CAMERON COUNTY REGIONAL MOBILITY AUTHORITY

IMPROVING MORE THAN JUST ROADS

AGENDA
Regular Meeting of the Board of Directors
of the
Cameron County Regional Mobility Authority
3470 Carmen Avenue, Suite 5
Rancho Viejo, Texas 78575
October 21, 2021
12:00 Noon

PUBLIC COMMENTS:

1. **Public Comments.**

ITEMS FOR DISCUSSION AND ACTION:

2. **Action Items.**

   A. **Consideration and Approval of the September 22, 2021 Special Meeting Minutes.**

   B. **Acknowledgement of Claims.**

   C. **Approval of Claims.**

   D. **Consideration and Approval of the Financial Statements and Budget Amendments for the Month of September 2021.**

   E. **Consideration and Approval of Resolution No. 2021-001**

   F. **Consideration and Approval of an Interlocal Agreement between Cameron County and the Cameron County Regional Mobility Authority regarding Administrative Services.**

   G. **Consideration and Authorization to Approve a Job Order Contracting Agreement with A & I Custom Manufacturing, LLC for construction and renovation of the Cameron County Isla Blanca Toll Booths via Contract with Choice Partners.**

   H. **Consideration and Approval to Terminate Work Authorization No. 19 with S&B Infrastructure Regarding the East Loop Project.**

   I. **Consideration and Approval of Work Authorization No. 22 with S&B Infrastructure Regarding the East Loop Project.**

   J. **Consideration and Approval of Supplemental Work Authorization No. 2 to Work Authorization No. 23 with S&B Infrastructure Regarding the Isla Blanca Toll Booth Project.**

   K. **Consideration and Approval to Award Bid Number 2021 – 003 to Foremost Paving Inc. and to Approve a Contract between the Cameron County Regional Mobility Authority and Foremost Paving, Inc. for the Isla Blanca Park Parking Lot Expansion.**

   L. **Consideration and Approval of a Professional Service Agreement between the Cameron County Regional Mobility Authority and JWH & Associates, Inc.**

M. **Discussion and Possible Action Regarding Disabled Veterans Tolls and Fees in the Tolls Back Office System.**

3. **EXECUTIVE SESSION:**

A. **Deliberation Regarding Acquisition of Real Property legally described as Units 3 through 8 of the Rancho Viejo Plaza Condominiums, Rancho Viejo, Cameron County, Texas, Pursuant to V.T.C.A., Government Code, Section 551.072.**

B. **Confer with the Cameron County Regional Mobility Authority's Legal Counsel Regarding Legal Issues Associated with Disabled Veterans Tolls and Fees in the Tolls Back Office System, Pursuant to V.T.C.A., Government code, Section 551.071 (2).**

C. **Confer with the Cameron County Regional Mobility Authority's Legal Counsel Regarding Legal Issues associated with an Interlocal Agreement with Cameron County Regarding Administrative Services, Pursuant to V.T.C.A., Government Code, Section 551.071 (2)**

D. **Confer with Legal Counsel Regarding Cause No. 2015-DCL-05357; David Garza and Diane Garza v. Cameron County Regional Mobility Authority, et al. Pursuant to V.T.C.A., Government Code, Section 551.071(1).**

4. **ACTION RELATIVE TO EXECUTIVE SESSION:**

A. **Possible Action**

B. **Possible Action**

C. **Possible Action**

D. **Possible Action**

ADJOURNMENT:

Signed this 18th day of October 2021.

Frank Parker, Jr.
Chairman

NOTE:
Participation by Telephone Conference Call – One or more members of the CCRMA Board of Directors may participate in this meeting through a telephone conference call, as authorized by Sec. 370.262, Texas Transportation Code. Each part of the telephone conference call meeting that by law must be open to the public shall be audible to the public at the meeting location and will be recorded. On conclusion of the meeting, the recording will be made available to the public.

2-A CONSIDERATION AND APPROVAL OF THE SEPTEMBER 22, 2021 SPECIAL MEETING MINUTES.

THE STATE OF TEXAS §

COUNTY OF CAMERON §

BE IT REMEMBERED on the 22nd day of September 2021, there was conducted a Special Meeting of the Cameron County Regional Mobility Authority, at the CCRMA Administrative Office, 3470 Carmen Avenue, Suite 5 thereof, in Rancho Viejo, Texas, for the purpose of transacting any and all business that may lawfully be brought before the same.

THE BOARD MET AT:

12:00 Noon

PRESENT:

FRANK PARKER, JR.
CHAIRPERSON

MICHAEL SCAIEF
DIRECTOR

ARTURO A. NELSON
DIRECTOR

DR. MARIA VILLEGAS, M.D.
DIRECTOR

MARK ESPARZA
DIRECTOR

LEO R. GARZA
DIRECTOR

AL VILLARREAL
DIRECTOR

The Meeting was called to order by Chairman Parker, at 12:00 Noon. At this time, the Board considered the following matters as per CCRMA Agenda posted on the CCRMA's website and physically at 3470 Carmen Avenue, Suite 5, Rancho Viejo, Texas. on this 18th day of September 2021.

PUBLIC COMMENTS

1 PUBLIC COMMENTS

None.

ACTION ITEMS

2-A Consideration and Approval of the August 26, 2021 Regular Meeting Minutes.

Director Esparza moved to approve the minutes of the August 26, 2021 Regular Meeting Minutes. The motion was seconded by Secretary Nelson and carried unanimously.

2-B Acknowledgement of Claims.

Mr. Victor Barron, RMA Controller went over the Claims and presented them into the record.

Director Esparza moved to acknowledge the Claims as presented. The motion was seconded by Director Villegas and carried unanimously.

The Claims are as follows:

2-C Approval of Claims.

Mr. Victor Barron, RMA Controller went over the Claims and presented them into the record.

Treasurer Villarreal moved to approve the Claims as presented. The motion was seconded by Director Esparza and carried unanimously.

The Claims are as follows:

2-D Consideration and Approval of the Financial Statements and Budget Amendments for the month of August 2021.

Mr. Victor Barron, RMA Controller went over the financial statements for August.

Director Esparza moved to approve the financial statements for August 2021. The motion was seconded by Treasurer Villarreal and carried unanimously.

The Financial Statements are as follows:

2-E Consideration and Approval of Quarterly Investment Report for the period ending August 31, 2021.

Mr. Victor Barron, RMA Controller, went over the Quarterly Investment Report for the period ending August 31, 2021.

Treasurer Villarreal moved to approve the Quarterly Investment Report for the period ending August 31, 2021. The motion was seconded by Secretary Nelson and carried as follows:

Ayes: Parker, Nelson, Villarreal, Villegas
Nayes:
Abstain: Scaief, Esparza, and Garza
Note: Directors Scaief, Esparza, and Garza submitted affidavits and abstained from discussion and vote.

The Quarterly Investment Report is as follows:

2-F Consideration and Approval of Amendment No. 5 to the Master Service Agreement for Toll System Maintenance between the Cameron County Regional Mobility Authority and Kapsch.

Mr. Pete Sepulveda, Jr., RMA Executive Director went over the need for Amendment No. 5 to the Master Service Agreement for Toll System Maintenance between the Cameron County Regional Mobility Authority and Kapsch.

Secretary Nelson moved to approved Amendment No. 5 to the Master Service Agreement for Toll System Maintenance between the Cameron County Regional Mobility Authority and Kapsch. The motion was seconded by Director Esparza and carried unanimously.

The Amendment is as follows:

2-G Consideration and Authorization to Approve a Job Order Contracting Agreement with A & I Custom Manufacturing, LLC for construction and renovation of the Cameron County Isla Blanca Toll Booths via Contract with Choice Partners.

Staff recommended that the item be tabled.

Treasurer Villarreal moved to table the item. The motion was seconded by Director Villegas and carried unanimously.

2-H Consideration and Approval of Amended Change Order Number 04 with Toll Plus for Back Office System.

Mr. Pete Sepulveda, Jr., RMA Executive Director explained the need for the Amended Change Order Number 04 with Toll Plus for Back Office System.

Director Esparza moved to approve the Amended Change Order Number 04 with Toll Plus for Back Office System. The motion was seconded by Secretary Nelson and carried unanimously.

The Amended Change Order is as follows:

2-I Consideration and Approval of an Amendment to the Cameron County Regional Mobility Authority's Procurement Polices to formally adopt the rules found in Chapter 2269.

Mr. Pete Sepulveda, Jr., RMA Executive Director explained the need for an Amendment to the Cameron County Regional Mobility Authority's Procurement Polices to formally adopt the rules found in Chapter 2269.

Treasurer Villarreal moved to approve an Amendment to the Cameron County Regional Mobility Authority's Procurement Polices to formally adopt the rules found in Chapter 2269. The motion was seconded by Director Esparza and carried unanimously.

The Amendment is as follows:

2-J Consideration and Approval of the RFQ for the Construction Manager at Risk for the Cameron County Parks System Administration Building and the Cameron County Parks System Warehouse Building.

Mr. Pete Sepulveda, Jr., RMA Executive Director explained to the Board the need for the RFQ for the Construction Manager at Risk for the Cameron County Parks System Administration Building and the Cameron County Parks System Warehouse Building and the authority to advertise.

Treasurer Villarreal moved to approve the RFQ for the Construction Manager at Risk for the Cameron County Parks System Administration Building and the Cameron County Parks System Warehouse Building and authority to advertise subject to legal review. The motion was seconded by Director Esparza and carried unanimously.

The RFQ is as follows:

2-K Consideration and Approval of the Fiscal Year 2022 Holiday Schedule.

Mr. Pete Sepulveda, Jr., RMA Executive Director explained to the Board the need for the Fiscal Year 2022 Holiday Schedule.

Treasurer Villarreal moved to approve the Fiscal Year 2022 Holiday Schedule. The motion was seconded by Director Villegas and carried unanimously.

The Holiday Schedule is as follows:

2-L Consideration and Approval of the Cameron County Regional Mobility Authority Fiscal Year 2021-2022 Annual Budget.

Mr. Victor Barron, RMA Controller, went over the Cameron County Regional Mobility Authority Fiscal Year 2021-2022 Annual Budget.

Treasurer Villarreal moved to approve the Cameron County Regional Mobility Authority Fiscal Year 2021-2022 Annual Budget. The motion was seconded by Director Esparza and carried unanimously.

The Annual Budget is as follows:

2-M Consideration and Approval of the Cameron County Regional Mobility Authority Investment Policy.

Mr. Victor Barron, RMA Controller, went over the Cameron County Regional Mobility Authority Investment Policy.

Treasurer Villarreal moved to approve the Cameron County Regional Mobility Authority Investment Policy. The motion was seconded by Secretary Nelson and carried unanimously.

The Investment Policy is as follows:

_____

2-N Consideration and Approval of the Cameron County Regional Mobility Authority Cost Allocation Policy.

Mr. Victor Barron, RMA Controller, went over the Cameron County Regional Mobility Authority Cost Allocation Policy.

Secretary Nelson moved to approve the Cameron County Regional Mobility Authority Cost Allocation Policy. The motion was seconded by Treasurer Villarreal and carried unanimously.

The Cost Allocation Policy is as follows:

_____

3 – EXECUTIVE SESSION

3-A Deliberation Regarding Acquisition of Real property legally described as Units 3 through 8 of the Rancho Viejo Plaza Condominiums, Rancho Viejo, Cameron County, Texas, Pursuant to V.T.C.A., Government Code, Section 551.072.

Treasurer Villarreal made a motion to table the item. The motion was seconded by Director Villegas and carried unanimously.

4-ACTION RELATIVE TO EXECUTIVE SESSION

4 -A Possible Action

Item 3-A was tabled.

ADJOURNMENT

There being no further business to come before the Board and upon motion by Director Esparza and seconded by Treasurer Villarreal and carried unanimously the meeting was **ADJOURNED** at 12:46 P.M.

APPROVED this _____ day of _____ 2021.

_____
CHAIRMAN FRANK PARKER, JR.

ATTESTED:_____
ARTURO A. NELSON, SECRETARY

2-B ACKNOWLEDGEMENT OF CLAIMS.

Claims for Acknowledgement

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY
Claims October 12, 2021

100 Operation

Vendor Name	Invoice Number	Cash Required	Invoice/Credit Description	PROJ Title	Transfer Funds	Funding Source	Bank Account
ROL Consulting LLC	125	$ 4,000.00	ROL consulting services Sept 2021	Indirect	Y	Local	Ope
Edwards Abstract and Title Co	Earnest Money 10/21	1,000.00	Earnest Money 3470 Carmen Ave Rancho Viejo, Tx	Indirect	Y	Local	Ope
Rentfro, Irwin, & Irwin, P.L.L.C	1106	1,767.26	Rentfro & Irwin Sept 2020 legal services	Indirect	Y	Local	Ope
Time Warner Cable Business Class	0121858100921	1,161.53	Spectrum Tolls Oct 2021	Indirect	Y	Local	Ope
AIM Media Texas	40016751-0921	2,175.00	AIM 3010-BH Classified Legal BH-BID Number 2021-03	CC - Administration Building & Parking Lot	Y	Local	Ope
Valley Municipal Utility District	2030007806 09/21	34.55	VMUD Sept 2021 Ste 7	Indirect	Y	Local	Ope
Valley Municipal Utility District	2030007907 09/21	34.92	VMUD Sept 2021 Ste 6	Indirect	Y	Local	Ope
Valley Municipal Utility District	2030008005 09/21	36.81	VMUD Sept 2021 Ste 4	Indirect	Y	Local	Ope
Valley Municipal Utility District	2030008105 09/21	81.11	VMUD Sept 2021 Ste 3	Indirect	Y	Local	Ope
Valley Municipal Utility District	2030008406 09/21	34.17	VMUD Sept 2021 Ste 5	Indirect	Y	Local	Ope
		10,325.35					

525 Tolls

Vendor Name	Invoice Number	Cash Required	Invoice/Credit Description	PROJ Title	Transfer Funds	Funding Source	Bank Account
Law Enforcement Systems LLC	1005608	$ 511.68	Duncan Solutions DMV Record Sept 2021	Indirect	Y	Local	Tolls
FRANCISCO J SANMIGUEL	Travel FSM 9.30.21	2,028.44	Travel Mileage Reimbursement May-Sept 2021	Indirect	Y	Local	Tolls
LexisNexis Risk Solutions FL Inc	1546392-20210930	110.13	LexisNexis Sept 2021	Indirect	Y	Local	Tolls
Tecsidel SA	1021	2,652.25	Tecsidel Sept 2021	Pharr-Reynosa Intl Bridge	Y	Local	Tolls
Rentfro, Irwin, & Irwin, P.L.L.C	1106	1,000.00	Rentfro & Irwin Sept 2020 legal services	Indirect	Y	Local	Tolls
Time Warner Cable Business Class	0121858100921	1,161.53	Spectrum Tolls Oct 2021	Indirect	Y	Local	Tolls
Valley Municipal Utility District	3010066802 09/21	38.32	VMUD Sept 2021 Tolls	Indirect	Y	Local	Tolls
		7,502.35					

Operations	$ 10,325.35
Tolls	7,502.35
Total Transfer	$ 17,827.70

Reviewed by:

Monica R. Ibarra, Accounting Clerk — 10.12.21

Victor J. Barron, Controller — 10.12.21

Pete Sepulveda Jr, Executive Director — 10/12/21

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY
Claims October 6, 2021

100 Operation

Vendor Name	Invoice Number	Cash Required	Invoice/Credit Description	PROJ Title	Transfer Funds	Funding Source	Bank Account
~~Best Buy~~	~~Best Buy~~ 10.5.21	VOID $ ~~3,844.85~~	~~Best Buy Two Tv's for Board Room~~	Indirect	Y	Local	Ope
Culligan of the Rio Grande Valley	320895 9.29.21	49.92	Culligan Sept 2021	Indirect	Y	Local	Ope
Monica R Ibarra	Travel MRI 9.30.21	10.08	Travel Reimbursement MRI 9.30.21	Indirect	Y	Local	Ope
Gulf Coast Paper Co.	2114049	3,592.80	Gulf Coast Paper Clorox 360	Indirect	Y	Local	Ope
MPC Studios, Inc	30769	125.00	MPC Studios Oct 2021	Indirect	Y	Local	Ope
Toshiba Financial Services	38599834	311.23	Toshiba Admin Oct 2021	Indirect	Y	Local	Ope
		7,933.88					

525 Tolls

Vendor Name	Invoice Number	Cash Required	Invoice/Credit Description	PROJ Title	Transfer Funds	Funding Source	Bank Account
AAM Automatizacion Avanzada y Metales, LLC	21-014	$ 458.00	AAM Automatizacion Avanzada Y Metales stainless steel parts	Indirect	Y	Local	Tolls
Culligan of the Rio Grande Valley	320895 9.29.21	57.95	Culligan Sept 2021	Indirect	Y	Local	Tolls
Ema Jaramillo	Travel EJ 9.28.21	7.84	Travel Reimburstment EJ 9.28.21	Indirect	Y	Local	Tolls
Fagan Consulting LLC	CCR-2019R1	460.20	Fagan operation support Sept 2021	Indirect	Y	Local	Tolls
Fagan Consulting LLC	TCSI-2019R1	644.28	Fagan Toll Collection Sys Implementation Sept 2021	Indirect	Y	Local	Tolls
Pharr International Bridge	Pharr Sponsor 21-22	1,250.00	Pharr Int'l Bridge Sponsorship 21-22	Indirect	Y	Local	Ope
Public Utilities Board	PUB 600710 Sept 2021	237.84	PUB 600710 Sept 2021	Direct Connectors - SH550	Y	Local	Tolls
Quadient Leasing USA, Inc.	N9071234	1,061.10	Quadient Oct 2021	Indirect	Y	Local	Tolls
Time Warner Cable Business Class	2868066100321	259.13	Spectrum 8066 Oct 2021	Direct Connectors - SH550	Y	Local	Tolls
Verizon Wireless	9889105042	88.36	Verizon wireless Sept 2021	Indirect	Y	Local	Tolls
		4,524.70					

Operations	$ 7,933.88
Tolls	4,524.70
Total Transfer	$ 12,458.58

Reviewed by:

Monica R. Ibarra, Accounting Clerk — 10.6.21

Victor J. Barron, Controller — 10.6.21

Pete Sepulveda Jr, Executive Director — 10.06.21

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY
Claims October 1, 2021

100 Operation

Vendor Name	Invoice Number	Cash Required	Invoice/Credit Description	PROJ Title	Transfer Funds	Funding Source	Bank Account
AGC Solutions LLC	Admin Rent Oct 2021	$ 4,460.00	AGC Admin Monthly Rent Oct 2021	Indirect	Y	Local	Ope
American Express	AMEX Sept 2021	781.64	AMEX Sept 2021	Indirect	Y	Local	Ope
South Padre Island Chamber of Commerce	SPI Member 2021	160.00	SPI Chamber Annual Membership Meeting 2021	Indirect	Y	Local	Ope
		5,401.64					

525 Tolls

Vendor Name	Invoice Number	Cash Required	Invoice/Credit Description	PROJ Title	Transfer Funds	Funding Source	Bank Account
American Express	AMEX Sept 2021	$ 8,365.78	AMEX Sept 2021	Indirect	Y	Local	Tolls
Direct Energy Business, LLC	212660046881015	246.72	Direct Energy Sept 2021 570 Fm 511	Direct Connectors - SH550	Y	Local	Tolls
Direct Energy Business, LLC	212660046881016	339.86	Direct Energy Sept 2021 1895 Fm 511 #1	FM1847 - SH550	Y	Local	Tolls
E.A. Stone dba Gulf Data Products	Envelope TPS 9.28.21	3,355.00	Gulf Data Products Envelope Order TPS logo	Indirect	Y	Local	Tolls
Kapsch TrafficCom USA, Inc	486022SI01074	14,274.00	Kapsch maintenance support Aug 2021	Indirect	Y	Local	Tolls
NSA Property Holdings. LLC d/b/a Move It Storage- North 77th	Move It Oct 2021	214.00	Move It Storage rent Oct 2021	Indirect	Y	Local	Tolls
Prisciliano Delgado	10726	250.00	Priscillano Lawn Care Sept 2021	Indirect	Y	Local	Tolls
Rice Signs LLC	524353	409.65	Rice Signs Texas Interstate 2 route shield	Indirect	Y	Local	Tolls
Rice Signs LLC	524356	971.90	Rice Signs Texas Intersate 169 and Texas Interstate 69E	Indirect	Y	Local	Tolls
United States Postal Service	USPS Repl 10.1.21	15,000.00	USPS Replenishment 10.1.21	Indirect	Y	Local	Tolls
		43,426.91					

Operations	$ 5,401.64
Tolls	43,426.91
Total Transfer	$ 48,828.55

Reviewed by:

Monica R. Ibarra, Accounting Clerk — 10.1.21

Victor J. Barron, Controller — 10.1.21

Pete Sepulveda Jr, Executive Director — 10.01.22

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY
Claims September 23, 2021

100 Operation

Vendor Name	Invoice Number	Cash Required	Invoice/Credit Description	PROJ Title	Transfer Funds	Funding Source	Bank Account
Amazon	Amazon Sept 2021	$ 370.97	Amazon Sept 2021	Indirect	Y	Local	Ope
Direct Energy Business, LLC	212640046857722	58.13	Direct Energy Sept 2021 Ste 7	Indirect	Y	Local	Ope
Direct Energy Business, LLC	212640046857723	99.41	Direct Energy Sept 2021 Ste 3	Indirect	Y	Local	Ope
Direct Energy Business, LLC	212640046857724	57.60	Direct Energy Sept 2021 Ste 5	Indirect	Y	Local	Ope
Direct Energy Business, LLC	212640046857725	58.82	Direct Energy Sept 2021 Ste 4	Indirect	Y	Local	Ope
Maria D Mayorga	Travel LM 9.22.21	42.90	Travel Reimbursement LM 9.22.21	Indirect	Y	Local	Ope
Gexa Energy, LP	32785157	65.23	GEXA Sept 2021 Ste 6	Indirect	Y	Local	Ope
Gulf Coast Paper Co.	2093644	251.80	Gulf Coast Paper PPE/cleaning supplies 8.26.21	Indirect	Y	Local	Ope
Gulf Coast Paper Co.	2095686	76.06	Gulf Coast Paper PPE/cleaning supplies 8.26.21	Indirect	Y	Local	Ope
Gulf Coast Paper Co.	2096058	66.86	Gulf Coast Paper PPE/cleaning supplies 8.26.21	Indirect	Y	Local	Ope
Gulf Coast Paper Co.	2099077	27.00	Gulf Coast Paper PPE/cleaning supplies 8.26.21	Indirect	Y	Local	Ope
E.A. Stone dba Gulf Data Products	Gulf Data FT 9.21.21	531.95	Gulf Data Products Fuego Tags 9.21.21	Indirect	Y	Local	Ope
S&B Infrastructure, LTD	U2716.800-09	1,591.61	S&B Cultural Resources WA 8 Aug 2021	Naranjo Rd/Old Alice Rd	Y	Local	Ope
Rentfro, Irwin, & Irwin, P.L.L.C	1067	1,960.00	Rentfro & Irwin legal services Aug 2021	Indirect	Y	Local	Ope
		5,258.34					

525 Tolls

Vendor Name	Invoice Number	Cash Required	Invoice/Credit Description	PROJ Title	Transfer Funds	Funding Source	Bank Account
Amazon	Amazon Sept 2021	$ 235.12	Amazon Sept 2021	Indirect	Y	Local	Tolls
Direct Energy Business, LLC	212640046856889	324.00	Direct Energy Sept 2021 Tolls	Indirect	Y	Local	Tolls
Gexa Energy, LP	32788362	148.01	GEXA Sept 2021 1505 Fm 511 & 1705 Fm 511	Direct Connectors - SH550	Y	Local	Tolls
Matus Contractor Company	358	2,800.00	Matus grass, garbage, herbicide Gap 1	Indirect	Y	Local	Tolls
Matus Contractor Company	361	4,000.00	Matus grass, garbage, herbicide Fm 550 to hwy 77	Indirect	Y	Local	Tolls
Republic Services	0863-002068883	96.87	Republic Services Oct - Dec 2021	Indirect	Y	Local	Tolls
Texas Department of Motor Vehicles (TxDMV)	TxDMV Replen 9.23.21	3,000.00	TxDMV Replenishment 9.23.21	Indirect	Y	Local	Tolls
Time Warner Cable Business Class	879673091521	290.22	Spectrum 9673 Sept 2021	Direct Connectors - SH550	Y	Local	Tolls
Toshiba America Business Solutions, Inc	5504593	381.47	Toshiba Tolls Maint Sept 2021	Indirect	Y	Local	Tolls
Toshiba Financial Services	38532603	296.86	Toshiba Tolls Sept 2021	Indirect	Y	Local	Tolls
United States Postal Service	USPS Repl 9.21.21	5,000.00	USPS Replenishment 9.21.21	Indirect	Y	Local	Tolls
		16,572.55					
	Operations	$ 5,258.34					
	Tolls	16,572.55					
	Total Transfer	$ 21,830.89					

Reviewed by:

Monica R. Ibarra, Accounting Clerk — 9.23.21

Victor J. Barron, Controller — 9.23.21

Pete Sepulveda Jr, Executive Director — 09.23.21

2-C APPROVAL OF CLAIMS.

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY
BOD Claims October 21, 2021

100 Operations

Vendor Name	Invoice Number	Cash Required	Invoice/Credit Description	PROJ Title	Transfer Funds	Funding Source	Bank Account
HALFF Associates, Inc.	10059334	$ 65,786.68	Halff Eng for Develop of Design for Whipple Rd Sept 2021	Whipple Road	Y	Local	Ope
HALFF Associates, Inc.	10060597	19,074.45	Halff Whipple Rd Devel if Design Oct 2021	Whipple Road	Y	Local	Ope
S&B Infrastructure, LTD	U2716.400-07	28,254.00	S&B SH 550 Gap II WA 4 Aug 2021	SH550 GAP II	Y	Local	Ope
		113,115.13					

100 Interlocal Agreements

Vendor Name	Invoice Number	Cash Required	Invoice/Credit Description	PROJ Title	Transfer Funds	Funding Source	Bank Account
S&B Infrastructure, LTD	U2716.120-09	$ 53,183.51	S&B Old Alice Rd APD & PS&E WA12 Aug 2021	CC - Old ALice Road	Y	Local	Ope
S&B Infrastructure, LTD	U2716.223-01	41,649.63	Isla Blanca Toll Booths WA 23 Aug 2021	CC - Parks	Y	Local	Ope
S&B Infrastructure, LTD	U2716.224-02	24,911.68	S&B Flor de Mayo WA 24 Aug 2021	Flor De Mayo Bridge	Y	Local	Ope
S&B Infrastructure, LTD	U2716.500-14	64,316.97	S&B East Loop APD WA 5 Aug 2021	SH 32 (East Loop)	Y	Local	Ope
		184,061.79					

525 Interlocal Agreements

Vendor Name	Invoice Number	Cash Required	Invoice/Credit Description	PROJ Title	Transfer Funds	Funding Source	Bank Account
TollPlus LLC	US2100114	$ 6,461.34	TollPlus Support and Maintenance Aug 2021	Pharr-Reynosa Intl Bridge	Y	Local	Toll
		6,461.34					

525 Tolls

Vendor Name	Invoice Number	Cash Required	Invoice/Credit Description	PROJ Title	Transfer Funds	Funding Source	Bank Account
TML Intergovernmental Risk Pool	9384 10.1.21	$ 16,798.25	TML Risk Pool 10.1.21	Indirect	Y	Local	Toll
TollPlus LLC	US2100114	15,600.00	TollPlus Support and Maintenance Sept 2021	Indirect	Y	Local	Toll
		32,398.25					

Operations	113,115.13
Oper Interlocal	184,061.79
Tolls Interlocal	6,461.34
Tolls	32,398.25
Total Transfer	$ 336,036.51

Reviwed by:

Victor J. Barron, Controller

DocuSigned by: Victor Barron 011FAAF829A74BA... 10/18/2021

Pete Sepulveda Jr, Executive Director

DocuSigned by: Pete Sepulveda, Jr 1A92BEDAEE9C45A... 10/18/2021

2-D CONSIDERATION AND APPROVAL OF THE FINANCIAL STATEMENTS AND BUDGET AMENDMENTS FOR THE MONTH OF SEPTEMBER 2021.

SEPTEMBER 2021 FINANCIAL REPORT

PETE SEPULVEDA, JR., EXECUTIVE DIRECTOR

VICTOR J. BARRON, CONTROLLER

CCRMA MONTHLY FINANCIAL

TABLE OF CONTENTS

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY
Statement of Revenues and Expenditures - Monthly R - Unposted Transactions Included In Report
From 9/1/2021 Through 9/30/2021

	Current Period Actual	Current Year Actual	Annual Budget - Original	Annual Budget Variance - Original	Prior Year Actual
Operating Revenues					
Vehicle registration fees	$ 274,590	$ 3,509,231	$ 3,250,000	$ 259,231	$ 3,251,304
Interlocal agreements	32,753	142,753	143,491	(738)	149,716
Total Operating Revenues	307,343	3,651,984	3,393,491	258,493	3,401,020
Operating Expenses					
Personnel costs	81,787	957,420	1,042,697	85,277	773,621
Professional services	16,000	272,815	306,300	33,485	289,569
Contractual services	1,127	38,338	52,000	13,662	26,238
Advertising & marketing	125	7,250	16,500	9,250	9,015
Data processing	158	9,549	11,000	1,451	7,642
Dues & memberships	160	16,639	20,000	3,361	17,917
Education & training	-	1,379	10,000	8,621	3,540
Fiscal agent fees	3,922	13,717	53,600	39,883	18,167
Insurance	-	1,085	2,000	915	798
Maintenance & repairs	-	609	5,000	4,391	2,656
Office supplies	8,570	16,338	27,150	10,812	11,301
Leases	4,771	62,982	66,755	3,773	59,085
Travel	189	1,362	21,650	20,288	12,880
Utilities	1,803	20,049	27,000	6,951	9,881
Contingency	-	-	94,164	94,164	-
Total Operating Expenses	118,612	1,419,531	1,755,816	336,285	1,242,309
Total Operating Income (Loss)	188,731	2,232,453	1,637,675	594,778	2,158,711
Non Operating Revenues					
Project revenues	-	-	-	-	3,311
Interest income	10,119	70,241	50,000	20,241	61,050
Other financing sources	13,112	4,234,704	-	4,234,704	(112,652)
TRZ revenue	-	2,208,261	1,311,065	897,196	1,311,065
Total Non Operating Revenues	23,231	6,513,207	1,361,065	5,152,142	1,262,775
Non Operating Expenses					
Debt interest	79,319	1,810,310	1,800,175	(10,135)	758,543
Debt issuance cost	-	166,615	-	(166,615)	-
Debt interest-LOC	-	380	25,500	25,120	6,258
Project expenses	9,385	216,835	1,173,065	956,230	315,291
Total Non Operating Expenses	88,704	2,194,140	2,998,740	804,600	1,080,093
Total Changes in Net Position	$ 123,257	$ 6,551,519	$ -	$ 6,551,519	$ 2,341,393

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY
Toll Operations Revenues Expenses - Cash - Toll Operations Revenues Expenditures - Cash - Unposted Transactions Included In Report
From 9/1/2021 Through 9/30/2021

	Current Period Actual	Current Year Actual	Annual Budget - Original	Annual Budget Variance - Original	Prior Year Actual
Toll Operating Revenues					
TPS Revenues	$ 269,758	$ 2,249,480	$ 1,715,000	$ 534,480	$ 1,874,298
Interop Revenues					
Interop revenues	69,616	950,522	740,000	210,522	810,616
Bridge interoperability	44,959	539,454	420,000	119,454	501,283
Total Interop Revenues	114,575	1,489,975	1,160,000	329,975	1,311,899
Other Toll Revenues					
Interlocal agreement	12,113	137,027	139,876	(2,849)	142,054
Total Other Toll Revenues	12,113	137,027	139,876	(2,849)	142,054
Total Toll Operating	396,446	3,876,482	3,014,876	861,606	3,328,250
Toll Operating Expenses					
Personnel costs	48,095	496,927	521,270	24,343	713,146
Transaction processing costs	83,570	491,744	505,625	13,881	357,599
Toll system maintenance/IT	29,280	341,949	346,353	4,404	331,998
Roadside maintnenace	35,713	436,162	453,962	17,800	456,347
CSC indirect/overhead costs	12,766	128,586	146,198	17,612	136,725
Total Toll Operating	209,425	1,895,368	1,973,408	78,040	1,995,816
Total Operating Income (Loss)	187,021	1,981,113	1,041,468	939,645	1,332,435
Non Operating Revenues					
Pass through grant	-	1,385,000	1,385,000	-	1,385,000
Total Non Operating	-	1,385,000	1,385,000	-	1,385,000
Non Operating Expenses					
Debt interest	134,215	2,424,657	2,426,468	1,811	5,427,507
Total Non Operating	134,215	2,424,657	2,426,468	1,811	5,427,507
Changes in Net Position	$ 52,806	$ 941,457	$ -	$ 941,457	$ (2,710,072)

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY
Combined Statement of Revenues and Expenses - Unposted Transactions Included In Report
From 9/1/2021 Through 9/30/2021

	Current Period Actual	Current Year Actual	Annual Budget - Original	Annual Budget Variance - Original	Prior Year Actual
Operating Revenues					
Vehicle registration fees	$ 274,590	$ 3,509,231	$ 3,250,000	$ 259,231	$ 3,251,304
Interlocal agreement	44,866	279,780	283,367	(3,587)	291,770
Toll revenues	384,333	3,739,455	2,875,000	864,455	3,186,197
Total Operating Revenues	703,789	7,528,466	6,408,367	1,120,099	6,729,270
Operating Expenses					
Personnel costs	129,882	1,454,347	1,563,967	109,620	1,486,767
Accounting software and services	-	4,695	4,700	5	1,206
Professional services	16,000	268,120	301,600	33,480	288,363
Contractual services	2,911	46,644	60,500	13,856	35,969
Advertising & marketing	125	34,583	46,500	11,917	40,648
Data processing	158	9,549	11,000	1,451	7,642
Dues & memberships	160	19,579	23,275	3,696	20,957
Education & training	-	1,478	11,000	9,522	3,540
Fiscal agent fees	3,922	18,867	58,800	39,933	18,167
Insurance	-	73,725	76,000	2,275	73,118
Maintenance & repairs	250	5,755	13,000	7,245	21,982
Office supplies	28,423	272,615	280,275	7,660	207,113
Road maintenance	81,916	732,738	740,915	8,177	713,787
Leases	13,598	108,930	115,278	6,348	92,818
Toll services	43,061	183,234	212,500	29,266	130,863
Travel	2,398	6,938	32,350	25,412	25,972
Utilities	5,232	73,102	83,400	10,298	69,213
Contingency	-	-	94,164	94,164	-
Total Operating Expenses	328,037	3,314,900	3,729,224	414,324	3,238,125
Net Change from Operations	375,752	4,213,567	2,679,143	1,534,424	3,491,146
Non Operating Revenue					
Pass through grant revenues	-	1,385,000	1,385,000	-	1,385,000
Project revenues	-	-	-	-	3,311
Interest income	10,119	70,241	50,000	20,241	61,050
TRZ Revenue	-	2,208,261	1,311,065	897,196	1,311,065
Other financing sources	13,112	4,234,704	-	4,234,704	(112,652)
Total Non Operating Revenue	23,231	7,898,207	2,746,065	5,152,142	2,647,775
Non Operating Expenses					
Bond Debt Expense	213,534	4,401,582	4,226,193	(175,389)	2,913,029
Debt Interest - LOC	-	380	25,950	25,570	6,258
Project expenses	9,385	216,835	1,173,065	956,230	315,291
Total Non Operating Expenses	222,919	4,618,797	5,425,208	806,411	3,234,579
Changes in Net Position	$ 176,063	$ 7,492,976	$ -	$ 7,492,976	$ 2,904,341

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY
Statement of Revenues and Expenditures - Monthly Project I/S - Unposted Transactions Included In Report
From 9/1/2021 Through 9/30/2021

	Current Period Actual	Current Year Actual
Non Operating Revenues		
Grant revenues		
Federal Revenue		
West Rail Corridor	$ 284,988	$ 284,988
SH550 GAP II	28,615	279,626
Whipple Road	52,629	113,081
Total Federal Revenue	366,232	677,696
State Revenue		
Whipple Road	9,342	71,043
Total State Revenue	9,342	71,043
Local Revenue		
West Rail Corridor	71,247	100,244
SH 32 (East Loop)	64,317	159,567
Whipple Road	3,816	11,337
Flor De Mayo Bridge	26,412	149,587
CC - Old ALice Road	53,184	235,571
CC - Consulting Services PF	-	88,000
CC - Administration Building	2,175	61,661
CC - Parks	41,650	41,650
Total Local Revenue	262,800	847,616
Total Grant revenues	638,374	1,596,354
Total Non Operating Revenues	638,374	1,596,354
Non Operating Expenses		
Project expenses		
West Rail Corridor	356,235	385,232
SH550 GAP II	28,615	279,626
SH 32 (East Loop)	64,317	159,567
Whipple Road	65,787	195,461
Flor De Mayo Bridge	26,412	149,587
CC - Old ALice Road	53,184	235,571
CC - Consulting Services PF	-	88,000
CC - Administration Building	2,175	61,661
CC - Parks	41,650	41,650
Total Project expenses	638,374	1,596,354
Total Non Operating Expenses	638,374	1,596,354
Total Changes in Net Position	$ -	$ -

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY
Balance Sheet
As of 9/30/2021

	Current Year
ASSETS	
Current Assets:	
Cash and cash equivalents	$ 10,693,123
Restricted cash accounts - debt service	6,598,534
Accounts receivable, net	
Vehicle Registration Fees - Receivable	572,405
Other	4,245,531
Total Accounts receivable, net	4,817,936
Accounts receivable - other agencies	2,739,920
Accrued interest	-
Total Current Assets:	24,849,514
Non Current Assets:	
Capital assets, net	99,160,214
Capital projects in progress	24,154,657
Unamortized bond prepaid costs	99,746
Net pension asset	58,990
Total Non Current Assets:	123,473,607
Deferred Outflow of Resources	
Deferred outflows related to bond refunding	145,267
Deferred outlflow related to pension	138,002
Total Deferred Outflow of Resources	283,269
Total ASSETS	$ 148,606,390
LIABILITIES	
Current Liabilities	
Accounts payable	$ 400,540
Accrued expenses	320,301
Deferred revenue	354,567
Total Current Liabilities	1,075,408
Non Current Liabilities	
Due to other agencies	16,184,188
Long term bond payable	75,293,488
Total Non Current Liabilities	91,477,675
Deferred Inflows of Resources	
Deferred inflows related to pension	31,006
Total LIABILITIES	92,584,090
NET POSITION	
Beginning net position	
	45,795,242
Total Beginning net position	45,795,242
Changes in net position	
	10,227,058
Total Changes in net position	10,227,058
Total NET POSITION	56,022,300
TOTAL LIABILITIES, DEFERRED INFLOWS AND NET POSITION	$ 148,606,390

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY
Statement of Cash Flows
As of 9/30/2021

	Current Period	Current Year
Cash Flows from Operating Activities		
Receipts from vehicle registration fees	$ 303,320	$ 3,484,460
Receipts from interop toll revenues	160,667	1,494,498
Receipts from TPS toll revenues	278,526	2,639,884
Receipts from other operating revenues	44,866	2,490,075
Payments to vendors	(233,075)	(2,223,725)
Payments to employees	(114,771)	(1,443,620)
Total Cash Flows from Operating Activities	439,533	6,441,573
Cash Flows from Capital and Related Financing Activities		
Acquisitions of construction in progress	(80,267)	(855,039)
Payments on principal and interest	-	(4,392,808)
Line of credit payment	-	(462,643)
Proceeds related to redevelopment assets	1,419,746	1,398,866
Payment on interlocal project expenses	(291,524)	(1,368,954)
Interlocal project proceeds	13,112	5,992,868
Total Cash Flows from Capital and Related Financing Activities	1,061,067	312,290
Cash Flows from Investing Activities		
Receipts from interest income	10,119	70,241
Total Cash Flows from Investing Activities	10,119	70,241
Beginning Cash & Cash Equivalents	15,780,938	10,467,554
Ending Cash & Cash Equivalents	$ 17,291,658	$ 17,291,658

2-E CONSIDERATION AND APPROVAL OF RESOLUTION NO. 2021-001

THE STATE OF TEXAS
COUNTY OF CAMERON

RESOLUTION 2021-001

BE IT RESOLVED THAT ON THE 21ST DAY OF OCTOBER, 2021, THE CAMERON COUNTY REGIONAL MOBILITY AUTHORITY CONVENED IN REGULAR SESSION, AND UPON THE REQUEST OF THE CAMERON COUNTY REGIONAL MOBILITY AUTHORITY BOARD OF DIRECTORS, THE FOLLOWING ITEM WAS OFFERED AND ADOPTED, TO WIT:

"CONSIDERATION AND APPROVAL OF RESOLUTION NUMBER 2021-001"

WHEREAS: the Cameron County Regional Mobility Authority's (CCRMA) mission since its inception in 2005 is to promote safe and effective mobility, improve the quality of life for area residents, and to create economic development to attract job growth all through a sustainable transportation network; and

WHEREAS: CCRMA staff would like to deposit excess funds into a restricted account where funds will be deposited and utilized for the payment of debt service exclusively. Any deviation would require Board approval.

NOW THEREFORE BE IT FURTHER PROCLAIMED, that the Cameron County Regional Mobility Authority Board of Directors authorizes staff to deposit excess funds into a restricted account where funds will be deposited and only utilized for payment of debt service if needed. Any deviation for the use of those funds would require Board approval.

Passed, Approved and Adopted on this 21st day of October, 2021.

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY

FRANK PARKER, JR.
CHAIRMAN

MICHAEL SCAIEF
VICE CHAIRMAN

ARTURO A. CISNEROS
SECRETARY

AL VILLARREAL
TREASURER

MARK ESPARZA
DIRECTOR

MARIA VILLEGAS, M.D.
DIRECTOR

LEO GARZA
DIRECTOR

2-F CONSIDERATION AND APPROVAL OF AN INTERLOCAL AGREEMENT BETWEEN CAMERON COUNTY AND THE CAMERON COUNTY REGIONAL MOBILITY AUTHORITY REGARDING ADMINISTRATIVE SERVICES.

INTERLOCAL AGREEMENT

This Interlocal Agreement (the "Agreement") is made and entered into effective as of the Effective Date, hereinafter defined, by and between the CAMERON COUNTY REGIONAL MOBILITY AUTHORITY (the "CCRMA"), a political subdivision of the State of Texas, and CAMERON COUNTY, TEXAS (the "County").

