HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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

DATE: **TUESDAY, SEPTEMBER 28, 2021**
TIME: **5:30 PM**
PLACE: **PHARR CITY HALL**
2nd FLOOR CITY COMMISSION CHAMBERS
118 SOUTH CAGE BLVD.
PHARR, TEXAS 78577

PRESIDING: S. DAVID DEANDA, JR, CHAIRMAN

MEMBERS OF THE PUBLIC ARE WELCOME TO PARTICIPATE REMOTELY
DIAL-IN NUMBER : +1 571-317-3122
Access Code: 471 042 733 #
WEBLINK: https://www.gotomeet.me/CityofPharr/hcrma-board-meeting

An electronic copy of the agenda packet can be obtained at www.hcrma.net

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PLEDGE OF ALLEGIANCE

INVOCATION

CALL TO ORDER AND ESTABLISHMENT OF A QUORUM FOR A REGULAR MEETING

PUBLIC COMMENT

1. **REPORTS**

   A. Report on Program Manager Activity for 365 Tollway Project and IBTC Environmental Clearance Document – Eric Davila, HCRMA.
   B. Report on 365 Tollway Project Financing Activities – Richard Ramirez, Hilltop Securities.

2. **CONSENT AGENDA** (*All matters listed under Consent Agenda are considered to be routine by the Governing Body and will be enacted by one motion. There will be no separate discussion of these items; however, if discussion is desired, that item(s) will be removed from the Consent Agenda and will be considered separately. The Governing Body may also elect to go into Executive Session on any item on this agenda, whether or not such item(s) are posted as an Executive Session Item, at any time during the meeting when authorized by provisions of the Open Public Meeting Act.)*

   A. Approval of Minutes for the Regular Meeting held August 24, 2021.
   B. Approval of Project & General Expense Report for the period from August 7, 2021 to September 8, 2021.

C. Approval of Financial Reports for August 2021.
D. Resolution 2021-28 – Approving the 3rd Amended and Restated Interlocal Agreement for Administrative Services with the City of Pharr.
E. Resolution 2021–44 – Approval of Work Authorization 10 to the Professional Services Agreement with Melden & Hunt to provide boundary survey services for the 365 Tollway Wetland Conservation Easement.
F. Resolution 2021–45 – Approval of Contract Amendment 8 to the Professional Services Agreement with Melden & Hunt to increase the maximum payable amount for Work Authorization 10.

3. REGULAR AGENDA

A. Resolution 2021–35 – Approval of One Year Extension to the Professional Service Agreement with Shepard Walton King to provide Insurance Broker Services to the Hidalgo County Regional Mobility Authority.
B. Resolution 2021 – 36 – Approval of Award of Contract with L&G Engineering Laboratory, LLC for construction material testing services for the Hidalgo County Regional Mobility Authority.
C. Resolution 2021 – 37 – Approval of Work Authorization 1 with L&G Engineering Laboratory, LLC for material testing in the 365 Tollway Project.
D. Resolution 2021 – 38 – Approval of Award of Contract with Terracon Consultants, Inc. for construction material testing services for the Hidalgo County Regional Mobility Authority.
E. Resolution 2021 – 39 – Approval of Work Authorization 1 with Terracon Consultants, Inc. for material testing in the 365 Tollway Project.
F. Resolution 2021 – 42 – Approval of Award of Contract with B2Z Engineering, LLC for construction material testing services for the Hidalgo County Regional Mobility Authority.
G. Resolution 2021 – 43 – Approval of Work Authorization 1 with B2ZEngineering, LLC for material testing in the 365 Tollway Project.

4. CHAIRMAN'S REPORT

A. None.

5. TABLED ITEMS

A. None.

6. EXECUTIVE SESSION, CHAPTER 551, TEXAS GOVERNMENT CODE, SECTION 551.071 (CONSULTATION WITH ATTORNEY), SECTION 551.072 (DELIBERATION OF REAL PROPERTY), AND SECTION 551.074 (PERSONNEL MATTERS)

A. Consultation with Attorney on legal issues pertaining to the acquisition, including the use of Eminent Domain, for property required to complete the project alignments of the 365 Tollway Project (Sections 551.071 and 551.072 T.G.C.).
B. Consultation with Attorney on personnel matters related annual evaluation of the Executive Director (551.074 T.G.C.)
C. Consultation with Attorney on legal issues pertaining to an Interlocal Cooperative Agreement with the City of Mission to provide Right of Way Acquisition Services (Section 551.071 T.G.C.)
D. Consultation with Attorney on legal issues pertaining to the Texas Department of Transportation State Infrastructure Bank Loan for the 365 Tollway Project (Section 551.071 T.G.C.)
E. Consultation with Attorney on legal issues pertaining to Professional Service Agreements for Engineering, Surveying and Environmental Services (Section 551.071 T.G.C.).
F. Consultation with Attorney on legal issues pertaining to the voluntary acquisition of real property for various parcels for the 365 Tollway Project and International Bridge Trade Corridor Project (Sections 551.071 and 551.072 T.G.C.).

G. Consultation with Attorney on legal issues pertaining to the Environmental Clearance Document for the International Bridge Trade Corridor Project (Section 551.071 T.G.C.).
H. Consultation with Attorney on legal issues pertaining to the issuance of one or more Series of Hidalgo County Regional Mobility Authority bonds and related agreements and provisions relating to the subject (Section 551.071 T.G.C.).
I. Consultation with Attorney on personnel matters related to the COVID-19 pandemic (Section 551.074 T.G.C.).

ADJOURNMENT OF REGULAR MEETING

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

I, the Undersigned Authority, do hereby certify that the attached agenda of the Hidalgo County Regional Mobility Authority Board of Directors is a true and correct copy and that I posted a true and correct copy of said notice on the Hidalgo County Regional Mobility Authority Web Page (www.hcrma.net) and the bulletin board in the Hidalgo County Court House (100 North Closner, Edinburg, Texas 78539), a place convenient and readily accessible to the general public at all times, and said Notice was posted on the **22nd** day of **September 2021** at **5:00 pm** and will remain so posted continuously for at least 72 hours preceding the scheduled time of said meeting in accordance with Chapter 551 of the Texas Government Code.

Maria E. Alaniz
Administrative Assistant

Note: If you are an individual with Limited English Proficiency (LEP) and need language assistance or require special accommodations under the Americans with Disabilities Act, please contact Maria E. Alaniz at 956-402-4762 at least 96 hours before the meeting.

PUBLIC COMMENT POLICY

Public Comment Policy: "At the beginning of each HCRMA meeting, the HCRMA will allow for an open public forum/comment period. This comment period shall not exceed one-half (1/2) hour in length and each speaker will be allowed a maximum of three (3) minutes to speak. Speakers addressing the Board through a translator will be allowed a maximum of six (6) minutes.

All individuals desiring to address the HCRMA must be signed up to do so, prior to the open comment period. For meetings being held by telephonic or videoconference, individuals may contact Maria. E. Alaniz at (956) 402-4762 before 5:00 pm day of the meeting.

The purpose of this comment period is to provide the public an opportunity to address issues or topics that are under the jurisdiction of the HCRMA. For issues or topics which are not otherwise part of the posted agenda for the meeting, HCRMA members may direct staff to investigate the issue or topic further. No action or discussion shall be taken on issues or topics which are not part of the posted agenda for the meeting. Members of the public may be recognized on posted agenda items deemed appropriate by the Chairman as these items are considered, and the same time limitations applies."

Note: Participation by Telephone/Video Conference Call – One or more member of the HCRMA Board of Directors may participate in this meeting through a telephone/video conference call, as authorized by Sec. 370.262, Texas Transportation Code.

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Item 1A

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**1A**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/14/2021**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/2021**
TECHNICAL COMMITTEE			

1. Agenda Item: **REPORT ON PROGRAM MANAGER ACTIVITY FOR 365 TOLLWAY PROJECT AND IBTC ENVIRONMENTAL CLEARANCE DOCUMENT**

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

   Report on 365 Tollway and IBTC Projects

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

4. Budgeted: ___Yes ___No X N/A

5. Staff Recommendation**: Report only.**

6. Program Manager's Recommendation: ___Approved ___Disapproved **X** None

7. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: ___Approved ___Disapproved **X** None

9. Chief Auditor's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Financial Officer's Recommendation: ___Approved ___Disapproved **X** None

11. Chief Development Engineer's Recommendation: **X** Approved ___Disapproved ___None

12. Chief Construction Engineer's Recommendation: ___Approved ___Disapproved **X** None

13. Executive Director's Recommendation: **X** Approved ___Disapproved ___None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

BOARD OF DIRECTORS MEETING FOR SEPTEMBER 2021

HCRMA Board of Directors

S. David Deanda, Jr., Chairman
Forrest Runnels, Vice-Chairman
Ezequiel Reyna, Jr., Secretary/Treasurer
Alonzo Cantu, Director
Paul S. Moxley, Director
Francisco "Frank" Pardo, Director
Joaquin Spamer, Director

HCRMA Administrative Staff

Pilar Rodriguez, PE, Executive Director
Eric Davila, PE, PMP, CCM, Chief Dev. Eng.
Ramon Navarro IV, PE, CFM, Chief Constr. Eng.
Celia Gaona, CIA, Chief Auditor/Compliance Ofcr.
Jose Castillo, Chief Financial Ofcr.

General Engineering Consultant

HDR ENGINEERING, INC.

Report on HCRMA Program Management Activity
Chief Development Engineer – Eric Davila, PE, PMP, CCM

Overview

- 365 TOLL Project Overview
- IBTC Project Overview
- Overweight Permit Summary
- Construction Economics Update

MISSION STATEMENT:
"To provide our customers with a rapid and reliable alternative for the safe and efficient movement of people, goods and services"

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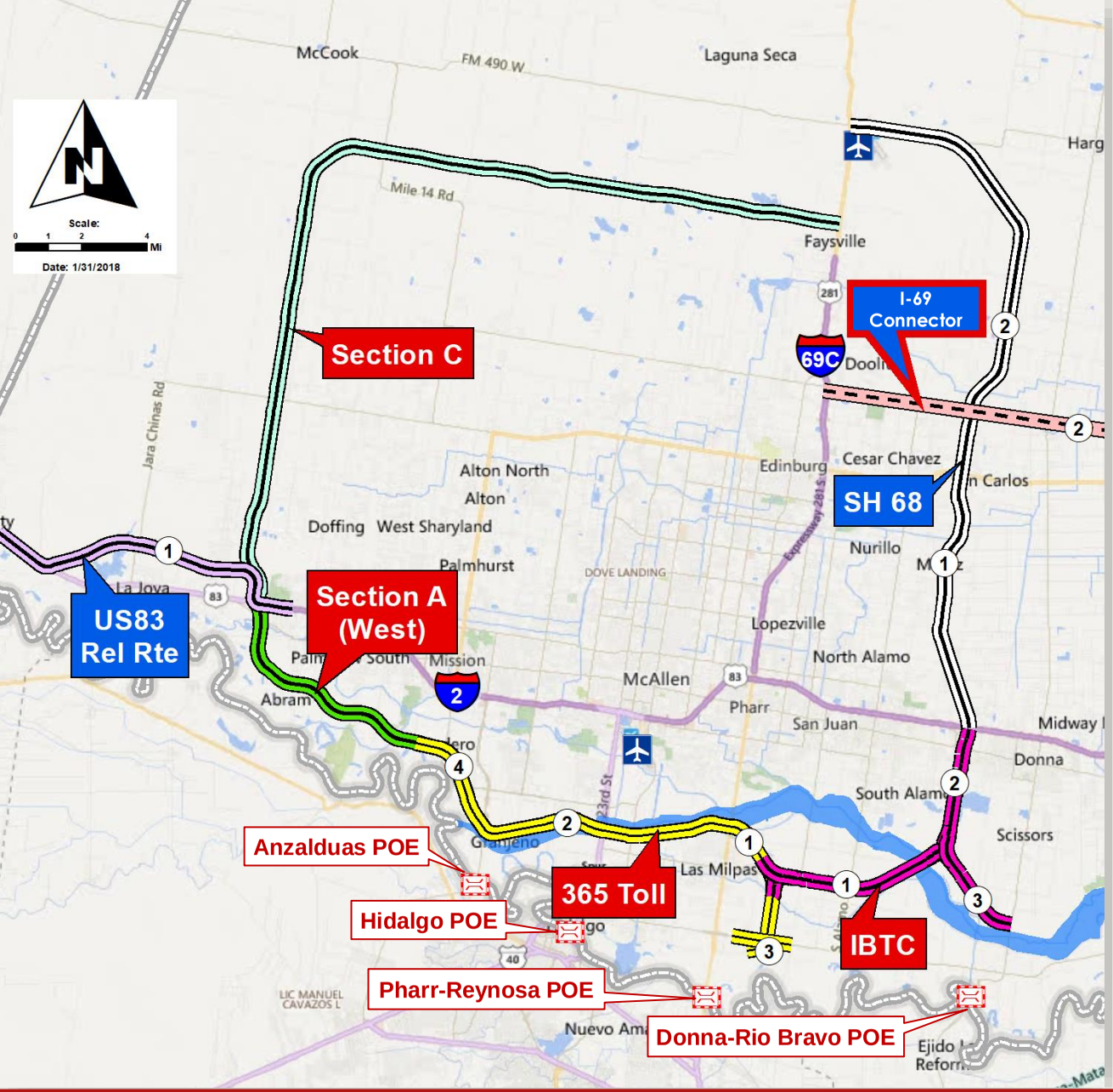
HCRMA
STRATEGIC PLAN

DEVELOP THE INFRASTRUCTURE TO SERVE A POPULATION OF APPROXIMATELY 800,000 RESIDENTS AND 5 INTERNATIONAL PORTS OF ENTRY



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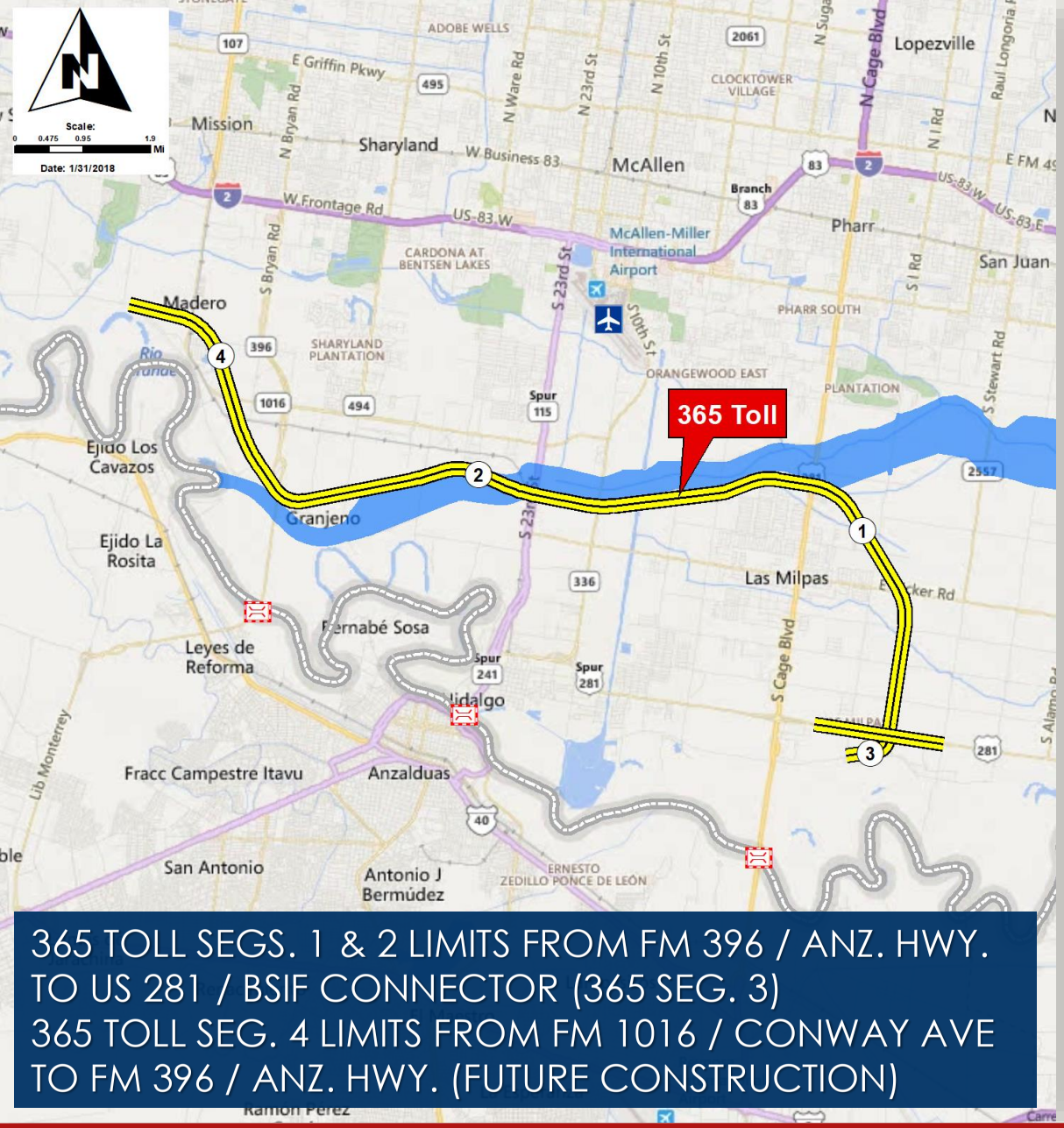
Post 2021 UTP Approval

SYSTEM WIDE

- Approval of 2021 UTP (Aug 2020)
  - 365 Toll: gap-funded construction funding was budgeted in 2021 UTP Update in 12/2020. On 06/2021 a 2nd FAA was granted to assign the gap funding contingent upon successful contract execution and sale of toll revenue bonds.
  - IBTC: funds listed under Cat 12 / TBD needs revised PDA and direction from TxDOT as to whether approved funding can be used for advanced planning (e.g. design, ROW, and/or utility) work.
- What's in the RGVMPO (Local Plan)
  - 365 Toll Project (TIP / MTP) thru construction
  - IBTC Project (TIP / MTP) thru design (pending funding commitments for construction)

PDA – Project Development Agreement
FAA – Financial Assistance Agreement
TIP – Transportation Improvement Program (Short range)
MTP – Metropolitan Transportation Plan (Long Range)



365 TOLL SEGS. 1 & 2 LIMITS FROM FM 396 / ANZ. HWY. TO US 281 / BSIF CONNECTOR (365 SEG. 3)
365 TOLL SEG. 4 LIMITS FROM FM 1016 / CONWAY AVE TO FM 396 / ANZ. HWY. (FUTURE CONSTRUCTION)

365 TOLL

HCRMA

MAJOR MILESTONES:

NEPA CLEARANCE
07/03/2015

98% ROW ACQUIRED

PH 1: 365 SEG. 3 –
LET: 08/2015
COMPLETED

PH 2: 365 TOLL SEGS. 1 & 2 –
RE-LET: 2021

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365 TOLL

SCHEDULE:

- ~~**12/2021,** TxDOT processed the Federal Project Authorization and Agreement (FPAA) Modification for the gap funding on 365 Tollway,~~
- ~~**03/2021,** TxDOT amended the Federal Project Authorization and Agreement (FPAA) with FHWA,~~
- ~~**06/2021**, TTC to read a Minute Order (M.O.) for a 2nd FAA to incorporate the gap funding into the project,~~
- **Early 08/2021,** TxDOT to provide "release to advertise" notice to HCRMA,
- **08/08/2021 - 10/13/2021**, HCRMA to advertise the 365 Toll (66 days), hold prebid 08/31/2021, and open bids 10/13/2021,
- **10/19/2021**, HCRMA Approves Award of Contract,
- **10/20/2021 - 10/22/2021**, HCRMA meets with rating agencies, prices bonds,
- **12/01/2021**, Receive TxDOT PHR/CST concurrence with award of contract,
- **12/14/2021**, HCRMA closes toll revenue bonds,
- **01/2022**, Commence 42-month construction, and
- **07/2025**, Open to traffic.

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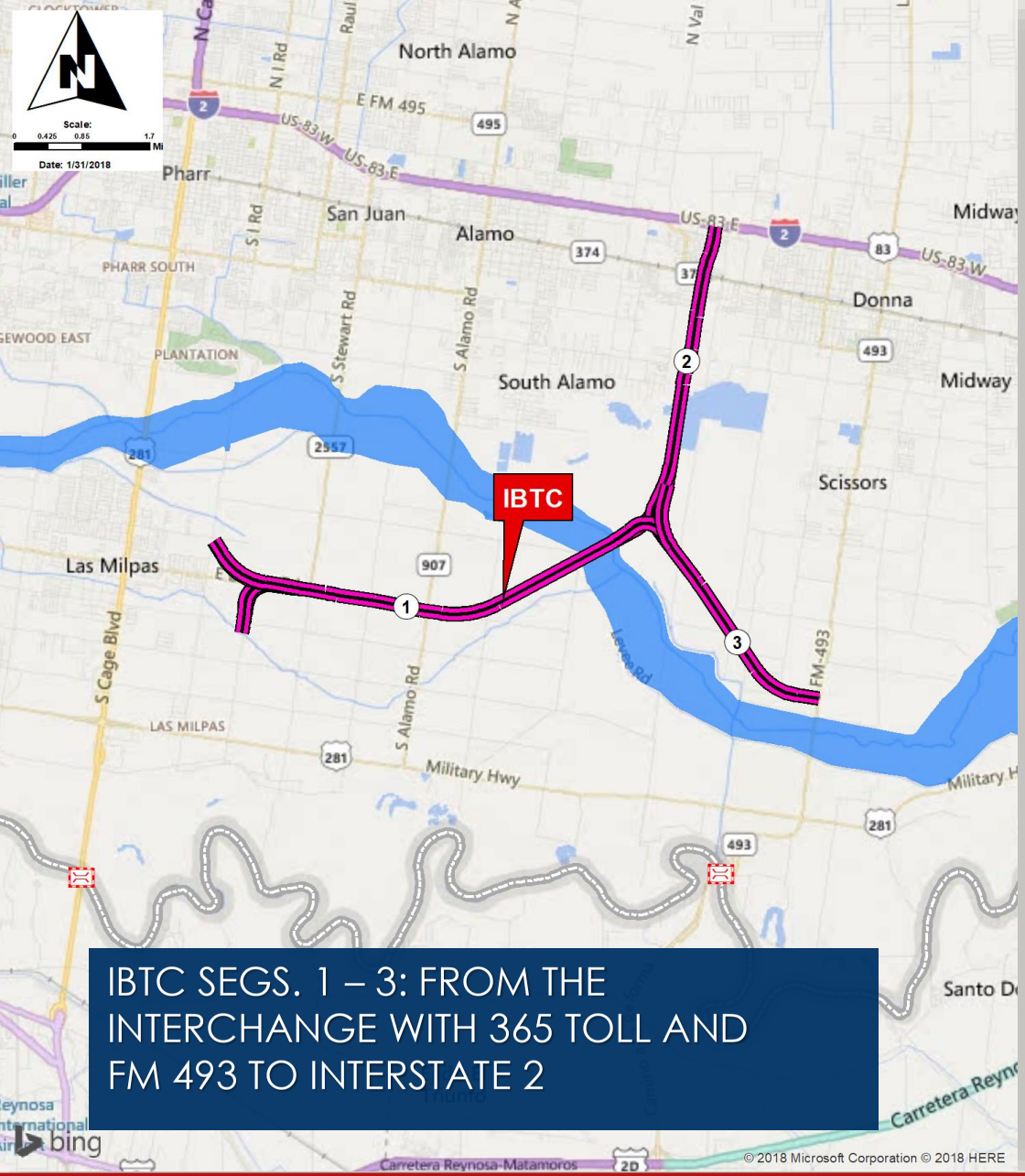

IBTC SEGS. 1 – 3: FROM THE INTERCHANGE WITH 365 TOLL AND FM 493 TO INTERSTATE 2

IBTC

MAJOR MILESTONES:

OBTAINED EA ENV CLASSIF.: 11/2017

EST. NEPA CLEARANCE: FALL 2021

EST. OPEN: EARLY 2027

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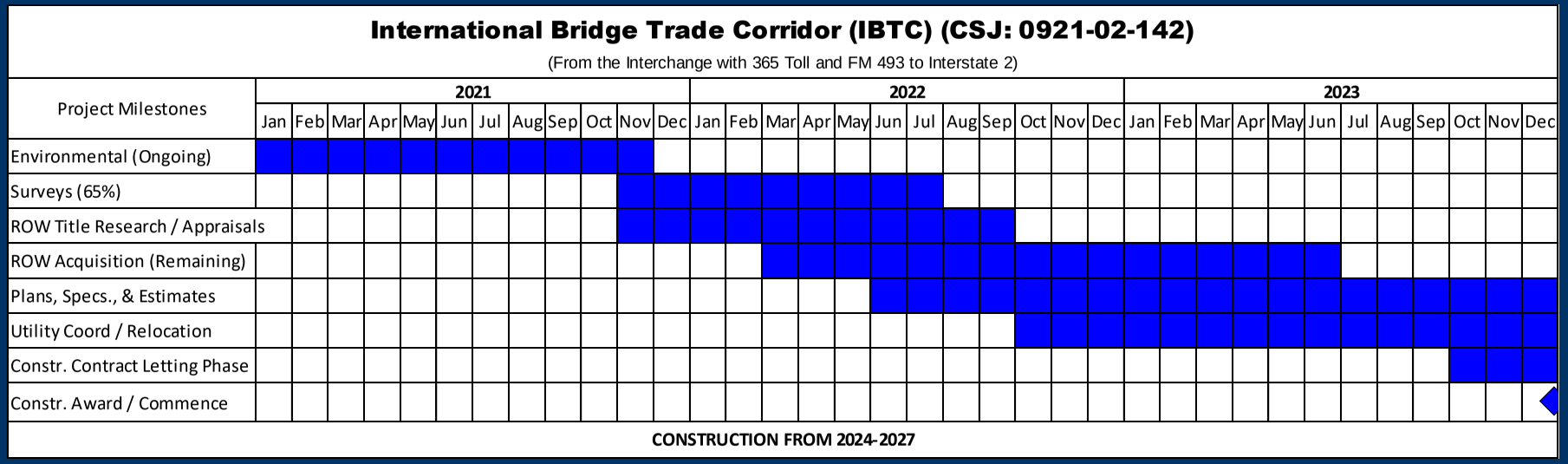
IBTC SCHEDULE



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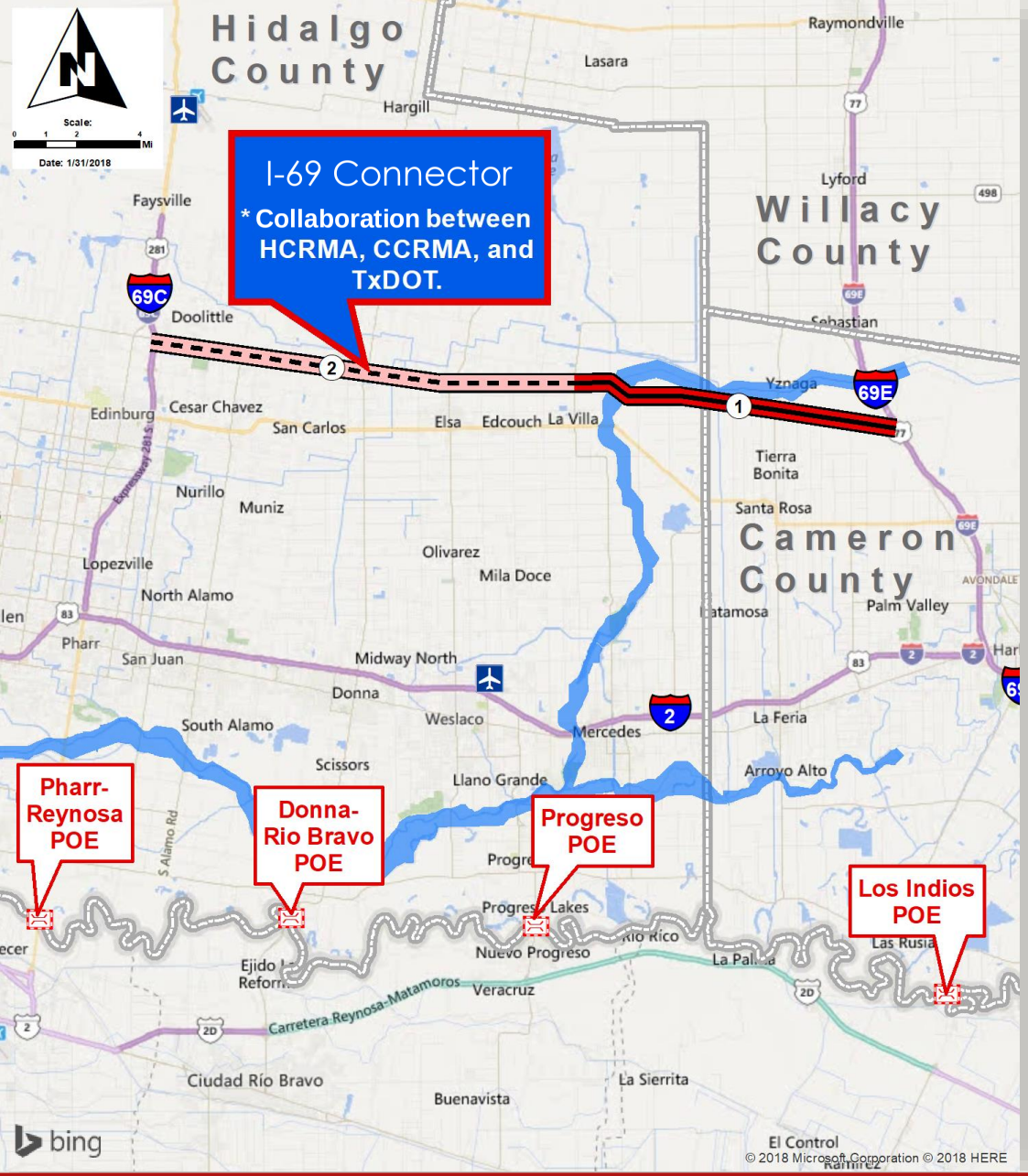
IBTC

Advance Planning

- Env.: Classification Letter and Scoping Toolkit Submitted Aug 2017
- Held IBTC Environmental Kick off with TxDOT PHR / ENV April 6, 2018.
- VRF UTP Matching Funds request processed at the HCMPO—pending adoption by TxDOT at State Level.
- All env. fieldwork complete: Waters of the US and Archeological trenching—Internal ROE efforts were instrumental to accelerating this work.
- Meeting held with EPA/TCEQ/TxDOT to discuss Donna Reservoir site for the Hazmat portion of the NEPA Document Oct 2018.
- Public Meeting took place at Donna High School March 29, 2019.
- All major milestone reports submitted and undergoing reviews: Project Description, Hazmat, Historic Resources, Public Meeting Summary Report, Waters of the US, and Archaeological Resources.
- Pending review / approval from TxDOT on: Noise Report, Archaeological Mitigation Plan, and CIC Report – so that final document can be submitted.

Other:

- Surveys (65% complete) – anticipate new survey pool procurement once TxDOT approves new federalized procurement procedures by end of Fall 2019.
- ROW Acquisition (5% complete)
- Utility Relo. (SUE 100%, coordination initiated, Overall 20%)
- Design (PS&E, 50% complete): On Hold



I-69 Connector

(COLLABORATION W/ TXDOT, CCRMA, AND HCRMA)

DESCRIPTION:

- PROJECT LENGTH ~27 MILES
- FROM I-69C IN HIDALGO COUNTY TO I69-E IN CAMERON COUNTY
- KEY PARALLEL CORRIDOR TO I-2 WITH IMPORTANCE TO MOBILITY PROJECTS BY TXDOT, CCRMA AND HCRMA
- TXDOT COMMITTED SUPPLEMENTAL DEVELOPMENT AUTHORITY FUNDS FOR THE ENTIRE 27 MILE CORRIDOR AS AN EXPRESSWAY FACILITY.
- TXDOT HAS COMMITTED TO FUNDING THE DEVELOPMENT OF THE SCHEMATIC DESIGN AND ENVIRONMENTAL DOCUMENTS.
- FEASIBILITY STUDIES KICKED OFF WITH A STAKEHOLDER MEETING OCT 2019.
- PUBLIC MEETING ON FEASIBILITY STUDIES HELD DECEMBER 2019.

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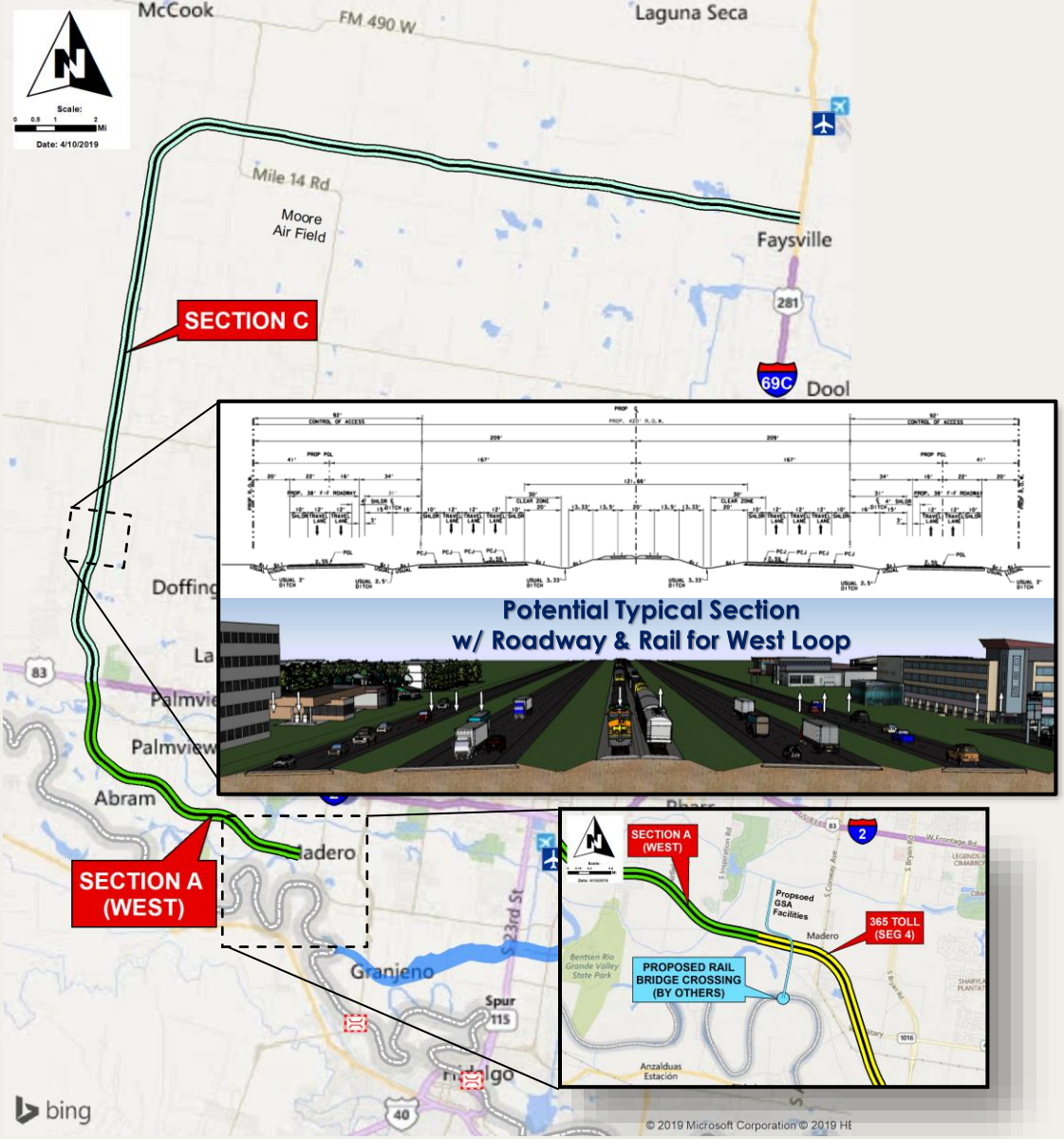
WEST LOOP

SECTION A(WEST) / SECTION C

***COMPLIMENTS PROPOSED MISSION/MADERO-REYNOSA INTERNATIONAL BORDER CROSSING (BY OTHERS)**



DESCRIPTION:

- COMBINED PROJECT LENGTH:
  38 MILES FROM FM 1016 / CONWAY AVE (MISSION/MADERO) TO I-69C (NORTH EDINBURG)
- LIKELY TO BE CLASSIFIED AS AN ENVIRONMENTAL IMPACT STATEMENT (EIS) NEPA DOCUMENT (36 TO 48 MONTHS)—TO BE ENGAGED AFTER IBTC ENV.
- POTENTIAL FOR CLASS I RAIL WITHIN THE ROW PENDING DEVELOPMENTS FOR RAIL CROSSING IN MISSION AREA.
- INTERLOCAL AGREEMENT IN PLACE WITH CITY OF MISSION FOR HCRMA'S ASSISTANCE WITH ENVIRONMENTAL CLEARANCE EFFORTS.
- MARCH 2020 - HELD AN ILA KICK OFF MEETING WITH THE CITY OF MISSION TO BEGIN ALIGNING ENV. CLEARANCE EFFORTS WITH THE CITY'S INTENDED OVERALL PROJECT PLAN.
- MAY 2020 – HCRMA PROVIDED CITY OF MISSION W DRAFT SCOPES FOR ENV / TRAFFIC ENG. FOR THEIR PROPOSED ENV. CLEARANCE EFFORTS AT THE PROPOSED RAIL BRIDGE CROSSING.
- SEPTEMBER 2020 – TXDOT APPROVED CITY OF MISSION PROCUREMENT RULES TO ALIGN WITH THE "FEDERAL PROCESS"

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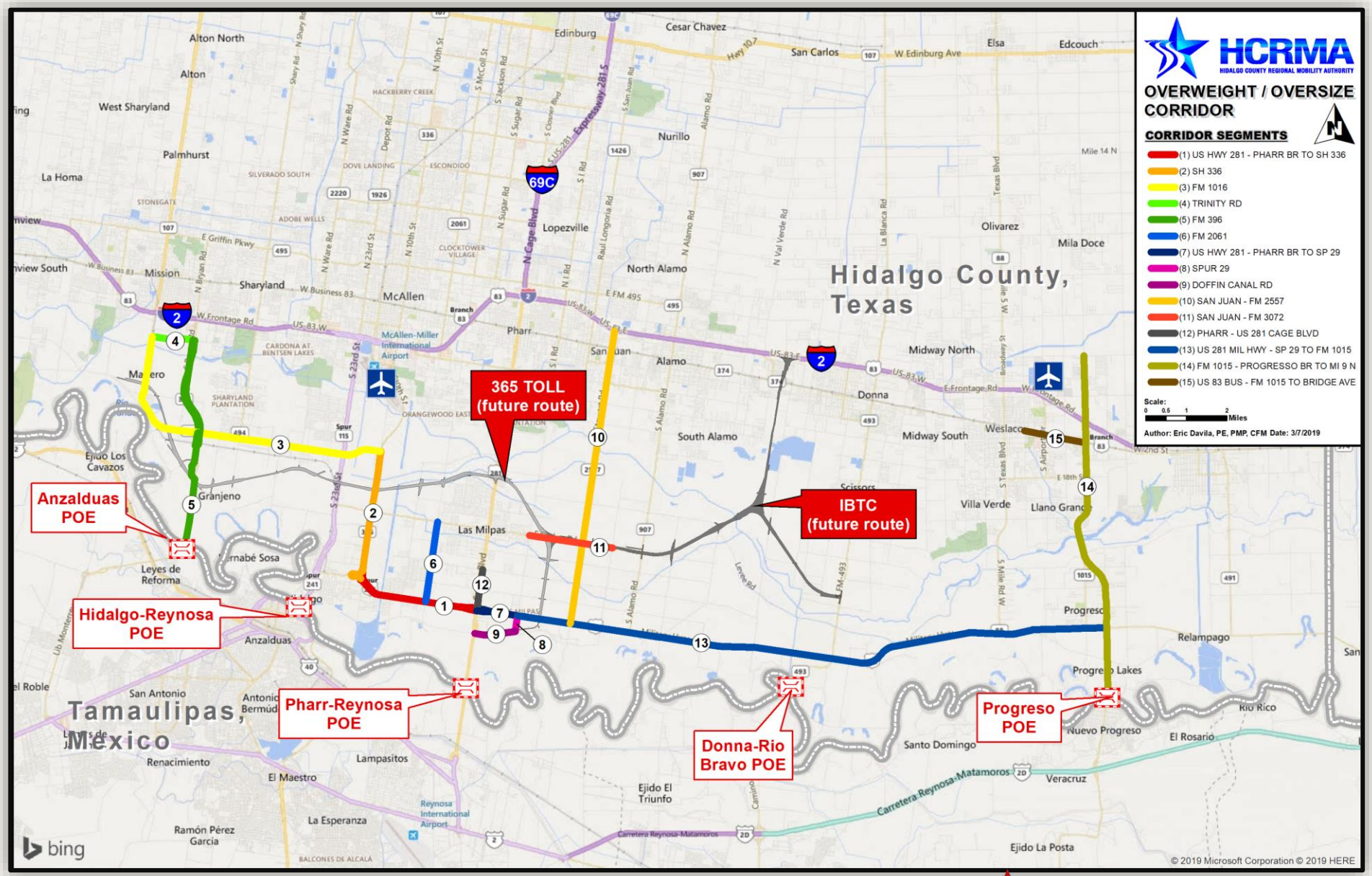

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Overweight Report for Period: Jan 1, 2014 – Aug 31, 2021

OW

Total Permits Issued:	**210,017**
Total Amount Collected:	**$ 33,535,084**
■ **Convenience Fees:**	**$ 695,484**
■ **Total Permit Fees:**	**$ 32,839,600**
– Pro Miles:	$ 630,051
– TxDOT:	$ 27,913,660
– HCRMA:	$ 4,295,889

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Overweight Report for Period: Jan 1, 2021 – Aug 31, 2021

OW

Total Permits Issued:	**25,338**
Total Amount Collected:	**$ 5,130,924**
■ **Convenience Fees:**	**$ 63,324**
■ **Total Permit Fees:**	**$ 5,067,600**
– Pro Miles:	$ 76,014
– TxDOT:	$ 4,307,460
– HCRMA:	$ 684,126

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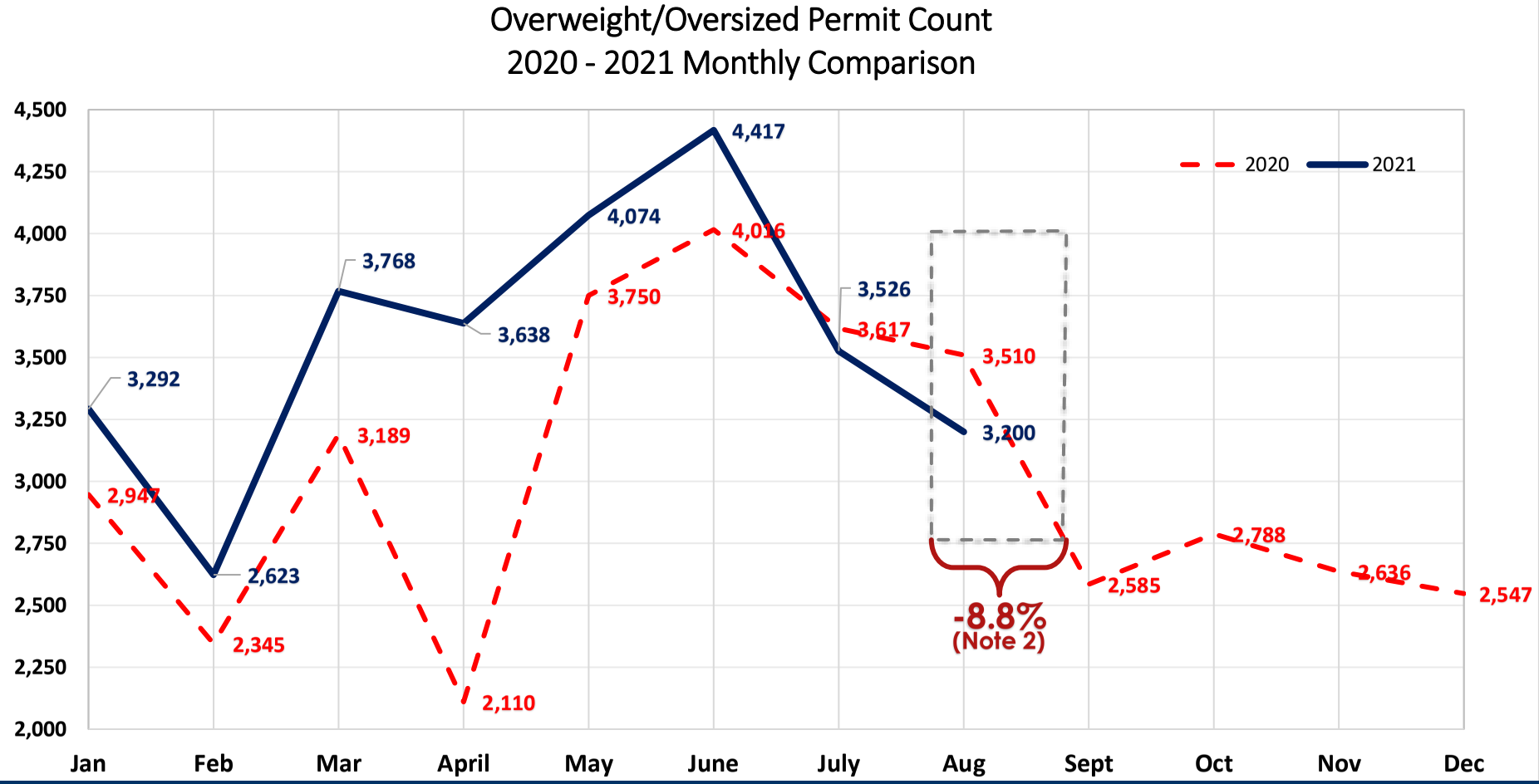
Overweight Report for Period: Jan 1, 2021 – Aug 31, 2021

OW

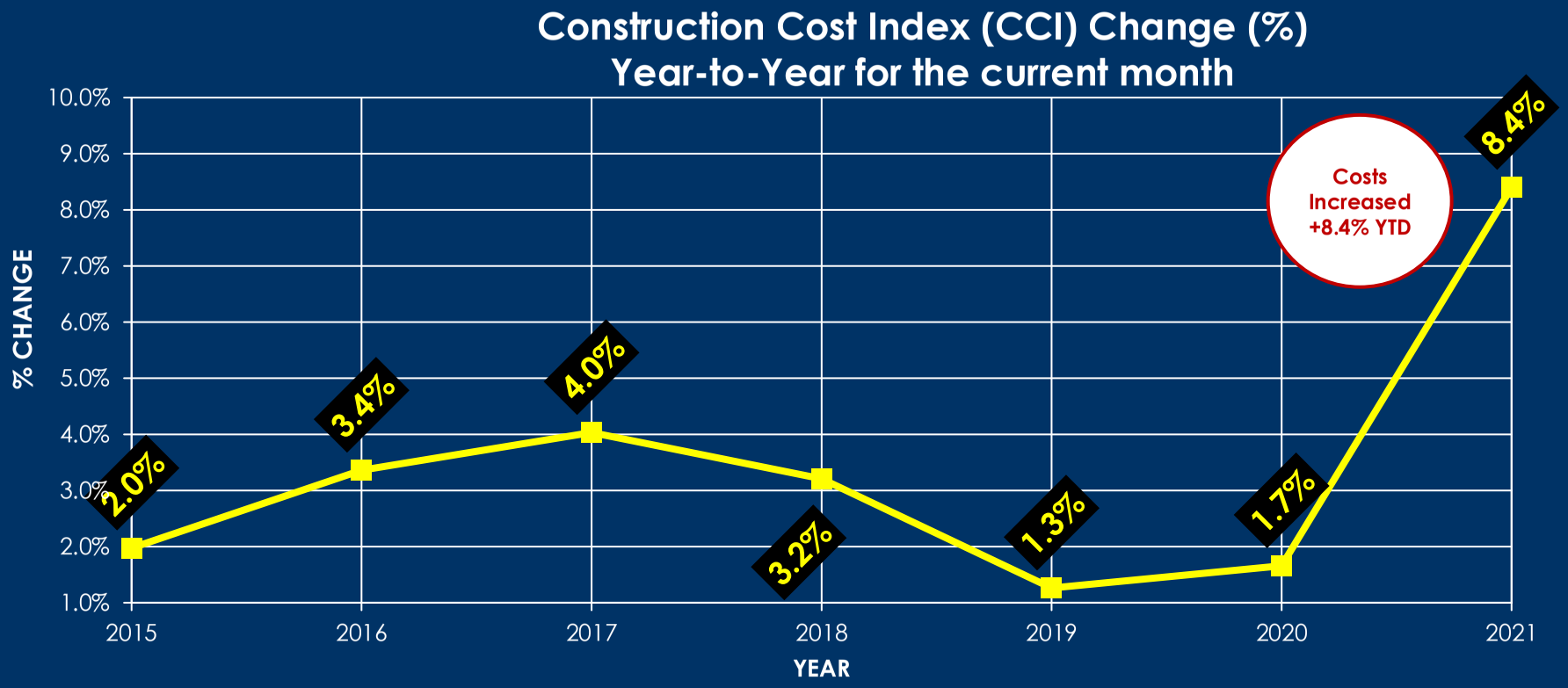


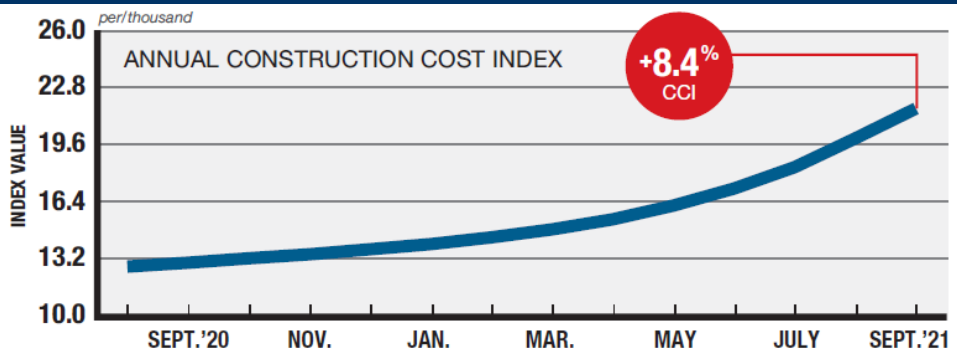
Notes:

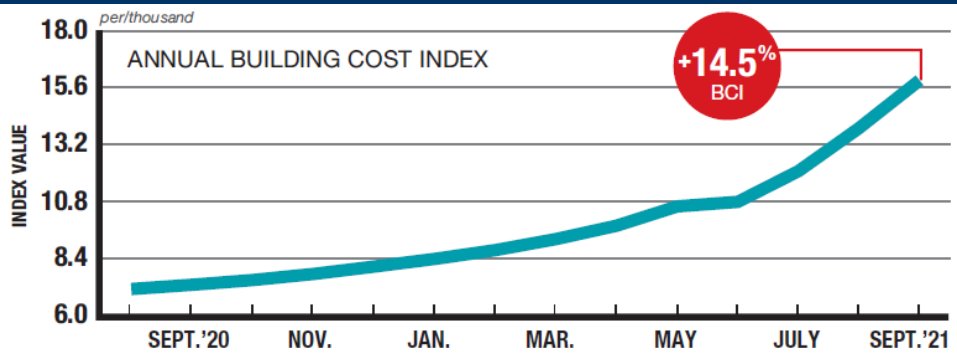
1. The permit count for 2020 (36,040) ended with a +6.7% increase compared to 2019 (33,790).
2. Monthly permit count of 3,200 represents an -8.8% decrease compared to the same month in 2020.

Constr. Economics Sept 2021

CE



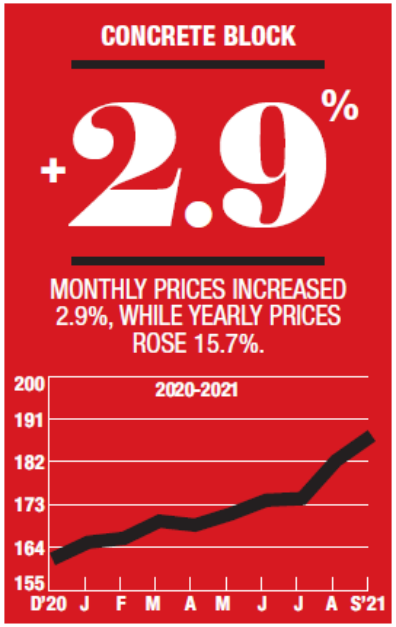




Source: McGraw Hill Construction ENR

Constr. Economics Sept 2021

CE



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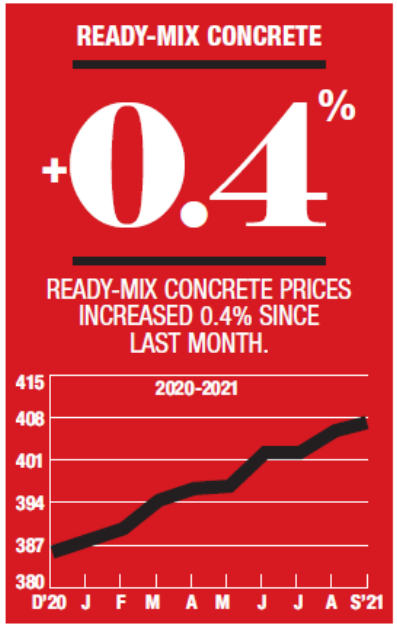

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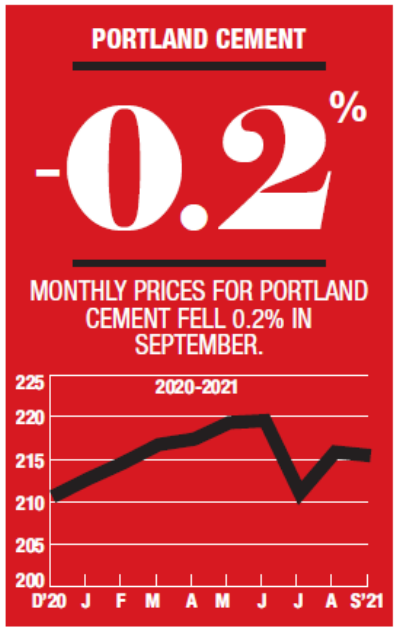

20-CITY AVERAGE

ITEM	UNIT	$PRICE	%MONTH	%YEAR
ASPHALT PAVING				
PG 58	TON	453.61	**+2.0**	+15.8
Cutback, MC800	TON	389.15	+0.7	+5.3
Emulsion, RAPID SET	TON	363.68	+0.8	+2.4
Emulsion, SLOW SET	TON	376.83	+1.0	+2.9
PORTLAND CEMENT				
Type one	TON	150.10	**–0.2**	+1.5
MASONRY CEMENT				
70-lb bag	TON	11.09	–0.3	+3.2
CRUSHED STONE				
Base course	TON	13.69	+2.6	+10.8
Concrete course	TON	13.40	+0.1	+13.7
Asphalt course	TON	14.31	+0.1	+2.9
SAND				
Concrete	TON	11.36	+1.0	+8.7
Masonry	TON	13.82	–0.6	+11.0
READY-MIX CONCRETE				
3,000 psi	CY	130.90	**+0.4**	+4.7
4,000 psi	CY	143.60	0.0	+0.5
5,000 psi	CY	181.60	–0.7	–6.1
CONCRETE BLOCK				
Normal weight: 8" x 8" x 16"	C	175.23	**+2.9**	+15.7
Lightweight: 8" x 8" x 16"	C	162.09	+0.2	–6.2
12" x 8" x 16"	C	231.52	+2.6	+26.5

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Item 1B

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**1B**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/13/21**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/21**
TECHNICAL COMMITTEE			

1. Agenda Item: **REPORT ON 365 TOLLWAY PROJECT FINANCING ACTIVITIES.**

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

   Report on 365 Tollway Project Financing Activities – Richard Ramirez, Hilltop Securities.

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

4. Budgeted: ___Yes ___No X N/A

5. Staff Recommendation**: Report only.**

6. Program Manager's Recommendation: ___Approved ___Disapproved **X** None

7. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: ___Approved ___Disapproved **X** None

9. Chief Auditor's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Financial Officer's Recommendation: ___Approved ___Disapproved **X** None

11. Chief Development Engineer's Recommendation: ___Approved ___Disapproved **X** None

12. Chief Construction Engineer's Recommendation: ___Approved ___Disapproved **X** None

13. Executive Director's Recommendation: ___Approved ___Disapproved **X** None

Item 2A

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**2A**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/17/21**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/21**
TECHNICAL COMMITTEE			

1. Agenda Item: **APPROVAL OF MINUTES FOR REGULAR MEETING HELD AUGUST 24, 2021.**

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

   Consideration and Approval of Minutes for the Hidalgo County Regional Mobility Authority Board of Directors Regular Meeting held August 24, 2021.

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

4. Budgeted: ___Yes ___No X N/A

5. Staff Recommendation**: Motion to approve the minutes for the Board of Director's Regular Meeting held August 24, 2021, as presented.**

6. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

7. Finance Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: X Approved ___Disapproved ___None

9. Chief Auditor's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Financial Officer's Recommendation: ___Approved ___Disapproved **X** None

11. Chief Development Engineer's Recommendation: ___Approved ___Disapproved **X** None

12. Chief Construction Engineer's Recommendation: ___Approved ___Disapproved **X** None

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

STATE OF TEXAS
COUNTY OF HIDALGO
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

The Hidalgo County Regional Mobility Authority Board of Directors convened for a Regular Meeting on **Tuesday, August 24, 2021**, at 5:30 pm at the Pharr City Hall, 2nd Floor City Commission Chambers, 118 S. Cage, Blvd, Pharr, TX 78577, with the following participating:

Board Members:	S. David Deanda, Jr., Chairman Forrest Runnels, Vice-Chairman (Teleconference) Ezequiel Reyna, Jr., Secretary/Treasurer (Teleconference) Alonzo Cantu, Director Paul Moxley, Director (Teleconference) Frank Pardo, Director Joaquin Spamer, Director
Absent:	None
Staff:	Pilar Rodriguez, Executive Director Ramon Navarro, Chief Construction Engineer Eric Davila, Chief Development Engineer Celia Gaona, Chief Auditor/Compliance Officer Jose Castillo, Chief Financial Officer Maria Alaniz, Administrative Assistant III Richard Cantu, Law Office of Richard Cantu, Legal Counsel Richard Ramirez, Hilltop Securities, Financial Advisor

PLEDGE OF ALLEGIANCE

Chairman Deanda led the Pledge of Allegiance.

INVOCATION

Ms. Gaona led the Invocation.

CALL TO ORDER FOR REGULAR MEETING AND ESTABLISH A QUORUM
Chairman Deanda called the Regular Meeting to order at 5:30 p.m.

PUBLIC COMMENT

No Comments.

1. REPORTS

A. Report on Program Manager Activity for 365 Tollway Project and IBTC Environmental Clearance Document – Eric Davila, HCRMA.
Mr. Eric Davila reported on Program Manager Activity for 365 Tollway Project and IBTC Environmental Clearance Document. No action taken.

B. Report on 365 Tollway Project Financing Activities – Richard Ramirez, Hilltop Securities.
Mr. Colby Eckols, Hilltop Securities, reported on the 365 Tollway Project Financing Activities. No action taken.

2. CONSENT AGENDA.

Motion by Alonzo Cantu, with a second by Ezequiel Reyna, to approve the Consent Agenda. Motion carried unanimously.

A. Approval of Minutes for the Regular Meeting held July 27, 2021.
Approved the Minutes for the Regular Meeting held July 27, 2021.

B. Approval of Project & General Expense Report for the period from July 8, 2021 to August 6, 2021.
Approved the Project & General Expense Report for the period from July 8, 2021 to August 6, 2021.

C. Approval of Financial Reports for July 2021.
Approved the Financial Reports for July 2021.

3. REGULAR AGENDA

A. Resolution 2021-32 – Approval of Work Authorization 9 to the Professional Service Agreement with C&M Associates, Inc. for a Traffic and Revenue Bring-Down Letter for the 365 Tollway Project Financing.
Motion by Ezequiel Reyna, with a second by Alonzo Cantu, to approve Resolution 2021-32 – Approval of Work Authorization 9 to the Professional Service Agreement with C&M Associates, Inc. for a Traffic and Revenue Bring-Down Letter for the 365 Tollway Project Financing in the amount of $35,598.24. Motion carried unanimously.

B. Resolution 2021-33 – Approval of Contract Amendment 10 to the Professional Service Agreement with C&M Associates to increase the maximum payable amount for Work Authorization Number 9.
Motion by Frank Pardo, with a second by Joaquin Spamer, to approve Resolution 2021 -33 – Approval of Contract Amendment 10 to the Professional Service Agreement with C&M Associates to increase the maximum payable amount for Work Authorization Number 9 for a revised maximum payable amount of $627,016.30. Motion carried unanimously.

C. Resolution 2021-34 – Approval of the 365 Tollway Wetland Mitigation Conservation Easement in Favor of the Valley Land Fund.
Motion by Frank Pardo, with a second by Joaquin Spamer, to approve Resolution 2021-34 – Approval of the 365 Tollway Wetland Mitigation Conservation Easement in Favor of the Valley Land Fund. Motion carried unanimously.

4. CHAIRMAN'S REPORT

A. None.

5. TABLED ITEMS

A. None.

6. **EXECUTIVE SESSION, CHAPTER 551, TEXAS GOVERNMENT CODE, SECTION 551.071 (CONSULTATION WITH ATTORNEY), SECTION 551.072 (DELIBERATION OF REAL PROPERTY) AND SECTION 551.074 (PERSONNEL MATTERS)**

A. Consultation with Attorney on legal issues pertaining to the acquisition, including the use of Eminent Domain, for property required to complete the project alignments of the 365 Tollway Project (Sections 551.071 and 551.072 T.G.C.).

No action taken

B. Consultation with Attorney on personnel matters related annual evaluation of the Executive Director (551.074 T.G.C.)
No action taken

C. Consultation with Attorney on legal issues pertaining to an Interlocal Cooperative Agreement with the City of Mission to provide Right of Way Acquisition Services (Section 551.071 T. G.C.)
No action taken.

D. Consultation with Attorney on legal issues pertaining to the Texas Department of Transportation State Infrastructure Bank Loan for the 365 Tollway Project (Section 551.071 T.G.C.).
No action taken.

E. Consultation with Attorney on legal issues pertaining to Professional Service Agreements for Engineering, Surveying and Environmental Services (Section 551.071 T.G.C.).
No action taken.

F. Consultation with Attorney on legal issues pertaining to the acquisition of real property for various parcels for the 365 Tollway Project and International Bridge Trade Corridor Project (Sections 551.071 and 551.072 T.G.C.).
No action taken.

G. Consultation with Attorney on legal issues pertaining to the Environmental Clearance Document for the International Bridge Trade Corridor Project (Section 551.071 T.G.C.).
No action taken.

H. Consultation with Attorney on legal issues pertaining to the issuance of one or more Series of Hidalgo County Regional Mobility Authority bonds and related agreements and provisions relating to the subject (Section 551.071 T.G.C.).
No action taken.

I. Consultation with Attorney on personnel matters related to the COVID-19 pandemic (Section 551.074 T.G.C.).
No action taken.

ADJOURNMENT

There being no other business to come before the Board of Directors, motion by Forrest Runnels, with a second by Paul Moxley, to adjourn the meeting at 5:45 p.m.

_____

S. David Deanda, Jr, Chairman

Attest:

_____

Ezequiel Reyna, Jr., Secretary/Treasurer

Item 2B

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**2B**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/21/21**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/21**
TECHNICAL COMMITTEE			

1. Agenda Item: **APPROVAL OF PROJECT AND GENERAL EXPENSE REPORT FROM AUGUST 7, 2021 TO SEPTEMBER 8, 2021**

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

   Consideration and approval of project and general expense report for the period from August 7, 2021 to September 8, 2021

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

4. Budgeted: X Yes ___No ___N/A Funding Source: VRF Bond

General Account	$ 103,120.28
Disbursement Account	$ 91,737.56
VRF Series 2020A	$ 323,341.97
Total Project Expenses for Reporting Period	**$ 518,199.81**
Fund Balance after Expenses	$ 8,683,456.04

5. Staff Recommendation**: Motion to approve the project and general expense report for the August 7, 2021 to September 8, 2021, as presented.**

6. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

7. Finance Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: ___Approved ___Disapproved **X** None

9 Chief Auditor's Recommendation: ___Approved ___Disapproved X None

10. Chief Financial Officer's Recommendation: **X** Approved ___Disapproved ___None

11. Chief Development Engineer's Recommendation: **X** Approved ___Disapproved ___None

12. Chief Construction Engineer's Recommendation: **X** Approved ___Disapproved ___None

13. Executive Director's Recommendation: **X** Approved ___Disapproved ___None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Memorandum

To: S. David Deanda Jr., Chairman

From: Pilar Rodriguez, PE, Executive Director

Date: September 21, 2021

Re: **Expense Report for the Period from August 7, 2021 to September 8, 2021**

Attached is the expense report for the period commencing on August 7, 2021 to September 8, 2021.

Expenses for the General Account total $103,120.28, Disbursement Account total $91,737.56 and the VRF Series 2020A Account is $323,341.97. The aggregate expense for the reporting period is $518,199.81.

Based on review by this office, **approval of expenses for the reporting period is recommended in the aggregate amount of $518,199.81**.

This leaves a fund balance (all funds) after expenses of $8,683,456.04.

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

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Aug 7 - Sept. 8

Sept. 2021

Plains Capital 41	Make Check Payable to	Date Work Performed	Amount
Wages & Benefits	City of Pharr	August 2021	$ 71,705.10
	Office Depot	August 2021	$ 113.41
	Office Depot	August 2021	$ 203.46
	A-Fast Delivery, LLC	August 2021	$ 119.25
	Copy Zone	August 2021	$ 471.97
	Bracewell, LLP	August 2021	$ 400.00
	Escobedo & Cardenas, LLP	August 2021	$ 75.00
	Pathfinder Public Affairs	August 2021	$ 10,000.00
Accounting Fees	City of Pharr	August 2021	$ 205.00
Rent	City of Pharr	September 2021	$ 4,480.00
	City of Pharr	August 2021	$ 4,305.00
	City of Pharr	9/1/21-9/30/21	$ 1,155.00
	Xerox- Business Solutions Southwest	9/1/2020-8/31/2021	$ 228.85
	Xerox	9/1/2021-90/30/2021	$ 194.05
Professional Services	Pena Designs	August 2021	$ 200.00
	Aim Media Texas	August 2021	$ 6,939.99
	Advance Publishing LLC	August 2021	$ 848.25
	Ivonne Rodriguez	Thru 8/31/2021	$ 21.95
	Credit Card Services	8/04/2021-9/03/2021	$ 325.00
	Credit Card Services	8/04/2021-9/03/2021	$ 710.66
	Credit Card Services	8/04/2021-9/03/2021	$ 418.34
			$ 103,120.28

Wilmington Trust 45/Capital Projects			
Legal Fees	Bracewell, LLP	August 2021	$ 11,520.00
	Escobedo & Cardenas, LLP	August 2021	$ 5,000.00
	Blanton & Associates, Inc.	August 2021	$ 656.99
	Blanton & Associates, Inc.	August 2021	$ 3,142.99
	C&M Associates, Inc.	03/01/2021-08/31/2021	$ 7,480.11
	HDR Engineering, Inc.	8/1/2021-08/28/2021	$ 19,604.17
	HDR Engineering, Inc.	8/1/2021-08/28/2021	$ 18,877.84
	HDR Engineering, Inc.	8/1/2021-08/28/2021	$ 2,698.78
	HDR Engineering, Inc.	9/8/2021-8/28/2021	$ 22,239.88
	Donna Irrigation District Hidalgo County No. 1	Thru 2022	$ 516.80
			$91,737.56

Wilmington Trust 46/VRF Series 2020A			
	L&G Engineering	August 2021	$ 320,268.45
	Sendero Acquisition, LP	Thru 8/31/2021	$ 3,073.52
			$ 323,341.97

Sub Total - General -41	$	103,120.28
Sub Total - Projects -45	$	91,737.56
Sub Total - 46	$	323,341.97
Total	**$**	**518,199.81**

Approved: _____
S. David Deanda, Jr., Chairman

Recommend Approval: _____
Pilar Rodriguez, Executive Director

Approved: _____
Ezequiel Reyna, Jr., Secretary/Treasurer

Date: **9/28/2021**

Item 2C

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**2C**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/17/21**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/21**
TECHNICAL COMMITTEE			

1. Agenda Item: **APPROVAL OF THE FINANCIAL REPORT FOR THE MONTH OF AUGUST 2021.**

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

   Consideration and approval of financial report for the months of August 2021.

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

4. Budgeted: ___Yes ___No X N/A

   Funding Source:

5. Staff Recommendation**: Motion to approve the Financial Report for the months of August 2021, as presented.**

6. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

7. Finance Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: ___Approved ___Disapproved **X** None

9. Chief Auditor's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Financial Officer's Recommendation: **X** Approved ___Disapproved ___None

11. Chief Development Engineer's Recommendation: ___Approved ___Disapproved **X** None

12. Chief Construction Engineer's Recommendation: ___Approved ___Disapproved **X** None

13. Executive Director's Recommendation: **X** Approved ___Disapproved ___None

HIDALGO CO. REGIONAL MOBILITY AUTHORITY
STATEMENT OF NET POSITION AUGUST 31, 2021

ASSETS

CURRENT ASSETS		
Cash	$	61,119
Investment-Cap. Projects nonrestricted		73,407
Pool Investments		3,177,830
Promiles-Prepaid/Escrow Overweight Permit Fees		112,582
Accounts Receivable - VR Fees		575,530
Prepaid expense		1,271
Prepaid bond insurances		309,595
Total Current Assets		4,311,334
RESTRICTED ASSETS		
Construction 2020A Series		5,591,448
Investment-2020 debt service		1,020,134
Investment-debt service		1,026,699
Investment-debt service jr. lien		6,664,029
Total Restricted Assets		14,302,310
CAPITAL ASSETS		
Land-enviornmental		441,105
Leasehold improvements		266,776
Office equipment/other		33,136
Construction in progress		127,588,194
Accumulated depreciation		(56,858)
Total Capital Assets		128,272,353
DEFERRED OUTFLOW OF RESOURCES		
Deferred charges on refunding		6,153,048
Total Deferred Outflows		6,153,048
TOTAL ASSETS and DEFERRED OUTFLOWS OF RESOURCES	$	153,039,045

LIABILITIES AND NET POSITION

CURRENT LIABILITIES		
Accounts payable-City of Pharr	$	76,010
Unearned Revenue - Overweight Permit Escrow		112,582
Current Portion of Bond Premium 2013		53,223
Current Portion of Bond Premium 2020A		45,256
Total Current Liabilities		287,071
RESTRICTED LIABILITIES		
Current Portion of Long-Term 2020 Debt		805,000
Current Portion of Long-Term Debt 2013		1,305,000
Total Restricted Liabilities		2,110,000
LONG-TERM LIABILITIES		
2013 VRF Bonds Payable		2,785,000
2020 Series A Bonds Payable		9,870,000
2020 Series B Bonds Payable		57,210,000
Jr. Lien Bonds		22,975,440
Bond premium 2013VRF		106,987
Bond premium 2020A		1,301,108
Total Long-Term Liabilities		94,248,535
Total Liabilities		96,645,606
NET POSITION		
Investment in Capital Assets, Net of Related Debt		43,559,835
Restricted for:		
Debt Service		6,600,862
Unrestricted		6,232,742
Total Net Position		56,393,439
TOTAL LIABILITIES AND NET POSITION	$	153,039,045

Pharr, TX

Balance Sheet
Account Summary
As Of 08/31/2021

Account	Name	Balance	
Fund: 41 - HCRMA-GENERAL			
Assets			
41-1-1100-000	GENERAL OPERATING	61,118.50	
41-1-1102-000	POOL INVESTMENTS	3,177,830.38	
41-1-1113-000	ACCOUNTS RECIEVABLES-VR FEES	575,530.00	
41-1-1113-100	PROMILES-PREPAID/ESCROW OVERWE	112,581.56	
41-1-1117-000	LEASEHOLD IMPROVEMENTS	266,776.38	
41-1-1118-000	CONSTRUCTION IN PROGRESS	127,588,193.87	
41-1-1119-001	LAND-ENVIRONMENTAL	441,105.00	
41-1-1121-000	FURNITURE & FIXTURES	24,529.90	
41-1-1122-000	COMPUTER EQUIP/SOFTWARE	8,606.51	
41-1-1123-000	ACCUMULATED DEPRECIATION	-56,857.53	
41-1-1601-000	PREPAID EXPENSE	1,271.08	
41-1-1700-001	DEFERRED CHARGES ON REFUNDING	6,153,048.16	
41-1-1700-010	DEFERRED CHARGES ON BOND INSURAN(	309,594.70	
	Total Assets:	**138,663,328.51**	**138,663,328.51**
Liability			
41-2-1212-001	A/P CITY OF PHARR	76,010.10	
41-2-1213-009	CURRENT-UNAMORTIZED PREMIUM	53,223.39	
41-2-1213-010	CURRENT- UNAMORTIZED- PREM 2020A	45,255.92	
41-2-1213-012	BONDS PAYABLE CURRENT- 2020B	805,000.00	
41-2-1213-100	UNEARNED REV.-OVERWEIGHT	112,581.56	
41-2-1214-001	BONDS PAYABLE-CURRENT	1,305,000.00	
41-2-1214-002	BONDS PAYABLE-LONG TERM PORTIO	2,785,000.00	
41-2-1214-003	UNAMORTIZED PREMIUM ON BOND	106,986.78	
41-2-1214-004	UNAMORTIZED PREM- 2020A	1,301,107.70	
41-2-1214-010	LONG TERM BONDS- JR LIEN	22,975,440.14	
41-2-1214-011	LONG TERM BONDS- 2020A	9,870,000.00	
41-2-1214-012	LONG TERM BONDS- 2020B	57,210,000.00	
	Total Liability:	**96,645,605.59**	
Equity			
41-3-3400-000	FUND BALANCE	41,689,825.95	
	Total Beginning Equity:	**41,689,825.95**	
Total Revenue		5,661,309.18	
Total Expense		5,333,412.21	
Revenues Over/Under Expenses		327,896.97	
	Total Equity and Current Surplus (Deficit):	**42,017,722.92**	
	Total Liabilities, Equity and Current Surplus (Deficit):		**138,663,328.51**

Pharr, TX

Budget Report
Account Summary
For Fiscal: 2021 Period Ending: 08/31/2021

		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Remaining
Fund: 41 - HCRMA-GENERAL							
Revenue							
41-4-1504-000	VEHICLE REGISTRATION FEES	6,500,000.00	6,500,000.00	575,530.00	4,892,940.00	-1,607,060.00	24.72 %
41-4-1505-005	PROMILES-OW/OS PERMIT FEES	1,000,000.00	1,000,000.00	100,926.00	767,151.00	-232,849.00	23.28 %
41-4-1506-000	INTEREST REVENUE	15,000.00	15,000.00	103.78	1,218.18	-13,781.82	91.88 %
	Revenue Total:	**7,515,000.00**	**7,515,000.00**	**676,559.78**	**5,661,309.18**	**-1,853,690.82**	**24.67 %**
Expense							
41-52900-1100-000	SALARIES	538,184.00	538,184.00	35,028.82	321,204.67	216,979.33	40.32 %
41-52900-1104-000	OVERTIME	500.00	500.00	48.32	172.36	327.64	65.53 %
41-52900-1105-000	FICA	45,608.00	45,608.00	1,649.49	22,659.61	22,948.39	50.32 %
41-52900-1106-000	HEALTH INSURANCE	29,000.00	29,000.00	2,473.00	17,071.44	11,928.56	41.13 %
41-52900-1115-000	EMPLOYEES RETIREMENT	45,608.00	45,608.00	2,538.27	23,284.76	22,323.24	48.95 %
41-52900-1116-000	PHONE ALLOWANCE	6,300.00	6,300.00	392.30	3,530.70	2,769.30	43.96 %
41-52900-1117-000	CAR ALLOWANCE	22,800.00	22,800.00	1,200.00	10,800.00	12,000.00	52.63 %
41-52900-1122-000	EAP- ASSISTANCE PROGRAM	0.00	0.00	5.36	42.88	-42.88	0.00 %
41-52900-1178-000	ADMIN FEE	9,750.00	9,750.00	750.00	6,750.00	3,000.00	30.77 %
41-52900-1179-000	CONTINGENCY	28,400.00	28,400.00	0.00	0.00	28,400.00	100.00 %
41-52900-1200-000	OFFICE SUPPLIES	12,000.00	12,000.00	234.17	2,752.08	9,247.92	77.07 %
41-52900-1603-000	BUILDING REMODEL	70,000.00	70,000.00	0.00	3,984.74	66,015.26	94.31 %
41-52900-1604-000	MAINTENANCE & REPAIR	25,000.00	25,000.00	0.00	15,810.46	9,189.54	36.76 %
41-52900-1605-000	JANITORIAL	1,000.00	1,000.00	0.00	7.79	992.21	99.22 %
41-52900-1606-000	UTILITIES	2,800.00	2,800.00	246.89	1,728.23	1,071.77	38.28 %
41-52900-1607-000	CONTRACTUAL ADM/IT SERVICES	8,500.00	8,500.00	655.00	4,440.00	4,060.00	47.76 %
41-52900-1610-000	DUES & SUBSCRIPTIONS	15,000.00	15,000.00	225.00	13,536.09	1,463.91	9.76 %
41-52900-1610-001	SUBSCRIPTIONS-SOFTWARE	500.00	500.00	599.00	714.16	-214.16	-42.83 %
41-52900-1611-000	POSTAGE/FEDEX/COURTIER	2,500.00	2,500.00	203.00	1,345.00	1,155.00	46.20 %
41-52900-1620-000	GENERAL LIABILITY	3,000.00	3,000.00	0.00	2,902.60	97.40	3.25 %
41-52900-1621-000	INSURANCE-E&O	1,500.00	1,500.00	0.00	1,465.10	34.90	2.33 %
41-52900-1622-000	INSURANCE-SURETY	800.00	800.00	0.00	0.00	800.00	100.00 %
41-52900-1623-000	INSURANCE-LETTER OF CREDIT	500.00	500.00	0.00	3,167.36	-2,667.36	-533.47 %
41-52900-1623-001	INSURANCE-OTHER	3,000.00	3,000.00	0.00	0.00	3,000.00	100.00 %
41-52900-1623-002	INSURANCE- CYBERSECURITY	2,500.00	2,500.00	0.00	3,200.22	-700.22	-28.01 %
41-52900-1630-000	BUSINESS MEALS	500.00	500.00	0.00	0.00	500.00	100.00 %
41-52900-1640-000	ADVERTISING	4,000.00	4,000.00	0.00	0.00	4,000.00	100.00 %
41-52900-1650-000	TRAINING	8,000.00	8,000.00	0.00	3,087.00	4,913.00	61.41 %
41-52900-1660-000	TRAVEL	10,000.00	10,000.00	0.00	703.37	9,296.63	92.97 %
41-52900-1662-000	PRINTING & PUBLICATIONS	8,000.00	8,000.00	660.78	2,873.34	5,126.66	64.08 %
41-52900-1703-000	BANK SERVICE CHARGES	100.00	100.00	0.00	0.00	100.00	100.00 %
41-52900-1705-000	ACCOUNTING FEES	30,000.00	30,000.00	205.00	28,185.00	1,815.00	6.05 %
41-52900-1710-000	LEGAL FEES	65,000.00	65,000.00	3,420.25	24,365.25	40,634.75	62.52 %
41-52900-1710-001	LEGAL FEES-GOV.AFFAIRS	120,000.00	120,000.00	10,000.00	80,000.00	40,000.00	33.33 %
41-52900-1712-000	FINANCIAL CONSULTING FEES	4,000.00	4,000.00	2,500.00	4,005.00	-5.00	-0.13 %
41-52900-1712-001	INSURANCE CONSULTANT	10,000.00	10,000.00	0.00	0.00	10,000.00	100.00 %
41-52900-1715-000	RENT-OFFICE	54,000.00	54,000.00	4,480.00	35,840.00	18,160.00	33.63 %
41-52900-1715-001	RENT-OFFICE EQUIPTMENT	8,500.00	8,500.00	0.00	4,099.26	4,400.74	51.77 %
41-52900-1715-002	RENT-OTHER	500.00	500.00	0.00	0.00	500.00	100.00 %
41-52900-1716-000	CONTRACTUAL WEBSITE SERVICES	2,400.00	2,400.00	200.00	1,600.00	800.00	33.33 %
41-52900-1731-000	MISCELLANEOUS	500.00	500.00	0.00	0.00	500.00	100.00 %
41-52900-1732-000	PENALTIES & INTEREST	100.00	100.00	0.00	0.00	100.00	100.00 %
41-52900-1850-000	CAPITAL OUTLAY	10,000.00	10,000.00	0.00	0.00	10,000.00	100.00 %
41-52900-1899-000	NON-CAPITAL	10,000.00	10,000.00	0.00	1,900.00	8,100.00	81.00 %
41-52900-1999-003	TRANSFER OUT TO DEBT	1,496,450.00	1,496,450.00	124,703.24	999,625.92	496,824.08	33.20 %

