EXHIBIT
"A"

STATE OF TEXAS

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COUNTY OF WILLIAMSON

#### SUPPLEMENTAL CONTRACT NO. 2 TO CONTRACT FOR ENGINEERING SERVICES

FIRM: <u>CP&Y</u>, INC. ("Engineer")

ADDRESS: 13809 Research Boulevard, Suite 300, Austin, TX 78750

PROJECT: Kenney Fort Boulevard (Segments 2 & 3)

This Supplemental Contract No. 2 to Contract for Engineering Services is made by and between the City of Round Rock, Texas, hereinafter called the "City" and CP&Y, Inc., hereinafter called the "Engineer".

WHEREAS, the City and Engineer executed a Contract for Engineering Services, hereinafter called the "Contract", on the 11th day of February, 2016 for the Kenney Fort Boulevard (Segments 2 & 3) Project in the amount of \$933,519.78; and

WHEREAS, the City and Engineer executed Supplemental Contract No. 1 on April 12, 2018 to amend the scope of services and to increase the compensation by \$135,900.00 to a total of \$1,069,419.78; and

WHEREAS, it has become necessary to amend the Contract to modify the provisions for the scope of services and to increase the compensation by \$840,597.18 to a total of \$1,910,016.96;

**NOW THEREFORE**, premises considered, the City and the Engineer agree that said Contract is amended as follows:

I.

Article 1, City Services and Exhibit A, City Services shall be amended as set forth in the attached Addendum to Exhibit A.

II.

<u>Article 2, Engineering Services</u> and <u>Exhibit B, Engineering Services</u> shall be amended as set forth in the attached <u>Addendum to Exhibit B</u>. <u>Exhibit C, Work Schedule</u> shall be amended as set forth in the attached Addendum to Exhibit C.

<u>Article 4, Compensation</u> and <u>Exhibit D, Fee Schedule</u> shall be amended by increasing by \$840,597.18 the lump sum amount payable under the Contract for a total of \$1,910,016.96, as shown by the attached <u>Addendum to Exhibit D</u>.

**IN WITNESS WHEREOF,** the City and the Engineer have executed this Supplemental Contract in duplicate.

[signature pages follow]

Supplemental Contract Rev.06/16 0199.1603; 00411364 84275

CP&Y, IN	iC.		
By:			
Date			

CITY OF ROUND ROCK	APPROVED AS TO FORM:
By:	
Craig Morgan, Mayor	Stephan L. Sheets, City Attorney
Date	

### ADDENDUM TO EXHIBIT A City Services

The City will furnish to the Engineer the following information and/or perform the following tasks:

- 1. Provide any existing data the Owner has on file concerning the project, if available.
- 2. Assist with the coordination of any required public involvement, attend one-on-one meetings with officials, neighborhood groups, and local businesses and attend an open house, if necessary. For public meetings or hearings, schedule and reserve the meeting location and place the required advertisements.
- 3. Assist the Engineer, as necessary, in obtaining any required data and information from the State, County, Upper Brushy Creek Water Control & Improvement District, neighboring Cities and/or other franchise utility companies.
- 4. Give prompt written notice to Engineer whenever the Owner observes or otherwise becomes aware of any development that affects the scope or timing of Engineer's services.
- 5. Meet on an as needed basis to answer questions, provide guidance and offer comment.
- 6. Provide construction inspection and construction testing services including coordination and scope of services.
- 7. In conjunction with the Texas Department of Transportation (TxDOT), provide the following:
  - a) Federal Highway Administration (FHWA) coordination
  - b) Environmental document review
  - c) Relevant prior and/or adjacent plan sets, studies, and planning documents
  - d) Ground Penetrating Radar (GPR) testing of existing frontage road pavement
  - e) Review and approval of traffic volume projections
  - f) Equivalent Single Axle Load (ESAL) calculations
- 8. Provide existing signal timing information for study intersections.

#### ADDENDUM TO EXHIBIT B

#### **Engineering Services**

The Kenney Fort Boulevard (Segments 2 &3) Project will extend Kenney Fort Boulevard from the current terminus at Forest Creek towards the south to SH 45, and widen Gattis School Road between Round Rock Ranch Blvd. and Rusk Road. The full length of the Kenney Fort Blvd. extension is approximately 1.5 miles along Kenney Fort Blvd, and 0.3 miles along Gattis School Road. Construction within the SH 45 right-of-way will be necessary to tie the new (Kenney Fort Blvd.) roadway into the frontage road and replace large guide signs along SH 45.

Design services related to the design and plan production for this project will be performed in accordance with the latest available City of Round Rock and TxDOT manuals, guidelines and standards, as applicable. The project shall consist of a 6-lane divided arterial with culvert crossings, raised median, curb and gutter, sidewalks and shared-use-paths, drainage facilities, street lighting, traffic signal design and modifications and public water / wastewater utility adjustments. The Engineer shall provide the necessary engineering and technical services for the completion of identification of utility conflicts, coordination with utility companies, preparation of PS&E, bid phase services and construction phase services. The final major deliverable for this phase will be detailed PS&E suitable for bidding and construction.

The development of the project will be consistent with applicable City of Round Rock and TxDOT design procedures and practices. This project will be developed utilizing Microstation V8i and Bentley Geopak V8i.

In May 2018, the Capital Area Metropolitan Planning Organization awarded federal funding to the City for construction of the Project; thus, federalizing the Project and triggering the requirements of the National Environmental Policy Act (NEPA). To satisfy the requirements of NEPA, coordination with TxDOT is required and preparation of a NEPA document is necessary. Resource-specific technical reports and additional public involvement is also required to satisfy state/federal requirements. The additional (NEPA-related) work to be performed by the Engineer shall consist of preparation of an environmental document (an environmental assessment is anticipated), updates to the previously-prepared draft technical reports, preparation of additional reports required by TxDOT, and additional public involvement (stakeholder meetings and a public hearing).

Exclusions: For purposes of this scope, it is assumed that any required coordination with Resource Agencies will be conducted by TxDOT; thus, agency coordination is not included in this scope of services. In addition, preparation of any permits that may be required, including a Section 404 permit, is not included in this scope of services. If environmental permitting is determined to be required, a supplemental work authorization will be required

Agency abbreviations are as follows:

City of Round Rock (City), Texas Department of Transportation (TxDOT), Texas Department of Transportation Environmental Division (TxDOT-ENV), Federal Highway Administration (FWHA), Capital Area Metropolitan Planning Organization (CAMPO), Environmental Protection Agency (EPA), Texas Historical Commission (THC), National Register of Historical Places (NRHP), Federal Emergency Management Agency (FEMA), Texas Commission on Environmental Quality (TCEQ), Upper Brushy Creek Water Control and Improvement District (UBWCID).

The tasks and products are more fully described in the following TASK OUTLINE.

#### TASK OUTLINE

#### I. SURVEYING SERVICES

- A. GEOTECHNICAL INVESTIGATIONS (provided by Corsair Consultants, Inc.)
  - 1. Soil Borings Geotechnical and Falling Weight Deflectometer (FWD) Testing
    - (a) Perform two (2) borings spaced at approximately 1,000 feet apart along the Gattis School alignment, alternating the drilling location between the edges of right-of-way.
    - (b) If expansive soils are encountered (PVR > 2") and a lime stabilized subgrade option is desired, additional borings may be needed to comply with TxDOT pavement design requirements. Drill these borings to a minimum depth of ten (10) feet to map geology and collect PI information if soils are expansive for PVR calculation.
  - 2. Laboratory testing will be performed to determine the soil's plasticity and strength characteristics, including:
    - (a) NRCS Soil Classification

- (b) Atterberg Limits Tests
- (c) Sieve Analysis
- (d) Soluble Sulfate Content
- (e) Moisture Content
- (f) Unconfined Compressive Strength
- (g) Resilient Modulus Testing of the subgrade
- (h) Eades and Grim (ASTM D6276) pH/lime series
- 3. The Engineer will coordinate with locator service to determine existing utility locations.

#### B. DELIVERABLES (provided by The Wallace Group)

- 1. The Surveyor shall provide:
  - (a) 2D MicroStation V8 planimetric file.
  - (b) 3D MicroStation V8 DTM file including break-lines and 1 foot contours.
  - (c) Geopak V8i DTM (tin) file.
  - (d) ASCII point file.
  - (e) Two CD-ROM containing the specified files.
  - (f) PDF file of each Surveyor's project field book.
  - (g) Spreadsheet of landowners for right-of-entry letters

#### C. ASSUMPTIONS (provided by The Wallace Group)

- 1. The Surveyor shall notify the client prior to performing the work if:
  - (a) Sufficient right-of-way monumentation cannot be found to re-establish the existing alignments and associated right-of-way lines along the project corridor.
  - (b) The work is delayed due to weather or other circumstances beyond the Surveyor's direct control.
  - (c) Existing Project Control cannot be recovered or verified.

#### II. Social, Economic and Environmental Studies and Public Involvement

A. Environmental Documentation – It is anticipated that the proposed project would require an Environmental Assessment (EA) with associated resource-specific Technical Reports to obtain environmental clearance. The Engineer shall prepare a Scope Development Tool for the project. The completed Scope Development Tool shall be submitted to the State for review and approval prior to initiating additional environmental investigations. The Engineer shall also prepare a Classification Letter, which will require approval by TxDOT-ENV to document that an EA is the appropriate level of environmental documentation.

#### Deliverables:

- (a) Draft Scope Development Tool The Engineer shall submit one (1) electronic copy. The Engineer will respond to two (2) rounds of review comments.
- (b) Final Scope Development Tool The Engineer shall submit one (1) electronic copy.
- (c) Draft Classification Letter The Engineer shall submit one (1) electronic copy. The Engineer will respond to two (2) rounds of review comments.
- (d) Final Classification Letter The Engineer shall submit one (1) electronic copy.
- B. Technical Reports Resource-specific technical reports shall be produced before the EA is prepared in order to identify issues early in the process. In some instances, TxDOT utilizes standardized forms in lieu of technical reports. In those instances, TxDOT forms will be completed and all required supporting documentation will be prepared/provided. Draft biological resources, jurisdictional waters, and hazardous materials reports were prepared in conjunction with WA#1. Federalization of the Project now requires those reports to be updated (per TxDOT standards) and additional reports to be prepared. All reports require coordination with and review by TxDOT. Once accepted by the City and TxDOT, the technical reports will be referenced in the Project EA.
  - 1. Technical reports and forms shall be prepared in accordance with the most recent TxDOT guidelines and SOUs (those in effect at the time of WA execution). Technical reports and forms must include sufficient information to determine the significance of impacts. It is assumed, pending the results of the required scope development tool, the following reports and forms will be required for the Project:

- (a) Project Description Report (includes Purpose & Need Statement and Alternatives Analysis)
- (b) Community Impacts Assessment Form
- (c) Water Resources Technical Report
- (d) Biological Evaluation Form and Tier I Site Assessment Form
- (e) Historic Project Coordination Request
- (f) Historic Resources Survey Report
- (g) Archeological Background Study
- (h) Archeological Survey Report
- (i) Air Quality Technical Report
- (i) Traffic Noise Technical Report (including noise modiling/analysis using TNM 2.5)
- (k) Hazardous Materials Initial Site Assessment Form
- (1) Indirect Impacts Technical Report
- (m) Cumulative Impacts Technical Report

#### Deliverables:

- (a) Draft Technical Report/Form The Engineer shall submit one (1) electronic copy for each resource category listed above. The Engineer will respond to four (4) rounds of review comments.
- (b) Final Technical Report/Form The Engineer shall submit one (1) electronic copy for each resource category listed above. The Engineer will respond to four (4) rounds of review comments.
- C. Environmental Assessment (EA) Content and Format The EA shall meet the requirements of 23 CFR §771.119 and TAC, Title 43, Part 1, Chapter 2. The EA content shall be in sufficient detail to meet regulatory requirements for legal sufficiency and include all items listed in TxDOT's Environmental Document Review Checklist and the Administrative Completeness Review Checklist. The EA will be developed in accordance with the most recent version of TxDOT's EA outline.

