



September 8, 2015

Mr. Earl Smith, P.E., CFM
City of League City
135 Dickinson Avenue
League City, Texas 77573

RE: Ervin Hobbs Connector Engineering Proposal

Dear Mr. Smith:

The City of League City has tasked R. G. Miller Engineers, Inc. (RGME) with the design of the Ervin Hobbs Connector. The purpose of this project to improve the existing Ervin Road which is to serve as a connector street from the future Hobbs Road to Calder Road. Currently Ervin Road is a two lane asphalt road with roadside ditches that extends approximately 800 feet west of Calder Road, where it terminates at a locked gate. The proposed design will extend Ervin Road approximately 2,400 feet beyond the gate (a total of 3,200 feet west of Calder Road) and improve the roadway to concrete pavement with concrete curb and gutters and an underground storm sewer system.

The future Ervin Road is to be a four lane concrete boulevard section with 10-foot wide walking trails that run along the north and south side of the future right-of-way. RGME will design the full boulevard section including the necessary public utilities (i.e. storm, water, and wastewater), however only the north half of the boulevard section will be constructed. The southern half of the roadway is to be constructed in a separate contract. The walking trail will be designed and constructed in a separate contract as well. The Hydraulic and Hydrologic Analysis, which is to be completed by Dannenbaum Engineering Corporation, is to incorporate the entire future boulevard section of Ervin Road. The proposed storm sewer system will also be sized to include the entire future boulevard section of Ervin Road.

In previous meetings with League City officials, it was mentioned that a future 24" water line may cross or run alongside Ervin Road. RGME will coordinate with League City Engineering Department on the potential alignment and design of the 24" water line as an optional service.

r. g. miller

R. G. Miller Engineers, Inc. (RGME) is pleased to submit our proposal to perform engineering services for the City of League City regarding the Ervin Hobbs Connector project.

Attached to this cover letter are the following Exhibits:

- A. Scope of Services – This scope covers Preliminary, Final and Construction Phase Services.
- B. PH I, II and III Level of Effort (LOE) – Please note that the PH II and PH III LOE are estimated and will require refinement due to outcome of preliminary engineering report. PH II and PH III LOE's are provided for budgetary information only.
- C. Right-Of-Way Alignment and Topographic Survey – Miller Survey Group
- D. Real Estate Acquisition services - Property Acquisition Services, LLC
- E. Hydraulic and Hydrology Study - Dannenbaum Engineering Corporation
- F. Geotechnical Investigation and Report – Terracon
- G. Environmental Investigation and Report (PH I ESA only) – Terracon
- H. Natural Resources Services (Jurisdictional Assessment/USACE Permit assistance) – Terracon
- I. Urban Forestry Services – C. N. Koehl
- J. Project Schedule – Schedule does not take into account Optional Services. If Optional Services are authorized, project schedule will need to be revised.

The following is a summary of the Estimated Level of Effort (Exhibit B):

Contract Amount

Prime and Sub-Consultant

Phase	Basic	Optional	Total
Phase I	\$ 377,052	\$ 43,525	\$ 420,577
Phase II	\$ 237,410	\$ 37,977	\$ 275,387
Phase III	\$ 48,320	\$ -	\$ 48,320
Total	\$ 662,782	\$ 81,502	\$ 744,284

If you have any questions or require further information regarding the above, please do not hesitate to contact me.

Sincerely,

R. G. Miller Engineers, Inc.



David Kubala, P.E.
Public Works Manager



Fred Bauhof, P.E.
Vice President

DK/JN

Attachments

P 3963

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EXHIBIT “A”

SCOPE OF SERVICES

The Engineer shall provide engineering services for Ervin Road (Ervin) from Calder Road westerly to Hobbs Road (approximately 3,200 feet). Ervin will be a four (4) lane, concrete with curb and gutter boulevard pavement section in a 100-foot Right-of-Way (ROW) section. For the purposes of this contract, the full boulevard section of the roadway shall be designed but only the northern half of the roadway will be constructed. The southern half of the roadway is to be constructed in a separate contract. Also, the design of the walking trails is not part of this contract. Additionally, flares at intersections will accommodate turn lanes and a conventional intersection will be designed at Ervin/Calder. The Engineer shall study COLC Master Plans and include recommendations for any additional ROW/easements required to accommodate water distribution, wastewater collection, hike/bike trails, etc. All designs will follow the *General Design and Construction Standards City of League City 2013* (or as currently amended) and the *Harris County Flood Control District Policy, Criteria, and Procedure Manual for Approval and Acceptance of Infrastructure* as adopted under City of League City Resolution No. 2011-07

The engineering services shall have three (3) primary phases consisting of a Preliminary Engineering Report with ROW Alignment (PH I), Final Design (PH II) and Construction Services (PH III). In addition, other professional services will be provided and they include but are not limited to the following, Hydraulic and Hydrology Study, Utility Coordination, Permitting, Route and Topographic Survey, Environmental, Geotechnical, Urban Forestry, Real Estate Acquisition, Agency Coordination, and Public Outreach.

The following is a breakdown of the three (3) primary services:

Phase I – Preliminary Engineering Report and ROW Alignment

1. **Preliminary Feasibility Review:** The Engineer will conduct a preliminary verification of the depth for the proposed storm sewer and Ervin Off-Site Channel due to the relative minimal depth of Magnolia Channel. If depth is sufficient, then Preliminary Engineering Study will begin. If not, then a meeting with COLC to discuss other alternatives will be necessary. The Scope of Service may be revised to reflect the different route.
2. **Right-Of-Way Alignment:** The Engineer will provide the COLC the necessary alignment services required for the extension of Ervin from Calder Road westerly to Hobbs Road Extension (approximately 3,200 feet). The Engineer will provide alignment maps and individual parcel maps illustrating the existing and the proposed ROW along with Metes and Bounds descriptions. The deliverables will consist of an overall ROW Alignment Map, individual parcel maps (8-1/2 inches

by 11-inches) and Metes and Bounds Descriptions. All Land Title Survey work will conform to Category 1A, Condition II per the latest Manual of Practice For Land Surveying in the State of Texas. Engineer shall obtain Rights-of-Entry for any private land that will need to be accessed for ROW and/or Topographic information. See Exhibit C.

3. **Topographic Survey:** The Engineer will provide COLC a full topographic survey of the project limits. The Engineer will provide full topographic survey services containing horizontal as well as vertical data, including cross-sections every 100-feet. The survey will extend 20-feet beyond each side of the proposed ROW. All surveying will be tied to the ongoing design project for Calder Road and the ongoing private development along Hobbs. If the two ongoing projects differ, Calder Road will prevail and adjustments will be noted for the development along Hobbs. A survey Control Map will be submitted illustrating the Survey Control Monuments used and their respective data. See Exhibit C.
4. **Hydraulic and Hydrology Study:** The Engineer will provide COLC a drainage study, impact analysis and mitigation plan for the project limits. The impact study will analyze sheet flow patterns and quantify runoff flow rates for existing and proposed (pre and post project) conditions. Once the impacts have been quantified the mitigation portion of the study will recommend multiple mitigation alternatives to offset these impacts generated by the proposed project. The study will document all the hydrologic and hydraulic parameters involved, the methodology and design frequencies utilized, and will enumerate the results through the use of tables and exhibits. The study will quantify changes in runoff due to increases in impervious cover, changes in time of concentration and changes in sheet flow/overland flow due to the proposed boulevards. Mitigation measures shall be recommended within the proposed right-of-way wherever possible or as an adjacent parcel basin. Coordination with the ongoing area developments (Calder and Sedona) will be performed to achieve the best economical drainage system for the project limits. This may mean designing the drainage system to be added on and/or included within the overall drainage plan for both area projects. See Exhibit E.
5. **Preliminary Storm Sewer Design:** In conjunction with the drainage study the Engineer shall develop a preliminary storm sewer design layout illustrating all of the preliminary details of the new proposed drainage system. The preliminary design shall be depicted on exhibit sheets which shall be used as a basis for the final design. The Engineer shall perform all of the drainage design in accordance with the latest COLC criteria manual. The preliminary storm sewer plan and profiles will be part of the overall 30% plans, drainage area maps, hydraulic

computations, and proposed mitigation facility layouts if necessary. The storm sewer design shall be performed by utilizing SWMM Drainage software.

6. **Water Line Feasibility:** The Engineer will coordinate with COLC to study the feasibility of constructing a 24" water line that will cross Ervin Road and/or run alongside the roadway. This task does not include the design of the water line. Design of the water line is part of Phase II Final Design - Optional Services.
7. **Geotechnical Investigation and Report:** The Engineer will provide COLC a geotechnical study and report in accordance with COLC Guidelines. See Exhibit F.
8. **Environmental Investigation and Report:** The Engineer will provide COLC a Phase I Environmental Site Assessment. If the Phase I Environmental Site Assessment determines that additional environmental services are required, then associated work will be covered as OPTIONAL SERVICES requiring written approval by COLC. All environmental work will conform to the respective governmental agencies that have jurisdictional oversight in addition to COLC Environmental Services. See Exhibit G. A Phase II ESA budgetary fee is included in the LOE. Please note that if the Phase II ESA is required, the fee may need to be revised to reflect the actual work being completed.
9. **Natural Resources Services:** The Engineer will provide Natural Resource Services to include Clean Water Act Compliance – Waters of the U.S. Jurisdictional Assessment and USACE Permit assistance. See Exhibit H.
10. **Urban Forestry Services:** The Engineer will provide COLC Urban Forestry Services conforming the COLC's Chapter 102-12 *Tree Preservation and Provisions Ordinance*, as currently amended. See Exhibit I.
11. **Parks Board Meeting:** RGME will met with the Parks Board and incorporate any comments they may have into the Final PER.
12. **Preliminary Engineering Report:** The Engineer will provide COLC the necessary preliminary engineering services (design, meetings, coordination, etc.) for the design of the planned improvements for Ervin Road. The Preliminary Engineering Report (PER) will illustrate the proposed ROW alignment and width in addition to a geometric (horizontal and vertical) alignment of the pavement section for review and comment by COLC and other stakeholders as deemed necessary by COLC. The PER will also include the data and reports as previously described above. The plan and profiles will be 30% complete and will provide sufficient information for COLC to make a decision on the path forward to Final Design (PH II). Within the project limits, Engineer will perform coordination with

all Utility and Pipeline Companies, Drainage Districts/Flood Control Agencies, other regulatory agencies as required, and United States Army Corp of Engineers as necessary.

- 13. Optional Services:** If Magnolia Creek does not have sufficient depth at the off-site drainage ditch outfall and alternative routes are not feasible, improvements to Magnolia Creek may be required. If improvements are made to Magnolia Creek, additional geotechnical, environmental, topographic, and wetland delineation will be required. The Engineer will prepare 30% plan and profiles of the improvements to the Magnolia Creek. The Engineer will only proceed with Optional Services with written authorization from COLC.

The PER and ROW Alignment will be submitted to the COLC and other stakeholders as necessary, for review and comment. The Engineer shall independently develop and report quantities and a construction cost estimate at PER submission. The estimate will be based on latest unit prices at the time of the estimate. Engineer will submit five (5) copies of the Draft PER which will include all reports in draft form. Engineer will take the comments and incorporate them into the Final PER and ROW Alignment for approval. Once written authorization is received by the Engineer, Phase II Final Design will begin.

Phase II – Final Design

- 1. Roadway and Storm Sewer Plans:** The Engineer will provide the necessary drawings incorporating the approved alignments and/or geometric sections from the PER. These plans will delineate the information required for the project to be constructed on the ground. Drawings included but not limited to will be as follows: Typical Cross-Sections, Drainage Area Map, Drainage Calculations, Plan and Profiles illustrating pavement, storm sewer and any other public utilities. The plans will be prepared per COLC standards using 22-inch by 34-inch full size sheets that can be reduced to 11-inch x 17-inch half size plans.
- 2. Real Estate Acquisition:** The Engineer will provide Real Estate Acquisition services on behalf of COLC. Based on the approved ROW alignment and written approval from COLC, Engineer shall proceed with acquiring the necessary parcels of land that will be required for the projects planned improvements. All acquisition services shall be performed per the Uniform Real Property Acquisition and Relocation Assistance Act current addition. See Exhibit D.
- 3. Traffic Control Plans:** The Engineer shall prepare Traffic Control Plans (TCP) in coordination with adjacent section. These plans shall also be prepared in accordance with the Texas Manual on Uniform Traffic Control Devices for Streets

and Highways (latest edition). The Engineer shall provide a written narrative of the construction sequencing and work activities per phase and determine the existing and proposed traffic control devices (regulatory signs, warning signs, guide signs, route markers, construction pavement markings, barricades, flag person, temporary traffic signals, etc.) to be used to handle traffic including at grade intersections during each construction sequence. The Engineer shall show temporary roadways, ramps and detours required to maintain lane continuity throughout the construction phasing. Where detours are required, the Engineer shall develop typical cross sections, calculate quantities, and show horizontal and vertical alignment information. The Engineer shall provide a detailed layout and arrangement of construction signs, construction pavement marking, traffic control devices (including temporary signals and signal heads). Continuous, safe access to all properties during all phases of construction is mandatory. The Engineer shall develop TCP to preserve existing curb cuts (if applicable). The Engineer shall design temporary drainage to replace existing drainage disturbed by construction activities or to drain detour pavement. The Engineer shall show horizontal and vertical location of culverts and required cross sectional area of culverts.

4. **Storm Water Pollution Prevention Plan:** The Engineer will provide COLC a Storm Water Pollution Prevention Plan (SWPPP) report, plans, documentation and specifications in accordance with TPDES and COLC standards. The SW3P sheets will include the location of erosion control devices and any required temporary and permanent erosion control measures. The plan shall also include all the required erosion control details and standard sheets.
5. **Pavement Marking and Signage Plans:** The Engineer shall prepare drawings, specifications and details for all signs. The proposed signs shall be illustrated and numbered on plan sheets. The Engineer shall detail permanent and temporary pavement markings and channelization devices on plan sheets.
6. **Earthwork/Cross-Sections:** The Engineer shall develop an earthwork analysis to determine cut and fill quantities and provide final design cross sections at 100 feet intervals and 50 feet intervals in curves.
7. **Utility Coordination:** This will be a continuation of the work performed during the PER Phase. Typically under the Final Design Phase, utility relocation/adjustments are finalized with work beginning to get underway by the utility company so any possible conflicts are removed prior to advertisement and bid for the Project.
8. **Opinion of Probable Construction Cost:** This will be a continuation of the work performed during the PER Phase. The Engineer shall independently develop

and report quantities at project submittals (60%, 90% and Final PS&E). The estimate will be based on latest unit prices at the time of the estimate.

9. **Construction Project Manual:** The Engineer will provide a Project Manual which will include the Front End documents, Unit Bid Price Form, list of Standard Specifications and Special Specifications. The Project Manual will also contain any Permitting required by other regulatory agencies.
10. **Optional Services:** If during the preliminary design phase improvements to Magnolia Creek and/or the 24" water line design are authorized, the Engineer will provide the necessary drawings incorporating the approved recommendations from the PER. These plans will delineate the information required for the project to be constructed on the ground. Drawings included but not limited to will be as follows: Typical Cross-Sections, Plan and Profiles illustrating the proposed water line and channel improvements. The plans will be prepared per COLC standards using 22-inch by 34-inch full size sheets that can be reduced to 11-inch x 17-inch half size plans. If improvements to Magnolia Creek are authorized, an Individual Permit, and not a Nationwide Permit, may be required from the USACE due to impacts the design will cause on jurisdictional waters of the U.S. Please note that some of the fee estimates are budgetary only fees. A final fee could not be determined due to unforeseen and unknown variables that could arise during design. If these services are authorized, the scope will need to be revised to reflect the recommended work from Phase I Preliminary Engineering. The Engineer will only proceed with Optional Services with written authorization from COLC.
11. **Submittals:** The Engineer shall deliver each submittal in accordance with the milestones shown in the Work Schedule. The Engineer shall provide both original and processed data to COLC on approved medium. Each data set shall be fully compatible with the computer system and program formats in use by the COLC at the time of submission, without further modification or conversion.