RECITALS

WHEREAS, the CCRMA is a regional mobility authority created pursuant to the request of Cameron County and operating pursuant to Chapter 370 of the Texas Transportation Code (the "RMA Act") and 43 TEX. ADMIN. CODE §§ 26.1 *et seq.* (the "RMA Rules"); and,

WHEREAS, the CCRMA and the County are each units of "local government" as defined in TEX. GOV'T CODE § 791.003(4); and,

WHEREAS, Chapter 791 of the Texas Government Code provides that local governments may contract with each other for the performance of governmental functions and services, administrative functions, and the purchase of goods and services in which the contracting parties are mutually interested; and,

WHEREAS, this Agreement will increase the efficiency and effectiveness of the CCRMA and the County as contemplated by TEX. GOV'T CODE § 791.001; and,

WHEREAS, Pete Sepulveda, Jr., is the Executive Director of the CCRMA; and,

WHEREAS, Mr. Sepulveda has previously served as the Executive Director of the CCRMA and the County Administrator of the County for several years; and,

WHEREAS, the County Administrator position is currently unoccupied, and the County intends to fill that position; and,

WHEREAS, in the interim, the County needs someone to temporarily serve as the County Administrator and believes that Mr. Sepulveda is the most qualified person to temporarily serve as the County Administrator; and,

WHEREAS, by approving this Agreement, the CCRMA and the County determine that this Agreement furthers each of their interests and that this Agreement is therefore in the public interest;

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree, as follows:

I.
FINDINGS

1.1. Recitals. The recitals set forth above are incorporated herein for all purposes and are found by the parties to be true and correct. It is further found and determined that the parties have authorized and approved the Agreement by action taken by the CCRMA's Board of Directors and the County's Commissioners Court, and that this Agreement will be in full force and effect when approved by the parties (the "Effective Date").

II.
SERVICES, TERM, AND COMPENSATION

2.1. Provision of Services. The governmental functions and services provided by Mr. Sepulveda to the County under this Agreement shall be pursuant to the job description for the County Administrator most recently approved by the Commissioners Court or as hereafter assigned by the Commissioners Court subject to prior written approval of the CCRMA. The CCRMA and the County hereby find that the foregoing is reasonably required and in the public interest.

2.2. Term and Termination. The primary term of this Agreement shall commence on the Effective Date (October 1, 2021) and shall continue in full force and effect for thirty six (36) months (the "Primary Term"). Notwithstanding the foregoing, either party may unilaterally terminate this Agreement at any time by giving the other party at least thirty (30) days prior written notice of its intent to terminate.

2.3. Compensation. In return for the services provided under this Agreement, the County shall pay the CCRMA the amount of $10,000.00 in monthly installments during the term of this Agreement. Any monies paid by the County shall be paid from the current revenues of the County. The County represents to the CCRMA that the funds for this Agreement are currently budgeted and will be included in each budget for each applicable fiscal year during the term of this Agreement.

III.
GENERAL AND MISCELLANEOUS

3.1. Information. Upon reasonable advance notice, the parties at their own expense may audit each other's books and records that directly relate to the subject matter of this Agreement. Notwithstanding the foregoing and any other provision of this Agreement, each party (the "Receiving Party") shall preserve and maintain the information received from the other party (the "Disclosing Party"). The Disclosing Party shall advise the Receiving Party if any information is confidential and not subject to disclosure. Each party shall at all times act in compliance with applicable laws concerning disclosure. These obligations survive the expiration or termination of this Agreement.

3.2. Subsequent Agreements. Mr. Sepulveda is authorized to enter into subsequent written agreements directly with the County provided that the CCRMA Board of Directors provides its prior written approval for such agreements.

3.3. Indemnification and Insurance. To the extent allowed by law, the County agrees to defend and indemnify Mr. Sepulveda for all losses sustained by Mr. Sepulveda as a direct result of the discharge of his duties under this Agreement provided that such losses are not based on the

intentional misconduct, gross negligence, or bad faith of Mr. Sepulveda. To the extent allowed by law, the County agrees to defend and indemnify Mr. Sepulveda for all losses sustained by him as a direct result of any claims that arose before the Effective Date, or that otherwise relate to any action or inaction by any prior County Administrator.

3.4. Working Conditions. The County will provide Mr. Sepulveda with a private office, secretarial services, computer, e-mail services, cellular telephone, and any other facilities and services suitable to the County Administrator position or required for the performance of his duties.

3.5. Conflict. In the event a conflict of interest arises between the CCRMA and the County in Mr. Sepulveda's performance of the services described in section 2.1, this Agreement shall terminate immediately upon written notice by the CCRMA to the County provided that the County does not waive any conflict.

3.6. Notices. All written notices, demands, and other papers or documents to be delivered to either party under this Agreement shall be delivered by courier, hand delivery, or overnight express mail service, to:

To the CCRMA: Cameron County Regional Mobility Authority
3461 Carmen Ave.
Rancho Viejo, Texas 78575
Attn: CCRMA Chairman Frank Parker, Jr.

To the County: Cameron County
1100 East Monroe St.
Brownsville, TX 78520
Attn: Cameron County Judge Eddie Trevino, Jr.

3.7. Governing Law. This Agreement shall be construed, interpreted, and the rights of the parties determined in accordance with the laws of the State of Texas, as applied to contracts made and performed within the State of Texas, without regard to principles of conflicts of law.

3.8. Entire Agreement. This Agreement embodies the entire agreement between the parties and supersedes all prior agreements and understandings relating to the subject matter hereof. This Agreement may not be amended or modified except in writing and executed by both parties to this Agreement and authorized by the CCRMA's Board of Directors and the County's Commissioners Court.

3.9. Assignability. Neither this Agreement nor any right, duty, obligation, or interest hereunder may be assigned or delegated by one party hereto without the prior written consent of the other party hereto.

3.10. Severability. If any provision of this Agreement, or the application thereof, shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof, but rather this entire Agreement will be construed as if not containing the particular invalid or unenforceable provision(s), and the rights and obligations of the parties shall be construed and enforced in accordance therewith. The parties acknowledge that if any provision of this Agreement is determined to be invalid or unenforceable, it is their desire and intention that such provision be reformed and construed in such a manner that

it will, to the maximum extent permitted by applicable law, give effect to the intent of this Agreement and be deemed to be validated and enforceable.

3.11. Other Services. Nothing in this Agreement shall be deemed to create, by implication or otherwise, any duty or responsibility of either of the parties to undertake or not to undertake any other service, or to provide or not to provide any service, except as specifically set forth in this Agreement or in a separate written instrument executed by both parties.

3.12. Governmental Immunity. The parties acknowledge that this Agreement provides for the provision of goods and services and is subject to TEX. LOC. GOV'T CODE, Sec. 271.151, et. seq. Subject thereto, nothing in this Agreement shall be deemed to waive, modify, or amend any legal defense available at law or in equity to either of the parties nor to create any legal rights or claims on behalf of any third party. Neither of the parties waives, modifies, or alters to any extent whatsoever the availability of the defense of governmental immunity under the laws of the State of Texas and of the United States.

3.13. Relationship of the Parties. Nothing in this Agreement is intended to create, nor shall be deemed or construed by the parties or by any third party as creating the relationship of principal and agent, partnership, or joint venture between the parties and/or any other party. Without limiting the foregoing, the purposes for which the parties have entered into this Agreement are separate and distinct, and there are no pecuniary interests, common purposes and/or equal rights of control between the parties hereto. Each party agrees it is responsible for its negligent actions and the negligent actions of its contractors, employees, representative, and agents. Neither party waives any powers, rights or defenses it may have under applicable law.

3.14. No Third-Party Beneficiaries. This Agreement is entered into for the sole benefit of the parties and their respective successors. Nothing in this Agreement nor in any approval subsequently provided by either party hereto will be construed as giving any benefits, rights, remedies, or claims to any other person, firm, corporation, or other entity, including, without limitation, the public in general or any member thereof, any contractor of either party, or to authorize anyone not a party to this Agreement to maintain a suit for personal injuries, property damage, or any other relief in law or equity in connection with this Agreement. In the event that the approval by a third party of this Agreement is required by law, obtaining such third party's approval does not demonstrate an intent by either party or either party's successors to make such third party a third-party beneficiary of this Agreement. Both parties disclaim any intent to have any third-party beneficiaries to this Agreement to the fullest extent allowed by law.

3.15. Successors and Assigns. This Agreement shall bind and shall be for the sole and exclusive benefit of the parties and their legal successors, except as provided herein. Other than as provided in the preceding sentence, neither party shall assign, sublet or transfer its respective interest in this Agreement without the prior written consent of the other party to this Agreement. Any assignment in violation of this paragraph shall be void and shall constitute a default under this Agreement.

3.16. Limitations. All covenants and obligations of the parties under this Agreement shall be deemed valid covenants and obligations of said entities, and no officer, director, or employee of the parties shall have any personal obligations or liability hereunder. Venue for any cause of action arising out of or related to this Agreement shall be in Cameron County, Texas.

3.17. Authorization. Each party to this Agreement represents to the other that it is fully authorized to enter into this Agreement and to perform its obligations hereunder, and that no waiver, consent, approval, or authorization from any third party is required to be obtained or made in connection with the execution delivery or performance of this Agreement. Each signatory on behalf of the parties, as applicable, represents that he or she is fully authorized to bind that entity to the terms of this Agreement.

3.18. Interpretation. In the event of a question as to the interpretation of any provision of this Agreement, the provision shall not be construed against the drafting party.

3.19. Waiver. No delay or omission by either party hereto to exercise any right or power hereunder shall impair such right or power or be construed as a waiver thereof. A waiver by either of the parties hereto of any of the covenants, conditions or agreements to be performed by the other or any breach thereof shall not be construed to be a waiver of any succeeding breach thereof or of any other covenant, condition or agreement herein contained. No course of dealing between the parties will be a waiver of a right, remedy, or condition under this Agreement.

3.20. Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed an original, and all such counterparts shall constitute one single agreement between the parties.

3.21. Headings. The article and section headings used in this Agreement are for reference and convenience only and shall not enter into the interpretation hereof.

3.22. Entire Agreement. This Agreement when executed constitutes the entire agreement between the parties with respect to the subject matter hereof. There are no representations, understandings or agreements relative hereto which are not fully expressed in this Agreement.

(*Signature Page to Follow*)

IN WITNESS WHEREOF, the parties have executed this Agreement on the dates shown below, to be effective on the date listed above.

ATTEST: **CAMERON COUNTY**

REGIONAL MOBILITY AUTHORITY

Arturo A. Nelson
Secretary

Frank Parker, Jr, Chairman

Date:

ATTEST:

CAMERON COUNTY

Sylvia Garza-Perez
County Clerk

Eddie Trevino, Jr.
County Judge

Date:

2-G CONSIDERATION AND AUTHORIZATION TO APPROVE A JOB ORDER CONTRACTING AGREEMENT WITH A & I CUSTOM MANUFACTURING, LLC FOR CONSTRUCTION AND RENOVATION OF THE CAMERON COUNTY ISLA BLANCA TOLL BOOTHS VIA CONTRACT WITH CHOICE PARTNERS.

2-H CONSIDERATION AND APPROVAL TO TERMINATE WORK AUTHORIZATION NO. 19 WITH S&B INFRASTRUCTURE REGARDING THE EAST LOOP PROJECT.

WORK AUTHORIZATION NO. 19

This Work Authorization is made as of this 28th day of May, 2020, under the terms and conditions established in the AGREEMENT FOR GENERAL CONSULTING CIVIL ENGINEERING SERVICES, dated as of May 10, 2018 (the "Agreement"), between the Cameron County Regional Mobility Authority (the "Authority") and S&B Infrastructure, Ltd. (the "GEC" or "Engineer").

This Work Authorization is made for the following purpose, consistent with the Services defined in the Agreement: ***Professional services including: providing engineering services for the preparation of Plans, Specifications & Estimates (PS&E) and Construction Management support services for the proposed roadway project as identified in Contract as East Loop from Interstate 69E to 1.57 Miles East of the intersection of SH 4 and FM 1419 along with levee relocation -- Project Roadway Length = 11.4 Miles Project Levee Length 1.7 Miles.***

Section A. - Scope of Services

A.1. GEC shall perform the following Services:

GEC shall perform the Services as listed in Exhibit B and as requested by the Authority.

Section B. - Schedule

GEC shall perform the Services and deliver the related Documents (if any) according to the following schedule as shown on Exhibit C.

Section C. - Compensation

C.1. In return for the performance of the foregoing obligations, the Authority shall pay to the Engineer the amount not to exceed $3,424,587.32, based on the attached fee estimate shown on Exhibit D. Compensation shall be in accordance with the Agreement.

C.2. The Authority shall pay the GEC under the following acceptable payment method – Lump Sum Payment Method.

C.3. Compensation for Additional Services (if any) shall be paid by the Authority to the GEC according to the terms of a future Work Authorization.

Section D. - Authority's Responsibilities

The Authority shall perform and/or provide the services as stated in Exhibit A in a timely manner so as not to delay the Services of the Engineer.

Section E. - Other Provisions

The parties agree to the following provisions with respect to this specific Work Authorization: None.

-SIGNATURES ON NEXT PAGE-

Except to the extent expressly modified herein, all terms and conditions of the Agreement shall continue in full force and effect.

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY

By: _____
Frank Parker, Jr., Chairman

Date: 6/30/20

S&B INFRASTRUCTURE, LTD.

By: _____
Daniel O. Rios, PE, President

Date: _____

LIST OF EXHIBITS
Exhibit A - Authority's Responsibilities
Exhibit B - Services to be Provided by Engineer
Exhibit C - Work Schedule
Exhibit D - Cost Proposal

EXHIBIT A
Authority's Responsibilities

The following provides an outline of the services to be provided by the **Authority** in the development of the **Project** for this work authorization.

GENERAL

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

(1) Provide **Engineer** with a Notice to Proceed.

(2) Payment for work performed by the **Engineer** and accepted by **Authority** in accordance with this 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 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 an agreed-upon work schedule.

(5) Coordinate with TxDOT for items as needed. The Authority will negotiate and approve all change orders and other contract revisions that the Authority finds necessary or convenient to accomplish the construction activities for the Project. For change orders and other contract revisions that affect prior environmental approvals or result in non-conformity with the specifications and standards agreed upon for the Project, the Authority must assess any potential environmental effects and any additional or revised environmental permits, issues, coordination, mitigation, and commitments required as a result of the contract revisions.

(6) Provide the **Engineer** the previous obtained mylars and electronic MicroStation files for the project.

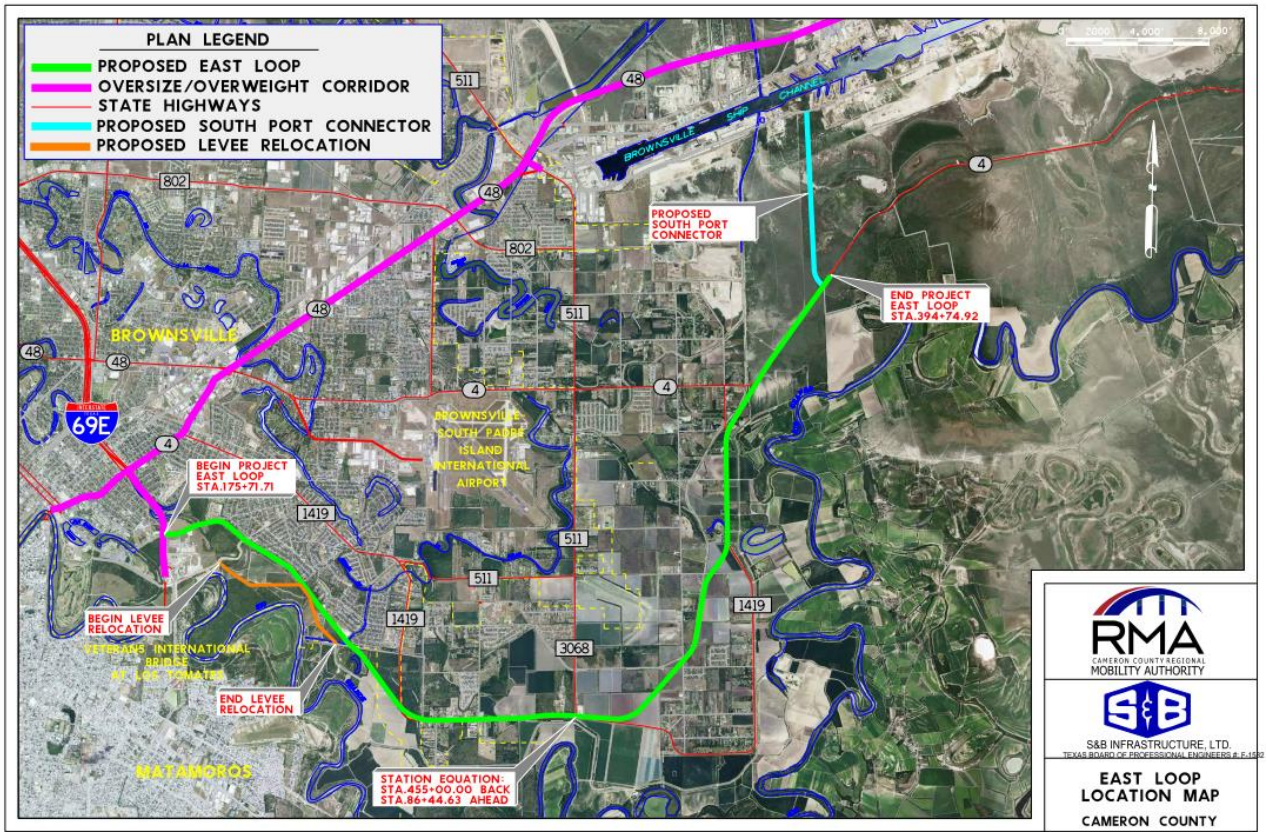
(7) Assist the **Engineer** in notifying previous Engineer Designers of modifications being made to existing plan designs.

EXHIBIT "B"

Services to be Provided by the Engineer

GENERAL

The work to be performed by the **Engineer** under this contract consists of providing engineering services required for the preparation of Plans, Specifications and Estimates (PS&E) and Construction Management support services for the proposed roadway project as identified in Contract as **East Loop from Interstate 69E to 1.57 Miles East of the intersection of SH 4 and FM 1419 along with levee relocation -- Project Roadway Length = 11.4 Miles Project Levee Length 1.7 Miles.**



The existing traffic capacity on existing roadways and number of main lanes must be maintained at all times during construction of the new facility, with any exceptions to be approved by the **State/Authority**. The Levee relocation must be completed to the Top of Levee Elevation (TOLE) without freeboard before the existing levee is removed. The **Engineer** shall prepare plans, details and compute quantities to include roadway design, grading, paving, sidewalks, drainage including pump stations, traffic signals, signing, pavement markings, illumination – safety lighting, traffic control plans, storm water pollution prevention plans, retaining walls – noise walls, levee relocations, border fence relocation, specifications, and cost estimates. The **Engineer** shall prepare the bridge layouts and furnish the structural details, confirm the layouts and/or structural details with the **Authority**, and bridge quantities for the designated bridges. The **Engineer** shall also provide Construction Phase Services. (Construction Management Services are not included in this scope at this time)

The **Engineer** shall collect, review and evaluate the available existing data pertaining to the project and prepare the Plans, Specifications and Estimates in accordance with the requirements and policies of the **State/Authority**.

The **Engineer** shall identify, prepare exhibits and complete all necessary forms for Design Exceptions and/or Waivers within project limits prior to the 30% Submittal. These exceptions shall be provided to the **State/Authority** for coordination and processing of approvals. If subsequent changes require additional exceptions, the **Engineer** shall notify the **State/Authority** as soon as possible after identification.

The **Engineer** shall provide field surveying services necessary to produce the Digital Terrain Model (DTM), produce topographic maps, establish the project baseline on the ground, locate and tie existing utilities to the project baseline. Coordinate geometry shall be based on and tied into **State** plane surface coordinate system. During all surveying operations the traffic shall be controlled in accordance with the latest edition of the Texas Manual on Uniform Traffic Control Devices-Part IV.

It shall be the responsibility of the **Engineer** to secure permission to enter private property for the purpose of performing any surveying, environmental and engineering/geotechnical activities. In pursuance of the **State/Authority**'s policy with the general public, the **Engineer** shall not commit acts which will result in damages to private property and the **Engineer** will make every effort to comply with the wishes and address the concerns of private property owners. The **Engineer will**, at all times, contact the property owner prior to any entry onto the owner's property.

The **Engineer** shall coordinate with adjacent Engineers on all controls at interfaces. In the event agreement cannot be reached, each **Engineer** shall meet jointly with the **State/Authority** for resolution. The **State/Authority** shall have authority over the Engineers' disagreements and its decision shall be final.

The **Engineer** shall perform their work in accordance with the **State**'s Utility Accommodation Policy. The **Engineer** shall prepare drawings early in the design phase (30 %) to be used as exhibits in utility agreements. The exhibits shall be prepared using English units. The **Engineer** shall show existing utilities, including those in conflict with construction on this project. The **Engineer** shall prepare plans to avoid utility adjustments, where feasible. The **Engineer** shall be responsible for sending out notices, with copies of exhibits and plans, including all milestone submittals.

The **Engineer** shall compile, maintain and update a Utility Conflict List. The **Engineer** shall provide the most current copy of the conflict list to the **State/Authority** at each milestone submittal and shall be responsible for coordination with utility companies to resolve conflicts. The Utility Conflict List shall identify the owner of the facility, the contact person (with address and telephone number), location of conflict (station and offset), type of facility, expected clearance date and type of adjustment necessary.

The **Engineer** shall prepare any exhibits necessary for IBWC, CBP and/or Utility approvals, and other governmental/regulatory agencies, specific to the project.

The **Engineer** shall coordinate through the **Authority**'s Project Manager for the development of the PS&E with any local entity having jurisdiction or interest in the project (e.g. city, county, municipal utility district, irrigation district, drainage district, etc.)

The **Engineer** shall conduct traffic counts, prepare Traffic Signal Warrant Studies and traffic signal plans for temporary, existing and permanent locations at designated intersections.

The **Engineer** shall prepare Traffic Control Plans (TCP) in coordination with the **State/Authority**. The TCP shall include interim signing for every phase of construction. This is to include regulatory, warning, construction, route, and guide signs. The **Engineer** shall interface and coordinate phases of work, including the TCP, with adjacent Engineers, which are responsible for the preparation of the PS&E for adjacent projects.

The **Engineer** shall maintain continuous access to abutters during all phases of the TCP. The **Engineer** shall develop a list of all abutters along its alignment. The **Engineer** shall prepare exhibits for and attend meetings with the public, as requested by the **State/Authority**.

The **Engineer** shall provide safety lighting at all intersections and interchanges required within the Project limits. The **Engineer** shall prepare exhibits as required to obtain agreements with adjacent municipalities. The **Engineer** shall tabulate all quantities and provide summary sheets.

The **Engineer** shall make every effort to prevent detours and utility relocations from extending beyond the proposed Right-of-way lines. If it is necessary to obtain additional permanent or temporary easements and/or Right-of-Entry, the **Engineer** shall notify the **State/Authority** in writing of the need and justification for such action. The **Engineer** shall identify and coordinate with all utility companies for relocations required.

The PS&E shall be complete and organized in accordance with the most current TxDOT-PS&E Preparation Manual. The PS&E package shall be suitable for the bidding and awarding of a construction contract, and in accordance with the latest **State/Authority**'s policies and procedures.

The **Engineer** shall use CADD to fully develop all drawings. The **Engineer** shall utilize corridor modeling software for the earthwork and cross-section data files in a GEOPAK format at each milestone submittal as an evolving electronic data file.

The **Engineer** shall design, develop and prepare all documents, including PS&E, in English units. The final plan sheets shall be size 11" x 17", signed, sealed and dated by a Professional Engineer registered in the **State** of Texas (where required). The plans shall be noted as copyrighted with the **Authority's** and **State's** logo.

PS&E for the above work shall be prepared in accordance with the applicable requirements of the **State**'s Specifications, Standards and Manuals (latest revision). Whenever possible, the **State**'s standard drawings, standard specifications, or previously approved special provisions and/or special specifications shall be used. If a special provision or a special specification must be developed or modified for this project, it shall be in the **State**'s format and, to the extent possible, incorporate references to approved **State** test procedures. Any specifications developed by the **Engineer** shall be submitted to the **State/Authority** for approval prior to

inclusion in the PS&E. The **Engineer** shall sign, seal, and date all project specific modifications to standard drawings.

The **Engineer** shall make submittals, as defined by the milestones in Exhibit C, and in accordance with the latest **State/Authority**'s policies and procedures. The submittals shall consist of electronic .pdf submittals. The **Engineer** shall reply to each comment either within the plan set or by separate cover letter. The **Engineer** shall make all agreed upon changes to the submitted documents before the next scheduled submittal.

The **Engineer** may be required to meet with the **Authority**'s Project Manager to report on progress. After each meeting with the **State** and any other meeting, the **Engineer** shall prepare meeting minutes, solicit and incorporate participants' comments, distribute the minutes, submit a memorandum summarizing the events, including an ACTION ITEM LIST, within five (5) working days of the meeting.

The **Engineer** shall invoice monthly according to Function Code breakdowns in accordance with the format provided at the Kick-off meeting and shall include Form 132 version 9-90 or equivalent. This invoice shall include a completed Form 132, a written progress report, a Projected vs. Actual Contract Invoices by Month form and a bar chart indicating the percentage of completion of each task shown in Attachment E. The written progress report shall describe activities during the reporting period; activities planned for the following period; problems encountered, and actions taken to remedy them; list of meetings attended; and overall status, including a per cent complete by task.

The **Engineer** shall design all conventional storm drainage and cross drainage systems. The **Engineer** shall evaluate the hydraulic grade line throughout the whole system, within the project limits, for the design frequency(ies) and make necessary system adjustments for conformance to program criteria. Should there be adjacent projects under design, the **Engineer** shall coordinate with the **State/Authority** and designers of adjacent projects such that all proposed drainage systems accommodate the proposed construction phasing plan.

The **Engineer** shall include the Storm Water Pollution Prevention Plans (SW3P) items for each phase of constructions, including details and pay quantities with respect to the Construction phase. The **Authority** will provide the Notice of Intent.

The **Engineer** shall prepare both a design time schedule, and an estimated construction contract time schedule, using the latest version of Excel, Primavera or SureTrak software in accordance with the **State**'s *Administrative Circular No. 17-93*. The schedules shall indicate tasks, production rates, subtasks, critical dates, milestones, deliverables and review requirements in a format that depicts the interdependence of the various items. The **Engineer** shall aid **State/Authority** personnel in interpreting the schedules. Milestone submittals shall be at 30 %, 60 %, 90%, 95% and final. If the **Engineer** cannot meet the scheduled milestone review date they are to advise the **State/Authority** in writing.

In addition to scheduling software set forth above, reports and/or spreadsheets prepared in connection with these services shall be in the Microsoft (MS) Office software compatible with the versions to the **State/Authority**'s software packages.

The project's engineering work may be inspected by both the **State/Authority** and the Federal Highway Administration in the offices of the Engineer, except for the field work which shall be performed on-site, and the sub-consultant work which will be performed in the office of the sub-consultant. After notice to proceed is given in writing, the PS&E for the work outlined above shall be completed and submitted to the **State/Authority** within the negotiated contract period per the identified milestones in the schedule.

All documents submitted to the **State/Authority** shall be accompanied by a letter of transmittal which shall include, but need not be limited to, the highway number, project limits, county, CSJ, and contract number.

The **Engineer** shall designate one Texas Registered Professional Engineer to be responsible throughout the project for project management and all communications, including billing, with the **State/Authority**. The **State/Authority** must approve any replacement to the Engineer's designated Project Manager.

The **Engineer** shall prepare and execute contracts with sub-consultants, monitor sub-consultant activities (staff and schedule), and review and recommend approval of sub-consultant invoices.

The **Engineer** shall implement their Quality Assurance/Quality Control program prior to submitting plans to the **State/Authority** for each of the milestones. The **Engineer** is responsible for design errors and/or omissions that become evident before, during or after construction of the project. The **Engineer**'s responsibility for all questions arising from design errors and/or omissions will be determined by the **State/Authority** and all decisions shall be final and binding. This would include, but not necessarily be limited to:

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

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

WORK OUTLINE

ROUTE AND DESIGN STUDIES (Function Code 110)

A. Data Collection. The **Engineer** shall collect, review and evaluate data described below. The **Engineer** shall notify the **State/Authority** in writing whenever the **Engineer** finds disagreement with the information or documents:

1. Data, if available, from the **State/Authority**, including "as-built plans", existing schematics, right-of-way maps, SUE mapping, existing cross sections, existing planimetric mapping, environmental documents, existing channel and drainage easement data, existing traffic counts, accident data, BRINSAP records, PMIS data, identified endangered species, identified hazardous material sites, current unit bid price information, current special provisions, special specifications, and standard drawings.
2. Documents for existing and proposed development along proposed route from local municipalities and local ordinances related to project development.
3. Utility plans and documents from appropriate municipalities and agencies.
4. Readily available flood plain information and studies from the Federal Emergency Management Agency (FEMA), the U. S. Army Corps of Engineers, local municipalities and other governmental agencies in addition to that provided by the **State/Authority**.

B. **Field Reconnaissance.** The **Engineer** shall conduct field reconnaissance and collect data including a photographic record (to be maintained in Engineer's office) of notable existing features.

C. **Design Concept Conference.** The **Engineer**, in cooperation with the **State/Authority** shall plan, attend and document a Design Concept Conference (DCC). Personnel from the **State**'s Pharr District will participate. The conference will provide for a brainstorming session in which decision makers, stakeholders, including USIBWC and technical personnel may discuss and agree on:

1. Roadway and drainage design parameters
2. Engineering and environmental constraints
3. Project development schedule
4. Other issues as identified by the **State/Authority**

D. **Roadway and Hydraulic Design Criteria**. The **Engineer** shall design the project using the **State**'s design criteria. The **Engineer** shall supply project specific design criteria (typical sections, estimate, design exceptions, etc.) to be inserted into the Design Elements form for discussion at the DCC.

The Engineer shall develop the roadway design criteria based on the controlling factors specified (i.e. 4R, 3R, 2R, or special facilities), by use of the funding categories, design speed, functional classification, roadway class and any other set criteria as set forth in Roadway Design Manual, Bridge Design Manual, Hydraulic Design Manual, and other deemed necessary State approved manuals. In addition, the Engineer shall prepare the Design Summary Report, DSR.

FIELD SURVEYING AND PHOTOGRAMMETRY (Function Code 150)

A. **Field Surveying.** The **Engineer** shall verify and reset existing benchmarks previously set in previous work orders.

The **Engineer** shall:

1. Stake Project Baseline: The project base line must be coincidental with, or parallel to, the stationed "Design Center Line." Base line control points shall be established using 15M(ASTM) (5/8 inch) iron rods, 36 inches long, at P.C.' s, P.I.'s and P.T.'s of horizontal curves and at 1000 feet maximum intervals on tangents. Baseline control points shall be offset with set iron rods on both sides near the existing ROW lines at a measured distance. If available, coordinate to field tie to the Project baseline set by adjacent Engineers for consistency and accuracy.

2. Vertical Control for existing Benchmarks: Locate previously set benchmarks established by **Engineer** (In accordance to the horizontal control of North American Datum of 1983 (NAD 83) with elevations being based on the North American Datum 88 (NAVD88); establish benchmark circuit (run levels) throughout the Project; establish additional benchmarks at intervals not to exceed 1,000 feet for the limits of the Project; tie benchmarks (station/offset) to Project baseline. Benchmarks shall be 20M (ASTM) (3/4-inch) diameter, 48 inches long, located near the existing ROW line at a measured distance. All benchmark circuits shall be tied to the **State**'s elevation datum. Perform the benchmark circuits in accordance with good surveying practices. The Surveyor shall verify the closure and submit adjustments to **State/Authority** for approval prior to beginning the field surveys.

2A. Vertical Control for new Benchmarks: Shall meet the following requirements:

- TxDOT GPS Level 3 (VRS) Survey guidelines and shall have (X, Y, & Z) coordinates assigned to them. (Access will be provided to State's Real Time Kinematic (RTK) Virtual Reference Station (VRS) Network via license agreement)
- Provide Station and Offset.
- Perform a three wire level routine in SDMS to establish the elevations of the benchmarks.

3. Profile and cross section intersecting streets and driveways (to 50 feet outside ROW for driveways, and 200 feet for intersecting streets and 500 feet for intersecting streets greater than two lanes wide) for tie into project.

4. Cross section drainage channels for a distance of 200 feet each way outside the ROW lines. Cross sections shall not exceed 100 feet intervals and shall be taken at right angles to the channels.

5. Secure right-of-entry (short of litigation), as needed for the project.

6. Tie to existing underground and overhead utilities (location, elevation, size and direction), in accordance with Attachment A.

7. ROW staking for additional field topography related to design work.

8. Determine and make changes to topography from outdated maps due to development, erosion, etc.

9. Determine type of existing material, pavements, etc.

10. Obtain profiles of existing drainage facilities.

11. Obtain measurement of hydraulic opening under existing bridges.

12. Obtain top of manhole and flowline elevations, type and size, etc. of manholes, inlets, and valves of utilities.

13. Provide temporary signs, traffic control, flags, safety equipment, etc. and obtain necessary permits.

14. Obtain ties to existing bridges or culverts that may conflict with new construction.

15. Verify DTM (cross sections at panel points). Obtain additional existing ground cross sections as necessary to supplement the DTM files. Obtain cross sections at the center panel points to verify the DTM.

16. Obtain line (PGL) and the edges of slab at bent location.

17. Perform datum ties as required. If required, establish an elevation base on the **State**'s datum to other public entities published benchmarks.

18. The Surveyor using wetlands delineation information provided by the **State/Authority** shall stake the areas containing wetlands. The Surveyor is to information back to the **Engineer** in an electronic file to be incorporated onto the P&P sheets

19. The Surveyor shall provide all traffic control, labor and equipment while performing their services and comply with the latest edition of the *Texas Manual on Uniform Traffic Control Devices*. In the event field personnel must divert traffic or close traveled lanes, a Traffic Control Plan shall be prepared by the **Engineer**'s surveyor and approved by the **State/Authority** prior to commencement of field work. A copy of the approved plans shall be in the possession of field personnel on the job site at all times and shall be made available to **State/Authority** personnel upon request.

20. All standards, procedures and equipment used by the Surveyor shall be such that the results of survey will be in accordance with Board Rule 663.15, as promulgated by the Texas Board of Professional Land Surveyors. At a minimum, the following standards of accuracy shall be met:

B. **<u>Horizontal Ground Control</u>**

The coordinate location of the traverse points shall be based on traverses conducted by the Surveyor meeting standards of accuracy as set forth below.

Reference may be made to standards of accuracy for Second Order, Class II, horizontal control traverses as described in the Federal Geodetic Control Committee publication

entitled *Standards and Specifications for Geodetic Control Networks*, reprinted February 1991.

- Azimuth closure shall not exceed 4.5 seconds times the square root of the number of traverse segments.
- Position closure after azimuth adjustment shall not exceed 1 in 20,000.
- In cases where a traverse approaches but does not entirely meet these standards of accuracy and the Surveyor has assured itself that gross errors, mistakes and blunders have been eliminated, the Surveyor shall submit the traverse data to the **State/Authority** for further review. The **State/Authority** will make a determination as to the acceptability of the traverse as an exception to the standard and notify the Surveyor accordingly.

C. <u>Vertical Ground Control</u>

Elevations established on the benchmarks shall be conducted by the Surveyor meeting standards of accuracy as set forth below. Reference may be made to standards of accuracy for third order vertical control traverses as described in the Federal Geodetic Control Committee publication entitled *Standards and Specifications for Geodetic Control Networks*, reprinted February 1991.

- Vertical closure shall not exceed 0.05 feet times the square root of the distance in miles.

- In case where a traverse approaches but does not entirely meet these standards of accuracy and the Surveyor has assured itself that gross errors, mistakes and blunders have been eliminated, the Surveyor shall submit the traverse data to the **State/Authority** for review. The **State/Authority** will make a determination as to the acceptability of the traverse as an exception to the standard, and the **State/Authority** will notify the Surveyor accordingly.

- Document field work and submit field data to the **State/Authority**.

ROADWAY DESIGN (Function Code 160)

A. Roadway & Levee Design. All roadway and levee design will be based on the approved Schematics provided by the Authority. The **Engineer** shall provide roadway and levee plan and profile drawings using CADD standards as required by the **State/Authority**. The drawings shall consist of a planimetric file of existing features and files of the proposed improvements. The roadway and levee base map shall contain line work that depicts existing surface features obtained from the schematic drawing. Existing major subsurface and surface utilities shall be shown. Existing and proposed right-of-way lines shall be shown.

The plan view shall contain the following design elements:

1. Calculated roadway centerlines for new eastbound and/or westbound mainlanes, ramps, and cross streets. Horizontal control points shall be shown. The alignments shall be calculated using GEOPAK.
2. Pavement edges for all improvements (mainlanes, ramps, cross streets access roads, maintenance roads and driveways).

3. Lane and pavement width dimensions.
4. The geometrics of ramps, auxiliary and managed lanes.
5. Proposed structure locations, lengths and widths.
6. Direction of traffic flow on all roadways. Lane lines and/or arrows indicating the number of lanes shall also be shown.
7 Drawing scale shall be 1"=100'
8. Access Denial line & ROW lines and easements.
9. Begin/end superelevation transitions and cross slope changes.
10. Limits of riprap block sod and seeding.
11. Existing utilities and structures.
12. Benchmark information.
13. Radii callouts, curb location, CTB, guard fence, crash safety items and American with Disabilities Act Accessibility Guidelines (ADAAG) compliance items.

The profile view shall contain the following design elements:

1. Calculated profile grade for proposed roadways, including mainlanes, direct connectors, ramps, cross streets and frontage roads. Vertical curve data, including "K" values shall be shown.
2. Existing and proposed profiles along the proposed centerline of the mainlanes, the outside shoulder line of ramps, and the outside gutter line of frontage roads.
3. Water surface elevations at major stream crossing for 10-, 25-, 50-, and 100- year storms.
4. Calculated vertical clearances at grade separations and overpasses, taking into account the appropriate superelevation rate, superstructure depth and required clearance.
5. The location of interchanges, mainlanes, grade separations and ramps (shall include cross sections of any proposed or existing roadway, structure, or utility crossing).
6. Drawing vertical scale to be 1"=10'.
7. For the Levee sheets the Design Water Surface profile shall also be shown.

B. **Typical Sections:** Typical sections shall be required for all proposed and existing roadways, levees, and structures. Typical sections shall include width of travel lanes, shoulders, outer separations, border widths, curb offsets, managed lanes, and ROW. The typical section shall also include PGL, centerline, pavement design, longitudinal joints, side slopes, sodding/seeding limits, concrete traffic barriers, station limits, common proposed/existing structures including retaining walls, riprap, limits of embankment excavation, etc.

C. **Roadway Design:** The **Engineer** shall provide the design of all roadways, including mainlanes, entrance and exit ramps, managed lanes and auxiliary lanes. The design shall be consistent with the approved schematic and the current *Roadway Design Manual*. If managed lanes are to be designed this work shall be coordinated through the **State/Authority**.

D. **Levee Design:** The **Engineer** shall provide the design of the levee relocation in coordination with the USIBWC. A continuous maintenance road shall be provided. The

design shall be consistent with the approved schematic and the current *Design and Construction of Levees Manual.*

E. **Cross Streets:** The **Engineer** shall provide an intersection layout detailing the pavement design and drainage design at the intersection of each designated major cross street. The layout shall include the curb returns, geometrics, transition length, stationing, pavement and drainage details. The **Engineer** shall design for full pavement width to the ROW and provide a transition to the existing roadway.

E. **Cut and Fill Quantities.** The **Engineer** shall develop an earthwork analysis which will be based on Open Roads utilizing 3d modeling. Cross sections shall be delivered in standard GEOPAK format on 11"x17" sheets and electronic files. The **Engineer** shall provide all criteria and input files used to generate the design cross sections. Cross sections and quantities shall consider existing pavement removals. Two sets of drawings shall be submitted by the **Engineer** at the 30%, 60%, and 90%, and final submittals, respectively.

F. **Border Fence Relocation.** The Engineer shall coordinate through the **Authority** with United States Department of Homeland Security (DHS) for the requirements and regulations for the border fence relocation. The temporary fence shall be salvaged as per DHS guidelines.

H. **Plan Preparation.** The **Engineer** shall prepare roadway plans, profiles and typical sections for the proposed improvements. This scope of services and the corresponding cost proposal are based on the **Engineer** preparing plans to construct east and west bound lanes, ramps, and cross streets at intersections. Wetlands information as provided by the **State/Authority** is to be staked by the **Engineer** for delineation and this data shall be electronically transferred to the P&P sheets.

I. **Pavement Design**. The **Engineer** shall incorporate the pavement design developed by the **State/Authority** for this project.

J. **Pedestrian and Bicycle Facilities.** The **Engineer** shall coordinate with the **State/Authority** to incorporate pedestrian and bicycle facilities as required. All pedestrian facilities must be designed in accordance with the latest *Americans with Disabilities Act Accessibility Guidelines* (ADAAG), the *Texas Accessibility Standards* (TAS), and the AASHTO *Guide for the Development of Bicycle Facilities".*

K. **Driveway Details.** The **Engineer** shall design all driveways in accordance TxDOT's, "Regulations for Access Driveways to State Highways", any approved latest version of the "Access Management Manual", and the Pharr District Standard Driveway Details. The **Engineer** shall notify the **State/Authority** early in the design process when a construction license agreement is needed to construct a portion of the driveway outside of the **State**'s Right of Way. The Engineer shall design the intersection by preventing the bottom of the vehicles to be wedged when accessing onto an adjacent property.

L. **Miscellaneous.** The **Engineer** shall design all longitudinal barriers (railing and guardrail), raised median, fencing, bus bays, parking areas, mailboxes, and shoulder texturing in accordance to the criteria set forth in the roadway design manual and

standards. Miscellaneous Details Sheet(s) may be developed to illustrate any necessary additional construction details not covered by the Standards. Standards that have not been approved for use in the Pharr District shall be signed, sealed, and dated by a Registered Professional Engineer in Texas for use as details. Approval shall be requested at the early stage of the plan preparation from the **State/Authority** regarding the use of these details. In addition, as part of the approval process, these details shall be accompanied by the appropriate general notes, special specifications, special provisions, and method of payment.

DRAINAGE DESIGN (Function Code 161)

A. Drainage Report. The **Engineer** shall design all of the project drainage elements and coordinate all drainage design.

