HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

NOTICE OF AND AGENDA FOR A PLANNING COMMITTEE MEETING
TO BE HELD BY THE BOARD OF DIRECTORS

DATE: **WEDNESDAY, APRIL 10, 2013**
TIME: **4:30 PM**
PLACE: **PHARR CITY HALL**
FD TRAINING ROOM, 3RD FLOOR
118 SOUTH CAGE BOULEVARD
PHARR, TEXAS 78577

PRESIDING: RICARDO PEREZ, CHAIRMAN-PLANNING COMMITTEE

CALL TO ORDER

AGENDA

1. Approval of procurement schedule for selection of Professional Consultant for a low level aerial flight and topographic survey for the International Bridge Trade Corridor.
2. ~~Recommendation on Dannenbaum Engineering Work Authorization No. 7 for an aerial flight and topographic survey for the International Bridge Trade Corridor~~.
3. Recommendation on TEDSI Infrastructure Group Work Authorization No. 2 to Professional Service Agreement to provide Schematic Design, Utility Research and Drainage Research for the US 281/Military Highway Overpass and Traffic Signal Warrant Studies and Illumination Warrant Studies for SH 365 Project

ADJOURNMENT

C E R T I F I C A T I O N

I, the Undersigned Authority, do hereby certify that the attached agenda of the Hidalgo County Regional Mobility Authority Board of Director's Planning Committee is a true and correct copy and that I posted a true and correct copy of said notice on the Hidalgo County Regional Mobility Web Page (www.hcrma.net) and on the bulletin board in the Hidalgo County Court House (100 North Closner, Edinburg, Texas 78539), a place convenient and readily accessible to the general public at all times, and said Notice was posted on the **8th** day of **April, 2013** at **12:00 pm** and will remain so posted continuously for at least 72 hours preceding the scheduled time of said meeting in accordance with Chapter 551 of the Texas Government Code.

Flor E. Koll
Program Administrator

Note: If you require special accommodations under the Americans with Disabilities Act, please contact Flor E. Koll at 956-402-6742 at least 24 hours before the meeting.

`

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS		**AGENDA ITEM**	**1**
PLANNING COMMITTEE	**X**	**DATE SUBMITTED**	**04/08/13**
FINANCE COMMITTEE		**MEETING DATE**	**04/10/13**
TECHNICAL COMMITTEE			

1. Agenda Item: **APPROVAL OF PROCUREMENT SCHEDULE FOR SELECTION OF PROFESSIONAL CONSULTANT FOR A LOW LEVEL FLIGHT AND TOPOGRAPHIC SURVEY FOR THE INTERNATIONAL BRIDGE TRADE CORRIDOR**

2. Nature of Request: (Brief Overview) Attachments: X Yes ___ No

   Approval of schedule for the procurement of a low level flight and topographic survey to rectify the schematic alignment for the International Bridge Trade Corrridor.

3. Policy Implication: Board Policy, Local Government Code, Texas Government Code, Texas Transportation Code, TxDOT Policy

4. Budgeted: ___ Yes X No ___ N/A

   Funding Source: Loop Fund

5. Staff Recommendation**: Motion to approve procurement schedule as presented.**

6. Program Manager Recommendation: **X** Approved ___ Disapproved ___ None

7. Planning Committee Recommendation: ___ Approved ___ Disapproved **X** None

8. Board Attorney Recommendation: ___ Approved ___ Disapproved **X** None

9. Executive Director's Recommendation: **X** Approved ___ Disapproved ___ None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Memorandum

To: Ricardo Perez, Chairman – Planning Committee

From: Pilar Rodriguez, PE, Executive Director

Date: April 8, 2013

Re: **Approval of Procurement Schedule for the Procurement of a Professional Consultant for a Low Level Flight and Topographic Survey for the International Bridge Trade Corridor**

At the May 2, 2012, regular meeting, the Hidalgo County Regional Mobility Authority (HCRMA) Board of Directors authorized the Planning Committee to approve the procurement schedule to environmentally clear the International Bridge Trade Corridor (IBTC).

Staff has evaluated the prior work on the IBTC (schematics, environmental documents, etc.) to determine the level of effort necessary to update the documents for a local environmental clearance.

The staff has the following options for consideration:

Option 1- Advertise a RFQ to procure a professional consultant to perform a low level flight and topographic survey for IBTC. Estimated time to commence work is 110 days from advertisement date.

Option 2 – Amend existing Professional Service Contract with Dannenbaum Engineering to perform a low level flight and topographic survey for IBTC. Estimated time to commence work is 15 days from approval date of contract amendment.

Based on review by this office, **approval of Option 2 for the procurement schedule is recommended.**

If you should have any questions or require additional information, please advise.

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY
DANNENBAUM - PROGRAM MANAGER

Memorandum Date: 04/08/2013
Subject: IBTC Low Level Flight/Survey Procurement
Prepared by: Eric Davila
Recipients: Pilar Rodriguez and Louis Jones

New Procurement

Contractor: New Procurement

Project: IBTC Advanced Planning (low level flight, in-fill topo)

Limits: Interchange with SH 365 to US83 and FM 493 to US 83.

Potential Fee: Between $340,000.00 to $360,000.00

Potential Start Date*: Early August 2013 (Approximately 110 days from Board approval)

Schedule to Complete: Early December 2013 (4 months from NTP)

Scope:

1. Preliminary data acquisition
2. Establish Primary Control Network
3. Establish Secondary Control Network along proposed centerline – to be used as center panel aerial control, and as future project control for localized surveying.
4. Establish aerial target network for design level photogrammetry
5. Alignment Control

***Procurement Process:**

1. Solicit Proposal and Advertise (30 days)
2. Collect Proposals and Evaluate (30 days)
3. Rank, Interview, and Select best proposal (20 days)
4. Negotiate contract (15 days)
5. Negotiate final scope and fee (5 days)
6. Mobilize crews from NTP (10 days)

PMC/GEC

Contractor: Dannenbaum Engineering Corporation (PMC/GEC)

Project: IBTC Advanced Planning (low level flight, in-fill topo)

Limits: Interchange with SH 365 to US83 and FM 493 to US 83.

Potential Fee: Between $340,000.00 to $360,000.00

Potential Start Date*: Early May 2013 (Approximately 15 days from Board approval)

Schedule to Complete: Early September (4 months from NTP)

Scope:

6. Preliminary data acquisition
7. Establish Primary Control Network
8. Establish Secondary Control Network along proposed centerline – to be used as center panel aerial control, and as future project control for localized surveying.
9. Establish aerial target network for design level photogrammetry
10. Alignment Control

Procurement Process:

1. Negotiate contract (0 days)
2. Negotiate final scope and fee (5 days)
3. Mobilize crews from NTP (10 days)

WHEREAS, to proceed with the project, on November 15, 2011, the Authority approved a procurement for certain design and surveying services including, but not limited to providing: construction plans, specifications, and construction estimates, surveying, parcel plats, legal descriptions, right-of-way maps, design and construction survey, and/or aerial mapping;

WHEREAS, the Board elected to defer selecting a consultant or consultants under the procurement until the 2012 Strategic Plan for 2013-2018 was adopted;

WHEREAS, the 2012 Strategic Plan for 2013-2018 was approved by the Board on March 28, 2012, providing a plan that includes federal environmental clearance of the International Bridge Trade Corridor; and

WHEREAS, the Board finds it to be in the best interest of the Authority to re-publish the procurement to possibly include environmental services to federally clear the project and to provide for low level aerial flight for topography;

NOW THEREFORE BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY THAT:

Section 1. The recital clauses are incorporated in the text of this Resolution as if fully restated.

Section 2. The Executive Director will assess the options for professional environmental services to federally clear the Project;

Section 3. The Executive Director will re-publish the request for qualifications, to including any additional services described above.

Section 3. The Executive Director and/or the Program Manager will notify all participants in the related pre-bid conference of the status of the procurement.

Section 4. The Board authorizes the Planning Committee to approve the related procurement schedule.

*****

PASSED AND APPROVED AS TO BE EFFECTIVE IMMEDIATELY BY THE BOARD OF DIRECTORS OF THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY AT A SPECIAL MEETING on the 2nd day of May, 2012, at which meeting a quorum was present.

