

## **PROFESSIONAL SERVICES AGREEMENT**

This Professional Services Agreement (“Agreement”) by and between Tarrant County (County) and Teague, Nall and Perkins, Inc. (Consultant), located at 5237 N. Riverside Drive, Suite 100, Fort Worth, Texas becomes effective on the date of approval in Tarrant County Commissioners Court.

### **SCOPE OF SERVICES**

Consultant agrees to perform the services set forth in the Scope of Services attached as Exhibit A in a timely and professional manner, consistent with industry and professional standards, and in accordance with all applicable laws and the terms of this Agreement. Consultant warrants that all engineering services to be performed under this contract will be performed by a licensed engineer or licensed engineers with the professional skill and care ordinarily provided by competent engineers practicing in Texas and under the same or similar circumstances and professional license and that such services will be performed as expeditiously as is prudent considering the ordinary professional skill and care of said engineer or engineers. If any services, functions or responsibilities not specifically described in this Exhibit A are required for the proper performance and provision of these services, they shall be deemed to be included with the Exhibit A.

### **ACCESSIBILITY OF DOCUMENTS**

Consultant agrees that documents prepared by Consultant in the performance of the Scope of Services shown in Exhibit A may be made available to the public, including land developers, upon request.

### **TERM AND RENEWAL OPTIONS**

Upon approval of this contract by the Tarrant County Commissioners Court, Consultant is authorized to begin the provision of services as described in the attached Exhibit A. Consultant agrees to complete the services requested by the County in accordance with the schedule shown in Exhibit D.

### **PAYMENT AND INVOICING**

Compensation to Consultant for the services described in the attached Exhibit A shall not exceed \$4,121,706 in the hourly rates as shown on Exhibit C for the services under this Agreement, upon approval by the County.

Consultant is to advise the County of additional services that may be required to complete any services requested under this Agreement prior to those additional services being performed that are not part of this Agreement, and must obtain prior approval, in writing, by the County before those additional services are performed and invoiced.

- a. If in the execution of services, the County may request Consultant to remove a service, prior to Consultant's performance of that service. Consultant agrees that the County will not be held responsible for costs associated with those services that were removed.
- b. Payments will be made monthly in arrears, on a net 30-day basis. The fee is to be inclusive of all travel costs.
- c. Invoices are to be detailed and reference the fees as shown in Exhibit C. A summary of the work performed during the invoiced period should accompany the invoice submittal.
- d. Submit invoices to: Tarrant County Auditor's Office, Attention: Accounts Payable, 100 E. Weatherford St., Suite 506, Fort Worth, Texas 76196, phone: 817-884-1205, or email to: [SAP-Invoices@tarrantcountytexas.gov](mailto:SAP-Invoices@tarrantcountytexas.gov) and [rvskinner@tarrantcountytexas.gov](mailto:rvskinner@tarrantcountytexas.gov). Invoices should reference the Purchase Order number.

## COMPLIANCE WITH LAWS

1. In providing the services required by this Agreement, Consultant must observe and comply with all applicable federal, state, and local statutes, ordinances, rules, and regulations, including, without limitation, workers' compensation laws, minimum and maximum salary and wage statutes and regulations, and non-discrimination laws and regulations. Consultant shall be responsible for ensuring its compliance with any laws and regulations applicable to its business, including maintaining any necessary licenses and permits.

### 2. Chapters 2271, 2252, and 2274 Texas Government Code Verification.

(a) *Boycott of Israel Prohibited.* In compliance with Section [2271.001](#) et seq. of the Texas Government Code, Consultant verifies that neither it nor any of its affiliates currently boycott Israel and neither it nor any of its affiliates will boycott Israel during the term of this Agreement. "Boycott Israel" is defined in Section [808.001\(1\)](#) of the Texas Government Code.

(b) *Scrutinized Business Operations Prohibited.* In compliance with Section [2252.151](#) et seq. of the Texas Government Code, Consultant warrants and represents that: (1) neither Consultant nor any of its affiliates engages in scrutinized business operations in Sudan; (2) neither Consultant nor any of its affiliates engages in scrutinized business operations in Iran; and (3) neither Consultant nor any of its affiliates engages in scrutinized business operations with designated foreign terrorist organizations. "Scrutinized business operations in Sudan" is defined in Section [2270.0052](#) of the Texas Government Code. "Scrutinized business operations in Iran" is defined in Section [2270.0102](#) of the Texas Government Code. "Scrutinized business operations with designated foreign terrorist organizations" is defined in Section [2270.0152](#) of the Texas Government Code. Consultant further represents and warrants that neither Consultant nor any of its affiliates appears on any of the Texas Comptroller's [Scrutinized Companies Lists](#).

(c) *Boycott of Certain Energy Companies Prohibited.* In compliance with Section [2276.002](#) of the Texas Government Code (added by 87th Legislature, S.B. 13), Consultant verifies that neither it nor any of its affiliates currently boycott energy companies and neither it nor any of its affiliates will boycott energy companies during the term of this Agreement. "Boycott energy company" is defined in Section [809.001\(1\)](#) (added by 87th Legislature, S.B. 13) and means, without an ordinary business purpose, refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit

commercial relations with a company because the company: (A) engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law; or (B) does business with a company described by subsection (A).

(d) *Discrimination against Firearm Entities or Firearm Trade Associations Prohibited.* In compliance with Section [2274.002](#) of the Texas Government Code (added by 87th Legislature, S.B. 19), Consultant verifies that neither it nor any of its affiliates have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association; and neither it nor any of its affiliates will discriminate during the term of the Agreement against a firearm entity or firearm trade association. “Discriminate against a firearm entity or firearm trade association” is defined in Section [2274.001\(3\)](#) (added by 87th Legislature, S.B. 19) and means, with respect to the entity or association, to: (i) refuse to engage in the trade of any goods or services with the entity or association based solely on its status as a firearm entity or firearm trade association; (ii) refrain from continuing an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association; or (iii) terminate an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association; the term *does not include*: (i) the established policies of a merchant, retail seller, or platform that restrict or prohibit the listing or selling of ammunition, firearms, or firearm accessories; and (ii) a company’s refusal to engage in the trade of any goods or services, decision to refrain from continuing an existing business relationship, or decision to terminate an existing business relationship: (aa) to comply with federal, state, or local law, policy, or regulations or a directive by a regulatory agency; or (bb) for any traditional business reason that is specific to the customer or potential customer and not based solely on an entity’s or association’s status as a firearm entity or firearm trade association.

3. **Legal Compliance.** Each party shall comply with the provisions of all applicable laws relating to the performance of its obligations under this Agreement. Each party is responsible for obtaining its own legal advice concerning its compliance with applicable laws.

4. **Prohibition of Political Activity.** None of the funds provided under this Agreement shall be used for influencing the outcome of any election, or the passage or defeat of any legislative measure. This prohibition shall not be construed to prevent the Parties’ compliance with the Texas Public Information Act. No funds provided under this Agreement may be used directly or indirectly to hire employees or in any other way fund or support candidates for the legislative, executive, or judicial branches of government, the State of Texas, or the government of the United States. None of the funds provided under this Agreement shall be paid to any official or employee who violates any of the provisions of this Section.

5. **Form 1295 Certificate of Interested Parties.** Consultant acknowledges and agrees that it has fully, accurately, and completely disclosed all interested parties in the Form 1295 electronically filed with the Texas Ethics Commission, at <https://www.ethics.state.tx.us/filinginfo/1295/>, as required by law, and that the attached signed copy attached as **Exhibit G** is a full and true copy of said filed form.

6. **Conflict of Interest.** Consultant assures that it is in compliance with the requirements of [Chapter 176](#) of the Texas Local Government Code and has filed or will promptly

file the Conflict of Interest Questionnaire (CIQ Form) with the Tarrant County Clerk no later than the 7th business day after the date Consultant becomes aware of facts that require the form to be filed. Completed forms are to be sent to:

Tarrant County Transportation Services  
Attn: Randall Skinner, Director  
100 East Weatherford Street, Room 401  
Fort Worth, Texas 76196

## INSURANCE REQUIREMENTS

Consultant shall take out, pay for and maintain always during the prosecution of the work under the contract, the following forms of insurance, in carriers acceptable to and approved by Tarrant County:

- a. Worker's Compensation/Employer's Liability
  1. Worker's Compensation – statutory
  2. Employer's Liability - \$500,000
- b. Commercial General Liability:
  1. Bodily injury/Personal injury/Property damage - \$1,000,000 per occurrence/\$2,000,000 aggregate
- c. Auto Liability:
  1. Combined Single Limit (CSL) - \$500,000 per occurrence
- d. Contractual Liability – same limits as above
- e. Professional Liability Insurance - \$1,000,000 each claim with minimum \$2,000,000 aggregate

## FINANCIAL RESPONSIBILITY

Consultant is responsible for its incurred expenses in performing this contract unless otherwise noted. To the extent permitted by the Constitution and the laws of the State of Texas, Consultant indemnifies and holds harmless the County against any and all claims, lawsuits, settlements, judgments, costs, penalties and expenses, including attorney's fees, for damage caused by or resulting from an act of negligence, intentional tort, intellectual property infringement, or failure to pay a subcontractor or supplier committed by the Consultant, its agent, or another entity over which the Consultant exercises control.