1. The **Engineer** will prepare a comprehensive drainage study and two reports for the project. The report for roadway elements shall be divided into two phases. The first phase will include the following items:

    - Obtain existing HEC-2 models from applicable drainage authorities to the extent possible, for use in analysis and determination the existing 2, 5, 10, 25, 50, 100 and 500 year (if available), water surface elevations at bayous, creeks, and ditch crossings along the project. This data will be utilized in the development of design roadway profiles.
    - Profile of natural ground along each proposed grade line of the roadway.
    - Profile of tentative proposed grade line of the roadway.
    - Profile of existing roadway.
    - Identify the existing drainage outfalls.
    - Pump Station design if applicable

2. These profiles will be superimposed on a drawing along with the 2, 5, 10, 25, 50, 100 and 500-year (if available) water surface elevations. The profile drawing will provide an overall view of the roadway/existing ground elevations with respect to the various storm design frequencies for the length of the project. This will enable the **State/Authority** to determine the most feasible proposed roadway profile. These profiles must be submitted to the **State/Authority** and approved before continuing with the preparation of the comprehensive drainage report. NOTE: THE **ENGINEER** WILL COORDINATE WITH ALL GOVERNMENT AGENCIES THROUGH THE **AUTHORITY**.

3. Manhole headlosses are to be computed as per the **State/Authority**'s direction. Also, GEOPAK Drainage with a pressure flow equation generally applicable to pipe running full flow. A hydraulic grade line starting at the outfall channel will be determined for each storm sewer system in order to obtain a design tailwater for each existing system. The design tailwater will be the starting basis for the design of the proposed storm sewer system.

4. For drainage areas, the **Engineer** will limit the outfalls into existing storm sewer to existing capacity flows, which will be determined by the **Engineer**. Alternate flow routes, if feasible, will be looked into for relieving storm sewer overload. The amount of the total detention storage to control storm sewer runoff for the design frequency will be determined, as well as a rough estimate of the available on-site volume. The method for handling the required off-site storage volume is not part of this scope.

5. Drainage areas and flows for cross culvert drainage systems will be determined as part of the comprehensive drainage report. Sizing of the drainage crossings and hydrologic information once determined will be provided to the **State/Authority**.

6. The **Engineer** will prepare a letter report which shall include the preliminary findings of the storm sewer capacities, requirement for line rerouting, preliminary detention storage volumes and initial recommendations on how to mitigate the storm impact on the receiving streams. The report will also include preliminary sizing of the trunkline for the proposed gravity storm sewer within the limits of the project, conceptual and generic discussions of the alternatives considered, a comparative cost associated with each alternative and a recommended solution.

7. Recommendations at this point should be generic and conceptual in nature, mainly for discussions with the **State/Authority** and the local government entities.

8. An impact analysis is required on the ditches as related the **State/Authority** and FEMA criteria 100-year storm. The **State/Authority** required approach for impact prediction is as follows:

    - Drainage areas for the existing and proposed conditions.
    - The **Engineer** will identify the existing drainage outfalls.
    - Compute right of way corridor 100-year flood plain volumes for existing and proposed roadway elevations. A decrease in 100-year flood plain volumes is not allowed by the **State/Authority** or other governmental agencies, without adequate offsite mitigation.
    - Compute existing and proposed peak flows by using hydraulics and hydrologic methodology and computer models. The additional lanes should be accounted for by increasing percent development.
    - Storage computations will be based on hydrograph calculations and peak flows obtained in the item above. A mitigation volume for the 100-year storm will be computed.
    - Analyze existing and proposed drainage system and quantify the increase in 100-year peak flows resulting from the roadway improvements.
    - Hand calculations shall be provided which quantify the cut and fill within the 100-year flood plain, if any occur.
    - Prepare conceptual 100-year sheet flow analysis for project utilizing existing and proposed conditions.
    - Obtain current hydrologic and hydraulic computer models from government agencies and review and comment on the models.

- Current models will be updated to existing condition using the available **State/Authority** aerial photographs and submitted to governmental agencies as the revised existing condition model.
- Analyze proposed roadway and outfall drainage improvements to quantify impacts top revised existing condition model.

1. At this point, a separate report (signed, sealed and dated by a professional Engineer) including results will be summarized and presented to the **State/Authority** for discussion. If mitigation is needed, location of storage volume and/or approaches to satisfy government agencies is not a part of this scope. After the **State/Authority** has reviewed and approved the floodplain impact analysis report, the **Engineer** will be compensated 80 percent of the total task shown in the fee proposal for the work order. The remaining 20 percent will be paid after the other agencies involved have approved the report.

2. The **Engineer** will also be responsible for the second report which will include the Levee relocation analysis with respect to the USIBWC guidelines. This will be a separate report from the one above to include the results/impacts of the levee relocation. Coordination with USIBWC shall be documented in this report along with obtaining the appropriate license agreement from the agency.

B. Scour Analysis to be provided at the bridge and bridge class culvert locations.

C. Culvert, Pump Station and Storm Drain Design. The **Engineer** shall develop design details that minimize the interference with the passage of traffic or incur damage to the highway and local property. The **Engineer** shall provide layouts, drainage area maps, and design of all drainage components. The **Engineer** shall design all conventional storm drainage and cross drainage in conformance with the
latest edition of the **State** *Hydraulic Manual* and any specific program guidance provided by the **State**. Storm drain design shall be performed using WinStorm or GEOPAK Drainage. Cross drainage design shall be performed using THYSYS, THYSYS CULVERT, HEC 2 or HEC RAS. The **Engineer** shall evaluate the hydraulic gradeline throughout the whole system, within project limits, for the design frequency(ies) and make necessary system adjustments for conformance to program criteria. The **Engineer** shall coordinate with the **State/Authority** and designers of adjacent projects to check that all proposed drainage systems accommodate the proposed construction phasing plan.

The **Engineer** shall perform the following:

1. Prepare culvert cross sections.
2. Identify areas requiring trench protection, excavation, shoring and de-watering.
3. Prepare drainage area maps.
4. Prepare plan/profile sheets for storm drain systems and outfall ditches.
5. Select standard details from **State/Authority** or District's list of standards for items such as inlets, manholes, junction boxes and end treatment, etc.
6. Prepare details for pump station, non-standard inlets, manholes and junction boxes.

7. Prepare drainage details for outlet protection, outlet structures and utility accommodation structures.
8. Identify pipe strength requirements.
9. Prepare drainage facility quantity summaries.
10. Identify potential utility conflicts and design around them, wherever possible.
11. Take into consideration pedestrian facilities, utility impacts, driveway grades, retaining wall and concrete traffic barrier drainage impacts.
12. Identify existing ground elevation profiles at the ROW lines on storm sewer plan and profile sheets.
13. If applicable, prepare Hydraulic Data Sheets for Bridge Class Culvert(s).

D. Storm Water Pollution Prevention Plans (SW3P). The **Engineer** shall minimize potential impact to receiving waterways. The SW3P shall include text describing the plan, quantities, type, phase and locations of erosion control devices and any required permanent erosion control measures.

E. Temporary drainage facilities. The **Engineer** shall develop plans for all temporary drainage facilities necessary to allow staged construction of the project and to conform with the phasing of adjacent construction projects without significant impact to the hydraulic capacity of the area.

F. Layout, Structural Design and Detailing of Drainage Features.

The **Engineer** shall perform layout, structural design and detailing for the following:

1. Culverts: New culverts; culvert replacement.
2. Storm Sewers: New or modified storm sewers; inlets; manholes; trunk lines.
3. Subsurface drainage at retaining walls.
4. Outfall channels within or outside of the existing ROW
5. Bridge deck drainage systems, including internal drainage piping within the bents where required on structures.

The **Engineer** shall use standard details where practical.

SIGNING, MARKINGS AND SIGNALIZATION (Function Code 162)

A. Signing. The **Engineer** shall prepare drawings, specifications and details for all signs. The **Engineer** shall coordinate with the **State/Authority** (and other Engineers as required) for overall temporary, interim and final signing strategies and placement of signs outside contract limits. Sign detail sheets shall be prepared for large guide signs showing dimensions, lettering, shields, borders, corner radii, etc., and shall provide a summary of large and small signs. The **Engineer** shall also designate the shields to be attached to guide signs. The proposed signs shall be illustrated and numbered on plan sheets. Sign foundation shall be selected from **State** Standards.

The **Engineer** shall provide the following information on sign/pavement marking layouts:

1. Roadway layout.

2. Center line with station numbering.
3. ROW lines.
4. Designation of arrow used on exit direction signs.
5. Culverts and other structures that present a hazard to traffic.
6. Location of utilities.
7. Existing signs to remain, to be removed, or to be relocated.
8. Proposed signs (illustrated and numbered).
9. Existing overhead sign bridges to remain, to be revised, removed or relocated.
10. Proposed overhead sign bridges, indicating location by plan.

B. **Pavement Markings**. The **Engineer** shall detail permanent and temporary pavement markings and channelization devices on plan sheets. The **Engineer** shall coordinate with the **State/Authority** (and other Engineers as required) for overall temporary, interim, and final pavement marking strategies. Pavement markings shall be selected from the latest **State/Authority** standards.

The **Engineer** shall provide the following information on sign/pavement marking layouts:

1. Proposed markings (illustrated and quantified) which include pavement markings, object markings and delineation.
2. Quantities of existing pavement markings to be removed.
3. Proposed delineators and object markers.
4. The location of interchanges, mainlanes, grade separations, frontage roads and ramps.
5. The number of lanes in each section of proposed highway and the location of changes in numbers of lanes.
6. ROW limits.
7. Direction of traffic flow on all roadways.

C. **Traffic Signals.** The **Engineer** shall identify and prepare Traffic Signal Plans for all traffic signal work needed. (Signals are currently planned for the Intersection of IH 69E and FM 3068.) If necessary, the **Engineer** shall perform Traffic Signal Warrant Studies to justify both existing and proposed signals, and provide traffic counts, to perform these studies. The **Engineer** shall confirm the power source for all signals and coordinate with the appropriate utility agency. Traffic Signal Plans shall be signed and sealed by a Texas Registered Professional Engineer. The **Engineer** shall develop all quantities, general notes, and specifications and incorporate appropriate agency standards required to complete construction.
The following information shall be provided in the Traffic Signal Plans:

1. Layout
   a. Estimate and quantity sheet
      (1) List of all bid items
      (2) Bid item quantities
      (3) Specification item number
      (4) Paid item description and unit of measure

b. Basis of estimate sheet (list of materials)
c. General notes and specification data.
d. Condition diagram
    (1) Highway and intersection design features
    (2) Roadside development
    (3) Traffic control including illumination
e. Plan sheet(s)
    (1) Existing traffic control that will remain (signs and markings)
    (2) Existing utilities
    (3) Proposed highway improvements
    (4) Proposed installation
    (5) Proposed additional traffic controls
    (6) Proposed illumination attached to signal poles.
f. Notes for plan layout
g. Phase sequence diagram(s)
    (1) Signal locations
    (2) Signal indications
    (3) Phase diagram
    (4) Signal sequence table
    (5) Flashing operation (normal and emergency)
    (6) Preemption operation (when applicable)
    (7) Contact responsible Agency to obtain interval timing, cycle length and offset
h. Construction detail sheets(s)
    (1) Poles (State standard sheets)
    (2) Detectors
    (3) Pull Box and conduit layout
    (4) Controller Foundation standard sheet
i. Marking details (when applicable)
j. Aerial or underground interconnect details (when applicable)

2. General Requirements
    a. Contact local utility company
        (1) Confirm power source
    b. Prepare governing specifications and special provisions list
    c. Prepare project estimate
    d. Conduct traffic counts and prepare Traffic Signal Warrant Studies for all proposed and existing traffic signals.

3. Summary of Quantities
    a. Small signs tabulation
    b. Large signs tabulation including all guide signs

4. Sign Detail Sheets
    a. All signs except route markers
    b. Design details for large guide signs

c. Dimensioning (letters, shields, borders, etc.)
d. Designation of shields attached to guide signs

MISCELLANEOUS (Function Code 163)

A. Retaining Walls/Sound Walls. The **Engineer** shall provide layouts (scale 1"=100'), elevations, quantity estimate, summary of quantities, typical cross sections and structural details of all retaining walls within the project.

If applicable, architectural standard drawings will be provided by the **State/Authority** and shall be incorporated into design details. The specific requirements for each item are as follows:

1. Layout Plan
   a) Designation of reference line
   b) Beginning and ending retaining wall stations
   c) Offset from reference line
   d) Horizontal curve data
   e) Total length of wall
   f) Indicate face of wall
   g) All wall dimensions and alignment relations (alignment data as necessary)
   h) Soil core hole locations

2. Elevation:
   a) Top of wall elevations
   b) Existing and finished ground line elevations
   c) Vertical limits of measurement for payment
   d) Type, limits and anchorage details of railing (only if Traffic Railing foundation standard is not being used on this project)
   e) Top and bottom of wall profiles and soil core hole data plotted at correct station & elevation. Groundwater elevations shall be shown.

3. Foundation Studies: The **Engineer** shall coordinate with the **State/Authority** to determine the location of soil borings to be drilled along the retaining wall alignments. The core holes shall extend a minimum of 15 feet below the footing elevation or deeper as soil conditions warrant. Spacing of core holes shall not exceed 500 feet. The **Engineer** shall provide a boring layout for the **State/Authority** to review and provide their recommendations.

4. The **Engineer** shall incorporate soil core hole data sheets prepared, signed, sealed, and dated by the Engineer. The soil boring sheets shall be in accordance with TxDOT WINCORE software as can be found on the Texas Department of Transportation website.

5. General Guidelines for Retaining Walls
   a) The **Engineer** shall make final design calculation and final detail

drawings in accordance with standard requirements of the **State/Authority**.

b) For retaining walls that the total estimated project quantity exceeds 30,000 square feet, preliminary retaining wall layouts shall be submitted to Austin Division for approval.

B. Traffic Control Plan, Detours and Sequence of Construction. The **Engineer** shall prepare Traffic Control Plans (TCP) for the project. A detailed TCP shall be developed in accordance with the latest edition of the *Texas Manual on Uniform Traffic Control Devices for Streets and Highways* (Texas MUTCD). The **Engineer** is to implement the current Barricade and Construction (BC) standards as applicable. The **Engineer** shall interface and coordinate phases of work, including the TCP, with adjacent Engineers.

1. The **Engineer** shall provide a written narrative of the construction sequencing and work activities per phase and determine the existing and proposed traffic control devices (regulatory signs, warning signs, guide signs, route markers, construction pavement markings, barricades, flag personnel, temporary traffic signals, etc.) to be used to handle traffic during each construction sequence. The **Engineer** shall show proposed traffic control devices at grade intersections during each construction phase (stop signs, flag person, signals, etc.). The **Engineer** shall show temporary roadways, ramps, structures and detours required to maintain lane continuity throughout the construction phasing.

2. Where detours are required, the **Engineer** shall develop typical cross sections, calculate quantities, and show horizontal and vertical alignment (if necessary) information. The **Engineer** shall provide a detailed layout and arrangement of construction signs, construction pavement marking, traffic control devices (including temporary signals and signal heads).

3. The **Engineer** shall be responsible to coordinate with the **State/Authority** in scheduling a Traffic Control Workshop and submittal of the TCP for Safety Review Committee (SRC) approval. The **Engineer** shall assist the **State/Authority** in coordinating mitigation of impacts to adjacent schools, emergency vehicles, pedestrians, bicyclists and neighborhoods.

4. Continuous, safe access to all properties during all phases of construction is mandatory. The **Engineer** shall develop TCP to preserve existing curb cuts. Approval from the **State/Authority** is required for any elimination of existing access capacity.

5. The **Engineer** shall design temporary drainage to replace existing drainage disturbed by construction activities or to drain detour pavement. The **Engineer** shall show horizontal and vertical location of culverts and required cross sectional area of culverts.

C. Illumination. The **Engineer** shall provide safety lighting at all intersections and interchanges, as well as at all other locations identified by the **State/Authority**. The **Engineer** shall prepare exhibits as required to obtain agreements with adjacent municipalities. The **Engineer** shall tabulate all quantities and provide summary sheets.

D. **Estimate.** The **Engineer** shall independently develop and report quantities in standard **State/Authority** bid format at the 60%, 90% and Final PS&E submittals. The **Engineer** shall identify and report quantity variances by means of a quantity variance report, to be provided with each submittal. The **Engineer** shall be prepared the estimate at the 60%, 90%, 95% and Final PS&E submittals.

E. **Specifications**. The **Engineer** shall develop the list of standard specifications with the appropriate reference items the estimate. The **Engineer** shall also identify the need for any special specifications, and special provisions. The **Engineer** shall prepare General Notes from the Pharr District's *Master List of General Notes*, Special Specifications and Special Provisions for inclusion in the plans and bidding documents. The **Engineer** shall provide General Notes, Special Specifications and Special Provisions in rich text format.

F. **Construction Schedule**. The **Engineer** shall prepare a construction contract time schedule using the latest version of Primavera or SureTrak software in accordance with the **State**'s *Administrative Circular No. 17-93*. The schedule shall indicate tasks, subtasks, critical dates, milestones, deliverables and review requirements in a format which depicts the interdependence of the various items, and adjacent construction packages. The **Engineer** shall aid the **State/Authority** in interpreting the schedule.

G. **Bidding services.** The **Enginee**r will provide the contract proposal/upfront bidding documents.

PROJECT MANAGEMENT (Function Code 164)

A. The **Engineer** will continue to coordinate with **AUTHORITY** staff, local municipal agencies and utility companies.

B. The **Engineer** will develop geometric and design criteria to establish uniform practices to be followed. Assemble existing TxDOT standard plans and prepare supplemental details for use as standard or guide plans for pavement, drainage, structures, traffic interchange facilities, traffic control, and other necessary appurtenances, all subject to the approval of the Authority.

C. The **Engineer** will provide the **Authority** with monthly reports of progress and a summary of key decisions that have been made or need to be made.

D. The **Engineer** will recommend approved designs, plans, and specifications and deliver to the **Authority** for bid advertisement. Assist the **Authority** in the process of bidding and award of construction contracts. Prepare final estimates of construction costs prior to the opening of construction bids.

E. Professional engineers' seals shall conform to the guidelines and regulations adopted by the Texas Board of Professional Engineers.

BRIDGE DESIGN (Function Code 170)

All bridge structures shall be designed for **LRFD** guidelines.

A. Bridge Layout. The **Engineer** shall Prepare Bridge Layout plans and elevations for all bridge types listed below in accordance with the latest edition of the **State**'s *Bridge Design Manual*, *Bridge Project Development Manual* and *Bridge Detailing Manual*. Submit to the **State/Authority** for approval before proceeding to structural detail design. Coordinate with the **State/Authority** to determine the location of soil borings to be drilled by the **Engineer**.

The Bridge layouts in Plan View shall contain the following information:

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

Bridge Layouts in Elevation View should contain the following:

1. Type of foundation
2. Finished grade elevations at beginning and end of bridge
3. Overall length of structure
4. Length, type of spans and units
5. Type of railing
6. Minimum calculated vertical clearance(s)
7. Existing and proposed ground lines clearly marked
8. Grid elevations and stations

9. Bent numbers encircled
10. Standard Title
11. Profile grade data
12. Type of riprap
13. Soil Core Hole information with penetrometer test data
14. Fixed/expansion condition of all bents
15. Column "H" heights
16. Number, size and length of foundations

Additional layout requirements for waterway structures and bridge classification culverts:

1. Design and 100-year peak discharges
2. Design and 100-year high water (HW) Any recorded HW data available?
3. Natural and through bridge velocities for design and 100-year floods
4. Calculated backwater for design and 100-year floods
5. Direction of flow for waterway crossings
6. Contours for water crossing

The substructure for simple span prestressed concrete U-beam girders shall be inverted T beam caps on rectangular columns. If necessary, the **State/Authority** will provide standard architectural details. The **Engineer** shall incorporate these drawings and make appropriate reference to these details.

The **Engineer** shall develop bridge layouts from the schematic provided by the **State/Authority** and submit an 80% complete layout to the **State/Authority** at the 30% submittal to provide ample review and design time.

B. **Final Design Calculations and Details.** The **Engineer** shall make final design calculations and final detail drawings, per structure, in accordance with standard requirements of the **State/Authority**. All bridge design shall be in conformance with the latest edition of the **State**'s *Bridge Design Manual*, *Bridge Project Development Manual*, *Bridge Detailing Manual*, and AASHTO *Standard Specifications for Highway Bridges*. The **Engineer**'s designer and checker shall both check all calculations and initial each page. The **Engineer** shall submit for review all structural design calculations and quantity calculations at the 90% submittal.

C. The **Engineer** shall perform a global stability analysis on fill areas on bridge approaches and other areas where the height of fill is determined to be greater than 15 feet. No geotechnical investigations are to be initiated until the **State/Authority** has given the **Engineer** written approval. The **Engineer** shall prepare an engineering report showing all material testing locations, with a summary of all geotechnical investigations, project background, and a summary of recommendations.

D. **Bridges/Overpasses/Underpasses/Ramp Structures.**

The **Engineer** shall prepare *bridge layouts, typical sections, structural details* (with appropriate scale) and estimated quantities for structures, as listed below:

Description	Approx Length	Approx. Width	Number of spans	Comments
Elevated Canal Crossing	100	80	1	New Bridge facilitated at the Tie in Realignment
SH 4 Overpass	272	80	3	80-112-80 Span Configuration

E. **Bridge Classification Culvert.** The **Engineer** shall prepare layouts, typical sections, structural details (with appropriate scale) and estimated quantities.

F. **Staged Construction:** The **Engineer** shall review and evaluate the need for phased construction for all structures in the project limits and advise the **State/Authority** of their recommendations. The **Engineer** shall review the as-builts and perform any necessary analysis to determine the structural integrity of any part of the structure that would remain open to traffic.

CONSTRUCTION PHASE SERVICES (Function Code 309)

The **Engineer** shall provide Construction Phase Services. These services shall include, but are not limited to the following:

Pre- Construction Award

The **Engineer** shall assist the **Authority** with the following:

(1) Pre-bid RFI's

(2) Pre-bid Conference

(3) Bid Opening

(4) Bid Tabulation & Review

Post - Construction Award

(1) Upon Award of Contract coordinate and attend Pre-Construction Meeting.

(2) Answer Construction RFI's.

(3) **Shop Drawings.** The Engineer shall review and check all shop or working drawings furnished by the Contractor that are related to the Project. Below is the listing of the proposed drawings to be reviewed.

Elevated Canal Bridge
- Abutments
- Girders
- Footings
- Rail
- Slab and Framing

- Falsework

SH 4 Overpass Bridge
- Abutments
- Girders
- Footings
- Rail
- Slab and Framing
- Falsework

Culverts
- Pre-Cast Culverts
- Pre-Cast Inlets

Large Guide Signs
- Foundations
- Frames

(4) **Change Orders.** When applicable, the **Engineer** will prepare the engineering data, including plan sheet drawings, specifications, and estimates, for the preparation of construction contract change orders, which may be required due to actual field conditions encountered or new requirements directed by the **Owner**. This work will be handled through a supplemental work order.

DELIVERABLES

I. Hydraulic Deliverables. The **Engineer** shall submit the two Hydraulic Reports signed and sealed by a Registered Professional Engineer in the State of Texas.

II. Survey Deliverables. The **Engineer** shall submit, after completion of PS&E, all original field books containing all survey information requested for this work authorization. The field book shall contain all information gathered in the field. The survey information provided shall be to the surveyor's best knowledge, accurate, and complete.

Electronic files (*.txt) containing survey information with proper identification and with the following data format x, y, and z NAD-83 coordinate system. The x-coordinate corresponding to the east bearing, the y-coordinate corresponding to the north bearing, and the z-coordinate corresponding to the vertical elevation.

Electronic 2d and 3d Microstation files (*.dgn) containing survey information with proper identification and with the following data format x, y, and z NAD-83 coordinate system. The Survey deliverables shall include the digital terrain model (DTM), aerial maps, and Subsurface Utility Engineering (SUE).

III. Plan Deliverables including 3D Corridor model. The **Engineer** shall forward to the State/Authority, upon completion of the work authorization, four (4) sets of Memory Sticks with all the files containing the information and layouts used to prepare the PS&E.

Each CD shall be labeled and include the following:

- CSJ
- County
- Highway
- Date of the CD Burn
- INTERIM (in 1" letters) Note: As-built shall specified FINAL
- Volume sequence (ie. Disk 1 of 3)

Each CD created shall have the standard directory structure, as follows:

Directory:\Control-Section - Job Number	Types of Data
Documents	Form 1002, Design Summary Report (DSR), Design Exceptions/ Variances, Traffic Control Safety Review Approval Form, Hydraulic Report, Geotechnical Report, Summaries, General Project Correspondence, and Excel files.
Schematic	All .DGN files – Mapping, Sheet Files, Master Design Files, dat files .gpk files, .prj files, design cross section files, etc.
Environmental	Environmental documentation can include but not limited to Categorical Exclusion (CE), Environmental Assessment (EA), Environmental Impact Statement (EIS), noise analysis and Water Pollution Abatement Plans.
Utilities	Existing utility information as provided by the affected utility company including correspondence.
ROW	ROW Maps and Parcel sketches as furnished By surveyor
Design	All .DGN files – Mapping, Sheet Files, Master Design Files, dat files .gpk files, .prj files, design cross section files, etc.
Hydraulics	Drainage Input & Output Culvert Analysis, Bridge Analysis
Electrical	Electrical input and output files, correspondence, everything except .dgn files
Signing	Signing input and output files, correspondence,

	everything except .dgn files
Standards	All Standard Sheets used for the Job
Construction	Field change documentation except for .dgn files.

A "readme" file should be created and placed under the "documents" subdirectory. The readme file should be composed of the minimum directory structure detailed above and modified to list particular files that are contained under the various subdirectories. This information will guide the end user to the location of particular files. In addition to the file information, the readme file should contain the general project information such as the CSJ, Limits of Construction and Type of Improvements.

All CADDSEALS placed on finished documents are to remain on that document. Do Not remove CADDSEALS.

The file naming convention will be as shown below. Not all plan sets will have all of the listed sheets.

Sheet File Type Naming Convention

Title Sheet *TTL*.DGN
Supplemental Index *INDX*.DGN
General Notes & Spec. Data *GNOT*.DGN
Estimate & Quantities *E&Q*.DGN
Consolidated Summaries *SUM*.DGN
Project Layout *PRJLO*.DGN
Typical Sections *TYP*.DGN
Traffic Control Plans *TCP*.DGN
Horizontal Alignment Data *HAD*.DGN
Benchmark Data *BM*.DGN
Table of Cross Slopes *CS*.DGN
Plan & Profile Sheets *PP*.DGN
Landscape Sheets *LAND*.DGN
Irrigation Sheets *IRRI*.DGN
Detail Sheets (any) *DET*.DGN
Drainage Area Maps *DA*.DGN
Hydraulic Data Sheets *HD*.DGN
Storm Sewer Plan & Profiles *SS*.DGN
Culvert Cross Sections *CUL*.DGN
Water Quality Facilities *WQ*.DGN
Retaining Wall Sheets *RET*.DGN
Bridge Layouts *BR*.DGN
Bridge Quantities/Bearing Seat Info *BRQUAN*.DGN
SW3P Info Sheet *SW3P*.DGN
Erosion Control (Temp & Perm) *EC*.DGN
Signing Layouts *SIGN*.DGN
Pavement Markers (incl. Delineation) *PMLO*.DGN
Signalization Sheets *SIG*.DGN

(includes electrical service sheets)
Illumination Sheets *ILLI*.DGN
Roadway Cross Sections *XS.DGN
Master Design File *MDF.DGN
Alignment File *ALN*.DGN

Where an * (wildcard) appears in the filename, the user is free to describe the file as they see fit as long as the required letters appear in the filename somewhere.

The Engineer shall submit a CADD file structure listing in spreadsheet format. This CADD file structure shall consist of the following fields of information for each design file created to produce the final plan sheets
for PS&E:

Active Design File Name (xxx.dgn)
Levels ON (1-63)
Plot Scale (1" = 100')
File date (Nov. 30, 2004)
File size (xxx bytes or KB)
Sheet Number (202)
Sheet Description (Typical Sections, Sheet 3 of 4)

Reference file names
Logical Name of Reference files (xxxdrn.dgn)
Levels ON (1-2, 5-17, 36-45, 50-63)

In addition, the Engineer shall include on the staple side of the sheet border (left side) by the use of a pen table the reference file information listed above for each reference file attached; i.e. Reference file name (xx.dgn), Levels ON, when this particular file is attached as a reference to the Active design file.

On the lower right-hand side, next to the title block, in a 90-degree orientation to the bottom of the sheet, also by the use of a pen table, the file name of the design file and date shall be shown when printed.

PS&E Deliverables. The **Engineer** shall deliver to the **Authority** an electronic copy of the 30%, 60%, and 90% submittals. For the final 100% submittal, the Engineer shall submit one electronically sealed plan portfolio with all backup data. The **Engineer** shall develop Exhibit C, Work Schedule for all project submissions.

30% Submittal -

a. Approved (signed form) Design Summary Report
b. Title Sheet
c. Typical Sections (existing and proposed)
d. Traffic Control Plan
e. Utility Layout (conflicts identified)
f. Plan & Profile (Roadway and Levee)
    1. Vertical Alignment (existing and proposed)
    2. Horizontal Alignment (existing and proposed)

g. Bridge Layouts (including bridge class structures)
h. Miscellaneous Details (including Border Fence Relocation)
i. Corresponding Quantity Summary Sheets
j. Corresponding Standard Detail Sheets for all Items of Work in this submittal
k. Preliminary Estimate
l. Design Exceptions/Waivers required
m. Newly created Special Provisions/Specifications to be used (Form 1814)
n. R.O.W. (issues identified)
o. Electronic Copy of Cross Sections

60% Submittal -

a. Index Sheet
b. Hydrologic Computation Sheets
c. Hydraulic Data Sheets
d. Drainage Area Maps
e. Drainage Plan & Profile
f. Pump Station Layouts/Details
g. Drainage Structure Details
h. Storm Sewer Details
i. Storm Water Pollution Prevention Plan
j. Bridge Details
k. Retaining Walls – Sound Walls
l. Miscellaneous Details
m. Corresponding Quantity Summary Sheets
n. Corresponding Standard Detail Sheets for all Items of Work in this submittal
o. Updated Estimate
p. Utility Adjustment/Relocation Details
q. R.O.W. Acquisition Detail
r. Electronic Copy of Cross Sections

III. 90% Submittal -

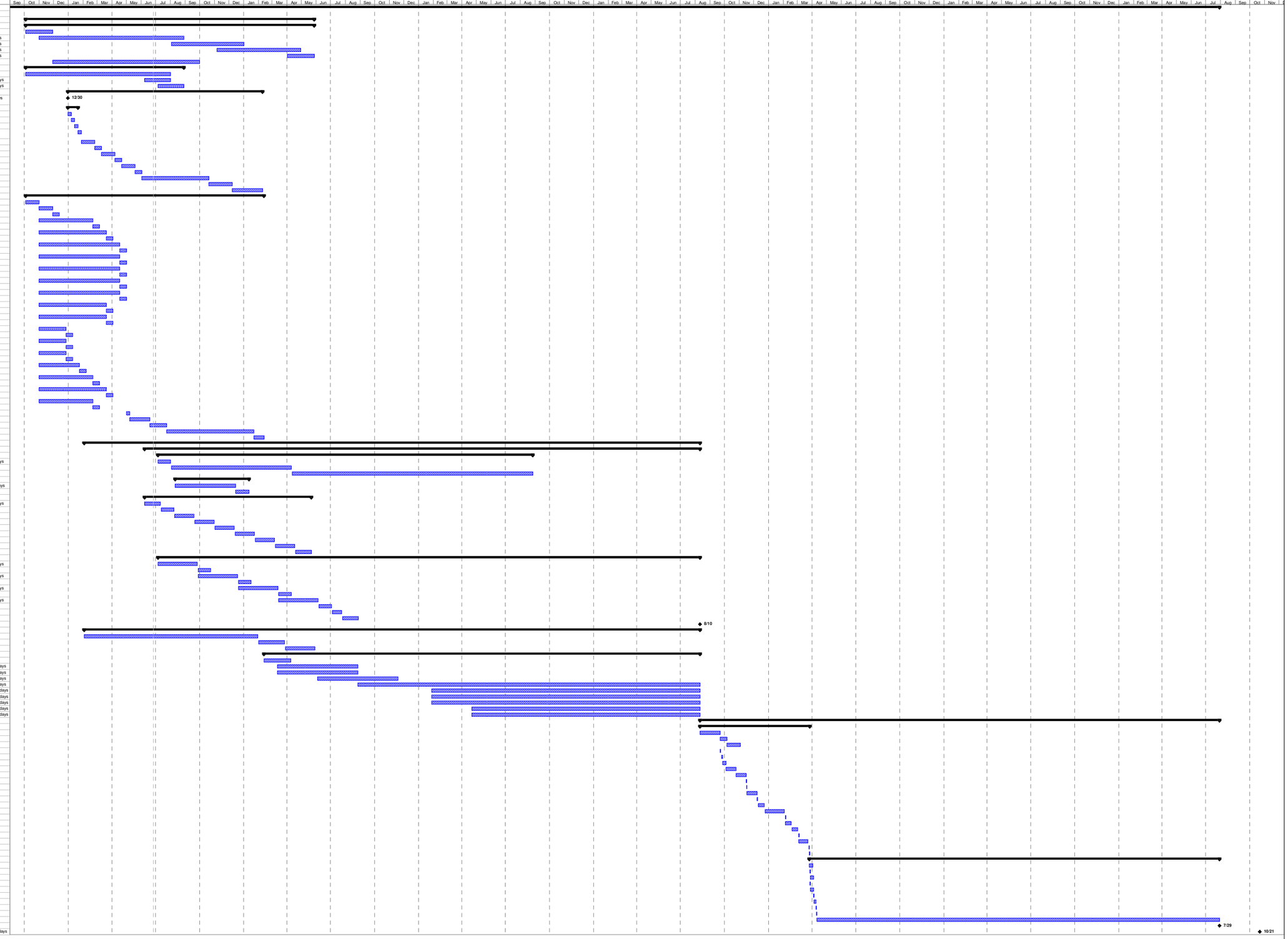
a. Final Index of Sheets
b. Pavement Marking Layout/Details
c. Signalization (existing and proposed)
d. Illumination
e. Traffic Management Items
f. Miscellaneous Details
g. Corresponding Quantity Summary Sheets
h. Corresponding Standard Detail Sheets for all Items of Work in this submittal
i. Final Estimate
j. General Notes
k. Certifications
l. Form 1002
m. Cross Sections

IV. 100% Submittal -

a. PS&E Package 100% complete.
g. Six Months prior to letting.

c. Construction Estimate in Estimator® format and Excel format
d. Form 1002
e. General Notes
f. Special Specifications and Special Provisions with a completed Form 1814 in TxDOT format
(2) each signed and sealed Specification Certifications
g. Utility, ROW Encroachment, ROW Acquisition, ROW Relocation Certification) originals of each signed and sealed.
i. Special Specifications, Special Provisions and applicable reference items to all items involved in the PS&E in Excel spreadsheet format
j. Construction CPM Schedule (**Signed and Sealed)**
k. Cross Sections

