the relocation benefits package.
- g) Sixty days later or upon acquisition of the parcel, whichever occurs later, issue a 30 day letter.
- h) Notify the City of Denton immediately if displacee does not move after 30-day notice expires.

- i) Perform a decent, safe, and sanitary inspection of the replacement housing in accordance with the City of Denton.
- j) Prepare moving plan with appropriate photos and sketches along with inventory of personal property to be moved for non-residential moves.
- k) Request moving estimates from moving companies as needed.
- l) Coordinate moves with displaced homeowners, business owners, and tenants and with moving companies in accordance with the City of Denton procedures.
- m) Maintain relocation contact logs.
- n) Attend closings on replacement property if requested by any party involved, and assure supplemental payment is properly distributed.
- o) Process and compute increased interest payments as required.
- p) Relocation agent shall be available for any appeals or hearings.
- q) Prepare all relocation payment claim submissions for all displacees on parcel.
- r) Deliver payments in accordance with the City of Denton guidelines.

7. Condemnation Support:

- a) Pre-Hearing Support
 - (i) Upon receipt of a copy of the final offer, request an updated title commitment for Eminent Domain from the Title Company.
 - (ii) Prepare a condemnation package as directed by the City of Denton and deliver the package to the City of Denton's designee or legal counsel.
 - (iii) Upon notification from the City of Denton request the update of appraisal.
 - (iv) Upon receipt of condemnation packet documents prepared by Counsel for the City of Denton, Agent will file the original petition with the County Court at Law or other appropriate Court for a cause number to be assigned.
 - (v) File the Lis Pendens including the cause number with the County Clerk's Office.
 - (vi) Upon assignment of a court, file the Order Appointing Commissioners with the judge retaining a copy of the Order for the files.
 - (vii) Following appointment of Commissioners by the judge, secure the following documents: Oath of Commissioners signed by the Commissioners, Order Setting Hearing, and 2 copies of the Notice of Hearing signed by the Commissioners.
 - (viii) File all originals with the court and send copies marked "copy" to Counsel for the City of Denton.
 - (ix) Send a copy of the petition to the Title Company so that they can assure all required parties were joined and that no changes in title have occurred.
 - (x) Set the Commissioners Hearing after the updated appraisal has been submitted, if there is no change in value. If there is an increase in value, upon approval by City of Denton make a revised final offer and submit a copy of the revised final offer letter.
 - (xi) Reserve a room for the hearing.

- (xii) Coordinate the hearing date with Counsel for the City of Denton, the Appraiser, the Engineering witness, the three Special Commissioners, the court reporter and any other parties designated by the City of Denton.
 - (xiii) Coordinate a pre-hearing conference if required by Counsel for the City of Denton.
 - (xiv) After the hearing is set, serve Notices of Hearing to the indicated parties at least 11 days prior to the Commissioner's hearing. If it is necessary to join the Federal Government, be advised that they must be served not later than 60 days prior to the date of the hearing.
 - (xv) Once the notices have been served, file the original notices with the court and send copies stamped "copy" to Counsel for the City of Denton.
 - (xvi) Send a reminder letter to all parties.
- b) Post-Hearing Support
- (i) Obtain the signatures of Commissioners and file with the court for the judge's signatures within two days the Hearing.
 - (ii) Obtain and distribute to Counsel for the City of Denton certified copies of the award.
 - (iii) File payment of the award in the registry of the court. File a Notice of Deposit with the court and send certified copies to each defendant notifying them of the date of the deposit. The Date of Deposit is the Date of Take.
 - (iv) Take photographs of the interest to be acquired on the day of deposit.
 - (v) Send written notices of the date of deposit to all interested parties.
 - (vi) Appear as Expert Witness as requested.

8. Project Administration

- a) Maintain current status reports of all parcel and project activities and provide monthly or as requested to GAI and the City of Denton.
- b) Participate in project review meetings as determined by GAI and the City of Denton.
- c) Provide copies of all incoming and outgoing correspondence as generated if requested.
- d) Maintain copies of all correspondence and contacts with property owners.

H. Geotechnical Materials and Construction Testing (Landtec & Alpha Testing)

Testing shall be conducted based on the latest requirements of the City of Denton and the North Central Texas Council of Governments.

Testing shall be performed for the following:

1. Site Preparation, Filling, Back Filling
2. Utilities
3. Mechanical Lime Stabilization
4. Pier Installation Monitoring
5. Concrete Testing
6. Hot Mix Asphalt Concrete Testing

ARTICLE III

EXTRA SERVICES: Extra Services to be performed by GAI, if specifically authorized in writing by Owner, which are not included in the above-described Basic and Additional Services, are described as follows:

- A. Phase II Environmental Site Assessment services in accordance with ASTM standards to identify and investigate the nature and extent of potential environmental contamination.
- B. Tree survey to comply with City of Denton tree protection ordinance.
- C. Field layouts or the furnishing of construction line and grade surveys.
- D. Legal services for eminent domain hearings.
- E. Historical structure survey for any structure that is within the proposal right-of-way that is 50+ years old will be considered an additional service.
- F. If buried features or structures are located, it may be necessary to conduct formal National Register of Historic Places testing to satisfy the THC. The costs of in-depth NRHP testing or mitigation excavation will be considered an additional service.
- G. Documenting and Recording Historic Structures.
- H. GIS mapping services or assistance with these services.
- I. Providing additional 3D renderings or revisions to existing 3D renderings of the project design.
- J. Making revisions to drawings, specifications or other documents when such revisions are 1) not consistent with approvals or instructions previously given by Owner or 2) due to other causes not solely within the control of GAI.
- K. Preparing applications and supporting documents for government grants, loans, or planning advances and providing data for detailed applications.
- L. Preparing data and reports for assistance to Owner in preparation for hearings before regulatory agencies, courts, arbitration panels or any mediator, giving testimony, personally or by deposition, and preparations therefore before any regulatory agency, court, arbitration panel or mediator unless such litigation, mediation, arbitration, dispute review boards, or other legal and/or administrative proceedings or hearings are caused by actions or negligence of GAI or one of its subconsultants..
- M. Assisting Owner in preparing for, or appearing at litigation, mediation, arbitration, dispute review boards, or other legal and/or administrative proceedings in the defense or prosecution of claims disputes with contractor(s) unless such litigation, mediation, arbitration, dispute review boards, or other legal and/or administrative proceedings in the defense or prosecution of claims disputes with contractor(s) are caused by actions or negligence of GAI or one of its subconsultants.

