EXHIBIT "A"

Services to be provided by the Owner

1. The County will provide with on-going guidance, timely reviews, and decisions necessary to complete services required by the work authorization in order to permit the Surveyor to maintain an agreed upon project schedule.

2. The County shall adhere to Article 6 of the Contract with respect to Payment.

3. The County shall allocate money for the Acquisition of Property in a "revolving account". These funds associated with actual land value will be reimbursed to the county in accordance with the TxDOT ROW agreement.

GENERAL INSTRUCTIONS

ENGINEER shall mean L&G Engineering.

STATE shall mean Texas Department of Transportation.

COUNTY shall mean Hidalgo County.

PROJECT DESCRIPTION

The services designated herein as "Services Provided by the Engineer" shall include the performance of all engineering services for the following described facility:

County/City: Hidalgo County

Control: 0669-01-043, etc.

Project/Description: PS&E Design, Right-of-Way Mapping, and Acquisition Services for FM 681

Length: Variable

Highway: FM 681

Limits: FM 2221 to SH 107

Existing Facility

Project Classification

(Place an "X" in only one Project Classification)

___ Surface Treatment
___ Overlay
___ Rehabilitation Existing Road (Scarify & Reshape)
___ Convert Non-Freeway to Freeway
___ Widen Freeway
_X_ Widen Non-Freeway
___ New Location Toll Freeway
___ New Location Non-Freeway
___ Interchange (New or Reconstruct)
___ Bridge Widening or Rehabilitation
___ Bridge Replacement
___ Upgrade to Standards - Freeway
___ Upgrade to Standards - Non-Freeway
___ Miscellaneous Studies (Use Function Code 110 For All Tasks)

NOTES

ROUTE AND DESIGN STUDIES
(Function Code 110)

Services Provided By: Engineer	County		
NO		1.	Route Location Studies*
NO		2.	Level of Service Analysis**
NO		3.	Traffic Evaluations and Projections
NO		4.	Develop Roadway Design Criteria
NO		5.	Preliminary Cost Estimates
NO		6.	Design Schematic (See Section 7, page 7-1 for schematic layout requirements)
NO		7.	Preliminary Right-of-Way Requirements
NO		8.	Design Concept Conference
		9.	Soil Core Hole Drilling
NO			a. Pavement (See Section 7, pages 7-3 thru 7-4 for requirements)
NO			b. Retaining Walls (See Section 10, page 10-1 Thru 10-2 for requirements)
NO			c. Miscellaneous Structures (See Section 10, page 10-4 for requirements)
NO			d. Bridges (See Section 11, page 11-3 for requirements)

* The Phase I or better survey for hazardous material should be included as a determining factor of route selection. Projects which do not require additional right of way should be considered separately from an expansion or new location.

NOTES
SOCIAL, ECONOMIC AND ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT
(Function Code 120)

Services Provided By:
Engineer COUNTY

1. Environmental Reports
All Environmental Reports shall be in accordance with 43 Texas Administrative Code (TAC) 2.40-2.51, Code of Federal Regulations, Title 23, Part 771 and Highway Design Operations and Procedures Manual, Part II-B.

a. Environmental Assessments

NO (1) An Environmental Assessment shall be prepared, anticipating a Categorical Exclusion.

NO (2) An Environmental Assessment shall be prepared, anticipating a Finding of No Significant Impact.

NO (3) An Environmental Assessment shall be prepared, anticipating the need for a Draft Environmental Impact Statement.

b. Environmental Impact Statement

NO (1) A Draft Environmental Impact Statement shall be prepared. After appropriate interagency and public reviews within time limits prescribed by the Code of Federal Regulations, Title 23, Part 771 and 43 Texas Administrative Code 2.40-2.51, a Final Environmental Impact Statement shall be prepared.

NO (2) A Section 4(f) Statement (Department of Transportation Act) shall be provided by ~~the~~ **Engineer**~~. The format and content of the statement is found in FHWA~~ Technical Advisory T6640.8A.

2. Public Involvement
All public involvement procedures shall be in accordance with 43 Texas Administrative Code (TAC) 2.40-2.51, Code of Federal Regulations Title 23, Part 771 and Highway Design Operations and Procedures Manual, Part II-B.

NO a. A public involvement meeting(s)/hearing(s) shall be scheduled, coordinated and conducted.*

NO b. Technical assistance, meeting(s)/hearing(s) preparation, maintenance of contracts lists, minutes of meeting(s), exhibit preparation, and other tasks outlined by the CITY, shall be provided.

NO 3. Cultural Resources
Formal consultation with the State Historic Preservation Office (SHPO) and the Texas Historical Commission (THC) will be conducted by the CITY.

NO a. Historic Structure Studies
A records search and reconnaissance survey shall be performed, and documentation prepared regarding identification efforts, National Register eligibility and potential impacts to historic properties in accordance with the state's historic structure requirements.

b. Archeological Studies

NO (1) Files searches shall be conducted to determine if known archeological sites are present; to identify whether these sites have been listed or determined eligible for the National Register of Historic Places or have been designated State Archeological Landmarks; and to identify the need (if any) to perform additional archeological investigations.

NO (2) Archeological reconnaissance will be performed under a Texas Antiquities Permit (13 TAC 26) signed for the Sponsor by a professional archeologist with the STATE.

Services
Provided By:
Engineer COUNTY

NO (3) Archeological survey shall be performed under a Texas Antiquities Permit (13 TAC 26) signed for the Sponsor by a professional archeologist with the STATE.

4. Noise and Air Quality Analyses

NO a. Noise Analysis
A noise analysis shall be prepared, including predicted noise levels and the consideration and evaluation of noise mitigation, in accordance with the STATE'S Noise Guidelines. The noise analysis or a summary of the noise analysis shall be included in the environmental document for the project.

NO b. Air Quality Analysis
An air quality analysis shall be prepared in accordance with the STATE'S Air Quality Guidelines. The air quality analysis or a summary of the air quality shall be included in the environmental document for the project.

NO 5. Ecological Investigations
A wetland survey and if necessary, a wetland delineation shall be conducted and a "wetland finding" shall be provided if necessary. As part of the environmental phase of the project, the consultant should notify the District if it is believed that a Section 404 or Section 9 permit is required, and provide the technical data to the District for application to the U.S. Army Corps of Engineers and/or the U.S. Coast Guard.

A determination should be made if there are potential federally listed endangered or threatened species that could be impacted. The District will be notified as soon as possible that Section 7 or 10 consultation may be required. Supporting data will be furnished to the district when consultation with the U.S. Fish and Wildlife Service is undertaken.

NO 6. Hazardous Materials
The consultant shall perform an Environmental Site Assessment for hazardous materials impact in accordance with the American Society for Testing and Materials (ASTM) 1528.93 (Transaction Screen Process).

NO 7. General Guidelines for Preparation of Environmental Documents

a. The environmental document prepared shall be provided on paper and on a formatted diskette that is compatible with the word processor program and equipment of the district office.
b. Three draft copies and twelve final copies of the Environmental Assessment shall be provided.
c. Ten draft copies and thirty final copies of the Draft and Final Environmental Impact Statements shall be provided.
d. The environmental document shall be prepared in accordance with the content and format of FHWA Technical Advisory T6640.8A.
e. Exhibits in the environmental document shall be limited to 297 millimeters by 420.5 millimeters (11 inches by 17 inches) where possible.

RIGHT-OF-WAY DATA
(Function Code 130)

Services Provided By: Engineer	County	
		NOTE: No work involving right-of-way (ROW) data is to be performed until the state has given the engineer written approval of the final location of the proposed ROW lines.
	YES	1. Ownership Data in a .dgn file a. Ownership Information shall be determined (Preliminary Title Data) for a distance of 3/4 miles before and after each existing or proposed overpass. b. Compensable utility ownership rights on TxDOT ROW shall be researched and provided. c. For each drainage outfall property preliminary ROW identification will be shown. d. For each irrigation structure pipe. e. Mailing list of owners on both side of the expressway for the project limits.
	YES	2. Parcel plats & Right-of-Way Map a. A ROW map, parcel plats and field notes shall be prepared and furnished. b. ROW map and field notes shall be revised as required due to changes in Highway Ownership Changes or Revised Parcel Numbering. All plats and field notes must be signed and sealed by a Registered Professional Land Surveyor (RPLS). c. ROW map must depict all improvements affecting ROW.
	YES	3. Utility Adjustments a. Highway Design Data shall be furnished by the Engineer to the County and TxDOT for joint coordination with Utility Companies of the needed Utility Adjustments.
	YES	4. Field Notes a. Field notes and plats, signed and sealed by a Registered Professional Land Surveyor, for all parcels on the ROW Map (metric and english units) b. Control of Access Descriptions for all parcels on Designated Controlled Access Highways. c. Computation Sheets for Survey Closure and Area for Each Parcel. d. Ground surveys and preparation of parcel maps, legal descriptions, and right of way maps.
	YES	5. Survey and Stake Right-of-Way
	YES	6. Records as Required by the County and TxDOT a. Records used to establish ownership

Services Provided By:
Engineer County

YES

7. General Guidelines for Preparation of Right-of-Way Maps

a. All procedures involving ROW maps, surveys and field notes shall be in conformance with the State's Right-of-Way, Book I and Book II, except as provided herein and in accordance with the Texas Board of Professional Land Surveying Practices Act.

b. The **engineer** shall be responsible for completing the title sheet as required and formatted by TxDOT and as discussed in Book II of the Right of Way Manual.

c. Preliminary and completed work shall be submitted as requested by the district.

d. The **engineer** shall maintain a direct line of communication and coordinate very closely with the district's design staff, through the district engineer, throughout the project.

e. (1) Minimum mathematical calculations relative to field note data are: (a) area of taking, if expressed in metric, will be carried to three decimal places or, if expressed in square feet, will be rounded to the square foot, (b) distances will be given to the nearest metric units and hundredth of a foot and (c) bearings will be carried to the nearest second. Data contained in the field notes and shown on the map shall be identical. More precise calculations may be requested by TxDOT.

(2) Calls within the body of the field notes shall be written to identify property lines and the existing and proposed ROW lines.

f. Project base line is to be drawn and stationed on the ROW map.

g. Minimum size lettering is to be 4 millimeters (5/32 inch) height for hand lettering and 140 for lettering by computer-aided design and drafting (CADD) on all ROW maps, unless otherwise authorized in writing by TxDOT.

h. As soon as property lines and parent tracts can be determined, the engineer shall submit a preliminary map for review of parcel numbers and guidance early in the development process.

i. Zip-a-tone or similar products shall not be used on map sheets.

j. All field notes and plats shall be signed, dated and sealed by a Registered Professional Land Surveyor or Licensed State Land Surveyor.

k. The ROW map sheets shall be ink or Mylar type tracing film or as otherwise authorized by TxDOT.

l. Field note data for all parcels shall be furnished on diskettes or tapes that are compatible with TxDOT.

m. THE SURVEYOR SHALL BE LIABLE FOR ALL SURVEYING MISTAKES AND SHALL BE RESPONSIBLE AT HIS SOLE EXPENSE FOR CORRECTION OF ALL ERRORS.

n. TxDOT Plan Checklist will be adhered to.