The Engineer shall deliver five (5) copies of the 60% and 90% project completion phase submittals to the COLC project manager unless otherwise directed. For the final 100% submittal, the Engineer shall submit one set in Mylar accompanied by ten (10) paper copies. In addition each submittal will include (1) copy of the plans in PDF format.

The 60% submittal shall include the following:

Cover Sheet
Index Sheet (list of drawings)

General Notes Sheets
Overall Layout Sheet
Survey Control Map
Drainage Area Maps and Hydraulic and Hydrology Computations
Plan and profile drawings of existing conditions, existing utilities and proposed improvements
Proposed Pavement Marking and Signage Plans
Traffic Control Plan and Detour Plans (if necessary)
Storm Water Pollution Prevention Plan
Tree and plant protection plan
Standard Details
Probable Opinion of Construction Estimate
Index of Specifications

90% Submittal. For all practical purposes, the 90% submittal will be a 100% complete set of plans, in the opinion of the engineer, but will be plotted on paper instead of Mylars. The 90% submittal shall include items submitted on previous submittals in addition to the following:

Final Index of Sheets
Pavement Marking Layout/Details
Miscellaneous Details
Corresponding Quantity Summary Sheets
Corresponding Detail Sheets for all Items of Work in this submittal
Final Probable Opinion of Construction Estimate
Cut/Fill Cross Sections
All Specifications for the Project (No front end; supplied by COLC) in a format pre-approved by COLC.

The 100% submittal shall include:

PS&E Package 100% complete.
Construction Estimate in Excel format
Final Project Manual including all documents for Project to be advertised

The Engineer shall forward to League City, upon completion two (2) sets of Compact Discs (CDs/DVDs) with all the files containing the information and layouts used to prepare the PS&E.

Advertisement and Bid Services:

Engineer will support COLC during the Advertisement and Bid Phase of the Project. Services will include assisting with the advertisement of the Project, attendance at the

Pre-Bid, preparing and submitting any Addendums as required, Bid Tabulation and submitting a letter of recommendation for the lowest best bid contractor for the Project.

Phase III – Construction Phase Services:

Engineer will support COLC during the construction phase. Services to be provided will be attendance at the Pre-Con Meeting, review of submittals, Request for Information, Meetings and Site Visits, Project Close Out documentation and providing a set of Record Drawings (hard copy and/or PDF as directed by COLC)

Exhibit B

PHASE I BASIC SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE Ervin Hobbs Connector Project

Date: August 31, 2015
Revision: 1

	Principal / Managing Director	Senior Project Manager	Civil / Project Engineer	Graduate Engineer	Senior Designer	Senior CADD Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 85	\$ 75	\$ 45	\$ 39	\$ 43	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3X)	\$ 255	\$ 225	\$ 135	\$ 117	\$ 129	\$ 105	\$ 90		
1. Coordination									
1.1 COLC	10	20		20			5	55	\$ 9,840.00
1.2 Regulatory Agencies (USACE, etc.)	5	20		20			5	50	\$ 8,565.00
1.3 Private Utilities includes pipeline co's		5	25	25			5	60	\$ 7,875.00
1.4 Adjacent Ongoing Projects (Calder, Sedona Development - Hobbs)		15		15				30	\$ 5,130.00
Subtotal Hours	15	60	25	80	0	0	15	195	
Subtotal Fee	\$ 3,825.00	\$ 13,500.00	\$ 3,375.00	\$ 9,360.00	\$ -	\$ -	\$ 1,350.00		\$ 31,410.00
2. Data Collection									
2.1 Field Verify Existing Conditions (Including Site Visits with and without City PM)		40		40				80	\$ 13,680.00
Subtotal Hours	0	40	0	40	0	0	0	80	
Subtotal Fee	\$ -	\$ 9,000.00	\$ -	\$ 4,680.00	\$ -	\$ -	\$ -		\$ 13,680.00
3. H&H Analysis (See Attached DEC LOE for detail)									
3.1 Review Existing Conditions									\$ 2,156.00
3.2 Preliminary Feasibility Review									\$ 3,322.00
3.3 Impact Analysis									\$ 50,539.50
3.4 Prepare Report									\$ 25,487.00
3.5 Project Management									\$ 15,235.00
3.6 Other Direct Costs									\$ 2,200.00
Subtotal Hours	0	0	0	0	0	0	0	0	
Subtotal Fee (includes 10% Sub-Consultant Markup Fee)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ 98,939.50
4. Preliminary Engineering Report									
4.1 Determine ROW/Easement Acquisition Required for Recommended Alternative		5	8					13	\$ 2,205.00
4.2 Determine Utility Relocation if Required for Recommended Alternative		5	10					15	\$ 2,475.00
4.3 Prepare Estimated Cost Estimate for Recommended Alternative		4	10	20				34	\$ 4,590.00
4.4 Prepare Text and Appendices for PER	5	20	70	35			70	195	\$ 25,620.00
4.4 Prepare PER Exhibits								0	\$ -
Project Location and Vicinity Maps				3		7		10	\$ 1,086.00
Typical Cross Sections				3		7		10	\$ 1,086.00
Right-of-Way Map				3		7		10	\$ 1,086.00
Public Utility Map				3		7		10	\$ 1,086.00

Exhibit B

PHASE I BASIC SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE Ervin Hobbs Connector Project

Date: August 31, 2015
Revision: 1

	Principal / Managing Director	Senior Project Manager	Civil / Project Engineer	Graduate Engineer	Senior Designer	Senior CADD Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 85	\$ 75	\$ 45	\$ 39	\$ 43	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3X)	\$ 255	\$ 225	\$ 135	\$ 117	\$ 129	\$ 105	\$ 90		
Private Utility Map				3		7		10	\$ 1,086.00
30% level plan & profiles (13 sheets +/-)		20	60	110		180		370	\$ 44,370.00
4.4 Internal QA/QC of Review of PER	5	10	5					15	\$ 4,200.00
4.5 Submit 5 copies Draft PER				5			5	10	\$ 1,035.00
4.6 Address Comments and Submit Final PER V.1 (5 copies and 5 discs)	1	3	6	10		10	10	39	\$ 4,860.00
Subtotal Hours	11	67	169	195	0	225	85	752	
Subtotal Fee	\$ 2,805.00	\$ 15,075.00	\$ 22,815.00	\$ 22,815.00	\$ -	\$ 23,625.00	\$ 7,650.00		\$ 94,785.00
5.0 Preliminary Feasibility Review									
5.1 Preliminary design of flow line depth		5		10				15	\$ 2,295.00
2.2 Prepare sketch illustrating flowlines		2		2		5		9	\$ 1,209.00
Subtotal Hours	\$ -	\$ 7.00	\$ -	\$ 12.00	\$ -	\$ 5.00	\$ -	24	
Subtotal Preliminary Feasibility Review	\$ -	\$ 1,575.00	\$ -	\$ 1,404.00	\$ -	\$ 525.00	\$ -		\$ 3,504.00
6.0 Parks Board Meeting									
6.1 Prepare for and Attend Parks Board Meeting		4	4	4		5	2	19	\$ 2,613.00
6.2 Incorporate Parks Board Comments into PER		2	6				2	10	\$ 1,440.00
Subtotal Hours	\$ -	\$ 6.00	\$ 10.00	\$ 4.00	\$ -	\$ 5.00	\$ 4.00	29	
Subtotal Public Meeting	\$ -	\$ 1,350.00	\$ 1,350.00	\$ 468.00	\$ -	\$ 525.00	\$ 360.00		\$ 4,053.00

Exhibit B

PHASE I BASIC SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE Ervin Hobbs Connector Project

Date: August 31, 2015
Revision: 1

	Principal / Managing Director	Senior Project Manager	Civil / Project Engineer	Graduate Engineer	Senior Designer	Senior CADD Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 85	\$ 75	\$ 45	\$ 39	\$ 43	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3X)	\$ 255	\$ 225	\$ 135	\$ 117	\$ 129	\$ 105	\$ 90		
7.0 Other Tasks (completed by Subcontractor, see attached exhibits for each LOE)	Fee Estimate		10% Mark up		Total Fee				
7.1 Survey	\$ -		\$ -		\$ -				
7.1.1 Spot Elevation for Flowline Check (Magnolia/Offsite and Road)	\$ 1,650.00		\$ 165.00		\$ 1,815.00				
7.1.2 Alignment and Topographic Survey	\$ 29,500.00		\$ 2,950.00		\$ 32,450.00				
7.1.2.A Parcel Map preparation and descriptions (Assume 5 parcels at \$1,500/parcel)	\$ 7,500.00		\$ 750.00		\$ 8,250.00				
7.1.3 Ervin Off-Site Channel (topographic/cross-sections)	\$ 6,490.00		\$ 649.00		\$ 7,139.00				
7.1.3.A Parcel Mapping for Ervin Off-Site Channel	\$ 1,500.00		\$ 150.00		\$ 1,650.00				
7.2 Abstracting	\$ 6,000.00		\$ 600.00		\$ 6,600.00				
7.3 Urban Forestry Services	\$ 3,440.00		\$ 344.00		\$ 3,784.00				
7.4 Environmental Site Assessment Phase I	\$ 4,000.00		\$ 400.00		\$ 4,400.00				
7.5 Natural Resources/USACE Wetland Delineation	\$ 8,550.00		\$ 855.00		\$ 9,405.00				
7.6 Geotechnical Services	\$ 19,420.00		\$ 1,942.00		\$ 21,362.00				
7.7 Phase II ESA (budgetary fee only)	\$ 30,000.00		\$ 3,000.00		\$ 33,000.00				
7.8 Reproduction Services	\$ 750.00		\$ 75.00		\$ 825.00				
Subtotal Other Tasks	\$ 118,800.00		\$ 11,880.00		\$ 130,680.00				

TOTAL PHASE I SERVICES FEES \$ 377,051.50

Exhibit B

PHASE I OPTIONAL SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE Ervin Hobbs Connector Project Magnolia Creek Improvements			
Date: August 31, 2015 Revision: 1			
Description	Fee Estimate	10% Mark Up	Additional Services Fee
1.0 Preliminary Feasibility of Improvements to Magnolia Creek			
1.1 Preliminary design of channel improvements	6,165.00	-	6,165.00
1.2 Prepare 30% Plan and Profiles for PER	7,000.00	-	7,000.00
Subtotal Preliminary Feasibility Review			13,165.00
2.0 Other Tasks for Improvements to Magnolia Creek			
2.1.1 Magnolia Creek Topography	6,000.00	600.00	6,600.00
2.1.2. Parcel Work Magnolia (Assume 4 parcels at \$1,500/parcel)	6,000.00	600.00	6,600.00
2.2 Environmental Site Assessment Phase I	2,500.00	250.00	2,750.00
2.3 Natural Resources/USACE Wetland Delineation	5,900.00	590.00	6,490.00
2.4 Geotechnical Services	6,700.00	670.00	7,370.00
2.5 Reproduction Services	500.00	50.00	550.00
Subtotal Other Tasks			30,360.00
Total Phase I Optional Services Fee			43,525.00

Exhibit B

PHASE II BASIC SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE									
Ervin Hobbs Connector Project									
Date: August 31, 2015									
Revision: 1									
	Principal / Managing Director	Senior Project Manager	Civil / Project Engineer	Graduate Engineer	Senior Designer	Senior CADD Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 85	\$ 75	\$ 45	\$ 39	\$ 43	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3X)	\$ 255	\$ 225	\$ 135	\$ 117	\$ 129	\$ 105	\$ 90		
COORDINATION, DATA COLLECTION, REVIEW AND APPROVAL									
Project Meetings (Kick-Off + 6 Meetings @ 3 Hrs Ea. + Meeting Minutes)		21	21				7	49	8,190.00
Internal QA/QC (60%, 90% & 100% Reviews)	4	10	20	20				54	8,310.00
COLC QA/QC (60%, 90% & 100% Reviews)								0	-
Site Meeting with Construction (one)		4	4	4				12	1,908.00
Coordinate, Review and Approvals With COLC		2	8	8				18	2,466.00
Coordinate, Review and Approvals with Galveston County Drainage District (if required)	2	4	8					14	2,490.00
Coordinate, Review and Approvals with TxDot (if required)								0	-
Coordinate/Approval with Private Utilities	2	8	24	24				58	8,358.00
Coordinate/Approval with Railroads (if required)								0	-
Coordinate with Adjacent Ongoing Projects (if required)	4	4						8	1,920.00
Field Visits and Data Collection		4	12	12				28	3,924.00
Subtotal Hours	12	57	97	68	0	0	7	241	
Subtotal Fee	\$ 3,060.00	\$ 12,825.00	\$ 13,095.00	\$ 7,956.00	\$ -	\$ -	\$ 630.00		37,566.00
FRONT END DRAWINGS									
Cover Sheet (Project Title; Location & Vicinity Map)				1		1		2	222.00
Index Of Drawings				1		1		2	222.00
General Construction, Private Utility Notes, & HCFCD Notes (If Required)		1		2		1		4	564.00
Legends (Const. & Topo), Abbreviations & Plan & Profile Key Notes				1		2		3	327.00
Project Layout - Pavement & Boring Location Plan						2		2	210.00
Project Layout – Existing & Proposed Storm Sewers		1				4		5	645.00
Project Layout – Existing & Proposed Sanitary Sewers								0	-
Project Layout - Existing & Proposed Water Lines								0	-
Typical Sections		1		2		2		5	669.00
Drainage Area & Overland Sheet Flow Map		1		2		3		6	774.00
Drainage Calculations (HouStorm Inlet Analysis and SWMM Export Tables)		1	25			2		28	3,810.00
Driveway Schedule		1		10		2		13	1,605.00

Exhibit B

PHASE II BASIC SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE									
Ervin Hobbs Connector Project									
Date: August 31, 2015									
Revision: 1									
	Principal / Managing Director	Senior Project Manager	Civil / Project Engineer	Graduate Engineer	Senior Designer	Senior CADD Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 85	\$ 75	\$ 45	\$ 39	\$ 43	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3X)	\$ 255	\$ 225	\$ 135	\$ 117	\$ 129	\$ 105	\$ 90		
Earthwork (Cut & Fill) & Summary Sheet		2		30		15		47	5,535.00
Flood Plain Volume Calcs (If Required)								0	-
Subtotal Hours	0	8	25	49	0	35	0	117	
Subtotal Fee	\$ -	\$ 1,800.00	\$ 3,375.00	\$ 5,733.00	\$ -	\$ 3,675.00	\$ -		14,583.00
PLAN & PROFILES									
PLAN & PROFILE - # of Sheets by Type (Main Alignment, Cross Street, etc.)		30	55	225		320		630	74,100.00
TRAFFIC CONTROL (includes construction and permanent traffic control)		10	20	35		50		115	14,295.00
Subtotal Hours	0	40	75	260	0	370	0	745	
Subtotal Fee	\$ -	\$ 9,000.00	\$ 10,125.00	\$ 30,420.00	\$ -	\$ 38,850.00	\$ -		88,395.00
STANDARD DETAILS									
Pavement Details			1			1		2	240.00
Excavation, Bedding, Backfill & Pavement Repair Details			1			2		3	345.00
Sanitary Sewer Details								0	-
Storm Sewer Details			1			2		3	345.00
Water Line Details								0	-
Special Details								0	-
Pavement Markings			1			2		3	345.00
Project Sign			1			1		2	240.00
Subtotal Hours	0	0	5	0	0	8	0	13	
Subtotal Fee	\$ -	\$ -	\$ 675.00	\$ -	\$ -	\$ 840.00	\$ -		1,515.00
DESIGN SERVICES									
Storm Sewer Design		5	20	50					9,675.00
Paving & Grading/Extreme Event Design		15	30	60					14,445.00
Waterline & Waterline Adjustment Design									-
SWPPP Design and Report		5	20			20			5,925.00
Subtotal Hours	0	25	70	110	0	20	0	225	
Subtotal Fee	\$ -	\$ 5,625.00	\$ 9,450.00	\$ 12,870.00	\$ -	\$ 2,100.00	\$ -		30,045.00