- N. Assisting Owner in the defense or prosecution of litigation in connection with or in addition to those services contemplated by this AGREEMENT unless such litigation, mediation, arbitration, dispute review boards, or other legal and/or administrative proceedings in the defense or prosecution of claims disputes with contractor(s) are caused by actions or negligence of GAI or one of its subconsultants. Such services, if any, shall be furnished by GAI on a fee basis negotiated by the respective parties outside of and in addition to this AGREEMENT.
- O. Performing investigations, studies, and analysis of work proposed by construction contractors to correct defective construction work.
- P. Design, contract modifications, studies or analyses required to comply with local, State, Federal or other regulatory agencies that become effective after the date of this agreement.
- Q. Services required to resolve bid protests or to rebid the project for any reason, unless such rebid is directly caused by actions or negligence of the engineering professional.
- R. Visits to the site in excess of the number of trips included in Article I for periodic site visits, coordination meetings, or contract completion activities.
- S. Any services required as a result of default of the contractor(s) or the failure, for any reason, of the contractor(s) to complete the work within the contract time.
- T. Providing services after the completion of the construction phase not specifically listed in Article I.
- U. Providing basic or additional services on an accelerated time schedule. The scope of this service includes the cost for overtime wages of employees and consultants, inefficiencies in work sequence and plotting or reproduction costs directly attributable to an accelerated time schedule directed by the Owner.
- V. Providing services made necessary because of unforeseen, concealed, or differing site conditions or due to the presence of hazardous substances in any form.
- W. Providing services to review or evaluate construction contractor(s) claim(s), provided said claims are supported by causes not within the control of GAI.
- X. Providing value engineering studies or reviews of cost savings proposed by construction contractors after bids have been submitted.
- Y. Provide follow-up professional services during contractor's warranty period.

ARTICLE IV

TIME OF COMPLETION: GAI is authorized to commence work on the Project upon execution of this AGREEMENT and agrees to complete the services in accordance with the schedule shown as Exhibit 3 of this document.

If GAI's services are delayed through no fault of GAI, GAI shall be entitled to adjust contract schedule consistent with the number of days of delay. These delays may include but are not limited to delays in Owner or regulatory reviews, delays on the flow of information to be provided to GAI, governmental approvals, etc. If the project is placed on hold by the Owner for more than six months, GAI reserves the right to negotiate additional compensation for additional services related to the delay.

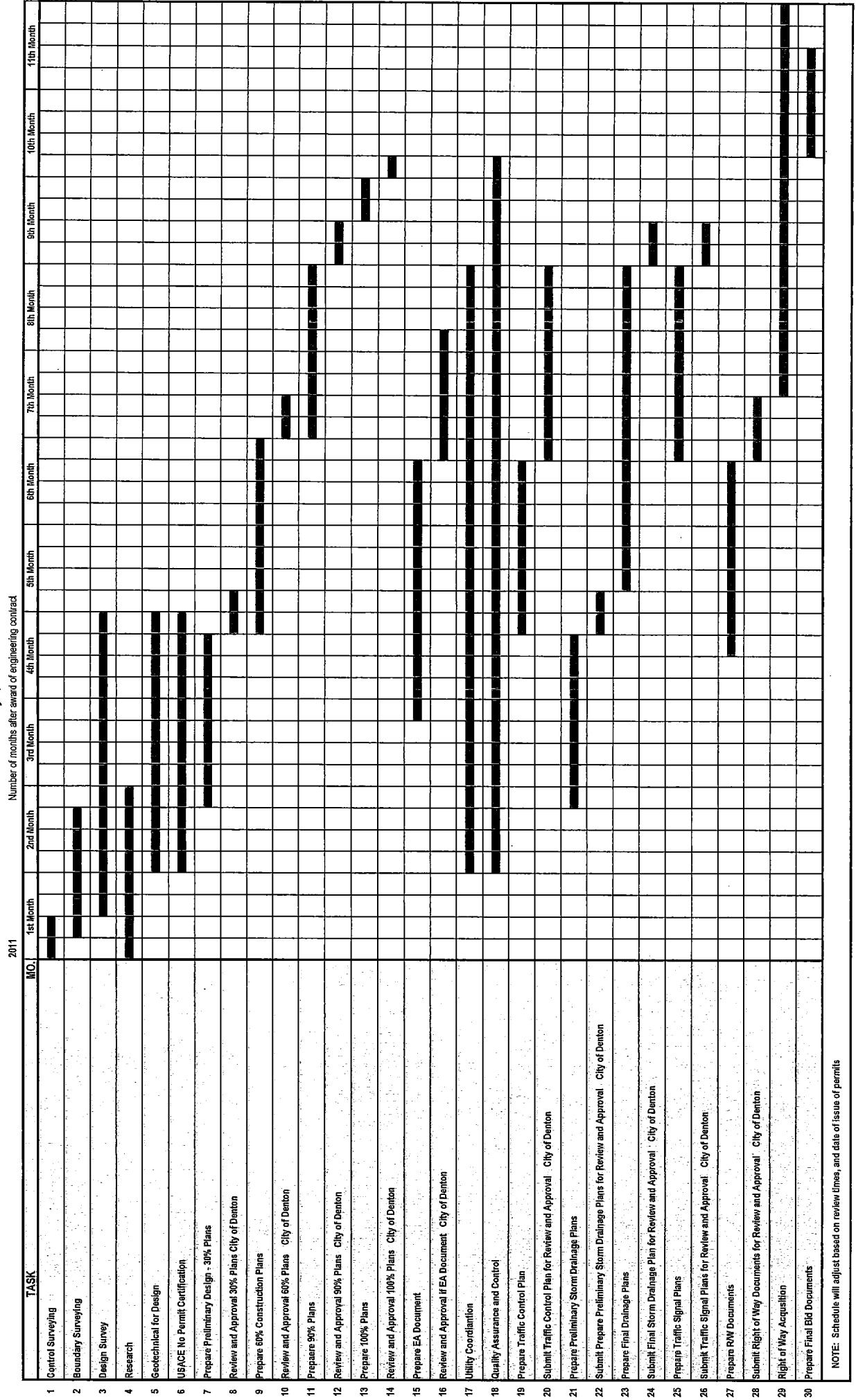
ARTICLE V

RESPONSIBILITIES OF OWNER: Owner shall perform the following in a timely manner so as not to delay the services of GAI:

- A. Designate in writing a person to act as Owner's representative with respect to the services to be rendered under this AGREEMENT. Such person shall have contract authority to transmit instructions, receive information, interpret and define Owner's policies and decisions with respect to GAI's services for the Project.
- B. Provide all criteria and full information as to Owner's requirements for the Project, including project objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which Owner will require to be included in the plan.
- C. Assist GAI by placing at GAI's disposal all available information pertinent to the Project including previous reports, GIS mapping and data, and any other data relative to completion of the Project.
- D. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by GAI, obtain advice of other consultants as Owner deems appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of GAI.
- E. Furnish approvals and permits from all governmental authorities having jurisdiction over the Project and such approvals and consents from others as may be necessary for completion of the Project.
- F. Attend and take leadership role in project progress meetings and other project related meetings and attend and moderate the public meetings.
- G. Give notice to GAI whenever OWNER observes or otherwise becomes aware of any development that affects the scope or timing of GAI's services, or any defect or nonconformance of the work of any contractor.
- H. Contact other departments within the City of Denton and coordinate with them to obtain record drawings of other utilities, buildings, or infrastructure as needed.