		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Remaining
41-52900-1999-005	TRANS OUT DEB-JR LIEN	1,126,162.00	1,126,162.00	0.00	1,126,162.00	0.00	0.00 %
41-52900-1999-006	TRANS OUT- 2020 DEBT SVC	2,470,095.00	2,470,095.00	205,841.20	1,646,729.60	823,365.40	33.33 %
41-52900-1999-009	TRANSFER OUT-CAPITAL PROJ	700,000.00	700,000.00	150,000.00	529,000.00	171,000.00	24.43 %
41-53000-1100-000	SALARIES	496,536.00	496,536.00	14,010.15	130,759.65	365,776.35	73.67 %
41-53000-1104-000	OVERTIME	10,500.00	10,500.00	0.00	0.00	10,500.00	100.00 %
41-53000-1105-000	FICA	44,968.00	44,968.00	1,060.96	9,973.08	34,994.92	77.82 %
41-53000-1106-000	HEALTH INSURANCE	25,000.00	25,000.00	1,236.50	8,888.88	16,111.12	64.44 %
41-53000-1115-000	EMPLOYEES RETIREMENT	44,968.00	44,968.00	1,128.26	10,511.49	34,456.51	76.62 %
41-53000-1116-000	PHONE ALLOWANCE	9,600.00	9,600.00	184.60	1,661.40	7,938.60	82.69 %
41-53000-1117-000	CAR ALLOWANCE	43,200.00	43,200.00	553.84	4,984.56	38,215.44	88.46 %
41-53000-1122-000	EAP- ASSISTANCE PROGRAM	0.00	0.00	2.68	21.44	-21.44	0.00 %
41-53000-1178-000	ADMN FEE	15,600.00	15,600.00	300.00	2,700.00	12,900.00	82.69 %
41-53000-1179-000	CONTINGENCY	27,992.00	27,992.00	0.00	0.00	27,992.00	100.00 %
41-53000-1200-000	OFFICE SUPPLIES	1,500.00	1,500.00	0.00	34.99	1,465.01	97.67 %
41-53000-1201-000	SMALL TOOLS	5,000.00	5,000.00	0.00	0.00	5,000.00	100.00 %
41-53000-1606-001	UTILITIES	0.00	0.00	32.90	32.90	-32.90	0.00 %
41-53000-1608-000	UNIFORMS	6,000.00	6,000.00	0.00	0.00	6,000.00	100.00 %
41-53000-1610-000	DUES & SUBSCRIPTIONS	2,000.00	2,000.00	0.00	740.00	1,260.00	63.00 %
41-53000-1610-001	SUBSCRIPTIONS - SOFTWARE	7,000.00	7,000.00	90.00	8,745.07	-1,745.07	-24.93 %
41-53000-1611-000	POSTAGE/FEDEX/COURTIER	500.00	500.00	0.00	15.90	484.10	96.82 %
41-53000-1640-000	ADVERTISING	5,000.00	5,000.00	0.00	0.00	5,000.00	100.00 %
41-53000-1650-000	TRAINING	5,000.00	5,000.00	0.00	890.00	4,110.00	82.20 %
41-53000-1660-000	TRAVEL	5,000.00	5,000.00	145.32	575.32	4,424.68	88.49 %
41-53000-1715-000	RENT CONSTRUCTION OFFICE	2,700.00	2,700.00	0.00	0.00	2,700.00	100.00 %
41-53000-1715-001	RENTAL - OFFICE EQUIPMENT	0.00	0.00	194.05	2,235.61	-2,235.61	0.00 %
41-53000-1715-002	RENT-OTHER	500.00	500.00	571.00	571.00	-71.00	-14.20 %
41-53000-1850-000	CAPITAL OUTLAY	62,500.00	62,500.00	0.00	7,810.04	54,689.96	87.50 %
41-53000-1899-000	NON-CAPITALIZED	22,000.00	22,000.00	0.00	0.00	22,000.00	100.00 %
41-54000-1100-000	SALARIES	426,970.00	426,970.00	10,382.38	98,165.41	328,804.59	77.01 %
41-54000-1104-000	OVERTIME	500.00	500.00	0.00	0.00	500.00	100.00 %
41-54000-1105-000	FICA	36,480.00	36,480.00	805.76	7,651.15	28,828.85	79.03 %
41-54000-1106-000	HEALTH INSURANCE	16,800.00	16,800.00	618.25	4,594.32	12,205.68	72.65 %
41-54000-1115-000	EMPLOYEES RETIREMENT	36,480.00	36,480.00	843.68	7,954.51	28,525.49	78.19 %
41-54000-1116-000	PHONE ALLOWANCE	4,800.00	4,800.00	92.30	830.70	3,969.30	82.69 %
41-54000-1117-000	CAR ALLOWANCE	21,600.00	21,600.00	553.84	4,984.56	16,615.44	76.92 %
41-54000-1122-000	EAP- ASSISTANCE PROGRAM	0.00	0.00	1.34	10.72	-10.72	0.00 %
41-54000-1178-000	ADMN FEE	7,800.00	7,800.00	150.00	1,350.00	6,450.00	82.69 %
41-54000-1179-000	CONTINGENCY	23,000.00	23,000.00	0.00	0.00	23,000.00	100.00 %
41-54000-1200-000	OFFICE SUPPLIES	500.00	500.00	69.99	347.51	152.49	30.50 %
41-54000-1610-000	DUES & SUBSCRIPTIONS	2,500.00	2,500.00	0.00	8,133.00	-5,633.00	-225.32 %
41-54000-1610-001	SUBSCRIPTIONS-SOFTWARE	69,000.00	69,000.00	1,500.00	56,809.09	12,190.91	17.67 %
41-54000-1611-000	POSTAGE/FEDEX/COURTIER	100.00	100.00	0.00	0.00	100.00	100.00 %
41-54000-1640-000	ADVERTISING	1,500.00	1,500.00	0.00	0.00	1,500.00	100.00 %
41-54000-1650-000	TRAINING	3,000.00	3,000.00	50.00	350.00	2,650.00	88.33 %
41-54000-1660-000	TRAVEL	2,000.00	2,000.00	0.00	0.00	2,000.00	100.00 %
41-54000-1850-000	CAPITAL OUTLAY	25,000.00	25,000.00	0.00	0.00	25,000.00	100.00 %
41-54000-1899-000	NON-CAPITALIZED	16,100.00	16,100.00	0.00	0.00	16,100.00	100.00 %
41-58000-1604-001	MAINTENANCE AND REPAIR -BSIF	3,000.00	3,000.00	465.00	1,860.00	1,140.00	38.00 %
41-58000-1606-002	UTILITIES - BSIF	1,000.00	1,000.00	66.24	473.92	526.08	52.61 %
	Expense Total:	**8,554,251.00**	**8,554,251.00**	**583,368.13**	**5,333,412.21**	**3,220,838.79**	**37.65 %**
	Fund: 41 - HCRMA-GENERAL Surplus (Deficit):	**-1,039,251.00**	**-1,039,251.00**	**93,191.65**	**327,896.97**	**1,367,147.97**	**131.55 %**
	Report Surplus (Deficit):	**-1,039,251.00**	**-1,039,251.00**	**93,191.65**	**327,896.97**	**1,367,147.97**	**131.55 %**

Pharr, TX

Bank Statement Register

GENERAL OPERATING

Period 8/1/2021 - 8/31/2021

09/22/21

Bank Statement		General Ledger	
Beginning Balance	104,895.59	Account Balance	61,118.50
Plus Debits	367,091.56	Less Outstanding Debits	0.00
Less Credits	405,616.64	Plus Outstanding Credits	5,252.01
Adjustments	0.00	Adjustments	0.00
Ending Balance	66,370.51	Adjusted Account Balance	66,370.51

Statement Ending Balance	66,370.51
Bank Difference	0.00
General Ledger Difference	0.00

CASH BALANCE CONSISTS OF THE FOLLOWING GENERAL LEDGER ACCOUNTS

41-1-1100-000 GENERAL OPERATING

Cleared Deposits

Item Date	Reference	Item Type	Description	Amount
08/31/2021	DEP 083121	Deposit	FUND 41- PROMILES	19,359.00
08/31/2021	DEP 083121	Deposit	FUND 41- PROMILES	21,060.00
08/31/2021	DEP 083121	Deposit	FUND 41- PROMILES	21,222.00
08/31/2021	DEP 083121	Deposit	FUND 41- PROMILES	19,953.00
08/31/2021	DEP 083121	Deposit	FUND 41- PROMILES	19,332.00
			Total Cleared Deposits (5)	100,926.00

Cleared Checks

Item Date	Reference	Item Type	Description	Amount
07/30/2021	2531	Check	A FAST DELIVERY	-282.50
07/30/2021	2532	Check	CARSON MAP COMPANY, INC.	-590.00
07/30/2021	2533	Check	COPYZONE	-663.45
07/30/2021	2534	Check	DAHILL	-683.21
07/30/2021	2535	Check	LIFTOFF, LLC	-7,176.00
07/30/2021	2536	Check	OFFICE DEPOT	-221.10
07/30/2021	2537	Check	SHI GOVERNMENT SOLUTIONS	-2,083.00
07/30/2021	2538	Check	SOUTHERN COMPUTER WAREHOUSE	-2,637.04
07/30/2021	2539	Check	VME ENGINEERING, LLC	-3,230.00
07/30/2021	2540	Check	XEROX CORPORATION	-194.05
			Total Cleared Checks (10)	-17,760.35

Pharr, TX

Bank Statement Register

POOL INVESTMENTS

Period 8/1/2021 - 8/31/2021

Bank Statement		General Ledger	
Beginning Balance	3,072,726.60	Account Balance	3,177,830.38
Plus Debits	105,103.78	Less Outstanding Debits	0.00
Less Credits	0.00	Plus Outstanding Credits	0.00
Adjustments	0.00	Adjustments	0.00
Ending Balance	3,177,830.38	Adjusted Account Balance	3,177,830.38

Statement Ending Balance	3,177,830.38
Bank Difference	0.00
General Ledger Difference	0.00

CASH BALANCE CONSISTS OF THE FOLLOWING GENERAL LEDGER ACCOUNTS

41-1-1102-000 POOL INVESTMENTS

Cleared Other

Item Date	Reference	Item Type	Description	Amount
08/31/2021	INT 083121	Interest	FUND 41- LOGIC	103.78
08/31/2021	MISC 083121	Miscellaneous	FUND 41- TO REC WIRE TXFRS	105,000.00
			Total Cleared Other (2)	105,103.78

Pharr, TX

Balance Sheet
Account Summary
As Of 08/31/2021

Account	Name	Balance	
Fund: 42 - HCRMA-DEBT SERVICE			
Assets			
42-1-4105-000	WILMINGTON-DEBT SERVICE	1,026,698.85	
42-1-4105-001	DEBT SVC - JR LIEN	6,664,029.00	
42-1-4105-002	DEBT SERVICE- 2020 SERIES	1,020,133.98	
	Total Assets:	**8,710,861.83**	**8,710,861.83**
Liability			
	Total Liability:	**0.00**	
Equity			
42-3-4400-000	FUND BALANCE	5,710,256.78	
	Total Beginning Equity:	**5,710,256.78**	
Total Revenue		3,776,165.58	
Total Expense		775,560.53	
Revenues Over/Under Expenses		**3,000,605.05**	
	Total Equity and Current Surplus (Deficit):	**8,710,861.83**	
	Total Liabilities, Equity and Current Surplus (Deficit):		**8,710,861.83**

Pharr, TX

Budget Report
Account Summary
For Fiscal: 2021 Period Ending: 08/31/2021

		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Remaining
Fund: 42 - HCRMA-DEBT SERVICE							
Revenue							
42-4-1506-000	INTEREST INCOME	0.00	0.00	18.54	83.56	83.56	0.00 %
42-4-1506-001	INTEREST INCOME-JR LIEN	0.00	0.00	220.18	3,492.07	3,492.07	0.00 %
42-4-1506-002	INTEREST 2020 SERIES	0.00	0.00	16.24	72.43	72.43	0.00 %
42-4-1999-000	TRANSFERS IN-FROM GENERAL FU	0.00	0.00	330,544.44	3,772,517.52	3,772,517.52	0.00 %
	Revenue Total:	**0.00**	**0.00**	**330,799.40**	**3,776,165.58**	**3,776,165.58**	**0.00 %**
Expense							
42-52900-4703-001	INTEREST EXPENSE-VRF 13 BOND	0.00	0.00	0.00	79,771.00	-79,771.00	0.00 %
42-52900-4703-005	INTEREST EXPENSE- 2020 SERIES	0.00	0.00	0.00	693,789.53	-693,789.53	0.00 %
42-52900-4727-000	FEES	0.00	0.00	0.00	2,000.00	-2,000.00	0.00 %
	Expense Total:	**0.00**	**0.00**	**0.00**	**775,560.53**	**-775,560.53**	**0.00 %**
	Fund: 42 - HCRMA-DEBT SERVICE Surplus (Deficit):	**0.00**	**0.00**	**330,799.40**	**3,000,605.05**	**3,000,605.05**	**0.00 %**
	Report Surplus (Deficit):	**0.00**	**0.00**	**330,799.40**	**3,000,605.05**	**3,000,605.05**	**0.00 %**

Pharr, TX

Bank Statement Register

WILMINGTON-DEBT SERVICE

Period 8/1/2021 - 8/31/2021

9/22/21

Bank Statement		General Ledger	
Beginning Balance	901,977.07	Account Balance	1,026,698.85
Plus Debits	124,721.78	Less Outstanding Debits	0.00
Less Credits	0.00	Plus Outstanding Credits	0.00
Adjustments	0.00	Adjustments	0.00
Ending Balance	1,026,698.85	Adjusted Account Balance	1,026,698.85

Statement Ending Balance	1,026,698.85
Bank Difference	0.00
General Ledger Difference	0.00

CASH BALANCE CONSISTS OF THE FOLLOWING GENERAL LEDGER ACCOUNTS

42-1-4105-000 WILMINGTON-DEBT SERVICE

Cleared Other

Item Date	Reference	Item Type	Description	Amount
08/31/2021	MISC 083121	Miscellaneous	FUND 42- WILMINGTON TRUST NEW ACCT	124,721.78
			Total Cleared Other (1)	124,721.78

Pharr, TX

Bank Statement Register

DEBT SVC - JR LIEN

Period 8/1/2021 - 8/31/2021

Bank Statement		General Ledger	
Beginning Balance	6,663,808.82	Account Balance	6,664,029.00
Plus Debits	220.18	Less Outstanding Debits	0.00
Less Credits	0.00	Plus Outstanding Credits	0.00
Adjustments	0.00	Adjustments	0.00
Ending Balance	6,664,029.00	Adjusted Account Balance	6,664,029.00

Statement Ending Balance	6,664,029.00
Bank Difference	0.00
General Ledger Difference	0.00

CASH BALANCE CONSISTS OF THE FOLLOWING GENERAL LEDGER ACCOUNTS

42-1-4105-001 DEBT SVC - JR LIEN

Cleared Other

Item Date	Reference	Item Type	Description	Amount
08/31/2021	INTEREST 083121	Interest	FUND 42- LOGIC INTEREST	220.18
			Total Cleared Other (1)	220.18

Pharr, TX

Bank Statement Register

INVESTMENTS D/S 2020 SERIES -

Period 8/1/2021 - 8/31/2021

Bank Statement		General Ledger	
Beginning Balance	814,276.54	Account Balance	1,020,133.98
Plus Debits	205,857.44	Less Outstanding Debits	0.00
Less Credits	0.00	Plus Outstanding Credits	0.00
Adjustments	0.00	Adjustments	0.00
Ending Balance	1,020,133.98	Adjusted Account Balance	1,020,133.98

Statement Ending Balance	1,020,133.98
Bank Difference	0.00
General Ledger Difference	0.00

CASH BALANCE CONSISTS OF THE FOLLOWING GENERAL LEDGER ACCOUNTS

42-1-4105-002 DEBT SERVICE- 2020 SERIES

Cleared Other

Item Date	Reference	Item Type	Description	Amount
08/31/2021	MISC 083121	Miscellaneous	FUND 42- WILMINGTON TRUST NEW ACCT	205,857.44
			Total Cleared Other (1)	205,857.44

Pharr, TX

Balance Sheet
Account Summary
As Of 08/31/2021

Account	Name		Balance	
Fund: 45 - HCRMA - CAP.PROJECTS FUND				
Assets				
45-1-1102-000	Pool Investment		73,406.76	
		Total Assets:	73,406.76	73,406.76
Liability				
		Total Liability:	0.00	
Equity				
45-3-1400-000	Fund Balance		-19,007.46	
		Total Beginning Equity:	-19,007.46	
Total Revenue			619,007.59	
Total Expense			526,593.37	
Revenues Over/Under Expenses			92,414.22	
		Total Equity and Current Surplus (Deficit):	73,406.76	
		Total Liabilities, Equity and Current Surplus (Deficit):		73,406.76

Pharr, TX

Budget Report
Account Summary
For Fiscal: 2021 Period Ending: 08/31/2021

		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Remaining
Fund: 45 - HCRMA - CAP.PROJECTS FUND							
Revenue							
45-4-1506-000	Interest Revenue	0.00	0.00	0.95	7.59	7.59	0.00 %
45-4-1999-000	TRANSFER IN - GENERAL FUND	0.00	0.00	150,000.00	529,000.00	529,000.00	0.00 %
45-4-4710-000	CITY CONTRIBUTIONS	0.00	0.00	0.00	90,000.00	90,000.00	0.00 %
	Revenue Total:	**0.00**	**0.00**	**150,000.95**	**619,007.59**	**619,007.59**	**0.00 %**
Expense							
45-52900-8800-000	Consulting & Engineering	0.00	0.00	36,314.13	339,829.79	-339,829.79	0.00 %
45-52900-8810-000	SH 365- Enviornmental	0.00	0.00	0.00	19,646.45	-19,646.45	0.00 %
45-52900-8810-003	365 RIGHT OF WAY	0.00	0.00	625.00	6,321.00	-6,321.00	0.00 %
45-52900-8820-000	IBTC - Enviornmental	0.00	0.00	6,423.25	53,766.06	-53,766.06	0.00 %
45-52900-8820-003	IBTC - ROW	0.00	0.00	41,157.07	47,030.07	-47,030.07	0.00 %
45-52900-8841-000	LEGAL FEES	0.00	0.00	18,032.50	60,000.00	-60,000.00	0.00 %
	Expense Total:	**0.00**	**0.00**	**102,551.95**	**526,593.37**	**-526,593.37**	**0.00 %**
	Fund: 45 - HCRMA - CAP.PROJECTS FUND Surplus (Deficit):	**0.00**	**0.00**	**47,449.00**	**92,414.22**	**92,414.22**	**0.00 %**
	Report Surplus (Deficit):	**0.00**	**0.00**	**47,449.00**	**92,414.22**	**92,414.22**	**0.00 %**

Pharr, TX

Bank Statement Register

Pool Investment

Period 8/1/2021 - 8/31/2021

Bank Statement		General Ledger	
Beginning Balance	25,957.76	Account Balance	73,406.76
Plus Debits	150,000.95	Less Outstanding Debits	0.00
Less Credits	102,551.95	Plus Outstanding Credits	0.00
Adjustments	0.00	Adjustments	0.00
Ending Balance	73,406.76	Adjusted Account Balance	73,406.76

Statement Ending Balance	73,406.76
Bank Difference	0.00
General Ledger Difference	0.00

CASH BALANCE CONSISTS OF THE FOLLOWING GENERAL LEDGER ACCOUNTS

45-1-1102-000 Pool Investment

Cleared Other

Item Date	Reference	Item Type	Description	Amount
08/31/2021	DFT0004141	Bank Draft	BRACEWELL LLP ATTORNEYS AT LAW	-13,720.00
08/31/2021	DFT0004142	Bank Draft	ESCOBEDO & CARDENAS, LLP	-4,312.50
08/31/2021	DFT0004143	Bank Draft	BLANTON & ASSOCIATES, INC.	-3,941.94
08/31/2021	DFT0004144	Bank Draft	BLANTON & ASSOCIATES, INC.	-2,481.31
08/31/2021	DFT0004145	Bank Draft	HDR	-12,862.09
08/31/2021	DFT0004146	Bank Draft	HDR	-14,055.00
08/31/2021	DFT0004147	Bank Draft	HDR	-9,397.04
08/31/2021	DFT0004148	Bank Draft	HDR	-39,714.07
08/31/2021	DFT0004149	Bank Draft	TOP CUT LAWN CARE, INC.	-648.00
08/31/2021	DFT0004150	Bank Draft	SAN MIGUEL LAWN CARE SERVICES	-625.00
08/31/2021	DFT0004151	Bank Draft	SAN MIGUEL LAWN CARE SERVICES	-795.00
08/31/2021	MISC 083121	Miscellaneous	FUND 45- WILMINGTON TRUST	150,000.95
			Total Cleared Other (12)	47,449.00

Pharr, TX

Balance Sheet
Account Summary
As Of 08/31/2021

Account	Name	Balance	
Fund: 46 - HCRMA- VRF SERIES 2020A			
Assets			
46-1-1102-000	INVESTMENTS	5,591,448.24	
	Total Assets:	**5,591,448.24**	**5,591,448.24**
Liability			
	Total Liability:	**0.00**	
Equity			
46-3-3400-000	FUND BALANCE	5,660,123.03	
	Total Beginning Equity:	**5,660,123.03**	
Total Revenue		2,235.26	
Total Expense		70,910.05	
Revenues Over/Under Expenses		-68,674.79	
	Total Equity and Current Surplus (Deficit):	**5,591,448.24**	
	Total Liabilities, Equity and Current Surplus (Deficit):		**5,591,448.24**

Pharr, TX

Budget Report
Account Summary
For Fiscal: 2021 Period Ending: 08/31/2021

		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Remaining
Fund: 46 - HCRMA- VRF SERIES 2020A							
Revenue							
46-4-1506-000	INTEREST REVENUE	0.00	0.00	184.78	2,235.26	2,235.26	0.00 %
	Revenue Total:	**0.00**	**0.00**	**184.78**	**2,235.26**	**2,235.26**	**0.00 %**
Expense							
46-52900-8810-003	365 RIGHT OF WAY	0.00	0.00	655.55	70,910.05	-70,910.05	0.00 %
	Expense Total:	**0.00**	**0.00**	**655.55**	**70,910.05**	**-70,910.05**	**0.00 %**
	Fund: 46 - HCRMA- VRF SERIES 2020A Surplus (Deficit):	**0.00**	**0.00**	**-470.77**	**-68,674.79**	**-68,674.79**	**0.00 %**
	Report Surplus (Deficit):	**0.00**	**0.00**	**-470.77**	**-68,674.79**	**-68,674.79**	**0.00 %**

Pharr, TX

Bank Statement Register

INVESTMENTS

Period 8/1/2021 - 8/31/2021

09/22/21

Bank Statement		General Ledger	
Beginning Balance	5,591,919.01	Account Balance	5,591,448.24
Plus Debits	185.48	Less Outstanding Debits	0.00
Less Credits	656.25	Plus Outstanding Credits	0.00
Adjustments	0.00	Adjustments	0.00
Ending Balance	5,591,448.24	Adjusted Account Balance	5,591,448.24

Statement Ending Balance	5,591,448.24
Bank Difference	0.00
General Ledger Difference	0.00

CASH BALANCE CONSISTS OF THE FOLLOWING GENERAL LEDGER ACCOUNTS

46-1-1102-000 INVESTMENTS

Cleared Other

Item Date	Reference	Item Type	Description	Amount
08/31/2021	DFT0004152	Bank Draft	SENDERO ACQUISITIONS	-656.25
08/31/2021	MISC 083121	Miscellaneous	FUND 46- LOGIC	0.70
08/31/2021	INTEREST 083121	Interest	FUND 46- LOGIC	184.78
			Total Cleared Other (3)	-470.77

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Item 2D

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**2D**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/20/21**
FINANCECOMMITTEE		**MEETING DATE**	**09/28/21**
TECHNICAL COMMITTEE			

1. Agenda Item: **RESOLUTION 2021-28 – APPROVING THE THIRD AMENDMENT AND RESTATED INTERLOCAL AGREEMENT FOR ADMINISTRATIVE SERVICES WITH THE CITY OF PHARR**

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

   Approving Resolution 2021-28 – Approving the Third Amended and Restated Interlocal Agreement for Administrative Services with the City of Pharr

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

4. Budgeted: ___Yes ___No X N/A

5. Staff Recommendation**: Motion to approve Resolution 2021-28 – Approving the Third Amended and Restated Interlocal Agreement for Administrative Services with the City of Pharr, as presented.**

6. Program Manager's Recommendation: ___Approved ___Disapproved **X** None

7. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: X Approved ___Disapproved ___None

9. Chief Auditor's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Financial Officer's Recommendation: ___Approved ___Disapproved X None

11. Chief Development Engineer's Recommendation: ___Approved ___Disapproved X None

12. Chief Construction Engineer's Recommendation: ___Approved ___Disapproved X None

13. Executive Director's Recommendation: **X** Approved ___Disapproved ___None

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY
BOARD RESOLUTION 2021- 28

APPROVING THE THIRD AMENDED AND RESTATED INTERLOCAL AGREEMENT FOR ADMINISTRATIVE SERVICES WITH THE CITY OF PHARR

THIS RESOLUTION is adopted this 28th day of September, 2021 by the Board of Directors of the Hidalgo County Regional Mobility Authority.

WHEREAS, the Hidalgo County Regional Mobility Authority (the "Authority"), acting through its Board of Directors (the "Board"), is a regional mobility authority created pursuant to Chapter 370, Texas Transportation Code, as amended (the "Act");

WHEREAS, Section 370.033 of the Texas Transportation Code provides that a regional mobility authority may enter into contracts or agreements with another governmental entity;

WHEREAS, the Authority requires administrative support and staffing to undertake its duties and responsibilities;

WHEREAS, the Authority entered into an Interlocal Agreement with the City of Pharr for administrative services, effective on June 20, 2012 and amended and restated on April 4, 2014; and, again amended and restated on July 28,2015; and

WHEREAS, the Board now finds it to be in the best interest of the Authority to provide critical clarifications to the Agreement with regard to administrative support and staffing:

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

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

Section 2. The Board hereby authorizes the Chairman to execute the Third Amended and Restated Agreement with the City of Pharr, attached hereto in substantially final form as Exhibit A.

* * *

PASSED AND APPROVED AS TO BE EFFECTIVE IMMEDIATELY BY THE BOARD OF DIRECTORS OF THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY AT A REGULAR MEETING on the 28th day of September, 2021 at which meeting a quorum was present.

S. David Deanda, Jr., Chairman

Ezequiel Reyna, Jr., Secretary / Treasurer

Exhibit A

THIRD AMENDED AND RESTATED INTERLOCAL AGREEMENT FOR ADMINISTRATIVE SERVICES

THIRD AMENDED AND RESTATED INTERLOCAL AGREEMENT FOR ADMINISTRATIVE SERVICES

STATE OF TEXAS §
COUNTY OF HIDALGO §

This Third Amended and Restated Interlocal Agreement for Administrative Services (the "**Agreement**") made and entered into this 28th day of September, 2021 further amends and restates that certain Second Amended and Restated Interlocal Agreement for Administrative Services dated July 28, 2015 and the First Amended and Restated Interlocal Agreement for Administrative Services entered into on April 4, 2014, by and between the **CITY OF PHARR**, Texas, a home rule municipality (hereinafter referred to as the "**CITY**") and the **HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY** (hereinafter referred to as "**HCRMA**"), a political subdivision of the State of Texas operating pursuant to Chapter 370, Texas Transportation Code, both situated in Hidalgo County in the Rio Grande Valley of Texas.

WITNESSETH:

WHEREAS, Chapter 791 of the Texas Government Code provides that any one or more public agencies may contract with each other for the performance of governmental functions or services in which the contracting parties are mutually interested; and

WHEREAS, Section 370.033 of the Texas Transportation Code provides that a regional mobility authority may enter into contracts or agreements with another governmental entity; and

WHEREAS, the CITY and the HCRMA share the goal of improving mobility within the CITY and throughout the region; and

WHEREAS, the CITY provides an Office Site under the Lease, certain Administrative Services, and Staffing Services to the HCRMA; and

WHEREAS, the CITY and the HCRMA desire to clarify the benefits provided to HCRMA staff members under this Agreement, specifically related to retirement benefits, and have undertaken the amended language herein for that purpose in Section II.B.1.e.(i)-(ii); and

WHEREAS, the CITY and the HCRMA desire to further clarify in Section VI.H. that the exhibits and schedules to this Agreement may be amended administratively by the City Manager of the CITY and the Executive Director of the HCRMA;

NOW, THEREFORE, the CITY and the HCRMA hereby agree to the terms and conditions of this Agreement. This Agreement consists of the following sections:

I. Definitions
II. Duties of the CITY
III. Duties of the HCRMA
IV. Default
V. Term and Termination
VI. Miscellaneous

All of the recitals and above described sections and documents are hereby incorporated into this Agreement by this reference for all purposes.

* * *

IN WITNESS HEREOF, the City of Pharr and the Hidalgo County Regional Mobility Authority have made and executed this Agreement in multiple copies, each of which is an original.

CITY OF PHARR

_____
Ambrosio "Amos" Hernandez, Mayor

Date: _____

Attest**:**

_____
Imelda Barrera, Assistant City Clerk

Approved as to form:

_____
City Attorney

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

_____
S. David Deanda, Jr., Chairman

Date: _____

Attest:

_____
Forrest Runnels, Vice Chair

Approved as to form:

_____
Blakely L. Fernandez, Board Attorney - HCRMA

I. DEFINITIONS

As used in this Agreement, the following terms shall have the meanings set out below.

"**Administrative Services**" means services that support the HCRMA and allow for the completion of its duties as defined in Chapter 370 of the Texas Transportation Code, to wit: management, financial management, personnel, human resources, purchasing and procurement services, information technology services and network systems maintenance, facilities services, and other administrative services agreed to by the parties in writing from time to time. The Administrative Services provided by the CITY to the HCRMA shall be identified in Schedule A, attached hereto and incorporated herein, as may be amended from time to time by the parties.

"**Agreement**" means this Third Amended and Restated Interlocal Agreement by and between the CITY and the HCRMA.

"**CITY**" means the City of Pharr, a home rule municipality.

"**Eligible Employee**" means employees eligible for certain retirement benefits described in Section II.B.1.e.(i)-(ii).

"**Governing Board**" means the City Commission of the City of Pharr.

"**HCRMA**" means the Hidalgo County Regional Mobility Authority, a political subdivision operating under Chapter 370, Texas Transportation Code.

"**Lease**" means that certain lease, including the First Amendment, by and between the CITY and the HCRMA for the Office Site, as may be amended or restated from time to time.

"**Office Site**" means the office space, related common space and services leased by the HCRMA at 203 W Newcombe Ave, Pharr, TX 78577.

"**Staffing Services**" means the provision of CITY staff to serve the HCRMA in the capacity of an Executive Director and other staff required by the HCRMA, which may include, but is not limited to an Administrative Assistant, Auditor, and Land Acquisition Manager, Engineering Manager, and may also include a Chief Development Officer, Chief Construction Engineer, Chief Auditor/Compliance Officer, Chief Financial Officer, Construction Manager, Public Affairs Manager, and any related support staff.

II. DUTIES OF THE CITY

A. Administrative Services.

1. During the term and as part of the normal course of business of the CITY, the CITY shall provide certain Administrative Services to the HCRMA. The services shall include purchasing and procurement services, financial management, information technology services and network systems maintenance, facilities services, and other administrative services agreed to by the parties from time to time. Services described herein shall be provided at the written request of the HCRMA.

2. The CITY and the HCRMA will mutually agree to the standard of each administrative service to be provided at the time of request. Expenses incurred by the CITY in providing such administrative services shall be compensated in accordance with Section III of this Agreement.

B. Staff and Management Services.

1. **CITY Employees**. The CITY shall provide the HCRMA with CITY Staffing Services to meet the RMA's staffing requirements, as requested by the HCRMA from time to time.

a. CITY will provide an employee, approved by the Board of Directors of the HCRMA, to serve as the Executive Director of the Authority.

b. Executive Director shall receive the same benefits and services as similarly-classified CITY employees, including health, life, dental, long term disability, retirement, wellness program, unemployment compensation benefits, and leave accruals and unless otherwise stated herein shall be subject to all rules and requirements of CITY employees.

c. Executive Director shall be a senior administrator at the CITY, reporting directly to the CITY Manager and the Board of Directors of the HCRMA.

d. CITY shall not change or replace Executive Director without written consent from the HCRMA Board Chairman.

e. Upon request by the Executive Director and approval of the HCRMA Board, the CITY shall provide additional administrative and management staff to the HCRMA under the terms and conditions of this Agreement. Executive Director shall approve any additional administrative or management staff provided by the CITY to the HCRMA as Staffing Services.

i. Any administrative or management staff provided by the CITY to the HCRMA shall receive the same benefits and services as similarly-classified CITY employees, including health, life, dental, long term disability, retirement, wellness program, unemployment compensation benefits, and leave accruals and unless otherwise stated herein shall be subject to all rules and requirements of CITY employees.

ii. For clarification, benefits referenced in subsection (i) above include retirement health coverage contribution eligibility for administrative and management staff who have a start date with the HCRMA prior to January 1, 2021 and have not less than twenty (20) years of participation in the Texas Municipal Retirement System (the "**Eligible Employees**").

1. The Eligible Employees shall be eligible upon retirement to receive continued health coverage at the expense of the HCRMA not to exceed $615.00 per month for the retiree.

2. Any Eligible Employee shall comply with the procedural requirements as may be applicable, and shall further execute any necessary authorizations allowing the HCRMA and/or the City to withdraw any payments owed on monthly premiums. Any Eligible Employee shall be subject to forfeiture or cancellation of continued coverage, at the expense of the municipality, upon becoming delinquent for monthly premiums. Should such cancellation or termination occur, the person will not be eligible for continued coverage. (See Chapter 37, Section 8 of Pharr Personnel Policy Manual – Retirement.)

3. If a retired Eligible Employee elects to voluntarily discontinue, cancel, or terminate coverage, the retired person is no longer eligible for coverage. Dependents are not eligible for health benefit coverage once the Eligible Employee is separated from the City.

4. Except as stated herein, all other provisions of Chapter 38, Section 3 of the Pharr Personnel Policy Manual apply.

f. The initial staff provided to the HCRMA shall include those persons currently serving the HCRMA in a full time capacity. Additional staff members for the HCRMA shall be hired as CITY employees pursuant to CITY policy and practices. The Executive Director, or his designee, shall be responsible for the solicitation, interviewing, and selection of any additional staff members.

2. **Executive Director**. In addition to any employment requirements maintained by the CITY and outlined in Chapter 171, Texas Local Government Code, any Executive Director for the HCRMA must comply with and be qualified under the requirements of Section 370.252, Texas Transportation Code and Title 43 of the Texas Administrative Code, unless an exception is granted by the Commission, to wit:

i. The Executive Director may not accept or solicit any gift, favor, or service that might reasonably influence him in the discharge of an official duty or that he knows is being offered with the intent to influence his official conduct.

ii. The Executive Director may not accept other employment or engage in a business or professional activity that he might reasonably expect would require or induce him to disclose confidential information acquired by reason of his position as Executive Director.

iii. The Executive Director may not accept other employment or compensation that could reasonably be expected to impair his independence or judgment in the performance of his official duties.

iv. The Executive Director may not make personal investments, including investments of his spouse, which could reasonably be expected to create a substantial conflict between his private interests and the interests of the HCRMA.

v. The Executive Director may not intentionally or knowingly solicit, accept, or agree to accept any benefit for having exercised his official duties in favor of another.

vi. The Executive Director may not have a personal interest in an agreement executed by the HCRMA.

vii. A person is not eligible to serve as the Executive Director of the HCRMA if he or his spouse is employed or participates in the management of a business entity or other organization, other than a political subdivision, that is regulated by or received funds directly from the HCRMA**,** the Texas Department of Transportation, or the County.

viii. A person is not eligible to serve as the Executive Director of the HCRMA if he or his spouse directly or indirectly owns or controls more than ten percent (10%) interest in a business or other organization that is regulated by or receive funds from the HCRMA, the Texas Department of Transportation, or the County.

ix. A person is not eligible to serve as the Executive Director of the HCRMA if he or his spouse uses or receives a substantial amount of tangible goods, services, or funds from the HCRMA, the Texas Department of Transportation, or the County.

x. A person is not eligible to serve as the Executive Director of the HCRMA if he or his spouse is required to register as a lobbyist under Chapter 305, Government Code, because of the person's activities for compensation on behalf of a profession related to the operation of the HCRMA, the Texas Department of Transportation, or the County.

xi. A person is not eligible to serve as the Executive Director of the HCRMA if he or his spouse is an officer, employee, or paid consultant of a Texas trade association in the field of road construction or maintenance, public transportation, or aviation, or if the person's spouse is an officer, manager, or paid consultant of a Texas trade association in the field of road construction or maintenance, public transportation, or aviation.

xii. A person is not eligible to serve as the Executive Director of the HCRMA if he or his spouse has received funds from the Texas Department of Transportation for acquisition of highway right-of-way unless the acquisition was for a project of the HCRMA and properly disclosed as such.

3. **Work on behalf of the CITY or other Political Subdivisions**.

i. To the extent permitted by State law and, if necessary, authorized by the Commission, with the consent of the Board of Directors of the HCRMA, the Executive Director may perform certain acts on behalf of the CITY or another political subdivision that benefit the County or the region.

ii. CITY does hereby release, indemnify, and promise to defend and save harmless the HCRMA, its officials, officers, employees, and agents from and against any and all liability, loss, damages, expense, action, and claims, including costs and reasonable attorney's fees incurred by the HCRMA, its officials, officers, employees, and agents in defense thereof, asserting or arising directly or indirectly on account of or out of Executive Director or other CITY staff member's performance of service to, for, or on behalf of the CITY.

C. Audit. The CITY will allow the HCRMA access to any and all electronic files, books, documents, papers and records for the purpose of making an audit of the services provided to the HCRMA by the CITY.

D. Public Information Requests. At the request of the HCRMA, the CITY will process requests for information deemed public under the Texas Public Information Act (Chapter 552, Texas Government Code) related to the services defined in this Agreement in accordance to applicable laws and CITY and HCRMA policies.

III. DUTIES OF THE HCRMA

A. **Reimbursement for Administrative Services**. The HCRMA will reimburse the CITY for Administrative Services based on costs provided in Schedule A. Administrative Services provided to the HCRMA but not listed on Schedule A shall be reimbursed based on actual cost plus a five percent (5%) administrative fee. Actual cost shall include out-of-pocket expenses (as in the purchase of software) undertaken by the CITY and/or hourly costs of CITY employees to accomplish the Administrative Services. CITY employees shall bill their time to the HCRMA in quarter of an hour increments.

B. Reimbursement for Staffing Services. HCRMA shall assume all costs and expenses for the dedicated Executive Director and any other staff assigned to the HCRMA, including costs of fringe benefits and professional obligations, and shall pay the CITY an administrative fee of $75.00 per employee per pay period (the "Staffing Fee").

C. Timely Payment.

1. **Administrative Services.** The HCRMA shall reimburse the CITY on a monthly basis for administrative services performed during the Term of this Agreement. The CITY will invoice the HCRMA following the end of each month for administrative services

performed during that prior month. Payments will be made in full by the HCRMA within thirty (30) days after receipt of the invoice. Any questions or disputes about amounts invoiced will be submitted to the CITY by the HCRMA within fifteen (15) days of the HCRMA's receipt of such invoice. The HCRMA agrees to timely pay amounts not in dispute. The parties agree to use best efforts to resolve amounts in dispute within fifteen (15) days of notice of such dispute.

2. **Staffing Services.** The HCRMA shall reimburse the CITY on a monthly basis for staffing services performed during the term of this Agreement. The CITY will invoice the HCRMA following the end of each month for Staffing Services, including the Staffing Fee. Payments will be made in full by the HCRMA within thirty (30) days after receipt of the invoice. The CITY shall provide a complete accounting of current costs, including benefit details and administrative fees, to the HCRMA. Any increases in such costs must be approved by the HCRMA Board of Directors.

D. Executive Director and other CITY Staff dedicated to the HCRMA.

1. The Board of Directors of the HCRMA shall approve the CITY employee designated as Executive Director and shall, in conjunction with the CITY Manager, supervise the Executive Director in the performance of the administrative tasks of the HCRMA.

2. The Board of Directors of the HCRMA shall provide an annual performance evaluation of the Executive Director. A copy of this evaluation shall be provided to the CITY.

3. The Executive Director shall select and/or approve any staff members provided by the CITY. Such staff members designated as HCRMA staff shall report directly to the Executive Director and the Executive Director shall supervise and perform annual evaluations on all such staff. If the City requires annual evaluations of City employees, the Executive Director will provide copies of such evaluations to the City's human resources department.

4. The HCRMA shall compensate CITY for all costs related to Executive Director and any other staff assigned to the HCRMA as described herein.

5. HCRMA shall directly reimburse Executive Director and any other staff assigned to the HCRMA for any expenses incurred in pursuit of official HCRMA business, including any licensing or training requirements, mileage and other business expenses. Any expenses incurred by Executive Director or other staff assigned to the HCRMA in pursuit of CITY business will be reimbursed by CITY.

6. HCRMA does hereby release, indemnify, and promise to defend and save harmless the CITY, its elected officials, officers, employees, and agents from and against any and all liability, loss, damages, expense, action, and claims, including costs and reasonable attorney's fees incurred by the CITY, its elected officials, officers, employees, and agents in defense thereof, asserting or arising directly or indirectly on account of or out of Executive Director or other CITY staff's performance of service to the HCRMA pursuant to this Agreement.

IV. DEFAULT

A. HCRMA Default. The HCRMA is in default of this Agreement if it fails to timely reimburse the CITY for administrative services provided or prompt pre-payment of personnel services as described herein.

1. The decision to exercise rights granted by this subsection shall be made by the Governing Board of the CITY.

2. If payment has not been received by the CITY forty five (45) days after the date the HCRMA received the invoice, the CITY shall deliver written notice of such breach to the HCRMA. If the HCRMA does not cure that breach within forty five (45) days of receiving the written notice of breach, the HCRMA is in default and the Governing Board shall deliver a written notice of default to the HCRMA that specifies the following:

a. The nature of the default,
b. The date of the notice of breach,
c. The failure of the HCRMA to cure timely, and
d. The administrative services to the HCRMA are terminated on the effective date stated in the notice if the termination is approved by the Governing Board.

3. Upon default by the HCRMA, the CITY has the right, but is not obligated, to terminate this Agreement and deny any further services to the HCRMA. Such termination shall not impact the term of the Lease.

4. The HCRMA is not in default for non-payment of amounts in dispute. If a dispute over an invoiced amount is not resolved by the parties as described in Section III.B above, the parties agree to jointly select an independent mediator to resolve the payment in question. The parties agree to abide by the decision of the independent mediator. If the mediator determines a payment is due, such payment must be made within thirty (30) days of such decision.

B. CITY Default. The CITY is in default of this Agreement if it fails to perform the services requested by the HCRMA or meet the service standards agreed to by the parties.

1. The HCRMA shall give the CITY prompt notice of any deficiency in service. If the CITY fails to cure the deficiency within a reasonable time, the HCRMA may cancel its request and seek services from another provider.

2. The HCRMA shall not owe the CITY any reimbursement for services not provided.

3. If the CITY fails to perform administrative services or fails to perform to the standards agreed to by the parties, the HCRMA may terminate this Agreement without

impacting the term of the Lease.

V. TERM AND TERMINATION

A. This Agreement commences on the date of execution of final signature, and shall remain in effect until terminated by the Parties.

B. This Agreement may be terminated upon thirty (30) calendar days' written notice to the other party.

C. In the event of termination of this Agreement, the parties agree to utilize best efforts to reduce or eliminate the impact on the CITY employees dedicated to the HCRMA, including assisting with the transition of benefits.

VI. MISCELLANEOUS

A. Other Services. Nothing in this Agreement shall be deemed to create, by implication or otherwise, any duty or responsibility of either party to undertake or not to undertake any other service, or to provide any service, except as contemplated by this Agreement or in a separate written instrument executed by both parties. Nothing in this Agreement shall compromise the independent authority of the HCRMA.

B. Governmental Immunity. 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.

C. Force Majeure. Force majeure includes, but is not limited to, acts of God, acts of the public enemy, war, blockades, insurrection, riots, acts of terrorism, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, tornadoes, hurricanes, arrests and restraints of government and people, explosions, and any other inabilities of either party to carry out its obligations under this Agreement and not within the control of the party claiming such inability, and which by the exercise of due diligence and care such party could not have avoided.

In the event either party is rendered unable, wholly or in part, by force majeure, to carry out any of its obligations under this Agreement, it is agreed that, upon such party's giving notice and full particulars of such force majeure in writing to the other party within five (5) business days after the occurrence of the cause relied upon, then the obligations of the party giving such notice, to the extent it is affected by force majeure and to the extent that due diligence is being used to resume performance at the earliest practicable time, shall be suspended during the continuance of any inability so caused as to the extent provided, but for no longer period. Such cause shall as far as possible be remedied with all reasonable dispatch.

D. Entire Agreement. This Agreement, including the attached Lease, merges the prior agreements, negotiations and understandings of the parties hereto and embodies the entire agreement of the parties, and there are no other agreements, assurances, conditions, covenants (expressed or implied) or other terms, whether written or verbal, antecedent or contemporaneous, with the execution hereof.

E. Applicable Laws. This Agreement is subject to all laws of the State of Texas, the CITY Charter and Ordinances of the CITY, the laws of the federal government of the United States of America, and all rules and regulations of any regulatory body or officer having relevant jurisdiction, including the Texas Department of Transportation. Venue for any litigation relating to this Agreement shall be Hidalgo County, Texas. Any dispute between **CITY** and **HCRMA** regarding this Agreement will be governed by Texas Government Code, Chapter 2009, *Alternative Dispute Resolution for Use by Governmental Bodies*, and any applicable Model Rules promulgated by the Office of the Attorney General, the State of Texas.

F. Assignment. Neither party shall have the right to assign the rights, obligations, responsibilities, or privileges of this Agreement without the written consent of the other.

G. Parties in Interest. This Contract shall not bestow any rights upon any third party, but rather shall bind and benefit the CITY and HCRMA only.

H. Amendments and Modifications. This Agreement may not be amended or modified except in writing and executed by both parties to this Agreement and authorized by their respective governing bodies. Exhibits and schedules to this Agreement may be amended administratively by the City Manager of the CITY and the Executive Director of the HCRMA.

I. Severability. If any provision of this Agreement 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 matter that it will, to the maximum extent practicable, give effect to the intent of this Agreement and be deemed validated and enforceable.

J. Notice. Notices required under this Agreement may be delivered by United States Postal Service regular surface mail, certified mail, registered mail, overnight delivery, or hand delivery. Notices should be addressed as follows:

CITY: City of Pharr

Pharr City Hall
118 South Cage
Pharr, TX 78577
Attn: City Manager

With a copy to:
City Attorney at the same location

HCRMA: Hidalgo County Regional Mobility Authority
203 W. Newcombe Ave
Pharr, TX 78577

With a copy to:
Blakely Fernandez
Bracewell & Giuliani LLP
300 Convent St., Ste. 1500
San Antonio, TX 78205

K. Execution in Counterparts. This Agreement may be simultaneously executed in counterparts, each of which shall be an original and all of which shall be considered fully executed as of the date first written above, when both parties have executed an identical counterpart, notwithstanding that all signatures may not appear on the same counterpart.

*** * ***

SCHEDULE A

updated as of September 28, 2021

Administrative Services Requested by the HCRMA and Approved by the City

$180.00	Monthly/Internet/Phone Connection
$20.00	Monthly/ Each Extension
$5.00	Monthly/ Fax line
$30.00	Monthly/ Each Email Account (with Outlook Sync/SPAM Protection/Email Anti-virus)
$75.00	Monthly/ Conference Bridge Access
$75.00	Monthly/ Video Conference System Access
$150.00	Monthly /200 GB Network storage / $75.00 each additional 100 GB of storage (backup included – weekly)
$100.00	Monthly/ General IT Service Support/Server Management
$20.00	Monthly/ hosting of RMA website (4GB Max) _ Requires utilization of city web contractors for security purposes.
$400.00	Monthly/ Video Production & Archive of Meetings

SCHEDULE B

updated as of September 28, 2021

Staffing Services Requested by the HCRMA and Provided by the City

Current Staff

Pilar Rodriguez, Executive Director (TMRS State Date 5/1/1992)
Eric Davila, Chief Development Engineer (TMRS Start Date 5/1/2017)
Ramon Navarro, Chief Construction Engineer (TMRS Start Date 9/1/2007)
Celia Gaona, Chief Auditor/Compliance Officer (TMRS Start Date 10/1/1999)
Jose Castillo, Chief Financial Officer (Retired through TMRS; part time)
Sergio Mandujano, Construction Records Keeper (TMRS Start Date 1/1/2016)
Maria Alaniz, Administrative Assistant III (TMRS Start Date 7/27/2016)
Ivonne Rodriguez, Administrative Assistant II (TMRS Start Date 9/1/2012)

Initial Staff

Pilar Rodriguez, Executive Director

Celia Gaona, Chief Auditor/Compliance Officer

Carlos "CJ" Moreno, Land Acquisition Coordinator

Flor E. Koll, Administrative Assistant

EXHIBIT A

LEASE AND FIRST AMENDMENT

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Item 2E

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**2E**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/14/21**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/21**
TECHNICAL COMMITTEE			

1. Agenda Item: **RESOLUTION 2021-44 – APPROVAL OF WORK AUTHORIZATION 10 TO THE PROFESSIONAL SERVICES AGREEMENT WITH MELDEN & HUNT TO PROVIDE BOUNDARY SURVEY SERVICES FOR THE 365 TOLLWAY WETLAND CONSERVATION EASEMENT.**

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

   Consideration and Approval of WA No. 10 to the PSA with Melden & Hunt to provide survey services for the 365 Tollway Project.

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

4. Budgeted: ___Yes ___No X N/A

5. Staff Recommendation**: Motion to approve Resolution 2021-44 – Approval of Work Authorization 10 to the Professional Services Agreement with Melden & Hunt to provide boundary survey services for the 365 Tollway Wetland Conservation Easement, as presented.**

6. Program Manager's Recommendation: ___Approved ___Disapproved **X** None

7. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: ___Approved ___Disapproved **X** None

9. Chief Auditor's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Financial Officer's Recommendation: ___Approved ___Disapproved **X** None

11. Chief Development Engineer's Recommendation: **X** Approved ___Disapproved **X** None

12. Chief Construction Engineer's Recommendation: ___Approved ___Disapproved **X** None

13. Executive Director's Recommendation: **X** Approved ___Disapproved ____None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Project: IBTC

- ☐ CMT Services
- ☐ Environmental
- ☐ Engineering
- ☐ Geo-Technical
- ☑ Surveying **Melden & Hunt**

WORK AUTHORIZATION SUMMARY

RESOLUTION 2021-44

Work Authorization # **10** Supplemental # _____

Amount **$ 2,105.00**

Approved Amendments:

Resolution No.	Description		Amount
2014-57	WA 1 - Prepare parcel plats and descript.	IBTC	$ 26,210.00
2014-83	WA 2 - Eight Cross Sections Donna Canal	IBTC	$ 5,542.00
2014-120	WA 1 - Sup 1 Revised parcel plats/description		$ 4,842.00
2016-01	WA 3 - Parcel 267 survey	IBTC	$ 4,968.00
2016-02	WA 4 - Banco 141 survey	SH365	$ 32,991.00
	Subtotal from Cont. Page		$ 16,437.50
	Total Approved WA		**$ 90,990.50**

Proposed Work Authorization and/or Supplemental

2021-44	WA 10 - Boundary Conservation Easement	**$ 2,105.00**

Goal and Options:

To Provide Boundary Survey Services for the 365 Tollway Wetland Conservation Easement.

Staff is recommending approval of this request in the amount of $ 2,105.00
Proposed total approved WA and/or Supplementals $ 93,095.50

Eric Davila, Dev. Engineer
Requested By:

Work Authorizations Cont... **Resolution No.** 2021-44

Resolution No.	Description		Amount
2016-27	WA 5 - McMillan/Neischweitz Easements	IBTC	$ 4,476.50
2016-28	WA 6 - Parcel 48A and 48B	SH365	$ 3,718.50
2016-45	WA 7 - Revise Parcel 60P2	SH365	$ 1,692.00
2016-46	WA 8 - Revise Parcel 18 & 48	SH365	$ 5,480.50
2017-18	WA 9 - Parcels 60 P3-A and 60 P3-B	365 Toll	$ 1,070.00

Subtotal $ 16,437.50

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

BOARD RESOLUTION No. 2021-44

APPROVAL OF WORK AUTHORIZATION 10 TO THE PROFESSIONAL SERVICE AGREEMENT WITH MELDEN & HUNT TO PROVIDE BOUNDARY SURVEY SERVICES FOR THE 365 TOLLWAY WETLAND CONSERVATION EASEMENT

THIS RESOLUTION is adopted this 28th day of September, 2021 by the Board of Directors of the Hidalgo County Regional Mobility Authority at a regular meeting.

WHEREAS, the Hidalgo County Regional Mobility Authority (the "Authority"), acting through its Board of Directors (the "Board"), is a regional mobility authority created pursuant to Chapter 370, Texas Transportation Code, as amended (the "Act");

WHEREAS, the Authority is authorized by the Act to address mobility issues in and around Hidalgo County;

WHEREAS, on February 22, 2012 the Authority approved by Resolution 2012-04, which created the Technical Committee, comprised of senior level engineers and professional from various communities and agencies in the jurisdiction of the Authority, to serve to advise the Board on procurement and consultant work products; and

WHEREAS, also authorized by Resolution 2012-04 the Executive Committee to determine the size, structure and scope of the Technical Committee, identify candidates and issue requests for participation; and

WHEREAS, on October 16, 2013 the Authority authorized by Resolution 2012-41 the use and structure of the Technical Committee to rate, rank and recommend a short list to the Board of Directors for the Statements of Qualifications for the International Bride Trade Corridor Project for Engineering, Surveying and Geotechnical Services; and

WHEREAS, on November 20, 2013 by Resolution 2013-53 the Technical Committee has rated and ranked the Statements of Qualifications for the International Bridge Trade Corridor Project for Surveying Services and recommended that HCRMA staff be authorized to negotiate with all qualified Surveying Firms (Halff Associates, RODS Surveying, Quintanilla, Headley & Associates, Land Tech Consultants, R. Gutierrez Engineering, Melden & Hunt, DOS Land Surveying, SAMES, Bain Medina Bain, ROW Surveying Services and Fulcrum Consulting Services) to establish a surveying pool for the project; and

WHEREAS, on June 18, 2014, by Resolution 2014-53 the Authority awarded professional service agreements to Halff Associates, RODS Surveying, Quintanilla, Headley & Associates, Land Tech Consultants, R. Gutierrez Engineering, Melden & Hunt, DOS Land Surveying, SAMES, Bain Medina Bain, ROW Surveying Services and

Fulcrum Consulting Services for surveying services for the International Bridge Trade Corridor Project; and

WHEREAS, on June 18, 2014, the Authority approved by Resolution 2014-57 Work Authorization Number 1 to the Professional Service Agreement with Melden & Hunt to prepare 8 parcel plats and descriptions in the amount of $26,210.00; and

WHEREAS, on August 27, 2014 the Authority approved by Resolution 2014-83 Work Authorization Number 2 to the Professional Service Agreement with Melden & Hunt to provide select topography along the Donna Irrigation District Main Canal in the amount of $5,542.00;

WHEREAS, on September 27, 2014 the Authority approved by Resolution 2014-95 Amendment Number 1 to the Professional Service Agreement with Melden & Hunt to increase the maximum payable amount to provide select topography along the Donna Irrigation District Main Canal in the amount of $5,542.00.00 for a revised maximum payable amount of
$ 31,752.00; and

WHEREAS, on December 15, 2014, the Authority approved by Resolution 2014-120 Supplemental Number 1 to Work Authorization Number 1 to the Professional Service Agreement with Melden and Hunt to provide revised parcel platting for 6 existing tracts due to an adjustment of the roadway alignment to accommodate both ETT and the Donna Irrigation District as part of the International Bridge Trade Corridor Project in the amount of $4,842.00; and

WHEREAS, on December 15, 2014 the Authority approved by Resolution 2014-121 Amendment Number 2 to the Professional Service Agreement with Melden & Hunt to increase the maximum payable amount for Supplemental Number 1 Work Authorization Number 1 in the amount of $4,842.00 for a revised maximum payable amount of $36,594.00; and

WHEREAS, on January 26, 2016 the Authority approved by Resolution 2016-01 Work Authorization 3 to the Professional Service Agreement with Melden & Hunt to provide metes & bounds for parcel 267 in the amount of $4,968.00; and

WHEREAS, on January 26, 2016 the Authority approved by Resolution 2016-02 Work Authorization 4 to the Professional Service Agreement with Melden & Hunt for Banco 141 Survey as part of the State Highway 365 in the amount of $32,991.00; and

WHEREAS, on January 26, 2016 the Authority approved by Resolution 2016-03 Amendment Number 3 to the Professional Service Agreement with Melden & Hunt to increase the maximum payable amount for Work Authorizations Number 3 & 4 in the amount of $37,959.00; and

WHEREAS, on February 23, 2016 the Authority approved by Resolution 2016-27 Work Authorization 5 to the Professional Service Agreement with Melden & Hunt to provide parcel sketches for Irrigation Easements for the ETT for the Cross Valley Project as part of the of the International Bridge Trade Corridor in the amount of $4,476.50; and

WHEREAS, on February 23, 2016 the Authority approved by Resolution 2016-28 Work Authorization 6 to the Professional Service Agreement with Melden & Hunt to revise parcel 48 into parcel 48A & 48B in the amount of $3,718.50; and

WHEREAS, on February 23, 2016, the Authority approved Resolution 2016-29 Contract Amendment 4 to the Professional Service Agreement with Melden & Hunt to increase the maximum payable amount for Work Authorizations Number 5 & 6 in the amount of $8,195.00; and

WHEREAS, on March 22, 2016 , the Authority approved Resolution 2016-45 Work Authorization 7 to the Professional Service Agreement with Melden & Hunt to revise Parcel 60P3 in the amount of $1,692.00; and

WHEREAS, on March 22, 2016 , the Authority approved Resolution 2016-46 Work Authorization 8 to the Professional Service Agreement with Melden & Hunt to revise Parcel 18 & 48 in the amount of $7,172.50; and

WHEREAS, on March 22, 2016, the Authority approved Resolution 2016-47 Contract Amendment 5 to the Professional Service Agreement with Melden & Hunt to increase the maximum payable amount for Work Authorizations Number 7 & 8 in the amount of $7,172.50 for a revised maximum payable amount of $89,920.50; and

WHEREAS, on February 28, 2016, the Authority approved Resolution 2017-17 Work Authorization 9 to the Professional Service Agreement with Melden & Hunt for surveying of parcels 60 P3-A and 60 P3-B for the 365 Tollway Project in the amount of $1,070.00; and

WHEREAS, on February 28, 2016, the Authority approved Resolution 2017-18 Contract Amendment 6 to the Professional Service Agreement with Melden & Hunt to increase the maximum payable amount for Work Authorizations Number 9 in the amount of $1,070.00 for a revised maximum payable amount of $90,990.50; and

WHEREAS, on June 26, 2018, the Authority approved Resolution 2018-31 Contract Amendment Number 7 to the Professional Service Agreement with Melden & Hunt for a no-cost time extension to provide survey services for the 365 Tollway and International Bridge Trade Corridor Projects; and

WHEREAS, the Authority determined it necessary to approve Resolution 2021-44 - Work Authorization 10 to the Professional Service Agreement with Melden & Hunt to provide boundary survey services for the 365 Tollway Wetland Conservation Easement in the amount of $2,105.00.

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

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

Section 2. The Board hereby approves Work Authorization 10 to the Professional Service Agreements with Melden & Hunt to provide boundary survey services for the 365 Tollway Project Wetland Conservation Easement, hereto attached as Exhibit A.

Section 3. The Board authorizes the Executive Director to execute the Work Authorization 10 to the Professional Services Agreement for Surveying Services with Melden & Hunt as approved.

*****

PASSED AND APPROVED AS TO BE EFFECTIVE IMMEDIATELY BY THE BOARD OF DIRECTORS OF THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY AT A REGULAR MEETING, duly posted and noticed, on the 28th day of September, 2021, at which meeting a quorum was present.

S. David Deanda, Jr., Chairman

Ezequiel Reyna, Jr., Secretary/Treasurer

Exhibit A

Work Authorization No. 10
to
Professional Service Agreements
with
Melden & Hunt
for
Surveying Services

ATTACHMENT D-1

WORK AUTHORIZATION NO. 10
AGREEMENT FOR SURVEYING SERVICES

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of "Article V of that certain Professional Services Agreement for Surveying Services" (the Agreement) entered into by and between the Hidalgo County Regional Mobility Authority (Authority), and Melden & Hunt, Inc. (the Surveyor).

PART I. The Surveyor will perform surveying services generally described as in accordance with the project description attached hereto and made a part of this Work Authorization. The responsibilities of the Authority and the Surveyor as well as the work schedule are further detailed in Exhibits A, B and C which are attached hereto and made a part of the Work Authorization.

PART II. The maximum amount payable under this Work Authorization is $2,105.00 and the method of payment is **Lump Sum**, as set forth in Attachment E of the Agreement. This amount is based upon fees set forth in Attachment E, Fee Schedule, of the Agreement and the Surveyor's estimated Work Authorization costs included in Exhibit D, Fee Schedule, which is attached and made a part of this Work Authorization.

PART III. Payment to the Surveyor for the services established under this Work Authorization shall be made in accordance with Articles III thru V of the Agreement, and Attachment A, Section 1.

PART IV. This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate on December 31, 2021, unless extended by a supplemental Work Authorization as provided in Attachment A, Section 1.

PART V. This Work Authorization does not waive the parties' responsibilities and obligations provided under "Article V of that certain Professional Services Agreement for Surveying Services for INTERNATIONAL BRIDGE TRADE CORRIDOR (IBTC) Segment 0010 project from the Interchange with 365 Tollway (formerly SH 365) to I-2 and from the Valleyview Interchange to FM 493.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE SURVEYOR	**THE AUTHORITY**
_____	_____
(Signature)	(Signature)
Robert Tamez	Pilar Rodriguez, P.E.
(Printed Name)	(Printed Name)
Vice-President	Executive Director
(Title)	(Title)
_____	_____
(Date)	(Date)

LIST OF EXHIBITS

Exhibit A	Services to be provided by the Authority
Exhibit B	Services to be provided by the Surveyor
Exhibit C	Work Schedule
Exhibit D	Fee Schedule/Budget
Exhibit H-2	Subprovider Monitoring System Commitment Agreement

EXHIBIT A
SERVICES TO BE PROVIDED BY THE AUTHORITY

Project Map.

ROW Map – ROW widths, other land, ownership, survey information.

Ownership information of adjacent tracts.

Intersecting ROW information, documentation, construction plans of existing utilities if available.

Construction plans of existing facilities if available.

Intended use of the survey and required form of deliverables, files required, etc.

Accuracy required and method of display.

Horizontal and vertical datum upon where the survey should be based (if varies from TxDOT).

Research on subject tracts/parcel ownership aerial photographs.

Title Report for Parent\Ownership Tracts within Project.

Boundary Survey, (data files) of Original Survey Lines Subdivisions, and Parent Tracts within Project. Includes found monumentation.

EXHIBIT B
SERVICES TO BE PROVIDED BY THE SURVEYOR

Survey Scope of Work: Conservation Easement Parcel No. 1 (CE1)

Perform a boundary survey to divide Banco No. 141. Boundary Survey will be provided for the new Parcel.

4.1 Coordination, Admin., Research and Abstracting Tasks

4.1.2 Research Deeds, Maps, and other survey records and Abstract adequate property data and information to support the preparation of a Digital "Working Sketch", or "Deed Draft Record Sketch", to support the determination of the location and the reconstruction of intended boundaries of the land tracts to be field surveyed.

4.1.5 Prepare digital "Working Sketch", or "Deed Draft Record Sketch".

4.2 Field Work Tasks

4.2.1 Locate, recover, and retrace all corners and survey lines of the Land Tracts through which the proposed project route or corridor will pass.

4.2.2 The surveyor will begin by locating or retracing as many corners of the original grants as required to construct the boundaries of the Land Tracts included in the project for future takings.

4.3 Office Work/Delivery Preparation Tasks

4.3.1 Perform final boundary analysis and boundary reconstruction decisions of survey lines for the lands included in the project for future takings in accordance to all Texas Board of Professional Land Surveying rules, standards, and policies.

4.3.2 Prepare and deliver a completed digital Boundary Survey and metes and bounds. This boundary survey will depict all survey evidence recovered in the survey. The surveyor will prepare a boundary survey showing the corners recovered, the courses, and distances of the boundaries. The boundary survey will include all easements, severances, or other exceptions that the "Abstracts of Title" or "Title Reports" yield.

EXHIBIT C
WORK SCHEDULE

Delivery of finished parcel within 14 days of Notice To Proceed (NTP).

Prime: Melden & Hunt, Inc.
Survey Services for the HCRMA
Work Authorization No. 10
Schedule Duration: 14 days from NTP

EXHIBIT 'D'
Fee Schedule/Budget for
Hidalgo County Regional Mobility Authority (HCRMA)
Work Authorization No. 10
Surveying Services
LIMITS: Interchange with 365 Tollway (formerly SH 365) to I-2 and from the ValleyView interchange to FM 493: Parcel CE1

SURVEY SERVICES DESCRIPTION	Principal / Sr. Manager / Senior survey Manager	Project Surveyor (RPLS)	Senior Survey Tech / SIT	Survey Technician	CADD Operator	Clerical / Admin.	Abstractor	1-Person Survey Crew	2-Person Survey Crew	3-Person Survey Crew	4-Person Survey Crew	Total Labor Hrs.	Remarks	Task Cost
Coordination, Admin, Research and Abstracting	1											1		$ 200.00
Field Work	1								8			9		$ 1,240.00
Office Work / Delivery Preparation	1		3	2								6		$ 665.00
Subtotal	3	0	3	2	0	0	0	0	8	0	0	16		$ 2,105.00
Parcel CE1 (Concervation Easement 1)														
Research												0		$ -
Field Work												0		$ -
CAD Work												0		$ -
Subtotal	0	0	0	0	0	0	0	0	0	0	0	0		$ -
Total Manhours by Classification	3	0	3	2	0	0	0	0	8	0	0	16		
Contract Hourly Rate by Classification	$ 200.00	$ 150.00	$ 105.00	$ 75.00	$ 65.00	$ 50.00	$ 65.00	$ 80.00	$ 130.00	$ 168.00	$ 198.00			
Total Fee by Classification	$ 600.00	$ -	$ 315.00	$ 150.00	$ -	$ -	$ -	$ -	$ 1,040.00	$ -	$ -	$ 2,105.00		
% Utilization by Over 6 months	0.29%	0.00%	0.29%	0.19%	0.00%	0.00%	0.00%	0.00%	0.77%	0.00%	0.00%		CHECK (MHRs): 16	
% of Total Labor Hours	18.75%	0.00%	18.75%	12.50%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	100.00%	CHECK (LABOR):	
% of Total Labor Cost	28.50%	0.00%	14.96%	7.13%	0.00%	0.00%	0.00%	0.00%	49.41%	0.00%	0.00%	100.00%	$ 2,105.00	
TOTAL DIRECT LABOR COST														$ 2,105.00

DIRECT EXPENSES	Rate	Unit	Amount	Total									
Mileage	$ 0.56	Mile	0	$ -									$ -
Photocopies	$ 0.10	Sheet	0	$ -									$ -
Blueline/Blackline Prints	$ 2.00	Sheet	0	$ -									$ -
Deed/Copies	$ 1.00	Sheet	0	$ -									$ -
Certified Deed Copies	$ 2.00	Sheet	0	$ -									$ -
Mylar (11x17)	$ 3.00	Sheet	0	$ -									$ -
Mylar (22x34)	$ 6.00	Sheet	0	$ -									$ -
TOTAL DIRECT EXPENSES				$ -									$ -

SPECIAL SERVICES FEE (SUBCONSULTANTS)		DBE Participation 0.00%
Name	Task(s) Summary	
TOTAL SPECIAL SERVICES FEE (SUBCONSULTANTS)		$ -

GRAND TOTAL	$ 2,105.00

EXHIBIT H-2
Subprovider Monitoring System Commitment Agreement

This commitment agreement is subject to the award and receipt of a signed contract from the Hidalgo County Regional Mobility Authority (Authority). ***NOTE: Attachment H-2 is required to be attached to each contract that does not include work authorizations. Attachment H-2 is required to be attached with each work authorization. Attachment H-2 is also required to be attached to each supplemental work authorization. If DBE/HUB Subproviders are used, the form must be completed and signed. If no DBE/HUB Subproviders are used, indicate with "N/A" on this line: _____ and attach with the work authorization or supplemental work authorization.***

Contract #: 02-S17-14-01 Assigned Goal: 0.0% Prime Provider Melden & Hunt, Inc.

Work Authorization (WA)#: 10 WA Amount: **$2,105.00** Date: _____
Supplemental Work Authorization (SWA) #: _____ to WA #: _____ SWA Amount: _____
Revised WA Amount: _____

Description of Work *(List by category of work or task description. Attach additional pages, if necessary.)*	**Dollar Amount** *(For each category of work or task description shown.)*
Survey	**$2,105.00**
FC	**$0**
Total Commitment Amount *(Including all additional pages.)*	**$0**

IMPORTANT: The signatures of the prime and the DBE/HUB and Second Tier Subprovider, if any (both DBE and Non-DBE) and the total commitment amount must always be on the same page.

Provider Name: Melden & Hunt, Inc. **Address: 115 W McIntyre** **Edinburg, Tx 78539** **VID Number: 17417379595** **PH: (956) 381-0981; FX: (956) 381-1839** **Email: robert@meldenandhunt.com**	**Name:** Robert Tamez ***(Please Print)*** **Title:** Vice-President _____ **Signature** **Date**
DBE/HUB Sub Provider **Subprovider Name:** **VID Number:** **Address:** **PH:** **FX:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ _____ **Signature** **Date**
DBE/HUB Sub Provider **Subprovider Name:** **VID Number:** **Address:** **PH:** **FX:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ _____ **Signature** **Date**

Item 2F

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**2F**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/14/21**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/21**
TECHNICAL COMMITTEE			

1. Agenda Item: **RESOLUTION 2021-45 – APPROVAL OF CONTRACT AMENDMENT 8 TO THE PROFESSIONAL SERVICES AGREEMENT WITH MELDEN & HUNT TO INCREASE THE MAXIMUM PAYABLE AMOUNT FOR WORK AUTHORIZATION 10.**

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

   Consideration and Approval of CA No. 8 to the PSA with Melden & Hunt for WA No. 10.

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

4. Budgeted: ___Yes ___No X N/A

5. Staff Recommendation**: Motion to approve Resolution 2021-45 – Approval of Contract Amendment 8 to the Professional Services Agreement with Melden & Hunt to increase the maximum payable amount for Work Authorization 10, as presented.**

6. Program Manager's Recommendation: ___Approved ___Disapproved **X** None

7. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: ___Approved ___Disapproved **X** None

9. Chief Auditor's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Financial Officer's Recommendation: ___Approved ___Disapproved **X** None

11. Chief Development Engineer's Recommendation: **X** Approved ___Disapproved **X** None

12. Chief Construction Engineer's Recommendation: ___Approved ___Disapproved **X** None

13. Executive Director's Recommendation: **X** Approved ___Disapproved ____None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Project: IBTC

- ☐ CMT Services
- ☐ Environmental
- ☐ Engineering
- ☐ Geo-Technical
- ☑ Surveying **Melden & Hunt**

CONTRACT AMENDMENT SUMMARY

RESOLUTION 2021-45

Original Contract Amount **$ 26,210**

Amendment # 8

Amount **$ 2,105.00**

Approved Amendments:

Resolution No.	Description	Amount
2014-57	Original Contract	$ 26,210.00
2014-95	Amendment No. 1 (Addition on WA No. 2)	$ 5,542.00
2014-121	Amendment No. 2 (Addition on SWA 1 to WA 1)	$ 4,842.00
2016-03	Amendment No. 3 (WA 3 and WA 4)	$ 37,959.00
2016-29	Amendment No. 4 (WA 5 and WA 6 $8,195.00)	$ 8,195.00
	Subtotal from Cont. Page	$ 8,242.50
	Contract Amount	**$ 90,990.50**
Proposed Amendment		
2021-45	Amendment No. 8 - (WA 10)	**$ 2,105.00**

Goal and Options:

Approval of CA 8 to PSA with Melden & Hunt to increase maximum payable amount for WA 10.

Staff is recommending approval of this request in the amount of $ 2,105.00
for a Revised Maximum Payable Amount of $ 93,095.50

Eric Davila, Dev. Engine

Requested by:

Approved Amendments Cont... **Resolution No.** 2021-45

Resolution No.	Description	Amount
2016-47	Amend. No. 5 (WA 7 and WA 8)	$ 7,172.50
2017-18	Amend. No. 6 (WA 9)	$ 1,070.00
2018-31	Amendment No. 7 - No Cost Time Extension	$ 0.00

Subtotal $ 8,242.50

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

BOARD RESOLUTION No. 2021-45

APPROVAL OF CONTRACT AMENDMENT 8 TO THE PROFESSIONAL SERVICE AGREEMENT WITH MELDEN & HUNT TO INCREASE MAXIMUM PAYABLE AMOUNT FOR WORK AUTHORIZATION 10

THIS RESOLUTION is adopted this 28th day of September, 2021 by the Board of Directors of the Hidalgo County Regional Mobility Authority at a regular meeting.

WHEREAS, the Hidalgo County Regional Mobility Authority (the "Authority"), acting through its Board of Directors (the "Board"), is a regional mobility authority created pursuant to Chapter 370, Texas Transportation Code, as amended (the "Act");

WHEREAS, the Authority is authorized by the Act to address mobility issues in and around Hidalgo County;

WHEREAS, on February 22, 2012 the Authority approved by Resolution 2012-04, which created the Technical Committee, comprised of senior level engineers and professional from various communities and agencies in the jurisdiction of the Authority, to serve to advise the Board on procurement and consultant work products; and

WHEREAS, also authorized by Resolution 2012-04 the Executive Committee to determine the size, structure and scope of the Technical Committee, identify candidates and issue requests for participation; and

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WHEREAS, on June 26, 2018, the Authority approved Resolution 2018-31 Contract Amendment Number 7 to the Professional Service Agreement with Melden & Hunt for a no-cost time extension to provide survey services for the 365 Tollway and International Bridge Trade Corridor Projects; and

WHEREAS, the Authority determined it necessary to approve Resolution 2021-45 – Contract Amendment 8 to the Professional Service Agreement with Melden & Hunt to increase the maximum payable amount for Work Authorization 10 in the amount of $2,105.00.

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

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

Section 2. The Board hereby approves Contract Amendment 8 to the Professional Service Agreements with Melden & Hunt to increase maximum payable amount for Work Authorization 10 in the amount of $2,105.00, for a revised maximum payable amount of $93,095.50; hereto attached as Exhibit A.

ection 3. The Board authorizes the Executive Director to execute the Contract Amendment 8 to the Professional Services Agreement for Surveying Services with Melden & Hunt as approved.

*****

PASSED AND APPROVED AS TO BE EFFECTIVE IMMEDIATELY BY THE BOARD OF DIRECTORS OF THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY AT A REGULAR MEETING, duly posted and noticed, on the 28th day of September, 2021, at which meeting a quorum was present.

S. David Deanda, Jr., Chairman

Ezequiel Reyna, Jr., Secretary/Treasurer

Exhibit A

Contract Amendment No. 8
to
Professional Service
Agreements with
Melden & Hunt
for
Surveying Services

SUPPLEMENTAL AGREEMENT NO. 8
TO PROFESSIONAL SERVICES
AGREEMENT FOR SURVEYING SERVICES

THIS SUPPLEMENTAL AGREEMENT NO 8 TO MAIN CONTRACT is made pursuant to the terms and conditions of "Attachment A General Provisions Section 6 Supplemental Agreements of that certain Professional Services Agreement for Engineering Design Services" hereinafter identified as the "Agreement," entered into by and between the Hidalgo County Regional Mobility Authority (Authority), and Melden & Hunt, Inc. (the Surveyor).

The following terms and conditions of the Agreement are hereby amended as follows:

Article II Agreement Period
This Agreement becomes effective when fully executed by all parties hereto and it shall terminate at the close of business on December 31, 2022.

Article III Compensation
Article III Compensation shall be amended to increase the amount payable under this contract from $90,990.50 to $93,095.50 for a total increase of $2,105.00 due to additional scope and effort outlined in Work Authorization No. 10.

This Supplemental Agreement No. 8 to the Main Contract shall become effective on the date of final execution of the parties hereto. All other terms and conditions of the Agreement not hereby amended are to remain in full force and effect.

IN WITNESS WHEREOF, this Supplemental Agreement is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE SURVEYOR	**THE AUTHORITY**
_____	_____
(Signature)	(Signature)
_____	Pilar Rodriguez, P.E.
(Printed Name)	(Printed Name)
_____	Executive Director
(Title)	(Title)
_____	_____
(Date)	**(Date)**

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Item 3A

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**3A**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/20/21**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/21**
TECHNICAL COMMITTEE			

1. Agenda Item: **RESOLUTION 2021-35 – APPROVAL OF ONE YEAR EXTENSION TO THE PROFESSIONAL SERVICE AGREEMENT WITH SHEPARD WALTON KING TO PROVIDE INSURANCE BROKER SERVICES TO THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY.**

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

   Consideration and approval of one year extension to the PSA with SWK to provide insurance broker services to the Hidalgo County Regional Mobility Authority.

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

4. Budgeted: ___Yes ___No X N/A

5. Staff Recommendation**: Motion to approve Resolution 2021-35 – Approval of One Year Extension to the Professional Service Agreement with Shepard Walton King to provide Insurance Broker Services to the Hidalgo County Regional Mobility Authority as presented.**

6. Program Manager's Recommendation: ___Approved ___Disapproved **X** None

7. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

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

9. Chief Auditor's Recommendation: ___Approved ___Disapproved X None

10. Chief Financial Officer's Recommendation: ___Approved ___Disapproved **X** None

11. Chief Development Engineer's Recommendation: ___Approved ___Disapproved **X** None

12. Chief Construction Engineer's Recommendation: ___Approved ___Disapproved **X** None

13. Executive Director's Recommendation: **X** Approved ___Disapproved ___None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Memorandum

To: S. David Deanda, Chairman

From: Pilar Rodriguez, PE, Executive Director

Date: September 20, 2021

Re: **Resolution 2021-35 - Approval of One Year Extension to the Professional Service Agreement with Shepard Walton King to provide Insurance Broker Services to the Hidalgo County Regional Mobility Authority**

Background

On September 21, 2016, the Authority solicited Requests for Proposals (RFP) to provide Insurance Broker Services to the authority. On October 31, 2016, the Authority received two responses to the Request for Proposals for licensed insurance broker services from the Klement Group and Cameron Investment Company, Inc. dba Shepard Walton King Insurance Group (SWK). On November 15, 2020, the Board ranked SWK the top firm and authorized the Executive Director to execute an agreement. The agreement was for an initial three-year period with provisions to exercise two (2) one-year extensions after the three-year period. On September 22, 2020, the board of directors approved a one-year extension to the agreement.

Goal

To comply with State Infrastructure Bank loan agreement terms, which requires the Authority to keep Authority System and its use and operation insured at all times in such amounts, subject to such exceptions and deductibles and against such risks, as are customary for similar organizations, including business interruption.

Options

The Board of Directors may opt to not award the contract and solicit proposals for insurance broker services.

Recommendation

Based on review by this office, **approval of Resolution 2021-35 – Approval of One Year Extension to the Professional Service Agreement with Shepard Walton King to provide Insurance Broker Services to the Hidalgo County Regional Mobility Authority is recommended.**

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

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

BOARD RESOLUTION No. 2021-35

APPROVAL OF AWARD OF CONTRACT FOR INSURANCE BROKER SERVICES FOR THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

THIS RESOLUTION is adopted this 28th day of September, 2021 by the Board of Directors of the Hidalgo County Regional Mobility Authority.

WHEREAS, on April 21, 2005, Hidalgo County (the "County") petitioned the Texas Transportation Commission (the "Commission") for authorization to create the Hidalgo County Regional Mobility Authority (the "Authority") pursuant to the provisions of the Texas Transportation Code; and

WHEREAS, the Commission authorized the creation of the Authority on November 17, 2005; and

WHEREAS, the Authority now operates pursuant to, among other statutory provisions, Chapters 370 and 502, Texas Transportation Code, and the corresponding Commission regulations, policies and procedures, as amended from time to time (collectively, the "Authorizing Law"); and

WHEREAS, the Authority is required in the State Infrastructure Bank loan agreement to keep Authority System and its use and operation insured at all times in such amounts, subject to such exceptions and deductibles and against such risks, as are customary for similar organizations, including business interruption insurance; and

WHEREAS, the Authority has determined to seek the services of a licensed Insurance Broker to advice on insurance coverage for the Authority; and

WHEREAS, on August 19, 2016 and September 21, 2016, the Authority solicited Requests for Proposals to provide Insurance Broker Services to the Authority; and

WHEREAS, on November 15, 2016, the Board of Directors ranked Cameron Investment Company, Inc. dba Shepard Walton King Insurance Group (SWK) the top firm and authorized the Executive Director to execute an agreement;

WHEREAS, the agreement with SWK was entered into for an initial three-year period with provisions to exercise two (2) one-year extensions after the three-year period; and

WHEREAS, on September 22, 2020, the Authority extended the Insurance Broker Service Agreement with SWK for one year; and

WHEREAS, the Authority has determined it is necessary to exercise a one-year extension to the Insurance Broker Service Agreement with SWK;

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

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

Section 2. The Board hereby approves a one (1) year extension to the Insurance Broker Services Agreement with Cameron Investment Company, Inc. dba Shepard Walton King Insurance Group hereto attached as Exhibit A.

Section 3. The Board authorizes the Executive Director to execute the one (1) year extension to the Professional Service Agreement with Cameron Investment Company, Inc. dba Shepard Walton King Insurance Group to provide Insurance Broker Services to the Hidalgo County Regional Mobility Authority, as approved.

* * *

PASSED AND APPROVED AS TO BE EFFETIVE IMMEDIATELY BY THE BOARD OF DIRECTORS OF THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY AT A REGULAR MEETING on the 28th day of September 2021, at which meeting a quorum was present.

