



July 24, 2017

Mr. Christopher Sims, P.E
Asst. City Engineer/Traffic Engineer, Engineering
City of League City
500 W Walker St
League City, Texas 77573

**RE: *City of League City – League City Parkway at Brittany Lakes Dr/ Fennigan Ln
Traffic Signal and Left Turn Lane Design
Professional Services Proposal***

Dear Mr. Sims,

We are pleased to submit this revised scope of services and fee schedule to develop traffic signal and left turn bay designs for League City Parkway at Brittany Lakes Drive/ Fennigan Lane in Galveston County, Texas. We have prepared the scope of services based on our discussions and meeting on July 17, 2017.

We look forward to working with you on this project. If you have any further questions regarding this scope or fee, please don't hesitate to contact me.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Manu Isaac".

Manu Isaac, P.E.
Associate/ Project Manager

City of League City

League City Parkway at Brittany Lakes Dr/Fennigan Ln – Traffic Signal & Left Turn Bay Design

Kimley-Horn and Associates, Inc. (“Kimley-Horn” or “the Consultant”) is pleased to submit this scope of services to the City of League City (“the Client”) for professional consulting services related to the above referenced project. Our project understanding, scope of services, schedule and fees are presented below.

PROJECT UNDERSTANDING

This proposal is based on our meeting with City staff on July 17, 2017. It is understood that the City intends to add one additional left-turn bay for the Eastbound and Westbound approaches of League City Parkway (LCP) at it's intersection with Brittany Lakes Dr/ Fennigan Ln and to add a traffic signal at this intersection.

INFORMATION PROVIDED BY THE CLIENT

The Client shall provide the following information requested by the Consultant during the project:

- Previous traffic studies completed for this intersection
- As-built plans available for this intersection and intersecting roadways
- Any future development plans in the immediate vicinity of the intersection
- Drainage Study for the area, if available

The Consultant shall be entitled to rely on the completeness and accuracy of all information provided by the Client or the Client's consultants or representatives in the completion of their services under this work order.

SCOPE OF SERVICES

Task 1: Topographic Survey

The Consultant will engage a surveying sub-consultant (MBCO Engineering LLC) to obtain a topographic survey of the study intersection. Information gathered by the survey will consist of right-of-way, edge of pavement, curb lines, islands and medians, pavement markings, signs, sidewalks, trees, and other above ground features within the survey area. This will also include vertical survey at the intersection including ditch lines, if applicable to required design. The survey will provide project baselines, identify one benchmark, and identify and show above and underground utilities that can be reasonably determined via markings by a utility locator service. This survey will form the base sheets for the turn-lanes and traffic signal design that will be performed. No deliverable is anticipated in performance of this task. The survey area consists of the following:

1. EB Approach of LCP (~300 ft)
2. WB Approach of LCP (~300 ft)
3. SB Approach of Fennigan Ln (~100 ft)
4. NB Approach of Brittany Lakes Dr (~100 ft)

Construction staking for this intersection is not included as part of this task and will be considered additional services.

Task 2: Intersection Improvement Concept Development

Kimley-Horn will develop up to 3 conceptual exhibits showing the proposed layout of intersection modifications associated with the addition of an eastbound and westbound left turn lane and a traffic signal at the League City Parkway and Brittany Lakes Dr/ Fennigan Ln intersection for the City to consider. These concepts will be prepared using publicly available aerial images and prepared in color with limited annotation.

Task 3: Geotechnical Investigation

Kimley-Horn will engage a geotechnical sub-consultant (Paradigm Consultants) to perform limited geotechnical services. Two soil borings will be conducted along the roadway alignment to depths of up to 20' below existing grade using truck-mounted equipment. Typical laboratory services (testing soil properties) and engineering analysis (preparing engineering report with the boring location map, general soil/water conditions, recommendations for subgrade and pavement section, etc.) will be completed. One copy of the report will be submitted to the City.

Kimley-Horn is retaining the geotechnical sub-consultant to provide the scope of this task solely for the administrative convenience of the Client. Client acknowledges that Consultant will not be reviewing the work product of sub-consultant and will not be liable for it in anyway. If Client has any future claim related to these services, Client will pursue sub-consultant directly and not the Consultant.

