

EXHIBIT "E"
Work Authorization

HIDALGO COUNTY
Professional Engineering Services
Contract # C-15-046-03-03
Work Authorization Form

WORK AUTHORIZATION NO. 2

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Article I. 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:
A complete Right of Way Map and Parcel Descriptions for the needed ROW along the proposed Regional Hike & Bike Trail Project.

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 **\$170,237.76**. This amount is based upon the costs outlined in the **Estimated Cost Proposal** attached hereto as **EXHIBIT "D" Fee Schedule**.

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.2 shall be funded through funding source:
Account No. _____
Requisition Number _____

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**.

EXHIBIT "E"
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PART 7. ACKNOWLEDGEMENT AND CONFIRMATION

Acknowledgement and confirmation by Hidalgo County Precinct No. 2, Commissioner Eduardo Cantu as to content and detail of this **Work Authorization No. 2**.

**HIDALGO COUNTY
COMMISSIONER PRECINCT NO. 2**

BY: _____

PART 8. ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners' Court on _____ as indicated below.

**THE ENGINEER:
L&G ENGINEERING**



By: Jacinto Garza, P.E.
President

**THE OWNER:
HIDALGO COUNTY**

By: Ramon Garcia
County Judge

ATTEST:

By: Arturo Guajardo, Jr., County Clerk

LIST OF ATTACHMENTS

- Exhibit A – Services to be Provided by the Owner
- Exhibit B – Services to be Provided by the Engineer
- Exhibit C – Work Schedule
- Exhibit D – Fee Schedule

**EXHIBIT “A”
Services to be Provided by the Owner**

The following provides an outline of the services to be provided by the **Owner** in the development of the ROW Map of Way Map for the proposed Regional Hike & Bike Trail located within the Cities of Pharr, San Juan & McAllen and within the limits of South San Antonio Avenue to South 2nd Street in Hidalgo County hereinafter denoted as the **Project**.

GENERAL:

The **Owner** will provide to the **Engineer** the following:

- 1) Provide the authorization to proceed with services through coordination with the project consulting and design Engineer.
- 2) Payment for work performed by the **Engineer** and accepted by the **Owner** in accordance with Article 3 of the Agreement.
- 3) Assistance to the **Engineer**, as necessary, to obtain the required data and information from other local, regional, State and Federal agencies the **Engineer** cannot easily obtain.
- 4) Provide any available relevant data the **Owner** may have on file concerning the **Project**.
- 5) Provide timely review and decisions in response to the **Engineer’s** request for information and/or required submittals and deliverables, in order for the **Engineer** to maintain the agreed upon work schedule prepared in accordance with Exhibit “C” attached to this Work Authorization.
- 6) Attend and participate in progress meetings as required and as coordinated and conducted by **Engineer**.

EXHIBIT "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE SURVEYOR

PROJECT DESCRIPTION

The services designated herein as "Services provided by the SURVEYOR" shall include the performance of all surveying services for the following described facility:

COUNTY/CITY: HIDALGO COUNTY

CONTROL: _____

PROJECT/DESCRIPTION: Hike & Bike Trail

LENGTH: 7.8 Miles

HIGHWAY: Pct. #2 Regional Hike & Bike Trail

LIMITS: San Antonio St. to 2nd St.

EXISTING FACILITY

PROJECT CLASSIFICATION

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

- Hike & Bike Trail
- Overlay
- Rehabilitation Existing Road (Scarify & Reshape)
- Convert Non-Freeway to Freeway
- Widen Freeway
- 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)

NOTE

ENGINEER shall mean L&G Engineering.

STATE shall mean Texas Department of Transportation.

COUNTY shall mean the Hidalgo County.

SURVEYOR shall mean R.O.W. Surveying Services, LLC.

EXHIBIT "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE SURVEYOR

RIGHT-OF-WAY DATA
(Function Code 130)

Services
Provided By:
SURVEYOR ENGR

NOTE: No work involving right-of-way (ROW) data is to be performed until the ENGINEER has given the SURVEYOR written approval of the final location of the proposed ROW lines as approved by Hidalgo County.