_____

S. David Deanda Jr, Chairman

_____

Ezequiel Reyna, Jr.. Secretary / Treasurer

EXHIBIT A
ONE (1) YEAR EXTESNION TO THE INSURANCE BROKER SERVICE AGREEMENT WITH
CAMERON INVESTMENT COMPANY, INC.
DBASHEPARD WALTON KING INSURANCE GROUP
DATED
SEPTEMBER 28, 2021

EXHIBIT B
INSURANCE BROKER SERVICE AGREEMENT WITH
CAMERON INVESTMENT COMPANY, INC.
DBASHEPARD WALTON KING INSURANCE GROUP
DATED
JANUARY 1, 2017

AMENDMENT NO. 1 TO THE INSURANCE BROKER SERVICE AGREEMENT WITH
CAMERON INVESTMENT COMPANY, INC.
DBASHEPARD WALTON KING INSURANCE GROUP
DATED
JUNE 5, 2018

ONE YEAR EXTENSION TO INSURANCE BROKER SERVICE AGREEMENT

BETWEEN HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY AND

CAMERON INVESTMENT COMPANY, INC

DBA SHEPARD WALTON KING INSURANCE GROUP

DATED JANUARY 1, 2017

INITIAL AGREEMENT PERIOD FOR THREE YEARS

ADDITIONAL ONE-YEAR TERMS

1ST EXTENSION DATED SEPTEMBER 22, 2020

ONE YEAR EXTENSION EFFECTIVE OCTOBER 1, 2021

CAMERON INVESTMENT COMPANCY, INC. **SHEPARD WALTON KING INSURACE GROUP**	**HIDALGO COUNTY REGIONAL** **MOBILITY AUTHORITY**
By:_____	By:_____
Raul Cabaza III, President	Pilar Rodriguez, Executive Director
Date:_____	Date: _____

STATE OF TEXAS §

COUNTY OF HIDALGO §

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY §

INSURANCE BROKER SERVICE AGREEMENT

This Insurance Broker Services Agreement ("AGREEMENT") is entered into by and between the HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY, a political subdivision of the State of Texas ("RMA") and CAMERON INVESTMENT COMPANY, INC. dba Shepard Walton King Insurance Group, a Texas corporation ("SWK"), pursuant to the RMA's authority under the Texas Transportation Code, Chapter 370 ("Regional Mobility Authority Act").

RECITALS

WHEREAS, RMA has obtained proposals for professional insurance brokerage services relating to the evaluation and placement of the RMAs insurance coverage; and

WHEREAS, SWK presented a proposal and was selected by the Board of Directors of the RMA to provide such services;

NOW THEREFORE, for and in consideration of the provisions and conditions set forth in this AGREEMENT, the RMA and SWK agree as follows:

Section 1. PURPOSE

The purpose of this AGREEMENT is to engage SWK to provide insurance broker services to the RMA, specifically to provide advice and expertise to assist the RMA in identifying insurance needs and requirements, selecting appropriate insurance coverage, limits, and carriers, and handling of insurance claims. SWK and RMA acknowledge that RMA is relying on SWK's advice and expertise in governmental liability, risk analysis, and insurance coverage.

Section 2. DESCRIPTION OF SERVICES

2.01 SWK will provide the services shown below:

Service Hours	Description of Service
10	I. • Meet with RMA personnel to discuss operations, assets, and projects, and determine exposures of risk. • Review existing insurance policy terms and conditions, including third party coverage, recommend coverage required and design desired insurance program. • Provide analysis of cybersecurity risks to the RMA, as a governmental entity and toll collection authority, and recommend coverage.
40	II. • Obtain needed underwriting data from the RMA in order to prepare submissions to underwriters. • Review carrier provided loss runs and prepare recap of losses and details on large

	losses. • Develop submission and approach markets for quotes on behalf of the RMA.
20	**III.** • Prepare and present report on proposals, including alternative program comparison, where applicable and negotiate with selected carriers. • Make recommendations regarding placement of coverage and present comparison of carrier coverage.
20	**IV.** • Answer questions regarding use of insurance clauses in contracts. • Attend meetings with board members or employees to discuss insurance program and needs. • Establish the claims reporting process for the RMA, determine the type of claims history reports that are necessary and coordinate claims reporting data accordingly, provide claims history information to RMA on an agreed upon basis, and monitor claims activity and provide periodic reviews with carriers. • When requested review third party insurance certificates for compliance with RMA contract requirements.
10	**V.** • Coordinate communications process among RMA, SWK, and the carriers. • Assist the RMA with insurance budget figures. • Meet with the RMA prior to each renewal to develop renewal strategy, discuss markets, desired changes in coverage, best practices, etc.

2.02 SWK agrees to immediately notify the RMA if any conflict or potential conflict of interest with regard to its representation of the RMA that may arise after the execution of this AGREEMENT. SWK agrees to operate at all times under and in conformance with the laws and regulations of the State of Texas and federal government.

Section 3. CONSIDERATION

3.01 In consideration of the broker services rendered by SWK as described above, the RMA agrees to pay SWK an annual fee of thirty-two thousand dollars ($32,000.00) for one hundred (100) service hours. Should the service hours exceed one hundred (100) for any given calendar year, the RMA agrees to pay SWK an hourly rate of three hundred twenty dollars ($320.00) until end of that annual term. Services described in Section 2.01 will be billed monthly on a percentage complete basis.

3.02 SWK shall be entitled to reimbursement for out-of-pocket expenses which are reasonable and necessary and incurred incident to the performance of insurance services requested hereunder, including delivery charges, travel expenses (outside of County), and long distance telephone calls. SWK agrees that they will bill for such out-of-pocket expense at direct cost with no added profit. Any individual out-of-pocket expense exceeding five hundred ($500.00) must have prior approval of the Executive Director of the RMA in order to be eligible for reimbursement.

3.03 Billing statements shall submitted to the RMA for review and approval. Monthly invoices will be billed as a percentage complete for services described in Section 2.01. Requests for reimbursements of allowable expenses should be accompanied by receipts. The approved invoices shall be forwarded for payment within thirty (30) days. Reimbursable mileage (mileage for travel outside of the County) will be paid at the IRS standard rate.

3.04 SWK understands and agrees that it will not accept any compensation from any third party for any services provided by SWK pursuant to this AGREEMENT, including, but not limited to any commissions that might otherwise be earned for the sale of insurance coverage to RMA, it being the intent of the parties that Broker's sole compensation shall be the fees paid by RMA as provided herein.

Section 4. INSURANCE

At all times during the term of this AGREEMENT, SWK is required to maintain professional liability insurance coverage in an amount not less than one million dollars ($1,000,000.00) per occurrence. The coverage must extend a minimum of three years beyond the completion of the services. SWK will provide the RMA proof of current insurance coverage annually prior to the expiration date of previous year's insurance certificate on file. SWK's insurance coverage must provide that it shall not be terminated or decreased below the minimum required coverage amounts with less than thirty (30) days' notice to the RMA.

Section 5. TERM

The term of this AGREEMENT is three years, beginning January 1, 2017with an option to extend for two (2) one (1) year terms; provided that SWK may give thirty (30) days' written notice to the other party of termination of the AGREEMENT prior to end of the term. RMA may terminate this AGREEMENT with seven (7) days' written notice to SWK.

Section 6. INSPECTION OF BOOKS AND RECORDS

The RMA, or any duly authorized representative of the RMA, may at all reasonable times inspect and examine the books and records of SWK for the purpose of (a) checking the costs and other expenses described and/or contemplated in the AGREEMENT; (b) gathering records of carrier proposals, contracts, and claim histories; or (c) otherwise confirming SWK's compliance with the terms of the AGREEMENT. SWK shall maintain said books and records and other evidence pertaining to costs and shall make such materials available at their respective offices, during the term of the AGREEMENT and for a period of three (3) years after the date of final payment for insurance brokerage services.

Section 7. ENTIRE AGREEMENT

This AGREEMENT supersedes any and all other agreements, either oral or in writing, between the parties hereto, and no other agreement, statement, or promise, which is not contained herein, shall be valid or binding

Section 8. SUCCESSORS & ASSIGNMENT

This AGREEMENT and all covenants, rights, benefits and privileges hereunder shall be binding upon and shall inure to the benefit of the parties hereto and their successors and assigns. SWK shall not assign this AGREEMENT or duties or obligations hereunder without the prior written consent of the RMA.

Section 9. AMENDMENTS

This AGREEMENT may be amended by the mutual agreement of the parties in writing to be attached to and incorporated into this AGREEMENT.

Section 10. LEGAL CONSTRUCTION

CAMERON INVESTMENT COMPANY, INC.
dba SHEPARD WALTON KING INSURANCE GROUP

By: _____
Raul Cabaza III, ~~Vice~~ President

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

By: _____
Pilar Rodriguez, Executive Director

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-145443

Date Filed:
12/12/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
Cameron Investment Company, Inc. dba Shepard Walton King Insurance Group
McAllen, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
5363548.1
Provide insurance broker services.

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. [X]

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

JENNIFER ANN OLIVARES
Notary Public, State of Texas
My Commission Expires
September 01, 2019

Raul Cabaza III
Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said Raul Cabaza III, this the 3rd day of January, 20 17, to certify which, witness my hand and seal of office.

Jennifer Olivares — Signature of officer administering oath
Jennifer Olivares — Printed name of officer administering oath
Marketing Exec. — Title of officer administering oath

AMENDMENT NO. 1
DATED JUNE 5, 2018

PROFESSIONAL SERVICE AGREEMENT ENTERED INTO BY AND BETWEEN THE HIDALGO COUNTY REGIONALY MOBILITY AUTHORITY (RMA) AND CAMERON INVESTMENT COMPANY, INC dba SHEPARD WALTON KING INSURANCE GROUP (SWK)

SECTION 3. CONSIDERATION

Section 3.01
In consideration of the broker services rendered by SWK, as described above, the RMA agrees to pay SWK an annual retainer of five thousand dollars ($5,000.00) and an hourly rate of three hundred twenty dollars ($320.00).

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Pilar Rodriguez, PE, Executive Director — Date: 6/27/2018

CAMERON INVESTMENT COMPANY, INC
dba SHEPARD WALTON KING INSURANCE GROUP

Raul Cabaza III, President — Date: 6/27/18

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Item 3B

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**3B**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/14/2021**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/2021**
TECHNICAL COMMITTEE			

1. Agenda Item: **RESOLUTION 2021-36 – APPROVAL OF AWARD OF CONTRACT WITH L&G CONSULTING ENGINEERS, INC. FOR CONSTRUCTION MATERIAL TESTING SERVICES FOR THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY.**

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

   Approval of award contract for CMT Services to L&G Consulting Engineers, Inc.

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

4. Budgeted: ___Yes ___No X N/A

5. Staff Recommendation**: Motion to approve Resolution 2021-36 - Approval of award of contract with L&G Consulting Engineers, Inc. for Construction Material Testing Services for the Hidalgo County Regional Mobility Authority, as presented.**

6. Program Manager's Recommendation: ___Approved ___Disapproved **X** None

7. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: ___Approved ___Disapproved **X** None

9. Chief Auditor's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Financial Officer's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Development Engineer's Recommendation: ___Approved ___Disapproved **X** None

11. Chief Construction Engineer's Recommendation: **X** Approved ___Disapproved **X** None

12. Executive Director's Recommendation: **X** Approved ___Disapproved ___None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Memorandum

To: Pilar Rodriguez, P.E
HCRMA, Executive Director

From: Ramon Navarro, IV, P.E., C.F.M.
HCRMA, Chief Construction Engineer

Date: September 21, 2021

Subject: **RESOLUTION 2021-36 APPROVAL OF AWARD OF CONTRACT WITH L&G CONSULTING ENGINEERS, INC. FOR CONSTRUCTION MATERIAL TESTING SERVICES FOR THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY**

GOAL

Approval and authorization to enter into contract for 2020-2021 Construction Material Testing Services with L&G Consulting Engineers, INC.

HISTORY

October 27, 2020 the HCRMA Board authorized the Executive Director to enter into negotiations with each of the ranked firms and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments.

L&G Consulting Engineers, Inc. have agreed to provide construction materials testing to assure the materials incorporated into 5.85 miles of Segment 1 [From McColl Road to us281] on Phase II of 365 Toll highway construction project are subject to verification sampling and testing when required and meet project plans and specifications; and administering the HCRMA Quality Monitoring and Quality Assurance Program.

RECOMMENDATION

Staff recommends award of contract in the amount of $2,765, 349.03 for an “indefinite delivery/indefinite quantity [IDIQ]” set of rates for a proposed three (3) year fixed period of time, during that period of time the Engineer will be responsible for an unlimited number of separate projects, or additional work on a current project to be issued on an individual work order basis.

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

BOARD RESOLUTION No. 2021-36

APPROVAL OF AWARD OF CONTRACT WITH L&G CONSULTING ENGINEERS, INC. FOR CONSTRUCTION MATERIAL TESTING SERVICES FOR THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

THIS RESOLUTION is adopted this 28th day of September, 2021, by the Board of Directors of the Hidalgo County Regional Mobility Authority at a regular meeting.

WHEREAS, the Hidalgo County Regional Mobility Authority (the "Authority"), acting through its Board of Directors (the "Board"), is a regional mobility authority created pursuant to Chapter 370, Texas Transportation Code, as amended (the "Act");

WHEREAS, the Authority is authorized by the Act to address mobility issues in and around Hidalgo County;

WHEREAS, on February 19, 2014, the Authority issued a solicitation for Statements of Qualification for Construction Material Testing Services for the Authority (the "Solicitation"); and

WHEREAS, on March 21, 2014 the Authority received responses to the Solicitation; and

WHEREAS, on April 23, 2014, Resolution 2014-38 authorized Authority staff to negotiate and enter into agreements with the top three scored firms (Raba Kistner Consultants Inc., L&G Laboratories and Terracon Consultants, Inc.) for Construction Material Testing Services (the "Services"); and

WHEREAS, on July 24, 2018, Resolution 2018-45 authorized Authority staff to procure one additional lab to provide additional Services; and

WHEREAS, on July 29, 2018, the Authority published a second Solicitation; and received three (3) responses, of which only one was deemed responsive;

WHEREAS, on September 25, 2018, the Authority authorized staff to negotiate contract terms for the Services to PaveTex Engineering LLC, dba PAVETEX, the sole responsive firm that met the professional services criteria set forth in the Solicitation;

WHEREAS, on August 21, 2020, the Authority received five (5) sealed statements of qualification packets. An internal committee of three HCRMA staff engineers ranked and reviewed; the Authority determined it necessary to negotiate contract terms to enter into negotiations with each of the ranked firms and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments; and

WHEREAS on October 27, 2020, the Authority approved Resolution 2020-28 Approval to enter into negotiations with each of the short-listed firms for Construction Material Testing for the Hidalgo County Regional Mobility Authority and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments; and

WHEREAS the Authority finds it necessary to approve Resolution 2021-36 Approval of Award of Contract by and between the L&G Consulting Engineers, Inc., and the Hidalgo County Regional Mobility Authority for Construction Material Testing Services.

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

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

Section 2. The Board hereby approves Award of Contract by and between L&G Consulting Engineers, Inc, and the Hidalgo County Regional Mobility Authority for Construction Material Testing Services in the amount of $2,765,349.03, hereto attached as Exhibit A.

Section 3. The Board authorizes the Executive Director to execute the Professional Service Agreement for Construction Material Testing with L&G Consulting Engineers, Inc., as approved by the Board.

*****

PASSED AND APPROVED AS TO BE EFFECTIVE IMMEDIATELY BY THE BOARD OF DIRECTORS OF THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY AT A REGULAR MEETING, duly posted and noticed, on the 28th day of September 2021, at which meeting a quorum was present.

S. David Deanda, Jr., Chairman

Ezequiel Reyna, Jr., Secretary/Treasurer

Exhibit A

Main
Professional Service
Agreement with
L&G Consulting Engineers, Inc.
For
Construction Material Testing Services

STATE OF TEXAS §
COUNTY OF HIDALGO §

PROFESSIONAL SERVICES AGREEMENT FOR ENGINEERING / DESIGN SERVICES

THIS CONTRACT FOR ENGINEERING SERVICES is made by and between the Hidalgo County Regional Mobility Authority (HCRMA) (hereinafter the "Authority") and L&G Consulting Engineers, Inc. (hereinafter the "Engineer"), having its principal business address at 900 S. Stewart Rd., Ste. 10 Mission, TX 78572 for the purpose of contracting for engineering services (hereinafter the "Agreement").

WITNESSETH

WHEREAS, Government Code, Chapter 2254, Subchapter A, "Professional Services Procurement Act" provides for the procurement of professional services of engineers;

WHEREAS, in compliance with the Professional Services Procurement Act and all federal requirements including those described in 23 CFR Part 172, the Authority procured professional engineering services (the "Procurement");

WHEREAS, pursuant to the Procurement and the Authority Board of Director's (the Board's) ranking of respondents thereto, the Board finds it to be in the best interest of the Authority to engage the Engineer to provide verification sampling and testing services as required by the 2019 TxDOT Guide Schedule of Sampling & Testing for Design Bid-Build Projects and adopted Quality Assurance Program (QAP) to assure that materials and workmanship incorporated into highway construction projects are in reasonable conformity with the requirements of the approved plans and specifications, including any approved changes as required for the development of the Project, as approved by the Authority to wit: the **{ PROVIDE CONSTRUCTION MATERIALS TESTING TO ASSURE THE MATERIALS INCORPORATED INTO 5.85 MILES OF SEGMENT 1 [FROM MCCOLL ROAD TO US281] ON PHASE II OF 365 TOLL HIGHWAY CONSTRUCTION PROJECT ARE SUBJECT TO VERIFICATION SAMPLING AND TESTING WHEN REQUIRED AND MEET PROJECT PLANS AND SPECIFICATIONS; AND ADMINISTERING QUALITY MONITORING AND QUALITY ASSURANCE PROGRAM. OVERALL PROJECT CONSISTS OF CONSTRUCTION OF A 12.4 MILE TOLLED FACILITY FROM FM 396 & GSA CONNECTOR TO US 281 (MILITARY HIGHWAY), WHICH CONSISTS OF: OF GRADING, FLEXIBLE BASE, LIME TREATED SUBGRADE, ASPHALTIC CONCRETE PAVEMENT, CONCRETE PAVEMENT, SIGNING AND PAVEMENT MARKINGS, CROSS CULVERTS, BRIDGE STRUCTURES, RETAINING WALLS, ILLUMINATION AND TOLL EQUIPMENT.**

NOW, THEREFORE, the Authority and the Engineer, in consideration of the mutual covenants and agreements herein contained, do hereby mutually agree as follows:

AGREEMENT

ARTICLE I
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

1.1 The Engineer shall timely perform those engineering services for the fulfillment of the Agreement. All work shall be subject to review and approval by the Authority, and, if appropriate, the Texas Department of Transportation and the Federal Highway Administration. Notwithstanding anything to the contrary in this Agreement or in any other Agreement document relating to the project, in performing its work under this Agreement Engineer shall perform its services to the standard of care of a reasonable engineer that is performing the same or similar work, at the same time and locality and under the same or similar conditions faced by Engineer.

1.2 The Authority and the Engineer will furnish items and perform those services for fulfillment of the Agreement as identified in Attachment B, Services to be provided by the Authority and Attachment C, Services to be provided by the Engineer. All services provided by the Engineer will conform to standard engineering practices and applicable rules and regulations of the Texas Engineering Practices Act and the rules of the Texas Board of Professional Engineers.

ARTICLE II
AGREEMENT PERIOD

This Agreement becomes effective when fully executed by all parties hereto and it shall terminate at the close of business on December 13, 2025 unless the Agreement period is: (1) modified by written supplemental agreement prior to the date of termination as set forth in Attachment A, General Provisions, Section 6, Supplemental Agreements; (2) extended due to a work suspension as provided for in Attachment A, Section 3, Paragraph C; or (3) otherwise terminated in accordance with Attachment A, General Provisions, Section 14, Termination. Any work performed or cost incurred before or after the Agreement period shall be ineligible for reimbursement.

ARTICLE III
COMPENSATION

3.1 Maximum Amount Payable. The maximum amount payable under this contract is $2,765,349.03 unless modified (1) modified written supplemental agreement prior to the date of termination as set forth in Attachment A, General Provisions, Section 6, Supplemental Agreements or (2) modified through a work authorization as set forth in Article V, provided that such work authorizations is adopted by Board action.

3.2 **Basis of Payment.** The basis of payment is identified in Attachment E, Fee Schedule. Reimbursement of costs incurred under a work authorization shall be in accordance with Attachment E, Fee Schedule.

3.3 **Reimbursement of Eligible Costs**. To be eligible for reimbursement, the Engineer's costs must (1) be incurred in accordance with the terms of a valid work authorization; (2) be in accordance with Attachment E, Fee Schedule; and (3) comply with cost principles set forth at 48 CFR Part 31, Federal Acquisition Regulation (FAR 31). Satisfactory progress of work shall be maintained and evidenced as a condition of payment.

3.4 **Engineer Payment of Subproviders**. No later than ten (10) days after receiving payment from the Authority, the Engineer shall pay all subproviders for work performed under a subcontract authorized hereunder. The Authority may withhold all payments that have or may become due if the Engineer fails to comply with the ten-day payment requirement. The Authority may also suspend the work under this Agreement

or any work authorization until subproviders are paid. This requirement also applies to all lower tier subproviders, and this provision must be incorporated into all subcontracts related to the project.

ARTICLE IV
PAYMENT REQUIREMENTS

4.1 **Monthly Billing Statements**. The Engineer shall request reimbursement of costs incurred by submitting the original and one copy of an itemized billing statement in a form acceptable to the Authority. The Engineer is authorized to submit requests for reimbursement no more frequently than monthly and no later than ninety (90) days after costs are incurred.

4.2 **Billing Statement**. The billing statement shall show the work authorization number for each work authorization included in the billing, the total amount earned to the date of submission, and the amount due and payable as of the date of the current billing statement for each work authorization. The billing statement shall indicate if the work has been completed or if the billing is for partial completion of the work. The lump sum fee will be paid in proportion to the percentage of work completed per work authorization.

4.3 **Overhead Rates**. The Engineer shall use the provisional overhead rate indicated in Attachment E. If a periodic escalation of the provisional overhead rate is specified in Attachment E, the effective date of the revised provisional overhead rate must be included. For lump sum agreements where a lump sum applies to a work authorization the overhead rate utilized shall correspond with the overhead rate specified in the year in which the work authorization is executed.

4.4 **Thirty Day Payments**. Upon receipt and acceptance of a billing statement that complies with all invoice requirements set forth in this Article, the Authority shall make a good faith effort to pay the amount which is due and payable within thirty (30) days.

4.5 **Withholding Payments**. The Authority reserves the right to withhold payment of the Engineer's billing statement in the event of any of the following: (1) If a dispute over the work or costs thereof is not resolved within a thirty day period; (2) pending verification of satisfactory work performed; (3) the Engineer becomes a delinquent obligor as set forth in Section 231.006 of the Family Code; or (4) required reports are not received. In the event that payment is withheld, the Authority shall notify the Engineer and give a remedy that would allow the Authority to release the payment.

4.6 **Required Reports.**

a) As required in Attachment H, Disadvantaged Business Enterprise or Historically Underutilized Business Program Requirements, the Engineer shall submit Progress Assessment Reports to report actual payments made to Disadvantaged Business Enterprises or Historically Underutilized Businesses. One copy shall be submitted with each billing statement and one copy shall be submitted to the address included in Attachment H, Disadvantaged Business Enterprise or Historically Underutilized Business Program Requirements.

b) Prior to Agreement closeout, the Engineer shall submit a Final Report (Attachment H-4) to the address set forth in Attachment H.

c) The Engineer shall submit a separate report with each billing statement showing the percent completion of the work accomplished during the billing period and the percent completion to date, and any additional written report requested by the Authority to document the progress of the work.

4.7 **Subproviders and Suppliers List**. Pursuant to requirements of 43 Texas Administrative Code §9.50 et seq., the Engineer must provide the Authority a list (Attachment H-5/DBE or Attachment H-6/HUB) of all Subproviders and suppliers that submitted quotes or proposals for subcontracts. This list shall include subproviders' and suppliers' names, addresses, telephone numbers, and type of work desired.

4.8 **Debt to the Authority.** If the Authority is prohibited by law from issuing a warrant or initiating an electronic funds transfer to the Engineer because of a debt owed to the Authority, the Authority shall apply all payments due the Engineer to the debt or delinquent tax until the debt or delinquent tax is paid in full.

4.9 **Audit.** The Authority auditor may conduct an audit or investigation of any entity receiving funds from the Authority directly under this Agreement or indirectly through a subcontract under this Agreement. Acceptance of funds directly under this Agreement or indirectly through a subcontract under this Agreement acts as acceptance of the Authority's right or the Authority's auditor right, to conduct an audit or investigation in connection with those funds. An entity that is the subject of an audit or investigation must provide the Authority auditor with access to any information the Authority auditor considers relevant to the investigation or audit.

ARTICLE V
WORK AUTHORIZATIONS

The Authority will issue work authorizations using the form included in Attachment D (Work Authorizations and Supplemental Work Authorizations) to authorize all work under this Agreement. The Engineer must sign and return a work authorization within seven (7) working days after receipt. Refusal to accept a work authorization may be grounds for termination of this Agreement. The Authority shall not be responsible for actions by the Engineer or any costs incurred by the Engineer relating to work not directly associated with or prior to the execution of a work authorization. Terms and conditions governing the use of work authorizations are set forth in Attachment A, General Provisions, Section 1. The work authorization shall not waive the Authority's or the Engineer's responsibilities and obligations established under this Agreement.

ARTICLE VI
SIGNATORY WARRANTY

The undersigned signatory for the Engineer hereby represents and warrants that he or she is an officer of the organization for which he or she has executed this Agreement and that he or she has full and complete Authority to enter into this Agreement on behalf of the firm. These representations and warranties are made for the purpose of inducing the Authority to enter into this Agreement.

ARTICLE VII
NOTICES

All notices to either party by the other required under this agreement shall be delivered personally or sent by certified or U.S. mail, postage prepaid, addressed to such party at the following addresses:

Engineer:	**Authority:**
L&G Consulting Engineers, Inc. 2100 W. Expressway 83 Mercedes, Texas 78570 Attn: Jacinto Garza, P.E., President / CEO	Hidalgo County Regional Mobility Authority (HCRMA) 203 W. Newcombe Ave. / PO BOX 1766 Pharr, Texas 78577 Attn: Pilar Rodriguez, P.E., Executive Director

All notices shall be deemed given on the date so delivered or so deposited in the mail, unless otherwise provided herein. Either party may change the above address by sending written notice of the change to the other party. Either party may request in writing that such notices shall be delivered personally or by certified U.S. mail and such request shall be honored and carried out by the other party.

ARTICLE VIII

INCORPORATION OF PROVISIONS

Attachments A through K are attached hereto and incorporated into this Agreement as if fully set forth herein.

SIGNATORIES

IN WITNESS WHEREOF, the Authority and the Engineer have executed these presents in duplicate and acknowledge that this Agreement constitutes the sole and only Agreement of the Parties hereto and supersedes any prior understandings or written or oral agreements between the Parties respecting the within subject matter.

AUTHORITY	**ENGINEER**
By: _____	By: _____
Name: Pilar Rodriguez	Name: Jacinto Garza, P.E. .
Title: Executive Director	Title: President / CEO .
Hidalgo County Regional Mobility Authority	L & G Consulting Engineers., Inc. .
Date: _____	Date: _____

:

LIST OF ATTACHMENTS TO AGREEMENT
FOR ENGINEERING SERVICES
INCORPORATED INTO THE AGREEMENT BY REFERENCE

Attachments	Title
A	General Provisions
B	Services to Be Provided by the Authority
C	Services to Be Provided by the Engineer
D	Work Authorization Forms
D-1	Work Authorization Form for Agreement for Engineering Services
D-2	Supplemental Work Authorization Form
E	Fee Schedule
E-1	Final Cost Proposal Form
E-2	Rate Sheets
E-3	Maximum Amount Payable
F	Work Schedule
G	Contract Deliverables/Computer Graphics Files for Document and Information Exchange, if applicable
H	DBE Participation
H-MOU	Memorandum of Understanding
H-Instructions	Instructions As per 49CFR 26.21
H-FG	Disadvantaged Business Enterprise (DBE) for Federal Funded Professional or Technical Services Contracts – See Attachment H Instructions
H–FN	Disadvantaged Business Enterprise (DBE) for Race-Neutral Professional or Technical Services Contracts – See Attachment H Instructions
H–SG	Historically Underutilized Business (HUB) Requirements for County Funded Professional or Technical Services Contracts – County of Texas HUB. Subcontracting plan required – See Attachment H Instructions
H–SN	Historically Underutilized Business (HUB) Requirements for County Funded Professional or Technical Services Contracts – No County of Texas HUB
H–1	Subprovider Monitoring System Commitment Worksheet
H–2	Subprovider Monitoring System Commitment Agreement
H–3	Monthly Progress Assessment Report
H-4	Subprovider Monitoring System Final Report
H-5	Federal Subproviders and Supplier Information
H-6	HUB Subcontracting Plan (HSP) Prime Contractor Progress Assessment Report
H-7	DBE Certifications
I	Certificate of Insurance
J	Conflicts of Certification
K	Debarment Certification
L	2019 Quality Assurance Program for Design Bid Build Projects
M	2019 Guide Schedule of Sampling & Testing for Design Bid-Build Projects

ATTACHMENT A
GENERAL PROVISIONS

INDEX TO PROVISIONS

Section	Title
1	Work Authorizations
2	Progress
3	Suspension of Work
4	Additional Work
5	Changes in Work
6	Supplemental Agreements
7	Ownership of Data
8	Public Information
9	Personnel, Equipment and Material
10	Subcontracting
11	Inspection of Work
12	Submission of Reports
13	Violation of Contract Terms (Breach of Agreement)
14	Termination
15	Compliance with Laws
16	Indemnification
17	Engineer's Responsibility
18	Non-collusion
19	Insurance
20	Gratuities
21	DBE/HUB Requirements
22	Maintenance, Retention and Audit of Records
23	Civil Rights Compliance
24	Patent Rights
25	Computer Graphics Files
26	Child Support Certification
27	Disputes
28	Successors and Assigns
29	Severability
30	Prior Agreements Superseded
31	Conflict of Interest
32	Office of Management and Budget (OMB) Audit Requirements
33	Certifications

ATTACHMENT A
GENERAL PROVISIONS

SECTION 1. WORK AUTHORIZATIONS

A. Use. The Engineer shall not begin any work until the Authority and the Engineer have signed a work authorization. Costs incurred by the Engineer before or after the completion date specified in the work authorization are not eligible for reimbursement. All work must be completed on or before the completion date specified in the work authorization, and no work authorization completion date shall extend beyond the Agreement period set forth in Article II of the Agreement (Agreement Period).

B. Contents. Each work authorization will include: (1) types of services to be performed; (2) a period of performance with a beginning and ending date; (3) a full description of the work to be performed; (4) a work schedule with milestones; (5) a cost not to exceed amount, (6) the basis of payment whether cost plus fixed fee, unit cost, lump sum, or specified rate; and (7) a work authorization budget calculated using fees set forth in Attachment E, Fee Schedule. The Engineer is not to include additional Agreement terms and conditions in the work authorization. In the event of any conflicting terms and conditions between the work authorization and the Agreement, the terms and conditions of the Agreement shall prevail and govern the work and costs incurred.

C. Work Authorization Budget. A work authorization budget shall set forth in detail (1) the computation of the estimated cost of the work as described in the work authorization, (2) the estimated time (hours/days) required to complete the work at the hourly rates established in Attachment E, Fee Schedule; (3) a work plan that includes a list of the work to be performed, (4) a stated maximum number of calendar days to complete the work, and (5) a cost-not-to-exceed-amount or unit or lump sum cost and the total cost or price of the work authorization. The Authority will not pay items of cost that are not included in or rates that exceed those approved in Attachment E.

D. No Guaranteed Work. Work authorizations are issued at the discretion of the Authority. While it is the Authority's intent to issue work authorizations hereunder, the Engineer shall have no cause of action conditioned upon the lack or number of work authorizations issued.

E. Incorporation into Agreement. Each work authorization shall be signed by both parties and become a part of this Agreement. No work authorization will waive the Authority's or the Engineer's responsibilities and obligations established in this Agreement. The Engineer shall promptly notify the Authority of any event that will affect the schedule or completion of the work authorization.

F. Supplemental Work Authorizations. Before additional work may be performed or additional costs incurred, a change in a work authorization shall be enacted by a written supplemental work authorization in the form identified and attached hereto as Attachment D. Both parties must execute a supplemental work authorization within the period of performance specified in the work authorization. The Authority shall not be responsible for actions by the Engineer or any costs incurred by the Engineer relating to additional work not directly associated with the performance or prior to the execution of the work authorization. The Engineer shall allow adequate time for review and approval of the supplemental work authorization by the Authority prior to expiration of the work authorization. Any supplemental work authorization must be executed by both parties within the time period established in Article II of the Agreement, (Agreement Period). Under no circumstances will a work authorization be allowed to extend beyond the Agreement's expiration date, unless a supplemental to the Agreement is approved by both parties extending the Agreement date.

F-1. More Time Needed. If the Engineer determines or reasonably anticipates that the work authorized in a work authorization cannot be completed before the specified completion date, the Engineer shall promptly notify the Authority. The Authority may, at its sole discretion, extend the work authorization period by execution of a supplemental to the work authorization, using the form attached hereto as Attachment D.

F-2. Changes in Scope. Changes that would modify the scope of the work authorized in a work authorization must be enacted by a written supplemental to the appropriate work authorization. The Engineer must allow adequate time for the Authority to review and approve any request for a time extension prior to expiration of the work authorization. If the change in scope affects the amount payable under the work authorization, the Engineer shall prepare a revised work authorization budget for the Authority's approval.

G. New Work Authorization. If the Engineer does not complete the services authorized in a work authorization before the specified completion date and has not requested a supplemental to the appropriate work authorization, the work authorization shall terminate on the completion date. At the sole discretion of the Authority, it may issue a new work authorization to the Engineer for the incomplete work using the unexpended balance of the preceding work authorization for the project. If approved by the Authority, the Engineer may calculate any additional cost for the incomplete work using the rates set forth in the preceding work authorization and in accordance with Attachment E, Fee Schedule.

H. Emergency Work Authorizations. The Authority, at its sole discretion, may accept the Engineer's signature on a faxed copy of the work authorization as satisfying the requirements for executing the work authorization, provided that the signed original is received by the Authority within five (5) business days from the date on the faxed copy.

I. Deliverables. Upon satisfactory completion of the work authorization, the Engineer shall submit the deliverables as specified in the executed work authorization to the Authority for review and acceptance.

J. Performance Standards. Unless authorized by the Authority and the Texas Department of Transportation, if applicable, work performed under this Agreement shall be developed in accordance with the latest version of the Texas Department of Transportation's manuals.

SECTION 2. PROGRESS

A. Progress meetings. The Engineer shall from time to time during the progress of the work confer with the Authority. The Engineer shall prepare and present such information as may be pertinent and necessary or as may be requested by the Authority in order to evaluate features of the work.

B. Conferences. At the request of the Authority or the Engineer, conferences shall be provided at the Engineer's office, the office of the Authority, or at other locations designated by the Authority. These conferences shall also include evaluation of the Engineer's services and work when requested by the Authority.

C. Inspections. If federal funds are used to reimburse costs incurred under this Agreement, the work and all reimbursements will be subject to periodic review by the Texas Department of Transportation and the U. S. Department of Transportation.

D. Reports. The Engineer shall promptly advise the Authority in writing of events that have a significant impact upon the progress of a work authorization, including:

1. Problems, delays, adverse conditions that will materially affect the ability to meet the time schedules and goals, or preclude the attainment of project work units by established time periods; this disclosure will be accompanied by Authority judgment of the action taken or contemplated, and any or federal assistance needed to resolve the situation; and
2. Favorable developments or events which enable meeting the work schedule goals sooner than anticipated.

E. Corrective Action. Should the Authority determine that the progress of work does not satisfy the milestone schedule set forth in a work authorization, the Authority shall review the work schedule with the Engineer to determine the nature of corrective action needed.

SECTION 3. SUSPENSION OF WORK AUTHORIZATION

A. Notice. Should the Authority desire to suspend a work authorization but not terminate the Agreement, the Authority may verbally notify the Engineer followed by written confirmation, giving ten (10) day notice. Both parties may waive the ten-day notice in writing.

B. Reinstatement. A work authorization may be reinstated and resumed in full force and effect within sixty (60) business days of receipt of written notice from the Authority to resume the work. Both parties may waive the sixty-day notice in writing.

C. Agreement Period Not Affected. If the Authority suspends a work authorization, the Agreement period as determined in Article II of the Agreement (Agreement Period) is not affected and the Agreement and the work authorization will terminate on the date specified unless the Agreement or work authorization is amended to authorize additional time.

D. Limitation of Liability. The Authority shall have no liability for work performed or costs incurred prior to the date authorized by the Authority to begin work, during periods when work is suspended, or after the completion date of the Agreement or work authorization.

SECTION 4. ADDITIONAL WORK

A. Notice. If the Engineer is of the opinion that any assigned work is beyond the scope of this Agreement and constitutes additional work, it shall promptly notify the Authority in writing, presenting the facts of the work authorization and showing how the work authorization constitutes additional work.

B. Supplemental Agreement. If the Authority finds that the work does constitute additional work, the Authority shall so advise the Engineer and a written supplemental agreement will be executed as provided in Attachment A, General Provisions, Section 6, Supplemental Agreements.

C. Limitation of Liability. The Authority shall not be responsible for actions by the Engineer or any costs incurred by the Engineer relating to additional work not directly associated with or prior to the execution of a supplemental agreement.

SECTION 5. CHANGES IN WORK

A. Work Previously Submitted as Satisfactory. If the Engineer has submitted work in accordance with the terms of this Agreement but the Authority requests changes to the completed work or parts thereof which involve changes to the original scope of services or character of work under the Agreement, the Engineer shall make such revisions as requested and as directed by the Authority. This will be considered as additional work and paid for as specified under Attachment A, General Provisions, Section 4, Additional Work.

B. Work Does Not Comply with the Agreement. If the Engineer submits work that does not comply with the terms of this Agreement, the Authority shall instruct the Engineer to make such revision as is necessary to bring the work into compliance with this Agreement. No additional compensation shall be paid for this work.

C. Errors/Omissions. The Engineer shall make revisions to the work authorized in this Agreement which are necessary to correct errors or omissions appearing therein, when required to do so by the Authority. No additional compensation shall be paid for this work.

SECTION 6. SUPPLEMENTAL AGREEMENTS

A. Need. The terms of this Agreement may be modified if the Authority determines that there has been a significant increase or decrease in the duration, scope, cost, complexity or character of the services to be performed. A supplemental agreement will be executed to authorize such significant increases or decreases.

B. Compensation. Additional compensation, if appropriate, shall be calculated as set forth in Article III of the Agreement (Compensation). Significant changes affecting the cost or maximum amount payable shall be defined to include but not be limited to new work not previously authorized or previously authorized services that will not be performed. The parties may reevaluate and renegotiate costs at this time.

C. When to Execute. Both parties must execute a supplemental agreement within the Agreement period specified in Article II of this Agreement (Agreement Period).

SECTION 7. OWNERSHIP OF DATA

A. Work for Hire. All services provided under this Agreement are considered work for hire and as such all data, basic sketches, charts, calculations, plans, specifications, and other documents created or collected under the terms of this Agreement are the property of the Authority.

B. Disposition of Documents. All documents prepared by the Engineer and all documents furnished to the Engineer by the Authority shall be delivered to the Authority upon request by the Authority. The Engineer, at its own expense, may retain copies of such documents or any other data which it has furnished the Authority under this Agreement, but further use of the data is subject to permission by the Authority.

C. Release of Data. The Engineer (1) will not release any documentation created or collected under this Agreement except to its subproviders as necessary to complete this Agreement; (2) shall include a provision in all subcontracts which acknowledges the Authority's ownership of the documents and prohibits its use for any use other than the project identified in this Agreement; and (3) is responsible for any improper use of the documents by its employees, officers, or subproviders, including costs, damages, or other liability resulting from improper use. Neither the Engineer nor any subprovider may charge a fee for the portion of the design plan created by the Authority.

D. Maintenance of Data. The Engineer and any subconsultant, subcontractor or vendor shall keep and maintain all Data and all other material relating to this Agreement and related projects, and shall make all such material available at any reasonable time during the term of the work on the Agreement and related projects and for five (5) years from the date of final payment to the Engineer for auditing, inspection, and copying upon the Authority's request or, if federal dollars are applied to the Agreement, upon request by the federal government.

SECTION 8. PUBLIC INFORMATION AND CONFIDENTIALITY

A. Public Information. The Authority will comply with Government Code, Chapter 552, the Public Information Act, and 43 Texas Administrative Code §3.10 et seq. in the release of information produced under this Agreement.

B. Confidentiality. The Engineer shall not disclose information obtained from the Authority under this Agreement without the express written consent of the Authority.

SECTION 9. PERSONNEL, EQUIPMENT AND MATERIAL

A. This Agreement is not intended to constitute, create, give up, or otherwise recognize a joint venture agreement or relationship, partnership, or formal business organization of any kind, and the rights and obligations of the parties shall be only those expressly set forth in this Agreement.

B. Engineer Resources. The Engineer shall furnish and maintain quarters for the performance of all services, in addition to providing adequate and sufficient personnel and equipment to perform the services required under this Agreement. The Engineer certifies that it presently has adequate qualified personnel in its employment for performance of the services required under this Agreement, or it will be able to obtain such personnel from sources other than the Authority.

C. Removal of Contractor Employee. All employees of the Engineer assigned to this Agreement shall have such knowledge and experience as will enable them to perform the duties assigned to them. The Authority may instruct the Engineer to remove any employee from association with work authorized in this Agreement if, in the sole opinion of the Authority, the work of that employee does not comply with the terms of this Agreement or if the conduct of that employee becomes detrimental to the work.

D. Replacement of Key Personnel. The Engineer must notify the Authority in writing as soon as possible, but no later than three business days after a project manager or other key personnel is removed from association with this Agreement, giving the reason for removal.

E. Authority Approval of Replacement Personnel. The Engineer may not replace the project manager or key personnel without prior consent of the Authority. The Authority must be satisfied that the new project manager or other key personnel is qualified to provide the authorized services. If the Authority determines that the new project manager or key personnel is not acceptable, the Engineer may not use that person in that capacity and shall replace him or her with one satisfactory to the Authority within forty-five (45) days.

F. Ownership of Acquired Property. Except to the extent that a specific provision of this Agreement states to the contrary, the Authority shall own all intellectual property acquired or developed under this Agreement and all equipment purchased by the Engineer or its subcontractors under this Agreement. All intellectual property and equipment owned by the Authority shall be delivered to the Authority when this Agreement terminates, or when it is no longer needed for work performed under this Agreement, whichever occurs first.

G. The Engineer shall furnish and maintain, at its own expense, office space for the performance of all services, and adequate and sufficient personnel and equipment to perform the services as required. All employees of the Engineer shall have such knowledge and experience as will enable them to perform the duties assigned to them.

H. The Engineer agrees to maintain (in sufficient detail as will properly reflect all work done and results achieved in the performance of this Agreement) tracings, plans, specifications, maps, basic survey notes and sketches, books, records, reports, research notes, charts, graphs, comments, plans, comparisons, computations, analyses, recordings, photographs, computer programs, and documentations thereof, and other graphic or written data or deliverables generated in connection with the work called for in the Agreement; all such information and documentations to be termed "Data" under this Agreement.

I. All Data is the exclusive property of the Authority and shall be furnished to the Authority upon request and shall not be used or released by the Engineer or any other person except with the prior approval of the Authority. All documents prepared by the Engineer and all documents furnished to the Engineer by the Authority shall be delivered to the Authority upon completion of the relevant milestone for payment and/or termination of this Agreement. Provided, however, that none of the documents or materials are intended or represented by Engineer to be suitable for reuse by the Authority, or others on extensions of the project or on any other project. Any reuse of Data without written verification or adaptation by Engineer for use beyond the specific purpose intended will be at Authority's sole risk and without liability or legal exposure to Engineer.

SECTION 10. SUBCONTRACTING

A. Prior Approval. The Engineer shall not assign, subcontract or transfer any portion of professional services related to the work under this Agreement without prior written approval from the Authority.

B. DBE/HUB Compliance. The Engineer's subcontracting program shall comply with the requirements of Attachment H of the Agreement (DBE/HUB Requirements).

C. Required Provisions. All subcontracts for professional services shall include the provisions included in Attachment A, General Provisions, and any provisions required by law. The Engineer is authorized to pay subproviders in accordance with the terms of the subcontract, and the basis of payment may differ from the basis of payment by the Authority to the Engineer.

D. **Prior Review.** All subcontracts for professional services shall be approved as to form in writing by the Authority and, if applicable, by the Texas Department of Transportation prior to its execution and performance of work thereunder.

E. Engineer Responsibilities. No subcontract relieves the Engineer of any responsibilities under this Agreement.

SECTION 11. INSPECTION OF WORK

A. Review Rights. The Authority and if appropriate, the Texas Department of Transportation, and when federal funds are involved, the U. S. Department of Transportation, and any of their authorized representatives shall have the right at all reasonable times to review or otherwise evaluate the work performed hereunder and the premises in which it is being performed.

B. Reasonable Access. If any review or evaluation is made on the premises of the Engineer or a subprovider, the Engineer shall provide and require its subproviders to provide all reasonable facilities and assistance for the safety and convenience of the Authority and if appropriate the Authority, State, or federal representatives in the performance of their duties.

SECTION 12. SUBMISSION OF REPORTS

All applicable study reports shall be submitted in preliminary form for approval by the Authority before a final report is issued. The Authority's comments on the Engineer's preliminary report must be addressed in the final report.

SECTION 13. VIOLATION OF AGREEMENT TERMS (BREACH OF AGREEMENT)

A. Violation. Violation of the Agreement terms or breach of this Agreement by the Engineer shall be grounds for termination of the Agreement. Any additional costs to the Authority that arise from the Engineer's default, breach of Agreement, or violation of Agreement terms shall be paid by the Engineer. This Agreement shall not be considered as specifying the exclusive remedy for any default, but all remedies existing at law and in equity may be availed of by either party and shall be cumulative.

B. Venue. Venue for disputes related to this Agreement shall be Hidalgo County, Texas.

C. Applicable Laws. This Agreement shall be construed under and in accordance with the laws of the State of Texas.

SECTION 14. TERMINATION

A. Causes. The Agreement may be terminated before the stated completion date by any of the following conditions.

1. By mutual agreement and consent, in writing from both parties.
2. By the Authority by notice in writing to the Engineer as a consequence of failure by the Engineer to perform the services set forth herein in a satisfactory manner.
3. By either party, upon the failure of the other party to fulfill its obligations as set forth herein.
4. By the Authority for reasons of its own, not subject to the mutual consent of the Engineer, by giving ten business days notice of termination in writing to the Engineer.
5. By the Authority, if the Engineer violates the provisions of Attachment A, General Provisions Section 21, Gratuities.
6. By satisfactory completion of all services and obligations described herein.

B. Measurement. Should the Authority terminate this Agreement as herein provided, no fees other than fees due and payable at the time of termination shall thereafter be paid to the Engineer. Compensation for work at termination will be based on a percentage of the work completed at that time. Should the Authority terminate this Agreement under Paragraph A (4) or (5) above, the Engineer shall not incur costs during the ten-day notice period in excess of the amount incurred during the preceding ten (10) days.

C. Value of Completed Work. If the Engineer defaults in the performance of this Agreement or if the Authority terminates this Agreement for fault on the part of the Engineer, the Authority will give consideration to the following when calculating the value of the completed work: (1) the actual costs incurred (not to exceed the rates set forth in Attachment E, Fee Schedule) by the Engineer in performing the work to the date of default;

(2) the amount of work required which was satisfactorily completed to date of default; (3) the value of the work which is usable to the Authority; (4) the cost to the Authority of employing another firm to complete the required work; (5) the time required to employ another firm to complete the work; and (6) other factors which affect the value to the Authority of the work performed.

D. Calculation of Payments. The Authority shall use the fee schedule set forth in Attachment E to the Agreement (Fee Schedule) in determining the value of the work performed up to the time of termination. In the case of partially completed engineering services, eligible costs will be calculated as set forth in Attachment E, Fee Schedule. The sum of the provisional overhead percentage rate for payroll additives and for general and administrative overhead costs during the years in which work was performed shall be used to calculate partial payments.

E. Excusable Delays. Except with respect to defaults of subproviders, the Engineer shall not be in default by reason of any failure in performance of this Agreement in accordance with its terms (including any failure to progress in the performance of the work) if such failure arises out of causes beyond the control and without the default or negligence of the Engineer. Such causes may include, but are not restricted to, acts of God or the public enemy, acts of the Government in either its sovereign or Contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather.

F. Surviving Requirements. The termination of this Agreement and payment of an amount in settlement as prescribed above shall extinguish the rights, duties, and obligations of the Authority and the Engineer under this Agreement, except for those provisions that establish responsibilities that extend beyond the Agreement period.

G. Payment of Additional Costs. If termination of this Agreement is due to the failure of the Engineer to fulfill its Agreement obligations, the Authority may take over the project and prosecute the work to completion, and the Engineer shall be liable to the Authority for any additional cost to the Authority.

SECTION 15. COMPLIANCE WITH LAWS

The Engineer shall comply with all applicable Authority, federal, County and local laws, statutes, codes, ordinances, rules and regulations, and the orders and decrees of any court, or administrative bodies or tribunals in any manner affecting the performance of this Agreement, including, without limitation, worker's compensation laws, minimum and maximum salary and wage statutes and regulations, nondiscrimination, and licensing laws and regulations. When required, the Engineer shall furnish the Authority with satisfactory proof of its compliance therewith.

SECTION 16. INDEMNIFICATION

A. THE ENGINEER SHALL SAVE AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, AND EMPLOYEES, FROM ALL CLAIMS, LIABILITY, ACTION, AND LOSS (INCLUDING DAMAGE OR INJURY INCLUDING DEATH TO PERSONS OR PROPERTY) DUE TO ACTIVITIES OF ITSELF, ITS AGENTS, SUBCONTRACTORS, OR EMPLOYEES PERFORMED UNDER THIS AGREEMENT AND WHICH ARE CAUSED BY OR RESULT FROM ERROR, OMISSION, OR NEGLIGENT ACT, INCLUDING ANY VIOLATION OF ANY STATUTES, ORDINANCES, BUILDING CODES OR REGULATIONS, OF THE ENGINEER OR OF ANY PERSON EMPLOYED OR ENGAGED BY THE ENGINEER, AND THE DEFENSE OF ANY SUCH CLAIMS, LIABILITY, ACTION, OR LOSS.

B. THE ENGINEER SHALL ALSO SAVE AND HOLD HARMLESS THE AUTHORITY FROM ANY AND ALL EXPENSE, INCLUDING, BUT NOT LIMITED TO, REASONBLE ATTORNEY FEES WHICH MAY BE INCURRED BY THE AUTHORITY OR LIABILITIES WHICH MAY BE IMPOSED ON THE AUTHORITY AS THE RESULT OF SUCH ERROR, OMISSION, OR NEGLIGENT ACT BY THE ENGINEER, ITS AGENTS, ITS SUBCONTRACTORS, OR EMPLOYEES.

SECTION 17. ENGINEER'S RESPONSIBILITY

A. Accuracy. The Engineer shall be responsible for the accuracy and completeness of work and shall promptly make necessary revisions or corrections resulting from its errors, omissions, or negligent acts without compensation.

B. Errors and Omissions. The Engineer's responsibility for all questions arising from design errors and/or omissions will be determined by the Authority and all decisions shall be in accordance with the Authority's "Errors or Omissions Policy". The Engineer will not be relieved of the responsibility for subsequent correction of any such errors or omissions or for clarification of any ambiguities until after the construction phase of the project has been completed.

C. Seal. The responsible Engineer shall sign, seal and date all appropriate engineering submissions to the Authority in accordance with the Texas Engineering Practice Act and the rules of the Texas Board of Professional Engineers.

D. Resealing of Documents. Once the work has been sealed and accepted by the Authority, the Authority, as the owner, will notify the party to this Agreement, in writing, of the possibility that a Authority engineer, as a second engineer, may find it necessary to alter, complete, correct, revise or add to the work. If necessary, the second engineer will affix his seal to any work altered, completed, corrected, revised or added. The second engineer will then become responsible for any alterations, additions or deletions to the original design including any effect or impacts of those changes on the original engineer's design.

SECTION 18. NONCOLLUSION

A. Warranty. The Engineer warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Engineer and those consultants, subconsultants, and providers identified in the presentation to the Authority's Board, to solicit or secure this Agreement and that it has not paid or agreed to pay any company or engineer any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon or resulting from the award or making of this Agreement.

B. Liability. For breach or violation of this warranty, the Authority shall have the right to annul this Agreement without liability or, in its discretion, to deduct from the Agreement price or compensation, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift or contingent fee.

SECTION 19. INSURANCE

A. Insurance Liability Limits. The Engineer shall obtain and maintain insurance limits of liability for each of the types of insurance coverage identified as follows:

1. Workers' Compensation, endorsed with a waiver of subrogation in favor of the Authority in the amount of statutory obligations imposed under the Texas Workers' Compensation Law.

2. Commercial General Liability, endorsed with the Authority as an additional insured and endorsed with a waiver of subrogation in favor of the Authority to the extent of the liabilities assumed by Engineer under **Attachment A, Section 17** of this Agreement, in limits of liability of one million dollars ($1,000,000) combined single limit each occurrence and in the aggregate for bodily injury and property damage.
3. Professional Liability in limits of two million dollars ($2,000,000) each claim and in the aggregate.

The coverage and amounts designated herein are minimum requirements and do not establish limits of the Engineer's liability. Additional coverage may be provided at the Engineer's option and expense.

The issuer of any policy must have a rating of at least B+ and a financial size of Class VI or better according to the latest *Best's* rating.

B. Insurance Liability Limits. The Engineer shall furnish proof of insurance by means of a completed Attachment I – Certificate of Insurance - Hidalgo County Regional Mobility Authority, attached hereto and made a part thereof with the Project Name and the Engineer's name stated thereon, to be submitted prior to the beginning of the Project. The Engineer will be considered in breach of this Agreement should the Engineer fail to maintain the required insurance coverage during the term of this Agreement. The termination of this Agreement resulting from failure to maintain the required insurance will be carried out in accordance with the termination provisions herein.

C. Engineer's Risk. The services to be provided under this Agreement will be performed entirely at Engineer's risk and Engineer assumes all responsibility for the condition of vehicles or other instrumentalities used in the performance of this Agreement.

D. Work on Texas Department of Transportation Property. To the extent that the Texas Department of Transportation or this Agreement authorizes the Engineer or its subconsultants to perform any work on Texas Department of Transportation right of way, before beginning work the entity performing the work shall provide the Authority and the Texas Department of Transportation with a fully executed copy of the Department's Form 1560 Certificate of Insurance verifying the existence of coverage in the amounts and types specified on the Certificate of Insurance for all persons and entities working on Department right of way. This coverage shall be maintained until all work on the Department right of way is complete. If coverage is not maintained, all work on Department right of way shall cease immediately, and, the Authority may recover damages and all costs of completing the work.

SECTION 20. GRATUITIES

Employees of the Authority shall not accept any benefits, gifts or favors from any person doing business or who reasonably speaking may do business with the Authority under this Agreement. The only exceptions allowed are ordinary business lunches and items that have received the advance written approval of the Authority. Any person doing business with or who may reasonably speaking do business with the Authority under this Agreement may not make any offer of benefits, gifts or favors to departmental employees, except as mentioned herein above. Failure on the part of the Engineer to adhere to this policy may result in the termination of this Agreement.

SECTION 21. DISADVANTAGED BUSINESS ENTERPRISE OR HISTORICALLY UNDERUTILIZED BUSINESS REQUIREMENTS

The Engineer agrees to comply with the requirements set forth in Attachment H, Disadvantaged Business Enterprise or Historically Underutilized Business Subcontracting Plan Requirements with an assigned goal or a zero goal, as determined by the Authority. The Engineer will adhere to the commitment and to participation by certain Disadvantaged Business Enterprises (DBE) agreed to by the Authority during negotiations. Refer to Attachment H-7 for copies of DBE Certifications.

SECTION 22. MAINTENANCE, RETENTION AND AUDIT OF RECORDS

A. Retention Period. The Engineer shall maintain all books, documents, papers, accounting records and other evidence pertaining to costs incurred and services provided (hereinafter called the Records). The Engineer shall make the records available at its office during the Agreement period and for five (5) years from the date of final payment under this Agreement, until completion of all audits, or until pending litigation has been completely and fully resolved, whichever occurs last.

B. Availability. The Authority or any of its duly authorized representatives and, if appropriate, the Texas Department of Transportation, the Federal Highway Administration, the United States, Department of Transportation, Office of Inspector General, and the Comptroller General shall have access to the Engineer's Records which are directly pertinent to this Agreement for the purpose of making audits, examinations, excerpts and transcriptions.

SECTION 23. CIVIL RIGHTS COMPLIANCE

(1) Compliance with Regulations: The Engineer shall comply with the regulations of the Department of Transportation, Title 49, Code of Federal Regulations, Parts 21, 24, 26 and 60 as they relate to nondiscrimination; 23 CFR 710.405(B); also Executive Order 11246 titled Equal Employment Opportunity as amended by Executive Order 11375.

The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible."

(2) Nondiscrimination: The Engineer, with regard to the work performed by it during this Agreement, shall not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

(3) Solicitations for Subcontracts, Including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the Engineer for work to be performed under a

subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Engineer of the Engineer's obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, sex, or national origin.

(4) Information and Reports: The Engineer shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and facilities as may be determined by the Authority; and if appropriate, the Texas Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of the Engineer is in the exclusive possession of another who fails or refuses to furnish this information, the Engineer shall so certify to the Authority; and if appropriate, the Texas Department of Transportation or the Federal Highway Administration and shall set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of the Engineer's noncompliance with the nondiscrimination provisions of this Agreement, the Authority shall impose such Agreement sanctions as the Authority; and if appropriate, the Texas Department of Transportation or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

(a) withholding of payments to the Engineer under this Agreement until the Engineer complies and/or
(b) cancellation, termination, or suspension of this Agreement, in whole or in part.

(6) Incorporation of Provisions: The Engineer shall include the provisions of paragraphs (1) through (5) above in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The Engineer shall take such action with respect to any subcontract or procurement as the Authority and; if appropriate, the Texas Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance provided, however, that in the event an Engineer becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Engineer may request the Authority; or, if appropriate, the Texas Department of Transportation to enter into such litigation to protect the interests of the Authority; and, in addition, the Engineer, if appropriate, may request the United States to enter into such litigation to protect the interests of the United States.

SECTION 24. PATENT RIGHTS

The Authority; and if appropriate, the Texas Department of Transportation; and the U. S. Department of Transportation shall have the royalty free, nonexclusive and irrevocable right to use and to authorize others to use any patents developed by the Engineer under this Agreement.

SECTION 25. COMPUTER GRAPHICS FILES

The Engineer agrees to comply with Attachment G, Computer Graphics Files for Document and Information Exchange, if determined by the Authority to be applicable to this Agreement.

SECTION 26. CHILD SUPPORT CERTIFICATION

Under Section 231.006, Texas Family Code, the Engineer certifies that the individual or business entity named in this Agreement, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this Agreement may be terminated and payment may be withheld if this certification is inaccurate. If the above certification is shown to be false, the Engineer is liable to the Authority for attorney's fees, the cost necessary to complete this Agreement, including the cost of advertising and awarding a second

Agreement, and any other damages provided by law or this Agreement. A child support obligor or business entity ineligible to receive payments because of a payment delinquency of more than thirty (30) days remains ineligible until: all arrearages have been paid; the obligor is in compliance with a written repayment agreement or court order as to any existing delinquency; or the court of continuing jurisdiction over the child support order has granted the obligor an exemption from Subsection (a) of Section 231.006, Texas Family Code, as part of a court-supervised effort to improve earnings and child support payments.

SECTION 27. DISPUTES

A. Disputes Not Related to Agreement Services. The Engineer shall be responsible for the settlement of all contractual and administrative issues arising out of any procurement made by the Engineer in support of the services authorized herein.

B. Disputes Concerning Work or Cost. Any dispute concerning the work hereunder or additional costs, or any non-procurement issues shall be settled by mediation and if mediation is unsuccessful then parties go to trial under Texas State law.

SECTION 28. SUCCESSORS AND ASSIGNS

The Engineer and the Authority do each hereby bind themselves, their successors, executors, administrators and assigns to each other party of this agreement and to the successors, executors, administrators and assigns of such other party in respect to all covenants of this Agreement. The Engineer shall not assign, subcontract or transfer its interest in this Agreement without the prior written consent of the Authority.

SECTION 29. SEVERABILITY

In the event any one or more of the provisions contained in this Agreement shall for any reason, be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision thereof and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

SECTION 30. PRIOR AGREEMENTS SUPERSEDED

This Agreement constitutes the sole agreement of the parties hereto for the services authorized herein and supersedes any prior understandings or written or oral Agreements between the parties respecting the subject matter defined herein.

SECTION 31. CONFLICT OF INTEREST

A. Representation by Engineer. The undersigned represents that its firm has no conflict of interest that would in any way interfere with its or its employees' performance of services for the Authority or which in any way conflicts with the interests of the Authority. The firm shall exercise reasonable care and diligence to prevent any actions or conditions that could result in a conflict with the Authority's interests.

B. Certification Status. The Engineer certifies that it is not:

1. a person required to register as a lobbyist under Chapter 305, Government Code; or
2. a public relations firm other than the firms identified in the presentation to the RMA Board.

C. Environmental Disclosure. If the Engineer will prepare an environmental impact statement or an environmental assessment under this Agreement, the Engineer certifies by executing this Agreement that it has no financial or other interest in the outcome of the project on which the environmental impact statement or environmental assessment is prepared.

SECTION 32. OFFICE OF MANAGEMENT AND BUDGET (OMB) AUDIT REQUIREMENTS

The parties shall comply with the requirements of the Single Audit Act of 1984, P.L. 98-502, ensuring that the single audit report includes the coverage stipulated in OMB Circular A-133.

ATTACHMENT A
GENERAL PROVISIONS

SECTION 33. CERTIFICATIONS

A. The parties are prohibited from making any award at any tier to any party that is debarred or suspended or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549, "Debarment and Suspension." By executing this Agreement, the Engineer certifies that it is not currently debarred, suspended, or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549. The parties to this Agreement shall require any party to a subcontract or purchase order awarded under this Agreement to certify its eligibility to receive Federal funds and, when requested by the Authority, to furnish a copy of the certification.

B. In accordance with Department of Transportation, Title 49, Code of Federal Regulations, Part 29 and by signature on this Agreement and the Debarment Certification attached hereto as Attachment K, the Engineer certifies its compliance and the compliance of any subconsultants or subcontractors present or future, by stating that any person associated therewith in the capacity of owner, partner, director, officer, principal investor, project director, manager, auditor, or any position involving federal, state or Authority funds:

(1) is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;
(2) does not have a proposed debarment pending;
(3) has not been suspended debarred, voluntarily excluded, or determined ineligible by an federal agency within the past three (3) years; and
(4) has not been indicted, convicted, or had a civil judgment rendered against the firm by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years as specified by Title 49, Code of Federal Regulations, paragraph 29.305(a).

C. The Engineer agrees to comply with the provisions of Section 1352 of Title 31, U.S. Code as codified in Title 48, Federal Acquisition Regulations, Subpart 3.8 and subpart 52.203.11, prohibiting federal funds from being expended by a recipient or lower-tier subrecipient of a federal contract, grant, loan, or cooperative agreement to pay any person for influencing or attempting to influence a federal agency or Congress in connection with the award of any federal contract or cooperative agreement. If federal funds are applied to the services under this Agreement, the Engineer and any subconsultants or subcontractors would be required to complete the Certification of Federal Contracts and, if necessary, the Disclosure of Lobbying Activities.

D. If the Project is a federal aid project, Engineer is required to comply with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act (42 U.S.C. 1857 (h)), which prohibit the use under non-exempt federal contract, grants, or loans of facilities included on the EPA List of Violating Facilities. Violations shall be reported to the Federal Highway Administration and to the USEPA Assistant Administrator of Enforcement.

ATTACHMENT B
SERVICES TO BE PROVIDE BY THE AUTHORITY

The **AUTHORITY** will provide the following general items.

1. Authorization to begin work with issuance of Notice to Proceed [NTP].
2. Timely payment for work performed by the **Engineer** and accepted by the **AUTHORITY** on a monthly basis.
3. Assistance to the **Engineer**, as necessary, to obtain the required data and information from other local, regional, State and Federal agencies that the **Engineer** cannot easily obtain.
4. Provide any available relevant data the **AUTHORITY** may have on file concerning the project:
   A. Electronic copy of project plans.
   B. Electronic copy of contract Proposal and any Addendums per project.
   C. Limited Access to Appia and ProjectWise.
   D. Storm Water Pollution Prevention Plan (SW3P) information.
   F. SW3P Coordination procedures.
   G. Best Practices coordination procedures (Disadvantaged Business Enterprise, (Materials, General Bookkeeping).
5. Review and approve the **Engineer**'s progress schedule with milestone activities and/or deliverables.
6. The **AUTHORITY** will provide the Environmental Document and electronic Constraints map for the project for development of the Environmental Permits, Issues and Commitments (EPIC) sheets and any other compliance issues.

RIGHT-OF-WAY DATA:

The **AUTHORITY** will provide the following:

1. Assist the **Engineer**, as necessary, with coordination of any utility relocations that may be required.
2. Ownership Data
   a. Ownership Information shall be provided for the corridor width.
   b. All utility ownership shall be provided.
3. Utility Adjustments:
   AUTHORITY (TxDOT as necessary) will provide executed utility agreements to the Engineer for all required utility adjustments.
5. Survey and Stake Right-of-Way
6. Right of Entry to all affected properties located within the project limits.
7. Deliverables: Right of way Map in electronic format (PDF)

MANAGEMENT:

The **AUTHORITY** will provide the following:

1. Attend/participate in progress meetings as required.
2. Timely review of submittals as required.

ATTACHMENT C
SERVICES TO BE PROVIDED BY THE ENGINEER

APPLICABILITY:

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

ABBREVIATIONS, ABBREVIATIONS, and DEFINITIONS:

HCRMA OR AUTHORITY shall mean Hidalgo County Regional Mobility Authority
PMC (GEC) shall mean Program Management Consultant (General Engineering Consultant) (Dannenbaum Engineering Corporation)
ENGINEER shall mean B2Z Engineering, LLC
TxDOT shall mean Texas Department of Transportation
FHWA shall mean Federal Highway Administration
IBWC shall mean International Boundary and Water Commission
USFWS shall mean United States Fish & Wildlife Service
THC shall mean Texas Historical Commission
SHPO shall mean State Highway Preservation Office
USACE shall mean United States Army Corps of Engineers
GSA shall mean General Services Administration
HCMPO shall mean Hidalgo County Metropolitan Planning Organization
FAA shall mean Federal Aviation Administration
MTP shall mean Metropolitan Transportation Plan
TIP shall mean Transportation Improvement Program
MUTCD shall mean Manual of Uniform Traffic Control Devices
AASHTO shall mean American Association of State Highway and Transportation Officials
LRFD shall mean Load & Resistance Factor Design
PS&E shall mean Plans, Specifications and Estimate
ACP shall mean Asphaltic Concrete Pavement
CSJ shall mean Control Section Job (highway project designation number)
ADP shall mean Advance Project Development

AAP	AASHTO Accreditation Program (AASHTO re:source and CCRL)
AASHTO	American Association of State Highway Transportation Officials
ACI	American Concrete Institute
AO	Area Office
AQMP	Aggregate Quality Monitoring Program
CAR	Corrective Action Report
CCRL	Concrete and Cement Reference Laboratory
CE&I	Construction Engineering and Inspection
CFR	Code of Federal Regulations
MTD	Materials and Tests Division
CMEC	Construction Materials Engineering Council
FHWA	Federal Highway Administration
HMA	Hot-Mix Asphalt
HMAC	Hot-Mix Asphalt Center
IA	Independent Assurance
L-A-B	Laboratory Accreditation Bureau
MPL	Material Producer List
QAP	Quality Assurance Program
QAT	Quality Assurance Test
QC	Quality Control
SM	SiteManager
TXAPA	Texas Asphalt Pavement Association
TxDOT	Texas Department of Transportation

ATTACHMENT C
SERVICES TO BE PROVIDED BY THE ENGINEER
PROJECT DESCRIPTION

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

County/HCRMA: Hidalgo County

CSJ number: 0921-02-368

Project/Description: Provide construction materials testing to assure the materials incorporated into 5.85 miles of Segment 1 [From McColl Road to us281] oN Phase II of 365 Toll highway construction project are subject to verification sampling and testing when required and meet project plans and specifications; and administering Quality Monitoring and Quality Assurance Program. Overall project consists of construction of a 12.4 mile tolled facility from FM 396 & GSA Connector to US 281 (Military Highway), which consists of: of grading, flexible base, lime treated subgrade, asphaltic concrete pavement, concrete pavement, signing and pavement markings, cross culverts, bridge structures, retaining walls, illumination and toll equipment.

.

Length: 5.85 Miles (Approx)

Highway: 365TOLL (Segment 1)

Limits: From McColl Road to us281] (See Location Map Attached)

Contract is for "indefinite delivery/indefinite quantity [IDIQ] set for a proposed three (3) year fixed period of time, during that period of time the Engineer will be responsible for an unlimited number of separate projects, or additional work on a current project to be issued on an individual work order basis.

The Engineer agency(s) must be accredited by one of the following FHWA- and TxDOT-approved accrediting bodies:

A. AASHTO Accreditation Program (AAP);
B. Construction Materials Engineering Council (CMEC); or
C. Laboratory Accreditation Bureau (L-A-B)

The Engineer shall have Texas Department of Transportation or Toll Authority/Regional Mobility Authority as well U.S. Army Corps of Engineers' construction material testing experience and is expected to work directly with the HCRMA Construction Division, namely, the Chief Construction Engineer for the Authority. The selected Engineer(s) may also perform certain tasks under the oversight of the HCRMA's General Engineering Consultant (Currently HDR Engineering Inc.).

To avoid an appearance of a conflict of interest, any qualified Engineer agency (laboratory) shall perform only one of the following types of testing on the same project:

A. Quality control testing;
B. Quality acceptance testing;
C. Owner verification testing;
D. Independent assurance testing; or
E. Referee testing.

The selected Engineer(s) shall have adequate experienced staff and a workload free from constraints to provide the necessary construction material testing for the HCRMA. Staff expertise is to include a Licensed Professional Engineer and certified, experienced staff proficient with TxDOT testing procedures, sampling and testing schedule, and the latest ASSHTO, ASTM and ACI testing requirements [Appendix A] performed and executed as per 2019 TxDOT Quality Assurance Program (~~DB-QAP~~ / DBB-QAP) / 2019 Guide Schedule of Sampling & Testing for Design Bid-Build Projects.

Engineer will compose and submit an annual report to the Federal Highway Administration (FHWA) summarizing the results of HCRMA's project specific systems approach program. This report identifies:

A. Number of sampling and testing personnel evaluated by the systems approach IA testing;
B. Number of IA evaluations found to be acceptable;
C. Number of IA evaluations found to be unacceptable; and
D. Summary of any significant system-wide corrective actions taken.

The Engineer will be responsible for maintaining documentation of all individuals qualified under their authority who perform required tests for acceptance of materials. A qualification summary listing all tests for which an individual is qualified will be available and printed at HCRMA's request. Documentation to be maintained for all qualified personnel includes:

A. Copies of any certificates issued by ACI and TXAPA ;
B. Original written examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, score, and date taken;
C. Original performance examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, qualification status, and date;
D. Results of annual split/proficiency testing administered by the TxDOT qualifying authority for each technician.

Engineer shall perform Quality Control / Quality Assurance sampling and testing and comply with Laboratory Qualification Program and will be evaluated under the Independent Assurance Program, as described in the 2019 QAPDBB [Attachment L]. Quality Control test results will be validated by verification test results obtained from independently taken samples. IA personnel or their designated agents will perform Quality Assurance verification sampling and testing.

1. The Engineer shall perform all sampling and testing of components and materials in accordance with the standard specifications, and all other standard and special specifications and special provisions applicable in this agreement. Meet the minimum sampling frequencies set out in the TxDOT 2019 Guide Schedule for Sampling and Testing forDesign Bid-Build Projects. The testing shall include the following materials and all the components of the materials listed. The estimated number of samples and tests are based on quantities in the executed construction contract.
2. The Engineer shall ensure the testing is completed and input into ProjectWise. NOTE: The General Contractor is responsible for Quality Control (QC) testing of Item 360, Concrete Paving. The Engineer shall be responsible for Quality Assurance (QA) testing of Item 360, Concrete Paving.
3. The Engineer shall provide certified personnel, outlined in their internal, AASHTO-approved, Quality Control (QC) Manual that are knowledgeable of all materials testing procedures. All personnel performing acceptance tests must provide certifications and must maintain the certifications throughout the project. The HCRMA reserves the right to require replacement of any technician during this contract if performance is determined to be unsatisfactory or the technician fails to maintain appropriate certifications.
4. Engineer's laboratory will be qualified by the HCRMA qualifying authority in accordance with Section 3, Laboratory Qualification Responsibility of the Texas Department of Transportation (TxDOT) Quality Assurance Program (Manual Notice: 2005-1), and be AASHTO accredited under the AASHTO Accreditation Program (AAP) throughout the life of the project. Engineer shall transmit, to the HCRMA, a copy of AAP accreditation certificate(s) upon receipt by the testing laboratory.

5. The Engineer shall provide technicians certified in accordance with TxDOT Quality Assurance Program for Construction (QAP) or other State approved programs, such as the Texas Asphalt Pavement Association (TxAPA) for Hot Mix Asphalt, and the Soils and Base Certification Program, as listed.

6. The Engineer shall provide certified technicians to perform the following tests:
   - A. Hot Mix Asphalt Testing:
     - a. Level l-A
     - b. Level l-B
     - c. Hot Mix Asphalt Testing • Level II
     - d. All other tests in the Manual of Testing Procedures 200-F Series or ASTM Procedures not covered in Level l-A, Level l-B, or Level II
   - B. Concrete Testing:
     - a. QAP Program for Concrete Testing
     - b. Other tests outlined in the Manual of Testing Procedures 400-A Series or ASTM Procedures that are not included in the QAP Program

7. The Engineer shall perform testing on the project. These tests include all tests listed in State's Guide Schedule of Sampling and Testing dated 2015. Follow the State's Guide Schedule of Sampling and Testing to establish testing frequencies. Testing frequencies may be increased as directed by the HCRMA.
8. The Engineer shall notify the HCRMA, to determine if any tests may be waived
9. The Engineer shall attend preconstruction QA and QC testing meetings prior to beginning work.
10. The Engineer shall:
    - A. Review and recommend approval or rejection of the Quality Control (QC) sampling and testing documentation submitted by the General Contractor for compliance with applicable State and Federal regulations, standards, and contract requirements.
    - B. Verify all tested materials used meet specifications, or identify materials that do not meet specifications and recommend action which should be taken.
    - C. Certify that all tested materials used during construction meet the specifications as outlined in the Site Manager Support System.
    - D. Work closely with the HCRMA to resolve all material discrepancies before the next monthly estimate is processed by utilizing the XiteReport in Site Manager.
    - E. Enter all test data in Site Manager.
    - F. Enter all mix designs, concrete and asphalt, provided by the General Contractor into Site Manager.
    - G. The Engineer shall report failing tests to the HCRMA within twenty-four (24) hours.

SUMMARY OF DELIVERABLES:

The Engineer shall provide the following:

1. Monthly Progress Reports
2. Quarterly Material Test Reports
3. Sampling and testing personnel qualification
4. Final document file (maintained in project control system during project execution. Final structure of file will be determined during project implementation, an example of content is provided below)
   - A. Construction Oversight Documentation
     - a. Testing reports and Testing documentation as applicable
     - b. Test Exception Letter
     - c. Certification Verifications
     - d. Photographs
   - B. Project Correspondence File (Design and Construction)
     - a. E-mail files
     - b. Letters
     - c. Memos
     - d. Meeting Minutes
     - e. Monthly Deficiency Reports to track material issues (one (1) per month)

f. Misc. correspondence

ATTACHMENT D

WORK AUTHORIZATION

ATTACHMENT D-1

WORK AUTHORIZATION NO. ____
AGREEMENT FOR ENGINEERING SERVICES

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of "Article V of that certain Professional Services Agreement for Engineering Services" (the Agreement) entered into by and between the Hidalgo County Regional Mobility Authority (Authority), and L&G Consulting Engineers. (the Engineer).

PART I. The Engineer will perform engineering design services generally described as in accordance with the project description attached hereto and made a part of this Work Authorization. The responsibilities of the Authority and the Engineer as well as the work schedule are further detailed in exhibits A, B and C which are attached hereto and made a part of the Work Authorization.

PART II. The maximum amount payable under this Work Authorization is $_____ and the method of payment is _____as set forth in Attachment E of the Agreement. This amount is based upon fees set forth in Attachment E, Fee Schedule, of the Agreement and the Engineer's estimated Work Authorization costs included in Exhibit D, Fee Schedule, which is attached and made a part of this Work Authorization.

PART III. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with Articles III thru V of the Agreement, and Attachment A, Section 1.

PART IV. This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate on _____, unless extended by a supplemental Work Authorization as provided in Attachment A, Section 1.

PART V. This Work Authorization does not waive the parties' responsibilities and obligations provided under "Article V of that certain Professional Services Agreement for Engineering / Design Services 365 Tollway Project / Segment 1 & 2.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER	**THE AUTHORITY**
_____	_____
(Signature)	(Signature)
Jacinto Garza, P.E._____	Pilar Rodriguez, P.E._____
(Printed Name)	(Printed Name)
President / CEO_____	Executive Director_____
(Title)	(Title)
_____	_____
(Date)	(Date)

LIST OF EXHIBITS

Exhibit A	Services to be provided by the Authority
Exhibit B	Services to be provided by the Engineer
Exhibit C	Work Schedule
Exhibit D	Fee Schedule/Budget
Exhibit H-2	Subprovider Monitoring System Commitment Agreement

ATTACHMENT D-2

SUPPLEMENTAL WORK AUTHORIZATION NO. ____
TO WORK AUTHORIZATION NO. ____
AGREEMENT FOR ENGINEERING SERVICES

THIS SUPPLEMENTAL WORK AUTHORIZATION is made pursuant to the terms and conditions of "Article V of that certain Professional Services Agreement for Engineering Design Services" hereinafter identified as the "Agreement," entered into by and between the Hidalgo County Regional Mobility Authority (Authority), and L&G Consulting Engineers, Inc. (the Engineer).

The following terms and conditions of Work Authorization No. ____ are hereby amended as follows:

This Supplemental Work Authorization shall become effective on the date of final execution of the parties hereto. All other terms and conditions of Work Authorization No. ____ not hereby amended are to remain in full force and effect.

