AGENDA
DRAINAGE DISTRICT
BOARD OF DIRECTORS
February 9, 2015
9:00 A.M.

NOTICE is hereby given in accordance with Chapter 551, Texas Government Code, that a SPECIAL MEETING of the Drainage District #1 Board of Directors will be held at the Edinburg Council Chambers, 415 W. University Drive, Edinburg, Hidalgo County, Texas. Discussion and possible action relating to the following business will be transacted:

1. Roll Call

2. Open Forum

3. Approval of Consent Agenda

4. AI -48406

A. Discussion and appropriate action on appointment of District General Manager, Drainage District #1 - Mr. Raul Sesin, P.E.

B. Discussion, consideration and action on appointment of Interim District General Manager

C. Discussion and action regarding District General Manager position advertisement and application process

5. AI -48379

Discussion and approval from HCID #2 for installation of 7x4 concrete box culverts, as it relates to the South Fork drainage lateral.

6. AI -48393

A.) Requesting approval of Work Authorization No. 17 in the amount of $5,599,008.00 with S&B Infrastructure, LTD under Agreement for Professional Engineering Services for Phase II of the Master Drainage System, as it relates to the design and expansion of the Raymondville Drain Outfall System. Funded in its entirety with a grant from the Texas Water Development Board.

7. AI -48392

A. Notice of receipt of Texas Water Development Board Grant Reimbursement G 1000321 in the amount of $5,599.008.00 to finance and reimburse cost incurred for the development of the Raymondville Drain. Project for Flood Control, an authorized federal project with the US Army Corps of Engineers as a project for flood control within the Lower Rio Grande Basis, Texas under Title IV, Section 401 of the Water Resources Development Act 1986, amended 2007. Monies have been deposited to the District's Capital Project Fund 134-Texas Water Development Board-Raymondville Drain Project with Lone Star National Bank.

B. Request approval to appropriate funds to Capital Projects Fund 134 - Budget 010-Raymondville Drain- Engineering

8. Closed Session:

Board of Directors may go into Closed Session pursuant to Chapter 551, Texas Government Code, Sections 551.071 & 551.072 to discuss the following:

A. Real Estate Acquisition

B. Pending and/or Potential Litigation

9. Open Session:

A. Real Estate Acquisition

B. Pending and/or Potential Litigation

10. Closed Session:

Board of Directors may reconvene into Closed Session for the discussion regarding the agenda items listed

11. Open Session:

Board of Directors may reconvene into Open Session for the discussion regarding the agenda items listed

12. Adjourn

AI -48406 **4.**

DRAINAGE DISTRICT

Meeting Date: 02/09/2015

Submitted By: Monica Badillo,
EXECUTIVE OFFICE

Department: EXECUTIVE OFFICE

Information

CAPTION

A. Discussion and appropriate action on appointment of District General Manager, Drainage District #1 - Mr. Raul Sesin, P.E.

B. Discussion, consideration and action on appointment of Interim District General Manager

C. Discussion and action regarding District General Manager position advertisement and application process

BACKGROUND

Fiscal Impact

Attachments

No file(s) attached.

Form Review

Inbox	**Reviewed By**	**Date**
Final Approval	Monica Badillo	02/05/2015 05:02 PM

Form Started By: Monica Badillo Started On: 02/05/2015 04:32 PM

Final Approval Date: 02/05/2015

AI -48379 **5.**

DRAINAGE DISTRICT

Meeting Date: 02/09/2015

Submitted By: Sylvia Sanchez, DRAINAGE DISTRICT

Department: DRAINAGE DISTRICT

Information

CAPTION

Discussion and approval from HCID #2 for installation of 7x4 concrete box culverts, as it relates to the South Fork drainage lateral.

BACKGROUND

Fiscal Impact

Attachments

No file(s) attached.

Form Review

Inbox	**Reviewed By**	**Date**
Budget & Management	Veronica Ortiz	02/04/2015 04:10 PM
Final Approval	Monica Badillo	02/05/2015 05:02 PM
Form Started By: Sylvia Sanchez		Started On: 02/04/2015 02:26 PM
Final Approval Date: 02/05/2015		

AI -48393 **6.**

DRAINAGE DISTRICT

Meeting Date: 02/09/2015

Submitted For: Jaime Salazar

Submitted By: Jaime Salazar, DRAINAGE DISTRICT

Department: DRAINAGE DISTRICT

Information

CAPTION

A.) Requesting approval of Work Authorization No. 17 in the amount of $5,599,008.00 with S&B Infrastructure, LTD under Agreement for Professional Engineering Services for Phase II of the Master Drainage System, as it relates to the design and expansion of the Raymondville Drain Outfall System. Funded in its entirety with a grant from the Texas Water Development Board.