ID	Task Name	Duration	Start	Finish	Predecessors
1	**East Loop Schematic and PS&E CSJ: 3626-02-001, 1426-01-038, 3226-03-001**	**1954 days**	**Fri 2/1/19**	**Wed 7/29/26**	
2	**NOTICE TO PROCEED**	0 days	Fri 2/1/19	Fri 2/1/19	
3	**Phase I: Planning, EA, Public Involvement, Schematic - Status**	**430 days**	**Fri 10/4/19**	**Thu 5/27/21**	2
4	**Project Planning (Roadway)**	**430 days**	**Fri 10/4/19**	**Thu 5/27/21**	
5	TxDOT Provides Executed PE AFA	40 days	Fri 10/4/19	Thu 11/28/19	
6	Funding of the Roadway in the TxDOT 2021 UTP	216 days	Fri 11/1/19	Fri 8/28/20	5FS-20 days
7	Coordination of RG/MPO Planning Documents	109 days	Mon 8/3/20	Thu 12/31/20	6FS-20 days
8	TxDOT Provides Construction / ROW AFA	125 days	Fri 11/6/20	Thu 4/29/21	7FS-40 days
9	CCRMA Executes AFA	40 days	Fri 4/2/21	Thu 5/27/21	8FS-20 days
10	TxDOT On-System Designation	219 days	Fri 11/29/19	Wed 9/30/20	9
11	**Public Involvement (Roadway)**	**236 days**	**Fri 10/4/19**	**Fri 8/28/20**	
12	Develop Alternatives & Matrix	216 days	Fri 10/4/19	Fri 7/31/20	
13	Advertise & Conduct Public Meeting	40 days	Mon 6/8/20	Fri 7/31/20	12FS-40 days
14	Select TPA	40 days	Mon 7/6/20	Fri 8/28/20	13FS-20 days
15	**Schematic (Roadway)**	**290 days**	**Mon 12/30/19**	**Mon 2/8/21**	
16	1-Utilize Geopak and Microstation for all roadway design(Hours included in items below)	0 days	Mon 12/30/19	Mon 12/30/19	5FS+22 days
17	2-Schematic Prepartion	15 days	**Tue 12/31/19**	**Mon 1/20/20**	
18	a-Horiz. Alignments, Layouts	5 days	Tue 12/31/19	Mon 1/6/20	16
19	b-Vert. Alignments	5 days	Tue 1/7/20	Mon 1/13/20	18
20	c-Typical Sections	5 days	Tue 1/14/20	Mon 1/20/20	19
21	3-Design cross-sections at 500 ft intervals/earth work quantities/check slope selection including plotting	5 days	Tue 1/21/20	Mon 1/27/20	20
22	4 - 30 % Schematic Submittal	20 days	Tue 1/28/20	Mon 2/24/20	21
23	TxDOT Review	10 days	Tue 2/25/20	Mon 3/9/20	22
24	4a -- 60 % Schematic Submittal	20 days	Tue 3/10/20	Mon 4/6/20	23
25	TxDOT Review	10 days	Tue 4/7/20	Mon 4/20/20	24
26	4b -- 90 % Schematic Submittal	20 days	Tue 4/21/20	Mon 5/18/20	25
27	TxDOT Review	10 days	Tue 5/19/20	Mon 6/1/20	26
28	Flight and Survey	100 days	Tue 6/2/20	Mon 10/19/20	27
29	4c- 100% Schematic Submittal	35 days	Tue 10/20/20	Mon 12/7/20	28
30	TxDOT Schematic Approval (Roadway)	45 days	Tue 12/8/20	Mon 2/8/21	29
31	**Enviornmental Document (Roadway)**	**355 days**	**Fri 10/4/19**	**Thu 2/11/21**	
32	1-Project Scope for EA	20 days	Fri 10/4/19	Thu 10/31/19	
33	2-Air Quality Technical Report	20 days	Fri 11/1/19	Thu 11/28/19	32
34	TxDOT Review	10 days	Fri 11/29/19	Thu 12/12/19	33
35	3-Archeological - To be done by others	80 days	Fri 11/1/19	Thu 2/20/20	32
36	TxDOT Review	10 days	Fri 2/21/20	Thu 3/5/20	35
37	4-Historical - To be done by others	100 days	Fri 11/1/19	Thu 3/19/20	32
38	TxDOT Review	10 days	Fri 3/20/20	Thu 4/2/20	37
39	5-Community Impact Analysis	120 days	Fri 11/1/19	Thu 4/16/20	32
40	TxDOT Review	10 days	Fri 4/17/20	Thu 4/30/20	39
41	6-Residential Displacement Analysis	120 days	Fri 11/1/19	Thu 4/16/20	32
42	TxDOT Review	10 days	Fri 4/17/20	Thu 4/30/20	41
43	7-Low Level Commercial Displacement Analysis	120 days	Fri 11/1/19	Thu 4/16/20	32
44	TxDOT Review	10 days	Fri 4/17/20	Thu 4/30/20	43
45	8-High Risk Access and Travel Patterns Analysis	120 days	Fri 11/1/19	Thu 4/16/20	32
46	TxDOT Review	10 days	Fri 4/17/20	Thu 4/30/20	45
47	9-High Level Community Cohesion Analysis	120 days	Fri 11/1/19	Thu 4/16/20	32
48	TxDOT Review	10 days	Fri 4/17/20	Thu 4/30/20	47
49	10-Water Quality Technical Report	100 days	Fri 11/1/19	Thu 3/19/20	32
50	TxDOT Review	10 days	Fri 3/20/20	Thu 4/2/20	49
51	11-Wetland Delineation Report	100 days	Fri 11/1/19	Thu 3/19/20	32
52	TxDOT Review	10 days	Fri 3/20/20	Thu 4/2/20	51
53	12-Biological Evaluation Report	40 days	Fri 11/1/19	Thu 12/26/19	32
54	TxDOT Review	10 days	Fri 12/27/19	Thu 1/9/20	53
55	13-Biological Technical Report	40 days	Fri 11/1/19	Thu 12/26/19	32
56	TxDOT Review	10 days	Fri 12/27/19	Thu 1/9/20	55
57	14-Hazardous Materials and ISA Technical Report	40 days	Fri 11/1/19	Thu 12/26/19	32
58	TxDOT Review	10 days	Fri 12/27/19	Thu 1/9/20	57
59	15-Noise Analysis Technical Report	60 days	Fri 11/1/19	Thu 1/23/20	32
60	TxDOT Review	10 days	Fri 1/24/20	Thu 2/6/20	59
61	16-Section 4(f) Technical Report	80 days	Fri 11/1/19	Thu 2/20/20	32
62	TxDOT Review	10 days	Fri 2/21/20	Thu 3/5/20	61
63	17-Indirect and Cumulative Imapct Technical Report	100 days	Fri 11/1/19	Thu 3/19/20	32
64	TxDOT Review	10 days	Fri 3/20/20	Thu 4/2/20	63
65	18-Biological Assessment	80 days	Fri 11/1/19	Thu 2/20/20	32
66	TxDOT Review	10 days	Fri 2/21/20	Thu 3/5/20	65
67	19-Public Hearing	5 days	Fri 5/1/20	Thu 5/7/20	48
68	20-Draft EA	30 days	Fri 5/8/20	Thu 6/18/20	67
69	21-Final EA	25 days	Fri 6/19/20	Thu 7/23/20	68
70	22-TxDOT Review and Approval	130 days	Fri 7/24/20	Thu 1/21/21	69
71	23-FONSI	15 days	Fri 1/22/21	Thu 2/11/21	70
72	**Phase II: PS&E & ROW Map - Status**	**919 days**	**Mon 2/3/20**	**Thu 8/10/23**	
73	**PS&E**	**829 days**	**Mon 6/8/20**	**Thu 8/10/23**	
74	**Compensable Utility Oversight**	**560 days**	**Mon 7/6/20**	**Fri 8/26/22**	
75	1-Evaluate Utility Conflicts	20 days	Mon 7/6/20	Fri 7/31/20	12FS-20 days
76	2-Coordinate w/Utility companies	180 days	Mon 8/3/20	Fri 4/9/21	75
77	3-Relocate Utilities	360 days	Mon 4/12/21	Fri 8/26/22	76
78	**Geotechnical**	**110 days**	**Tue 8/11/20**	**Mon 1/11/21**	
79	Prepare geotechnical report - Under Different work order	90 days	Tue 8/11/20	Mon 12/14/20	26FS+60 days
80	TxDOT Review and Approval	20 days	Tue 12/15/20	Mon 1/11/21	79
81	**Outfall Coordination**	**250 days**	**Mon 6/8/20**	**Fri 5/21/21**	
82	Drainage Area Maps - determine and calculate	25 days	Mon 6/8/20	Fri 7/10/20	12FS-40 days
83	Hydrologic data/discharge determination	20 days	Mon 7/13/20	Fri 8/7/20	82
84	Hydraulic Computations - Channels	30 days	Mon 8/10/20	Fri 9/18/20	83
85	Hydraulic Reports	30 days	Mon 9/21/20	Fri 10/30/20	84
86	Culv Design, Details & Layouts	30 days	Mon 11/2/20	Fri 12/11/20	85
87	Outfall channel(s) outside ROW - analyze exist. or prop.	30 days	Mon 12/14/20	Fri 1/22/21	86
88	Summary of Drainage Structure Quantities	30 days	Mon 1/25/21	Fri 3/5/21	87
89	Storm Water Pollution Prevention Plan (SW3P)	30 days	Mon 3/8/21	Fri 4/16/21	88
90	Standard Sheets (SW3P, Storm Sewer, and Culvert) Approx.12 sheets	25 days	Mon 4/19/21	Fri 5/21/21	89
91	**PS&E Completion**	**809 days**	**Mon 7/6/20**	**Thu 8/10/23**	
92	Design up to 30% Submittal	60 days	Mon 7/6/20	Fri 9/25/20	12FS-20 days
93	TxDOT Review	20 days	Mon 9/28/20	Fri 10/23/20	92
94	Design up to 60% Submittal	60 days	Mon 9/28/20	Fri 12/18/20	93FS-20 days
95	TxDOT Review	20 days	Mon 12/21/20	Fri 1/15/21	94
96	Design up to 90% Submittal	60 days	Mon 12/21/20	Fri 3/12/21	95FS-20 days
97	TxDOT Review	20 days	Mon 3/15/21	Fri 4/9/21	96
98	Design up to 95% Submittal	60 days	Mon 3/15/21	Fri 6/4/21	97FS-20 days
99	TxDOT Review	20 days	Mon 6/7/21	Fri 7/2/21	98
100	Revisions from review by TxDOT	15 days	Mon 7/5/21	Fri 7/23/21	99
101	100% Final Submittal (.PDF's) and TxDOT Approval	25 days	Mon 7/26/21	Fri 8/27/21	100
102	RTL: Ready to LET	0 days	Thu 8/10/23	Thu 8/10/23	117
103	**ROW MAP**	**919 days**	**Mon 2/3/20**	**Thu 8/10/23**	
104	Prepare ROW Map	260 days	Mon 2/3/20	Fri 1/29/21	
105	TxDOT Review and Revisions	40 days	Mon 2/1/21	Fri 3/26/21	104
106	TxDOT ROW Map Approval	45 days	Mon 3/29/21	Fri 5/28/21	105
107	**ROW Acquisition (est. 130 Parcels)**	**650 days**	**Fri 2/12/21**	**Thu 8/10/23**	
108	ROW Release	40 days	Fri 2/12/21	Thu 4/8/21	71
109	Title Commitments	120 days	Fri 3/12/21	Thu 8/26/21	108FS-20 days
110	Appraisal Reports	120 days	Fri 3/12/21	Thu 8/26/21	108FS-20 days
111	Approved Values by TxDOT	120 days	Fri 6/4/21	Thu 11/18/21	110FS-60 days
112	Acquisition Negotiation Offers	510 days	Fri 8/27/21	Thu 8/10/23	111FS-60 days
113	Title Curative Process	400 days	Fri 1/28/22	Thu 8/10/23	112FS-400 days
114	Title Commitment Updates	400 days	Fri 1/28/22	Thu 8/10/23	112FS-400 days
115	Payments for Parcels	400 days	Fri 1/28/22	Thu 8/10/23	112FS-400 days
116	Condemnation Process	340 days	Fri 4/22/22	Thu 8/10/23	115FS-340 days
117	Eminent Domain Proceedings	340 days	Fri 4/22/22	Thu 8/10/23	115FS-340 days
118	**Phase III: Letting and Construction - Status**	**774 days**	**Fri 8/11/23**	**Wed 7/29/26**	
119	**Letting**	**163 days**	**Fri 8/11/23**	**Tue 3/26/24**	
120	State Letter of Authority (SLOA) (TBD) and FPAA	30 days	Fri 8/11/23	Thu 9/21/23	102
121	Prepare Bidding Work Plan	10 days	Fri 9/22/23	Thu 10/5/23	120
122	TxDOT Bidding Work Plan Review and Approval	20 days	Fri 10/6/23	Thu 11/2/23	121
123	Release for Advertisement	1 day	Fri 9/22/23	Fri 9/22/23	120
124	Prepare Advertisements	2 days	Mon 9/25/23	Tue 9/26/23	123
125	TxDOT Advertisement Review/Approval	5 days	Wed 9/27/23	Tue 10/3/23	124
126	Advertise for Bids (2 Advertisements - 21 & 14 Days)	15 days	Wed 10/4/23	Tue 10/24/23	125
127	Addendums (if Required)	15 days	Wed 10/25/23	Tue 11/14/23	126
128	Pre - Bid Meeting	1 day	Wed 11/15/23	Wed 11/15/23	127
129	Open Bids Publicly	1 day	Thu 11/16/23	Thu 11/16/23	128
130	Bid Review LG	15 days	Fri 11/17/23	Thu 12/7/23	129
131	Recommendation to Award/Reject of Cancel LG	1 day	Fri 12/8/23	Fri 12/8/23	130
132	Request Concurrance Letter LG	10 days	Mon 12/11/23	Fri 12/22/23	131
133	TxDOT Bid Review	30 days	Mon 12/25/23	Fri 2/2/24	132
134	TxDOT Concurance	1 day	Mon 2/5/24	Mon 2/5/24	133
135	TxDOT Draft Concurrance Letter	10 days	Mon 2/5/24	Fri 2/16/24	133
136	TxDOT Compare Obligation to Approval Bid	10 days	Mon 2/19/24	Fri 3/1/24	135
137	TxDOT Requests FHWA Approval in Obligation (Increase/Decrease)	1 day	Mon 3/4/24	Mon 3/4/24	136
138	FHWA Approval Adjustment in Obligation	15 days	Mon 3/4/24	Fri 3/22/24	136
139	Award Bid LG	1 day	Mon 3/25/24	Mon 3/25/24	138
140	Approve Contract LG	1 day	Tue 3/26/24	Tue 3/26/24	139
141	**Construction**	**612 days**	**Tue 3/26/24**	**Wed 7/29/26**	
142	LG Confirms Contractor's DBE Goal	5 days	Tue 3/26/24	Mon 4/1/24	139
143	LG Executes Contract and Provides to TxDOT	1 day	Wed 3/27/24	Wed 3/27/24	140
144	LG & TxDOT to Verify 30% Self Performance and Debarred Subcontractors	5 days	Thu 3/28/24	Wed 4/3/24	143
145	LG and TxDOT Coordination Meeting	1 day	Wed 3/27/24	Wed 3/27/24	140
146	TxDOT to Spot Check Sub-Contractor (Agreements & Retain Audit Checklis	5 days	Thu 3/28/24	Wed 4/3/24	145
147	Pre-Construction Meeting	1 day	Thu 4/4/24	Thu 4/4/24	146
148	Provide Notice to Proceed	2 days	Fri 4/5/24	Mon 4/8/24	147
149	Obtain TPDES NOI/CSN Environmental Permits	1 day	Tue 4/9/24	Tue 4/9/24	148
150	LET Project	1 day	Wed 4/10/24	Wed 4/10/24	149
151	Construction Duration	600 days	Thu 4/11/24	Wed 7/29/26	150
152	Open to Traffic	0 days	Wed 7/29/26	Wed 7/29/26	151
153	**Work Authorization Complete**	0 days	Wed 10/21/26	Wed 10/21/26	152FS+60 days



Project: East Loop

Task | Milestone | Project Summary | External Milestone | Inactive Summary | Duration-only | Manual Summary | Finish-only | External Milestone | Deadline

Split | Summary | External Tasks | Inactive Milestone | Manual Task | Manual Summary Rollup | Start-only | External Tasks | Progress

PROJECT: East Loop PS&E
CLIENT: CCRMA
CONTRACT: GEC Contract
CSJ: x
COUNTY: Cameron
S & B JOB NO.: U2716.119

06/26/20

EXHIBIT D -- FEE ESTIMATE

ACTIVITY CODE	FUNCTION CODE	DESCRIPTION from Attachment B	FIRM	SERVICE	MAN-HOURS Principal	Quality Manager	Project Manager	Env Manager	Env Scientist	RPLS	Engineer Structural	Engineer (V)	Engineer (I,II)	3-Man Survey Crew	Engineer in Training	Senior CADD	CADD Operator (I)	Secretary	TOTAL HRS	ESTIMATED FEE	TOTALS
	110	**ROUTE AND DESIGN STUDIES**																			
		Design Concept Conference	S & B	BASIC			12				12	12							36	$8,941.68	
		Prepare Design Concept Conference Meeting Notes & Revise DSR	S & B	BASIC			2					4			4				10	$1,789.92	
		Sub Total (110 - ROUTE AND DESIGN STUDIES)			**0**	**0**	**14**	**0**	**0**	**0**	**12**	**16**	**0**	**0**	**4**	**0**	**0**	**0**	**46**		**$10,731.60**
	120	**SOCIAL & ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT General FC 120 Categories**																			
		Prespare EPIC sheets	S & B	BASIC			4	4				6	24			24			62	$10,023.40	
		Prespare EPIC sheets (Seg 1) (See L&G Cost Proposal)	L&G	BASIC																$8,864.54	
		Sub Total (120 - SOCIAL & ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT)			**0**	**0**	**4**	**4**	**0**	**0**	**0**	**6**	**24**	**0**	**0**	**24**	**0**	**0**	**62**		**$18,887.94**
	150	**FIELD SURVEYING AND PHOTOGRAMMETRY**																			
		Field Surveying and Setting Benchmarks for Construction Plans	S & B	SPECIAL						40				400					440	$84,035.60	
		Sub Total (150 - FIELD SURVEYING AND PHOTOGRAMMETRY)			**0**	**0**	**0**	**0**	**0**	**40**	**0**	**0**	**0**	**400**	**0**	**0**	**0**	**0**	**440**		**$84,035.60**
	160	**ROADWAY DESIGN**																			
		Geometric Design - Roadway geometrics and P&P Sheets (30)	S & B	BASIC			30					60			200	320			610	$75,548.80	
		Exhibit for Airway/Highway Clearance Permits	S & B	BASIC			4					8			40			16	68	$7,339.84	
		Grading Design - Typical Sections	S & B	BASIC			4					16			24	60			104	$13,639.68	
		Grading Design - Corridor Model	S & B	BASIC			16					24			480	120			640	$64,399.52	
		Grading Design - Determine Cut and Fill Quantities	S & B	BASIC			4					8			120		120		252	$25,099.84	
		Levee Design	S & B	BASIC			16					40			80	80				$29,399.20	
		Plan Details to Supplement Std Shts	S & B	BASIC			4					12			24	60			100	$12,739.76	
		ROADWAY DESIGN SEGMENT 1 (See L&G Cost Proposal)	L&G	BASIC															0	$599,575.82	
		Sub Total (160 - ROADWAY DESIGN)			**0**	**0**	**78**	**0**	**0**	**0**	**0**	**168**	**0**	**0**	**968**	**640**	**120**	**16**	**1,774**		**$827,742.46**
	161	**DRAINAGE**																			
		Drainage Area Maps - determine and calculate	S & B	BASIC			16					40			60	80			196	$27,699.20	
		Hydrologic data/discharge determination	S & B	BASIC			4					80			120	160			364	$47,698.40	
		Hydraulic Computations	S & B	BASIC			4					120			180	240			544	$70,997.60	
		Hydraulic Report Roadway	S & B	BASIC			16					80			40	40			176	$30,398.40	
		FEMA floodway requirements	S & B	BASIC			8					60			24	24			116	$20,498.80	
		Culv Design, Details & Layouts	S & B	BASIC			4					120			120	120			364	$52,097.60	
		Outfall channel(s) outside ROW - analyze exist. or prop.	S & B	BASIC			8					120			80	120			328	$49,797.60	
		Summary of Drainage Structure Quantities	S & B	BASIC			2					40			40	60			142	$19,849.20	
		Storm Water Pollution Prevention Plan (SW3P)	S & B	BASIC			8					60			120	80			268	$35,098.80	
		DRAINAGE DESIGN SEGMENT 1	L&G	BASIC															0	$558,185.12	
		LEVEE H&H																			
		Develop Model of Existing and Proposed Levee Configuration for Study Area.	S & B	BASIC			12						40			80			132	$19,289.20	
		Perform H&H Modeling for Existing Levee Conditions	S & B	BASIC			12						40			40			92	$14,689.20	
		Perform H&H Modeling for Proposed Levee Conditions	S & B	BASIC			12						40			40			92	$14,689.20	
		Preliminary H&H Report for Levee for IBWC/CILA.	S & B	BASIC			36						40			80			156	$25,889.20	
		Final H&H Report for submittal to the IBWC/CILA.	S & B	BASIC			16						24			40			80	$13,073.52	
		Permitting Assistance for IBWC/CILA permit/construction license	S & B	BASIC			24						80					24	128	$21,738.40	
		Sub Total (161 - DRAINAGE)			**0**	**0**	**182**	**0**	**0**	**0**	**0**	**720**	**264**	**0**	**784**	**1,204**	**0**	**24**	**3,178**		**$1,021,689.44**

PROJECT: East Loop PS&E
CLIENT: CCRMA
CONTRACT: GEC Contract
CSJ: x
COUNTY: Cameron
S & B JOB NO.: U2716.119

06/26/20

EXHIBIT D -- FEE ESTIMATE

ACTIVITY CODE	FUNCTION CODE	DESCRIPTION from Attachment B	FIRM	SERVICE	MAN-HOURS Principal	Quality Manager	Project Manager	Env Manager	Env Scientist	RPLS	Engineer Structural	Engineer (V)	Engineer (I,II)	3-Man Survey Crew	Engineer in Training	Senior CADD	CADD Operator (I)	Secretary	TOTAL HRS	ESTIMATED FEE	TOTALS
	162	**SIGNING, MARKINGS AND SIGNALIZATION**																			
		Signing and Markings Layouts	S & B	BASIC			16					40				80			136	$22,599.20	
		Summary of Small Signs Tabulation	S & B	BASIC			8					16				80			104	$14,999.68	
		Summary of Large Signs Tabulation	S & B	BASIC			16					36				120			172	$26,299.28	
		Sign Detail Sheets & Standards	S & B	BASIC			8					4				60			72	$9,999.92	
		Signing and Markings Layouts (Segment 1) (See L&G Cost Proposal)	L&G	BASIC															0	$150,116.04	
		Signalization (See ETSI Cost Proposal)	ETSI	BASIC															0	$171,550.78	
		Traffic Counts and Signal Warrants (See ETSI Cost Proposal)	ETSI	BASIC															0	$69,553.32	
		Sub Total (162 - SIGNING, MARKINGS AND SIGNALIZATION)			**0**	**0**	**48**	**0**	**0**	**0**	**0**	**96**	**0**	**0**	**0**	**340**	**0**	**0**	**484**		**$465,118.22**
	163	**MISCELLANEOUS ROADWAY**																			
		Sound Walls	S & B	BASIC																	
		Structural Details	S & B	BASIC			4				40				80	80			204	$26,906.40	
		Alternate Patented Retaining Walls	S & B	BASIC			2				16				32	16			66	$9,032.56	
		Foundation Studies	S & B	SPECIAL			2				40				16	32			90	$15,396.40	
		Stability Analysis	S & B	BASIC			2				60				16	8			86	$17,539.60	
		Estimate	S & B	BASIC			2				8				24	2			36	$4,781.28	
		Summary of Quantities	S & B	BASIC			2				8				16	2			28	$4,101.28	
		Typical X-section.	S & B	BASIC			2				8				16	24			50	$6,631.28	
		Traffic Control Plan	S & B	BASIC			16					40			120	120			296	$37,399.20	
		Coordinate with & Prepare TCP layouts for TxDOT review	S & B	BASIC			8					8			8				24	$4,679.84	
		Illumination Layouts	S & B	BASIC			2					40			80		120		242	$28,349.20	
		Compute and Tabulate Quantities for Revised Limits	S & B	BASIC			2					40			80		80		202	$24,349.20	
		Special Utility Details (Water, Sanitary Sewer, etc.)	S & B	BASIC			2					40				40			82	$14,149.20	
		Exhibits for Utility Agreements	S & B	SPECIAL			2					40							42	$9,549.20	
		Estimates	S & B	BASIC			2					24			60				86	$11,049.52	
		Specifications	S & B	BASIC			2					24			40				66	$9,349.52	
		General Notes	S & B	BASIC			2					16			32				50	$6,869.68	
		Prepare Construction Time Schedule	S & B	BASIC			2					40			120				162	$19,749.20	
		Project Submittals 30%, 60%, 95% and 100%	S & B	BASIC			16					80			80				176	$29,198.40	
		Assembely of Final Documents (Graphic Files of Plan Sheets and Geopak Files)	S & B	BASIC			2					16			40	40			98	$12,149.68	
		ADA/TDLR Coordination	S & B	SPECIAL			1					4			4				9	$1,514.92	
		ADA Non-Standard Details	S & B	SPECIAL			1					4			4	16			25	$3,354.92	
		TDLR Cost Justification/Comparisons	S & B	SPECIAL			1					16			16				33	$5,234.68	
		Misc. Items (Segment 1) (See L&G Cost Proposal)	L&G	BASIC															0	$151,847.08	
		Sub Total (163 - MISCELLANEOUS ROADWAY)			**0**	**0**	**77**	**0**	**0**	**0**	**180**	**432**	**0**	**0**	**884**	**380**	**200**	**0**	**2,153**		**$453,182.24**
	170	**BRIDGE DESIGN**																			
		New Structure(s) Structural Details	S & B	BASIC			4				80	60				120			264	$48,011.60	
		Preparation of Bridge Layouts (Two Bridges)	S & B	BASIC			8				48	60				120			236	$41,266.48	
		Bridge Class Culv Layouts	S & B	BASIC			4				12	40				80			136	$22,241.12	
		Bridge Class Culv Details	S & B	BASIC			2				16					80			98	$13,672.56	
		Bridge Class Culv Estimate & Quantities	S & B	BASIC			2				16					40			58	$9,072.56	
		Bridge Class Culv Specifications	S & B	BASIC			2				8					16			26	$4,351.28	
		Bridge Foundation Design	S & B	BASIC			8				80	120				80			288	$58,010.40	
		Bridge Total Quantities and Cost Estimates (each bridge)	S & B	BASIC							16	16				24			56	$10,282.24	
		Bridge Special Provisions and Specifications (each bridge)	S & B	BASIC							8					8			16	$2,881.28	
		Bearing seat elevations for each beam or girder.	S & B	BASIC							24	24				60			108	$18,183.36	
		Sub Total (170 - BRIDGE DESIGN)			**0**	**0**	**30**	**0**	**0**	**0**	**308**	**320**	**0**	**0**	**0**	**628**	**0**	**0**	**1,286**		**$227,972.88**

PROJECT: East Loop PS&E
CLIENT: CCRMA
CONTRACT: GEC Contract
CSJ: x
COUNTY: Cameron
S & B JOB NO.: U2716.119

06/26/20

EXHIBIT D -- FEE ESTIMATE

ACTIVITY CODE	FUNCTION CODE	DESCRIPTION from Attachment B	FIRM	SERVICE	MAN-HOURS Principal	Quality Manager	Project Manager	Env Manager	Env Scientist	RPLS	Engineer Structural	Engineer (V)	Engineer (I,II)	3-Man Survey Crew	Engineer in Training	Senior CADD	CADD Operator (I)	Secretary	TOTAL HRS	ESTIMATED FEE	TOTALS
	164	**GENERAL COORDINATION**																			
		Project Manager (Proj Coord)(2 HRS/WK)	S & B	BASIC			208												208	$57,200.00	
		Project Manager Weekly Meeting (Prog. Rpts)	S & B	BASIC			104												104	$28,600.00	
		Proj. Meetings (DCC, 30% 60%, 100% Submittals)	S & B	BASIC			32				32	32			32			32	160	$28,644.48	
		Prepare Proj. Meetings Notes	S & B	BASIC			2					4			16			16	38	$3,849.92	
		Qualtiy Control - 4 Submittals	S & B	BASIC		320													320	$79,996.80	
		Project Secretary /CLERICAL (2 hrs/week)	S & B	BASIC														200	200	$13,000.00	
		General Coordiantion (Segment 1) See L&G's Cost Proposal	L&G	BASIC																$26,592.96	
		Sub Total (164 - GENERAL COORDINATION)			**0**	**320**	**346**	**0**	**0**	**0**	**32**	**36**	**0**	**0**	**48**	**0**	**0**	**248**	**1,030**		**$237,884.16**
	350	**CONSTRUCTION PHASE SERVICES**																			
		CONSTUCTION BIDDING	S & B	SPECIAL																	
		RFI'S/Addendums	S & B	SPECIAL			4					14			24		12		54	$7,489.72	
		Pre Bid Conference	S & B	SPECIAL			4					4						2	10	$2,129.92	
		Bid Opening	S & B	SPECIAL			4					4							8	$1,999.92	
		Bid Tabulation/Recommendation of Award	S & B	SPECIAL			4					40			24			12	80	$12,919.20	
		DURING CONSTUCTION	S & B	SPECIAL																	
		Attend Preconstruction Meeting	S & B	SPECIAL			4					4			4			2	14	$2,469.92	
		Review of Shop Drawings	S & B	SPECIAL															0	$0.00	
		Sign Bridges	S & B	SPECIAL			1								8				9	$955.00	
		Concrete Mix Design	S & B	SPECIAL			1								8				9	$955.00	
		Hot Mix Design (Bond Breaker)	S & B	SPECIAL			1								8				9	$955.00	
		Canal Bridge	S & B	SPECIAL																	
		Prestressed Concrete I Beams Design	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Prestressed Concrete I Beams Detail	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Bearing Pads	S & B	SPECIAL			1				4							1	6	$1,320.64	
		Prestressed Concrete Layout	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Bridge Railing	S & B	SPECIAL			1				8							1	10	$2,301.28	
		SH 4 Overpass	S & B	SPECIAL																	
		Prestressed Concrete I Beams Design	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Prestressed Concrete I Beams Detail	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Bearing Pads	S & B	SPECIAL			1				4							1	6	$1,320.64	
		Prestressed Concrete Layout	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Bridge Railing	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Sub Total (350 - CONSTRUCTION PHASE SERVICES)			**0**	**0**	**33**	**0**	**0**	**0**	**72**	**66**	**0**	**0**	**76**	**0**	**12**	**26**	**285**		**$50,925.20**
		LABOR TOTALS																			**$3,398,169.74**
		Total Hours	MULTIPLIER		0	320	812	4	0	40	604	1,860	288	400	2,764	3,216	332	314	10,738		
		CONTRACT RATES: ($/MAN-HOUR)	3.7717		299.96	249.99	275.00	185.00	110.00	214.99	245.16	224.98	169.73	188.59	85.00	115.00	100.00	65.00			
		BASE RATES: ($/MAN-HOUR)			79.53	66.28	72.91	49.05	29.17	57.00	65.00	59.65	45.00	50.00	22.54	30.49	26.51	17.23			
	160	**NON LABOR**																			
		Outside reproduction (16 Sets @ 1000 Sheet Avg @ $0.35 11X17 B/W)	S & B	SPECIAL																$5,600.00	
		Travel - Mileage During Plan Development (12 Mtgs and Precon Mtg)	S & B	SPECIAL	Mileage per trip =		120	Trips =	13							Milage Rate ($/mi.)=	$ 0.535			$834.60	
		Travel - Mileage During Plan Development (Survey)	S & B	SPECIAL	Mileage per trip =		350	Trips =	10							Milage Rate ($/mi.)=	$ 0.535			$1,872.50	
		Survey Crew Lodging including Taxes	S & B	SPECIAL		Nights=	30	Persons =	3							Lodging w taxes	$ 120.000			$10,800.00	
		Travel to District Area Office- Mileage 5 Meetings	S & B	SPECIAL	Mileage per trip =		9	Trips =	5							Milage Rate ($/mi.)=	$ 0.535			$24.08	
		L&G Non Labor Items (See L&G Cost Proposal)	L&G																	$7,286.40	
		Sub Total (F.C. 160)																			**$26,417.58**
		NON LABOR TOTAL																		**$26,417.58**	
		BASIC SERVICE TOTAL																		**$ 3,228,158.82**	
		SPECIAL SERVICE TOTAL																		**$ 189,142.10**	
		PROJECT TOTAL																			**$3,424,587.32**

EXHIBIT B "FEE SCHEDULE" - WARRANT STUDIES'
Along East Loop: From IH 69E to SH 4

Ergonomic Transportation Solutions, Inc.

WARRANT STUDIES				MANHOURS				
				Project Manager	Traffic Engineer III	CADD Operator	Administrative Assistant	Total
TASK								
	1	Collect Data and Conduct Field Investigations		12	60	34		106
	2	Assess Collected Data		4	20			24
	3	Accident Analysis		8	44	8		60
	4	Collision Diagram		2	4	18		24
	5	Intersection Exhibits		4	12	24		40
	6	Signal Warrant Analysis		26	120	26		172
	7	Photo Album			2	14	8	24
	8	Recommendations		12	12			24
	9	Traffic Signal Warrant Study Report		8	36	16	12	72
		Subtotal		**76**	**310**	**140**	**20**	**546**

Total Sheets/Labor Hours		**76**	**310**	**140**	**20**	**546**
Contract Rates		$ 221.07	$ 127.12	$ 71.85	$ 60.79	
Total Costs		**$ 16,801.32**	**$ 39,407.20**	**$ 10,059.00**	**$ 1,215.80**	**$ 67,483.32**

EXPENSES

Lodging	(2 people)(2 nights)($96/night)	$	384.00
Meals	(2 people)(3 days)($36/day)	$	216.00
Rental Car	(3 days)($60/day)	$	180.00
Rental Car Fuel	(3 days)($30/day)	$	90.00
Airfare	(2 people)($600/ea)(1 trip)	$	1,200.00
		$	-
Total Expenses		**$**	**2,070.00**

ETSI Total Cost **$ 69,553.32**

EXHIBIT C "FEE SCHEDULE" - FLASHING BEACON & TRAFFIC SIGNAL DESIGN
Along East Loop: From IH 69E to SH 4

Ergonomic Transportation Solutions, Inc.

FLASHING BEACON AND TRAFFIC SIGNAL DESIGN			MANHOURS						
			No. of sheets (estimated)	Project Manager	Senior Traffic Engineer	Traffic Engineer III	CADD Operator	Administrative Assistant	Total
TASK									
	1	General Notes	n/a	2	4	12		6	24
	2	Basis of Estimate	1	4	6	16	10		36
	3	Condition Diagram	7	14	22	60	44		140
	4	Proposed Signal Plan Layout	7	58	86	262	176		582
	5	Signal Phasing/Timing	n/a	4	6	16	10		36
	6	Electrical Schedules	7	18	26	78	52		174
	7	Int..Signs, Pav.Markings, Curb Ramps	n/a	4	6	16	10		36
	8	Standard Sheets List	14	4	6	16	10		36
	9	Specifications and Cost Estimate	n/a	8	12	36	26		82
	10	Coordination and Meetings	n/a	40					40
	11	TEMPORARY TRAFFIC SIGNALS	4	14	22	60	44		140
		Subtotal	**40**	**170**	**196**	**572**	**382**	**6**	**1326**

Total Sheets/Labor Hours	**40**	**170**	**196**	**572**	**382**	**6**	**1326**
Contract Rates		$ 221.07	$ 165.80	$ 127.12	$ 71.85	$ 60.79	
Total Labor Costs		**$ 37,581.90**	**$ 32,496.80**	**$ 72,712.64**	**$ 27,446.70**	**$ 364.74**	**$ 170,602.78**

EXPENSES

Lodging	(1 person)(1 night)($96/night)	$	96.00
Meals	(1 person)(2 days)($36/day)	$	72.00
Rental Car	(2 days)($60/day)	$	120.00
Rental Car Fuel	(2 days)($30/day)	$	60.00
Airfare	(1 person)($600/ea)(1 trip)	$	600.00
Total Expenses		**$**	**948.00**

ETSI Total Cost **$ 171,550.78**

PROJECT: East Loop (Limits: I69E to FM3068 - Approx. 5.4 Miles)
CLIENT: S&B Infrastructure (via CCRMA)
CONTRACT: GEC Contract
CSJ:
COUNTY: Cameron

06/26/20

EXHIBIT D - L&G ENGINEERING FEE ESTIMATE

L&G Consulting Engineers, Inc.

FUNCTION CODE		DESCRIPTION (Attachment B)	FIRM	SERVICE	Project Manager	Engineer (V)	Engineer (IV)	Engineer (III)	Engineer in Training	Senior CADD Operator	CADD Operator	Utilities Coord.	Admin / Clerical	TOTAL HRS	ESTIMATED FEE	TOTALS
120		**SOCIAL & ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT General FC 120 Categories**														
		Update EPIC sheets	L&G	BASIC	6	12			16	32	18		6	90	$8,864.54	
		Sub Total (120 - SOCIAL & ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT)			**6**	**12**	**0**	**0**	**16**	**32**	**18**	**0**	**6**	**90**		**$8,864.54**
160		**ROADWAY DESIGN CONTROLS**														
	1	Geometric Design - Horiz & Vert Align Finalize From Schematic Based on Field Surveys	L&G	BASIC	16	32				120				168	$18,287.68	
	2	Typical Sections	L&G	BASIC	20	30				120	120			290	$27,163.90	
	3	Intersection Layouts ~ 6 Intersections	L&G	BASIC	20	30		40	120	480	300	120		1,110	$94,056.30	
	4	Geometric Design - Roadway geometrics and P&P Sheets	L&G	BASIC	170	210		340	480	480	300	100	20	2,100	$226,849.00	
	5	Grading Design - Cross Sections	L&G	BASIC	60	100		240	180	160		80	20	840	$98,126.80	
	6	Grading Design - Determine Cut and Fill Quantities	L&G	BASIC	28	30		80	140	170				448	$46,335.78	
	7	Plan Details to Supplement Std Shts	L&G	BASIC	18	48		60	90	120	120		20	476	$46,527.46	
	8	Compute and Tabulate Quantities	L&G	BASIC	20	30	60		120	160			30	420	$42,228.90	
		Sub Total (160 - ROADWAY DESIGN CONTROLS)			**352**	**510**	**60**	**760**	**1,130**	**1,810**	**840**	**300**	**90**	**5,852**		**$599,575.82**
161		**DRAINAGE**														
	1a	Hydrologic data/discharge Implementation (XX Report)	L&G	BASIC		60	100							160	$24,778.60	
	1b	Drainage Area Maps - determine and calculate	L&G	BASIC	80	170	120		80	170				620	$84,224.10	
	2a	Hydraulic Computations - Roadside Ditches & Outfalls	L&G	BASIC		120	170							290	$45,369.20	
	2b	FEMA floodway requirements (Design Roadway Above BFE)	L&G	BASIC	16	120	160							296	$47,416.56	
	3a	Utility & Drainage Sheets	L&G	BASIC		100	120		240	240			20	720	$74,453.00	
	3b	Storm Sewer Side-Drain Details & Layouts	L&G	BASIC					120	120			20	260	$20,474.80	
	3c	Culv Design, Details & Layouts	L&G	BASIC		80	220			200				500	$60,260.80	
	3d	Coordinate with Permitted Utilities	L&G	BASIC	32	120						360	20	532	$65,400.32	
	3e	Summary of Drainage Structure Quantities	L&G	BASIC		170	170			170				510	$67,240.10	
	4	Storm Water Pollution Prevention Plan (SW3P)	L&G	BASIC	4	40	170			240				454	$49,954.04	
	5	Compute and Tabulate Quantities	L&G	BASIC	20	40	60		120	160			20	420	$43,392.20	
		Sub Total (161 - DRAINAGE)			**152**	**960**	**1,190**	**0**	**560**	**1,300**	**0**	**360**	**80**	**4,602**		**$558,185.12**
162		**SIGNING and MARKINGS**														
	1	Signing and Markings Layouts	L&G	BASIC	44	40	50		100	180				414	$45,707.24	
	2	Summary of Small Signs Tabulation	L&G	BASIC	60	30	40		80	140				350	$41,239.90	
	3	Sign Detail Sheets & Standards	L&G	BASIC	20	40	60		120	160				400	$42,112.60	
	4	Compute and Tabulate Quantities	L&G	BASIC	10	20	30		60	80				200	$21,056.30	
		Sub Total (162 - SIGNING and MARKINGS)			**134**	**130**	**180**	**0**	**360**	**560**	**0**	**0**	**0**	**1,364**		**$150,116.04**
163		**MISCELLANEOUS ROADWAY**														
	1	Coordinate w/ Surveyor for Survey Data Sheets	L&G	BASIC	12	60		80	60	100	70	60		442	$47,079.92	
	2	Traffic Control Plan (w/o Signal Modifications)	L&G	BASIC	12	60		80	60	100	70	60		442	$47,079.92	
	3	Compute and Tabulate Quantities	L&G	BASIC	2	12	24		32	40				110	$11,668.22	
	4	Specifications	L&G	BASIC	2	6	8							16	$2,629.08	
	5	General Notes	L&G	BASIC	4	8	12							24	$3,978.52	
	6	Prepare Utility Status Sheet (Permitted)	L&G	BASIC	20							80		100	$12,214.60	
	7	Prepare Utility Status Sheet (Compensable)	L&G	BASIC	20							80		100	$12,214.60	
	8	Prepare Construction Time Schedule	L&G	BASIC	24	16	8							48	$9,166.80	
	9	Project Submittals 60%, 95% and 100%	L&G	BASIC	18	24			32	40			40	154	$16,484.10	
	10	Project Submittals - Bidding Documents	L&G	BASIC	40	60								100	$19,427.00	
	11	Assembely of Final Documents (Graphic Files of Plan Sheets and Geopak Files)	L&G	BASIC	16	20				32			12	80	$10,237.16	
	12	ADA/TDLR Coordination	L&G	BASIC	12	16							20	48	$6,747.08	
		Sub Total (163 - MISCELLANEOUS ROADWAY)			**182**	**282**	**52**	**160**	**184**	**312**	**140**	**280**	**72**	**1,664**		**$151,847.08**

PROJECT: East Loop (Limits: I69E to FM3068 - Approx. 5.4 Miles)
CLIENT: S&B Infrastructure (via CCRMA)
CONTRACT: GEC Contract
CSJ:
COUNTY: Cameron

06/26/20

EXHIBIT D - L&G ENGINEERING FEE ESTIMATE

L&G Consulting Engineers, Inc.

FUNCTION CODE	DESCRIPTION (Attachment B)	FIRM	SERVICE	Project Manager	Engineer (V)	Engineer (IV)	Engineer (III)	Engineer in Training	Senior CADD Operator	CADD Operator	Utilities Coord.	Admin / Clerical	TOTAL HRS	ESTIMATED FEE	TOTALS
164	**GENERAL COORDINATION for Bid Packaging and Letting**														
	1 Project Manager (Proj Coord)(2 HRS/WK)	L&G	BASIC	120									120	$25,825.20	
	5 Project Secretary /CLERICAL (2 hrs/week)	L&G	BASIC									12	12	$767.76	
	Sub Total (164 - GENERAL COORDINATION for Bid Packaging and Letting)			**120**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**132**		**$26,592.96**
	LABOR TOTALS														
	Total Hours			946	1,894	1,482	920	2,250	4,014	998	940	260	13,704		
	CONTRACT RATES: ($/MAN-HOUR)			$215.21	$180.31	$139.60	$127.97	$84.34	$75.62	$69.80	$98.88	$63.98			
	BASE RATES: ($/MAN-HOUR)			$74.00	$62.00	$48.00	$44.00	$29.00	$26.00	$24.00	$34.00	$22.00			
															$1,495,181.56
160	**NON LABOR**														
	a Courier Services	L&G		48								$ 40.000		$1,920.00	
	b Plan Development Prints (11" x 17")	L&G		12,000					Photocopies B/W (11" x 17") =			$ 0.350		$4,200.00	
	c Travel - Mileage During Plan Development	L&G		2,160	Miles					Milage Rate ($/mi.)=		$ 0.540		$1,166.40	
	Sub Total (F.C. 160)														**$7,286.40**
	NON LABOR TOTAL													**$7,286.40**	
	BASIC SERVICE TOTAL													**$1,495,181.56**	
	SPECIAL SERVICE TOTAL													**$0.00**	
	PROJECT TOTAL													**$1,502,467.96**	

2-I CONSIDERATION AND APPROVAL OF WORK AUTHORIZATION NO. 22 WITH S&B INFRASTRUCTURE REGARDING THE EAST LOOP PROJECT.

WORK AUTHORIZATION NO. 22

This Work Authorization is made as of this _____ day of _____, 2021, under the terms and conditions established in the AGREEMENT FOR GENERAL CONSULTING CIVIL ENGINEERING SERVICES, dated as of May 10, 2018 (the "Agreement"), between the Cameron County Regional Mobility Authority (the "Authority") and S&B Infrastructure, Ltd. (the "GEC").

This Work Authorization is made for the following purpose, consistent with the Services defined in the Agreement: ***Professional services including: providing engineering services required for the preparation of Plans, Specifications and Estimates (PS&E), Geotechnical & Utility Engineering Services and Construction Management support services for the proposed roadway project as identified as East Loop from Interstate 69E to 1.57 Miles East of the intersection of SH 4 and FM 1419 along with levee relocation – Project Roadway Length = 11.4 Miles, Project Levee Length = 1.7 Miles.***

Section A. - Scope of Services

A.1. GEC shall perform the following Services:

GEC shall perform the Services as listed in Exhibit B and as requested by the Authority.

Section B. - Schedule

GEC shall perform the Services and deliver the related Documents (if any) according to the following schedule as shown on Exhibit C.

Section C. - Compensation

C.1. In return for the performance of the foregoing obligations, the Authority shall pay to the Engineer the amount not to exceed $5,001,659.38, based on the attached fee estimate shown on Exhibit D. Compensation shall be in accordance with the Agreement.

C.2. The Authority shall pay the GEC under the following acceptable payment method – Lump Sum Payment Method.

C.3. Compensation for Additional Services (if any) shall be paid by the Authority to the GEC according to the terms of a future Work Authorization.

Section D. - Authority's Responsibilities

The Authority shall perform and/or provide the services as stated in Exhibit A in a timely manner so as not to delay the Services of the Engineer.

Section E. - Other Provisions

The parties agree to the following provisions with respect to this specific Work Authorization: None.

-SIGNATURES ON NEXT PAGE-

Except to the extent expressly modified herein, all terms and conditions of the Agreement shall continue in full force and effect.

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY

By:_____
Frank Parker, Jr., Chairman
Date: _____

S&B INFRASTRUCTURE, LTD.

By: _____
Daniel O. Rios, PE, President
Date: _____

LIST OF EXHIBITS
Exhibit A - Authority's Responsibilities
Exhibit B - Services to be Provided by Engineer
Exhibit C - Work Schedule
Exhibit D - Cost Proposal

EXHIBIT A
Authority's Responsibilities

The following provides an outline of the services to be provided by the **Authority** in the development of the **Project** for this work authorization.

GENERAL

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

(1) Provide **Engineer** with a Notice to Proceed.

(2) Payment for work performed by the **Engineer** and accepted by **Authority** in accordance with this 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 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 an agreed-upon work schedule.

(5) Coordinate with TxDOT for items as needed. The Authority will negotiate and approve all change orders and other contract revisions that the Authority finds necessary or convenient to accomplish the construction activities for the Project. For change orders and other contract revisions that affect prior environmental approvals or result in non-conformity with the specifications and standards agreed upon for the Project, the Authority must assess any potential environmental effects and any additional or revised environmental permits, issues, coordination, mitigation, and commitments required as a result of the contract revisions.

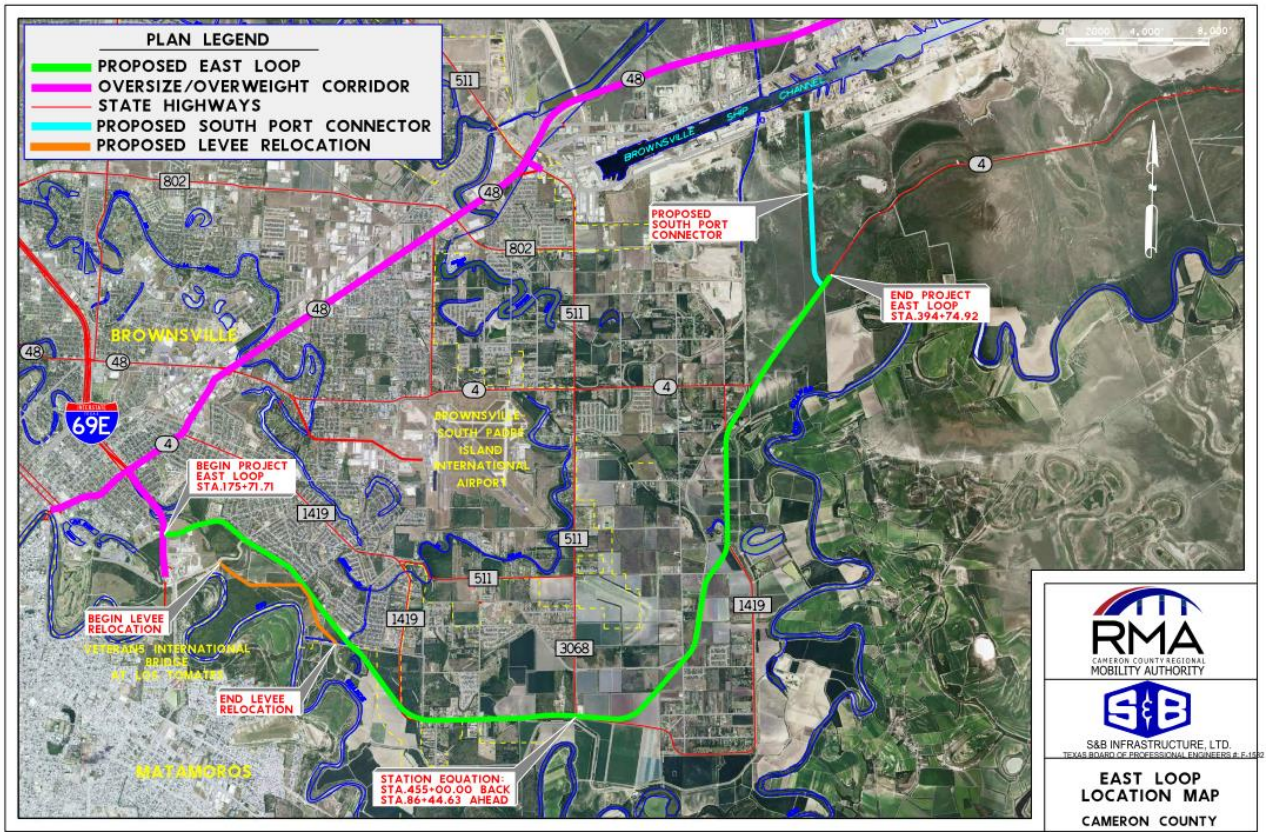
(6) Provide the **Engineer** the previous obtained mylars and electronic MicroStation files for the project.