FIELD SURVEYING AND PHOTOGRAMMETRY
(Function Code 150)

Services Provided By: Engineer	County	
		1. Field Surveying
NO	YES	a. Primary Project Control - 3 to 5 miles spacing Precision shall be 1 part in 20,000 or better, unless otherwise directed by the district engineer. (1) Establish horizontal control points (2) Establish vertical control points
YES	YES	b. Secondary Project Control (Surveyor shall recover and/or reset H&V Control Points as provided by the Engineer and create Survey Data Sheets for inclusion in the Project Plans. • No traverse should exceed 25 angle points. Planimetrics shall be 20 ft Lt & Rt from the proposed ROW. • The unadjusted angular error should not exceed 2 seconds per angle, plus 14 seconds. • The unadjusted ratio of precision should be one part in 10,000 or better. (The ratio of precision is the total length of the traverse divided by the total error.) • The unadjusted vertical error should not exceed 0.03 foot per mile of traverse. (1) Project control base lines
NO		(2) Photogrammetric ground control
NO		(a) Establish horizontal control
NO		(b) Establish vertical control points
NO		(c) Place and maintain control point targets
YES	NO	c. Other Field Surveying

(1) **The limit of the Design surveys shall be 500-ft before and after the limits of the project as identified by the Project Engineer on the schematic. Recover and/or re-establish horizontal and vertical control.** Set benchmarks at 1000-ft intervals and along each outfall identified on Exhibit A & B. The BM's shall be #5 I.R. 2-ft in depth set in concrete. A H&V Book will be provided by the Engineer to the Surveyor and the surveyor will provide a 3-pt reference sketch with ties to the BMs for inclusion the the existing H&V Control Book. Establish benchmark circuit throughout the project with a tolerance of 0.03'/ft per mile error vertically.

(2) Complete topographic and cross section survey, data processing, and CADD mapping (2D 3D) on voided sections identified on CD provided by the engineer.

(3) Locate all visible utilities, data processing and CADD mapping (2D & 3D) including irrigation lines.

(4) Field locate cross culverts, driveway culverts, inverts, irrigation lines, within the project limits, data processing and CADD mapping (2D & 3D).

(5) Right of Entry, Right of Way Research, and Appraisal District Records is the responsibility of the Surveyor.

(6) The Surveyor shall also paint the proposed centerline on the existing pavement as approved by Engineer. (500-ft stations and a tick mark at 100-ft. stations –12 inches long with approved paint by Engineer) before construction for the purpose of utility adjustments and project location.

(7) Profile and cross section intersecting streets for ties into project (500-ft. beyond the proposed ROW per schematic and 20-ft wider than the existing ROW of intersecting street). Reference missing voids as per CD provided by the Engineer.

(8) Cross section irrigation crossings for a distance of 20-ft beyond the proposed ROW at 100-ft intervals in a DTM file. Provide a complete description of irrigation appurtances as identified by the engineer sample layout.

(9) Tie Horizontally and Vertically the existing storm drain system that lies within the existing proposed ROW including the elevation of the outfall of said recovered existing storm drain systems.

Services Provided By: Engineer	County	
YES	NO	(10) Tie to existing underground and overhead utilities (location, elevation and direction) Horizontally – the surveyor shall call the 1-800 number for the utilities to be marked on the ground as well as any city water and sewer lines. He shall tie all visible utility crossings with name, address and Phone #'s of utility companies. The engineer will coordinate with the utility companies and jointly the Surveyor and the Engineer will identify which utilities were missed and need to be tied down. Vertically – The engineer shall identify all utilities that are potential conflicts and that need to be tied vertically. The engineer will advise the surveyor in writing of the needed vertical ties and the surveyor will tie the lines vertically once the surveyor has coordinated the exposure and provide the information to the engineer.
YES	NO	(11) Additional Field Surveying as shown below: (A) IRRIGATION LINES – The surveyor will meet with the engineer before he ties down any irrigation lines. The Engineer will provide him the existing Irrigation District Maps and the A&M Data of existing irrigation lines that are identified of record. He will follow the sample given to him by the engineer and tie the structures horizontally and vertically and provide Field Books to the engineer. (B) OUTFALLS – The surveyor will provide a complete 2D & 3D File including utilities of the outfall identified on Exhibit A and B **Driveways and Turnouts** (a) Inventory commercial entrances, public roads and side streets separately. (b) Obtain centerline station. (Width at ROW, PAV'T and existing radius. (c) Inventory by type (dirt, caliche, gravel or paved). If paved, indicate condition in terms of no patches, has patches or has potholes. Obtain width at R.O.W. line. (e) Obtain elevations at both edges of the driveway or turnout in line with the side drain.
YES	NO	(13) ROW staking (Existing and Proposed @ 1,000 ft. stations PC's PT's and Angle points as per ROW Map)
NO	NO	(14) Soil core hole staking -
YES	NO	(15) Determine changes in topography from voids and outdated maps due to development, erosion, etc.
YES	NO	(16) Profiles of existing drainage facilities
NO	NO	(17) Measurement of hydraulic opening under existing bridges
YES	NO	(18) Obtain elevations of manholes and valves of utilities
YES	NO	(19) Provide temporary signs, traffic control, flags, safety equipment, etc.
YES	NO	(20) Ties to existing bridges or culverts that may conflict with new construction.
N/A	N/A	(21) Bridge widening top of deck and/or top of cap elevations at the Profile Grade Line (PGL) and the edges of slab at bent locations.
YES	N/A	(22) Inventory signs, mailboxes, and driveways
YES	N/A	(23) Survey controlled data sheets per TxDOT guidelines.

Services Provided By: Engineer	County	
N/A	N/A	2. Photogrammetric Products a. Uncontrolled Photography (1) Contact Prints (2) Mosaics (3) Digital ortho plots b. Mapping (1) Planimetric Maps (2) Contour Maps (3) Cross Sections (4) Profiles (5) Digital Terrain Models (DTM)

ROADWAY DESIGN CONTROLS
(Function Code 160)

Services Provided By:
Engineer COUNTY

1. Geometric Design

NO NO a. Horizontal and Vertical Alignment
NO NO b. Schematic Layout (Completed)
(1) The location of interchanges, main lanes, grade separations, frontage roads and ramps.
(2) Develop vertical and horizontal alignment of main lanes, ramps and cross roads at proposed interchanges or grade separations. Frontage road alignment data need not be shown on the schematic; however, it should be developed in sufficient detail to determine ROW needs. The degree of horizontal curves and vertical curve data, including "K" values, shall also be shown for ease of checking.
(3) For freeways, show the location and text of the proposed main lane guide signs. Lane lines and/or arrows indicating the number of lanes shall also be shown.
(4) A complete explanation of the sequence and methods of stage construction, if proposed, including the initial and ultimate proposed treatment of crossovers and ramps.
(5) The tentative ROW limits.
(a) Provide a roadway Design System (RDS) or (GEOPAK) computer tape of the preliminary earthwork to verify ROW requirements.
(b) Provide a graphics file containing the approved schematic.
(6) The geometric (pavement cross slopes, lane and shoulder widths, slope rates for fills and cuts) of the typical sections of proposed highway main lanes, ramps, frontage roads, and cross roads.
(7) The current and projected traffic volumes as provided by the TxDOT (20 year traffic projection, unless otherwise determined by the District Engineer).
(8) The control of access lines if Interstate or designated under House Bill 179.
(9) Direction of traffic flow on all roadways.
(10) Location and width of median openings for highway without access control.
(11) The geometric of speed change (acceleration, deceleration, climbing) lanes.

Services Provided By: Engineer	COUNTY	
NO	NO	2. General Guidelines for Project Development

a. Prior to preparing detailed plans for a proposed project, a preliminary schematic layout shall be prepared which indicates the general geometric features and location requirements peculiar to the project. An uncontrolled aerial mosaic will be provided for this use. Four copies of the schematic layout shall be submitted through the district to the Design Division for approval and subsequent coordination with the Federal Highway Administration (FHWA) where applicable.

   The layout shall be submitted for two-lane arterial highway projects on new locations and for all multi-lane highway projects. **No geometric design is to be performed until the COUNTY has given the engineer written approval of the preliminary schematic layout.**

b. All geometric design shall be in conformance with the State's Design Division, Operations and Procedures Manual, except where variances are permitted in writing by the STATE.

c. The schematic layout shall include basic information which is necessary for the proper review and evaluation including the items listed above in the checklist for schematic layout.

d. Handling of traffic during construction shall be a consideration in the development of preliminary designs.

e. Upon approval of the schematic layout by Design Division (FHWA on Federal-aid projects), it shall be the basis for an exhibit at any required public hearing prior to final development of the project. If there are any changes to the schematic after the Design Division and FHWA approval and before the public hearing, four copies of the revised schematic, as displayed at the hearing, shall be submitted either prior to or accompanying the public hearing data. If there are no changes in the schematic as displayed at the hearing, only photographs of the schematic and other displays shall be submitted with the public hearing data.

f. For all freeway construction projects, these schematics shall show the location and text of the proposed main lane guide signs. A schematic layout shall be submitted through the district to the Traffic Operations Division, Traffic Safety Section for approval and subsequent coordination with the FHWA. All signing shall be in conformance with the Texas MUTCD.

g. On complex projects, informal contact through the district with the Design Division and FHWA personnel is encouraged with regard to development of preliminary design prior to official schematic submission.

h. The engineer shall furnish a project tape that is compatible with the STATE's computer system, a project listing, and a cross section plot showing the original design sections containing the earthwork input and original cross sections for the project. **Accuracy of the earthwork design is of utmost importance since it is the basis for contractor payments and construction staking.**

N/A	NO	3. Exhibit for Airway/Highway Clearance Permits

Services Provided By: Engineer	COUNTY	
		4. Grading Design
YES	NO	a. Refine the horizontal and vertical alignment of main lanes, frontage roads, ramps, cross roads and direct connectors based upon the approved schematic layout. Determine vertical clearances at grade separations and overpasses, taking into account the appropriate superelevation rate.
YES	NO	b. Typical Sections
YES	NO	c. Design Cross Sections
YES	NO	d. Determine Cut and Fill Quantities
YES	NO	e. Slope Stability Analysis
N/A	N/A	f. Embankment Foundation Stability Analysis
N/A	N/A	g. Embankment Settlement Analysis
		5. Pavement Design
YES	NO	a. Prior to initiating detailed plan preparations for a project, a preliminary investigation shall be made to determine the approximate section and pavement type to be used for the pavement structure. The Flexible Pavement Design Manual for flexible pavement, "Appendix F" of the Design Division, Operations and Procedures Manual, and the current AASHTO Guide for the Design of Pavement Structures, may be used for this purpose.
YES	NO	b. The typical section shall also reflect proposed geometric including pavement cross slopes, lane and shoulder widths, and slope rates whenever this data have not been previously shown on a schematic submission.
		c. Embankment and Subgrade
		(1) Soil Core Holes (Show cost estimate with Function Code 110)
NO	NO	(a) Along center line
YES	NO	(b) Along center line of each roadway The location and minimum number of soil core holes required for this project are as follows: (To be determined when schematic is being completed)
YES	NO	(2) Identify, interpret and summarize geologic features that affect engineering design (PI, Sulfate content, % of lime)
NO	NO	d. Traffic Data for Pavement Design by **STATE**
YES	NO	e. Basic Design Criteria
YES	NO	f. Life Cycle Cost Analysis(es)
YES	NO	g. Cost Data
YES	NO	h. Pavement Material Properties

Services Provided By:
Engineer COUNTY

5. Pavement Design (Continued)

YES NO i. Rehabilitation Investigations

YES NO (1) Core Hole Survey (Show cost estimate with Function Code 110)
(a) Determine type and depth of existing material, pavement, etc. The Engineer will determine whether to salvage ACP and FLEXBASE as well as their properties and provide this information to TxDOT.