Dennis Burleson, Chairman

Joe Daniel Olivarez, Secretary/Treasurer

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS		**AGENDA ITEM**	**2**
PLANNING COMMITTEE	**X**	**DATE SUBMITTED**	**04/08/13**
FINANCE COMMITTEE		**MEETING DATE**	**04/10/13**
TECHNICAL COMMITTEE			

1. Agenda Item: **RECOMMENDATION ON APPROVAL OF DANNENBAUM ENGINEERING WORK AUTHORIZATION NUMBER 7 FOR AN AERIAL FLIGHT AND TOPOGRAPHIC SURVEY FOR THE INTERNATIONAL BRIDGE TRADE CORRIDOR**

2. Nature of Request: (Brief Overview) Attachments: X Yes ___ No

   Recommendation on approval of a Work Authorization Number 7 for a low level flight and topographic survey to perform work necessary for a local environmental clearance of the IBTC Project.

3. Policy Implication: Board Policy, Local Government, Texas Government Code, Texas Transportation Code, TxDOT Policy

4. Budgeted: ___ Yes X No ___ N/A

   Funding Source: Loop Fund

Maximum amount payable	$5,000,000.00	100%
Work Authorization No. 1	($ 909,960.63)	-18.19%
Work Authorization No. 2 (cancelled)	($ 0.00)	0%
Work Authorization No. 3	($ 57,750.00)	-1.16%
Work Authorization No. 4	($ 891,814.61)	-17.84%
Supplemental No. 1 to WA No. 4	$ 197,458.76	3.95%
Work Authorization No. 5	($ 832,369.93)	-16.64%
Work Authorization No. 6	($ 689,834.33)	-13.80%
Work Authorization No. 7 (Proposed)	**($**	
Maximum fee balance	$1,815,729.26	36.32%

Total authorized for WA 1, 3, 4, 5 & 6	$2,509,436.41
Payments to date for WA 1, 3, 4, 5 & 6	($2,227,854.94)
Work Authorization balance	$ 281,581.47

5. Staff Recommendation: **Motion to recommend approval of Dannenbaum Work Authorization Number 7 in the amount of $689,834.33, leaving a maximum fee balance of $1,815,729.26.**

6. Program Manager's Recommendation: ___ Approved ___ Disapproved X None

7. Planning Committee's Recommendation: ___ Approved ___ Disapproved X None

8. Board Attorney's Recommendation: ___ Approved ___ Disapproved X None

9. Executive Director's Recommendation: X Approved ___ Disapproved ___ None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Memorandum

To: Ricardo Perez, Chairman – Planning Committee

From: Pilar Rodriguez, PE, Executive Director

Date: April 8, 2012

Re: **Dannenbaum Engineering Work Authorization Number 7**

At the October 27, 2011, regular meeting, the Board of Directors awarded a professional service agreement for general engineering and program management services to Dannenbaum Engineering in the maximum payable amount of $5,000,000. Subsequently, the Board has approved Work Authorizations No. 1, 3, 4 and 5 in the amounts of $909,960.63, $57,750.00, $891,814.61 and $832,369.93 respectively.

Work Authorization No. 1 was to review prior engineering, surveying, environmental and permitting work provided to the Hidalgo County Regional Mobility Authority (HCRMA), Work Authorization No. 2 was cancelled by the HCRMA Board, Work Authorization No. 3 was to provide title reports for the SH 365, Work Authorization No. 4. was to update the new Executive Director, oversee the update of T&R study, oversee environmental clearance/preliminary design of SH 365 and oversee various other tasks related to SH 365 and IBTC Projects, and Work Authorization No. 5 was to continue Program Management for SH 365 and IBTC Projects.

Dannenbaum's tasks under Work Authorization No. 6 continue the Program Management for SH 365 and include the following:

Coordinate with the Executive Director
Attend meetings with the HCRMA, County Commissioners Court, TxDOT and MPO
Coordinate with Hidalgo County Appraisal District on TRZ agreements
Implement public outreach with 4 jurisdictions
Revise the HCRMA Strategic Plan based on revised T&R Study
Oversee environmental clearance of SH 365 and review schematics/drainage
Oversee environmental clearance of US 281 and development of route study and schematics
Provide the listed services for six (6) months (January to June 2013)

The engineer's level of effort to perform these tasks was also evaluated and calculated to equate to 13.80% of the maximum amount payable to Dannenbaum for program management and engineering. I have attached the engineer's proposed scope and level of effort for the proposed work order for your review and consideration.

Based on review by this office, **approval of Work Authorization No. 6 is recommended to Dannenbaum Engineering in the amount of $689,834.33,** leaving a maximum fee balance of $1,815,729.26.

If you should have any questions or require additional information, please advise.

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS		**AGENDA ITEM**	**3**
PLANNING COMMITTEE	**X**	**DATE SUBMITTED**	**04/08/13**
FINANCE COMMITTEE		**MEETING DATE**	**04/10/13**
TECHNICAL COMMITTEE			

1. Agenda Item: **RECOMMENDATION ON APPROVAL OF TEDSI INFRASTRUCTURE WORK AUTHORIZATION NO. 2 FOR US 281/MILITARY HIGHWAY PROJECT**

2. Nature of Request: (Brief Overview) Attachments: X Yes ___No

   Consideration and recommendation on approval of Work Authorization No. 2 to allow for development of schematics (4 lanes), drainage studies and utility research for US 281/Military Highway Overpass at SH 365 and San Juan Road.

3. Policy Implication: Board Policy, Local Government Code, Texas Government Code

4. Budgeted: ___Yes X No ___N/A

   Funding Source: Loop Fund

Maximum amount payable	$1,430,733.00	(100%)
Work Authorization No. 1	($ 142,735.06)	(9.98%)
Work Authorization No. 2 (proposed)	**($ 746,739.14)**	**(52.19%)**
Maximum fee balance	$ 541,258.80	(37.83%)

5. Staff Recommendation**: Motion to recommend Work Authorization No. 2 to Professional Service Agreement with TEDSI Infrastructure in the amount of $746,739.14, leaving a maximum fee balance of $541,258.80.**

6. Program Manager's Recommendation: X Approved ___Disapproved ___None

7. Board Attorney's Recommendation: ___Approved ___Disapproved X None

8. Executive Director's Recommendation: X Approved ___Disapproved ___None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Memorandum

To: Rick Perez, Chairman – Planning Committee

From: Pilar Rodriguez, PE, Executive Director

Date: April 8, 2012

Re: **TEDSI Professional Service Agreement and Work Authorization No. 2**

At the October 27, 2011, regular meeting, the Board of Directors awarded a professional service agreement and Work Authorization No. 1 for route studies and overpass schematics, drainage studies and utility research as part of the route studies to TEDSI infrastructure in the amounts of $1,430,733.00 and $142,735.06 respectively.

TEDSI's tasks under Work Authorization No. 2 includes development of overpass schematics (4 lanes), drainage studies,utility research and partial geotechnical services for the design of US 281/Military Highway at San Juan Road. The engineer's level of effort of $746,739.14 to perform these tasks was also evaluated and calculated to equate to 52.19% of the maximum amount payable to TEDSI Infrastructure for plans, specifications and estimates.

Based on review by this office, **approval of TEDSI Infrastructure Work Authorization No. 2 is recommended in the amount of $746,739.14 leaving a maximum fee balance of $541,258.80**.

Additionally, I have attached the level of effort for the proposed work authorization for your review and consideration.

If you should have any questions or require additional information, please advise.

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY
DANNENBAUM - PROGRAM MANAGER

Memorandum Date: 04/08/2013
Subject: Update to TEDSI Contract
Prepared by: Eric Davila
Recipients: Pilar Rodriguez and Louis Jones

Summary of Proposed Contract Amendments (04/08/2013)

Contractor: TEDSI Infrastructure Group, Inc.
Project: SH 365 Segment 0033
Limits: US 281 Military Highway Overpass Project (0.45 Mi E of Spur 600 to FM 2557)
"Do Not Exceed" Contract Amount: Existing: $1,430,731.98
Work Authorization No. 1 Amount: Existing: $142,735.06
Work Authorization No. 2 Amount: Proposed: $746,739.14 (with $229,998.67 for Traffic Signal Warrants and Illumination Studies for SH 365 from FM 1016/Conway Ave to US 281/Military Highway)

Summary of Ongoing Activity:

1. Proposing a WA No. 2 to take the results of the route study where Alternative 1 was received overwhelming support (the route that parallels San Juan Rd culminating in an underpass where US 281 is taken over SH 365).
2. The proposed WA No. 2 includes:
    a. Updating and finalizing the previously conducted survey and schematic.
    b. Initiating detailed drainage and utility research (in the same fashion as the other engineers' have on their sections).
    c. Traffic signal warrants and illumination studies from FM 1016/Conway Ave to US 281/Military Highway.
3. Please see Attachments C and D for the proposed scope of services and fee schedule.