- | | | |
|------------|-----------|---|
| <u>YES</u> | <u>NO</u> | 1. Ownership Data in a .dgn file <ol style="list-style-type: none">a. The entire project limits as identified on the attached Preliminary Exhibit.b. Compensable utility ownership that has property rights on ROW shall be researched and provided.c. For each drainage outfall propertyd. For each irrigation structure pipe. |
| <u>YES</u> | <u>NO</u> | 2. Parcel plats & Right-of-Way Map of Parent Tracts of Proposed Hike & Bike Trail <ol style="list-style-type: none">a. A ROW map, parcel plats and field notes shall be prepared and furnished.b. 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 including visible utilities only in 2D. |
| <u>YES</u> | <u>NO</u> | 3. Utilities (Compensable) <ol style="list-style-type: none">a. Property ownership with recording information shall be shown on ROW Map and Parcel Plats with distance ties to property corners in an effort to locate compensable utilities including Irrigation lines. |
| <u>YES</u> | <u>NO</u> | 4. Field Notes <ol style="list-style-type: none">a. Field notes and plats, signed and sealed by a Registered Professional Land Surveyor, for all parcels on the ROW Mapb. Computation Sheets for Survey Closure and Area for Each Parcel.c. Ground surveys and preparation of parcel maps, legal descriptions, and right of way maps. |
| <u>YES</u> | <u>NO</u> | 5. Survey and Stake Right-of-Way for each Parent Tract(s) for the proposed Hike & Bike Trail. |
| <u>YES</u> | <u>NO</u> | 6. Records as Required by the County and State <ol style="list-style-type: none">a. Records used to establish ownership |
| <u>YES</u> | <u>NO</u> | 7. General Guidelines for Preparation of Right-of-Way Maps
<i>(Sample ROW Maps and Parcel Plats as provided by the Engineer)</i>
GENERAL SPECIFICATIONS <ol style="list-style-type: none">a. All data submitted by the surveyor will be legible, organized and well documented.b. The surveyor shall provide temporary signs and shall control traffic near surveying operations adequately to comply with provisions of the MUTCD; a copy of which the Surveyor acknowledges has been furnished to him. All signs, flags, and safety equipment are to be provided by the surveyor.c. Permission to enter private property for surveying (Right-Of-Entry) shall be the sole responsibility of the surveyor.d. The surveyor will be held responsible for the correctness of his services. The surveyor will be responsible for the completion of his services.e. The surveyor will be required to complete the attached "Right-of-Way Map Checklist" and submit along with the completed R.O.W. map. All requirements of attached |

EXHIBIT "B"

SCOPE OF SERVICES TO BE PROVIDED BY THE SURVEYOR

R.O.W. map checklist must be complete, accurate and also considered to be essential and is a part of this contract.

SURVEYING SCOPE OF SERVICES FOR PARCEL MAPPING

FC 130 – RIGHT-OF-WAY DATA

Right-of-Way Documents - The SURVEYOR will utilize State examples and provide the following:

GENERAL

- a. Abstracting: The SURVEYOR will determine Ownership Data.
- b. Prepare individual parcel maps and field notes as needed to properly describe the right-of-way the COUNTY is to acquire.
- c. All procedures involving right-of-way maps will be in accordance with the STATE'S Right-of-Way Book I and Book II, the State's local operating procedures and according to the Texas Board of Professional Land Surveying Practices Act.
- d. All required documents will be in English units.
- e. The SURVEYOR will monument all corners with a 5/8 inch iron rod with a Surveyor's plastic cap on all parcel boundary corners.
- f. The SURVEYOR will provide to the COUNTY a copy of Instruments of Record.
- g. The SURVEYOR will attach graphics files compatible with the latest version of Micro-Station graphics software.
- h. The SURVEYOR will attach documents or text files compatible with the latest version of Word software.