DRAINAGE
(Function Code 161)

Services Provided By:
Engineer COUNTY

All hydraulic design shall be in accordance with the TxDOT's Hydraulic Manual, except where variances are permitted in writing by the **COUNTY**.

1. Hydrologic Studies, Discharges

YES	NO	a. Drainage area maps showing existing conditions and proposed improvements.
YES	NO	b. Hydrologic data/discharge determination

2. Hydraulic Drainage Study and Documentation

		a. Hydraulic computations
N/A	N/A	(1) Storm water detention available within the ROW (linear ft. along side drain ditch).
YES	NO	(2) Storm water detention required outside the ROW (as per HCDD#1)
YES	NO	(3) Culverts
YES	NO	(4) Bridge waterways
YES	NO	(5) Channels
YES	NO	(6) Storm sewers/inlets
NO	NO	(7) Pump stations
YES	NO	(8) Storm Water Management facilities
YES	N/A	(9) Other
		(a) Irrigation Canals/Siphons
		(b)
NO	NO	b. Hydraulic report(s)
YES	N/A	c. Federal Emergency Management Agency (FEMA) floodway requirements
YES	N/A	d. Determine impact of proposed drainage plan on the following receiving stream(s)
		(1) Hidalgo County Drainage District Outfalls
		(2) All Irrigation District Outfalls impacted

Services

Provided By: Engineer	COUNTY		
		3.	Layout, Structural Design and Detailing of Drainage Features
		a.	Culverts
YES	NO		(1) New culverts
YES	NO		(2) Culvert widening and/or lengthening
YES	NO		(3) Culvert replacements
		b.	Storm sewers
YES	NO		(1) New storm sewers
YES	NO		(2) Modify existing storm sewers
YES	NO		(3) Inlets
YES	NO		(4) Manholes
YES	NO		(5) Trunk lines
		c.	Pump stations
NO	NO		(1)
YES	NO	d.	Subsurface drainage at retaining walls
YES	N/A	e.	Outfall channel(s) within the ROW
YES	NO	f.	Outfall channel(s) outside the ROW
NO	NO	g.	Detention Pond(s) within the ROW
NO	NO	h.	Detention Pond(s) outside the ROW
YES	NO	i.	Summary of Quantities
NO	NO	j.	Storm Water Management facilities
YES	NO	4.	Storm Water Pollution Prevention Plan (SW3P)
NO	NO	5.	Scour Evaluation - Waterway Structures Only (to be completed by Bridge Engineer under FC 170).

SIGNING, MARKINGS AND SIGNALIZATION
(Function Code 162)

Services Provided By:
Engineer COUNTY

YES NO 1. Signing and Markings Layout

a. Requirements (Separate Layout)
   (1) Roadway layout
   (2) Center line with station numbering
   (3) ROW lines
   (4) Culverts and other structures that present a hazard to traffic
   (5) Location of utilities, if not shown on plan and profile
   (6) Existing signs to remain, to be removed, to be relocated
   (7) Proposed signs (illustrated and numbered)
   (8) Existing overhead sign bridges to remain, to be revised, removed or relocated
   (9) Proposed overhead sign bridges indicating location by plan layout (electrical details need not be shown on this layout)
   (10) Proposed markings (illustrated and quantified) which include pavement markings, object markings and delineation
   (11) Quantities of existing pavement markings to be removed
   (12) Proposed delineators and object markers

b. For projects involving freeway to freeway or other types of directional interchanges, projects including left-hand ramps or connections, the following information must be provided:
   (1) The location of interchanges, main lanes, grade separations, frontage roads and ramps
   (2) complete explanation of the sequence and methods of stage construction, where applicable, which would include the initial and ultimate proposed treatment of crossovers and ramps
   (3) The number of lanes in each section of proposed highway and the location of changes in numbers of lanes
   (4) The projected traffic volumes as provided by the **STATE** (20 year traffic projection, unless otherwise determined by the District Engineer)
   (5) Tentative ROW limits
   (6) Direction of traffic flow on all roadways
   (7) Main lane, ramp, frontage road, and necessary cross road profiles at proposed interchanges or grade separations

YES NO 2. Summary of Small Signs Tabulation

YES NO 3. Summary of Large Signs Tabulation including all Guide Signs

YES NO 4. Sign Detail Sheets
   a. All signs except route markers
   b. Design details for large guide signs
   c. Dimensions of letters, shields, borders, corner radii etc.
   d. Designation of shields attached to guide signs
   e. Designation of arrow used on exit direction signs

Services Provided By: Engineer	COUNTY	
		5. Traffic Signals
		a. Development of Justification (Warrant) Data
YES	NO	(1) Location Map Relationship of proposed installation to other traffic signals, highways, business areas and traffic generators
YES	NO	(2) Photographs as appropriate
YES	NO	(3) Accident data as appropriate
		(4) Vehicle volumes (provided by TxDOT)
YES	NO	(a) Existing
YES	NO	(b) Estimated
YES	NO	(c) Projected
YES	NO	(d) Pedestrian
YES	NO	(5) Traffic Survey - Count Analysis
YES	NO	(6) Recommendation based on above data
YES	NO	b. Layout
		(1) Title Sheet (when applicable)
		(a) Describe the location
		(b) Type of installation
		(c) Area map with project limits for each location
		(d) Index of sheets
		(e) Space for official signatures
		(2) Estimate and quantity sheet (when applicable)
		(a) List of all bid items
		(b) Bid item quantities
		(c) Specification item number
		(d) Paid item description and unit of measure
		(3) Basis of estimate sheet (list of materials)
		(4) General notes and specification data sheet
		(5) Condition diagram
		(a) Highway and intersection design features
		(b) Roadside development
		(c) Traffic control including illumination
		(6) Plan sheet(s)
		(a) Existing traffic control that will remain (signs and markings)
		(b) Existing utilities
		(c) Proposed highway improvements
		(d) Proposed installation
		(e) Proposed additional traffic controls
		(f) When applicable, proposed conduit for Railroad interconnect with standard details for runs under tracks.
		(g) Proposed illumination attached to signal poles.
		(7) Notes for plan layout
		(8) Elevation sheet(s) (span wire design)

Services Provided By:
Engineer COUNTY

5. Traffic Signals (Continued)

(9) Phase sequence diagram(s)

(a) Signal locations
(b) Signal indications
(c) Phase diagram
(d) Signal sequence table
(e) Flashing operation (normal and emergency)
(f) Preemption operation (when applicable)
(g) Interval timing, cycle length and offset

(10) Construction detail sheets(s)
(a) Poles (TxDOT standard sheets)
(b) Detectors
(c) Pull Box and conduit layout
(d) Controller Foundation standard sheet

(11) Marking details (when applicable)

(12) Barricade and warning sign standard sheet and any special details for work zone traffic control for special conditions

(13) Aerial or underground interconnect details (when applicable)

c. General Requirements

(1) Contact local utility company

YES NO (a) Confirm power source
YES NO (b) Discuss route of aerial or underground interconnect cable (when applicable)
YES NO (c) Adjustment of overhead utility lines
YES NO (2) Prepare governing specifications and special provisions list
YES NO (3) Prepare project estimate

YES NO d. Summary of Quantities

MISCELLANEOUS (ROADWAY)
(Function Code 163)

Services Provided By: Engineer	COUNTY	
		1. Retaining Walls
		a. Structural Details
NO	NO	(1) Cast-in-Place Cantilever at _____ locations. (TxDOT Standard Retaining Wall)*
NO	NO	(2) Tiedback Retaining Wall at _____ location. (TxDOT standard retaining wall)
NO	NO	(3) Specialized Retaining Wall at _____ locations (Unique Design).*
		b. Alternate Patented Retaining Walls at _all_ locations. (Layouts Only)**
NO	NO	(1) Mechanically Stabilized Earth
NO	NO	(2) Concrete Block Wall Systems
NO	NO	(3)
NO	NO	c. Retaining Wall Layout (PLAN)
		(1) Designation of reference line
		(2) Beginning and ending retaining wall stations
		(3) Station of each retaining wall joint***
		(4) Offset from reference line
		(5) Horizontal curve data
		(6) Number of retaining wall panels and lengths***
		(7) Total length of wall
		(8) Indicate face of wall
		(9) All wall dimensions and alignment relations (alignment data as necessary)
		(10) Soil core hole locations
NO	NO	d. Retaining Wall Layout (ELEVATION)
		(1) Top of wall elevations at each joint*** or intervals****
		(2) Existing and finished ground line elevations
		(3) Height of stem at each joint***
		(4) Wall panel designations***
		(5) Top of footing elevations***
		(6) Limits of measurement for payment****
		(7) Type, limits and anchorage details of railing (If applicable)
		(8) Top and bottom of wall profiles and soil core hole data plotted at correct station and elevation. The plot shall be at the same scale as the wall profile. Ground water elevations and the observation date shall be shown.
NO	NO	e. Foundation Studies (Show cost estimate with Function Code 110)
NO	NO	The soil core holes shall be obtained at approximately 200 foot intervals along retaining wall alignments. The core holes shall extend 25 feet below the footing elevation.
NO	NO	f. Stability Analysis (the Engineer shall estimate this task as part of his bid to complete the work).
NO	NO	g. Estimate
NO	NO	h. Summary of Quantities
NO	NO	i. Typical X-section.

Services Provided By:
Engineer COUNTY

1. Retaining Walls (continued)

YES

j. General Guidelines for Retaining Walls
   (1) The **engineer** shall make final design calculations and final detail drawings in accordance with standard requirements of the Texas Department of Transportation. **The designer and checker shall check all calculations and initial each page.**
   (2) The ground water level should be observed at the water strike.
   (3) For purposes of uniformity statewide, soil core hole data shall be shown on layouts as illustrated in the Bridges and Structures Foundation Exploration and Design Manual.
   (4) Foundation exploration shall conform to the requirements set forth in Administrative Circular No. 25-84, Administrative Circular 33-87 and Administrative Circular No. 25-92.

YES NO 2. Traffic Control Plan, Detours and Sequence of Construction

Traffic Control Plans (TCP) are required for all projects. A detailed TCP shall be developed when traffic handling during construction involves complications for which a feasible solution is not covered by the Texas MUTCD or the current Barricade and Construction (BC) Standards. The following items are required on all Traffic Control Plan Layouts:

a. The sequence of construction and method of handling traffic during each phase.
b. The existing and proposed traffic control devices that will be used to handle traffic during each construction sequence. Include signals, regulatory signs, warning signs, construction warning signs, guide signs, route markers, construction pavement markings, channelizing devices, portable changeable message signs, flashing arrow boards, barricades, barriers, etc.
c. The proposed traffic control devices (stop signs, signals, flagperson, etc.) at grade intersections during each construction sequence.
d. Where detours are provided, typical cross sections shall be shown.
e. Road construction work hours shall be developed after an investigation of the traffic volumes has been performed.