## AGENCY-INDEPENDENT CONTRACTOR

Neither Consultant nor any employee thereof is an agent of the County and neither the County nor any employee thereof is an agent of Consultant. This agreement does not and shall not be construed to entitle either party or any of their representative employees, if applicable, to any benefits, privilege, or other amenities of employment of the other part.

## ASSIGNMENT

Neither party may assign this contract.

### THIRD PARTY BENEFICIARY EXCLUDED

This party does not incur to the benefit of any specific third party. The parties to this contract do not consent to the waiver of sovereign or government immunity under Texas state or federal law to the extent either party may have that immunity under law.

### ENTIRE AGREEMENT

The Contract documents consist of the following:

- This Agreement
- Request for Qualifications 2022-044 Bid Documents and Consultant Response
- Consultant Proposal
- Any exhibits attached hereto, conditions of the contract (special, supplementary and other conditions), all addenda issued prior to execution of this Agreement and all modifications issued subsequent thereto.

To the extent of an ambiguity among the various documents, the Request for Qualifications 2022-044 will prevail. These documents collectively form the Contract, and all are fully a part of the Contract as if attached to this Agreement or repeated herein.

This Agreement may not be modified, altered, changed or amended in any respect, unless in writing and signed by both parties. For avoidance of doubt, this Agreement may not be modified orally.

The law of the State of Texas governs this contract. Venue for any action regarding this contract must be in the district courts of Tarrant County, Texas.

This agreement is effective upon the date of approval in Tarrant County Commissioners Court.

### TERMINATION

Either party may terminate this contract by:

- a. Providing written notice to the other party at least thirty (30) days prior to the date of termination;
- b. Providing in the written notice the date of termination; and
- c. Sending the written notice by certified mail return receipt requested to the party at its address.

NOTICES

**Tarrant County**

Randall Skinner  
Tarrant County Transportation Services  
100 E. Weatherford, Room 401  
Fort Worth, Texas 76196

**Teague, Nall and Perkins, Inc.**

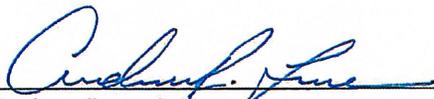
Ty Hilton, P.E.  
5237 N. Riverside Drive, Suite 100  
Fort Worth, Texas 76137

**TARRANT COUNTY**

**TEAGUE, NALL AND PERKINS, INC.**

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Tim O'Hare  
County Judge



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Andrew Luce, P.E.

**REVIEWED AS TO FORM:**

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Criminal District Attorney's Office\*

\*By law, the Criminal District Attorney's Office may only advise or approve contracts or legal documents on behalf of its clients. It may not advise or approve a contract or legal document on behalf of other parties. Our review of this document was conducted solely from the legal perspective of our client. Our approval of this document was offered solely for the benefit of our client. Other parties should not rely on this approval, and should seek review and approval by their own respective attorney(s).

**CERTIFICATION OF AVAILABLE FUNDS IN THE AMOUNT OF \$4,121,706:**

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Auditor's Office

## **Exhibit 'A' – Scope of Services**

### **BONDS RANCH ROAD WIDENING BOAT CLUB ROAD TO BUSINESS 287**

#### **PROJECT DESCRIPTION:**

The project consists of the widening of 3.5 miles of Bonds Ranch Road from an existing 2-lane roadway to a 4-lane undivided road from Boat Club Rd to Fleming Ranch Rd and from a 2-lane roadway to a 4-lane divided road from Fleming Ranch Rd to Business 287. The project will also include design of sidewalk, a traffic signal warrant study and traffic signal design at Fleming Ranch Rd, traffic signal adjustment plans for the Business 287 intersection, illumination, landscape and irrigation design, hydrologic and hydraulic analysis of eight cross drainage structures, and roadway drainage design. Data acquisition will include topographic and boundary survey, and a subsurface utility engineering (SUE) investigation of existing utilities. Right of Way (ROW) acquisition and utility coordination services are also included as part of the project scope. Construction management and inspection services are included as an additional service.

#### **DEFINITIONS:**

For the purpose of this document the following definitions apply: OWNER shall be defined as Tarrant County and CONSULTANT shall be defined as Teague, Nall, & Perkins, Inc.

#### **BASIC SERVICES:**

##### **WORK TO BE PERFORMED**

- Task 1. Design Management
- Task 2. Conceptual Design (30%)
- Task 3. Preliminary Design (60%)
- Task 4. Final Design (90% and 100%)
- Task 5. Bid Phase Services
- Task 6. Construction Phase Services
- Task 7. ROW/Easement Services
- Task 8. Survey and Subsurface Utility Engineering Services
- Task 9. Permitting
- Task 10. Landscape Architecture

The following tasks have been identified for inclusion as Additional Services and shall require advance authorization in writing by the OWNER:

#### **ADDITIONAL SERVICES:**

- Task 11. Construction Management and Inspection

## **TASK 1. DESIGN MANAGEMENT.**

### 1.1. Managing the Team:

- Lead, manage and direct design team activities
- Ensure Quality Control / Quality Assurance (QC/QA) is practiced in performance of the work.
- Communicate internally among team members
- Task and allocate team resources

### 1.2. Communications and Reporting:

- Attend a pre-design project kickoff/charter meeting with OWNER staff to confirm and clarify scope, understand OWNER objectives, and ensure economical and functional designs that meet OWNER requirements
- Conduct and document *monthly* project update meetings with OWNER Project Manager
- Conduct review meetings with the OWNER at the end of each design phase
- Coordinate with and conduct a meeting with TxDOT regarding the intersection at Business 287
- Coordinate with and conduct a meeting with TxDOT and the Design CONSULTANT regarding the FM 1220 (Boat Club Rd) intersection
- Conduct QC/QA reviews and document those activities.
- Prepare and submit monthly invoices in the format acceptable to the OWNER
- Prepare and submit baseline Project Schedule initially, and Project Schedule updates monthly.
- Coordinate with other agencies and entities as necessary for the design of the proposed infrastructure, and provide and obtain information needed to prepare the design.
- With respect to coordination with permitting authorities, CONSULTANT shall communicate with permitting authorities such that their regulatory requirements are appropriately reflected in the designs. CONSULTANT shall work with regulatory authorities to obtain approval of the designs, and make changes necessary to meet their requirements, as part of the design scope.

### 1.3. Constructability Review

- Prior to the 60 percent review meeting with the OWNER, the CONSULTANT shall schedule and attend a project site visit with the OWNER's Project Manager and Construction personnel to walk the project. The CONSULTANT shall summarize the OWNER's comments from the field visit and submit this information to the OWNER in writing.

## **ASSUMPTIONS**

- One (1) pre-design project kickoff/chartering meeting
- One (1) constructability review meeting during design
- Twelve (12) monthly project update meetings during design phase
- Four (4) plan review meetings
- Twenty Four (24) biweekly design team meetings
- All submittals to the OWNER will be Quality checked prior to submission.
- Project design phase is anticipated to take twelve (12) months.
- Project construction phase is anticipated to take twenty four (24) months.
- Twelve (12) monthly updates of Project Status Reports and Project Schedule.

## **DELIVERABLES**

- A. Meeting summaries with action items
- B. QC/QA documentation
- C. Baseline design schedule
- D. Monthly Schedule updates with schedule narrative describing any current or anticipated schedule changes
- E. Monthly Project Status Reports
- F. Monthly invoices

## **TASK 2. CONCEPTUAL DESIGN (30 PERCENT).**

The Conceptual Design shall be submitted to OWNER per the approved Project Schedule.

The purpose of the conceptual design is for the CONSULTANT to identify, develop, communicate through the defined deliverables, and recommend the design concept that successfully addresses the design problem, and to obtain the OWNER's endorsement of this concept.

CONSULTANT will develop the conceptual design of the infrastructure as follows.

### **2.1. Data Collection**

- In addition to data obtained from the OWNER, CONSULTANT will research and make efforts to obtain pertinent information to aid in coordination of the proposed improvements with any planned future improvements that may influence the project. CONSULTANT will also identify and seek to obtain data for existing conditions that may impact the project including; utilities, agencies (TxDOT and railroads), OWNER Master Plans, and any other planned future improvements know by the OWNER that may influence the project
- The data collection efforts will also include conducting special coordination meetings with affected property owners and businesses as necessary to develop sewer re-routing plans where necessary.

### **2.2. Subsurface Utility Engineering**

Provide Subsurface Utility Engineering (SUE) per Task 8.

### **2.3. Utility Clearance**

- CONSULTANT will develop the design of OWNER facilities to avoid or minimize conflicts with existing utilities, and where known and possible consider potential future utilities in designs. Where conflicts cannot be avoided, coordination of Utility Conflicts will begin at the Conceptual Design phase.
- In the case of a public utility conflict, the CONSULTANT will design OWNER facilities to avoid or minimize conflicts with existing utilities, and where known and possible consider potential future utilities in designs.
- CONSULTANT will provide plans to and coordinate with utility owner related to the relocation efforts of franchise utilities that remain in conflict with the proposed construction per Task 8.