#### Deliverables:

- (a) Draft Environmental Assessment The Engineer shall submit one (1) electronic copy before the public hearing. The Engineer will respond to four (4) rounds of review comments.
- (b) Final Environmental Assessment The Engineer shall submit one (1) electronic copy after the public hearing. The Engineer will respond to four (4) rounds of review comments.
- D. Public Involvement The Engineer shall perform public involvement activities in accordance with TAC, Title 43, Part 1, Chapter 2 and 36 CFR 800.2.
  - (a) Stakeholder List The Engineer will update the Project stakeholder list (developed in conjunction with WA#1).
  - (b) Stakeholder Meetings The Engineer will plan, prepare for, attend, and produce summaries of up to ten (10) one-on-one or small group stakeholder meetings.
  - (c) Public Hearing The Engineer will plan, prepare for, advertise and attend a public hearing to present the recommended alternative and findings of the EA. Preparation for the public hearing includes the development and production of advertising copy/notices, hand-outs, information boards, a PowerPoint presentation and other materials. The Engineer will staff the public hearing, make required technical presentations, and provide two (2) court reporters to record the hearing and public comments. Following the public hearing and subsequent comment period, the Engineer will prepare and submit a public hearing comment and response report (including copies of all written comments received and response letters, if any), summary and analysis, required certification, verbatim public hearing transcript and other information necessary to evaluate and disseminate information from the public hearing.
  - (d) Noise Workshop The Engineer will plan, prepare for, and attend a noise workshop. Preparation for the workshop includes the development and production of letters of invitation (to be sent via US Postal Service certified mail with return receipts), hand-outs, information boards, a PowerPoint presentation and other materials. The Engineer will staff the workshop and make required technical presentations. Following the workshop, the Engineer will poll affected property owners to determine where noise walls are desired by a majority. The noise workshop and polling results will be documented in a Noise Workshop Summary Report.

#### Deliverables:

- (e) Draft Project Contact List The Engineer shall submit one (1) electronic copy. The Engineer will make up to three (3) updates.
- (f) Final Project Contact List The Engineer shall submit one (1) electronic copy.

- (g) Draft Notifications for Stakeholder Meetings/MAPOs The Engineer shall submit one (1) electronic copy.
- (h) Final Notifications for Stakeholder Meetings/MAPOs The Engineer shall submit one (1) electronic copy.
- (i) Draft Materials for Stakeholder Meetings/MAPOs The Engineer shall submit one (1) electronic copy.
- (j) Final Materials for Stakeholder Meetings/MAPOs The Engineer shall submit one (1) electronic copy.
- (k) Draft Meeting Notes for Stakeholder Meetings/MAPOs The Engineer shall submit one (1) electronic copy.
- (l) Final Meeting Notes for Stakeholder Meetings/MAPOs The Engineer shall submit one (1) electronic copy.
- (m) Draft Advertising/Notifications for Public Hearing The Engineer shall submit one (1) electronic copy.
- (n) Final Advertising/Notifications for Public Hearing The Engineer shall submit one (1) electronic copy.
- (o) Draft Materials for Public Hearing The Engineer shall submit one (1) electronic copy.
- (p) Final Materials for Public Hearing The Engineer shall submit one (1) electronic copy.
- (q) Draft Public Hearing Summary Report and Analysis The Engineer shall submit one (1) electronic copy.
- (r) Final Public Hearing Summary Report and Analysis The Engineer shall submit one (1) electronic copy.
- (s) Draft Materials for Noise Workshop The Engineer shall submit one (1) electronic copy.
- (t) Final Materials for Noise Workshop The Engineer shall submit one (1) electronic copy.
- (u) Draft Noise Workshop Summary Report The Engineer shall submit one (1) electronic copy.
- (v) Final Noise Workshop Summary Report The Engineer shall submit one (1) electronic copy.

#### III. PLANS, SPECIFICATIONS & ESTIMATE

The engineer will develop and submit Plans, Specifications & Estimates (PS&E) plans at levels consistent with and required for City 30%, 90%, and final 100% plans.

#### A. UTILITY ADJUSTMENTS (provided by Cobb Fendley)

1. Utility adjustment coordination includes utility coordination meetings with individual utility companies, communication and coordination with utilities, conflict assessment and analysis, and preparation of utility agreements, including reimbursable and non-reimbursable. All utility coordination activities will be in accordance with City of Round Rock & TxDOT Guidelines. There are seven (7) utilities anticipated along the project corridor, including CenturyLink (formerly Level 3 Communications), AT&T, Atmos Gas, City of Round Rock, Grande, Spectrum (formerly Time Warner Cable) and Oncor Electric.

#### (a) 60% Design Phase

- (i) Coordination/Project Meetings. Utility Coordinator shall attend project team meetings to assist in minimizing utility impacts and discuss alternatives. In addition, Utility Coordinator will conduct meetings with individual utilities as needed (up to 4 meetings). These meetings will include meeting preparation, travel time, and meeting minutes.
- (ii) Updates to Existing Utility Layouts. The Engineer shall update the existing utility layout in the latest version of Microstation V8 using the base topo files and 60% design files provided by CP&Y. This layout will be utilized to assist in conflict assessment, monitor necessity of relocations and evaluate alternatives.
- (iii) 60% Conflict Assessment. The Engineer will determine which utilities will conflict with roadway construction and City or TxDOT guidelines based on the 60% design plans and make the utility company aware of these conflicts. We will be reviewing for direct conflicts with proposed roadway improvements, constructability conflicts, and conflicts with current rules/guidelines. A detailed list will be prepared at this design milestone and will be communicated with the Utility Owners and design team.
- (iv) Evaluate Relocation Alternatives. The Engineer will evaluate alternatives in the adjustment of utilities balancing the needs of both the City and the Utility.
- (v) Prepare Proposed Utility Layout. The Engineer shall prepare a proposed utility layout (concept plan) using the latest version of Microstation V8. The proposed utility layout will overlay the base topo files and 60% design files provided by CP&Y. This layout will be utilized to assist in evaluating relocation alternatives and corridor assignments.
- (vi) Coordinate Reimbursable and Non-Reimbursable Adjustments. If a utility is located within an easement, the utility company may have a compensable interest. The utility company must furnish a copy of their easement document. The Engineer shall determine if a compensable interest exists and the owner's degree of eligibility and prepare a packaged agreement utilizing City of Round Rock reimbursement agreement forms, plans on 11x17 sheets, easement documentation, estimate and schedule of work.
- (b) 90% & 100% Design Phase

- (i) Coordination/Project Team Meetings. Utility Coordinator shall attend project team meetings to assist in minimizing utility impacts and discuss alternatives. In addition, Utility Coordinator will conduct meetings with individual utilities as needed (up to 3 meetings). These meetings will include meeting preparation, travel time, and meeting minutes.
- (ii) Updates to Existing and Proposed Utility Layouts. CobbFendley will update the existing and proposed utility layouts based on latest design files received by CP&Y for the 90% & 100% design phases.
- (iii) 90% & 100% Conflict Assessment. CobbFendley will update conflict assessment at the 90% & 100% design phase to identify which utilities will conflict with roadway construction and City or TxDOT guidelines and make the utility company aware of any changes in conflict locations from the 60% submittal. We will be reviewing for direct conflicts with proposed roadway improvements, constructability conflicts, and conflicts with current rules/guidelines. The detailed list will be updated at each of these design milestones and will be communicated with the Utility Owners and design team.
- (iv) Secure Reimbursable and Non-Reimbursable Adjustments. CobbFendley will coordinate with utility owners to secure all reimbursable and non-reimbursable adjustment plans and associated forms/permits. CobbFendley will review relocation plans to confirm conflicts have been resolved, no conflicts with other relocating utilities, and that project requirements/agency clearance requirements are met. CobbFendley will
- (v) Utility Schedule and Sequencing. Review the utility adjustment schedule in relation to construction sequencing and schedule for timely relocation of the utility. re-Construction:
- (vi) Prepare Utility Certifications for project bidding; identify anticipated utility clearance dates.

#### B. ROADWAY DESIGN CONTROLS (provided by CP&Y, Inc.)

#### 1. Miscellaneous Plans

- (a) A project title sheet will be prepared as required for the construction plans.
- (b) A detailed index of sheets will be prepared that shows each sheets location in the plan set, as well as its corresponding sheet number. This index will be updated throughout the submittal process to allow for easier reference during the review process.
- (c) Project layout sheets will be prepared at a scale of 1"=200' that clearly indicates the limits of the entire project.
- (d) Benchmark layout sheets will be completed at a scale of 1"=200' that clearly indicate the benchmark locations and associated control information. These sheets will later be sealed by a RPLS for submittal.

#### 2. Roadway Plans & Geometry

- (a) Existing typical sections will be completed depicting the existing conditions of the project roadway.
- (b) Proposed typical sections will be completed depicting the improvements to Little Elm Trail and cross streets. The proposed typical sections are intended to show the general cross-sectional configuration of the roadway in logical sections, and will be prepared to the appropriate level of detail and limits to convey that general information.
- (c) A horizontal alignment data sheet will be prepared depicting the horizontal geometric information for the project roadways to be included in the construction plan set.
- (d) Kenney Fort Blvd plan and profile sheets shall be completed depicting the proposed construction. The plan and profile sheets will be prepared at a scale of 1"=100' H and 1"=10' V.
- (e) Gattis School Road plan and profile sheets shall be completed depicting the proposed construction. The plan and profile sheets will be prepared at a scale of 1"=100' H and 1"=10' V.
- (f) Supplemental grading sheets will be prepared at a scale of 1"=50' for areas of the project that require additional grading information for construction or review purposes.
- (g) The Engineer shall provide plan sheets of removals at a scale of 1"=100'. Removal sheets shall clearly identify the disposition of roadway appurtenances. Description of removal items, including material, shall be included.

#### 3. Grading and Details

- (a) Design cross sections will be completed at 50-foot stations and other locations as necessary for the determination of cut and fill quantities. These sections will also be used to further refine the design vertical geometry. Cut and fill quantities determined from the design cross sections will be shown on the plan/profile sheets. Cross sections will not be developed as a deliverable for phased TCP.
- (b) The Engineer shall complete intersection layouts for five (5) intersections/locations. The intersection layouts will include the design of the pavement and drainage layouts, as well as other pertinent details not discernable elsewhere in the plans.
- (c) Driveway details will be prepared for each driveway along the project corridor. When possible these driveways will be defined in a tabular format. Non-typical driveways may require special details.

- (d) The Engineer will develop driveway profiles as required for the project. These profiles will be developed to show driveway tie-back slopes, as well as limits for the contractor's information.
- (e) Miscellaneous roadway detail sheets will be developed for the project. The sheets will depict details required that are not defined in standard detail sheets. When possible, TxDOT Statewide and TxDOT Austin District standards will be used for the project development.

#### C. DRAINAGE DESIGN (provided by K-Friese.)

1. Crossing Structure Hydrology and Hydraulic Analysis

Perform hydrologic and hydraulic analysis/design to determine sizes of major and minor cross drainage structures except for those along Dyer Creek.

Anticipated major structures are:

- (i) Crossing to Dyer Creek south of Forest Creek (Approx. STA 74+50)
- (ii) Crossing to Dyer Creek south of Forest Creek (Approx. STA 84+00)
- (iii) Crossing to Dyer Creek between Forest Creek and Gattis School (Approx. STA 93+00)
- (iv) 48" Outflow pipe for Rolling Ridge Neighborhood (Approx. STA 104+00)
- (v) SH 45 Culvert Extension (Approx. STA 146+50 to STA 139+50)

Anticipated minor structures are (minor structures are anticipated to be connected to the storm sewer system and conveyed to a major structure):

- (i) 36" Outflow pipe for Rolling Ridge Neighborhood (Approx. STA 97+00)
- (ii) 48" Outflow pipe for Rolling Ridge Neighborhood (Approx. STA 112+00)
- (iii) Crossing of shallow channel approximately 500-ft south of Gattis School Road (Approx. STA 122+00)
- (iv) Crossing near the end of Westview Drive (Approx. STA 140+00)
- (v) Outflow pipe from development at Northeast corner of SH 45 and Kenney Fort Blvd. (Approx. STA 146+00)

#### (b) Data Collection

The Engineer will utilize the data collected during the schematic phase and build upon it with field visits as necessary to observe conditions of existing structures, channels and field conditions. The Engineer will obtain and review existing hydraulic and hydrologic data associated with nearby developments and existing outfalls into the proposed roadway corridor.

#### (c) Hydrology

The Engineer will expand upon the hydrology developed during the schematic with the crossing structures above in order to assess the hydrologic impact of the proposed improvements. Hydrologic analysis for major and minor crossings (as listed above) will be performed in accordance with the City of Round Rock Drainage Criteria Manual. Existing and proposed flows for the two (2), ten (10), twenty-five (25) and one-hundred (100) year frequency storms will be computed. Existing and proposed external drainage area maps will be developed at a scale of 1" = 500'. An additional drainage area map will be provided at a larger scale to show the overall project and drainage basin divides.