Services Provided By: Engineer	COUNTY	
		3. Illumination
YES	N/A	a. Preliminary Roadway Illumination Layout and Circuit Layout
		(1) For projects involving freeway to freeway or other types of directional interchanges and projects including left-hand ramps or connections, provide the following:
		(a) The location of interchanges, main lanes, grade separations, frontage roads and ramps
		(b) A complete explanation of the sequence and methods of stage construction, where applicable, which would include the initial and ultimate proposed treatment of crossovers and ramps
		(c) The number of lanes in each section of proposed highway and the location of changes in the number of lanes
		(d The projected traffic volumes as provided by the STATE (20 year traffic projection unless otherwise determined by the district engineer)
		(e) Tentative ROW limits
		(f) Direction of traffic flow on all roadways
		(g) Main lane, ramp, frontage road, and necessary cross road profiles at proposed interchanges or grade separations
YES	NO	b. Final Roadway Illumination and Electrical Circuit Layouts
		(1) Roadway layout showing pavement edges and shoulders, curbs, retaining walls, etc.
		(2) Center line with station numbering.
		(3) ROW lines.
		(4) Symbol legend. Use department standard symbols for lighting and electrical.
		(5) Culverts and other structures that present a hazard to traffic.
		(6) Location of underground utilities, if not shown on plan profile.
		(7) Location of overhead electrical lines, both crossing and parallel to ROW.
		(8) Existing sign lighting circuits and roadway illumination to remain, to be removed, to be relocated.
		(9) Existing service poles, electrical circuits, ground boxes, etc.
		(10) Contact electric utility for service pole locations, voltage characteristics.
		(11) Location of proposed sign lighting circuits and roadway illumination.
		(12) Proposed electrical circuits.
		(13) Tabulation of all quantities including proposed, existing to be relocated, existing to be removed. The layout sheet quantities and lighting summary shall be shown. Tabulations to include estimated quantity with a column for final quantities.
YES		c. General Guidelines for Illumination (If applicable)
		The **Engineer** shall submit to the **COUNTY**, well in advance of PS&E due date, the roadway illumination and electrical circuit layout sheets for review by the **STATE**. Two copies of the layout sheets are to be submitted. One copy will be returned to the **Engineer** showing corrections that are to be made by the **Engineer**. When final plan submission is made, the **Engineer** shall provide a written statement regarding completion of the corrections.

Services Provided By: Engineer	COUNTY		
		4.	Miscellaneous Drafting/Standards
YES	NO		a. Erosion Control
NO	NO		b. Landscape Development
YES	NO	5.	Compute and Tabulate Quantities
NO	NO	6.	Special Utility Details (Irrigation lines)
		7.	Miscellaneous Structures
			a. Type of Structure*
			(1) Overhead Sign Bridges (O.S.B.) Modifications or special O.S.B. designs shall be prepared using the same design assumptions that are used for the standard O.S.B structures.
NO	NO		(a) New O.S.B. structure(s)
NO	NO		(b) Structural evaluation of existing O.S.B. structure(s) that are to remain in place or to be relocated.
NO	NO		(2) High Mast Illumination Poles (HMIP)
YES	NO		(3) Traffic Signal Supports
NO	NO		(4) Conventional Illumination Poles
NO	NO		(5) Sound Barrier Walls
YES	NO		b. Checklist for Layouts
			(1) Reference appropriate O.S.B. standard
			(2) Drilled shaft size and length
			(3) Soil strength used for design {indicate basis and boring(s) used}
			(4) Design height
			(5) Tower heights
			(6) Leg spacings
			(7) Design wind speed
YES	NO		c. Foundation Studies (Show cost estimate with Function Code 110) The soils exploration requirements for miscellaneous structures on this project are as follows: (To be provided by the Engineer on an as-needed basis)
		8.	Agreements
YES	NO		a. Utility Agreements
YES	NO		b. Exhibits for Utility Agreements
N/A	NO		c. Railroad Agreements
			d. Railroad Exhibits
N/A	N/A		(1) Railroad Underpasses
N/A	N/A		(2) Railroad Overpasses
N/A	N/A		(3) Railroad Grade Crossing (Replanking)
N/A	N/A		(4) Railroad Grade Crossing Warning Systems (Signals)
N/A	N/A		(5) Other Miscellaneous Sketches for Railroads
NO	NO		e. Traffic Signal Agreements
NO	NO		f. Exhibits for Traffic Signal Agreements
YES	NO	9.	Estimate
YES	NO	10.	Specifications and General Notes

BRIDGE DESIGN
(Function Code 170)

Services Provided By: Engineer	COUNTY		NUMBER REQUIRED
		1. Preparation of Structural Details	
		a. New Structure(s)	
NO	NO	(1) Underpass(es)	_____
NO	NO	(2) Overpass(es)	_____
N/A	N/A	(3) Main Lanes	_____
N/A	NA	(4) Direct Connector(s)	_____
N/A	N/A	(5) Ramp Bridge(s)	_____
NO	N/A	(6) Waterway Structure(s)**	_____
N/A	N/A	(7) Pedestrian Structure(s)	_____
N/A	N/A	(8) Utility Structure(s)	_____
N/A	N/A	(9) Railroad Underpass(es)	_____
N/A	N/A	(10) Railroad Overpass(es)	_____
N/A	N/A	11) Bridge Classification Culvert(s)**	
N/A	N/A	(11) Alternate Structural Designs	_____
N/A	N/A	(12) Alternate Foundation Design	
		Total New Structures =	_____
		b. Existing Structure(s)	_____
NO	NO	(1) Bridge Widening, Rehabilitation and/or Modification of Existing Structure(s)	_____
NO	NO	(2) Bridge Replacement	_____
NO	NO	(3) Raising Bridge Elevation	_____
NO	NO	(4) Bridge Classification Culvert(s) Widening and/or Modification of Existing Structures(s)	_____
N/A	N/A	(5) Railroad Overpass(es)	_____
N/A	N/A	(6) Railroad Underpass(es)	_____
N/A	N/A	(7)	_____
		Total Existing Structures =	0

* Countour plots of bridge gores are required for projects involving ramps within the main bridge in order to ensure project transition. The Template data and vertical alignment necessary to generate the contour plots are also required.

** In the early stages of a project, it sometimes cannot be determined whether a Waterway Bridge Structure or a Bridge Classification Culvert (20' minimum length) will be required. Therefore, the **engineer** should be aware that either of these two types of bridges may be reclassified later in the project for the other type when more information is known that would dictate a change in structure classification.

Services Provided By: Engineer	COUNTY	
NO	NO	2. Preparation of Bridge Layouts (each bridge)

a. Bridge Layouts (PLAN)
   (1) Horizontal curve information or bearing of centerline.
   (2) Including horizontal, vertical, and template information of all roadways or railroads crossed.
   (3) Bearing of center line or reference line.
   (4) Skew angle(s).
   (5) Slope for header banks and approach fills.
   (6) Control stations at beginning and ending of bridge (with deck elevation), intersections, etc.
   (7) Approach pavement and crown width.
   (8) Bridge roadway width and curbs, face of rail, shoulders, or sidewalks.
   (9) Approach slab and curb returns.
   (10) Limits and type of riprap.
   (11) Proposed features under structure.
   (12) Location of profile grade line.
   (13) North arrow.
   (14) Typical bridge roadway section including preliminary proposed beam types and spacings.
   (15) Cross slope and superelevation data.
   (16) Minimum horizontal clearances when applicable.
      (a) Dimensions to features that control clearances. (Calculate and indicate points of minimum vertical and horizontal clearances.
   (17) Location of soil core holes (station and offset), shown on layout.
   (18) Bent stations and bearings.
   (19) Retaining wall locations.
   (20) Traffic flow directional arrows.
   (21) Railing types shown.
   (22) Joint types and seal size, if used.
   (23) Beam line numbers consistent with span details.
   (24) Critical horizontal clearances (location of railroad tracks, nearby structures and utilities).
   (25) Bearings of utilities.

Services Provided By:
Engineer COUNTY

2. Preparation of Bridge Layouts (each bridge) (Continued)

b. Bridge Layouts (ELEVATION)
(1) Type of foundation.
(2) Finished grade elevations at beginning and end of bridge.
(3) Overall length of structure.
(4) Length, type of spans and units.
(5) Type of railing.
(6) Minimum calculated vertical clearance(s).
(7) Existing and proposed ground lines clearly marked.
(8) Grid elevations and stations.
(9) Bent numbers encircled.
(10) Stationing of bridge compatible with grid stations.
(11) Standard title.
(12) Profile grade data.
(13) Type of riprap.
(14) Soil Core Hole information with penetrometer test data shall be shown on the bridge layout at correct station, elevation and scale.
(15) Fixed/expansion condition of all bents.
(16) Column "H" heights.
(17) Number, size and length of foundations.

c. Additional layout requirements for waterway structures and bridge classification culverts.
(1) Design and 100-year peak discharges.
(2) Design and 100-year high water (HW). (Recorded HW and date if available.)
(3) Natural and through-bridge velocities for design and 100-year floods.
(4) Calculated backwater for design and 100-year floods.
(5) Direction of flow for waterway crossings.
(6) Contours for water crossing.

YES NO 3. Bridge Classification Culvert, Estimate, Quantities, and Specifications (each bridge)

YES NO 4. Foundation Studies (Show cost estimate with Function Code 110)
The minimum number of soil core holes shall be obtained in accordance with Section 1-301 of the Bridges and Structures Foundation Exploration and Design Manual. Soil core holes shall be obtained at approximately (300 foot) intervals along bridge alignments. Texas cone penetrometer (TCP) tests shall be conducted in all soil types encountered at a maximum of (10 foot) intervals. If single column bents with single drilled shafts are planned, TCP values should be taken at close intervals in the upper (15 feet).

YES NO 5. Bridge Total Quantities and Cost Estimates (each bridge)

YES NO 6. Bridge Special Provisions and Specifications (each bridge)

YES NO 7. Bearing seat elevations for each beam or girder. Top of cap elevations for non-beam type structures.

Services Provided By:
Engineer COUNTY

YES 8. General Guidelines for Bridge Design

a. The **engineer** shall prepare a bridge layout of each bridge structure for Company's review and approval. The bridge layout shall be in conformance with the Bridges and Structures, Operation and Planning Manual and the Bridges and Structures, Detailing Manual. Soil core hole data is not required for submission of the preliminary bridge layout. **No bridge design work is to be performed until the COUNTY has given the engineer written approval of the preliminary bridge layout.**

Several months may be required, after the preliminary bridge layout is submitted, for the district to obtain approval and/or permits from the following:

- TxDOT Design Division, when applicable:
  - Railroad Companies
  - FHWA
  - U.S. Army Corps of Engineers
  - U.S. Coast Guard
  - Bureau of Reclamation
  - Texas Parks and Wildlife
  - Others

Therefore, the bridge layout should be submitted at the earliest possible date and the **engineer's** design schedule should reflect this.

b. All bridge superstructure and substructure design will be reviewed by the Design Division for purposes of verifying structural integrity and optimization of design.

c. The final bridge layout shall be in conformance with the Bridges and Structures, Operation and Planning Manual and the Bridges and Structures Detailing Manual.