BACKGROUND

Fiscal Impact

Attachments

WA 17

Form Review

Inbox	**Reviewed By**	**Date**
Final Approval	Monica Badillo	02/05/2015 05:02 PM

Form Started By: Jaime Salazar Started On: 02/04/2015 04:26 PM

Final Approval Date: 02/05/2015

WORK AUTHORIZATION NO. 17

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Article 7 of the **Agreement** made by and between **HIDALGO COUNTY DRAINAGE DISTRICT NO. 1**, acting herein by and through the **BOARD OF DIRECTORS**, hereinafter called the "**Owner**", and **S&B INFRASTRUCTURE, LTD**., professional engineers of McAllen, Texas, hereinafter called the "**Engineer**".

PART 1. Scope of Work. The purpose of this work authorization is *to continue to perform services for the project, including GCM, Basic Engineering, Design, Plans, Specifications, and Estimates, and ROW Surveying and Mapping, ROW Acquisition Administration, Compensable Utilities Evaluation, and Geotechnical Investigations & Analysis* for the continued development of the Master Drainage System Phase II involving the design and expansion of the Raymondville Drain Outfall System.

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

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

PART 2. Estimated Cost. The estimated cost for services under this Work Authorization is **$5,599,008**, as shown in **ATTACHMENT "D"**.

Dos Legislative, LLC, Dos Land Surveying, LLC, L&G Consulting Engineers, LLC, under this work authorization, will assist in the development of tasks of this work authorization as outlined in ATTACHMENT "D".

PART 3. Payment. Compensation and payment to the **Engineer** for the services established under this Work Authorization shall be made in accordance with Articles 5, 6, and 7 of the **Agreement**.

PART 4. Work Schedule. This Work Authorization shall become effective on the date of final acceptance of the parties hereto. Work shall begin by the **Engineer** upon written notice-to-proceed from the **Owner**, and a work schedule shall be prepared in accordance with the requirements attached hereto as **ATTACHMENT "C"**.

PART 5. Responsibilities and Obligations. This Work Authorization does not waive the parties' responsibilities and obligations provided under the **Agreement**.

PART 6. Acceptance and Acknowledgement. This Work Authorization is hereby accepted and acknowledged as indicated below and is effective as of the **9th day of February, 2015**.

THE ENGINEER:	**THE OWNER:**
S&B INFRASTRUCTURE, LTD.	**HIDALGO COUNTY DRAINAGE DISTRICT NO. 1**
BY: _____	**BY:** _____
Daniel O. Rios, PE, Senior Vice-President	**Ramon Garcia, Chairman of the Board**

LIST OF ATTACHMENTS

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

ATTACHMENT "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 *services* for the Project.

GENERAL
The Owner will provide to the Engineer the following:

(1) Authorization to the Engineer to begin work in accordance with Article 7 of the Agreement.

(2) Payment for work performed by the Engineer and accepted by the Owner in accordance with Article 5 and Article 6, both 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 that 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 **ATTACHMENT "C"** attached hereto.

(6) Attend and participate in progress meetings as required and as coordinated and conducted by the Engineer.

(7) The Owner will be responsible to provide any necessary permits or authorization to access areas (right of entry) where borings are to be drilled.

(8) For Right-of-Way Acquisition, the Owner will provide assistance and/or perform tasks as identified to be performed by Owner under ATTACHMENT "B", paragraphs 6 and 6(a~g), including below. All right-of-way to be acquired shall be paid for and purchased by the Owner.

a. Title Commitments.

(1) Secure preliminary title commitments from the Title Company that will be providing title insurance.

(2) Secure title commitments updates in accord with insurance rules and requirements for parcel payment submissions.

(3) Secure title insurance for all parcels acquired, insuring acceptable title to the Owner. Written approval by the Owner is required for any exception.

b. Appraisal.

(1) Obtain Appraiser.

(2) Secure written permission (if necessary) from the property owner to enter the property from which land is to be acquired. If the Owner, 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 Owner. Maintain permission letters with appraisal reports.

(3) Prepare (if necessary) pre-appraisal contact with interest owner(s) for each parcel using acceptable Owner forms.

(4) 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.

(5) Prepare complete appraisal report for each parcel to be acquired. These reports shall conform to the Owner policies and procedures along with the Uniform Standards of Professional Appraisal Practices.

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

(7) All completed appraisals will be administratively reviewed by the Engineer and recommended for approval by the Owner.

(8) 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 required by the Owner.