(7) Assist the **Engineer** in notifying previous Engineer Designers of modifications being made to existing plan designs.

EXHIBIT B
Services to be Provided by the Engineer

GENERAL

The work to be performed by the **Engineer** under this contract consists of providing engineering services required for the preparation of **Plans, Specifications and Estimates (PS&E), Geotechnical & Utility engineering services, and Construction Management support services** for the proposed roadway project as identified in Contract as **East Loop from Interstate 69E to 1.57 Miles East of the intersection of SH 4 and FM 1419 along with levee relocation -- Project Roadway Length = 11.4 Miles Project Levee Length 1.7 Miles.**



The existing traffic capacity on existing roadways and number of main lanes must be maintained at all times during construction of the new facility, with any exceptions to be approved by the **State/Authority**. The Levee relocation must be completed to the Top of Levee Elevation (TOLE) without freeboard before the existing levee is removed. The **Engineer** shall prepare plans, details, and compute quantities to include roadway design, grading, paving, sidewalks, drainage including pump stations, traffic signals, signing, pavement markings, illumination – safety lighting, traffic control plans, storm water pollution prevention plans, retaining walls – noise walls, levee relocations, border fence relocation, specifications, and cost estimates. The **Engineer** shall prepare the bridge layouts and furnish the structural details, confirm the layouts and/or structural details with the **Authority**, and bridge quantities for the designated bridges. The **Engineer** shall also provide Construction Phase Services. (Construction Management Services are not included in this scope at this time)

The **Engineer** shall collect, review, and evaluate the available existing data pertaining to the project and prepare the Plans, Specifications and Estimates in accordance with the requirements and policies of the **State/Authority**.

The **Engineer** shall identify, prepare exhibits, and complete all necessary forms for Design Exceptions and/or Waivers within project limits prior to the 30% Submittal. These exceptions shall be provided to the **State/Authority** for coordination and processing of approvals. If subsequent changes require additional exceptions, the **Engineer** shall notify the **State/Authority** as soon as possible after identification.

The **Engineer** shall provide field surveying services necessary to produce the Digital Terrain Model (DTM), produce topographic maps, establish the project baseline on the ground, locate and tie existing utilities to the project baseline. Coordinate geometry shall be based on and tied into **State** plane surface coordinate system. During all surveying operations the traffic shall be controlled in accordance with the latest edition of the Texas Manual on Uniform Traffic Control Devices-Part IV.

It shall be the responsibility of the **Engineer** to secure permission to enter private property for the purpose of performing any surveying, environmental and engineering/geotechnical activities. In pursuance of the **State/Authority**'s policy with the general public, the **Engineer** shall not commit acts which will result in damages to private property and the **Engineer** will make every effort to comply with the wishes and address the concerns of private property owners. The **Engineer will**, at all times, contact the property owner prior to any entry onto the owner's property.

The **Engineer** shall coordinate with adjacent Engineers on all controls at interfaces. In the event agreement cannot be reached, each **Engineer** shall meet jointly with the **State/Authority** for resolution. The **State/Authority** shall have authority over the Engineers' disagreements and its decision shall be final.

The **Engineer** shall perform their work in accordance with the **State**'s Utility Accommodation Policy. The **Engineer** shall prepare drawings early in the design phase (30%) to be used as exhibits in utility agreements. The exhibits shall be prepared using English units. The **Engineer** shall show existing utilities, including those in conflict with construction on this project. The **Engineer** shall prepare plans to avoid utility adjustments, where feasible. The **Engineer** shall be responsible for sending out notices, with copies of exhibits and plans, including all milestone submittals.

The **Engineer** shall compile, maintain, and update a Utility Conflict List. The **Engineer** shall provide the most current copy of the conflict list to the **State/Authority** at each milestone submittal and shall be responsible for coordination with utility companies to resolve conflicts. The Utility Conflict List shall identify the owner of the facility, the contact person (with address and telephone number), location of conflict (station and offset), type of facility, expected clearance date and type of adjustment necessary.

The **Engineer** shall prepare any exhibits necessary for IBWC, CBP and/or Utility approvals, and other governmental/regulatory agencies, specific to the project.

The **Engineer** shall coordinate through the **Authority**'s Project Manager for the development of the PS&E with any local entity having jurisdiction or interest in the project (e.g., city, county, municipal utility district, irrigation district, drainage district, etc.)

The **Engineer** shall conduct traffic counts, prepare Traffic Signal Warrant Studies, and traffic signal plans for temporary, existing, and permanent locations at designated intersections.

The **Engineer** shall prepare Traffic Control Plans (TCP) in coordination with the **State/Authority**. The TCP shall include interim signing for every phase of construction. This is to include regulatory, warning, construction, route, and guide signs. The **Engineer** shall interface and coordinate phases of work, including the TCP, with adjacent Engineers, which are responsible for the preparation of the PS&E for adjacent projects.

The **Engineer** shall maintain continuous access to abutters during all phases of the TCP. The **Engineer** shall develop a list of all abutters along its alignment. The **Engineer** shall prepare exhibits for and attend meetings with the public, as requested by the **State/Authority**.

The **Engineer** shall provide safety lighting at all intersections and interchanges required within the Project limits. The **Engineer** shall prepare exhibits as required to obtain agreements with adjacent municipalities. The **Engineer** shall tabulate all quantities and provide summary sheets.

The **Engineer** shall make every effort to prevent detours and utility relocations from extending beyond the proposed Right-of-way lines. If it is necessary to obtain additional permanent or temporary easements and/or Right-of-Entry, the **Engineer** shall notify the **State/Authority** in writing of the need and justification for such action. The **Engineer** shall identify and coordinate with all utility companies for relocations required.

The PS&E shall be complete and organized in accordance with the most current TxDOT-PS&E Preparation Manual. The PS&E package shall be suitable for the bidding and awarding of a construction contract, and in accordance with the latest **State/Authority**'s policies and procedures.

The **Engineer** shall use CADD to fully develop all drawings. The **Engineer** shall utilize corridor modeling software for the earthwork and cross-section data files in a GEOPAK format at each milestone submittal as an evolving electronic data file.

The **Engineer** shall design, develop, and prepare all documents, including PS&E, in English units. The final plan sheets shall be size 11" x 17", signed, sealed, and dated by a Professional Engineer registered in the **State** of Texas (where required). The plans shall be noted as copyrighted with the **Authority's** and **State's** logo.

PS&E for the above work shall be prepared in accordance with the applicable requirements of the **State**'s Specifications, Standards and Manuals (latest revision). Whenever possible, the **State**'s standard drawings, standard specifications, or previously approved special provisions and/or special specifications shall be used. If a special provision or a special specification must be developed or modified for this project, it shall be in the **State**'s format and, to the extent possible, incorporate references to approved **State** test procedures. Any specifications developed by the **Engineer** shall be submitted to the **State/Authority** for approval prior to inclusion in the PS&E. The **Engineer** shall sign, seal, and date all project specific modifications to standard drawings.

The **Engineer** shall make submittals, as defined by the milestones in Exhibit C, and in accordance with the latest **State/Authority**'s policies and procedures. The submittals shall consist of electronic .pdf submittals. The **Engineer** shall reply to each comment either within the plan set or by separate cover letter. The **Engineer** shall make all agreed upon changes to the submitted documents before the next scheduled submittal.

The **Engineer** may be required to meet with the **Authority**'s Project Manager to report on progress. After each meeting with the **State** and any other meeting, the **Engineer** shall prepare meeting minutes, solicit, and incorporate participants' comments, distribute the minutes, submit a memorandum summarizing the events, including an ACTION ITEM LIST, within five (5) working days of the meeting.

The **Engineer** shall invoice monthly according to Function Code breakdowns in accordance with the format provided at the Kick-off meeting and shall include Form 132 version 9-90 or equivalent. This invoice shall include a completed Form 132, a written progress report, a Projected vs. Actual Contract Invoices by Month form and a bar chart indicating the percentage of completion of each task shown in Attachment E. The written progress report shall describe activities during the reporting period; activities planned for the following period; problems encountered, and actions taken to remedy them; list of meetings attended; and overall status, including a per cent complete by task.

The **Engineer** shall design all conventional storm drainage and cross drainage systems. The **Engineer** shall evaluate the hydraulic grade line throughout the whole system, within the project limits, for the design frequency(ies) and make necessary system adjustments for conformance to program criteria. Should there be adjacent projects under design, the **Engineer** shall coordinate with the **State/Authority** and designers of adjacent projects such that all proposed drainage systems accommodate the proposed construction phasing plan.

The **Engineer** shall include the Storm Water Pollution Prevention Plans (SW3P) items for each phase of constructions, including details and pay quantities with respect to the Construction phase. The **Authority** will provide the Notice of Intent.

The **Engineer** shall prepare both a design time schedule, and an estimated construction contract time schedule, using the latest version of Excel, Primavera or SureTrak software in accordance with the **State**'s *Administrative Circular No. 17-93*. The schedules shall indicate tasks, production rates, subtasks, critical dates, milestones, deliverables, and review requirements in a format that depicts the interdependence of the various items. The **Engineer** shall aid **State/Authority** personnel in interpreting the schedules. Milestone submittals shall be at 30 %, 60 %, 90%, 95% and final. If the **Engineer** cannot meet the scheduled milestone review date they are to advise the **State/Authority** in writing.

In addition to scheduling software set forth above, reports and/or spreadsheets prepared in connection with these services shall be in the Microsoft (MS) Office software compatible with the versions to the **State/Authority**'s software packages.

The project's engineering work may be inspected by both the **State/Authority** and the Federal Highway Administration in the offices of the Engineer, except for the field work which shall be performed on-site, and the sub-consultant work which will be performed in the office of the sub-consultant. After notice to proceed is given in writing, the PS&E for the work outlined above shall be completed and submitted to the **State/Authority** within the negotiated contract period per the identified milestones in the schedule.

All documents submitted to the **State/Authority** shall be accompanied by a letter of transmittal which shall include, but need not be limited to, the highway number, project limits, county, CSJ, and contract number.

The **Engineer** shall designate one Texas Registered Professional Engineer to be responsible throughout the project for project management and all communications, including billing, with the **State/Authority**. The **State/Authority** must approve any replacement to the Engineer's designated Project Manager.

The **Engineer** shall prepare and execute contracts with sub-consultants, monitor sub-consultant activities (staff and schedule), and review and recommend approval of sub-consultant invoices.

The **Engineer** shall implement their Quality Assurance/Quality Control program prior to submitting plans to the **State/Authority** for each of the milestones. The **Engineer** is responsible for design errors and/or omissions that become evident before, during or after construction of the project. The **Engineer**'s responsibility for all questions arising from design errors and/or omissions will be determined by the **State/Authority** and all decisions shall be final and binding. This would include, but not necessarily be limited to:

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

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

An evaluation of the **Engineer**'s performance, professionalism, quality of plan preparation, etc. will be performed annually by the **State/Authority**.

WORK OUTLINE

ROUTE AND DESIGN STUDIES (Function Code 110)

A. **Data Collection.** The **Engineer** shall collect, review, and evaluate data described below. The **Engineer** shall notify the **State/Authority** in writing whenever the **Engineer** finds disagreement with the information or documents:

1. Data, if available, from the **State/Authority**, including "as-built plans", existing schematics, right-of-way maps, SUE mapping, existing cross sections, existing planimetric mapping, environmental documents, existing channel and drainage easement data, existing traffic counts, accident data, BRINSAP records, PMIS data, identified endangered species, identified hazardous material sites, current unit bid price information, current special provisions, special specifications, and standard drawings.
2. Documents for existing and proposed development along proposed route from local municipalities and local ordinances related to project development.
3. Utility plans and documents from appropriate municipalities and agencies.
4. Readily available flood plain information and studies from the Federal Emergency Management Agency (FEMA), the U. S. Army Corps of Engineers, local municipalities, and other governmental agencies in addition to that provided by the **State/Authority**.

B. **Field Reconnaissance.** The **Engineer** shall conduct field reconnaissance and collect data including a photographic record (to be maintained in Engineer's office) of notable existing features.

C. **Design Concept Conference.** The **Engineer**, in cooperation with the **State/Authority** shall plan, attend, and document a Design Concept Conference (DCC). Personnel from the **State**'s Pharr District will participate. The conference will provide for a brainstorming session in which decision makers, stakeholders, including USIBWC and technical personnel may discuss and agree on:

1. Roadway and drainage design parameters
2. Engineering and environmental constraints
3. Project development schedule
4. Other issues as identified by the **State/Authority**

D. **Roadway and Hydraulic Design Criteria**. The **Engineer** shall design the project using the **State**'s design criteria. The **Engineer** shall supply project specific design criteria (typical sections, estimate, design exceptions, etc.) to be inserted into the Design Elements form for discussion at the DCC.

The Engineer shall develop the roadway design criteria based on the controlling factors specified (i.e., 4R, 3R, 2R, or special facilities), by use of the funding categories, design speed, functional classification, roadway class and any other set criteria as set forth in Roadway Design Manual, Bridge Design Manual, Hydraulic Design Manual, and other deemed necessary State approved manuals. In addition, the Engineer shall prepare the Design Summary Report, DSR.

E. **Geotechnical Borings**. The **Engineer** shall determine the location of proposed soil borings for bridge design, embankment settlement analysis, retaining walls/sound walls, and slope stability and along storm sewer alignment. The **State/Authority** will review and provide recommendation for a boring layout submitted by the **Engineer** showing the general location and depths of the proposed borings. Once the **Engineer** receives the **State/Authority**'s recommendations they shall perform soil borings (field work), soil testing and prepare the soil borings in accordance with Pharr District's procedures. The **Engineer** shall prepare a geotechnical report to include soil boring locations, soil boring logs, signed, sealed, and dated for insertion into plans, lab test results, design capacity curves including skin friction and point bearings for piling and drilled shaft foundations.

F. **Geotechnical Investigations.** The **Engineer** shall determine the location of proposed soil borings for bridge design and pavement design in accordance with the latest edition of the State's Geotechnical Manual.

1. The following is a list of proposed borings for the project:

   Bridge Borings (@ Canal):
   2 Holes @ 80' depth

   Bridge/Embank Borings (@ SH 4):
   9 Holes @ 100' depth

   Levee Borings:
   26 Holes @ 65' depth

   Roadway Pavement Borings***:
   62 Holes @ 15' depth
   (*1000 ft increments)

   Noise Wall Borings:
   10 Holes @ 65' depth

   Large Sign Borings:
   6 Holes @ 20' depth

   Total 115 Borings
   Total Linear Footage – 4450 linear feet of borings

2. All geotechnical work should be performed in accordance with the latest version of the State's Geotechnical Manual. All testing shall be performed in accordance with the latest version of the State's Manual of Test Procedures. American Society for Testing Materials (ASTM) test procedures can be used only in the absence of the State's procedures. All soil classification should be done in accordance with the Unified Soil Classification System. Levee design will be in accordance with US Army Corps of Engineers (USACE) for all levee elements.
3. The Geotechnical Report recommendations shall be in accordance with TxDOT Standard Specification Item 423, "Retaining Walls", and applicable standard retaining/noise wall drawings. The report shall specifically note if modifications are required to either the specification or standard drawings. No additional walls are anticipated to address proposed slopes steeper than 4:1. Instead, slope stabilization

through soil admixtures, such as geo-grids, fibers or soil-cement, or riprap will be utilized if necessary, based on geotechnical recommendations.

4. The **Engineer** shall provide a signed, sealed and dated geotechnical report which contains, but is not limited to, soil boring locations, boring logs, laboratory test results, generalized subsurface conditions, ground water conditions, analyses, and recommendations for slope stability of the earthen embankments, skin friction and design capacity curves including skin friction and point bearing. The skin friction and design capacity curves must be present for piling and drilled shaft foundation.
5. The **Engineer** shall provide Grain Size Distribution Curves with D_{50} values at 2 locations throughout the project. If the bridge borings indicate rock, the **Engineer** shall include a Rock Quality Designation (RQD) for each of the borings provided in this area to determine the stability of the rock for use during scour analysis.
6. The **Engineer** shall sign, seal and date soil boring sheets to be used in the PS&E package. The preparation of soil boring sheets must be in accordance with a State's District standards.
7. Pavement Design: The **Engineer** shall provide a signed and sealed pavement design report to reflect a flexible pavement structure.
8. The **Engineer** shall incorporate soil boring data sheets prepared, signed, sealed, and dated by the **Engineer**. The soil boring sheets shall be in accordance with the State's WINCORE Software as can be found on the TxDOT Website.

RIGHT-OF-WAY DATA (Function Code 130)

A. Utility Adjustments. The **Engineer** shall coordinate with the **State/Authority** to determine the location of all existing and proposed utilities and attend meetings with the various utility companies to discuss potential conflicts. The **Engineer** shall be responsible for covering milestone meetings, minutes, invitations to utility companies to attend milestone meetings, correspondence, etc.

B. Proposed Utility Layouts, Utility Coordination and Meetings

The **Engineer** shall perform the following duties:

1. Meet with Utility providers periodically to coordinate the work efforts and resolve any utility related problems. The **Engineer** shall prepare the minutes for these meetings and forward them to the **State/Authority**. The **Engineer** shall address the following issues and any other items deemed necessary during the Utility Coordination meetings:
    a) Activities completed since last meeting
    b) Problems encountered.
    c) Late activities.
    d) Activities required by the next progress meeting.
    e) Solutions for unresolved and/or anticipated problems.
    f) Information or items required from other agencies/consultants.
2. If a reimbursable utility relocation exists, request conveyance documents from the utility provider and notify the **State/Authority** in writing.
3. Notify the Utility companies in writing of the project letting date, requesting that they relocate prior to letting, and requesting the following information in writing:
    a) Relocation plan according to Utility Accommodation Policy Manual.
    b) Forward their relocation plan to the **Engineer**.
    c) When relocation of utilities will be complete.

d) Forward as-built plans to the **State/Authority** upon immediate completion of relocation.

4. Develop the typical sections, alignment, and preliminary cross sections addressing the utility location and forward to the respective utility company.
5. Update all files and plans based on the utility company responses.
6. Identify all utility conflicts on the plans and prepare layouts and profiles of existing utility crossings showing conflicts of utilities with proposed improvements. The **Engineer** shall forward these layouts to the **State/Authority** and the utility companies. During design process, the **Engineer** shall field verify all visible utility conflicts.
7. Verify the proposed relocation plan submitted by the Utility companies to assure their design is according to Utility Accommodation Policy Manual. Upon the **Engineer**'s review and concurrence with the proposed relocation plan, they shall forward their recommendation for approval to the **State/Authority**.
8. Gather all vertical and horizontal information for overhead utilities (location, elevation, direction, etc.) within the existing and proposed right of way that will not be obtained by Subsurface Utility Engineering (SUE).

In order to promote uniformity in the coordination of utility adjustments and to minimize construction delays, the following procedures must be followed on every design project:

- Notify the Authority of the upcoming utility meeting as soon as the date is known
- Identify all utilities within the project limits
- Have a utility kick off meeting and introduce the project
- Identify any utilities that hold a compensable interest and may be reimbursable
- Notify the **State/Authority** if any compensable utilities have been identified
- Start a utility file folder for each utility identified within project corridor
- Carbon copy all correspondence and project notes to the **State/Authority**
- Advise Utility Companies as soon as possible in order for them to budget for the anticipated adjustments

At the 30% PS&E Stage, the Engineer shall:

- Make available all horizontal and vertical data and plan sheets for markups to utility companies.
- Coordinate with utility companies to commence obtaining positive ties by test holing and placing PVC on existing utilities within project limits
- Coordinate with utility companies to obtain accurate location data showing horizontal and vertical information within thirty (30) days of utility coordination meeting
- Obtain positive ties (Station, offset & elevation) on any compensable utilities that have been identified

At the 60% PS&E Stage the Engineer shall:

- Conduct a utility follow up meeting for exchange of information
- Analyze all horizontal and vertical utility information available.
- Explore the possibility of designing around existing utilities in order to avoid conflicts
- Ensure that the utility company has thirty days (30) after receipt of substantially complete storm drain design to provide a relocation plan of adjustment with utilities schedule of work and estimated start date
- Establish priorities for any remaining / outstanding utility such as conflicts with outfalls

At 90% PS&E Stage the Engineer shall:

- Conduct the final Utility Meeting
- Provide plan sheets to utility companies and any other information that may be required in assisting with adjustments
- Establish a schedule for utility adjustment start and completion dates
- Submit notification letter from TxDOT following meeting with commitment dates from utilities

At 100% PS&E Stage the Engineer shall:

Submit completed utility folders (permitted utilities) to area office construction engineer.

The **Engineer** shall also be responsible for the following:

1. Traffic Control Plan (TCP). Provide all traffic control, labor, and equipment. The **Engineer** shall comply with the regulations of the most recent edition of the "Texas Manual on Uniform Traffic Control Devices". In the event field personnel must divert traffic or close traveled lanes, a Traffic Control Plan shall be prepared by the **Engineer**'s surveyor and approved by the **State/Authority** prior to commencement of field work. A copy of the approved plans shall be in the possession of field personnel on the job site at all times and shall be made available to **State/Authority** personnel upon request.
   All standards, procedures and equipment used by the Surveyor shall be such that the results of survey will be in accordance with Board Rule 663.15, as promulgated by the Texas Board of Professional Land Surveyors.

2. Permits and rights of entry. Obtain all necessary permits from property owners, city, county, municipality, railroad, or other jurisdiction to allow the **engineer** to work within existing streets, roads, or private property for designating and/or subsurface utility locating service.

3. Condition Assessments. The **Engineer** shall perform and document condition assessments of the utility facility by utilizing ultrasonic equipment, interior pipe wall videos, visual inspection, or other techniques, when requested.

C. SUBSURFACE UTILITY ENGINEERING (SUE)

1. **Utility Engineering Investigation (currently a Level D being performed under APD work order)** including utility investigations subsurface and above ground prepared in accordance with AASHTO standards and Utility Quality Levels as follows:
   a) Utility Quality Levels are defined in cumulative order (least to greatest) as follows:
      1) Quality Level D - Existing Records: Utilities are plotted from review of available existing records.
      2) Quality Level C - Surface Visible Feature Survey: Quality level "D" information from existing records is correlated with surveyed surface-visible features. Includes Quality Level D information. If there are variances in the designated work area of Level D then a new schematic or plan layout, if needed, is required showing the limits of the proposed project and limits of the work area required for this work authorization; including highway stations, limits within existing or proposed right of way, additional areas outside the proposed right of way, and distances or areas to be included down existing intersecting roadways.

3) Quality Level B - Designate: Two-dimensional horizontal mapping. This information is obtained through the application and interpretation of appropriate non-destructive surface geophysical methods. Utility indications are referenced to established survey control. Incorporates quality levels C and D information to produce Quality Level B. If there are variances in the designated work area of Level D then a new schematic or plan layout, if needed, is required showing the limits of the proposed project and limits of the work area required for this work authorization; including highway stations, limits within existing or proposed right of way, additional areas outside the proposed right of way, and distances or areas to be included down existing intersecting roadways.
4) Quality Level A - Locate (Test Hole): Three-dimensional mapping and other characterization data. This information is obtained through exposing utility facilities through test holes and measuring and recording (to appropriate survey control) utility/environment data. Incorporates quality levels B, C and D information to produce Quality Level A.

b) Designate (Quality Level B), Designate means to indicate the horizontal location of underground utilities by the application and interpretation of appropriate non-destructive surface geophysical techniques and reference to established survey control. Designate (Quality Level B) Services are inclusive of Quality levels C and D.
   1) The **Engineer** shall:
      (a) As requested by the **State/Authority** compile "As Built" information from plans, plats and other location data as provided by the utility owners.
      (b) Coordinate with utility owner when utility owner's policy is to designate their own facilities at no cost for preliminary survey purposes. The **Engineer** will examine utility owner's work to ensure accuracy and completeness.
      (c) Designate, record, and mark the horizontal location of the existing utility facilities and their service laterals to existing buildings using non-destructive surface geophysical techniques. No storm sewer facilities are to be designated unless authorized by the **State/Authority**. A non-water base paint, utilizing the APWA color code scheme, must be used on all surface markings of underground utilities.
      (d) Correlate utility owner records with designating data and resolve discrepancies using professional judgment. A color-coded composite utility facility plan with utility owner names, quality levels, line sizes and subsurface utility locate (test hole) locations, if applicable will be prepared and delivered to the **State/Authority**. It is understood by both the **Engineer** and the **State/Authority** that the line sizes of designated utility facilities detailed on the deliverable are from the best available records and that an actual line size is normally determined from a test hole vacuum excavation. A note must be placed on the designate deliverable only that states "lines sizes are from best available records". All above ground appurtenance locations must be included in the deliverable to the **State/Authority**. This information will be provided in the latest version of MicroStation or GeoPak used by the **State/Authority**. The electronic file will be delivered on C.D., as

required by the State's District Office. A hard copy is required and must be signed, sealed, and dated by the **Engineer**. When requested by the State's District Office, the designated utility information must be over laid on the **State/Authority**'s design plans.

(e) Determine and inform the **State/Authority** of the approximate utility depths at critical locations as determined by the **State/Authority**. This depth indication is understood by both the **Engineer** and the **State/Authority** to be approximate only and is not intended to be used preparing the right of way and construction plans.

(f) When requested, provide a monthly summary of work completed and in process with adequate detail to verify compliance with agreed work schedule.

(g) Close-out permits as required.

(h) Clearly identify all utilities that were discovered from quality levels C and D investigation but cannot be depicted in quality level B standards. These utilities must have a unique line style and symbology in the designate (Quality Level B) deliverable.

(i) Comply with all applicable State policy and procedural manuals.

c) Subsurface Utility Locate (Test Hole) Service (Quality Level A), Locate means to obtain precise horizontal and vertical position, material type, condition, size, and other data that may be obtainable about the utility facility and its surrounding environment through exposure by non-destructive excavation techniques that ensures the integrity of the utility facility. Subsurface Utility Locate (Test Hole) Services (Quality Level A) are inclusive of Quality Levels B, C, and D.

1) The **Engineer** shall:

(a) Review requested test hole locations and advise the **State/Authority** in the development of an appropriate locate (test hole) work plan relative to the existing utility infrastructure and proposed highway design elements.

(b) Coordinate with utility owner inspectors as may be required by law or utility owner policy.

(c) Neatly cut and remove existing pavement material, such that the cut not to exceed 0.10 square meters (1.076 square feet) unless unusual circumstances exist.

(d) Measure and record the following data on an appropriately formatted test hole data sheet that has been sealed and dated by the **Engineer**:

(1) Elevation of top and/or bottom of utility tied to the datum of the furnished plan.

(2) Identify a minimum of two benchmarks utilized. Elevations shall be within an accuracy of 15mm (.591 inches) of utilized benchmarks.

(3) Elevation of existing grade over utility at test hole location.

(4) Horizontal location referenced to project coordinate datum.

(5) Outside diameter of pipe or width of duct banks and configuration of non-encased multi-conduit systems.

(6) Utility facility material(s).

(7) Utility facility condition.

(8) Pavement thickness and type.

(9) Coating/Wrapping information and condition.
(10) Unusual circumstances or field conditions.

(e) Excavate test holes in such a manner as to prevent any damage to wrappings, coatings, cathodic protection or other protective coverings and features. Water excavation can only be utilized with written approval from the appropriate State District Office.

(f) Be responsible for any damage to the utility during the locating process. In the event of damage, the **Engineer** shall stop work, notify the appropriate utility facility owner, the State and appropriate regulatory agencies. The regulatory agencies include but are not limited to the Railroad Commission of Texas and the Texas Commission on Environmental Quality. The **Engineer** will not resume work until the utility facility owner has determined the corrective action to be taken. The **Engineer** shall be liable for all costs involved in the repair or replacement of the utility facility.

(g) Back fill all excavations with appropriate material, compact backfill by mechanical means, and restore pavement and surface material. The **Engineer** shall be responsible for the integrity of the backfill and surface restoration for a period of three years. Install a marker ribbon throughout the backfill.

(h) Furnish and install a permanent above ground directly above center line of the utility facility.

(i) Provide complete restoration of work site and landscape to equal or better condition than before excavation. If a work site and landscape is not appropriately restored, the **Engineer** shall return to correct the condition at no extra charge to the **State/Authority**.

(j) Plot utility location position information to scale and provide a comprehensive utility plan sign and sealed by the responsible **Engineer**. This information will be provided in the latest version of MicroStation or GeoPak format used by the **State/Authority**. The electronic file will be delivered on USB. When requested by the **State/Authority**, the Locate information must be over laid on the **State/Authority**'s design plans.

(k) Return plans, profiles, and test hole data sheets to the **State/Authority**. If requested, conduct a review of the findings with the **State/Authority**.

(l) Close-out permits as required.

D. COMPENSABLE UTILITIES

Utility Accommodation is an integral factor in road construction and design. Coordination of utility adjustments is a necessary function within planning, design, acquisition, and construction and requires the administration of property rights issues, utility policy, and reimbursement of eligible utility adjustments. It includes the following tasks:

a) Preliminary Design Consultations
   i) Conduct Field Investigation and review Certificate of Convenience and Necessity boundaries to identify utility providers within the project area. Communications through letter, phone calls and email to establish a contact list. Coordinate data gathering by surveyors and design team. Introduce project to utility providers.

b) Field Observations and Verifications
   i) Provide maps to Utility providers to “redline” and identify conflicts. Coordinate exposures and data collection by surveyor. Provide and confirm utility data on project maps. Order Utility Location Service.

c) Exchange of Information with Utility Providers
   i) Provide project schedule.
   ii) Request schedules for utility adjustments.
   iii) Identify who is responsible for utility process.

d) Confirmation of Property Interests
   i) Request Documents.
   ii) Coordination of data on maps and citation of property interest documents.
   iii) Confirm utilities are within easements.

e) Coordination of Agreements
   i) Identify utilities that are compensable.
   ii) Determine parties and agreements necessary to complete compensable process.
   iii) Coordinate execution and processing of Standard Utility Agreements.

f) Utility Meetings throughout project development

g) Set up and coordinate utility meetings during planning, design, acquisition, and construction phases.

h) Attend and participate in meetings by other parties.

E. PAYMENT SCHEDULE

Compensable Utilities – Payment is by percent complete.

FIELD SURVEYING AND PHOTOGRAMMETRY (Function Code 150)

A. Field Surveying. The **Engineer** shall verify and reset existing benchmarks previously set in previous work orders.

The **Engineer** shall:

1. Stake Project Baseline: The project base line must be coincidental with, or parallel to, the stationed “Design Center Line.” Base line control points shall be established using 15M(ASTM) (5/8 inch) iron rods, 36 inches long, at P.C.’ s, P.I.’s and P.T.’s of horizontal curves and at 1000 feet maximum intervals on tangents. Baseline control points shall be offset with set iron rods on both sides near the existing ROW lines at a measured distance. If available, coordinate to field tie to the Project baseline set by adjacent Engineers for consistency and accuracy.

2. Vertical Control for existing Benchmarks: Locate previously set benchmarks established by **Engineer** (In accordance with the horizontal control of North American Datum of 1983 (NAD 83) with elevations being based on the North

American Datum 88 (NAVD88); establish benchmark circuit (run levels) throughout the Project; establish additional benchmarks at intervals not to exceed 1,000 feet for the limits of the Project; tie benchmarks (station/offset) to Project baseline. Benchmarks shall be 20M (ASTM) (3/4-inch) diameter, 48 inches long, located near the existing ROW line at a measured distance. All benchmark circuits shall be tied to the **State**'s elevation datum. Perform the benchmark circuits in accordance with good surveying practices. The Surveyor shall verify the closure and submit adjustments to **State/Authority** for approval prior to beginning the field surveys.

2A. Vertical Control for new Benchmarks: Shall meet the following requirements:

- TxDOT GPS Level 3 (VRS) Survey guidelines and shall have (X, Y, & Z) coordinates assigned to them. (Access will be provided to State's Real Time Kinematic (RTK) Virtual Reference Station (VRS) Network via license agreement)
- Provide Station and Offset.
- Perform a three-wire level routine in SDMS to establish the elevations of the benchmarks.

3. Profile and cross section intersecting streets and driveways (to 50 feet outside ROW for driveways, and 200 feet for intersecting streets and 500 feet for intersecting streets greater than two lanes wide) for tie into project.

4. Cross section drainage channels for a distance of 200 feet each way outside the ROW lines. Cross sections shall not exceed 100 feet intervals and shall be taken at right angles to the channels.

5. Secure right-of-entry (short of litigation), as needed for the project.

6. Tie to existing underground and overhead utilities (location, elevation, size, and direction), in accordance with Attachment A.

7. ROW staking for additional field topography related to design work.

8. Determine and make changes to topography from outdated maps due to development, erosion, etc.

9. Determine type of existing material, pavements, etc.

10. Obtain profiles of existing drainage facilities.

11. Obtain measurement of hydraulic opening under existing bridges.

12. Obtain top of manhole and flowline elevations, type, and size, etc. of manholes, inlets, and valves of utilities.

13. Provide temporary signs, traffic control, flags, safety equipment, etc. and obtain necessary permits.

14. Obtain ties to existing bridges or culverts that may conflict with new construction.

15. Verify DTM (cross sections at panel points). Obtain additional existing ground cross sections as necessary to supplement the DTM files. Obtain cross sections at the center panel points to verify the DTM.

16. Obtain line (PGL) and the edges of slab at bent location.

17. Perform datum ties as required. If required, establish an elevation base on the **State**'s datum to other public entities published benchmarks.

18. The Surveyor using wetlands delineation information provided by the **State/Authority** shall stake the areas containing wetlands. The Surveyor is to information back to the **Engineer** in an electronic file to be incorporated onto the P&P sheets

19. Establish x, y, and z coordinates on all boreholes performed under Function Code 110.

20. Tie to existing underground and overhead utilities (location, elevation, size, and direction) and the utility locates as obtained under Function Code 130.

21. The Surveyor shall provide all traffic control, labor and equipment while performing their services and comply with the latest edition of the *Texas Manual on Uniform Traffic Control Devices*. In the event field personnel must divert traffic or close traveled lanes, a Traffic Control Plan shall be prepared by the **Engineer**'s surveyor and approved by the **State/Authority** prior to commencement of field work. A copy of the approved plans shall be in the possession of field personnel on the job site at all times and shall be made available to **State/Authority** personnel upon request.

22. All standards, procedures and equipment used by the Surveyor shall be such that the results of survey will be in accordance with Board Rule 663.15, as promulgated by the Texas Board of Professional Land Surveyors. At a minimum, the following standards of accuracy shall be met:

B. <u>Horizontal Ground Control</u>

The coordinate location of the traverse points shall be based on traverses conducted by the Surveyor meeting standards of accuracy as set forth below.

Reference may be made to standards of accuracy for Second Order, Class II, horizontal control traverses as described in the Federal Geodetic Control Committee publication entitled *Standards and Specifications for Geodetic Control Networks*, reprinted February 1991.

- Azimuth closure shall not exceed 4.5 seconds times the square root of the number of traverse segments.
- Position closure after azimuth adjustment shall not exceed 1 in 20,000.
- In cases where a traverse approaches but does not entirely meet these standards of accuracy and the Surveyor has assured itself that gross errors, mistakes, and blunders have been eliminated, the Surveyor shall submit the traverse data to the **State/Authority** for further review. The **State/Authority** will make a determination as to the acceptability of the traverse as an exception to the standard and notify the Surveyor accordingly.

C. Vertical Ground Control

Elevations established on the benchmarks shall be conducted by the Surveyor meeting standards of accuracy as set forth below. Reference may be made to standards of accuracy for third order vertical control traverses as described in the Federal Geodetic Control Committee publication entitled *Standards and Specifications for Geodetic Control Networks*, reprinted February 1991.

- Vertical closure shall not exceed 0.05 feet times the square root of the distance in miles.

- In case where a traverse approaches but does not entirely meet these standards of accuracy and the Surveyor has assured itself that gross errors, mistakes, and blunders have been eliminated, the Surveyor shall submit the traverse data to the **State/Authority** for review. The **State/Authority** will make a determination as to the acceptability of the traverse as an exception to the standard, and the **State/Authority** will notify the Surveyor accordingly.

- Document field work and submit field data to the **State/Authority**.

ROADWAY DESIGN (Function Code 160)

A. Roadway & Levee Design. All roadway and levee design will be based on the approved Schematics provided by the Authority. The **Engineer** shall provide roadway and levee plan and profile drawings using CADD standards as required by the **State/Authority**. The drawings shall consist of a planimetric file of existing features and files of the proposed improvements. The roadway and levee base map shall contain line work that depicts existing surface features obtained from the schematic drawing. Existing major subsurface and surface utilities shall be shown. Existing and proposed right-of-way lines shall be shown.

The plan view shall contain the following design elements:

1. Calculated roadway centerlines for new eastbound and/or westbound mainlanes, ramps, and cross streets. Horizontal control points shall be shown. The alignments shall be calculated using GEOPAK.
2. Pavement edges for all improvements (mainlanes, ramps, cross streets access roads, maintenance roads and driveways).
3. Lane and pavement width dimensions.
4. The geometrics of ramps, auxiliary and managed lanes.
5. Proposed structure locations, lengths, and widths.
6. Direction of traffic flow on all roadways. Lane lines and/or arrows indicating the number of lanes shall also be shown.
7 Drawing scale shall be 1"=100'
8. Access Denial line & ROW lines and easements.
9. Begin/end superelevation transitions and cross slope changes.
10. Limits of riprap block sod and seeding.
11. Existing utilities and structures.
12. Benchmark information.
13. Radii callouts, curb location, CTB, guard fence, crash safety items and American with Disabilities Act Accessibility Guidelines (ADAAG) compliance items.

The profile view shall contain the following design elements:

1. Calculated profile grade for proposed roadways, including mainlanes, direct connectors, ramps, cross streets, and frontage roads. Vertical curve data, including “K” values shall be shown.
2. Existing and proposed profiles along the proposed centerline of the mainlanes, the outside shoulder line of ramps, and the outside gutter line of frontage roads.
3. Water surface elevations at major stream crossing for 10-, 25-, 50-, and 100- year storms.
4. Calculated vertical clearances at grade separations and overpasses, taking into account the appropriate superelevation rate, superstructure depth and required clearance.
5. The location of interchanges, mainlanes, grade separations and ramps (shall include cross sections of any proposed or existing roadway, structure, or utility crossing).
6. Drawing vertical scale to be 1”=10’.
7. For the Levee sheets the Design Water Surface profile shall also be shown.

B. **Typical Sections:** Typical sections shall be required for all proposed and existing roadways, levees, and structures. Typical sections shall include width of travel lanes, shoulders, outer separations, border widths, curb offsets, managed lanes, and ROW. The typical section shall also include PGL, centerline, pavement design, longitudinal joints, side slopes, sodding/seeding limits, concrete traffic barriers, station limits, common proposed/existing structures including retaining walls, riprap, limits of embankment excavation, etc.

C. **Roadway Design:** The **Engineer** shall provide the design of all roadways, including mainlanes, entrance and exit ramps, managed lanes, and auxiliary lanes. The design shall be consistent with the approved schematic and the current *Roadway Design Manual*. If managed lanes are to be designed this work shall be coordinated through the **State/Authority**.

D. **Levee Design:** The **Engineer** shall provide the design of the levee relocation in coordination with the USIBWC. A continuous maintenance road shall be provided. The design shall be consistent with the approved schematic and the current *Design and Construction of Levees Manual.*

E. **Cross Streets:** The **Engineer** shall provide an intersection layout detailing the pavement design and drainage design at the intersection of each designated major cross street. The layout shall include the curb returns, geometrics, transition length, stationing, pavement, and drainage details. The **Engineer** shall design for full pavement width to the ROW and provide a transition to the existing roadway.

G. **Cut and Fill Quantities.** The **Engineer** shall develop an earthwork analysis which will be based on Open Roads utilizing 3d modeling. Cross sections shall be delivered in standard GEOPAK format on 11"x17" sheets and electronic files. The **Engineer** shall provide all criteria and input files used to generate the design cross sections. Cross sections and quantities shall consider existing pavement removals. Two sets of drawings shall be submitted by the **Engineer** at the 30%, 60%, and 90%, and final submittals, respectively.

H. **Border Fence Relocation.** The Engineer shall coordinate through the **Authority** with United States Department of Homeland Security (DHS) for the requirements and regulations for the border fence relocation. The temporary fence shall be salvaged as per DHS guidelines.

H. **Plan Preparation.** The **Engineer** shall prepare roadway plans, profiles, and typical sections for the proposed improvements. This scope of services and the corresponding cost proposal are based on the **Engineer** preparing plans to construct east and west bound lanes, ramps, and cross streets at intersections. Wetlands information as provided by the **State/Authority** is to be staked by the **Engineer** for delineation and this data shall be electronically transferred to the P&P sheets.

I. **Pavement Design**. The **Engineer** shall incorporate the pavement design developed by the **State/Authority** for this project.

J. **Pedestrian and Bicycle Facilities.** The **Engineer** shall coordinate with the **State/Authority** to incorporate pedestrian and bicycle facilities as required. All pedestrian facilities must be designed in accordance with the latest *Americans with Disabilities Act Accessibility Guidelines* (ADAAG), the *Texas Accessibility Standards* (TAS), and the AASHTO *Guide for the Development of Bicycle Facilities".*

K. **Driveway Details.** The **Engineer** shall design all driveways in accordance TxDOT's, "Regulations for Access Driveways to State Highways", any approved latest version of the "Access Management Manual", and the Pharr District Standard Driveway Details. The **Engineer** shall notify the **State/Authority** early in the design process when a construction license agreement is needed to construct a portion of the driveway outside of the **State**'s Right of Way. The Engineer shall design the intersection by preventing the bottom of the vehicles to be wedged when accessing onto an adjacent property.