Services
Provided By:
Engineer COUNTY

8. General Guidelines for Bridge Design (Continued)

   d. The **engineer** shall make final design calculations and final detail drawings in accordance with standard requirements of the Texas Department of Transportation. All bridge design shall be in conformance with the Texas Department of Transportation Bridges and Structures Operation and Planning Manual, the current American Association of State Highway and Transportation Officials or American Railway Engineers Association Specifications for railway structures, Standard Specifications for Highway Bridges, including applicable interim specifications, and the Bridges and Structures, Foundation Exploration and Design Manual. The **engineer** shall furnish design calculations to the Design Division. **The designer and checker shall check all calculations and initial each page.**
   e. Structural steel or prestressed concrete shop drawings, form work drawings and false work drawings are not part of the design requirements. However, contract plans shall be in sufficient detail to permit the preparation of complete shop details for fabrication and erection.
   f. Elements of the bridge (abutments, bents, slabs, etc.) shall be detailed to a metric scale of 1:20 (1/2 inch equals one foot architect scale) or 1:50 (1/4 inch equals one foot architect scale) to provide clear legible drawings when the drawings are reduced. Lettering shall be a minimum size of 4 millimeters (5/32 inch) height for hand lettering and 140 for lettering by computer-aided design and drafting (CADD).
   g. Standard drawings for beams, diaframs, railings, armor joints, riprap, etc., shall be furnished to the **engineer** upon request. These standards shall not be redrawn by the **engineer** nor shall his title block be transferred to the standard drawings. Modifications to the standards, if necessary, shall be clearly identified and designated by "MOD" in the standard title. Specific special drawings prepared by the **engineer** shall not be identified as standards.
   h. Bridge layout sheets shall have the same vertical and horizontal scale. Usually a metric scale of 1:100 (1 inch = 10 feet) or 1:200 (1 inch = 20 feet) is used. Sections of existing and proposed structures usually have a metric scale of 1:50 (1 inch = 5 feet). Soil core holes shall be positioned and labeled on the bridge layout plan view. The core hole data shall be plotted at the correct station, at the same vertical scale, and at the proper elevation unless otherwise approved by the Design Division.
   i. APPENDIX C, "GENERAL PLAN CHECKLIST", on pages C-1 thru C-5, more specifically relates various sheet types, details, summaries, standards, etc.
   j. For purposes of uniformity statewide, soil core hole data shall be shown on layouts as illustrated in the Bridges and Structures Foundation Exploration and Design Manual.
   k. Geometry and structural design errors found after acceptance of bridge plans shall be promptly corrected by the consultant at no cost to the Company.

FC 600 **– ACQUISITION PROVIDER SERVICES**

(Services to be provided by L&G Engineering)

1) Project Administration

a) Negotiation of Scope of Services for Work Authorization
   i) Acquisition Provider will visit project site with City personnel if necessary.

b) Project Presence at L&G Consultant Office Headquarters
   i) Full Project Office
      (1) No Joint Use of City or TxDOT facilities
      (2) Open during normal City and State work hours
      (3) Personnel available to answer questions
      (4) Availability of Project Files
      (5) At least one office staff member is required to be a current commissioned notary public.

c) Overhead Costs
   i) Administrative costs

d) Communication
   i) Provide monthly progress reports with invoice.
   ii) Participate in project review meetings as determined by the City.
   iii) Prepare initial property owner contact list for use by the City in distribution of Acquisition Provider introduction letters.

e) File Management
   i) Project and parcel files will be kept in the City's Office, if necessary. Working files will be kept in the Acquisition Provider's project administrative office, but documents generated or received by the Acquisition Provider will be forwarded to the City office as they are generated or received by the Acquisition Provider, if necessary.
   ii) Prepare payment transmittal request utilizing standard payment submissions forms with supporting documentation.
   iii) Maintain records of all payments including check number, amount, and date paid, etc.
   iv) Provide copies of all incoming and outgoing correspondence as generated if requested by City at provider conference.
   v) Maintain copies of all correspondence and contacts with property owners.

2) Title Services

a) Secure preliminary title commitments from the Title Company that will be providing title insurance. Cost of preliminary title commitments will be paid by the Acquisition Provider (if requested by the title company) and will be included in the Acquisition Provider's scope of work for payment.

b) Secure title commitments updates in accord with insurance rules and requirements for parcel payment submissions. Cost of title commitment updates will be paid by the Acquisition Provider (if requested by the title company) and will be included in the Acquisition Provider's scope of work.

c) Secure title insurance for all parcels acquired, insuring acceptable title to City of Mission. Written approval by the City required for any exception.

3) Appraisal

a) Appraiser may be selected from TxDOT's list of state approved fee appraisers. This list will be available for review at all District offices or at the Right of Way Division Office at 118 E. Riverside Drive, Austin, Texas, upon request.

b) Secure written permission (if necessary) from the owner to enter the property from which land is to be acquired. If the Acquisition Provider, after diligent effort, is unable to secure the necessary letter of permission from the property owner, a waiver must be obtained, in writing from the City/TxDOT. Maintain permission letters with appraisal reports.

c) Prepare (if necessary) pre-appraisal contact with interest owner(s) for each parcel using acceptable City/TxDOT forms.

d) Contact property owners or their designated representative to offer opportunity to accompany the appraiser on the appraiser's inspection of subject property. Maintain record of contact in file.

e) Prepare complete appraisal report for each parcel to be acquired utilizing TxDOT Forms No. ROW-A-5 and ROW-A-6 as applicable. These reports shall conform to City policies and procedures along with the Uniform Standards of Professional Appraisal Practices.

f) As necessary, prepare written notification to City/TxDOT of any environmental concerns associated with the right of way to be acquired which could require environmental remediation.

g) All completed appraisals will be administratively reviewed by L&G Engineering ROW Office and recommended for approval by the City of Mission.

h) As necessary, the appraiser will appear and or testify as an Expert Witness in eminent domain proceedings and be available for pre-hearing or pre-trial meetings as directed by L&G Engineering and/or the City.

i) As necessary, the appraiser will coordinate with review appraiser regarding revisions, comments, or additional information that may be required.

j) The cost of the appraiser appearing as an expert witness for testimony at special commissioners hearing must be included in the proposed fee schedule for the appraiser. The cost of the appraiser's expert witness testimony for trial is not part of this contract, and shall be paid by the City.

4) Appraisal Review

a) Review Appraiser may be selected from TxDOT's list of state approved fee appraisers. This list is available for viewing at all District offices or the Right of Way Division office at 118 E. Riverside Drive, Austin, Texas upon request.

b) Review all appraisal reports for each parcel to determine consistency of values, supporting documentation related to the conclusion reached and compliance with TxDOT/City policies and procedures and the Uniform Standards of Professional Appraisal Practices.

c) Prepare and submit to City the Form ROW-RTA-10 "Tabulation of Values", for each appraisal.

d) The cost of the review appraiser appearing as an expert witness for testimony at special commissioners hearing must be included in the proposed fee schedule for the review appraiser. The cost of the appraiser's expert witness testimony for trial is not part of this contract, and shall be paid by the City.

5) Appraisal Updates

a) Prepare complete appraisal update for the parcel to be acquired utilizing TxDOT Form No. ROW-A-5, which will be furnished to the provider by TxDOT. These reports shall conform to City/TxDOT policies and procedures along with the Uniform Standards of Professional Appraisal Practices.

b) As necessary, prepare written notification to City/TxDOT of any environmental concerns associated with the right of way to be acquired which could require environmental remediation. All completed appraisals will be administratively reviewed by L&G Engineering Right of Way Office and recommended for approval by the City of Mission.

c) As necessary, the appraiser will appear or testify as an Expert Witness in eminent domain proceedings and be available for pre-hearing or pre-trial meetings as directed by the City.

d) The cost of the appraiser appearing as an expert witness for testimony at special commissioners hearing must be included in the proposed fee schedule for the appraiser. The cost of the appraiser's expert witness testimony for trial is not part of this contract, and shall be paid by the City.

e) As necessary, the appraiser will coordinate with the review appraiser regarding corrections and/or additional information that may be required.

6) Negotiation, Tasks, and Fees

a) Analyze appraisal and appraisal review reports and confirm the City's approved value prior to making offer for each parcel.

b) Analyze preliminary title report to determine potential title problems, propose methods to cure title deficiencies.

c) Prepare the initial offer letter, instruments of conveyance, and any other documents required or requested by City/TxDOT on applicable City/TxDOT forms.

d) Contact each property owner or owner's designated representative, to present the written offer in person where practical, and deliver appraisal report and required brochures. Maintain follow-up contacts and secure the necessary instruments upon acceptance of the offer for the closing.

e) Provide a copy of the appraisal report for the subject property exclusively to the property owner or authorized representative at the time of the offer. Maintain original signed Receipt of Appraisal, (unless property owner refuses to sign it, it will be so noted) for billing purposes.

f) Respond to property owner inquiries verbally and in writing within two business days.

g) Prepare a separate negotiator contact report for each parcel per contact.

h) Maintain parcel files of original documentation related to the purchase of the real property or property interests.

i) Advise property owner on the Administrative Settlement process. Transmit to City any written counter offer from property owners including supporting documentation, and provider recommendation with regard to Administrative Settlements in accordance with City/TxDOT policy and procedures.

j) Prepare final offer letter, documents of conveyance as necessary.

k) Appear and provide Expert Witness testimony as an Acquisition Provider when requested.

l) Meet at the L&G Engineering ROW office in Mission once per week as agreed-upon with the Right of Way Acquisition Manager/Administrator.

m) Provide a monthly progress report per parcel by the 25th of the month with invoice.

n) The consultant shall, as part of this proposal, estimate 10% of the 55 parcels may end up in condemnation. The consultant shall be available for any meeting/hearings as requested by the City Attorney.

7) Closing Service Fees

a) Coordinate with City and Title Company to obtain an updated title commitment along with other Forms and certified copy of the instrument of conveyance necessary when requesting the Parcel Payment from the City.

b) Acquisition Provider shall attend closings and provide closing services in conjunction with Title Company.

c) Acquisition Provider shall record all original instruments immediately after closing at the respective County Clerk's Office, except for donations which must be forwarded to City for acceptance by the City Council or City Commissioners.

8) Relocation Assistance Services

1) There are an estimated 12 relocations or displacements for this contract and L&G will provide relocation advisory services. L&G will compute replacement housing supplements (owner occupant and/or tenants)

2) L&G will provide advisory services to business displacements and relocate them effectively.

3) TxDOT will review, approve and pay for all relocation costs as per ROW Agreement.