(9) As necessary, the Appraiser will coordinate with Review Appraiser regarding revisions, comments, or additional information that may be required.

(10) The cost of the Appraiser appearing as an expert witness for testimony at special commissioners hearing is to be paid by the Owner, and is not part of the Engineer's Right-of-Way Acquisition Administration. The cost of the Appraiser's expert witness testimony for trial is not part of this work authorization, and shall be paid by the Owner.

c. Appraisal Review.

(1) Obtain Review Appraiser.

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

(3) Prepare and submit appraisal review reports, including a tabulation of values, for each appraisal.

(4) The cost of the Review Appraiser appearing as an expert witness for testimony at special commissioners hearing is to be paid by the Owner, and is not part of the Engineer's Right-of-Way Acquisition Administration. The cost of the Review Appraiser's expert witness testimony for trial is not part of this work authorization, and shall be paid by the Owner.

d. Appraisal Updates.

(1) Prepare complete appraisal update report for the parcel to be acquired. These reports shall conform to Owner policies and procedures along with the Uniform Standards of Professional Appraisal Practices.

(2) As necessary, prepare written notification 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 the Engineer and recommended for approval by the Owner.

(3) 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 required by the Owner.

(4) The cost of the Appraiser appearing as an expert witness for testimony at special commissioners hearing is to be paid by the Owner, and is not part of the Engineer's Right-of-Way Acquisition Administration. The cost of the Appraiser's expert witness testimony for trial is not part of this work authorization, and shall be paid by the Owner.

(5) As necessary, the Appraiser will coordinate with the Review Appraiser regarding corrections and/or additional information that may be required.

ATTACHMENT "B"
Services to be Provided by the Engineer

GENERAL
The work to be furnished by the Engineer under this work authorization shall consist of basic and special services for the continued development of the Project.

The Engineer shall furnish all equipment, materials, supplies, and incidentals as needed to perform the services required by this Work Authorization, except as otherwise specified to be provided by the Owner.

The Engineer will develop/submit a work schedule (as required in ARTICLE 2.3 of the Agreement) that identifies milestone activities and/or deliverables, and that is conformable to the schedule stated in **ATTACHMENT "C"**.

It is understood and agreed that the Engineer *may not complete all of the following activities under this Work Authorization, and that the actual deliverables may be completed in subsequent or concurrent work authorizations.*

1. ***GCM***. In general, this will include the *management* that is required for the overall development of the **Project**. Specific activities include:

   a. Project Development Schedule. The Engineer will monitor and update the Project Development Schedule. The schedule will identify all major milestones and Project deliverables. The Engineer will inform the Owner (in reasonable advance of the delay) should the Engineer encounter delays that would prevent the performance of all work in accordance with the established schedule.

   b. Construction Estimate. The Engineer shall manage the estimate for the construction of the Project. The construction estimate shall be monitored, verified and updated throughout the course of Project development.

   c. Quality Control / Quality Assurance (QC/QA). The Engineer shall monitor and manage the quality control and quality assurance program for the Project to ensure the Project Team is producing quality work for the Project.

   d. Subcontract Administration. The Engineer shall initiate, execute and monitor all subcontracts for the duration of the Project. The Engineer shall advise and/or provide recommendations to the Owner, as the Project progresses, should additional sub-providers be required. All subcontracting and assignment will be in accordance with Article 14.

   e. Funding Sources. The development and construction of the Project may be eligible for funding from outside sources. The Engineer's responsibilities regarding funding sources will include the following:

      (1) Coordination with applicable State and Federal funding agencies (i.e. Texas Water Development Board, State of Texas, US Army Corps of Engineers, Federal Emergency Management Agency, US Fish and Wildlife Service, Texas Parks and Wildlife, etc.).

      (2) Management and monitoring the list of all funding sources (identification, status of applications, concepts for funding, etc.) for the Project.

      (3) Preparation of all required applications to funding sources.

   f. Capital Improvement Program (CIP). The Engineer will prepare a CIP based on a conceptual sequence of construction for the Project. The primary focus will be to address the overall needs of the

system, the funding availability, the identification of operational issues, the acquisition of right of way, and the prioritization of those needs and issues in a cost effective and efficient manner (conducive of funding availability). The CIP will be continuously monitored and updated by the Engineer throughout Project development.

g. The Engineer shall *manage* and coordinate specific work activities, tasks, and/or special services for the final development of APD, preliminary engineering / design, including Environmental Document Preparation, Public Involvement, Field Surveying, Data Collection, the development of a Geographical Information System, Hydrologic/Hydraulic Analysis, Alternate Solutions, Right of Way Data, Design Field Surveying, Geotechnical Investigations, Permitting, Channel/Drainage Design, Roadway Design, Bridge Design and /or Final Recommendations.