#### (d) Hydraulics

The Engineer will analyze existing and proposed conditions hydraulics and modify from the schematic design as a result of the proposed improvements using HEC-RAS or FHWA HY-8 software Hydraulic analysis for bridge class culverts (any culvert with a clear opening of more than 20-feet, measured along the center of the roadway between inside of end walls), and FEMA 100-year floodplain crossings will be performed with HEC-RAS. Hydraulic analysis for cross structures that are not bridge class culverts or FEMA crossings, will be performed with HY-8. In the event that a minor crossing is incorporated into the storm sewer system, this analysis will be included in the storm sewer analysis and modeled as described in Storm Sewer Design. This includes assessing the hydraulic impacts as a result of any changes to the hydrology. Tailwater assumptions will be determined from the water surface elevations of Dyer Creek from most up to date UBCWID model for outfalls within a FEMA floodplain based on a peak timing assessment. The Engineer will summarize the relative impacts to computed water surface elevations between existing and proposed conditions on the culvert layout sheets and provide additional detailed information on hydraulic data sheets.

#### (e) Drainage Report

The Engineer will update the preliminary drainage report with the final hydrology and hydraulic data from the PS&E design.

#### (f) Culvert Layout Sheets

Culvert layout sheets will be developed at all the major crossing locations specified above and the Dyer Creek crossing of Gattis School Road (5 crossing total) not covered by storm sewer plan and profiles. These sheets will be developed at a scale of 1"=40' H and 1"=10' V. It is anticipated that there will be 6 sheets.

#### (g) Hydraulic Data Sheets

A hydraulic data sheet will be developed at all the major crossing locations specified above and the Dyer Creek crossing of Gattis School Road (5 crossing total) not covered by storm sewer plan and profiles. These sheets will include data related to the performance of the crossing such as water surface elevations, tailwater assumptions, and overtopping data. It is anticipated that there will be 5 sheets.

#### (h) Culvert Standards and Detail Sheets

Culvert standards will be selected based on headwall configuration and fill conditions. Details will developed as needed for non-standard headwalls, special grading at upstream and downstream transitions and energy dissipation. It is anticipated that there will be 4 detail sheets and standards provided as required.

#### 2. Dyer Creek Hydrology and Hydraulic Impact Analysis

This section includes the analysis of the project impacts to Dyer Creek including the crossing at:

#### (i) Dyer Creek at Gattis School

#### (b) Data Collection

The Engineer will review the schematic data with respect to the final design. Field visits will be conducted as necessary to obtain data to finalize and refine analysis.

#### (c) Hydrology

The Engineer will expand upon the hydrology developed with the schematic in order to assess the hydrologic impact of the proposed improvements. The loss, routing, time step and precipitation methodologies used in the UBCWCID will be used and updated for these areas. Existing and proposed flows for the two (2), ten (10), twenty-five (25) and one-hundred (100) year frequency storms will be computed. The change in flow due to the proposed project will be at a minimum quantified at the Gattis School Road culvert crossing as well as at Forest Creek Drive. Existing and proposed drainage area maps will be developed at a scale of 1" = 1000'.

#### (d) Hydraulics

The Engineer will expand upon the hydraulics developed in the schematic phase in order to assess the hydraulic impacts of the proposed improvements. The Engineer will analyze existing and proposed conditions hydraulics as a result of the proposed improvements using HEC-RAS. This includes assessment the hydraulic impacts as a result of any changes to the hydrology, the potential addition of embankment in the floodplain and analysis of the Gattis School Road culvert crossing. The most up to date UBCWID model will be used as best available data and basis of hydraulic modeling along Dyer Creek. The Engineer will summarize the relative impacts to computed water surface elevations between existing and proposed conditions on the culvert layouts and within the drainage report.

#### (e) Hydraulic Impact Mitigation

The Engineer will expand upon the preliminary design of the mitigation alternative selected in the schematic phase. The Engineer will provide detailed design and analysis for one (1) mitigation alternative. The mitigation alternative will be designed to comply with the City of Round Rock Drainage Criteria Manual and Floodplain Ordinance to ensure that no structures are adversely impacted due to the roadway design. The selected mitigation alternative will be analyzed for the two (2), ten (10), twenty-five (25) and one-hundred (100) year frequency storms to limit the increase in water surface elevations to adjacent roadways or structures. Grading plan sheets and details will be developed at an appropriate scale, not smaller than 1" = 100' and not larger than 1" = 40'. It is anticipated that there will be 2 grading plan sheets and 1 detail sheet.

#### 3. Storm Sewer Design

- (a) Interior drainage area maps will be finalized at a scale of 1"=100'. These maps will depict drainage area boundaries and flow direction arrows. Each area will be identified and cross-referenced to the calculation sheets. It is anticipated that there will be 10 sheets.
- (b) Run-off to each inlet and inlet hydraulic information will be calculated in accordance with City of Round Rock Drainage Criteria Manual and shown on the run-off and inlet computation sheets. It is anticipated that there will be 4 sheets.
- (c) Storm sewers will be analyzed and computations will be prepared for the storm sewer design using Geopak Drainage or other approved software.
- (d) Storm sewer plan and profile sheets will be completed depicting locations of inlets, manholes, storm sewers, culverts, known utilities, channel improvements, and ditch locations and flowlines as required. The storm sewer plan sheets will be prepared at a scale of 1"=100". Storm sewer profiles will be prepared at a scale of 1"=50" H and 1"=5" V. Storm sewer profiles will show pipe size and type, slope, existing and proposed ground lines above the pipe, pertinent hydraulic information, and locations of inlets and junctions. It is anticipated that there will be 10 plan sheets and 10 profile sheets.
- (e) The Engineer will prepare a tabular ditch layout schedule that depicts pertinent information about the roadside ditch geometry and design. This table will include station, offset, flow line elevation, ditch lining material, as well as ditch bottom width. The tables will be shown the hydraulic data sheets. It is anticipated that there will be 1 sheet.
- (f) The Engineer shall provide drainage design details for "non-standard" drainage structures in instances where they are not covered by City of Round Rock or TxDOT standard details. The Engineer shall use City of Round Rock or TxDOT standard details where practical. It is anticipated that there will be 3 sheets.
- (g) The Engineer will identify areas within the construction of the storm sewer and culvert construction that will require trench protection or special shoring.

#### 4. SW3P and Erosion Control

- (a) Erosion control plans will be prepared for the length of project. Temporary storm water management devices will be needed to minimize the sediment runoff during construction of this project. The anticipated design components to be utilized on this project are silt fence, sand bags, rock filter dams, sediment traps, and construction exits. One temporary erosion control plan depicting the entire project will be developed with notes that indicate that the contractor is responsible for phasing the devices along with the construction sequencing. Permanent erosion control measures will be included on these sheets as well.
- (b) A Storm Water Pollution Prevention Plan (SW3P) will be prepared for this job in accordance with TCEQ regulations.
- (c) Erosion control details will be prepared for any related items that are not covered by City of Round Rock and TxDOT standard details.

#### 5. Additional Services

The following services are beyond the scope of services described above. KFA can provide these services upon written request from the City. Any additional compensation to KFA as a result of any material change to the Scope of Services shall be agreed upon in writing before additional services are performed. These additional services include the following:

- (a) Detention analysis and/or design
- (b) FEMA LOMR/CLOMR
- (c) Water quality analysis and/or design
- (d) Scour analysis
- (e) Streambank stability analysis
- (f) SW3P Book to be included in the construction documents

#### D. SIGNING, MARKINGS AND SIGNALIZATION (provided by CP&Y, Inc. and HDR)

#### 1. Small Signing and Pavement Markings

- (a) Signing and Pavement marking layouts will be prepared at a scale of 1"=100'. Road signs and markings will be shown all on the same plan sheet. Any additional sheets for signing/pavement markings will be included in a future supplemental agreement. These layouts will depict striping and delineator type and location, as well as MBGF location, lengths, and end treatments. Each sign will have a corresponding number for cross-reference to the sign summaries.
- (b) Pavement marking details will be prepared for non-standard conditions.

(c) Detail sheets for small signs will be prepared for non-standard signs. This sheet is intended to show the overall dimensions of the signs by determining letter size and spacing. Details will not be to scale.

#### 2. Large Guide Signs

Existing Large Guide Signs along SH 45 shall be updated to represent the new cross street connection of Kenney Fort Blvd with SH 45. This entails updating existing sign plaques from "Donnell Dr" to "Kenney Fort Blvd" to be approved by TxDOT.

- (a) Large Guide Signal Layout: Engineer shall provide an overview layout at a reasonable scale to show where existing large guide signs need to be replaced.
- (b) Large Sign Details: Engineer shall provide detail sheets for large guide signs. These sheets shall show dimensions, layout of text, directional arrows and shields, borders and colors.
- (c) Overhead Sign Structures Elevations: Engineer shall provide overhead sign structure elevations for the existing structures showing the new sign plaques.
- (d) Overhead Sign Structure Details: New overhead sign structures and details are not anticipated.
- (e) The signal at SH 45 will need to be approved by TxDOT.

#### 3. Signalization (provided by HDR)

Traffic signal plans will be prepared for the following locations:

- (i) Kenney Fort Blvd and Forest Creek Drive intersection Modification of existing mast arm signal to provide for the southern extension of Kenny Fort Boulevard and to accommodate a right turn lane on Kenney Fort Boulevard in both the northbound and southbound directions. One (1) new mast arm pole will be installed and two (2) mast arm poles will be relocated.
- (ii) Kenney Fort Blvd and Gattis School New signal installation
- (iii) Kenney Fort Blvd and SH 45 New signal installation (diamond interchange signal) to be approved by TxDOT.
- (a) Conduct field review at the intersections to note and verify physical constraints, power connection, utility placement, and any other details necessary for signal plan preparation.
- (b) Coordinate with electric utility company in the field to discuss pole locations and source of power for each signal. Identify potential overhead utility conflicts, and coordinate with the City and utility companies to resolve conflicts. Two (2) meetings are assumed for budget purposes
- (c) Prepare existing signal and intersection layouts, as appropriate, for each proposed traffic signal location. Plans will be developed at a scale of 1" = 40' (or larger) and will indicate existing conditions, existing utilities, existing striping, and existing traffic control devices, if applicable.
- (d) Develop traffic signal layouts at a scale of 1"=40' (or larger) and indicate existing conditions, location of signal poles, conduit, ground boxes, proposed traffic control devices, existing and proposed utilities, and proposed roadway improvements.
- (e) Develop phasing and signing sheets for each traffic signal location.
- (f) Develop conduit and conductor schedule sheets for each traffic signal location. Wiring for power to controller, illumination, and ILSN signs will run in separate conduit from traffic signal cable.
- (g) Prepare traffic signal elevations showing the vertical clearance required for each mast arm and pedestrian push button/signal head mounting height.
- (h) Prepare vehicle detection details based on proposed traffic signal layout sheets to demonstrate detector locations and detection zones for each signal approach.

It is assumed that temporary traffic signal layouts and details will not be required at any of the project intersections, including the intersection of Kenney Fort Boulevard and Forest Creek Drive, which is currently signalized. If, during final design, it is determined that a temporary traffic signal plan is required, or if any additional design tasks not identified herein are requested, the Engineer shall prepare a budget and a schedule for the additional work. The Engineer shall not commence work on a task prior to receiving written approval by the City.

#### E. MISCELLANEOUS ROADWAY (provided by CP&Y, Inc.)

#### 1. Retaining Walls

- (a) The Engineer will investigate each wall location and determine what the most suitable wall type is for each application. The anticipated wall type is MSE.
- (b) The Engineer will provide a location plan of all walls at a scale of 1"=200'. The intent is to show the location of all walls in plan including the wall designation and beginning and ending stations.

- (c) The Engineer shall prepare retaining wall layouts at a max scale of 1"=40'. The layouts will show plan and profile views of the retaining wall. Retaining walls are assumed at the following locations
  - (i) Station 91+00 to Station 106+00
  - (ii) Station 142+00 to Stat 145+00
- (d) Non-proprietary wall designs (i.e., Tie-back, soil nailed, drill shaft) are not included in this scope of work.

#### 2. Traffic Control Plan

- (a) Traffic control typical sections will be prepared for each stage of the construction sequence to clearly delineate the position of the existing traffic with respect to the proposed construction. Temporary traffic barriers and pavement markings will also be shown and dimensioned.
- (b) The Engineer will develop overview plans for each stage of traffic control. These plans will act as key maps for each phase of TCP and shall be developed at a 1"=400' scale.
- (c) The Engineer will prepare 1"=400' plan layouts of all advance warning signs for Little Elm Trail and all cross streets.
- (d) A detailed narrative for the sequence of construction and traffic control general notes will be prepared and submitted to the City for review and incorporation into the plans. The narrative will include a phase-by-phase, step-by-step written account of the proposed activities throughout the construction process. This is intended to be a narrative account of the activities shown in the traffic control plan layouts.
- (e) Detailed traffic control plans will be prepared at a scale of 1″=100′. These plans will be developed based on the City's approval of the conceptual plans developed at the schematic design level. This plan will describe the maintenance of traffic and sequence of work for each phase of the proposed construction. Detour alignments, location of work areas, temporary paving, temporary shoring, signing, barricades and other details will be required to describe the traffic control plan. The Engineer will be required to ensure that proper drainage can be maintained during each phase of construction.
- (f) Traffic control details will be developed for items not covered by City of Round Rock or TxDOT standard details.
- (g) The Engineer will attend one meeting to present the traffic handling scheme along at SH 45to the TxDOT's Safety Review Committee. The Engineer will be responsible for incorporating the comments of the Safety Review Committee in the traffic control plans. Additional scope of services for items such as public presentations of the traffic handling plan or any additional meetings will be handled through a supplemental agreement to this scope of services.
- (h) An Engineer's opinion of construction schedule will be computed in order to determine an approximate duration for each of the phases of construction. The schedule will be prepared using Microsoft Project.