North Bonnie Brae
Scripture to University Drive
May 1, 2013

Exhibit 3



North Bonnie Brae
 Scripture to University Drive
 May 1, 2013

Exhibit 3

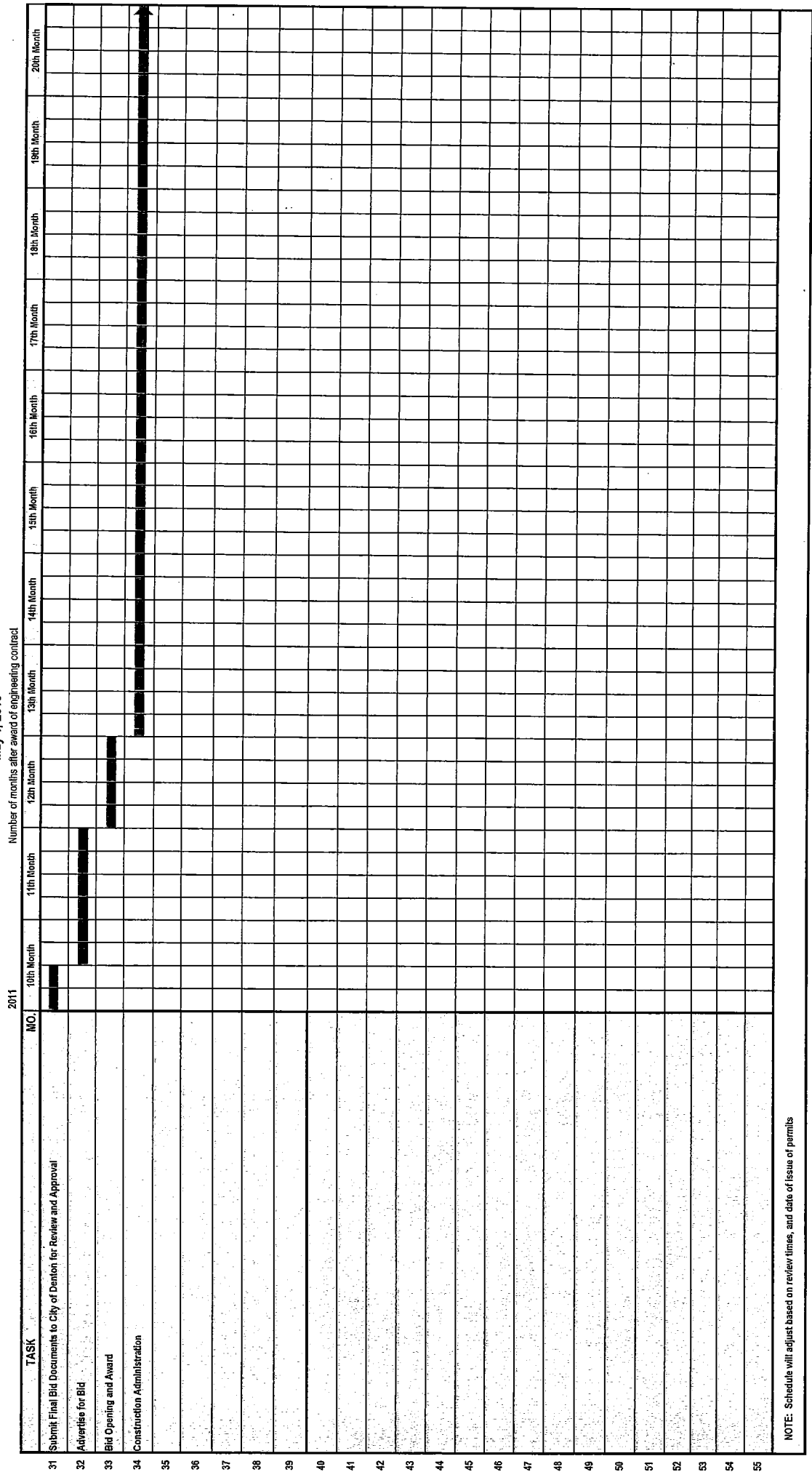


Exhibit 4**Graham Associates, Inc.:**

Principal	\$150.00
Senior Engineer	\$125.00
Registered Public Land Surveyor	\$125.00
Senior Hydrologist	\$125.00
Registered Engineer	\$100.00
Graduate Engineer	\$90.00
Graduate Hydrologist	\$95.00
Technician IV	\$90.00
Technician III	\$75.00
Technician II	\$60.00
Technician I	\$40.00
GPS Survey Crew	\$130.00
3 Man Survey Crew	\$140.00
2 Man Survey Crew	\$120.00
Clerical	\$35.00
CADD Station	\$25.00

Schricket, Rollins & Associates, Inc.:

Project Manager	\$150.00
Senior Engineer	\$120.00
Engineers	\$90.00
Senior Landscape Architect	\$95.00
Landscape Architect II	\$80.00
Landscape Architect I	\$66.00
Lic. Irrigator	\$70.00
CAD Technician	\$70.00
Clerical	\$60.00

Blanton and Associates, Inc.:

Senior Project Manager	\$136.47
Senior Scientist	\$108.39
Env. Scientist/Planner	\$103.89
Cartography	\$87.38
Env. Tech	\$81.54
CADD Tech	\$72.82
Secretary	\$65.02
Clerical Staff	\$48.06
Other Direct Expenses	
Mileage	\$.500 (mile)

Standard Postage	\$.42 (letter)
Overnight Mail-letter size	\$16.00 each
Overnight Mail - oversized box	\$ 40.00 each
Photocopies B/W (8 1/2"x 11") \$	\$0.10 each
Photocopies B/W (11"x17") \$	\$0.20 each
Photocopies Color (8 1/2"x 11")	\$ 0.20 each
Photocopies Color (11"x17")	\$ 0.40 each
Plots (B/W Bond)	\$1.50 sq ft
Plots (Color Bond)	\$ 2.50 sq ft
Lodging/Hotel (Taxes/fees not included)	\$ 85.00 day
Meals (over night stay required)	\$ 36.00 day
Backhoe Rental	\$ 800.00 day
Hazmat Database Search	\$ 500.00 search

Landtec Engineers, LLC

PERSONNEL

Project Geotechnical Engineer	\$ 125.00
Senior Geotechnical Engineer	\$ 135.00
Senior Project Manager	\$ 150.00
Principal Engineer	\$ 165.00
Senior Engineering Consultant	\$ 195.00
Registered Professional Land Surveyor	\$ 135.00
Expert Witness (Deposition and Trial)	\$ Reg. Rt. x 1.5
Engineering Technician I	\$ 40.00
Engineering Technician II	\$ 50.00
Engineering Technician III	\$ 60.00
Senior Engineering Technician	\$ 65.00
Engineering Assistant/Specialist	\$ 75.00
Word Processing/Clerical	\$ 50.00
Drafting/CADD	\$ 70.00
Field Survey	\$ 115.00
Field Survey over 8 hrs/day	\$ 125.00
GPS Equipment	\$ 10.00
GPS Communications	\$ 50.00
Robotic Equipment Charge	\$ 10.00
Transportation (portal to portal)	\$ 0.65/mile
Transportation w/trailer (portal to portal)	\$ 0.75/mile
Minimum Transportation Charge	\$ 50.00/trip
Support Vehicle	\$ 50.00/day
Per Diem	\$ 150.00/day
Sample/Document Shipment.\$	50.00 each
Plots/Copies	\$ 50.00/first plot; \$ 5.00 after first plot
Copies	\$ 0.10/page

DRILLING AND SAMPLING

Drilling and Intermittent Sampling in Soil	\$ 16.00/foot
Drilling and Continuous Sampling in Soil	\$ 24.00/foot
Drilling in Rock (Auger - no sampling)	\$ 15.00/foot
Core Drilling in Shale/Sandstone/Moderately Hard Limestone	\$ 25.00/foot
Core Drilling in Very Hard Rock	\$ 30.00/foot
Field Penetration Tests, split spoon or TxDOT cone	\$ 35.00/each