h. Implement QC/QA. The Engineer will monitor and perform the QC/QA program developed to ensure the quality of APD / preliminary engineering and design, and their compliance with applicable standards and requirements, including compliance with standards of sound engineering principles and the agreed-upon design criteria. Designs shall in all respects combine the application of sound engineering principles with a high degree of economy and shall be submitted to the applicable city, county, state, and/or federal agencies for approval.

i. Coordination with Reviewing Agencies. The development of the preliminary engineering elements will require documentation and/or coordination with the US Army Corps of Engineer (USACE) and Federal Emergency Management Agency (FEMA). The Engineer will act as a liaison for the Owner, and will attend any meetings, and develop / prepare any required correspondence, documentation, permits and/or applications to satisfy USACE, FEMA, and other applicable federal, state, and local regulations.

2. ***Final Design – Remaining Basic Engineering – Hidalgo County Only*.** The Engineer will perform all required engineering activities to provide the Owner with final design and a complete and approved set of plans, specifications, and estimate (PS&E) for each segment of construction of the Project**.**

a. Channel / Drainage Design. The Engineer shall perform channel / drainage design for the proposed improvements to existing channels and/or facilities, as well as the proposed channels of the Project. The design of drainage improvements shall conform to the Project design criteria. These designs shall in all respects combine the application of sound engineering principles with a high degree of economy, and shall be submitted to the applicable city, county, state, and/or federal agencies for approval**.**

b. Roadway Design. The Engineer shall perform roadway design for any intersecting roadway approaches to the proposed improvements to the existing channels and / or proposed channels of the Project. The design of these roadways shall conform to the Project design criteria, and when possible the standard designs, required by the owner (city, county, or state) of the associated roadway. These designs shall in all respects combine the application of sound engineering principles with a high degree of economy, and shall be submitted to the applicable city, county, state, and/or federal agencies for approval**.**

c. Bridge / Structure Design.

(1) The Engineer shall perform bridge design required for any roadway crossings to the proposed improvements to the existing channels and / or proposed channels of the Project. The design of these bridges shall conform to the Project design criteria required by the owner (city, county, or state) of the associated bridge structure and/or roadway, and the requirements set forth by the American Association of State Highway and Transportation Officials (AASHTO), "Standard Specifications for Highway Bridges". These designs shall in all respects combine the application of sound engineering principles with a high degree of economy, and shall be submitted to the applicable city, county, state, and/or federal agencies for approval.

(2) Prior to performing structural detailing, the Engineer shall provide a bridge layout to the governing entity of the associated bridge structure and/or roadway for approval. Each bridge layout will include the required information set forth by the governing entity.

(3) The Engineer shall perform any other structural design required for the Project. These designs shall in all respects combine the application of sound engineering principles with a high degree of economy, and shall be submitted to the applicable city, county, state, and/or federal agencies for approval.

d. Plans, Specifications, and Estimates (PS&E).

(1) The Engineer shall prepare contract drawings, specifications and estimates for construction of the Project or portions of the Project as authorized by the Owner. These documents shall in all respects combine the application of sound engineering principles with a high degree of economy, and shall be submitted to the applicable city, county, state, and/or federal agencies for approval.

(2) All final plan sheets shall be developed, by the Engineer, on 11" x 17" reproducible, 4 mil, double-matte, white, opaque film.

(3) Graphics files shall be developed by the Engineer in Microstation design file format, and must plot consistent with the reproducible plots submitted.

(4) Plan Sheets. Plan sheets developed by the Engineer shall include, but not be limited to, title sheet, typical sections, sequence of construction, traffic control (as applicable), specification data (including schedules for minimum sampling and testing), estimate and quantity, plan-profile, channel details, roadway details (as applicable), bridge and culvert details, hydraulic details, and standards. (Standards may be used from governing entities, but must be signed and dated by the Project Engineer of responsible supervision as being applicable to the Project.)

(5) Specifications. Whenever possible, the Engineer shall use the Texas Department of Transportation's 1993 Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges. Other specifications may be developed by the Engineer, but must incorporate, to the extent possible, references to standard requirements of AASHTO design and AASHTO testing procedures.

(6) Estimates. The Engineer shall prepare detailed cost estimates and proposals of authorized construction, which shall include summaries of bid items and quantities based, insofar as practicable, on the unit price system of bidding. The Engineer shall not be required to guarantee the accuracy of those estimates.

3. ***Planning Schematic of Final Alignment of Willacy County*** **-** The Engineer will prepare a planning schematic for the Willacy County alignment.