Exhibit B

PHASE II BASIC SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE									
Ervin Hobbs Connector Project									
Date: August 31, 2015									
Revision: 1									
	Principal / Managing Director	Senior Project Manager	Civil / Project Engineer	Graduate Engineer	Senior Designer	Senior CADD Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 85	\$ 75	\$ 45	\$ 39	\$ 43	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3X)	\$ 255	\$ 225	\$ 135	\$ 117	\$ 129	\$ 105	\$ 90		
DESIGN - PROJECT MANUAL (60%, 90%, & 100%)									
Sheet by Sheet Quantity Take-off and Cost Estimate		2	5	15			4		3,240.00
Contract Documents (TOC, Intro Info, Bid Reqmt, Contract Reqmt)		2	10	15			2		3,735.00
Specifications	2	4	5	16			2		4,137.00
Subtotal Hours	2	8	20	46	0	0	8	84	
Subtotal Fee	\$ 510.00	\$ 1,800.00	\$ 2,700.00	\$ 5,382.00	\$ -	\$ -	\$ 720.00		11,112.00
BID PHASE SERVICES									
Pre-Bid Meeting		3	5				2		1,530.00
Answer Contractor Inquiries, Draft And Issue Addendums		5	10				2		2,655.00
Bid Tabulation		2	8				2		1,710.00
Research Low Bid Contractor, Issue Letter Of Recommendation		1	4	4			4		1,593.00
Subtotal Hours	0	11	27	4	0	0	10	52	
Subtotal Fee	\$ -	\$ 2,475.00	\$ 3,645.00	\$ 468.00	\$ -	\$ -	\$ 900.00		7,488.00
TOTAL BASIC SERVICES HOURS	14	149	319	537	0	433	25	1477	
TOTAL BASIC SERVICES FEE	\$3,570.00	\$33,525.00	\$43,065.00	\$62,829.00	\$0.00	\$45,465.00	\$2,250.00		190,704.00
BASIC SVCIES PERFORMED BY SUB-CONTRACTOR	Fee Estimate		10% Mark-up		Total Fee				
Tree Protection Plan	\$ 5,460.00		\$ 546.00		\$ 6,006.00				
Property Acquisition Services	\$ 17,000.00		\$ 1,700.00		\$ 18,700.00				
USACE Permitting (includes additional cost for Individual Permit)	\$ 18,000.00		\$ 1,800.00		\$ 19,800.00				
Reproduction	\$ 2,000.00		\$ 200.00		\$ 2,200.00				
Subtotal Fee					\$ 46,706.00				
TOTAL BASIC SERVICES FEE									237,410.00

Exhibit B

PHASE II OPTIONAL SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE									
Ervin Hobbs Connector Project									
Water Line Design/Magnolia Creek Improvements									
Date: August 31, 2015									
Revision: 1									
	Principal / Managing Director	Senior Project Manager	Civil / Project Engineer	Graduate Engineer	Senior Designer	Senior CADD Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 85	\$ 75	\$ 45	\$ 39	\$ 43	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3X)	\$ 255	\$ 225	\$ 135	\$ 117	\$ 129	\$ 105	\$ 90		
COORDINATION, DATA COLLECTION, REVIEW AND APPROVAL									
Project Meetings (Kick-Off + 6 Meetings @ 3 Hrs Ea. + Meeting Minutes)								0	-
Internal QA/QC (60%, 90% & 100% Reviews)		3	6	6				15	2,187.00
COLC QA/QC (60%, 90% & 100% Reviews)								0	-
Site Meeting with Construction (one)								0	-
Coordinate, Review and Approvals With COLC		1	1	1				3	477.00
Coordinate, Review and Approvals with Galveston County Drainage District (if required)	2	4	8					14	2,490.00
Coordinate, Review and Approvals with TxDot (if required)								0	-
Coordinate/Approval with Private Utilities		1	2	5				8	1,080.00
Coordinate/Approval with Railroads (if required)								0	-
Coordinate with Adjacent Ongoing Projects (if required)	4	4						8	1,920.00
Field Visits and Data Collection		4	4	4				12	1,908.00
Subtotal Hours	6	17	21	16	0	0	0	60	
Subtotal Fee	\$ 1,530.00	\$ 3,825.00	\$ 2,835.00	\$ 1,872.00	\$ -	\$ -	\$ -		10,062.00
FRONT END DRAWINGS									
Cover Sheet (Project Title; Location & Vicinity Map)								0	-
Index Of Drawings								0	-
General Construction, Private Utility Notes, & HCFCD Notes (If Required)								0	-
Legends (Const. & Topo), Abbreviations & Plan & Profile Key Notes								0	-
Project Layout - Pavement & Boring Location Plan								0	-
Project Layout – Existing & Proposed Storm Sewers								0	-
Project Layout – Existing & Proposed Sanitary Sewers								0	-
Project Layout - Existing & Proposed Water Lines		1	5			10		16	1,950.00
Typical Sections								0	-
Drainage Area & Overland Sheet Flow Map								0	-
Drainage Calculations (HouStorm Inlet Analysis and SWMM Export Tables)								0	-
Driveway Schedule								0	-

Exhibit B

PHASE II OPTIONAL SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE									
Ervin Hobbs Connector Project									
Water Line Design/Magnolia Creek Improvements									
Date: August 31, 2015									
Revision: 1									
	Principal / Managing Director	Senior Project Manager	Civil / Project Engineer	Graduate Engineer	Senior Designer	Senior CADD Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 85	\$ 75	\$ 45	\$ 39	\$ 43	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3X)	\$ 255	\$ 225	\$ 135	\$ 117	\$ 129	\$ 105	\$ 90		
Earthwork (Cut & Fill) & Summary Sheet		2	10			10		22	2,850.00
Flood Plain Volume Calcs (If Required)								0	-
Subtotal Hours	0	3	15	0	0	20	0	38	
Subtotal Fee	\$ -	\$ 675.00	\$ 2,025.00	\$ -	\$ -	\$ 2,100.00	\$ -		4,800.00
PLAN & PROFILES									
PLAN & PROFILE - # of Sheets by Type (Main Alignment, Cross Street, etc.)		6	9	20		40		75	9,105.00
TRAFFIC CONTROL (includes construction and permanent traffic control)								0	-
Subtotal Hours	0	6	9	20	0	40	0	75	
Subtotal Fee	\$ -	\$ 1,350.00	\$ 1,215.00	\$ 2,340.00	\$ -	\$ 4,200.00	\$ -		9,105.00
STANDARD DETAILS									
Pavement Details								0	-
Excavation, Bedding, Backfill & Pavement Repair Details			1			2		3	345.00
Sanitary Sewer Details								0	-
Storm Sewer Details								0	-
Water Line Details			1			2		3	345.00
Special Details								0	-
Pavement Markings								0	-
Project Sign								0	-
Subtotal Hours	0	0	2	0	0	4	0	6	
Subtotal Fee	\$ -	\$ -	\$ 270.00	\$ -	\$ -	\$ 420.00	\$ -		690.00
DESIGN SERVICES									
Storm Sewer Design									-
Paving & Grading/Extreme Event Design									-
Waterline & Waterline Adjustment Design		5	15	30					6,660.00
Channel Improvements		5	15	30					6,660.00
Subtotal Hours	0	10	30	60	0	0	0	100	
Subtotal Fee	\$ -	\$ 2,250.00	\$ 4,050.00	\$ 7,020.00	\$ -	\$ -	\$ -		13,320.00

Exhibit B

PHASE II OPTIONAL SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE									
Ervin Hobbs Connector Project									
Water Line Design/Magnolia Creek Improvements									
Date: August 31, 2015									
Revision: 1									
	Principal / Managing Director	Senior Project Manager	Civil / Project Engineer	Graduate Engineer	Senior Designer	Senior CADD Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 85	\$ 75	\$ 45	\$ 39	\$ 43	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3X)	\$ 255	\$ 225	\$ 135	\$ 117	\$ 129	\$ 105	\$ 90		
DESIGN - PROJECT MANUAL (60%, 90%, & 100%)									
Sheet by Sheet Quantity Take-off and Cost Estimate									-
Contract Documents (TOC, Intro Info, Bid Reqmt, Contract Reqmt)									-
Specifications (Div 01 - 16)									-
Subtotal Hours	0	0	0	0	0	0	0	0	
Subtotal Fee	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		-
BID PHASE SERVICES									
Pre-Bid Meeting									-
Answer Contractor Inquiries, Draft And Issue Addendums									-
Bid Tabulation									-
Research Low Bid Contractor, Issue Letter Of Recommendation									-
Subtotal Hours	0	0	0	0	0	0	0	0	
Subtotal Fee	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		-
TOTAL OPTIONAL SERVICES HOURS	6	36	77	96	0	64	0	279	
TOTAL OPTIONAL SERVICES FEE	\$1,530.00	\$8,100.00	\$10,395.00	\$11,232.00	\$0.00	\$6,720.00	\$0.00		37,977.00
TOTAL OPTIONAL SERVICES FEE									37,977.00

Exhibit B

PHASE III SERVICES LEVEL OF EFFORT (LOE) Ervin Hobbs Connector Project

Date: August 31, 2015
Revision: 1

xcavation No.	TASK DESCRIPTION	BASIS OF MANHOUR ESTIMATE		TOTAL MANHOURS PER WORK TASK BY STAFF CLASSIFICATION									TOTAL MH'S PER WORK TASK	TOTAL COSTS WITH 3.0 MULT. PER WORK TASK
				PRINC.	PRINC. ENGR	SENIOR PROJ ENGR	PROJECT ENGR (PM)	ASST ENGR	SENR ENGR TECH	ENGR TECH	CADD TECH	ADMIN		
		QNTY	UNIT	\$255.00	\$225.00	\$195.00	\$165.00	\$135.00	\$117.00	\$105.00	\$105.00	\$90.00		
1	PRE-CONSTRUCTION													
	ATTEND PRE-CONSTRUCTION CONFERENCE	1	MH	0.00	0.00	3.00	3.00	0.00	0.00	0.00	0.00	0.00	6.00	\$ 1,080.00
2	CONTRACTOR SUBMITTALS													
	REVIEW SUBMITTALS & PREPARE RESPONSES (Estimate 20 of SUBMITTALS)	1	MH	0.00	0.00	5.00	10.00	30.00	0.00	0.00	0.00	0.00	45.00	\$ 6,675.00
3	REQUESTS FOR INFORMATION													
	PROJECT COORDINATION w/ CITY, CONTRACTOR, ETC.	1	MH	0.00	0.00	2.00	5.00	0.00	10.00	0.00	0.00	0.00	17.00	\$ 2,385.00
	REVIEW & RESPOND TO RFIs OR CLARIFICATIONS (Estimate 5 of RFIs)	1	MH	0.00	0.00	5.00	10.00	0.00	25.00	0.00	0.00	0.00	40.00	\$ 5,550.00
4	DESIGN CHANGES													
	REVIEW & RESPOND TO PROPOSALS, MODIFICATIONS AND CHANGE ORDERS (Estimate 2 of Change Orders)	1	MH	0.00	0.00	2.00	5.00	0.00	10.00	0.00	0.00	0.00	17.00	\$ 2,385.00
5	MEETINGS AND SITE VISITS													
	MONTHLY STATUS MEETINGS & SITE INSPECTIONS (12 @ 4 HRS EA)	1	MH	0.00	0.00	12.00	48.00	0.00	0.00	0.00	0.00	12.00	72.00	\$ 11,340.00
	SITE INSPECTION REPORTS (12)	1	MH	0.00	0.00	3.00	12.00	0.00	0.00	0.00	0.00	12.00	27.00	\$ 3,645.00
	ADD'L MEETINGS-CONTRACTOR, PUBLIC, CITY, ETC. (4 @ 4HRS EA)	1	MH	0.00	0.00	4.00	16.00	0.00	0.00	0.00	0.00	4.00	24.00	\$ 3,780.00
6	PROJECT CLOSE-OUT													
	SUBSTANTIAL COMPLETION INSPECTION	1	MH	0.00	0.00	4.00	4.00	0.00	0.00	0.00	0.00	0.00	8.00	\$ 1,440.00
	FINAL COMPLETION INSPECTION	1	MH	0.00	0.00	2.00	4.00	0.00	0.00	0.00	0.00	0.00	6.00	\$ 1,050.00
	REVIEW & COMMENT ON PUNCH LIST	1	MH	0.00	0.00	1.00	2.00	0.00	0.00	0.00	0.00	0.00	3.00	\$ 525.00
	TDLR POST CONSTRUCTION INSPECTION (SITE WALK-THRU & CERITIFCATION)	1	MH	0.00	0.00	4.00	4.00	0.00	0.00	0.00	0.00	0.00	8.00	\$ 1,440.00
	GALVESTON COUNTY INSPECTION, WALK THROUGH, & PUNCH LIST (if required)	1	MH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	RECORD DRAWINGS													
	PREPARE RECORD DRAWINGS & RETURN SUBMIT ELECTRONICALLY TO COLC	1	MH	0.00	0.00	0.00	5.00	0.00	0.00	0.00	40.00	0.00	45.00	\$ 5,025.00
SUBTOTAL ESTIMATED MANHOURS				0	0	47	128	30	45	0	40	28	318	\$ 46,320.00

TOTAL LABOR COSTS (RAW SALARY X 3.0 MULT.): \$ 46,320.00

	SUBCONSULTANTS - MWBE?	CONSTRUCTION PHASE ADDITIONAL SERVICES	FEE ESTIMATE	
1		Drug Testing	\$ -	\$ -
2		Expenses - Mileage, in-house printing, deliveries, etc.	\$ 2,000.00	\$ 2,000.00
TOTAL ADD'L SERVICE FEES				\$ 2,000.00

TOTAL PHASE III FEES \$ 48,320.00

MILLER SURVEY★GROUP EXHIBIT C

JANUARY 8, 2015
REVISED: JANUARY 23, 2015
REVISED: SEPTEMBER 1, 2015

EMAIL: JNETARDUS@RGMILLER.COM

TO: JOSHUA NETARDUS
RG MILLER ENGINEERS, INC.
16340 PARK TEN PLACE, SUITE 350
HOUSTON, TEXAS 77084

RE: SURVEYING SERVICES IN CONNECTION WITH THE PROPOSED IMPROVEMENTS FOR LEAGUE CITY
ERVIN HOBBS CONNECTOR PROJECT 010615

DEAR JOSHUA,

WE ARE PLEASED TO SUBMIT THIS PROPOSAL TO PROVIDE THE FOLLOWING SERVICES FOR THE
AFOREMENTIONED PROJECT FOR THE AMOUNT INDICATED FOR EACH ITEM:

TASK 1 – SPOT ELEVATIONS FOR EXISTING CREEK FLOW LINE

OBTAIN SPOT ELEVATION FOR ERVIN ROAD; WATER SURFACE ELEVATIONS FOR OFFSITE CHANNEL & MAGNOLIA
CREEK.

TASK 1 = \$1,650.00

TASK 2 – ALIGNMENT SURVEY (ERVIN ROAD 3600 LINEAR FEET)

THIS SERVICE WILL INCLUDE ALL THE FIELD SURVEYING, AND OTHER INVESTIGATIONS REQUIRED TO CREATE A
CURRENT RIGHT-OF-WAY BASE MAP AND WILL INCLUDE ALL THE FIELD SURVEYING SERVICES REQUIRED TO
MEET THE LEAGUE CITY DESIGN GUIDELINES AND WILL INCLUDE TOPO OF 20 FEET OUTSIDE OF PROPOSED
RIGHT-OF-WAY LINES. ALL DATA GATHERED WILL BE TIED INTO THE TEXAS COORDINATE SYSTEM OF 1983,
SOUTH CENTRAL ZONE AND TSARP BENCHMARKS.

TASK 2 = \$29,500.00*

*NOTE: PRIVATE DEVELOPER WILL BE REQUIRED TO PROVIDE CONTROL FOR HOBBS ROAD ALIGNMENT FOR
US TO RELY ON.

TASK 2A – PARCEL ACQUISITION MAPPING

THIS SERVICE WILL INCLUDE PREPARATION OF PARCEL MAPS, METES AND BOUNDS DESCRIPTIONS AND PARCEL
STAKING. (ERVIN ROAD 5 PARCELS AT \$1,500.00)

TASK 2A = \$7,500.00

TASK 3 – ERVIN OFF-SITE CHANNEL

OBTAIN CROSS-SECTIONS AT 200' INTERVALS FROM ERVIN ROAD TO MAGNOLIA CREEK.