DRILLING AND SAMPLING CONT'D

Drilling Through Concrete	\$ 100.00/hole
Mobilization of Rig (Local)	\$ 300.00/each
Minimum Drilling fee	\$ 1250.00/each
Plug Bore Hole with Bentonite	\$ 7.50/foot
Hollow Stem Auger Drilling (3.25 I.D.) w/continuous bbl sampler	\$ 27.00/foot
Drill Rig Standby Time	\$ 185.00/hour

SOIL

Atterberg Limits (liquid and plastic limits), ASTM D4318	\$ 60.00/test
Percent Passing No. 200 Sieve, ASTM D 1140	\$ 50.00/test
Standard Proctor, ASTM D 698	\$ 140.00/test
Modified Proctor, ASTM D 1557	\$ 175.00/test
TEX-113E	\$ 225.00/test
Processing Materials greater than No. 4 Sieve Analysis, ASTM D422	\$ 65.00/test \$ 70.00/test
Lime/Atterberg Limits Series, 4 points	\$ 250.00/test
Soluble Sulfate, TxDOT 145E	\$ 100.00/test
Moisture Content, ASTM D433	\$ 15.00/test
Moisture Content and Unit Dry Weight	\$ 25.00/test
Hydraulic Conductivity, ASTM 5084	\$ 310.00/test \$ 310.00/test
Hydraulic Conductivity, COE	\$ 115.00/test
Hydrometer Analysis.	\$ 60.00/test
Specific Gravity	\$ 45.00/test
Unconfined Compressive Strength	\$ 60.00/test
Unconfined Compressive Strength (core)	\$ 100.00/test
Absorption-Pressure Swell	\$ 75.00/test
Free Swell	\$ 20.00/test
Bar Linear Shrinkage	
California Bearing Ratio (ASTM 1883)	\$ 225.00/point
Consolidation	\$ 450.00/test

Triaxial Shear – 1.4-inch, 2.0-inch diameter specimens
(larger diameter specimens quoted upon request)

a. Unconsolidated Undrained:

- multiple specimen,
3 specimens minimum \$ 85.00/spec
- single specimen,
3 points minimum \$ 85.00/point

b. Consolidated Undrained

– with pore pressure measurements:

- multiple specimen,
3 specimens \$ 425.00/spec
- single specimen,
3 points minimum \$ 425.00/point

c. Consolidated Drained:

- multiple specimen,
3 specimens minimum \$ 450.00/spec
- single specimen,
3 points minimum \$ 450.00/point

Direct Shear – 2.5-inch diameter specimen

- Q-Test,
3 points minimum \$ 175.00/point
- S-Test,
3 points minimum \$ 250.00/point

Remolding samples \$ 60.00/each



Geotechnical & Environmental Engineering
Construction Materials Testing
Laboratory Testing
QA/QC Services

September 28, 2012
Proposal 3142

Mr. Jim Wagnon, P.E.
Graham Associates, Inc.
600 Six Flags Drive, Suite 500
Arlington, TX 76011

Re: Geotechnical Investigation – Bonnie Brae Street – Scripture Street to US 380, Denton, Texas

Dear Jim:

In accordance with your request we are herein submitting our proposal for professional geotechnical engineering services for the Bonnie Brae Street project in Denton, Texas. This proposal is based on information provided and discussed on September 27, 2012.

This section of Bonnie Brae Street includes the section from Scripture Street to US 380, approximately 4000 linear feet in Denton, Texas.

Based on our understanding of the roadway project, the existing street will be improved to add additional lane width in both directions, resulting in a four lane arterial. The proposed pavement includes Jointed Reinforced Concrete Pavement (JRCP) on a stabilized subgrade.

The scope of work includes pavement design borings and items associated with coordinating the field work such as utility clearance, laboratory testing for soil classification and strength tests, preparation of boring logs, and providing the design team with geotechnical data.

SCOPE OF BASIC SERVICES

LANDTEC proposes the following *Basic Services*:

Field Exploration

- Drill eight (8) soil sample borings along the existing roadway to depths of approximately 15 feet for pavement design. (Total of 8 borings and 120 linear feet of drilling).
- Obtain soil samples and perform Hand Penetrometer tests as appropriate for the soils encountered.

LANDTEC ENGINEERS, LLC 1700 Robert Road Suite 101 Mansfield, Texas 76063 817.572.2818 Fax 817.453.9984

3142 Bonnie Brae - Scripture to US380 Sept2012.doc

- Observe for groundwater seepage during drilling and record level.
- Backfill boreholes with soil cuttings upon completion.
- Coordinate the clearance of underground utility locations in accordance with the State of Texas DIGTESS (811) requirement.
- Coordinate with Graham and City of Denton while drilling on or adjacent to public roads, including traffic control and barricades as necessary.

Laboratory Testing

Laboratory testing will be conducted on samples that are considered to be reasonably representative of the materials obtained from the field exploration. The tests will evaluate and classify the soils, identify subsurface site characteristics, and provide data for analysis. The tests include:

- Atterberg limits (liquid and plastic limits) tests
- Sieve Analysis
- Unit dry weight and moisture content tests
- Unconfined Compressive strength tests
- Soil / Stabilization Additive / Atterberg Limits series tests on subgrade soils
- Soluble Sulfate tests (subgrade soils upper 4 feet)

Engineering Analysis and Reports

An engineering analysis and evaluation of the field and laboratory data will be performed for the project, based on available project concepts. Information to be provided is as follows:

- Plan of borings illustrating the approximate location of each boring and scale to which the drawing is made
- A log of each boring indicating the boring number, location (northing, easting and elevation if provided by Graham Associates), depth of each strata, soil description, field penetration tests including Standard Penetration tests (SPT's) and/or Texas Cone Penetrometer (TCP) , laboratory tests, and groundwater information
- Description of the field exploration and laboratory testing program
- Laboratory test results and analysis of results
- Discussion of subsurface soil and groundwater conditions

- Pavement design using WinPAS computer software
- Recommendations for subgrade stabilization including depth, percent stabilization, compaction and moisture content requirements
- Earthwork recommendations
- Four (4) copies of the geotechnical report plus a PDF version

INFORMATION/SERVICES PROVIDED BY CLIENT

We understand the Client will

- Assist LandTec with known subsurface utilities or other structures or items which might be damaged during the field exploration program
- Survey locations of boreholes and provide the information to LandTec
- Provide existing and proposed grades

ADDITIONAL SERVICES

The following services are not included in the *Basic Services* and will be considered as *Additional Services*, if and when required or requested:

- Additional copies of the report; additional submittals of draft reports other than those described in Basic Services; revisions to the report after final submission to Client; revisions to the report required as a result of changed regulations or design
- Special testing and/or field pavement analysis/studies for pavement design
- Installation and monitoring of piezometers
- The services of specialty subconsultants or other special outside services other than those described in Basic Services
- Coordination with regulatory agencies other than that described in Basic Services
- Any other services not specifically included in *Basic Services*

COMPENSATION

LandTec proposes to perform the *Basic Services* outlined herein on the basis of **Lump Sum of \$12,330**

Client and LandTec may subsequently agree in writing to provide for additional services to be rendered under this agreement for additional, negotiated compensation. Services provided by LandTec will be consistent with the engineering standards prevailing at the time and in the area that the work is performed; no other warranty, express or implied, is intended. The cost presented here is applicable for 12 months from the date of this proposal.