#### 3. Illumination

The engineer shall coordinate with the electrical provider for the City (Oncor) on the continuous illumination design and electrical service locations.

- (a) The Engineer will design continuous and safety lighting along the project corridor. The lighting will be shown on illumination layouts.
- (b) The Engineer shall provide electrical circuit plans and details for the roadway lighting systems within the project limits.
- (c) The Engineer will coordinate with the City in identifying power sources, conduit runs, and will show them on the project plans. The Engineer shall identify potential overhead utility conflicts, and coordinate with the State and the utility company to help resolve the conflicts.

#### 4. Landscape Architecture (provided by Verdi)

- (a) Participate in Stakeholder Meetings Attend up to two stakeholder meetings to address question and comments as they relate to the landscape design development.
- (b) Prepare Constructions Documents These documents for construction include landscape plans that stipulate plant and soil quantities along with details and written specifications for implementation requirements.

#### 5. Irrigation (provided by JAS)

The irrigated area is up to twelve planting beds along the roadway within the property boundary. Option 1 consists of full irrigation coverage from right of way (ROW) to the edge of pavement. The irrigation system will be designed based off a potable water source and according to the applicable local jurisdiction irrigation standards.

Task 1: Landscape Irrigation Design Plan (Planting Beds) 90% Submittal

- (i) Option 1: Landscape Irrigation Design Plan (Turf) 90% Submittal
  - Plan includes details, notes, and tabulations that comply with applicable regulations.
  - a) Provide plan sheets to lead consultant.
  - b) Respond to comments and resubmit.
- (b) Task 2: Landscape Irrigation Design Plan (Planting Beds) 100% Submittal
  - (i) Option 1: Landscape Irrigation Design Plan (Turf) 100% Submittal

Plan includes details, notes, and tabulations that comply with applicable regulations.

- a) Provide plan sheets to lead consultant.
- b) Respond to comments and resubmit.
- c) Perform minor revisions (one round) to the Landscape Irrigation Design Plan.
- d) Respond to up to three (3) RFI's from irrigation contractor. More than three (3) RFI's may result in an additional fee.
- e) The Landscape Irrigation Design Plan does not include as-builts unless noted.
- (c) Task 3: Landscape Irrigation Specifications Plan includes details, notes, and tabulations that *comply with applicable regulations*.
  - a) A. Provide written Landscape Irrigation Design specifications. Specifications will cover all irrigation system components and installation procedures.

#### 6. Quantities

Quantities will be tabulated for each of the following and as necessary to bid this project:

<ul> <li>(b) Earthwork (provided by CP&amp;Y, Inc)</li> <li>(c) Roadway (provided by CP&amp;Y, Inc)</li> </ul>
(c) Roadway (provided by CP&Y, Inc)
(d) Retaining Walls (provided by CP&Y, Inc)
(e) Removal (provided by CP&Y, Inc)
(f) Drainage (provided by K-Frieese)
(g) Culverts (provided by K-Frieese.)
(h) Small / Large Signs (provided by CP&Y, Inc)
(i) Pavement Markings (provided by CP&Y, Inc)
(j) Signals (provided by HDR)
(k) Illumination (provided by CP&Y, Inc)
(I) Utilities (provided by CP&Y, Inc.)
(m) Erosion Control and SW3P (provided by CP&Y, Inc)
(n) Landscaping / Irrigation (provided by Verdi and JAS irrigation)

#### 7. Summary Sheets

Quantities that are calculated will be tabulated on individual summary sheets for inclusion in the construction plan set:

(a)	Traffic Control (per each phase)	(provided by CP&Y, Inc)
(b)	Earthwork	(provided by CP&Y, Inc)
(c)	Roadway	(provided by CP&Y, Inc)
(d)	Retaining Walls	(provided by CP&Y, Inc)
(e)	Removal	(provided by CP&Y, Inc)
(f)	Drainage	(provided by K-Frieese)
(g)	Culverts	(provided by K-Frieese.)
(h)	Small / Large Signs	(provided by CP&Y, Inc)
(i)	Pavement Markings	(provided by CP&Y, Inc)
(j)	Signals	(provided by HDR)
(k)	Illumination	(provided by CP&Y, Inc)
(1)	Utilities	(provided by CP&Y, Inc.)
(m)	Erosion Control and SW3P	(provided by CP&Y, Inc)
(n)	Landscaping / Irrigation	(provided by Verdi and IAS

(n) Landscaping / Irrigation (provided by Verdi and JAS irrigation)

#### 8. Standards, Specifications and Estimate

- (a) The Engineer will download the appropriate standards for the project from the City of Round and TxDOT's web site. Standards that require modification will be corrected and sealed by the Engineer. All other standards will have their title blocks filled out with the applicable project data and printed for inclusion in the final plan set
- (b) A tabulation of applicable specifications, special specifications and special provisions will be prepared for submission with the final PS&E package.
- (c) The Engineer will review general notes provided by the City for applicability to the project. The Engineer will mark-up a set and return it to the City for their inclusion in the final plan set. The Engineer will work with the City to complete the basis of estimate prior to beginning quantity calculations.
- (d) An opinion of probable construction cost will be prepared at the 30%, 90% and prior to final PS&E submittal, and supplied to the City in Microsoft Excel format. Opinion of probable cost will also be broken out for each bridge class structure.

#### 9. Bid Documents

(a) The Engineer will prepare contract bid documents and proposals and make them available in electronic format (PDF) as well as hard copy for the City's use.

#### IV. PROJECT MANAGEMENT

#### A. PROJECT MANAGEMENT

- 1. Create and submit monthly invoices suitable for payment by the City.
- 2. Prepare monthly progress reports for submission with the monthly invoices to provide a written account of the progress made to date on the project.

(provided by CP&Y, Inc.)

- 3. Prepare a schedule depicting the key milestones and critical path items necessary to complete the environmental, public involvement and PS&E phase of project development. The schedule shall incorporate and depict the various aspects of the environmental process (including review times) and the interdependence of various tasks, subtasks, milestones and deliverables. The schedule will be updated monthly throughout the duration of the project to reflect substantial changes in progress that are found during review and coordination meetings. Any issues that need resolution or action items will be identified in the progress report. The environmental schedule shall be incorporated into the overall project schedule.
- 4. Meet formally once a month with the City to review project progress. The Engineer shall attend up to 18 monthly coordination meetings with the City.
- 5. The Engineer shall meet with TxDOT (Georgetown Area Office and Austin District Environmental) monthly to review the status of the environmental study, discuss pending activities, and resolve any issues related to the project.
- 6. Prepare project meeting summaries for applicable meetings during the project development process.
- 7. The Engineer will have internal meetings with the consultant design team every two weeks for the length of the project. It is assumed that these meetings will include key personnel from each discipline and will be required to discuss and resolve project issues.
- 8. The Engineer shall prepare and execute contracts with sub-consultants, monitor sub-consultants activities (staff and schedule), complete monthly reports and review and recommend approval of sub-consultant invoices.
- 9. Coordinate and review subconsultant work activities and submittals. The Engineer will review and coordinate work of sub-consultants to ensure quality products are delivered to the City. The Engineer will also be responsible for the consistency and coordination between plans developed by each sub-consultant on the design team.
- 10. The Engineer shall formally close out the project and perform a documented archive process.

#### V. BID AND CONSTRUCTION PHASE SERVICES

#### A. BID PHASE SERVICES

1. The Engineer will coordinate with the City and TxDOT in all aspects of the Bid Package including but not limited to answering prospective bidder questions and preparing addenda as necessary.

- 2. The Engineer will attend one pre-bid meeting.
- 3. The Engineer will assist the City at contract bid opening.
- 4. The Engineer will tabulate the bids, research low bidder and make a recommendation of award to the City.

#### B. CONSTRUCTION PHASE SERVICES

- 1. Create and submit monthly invoices suitable for payment by the City.
- 2. The Engineer shall attend the pre-construction meeting.
- 3. The Engineer shall attend up to six (6) construction meetings as requested by the City.
- 4. The Engineer shall provide Construction Support Services at the written request of the City project manager. The written request shall include a description of the work requested, a mutually agreed upon time limit, a mutually agreed upon level of effort, a defined deliverable and any special instructions for coordination and submittal. These services shall include, but are not limited to the following:
  - Responding to requests for information (RFIs)
  - Providing redesign as directed by the City for Change orders and documentation
  - Other project related tasks in support of the City during construction

The Engineer shall provide minor redesign as requested by the City project manager. In the event that revisions are requested, and the work is considered to be additional to that set forth on the original contract or scopes of work, the Engineer shall prepare a budget and a schedule for the additional work requested. The Engineer shall not commence work on a task prior to receiving written approval by the City.

5. Review the Application for Payment and supporting documentation submitted by the Contractor, recommended to the Owner the amount that the Contractor is to be paid on monthly estimates as required by the Construction Contract. A fourteen (14) month construction schedule is assumed.

Such recommendation for payment to the Contractor shall not be a representation that the Engineer:

- (a) has made exhaustive or continuous on-site observations to check the quality or quantity of the Contractor's work,
- (b) has reviewed construction means, methods, techniques, sequences, or procedures,
- (c) has reviewed copies of invoices received from subcontractors, material suppliers or other data requested by the Owner to substantiate the Contractor's right to payment,
- (d) has ascertained how or for what purpose the Contractor has used monies previously paid by the Owner, or
- (e) has determined that title to any of the Contractor's work has passed to the Owner free and clear of any liens, claims, security interests or encumbrances.
- 6. Upon notice from the Contractor that the Contractor's work is ready for its intended use, conduct, in company with the Owner's representative and the Contractor, an inspection to determine if the work is substantially complete. If the Owner and the Engineer consider the work substantially complete, issue a certificate of substantial completion containing a list of required tasks for the Contractor to complete prior to issuance of certificate of final completion. Conduct a final inspection together with the Owner and the Contractor to determine if the work has reached final completion so that the Engineer may recommend final payment to the Contractor. If appropriate, make recommendations to the Owner for final payment to the Contractor.
- 7. Provide shop drawing review. The shop drawing submittals will be limited to those specifically called for in the construction contract documents (plans, standard specifications, special provisions to the standard specifications and special specifications). Such reviews will not extend to means, methods, techniques, sequences or procedures of construction or to safety precautions and programs incident thereto.
- 8. An engineer's concurrence letter and 11"x17" record drawings (one Mylar copy and a digital copy on CD) will be submitted to the Public Works Department. The Engineer and Contractor shall verify that all final revisions and changes have been made to the Mylar and digital copy prior to City submittal. Record construction drawings shall be provided to the City in digital format as AutoCAD ". dwg" files, MicroStation ".dgn" files or ESRI ".shp" files as well as PDF ".pdf" on CD. The set of Record Drawings, which are stamped by the Engineer, shall be the sole documents relied upon by the Owner as a reflection of the condition of the project location after completion of the construction activities.