IN WITNESS WHEREOF, this Supplemental Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER	**THE AUTHORITY**
_____	_____
(Signature)	(Signature)
Jascinto Garza, P.E._____	Pilar Rodriguez, P.E._____
(Printed Name)	(Printed Name)
President / CEO_____	Executive Director_____
(Title)	(Title)
_____	_____
(Date)	**(Date)**

ATTACHMENT E

FEE SCHEDULE

TEST NO.	CMT Firm:L&G ENGINEERING Date: 09/13/2021			2020-23					
	Geotechnical Services		Unit	20210830 FINAL RATES					COMMENTS
1	Mobilization/Demobilization		each	$ 400.00					$6/mile for anything < 67 miles per trip or $400 > 67 miles
	Drilling, Logging, &Recovering Samples (With TCP)		per mile	$6					
2A	1. Depth ≤ 50 feet		Tex-132-E (every 5 feet)	$ 38.00					
2B	2. Depth ≥ 50 feet		linear foot	$ 40.00					
	Drilling, Logging, &Recovering Samples (Without TCP)								
3A	1. Depth ≤ 50 feet ( )		linear foot	$ 30.61					
3B	2. Depth ≥ 50 feet ( )		linear foot	$ 32.57					
4	Rock Coring (Soft Rock) [2]		linear foot	$ 33.00					
5	Rock Coring (Hard Rock) [2]		linear foot	$ 36.00					
6	Staking Borings and Utility Locations		hour	$ 121.67					
	Standby Time (sampling)		hour	$ 297.74					
7A	1. Hot Mix Asphalt (minumum of one hour)		each	$ 117.05					
7B	2. Concrete (minumum of one hour)		each	$ 173.34					
8	Piezometer - 2 inch (including well completion and installation)		linear foot	$ 48.36					
9	Grouting of Borings		linear foot	$ 6.86					
10	Traffic Control - Major		day	$ 3,000.00					
	Laboratory Test	Test Method	Unit						
11	Volumetric Shrinkage	ASTM D427	each	$ 105.24					
12	Standard Poor Test	ASTM D698	each	$ 255.00					
13	Modified Poor Test	ASTM D1557	each	$ 340.00					
14	Standard Penetration Test (SPT)	ASTM D1586	LF	$ 33.00					
15	California Bearing Ratio (Single Sample without MD Curve)	ASTM D1883	test	$ 350.00					
16	Unconfined Compressive Strength (Soil)	ASTM D2166	each	$ 75.00					
17	Hydraulic Conductivity Permeability	ASTM D2434	each	$ 450.00					
18	One Dimensional Consolidation Properties of Soil	ASTM D2435	each	$ 550.00					
19	Unconfined Compressive Strength (Rock)	ASTM D2938	each	$ 98.00					
20	Direct Shear Test of Soils Under Consolidated Drained Conditions	ASTM D3080	set of 3	$ 810.27					
21	Direct Shear Test of Soils Under Consolidated Drained Conditions, SAND	ASTM D3080	set of 3	$ 580.00					
22	Direct Shear Test of Soils Under Consolidated Drained Conditions, CLAY	ASTM D3080	set of 3	$ 708.79					
23	Splitting Tensile of Intact Rock Core	ASTM D3967	each	$ 131.11					
24	Water Stand Pipes	ASTM D4043	each	$ 40.00					
25	Calcium Carbonate Content of Soils	ASTM D4373	LF	$ 68.31					
26	Hydraulic Conductivity Permeability	ASTM D4511	each	$ 419.55					
27	One Dimensional Swell, Methods A&B	ASTM D4546	each	$ 316.53					
28	One Dimensional Swell, Method B Only	ASTM D4546	each	$ 324.66					
29	One Dimensional Swell, Method C	ASTM D4546	each	$ 292.00					
30	Permeability of Silt and Clays	ASTM D5084	each	$ 410.00					
31	Suction Test (Filter Method)	ASTM D5298	each	$ 98.00					
32	Casagrande Type Piezometers	N/A	each	$ 337.82					
33	Casagrande Type Piezometers Installation	N/A	each	$ 450.00					
~~34~~	~~Miscellaneous Testing~~	~~N/A~~	~~each~~	~~$ 55.00~~					No need for this rate.
35	Vertical Inclinometer	N/A	each	$ 490.00					
36	Vertical Inclinometer Installation	N/A	each	$ 900.00					
37	Vibrating Wire Piezometer	N/A	each	$ 980.00					
38	Vibrating Wire Piezometer Installation	N/A	each	$ 1,200.00					
39	Soil Boring with SPT	ASTM D1586	LF	$ 36.00					
	Laboratory Test	Test Method							
	Soils & Base Testing								
40	Sampling	Tex-400-A	hour	$ 66.15					
41	Sample Preparation	Tex-101-E	each	$ 68.00					
42	Determining Slaking Time	Tex-102-E	each	$ 72.25					
43	Moisture Content	Tex-103-E	each	$ 15.44					
44	Atterburg Limits	Tex-104,105&106-E	Set of 3	$ 95.00					
45	Linear Bar Shrinkage (per bar)	Tex-107-E	each	$ 69.04					
46	Determining the Specific Gravity of Soils	Tex-108-E	each	$ 90.00					
47	Sieve Analysis	Tex-110-E, Part I	each	$ 89.00					
48	Sieve Analysis (Hydrometer with Tex-108-E)	Tex-110-E, Part II	each	$ 117.00					
49	Hydrometer with Tex-108-E (in conjunctin with Tex-110-E, Part II)	Tex-108-E	each	$ 72.00					
50	Percent Passing No. 200 Sieve	Tex-111-E	each	$ 96.13					
51	Determining the Amount of Material in Solis Finer than the 75 mi	Tex-111-E	each	$ 65.00					
52	Admixing Lime to Reduce Plasticity Index of Soils	Tex-112-E	each	$ 146.00					
53	Moisture-Density Relationship	Tex-113-E	each	$ 275.00					
54	Moisture-Density Relationship	Tex-114-E	each	$ 255.00					
55	Field Density Measurements	Tex-115-E	hour	$ 68.00					
56	Wet Ball Mill Test	Tex-116-E	each	$ 260.00					
57	Texas Triaxial Compression [6]	Tex-117-E, Part I	each	$ 1,650.00					
58	Texas Triaxial Compression [6]	Tex-117-E, Part II	each	$ 1,510.00					
59	Quality Assurance (QA) Series for Flexible Base [7] [8]	See Foot Notes	each	$ 2,246.91					
60	Soil- Cement Testing [7]	Tex-120-E, Part II	each	$ 439.45					
61	Soil- Lime Testing [7]	Tex-121-E, Part II	each	$ 430.11					
61.1	Soil-Lime Testing Determining Stabilization Ability of Lime by Soil pH	Tex-121-E, Part III	each	$ 450.00					
62	Determining the Drainage Factor of Soil Materials (Not Field Test)	Tex-123-E ++	each	$ 506.87					
63	Determining Modulus of Sub-grade Recaction (K Value) (Not Field Test)	Tex-125-E ++	each	$ 150.00					
64	Molding, Testing, and Evaluation Bituminous Black Base Materials	Tex-126-E ++	each	$ 1,750.00					
65	Lime-Fly Ash Compression [7]	Tex-127-E	each	$ 751.14					
66	Soil pH	Tex-128-E	each	$ 75.00					
67	Resistivity of Soils	Tex-129-E	each	$ 120.00					
68	Slurry Testing	Tex-130-E	each	$ 109.49					
69	Texas Cone Penetration	Tex-132-E	each	$ 46.34					
70	Freezing and Thawing Tests oc Compacted Soil-Cement Mixture	Tex-135-E	each	$ 365.00					
71	Thickness of Pavement Layers (4 hour minimum)	Tex-140-E	hour	$ 155.59					
72	Manual Procedure for Description and Identification of Soils	Tex-141-E	each	$ 52.52					
73	Laboratory Classification os Soils for Engineering Purposes	Tex-142-E	each	$ 70.00					
74	Sulfate Content in Soils	Tex-145-E	each	$ 95.00					
75	Conductivity Test for Field Detection of Sulfates in Soil	Tex-146-E	each	$ 100.96					
75.1	Organic Content Using UV-VIS Method	Tex-148-E	each	$ 231.70					
76	Determining Cholride and Sulfate Contents in Soils	Tex-620-J	each	$ 88.16					
77	Free Swell Test	EM1110-2-1906	each	$ 195.00					
78	Pressure Swell Test	EM1110-2-1906	each	$ 293.00					
79	One-Dimensional Swell	ASTM D4546	each	$ 316.53					
80	One-Dimensional Swell (Method B Only)	ASTM D4546	each	$ 261.70					
81	Potential Vertical Rise Calculation	Tex-124-E	each	$ 85.14					
82	Volumetric Shrinkage	ASTM D4943	each	$ 119.00					
~~83~~	~~Volumetric Shrinkage~~	~~ASTM D427~~	~~each~~	~~$ -~~					Repeated on Line 11
84	Unconfined Compression Test (Soil)	ASTM D2166	each	$ 80.65					
85	Unconfined Compression Test (Rock)	ASTM D2938	each	$ 98.00					
86	Unconfined Compression Test (Rock) (Method D)	ASTM D7012	each	$ 75.00					
	Unconsolidated Undrained (UU) Triaxial Compression Test								
87	1. Set of Three	Tex-118-E	set	$ 312.36					
88	2. Multistage	Tex-118-E	each	$ 286.75					
	Consolidated Undrained (CU) Triaxial Compression Test								
89	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 1,502.50					
90	2. Multistage	Tex-131-E or ASTM D4767	each	$ 1,362.50					
	Consolidated Drained (CD) Triaxial Compression Test								
91	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 1,335.00					
92	2. Multistage	Tex-131-E or ASTM D4767	each	$ 1,261.50					
93	Direct Shear Consolidated Drained (CD), sand	ASTM D3080	set of 3	$ 1,131.55					
94	Direct Shear Consolidated Drained (CD), clay	ASTM D3080	set of 3	$ 1,147.11					
95	One-Dimensional Consolidation Test (7 load increments)	ASTM D2435	each	$ 597.14					

96	Resilient Modulus (fine-grained soils)	AASHTO T307	each	$ 1,200.00					
	Hot Mix Asphalt Testing								
97	Sieve Analysis of Fine and Coarse Aggregates	Tex-200-F	each	$ 95.00					
98	Bulk Specific Gravity and Water Absorption of Aggregates	Tex-201-F	each	$ 95.00					
99	Apparent Specific Gravity of Material Finer Than 180 µm (No. 80) Sieve	Tex-202-F	each	$ 65.00					
100	Sand Equivalent Test	Tex-203-F	each	$ 95.50					
101	Labortory Method of Mixing Bituminous Mixtures	Tex-205-F	Set of 3	$ 187.00					
102	Compacting Specimens Using the Texas Gyratory Compactor (TG	Tex-206-F	Set of 3	$ 113.04					
103	Determining Bulk Specific Gravity of Compacted Bituminuous Mixtures	Tex-207-F (I)	each	$ 50.00					
104	Determining In-Place Density of Compacted Bituminuous Mixtures (Nuclear Method)	Tex-207-F (III)	each	$ 45.00					
105	Asphalt Rolling Pattern (Nuclear Method)	Tex-207-F (IV)	each	$ 88.69					
106	Segregation Profile	Tex-207-F (V)	each	$ 250.00					
107	Joint Density	Tex-207-F (VII)	each	$ 250.00					
108	Test of Stabilometer Value of Bituminous Mixtures	Tex-208-F	set of 3	$ 175.00					
109	Determining Asphalt Content of Bituminous Mixtures by Extraction	Tex-210-F	each	$ 200.00					
110	Recovery of Asphalt from Bituminou Mixtures by the Abson Pro	Tex-211-F	each	$ 300.00					
111	Determining Moisture Content of Bituminous Mixtures	Tex-212-F	each	$ 55.79					
112	Determining Hydrocarbon-Volatile Content of Bituminous Mixture	Tex-213-F	each	$ 131.76					
113	Determining Deleterious Material and Decantation Test for Coarse Aggregates	Tex-217-F	each	$ 110.00					
114	Indirect Tensile Strength Test	Tex-226-F	each	$ 520.24					
115	Theoretical Maximum Specific Gravity of Bituminous Mixtures	Tex-227-F	each	$ 105.31					
116	Determining Asphalt Content of Bituminous Mixtures by the Nuclear	Tex-228-F	each	$ 147.05					
117	Combined HMAC Cold-Belt Sampling and Testing Procedure	Tex-229-F	each	$ 83.50					
118	Determining Draindown Characteristics in Bituminous Mixtures	Tex-235-F	each	$ 75.00					
119	Determining Asphalt Content from Asphalt Paving Mixtures by the Ignition Method	Tex-236-F	each	$ 168.25					
120	Asphalt Release Agents	Tex-239-F	each	$ 90.00					
121	Superpave Gyratory Compacting of Test Specimens of Bituminous	Tex-241-F	each	$ 158.11					
122	Hamburg Wheel Tracker	Tex-242-F	each	$ 600.00					
123	Tack Coat Adhesion	Tex-243-F	each	$ 185.00					
124	Thremal Profile	Tex-244-F	each	$ 164.50					
125	Cantabro Loss	Tex-245-F	each	$ 219.67					
126	Permeability or Water Flow of Hot Mix Asphalt	Tex-246-F	each	$ 83.50					
127	Overlay Test	Tex-248-F	set of 3	$ 762.22					
128	Flat and Elongated Particles	Tex-280-F	each	$ 77.36					
129	Sampling Bituminous Materials, Pre-Molded Joint Fillers, and Joint	Tex-500-C	each	$ 87.00					
130	Asphalt Binder Water in Petroleum	Tex-501-C AASHTO T55	each	$ 125.25					No original cost presented for consideration
131	Penetration of Bituminous Materials	Tex-502-C AASHTO T49	each	$ 148.83					No original cost presented for consideration
132	Ductility of Asphalt Materials	Tex-503-C AASHTO T51	each	$ 141.50					No original cost presented for consideration
133	Flash and Fire Points by Cleveland Open Cup	Tex-504-C AASHTO T48	each	$ 70.56					No original cost presented for consideration
134	Softening Point of Bitumen (Riing and Ball Apparatus	Tex-505-C AASHTO T53	each	$ 120.27					No original cost presented for consideration
135	Solubility of Bituminous Materials	Tex-507-C AASHTO T44	each	$ 147.75					No original cost presented for consideration
136	Specific Gravity	Tex-508-C AASHTO T228	each	$ 96.00					No original cost presented for consideration
137	Spot Test of Asphaltic Materials	Tex-509-C AASHTO T102	each	$ 203.50					No original cost presented for consideration
138	Effect of Heat and Air on Asphalt Materials (Thin-Film Oven Test)	Tex-510-C AASHTO t179	each	$ 169.30					No original cost presented for consideration
139	Flash Point with Tag Open-Cup Apparatus for Use with Material H	Tex-512-C AASHTO T79	each	$ 113.88					No original cost presented for consideration
140	Saybolt Viscosity	Tex-513-C AASHTO T72	each	$ 89.02					No original cost presented for consideration
141	Cutback Asphalts - Specific Gravity, API Gravity, or Density of Cutback Asphalts by Hdyrometer Method; Emulsified Asphalts - Weight per Gallon of Emulsified Asphalt	Tex-514-C ASTM D3142 ASTM D244	each	$ 423.00					No original cost presented for consideration
142	Distillation of Cutback Asphalt Products	Tex-515-C AASHTO T78	each	$ 205.67					No original cost presented for consideration
143	Float Test for Bituminous Materials	Tex-519-C AASHTO T50	each	$ 87.83					No original cost presented for consideration
144	Standard Test Method for Emulsified Asphalts	Tex-521-C AASHTO T59	each	$ 241.88					No original cost presented for consideration
145	Viscosity of Asphalts by Vacuum Capillary Viscometer	Tex-528-C AASHTO T202	each	$ 47.50					No original cost presented for consideration
146	Kinematic Viscosity of Asphalts (Bitumens)	Tex-529-C AASHTO T201	each	$ 89.02					No original cost presented for consideration
147	Boil Test (Effect of Water on Paving Mix)	Tex-530/531-C	each	$ 153.50					
148	Field Coring - ACP Thickness	ASTM D3549	each	$ 124.25					
149	Pavement Thickness Determin. (Full Depth)	ASTM D3549	each	$ 153.00					
150	Determining Polymer Additive Percentages in Polymer Modified	Tex-533-C	each	$ 82.50					No original cost presented for consideration
151	Calculating Viscosity from Penetration	Tex-535-C	each	$ 87.06					No original cost presented for consideration
152	Elastic Recovery of Tensile Deformation Using a Ductilometer	Tex-539-C	each	$ 79.13					No original cost presented for consideration
153	Measurement of Polymer Separation on Heating in Modified Asphalat	Tex-540-C	each	$ 129.50					No original cost presented for consideration
154	Rolling Thin Film Oven Test for Asphalt Binders	Tex-541-C ASSHTO T240	each	$ 189.00					No original cost presented for consideration
155	Flexural Creep Stiffness Using the Bending Beam Rheometer	AASHTO T313	each	$ 275.00					No original cost presented for consideration
156	Determining Rheological Properties of Asphalt Binder Using a Dy	AASHTO T315	each	$ 244.13					No original cost presented for consideration
157	Determining Breaking Index for Asphalt Emulsions	Tex-542-C	each	$ 251.89					No original cost presented for consideration
158	Resilience Test for Sealants and Repair Materials	Tex-547-C	each	$ 305.36					No original cost presented for consideration
159	Tensile Strain to Failure	Tex-548-C	each	$ 84.00					No original cost presented for consideration
160	Cone Flow Test	Tex-549-C	each	$ 87.50					No original cost presented for consideration
161	Flexibility Test for Sealants and Repair Materials	Tex-550-C	each	$ 302.50					No original cost presented for consideration
162	Settlement of Sealants and Repair Materials	Tex-551-C	each	$ 118.50					No original cost presented for consideration
	Concrete & Aggregate Testing								
163	Sieve Analysis for Conc. Agg	Tex-401-A	each	$ 95.00					
164	Fineness Modulus for Conc. Agg	Tex-402-A	each	$ 58.78					
165	SSD Specific Gravity / Absorption Conc. Agg	Tex-403-A	each	$ 88.00					
166	Unit Weight of Conc. Agg	Tex-404-A	each	$ 60.00					
167	Determining Pecent Voids and Solids in Concrete	Tex-405-A	each	$ 75.94					
168	Decantation for Conc. Agg	Tex-406-A	each	$ 65.00					
169	Organic Impurities for Conc. Agg	Tex-408-A	each	$ 65.00					
170	Free Moisture and Water Absorption in Aggregate for Concrete	Tex-409-A	each	$ 66.00					
171	L.A. Abrasion	Tex-410-A	each	$ 520.00					
172	5 Cycle Magnesium Soundness	Tex-411-A	each	$ 520.48					
173	Deleterious Material for Conc. Agg	Tex-413-A	each	$ 77.25					
174	Air Content of Fresh Concrete by Volumeteric	Tex-414-A	each	$ 33.10					
175	Slump of Fresh Concrete	Tex-415-A	each	$ 29.90					
176	Air Content of Fresh Concrete by Pressure	Tex-416-A	each	$ 34.91					
177	Unit Weight, Yield and Air Content (Gravimetric) of Concrete	Tex-417-A	each	$ 60.13					
178	Comp. Strength of Cyl. Conc. Specimen	Tex-418-A	each	$ 23.00					
179	Measure Temp. of Fresh Conc.	Tex-422-A	each	$ 23.59					
180	Obtaining & Testing Drilled Conc. Cores	Tex-424-A	each	$ 333.73					
181	Absorption and Dry Bulk Specific Gravity of Lightweight Coarse	Tex-433-A	each	$ 105.40					No original cost presented for consideration
182	Test Flow of Grout Mixtures (Flow Cone Method)	Tex-437-A	each	$ 125.00					No original cost presented for consideration
183	Accelerated Polish Test for Coarse Aggregate	Tex-438-A	each	$ 891.21					No original cost presented for consideration
184	Det. Comp. Strength of Grouts	Tex-442-A	each	$ 31.00					
185	Making & Curing Conc. Test Specimen	Tex-447-A	each	$ 19.91					
186	Flexural Strength of Concrete Using Simple Beam Third-Point Load	Tex-448-A	each	$ 49.23					No original cost presented for consideration
187	Capping Cyl. Conc. Specimen	Tex-450-A	each	$ 22.25					
188	Degradation of Coarse Aggregate by Micro-Devel Abrasion	Tex-461-A	each	$ 288.80					
189	Uniformity of Concrete	Tex-472-A	each	$ 189.63					
	Additional Testing	Test Method	Unit						
190	Geogrid Testing	Tex-621-J	each	$ 800.20					
191	Water Quality Testing	Tex-619-J	each	$ 179.25					
192	Lime Testing	Tex-600-J	each	$ 411.24					
193	Operating Inertial Profilers and Evaluating Pavement Profiles	Tex-1001-S	each	$ 1,800.00					No original cost presented for consideration
194	Vane Shear Testing	ASTM D2573	each	$ 338.00					
	Miscellaneous Testing	Test Method	Unit						
195	Structural Field Welding	NA	hour	$ 150.00					No original cost presented for consideration
	Equipment & Supplies for MT & UT		day	$ 150.00					No original cost presented for consideration
	Other Direct Expenses		Unit						
	Photocopies B/W (8 1/2" X 11")		each	$ 0.15					
	Photocopies B/W (11" X 17")		each	$ 0.23					
	Photocopies Color (8 1/2" X 11")		each	$ 0.82					
	Photocopies Color (11" X 17")		each	$ 1.41					
	Digital Ortho Plotting		sheet	$ 2.43					
	CADD Plotting		linear foot	$ 1.00					
	Plots (B/W on Bond)		linear foot	$ 0.91					
	Plots (Color on Bond)		linear foot	$ 1.75					
	Plots (Color on Photgraphic Paper)		linear foot	$ 2.72					
	Reproduction of CD/DVD		each	$ 5.00					

L&G Personnel Classification	Hourly Base Rate	Contract Rate FY 2020-2023	20210830 FINAL RATES
Senior Project Manager / Principal	$ 83.00	$ 257.30	**$ 186.90**
Senior Geotechnical Engineer	$ 65.00	$ 210.50	**$ 166.32**
Geotechnical Engineer	$ 62.00	$ 192.20	**$ 136.40**
Project Engineer	$ 56.00	$ 173.60	**$ 133.98**
Engineering Lab Manager	$ 40.00	$ 124.00	**$ 94.71**
Utility Coordinator	$ 38.00	$ 117.80	**$ 110.98**
Senior Project Inspector	$ 38.00	$ 117.80	**$ 99.75**
Project Inspector	$ 30.00	$ 93.00	**$ 73.92**
EIT	$ 40.00	$ 124.00	**$ 88.00**
Engineer Tech / GIS	$ 27.00	$ 83.70	**$ 76.60**
Logger	$ 22.00	$ 68.20	**$ 62.00**
Field Technician (Soils, Aggr, Asph, Conc)	$ 22.00	$ 68.20	**$ 68.20**
CADD Operator	$ 22.00	$ 68.20	**$ 77.50**
Admin/Clerical	$ 22.00	$ 68.20	**$ 61.95**

EXHIBIT D

ESTIMATEDMAN-HOURSAND TEST BREAKDOWN

HCRMA - 365 Toll Project - Segment 1 (From 987+00 to 1350+00) - CSJ: 3627-01-001 Construction Materials Testing

Embankment(Test All Fill Material Including Cut From Job) (ITEM 132)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.)to determine compliance of these materials with project plans and specifications.
- Field density testing of soils and base materials to ensure proposer compaction as required by project plans and specifications.

								378kC/3.5MF CY
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Liquid Limit		Tex-104-E	PI>15 ~ Every 5,000 CY	included with PI	Each			$0.00
Plasticity Index		Tex-106-E	PI>15 ~ Every 5,000 CY		Each	780	$95.00	$74,100.00
Gradation (Part I)		Tex-110-E PI	Every 10,000 CY		Each	390	$89.00	$34,710.00
Gradation (Part II)		Tex-110-E PII	Every 10,000 CY		Each	390	$117.00	$45,630.00
Moisture/Density		Tex-114-E	One per Each Material	Assume40 (per 100k CY)	Each	40	$255.00	$10,200.00
In-Place Density		Tex-115-E	Every 5,000 CY or 6,000	Add 20% inc for lifts	Each	850	$68.00	$57,800.00
Tech Time (Reports)				LL/PI, Grad, MD, FD	Hour	820	$68.20	$55,924.00
Tech Time (Soils)				4 hrs - PI,Gr,MD, 2 hrs - FD	Hour	4980	$68.20	$339,636.00
# of Trips (Tech)				1205 Trips (50 Miles RT)	Mile	60250	$6.00	$361,500.00
**Admin/Clerical					Hour	1050	$61.95	$65,047.50
							Item Subtotal	$1,044,547.50

Hydraulic Cement Concrete Bridge Slab & Approach Slab ~ (Class S)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

								14k CY
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.				QA Test. (QC by Source)				
Decantation		Tex-406-A	Each 20,000 CY(or source)		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY (ea source)	5 Sieve	Each	14	$95.00	$1,330.00
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
L.A. Abrasion		Tex-410-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.00	$0.00
Soundness		Tex-411-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.48	$0.00
Fine Aggr.				QA Test. (QC by Source)				
Sand Equivalent		Tex-203-F	Each 1,000 CY(ea source)		Each	14	$95.50	$1,337.00
Organic Imp.		Tex-408-A	One Per Project Per Source		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY(ea source)	9 Sieve	Each	14	$95.00	$1,330.00
Fineness Mod.		Tex-402-A	Each 1,000 CY(ea source)		Each	14	$58.78	$822.92
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
Acid Insoluble		Tex-612-J	Two Each Source	if CRSQC meets Project Spec ~	Each	0		$0.00
Mineral Filler				QA Test. (QC by Source)				
Sieve Analysis		Tex-401-A	Two Each Source	if No Mineral Filler utilized in	Each	0	$95.00	$0.00
Concrete								
*Strength		Tex-418-A	Each 60 CY(2 Sets = 4 Cyl.)		Each	934	$23.00	$21,482.00
Slump		Tex-415-A	One per 2 Sets		Each	234	$29.90	$6,996.60
Entrained Air		Tex-416-A	One per 2 Sets		Each	234	$34.91	$8,168.94
Temperature		Tex-422-A	One per 2 Sets		Each	234	$23.59	$5,520.06
Tech Tine (Reports)				CA,FA,MF,Conc.	Hour	382	$68.20	$26,052.40
Tech Time (Aggr)					Hour	112	$68.20	$7,638.40
Tech Time (Conc)					Hour	1872	$68.20	$127,670.40
# of Trips (Tech)				248 Trips (50 Miles RT)	Mile	12400	$6.00	$74,400.00
**Admin/Clerical					Hour	350	$61.95	$21,682.50
							Item Subtotal	$304,715.72

Hydraulic Cement Concrete Bridge Sub & Super Str Components ~ (Class C)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

								9k CY
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.				QA Test. (QC by Source)				
Decantation		Tex-406-A	Each 20,000 CY(or source)		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY (ea source)	5 Sieve	Each	9	$95.00	$855.00
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
L.A. Abrasion		Tex-410-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.00	$0.00
Soundness		Tex-411-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.48	$0.00
Fine Aggr.				QA Test. (QC by Source)				
Sand Equivalent		Tex-203-F	Each 1,000 CY(ea source)		Each	9	$95.50	$859.50
Organic Imp.		Tex-408-A	One Per Project Per Source		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY(ea source)	9 Sieve	Each	9	$95.00	$855.00
Fineness Mod.		Tex-402-A	Each 1,000 CY(ea source)		Each	9	$58.78	$529.02
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
Acid Insoluble		Tex-612-J	Two Each Source	if CRSQC meets Project Spec ~	Each	0		$0.00
Mineral Filler				QA Test. (QC by Source)				
Sieve Analysis		Tex-401-A	Two Each Source	if No Mineral Filler utilized in	Each	0	$95.00	$0.00
Concrete								
*Strength		Tex-418-A	Each 60 CY(2 Sets = 4 Cyl.)		Each	575	$23.00	$13,225.00
Slump		Tex-415-A	One per 2 Sets		Each	144	$29.90	$4,305.60
Entrained Air		Tex-416-A	One per 2 Sets		Each	144	$34.91	$5,027.04
Temperature		Tex-422-A	One per 2 Sets		Each	144	$23.59	$3,396.96
Tech Tine (Reports)				CA,FA,MF,Conc.	Hour	236	$68.20	$16,095.20
Tech Time (Aggr)					Hour	72	$68.20	$4,910.40
Tech Time (Conc)					Hour	1152	$68.20	$78,566.40
# of Trips (Tech)				153 Trips (50 Miles RT)	Mile	7650	$6.00	$45,900.00
**Admin/Clerical					Hour	215	$61.95	$13,319.25
							Item Subtotal	$188,128.87

Hydraulic Cement Concrete Drilled Shafts (Brg) ~ (Class SS)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

								9k CY
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.				QA Test. (QC by Source)				
Decantation		Tex-406-A	Each 20,000 CY(or source)		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY (ea source)	5 Sieve	Each	13	$95.00	$1,235.00
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
L.A. Abrasion		Tex-410-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.00	$0.00
Soundness		Tex-411-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.48	$0.00
Fine Aggr.				QA Test. (QC by Source)				
Sand Equivalent		Tex-203-F	Each 1,000 CY(ea source)		Each	13	$95.50	$1,241.50
Organic Imp.		Tex-408-A	One Per Project Per Source		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY(ea source)	9 Sieve	Each	13	$95.00	$1,235.00
Fineness Mod.		Tex-402-A	Each 1,000 CY(ea source)		Each	13	$58.78	$764.14
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
Acid Insoluble		Tex-612-J	Two Each Source	if CRSQC meets Project Spec ~	Each	0		$0.00
Mineral Filler				QA Test. (QC by Source)				
Sieve Analysis		Tex-401-A	Two Each Source	if No Mineral Filler utilized in	Each	0	$95.00	$0.00
Concrete								
*Strength		Tex-418-A	Each 60 CY(2 Sets = 4 Cyl.)		Each	820	$23.00	$18,860.00
Slump		Tex-415-A	One per 2 Sets		Each	205	$29.90	$6,129.50
Entrained Air		Tex-416-A	One per 2 Sets		Each	205	$34.91	$7,156.55
Temperature		Tex-422-A	One per 2 Sets		Each	205	$23.59	$4,835.95
Tech Tine (Reports)				CA,FA,MF,Conc.	Hour	336	$68.20	$22,915.20
Tech Time (Aggr)					Hour	104	$68.20	$7,092.80
Tech Time (Conc)					Hour	1640	$68.20	$111,848.00
# of Trips (Tech)				218 Trips (50 Miles RT)	Mile	10900	$6.00	$65,400.00
**Admin/Clerical					Hour	305	$61.95	$18,894.75
							Item Subtotal	$267892.89

Hydraulic Cement Concrete Unknown ~ (Class D)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

								9k CY
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.				QA Test. (QC by Source)				
Decantation		Tex-406-A	Each 20,000 CY(or source)		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY (ea source)	5 Sieve	Each	1	$95.00	$95.00
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
L.A. Abrasion		Tex-410-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.00	$0.00
Soundness		Tex-411-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.48	$0.00
Fine Aggr.				QA Test. (QC by Source)				
Sand Equivalent		Tex-203-F	Each 1,000 CY(ea source)		Each	1	$95.50	$95.50
Organic Imp.		Tex-408-A	One Per Project Per Source		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY(ea source)	9 Sieve	Each	1	$95.00	$95.00

Fineness Mod.		Tex-402-A	Each 1,000 CY(ea source)		Each	1	$58.78	$58.78
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
Acid Insoluble		Tex-612-J	Two Each Source	if CRSQC meets Project Spec ~	Each	0		$0.00
Mineral Filler				QA Test. (QC by Source)				
Sieve Analysis		Tex-401-A	Two Each Source	if No Mineral Filler utilized in	Each	0	$95.00	$0.00
Concrete								
*Strength		Tex-418-A	Each 60 CY(2 Sets = 4 Cyl.)		Each	4	$23.00	$92.00
Slump		Tex-415-A	One per 2 Sets		Each	1	$29.90	$29.90
Entrained Air		Tex-416-A	One per 2 Sets		Each	1	$34.91	$34.91
Temperature		Tex-422-A	One per 2 Sets		Each	1	$23.59	$23.59
Tech Time (Reports)				CA,FA,MF,Conc.	Hour	6	$68.20	$409.20
Tech Time (Aggr)					Hour	8	$68.20	$545.60
Tech Time (Conc)					Hour	8	$68.20	$545.60
# of Trips (Tech)				2 Trips (50 Miles RT)	Mile	100	$6.00	$600.00
**Admin/Clerical					Hour	4	$61.95	$247.80
							Item Subtotal	$3,157.38

Hydraulic Cement Concrete Misc. - Riprap (Class A)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

								4k CY
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Concrete								
*Strength		Tex-418-A	Each 180 CY(1 Set = 2 Cyl.)	Adjust Per Str & Placement	Each	44	$23.00	$1,012.00
Slump		Tex-415-A	Not Required	Not Required	Each	0	$29.90	$0.00
Entrained Air		Tex-416-A	One per Set		Each	22	$34.91	$768.02
Temperature		Tex-422-A	Not Required	Not Required	Each	0	$23.59	$0.00
Tech Time (Reports)				Conc.	Hour	44	$68.20	$3,000.80
Tech Time (Aggr)			Not Required		Hour	0	$68.20	$0.00
Tech Time (Conc)					Hour	88	$68.20	$6,001.60
# of Trips (Tech)				22 Trips (50 Miles RT)	Miles	1100	$6.00	$6,600.00
**Admin/Clerical					Hour	18	$61.95	$1,115.10
							Item Subtotal	$18,497.32

Batching for Hydrulic Cement Concrete - Inspection of Batching at Plant (1 Tech per Plant, Reports)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching at the plants to insure delivery of acceptable material to the job site (as required). Exception is Concrete for Pavement (Class P)

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Concrete								
Tech Time (Conc)					Hour	4664	$68.20	$318,084.80
# of Trips (Tech)				583 Trips (50 Miles RT)	Mile	29150	$6.00	$174,900.00
Tech Time (Reports)					Hour	292	$68.20	$19,914.40
**Admin/Clerical					Hour	570	$61.95	$35,311.50
							Item Subtotal	$548,210.70

* Concrete Strength testing includes strength testing of cylinder specimens (breaks) as well as preperation, holding and curing of strength specimen costs

~ 1 Set is defined as 2 Cylinders (7-day or 28-day)
~ All Structural Concrete requires a minimum 2 Sets per Test Location (4 Cyl.)
** Project Administrative Fee is assessed on a per invoice basis and involves engineering review, evaluation, management and administration

Summary

Sub-Total (CMT Items) =		$2,375,150.38
Engineer (Coor. w/ Client / Rpt. Rev.)	(1036 hrs x 133.98 Hr.)	$138,803.28
Constuction Materials Testing Sub-Total (Road, Brg, Misc.) :		$2,513,953.66
Contingency (Estimated at 10%) :		$251,395.37
Constuction Materials Testing Total (ALL) :		$2,765,349.03

ATTACHMENT E-1
Final Cost Proposal Form

This attachment provides the basis of payment and fee schedule**. The basis of payment for this Work Authorization is indicated by an "X" in the applicable box.** The basis shall be supported by the Final Cost Proposal (FCP) shown below and should identify maximum amount payable and basis of payment. If more than one basis of payment is used, each one must be supported by a separate FCP. The basis of payment will be determined by Work Authorization and may be by any of the methods listed below.

"X"	**Basis**	
____	Lump Sum	The lump sum shall be equal to the maximum amount payable. The lump sum includes all direct and indirect costs and fixed fee. The Engineer shall be paid pro rata based on the percentage of work completed. For payment the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.
__X__	Unit Cost	The unit cost(s) for each type of unit and number of units are shown in the FCP. The unit cost includes all direct and indirect costs and fixed fee. The Engineer shall be paid based on the type and number of units fully completed and the respective unit cost. For payment, the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or any other cost data. The FCP may include special items, such as equipment which are not included in the unit costs. Documentation of these special costs may be required. The maximum amount payable equals the total of all units times their respective unit cost plus any special direct items shown.
__X	Specified Rate Basis	The specified rates for each type of labor are shown in the FCP below. The FCP may include special items, such as equipment which are not included in the specified rates. Payment shall be based on the actual hours worked multiplied by the specified rate for each type of labor plus other agreed to special direct cost items. The specified rate includes direct labor and indirect cost and fixed fee. The Authority may request documentation of reimbursable direct costs including hours worked. Documentation of special item costs may be required. The specified rate is not subject to audit.
____	Cost Plus Fixed Fee	Payment shall be based on direct and indirect costs incurred plus a pro rata share of the fixed fee based on the ratio of labor and overhead cost incurred to total estimated labor and overhead cost in the FCP or the percentage of work completed. The invoice must itemize labor rates, hours worked, other direct costs and indirect costs. The Engineer may be required to provide documentation of hours worked and any eligible direct costs claimed. The provisional overhead rate charged is subject to audit and adjustment to actual rates incurred. The FCP below shows the hourly rates for labor, other direct expenses including but not limited to travel and allowable materials, provisional overhead rate and the fixed fee. __A. Actual Cost Plus Fixed Fee - Actual wages are paid (no minimum, no maximum. __B. Range of Cost Plus Fixed Fee – Actual wages must be within the allowable range shown on the Final Cost Proposal.

A. **REFER TO ATTACHMENT E-2 FOR HOURLY SPECIFIED / LUMP SUM RATE SCHEDULE FOR EACH FIRM**

ATTACHMENT F

WORK SCHEDULE

HCRMA Construction & Materials Testing Services
TOLL365 (SH 365)

Task Name	Start	Finish
Material Testing	10/1/2021	12/13/2025
Geotechnical	10/1/2021	12/13/2025
Other Analyses	10/1/2021	12/13/2025
All sampling and testing of components and materials	10/1/2021	12/13/2025
Hot Mix Asphalt Testing	10/1/2021	12/13/2025
Concrete Testing	10/1/2021	12/13/2025
Construction Oversight Documentation	10/1/2021	12/13/2025
Project Correspondence File (Design and Construction)	10/1/2021	12/13/2025

ATTACHMENT H

DBE PARTICIPATION

ATTACHMENT H-MOU

MEMORANDUM OF UNDERSTANDING REGARDING THE ADOPTION OF THE TEXAS DEPARTMENT OF TRANSPORATION'S FEDERALY-APPROVED DISADVANTAGED BUSINESS ENTERPRISE PROGRAM BY THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

This Memorandum of Understanding is by and between the **TEXAS DEPARTMENT OF TRANSPORTATION ("TxDOT"),** an agency of the State of Texas; and the Hidalgo County Regional Mobility Authority, a mobility authority created under the provisions of Chapter 370, Texas Transportation Code (the "RMA").

Whereas, from time to time from the Authority receives federal funds from the Federal Highway Administration ("FHWA") through TxDOT to assist the Authority with the construction and design of projects partially or wholly funded through FHWA; and

Whereas, the Authority, as a sub-recipient of federal funds, is required by 49 CFR 26, to implement a program for disadvantaged business enterprises ("DBEs"), as defined by 49 CFR 26 ("DBE Program"); and

Whereas, TxDOT has implemented a DBE Program that is approved by the Federal Highway Administration (FHWA) pursuant to 49 CFR part 26; and

Whereas, as a condition of receiving federal funds from FHWA through TxDOT, certain aspects of the Authority's procurement of construction and design services are subject to review and/or concurrence by TxDOT; and

Whereas, the Authority and TxDOT undertake substantially similar roadway construction projects and design projects and construct and design their respective projects using substantially the same pool of contractors; and

Whereas, the Authority desires to implement a federally compliant DBE Program by adopting the TxDOT approved program, as recommended by FHWA; and

Whereas, TxDOT and the Authority find it appropriate to enter into this Memorandum of Understanding to memorialize the obligations, expectations and rights each has as related to the Authority's adoption of the TxDOT DBE Program to meet the federal requirements;

Now, therefore, TxDOT and the Authority, in consideration of the mutual promises, covenants and conditions made herein, agree to and acknowledge the following:

(1) TxDOT has developed a DBE Program and annually establishes a DBE goal for Texas that are federally approved and compliant with 49 CFR 26 and other applicable laws and regulations.

(2) The Authority anticipates being a sub-recipient of federal assistance for construction projects and design projects and, in accordance with 49 CFR § 26.21, must implement a federally approved DBE Program. The Authority receives its federal assistance through TxDOT. As a sub-recipient, the Authority has the option of developing its own program or adopting and operating under TxDOT's federally approved DBE Program. The FHWA recommends that sub-recipients, such as the Authority, adopt the DBE program, administered through TxDOT, and the Authority by its prescribed protocol adopted the TxDOT DBE Program on August 8, 2007.

(3) This Memorandum of Understanding evidences FHWA's and TxDOT's consent to the adoption of the TxDOT DBE Program by the Authority to achieve its DBE participation in federally assisted Construction

158111-1 163.000

and Design Projects.

(4) The parties will work together in good faith to assure effective and efficient implementation of the DBE Program for the Authority and for TxDOT.

(5) the Authority and TxDOT have agreed upon the following delegation of responsibilities and obligations in the administration of the DBE Program adopted by the Authority:

(a) The Authority will be responsible for project monitoring and data reporting to TxDOT. The Authority will furnish to TxDOT any required DBE contractor compliance reports, documents or other information as may be required from time to time to comply with federal regulations. TxDOT will provide the necessary and appropriate reporting forms, if any, to the Authority.

(b) The Authority will recommend contract-specific DBE goals, if any, consistent with TxDOT's DBE guidelines and in consideration of the local market, project size, and nature of the good(s) or service(s) to be acquired. The Authority's recommendation may be that no DBE goals are set on any particular project or portion of a project or that proposed DBE goals be modified. The Authority and TxDOT will work together to achieve a mutually acceptable goal; however, TxDOT will retain final decision-making authority on those issues.

(c) TxDOT will cooperate with the Authority in an effort to meet the timing and other requirements of the Authority's projects.

(d) The Authority will be solely responsible for the solicitation and structuring of bids and bid documents to procure goods and services for its Construction and Design Projects and will be responsible for all costs and expenses incurred in its procurements.

(e) The DBEs eligible to participate on TxDOT construction projects or design projects also will be eligible to participate on the Authority's construction projects or design projects subject to the DBE Program, unless otherwise prohibited from bidding on a the Authority's project under applicable law or the Authority's procurement policy. The DBEs will be listed on TxDOT's website under the Texas Unified Certification Program (TUCP).

(f) The Authority will conduct investigations and provide reports with recommendations to TxDOT concerning any DBE Program compliance issues that may arise due to project specific requirements such as Good Faith Effort (GFE), Commercially Useful Function (CUF), etc. The Authority and TxDOT will work together to achieve a mutually acceptable goal; however, TxDOT will retain final decision-making authority on those issues and reserves the right to perform compliance reviews by TxDOT's Office of Civil Rights (OCR).

(g) The Authority will designate a liaison officer to coordinate efforts with TxDOT's DBE Program administrators and to respond to questions from the public and private sector regarding the Authority's administration of the DBE Program through TxDOT.

(h) The Authority will be responsible for providing TxDOT with DBE project awards and DBE Commitments, monthly DBE reports, DBE Final Reports, DBE shortfall reports, and annual and updated goal analysis and reports.

(i) TxDOT will be responsible for maintaining a directory of firms eligible to participate in the DBE Program, and providing business development and outreach programs. The Authority and TxDOT will work cooperatively to provide supportive services and outreach to DBE firms in the Hidalgo County area.

(j) The Authority will submit DBE semi-annual progress reports to TxDOT.

(k) The Authority will participate in TxDOT sponsored training classes to include topics on DBE Annual Goals, DBE Goal Setting for Construction Projects and Design Projects, DBE Contract Provisions, and DBE Contract Compliance, which may include issues such as DBE Commitments, DBE Substitution, and Final DBE Clearance. TxDOT will include DBE contractors performing work on the Authority projects in the DBE Education and Outreach Programs.

(6) In the event there is a disagreement between TxDOT and the Authority about the implementation of the TxDOT DBE Program by the Authority, the parties agree to meet within ten (10) days of receiving a written request from the other party of a desire to meet to resolve any disagreement. The parties will make good faith efforts to resolve any disagreement as efficiently as is reasonably possible in consultation with FHWA. Non-compliance by the Authority can result in restitution of federal funds to TxDOT and withholding of further federal funds upon consultation with FHWA.

(7) This Memorandum of Understanding becomes effective upon execution by all parties and automatically renews each year unless a party notifies the other parties of its intent to terminate the agreement.

(8) If this Memorandum of Understanding is terminated for any reason, the Authority will be allowed reasonable time in which to seek approval from FHWA for an alternative DBE Program, without being deemed non-compliant with 49 CFR Part 26.

(9) This Memorandum of Understanding applies only to projects for which the Authority is a sub-recipient of federal funds through TxDOT. The Authority may also implement a Minority and Women-Owned Small Business Enterprise (M/W/SBE) policy and program that applies to projects for which it is not a sub-recipient of federal funds through TxDOT and which are not subject to the TxDOT DBE Program. The Authority may, at its option, use some aspects of the TxDOT DBE Program and other similar programs in implementing its other policies and programs for its non-federally funded projects.

(10) The following attachments to this Memorandum of Understanding ("MOU") are incorporated as if fully set out herein for all purposes: Attachment A - FHWA Memorandum HCR-1/HIF-1 (relating to access required by the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973); Attachment B - SPECIAL PROVISION 000-461; Attachment C - Comprehensive Development Agreement (CDA) DBE Provisions (with TxDOT's DBE Program attached); and Attachment D - 49 CFR §26.13 (contractual assurances). In the case of any conflict between the SPECIAL PROVISION and CDA DBE Provisions and TxDOT's DBE Program, the provisions of the first two documents shall prevail in regard to CDAs only.

(11) The following procedure shall be observed by the parties in regard to any notifications:

(a) Any notice required or permitted to be given under this Memorandum of Understanding shall be in writing and may be effected by personal delivery, by hand delivery through a courier or a delivery service, or by registered or certified mail, postage prepaid, return receipt requested, addressed to the proper party, at the following address:

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY:

Dennis Burleson
Chairman
c/o LRGVDC
311 N. 15th Street

158111-1 163.000

McAllen, Texas 78501-4705

With a copy to:

Blakely L. Fernandez
Tuggey Rosenthal Pauerstein Sandoloski Agather LLP
755 E. Mulberry, Ste. 200
San Antonio, Texas 78212

TEXAS DEPARTMENT OF TRANSPORTATION

Amadeo Saenz, Jr. P.E.
Executive Director
125 E. 11th Street
Austin, Texas 78701

(b) Notice by personal delivery or hand delivery shall be deemed effective immediately upon delivery, provided notice is given as required by Paragraph (a) hereof. Notice by registered or certified mail shall be deemed effective three (3) days after deposit in a U.S. mailbox or U.S. Post Office, provided notice is given as required by Paragraph (a) hereof.

(c) Either party hereto may change its address by giving notice as provided herein.

(12) This Memorandum of Understanding may be modified or amended only by written instrument, signed by both the Authority and the TxDOT and dated subsequent to the date(s) of this MOU. Except as authorized by the respective parties, no official, employee, agent, or representative of the parties has any authority, either express or implied, to modify or amend this MOU.

(13) The provisions of this MOU are severable. If any clause, sentence, provision, paragraph, or article of this MOU, or the application of this MOU to any person or circumstance is held by any court of competent jurisdiction to be invalid, illegal, or unenforceable for any reason, such invalidity, illegality, or unenforceability shall not impair, invalidate, nullify, or otherwise affect the remainder of this MOU, but the effect thereof shall be limited to the clause, sentence, provision, paragraph, or article so held to be invalid, illegal, or unenforceable, and the application of such clause, sentence, provision, paragraph, or article to other persons or circumstances shall not be affected; provided, however, the Authority and TxDOT may mutually agree to terminate this Memorandum of Understanding.

(14) The following provisions apply in regard to construction of this MOU:

(a) Words of any gender in this MOU shall be construed to include the other, and words in either number shall be construed to include the other, unless the context in this MOU clearly requires otherwise.

(b) When any period of time is stated in this MOU, the time shall be computed to exclude the first day and include the last day of the period. If the last day of any period falls on a Saturday, Sunday, or national holiday, or state or county holiday, these days shall be omitted from the computation. All hours stated in this MOU are stated in Central Standard Time or in Central Daylight Savings Time, as applicable.

(15) This Memorandum of Understanding shall not be construed in any way as a waiver by the parties of any immunities from suit or liability that parties may have by operation of law, and the parties hereby retain all of their respective affirmative defenses.

158111-1 163.000

ATTACHMENT H-MOU

**MEMORANDUM OF UNDERSTANDING
REGARDING THE ADOPTION OF THE TEXAS DEPARTMENT OF TRANSPORATION'S FEDERALY-APPROVED DISADVANTAGED BUSINESS ENTERPRISE PROGRAM BY
THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY**

EXECUTED by TxDOT and the Authority, acting through each duly authorized official and effective on the latest date signed.

The signatories below confirm that they have the authority to execute this MOU and bind their principles.

TEXAS DEPARTMENT OF TRANSPORTATION

By: _____
Amadeo Saenz, Jr. P.E.
Executive Director

Date: 3/13/08

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

By: _____
Dennis Burleson
Chairman

Date: 2/13/2008

158111-1 163.000

Attachment H-Instructions
As Per 49CFR 26.21

The following pages contain six (6) different Attachments to Attachment H covering participation of HUB and DBE providers and subproviders. The correct form to use is determined by whether the Agreement is funded in whole or part by federal funds State funds or Authority funds, and whether or not a HUB/DBE goal has been set for the Agreement. The following pages contain separate reporting forms for federally funded DBE participation and Authority funded HUB participation. **Select the forms that are appropriate for your Agreement and <u>delete the rest</u> along with these instructions from the final Agreement.**

Federally Funded Contracts
Attachment H-FG, Disadvantaged Business Enterprise (DBE) for Federal Funded Professional or Technical Services Contracts ♦ This provision is applicable to federally funded contracts with assigned DBE goals. ♦ The appropriate forms for this provision are Attachments H-1, H-2, H-3 and H-4 and H-5. A copy of each form is required in the contract. ♦ Note: if the contract requires work authorizations, a completed Attachment H-2 will be required with each Work Authorization, if a DBE will be performing work. If a non-DBE subprovider is used, insert N/A (not applicable) on the line provided on the H-2 form. ♦ Attachment H-3 must be submitted monthly to the AUTHORITY Office even if there is no invoice being submitted or subcontracting to report. ♦ Attachment H-3 must be submitted with each invoice to the appropriate agency contact for payment.
Attachment H-FN, Disadvantaged Business Enterprise (DBE) for Race Neutral Professional or Technical Services Contracts ♦ This provision is applicable to federally funded contracts with no DBE goal assigned. ♦ If no subcontractors will be used, the appropriate forms for this provision are Attachments H-3 and H-5. A copy of each form is required in the contract. ♦ Note: If subcontractors are used, the required forms would be Attachments H-1, H-2, H-3, H-4 and H-5. A copy of each form is required in the contract. ♦ Attachment H-3 must be submitted monthly to the AUTHORITY Office even if there is no invoice being submitted or subcontracting to report. ♦ Attachment H-3 must be submitted with each invoice to the appropriate agency contact for payment.
Attachment H-3, Texas Department of Transportation Subprovider Monitoring System for Federally Funded Contracts. This is a Monthly Progress Assessment Report. ♦ Required for all federally funded contracts. ♦ This form is required monthly and must be submitted to the AUTHORITY Office even if there is no invoice being submitted or subcontracting to report. ♦ This form must be submitted with each invoice to the appropriate agency contact for payment.
Attachment H-5, Federal Subprovider and Supplier Information Required for all federally funded contracts.

State Funded Contracts

Attachment H-SG, Historically Underutilized Business (HUB) for State Funded Professional or Technical Services Contracts, State of Texas HUB Subcontracting Plan Required

- This provision is applicable to state funded contracts with a HUB goal assigned.
- The appropriate reporting forms for this provision are Attachments H-1, H-2, H-4, and H-6 (Texas Building and Procurement Commission [TBPC] State of Texas HUB Subcontracting Plan (HSP), Prime Contractor Assessment Report). A copy of each form is required in the contract.
- Note: if the contract requires work authorizations, a completed Attachment H-2 will be required with each Work Authorization, if a HUB will be performing work. If a non-HUB subprovider is used, insert N/A (not applicable) on the line provided on the H-2 form.
- Attachment H-6 will be required monthly and must be submitted to the AUTHORITY Office even if there is no invoice being submitted or subcontracting to report.
- Attachment H-6 must be submitted with each invoice to the appropriate agency contact for payment.

Attachment H-SN, Historically Underutilized Business (HUB) Participation for State Funded Professional or Technical Services Contracts, No State of Texas HUB Subcontracting Plan Required

- This provision is applicable to state funded contracts with no HUB subcontracting plan required and no HUB goal assigned. If no subcontractors are used, the appropriate forms for this provision are Attachments H-1 and H-6.
- Note: If subcontractors are used, the required forms would be Attachments H-1, H-2, H-4 and H-6. A copy of each form is required in the contract.
- Attachment H-6 must be submitted monthly to the AUTHORITY Office even though there is no invoice being submitted or subcontracting to report.
- Attachment H-6 must be submitted with each invoice to the appropriate agency contact for payment.

Attachment H-6, HUB Subcontracting Plan (HSP) Prime Contractor Professional Assessment Report. This is a Monthly Progress Assessment Report. This is a Texas Building and Procurement Commission (TBPC) form and cannot be altered.

- Required for all State funded contracts.
- Attachment H-6 is required monthly and should be submitted to the AUTHORITY Office. This is a requirement even though there is no invoice being submitted or subcontracting to report.
- A copy of Attachment H-6 must be submitted when supplying an invoice to the appropriate agency contact for payment.
- The "Object Code" section(s) on this form should remain blank.

ATTACHMENT H-FG
Disadvantaged Business Enterprise (DBE)
for Federal-Aid Professional or Technical Services Contracts

1) **PURPOSE.** The purpose of this attachment is to carry out the Authority and the U.S. Department of Transportation's (DOT) policy of ensuring nondiscrimination in the award and administration of the AUTHORITY and DOT assisted contracts and creating a level playing field on which firms owned and controlled by minority or socially and economically disadvantaged individuals can compete fairly for the AUTHORITY and DOT assisted contracts.
2) **POLICY.** It is the policy of the AUTHORITY and DOT and the Texas Department of Transportation (henceforth the "Department") that Disadvantaged Business Enterprises (DBEs) as defined in 49 CFR Part 26, Subpart A and the Department's Disadvantaged Business Enterprise Program, shall have the opportunity to participate in the performance of contracts financed in whole or in part with Federal funds. Consequently, the Disadvantaged Business Enterprise requirements of 49 CFR Part 26, and the Department's Disadvantaged Business Enterprise Program, apply to this contract as follows.
   a. The Provider will offer Disadvantaged Business Enterprises, as defined in 49 CFR Part 26, Subpart A and the Authority/Department Disadvantaged Business Enterprise Program, the opportunity to compete fairly for contracts and subcontracts financed in whole or in part with Federal funds. In this regard, the Provider shall make a good faith effort to meet the Disadvantaged Business Enterprise goal for this contract.
   b. The Provider and any subprovider(s) shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Provider shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. The requirements of this Special Provision shall be physically included in any subcontract.
   c. When submitting the contract for execution by the Authority, the Provider must complete and furnish Attachment H-1 which lists the commitments made to certified DBE subprovider(s) that are to meet the contract goal and Attachment H-2 which is a commitment agreement(s) containing the original signatures of the Provider and the proposed DBE(s). For Work Authorization Contracts, Attachment H-1 is required at the time of submitting the contract for execution by the Authority/Department. Attachment H-2 will be required to be completed and attached with each work authorization number that is submitted for execution, if the DBE will be performing work**.** Any substitutions or changes to the DBE subcontract amount shall be subject to prior written approval by the Authority/Department. If non-DBE subprovider is performing work, insert N/A (not applicable) on the line provided.
   d. Failure to carry out the requirements set forth above shall constitute a material breach of this contract and may result; in termination of the contract by the Authority/Department; in a deduction of the amount of DBE goal not accomplished by DBEs from the money due or to become due to the Provider, not as a penalty but as liquidated damages to the Authority/Department; or such other remedy or remedies as the Authority/Department deems appropriate.
3) **DEFINITIONS.**
   a. "Authority/Department" means Hidalgo County Regional Mobility Authority (HCRMA) and the Texas Department of Transportation (TxDOT).
   b. "Federal-Aid Contract" is any contract between the Texas Department of Transportation and a Provider which is paid for in whole or in part with U. S. Department of Transportation (DOT) financial assistance.
   c. "Provider" is any individual or company that provides professional or technical services.
   d. "DBE Joint Venture" means an association a DBE firm and one (1) or more other firm(s) to carry out a single business enterprise for profit for which purpose they combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work

of the contract and whose share in the capital contribution, control, management, risks and profits of the joint venture are commensurate with its ownership interest.

e. "Disadvantaged Business Enterprise (DBE)" means a firm certified as such by the Authority/Department in accordance with 49 CFR Part 26.

f. "Good Faith Effort" means efforts to achieve a DBE goal or other requirement of this Special Provision which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement.

g. "Race-neutral DBE Participation" means any participation by a DBE through customary competitive procurement procedures.

4) **PERCENTAGE GOAL.** The goal for Disadvantaged Business Enterprise (DBE) participation in the work to be performed under this Agreement is **6.0%** of the Agreement amount.

5) **PROVIDER'S RESPONSIBILITIES.** A DBE prime may receive credit toward the DBE goal for work performed by his-her own forces and work subcontracted to DBEs. A DBE prime must make a good faith effort to meet the goals. In the event a DBE prime subcontracts to a non-DBE, that information must be reported to the Authority/Department.

a. A Provider who cannot meet the contract goal, in whole or in part, shall document the "Good Faith Efforts" taken to obtain DBE participation. The following is a list of the types of actions that may be considered as good faith efforts. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

(1) Soliciting through all reasonable and available means the interest of all certified DBEs who have the capability to perform the work of the contract. The solicitation must be done within sufficient time to allow the DBEs to respond to it. Appropriate steps must be taken to follow up initial solicitations to determine, with certainty, if the DBEs are interested.

(2) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Provider might otherwise prefer to perform the work items with its own forces.

(3) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

(4) Negotiating in good faith with interested DBEs by making a portion of the work available to DBE subproviders and suppliers and selecting those portions of the work or material needs consistent with the available DBE subproviders and suppliers.

(5) The ability or desire of the Provider to perform the work of a contract with its own organization does not relieve the Provider's responsibility to make a good faith effort. Additional costs involved in finding and using DBEs is not in itself sufficient reason for a Provider's failure to meet the contract DBE goal, as long as such costs are reasonable. Providers are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

(6) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities.

(7) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Provider.

(8) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials or related assistance or services.

(9) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, County, State and Federal minority/women business

assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

(10) If the Authority/Department's Director of the Business Opportunity Programs Office determines that the Provider has failed to meet the good faith effort requirements, the Provider will be given an opportunity for reconsideration by the Director of the appropriate Division.

NOTE: The Provider must not cause or allow subproviders to bid their services.

b. The preceding information shall be submitted directly to the Chair of the Hidalgo County Regional Mobility Authority (Authority) responsible for the project.

c. The Provider shall make all reasonable efforts to honor commitments to DBE subproviders named in the commitment submitted under Section 2.c. of this attachment. Where the Provider terminates or removes a DBE subprovider named in the initial commitment, the Provider must demonstrate on a case-by-case basis to the satisfaction of the Authority/Department that the originally designated DBE was not able or willing to perform.

d. The Provider shall make a good faith effort to replace a DBE subprovider that is unable or unwilling to perform successfully with another DBE, to the extent needed to meet the contract goal. The Provider shall submit a completed Attachment H-2 Form for the substitute firm(s). Any substitution of DBEs shall be subject to prior written approval by the Authority /Department. The Authority /Department may request a statement from the firm being replaced concerning its replacement prior to approving the substitution.

e. The Provider shall designate a DBE liaison officer who will administer the DBE program and who will be responsible for maintenance of records of efforts and contacts made to subcontract with DBEs.

f. Providers are encouraged to investigate the services offered by banks owned and controlled by disadvantaged individuals and to make use of these banks where feasible.

6) **ELIGIBILITY OF DBEs.**

a. The Authority/Department certifies the eligibility of DBEs, DBE joint ventures and DBE truck-owner operators to perform DBE subcontract work on DOT financially assisted contracts.

b. This certification will be accomplished through the use of the appropriate certification schedule contained in this Authority/Department's DBE program.

c. The Authority/Department publishes a Directory of Disadvantaged Business Enterprises containing the names of firms that have been certified to be eligible to participate as DBEs on DOT financially assisted contracts. The directory is available from the Authority's/Department's Business Opportunity Programs Office. The Texas Unified Certification Program DBE Directory can be found on the Internet at: http://www.dot.state.tx.us/services/business_opportunity_programs/tucp_dbe_directory.htm .

d. Only DBE firms certified at the time the contract is signed or at the time the commitments are submitted are eligible to be used in the information furnished by the Provider as required under Section 2.c. and 5.d. above. For purposes of the DBE goal on this contract, DBEs will only be allowed to perform work in the categories of work for which they were certified.

7) **DETERMINATION OF DBE PARTICIPATION.**

A firm must be an eligible DBE and perform a professional or technical function relating to the project. Once a firm is determined to be an eligible DBE, the total amount paid to the DBE for work performed with his/her own forces is counted toward the DBE goal. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the subprovider is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.

A DBE subprovider may subcontract no more than 70% of a federal aid contract. The DBE subprovider shall perform not less than 30% of the value of the contract work with assistance of employees employed and paid directly by the DBE; and equipment owned or rented directly by the DBE. DBE subproviders must perform a commercially useful function required in the contract in order for payments to be credited toward meeting the contract goal. A DBE performs a commercially useful function when it is responsible for executing the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself . When a DBE is presumed not to be performing a commercially useful function, the DBE may present evidence to rebut this presumption.

A Provider may count toward its DBE goal a portion of the total value of the contract amount paid to a DBE joint venture equal to the distinct, clearly defined portion of the work of the contract performed by the DBE.

Proof of payment, such as copies of canceled checks, properly identifying the Authority/Department's contract number or project number may be required to substantiate the payment, as deemed necessary by the Authority/Department.

8) **RECORDS AND REPORTS.**
   a. After submission of the initial commitment reported (Attachment H-1), required by Section 2.c. of this attachment, the Provider shall submit Monthly Progress Assessment Reports (Attachment H-3), after contract work begins, on DBE involvement to meet the goal and for race-neutral participation. One copy of each report is to be sent to the Authority/Department's Business Opportunity Programs Office monthly, in addition one copy is to be submitted with the Provider's invoice. **Only actual payments made to subproviders are to be reported.** These reports will be required until all subprovider activity is completed. The Authority/Department may verify the amounts being reported as paid to DBEs by requesting copies of canceled checks paid to DBEs on a random basis.
   b. DBE subproviders should be identified on the report by name, type of work being performed, the amount of actual payment made to each during the billing period, cumulative payment amount and percentage of the total contract amount. These reports will be due within fifteen (15) days after the end of a calendar month. Reports are required even when no DBE activity has occurred in a billing period.
   c. All such records must be retained for a period of four (4) years following final payment or until any investigation, audit, examination, or other review undertaken during the four (4) years is completed, and shall be available at reasonable times and places for inspection by authorized representatives of the Authority or Texas Department of Transportation or the DOT.
   d. Prior to receiving final payment, the Provider shall submit a Final Report (Attachment H-4), detailing the DBE payments. The Final Report is to be sent to the Authority/Department's Business Opportunity Programs Office and one (1) copy to be submitted with the Provider's final invoice. If the DBE goal requirement is not met, documentation of the good faith efforts made to meet the goal must be submitted with the Final Report.

9) **COMPLIANCE OF PROVIDER.** To ensure that DBE requirements of this DOT-assisted contract are complied with, the Authority/Department will monitor the Provider's efforts to involve DBEs during the performance of this contract. This will be accomplished by a review of Monthly Progress Assessment Reports (Attachment H-3), submitted to the Authority/Department's Business Opportunity Programs Office

by the Provider indicating his progress in achieving the DBE contract goal, and by compliance reviews conducted by the Authority/Department. The Monthly Progress Assessment Report (Attachment H-3) must be submitted at a minimum monthly to the Business Opportunity Programs Office, in addition to with each invoice to the appropriate agency contact.

The Provider shall receive credit toward the DBE goal based on actual payments to the DBE subproviders with the following exceptions and only if the arrangement is consistent with standard industry practice. The Provider shall contact the Authority/Department if he/she withholds or reduces payment to any DBE subprovider.

(1) A DBE firm is paid but does not assume contractual responsibility for performing the service;
(2) A DBE firm does not perform a commercially useful function;
(3) Payment is made to a DBE that cannot be linked by an invoice or canceled check to the contract under which credit is claimed;
(4) Payment is made to a broker or a firm with a brokering-type operation;
(5) Partial credit is allowed, in the amount of the fee or commission provided the fee or commission does not exceed that customarily allowed for similar services, for a bona fide service, such as professional, technical, consultant, or managerial services, and assistance in the procurement of essential personnel, facilities, equipment, materials, or supplies required for performance of the contract.

A Provider's failure to comply with the requirements of this Special Provision shall constitute a material breach of this contract. In such a case, the Authority/Department reserves the right to terminate the contract; to deduct the amount of DBE goal not accomplished by DBEs from the money due or to become due the Provider, not as a penalty but as liquidated damages to the Authority/Department; or such other remedy or remedies as the Authority/Department deems appropriate.

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ATTACHMENT H-FN

Disadvantaged Business Enterprise (DBE) for Race-Neutral Professional or Technical Services Contracts

It is the policy of the U. S. Department of Transportation (DOT) that DBEs as defined in 49 CFR Part 26, Subpart A, be given the opportunity to compete fairly for contracts and subcontracts financed in whole or in part with Federal funds and that a maximum feasible portion of the Department's overall DBE goal be met using race-neutral means. Consequently, if there is no DBE goal, the DBE requirements of 49 CFR Part 26, apply to this contract as follows:

The Provider will offer DBEs as defined in 49 CFR Part 26, Subpart A, the opportunity to compete fairly for contracts and subcontracts financed in whole or in part with federal funds. Race-Neutral DBE participation on projects with no DBE goal should be reported on the Attachment H-3 Form. Payments to DBEs reported on Attachment H-3 are subject to the following requirements:

DETERMINATION OF DBE PARTICIPATION.

A firm must be an eligible DBE and perform a professional or technical function relating to the project. Once a firm is determined to be an eligible DBE, the total amount paid to the DBE for work performed with his/her own forces must be reported as race-neutral DBE participation. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work should not be reported unless the subcontractor is itself a DBE.

A DBE subprovider may subcontract no more than 70% of a federal aid contract. The DBE subprovider shall perform not less than 30% of the value of the contract work with assistance of employees employed and paid directly by the DBE; and equipment owned or rented directly by the DBE. DBE subproviders must perform a commercially useful function required in the contract. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. When a DBE is presumed not to be performing a commercially useful function, the DBE may present evidence to rebut this presumption.

A Provider must report a portion of the total value of the contract amount paid to a DBE joint venture equal to the distinct, clearly defined portion of the work of the contract performed by the DBE.

Proof of payment, such as copies of canceled checks, properly identifying the Authority's contract number or project number may be required to substantiate the payment, as deemed necessary by the Authority.

The Provider and any subprovider shall not discriminate on the basis of race, color, national origin or sex in the award and performance of contracts. These requirements shall be physically included in any subcontract.

Failure to carry out the requirements set forth above shall constitute a material breach of this contract and, may result in termination of the contract by the Authority/Department or other such remedy as the Authority/Department deems appropriate.

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ATTACHMENT H-SG (NOT APPLICABLE)

Historically Underutilized Business
for State Funded Professional or Technical Services Contracts
HUB Goal Assigned-State of Texas Subcontracting Plan Required

1) **POLICY.** It is the policy of the Authority/Department to ensure that HUBs shall have an equal opportunity to participate in the performance of contracts; to create a level playing field on which HUBs can compete fairly for contracts and subcontracts; to ensure nondiscrimination on the basis of race, color, national origin, or gender in the award and administration of contracts; to help remove barriers to the participation of HUBs in department contracts; and, to assist in the development of firms that can compete successfully in the market place outside the HUB program. Consequently, the HUB requirements of the Authority/Department's HUB Program apply to this contract as follows:
   (1) The Provider agrees to insure that they shall take all necessary and reasonable steps to meet the HUB goal for this contract.
      a. The Provider and any subprovider(s) shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of contracts.
      b. When submitting the contract for execution by the Authority, the Provider must complete and furnish Attachment H-1 which lists the commitments made to all subproviders, including certified HUB subprovider(s) that are to meet the contract goal, and Attachment H-2 which is a commitment agreement(s) containing the original signatures of the Provider and HUB(s) that were indicated in the original submitted Authority/State of Texas HUB Subcontracting Plan (HSP) in Section 8. For Work Authorization Contracts, Attachment H-1 is required at the time of submitting the contract for execution by the Department. Attachment H-2 will be required to be completed and attach with each work authorization number that is submitted for execution, if the HUB will be performing work. If non-HUB subprovider is performing work, insert N/A (not applicable) on the line provided. A prime must allow a HUB maximum opportunity to perform the work by not creating unnecessary barriers or artificial requirements for the purpose of hindering a HUB's performance under the contract. Any substitutions or changes to the HSP, in addition to any changes to the original contract award, shall be subject to prior written approval by the Department. If there are any changes to the subproviders during the contract term, the Provider must furnish a Revised Attachment H-1 showing the revised commitment of all subproviders.
      c. Failure to carry out the requirements set forth above shall constitute a breach of contract and may result in a letter of reprimand; in termination of the contract by the Authority; in a deduction from money due or to become due to the Provider, not as a penalty but as damages to the Department's HUB Program; or such other remedy or remedies as the Department deems appropriate.
2) **DEFINITIONS.**
   g. "Authority/Department" means Hidalgo County Regional Mobility Authority (HCRMA) and the Texas Department of Transportation (TxDOT).
   a. "Agreement" is the agreement between the Authority and a Provider.
   b. "Provider" is any individual or company that provides professional or technical services.
   c. "Joint Venture" means an association of two or more businesses to carry out a single business enterprise for profit which combines their property, capital, efforts, skills and knowledge.
   d. "Historically Underutilized Business (HUB)" means any business so certified by the Texas Building and Procurement Commission.
3) **PERCENTAGE GOAL.** The goal for Historically Underutilized Business (HUB) participation in the work to be performed under this contract is **6.0%** of the contract amount.

4) **PROVIDER'S RESPONSIBILITIES.** A Provider (HUB or non-HUB) must perform a minimum of 30% of the contract with its employees (as defined by the Internal Revenue Service). The contract is subject to the HSP Good Faith Effort Requirements.
   a. A Provider who cannot meet the contract goal, in whole or in part, should have documented any of the following and other efforts made as a "Good Faith Effort" to obtain HUB participation.
      (1) Whether the prime advertised in general circulation, trade association, and/or minority/women focus media concerning subcontracting opportunities.
      (2) Whether the prime provided written notice to at least three (3) qualified HUBs allowing sufficient time for HUBs to participate effectively.
      (3) Whether the prime documented reasons for rejection or met with the rejected HUB to discuss the rejection.
      (4) Whether the prime provided qualified HUBs with adequate information about bonding, insurance, the plans, the specifications, scope of work and requirements of the contract.
      (5) Whether the prime negotiated in good faith with qualified HUBs, not rejecting qualified HUBs who are also the lowest responsive bidder.
      (6) Whether the prime used the services of available minority and women community organizations, contractor's groups, local, state, and federal business assistance offices, and other organizations that provide support services to HUBs.

NOTE: The Provider must not cause or allow subproviders to bid their services.

   b. The preceding information shall be submitted directly to the Chair of the Authority responsible for the contract.
   c. The Provider shall make all reasonable efforts to honor commitments to HUB subproviders named in the original HSP in Section 8. Where the Provider terminates or removes a HUB subprovider named in the initial commitment, the Provider must demonstrate on a case-by-case basis to the satisfaction of the Authority/Department that the originally designated HUB was not able or willing to perform. The term "unable" includes, but is not limited to, a firm that does not have the resources and expertise to finish the work and/or a firm that substantially increases the time to complete the project.
   d. The Provider shall make all reasonable efforts to replace a HUB subprovider that is unable or unwilling to perform successfully with another HUB and must meet the HSP Good Faith Effort Requirements. Any substitution of HUBs shall be subject to prior written approval by the Authority. The Authority will request a statement from the firm being replaced concerning its replacement prior to approving the substitution. If there are any changes to the subproviders during the contract term, the Provider must furnish a Revised Attachment H-1 showing the revised commitment of all subproviders.
   e. The Provider shall designate a HUB liaison officer who will administer the Provider's HUB program and who will be responsible for maintenance of records of efforts and contacts made to subcontract with HUBs.

5) **ELIGIBILITY OF HUBs.**
   a. The Texas Building and Procurement Commission (TBPC) certifies the eligibility of HUBs.
   b. The TBPC maintains a directory of certified HUBs. The HUB Directory is available through the TxDOT Department's Business Opportunity Programs Office and through the Internet at the TBPC's Website (http://www2.tbpc.state.tx.us/cmbl/hubonly.html).
   c. Only HUB firms certified and identified in specific categories and classes at the time the contract is signed or at the time the commitments are submitted are eligible to be used in the information furnished by the Provider as required under Section 2.c. above.
   d. If during the course of the contract it becomes necessary to substitute another HUB firm for a firm named in the information submitted by the Provider as required by Section 2.c. above, then only certified HUBs will be considered eligible as a substituted firm. The Provider's written request for

substitutions of HUB subproviders shall be accompanied by a detailed explanation, which should substantiate the need for a substitution. The Authority/Department will verify the explanation with the HUB firm being replaced before giving approval of the substitution. If there are any changes to the subproviders during the contract term, the Provider must furnish a Revised Attachment H-1 showing the revised commitment of all subproviders.

e. The 73rd Legislature passed Texas Civil Statutes, Article 601i, relative to contracts between governmental entities and certain disadvantaged businesses. The Statute provides for civil penalties for persons who falsely claim disadvantaged business status and for the general contractor who knowingly contracts with a person claiming to be a disadvantaged business.

6) **DETERMINATION OF HUB PARTICIPATION.**

A firm must be an eligible HUB and perform a professional or technical function relating to the project. Proof of payment, such as copies of canceled checks, properly identifying the Authority's contract number or project number may be required to substantiate the payment, as deemed necessary by the Authority/Department. A HUB subprovider, with prior written approval from the Authority/Department, may subcontract 70% of a contract as long as the HUB subprovider performs a commercially useful function. All subcontracts shall include the provisions required in the subcontract and shall be approved as to form, in writing, by the Authority/Department prior to work being performed under the subcontract. A HUB performs a commercially useful function when it is responsible for a distinct element of the work of a contract; and actually manages, supervises, and controls the materials, equipment, employees, and all other business obligations attendant to the satisfactory completion of contracted work. If the subcontractor uses an employee leasing firm for the purpose of providing salary and benefit administration, the employees must in all other respects be supervised and perform on the job as if they were employees of the subcontractor.

7) **COMPLIANCE OF PROVIDER.**

To ensure that HUB requirements of this contract are complied with, the Authority/Department will monitor the Provider's efforts to involve HUBs during the performance of this contract. This will be accomplished by a review of the monthly Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) submitted to the AUTHORITY Office by the Provider indicating his/her progress in achieving the HUB contract goal, and by compliance reviews conducted by the Authority/Department. The Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) must be submitted at a minimum monthly to the Business Opportunity Programs Office, in addition to with each invoice to the appropriate agency contact.

The Provider shall receive credit toward the HUB goal based on actual payments to the HUB subproviders with the following exceptions and only if the arrangement is consistent with standard industry practice.

(1) Payments to brokers or firms with a brokering type operation will be credited only for the amount of the commission;
(2) Payments to a joint venture will not be credited unless all partners in the joint venture are HUBs;
(3) Payments to a HUB subprovider who has subcontracted a portion of the work required under the subcontract will not be credited unless the HUB performs a commercially useful function;
(4) Payments to a HUB will not be credited if the firm does not provide the goods or perform the services paid for;
(5) Payments made to a HUB that cannot be linked by an invoice or canceled check to the contract under which credit is claimed will not be credited.

A Provider must not withhold or reduce payments to any HUB without a reason that is accepted as standard industry practice. A HUB prime or subprovider must comply with the terms of the contract or subcontract. Work products, services, and commodities must meet contract specifications whether performed by a prime or subprovider.

A Provider's failure to meet the HUB goal and failure to demonstrate to the Authority/Department's satisfaction sufficient "Good Faith Effort" on his/her part to obtain HUB participation shall constitute a breach of contract. In such a case, the Authority/Department reserves the right to issue a letter of reprimand; to deduct the amount of HUB goal not accomplished by HUBs from the money due or to become due the Provider, not as a penalty but as damages to the Authority/Department's HUB program; or such other remedy or remedies as the Authority/Department deems appropriate.

8) **RECORDS AND REPORTS.**

a. After submission of the initial commitment (Attachment H-1), required by Section 2.c. of this attachment, the Provider shall submit State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) at a minimum monthly, after contract work begins, on subcontracting involvement. One copy of the State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) is to be sent to the Authority/Department's Office monthly. In addition, the Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) must be submitted with the Provider's invoice. All payments made to subproviders are to be reported. **The Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Reports are required monthly even during months when no payments to subproviders have been made.** The Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report will be required until all work on the contract has been completed. The Authority/Department may verify the amounts being reported as paid to HUBs by requesting copies of canceled checks paid to HUBs on a random basis.

b. Subproviders should be identified on the Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) by name, the amount of actual payment made to each during the billing period, cumulative payment amount and percentage of the total contract amount.

c. All such records must be retained for a period of four years following final payment, or until an investigation, audit, examination, or other review undertaken during the four years, and shall be available at reasonable times and places for inspection by authorized representatives of the Authority/Department and other agencies.

d. Prior to receiving final payment, the Provider shall submit a Final Report (Attachment H-4), detailing the subprovider payments to the AUTHORITY Office of the Authority, and one copy to the Authority/Department with the Provider's final invoice.

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ATTACHMENT H-SN (NOT APPLICABLE)

Historically Underutilized Business (HUB)
for State Funded Professional or Technical Services Contracts
No State of Texas HUB Subcontracting Plan Required

POLICY

It is the policy of the Authority/Department to ensure that HUBs shall have an equal opportunity to participate in the performance of contracts; to create a level playing field on which HUBs can compete fairly for contracts and subcontracts; to ensure nondiscrimination on the basis of race, color, national origin, or gender in the award and administration of contracts; to help remove barriers to the participation of HUBs in Authority contracts; and, to assist in the development of firms that can compete successfully in the market place outside the HUB program.

Subcontracting participation on projects with no HUB Subcontracting Plan Required should be reported on the Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report, the Attachment H-6 Form. Payment to non-HUBs subproviders must be reported on Attachment H-6. Payments to HUBs reported on Attachment H-6 are subject to the following requirements:

DETERMINATION OF HUB PARTICIPATION.

A firm must be an eligible HUB and perform a professional or technical function relating to the project. Once a firm is determined to be an eligible HUB, the total amount paid to the HUB should be reported as race-neutral HUB participation.

A HUB subprovider may subcontract no more than 70% of a contract. The HUB subprovider shall perform not less than 30% of the value of the contract work with assistance of employees employed and paid directly by the HUB; and equipment owned or rented directly by the HUB.

A provider must report a portion of the total value of the contract amount paid to a HUB joint venture equal to the distinct, clearly defined portion of the work of the contract performed by the HUB.

Proof of payment, such as copies of canceled checks, properly identifying the Authority/Department's contract number or project number may be required to substantiate the payment, as deemed necessary by the Authority/Department.

The provider and any subprovider shall not discriminate on the basis of race, color, national origin or sex in the award and performance of contracts. These requirements shall be physically included in any subcontract.

REQUIRED FORMS.

If subcontractors are used under the contract that has no stated HUB goal, Attachments H-1, H-2, H-4 and H-6 are required. Attachments H-1 and H-6 <u>are required</u> if no subcontractors are being used to perform work under this contract.

Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) **is required monthly even when no subcontracting activity has occurred.** In addition, Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) should be submitted with the Provider's invoice.

ATTACHMENT H-1

Subprovider Monitoring System
Commitment Worksheet

Contract #:_____ Assigned Goal: 6.0% Federally Funded _____ County Funded _____
Prime Provider: L&G Consulting Engineers, Inc. Total Contract Amount: ${Contract Amt}
Prime Provider Info: DBE____HUB ___ Both ___
Vendor ID #:_____ DBE/HUB Expiration Date: _____
(First 11 Digits Only)

If no subproviders are used on this contract, please indicate by placing "N/A" on the 1st line under Subproviders.

Subprovider(s) (List All)	**Type of Work**	**Vendor ID #** (First 11 Digits Only)	**D=DBE H=HUB**	**Expiration Date**	**$ Amount or % of Work ***
Subprovider(s) Contract or % of Work* Totals					

*For Work Authorization Contracts, indicate the % of work to be performed by each subprovider.

Total DBE **or** HUB Commitment Dollars $0.00 (DBE)

Total DBE **or** HUB Commitment Percentages of Contract 0% (DBE)
(Commitment Dollars and Percentages are for Subproviders only)

12/06 DBEH1.AT

ATTACHMENT H-2
Subprovider Monitoring System Commitment Agreement

This commitment agreement is subject to the award and receipt of a signed contract from the Hidalgo County Regional Mobility Authority (Authority). ***NOTE: Attachment H-2 is required to be attached to each contract that does not include work authorizations. Attachment H-2 is required to be attached with each work authorization. Attachment H-2 is also required to be attached to each supplemental work authorization. If DBE/HUB Subproviders are used, the form must be completed and signed. If no DBE/HUB Subproviders are used, indicate with "N/A" on this line: _____ and attach with the work authorization or supplemental work authorization.***

Contract #: _____ Assigned Goal: % Prime Provider L&G Consulting Engineers, Inc.

Work Authorization (WA)#: _____ WA Amount: **$0** Date: _____
Supplemental Work Authorization (SWA) #: _____ to WA #: _____ SWA Amount: _____
Revised WA Amount: _____

Description of Work *(List by category of work or task description. Attach additional pages, if necessary.)*	**Dollar Amount** *(For each category of work or task description shown.)*
FC	**$0**
FC	**$0**
Total Commitment Amount *(Including all additional pages.)*	**$0**

IMPORTANT: The signatures of the prime and the DBE/HUB and Second Tier Subprovider, if any (both DBE and Non-DBE) and the total commitment amount must always be on the same page.

Provider Name: L&G Consulting Engineers, Inc. **Address: 900 S. Steward Rd., Ste. 10,** **Mission, TX 78572** **VID Number:** **PH: & FAX: 956-585-1909** **Email: jacinto@lgengineers.com**	**Name:** Jacinto Garza, P.E. ***(Please Print)*** **Title:** President / CEO **Signature** **Date**
DBE/HUB Sub Provider **Subprovider Name:** **VID Number:** **Address:** **PH:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ **Signature** **Date**
Second Tier Sub Provider **Subprovider Name:** **VID Number:** **Address:** **Phone #& Fax #:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ **Signature** **Date**

VID Number is the Vendor Identification Number issued by the Comptroller. If a firm does not have a VID Number, please enter the owner's Social Security or their Federal Employee Identification Number (if incorporated).

ATTACHMENT H-3
Subprovider Monitoring System for Federally Funded Contracts
Progress Assessment Report for month of (Mo./Yr.) _____/_____

Contract #: _____
Date of Execution: _____
Prime Provider: L&G Consulting Engineers, Inc.
Work Authorization No. : _____

Original Contract Amount: **$0**
Approved Supplemental Agreements: **$0**
Total Contract Amount: **$0**
Work Authorization Amount: **$0**

If no subproviders are used on this contract, please indicate by placing "N/A" on the 1st line under Subproviders.

DBE	All Subproviders	Category of Work	Total Subprovider Amount	% Total Contract Amount	Amount Paid This Period	Amount Paid To Date	Subcontract Balance Remaining

Fill out Progress Assessment Report with each estimate/invoice submitted, *for all subcontracts*, and forward as follows:
1 Copy with Invoice - Hidalgo County Regional Mobility Authority Office
I hereby certify that the above is true and correct statement of the amounts paid to the firms listed above.

Print Name - Company Official /DBE Liaison Officer | Signature | Phone | Date

Email | | Fax

ATTACHMENT H-4

Subprovider Monitoring System
Final Report

The Final Report Form should be filled out by the Prime Provider and submitted to the Contract Manager and the Business Opportunity Programs Office for review upon completion of the contract. The report should reflect **all subcontract activity** on the project. The report will aid in expediting the final estimate for payment. If the HUB or DBE goal requirements were not met, documentation supporting good faith efforts must be submitted.

DBE Goal: 6.0 % **OR** HUB Goal: ____%

Total Contract Amount: **$0** Total Contract Amount: ${Contract Amt}

Contract Number:

Vendor ID #	**Subprovider**	**Total $ Amount Paid to Date**
TOTAL		

This is to certify that _____% of the work was completed by the HUB or DBE subproviders as stated above.

_____
By: Prime Provider

_____
Per: Signature

Subscribed and sworn to before me, this _____ day of _____, 20 __

_____Notary Public _____ County

My Commission expires:_____

12/06 DBE-H4.A

ATTACHMENT H-5

Federal Subprovider and Supplier Information

The Provider shall indicate below the name, address and phone number of all successful and unsuccessful subproviders and/or suppliers that provided proposals/quotes for this contract prior to execution. You may reproduce this form if additional space is needed.

Name	Address	Phone Number

The information must be provided and returned with the contract.

_____ _____

Signature Date

{Signatory Name, Position} _____ _____

Printed Name Email Phone #

ATTACHMENT H-6

Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report

HUB Subcontracting Plan (HSP)
Prime Contractor Progress Assessment Report

This form must be completed and submitted to the contracting agency each month to document compliance with your HSP.