PARCEL PLATS

- a. A parcel plat will be prepared for each parcel of land to be acquired. The STATE has developed standard formats for parcel plats, copies of which the SURVEYOR will request and secure for all purposes
- b. Parcel boundary lines will be delineated with appropriate bearings, distances, and curve data.
- c. Private property lines will be delineated with appropriate bearings, distances, and curve data to the extent necessary to describe the individual parcels of land to be acquired.
- d. League lines and survey lines will be shown and identified by name and abstract number.
- e. A north arrow will be shown on each sheet and, if possible, in the upper right hand corner.
- f. Monumentation set or found will be shown and described as to material and size.
- g. A station and offset will be shown for each PC, PT, and angle point in the proposed right-of-way lines and the existing right-of-way lines in areas of no proposed acquisition.
- h. Intersecting streets will be shown and identified by name and right-of-way width.
- i. A parent tract inset will be shown for each parent tract.
- j. A note will be included on each map sheet stating the basis of bearings, coordinates, and datum used.
- k. Appropriate notes will be included on the title sheet stating the following:
 - a. Month(s) and year abstracting was performed upon which the map is based.
 - b. Month(s) and year field surveys were conducted upon which the map is based.
 - c. Month and year map was completed by the SURVEYOR.
- l. The right-of-way account number if available will be shown on each parcel map sheet.
- m. All parcel maps should be 8-1/2" x 11" signed and sealed by a Registered Professional Land Surveyor and note referencing legal description.
- n. The acreage of the part taken should be shown to three decimal places, rounded.

EXHIBIT "B"

SCOPE OF SERVICES TO BE PROVIDED BY THE SURVEYOR

FIELD NOTE DESCRIPTIONS

A field note description will be prepared for each parcel of land to be acquired. Field note descriptions will include, but need not be limited to, the following:

- a. The field note description will begin with a general description that will include, as a minimum:
 - (1) State, county, and city within which the proposed parcel of land to be acquired is located.
 - (2) A reference to unrecorded and recorded subdivisions by name, lot, block, and recording data to the extent applicable.
 - (3) A reference, by name, to the grantor and grantee, date, and recording data of the most current instrument(s) of conveyance describing the parent tract.

- b. The field note description will continue with a metes and bounds description that will include, as a minimum:
 - (1) A point of commencing (outside property corner).
 - (2) A point of beginning on proposed R.O.W. line.
 - (3) A series of courses, identified by number and proceeding in a clockwise direction, describing the perimeter of the parcel of land to be acquired, and delineated with appropriate bearings, distances, and curve data.
 - (4) A description (8-1/2" x 11") of all monumentation set or found to include, as a minimum, size and material.
 - (5) All field note descriptions will be signed and sealed by a Registered Professional Land Surveyor.
 - (6) Note referencing parcel plat.

SUBMITTALS

- a. ROW Map Submittal Requirements:
 - (1) Pharr District ROW Map Checklist (signed and dated)
 - (2) Two (2) paper sets of half-size ROW maps (11"x 17")
 - (3) One (1) paper set of the full-size ROW maps (22"x 34")
 - (4) Four (4) sets of original metes & bounds descriptions (field notes) with parcel plats (signed & sealed by the surveyor). *Do not include traverse sheet.*
 - (5) One (1) electronic copy of the ROW Map on a CD, and
 - (6) One (1) copy of the DGN electronic file on a CD from the surveyor- Both the electronic copy of the ROW Map and the DGN file can be on one CD.

- b. After Approval of the ROW Maps by the Engineer & County (REVISIONS) Submittal Requirements:
 - (1) Two (2) paper sets of the half-size of the affected ROW map sheets (11"x17"), detailing the revision
 - (2) One (1) paper set of the full-size of the affected ROW map sheets (22"x 34"), detailing the revision
 - (3) Four (4) sets of any Revised original metes & bounds descriptions (field notes) with parcel plats (signed & sealed by the surveyor). *Do not include traverse sheet.*
 - (4) One (1) electronic copy of the Revised ROW Map sheets on a CD, and
 - (5) One (1) copy of the DGN electronic file on a CD from the surveyor-detailing the revision-Both the electronic copy of the Revised ROW Map sheets and the DGN file can be on one CD.

EXHIBIT "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE SURVEYOR

PHARR DISTRICT
ROW MAP CHECKLIST

Consultant: _____
Contract/WA# _____
Responsible Office _____
Hidalgo County Project Manager: _____
County: _____
Hike and Bike : _____
Limits: _____

This Checklist must be signed by the RPLS and turned in with all proposed ROW Projects. Pharr District ROW will not accept a project without this checklist.