### **2.4 The Conceptual Design Package shall include the following:**

- Preliminary cover and index of sheets including project limits, area location map and beginning and end station limits.
- Conceptual Design Report in the format provided by the OWNER
- Drainage/Flood Study as described in Section 9.5
- SUE Plan sheets sealed by a licensed professional CONSULTANT registered in the State of Texas.

- Traffic Counts and Signal Warrant Study are exclusive to the Bonds Ranch Rd and Fleming Ranch Rd intersection.
  - Traffic Count Data: Microsoft Excel spreadsheet of Raw 24-hour and Turning Movement Count data gathered at 15-minute intervals at a minimum on all raw data collected. Provide Daily Summaries by Approach and Peak-Period Summaries by Approach.
  - CONSULTANT will perform a Traffic Signal Warrant Analysis to determine whether installation of a traffic control signal is justified at the intersection of Bonds Ranch Road and Fleming Ranch Rd in Fort Worth, Texas. The effort will include 24 hour turning movement counts. It is assumed that intersection crash history data will be provided by the City of Fort Worth.
  - The Traffic Signal Warrant Analysis will include a model to show the level of service (LOS) of the existing intersection and potential signal improvements including auxiliary turn lanes. A technical memo will be prepared detailing results of the Signal Warrant and LOS analyses and conclusions. A draft of the memo will be submitted for review and comment. CONSULTANT will attend one (1) comment review meeting.
- Existing typical sections of the roadway to be constructed along with proposed typical sections which outline the proposed improvements. Typical sections shall include existing and proposed ROW, existing and proposed lane widths and direction arrows, existing and proposed curbs, sidewalks, and retaining walls.
- Conceptual plan and profile sheets showing existing and proposed horizontal roadway alignments, existing and proposed ROW, existing and proposed sidewalks and driveways, proposed illumination pole and foundation locations, proposed lane dimensions and lane arrows, existing drainage structures, OWNER owned and franchise utilities, and existing roadway vertical alignments (profiles).
- Documentation of key design decisions.
- Estimates of probable construction cost.

#### **ASSUMPTIONS**

- All storm water calculations and design shall conform to the City of Fort Worth's current *iSWM Criteria Manual for Site Development and Construction*.
- Three (3) sets of 11"x17" size plans will be delivered for the 30% design.
- PDF files created from design CAD drawings will be provided to the OWNER
- CONSULTANT shall not proceed with Preliminary Design activities without written approval by the OWNER of the Conceptual Design Package.

#### **DELIVERABLES**

- A. Traffic Signal Warrant Study
- B. Drainage/Flood Study
- C. Conceptual Design Package (Electronic plus 3 sets 11 X 17 paper copies (bound))



### **TASK 3. PRELIMINARY DESIGN (60 PERCENT).**

Preliminary plans and specifications shall be submitted to OWNER per the approved Project Schedule.

CONSULTANT will develop the preliminary design of the infrastructure as follows.

3.1. The Preliminary Design Drawings and Specifications shall include the following:

- Preliminary cover and index of sheets including project limits, area location map and beginning and end station limits.
- SUE Plan sheets sealed by a licensed professional engineer registered in the State of Texas.
- Utility Conflict Matrix
- Drainage/Flood Study as described in Section 9.5
- Traffic Control Plan including all construction signage and pavement markings which will be in accordance with the latest edition of the Texas Manual on Uniform Traffic Control Devices.
- A Project Control Sheet, showing all Control Points, used or set while gathering data. Generally on a scale of not less than 1:400. The following information shall be indicated for each Control Point: Identified (existing OWNER Monument #8901, PK Nail, 5/8" Iron Rod); X, Y and Z Coordinates, in an identified coordinate system, and a referred bearing base. Z coordinate on OWNER Datum only; descriptive location (i.e. set in the centerline of the inlet in the South curb line of North Side Drive at the East end of radius at the Southeast corner of North Side Drive and North Main Street).
- Updated existing and proposed typical section sheets.
- Updated roadway plan and profile sheets displaying station and coordinate data for all horizontal alignment P.C.'s, P.T.'s, P.I.'s; station and elevation data of all vertical profile P.C.'s, P.T.'s, P.I.'s, low points, and high points; lengths of vertical curves, grades, K values, e, and vertical clearances where required.
- Retaining walls are anticipated to be less than 4 ft and not require engineered plans.
- No less than two bench marks per plan/profile sheet.
- Bearings given on all proposed centerlines, or baselines.
- Station equations relating utilities to paving, when appropriate.
- Overall project easement layout sheet(s).
- Intersection layout sheets including ROW lines, horizontal alignments, utilities, curbs, sidewalks, driveways, lane dimensions and arrows, and existing and proposed contours (0.25' intervals)
- Preliminary roadway details to include curbs, curb expansion joints, driveways, sidewalks, pavement, streetlights, traffic signals and all applicable utility details.
- Preliminary signing, pavement marking, illumination and signal layouts.

- CONSULTANT will delineate the watershed based on contour data and field verification and document existing street, right-of-way and storm drain capacities for the subject site. A drainage area map will be drawn at maximum 1" = 200' scale from available 2-foot contour data with the contours labeled. Data source and year will be provided by the OWNER. Calculations regarding street and right-of-way capacities and design discharges (5-year and 100-year frequencies) at selected critical locations will be provided. Other frequencies as required by iSWM criteria may be appropriate for outfalls and sensitive locations. Capacities of existing storm drain will be calculated and shown. All calculations shall conform to City of Fort Worth's criteria delineated in the City's *current iSWM Criteria Manual for Site Development and Construction*. All locations in the project area where 100-year runoff exceeds available storm drain and right-of-way capacities shall be clearly identified. The CONSULTANT's responsibility includes recommendations for improvements of the existing system as deemed reasonable and consistent with OWNER standards.
- Storm drain layout sheets showing location and size of all inlets, manholes, junction boxes, culverts and piping to include storm drain profiles showing existing and proposed flow lines, flows, lengths and slopes of pipe, top of ground profile over pipe and connections to existing or proposed storm sewer systems.
- Estimates of probable construction cost.
- Traffic signal design is exclusive to the intersections of Bonds Ranch Road at Fleming Ranch Road and Bonds Ranch Road and BUS 287.

BUS 287 shall be designed to TxDOT Standards.

Develop signal design plans to include removals, traffic signal layout showing existing utilities (utility poles, street lights, storm drains, fire hydrants, etc.), permanent traffic signal poles and mast arms, pedestrian signal poles, pedestrian signals, APS push buttons, controller cabinet assemblies, signal heads, street lights, detector loops or other detectors, conduit, ground boxes, power sources with distribution to signal service, communications connections, wiring diagrams, pavement markings, signal phasing plan, detection equipment, conduit and cable chart, pole summary chart, cable termination, phasing sequence, pole details, pole locations diagram, and all other items required for the complete construction of the signals. Existing traffic signal specifications and standards will be furnished by the City and will be used for design plans, unless otherwise requested by the City.

- Luminaire poles will be placed in the median if present, and on the roadside otherwise, for the entire length of the project. CONSULTANT will coordinate with the OWNER and City of Fort Worth to determine what existing lighting standards, if any, are in place. The standards would include luminaire spacing criteria, desired fixture model number, color temperature, distribution, pole height, and spacing. CONSULTANT will not be required to conduct a photometric analysis. It is assumed no existing lighting fixture or equipment will be upgraded or reused. The 60% lighting design plans will detail location of proposed poles and foundations, conduit runs, anticipated ground box locations, electrical service locations, and charts quantifying each pole, foundation, ground box type, conduit lengths and installation methods, and wiring quantities.

### 3.2. Geotechnical Investigation/Pavement Design

- Soil investigations, including field and laboratory tests, borings, related engineering analysis and recommendations for determining soil conditions will be made. In addition to the above investigations, borings and appropriate field and laboratory analysis will be made at reasonable intervals along the project alignment for the Contractor's use in determining soil conditions for preparing bids and a Trench Safety Plan. For estimation purposes, a total of seventeen (17) borings are planned with spacing ranging between 1000 to 1500 feet. Two (2) borings are planned at the intersection with Morris Dido Newark Road and BUS 287 to a depth of 35 feet each for potential traffic signal foundation, and fifteen (15) borings are planned along the roadway alignment to a depth of 15 feet for pavement design and potential storm drains.
- The CONSULTANT shall prepare a detailed geotechnical engineering study and pavement design conforming to the City of Fort Worth Pavement Design Manual. The study shall include recommendations regarding utility trenching, pavement design, traffic signal foundation, and identify existing groundwater elevation at each boring. Pavement recommendations will be provided for a permanent concrete section for the majority of the project alignment and HMAC transition pavement at the tie-ins.

### 3.3. Constructability Review

- Prior to the 60 percent review meeting with the OWNER, the CONSULTANT shall schedule and attend a project site visit with the OWNER Project Manager and Construction personnel to walk the project. The CONSULTANT shall summarize the OWNER's comments from the field visit and submit this information to the OWNER in writing.