TASK 3 = \$6,490.00

SEE PAGE 2

1760 WEST SAM HOUSTON PARKWAY NORTH ★ HOUSTON, TEXAS 77043

PHONE 713-413-1900 ★ FAX 713-413-1944

FIRM REGISTRATION No. 10047100

TASK 3A – PARCEL MAPPING

PROVIDE PARCEL MAPPING FOR CHANNEL AND ADJACENT TRACT.

TASK 3A = \$1,500.00 PER PARCEL

TASK 4 – MAGNOLIA CREEK TOPOGRAPHY 1,800'

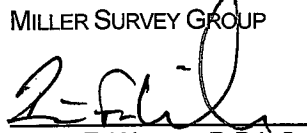
OBTAIN CROSS SECTIONS AT 100' INTERVALS FROM ERVIN ROAD OFFSITE CHANNEL TO APPROXIMATELY 700' EAST OF CALDER ROAD.

TASK 4 = \$6,000.00*

*NOTE: IF PARCEL MAPPING IS REQUIRED FOR CHANNEL AND ADJACENT TRACTS; COST WILL BE \$1,500.00 PER PARCEL.

PAYMENT SHALL BE DUE AND PAYABLE WITHIN 30 DAYS OF RECEIPT OF INVOICE FOR SAME. YOUR SIGNATURE ON THIS PROPOSAL AND EMAILED OR FAXED (713-413-1944) BACK TO US WILL CONSTITUTE ACCEPTANCE AND NOTICE TO PROCEED.

RESPECTFULLY SUBMITTED:
MILLER SURVEY GROUP



BRIAN E. WILSON, R.P.L.S.
SURVEY MANAGER

ACCEPTED:

BY:

DATE: _____

1760 WEST SAM HOUSTON PARKWAY NORTH ★ HOUSTON, TEXAS 77043

PHONE 713-413-1900 ★ FAX 713-413-1944

FIRM REGISTRATION No. 10047100

EXHIBIT D

Right-of-Way and Acquisition Services Proposal

for

R. G. Miller Engineers

Ervin Hobbs Connector Project Galveston County

Property Acquisition Services, LLC
19855 Southwest Freeway, Suite 200
Sugar Land, TX 77479
281-343-7171 office
281-343-8181 fax



August 27, 2015

Joshua Netardus, P.E.
R.G. Miller Engineers
16340 Park Ten Place, Suite 350
Houston, TX 77084

Re: Proposal to provide right-of-way acquisition services in conjunction Ervin Hobbs Connector Project in Galveston County, Texas.

Dear Mr. Cristofaro:

Property Acquisition Services, Inc. (PAS) hereby submits this proposal per your request for the purpose of providing right-of-way acquisition services to R.G. Miller Engineers under the terms of a Professional Services Agreement. In conjunction with the Ervin and Hobbs connector project, PAS submits the following pricing:

PER PARCEL

Title – 5 parcel	@ \$ 400.00 per parcel	\$ 2,000.00
Acquisition of 5 parcels	@ \$3,000.00 per parcel	\$ 15,000.00

Total Cost of above mentioned services	\$ 17,000.00
---	---------------------

All parcels will be billed as follows:

Acquisition Fee Billing

Initial Offer	40% per parcel price
Submission of signed Deed/ Easement or Final Offer Letter	40% per parcel price
Closing Package or Submission of Condemnation Package	20% per parcel price

ADDITIONAL SERVICES IF NEEDED

Condemnation Support – Billed Hourly

If additional condemnation support is required (beyond submitting final package to ED attorney) it will be billed at an hourly rate as follows not to exceed \$1,000 per parcel:

LPA Reimbursement submittal – Billed Hourly

Utility Conflict Resolution – Billed Hourly

Provide program management support in monitoring all activities relative to utility issues in each corridor, establish work flow diagrams for tracking the utility coordination processes, ensure compliance with TxDOT Accommodation Rules (UAR), help identify which utility adjustments are eligible for cost participation, set and conduct status meetings with team engineers overseeing the utility adjustment activity. Participate in coordination meetings between team engineers and utility companies.

Relocation Services – Billed Hourly

Provide program management support to monitor the right of way relocation process in accordance with the “Uniform Relocation Assistance and Real Property Acquisition Act of 1970” and subsequent revisions. Oversee the relocation of Business, Residential, and Billboard relocation as it applies to the Federal guidelines. Participate in meetings with various Governing Agencies to insure compliance and regulatory requirements are met in conjunction with the project progress. Establish and maintain progress logs of all activities.

HOURLY RATES:

Sr. Project Manager.....	\$150.00/hr
Right of Way Agent.....	\$115.00/hr
Utility Coordinator.....	\$105.00/hr
Relocation Coordinator.....	\$105.00/hr
Data Analyst.....	\$80.00/hr
Title Coordinator / Examiner.....	\$60.00/hr
Clerical.....	\$50.00/hr

Thank you for allowing PAS Property Acquisition Services the opportunity to submit this proposal to assist you with your right of way needs. Please contact us at (281) 343-7171 if we can answer any questions or be of further assistance.

Sincerely,

Steven Bonjonia

Steven Bonjonia
Vice President

SCOPE OF SERVICES

Acquisition

- ♦ Review Surveys and Parcel Plats.
- ♦ Open Title
- ♦ Request appraisals
- ♦ Review title commitments and appraisal.
- ♦ Prepare offer package in accordance with the approved value.
- ♦ Contact landowners, present the City's offer and negotiate land acquisition.
- ♦ Assist in curative matters as they pertain to title issues.
- ♦ Obtain a General Warranty Deed or Easement as applicable.
- ♦ Execute all documents and record in Clerk's Office or Close at Title Company.
- ♦ Maintain record files in accordance with Policy and procedure and supply said records to City as required under Federal Policy.
- ♦ Submit closing file to R.G. Miller Engineers or Condemnation Package.

DANNENBAUM ENGINEERING CORPORATION

3100 WEST ALABAMA HOUSTON, TEXAS 77098 P.O. BOX 22292 HOUSTON, TEXAS 77227 (713) 520-9570

ENGINEERING
EXCELLENCE
SINCE
1945

September 2, 2015

EXHIBIT E

Mr. Marty Cristofaro, P.E.
Manager - Public works Department
R.G. Miller Engineers
16340 Park Ten Place Suite 350
Houston, Texas 77084

RE: **Ervin St and Butler Rd Drainage Analysis**

Dear Mr. Cristofaro:

Dannenbaum Engineering Corporation (DEC) is pleased to submit this proposal for a drainage analysis and mitigation design report for the proposed Ervin Street, Butler Road expansion (see Exhibit 1). The configuration that is being considered is a four lane divided road with a raised grass median and left turn location. The report will determine the needed mitigation for this configuration, and the mitigation for Calder Road between Ervin St and Magnolia Bayou and a portion of Butler.

The scope of work will consist of the following:

1.0 Data Collection

Dannenbaum has done various studies in the area that will be used as the base conditions for this analysis.

Survey data will be provided by R.G. Miller Engineers to complement the existing models.

2.0 Preliminary Feasibility Review

Due to an existing shallow channel at Magnolia Bayou a preliminary verification if there is enough depth needs to be conducted. A preliminary storm sewer and channel conveyance sizing, and with limited topographical data, a feasibility review of the possible Outfall alternatives and potential Magnolia Bayou improvements will be presented to R.G Miller for discussions with the City.

3.0 Impact Analysis

Drainage areas for the existing conditions and the proposed conditions of this configuration will be delineated, and peak flows for these areas calculated using the rational method. Hydrographs will then be created, with each hydro graph for its respective area having a peak flow matching that calculated with the rational method. An XP-SWMM model will be developed with a geometry representing this configuration, and the developed flows represented by the created hydrographs, input at the proper locations. The SWMM model will calculate the proposed conditions peak flows and hydraulic grade line, which will be compared with existing conditions to show that neither will increase as a result of the expansion, and also that the 100 year HGL will be contained within the ROW and the 2yr HGL will be below the gutter line. Mitigation will be analyzed in the City

Mr. Marty Cristofaro, P.E.
R.G. Miller Engineers
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September 2, 2015

owned park area, and potential improvements on Magnolia Bayou; mitigation will be analyzed for:

- Ervin Street
- Calder Road from Ervin to Magnolia
- Butler Road Extension

4.0 Report

The results of the analyses and design will be presented in a report. The report will contain text, tables, exhibits, models, and other calculations that explain DEC's analysis and results, and will be submitted to the City of League City.

5.0 Project Management

Coordination will be needed with the City of League City and Galveston County, mainly in the review process of the mitigation design. This analysis will be considered complete when the City and County issue respective approval letters.

The cost for performing these tasks is not to exceed \$89,945. If you have any questions or comments concerning this proposal, please feel free to contact me at 713-527-6437.

Sincerely yours,

DANNENBAUM ENGINEERING CORPORATION



Johan Petterson, P.E., CFM
Project Manager

Attachment

XC: Ms. Elizabeth Johnson, P.E.
Alejandro C. Flores, P.E., CFM, D.WRE

Ervin, Hobbs connector--Hydraulic Impact Study

TASK		Project Manager \$225.00	Project Engineer IV \$130.00	Project Engineer III \$100.00	CADD \$95.00	Secretary \$75.00	Total Hours	Total Cost	
1.0	Data Collection		6	8	4		18	\$1,960.00	
	Review previous work done		6	8	4		18	\$1,960	
2.0	Preliminary feasibility review		8	16	4		28	\$3,020.00	3.4%
	Preliminary review of proposed solution		8	16	4		28	\$3,020	
3.0	Impact Analysis	17	80	264	56		417	\$45,945.00	51.1%
	Define existing conditions drainage areas and parameters	2	4	16	16		38	\$4,090	
	Define existing conditions peak flow calculations	2	4	16			22	\$2,570	
	Create hydrographs based on existing peak flows	1	4	16			21	\$2,345	
	Define proposed conditions drainage areas and parameters	1	4	24	16		45	\$4,665	
	Define future conditions peak flow calculations	1	4	16			21	\$2,345	
	Create hydrographs based on future peak flows	1	4	16			21	\$2,345	
	Develop Existing SWMM model	1	8	24			33	\$3,665	
	Develop Proposed SWMM model	1	8	24			33	\$3,665	
	Input hydrographs into SWMM models	1	6	16			23	\$2,605	
	Determine required mitigation	2	12	24	8		46	\$5,170	
	Calculate proposed flows and HGL--compare with existing	1	8	24	8		41	\$4,425	
	Size Restrictor if required and Outfall channel	1	6	24			31	\$3,405	
	Determine the required Magnolia Bayou Channel Improvements	2	8	24	8		42	\$4,650	
4.0	Report	10	26	92	72	20	220	\$23,170.00	25.8%
	<u>Text</u>	2	6	24		4	36	\$3,930	
	<u>Tables</u>	2	6	24		4	36	\$3,930	
	<u>Exhibits</u>	2	6	16	32	4	60	\$6,170	
	<u>Appendices</u>	2	4	12	24	4	46	\$4,750	
	<u>Addressing Comments</u>	2	4	16	16	4	42	\$4,390	
5.0	Project Management	12	30	46	20	10	118	\$13,850.00	15.4%
	-Internal Coordination	2	6	8		2	18	\$2,180	
	-External Coordination/ Meetings with Client	4	8	16	8	2	38	\$4,450	
	-Approval from League City	4	8	16	8	4	40	\$4,600	
	-QA/QC	2	8	6	4	2	22	\$2,620	
6.0	Other Direct Costs							\$2,000.00	2.2%
	-Supplies							\$1,000.00	
	-Reproduction							\$1,000.00	
		39	150	426	156	30	801	\$89,945.00	97.8%
		4.9%	18.7%	53.2%	19.5%	3.7%			

September 3, 2015

EXHIBIT F

R.G. Miller Engineers, Inc.
16340 Park Ten Place, Suite 350
Houston, Texas 77084

Attn: Mr. David Kubala
P: 713-461-9600
E: dkubala@rgmiller.com

Re: Cost Estimate for Geotechnical Engineering Services
Ervin Avenue – Hobbs Road Connector
League City, Texas
Terracon Document No. P91150022.Revision2

Dear Mr. Kubala:

Terracon Consultants, Inc. (Terracon) understands we have been selected based on qualifications to provide geotechnical engineering services for the above referenced project. This document outlines our understanding of the scope of services to be performed by Terracon for this project and provides an estimate of the cost of our services.

1.0 PROJECT INFORMATION

Item	Description
Project locations	<ul style="list-style-type: none"> ■ Ervin Avenue: From its intersection with Calder Road to about 3,200 linear feet west to the proposed Hobbs Road in League City, Texas. ■ Ervin Off-site Channel: From Erin Avenue (about 800 linear feet east of the intersection of Ervin Avenue and Calder Road) and extends approximately 2,800 linear feet south to Magnolia Creek in League City, Texas. ■ Magnolia Creek: Approximately 1,400 linear feet from about 660 feet east of Calder Road to about 740 feet west of Calder Road in League City, Texas.
Existing conditions	<ul style="list-style-type: none"> ■ Ervin Avenue: Asphaltic concrete and gravel. ■ Ervin Off-site Channel: Generally wooded. ■ Magnolia Creek: Grass, weeds, and wooded areas.



Item	Description
Proposed improvements	<ul style="list-style-type: none">■ Reconstruction of about 3,200 linear feet of Ervin Avenue.■ Installation of storm sewers along the proposed Ervin Avenue roadway section at maximum depths of 5 to 8 feet, using open-excavation methods.■ Construction of an approximate 3,800 linear foot long drainage channel. The proposed channel is planned to have maximum depths of 8 to 10 feet. We understand the proposed channel is being designed to meet HCFCD requirements.■ Approximately 1,400 linear feet of drainage improvements along Magnolia Creek. We understand the creek is planned to have maximum depths of 10 to 15 feet with sideslopes of 4 horizontal to 1 vertical. We also understand the proposed channel is being designed to meet HCFCD requirements.
Proposed pavement system	Concrete pavement with a median and curb-and-gutter.

If our understanding of the project is not accurate, please let us know so that we may revise our scope of services and cost estimate, if necessary.

2.0 SCOPE OF SERVICES

A brief summary of the services to be provided by Terracon is summarized in the following paragraphs.

2.1 Field Program

Based on the information provided to us, we plan to drill seven test borings to a depth of 15 feet along the proposed Ervin Avenue roadway alignment, five test borings to a depth of 20 feet along the proposed Ervin off-site channel alignment, and three test borings to a depth of 30 feet along the proposed Magnolia Creek drainage improvement section. The total drilling footage is planned to be 295 feet. The borings for the proposed Ervin off-site channel and Magnolia Creek drainage improvement are planned to be drilled in general accordance with HCFCD requirements.

The borings will be located using a hand-held GPS unit with an accuracy of ± 20 feet. Therefore, the layout of the boring locations will be approximate. Boring depths will be measured from existing grades.

Based on available aerial photographs and our site visit, the proposed Ervin off-site channel and portions of Magnolia Creek drainage improvement section are wooded. Therefore, the boring locations are not accessible to drilling equipment and clearing of pathways will be required. We assume that there are no conflicts with regard to clearing of pathways with a bulldozer. If there are any restricted areas, trees, facilities, etc. on-site that are sensitive to clearing, Terracon should

Cost Estimate for Geotechnical Engineering Services

Ervin Avenue – Hobbs Road Connector ■ League City, Texas

September 3, 2015 ■ Terracon Document No. P91150022.Revision2



be notified in advance so that we can avoid these areas during our clearing activities. The additional cost associated with having Terracon coordinate and clear pathways on-site are provided in the **“3.0 COMPENSATION”** section of this cost estimate.

The drilling services for this project will be performed by a drilling subcontractor or Terracon's in-house drillers. During drilling, soil samples will generally be collected utilizing either open-tube samplers or the Standard Penetration Test. Once the samples have been collected and classified in the field, they will be properly prepared and placed in appropriate sample containers for transport to our laboratory. Groundwater observations will be made one day after completion of drilling of each HCFCD boring. Upon completion of field program, the borings will be backfilled with soil cuttings and patched at the surface with asphaltic concrete, where necessary.