Task 4: Culvert Extension Design (Option 1)

Kimley-Horn will prepare a design to extend the existing Brittany Lakes Drive culvert crossing under the proposed left turn lane improvements. This task excludes drainage analysis. The size of the existing box culvert will be matched in our design of the new segment. The design will consist of the following:

- Storm Drainage Plan and Profile
 - Consultant will prepare storm drainage plan and profile sheets for the culvert extension. The plan will show flowline elevations of the proposed extensions, tie-in elevations to the existing culverts, headwall location, and tie-in information to the existing concrete channel section.
- Erosion Control Plan
 - Showing initial erosion control measures to be installed prior to disturbance of the project area. The erosion control measures will be maintained and modified throughout site construction by the Contractor, and it is the Contractor's responsibility to modify the plan during construction as necessary to comply with the conditions of their permits. This task does not yield a SWPPP document.
- Construction Details
 - Showing construction details required for the culvert extension and erosion control measures identified on the erosion control plan.

Task 5: Structural Soil Wall Design (Option 2)

Kimley-Horn will provide design/plan sheets for the structural soil retention support wall to allow the left turn lane to carry traffic load adjacent to the existing channel. This soil retention support wall will only

be needed on one side of the channel for each of the eastbound and westbound approach for approximately 200 feet. As part of design, the appropriate method of soil support wall will be determined. Client will provide record drawings for the existing drainage channel structure.

Task 6: Left Turn Lanes and Minor Roadway Improvements

Scope of this task consists of design of the following roadway improvements:

1. LCP at Brittany Lakes Dr – EB Left-Turn Lane (~100' storage + 100' taper)
2. LCP at Brittany Lakes Dr – WB Left-Turn Lane (~100' storage + 100' taper)
3. Median Curb Radii improvements

The civil engineering design documents will be prepared in general accordance with published City of League City design standards and specifications. If City standards are not applicable or relevant, TxDOT standards and specification will be used.

- A. Data Collection: The Consultant will visit the project intersection for observation of existing conditions consisting of existing geometry, examine lane configuration, visible utility appurtenances, and traffic/pedestrian operations within the study area.

The Consultant will gather readily available existing record drawings and file information of the project intersection from Client files, consisting of the existing record or construction roadway and traffic signalization plans, right-of-way information, and utility maps. The Consultant will prepare a base map of existing geometrics, apparent or known utilities from record drawings and the topographic survey.

- B. The Consultant will prepare 60% preliminary turn lane and roadway layout sheets showing the proposed improvements, typical sections and submit to the Client for review.
- C. The Consultant will incorporate Client review comments from the preliminary layout and prepare the final design plan set for the project intersection. The basic design parameters will be based on discussions with the Client. The final design plans will consist of the following items:

- Typical Sections
 - Consultant will prepare proposed typical sections for each of the turn lanes and roadway improvements, but detailed plan and profiles will not be included. The typical section will show the pavement and subgrade section, existing edge of concrete, proposed edge of concrete (or curb), existing right-of-way, travel lanes. The pavement section will match the existing roadway section. Pavement design is not included in this scope of services.
- Paving Plans
 - Consultant will prepare paving design showing plan view (no profile) of the proposed turn lane improvements. The plan will show the existing and proposed horizontal roadway improvements with tie-in elevations, existing and proposed (if needed) right-of-way and easements, existing and proposed drainage structures, horizontal and vertical control data.
- Pavement Markings and Signage
 - Consultant will prepare a pavement marking and signage design showing plan view of the proposed lane dimensions and lane designation arrows.

- Storm Drain
 - Consultant will prepare design for storm drain adjustments due to the proposed right-turn lane improvements, where needed. Adjustments could include moving inlets, adding inlets, typical re-grading, and adjusting manhole elevations. No drainage analysis, drainage area map, or calculations will be performed. Relocation or adjustment of other utilities such as sanitary, water, and gas is not included in this design; these would be considered additional services.
- Traffic Control Plans (TCP)
 - Consultant will prepare TCP sheets that show the lane closures required for the construction of the turn lane and roadway improvements. Traffic control will show the temporary signing and striping required to provide flow of traffic during construction. TCP will follow Part VI of the TMUTCD, TxDOT standards (where applicable) and City of League City guidelines.