### 3.4. Utility Clearance (See Task 8 for additional scope)

- CONSULTANT will design OWNER facilities to avoid or minimize conflicts with existing utilities, and where known and possible consider potential future utilities in designs
- Where conflicts cannot be avoided, coordination of Utility Conflicts will be identified at the Conceptual phase and begin at the Preliminary Design phase.

### **ASSUMPTIONS**

- Five (5) sets of 22"x34" size plans, one (1) set of preliminary construction contract documents, special conditions and preliminary opinion of probably construction costs to the OWNER for the review. One (1) set of 11"x17" plans will be submitted with the 60% plan submittal.
- One (1) set of the Project Manual (Contract and Specifications) will be delivered for the 60% design.
- CONSULTANT shall not proceed with Final Design activities without written approval by the OWNER of the Preliminary Design plans.

### **DELIVERABLES**

- A. Preliminary Design drawings and specifications including QC/QA documentation
- B. Geotechnical Report

C. Drainage/Flood Study

D. Estimates of probable construction cost

#### **TASK 4. FINAL DESIGN (90 PERCENT) AND FINAL CONSTRUCTION DOCUMENTS (100 PERCENT).**

Upon approval of the Preliminary plans, CONSULTANT will prepare construction plans as follows:

- Final draft construction plans (90%) and Project Manual shall be submitted to OWNER per the approved Project Schedule.
- Following a 90% construction plan review meeting with the OWNER, the CONSULTANT shall submit Final Plans (100%) to the OWNER per the approved Project Schedule. Each plan sheet shall be stamped, dated, and signed by the CONSULTANT registered in State of Texas.
- Drainage/Flood Study as described in Section 9.5
- The CONSULTANT shall submit an estimate of probable construction cost with both the 90% and 100% design packages. This estimate shall use standard City of Fort Worth standard bid items or TxDOT bid items, as applicable.

#### **ASSUMPTIONS**

- Five (5) sets of 22"x34" size plans, one (1) set of preliminary construction contract documents, special conditions and preliminary opinion of probable construction costs to the OWNER for the review. One (1) set of 11"x17" plans will be submitted with the 90% plan submittal
- Five (5) sealed (100%) sets of final plans and construction documents

#### **DELIVERABLES**

- A. 90% construction plans and specifications including QC/QA documentation.
- B. Drainage/Flood Study
- C. Floodplain Development Permit
- D. 100% construction plans and Project Manual including QC/QA documentation.
- E. Detailed estimates of probable construction costs including summaries of bid items and quantities using the OWNER's or TxDOT's standard bid items and format, as applicable
- F. Digital cover sheet for the signatures of authorized OWNER officials.

## **TASK 5. BID PHASE SERVICES.**

CONSULTANT will support the bid phase of the project as follows.

### **5.1. Bid Support**

- CONSULTANT will assist in providing technical interpretation of the contract bid documents and preparation of proposed responses to all bidders' questions and requests.
- Attend the pre-bid conference in support of the OWNER.
- Assist the OWNER in determining the qualifications and acceptability of prospective contractors, subcontractors, and suppliers.
- Attend the bid opening in support of the OWNER.
- Tabulate and review all bids received for the construction project, assist the OWNER in evaluating bids, and recommend award of the contract.
- Incorporate all addenda into the contract documents and issue conformed sets. After the bid opening, CONSULTANT will provide 5 full sets of plans, 7 half-size sets and 2 copies of the conformed Project Manual set incorporating all approved addenda.

### **ASSUMPTIONS**

- The project will be bid only once and awarded to one contractor.

### **DELIVERABLES**

- A. Addenda
- B. Bid tabulations
- C. Recommendation of award
- D. Construction documents (conformed)

## **TASK 6. CONSTRUCTION PHASE SERVICES.**

CONSULTANT will support the construction phase of the project as follows.

### 6.1. Construction Support

- The CONSULTANT shall attend the pre-construction conference.
- The CONSULTANT shall review shop drawings, samples and other submittals submitted by the contractor for general conformance with the design concepts and general compliance with the requirements of the contract for construction. Such review shall not relieve the Contractor from its responsibility for performance in accordance with the contract for construction, nor is such review a guarantee that the work covered by the shop drawings, samples and submittals is free of errors, inconsistencies or omissions. The CONSULTANT shall log and track all shop drawings, samples and other submittals in the OWNER's document management system (BIM 360).
- As requested by the OWNER, the CONSULTANT shall provide necessary interpretations and clarifications of contract documents, respond to Request for Information (RFI) from the contractor, review change orders, and make recommendations as to the acceptability of the work. The CONSULTANT will meet with the Project Delivery Team and Contractor on-site to review any field changes.
- The CONSULTANT shall attend the "Final" project walk through and assist with preparation of final punch list.

### 6.2 Record Drawings

- Prepare construction "Record Drawings" based upon mark-ups and information provided by the construction contractor(s). Submit one (1) set of the record drawings (with "record drawing stamp" bearing the signature of the CONSULTANT and the date) to the OWNER on a flash drive containing scanned 22"x34" black and white PDF images.

### **ASSUMPTIONS**

- Twelve (12) site visits are assumed.
- Ten (10) submittal reviews are assumed.
- Twenty Five (25) RFI's/Change Orders are assumed.

### **DELIVERABLES**

- A. Response to Contractor's Request for Information
- B. Review of Change Orders
- C. Review of shop drawings
- D. Final Punch List items
- E. Record Drawings

## **SPECIAL SERVICES**

### **TASK 7. ROW/EASEMENT SERVICES.**

CONSULTANT will support and perform activities related to ROW and land as outlined below, per scoping direction and guidance from the OWNER's Project Manager.

#### **7.1. Right-of-Way Research**

- The CONSULTANT shall determine rights-of-way and easement needs for construction of the project. Required temporary and permanent easements will be identified based on available information and recommendations will be made for approval by the OWNER.

#### **7.2. Right-of-Way/Easement Preparation and Submittal.**

- The CONSULTANT shall prepare documents to be used to obtain right-of-way and permanent and/or temporary easements required to construct the improvements.
- The CONSULTANT shall prepare a ROW and Easement parcel reference map showing and designating all land interest for project. The map shall be revised as necessary throughout the land acquisition process.

#### **7.3. Temporary Right of Entry Preparation and Submittal**

- Prior to construction, the CONSULTANT should coordinate with the OWNER project manager to identify all needed Temporary Right of Entries from landowners. It is assumed that letters will only be required for land owners adjacent to construction or who are directly affected by the project and no easement is required to enter their property.

#### **7.4. Negotiation Services**

- Analyze preliminary title report to determine potential title curative issues.
- Analyze appraisal report if applicable; confirm the OWNER's approved value prior to making an offer for each parcel.
- Prepare the initial offer letter, instruments of conveyance, and any other documents required or requested by the OWNER on OWNER-approved forms.
- Send the initial offer, appraisal, draft conveyance documents, title commitment, and required brochures to each property owner or the property owner's designated representative. Maintain follow-up contacts and secure the necessary instruments upon acceptance of the offer for the closing.
- Make at least four (4) diligent attempts to negotiate with each property owner, after which negotiations will be considered exhausted.
- Prepare and maintain a negotiator's report for each parcel.
- Receive any counteroffers from the property owner. Evaluate all counters and submit to and discuss them with the OWNER's Project Manager.

- After the concurrence of the OWNER Project Manager, prepare final offer letters and mail conveyance documents by Certified Mail, Return Receipt Required.

#### 7.5. Title and Closing Services

- CONSULTANT will utilize a Title Company (PROVIDER) currently on the OWNER's approved list.
- Secure preliminary title commitment or preliminary title search and 5-year sales data from the PROVIDER that will be providing title insurance.
- Secure title insurance for all parcels acquired, ensuring acceptable title to the OWNER. Written approval by the OWNER is required for any exception.
- The curative services necessary to provide clear title to the OWNER are the responsibility of the PROVIDER.
- Any fee related to obtaining certified court documents and fees for recording the same, which are not collected at the closing of the parcel, shall be direct pass-through fees at the exact cost.
- PROVIDER shall cause the recordation of all instruments conveying property to the OWNER. The cost of title insurance, recording fees, and filing fees are paid by the OWNER at the time of closing and are not included in the negotiated fee schedule.

#### 7.6. Real Estate Appraisal Services

- CONSULTANT will utilize an Appraiser (APPRAISER) currently on the OWNER's approved list.
- APPRAISER will provide advance notice of the date and time of their appraisal inspections of the subject property to the CONSULTANT'S Project Manager.
- CONSULTANT will prepare and conduct personal pre-appraisal contact with interested owners for each parcel.
- CONSULTANT will contact property owners or their designated representatives to offer an opportunity to accompany the APPRAISER on the APPRAISER's inspection of the subject property. Maintain a record of contact in the file.
- For an initial appraisal assignment, CONSULTANT will prepare an appraisal report for each parcel to be acquired utilizing appropriate appraisal forms. These reports shall conform to policies and procedures along with the Uniform Standards of Professional Appraisal Practices as promulgated by the Appraisal Foundation.
- CONSULTANT will review and recommend completed appraisals for approval by the OWNER.
- Should the OWNER request revisions or updates to appraisal reports, the CONSULTANT will submit associated fees to the OWNER for approval before authorizing such revisions or updates.