Contract/Requisition Number: _____ **Date of Award:** _____ (mm/dd/yyyy) **Object Code:** _____ (Agency Use Only)

Contracting Agency/University Name: _____

Contractor (Company) Name: _____ **State of Texas VID #:** _____

Point of Contact: _____ **Phone #:** _____

Reporting (Month) Period: _____ **Total Amount Paid this Reporting Period to** $ _____ -

Report HUB and Non-HUB subcontractor information

Subcontractor's Name	Subcontractor's VID or HUB Certificate Number	*Texas Certified HUB? (Yes or No)	Total Contract $ Amount from HSP with Subcontractor	Total $ Amount Paid This Reporting Period to Subcontractor	Total Contract $ Amount Paid to Date to Subcontractor	Object Code (Agency Use Only)
			$ -	$ -	$ -	
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			$ -	$ -	$ -	
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		TOTALS:	$ -	$ -	$ -	

Signature: _____ **Title:** _____ **Date:** _____

***Note: HUB certification status can be verified on-line at:** **http://www2.cpa.state.tx.us/cmbl/hubonly.html** Rev. 10/07

ATTACHMENT H-7

DBE CERTIFICATIONS

ATTACHMENT I

CERTIFICATE OF INSURANCE

ATTACHMENT J

CONFLICTS CERTIFICATION

ATTACHMENT J

CONFLICTS CERTIFICATION

1. Business Relationships:

   The RMA has adopted a conflict of interest policy which generally requires disclosure of any business relationships with RMA board members or key personnel, as designated on the Authority's website. The Conflict of Interest Policy for Consultants, the list of Board Members and Key Personnel, and the Disclosure Form can be obtained from the RMA website (www.hcrma.net). Engineer all any sub consultants to Engineer shall adhere to this policy and provide any required disclosures.

2. Adverse Matters:

   Engineer must disclose conflicts of interest by identifying any matter in which the Engineer becomes adverse to the RMA or the Texas Department of Transportation or to the State of Texas or any of its boards, agencies, commissions, universities, elected or appointed officials, or Hidalgo County during the term of the Agreement.

3. Direct and Indirect Interest:

   The Engineer shall ensure that, during the term of the Agreement, the Engineer, including any of its principals, will have no interest, direct or indirect, that would conflict in any manner or degree with the performance of Engineer's obligations under the agreement, including, but not limited to, ownership of property in the right-of-way of any of the independent projects of the Hidalgo County Roadway System. The Engineer warrants that, in the performance of the Agreement, the Engineer shall not employ any person, or subcontract with any entity, having such known interest.

ENGINEER: L&G Consulting Engineers, Inc

BY: _____

DATE: _____

ATTACHMENT K
DEBARMENT CERTIFICATION

Texas Department of Transportation

Quality Assurance Program for Design-Bid-Build Projects

May 2019

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TABLE OF CONTENTS

SECTION 1 - INTRODUCTION 4
1.1 Overview 4
1.2 Support 4
SECTION 2 - ACCEPTANCE PROGRAM 5
2.1 Overview 5
2.2 Sampling and Testing Frequency and Location 5
2.3 Documentation 5
2.4 Quality Control Sampling and Testing 5
2.5 Dispute Resolution 5
SECTION 3 - INDEPENDENT ASSURANCE 6
3.1 Overview 6
3.2 Required Frequencies and Activities 6
3.3 Testing Equipment 7
3.4 Testing Personnel 7
3.5 Comparing Test Results 8
3.6 Annual Report of IA Program Results 8
SECTION 4 - MATERIALS CERTIFICATION 9
4.1 Overview 9
SECTION 5 - CONFLICT OF INTEREST 10
5.1 Overview 10
SECTION 6 - TECHNICIAN QUALIFICATION PROGRAM 11
6.1 Purpose 11
6.2 Technician Qualification 11
6.3 Who Must Be Qualified? 11
6.4 Who Can Qualify Sampling and Testing Personnel? 11
6.5 Required Certifications for Commercial Laboratory and Contractor Personnel 12
6.6 Qualification Procedure 12
6.7 Provisional Certifications 13
6.8 Responsibility and Documentation 14
6.9 Disqualification 14
SECTION 7 - LABORATORY QUALIFICATION PROGRAM 16
7.1 Purpose 16
7.2 Laboratory Responsibility 16
7.2.1 CE&I 16
7.2.2 District AO Personnel 16
7.2.3 District Lab Coordinator 17

7.3 Qualification 17
7.3.1 District Lab Accreditation 17
7.3.2 Commercial Lab and CE&I Qualification Process 18
7.4 Calibration Standards and Frequencies for Laboratory Equipment 20
7.5 Non-Compliance 20
7.6 Documentation 20
7.7 Dispute Resolution 21

Appendix A – Acronyms and Definitions
Appendix B – Test Methods for Split/Proficiency Evaluation
Appendix C – IA Annual Report
Appendix D – Material Certification Example Letter for Projects with Federal Oversight
Appendix E – Material Certification Example Letter for Projects with Non-Federal Oversight
Appendix F – Archived Versions

SECTION 1 - INTRODUCTION

1.1 Overview

The Texas Department of Transportation (TxDOT) established the Quality Assurance Program (QAP) for Design-Bid-Build (D-B-B) Projects to ensure that materials and workmanship incorporated into highway construction projects are in reasonable conformity with the requirements of the approved plans and specifications, including any approved changes. This program conforms to the criteria in 23 CFR 637 B, where the Materials and Tests Division (MTD) central laboratory will be accredited under the AASHTO Accreditation Program (AAP) which oversees the statewide qualification program.

It consists of an "Acceptance Program" and "Independent Assurance (IA) Program" based on test results obtained by qualified persons and equipment.

The QAP allows for the use of validated Contractor-performed quality control (QC) test results as part of an acceptance decision. It also allows for the use of test results obtained by commercial laboratories in acceptance decisions. The acceptance of all materials and workmanship is the responsibility of the Engineer.

1.2 Support

For more information regarding the information and procedures in the program, contact the Materials and Tests Division (MTD) Administration at 512/506-5843.

ATTACHMENT L
2019 Quality Assurance Program for Design Bid Build Projects

SECTION 2 - ACCEPTANCE PROGRAM

2.1 Overview

The Quality Assurance Program (QAP) assures materials, incorporated into any highway construction project, are subject to verification sampling and testing, as well as quality control (QC) sampling and testing when required by the specifications.

The District Engineer will delegate an individual at the district level for the accountability of certification verification in SiteManager (SM) and at the laboratory for various project delivery options applicable to the DBB program.

The delegation of authority should encompass a mechanism that provides oversight authority and an audit function to ensure compliance. Additional information can be found in Section 6.7 – Dispute Resolution.

2.2 Sampling and Testing Frequency and Location

Verification sampling and testing will be performed at the location and frequency established in the Department's Guide Schedule of Sampling and Testing for Design-Bid-Build (DBB) Projects (DBB Guide Schedule) or specifications specific to each project.

2.3 Documentation

Testing will be documented within SiteManager on the department approved excel templates. When the tester does not enter test results directly into SM, the hardcopy will need to be scanned and attached to the SM sample documenting the tester's name.

2.4 Quality Control Sampling and Testing

Contractor-performed QC sampling and testing may be used as part of an acceptance decision when required or allowed by specification.

QC sampling and testing personnel, laboratories, and equipment will be qualified in accordance with Section 6 – Technician Qualification Program and Section 7 – Laboratory Qualification Program and will be evaluated under the Independent Assurance Program, as described in Section 3 of this document.

QC test results will be validated by verification test results obtained from independently taken samples. Qualified TxDOT personnel or their designated agents will perform verification sampling and testing.

2.5 Dispute Resolution

When QC test results are used in the acceptance decision, the MTD central laboratory or an accredited independent laboratory approved by MTD will perform the referee testing. The referee laboratory decision will be final.

ATTACHMENT L
2019 Quality Assurance Program for Design Bid Build Projects

SECTION 3 - INDEPENDENT ASSURANCE PROGRAM

3.1 Overview

The Independent Assurance (IA) program evaluates all sampling and testing procedures, personnel, and equipment used as part of an acceptance decision.

The IA program evaluates the qualified sampling and testing personnel and testing equipment and is established using the system approach. The system approach bases frequency of IA activities on time—regardless of the number of tests, quantities of materials, or numbers of projects tested by the individual being evaluated.

3.2 Required Frequencies and Activities

Table 1 gives the frequencies and activities required for evaluating sampling and testing personnel and equipment under the system approach to IA.

Table 1
Frequencies and Activities Required Under IA System Approach

Time	Activity
Before performing acceptance sampling and testing.	Qualification required under Section 6 and Section 7 of this QAP.
Within 12 months after Observation and Qualification, not to exceed 15 months.	Each qualified technician is required to participate in the first available proficiency or split sample for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.
Within 24 months after Observation and Qualification, not to exceed 27 months.	Each qualified technician is required to participate in one proficiency or split sample test for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.
Within 36 months of Qualification. (Only required for certifications issued by TxDOT or TXAPA with a 3-year cycle.)	Qualification is again required under Section 6 and Section 7 of this QAP.
Within 36 months after Observation and Qualification, not to exceed 39 months. (Only required for ACI, which has a 5-year certification cycle.)	Each qualified technician is required to participate in one proficiency or split sample test for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.
Within 48 months after Observation and Qualification, not to exceed 51 months. (Only required for ACI, which has a 5-year certification cycle.)	Each qualified technician is required to participate in one proficiency or split sample test for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.

Within 60 months of qualification (Only required for certifications issued by ACI with a 5-year cycle.)	Qualification is again required under Section 6 and Section 7 of this QAP.

Maintaining technician qualification under the IA system approach requires continuation of the above cycle of qualification and successful split or proficiency sample testing.

3.3 Testing Equipment

MTD will qualify district laboratory testing equipment used for acceptance sampling and testing, in accordance with Section 7 – Laboratory Qualification Program. Any non-TxDOT commercial laboratory used for acceptance sampling and testing must be accredited in accordance with Section 7.3 – Qualification.

MTD may designate the district laboratory to qualify commercial laboratory testing equipment, used for acceptance sampling and testing, in accordance with corresponding calibration test procedures. MTD or TxDOT district laboratory may hire a third-party entity to perform calibration or verification in accordance with corresponding calibration test procedures.

The qualifying authority will qualify testing equipment in accordance with the following guidelines.

A. Frequency for qualifying sampling and testing equipment must not exceed 1 year.
B. Calibration or verification is required whenever the laboratory or equipment is moved.

The qualifying authority will evaluate any equipment used to perform verification and QC sampling and testing in making an acceptance decision. This evaluation includes calibration checks and split or proficiency sample tests. The Department test procedures referenced in Section 7.4 – Calibration Standards and Frequencies for Laboratory Equipment give the requirements for, and frequency of, equipment calibrations.

3.4 Testing Personnel

MTD will qualify district and commercial laboratory personnel performing IA activities, in accordance with Section 6 – Technician Qualification Program.

MTD may designate a district laboratory to qualify other Department personnel and accredited commercial laboratory personnel performing IA activities. When a district qualifies commercial laboratory personnel, they must notify MTD in writing.

Individuals performing IA activities will be other than those performing verification or QC testing.

IA personnel will evaluate any individual performing verification or QC sampling and testing. This evaluation includes observations and split or proficiency sample testing.

3.5 Comparing Test Results

Comparison of the split sample test results can be used if equipment or procedures issues are suspected. Appendix B gives the acceptable tolerance limits for comparing test results from split and proficiency samples.

If the comparisons of the test results do not comply with the tolerances, an engineering review of the test procedures and equipment will be performed immediately to determine the source of the discrepancy.

3.6 Annual Report of IA Program Results

MTD will compose and submit an annual report to the Federal Highway Administration (FHWA) summarizing the results of TxDOT's systems approach IA program. See Appendix C for the annual report form.

This report identifies:

- number of sampling and testing personnel evaluated by the systems approach IA testing;
- number of IA evaluations found to meet tolerances in Appendix B;
- number of IA evaluations found to not meet tolerances in Appendix B; and
- summary of any significant system-wide corrective actions taken.

SECTION 4 - MATERIALS CERTIFICATION

4.1 Overview

The TxDOT District Area Engineer or Director of Construction will submit a materials certification letter, conforming in substance to the examples shown in Appendix D or E, as applicable.

For projects with federal oversight, submit the materials certification letter (Appendix D) to the FHWA division administrator, with a copy to MTD.

For non-federal oversight projects, submit the material certification letter (Appendix E) to the TxDOT District Engineer, with a copy to MTD.

Either letter must be submitted at final acceptance of the project.

SECTION 5 - CONFLICT OF INTEREST

5.1 Overview

To avoid an appearance of a conflict of interest, any qualified non-TxDOT laboratory will perform only one of the following functions on the same project:

- verification sampling and testing;
- QC sampling and testing;
- IA testing; or
- referee testing.

SECTION 6 - TECHNICIAN QUALIFICATION PROGRAM

6.1 Purpose

This program provides uniform statewide procedures for technician qualification to ensure that tests required by the specifications are performed according to the prescribed sampling and testing methods.

6.2 Technician Qualification

Sampling and testing personnel will be qualified to perform sampling and testing for the acceptance of materials in the areas of soils, bituminous, aggregate, and concrete materials.

The test methods for which individuals can be qualified are included in the following series of the TxDOT Test Procedures.

- 100-E Series (Soils)
- 200-F Series (Bituminous)
- 400-A Series (Aggregates and Concrete)
- 500-C Series (Asphalt – Tex-500-C and Tex-530-C)

6.3 Who Must Be Qualified?

Any individual who performs sampling and testing on the materials listed in Section 6.2 – Technician Qualification, for acceptance, must be qualified in each test procedure they perform.

NOTE—Reciprocity may be granted to individuals who have been successfully qualified under another state's program. These situations will be considered on a case-by-case basis and must meet the approval of the Materials and Tests (MTD) Division Director.

6.4 Who Can Qualify Sampling and Testing Personnel?

The following personnel may qualify an individual to perform the required sampling and testing of materials:

- MTD personnel;
- qualified district materials engineer or laboratory supervisor (except as noted below);
- qualified district laboratory personnel who have been authorized by the district materials engineer or laboratory supervisor to qualify others; and
- department-approved entities such as the Texas Asphalt Pavement Association (TXAPA) and the American Concrete Institute (ACI). Certifications received from these institutions may be used to satisfy the written exam and observation part of the Technician Qualification Program.

NOTE—Each district laboratory will maintain a minimum of one individual qualified by MTD or its designated agent, for each test procedure performed within the district. To perform testing and qualify district personnel for TxDOT concrete test methods, at least one individual from the district laboratory must have the corresponding ACI Field and Strength certifications issued by MTD.

6.5 Required Certifications for Commercial Laboratory and Contractor Personnel

Non-TxDOT laboratory personnel performing sampling and testing for TxDOT, or as required by specification, must obtain and keep current the following certifications pertinent to their scope of testing:

- ACI Concrete Field Testing Technician – Grade I,
- ACI Concrete Strength Testing Technician,
- TXAPA HMA Level 1A – Plant Production Specialist,
- TXAPA HMA Level 1B – Roadway Specialist,
- TXAPA HMA Level 2 – Mix Design Specialist,
- TXAPA SB 101 – Property Specialist,
- TXAPA SB 102 – Field Specialist,
- TXAPA SB 103 – Materials Analysis Specialist,
- TXAPA SB 201 – Strength Specialist,
- TXAPA SB 202 – Compressive Strength Specialist, and
- TXAPA AGG101 -– Aggregate Specialists.

For testing procedures not covered by the above certifications, the following personnel may qualify an individual to perform the required sampling and testing of materials:

- district laboratory personnel who have been authorized by MTD to perform technician qualifications, and
- MTD personnel.

6.6 Qualification Procedure

To qualify, an authorized evaluator must witness an individual successfully perform the specific test and the necessary calculations required to determine specification compliance. Successful performance is defined as demonstrating the ability to properly perform the key elements for each test method. If the individual fails to demonstrate the ability to perform a test, the individual will be allowed one retest per test method at the evaluator's

convenience. The maximum number of attempts cannot exceed three trials in a 90-day period of time.

In addition to successful performance of a test method, the individual must pass a written examination (minimum score of 80%) administered by an authorized evaluator. The maximum amount of time allocated per test will be one hour. If an individual cannot complete the written test in an hour, it will result in failure. An individual failing the written examination may request a retest. The retest must be scheduled and administered within 30 days of notification of failure; however, the maximum number of attempts cannot exceed three trials in a 90-day period of time.

Under unique circumstances, the qualification authority may grant a verbal examination upon request. The reasons for requesting a verbal examination must be presented and documented before the individual is allowed to take the examination. Should the technician fail the retest examination, the technician will not be allowed to test again unless a written notification is received from the technician's employer or supervisor stating that the technician has received additional training. MTD or its representative will determine the adequacy of the additional training. Failure to pass the third written examination will be considered as failing the entire qualification.

Successful qualification is defined as passing both the written and performance examinations.

In addition, the individual must participate in split or proficiency samples administered by the qualifying authority to validate the qualification as defined in Appendix B. MTD determines the qualifying authority for the split or proficiency sample.

Unless otherwise stated, qualification of an individual is valid for not more than 3 years, after which the individual must be re-qualified. Under the IA system approach, annual split or proficiency evaluations will be required as specified in Section 3.2 – Required Frequencies and Activities. Failure to satisfactorily complete annual split or proficiency testing will result in certification revocation.

6.7 Provisional Certifications

If the required certifications, listed in the Section 6.5 – Required Certifications for Commercial Laboratories and Contractor Personnel, cannot be readily obtained due to course availability, schedule conflicts, or other extenuating circumstances, provisional certifications administered by MTD or TxDOT's district laboratory will be allowed, per the following stipulations:

- provisional certifications must be approved by MTD or TxDOT district laboratory supervisor;
- provisional certifications will be valid for one month after the TXAPA and ACI examination dates; and
- the candidate must show evidence of having enrolled in the required ACI or TXAPA course.

6.8 Responsibility and Documentation

MTD and the district materials engineer, laboratory supervisor, or designee are responsible for maintaining documentation of all individuals qualified under their authority who perform required tests for acceptance of materials. The CE&I firm shall identify a coordinator with the responsibility to communicate with the Area Office who will then coordinate with the district level person to satisfy the requirements for qualified testers. SiteManager shall be used to send email notification on certification status to the owner (technician) as well as the district level responsible person. TxDOT's SiteManager will be the official system of record for qualified or certified TxDOT and commercial laboratory personnel.

Issuance of qualification certificates by the TxDOT qualifying authority is not required. A qualification summary listing all tests for which an individual is qualified is available in SiteManager and may be printed and signed at the district's discretion. Documentation is to be maintained through the Object Linking and Embedding (OLE) attachment window. This function allows all qualified personnel supporting documentation to be viewed in SM which includes:

- copies of certificates issued by ACI and TXAPA; or
- copies of certificates issued by MTD or TxDOT district laboratory, if issued;
- Quality Assurance Test (QAT) report with clear identification of technician's name, qualifier's name, score, and date taken; and
- original performance examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, qualification status, and date.

Documentation retention will be for the life of the qualification, as detailed in the State of Texas Records Retention Schedule.

Results of annual proficiency testing administered by MTD or TXAPA will be stored in their respective central repositories through SharePoint. Annual split sample evaluations should be stored in SiteManager.

6.9 Disqualification

Accusations of misconduct by testing technicians are made to the responsible TxDOT district representative and reported to MTD. Table 2 defines the 3 levels of misconduct: neglect, abuse, and breach of trust.

Table 2
Levels of Misconduct

Term	Definition
Neglect	Unintentional deviations from testing procedures or specifications.
Abuse	Careless or deliberate deviation from testing procedures or specifications.
Breach of Trust	Violation of the trust placed in the certified technician including, but not limited to, acts such as: • falsification of records; • being aware of improprieties in sampling, testing, or production by others and not reporting them to appropriate supervisors involved in the project; • re-sampling or retesting without awareness and consent of appropriate supervisors involved in the project; and • manipulating compensation or production.

The certification steering committee will investigate accusations of misconduct with the assistance of the responsible district. Depending on the severity of the misconduct, MTD may impose penalties ranging from a written reprimand, a temporary suspension, or a permanent revocation of the certification, contingent upon the findings of the investigation. A technician with a revoked certification will be removed from the project and will not be allowed to be employed on any TxDOT project statewide.

SECTION 7 - LABORATORY QUALIFICATION PROGRAM

7.1 Purpose

This program provides uniform statewide procedures to ensure that laboratory facilities and equipment are qualified for the performance of required sampling and testing methods.

7.2 Laboratory Responsibility

The responsibilities are spread among varying roles and are defined below to achieve a level of quality and to maintain program compliance.

7.2.1 CE&I

The CE&I firm shall:

- determine all test methods and certification requirements for a project and submit to the area office coordinator within ten (10) days after the execution of the contract and before the kick off meeting;
- submit required technician certifications and commercial lab requests submittals to the AO; and
- provide a quality plan to the AO that will demonstrate how quality is to be achieved through acceptance testing, per project. Include how the firm will track and ensure that only certified technicians perform acceptance on equipment that is calibrated and in good working order.

7.2.2 District AO Personnel

The Area Engineer will delegate the District AO coordinator. The AO coordinator shall:

- provide the district lab personnel with monthly status of the CE&I projects;
- provide the district lab contacts for CE&I firms and their commercial labs;
- invite the district lab personnel to the kick off and associated preconstruction meetings;
- will forward all CE&I technician certifications and laboratory submittals or requests to the district lab;
- will review the CE&I project specific testing, certification, and equipment needs; and
- submit the CE&I's quality plan to the district lab.

7.2.3 District lab coordinator

The district lab coordinator shall:

- review and make recommendations to the AO coordinator for approval or rejection of the CE&I quality plan;
- coordinate the inspection of the commercial lab facility and equipment once the quality plan has been approved;
- communicate the status of the inspection with the CE&I firm;
- use SM to auto notify the owner (technician) and the district lab designee before certification expiration; and
- conduct an internal review for continual compliance for all levels of certifications annually.

7.3 Qualification

All laboratories performing sampling and testing for TxDOT require qualification. These include, but are not limited to the following:

- Materials and Tests Division (MTD) central laboratory;
- District laboratories;
- area or project laboratories (including field laboratories at hot mix and concrete plants);
- MTD field laboratories; and
- commercial laboratories.

7.3.1 District Lab Accreditation

MTD is responsible for accrediting the district and MTD field laboratories. Upon completion of the laboratory accreditation process, the district lab is assigned a rating. The rating system identified in Table 3 is based on the associated risks to the department.

Table 3
Rating Legend

Number	Rating Legend
1	Excellent review with minor or no deficiencies notated.
2	Several deficiencies or repetitive observation were notated.
3	A level of negligence was found programmatically violating compliance requirements.

Each laboratory inspection summarizes the accreditation visit where a finding is classified as either a deficiency or an observation, defined as follows:

Deficiency: A finding that indicates policy or practice contrary to the requirements of the applicable test methods or documented quality procedures.

Observation: Observations are intended as comments for improvements relating to specific technical information to offer recommendations for best practice. Specifically, observations are noted for any technically related deficiencies where judgment and experience indicate it is not likely to affect the laboratory's ability to produce valid and accurate test results.

Resolution of Findings

A corrective action report (CAR) and supporting documentation is collectively submitted to MTD to address the findings notated in the report. The CAR will document actions that have been taken to prevent reoccurrence and to show a formal resolution to the findings.

Deficiencies:
Deficiencies require a formal written response describing the corrective actions taken or planned and enough documentation, i.e., records, copies of new or revised procedures, equipment invoices, or photographs to substantiate actions taken. Corrective actions should be permanently implemented to prevent recurrence of the problem.

Observations:
No written response is required for findings identified as observations. The laboratory should; however, take necessary corrective action to address the observation to prevent possible recurrence. Repeat observations may result in deficiencies.

The resolution should be completed in 21 days from the issuance of the report. If the laboratory cannot satisfy the findings in the report, an extension may be requested for additional time to resolve any outstanding or pending findings. Additional time extensions may be granted on a case by case scenario but should not exceed 90 days. When the findings cannot be resolved within the 90-day period, the MTD Division Director (DD) will escalate the outstanding issues at his discretion to the DOC or DE as needed. See Section 7.5 – Non-Compliance.

7.3.2 Commercial Lab and CE&I Qualification Process

At the district level, the district laboratory will be the qualifying authority for area office and commercial laboratories, only in the areas for which the district laboratory is accredited. They are also responsible for participating and conducting a peer review that will include a minimum of two projects conducted by CE&I firms to ensure program compliance. The peer review shall be documented and conducted within 12-24 months after MTD conducts the QAP district accreditation.

When a district qualifies a commercial laboratory, they must notify MTD in writing and submit a copy of the laboratory qualification certificate. A directory of all TxDOT-qualified laboratories is available through the MTD crossroads intranet.

The laboratory qualifying authority will use Form 2682, "Quality System Inspection – Commercial Laboratory," to document the following:

- identify the scope of testing to be performed;
- verify that test methods used to perform tests are available and current;
- document that the laboratory has the required equipment to perform the tests;
- check the calibration or verification records for each piece of equipment, to include:
  - description of equipment,
  - identification of any traceable standard used,
  - frequency of calibration,
  - date of calibration,
  - date of last calibration,
  - date of next calibration,
  - calibrating technician,
  - procedure used to calibrate or verify equipment, and
  - detailed results of calibration; and
- verify that the laboratory has qualified or certified technicians to perform required testing.

In addition, all equipment may be subject to calibration verification or other inspection by the qualifying authority. Laboratories performing acceptance sampling and testing should use results from TxDOT's Material Producer List (MPL), and perform materials sampling and testing in accordance with TxDOT's DBB Guide Schedule. Materials that are not monitored or not pre-approved by TxDOT are subject to sampling and testing as part of the acceptance program, except as noted in the DBB Guide Schedule remarks.

NOTE—Project or field laboratories performing Tex-113-E, Tex-117-E, and Tex-242-F tests must be an approved laboratory from TxDOT's MPL.

Laboratories are qualified every 3 years, at a minimum, although accreditation may be an ongoing process. Calibration or verification is required whenever laboratory or equipment is moved or per the minimum laboratory standards defined in Section 7.4 – Calibration Standards and Frequencies for Laboratory Equipment.

An annual internal audit should be conducted by designated staff to ensure continual compliance with technician records and equipment intervals. The following are tools and resources available to aid in managing the program for compliance:

- SM Material Users Query that allows filtering to determine expiring certifications, and
- Form 2682.

7.4 Calibration Standards and Frequencies for Laboratory Equipment

The standards for calibration and the frequencies for laboratory equipment calibrations are shown in:

- Tex-198-E, "Minimum Standards for Acceptance of a Laboratory for Soils and Flexible Base Testing,"
- Tex-237-F, "Minimum Standards for Acceptance of a Laboratory for Hot Mix Testing,"
- Tex-498-A, "Minimum Standards for Acceptance of a Laboratory for Concrete and Aggregate Testing," and
- Tex-900-K Series, procedures for calibrating, verifying, and certifying equipment and devices.

7.5 Non-Compliance

A laboratory that does not meet all the above requirements is subject to disqualification or suspension.
Any equipment in a qualified laboratory failing to meet specified equipment requirements for a specific test method will not be used for that test method. MTD or the TxDOT district laboratory responsible for the certification or audit will immediately notify all applicable Area Offices of non-conformance for those test methods.

7.6 Documentation

The qualifying authority is responsible for verifying that laboratories are qualified to perform sampling and testing. Documentation will be required to be kept by the qualifying authority and the qualified laboratory. Calibration records will be maintained for a minimum of 10 years. Upon satisfactory completion of the laboratory qualification process, the qualifying authority will issue a certificate within 14 days covering the scope of testing in which the laboratory has been qualified, with a copy to MTD.

Laboratory qualification documentation to be maintained by the qualifying authority includes:

- availability and calibration or verification records for each piece of equipment;
- personnel qualified or certified to perform required testing; and

- copy of laboratory qualification certificate issued.

7.7 Dispute Resolution

The next higher qualification authority will resolve disputes concerning calibration and verification of equipment. For disputes that cannot be resolved at the district level, MTD will be the final authority.

Appendix A
Acronyms and Definitions

The following terms and definitions are referenced in this document and have the meanings set forth below.

AAP	AASHTO Accreditation Program (AASHTO re:source and CCRL)
AASHTO	American Association of State Highway Transportation Officials
ACI	American Concrete Institute
AO	Area Office
AQMP	Aggregate Quality Monitoring Program
CAR	Corrective Action Report
CCRL	Concrete and Cement Reference Laboratory
CE&I	Construction Engineering and Inspection
CFR	Code of Federal Regulations
MTD	Materials and Tests Division
CMEC	Construction Materials Engineering Council
FHWA	Federal Highway Administration
HMA	Hot-Mix Asphalt
HMAC	Hot-Mix Asphalt Center
IA	Independent Assurance
L-A-B	Laboratory Accreditation Bureau
MPL	Material Producer List
QAP	Quality Assurance Program
QAT	Quality Assurance Test
QC	Quality Control
SM	SiteManager
TXAPA	Texas Asphalt Pavement Association
TxDOT	Texas Department of Transportation

Abuse—Careless or deliberate deviation from testing procedures or specifications.

Acceptance Program—All factors that comprise TxDOT's program to determine the quality of the product as specified in the contract requirements. These factors include verification sampling, testing, and inspection and may include results of QC sampling and testing.

Accredited Laboratories—Laboratories that are recognized by a formal accrediting body as meeting quality system requirements including demonstrated competence to perform standard test procedures.

Breach of Trust—Violation of the trust placed in the certified technician including, but not limited to, acts such as: falsification of records; being aware of improprieties in sampling, testing, or production by others and not reporting them to appropriate supervisors involved in the project; re-sampling or retesting without awareness and consent of appropriate supervisors involved in the project; and manipulating compensation or production.

Certified Technician—A technician certified by some agency as proficient in performing certain duties.

Independent Assurance (IA) Program—Activities that are an unbiased and independent evaluation of all the sampling and testing procedures, equipment, and personnel qualifications used in the acceptance program.

Material Producer List (MPL)—TxDOT-approved products and materials from various manufacturers and producers are located at:
http://www.txdot.gov/business/resources/producer-list.html

Neglect—Unintentional deviations from testing procedures or specifications.

Proficiency Samples—Homogenous samples that are distributed and tested by 2 or more laboratories or personnel. The test results are compared to assure that the laboratories or personnel are obtaining the same results.

Qualified Laboratories—Laboratories that are capable as defined by appropriate programs established by TxDOT. As a minimum, the qualification program must include provisions for checking testing equipment, and the laboratory must keep records of calibration checks.

Qualified Sampling and Testing Personnel—Personnel who are capable as defined by appropriate programs established by TxDOT.

Quality Assurance (QA)—All planned and systematic actions necessary to provide confidence that a product or service will satisfy given requirements for quality.

Quality Control (QC)—All Contractor operational techniques and activities performed or conducted to fulfill the contract requirements.

TxDOT Standard Specifications—the *Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges* adopted by the Texas Department of Transportation, including all revisions thereto applicable on the effective date of the contract documents.

Verification Sampling and Testing—Sampling and testing performed to verify the quality of the product.

Appendix B
Test Methods for Split or Proficiency Evaluation

After observation and qualification, each qualified technician is required to participate annually in one proficiency or split sample test for each test method requiring independent assurance. Split sample test results must compare to the independent assurance test results below. Proficiency sample test results must be within ±2 standard deviations of the proficiency sample mean.

Laboratory Testing Procedures and Tolerance Limits

Test Procedure	Description	Tolerance
Tex-104-E	Liquid Limit of Soils	15% of mean[1]
Tex-105-E	Plastic Limit of Soils	15% of mean[1]
Tex-106-E	Plasticity Index of Soils	20% of mean[1]
Tex-107-E	Bar Linear Shrinkage of Soils	± 2%
Tex-110-E	Particle Size Analysis of Soils, Part I	> No. 4 sieve: ± 5% points
		≤ No. 4 sieve: ± 3% points
Tex-113-E	Moisture-Density Relationship of Base Materials	Density ± 2.0 PCF
		Moisture Content ± 0.5%
Tex-117-E	Triaxial Compression for Disturbed Soils and Base Materials, Part II	Strength ± 15 psi
		Moisture Content ± 0.5%
Tex-200-F	Asphaltic Concrete Combined Aggregate	>5/8" sieve: ± 5.0% points (individual % retained)
		≤5/8" sieve–No. 200: ± 3.0% (individual % retained)
		Passing No. 200: ± 1.6% points
Tex-206-F	Compacting Test Specimens of Bituminous Mixtures	± 1.0% laboratory-molded density in accordance with Tex-207-F
Tex-207-F	Determining Density of Compacted Bituminous Mixtures	Laboratory-Molded Density: ± 1.0%
		Laboratory-Molded Bulk Specific Gravity: ± 0.020
		In-place air voids (cores): ± 1.0%
Tex-227-F	Theoretical Maximum Specific Gravity of Bituminous Mixtures	± 0.020
Tex-236-F	Asphalt Content of Asphalt Paving Mixtures by the Ignition Method	± 0.3%

Test Procedure	Description	Tolerance
Tex-241-F	Compacting Bituminous Specimens Using the Superpave Gyratory Compactor (SGC)	± 1.0% laboratory-molded density in accordance with Tex-207-F
Tex-418-A	Compressive Strength of Cylindrical Concrete Specimens	17% of mean[1] (4 × 8" specimen)
		14% of mean[1] (6 × 12" specimen)

1. The difference between compared test results must not exceed the indicated percentage of the mean of the compared test results, where the mean is the average of the two test results.

EXAMPLE: Plasticity Index

Tolerance = 20% of the mean

Technician test value	18
IA technician test value	22
Mean	20
20% difference	4

Both values are within 20% of the mean.

Appendix C
IA Annual Report

{Date}

Thomas L. Smith
Independent Assurance Program Manager
Materials and Tests Division (MTD)
Texas Department of Transportation
125 East 11th Street
Austin, TX 78701

RE: Annual Report of Independent Assurance (IA) Program Results – {Project Name}

Dear Mr. Smith:

In accordance with the requirements set forth in the TxDOT Quality Assurance Program for Design-Bid-Build Projects, the information below summarizes the results of system approach independent assurance (IA) testing conducted by our firm on the {Project Name} project for calendar year {XXXX}.

Independent Assurance Program Results – {Year}	
IA Activities	**{Project Name}**
1. Number of personnel evaluated under system approach.	
2. Number of IA evaluations meeting tolerance.	
3. Number of IA evaluations not meeting tolerance.	
4. Corrective actions:	

cc: Jere A. Williams, P.E.
Materials and Tests, Division Director
TxDOT – MTD

Appendix D
Materials Certification Example Letter for Projects with Federal Oversight

{Date}

Al Alonzi
FHWA Texas Division Administration
FHWA Texas Division Office
300 East 8th Street
Austin, TX 78701

RE: Materials Certification Letter

Project: SH Contract No.:
CSJ:
HWY:
County:
Federal-Aid Project No.:

Dear Mr. Alonzi:

This letter is to certify:

The results of the tests used in the acceptance program indicate that the materials incorporated in the construction work, and in the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications.

Both the Acceptance and Verification results were evaluated by an independent assurance sampling and testing program, the results of which were submitted to FHWA by the department in the Annual Report of Independent Assurance Program Results and independent of this materials certification.

☐ Exceptions to the plans and specifications are explained on the back hereof (or on attached sheet).
☐ There are no exceptions to the plans and specifications on this project.

Sincerely,
{TxDOT District Area Engineer or Director of Construction), P.E.
{Title}

cc: Jere A. Williams, P.E.
Materials and Tests, Division Director
TxDOT – MTD

Appendix E
Materials Certification Example Letter for Projects with Non-Federal Oversight

{Date}

{TxDOT District Engineer}
{Title}

RE: Materials Certification Letter

Project: SH Contract No.:
CSJ:
HWY:
County:

Dear Mr. {District Engineer}:

This letter is to certify:

The results of the tests used in the acceptance program indicate that the materials incorporated in the construction work, and in the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications.

Both the Acceptance and Verification results were evaluated by an independent assurance sampling and testing program, the results of which were submitted to MTD in the Annual Report of Independent Assurance Program Results and independent of this materials certification.

☐ Exceptions to the plans and specifications are explained on the back hereof (or on attached sheet).
☐ There are no exceptions to the plans and specifications on this project.

Sincerely,
{TxDOT District Area Engineer or Director of Construction}, P.E.
{Title}

cc: Jere A. Williams, P.E.
Materials and Tests, Division Director
TxDOT – MTD

Appendix F
Archived Versions

The following archived versions of this document are available.

- Effective January 2016–April 2018:
  ftp://ftp.dot.state.tx.us/pub/txdot-info/cst/qap_dbb_0116.pdf

GUIDE SCHEDULE OF SAMPLING & TESTING FOR DESIGN BID-BUILD (DBB) PROJECTS - (DBB Guide Schedule)

JUNE 28, 2019

Texas Department of Transportation

Using the Guide Schedule

Research of sampling and testing rates, listed for project tests in the following Guide Schedule, show that the Department's and the Contractor's risk of either rejecting "good" material or accepting "bad" material range from 20% to 40%.

To reduce this risk, we recommend that the sampling rate be increased during initial production. A four-fold increase in testing frequency will generally reduce risk to approximately 5%. The intent of increasing testing, at the start of production, is to insure the Contractor's processes are in control and to establish acceptability requirements early.

There is a need to increase the frequency of testing for high-variability materials and when testing results do not meet specifications. The Engineer may require the Contractor to reimburse the Department for costs resulting from failing test results, in accordance with the specifications.

Materials incorporated in TxDOT projects are subjected to various quality assurance procedures such as testing (as outlined in this document), certification, quality monitoring, approved lists, etc. The Engineer and testing staff should familiarize themselves with materials to be used before work begins by reviewing the specifications and this document. Discuss material testing requirements with the Contractor.

Other testing required by the specifications, but not shown in the DBB Guide Schedule, should be performed at a frequency necessary to provide adequate confidence that materials meet specifications.

NOTE—The TxDOT District Area Engineer or Director of Construction must submit a "Materials Certification Letter" at final acceptance of the project. The intent of this letter is to ensure that the quality of all materials incorporated into the project is in conformance with the plans and specifications, thus ensuring a service life equivalent to the design life. Any material represented by an acceptance test, that does not meet the criteria contained in the plans and specifications, is considered an exception. Exceptions must be listed in the materials certification letter. For projects with federal oversight, submit the materials certification letter (See Appendix D of DBB QAP) to the FHWA division administrator, with a copy to the Materials and Tests Division (MTD). For non-federal oversight projects, submit the material certification letter (Appendix E of DBB QAP) to the TxDOT District Engineer, with a copy to MTD. Refer to section 4.1 of the "Quality Assurance Program for Design-Bid-Build Projects" (DBB QAP).

Assuring the quality of the product and proper incorporation of materials into the project begins with proper sampling practices. Sampling, testing, and construction inspection must be performed collaboratively to assure the specific attributes of the finished product reflect quality workmanship. Sampling guidance for hot-mix asphalt is contained in Tex-225-F, "Random Selection of Bituminous Mixture Samples," and the respective specification for that material. All remaining materials are covered by method and materials specifications, to which the following applies.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows:

- Soils/flexible base: Vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed.
- Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
- Concrete (structural and miscellaneous): Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled. Tests for slump, air, and temperature should be done often to ensure the consistent control of the concrete production (not applicable to miscellaneous concrete).

This Guide Schedule is applicable to all contracts associated with the 2014 Standard Specifications.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES

			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
EMBANKMENT (CUTS & FILLS)	Liquid Limit (A)	Tex-104-E	During stockpiling operations, from completed stockpile, or project site (B)	Materials with PI ≤ 15: 10,000 CY	For Type A embankment or when required by the plans. This test may be waived for embankment cuts as directed by the Engineer. Determine a new liquid limit and plasticity index for each different material or notable change in material. Sample in accordance with Tex-100-E.
	Plasticity Index (A)	Tex-106-E		Materials with PI > 15: 5,000 CY	
	Gradation	Tex-110-E		Each 10,000 CY	When shown on plans. This test may be waived for embankment cuts, as directed by the Engineer. Sample in accordance with Tex-100-E.
	Moisture/Density	Tex-114-E		As directed by the Engineer	Not required for ordinary compaction. Determine a new optimum moisture and maximum density for each different material or notable change in material. Sample in accordance with Tex-100-E.
	In-place Density (A)	Tex-115-E	As directed by the Engineer	Fill: each 5,000 CY min. 1 per lift	Not required for ordinary compaction. Determine a new optimum moisture and maximum density according to Tex-114-E for each different material or notable change in material. Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Materials such as RAP, gypsum, lime, cement, and iron ore tend to bias the counts for nuclear density gauges.
				Cut: each 6,000 LF	
RETAINING WALL (NON-SELECT BACKFILL)	As shown above for Embankment (Cuts and Fills)		As shown above for Embankment (Cuts and Fills)	As shown above for Embankment (Cuts and Fills)	Sample in accordance with Tex-100-E.
RETAINING WALL (SELECT BACKFILL)	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	Required only for Type CS backfill. Test the fraction of material finer than the No. 200 sieve. Sample in accordance with Tex-400-E.
	Gradation	Tex-110-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	Required only for Drainage Aggregate. Sample in accordance with Tex-400-A.
		Tex-401-A			Required only for Select Backfill. Sample in accordance with Tex-400-A.
	Resistivity (A)	Tex-129-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	For material with resistivity between 1,500 and 3,000 ohm-cm, determine chloride and sulfate content, as specified in Item 423. Sample in accordance with Tex-400-A.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
RETAINING WALL (SELECT BACKFILL) (continued)	pH (A)	Tex-128-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	Sample in accordance with Tex-400-A.
	Magnesium Soundness	Tex-411-A	During stockpiling operations, or from completed stockpile	1 per source, per project	Test when backfill sources appear to contain particles such as shale, caliche, or other soft, poor-durability particles. Sample in accordance with Tex-400-A.
	Micro-Deval	Tex-461-A	During stockpiling operations, or from completed stockpile	1 per source, per project	May be used as an alternate to the magnesium soundness only when the % loss from the micro-deval is not greater than 20%. When the % loss from the micro-deval is greater than 20%, the magnesium soundness governs aggregate verification. Sample in accordance with Tex-400-A.
	In-place Density (A)	Tex-115-E	As directed by the Engineer.	1 per backfill lift, per wall	Not required for rock backfill. For walls greater than 500 ft. in length, perform one test per lift for every 500 ft. in length. (F) Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E for each different material or notable change in material and adjust the density accordingly.
UNTREATED BASE COURSES	Liquid Limit (A)	Tex-104-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	Sample in accordance with Tex-400-A.
	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	
	Gradation (A)	Tex-110-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	Sample in accordance with Tex-400-A.
	Moisture/Density	Tex-113-E	From completed stockpile at the source (E)	Each 20,000 CY	Not required for ordinary compaction. Sample in accordance with Tex-400-A.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
UNTREATED BASE COURSES (Continued)		Wet Ball Mill (A)	Tex-116-E	From completed stockpile at the source (E)	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. Sample in accordance with Tex-400-A.
		Strength (A)	Tex-117-E	From completed stockpile at the source (E)	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. When base material is from a source where the District has a record of satisfactory triaxial results, the frequency of testing may be reduced to one per 30,000 CY. If any one test falls below the minimum value required, the frequency of testing will return to the original frequency of 20,000 CY. Sample in accordance with Tex-400-A.
		In-place Density (A)	Tex-115-E	As directed by the Engineer	Each 3,000 CY, min. 1 per lift	Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Materials such as RAP, gypsum, lime, cement, and iron ore tend to bias the counts for nuclear density gauges.
		Thickness (A)	Tex-140-E	As directed by the Engineer	Each 3,000 CY	Not required where survey grade control documents are compliant.
		Ride Quality (A)	Tex-1001-S Surface Test, Type B	Final riding surface of travel lanes		This applies to the final travel lanes that receive a 1- or 2-course surface treatment for the final surface, unless otherwise shown on the plans.
TREATED SUBGRADE AND BASE COURSES	SUBGRADE BEFORE TREATMENT	Organic Content	Tex-148-E	As directed by the Engineer	1 per project, per source or as directed by the Engineer	Required for existing subgrade material and material imported from a borrow source. Soil survey and geologic maps may be used to determine sampling locations. Sample in accordance with Tex-100-E.
		Sulfate Content	Tex-145-E	As directed by the Engineer	1 per 500 feet or 5,000 CY	Required for existing subgrade material and material imported from a borrow source. Soil survey and geologic maps may be used to determine sampling locations. Sample in accordance with Tex-100-E.
	NEW BASE MATERIAL	Liquid Limit (A)	Tex-104-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	When central mix site or plant is used, windrow sampling may be waived. Sample in accordance with Tex-400-A.

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TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
TREATED SUBGRADE AND BASE COURSES (Continued)	NEW BASE MATERIAL (Continued)	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	
		Gradation (A)	Tex-110-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	Sample in accordance with Tex-400-A.
		Wet Ball Mill (A)	Tex-116-E	From completed stockpile at the source (E)	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. Sample in accordance with Tex-400-A.
		Strength (A)	Tex-117-E	From completed stockpile at the source (E)	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. When base material is from a source where the District has a record of satisfactory triaxial results, the frequency of testing may be reduced to one per 30,000 CY. If any one test falls below the minimum value required, the frequency of testing will return to the original frequency of 20,000 CY.
	LIME	Compliance with DMS-6350	Tex-600-J	During delivery to project	Commercial Lime Slurry: each 200 tons of lime Carbide Lime Slurry: each 100 tons of lime	Sample in accordance with Tex-600-J. Verify the source is listed on the current Material Producer List for Lime. Only materials appearing on the Material Producer List will be accepted. Sample frequency for Carbide Lime Slurry may be increased as directed by the Engineer. For Hydrated Lime and Quick Lime, project testing is not required but it is encouraged to sample and test the material at a rate of 1 per project as a best practice.
	CEMENT	Compliance with DMS-4600		Railroad car, truck, or cement bins		Verify the source is listed on the current Material Producer List for Cement. If not, sample and test in accordance with DMS-4600. (C)
	FLY ASH MATERIAL	Compliance with DMS-4615		Project samples at location directed by the Engineer		Verify the source is listed on the current Material Producer List for Fly Ash. Only materials from MTD approved sources appearing on the Material Producer List for Fly Ash will be accepted. Project testing is not required but it is encouraged to sample and test the material at a rate of 1 per project as a best practice. (C)

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TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
TREATED SUBGRADE AND BASE COURSES (Continued)	COMPLETE MIXTURE	Pulverization Gradation	Tex-101-E, Part III	Roadway, after pulverization and mixing	As necessary for control	At the beginning of the project, one test must be made for each 4,500 CY or 6,000 tons until the Engineer is satisfied that acceptable pulverization results are being obtained. Sample in accordance with Tex-100-E.
		Moisture/Density Curve and Strength	Tex-120-E, Part II, or Tex-121-E, Part II	From roadway windrow after treatment (E)	Each 20,000 CY	Not required for ordinary compaction. Determine a new moisture/density curve for each different or notable change in material. Perform Tex-120-E, Part II, for Cement Treated Material, and Tex-121-E, Part II, for Lime, Lime-Fly Ash, or Fly Ash Treated Material. If Tex-120-E, Part I, Tex-121-E, Part I, or Tex-127-E is performed before the project, this test may be waived. Sample in accordance with Tex-100-E.
		Moisture/Density Curve and Strength	Tex-120-E, Part I, Tex-121-E, Part I, or Tex-127-E	From roadway before treatment	As necessary for control	Perform Tex-120-E, Part I, on cement treated material, and Tex-121-E, Part I, for lime-fly ash or fly ash treated material. Verifies the field strength by comparing results from the mix design. Performed at the direction of the Engineer and when notable change in material, as described above for Part II of the test procedures. Sample in accordance with Tex-100-E.
		In-place Density (A)	Tex-115-E	As directed by the Engineer	Each 3,000 CY, min 1 per lift	Determine the appropriate moisture/density curve for each different material or notable change in material. Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Stabilizers and materials such as RAP, gypsum, and iron ore tend to bias the counts for nuclear density gauges.
		Thickness (A)	Tex-140-E	As directed by the Engineer	Each 3,000 CY	Not required where survey grade control documents are used for compliance.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

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TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
RECLAIMED ASPHALT PAVEMENT (RAP), CRUSHED CONCRETE, and RECYCLED MATERIALS	Sulfate Content	Tex-145-E	During stockpiling operations, from completed stockpile, or windrow	Each 5,000 CY	Required only for contractor furnished recycled material, including crushed concrete. Not required for RAP. Sample in accordance with Tex-400-A.
	Deleterious Material	Tex-413-A		Each 5,000 CY	Required only for contractor furnished recycled material, including crushed concrete. Sample in accordance with Tex-400-A.
	Decantation	Tex-406-A	During stockpiling operations, from completed stockpile, or windrow	Each 5,000 CY	Required only for contractor furnished RAP. Sample in accordance with Tex-400-A.

TABLE I – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager (SM), in the remarks field, and on the end of the Project Materials Certification Letter.
B	Engineer will select any of these locations or any combinations thereof with the provision that the initial sample will be obtained from the completed stockpile at the source and at least one out of ten consecutive samples will be taken at the project site (from the windrow for treated and untreated bases and embankments when possible).
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Soils/Flexible Base: For gradation, liquid limit, and plastic limit, vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed. • Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
E	The Engineer will sample from the completed stockpile at the source and test before placement.
F	Each test performed that is based on a quantity of material is considered "or fraction thereof" for calculating number of tests.

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TABLE IA – ASPHALT TREATED BASE (Plant Mix)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
AGGREGATE	Liquid Limit (A)	Tex-104-E	During stockpiling operations, from completed stockpile, or before mixing	Each 5,000 CY	Sample in accordance with Tex-400-A.
	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or before mixing	Each 5,000 CY	
	Wet Ball Mill (A)	Tex-116-E	During stockpiling operations, from completed stockpile, or before mixing	1 per project, per source	Sample in accordance with Tex-400-A. (B)
LIME	Compliance with DMS-6350		During delivery to the project	Hydrated Lime: 1 per project Commercial Lime Slurry: each 200 tons of lime (D) Carbide Lime Slurry: each 100 tons of lime (D) Quick Lime: 1 per project	On projects requiring less than 50 tons, material from MTD approved sources may be accepted on the basis of Producer's Certification without sampling.
RECLAIMED ASPHALT PAVEMENT (RAP), and RECYCLED AGGREGATE	Decantation	Tex-406-A, Part I	During stockpiling operations, from completed stockpile, or before mixing	Each 10,000 CY	Sample in accordance with Tex-400-A.
RECYCLED ASPHALT SHINGLES (RAS)	Decantation	Tex-217-F,Part III	During stockpiling operations, from completed stockpile, or before mixing	Each 10,000 CY	Sample in accordance with Tex-400-A.
ASPHALT BINDER	Compliance with Item 300		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SiteManager (SM) Assistant. The Engineer must associate one QM sample per project in SM.

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TABLE IA – ASPHALT TREATED BASE (Plant Mix)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
TACK COAT	Compliance with Item 300		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample per project in SM.
COMPLETE MIXTURE	Gradation **(A)**	Tex-200-F, Part I	Plant Mix (C)	20,000 CY (25,000 tons)	Sample in accordance with Tex-222-F. Determine the gradation of the aggregate from the complete mixture tested in accordance with Tex-236-F.
	Laboratory Density **(A)**	Tex-126-E	Plant Mix **(C)**	20,000 CY (25,000 tons)	Sample in accordance with Tex-222-F.
	Percent Asphalt **(A)**	Tex-236-F	Plant Mix **(C)**	Each 1,500 CY (2,000 tons) or days production	Determine an asphalt content correction factor for ignition oven at a minimum of one per project. Sample in accordance with Tex-222-F.
	Indirect Tensile Strength – Dry	Tex-226-F	Plant Mix	1 per project, per design	Sample in accordance with Tex-222-F.
	Moisture Susceptibility	Tex-530-C	As directed by the Engineer	1 per project, per design	This test may be waived, when shown on the plans. Sample in accordance with Tex-222-F.
ROADWAY	In-Place Air Voids **(A)**	Tex-207-F	Roadway cores, as directed by the Engineer **(C, D)**	Each 3,000 CY, min 1 per lift	Not required for ordinary compaction or when air void requirements are waived. Sample in accordance with Tex-222-F.
	Ride Quality	Tex-1001-S Surface Test, Type A	On Finished Surface		Unless otherwise shown on the plans.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

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TABLE IA – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager (SM), in the remarks field, and on the end of the Project Materials Certification Letter.
B	Engineer will select any of these locations or any combinations thereof with the provision that at least one out of ten consecutive samples will be taken at the project site (from the windrow for treated and untreated bases and embankments when possible).
C	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Soils/Flexible Base: Vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed. • Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

This is a guide for minimum sampling and testing.
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TABLE II – SEAL COAT					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
AGGREGATE	Gradation (A)	Tex-200-F, Part I	Stockpile (At source or at point of delivery)	Each 1,000 CY	Rate may be reduced to each 2,000 CY if the Engineer approves a contractor quality control plan. Sample in accordance with Tex-221-F.
	L. A. Abrasion (A)	Tex-410-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use. Sample in accordance with Tex-221-F. (B)
	Magnesium Soundness (A)	Tex-411-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use. Sample in accordance with Tex-221-F. (B)
	Surface Aggregate Classification (A)	Tex-612-J, Tex-411-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use. Sample in accordance with Tex-221-F. (B)
	Pressure Slake (A)	Tex-431-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.
	Freeze Thaw (A)	Tex-432-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.
	Unit Weight	Tex-404-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.
	24 hr. Water Absorption (A)	Tex-433-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.
	Crushed Face Count	Tex-460-A, Part I	Stockpile	1 per 20,000 CY	Only required for crushed gravel. Sample in accordance with Tex-221-F.
	Deleterious Material (A)	Tex-217-F, Part I	Stockpile	1 per 10,000 CY	Not required for lightweight aggregate. Sample in accordance with Tex-221-F.
	Decantation (A)	Tex-406-A	Stockpile	1 per 10,000 CY	Sample in accordance with Tex-221-F.
	Flakiness Index	Tex-224-F	Stockpile	Frequency as directed by the Engineer	Sample in accordance with Tex-221-F.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

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TABLE II – SEAL COAT

			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
AGGREGATE (Continued)	Micro Deval	Tex-461-A	Stockpile	1 per project or as necessary for control	Compare result to published value listed on the current Material Producer List for BRSQC. Submit sample to MTD for Soundness and L.A. Abrasion testing when results differ by more than 3% points, unless otherwise directed by the Engineer. Sample in accordance with Tex-221-F.
	White Rock Count	Tex-220-F	Stockpile		Required only for Limestone Rock Asphalt. Not required when MTD provides inspection at the plant. Sample in accordance with Tex-221-F.
	Naturally Impregnated Bitumen Content	Tex-236-F	Stockpile		Required only for Limestone Rock Asphalt. Not required when MTD provides inspection at the plant. Sample in accordance with Tex-221-F.
PRECOATED AGGREGATE	Asphalt Content	Tex-210-F	Stockpile	Frequency as directed by the Engineer when a target value is specified	Sample in accordance with Tex-221-F.
ASPHALT BINDER	Compliance with Item 300		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample asphalt binder in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample per project in SM.

TABLE II – FOOTNOTES

A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
C	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

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TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS
MINERAL AGGREGATE	COARSE AGGREGATE	Decantation (B)	Tex-406-A	From stockpile at concrete plant	Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		Sieve Analysis (A) (B)	Tex-401-A		Each 1,000 CY of concrete (each source)	Test combined aggregate when used. Sample in accordance with Tex-400-A.
		Deleterious Materials (B)	Tex-413-A		1 per project or as necessary for control	Sample in accordance with Tex-400-A.
		Los Angeles Abrasion (A) (B)	Tex-410-A		One, each source	Verify the value of the source, as listed on the current Material Producer list for CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. (C)
		Magnesium Soundness (A) (B)	Tex-411-A		One, each source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. (C)
	FINE AGGREGATE	Sand Equivalent (B)	Tex-203-F	From stockpile at concrete plant	1 per project or as necessary for control	Test combined aggregate when used. Sample in accordance with Tex-400-A.
		Organic Impurities (B)	Tex-408-A		1 per project, per source	Sample in accordance with Tex-400-A.
		Sieve Analysis (A) (B)	Tex-401-A		Each 1,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		Fineness Modulus (B)	Tex-402-A		1 per project or as necessary for control	Test combined aggregate when used. Test to confirm material variability when strength values are in question. Sample in accordance with Tex-400-A.
		Deleterious Material (B)	Tex-413-A		1 per project or as necessary for control	Test to confirm material variability when strength values are in question. Sample in accordance with Tex-400-A.

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TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS
MINERAL AGGREGATE (Continued)	FINE AGGREGATE (Continued)	Acid Insoluble Residue (A) (B)	Tex-612-J		Two, each source	Only for concrete subject to direct traffic. Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. (C)
SILICA FUME		Compliance with DMS-4630 (A)		Railroad car, truck, bags or silos	1 per project, per class of concrete (For each type and brand)	Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume. Sample in accordance with Tex-300-D.
METAKAOLIN		Compliance with DMS-4635 (A)		Railroad car, truck or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D.
MIX DESIGN		Compliance with Standard Specification Item 421.4.A		At source (if not approved)	Min. 1 design per class, per source	Verify if cement, fly ash, slag cement, and chemical admixture sources are listed on the Material Producer Lists. If not, sample and submit to MTD for testing. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT). Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash.
JOINT MATERIAL		Compliance with DMS-6300				Verify the source is listed on the Material Producer List for Joint Sealers. If not, sample and test before use in accordance with DMS-6310. (C) Sample in accordance with Tex-500-C.
CURING COMPOUND		Compliance with DMS-4650		Sampled at jobsite; tested by MTD. See remarks.	When requested by MTD	Only products listed on the Material Producer List for Concrete Curing Compounds will be allowed. When sample is requested by MTD, sample in accordance with Tex-718-I. Ensure container has been agitated and mixed before sampling. (C)
EVAPORATION RETARDANTS		Compliance with DMS-4650				Only products listed on the Material Producer list for Evaporation Retardants will be allowed. (C)
REINFORCING STEEL		Compliance with the Std. Specifications & Spec. Provisions	As Specified			Only materials from MTD approved sources listed on the Material Producer Lists for Reinforcing Steel Mills and Seven Wire Steel Strand will be allowed. (C)

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TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS
MECHANICAL COUPLERS	Compliance with DMS-4510	Tex-743-I	Sampled at jobsite; Tested by MTD	3 couplers per lot (500 couplers) for each type, model, bar size, and grade	Only materials from MTD approved sources listed on the Material Producer List for Mechanical Couplers will be allowed. **(C)**
LATEX	Compliance with DMS-4640 for concrete chemical admixtures				Verify the Latex is listed on the Material Producer List for Chemical Admixtures.
EPOXY	Compliance with DMS-6100, unless otherwise specified		Sampled at jobsite if not pre-approved by MTD.	1 per batch or shipment	Verify the source is listed on the Material Producer List for Epoxies and Adhesives. If not, sample and test before use in accordance with DMS-6100. Sample in accordance with Tex-734-I. **(C)**
CONCRETE	Compressive Strength **(A)**	Tex-418-A	At point of concrete placement	4 cylinders for each 60 CY per class, per day (For bridge railing and traffic railing, testing may be reduced to 4 cylinders per 180 CY per class regardless of days)	Sampling must be in accordance with Tex-407-A. Making additional cylinders for 56 day testing should be considered when slow strength gain mixtures are being used, or when the approved mix design has a history of failing to meet design strength at 28 days. Test two cylinders at 7 days, and if the average value is below the design strength, as defined in Item 421, Table 8, test the remaining 2 cylinders at 28 days, or 56 days if additional cylinder were not made. If the average value of the 2 cylinders tested at 7 days meets the minimum design strength, listed in Item 421, Table 8, the remaining cylinders are not required to be tested. If the average value of the 7 and 28 day cylinders are below the design strengths, and 56 day cylinders were made, test the remaining set at 56 days.
	Slump	Tex-415-A		1 test, per 4 strength specimens	Sample in accordance with Tex-407-A. Perform slump and temperature tests on the same load from which strength test specimens are made. Perform entrained air test only when entrained air concrete is specified on the plans. Check temperature of every load for bridge slabs and mass concrete placements. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.
	Entrained Air **(A)**	Tex-416-A or Tex-414-A			
	Temperature of Concrete **(A)**	Tex-422-A			

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS
CONCRETE (Continued)	Bridge Deck or Culvert Top Slab Thickness and Depth of Reinforcement	Tex-423-A, Part II	During dry run and during concrete placement (Bridge decks and direct traffic culverts)	1 per span	Min 6–Max 18 locations per span.

TABLE III – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	These Project Tests may be used for one or more projects being furnished concrete from the same plant during the same period.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed. • Concrete (structural): Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled. Test often for slump, air, and temperature to ensure the consistent control of the concrete production.
E	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

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TABLE IV – HYDRAULIC CEMENT CONCRETE – NON-STRUCTURAL CONCRETE (Classes: A, B, or E)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (B)	FREQUENCY OF SAMPLING (C)	REMARKS
CONCRETE	Compressive Strength (A)	Tex-418-A	At point of concrete placement	2 cylinders per 180 CY, per class	Sampling must be in accordance with Tex-407-A. Strength will be determined by 7-day specimens.
MIX DESIGN	Compliance with the Standard Specification		At source if not approved	Min. 1 design per class, per source	Verify if cement, fly ash, slag cement, and chemical admixture sources are listed on the Material Producer Lists. If not, sample and submit to MTD for testing. Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT).
SILICA FUME	Compliance with DMS-4630		Railroad car, truck, bags, or silos	1 test per project, per class (for each type and brand)	Sample in accordance with Tex-300-D. Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume.
METAKAOLIN	Compliance with DMS-4635		Railroad car, truck, or silos	1 test per project, per class (for each type and brand)	Sample in accordance with Tex-300-D.

TABLE IV – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Concrete (miscellaneous): Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled.
C	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS
MINERAL AGGREGATE	COARSE AGGREGATE	Decantation	Tex-406-A	From stockpile at concrete plant	Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		Sieve Analysis (A)	Tex-401-A		As necessary for control	Sample in accordance with Tex-400-A. Test combined aggregate when used.
		Deleterious Materials	Tex-413-A		Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		L.A. Abrasion (A)	Tex-410-A		One, each source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. (C)
		Magnesium Soundness (A)	Tex-411-A			
	FINE AGGREGATE	Sand Equivalent	Tex-203-F	From stockpile at concrete plant	Each 3,000 CY of concrete (Each source or combination of sources)	Sample in accordance with Tex-400-A. Test combined aggregate when used. At least one per week's production.
		Organic Impurities	Tex-408-A		1 per project, per source	Sample in accordance with Tex-400-A.
		Sieve Analysis (A)	Tex-401-A		As necessary for control	Sample in accordance with Tex-400-A. Test combined aggregate when used.
		Fineness Modulus (B)	Tex-402-A			
		Deleterious Material (B)	Tex-413-A		Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		Acid Insoluble (A)	Tex-612-J		1 per project, per source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. (C)
MIX DESIGN		Compliance with the Standard Specifications Item 421.4.A		At source, if not approved	Min. 1 design, per class, per source	Verify if cement, fly ash, ground granulated blast furnace slag, and admixture sources are listed on the Material Producer List. If not, sample and submit to MTD for testing. Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT).
SILICA FUME		Compliance with DMS-4630		Railroad car, truck, bags, or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D. Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume.

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TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS
METAKAOLIN	Compliance with DMS-4635		Railroad car, truck, or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D.
JOINT MATERIAL	Compliance with DMS-6310		Sampled at jobsite if not sampled at source by MTD; tested by MTD. See remarks.	1 per batch or shipment	Sample in accordance with Tex-500-C. Sampling may be waived when the source is listed on the Material Producer List for Joint Sealers. **(C)**
CURING COMPOUND	Compliance with DMS-4650		Sampled at jobsite; tested by MTD. See remarks.	When requested by MTD	Only products listed on the Material Producer List for Concrete Curing Compounds will be allowed. When sample is requested by MTD, sample in accordance with Tex-718-I. Ensure container has been agitated and mixed before sampling. **(C)**
EVAPORATION RETARDANTS	Compliance with DMS-4650				Only products listed on the Material Producer List for Evaporation Retardants will be allowed. **(C)**
REINFORCING STEEL	Compliance with the Std. Specifications & Spec. Provisions	As Specified			Only materials from MTD approved sources listed on the Material Producer List for Reinforcing Steel Mills and Seven Wire Steel Strand will be accepted. **(C)**
MULTIPLE PIECE TIE BARS	Compliance with DMS-4515	Tex-712-I	Sampled at jobsite if not sampled at source by MTD; tested by MTD. See remarks.	Refer to Tex-711-I for sampling rates	Only materials from MTD approved sources listed on the Material Producer List for Multiple Piece Tie-bars for Concrete Pavements will be allowed. Sample in accordance with Tex-711-I.
EPOXY	Compliance with DMS-6100		Sampled at jobsite if not pre-approved by MTD. See remarks.	1 batch per shipment	Verify the source is listed on the Material Producer List for Epoxies and Adhesives. If not, sample and test before use in accordance with DMS-6100. Sample in accordance with Tex-734-I. **(C)**
CONCRETE	Strength **(A) (B)**	Tex-448-A or Tex-418-A	At point of concrete placement	2 cylinders for every 10 contractor job control tests	Sample in accordance with Tex-407-A. When the contract requires the project testing to be by the Engineer, the frequency and job control testing will be in accordance with the item of work. Split sample verification testing used when contractor performs job control testing. When job control testing by the contractor is waived by the plans, the frequency of sampling will be one test (2 specimens) for each 3,000 SY of concrete or fraction thereof or per day and split sample verification testing will be waived. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.

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TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS
CONCRETE (Continued)	Slump	Tex-415-A	At time and location strength specimens are made	1 test for every 10 contractor job control tests.	Sample in accordance with Tex-407-A. Slump is not required for slip-formed pavement. Perform slump and temperature tests on the same load from which the strength specimens are made. Perform entrained air test only when entrained air concrete is specified on the plans. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.
	Entrained Air (A)	Tex-416-A or Tex-414-A			
	Temperature	Tex-422-A			
	Pavement Texture	Tex-436-A	Final Riding Surface of travel lanes	1 per day, per driving lane	Perform when carpet drag is the only surface texture required on the plans.
	Thickness	Tex-423-A, Part I	Center of paving machine	Every 500 feet	Methods other than Tex-423-A may be shown on the plans.
	Ride Quality (A)	Tex-1001-S Surface Test, Type B	Final riding surface of travel lanes		Engineer may verify contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.

TABLE V – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	When a project test does not meet the specified strength requirements and a reduced pay factor is assigned, document the analysis on the Letter of Certification of Materials Used.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

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Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348)
(All testing as noted in Table VI may be waived for exempt production as defined by specification.)

			PROJECT TESTS		
MATERIAL OR PRODUCT	**TEST FOR**	**TEST NUMBER**	**LOCATION (Per Design)**	**FREQUENCY OF SAMPLING (E)**	**REMARKS**
COARSE AGGREGATE	L. A. Abrasion **(A)**	Tex-410-A	Stockpile **(B)**	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. **(C)**
	Magnesium Soundness **(A)**	Tex-411-A			
	Surface Aggregate Classification **(A)**	Tex-499-A		1 per project, per source	
	Micro Deval	Tex-461-A		1 per project, per aggregate source	Not required when the Rated Source Soundness Magnesium loss is 15 or less as listed on the current published BRSQC. If testing is required, sample in accordance with Tex-221-F.
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per source, per design	Does not apply to Item 342. Sample in accordance with Tex-221-F. The timing of when the test is performed is at the discretion of the Engineer.
ASPHALT BINDER	Compliance with Item 300 **(A)**		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder at hot- mix plant in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 **(A)**		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.

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TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348)
(All testing as noted in Table VI may be waived for exempt production as defined by specification.)

			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min 1 design, per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted on individual materials, as necessary, for control.
COMPLETE MIXTURE	Asphalt Content (A)	Tex-236-F	Engineer Truck Sample (D)	Minimum 1 per Lot	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project. When Tex-236-F does not yield reliable results, use alternative methods for determining asphalt content, such as, Tex-210-F (ASTM D2172/AASHTO T164) and Tex-228-F (ASTM D4125/AASHTO T287).
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced (D)	1 per Sublot	Sample in accordance with Tex-222-F. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #. Does not apply to Items 342 and 348.
	Gradation (A)	Tex-200-F	Engineer Truck Sample (D)	Minimum 1, per 12 Sublots (E)	Sample in accordance with Tex-222-F. Determine correction factors for ignition oven using Tex-236-F at a minimum of one per project.
	Moisture Susceptibility	Tex-530-C	Truck Sample	1 per project	Sample in accordance with Tex-222-F, unless waived by the Engineer.
	Indirect Tensile Strength – Dry	Tex-226-F			Sample in accordance with Tex-222-F, unless waived by the Engineer. Does not apply to Items 342, 346, 347, and 348.
	Moisture Content	Tex-212-F, Part II	Engineer Truck Sample		Sample in accordance with Tex-222-F.
	Lab Molded Density (A)	Tex-207-F, Part I, VI, VIII	Truck Sample (D)	1 per Sublot 1 per Lot for Item 347	Sample in accordance with Tex-222-F. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.
	Drain Down Test (A)	Tex-235-F	Engineer Truck Sample	1 per 12 Sublots	Sample in accordance with Tex-222-F. Not required for Items 341, 344, and 347.
	Hamburg Wheel Test (A)	Tex-242-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Sample during production. Does not apply to Item 348 PFC-C, PFCR-C, and Thin Bonded Wearing Course –All Types.

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TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348)
(All testing as noted in Table VI may be waived for exempt production as defined by specification.)

			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS
COMPLETE MIXTURE (Continued)	Cantabro Loss (A)	Tex-245-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Sample during production. Does not apply to items 341, 344, 346, and 347.
	Overlay Test (A)	Tex-248-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Does not apply to Items 341, 344, and 348 PFC-C, PFCR-C, and Thin Bonded Wearing Course –All Types.
ROADWAY	In-Place Air Voids (A)	Tex-207-F, Part I, VI, VIII	Roadway (D)	2 cores per Sublot	Two cores taken per Sublot and averaged. Sample in accordance with Tex-222-F. Does not apply to Items 342, 347, and 348.
	Segregation Profile (A)	Tex-207-F, Part V	Roadway	1 per project	Not required when Contractor uses thermal imaging system. Does not apply to Items 342, 347, and 348.
	Joint Density (A)	Tex-207-F, Part VII	Roadway	1 per project	
	Thermal Profile	Tex-244-F	Immediately behind paver	1 per project	Not required when Contractor uses thermal imaging system.
	Ride Quality Test Type B (A)	Tex-1001-S	Final riding surface of travel lanes	1 per project	Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results for surface test Type A are not required to be reported.
	Permeability	Tex-246-F	Roadway	1 per project	Permeability is encouraged to use with items 342 and 348. Only applies to Item 347.
FABRIC UNDERSEAL	Compliance with DMS-6220		Sampled, tested, and approved by MTD		Sampling must be in accordance with Tex-735-I. Verify the source is listed on the current Material Producer List for Silt Fence, Filter Fabric, and Fabric Underseals. If not, sample and test before use in accordance with DMS-6220.

TABLE VI – FOOTNOTES

A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."
E	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

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TABLE VII – HOT-MIX ASPHALT PAVEMENT (Items 334) (Refer to DMS-9210, "Limestone Rock Asphalt (LRA)," for testing requirements for Item 330.)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY (Per Design) (F)	REMARKS
COARSE AGGREGATE	L. A. Abrasion (A)	Tex-410-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (D)
	Magnesium Soundness (A)	Tex-411-A			
	Micro Deval	Tex-461-A			Sample in accordance with Tex-221-F. Testing frequency may be reduced or eliminated based on a satisfactory test history.
	Surface Aggregate Classification (A)	Tex-499-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. SiteManager Quality Monitoring test documentation is accomplished by attaching an approved mix design.
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per source	Sample in accordance with Tex-221-F. The timing of when the test is performed is at the discretion of the Engineer.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 (A) (C)		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

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TABLE VII – HOT-MIX ASPHALT PAVEMENT (Items 334)
(Refer to DMS-9210, "Limestone Rock Asphalt (LRA)," for testing requirements for Item 330.)

			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY (Per Design) (F)	REMARKS
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min 1 design per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted in individual materials as necessary for control.
COMPLETE MIXTURE	Asphalt Content (A)	Tex-236-F	Engineer Truck Sample (E)	Minimum of 1 per 5,000 tons	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced (E)	1 per 5,000 tons	Sample in accordance with Tex-222-F.
	Gradation (A)	Tex-236-F	Truck Sample	Minimum 1 per 5,000 tons	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Boil Test	Tex-530-C		1 per project	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.
	Moisture Content	Tex-212-F, Part II	Truck Sample	1 per 5,000 tons	Sample in accordance with Tex-222-F. Performed by MTD at the point of production for payment calculations.
	Hydrocarbon-Volatile Content	Tex-213-F		1 per 5,000 tons	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.
	Lab Molded Density (A)	Tex-207-F		1 per 5,000 tons	Sample in accordance with Tex-222-F.
	Hveem Stability (A)	Tex-208-F		1 per 5,000 tons	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.
ROADWAY	Ride Quality Test Type B (A)	Tex-1001-S	Final riding surface of travel lanes		Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.

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TABLE VII – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project.
C	Or as called for in the Specifications.
D	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
E	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."
F	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

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TABLE VIII – HOT-MIX ASPHALT PAVEMENT (Item 340)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY	REMARKS
COARSE AGGREGATE	L. A. Abrasion (A)	Tex-410-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (C)
	Magnesium Soundness (A)	Tex-411-A			
	Micro Deval	Tex-461-A	Stockpile (B)	1 per project, per source	Sample in accordance with Tex-221-F. Testing frequency may be reduced or eliminated based on a satisfactory test history.
	Surface Aggregate Classification (A)	Tex-499-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (C)
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per design	Sample in accordance with Tex-221-F.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 (A)		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min. 1 design per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted in individual materials as necessary for control.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VIII – HOT-MIX ASPHALT PAVEMENT (Item 340)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY	REMARKS
COMPLETE MIXTURE	Asphalt Content	Tex-236-F	Truck Sample (D)	Minimum of 1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced (D)	1 per day	Sample in accordance with Tex-222-F.
	Gradation (A)	Tex-236-F	Truck Sample	Minimum 1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Boil Test	Tex-530-C		1 per project	Sample in accordance with Tex-222-F, unless waived by the Engineer.
	Indirect Tensile Strength – Dry	Tex-226-F		1 per project, per design	Sample in accordance with Tex-222-F, unless waived by the Engineer.
	Lab Molded Density (A)	Tex-207-F	Truck Sample	1 per day	Sample in accordance with Tex-222-F.
	Hamburg Wheel Tracker (A)	Tex-242-F		1 per project	Sample in accordance with Tex-222-F. Sample during production.
ROADWAY	Air Voids (A)	Tex-207-F	Selected by the Engineer (D)	1 per day (2 Cores)	Sample in accordance with Tex-222-F.
	Ride Quality Test Type B (A)	Tex-1001-S	Final riding surface of travel lanes		Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.
FABRIC UNDERSEAL	Compliance with DMS-6220		Sampled, tested, and approved by MTD		Sample in accordance with Tex-735-I. Verify the source is listed on the current Material Producer List for Silt Fence, Filter Fabric, and Fabric Underseals. If not, sample and submit to MTD for testing before use in accordance with DMS-6220.

This is a guide for **minimum** sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VIII – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

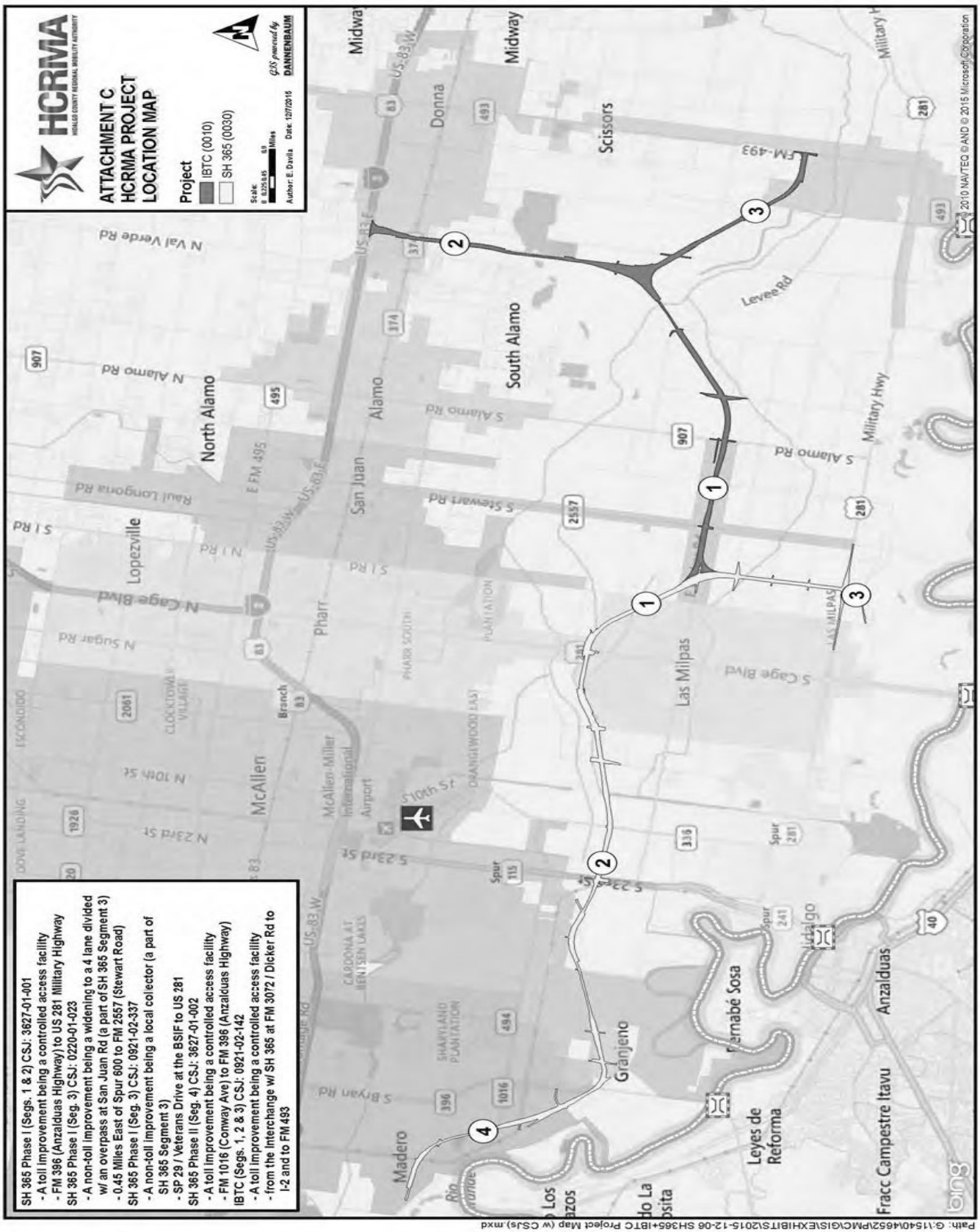
TABLE IX – MICROSURFACING (Item 350)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OF SAMPLING	FREQUENCY (Per Design)	REMARKS
AGGREGATE	Magnesium Soundness (A)	Tex-411-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing at 1 per project, per source. (C)
	Gradation	Tex-200-F, Part II		1 per project, per source	Sample in accordance with Tex-221-F.
	Crushed Face Count	Tex-460-A		1 per project, per source	Sample in accordance with Tex-221-F.
	Acid Insoluble (A)	Tex-612-J		1 per project, per source	Verify the value of the source, as listed on the current BRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-221-F. (C)
	Surface Aggregate Classification	Tex-499-A	Stockpile, or BRSQC (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing at 1 per project, per source. (C)
COMBINED BLEND	Sand Equivalent	Tex-203-F	Stockpile (B)	1 per project, per source	Sample in accordance with Tex-221-F.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 (A)		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE IX – MICROSURFACING (Item 350)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OF SAMPLING	FREQUENCY (Per Design)	REMARKS
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min. 1 design per project	Submit to MTD for approval.
CEMENT	Compliance with DMS-4600				Verify the source is listed on the current Material Producer List for Cement. If not, sample and submit to MTD for testing before use in accordance with DMS-4600.
COMPLETE MIX	Asphalt Content	Tex-236-F	During production	1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Gradation	Tex-200-F, Part II Tex-236-F			Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven use at a minimum of one per project.