MAP

General

- ___ All documents have been proofread and are accurate.
- ___ Title commitments and/or title reports that include easements for each individual parcel.
- ___ Graphics files compatible with Microstation and Word software are provided.
- ___ Photos of proposed ROW staking included.
- ___ Field notes and Parcel Plats are numbered continuous.
- ___ Scale shall be 1"=50' or 1"=100".

Title Sheet Requirements

- ___ Title and description of project including county, limits, etc....
- ___ Vicinity map with begin and end sta.
- ___ Equations and Exceptions
- ___ Index
- ___ Legend
- ___ Title block completely filled out with County Project Authorization Number
- ___ List all Major Utilities from Station to Station

Individual Map Sheet Requirements

- ___ Sheet size 22" X 34"
- ___ The text is legible when reduced to half-scale.
- ___ Title block completely filled out with Hidalgo County Project Authorization Number
- ___ Matchlines
- ___ Project layout sheet
- ___ Existing utility lines and easements, deed reference, as shown on Schedule "B" of the Title Commitment, and defined on parcel plats

Existing information:

- ___ R.O.W. lines
- ___ Whole property or whole property inset
- ___ Roadways
- ___ Survey, county, and city limit lines shown and labeled
- ___ Improvements shown and labeled (*see below*)
- ___ Monumentation i.e. P.C., P.T., Break Points

EXHIBIT "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE SURVEYOR

- North arrow
- Scale
- Property lines
- Property descriptions i.e., lot, block, tract, subdivision, etc...
- Identify existing and proposed access denial locations (*if applicable*)

Proposed information:

- Type II Monumentation i.e. P.C., P.T., Break Points and 1500' intervals
- Survey and R.O.W. lines
- Basis of bearings
- Parcel bearings and distances correspond with traverse sheet
- Outside ties (P.O.C.) corresponds with field notes
- Point of beginning (P.O.B.) established on proposed R.O.W. line
- Parcel tied to baseline
- Baseline information shown i.e. Stationing, bearings, curve data, etc...
- Conveyance information shown in tables i.e. parcel number, grantors name, amount of take, remainder etc...
- Math checked on remainder

Improvements:

- Improvements bisected or within 25' of proposed R.O.W. line are shown on map with stationing and distance from proposed R.O.W. line. Buildings are labeled and dimensioned.
- Off-premise outdoor advertising signs within proposed R.O.W. are shown and labeled.

Utilities:

- All utilities within or crossing existing and proposed right of way are shown and labeled as to size, easement or fee width, and recording data of instrument.
- Location of underground storage tanks and/or filler caps are shown and labeled

*** DO NOT SEAL MAP**

FIELD NOTES

Heading

- County
 - Highway
 - Parcel number
- Hidalgo County Project Authorization No.

General Description or "preamble"

- Area of parcel to be acquired is shown in acreage (0.000) for rural land and/or square feet (to nearest whole sq. ft.) for urban land or smaller parcels

Parent tract data is shown:

- Size of parent tract
- Survey data or lot, block, and subdivision
- Name of last recorded seller and buyer
- Date, volume and page or document number of last recorded conveyance
- Records and county of last recorded conveyance

EXHIBIT "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE SURVEYOR

Beginning Description

- Point of commencement is on outside tie and is described accurately by bearings and distances as it leads to the point of beginning.
- Point of beginning is on proposed R.O.W. line

Particular Description

- Traverse calls are clockwise sequence
- Bearings and distances correspond exactly with map, parcel sketch, and traverse sheet
- Bearings are to nearest whole second and distances are to the nearest one-hundredth of a foot
- Calls are numbered
- Denial of access shall be described from beginning to end *(if applicable)*

Closing Description

- Last call leads back to P.O.B.
- Restates area of parcel
- Establishes taking in existing road R.O.W. if applicable
- Legal description is referenced to Plat
- Sealed and signed
- Include an access clause whether access is permitted or denied *(if applicable)*

PARCEL SKETCH

- Shows P.O.B. and P.O.C.
- All data corresponds exactly with Map and Field Notes
- Sheet size is no larger than 8 1/2" x 11"
- Plat closely matches example provided
- Plat referenced to legal description
- Sealed and signed
- Include an access clause whether access is permitted or denied *(if applicable)*
- Existing utility lines and easements (deed reference, if available);