L. **Miscellaneous.** The **Engineer** shall design all longitudinal barriers (railing and guardrail), raised median, fencing, bus bays, parking areas, mailboxes, and shoulder texturing in accordance with the criteria set forth in the roadway design manual and standards. Miscellaneous Details Sheet(s) may be developed to illustrate any necessary additional construction details not covered by the Standards. Standards that have not been approved for use in the Pharr District shall be signed, sealed, and dated by a Registered Professional Engineer in Texas for use as details. Approval shall be requested at the early stage of the plan preparation from the **State/Authority** regarding the use of these details. In addition, as part of the approval process, these details shall be accompanied by the appropriate general notes, special specifications, special provisions, and method of payment.

DRAINAGE DESIGN (Function Code 161)

A. **Drainage Report.** The **Engineer** shall design all of the project drainage elements and coordinate all drainage design.

1. The **Engineer** will prepare a comprehensive drainage study and two reports for the project. The report for roadway elements shall be divided into two phases. The first phase will include the following items:

- Obtain existing HEC-2 models from applicable drainage authorities to the extent possible, for use in analysis and determination the existing 2, 5, 10, 25, 50, 100 and 500 year (if available), water surface elevations at bayous, creeks, and ditch crossings along the project. This data will be utilized in the development of design roadway profiles.
- Profile of natural ground along each proposed grade line of the roadway.
- Profile of tentative proposed grade line of the roadway.
- Profile of existing roadway.
- Identify the existing drainage outfalls.
- Pump Station design if applicable

2. These profiles will be superimposed on a drawing along with the 2, 5, 10, 25, 50, 100 and 500-year (if available) water surface elevations. The profile drawing will provide an overall view of the roadway/existing ground elevations with respect to the various storm design frequencies for the length of the project. This will enable the **State/Authority** to determine the most feasible proposed roadway profile. These profiles must be submitted to the **State/Authority** and approved before continuing with the preparation of the comprehensive drainage report. NOTE: THE **ENGINEER** WILL COORDINATE WITH ALL GOVERNMENT AGENCIES THROUGH THE **AUTHORITY**.

3. Manhole headlosses are to be computed as per the **State/Authority**'s direction. Also, GEOPAK Drainage with a pressure flow equation generally applicable to pipe running full flow. A hydraulic grade line starting at the outfall channel will be determined for each storm sewer system in order to obtain a design tailwater for each existing system. The design tailwater will be the starting basis for the design of the proposed storm sewer system.

4. For drainage areas, the **Engineer** will limit the outfalls into existing storm sewer to existing capacity flows, which will be determined by the **Engineer**. Alternate flow routes, if feasible, will be looked into for relieving storm sewer overload. The amount of the total detention storage to control storm sewer runoff for the design frequency will be determined, as well as a rough estimate of the available on-site volume. The method for handling the required off-site storage volume is not part of this scope.

5. Drainage areas and flows for cross culvert drainage systems will be determined as part of the comprehensive drainage report. Sizing of the drainage crossings and hydrologic information once determined will be provided to the **State/Authority**.

6. The **Engineer** will prepare a letter report which shall include the preliminary findings of the storm sewer capacities, requirement for line rerouting, preliminary detention storage volumes and initial recommendations on how to mitigate the storm impact on the receiving streams. The report will also include preliminary sizing of the trunkline for the proposed gravity storm sewer within the limits of the project, conceptual and generic discussions of the alternatives considered, a comparative cost associated with each alternative and a recommended solution.

7. Recommendations at this point should be generic and conceptual in nature, mainly for discussions with the **State/Authority** and the local government entities.

8. An impact analysis is required on the ditches as related the **State/Authority** and FEMA criteria 100-year storm. The **State/Authority** required approach for impact prediction is as follows:

    - Drainage areas for the existing and proposed conditions.
    - The **Engineer** will identify the existing drainage outfalls.
    - Compute right of way corridor 100-year flood plain volumes for existing and proposed roadway elevations. A decrease in 100-year flood plain volumes is not allowed by the **State/Authority** or other governmental agencies, without adequate offsite mitigation.
    - Compute existing and proposed peak flows by using hydraulics and hydrologic methodology and computer models. The additional lanes should be accounted for by increasing percent development.
    - Storage computations will be based on hydrograph calculations and peak flows obtained in the item above. A mitigation volume for the 100-year storm will be computed.
    - Analyze existing and proposed drainage system and quantify the increase in 100-year peak flows resulting from the roadway improvements.
    - Hand calculations shall be provided which quantify the cut and fill within the 100-year flood plain, if any occur.
    - Prepare conceptual 100-year sheet flow analysis for project utilizing existing and proposed conditions.
    - Obtain current hydrologic and hydraulic computer models from government agencies and review and comment on the models.
    - Current models will be updated to existing condition using the available **State/Authority** aerial photographs and submitted to governmental agencies as the revised existing condition model.
    - Analyze proposed roadway and outfall drainage improvements to quantify impacts top revised existing condition model.

9. At this point, a separate report (signed, sealed, and dated by a professional Engineer) including results will be summarized and presented to the **State/Authority** for discussion. If mitigation is needed, location of storage volume and/or approaches to satisfy government agencies is not a part of this scope. After the **State/Authority** has reviewed and approved the floodplain impact analysis report, the **Engineer** will be compensated 80 percent of the total task shown in the fee proposal for the work order. The remaining 20 percent will be paid after the other agencies involved have approved the report.

10. The **Engineer** will also be responsible for the second report which will include the Levee relocation analysis with respect to the USIBWC guidelines. This will be a separate report from the one above to include the results/impacts of the levee relocation. Coordination with USIBWC shall be documented in this report along with obtaining the appropriate license agreement from the agency.

B. Scour Analysis to be provided at the bridge and bridge class culvert locations.

C. Culvert, Pump Station and Storm Drain Design. The **Engineer** shall develop design details that minimize the interference with the passage of traffic or incur damage to the

highway and local property. The **Engineer** shall provide layouts, drainage area maps, and design of all drainage components. The **Engineer** shall design all conventional storm drainage and cross drainage in conformance with the
latest edition of the **State** *Hydraulic Manual* and any specific program guidance provided by the **State**. Storm drain design shall be performed using WinStorm or GEOPAK Drainage. Cross drainage design shall be performed using THYSYS, THYSYS CULVERT, HEC 2 or HEC RAS. The **Engineer** shall evaluate the hydraulic gradeline throughout the whole system, within project limits, for the design frequency(ies) and make necessary system adjustments for conformance to program criteria. The **Engineer** shall coordinate with the **State/Authority** and designers of adjacent projects to check that all proposed drainage systems accommodate the proposed construction phasing plan.

The **Engineer** shall perform the following:

1. Prepare culvert cross sections.
2. Identify areas requiring trench protection, excavation, shoring and de-watering.
3. Prepare drainage area maps.
4. Prepare plan/profile sheets for storm drain systems and outfall ditches.
5. Select standard details from **State/Authority** or District's list of standards for items such as inlets, manholes, junction boxes and end treatment, etc.
6. Prepare details for pump station, non-standard inlets, manholes and junction boxes.
7. Prepare drainage details for outlet protection, outlet structures and utility accommodation structures.
8. Identify pipe strength requirements.
9. Prepare drainage facility quantity summaries.
10. Identify potential utility conflicts and design around them, wherever possible.
11. Take into consideration pedestrian facilities, utility impacts, driveway grades, retaining wall and concrete traffic barrier drainage impacts.
12. Identify existing ground elevation profiles at the ROW lines on storm sewer plan and profile sheets.
13. If applicable, prepare Hydraulic Data Sheets for Bridge Class Culvert(s).

D. **Storm Water Pollution Prevention Plans (SW3P).** The **Engineer** shall minimize potential impact to receiving waterways. The SW3P shall include text describing the plan, quantities, type, phase and locations of erosion control devices and any required permanent erosion control measures.

E. **Temporary drainage facilities.** The **Engineer** shall develop plans for all temporary drainage facilities necessary to allow staged construction of the project and to conform with the phasing of adjacent construction projects without significant impact to the hydraulic capacity of the area.

F. **Layout, Structural Design and Detailing of Drainage Features.**

The **Engineer** shall perform layout, structural design and detailing for the following:

1. Culverts: New culverts; culvert replacement.
2. Storm Sewers: New or modified storm sewers; inlets; manholes; trunk lines.
3. Subsurface drainage at retaining walls.
4. Outfall channels within or outside of the existing ROW

5. Bridge deck drainage systems, including internal drainage piping within the bents where required on structures.

The **Engineer** shall use standard details where practical.

SIGNING, MARKINGS AND SIGNALIZATION (Function Code 162)

A. Signing. The **Engineer** shall prepare drawings, specifications, and details for all signs. The **Engineer** shall coordinate with the **State/Authority** (and other Engineers as required) for overall temporary, interim, and final signing strategies and placement of signs outside contract limits. Sign detail sheets shall be prepared for large guide signs showing dimensions, lettering, shields, borders, corner radii, etc., and shall provide a summary of large and small signs. The **Engineer** shall also designate the shields to be attached to guide signs. The proposed signs shall be illustrated and numbered on plan sheets. Sign foundation shall be selected from **State** Standards.

The **Engineer** shall provide the following information on sign/pavement marking layouts:

1. Roadway layout.
2. Center line with station numbering.
3. ROW lines.
4. Designation of arrow used on exit direction signs.
5. Culverts and other structures that present a hazard to traffic.
6. Location of utilities.
7. Existing signs to remain, to be removed, or to be relocated.
8. Proposed signs (illustrated and numbered).
9. Existing overhead sign bridges to remain, to be revised, removed, or relocated.
10. Proposed overhead sign bridges, indicating location by plan.

B. Pavement Markings. The **Engineer** shall detail permanent and temporary pavement markings and channelization devices on plan sheets. The **Engineer** shall coordinate with the **State/Authority** (and other Engineers as required) for overall temporary, interim, and final pavement marking strategies. Pavement markings shall be selected from the latest **State/Authority** standards.

The **Engineer** shall provide the following information on sign/pavement marking layouts:

1. Proposed markings (illustrated and quantified) which include pavement markings, object markings and delineation.
2. Quantities of existing pavement markings to be removed.
3. Proposed delineators and object markers.
4. The location of interchanges, mainlanes, grade separations, frontage roads and ramps.
5. The number of lanes in each section of proposed highway and the location of changes in numbers of lanes.
6. ROW limits.
7. Direction of traffic flow on all roadways.

C. Traffic Signals. The **Engineer** shall identify and prepare Traffic Signal Plans for all traffic signal work needed. (Signals are currently planned for the Intersection of IH 69E and FM

3068.) If necessary, the **Engineer** shall perform Traffic Signal Warrant Studies to justify both existing and proposed signals, and provide traffic counts, to perform these studies. The **Engineer** shall confirm the power source for all signals and coordinate with the appropriate utility agency. Traffic Signal Plans shall be signed and sealed by a Texas Registered Professional Engineer. The **Engineer** shall develop all quantities, general notes, and specifications and incorporate appropriate agency standards required to complete construction.
The following information shall be provided in the Traffic Signal Plans:

1. Layout
    a. Estimate and quantity sheet
        (1) List of all bid items
        (2) Bid item quantities
        (3) Specification item number
        (4) Paid item description and unit of measure
    b. Basis of estimate sheet (list of materials)
    c. General notes and specification data.
    d. Condition diagram
        (1) Highway and intersection design features
        (2) Roadside development
        (3) Traffic control including illumination
    e. Plan sheet(s)
        (1) Existing traffic control that will remain (signs and markings)
        (2) Existing utilities
        (3) Proposed highway improvements
        (4) Proposed installation
        (5) Proposed additional traffic controls
        (6) Proposed illumination attached to signal poles.
    f. Notes for plan layout
    g. Phase sequence diagram(s)
        (1) Signal locations
        (2) Signal indications
        (3) Phase diagram
        (4) Signal sequence table
        (5) Flashing operation (normal and emergency)
        (6) Preemption operation (when applicable)
        (7) Contact responsible Agency to obtain interval timing, cycle length and offset
    h. Construction detail sheets(s)
        (1) Poles (State standard sheets)
        (2) Detectors
        (3) Pull Box and conduit layout
        (4) Controller Foundation standard sheet
    i. Marking details (when applicable)
    j. Aerial or underground interconnect details (when applicable)

2. General Requirements
    a. Contact local utility company
        (1) Confirm power source
    b. Prepare governing specifications and special provisions list
    c. Prepare project estimate

d. Conduct traffic counts and prepare Traffic Signal Warrant Studies for all proposed and existing traffic signals.

3. Summary of Quantities
   a. Small signs tabulation
   b. Large signs tabulation including all guide signs

4. Sign Detail Sheets
   a. All signs except route markers
   b. Design details for large guide signs
   c. Dimensioning (letters, shields, borders, etc.)
   d. Designation of shields attached to guide signs

MISCELLANEOUS (Function Code 163)

A. Retaining Walls/Sound Walls. The **Engineer** shall provide layouts (scale 1"=100'), elevations, quantity estimate, summary of quantities, typical cross sections, and structural details of all retaining walls within the project.

If applicable, architectural standard drawings will be provided by the **State/Authority** and shall be incorporated into design details. The specific requirements for each item are as follows:

1. Layout Plan
   a) Designation of reference line
   b) Beginning and ending retaining wall stations
   c) Offset from reference line
   d) Horizontal curve data
   e) Total length of wall
   f) Indicate face of wall
   g) All wall dimensions and alignment relations (alignment data as necessary)
   h) Soil core hole locations

2. Elevation:
   a) Top of wall elevations
   b) Existing and finished ground line elevations
   c) Vertical limits of measurement for payment

   d) Type, limits, and anchorage details of railing (only if Traffic Railing foundation standard is not being used on this project)
   e) Top and bottom of wall profiles and soil core hole data plotted at correct station & elevation. Groundwater elevations shall be shown.

3. Foundation Studies: The **Engineer** shall coordinate with the **State/Authority** to determine the location of soil borings to be drilled along the retaining wall alignments. The core holes shall extend a minimum of 15 feet below the footing elevation or deeper as soil conditions warrant. Spacing of core holes shall not exceed 500 feet. The **Engineer** shall provide a boring layout for the **State/Authority** to review and provide their recommendations.

4. The **Engineer** shall incorporate soil core hole data sheets prepared, signed, sealed, and dated by the Engineer. The soil boring sheets shall be in accordance with TxDOT WINCORE software as can be found on the Texas Department of Transportation website.

5. General Guidelines for Retaining Walls
    a) The **Engineer** shall make final design calculation and final detail drawings in accordance with standard requirements of the **State/Authority**.
    b) For retaining walls that the total estimated project quantity exceeds 30,000 square feet, preliminary retaining wall layouts shall be submitted to Austin Division for approval.

B. Traffic Control Plan, Detours and Sequence of Construction. The **Engineer** shall prepare Traffic Control Plans (TCP) for the project. A detailed TCP shall be developed in accordance with the latest edition of the *Texas Manual on Uniform Traffic Control Devices for Streets and Highways* (Texas MUTCD). The **Engineer** is to implement the current Barricade and Construction (BC) standards as applicable. The **Engineer** shall interface and coordinate phases of work, including the TCP, with adjacent Engineers.

1. The **Engineer** shall provide a written narrative of the construction sequencing and work activities per phase and determine the existing and proposed traffic control devices (regulatory signs, warning signs, guide signs, route markers, construction pavement markings, barricades, flag personnel, temporary traffic signals, etc.) to be used to handle traffic during each construction sequence. The **Engineer** shall show proposed traffic control devices at grade intersections during each construction phase (stop signs, flag person, signals, etc.). The **Engineer** shall show temporary roadways, ramps, structures, and detours required to maintain lane continuity throughout the construction phasing.

2. Where detours are required, the **Engineer** shall develop typical cross sections, calculate quantities, and show horizontal and vertical alignment (if necessary) information. The **Engineer** shall provide a detailed layout and arrangement of construction signs, construction pavement marking, traffic control devices (including temporary signals and signal heads).

3. The **Engineer** shall be responsible to coordinate with the **State/Authority** in scheduling a Traffic Control Workshop and submittal of the TCP for Safety Review Committee (SRC) approval. The **Engineer** shall assist the **State/Authority** in coordinating mitigation of impacts to adjacent schools, emergency vehicles, pedestrians, bicyclists, and neighborhoods.

4. Continuous, safe access to all properties during all phases of construction is mandatory. The **Engineer** shall develop TCP to preserve existing curb cuts. Approval from the **State/Authority** is required for any elimination of existing access capacity.

5. The **Engineer** shall design temporary drainage to replace existing drainage disturbed by construction activities or to drain detour pavement. The **Engineer** shall show horizontal and vertical location of culverts and required cross sectional area of culverts.

C. **Illumination.** The **Engineer** shall provide safety lighting at all intersections and interchanges, as well as at all other locations identified by the **State/Authority**. The **Engineer** shall prepare exhibits as required to obtain agreements with adjacent municipalities. The **Engineer** shall tabulate all quantities and provide summary sheets.

D. **Estimate.** The **Engineer** shall independently develop and report quantities in standard **State/Authority** bid format at the 60%, 90% and Final PS&E submittals. The **Engineer** shall identify and report quantity variances by means of a quantity variance report, to be provided with each submittal. The **Engineer** shall be prepared the estimate at the 60%, 90%, 95% and Final PS&E submittals.

E. **Specifications**. The **Engineer** shall develop the list of standard specifications with the appropriate reference items the estimate. The **Engineer** shall also identify the need for any special specifications, and special provisions. The **Engineer** shall prepare General Notes from the Pharr District's *Master List of General Notes*, Special Specifications and Special Provisions for inclusion in the plans and bidding documents. The **Engineer** shall provide General Notes, Special Specifications and Special Provisions in rich text format.

F. **Construction Schedule**. The **Engineer** shall prepare a construction contract time schedule using the latest version of Primavera or SureTrak software in accordance with the **State**'s *Administrative Circular No. 17-93*. The schedule shall indicate tasks, subtasks, critical dates, milestones, deliverables, and review requirements in a format which depicts the interdependence of the various items, and adjacent construction packages. The **Engineer** shall aid the **State/Authority** in interpreting the schedule.

G. **Bidding services.** The **Engineer** will provide the contract proposal/upfront bidding documents.

PROJECT MANAGEMENT (Function Code 164)

A. The **Engineer** will continue to coordinate with **AUTHORITY** staff, local municipal agencies, and utility companies.

B. The **Engineer** will develop geometric and design criteria to establish uniform practices to be followed. Assemble existing TxDOT standard plans and prepare supplemental details for use as standard or guide plans for pavement, drainage, structures, traffic interchange facilities, traffic control, and other necessary appurtenances, all subject to the approval of the Authority.

C. The **Engineer** will provide the **Authority** with monthly reports of progress and a summary of key decisions that have been made or need to be made.

D. The **Engineer** will recommend approved designs, plans, and specifications and deliver to the **Authority** for bid advertisement. Assist the **Authority** in the process of bidding and award of construction contracts. Prepare final estimates of construction costs prior to the opening of construction bids.

E. Professional engineers' seals shall conform to the guidelines and regulations adopted by the Texas Board of Professional Engineers.

BRIDGE DESIGN (Function Code 170)

All bridge structures shall be designed for **LRFD** guidelines.

A. Bridge Layout. The **Engineer** shall Prepare Bridge Layout plans and elevations for all bridge types listed below in accordance with the latest edition of the **State**'s *Bridge Design Manual*, *Bridge Project Development Manual* and *Bridge Detailing Manual*. Submit to the **State/Authority** for approval before proceeding to structural detail design. Coordinate with the **State/Authority** to determine the location of soil borings to be drilled by the **Engineer**.

The Bridge layouts in Plan View shall contain the following information:

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

Bridge Layouts in Elevation View should contain the following:

1. Type of foundation
2. Finished grade elevations at beginning and end of bridge
3. Overall length of structure
4. Length, type of spans and units
5. Type of railing
6. Minimum calculated vertical clearance(s)
7. Existing and proposed ground lines clearly marked
8. Grid elevations and stations

9. Bent numbers encircled
10. Standard Title
11. Profile grade data
12. Type of riprap
13. Soil Core Hole information with penetrometer test data
14. Fixed/expansion condition of all bents
15. Column “H” heights
16. Number, size, and length of foundations

Additional layout requirements for waterway structures and bridge classification culverts:

1. Design and 100-year peak discharges
2. Design and 100-year high water (HW) Any recorded HW data available?
3. Natural and through bridge velocities for design and 100-year floods
4. Calculated backwater for design and 100-year floods
5. Direction of flow for waterway crossings
6. Contours for water crossing

The substructure for simple span prestressed concrete U-beam girders shall be inverted T beam caps on rectangular columns. If necessary, the **State/Authority** will provide standard architectural details. The **Engineer** shall incorporate these drawings and make appropriate reference to these details.

The **Engineer** shall develop bridge layouts from the schematic provided by the **State/Authority** and submit an 80% complete layout to the **State/Authority** at the 30% submittal to provide ample review and design time.

B. **Final Design Calculations and Details.** The **Engineer** shall make final design calculations and final detail drawings, per structure, in accordance with standard requirements of the **State/Authority**. All bridge design shall be in conformance with the latest edition of the **State**’s *Bridge Design Manual*, *Bridge Project Development Manual*, *Bridge Detailing Manual*, and AASHTO *Standard Specifications for Highway Bridges*. The **Engineer**’s designer and checker shall both check all calculations and initial each page. The **Engineer** shall submit for review all structural design calculations and quantity calculations at the 90% submittal.

C. The **Engineer** shall perform a global stability analysis on fill areas on bridge approaches and other areas where the height of fill is determined to be greater than 15 feet. No geotechnical investigations are to be initiated until the **State/Authority** has given the **Engineer** written approval. The **Engineer** shall prepare an engineering report showing all material testing locations, with a summary of all geotechnical investigations, project background, and a summary of recommendations.

D. **Bridges/Overpasses/Underpasses/Ramp Structures.**

The **Engineer** shall prepare *bridge layouts, typical sections, structural details* (with appropriate scale) and estimated quantities for structures, as listed below:

Description	Approx Length	Approx. Width	Number of spans	Comments
Elevated Canal Crossing	100	80	1	New Bridge facilitated at the Tie in Realignment
SH 4 Overpass	272	80	3	80-112-80 Span Configuration

E. **Bridge Classification Culvert.** The **Engineer** shall prepare layouts, typical sections, structural details (with appropriate scale) and estimated quantities.

F. **Staged Construction:** The **Engineer** shall review and evaluate the need for phased construction for all structures in the project limits and advise the **State/Authority** of their recommendations. The **Engineer** shall review the as-builts and perform any necessary analysis to determine the structural integrity of any part of the structure that would remain open to traffic.

CONSTRUCTION PHASE SERVICES (Function Code 309)

The **Engineer** shall provide Construction Phase Services. These services shall include, but are not limited to the following:

Pre- Construction Award

The **Engineer** shall assist the **Authority** with the following:

(1) Pre-bid RFI's

(2) Pre-bid Conference

(3) Bid Opening

(4) Bid Tabulation & Review

Post - Construction Award

(1) Upon Award of Contract coordinate and attend Pre-Construction Meeting.

(2) Answer Construction RFI's.

(3) **Shop Drawings.** The Engineer shall review and check all shop or working drawings furnished by the Contractor that are related to the Project. Below is the listing of the proposed drawings to be reviewed.

Elevated Canal Bridge
- Abutments
- Girders
- Footings
- Rail

- Slab and Framing
- Falsework

SH 4 Overpass Bridge
- Abutments
- Girders
- Footings
- Rail
- Slab and Framing
- Falsework

Culverts
- Pre-Cast Culverts
- Pre-Cast Inlets

Large Guide Signs
- Foundations
- Frames

(4) **Change Orders.** When applicable, the **Engineer** will prepare the engineering data, including plan sheet drawings, specifications, and estimates, for the preparation of construction contract change orders, which may be required due to actual field conditions encountered or new requirements directed by the **Owner**. This work will be handled through a supplemental work order.

DELIVERABLES

I. Hydraulic Deliverables. The **Engineer** shall submit the two Hydraulic Reports signed and sealed by a Registered Professional Engineer in the State of Texas.

II. Survey Deliverables. The **Engineer** shall submit, after completion of PS&E, all original field books containing all survey information requested for this work authorization. The field book shall contain all information gathered in the field. The survey information provided shall be to the surveyor's best knowledge, accurate, and complete.

Electronic files (*.txt) containing survey information with proper identification and with the following data format x, y, and z NAD-83 coordinate system. The x-coordinate corresponding to the east bearing, the y-coordinate corresponding to the north bearing, and the z-coordinate corresponding to the vertical elevation.

Electronic 2d and 3d Microstation files (*.dgn) containing survey information with proper identification and with the following data format x, y, and z NAD-83 coordinate system. The Survey deliverables shall include the digital terrain model (DTM), aerial maps, and Subsurface Utility Engineering (SUE).

III. Geotechnical Deliverables. The **Engineer** shall submit the Geotechnical Reports signed and sealed by a Registered Professional Engineer in the State of Texas.

Each USB shall be labeled and include the following:

- CSJ
- County
- Highway

Each USB created shall have the standard directory structure, as follows:

Directory:\Control-Section - Job Number	Types of Data
Documents	Geotechnical Report, Summaries, General Project Correspondence, and Excel files.
Utilities	Existing utility information as provided by the affected utility company including correspondence.

IV. Plan Deliverables including 3D Corridor model. The **Engineer** shall forward to the State/Authority, upon completion of the work authorization, four (4) sets of Memory Sticks with all the files containing the information and layouts used to prepare the PS&E.

Each CD shall be labeled and include the following:

- CSJ
- County
- Highway
- Date of the CD Burn
- INTERIM (in 1" letters) Note: As-built shall specified FINAL
- Volume sequence (ie. Disk 1 of 3)

Each CD created shall have the standard directory structure, as follows:

Directory:\Control-Section - Job Number	Types of Data
Documents	Form 1002, Design Summary Report (DSR), Design Exceptions/ Variances, Traffic Control Safety Review Approval Form, Hydraulic Report, Geotechnical Report, Summaries, General Project Correspondence, and Excel files.
Schematic	All .DGN files – Mapping, Sheet Files, Master Design Files, dat files .gpk files, .prj files, design cross section files, etc.
Environmental	Environmental documentation can include but not limited to Categorical Exclusion (CE), Environmental Assessment (EA), Environmental Impact Statement (EIS), noise analysis and Water Pollution Abatement Plans.
Utilities	Existing utility information as provided by the affected utility company including

	correspondence.
ROW	ROW Maps and Parcel sketches as furnished By surveyor
Design	All .DGN files – Mapping, Sheet Files, Master Design Files, dat files .gpk files, .prj files, design cross section files, etc.
Hydraulics	Drainage Input & Output Culvert Analysis, Bridge Analysis
Electrical	Electrical input and output files, correspondence, everything except .dgn files
Signing	Signing input and output files, correspondence, everything except .dgn files
Standards	All Standard Sheets used for the Job
Construction	Field change documentation except for .dgn files.

A “readme” file should be created and placed under the “documents” subdirectory. The readme file should be composed of the minimum directory structure detailed above and modified to list particular files that are contained under the various subdirectories. This information will guide the end user to the location of particular files. In addition to the file information, the readme file should contain the general project information such as the CSJ, Limits of Construction and Type of Improvements.

All CADDSEALS placed on finished documents are to remain on that document. Do Not remove CADDSEALS.

The file naming convention will be as shown below. Not all plan sets will have all of the listed sheets.

Sheet File Type Naming Convention

Title Sheet *TTL*.DGN
Supplemental Index *INDX*.DGN
General Notes & Spec. Data *GNOT*.DGN
Estimate & Quantities *E&Q*.DGN
Consolidated Summaries *SUM*.DGN
Project Layout *PRJLO*.DGN
Typical Sections *TYP*.DGN
Traffic Control Plans *TCP*.DGN
Horizontal Alignment Data *HAD*.DGN
Benchmark Data *BM*.DGN
Table of Cross Slopes *CS*.DGN
Plan & Profile Sheets *PP*.DGN
Landscape Sheets *LAND*.DGN

Irrigation Sheets *IRRI*.DGN
Detail Sheets (any) *DET*.DGN
Drainage Area Maps *DA*.DGN
Hydraulic Data Sheets *HD*.DGN
Storm Sewer Plan & Profiles *SS*.DGN
Culvert Cross Sections *CUL*.DGN
Water Quality Facilities *WQ*.DGN
Retaining Wall Sheets *RET*.DGN
Bridge Layouts *BR*.DGN
Bridge Quantities/Bearing Seat Info *BRQUAN*.DGN
SW3P Info Sheet *SW3P*.DGN
Erosion Control (Temp & Perm) *EC*.DGN
Signing Layouts *SIGN*.DGN
Pavement Markers (incl. Delineation) *PMLO*.DGN
Signalization Sheets *SIG*.DGN
(includes electrical service sheets)
Illumination Sheets *ILLI*.DGN
Roadway Cross Sections *XS.DGN
Master Design File *MDF.DGN
Alignment File *ALN*.DGN

Where an * (wildcard) appears in the filename, the user is free to describe the file as they see fit as long as the required letters appear in the filename somewhere.

The Engineer shall submit a CADD file structure listing in spreadsheet format. This CADD file structure shall consist of the following fields of information for each design file created to produce the final plan sheets
for PS&E:

Active Design File Name (xxx.dgn)
Levels ON (1-63)
Plot Scale (1" = 100')
File date (Nov. 30, 2004)
File size (xxx bytes or KB)
Sheet Number (202)
Sheet Description (Typical Sections, Sheet 3 of 4)

Reference file names
Logical Name of Reference files (xxxdrn.dgn)
Levels ON (1-2, 5-17, 36-45, 50-63)

In addition, the Engineer shall include on the staple side of the sheet border (left side) by the use of a pen table the reference file information listed above for each reference file attached, i.e., Reference file name (xx.dgn), Levels ON, when this particular file is attached as a reference to the Active design file.

On the lower right-hand side, next to the title block, in a 90-degree orientation to the bottom of the sheet, also by the use of a pen table, the file name of the design file and date shall be shown when printed.

V. PS&E Deliverables. The **Engineer** shall deliver to the **Authority** an electronic copy of the 30%, 60%, and 90% submittals. For the final 100% submittal, the Engineer shall submit one electronically sealed plan portfolio with all backup data. The **Engineer** shall develop Exhibit C, Work Schedule for all project submissions.

30% Submittal -

a. Approved (signed form) Design Summary Report
b. Title Sheet
c. Typical Sections (existing and proposed)
d. Traffic Control Plan
e. Utility Layout (conflicts identified)
f. Plan & Profile (Roadway and Levee)
    1. Vertical Alignment (existing and proposed)
    2. Horizontal Alignment (existing and proposed)
g. Bridge Layouts (including bridge class structures)
h. Miscellaneous Details (including Border Fence Relocation)
i. Corresponding Quantity Summary Sheets
j. Corresponding Standard Detail Sheets for all Items of Work in this submittal
k. Preliminary Estimate
l. Design Exceptions/Waivers required
m. Newly created Special Provisions/Specifications to be used (Form 1814)
n. R.O.W. (issues identified)
o. Electronic Copy of Cross Sections

60% Submittal -

a. Index Sheet
b. Hydrologic Computation Sheets
c. Hydraulic Data Sheets
d. Drainage Area Maps
e. Drainage Plan & Profile
f. Pump Station Layouts/Details
g. Drainage Structure Details
h. Storm Sewer Details
i. Storm Water Pollution Prevention Plan
j. Bridge Details
k. Retaining Walls – Sound Walls
l. Miscellaneous Details
m. Corresponding Quantity Summary Sheets
n. Corresponding Standard Detail Sheets for all Items of Work in this submittal
o. Updated Estimate
p. Utility Adjustment/Relocation Details
q. R.O.W. Acquisition Detail
r. Electronic Copy of Cross Sections

90% Submittal -

a. Final Index of Sheets
b. Pavement Marking Layout/Details
c. Signalization (existing and proposed)
d. Illumination
e. Traffic Management Items
f. Miscellaneous Details

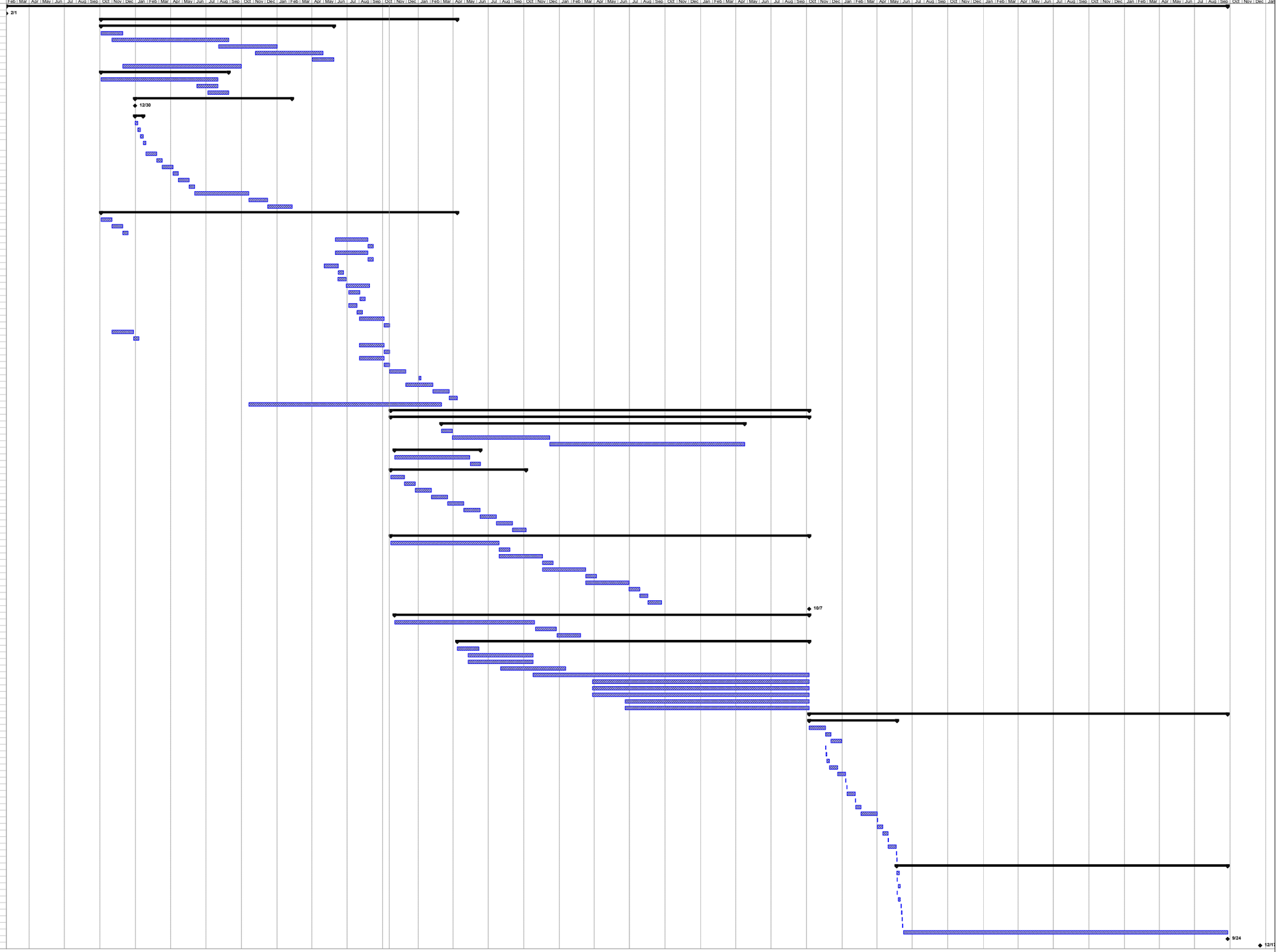
g. Corresponding Quantity Summary Sheets
h. Corresponding Standard Detail Sheets for all Items of Work in this submittal
i. Final Estimate
j. General Notes
k. Certifications
l. Form 1002
m. Cross Sections

100% Submittal -

a. PS&E Package 100% complete.
g. Six Months prior to letting.
c. Construction Estimate in Estimator® format and Excel format
d. Form 1002
e. General Notes
f. Special Specifications and Special Provisions with a completed Form 1814 in TxDOT format
(2) each signed and sealed Specification Certifications
g. Utility, ROW Encroachment, ROW Acquisition, ROW Relocation Certification) originals of each signed and sealed.
i. Special Specifications, Special Provisions and applicable reference items to all items involved in the PS&E in Excel spreadsheet format
j. Construction CPM Schedule (**Signed and Sealed)**
k. Cross Sections