9) **Condemnation Support**

a) Pre-Hearing Support
   i) Upon receipt of a copy of the final offer, request an updated title commitment for Eminent Domain from the Title Company.
   ii) Prepare a Bisection Clause for the original set of Legal Descriptions supplied by Surveyor if applicable
   iii) Use the information from the Title Commitment to join all interested parties on the necessary forms. Spouses of owners must also be joined.
   iv) Upon completion of the necessary forms, prepare a packet containing 2 copies each of the following documents: Title Commitment, Negotiator's Reports, Appraisal Acknowledgment, Preappraisal Contact Sheet, signed and sealed property description, and plat, Final Offer Letter, any correspondence from the land owner or representatives, along with one copy of the appraisal report. Submit packet to the City Office for submission to the City Attorney's office.
   v) Upon receipt of concurrence for the Appraisal Witness, request the update of appraisal.
   vi) Upon receipt of packet prepared by the City Attorney which will include Petition for Condemnation, Lis Pendens, Order Appointing Special Commissioners, Order Setting Hearing, Oath of Special Commissioner, and Notice of Hearings, developed by the City Attorney; the attorney shall file the original petition with the County Court at Law or other appropriate Court for a cause number to be assigned.
   vii) The City attorney shall file the Lis Pendens including the cause number with the County Clerk's Office.
   viii) Upon assignment of a court, the City Attorney shall file the Order Appointing Commissioners with the judge retaining a copy of the Order for the files.
   ix) Following appointment of Special Commissioners by the judge, the City shall secure the following documents: Oath of Commissioners signed by the Commissioners, Order Setting Hearing, 2 copies of the Notice of Hearing signed by the Commissioners.
   x) The City shall file all originals with the court and send copies marked "copy" to L & G Engineering.
   xi) The City Attorney shall send a copy of the petition to the Title Company so that the Title Company can make sure the appropriate parties were joined and that no changes in title have occurred.
   xii) The City Attorney shall set the Special Commissioners Hearing after the updated appraisal has been submitted, if there is no change in value. If there is an increase in value, City will approve the new value and the City's provider will present a revised offer and a final offer letter and submit a copy of the final offer letter.
   xiii) The City Attorney shall coordinate a pre-hearing conference prior to the hearing (the day before or earlier) to discuss facts of the case with the City, Appraiser, and Negotiator.

xiv) After the hearing is set, the City Attorney shall serve Notices of Hearing to the indicated parties at least 11 days prior to the Commissioner's hearing. If it is necessary to join the Federal Government, be advised that they have an additional 60 days to prepare for the Hearing.
xv) Once the notices have been served, the City Attorney shall file the original notices with the court and send copies stamped "copy" to L&G Engineering ROW Office.
xvi) The City's Attorney shall send a reminder letter 2-3 weeks in advance to the City Administration offices, Acquisition Provider, the three special commissioners and court reporter concerning Hearing dates.

d) Post Hearing Support (by City Attorney)
i) For the hearing, prepare the necessary forms and Special Commissioners time sheets and submit forms to Hidalgo County clerk's office.
ii) Obtain the signatures of Special Commissioners on the Award of Commissioners and file with the court for the judge's signatures within 48 hours of the Hearing.
iii) Give timesheets to Judge. The amount paid to the Special Commissioners is determined by the Judge.
iv) Obtain and distribute 3 certified copies of the award as follows: 1 certified copy to the title company with a request for a commitment, 1 certified copy to the City, 1 certified copy to L&G Engineering with the Commitment to request the warrant in the amount of the Special Commissioners Award.
v) Send the Commitment and the Award to City, along with individual special commissioner's billing requesting the payment for their fees.
vi) File City warrant in the registry of the court. File a Notice of Deposit with the court and send certified copies to each defendant notifying them of the date of the deposit. The Date of Deposit is the Date of Take.
vii) Take photograph of the interest to be acquired (if necessary) on the day of deposit for relocation verification.
viii) Send written notices of the date of deposit to the City Administration office and all interested parties.
ix) Appear as Expert Witness as requested. Sub-contractors must also appear as Expert Witnesses as requested.
x) All acquisition negotiations file indicating all "due diligence" provided by the Acquisition Provider will be directed to the City Attorney's office for his further handling in accordance to the Eminent Domain process by the City.

ADDITIONAL RESONSIBILITIES

Easements, Letters of Permission, Etc.

The **ENGINEER** shall be responsible for delineating easements. The **ENGINEER** will be responsible for securing the necessary legal instruments.

Coordination of Utilities

The **ENGINEER** shall furnish the **COUNTY** prints of a project layout which will be distributed by **ENGINEER** to various utility companies to determine which utilities are in the limits of the project. These shall be preliminary layouts. Upon completion of the preliminary drainage plans and U&D sheets, the **ENGINEER** shall distribute to the various utility companies and request return. Upon return of these prints, the **ENGINEER** will schedule a meeting with the various utility companies to discuss potential conflicts and conformance with the State's Utility Accommodation Policy. The **ENGINEER** is responsible for coordination with the various utility companies for exposing potential conflicts and field ties to uncover utilities in potential conflict areas.

Meetings

Meetings will be held with the FHWA, State Officials, local governments, property owners, utility owners, railroad companies, other consulting firms, etc., as needed or required by the **COUNTY**. The **ENGINEER** shall coordinate through the COUNTY for the development of this project with any local entity having jurisdiction or interest in the project (i.e., city, county, etc).

Specifications, Special Provisions, Special Specifications

Whenever possible, use the State's standard specifications or previously approved special provisions and/or special specifications. If a special provision and/or special specification is developed for this project, it shall be in the State's format and, to the extent possible, incorporate references to approved State test procedures.

Project Manager/Engineer Communication

The **Engineer** shall designate one Texas Registered Professional Engineer to be responsible throughout the project for project management and all communications, including billing, with the **COUNTY's** Director. Any replacements to the **Engineer's** designated Project Manager/Engineer must be approved by the **COUNTY**.

Engineering documents produced for the department's engineering projects shall be signed, sealed and dated or CADDSEALed in accordance with Administrative Order No. 5-89 and Administrative Circular No. 26-91.

Design Responsibilities

The **engineer** is responsible for design errors and/or omissions that become evident before, during or after construction of the project. The **Engineer's** responsibility for all questions arising from design errors and/or omissions will be determined by the **COUNTY** and all decisions shall be final and binding. This would include, but not necessarily be limited to:

1. All design errors and/or omissions resulting in additional design work to correct the errors and/or omissions.
2. Preparation of design documents and detail drawings necessary for a field change due to design errors and/or omissions.
3. Revision of original tracings to the extent required for a field change due to design errors and/or omissions.

The **Engineer** shall promptly make necessary revisions or corrections resulting from the **Engineer's** errors, omissions or negligent acts without additional compensation. Acceptance of the work by the **COUNTY** will not relieve the **Engineer** of the responsibility for subsequent correction of any such errors or omissions or for clarification of any ambiguities.

Document and Information Exchange

Data, Plan Sheets, General Notes and/or Specifications provided to the **COUNTY** shall be furnished on 8GB USB flash drives. Each 8 GB flash drive shall have a file titled Table of Contents. The Table of Contents shall indicate the locations of files within the directory structure of the documentation.

General Notes and specifications shall be provided in MS Office 2007 format. Plan sheets shall be provided in Microstation DGN or GEOPAK GPK format. PDF copies of plan sheets shall also be provided.

Two copies of the documentation shall be provided to the Company.

If required, the **engineer** shall provide to the **COUNTY**, a CD that contains all the plan sheets for the project. The graphics tape shall be compatible with the **COUNTY's** computer system.

CD Tape Required (YES or NO): **YES**

Proposal Time

The time indicated in the proposal and the contract shall include time necessary for reviews, approval, etc.

Office Location

The **engineer** will perform the services to be provided under this agreement out of their office or offices listed below:

Service	Office Location
PS&E ROW Acqusition Services	Mission Office

The work effort will be managed out of the Mission (City)

office located at 900 South Stewart Rd. (Address),

Mission (City), Texas (State).

APPENDIX A - PLAN SHEET SEQUENCE PROCEDURE

1. Title Sheet
   Detailed Index of Sheets

2. Typical Sections

3. General Notes and Specifications Data

4. Estimate and Quantity Sheets

5. Storm Water Pollution Prevention Plan (SW3P) Sheets

6. Traffic Control Plans
   a. Sequence of Construction Layouts
   b. Detour Plan/Profile/Typical Sections/Quantities

7. Roadway Layouts
   a. Roadway Plan/Profile Sheets
   b. Intersection Plan/Profile Sheets
   c. Intersection Layouts
   d. Alignment Layouts/Data
   e. Ramp Layouts/Profiles
   f. Connection Roads/U-turns Layouts/Profile

8. Roadway Details
   a. Concrete Pavement Details/Standards
   b. Concrete Pavement Terminal Anchorage Details/Standards
   c. Bridge Approach Details/Standards
   d. Bridge Terminal Anchorage Details/Standards
   e. Roadway/Median Barrier Details/Standards
   f. Curb Details
   g. Driveway Details/Typical Sections/Standards

9. Signing Layouts and Marking Layouts

10. Traffic Signal Layouts

11. Lighting Layouts

12. Illumination Detail Standards (HMID, HMIF, HMIP, RID)

13. Utility Layouts/Profiles

14. Drainage Area Maps and Hydraulic Data
    a. General Drainage Area Maps
    b. Stage-Discharge Curves
    c. Main Cross-Drainage Culvert/Bridge Hydraulic Data
    d. Drainage Area Maps/Culverts/Storm Sewer
    e. Hydraulic Data/Culverts/Inlets/Storm Sewer/Pumps

APPENDIX A - PLAN SHEET SEQUENCE PROCEDURE (Continued)

15. Detailed Drainage Plans
    a. Drainage Plan/Profile Sheets (Storm Sewer Plan/Profile Sheets)
    b. Channel Plan/Profiles/Typical Sections
    c. Box Culvert Plan/Profile
    d. Pipe Sewer/Culvert Cross Sections

16. Drainage Structural Details/Standards
    a. Inlet Details/Standards
    b. Manhole Details/Standards
    c. Junction Box Details/Standards
    d. Safety End Treatment Details/Standards
    e. Box Culvert Details/Standards
    f. Culvert Wingwall Details/Standards
    g. Excavation-Backfill Diaphrams
    h. Riprap Details/Standards
    i. Temporary Pollution and Erosion Control Details

17. Pumphouse Layouts

18. Pumphouse Details

19. Pumphouse Standard Details

20. Bridge Layouts/Profile/Typical Sections*

21. Bridge Details*
    a. Summary of Bridge Quantities
    b. Abutments
    c. Interior Bents
    d. Spans
    e. Special details for the specific bridge

22. Bridge Standard Details*

23. Bridge Railing Standards

NOTE: Variations of these plan sheet sequence guidelines may be permitted if approved in writing by the COUNTY.

APPENDIX A - PLAN SHEET SEQUENCE PROCEDURE (Continued)

24. Retaining Wall Layouts/Profiles**
25. Retaining Wall Details**
26. Retaining Wall Standard Details**
27. Guard Fence/Standards and Signal Pole Standards
28. Signal/Electrical Details/Standards and Signal Pole Standards
29. Signing/Markers/Striping Details/Standards
30. Barricade/Construction/Beacon Standards
31. Miscellaneous Standards
    a. Chain Link Fence Standards
    b. Bridge End Detail/Standards
    c. Roadway Clearance Details/Standards
    e. Attenuator Standards

APPENDIX B - PLAN PREPARATION PROCEDURES

1. Title Sheet
   The **engineer** shall be responsible for completing the title sheet as required and formatted by the **STATE** and as discussed in Part V of the Highway Design, Operations and Procedures Manual. Refer to Section K - Plans, 1 - Title Sheets, page 5-24, for the procedure to be used regarding all plans prepared by the **engineer**.

