PROFESSIONAL SERVICES AGREEMENT FOR ARCHITECT OR ENGINEER PSA 6388

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 Attachment A, in connection with the Project. The Project shall include, without limitation,

The City of Denton Water Distribution System Master Plan

- Water Distribution System Master Plan Updated
 - Task A. Project Development
 - Task B. Water Model Review and Update
 - Task C. Population and water Demand Projections
 - Task D. Distribution System Hydraulic Capacity Analysis
 - Task E. Water System Capital Improvement Plan, Master Plan Report & Model Training
 - Task F. Water Impact Fee Assistance

SECTION 2 COMPENSATION

The Owner shall compensate the Design Professional as follows:

2.1 BASIC SERVICES

2.1.1 For Basic Services the total compensation shall be \$213,300.

2.1.2 Progress payments for Basic Services shall be paid in the following percentages for of the total compensation for the Basic Services satisfactorily completed at the end of the following phases of the Project:

Engineering Fee Summary

Task A. Project Management	\$ 20,060
Task B. Water Model Review and Update	\$ 28,200
Task C. Population and Water Demand Projections	\$ 30,210
Task D. Distribution System Hydraulic Capacity Analysis	\$ 55,570
Task E. Water System CIP & Master Plan Report	\$ 50,300
Task F. Water Impact Fee Assistance	\$ 28,960
Total	\$213,300

2.2 ADDITIONAL SERVICES

2.2.1 Compensation for Additional Services is as follows:

Will be based on the attached schedule of charges

- **2.2.2** Compensation for Additional Services of consultants (FNI), including additional structural, mechanical and electrical engineering services shall be based on a multiple of 2.02 times the amounts billed to the Design Professional for such additional services.
- **2.3 REIMBURSABLE EXPENSES** Reimbursable Expenses shall be a multiple of 1.10 times the expenses incurred by the Design Professional, the Design Professional's employees and consultants in the interest of the Project.

SECTION 3 INVOICES

<u>Invoices</u> shall be sent directly to the City of Denton Accounts Payable Department, 215 E McKinney St, Denton, TX, 76201-4299. A pro-forma invoice shall be sent to the contract administrator as identified in the Notice to Proceed. It is the intention of the City of Denton to make payment on completed orders within thirty days after receipt of invoice or items; whichever is later, unless unusual circumstances arise. Invoices must be fully documented as to labor, materials, and equipment provided, if applicable, and must reference the City of Denton Purchase Order Number in order to be processed. No payments shall be made on invoices not listing a Purchase Order Number.

SECTION 4 Certificate of Interested Parties Electronic Filing

In 2015, the Texas Legislature adopted House Bill 1295, which added section 2252.908 of the Government Code. The law states that the City may not enter into this contract unless the Contractor submits a disclosure of interested parties (Form 1295) to the City at the time the Contractor submits the signed contract. The Texas Ethics Commission has adopted rules requiring the business entity to file Form 1295 electronically with the Commission.

<u>Contractor will be required to furnish an original notarized Certificate of Interest Parties before</u> the contract is awarded, in accordance with Government Code 2252.908.

The contractor shall:

- 1. Log onto the State Ethics Commission Website at : https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm
- 2. Register utilizing the tutorial provided by the State
- 3. Print a copy of the completed Form 1295
- 4. Enter the Certificate Number on the signature page of this contract.
- 5. Sign and notarize the Form 1295
- 6. Email the notarized form to purchasing@cityofdenton.com with the contract number in the subject line. (EX: Contract 1234 Form 1295)

The City must acknowledge the receipt of the filed Form 1295 not later than the 30th day after Council award. Once a Form 1295 is acknowledged, it will be posted to the Texas Ethics Commission's website within seven business days.

SECTION 5 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:

- 1. City of Denton General Conditions to Agreement for Architectural or Engineering Services.
- 2. The Design Professional's Proposal
- 3. Attachments A through C

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

CITY OF DENTON

	BY:
A TOTAL COLUMN	TODD HILEMAN CITY MANAGER
ATTEST: JENNIFER WALTERS, CITY SECRETAR	RY
BY:	
APPROVED AS TO LEGAL FORM:	
AARON LEAL, INTERIM CITY ATTORN	NEY
BY: John knight c821998C2A2B439	
	DESIGN FIRM
	BY:BFD8359411414B4
	Firm's Officer/Representative (Signature)
	TEXAS ETHICS COMMISSION CERTIFICATE NUMBER

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:
 - 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.