Memorandum Date: 04/08/2013
Subject: Update to TEDSI Contract
Prepared by: Eric Davila
Recipients: Pilar Rodriguez and Louis Jones

Attachment A – WA No. 1 Scope of Services

EXHIBIT B
SERVICES TO BE PROVIDED BY THE ENGINEER

The engineer shall provide the following engineer services required for the preparation of the plans, specification and estimate, and related documents for the above noted project. The Engineer shall maintain a direct line of communication and coordinate very closely with the AUTHORITY and General Engineering Consultant throughout the project. Limits of proposed work is as follows:

1) Along US 281 from Spur 600 to FM 2557.
2) I Road from BSIF connection to Highline Road.
3) San Juan Road from BSIF connection to Highline Road

FC110 ROUTE AND DESIGN STUDIES

1) Develop Roadway Design Criteria; prepare the Design Summary Report.
2) Attend and conduct the Design Concept Conference.
3) Attend Eight (8) design review/coordination meeting with AUTHORITY, City of Pharr and TxDOT.
4) Coordinate with AUTHORITY to obtain readily available information/documents illustrating existing or proposed improvements, digital design files, utilities, etc.
5) Develop up to 5 options for preliminary route to be used in the alternative analysis as follows (Note US 281 over San Juan Road is the currently option that has been developed):
   a) Option No. 1 Evaluate San Juan Road over US 281
   b) Option No. 2 Evaluate US 281 over I Road
   c) Option No. 3 Evaluate I Road over US 281
   d) Option No. 4 Evaluate Frontage Roads from the vicinity of FM 2557 to Spur 600
   e) Option No. 5 Evaluate Frontage Roads from the vicinity of San Juan Road to Spur 600
6) Develop preliminary plan views of each of the options above.
7) Develop and assemble Preliminary Construction Cost Estimates for each of the options above.
8) Assist the PM in coordinating stakeholder outreach meetings, 4 meetings maximum, and prepare summaries of said meetings to provide to AUTHORITY.
9) Meetings will be held with the AUTHORITY, as needed or required by the AUTHORITY. The engineer shall coordinate through the AUTHORITY for the development of this project with any local entity having jurisdiction or interest in the project (i.e. AUTHORITY, county, etc).
10) Engineer shall comply with all requirements stated in the Pass-Through Agreement between AUTHORITY and TxDOT. However no further coordination with TxDOT will be required.
11) Additional items not specifically mentioned above will be considered additional work and added by supplemental agreement.

Attachment B – WA No. 1 Fee Estimate

TEDSI INFRASTRUCTURE GROUP, INC.

WA NO. 1
Schedule Duration: 4.0 Months (July 1, 2012 TO December 31, 2012)

Hidalgo County Regional Mobility Authority (HCRMA)

EXHIBIT C
WORK AUTHORIZATION NO. 1
LUMP SUM AMOUNT
SH 365 SEGMENT 3 AT US 281 MILITARY HIGHWAY PROJECT

PROGRAM MANAGEMENT SERVICES DESCRIPTION	Senior Project Manager	Project Manager	Senior Engineer (V Civil)	Project Engineer (V Civil)	Project Engineer (III, IV Civil)	EIT	Senior Engineering Tech.	CADD Operator	Admin./ Clerical	Total Labor Hrs.	Remarks	Task Cost
FC 110 - ROUTE AND DESIGN STUDIES												
1.0 ATTEND 8 MEETINGS WITH THE HCRMA / CITY OF PHARR / TXDOT (INCLUDE. PREP. - 4HRS/MTG)	32	0	32	4	32	1	16	1	8	126		$ 18,001.80
2.0 PREPARE EXHIBITS FOR FIVE (5) OPTIONS	5	10	50	0	75	0	200	0	8	348		$ 38,808.88
3.0 PREPARE PRELIMINARY COST ESTIMATES FOR FIVE (5) OPTIONS	5	10	25	0	50	0	100	0	20	210		$ 23,252.33
4.0 ATTEND FOUR (4) MEETINGS WITH STAKEHOLDER OUTREACH MEETINTG (INCLUDE. PREP. - 4HRS/MTG)	16	0	16	4	16	1	8	1	4	66		$ 9,360.94
4.0 ANALYZE ROUTES FOR FATAL FLAWS	5	30	75	0	100	0	30	0	8	248		$ 34,443.44
5.0 PREPARE ROUTE STUDY REPORT ON FINDINGS	5	18	45	0	0	0	30	0	10	108		$ 15,235.52
6.0 QA/QC REPORT	8	0	0	0	0	0	0	0	0	8		$ 1,512.15
Subtotal	**76**	**68**	**243**	**8**	**273**	**2**	**384**	**2**	**58**	**1114**	**0**	**$ 140,615.06**
HOURS TOTAL	**76**	**68**	**243**	**8**	**273**	**2**	**384**	**2**	**58**	**1,114**		
LABOR RATE PER HOUR	**$ 189.02**	**$ 183.02**	**$ 171.02**	**$ 135.01**	**$ 120.01**	**$105.01**	**$90.01**	**$75.01**	**$ 60.01**			
TOTAL DIRECT LABOR COSTS	**$ 14,365.44**	**$ 12,445.24**	**$ 41,557.16**	**$ 1,080.11**	**$ 32,763.28**	**$ 210.02**	**$ 34,563.46**	**$ 150.02**	**$ 3,480.35**	**$ 140,615.08**		
PERCENT LABOR UTILIZATION FOR TOTAL PROJECT (BASED ON FEE)	**10.22%**	**8.85%**	**29.55%**	**0.77%**	**23.30%**	**0.15%**	**24.58%**	**0.11%**	**2.48%**	**100.00%**	**CHECK**	
PERCENT LABOR UTILIZATION FOR TOTAL PROJECT (BASED ON MANHOURS)	**6.82%**	**6.10%**	**21.81%**	**0.72%**	**24.51%**	**0.18%**	**34.47%**	**0.18%**	**5.21%**	**100.00%**	**$ 140,615.08**	
TOTAL DIRECT LABOR COST												**$ 140,615.06**

DIRECT EXPENSES	**Rate**	**Unit**	**Amount**	**Total**		
LODGING (ALLOWABLE STATE RATE)			0	$ -	**$ -**	
MEALS (ALLOWABLE STATE RATE)		MILE	0	$ -	**$ -**	
MILEAGE (ALLOWABLE STATE RATE)	$ 0.555	MILE	1,500	$ 832.50	**$ 832.50**	
CAR RENTAL ($60.00/DAY)		DAY	0	$ -	**$ -**	
AIR TRAVEL (COACH/BUSINESS CLASS) (AT COST)		AT COST	0	$ -	**$ -**	
8.5"X11" COPIES ($1.00/SHEET)	$ 1.00	SHEET	300	$ 300.00	**$ 300.00**	
11"X17" COPIES ($1.50/SHEET)	$ 1.50	SHEET	125	$ 187.50	**$ 187.50**	
11"X17" MYLAR ($2.00/SHEET)	$ 2.00	SHEET	125	$ 250.00	**$ 250.00**	
COLOR PLOTS ($4.00/SF)	$ 4.00	SF	100	$ 400.00	**$ 400.00**	
OVERNIGHT MAIL - LETTER SIZE ($15.00/EA)	$ 15.00	EACH	10	$ 150.00	**$ 150.00**	
OVERNIGHT MAIL - OVERSIZED BOX ($25.00/EA)		EACH	0	$ -	**$ -**	
TOTAL DIRECT EXPENSES				**$ 2,120.00**		**$ 2,120.00**

GRAND TOTAL	**$ 142,735.06**

ASSUMPTIONS

NONE

Memorandum Date: 04/08/2013
Subject: Update to TEDSI Contract
Prepared by: Eric Davila
Recipients: Pilar Rodriguez and Louis Jones

Attachment C – WA No. 2 Scope of Services

WORK AUTHORIZATION NO. 2
Exhibit "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

APPLICABILITY:

Wherever the following terms are used in this attachment or other contract documents, the intent and meaning will be interpreted as indicated below.