### ADDENDUM TO EXHIBIT C Work Schedule

Attached Behind This Page

### EXHIBIT C Kenney Fort Boulevard Development Schedule

ID	Task Name	Duration	Start	Finish	2018	2019	2020	2021 Jan Apr Jul Oct
1	TxDOT AFA Executed	0 days	Thu 11/1/18	Thu 11/1/18		xDOT AFA Executed	Jan Apr Jul Oct	Jan Apr Jul Oct
2	Environmental Documentation	226 days	Fri 11/16/18	Mon 9/30/19	-	Env	ironmental Documen	tation
3	Submit ENV Scope Document	0 days	Fri 11/16/18	Fri 11/16/18	11/16/18 🔷	Submit ENV Scope Do	cument	
4	Draft EA	0 days	Thu 1/31/19	Thu 1/31/19	1/31/19	◆ Draft EA		
5	Public Hearing	0 days	Tue 7/2/19	Tue 7/2/19		7/2/19 ♦ Public He	earing	
6	Draft FONSI	0 days	Mon 9/2/19	Mon 9/2/19		9/2/19 ♦ Draft	FONSI	
7	Enviornmental Clearance	0 days	Mon 9/30/19	Mon 9/30/19		9/30/19 🄷 Env	iornmental Clearance	
8	Design Phase	153 days	Thu 11/1/18	Mon 6/3/19		Design Ph	ase	
9	TxDOT Schematic Coordination	44 days	Thu 11/1/18	Tue 1/1/19		TxDOT Schematic Co	ordination	
10	PS&E Start	0 days	Tue 1/1/19	Tue 1/1/19	1/1/19	▶ PS&E Start		
11	60% PS&E Plan Development	24 days	Tue 1/1/19	Fri 2/1/19		60% PS&E Plan De	velopment	
12	60% PS&E Submittal	0 days	Fri 2/1/19	Fri 2/1/19	2/1/19	♦ 60% PS&E Submit	tal	
13	60% PS&E Review	10 days	Mon 2/4/19	Fri 2/15/19		■ 60% PS&E Review		
14	90% PS&E Plan Development	45 days	Mon 2/18/19	Fri 4/19/19		90% PS&E Pla	n Development	
15	90% PS&E Submittal	0 days	Fri 4/19/19	Fri 4/19/19	4/1	.9/19 🔷 90% PS&E Su	bmittal	
16	90% PS&E Review	10 days	Mon 4/22/19	Fri 5/3/19		■ 90% PS&E Re	view	
17	Final Plan Development	21 days	Mon 5/6/19	Mon 6/3/19		Final Plan [	Development	
18	Submit final Plans	0 days	Mon 6/3/19	Mon 6/3/19		6/3/19 ♦ Submit fin	al Plans	
19	Construction	262 days	Mon 12/2/19	Tue 12/1/20				Construction
20	Begin Construction	0 days	Mon 12/2/19	Mon 12/2/19		12/2/19 秦	Begin Construction	
21	End Construction	0 days	Tue 12/1/20	Tue 12/1/20			12/1/20 🔷	<b>End Construction</b>



Task Milestone ♦ Summary



#### ADDENDUM TO EXHIBIT D Fee Schedule

Attached Behind This Page

## KENNEY FORT BLVD, SEGMENTS 2 & 3 FOREST CREEK TO SH 45 City of Round Rock

Task Description	Total Cost
TOTAL LABOR COSTS	
. Surveying Services	
Geotechnical Investigations CORSAIR	
Utilities CP&Y  I. Surveying Services Subtotal	
i. Surveying Services Subtotal	\$ 6,
II. SOCIAL, ECONOMIC & ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT	
Environmental documentation CP&Y	\$ 1,
Techical Reports CP&Y	
Environmental Assessment Content and Format CP&Y	
Public Involvement CP&Y	
Public Involvement Rifeline	- ,
II. SOCIAL, ECONOMIC & ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT Subtotal	\$ 158,
III. PLANS, SPECIFICATIONS AND ESTIMATE	
Utility Adjustments CP&Y	
Utility Coordination Cobb Fendley	
Roadway Design Controls CP&Y	
Drainage Design KFriese Signing, Markings and Signalization CP&Y	, .,
Signing, Markings and Signalization CP&Y Signing, Markings and Signalization - Signals HDR	
Miscellaneous Roadway  CP&Y	
Miscellaneous Roadway CF&F  Miscellaneous Roadway - Signals (HDR)  HDR	
Miscellaneous Roadway - Drainage (Kfriese)  KFriese	. ,
Miscellaneous Roadway - Landscape (Verdi) Verdi	
Miscellaneous Roadway - Irrigation (JAS)  JAS	
III. PLANS, SPECIFICATIONS AND ESTIMATE Subtotal	
DO JEST MANASEMENT	
IV. PROJECT MANAGEMENT Project Management (12 months)  CP&Y  CP&Y	\$ 59.
IV. PROJECT MANAGEMENT Subtotal	
V. Bid and Construction Phase Services	
Bid Phase CP&Y	\$ 5,
Construction Phase CP&Y	
Construction Phase - Drainage KFriese	· · · · · · · · · · · · · · · · · · ·
Construction Phase - Signals HDR	\$ 22,
V. Bid and Construction Phase Services Subtotal	\$ 74,
SUBTOTAL LABOR EXPENSES	\$ 804,
EXPENSES - CP&Y CP&Y	
EXPENSES - HDR HDR EXPENSES - Rifeline Rifeline	•
EXPENSES - Rifeline Rifeline  EXPENSES - Verdi Verdi	
EXPENSES - Verdi Verdi  EXPENSES - Cobb Fendley  Cobb Fendley	
EXPENSES - KFriese KFriese	
GRAND TOTAL	\$ 840,5
SUMMARY of Cost breakdown by Firm	
CP&Y	\$ 485,
Cobb Fendley	
·	
HDR KFriese	
HDR	
HDR KFriese	\$ 36,
HDR KFriese Rifeline	\$ 36, \$ 18,

Kenney Fort Blvd Exhibit D.xlsx

SUMMARY Page 1 of 8

#### Exhibit D - CP&Y, INC.

Fee Schedule/Budget for	r CP&Y, Inc.
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Fee Schedule/Budget for CP&Y, Inc.							
Task Description	Project Manager / RPLS	Senior CADD Operator	Survey Crew with GPS	SUE Locator 2- Man Crew	Admin / Clerical	Total Labor Hours	Total Direct Labor Costs
	\$140.00	\$120.00	\$150.00	\$150.00	\$104.00		
I. Surveying Services							
E Geotechnical Investigations							•
E1 Soil Borings							
a Performed by CORSAIR							
						0	\$ -
H Utilities							
H1 Provide QL-B SUE extension on Gattis				20		20	\$ 3,000.00
							\$ -
						20	\$ 3,000.00
I. Surveying Services- SUBTOTAL							
HOURS SUB-TOTALS	0	0	0	20	0	20	\$ 3,000.00
SUBTOTAL	\$ -	\$ -	\$ -	\$ 3,000.00	\$ -		\$3,000.00

#### Exhibit D - CP&Y, INC.

Task Description	Project Manager	Senior Engineer	Environ Manager	Senior Environ Specialist	Environ Specialist	Senior Architectural Historian	Biologist	GIS Specialist	Admin / Clerical	Total Labor Hours	Total Direc Labor Cost
	\$210.00	\$170.00	\$195.00	\$130.00	\$115.00	\$135.00	\$104.00	\$85.00	\$104.00	1	
II. SOCIAL, ECONOMIC & ENVIRONMENTAL STUDIES AND PUBLIC INVOL	<u>VEMENT</u>	•						•			
A Environmental documentation											
a & b Scope Development Tool	1	-	1	2	_	-	-	_	_	4	\$ 665.0
c & d Classification Letter	2	-	2	4	-	-	-	-	-	8	
				JJ.						12	
B Techical Reports											
a Prepare Project Description Report	4	4	4	8	16	-	-	4	-	40	\$ 5,520.
b Complete Community Impact Assessment Form	2	-	2	4	12	-	-	4	-	24	\$ 3,050.
c Update Jurisdictional Waters Technical Report	2	-	4	4	-	-	16	2	-	28	\$ 3,554.
d1 Update Biological Resources Technical Report	2	-	4	4	-	-	16	2	-	28	\$ 3,554.
d2 Complete Biological Evaluation Form and Tier Site Assessment Form	2	-	4	4	-	-	16	-	-		\$ 3,384
e Prepare Historic Project Coordination Request and Research Design	1	-	2	-	-	8	-	4	-	15	\$ 2,020
f Prepare Historic Resources Survey Report (and conduct survey)	2	-	2	-	-	24	-	4	-	32	\$ 4,390.
g & h Prepare Archeoligical Background Study (SWCA)	1	-	1	-	-	-	-	-	-	2	\$ 405.
i Prepare Air Quality Technical Report	2	-	2	4	4	-	-	8	-	20	\$ 2,470
j Prepare Traffic Noise Technical Report (includes modeling/analysis)	2	-	6	16	60	-	-	24	-	108	\$ 12,610
k Update Hazardous Materials Report (and complete ISA Form)	2	-	4	8	16	-	-	4	-	34	\$ 4,420
I Prepare Indirect Impacts Technical Report	4	-	6	8	16	-	8	4	-	46	\$ 6,062
m Prepare Cumulative Impacts Technical Report	4	-	6	8	16	-	8	4	-	46	\$ 6,062
									-	423	\$ 57,501
Environmental Assessment Content and Format											
a Prepare Draft Environmental Assessment	12	4	16	30	40	-	4	8	-	114	
b Prepare Final Environmental Assessment	6	2	8	12	24	-	2	4	-	58	
										172	\$ 23,944
Public Involvement											
a Update Stakeholder List (RIFELINE)	-	-	-	-	-	-	-	-	-		\$
b Stakeholder Meetings (up to 10)	20	20	-	20		-	-	10	4	74	\$ 11,466
c Public Hearing (Plan, Schedule, Coordinate, Attend and prepare required report)	24	12	24	16	40	-	-	16	4	136	\$ 20,216
d Noise Workshop (Plan, Schedule, Coordinate, Attend and prepare required repo	8	6	12	12	12	-	-	10	4	64 <b>274</b>	\$ 9,246 <b>\$ 40.928</b>
II. SOCIAL. ECONOMIC & ENVIRONMENTAL STUDIES AND PUBLIC INVOLV	EMENT- SUBTO	ΤΔΙ								2/4	\$ 40,928
HOURS SUB-TOTALS	103	48	110	164	256	32	70	112	12	881	\$ 124.368
HOURS SUB-TOTALS	\$ 21,630.00		\$ 21,450.00	\$ 21,320.00	250	\$ 4,320.00	\$ 7,280.00		\$ 1.248.00	001	\$ 124,368.

### KENNEY FORT BLVD, SEGMENTS 2 & 3 FOREST CREEK TO SH 45 City of Round Rock

	Project	Senior	Design		Chief	Senior CADD	CADD		Total Labor	Total D
Task Description	Manager	Engineer	Engineer	E.I.T.	Hydrologist	Operator	Operator	GIS Specialist	Hours	Labor C
	\$210.00	\$170.00	\$135.00	\$105.00	\$210.00	\$120.00	\$105.00	\$85.00		
III. PLANS, SPECIFICATIONS AND ESTIMATE										
A Utility Adjustments										
A1 Utilities	-	-	-	-	-	-	-	-		\$
a Utility Coordination - Performed by Cobb Fendley d Creat utility layouts for coordination	4	8	-	16	-	-	-	-	28	
Roadway Design Controls									28	<b>ў 3</b> ,
B1 Miscellaneous Plans	-	-	-	-	-	-	-	-		\$
a Title Sheet	1	-	1	4	-	-	-	-	6	
b Index of Sheets	1	-	1	6	-	-	-	-	8	
c Project Layout 1"=200' d Benchmark Layout 1"=200'	1 2	-	2	4	-	-	-	-	9	
B2 Roadway Plans & Geometry		_		4	-	_		-	0	\$
a Existing Typical Sections		-	2	6	_	_		-	8	
b Proposed Typical Sections	2	2	4	8	-	6	-	-	22	
c Horizontal Data Sheet	1	-	1	2	-	-	-	-	4	\$
d KFB Plan & Profile Sheets 1"=100' H and 1"=10' V	8	16	40	112	-	40	20	-	236	
e Gattis School Plan & Profile Sheets 1"=100' H and 1"=10' V	1	4	6	30	-	14	5	-	60	
f Supplemental Grading Sheets 1"=40'	2	8	8	16	-	16	-	-	50	
g Removal Sheets 1"=100'	-	2	6	12	-	-		-	20	\$ : \$
B3 Grading and Details a 50-ft cross sections	4	8	30	120	-	-	-	-	162	φ \$ 18
b Intersection layouts (5 locations) 1"=40'	2	6	12	40		30	12	_	102	
c Driveway Details	-	1	1	4	-	-	-	_	6	
d Driveway Profiles	-	1	1	4	-	-	-	-	6	
e Miscellaneous roadway details	2	4	8	10	-	16	-	-	40	\$ !
Drainage Design									747	\$ 90
a Performed by Kfrieese	-	-	-	-	-	-	-	-		\$
Signing, Markings and Signalization									0	\$
D1 Site visits of project corridor and surrounding areas	-	-	-	-	-	-	-	-		\$
a Small Signing & Pavement marking layouts 1"=100'	4	- 6	12	30	-	16	24	-	92	
b Pavement Marking Details	2	4	-	8	-	-	-	-	14	
c Detail sheets for small signs	2	-	4	8	-	-	-	-	14	
D2 Large Guide Signs	- 1	-	- 1	10	-	-	10	-	22	\$
a Large Guide Sign Layout a Large Guide Sign Details	2	-	2	8	-	_	4	_	16	
b Large Guide Sign overhead sign elevations	1	1	2	10	_	_	12	_	26	
D2 Signalization	-	-	-	-	-	-	-	-		\$
a Performed by HDR	-	-	-	-	-	-	-	-		\$
Miscellaneous Roadway									184	\$ 2
E1 Retaining Walls	_	I _	_ 1		_	I _ I		_		\$
a Investigate wall locations and determine wall type	_	2	-	1	-	<u> </u>			3	
b Retaining Wall Location Map	-	1	-	7	-	-	-	-	8	
c Retaining Wall Plan and Profile 1"=40' H 1"=10' V	2	4	12	45		12	24	-	99	
E2 Traffic Control Plan	-	-	-	-	-	-	-	-		\$
a TCP Typicals	2	2	-	10	-	16	-	-	30	\$ 3
b TCP Overview	-	1	-	10	-	8	-	-	19	
c TCP Advanced Warning Layouts 1"=400' d TCP Narrative for Sequence of Construction	2	6	-	6	-		4	-	12 8	
e TCP Plans Sheets 1"=100'	6	16	32	60	-	24	16	-	154	
f TCP Details - Non Standard	-	10	- 32	4	-		- 10		5	
q TxDOT Coordination	4	4		-	-				8	
Kenney Fore BIVI Excited Developed	2				1	1		1	6	

III. PS&E

#### Exhibit D - CP&Y, INC.

### KENNEY FORT BLVD, SEGMENTS 2 & 3 FOREST CREEK TO SH 45 City of Round Rock

Fee Schedule/Budget for CP&Y, Inc.