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- **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, 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.

8.6 DESIGN PROFESSIONAL'S ACCOUNTING RECORDS Design Professional shall make available to Owner or Owner's authorized representative records of Reimbursable Expenses and expenses pertaining to Additional Services and services performed on the basis of a multiple of Direct Personnel Expense for inspection and copying during regular business hours for three years after the date of the final Certificate of Payment, or until any litigation related to the Project is final, whichever date is later.

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,
- 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 sub consultants 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.

AT**EXCHIBITIN**T A

CITY OF DENTON WATER DISTRIBUTION SYSTEM MASTER PLAN SCOPE OF SERVICES 02/16/2017

PROJECT UNDERSTANDING:

Freese and Nichols, Inc. (FNI) understands that the City of Denton is engaging engineering services to perform an update to its Water Distribution System Master Plan. The previous Water Distribution System Master Plan was started in 2007 and completed in 2008. The 2008 Study was based on population and water demand data from 2006. Since the 2008 Study, City of Denton staff have invested in maintaining, improving, and updating the H2OMAP Water model. Several fire flow tests have been performed on a yearly basis and have been used to continuously update the Hazen-Williams Roughness Coefficients (C-Factors) in the water model. This scope of services assumes that the H2OMAP Water model is reasonably reflective of the existing water system and only minor updates will be required. The scope includes some temporary pressure testing as a validation exercise to ensure that the water model matches real-world conditions. This Water Distribution System Master Plan Update will consist of developing and updating water demand projections, performing distribution system hydraulic modeling analyses, development of a phased Water Distribution System CIP, and a Water Distribution System Master Plan Report.

The scope also includes assistance for the development water impact fees. FNI will not be calculating the maximum allowable water impact fee, but will rather provide eligible water CIP costs to the City to deliver to the impact fee consultant.

SCOPE OF SERVICES:

WATER DISTRIBUTION SYSTEM MASTER PLAN

A. Project Management

- A1. <u>Project Kick-Off Meeting:</u> Freese and Nichols, Inc. (FNI) will meet with the City to review scope, project team and schedule of the project, and present a data request memorandum. FNI will obtain input on customer complaints to determine areas of pressure concerns during summer conditions.
- A2. <u>Data Collection:</u> FNI will request and compile information from the City including current water system GIS, updated water model, water system improvements completed since the last update, wholesale customer water data, wholesale historical water usage, metered billing data, and other information.
- A3. <u>Monthly Reporting and Status Updates</u>: FNI will develop monthly one-page progress reports and invoicing, providing status updates and documentation of decisions made.

B. Water Model Review and Update

- B1. <u>Update All-Pipes H2OMAP Water Model</u>: FNI will review the updated H2OMAP Water model that the City has been maintaining and perform any necessary updates based on the City's most recent GIS database and any modifications made to water system facilities and pipelines since the 2008 Study.
- B2. <u>Develop and Distribute Existing Demand Data:</u> FNI will utilize data from the City's billing system database to allocate base year demands to the model by customer class. The data will consist of address, parcel ID, and metered usage fields for each customer account. The metered billing data will be geocoded to street centerline or parcel data and then distributed to the model using Theissen polygons.

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- B3. Obtain and Evaluate SCADA Data and Update Diurnal Curves: FNI will obtain SCADA data for the last several years including two weeks of peak summer usage and two weeks of typical average day usage. SCADA data will be used for model updates, development of diurnal curves, and to assist in model calibration. FNI will update the 24-hour diurnal demand curves by pressure plane.
- B4. <u>Identify and Map Field Pressure Testing Locations</u>: FNI will identify locations for field testing based on model update needs and areas of concern from City. Ten pressure testing recorders will be furnished by FNI and utilized along with 10 recorders from the City for a total of up to 20 locations. FNI will prepare procedures for field testing showing proposed location of testing, duration of testing, required SCADA data during testing period, and assistance from utility department.
- B5. <u>Conduct Pressure Testing</u>: FNI will assist and coordinate with City in performing pressure testing at up to 20 locations. Testing will consist of recording pressure readings for a two-week time period within each pressure plane along with needed SCADA data during field testing. FNI will provide the pressure recorders to the City and City staff will install the pressure recorders on the selected hydrants.
- B6. <u>Conduct EPS Model Validation:</u> FNI will conduct a 24-hour extended period simulation (EPS) model validation by adjusting c-factors, peaking factors, and diurnal curves for domestic and commercial loads, and demand distribution until modeling results reasonably match the field pressure measurements and pump/tank operation.
- B7. <u>Meet with City to Review Water Model Review and Update:</u> FNI will attend a meeting with the City to review the water model review and update.