ABBREVIATIONS:

HCRMA OR AUTHORITY shall mean Hidalgo County Regional Mobility Authority
PMC (GEC) shall mean Program Management Consultant (General Engineering Consultant) (Dannenbaum Engineering Corporation)
ENGINEER shall mean TEDSI Infrastructure Group, Inc.
TxDOT shall mean Texas Department of Transportation
FHWA shall mean Federal Highway Administration
IBWC shall mean International Boundary and Water Commission
USFWS shall mean United States Fish & Wildlife Service
THC shall mean Texas Historical Commission
SHPO shall mean State Highway Preservation Office
USACE shall mean United States Army Corps of Engineers
GSA shall mean General Services Administration
HCMPO shall mean Hidalgo County Metropolitan Planning Organization
FAA shall mean Federal Aviation Administration
MTP shall mean Metropolitan Transportation Plan
TIP shall mean Transportation Improvement Program
MUTCD shall mean Manual of Uniform Traffic Control Devices
AASHTO shall mean American Association of State Highway and Transportation Officials
LRFD shall mean Load & Resistance Factor Design
PS&E shall mean Plans, Specifications and Estimate
ACP shall mean Asphaltic Concrete Pavement
CSJ shall mean Control Section Job (highway project designation number)

— Items with lines drawn through descriptions mean that this item is not part of this Work Authorization

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: Hidalgo County, Texas

CSJ number: 0220-01-023

Project/Description: Preliminary engineering, including development of schematics (4-lane), drainage studies, utility research, partial geotechnical services,.

Project/Description: Schematic Design for US 281 Military Highway at San Juan Rd.

Length: 2.87 Miles

Highway: US 281 Military Highway

Limits: (See Location Map Attached Labeled Exhibit B-1)

Existing Facility: New Location

Proposed Facility: 4-lane divided controlled access 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 (The design of the tolling infrastructure is not included in the scope of this proposal)
_X New Location Non-Freeway
_X_ 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)

ROUTE AND DESIGN STUDIES
(Task 110)

Services Provided By: Engineer	AUTHORITY		
~~NO~~	~~YES~~	~~1.~~	~~Route Location Studies~~
~~NO~~	~~YES~~	~~2.~~	~~Level of Service Analysis~~
~~NO~~	~~YES~~	~~3.~~	~~Traffic Evaluations and Projections~~
YES	YES	4.	Develop Roadway Design Criteria. a. Prepare design summary report (DSR). b. Conduct Design Concept Conference.
YES	YES	5.	Preliminary Cost Estimates
~~YES~~	~~YES~~	~~6.~~	~~Value Engineering Study~~ ~~The Engineer shall be responsible for attending with the AUTHORITY one Value Engineering Study (VE Study) for the project. The VE study shall incorporate several lead disciplines along with the VE moderator to participate in a week long study. The study shall consist of the Investigation Phase, Creative Phase, Evaluation Phase, Development Phase and the Presentation Phase. The AUTHORITY shall document the complete study in a final Value Engineering Report. Representation from TxDOT and the AUTHORITY shall be in attendance. PMC will provide moderator and cost of facilities.~~
YES	NO	7.	Develop design schematic (Develop 4-Lane Schematic) utilizing Typical Section A. HCRMA to provide Microstation Design schematic and associated design files.
YES	NO	8.	Preliminary Right-of-Way Requirements
YES	NO	9.	Soil Core Hole Drilling
~~YES~~	~~NO~~		~~a. Pavement~~
~~YES~~	~~NO~~		~~b. Retaining Walls~~
~~YES~~	~~NO~~		~~c. Miscellaneous Structures~~
YES	NO		d. Bridges
YES	NO	10.	Obtain existing facility information. Coordinate and meet with following entities to obtain preliminary design information: TxDOT, Cities, County, ~~Railroad,~~ HCDD#1, ~~IBWC~~, Irrigation Districts, and Utility Companies.
YES	NO	11.	Schematic Layout (Revisions to Existing Schematic – Modify for 4-Lane Schematic) a. Layout shall include the location of interchange, main lanes, grade separation, frontage roads and ramps. b. Develop vertical and horizontal alignment of main lanes, ramps and cross roads at proposed interchange or grade separation. 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.

c. ~~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. All signing shall be in conformance with the Texas MUTCD.

d. The tentative ROW limits.
   (1) Provide preliminary earthwork cross sections to verify ROW requirements utilizing GEOPAK.
   (2) Provide a graphics file containing the approved schematic.

e. Layout shall include the geometric (pavement cross slopes, lane and shoulder widths, slope rates for fills and cuts) typical sections. ~~of proposed highway main lanes, ramps, frontage roads, bridges, and cross roads.~~

f. Indicate the current and projected traffic volumes as provided by the AUTHORITY (20 year traffic projection, unless otherwise determined by the District Engineer).

g. The control of access lines shall be shown on the proposed schematic.

h. Direction of traffic flow on all roadways.

i. Layout shall include the geometric of speed change (acceleration, deceleration, climbing) lanes.

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

k. 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.

12. Agreements and Permits

~~YES*~~ ~~YES~~ ~~a. Compensable Utility Agreements and exhibits for Utility Agreements~~

~~YES~~ ~~NO~~ ~~b. Railroad Agreements~~

~~c. Railroad Exhibits~~

~~N/A~~ ~~N/A~~ ~~(1) Railroad Underpasses~~

~~YES~~ ~~NO~~ ~~(2) Railroad Overpasses (SH365/TCC Overpasses at RR)~~

~~N/A~~ ~~N/A~~ ~~(3) Railroad Grade Crossing (Re-planking)~~

~~N/A~~ ~~N/A~~ ~~(4) Railroad Grade Crossing Warning Systems (Signals)~~

~~N/A~~ ~~N/A~~ ~~(5) Other Miscellaneous Sketches for Railroads~~

~~YES~~ ~~NO~~ ~~d. Traffic Signal Agreements (Pending warrant analysis) and required exhibits.~~

~~YES~~ ~~NO~~ ~~e. IBWC License Agreement~~

~~Due to the associated impacts of the floodway levee the Engineer shall be responsible for the preparation/packaging of all documents necessary for submission to the USIBWC for the license agreement.~~

~~The license agreement package should include:~~

~~1) The hydraulic model, with proposed floodway impacts due to the proposed bridge structure provided by the engineer~~

~~2) THC Concurrence letter from AUTHORITY~~

~~3) USFW Concurrence letter from AUTHORITY~~

~~4) US Army Corp of Engineers concurrence letter from AUTHORITY~~

~~5) Scour Analysis provided by the engineer~~

YES YES f. Required Coordination ~~for splitting the project limits (two separate CSJ's)~~
   1) Provide all project information to GEC and/or HCMPO for updating the MTP and TIP.
   2) Provide all project information to the GEC and/or Environmental Consultant for updating the environmental document.

~~YES~~ ~~NO~~ ~~g. Exhibit for airway/highway clearance permits for FAA~~

~~YES~~ ~~NO~~ ~~h. USACE exhibits and permits for structures that impact waters of the US and wetlands.~~

(* = Task anticipated to be led and/or handled by AUTHORITY /PMC)

SOCIAL, ECONOMIC AND ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT
(Task 120)

Services Provided By: Engineer	AUTHORITY	
		1. Public Involvement
YES	YES*	a. Technical assistance to the GEC and/or Environmental Consultant in the preparation of public meeting(s)/hearing(s), and exhibit preparation.
~~YES*~~	~~YES~~	~~b. Assist the GEC and/or Environmental Consultant to respond to technical questions received during the Public Meeting/Hearing.~~
YES	YES*	c. Assist the GEC in conducting stakeholder outreach meetings and prepare summaries of said meetings to provide to AUTHORITY
~~YES*~~	~~YES~~	~~d. Assist the GEC and/or Environmental Consultant in developing the PowerPoint presentation for the Public Meeting/Hearing.~~
~~YES*~~	~~YES~~	~~e. Prepare and Present the technical presentation portion of the speech.~~
		~~2. Preparation of Environmental Permits, Issues and Commitments~~
~~YES~~	~~NO~~	~~a. The Engineer shall develop a plan sheet to be included in the construction plans identifying the Environmental Permits, Issues & Commitments (EPIC) sheet. This plan sheet will be based on the Environmental Document provided by the AUTHORITY. The permits if required shall be obtained by the AUTHORITY.~~
~~NO*~~	~~YES~~	~~b. Preparation & Submittal of Notice of Intent (NOI)~~
~~NO*~~	~~YES~~	~~c. Preparation & Submittal of Notice of Termination (NOT) upon completion of project~~
~~NO~~	~~NO~~	~~d. Section 4(f) evaluation, including developing the avoidance alternatives have not been identified at this point.~~
~~YES~~	~~NO~~	~~e. Prepare exhibits on structures that impact Waters of the US and wetlands by minimizing impacts for the further coordination and eventual securing of construction permits from the USACE (if needed).~~