TABLE IX – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

Project Limits Exhibit



APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

I. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, ***(Title o(Modal Operating Administration),*** as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21. *[Include Modal Operating Administration specific program* ***requirements.[***

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds ofrace, color, or national origin. ***[Include Modal Operating Administration specific program requirements.]***

4. **Information and Repo11s:** The contractor will provide all information and reports required by the Acts,the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the ***(Title o(Modal Operating Administration)*** to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the *(Title of Modal Operating Administration)*, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non- discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the ***(Title o(Modal Operating Administration)*** may determine to be appropriate, including, but not limitedto:

    a. withholding payments to the contractor under the contract until the contractor complies; and/or
    b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respectto any subcontract or procurement as the Recipient or the ***(Title o(Modal Operating Administration)*** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes andauthorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.,* 78 stat. 252), (prohibits discrimination on the basis ofrace, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.),* (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.),* as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.),* (prohibits discriminationon the basis of age);
- Airport and Airway Improvement Act of1982, (49 USC§ 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 - 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to -ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

North American Industry Classification System (NAICS) Work Codes
For Federally Funded Contracts

Texas Department of Transportation
Professional Engineering Procurement Services (PEPS) Division
Professional Services Contracts for Engineering, Surveying and Architecture
Pre-Certified Work Categories and North American Industry Classification System (NAICS) Work Codes for Federally Funded contracts

Work Category No.	Category Name	Applicable Disadvantaged Business Enterprise (DBE) NAICS Work Codes
1.1.1	Policy Planning	541330 or 541320
1.2.1	Systems Planning	541330
1.3.1	Subarea/Corridor Planning	541330
1.4.1	Land Planning/Engineering	541330
1.5.1	Feasibility Studies	541330
1.6.1	Major Investment Studies	541330
1.7.1	Traffic Demand Modeling	541330
1.8.1	Public Involvement	541820 or 541330
2.1.1	Traffic Noise Analysis	541330 or 541620
2.2.1	Air Quality Analysis	541330 or 541620
2.3.1	Wetland Delineation	541330 or 541620
2.3.2	Conditional/Functional Assessment	541330 or 541620
2.4.1	Nationwide Permit	541330 or 541620
2.4.2	Clean Water Act Sec. 404 Permits	541330 or 541620
2.4.3	U.S. Coast G. & U.S. Army Corps Of Engr. Permits	541330 or 541620
2.5.1	Geological Assessment for Edwards Aquifer Recharge Zone	541330 or 541360 or 541620
2.6.2	Impact Evaluation Assessments	541330 or 541620
2.6.4	Biological Evaluations/Assessments	541330 or 541620
2.7.1	Sec. 4(F)/6(F) Evaluations	541330 or 541620
2.7.2	Historic Sites Sec. 4(f) Evaluations	541330 or 541620 or 541310
2.10.1	Archaeological Surveys, Doc., Excavation, Testing Rpts	541330 or 541620
2.12.1	Socio-Economic and Environmental Justice Analysis	541330 or 541620
2.13.1	Hazardous Materials Initial Site Assessment	541330 or 541620
2.14.1	Environmental Document Preparation	541330 or 541620
2.15.1	Historical Research of Extant Bldgs, Struct, Landsc., & Obj.	541310 or 541620
2.15.2	Historical Surveys & Doc. of Bldgs, Struct, Landsc., & Obj.	541310 or 541620
3.2.1	Route Studies & Schematic Design	541330
4.2.1	Roadway Design	541330
4.4.1	Freeway Interchanges	541330
4.5.1	Constructability Review	541330
4.6.1	3-D Design Visualization Services	541330 or 541340
5.2.1	Bridge Design	541330
5.3.1	Multi-Level Interchange Design	541330
5.5.1	Bridge & Non-Bridge Class Culvert and Inlet Design	541330
6.1.1	Routine Bridge Inspection Team Leader	541330
6.1.2	Routine Bridge Inspection Project Manager	541330
6.2.1	Complex Bridge Inspection Team Leader	541330
6.2.2	Complex Bridge Inspection Project Manager	541330
6.3.1	Tunnel Inspection Team Leader	541330
6.3.2	Tunnel Inspection Project Manager	541330
6.4.1	Underwater Bridge Inspection Team Leader	541330
6.5.1	Non-Destructive Testing	541330 or 541380
7.1.1	Traffic Engineering Studies (Traffic Counting 541990)	541330
7.3.1	Traffic Signal Timing	541330
7.4.1	Traffic Control Systems Analysis, Design & Implementation	541330
7.5.1	Intelligent Transportation System	541330
8.1.1	Signing, Pavement Marking & Channelization	541330
8.2.1	Illumination	541330
8.3.1	Signalization	541330
8.4.1	ITS Control Systems Analysis, Design & Implementation	541330
8.6.1	Rail-Highway Design	541330

North American Industry Classification System (NAICS) Work Codes
For Federally Funded Contracts

Work Category No.	Category Name	Applicable Disadvantaged Business Enterprise (DBE) NAICS Work Codes
9.1.1	Bicycle & Pedestrian Facility Development	541330
10.1.1	Hydrologic Studies	541330
10.2.1	Roadway Hydraulic Design	541330
10.3.1	Bridge Hydraulic Design	541330
10.4.1	Storm Water Pump Station-Hydraulic Design	541330
10.4.2	Pump Stations-Electrical	541330
10.4.3	Pump Stations-Structures	541330
10.5.1	Bridge Scour Evaluations And Analysis	541330
10.6.1	Coastal Hydraulic Design	541330
10.7.1	Riverine Hydraulic Design	541330
10.8.1	FEMA Regulations and Permits	541330
11.1.1	Roadway Construction Management And Inspection	541330
11.2.1	Bridge Construction Management And Inspection	541330
11.3.1	Construction Superintendent	541330
11.4.1	Environmental Inspections	541330 or 541620
11.5.1	Construction Scheduling Project Manager	541330
11.6.1	Construction Schedule Support- General	541330
11.7.1	Construction Schedule Support- Relating to Scheduling of Roadway Design	541330
11.8.1	Construction Schedule Support- Relating to Construction Management of Projects Including Bridges or Multi-level Interchanges	541330
12.1.1	Asphaltic Concrete Production	541330 or 541380
12.1.2	Portland Cement Concrete	541330 or 541380
12.1.3	Materials Engineering	541330 or 541380
12.1.4	Asphaltic Concrete Placement	541330 or 541380
12.1.5	Portland Cement Concrete Placement	541330 or 541380
12.1.6	Embankment/Subgrade/Backfill/Base Production	541330 or 541380
12.1.7	Embankment/Subgrade/Backfill/Base Placement	541330 or 541380
12.2.1	Plant Inspection And Testing	541330 or 541380
12.3.1	Coatings Inspection and Material Testing Project Manager	541330 or 541380
12.3.2	Coatings Inspection and Material Testing Task Leader	541330 or 541380
14.1.1	Soil Exploration	541330 or 541380
14.2.1	Geotechnical Testing	541330 or 541380
14.3.1	Transportation Foundation Studies	541330 or 541380
14.4.1	Building Foundation Studies	541330 or 541380
14.5.1	Evaluation & Design of Geotechnical Related Structures	541330 or 541380
15.1.1	Right of Way Surveys	541370
15.2.1	Design Survey	541370
15.2.2	Construction Survey	541370
15.3.1	Aerial Photogrammetry	541370
15.3.2	Terrestrial Photogrammetry	541370
15.3.3	Terrestrial LiDAR	541370
15.3.4	Mobile and Airborne LiDAR	541370
15.3.5	Horizontal and Vertical Control	541370
15.5.1	State Land Surveying	541370
16.1.1	Architecture	541310
16.2.1	Building and Facilities Architecture	541310
16.3.1	Landscape Architecture	541320
17.1.1	Structural Engineering	541330
17.2.1	Mechanical Engineering	541330
17.3.1	Plumbing Engineering	541330
17.4.1	Electrical Engineering	541330
17.5.1	Civil Engineering	541330
17.6.1	Hazardous Building Materials Assessment (Asbestos)	541330 or 541620
17.6.2	Hazardous Building Materials Assessment (Lead)	541330 or 541620

North American Industry Classification System (NAICS) Work Codes
For Federally Funded Contracts

Work Category No.	Category Name	Applicable Disadvantaged Business Enterprise (DBE) NAICS Work Codes
18.2.1	Subsurface Utility Engineering	541330
18.3.1	Utility Adjustment Coordination	541330 or 541618
18.4.1	Utility Engineering	541330
18.5.1	Utility Construction Management and Verification	541330
18.6.1	Utility Management & Coordination Oversight	541330
19.1.1	Value Engineering	541330
Services used to support work done under the precertification work categories		
Support	Drilling and Coring Services (for Engineering services)	541330
Support	Boring, Core Drilling, Foundation Drilling, and Soil Test Drilling	238910
Support	Materials Testing (for Engineering services)	541330
Support	Materials Testing (for testing laboratories)	541380
Support	Traffic Control - Flagging	561990
Support	Traffic Control - Sign erection, highway, road, street or bridge	237310
Support	Traffic Counting	541330 or 541990
Non-listed categories (NLC)		
NLCs	NLC - for Engineering	541330
NLCs	NLC - for Materials Testing	541330 or 541380
NLCs	NLC - for Construction Record Keeper	541330
NLCs	NLC - for Non-engineering, Non-architecture, Non-surveying	To Be Determined

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Item 3C

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**3C**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/14/2021**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/2021**
TECHNICAL COMMITTEE			

1. Agenda Item: **RESOLUTION 2021-37 – APPROVAL OF WORK AUTHORIZATION 1 WITH L&G CONSULTING ENGINEERS, INC. FOR CONSTRUCTION MATERIAL TESTING SERVICES FOR THE 365 TOLLWAY PROJECT.**

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

   Approval of WA No. 1 for CMT Services with L&G Consulting Engineers, Inc..

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

4. Budgeted: ___Yes ___No X N/A

5. Staff Recommendation**: Motion to approve Resolution 2021-37 - Approval of Work Authorization 1 with L&G Consulting Engineers, Inc. for Construction Material Testing Services for the 365 Tollway Project, as presented.**

6. Program Manager's Recommendation: ___Approved ___Disapproved **X** None

7. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: ___Approved ___Disapproved **X** None

9. Chief Auditor's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Financial Officer's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Development Engineer's Recommendation: ___Approved ___Disapproved **X** None

11. Chief Construction Engineer's Recommendation: **X** Approved ___Disapproved **X** None

12. Executive Director's Recommendation: **X** Approved ___Disapproved ___None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Memorandum

To: Pilar Rodriguez, P.E
HCRMA, Executive Director

From: Ramon Navarro, IV, P.E., C.F.M.
HCRMA, Chief Construction Engineer

Date: September 21, 2021

Subject: **RESOLUTION 2021-37 APPROVAL OF WORK AUTHORIZATION 1 WITH L&G CONSULTING ENGINEERS, INC. FOR MATERIAL TESTING IN THE 365 TOLLWAY PROJECT**

GOAL

Approval and authorization to enter into Work Authorization#1 Construction Material Testing Services with L&G Consulting Engineers, INC.

BASIS

L&G Consulting Engineers, Inc. have agreed to provide construction materials testing to assure the materials incorporated into 5.85 miles of Segment 1 [From McColl Road to us281] on Phase II of 365 Toll highway construction project are subject to verification sampling and testing when required and meet project plans and specifications; and administering the HCRMA Quality Monitoring and Quality Assurance Program.

RECOMMENDATION

Staff recommends award of contract in the amount of $2,765,349.03 for a proposed three (3) year fixed period of time to conclude no later than December 13, 2025.

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

☑ CMT Services **L&G Consulting Engineers, Inc.**

☐ Environmental

☐ Engineering

☐ Geo-Technical

☐ Surveying

WORK AUTHORIZATION SUMMARY

RESOLUTION 2021-37

Work Authorization # 1 Supplemental # _____

Amount **$ 2,765,349.03**

Approved Work Authorizations:

Resolution No.	Description	Amount

Subtotal from Cont. Page $ 0.00

Total Approved WA **$ 0.00**

Proposed Work Authorization and/or Supplemental

2021-37	WA No. 1 - CMT Services for 365 Toll Project	**$ 2,765,349.03**

Goal and Options:

Approval of WA 1 for Construction Material Testing for the 365 Tollway Project.

Staff is recommending approval of this request in the amount of $ 2,765,349.03

Proposed total approved WA and/or Supplementals $ 2,765,349.03

R. Navarro IV, Cons Eng

Requested By:

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

BOARD RESOLUTION No. 2021-37

APPROVAL OF WORK AUTHORIZATION 1 WITH L&G CONSULTING ENGINEERS, INC., FOR CONSTRUCTION MATERIAL TESTING IN THE 365 TOLLWAY PROJECT

THIS RESOLUTION is adopted this 28th day of September, 2021, by the Board of Directors of the HidalgoCounty Regional Mobility Authority at a regular meeting.

WHEREAS, the Hidalgo County Regional Mobility Authority (the "Authority"), acting through its Board of Directors (the "Board"), is a regional mobility authority created pursuant to Chapter 370, Texas Transportation Code, as amended (the "Act");

WHEREAS, the Authority is authorized by the Act to address mobility issues in and around Hidalgo County;

WHEREAS, on February 19, 2014, the Authority issued a solicitation for Statements of Qualification for Construction Material Testing Services for the Authority (the "Solicitation"); and

WHEREAS, on March 21, 2014 the Authority received responses to the Solicitation; and

WHEREAS, on April 23, 2014, Resolution 2014-38 authorized Authority staff to negotiate and enter into agreements with the top three scored firms (Raba Kistner Consultants Inc., L&G Laboratories and Terracon Consultants, Inc.) for Construction Material Testing Services (the "Services"); and

WHEREAS, on July 24, 2018, Resolution 2018-45 authorized Authority staff to procure one additional lab to provide additional Services; and

WHEREAS, on July 29, 2018, the Authority published a second Solicitation; and received three (3) responses, of which only one was deemed responsive;

WHEREAS, on September 25, 2018, the Authority authorized staff to negotiate contract terms for the Services to PaveTex Engineering LLC, dba PAVETEX, the sole responsive firm that met the professional services criteria set forth in the Solicitation;

WHEREAS, on August 21, 2020, the Authority received five (5) sealed statements of qualification packets. An internal committee of three HCRMA staff engineers ranked and reviewed; the Authority determined it necessary to negotiate contract terms to enter into negotiations with each of the ranked firms and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments; and

WHEREAS on October 27, 2020, the Authority approved Resolution 2020-28 Approval to enter into negotiations with each of the short-listed firms for Construction Material Testing for the Hidalgo County Regional Mobility Authority and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments; and

WHEREAS the Authority finds it necessary to approve Resolution 2021-36 Approval of Award of Contract by and between the L&G Consulting Engineers, Inc., and the Hidalgo County Regional Mobility Authority for Construction Material Testing Services; and

WHEREAS the Authority finds it necessary to approve Resolution 2021-37 Approval of Work Authorization 1 to the Professional Service Agreement with L&G Consulting Engineers, Inc., for Construction Material Testing in the amount of $2,765,349.03 for the 365 Tollway Project.

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

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

Section 2. The Board hereby approves Work Authorization 1 to the Professional Service Agreement with L&G Consulting Engineers, Inc., in the amount of $2,765,349.03 for the 365 Tollway Project, hereto attached as Exhibit A, hereto attached as Exhibit A.

Section 3. The Board authorizes the Executive Director to execute Work Authorization 1 with L&G Consulting Engineers, Inc., as approved by the Board.

*****

PASSED AND APPROVED AS TO BE EFFECTIVE IMMEDIATELY BY THE BOARD OF DIRECTORS OF THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY AT A REGULAR MEETING, duly posted and noticed, on the 28th day of September 2021, at which meeting a quorum was present.

S. David Deanda, Jr., Chairman

Ezequiel Reyna, Jr., Secretary/Treasurer

Exhibit A

Work Authorization 1
to the
Professional Service
Agreement with
L&G Consulting Engineers, Inc.
For
Construction Material Testing Services

WORK AUTHORIZATION NO. 1
AGREEMENT FOR ENGINEERING SERVICES

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of "Article V of that certain Professional Services Agreement for Engineering Services" (the Agreement) entered into by and between the Hidalgo County Regional Mobility Authority (Authority), and L&G Consulting Engineers. (the Engineer).

PART I. The Engineer will perform engineering design services generally described as in accordance with the project description attached hereto and made a part of this Work Authorization. The responsibilities of the Authority and the Engineer as well as the work schedule are further detailed in exhibits C, E and F which are attached hereto and made a part of the Work Authorization.

PART II. The maximum amount payable under this Work Authorization is $ 2,765,349.03 and the method of payment is unit cost/specified rate basis as set forth in Attachment E of the Agreement. This amount is based upon fees setforth in Attachment E, Fee Schedule, of the Agreement and the Engineer's estimated Work Authorization costs included in Exhibit D, Fee Schedule, which is attached and made a part of this Work Authorization.

PART III. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with Articles III thru V of the Agreement, and Attachment A, Section 1.

PART IV. This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate on Dec. 13, 2025, unless extended by a supplemental Work Authorization as provided in Attachment A, Section 1.

PART V. This Work Authorization does not waive the parties' responsibilities and obligations provided under "Article V of that certain Professional Services Agreement for Engineering / Design Services 365 Tollway Project / Segment 1 & 2.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER	**THE AUTHORITY**
_____	_____
(Signature)	(Signature)
Jacinto Garza, P.E.	Pilar Rodriguez, P.E.
(Printed Name)	(Printed Name)
President / CEO	Executive Director
(Title)	(Title)
_____	_____
(Date)	(Date)

SH 365 Phase I (Segs. 1 & 2) CSJ: 3627-01-001
- A toll improvement being a controlled access facility
- FM 396 (Anzalduas Highway) to US 281 Military Highway

SH 365 Phase I (Seg. 3) CSJ: 0220-01-023
- A non-toll improvement being a widening to a 4 lane divided w/ an overpass at San Juan Rd (a part of SH 365 Segment 3)
- 0.45 Miles East of Spur 600 to FM 2557 (Stewart Road)

SH 365 Phase I (Seg. 3) CSJ: 0921-02-337
- A non-toll improvement being a local collector (a part of SH 365 Segment 3)
- SP 29 / Veterans Drive at the BSIF to US 281

SH 365 Phase II (Seg. 4) CSJ: 3627-01-002
- A toll improvement being a controlled access facility
- FM 1016 (Conway Ave) to FM 396 (Anzalduas Highway)

IBTC (Segs. 1, 2 & 3) CSJ: 0921-02-142
- A toll improvement being a controlled access facility
- from the Interchange w/ SH 365 at FM 3072 / Dicker Rd to I-2 and to FM 493

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

EXHIBIT C
HCRMA PROJECT LOCATION MAP

Project
- IBTC (0010)
- SH 365 (0030)

Scale: 0 0.225 0.45 0.9 Miles

Author: E. Davila Date: 12/7/2015

GIS powered by DANNENBAUM

Path: G:\1540\4652\PMC\GIS\EXHIBITS\2015-12-06 SH365+IBTC Project Map (w CSJs).mxd

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ATTACHMENT C
SERVICES TO BE PROVIDED BY THE ENGINEER

APPLICABILITY:

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

ABBREVIATIONS, ABBREVIATIONS, and DEFINITIONS:

HCRMA OR AUTHORITY shall mean Hidalgo County Regional Mobility Authority
PMC (GEC) shall mean Program Management Consultant (General Engineering Consultant) (Dannenbaum Engineering Corporation)
ENGINEER shall mean B2Z Engineering, LLC
TxDOT shall mean Texas Department of Transportation
FHWA shall mean Federal Highway Administration
IBWC shall mean International Boundary and Water Commission
USFWS shall mean United States Fish & Wildlife Service
THC shall mean Texas Historical Commission
SHPO shall mean State Highway Preservation Office
USACE shall mean United States Army Corps of Engineers
GSA shall mean General Services Administration
HCMPO shall mean Hidalgo County Metropolitan Planning Organization
FAA shall mean Federal Aviation Administration
MTP shall mean Metropolitan Transportation Plan
TIP shall mean Transportation Improvement Program
MUTCD shall mean Manual of Uniform Traffic Control Devices
AASHTO shall mean American Association of State Highway and Transportation Officials
LRFD shall mean Load & Resistance Factor Design
PS&E shall mean Plans, Specifications and Estimate
ACP shall mean Asphaltic Concrete Pavement
CSJ shall mean Control Section Job (highway project designation number)
ADP shall mean Advance Project Development AAP shall mean American Accreditation Program
AASHTO shall mena American Association of State Highway Transportation Officials
ACI shall mean American Concrete Institute
AO shall mean Area Office
AQMP shall mean Aggregate Quality Monitoring Program
CAR shall mean Corrective Action Report
CCRL shall mean Concrete and Cement Reference Laboratory
CE&I shall mean Construction Engineering and Inspection
CFR shall mean Code of Federal Regulations
MTD shall mean Materials and Tests Division
CMEC shall mean Construction Materials Engineering Council
FHA shall mean Federal Highway Administration
HMA shall mean Hot-Mix Asphalt
HMAC shall mean Hot-Mix Asphalt Center
IA shall mean Independent Assurance
L-A-B shall mean Laboratory Accreditation Bureau
MPL shall mean Material Producer List
QAP shall mean Quality Assurance Program
QAT shall mean Quality Assurance Test
QC shall mean Quality Control
SM shall mean SiteManager
TXAPA shall mean Texas Asphalt Pavement Association
TxDOT shall mean Texas Department of Transportation

ATTACHMENT C
SERVICES TO BE PROVIDED BY THE ENGINEER
PROJECT DESCRIPTION

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

County/HCRMA: Hidalgo County

CSJ number: 0921-02-368

Project/Description: Provide construction materials testing to assure the materials incorporated into 5.85 miles of Segment 1 [From McColl Road to us281] oN Phase II of 365 Toll highway construction project are subject to verification sampling and testing when required and meet project plans and specifications; and administering Quality Monitoring and Quality Assurance Program. Overall project consists of construction of a 12.4 mile tolled facility from FM 396 & GSA Connector to US 281 (Military Highway), which consists of: of grading, flexible base, lime treated subgrade, asphaltic concrete pavement, concrete pavement, signing and pavement markings, cross culverts, bridge structures, retaining walls, illumination and toll equipment.

.

Length: 5.85 Miles (Approx)

Highway: 365TOLL (Segment 1)

Limits: From McColl Road to us281 (See Location Map Attached)

Contract is for "indefinite delivery/indefinite quantity [IDIQ] set for a proposed three (3) year fixed period of time, during that period of time the Engineer will be responsible for an unlimited number of separate projects, or additional work on a current project to be issued on an individual work order basis.

The Engineer agency(s) must be accredited by one of the following FHWA- and TxDOT-approved accrediting bodies:

A. AASHTO Accreditation Program (AAP);
B. Construction Materials Engineering Council (CMEC); or
C. Laboratory Accreditation Bureau (L-A-B)

The Engineer shall have Texas Department of Transportation or Toll Authority/Regional Mobility Authority as well U.S. Army Corps of Engineers' construction material testing experience and is expected to work directly with the HCRMA Construction Division, namely, the Chief Construction Engineer for the Authority. The selected Engineer(s) may also perform certain tasks under the oversight of the HCRMA's General Engineering Consultant (Currently HDR Engineering Inc.).

To avoid an appearance of a conflict of interest, any qualified Engineer agency (laboratory) shall perform only one of the following types of testing on the same project:

A. Quality control testing;
B. Quality acceptance testing;
C. Owner verification testing;
D. Independent assurance testing; or
E. Referee testing.

The selected Engineer(s) shall have adequate experienced staff and a workload free from constraints to provide the necessary construction material testing for the HCRMA. Staff expertise is to include a Licensed Professional Engineer and certified, experienced staff proficient with TxDOT testing procedures, sampling and testing schedule, and the latest ASSHTO, ASTM and ACI testing requirements [Appendix A] performed and executed as per 2019 TxDOT Quality Assurance Program (~~DB-QAP~~ / DBB-QAP) / 2019 Guide Schedule of Sampling & Testing for Design Bid-Build Projects.

Engineer will compose and submit an annual report to the Federal Highway Administration (FHWA) summarizing the results of HCRMA's project specific systems approach program. This report identifies:

A. Number of sampling and testing personnel evaluated by the systems approach IA testing;
B. Number of IA evaluations found to be acceptable;
C. Number of IA evaluations found to be unacceptable; and
D. Summary of any significant system-wide corrective actions taken.

The Engineer will be responsible for maintaining documentation of all individuals qualified under their authority who perform required tests for acceptance of materials. A qualification summary listing all tests for which an individual is qualified will be available and printed at HCRMA's request. Documentation to be maintained for all qualified personnel includes:

A. Copies of any certificates issued by ACI and TXAPA ;
B. Original written examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, score, and date taken;
C. Original performance examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, qualification status, and date;
D. Results of annual split/proficiency testing administered by the TxDOT qualifying authority for each technician.

Engineer shall perform Quality Control / Quality Assurance sampling and testing and comply with Laboratory Qualification Program and will be evaluated under the Independent Assurance Program, as described in the 2019 QAPDBB [Attachment L]. Quality Control test results will be validated by verification test results obtained from independently taken samples. IA personnel or their designated agents will perform Quality Assurance verification sampling and testing.

1. The Engineer shall perform all sampling and testing of components and materials in accordance with the standard specifications, and all other standard and special specifications and special provisions applicable in this agreement. Meet the minimum sampling frequencies set out in the TxDOT 2019 Guide Schedule for Sampling and Testing forDesign Bid-Build Projects. The testing shall include the following materials and all the components of the materials listed. The estimated number of samples and tests are based on quantities in the executed construction contract.
2. The Engineer shall ensure the testing is completed and input into ProjectWise. NOTE: The General Contractor is responsible for Quality Control (QC) testing of Item 360, Concrete Paving. The Engineer shall be responsible for Quality Assurance (QA) testing of Item 360, Concrete Paving.
3. The Engineer shall provide certified personnel, outlined in their internal, AASHTO-approved, Quality Control (QC) Manual that are knowledgeable of all materials testing procedures. All personnel performing acceptance tests must provide certifications and must maintain the certifications throughout the project. The HCRMA reserves the right to require replacement of any technician during this contract if performance is determined to be unsatisfactory or the technician fails to maintain appropriate certifications.
4. Engineer's laboratory will be qualified by the HCRMA qualifying authority in accordance with Section 3, Laboratory Qualification Responsibility of the Texas Department of Transportation (TxDOT) Quality Assurance Program (Manual Notice: 2005-1), and be AASHTO accredited under the AASHTO Accreditation Program (AAP) throughout the life of the project. Engineer shall transmit, to the HCRMA, a copy of AAP accreditation certificate(s) upon receipt by the testing laboratory.

5. The Engineer shall provide technicians certified in accordance with TxDOT Quality Assurance Program for Construction (QAP) or other State approved programs, such as the Texas Asphalt Pavement Association (TxAPA) for Hot Mix Asphalt, and the Soils and Base Certification Program, as listed.

6. The Engineer shall provide certified technicians to perform the following tests:
   - A. Hot Mix Asphalt Testing:
     - a. Level l-A
     - b. Level l-B
     - c. Hot Mix Asphalt Testing • Level II
     - d. All other tests in the Manual of Testing Procedures 200-F Series or ASTM Procedures not covered in Level l-A, Level l-B, or Level II
   - B. Concrete Testing:
     - a. QAP Program for Concrete Testing
     - b. Other tests outlined in the Manual of Testing Procedures 400-A Series or ASTM Procedures that are not included in the QAP Program

7. The Engineer shall perform testing on the project. These tests include all tests listed in State's Guide Schedule of Sampling and Testing dated 2015. Follow the State's Guide Schedule of Sampling and Testing to establish testing frequencies. Testing frequencies may be increased as directed by the HCRMA.
8. The Engineer shall notify the HCRMA, to determine if any tests may be waived
9. The Engineer shall attend preconstruction QA and QC testing meetings prior to beginning work.
10. The Engineer shall:
    - A. Review and recommend approval or rejection of the Quality Control (QC) sampling and testing documentation submitted by the General Contractor for compliance with applicable State and Federal regulations, standards, and contract requirements.
    - B. Verify all tested materials used meet specifications, or identify materials that do not meet specifications and recommend action which should be taken.
    - C. Certify that all tested materials used during construction meet the specifications as outlined in the APPIA Support System.
    - D. Work closely with the HCRMA to resolve all material discrepancies before the next monthly estimate is processed by utilizing the Reports in APPIA.
    - E. Enter all test data in APPIA.
    - F. Enter all mix designs, concrete and asphalt, provided by the General Contractor into APPIA.
    - G. The Engineer shall report failing tests to the HCRMA within twenty-four (24) hours.

SUMMARY OF DELIVERABLES:

The Engineer shall provide the following:

1. Monthly Progress Reports
2. Quarterly Material Test Reports
3. Sampling and testing personnel qualification
4. Final document file (maintained in project control system during project execution. Final structure of file will be determined during project implementation, an example of content is provided below)
   - A. Construction Oversight Documentation
     - a. Testing reports and Testing documentation as applicable
     - b. Test Exception Letter
     - c. Certification Verifications
     - d. Photographs
   - B. Project Correspondence File (Design and Construction)
     - a. E-mail files
     - b. Letters
     - c. Memos
     - d. Meeting Minutes
     - e. Monthly Deficiency Reports to track material issues (one (1) per month)
     - f. Misc. correspondence

EXHIBIT D

ESTIMATED HOURS AND TEST

BREAKDOWN

EXHIBIT D

ESTIMATEDMAN-HOURSAND TEST BREAKDOWN

HCRMA - 365 Toll Project - Segment 1 (From 987+00 to 1350+00) - CSJ: 3627-01-001 Construction Materials Testing

Embankment(Test All Fill Material Including Cut From Job) (ITEM 132)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.)to determine compliance of these materials with project plans and specifications.
- Field density testing of soils and base materials to ensure proposer compaction as required by project plans and specifications.

								378kC/3.5MF CY
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Liquid Limit		Tex-104-E	PI>15 ~ Every 5,000 CY	included with PI	Each			$0.00
Plasticity Index		Tex-106-E	PI>15 ~ Every 5,000 CY		Each	780	$95.00	$74,100.00
Gradation (Part I)		Tex-110-E PI	Every 10,000 CY		Each	390	$89.00	$34,710.00
Gradation (Part II)		Tex-110-E PII	Every 10,000 CY		Each	390	$117.00	$45,630.00
Moisture/Density		Tex-114-E	One per Each Material	Assume40 (per 100k CY)	Each	40	$255.00	$10,200.00
In-Place Density		Tex-115-E	Every 5,000 CY or 6,000	Add 20% inc for lifts	Each	850	$68.00	$57,800.00
Tech Time (Reports)				LL,PI, Grad, MD, FD	Hour	820	$68.20	$55,924.00
Tech Time (Soils)				4 hrs - PI,Gr,MD, 2 hrs - FD	Hour	4980	$68.20	$339,636.00
# of Trips (Tech)				1205 Trips (50 Miles RT)	Mile	60250	$6.00	$361,500.00
**Admin/Clerical					Hour	1050	$61.95	$65,047.50
							Item Subtotal	$1,044,547.50

Hydraulic Cement Concrete Bridge Slab & Approach Slab ~ (Class S)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

								14k CY
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.				QA Test. (QC by Source)				
Decantation		Tex-406-A	Each 20,000 CY(or source)		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY (ea source)	5 Sieve	Each	14	$95.00	$1,330.00
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
L.A. Abrasion		Tex-410-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.00	$0.00
Soundness		Tex-411-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.48	$0.00
Fine Aggr.				QA Test. (QC by Source)				
Sand Equivalent		Tex-203-F	Each 1,000 CY(ea source)		Each	14	$95.50	$1,337.00
Organic Imp.		Tex-408-A	One Per Project Per Source		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY(ea source)	9 Sieve	Each	14	$95.00	$1,330.00
Fineness Mod.		Tex-402-A	Each 1,000 CY(ea source)		Each	14	$58.78	$822.92
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
Acid Insoluble		Tex-612-J	Two Each Source	if CRSQC meets Project Spec ~	Each	0		$0.00
Mineral Filler				QA Test. (QC by Source)				
Sieve Analysis		Tex-401-A	Two Each Source	if No Mineral Filler utilized in	Each	0	$95.00	$0.00
Concrete								
*Strength		Tex-418-A	Each 60 CY(2 Sets = 4 Cyl.)		Each	934	$23.00	$21,482.00
Slump		Tex-415-A	One per 2 Sets		Each	234	$29.90	$6,996.60
Entrained Air		Tex-416-A	One per 2 Sets		Each	234	$34.91	$8,168.94
Temperature		Tex-422-A	One per 2 Sets		Each	234	$23.59	$5,520.06
Tech Tine (Reports)				CA,FA,MF,Conc.	Hour	382	$68.20	$26,052.40
Tech Time (Aggr)					Hour	112	$68.20	$7,638.40
Tech Time (Conc)					Hour	1872	$68.20	$127,670.40
# of Trips (Tech)				248 Trips (50 Miles RT)	Mile	12400	$6.00	$74,400.00
**Admin/Clerical					Hour	350	$61.95	$21,682.50
							Item Subtotal	$304,715.72

Hydraulic Cement Concrete Bridge Sub & Super Str Components ~ (Class C)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

								9k CY
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.				QA Test. (QC by Source)				
Decantation		Tex-406-A	Each 20,000 CY(or source)		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY (ea source)	5 Sieve	Each	9	$95.00	$855.00
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
L.A. Abrasion		Tex-410-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.00	$0.00
Soundness		Tex-411-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.48	$0.00
Fine Aggr.				QA Test. (QC by Source)				
Sand Equivalent		Tex-203-F	Each 1,000 CY(ea source)		Each	9	$95.50	$859.50
Organic Imp.		Tex-408-A	One Per Project Per Source		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY(ea source)	9 Sieve	Each	9	$95.00	$855.00
Fineness Mod.		Tex-402-A	Each 1,000 CY(ea source)		Each	9	$58.78	$529.02
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
Acid Insoluble		Tex-612-J	Two Each Source	if CRSQC meets Project Spec ~	Each	0		$0.00
Mineral Filler				QA Test. (QC by Source)				
Sieve Analysis		Tex-401-A	Two Each Source	if No Mineral Filler utilized in	Each	0	$95.00	$0.00
Concrete								
*Strength		Tex-418-A	Each 60 CY(2 Sets = 4 Cyl.)		Each	575	$23.00	$13,225.00
Slump		Tex-415-A	One per 2 Sets		Each	144	$29.90	$4,305.60
Entrained Air		Tex-416-A	One per 2 Sets		Each	144	$34.91	$5,027.04
Temperature		Tex-422-A	One per 2 Sets		Each	144	$23.59	$3,396.96
Tech Tine (Reports)				CA,FA,MF,Conc.	Hour	236	$68.20	$16,095.20
Tech Time (Aggr)					Hour	72	$68.20	$4,910.40
Tech Time (Conc)					Hour	1152	$68.20	$78,566.40
# of Trips (Tech)				153 Trips (50 Miles RT)	Mile	7650	$6.00	$45,900.00
**Admin/Clerical					Hour	215	$61.95	$13,319.25
							Item Subtotal	$188,128.87

Hydraulic Cement Concrete Drilled Shafts (Brg) ~ (Class SS)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

								9k CY
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.				QA Test. (QC by Source)				
Decantation		Tex-406-A	Each 20,000 CY(or source)		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY (ea source)	5 Sieve	Each	13	$95.00	$1,235.00
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
L.A. Abrasion		Tex-410-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.00	$0.00
Soundness		Tex-411-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.48	$0.00
Fine Aggr.				QA Test. (QC by Source)				
Sand Equivalent		Tex-203-F	Each 1,000 CY(ea source)		Each	13	$95.50	$1,241.50
Organic Imp.		Tex-408-A	One Per Project Per Source		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY(ea source)	9 Sieve	Each	13	$95.00	$1,235.00
Fineness Mod.		Tex-402-A	Each 1,000 CY(ea source)		Each	13	$58.78	$764.14
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
Acid Insoluble		Tex-612-J	Two Each Source	if CRSQC meets Project Spec ~	Each	0		$0.00
Mineral Filler				QA Test. (QC by Source)				
Sieve Analysis		Tex-401-A	Two Each Source	if No Mineral Filler utilized in	Each	0	$95.00	$0.00
Concrete								
*Strength		Tex-418-A	Each 60 CY(2 Sets = 4 Cyl.)		Each	820	$23.00	$18,860.00
Slump		Tex-415-A	One per 2 Sets		Each	205	$29.90	$6,129.50
Entrained Air		Tex-416-A	One per 2 Sets		Each	205	$34.91	$7,156.55
Temperature		Tex-422-A	One per 2 Sets		Each	205	$23.59	$4,835.95
Tech Tine (Reports)				CA,FA,MF,Conc.	Hour	336	$68.20	$22,915.20
Tech Time (Aggr)					Hour	104	$68.20	$7,092.80
Tech Time (Conc)					Hour	1640	$68.20	$111,848.00
# of Trips (Tech)				218 Trips (50 Miles RT)	Mile	10900	$6.00	$65,400.00
**Admin/Clerical					Hour	305	$61.95	$18,894.75
							Item Subtotal	$267892.89

Hydraulic Cement Concrete Unknown ~ (Class D)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

								9k CY
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.				QA Test. (QC by Source)				
Decantation		Tex-406-A	Each 20,000 CY(or source)		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY (ea source)	5 Sieve	Each	1	$95.00	$95.00
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
L.A. Abrasion		Tex-410-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.00	$0.00
Soundness		Tex-411-A	Two Each Source	if CRSQC meets Project Spec ~	Each	0	$520.48	$0.00
Fine Aggr.				QA Test. (QC by Source)				
Sand Equivalent		Tex-203-F	Each 1,000 CY(ea source)		Each	1	$95.50	$95.50
Organic Imp.		Tex-408-A	One Per Project Per Source		Each	1	$65.00	$65.00
Sieve Analysis		Tex-401-A	Each 1,000 CY(ea source)	9 Sieve	Each	1	$95.00	$95.00

Fineness Mod.		Tex-402-A	Each 1,000 CY(ea source)		Each	1	$58.78	$58.78
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$77.25	$77.25
Acid Insoluble		Tex-612-J	Two Each Source	if CRSQC meets Project Spec ~	Each	0		$0.00
Mineral Filler				QA Test. (QC by Source)				
Sieve Analysis		Tex-401-A	Two Each Source	if No Mineral Filler utilized in	Each	0	$95.00	$0.00
Concrete								
*Strength		Tex-418-A	Each 60 CY(2 Sets = 4 Cyl.)		Each	4	$23.00	$92.00
Slump		Tex-415-A	One per 2 Sets		Each	1	$29.90	$29.90
Entrained Air		Tex-416-A	One per 2 Sets		Each	1	$34.91	$34.91
Temperature		Tex-422-A	One per 2 Sets		Each	1	$23.59	$23.59
Tech Time (Reports)				CA,FA,MF,Conc.	Hour	6	$68.20	$409.20
Tech Time (Aggr)					Hour	8	$68.20	$545.60
Tech Time (Conc)					Hour	8	$68.20	$545.60
# of Trips (Tech)				2 Trips (50 Miles RT)	Mile	100	$6.00	$600.00
**Admin/Clerical					Hour	4	$61.95	$247.80
							Item Subtotal	$3,157.38

Hydraulic Cement Concrete Misc. - Riprap (Class A)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

								4k CY
		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Concrete								
*Strength		Tex-418-A	Each 180 CY(1 Set = 2 Cyl.)	Adjust Per Str & Placement	Each	44	$23.00	$1,012.00
Slump		Tex-415-A	Not Required	Not Required	Each	0	$29.90	$0.00
Entrained Air		Tex-416-A	One per Set		Each	22	$34.91	$768.02
Temperature		Tex-422-A	Not Required	Not Required	Each	0	$23.59	$0.00
Tech Time (Reports)				Conc.	Hour	44	$68.20	$3,000.80
Tech Time (Aggr)			Not Required		Hour	0	$68.20	$0.00
Tech Time (Conc)					Hour	88	$68.20	$6,001.60
# of Trips (Tech)				22 Trips (50 Miles RT)	Miles	1100	$6.00	$6,600.00
**Admin/Clerical					Hour	18	$61.95	$1,115.10
							Item Subtotal	$18,497.32

Batching for Hydrulic Cement Concrete - Inspection of Batching at Plant (1 Tech per Plant, Reports)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching at the plants to insure delivery of acceptable material to the job site (as required). Exception is Concrete for Pavement (Class P)

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Concrete								
Tech Time (Conc)					Hour	4664	$68.20	$318,084.80
# of Trips (Tech)				583 Trips (50 Miles RT)	Mile	29150	$6.00	$174,900.00
Tech Time (Reports)					Hour	292	$68.20	$19,914.40
**Admin/Clerical					Hour	570	$61.95	$35,311.50
							Item Subtotal	$548,210.70

*** Concrete Strength testing includes strength testing of cylinder specimens (breaks) as well as preperation, holding and curing of strength specimen costs**

~ 1 Set is defined as 2 Cylinders (7-day or 28-day)
~ All Structural Concrete requires a minimum 2 Sets per Test Location (4 Cyl.)
**** Project Administrative Fee is assessed on a per invoice basis and involves engineering review, evaluation, management and administration**

Summary

Sub-Total (CMT Items) =		$2,375,150.38
Engineer (Coor. w/ Client / Rpt. Rev.)	(1036 hrs x 133.98 Hr.)	$138,803.28
Constuction Materials Testing Sub-Total (Road, Brg, Misc.) :		$2,513,953.66
Contingency (Estimated at 10%) :		$251,395.37
Constuction Materials Testing Total (ALL):		**$2,765,349.03**

ATTACHMENT E

FEE SCHEDULE

TEST NO.	CMT Firm:L&G ENGINEERING Date: 09/13/2021			2020-23					
	Geotechnical Services		**Unit**	**20210830 FINAL RATES**					**COMMENTS**
1	Mobilization/Demobilization		each	$ 400.00					$6/mile for anything < 67 miles per trip or $400 > 67 miles
	Drilling, Logging, &Recovering Samples (**With** TCP)		per mile	$6					
2A	1. Depth ≤ 50 feet		Tex-132-E (every 5 feet)	$ 38.00					
2B	2. Depth ≥ 50 feet		linear foot	$ 40.00					
	Drilling, Logging, &Recovering Samples (**Without** TCP)								
3A	1. Depth ≤ 50 feet ( )		linear foot	$ 30.61					
3B	2. Depth ≥ 50 feet ( )		linear foot	$ 32.57					
4	Rock Coring (Soft Rock) [2]		linear foot	$ 33.00					
5	Rock Coring (Hard Rock) [2]		linear foot	$ 36.00					
6	Staking Borings and Utility Locations		hour	$ 121.67					
	Standby Time (sampling)		hour	$ 297.74					
7A	1. Hot Mix Asphalt (minumum of one hour)		each	$ 117.05					
7B	2. Concrete (minumum of one hour)		each	$ 173.34					
8	Piezometer - 2 inch (including well completion and installation)		linear foot	$ 48.36					
9	Grouting of Borings		linear foot	$ 6.86					
10	Traffic Control - Major		day	$ 3,000.00					
	Laboratory Test	**Test Method**	**Unit**						
11	Volumetric Shrinkage	ASTM D427	each	$ 105.24					
12	Standard Poor Test	ASTM D698	each	$ 255.00					
13	Modified Poor Test	ASTM D1557	each	$ 340.00					
14	Standard Penetration Test (SPT)	ASTM D1586	LF	$ 33.00					
15	California Bearing Ratio (Single Sample without MD Curve)	ASTM D1883	test	$ 350.00					
16	Unconfined Compressive Strength (Soil)	ASTM D2166	each	$ 75.00					
17	Hydraulic Conductivity Permeability	ASTM D2434	each	$ 450.00					
18	One Dimensional Consolidation Properties of Soil	ASTM D2435	each	$ 550.00					
19	Unconfined Compressive Strength (Rock)	ASTM D2938	each	$ 98.00					
20	Direct Shear Test of Soils Under Consolidated Drained Conditions	ASTM D3080	set of 3	$ 810.27					
21	Direct Shear Test of Soils Under Consolidated Drained Conditions, SAND	ASTM D3080	set of 3	$ 580.00					
22	Direct Shear Test of Soils Under Consolidated Drained Conditions, CLAY	ASTM D3080	set of 3	$ 708.79					
23	Splitting Tensile of Intact Rock Core	ASTM D3967	each	$ 131.11					
24	Water Stand Pipes	ASTM D4043	each	$ 40.00					
25	Calcium Carbonate Content of Soils	ASTM D4373	LF	$ 68.31					
26	Hydraulic Conductivity Permeability	ASTM D4511	each	$ 419.55					
27	One Dimensional Swell, Methods A&B	ASTM D4546	each	$ 316.53					
28	One Dimensional Swell, Method B Only	ASTM D4546	each	$ 324.66					
29	One Dimensional Swell, Method C	ASTM D4546	each	$ 292.00					
30	Permeability of Silt and Clays	ASTM D5084	each	$ 410.00					
31	Suction Test (Filter Method)	ASTM D5298	each	$ 98.00					
32	Casagrande Type Piezometers	N/A	each	$ 337.82					
33	Casagrande Type Piezometers Installation	N/A	each	$ 450.00					
~~34~~	~~Miscellaneous Testing~~	~~N/A~~	~~each~~	~~$ 55.00~~					No need for this rate.
35	Vertical Inclinometer	N/A	each	$ 490.00					
36	Vertical Inclinometer Installation	N/A	each	$ 900.00					
37	Vibrating Wire Piezometer	N/A	each	$ 980.00					
38	Vibrating Wire Piezometer Installation	N/A	each	$ 1,200.00					
39	Soil Boring with SPT	ASTM D1586	LF	$ 36.00					
	Laboratory Test	**Test Method**							
	Soils & Base Testing								
40	Sampling	Tex-400-A	hour	$ 66.15					
41	Sample Preparation	Tex-101-E	each	$ 68.00					
42	Determining Slaking Time	Tex-102-E	each	$ 72.25					
43	Moisture Content	Tex-103-E	each	$ 15.44					
44	Atterburg Limits	Tex-104,105&106-E	Set of 3	$ 95.00					
45	Linear Bar Shrinkage (per bar)	Tex-107-E	each	$ 69.04					
46	Determining the Specific Gravity of Soils	Tex-108-E	each	$ 90.00					
47	Sieve Analysis	Tex-110-E, Part I	each	$ 89.00					
48	Sieve Analysis (Hydrometer with Tex-108-E)	Tex-110-E, Part II	each	$ 117.00					
49	Hydrometer with Tex-108-E (in conjunctin with Tex-110-E, Part II)	Tex-108-E	each	$ 72.00					
50	Percent Passing No. 200 Sieve	Tex-111-E	each	$ 96.13					
51	Determining the Amount of Material in Solis Finer than the 75 mi	Tex-111-E	each	$ 65.00					
52	Admixing Lime to Reduce Plasticity Index of Soils	Tex-112-E	each	$ 146.00					
53	Moisture-Density Relationship	Tex-113-E	each	$ 275.00					
54	Moisture-Density Relationship	Tex-114-E	each	$ 255.00					
55	Field Density Measurements	Tex-115-E	hour	$ 68.00					
56	Wet Ball Mill Test	Tex-116-E	each	$ 260.00					
57	Texas Triaxial Compression [6]	Tex-117-E, Part I	each	$ 1,650.00					
58	Texas Triaxial Compression [6]	Tex-117-E, Part II	each	$ 1,510.00					
59	Quality Assurance (QA) Series for Flexible Base [7] [8]	See Foot Notes	each	$ 2,246.91					
60	Soil- Cement Testing [7]	Tex-120-E, Part II	each	$ 439.45					
61	Soil- Lime Testing [7]	Tex-121-E, Part II	each	$ 430.11					
61.1	Soil-Lime Testing Determining Stabilization Ability of Lime by Soil pH	Tex-121-E, Part III	each	$ 450.00					
62	Determining the Drainage Factor of Soil Materials (Not Field Test)	Tex-123-E ++	each	$ 506.87					
63	Determining Modulus of Sub-grade Recaction (K Value) (Not Field Test)	Tex-125-E ++	each	$ 150.00					
64	Molding, Testing, and Evaluation Bituminous Black Base Materials	Tex-126-E ++	each	$ 1,750.00					
65	Lime-Fly Ash Compression [7]	Tex-127-E	each	$ 751.14					
66	Soil pH	Tex-128-E	each	$ 75.00					
67	Resistivity of Soils	Tex-129-E	each	$ 120.00					
68	Slurry Testing	Tex-130-E	each	$ 109.49					
69	Texas Cone Penetration	Tex-132-E	each	$ 46.34					
70	Freezing and Thawing Tests oc Compacted Soil-Cement Mixture	Tex-135-E	each	$ 365.00					
71	Thickness of Pavement Layers (4 hour minimum)	Tex-140-E	hour	$ 155.59					
72	Manual Procedure for Description and Identification of Soils	Tex-141-E	each	$ 52.52					
73	Laboratory Classification os Soils for Engineering Purposes	Tex-142-E	each	$ 70.00					
74	Sulfate Content in Soils	Tex-145-E	each	$ 95.00					
75	Conductivity Test for Field Detection of Sulfates in Soil	Tex-146-E	each	$ 100.96					
75.1	Organic Content Using UV-VIS Method	Tex-148-E	each	$ 231.70					
76	Determining Cholride and Sulfate Contents in Soils	Tex-620-J	each	$ 88.16					
77	Free Swell Test	EM1110-2-1906	each	$ 195.00					
78	Pressure Swell Test	EM1110-2-1906	each	$ 293.00					
79	One-Dimensional Swell	ASTM D4546	each	$ 316.53					
80	One-Dimensional Swell (Method B Only)	ASTM D4546	each	$ 261.70					
81	Potential Vertical Rise Calculation	Tex-124-E	each	$ 85.14					
82	Volumetric Shrinkage	ASTM D4943	each	$ 119.00					
~~83~~	~~Volumetric Shrinkage~~	~~ASTM D427~~	~~each~~	~~$ ——~~					Repeated on Line 11
84	Unconfined Compression Test (Soil)	ASTM D2166	each	$ 80.65					
85	Unconfined Compression Test (Rock)	ASTM D2938	each	$ 98.00					
86	Unconfined Compression Test (Rock) (Method D)	ASTM D7012	each	$ 75.00					
	Unconsolidated Undrained (UU) Triaxial Compression Test								
87	1. Set of Three	Tex-118-E	set	$ 312.36					
88	2. Multistage	Tex-118-E	each	$ 286.75					
	Consolidated Undrained (CU) Triaxial Compression Test								
89	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 1,502.50					
90	2. Multistage	Tex-131-E or ASTM D4767	each	$ 1,362.50					
	Consolidated Drained (CD) Triaxial Compression Test								
91	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 1,335.00					
92	2. Multistage	Tex-131-E or ASTM D4767	each	$ 1,261.50					
93	Direct Shear Consolidated Drained (CD), sand	ASTM D3080	set of 3	$ 1,131.55					
94	Direct Shear Consolidated Drained (CD), clay	ASTM D3080	set of 3	$ 1,147.11					
95	One-Dimensional Consolidation Test (7 load increments)	ASTM D2435	each	$ 597.14					

96	Resilient Modulus (fine-grained soils)	AASHTO T307	each	$ 1,200.00				
	Hot Mix Asphalt Testing							
97	Sieve Analysis of Fine and Coarse Aggregates	Tex-200-F	each	$ 95.00				
98	Bulk Specific Gravity and Water Absorption of Aggregates	Tex-201-F	each	$ 95.00				
99	Apparent Specific Gravity of Material Finer Than 180 µm (No. 80) Sieve	Tex-202-F	each	$ 65.00				
100	Sand Equivalent Test	Tex-203-F	each	$ 95.50				
101	Labortory Method of Mixing Bituminous Mixtures	Tex-205-F	Set of 3	$ 187.00				
102	Compacting Specimens Using the Texas Gyratory Compactor (TG	Tex-206-F	Set of 3	$ 113.04				
103	Determining Bulk Specific Gravity of Compacted Bituminuous Mixtures	Tex-207-F (I)	each	$ 50.00				
104	Determining In-Place Density of Compacted Bituminuous Mixtures (Nuclear Method)	Tex-207-F (III)	each	$ 45.00				
105	Asphalt Rolling Pattern (Nuclear Method)	Tex-207-F (IV)	each	$ 88.69				
106	Segregation Profile	Tex-207-F (V)	each	$ 250.00				
107	Joint Density	Tex-207-F (VII)	each	$ 250.00				
108	Test of Stabilometer Value of Bituminous Mixtures	Tex-208-F	set of 3	$ 175.00				
109	Determining Asphalt Content of Bituminous Mixtures by Extraction	Tex-210-F	each	$ 200.00				
110	Recovery of Asphalt from Bituminou Mixtures by the Abson Pro	Tex-211-F	each	$ 300.00				
111	Determining Moisture Content of Bituminous Mixtures	Tex-212-F	each	$ 55.79				
112	Determining Hydrocarbon-Volatile Content of Bituminous Mixture	Tex-213-F	each	$ 131.76				
113	Determining Deleterious Material and Decantation Test for Coarse Aggregates	Tex-217-F	each	$ 110.00				
114	Indirect Tensile Strength Test	Tex-226-F	each	$ 520.24				
115	Theoretical Maximum Specific Gravity of Bituminous Mixtures	Tex-227-F	each	$ 105.31				
116	Determining Asphalt Content of Bituminous Mixtures by the Nuclear	Tex-228-F	each	$ 147.05				
117	Combined HMAC Cold-Belt Sampling and Testing Procedure	Tex-229-F	each	$ 83.50				
118	Determining Draindown Characteristics in Bituminous Mixtures	Tex-235-F	each	$ 75.00				
119	Determining Asphalt Content from Asphalt Paving Mixtures by the Ignition Method	Tex-236-F	each	$ 168.25				
120	Asphalt Release Agents	Tex-239-F	each	$ 90.00				
121	Superpave Gyratory Compacting of Test Specimens of Bituminous	Tex-241-F	each	$ 158.11				
122	Hamburg Wheel Tracker	Tex-242-F	each	$ 600.00				
123	Tack Coat Adhesion	Tex-243-F	each	$ 185.00				
124	Thremal Profile	Tex-244-F	each	$ 164.50				
125	Cantabro Loss	Tex-245-F	each	$ 219.67				
126	Permeability or Water Flow of Hot Mix Asphalt	Tex-246-F	each	$ 83.50				
127	Overlay Test	Tex-248-F	set of 3	$ 762.22				
128	Flat and Elongated Particles	Tex-280-F	each	$ 77.36				
129	Sampling Bituminous Materials, Pre-Molded Joint Fillers, and Joint	Tex-500-C	each	$ 87.00				
130	Asphalt Binder Water in Petroleum	Tex-501-C AASHTO T55	each	$ 125.25				No original cost presented for consideration
131	Penetration of Bituminous Materials	Tex-502-C AASHTO T49	each	$ 148.83				No original cost presented for consideration
132	Ductility of Asphalt Materials	Tex-503-C AASHTO T51	each	$ 141.50				No original cost presented for consideration
133	Flash and Fire Points by Cleveland Open Cup	Tex-504-C AASHTO T48	each	$ 70.56				No original cost presented for consideration
134	Softening Point of Bitumen (Riing and Ball Apparatus	Tex-505-C AASHTO T53	each	$ 120.27				No original cost presented for consideration
135	Solubility of Bituminous Materials	Tex-507-C AASHTO T44	each	$ 147.75				No original cost presented for consideration
136	Specific Gravity	Tex-508-C AASHTO T228	each	$ 96.00				No original cost presented for consideration
137	Spot Test of Asphaltic Materials	Tex-509-C AASHTO T102	each	$ 203.50				No original cost presented for consideration
138	Effect of Heat and Air on Asphalt Materials (Thin-Film Oven Test)	Tex-510-C AASHTO t179	each	$ 169.30				No original cost presented for consideration
139	Flash Point with Tag Open-Cup Apparatus for Use with Material H	Tex-512-C AASHTO T79	each	$ 113.88				No original cost presented for consideration
140	Saybolt Viscosity	Tex-513-C AASHTO T72	each	$ 89.02				No original cost presented for consideration
141	Cutback Asphalts - Specific Gravity, API Gravity, or Density of Cutback Asphalts by Hdyrometer Method; Emulsified Asphalts - Weight per Gallon of Emulsified Asphalt	Tex-514-C ASTM D3142 ASTM D244	each	$ 423.00				No original cost presented for consideration
142	Distillation of Cutback Asphalt Products	Tex-515-C AASHTO T78	each	$ 205.67				No original cost presented for consideration
143	Float Test for Bituminous Materials	Tex-519-C AASHTO T50	each	$ 87.83				No original cost presented for consideration
144	Standard Test Method for Emulsified Asphalts	Tex-521-C AASHTO T59	each	$ 241.88				No original cost presented for consideration
145	Viscosity of Asphalts by Vacuum Capillary Viscometer	Tex-528-C AASHTO T202	each	$ 47.50				No original cost presented for consideration
146	Kinematic Viscosity of Asphalts (Bitumens)	Tex-529-C AASHTO T201	each	$ 89.02				No original cost presented for consideration
147	Boil Test (Effect of Water on Paving Mix)	Tex-530/531-C	each	$ 153.50				
148	Field Coring - ACP Thickness	ASTM D3549	each	$ 124.25				
149	Pavement Thickness Determin. (Full Depth)	ASTM D3549	each	$ 153.00				
150	Determining Polymer Additive Percentages in Polymer Modified	Tex-533-C	each	$ 82.50				No original cost presented for consideration
151	Calculating Viscosity from Penetration	Tex-535-C	each	$ 87.06				No original cost presented for consideration
152	Elastic Recovery of Tensile Deformation Using a Ductilometer	Tex-539-C	each	$ 79.13				No original cost presented for consideration
153	Measurement of Polymer Separation on Heating in Modified Asphalat	Tex-540-C	each	$ 129.50				No original cost presented for consideration
154	Rolling Thin Film Oven Test for Asphalt Binders	Tex-541-C ASSHTO T240	each	$ 189.00				No original cost presented for consideration
155	Flexural Creep Stiffness Using the Bending Beam Rheometer	AASHTO T313	each	$ 275.00				No original cost presented for consideration
156	Determining Rheological Properties of Asphalt Binder Using a Dy	AASHTO T315	each	$ 244.13				No original cost presented for consideration
157	Determining Breaking Index for Asphalt Emulsions	Tex-542-C	each	$ 251.89				No original cost presented for consideration
158	Resilience Test for Sealants and Repair Materials	Tex-547-C	each	$ 305.36				No original cost presented for consideration
159	Tensile Strain to Failure	Tex-548-C	each	$ 84.00				No original cost presented for consideration
160	Cone Flow Test	Tex-549-C	each	$ 87.50				No original cost presented for consideration
161	Flexibility Test for Sealants and Repair Materials	Tex-550-C	each	$ 302.50				No original cost presented for consideration
162	Settlement of Sealants and Repair Materials	Tex-551-C	each	$ 118.50				No original cost presented for consideration
	Concrete & Aggregate Testing							
163	Sieve Analysis for Conc. Agg	Tex-401-A	each	$ 95.00				
164	Fineness Modulus for Conc. Agg	Tex-402-A	each	$ 58.78				
165	SSD Specific Gravity / Absorption Conc. Agg	Tex-403-A	each	$ 88.00				
166	Unit Weight of Conc. Agg	Tex-404-A	each	$ 60.00				
167	Determining Pecent Voids and Solids in Concrete	Tex-405-A	each	$ 75.94				
168	Decantation for Conc. Agg	Tex-406-A	each	$ 65.00				
169	Organic Impurities for Conc. Agg	Tex-408-A	each	$ 65.00				
170	Free Moisture and Water Absorption in Aggregate for Concrete	Tex-409-A	each	$ 66.00				
171	L.A. Abrasion	Tex-410-A	each	$ 520.00				
172	5 Cycle Magnesium Soundness	Tex-411-A	each	$ 520.48				
173	Deleterious Material for Conc. Agg	Tex-413-A	each	$ 77.25				
174	Air Content of Fresh Concrete by Volumeteric	Tex-414-A	each	$ 33.10				
175	Slump of Fresh Concrete	Tex-415-A	each	$ 29.90				
176	Air Content of Fresh Concrete by Pressure	Tex-416-A	each	$ 34.91				
177	Unit Weight, Yield and Air Content (Gravimetric) of Concrete	Tex-417-A	each	$ 60.13				
178	Comp. Strength of Cyl. Conc. Specimen	Tex-418-A	each	$ 23.00				
179	Measure Temp. of Fresh Conc.	Tex-422-A	each	$ 23.59				
180	Obtaining & Testing Drilled Conc. Cores	Tex-424-A	each	$ 333.73				
181	Absorption and Dry Bulk Specific Gravity of Lightweight Coarse	Tex-433-A	each	$ 105.40				No original cost presented for consideration
182	Test Flow of Grout Mixtures (Flow Cone Method)	Tex-437-A	each	$ 125.00				No original cost presented for consideration
183	Accelerated Polish Test for Coarse Aggregate	Tex-438-A	each	$ 891.21				No original cost presented for consideration
184	Det. Comp. Strength of Grouts	Tex-442-A	each	$ 31.00				
185	Making & Curing Conc. Test Specimen	Tex-447-A	each	$ 19.91				
186	Flexural Strength of Concrete Using Simple Beam Third-Point Load	Tex-448-A	each	$ 49.23				No original cost presented for consideration
187	Capping Cyl. Conc. Specimen	Tex-450-A	each	$ 22.25				
188	Degradation of Coarse Aggregate by Micro-Devel Abrasion	Tex-461-A	each	$ 288.80				
189	Uniformity of Concrete	Tex-472-A	each	$ 189.63				
	Additional Testing	**Test Method**	**Unit**					
190	Geogrid Testing	Tex-621-J	each	$ 800.20				
191	Water Quality Testing	Tex-619-J	each	$ 179.25				
192	Lime Testing	Tex-600-J	each	$ 411.24				
193	Operating Inertial Profilers and Evaluating Pavement Profiles	Tex-1001-S	each	$ 1,800.00				No original cost presented for consideration
194	Vane Shear Testing	ASTM D2573	each	$ 338.00				
	Miscellaneous Testing	**Test Method**	**Unit**					
195	Structural Field Welding	NA	hour	$ 150.00				No original cost presented for consideration
	Equipment & Supplies for MT & UT		day	$ 150.00				No original cost presented for consideration
	Other Direct Expenses		**Unit**					
	Photocopies B/W (8 1/2" X 11")		each	$ 0.15				
	Photocopies B/W (11" X 17")		each	$ 0.23				
	Photocopies Color (8 1/2" X 11")		each	$ 0.82				
	Photocopies Color (11" X 17")		each	$ 1.41				
	Digital Ortho Plotting		sheet	$ 2.43				
	CADD Plotting		linear foot	$ 1.00				
	Plots (B/W on Bond)		linear foot	$ 0.91				
	Plots (Color on Bond)		linear foot	$ 1.75				
	Plots (Color on Photgraphic Paper)		linear foot	$ 2.72				
	Reproduction of CD/DVD		each	$ 5.00				

L&G Personnel Classification	Hourly Base Rate	Contract Rate FY 2020-2023	20210830 FINAL RATES
Senior Project Manager / Principal	$ 83.00	$ 257.30	**$ 186.90**
Senior Geotechnical Engineer	$ 65.00	$ 210.50	**$ 166.32**
Geotechnical Engineer	$ 62.00	$ 192.20	**$ 136.40**
Project Engineer	$ 56.00	$ 173.60	**$ 133.98**
Engineering Lab Manager	$ 40.00	$ 124.00	**$ 94.71**
Utility Coordinator	$ 38.00	$ 117.80	**$ 110.98**
Senior Project Inspector	$ 38.00	$ 117.80	**$ 99.75**
Project Inspector	$ 30.00	$ 93.00	**$ 73.92**
EIT	$ 40.00	$ 124.00	**$ 88.00**
Engineer Tech / GIS	$ 27.00	$ 83.70	**$ 76.60**
Logger	$ 22.00	$ 68.20	**$ 62.00**
Field Technician (Soils, Aggr, Asph, Conc)	$ 22.00	$ 68.20	**$ 68.20**
CADD Operator	$ 22.00	$ 68.20	**$ 77.50**
Admin/Clerical	$ 22.00	$ 68.20	**$ 61.95**

ATTACHMENT E-1
Final Cost Proposal Form

This attachment provides the basis of payment and fee schedule**. The basis of payment for this Work Authorization is indicated by an "X" in the applicable box.** The basis shall be supported by the Final Cost Proposal (FCP) shown below and should identify maximum amount payable and basis of payment. If more than one basis of payment is used, each one must be supported by a separate FCP. The basis of payment will be determined by Work Authorization and may be by any of the methods listed below.

"X"	**Basis**	
____	Lump Sum	The lump sum shall be equal to the maximum amount payable. The lump sum includes all direct and indirect costs and fixed fee. The Engineer shall be paid pro rata based on the percentage of work completed. For payment the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.
__X__	Unit Cost	The unit cost(s) for each type of unit and number of units are shown in the FCP. The unit cost includes all direct and indirect costs and fixed fee. The Engineer shall be paid based on the type and number of units fully completed and the respective unit cost. For payment, the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or any other cost data. The FCP may include special items, such as equipment which are not included in the unit costs. Documentation of these special costs may be required. The maximum amount payable equals the total of all units times their respective unit cost plus any special direct items shown.
__X	Specified Rate Basis	The specified rates for each type of labor are shown in the FCP below. The FCP may include special items, such as equipment which are not included in the specified rates. Payment shall be based on the actual hours worked multiplied by the specified rate for each type of labor plus other agreed to special direct cost items. The specified rate includes direct labor and indirect cost and fixed fee. The Authority may request documentation of reimbursable direct costs including hours worked. Documentation of special item costs may be required. The specified rate is not subject to audit.
____	Cost Plus Fixed Fee	Payment shall be based on direct and indirect costs incurred plus a pro rata share of the fixed fee based on the ratio of labor and overhead cost incurred to total estimated labor and overhead cost in the FCP or the percentage of work completed. The invoice must itemize labor rates, hours worked, other direct costs and indirect costs. The Engineer may be required to provide documentation of hours worked and any eligible direct costs claimed. The provisional overhead rate charged is subject to audit and adjustment to actual rates incurred. The FCP below shows the hourly rates for labor, other direct expenses including but not limited to travel and allowable materials, provisional overhead rate and the fixed fee. __A. Actual Cost Plus Fixed Fee - Actual wages are paid (no minimum, no maximum. __B. Range of Cost Plus Fixed Fee – Actual wages must be within the allowable range shown on the Final Cost Proposal.

A. **REFER TO ATTACHMENT E-2 FOR HOURLY SPECIFIED / LUMP SUM RATE SCHEDULE FOR EACH FIRM**

EXHIBIT F

WORK SCHEDULE

EXHIBIT F

WORK SCHEDULE

HCRMA Construction & Materials Testing Services
TOLL365 (SH 365)

Task Name	Start	Finish
Material Testing	10/1/2021	12/13/2025
Geotechnical	10/1/2021	12/13/2025
Other Analyses	10/1/2021	12/13/2025
All sampling and testing of components and materials	10/1/2021	12/13/2025
Hot Mix Asphalt Testing	10/1/2021	12/13/2025
Concrete Testing	10/1/2021	12/13/2025
Construction Oversight Documentation	10/1/2021	12/13/2025
Project Correspondence File (Design and Construction)	10/1/2021	12/13/2025

ATTACHMENT H-2
Subprovider Monitoring System Commitment Agreement

This commitment agreement is subject to the award and receipt of a signed contract from the Hidalgo County Regional Mobility Authority (Authority). ***NOTE: Attachment H-2 is required to be attached to each contract that does not include work authorizations. Attachment H-2 is required to be attached with each work authorization. Attachment H-2 is also required to be attached to each supplemental work authorization. If DBE/HUB Subproviders are used, the form must be completed and signed. If no DBE/HUB Subproviders are used, indicate with "N/A" on this line:_____ and attach with the work authorization or supplemental work authorization.***

Contract #: **01-M01-21-01** Assigned Goal: **6.0%** Prime Provider: L&G Consulting Engineers, Inc.
Work Authorization (WA)#: **1** WA Amount: **$2,765,349.03** Date: _____
Supplemental Work Authorization (SWA) #: _____ to WA #: _____ SWA Amount: _____
Revised WA Amount: _____

Description of Work *(List by category of work or task description. Attach additional pages, if necessary.)*	**Dollar Amount** *(For each category of work or task description shown.)*
FC	**$0**
FC	**$0**
Total Commitment Amount *(Including all additional pages.)*	**$0**

IMPORTANT: The signatures of the prime and the DBE/HUB and Second Tier Subprovider, if any (both DBE and Non-DBE) and the total commitment amount must always be on the same page.

Provider Name: L&G Consulting Engineers, Inc. **Address: 2100 W. Expressway 83** **Mercedes, TX 78570** **VID Number:** **PH: & FAX: 956-585-1909** **Email: jacinto@lgengineers.com**	**Name:** Jacinto Garza, P.E. ***(Please Print)*** **Title:** President / CEO **Signature** **Date**
DBE/HUB Sub Provider **Subprovider Name:** **VID Number:** **Address:** **PH:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ **Signature** **Date**
Second Tier Sub Provider **Subprovider Name:** **VID Number:** **Address:** **Phone #& Fax #:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ **Signature** **Date**

VID Number is the Vendor Identification Number issued by the Comptroller. If a firm does not have a VID Number, please enter the owner's Social Security or their Federal Employee Identification Number (if incorporated).

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Item 3D

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**3D**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/14/2021**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/2021**
TECHNICAL COMMITTEE			

1. Agenda Item: **RESOLUTION 2021-38 – APPROVAL OF AWARD OF CONTRACT WITH TERRACON CONSULTANTS, INC. FOR CONSTRUCTION MATERIAL TESTING SERVICES FOR THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY.**

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

   Approval of Award of Contract CMT Services with Terracon Consultants, Inc.

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

4. Budgeted: ___Yes ___No X N/A

5. Staff Recommendation**: Motion to approve Resolution 2021-38 - Approval of Award of Contract with Terracon Consultants, Inc. for Construction Material Testing Services for the Hidalgo County Regional Mobility Authority, as presented.**

6. Program Manager's Recommendation: ___Approved ___Disapproved **X** None

7. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: ___Approved ___Disapproved **X** None

9. Chief Auditor's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Financial Officer's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Development Engineer's Recommendation: ___Approved ___Disapproved **X** None

11. Chief Construction Engineer's Recommendation: **X** Approved ___Disapproved **X** None

12. Executive Director's Recommendation: **X** Approved ___Disapproved ___None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Memorandum

To: Pilar Rodriguez, P.E
HCRMA, Executive Director

From: Ramon Navarro, IV, P.E., C.F.M.
HCRMA, Chief Construction Engineer

Date: September 21, 2021

Subject: **RESOLUTION 2021-38 APPROVAL OF AWARD OF CONTRACT WITH TERRACON CONSULTANTS, INC. FOR CONSTRUCTION MATERIAL TESTING SERVICES FOR THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY**

GOAL

Approval and authorization to enter into contract for 2020-2021 Construction Material Testing Services with Terracon Consultants, INC. .

HISTORY

October 27, 2020 the HCRMA Board authorized the Executive Director to enter into negotiations with each of the ranked firms and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments.

Terracon Consultants, INC. have agreed to provide construction materials testing to assure the materials incorporated into 12.3 miles of concrete paving section on Phase II of 365 Toll highway construction project are subject to verification sampling and testing when required and meet project plans and specifications; and administering the HCRMA Quality Monitoring and Quality Assurance Program.

RECOMMENDATION

Staff recommends award of contract in the amount of $1,950,258.64 for an “indefinite delivery/indefinite quantity [IDIQ]” set of rates for a proposed three (3) year fixed period of time, during that period of time the Engineer will be responsible for an unlimited number of separate projects, or additional work on a current project to be issued on an individual work order basis.

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

BOARD RESOLUTION No. 2021-38

APPROVAL OF AWARD OF CONTRACT WITH TERRACON CONSULTANTS, INC. FOR CONSTRUCTION MATERIAL TESTING SERVICES FOR THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

THIS RESOLUTION is adopted this 28th day of September, 2021, by the Board of Directors of the HidalgoCounty Regional Mobility Authority at a regular meeting.

WHEREAS, the Hidalgo County Regional Mobility Authority (the "Authority"), acting through its Board of Directors (the "Board"), is a regional mobility authority created pursuant to Chapter 370, Texas Transportation Code, as amended (the "Act");

WHEREAS, the Authority is authorized by the Act to address mobility issues in and around Hidalgo County;

WHEREAS, on February 19, 2014, the Authority issued a solicitation for Statements of Qualification for Construction Material Testing Services for the Authority (the "Solicitation"); and

WHEREAS, on March 21, 2014 the Authority received responses to the Solicitation; and

WHEREAS, on April 23, 2014, Resolution 2014-38 authorized Authority staff to negotiate and enter into agreements with the top three scored firms (Raba Kistner Consultants Inc., L&G Laboratories and Terracon Consultants, Inc.) for Construction Material Testing Services (the "Services"); and

WHEREAS, on July 24, 2018, Resolution 2018-45 authorized Authority staff to procure one additional lab to provide additional Services; and

WHEREAS, on July 29, 2018, the Authority published a second Solicitation; and received three (3) responses, of which only one was deemed responsive;

WHEREAS, on September 25, 2018, the Authority authorized staff to negotiate contract terms for the Services to PaveTex Engineering LLC, dba PAVETEX, the sole responsive firm that met the professional services criteria set forth in the Solicitation;

WHEREAS, on August 21, 2020, the Authority received five (5) sealed statements of qualification packets. An internal committee of three HCRMA staff engineers ranked and reviewed; the Authority determined it necessary to negotiate contract terms to enter into negotiations with each of the ranked firms and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments; and

WHEREAS on October 27, 2020, the Authority approved Resolution 2020-28 Approval to enter into negotiations with each of the short-listed firms for Construction Material Testing for the Hidalgo County Regional Mobility Authority and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments; and

WHEREAS the Authority finds it necessary to approve Resolution 2021-38 Approval of Award of Contract by and between the Terracon Consultants, Inc., and the Hidalgo County Regional Mobility Authority for Construction Material Testing Services in the amount of $1,950,258.64.

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

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

Section 2. The Board hereby approves Award of Contract by and between Terracon Consultants, Inc., and the Hidalgo County Regional Mobility Authority for Construction Material Testing Services in the amount of $1,950,258.64, hereto attached as Exhibit A.

Section 3. The Board authorizes the Executive Director to execute the Professional Service Agreement for Construction Material Testing with Terracon Consultants, Inc., as approved by the Board.

*****

PASSED AND APPROVED AS TO BE EFFECTIVE IMMEDIATELY BY THE BOARD OF DIRECTORS OF THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY AT A REGULAR MEETING, duly posted and noticed, on the 28th day of September 2021, at which meeting a quorum was present.

S. David Deanda, Jr., Chairman

Ezequiel Reyna, Jr., Secretary/Treasurer

Exhibit A

Main
Professional Service
Agreement with
Terracon Consultants, Inc.
For
Construction Material Testing Services

STATE OF TEXAS §
COUNTY OF HIDALGO §

PROFESSIONAL SERVICES AGREEMENT FOR ENGINEERING / DESIGN SERVICES

THIS CONTRACT FOR ENGINEERING SERVICES is made by and between the Hidalgo County Regional Mobility Authority (HCRMA) (hereinafter the "Authority") and Terracon Consultants, Inc. Engineering, LLC. (hereinafter the "Engineer"), having its principal business address at 1506 Mid-Cities Drive, Pharr, TX 78577 for the purpose of contracting for engineering services (hereinafter the "Agreement").

WITNESSETH

WHEREAS, Government Code, Chapter 2254, Subchapter A, "Professional Services Procurement Act" provides for the procurement of professional services of engineers;

WHEREAS, in compliance with the Professional Services Procurement Act and all federal requirements including those described in 23 CFR Part 172, the Authority procured professional engineering services (the "Procurement");

WHEREAS, pursuant to the Procurement and the Authority Board of Director's (the Board's) ranking of respondents thereto, the Board finds it to be in the best interest of the Authority to engage the Engineer to provide verification sampling and testing services as required by the 2019 TxDOT Guide Schedule of Sampling & Testing for Design Bid-Build Projects and adopted Quality Assurance Program (QAP) to assure that materials and workmanship incorporated into highway construction projects are in reasonable conformity with the requirements of the approved plans and specifications, including any approved changes as required for the development of the Project, as approved by the Authority to wit: **{ PROVIDE CONSTRUCTION MATERIALS TESTING TO ASSURE THE MATERIALS INCORPORATED INTO THE 12.23 MILES OF SEGMENT 1 [FROM MCCOLL ROAD TO US281] AND SEGMENT 2 [FROM FM396, ANZALDUAS HIGHWAY/GSA CONNECTOR] ON PHASE II OF 365 TOLL HIGHWAY CONSTRUCTION PROJECT HIGHWAY CONSTRUCTION PROJECT ARE SUBJECT TO VERIFICATION SAMPLING AND TESTING WHEN REQUIRED AND MEET PROJECT PLANS AND SPECIFICATIONS; AND ADMINISTERING QUALITY MONITORING AND QUALITY ASSURANCE PROGRAM. OVERALL PROJECT CONSISTS OF CONSTRUCTION OF A 12.23 MILE TOLLED FACILITY FROM FM 396 & GSA CONNECTOR TO US 281 (MILITARY HIGHWAY), WHICH CONSISTS OF: OF GRADING, FLEXIBLE BASE, LIME TREATED SUBGRADE, ASPHALTIC CONCRETE PAVEMENT, CONCRETE PAVEMENT, SIGNING AND PAVEMENT MARKINGS, CROSS CULVERTS, BRIDGE STRUCTURES, RETAINING WALLS, ILLUMINATION AND TOLL EQUIPMENT.** (the "Project");

NOW, THEREFORE, the Authority and the Engineer, in consideration of the mutual covenants and agreements herein contained, do hereby mutually agree as follows:

AGREEMENT

ARTICLE I
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

1.1 The Engineer shall timely perform those engineering services for the fulfillment of the Agreement. All work shall be subject to review and approval by the Authority, and, if appropriate, the Texas Department of Transportation and the Federal Highway Administration. Notwithstanding anything to the contrary in this Agreement or in any other Agreement document relating to the project, in performing its work under this Agreement Engineer shall perform its services to the standard of care of a reasonable engineer that is performing the same or similar work, at the same time and locality and under the same or similar conditions faced by Engineer.

1.2 The Authority and the Engineer will furnish items and perform those services for fulfillment of the Agreement as identified in Attachment B, Services to be provided by the Authority and Attachment C, Services to be provided by the Engineer. All services provided by the Engineer will conform to standard engineering practices and applicable rules and regulations of the Texas Engineering Practices Act and the rules of the Texas Board of Professional Engineers.

ARTICLE II
AGREEMENT PERIOD

This Agreement becomes effective when fully executed by all parties hereto and it shall terminate at the close of business on December 13, 2025 unless the Agreement period is: (1) modified by written supplemental agreement prior to the date of termination as set forth in Attachment A, General Provisions, Section 6, Supplemental Agreements; (2) extended due to a work suspension as provided for in Attachment A, Section 3, Paragraph C; or (3) otherwise terminated in accordance with Attachment A, General Provisions, Section 14, Termination. Any work performed or cost incurred before or after the Agreement period shall be ineligible for reimbursement.

ARTICLE III
COMPENSATION

3.1 Maximum Amount Payable. The maximum amount payable under this contract is $1,950,258.64 unless modified (1) modified written supplemental agreement prior to the date of termination as set forth in Attachment A, General Provisions, Section 6, Supplemental Agreements or (2) modified through a work authorization as set forth in Article V, provided that such work authorizations is adopted by Board action.

3.2 **Basis of Payment.** The basis of payment is identified in Attachment E, Fee Schedule. Reimbursement of costs incurred under a work authorization shall be in accordance with Attachment E, Fee Schedule.

3.3 **Reimbursement of Eligible Costs**. To be eligible for reimbursement, the Engineer's costs must (1) be incurred in accordance with the terms of a valid work authorization; (2) be in accordance with Attachment E, Fee Schedule; and (3) comply with cost principles set forth at 48 CFR Part 31, Federal Acquisition Regulation (FAR 31). Satisfactory progress of work shall be maintained and evidenced as a condition of payment.

3.4 **Engineer Payment of Subproviders**. No later than ten (10) days after receiving payment from the Authority, the Engineer shall pay all subproviders for work performed under a subcontract authorized

hereunder. The Authority may withhold all payments that have or may become due if the Engineer fails to comply with the ten-day payment requirement. The Authority may also suspend the work under this Agreement or any work authorization until subproviders are paid. This requirement also applies to all lower tier subproviders, and this provision must be incorporated into all subcontracts related to the project.

ARTICLE IV
PAYMENT REQUIREMENTS

4.1 **Monthly Billing Statements**. The Engineer shall request reimbursement of costs incurred by submitting the original and one copy of an itemized billing statement in a form acceptable to the Authority. The Engineer is authorized to submit requests for reimbursement no more frequently than monthly and no later than ninety (90) days after costs are incurred.

4.2 **Billing Statement**. The billing statement shall show the work authorization number for each work authorization included in the billing, the total amount earned to the date of submission, and the amount due and payable as of the date of the current billing statement for each work authorization. The billing statement shall indicate if the work has been completed or if the billing is for partial completion of the work. The lump sum fee will be paid in proportion to the percentage of work completed per work authorization.

4.3 **Overhead Rates**. The Engineer shall use the provisional overhead rate indicated in Attachment E. If a periodic escalation of the provisional overhead rate is specified in Attachment E, the effective date of the revised provisional overhead rate must be included. For lump sum agreements where a lump sum applies to a work authorization the overhead rate utilized shall correspond with the overhead rate specified in the year in which the work authorization is executed.

4.4 **Thirty Day Payments**. Upon receipt and acceptance of a billing statement that complies with all invoice requirements set forth in this Article, the Authority shall make a good faith effort to pay the amount which is due and payable within thirty (30) days.

4.5 **Withholding Payments**. The Authority reserves the right to withhold payment of the Engineer's billing statement in the event of any of the following: (1) If a dispute over the work or costs thereof is not resolved within a thirty day period; (2) pending verification of satisfactory work performed; (3) the Engineer becomes a delinquent obligor as set forth in Section 231.006 of the Family Code; or (4) required reports are not received. In the event that payment is withheld, the Authority shall notify the Engineer and give a remedy that would allow the Authority to release the payment.

4.6 **Required Reports.**

a) As required in Attachment H, Disadvantaged Business Enterprise or Historically Underutilized Business Program Requirements, the Engineer shall submit Progress Assessment Reports to report actual payments made to Disadvantaged Business Enterprises or Historically Underutilized Businesses. One copy shall be submitted with each billing statement and one copy shall be submitted to the address included in Attachment H, Disadvantaged Business Enterprise or Historically Underutilized Business Program Requirements.

b) Prior to Agreement closeout, the Engineer shall submit a Final Report (Attachment H-4) to the address set forth in Attachment H.

c) The Engineer shall submit a separate report with each billing statement showing the percent completion of the work accomplished during the billing period and the percent completion to date, and any additional written report requested by the Authority to document the progress of the work.

4.7 **Subproviders and Suppliers List**. Pursuant to requirements of 43 Texas Administrative Code §9.50 et seq., the Engineer must provide the Authority a list (Attachment H-5/DBE or Attachment H-6/HUB) of all Subproviders and suppliers that submitted quotes or proposals for subcontracts. This list shall include subproviders' and suppliers' names, addresses, telephone numbers, and type of work desired.

4.8 **Debt to the Authority.** If the Authority is prohibited by law from issuing a warrant or initiating an electronic funds transfer to the Engineer because of a debt owed to the Authority, the Authority shall apply all payments due the Engineer to the debt or delinquent tax until the debt or delinquent tax is paid in full.

4.9 **Audit.** The Authority auditor may conduct an audit or investigation of any entity receiving funds from the Authority directly under this Agreement or indirectly through a subcontract under this Agreement. Acceptance of funds directly under this Agreement or indirectly through a subcontract under this Agreement acts as acceptance of the Authority's right or the Authority's auditor right, to conduct an audit or investigation in connection with those funds. An entity that is the subject of an audit or investigation must provide the Authority auditor with access to any information the Authority auditor considers relevant to the investigation or audit.

ARTICLE V
WORK AUTHORIZATIONS

The Authority will issue work authorizations using the form included in Attachment D (Work Authorizations and Supplemental Work Authorizations) to authorize all work under this Agreement. The Engineer must sign and return a work authorization within seven (7) working days after receipt. Refusal to accept a work authorization may be grounds for termination of this Agreement. The Authority shall not be responsible for actions by the Engineer or any costs incurred by the Engineer relating to work not directly associated with or prior to the execution of a work authorization. Terms and conditions governing the use of work authorizations are set forth in Attachment A, General Provisions, Section 1. The work authorization shall not waive the Authority's or the Engineer's responsibilities and obligations established under this Agreement.