4. ***Special – Geotechnical.*** The Engineer will perform the following geotechnical services: Geotechnical Drilling and Miscellaneous Field Services, Geotechnical Laboratory Testing Services and Geotechnical Engineering Services for the preparation of PS&E and/or, and related documents.

a. Geotechnical Drilling and Miscellaneous Field Services. The Engineer will provide drilling/excavation and sampling of subsurface materials in accordance with TxDOT and ASTM guidelines:

(1) Channel Borings – Borings will be drilled along the proposed channel alignment (generally spaced at 1,000 foot intervals and between structural borings). The purpose of these borings will be to establish soil make-up, consistency and strength parameters. These borings will also assist in defining the

groundwater levels throughout the alignment. Borings shall be advanced to a depth of approximately 35 feet below the existing top of natural ground. Borings will be drilled and sampled in accordance with ASTM D1586 – Standard Penetration Testing (SPT) with split spoon sampling.

(2) Structure Borings – Borings will be drilled at the locations of structures noted along the channel alignment (typically 2 borings taken per each structure set at opposite corners of each structure). Borings will be advanced to a depth of approximately 75 feet below the existing top of natural ground. Borings will be drilled and sampled in accordance with Tex-132-E – Texas Cone Penetration (TCP) with auger grab sampling.

(3) Weir Borings – Borings will be drilled at the locations of proposed weirs along the channel alignment (2 borings taken per each weir set along each bank). Borings will be advanced to a depth of approximately 70 feet below the existing top of natural ground. Borings will be drilled and sampled in accordance with ASTM D1586 – Standard Penetration Testing (SPT) with split spoon sampling.

(4) The Engineer will stake the boring locations and provide utility clearances prior to performing the field exploration. All boring locations will be documented with GPS coordinates.

(5) The borings will be advanced to the specified depth(s) and in-situ soil testing will be performed in general accordance with ASTM and/or TxDOT Standard Test Procedures and Geotechnical Manual (ASTM D1586 – Standard Penetration Testing (SPT) and/or Tex-132-E – Texas Cone Penetration (TCP)). In addition, where applicable, thin-walled Shelby tube samples may be collected (ASTM D1587 – Thin Walled Tube Sampling). The soils will be sampled as needed to verify subsurface materials and strata changes. Final drilling depths and elevations will be based on topographic conditions at the time of drilling operations.

(6) All samples will be removed from the sample apparatus during drilling operations. The Engineer will conduct various field tests on the recovered samples, visually classify the samples, and record the appropriate data on a field boring log. The samples will be appropriately packaged to minimize loss of natural moisture content and to reduce the possibility of damage during transportation to the soil testing laboratory facility.

(7) Drilling services will include an initial water strike depth and a 24-hour water level reading at each boring location where possible. Following completion of drilling and sampling, all boreholes will be backfilled with soil cuttings from the completed borings. If there is insufficient soil cuttings available, alternate fill will be used to backfill the completed boreholes.

(8) Geotechnical field services under this Work Authorization **do not** include activities and corresponding costs that may be associated with the following:

- Providing an ATV mounted drill rig, dozer or special equipment to clear areas of vegetation and debris or re-grading the site to gain access to the boring locations;
- Re-grading the site or portions of the site after drilling activities are completed;
- Site safety meetings that may be required;
- Encountering hazardous or contaminated soils or substances during our field activities.

The Engineer will notify the Owner should these services become necessary to complete field exploration activities, and if approved by the Owner, additional negotiated fee and scope will be incorporated through Supplemental Work Authorization.

b. Geotechnical Laboratory Testing Services. Geotechnical Laboratory Testing will be performed by the Engineer on the samples recovered during the field study to evaluate their physical and engineering properties. Laboratory testing will be performed in general accordance with ASTM and/or TxDOT

Standard Test Procedures. Testing shall include the following test procedures:

(1) Atterberg Limits (ASTM D4318 or Tex-104-E, 105-E, 106-E). This procedure will be used to aid in the classifying of the soil and to provide information on the potential vertical rise and contraction of the soil. Test data furnished will include Liquid Limit, Plasticity Index, and Linear Shrinkage test results.

(2) Gradation (-200) (ASTM D1140 or Tex-111-E). This procedure will be used to aid in the classifying of the soil. A No. 200 sieve will be used to distinguish fine grained material as well as for cohesive soils.

(3) Lab. Determination of Moisture in Soils (ASTM D2216 or Tex-103-E). This procedure will aid in determining the in-situ moisture of the soil to be able to evaluate the potential vertical rise and contraction of the soil.