(* = Task anticipated to be led and/or handled by AUTHORITY/PMC)

P

RIGHT-OF-WAY/UTILITY DATA
(Function Code 130)

Services Provided By: Engineer	AUTHORITY	
		1. Right-of-Way Map
YES	YES*	a. ROW Map submitted by ~~the Surveyor to the~~ AUTHORITY shall be reviewed by the Engineer on the following items: 1. Correctness of alignment and geometry 2. Correctness of control of access lines as depicted on schematic 3. Coordinate the final centerline alignment adjustment to finalize the ROW map.
~~NO~~	~~YES~~	~~b. Full compliance with ROW Map requirements as specified in TxDOT ROW Manuals.~~
YES*	YES	2. Utility Adjustments
		a. The Engineer shall prepare an initial coordination letter and a project layout which will be distributed to various utility companies to determine which utilities are in the limits of the project.
		b. The Engineer shall schedule and conduct a Utility Kick-Off meeting with TxDOT, AUTHORITY and the utility companies.
		c. The Engineer shall prepare a Utility Conflict Tracking Matrix table.
		~~d. Upon completion of the preliminary drainage plans and Utility & Drainage (U&D) sheets and Irrigation sheets, the Engineer shall distribute these sheets to the various utility companies and request identification of their lines within the project limits.~~
		~~e. The Engineer will coordinate with the Surveyor and the various utility companies for exposing potential conflicts and field ties to uncover utilities in potential conflict areas.~~
		~~f. The Engineer shall coordinate and approve an adjustment plan and preliminary estimates for all utilities impacting the proposed project construction.~~
		~~g. The Engineer will be responsible for preparing any and all compensable utility agreements, in compliance with TxDOT requirements, and preparation of the final adjustment letters.~~
		~~h. A due diligence package will be provided for the AUTHORITY for their use in processing reimbursements to utility companies.~~
		~~i. Before a construction contract for the project is let, the Engineer shall provide a utility certification for the AUTHORITY's signature to TxDOT that all utilities have been adjusted.~~
~~YES*~~	~~NO~~	~~3. Design of Compensable Utilities~~
		~~a. Irrigation Structures~~ ~~1) Parallel~~ ~~2) Perpendicular Crossings / Siphons~~ ~~3) Irrigation Canals~~
~~N/A~~	~~NO~~	~~b. Various Pipelines~~

(* = Task anticipated to be led and/or handled by AUTHORITY/PMC)

FIELD SURVEYING
(Task 150)

Services Provided By: Engineer	AUTHORITY	
YES	YES*	1. Field Survey
		a. Assist PMC (GEC) to coordinate with Surveyor to obtain DTM data on voids and missing areas
		b. Assist PMC (GEC) to coordinate with Surveyor to obtain outfall design surveys
		c. Assist PMC (GEC) to coordinate with Surveyor to obtain utility company field ties
		d. Assist PMC (GEC) to coordinate with Surveyor to provide final alignment for the preparation of the ROW Map
		e. Assist PMC (GEC) to coordinate with Surveyor to tie down geotechnical borings
		f. Assist PMC (GEC) to coordinate with Surveyor to stake centerline of proposed mainlanes

(* = Task anticipated to be led and/or handled by AUTHORITY/PMC)

ROADWAY DESIGN
(Task 160)

Services Provided By:
Engineer AUTHORITY

1. Geometric Design

YES NO a. Horizontal and Vertical Alignment

YES NO b. Geometric Layout for Plan and Profile Sheets

(1) Layout shall include 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. The degree of horizontal curves and vertical curve data, including "K" values, shall also be shown for ease of checking.

(3) Layout shall include 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, bridges, and cross roads.

(4) Direction of traffic flow on all roadways.

(5) Layout shall include the geometric of speed change (acceleration, deceleration, climbing) lanes.

YES 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. Copies of the four-lane freeway schematic layout shall be submitted through the TxDOT Pharr District office to the Design Division for approval and subsequent coordination with the FHWA. No geometric design is to be performed until the AUTHORITY and TxDOT have given the engineer written approval of the preliminary schematic layout.

b. All geometric design shall be in conformance with the latest version of the TxDOT's Standard Specification for Construction and Maintenance of Highways, Streets, and Bridges, and the Special Specification and Special Provisions related thereto, and shall conform to the latest edition and revisions of the State's Roadway Design Manual, except where variances are permitted in writing by the AUTHORITY and TxDOT.

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

d. The engineer shall furnish a final cross section plot for the project, which is of utmost importance since it is the basis for contractor payments and construction staking.

YES NO 3. Grading Design

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 super elevation rate.

b. Typical Sections

c. Design Cross Sections for roadways and outfalls.

d. Determine Cut and Fill Quantities for roadways and outfalls

4. Pavement Design

YES NO a. Prior to initiating detailed plan preparations for a project, an investigation shall be made to design the proposed pavement structure. TxDOT's computer program "The Flexible Pavement Design System (FPS) will be utilized for this purpose. Options will be provided, including lesser pavement design for shoulders.

~~YES NO b. A typical section for the proposed pavement design of main lanes, ramps, frontage roads and intersecting streets shall include pavement thicknesses as well as pavement cross slopes, lane and shoulder widths, ACP type and Asphalt binder.~~

~~c. Required geo-technical testing for Subgrade, salvage flexible base, recycle asphalt pavement (RAP). (see detailed scope from L&G Lab)~~

~~YES NO (1) Subgrade: tests will be performed for sulfate content to determine if addition of lime stabilization is a feasible method. If lime stabilization is determined to be a feasible method, a lime series test will be performed to determine the required percentage of lime. Plasticity Index (PI) of the subgrade throughout the project will also be tested to determine it's suitability of usage as embankment.~~

~~YES NO (2) Salvage Flexible Base: Triaxial test will be performed to determine the strength of the salvage base and it's suitability to be used as a part of the proposed pavement.~~

~~YES NO (3) Recycle Asphalt Pavement (RAP): Extraction tests will be performed on existing ACP to determine the asphalt content as well as gradations for the potential use by the contractor in the proposed ACP mix design.~~

~~NO YES d. Traffic Data for Pavement Design~~

~~YES NO e. Basic Pavement Design Criteria~~

~~YES NO f. Life Cycle Cost Analysis (es) for flexible pavement~~

~~YES NO g. Provide a full pavement design report~~

DRAINAGE
(Task 161)

Preliminary hydraulic design of all drainage structures (bridge waterways, culverts, storm sewers, channels) shall be submitted to the AUTHORITY and TxDOT for review. This preliminary submission shall include the overall drainage plan, structure layout, and hydraulic computations. No detailed design of drainage structures is to be performed, until the AUTHORITY and TxDOT have given the engineer written approval of the preliminary hydraulic design. All hydraulic design shall be in accordance with the TxDOT's Hydraulic Manual, except where variances are permitted in writing by the AUTHORITY and TxDOT.