We anticipate that the site can be accessed with all-terrain vehicle (ATV) mounted drilling equipment. This cost estimate assumes that the site can be accessed during normal business hours and does not include services associated with surveying of boring locations, location of underground utilities, or use of special equipment for unusually soft or wet surface conditions. If such conditions are known to exist on the site, Terracon should be notified so that we may adjust our scope of services and estimated fees if necessary.

Terracon will notify Texas811, a free utility locating service, to help locate public utilities within dedicated public utility easements. Location of private lines on the property is not part of the one-call service or Terracon scope. All private lines should be marked by others prior to the start of drilling. If underground utilities are known to exist within the site, Terracon should be notified so that we may review utility plans to help avoid the existing lines. Terracon cannot be responsible for damage to unmarked and/or unlocated utilities for which we are unaware or that are improperly located.

2.2 Environmental Considerations

In an effort to reduce the potential for cross-contamination of subsurface media and exposure of site workers to contaminants that might be present at the site, Terracon requests that prior to mobilization to the site, the client inform Terracon of known or suspected environmental conditions at or adjacent to the site. If adverse environmental conditions are present, additional expenses may be necessary to properly protect site workers and abandon borehole that penetrate affected groundwater-bearing units.

If Terracon is not informed of potentially adverse environmental conditions prior to the geotechnical services, Terracon will not be responsible for cross-contamination of groundwater aquifers, soil contamination, or any modification to the environmental conditions to the site that may occur during our geotechnical services. The geotechnical scope of services described above is based on our assumption that the site does not pose environmental risks to the personnel conducting the geotechnical exploration services.

2.3 Laboratory Testing

The sample classifications will be reviewed and a laboratory testing program will be assigned which will be specific to the project requirements and the subsurface conditions observed. The testing program could include, but may not be limited to, moisture contents, dry unit weights, Atterberg limits, unconfined compressive strength, consolidated undrained strength, pinhole, crumb, hydrometers, and grain-size analyses.

2.4 Geotechnical Engineering Report

The results of our field and laboratory programs will be evaluated by a professional geotechnical engineer licensed in the State of Texas. Based on the results of our evaluation, an engineering report will be prepared which details the results of the testing performed and provides Boring Logs, Site Location Plan, and Boring Location Plan. The report will also address the following:

- Site and subgrade preparation;
- Pavement design guidelines;
- Groundwater control and excavation consideration;
- Uplift and lateral earth pressures;
- Utility bedding and backfill considerations;
- Slope stability analyses of the proposed drainage channels

Slope stability analyses for the proposed drainage channels will be performed using short-term, long-term, and rapid drawdown conditions in accordance with HCFCD requirements. We request the client provide all applicable cross-sections and any other data relevant to the slope stability analyses.

2.5 Schedule

We can initiate our field operations within seven to nine working days following authorization to proceed, if site access and weather conditions will permit. We anticipate completion of our services and submittal of our report in five to six weeks after completion of our field services. In situations where information is needed prior to submittal of our report, we can provide verbal information or recommendations for specific project requirements directly after we have completed our field and laboratory programs.

3.0 COMPENSATION

Ervin Avenue and Ervin Offsite Channel

For the scope of services consisting of 205 feet of drilling, laboratory testing, and an engineering report as outlined in this document along with having Terracon coordinate clearing of pathways to access the boring locations (the tree debris would only be moved away from the cleared pathways and not removed from the site), we estimated the costs summarized in the following

Cost Estimate for Geotechnical Engineering Services

Ervin Avenue – Hobbs Road Connector ■ League City, Texas

September 3, 2015 ■ Terracon Document No. P91150022.Revision2



table. The costs are presented in detail on the attached **Details of Cost Estimate**. The cost of our services will not exceed these figures unless the scope of work is modified with the approval of the client.

Ervin Avenue and Ervin Off-site Channel	
Task	Cost Estimate
Field Program	\$4,320
Laboratory Testing	\$5,630
Engineering and Report	\$6,470
Clearing Pathways	\$3,000
Total Cost Not to Exceed	\$19,420

Magnolia Creek Drainage Improvements

Based on the information provided to us, three additional borings to a depth of 30 feet may need to be drilled for the proposed Magnolia Creek drainage improvements. If the three additional borings (extra drilling footage of 90 feet) are desired to be included in our scope of services, we anticipate an additional cost of \$6,700, provided we drill the borings in one mobilization. If the borings are required to be drilled in another mobilization, Terracon should be contacted to provide additional costs.

Additional consultation (such as attendance on project meetings, conference calls, engineering analyses, review of project documents, etc.) requested will be performed on a time-and-material basis in accordance with the attached unit rates in concurrence with your approval. Any project and/or scope changes requiring additional or revised analyses will also incur additional charges. The fee to provide additional consultation services will be in excess of the above provided fee to complete the geotechnical project and would not be incurred without prior approval of the client.

4.0 AUTHORIZATION

We have included a copy of our "Supplement to Agreement for Services." If you agree to the conditions set forth in this proposal, please sign and return a copy of the accompanying Supplement to Agreement for Services and an Access Agreement, if applicable, to our office. If you have questions regarding any aspect of this proposal, please feel free to contact us.

Cost Estimate for Geotechnical Engineering Services

Ervin Avenue – Hobbs Road Connector ■ League City, Texas

September 3, 2015 ■ Terracon Document No. P91150022.Revision2

Terracon

We appreciate the opportunity to provide this proposal and look forward to the opportunity of working with you.

Sincerely,

Terracon Consultants, Inc.

(Texas Registration No. F-3272)



Daniel B. Mabirizi, E.I.T.

Senior Staff Engineer (League City)



Brett A. Pope, P.E.

Project Manager (Houston)



for Patrick M. Beecher, P.E.

Geotechnical Services Manager (Houston)

Attachment: Details of Cost Estimate
 Supplement to Agreement for Services

Details of Cost Estimate

Ervin Avenue and Ervin Off-site Channel					
Item	Description	Quantity	Unit	Rate	Amount
Field Exploration					
1	ATV Drilling Rig Mobilization	1	each	\$465	\$465
2	ATV Drill and Sample, 0 - 50 feet	205	feet	\$13	\$2,665
3	Field Technician (logging)	15	hours	\$50	\$750
4	Staff Engineer (field coordination & site visit)	4	hours	\$110	\$440
Sub-total for Field Exploration					\$4,320
Laboratory Testing					
1	Liquid and Plastic Limits	14	each	\$50	\$700
2	Unconfined Compressive Strength	10	each	\$45	\$450
3	Moisture Content	10	each	\$10	\$100
4	Percent finer than the No. 200 Sieve	8	each	\$45	\$360
5	CU Triaxial Strength (2 samples)	2	each	\$1,600	\$3,200
6	Hydrometers	2	each	\$100	\$200
7	Pinhole Test	2	each	\$240	\$480
8	Crumb Test	4	each	\$35	\$140
Sub-total for Laboratory Testing					\$5,630
Engineering Analyses & Report					
1	Principal Engineer	4	hours	\$170	\$680
2	Project Engineer	12	hours	\$140	\$1,680
3	Staff Engineer	36	hours	\$110	\$3960
4	Support Personnel	3	hours	\$50	\$150
Sub-total for Engineering Analyses & Report					\$6,470
Clearing Pathways to access Boring Locations					
1	Bulldozer, Operator, and Technician Guide	1	each	\$3,000	\$3,000
Total Cost Not to Exceed					\$19,420

SUPPLEMENT TO AGREEMENT FOR SERVICES

CHANGE TO SCOPE OF SERVICES AND FEES

This **SUPPLEMENT to AGREEMENT FOR SERVICES** to the original Agreement for Services (original Agreement dated 01/22/2015, Agreement reference number P92150118) is between R.G. Miller Engineers, Inc. ("Client") and Terracon Consultants, Inc. ("Consultant") for additional or changed Services to be provided by Consultant for client on the Project, as described in the Agreement for Services. This Supplement is incorporated into and part of the Agreement for Services.

- 1. Scope of Services.** The scope of the additional or changed Services are described in the Scope of Services section of the Consultant's Supplemental Proposal, unless Services are otherwise described below or in Exhibit B to this Supplement (which section or exhibit are incorporated into the Supplement).

Please refer to Terracon Proposal No. P91150022.Revision2.

- 2. Compensation.** Client shall pay compensation for the additional or changed Services performed at the fees stated in the Supplemental Proposal unless fees are otherwise stated below or in Exhibit C to this Supplement (which section or exhibit are incorporated into the Supplement).

Please refer to Terracon Proposal No. P91150022.Revision2.

All terms and conditions of the **Agreement for Services** shall continue in full force and effect. This Supplement is accepted and Consultant is authorized to proceed.

Consultant: **Terracon Consultants, Inc.**
By:  Date: **9/3/2015**
Name/Title: **Brett A Pope / Project Engineer II**
Address: **11555 Clay Road Suite 100**
Houston, TX 77043
Phone: **(713) 690-8989** Fax: **(713) 690-8787**
Email: **Brett.Pope@terracon.com**

Client: **R.G. Miller Engineers, Inc.**
By: _____ Date: _____
Name/Title: _____
Address: **16340 Park Ten Place, Suite 350**
Houston, TX 77084
Phone: **(713) 461-9600** Fax: _____
Email: _____

January 22, 2015 (revised September 2, 2015)



Mr. David Kubala, P.E.
RG Miller Engineers, Inc.
16340 Park Ten Place, Suite 350
Houston, Texas 77084

EXHIBIT G

Telephone: (281) 921-8775
E-mail: dkubala@rgmiller.com

RE: Proposal for Phase I Environmental Site Assessment
Ervin Avenue - Hobbs Road Connector Project
Ervin Avenue and Hobbs Road
League City, Galveston County, Texas
Terracon Proposal No. P92150119

Dear Mr. Kubala:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal to RG Miller Engineers, Inc. (client) to conduct a Phase I Environmental Site Assessment (ESA) of the above-referenced site.

1.0 PROJECT INFORMATION

We understand the site will likely consist of two tasks. Task 1 will consist of approximately 3,200 linear feet of 100-foot wide right-of-way for the proposed improvements to Ervin Avenue and approximately 2,800 linear feet of 100-foot wide right-of-way for a proposed offsite drainage channel leading from Ervin Avenue to Magnolia Bayou. Task 2 will consist of approximately 1,400 linear feet of 100-foot wide right-of-way along Magnolia Creek trending west from Calder Drive. We understand that Task 2 will likely be requested at a later date. If this is not accurate, or if you have additional useful information, please inform us as soon as possible.

2.0 SCOPE OF SERVICES

2.1. Base Phase I ESA Services

The ESA will be performed consistent with the procedures included in ASTM E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of this ESA is to assist the client in developing information to identify recognized environmental conditions (RECs - as defined below) in connection with the



Terracon Consultants, Inc. 11555 Clay Road Suite 100 Houston, TX 77043
P 713-690-8989 F 713-690-8787 terracon.com

Environmental



Facilities



Geotechnical



Materials

Proposal for Phase I Environmental Site Assessment

RG Miller Engineers, Inc. ■ Houston, TX

January 22, 2015 (revised September 2, 2015) ■ Terracon Proposal No. P92150119



site as reflected by the scope of this proposal. If modifications to the scope of services are required, please contact us to discuss proposal revisions.

Physical Setting

The physical setting for the site will be described based on a review of the applicable USGS topographic quadrangle map, USDA soil survey, and selected geologic reference information.

Historical Use Information

A review of selected historical sources, where reasonably ascertainable and readily available, will be conducted in an attempt to document obvious past land use of the site and adjoining properties back to 1940 or when the site was initially developed, whichever is earlier. The following selected references, depending on applicability and likely usefulness, will be reviewed for the site.

- Historical topographic maps
- Aerial photographs (approximate 10 to 15 year intervals)
- City directories (approximate 5 year intervals)
- Fire (Sanborn) insurance maps
- Site title search information, if provided by client
- Environmental liens, if provided by client
- Prior environmental reports, permits and registrations; or geotechnical reports, if provided by the client

Pursuant to ASTM E 1527-13, the client should engage a title company or title professional to undertake a review of reasonably ascertainable recorded land title records and lien records for environmental liens currently recorded against or relating to the site. If the client is unable to provide land title records or environmental lien information, an abstract firm may be contracted by Terracon to develop a chain of title from a review of land title records for an additional fee. Documentation of environmental liens, if recorded, will be provided with the chain of title. Note, however, unless specifically requested within three days of project commencement, Terracon will rely on the client to provide land title records. **If land title records or environmental lien information are not provided for review in a timely manner, Terracon may conclude that the absence of records represents a significant data gap, which must be documented in the final report.**

REC Definition

Recognized Environmental Conditions are defined by ASTM E 1527-13 as “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to any release to the environment, 2) under conditions indicative of a release to the environment, or 3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not recognized environmental conditions.”

Regulatory Records Review

Consistent with ASTM E 1527-13, outlined below are the following federal, state, and tribal databases, where applicable are typically reviewed for indications of RECs, and the approximate minimum search distance of the review from the nearest property boundary. A database firm will be subcontracted to access governmental records used in this portion of the assessment. Additional federal, state, and local databases may be reviewed if provided by the database firm. Determining the location of unmapped facilities is beyond the scope of this assessment.

Governmental Records	Search Distance
Federal NPL Site List	1.0 mile
Federal NPL (Delisted) Site List	0.5 mile
Federal CERCLIS Site List	0.5 mile
Federal CERCLIS NFRAP Site List	0.5 mile
Federal RCRA Corrective Actions (CORRACTS) TSD Facilities List	1.0 mile
Federal RCRA Non-CORRACTS TSD Facilities List	0.5 mile
Federal RCRA Generators List	Site and Adjoining
Federal Institutional Control/Engineering Control Registries	Site Only
Federal ERNS List	Site Only
State and Tribal-Equivalent NPL Site Lists	1.0 mile
State and Tribal-Equivalent CERCLIS Lists	0.5 mile
State and Tribal Landfill and/or Solid Waste Disposal Site Lists	0.5 mile
State and Tribal Leaking UST Lists	0.5 mile
State and Tribal Registered UST Lists	Site and Adjoining
State and Tribal Institutional Control/Engineering Control Registries	Site Only
State and Tribal VCP Site Lists	0.5 mile
State and Tribal Brownfield Site Lists	0.5 mile

Tribal databases will only be evaluated if the site is located in an area where a recognized tribe has jurisdiction for environmental affairs.

In addition to the database review and if customary practice for the site location, an attempt will be made to review reasonably ascertainable and useful local lists or records such as Brownfield sites, landfill/solid waste disposal sites, registered storage tanks, land records, emergency

Proposal for Phase I Environmental Site Assessment

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release reports, and contaminated public wells. A reasonable attempt will also be made to interview at least one staff member of any one of the following types of local government agencies: fire department, health agency, planning department, building department, or environmental department. As an alternative, a written request for information may be submitted to the local agencies.

The scope of work proposed herein includes up to two hours of regulatory agency file and/or records review. If the results of this initial review appear to warrant a more extensive review of applicable regulatory agency files and/or records, a cost estimate will be provided to the client for pre-approval. Review of regulatory files and/or records, when authorized, will be for the purpose of identifying RECs. Please note that all requested files may not be available from regulatory agencies within the client's requested project schedule.

Site and Adjoining/Surrounding Property Reconnaissance

A site reconnaissance will be conducted to identify RECs. The reconnaissance will consist of visual observations of the site from the site boundaries and selected interior portions of the site. The site reconnaissance will include, where applicable, an interview with site personnel who the client has identified as having knowledge of the uses and physical characteristics of the site. Pertinent observations from the site reconnaissance will be documented including:

- Site description
- General site operations
- Aboveground chemical or waste storage
- Visible underground chemical or waste storage, drainage, or collection systems
- Electrical transformers
- Obvious releases of hazardous substances or petroleum products

The adjoining property reconnaissance will consist of visual observations of the adjoining/surrounding properties from the site boundaries and accessible public right-of-ways.

Report Preparation

A PDF-formatted copy of the final report will be submitted that presents the results of this assessment, based upon the scope of services and limitations described herein. The final report will be signed by an environmental professional responsible for the Phase I ESA, and the report will contain an environmental professional statement as required by 40 CFR 312.21(d). Recommendations will be developed as part of the Phase I ESA scope of services. Prior to final report issuance, the client may request paper copies at a charge of \$50.00 per report copy.