2. Project Layout
   The project layout shall clearly depict the entire project as it is proposed and will usually be drawn at a scale of 1 inch=100 feet or 1 inch=200 feet, depending on the size of the project.

3. Typical Sections
   See Part IV of the Highway Design, Operations and Procedures Manual.

4. Sequence of Work Sheets (Traffic Control Plan)
   Clarity and completeness should be the rule to follow in preparing these sheets, with particular attention given to location of construction signs and barricades, lane widths, protection of drop offs, etc. For a reference guide use the Texas Department of Transportation, Texas Manual on Uniform Traffic Control Devices. Usual scale of 1 inch=100 feet and/or 1 inch=50 feet for special locations. A narrative sequence shall be included in the special provisions for the project. Staging of structural elements shall be considered. Provisions for drainage shall be considered, included and indicated during all stages of construction operations.

5. Removal Item Sheets
   These sheets indicate removal of existing facilities necessary to the proposed construction. (1 inch=40 feet) (use same scale as plan/profile sheets).

6. Summary Sheets
   Summary Sheets are required to indicate type, quantity and/or location of work for individual items of the proposed project.

7. Alignment Layout Sheets
   These sheets indicate the horizontal alignment with curve data and coordinates usually tabulated thereon. On some projects, depending on size, this information may be included on the plan profile sheets. Usual scale (1 inch=100 feet) or (1 inch=40 feet).

8. Plan Profile Sheet
   Clarity and completeness should be the rule to follow in preparation of these sheets. Usual scale (1 inch=40 feet or 1 inch=50 feet) or (1 inch=20 feet), depending on project complexity.

9. Drainage Area Maps
   Usual scale (1 inch=100 feet) and/or (1 inch=200 feet) supplemented by large scale area maps as necessary.

10. Drainage Plan Profile Sheets
    These sheets may be required on some projects to clearly depict location of inlets, storm sewer lines, and profile of storm sewer lines and laterals. Usual scale (1 inch=40 feet or 1 inch=50 feet) or (1 inch=20 feet). Storm sewer design does include redesign of storm sewers imposed by utility constraints developing after initial reviews by the **STATE** and consequential redesign and adjustments.

APPENDIX B - PLAN PREPARATION PROCEDURES (Continued)

11. Runoff, Inlet, Storm Sewer and Culvert Sheets
Use standard sheets.

12. Culvert Cross Sections and Details
District standard reproducible sheets can be furnished (one each) to the **engineer** for modification of special designs.

13. Manhole and Inlet Details
District standard reproducible sheets can be furnished (one each) to the **engineer**.

14. Miscellaneous Detail
Curb, Sidewalk, Driveways, etc.

15. Intersection Details

16. Marking Layouts and/or Details
Layouts of the entire project with markings depicted thereon. Usual scale 1:500 (1 inch=40 feet or 1 inch=50 feet). On some projects typical details might suffice.

17. Structural Details
Bridge layout sheets shall have the same horizontal and vertical scale. Usually (1 inch = 10 feet) (1 inch = 20 feet). Sections of existing and proposed structures usually have a scale of (1 inch = 5 feet). Elements of the bridge (abutments, bents, slabs, etc.) shall be detailed to a (1/2 inch = 1 foot) or (1/4 inch equals 1 foot) architect scale to provide clear legible drawings when reduced. Letters shall be a minimum size of 4 millimeters (5/32 inch) height for hand lettering and 140 for lettering by computer-aided design and drafting (CADD).

18. Overhead Sign Bridge Layouts
A maximum of four structures may be shown on each layout sheet. The reference to the appropriate overhead sign bridge (OSB) standard and the following requirements shall be shown on the layout: (1) Drilled shaft size and length (2) Soil strength used for design {indicate basis and boring(s) used} (3) Design height (4) Tower height (5) Leg spacings and (6) Design wind speed. The wind speed design map need not be included in the project plans. Designation of tower member size and anchor bolt size shall not be shown. For OSBs which require special design, the design shall be in accordance with the AASHTO sign specifications (see Item 22 of References on page 49) and to the same loading requirements as for normal standard structures. Structures (special or standard) which will have changeable message signs shall be analyzed by the **engineer**.

APPENDIX C - GENERAL PLAN CHECKLIST

Services Provided By: Engineer	COUNTY	
YES	N/A	Title Sheet
YES	N/A	Project Layout
YES	N/A	Sequence of Work
YES	N/A	Detour Layouts & Profiles
YES	N/A	Construction Pavement Markings
YES	N/A	Signing & Barricades
YES	N/A	Construction Sign & Beacons
YES	N/A	Typical Sections
YES	N/A	Shaping & Finishing Sections
YES	N/A	Slopes Adjacent to Shoulders
YES	N/A	Estimate & Quantities
YES	N/A	General Notes & Specification Data
YES	N/A	Grading Summary
YES	N/A	Miscellaneous Summaries (See following "SUMMARIES" heading)
YES	N/A	Horizontal Curve Data & Alignment Layouts
YES	N/A	Drainage Summaries
YES	N/A	Structure Summaries
YES	N/A	Erosion Control Summary & Details
YES	N/A	Plan/Profile Sheets
YES	N/A	Erosion Control Summary & Details
YES	N/A	Pavement Contours
YES	N/A	Superelevation Transition (If Required)
YES	N/A	Grading Contours
YES	N/A	Guard Fence Layouts
YES	N/A	Storm Water Pollution Prevention Plans (SW3P)
YES	N/A	Drainage Area Maps
YES	N/A	Hydraulic Data
YES	N/A	Drainage Sheets
YES	N/A	Bridge Hydrology Sheets
YES	N/A	Inlet & Manhole Details
YES	N/A	Utility Support Details
YES	N/A	Culvert Cross Sections & Details
YES	N/A	Special Culvert Designs
YES	N/A	Special Drainage Details
YES	N/A	Chain Link Fence Locations
YES	NO	Ramp Details Sheet
YES	N/A	Removal Item Sheet - Including detours (Shown in detour summary, No payment for removal; subsidiary to construction detours)
YES	NO	Pavement Details
N/A	N/A	Pavement Standard Modification for Concrete Shoulder
N/A	N/A	Concrete Pavement Continuously Reinforced (CPCR)

APPENDIX C - GENERAL PLAN CHECKLIST (Continued)

Services Provided By: Engineer	COUNTY	
N/A	N/A	Concrete Pavement Contraction Design (CPCD)
N/A	N/A	Concrete Pavement Details - Jointed Reinforced (Steel Bars) (CPJR)
YES	N/A	Bridge Approach Slab Details
YES	N/A	Vehicle Attenuator Details
YES	N/A	Miscellaneous Details
YES	N/A	Wheelchair Ramps
YES	N/A	Pavement Marking Details
YES	N/A	Modified Standards
YES	N/A	List of Standards
YES	N/A	Permanent Signing Plans & Quantities
YES	N/A	Permanent Lighting Plans, Quantities & Standards
YES	N/A	Bridge Layout(s)
YES	NO	Bridge Details
YES	N/A	Retaining Wall Layout(s)
YES	N/A	Retaining Wall Details
N/A	N/A	Pumphouse Details
YES	N/A	Underdrain Details (Retaining Walls)
YES	N/A	Culvert Standards
N/A	N/A	Soil Profile
YES	N/A	Temporary Traffic Signals
YES	N/A	Design Cross Sections
YES	NO	Estimate
YES	N/A	List of Standard Specification, Special Provisions & Special Specifications
YES	N/A	Detour Special Provisions (If Required)
YES	N/A	Construction Time Estimate
NO	N/A	Critical Path Method (CPM)
YES	NO	Unit Price Documentation

APPENDIX C - GENERAL PLAN CHECKLIST (Continued)

Services Provided By: Engineer	COUNTY	

Miscellaneous

YES	N/A	Conduit Requirements
YES	N/A	Traffic signal Requirements

Summaries **(ALL BELOW YES FOR ENGINEER AND NO FOR COUNTY UNLESS NOTED OTHERWISE)**

___	___	Salvaging and Placing Topsoil
___	___	Prepare ROW
___	___	Remove Old Structures
___	___	Scarify Existing Pavement
___	___	Remove Old Concrete Curb of Curb and Gutter (C&G)
___	___	Remove Old Concrete Pavement
___	___	Remove Old Concrete Riprap
___	___	Remove Metal Beam Guard Fence
___	___	Galvanized steel Beam Guard Fence (12Ga) (GSBGF)
___	___	Temporary Guard Fence (TEMPGF)
___	___	Summary of Concrete Flumes
___	___	Curbs
___	___	Adjust Manholes & Inlets
NO	___	Underdrains
___	___	Base and Pavement
___	___	Large Structure
___	___	Concrete Riprap (RR8 & RR9)
___	___	Temporary Portable Concrete Barrier (PCBR)
___	___	Concrete Traffic Barrier
___	___	Vehicle Attenuator
___	___	Guard Rail Energy Absorbing Terminal (Great System)
___	___	Pavement Markings & Blast Cleaning (Thermoplastic)
___	___	Retaining Walls
___	___	Large Structure Summaries
___	___	Small Structure Summaries
___	___	Earthwork (Roadway & Channel) & Channel Details
___	___	Culverts
___	___	Detours
___	___	Seeding or Mulch Sod - Quantity Only
___	___	Inlet & Manholes
___	___	Sidewalks
___	___	Construction Pavement Markings
___	___	Driveways
___	___	Concrete Median
___	___	Storm Sewers
___	___	Head Walls & Safety End Treatments
___	___	Curb Openings
___	___	Manholes
___	___	Chain Link Fence, Remove & Replace Chain Link Fence
___	___	Remove & Relay Reinforced Concrete Pipe (RCP) or Pipe Sewer

PROJECT: FM 681
CLIENT: Hidalgo County

EXHIBIT C
WORK SCHEDULE

5/28/2009

TASK AND DESCRIPTION	2009												2010												2011				
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
ROW Mapping																													
Design Surveys																													
Final ROW Map, Parcel Sketches and Field Notes																													
ROW Acquisition (Anticipated FONSI Sept. 2009)																													
Project Administration																													
Coordination with County and TxDOT																													
Preliminary Administrative & Acquisition Process																													
Title Commitments																													
Appraisal Reports																													
Appraisal Review Reports																													
Appraisal Update Reports																													
Approved Values by TxDOT																													
Acquisition Negotiation Offers																													
Title Curative Process																													
Title Commitment Updates																													
Payments for Parcels																													
L&G Condemnation Support Process																													
Eminent Domain Proceedings by County																													
Title Insurance Policies - Negotiations/ED																													
Consummation of Outstanding Cases																													
PS&E																													
Complete Intersection Layouts																													
Roadway Design, x-sections, earthwork, etc.																													
Design Hydraulic Structures, Outfalls, etc.																													
Design Storm Drain System																													
Signing and Pav't Markings																													
Traffic Control Plan																													
Utility Coordination																													
Specifications, General Notes, Estimates																													
TxDOT Review																													
REVISIONS BY L&G AS RECEIVED FROM TXDOT																													
TxDOT PROCESS FOR LETTING AT AUSTIN																													
Estimated Construction Letting																													
Construction																													
Construction Inspection assisting TxDOT																													