ANTICIPATED SCHEDULE

The field exploration will begin approximately one to two weeks from the time authorization is received. The field work will require approximately two days, depending on weather conditions and site accessibility.

Laboratory testing will start after the borings are made and should be completed within one to two weeks after completion of the field exploration.

The geotechnical engineering report will be completed within one week of completion of the laboratory testing. A total turnaround time of four weeks is anticipated.

Please call if you have questions.

Sincerely,

LANDTEC ENGINEERS, LLC



Thomas D. Baker, P.E., R.P.L.S.
Sr. Geotechnical Engineer / Principal

TBPE Firm No. F-000329 TBPLS Firm No. 100956-00



Geotechnical & Environmental Engineering
Construction Materials Testing
Laboratory Testing
QA/QC Services

July 14, 2011
Proposal 3142

Mr. Mark Burckhard, P.E.
Vice President
Graham Associates, Inc.
600 Six Flags Drive, Suite 500
Arlington, TX 76011

**Re: Geotechnical Investigation – Bonnie Brae Street – Scripture Street to US 380,
Denton, Texas**

Dear Mark:

In accordance with your request we are herein submitting our proposal for professional geotechnical engineering services for the Bonnie Brae Street project in Denton, Texas. This proposal is based on information provided and discussed during our meeting on June 30, 2011.

This section of Bonnie Brae Street includes the section from Scripture Street to US 380, approximately 4000 linear feet in Denton, Texas.

Based on our understanding of the roadway project and our meeting on June 30, 2011, the existing street will be improved to add additional lane width in both directions, resulting in a four lane arterial. The proposed pavement includes reinforced Portland cement concrete paving on a stabilized subgrade.

The scope of work includes pavement design borings and items associated with coordinating the field work such as utility clearance, laboratory testing for soil classification and strength tests, preparation of boring logs, and providing the design team with geotechnical data.

SCOPE OF BASIC SERVICES

LANDTEC proposes the following *Basic Services*:

Field Exploration

- Drill eight (8) soil sample borings along the existing roadway to depths of approximately 15 feet for pavement design. (Total of 8 borings and 120 linear feet of drilling).

- Obtain soil samples and perform Hand Penetrometer tests as appropriate for the soils encountered.
- Observe for groundwater seepage during drilling and record level.
- Backfill boreholes with soil cuttings upon completion.
- Coordinate the clearance of underground utility locations in accordance with the State of Texas DIGTESS (811) requirement.
- Coordinate with Graham and City of Denton while drilling on or adjacent to public roads, including traffic control and barricades as necessary.

Laboratory Testing

Laboratory testing will be conducted on samples that are considered to be reasonably representative of the materials obtained from the field exploration. The tests will evaluate and classify the soils, identify subsurface site characteristics, and provide data for analysis. The tests include:

- Atterberg limits (liquid and plastic limits) tests
- Sieve Analysis
- Unit dry weight and moisture content tests
- Unconfined Compressive strength tests
- Soil / Stabilization Additive / Atterberg Limits series tests on subgrade soils
- Soluble Sulfate tests (subgrade soils upper 4 feet)

Engineering Analysis and Reports

An engineering analysis and evaluation of the field and laboratory data will be performed for the project, based on available project concepts. Information to be provided is as follows:

- Plan of borings illustrating the approximate location of each boring and scale to which the drawing is made
- A log of each boring indicating the boring number, location (northing, easting and elevation if provided by Graham Associates), depth of each strata, soil description, field penetration tests including Standard Penetration tests (SPT's) and/or Texas Cone Penetrometer (TCP) , laboratory tests, and groundwater information
- Description of the field exploration and laboratory testing program

- Laboratory test results and analysis of results
- Discussion of subsurface soil and groundwater conditions
- Pavement design using WinPAS computer software
- Recommendations for subgrade stabilization including depth, percent stabilization, compaction and moisture content requirements
- Earthwork recommendations
- Four (4) copies of the geotechnical report plus a PDF version

INFORMATION/SERVICES PROVIDED BY CLIENT

We understand the Client will

- Assist LandTec with known subsurface utilities or other structures or items which might be damaged during the field exploration program
- Survey locations of boreholes and provide the information to LandTec
- Provide existing and proposed grades

ADDITIONAL SERVICES

The following services are not included in the *Basic Services* and will be considered as *Additional Services*, if and when required or requested:

- Additional copies of the report; additional submittals of draft reports other than those described in Basic Services; revisions to the report after final submission to Client; revisions to the report required as a result of changed regulations or design
- Special testing and/or field pavement analysis/studies for pavement design
- Installation and monitoring of piezometers
- The services of specialty subconsultants or other special outside services other than those described in Basic Services
- Coordination with regulatory agencies other than that described in Basic Services
- Any other services not specifically included in *Basic Services*

COMPENSATION

LandTec proposes to perform the *Basic Services* outlined herein on the basis of **Lump Sum of \$12,330**

Client and LandTec may subsequently agree in writing to provide for additional services to be rendered under this agreement for additional, negotiated compensation. Services provided by LandTec will be consistent with the engineering standards prevailing at the time and in the area that the work is performed; no other warranty, express or implied, is intended. The cost presented here is applicable for 12 months from the date of this proposal.

ANTICIPATED SCHEDULE

The field exploration will begin approximately one to two weeks from the time authorization is received. The field work will require approximately two days, depending on weather conditions and site accessibility.

Laboratory testing will start after the borings are made and should be completed within one to two weeks after completion of the field exploration.

The geotechnical engineering report will be completed within one week of completion of the laboratory testing. A total turnaround time of four weeks is anticipated.

Please call if you have questions.

Sincerely,

LANDTEC ENGINEERS, LLC



Thomas D. Baker, P.E., R.P.L.S.
Sr. Geotechnical Engineer / Principal

TBPE Firm No. F-000329 TBPLS Firm No. 100956-00

Blanton & Associates, Inc.

ENVIRONMENTAL CONSULTING • PLANNING • PROJECT MANAGEMENT

August 31, 2011

Mark Burckhard, P.E.
Graham Associates, Inc.
600 Six Flags Drive, Suite 500
Arlington, Texas 76011

Re: Proposed Scope of Services for Improvements to North Bonnie Brae Street from IH 35E to US 380, City of Denton, Texas

Dear Mr. Burckhard:

As requested, we have prepared the following scope of services to be provided by Blanton & Associates, Inc. ("B&A") for the proposed improvements to Bonnie Brae Street extending from IH 35E to US 380.

The proposed improvement would widen Bonnie Brae Street between IH 35E and US 380 from a two-lane undivided facility to four-lane divided facility with raised medians. The proposed project is approximately 1.4 miles in length and may result in several displacements and/or relocations due to the requirements of the proposed project and developed nature of surrounding properties. A copy of the preliminary schematic is included as **Attachment A**.

Under this proposal, B&A will prepare environmental documentation in accordance with the North Central Texas Council of Governments' (NCTCOG) requirements for local environmental review. The report will include NCTCOG's Environmental Review Checklist for Local Projects and supporting documentation for each section of the checklist. The NCTCOG's Draft Environmental Review Process for Local Projects is included as **Attachment B**.