2.2 Additional Services Beyond Base ESA

At the direction of the client, additional services beyond the scope of the base Phase I ESA have not been included.

2.3 Additional Services Not Included

The following services, although not specifically required by ASTM E 1527-13, may also be performed concurrently with ESAs and may be beneficial for the evaluation of environmental conditions and/or an evaluation of specific business environmental risks at the site. At your direction, these services have not been included as part of the scope of services for this ESA. Please note that this list is not all-inclusive. If you seek additional services, please contact us for a supplemental proposal and cost estimate.

- Limited Wetland Review
- Limited Threatened/Endangered Species Review
- Limited Historic Properties/Archaeological Resources Review
- ASTM E 2600-10 Vapor Encroachment Screen

If the site is intended for future development, Terracon can also provide proposals for geotechnical investigations, geologic hazards (like growth faulting), construction materials testing, construction draw reviews and scope and budget review services.

2.4 Schedule

Services will be initiated upon receipt of the written notice to proceed. The final reports for each task will be submitted 20-business days after receipt of your written notice to proceed, assuming site access can be obtained within 5-business days after the notice to proceed.

In order to comply with the proposed schedule, please provide the following items at the time of notification to proceed.

- A signed Agreement for Services evidencing acceptance of this scope of services
- The completed ASTM E 1527-13 User Questionnaire, supplied as an attachment to this proposal
- Right of entry to conduct the assessment, including access to building interiors
- Notification of any restrictions or special requirements (such as confidentiality, scheduling, or on-site safety requirements) regarding accessing the site

Proposal for Phase I Environmental Site Assessment

RG Miller Engineers, Inc. ■ Houston, TX

January 22, 2015 (revised September 2, 2015) ■ Terracon Proposal No. P92150119



- An accurate legal description and/or a diagram of the site such as a surveyor's plat map or scaled architect's drawing (if such diagrams exist)
- Current site owner, property manager, occupant information (including tenant list), and contact information for persons knowledgeable about the site history including current and historical use of hazardous substances and petroleum products on site (e.g., names, phone numbers, etc.)
- Copies of environmental reports, permits and registrations, and geotechnical reports that were previously prepared for the site
- Information relating to known or suspect environmental conditions at the site, including commonly known or reasonable ascertainable information within the local community about the site that is material to RECs in connection with the site
- Information about environmental liens and activity and use limitations for the site, if any
- Specialized knowledge or experience that is material to RECs in connection with the site, if any
- Knowledge that the purchase price of the site is significantly less than the purchase price of comparable properties
- Land title records

Please note that requested regulatory files or other information may not be provided to Terracon by the issuance date of the report. Consideration of information not received by the issuance date of the report is beyond the scope of this ESA.

2.5 Reliance

The ESA report will be prepared for the exclusive use and reliance of RG Miller Engineers, Inc. Reliance by any other party is prohibited without the written authorization of the client and Terracon.

If the client is aware of additional parties that will require reliance on the ESA report, the names, addresses, and relationship of these parties should be provided for Terracon approval prior to the time of authorization to proceed. Terracon may grant reliance on the ESA report to those approved parties upon receipt of a fully executed Reliance Agreement (available upon request) and receipt of information requested in the Reliance Agreement. If, in the future, the client and Terracon consent to reliance on the ESA by a third party, Terracon may grant reliance upon receipt of a fully executed Reliance Agreement, requested information and receipt of an additional minimum fee of \$400 per relying party.

Reliance on the ESA by the client and all authorized parties will be subject to the terms, conditions, and limitations stated in the Agreement for Services, sections of this proposal incorporated therein, the Reliance Agreement, and ESA report. The limitation of liability defined in the Agreement for Services is the aggregate limit of Terracon's liability to the client and all relying parties.

Continued viability of the report is subject to ASTM E 1527-13 Sections 4.6 and 4.8. If the ESA will be used by a different user (third party) than the user for whom the ESA was originally prepared, the third party must also satisfy the user's responsibilities in Section 6 of ASTM E 1527-13.

2.6 Scope and Report Limitations

The findings and conclusions presented in the final report will be based on the site's current utilization and the information collected as discussed in this proposal. Please note that we do not warrant database or third party information (such as from interviewees) or regulatory agency information used in the compilation of reports.

Phase I ESAs, such as the one proposed for this site, are of limited scope, are noninvasive, and cannot eliminate the potential that hazardous, toxic, or petroleum substances are present or have been released at the site beyond what is identified by the limited scope of this ESA. In conducting the limited scope of services described herein, certain sources of information and public records will not be reviewed. It should be recognized that environmental concerns may be documented in public records that are not reviewed. This ESA does not include subsurface or other invasive assessments, vapor intrusion assessments or indoor air quality assessments (i.e. evaluation of the presence of vapors within a building structure), business environmental risk evaluations, or other services not particularly identified and discussed herein. No ESA can wholly eliminate uncertainty regarding the potential for RECs. The limitations herein must be considered when the user of this report formulates opinions as to risks associated with the site. No warranties, express or implied, are intended or made.

An evaluation of significant data gaps will be based on the information available at the time of report issuance, and an evaluation of information received after the report issuance date may result in an alteration of our opinions and conclusions. We have no obligation to provide information obtained or discovered by us after the date of the report, or to perform any additional services, regardless of whether the information would affect any conclusions, recommendations, or opinions in the report. This disclaimer specifically applies to any information that has not been provided by the client.

3.0 COMPENSATION

TASK 1

Base Phase I ESA Services	Fee
Base Phase I ESA Services – Lump Sum (Includes items outlined in Section 2.1. Cost to contract an abstract firm to develop a chain of title or environmental lien search is not included in this fee.)	\$4,000
Additional Services	Fee
Limited Threatened/Endangered Species Review	*
Limited Historic Properties/Archaeological Resources Review	*
Additional Services – Subtotal	\$0
Lump Sum Total	\$4,000

* Not included in the scope of services per the client's direction.

TASK 2

Base Phase I ESA Services	Fee
Base Phase I ESA Services - Lump Sum (Includes items outlined in Section 2.1. Cost to contract an abstract firm to develop a chain of title or environmental lien search is not included in this fee.)	\$2,500
Additional Services	Fee
Limited Threatened/Endangered Species Review	*
Limited Historic Properties/Archaeological Resources Review	*
Additional Services - Subtotal	\$0
Lump Sum Total	\$2,500

* Not included in the scope of services per the client's direction.

The fee is valid for 90 days from the date of this proposal and is based on the assumption that all field services will be performed under safety Level D personal protective procedures and that only one site visit will be made by Terracon personnel. The lump sum fee is based on the assumptions and conditions provided at the time of this proposal.

Proposal for Phase I Environmental Site Assessment

RG Miller Engineers, Inc. ■ Houston, TX

January 22, 2015 (revised September 2, 2015) ■ Terracon Proposal No. P92150119

Terracon

4.0 AUTHORIZATION

If this proposal meets with your approval, work may be initiated by returning an original copy of the attached Supplement to Agreement for Services to our Houston office. Project initiation may be expedited by sending a copy of the signed Supplement to Agreement for Services via e-mail or facsimile.

We appreciate the opportunity to provide this proposal and look forward to working with you on this project. If you have any questions or comments regarding this proposal or require additional services, please give me a call.

Sincerely,

Terracon Consultants, Inc.



Christina Rosilez

ESA Group Manager



Thomas R. Martens, P.G.

Senior Principal

Attachments: ASTM E 1527-13 User Questionnaire
Supplement to Agreement for Services

ASTM E 1527-13 USER QUESTIONNAIRE

Page 1 of 3

Proposal No: P92150119

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Relief and Brownfields Revitalization Act of 2002 (the "Brownfields Amendments"), the user must respond to the following questions. Failure to provide this information to the environmental professional may result in significant data gaps, which may limit our ability to identify recognized environmental conditions resulting in a determination that "all appropriate inquiry" is not complete. This form represents a type of interview and as such, the user has an obligation to answer all questions in good faith, to the extent of their actual knowledge.

Site Name: Ervin Avenue - Hobbs Road Connector Project

Site Address: League City, Texas

1) Did a search of recorded land title records (or judicial records where appropriate) identify any environmental liens filed or recorded against the property under federal, tribal, state, or local law (40 CFR 312.25)? ☐ No ☐ Yes If yes, please explain.

2) Did a search of recorded land title records (or judicial records where appropriate) identify any activity and use limitations (AULs), such as engineering controls, land use restrictions, or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state, or local law (40 CFR 312.26)? ☐ No ☐ Yes If yes, please explain.

3) Do you have any specialized knowledge or experience related to the site or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the site or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business (40 CFR 312-28)? ☐ No ☐ Yes If yes, please explain.

4) Does the purchase price being paid for this site reasonably reflect the fair market value of the site (40 CFR 312.29)? ☐ No ☐ Yes

If no, have you considered whether the lower purchase price is because contamination is known or believed to be present at the site (40 CFR 312.29)? ☐ No ☐ Yes If yes, please explain.

5) Are you aware of commonly known or reasonably ascertainable information about the site that would help the environmental professional to identify conditions indicative of releases or threatened releases (40 CFR 312.30)? ☐ No ☐ Yes If yes, please explain.

6) Based on your knowledge and experience related to the site, are there any obvious indicators that point to the presence or likely presence of contamination at the site (40 CFR 312.31)? ☐ No ☐ Yes If yes, please explain.

Please return this form with the signed and completed Agreement for Services.

ASTM E 1527-13 USER QUESTIONNAIRE**Page 2 of 3****Proposal No: P92150119****Request for Information and Documentation**

In addition to the specific questions outlined above, the user is requested to provide the following information and documentation, as available. ASTM requires that this information, if available, be provided to the environmental professional prior to the site visit.

Item Supplied "X"	Not Applicable, Not Available or Not Known "X"	Item Requested (See Proposal)	Contacts/Comments or Indicate Attachment
		Point of Contact for Access	Name/Phone:
		Current Site Owner	Name/Phone:
		Current Facility Operator	Name/Phone:
		Contacts for Prior Owners	Name/Phone:
		Contacts for Prior Occupants	Name/Phone:
		Access Restrictions	
		Notification of Special Requirements Regarding Confidentiality	
		Legal Description and Diagram / Survey of Site	
		Chain of Title with Grantor/Grantee Summary (back to 1940 or first developed use)	
		Reasons for Conducting ESA	

Please return this form with the signed and completed Agreement for Services.

ASTM E 1527-13 USER QUESTIONNAIRE

Page 3 of 3

Proposal No: P92150119

Helpful Documents Checklist

Pursuant to ASTM E 1527-13 § 10.8, do you know whether any of the following documents exist related to the subject property and, if so, whether copies can and will be provided to the environmental professional? Check all that apply.

- | | |
|---|---|
| <input type="checkbox"/> Environmental site assessment reports | <input type="checkbox"/> Notices or other correspondence from any governmental agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property |
| <input type="checkbox"/> Environmental compliance audit reports | |
| <input type="checkbox"/> Geotechnical studies | |
| <input type="checkbox"/> Reports regarding hydrogeologic conditions on the property or surrounding area | <input type="checkbox"/> Registrations for underground injection systems |
| <input type="checkbox"/> Registrations for above or underground storage tanks | <input type="checkbox"/> Environmental permits/plans, solid waste permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits, SPCC plans |

Name (Authorized Client Representative)

Title

Signature

Date

Please return this form with the signed and completed Agreement for Services.

SUPPLEMENT TO AGREEMENT FOR SERVICES

CHANGE TO SCOPE OF SERVICES AND FEES

This **SUPPLEMENT to AGREEMENT FOR SERVICES** to the original Agreement for Services (original Agreement dated September 2, 2015, Agreement reference number P92150118) is between RG Miller Engineers Inc ("Client") and Terracon Consultants, Inc. ("Consultant") for additional or changed Services to be provided by Consultant for client on the Project, as described in the Agreement for Services, unless otherwise described in the Project Information section of Consultant's Supplemental Proposal dated January 22, 2015 ("Supplemental Proposal"), or Exhibit A to this Supplement (which section or exhibit is incorporated into the Supplement). This Supplement is incorporated into and part of the Agreement for Services.

- 1. Scope of Services.** The scope of the additional or changed Services are described in the Scope of Services section of the Consultant's Supplemental Proposal, unless Services are otherwise described below or in Exhibit B to this Supplement (which section or exhibit are incorporated into the Supplement).

Phase I ESA – refer to Terracon Proposal No. P92150119

- 2. Compensation.** Client shall pay compensation for the additional or changed Services performed at the fees stated in the Supplemental Proposal unless fees are otherwise stated below or in Exhibit C to this Supplement (which section or exhibit are incorporated into the Supplement).

Refer to Terracon Proposal No. P92150119

All terms and conditions of the **Agreement for Services** shall continue in full force and effect. This Supplement is accepted and Consultant is authorized to proceed.

Consultant: **Terracon Consultants, Inc.**
By:  Date: **9/2/2015**
Name/Title: **Christina Rosilez / ESA Group Manager**
Address: **11555 Clay Road Suite 100**
Houston, TX 77043
Phone: **713-690-8989** Fax: **713-690-8787**
Email: **Christina.Rosilez@terracon.com**

Client: **RG Miller Engineers Inc**
By: _____ Date: _____
Name/Title: **Mr. David Kubala**
Address: **16340 Park Ten Place, Suite 350**
Houston, TX 77084
Phone: **(281) 921-8775** Fax: _____
Email: **dkubala@rgmiller.com**

EXHIBIT H

September 2, 2015 (revised from January 22, 2015)

David Kubala, P.E.
Manager – Public Works Department
R.G. Miller Engineers, Inc.
16340 Park Ten Place, Suite 350
Houston, Texas 77084

Telephone: 281-921-8775
E-mail: dkubala@rgmiller.com

RE: Proposal for Natural Resources Services
Ervin Avenue – Hobbs Road Connector Project
League City, Galveston County, Texas
Terracon Proposal No. P92150118

Dear Mr. Kubala:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal to R.G. Miller Engineers, Inc. (client) to perform Natural Resources services at the above-referenced site. The scope items related to the Natural Resources services include:

- Clean Water Act Compliance – Waters of the U.S. Jurisdictional Assessment
- Clean Water Act Compliance – USACE Permit

1.0 PROJECT INFORMATION

We understand the site consists of approximately 17.5 acres of land, in League City, Galveston County, Texas. More specifically, the site consists of:

- Approximately 3,200 feet of 100-foot wide right-of-way (~7.4 acres) for the proposed improvements to Ervin Avenue.
- Approximately 2,800 feet of 100-foot wide right-of-way (~6.4 acre) for a proposed offsite drainage channel leading to Magnolia Bayou.

If this is not accurate, or if you have additional useful information, please inform us as soon as possible.



2.0 SCOPE OF SERVICES

2.1 Clean Water Act Compliance – Waters of the U.S. Jurisdictional Assessment

The Jurisdictional Assessment scope of services is intended to assist the client in evaluating potential regulatory requirements of the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA).¹ To meet this objective, Terracon will assess the observed on-site water bodies, drainage ways and wetlands that potentially may constitute jurisdictional areas² in order to help secure an official jurisdictional determination from the USACE, if warranted.

Preliminary Assessment (recommended)

As deemed appropriate and upon specific request by the client, Terracon will perform a preliminary assessment as follows:

- A qualified environmental professional will review published, readily available resource documents to preliminarily identify indications of potentially jurisdictional waters. Such documents typically include topographic quadrangle maps, National Wetlands Inventory maps, flood insurance rate maps, rainfall data, and color infra-red aerial photographs.
- A visual reconnaissance of the site will then be performed to supplement resource review findings. Potentially jurisdictional waters will be identified and delineated through on-site assessment of topography, hydrology, vegetation, and soils in general accordance with current USACE guidelines for routine determinations,³ as practicable. Representative photographs will be taken to document site observations.
- Delineated areas will be surveyed using differentially corrected GPS equipment. GPS data collected in the field will then be used to plot the surveyed areas on an exhibit, with data attributes presented in table format. Terracon will delineate wetland areas and waters within the project site and will additionally delineate the ordinary high water mark of Magnolia Bayou where a proposed outfall will extend from the offsite drainage channel.

