

## SUPPLEMENTAL #2 TO EXHIBIT A

FM 2551 (from FM 2514 to FM 2170)  
Collin County

### SERVICES TO BE PROVIDED BY THE ENGINEER

The Engineer shall provide the necessary engineering and technical services for the preparation of plans, specifications and estimates (PS&E) for the reconstruction of FM 2551 from FM 2514 (Parker Road) to FM 2170 (Main Street) within Collin County. The project length along FM 2551 is approximately 3.4 miles.

The construction will include the widening of FM 2551 from an existing two-lane asphalt roadway to an ultimate six-lane concrete section with curb and gutter, enclosed storm sewers, raised median, and horizontal re-alignment. The re-alignment will eliminate the approximately 2200 ft. offset of FM 2551 at FM 2514 by connecting the two section of FM 2551 with an "S-curve", beginning approximately 760 ft. north of FM 2514 and ending approximately 320 ft. north of Curtis Drive. Additionally, existing storm sewer will be upgraded and pavement cut & restored along FM 2514 at FM 2551 for approximately 2600 ft. to Maxwell Creek to the west.

The project will be prepared in conformance with TxDOT Dallas District requirements. The construction plan set shall contain the required drawings, details and applicable standards required to describe the grading, paving, drainage, culverts, signing, pavement marking, delineation, sequence of construction, and traffic control for this construction project. The project will also involve the preparation of ROW maps and deed descriptions.

The engineering work for this project will be divided into a number of tasks as outlined below. It is the intent of Exhibit A (TASK OUTLINE), in coordination with Exhibit B (Services to be provided by the County), to help clarify the scope of work.

### TASK OUTLINE

#### Function Code 130 – Right-of-Way Data

##### 130.1 ROW Mapping

130.1.2 Research property owners affecting the project and obtaining deeds, addresses easements and other title information.

130.1.3 Prepare a Right-of-Way Map with appropriate right-of-way instruments of conveyance once the Engineer and the State have established the need for easements and additional right-of-way. Locate property corners of affected parcels of land. All the procedures shall conform with TxDOT's Right-of-Way, Book I and II and in accordance with the Texas Board of Professional Land Surveying Practices Act and special procedures as may be required by the TxDOT Dallas District. Submit (3) three copies

each of the preliminary right-of-way strip maps. All final deliverables shall be signed and sealed by a Texas Registered Professional Land Surveyor.

#### Function Code 160 – Roadway Design Controls

##### 160.1 Verify Schematic Geometry

160.1.1 Revise established horizontal and vertical geometry set during schematic development utilizing field survey at the project tie-down points.

##### 160.3 Typical Sections

160.3.1 Prepare Proposed Typical Section Sheets (FM 2551)

##### 160.4 Roadway Plan and Profile

160.4.1 Revise Plan and Profile Sheets for FM 2551. Prepare Plan and Profile Sheets for cut & restore of FM 2514.

##### 160.7 Earthwork Cross Sections

160.7.1 Prepare final grading cross sections at 50' interval. Grading cross sections will include centerline/profile grade line elevation, pavement elevation at face of curb, subgrade break line elevations and offsets to proposed toe of slope and ROW limits.

160.7.2 Prepare phase construction grading sections to identify the grading to be done in each phase to ensure the constructability and provide adequate drainage.

##### 160.8 3D Modeling

160.8.1 Use Bentley's OpenRoads 3D Design technology in the design and preparation of the roadway plan sheets.

160.8.2 Verify final grading and identify ROW limits to include final grading throughout the project limits.

#### Function Code 161 – Drainage

##### 161.2 Storm Drain Design

161.2.1 Perform field inventory of existing drainage structures to verify structure size and condition and channel characteristics along FM 2514.

161.2.3 Prepare Interior Drainage Area Maps. Task includes determining drainage areas and calculating runoff to determining size and location of inlets.

161.2.4 Prepare Hydraulic Data Sheets utilizing Geopak Drainage.

161.2.5 Revise Storm Sewer Plan & Profile Sheets.

Prepare Sewer Plan & Profile Sheets. Perform hydraulic computations for the sizing and location of storm sewer lines and manholes. Utilize approved hydraulic software to verify adequacy of the proposed storm sewer lines.

161.2.6 Revise Lateral Profile Sheets.

#### Function Core 163 – Miscellaneous Roadway

##### 163.3 Traffic Control Plans

163.3.2 Revise TCP Narrative for Sequence of Construction Sheets. Include work for FM 2514.

163.3.4 Revise TCP Typical Sections for each Phase. Prepare TCP Typical Sections for FM 2514.

163.3.5 Revise TCP Layouts. Assume three phases with multiple stages will be required. Prepare TCP Layouts for FM 2514.

163.3.7 Revise Shoring Wall Layouts.

##### 163.10 Miscellaneous Project Management

###### 163.10.3 Project Development Meeting

163.10.3.1 Attend/conduct (9) nine non-milestone utility meetings with Area Office and/or consultant project team. Prepare and submit meeting minutes.