Services Provided By: Engineer	AUTHORITY	
		1. Hydrologic Studies, Discharges
YES	NO	a. Drainage area maps showing existing conditions and proposed drainage structure improvements.
YES	NO	b. Hydrologic data/discharge determination
		2. Hydraulic Drainage Study and Documentation
		a. Hydraulic computations
~~YES~~	~~NO~~	~~(1) Storm water detention available within the ROW~~
~~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
~~YES~~	~~NO~~	~~b. Federal Emergency Management Agency (FEMA) floodplain coordination requirements~~
~~YES~~	~~NO~~	~~c. Determine impact of proposed drainage plan on the following receiving stream(s)~~
		~~(1) Hidalgo County Drainage District Outfalls~~
		~~(2) All Irrigation District Outfalls impacted~~
		~~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~~
~~YES~~	~~NO~~	~~c. Levees~~
~~YES~~	~~NO~~	~~d. Retaining Wall drainage~~
~~YES~~	~~NO~~	~~e. Outfall channel(s) within the ROW~~
~~YES~~	~~NO~~	~~f. Outfall channel(s) outside the ROW~~
~~YES~~	~~NO~~	~~g. Detention Pond(s) within the ROW (as needed)~~
~~YES~~	~~NO~~	~~h. Detention Pond(s) outside the ROW (as needed)~~
~~YES~~	~~NO~~	~~i. Summary of Quantities~~
~~YES~~	~~NO~~	~~4. Storm Water Pollution Prevention Plan (SW3P)~~
~~YES~~	~~NO~~	~~5. Scour Evaluation and floodway hydraulic modeling and report for TCC impacts on the IBWC floodway.~~

~~a. Soil Properties of Floodway – D50 & D90 Sieve Analysis~~

SIGNING, PAVEMENT MARKINGS AND SIGNALIZATION
(Task 162)

Services Provided By: Engineer	AUTHORITY	
YES	NO	1. Preliminary Signing and Pavement Markings (Conducted at the Schematic Level)

The schematic layout in addition to the roadway related features will show:

a. The number of lanes in each section of proposed highway and the location of changes in numbers of lanes
b. The projected traffic volumes as provided by the AUTHORITY (20 year traffic projection)
c. Proposed ROW lines
d. Arrows with direction of traffic flow on all roadways
e. Location of Large Ground Mounted Signs and their message
f. Location of Large Bridge Mounted Signs and their message
g. Location of Trailblazer Signs (type D) and their message

~~YES NO 2. Signing and Pavement Markings Layouts (Conducted at the PS&E Level & Individual Sheets for Signing and Pavement Markings are Anticipated to be Required)~~

~~YES NO a. Boring Logs needed for design of sign foundations~~

~~YES NO b. General Requirements~~

- ~~Prepare General Notes for Signing and Pavement Markings~~
- ~~Prepare governing specifications and provisions~~
- ~~Prepare Cost Estimate~~
- ~~Select TxDOT standard sheets~~

~~c. Signing and Pavement Markings Layouts (1"=100' scale)~~

- ~~Legend with symbols~~
- ~~Center line with station numbering~~
- ~~ROW lines~~
- ~~Culverts and other structures that present a hazard to traffic~~
- ~~Location of utilities, if not shown on plan and profile~~
- ~~Existing signs to remain, to be removed, to be relocated~~
- ~~Proposed small signs (illustrated and numbered)~~
- ~~Proposed Large ground mounted signs indicating location by plan layout~~
- ~~Proposed large overhead mounted signs indicating location by plan layout~~
- ~~Proposed pavement markings (illustrated and quantified)~~
- ~~Quantities of existing pavement markings to be removed~~
- ~~Proposed delineators and object markers~~
- ~~Quantities table with each pavement marking type quantified~~

~~YES NO d. Summary of Small Signs Tabulation Sheets~~

~~YES NO e. Summary of Large Signs Tabulation Sheets (includes all Guide Signs)~~

~~YES NO f. Sign Panel Detail Sheets~~

- ~~All signs not covered by the Texas MUTCD~~
- ~~Design details for large guide signs~~
- ~~Dimensions of letters, shields, borders, corner radii etc.~~
- ~~Designation of shields attached to guide signs~~
- ~~Designation of arrow used on exit direction signs~~

~~SIGNYES NO g. Proposed Overhead Sign Bridge Design (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. Proposed O.S.B. elevation Sheets will show at a minimum the following: (Note: No walkways or sign lights will be used, since all sign panels will have high intensity reflective sheeting)~~

- ~~Span length~~
- ~~Tower Height~~
- ~~Drill Shaft size and top elevation~~
- ~~Soil strength used for design {indicate basis and boring(s) used}~~
- ~~Reference appropriate O.S.B. standard~~
- ~~Center line of truss elevation~~
- ~~Bottom of base plate elevation~~
- ~~Leg spacing~~
- ~~Design wind speed~~

YES NO 3. Conduct Traffic Signal Warrant Studies (Conducted at the Schematic Level) at the following locations:
SH 365 at Trosper Rd - T intersection
SH 365 at FM 1016 - T intersection
SH 365 at Anzalduas Connector - Diamond Intersection
SH 365 at FM 494 - Diamond intersection
SH 365 at SP 115 - Diamond intersection
SH 365 at SH 336 - Diamond intersection
SH 365 at FM 2061 - Diamond intersection
SH 365 at US 281 (Cage Blvd) - Diamond intersection
SH 365 at FM 3072 - Diamond intersection
SH 365 at Anaya Rd - Diamond intersections
SH 365 at US 281 (Military Hwy) - Diamond intersection

YES NO a. Location Map: Relationship of proposed installation to other traffic signals, highways, business areas and traffic generators

~~YES NO b. Photographs in the vicinity of the signal under consideration~~

~~NO YES c. Accident data for the past four years at the proposed interchange locations~~

d. Vehicle volumes
Authority to provide projected 24 hourly traffic volumes.
Authority to provide projected 24 hourly traffic volumes for anticipated year of construction completion.
Authority to provide projected 24 hourly traffic volumes for all approaches to intersection including side streets.
Engineer to conduct volume warrants (1 and/or 2 and/or 3) depending on availability of hourly traffic volumes.
Warrants 4, 5, 6, 7, 8 and 9 will not be evaluated.

NO YES Existing
NO YES Estimated
NO YES Projected
~~NO NO Pedestrian~~

YES NO e. Warrant Analysis and Assessment
YES NO f. Recommendations

~~YES NO 4. Traffic Signal Design (Conducted at the PS&E Level)~~

a. General Requirements
    - Contact Local Utility Company, conduct joint field investigation, determine service drop locations, determine need for adjustment of overhead utility lines
    - Prepare General Notes for Traffic signal installation
    - Prepare governing specifications and provisions
    - Prepare Cost Estimate for Traffic signal installation
    - Select TxDOT standard sheets

b. Basis of estimate sheet (list of materials)

c. General notes sheet

d. Condition diagram
    - Existing intersection design features
    - Adjacent Roadside development
    - Existing traffic control including illumination

e. Proposed Signal Plan Layouts
    - Existing traffic control devices that will remain (signs and markings)
    - Existing utilities
    - Proposed highway improvements
    - Proposed installation
    - Proposed additional traffic controls devices (signs and markings)
    - Proposed illumination attached to signal poles
    - Proposed controller and foundation
    - Proposed service drop
    - Loop detector locations and connections
    - Proposed signal head orientation
    - Intersection signing, pavement markings and wheel chair ramps

f. Signal Phasing and Timing
    - Phase sequence diagram
    - Interval timing, cycle length and offsets

g. Electrical Schedule Table
    - Wire and conduit sizes by cable run
    - Quantities by cable run
    - Loop detector cables
    - Signal cables
    - Pedestrian cables
    - Safety lighting cables

h. TxDOT Standard Sheets
    - Signal Pole Details
    - Loop Detector details
    - Pull Box and conduit details
    - Controller Foundation details
    - Signal Pole foundation details and quantities
    - Mast Arm details and quantities
    - Traffic control for installation of traffic signals

MISCELLANEOUS (ROADWAY)
(Task 163)