TRAVERSE SHEET

- Computations show area to be acquired in sq. ft. or acres, whichever is applicable
- Computations show area that is existing road R.O.W. if applicable
- Traverse calls are in clockwise sequence
- Error of closure meets the following:
 - Secondary rural .0003
 - Primary rural - secondary urban .0002
 - Urban or industrial .00013

Signature of Responsible RPLS

Date

Printed Name

As the responsible project manager, I hereby certify that the attached ROW Map has undergone a QA/QC review, with the following applicable items specifically checked for accuracy, completeness and constructability (as noted by Checkmarks)

Signature of Project Manager

Date

Printed Name

EXHIBIT "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE SURVEYOR

SECTION 5 - FIELD SURVEYING AND PHOTOGRAMMETRY
(Function Code 150)

Services
Provided By:
SURVEYOR ENGINEER

- | | |
|---|--|
| <p><u>YES</u> <u>NO</u></p> | <p>1. Field Surveying</p> <p>a. Primary Project Control - 3 to 5 miles spacing
 Precision shall be 1 part in 20,000 or better, unless otherwise directed by the engineer.
 (1) Establish horizontal control points
 (2) Establish vertical control points</p> <p>NOTE: ALL BEARING AND DISTANCE SHALL BE BASED ON THE STATE PLANE COORDINATE SYSTEM NAD 1983, SOUTH ZONE.</p> <p>ALL DISTANCES AND COORDINATES SHALL BE SURFACE AND MAY BE CONVERTED TO GRID BY MULTIPLYING BY A COMBINED SCALE FACTOR OF 0.999960</p> <p>The Engineer shall coordinate with the Surveyor to determine and agree for the H&V Control Points that this project will be tied into and made part of Horizontal and Vertical Control Book that will be submitted by the Surveyor to the Engineer.</p> |
| <p><u>NO</u> <u>NO</u></p> | <p>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.</p> <ul style="list-style-type: none"> • No traverse should exceed 25 angle points. Planimetrics shall be 20 ft Lt & Rt from the proposed ROW as per the schematic provided by the Engineer. • 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. • Project control base lines |
| <p><u>NO</u> <u>NO</u>
 <u>NO</u> <u>NO</u>
 <u>NO</u> <u>NO</u>
 <u>NO</u> <u>NO</u></p> | <p>c. Photogrammetric ground control</p> <ul style="list-style-type: none"> (a) Establish horizontal control (b) Establish vertical control points (c) Place and maintain control point targets |
| <p><u>YES</u> <u>NO</u></p> | <p>d. Other Field Surveying</p> <p>(1) The surveyor shall provide A H&V Book (a Sample shall be provided by the Engineer to the Surveyor).</p> |
| <p><u>NO</u> <u>NO</u></p> | <p>(2) The limit of the Design surveys shall be 1,500-ft before and after the limits of the project as identified by the Project Engineer on the schematic. Establish horizontal and vertical control. Set benchmarks at 1000-ft intervals along the project proposed right-of-way. Provide x,y,z for each Benchmak. Provide a BM along each outfall ide 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 identified on the Hydrologic Map. The BM's shall be #5 I.R. 2-ft in depth set in concrete.</p> |
| <p><u>NO</u> <u>NO</u></p> | <p>(3) Complete topographic and cross section survey, data processing, and CADD mapping (2D & 3D) for the limits of the project.</p> |
| <p><u>NO</u> <u>NO</u></p> | <p>(4) Locate all visible utilities, data processing and CADD mapping (2D & 3D) including irrigation lines. Follow sample provided by the Engineer.</p> |
| <p><u>NO</u> <u>NO</u></p> | <p>(5) Field locate cross culverts, driveway culverts, inverts, irrigation lines, within the project limits, data processing and CADD mapping (2D & 3D).</p> |