Task Description	Project Manager	Senior Engineer	Design Engineer	E.I.T.	Chief Hydrologist	Senior CADD Operator	CADD Operator	GIS Specialist	Total Labor Hours	Total Dir Labor Co
	\$210.00	\$170.00	\$135.00	\$105.00	\$210.00	\$120.00	\$105.00	\$85.00		
E3 Illumination	-	-	-	-	-	-	-	-		\$
a Continuous Lighting Layouts	4	8	30	40	-	16	40	-	138	\$ 16,5
b Electrical Circuit Plans and Details	-	4	4	16	-	-	-	-	24	\$ 2,9
c State and Utility Coordination, Power Source Coordination	4	-	-	-	-	-	-	-	4	\$ 8
E4 Landscaping	-	-	-	-	-	-	-	-		\$
Performed by Verdi	-	-	-	-	-	-	-	-		\$
E5 Irrigation	-	-	-	-	-	-	-	-		\$
Performed by JAS	-	-	-	1	-	-	-	-		\$
E6 Quantities	-	-	-	-	-	-	-	-		\$
a Traffic Control	-	-	2	4	-	-	4	-	10	\$ 1,
b Earthwork	2	2	2	8	-	-	-	-	14	\$ 1,
c Roadway	1	2	2	6	-	-	8	-	19	\$ 2.
d Retaining Walls	-	1	1	4	-	-	-	-	6	\$
e Removal	-	1	1	8	-	-	8	-	18	\$ 1
f Drainage	_	-	-	•	-	_	-	-		\$
g Culverts	_	-	-	•	-	_	-	-		\$
h Signs	_	1	2	8	-	_	8	-	19	\$ 2
i Pavement Markings	1	2	-	8	-	_	8	-	19	\$ 2
j Signals	1	2	2	8	-	_	-	-	13	
k Illumination	_	1	1	8	-	_	8	-		\$ 1
I Utilities	_	_	_	-	-	_	-	-	-	\$
m Erosion Control and SW3P	_	_	_	-	-	_	-	-		\$
n Landscaping and Irrigation	_	_	_	-	-	_	-	-		\$
E7 Summary Sheets	_	_	_	-	-	_	-	-		\$
a Traffic Control	1	-	-	2	-	-	2	-	5	\$
b Earthwork	-	-	-	2	-	-	2	-		•
c Roadway	1	1	_	2	_	_	2	_	6	\$
d Retaining Walls		1	_	2	_	_	2	_	5	\$
e Removal	_	-	_	2	-	_	2	-	4	\$
f Drainage	_	_	_	-	-	_	-	-	·	\$
g Culverts	_	_	_	-	-	_	-	-		\$
h Signs	_	_	_	2	-	_	2	-	4	\$
i Pavement Markings	1	_	_	2	_	_	2	-	5	\$
j Signals		1	_	2	_	_	2	_	5	\$
k Illumination	1	1	_	2	-	_	2	-	6	\$
l Utilities		-	_	2	-	_	2	-	4	\$
m Erosion Control and SW3P	-	-	-	-	-	-		-	·	\$
n Landscaping and Irrigation	-	-	-	_	-	-	-	-		\$
E8 Standards, Specifications and Estimate	_	-	_	-	-	_	-	_		\$
a Download, Prepare and Modify Standards	1	2	_	16	-	_	-		19	\$ 2
b Specifications	4	16	-	4	-	_	-	_		\$ 3.
c General Notes	4	12	_	2	-	_	-	_		\$ 3.
d Preliminary Cost Estimate and item price identification	8	8	_	16	_	_	-	_	32	\$ 4
E9 Prepare contract bid documents and proposals	4	8	20	24	-	_	-	_	56	\$ 7
					l			1		\$ 107
III. PLANS, SPECIFICATIONS AND ESTIMATE- SUBTOTAL									301	
HOURS SUB-TOTALS	99	188	259	815	0	214	235	0	1,810	\$ 223
SUBTOTAL	\$ 20,790.00			\$ 85,575.00	\$ -	\$ 25,680.00	\$ 24.675.00	\$ -	,	\$223.

Fee Sch	edule	e/Budget for CP&Y, Inc.								
		Task Description	Project Manager	Senior Engineer	Design Engineer	E.I.T.	Admin / Clerical	Environ Manager	Total Labor Hours	Total Direct Labor Costs
			\$210.00	\$170.00	\$135.00	\$105.00	\$104.00	\$195.00		
		IV. PROJECT MANAGEMENT								
Α	Projec	t Management (12 months)								
	A1	Create and submit monthly invoices	18	ı	-	-	18	-	36	\$ 5,652.00
	A2	Prepare monthly progress reports	9	4	-	-	-	-	13	\$ 2,570.00
		Prepare schedule	4	ı	6	-	ı	-	10	\$ 1,650.00
	A3	Meet with City twice a month,up to 18 meetings	36	30	-	-	ı	1	66	\$ 12,660.00
	A3	Meet with City twice a month, up to 18 meetings	36	16	-	-	-	-	52	\$ 10,280.00
	A4	Prepare project meeting summaries	24	12	-	-	=	=	36	\$ 7,080.00
	A5	Meet with property owners, stakeholders, and City	12	12	-	-	-	-	24	\$ 4,560.00
	A6	Meet with other Stakeholders every 2 months	8	8	-	-	=	=	16	\$ 3,040.00
	A7	Internal Design Team Meetings	12	12	10	10	-	-	44	\$ 6,960.00
	A8	Monitor and Review Sub-consultant invoices	8	-	-	-	3	-	11	\$ 1,992.00
	A9	Coordinate and Review Sub-consultant work products	6	2	-	-	-	-	8	\$ 1,600.00
	A10	Project Closeout	2	=	6	-	4	=	12	\$ 1,646.00
									328	\$ 59,690.00
		IV. PROJECT MANAGEMENT - SUBTOTAL								
		HOURS SUB-TOTALS	175	96	22	10	25	0	328	\$ 59,690.00
		SUBTOTAL	\$ 36,750.00	\$ 16,320.00	\$ 2,970.00	\$ 1,050.00	\$ 2,600.00	\$ -		\$ 59,690.00

Fee Sc	hedule	/Budget for CP&Y, Inc.								
		Task Description	Project Manager	Senior Engineer	Design Engineer	E.I.T.	Admin / Clerical	Environ Manager	Total Labor Hours	Total Direct Labor Costs
			\$210.00	\$170.00	\$135.00	\$105.00	\$104.00	\$195.00		
		V. Bid and Construction Phase Services								
Α	Bid Ph	ase								
	A1	Coordinate with City during Bid Package	4	1	10	5	-	ı	19	\$ 2,715.00
	A2	Attend pre-bid meeting	3	3	_	-	-	-	6	\$ 1,140.00
	A3	Assist City at contract bid opening	2	-	_	1	-	-	3	\$ 525.00
	A4	Tabulate bids, research low bidder, make recommendation	1	5	-	4	-	1	10	\$ 1,480.00
									38	\$ 5,860.00
В	Constr	uction Phase								
	B1	Create and submit monthly invoices (14 months)	6	-		-	10	-	16	\$ 2,300.00
	B2	Prepare for and attend pre-construction meeting	4	-	-	2	-	-	6	\$ 1,050.00
	B3	Attend up to 6 construction meetings	12	40	_	-	-	-	52	\$ 9,320.00
	B4	Respond to RFI's, make updates as agreed	8	-	20	60	-	-	88	\$ 10,680.00
	B5	Review Contractor Pay Applications (14 months)	6	-	20	-	-	-	26	\$ 3,960.00
	B6	Conduct final site visit for substanial completion	6	4	-	2	-	-	12	\$ 2,150.00
	B7	Provide shop drawing review	1	4	-	12	-	-	17	\$ 2,150.00
	B8	Develop as-builts	1	8		50	-	-	59	\$ 6,820.00
<u> </u>									260	\$ 36,130.00
		V. Bid and Construction Phase Services- SUBTOTAL								
		HOURS SUB-TOTALS	54	64	50	136	10	0	314	\$ 44,290.00
		SUBTOTAL	\$ 11,340.00	\$ 10,880.00	\$ 6,750.00	\$ 14,280.00	\$ 1,040.00	\$ -		\$ 44,290.00

#### Exhibit D - CP&Y, INC.

Expense Item	Unit		Unit Cost	Amount		Total Cost
0.100.01.41			4.50		•	222.22
CADD Plotting	sf	\$	1.50	200	\$	300.00
Mylar Plots (22x34 As-Builts)	lf	\$	6.00		\$	-
Digital Ortho Plotting	lf	\$	2.00		\$	=
11" X 17" Mylar	sheet	\$	1.00	1.500	\$	-
8 1/2" X 11" B/W Paper Copies	sheet	\$	0.10	1,500	\$	150.00
11" X 17" B/W Paper Copies	sheet	\$	0.15	1,000	\$	150.00
8 1/2" X 11" Color Paper Copies	sheet	\$	1.00	500	\$	500.00
11" X 17" Color Paper Copies	sheet	\$	1.80	100	\$	180.00
Fax Copies	sheet	\$	0.10		\$	_
Film and Development	roll	\$	8.00		\$	-
4 X 6 Digital Color Prints	picture	\$	0.50		\$	-
Oversized Digital Color Prints	picture	\$	50.00		\$	=
Standard Postage	letter	\$	0.44		\$	=
Express Mail (Standard)	each	\$	15.00		\$	-
Express Mail (Oversized)	each	\$	30.00		\$	
Deliveries	each	\$	25.00	4	\$	100.00
Airfare	each	\$	200.00		\$	
Rental Car	day	\$	80.00		\$	-
Lodging	day	\$	85.00		\$	-
Meals	day	\$	36.00		\$	-
Mileage	mile	\$	0.550	350	\$	192.50
GPS Rental	day	\$	80.000	5	\$	400.00
HazMat Database Search	each	\$	250.000	2	\$	500.00
SUE (Quality Level C and D)	lf	\$	0.550		\$	-
SUE (Quality Level B - Utility Designation)	lf	\$	1.500		\$	-
SUE (Quality Level A - Utility Locate, Test Holes)					\$	-
Level A: 0 to 5 ft.	each	\$	1,200.000	10	\$	12,000.00
Level A: > 6 to 8 ft.	each	\$	1,500.000	5	\$	7,500.00
Level A: > 8 to 10 ft.	each	\$	1,800.000	5	\$	9,000.00
Level A: > 10 to 12 ft.	each	\$	2,000.000	1	\$	2,000.00
Level A: > 20 ft.	each	Ť	,		\$	-
Miscellaneous Project Related Expenses	NA	at o	cost	NA	•	
SUBTOTAL DIRECT EXPENSES					\$	32,972.50