ARTICLE VI
SIGNATORY WARRANTY

The undersigned signatory for the Engineer hereby represents and warrants that he or she is an officer of the organization for which he or she has executed this Agreement and that he or she has full and complete Authority to enter into this Agreement on behalf of the firm. These representations and warranties are made for the purpose of inducing the Authority to enter into this Agreement.

ARTICLE VII
NOTICES

All notices to either party by the other required under this agreement shall be delivered personally or sent by certified or U.S. mail, postage prepaid, addressed to such party at the following addresses:

Engineer:	**Authority:**
Terracon Consultants, Inc. Pharr Office, 1506 Mid Cities Drive Pharr, Texas 78577 Attn: Jorge A Flores, P.G., Client Manager	Hidalgo County Regional Mobility Authority (HCRMA) 203 W. Newcombe Ave. Pharr, Texas 78577 Attn: Pilar Rodriguez, P.E., Executive Director

All notices shall be deemed given on the date so delivered or so deposited in the mail, unless otherwise provided herein. Either party may change the above address by sending written notice of the change to the other party. Either party may request in writing that such notices shall be delivered personally or by certified U.S. mail and such request shall be honored and carried out by the other party.

ARTICLE VIII
INCORPORATION OF PROVISIONS

Attachments A through K are attached hereto and incorporated into this Agreement as if fully set forth herein.

SIGNATORIES

IN WITNESS WHEREOF, the Authority and the Engineer have executed these presents in duplicate and acknowledge that this Agreement constitutes the sole and only Agreement of the Parties hereto and supersedes any prior understandings or written or oral agreements between the Parties respecting the within subject matter.

AUTHORITY	**ENGINEER**
By: _____	By: _____
Name: Pilar Rodriguez	Name: Jorge A Flores, P.G.
Title: Executive Director	Title: Client Manager
Hidalgo County Regional Mobility Authority	Terracon Consultants, Inc.
Date: _____	Date: _____

:

LIST OF ATTACHMENTS TO AGREEMENT
FOR ENGINEERING SERVICES
INCORPORATED INTO THE AGREEMENT BY REFERENCE

Attachments	Title
A	General Provisions
B	Services to Be Provided by the Authority
C	Services to Be Provided by the Engineer
D	Work Authorization Forms
D-1	Work Authorization Form for Agreement for Engineering Services
D-2	Supplemental Work Authorization Form
E	Fee Schedule
E-1	Final Cost Proposal Form
E-2	Rate Sheets
E-3	Maximum Amount Payable
F	Work Schedule
G	Contract Deliverables/Computer Graphics Files for Document and Information Exchange, if applicable
H	DBE Participation
H-MOU	Memorandum of Understanding
H-Instructions	Instructions As per 49CFR 26.21
H-FG	Disadvantaged Business Enterprise (DBE) for Federal Funded Professional or Technical Services Contracts – See Attachment H Instructions
H–FN	Disadvantaged Business Enterprise (DBE) for Race-Neutral Professional or Technical Services Contracts – See Attachment H Instructions
H–SG	Historically Underutilized Business (HUB) Requirements for County Funded Professional or Technical Services Contracts – County of Texas HUB. Subcontracting plan required – See Attachment H Instructions
H–SN	Historically Underutilized Business (HUB) Requirements for County Funded Professional or Technical Services Contracts – No County of Texas HUB
H–1	Subprovider Monitoring System Commitment Worksheet
H–2	Subprovider Monitoring System Commitment Agreement
H–3	Monthly Progress Assessment Report
H-4	Subprovider Monitoring System Final Report
H-5	Federal Subproviders and Supplier Information
H-6	HUB Subcontracting Plan (HSP) Prime Contractor Progress Assessment Report
H-7	DBE Certifications
I	Certificate of Insurance
J	Conflicts of Certification
K	Debarment Certification
L	2019 Quality Assurance Program for Design Bid Build Projects
M	2019 Guide Schedule of Sampling & Testing for Design Bid-Build Projects

INDEX TO PROVISIONS

Section	Title
1	Work Authorizations
2	Progress
3	Suspension of Work
4	Additional Work
5	Changes in Work
6	Supplemental Agreements
7	Ownership of Data
8	Public Information
9	Personnel, Equipment and Material
10	Subcontracting
11	Inspection of Work
12	Submission of Reports
13	Violation of Contract Terms (Breach of Agreement)
14	Termination
15	Compliance with Laws
16	Indemnification
17	Engineer's Responsibility
18	Non-collusion
19	Insurance
20	Gratuities
21	DBE/HUB Requirements
22	Maintenance, Retention and Audit of Records
23	Civil Rights Compliance
24	Patent Rights
25	Computer Graphics Files
26	Child Support Certification
27	Disputes
28	Successors and Assigns
29	Severability
30	Prior Agreements Superseded
31	Conflict of Interest
32	Office of Management and Budget (OMB) Audit Requirements
33	Certifications

SECTION 1. WORK AUTHORIZATIONS

A. Use. The Engineer shall not begin any work until the Authority and the Engineer have signed a work authorization. Costs incurred by the Engineer before or after the completion date specified in the work authorization are not eligible for reimbursement. All work must be completed on or before the completion date specified in the work authorization, and no work authorization completion date shall extend beyond the Agreement period set forth in Article II of the Agreement (Agreement Period).

B. Contents. Each work authorization will include: (1) types of services to be performed; (2) a period of performance with a beginning and ending date; (3) a full description of the work to be performed; (4) a work schedule with milestones; (5) a cost not to exceed amount, (6) the basis of payment whether cost plus fixed fee, unit cost, lump sum, or specified rate; and (7) a work authorization budget calculated using fees set forth in Attachment E, Fee Schedule. The Engineer is not to include additional Agreement terms and conditions in the work authorization. In the event of any conflicting terms and conditions between the work authorization and the Agreement, the terms and conditions of the Agreement shall prevail and govern the work and costs incurred.

C. Work Authorization Budget. A work authorization budget shall set forth in detail (1) the computation of the estimated cost of the work as described in the work authorization, (2) the estimated time (hours/days) required to complete the work at the hourly rates established in Attachment E, Fee Schedule; (3) a work plan that includes a list of the work to be performed, (4) a stated maximum number of calendar days to complete the work, and (5) a cost-not-to-exceed-amount or unit or lump sum cost and the total cost or price of the work authorization. The Authority will not pay items of cost that are not included in or rates that exceed those approved in Attachment E.

D. No Guaranteed Work. Work authorizations are issued at the discretion of the Authority. While it is the Authority's intent to issue work authorizations hereunder, the Engineer shall have no cause of action conditioned upon the lack or number of work authorizations issued.

E. Incorporation into Agreement. Each work authorization shall be signed by both parties and become a part of this Agreement. No work authorization will waive the Authority's or the Engineer's responsibilities and obligations established in this Agreement. The Engineer shall promptly notify the Authority of any event that will affect the schedule or completion of the work authorization.

F. Supplemental Work Authorizations. Before additional work may be performed or additional costs incurred, a change in a work authorization shall be enacted by a written supplemental work authorization in the form identified and attached hereto as Attachment D. Both parties must execute a supplemental work authorization within the period of performance specified in the work authorization. The Authority shall not be responsible for actions by the Engineer or any costs incurred by the Engineer relating to additional work not directly associated with the performance or prior to the execution of the work authorization. The Engineer shall allow adequate time for review and approval of the supplemental work authorization by the Authority prior to expiration of the work authorization. Any supplemental work authorization must be executed by both parties within the time period established in Article II of the Agreement, (Agreement Period). Under no circumstances will a work authorization be allowed to extend beyond the Agreement's expiration date, unless a supplemental to the Agreement is approved by both parties extending the Agreement date.

F-1. More Time Needed. If the Engineer determines or reasonably anticipates that the work authorized in a work authorization cannot be completed before the specified completion date, the Engineer shall promptly notify the Authority. The Authority may, at its sole discretion, extend the work authorization period by execution of a supplemental to the work authorization, using the form attached hereto as Attachment D.

F-2. Changes in Scope. Changes that would modify the scope of the work authorized in a work authorization must be enacted by a written supplemental to the appropriate work authorization. The Engineer must allow adequate time for the Authority to review and approve any request for a time extension prior to expiration of the work authorization. If the change in scope affects the amount payable under the work authorization, the Engineer shall prepare a revised work authorization budget for the Authority's approval.

G. New Work Authorization. If the Engineer does not complete the services authorized in a work authorization before the specified completion date and has not requested a supplemental to the appropriate work authorization, the work authorization shall terminate on the completion date. At the sole discretion of the Authority, it may issue a new work authorization to the Engineer for the incomplete work using the unexpended balance of the preceding work authorization for the project. If approved by the Authority, the Engineer may calculate any additional cost for the incomplete work using the rates set forth in the preceding work authorization and in accordance with Attachment E, Fee Schedule.

H. Emergency Work Authorizations. The Authority, at its sole discretion, may accept the Engineer's signature on a faxed copy of the work authorization as satisfying the requirements for executing the work authorization, provided that the signed original is received by the Authority within five (5) business days from the date on the faxed copy.

I. Deliverables. Upon satisfactory completion of the work authorization, the Engineer shall submit the deliverables as specified in the executed work authorization to the Authority for review and acceptance.

J. Performance Standards. Unless authorized by the Authority and the Texas Department of Transportation, if applicable, work performed under this Agreement shall be developed in accordance with the latest version of the Texas Department of Transportation's manuals.

SECTION 2. PROGRESS

A. Progress meetings. The Engineer shall from time to time during the progress of the work confer with the Authority. The Engineer shall prepare and present such information as may be pertinent and necessary or as may be requested by the Authority in order to evaluate features of the work.

B. Conferences. At the request of the Authority or the Engineer, conferences shall be provided at the Engineer's office, the office of the Authority, or at other locations designated by the Authority. These conferences shall also include evaluation of the Engineer's services and work when requested by the Authority.

C. Inspections. If federal funds are used to reimburse costs incurred under this Agreement, the work and all reimbursements will be subject to periodic review by the Texas Department of Transportation and the U. S. Department of Transportation.

D. Reports. The Engineer shall promptly advise the Authority in writing of events that have a significant impact upon the progress of a work authorization, including:

1. Problems, delays, adverse conditions that will materially affect the ability to meet the time schedules and goals, or preclude the attainment of project work units by established time periods; this disclosure will be accompanied by Authority judgment of the action taken or contemplated, and any or federal assistance needed to resolve the situation; and
2. Favorable developments or events which enable meeting the work schedule goals sooner than anticipated.

E. Corrective Action. Should the Authority determine that the progress of work does not satisfy the milestone schedule set forth in a work authorization, the Authority shall review the work schedule with the Engineer to determine the nature of corrective action needed.

SECTION 3. SUSPENSION OF WORK AUTHORIZATION

A. Notice. Should the Authority desire to suspend a work authorization but not terminate the Agreement, the Authority may verbally notify the Engineer followed by written confirmation, giving ten (10) day notice. Both parties may waive the ten-day notice in writing.

B. Reinstatement. A work authorization may be reinstated and resumed in full force and effect within sixty (60) business days of receipt of written notice from the Authority to resume the work. Both parties may waive the sixty-day notice in writing.

C. Agreement Period Not Affected. If the Authority suspends a work authorization, the Agreement period as determined in Article II of the Agreement (Agreement Period) is not affected and the Agreement and the work authorization will terminate on the date specified unless the Agreement or work authorization is amended to authorize additional time.

D. Limitation of Liability. The Authority shall have no liability for work performed or costs incurred prior to the date authorized by the Authority to begin work, during periods when work is suspended, or after the completion date of the Agreement or work authorization.

SECTION 4. ADDITIONAL WORK

A. Notice. If the Engineer is of the opinion that any assigned work is beyond the scope of this Agreement and constitutes additional work, it shall promptly notify the Authority in writing, presenting the facts of the work authorization and showing how the work authorization constitutes additional work.

B. Supplemental Agreement. If the Authority finds that the work does constitute additional work, the Authority shall so advise the Engineer and a written supplemental agreement will be executed as provided in Attachment A, General Provisions, Section 6, Supplemental Agreements.

C. Limitation of Liability. The Authority shall not be responsible for actions by the Engineer or any costs incurred by the Engineer relating to additional work not directly associated with or prior to the execution of a supplemental agreement.

SECTION 5. CHANGES IN WORK

A. Work Previously Submitted as Satisfactory. If the Engineer has submitted work in accordance with the terms of this Agreement but the Authority requests changes to the completed work or parts thereof which involve changes to the original scope of services or character of work under the Agreement, the Engineer shall make such revisions as requested and as directed by the Authority. This will be considered as additional work and paid for as specified under Attachment A, General Provisions, Section 4, Additional Work.

B. Work Does Not Comply with the Agreement. If the Engineer submits work that does not comply with the terms of this Agreement, the Authority shall instruct the Engineer to make such revision as is necessary to bring the work into compliance with this Agreement. No additional compensation shall be paid for this work.

C. Errors/Omissions. The Engineer shall make revisions to the work authorized in this Agreement which are necessary to correct errors or omissions appearing therein, when required to do so by the Authority. No additional compensation shall be paid for this work.

SECTION 6. SUPPLEMENTAL AGREEMENTS

A. Need. The terms of this Agreement may be modified if the Authority determines that there has been a significant increase or decrease in the duration, scope, cost, complexity or character of the services to be performed. A supplemental agreement will be executed to authorize such significant increases or decreases.

B. Compensation. Additional compensation, if appropriate, shall be calculated as set forth in Article III of the Agreement (Compensation). Significant changes affecting the cost or maximum amount payable shall be defined to include but not be limited to new work not previously authorized or previously authorized services that will not be performed. The parties may reevaluate and renegotiate costs at this time.

C. When to Execute. Both parties must execute a supplemental agreement within the Agreement period specified in Article II of this Agreement (Agreement Period).

SECTION 7. OWNERSHIP OF DATA

A. Work for Hire. All services provided under this Agreement are considered work for hire and as such all data, basic sketches, charts, calculations, plans, specifications, and other documents created or collected under the terms of this Agreement are the property of the Authority.

B. Disposition of Documents. All documents prepared by the Engineer and all documents furnished to the Engineer by the Authority shall be delivered to the Authority upon request by the Authority. The Engineer, at its own expense, may retain copies of such documents or any other data which it has furnished the Authority under this Agreement, but further use of the data is subject to permission by the Authority.

C. Release of Data. The Engineer (1) will not release any documentation created or collected under this Agreement except to its subproviders as necessary to complete this Agreement; (2) shall include a provision in all subcontracts which acknowledges the Authority's ownership of the documents and prohibits its use for any use other than the project identified in this Agreement; and (3) is responsible for any improper use of the documents by its employees, officers, or subproviders, including costs, damages, or other liability resulting from improper use. Neither the Engineer nor any subprovider may charge a fee for the portion of the design plan created by the Authority.

D. Maintenance of Data. The Engineer and any subconsultant, subcontractor or vendor shall keep and maintain all Data and all other material relating to this Agreement and related projects, and shall make all such material available at any reasonable time during the term of the work on the Agreement and related projects and for five (5) years from the date of final payment to the Engineer for auditing, inspection, and copying upon the Authority's request or, if federal dollars are applied to the Agreement, upon request by the federal government.

SECTION 8. PUBLIC INFORMATION AND CONFIDENTIALITY

A. Public Information. The Authority will comply with Government Code, Chapter 552, the Public Information Act, and 43 Texas Administrative Code §3.10 et seq. in the release of information produced under this Agreement.

B. Confidentiality. The Engineer shall not disclose information obtained from the Authority under this Agreement without the express written consent of the Authority.

SECTION 9. PERSONNEL, EQUIPMENT AND MATERIAL

A. This Agreement is not intended to constitute, create, give up, or otherwise recognize a joint venture agreement or relationship, partnership, or formal business organization of any kind, and the rights and obligations of the parties shall be only those expressly set forth in this Agreement.

B. Engineer Resources. The Engineer shall furnish and maintain quarters for the performance of all services, in addition to providing adequate and sufficient personnel and equipment to perform the services required under this Agreement. The Engineer certifies that it presently has adequate qualified personnel in its employment for performance of the services required under this Agreement, or it will be able to obtain such personnel from sources other than the Authority.

C. Removal of Contractor Employee. All employees of the Engineer assigned to this Agreement shall have such knowledge and experience as will enable them to perform the duties assigned to them. The Authority may instruct the Engineer to remove any employee from association with work authorized in this Agreement if, in the sole opinion of the Authority, the work of that employee does not comply with the terms of this Agreement or if the conduct of that employee becomes detrimental to the work.

D. Replacement of Key Personnel. The Engineer must notify the Authority in writing as soon as possible, but no later than three business days after a project manager or other key personnel is removed from association with this Agreement, giving the reason for removal.

E. Authority Approval of Replacement Personnel. The Engineer may not replace the project manager or key personnel without prior consent of the Authority. The Authority must be satisfied that the new project manager or other key personnel is qualified to provide the authorized services. If the Authority determines that the new project manager or key personnel is not acceptable, the Engineer may not use that person in that capacity and shall replace him or her with one satisfactory to the Authority within forty-five (45) days.

F. Ownership of Acquired Property. Except to the extent that a specific provision of this Agreement states to the contrary, the Authority shall own all intellectual property acquired or developed under this Agreement and all equipment purchased by the Engineer or its subcontractors under this Agreement. All intellectual property and equipment owned by the Authority shall be delivered to the Authority when this Agreement terminates, or when it is no longer needed for work performed under this Agreement, whichever occurs first.

G. The Engineer shall furnish and maintain, at its own expense, office space for the performance of all services, and adequate and sufficient personnel and equipment to perform the services as required. All employees of the Engineer shall have such knowledge and experience as will enable them to perform the duties assigned to them.

H. The Engineer agrees to maintain (in sufficient detail as will properly reflect all work done and results achieved in the performance of this Agreement) tracings, plans, specifications, maps, basic survey notes and sketches, books, records, reports, research notes, charts, graphs, comments, plans, comparisons, computations, analyses, recordings, photographs, computer programs, and documentations thereof, and other graphic or written data or deliverables generated in connection with the work called for in the Agreement; all such information and documentations to be termed "Data" under this Agreement.

I. All Data is the exclusive property of the Authority and shall be furnished to the Authority upon request and shall not be used or released by the Engineer or any other person except with the prior approval of the Authority. All documents prepared by the Engineer and all documents furnished to the Engineer by the Authority shall be delivered to the Authority upon completion of the relevant milestone for payment and/or termination of this Agreement. Provided, however, that none of the documents or materials are intended or represented by Engineer to be suitable for reuse by the Authority, or others on extensions of the project or on any other project. Any reuse of Data without written verification or adaptation by Engineer for use beyond the specific purpose intended will be at Authority's sole risk and without liability or legal exposure to Engineer.

SECTION 10. SUBCONTRACTING

A. Prior Approval. The Engineer shall not assign, subcontract or transfer any portion of professional services related to the work under this Agreement without prior written approval from the Authority.

B. DBE/HUB Compliance. The Engineer's subcontracting program shall comply with the requirements of Attachment H of the Agreement (DBE/HUB Requirements).

C. Required Provisions. All subcontracts for professional services shall include the provisions included in Attachment A, General Provisions, and any provisions required by law. The Engineer is authorized to pay subproviders in accordance with the terms of the subcontract, and the basis of payment may differ from the basis of payment by the Authority to the Engineer.

D. **Prior Review.** All subcontracts for professional services shall be approved as to form in writing by the Authority and, if applicable, by the Texas Department of Transportation prior to its execution and performance of work thereunder.

E. Engineer Responsibilities. No subcontract relieves the Engineer of any responsibilities under this Agreement.

SECTION 11. INSPECTION OF WORK

A. Review Rights. The Authority and if appropriate, the Texas Department of Transportation, and when federal funds are involved, the U. S. Department of Transportation, and any of their authorized representatives shall have the right at all reasonable times to review or otherwise evaluate the work performed hereunder and the premises in which it is being performed.

B. Reasonable Access. If any review or evaluation is made on the premises of the Engineer or a subprovider, the Engineer shall provide and require its subproviders to provide all reasonable facilities and assistance for the safety and convenience of the Authority and if appropriate the Authority, State, or federal representatives in the performance of their duties.

SECTION 12. SUBMISSION OF REPORTS

All applicable study reports shall be submitted in preliminary form for approval by the Authority before a final report is issued. The Authority's comments on the Engineer's preliminary report must be addressed in the final report.

SECTION 13. VIOLATION OF AGREEMENT TERMS (BREACH OF AGREEMENT)

A. Violation. Violation of the Agreement terms or breach of this Agreement by the Engineer shall be grounds for termination of the Agreement. Any additional costs to the Authority that arise from the Engineer's default, breach of Agreement, or violation of Agreement terms shall be paid by the Engineer. This Agreement shall not be considered as specifying the exclusive remedy for any default, but all remedies existing at law and in equity may be availed of by either party and shall be cumulative.

B. Venue. Venue for disputes related to this Agreement shall be Hidalgo County, Texas.

C. Applicable Laws. This Agreement shall be construed under and in accordance with the laws of the State of Texas.

SECTION 14. TERMINATION

A. Causes. The Agreement may be terminated before the stated completion date by any of the following conditions.

1. By mutual agreement and consent, in writing from both parties.
2. By the Authority by notice in writing to the Engineer as a consequence of failure by the Engineer to perform the services set forth herein in a satisfactory manner.
3. By either party, upon the failure of the other party to fulfill its obligations as set forth herein.
4. By the Authority for reasons of its own, not subject to the mutual consent of the Engineer, by giving ten business days notice of termination in writing to the Engineer.
5. By the Authority, if the Engineer violates the provisions of Attachment A, General Provisions Section 21, Gratuities.
6. By satisfactory completion of all services and obligations described herein.

B. Measurement. Should the Authority terminate this Agreement as herein provided, no fees other than fees due and payable at the time of termination shall thereafter be paid to the Engineer. Compensation for work at termination will be based on a percentage of the work completed at that time. Should the Authority terminate this Agreement under Paragraph A (4) or (5) above, the Engineer shall not incur costs during the ten-day notice period in excess of the amount incurred during the preceding ten (10) days.

C. Value of Completed Work. If the Engineer defaults in the performance of this Agreement or if the Authority terminates this Agreement for fault on the part of the Engineer, the Authority will give consideration to the following when calculating the value of the completed work: (1) the actual costs incurred (not to exceed the rates set forth in Attachment E, Fee Schedule) by the Engineer in performing the

work to the date of default; (2) the amount of work required which was satisfactorily completed to date of default; (3) the value of the work which is usable to the Authority; (4) the cost to the Authority of employing another firm to complete the required work; (5) the time required to employ another firm to complete the work; and (6) other factors which affect the value to the Authority of the work performed.

D. Calculation of Payments. The Authority shall use the fee schedule set forth in Attachment E to the Agreement (Fee Schedule) in determining the value of the work performed up to the time of termination. In the case of partially completed engineering services, eligible costs will be calculated as set forth in Attachment E, Fee Schedule. The sum of the provisional overhead percentage rate for payroll additives and for general and administrative overhead costs during the years in which work was performed shall be used to calculate partial payments.

E. Excusable Delays. Except with respect to defaults of subproviders, the Engineer shall not be in default by reason of any failure in performance of this Agreement in accordance with its terms (including any failure to progress in the performance of the work) if such failure arises out of causes beyond the control and without the default or negligence of the Engineer. Such causes may include, but are not restricted to, acts of God or the public enemy, acts of the Government in either its sovereign or Contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather.

F. Surviving Requirements. The termination of this Agreement and payment of an amount in settlement as prescribed above shall extinguish the rights, duties, and obligations of the Authority and the Engineer under this Agreement, except for those provisions that establish responsibilities that extend beyond the Agreement period.

G. Payment of Additional Costs. If termination of this Agreement is due to the failure of the Engineer to fulfill its Agreement obligations, the Authority may take over the project and prosecute the work to completion, and the Engineer shall be liable to the Authority for any additional cost to the Authority.

SECTION 15. COMPLIANCE WITH LAWS

The Engineer shall comply with all applicable Authority, federal, County and local laws, statutes, codes, ordinances, rules and regulations, and the orders and decrees of any court, or administrative bodies or tribunals in any manner affecting the performance of this Agreement, including, without limitation, worker's compensation laws, minimum and maximum salary and wage statutes and regulations, nondiscrimination, and licensing laws and regulations. When required, the Engineer shall furnish the Authority with satisfactory proof of its compliance therewith.

SECTION 16. INDEMNIFICATION

A. THE ENGINEER SHALL SAVE AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, AND EMPLOYEES, FROM ALL CLAIMS, LIABILITY, ACTION, AND LOSS (INCLUDING DAMAGE OR INJURY INCLUDING DEATH TO PERSONS OR PROPERTY) DUE TO ACTIVITIES OF ITSELF, ITS AGENTS, SUBCONTRACTORS, OR EMPLOYEES PERFORMED UNDER THIS AGREEMENT AND WHICH ARE CAUSED BY OR RESULT FROM ERROR, OMISSION, OR NEGLIGENT ACT, INCLUDING ANY VIOLATION OF ANY STATUTES, ORDINANCES, BUILDING CODES OR REGULATIONS, OF THE ENGINEER OR OF ANY PERSON EMPLOYED OR ENGAGED BY THE ENGINEER, AND THE DEFENSE OF ANY SUCH CLAIMS, LIABILITY, ACTION, OR LOSS.

B. THE ENGINEER SHALL ALSO SAVE AND HOLD HARMLESS THE AUTHORITY FROM ANY AND ALL EXPENSE, INCLUDING, BUT NOT LIMITED TO, REASONBLE ATTORNEY FEES WHICH MAY BE INCURRED BY THE AUTHORITY OR LIABILITIES WHICH MAY BE IMPOSED ON THE AUTHORITY AS THE RESULT OF SUCH ERROR, OMISSION, OR NEGLIGENT ACT BY THE ENGINEER, ITS AGENTS, ITS SUBCONTRACTORS, OR EMPLOYEES.

SECTION 17. ENGINEER'S RESPONSIBILITY

A. Accuracy. The Engineer shall be responsible for the accuracy and completeness of work and shall promptly make necessary revisions or corrections resulting from its errors, omissions, or negligent acts without compensation.

B. Errors and Omissions. The Engineer's responsibility for all questions arising from design errors and/or omissions will be determined by the Authority and all decisions shall be in accordance with the Authority's "Errors or Omissions Policy". The Engineer will not be relieved of the responsibility for subsequent correction of any such errors or omissions or for clarification of any ambiguities until after the construction phase of the project has been completed.

C. Seal. The responsible Engineer shall sign, seal and date all appropriate engineering submissions to the Authority in accordance with the Texas Engineering Practice Act and the rules of the Texas Board of Professional Engineers.

D. Resealing of Documents. Once the work has been sealed and accepted by the Authority, the Authority, as the owner, will notify the party to this Agreement, in writing, of the possibility that a Authority engineer, as a second engineer, may find it necessary to alter, complete, correct, revise or add to the work. If necessary, the second engineer will affix his seal to any work altered, completed, corrected, revised or added. The second engineer will then become responsible for any alterations, additions or deletions to the original design including any effect or impacts of those changes on the original engineer's design.

SECTION 18. NONCOLLUSION

A. Warranty. The Engineer warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Engineer and those consultants, subconsultants, and providers identified in the presentation to the Authority's Board, to solicit or secure this Agreement and that it has not paid or agreed to pay any company or engineer any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon or resulting from the award or making of this Agreement.

B. Liability. For breach or violation of this warranty, the Authority shall have the right to annul this Agreement without liability or, in its discretion, to deduct from the Agreement price or compensation, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift or contingent fee.

SECTION 19. INSURANCE

A. Insurance Liability Limits. The Engineer shall obtain and maintain insurance limits of liability for each of the types of insurance coverage identified as follows:

1. Workers' Compensation, endorsed with a waiver of subrogation in favor of the Authority in the amount of statutory obligations imposed under the Texas Workers' Compensation Law.

2. Commercial General Liability, endorsed with the Authority as an additional insured and endorsed with a waiver of subrogation in favor of the Authority to the extent of the liabilities assumed by Engineer under **Attachment A, Section 17** of this Agreement, in limits of liability of one million dollars ($1,000,000) combined single limit each occurrence and in the aggregate for bodily injury and property damage.
3. Professional Liability in limits of two million dollars ($2,000,000) each claim and in the aggregate.

The coverage and amounts designated herein are minimum requirements and do not establish limits of the Engineer's liability. Additional coverage may be provided at the Engineer's option and expense.

The issuer of any policy must have a rating of at least B+ and a financial size of Class VI or better according to the latest *Best's* rating.

B. Insurance Liability Limits. The Engineer shall furnish proof of insurance by means of a completed Attachment I – Certificate of Insurance - Hidalgo County Regional Mobility Authority, attached hereto and made a part thereof with the Project Name and the Engineer's name stated thereon, to be submitted prior to the beginning of the Project. The Engineer will be considered in breach of this Agreement should the Engineer fail to maintain the required insurance coverage during the term of this Agreement. The termination of this Agreement resulting from failure to maintain the required insurance will be carried out in accordance with the termination provisions herein.

C. Engineer's Risk. The services to be provided under this Agreement will be performed entirely at Engineer's risk and Engineer assumes all responsibility for the condition of vehicles or other instrumentalities used in the performance of this Agreement.

D. Work on Texas Department of Transportation Property. To the extent that the Texas Department of Transportation or this Agreement authorizes the Engineer or its subconsultants to perform any work on Texas Department of Transportation right of way, before beginning work the entity performing the work shall provide the Authority and the Texas Department of Transportation with a fully executed copy of the Department's Form 1560 Certificate of Insurance verifying the existence of coverage in the amounts and types specified on the Certificate of Insurance for all persons and entities working on Department right of way. This coverage shall be maintained until all work on the Department right of way is complete. If coverage is not maintained, all work on Department right of way shall cease immediately, and, the Authority may recover damages and all costs of completing the work.

SECTION 20. GRATUITIES

Employees of the Authority shall not accept any benefits, gifts or favors from any person doing business or who reasonably speaking may do business with the Authority under this Agreement. The only exceptions allowed are ordinary business lunches and items that have received the advance written approval of the Authority. Any person doing business with or who may reasonably speaking do business with the Authority under this Agreement may not make any offer of benefits, gifts or favors to departmental employees, except as mentioned herein above. Failure on the part of the Engineer to adhere to this policy may result in the termination of this Agreement.

SECTION 21. DISADVANTAGED BUSINESS ENTERPRISE OR HISTORICALLY UNDERUTILIZED BUSINESS REQUIREMENTS

The Engineer agrees to comply with the requirements set forth in Attachment H, Disadvantaged Business Enterprise or Historically Underutilized Business Subcontracting Plan Requirements with an assigned goal or a zero goal, as determined by the Authority. The Engineer will adhere to the commitment and to participation by certain Disadvantaged Business Enterprises (DBE) agreed to by the Authority during negotiations. Refer to Attachment H-7 for copies of DBE Certifications.

SECTION 22. MAINTENANCE, RETENTION AND AUDIT OF RECORDS

A. Retention Period. The Engineer shall maintain all books, documents, papers, accounting records and other evidence pertaining to costs incurred and services provided (hereinafter called the Records). The Engineer shall make the records available at its office during the Agreement period and for five (5) years from the date of final payment under this Agreement, until completion of all audits, or until pending litigation has been completely and fully resolved, whichever occurs last.

B. Availability. The Authority or any of its duly authorized representatives and, if appropriate, the Texas Department of Transportation, the Federal Highway Administration, the United States, Department of Transportation, Office of Inspector General, and the Comptroller General shall have access to the Engineer's Records which are directly pertinent to this Agreement for the purpose of making audits, examinations, excerpts and transcriptions.

SECTION 23. CIVIL RIGHTS COMPLIANCE

(1) Compliance with Regulations: The Engineer shall comply with the regulations of the Department of Transportation, Title 49, Code of Federal Regulations, Parts 21, 24, 26 and 60 as they relate to nondiscrimination; 23 CFR 710.405(B); also Executive Order 11246 titled Equal Employment Opportunity as amended by Executive Order 11375.

The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible."

(2) Nondiscrimination: The Engineer, with regard to the work performed by it during this Agreement, shall not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

(3) Solicitations for Subcontracts, Including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the Engineer for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Engineer of the Engineer's obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, sex, or national origin.

(4) Information and Reports: The Engineer shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and facilities as may be determined by the Authority; and if appropriate, the Texas Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of the Engineer is in the exclusive possession of another who fails or refuses to furnish this information, the Engineer shall so certify to the Authority; and if appropriate, the Texas Department of Transportation or the Federal Highway Administration and shall set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of the Engineer's noncompliance with the nondiscrimination provisions of this Agreement, the Authority shall impose such Agreement sanctions as the Authority; and if appropriate, the Texas Department of Transportation or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

(a) withholding of payments to the Engineer under this Agreement until the Engineer complies and/or
(b) cancellation, termination, or suspension of this Agreement, in whole or in part.

(6) Incorporation of Provisions: The Engineer shall include the provisions of paragraphs (1) through (5) above in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The Engineer shall take such action with respect to any subcontract or procurement as the Authority and; if appropriate, the Texas Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance provided, however, that in the event an Engineer becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Engineer may request the Authority; or, if appropriate, the Texas Department of Transportation to enter into such litigation to protect the interests of the Authority; and, in addition, the Engineer, if appropriate, may request the United States to enter into such litigation to protect the interests of the United States.

SECTION 24. PATENT RIGHTS

The Authority; and if appropriate, the Texas Department of Transportation; and the U. S. Department of Transportation shall have the royalty free, nonexclusive and irrevocable right to use and to authorize others to use any patents developed by the Engineer under this Agreement.

SECTION 25. COMPUTER GRAPHICS FILES

The Engineer agrees to comply with Attachment G, Computer Graphics Files for Document and Information Exchange, if determined by the Authority to be applicable to this Agreement.

SECTION 26. CHILD SUPPORT CERTIFICATION

Under Section 231.006, Texas Family Code, the Engineer certifies that the individual or business entity named in this Agreement, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this Agreement may be terminated and payment may be withheld if this certification is

inaccurate. If the above certification is shown to be false, the Engineer is liable to the Authority for attorney's fees, the cost necessary to complete this Agreement, including the cost of advertising and awarding a second Agreement, and any other damages provided by law or this Agreement. A child support obligor or business entity ineligible to receive payments because of a payment delinquency of more than thirty (30) days remains ineligible until: all arrearages have been paid; the obligor is in compliance with a written repayment agreement or court order as to any existing delinquency; or the court of continuing jurisdiction over the child support order has granted the obligor an exemption from Subsection (a) of Section 231.006, Texas Family Code, as part of a court-supervised effort to improve earnings and child support payments.

ATTACHMENT A
GENERAL PROVISIONS

SECTION 27. DISPUTES

A. Disputes Not Related to Agreement Services. The Engineer shall be responsible for the settlement of all contractual and administrative issues arising out of any procurement made by the Engineer in support of the services authorized herein.

B. Disputes Concerning Work or Cost. Any dispute concerning the work hereunder or additional costs, or any non-procurement issues shall be settled by mediation and if mediation is unsuccessful then parties go to trial under Texas State law.

SECTION 28. SUCCESSORS AND ASSIGNS

The Engineer and the Authority do each hereby bind themselves, their successors, executors, administrators and assigns to each other party of this agreement and to the successors, executors, administrators and assigns of such other party in respect to all covenants of this Agreement. The Engineer shall not assign, subcontract or transfer its interest in this Agreement without the prior written consent of the Authority.

SECTION 29. SEVERABILITY

In the event any one or more of the provisions contained in this Agreement shall for any reason, be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision thereof and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

SECTION 30. PRIOR AGREEMENTS SUPERSEDED

This Agreement constitutes the sole agreement of the parties hereto for the services authorized herein and supersedes any prior understandings or written or oral Agreements between the parties respecting the subject matter defined herein.

SECTION 31. CONFLICT OF INTEREST

A. Representation by Engineer. The undersigned represents that its firm has no conflict of interest that would in any way interfere with its or its employees' performance of services for the Authority or which in any way conflicts with the interests of the Authority. The firm shall exercise reasonable care and diligence to prevent any actions or conditions that could result in a conflict with the Authority's interests.

B. Certification Status. The Engineer certifies that it is not:

1. a person required to register as a lobbyist under Chapter 305, Government Code; or
2. a public relations firm other than the firms identified in the presentation to the RMA Board.

C. Environmental Disclosure. If the Engineer will prepare an environmental impact statement or an environmental assessment under this Agreement, the Engineer certifies by executing this Agreement that it has no financial or other interest in the outcome of the project on which the environmental impact statement or environmental assessment is prepared.

SECTION 32. OFFICE OF MANAGEMENT AND BUDGET (OMB) AUDIT REQUIREMENTS

The parties shall comply with the requirements of the Single Audit Act of 1984, P.L. 98-502, ensuring that the single audit report includes the coverage stipulated in OMB Circular A-133.

SECTION 33. CERTIFICATIONS

A. The parties are prohibited from making any award at any tier to any party that is debarred or suspended or

otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549, "Debarment and Suspension." By executing this Agreement, the Engineer certifies that it is not currently debarred, suspended, or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549. The parties to this Agreement shall require any party to a subcontract or purchase order awarded under this Agreement to certify its eligibility to receive Federal funds and, when requested by the Authority, to furnish a copy of the certification.

B. In accordance with Department of Transportation, Title 49, Code of Federal Regulations, Part 29 and by signature on this Agreement and the Debarment Certification attached hereto as Attachment K, the Engineer certifies its compliance and the compliance of any subconsultants or subcontractors present or future, by stating that any person associated therewith in the capacity of owner, partner, director, officer, principal investor, project director, manager, auditor, or any position involving federal, state or Authority funds:

(1) is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;
(2) does not have a proposed debarment pending;
(3) has not been suspended debarred, voluntarily excluded, or determined ineligible by an federal agency within the past three (3) years; and
(4) has not been indicted, convicted, or had a civil judgment rendered against the firm by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years as specified by Title 49, Code of Federal Regulations, paragraph 29.305(a).

C. The Engineer agrees to comply with the provisions of Section 1352 of Title 31, U.S. Code as codified in Title 48, Federal Acquisition Regulations, Subpart 3.8 and subpart 52.203.11, prohibiting federal funds from being expended by a recipient or lower-tier subrecipient of a federal contract, grant, loan, or cooperative agreement to pay any person for influencing or attempting to influence a federal agency or Congress in connection with the award of any federal contract or cooperative agreement. If federal funds are applied to the services under this Agreement, the Engineer and any subconsultants or subcontractors would be required to complete the Certification of Federal Contracts and, if necessary, the Disclosure of Lobbying Activities.

D. If the Project is a federal aid project, Engineer is required to comply with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act (42 U.S.C. 1857 (h)), which prohibit the use under non-exempt federal contract, grants, or loans of facilities included on the EPA List of Violating Facilities. Violations shall be reported to the Federal Highway Administration and to the USEPA Assistant Administrator of Enforcement.

ATTACHMENT B
SERVICES TO BE PROVIDE BY THE AUTHORITY

The **AUTHORITY** will provide the following general items.

1. Authorization to begin work with issuance of Notice to Proceed [NTP].
2. Timely payment for work performed by the **Engineer** and accepted by the **AUTHORITY** on a monthly basis.
3. Assistance to the **Engineer**, as necessary, to obtain the required data and information from other local, regional, State and Federal agencies that the **Engineer** cannot easily obtain.
4. Provide any available relevant data the **AUTHORITY** may have on file concerning the project:
   A. Electronic copy of project plans.
   B. Electronic copy of contract Proposal and any Addendums per project.
   C. Limited Access to Appia and ProjectWise.
   D. Storm Water Pollution Prevention Plan (SW3P) information.
   F. SW3P Coordination procedures.
   G. Best Practices coordination procedures (Disadvantaged Business Enterprise, (Materials, General Bookkeeping).
5. Review and approve the **Engineer**'s progress schedule with milestone activities and/or deliverables.
6. The **AUTHORITY** will provide the Environmental Document and electronic Constraints map for the project for development of the Environmental Permits, Issues and Commitments (EPIC) sheets and any other compliance issues.

RIGHT-OF-WAY DATA:

The **AUTHORITY** will provide the following:

1. Assist the **Engineer**, as necessary, with coordination of any utility relocations that may be required.
2. Ownership Data
   a. Ownership Information shall be provided for the corridor width.
   b. All utility ownership shall be provided.
3. Utility Adjustments:
   AUTHORITY (TxDOT as necessary) will provide executed utility agreements to the Engineer for all required utility adjustments.
5. Survey and Stake Right-of-Way
6. Right of Entry to all affected properties located within the project limits.
7. Deliverables: Right of way Map in electronic format (PDF)

MANAGEMENT:

The **AUTHORITY** will provide the following:

1. Attend/participate in progress meetings as required.
2. Timely review of submittals as required.

ATTACHMENT C
SERVICES TO BE PROVIDED BY THE ENGINEER

APPLICABILITY:

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

ABBREVIATIONS, ABBREVIATIONS, and DEFINITIONS:

HCRMA OR AUTHORITY shall mean Hidalgo County Regional Mobility Authority
PMC (GEC) shall mean Program Management Consultant (General Engineering Consultant) (Dannenbaum Engineering Corporation)
ENGINEER shall mean B2Z Engineering, LLC
TxDOT shall mean Texas Department of Transportation
FHWA shall mean Federal Highway Administration
IBWC shall mean International Boundary and Water Commission
USFWS shall mean United States Fish & Wildlife Service
THC shall mean Texas Historical Commission
SHPO shall mean State Highway Preservation Office
USACE shall mean United States Army Corps of Engineers
GSA shall mean General Services Administration
HCMPO shall mean Hidalgo County Metropolitan Planning Organization
FAA shall mean Federal Aviation Administration
MTP shall mean Metropolitan Transportation Plan
TIP shall mean Transportation Improvement Program
MUTCD shall mean Manual of Uniform Traffic Control Devices
AASHTO shall mean American Association of State Highway and Transportation Officials
LRFD shall mean Load & Resistance Factor Design
PS&E shall mean Plans, Specifications and Estimate
ACP shall mean Asphaltic Concrete Pavement
CSJ shall mean Control Section Job (highway project designation number)
ADP shall mean Advance Project Development

AAP	AASHTO Accreditation Program (AASHTO re:source and CCRL)
AASHTO	American Association of State Highway Transportation Officials
ACI	American Concrete Institute
AO	Area Office
AQMP	Aggregate Quality Monitoring Program
CAR	Corrective Action Report
CCRL	Concrete and Cement Reference Laboratory
CE&I	Construction Engineering and Inspection
CFR	Code of Federal Regulations
MTD	Materials and Tests Division
CMEC	Construction Materials Engineering Council
FHWA	Federal Highway Administration
HMA	Hot-Mix Asphalt
HMAC	Hot-Mix Asphalt Center
IA	Independent Assurance
L-A-B	Laboratory Accreditation Bureau
MPL	Material Producer List
QAP	Quality Assurance Program
QAT	Quality Assurance Test
QC	Quality Control
SM	SiteManager
TXAPA	Texas Asphalt Pavement Association
TxDOT	Texas Department of Transportation

SERVICES TO BE PROVIDED BY THE ENGINEER
PROJECT DESCRIPTION

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

County/HCRMA: Hidalgo County

CSJ number: 0921-02-368

Project/Description Provide construction materials testing to assure the materials incorporated into the 12.23 miles of concrete pavement section for Segment 1 [From McColl Road to us281] and segment 2 [from fm396, anzalduas highway/gsa connector] on Phase II of 365 Toll highway construction project highway construction project are subject to verification sampling and testing when required and meet project plans and specifications; and administering Quality Monitoring and Quality Assurance Program. Overall project consists of construction of a 12.23 mile tolled facility from FM 396 & GSA Connector to US 281 (Military Highway), which consists: of grading, flexible base, lime treated subgrade, asphaltic concrete pavement, and concrete pavement.

Length: 12.23 Miles (Approx)

Highway: 365TOLL

Limits: (See Location Map Attached)

Contract is for "indefinite delivery/indefinite quantity [IDIQ] set for a proposed three (3) year fixed period of time, during that period of time the Engineer will be responsible for an unlimited number of separate projects, or additional work on a current project to be issued on an individual work order basis.

The Engineer agency(s) must be accredited by one of the following FHWA- and TxDOT-approved accrediting bodies:

A. AASHTO Accreditation Program (AAP);
B. Construction Materials Engineering Council (CMEC); or
C. Laboratory Accreditation Bureau (L-A-B)

The Engineer shall have Texas Department of Transportation or Toll Authority/Regional Mobility Authority as well U.S. Army Corps of Engineers' construction material testing experience and is expected to work directly with the HCRMA Construction Division, namely, the Chief Construction Engineer for the Authority. The selected Engineer(s) may also perform certain tasks under the oversight of the HCRMA's General Engineering Consultant (Currently HDR Engineering Inc.).

To avoid an appearance of a conflict of interest, any qualified Engineer agency (laboratory) shall perform only one of the following types of testing on the same project:

A. Quality control testing;
B. Quality acceptance testing;
C. Owner verification testing;
D. Independent assurance testing; or
E. Referee testing.

The selected Engineer(s) shall have adequate experienced staff and a workload free from constraints to provide the necessary construction material testing for the HCRMA. Staff expertise is to include a Licensed Professional Engineer and certified, experienced staff proficient with TxDOT testing procedures, sampling and testing schedule, and the latest ASSHTO, ASTM and ACI testing requirements [Appendix A] performed and executed

as per 2019 TxDOT Quality Assurance Program (~~DB-QAP~~ / DBB-QAP) / 2019 Guide Schedule of Sampling & Testing for Design Bid-Build Projects.

Engineer will compose and submit an annual report to the Federal Highway Administration (FHWA) summarizing the results of HCRMA's project specific systems approach program. This report identifies:

A. Number of sampling and testing personnel evaluated by the systems approach IA testing;
B. Number of IA evaluations found to be acceptable;
C. Number of IA evaluations found to be unacceptable; and
D. Summary of any significant system-wide corrective actions taken.

The Engineer will be responsible for maintaining documentation of all individuals qualified under their authority who perform required tests for acceptance of materials. A qualification summary listing all tests for which an individual is qualified will be available and printed at HCRMA's request. Documentation to be maintained for all qualified personnel includes:

A. Copies of any certificates issued by ACI and TXAPA ;
B. Original written examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, score, and date taken;
C. Original performance examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, qualification status, and date;
D. Results of annual split/proficiency testing administered by the TxDOT qualifying authority for each technician.

Engineer shall perform Quality Control / Quality Assurance sampling and testing and comply with Laboratory Qualification Program and will be evaluated under the Independent Assurance Program, as described in the 2019 QAPDBB [Attachment L]. Quality Control test results will be validated by verification test results obtained from independently taken samples. IA personnel or their designated agents will perform Quality Assurance verification sampling and testing.

1. The Engineer shall perform all sampling and testing of components and materials in accordance with the standard specifications, and all other standard and special specifications and special provisions applicable in this agreement. Meet the minimum sampling frequencies set out in the TxDOT 2019 Guide Schedule for Sampling and Testing forDesign Bid-Build Projects. The testing shall include the following materials and all the components of the materials listed. The estimated number of samples and tests are based on quantities in the executed construction contract.
2. The Engineer shall ensure the testing is completed and input into ProjectWise. NOTE: The General Contractor is responsible for Quality Control (QC) testing of Item 360, Concrete Paving. The Engineer shall be responsible for Quality Assurance (QA) testing of Item 360, Concrete Paving.
3. The Engineer shall provide certified personnel, outlined in their internal, AASHTO-approved, Quality Control (QC) Manual that are knowledgeable of all materials testing procedures. All personnel performing acceptance tests must provide certifications and must maintain the certifications throughout the project. The HCRMA reserves the right to require replacement of any technician during this contract if performance is determined to be unsatisfactory or the technician fails to maintain appropriate certifications.
4. Engineer's laboratory will be qualified by the HCRMA qualifying authority in accordance with Section 3, Laboratory Qualification Responsibility of the Texas Department of Transportation (TxDOT) Quality Assurance Program (Manual Notice: 2005-1), and be AASHTO accredited under the AASHTO Accreditation Program (AAP) throughout the life of the project. Engineer shall transmit, to the HCRMA, a copy of AAP accreditation certificate(s) upon receipt by the testing laboratory.
5. The Engineer shall provide technicians certified in accordance with TxDOT Quality Assurance Program for Construction (QAP) or other State approved programs, such as the Texas Asphalt Pavement Association (TxAPA) for Hot Mix Asphalt, and the Soils and Base Certification Program, as listed.

6. The Engineer shall provide certified technicians to perform the following tests:
   A. Hot Mix Asphalt Testing:

a. Level l-A
b. Level l-B
c. Hot Mix Asphalt Testing • Level II
d. All other tests in the Manual of Testing Procedures 200-F Series or ASTM Procedures not covered in Level l-A, Level l-B, or Level II

B. Concrete Testing:
a. QAP Program for Concrete Testing
b. Other tests outlined in the Manual of Testing Procedures 400-A Series or ASTM Procedures that are not included in the QAP Program

7. The Engineer shall perform testing on the project. These tests include all tests listed in State's Guide Schedule of Sampling and Testing dated 2015. Follow the State's Guide Schedule of Sampling and Testing to establish testing frequencies. Testing frequencies may be increased as directed by the HCRMA.
8. The Engineer shall notify the HCRMA, to determine if any tests may be waived
9. The Engineer shall attend preconstruction QA and QC testing meetings prior to beginning work.
10. The Engineer shall:

A. Review and recommend approval or rejection of the Quality Control (QC) sampling and testing documentation submitted by the General Contractor for compliance with applicable State and Federal regulations, standards, and contract requirements.

B. Verify all tested materials used meet specifications, or identify materials that do not meet specifications and recommend action which should be taken.

C. Certify that all tested materials used during construction meet the specifications as outlined in the APPIA Support System.

D. Work closely with the HCRMA to resolve all material discrepancies before the next monthly estimate is processed by utilizing the Reportng in APPIA.

E. Enter all test data in APPIA.

F. Enter all mix designs, concrete and asphalt, provided by the General Contractor into APPIA.

G. The Engineer shall report failing tests to the HCRMA within twenty-four (24) hours.

SUMMARY OF DELIVERABLES:

The Engineer shall provide the following:

1. Monthly Progress Reports
2. Quarterly Material Test Reports
3. Sampling and testing personnel qualification
4. Final document file (maintained in project control system during project execution. Final structure of file will be determined during project implementation, an example of content is provided below)

A. Construction Oversight Documentation
a. Testing reports and Testing documentation as applicable
b. Test Exception Letter
c. Certification Verifications
d. Photographs

B. Project Correspondence File (Design and Construction)
a. E-mail files
b. Letters
c. Memos
d. Meeting Minutes
e. Monthly Deficiency Reports to track material issues (one (1) per month)
f. Misc. correspondence

ATTACHMENT D

WORK AUTHORIZATION

ATTACHMENT D-1

WORK AUTHORIZATION NO. ____
AGREEMENT FOR ENGINEERING SERVICES

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of "Article V of that certain Professional Services Agreement for Engineering Services" (the Agreement) entered into by and between the Hidalgo County Regional Mobility Authority (Authority), and Terracon Consultants Inc. (the Engineer).

PART I. The Engineer will perform engineering design services generally described as in accordance with the project description attached hereto and made a part of this Work Authorization. The responsibilities of the Authority and the Engineer as well as the work schedule are further detailed in exhibits A, B and C which are attached hereto and made a part of the Work Authorization.

PART II. The maximum amount payable under this Work Authorization is $_____ and the method of payment is _____as set forth in Attachment E of the Agreement. This amount is based upon fees set forth in Attachment E, Fee Schedule, of the Agreement and the Engineer's estimated Work Authorization costs included in Exhibit D, Fee Schedule, which is attached and made a part of this Work Authorization.

PART III. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with Articles III thru V of the Agreement, and Attachment A, Section 1.

PART IV. This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate on _____, unless extended by a supplemental Work Authorization as provided in Attachment A, Section 1.

PART V. This Work Authorization does not waive the parties' responsibilities and obligations provided under "Article V of that certain Professional Services Agreement for Engineering / Design Services 365 Tollway Project / Segment 1 & 2.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER	**THE AUTHORITY**
_____	_____
(Signature)	(Signature)
Jorge A Flores, P.G._____	Pilar Rodriguez_____
(Printed Name)	(Printed Name)
Client Manager_____	Executive Director_____
(Title)	(Title)
_____	_____
(Date)	(Date)

ATTACHMENT D-2

SUPPLEMENTAL WORK AUTHORIZATION NO. ____
TO WORK AUTHORIZATION NO. ____
AGREEMENT FOR ENGINEERING SERVICES

THIS SUPPLEMENTAL WORK AUTHORIZATION is made pursuant to the terms and conditions of "Article V of that certain Professional Services Agreement for Engineering Design Services" hereinafter identified as the "Agreement," entered into by and between the Hidalgo County Regional Mobility Authority (Authority), and Terracon Consultants, Inc. (the Engineer).

The following terms and conditions of Work Authorization No. ____ are hereby amended as follows:

This Supplemental Work Authorization shall become effective on the date of final execution of the parties hereto. All other terms and conditions of Work Authorization No. ____ not hereby amended are to remain in full force and effect.

IN WITNESS WHEREOF, this Supplemental Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER	**THE AUTHORITY**
_____	_____
(Signature)	(Signature)
Jorge A Flores, P.G.	Pilar Rodriguez
(Printed Name)	(Printed Name)
Client Manager	Executive Director
(Title)	(Title)
_____	_____
(Date)	(Date)

ATTACHMENT E

FEE SCHEDULE

ATTACH APPROPRIATE RATES AND TESTING SUBMITTALS

Basis of Labor Estimate for HCRMA Bypass

Labor hours are based on the engineer provided schedule, and a 50 hour work week.

	Level of Effort Per Work Category Tech Hours	
Excavation & Embankment w/ Bridge Fills	7213	Field Technician on site for 100% of the anticipated construction time
Lime Treating	1575	Field Technician on site for 75% of the anticipated construction time
Cement Treating Base	1800	Field Technician on site for 100% of the anticipated construction time
Bond Breaker	500	Field Technician on site for 100% of the anticipated construction time
Concrete Paving	740	Field Technician on site for 20% of the anticipated construction time
Side Street Construction	1625	Field Technician on site for 50% of the anticipated construction time

Labor Category	Hours	Raw Rate	Contract Rate	Total
Field Technician	13453	$27.00	$68.02	$915,073.06
Project Engineer	1346	$58.00	$133.98	$180,337.08
Principal	135	$80.00	$186.90	$25,231.50
			Total Labor =	**$1,120,641.64**

Mileage		
Weeks on Project	272	
Days per Week	5.25	
Days on Project	1428	
Mileage per Day	49.5	
Mileage Rate	$ 6.00	
Total Miles Anticipated	70686	
Mileage Budget	**$ 424,116.00**	

Labor & Mileage Total =	**$1,544,757.64**
Total Testing =	**$405,501.00**
Grand Total =	**$1,950,258.64**

TEST NO.	CMT Firm: Terracon Date: 01/26/2021			Final as of 3/29/2021		
	Type		**Unit**		**QUANTITY**	**TOTAL**
1	Mobilization/Demobilization		Mile	$ 400.00		$ -
	Drilling, Logging, &Recovering Samples (**With** TCP)					$ -
2A	1. Depth ≤ 50 feet		Tex-132-E (every 5 feet)	$ 30.00		$ -
2B	2. Depth ≥ 50 feet		linear foot	$ 32.00		$ -
	Drilling, Logging, &Recovering Samples (**Without** TCP)					
3A	1. Depth ≤ 50 feet		linear foot	$ 27.00		$ -
3B	2. Depth ≥ 50 feet		linear foot	$ 29.00		$ -
4	Rock Coring (Soft Rock)[2]		linear foot	$ 12.50		$ -
5	Rock Coring (Hard Rock)[2]		linear foot	$ 16.00		$ -
6	Staking Borings and Utility Locations		hour	$ 115.00		$ -
	Standby Time (sampling)		hour	$ 272.00		$ -
7A	1. Hot Mix Asphalt (minumum of one hour)		each	$ 109.00		$ -
7B	2. Concrete (minumum of one hour)		each	$ 218.00		$ -
8	Piezometer - 2 inch (including well completion and installation)		linear foot	$ 44.00		$ -
9	Grouting of Borings		linear foot	$ 5.50		$ -
10	Traffic Control - Major		day	$ 2,500.00		$ -
	Laboratory Test	**Test Method**	**Unit**			
11	Volumetric Shrinkage	ASTM D427	each	$ 104.00		$ -
12	Standard Poor Test	ASTM D698	each	$ 98.00		$ -
13	Modified Poor Test	ASTM D1557	each	$ 340.00		$ -
14	Standard Penetration Test (SPT)	ASTM D1586	LF	$ 33.00		$ -
15	California Bearing Ratio (Single Sample without MD Curve)	ASTM D1883	test	$ 350.00		$ -
16	Unconfined Compressive Strength (Soil)	ASTM D2166	each	$ 75.00		$ -
17	Hydraulic Conductivity Permeability	ASTM D2434	each	$ 450.00		$ -
18	One Dimensional Consolidation Properties of Soil	ASTM D2435	each	$ 550.00		$ -
19	Unconfined Compressive Strength (Rock)	ASTM D2938	each	$ 98.00		$ -
20	Direct Shear Test of Soils Under Consolidated Drained Conditions	ASTM D3080	set of 3	$ 870.00		$ -
21	Direct Shear Test of Soils Under Consolidated Drained Conditions, SAND	ASTM D3080	set of 3	$ 490.00		$ -
22	Direct Shear Test of Soils Under Consolidated Drained Conditions, CLAY	ASTM D3080	set of 3	$ 655.00		$ -
23	Splitting Tensile of Intact Rock Core	ASTM D3967	each	$ 120.00		$ -
24	Water Stand Pipes	ASTM D4043	each	$ 40.00		$ -
25	Calcium Carbonate Content of Soils	ASTM D4373	LF	$ 62.00		$ -
26	Hydraulic Conductivity Permeability	ASTM D4511	each	$ 490.00		$ -
27	One Dimensional Swell, Methods A&B	ASTM D4546	each	$ 380.00		$ -
28	One Dimensional Swell, Method B Only	ASTM D4546	each	$ 327.00		$ -
29	One Dimensional Swell, Method C	ASTM D4546	each	$ 292.00		$ -
30	Permeability of Silt and Clays	ASTM D5084	each	$ 410.00		$ -
31	Suction Test (Filter Method)	ASTM D5298	each	$ 98.00		$ -
32	Casagrande Type Piezometers	N/A	each	$ 300.00		$ -
33	Casagrande Type Piezometers Installation	N/A	each	$ 55.00		$ -
34	Miscellaneous Testing	N/A	each	$ 55.00		$ -
35	Vertical Inclinometer	N/A	each	$ 490.00		$ -
36	Vertical Inclinometer Installation	N/A	each	$ 900.00		$ -
37	Vibrating Wire Piezometer	N/A	each	$ 980.00		$ -
38	Vibrating Wire Piezometer Installation	N/A	each	$ 1,200.00		$ -
39	Soil Boring with SPT	ASTM D1586	LF	$ 35.00		$ -
	Laboratory Test	**Test Method**	**Unit**			
	Soils & Base Testing					
40	Sampling	Tex-400-A	hour	$ 60.00	50	$ 3,000.00
41	Sample Preparation	Tex-101-E	each	$ 57.00	24	$ 1,368.00
42	Determining Slaking Time	Tex-102-E	each	$ 50.00		$ -
43	Moisture Content	Tex-103-E	each	$ 13.00	300	$ 3,900.00
44	Atterburg Limits	Tex-104,105&106-E	Set of 3	$ 75.00	224	$ 16,800.00
45	Linear Bar Shrinkage (per bar)	Tex-107-E	each	$ 65.00		$ -
46	Determining the Specific Gravity of Soils	Tex-108-E	each	$ 98.00		$ -
47	Sieve Analysis	Tex-110-E, Part I	each	$ 65.00	433	$ 28,145.00
48	Sieve Analysis (Hydrometer with Tex-108-E)	Tex-110-E, Part II	each	$ 82.00		$ -
49	Hydrometer with Tex-108-E (in conjunctin with Tex-110-E, Part II)	Tex-108-E	each	$ 55.00		$ -
50	Percent Passing No. 200 Sieve	Tex-111-E	each	$ 108.00	224	$ 24,192.00
51	Determining the Amount of Material in Solis Finer than the 75 mi	Tex-111-E	each	$ 49.00		$ -
52	Admixing Lime to Reduce Plasticity Index of Soils	Tex-112-E	each	$ 125.00		$ -
53	Moisture-Density Relationship	Tex-113-E	each	$ 245.00	20	$ 4,900.00
54	Moisture-Density Relationship	Tex-114-E	each	$ 218.00	73	$ 15,914.00
55	Field Density Measurements	Tex-115-E	hour	$ 55.00	0	$ -
56	Wet Ball Mill Test	Tex-116-E	each	$ 250.00	10	$ 2,500.00

57	Texas Triaxial Compression [6]	Tex-117-E, Part I	each	$ 1,650.00	10	$ 16,500.00
58	Texas Triaxial Compression [6]	Tex-117-E, Part II	each	$ 1,500.00		$ -
59	Quality Assurance (QA) Series for Flexible Base [7] [8]	See Foot Notes	each	$ 2,350.00		$ -
60	Soil- Cement Testing [7]	Tex-120-E, Part II	each	$ 436.00	9	$ 3,924.00
61	Soil- Lime Testing [7]	Tex-121-E, Part II	each	$ 436.00	19	$ 8,284.00
61.1	Soil-Lime Testing Determining Stabilization Ability of Lime by Soil pH	Tex-121-E, Part III	each	$ 250.00		$ -
62	Determining the Drainage Factor of Soil Materials (Not Field Test)	Tex-123-E ++	each	$ 600.00		$ -
63	Determining Modulus of Sub-grade Recaction (K Value) (Not Field Test)	Tex-125-E ++	each	$ 150.00		$ -
64	Molding, Testing, and Evaluation Bituminous Black Base Materials	Tex-126-E ++	each	$ 250.00		$ -
65	Lime-Fly Ash Compression [7]	Tex-127-E	each	$ 872.00	28	$ 24,416.00
66	Soil pH	Tex-128-E	each	$ 41.00	77	$ 3,157.00
67	Resistivity of Soils	Tex-129-E	each	$ 98.00		$ -
68	Slurry Testing	Tex-130-E	each	$ 103.00		$ -
69	Texas Cone Penetration	Tex-132-E	each	$ 49.00		$ -
70	Freezing and Thawing Tests oc Compacted Soil-Cement Mixture	Tex-135-E	each	$ 327.00		$ -
71	Thickness of Pavement Layers (4 hour minimum)	Tex-140-E	hour	$ 200.00	184	$ 36,800.00
72	Manual Procedure for Description and Identification of Soils	Tex-141-E	each	$ 55.00		$ -
73	Laboratory Classification os Soils for Engineering Purposes	Tex-142-E	each	$ 55.00		$ -
74	Sulfate Content in Soils	Tex-145-E	each	$ 71.00	77	$ 5,467.00
75	Conductivity Test for Field Detection of Sulfates in Soil	Tex-146-E	each	$ 65.00		$ -
75.1	Organic Content Using UV-VIS Method	Tex-148-E	each	$ 70.00	10	$ 700.00
76	Determining Cholride and Sulfate Contents in Soils	Tex-620-J	each	$ 81.00		$ -
77	Free Swell Test	EM1110-2-1906	each	$ 164.00		$ -
78	Pressure Swell Test	EM1110-2-1906	each	$ 272.00		$ -
79	One-Dimensional Swell	ASTM D4546	each	$ 380.00		$ -
80	One-Dimensional Swell (Method B Only)	ASTM D4546	each	$ 75.00		$ -
81	Potential Vertical Rise Calculation	Tex-124-E	each	$ 71.00		$ -
82	Volumetric Shrinkage	ASTM D4943	each	$ 104.00		$ -
83	Volumetric Shrinkage	ASTM D427	each	$ 98.00		$ -
84	Unconfined Compression Test (Soil)	ASTM D2166	each	$ 81.00		$ -
85	Unconfined Compression Test (Rock)	ASTM D2938	each	$ 98.00		$ -
86	Unconfined Compression Test (Rock) (Method D)	ASTM D7012	each	$ 60.00		$ -
	Unconsolidated Undrained (UU) Triaxial Compression Test					$ -
87	1. Set of Three	Tex-118-E	set	$ 300.00		$ -
88	2. Multistage	Tex-118-E	each	$ 273.00		$ -
	Consolidated Undrained (CU) Triaxial Compression Test					$ -
89	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 1,310.00		$ -
90	2. Multistage	Tex-131-E or ASTM D4767	each	$ 1,090.00		$ -
	Consolidated Drained (CD) Triaxial Compression Test					$ -
91	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 925.00		$ -
92	2. Multistage	Tex-131-E or ASTM D4767	each	$ 872.00		$ -
93	Direct Shear Consolidated Drained (CD), sand	ASTM D3080	set of 3	$ 1,400.00		$ -
94	Direct Shear Consolidated Drained (CD), clay	ASTM D3080	set of 3	$ 1,400.00		$ -
95	One-Dimensional Consolidation Test (7 load increments)	ASTM D2435	each	$ 600.00		$ -
96	Resilient Modulus (fine-grained soils)	AASHTO T307	each	$ 1,035.00		$ -
	Hot Mix Asphalt Testing					$ -
97	Sieve Analysis of Fine and Coarse Aggregates	Tex-200-F	each	$ 95.00	18	$ 1,710.00
98	Bulk Specific Gravity and Water Absorption of Aggregates	Tex-201-F	each	$ 95.00	18	$ 1,710.00
99	Apparent Specific Gravity of Material Finer Than 180 µm (No. 80) Sieve	Tex-202-F	each	$ 65.00		$ -
100	Sand Equivalent Test	Tex-203-F	each	$ 85.00	103	$ 8,755.00
101	Labortory Method of Mixing Bituminous Mixtures	Tex-205-F	Set of 3	$ 92.00		$ -
102	Compacting Specimens Using the Texas Gyratory Compactor (TG	Tex-206-F	Set of 3	$ 98.00		$ -
103	Determining Bulk Specific Gravity of Compacted Bituminuous Mixtures	Tex-207-F (I)	each	$ 27.00	186	$ 5,022.00
104	Determining In-Place Density of Compacted Bituminuous Mixtures (Nuclear Method)	Tex-207-F (III)	each	$ 27.00		$ -
105	Asphalt Rolling Pattern (Nuclear Method)	Tex-207-F (IV)	each	$ 87.00		$ -
106	Segregation Profile	Tex-207-F (V)	each	$ 175.00	3	$ 525.00
107	Joint Density	Tex-207-F (VII)	each	$ 175.00	3	$ 525.00
108	Test of Stabilometer Value of Bituminous Mixtures	Tex-208-F	set of 3	$ 120.00		$ -
109	Determining Asphalt Content of Bituminous Mixtures by Extraction	Tex-210-F	each	$ 155.00	20	$ 3,100.00
110	Recovery of Asphalt from Bituminou Mixtures by the Abson Pro	Tex-211-F	each	$ 218.00		$ -
111	Determining Moisture Content of Bituminous Mixtures	Tex-212-F	each	$ 55.00	3	$ 165.00
112	Determining Hydrocarbon-Volatile Content of Bituminous Mixture	Tex-213-F	each	$ 110.00		$ -
113	Determining Deleterious Material and Decantation Test for Coarse Aggregates	Tex-217-F	each	$ 82.00	10	$ 820.00
114	Indirect Tensile Strength Test	Tex-226-F	each	$ 545.00		$ -
115	Theoretical Maximum Specific Gravity of Bituminous Mixtures	Tex-227-F	each	$ 98.00	186	$ 18,228.00
116	Determining Asphalt Content of Bituminous Mixtures by the Nuclear	Tex-228-F	each	$ 190.00		$ -
117	Combined HMAC Cold-Belt Sampling and Testing Procedure	Tex-229-F	each	$ 55.00		$ -
118	Determining Draindown Characteristics in Bituminous Mixtures	Tex-235-F	each	$ 55.00		$ -

119	Determining Asphalt Content from Asphalt Paving Mixtures by the Ignition Method	Tex-236-F	each	$ 142.00	120	$ 17,040.00
120	Asphalt Release Agents	Tex-239-F	each	$ 50.00		$ -
121	Superpave Gyratory Compacting of Test Specimens of Bituminous	Tex-241-F	each	$ 125.00	30	$ 3,750.00
122	Hamburg Wheel Tracker	Tex-242-F	each	$ 245.00	3	$ 735.00
123	Tack Coat Adhesion	Tex-243-F	each	$ 109.00		$ -
124	Thremal Profile	Tex-244-F	each	$ 130.00	3	$ 390.00
125	Cantabro Loss	Tex-245-F	each	$ 190.00	3	$ 570.00
126	Permeability or Water Flow of Hot Mix Asphalt	Tex-246-F	each	$ 76.00		$ -
127	Overlay Test	Tex-248-F	set of 3	$ 545.00	3	$ 1,635.00
128	Flat and Elongated Particles	Tex-280-F	each	$ 61.00		$ -
129	Sampling Bituminous Materials, Pre-Molded Joint Fillers, and Joint	Tex-500-C	each	$ 55.00	4	$ 220.00
130	Asphalt Binder Water in Petroleum	Tex-501-C AASHTO T55	each	$ 93.00		$ -
131	Penetration of Bituminous Materials	Tex-502-C AASHTO T49	each	$ 163.00		$ -
132	Ductility of Asphalt Materials	Tex-503-C AASHTO T51	each	$ 120.00		$ -
133	Flash and Fire Points by Cleveland Open Cup	Tex-504-C AASHTO T48	each	$ 65.00		$ -
134	Softening Point of Bitumen (Riing and Ball Apparatus	Tex-505-C AASHTO T53	each	$ 110.00		$ -
135	Solubility of Bituminous Materials	Tex-507-C AASHTO T44	each	$ 110.00		$ -
136	Specific Gravity	Tex-508-C AASHTO T228	each	$ 82.00		$ -
137	Spot Test of Asphaltic Materials	Tex-509-C AASHTO T102	each	$ 158.00		$ -
138	Effect of Heat and Air on Asphalt Materials (Thin-Film Oven Test)	Tex-510-C AASHTO t179	each	$ 68.00		$ -
139	Flash Point with Tag Open-Cup Apparatus for Use with Material H	Tex-512-C AASHTO T79	each	$ 93.00		$ -
140	Saybolt Viscosity	Tex-513-C AASHTO T72	each	$ 82.00		$ -
141	Cutback Asphalts - Specific Gravity, API Gravity, or Density of Cutback Asphalts by Hdyrometer Method; Emulsified Asphalts - Weight per Gallon of Emulsified Asphalt	Tex-514-C ASTM D3142 ASTM D244	each	$ 136.00		$ -
142	Distillation of Cutback Asphalt Products	Tex-515-C AASHTO T78	each	$ 185.00		$ -
143	Float Test for Bituminous Materials	Tex-519-C AASHTO T50	each	$ 70.00		$ -
144	Standard Test Method for Emulsified Asphalts	Tex-521-C AASHTO T59	each	$ 190.00		$ -
145	Viscosity of Asphalts by Vacuum Capillary Viscometer	Tex-528-C AASHTO T202	each	$ 38.00		$ -
146	Kinematic Viscosity of Asphalts (Bitumens)	Tex-529-C AASHTO T201	each	$ 82.00		$ -
147	Boil Test (Effect of Water on Paving Mix)	Tex-530/531-C	each	$ 136.00	3	$ 408.00
148	Field Coring - ACP Thickness	ASTM D3549	each	$ 109.00		$ -
149	Pavement Thickness Determin. (Full Depth)	ASTM D3549	each	$ 136.00		$ -
150	Determining Polymer Additive Percentages in Polymer Modified	Tex-533-C	each	$ 65.00		$ -
151	Calculating Viscosity from Penetration	Tex-535-C	each	$ 76.00		$ -
152	Elastic Recovery of Tensile Deformation Using a Ductilometer	Tex-539-C	each	$ 65.00		$ -
153	Measurement of Polymer Separation on Heating in Modified Asphalat	Tex-540-C	each	$ 55.00		$ -
154	Rolling Thin Film Oven Test for Asphalt Binders	Tex-541-C ASSHTO T240	each	$ 110.00		$ -
155	Flexural Creep Stiffness Using the Bending Beam Rheometer	AASHTO T313	each	$ 110.00		$ -
156	Determining Rheological Properties of Asphalt Binder Using a Dy	AASHTO T315	each	$ 125.00		$ -
157	Determining Breaking Index for Asphalt Emulsions	Tex-542-C	each	$ 235.00		$ -
158	Resilience Test for Sealants and Repair Materials	Tex-547-C	each	$ 200.00		$ -
159	Tensile Strain to Failure	Tex-548-C	each	$ 65.00		$ -
160	Cone Flow Test	Tex-549-C	each	$ 60.00		$ -
161	Flexibility Test for Sealants and Repair Materials	Tex-550-C	each	$ 190.00		$ -
162	Settlement of Sealants and Repair Materials	Tex-551-C	each	$ 95.00		$ -
	Concrete & Aggregate Testing					
163	Sieve Analysis for Conc. Agg	Tex-401-A	each	$ 85.00	2	$ 170.00
164	Fineness Modulus for Conc. Agg	Tex-402-A	each	$ 75.00	2	$ 150.00
165	SSD Specific Gravity / Absorption Conc. Agg	Tex-403-A	each	$ 80.00		$ -
166	Unit Weight of Conc. Agg	Tex-404-A	each	$ 40.00	2	$ 80.00
167	Determining Pecent Voids and Solids in Concrete	Tex-405-A	each	$ 65.00		$ -
168	Decantation for Conc. Agg	Tex-406-A	each	$ 65.00	17	$ 1,105.00
169	Organic Impurities for Conc. Agg	Tex-408-A	each	$ 65.00	2	$ 130.00
170	Free Moisture and Water Absorption in Aggregate for Concrete	Tex-409-A	each	$ 35.00		$ -
171	L.A. Abrasion	Tex-410-A	each	$ 450.00	3	$ 1,350.00
172	5 Cycle Magnesium Soundness	Tex-411-A	each	$ 500.00	4	$ 2,000.00
173	Deleterious Material for Conc. Agg	Tex-413-A	each	$ 75.00	30	$ 2,250.00
174	Air Content of Fresh Concrete by Volumeteric	Tex-414-A	each	$ 33.00	141	$ 4,653.00
175	Slump of Fresh Concrete	Tex-415-A	each	$ 25.00	141	$ 3,525.00
176	Air Content of Fresh Concrete by Pressure	Tex-416-A	each	$ 27.00		$ -
177	Unit Weight, Yield and Air Content (Gravimetric) of Concrete	Tex-417-A	each	$ 30.00		$ -
178	Comp. Strength of Cyl. Conc. Specimen	Tex-418-A	each	$ 15.00	282	$ 4,230.00
179	Measure Temp. of Fresh Conc.	Tex-422-A	each	$ 20.00	141	$ 2,820.00
180	Obtaining & Testing Drilled Conc. Cores	Tex-424-A	each	$ 250.00		$ -
181	Absorption and Dry Bulk Specific Gravity of Lightweight Coarse	Tex-433-A	each	$ 95.00	2	$ 190.00
182	Test Flow of Grout Mixtures (Flow Cone Method)	Tex-437-A	each	$ 125.00		$ -
183	Accelerated Polish Test for Coarse Aggregate	Tex-438-A	each	$ 355.00		$ -
184	Det. Comp. Strength of Grouts	Tex-442-A	each	$ 18.00		$ -
185	Making & Curing Conc. Test Specimen	Tex-447-A	each	$ 18.00		$ -
186	Flexural Strength of Concrete Using Simple Beam Third-Point Load	Tex-448-A	each	$ 55.00		$ -
187	Capping Cyl. Conc. Specimen	Tex-450-A	each	$ 18.00		$ -
188	Degradation of Coarse Aggregate by Micro-Devel Abrasion	Tex-461-A	each	$ 350.00	2	$ 700.00

189	Uniformity of Concrete	Tex-472-A	each	$ 165.00		$ -
	Additional Testing	**Test Method**	**Unit**			
190	Geogrid Testing	Tex-621-J	each	$ 806.00		$ -
191	Water Quality Testing	Tex-619-J	each	$ 158.00		$ -
192	Lime Testing	Tex-600-J	each	$ 450.00	11	$ 4,950.00
193	Operating Inertial Profilers and Evaluating Pavement Profiles	Tex-1001-S	each	$ 1,500.00	2	$ 3,000.00
194	Vane Shear Testing	ASTM D2573	each	$ 327.00		$ -
	Miscellaneous Testing	**Test Method**	**Unit**			
195	Structural Field Welding	**NA**	hour	$150.00		$ -
	Equipmemt & Supplies for MT & UT		day	$150.00		$ -
	Other Direct Expenses		**Unit**			
	Photocopies B/W (8 1/2" X 11")		each	$ 0.15		$ -
	Photocopies B/W (11" X 17")		each	$ 0.23		$ -
	Photocopies Color (8 1/2" X 11")		each	$ 0.82		$ -
	Photocopies Color (11" X 17")		each	$ 1.41		$ -
	Digital Ortho Plotting		sheet	$ 2.43		$ -
	CADD Plotting		linear foot	$ 1.00		$ -
	Plots (B/W on Bond)		linear foot	$ 0.91		$ -
	Plots (Color on Bond)		linear foot	$ 1.75		$ -
	Plots (Color on Photgraphic Paper)		linear foot	$ 2.72		$ -
	Reproduction of CD/DVD		each	$ 5.00		$ -
	Additional Testing	**Test Method**	**Unit**			
196	Pressure Slake	Tex-431-A	each		2	$ -
197	Freeze Thaw	Tex-432-A	each		2	$ -
198	Determining Crushed Face Particle Count	Tex-460-A	each	$ 91.00	2	$ 182.00
199	Determining Flakiness Index	Tex-224-F	each	$ 90.00	2	$ 180.00
200	White Rock Count	Tex-220-F	each		2	$ -
201	Voids in Mineral Aggregates (VMA)	Tex-204-F	each	$ 2,250.00	48	$ 108,000.00
202	Acid Insoluble Residue for Fine Aggregates	Tex-612-J	each	$ 187.00	3	$ 561.00
					TOTAL TESTING:	**$ 405,501.00**