Services Provided By: Engineer	AUTHORITY		
YES	NO	1.	Preliminary Roadway Illumination Requirements (Conducted at the schematic level) for the following locations: SH 365 - Trosper to Anzalduas Connector SH 365 - Anzalduas Connector to FM 494 SH 365 - FM 494 to SP 115 SH 365 - SP 115 to SH 336 SH 365 - SH 336 to FM 2061 SH 365 - FM 2061 to US 281 (Cage Blvd) SH 365 - US 281 (Cage Blvd) to US 281 (Military Hwy) US 281 (Military Hwy) - US 281 (Cage Blvd) to FM 2557
			a. Determine Safety Lighting Requirements: ~~(1) At Entrance Ramps (merging areas)~~ ~~(2) At Exit Ramps (diverging areas)~~ ~~(3) At Overpasses (Underpass Lighting)~~ (4) At Critical Locations where safety is an issue • Engineer to prepare Illumination Warrants for 8 segments • Engineer to evaluate Roadway Eligibility for Proposed Lighting Systems • Engineer to evaluate Continuous Lighting Warrants • Engineer to conduct ADT warrants (CL-1 and CL-2) depending on availability of hourly traffic volumes. • Warrants CL-3 and CL-4 will not be evaluated. • Engineer to evaluate Safety Lighting Warrants • Engineer to conduct ADT warrants (SL-1, SL-2, SL-4, SL-5 and SL-6) depending on availability of hourly traffic volumes. • Warrants SL-3 and SL-7 will not be evaluated. • Authority to provide projected 24 hourly traffic volumes for anticipated year of construction completion. • Authority to provide projected 24 hourly traffic volumes for all approaches to intersection including side streets. • Engineer to prepare Illumination Contour Lighting Analysis • Should continuous lighting be justified, the Engineer shall make recommendations on luminaire types and spacing for 8 segments. • Analysis will be limited to combination of high masts at the interchanges and conventional luminaires elsewhere.
			~~b. Calculate Preliminary Quantities and Cost Estimate for Roadway Illumination~~
~~YES~~	~~NO~~	~~2.~~	~~Final Roadway Illumination Design (Conducted at the PS&E Level) (Safety Lighting)~~
~~YES~~	~~NO~~		~~a. Geotechnical Report with Boring Logs required for foundation design~~
~~YES~~	~~NO~~		~~b. General Requirements~~ ~~(1) Develop wiring connections~~ ~~(2) Calculate voltage drops~~ ~~(3) Contact Local Utility Company, conduct joint field investigation, determine power requirements and sources for each circuit~~ ~~(4) Prepare General Notes for Roadway Illumination~~ ~~(5) Prepare governing specifications and provisions~~ ~~(6) Prepare Cost Estimate for Roadway Illumination~~

(7) Select TxDOT standard sheets

YES NO c. Safety Roadway Illumination layouts (1"=100' scale) showing:
(1) Pavement edges, shoulders, curbs, retaining walls, etc.
(2) Center line with station numbering.
(3) ROW lines.
(4) Symbol legend. Use TxDOT standard symbols for lighting and electrical design.
(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 lighting equipment to remain, to be removed, to be relocated.
(9) Location of proposed roadway lighting equipment.
(10) Lighting Equipment Table showing, station and offset of proposed lighting fixtures, light intensity, lighting pattern.
(11) Lighting Quantities Table

YES NO d. Circuit Diagrams, showing:
(1) Service drop details
(2) Control panel details
(3) Lighting equipment
(4) Wiring connections
(5) Proposed conductor sizes and lengths
(6) Proposed conduits
(7) Proposed Ground Boxes

YES NO e. Continuous Illumination and/or high mast
YES NO f. Quantities Summary Table
YES NO g. Electrical Service Summary Sheet
NO NO h. Continuous Illumination Design
YES NO I. Continuous Illumination Design Study

3. Retaining Walls

a. Structural Details

NO NO (1) Cast in Place Cantilever.
NO NO (2) Tieback Retaining Wall.
NO NO (3) Specialized Retaining Wall.

b. Alternate Patented Retaining Walls at all locations. (Layouts Only)

YES NO (1) Mechanically Stabilized Earth
NO NO (2) Concrete Block Wall Systems

YES 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 (if necessary based on wall type)
(4) Offset from reference line
(5) Horizontal curve data
(6) Number of retaining wall panels and lengths (if necessary based on wall type)
(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

YES 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 (if necessary based on wall type)
(4) Wall panel designations (if necessary based on wall type)

(5) Top of footing elevations (if necessary based on wall type)
(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.

YES NO e. Foundation Studies. The soil core holes shall be obtained at approximately 200 foot intervals along retaining wall alignments.

YES NO f. Slope Stability Analysis.

YES NO g. Embankment Foundation Stability Analysis

YES NO h. Embankment Settlement Analysis

YES NO i. Estimate

YES NO j. Summary of Quantities

YES NO k. Typical cross section.

YES NO l. 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.
(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.

YES NO 4. 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. General Notes indicating the requirement and sequence of construction phasing.

b. Develop a Traffic Control Narrative describing the handling of traffic during each phase. Prepare a roll plot indicating location of traffic per the Traffic Control Narrative developed.

Services
Provided By:
Engineer AUTHORITY

c. 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.
d. The proposed traffic control devices (stop signs, signals, flagging, etc.) at grade intersections during each construction sequence.
e. Where detours are provided, a plan view and typical sections shall be shown.

5. Miscellaneous Drafting/Standards

YES NO a. Erosion Control
YES YES b. Hardscape Development (Aesthetics for concrete structures - form liners at bridge, caps columns bents and retaining walls).

YES NO 6. Compute and Tabulate Quantities

YES NO 7. Specifications, Special Provisions, Special Specifications

a. Use the TxDOT 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 TxDOT's format and, to the extent possible, incorporate references to approved State test procedures.

YES YES 8. Tolling Infrastructure

a. From the Preliminary Tolling Gantry locations identified by the AUTHORITY prepare plans that identify conduit layouts and pull boxes with respect to the pavement sections, ditch cross sections, and right of way lines. The conduit layouts within the pavement structure shall be shown to be placed within a concrete pavement section. All other Tolling appurtenances (Supports, foundations, wiring, cameras, buildings etc.) will be provided by the AUTHORITY.

BRIDGE DESIGN
(Task 170)

Services Provided By: Engineer	AUTHORITY		NUMBER REQUIRED
		1. Preparation of Structural Details	
		a. New Structure(s)	
YES	NO	(1) Underpass(es) (McColl Road)	1
YES	NO	(2) Overpasses (2 Each) (FM 494 Shary Road)(SP 115 – 23rd)	4
N/A	N/A	(3) Main Lanes	
N/A	NA	(4) Direct Connector(s)	
YES	NO	(5) Ramp Bridge(s) (Ware Rd exit, SP115 exit/entr)	3
YES	NO	(6) Waterway Structure(s) (Floodway) USIBWC Floodway between SP 115 (23rd Street) and Ware Road; Pharr/San Juan Irrigation Canal	2
N/A	N/A	(7) Pedestrian Structure(s)	
N/A	N/A	(8) Utility Structure(s)	
N/A	N/A	(9) Railroad Underpass(es)	
NO	NO	(10) Railroad Overpass(es) (FM 1016/UP, UP)	
N/A	N/A	(11) Bridge Classification Culvert(s)**	
N/A	N/A	(12) Alternate Structural Designs	
N/A	N/A	(13) Alternate Foundation Design	
YES	NO	(14) US-281 Overpass (San Juan Road)	1
		Total New Structures =	1
		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)	
		Total Existing Structures =	0

** 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.

** Above bridge structures identified above occur in SH365 Segment 0031 from FM 396 to East of McColl Road (Sta. 986+00)

Services
Provided By:
Engineer AUTHORITY

~~YES NO 2. Preparation of Bridge Layouts~~
~~The Engineer will prepare the bridge layouts in compliance with the latest TxDOT Pharr District bridge layout checklist.~~

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

~~YES NO 4. Foundation Studies~~
~~The minimum number of soil core holes shall be obtained in accordance with Chapter 2, Section 1 of the TxDOT Bridge Geotechnical Manual. Texas Cone Penetrometer (TCP) tests shall be conducted in all soil types encountered at a maximum of (5 foot) intervals.~~

~~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 girder. Top of cap elevations for non-girder type structures.~~

~~YES NO 8. General Guidelines for Bridge Design~~

~~a. The engineer shall prepare a bridge layout of each bridge structure for AUTHORITY and TxDOT's review and approval. The bridge layout shall be in conformance with the latest TxDOT's requirements.~~
~~b. The engineer shall make final design calculations and final detail drawings in conformance with the Texas Department of Transportation Bridge Design Manual – LRFD, the current American Association of State Highway and Transportation Officials (AASHTO) LRFD Bridge Design Specifications, and the TxDOT Bridge Geotechnical Manual.~~
~~c. 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.~~
~~d. Standard drawings for beams, girders, railings, 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.~~
~~e. Geometry and structural design errors found after acceptance of bridge plans shall be promptly corrected by the Engineer at no cost to the AUTHORITY.~~

PROJECT MANAGEMENT
(Task 164)