EXHIBIT C - WORK SCHEDULE

ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1	**East Loop Schematic and PS&E CSJ: 3626-02-001, 1426-01-038, 3226-03-001**	**2256 days**	**Fri 2/1/19**	**Fri 9/24/27**		
2	**NOTICE TO PROCEED**	0 days	Fri 2/1/19	Fri 2/1/19		
3	**Phase I: Planning, EA, Public Involvement, Schematic - Status**	**657 days**	**Fri 10/4/19**	**Mon 4/11/22**	2	
4	**Project Planning (Roadway)**	**430 days**	**Fri 10/4/19**	**Thu 5/27/21**		
5	TxDOT Provides Executed PE AFA	40 days	Fri 10/4/19	Thu 11/28/19		
6	Funding of the Roadway in the TxDOT 2021 UTP	216 days	Fri 11/1/19	Fri 8/28/20	5FS-20 days	
7	Coordination of ROW/MPO Planning Documents	109 days	Mon 8/3/20	Thu 12/31/20	6FS-20 days	
8	TxDOT Provides Construction / ROW AFA	125 days	Fri 11/6/20	Thu 4/29/21	7FS-40 days	
9	CCRMA Executes AFA	40 days	Fri 4/2/21	Thu 5/27/21	8FS-20 days	
10	TxDOT On-System Designation	219 days	Fri 11/29/19	Wed 9/30/20	5	
11	**Public Involvement (Roadway)**	**236 days**	**Fri 10/4/19**	**Fri 8/28/20**		
12	Develop Alternatives & Matrix	216 days	Fri 10/4/19	Fri 7/31/20		
13	Advertise & Conduct Public Meeting	40 days	Mon 6/8/20	Fri 7/31/20	12FS-40 days	
14	Select TPA	40 days	Mon 7/6/20	Fri 8/28/20	13FS-20 days	
15	**Schematic (Roadway)**	**290 days**	**Mon 12/30/19**	**Mon 2/8/21**		
16	1-Utilize Geopak and Microstation for all roadway design(Hours included in items below)	0 days	Mon 12/30/19	Mon 12/30/19	5FS+22 days	
17	2-Schematic Prepartion	15 days	**Tue 12/31/19**	**Mon 1/20/20**		
18	a-Horiz. Alignments, Layouts	5 days	Tue 12/31/19	Mon 1/6/20	16	
19	b-Vert. Alignments	5 days	Tue 1/7/20	Mon 1/13/20	18	
20	c-Typical Sections	5 days	Tue 1/14/20	Mon 1/20/20	19	
21	3-Design cross-sections at 500 ft intervals/earth work quantities/check slope selection including plotting	5 days	Tue 1/21/20	Mon 1/27/20	20	
22	4 -- 30 % Schematic Submittal	20 days	Tue 1/28/20	Mon 2/24/20	21	
23	TxDOT Review	10 days	Tue 2/25/20	Mon 3/9/20	22	
24	4a -- 60 % Schematic Submittal	20 days	Tue 3/10/20	Mon 4/6/20	23	
25	TxDOT Review	10 days	Tue 4/7/20	Mon 4/20/20	24	
26	4b -- 90 % Schematic Submittal	20 days	Tue 4/21/20	Mon 5/18/20	25	
27	TxDOT Review	10 days	Tue 5/19/20	Mon 6/1/20	26	
28	Flight and Survey	100 days	Tue 6/2/20	Mon 10/19/20	27	
29	4c- 100% Schematic Submittal	35 days	Tue 10/20/20	Mon 12/7/20	28	
30	TxDOT Schematic Approval (Roadway)	45 days	Tue 12/8/20	Mon 2/8/21	29	
31	**Enviornmental Document (Roadway)**	**657 days**	**Fri 10/4/19**	**Mon 4/11/22**		
32	1-Project Scope for EA	20 days	Fri 10/4/19	Thu 10/31/19		
33	2-Air Quality Technical Report	20 days	Fri 11/1/19	Thu 11/28/19	32	
34	TxDOT Review	10 days	Fri 11/29/19	Thu 12/12/19	33	
35	3-Archeological Survey - To be done by others	60 days	Tue 6/1/21	Mon 8/23/21		
36	TxDOT Review	10 days	Tue 8/24/21	Mon 9/6/21	35	
37	4-Historical Survey - To be done by others	60 days	Tue 6/1/21	Mon 8/23/21		
38	TxDOT Review	10 days	Tue 8/24/21	Mon 9/6/21	37	
39	5-Community Impact Analysis	26 days	Mon 5/3/21	Mon 6/7/21		
40	TxDOT Review	10 days	Tue 6/8/21	Mon 6/21/21	39	
41	6-Noise Analysis Technical Report	16 days	Mon 6/7/21	Mon 6/28/21		
42	TxDOT Review	44 days	Tue 6/29/21	Fri 8/27/21	41	
43	7-Indirect and Cumulative Imapct Technical Report	21 days	Mon 7/5/21	Mon 8/2/21		
44	TxDOT Review	10 days	Tue 8/3/21	Mon 8/16/21	43	
45	8-Surface Water Analysis Technical Report	16 days	Mon 7/5/21	Mon 7/26/21		
46	TxDOT Review	10 days	Tue 7/27/21	Mon 8/9/21	45	
47	9-Biological Evaluation Report	46 days	Mon 8/2/21	Mon 10/4/21		
48	TxDOT Review	10 days	Tue 10/5/21	Mon 10/18/21	47	
49	10-Hazardous Materials and ISA Technical Report	40 days	Fri 11/1/19	Thu 12/26/19	32	
50	TxDOT Review	10 days	Fri 12/27/19	Thu 1/9/20	49	
51	11-Section 4(f) Technical Report	46 days	Mon 8/2/21	Mon 10/4/21		
52	TxDOT Review	10 days	Tue 10/5/21	Mon 10/18/21	51	
53	12-Biological Assessment	46 days	Mon 8/2/21	Mon 10/4/21		
54	TxDOT Review	10 days	Tue 10/5/21	Mon 10/18/21	53	
55	13-Draft EA	30 days	Tue 10/19/21	Mon 11/29/21	54	
56	14-Public Hearing	5 days	Mon 1/3/22	Fri 1/7/22		
57	15-Final EA	50 days	Tue 11/30/21	Mon 2/7/22	55	
58	16-TxDOT Review and Approval	30 days	Tue 2/8/22	Mon 3/21/22	57	
59	17-FONSI	15 days	Tue 3/22/22	Mon 4/11/22	58	
60	**Functional Classification Determination**	**356 days**	**Tue 10/20/20**	**Tue 3/1/22**	28	
61	**Phase II: PS&E & ROW Map - Status**	**772 days**	**Fri 10/22/21**	**Mon 10/7/24**		
62	**PS&E**	**772 days**	**Fri 10/22/21**	**Mon 10/7/24**		
63	**Compensable Utility Oversight**	**560 days**	**Wed 3/2/22**	**Tue 4/23/24**		
64	1-Evaluate Utility Conflicts	20 days	Wed 3/2/22	Tue 3/29/22	60	
65	2-Coordinate w/Utility companies	180 days	Wed 3/30/22	Tue 12/6/22	64	
66	3-Relocate Utilities	360 days	Wed 12/7/22	Tue 4/23/24	65	
67	**Geotechnical**	**160 days**	**Mon 11/1/21**	**Fri 6/10/22**		
68	Prepare geotechnical report - Under Different work order	140 days	Mon 11/1/21	Fri 5/13/22		
69	TxDOT Review and Approval	20 days	Mon 5/16/22	Fri 6/10/22	68	
70	**Outfall Coordination**	**250 days**	**Fri 10/22/21**	**Thu 10/6/22**		
71	Drainage Area Maps - determine and calculate	25 days	Fri 10/22/21	Thu 11/25/21		
72	Hydrologic data/discharge determination	20 days	Fri 11/26/21	Thu 12/23/21	71	
73	Hydraulic Computations - Channels	30 days	Fri 12/24/21	Thu 2/3/22	72	
74	Hydraulic Reports	30 days	Fri 2/4/22	Thu 3/17/22	73	
75	Culv Design, Details & Layouts	30 days	Fri 3/18/22	Thu 4/28/22	74	
76	Outfall channel(s) outside ROW - analyze exist. or prop.	30 days	Fri 4/29/22	Thu 6/9/22	75	
77	Summary of Drainage Structure Quantities	30 days	Fri 6/10/22	Thu 7/21/22	76	
78	Storm Water Pollution Prevention Plan (SW3P)	30 days	Fri 7/22/22	Thu 9/1/22	77	
79	Standard Sheets (SW3P, Storm Sewer, and Culvert) Approx.12 sheets	25 days	Fri 9/2/22	Thu 10/6/22	78	
80	**PS&E Completion**	**772 days**	**Fri 10/22/21**	**Mon 10/7/24**		
81	Design up to 30% Submittal	200 days	Fri 10/22/21	Thu 7/28/22		
82	TxDOT Review	20 days	Fri 7/29/22	Thu 8/25/22	81	
83	Design up to 60% Submittal	80 days	Fri 7/29/22	Thu 11/17/22	82FS-20 days	
84	TxDOT Review	20 days	Fri 11/18/22	Thu 12/15/22	83	
85	Design up to 90% Submittal	80 days	Fri 11/18/22	Thu 3/9/23	84FS-20 days	
86	TxDOT Review	20 days	Fri 3/10/23	Thu 4/6/23	85	
87	Design up to 95% Submittal	80 days	Fri 3/10/23	Thu 6/29/23	86FS-20 days	
88	TxDOT Review	20 days	Fri 6/30/23	Thu 7/27/23	87	
89	Revisions from review by TxDOT	15 days	Fri 7/28/23	Thu 8/17/23	88	
90	100% Final Submittal (PDF's) and TxDOT Approval	25 days	Fri 8/18/23	Thu 9/21/23	89	
91	RTL: Ready to LET	0 days	Mon 10/7/24	Mon 10/7/24	106	
92	**ROW MAP**	**766 days**	**Mon 11/1/21**	**Mon 10/7/24**		
93	Prepare ROW Map	260 days	Mon 11/1/21	Fri 10/28/22		
94	TxDOT Review and Revisions	40 days	Mon 10/31/22	Fri 12/23/22	93	
95	TxDOT ROW Map Approval	45 days	Mon 12/26/22	Fri 2/24/23	94	
96	**ROW Acquisition (est. 130 Parcels)**	**650 days**	**Tue 4/12/22**	**Mon 10/7/24**		
97	ROW Release	40 days	Tue 4/12/22	Mon 6/6/22	59	
98	Title Commitments	120 days	Tue 5/10/22	Mon 10/24/22	97FS-20 days	
99	Appraisal Reports	120 days	Tue 5/10/22	Mon 10/24/22	97FS-20 days	
100	Approved Values by TxDOT	120 days	Tue 8/2/22	Mon 1/16/23	99FS-60 days	
101	Acquisition Negotiation Offers	510 days	Tue 10/25/22	Mon 10/7/24	100FS-60 days	
102	Title Curative Process	400 days	Tue 3/28/23	Mon 10/7/24	101FS-400 days	
103	Title Commitment Updates	400 days	Tue 3/28/23	Mon 10/7/24	101FS-400 days	
104	Payments for Parcels	400 days	Tue 3/28/23	Mon 10/7/24	101FS-400 days	
105	Condemnation Process	340 days	Tue 6/20/23	Mon 10/7/24	104FS-340 days	
106	Eminent Domain Proceedings	340 days	Tue 6/20/23	Mon 10/7/24	104FS-340 days	
107	**Phase III: Letting and Construction - Status**	**774 days**	**Tue 10/8/24**	**Fri 9/24/27**		
108	**Letting**	**163 days**	**Tue 10/8/24**	**Thu 5/22/25**		
109	State Letter of Authority (SLOA) (TBD) and FPAA	30 days	Tue 10/8/24	Mon 11/18/24	91	
110	Prepare Bidding Work Plan	10 days	Tue 11/19/24	Mon 12/2/24	109	
111	TxDOT Bidding Work Plan Review and Approval	20 days	Tue 12/3/24	Mon 12/30/24	110	
112	Release for Advertisement	1 day	Tue 11/19/24	Tue 11/19/24	109	
113	Prepare Advertisements	2 days	Wed 11/20/24	Thu 11/21/24	112	
114	TxDOT Advertisement Review/Approval	5 days	Fri 11/22/24	Thu 11/28/24	113	
115	Advertise for Bids (2 Advertisements - 21 & 14 Days)	15 days	Fri 11/29/24	Thu 12/19/24	114	
116	Addendums (if Required)	15 days	Fri 12/20/24	Thu 1/9/25	115	
117	Pre - Bid Meeting	1 day	Fri 1/10/25	Fri 1/10/25	116	
118	Open Bids Publicly	1 day	Mon 1/13/25	Mon 1/13/25	117	
119	Bid Review LG	15 days	Tue 1/14/25	Mon 2/3/25	118	
120	Recommendation to Award/Reject of Cancel LG	1 day	Tue 2/4/25	Tue 2/4/25	119	
121	Request Concurrance Letter LG	10 days	Wed 2/5/25	Tue 2/18/25	120	
122	TxDOT Bid Review	30 days	Wed 2/19/25	Tue 4/1/25	121	
123	TxDOT Concurrance	1 day	Wed 4/2/25	Wed 4/2/25	122	
124	TxDOT Draft Concurrance Letter	10 days	Wed 4/2/25	Tue 4/15/25	122	
125	TxDOT Compare Obligation to Approval Bid	10 days	Wed 4/16/25	Tue 4/29/25	124	
126	TxDOT Requests FHWA Approval in Obligation (Increase/Decrease)	1 day	Wed 4/30/25	Wed 4/30/25	125	
127	FHWA Approval Adjustment in Obligation	15 days	Wed 4/30/25	Tue 5/20/25	125	
128	Award Bid LG	1 day	Wed 5/21/25	Wed 5/21/25	127	
129	Approve Contract LG	1 day	Thu 5/22/25	Thu 5/22/25	128	
130	**Construction**	**612 days**	**Thu 5/22/25**	**Fri 9/24/27**		
131	LG Confirms Contractor's DBE Goal	5 days	Thu 5/22/25	Wed 5/28/25	128	
132	LG Executes Contract and Provides to TxDOT	1 day	Fri 5/23/25	Fri 5/23/25	129	
133	LG & TxDOT to Verify 30% Self Performance and Debarred Subcontractors	5 days	Mon 5/26/25	Fri 5/30/25	132	
134	LG and TxDOT Coordination Meeting	1 day	Fri 5/23/25	Fri 5/23/25	129	
135	TxDOT to Spot Check Sub-Contractor (Agreements & Retain Audit Checkli	5 days	Mon 5/26/25	Fri 5/30/25	134	
136	Pre-Construction Meeting	1 day	Mon 6/2/25	Mon 6/2/25	135	
137	Provide Notice to Proceed	2 days	Tue 6/3/25	Wed 6/4/25	136	
138	Obtain TPDES NOI/CSN Environmental Permits	1 day	Thu 6/5/25	Thu 6/5/25	137	
139	LET Project	1 day	Fri 6/6/25	Fri 6/6/25	138	
140	Construction Duration	600 days	Mon 6/9/25	Fri 9/24/27	139	
141	Open to Traffic	0 days	Fri 9/24/27	Fri 9/24/27	140	
142	**Work Authorizaition Complete**	0 days	Fri 12/17/27	Fri 12/17/27	141FS+60 days	



Project: East Loop
Date: Mon 10/18/21

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Progress | Deadline

PROJECT: East Loop PS&E, Geo & Utilities
CLIENT: CCRMA
CONTRACT: GEC Contract
CSJ: x
COUNTY: Cameron
S & B JOB NO.: U2716.222

EXHIBIT D -- FEE ESTIMATE

10/18/21

ACTIVITY CODE	FUNCTION CODE	DESCRIPTION from Attachment B	FIRM	SERVICE	MAN-HOURS														ESTIMATED FEE	TOTALS
					Principal	Quality Manager	Project Manager	Env Manager	Env Scientist	RPLS	Engineer Structural	Engineer (V)	Engineer (I,II)	3-Man Survey Crew	Engineer in Training	Senior CADD	CADD Operator (I)	Secretary	TOTAL HRS		
	110	**ROUTE AND DESIGN STUDIES**																		
		Design Concept Conference	S & B	BASIC			12				12	12							36	$8,941.68
		Prepare Design Concept Conference Meeting Notes & Revise DSR	S & B	BASIC			2					4			4				10	$1,789.92
		Geotechnical services																		
		Oversight of subcontractor	S & B	BASIC			40				60		120			24		8	252	$49,357.20
		Geotechnical services for Bridges, Bridge Embankment, Levee and Report (See L&G Cost Proposal)	L&G	SPECIAL																$402,984.16
		Geotechnical services for Rigid Pavment Design, Noise Wall, Large Guide Signs,and Report (See B2Z Cost Proposal)	B2Z	SPECIAL																$292,052.72
		Sub Total (110 - ROUTE AND DESIGN STUDIES)			**0**	**0**	**54**	**0**	**0**	**0**	**72**	**16**	**120**	**0**	**4**	**24**	**0**	**8**	**298**		**$755,125.68**
	120	**SOCIAL & ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT General FC 120 Categories**																		
		Prespare EPIC sheets	S & B	BASIC			8	8				6	48			48			118	$18,696.92
		Sub Total (120 - SOCIAL & ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT)			**0**	**0**	**8**	**8**	**0**	**0**	**0**	**6**	**48**	**0**	**0**	**48**	**0**	**0**	**118**		**$18,696.92**
	130	**RIGHT-OF-WAY DATA**																		
		Subconsultant Oversight	S & B	SPECIAL			16					240			40		40	16	352	$66,835.20
		Utility Ownership Data and Quality Level A Designation	RODSUE	SPECIAL																$147,273.00
		Utility Adjustments- Evaluate conflicts & preliminary drawings for Agreements Est @ 35 Conflicts	AMB	SPECIAL																$436,077.60
		Sub Total (130 - RIGHT-OF-WAY DATA)			**0**	**0**	**16**	**0**	**0**	**0**	**0**	**240**	**0**	**0**	**40**	**0**	**40**	**16**	**352**		**$650,185.80**
	150	**FIELD SURVEYING AND PHOTOGRAMMETRY**																		
		Field Surveying and Setting Benchmarks for Construction Plans	S & B	SPECIAL						40				400					440	$84,035.60
		Misc. Field Survyeying to include Borehole staking, Utility staking, SUE Level A Staking, Etc.	S & B	SPECIAL						80				160					240	$47,373.60
		Sub Total (150 - FIELD SURVEYING AND PHOTOGRAMMETRY)			**0**	**0**	**0**	**0**	**0**	**120**	**0**	**0**	**0**	**560**	**0**	**0**	**0**	**0**	**680**		**$131,409.20**
	160	**ROADWAY DESIGN**																		
		Geometric Design - Roadway geometrics Alignment Data and P&P Sheets	S & B	BASIC			216					270	340		680	440	340		2,286	$320,252.80
		Exhibit for Airway/Highway Clearance Permits	S & B	BASIC			4					8			40			16	68	$7,339.84
		Grading Design - Typical Sections	S & B	BASIC			24					46			24	120	80		294	$40,789.08
		Grading Design - Corridor Model - Cross Sections	S & B	BASIC			76					123	240		480	280			1,199	$162,307.74
		Grading Design - Intersection Layouts	S & B	BASIC			20					30	120		120	360	100		750	$94,217.00
		Grading Design - Determine Cut and Fill Quantities	S & B	BASIC			32					40	80		260		180		592	$71,477.60
		Levee Design	S & B	BASIC			16					40			80	80				$29,399.20
		Plan Details to Supplement Std Shts	S & B	BASIC			20					60	60		100	100	100		440	$59,182.60
		Compute & Tabulate Quantities	S & B	BASIC			20					30	60		120	84			314	$42,293.20
		Sub Total (160 - ROADWAY DESIGN)			**0**	**0**	**428**	**0**	**0**	**0**	**0**	**647**	**900**	**0**	**1,904**	**1,464**	**800**	**16**	**5,943**		**$827,259.06**
	161	**DRAINAGE**																		
		Drainage Area Maps - determine and calculate	S & B	BASIC			96					210	110		120	80			616	$111,716.10
		Hydrologic data/discharge determination	S & B	BASIC			84					92			120	160			456	$72,398.16
		Hydraulic Computations - Roadside Ditches & Outfalls	S & B	BASIC			4					240	110		180	240			774	$116,665.50
		Hydraulic Report Roadway	S & B	BASIC			16					80			40	40			176	$30,398.40
		FEMA floodway requirements	S & B	BASIC			24					180	80		36	36			356	$67,874.80
		Utility and Darinage Sheets	S & B	BASIC								100	120		40	240		10	510	$74,515.60
		Storm Sewer Side Drain Details	S & B	BASIC											100	100		4	204	$20,260.00
		Culv Design, Details & Layouts	S & B	BASIC			4					200	220		120	160			704	$112,036.60
		Coordination with Permitted Utilities	S & B	BASIC			32	120							360	20		20	552	$65,200.00
		Outfall channel(s) outside ROW - analyze exist. or prop.	S & B	BASIC			8					120			80	40			248	$40,597.60
		Summary of Drainage Structure Quantities	S & B	BASIC			24					200	200		160	124			708	$113,402.00
		Storm Water Pollution Prevention Plan (SW3P)	S & B	BASIC			12					100	80		220	240			652	$85,676.40
		LEVEE H&H																		
		Develop Model of Existing and Proposed Levee Configuration for Study Area.	S & B	BASIC			12						40			80			132	$19,289.20
		Perform H&H Modeling for Existing Levee Conditions	S & B	BASIC			12						40			40			92	$14,689.20
		Perform H&H Modeling for Proposed Levee Conditions	S & B	BASIC			12						40			40			92	$14,689.20
		Preliminary H&H Report for Levee for IBWC/CILA.	S & B	BASIC			36						40			80			156	$25,889.20
		Final H&H Report for submittal to the IBWC/CILA.	S & B	BASIC			16						24			40			80	$13,073.52
		Permitting Assistance for IBWC/CILA permit/construction license	S & B	BASIC			24						80					24	128	$21,738.40
		Sub Total (161 - DRAINAGE)			**0**	**0**	**416**	**120**	**0**	**0**	**0**	**1,522**	**1,184**	**0**	**1,576**	**1,760**	**0**	**58**	**6,636**		**$1,020,109.88**
	162	**SIGNING, MARKINGS AND SIGNALIZATION**																		
		Signing and Markings Layouts	S & B	BASIC			60					80	50		100	140			430	$67,584.90
		Summary of Small Signs Tabulation	S & B	BASIC			68					46	40		80	110			344	$55,288.28

PROJECT: East Loop PS&E, Geo & Utilities
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S & B JOB NO.: U2716.222

EXHIBIT D -- FEE ESTIMATE

10/18/21

ACTIVITY CODE	FUNCTION CODE	DESCRIPTION from Attachment B	FIRM	SERVICE	MAN-HOURS Principal	Quality Manager	Project Manager	Env Manager	Env Scientist	RPLS	Engineer Structural	Engineer (V)	Engineer (I,II)	3-Man Survey Crew	Engineer in Training	Senior CADD	CADD Operator (I)	Secretary	TOTAL HRS	ESTIMATED FEE	TOTALS
		Summary of Large Signs Tabulation	S & B	BASIC			16					36				120			172	$26,299.28	
		Sign Detail Sheets & Standards	S & B	BASIC			28					44	60		120	130			382	$52,932.92	
		Compute & Tabulate Quantities	S & B	BASIC			10					20	30		40	40			140	$20,341.50	
		Signalization (See ETSI Cost Proposal)	ETSI	BASIC															0	$171,550.78	
		Traffic Counts and Signal Warrants (See ETSI Cost Proposal)	ETSI	BASIC															0	$69,553.32	
		Sub Total (162 - SIGNING, MARKINGS AND SIGNALIZATION)			**0**	**0**	**182**	**0**	**0**	**0**	**0**	**226**	**180**	**0**	**340**	**540**	**0**	**0**	**1,468**		**$463,550.98**
	163	**MISCELLANEOUS ROADWAY**																			
		Sound Walls	S & B	BASIC																	
		Structural Details	S & B	BASIC			4				40				80	80			204	$26,906.40	
		Alternate Patented Retaining Walls	S & B	BASIC			2				16				32	16			66	$9,032.56	
		Foundation Studies	S & B	SPECIAL			2				40				16	32			90	$15,396.40	
		Stability Analysis	S & B	BASIC			2				60				16	8			86	$17,539.60	
		Estimate	S & B	BASIC			2				8				24	2			36	$4,781.28	
		Summary of Quantities	S & B	BASIC			2				8				16	2			28	$4,101.28	
		Typical X-section.	S & B	BASIC			2				8				16	24			50	$6,631.28	
		Survey Control Sheets	S & B	BASIC			12					60	60		100	100			332	$46,982.60	
		Traffic Control Plan	S & B	BASIC			28					100	80		180	180			568	$79,776.40	
		Coordinate with & Prepare TCP layouts for TxDOT review	S & B	BASIC			8					8			8				24	$4,679.84	
		Illumination Layouts	S & B	BASIC			2					40			80		120		242	$28,349.20	
		Compute and Tabulate Quantities for Revised Limits	S & B	BASIC			4					52			120		120		296	$34,998.96	
		Special Utility Details (Water, Sanitary Sewer, etc.)	S & B	BASIC			2					40				40			82	$14,149.20	
		Exhibits for Utility Agreements	S & B	SPECIAL			42					40			140				222	$32,449.20	
		Estimates	S & B	BASIC			2					24			60				86	$11,049.52	
		Specifications	S & B	BASIC			4					30			40				74	$11,249.40	
		General Notes	S & B	BASIC			6					36			32				74	$12,469.28	
		Prepare Construction Time Schedule	S & B	BASIC			24					48			120				192	$27,599.04	
		Project Submittals 30%, 60%, 95% and 100%	S & B	BASIC			32					100			110	30			272	$44,098.00	
		Assembely of Final Documents (Graphic Files of Plan Sheets and Geopak Files)	S & B	BASIC			2					16			40	40			98	$12,149.68	
		ADA/TDLR Coordination	S & B	SPECIAL			1					4			4				9	$1,514.92	
		ADA Non-Standard Details	S & B	SPECIAL			1					4			4	8			17	$2,434.92	
		TDLR Cost Justification/Comparisons	S & B	SPECIAL			1					16			16				33	$5,234.68	
		Sub Total (163 - MISCELLANEOUS ROADWAY)			**0**	**0**	**187**	**0**	**0**	**0**	**180**	**618**	**140**	**0**	**1,254**	**562**	**240**	**0**	**3,181**		**$453,573.64**
	170	**BRIDGE DESIGN**																			
		New Structure(s) Structural Details	S & B	BASIC			4				80	60				120			264	$48,011.60	
		Preparation of Bridge Layouts (Two Bridges)	S & B	BASIC			8				48	60				120			236	$41,266.48	
		Bridge Class Culv Layouts	S & B	BASIC			4				12	40				80			136	$22,241.12	
		Bridge Class Culv Details	S & B	BASIC			2				16					80			98	$13,672.56	
		Bridge Class Culv Estimate & Quantities	S & B	BASIC			2				16					40			58	$9,072.56	
		Bridge Class Culv Specifications	S & B	BASIC			2				8					16			26	$4,351.28	
		Bridge Foundation Design	S & B	BASIC			8				80	120				80			288	$58,010.40	
		Bridge Total Quantities and Cost Estimates (each bridge)	S & B	BASIC							16	16				24			56	$10,282.24	
		Bridge Special Provisions and Specifications (each bridge)	S & B	BASIC							8					8			16	$2,881.28	
		Bearing seat elevations for each beam or girder.	S & B	BASIC							24	24				60			108	$18,183.36	
		Sub Total (170 - BRIDGE DESIGN)			**0**	**0**	**30**	**0**	**0**	**0**	**308**	**320**	**0**	**0**	**0**	**628**	**0**	**0**	**1,286**		**$227,972.88**
	164	**GENERAL COORDINATION**																			
		Project Manager (Proj Coord)(4 HRS/WK)	S & B	BASIC			416												416	$114,400.00	
		Project Manager Weekly Meeting (Prog. Rpts)	S & B	BASIC			104												104	$28,600.00	
		Proj. Meetings (DCC, 30% 60%, 100% Submittals)	S & B	BASIC			32				40	48			60			32	212	$36,585.44	
		Prepare Proj. Meetings Notes	S & B	BASIC			2					4			16			16	38	$3,849.92	
		Qualtiy Control - 4 Submittals	S & B	BASIC		640													640	$159,993.60	
		Project Secretary /CLERICAL (4 hrs/week)	S & B	BASIC														416	416	$27,040.00	
		Sub Total (164 - GENERAL COORDINATION)			**0**	**640**	**554**	**0**	**0**	**0**	**40**	**52**	**0**	**0**	**76**	**0**	**0**	**464**	**1,826**		**$370,468.96**
	350	**CONSTRUCTION PHASE SERVICES**																			
		CONSTUCTION BIDDING	S & B	SPECIAL																	
		RFI'S/Addendums	S & B	SPECIAL			4					14			24		12		54	$7,489.72	
		Pre Bid Conference	S & B	SPECIAL			4					4						2	10	$2,129.92	
		Bid Opening	S & B	SPECIAL			4					4							8	$1,999.92	
		Bid Tabulation/Recommendation of Award	S & B	SPECIAL			4					40			24			12	80	$12,919.20	
		DURING CONSTUCTION	S & B	SPECIAL																	
		Attend Preconstruction Meeting	S & B	SPECIAL			4					4			4			2	14	$2,469.92	
		Review of Shop Drawings	S & B	SPECIAL															0	$0.00	
		Sign Bridges	S & B	SPECIAL			1								8				9	$955.00	
		Concrete Mix Design	S & B	SPECIAL			1								8				9	$955.00	
		Hot Mix Design (Bond Breaker)	S & B	SPECIAL			1								8				9	$955.00	
		Canal Bridge	S & B	SPECIAL																	
		Prestressed Concrete I Beams Design	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Prestressed Concrete I Beams Detail	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Bearing Pads	S & B	SPECIAL			1				4							1	6	$1,320.64	
		Prestressed Concrete Layout	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Bridge Railing	S & B	SPECIAL			1				8							1	10	$2,301.28	

PROJECT: East Loop PS&E, Geo & Utilities
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10/18/21

EXHIBIT D -- FEE ESTIMATE

ACTIVITY CODE	FUNCTION CODE	DESCRIPTION from Attachment B	FIRM	SERVICE	MAN-HOURS Principal	Quality Manager	Project Manager	Env Manager	Env Scientist	RPLS	Engineer Structural	Engineer (V)	Engineer (I,II)	3-Man Survey Crew	Engineer in Training	Senior CADD	CADD Operator (I)	Secretary	TOTAL HRS	ESTIMATED FEE	TOTALS
		SH 4 Overpass	S & B	SPECIAL																	
		Prestressed Concrete I Beams Design	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Prestressed Concrete I Beams Detail	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Bearing Pads	S & B	SPECIAL			1				4							1	6	$1,320.64	
		Prestressed Concrete Layout	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Bridge Railing	S & B	SPECIAL			1				8							1	10	$2,301.28	
		Sub Total (350 - CONSTRUCTION PHASE SERVICES)			**0**	**0**	**33**	**0**	**0**	**0**	**72**	**66**	**0**	**0**	**76**	**0**	**12**	**26**	**285**		**$50,925.20**
		LABOR TOTALS																			**$4,969,278.20**
		Total Hours	MULTIPLIER		0	640	1,908	128	0	120	672	3,713	2,572	560	5,270	5,026	1,092	588	22,073		
		CONTRACT RATES: ($/MAN-HOUR)	3.7717		299.96	249.99	275.00	185.00	110.00	214.99	245.16	224.98	169.73	188.59	85.00	115.00	100.00	65.00			
		BASE RATES: ($/MAN-HOUR)			79.53	66.28	72.91	49.05	29.17	57.00	65.00	59.65	45.00	50.00	22.54	30.49	26.51	17.23			
	160	**NON LABOR**																			
		Outside reproduction Plans (16 Sets @ 1000 Sheet Avg @ $0.35 11X17 B/W)	S & B	SPECIAL																$5,600.00	
		Outside reproduction Utility Agreements (35 Sets @ 50 Sheet Avg @ $0.35 11X17 B/W)* 3 Drafts and 1 Final	S & B	SPECIAL																$2,450.00	
		Travel - Mileage During Plan Development (12 Mtgs and Precon Mtg)	S & B	SPECIAL	Mileage per trip =		120	Trips =	13							Milage Rate ($/mi.)=		$ 0.535		$834.60	
		Travel - Mileage During Plan Development (Survey)	S & B	SPECIAL	Mileage per trip =		350	Trips =	10							Milage Rate ($/mi.)=		$ 0.535		$1,872.50	
		Survey Crew Lodging including Taxes	S & B	SPECIAL		Nights=	60	Persons =	3							Lodging w taxes		$ 120.000		$21,600.00	
		Travel to District Area Office- Mileage 5 Meetings	S & B	SPECIAL	Mileage per trip =		9	Trips =	5							Milage Rate ($/mi.)=		$ 0.535		$24.08	
		Sub Total (F.C. 160)																			**$32,381.18**
		NON LABOR TOTAL																		**$32,381.18**	
		BASIC SERVICE TOTAL																		**$ 3,384,691.00**	
		SPECIAL SERVICE TOTAL																		**$ 1,616,968.38**	
		PROJECT TOTAL																			**$5,001,659.38**

AMBIOTEC
GROUP

Civil and Environmental
Engineers, Scientists and
Construction Managers
TBPE Firm No. F-4126
TBPLS Reg. No. 10005300

April 21, 2020
Revised September 9, 2020

Mr. Phillip J. Pawelek, P.E.
S&B Infrastructure, Ltd.
5408 North 10th Street
McAllen, Texas 78504

RE: Utility Conflicts at East Loop Project
Proposal No. 6136.0420

Dear Mr. Pawelek:

Ambiotec Group, Inc. (Engineer) is pleased to submit this proposal for professional engineering services for the above referenced project. The scope of services, schedule and compensation are presented below.

Design
This includes the site survey, running a bench loop to the site for topography and coordinating for utilities

1.	Engineer	62 hrs x $106.28	= $ 6,589.36
2.	Senior CADD Operator	80 hrs x $ 44.02	= $ 3,521.60
3.	Administrative Clerk	57 hrs x $ 41.60	= $ 2,348.40

Total Engineering **$12,459.36 per utility conflict**

For purposes of this proposal, I'm taking into account approximately 35 utility conflicts.

35 Utility conflicts x $12,459.36 per utility conflict = **$436,077.60**

5420 Paredes Line Rd., Brownsville, TX 78526
(956) 548-9333 (956) 548-9399 Fax

1101 East Harrison Ave., Harlingen, TX 78550
(956) 423-7807 (956) 423-7905 Fax

EXHIBIT D
FEE SCHEDULE

Geotechnical Engineering, Report & Summary

B2Z Engineering

East Loop Project		***Client:*** ***S&B Infrastucture, LTD***	MANHOURS						
			Project Manager	Geotechnical Engineer (Eng V)	Project Engineer (Eng IV)	Engineering Tech (EIT)	CADD Operator	Admin/Clerical	Total
	TASK								
	1A	Project Management and Review - Field Operation Oversight	8		12				20
	2A	Boring Locates and Utility Clearance				16			16
	3A	Field Exploration - Field Logging for Soil Borings				184			184
	4A	Lab Analysis of Soil Borings - Assignments, Soil Logs, Soil Summ, Soil Classific.				94			94
	1P	Pavement Subgrade Stabilization Analysis & Recommendations		8	32				40
	2P	Rigid Pavement Design		20	72				92
	3P	Pavement Material Recommendations		8	16				24
	4P	Pavement Design Report (including Pavement Geo Report)	12	20	54		16	20	122
	1W	Noise Wall Memo - Misc Analyses (Deep Foundation & L-Pile Parameters)		10	24		4	4	42
	1S	Large Signs Memo - Misc Analysis for Large Signs (Recs for Design)		4	24		4	4	36
	1O	Meetings, Conf Call, Invoice, Progress Reports, Admin, etc.	20	6	6			8	40
		Subtotal	**40**	**76**	**240**	**294**	**24**	**36**	**710**
Labor Hours			**40**	**76**	**240**	**294**	**24**	**36**	**710**
Contract Rate			$ 230.17	$ 192.84	$ 149.30	$ 84.76	$ 74.65	$ 64.54	
Total Labor Costs			**$ 9,206.80**	**$ 14,655.84**	**$ 35,832.00**	**$ 24,919.44**	**$ 1,791.60**	**$ 2,323.44**	**$ 88,729.12**

LINE ITEM EXPENSES

Printing Reproduction (N/A - Electronic Submittal Only)	$ -
*B2Z Engineering (Sub-Total for Geo. Field & Lab Services)	$ 203,323.60
** - (Please see page 2, for detailed estimates of testing)*	
Total Expenses	**$ 203,323.60**

B2Z Total Cost **$ 292,052.72**

B2Z ENGINEERING

EXHIBIT D
Geotechnical Field and Laboratory Services
East Loop Project
Prepared for S&B Infrastructure, LTD

	SERVICES		UNITS	UNITS	UNIT COST	TOTAL COST
I.	**Project Management / Review**					
II.	**Utility Clearances / Boring Locates**					
	B. Mileage		Mile	**160**	**$ 0.54**	**$ 86.40**
III.	**Field Exploration**					
A	Mobilization/Demobilization (Drill Rig)		Mile	**1840**	**$ 5.00**	**$ 9,200.00**
B	Field Exploration					
	1. Soil Boring/Rock Coring w TCP (< 60 ft.)		LF	**1700**	**$ 36.00**	**$ 61,200.00**
	1A. Backfilling Boreholes Bentonite Plug		LF	**1700**	**$ 10.00**	**$ 17,000.00**
	3. Supp. Vehicle-Trailer, Tools Water Supply		Mile	**1840**	**$ 0.54**	**$ 993.60**
	4. Vehicle Charge		Mile	**1840**	**$ 0.54**	**$ 993.60**
	5. Traffic Control Services (Med Project)		Day	**10**	**$ 2,500.00**	**$ 25,000.00**
C	Miscellaneous Field Services					
IV.	**Engineering Data Analysis / Report**					
	3. Prep Soil for Testing (Tex-101-E)		Ea.	**263**	**$ 70.00**	**$ 18,410.00**
	4. Moisture Content (Tex-103-E)		Ea.	**340**	**$ 14.00**	**$ 4,760.00**
	5a. Liquid Limit (Tex-104-E)		Ea.	**263**	**$ 40.00**	**$ 10,520.00**
	5b. Plastic Limit (Tex-105-E)		Ea.	**263**	**$ 40.00**	**$ 10,520.00**
	5c. Plasticity Index (Tex-106-E)		Ea.	**263**	**$ 50.00**	**$ 13,150.00**
	6. Sieve Analysis (w/ Hyd) (Tex-110-E)		Ea.			**$ -**
	7. -200 Determination (Tex-111-E)		Ea.	**263**	**$ 40.00**	**$ 10,520.00**
	8. Soils Sulfate Content (Tex-145-E)		Ea.	**78**	**$ 90.00**	**$ 7,020.00**
	9. Lime Series Testing (Tex-121-E - Part 3)		Ea.	**31**	**$ 450.00**	**$ 13,950.00**
	10. One Dimensional Consol (ASTM D2435)		Ea.			**$ -**
	Project Sub-Total (Geo Field and Lab)					**$ 203,323.60**

Exhibit D

"FEE SCHEDULE" - WARRANT STUDIES'
Along East Loop: From IH 69E to SH 4

Ergonomic Transportation Solutions, Inc.

WARRANT STUDIES				MANHOURS				
				Project Manager	Traffic Engineer III	CADD Operator	Administrative Assistant	Total
TASK								
	1	Collect Data and Conduct Field Investigations		12	60	34		106
	2	Assess Collected Data		4	20			24
	3	Accident Analysis		8	44	8		60
	4	Collision Diagram		2	4	18		24
	5	Intersection Exhibits		4	12	24		40
	6	Signal Warrant Analysis		26	120	26		172
	7	Photo Album			2	14	8	24
	8	Recommendations		12	12			24
	9	Traffic Signal Warrant Study Report		8	36	16	12	72
		Subtotal		**76**	**310**	**140**	**20**	**546**

Total Sheets/Labor Hours		**76**	**310**	**140**	**20**	**546**
Contract Rates		$ 221.07	$ 127.12	$ 71.85	$ 60.79	
Total Costs		**$ 16,801.32**	**$ 39,407.20**	**$ 10,059.00**	**$ 1,215.80**	**$ 67,483.32**

EXPENSES

Lodging	(2 people)(2 nights)($96/night)	$	384.00
Meals	(2 people)(3 days)($36/day)	$	216.00
Rental Car	(3 days)($60/day)	$	180.00
Rental Car Fuel	(3 days)($30/day)	$	90.00
Airfare	(2 people)($600/ea)(1 trip)	$	1,200.00
		$	-
Total Expenses		**$**	**2,070.00**

ETSI Total Cost **$ 69,553.32**

Exhibit D

"FEE SCHEDULE" - FLASHING BEACON & TRAFFIC SIGNAL DESIGN
Along East Loop: From IH 69E to SH 4

Ergonomic Transportation Solutions, Inc.

FLASHING BEACON AND TRAFFIC SIGNAL DESIGN			MANHOURS						
			No. of sheets (estimated)	Project Manager	Senior Traffic Engineer	Traffic Engineer III	CADD Operator	Administrative Assistant	Total
TASK									
	1	General Notes	n/a	2	4	12		6	24
	2	Basis of Estimate	1	4	6	16	10		36
	3	Condition Diagram	7	14	22	60	44		140
	4	Proposed Signal Plan Layout	7	58	86	262	176		582
	5	Signal Phasing/Timing	n/a	4	6	16	10		36
	6	Electrical Schedules	7	18	26	78	52		174
	7	Int..Signs, Pav.Markings, Curb Ramps	n/a	4	6	16	10		36
	8	Standard Sheets List	14	4	6	16	10		36
	9	Specifications and Cost Estimate	n/a	8	12	36	26		82
	10	Coordination and Meetings	n/a	40					40
	11	TEMPORARY TRAFFIC SIGNALS	4	14	22	60	44		140
		Subtotal	**40**	**170**	**196**	**572**	**382**	**6**	**1326**

Total Sheets/Labor Hours	**40**	**170**	**196**	**572**	**382**	**6**	**1326**
Contract Rates		$ 221.07	$ 165.80	$ 127.12	$ 71.85	$ 60.79	
Total Labor Costs		**$ 37,581.90**	**$ 32,496.80**	**$ 72,712.64**	**$ 27,446.70**	**$ 364.74**	**$ 170,602.78**

EXPENSES

Lodging	(1 person)(1 night)($96/night)	$	96.00
Meals	(1 person)(2 days)($36/day)	$	72.00
Rental Car	(2 days)($60/day)	$	120.00
Rental Car Fuel	(2 days)($30/day)	$	60.00
Airfare	(1 person)($600/ea)(1 trip)	$	600.00
Total Expenses		**$**	**948.00**

ETSI Total Cost **$ 171,550.78**

EXHIBIT D
FEE SCHEDULE

L&G Consulting Engineers, Inc.

Geotechnical Engineering, Report & Summary

L&G Consulting Engineers, Inc. (Division: L&G ENGINEERING LAB)

East Loop Project		*S&B Infrastucture, LTD* *Client:*	MANHOURS						
			Senior Project Manager	Geotechnical Engineer (Eng V)	Project Engineer (Eng IV)	Engineering Tech (Construction Inspector)	Sr CADD Operator / GIS Operator	Admin/Clerical	Total
	TASK								
	1A	Project Management and Review - Field Operation Oversight	8		18				26
	2A	Boring Locates and Utility Clearance				10			10
	3A	Field Exploration - Field Logging for Soil Borings				296			296
	4A	Lab Analysis of Soil Borings - Assignments, Soil Logs, Soil Summ, Soil Classific.				74			74
	1G	Deep Foundation Analysis for Bridge (Wincore) (at Canal and SH 4)		12	64				76
	2G	Embankment Analysis (BC, Settlement, Stability)	4	32	74				110
	3G	Levee Analysis (BC, Settlement, Seepage, Slope Stability)	16	96	194		16		322
	4G	Geotechnical Report (including Bridge and Levee Geo Report)	12	36	84		36	20	188
	1O	Meetings, Conf Call, Invoice, Progress Reports, Admin, etc.	20	8	6			6	40
		Subtotal	**60**	**184**	**440**	**380**	**52**	**26**	**1142**
Labor Hours			**60**	**184**	**440**	**380**	**52**	**26**	**1142**
Contract Rate			$ 215.21	$ 180.31	$ 139.60	$ 93.07	$ 75.62	$ 63.98	
Total Labor Costs			**$ 12,912.60**	**$ 33,177.04**	**$ 61,424.00**	**$ 35,366.60**	**$ 3,932.24**	**$ 1,663.48**	**$ 148,475.96**

LINE ITEM EXPENSES

Printing Reproduction (N/A - Electronic Submittal Only)	$ -
*L&G Consulting Engineers, Inc. (Sub-Total for Geo. Field & Lab Services)	$ 254,508.20
** - (Please see page 2, for detailed estimates of testing)*	
Total Expenses	**$ 254,508.20**
L&G Total Cost	**$ 402,984.16**

EXHIBIT D
Geotechnical Field and Laboratory Services
East Loop Project
Prepared for S&B Infrastructure, LTD

	SERVICES		UNITS	UNITS	UNIT COST	TOTAL COST
I.	**Project Management / Review**					
II.	**Utility Clearances / Boring Locates**					
	B. Mileage		Mile	**160**	**$ 0.54**	**$ 86.40**
III.	**Field Exploration**					
A	Mobilization/Demobilization (Drill Rig)		Mile	**2960**	**$ 5.00**	**$ 14,800.00**
B	Field Exploration					
	1. Soil Boring/Rock Coring w TCP (< 60 ft.)		LF	**2750**	**$ 36.00**	**$ 99,000.00**
	1A. Backfilling Boreholes Bentonite Plug		LF	**2750**	**$ 10.00**	**$ 27,500.00**
	3. Supp. Vehicle-Trailer, Tools Water Supply		Mile	**2960**	**$ 0.54**	**$ 1,598.40**
	4. Vehicle Charge		Mile	**2960**	**$ 0.54**	**$ 1,598.40**
	5. Traffic Control Services (Med Project)		Day	**2**	**$ 2,500.00**	**$ 5,000.00**
C	Miscellaneous Field Services					
IV.	**Engineering Data Analysis / Report**					
	3. Prep Soil for Testing (Tex-101-E)		Ea.	**338**	**$ 70.00**	**$ 23,660.00**
	4. Moisture Content (Tex-103-E)		Ea.	**550**	**$ 14.00**	**$ 7,700.00**
	5a. Liquid Limit (Tex-104-E)		Ea.	**275**	**$ 40.00**	**$ 11,000.00**
	5b. Plastic Limit (Tex-105-E)		Ea.	**275**	**$ 40.00**	**$ 11,000.00**
	5c. Plasticity Index (Tex-106-E)		Ea.	**275**	**$ 50.00**	**$ 13,750.00**
	6. Sieve Analysis (w/ Hyd) (Tex-110-E)		Ea.	**63**	**$ 95.00**	**$ 5,985.00**
	7. -200 Determination (Tex-111-E)		Ea.	**275**	**$ 40.00**	**$ 11,000.00**
	8. Soils Sulfate Content (Tex-145-E)		Ea.	**37**	**$ 90.00**	**$ 3,330.00**
	9. Lime Series Testing (Tex-121-E - Part 3)		Ea.			**$ -**
	10. One Dimensional Consol (ASTM D2435)		Ea.	**35**	**$ 500.00**	**$ 17,500.00**
	Project Sub-Total (Geo Field and Lab)					**$ 254,508.20**

Sub Provider: RODS Subsurface Utility Engineering, Inc.
Specified Rate Fee Payment Basis

April 9, 2020

Salary Classification			Contract Rate	Hours	Total
Project Manager			$199.84	40	$7,993.60
Engineer			$96.82	40	$3,872.80
Engineer-In-Training			$85.00	0	$0.00
Senior CADD Operator			$102.48	120	$12,297.60
CADD Operator			$93.70	0	$0.00
Admin/Clerical			$65.00	9	$585.00
Senior Engineer			$178.61	0	$0.00
	Vacuum Excavation Vehicles (Mobilization)	mi	$4.00		$0.00
	Pavment Coring	each	$250.00	0	$0.00
	Traffic Control Devices	daily	$500.00		$0.00
SUE Quality Level C & D (Includes labor and eqipment for records resarch, CADD and mapping.)		LF	$0.70	0	$0.00
SUE Quality Level B - Utility Designation (Includes labor and eqipment for records research, designating, engineering, surveying, CADD mapping and limited traffic control.)		LF	$1.45	0	$0.00
SUE Field Services					
One (1) Designating Person with equipment		Hour	$105.00	0	$0.00
Two (2) Designating People with equipment		Hour	$175.00	0	$0.00
SUE Quality Level A Testholes (Per testhole depth)					
	Level A: 0 to 4.99 ft.	Each	$965.00	17	$16,405.00
	Level A: > 5 to 7.99 ft.	Each	$1,330.00	26	$34,580.00
	Level A: > 8 to 12.99 ft.	Each	$1,600.00	17	$27,200.00
	Level A: > 13 to 19.99 ft.	Each	$2,100.00	6	$12,600.00
	Level A: > 20 ft.	VF	$155.00	1	$155.00
Labor Totals				209	$24,749.00
Unit Cost					$90,940.00
Direct Expenses		(see attached)			$31,584.00
Subtotal for Offsite Resources					$147,273.00

66 Total Testholes

Exhibit D
Cost Proposal

RODS Subsurface Utility Engineering, Inc. Service to Be Provided	Unit	Fixed Cost	Maximum Cost	Quantity	Total
Travel					
Lodging/Hotel (Taxes / fees not included)	day/person		$ 102.00	72	$ 7,344.00
Lodging/Hotel - Taxes and fees	day/person		$ 35.00	72	$ 2,520.00
Meals (Excluding alcohol & tips) (Overnight stay required)	day/person		$ 56.00	72	$ 4,032.00
Mileage	mile		$ 0.540	2,200	$ 1,188.00
Miscellaneous					
Car Rental	day		$ 30.00		$ -
Traffic Control Services, Arrow Boards and Attenuator trucks - Large Project (Includes labor, equipment and fuel)	day		$ 3,000.00		$ -
Traffic Control Services, Arrow Boards and Attenuator trucks - Medium Project (Includes labor, equipment and fuel)	day		$ 2,500.00	5	$ 12,500.00
Traffic Control Services, Arrow Boards and Attenuator trucks - Small Project (Includes labor, equipment and fuel)	day		$ 1,375.00		$ -
Attenuator trucks - (lane/Shoulder Closure) (Includes labor, equipment and fuel)	day		$ 400.00	10	$ 4,000.00
Attenuator trucks - (No Lane Closure) (Includes labor, equipment and fuel)	day		$ 250.00		$ -
				TOTAL	$ 31,584.00

2-J CONSIDERATION AND APPROVAL OF SUPPLEMENTAL WORK AUTHORIZATION NO. 2 TO WORK AUTHORIZATION NO. 23 WITH S&B INFRASTRUCTURE REGARDING THE ISLA BLANCA TOLL BOOTH PROJECT.