EXHIBIT "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE SURVEYOR

- | | | |
|-----------|-----------|--|
| <u>NO</u> | <u>NO</u> | (6) Right of Entry, Right of Way Research, and Appraisal District Records is the responsibility of the Surveyor. |
| <u>NO</u> | <u>NO</u> | (7) 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. |
| <u>NO</u> | <u>NO</u> | (8) 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. |
| <u>NO</u> | <u>NO</u> | (9) 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 appurtenances as identified by the engineer sample layout. |
| <u>NO</u> | <u>NO</u> | (10) 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. |
| <u>NO</u> | <u>NO</u> | (11) Tie to existing underground and overhead utilities (location, elevation and direction)
<u>Horizontally</u> – 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.
<u>Vertically</u> – 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. |
| <u>NO</u> | <u>NO</u> | (12) Additional Field Surveying as shown below:
(A) <u>IRRIGATION LINES</u> – 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. |
| <u>NO</u> | <u>NO</u> | (B) <u>OUTFALLS</u> – The surveyor will provide a complete 2D & 3D File including utilities of the outfall identified on the Hydrologic Map. |
| <u>NO</u> | <u>NO</u> | <u>Driveways and Turnouts</u>
(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. |
| <u>NO</u> | <u>NO</u> | (13) ROW staking (Existing and Proposed @ 1,000 ft. stations PC's PT's and Angle points as per ROW Map) |
| <u>NO</u> | <u>NO</u> | (14) Soil core hole staking - |
| <u>NO</u> | <u>NO</u> | (15) Determine changes in topography from voids and outdated maps due to development, erosion, etc. |
| <u>NO</u> | <u>NO</u> | (16) Profiles of existing drainage facilities |
| <u>NO</u> | <u>NO</u> | (17) Measurement of hydraulic opening under existing bridges |
| <u>NO</u> | <u>NO</u> | (18) Obtain elevations of manholes and valves of utilities |
| <u>NO</u> | <u>NO</u> | (19) Provide temporary signs, traffic control, flags, safety equipment, etc. |
| <u>NO</u> | <u>NO</u> | (20) Ties to existing bridges or culverts that may conflict with new construction. |

EXHIBIT "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE SURVEYOR

- | | | |
|------------|------------|---|
| <u>N/A</u> | <u>N/A</u> | (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. |
| <u>NO</u> | <u>N/A</u> | (22) Inventory signs, mailboxes, and driveways |
| <u>NO</u> | <u>N/A</u> | (23) Survey controlled data sheets per TxDOT guidelines. |
| <u>YES</u> | <u>N/A</u> | (24) Recover and/or re-establish the existing center line of the existing Right-of-Way along the proposed trail alignment. Have said existing centerline approved by the Engineer. Provide a digital computer dump of both. |
| <u>YES</u> | <u>N/A</u> | (25) Coordinate with the Engineer to set the existing centerline stationing. |

Services
 Provided By:
SURVEYOR County

- | | | |
|------------|------------|----------------------------------|
| <u>N/A</u> | <u>N/A</u> | 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) |

EXHIBIT "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE SURVEYOR

ADDITIONAL RESPONSIBILITIES

A. TRAFFIC CONTROL:

The SURVEYOR shall control traffic in and near surveying operations adequately to comply with provisions of the latest edition of the TxDOT Manual on Uniform Traffic Control Devices – Part VI and the latest edition of the Occupational Safety Manual both of which can be found on the TxDOT internet site.

In the event field crew personnel must divert traffic or close traveled lanes, a Traffic Control Plan based upon principles outlined in the latest edition of the TxDOT Manual on Uniform Traffic Control Devices – Part VI shall be prepared by the SURVEYOR and approved by the ENGINEER prior to commencement of field work. A copy of the approved plan shall be in the possession of field crew personnel on the job site at all times and shall be made available to the ENGINEER for inspection upon request.

B. INVOICING:

Payment requests shall include a SURVEYOR's invoice. With each payment request, the SURVEYOR shall submit a project status report which will, as a minimum, include the percentage of total work complete as of the date of the payment request and a description of current work activity. The percentage of total work complete shall not be based simply on the percentage of funds expended, but shall be based on the best judgment of the SURVEYOR as to the percentage of actual work complete.