#### **ASSUMPTIONS**

- Right-of-Way research includes review of property/right-of-way records based on current internet based Tarrant Appraisal District (TAD) information available at the

start of the project and available on-ground property information (i.e. iron rods, fences, stakes, etc.). It does not include effort for chain of title research, parent track research, additional research for easements not included in the TAD records, right-of-way takings, easement vacations and abandonments, right-of-way vacations, and street closures.

### **DELIVERABLES**

- A. Up to Twenty (20) ROW/Easement exhibits and meets and bounds provided on OWNER forms.
- B. ROW and Easement parcel map
- C. Up to Twenty (20) Temporary Right of Entry cover letters
- D. Up to Twenty (20) Temporary Right of Entry documents
- E. Up to Twenty (20) Filed Easement documents
- F. Up to Twenty (20) Title Commitments and Policies
- G. Up to Twenty (20) Appraisal Reports

## TASK 8. SURVEY AND SUBSURFACE UTILITY CONSULTANTING SERVICES.

CONSULTANT will provide survey support as follows.

### 8.1 Design Survey

- CONSULTANT will perform field surveys to collect horizontal and vertical elevations and other information needed in design and preparation of plans for the project. Information gathered during the survey shall include topographic data, elevations of all sanitary and adjacent storm sewers, rim/invert elevations, curbs, sidewalks, pavement, visible utilities, structures, and other features relevant to project design. CONSULTANT shall provide all office and field work necessary to determine the existing right-of-way and adjacent property lines along Bonds Ranch Road within the project limits.
- CONSULTANT will provide all office and field work necessary to establish ground control points for the project and will provide northing, easting and elevation data for each control point established. Conventional surveys, ground truthing and/or supplemental field surveys as necessary to verify existing surface and other critical features within inaccessible or obscured areas are included herein.
- All survey information provided by the CONSULTANT will be referenced to Grid North of the Texas Coordinate System of 1983 {North Central Zone No. 4202; NAD83(2011) Epoch 2010} as derived locally from Allterra Central's continuously operating reference stations via real time kinematic survey methods. Elevations will be referenced to the City of Fort Worth's vertical datum as derived from RTK observations. Orthometric heights will be calculated by applying the Geoid 12B model to ellipsoid heights.
- CONSULTANT will perform all surveying services in accordance with the General Rules and Procedures of Practice, and the Professional and Technical Standards established by the Texas Board of Professional Engineers and Land Surveyors.
- Deliverables will include a base map prepared in AutoCAD Civil 3D format for in house design purposes only. Right-of-way and/or easement documents will be provided consisting of an Exhibit A (metes and bounds) and Exhibit B (sketch) signed and sealed by a Texas Registered Professional Land Surveyor.
- The minimum survey information to be provided on the plans shall include the following:
  - A Project Control Sheet, showing **ALL** Control Points, used or set while gathering data. Generally on a scale of not less than 1:400:
  - The following information about each Control Point;
    - a. Identified (Ex: Existing. City of Fort Worth Monument #8901, PK Nail, 5/8" Iron Rod)
    - b. X, Y and Z Coordinates, in an identified coordinate system, and a referred bearing base. Z coordinate on CITY Datum only.
    - c. Descriptive Location (e.g., Set in the centerline of the inlet in the South curb line of North Side Drive at the East end of radius at the Southeast corner of North Side Drive and North Main Street).

## ASSUMPTIONS

- No Right-of-Entry will be required for access to property frontages
- No Permitting will be required

### 8.2. Temporary Right of Entry Preparation and Submittal

- The documentation shall be provided in conformance with the checklists and templates available on the OWNER's document management system resources folder.

### 8.3. Subsurface Utility Engineering

Provide Subsurface Utility Engineering (SUE) to Quality Level *D, C, B, and A*, as described below. The SUE shall be performed in accordance with CI/ASCE 38-22.

#### Quality Level D

- Conduct appropriate investigations (e.g., utility owner records, OWNER and CITY records, personal interviews, visual inspections, etc.), to help identify utility owners that may have facilities within the project limits or that may be affected by the project.
- Collect applicable records (e.g., utility owner base maps, "as built" or record drawings, permit records, field notes, geographic information system data, oral histories, etc.) on the existence and approximate location of existing involved utilities.
- Review records for: evidence or indication of additional available records; duplicate or conflicting information; need for clarification.
- Develop SUE plan sheets and transfer information on all involved utilities to appropriate design plan sheets, electronic files, and/or other documents as required. Exercise professional judgment to resolve conflicting information. For information depicted, indicate: utility type and ownership; date of depiction; quality level(s); end points of any utility data; line status (e.g., active, abandoned, out of service); line size and condition; number of jointly buried cables; and encasement.

#### Quality Level C (includes tasks as described for Quality Level D)

- Identify surface features, from project topographic data and from field observations, that are surface appurtenances of subsurface utilities.
- Include survey and correlation of aerial or ground-mounted utility facilities in Quality Level C tasks.
- Survey surface features of subsurface utility facilities or systems, if such features have not already been surveyed by a professional surveyor. If previously surveyed, check survey data for accuracy and completeness.
- The survey shall also include (in addition to subsurface utility features visible at the ground surface): determination of invert elevations of any manholes and vaults; sketches showing interior dimensions and line connections of such manholes and vaults; any surface markings denoting subsurface utilities, furnished by utility owners for design purposes.

- Exercise professional judgment to correlate data from different sources, and to resolve conflicting information.
- Update (or prepare) plan sheets, electronic files, and/or other documents to reflect the integration of Quality Level D and Quality Level C information.
- Recommend follow-up investigations (e.g., additional surveys, consultation with utility owners, etc.) as may be needed to further resolve discrepancies.
- Provide Quality Level C to identify overhead utilities on the project and provide the overhead utility information on the SUE plan sheets.

Quality Level B (includes tasks as described for Quality Level C and D)

- Select and apply appropriate surface geophysical method(s) to search for and detect subsurface utilities within the project limits, and/or to trace a particular utility line or system.
- Based on an interpretation of data, mark the indications of utilities on the ground surface for subsequent survey. Utilize paint or other method acceptable for marking of lines.
- Unless otherwise directed, mark centerline of single-conduit lines, and outside edges of multi-conduit systems.
- Resolve differences between designated utilities and utility records and surveyed appurtenances.
- Recommend additional measures to resolve differences if they still exist. Recommendations may include additional or different surface geophysical methods, exploratory excavation, or upgrade to Quality Level A data.
- As an alternative to the physical marking of lines, the CONSULTANT may, with OWNER's approval, utilize other means of data collection, storage, retrieval, and reduction, that enables the correlation of surface geophysical data to the project's survey control.

Quality Level A (includes tasks as described for Quality Level B and C and D)

- Expose and locate utilities at specific locations.
- Tie horizontal and vertical location of utility to survey control.
- Provide utility size and configuration.
- Provide paving thickness and type, where applicable.
- Provide general soil type and site conditions and such other pertinent information as is reasonably ascertainable from each test hole site.

**ASSUMPTIONS**

Up to Thirty (30) Level A test holes are included.

8.4 Utility Coordination

Utility Adjustment Coordination

Utility Adjustment Coordination shall include utility coordination meetings with individual utility companies, communication and coordination with utilities.

- UTILITY BASE MAP

- The CONSULTANT shall obtain information on existing utilities from utility owners and shall conduct investigations to identify and evaluate all known existing and proposed utilities. The CONSULTANT shall identify potential conflicts and attempt to minimize the potential adverse utility impacts in the preparation of the schematic design. The CONSULTANT shall prepare a base map depicting the utility locations. The CONSULTANT shall create and update a utility conflict table along with a utility conflict exhibit highlighting utility conflicts at each submittal of the contract identifying potential known conflicts..

- UTILITY COORDINATION

The CONSULTANT will consult with the OWNER'S Transportation Services Department, City of Fort Worth departments, public utilities, private utilities, and government agencies to determine the approximate location of above and underground utilities, and other facilities (current and future) that have an impact or influence on the project.

The CONSULTANT's Utility Coordinator shall perform utility coordination and liaison activities with involved utility owners, their consultants, and the OWNER to achieve timely project notifications, formal coordination meetings, conflict analysis and resolution. The CONSULTANT's Utility Coordinator shall act as the "Responsible Party" as indicated in the OWNER'S requirements.

- The CONSULTANT's Utility Coordinator shall coordinate all activities with the OWNER, or their designee, to facilitate the orderly progress and timely completion of the design phase. The CONSULTANT's Utility Coordinator shall be responsible for the following:
  - a. Work Plan. Coordinate a work plan including a list of the proposed meetings and coordination activities, and related tasks to be performed, a schedule and an estimate. The work plan must satisfy the requirements of the project and must be approved by the OWNER prior to commencing work.
  - b. Initial Project Meeting. Attend an initial meeting and an on-site inspection (when appropriate) to ensure familiarity with existing conditions, project requirements and prepare a written report of the meeting.
  - c. External Communications. The CONSULTANT's Utility Coordinator shall coordinate all activities with the OWNER and its consultants or other contractors or representatives, as authorized by the OWNER. Also, the CONSULTANT's Utility Coordinator shall provide the OWNER copies of diaries, correspondence and other documentation of work-related communications between the CONSULTANT's Utility Coordinator, utility owners and other outside entities when requested by the OWNER.