Exhibit D - K Friese and Associates

#### **KENNEY FORT BLVD, SEGMENTS 2 & 3 FOREST CREEK TO SH 45** City of Round Rock Fee Schedule/Budget for CP&Y, Inc. Senior CADD Admin / **Total Labor Total Direct Project** Senior Design **Task Description** E.I.T. Manager Engineer Engineer Operator Clerical Hours **Labor Costs** \$190.00 \$160.00 \$110.00 \$100.00 \$85.00 \$60.00 II. PLANS. SPECIFICATIONS AND ESTIMATE C Drainage Design C2 Crossing Structure Hydrology and Hydraulic Analysis a Data Collection \$ 1,040.00 4 6 10 b Hydrology: External Drainage Area Maps 2 6 8 16 8 40 \$ 4,500.00 c Hydraulic Analysis 15 20 12 91 \$ 10.380.00 4 40 2 10 16 2 36 \$ 4,210.00 d Drainage Report 6 e Culvert Layout sheets 2 24 32 40 16 114 \$ 13,100.00 f Culvert Hydraulic Data Sheets 2 32 \$ 2 4 8 16 3,300.00 g Culvert Standards and Details 2 4 24 24 16 70 \$ 7.420.00 C3 Dyer Creek Hydrology and Hydraulic Impact Analysis a Data Collection 2 4 420.00 b Hydrology 2 2 6 6 16 \$ 1,960.00 c Hydraulic Analysis 2 2 10 12 26 \$ 3,000.00 C4 Storm Sewer Design a Interior Drainage Area Maps 4 8 24 56 56 148 \$ 15,040.00 b Inlet compulations 28 62 \$ 7,110.00 4 8 16 6 c Storm sewer hydraulics 4 8 24 36 6 78 \$ 8,790.00 d Storm sewer plan and profile sheets 8 10 60 90 80 248 \$ 25,520.00 e Ditch hydraulics 2 6 10 24 6 48 \$ 5,350.00 f Drainage standards and details 2 2 4 4 3 15 1.795.00 2 4 4 10 \$ 1,160.00 g Trench protection and special shoring C7 SW3P and Erosion Control a Erosion Control Plans 2 16 30 48 96 \$ 9,160.00 b SW3P Plan 2 4 6 12 \$ 1,360.00 c Erosion Control Details 2 2 2 8 \$ 910.00 1,048 \$ 125,525.00 E Miscellaneous Roadway E6 Quantities q Culverts 2 2 8 16 28 3,180.00 2 2 24 24 52 5,740.00 h Storm Sewer i SW3P and Erosion Control 1 8 16 \$ 1,810.00 6 E7 Summary Sheets q Culverts 2 4 8 \$ 865.00 1 h Storm Sewer 2 865.00 1 4 8 \$ i SW3P and Erosion Control 865.00 1 2 4 8 \$ E8 Standards, Specifications and Estimate 2 760.00 b Specifications 4 6 \$ c General Notes 4 6 \$ 760.00 132 \$ 14,845.00 II. PLANS, SPECIFICATIONS AND ESTIMATE- SUBTOTAL HOURS SUB-TOTALS 47 123 336 280 1,296 \$ 140,370.00 510 0 SUBTOTAL 8,930.00 \$ 19,680.00 \$ 36,960.00 \$ 51,000.00 \$ \$140,370.00

**Exhibit D - K Friese and Associates** 

HOURS SUB-TOTALS

SUBTOTAL

IV. Bid and Construction Phase Services- SUBTOTAL

#### **KENNEY FORT BLVD, SEGMENTS 2 & 3 FOREST CREEK TO SH 45 City of Round Rock** Fee Schedule/Budget for CP&Y, Inc. Senior Senior CADD **Total Labor Total Direct Project** Design Admin / E.I.T. **Task Description** Engineer Manager Engineer Operator Clerical Hours **Labor Costs** \$190.00 \$160.00 \$110.00 \$85.00 \$100.00 \$60.00 IV. Bid and Construction Phase Services **Construction Phase** Respond to RFI's, make updates as agreed 2 6 6,570.00 18 24 10 3,980.00 В8 Develop as-builts 2 2 4 8 24 40 \$ 100 \$ 10,550.00

760.00 \$

8

1,280.00 \$

22

2,420.00

32

3,200.00 \$

34

2,890.00 \$

0

100 \$ 10,550.00

\$ 10,550.00

#### **Exhibit D - K Friese and Associates**

Expense Item Unit Unit Cost Ar		st Amount		Total Cost		
OLDD DI W			4 = 0			
CADD Plotting	sf	\$	1.50		\$	-
Mylar Plots (22x34 As-Builts)	lf 	\$	6.00		\$	-
Digital Ortho Plotting	lf	\$	2.00		\$	-
11" X 17" Mylar	sheet	\$	1.00		\$	-
8 1/2" X 11" B/W Paper Copies	sheet	\$	0.10	500	\$	50.00
11" X 17" B/W Paper Copies	sheet	\$	0.15	500	\$	75.00
8 1/2" X 11" Color Paper Copies	sheet	\$	1.00		\$	-
11" X 17" Color Paper Copies	sheet	\$	1.80		\$	
Fax Copies	sheet	\$	0.10		\$	-
Film and Development	roll	\$	8.00		\$	-
4 X 6 Digital Color Prints	picture	\$	0.50		\$	-
Oversized Digital Color Prints	picture	\$	50.00		\$	-
Standard Postage	letter	\$	0.44		\$	-
Express Mail (Standard)	each	\$	15.00		\$	-
Express Mail (Oversized)	each	\$	30.00		\$	-
Deliveries	each	\$	25.00		\$	-
Airfare	each	\$	200.00		\$	-
Rental Car	day	\$	80.00		\$	-
Lodging	day	\$	85.00		\$	-
Meals	day	\$	36.00		\$	-
Mileage	mile	\$	0.550	250	\$	137.50
GPS Rental	day	\$	80.000		\$	-
HazMat Database Search	each	\$	250.000		\$	-
		Ė			\$	-
Miscellaneous Project Related Expenses	NA	at	cost	NA		
SUBTOTAL DIRECT EXPENSES					\$	262.50

	City of	Round Ro	CK					
Schedule/Budget for HDR								
Task Description	Project Manager				Total Labor Hours	Total D		
	\$250.00	\$200.00	\$170.00	\$120.00	\$100.00	\$90.00		
II. PLANS, SPECIFICATIONS AND ESTIMATE								
Roadway Design Controls								
1 Signalization	-	-	-	-	-	-		\$
a Field Data Collection	4	-	4		-	-	8	\$ 1,
b Utility and Power Coordination	4	-	8	-	-	-	12	\$ 2,
c Existing Layouts	2	-	4	8	16	4	34	\$ 4,
d Proposed Signal Layouts	2	16	16	24	40	4	102	\$ 13,
e Phasing & Signing Sheets	2	-	16	24	40	-	82	\$ 10,
f Conduit & Conductor Schedules	2	-	16	24	40	-	82	\$ 10,
g Traffic Signal Elevations	2	-	16	24	40	-	82	\$ 10,
h Vehicle Detection Details	2	-	16	24	40	_	82	\$ 10,
							484	\$ 62,
Miscellaneous Roadway								
1 Signals Quantities	2		16	32			50	
2 Signal Summary Sheets			2	4	8		14	\$ 1,
3 Standards, Specifications and Estimate								\$
a Download, Prepare and Modify Standards	2		2	8	16		28	\$ 3,
b Specifications	2		4	8			14	\$ 2,
c General Notes	2		4	8	8		22	\$ 2,
d Preliminary Cost Estimate and item price identification	2		4	16			22	\$ 3,
						<u> </u>		\$
							150	\$ 20,
II. PLANS, SPECIFICATIONS AND ESTIMATE- SUBTOTAL								
HOURS SUB-TOTALS	30	16	128	204	248	8	634	\$ 82,
SUBTOTAL	\$ 7,500.00	\$ 3,200.00	\$ 21,760.00	\$ 24,480.00	\$ 24,800.00	\$ 720.00		\$82,4

#### Exhibit D - HDR

Fee Sc	hedule/Budget for CP&Y, Inc.								
	Task Description	Project Manager	Senior Engineer	Design Engineer	E.I.T.	CADD Operator	Admin / Clerical	Total Labor Hours	Total Direct Labor Costs
		\$250.00	\$200.00	\$170.00	\$120.00	\$100.00	\$90.00		
A	IV. Bid and Construction Phase Services  Bid Phase Serivces							<b>.</b>	
_		2	2		8			16	\$ 2.540.00
	1 Preparation of Bid Documents 2 Pre-bid meeting		2	4	0			10	\$ 2,540.00
	3 Respond to design questions	2	2	8	8			20	\$ 3,220.00
	Trespond to design questions			<u> </u>	0			36	
В	Construction Phase Services							30	ψ 3,700.00
	1 Construction Support Services	12		16	8	4		40	\$ 7,080.00
	Provide shop drawing review	2	6	16				24	\$ 4,420.00
	Develop as-builts and concurrence letter	2		4	8	26		40	\$ 4,740.00
								104	\$ 19,460.00
	IV. Bid and Construction Phase Services- SUBTOTAL								
	HOURS SUB-TOTALS	20	10	48	32	30	0	140	\$ 22,000.00
	SUBTOTAL	\$ 5,000.00	\$ 2,000.00	\$ 8,160.00	\$ 3,840.00	\$ 3,000.00	\$ -		\$ 22,000.00

#### **Exhibit D - HDR**

CARD DIAM's		Expense Item Unit Unit Cost Amou		Amount	Т	otal Cost
			4.50		•	
CADD Plotting	sf	\$	1.50		\$	-
Mylar Plots (22x34 As-Builts)	lf If	\$	6.00	0	\$	-
Digital Ortho Plotting	lf	\$	2.00		\$	-
11" X 17" Mylar	sheet	\$	1.00		\$	-
8 1/2" X 11" B/W Paper Copies	sheet	\$	0.10		\$	
11" X 17" B/W Paper Copies	sheet	\$	0.15	500	\$	75.00
8 1/2" X 11" Color Paper Copies	sheet	\$	1.00		\$	-
11" X 17" Color Paper Copies	sheet	\$	1.80		\$	-
Fax Copies	sheet	\$	0.10		\$	
Film and Development	roll	\$	8.00		\$	-
4 X 6 Digital Color Prints	picture	\$	0.50		\$	
Oversized Digital Color Prints	picture	\$	50.00		\$	-
Standard Postage	letter	\$	0.44		\$	-
Express Mail (Standard)	each	\$	15.00		\$	-
Express Mail (Oversized)	each	\$	30.00		\$	-
Deliveries	each	\$	25.00	2	\$	50.00
Airfare	each	\$	200.00		\$	-
Rental Car	day	\$	80.00		\$	-
Lodging	day	\$	85.00		\$	-
Meals	day	\$	36.00		\$	-
Mileage	mile	\$	0.550	200	\$	110.00
GPS Rental	day	\$	80.000		\$	-
HazMat Database Search	each	\$	250.000		\$	-
		Ė			\$	=
Miscellaneous Project Related Expenses	NA	at o	cost	NA	•	
SUBTOTAL DIRECT EXPENSES					\$	235.00

Exhibit D - Rifeline

Lump Sum Basis

#### KENNEY FORT BLVD, SEGMENTS 2 & 3 FOREST CREEK TO SH 45 City of Round Rock

Fee Schedule/Budget for Rifeline

ree ochedule/budget for Kheime								
Task Description	Project Principal	Senior Project Coordinator	Project Coordinator	Project Assistant	Admin / Clerical		Total Labor Hours	Total Direct Labor Costs
	\$200.00	\$170.00	\$150.00	\$120.00	\$50.00			
II. SOCIAL, ECONOMIC & ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT								
D Public Involvement								
Prepare montly invoices, progress reports								\$ -
Invoices		9			18		27	\$ 2,430.00
Status Reports		9			18		27	\$ 2,430.00
Update Stakeholder list				10			10	\$ 1,200.00
Stakeholder Meetings (up to 10)	15	20					35	\$ 6,400.00
Public Hearing (plan, schedule, coordinate, advertise, attend & prepare required report)	20	35		35			90	
Noise workshop (plan, schedule, coordinate, and attend)	12	17		20			49	
							238	\$ 34,300.00
II SUBTOTALS								
HOURS SUB-TOTALS	47	90	0	65	36	0	238	\$ 34,300.00
SUBTOTAL	\$ 9,400.00	\$ 15,300.00	<b>e</b> -	\$ 7,800.00	\$ 1,800.00	s -		\$34,300.00
OUDIOIAL	Ψ 5,700.00	Ψ 10,000.00	Ψ	Ψ 1,000.00	Ψ 1,000.00	Ψ -		Ψ54,500.00