Deliverables:

- Preliminary 60% - Three (3) 11"x17" drawings and plan set
- Final 100% - One (1) Signed and sealed 11"x17" drawings and plan set
- Quantity Listing
- Engineer's opinion of probable construction cost

Client acknowledges that Kimley-Horn does not control the cost of labor, materials, equipment or services, and therefore, Kimley-Horn cannot and does not guarantee that proposals, bids or actual costs will not vary from its opinions of probable construction cost.

Task 7: Traffic Signal Design

The scope for traffic signal design consists of developing the signal layout for mast arm signal pole configuration, signal head configuration, electrical details, signing and pavement marking layouts, signal pole and foundation standards, quantities and construction cost estimates, and specifications.

The traffic signal design plans consists of the following plan sheets. No elevation layout would be required due to traffic signal being mast-arm configuration.

- Summary of Quantities
- Traffic Signal Notes
- Existing Conditions Sheet (where applicable) showing existing intersection and roadway layout, signs, pavement markings, other notable above ground features, and the recorded utilities
- Traffic Signal Layout Sheet including overhead signs and pedestrian elements
- Traffic Signalization Detail Sheet with tabulation of quantities, electrical chart, timing table, Gridsmart detection, and general notes
- Standard Detail Sheets as may be applicable

Deliverables:

- Preliminary 60% - Three (3) 11"x17" drawings and plan set
- Final 100% - One (1) Signed and sealed 11"x17" drawings and plan set
- Quantity Listing
- Engineer's opinion of probable construction cost

Client acknowledges that Kimley-Horn does not control the cost of labor, materials, equipment or services, and therefore, Kimley-Horn cannot and does not guarantee that proposals, bids or actual costs will not vary from its opinions of probable construction cost.

Task 8: Public Meetings and Presentations

Kimley-Horn will conduct an initial public meeting to share the intersection improvement concepts and receive input and/or feedback from the stakeholders/residents/HOA in the immediate vicinity of the study intersection. After the design is at a 60% level of completion, Kimley-Horn will conduct a final public meeting to present the design and share the proposed design with stakeholders/residents/HOA. Brief handouts (2-3 pages) and/or powerpoint presentations (limited to 12 slides each) may be used for these public meetings.

In addition to the two public meetings, Kimley-Horn may meet with the League City staff, elected City officials, and other stakeholders (selected by City) to discuss about this project. However, such meetings will be limited to a maximum of two. Any additional meetings will be considered additional services.

Task 9: Bid Phase Services

Kimley-Horn will prepare a project manual/bid document that includes the necessary technical documents and specifications required for bidding. This project manual/bid document will include the construction drawings and specifications suitable for bidding and construction. Kimley-Horn will compile the final bid document which will consist of drawings, specifications, bid tables and supporting documents for bidding purposes.

The services that are considered part of this task could include:

- Assist the City in the development of a Bid Schedule.
- Assist the City in responding to Bidder's questions.
- Attend one meeting with City Staff to review Bid Documents & Schedules.

It is expected that the City will solicit the bids. Kimley-Horn can be available during the bidding process to answer any questions that may arise and will assist the City with bid tabulation. However, selection of bidders is not considered part of this task.

Construction Phase Services are not included in this scope of services and will be considered additional services.

Task 10: Construction Phase Services (Hourly)

Consultant will provide construction phase services specifically stated below, as requested by Client on an hourly basis. The tasks that will be performed for some of the items below are listed explicitly. However, the effort for all items that do not have any specific tasks listed under them will be limited to a maximum of 20 hours.

Visits to Site and Observation of Construction. Consultant will provide on-site construction observation services during the construction phase. Visits and observations by Consultant are not intended to be exhaustive or to extend to every aspect of Contractor's work in progress. Observations are to be limited to spot checking, selective measurement, and similar methods of general observation of the Work based on Consultant's exercise of professional judgment. Based on information obtained during such visits and such observations, Consultant will evaluate whether Contractor's work is generally proceeding in accordance with the Contract Documents, and Consultant will keep Client informed of

the general progress of the Work.