- d. Progress Meetings. The CONSULTANT's Utility Coordinator shall implement a schedule of periodic meetings with each utility company and utility owner or utility owner's representatives for coordination purposes. Such meetings shall commence as early as possible in the design process and shall continue until completion of the project. The CONSULTANT's Utility Coordinator shall notify the OWNER at least two (2) business days in advance of each meeting to allow the OWNER the opportunity to participate in the meeting. The CONSULTANT's Utility Coordinator shall provide and produce meeting minutes of all meetings with said utility companies, utility owners or utility owners' representatives within seven (7) business days. The frequency of such meetings shall be appropriate to the matters under discussion with each utility owner.
- As required the CONSULTANT's Utility Coordinator shall coordinate with the local utilities committees to present a footprint of the OWNER'S projects with represented utility companies and owners. The CONSULTANT's Utility Coordinator shall also coordinate with any other utility committees which may include OWNER, City of Fort Worth, or other officials, if needed.
  - The CONSULTANT's Utility Coordinator shall provide initial project notification letters to all affected utility companies, utility owners, and other concerned parties, if needed.
  - The CONSULTANT's Utility Coordinator shall provide the OWNER and all affected utility companies and utility owners a Utility Contact List for each project with all information such as: (a) Owner's Name; (b) Contact Person; (c) Telephone Numbers; (d) Emergency Contact Number; (e) E-mail addresses; (f) as well as all pertinent information concerning their respective affected utilities and facilities, including but not limited to: size, number of poles, material, and other information which readily identifies the utilities companies' facilities.
  - The CONSULTANT's Utility Coordinator shall advise utility companies and utility owners of the general characteristics of the Project and provide an illustration of the project footprint for mark-up of the utility facility locations that occupy the project area.
- Review of Utility's Proposed Adjustments
    - Evaluate Alternatives: The CONSULTANT shall evaluate alternatives in the adjustment of utilities balancing the needs of both the OWNER and the Utility.
    - Review Schedules: The CONSULTANT shall review up to fifteen (15) utility relocation schedules.
    - Review up to fifteen (15) utility agreement plans for compliance with Utility Accommodation Rules and proposed location data. The responsibility for quality and accuracy of Utility adjustment plans will remain with the Utility Company.
    - Inspect Traffic control setup. Ensure necessary traffic control, labor and equipment is utilized where applicable during the utility relocation process. The Utility CONSULTANT shall ensure compliance with the regulations of the

most recent edition of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD). The CONSULTANT must obtain approval from the OWNER concerning the proposed method of handling traffic prior to allowing commencement of work.

- The CONSULTANT shall not provide services for the sole benefit of third parties.
- Signed and Sealed Proposed Utility Layout will not be included in the scope of this project.

#### 8.5 DELIVERABLES

- A. Electronic Base Map prepared in MicroStation format.
- B. Drawing of the project layout with dimensions and coordinate list.
- C. SUE plan drawings sealed by a professional engineer registered in the State of Texas.
- D. Utility Conflict Coordination Package including:
  - a. Utility Conflict Table
  - b. Contact list of utilities on the project

## E. TASK 9. PERMITTING.

CONSULTANT will provide permitting support for the OWNER to obtain any and all agreements and/or permits normally required for a project of this size and type, as follows:

### 9.1 Texas Department of Transportation (TxDOT) Permit

- This project involves TxDOT facilities and will require coordination and review by TxDOT Fort Worth District staff. The design shall conform to criteria and guidelines from current TxDOT Roadway Design Manual, PROWAG, and TxDOT Standards for portion of project bounded by TxDOT ROW. The CONSULTANT makes no warranty that TxDOT policy will be applied uniformly to the project. Additional project requirements or coordination from TxDOT for the project is considered additional services.
- Meet, negotiate and coordinate to obtain approval of the agency issuing the agreement and/or permits.
- Completing all forms/applications necessary.
- Submitting forms/applications for OWNER and TxDOT review
- Submitting revised forms for agency review
- Responding to agency comments and requests
- Assist with Inter-Local Agreement. No Advance Funding Agreement (AFA) is anticipated. TxDOT coordination will be limited to a Local On-System Agreement (LOSA).
- LOSA process. The CONSULTANT will provide two (2) submittals to TxDOT Fort Worth for review and comment (60% PS&E and 95% PS&E). CONSULTANT will meet with and provide resolution to TxDOT comments in accordance with TxDOT STAO LOSA Guidelines. LOSA requirements for Environmental Documentation, Utility Coordination / Verification, and ROW Acquisition are incorporated in other section of this scope.

### 9.2 Texas Department of Licensing and Regulation (TDLR)

- Identify and analyze the requirements of the Texas Architectural Barriers Act, Chapter 68 Texas Administrative Code, and become familiar with the governmental authorities having jurisdiction to approve the design of the Project.
- CONSULTANT is responsible for providing plans that are in compliance with TDLR requirements.
- Submit construction documents to the TDLR
- Completing all TDLR forms/applications necessary
- Obtain the Notice of Substantial Compliance from the TDLR
- Request an inspection from TDLR or a TDLR locally approved Registered Accessibility Specialist no later than 30 calendar days after construction substantial completion. Advise the OWNER in writing of the results of the inspection.

- Responding to agency comments and requests
- All costs associated with TDLR plan review and inspections are to be paid by the CONSULTANT during the course of the project.

### 9.3 Storm Water Pollution Prevention Plan

- For projects that disturb an area greater than one (1) acre, the Contractor will be responsible for preparing and submitting the Storm Water Pollution Prevention Plan (SWPPP) with appropriate regulatory agencies. The CONSULTANT will prepare the iSWM Construction Plan according to the current *City of Fort Worth iSWM Criteria Manual for Site Development and Construction* which will be incorporated into the SWPPP by the Contractor.
- It is assumed that any permitting fees will be waived.

### 9.4 Environmental Services

- Waters of the United States Delineation
  - Delineate the jurisdictional limits of the streams based on 33 CFR 328.3[e] and delineate the jurisdictional limits of any wetlands based on the 1987 USACE Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0), and any current Regulatory Guidance Letters. The boundaries of all these water features identified in the field will be recorded with a Global Positioning System (GPS) unit that is capable of sub-meter accuracy.
  - A delineation report will be generated that includes methods, results, and conclusions, along with the necessary data forms, photographs, maps, and a delineation map.
- Section 404/Nationwide Permit Assessment
  - Evaluate the proposed site plan to determine compliance with Section 404, specifically the NWP program.
  - Evaluate the proposed project and what impacts the project has in waters of the United States to determine the USACE's scope and type of permit necessary for the impacts.
  - Document the NWP terms and conditions, General Conditions, and Fort Worth District Regional Conditions for the applicable permit.
  - Document how the proposed project complies with each of these conditions.
  - Provide a brief letter report that summarizes the delineation, impact assessment, permit conditions, and compliance.
- Protected Species Habitat Assessment
  - Gather the necessary data and complete the documentation required by the TPWD for Rare, Threatened, and Endangered Species. The initial data gathering will include the county list from the TPWD Wildlife Diversity Program and the USFWS Information, Planning, and Consultation System (IPaC).

- A desktop habitat assessment will be performed to determine the potential for certain required habitats to be present within the project.
- A letter report will be prepared that describes the habitats present on the site, the protected species that are listed in the county and their preferred habitats, and an evaluation of whether this preferred habitat is present on the site. The report will also contain recommendations for any construction monitoring or mitigation measures to avoid impacts to migratory birds during primary nesting seasons that may overlap proposed construction schedules. If preferred habitats for protected species are located through the desktop study, CONSULTANT will provide recommendations to avoid impacts to high probability habitats to assist the OWNER in maintaining budget and schedule on the development projects. If preferred habitats could not be avoided, TPWD may require a species-specific survey to be performed.
- Cultural Resources Pedestrian Survey
  - Obtain a Texas Antiquities Permit;
  - Complete a full pedestrian survey to document sites or features and historic buildings, bridges, or other structures older than 50 years of age;
  - Document any cultural resources encountered to make preliminary determinations of eligibility for inclusion in the NRHP or designated as a State Archaeological Landmark (SAL);
  - Analyze any artifacts recorded and/or collected (if applicable);
  - Assess any previously recorded archaeological sites within the project area for their present condition (if applicable); and
  - Complete and submitting State of Texas Archaeological Site Data Forms or Update Forms for any new or previously recorded sites to TARL and obtain site trinomial identification numbers documented within the APE for up to two sites (if applicable)
  - Draft a technical report that documents the cultural resource background review, survey methods, survey results, any necessary NRHP eligibility assessment, and recommendations.
- Agency Coordination and Public Involvement
  - Provide staff to assist the OWNER with various agency coordination and public involvement activities. This coordination could include USACE and TXDOT. Public Involvement activities could include the development and printing of meeting exhibits and presentations materials, comment/response matrices, staffing up to two (2) community meetings, and other related services.
- Negotiating and coordinating to obtain approval of the agency issuing the agreement and/or permits.
- Completing all forms/applications necessary.
- Submitting forms/applications for OWNER review
- Submitting revised forms for agency review

- Responding to agency comments and requests

## 9.5 Drainage/Floodplain Services

Based on existing conditions topography and the current roadway conditions, up to ten (10) drainage crossings have been identified within the project limits. Some of these crossings may be eliminated with the installation of linear storm drain, but ten crossings are assumed for the purpose of this contract. They are conceptually shown below:



Two of the ten drainage crossings are located within FEMA Zone A floodplain and the remainder are unmapped. A floodplain analysis will be performed for all crossings in accordance with City of Fort Worth Standards and the minimum requirements of the National Flood Insurance Program (NFIP) as administered by the Federal Emergency Management Agency (FEMA). A LOMR has been scoped below for the two crossings within FEMA floodplain.