C. Population and Water Demand Projections

- C1. <u>Review and Evaluate Historical Water Usage Records:</u> FNI will review and evaluate historical water usage by residential usage and commercial/industrial over the last 10 years. Calculate and summarize historical per-capita usage and peaking factors.
- C2. Meet with City to Discuss Future Service Areas Boundaries, Land Use Plan, CCN Issues: FNI will meet with City utility personnel on future service area boundaries, land use plan, and discuss path forward on these issues as well as CCN issues as related to developing future water demand projections. FNI will solicit input from the City on known developments, densities, and projected timing and phasing of new development and infill.
- C3. <u>Develop and Distribute Population and Future Land Use Projections</u>: FNI will compile available data from the City and NCTCOG to develop population and non-residential land use projections by Traffic Survey Zone (TSZ) for existing, 5-year, 10-year, and 25-year planning periods.
- C4. <u>Develop and Distribute Water Demand Projections</u>: Utilizing historical water usage and City provided land use assumptions, FNI will develop updated population projections and projected average day, maximum day, and peak hour demands for 5-year, 10-year and 25-year planning periods for retail customers. FNI will compile this information with wholesale customer projections to develop total water demand needs for each of the future planning periods. FNI will distribute projected water demands for 5-year, 10-year and 25-year conditions by pressure plane for average day, maximum day, and peak hour using TSZ population projections, per capita usage, and peaking factors.
- C5. <u>Develop Technical Memorandum Water Demand Projections:</u> FNI will prepare a technical memorandum that documents the analysis of historical consumption data, and future water demand projections. FNI will submit an electronic PDF copy of the TM.
- C6. <u>Meet with City to Review Water Demand Projections:</u> FNI will attend a meeting with the City to review the population and water demand projections. City comments on the TM will be incorporated into the Water Master Plan Report for simplicity.

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D. Distribution System Hydraulic Capacity Analysis

- D1. <u>Perform Modeling of Existing Water System</u>: FNI will conduct EPS modeling of the existing water system under maximum day (including peak hour) demand conditions to determine capacity and deficiencies within the existing water system. FNI will prepare charts and full scale color mapping to document existing system analysis results.
- D2. <u>Conduct Fire Flow Analysis:</u> FNI will utilize water system model to conduct fire flow analysis under existing maximum day demands to identify areas with less than adequate fire flow capacity. Fire flow analysis will be shown using contour mapping of available fire flows.
- D3. Evaluate Pressure Plane Delineation: FNI will analyze existing pressure plane delineation based on modeling results, field testing data, and water supply locations. Identify specific areas with low pressures at normal operating conditions. Evaluate and recommend modifications to the existing pressure plane boundaries. FNI will present mapping showing proposed water system pressures throughout City under new pressure plane boundary alternatives vs. existing pressure plane delineation.
- D4. <u>Utilize 25-year Water Model to Determine Sizing of Water System Improvements</u>: FNI will utilize water model to determine water system transmission, elevated and ground storage, and pumping facilities needed to serve 25-year demands throughout each pressure plane service area using the EPS model analyses under maximum day (including peak hour) demand conditions. The minimum line size for recommended piping improvements will be 12-inches.
- D5. <u>Meet with the City to Review 25-year Water System Improvement Alternatives</u>: FNI will meet with the City to discuss future water system improvement options for 25-year conditions and the proposed pressure plane boundaries.
- D6. <u>Utilize Interim Model Scenarios to Determine Phasing of Water System Improvements</u>: FNI will use interim 5-year and 10-year EPS maximum day model runs to determine phasing of water system improvements. System improvements will include transmission, storage, pumping and distribution system related needs.
- D7. <u>Water Age Modeling</u>: FNI will perform water age modeling using the EPS model. Water age modeling will be conducted for up to three operational scenarios jointly defined by the City and FNI. FNI will investigate operational modifications to reduce water age for areas of concern. FNI will prepare full scale color mapping that document the water age modeling analyses.
- D8. <u>Meet with the City to Phased Water System Improvement Alternatives</u>: FNI will meet with the City to discuss phased water system improvement options for 25-year conditions and the proposed pressure plane boundaries.