Environmental Report Documentation

The environmental report will include NCTCOG's Environmental Review Checklist for Local Projects and supporting documentation for each section of the checklist. B&A will work closely with the Engineer and City of Denton to complete the local environmental review process outlined in **Attachment B**. Draft and final environmental reports will be submitted to the Engineer for processing.

The following scope of services is based on associated field investigations, and preparation of the environmental report.

Project Information

This section will describe the proposed project; project costs for engineering, right-of-way, utility relocation, and construction; need and purpose for the project; and alternatives considered during project development.

5 LAKEWAY CENTRE COURT, SUITE 200 • AUSTIN, TEXAS 78734
PHONE 512.264.1095 • FAX 512.264.1531

Local Support and Coordination

This section will list local planning documents that include this project, identify project consistency with other transportation, infrastructure, or community projects or plans, address compliance with the Americans with Disabilities Act, document any agreement executed with authorities/agencies, list local governmental approvals or permits obtained or required, public involvement process and outreach to environmental justice and LEP populations.

Right-of-Way Information

This section will describe additional ROW needs, number of parcels affected by ROW acquisition, existing area land use, method for estimating ROW acquisition costs, potential relocations or displacements of structures, utility relocations or adjustments and potential conflicts, required utility permits, and potential project impacts on existing billboards.

Cultural Resources

Any anticipated impacts to dedicated publicly owned parkland, wildlife refuges, or recreation areas will be described. This section will also describe potential project impacts on archeological resources and historic resources based on literature review and field investigations. This section will document coordination with the THC and the local historic preservation commission (if applicable). A description of anticipated cultural resource efforts are described below.

Archeology

A brief review of the proposed project area indicates that it is urban and extensively developed (e.g., primarily residential and limited commercial) or in the process of being developed (e.g., the area west of Bonnie Brae Street between West University Drive and Scripture Street). A review of data available from the Texas Historical Commission's (THC) online Texas Archeological Sites Atlas (TASA) indicates that there are no previously recorded sites within or adjacent to the planned project area. The review further indicated that in 2009, the City of Denton's proposed North/South Water Pipeline within the existing Bonnie Brae Road right-of-way (ROW) from Scripture Street to approximately 0.75 mile south of the Loop 288/Bonnie Brae Street intersection. However, as per the THC, the segment of proposed pipeline from West Windsor Drive to south of the Loop 288/Bonnie Brae Street intersection was subjected to an intensive archeological survey; the segment of the pipeline from Scripture Street to West Windsor Drive was not surveyed (as per the THC) given previous impacts and development. Those investigations discovered no archeological resources (TASA 2011).

Given those circumstances, it is the opinion of Blanton & Associates, Inc. (B&A) that there is little to no potential for the proposed project area to contain archeological resources eligible for inclusion to the National Register of Historic Places (NRHP) or warranting State Archeological Landmark (SAL) designation. As such, B&A proposes to prepare an archeological background study to initiate project review with the THC. The background study will evaluate the geologic and soil conditions of the project area in conjunction with prior disturbances and the location of previously known archeological sites to assess the potential for the project area to contain archeological resources eligible for inclusion to the NRHP or warranting SAL. It is B&A's opinion that the level of previous impacts to the proposed project area precludes the need for an intensive archeological survey (as per 13 TAC 26.20 and 26.5).

Historic Resource Studies

Blanton and Associates, Inc. (B&A) shall perform a reconnaissance-level documentation and National Register of Historic Places (NRHP) eligibility evaluation for historic-age buildings, structures, objects, districts, and non-archeological sites in the project's Area of Potential Effect (APE). Identification, evaluation and documentation tasks shall be completed in accordance with the provisions of the *Secretary of the Interior's Standards for the Identification, Evaluation and Documentation* (48 FR Parts 44716-42). Historic studies shall be performed by a TxDOT pre-certified architectural historian and/or historian and documented at sufficient levels to satisfy Texas Historical Commission (THC) requirements for determining the presence of historically significant properties in the Area of Potential Effect (APE) in accordance with 36 C.F.R. 60 and 13 TAC 26. Performance of historic studies shall include the following tasks.

Task 1 – Research Design

B&A shall determine the APE and the limits of the survey area in consultation with the THC. B&A shall conduct a literature review to establish appropriate architectural, historical and cultural contexts for the project area, determine information requirements and direct the survey effort. B&A shall prepare a research design in consultation with the THC. The research design shall provide a succinct summary of the literature review results, clear descriptions of identification, evaluation and documentation tasks required, and associated production schedules. B&A shall submit an electronic copy of the research design to Graham & Associates, Inc. (Graham) for forwarding prior to forwarding to THC, unless otherwise directed by Graham. B&A will revise the research design in accordance with Graham's comments and forward the research design to the THC. B&A shall revise the research design to reflect comments by THC.

Task 2 – Draft Historic Resources Reconnaissance Survey

It is anticipated that the APE will be the proposed right-of-way and will include any historic-age resource (defined in accordance with 36 C.F.R. 60 as a building, structure, object, historic district or non-archeological site at least 50 years old). B&A will also survey any potential historic district within or partially within the APE. To ensure the reconnaissance-level survey encompasses resources at least 50-year-old or older, THC's general guideline is to subtract 45 years from the year of letting in the event that the project is delayed due to unforeseen or unanticipated factors.

B&A shall also complete on-site research sufficient to establish an appropriate historic context for resources within the APE. B&A shall provide a Historic Resources Survey Report (HRSR) detailing the results of the reconnaissance-level survey. The HRSR shall describe the findings of the reconnaissance-level survey and make recommendations for the need, if any, to conduct intensive survey efforts in order to finalize determinations of NRHP eligibility in accordance with 36 C.F.R. 60. (Intensive survey efforts would be included under a separate scope and budget, if required.) The HRSR shall have sufficient detail and clarity to provide the THC with a basis for making determinations of NRHP eligibility.

B&A shall submit four hard copies of Draft Reconnaissance-level HRSR to Graham prior to forwarding to THC, unless otherwise directed by Graham. B&A will revise the Draft HRSR in accordance with Graham's comments and forward the Draft HRSR to the THC.

Task 3 – Final Historic Resources Reconnaissance Survey

Based on comments from THC, B&A will revise and finalize the Reconnaissance-level HRSR. B&A shall submit a hard copy of the Final Reconnaissance-level HRSR to Graham and the THC, unless otherwise directed by Graham.

Threatened and Endangered Species

This section will document literature review, including the Texas Parks and Wildlife Department's (TPWD) Natural Diversity Database search results, and results of the habitat assessment to identify and address threatened/endangered species issues. The assessment will focus on federal and state listed species of potential occurrence. Ecologically sensitive resources, if identified, will be mapped and described in order to assess the potential effects of project construction and operation. These tasks will include the appropriate literature and aerial photography review and field verification.

Migratory Bird Treaty Act

This section will document migratory bird observations in the field and address project compliance with the Migratory Bird Treaty Act.

Farmland

This section will identify potential impacts to prime farmland soils and include form CPA-106, if applicable. Coordination with the Natural Resources Conservation Service may be required.

Wetlands/Waters of the U.S.

Evaluations of waters of the U.S., including wetlands are not anticipated. The Engineer will notify the City of Denton if a Section 404 permit may be required.