The purpose of Consultant's site visits will be to enable Consultant to better carry out the duties and responsibilities specifically assigned in this Agreement to Consultant, and to provide Client a greater degree of confidence that the completed Work will conform in general to the Contract Documents. Consultant shall not, during such visits or as a result of such observations of Contractor's work in progress, supervise, direct, or have control over Contractor's work, nor shall Consultant have authority over or responsibility for the means, methods, techniques, equipment choice and usage, sequences, schedules, or procedures of construction selected by Contractor, for safety precautions and programs incident to Contractor's work, nor for any failure of Contractor to comply with laws and regulations applicable to Contractor's furnishing and performing the Work. Accordingly, Consultant neither guarantees the performance of any Contractor nor assumes responsibility for any Contractor's failure to furnish and perform its work in accordance with the Contract Documents.

- Perform Site Visits and Construction Observations during construction. These shall be limited to ten (10) visits. City will perform all formal site inspections.

Recommendations with Respect to Defective Work. Consultant will recommend to Client that Contractor's work be disapproved and rejected while it is in progress if, on the basis of such observations, Consultant believes that such work will not produce a completed Project that conforms generally to Contract Documents.

Clarifications and Interpretations. Consultant will respond to reasonable and appropriate Contractor requests for information and issue necessary clarifications and interpretations of the Contract Documents to Client as appropriate to the orderly completion of Contractor's work. Any orders authorizing variations from the Contract Documents will be made by Client.

Change Orders. Consultant may recommend Change Orders to Client, and will review and make recommendations related to Change Orders submitted or proposed by the Contractor.

- Respond to clarifications and request for information (RFI) by Contractor and issue Change Orders (CO), if needed. RFI's and CO's shall be limited to a total of eight (8).

Shop Drawings and Samples. Consultant will review and approve or take other appropriate action in respect to Shop Drawings and Samples and other data which Contractor is required to submit, but only for conformance with the information given in the Contract Documents. Such review and approvals or other action will not extend to means, methods, techniques, equipment choice and usage, sequences, schedules, or procedures of construction or to related safety precautions and programs.

- Review shop drawings and sample submittals, layouts, and any other materials submitted by fabricators for approval.

Substitutes and "or-equal." Evaluate and determine the acceptability of substitute or "or-equal" materials and equipment proposed by Contractor in accordance with the Contract Documents, but subject to the provisions of applicable standards of state or local government entities.

Inspections and Tests. Consultant may require special inspections or tests of Contractor's work as Consultant deems appropriate, and may receive and review certificates of inspections within Consultant's area of responsibility or of tests and approvals required by laws and regulations or the Contract Documents. Consultant's review of such certificates will be for the purpose of determining that the results certified indicate compliance with the Contract Documents and will not constitute an independent evaluation that the content or procedures of such inspections, tests, or approvals comply with the requirements of the Contract Documents. Consultant shall be entitled to rely on the results of

such tests and the facts being certified.

Disagreements between Client and Contractor. Consultant will, if requested by Client, render written decision on all claims of Client and Contractor relating to the acceptability of Contractor's work or the interpretation of the requirements of the Contract Documents pertaining to the progress of Contractor's work. In rendering such decisions, Consultant shall be fair and not show partiality to Client or Contractor and shall not be liable in connection with any decision rendered in good faith in such capacity.

Applications for Payment. Based on its observations and on review of applications for payment and accompanying supporting documentation, Consultant will provide limited assistance to the City in determining amounts for the Contractor to be paid. This will constitute Consultant's representation to the Client, based on such observations and review, that, to the best of Consultant's knowledge, information and belief, Contractor's work has progressed to the point indicated and that such work-in-progress is generally in accordance with the Contract Documents subject to any qualifications stated otherwise. In the case of unit price work, Consultant's recommendations of payment will include determinations of quantities and classifications of Contractor's work, based on observations and measurements of quantities provided with pay requests.

By recommending any payment, Consultant shall not thereby be deemed to have represented that its observations to check Contractor's work have been exhaustive, extended to every aspect of Contractor's work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Consultant in this Agreement. It will also not impose responsibility on Consultant to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, nor to determine that title to any portion of the work in progress, materials, or equipment has passed to Client free and clear of any liens, claims, security interests, or encumbrances, nor that there may not be other matters at issue between Client and Contractor that might affect the amount that should be paid.