It is intended that a drainage/flood study include all drainage information and planning for the project limits and will include tasks associated with development of the linear storm drain plans as well as the drainage crossings. Below is a summary of the tasks associated with the drainage/flood study.

### **A. DATA COLLECTION**

1. Topographic Survey:
  - a. Channel cross-section survey of the ten proposed crossings.
  - b. As-built survey of all current culvert crossings.
2. Perform up to two (2) field visits to evaluate the site conditions and understand drainage patterns, as well as potential construction constraints.
3. Obtain available models from FEMA and the City of Fort Worth.
4. Obtain record drawings or construction plans for existing infrastructure and existing and proposed developments in the area.

### **B. DRAINAGE/FLOOD STUDY**

CONSULTANT shall perform a drainage/flood study to evaluate peak discharges from the project site, determine storm drain infrastructure sizes and locations and ensure no adverse downstream impacts.

## **Tasks**

### 1. Hydrology

- a. Existing Discharges – Determine the contributing drainage areas for each existing crossing and compute the SCS unit hydrograph hydrologic parameters associated with the drainage areas (area, weighted curve number, impervious percentage, time of concentration and rainfall intensity). Compute the anticipated pre-project storm water runoff each roadway crossing.
- b. Proposed Discharges – Update any drainage areas and parameters based on the proposed roadway configuration.
- c. Fully Developed Discharge – Determine watershed hydrologic parameters for the 100-year fully developed conditions.

### 2. Hydraulic Analysis

- a. Develop/Update Cross-Sections - Data from the topographic survey of the Project and LIDAR will be used to generate cross section data. If there are any available studies of the area, this information will be incorporated as well.
  - b. Existing flow characteristics - Compute the existing 100-year flood elevations, velocities and typical flow characteristics for each crossing. The upstream and downstream limits will be established on a crossing specific basis.
  - c. Proposed flow characteristics - Compute the proposed 100-year flood elevations, velocities and typical flow characteristics for each crossing. The limits of the analysis will extend to where there are no impacts or the impacts meet City of Fort Worth criteria.
  - d. System sizing – Using the proposed conditions discharges, establish approximate inlet locations and sizes, approximate storm drain sizes and drainage crossings (assumed culvert) sizes. Crossings and systems will be sized to meet the City’s criteria.
3. Exhibits – Develop exhibits for use in discussions related to the project and inclusion in the report.
4. Report – Compile the above information into a report.

### **Deliverables and Submittals:**

It is intended that the Drainage/Flood Study Report be submitted with each plan submission.

1. Conceptual Plan Submission – The Drainage/Flood Study Report will include all available information with the intent of providing adequate sizes of drainage facilities to support the design. The intent is to allow the OWNER and City of Fort Worth the ability to understand the configurations and impacts associated with drainage infrastructure so that coordination with adjacent utilities and land owners may begin.

2. Preliminary Plan Submission – All Drainage/Flood Study comments provided with the Conceptual Plan submission will be addressed and the Study will be modified and refined based on any changes in the plans from Conceptual Submission to Preliminary Submission.
3. Final Plan Submission – All Drainage/Flood Study Comments provided with the Preliminary Plan Submission will be addressed and the Study will be modified and refined based on any changes in the plans from Preliminary Submission to Final Submission. Comments received on this submission will be addressed promptly until the Study is approved.
4. Floodplain Development Permit – Upon acceptance of the final drainage/flood study, appropriate applications and checklists will be completed for issuance of a City of Fort Worth Floodplain Development Permit.

**C. CONDITIONAL LETTER OF MAP REVISION (CLOMR)**

There is currently, no FEMA Zone AE floodplain within the project limits. Dosier Creek and the Tributary to Dosier Creek are Zone A floodplain and a CLOMR is not required by FEMA for a revision to Zone A floodplain. If OWNER or the City of Fort Worth would like for a CLOMR to be submitted for any portion of the project, a scope and fee will need to be established through a contract amendment process. No work associated with a CLOMR is included in this scope.

**D. LETTER OF MAP REVISION (LOMR)**

CONSULTANT will assist OWNER in securing a LOMR from the FEMA that depicts the revised floodplain of Dosier Creek and the Tributary to Dosier Creek within the project limits. If OWNER or the City of Fort Worth would like to establish FEMA floodplain designation for any of the other drainage crossings associated with this project, a scope and fee will need to be established through a contract amendment process.

1. The LOMR will be based on as-built survey conditions performed under Task 8 of this Contract.
2. Update the hydraulic model of Dosier Creek and the Tributary to Dosier Creek developed with the Flood Study to reflect the post-construction topography per the as-built survey data referenced above and assemble the required technical data to support the proposed LOMR (i.e., flood study report, hydrologic and hydraulic computer models and associated exhibits).
3. Prepare a draft public notice describing the proposed revisions to the effective floodplain. The draft public notice will be included in the LOMR submittal to FEMA and upon FEMA's approval of the notice, it will be published in a local newspaper. The cost of publishing the public notice is not included in this Scope of Services and shall be paid by OWNER. Any property owner notifications will be coordinated with the OWNER as needed.
4. Submit a draft copy of the LOMR request package to the City of Fort Worth floodplain administrator for review prior to submitting to FEMA and revise the information in the

LOMR submittal per the floodplain administrator's review comments, if any.

5. FEMA requires that a review and processing fee be submitted for a map revision and requests related to modifications of the floodplain limits. The current FEMA review fee associated with LOMRs of this type (Physical Map Revision Based on a Bridge, Culvert, Channel, Hydrology, or Combination Thereof) is \$8,000. **The FEMA review fee is included in the fee for this project. If the fee changes significantly or FEMA requires more than one LOMR Submittal due to the two crossings, the OWNER will be notified for payment of the difference.**
6. Submit the LOMR request package to FEMA for review and revise the information in the LOMR submittal per review comments for FEMA, if any.

***Unless otherwise indicated, application fees are not included in the BASIC SERVICES fees and must be paid by the OWNER prior to submittal.***

### **ASSUMPTIONS**

- All studies will meet City of Fort Worth iSWM Criteria.
- The project will go through the City's development review process or a similar process established for Capital Improvement Projects.

## TASK 10. LANDSCAPE ARCHITECTURE

1. **MEDIAN LANDSCAPE AND IRRIGATION PLANS:** CONSULTANT will provide Landscape Architecture Design services that consist of minimum requirements to meet the applicable landscape ordinance for the City of Fort Worth for up to 4,900 LF of roadway that contains medians. It is assumed that there will be no medians west of Fleming Ranch Road.

*Included in this item:*

- Develop an appropriate plant palette for the medians which addresses vehicular safety, sight distances, and maintenance needs. Plant palettes shall include turf, ground cover, ornamental grasses, accent plants, perennials, annuals, shrubs, ornamental trees, shade trees and screening plants as desired by OWNER.
- Landscape Plan Submittal: CONSULTANT will submit a Landscape Plan for OWNER and City of Fort Worth review and approval and then revise plans based upon comments.
- Up to three (3) virtual design team meetings to coordinate ground plane design elements and verify owner expectations for the level of finish.
- Construction Documents: Plans to include planting and irrigation with applicable details to a level sufficient to demonstrate design intent and allow the construction thereof, including materials and quantity schedules. Technical specifications to be included.
- Coordination to provide dedicated irrigation meter.
- Coordinate with the City of Fort Worth on irrigation standards to determine and recommend irrigation equipment for trees, shrub beds, and turf.
- Coordinate with City of Fort Worth to determine locations for meters, controllers, and service connections for irrigation.
- Coordinate with the City of Fort Worth to determine locations for enhanced pavement (e.g. stamped concrete) for elements such as crosswalks, median noses, etc. if required.

*Not included in this item:*

- Signage, site furnishings, landscape lighting, fences, or water features.
- Irrigation systems utilizing reclaimed water that require pumps, filters, and associated controls.
- LEED pursuit.
- All these services can be provided upon request for an additional fee.
- Any work outside of the medians such as the parkways

2. **MEDIAN LANDSCAPE CONSTRUCTION ADMINISTRATION:** CONSULTANT will provide limited Construction Administration services by processing shop drawings and product submittals, responding to RFIs, and issuing supplemental instructions if required related to the work shown on the Landscape Architecture Plans. Submittals not required by the contract documents or not related to plans developed by the CONSULTANT will not be reviewed.