Water Quality

This section will describe potential project impacts to water quality and identify expected permitting requirements.

Floodplains

This section will describe potential project impacts to floodplains and expected permitting requirements and coordination with agencies.

Vegetation

This section will identify and describe existing vegetation in the project area and potential project impacts. Mitigation for project impacts will address local requirements.

Air Quality

This section will discuss potential project impacts on air quality and measures taken to minimize construction emissions (MSAT and dust). Air quality sensitive receivers adjacent to the proposed project limits will be identified and described.

Regulated Materials

A standard American Society for Testing and Materials (ASTM) data search for potential hazardous material sites within one mile of the project site will be performed. The report will include a map and detailed information on sites identified. In addition, a visual inspection for potential hazardous materials will be performed within the existing and proposed ROW.

Hazardous materials concerns for this project will be identified and applicable compliance with local, state, and federal regulations.

Construction Impacts

This section will identify and describe potential construction impacts on facilities and services in the project area and surrounding area. Impacts resulting from limited access or detours will be described and measures to minimize impacts will be discussed.

Noise sensitive receivers near the construction area or along any detour route will be identified and described.

Project Coordination

This task includes communication with the Engineer, informal communication with the City of Denton, and resource agencies, and attendance at no more than three (3) coordination meetings by B&A personnel. All communication with the Engineer, resource agencies, and the City of Denton will be made a part of the project file.

Assumptions

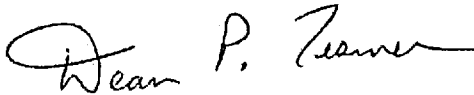
This proposed scope of services is based on the following assumptions:

1. A presence/absence survey for federally endangered vertebrates will not be required. If the results of the habitat assessments indicate that a survey(s) is necessary, or the U.S. Fish & Wildlife Service determines one or more surveys are needed, it (or they) will be accomplished under a separate scope and budget.
2. Section 7 consultations under the Endangered Species Act are not included in this scope of services. Section 7 consultation, if deemed necessary, will be accomplished under a separate scope and budget.
3. This scope includes an archeological survey but does not include testing and/or mitigation of sites. Testing and/or mitigation would be conducted under a separate scope and budget.
4. This scope does not include intensive survey efforts, which includes (but is not limited to) the research of primary sources such as archival research and deed research. If an intensive survey is needed, a supplemental scope and fee will be provided.
5. All necessary land access will be secured by the Engineer or the City of Denton.

6. Any mitigation plan that may be required as a result of regulatory coordination or consultation will be done under a separate scope and budget.
7. Preparation of a National Environmental Policy Act document for Added Capacity TxDOT Facilities (intersection improvements at FM 1515) is not included in this scope of services.
8. This scope of services does not include planning, organizing, or holding any type of public involvement activity.
9. This scope of services does not include formal coordination with any regulatory agency.
10. This scope of services does not include the preparation of a 4(f) or 6(f) Evaluation.
11. This scope of services does not include a quantitative air quality analysis.
12. Permitting or state or federal funding requirements may affect this scope of services. Any additional work or field investigation as a result of permitting or other requirements will be done under a separate scope and budget.

Under this scope of services, B&A proposes to incorporate environmental documentation in the environmental report on a time and materials basis not to exceed \$69,822.23. The budget estimate is included as **Attachment C**.

Sincerely,



Dean Tesmer
Blanton & Associates, Inc.

Attachments



Geotechnical & Environmental Engineering
Construction Materials Testing
Laboratory Testing

September 28, 2012
Proposal No. 3156

Mr. Jim Wagnon, P.E.
Graham Associates, Inc.
600 Six Flags Drive, Suite 500
Arlington, TX 76011

**Re: Proposal for Construction Materials Testing CMT Services
Bonnie Brae Street, Scripture Street to US Hwy 380, Denton, Texas**

Dear Jim:

In accordance with your request we are herein submitting our proposal for Construction Materials Testing services for the Bonnie Brae Street project including the section from Scripture Street to US Highway 380 in Denton, Texas. This proposal is based on information provided and discussed on September 27, 2012.

Based on our understanding of the roadway project, the existing street will be improved to add additional lane width in both directions, resulting in a four lane arterial. The proposed pavement includes reinforced Portland cement concrete paving on a stabilized subgrade.

1.0 GENERAL

Based on the information currently available and our understanding of the project, we propose to provide observation / testing on the following items.

- General grading along the roadway including utility backfill
- Stabilized subgrade for the concrete paving
- Reinforcing Steel
- Concrete Paving

2.0 BASIC SCOPE OF SERVICES

The following paragraphs and attachments detail our basic scope of services and estimated cost for the construction materials observation and testing, coordination of field technicians and related engineering review of testing for the project. As a general overview, our scope of work includes the following:

- Provide experienced engineering technicians to perform on site and laboratory testing services including sampling materials, observation and testing earthwork, reinforcing steel, stabilized subgrade and concrete during construction.
- Provide an experienced geotechnical/materials engineer (Registered Professional Engineer in Texas) to provide oversight and coordination of the engineering technician's daily work, review test data and review test report submittals.
- Perform moisture/density relationships (standard Proctor), Atterberg Limits (liquid and plastic limits) for general earthwork and backfill.
- Perform compaction tests using a nuclear density device (Troxler gauge). Determine the density and moisture content, percent compaction on general earthwork.
- Perform observation and testing of the paving subgrade stabilization including compaction tests, Proctors, field gradations and depth checks.
- Observe reinforcing steel based on project plans and contractor supplied shop drawings.
- Perform observation and testing of concrete paving, including slump, temperature, air content and casting the appropriate number of cylinders for compressive strength testing.

Based on our current understanding of the proposed construction project, LANDTEC proposes the following **Basic Services** to provide construction materials testing on the referenced project.

A. General Earthwork / Utilities

Standard Proctor and classification tests will be performed for the on-site soils proposed for fill. In-place moisture-density (compaction) tests will be taken in each 6 to 8 inch lift of compacted fill material using a Troxler nuclear density gauge. Tests will be taken at a frequency of one test per 5,000 to 10,000 square feet with a minimum of two tests per lift.

B. Pavement Subgrade

Observation and testing of the pavement subgrade will include use of a Troxler nuclear density gauge to determine the moisture and density of the stabilized subgrade and verify it is compacted as per the specifications.

Field moisture-density (compaction) tests will be performed at the rate of one test per approximately each 5,000 to 10,000 square feet, with a minimum of two tests per section. Gradation tests will also be performed on the prepared subgrade (once the chemical additive is applied) at the rate of approximately one per three compaction tests.

C. Portland Cement Concrete Paving

An engineering technician will sample/test the concrete paving and flatwork. Samples of plastic concrete will be obtained for slump measurements, air and temperature, and casting of compressive strength specimens. Concrete will be sampled each 100 cy or fraction thereof for slump and a set of cylinders (4 each) will be cast and tested per each 100 cy or fraction thereof. The cylinders will be tested with one cylinder at 7-days, two at 28 days, and one held in reserve. Batch plant inspection is not included in our scope and cost.

D. Reinforcing Steel

Observation of reinforcing steel for the paving and other cast-in-place concrete based on contractor supplied shop drawings will be performed on rebar for reinforced cast-in-place concrete elements.