Substantial Completion. Consultant will, promptly after notice from Contractor that it considers the entire Work ready for its intended use, in company with Client and Contractor, conduct a site visit to determine if the Work is substantially complete. Work will be considered substantially complete following satisfactory completion of all items with the exception of those identified on a final punch list. If after considering any objections of Client, Consultant considers the Work substantially complete, Consultant will notify Client and Contractor.

- Conduct one walkthrough at substantial completion and provide a "punchlist" to Client for completion of the project.

Final Notice of Acceptability of the Work. Consultant will conduct a final site visit to determine if the completed Work of Contractor is generally in accordance with the Contract Documents and the final punch list so that Consultant may recommend, in writing, final payment to Contractor. Accompanying the recommendation for final payment, Consultant shall also provide a notice that the Work is generally in accordance with the Contract Documents to the best of Consultant's knowledge, information, and belief based on the extent of its services and based upon information provided to Consultant upon which it is entitled to rely.

- Perform one (1) Final Completion walk-through.
- Prepare record drawing of the traffic signal layout based on Contractor redlines.
- Attend traffic signal turn-on and assist with basic signal timing.

Limitation of Responsibilities. Consultant shall not be responsible for the acts or omissions of any

Contractor, or of any of their subcontractors, suppliers, or of any other individual or entity performing or furnishing the Work. Consultant shall not have the authority or responsibility to stop the work of any Contractor.

SCHEDULE

The work identified under Tasks 1 through 8 above is anticipated to be complete within 6 months from receiving notice to proceed. The timeline for completion of these tasks are contingent on City review times.

Times for performance shall be extended as necessary for delays due to circumstances that Kimley-Horn does not control. Kimley-Horn shall not be liable for or be deemed in breach because of delays caused by any factor outside of its reasonable control.

FEE AND EXPENSES

Kimley-Horn will perform the scope of services under this work authorization as described above for a lump sum fee. Depending on the concept selected after Task 2 and first public meeting, either Task 4 (Option 1) or Task 5 (Option 2) will be authorized, but not both. The total fee for design if **Option 1** is selected is \$115,000.00 (lump sum) plus \$8,000 (hourly), for a total fee of **\$123,000.00**. The total fee for design if **Option 2** is selected is \$120,000.00 (lump sum) plus \$8,000 (hourly), for a total fee of **\$128,000.00**. All project-related direct expenses are included in these values. The breakdown of fees for each task is detailed below for information purposes only:

Task 1 - Topographic Survey:	\$ 15,300	
Task 2 - Intersection Improvement Concepts:	\$ 5,800	
Task 3 - Geotechnical Investigation:	\$ 4,900	
Task 4 - Culvert Extension Design:	\$ 20,000	(Option 1)
Task 5 - Structural Soil Wall Design:	\$ 25,000	(Option 2)
Task 6 - Left Turn Lanes & Minor Roadway:	\$ 36,000	
Task 7 - Traffic Signal Design:	\$ 21,000	
Task 8 - Public Meetings:	\$ 7,000	
Task 9 - Bid Phase Services:	\$ 5,000	

Kimley-Horn will perform the scope of services under Task 10 on an hourly basis and will be billed based on the Standard Rate Schedule attached for a not-to-exceed amount of \$8,000.00.

Lump sum fees will be invoiced monthly upon the percentage of services completed or actual services performed. Payment will be due within 25 days of the date of the invoice.

ADDITIONAL SERVICES

Any services beyond the Scope of Services described in the tasks above shall be considered additional services. The Consultant can provide these services, if needed, upon the City's issuance of a written Task Order. Any additional amounts paid to the Consultant as a result of the material change to the Scope of the Project shall be agreed upon in writing by both parties before the services are performed.



Kimley-Horn and Associates, Inc.

Standard Rate Schedule

(Hourly Rate)

Senior Professional I	\$240 - \$265
Senior Professional II	\$180 - \$250
Professional	\$160 - \$210
Analyst	\$105 - \$175
Senior Technical Support	\$115 - \$190
Technical Support	\$70 - \$100
Support Staff	\$75 - \$115

Effective July 2017