At the request of the OWNER, and in conjunction with the OAC meetings, CONSULTANT will visit the site at critical junctures during site construction up to three (3) times. Recommended times for site visits could include:

- Testing of the irrigation main line and landscape drainage structures.

- Upon completion of soil preparation and finish grade, after plant material has been laid out, but prior to actual planting.
- Substantial Completion Walk-Through.
- Final Completion Walk-Through.
- This shall not be construed as performing continuous construction inspection.

Please note the following:

- CONSULTANT shall not at any time supervise or have authority over any Contractor work or jobsite management procedures, nor shall CONSULTANT have authority over or be responsible for the means and methods, or procedures of construction selected or used by the Contractor.
- CONSULTANT neither guarantees the performance of the Contractor nor assumes responsibility for the Contractor's failure to furnish and perform the Work in accordance with the Contract Documents.
- CONSULTANT shall not provide or have any responsibility for surety bonding or insurance-related advice, recommendations, counseling, or research, or enforcement of construction insurance or surety bonding requirements.
- CONSULTANT shall not be responsible for the acts or omissions of the Contractor or for any decision or interpretation of the Contract Documents made by the Contractor.
- While at the Site, CONSULTANT'S employees and representatives shall comply with the specific applicable requirements of the Contractor's and OWNER'S safety programs of which CONSULTANT has been informed in writing.

**3. MEDIAN RECORD DRAWINGS:** Based on project construction records, maintained, and provided by the Contractor, CONSULTANT will prepare final Record Drawings of the referenced project in conformance with City requirements. These drawings will rely solely on the information provided by the Contractor. Field verification of actual construction is *not* included in this item. In the event the Contractor claims no changes were made to the plans during construction, Contractor will provide a letter on their letterhead positively stating that all construction was done per the construction documents.

**4. URBAN FORESTRY AND TREE REMOVAL PERMIT**

- CONSULTANT shall coordinate with the City of Fort Worth Forester in the Park and Recreation Department, submit and obtain approval of Urban Forestry and Tree Removal Permit when required.
- A digital spreadsheet provided the identification number of the tree, size in caliper inches, approximate canopy spread, species, and condition of the tree based on the tree survey.
- An analysis summary of required mitigation and potential methods of achieving it based on the preliminary site development plans.
- Tree protection plan, details and specifications.
- Field identification to verify tree species.

**DELIVERABLES**

- A. Median landscape at irrigation plans at 30%, 60%, 90%, and 100%
- B. OPCC - Opinion of Probable Construction Cost.
- C. Schedule of deliverables
- D. Technical Specifications
- E. Median Record Drawings
- F. Urban Forestry and Tree Removal Documents

## **TASK 11. CONSTRUCTION MANAGEMENT AND INSPECTION**

The estimated effort and associated fee for Construction Management and Inspection is based on an average of eight (8) hours per day, a six (6) day work week, and an eighteen (18) month construction schedule. The actual hours required for this inspection may adjust if the construction schedule is a shorter or longer duration.

### **1. PRE-CONSTRUCTION PHASE**

- Video the project site to document the pre-construction conditions.
- Prepare project folders and daily logbooks.
- Attend the pre-construction meeting with the contractor.

### **2. CONSTRUCTION PHASE**

- Inspect contractor's work for adherence to the project's construction plans and specifications.
- Provide daily inspections of the project to ensure that the Contractor's activities adhere to the construction plans and specifications on days that Contractor is working or at the request of the OWNER.
- Report any issues with the Contractor or citizens to OWNER staff.
- Maintain red-line drawings of project to document field changes during construction.
- Maintain daily log record of project using Inspection Daily Work Report Checklist.
- Review pay estimates. The quantities shall be field verified with the Contractor.
- CONSULTANT Senior Construction Manager will be primary point of contact with OWNER PM. CONSULTANT Senior Construction Inspector will handle daily communication with Contractor. CONSULTANT Inspector will escalate issues to CONSULTANT Senior Construction Manager when necessary.
- CONSULTANT Senior Construction Manager will make site visits, generally once every two weeks, to observe construction activity and progress. CONSULTANT Senior Construction Inspector will be on-site daily.
- CONSULTANT Senior Construction Manager will identify, make recommendations to the OWNER and work to resolve all disputes, material substitutions, defects, and deficiencies in the work of the contractor, subcontractor, vendors or others.

### **3. POST-CONSTRUCTION PHASE**

- Perform preliminary walk through with Contractor to create punch-list of corrections.
- Ensure that all work required of the Contractor has been completed.
- Schedule, attend and participate in the final inspection with OWNER staff and the Contractor.
- Inspect any punch-list items after the Contractor has completed them.
- Collect close-out documentation from the Contractor. (i.e. consent of surety, affidavit of bills paid)
- Prepare close-out documents required by the OWNER.

### **4. INSPECTION DAILY WORK REPORT CHECKLIST**

Daily Work Report (DWR) entries include, but are not limited to the following:

- date

- temperature
  - weather conditions
  - contractor/subcontractor work hours
  - controlling item of work based on schedule.
- 
- safety violations, if observed
  - visitors
  - SW3P report/issues
  - accident information
  - payroll interviews
  - utility issues
  - directions given/received
  - unauthorized subcontractors
  - work performed:
    - who performed the work
    - what was performed (inspected and not inspected)
    - where work was performed (station numbers and offsets)
  - approximate quantities of work
  - arrival and departure of equipment
  - quantity and type of equipment and activity at the project site
  - details and reasons regarding time or work suspension
  - record of scheduled work cancelled, including the reason
  - unusual construction or work conditions
  - changes to the plans and any decision-making discussions with the contractor
  - detailed information that may have a connection with a probable dispute or claim against the OWNER
  - all traffic control changes, noting duration and phase to include description of traffic control (e.g., one lane closure, TCP #) and all applicable details such as description of location/lane, direction, and approximate period of the day, location on roadway such as distance or land mark limits
  - project completion and final inspection activities
  - other important features of the project, such as discussions concerning Disadvantaged Business Enterprise (DBE), Equal Employment Opportunity (EEO) requirements, Commercially Useful Function (CUF) reviews, etc.

When working day charges are suspended due to non-acquired right of way (ROW), railroad issues, or utility relocation, list the weather conditions in the DWR with a note indicating whether a day would normally be charged in accordance with the contract.

Complete at least one DWR and a project diary entry for each day from the date the contractor begins work or the date working day charges begin, whichever occurs first, to the completion of the work.

Additional Services **not** included in this contract:

- Services related to development of the OWNER'S project financing and/or budget.
- Services related to disputes over pre-qualification, bid protests, bid rejection and re-bidding of the contract for construction.
- Performance of materials testing or specialty testing services.
- Services necessary due to the default of the Contractor.
- Services related to damages caused by fire, flood, earthquake or other acts of God.
- Services related to warranty claims, enforcement and inspection after final completion.
- Services to support, prepare, document, bring, defend, or assist in litigation undertaken or defended by the OWNER.
- Performance of miscellaneous and supplemental services related to the project as requested by the OWNER.
- Water and Sanitary Sewer Design
- As-built surveys
- Public hearings or OWNER Commission meetings
- CLOMR

**EXHIBIT 'B' – Compensation and Method of Payment**

**BONDS RANCH ROAD WIDENING  
BOAT CLUB ROAD TO BUSINESS 287**

**COMPENSATION:**

For all professional services included in EXHIBIT 'A', Scope of Services, the CONSULTANT shall be compensated a not to exceed fee of \$4,121,706 as summarized below. The total lump sum fee shall be considered full compensation for the services described in EXHIBIT A, including all labor materials, supplies, and equipment necessary to deliver the services.

**Basic & Special Services**

Task 1.	Design Management	\$104,220
Task 2.	Conceptual Design (30%)	\$529,090
Task 3.	Preliminary Design (60%)	\$747,145
Task 4.	Final Design (90% and 100%)	\$521,025
Task 5.	Bid Phase Services	\$ 13,200
Task 6.	Construction Phase Services	\$152,280
Task 7.	ROW/Easement Services	\$340,600
Task 8.	Survey and Subsurface Utility Engineering Services	\$602,475
Task 9.	Permitting	\$180,780
Task 10.	Landscape Architecture	\$111,120
Task 11.	Construction Management and Inspection	\$676,800
	10% Sub Markup	\$ 23,609
	3% Direct Expenses	\$119,362

**Total** **\$4,121,706**

- A. A fee equal to 3% of labor billings shall be included on each monthly invoice for prints, plots, photocopies, plan or documents on CD, DVD or memory device, and mileage. No individual or separate accounting of these items will be performed by CONSULTANT.
- B. For work done by others (subconsultants to CONSULTANT), compensation will be at the actual cost to the CONSULTANT of such subconsultant services plus 10%. Any subconsultants to CONSULTANT must be approved by OWNER prior to any agreements with subconsultants or work performed.
- C. Partial payments will be billed monthly for work performed to date.