ESTIMATED 18 MONTHS CONSTRUCTION

L&G ENGNEERING TASK
TxDOT TASK
COUNTY TASK

ATTACHMENT D ENGINEERING AND RIGHT-OF-WAY ACQUISTION FEE
ESTIMATE FOR FM 681
FY 2009 - FY 2011 PROJECT

ROADWAY PROJECT:	**FM 681 (MILE 7)**
LIMITS:	FM 2221 to SH 107
EXISTING ROADWAY SECTION:	variable 40 - Rural
EXISTING ADT:	15000
EXISTING ROW WIDTH:	80 Varies
PROPOSED ROADWAY SECTION:	4-lane divided urban
PROPOSED ROW WIDTH:	150-ft
ESTIMATED CONSTRUCTION COST.....	$7,524,000.00
LENGTH:	1.80 Miles

ESTIMATED PROJECT COSTS	*STATE*	*LOCAL*
ROADWAY CONSTRUCTION COST	$7,524,000.00	
Construction Cost		
PHASE I - PLANNING& DESIGN		
Schematic		PD
Field Surveys for Schematic	PD	$ -
Environmental Assessment (includes Historical and Archival)		PD
Public Involvement for County (I public meeting and I public hearing)		PD
Field Surveys for Design and Construction		$ 115,847.32
PS&E Development (8% of Const)		$ 601,920.00
Signal,Pv't Mrkings and Sign Design		$ 81,509.43
PHASE II - RIGHT OF WAY COSTS		
Compensible Utilities	$ 339,622.64	$ 5,094.34
Estimated ROW Parcels		53
ROW Map (@ $3100/parcel)		$ 164,300.00
Roadway Right-of-Way Costs - @ $3.50 average/sq ft	$ 2,583,294.79	$ 38,716.98
Relocation Costs (Estimated 8 Relocations)	$ 169,811.32	$ -
Roadway Right-of-Way Costs - Acq.Services (Est. 53 Parcels) please reference the sheet 2 of 2 of this attachment		$ 707,752.83
PHASE III - CONSTRUCTION		
TxDOT Construction Inspection (11%)	$ 827,640.00	
L&G Construction Management		$ 30,566.04
SUB-TOTAL	**$11,444,368.75**	**$1,745,706.94**
TOTAL PROJECT COST		**$ 13,190,075.70**

TOTAL PROPOSED ENGINEERING AND ROW ACQUSITION FEE **$ 1,740,612.60**

HIDALGO COUNTY PCT #3 BUDGET SCHEDULE			
ENGINEERING	**FY 2009**		$ 963,576.75
ENGINEERING,UTILITIES & ROW ACQUISITION	**FY 2010**		$ 397,687.74
MANAGEMENT & ROW ACQUISITION	**FY 2011**		$ 384,442.45

State Estimated Cost

Local Estimated Cost

Total Project Estimated Cost

EXHIBIT "D" FEE SCHEDULE
L&G ENGINEERING's ROW ACQUISITION SERVICES
PROJECT FM 681 From FM 2221 to SH 107
CSJ: 0669-01-043

The following is an estimated Parcel No. Cost for completing the subject project's Right-of-Way Acquisition Services as outlined in EXHIBIT B according to the EXHIBIT D "Fee Schedule" of the contract. The parcels are estimated from the approved Schematic . **The work and payment, for these services will be accomplished by L&G Engineering and approved and paid for by Hidalgo County Pct. 3- on a percent complete basis as approved by Hidalgo County Pct. 3.** L&G Engineering will be completing the work on the approximate schedule provided in Attachment C of this Contract or as approved by Hidalgo County Pct. 3. The Parcels will be acquired either by completing the entire negotiation of the parcel or by modifying the approved schematic to acquire the parcels. This is a lump sum cost proposal.

Parcel No.	Project Admin	Condemnation Support Services	Title Services Per Parcel	Appraisal Services Per Parcel	Appraisal Review Per Parcel	Appraisal Update	Negotiation Fees Per Parcel	Closing Services Per Parcel	Relocation (Residential/Business)	Parcel Totals
Overall Project Parcels		$117,373.58				9,526.42			$48,000.00	$174,900.00
53 parcels (CSJ:0669-01-043)	$2,200.00	**	$600.00	$2,700.00	$800.00	*	$3,500.00	$200.00	***	$530,000.00
Total of Work Authorization										**$704,900.00**

(*) Appraisal Updates. We are estimating a 33% of the parcels to require updates and are subsidiary to charges of appraisalsat $500 each.
(**) Condemnation support services based on 18 parcels going to Eminent Domain Proceedings (80 hrs total/per parcel condemned at $120/hr).
(***) Based on the approved Schematic we are estimating 12 relocations @ $6,000/each.
Hidalgo County will be responsible to pay for the Title Insurance Policy

L&G Engineering
Direct Expenses

	Unit	Rate	Qty	Total
Auto Mileage	MI	$0.55	2717	$1,494
Reproduction Costs	EA	$0.20	6792	$1,358
Total Direct Expenses				**$2,853**

TOTAL L & G ENGINEERING PROJECT COSTS **$707,752.83**

HIDALGO COUNTY

Professional Engineering Services

Contract # C-_____

Work Authorization Form EXHIBIT E

WORK AUTHORIZATION NO. ____

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Section I.A. of the Agreement made by and between **HIDALGO COUNTY**, action herein by and through the **Commissioner's Court**, hereinafter called the "**Owner**," and, L & G Consulting Engineers, Inc. *d/b/a* L & G Engineering, professional engineers of Mercedes, Texas, hereinafter called "**Engineer**".

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the **Engineer** to provide

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The scope of services to be provided by the **Owner** is identified in ***EXHIBIT "A" - Scope of Services to be Provided by the Owner*** attached hereto.

The scope of services to be provided by the **Engineer** is identified in ***EXHIBIT "B" - Scope of Services to be Provided by the Engineer*** attached hereto.

PART 2. ESTIMATED COST

The estimated cost for services under this Work Authorization is $_____. This amount is based upon the costs outlined in the Estimated **Cost Proposal** attached hereto as **EXHIBIT "D".**

PART 3. PAYMENT

Compensation and payment to the Engineer for the services established under this Work Authorization shall be made in accordance with **Article 6** of the Agreement.

PART 4. FUNDING

This Work Authorization No.1 shall be funded through funding source:
Account No. _____
Requisition Number _____ **(MUST BE INCLUDED AFTER CC APPROVAL)**

PART 5. PERIOD OF SERVICE

This Work Authorization shall become effective on the date of final acceptance of the parties hereto, and terminate upon completion of scopes of the work authorization.

PART 6. RESPONSIBILITIES AND OBLIGATIONS

This Authorization does not waive the parties' responsibilities and obligations provided under the **Agreement.**

PART 7. ACKNOWLEDGEMENT AND CONFIRMATION

Acknowledgement and confirmation by **Hidalgo County** _____, Commissioner _____ as to content and detail of this **Work Authorization No.** 1.

HIDALGO COUNTY

BY:_____

PART 8. ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners' Court on _____ as indicated below and effective as of ____ day of _____, 2009.

THE ENGINEER:

_____

By: Jacinto Garza, P.E.
President

THE OWNER:
HIDALGO COUNTY

_____

By: Juan D. Salinas, III, County Judge

ATTEST:

_____

By: Arturo Guajardo, Jr., County Clerk

LIST OF ATTACHMENTS

EXHIBIT "A" - Service to be Provided by the Owner
EXHIBIT "B" - Services to be Provided by the Engineer
EXHIBIT "C" - Work Schedule
EXHIBIT "D" - Cost Proposal

EXHIBIT "F"

Supplemental Agreement Form

THE STATE OF TEXAS §
§
COUNTY OF HIDALGO §

SUPPLEMENTAL AGREEMENT NO. ___

TO AGREEMENT FOR PROFESSIONAL SERVICES

THIS **SUPPLEMENTAL AGREEMENT** is made pursuant to the terms and conditions of Article 8 of the Agreement made by and between **HIDALGO COUNTY**, acting herein by and through the **Commissioner's Court**, hereinafter called the "**Owner**", and _____, Professional Engineers of, _____, Texas, hereinafter called the "**Engineer**".

WITNESSETH

WHEREAS, the **Owner** and the **Engineer** executed the **Agreement** on the _____ day of _____ **2007** concerning engineering for _____ (hereinafter referred to as the "**Project**"); and,

WHEREAS, Article ___ of the **Agreement**, (article title), establishes _____; and,

WHEREAS, it has become necessary to amend the contract to

_____

_____

A. AGREEMENT

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

1. Article ___ of the **Agreement**, (article title), is revised to

_____

_____

_____

_____

_____

_____

_____

All other provisions are unchanged and remain in full force and effect.

IN WITNESS WHEREOF, the Engineer and the Owner have caused this Supplemental Agreement to the Agreement for Professional Services to be executed as of the _____ day of _____, 20__.

THE ENGINEER:
ENGINEER

BY:_____

THE OWNER:
HIDALGO COUNTY

BY:_____
Juan D. Salinas III, County Judge

LIST OF ATTACHMENTS

(as required)

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY) 07/01/08

PRODUCER
Hilb Rogal & Hobbs
(956)682-9423 FAX(956)687-1286
1400 N McColl Rd Suite 105
[illegible]llen, TX 78501

THIS CERTIFICATE IS [illegible]ED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
L & G Consulting Engineers Inc
dba L & G Engineering
2100 W Expressway 83
Mercedes, TX 78570

INSURERS AFFORDING COVERAGE	NAIC #
INSURER A: Fidelity & Guaranty Insurance Compan	35386
INSURER B: SOUTHERN VANGUARD INSURANCE COMPANY	
INSURER C: Ace American Insurance Company	22667
INSURER D:	
INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A		GENERAL LIABILITY [X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [ ] PRO-JECT [ ] LOC	PACP2822L500TLC08	07/19/08	07/19/09	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$2,000,000 $50,000 $5,000 $2,000,000 $4,000,000 $4,000,000
A		AUTOMOBILE LIABILITY [ ] ANY AUTO [ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS [X] HIRED AUTOS [X] NON-OWNED AUTOS	PACP2822L500TLC08	07/19/08	07/19/09	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$1,000,000 $ $ $
		GARAGE LIABILITY [ ] ANY AUTO				AUTO ONLY - EA ACCIDENT OTHER THAN AUTO ONLY: EA ACC AGG	$ $ $
		EXCESS/UMBRELLA LIABILITY [ ] OCCUR [ ] CLAIMS MADE [ ] DEDUCTIBLE [ ] RETENTION $				EACH OCCURRENCE AGGREGATE	$ $
B		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below	TSV000268001	07/23/08	07/23/09	[ ] WC STATU-TORY LIMITS [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $1,000,000 $1,000,000 $1,000,000
C		OTHER Professional	EONG2363384A002	07/20/08	07/20/09	$1,000,000 ea. Claim $1,000,000 Aggregate $15,000 Ded. ea. Claim	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

** Supplemental Name **

First Supplemental Name applies to all policies - L & G Consulting Engineers Inc; San Jacinto Enterprises, LLC

CERTIFICATE HOLDER

County of Hidalgo
100 E Cano
Edinburg, TX 78539

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE
Brian E Lewis

IMPORTANT

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

The Certificate of Insurance on the reverse side of this form does not constitute a contract between