(4) Particle Size (Sieve) Analysis with Hydrometer (ASTM D422). This procedure will aid in determining the complete gradation (full gradation curve) of a soil sample including hydrometer for tail-end portion of gradation curve. Full gradation curve can be utilized to extract D50 and D90 soil particle diameters for use in scour analysis and prediction for foundation design.

(5) Sulfate Content of Soil (ASTM C1580 or Tex-145-E). This procedure will identify the soluble sulfate content of soil by using the colorimetric method. The results of this procedure are typically utilized with regard to structures, to determine the presence of extreme amounts of soluble sulfates in soils which can mark a necessity for the use of Sulfate Resistant Concrete (> than 1000 ppm).

c. Geotechnical Analysis and Engineering Services. The Engineer will utilize information gathered from the field and laboratory testing to provide the Engineer with Geotechnical Engineering results and analyses for the Project. The findings and conclusions derived from the results and analyses will be presented in a written engineering report and provided to the Owner (three (3) copies). The report will include a boring location plan, boring logs with laboratory classification of recovered soil samples at the boring locations and subsurface water conditions encountered. The report will provide analyses and/or engineering recommendations as follows:

(1) Develop Bore Hole & Scour Analysis Needs (Loc. Scheme, Graphic Files, Param.). Plan view and location scheme of borings will be developed based on requirements of latest TxDOT Geotechnical Manual and field conditions. These will be verified against the boring information provided by TxDOT (to ensure the necessary number of borings and testing types/frequencies have been completed for successful foundation design). Scour analysis needs will also be investigated (full gradation curves).

(2) Strength Parameters and Structural Evaluation of Soil Borings. A detailed structural evaluation of the borings will be done so that soil strength parameters can be quantified for usage in overall global (slope) stability calculations and estimation of consistency of in-situ strata. In addition, strength parameters will be correlated based on field strength testing for usage in deep and shallow structural foundation design.

(3) Soil Slope Stability Analysis (GSTABL) for Channel. A geometric model will be constructed for each of the proposed cross-sections (major cross sections) to ensure accurate modeling of the proposed configuration. A limit equilibrium slope stability analysis will be conducted for each of the locations to ensure adequate factors of safety.

(4) Soil Scourability and Establishment of D50-D90 Values. Results of full sieve and hydrometer

analyses and soil classifications will be used to provide soil scour parameters for use in Scour Analysis at structure locations. Determination of extent of scour will be of importance at locations of structure foundations.

(5) Foundation Analysis and Design for Structures/Crossings, Deep Foundation Analysis and Design Parameters (Brg. Drilled Shafts, Piling, etc.). Deep foundation analyses will include calculation of site specific point bearing and skin friction models and generation of foundation capacity curves. Final foundation capacity curves will be calculated utilizing the TCP data in TxDOT Wincore Design format.

(6) Evaluation & Recommendations on Soil Chemical Properties (Sulfate Content). The Engineer will investigate sulfate contents throughout the project at the locations and depths that will be in contact with proposed structures (drilled shafts, piles, etc.). The establishment of high sulfate content areas may necessitate a change in concrete design and/or the use of sulfate resistant concrete mixes. The Engineer will provide recommendations based on the findings.

(7) Brg/Channel Recommendations – Geometry, Geo. Issues, Limits, Construction. The Engineer will consolidate all information, calculations and analyses to provide overall recommendations on bridge locations and channel cross sections. Recommendations will cover geometry, design, issues noted through the investigation process and construction.

(8) Geotechnical Analyses & Design Parameters for Weir Structures. The Engineer will provide all calculations, analyses and design parameters for support of the design of Weir structures along the channel alignment including Underseepage Analysis, Allowable Bearing Capacity Analysis of Channel Bed Soils, Soil Scourablity and Soil Strength Profiles / Lateral Loading Parameters.

(9) The report will provide general comments and applicable recommendations regarding construction methods, sequences, and potential difficulties that may arise during overall construction as it relates to the soil aspects of this project. This information may serve to guide both geometric modeling and foundation selection and design (shafts/piles) as well as provide input in the preparation of specifications for the project.

5. ***Special – Preliminary Design Surveying.***

a. All field survey work will be performed in NAD 83, ZONE 4205, NAVD 88**.**

b. The Engineer shall obtain the required survey data needed to establish existing and proposed right-of-way lines, channel centerline alignment, private property lines, county and/or city limits, and any topographic information not clearly indicated by the aerial photogrammetry:

(1) Survey along proposed channel alignment**.**

(2) Points taken at a maximum of 500’ intervals and/or vertical/horizontal grade breaks.