C. EASEMENTS, LETTERS OF PERMISSION, ETC.

The SURVEYOR shall be responsible for delineating easements. The SURVEYOR will be responsible for securing the necessary legal instruments and obtaining all Right-of-Entries (ROEs).

D. MEETINGS:

The ENGINEER shall setup the necessary meetings with the SURVEYOR in order to assure all field information is provided on-time and products are delivered in accordance with TxDOT's specifications. SURVEYOR must attend all meetings involving data provided if requested by ENGINEER.

E. PROJECT MANAGER/SURVEYOR COMMUNICATION:

The SURVEYOR shall designate one Texas Registered Professional Land Surveyor (RPLS) to be responsible throughout the project for project surveying coordination and all communications, including billing, with the ENGINEER.

F. OFFICE LOCATION:

The SURVEYOR will perform the services to be provided under this agreement out of a local office and have a crew available to perform requested tasks within 24 hours of request. The coordinating SURVEYOR's Project Manager (RPLS) shall be accessible at all times and working from the local office.

Exhibit "C"
 Work Schedule
 Regional Hike and Bike Trail - Work Authorization #10

Approx. Work to Start 3/9/2015

TASK AND DESCRIPTION	FIRM	2015											
		MAR	APR	MAY	JUN	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	
Phase I & II: ROW Mapping													
A. ROW Map													
B. Parcel Plats													
Phase I & II: Field Surveying (Control Hz & Vt)													
A. Primary and Secondary Control	ROWSS												
B. Setting Benchmarks	ROWSS												
Final Report and Deliverables													
A. Final Report and Deliverables	ROWSS												

**EXHIBIT D - WA #2
FEE PROPOSAL - SPECIAL SERVICES**

**Regional Hike Bike Trail
HIDALGO COUNTY PCT. #2**

		MANHOURS				
		Senior Project Manager	Senior Engineer	Project Engineer	L&G TOTAL HOURS	Sub-Contract Amounts
TASK						
Regional Hike & Bike Project						
1	Coordination & Support to Surveyor for ROW Map Accuracy Based on Proposed Alignment	18	26	52	96	
1a	Sub: ROWSS ~ ROW Mapping for 40 Parcels (FC130)					\$154,651.00
Subtotal Hours		18	26	52	96	
Contract Rate (Hourly Base Rate + Overhead (178.12%) + Fixed Fee (12.00%))		\$ 218.04	\$ 180.66	\$ 133.94		
Total Labor Costs		\$ 3,924.72	\$ 4,697.16	\$ 6,964.88	\$ 15,586.76	\$154,651.00

Project Team Cost Proposals - Sub Consultants

R.O.W. Surveying Services, LLC

Cost Proposal

\$154,651.00 (See detailed break-down of fee page 2 and 3 of 3 attached)

Grand Total \$ 170,237.76

Exhibit "D"

R. O. W. SURVEYING SERVICES

March 4, 2015

Mr. Jacinto Garza, P.E.
L&G Engineering
Transportation Consultants
Attn: Reza Badiozzamani, P.E.
2100 W. Expressway 83
Mercedes, Texas 78570

Proposal: **Proposal FNC 130 and 150**
Precinct 2 Regional Hike and Bike Trail
Work Authorization #10
Limits: Phase I-South San Antonio Ave., (San Juan) to Ridge Road (Pharr)
Phase II-Ridge Rd. (Pharr) to 2nd Street (McAllen)

Dear Mr. Garza:

Thank you for your consideration for the Surveying Services from ROWSS for the above mentioned project. The attached is EXHIBIT B Services to be provided by Surveyor, EXHIBIT C Work Schedule, and EXHIBIT D Surveying Fee Schedule. The following is a summary of the proposal:

FC 130 ROW Mapping:

Phase I--	20 Parcels	@ \$2850/Parcel = \$57,000
Phase II--	20 Parcels	@ \$2850/Parcel = <u>\$57,000</u>
		\$114,000

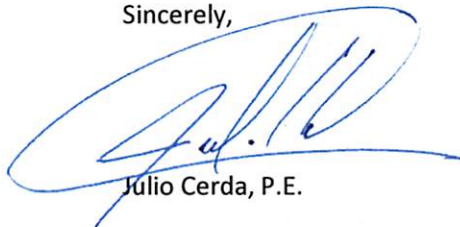
FC 150 Horizontal/Vertical Control

Phase I--	Horizontal/Vertical Control	= \$18,876
Phase II--	Horizontal/Vertical Control	= <u>\$21,775</u>
		\$40,651

Total Project = \$154,651

If you have any questions or need additional information, please contact me at 956-451-2670.