¹ Federal requirements of the Rivers and Harbors Act (regulating navigation within tidal waters) will also be addressed as appropriate. Unless otherwise notified by the client, it is assumed that Executive Order 11990 (addressing wetland protection for projects with federal involvement) does not apply.

² Reference Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. U.S. & Carabell v. U.S. (Memorandum), dated June 5, 2007; and, U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook (Guidebook), dated May 30, 2007.

³ The USACE's Wetlands Delineation Manual, dated 1987 (1987 Manual), and the Regional Supplement to the USACE's Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0), dated November 2010 (2010 Regional Supplement), are the currently accepted guides for conducting wetland delineations in the project area.

- Based on the resource document data, on-site findings, and known regulatory requirements, further assessment of the potential for USACE jurisdiction will be provided. Preliminary recommendations will be formulated as appropriate, and the findings, along with a discussion of the regulatory framework, assessment methodology and applicable limitations, will be documented in a report, as discussed in Section 2.3 of this proposal.

PJD Request (recommended)

As deemed necessary and upon specific request by the client, Terracon will prepare a letter request, complete a PJD form for each delineated waterbody and/or wetland area, submit the letter request, PJD forms and Jurisdictional Assessment report to the USACE, and field a nominal amount of telephone requests for clarification, as may be necessary to assist the USACE in processing the PJD request.

Assistance with USACE Verification (recommended)

The USACE may request accompaniment on a site visit to verify submitted findings of the AJD and/or PJD requests. For each effort, Terracon will coordinate and attend one onsite meeting with a USACE representative to help facilitate field verification of the submitted report/form data.

Errors are not anticipated, but there may be discrepancies related to subjective analysis and/or seasonal/ temporal variation. Additionally, due to the extended time frame that is currently anticipated for verification, field flagging may be disturbed or missing and site conditions may have otherwise changed significantly (e.g. ongoing land use, weathering, vandalism, volunteer vegetation on disturbed soils) since the original survey was performed, requiring additional field work and/or onsite meetings. Clearing may be required for adequate access and visibility. Any such discrepancies will be resolved and post-verification versions of the assessment report and JD forms will be prepared, as needed. Terracon will prepare the appropriate documentation for eventual submittal to the USACE Galveston District.

Additional Services Not Included

Application of quantitative procedures for making wetland determinations as part of a delineation using the USACE's comprehensive approach is not expected, as its use is typically restricted to situations in which the wetland is the subject of likely or pending litigation. Assessment in accordance with comprehensive survey methodologies, therefore, is also not included. Terracon can provide additional services such as those mentioned above upon request. In accordance with the June 5, 2007 Memorandum and associated Guidebook, the jurisdictional status of waters or wetlands that are adjacent to but not abutting regulated waters is dependent on specific hydrologic and ecologic analysis. Performance of such a "significant

nexus" analysis is not included in this scope of services. It is Terracon's opinion that sufficient guidance for performance of such analyses to the satisfaction of the USACE and the interested public is not currently available and such is, therefore, not included in this scope of services.

Scope Specific Limitations

This scope of services is intended to provide a reasonable effort for preliminary assessment and is thereby limited to general concurrence with guidance for routine determination only, and sample pit excavation to a depth not to exceed 20 inches.

Wetlands are naturally evolved and evolving systems. The limited scope of the Jurisdictional Assessment as proposed herein, effects of man-made disturbances and/or temporal variations (e.g. rainfall, season, drought), and or subjective interpretation of data may preclude assessment in conformance with USACE requirements and significantly affect findings, conclusions and recommendations. Effects of man-made disturbances and/or temporal variations, such as significant rainfall, winter conditions and drought, may preclude accurate assessment and significantly affect findings, conclusions and recommendations.

Official authority to make a determination defining applicable jurisdictional limits under the CWA rests solely with the Environmental Protection Agency (EPA); however, authority has been delegated to the USACE. Jurisdictional Determinations (JD) are made by the USACE, upon specific written request, on a case-by-case basis and may make use of certain information at its disposal (such as other permits in the local area) that may not be readily available to the public. The proposed Jurisdictional Assessment should, therefore, not be considered authoritative, and it may not wholly eliminate uncertainty regarding the USACE's jurisdictional limits under the CWA.

2.2 Clean Water Act Compliance – USACE Permit (*recommended*)

The Clean Water Act Compliance - USACE Permit (Permitting) scope of service is intended to assist the client in securing a Department of the Army Permit for work that involve certain types of activities within areas that fall under the USACE's Clean Water Act (CWA) jurisdiction. If waterbodies and/or wetlands are deemed jurisdictional, a permit could be required to construct on the property. To meet this objective, Terracon will prepare the appropriate permit documentation generally as follows:

- Client-provided preliminary engineering plans will be reviewed and a preliminary assessment of applicable permit requirements is made in accordance with jurisdictional findings and regulations related to Section 404 of the CWA.
- The appropriate permit documentation will be prepared for submittal to the USACE in general accordance with Galveston District guidance as published on their Regulatory

Branch, Permit Application web page. This may include a description of preliminary mitigation measures, as needed and with input from the client, but only on a conceptual basis.

- A nominal amount of telephone requests for clarification may be expected to assist the USACE in processing the permit submittal.

To initiate Permitting services, the client must provide preliminary information regarding activity or structures planned in the vicinity of regulated areas and additional information as indicated in the applicable regulations. This may include available documentation addressing issues such as wetland avoidance, impact minimization and water quality control measures, as needed to appropriately satisfy permit conditions. Additional information regarding site and project alternatives is sometimes also needed in order to include a cursory discussion addressing avoidance and minimization requirements. The Assessment and completed PJD forms addressed in Section 2.1, above, are also typically provided.

It is Terracon's understanding that if a USACE permit is required for the proposed project, it is possible that the impacts to jurisdictional areas associated with the proposed project could be authorized by the USACE under the conditions, limits, and thresholds of a Nationwide Permit (NWP) or an Individual Permit (IP). Terracon will prepare the appropriate documentation for submittal to the USACE, if required, depending upon the type of permit.

Additional Services Not Included

A jurisdictional determination and preliminary assessment of potential impacts to cultural resources and endangered species is typically performed by the USACE as part of their internal permit review process. Should their preliminary findings indicate the potential for significant adverse impacts, the USACE may request project-specific assessments. Terracon will provide limited professional opinion statements with respect to threatened and endangered species and cultural resources to include with the permitting documentation. Additional services, such as threatened and endangered species presence-absence surveys, cultural resource surveys, mitigation plan preparation, additional meetings and/or site visits (other than per above), may be warranted but are not included in this scope of services. Terracon has the capability to provide such additional CWA compliance services upon request.

Scope Specific Limitations

The federal permit application process regulates both the conservation and use of the nation's resources. Issues such as previous impacts, insufficient avoidance and minimization measures, and significant adverse impacts that may be proposed as part of the proposed project can preclude permit approval as proposed

2.3 Report Preparation

Comprehensive reports typically address the applicable regulatory framework, describe the assessment methodology, limitations and findings, and provide site-specific conclusions and recommendations, as appropriate. Exhibits such as figures, referenced resource documents, data forms and photographs are included as appendices. Draft documents are reviewed in-house for quality assurance purposes and initially provided to the client in electronic format (.pdf) by email for review and/or approval. Any changes resulting from client review are incorporated, as appropriate, and the updated report is similarly delivered to the client by email, along with one paper copy for the use of R.G. Miller Engineers, Inc. Copies requested post-delivery or in addition to the above can be provided for an additional fee.

2.4 Schedule

Services will be initiated within five days upon receipt of authorization, per below, and written notice to proceed. The initial draft submittals will be emailed to the client for review and/or approval within three weeks of initiation. The final reports will be delivered to the client within one week upon receipt of client approval. This report will be the findings of the preliminary assessments. Upon approval from client, Terracon will proceed with additional services described in this proposal. Please coordinate at the time of authorization to confirm schedule.

2.5 Reliance

The reports will be prepared for the exclusive use and reliance of R.G. Miller Engineers, Inc. and any relying governmental entity. Reliance by any other party is prohibited without the written authorization of the client and Terracon.

If the client is aware of additional parties that will require reliance on the reports, the names, addresses, and relationship of these parties should be provided for Terracon approval prior to the time of authorization to proceed. Terracon may grant reliance on the reports to those approved parties upon receipt of a fully executed Reliance Agreement (available upon request) and receipt of information requested in the Reliance Agreement. If, in the future, the client and Terracon consent to reliance on the report by a third party, Terracon may grant reliance upon receipt of a fully executed Reliance Agreement, requested information and receipt of an additional minimum fee of \$500.00 per relying party.

Reliance on the reports by the client and all authorized parties will be subject to the terms, conditions, and limitations stated in the Agreement for Services, sections of this proposal incorporated therein, the Reliance Agreement, and reports. The limitation of liability defined in the Agreement for Services is the aggregate limit of Terracon's liability to the client and all relying parties.

2.6 Scope and Report Limitations

The findings and conclusions presented in the final reports will be based on the site's current utilization and the information collected as discussed in this proposal. Please note that we do not warrant database or third party information or regulatory agency information used in the compilation of reports.

The environmental services described above will be performed in accordance with current, generally accepted professional practices in the local area. No warranties, express or implied, are intended or made.

The stated and inherent limitations of the Scope of Services proposed herein must be considered when the user formulates opinions as to potential regulatory requirements associated with development of the site.

3.0 COMPENSATION

Compensation for the proposed recommended Scope of Services shall be on a lump sum basis for the amount of **\$12,900**. A fee estimate summary is provided below:

Scope	Fee
Clean Water Act Compliance:	(see below)
Preliminary Assessment	\$6,750
Optional: Magnolia Bayou (site review at a later time and separate report)*	\$5,900
PJD Request	\$750
Assistance with USACE Verification of PJD	\$1,050
Clean Water Act Compliance - USACE Permit**	\$4,350
Total Fee	\$12,900

**Not included in total price if field work is completed at a separate time and requires separate report.*

***If USACE permit is deemed necessary, fee can vary depending upon the type of permit pursued. This fee is based on the preparation of a Nationwide Permit Pre-Construction Notification package. Additional fees may apply if an Individual Permit is required.*

The stated fees are valid only for ninety (90) days after the date of this proposal. Once initiated, should completion of the proposed Scope of Services be delayed by the client for a period exceeding 4 months, additional charges may apply. Additional services requested or approved by the client, such as consultation or other work that is not specifically included in the Scope of Services described in this proposal, will be performed on a time and materials basis for an additional fee based on a not-to-exceed budget.

4.0 AUTHORIZATION

If this proposal meets with your approval, work may be initiated by returning an original copy of the attached Agreement for Services to the attention of Ms. Ginger C. Horn via mail, facsimile, or by email to gchorn@terracon.com.

The terms, conditions and limitations stated in the executed Agreement, including sections of this proposal incorporated therein, shall constitute the exclusive terms and conditions and services to be performed for this project.

We appreciate the opportunity to provide this proposal and look forward to working with you on this project. If you have any questions or comments regarding this proposal or require additional services, please give us a call.

Sincerely,
Terracon Consultants, Inc.



Carland Holstead
Project Biologist



Ginger C. Horn
Senior Project Manager

Attachments: Agreement for Services

AGREEMENT FOR SERVICES

This **AGREEMENT** is between RG Miller Engineers Inc ("Client") and Terracon Consultants, Inc. ("Consultant") for Services to be provided by Consultant for Client on the Ervin Avenue - Hobbs Road Connector Project project ("Project"), as described in the Project Information section of Consultant's Proposal dated 09/02/2015 ("Proposal") unless the Project is otherwise described in Exhibit A to this Agreement (which section or Exhibit is incorporated into this Agreement).

- 1. Scope of Services.** The scope of Consultant's services is described in the Scope of Services section of the Proposal ("Services"), unless Services are otherwise described in Exhibit B to this Agreement (which section or exhibit is incorporated into this Agreement). Portions of the Services may be subcontracted. When Consultant subcontracts to other individuals or companies, then consultant will collect from Client on the Subcontractors' behalf. Consultant's Services do not include the investigation or detection of, nor do recommendations in Consultant's reports address the presence or prevention of biological pollutants (e.g., mold, fungi, bacteria, viruses, or their byproducts) or occupant safety issues, such as vulnerability to natural disasters, terrorism, or violence. If Services include purchase of software, Client will execute a separate software license agreement. Consultant's findings, opinions, and recommendations are based solely upon data and information obtained by and furnished to Consultant at the time of the Services.
- 2. Acceptance/ Termination.** Client agrees that execution of this Agreement is a material element of the consideration Consultant requires to execute the Services, and if Services are initiated by Consultant prior to execution of this Agreement as an accommodation for Client at Client's request, both parties shall consider that commencement of Services constitutes formal acceptance of all terms and conditions of this Agreement. Additional terms and conditions may be added or changed only by written amendment to this Agreement signed by both parties. In the event Client uses a purchase order or other form to administer this Agreement, the use of such form shall be for convenience purposes only and any additional or conflicting terms it contains are stricken. This Agreement shall not be assigned by either party without prior written consent of the other party. Either party may terminate this Agreement or the Services upon written notice to the other. In such case, Consultant shall be paid costs incurred and fees earned to the date of termination plus reasonable costs of closing the project.
- 3. Change Orders.** Client may request changes to the scope of Services by altering or adding to the Services to be performed. If Client so requests, Consultant will return to Client a statement (or supplemental proposal) of the change setting forth an adjustment to the Services and fees for the requested changes. Following Client's review, Client shall provide written acceptance. If Client does not follow these procedures, but instead directs, authorizes, or permits Consultant to perform changed or additional work, the Services are changed accordingly and Consultant will be paid for this work according to the fees stated or its current fee schedule. If project conditions change materially from those observed at the site or described to Consultant at the time of proposal, Consultant is entitled to a change order equitably adjusting its Services and fee.
- 4. Compensation and Terms of Payment.** Client shall pay compensation for the Services performed at the fees stated in the Compensation section of the Proposal unless fees are otherwise stated in Exhibit C to this Agreement (which section or Exhibit is incorporated into this Agreement). If not stated in either, fees will be according to Consultant's current fee schedule. Fee schedules are valid for the calendar year in which they are issued. Fees do not include sales tax. Client will pay applicable sales tax as required by law. Consultant may invoice Client at least monthly and payment is due upon receipt of invoice. Client shall notify Consultant in writing, at the address below, within 15 days of the date of the invoice if Client objects to any portion of the charges on the invoice, and shall promptly pay the undisputed portion. Client shall pay a finance fee of 1.5% per month, but not exceeding the maximum rate allowed by law, for all unpaid amounts 30 days or older. Client agrees to pay all collection-related costs that Consultant incurs, including attorney fees. Consultant may suspend Services for lack of timely payment. It is the responsibility of Client to determine whether federal, state, or local prevailing wage requirements apply and to notify Consultant if prevailing wages apply. If it is later determined that prevailing wages apply, and Consultant was not previously notified by Client, Client agrees to pay the prevailing wage from that point forward, as well as a retroactive payment adjustment to bring previously paid amounts in line with prevailing wages. Client also agrees to defend, indemnify, and hold harmless Consultant from any alleged violations made by any governmental agency regulating prevailing wage activity for failing to pay prevailing wages, including the payment of any fines or penalties.
- 5. Third Party Reliance.** This Agreement and the Services provided are for Consultant and Client's sole benefit and exclusive use with no third party beneficiaries intended. Reliance upon the Services and any work product is limited to Client, and is not intended for third parties. For a limited time period not to exceed three months from the date of the report, Consultant will issue additional reports to others agreed upon with Client, however Client understands that such reliance will not be granted until those parties sign and return Consultant's reliance agreement and Consultant receives the agreed-upon reliance fee.
- 6. LIMITATION OF LIABILITY.** CLIENT AND CONSULTANT HAVE EVALUATED THE RISKS AND REWARDS ASSOCIATED WITH THIS PROJECT, INCLUDING CONSULTANT'S FEE RELATIVE TO THE RISKS ASSUMED, AND AGREE TO ALLOCATE CERTAIN OF THE ASSOCIATED RISKS. TO THE FULLEST EXTENT PERMITTED BY LAW, THE TOTAL AGGREGATE LIABILITY OF CONSULTANT (AND ITS RELATED CORPORATIONS AND EMPLOYEES) TO CLIENT AND THIRD PARTIES GRANTED RELIANCE IS LIMITED TO THE GREATER OF \$50,000 OR CONSULTANT'S FEE, FOR ANY AND ALL INJURIES, DAMAGES, CLAIMS, LOSSES, OR EXPENSES (INCLUDING ATTORNEY AND EXPERT FEES) ARISING OUT OF CONSULTANT'S SERVICES OR THIS AGREEMENT. PRIOR TO ACCEPTANCE OF THIS AGREEMENT AND UPON WRITTEN REQUEST FROM CLIENT, CONSULTANT MAY NEGOTIATE A HIGHER LIMITATION FOR ADDITIONAL CONSIDERATION. THIS LIMITATION SHALL APPLY REGARDLESS OF AVAILABLE PROFESSIONAL LIABILITY INSURANCE COVERAGE, CAUSE(S) OR THE THEORY OF LIABILITY, INCLUDING NEGLIGENCE, INDEMNITY, OR OTHER RECOVERY. THIS LIMITATION SHALL NOT APPLY TO THE EXTENT THE DAMAGE IS PAID UNDER CONSULTANT'S COMMERCIAL GENERAL LIABILITY POLICY.
- 7. Indemnity/Statute of Limitations.** Consultant and Client shall indemnify and hold harmless the other and their respective employees from and against legal liability for claims, losses, damages, and expenses to the extent such claims, losses, damages, or expenses are legally determined to be caused by their negligent acts, errors, or omissions. In the event such claims, losses, damages, or expenses are legally determined to be caused by the joint or concurrent negligence of Consultant and Client, they shall be borne by each party in proportion to its own negligence under comparative fault principles. Neither party shall have a duty to defend the other party, and no duty to defend is hereby created by this indemnity provision and such duty is explicitly waived under this Agreement. Causes of action arising out of Consultant's services or this Agreement regardless of cause(s) or the theory of liability, including negligence, indemnity or other recovery shall be deemed to have accrued and the applicable statute of limitations shall commence to run not later than the date of Consultant's substantial completion of services on the project.
- 8. Warranty.** Consultant will perform the Services in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. **EXCEPT FOR THE STANDARD OF CARE PREVIOUSLY STATED, CONSULTANT MAKES NO WARRANTIES OR GUARANTEES, EXPRESS OR IMPLIED, RELATING TO CONSULTANT'S SERVICES AND CONSULTANT DISCLAIMS ANY IMPLIED WARRANTIES OR WARRANTIES IMPOSED BY LAW, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**
- 9. Insurance.** Consultant represents that it now carries, and will continue to carry: (i) workers' compensation insurance in accordance with the laws of the states having jurisdiction over Consultant's employees who are engaged in the Services, and employer's liability insurance (\$1,000,000); (ii)