(3) Design survey will provide enough evidence to allow for creation of Digital Terrain Model (DTM).

(4) Locate potential utility conflicts; coordinate with DigTess to have utility companies mark existing utilities; field locate any visible utilities marked by utility companies that are within project limits.

(5) Coordinate with City/County/TxDOT/Owner for any additional infrastructure within project limits.

(6) Topographic Survey - Measure and locate any existing improvements within project limits, ie -

fences, utility poles, drainage features.

c. Design field survey under this work authorization does not include setting panel points or coordination with aerial photography services.

6. ***Special – Preliminary Right of Way Surveying and Mapping.*** The Engineer shall provide a right of way (ROW) map to the Owner that properly describes the ROW the Owner is to acquire. All procedures and tasks involved in the development of the ROW map will be in accordance with the Owner's local operating procedures and the Texas Board of Professional Land Surveying Practices Act. This portion of the project consists of approximately 13.4 miles of new drainage channel, and 6 miles of existing channel widening. From GIS, there are approximately 76 individual parcels that will require ROW acquisition. Activities and/or requirements include:

   a. Property Title Research.

      (1) Preliminary research to include area subdivisions, plats, maps and information regarding lots and blocks for reference.

      (2) Develop preliminary strip map for title company use.

   b. Coordination for Right-of-Entry. Coordinate with county representatives for access to properties and comply with any special instructions property owners may have for access.

   c. Survey Existing Property Lines.

      (1) Prepare working sketch for field crews to identify areas of interest and to assist in the coordination of property access.

      (2) Locate minimum amount of property corners to establish R.O.W. acquisition tract.

      (3) Identify possible conflicts in the area with regards to the proposed R.O.W.

      (4) Survey existing all county roads, ditches, channels, and possible railroads that are located within the project limits

      (5) Identify any existing easements within existing and proposed channel limits.

   d. Prepare Survey Base Map and Working Files.

      (1) Provide cadd file with all owner information and final boundaries

      (2) Base Map will show existing property lines, R.O.W. lines, adjacent owner information and proposed R.O.W. line.

   e. Coordination with Design Engineers, Land Owners & County Representatives.

      (1) Meetings with property owners to discuss final location of proposed channel.

      (2) Coordinate with county and land owners for special instructions on property access and any additional requests from land owners.

      (3) Once final property lines have been established, meet with design engineers to discuss final alignment.

      (4) Provide input to engineers with conflicts that arise during the planning stage.

   f. Prepare Parcel Plats and Easements.

(1) Prepare preliminary Plats and Legal Descriptions for review and coordination with real estate appraiser

(2) Prepare legal description for R.O.W. acquisition

(3) Prepare Survey Plat for R.O.W. acquisition

g. ROW surveying and mapping under this work authorization does not include coordination time for any condemnation.

7. ***Special – Preliminary Right of Way - Acquisition Administration.*** The Engineer, as Acquisition Provider, will perform the following:

a. ROW Project Office. The Engineer shall set-up a full project office for ROW Acquisition Administration at an agreed-upon location between the Engineer and the Owner; conditions include:

(1) No joint-use of Hidalgo County, Owner, or TxDOT facilities.

(2) Open during normal Hidalgo County, Owner, and State work-hours; ROW Project Office Staff shall be available to answer questions.

(3) ROW project files shall be available at all times for review by Owner.

(4) At least one staff member of the ROW Project Office shall be a current commissioned notary public.

b. Communication. The Engineer, for all ROW Acquisition Administration activities shall provide the following:

(1) Provide monthly progress reports of ROW acquisition status with invoice.

(2) Participate in project review meetings as determined by Owner.

(3) Prepare initial property owner contact list for use by Owner in distribution of Acquisition Provider introduction letter.

c. File Management. The Engineer shall perform ROW acquisition file management as follows:

(1) Project and parcel files will be kept in the Owner's office, as required. Working files will be kept in the ROW Project Office, but documents generated or received by the Engineer as Acquisition Provider will be forwarded to the Owner as they are generated or received by the Engineer.

(2) Prepare payment transmittal request utilizing standard payment submissions forms with supporting documentation.

(3) Maintain records of all payments including check number, amount and date paid, etc.

(4) Provide copies of all incoming and outgoing correspondence as generated if requested by the Owner.

(5) Maintain copies of all correspondence and contacts with property owners.

d. Negotiations, Tasks, and Fees.

(1) Analyze appraisal and appraisal review reports and confirm the Owner's approval value prior to making offer for each parcel.

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

(3) Prepare the initial offer letter, instruments of conveyance, and any other documents required or requested by the Owner on applicable Owner forms.