E. Water System Capital Improvement Plan, Master Plan Report & Model Training

- E1. <u>Develop Draft Capital Improvement Plan (CIP) Costs and Project Schedule:</u> FNI will develop planning level cost estimates for each proposed project in Year 2017 dollars including engineering and contingencies. Project prioritization and phasing will be developed. FNI will develop one-page CIP project sheets showing project drivers, justification, cost estimates, and location map. FNI will develop large scale citywide mapping showing proposed projects and phasing.
- E2. <u>Prepare Draft Master Plan Report</u>: FNI will prepare a Draft Master Plan Report summarizing water demand projections, and Capital Improvement Plan along with descriptions of need for individual projects. FNI will deliver 5 hard copies and one electronic PDF copy of the draft report to City.
- E3. <u>Meet with City to Review Draft Capital Improvement Plan and Draft Master Plan Report</u>: FNI will meet with City to discuss draft CIP and the Draft Master Plan Report.

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- E4. <u>Revise Capital Improvement Plan and Master Plan Report</u>: FNI will revised the scheduling of the CIP and resubmit final Capital Improvement Plans and resubmit 20 final hard copies and one electronic copy in PDF format of the Master Plan Report to the City.
- E5. <u>Deliver Project Files to City</u>: FNI will deliver GIS and hydraulic model files to the City.
- E6. <u>Conduct Training for Water System Model:</u> FNI will conduct two consecutive days of model training on the use of the water system model. The training will include providing instructional material and training in setting up the model, running and modifying the model, and printing results.

WATER IMPACT FEE ASSISTANCE

F. Water Impact Fee Assistance

- F1. <u>Identify Water Impact Fee Service Areas</u>: FNI will examine existing impact fee zones and evaluate and identify the future service areas for impact fees.
- F2. <u>Identify Water Improvements Eligible for Impact Fees:</u> FNI will determine impact fee eligible projects based on recently constructed project and proposed projects from the updated water CIP. Maps will be prepared showing the proposed projects included in the impact fee calculation.
- F3. Conduct Water Impact Fee Capacity Analysis for Eligible Projects: FNI will utilize water model to analyze existing recently completed projects for excess capacity and new capital improvement projects for impact fee cost recovery for 10-year projected growth. The capacity analysis will be conducted one time based on the land use assumptions provide by the City. If the land use assumptions are revised after the initial capacity analysis, additional services would be required to update the demands and capacity analysis.
- F4. <u>Calculate Project Costs Eligible for Impact Fee Cost Recovery</u>: FNI will calculate eligible CIP costs for impact fee calculations. The capacity analysis will be utilized to calculate percentage of project cost eligible for impact fee cost recovery.
- F5. <u>Prepare Draft Technical Memorandum</u>: FNI will prepare a draft technical memorandum to document the CIP development and impact fee analysis. A map showing the impact fee capital improvement projects will be prepared. Utilization percentages for each project will also be included. Calculation of the maximum allowable impact fee will not be included. An electronic PDF copy will be submitted for City review.
- F6. <u>Meeting with City to Discuss Technical Memorandum</u>: FNI will conduct a meeting with City to discuss the Draft Technical Memorandum. FNI will solicit comments and incorporate City comments into the final memorandum.
- F7. <u>Finalize Technical Memorandum</u>: FNI will revise the memorandum based on City comments and submit five hard copies and one electronic PDF copy.