SUPPLEMENTAL WORK AUTHORIZATION NO. 2
TO WORK AUTHORIZATION NO. 23

This Supplemental Work Authorization No. 2 is made as of this _____ day of _____, 2021, under the terms and conditions established in the AGREEMENT FOR GENERAL CONSULTING CIVIL ENGINEERING SERVICES, dated as of May 10, 2018 (the "Agreement"), between the Cameron County Regional Mobility Authority ("Authority") and S&B Infrastructure, Ltd. ("GEC").

The work to be performed by the GEC under this Supplemental Work Authorization is for the following purpose, consistent with the Services defined in the Agreement: ***Professional services including: providing engineering services for the preparation of Construction Documents and support services to make Modifications to 2 Isla Blanca Toll Booths in Cameron County.***

Section A. – Scope of Services

GEC shall perform the Additional Services according to **Exhibit B**.

Section B. – Schedule – No Change

GEC shall perform the Services and deliver the related Documents according to the schedule as shown on **Exhibit C**.

Section C. – Compensation

Paragraph C.1 is hereby amended to increase the overall maximum amount from $59,172.32 to $72,272.32, an increase of $13,100.00 based on the attached fee estimate shown on **Exhibit D**. Compensation shall be in accordance with the Agreement.

C.1. The Authority shall pay the GEC under the following acceptable payment method – Lump Sum Payment Method.

C.2. Compensation for Additional Services (if any) shall be paid by the Authority to the GEC according to the terms of a future Work Authorization.

Section D. – Authority's Responsibilities – No Change

The Authority shall perform and/or provide the services as stated in Exhibit A in a timely manner so as not to delay the Services of the GEC.

Section E. - Other Provisions – No Change

Except to the extent expressly modified herein, all terms and conditions of the Agreement shall continue in full force and effect.

-SIGNATURES ON NEXT PAGE-

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY

By: _____
Name: Frank Parker, Jr., Chairman
Date: _____

S&B INFRASTRUCTURE, LTD.

By: _____
Name: Daniel O. Rios, PE, President
Date: _____

LIST OF EXHIBITS

Exhibit B – Scope of Work

Exhibit D – Consultant's Cost Proposal

EXHIBIT B
Services to be Provided by the Engineer

GENERAL DESCRIPTION

For this work authorization, Engineer shall perform activities for the development of the ***final design including, plans, specifications, and estimates (PS&E), and bidding documents*** for Toll Booths.

The Engineer shall perform all revisions based on the new design of the electronic toll and fee collection systems being incorporated into the Toll booths. The new systems require major structural and architectural redesign to be accommodated within the booths and the existing footprints with respect to the lane configurations.

GMS ARCHITECTS

Exhibit D
Cost Proposal

July 8, 2021

Proposed Budget for Modifications to 2 Isla Blanca Toll Booths as requested by Parks Director & E-Transit

Architect's Time	$ 8,795
Consultant's Time	$ 4,305
GRAND TOTAL	**$ 13,100**

Sincerely,

RUDY V. GOMEZ, AIA
ARCHITECT – PLANNER

1150 Paredes Line Rd., Brownsville, Texas 78521
Tel (956) 546-0110 Fax (956) 546-0196

2-K CONSIDERATION AND APPROVAL TO AWARD BID NUMBER 2021 – 003 TO FOREMOST PAVING INC. AND TO APPROVE A CONTRACT BETWEEN THE CAMERON COUNTY REGIONAL MOBILITY AUTHORITY AND FOREMOST PAVING, INC. FOR THE ISLA BLANCA PARK PARKING LOT EXPANSION.

CAMERON COUNTY REGIONAL MOBILITY AUTHORITY

ISLA BLANCA PARK PARKING LOT EXPANSION

****

This Contract between the Cameron County Regional Mobility Authority (the "Authority") and Foremost Paving, Inc. (the "Contractor") is hereby entered into and agreed to as of the 21st day of October 2021, (the "Effective Date") and the parties agree to certain terms and conditions, as follows (the "Contract"):

1.0 Definitions.

1.1 Authority. Any reference herein to the "Authority" shall be interpreted to mean the same as the Cameron County Regional Mobility Authority.

1.2 Contractor. Any reference herein to the "Contractor" shall be interpreted to mean the same as Foremost Paving, Inc.

1.3 The Contract. The Contract is comprised of the Contract, the Exhibits listed and referenced herein, and all formal changes to any of those documents by addendum, change order, or other modification.

1.4 The Contract Documents. The Contract Documents consist of this document, the general conditions and special or supplementary conditions and in the bid package for Invitation for Bid No. 2021-003, which include, but are not limited to the Plans, Standard Specifications, Special Provisions, Special Specifications, Contract Bonds, Change Orders, Addendums, and Supplemental Agreements, and the Exhibits listed and referenced herein. This Contract is intended to be an integral whole and shall be interpreted as internally consistent. Work required by any page, part, or portion of the Contract shall be deemed to be required Contract Work as if called for in the whole Contract and no claim for extra work shall be based upon the fact that the description of the Work in question is incomplete.

1.5 Provision of All Things Required. Anything that may be required, implied or inferred by the Contract Documents which make up this Contract, or any one or more of them, shall be provided by the Contractor for the Contract Price.

1.6 Privity only with the Contractor. Nothing contained in this Contract shall create, nor be interpreted to create privity or any other relationship whatsoever between Owner and any person except the Contractor and the Contractor's successors, executors, administrators, and assigns.

1.7 **"Include" Intended to be Encompassing.** "Include", "includes", or "including", as used in the Contract, shall be deemed in all cases to be followed by the phrase, "without limitation."

1.8 **Use of Singular and Plural.** Words or terms used as nouns in the Contract shall be inclusive of their singular and plural forms, unless the context of their usage clearly requires a contrary meaning.

1.9 **Definition of Material Breaches not Exhaustive.** The specification herein of any act, failure, refusal, omission, event, occurrence or condition as constituting a material breach of the Contract shall not imply that any other, non-specified act, failure, refusal, omission, event, occurrence or condition shall be deemed not to constitute a material breach of the Contract.

2.0 **Contractor's Representations.** In order to induce the Authority to execute this Contract and recognizing that the Authority is relying thereon, the Contractor, by executing this Contract, and without superseding, limiting, or restricting any other representation or warranty set forth elsewhere in this Contract, or implied by operation of law, makes the following express representations to the Authority:

2.1 The Contractor is fully qualified to perform the Work. The Contractor is registered with the State of Texas.

2.2 The Contractor will maintain all necessary licenses, permits or other authorizations necessary for the Work until the Contractor's duties under this Contract have been fully satisfied.

2.3 The Contractor has the expertise, experience, and knowledge as well as the necessary team, personnel and financial capability to perform the Work in accordance with the terms of this Contract.

2.4 Prior to the execution of this Contract, the Contractor has visited and inspected the Project site and the local conditions under which the Work is to be performed, and the Contractor has reviewed the Authority's concerns, if any, as are necessary to determine the conditions under which the Work will be performed, and the Contractor accepts the conditions of the Project site and has taken those conditions into account in entering into this Contract.

2.5 The Contractor assumes full responsibility to the Authority for the improper acts and omissions of its Subcontractors or others employed or retained by Contractor in connection with the Work.

3.0 Contract Time.

3.1 Notice of Commencement. After the Authority has approved the required Documents for the Work and is otherwise prepared for the Contractor to proceed with the Work, as determined by the Authority in its sole and absolute discretion, the Authority shall issue a notice to commence the Work directing the Contractor to proceed with the Work on the date indicated in the notice (the "Commencement Date").

3.2 Time for Completion. The Contractor shall commence the Work on the Commencement Date, and the Work shall be carried out regularly and without interruption. The Contractor shall substantially complete the Work not later than ninety (90) calendar days after the Commencement Date, or such other date as may by Change Order be designated (the "Scheduled Completion Date"). The number of working days between the effective date of the Contract and the Scheduled Completion Date is the "Contract Time."

3.2.1 Unless otherwise described herein, all references to "days" shall be calendar days (in the case that the last day falls on a Saturday, Sunday, or legal holiday, then the period of time shall automatically extend to include the next work day).

4.0 Contract Price.

4.1 The total not-to-exceed (NTE) value of the Contract is the amount of **FIVE HUNDRED SEVENTY-FOUR THOUSAND EIGHT HUNDRED AND NO/100 DOLLARS ($574,800.00)** to be paid in accordance with the provisions herein. The Contractor exceeds the NTE amount at its own risk. The Authority reserves the right to amend this amount (increase/decrease) at any time during the Contract when the Authority determines, in its sole and absolute discretion, that doing so is in its best interests.

5.0 Work.

5.1 The Contractor shall perform all Work necessary to complete the Project in accordance with the Contract Documents.

5.2 Work Defined. The terms "Work" and "Project Work" shall mean whatever is done by or required of the Contractor to perform and complete its duties relating to the installation of the Project under the Contract, including, without limitation, the following:

5.2.1 Construction of the whole and all parts of the Work in full and strict conformity with this Contract;

5.2.2 The provision and furnishing, and prompt payment therefore, of all labor, supervision, services, materials, supplies, equipment, fixtures, tools, transportation, storage, and things required for the installation of the Project;

5.2.3 The furnishing of any required bonds and insurance as required by the Contract;

5.2.4 The furnishing of all warranties required by the Contract; and,

5.2.5 The furnishing of all other services and things required or reasonably inferable from the Contract Documents.

6.0 Authority's Obligations. Pursuant to the Contract, the Authority agrees to perform any obligations of the Authority as detailed herein.

6.1 The Authority shall review any documents submitted by the Contractor requiring the Authority's decision and shall render any required decisions pertaining thereto.

6.2 In the event that the Authority knows of any material fault or defect in the Work, nonconformance with the Contract, or any other errors, omissions, or inconsistencies, the Authority shall give prompt notice thereof in writing to the Contractor.

6.3 The Authority shall provide the Contractor with access to the site and to the Work, and shall provide the Contractor with such information, existing and reasonably available, necessary to the Contractor's performance of the Contract as the Contract may request.

6.4 The Authority shall cooperate with the Contractor in securing any necessary licenses, permits, approvals, or other necessary authorizations.

6.5 The Authority shall perform the duties set forth herein in a reasonably expeditious fashion so as to permit the orderly and timely progress of the Work.

6.6 The Authority's agreement not to exercise, or its delay or failure to exercise, any right under the Contract or to require strict compliance with any obligation of the Contractor under the Contract shall not be a waiver of the right to exercise such right or to insist on such compliance at any other time or on any other occasion.

6.7 Right to Audit. The Authority shall be entitled to rely upon the accuracy and completeness of the information furnished by the Contractor in connection with its request for payment. The Authority shall have the right, however, upon demand, to make a detailed examination, audit, or inspection of the Contractor's books and records for the purpose of verifying the accuracy and completeness of such information. In the event the Authority determines that the Contractor has been

paid any sums not due, then such sums shall be reimbursed by the Contractor to the Authority within two (2) Working Days of written demand by the Authority. In addition, the Contractor shall make available at reasonable times and upon reasonable notice, and for reasonable periods, work papers, reports, books, records, and supporting documents kept current by the Contractor pertaining to the Contract for purposes of inspecting, monitoring, auditing, or evaluating by the Authority. The Contractor shall maintain and retain all records relating to the performance of the Contract including supporting fiscal documents adequate to ensure that claims for contract funds are in accordance with the applicable requirements. These records will be maintained and retained by the Contractor for a period of seven (7) years after the Contract expiration or until all audit, claim, and litigation matters are resolved, whichever is later.

7.0 Billing Method.

7.1 To receive payment for services rendered pursuant to the Contract, the Contractor shall submit a fully completed payment application for work previously performed for the Authority in accordance with section 10.1 herein.

7.2 The Authority shall have thirty (30) days to review the payment application and determine, in its sole and absolute discretion, whether the payment application satisfies the requirements herein and in the Contract Documents.

7.3 The Contractor waives any rights under the Prompt Payment Act or other law until the foregoing requirements are fulfilled as determined by the Authority in its sole and absolute discretion.

7.4 At a minimum, the payment application shall detail the following information:

- **7.4.1.1** Unique payment application number
- **7.4.1.2** Contractor's name, address, and telephone number
- **7.4.1.3** Date of payment application and/or billing period
- **7.4.1.4** Applicable Contract No.
- **7.4.1.5** Applicable Purchase Order No.
- **7.4.1.6** Brief description of services rendered, including applicable time frame, total hours being billed for each service at each detailed site, and at the approved rate (may be submitted in the form of a report)
- **7.4.1.7** Supporting documentation for the payment application
- **7.4.1.8** Total dollar amount being currently billed

7.5 The Authority reserves the right to issue payments for payment applications in the form of joint checks in the event that the Authority determines, in its sole and absolute discretion, that doing so is in its best interests.

8.0 Additional Obligations of the Contractor.

8.1 The Contractor shall be solely responsible for providing supervision and oversight to all of the Contractor's personnel.

8.2 The Contractor agrees to submit a status report to the Authority at least one (1) time every ten (10) business days during the term of this Contract in addition to the scheduling and reporting requirements under the Contract.

8.3 The Contractor warrants and represents that it will assign only qualified personnel to perform the services outlined herein and within the Contract Documents. For the purposes of the Contract, the term "qualified personnel" shall mean those personnel that have been investigated, tested and trained in the manner described within the Contract and, as proposed by the Contractor within its bid or as provided by the Contractor during the Contractor's normal conduct of business.

8.4 Compliance with Federal and State Laws. All work performed by the Contractor, pursuant to the Contract, shall be done in accordance with all applicable Federal, State and local laws, regulations, codes, and ordinances.

8.5 Insurance Requirements.

8.5.1 Indemnity. The indemnity requirements are detailed within section 11.15 herein.

8.5.2 Insurances. In this regard, the Contractor shall maintain the following insurance coverage during the effective term(s) of the Contract and shall name the Authority as an "additional insured" on the following insurance coverage:

8.5.2.1 Commercial General Liability Insurance. An original certificate evidencing Commercial General Liability coverage, naming the Authority as an additional insured, together with the appropriate endorsement to said policy reflecting the addition of the Authority as an additional insured under said policy (combined single limit of not less than $1,000,000.00 for bodily injury and property damage). If the policy is a "claims-made" policy, then the policy must provide a retroactive date which must be on or before the execution date of the Contract and the extended reporting period may not be less than five (5) years following the completion date of the Contract.

8.5.2.2 Business Automobile Liability Insurance. Such coverage shall be a combined single limit of not less than $1,000,000.00 for bodily injury and property damage.

8.5.2.3 **Worker's Compensation Insurance.** Such coverage shall be not less than the statutory requirement and with no pre-set limits. A waiver of subrogation endorsement in favor of the Authority must be included in the policy.

8.5.2.4 **Umbrella Liability.** Such coverage shall be not less than $1,000,000.00 per occurrence or $1,000,000.00 in the aggregate.

8.5.2.5 **All Risk Builder's Risk Insurance.** Such coverage shall be for 100% of the Contract Price.

8.5.2.6 By signing the Contract, the Contractor certifies compliance with all applicable laws, rules, and regulations pertaining to worker's compensation insurance. This certification includes all subcontractors. The Contractor shall pay all deductibles stated in the policy.

8.5.2.7 **Certificates/Endorsements.** The Contractor shall provide to the Authority with current certificate(s)/endorsement(s) evidencing the insurance coverage referenced above. Such certificates shall indicate that policies will not be reduced or canceled without thirty days prior notice to Owner. The required insurance must be written by a company licensed to do business in the State of Texas at the time the policy is issued. The insurance company shall be acceptable to the Owner and said insurance companies must have a rating in the current Best's of at least A:XIII. Failure to maintain the above-referenced insurance coverage, including naming the Authority as an additional insured during the term(s) of the Contract shall constitute a material breach thereof. Insurance certificate(s)/endorsement(s) shall be delivered to the Contracting Officer.

8.6 **Licensing.** The Contractor shall also provide to the Authority a copy of any required licenses. Failure to maintain these licenses in a current status during the term(s) of the Contract shall constitute a material breach thereof.

8.7 **Confidentiality.** The Contractor, in connection with performing its services hereunder, will have access to or may be provided certain confidential information concerning the Authority and agrees that any information concerning the finances, accounting practices, business, client, client lists, property information, client data, records of the Authority or any other information which a reasonable person could conclude that should remain confidential (collectively "Confidential Information"), will not be disclosed to any party and without limitation, any employee of the Authority or any client or potential client of the Authority at any time, except for the Contractor's legal counsel, accounts, or financial advisors, who will also hold

such Confidential Information in confidence. The Contractor acknowledges that the information is being provided with the sole understanding that all Confidential Information will remain confidential and will be held in the strictest confidence. The Contractor further acknowledges that any disclosure of the Confidential Information, whether intentional or inadvertent, may harm the Authority. The Authority will have the right to enforce the Contract by specific performance, as well as hold the Contractor liable for any damages caused by any disclosure of any Confidential Information, whether intentional or inadvertent. The Contractor agrees that he has received valuable consideration for the entering into of the Contract and agrees to be bound all of its terms and conditions. The Contract will be binding on the Contractor and any attorney, accountant, financial advisor who also may be provided Confidential Information. This provision shall survive any expiration or termination of the Contract.

9.0 Changes and Extensions of Time.

9.1 Authority's Right to Order Changes. Changes in the Work under this Contract, consisting of additions, deletions, revisions, or any combination thereof, may be ordered unilaterally by the Authority, in the Authority's sole and absolute discretion, without invalidating the Contract. Such changes shall be communicated by Change Order or supplemental agreement in accordance with the Contract. The Contractor shall proceed diligently with any changes, and same shall be accomplished in strict accordance with the Contract as modified by any Change Order or supplemental agreement.

9.2 Continuing Duty to Perform the Work and Make Payment. In the event that the parties are unable to agree on the terms of a Change Order or supplemental agreement, notwithstanding any other provision of the Contract, the Contractor shall continue to diligently perform the Work, including any change directed by the Authority through a Change Order or supplemental agreement, and shall keep thorough records of the cost of performance of such Change Order or supplemental agreement.

9.3 All Change Orders, supplemental agreements, changes requested by the Contractor, or extensions of Contract Time shall be governed by this section and the Contract. Any request for an extension of time or for an increase in the not-to-exceed amount shall be made in writing within seven (7) calendar days after the occurrence of the event that gives rise to the request. Such request shall include sufficient backup documentation for the Authority to reasonably understand the request and the amount of time or compensation requested and to determine the merits of the request.

10.0 Notices, Invoices, and Reports.

10.1 All notices, reports and/or invoices submitted to the Authority by the Contractor pursuant to the Contract shall be in writing and delivered to the attention of the following person representing the Authority:

Cameron County Regional Mobility Authority
Attention: Frank Parker, Jr.
Chairman
3461 Carmen Avenue
Rancho Viejo, Texas 78575
Email: PSepulveda@ccrma.org

10.2 All notices submitted to the Contractor pursuant to the Contract shall be in writing and delivered to the attention of:

Foremost Paving, Inc.
Attention: Trey Pebley
P.O. Box 29
Weslaco, Texas 78599
Email: trey@fpitex.com

11.0 Additional Considerations.

11.1 **Severability.** The invalidity of any provision of the Contract, as determined by a court of competent jurisdiction shall in no way affect the validity of any other provision herein.

11.2 **Applicable Laws and Venue.** THIS CONTRACT SHALL BE GOVERNED AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS. VENUE FOR ANY CAUSE OF ACTION ARISING OUT OF OR RELATED TO THIS CONTRACT SHALL BE EXCLUSIVELY IN THE STATE AND FEDERAL COURTS OF CAMERON COUNTY, TEXAS. ANY ALTERATIONS, ADDITIONS, OR DELETIONS TO THE TERMS OF THE CONTRACT THAT ARE REQUIRED BY CHANGES IN FEDERAL OR STATE LAW OR REGULATIONS ARE AUTOMATICALLY INCORPORATED INTO THE CONTRACT WITHOUT WRITTEN AMENDMENT HERETO AND SHALL BECOME EFFECTIVE ON THE DATE DESIGNATED BY SUCH LAW OR BY REGULATION.

11.3 **Non-Escalation.** The NTE value of the Contract shall remain firm with no provision for price increases during the term of the Contract subject to section 4.1 herein.

11.4 Funding Restrictions and Order Quantities. The Authority reserves the right to reduce or increase estimated or actual quantities in whatever amount necessary without prejudice or liability to the Authority, if:

11.4.1 Funding is not available;
11.4.2 Legal restrictions are placed upon the expenditure of monies for this category of service or supplies; or,
11.4.3 The Authority's requirements in good faith change after award of the Contract.

11.5 Local State, and/or Federal Permits. All local, State or Federal permits which may be required to provide the services, whether or not they are presently known to either the Authority or the Contractor, shall be the sole responsibility of the Contractor and any costs shall be paid by Contractor to procure and provide such necessary permits.

11.6 Government Standards. It is the responsibility of the Contractor to ensure that all items and services proposed conform to all local, State and Federal law concerning safety (OSHA and NOSHA) and environmental control (EPA and Texas law as well as ordinances or regulations of the City of Brownsville, Texas, and Cameron County, Texas) and any other enacted ordinance, code, law or regulation. The Contractor shall be responsible for all costs incurred for compliance with any such possible ordinance, code, law, or regulation. No time extensions shall be granted or financial consideration given to the Contractor for time or monies lost due to violations of any such ordinance, code, law or regulations that may occur.

11.7 Work on Authority Property. If the Contractor's work under the contract involves operations by the Contractor on Authority premises, the Contractor shall take all necessary precautions to prevent the occurrence of any injury to persons or property during the progress of such work and, except to the extent that any such injury is caused solely and directly by the Authority's negligence, shall indemnify the Authority, and their officers, agents, servants and employees against all loss which may result in any way from any act or omission of the Contractor, its agents, employees, or subcontractors.

11.8 Official, Agent and Employees of the Authority Not Personally Liable. It is agreed by and between the parties hereto that in no event shall any official, officer, employee, or agent of the Authority in any way be personally liable or responsible for any covenant or agreement herein contained, whether either expressed or implied, nor for any statement, representation or warranty made herein or in any connection with this agreement.

11.9 Subcontractors. Unless otherwise authorizing in writing by the Authority, the Contractor may not use any subcontractors to accomplish any portion of the services described within the Contract or the Task Orders without obtaining the prior written permission of the Authority.

11.10 Attorney's Fees. In the event that litigation is commenced by one party hereto against the other in connection with the enforcement of any provision of this agreement, the prevailing party shall be paid by the losing party all court costs and other expenses of such litigation, including reasonable attorneys' fees. The amount so allowed as attorneys' fees shall be taxed to the losing party as costs of the suit, unless prohibited by law.

11.11 Independent Contractor. The Contractor is an independent contractor. Nothing herein shall create any association, agency, partnership or joint venture between the parties hereto and neither shall have any authority to bind the other in any way.

11.12 Waiver of Breach. A waiver of either party of any terms or condition of this agreement in any instance shall not be deemed or construed as a waiver of such term or condition for the future, or of any subsequent breach thereof. All remedies, rights, undertakings, obligations, and agreements contained in this agreement shall be cumulative and none of them shall be in limitation of any other remedy, right, obligation or agreement of either party.

11.13 Time of the Essence. Time is of the essence under this agreement as to each provision in which time of performance is a factor.

11.14 Limitation of Liability. NOTWITHSTANDING ANY OTHER PROVISION TO THE CONTRARY HEREIN, IN NO EVENT SHALL THE AUTHORITY BE LIABLE TO THE CONTRACTOR FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES, OR LOSS OF PROFITS, ANTICIPATED OR OTHERWISE, OR LOSS OF REVENUES IN CONNECTION WITH OR ARISING OUT OF, OR IN CONNECTION WITH, THE SUBJECT MATTER OF THIS CONTRACT.

11.15 Indemnification. This provision shall survive any expiration or termination of the Contract.

11.15.1 THE CONTRACTOR RELEASES THE AUTHORITY FROM AND AGREES TO INDEMNIFY, DEFEND, AND HOLD THE AUTHORITY (AND ITS DIRECTORS, OFFICERS, EMPLOYEES, AND AGENTS) HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, DAMAGES, LOSSES, SUITS, ACTIONS, DECREES, JUDGMENTS, ATTORNEY'S FEES, COURT COSTS, AND OTHER EXPENSES OF ANY KIND OR CHARACTER FOR DEFENDING THE CLAIMS AND DEMANDS, WHICH ARE CAUSED BY, ARISE OUT OF, OR OCCUR DUE TO ANY FAILURE OF THE CONTRACTOR TO PERFORM THE OBLIGATIONS REQUIRED BY THE CONTRACT AS WELL AS FEDERAL, TEXAS, OR OTHER APPLICABLE LAW, INCLUDING BUT NOT LIMITED TO CLAIMS OR DEMANDS BASED ON THE NEGLIGENCE, GROSS NEGLIGENCE, OR OTHER ACTIONS OR INACTIONS OF THE CONTRACTOR, OR THE

CONTRACTOR'S AGENTS, EMPLOYEES, SUBCONTRACTORS, OR OTHER THIRD PARTIES. THE CONTRACTOR HEREBY WAIVES ANY RIGHT TO DEFEND AGAINST THE ENFORCEABILITY OF THIS INDEMNIFICATION PROVISION AND EXPRESSLY AGREES THAT THIS PROVISION MEETS ALL LEGAL REQUIREMENTS AND IS LEGALLY ENFORCEABLE AGAINST THE CONTRACTOR.

11.15.2 In this connection, it is expressly agreed that the Contractor shall, at its own expense, defend the Authority, its officers, employees, and agents, against any and all claims, suits or actions which may be brought against them, or any of them, as a result of, or by reason of, or arising out of, or on account of, or in consequence of any act or failure to act of the Contractor the consequences of which the Contractor has indemnified the Authority. If the Contractor shall fail to do so, the Authority shall have the right, but not the obligation, to defend the same and to charge all direct and incidental costs of such defense to the Contractor including attorney's fees and court costs.

11.15.3 Any money due to the Contractor under and by virtue of the Contract, which the Authority believes must be withheld from the Contractor to protect the Authority, may be retained by the Authority so long as it is reasonably necessary to ensure the Authority's protection; or in case no money is due, its surety may be held until all applicable claims have been settled and suitable evidence to that effect furnished to the Authority provided, however, the Contractor's payments shall not be withheld, and its surety shall be released, if the Contractor is able to demonstrate that it has adequate liability and property damage insurance to protect the Authority from any potential claims.

11.15.4 The Contractor shall provide that any contractual arrangement with a subcontractor shall be in conformance with the terms of the Contract including the terms of this indemnity provision. The Contractor guarantees that it will promptly handle and rectify any and all claims for materials, supplies and labor, or any other claims that may be made against it or any of its subcontractors in connection with the contract.

11.15.5 THE CONTRACTOR RELEASES THE AUTHORITY FROM AND AGREES TO INDEMNIFY, DEFEND, AND HOLD THE AUTHORITY (AND ITS DIRECTORS, OFFICERS, EMPLOYEES, AND AGENTS) HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, DAMAGES, LOSSES, SUITS, ACTIONS, DECREES, JUDGMENTS, ATTORNEY'S FEES, COURT COSTS, AND OTHER EXPENSES OF ANY KIND OR CHARACTER FOR DEFENDING THE CLAIMS AND DEMANDS BASED ON THE NEGLIGENCE, GROSS NEGLIGENCE, OR OTHER ACTIONS OR INACTIONS OF THE AUTHORITY, OR THE AUTHORITY'S AGENTS, EMPLOYEES, OR OTHER THIRD PARTIES. THE CONTRACTOR HEREBY WAIVES

ANY RIGHT TO DEFEND AGAINST THE ENFORCEABILITY OF THIS INDEMNIFICATION PROVISION AND EXPRESSLY AGREES THAT THIS PROVISION MEETS ALL LEGAL REQUIREMENTS AND IS LEGALLY ENFORCEABLE AGAINST THE CONTRACTOR.

11.16 Rights in Data (Ownership and Proprietary Interest). For purposes of the Contract, the term "Work Product" is defined as all work papers, materials, approaches, designs, specifications, systems, software, programs, source code, documentation, methodologies, concepts, intellectual property or other property and/or results of the services that are developed, produced, generated or provided to the Authority in connection with, or as a result of, the services provided under the contract. The Authority and the Contractor intend this agreement to be a contract for the services and each considers and expressly intends and agrees that the Work Product to be rendered by the Contractor shall be a work-made-for-hire. The Contractor and the Contractor's employees will have no rights in or ownership of the Work Product or any other property of the Authority. The Contractor acknowledges and agrees that the Work Product (and all rights therein, including without limitation all intellectual property rights) belongs to and shall be the sole and exclusive property of the Authority. If for any reason the Work Product would not be considered a work-made-for-hire under applicable law, the Contractor does hereby irrevocably sell, assign, and transfer to the Authority, its successors and assigns, the entire right, title and interest in and to the Work Product and any and all intellectual property rights embedded therein or associated therewith, and in and to all works based upon, derived from, or incorporating the Work Product, and in and to all income, royalties, damages, claims and payments now or hereafter due or payable with respect thereto, and in and to all causes of action, either in law or in equity for past, present, or future infringement based on the copyrights, and in and to all rights corresponding to the foregoing. The Contractor agrees to execute all papers and to perform such other property rights, as the Authority may deem necessary to secure for the Authority or its designee the rights herein assigned. In the event that the Contractor has any rights in and to the Work Product that cannot be assigned to the Authority, the Contractor hereby grants to Agency an exclusive, worldwide, royalty-free, irrevocable, and perpetual license to directly and indirectly reproduce, distribute, modify, create derivative works of, publicly perform and publicly display, such rights to make, have made, use, sell and offer for sale any products developed by practicing such rights, and to otherwise use such rights, with the right to sublicense such rights through multiple levels of sublicenses. No later than the first calendar day after the termination or expiration of the contract or upon the Authority's request, the Contractor shall deliver to the Authority all completed, or partially completed, Work Product and any and all versions thereof. Failure to timely deliver such Work Product will be considered a material breach of the Contract. The Contractor will not make or retain any copies of the Work Product or any and all documentation or other products and results of the services without the prior written consent of the Authority.

11.17 Assignment/Transfer. The Contractor shall not assign or transfer any of its rights or interest under the Contract without first obtaining the Authority's prior written consent to such assignment or transfer. Whether to provide such prior written consent shall be in all respects within the Authority's sole and absolute discretion. Any attempted assignment in violation of this Section is void and without effect.

11.18 THE CONTRACTOR EXPRESSLY AGREES THAT: (1) NO PASS-THRU AGREEMENTS, OR SIMILAR AGREEMENTS, BETWEEN THE CONTRACTOR AND ANY THIRD PARTY SHALL BE ENFORCEABLE AGAINST THE AUTHORITY; AND, (2) THE AUTHORITY RETAINS ITS GOVERNMENTAL IMMUNITY IN ALL RESPECTS UNDER THIS CONTRACT AND ANY PASS-THRU AGREEMENTS OR SIMILAR AGREEMENTS AS NO PROVISION IN THIS CONTRACT IS IN ANY WAY INTENDED TO CONSTITUTE A WAIVER BY THE AUTHORITY OF ANY IMMUNITES FROM SUIT OR FROM LIABILITY THAT THE AUTHORITY MAY HAVE BY OPERATION OF LAW.

11.19 Warranty of Title. The Contractor warrants good title to all materials, supplies, and equipment incorporated in the work and agrees to deliver the premises together with all improvements thereon free from any claims, liens or charges, and agrees further that neither it nor any other person, firm or corporation shall have any right to a lien upon the premises or anything appurtenant thereto. This provision shall survive any expiration or termination of the Contract.

11.20 Warranty of Workmanship and Materials. The Contractor warrants and guarantees to the Authority that all labor furnished to perform the Work under the Contract shall be competent to perform the tasks undertaken, that the product of such labor shall yield only first-class results in compliance with the Contract, that materials and equipment furnished shall be of high quality and new unless otherwise permitted by the Contract, and that the Work will be of high quality free from faults and defects and in conformance with the Contract. Any and all Work not conforming to these requirements shall be considered defective and shall constitute a breach of the Contractor's warranty if not remedied in accordance with the Contract. This warranty shall continue for a period of one (1) year from the date of final acceptance of the work except where a longer period is specified. The Contractor further represents and guarantees to the Authority that all right, title, and interest in warranties for the materials provided as part of the Work shall be held by the Authority and the term of such warranties shall be in accordance with what is considered commercially reasonable. This provision shall survive any expiration of termination of the Contract.

11.21 Prohibition Against Liens. The Contractor is prohibited from placing a lien on the subject property. This prohibition shall apply to all subcontractors at any tier and all materials suppliers.

11.22 Bonding Requirements.

11.22.1 The Contractor shall furnish Performance, Payment, and Warranty Bonds, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all the Contractor's obligations to perform the Work under the Contract Documents. These Bonds shall remain in effect at least one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. The Contractor shall also furnish such other Bonds as are required by the Contract Documents.

11.22.2 All Bonds shall be in a form approved by the Authority except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are authorized to do business in the State of Texas and are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bonds Branch, U.S. Department of the Treasury. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

11.22.3 If the surety on any Bond furnished by the Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in the State of Texas, or it ceases to meet the requirements herein, the Contractor shall within 20 days thereafter substitute another Bond and surety, both of which shall comply with the provisions herein.

11.23 Americans with Disabilities Act. The Contractor represents and warrants it compliance with the requirements of the Americans with Disabilities Act (ADA) and its implementing regulations, as each may be amended.

11.24 Survival. Expiration or termination of the Contract for any reason does not release the Contractor from any liability or obligation set forth in the Contract that is expressly stated to survive any such expiration or termination, that by its nature would be intended to be applicable following any such expiration or termination, or that is necessary to fulfill the essential purpose of the Contract, including without limitation the provisions regarding warranty, indemnification, confidentiality, and rights and remedies upon termination.

11.25 IN THE EVENT OF A QUESTION AS TO THE INTERPRETATION OF ANY PROVISION OF THIS CONTRACT, THE PROVISION SHALL NOT BE CONSTRUED AGAINST THE DRAFTING PARTY. THIS INCLUDES BUT IS NOT LIMITED TO THE CONTRACTOR'S AGREEMENT THAT SECTION 11.15, AND ANY OTHER CLAUSE HEREIN, SHALL IN NO EVENT BE STRICTLY CONSTRUED AGAINST THE AUTHORITY.

12.0 Exhibits.

12.1 The following noted documents are a part of the Contract:

12.1.1 Exhibit 1. Bid Documents for Bid No. 2021-003. A true and correct copy of the Bid Documents may be found at the Authority's office and are incorporated by reference as if fully set forth herein.

12.1.2 Exhibit 2. Plans and Specifications for Bid No. 2021-003. A true and correct copy of the Plans and Specifications may be found at the Authority's office and are incorporated by reference as if fully set forth herein.

12.1.3 Exhibit 3. Awarded bid for Bid No. 2021-003. A true and correct copy of the Bid may be found at the Authority's office and is incorporated by reference as if fully set forth herein.

12.2 Subject to section 11.25, to the extent that any provisions of this Contract conflict with the provisions of the Exhibits, the more specific provision shall control.

13.0 CERTIFICATIONS. Each party hereby acknowledges by signature below that they have reviewed the foregoing and understand and agree to abide by their respective obligations as defined herein.

CONTRACTOR

Foremost Paving, Inc.

By: _____ **Date:** _____
Joseph E. Forshage, President

AUTHORITY

Cameron County Regional Mobility Authority

By: _____ **Date:** _____
Frank Parker, Jr., Chairman

GMS ARCHITECTS

September 29, 2021

Mr. Pete Sepulveda, Jr.
County Administrator
1100 E. Monroe
Brownsville, Texas 78520

Re: Cameron County Isla Blanca Park Parking Lot Expansion
(220 Parking Spaces) Project No. 2021-003

Dear Mr. Sepulveda:

Enclosed is the Bid Tabulation for the above referenced project.

We have reviewed the bids and find them to be in order. We recommend the bid be awarded to Foremost Paving Inc., for the base bid amount of $574,800.00.

If you should have any questions, please contact me.

Sincerely,

RUDY V. GOMEZ, AIA
ARCHITECT – PLANNER

RVG:sh
Encl.

1150 Paredes Line Rd,
Brownsville, TX 78521
P 956.546.0110
F 956.546.0196

BID TABULATION

Isla Blanca Park Parking Lot Expansion
Project No. 2021-003
South Padre Island, Texas
September 28, 2021, 11:01 AM

CONTRACTOR	BID BOND	BASE BID	No. of Days	Addendum N/A
Foremost Paving, Inc	√	$574,800.00	90 calendar days	N/A
ZIWA	√	$1,222,937.00	365 calendar days	N/A

2-L CONSIDERATION AND APPROVAL OF A PROFESSIONAL SERVICE AGREEMENT BETWEEN THE CAMERON COUNTY REGIONAL MOBILITY AUTHORITY AND JWH & ASSOCIATES, INC.

JWH & Associates, Inc.

3014 Fairway Drive Sugar Land, Texas 77478
956.793.3870 Cell Phone jhudson8@comcast.net Email

October 21, 2021

Mr. Pete Sepulveda, Jr.
Executive Director
Cameron County Regional Mobility Authority
3461 Carmen Ave., Suite 5
Rancho Viejo, Texas 78575

Re: Professional Services for Consulting Services for CCRMA Projects

Dear Mr. Sepulveda:

I request approval of the additional services for the SH 550 Gap 2 project and the Harlingen Commerce Street Rail Relocation Project. The additional scope of services will include providing consulting services regarding issues with the Union Pacific Railroad on Cameron County Regional Mobility Authority projects as follows:

Scope

1. Provide consulting services relating to the consolidation of the railroad line in Harlingen and the removal of the old Southern Pacific Railroad tracks between the switchyards and Commerce Street near US 77 Sunshine Street. Such rail consolidation plan has been included within the Cameron County Railroad Relocation plan and includes the removal of numerous at grade street and rail crossings in Harlingen.

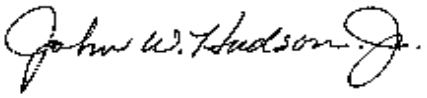
2. Provide consulting services relating the to the proposed Union Pacific Railroad grade separation on SH 550. The issues relate to the utilization of the right of way and the design of the grade separation support structure within the railroad right of way.

3. Provide general consulting services relating to acquisition of rail right of way involving the Union Pacific Railroad.

It is requested that the time of this agreement be through December 31, 2022 to allow consulting services on the Cameron County Regional Mobility Authority railroad projects. The additional fee requested is not to exceed **$25,000.00** to include the consulting services of railroad expertise on Cameron County Regional Mobility Authority projects and based on the Exhibit A attached. Any additional services requested by the CCRMA would be charged on an hourly basis with the rates contained in the approved agreement. An hourly rate of **$200.00** is to be added to the fee schedule for the services of John Hopkins. Exhibit A provides the proposed Billing Rate Table. Mr. Hopkins had more than 50 years of experience working for railroads. Many of those years were in South Texas and Cameron County.

Please review this proposed action and advise me should you have any changes.

Sincerely yours,



John W. Hudson, Jr. P. E.
President

Approved

CAMERON COUNTY REGIONAL MOBILITY ARTHORITY

By: _____

Frank Parker Jr.
Title: Chairman

Date: _____

EXHIBIT A

JWH and ASSOCIATES, INC.
Billing Rate Table
October 21, 2021

Classification	Billing Rate
Principal	$ 250.00
Admin. Assistant	$ 55.00
Associate Engineer	$150.00
CADD	$ 75.00
CADD Technician	$ 75.00
Railroad Consultant (Hopkins)	$200.00

Reimbursable Expenses	Rate
Mileage (per mile)	$ 0.50/mile
Meals (per diem)	$56.00/day
Lodging	at cost
Printing/Reproduction	at cost
Rental Car	at cost
Airfare	at cost
Printing	at cost
Subconsultants	Cost + 10%

2-M DISCUSSION AND POSSIBLE ACTION REGARDING DISABLED VETERANS TOLLS AND FEES IN THE TOLLS BACK OFFICE SYSTEM.