3.0 ADDITIONAL SERVICES

The following services are not included in the *Basic Services* and will be considered as *Additional Services*, if and when required or requested:

- Additional hours or trips for the engineering technician beyond the specific hours/trips detailed on the attached spreadsheets.
- Additional engineering, site visits, report review and preparation time beyond what is outlined in basic services and detailed on the attached spreadsheets.
- Additional testing beyond that outlined in *Basic Services* on the attached spreadsheets.
- The services of specialty sub consultants or other special outside services other than those described in *Basic Services*.
- Any other services not specifically included in *Basic Services* and on the attached spreadsheets.

4.0 GENERAL INFORMATION

We propose to provide construction materials testing and observation services for this project on a call-out basis. The contractor's superintendent will be responsible for providing notification for field testing. A minimum notice of 24 hours is requested so that we may effectively schedule our personnel.

Tests will be conducted in all areas designated by the superintendent to be ready for testing at the time the technician is on site. Field test results will be given verbally to the superintendent before the technician leaves the site. Test reports will be submitted after the results are reviewed by a geotechnical/materials engineer. It will be the contractor's responsibility to track areas and/or items requiring retesting and to schedule retests.

The presence of our field representative will be for the purpose of providing observation and field testing. Our work does not include supervision or direction of the actual work of the contractor, employees or agents of the contractor. Neither the presence of our field representative nor the observation and testing by our firm shall excuse the contractor in any way for defects discovered in his work.

It is understood that our firm will not be responsible for the job or site safety on this project. Job and site safety will be the sole responsibility of the contractor.

5.0 COST ESTIMATE (CMT Services)

As indicated in the introduction, the cost estimate provided herein is an "estimate only". This is in part due to the fact that the project has not been designed at the time of this submittal; plans and specs are not available; and, the construction time frame is unknown.

Cost Estimate for Bonnie Brae – Scripture to US 380: \$ 34,320

The actual cost will be dependent on the contractor's rate of work and scheduling of the various individual work elements. The total testing cost is determined by such items as the quantity of equipment and manpower on site, cubic yards of concrete placed per day, earthwork equipment, daily production and scheduling, weather conditions and numerous other items that are beyond LANDTEC's control.

LANDTEC proposes to perform the Basic Services outlined herein on the basis of **Time and Materials**. The attached Cost Estimate sheets estimate the number of hours, tests, transportation, report preparation and review time. The spreadsheets also present the unit rates for the various activities. Cost for the items may vary; however, the total estimated amount will not be exceeded without notification of the client and with client's approval. Client and LANDTEC may subsequently agree in writing for additional services to be rendered under this agreement for additional negotiated compensation.

Notes for the cost estimate are as follows:

1. Field test rates are charged per test in addition to technician hourly rates.
2. A minimum of four hours technician time and vehicle charge will be billed for each call out, sample or specimen pickup.
3. A minimum of four concrete cylinders will be charged for each concrete placement.
4. A minimum of four in-place moisture-density tests will be charged for each trip to site to perform tests.
5. Technician time is charged portal-to-portal from our office.
6. Overtime rates are 1.5 times the regular rate for hours worked over 8 hours per day or hours before 7:00 AM and/or after 5:00 PM. Lab and field services performed on Saturday, Sunday and holidays will be charged at 1.5 times the regular rate.
7. Additional tests not included in this proposal will be quoted upon request.

We appreciate the opportunity to submit this letter proposal and look forward to providing construction materials engineering and testing services for this project. If you have any questions please call.

Sincerely,

LANDTEC ENGINEERS, LLC



Thomas D. Baker, P.E.
Sr. Geotechnical Engineer / Principal

Attachments: Cost Estimate Spreadsheets A-1 and A-2

Construction Materials Testing Cost Estimate
Bonnie Brae - Scripture to 380
Denton, Texas

Item	Description	Unit	Estimated	Unit	Estimated
Earthwork / Backfill - Testing					
	Engineering Technician	hr	40	50.00	2,000.00
	Engineering Technician (OT)	hr	20	75.00	1,500.00
	Transportation	mi	1,000	0.65	650.00
	Vehicle	ea	6	50.00	300.00
	Standard Proctor ASTM D 698	ea	4	140.00	560.00
	Atterberg Limit Test ASTM D 4318	ea	4	60.00	240.00
	Percent Passing #200 Sieve - D 1140	ea	4	50.00	200.00
	Sieve Analysis	ea	2	70.00	140.00
	In-Place Density Test - ASTM D 2922 & 3017	ea	30	15.00	450.00
	Report Preparation/Clerical	hr	8	50.00	400.00
	Geotechnical Engineer / Report Review	hr	8	125.00	1,000.00
	Transportation	mi	1,000	0.65	650.00
					-
Subtotal =					8,090.00
Pavement Subgrade - Testing					
	Engineering Technician	hr	80	50.00	4,000.00
	Engineering Technician (OT)	hr	10	75.00	750.00
	Transportation	ea	1,500	0.65	975.00
	Vehicle	ea	10	50.00	500.00
	Standard Proctor ASTM D 698	ea	3	140.00	420.00
	Atterberg Limit	ea	3	60.00	180.00
	Percent Passing #200 Sieve	ea	3	50.00	150.00
	Sieve Analysis	ea	2	70.00	140.00
	Soil / Stabilization / Atterberg Limits Series	ea	1	250.00	250.00
	Field Moisture/Density Tests	ea	30	15.00	450.00
	Gradation Tests	ea	10	20.00	200.00
	Report Preparation/Clerical	hr	8	50.00	400.00
	Geotechnical Engineer / Report Review	hr	8	125.00	1,000.00
	Transportation	mi	1,000	0.65	650.00
					-
Subtotal =					10,065.00
Concrete Paving - Testing					
	Engineering Technician	hr	75	50.00	3,750.00
	Engineering Technician (OT)	hr	20	75.00	1,500.00
	Transportation	ea	2,000	0.65	1,300.00
	Vehicle	ea	10	50.00	500.00
	Concrete Cylinders	ea	60	18.00	1,080.00
	Report Preparation/Clerical	hr	16	50.00	800.00
	Project Engineer / Report Review	hr	8	125.00	1,000.00
	Transportation	mi	200	0.65	130.00
					-
Subtotal =					10,060.00
Reinforcing Steel					
	Engineering Technician	hr	40	50.00	2,000.00
	Engineering Technician (OT)	hr	10	75.00	750.00
	Transportation	ea	1,500	0.65	975.00
	Vehicle	ea	10	50.00	500.00
	Report Preparation/Clerical	hr	8	50.00	400.00
	Project Engineer / Report Review	hr	4	125.00	500.00
	Transportation	mi		0.65	-
					-
Subtotal =					5,125.00

Construction Materials Testing Cost Estimate
Bonnie Brae - Scripture to 380
Denton, Texas

Item	Description	Unit	Estimated	Unit	Estimated
<i>Pre-Construction / Construction Meetings</i>					
	Project Engineer (P.E.)	hr	4	125.00	500.00
	Transportation	mi	100	0.65	65.00
	Report Preparation/Clerical	hr	2	50.00	100.00
	Engineering Technician	hr	4	50.00	200.00
	Transportation	ea	100	0.65	65.00
	Vehicle	ea	1	50.00	50.00
Subtotal =					980.00
Total Estimate =					\$ 34,320.00