Sincerely,



Julio Cerda, P.E.

R. O. W. SURVEYING SERVICES, LLC
TBPLS Reg. # 10193886

900 S. Stewart Rd. Suite 11 -- Mission, TX 78572
PH 956.451.2670 -- FX 956.583.7116

Exhibit "D"
BUDGET
LUMP SUM RATE BASIS OF PAYMENT

Work Authorization No.10

A	B	C	D	E	F	G	H	I	J	
1	Project: Hidalgo County Pct 2 Regional Hike and Bike Trail									
2	County: Hidalgo County, Texas									
3	From: Phase I--South San Antonio Ave. to Ridge Rd.; Phase II--Ridge Rd. to 2nd St.									
4	Description of Work: ROW Map and Horizontal/Vertical Control									
5										
6	TASK AND DESCRIPTION	Survey		Survey	4-man	3-man	2-man	Admin/	Total	
7		PM	RPLS	Technician	Survey Crew	Survey Crew	Survey Crew	Clerical	Hours	
8	HOURLY RATE	\$124.00	\$125.00	\$82.00	\$175.00	\$155.00	\$130.00	\$50.00		
9	FC 130 (ROW MAP) Lump Sum per Parcel									
10	A. Phase I – ROW Map, Parcel Description, Metes and Bounds Description, and Title Reports (20 Parcels @ \$2850)								\$ 57,000.00	
11	B. Phase I – ROW Map, Parcel Description, Metes and Bounds Description, and Title Reports (20 Parcels @ \$2850)								\$ 57,000.00	
12	FC 150 Field Surveying (Control Hz & Vt)									
13	Phase I									
14	A. Primary Project Control									
15	a. Establish Primary Control	3	8	5	0	73	0	2	91 \$ 13,197.00	
16	B. Secondary Project Control									
17	a. Set additional secondary control points as needed	0	4	4	0	10	0	0	18 \$ 2,378.00	
18	b. Horizontal values established with RTK or VRS	0	4	4	0	3	0	0	11 \$ 1,293.00	
19	c. Vertical values established with digital level	0	4	4	0	3	0	0	11 \$ 1,293.00	
20	C. Setting Benchmarks									
21	a. Setting Benchmarks	0	2	0	0	3	0	0	5 \$ 715.00	
22	Subtotal Hours	3	22	17	0	92	0	2	136	
23	Subtotal Cost - Phase 1	\$372.00	\$2,750.00	\$1,394.00	\$0.00	\$14,260.00	\$0.00	\$100.00	\$18,876.00	
24	Phase II									
25	A. Primary Project Control									
26	a. Establish Primary Control	10	14	8	0	80	0	1	113 \$ 16,098.00	
27	B. Secondary Project Control									
28	a. Set additional secondary control points as needed	0	4	4	0	10	0	0	18 \$ 2,378.00	
29	b. Horizontal values established with RTK or VRS	0	4	4	0	3	0	0	11 \$ 1,293.00	
30	c. Vertical values established with digital level	0	4	4	0	3	0	0	11 \$ 1,293.00	
31	C. Setting Benchmarks									
32	a. Setting Benchmarks	0	2	0	0	3	0	0	5 \$ 715.00	
33	Subtotal Hours	10	28	20	0	99	0	1	158	
34	Subtotal Cost - Phase 2	\$1,240.00	\$3,500.00	\$1,640.00	\$0.00	\$15,345.00	\$0.00	\$50.00	\$21,775.00	
35										
36										
37										
38										
39										
40	Phase I and Phase II Total Fee FC 130								\$114,000.00	
41	Total Fee FC 150	\$1,612.00	\$6,250.00	\$3,034.00	\$0.00	\$29,605.00	\$0.00	\$150.00	294 \$40,651.00	
42										
43	Grand Total FC 130 and FC 150								\$154,651.00	