# KENNEY FORT BLVD, SEGMENTS 2 & 3 FOREST CREEK TO SH 45 City of Round Rock

#### **Expenses for Rifeline**

Expense Item	Unit	Unit	Cost	Amount	T	otal Cost
OADD DL W			4.50		Φ.	
CADD Plotting	sf	\$	1.50		\$	=
Mylar Plots	lf	\$	6.00		\$	=
Digital Ortho Plotting	If	\$	2.00		\$	-
11" X 17" Mylar	sheet	\$	1.00		\$	-
8 1/2" X 11" B/W Paper Copies	sheet	\$	0.10	600	\$	60.00
11" X 17" B/W Paper Copies	sheet	\$	0.15	100	\$	15.00
8 1/2" X 11" Color Paper Copies	sheet	\$	1.00	700	\$	700.00
11" X 17" Color Paper Copies	sheet	\$	1.80	100	\$	180.00
Fax Copies	sheet	\$	0.10		\$	
Film and Development	roll	\$	8.00		\$	-
4 X 6 Digital Color Prints	picture	\$	0.50		\$	-
Oversized Digital Color Prints	picture	\$	50.00		\$	-
Standard Postage	letter	\$	0.44	400	\$	176.00
Express Mail (Standard)	each	\$	15.00		\$	-
Express Mail (Oversized)	each	\$	30.00		\$	-
Deliveries	each	\$	25.00		\$	-
Airfare	each	\$	200.00		\$	-
Rental Car	day	\$	80.00		\$	-
Lodging	day	\$	85.00		\$	-
Meals	day	\$	36.00		\$	=
Mileage	mile	\$	0.550	1,500	\$	825.00
GPS Rental	dav	\$	80.000	,	\$	=
HazMat Database Search	each		250.000		\$	_
					\$	_
Miscellaneous Project Related Expenses	NA	at cost	t	NA	\$	-
SUBTOTAL DIRECT EXPENSES					\$	1,956.0

Exhibit D - Cobb Fendley

Lump Sum Basis

## KENNEY FORT BLVD, SEGMENTS 2 & 3 FOREST CREEK TO SH 45 City of Round Rock

Fee Schedule/Budget for Cobb Fendley

Task Description		roject anager	Senior Engineer	Project Engineer	Utility Specialist	Senior Technician	Admin / Clerical	Total Labor Hours	Total Direct Labor Costs
	\$1	185.00	\$225.00	\$125.00	\$140.00	\$135.00	\$100.00		
1 UTILITY COORDINATION									
60% Design Phase									
1(b)(i) Coordination/Team Meetings (up to 4 meetings)		4		10	10		2	26	
1(b)(ii) Updates to Existing Utility Layouts				2		4		6	
1(b)(iii) 60% Conflict Assessment & Strip Map		1	3	16	2	8	2	32	
1(b)(iv) Evaluate Relocation Alternatives			4	4	4			12	
1(b)(v) Prepare Proposed Utility Layouts		1	2	8	3	10		24	* -,
1(b)(vi) Coordinate Reimbursable and Non-Reimbursable Agreements/Relocations				4	16			20	\$ 2,740.00
90% & 100% Design Phase									
1(c)(i) Coordination/Team Meetings (up to 3 meetings)		2		6	6		2	16	\$ 2,160.00
1(c)(ii) Updates to Existing & Proposed Utility Layouts				4		8		12	\$ 1,580.00
1(c)(iii) 90% & 100% Conflict Assessment & Strip Map		1	3	16	2		2	24	\$ 3,340.00
1(c)(iv) Secure Reimbursable and Non-Reimbursable Adjustments			4	6	20			30	\$ 4,450.00
1(c)(v) Utility Schedule and Sequencing			2	4	1			7	\$ 1,090.00
1(c)(vi) Prepare Utility Certifications		1			3			4	\$ 605.00
								213	\$ 30,130.00
III SUBTOTALS		,							
HOURS SUB-TOTALS		10	18	80	67	30	8	213	
SUBTOTAL	\$	1,850.00	\$ 4,050.00	\$ 10,000.00	\$ 9,380.00	\$ 4,050.00	\$ 800.00		\$30,130.00

#### **Exhibit D - Cobb Fendley**

Expense Item	Unit	Unit Cost	Amount	Total Cost
CADD Plotting	sf	\$ 1.50	150	\$ 225.00
Mylar Plots	If	\$ 6.00	0	\$ -
Digital Ortho Plotting	if	\$ 2.00	0	\$ -
11" X 17" Mylar	sheet	\$ 1.00	0	\$ -
8 1/2" X 11" B/W Paper Copies	sheet	\$ 0.10	50	\$ 5.00
11" X 17" B/W Paper Copies	sheet	\$ 0.15	100	\$ 15.00
8 1/2" X 11" Color Paper Copies	sheet	\$ 1.00	0	\$ -
11" X 17" Color Paper Copies	sheet	\$ 1.80	100	\$ 180.00
Fax Copies	sheet	\$ 0.10	0	\$ -
Film and Development	roll	\$ 8.00	0	\$ -
4 X 6 Digital Color Prints	picture	\$ 0.50	0	\$ -
Oversized Digital Color Prints	picture	\$ 50.00	0	\$ -
Standard Postage	letter	\$ 0.44	24	\$ 10.56
Express Mail (Standard)	each	\$ 15.00	0	\$ -
Express Mail (Oversized)	each	\$ 30.00	0	\$ -
Deliveries	each	\$ 25.00	4	\$ 100.00
Airfare	each	\$ 200.00	0	\$ -
Rental Car	day	\$ 80.00	0	\$ -
Lodging	day	\$ 85.00	0	\$ -
Meals	day	\$ 36.00	0	\$ -
Mileage	mile	\$ 0.545	300	\$ 163.50
GPS Rental	day	\$ 80.000	0	\$ -
HazMat Database Search	each	\$ 250.000	0	\$ -
				\$ -
Miscellaneous Project Related Expenses	NA	at cost	NA	-
SUBTOTAL DIRECT EXPENSES				\$ 699.06

Exhibit D - Verdi

Fee Schedu	Fee Schedule/Budget for Verdi											
Т	ask Description	Project Manager	Senior Engineer	Design Engineer	E.I.T.	Chief Hydrologist	Admin / Clerical	Total Labor Hours	Total Direct Labor Costs			
		\$100.00	\$75.00	\$0.00	\$0.00	\$0.00	\$45.00					
	I. PLANS, SPECIFICATIONS AND ESTIMATE											
E4 LANDS	SCAPE ARCHITECTURE											
	Coordinate with project engineer	4						4	\$ 400.00			
b P	Prepare landscape, detail and specifications sheets (10) for construction.	175						175	\$ 17,500.00			
							•	179	\$ 17,900.00			
ll l	I. PLANS, SPECIFICATIONS AND ESTIMATE SUBTOTALS											
Н	HOURS SUB-TOTALS	179	0	0	0	0	0	179	\$ 17,900.00			
S	SUBTOTAL	\$ 17,900.00	\$ -	\$ -	\$ -	\$ -	\$ -		\$17,900.00			

#### Exhibit D - Verdi

Expense Item	Unit	Unit Cost	Amount	Total Cost
0.488.81.44				
CADD Plotting	sf	\$ 1.50	36	\$ 54.00
Mylar Plots	If	\$ 6.00		\$ -
Digital Ortho Plotting	If	\$ 2.00		\$ -
11" X 17" Mylar	sheet	\$ 1.00		\$ -
8 1/2" X 11" B/W Paper Copies	sheet	\$ 0.10	50	\$ 5.00
11" X 17" B/W Paper Copies	sheet	\$ 0.15		\$ -
8 1/2" X 11" Color Paper Copies	sheet	\$ 1.00		\$ -
11" X 17" Color Paper Copies	sheet	\$ 1.80	28	\$ 50.40
Fax Copies	sheet	\$ 0.10		\$ -
Film and Development	roll	\$ 8.00		\$ -
4 X 6 Digital Color Prints	picture	\$ 0.50		\$ -
Oversized Digital Color Prints	picture	\$ 50.00	4	\$ 200.00
Standard Postage	letter	\$ 0.44		\$ -
Express Mail (Standard)	each	\$ 15.00		\$ -
Express Mail (Oversized)	each	\$ 30.00		\$ -
Deliveries	each	\$ 25.00	2	\$ 50.00
Airfare	each	\$ 200.00		\$ -
Rental Car	day	\$ 80.00		\$ -
Lodging	day	\$ 85.00		\$ -
Meals	dav	\$ 36.00		\$ -
Mileage	mile	\$ 0.550		\$ -
GPS Rental	day	\$ 80.000		\$ -
HazMat Database Search	each	\$ 250.000		\$ -
		·		\$ -
Miscellaneous Project Related Expenses	NA	at cost	NA	\$ -
				*
SUBTOTAL DIRECT EXPENSES				\$ 359.40

Exhibit D - JAS

Lump Sum Basis

Fee Sched	ıle/Budaet	for JAS
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Task Description	Project Manager	Senior Engineer	Design Engineer	E.I.T.	Chief Hydrologist	Admin / Clerical	Total Labor Hours	Total Direct Labor Costs
II. PLANS, SPECIFICATIONS AND ESTIMATE								
E5 Irrigation								
a Landscape Irrigation Plan								\$ 10,000.00
·				•			0	\$ 10,000.00
II. PLANS, SPECIFICATIONS AND ESTIMATE SUBTOTALS								
HOURS SUB-TOTALS	0	0	0	0	0	0	0	\$ 10,000.00
SUBTOTAL	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$10,000.00

#### **Exhibit D - JAS**

Expense Item	Unit	Unit Cost	Amount	Total Cost
0.400.01				•
CADD Plotting	sf	\$ 1.50		\$ -
Mylar Plots	lf	\$ 6.00		\$ -
Digital Ortho Plotting	lf	\$ 2.00		\$ -
11" X 17" Mylar	sheet	\$ 1.00		\$ -
8 1/2" X 11" B/W Paper Copies	sheet	\$ 0.10		\$ -
11" X 17" B/W Paper Copies	sheet	\$ 0.15		\$ -
8 1/2" X 11" Color Paper Copies	sheet	\$ 1.00		\$ -
11" X 17" Color Paper Copies	sheet	\$ 1.80		\$ -
Fax Copies	sheet	\$ 0.10		\$ -
Film and Development	roll	\$ 8.00		\$ -
4 X 6 Digital Color Prints	picture	\$ 0.50		\$ -
Oversized Digital Color Prints	picture	\$ 50.00		\$ -
Standard Postage	letter	\$ 0.44		\$ -
Express Mail (Standard)	each	\$ 15.00		\$ -
Express Mail (Oversized)	each	\$ 30.00		\$ -
Deliveries	each	\$ 25.00		\$ -
Airfare	each	\$ 200.00		\$ -
Rental Car	day	\$ 80.00		\$ -
Lodging	day	\$ 85.00		\$ -
Meals	day	\$ 36.00		\$ -
Mileage	mile	\$ 0.550		\$ -
GPS Rental	day	\$ 80.000		\$ -
HazMat Database Search	each	\$ 250.000		\$ -
				\$ -
Miscellaneous Project Related Expenses	NA	at cost	NA	\$ -
	1			
SUBTOTAL DIRECT EXPENSES				\$ -

Exhibit D - CORSAIR

Lump Sum Basis

# KENNEY FORT BLVD, SEGMENTS 2 & 3 FOREST CREEK TO SH 45 City of Round Rock

Fee Schedule/Budget for Corsair

li ee Scheddie/Budget for Corsan							
Soil Borings	Quantity			Fee	Total		
10' Pavement Borings	2	Each	\$	200.00	\$	400.00	
Bucket Samples	0	Each	\$	100.00	\$	-	
Mileage	0	Each	\$	0.55	\$	-	
Utility Clearing and boring Staking EIT	1	Hours	\$	86.80	\$	86.80	
Field engineer EIT Logging	2	Hours	\$	86.80	\$	173.60	
Traffic Control	1	Day		\$1,800	\$	1,800.00	
			Sub	Total	\$	2,460.40	
Laboratory Testing							
Atterberg Limits Tests	4	Each	\$	65.00	\$	260.00	
Sieve Analyses Full Sieve with D50, D90	4	Each	\$	120.00	\$	480.00	
Caluble Culfate Content	2	Γa ab	<b>+</b>	25.00	4	F0 00	

			Sub	Total	\$ 822.00
Moisture Content of Soil	4	Each	\$	8.00	\$ 32.00
Resilient Modulus Testing of the Subgrade	0	Each	\$	500.00	\$ -
UU Triax Compression	0	Each	\$	180.00	\$ -
Eades and Grim (ASTM D6276) pH/lime series	0	Each	\$	290.00	\$ -
Soluble Sulfate Content	2	Each	\$	25.00	\$ 50.00
Sieve Analyses Full Sieve with D50, D90	4	Each	\$	120.00	\$ 480.00

Engineering	No. Hours	Billing Rate			Total
Project Manager	0	Per Hour	\$	200.28	\$ -
Senior Engineer	0	Per Hour	\$	126.86	\$ -
Design Engineer	2	Per Hour	\$	126.86	\$ 253.72
EIT	2	Per Hour	\$	86.80	\$ 173.60
			Sub Total		\$ 427.32
		<b>Grand Total</b>			\$ 3,709.72