commercial general liability insurance (\$1,000,000 occ / \$2,000,000 agg); (iii) automobile liability insurance (\$1,000,000 B.I. and P.D. combined single limit); and (iv) professional liability insurance (\$1,000,000 claim / agg). Certificates of insurance will be provided upon request. Client and Consultant shall waive subrogation against the other party on all general liability and property coverage.

- 10. CONSEQUENTIAL DAMAGES. NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR LOSS OF PROFITS OR REVENUE; LOSS OF USE OR OPPORTUNITY; LOSS OF GOOD WILL; COST OF SUBSTITUTE FACILITIES, GOODS, OR SERVICES; COST OF CAPITAL; OR FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, PUNITIVE, OR EXEMPLARY DAMAGES.**
- 11. Dispute Resolution.** Client shall not be entitled to assert a Claim against Consultant based on any theory of professional negligence unless and until Client has obtained the written opinion from a registered, independent, and reputable engineer, architect, or geologist that Consultant has violated the standard of care applicable to Consultant's performance of the Services. Client shall provide this opinion to Consultant and the parties shall endeavor to resolve the dispute within 30 days, after which Client may pursue its remedies at law. This Agreement shall be governed by and construed according to Kansas law.
- 12. Subsurface Explorations.** Subsurface conditions throughout the site may vary from those depicted on logs of discrete borings, test pits, or other exploratory services. Client understands Consultant's layout of boring and test locations is approximate and that Consultant may deviate a reasonable distance from those locations. Consultant will take reasonable precautions to reduce damage to the site when performing Services; however, Client accepts that invasive services such as drilling or sampling may damage or alter the site. Site restoration is not provided unless specifically included in the Services.
- 13. Testing and Observations.** Client understands that testing and observation are discrete sampling procedures, and that such procedures indicate conditions only at the depths, locations, and times the procedures were performed. Consultant will provide test results and opinions based on tests and field observations only for the work tested. Client understands that testing and observation are not continuous or exhaustive, and are conducted to reduce - not eliminate - project risk. Client agrees to the level or amount of testing performed and the associated risk. Client is responsible (even if delegated to contractor) for requesting services, and notifying and scheduling Consultant so Consultant can perform these Services. Consultant is not responsible for damages caused by services not performed due to a failure to request or schedule Consultant's services. Consultant shall not be responsible for the quality and completeness of Client's contractor's work or their adherence to the project documents, and Consultant's performance of testing and observation services shall not relieve Client's contractor in any way from its responsibility for defects discovered in its work, or create a warranty or guarantee. Consultant will not supervise or direct the work performed by Client's contractor or its subcontractors and is not responsible for their means and methods.
- 14. Sample Disposition, Affected Materials, and Indemnity.** Samples are consumed in testing or disposed of upon completion of tests (unless stated otherwise in the Services). Client shall furnish or cause to be furnished to Consultant all documents and information known or available to Client that relate to the identity, location, quantity, nature, or characteristic of any hazardous waste, toxic, radioactive, or contaminated materials ("Affected Materials") at or near the site, and shall immediately transmit new, updated, or revised information as it becomes available. Client agrees that Consultant is not responsible for the disposition of Affected Material unless specifically provided in the Services, and that Client is responsible for directing such disposition. In the event that test samples obtained during the performance of Services (i) contain substances hazardous to health, safety, or the environment, or (ii) equipment used during the Services cannot reasonably be decontaminated, Client shall sign documentation (if necessary) required to ensure the equipment and/or samples are transported and disposed of properly, and agrees to pay Consultant the fair market value of this equipment and reasonable disposal costs. In no event shall Consultant be required to sign a hazardous waste manifest or take title to any Affected Materials. Client shall have the obligation to make all spill or release notifications to appropriate governmental agencies. The Client agrees that Consultant neither created nor contributed to the creation or existence of any Affected Materials conditions at the site. Accordingly, Client waives any claim against Consultant and agrees to indemnify and save Consultant, its agents, employees, and related companies harmless from any claim, liability or defense cost, including attorney and expert fees, for injury or loss sustained by any party from such exposures allegedly arising out of Consultant's non-negligent performance of services hereunder, or for any claims against Consultant as a generator, disposer, or arranger of Affected Materials under federal, state, or local law or ordinance.
- 15. Ownership of Documents.** Work product, such as reports, logs, data, notes, or calculations, prepared by Consultant shall remain Consultant's property. Proprietary concepts, systems, and ideas developed during performance of the Services shall remain the sole property of Consultant. Files shall be maintained in general accordance with Consultant's document retention policies and practices.
- 16. Utilities.** Client shall provide the location and/or arrange for the marking of private utilities and subterranean structures. Consultant shall take reasonable precautions to avoid damage or injury to subterranean structures or utilities. Consultant shall not be responsible for damage to subterranean structures or utilities that are not called to Consultant's attention, are not correctly marked, including by a utility locate service, or are incorrectly shown on the plans furnished to Consultant.
- 17. Site Access and Safety.** Client shall secure all necessary site related approvals, permits, licenses, and consents necessary to commence and complete the Services and will execute any necessary site access agreement. Consultant will be responsible for supervision and site safety measures for its own employees, but shall not be responsible for the supervision or health and safety precautions for any other parties, including Client, Client's contractors, subcontractors, or other parties present at the site.

Consultant: **Terracon Consultants, Inc.**
 By:  Date: **9/2/2015**
 Name/Title: **Ginger C Horn / Senior Project Scientist**
 Address: **11555 Clay Road Suite 100**
Houston, TX 77043
 Phone: **(713) 690-8989** Fax: **(713) 690-8787**
 Email: **Ginger.Horn@terracon.com**

Client: **RG Miller Engineers Inc**
 By: _____ Date: _____
 Name/Title: **David Kubala / Manager - Public Works Department**
 Address: **16340 Park Ten Place, Suite 350**
Houston, TX 77084
 Phone: **(281) 921-8775** Fax: _____
 Email: **dkubala@rgmiller.com**

Reference Number: P92150118

August 26, 2015

EXHIBIT I

Mr. Joshua Netardus, P.E.
R.G. Miller Engineers
16340 Park Ten Place, Suite 350
Houston, Texas 77084

Re: Proposal for Urban Forestry Consulting Services on the City of League City,
Ervin Connector project.

Dear Mr. Netardus,

As per your request, C.N. Koehl Urban Forestry, Inc proposes to provide Urban Forestry Consulting services for the design phase of the Ervin Connector project. Approximately 3,200 linear feet of project right of way will be evaluated for proposed roadway construction. Based on your request for proposal, and our most recent experience on similar projects, we propose to provide the following Urban Forestry services:

Preliminary Tree Inventory/Site Visit

We will visit the site to inventory and flag all “Protected Trees” and “Invasive Trees” as defined in Chapter 102-12 – Tree Preservation and Provisions Ordinance. All trees within the proposed 100’ wide right of ways will be inventoried and flagged so that survey crew may tie tree locations in during topo survey. Right of entry will need to be provided and limits of proposed right of way acquisition will need to be marked in field prior to our site visit. Trees will be flagged in the field as follows:

- Small trees (as defined in Chapter 102-12) – will be flagged with green surveyor’s flagging and tagged with numbered aluminum tag. Surveyor’s flagging will assist survey crew in finding inventoried trees and aluminum tag nailed to tree will ensure tree numbering is not lost to vandalism prior to survey crew getting to site. Only trees within the 100’ ROW will be inventoried.
- Large trees (as defined in Chapter 102-12) – will also be flagged with green surveyor’s flagging and tagged with numbered aluminum tag. Trees within the 100’ ROW and 20’ beyond on each side will be inventoried.
- Invasive trees (as defined in Chapter 102-12) – will be flagged with orange surveyor’s flagging and numbered on flagging. We do not believe the invasive trees will need to be tied in by survey crew. We recommend inventory of invasive trees be completed in order to use the “Reduction of Caliper Inch Replacement for Removal of Invasive Trees” included in Chapter 102-12. Only trees within the 100’ ROW will be inventoried.

The data collected will be used reviewing proposed design when it is available and in preparation of tree preservation plan. We will need 14 to 16 business days to complete the preliminary tree inventory.

Fee for Field Evaluation/Site Visit (Two foresters working together for safety concerns due to undeveloped nature of project)	
30.0 hours @ \$110.00/hour	\$3,300.00
300 numbered aluminum tags.....	\$95.00
<u>15 rolls surveyor's flagging.....</u>	<u>\$45.00</u>
Total fee for preliminary tree inventory.....	\$3,440.00

Preliminary Tree Preservation Plan

The plan and profile drawings, provided by the engineer will be reviewed between the 50 and 70 percent submittals, to determine treatment for each tree. Each tree will be numbered on the drawings. A tree treatment schedule will list each tree by number, species, diameter, condition, anticipated treatment. Each tree (public and private) adjacent to construction activity will be evaluated to ensure that construction activity will not destroy too much of the structural root system. Destroying too much of the structural root system leaves the tree unstable, which could create liabilities. Should we find any conflicts with proposed construction or any liability issues we will make recommendations for minor design changes or for removal of the tree. Recommendations for minor design changes, such as shifting bends, a ts&v, vertical offset, inlets, or a fire hydrant, will be redlined on plan and profile drawings copied to our Tree Submittal Form with a brief description of recommended changes and emailed to engineer office designing the specific area of concern. Design change recommendations can then be reviewed by engineer and City to determine feasibility.

After we receive your comments on our design change recommendations we will develop an Autocad drawn tree protection plan which will identify the mitigative and protective treatments needed to ensure long term tree survival and compliance with the City's Tree Ordinance and staff recommendations. Plan and profile drawings, provided by the engineer, will be used to indicate each tree by number, and exact location of preservation treatments (protection fencing, root pruning trench, water line augers, Zero Curb cutback, etc.). A table including required replacement inch calculations and reduction of caliper inch replacement for removal of invasive trees will also be included on the drawings. Required tree replacement plantings will be shown on the tree protection plan as well. A specification addressing tree protection and tree planting will be provided to address all recommendations made in the treatment schedule and on the plans. Details for tree treatments will be included in the tree protection plan. Quantity totals and cost estimates for each tree treatment will be provided. The preliminary tree protection plan, specifications, and quantity totals and cost estimates will be emailed to you so that your staff may use the specs and quantity estimates as needed and plot the tree protection plan as it is needed. The AutoCad drawn tree protection plan would include our logo with a signature line, which we sign at the mylar stage. The preliminary tree protection plan, specifications and quantity/cost estimate can be included in your 70% and/or 90% submittal so that the City's staff can review our plan and provide

comments prior to the final submittal. We will need 14-20 business days to complete the preliminary tree protection plan for this project.

Fee for Preliminary Tree Preservation Plan\$2,640.00

Final Tree Preservation Plan and Specifications

We will review the construction design just prior to the final submittal, following comments from the City on recommendations made in the 70% and/or 90% submittal, to ensure that any design changes that may have been made are incorporated into the final tree protection plan. Changes necessary to the tree protection plan will be completed in the DWG drawings and resubmitted to engineer for final plotting. Quantity/Cost estimates, and specifications will be finalized and forwarded to engineer for inclusion in project. We will need 7-10 days to complete the Final Evaluation and Plan for each project.

Fee for Final Tree Preservation Plan and Specifications.....\$1,320.00

Drafting AutoCAD(DWG) files of Tree Preservation Plan

We do have AutoCAD capabilities and will provide a CAD drawn document. We will need the electronic files of proposed construction in DWG or DGN format. We will use the project title block and insert plan drawings at a 1:40 scale, triple banked on each sheet, similar to most traffic control plans. 1-2 sheets including the tree treatment schedule and one sheet including tree protection details will also be included. This format typically allows us to fit approximately 1,200-1,500 l.f. per sheet, which would give us 5-7 total sheets on this project. The drawings will be emailed, posted to your ftp site, or saved to CD and delivered to you, so that you may plot the files as you need them. CAD drafting will be completed in conjunction with the Preliminary and Final Plans. No additional time required.

Fee for Drafting DWG files of the Tree Preservation Plan.....\$1,500.00

Total Phase 2 Fees

CAD Drawn DWG files of Tree Protection Plan.....\$8,900.00

We have utilized the services contained in this proposal on similar projects for The City of West University Place Infrastructure Replacement Program, City of Houston Neighborhood Street Reconstruction Program, City of Houston Surface Water Transmission Program, City of Missouri City Street Reconstruction, City of Friendswood Street Reconstruction, City of Piney Point Street Reconstruction, City of Baytown Street Reconstruction, City of League City Street Reconstruction, City of Texas City Street Reconstruction, City of Galveston Street Reconstruction, City of Pearland Street Reconstruction, and numerous City of Houston waterline and sewer projects in the past. It is our goal to provide you the most effective, efficient, and value added services we can provide. We are willing to provide services in whatever capacity you deem appropriate.

If this proposal meets with your approval and you would like to retain our services, please forward your standard agreement or a notice to proceed, and we will coordinate drawings with each engineer and schedule the work as soon as we receive the plan and profile sheets. We greatly appreciate the opportunity to present this proposal and look forward to working with you on this project. If you have any questions or would like to make any changes, please do not hesitate to call me or Craig at 281-391-0022.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'SKLQ', is positioned above the printed name and title.

Sarah Koehl
President

EXHIBIT J