(4) Contact each property owner or property owner's designated representative, to present the written offer in person where practical, and deliver appraisal report and required brochures. The initial offer must include copies of all related appraisal reports prepared in the previous ten years that were produced or acquired by the acquiring agency and be sent to the property owner by certified mail, return receipt requested. Must include landowner bill of rights, brochures, a draft conveyance document, and the Acknowledgment of Receipt of Appraisal. Maintain follow-up contacts and secure the necessary instruments upon acceptance of the offer for the closing.

(5) 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.

(6) Respond to property owner inquiries verbally, and in writing within two business days.

(7) Prepare a separate negotiator contract report for each parcel per contact.

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

(9) Advise property owner on the administrative settlement process. Transmit to the Owner any written counter offer from property owners including supporting documentation, and Engineer recommendation with regard to administrative settlements in accordance with Owner policy and procedures.

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

(11) Appear and provide Expert Witness testimony as Acquisition Provider, when requested.

(12) Meetings shall be held once-a-week at the ROW Project Office between the Engineer and the Owner's ROW Acquisition Manager / Administrator.

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

e. Closing Services.

(1) Coordinate with County 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 County.

(2) Attend closings and provide closing services in conjunction with Title Company.

(3) Record all original instruments immediately after closing at the respective County Clerk's Office, except for donations which must be forwarded to Owner for acceptance.

f. Relocations. Relocation services are not a part of this work authorization, and if these services are needed, will be negotiated in a supplemental work authorization.

g. Condemnations. Full condemnation services are not a part of this work authorization, and if these services are needed, will be negotiated in a supplemental work authorization. However, the Engineer will provide under this work authorization a "Due Diligence Package" (the file that contains the research, contacts, parcel information, and correspondence) for each parcel that goes to condemnation to the Owner for the Owner's attorney's use.

8. ***Special – Right of Way - Compensable Utilities.*** The Engineer shall perform preliminary identification and coordination regarding compensable utility adjustments.

ATTACHMENT "C"
Work Schedule

The Engineer will provide to the Owner within 2 weeks of the notice-to-proceed, a Work Schedule regarding the work tasks associated with the scope of work.

The Engineer will diligently pursue the completion of this work authorization as defined by the milestones and deliverable due dates stated in the approved work schedule.

The Engineer will inform the Owner (in reasonable advance of the delay) should the Engineer encounter delays that would prevent the performance of all work in accordance with the approved work schedule.

ATTACHMENT "D"
Estimated Cost Proposal

Compensation and payment to the Engineer for work under this Work Authorization shall be in accordance with Article 5 and 6 and other related terms of the Contract. Compensation for work to be performed under this Work Authorization is itemized as follows:

Hidalgo County:		Team	Est. Fee
1	Basic Engineering	S&B	$ 653,667
2	Special - Compensable Utilities ROW	L&G	*$ 227,008
Willacy County:			
1	GCM	S&B / DLL	$ 703,663
2.	Basic – H&H – Final Design	S&B	$ 930,776
3.	Basic - 30% - Partial Remaining Basic Engineering	S&B / L&G / DLL	$ 893,524
4.	Special – Preliminary Design / ROW Survey & Mapping	S&B / DLS	$ 354,932
5.	Special – Preliminary ROW Acquisition Administration	L&G	*$ 270,500
6.	Special - Geotechnical	L&G	*$1,564,938
			$ 5,599,008

* includes S&B Special Services management

AI -48392 **7.**

DRAINAGE DISTRICT

Meeting Date: 02/09/2015

Submitted By: Claudette Guerrero, DRAINAGE DISTRICT

Department: DRAINAGE DISTRICT

Information

CAPTION

A. Notice of receipt of Texas Water Development Board Grant Reimbursement G 1000321 in the amount of $5,599.008.00 to finance and reimburse cost incurred for the development of the Raymondville Drain. Project for Flood Control, an authorized federal project with the US Army Corps of Engineers as a project for flood control within the Lower Rio Grande Basis, Texas under Title IV, Section 401 of the Water Resources Development Act 1986, amended 2007. Monies have been deposited to the District's Capital Project Fund 134-Texas Water Development Board-Raymondville Drain Project with Lone Star National Bank.

B. Request approval to appropriate funds to Capital Projects Fund 134 - Budget 010-Raymondville Drain- Engineering

BACKGROUND

Fiscal Impact

Attachments

No file(s) attached.

Form Review

Inbox	**Reviewed By**	**Date**
Final Approval	Monica Badillo	02/06/2015 09:01 AM

Form Started By: Claudette Guerrero Started On: 02/04/2015 04:21 PM

Final Approval Date: 02/06/2015