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SUMMARY OF DELIVERABLES

1. Technical Memorandum: Water Demand Projections

2. Draft Capital Improvements Plan

3. Draft Master Plan Report

4. Final Master Plan Report

5. GIS Mapping and Modeling Files

6. Model Training Material

7. Technical Memorandum: Water Impact Fee Assistance

PROJECT SCHEDULE



ENGINEERING FEE SUMMARY

Task	Description	Hours	Labor	E	cpenses	S	ubs	Total
Α	Project Management	114	\$ 18,970	\$	1,090	\$	-	\$ 20,060
В	Water Model Review and Update	180	\$ 24,320	\$	3,880	\$	-	\$ 28,200
С	Population and Water Demand Projections	204	\$ 28,240	\$	1,970	\$	-	\$ 30,210
D	Distribution System Hydraulic Capacity Analysis	364	\$ 52,210	\$	3,360	\$	-	\$ 55,570
E	Water System CIP & Master Plan Report	320	\$ 46,410	\$	3,890	\$	-	\$ 50,300
F	Water Impact Fee Assistance	190	\$ 27,080	\$	1,880	\$	-	\$ 28,960
	Total	1,372	\$ 197,230	\$	16,070	\$		\$ 213,300

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City of Denton Water Distribution System Master Plan Project Schedule

ATTACHMENT B



Task Name	2017										2018			
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
Task A: Project Management														
													1	
Task B: Water Model Review and Update														
Task C: Population and Water Demand Projections														
Task D: Distribution System Hydraulic Capacity Analysis														
Task E: Water System CIP, Master Plan Report & Model Training														
Task F: Water Impact Fee Assistance														$\mathbf{E}\lambda$
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Certificate Of Completion

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Document Pages: 20

Supplemental Document Pages: 0

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Envelope Originator:

Jody Word

jody.word@cityofdenton.com

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jody.word@cityofdenton.com

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Signer Events

Jody Word

jody.word@cityofdenton.com

Buyer

City of Denton

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Electronic Record and Signature Disclosure:

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Scott A. Cole. P.E.

sac@freese.com

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John Knight

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Deputy City Attorney

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Contracts Administration Supervisor

City of Denton

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Electronic Record and Signature Disclosure:

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ID:

Signature

Signatures: 3 Initials: 0

Payments: 0

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John knight

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Signer Events Signature Timestamp

Todd Hileman

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Jennifer Walters

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Sherri Thurman

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Contracts Administration Supervisor

City of Denton

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Not Offered via DocuSign

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Electronic Record and Signature Disclosure:

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Robin Fox

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Electronic Record and Signature Disclosure:

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Jennifer Bridges

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Not Offered via DocuSign

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(Optional)

Electronic Record and Signature Disclosure:

Not Offered via DocuSign ID:

Tim Fisher

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Security Level: Email, Account Authentication

(Optional)

Electronic Record and Signature Disclosure:

Not Offered via DocuSign ID:

Elton Brock

elton.brock@cityofdenton.com

Security Level: Email, Account Authentication

(Optional)

Electronic Record and Signature Disclosure:

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ELECTRONIC RECORD AND SIGNATURE DISCLOSURE

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Required hardware and software

1		
Operating Systems:	Windows2000? or WindowsXP?	
Browsers (for SENDERS):	Internet Explorer 6.0? or above	
Browsers (for SIGNERS):	Internet Explorer 6.0?, Mozilla FireFox 1.0,	
	NetScape 7.2 (or above)	
Email:	Access to a valid email account	
Screen Resolution:	800 x 600 minimum	
Enabled Security Settings:	•Allow per session cookies	
	•Users accessing the internet behind a Proxy Server must enable HTTP 1.1 settings via proxy connection	

^{**} These minimum requirements are subject to change. If these requirements change, we will provide you with an email message at the email address we have on file for you at that time providing you with the revised hardware and software requirements, at which time you will have the right to withdraw your consent.

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To confirm to us that you can access this information electronically, which will be similar to other electronic notices and disclosures that we will provide to you, please verify that you were able to read this electronic disclosure and that you also were able to print on paper or electronically save this page for your future reference and access or that you were able to e-mail this disclosure and consent to an address where you will be able to print on paper or save it for your future reference and access. Further, if you consent to receiving notices and disclosures exclusively in electronic format on the terms and conditions described above, please let us know by clicking the 'I agree' button below. By checking the 'I Agree' box, I confirm that:

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