Services Provided By: Engineer	AUTHORITY		
YES	YES	1.	Meetings Meetings will be held with the AUTHORITY, TxDOT, FHWA, State Officials, local governments, property owners, utility owners, other consulting firms, etc., as needed or required by the AUTHORITY and TxDOT. The engineer shall coordinate through the AUTHORITY for the development of this project with any local entity having jurisdiction or interest in the project (i.e. AUTHORITY, county, etc).
YES	YES	2.	Project Manager/Engineer Communication Engineer shall comply with all requirements stated in the Pass-Through Agreement between AUTHORITY and TxDOT. However, no further coordination with TxDOT will be required.
~~YES~~	~~YES~~	~~3.~~	~~Quality Assurance/ Quality Control~~ ~~The Engineer shall perform quality assurance and quality control (QA/QC) on all deliverables associated with this project as follows:~~ ~~a) The Project Manager will continually review the quality, progress and cost of the various tasks assigned to all firms within the team. Quality review will include technical requirements.~~ ~~b) Peer review will be provided at all levels.~~ ~~c) An independent engineer, within the Engineer's firm, will assure that the project constructability requirements (details, specifications, plan notes, etc.) are met.~~
~~YES~~	~~YES~~	~~4.~~	~~Submittals to AUTHORITY and TxDOT for review and approval~~ ~~a) When 30% and final design is completed the Engineer shall submit all the required design information as specified on the Pass Through Agreement to AUTHORITY and TxDOT for review and approval.~~ ~~b) Final documents and information exchange of data, Plan Sheets, General Notes and/or Specifications provided to the AUTHORITY shall be furnished on a USB flash drives. Each 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 Word format or later. Plan sheets shall be provided in Microstation DGN or GEOPAK GPK format. PDF copies of plan sheets shall be provided during review submittals. If required, the engineer shall provide to the AUTHORITY, an external hard drive that contains all the plan sheets for the project.~~

CONSTRUCTION MANAGEMENT
(Task 320)

Services Provided By: Engineer	AUTHORITY	
NO*	YES	1. Construction Bidding Assistance After acceptance by AUTHORITY of the Bidding Documents and upon written authorization by AUTHORITY to proceed, Engineer shall: a) Assist AUTHORITY in advertising for and obtaining bids or proposals for the Work and, where applicable, maintain a record of prospective bidders to whom Bidding Documents have been issued, b) Attend pre-Bid conferences c) Develop Addenda for AUTHORITY as appropriate to clarify, correct, or change the Bidding Documents. ***(Task performed by PMC (GEC) assisted by Engineer)*** d) Provide Project design information or assistance needed by AUTHORITY in the course of the bid submittal with prospective contractors.***((Task performed by PMC (GEC) assisted by Engineer)*** e) Advise the AUTHORITY as to the acceptability of subcontractors, suppliers, and other individuals and entities proposed by prospective contractors for those portions of the Work as to which such acceptability is required by the Bidding Documents. f) Attend the Bid opening, prepare Bid tabulation sheets, and assist AUTHORITY in evaluating Bids and recommend award of contract.
YES	YES	2. Services during Construction Upon successful completion of the Bidding, and upon concurrence from AUTHORITY, Engineer shall:
YES	YES	a.) *Pre-Construction Conference*. Participate in a Pre-Construction Conference (if required) prior to commencement of Work at the Site. ***((Task performed by PMC (GEC) assisted by Engineer)***
YES	YES	*b.) Change Orders.* Provide related services such as: Preparing Engineering drawings required for change orders correcting errors and omissions on the plans.
YES	YES	c.) *Review and approval of Shop Drawings*. Review and approve or take other appropriate action in respect to Shop Drawings and other data which Contractor is required to submit, but only for conformance with the information given in the Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such reviews and approvals or other action will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto. ***(This task will be performed by the Engineer and reviewed/managed by PMC (GEC))***
YES	YES	*d.) Substitutes and "or equal."* Evaluate and determine the acceptability of substitute or "or equal" materials and equipment proposed by Contractor.
YES	YES	e.) *Interpretation of Intent*. The Engineer shall provide interpretation and clarification of design intent throughout the construction of the project.

(* = Task anticipated to be handled by AUTHORITY /PMC except where identified in Attachment "D")

Memorandum Date: 04/08/2013
Subject: Update to TEDSI Contract
Prepared by: Eric Davila
Recipients: Pilar Rodriguez and Louis Jones

Attachment D – WA No. 2 Fee Estimate

TEDSI INFRASTRUCTURE GROUP
Engineering Services for the HCRMA
Work Authorization No. 2

EXHIBIT 'D'
Fee Schedule/Budget for
Hidalgo County Regional Mobility Authority (HCRMA)
Scope of Services
SH 365 and US 281

WORK DESCRIPTION	Sr. Project Manager	Project Manager	Senior Engineer (V Civil)	Project Engineer (V Civil)	Project Engineer (III,IV Civil)	EIT	Senior Engineering Tech.	CADD Operator	Admin/Clerical	Total Labor Hrs.	Task Cost
FUNCTION CODE 110 - ROUTE AND DESIGN STUDIES	107	0	158	60	216	234	206	296	34	1311	$ 148,625.18
FUNCTION CODE 120 - ENVIRONMENTAL DOCUMENTATION AND PUBLIC INVOLVEMENT	40	0	50	0	14	16	2	52	8	182	$ 24,032.22
FUNCTION CODE 130 - RIGHT OF WAY/UTILITY DATA	16	8	96	0	32	0	268	40	28	488	$ 53,549.12
FUNCTION CODE 150 - FIELD SURVEYING AND PHOTOGRAMMETRY	16	0	0	0	24	0	0	0	0	40	$ 5,904.56
FUNCTION CODE 161 - DRAINAGE	24	0	0	0	0	0	0	0	0	24	$ 4,536.48
FUNCTION CODE 162 - SIGNING, PAVEMENT MARKINGS AND SIGNALIZATION	10	0	180	0	350	512	0	192	0	1244	$ 142,842.54
FUNCTION CODE 163 - MISCELLANEOUS (ROADWAY)	40	0	48	0	16	24	0	56	0	184	$ 122,649.68
FUNCTION CODE 170 - BRIDGE DESIGN	8	0	0	0	0	0	0	0	0	8	$ 1,512.16
TEDSI TOTAL LABOR COST	**261**	**8**	**532**	**60**	**652**	**786**	**476**	**636**	**70**	**3481**	**$ 503,651.94**

DIRECT EXPENSES	FC110	FC120	FC130	FC150	FC161	FC162	FC163	FC170		TOTAL
8 1/2" X 11" copies	$ 500.00	$ -	$ 500.00	$ 100.00	$ -	$ 1,500.00	$ 500.00	$ -		$ 3,100.00
11" x 17" copies	$ 750.00	$ -	$ 750.00	$ 225.00	$ -	$ -	$ 675.00	$ -		$ 2,400.00
Plots	$ 2,000.00	$ 200.00	$ -	$ -	$ -	$ -	$ 3,840.00	$ -		$ 6,040.00
Mileage	$ 84.75	$ 135.60	$ -	$ -	$ -	$ 282.50	$ 282.50	$ -		$ 785.35
Shipping	$ 300.00	$ 300.00	$ 450.00	$ 450.00	$ -	$ 175.00	$ 125.00	$ -		$ 1,800.00
Photos	$ 500.00	$ 500.00	$ 500.00	$ 500.00	$ -	$ 175.00	$ 125.00	$ -		$ 2,300.00
TEDSI TOTAL DIRECT EXPENSES	**$ 4,134.75**	**$ 1,135.60**	**$ 2,200.00**	**$ 1,275.00**	**$ -**	**$ 2,132.50**	**$ 5,547.50**	**$ -**		**$ 16,425.35**

TEDSI TOTAL **$ 520,077.29**

SPECIAL SERVICES FEE (SUBCONSULTANTS) (DBE SUBCONSULTANTS INDICATED IN BOLD)	DBE Participation 23.68%

SUBCONSULTANTS FEE	FC110	FC120	FC130	FC150	FC161	FC162	FC163	FC170		TOTAL
Cortran Engineering					**$ 59,830.37**					**$ 59,830.37**
L & G Engineering Laboratoray	$ 49,835.40									$ 49,835.40
Guzman & Munoz Engineering and Survey			**$ 40,766.88**	**$ 65,355.86**						**$ 106,122.74**
Unintech Consulting Engineers								**$ 10,873.34**		**$ 10,873.34**
										$ -
TOTAL SUBCONSULTANT	$ 49,835.40	**$ -**	**$ 40,766.88**	**$ 65,355.86**	**$ 59,830.37**	**$ -**	**$ -**	**$ 10,873.34**		**$ 226,661.85**

WORK AUTHORIZATION TOTAL **$ 746,739.14**