TEST NO.	CMT Firm:TERRACON CONSULTANTS Date: 09/13/2021			2020-23					
	Geotechnical Services		**Unit**	**20210830 FINAL RATES**					**COMMENTS**
1	Mobilization/Demobilization		each	$ 458.50					$6/mile for anything < 67 miles per trip or $400 > 67 miles
	Drilling, Logging, &Recovering Samples (**With** TCP)		per mile	$ 6.00					
2A	1. Depth ≤ 50 feet		Tex-132-E (every 5 feet)	$ 35.17					
2B	2. Depth ≥ 50 feet		linear foot	$ 37.36					
	Drilling, Logging, &Recovering Samples (**Without** TCP)								
3A	1. Depth ≤ 50 feet ( )		linear foot	$ 30.61					
3B	2. Depth ≥ 50 feet ( )		linear foot	$ 32.57					
4	Rock Coring (Soft Rock) [2]		linear foot	$ 17.52					
5	Rock Coring (Hard Rock) [2]		linear foot	$ 21.28					
6	Staking Borings and Utility Locations		hour	$ 121.67					
	Standby Time (sampling)		hour	$ 297.74					
7A	1. Hot Mix Asphalt (minumum of one hour)		each	$ 117.05					
7B	2. Concrete (minumum of one hour)		each	$ 171.98					
8	Piezometer - 2 inch (including well completion and installation)		linear foot	$ 48.36					
9	Grouting of Borings		linear foot	$ 6.86					
10	Traffic Control - Major		day	$ 1,957.92					
	Laboratory Test	**Test Method**	**Unit**						
11	Volumetric Shrinkage	ASTM D427	each	$ 105.24					
12	Standard Poor Test	ASTM D698	each	$ 205.74					
13	Modified Poor Test	ASTM D1557	each	$ 278.52					
14	Standard Penetration Test (SPT)	ASTM D1586	LF	$ 30.04					
15	California Bearing Ratio (Single Sample without MD Curve)	ASTM D1883	test	$ 302.03					
16	Unconfined Compressive Strength (Soil)	ASTM D2166	each	$ 67.44					
17	Hydraulic Conductivity Permeability	ASTM D2434	each	$ 391.33					
18	One Dimensional Consolidation Properties of Soil	ASTM D2435	each	$ 489.34					
19	Unconfined Compressive Strength (Rock)	ASTM D2938	each	$ 89.11					
20	Direct Shear Test of Soils Under Consolidated Drained Conditions	ASTM D3080	set of 3	$ 679.23					
21	Direct Shear Test of Soils Under Consolidated Drained Conditions, SAND	ASTM D3080	set of 3	$ 576.27					
22	Direct Shear Test of Soils Under Consolidated Drained Conditions, CLAY	ASTM D3080	set of 3	$ 708.79					
23	Splitting Tensile of Intact Rock Core	ASTM D3967	each	$ 131.11					
24	Water Stand Pipes	ASTM D4043	each	$ 37.69					
25	Calcium Carbonate Content of Soils	ASTM D4373	LF	$ 68.31					
26	Hydraulic Conductivity Permeability	ASTM D4511	each	$ 324.08					
27	One Dimensional Swell, Methods A&B	ASTM D4546	each	$ 249.47					
28	One Dimensional Swell, Method B Only	ASTM D4546	each	$ 324.66					
29	One Dimensional Swell, Method C	ASTM D4546	each	$ 247.52					
30	Permeability of Silt and Clays	ASTM D5084	each	$ 385.64					
31	Suction Test (Filter Method)	ASTM D5298	each	$ 91.51					
32	Casagrande Type Piezometers	N/A	each	$ 337.82					
33	Casagrande Type Piezometers Installation	N/A	each	$ 339.59					
~~34~~	~~Miscellaneous Testing~~	~~N/A~~	~~each~~	$ 188.62					No need for this rate.
35	Vertical Inclinometer	N/A	each	$ 575.22					
36	Vertical Inclinometer Installation	N/A	each	$ 917.26					
37	Vibrating Wire Piezometer	N/A	each	$ 960.25					
38	Vibrating Wire Piezometer Installation	N/A	each	$ 995.10					
39	Soil Boring with SPT	ASTM D1586	LF	$ 33.48					
	Laboratory Test	**Test Method**							
	Soils & Base Testing								
40	Sampling	Tex-400-A	hour	$ 66.15					
41	Sample Preparation	Tex-101-E	each	$ 67.65					
42	Determining Slaking Time	Tex-102-E	each	$ 72.20					
43	Moisture Content	Tex-103-E	each	$ 15.44					
44	Atterburg Limits	Tex-104,105&106-E	Set of 3	$ 93.10					
45	Linear Bar Shrinkage (per bar)	Tex-107-E	each	$ 69.04					
46	Determining the Specific Gravity of Soils	Tex-108-E	each	$ 80.67					
47	Sieve Analysis	Tex-110-E, Part I	each	$ 83.14					
48	Sieve Analysis (Hydrometer with Tex-108-E)	Tex-110-E, Part II	each	$ 94.61					
49	Hydrometer with Tex-108-E (in conjunctin with Tex-110-E, Part II)	Tex-108-E	each	$ 65.69					
50	Percent Passing No. 200 Sieve	Tex-111-E	each	$ 66.42					
51	Determining the Amount of Material in Solis Finer than the 75 mi	Tex-111-E	each	$ 63.71					
52	Admixing Lime to Reduce Plasticity Index of Soils	Tex-112-E	each	$ 145.84					
53	Moisture-Density Relationship	Tex-113-E	each	$ 274.07					
54	Moisture-Density Relationship	Tex-114-E	each	$ 259.06					
55	Field Density Measurements	Tex-115-E	hour	$ 61.22					
56	Wet Ball Mill Test	Tex-116-E	each	$ 260.00					
57	Texas Triaxial Compression [6]	Tex-117-E, Part I	each	$ 793.37					
58	Texas Triaxial Compression [6]	Tex-117-E, Part II	each	$ 1,451.89					
59	Quality Assurance (QA) Series for Flexible Base [7] [8]	See Foot Notes	each	$ 2,178.60					
60	Soil- Cement Testing [7]	Tex-120-E, Part II	each	$ 439.45					
61	Soil- Lime Testing [7]	Tex-121-E, Part II	each	$ 430.11					
61.1	Soil-Lime Testing Determining Stabilization Ability of Lime by Soil pH	Tex-121-E, Part III	each	$ 395.15					
62	Determining the Drainage Factor of Soil Materials (Not Field Test)	Tex-123-E ++	each	$ 332.34					
63	Determining Modulus of Sub-grade Recaction (K Value) (Not Field Test)	Tex-125-E ++	each	$ 139.15					
64	Molding, Testing, and Evaluation Bituminous Black Base Materials	Tex-126-E ++	each	$ 1,360.40					
65	Lime-Fly Ash Compression [7]	Tex-127-E	each	$ 719.39					
66	Soil pH	Tex-128-E	each	$ 53.94					
67	Resistivity of Soils	Tex-129-E	each	$ 118.20					
68	Slurry Testing	Tex-130-E	each	$ 109.14					
69	Texas Cone Penetration	Tex-132-E	each	$ 41.79					
70	Freezing and Thawing Tests oc Compacted Soil-Cement Mixture	Tex-135-E	each	$ 360.26					
71	Thickness of Pavement Layers (4 hour minimum)	Tex-140-E	hour	$ 107.04					
72	Manual Procedure for Description and Identification of Soils	Tex-141-E	each	$ 51.18					
73	Laboratory Classification os Soils for Engineering Purposes	Tex-142-E	each	$ 65.75					
74	Sulfate Content in Soils	Tex-145-E	each	$ 91.91					
75	Conductivity Test for Field Detection of Sulfates in Soil	Tex-146-E	each	$ 100.96					
75.1	Organic Content Using UV-VIS Method	Tex-148-E	each	$ 231.70					
76	Determining Cholride and Sulfate Contents in Soils	Tex-620-J	each	$ 88.16					
77	Free Swell Test	EM1110-2-1906	each	$ 192.31					
78	Pressure Swell Test	EM1110-2-1906	each	$ 292.08					
79	One-Dimensional Swell	ASTM D4546	each	$ 277.26					
80	One-Dimensional Swell (Method B Only)	ASTM D4546	each	$ 259.35					
81	Potential Vertical Rise Calculation	Tex-124-E	each	$ 85.14					
82	Volumetric Shrinkage	ASTM D4943	each	$ 111.43					
~~83~~	~~Volumetric Shrinkage~~	~~ASTM D427~~	~~each~~	$ 81.35					Repeated on Line 11
84	Unconfined Compression Test (Soil)	ASTM D2166	each	$ 66.79					
85	Unconfined Compression Test (Rock)	ASTM D2938	each	$ 97.80					
86	Unconfined Compression Test (Rock) (Method D)	ASTM D7012	each	$ 72.17					
	Unconsolidated Undrained (UU) Triaxial Compression Test								
87	1. Set of Three	Tex-118-E	set	$ 312.36					
88	2. Multistage	Tex-118-E	each	$ 286.21					
	Consolidated Undrained (CU) Triaxial Compression Test								
89	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 1,484.08					
90	2. Multistage	Tex-131-E or ASTM D4767	each	$ 1,286.81					
	Consolidated Drained (CD) Triaxial Compression Test								
91	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 1,128.69					
92	2. Multistage	Tex-131-E or ASTM D4767	each	$ 1,030.76					
93	Direct Shear Consolidated Drained (CD), sand	ASTM D3080	set of 3	$ 658.05					
94	Direct Shear Consolidated Drained (CD), clay	ASTM D3080	set of 3	$ 834.92					
95	One-Dimensional Consolidation Test (7 load increments)	ASTM D2435	each	$ 597.14					

96	Resilient Modulus (fine-grained soils)	AASHTO T307	each	$ 1,141.53				
	Hot Mix Asphalt Testing							
97	Sieve Analysis of Fine and Coarse Aggregates	Tex-200-F	each	$ 94.54				
98	Bulk Specific Gravity and Water Absorption of Aggregates	Tex-201-F	each	$ 91.88				
99	Apparent Specific Gravity of Material Finer Than 180 µm (No. 80) Sieve	Tex-202-F	each	$ 64.35				
100	Sand Equivalent Test	Tex-203-F	each	$ 95.22				
101	Labortory Method of Mixing Bituminous Mixtures	Tex-205-F	Set of 3	$ 163.82				
102	Compacting Specimens Using the Texas Gyratory Compactor (TG	Tex-206-F	Set of 3	$ 113.04				
103	Determining Bulk Specific Gravity of Compacted Bituminuous Mixtures	Tex-207-F (I)	each	$ 42.46				
104	Determining In-Place Density of Compacted Bituminuous Mixtures (Nuclear Method)	Tex-207-F (III)	each	$ 39.73				
105	Asphalt Rolling Pattern (Nuclear Method)	Tex-207-F (IV)	each	$ 88.69				
106	Segregation Profile	Tex-207-F (V)	each	$ 194.17				
107	Joint Density	Tex-207-F (VII)	each	$ 194.17				
108	Test of Stabilometer Value of Bituminous Mixtures	Tex-208-F	set of 3	$ 157.05				
109	Determining Asphalt Content of Bituminous Mixtures by Extraction	Tex-210-F	each	$ 182.13				
110	Recovery of Asphalt from Bituminou Mixtures by the Abson Pro	Tex-211-F	each	$ 289.11				
111	Determining Moisture Content of Bituminous Mixtures	Tex-212-F	each	$ 54.03				
112	Determining Hydrocarbon-Volatile Content of Bituminous Mixture	Tex-213-F	each	$ 131.76				
113	Determining Deleterious Material and Decantation Test for Coarse Aggregates	Tex-217-F	each	$ 99.09				
114	Indirect Tensile Strength Test	Tex-226-F	each	$ 495.02				
115	Theoretical Maximum Specific Gravity of Bituminous Mixtures	Tex-227-F	each	$ 105.31				
116	Determining Asphalt Content of Bituminous Mixtures by the Nuclear	Tex-228-F	each	$ 103.18				
117	Combined HMAC Cold-Belt Sampling and Testing Procedure	Tex-229-F	each	$ 79.85				
118	Determining Draindown Characteristics in Bituminous Mixtures	Tex-235-F	each	$ 69.93				
119	Determining Asphalt Content from Asphalt Paving Mixtures by the Ignition Method	Tex-236-F	each	$ 162.20				
120	Asphalt Release Agents	Tex-239-F	each	$ 86.83				
121	Superpave Gyratory Compacting of Test Specimens of Bituminous	Tex-241-F	each	$ 158.11				
122	Hamburg Wheel Tracker	Tex-242-F	each	$ 451.77				
123	Tack Coat Adhesion	Tex-243-F	each	$ 135.65				
124	Thremal Profile	Tex-244-F	each	$ 159.17				
125	Cantabro Loss	Tex-245-F	each	$ 219.67				
126	Permeability or Water Flow of Hot Mix Asphalt	Tex-246-F	each	$ 81.80				
127	Overlay Test	Tex-248-F	set of 3	$ 762.22				
128	Flat and Elongated Particles	Tex-280-F	each	$ 77.36				
129	Sampling Bituminous Materials, Pre-Molded Joint Fillers, and Joint	Tex-500-C	each	$ 82.52				
130	Asphalt Binder Water in Petroleum	Tex-501-C AASHTO T55	each	$ 120.50				
131	Penetration of Bituminous Materials	Tex-502-C AASHTO T49	each	$ 130.82				
132	Ductility of Asphalt Materials	Tex-503-C AASHTO T51	each	$ 139.55				
133	Flash and Fire Points by Cleveland Open Cup	Tex-504-C AASHTO T48	each	$ 70.56				
134	Softening Point of Bitumen (Riing and Ball Apparatus	Tex-505-C AASHTO T53	each	$ 120.27				
135	Solubility of Bituminous Materials	Tex-507-C AASHTO T44	each	$ 140.33				
136	Specific Gravity	Tex-508-C AASHTO T228	each	$ 94.34				
137	Spot Test of Asphaltic Materials	Tex-509-C AASHTO T102	each	$ 197.57				
138	Effect of Heat and Air on Asphalt Materials (Thin-Film Oven Test)	Tex-510-C AASHTO t179	each	$ 148.60				
139	Flash Point with Tag Open-Cup Apparatus for Use with Material H	Tex-512-C AASHTO T79	each	$ 108.75				
140	Saybolt Viscosity	Tex-513-C AASHTO T72	each	$ 89.02				
141	Cutback Asphalts - Specific Gravity, API Gravity, or Density of Cutback Asphalts by Hdyrometer Method; Emulsified Asphalts - Weight per Gallon of Emulsified Asphalt	Tex-514-C ASTM D3142 ASTM D244	each	$ 365.94				
142	Distillation of Cutback Asphalt Products	Tex-515-C AASHTO T78	each	$ 205.67				
143	Float Test for Bituminous Materials	Tex-519-C AASHTO T50	each	$ 85.65				
144	Standard Test Method for Emulsified Asphalts	Tex-521-C AASHTO T59	each	$ 238.65				
145	Viscosity of Asphalts by Vacuum Capillary Viscometer	Tex-528-C AASHTO T202	each	$ 46.17				
146	Kinematic Viscosity of Asphalts (Bitumens)	Tex-529-C AASHTO T201	each	$ 89.02				
147	Boil Test (Effect of Water on Paving Mix)	Tex-530/531-C	each	$ 147.94				
148	Field Coring - ACP Thickness	ASTM D3549	each	$ 119.16				
149	Pavement Thickness Determin. (Full Depth)	ASTM D3549	each	$ 147.94				
150	Determining Polymer Additive Percentages in Polymer Modified	Tex-533-C	each	$ 79.42				
151	Calculating Viscosity from Penetration	Tex-535-C	each	$ 87.06				
152	Elastic Recovery of Tensile Deformation Using a Ductilometer	Tex-539-C	each	$ 78.21				
153	Measurement of Polymer Separation on Heating in Modified Asphalat	Tex-540-C	each	$ 123.22				
154	Rolling Thin Film Oven Test for Asphalt Binders	Tex-541-C ASSHTO T240	each	$ 171.74				
155	Flexural Creep Stiffness Using the Bending Beam Rheometer	AASHTO T313	each	$ 253.00				
156	Determining Rheological Properties of Asphalt Binder Using a Dy	AASHTO T315	each	$ 218.06				
157	Determining Breaking Index for Asphalt Emulsions	Tex-542-C	each	$ 251.89				
158	Resilience Test for Sealants and Repair Materials	Tex-547-C	each	$ 305.36				
159	Tensile Strain to Failure	Tex-548-C	each	$ 81.65				
160	Cone Flow Test	Tex-549-C	each	$ 80.95				
161	Flexibility Test for Sealants and Repair Materials	Tex-550-C	each	$ 299.70				
162	Settlement of Sealants and Repair Materials	Tex-551-C	each	$ 115.78				
	Concrete & Aggregate Testing							
163	Sieve Analysis for Conc. Agg	Tex-401-A	each	$ 90.10				
164	Fineness Modulus for Conc. Agg	Tex-402-A	each	$ 37.69				
165	SSD Specific Gravity / Absorption Conc. Agg	Tex-403-A	each	$ 85.63				
166	Unit Weight of Conc. Agg	Tex-404-A	each	$ 58.30				
167	Determining Pecent Voids and Solids in Concrete	Tex-405-A	each	$ 75.94				
168	Decantation for Conc. Agg	Tex-406-A	each	$ 62.34				
169	Organic Impurities for Conc. Agg	Tex-408-A	each	$ 59.16				
170	Free Moisture and Water Absorption in Aggregate for Concrete	Tex-409-A	each	$ 62.94				
171	L.A. Abrasion	Tex-410-A	each	$ 403.12				
172	5 Cycle Magnesium Soundness	Tex-411-A	each	$ 520.48				
173	Deleterious Material for Conc. Agg	Tex-413-A	each	$ 73.27				
174	Air Content of Fresh Concrete by Volumeteric	Tex-414-A	each	$ 33.10				
175	Slump of Fresh Concrete	Tex-415-A	each	$ 29.90				
176	Air Content of Fresh Concrete by Pressure	Tex-416-A	each	$ 32.08				
177	Unit Weight, Yield and Air Content (Gravimetric) of Concrete	Tex-417-A	each	$ 55.25				
178	Comp. Strength of Cyl. Conc. Specimen	Tex-418-A	each	$ 20.43				
179	Measure Temp. of Fresh Conc.	Tex-422-A	each	$ 23.16				
180	Obtaining & Testing Drilled Conc. Cores	Tex-424-A	each	$ 303.62				
181	Absorption and Dry Bulk Specific Gravity of Lightweight Coarse	Tex-433-A	each	$ 105.40				
182	Test Flow of Grout Mixtures (Flow Cone Method)	Tex-437-A	each	$ 102.66				
183	Accelerated Polish Test for Coarse Aggregate	Tex-438-A	each	$ 790.55				
184	Det. Comp. Strength of Grouts	Tex-442-A	each	$ 24.84				
185	Making & Curing Conc. Test Specimen	Tex-447-A	each	$ 22.78				
186	Flexural Strength of Concrete Using Simple Beam Third-Point Load	Tex-448-A	each	$ 48.13				
187	Capping Cyl. Conc. Specimen	Tex-450-A	each	$ 19.40				
188	Degradation of Coarse Aggregate by Micro-Devel Abrasion	Tex-461-A	each	$ 252.89				
189	Uniformity of Concrete	Tex-472-A	each	$ 173.12				
	Additional Testing	**Test Method**	**Unit**					
190	Geogrid Testing	Tex-621-J	each	$ 800.20				
191	Water Quality Testing	Tex-619-J	each	$ 175.47				
192	Lime Testing	Tex-600-J	each	$ 367.59				
193	Operating Inertial Profilers and Evaluating Pavement Profiles	Tex-1001-S	each	$ 1,676.76				
194	Vane Shear Testing	ASTM D2573	each	$ 338.00				
	Miscellaneous Testing	**Test Method**	**Unit**					
195	Structural Field Welding	**NA**	hour	$ 150.00				
	Equipment & Supplies for MT & UT		day	$ 150.00				
	Other Direct Expenses		**Unit**					
	Photocopies B/W (8 1/2" X 11")		each	$ 0.15				
	Photocopies B/W (11" X 17")		each	$ 0.23				
	Photocopies Color (8 1/2" X 11")		each	$ 0.82				
	Photocopies Color (11" X 17")		each	$ 1.41				
	Digital Ortho Plotting		sheet	$ 2.43				
	CADD Plotting		linear foot	$ 1.00				
	Plots (B/W on Bond)		linear foot	$ 0.91				
	Plots (Color on Bond)		linear foot	$ 1.75				
	Plots (Color on Photgraphic Paper)		linear foot	$ 2.72				
	Reproduction of CD/DVD		each	$ 5.00				

L&G Personnel Classification	Hourly Base Rate	Contract Rate FY 2020-2023	20210830 FINAL RATES
Senior Project Manager / Principal	$ 83.00	$ 257.30	**$ 186.90**
Senior Geotechnical Engineer	$ 65.00	$ 210.50	**$ 166.32**
Geotechnical Engineer	$ 62.00	$ 192.20	**$ 136.40**
Project Engineer	$ 56.00	$ 173.60	**$ 133.98**
Engineering Lab Manager	$ 40.00	$ 124.00	**$ 94.71**
Utility Coordinator	$ 38.00	$ 117.80	**$ 110.98**
Senior Project Inspector	$ 38.00	$ 117.80	**$ 99.75**
Project Inspector	$ 30.00	$ 93.00	**$ 73.92**
EIT	$ 40.00	$ 124.00	**$ 88.00**
Engineer Tech / GIS	$ 27.00	$ 83.70	**$ 76.60**
Logger	$ 22.00	$ 68.20	**$ 62.00**
Field Technician (Soils, Aggr, Asph, Conc)	$ 22.00	$ 68.20	**$ 68.20**
CADD Operator	$ 22.00	$ 68.20	**$ 77.50**
Admin/Clerical	$ 22.00	$ 68.20	**$ 61.95**

ATTACHMENT E-1
Final Cost Proposal Form

This attachment provides the basis of payment and fee schedule**. The basis of payment for this Work Authorization is indicated by an "X" in the applicable box.** The basis shall be supported by the Final Cost Proposal (FCP) shown below and should identify maximum amount payable and basis of payment. If more than one basis of payment is used, each one must be supported by a separate FCP. The basis of payment will be determined by Work Authorization and may be by any of the methods listed below.

"X"	**Basis**	
____	Lump Sum	The lump sum shall be equal to the maximum amount payable. The lump sum includes all direct and indirect costs and fixed fee. The Engineer shall be paid pro rata based on the percentage of work completed. For payment the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.
__X__	Unit Cost	The unit cost(s) for each type of unit and number of units are shown in the FCP. The unit cost includes all direct and indirect costs and fixed fee. The Engineer shall be paid based on the type and number of units fully completed and the respective unit cost. For payment, the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or any other cost data. The FCP may include special items, such as equipment which are not included in the unit costs. Documentation of these special costs may be required. The maximum amount payable equals the total of all units times their respective unit cost plus any special direct items shown.
__X	Specified Rate Basis	The specified rates for each type of labor are shown in the FCP below. The FCP may include special items, such as equipment which are not included in the specified rates. Payment shall be based on the actual hours worked multiplied by the specified rate for each type of labor plus other agreed to special direct cost items. The specified rate includes direct labor and indirect cost and fixed fee. The Authority may request documentation of reimbursable direct costs including hours worked. Documentation of special item costs may be required. The specified rate is not subject to audit.
____	Cost Plus Fixed Fee	Payment shall be based on direct and indirect costs incurred plus a pro rata share of the fixed fee based on the ratio of labor and overhead cost incurred to total estimated labor and overhead cost in the FCP or the percentage of work completed. The invoice must itemize labor rates, hours worked, other direct costs and indirect costs. The Engineer may be required to provide documentation of hours worked and any eligible direct costs claimed. The provisional overhead rate charged is subject to audit and adjustment to actual rates incurred. The FCP below shows the hourly rates for labor, other direct expenses including but not limited to travel and allowable materials, provisional overhead rate and the fixed fee. __A. Actual Cost Plus Fixed Fee - Actual wages are paid (no minimum, no maximum. __B. Range of Cost Plus Fixed Fee – Actual wages must be within the allowable range shown on the Final Cost Proposal.

A. **REFER TO ATTACHMENT E-2 FOR HOURLY SPECIFIED / LUMP SUM RATE SCHEDULE FOR EACH FIRM**

ATTACHMENT F

WORK SCHEDULE

HCRMA Construction & Materials Testing Services
TOLL365 (SH 365)

Task Name	Start	Finish
Material Testing	10/1/2021	12/13/2025
Geotechnical	10/1/2021	12/13/2025
Other Analyses	10/1/2021	12/13/2025
All sampling and testing of components and materials	10/1/2021	12/13/2025
Hot Mix Asphalt Testing	10/1/2021	12/13/2025
Concrete Testing	10/1/2021	12/13/2025
Construction Oversight Documentation	10/1/2021	12/13/2025
Project Correspondence File (Design and Construction)	10/1/2021	12/13/2025

ATTACHMENT H-MOU

MEMORANDUM OF UNDERSTANDING REGARDING THE ADOPTION OF THE TEXAS DEPARTMENT OF TRANSPORATION'S FEDERALY-APPROVED DISADVANTAGED BUSINESS ENTERPRISE PROGRAM BY THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

This Memorandum of Understanding is by and between the **TEXAS DEPARTMENT OF TRANSPORTATION ("TxDOT"),** an agency of the State of Texas; and the Hidalgo County Regional Mobility Authority, a mobility authority created under the provisions of Chapter 370, Texas Transportation Code (the "RMA").

Whereas, from time to time from the Authority receives federal funds from the Federal Highway Administration ("FHWA") through TxDOT to assist the Authority with the construction and design of projects partially or wholly funded through FHWA; and

Whereas, the Authority, as a sub-recipient of federal funds, is required by 49 CFR 26, to implement a program for disadvantaged business enterprises ("DBEs"), as defined by 49 CFR 26 ("DBE Program"); and

Whereas, TxDOT has implemented a DBE Program that is approved by the Federal Highway Administration (FHWA) pursuant to 49 CFR part 26; and

Whereas, as a condition of receiving federal funds from FHWA through TxDOT, certain aspects of the Authority's procurement of construction and design services are subject to review and/or concurrence by TxDOT; and

Whereas, the Authority and TxDOT undertake substantially similar roadway construction projects and design projects and construct and design their respective projects using substantially the same pool of contractors; and

Whereas, the Authority desires to implement a federally compliant DBE Program by adopting the TxDOT approved program, as recommended by FHWA; and

Whereas, TxDOT and the Authority find it appropriate to enter into this Memorandum of Understanding to memorialize the obligations, expectations and rights each has as related to the Authority's adoption of the TxDOT DBE Program to meet the federal requirements;

Now, therefore, TxDOT and the Authority, in consideration of the mutual promises, covenants and conditions made herein, agree to and acknowledge the following:

(1) TxDOT has developed a DBE Program and annually establishes a DBE goal for Texas that are federally approved and compliant with 49 CFR 26 and other applicable laws and regulations.

(2) The Authority anticipates being a sub-recipient of federal assistance for construction projects and design projects and, in accordance with 49 CFR § 26.21, must implement a federally approved DBE Program. The Authority receives its federal assistance through TxDOT. As a sub-recipient, the Authority has the option of developing its own program or adopting and operating under TxDOT's federally approved DBE Program. The FHWA recommends that sub-recipients, such as the Authority, adopt the DBE program, administered through TxDOT, and the Authority by its prescribed protocol adopted the TxDOT DBE Program on August 8, 2007.

(3) This Memorandum of Understanding evidences FHWA's and TxDOT's consent to the adoption of the TxDOT DBE Program by the Authority to achieve its DBE participation in federally assisted Construction

158111-1 163.000

and Design Projects.

(4) The parties will work together in good faith to assure effective and efficient implementation of the DBE Program for the Authority and for TxDOT.

(5) the Authority and TxDOT have agreed upon the following delegation of responsibilities and obligations in the administration of the DBE Program adopted by the Authority:

(a) The Authority will be responsible for project monitoring and data reporting to TxDOT. The Authority will furnish to TxDOT any required DBE contractor compliance reports, documents or other information as may be required from time to time to comply with federal regulations. TxDOT will provide the necessary and appropriate reporting forms, if any, to the Authority.

(b) The Authority will recommend contract-specific DBE goals, if any, consistent with TxDOT's DBE guidelines and in consideration of the local market, project size, and nature of the good(s) or service(s) to be acquired. The Authority's recommendation may be that no DBE goals are set on any particular project or portion of a project or that proposed DBE goals be modified. The Authority and TxDOT will work together to achieve a mutually acceptable goal; however, TxDOT will retain final decision-making authority on those issues.

(c) TxDOT will cooperate with the Authority in an effort to meet the timing and other requirements of the Authority's projects.

(d) The Authority will be solely responsible for the solicitation and structuring of bids and bid documents to procure goods and services for its Construction and Design Projects and will be responsible for all costs and expenses incurred in its procurements.

(e) The DBEs eligible to participate on TxDOT construction projects or design projects also will be eligible to participate on the Authority's construction projects or design projects subject to the DBE Program, unless otherwise prohibited from bidding on a the Authority's project under applicable law or the Authority's procurement policy. The DBEs will be listed on TxDOT's website under the Texas Unified Certification Program (TUCP).

(f) The Authority will conduct investigations and provide reports with recommendations to TxDOT concerning any DBE Program compliance issues that may arise due to project specific requirements such as Good Faith Effort (GFE), Commercially Useful Function (CUF), etc. The Authority and TxDOT will work together to achieve a mutually acceptable goal; however, TxDOT will retain final decision-making authority on those issues and reserves the right to perform compliance reviews by TxDOT's Office of Civil Rights (OCR).

(g) The Authority will designate a liaison officer to coordinate efforts with TxDOT's DBE Program administrators and to respond to questions from the public and private sector regarding the Authority's administration of the DBE Program through TxDOT.

(h) The Authority will be responsible for providing TxDOT with DBE project awards and DBE Commitments, monthly DBE reports, DBE Final Reports, DBE shortfall reports, and annual and updated goal analysis and reports.

(i) TxDOT will be responsible for maintaining a directory of firms eligible to participate in the DBE Program, and providing business development and outreach programs. The Authority and TxDOT will work cooperatively to provide supportive services and outreach to DBE firms in the Hidalgo County area.

158111-1 163.000

(j) The Authority will submit DBE semi-annual progress reports to TxDOT.

(k) The Authority will participate in TxDOT sponsored training classes to include topics on DBE Annual Goals, DBE Goal Setting for Construction Projects and Design Projects, DBE Contract Provisions, and DBE Contract Compliance, which may include issues such as DBE Commitments, DBE Substitution, and Final DBE Clearance. TxDOT will include DBE contractors performing work on the Authority projects in the DBE Education and Outreach Programs.

(6) In the event there is a disagreement between TxDOT and the Authority about the implementation of the TxDOT DBE Program by the Authority, the parties agree to meet within ten (10) days of receiving a written request from the other party of a desire to meet to resolve any disagreement. The parties will make good faith efforts to resolve any disagreement as efficiently as is reasonably possible in consultation with FHWA. Non-compliance by the Authority can result in restitution of federal funds to TxDOT and withholding of further federal funds upon consultation with FHWA.

(7) This Memorandum of Understanding becomes effective upon execution by all parties and automatically renews each year unless a party notifies the other parties of its intent to terminate the agreement.

(8) If this Memorandum of Understanding is terminated for any reason, the Authority will be allowed reasonable time in which to seek approval from FHWA for an alternative DBE Program, without being deemed non-compliant with 49 CFR Part 26.

(9) This Memorandum of Understanding applies only to projects for which the Authority is a sub-recipient of federal funds through TxDOT. The Authority may also implement a Minority and Women-Owned Small Business Enterprise (M/W/SBE) policy and program that applies to projects for which it is not a sub-recipient of federal funds through TxDOT and which are not subject to the TxDOT DBE Program. The Authority may, at its option, use some aspects of the TxDOT DBE Program and other similar programs in implementing its other policies and programs for its non-federally funded projects.

(10) The following attachments to this Memorandum of Understanding ("MOU") are incorporated as if fully set out herein for all purposes: Attachment A - FHWA Memorandum HCR-1/HIF-1 (relating to access required by the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973); Attachment B - SPECIAL PROVISION 000-461; Attachment C - Comprehensive Development Agreement (CDA) DBE Provisions (with TxDOT's DBE Program attached); and Attachment D - 49 CFR §26.13 (contractual assurances). In the case of any conflict between the SPECIAL PROVISION and CDA DBE Provisions and TxDOT's DBE Program, the provisions of the first two documents shall prevail in regard to CDAs only.

(11) The following procedure shall be observed by the parties in regard to any notifications:

(a) Any notice required or permitted to be given under this Memorandum of Understanding shall be in writing and may be effected by personal delivery, by hand delivery through a courier or a delivery service, or by registered or certified mail, postage prepaid, return receipt requested, addressed to the proper party, at the following address:

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY:

Dennis Burleson
Chairman
c/o LRGVDC
311 N. 15th Street

158111-1 163.000

McAllen, Texas 78501-4705

With a copy to:

Blakely L. Fernandez
Tuggey Rosenthal Pauerstein Sandoloski Agather LLP
755 E. Mulberry, Ste. 200
San Antonio, Texas 78212

TEXAS DEPARTMENT OF TRANSPORTATION

Amadeo Saenz, Jr. P.E.
Executive Director
125 E. 11th Street
Austin, Texas 78701

(b) Notice by personal delivery or hand delivery shall be deemed effective immediately upon delivery, provided notice is given as required by Paragraph (a) hereof. Notice by registered or certified mail shall be deemed effective three (3) days after deposit in a U.S. mailbox or U.S. Post Office, provided notice is given as required by Paragraph (a) hereof.

(c) Either party hereto may change its address by giving notice as provided herein.

(12) This Memorandum of Understanding may be modified or amended only by written instrument, signed by both the Authority and the TxDOT and dated subsequent to the date(s) of this MOU. Except as authorized by the respective parties, no official, employee, agent, or representative of the parties has any authority, either express or implied, to modify or amend this MOU.

(13) The provisions of this MOU are severable. If any clause, sentence, provision, paragraph, or article of this MOU, or the application of this MOU to any person or circumstance is held by any court of competent jurisdiction to be invalid, illegal, or unenforceable for any reason, such invalidity, illegality, or unenforceability shall not impair, invalidate, nullify, or otherwise affect the remainder of this MOU, but the effect thereof shall be limited to the clause, sentence, provision, paragraph, or article so held to be invalid, illegal, or unenforceable, and the application of such clause, sentence, provision, paragraph, or article to other persons or circumstances shall not be affected; provided, however, the Authority and TxDOT may mutually agree to terminate this Memorandum of Understanding.

(14) The following provisions apply in regard to construction of this MOU:

(a) Words of any gender in this MOU shall be construed to include the other, and words in either number shall be construed to include the other, unless the context in this MOU clearly requires otherwise.

(b) When any period of time is stated in this MOU, the time shall be computed to exclude the first day and include the last day of the period. If the last day of any period falls on a Saturday, Sunday, or national holiday, or state or county holiday, these days shall be omitted from the computation. All hours stated in this MOU are stated in Central Standard Time or in Central Daylight Savings Time, as applicable.

(15) This Memorandum of Understanding shall not be construed in any way as a waiver by the parties of any immunities from suit or liability that parties may have by operation of law, and the parties hereby retain all of their respective affirmative defenses.

158111-1 163.000

ATTACHMENT H-MOU

MEMORANDUM OF UNDERSTANDING
REGARDING THE ADOPTION OF THE TEXAS DEPARTMENT OF TRANSPORATION'S FEDERALY-APPROVED DISADVANTAGED BUSINESS ENTERPRISE PROGRAM BY
THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

EXECUTED by TxDOT and the Authority, acting through each duly authorized official and effective on the latest date signed.

The signatories below confirm that they have the authority to execute this MOU and bind their principles.

TEXAS DEPARTMENT OF TRANSPORTATION

By: _____
Amadeo Saenz, Jr. P.E.
Executive Director

Date: 3/13/08

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

By: _____
Dennis Burleson
Chairman

Date: 2/13/2008

158111-1 163.000

Attachment H-Instructions
As Per 49CFR 26.21

The following pages contain six (6) different Attachments to Attachment H covering participation of HUB and DBE providers and subproviders. The correct form to use is determined by whether the Agreement is funded in whole or part by federal funds State funds or Authority funds, and whether or not a HUB/DBE goal has been set for the Agreement. The following pages contain separate reporting forms for federally funded DBE participation and Authority funded HUB participation. **Select the forms that are appropriate for your Agreement and delete the rest along with these instructions from the final Agreement.**

Federally Funded Contracts
Attachment H-FG, Disadvantaged Business Enterprise (DBE) for Federal Funded Professional or Technical Services Contracts ♦ This provision is applicable to federally funded contracts with assigned DBE goals. ♦ The appropriate forms for this provision are Attachments H-1, H-2, H-3 and H-4 and H-5. A copy of each form is required in the contract. ♦ Note: if the contract requires work authorizations, a completed Attachment H-2 will be required with each Work Authorization, if a DBE will be performing work. If a non-DBE subprovider is used, insert N/A (not applicable) on the line provided on the H-2 form. ♦ Attachment H-3 must be submitted monthly to the AUTHORITY Office even if there is no invoice being submitted or subcontracting to report. ♦ Attachment H-3 must be submitted with each invoice to the appropriate agency contact for payment.
Attachment H-FN, Disadvantaged Business Enterprise (DBE) for Race Neutral Professional or Technical Services Contracts ♦ This provision is applicable to federally funded contracts with no DBE goal assigned. ♦ If no subcontractors will be used, the appropriate forms for this provision are Attachments H-3 and H-5. A copy of each form is required in the contract. ♦ Note: If subcontractors are used, the required forms would be Attachments H-1, H-2, H-3, H-4 and H-5. A copy of each form is required in the contract. ♦ Attachment H-3 must be submitted monthly to the AUTHORITY Office even if there is no invoice being submitted or subcontracting to report. ♦ Attachment H-3 must be submitted with each invoice to the appropriate agency contact for payment.
Attachment H-3, Texas Department of Transportation Subprovider Monitoring System for Federally Funded Contracts. This is a Monthly Progress Assessment Report. ♦ Required for all federally funded contracts. ♦ This form is required monthly and must be submitted to the AUTHORITY Office even if there is no invoice being submitted or subcontracting to report. ♦ This form must be submitted with each invoice to the appropriate agency contact for payment.
Attachment H-5, Federal Subprovider and Supplier Information Required for all federally funded contracts.

State Funded Contracts
Attachment H-SG, Historically Underutilized Business (HUB) for State Funded Professional or Technical Services Contracts, State of Texas HUB Subcontracting Plan Required ♦ This provision is applicable to state funded contracts with a HUB goal assigned. ♦ The appropriate reporting forms for this provision are Attachments H-1, H-2, H-4, and H-6 (Texas Building and Procurement Commission [TBPC] State of Texas HUB Subcontracting Plan (HSP), Prime Contractor Assessment Report). A copy of each form is required in the contract. ♦ Note: if the contract requires work authorizations, a completed Attachment H-2 will be required with each Work Authorization, if a HUB will be performing work. If a non-HUB subprovider is used, insert N/A (not applicable) on the line provided on the H-2 form. ♦ Attachment H-6 will be required monthly and must be submitted to the AUTHORITY Office even if there is no invoice being submitted or subcontracting to report. ♦ Attachment H-6 must be submitted with each invoice to the appropriate agency contact for payment.
Attachment H-SN, Historically Underutilized Business (HUB) Participation for State Funded Professional or Technical Services Contracts, No State of Texas HUB Subcontracting Plan Required ♦ This provision is applicable to state funded contracts with no HUB subcontracting plan required and no HUB goal assigned. If no subcontractors are used, the appropriate forms for this provision are Attachments H-1 and H-6. ♦ Note: If subcontractors are used, the required forms would be Attachments H-1, H-2, H-4 and H-6. A copy of each form is required in the contract. ♦ Attachment H-6 must be submitted monthly to the AUTHORITY Office even though there is no invoice being submitted or subcontracting to report. ♦ Attachment H-6 must be submitted with each invoice to the appropriate agency contact for payment.
Attachment H-6, HUB Subcontracting Plan (HSP) Prime Contractor Professional Assessment Report. This is a Monthly Progress Assessment Report. This is a Texas Building and Procurement Commission (TBPC) form and cannot be altered. ♦ Required for all State funded contracts. ♦ Attachment H-6 is required monthly and should be submitted to the AUTHORITY Office. This is a requirement even though there is no invoice being submitted or subcontracting to report. ♦ A copy of Attachment H-6 must be submitted when supplying an invoice to the appropriate agency contact for payment. ♦ The "Object Code" section(s) on this form should remain blank.

ATTACHMENT H-FG
Disadvantaged Business Enterprise (DBE)
for Federal-Aid Professional or Technical Services Contracts

1) **PURPOSE.** The purpose of this attachment is to carry out the Authority and the U.S. Department of Transportation's (DOT) policy of ensuring nondiscrimination in the award and administration of the AUTHORITY and DOT assisted contracts and creating a level playing field on which firms owned and controlled by minority or socially and economically disadvantaged individuals can compete fairly for the AUTHORITY and DOT assisted contracts.
2) **POLICY.** It is the policy of the AUTHORITY and DOT and the Texas Department of Transportation (henceforth the "Department") that Disadvantaged Business Enterprises (DBEs) as defined in 49 CFR Part 26, Subpart A and the Department's Disadvantaged Business Enterprise Program, shall have the opportunity to participate in the performance of contracts financed in whole or in part with Federal funds. Consequently, the Disadvantaged Business Enterprise requirements of 49 CFR Part 26, and the Department's Disadvantaged Business Enterprise Program, apply to this contract as follows.
   a. The Provider will offer Disadvantaged Business Enterprises, as defined in 49 CFR Part 26, Subpart A and the Authority/Department Disadvantaged Business Enterprise Program, the opportunity to compete fairly for contracts and subcontracts financed in whole or in part with Federal funds. In this regard, the Provider shall make a good faith effort to meet the Disadvantaged Business Enterprise goal for this contract.
   b. The Provider and any subprovider(s) shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Provider shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. The requirements of this Special Provision shall be physically included in any subcontract.
   c. When submitting the contract for execution by the Authority, the Provider must complete and furnish Attachment H-1 which lists the commitments made to certified DBE subprovider(s) that are to meet the contract goal and Attachment H-2 which is a commitment agreement(s) containing the original signatures of the Provider and the proposed DBE(s). For Work Authorization Contracts, Attachment H-1 is required at the time of submitting the contract for execution by the Authority/Department. Attachment H-2 will be required to be completed and attached with each work authorization number that is submitted for execution, if the DBE will be performing work**.** Any substitutions or changes to the DBE subcontract amount shall be subject to prior written approval by the Authority/Department. If non-DBE subprovider is performing work, insert N/A (not applicable) on the line provided.
   d. Failure to carry out the requirements set forth above shall constitute a material breach of this contract and may result; in termination of the contract by the Authority/Department; in a deduction of the amount of DBE goal not accomplished by DBEs from the money due or to become due to the Provider, not as a penalty but as liquidated damages to the Authority/Department; or such other remedy or remedies as the Authority/Department deems appropriate.
3) **DEFINITIONS.**
   a. "Authority/Department" means Hidalgo County Regional Mobility Authority (HCRMA) and the Texas Department of Transportation (TxDOT).
   b. "Federal-Aid Contract" is any contract between the Texas Department of Transportation and a Provider which is paid for in whole or in part with U. S. Department of Transportation (DOT) financial assistance.
   c. "Provider" is any individual or company that provides professional or technical services.
   d. "DBE Joint Venture" means an association a DBE firm and one (1) or more other firm(s) to carry out a single business enterprise for profit for which purpose they combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work

of the contract and whose share in the capital contribution, control, management, risks and profits of the joint venture are commensurate with its ownership interest.

e. "Disadvantaged Business Enterprise (DBE)" means a firm certified as such by the Authority/Department in accordance with 49 CFR Part 26.
f. "Good Faith Effort" means efforts to achieve a DBE goal or other requirement of this Special Provision which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement.
g. "Race-neutral DBE Participation" means any participation by a DBE through customary competitive procurement procedures.

4) **PERCENTAGE GOAL.** The goal for Disadvantaged Business Enterprise (DBE) participation in the work to be performed under this Agreement is **6.0%** of the Agreement amount.
5) **PROVIDER'S RESPONSIBILITIES.** A DBE prime may receive credit toward the DBE goal for work performed by his-her own forces and work subcontracted to DBEs. A DBE prime must make a good faith effort to meet the goals. In the event a DBE prime subcontracts to a non-DBE, that information must be reported to the Authority/Department.
   a. A Provider who cannot meet the contract goal, in whole or in part, shall document the "Good Faith Efforts" taken to obtain DBE participation. The following is a list of the types of actions that may be considered as good faith efforts. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.
      (1) Soliciting through all reasonable and available means the interest of all certified DBEs who have the capability to perform the work of the contract. The solicitation must be done within sufficient time to allow the DBEs to respond to it. Appropriate steps must be taken to follow up initial solicitations to determine, with certainty, if the DBEs are interested.
      (2) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Provider might otherwise prefer to perform the work items with its own forces.
      (3) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
      (4) Negotiating in good faith with interested DBEs by making a portion of the work available to DBE subproviders and suppliers and selecting those portions of the work or material needs consistent with the available DBE subproviders and suppliers.
      (5) The ability or desire of the Provider to perform the work of a contract with its own organization does not relieve the Provider's responsibility to make a good faith effort. Additional costs involved in finding and using DBEs is not in itself sufficient reason for a Provider's failure to meet the contract DBE goal, as long as such costs are reasonable. Providers are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
      (6) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities.
      (7) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Provider.
      (8) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials or related assistance or services.
      (9) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, County, State and Federal minority/women business

assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

(10) If the Authority/Department's Director of the Business Opportunity Programs Office determines that the Provider has failed to meet the good faith effort requirements, the Provider will be given an opportunity for reconsideration by the Director of the appropriate Division.

NOTE: The Provider must not cause or allow subproviders to bid their services.

b. The preceding information shall be submitted directly to the Chair of the Hidalgo County Regional Mobility Authority (Authority) responsible for the project.

c. The Provider shall make all reasonable efforts to honor commitments to DBE subproviders named in the commitment submitted under Section 2.c. of this attachment. Where the Provider terminates or removes a DBE subprovider named in the initial commitment, the Provider must demonstrate on a case-by-case basis to the satisfaction of the Authority/Department that the originally designated DBE was not able or willing to perform.

d. The Provider shall make a good faith effort to replace a DBE subprovider that is unable or unwilling to perform successfully with another DBE, to the extent needed to meet the contract goal. The Provider shall submit a completed Attachment H-2 Form for the substitute firm(s). Any substitution of DBEs shall be subject to prior written approval by the Authority /Department. The Authority /Department may request a statement from the firm being replaced concerning its replacement prior to approving the substitution.

e. The Provider shall designate a DBE liaison officer who will administer the DBE program and who will be responsible for maintenance of records of efforts and contacts made to subcontract with DBEs.

f. Providers are encouraged to investigate the services offered by banks owned and controlled by disadvantaged individuals and to make use of these banks where feasible.

6) **ELIGIBILITY OF DBEs.**

a. The Authority/Department certifies the eligibility of DBEs, DBE joint ventures and DBE truck-owner operators to perform DBE subcontract work on DOT financially assisted contracts.

b. This certification will be accomplished through the use of the appropriate certification schedule contained in this Authority/Department's DBE program.

c. The Authority/Department publishes a Directory of Disadvantaged Business Enterprises containing the names of firms that have been certified to be eligible to participate as DBEs on DOT financially assisted contracts. The directory is available from the Authority's/Department's Business Opportunity Programs Office. The Texas Unified Certification Program DBE Directory can be found on the Internet at: http://www.dot.state.tx.us/services/business_opportunity_programs/tucp_dbe_directory.htm .

d. Only DBE firms certified at the time the contract is signed or at the time the commitments are submitted are eligible to be used in the information furnished by the Provider as required under Section 2.c. and 5.d. above. For purposes of the DBE goal on this contract, DBEs will only be allowed to perform work in the categories of work for which they were certified.

7) **DETERMINATION OF DBE PARTICIPATION.**

A firm must be an eligible DBE and perform a professional or technical function relating to the project. Once a firm is determined to be an eligible DBE, the total amount paid to the DBE for work performed with his/her own forces is counted toward the DBE goal. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the subprovider is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.

A DBE subprovider may subcontract no more than 70% of a federal aid contract. The DBE subprovider shall perform not less than 30% of the value of the contract work with assistance of employees employed and paid directly by the DBE; and equipment owned or rented directly by the DBE. DBE subproviders must perform a commercially useful function required in the contract in order for payments to be credited toward meeting the contract goal. A DBE performs a commercially useful function when it is responsible for executing the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself . When a DBE is presumed not to be performing a commercially useful function, the DBE may present evidence to rebut this presumption.

A Provider may count toward its DBE goal a portion of the total value of the contract amount paid to a DBE joint venture equal to the distinct, clearly defined portion of the work of the contract performed by the DBE.

Proof of payment, such as copies of canceled checks, properly identifying the Authority/Department's contract number or project number may be required to substantiate the payment, as deemed necessary by the Authority/Department.

8) **RECORDS AND REPORTS.**
   a. After submission of the initial commitment reported (Attachment H-1), required by Section 2.c. of this attachment, the Provider shall submit Monthly Progress Assessment Reports (Attachment H-3), after contract work begins, on DBE involvement to meet the goal and for race-neutral participation. One copy of each report is to be sent to the Authority/Department's Business Opportunity Programs Office monthly, in addition one copy is to be submitted with the Provider's invoice. **Only actual payments made to subproviders are to be reported.** These reports will be required until all subprovider activity is completed. The Authority/Department may verify the amounts being reported as paid to DBEs by requesting copies of canceled checks paid to DBEs on a random basis.
   b. DBE subproviders should be identified on the report by name, type of work being performed, the amount of actual payment made to each during the billing period, cumulative payment amount and percentage of the total contract amount. These reports will be due within fifteen (15) days after the end of a calendar month. Reports are required even when no DBE activity has occurred in a billing period.
   c. All such records must be retained for a period of four (4) years following final payment or until any investigation, audit, examination, or other review undertaken during the four (4) years is completed, and shall be available at reasonable times and places for inspection by authorized representatives of the Authority or Texas Department of Transportation or the DOT.
   d. Prior to receiving final payment, the Provider shall submit a Final Report (Attachment H-4), detailing the DBE payments. The Final Report is to be sent to the Authority/Department's Business Opportunity Programs Office and one (1) copy to be submitted with the Provider's final invoice. If the DBE goal requirement is not met, documentation of the good faith efforts made to meet the goal must be submitted with the Final Report.
9) **COMPLIANCE OF PROVIDER.** To ensure that DBE requirements of this DOT-assisted contract are complied with, the Authority/Department will monitor the Provider's efforts to involve DBEs during the performance of this contract. This will be accomplished by a review of Monthly Progress Assessment Reports (Attachment H-3), submitted to the Authority/Department's Business Opportunity Programs Office

by the Provider indicating his progress in achieving the DBE contract goal, and by compliance reviews conducted by the Authority/Department. The Monthly Progress Assessment Report (Attachment H-3) must be submitted at a minimum monthly to the Business Opportunity Programs Office, in addition to with each invoice to the appropriate agency contact.

The Provider shall receive credit toward the DBE goal based on actual payments to the DBE subproviders with the following exceptions and only if the arrangement is consistent with standard industry practice. The Provider shall contact the Authority/Department if he/she withholds or reduces payment to any DBE subprovider.

(1) A DBE firm is paid but does not assume contractual responsibility for performing the service;
(2) A DBE firm does not perform a commercially useful function;
(3) Payment is made to a DBE that cannot be linked by an invoice or canceled check to the contract under which credit is claimed;
(4) Payment is made to a broker or a firm with a brokering-type operation;
(5) Partial credit is allowed, in the amount of the fee or commission provided the fee or commission does not exceed that customarily allowed for similar services, for a bona fide service, such as professional, technical, consultant, or managerial services, and assistance in the procurement of essential personnel, facilities, equipment, materials, or supplies required for performance of the contract.

A Provider's failure to comply with the requirements of this Special Provision shall constitute a material breach of this contract. In such a case, the Authority/Department reserves the right to terminate the contract; to deduct the amount of DBE goal not accomplished by DBEs from the money due or to become due the Provider, not as a penalty but as liquidated damages to the Authority/Department; or such other remedy or remedies as the Authority/Department deems appropriate.

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ATTACHMENT H-FN

Disadvantaged Business Enterprise (DBE) for Race-Neutral Professional or Technical Services Contracts

It is the policy of the U. S. Department of Transportation (DOT) that DBEs as defined in 49 CFR Part 26, Subpart A, be given the opportunity to compete fairly for contracts and subcontracts financed in whole or in part with Federal funds and that a maximum feasible portion of the Department's overall DBE goal be met using race-neutral means. Consequently, if there is no DBE goal, the DBE requirements of 49 CFR Part 26, apply to this contract as follows:

The Provider will offer DBEs as defined in 49 CFR Part 26, Subpart A, the opportunity to compete fairly for contracts and subcontracts financed in whole or in part with federal funds. Race-Neutral DBE participation on projects with no DBE goal should be reported on the Attachment H-3 Form. Payments to DBEs reported on Attachment H-3 are subject to the following requirements:

DETERMINATION OF DBE PARTICIPATION.

A firm must be an eligible DBE and perform a professional or technical function relating to the project. Once a firm is determined to be an eligible DBE, the total amount paid to the DBE for work performed with his/her own forces must be reported as race-neutral DBE participation. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work should not be reported unless the subcontractor is itself a DBE.

A DBE subprovider may subcontract no more than 70% of a federal aid contract. The DBE subprovider shall perform not less than 30% of the value of the contract work with assistance of employees employed and paid directly by the DBE; and equipment owned or rented directly by the DBE. DBE subproviders must perform a commercially useful function required in the contract. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. When a DBE is presumed not to be performing a commercially useful function, the DBE may present evidence to rebut this presumption.

A Provider must report a portion of the total value of the contract amount paid to a DBE joint venture equal to the distinct, clearly defined portion of the work of the contract performed by the DBE.

Proof of payment, such as copies of canceled checks, properly identifying the Authority's contract number or project number may be required to substantiate the payment, as deemed necessary by the Authority.

The Provider and any subprovider shall not discriminate on the basis of race, color, national origin or sex in the award and performance of contracts. These requirements shall be physically included in any subcontract.

Failure to carry out the requirements set forth above shall constitute a material breach of this contract and, may result in termination of the contract by the Authority/Department or other such remedy as the Authority/Department deems appropriate.

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ATTACHMENT H-SG (NOT APPLICABLE)

Historically Underutilized Business
for State Funded Professional or Technical Services Contracts
HUB Goal Assigned-State of Texas Subcontracting Plan Required

1) **POLICY.** It is the policy of the Authority/Department to ensure that HUBs shall have an equal opportunity to participate in the performance of contracts; to create a level playing field on which HUBs can compete fairly for contracts and subcontracts; to ensure nondiscrimination on the basis of race, color, national origin, or gender in the award and administration of contracts; to help remove barriers to the participation of HUBs in department contracts; and, to assist in the development of firms that can compete successfully in the market place outside the HUB program. Consequently, the HUB requirements of the Authority/Department's HUB Program apply to this contract as follows:
   (1) The Provider agrees to insure that they shall take all necessary and reasonable steps to meet the HUB goal for this contract.
      a. The Provider and any subprovider(s) shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of contracts.
      b. When submitting the contract for execution by the Authority, the Provider must complete and furnish Attachment H-1 which lists the commitments made to all subproviders, including certified HUB subprovider(s) that are to meet the contract goal, and Attachment H-2 which is a commitment agreement(s) containing the original signatures of the Provider and HUB(s) that were indicated in the original submitted Authority/State of Texas HUB Subcontracting Plan (HSP) in Section 8. For Work Authorization Contracts, Attachment H-1 is required at the time of submitting the contract for execution by the Department. Attachment H-2 will be required to be completed and attach with each work authorization number that is submitted for execution, if the HUB will be performing work. If non-HUB subprovider is performing work, insert N/A (not applicable) on the line provided. A prime must allow a HUB maximum opportunity to perform the work by not creating unnecessary barriers or artificial requirements for the purpose of hindering a HUB's performance under the contract. Any substitutions or changes to the HSP, in addition to any changes to the original contract award, shall be subject to prior written approval by the Department. If there are any changes to the subproviders during the contract term, the Provider must furnish a Revised Attachment H-1 showing the revised commitment of all subproviders.
      c. Failure to carry out the requirements set forth above shall constitute a breach of contract and may result in a letter of reprimand; in termination of the contract by the Authority; in a deduction from money due or to become due to the Provider, not as a penalty but as damages to the Department's HUB Program; or such other remedy or remedies as the Department deems appropriate.
2) **DEFINITIONS.**
   g. "Authority/Department" means Hidalgo County Regional Mobility Authority (HCRMA) and the Texas Department of Transportation (TxDOT).
   a. "Agreement" is the agreement between the Authority and a Provider.
   b. "Provider" is any individual or company that provides professional or technical services.
   c. "Joint Venture" means an association of two or more businesses to carry out a single business enterprise for profit which combines their property, capital, efforts, skills and knowledge.
   d. "Historically Underutilized Business (HUB)" means any business so certified by the Texas Building and Procurement Commission.
3) **PERCENTAGE GOAL.** The goal for Historically Underutilized Business (HUB) participation in the work to be performed under this contract is **6.0 %** of the contract amount.

4) **PROVIDER'S RESPONSIBILITIES.** A Provider (HUB or non-HUB) must perform a minimum of 30% of the contract with its employees (as defined by the Internal Revenue Service). The contract is subject to the HSP Good Faith Effort Requirements.
   a. A Provider who cannot meet the contract goal, in whole or in part, should have documented any of the following and other efforts made as a "Good Faith Effort" to obtain HUB participation.
      (1) Whether the prime advertised in general circulation, trade association, and/or minority/women focus media concerning subcontracting opportunities.
      (2) Whether the prime provided written notice to at least three (3) qualified HUBs allowing sufficient time for HUBs to participate effectively.
      (3) Whether the prime documented reasons for rejection or met with the rejected HUB to discuss the rejection.
      (4) Whether the prime provided qualified HUBs with adequate information about bonding, insurance, the plans, the specifications, scope of work and requirements of the contract.
      (5) Whether the prime negotiated in good faith with qualified HUBs, not rejecting qualified HUBs who are also the lowest responsive bidder.
      (6) Whether the prime used the services of available minority and women community organizations, contractor's groups, local, state, and federal business assistance offices, and other organizations that provide support services to HUBs.

NOTE: The Provider must not cause or allow subproviders to bid their services.

   b. The preceding information shall be submitted directly to the Chair of the Authority responsible for the contract.
   c. The Provider shall make all reasonable efforts to honor commitments to HUB subproviders named in the original HSP in Section 8. Where the Provider terminates or removes a HUB subprovider named in the initial commitment, the Provider must demonstrate on a case-by-case basis to the satisfaction of the Authority/Department that the originally designated HUB was not able or willing to perform. The term "unable" includes, but is not limited to, a firm that does not have the resources and expertise to finish the work and/or a firm that substantially increases the time to complete the project.
   d. The Provider shall make all reasonable efforts to replace a HUB subprovider that is unable or unwilling to perform successfully with another HUB and must meet the HSP Good Faith Effort Requirements. Any substitution of HUBs shall be subject to prior written approval by the Authority. The Authority will request a statement from the firm being replaced concerning its replacement prior to approving the substitution. If there are any changes to the subproviders during the contract term, the Provider must furnish a Revised Attachment H-1 showing the revised commitment of all subproviders.
   e. The Provider shall designate a HUB liaison officer who will administer the Provider's HUB program and who will be responsible for maintenance of records of efforts and contacts made to subcontract with HUBs.

5) **ELIGIBILITY OF HUBs.**
   a. The Texas Building and Procurement Commission (TBPC) certifies the eligibility of HUBs.
   b. The TBPC maintains a directory of certified HUBs. The HUB Directory is available through the TxDOT Department's Business Opportunity Programs Office and through the Internet at the TBPC's Website (http://www2.tbpc.state.tx.us/cmbl/hubonly.html).
   c. Only HUB firms certified and identified in specific categories and classes at the time the contract is signed or at the time the commitments are submitted are eligible to be used in the information furnished by the Provider as required under Section 2.c. above.
   d. If during the course of the contract it becomes necessary to substitute another HUB firm for a firm named in the information submitted by the Provider as required by Section 2.c. above, then only certified HUBs will be considered eligible as a substituted firm. The Provider's written request for

substitutions of HUB subproviders shall be accompanied by a detailed explanation, which should substantiate the need for a substitution. The Authority/Department will verify the explanation with the HUB firm being replaced before giving approval of the substitution. If there are any changes to the subproviders during the contract term, the Provider must furnish a Revised Attachment H-1 showing the revised commitment of all subproviders.

e. The 73rd Legislature passed Texas Civil Statutes, Article 601i, relative to contracts between governmental entities and certain disadvantaged businesses. The Statute provides for civil penalties for persons who falsely claim disadvantaged business status and for the general contractor who knowingly contracts with a person claiming to be a disadvantaged business.

6) **DETERMINATION OF HUB PARTICIPATION.**

A firm must be an eligible HUB and perform a professional or technical function relating to the project. Proof of payment, such as copies of canceled checks, properly identifying the Authority's contract number or project number may be required to substantiate the payment, as deemed necessary by the Authority/Department. A HUB subprovider, with prior written approval from the Authority/Department, may subcontract 70% of a contract as long as the HUB subprovider performs a commercially useful function. All subcontracts shall include the provisions required in the subcontract and shall be approved as to form, in writing, by the Authority/Department prior to work being performed under the subcontract. A HUB performs a commercially useful function when it is responsible for a distinct element of the work of a contract; and actually manages, supervises, and controls the materials, equipment, employees, and all other business obligations attendant to the satisfactory completion of contracted work. If the subcontractor uses an employee leasing firm for the purpose of providing salary and benefit administration, the employees must in all other respects be supervised and perform on the job as if they were employees of the subcontractor.

7) **COMPLIANCE OF PROVIDER.**

To ensure that HUB requirements of this contract are complied with, the Authority/Department will monitor the Provider's efforts to involve HUBs during the performance of this contract. This will be accomplished by a review of the monthly Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) submitted to the AUTHORITY Office by the Provider indicating his/her progress in achieving the HUB contract goal, and by compliance reviews conducted by the Authority/Department. The Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) must be submitted at a minimum monthly to the Business Opportunity Programs Office, in addition to with each invoice to the appropriate agency contact.

The Provider shall receive credit toward the HUB goal based on actual payments to the HUB subproviders with the following exceptions and only if the arrangement is consistent with standard industry practice.

(1) Payments to brokers or firms with a brokering type operation will be credited only for the amount of the commission;
(2) Payments to a joint venture will not be credited unless all partners in the joint venture are HUBs;
(3) Payments to a HUB subprovider who has subcontracted a portion of the work required under the subcontract will not be credited unless the HUB performs a commercially useful function;
(4) Payments to a HUB will not be credited if the firm does not provide the goods or perform the services paid for;
(5) Payments made to a HUB that cannot be linked by an invoice or canceled check to the contract under which credit is claimed will not be credited.

A Provider must not withhold or reduce payments to any HUB without a reason that is accepted as standard industry practice. A HUB prime or subprovider must comply with the terms of the contract or subcontract. Work products, services, and commodities must meet contract specifications whether performed by a prime or subprovider.

A Provider's failure to meet the HUB goal and failure to demonstrate to the Authority/Department's satisfaction sufficient "Good Faith Effort" on his/her part to obtain HUB participation shall constitute a breach of contract. In such a case, the Authority/Department reserves the right to issue a letter of reprimand; to deduct the amount of HUB goal not accomplished by HUBs from the money due or to become due the Provider, not as a penalty but as damages to the Authority/Department's HUB program; or such other remedy or remedies as the Authority/Department deems appropriate.

8) **RECORDS AND REPORTS.**

a. After submission of the initial commitment (Attachment H-1), required by Section 2.c. of this attachment, the Provider shall submit State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) at a minimum monthly, after contract work begins, on subcontracting involvement. One copy of the State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) is to be sent to the Authority/Department's Office monthly. In addition, the Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) must be submitted with the Provider's invoice. All payments made to subproviders are to be reported. **The Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Reports are required monthly even during months when no payments to subproviders have been made.** The Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report will be required until all work on the contract has been completed. The Authority/Department may verify the amounts being reported as paid to HUBs by requesting copies of canceled checks paid to HUBs on a random basis.

b. Subproviders should be identified on the Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) by name, the amount of actual payment made to each during the billing period, cumulative payment amount and percentage of the total contract amount.

c. All such records must be retained for a period of four years following final payment, or until an investigation, audit, examination, or other review undertaken during the four years, and shall be available at reasonable times and places for inspection by authorized representatives of the Authority/Department and other agencies.

d. Prior to receiving final payment, the Provider shall submit a Final Report (Attachment H-4), detailing the subprovider payments to the AUTHORITY Office of the Authority, and one copy to the Authority/Department with the Provider's final invoice.

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ATTACHMENT H-SN (NOT APPLICABLE)

Historically Underutilized Business (HUB)
for State Funded Professional or Technical Services Contracts
No State of Texas HUB Subcontracting Plan Required

POLICY

It is the policy of the Authority/Department to ensure that HUBs shall have an equal opportunity to participate in the performance of contracts; to create a level playing field on which HUBs can compete fairly for contracts and subcontracts; to ensure nondiscrimination on the basis of race, color, national origin, or gender in the award and administration of contracts; to help remove barriers to the participation of HUBs in Authority contracts; and, to assist in the development of firms that can compete successfully in the market place outside the HUB program.

Subcontracting participation on projects with no HUB Subcontracting Plan Required should be reported on the Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report, the Attachment H-6 Form. Payment to non-HUBs subproviders must be reported on Attachment H-6. Payments to HUBs reported on Attachment H-6 are subject to the following requirements:

DETERMINATION OF HUB PARTICIPATION.

A firm must be an eligible HUB and perform a professional or technical function relating to the project. Once a firm is determined to be an eligible HUB, the total amount paid to the HUB should be reported as race-neutral HUB participation.

A HUB subprovider may subcontract no more than 70% of a contract. The HUB subprovider shall perform not less than 30% of the value of the contract work with assistance of employees employed and paid directly by the HUB; and equipment owned or rented directly by the HUB.

A provider must report a portion of the total value of the contract amount paid to a HUB joint venture equal to the distinct, clearly defined portion of the work of the contract performed by the HUB.

Proof of payment, such as copies of canceled checks, properly identifying the Authority/Department's contract number or project number may be required to substantiate the payment, as deemed necessary by the Authority/Department.

The provider and any subprovider shall not discriminate on the basis of race, color, national origin or sex in the award and performance of contracts. These requirements shall be physically included in any subcontract.

REQUIRED FORMS.

If subcontractors are used under the contract that has no stated HUB goal, Attachments H-1, H-2, H-4 and H-6 are required. Attachments H-1 and H-6 <u>are required</u> if no subcontractors are being used to perform work under this contract.

Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) **is required monthly even when no subcontracting activity has occurred.** In addition, Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) should be submitted with the Provider's invoice.

ATTACHMENT H-1

Subprovider Monitoring System
Commitment Worksheet

Contract #:_____ Assigned Goal: 6.0% Federally Funded _____ County Funded _____
Prime Provider: Terracon Consultants, Inc. Total Contract Amount: ${Contract Amt}
Prime Provider Info: DBE____HUB ___ Both ___
Vendor ID #:_____ DBE/HUB Expiration Date: _____
(First 11 Digits Only)

If no subproviders are used on this contract, please indicate by placing "N/A" on the 1st line under Subproviders.

Subprovider(s) (List All)	**Type of Work**	**Vendor ID #** (First 11 Digits Only)	**D=DBE H=HUB**	**Expiration Date**	**$ Amount or % of Work ***
Subprovider(s) Contract or % of Work* Totals					

*For Work Authorization Contracts, indicate the % of work to be performed by each subprovider.

Total DBE **or** HUB Commitment Dollars $0.00 (DBE)

Total DBE **or** HUB Commitment Percentages of Contract 0% (DBE)
(Commitment Dollars and Percentages are for Subproviders only)

12/06 DBEH1.AT

ATTACHMENT H-2
Subprovider Monitoring System Commitment Agreement

This commitment agreement is subject to the award and receipt of a signed contract from the Hidalgo County Regional Mobility Authority (Authority). ***NOTE: Attachment H-2 is required to be attached to each contract that does not include work authorizations. Attachment H-2 is required to be attached with each work authorization. Attachment H-2 is also required to be attached to each supplemental work authorization. If DBE/HUB Subproviders are used, the form must be completed and signed. If no DBE/HUB Subproviders are used, indicate with "N/A" on this line: _____ and attach with the work authorization or supplemental work authorization.***

Contract #: _____ Assigned Goal: 6.0% Prime Provider Terracon Consultants, Inc.

Work Authorization (WA)#: _____ WA Amount: **$0** Date: _____
Supplemental Work Authorization (SWA) #: _____ to WA #: _____ SWA Amount: _____
Revised WA Amount: _____

Description of Work *(List by category of work or task description. Attach additional pages, if necessary.)*	**Dollar Amount** *(For each category of work or task description shown.)*
FC	**$0**
FC	**$0**
Total Commitment Amount *(Including all additional pages.)*	**$0**

IMPORTANT: The signatures of the prime and the DBE/HUB and Second Tier Subprovider, if any (both DBE and Non-DBE) and the total commitment amount must always be on the same page.

Provider Name: Terracon Consultants, Inc. **Address: 1506 Mid-Cities, Pharr, Texas, 78577** **VID Number:** **PH: & FAX: 956-283-8254** **Email: jorge.flores@terracon.com**	**Name:** Jorge A. Flores, P.G. ***(Please Print)*** **Title:** Client Manager _____ **Signature** **Date**
DBE/HUB Sub Provider **Subprovider Name:** **VID Number:** **Address:** **PH:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ _____ **Signature** **Date**
Second Tier Sub Provider **Subprovider Name:** **VID Number:** **Address:** **Phone #& Fax #:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ _____ **Signature** **Date**

VID Number is the Vendor Identification Number issued by the Comptroller. If a firm does not have a VID Number, please enter the owner's Social Security or their Federal Employee Identification Number (if incorporated).

ATTACHMENT H-3
Subprovider Monitoring System for Federally Funded Contracts
Progress Assessment Report for month of (Mo./Yr.) _____/_____

Contract #: _____
Date of Execution: _____
Prime Provider: Terracon Consultants, Inc.
Work Authorization No. : _____

Original Contract Amount: **$0**
Approved Supplemental Agreements: **$0**
Total Contract Amount: **$0**
Work Authorization Amount: **$0**

If no subproviders are used on this contract, please indicate by placing "N/A" on the 1st line under Subproviders.

DBE	All Subproviders	Category of Work	Total Subprovider Amount	% Total Contract Amount	Amount Paid This Period	Amount Paid To Date	Subcontract Balance Remaining

Fill out Progress Assessment Report with each estimate/invoice submitted, *for all subcontracts*, and forward as follows:
1 Copy with Invoice - Hidalgo County Regional Mobility Authority Office
I hereby certify that the above is true and correct statement of the amounts paid to the firms listed above.

Print Name - Company Official /DBE Liaison Officer | Signature | Phone | Date

Email | | Fax

ATTACHMENT H-4

Subprovider Monitoring System
Final Report

The Final Report Form should be filled out by the Prime Provider and submitted to the Contract Manager and the Business Opportunity Programs Office for review upon completion of the contract. The report should reflect **all subcontract activity** on the project. The report will aid in expediting the final estimate for payment. If the HUB or DBE goal requirements were not met, documentation supporting good faith efforts must be submitted.

DBE Goal: 6.0 % **OR** HUB Goal: ____%

Total Contract Amount: **$0** Total Contract Amount: ${Contract Amt}

Contract Number:

Vendor ID #	**Subprovider**	**Total $ Amount Paid to Date**
TOTAL		

This is to certify that _____% of the work was completed by the HUB or DBE subproviders as stated above.

_____
By: Prime Provider

_____
Per: Signature

Subscribed and sworn to before me, this _____ day of _____, 20 __

_____Notary Public _____ County

My Commission expires:_____

12/06 DBE-H4.A

ATTACHMENT H-5

Federal Subprovider and Supplier Information

The Provider shall indicate below the name, address and phone number of all successful and unsuccessful subproviders and/or suppliers that provided proposals/quotes for this contract prior to execution. You may reproduce this form if additional space is needed.

Name	Address	Phone Number

The information must be provided and returned with the contract.

_____ _____

Signature Date

{Signatory Name, Position} _____ _____

Printed Name Email Phone #

ATTACHMENT H-6

Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report

HUB Subcontracting Plan (HSP)
Prime Contractor Progress Assessment Report

This form must be completed and submitted to the contracting agency each month to document compliance with your HSP.

Contract/Requisition Number: _____ Date of Award: _____ (mm/dd/yyyy) Object Code: _____ (Agency Use Only)

Contracting Agency/University Name: _____

Contractor (Company) Name: _____ State of Texas VID #: _____

Point of Contact: _____ Phone #: _____

Reporting (Month) Period: _____ Total Amount Paid this Reporting Period to $ _____ -

Report HUB and Non-HUB subcontractor information

Subcontractor's Name	Subcontractor's VID or HUB Certificate Number	*Texas Certified HUB? (Yes or No)	Total Contract $ Amount from HSP with Subcontractor	Total $ Amount Paid This Reporting Period to Subcontractor	Total Contract $ Amount Paid to Date to Subcontractor	Object Code (Agency Use Only)
			$ -	$ -	$ -	
			$ -	$ -	$ -	
			$ -	$ -	$ -	

ATTACHMENT H-7

DBE CERTIFICATIONS

ATTACHMENT I

CERTIFICATE OF INSURANCE

ATTACHMENT J

CONFLICTS CERTIFICATION

ATTACHMENT J

CONFLICTS CERTIFICATION

1. Business Relationships:

   The RMA has adopted a conflict of interest policy which generally requires disclosure of any business relationships with RMA board members or key personnel, as designated on the Authority's website. The Conflict of Interest Policy for Consultants, the list of Board Members and Key Personnel, and the Disclosure Form can be obtained from the RMA website (www.hcrma.net). Engineer all any sub consultants to Engineer shall adhere to this policy and provide any required disclosures.

2. Adverse Matters:

   Engineer must disclose conflicts of interest by identifying any matter in which the Engineer becomes adverse to the RMA or the Texas Department of Transportation or to the State of Texas or any of its boards, agencies, commissions, universities, elected or appointed officials, or Hidalgo County during the term of the Agreement.

3. Direct and Indirect Interest:

   The Engineer shall ensure that, during the term of the Agreement, the Engineer, including any of its principals, will have no interest, direct or indirect, that would conflict in any manner or degree with the performance of Engineer's obligations under the agreement, including, but not limited to, ownership of property in the right-of-way of any of the independent projects of the Hidalgo County Roadway System. The Engineer warrants that, in the performance of the Agreement, the Engineer shall not employ any person, or subcontract with any entity, having such known interest.

ENGINEER: Terracon Consultants, Inc.

BY:_____

DATE: _____

ATTACHMENT K
DEBARMENT CERTIFICATION

Quality Assurance Program for Design-Bid-Build Projects

May 2019

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TABLE OF CONTENTS

SECTION 1 - INTRODUCTION 4
1.1 Overview 4
1.2 Support 4
SECTION 2 - ACCEPTANCE PROGRAM 5
2.1 Overview 5
2.2 Sampling and Testing Frequency and Location 5
2.3 Documentation 5
2.4 Quality Control Sampling and Testing 5
2.5 Dispute Resolution 5
SECTION 3 - INDEPENDENT ASSURANCE 6
3.1 Overview 6
3.2 Required Frequencies and Activities 6
3.3 Testing Equipment 7
3.4 Testing Personnel 7
3.5 Comparing Test Results 8
3.6 Annual Report of IA Program Results 8
SECTION 4 - MATERIALS CERTIFICATION 9
4.1 Overview 9
SECTION 5 - CONFLICT OF INTEREST 10
5.1 Overview 10
SECTION 6 - TECHNICIAN QUALIFICATION PROGRAM 11
6.1 Purpose 11
6.2 Technician Qualification 11
6.3 Who Must Be Qualified? 11
6.4 Who Can Qualify Sampling and Testing Personnel? 11
6.5 Required Certifications for Commercial Laboratory and Contractor Personnel 12
6.6 Qualification Procedure 12
6.7 Provisional Certifications 13
6.8 Responsibility and Documentation 14
6.9 Disqualification 14
SECTION 7 - LABORATORY QUALIFICATION PROGRAM 16
7.1 Purpose 16
7.2 Laboratory Responsibility 16
7.2.1 CE&I 16
7.2.2 District AO Personnel 16
7.2.3 District Lab Coordinator 17

7.3 Qualification 17
7.3.1 District Lab Accreditation 17
7.3.2 Commercial Lab and CE&I Qualification Process 18
7.4 Calibration Standards and Frequencies for Laboratory Equipment 20
7.5 Non-Compliance 20
7.6 Documentation 20
7.7 Dispute Resolution 21

Appendix A – Acronyms and Definitions
Appendix B – Test Methods for Split/Proficiency Evaluation
Appendix C – IA Annual Report
Appendix D – Material Certification Example Letter for Projects with Federal Oversight
Appendix E – Material Certification Example Letter for Projects with Non-Federal Oversight
Appendix F – Archived Versions

SECTION 1 - INTRODUCTION

1.1 Overview

The Texas Department of Transportation (TxDOT) established the Quality Assurance Program (QAP) for Design-Bid-Build (D-B-B) Projects to ensure that materials and workmanship incorporated into highway construction projects are in reasonable conformity with the requirements of the approved plans and specifications, including any approved changes. This program conforms to the criteria in 23 CFR 637 B, where the Materials and Tests Division (MTD) central laboratory will be accredited under the AASHTO Accreditation Program (AAP) which oversees the statewide qualification program.

It consists of an "Acceptance Program" and "Independent Assurance (IA) Program" based on test results obtained by qualified persons and equipment.

The QAP allows for the use of validated Contractor-performed quality control (QC) test results as part of an acceptance decision. It also allows for the use of test results obtained by commercial laboratories in acceptance decisions. The acceptance of all materials and workmanship is the responsibility of the Engineer.

1.2 Support

For more information regarding the information and procedures in the program, contact the Materials and Tests Division (MTD) Administration at 512/506-5843.

SECTION 2 - ACCEPTANCE PROGRAM

2.1 Overview

The Quality Assurance Program (QAP) assures materials, incorporated into any highway construction project, are subject to verification sampling and testing, as well as quality control (QC) sampling and testing when required by the specifications.

The District Engineer will delegate an individual at the district level for the accountability of certification verification in SiteManager (SM) and at the laboratory for various project delivery options applicable to the DBB program.

The delegation of authority should encompass a mechanism that provides oversight authority and an audit function to ensure compliance. Additional information can be found in Section 6.7 – Dispute Resolution.

2.2 Sampling and Testing Frequency and Location

Verification sampling and testing will be performed at the location and frequency established in the Department's Guide Schedule of Sampling and Testing for Design-Bid-Build (DBB) Projects (DBB Guide Schedule) or specifications specific to each project.

2.3 Documentation

Testing will be documented within SiteManager on the department approved excel templates. When the tester does not enter test results directly into SM, the hardcopy will need to be scanned and attached to the SM sample documenting the tester's name.

2.4 Quality Control Sampling and Testing

Contractor-performed QC sampling and testing may be used as part of an acceptance decision when required or allowed by specification.

QC sampling and testing personnel, laboratories, and equipment will be qualified in accordance with Section 6 – Technician Qualification Program and Section 7 – Laboratory Qualification Program and will be evaluated under the Independent Assurance Program, as described in Section 3 of this document.

QC test results will be validated by verification test results obtained from independently taken samples. Qualified TxDOT personnel or their designated agents will perform verification sampling and testing.

2.5 Dispute Resolution

When QC test results are used in the acceptance decision, the MTD central laboratory or an accredited independent laboratory approved by MTD will perform the referee testing. The referee laboratory decision will be final.

SECTION 3 - INDEPENDENT ASSURANCE PROGRAM

3.1 Overview

The Independent Assurance (IA) program evaluates all sampling and testing procedures, personnel, and equipment used as part of an acceptance decision.

The IA program evaluates the qualified sampling and testing personnel and testing equipment and is established using the system approach. The system approach bases frequency of IA activities on time—regardless of the number of tests, quantities of materials, or numbers of projects tested by the individual being evaluated.

3.2 Required Frequencies and Activities

Table 1 gives the frequencies and activities required for evaluating sampling and testing personnel and equipment under the system approach to IA.

Table 1
Frequencies and Activities Required Under IA System Approach

Time	Activity
Before performing acceptance sampling and testing.	Qualification required under Section 6 and Section 7 of this QAP.
Within 12 months after Observation and Qualification, not to exceed 15 months.	Each qualified technician is required to participate in the first available proficiency or split sample for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.
Within 24 months after Observation and Qualification, not to exceed 27 months.	Each qualified technician is required to participate in one proficiency or split sample test for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.
Within 36 months of Qualification. (Only required for certifications issued by TxDOT or TXAPA with a 3-year cycle.)	Qualification is again required under Section 6 and Section 7 of this QAP.
Within 36 months after Observation and Qualification, not to exceed 39 months. (Only required for ACI, which has a 5-year certification cycle.)	Each qualified technician is required to participate in one proficiency or split sample test for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.
Within 48 months after Observation and Qualification, not to exceed 51 months. (Only required for ACI, which has a 5-year certification cycle.)	Each qualified technician is required to participate in one proficiency or split sample test for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.

Within 60 months of qualification (Only required for certifications issued by ACI with a 5-year cycle.)	Qualification is again required under Section 6 and Section 7 of this QAP.

Maintaining technician qualification under the IA system approach requires continuation of the above cycle of qualification and successful split or proficiency sample testing.

3.3 Testing Equipment

MTD will qualify district laboratory testing equipment used for acceptance sampling and testing, in accordance with Section 7 – Laboratory Qualification Program. Any non-TxDOT commercial laboratory used for acceptance sampling and testing must be accredited in accordance with Section 7.3 – Qualification.

MTD may designate the district laboratory to qualify commercial laboratory testing equipment, used for acceptance sampling and testing, in accordance with corresponding calibration test procedures. MTD or TxDOT district laboratory may hire a third-party entity to perform calibration or verification in accordance with corresponding calibration test procedures.

The qualifying authority will qualify testing equipment in accordance with the following guidelines.

A. Frequency for qualifying sampling and testing equipment must not exceed 1 year.
B. Calibration or verification is required whenever the laboratory or equipment is moved.

The qualifying authority will evaluate any equipment used to perform verification and QC sampling and testing in making an acceptance decision. This evaluation includes calibration checks and split or proficiency sample tests. The Department test procedures referenced in Section 7.4 – Calibration Standards and Frequencies for Laboratory Equipment give the requirements for, and frequency of, equipment calibrations.

3.4 Testing Personnel

MTD will qualify district and commercial laboratory personnel performing IA activities, in accordance with Section 6 – Technician Qualification Program.

MTD may designate a district laboratory to qualify other Department personnel and accredited commercial laboratory personnel performing IA activities. When a district qualifies commercial laboratory personnel, they must notify MTD in writing.

Individuals performing IA activities will be other than those performing verification or QC testing.

IA personnel will evaluate any individual performing verification or QC sampling and testing. This evaluation includes observations and split or proficiency sample testing.

3.5 Comparing Test Results

Comparison of the split sample test results can be used if equipment or procedures issues are suspected. Appendix B gives the acceptable tolerance limits for comparing test results from split and proficiency samples.

If the comparisons of the test results do not comply with the tolerances, an engineering review of the test procedures and equipment will be performed immediately to determine the source of the discrepancy.

3.6 Annual Report of IA Program Results

MTD will compose and submit an annual report to the Federal Highway Administration (FHWA) summarizing the results of TxDOT's systems approach IA program. See Appendix C for the annual report form.

This report identifies:

- number of sampling and testing personnel evaluated by the systems approach IA testing;
- number of IA evaluations found to meet tolerances in Appendix B;
- number of IA evaluations found to not meet tolerances in Appendix B; and
- summary of any significant system-wide corrective actions taken.

SECTION 4 - MATERIALS CERTIFICATION

4.1 Overview

The TxDOT District Area Engineer or Director of Construction will submit a materials certification letter, conforming in substance to the examples shown in Appendix D or E, as applicable.

For projects with federal oversight, submit the materials certification letter (Appendix D) to the FHWA division administrator, with a copy to MTD.

For non-federal oversight projects, submit the material certification letter (Appendix E) to the TxDOT District Engineer, with a copy to MTD.

Either letter must be submitted at final acceptance of the project.

SECTION 5 - CONFLICT OF INTEREST

5.1 Overview

To avoid an appearance of a conflict of interest, any qualified non-TxDOT laboratory will perform only one of the following functions on the same project:

- verification sampling and testing;
- QC sampling and testing;
- IA testing; or
- referee testing.

SECTION 6 - TECHNICIAN QUALIFICATION PROGRAM

6.1 Purpose

This program provides uniform statewide procedures for technician qualification to ensure that tests required by the specifications are performed according to the prescribed sampling and testing methods.

6.2 Technician Qualification

Sampling and testing personnel will be qualified to perform sampling and testing for the acceptance of materials in the areas of soils, bituminous, aggregate, and concrete materials.

The test methods for which individuals can be qualified are included in the following series of the TxDOT Test Procedures.

- 100-E Series (Soils)
- 200-F Series (Bituminous)
- 400-A Series (Aggregates and Concrete)
- 500-C Series (Asphalt – Tex-500-C and Tex-530-C)

6.3 Who Must Be Qualified?

Any individual who performs sampling and testing on the materials listed in Section 6.2 – Technician Qualification, for acceptance, must be qualified in each test procedure they perform.

NOTE—Reciprocity may be granted to individuals who have been successfully qualified under another state's program. These situations will be considered on a case-by-case basis and must meet the approval of the Materials and Tests (MTD) Division Director.

6.4 Who Can Qualify Sampling and Testing Personnel?

The following personnel may qualify an individual to perform the required sampling and testing of materials:

- MTD personnel;
- qualified district materials engineer or laboratory supervisor (except as noted below);
- qualified district laboratory personnel who have been authorized by the district materials engineer or laboratory supervisor to qualify others; and
- department-approved entities such as the Texas Asphalt Pavement Association (TXAPA) and the American Concrete Institute (ACI). Certifications received from these institutions may be used to satisfy the written exam and observation part of the Technician Qualification Program.

NOTE—Each district laboratory will maintain a minimum of one individual qualified by MTD or its designated agent, for each test procedure performed within the district. To perform testing and qualify district personnel for TxDOT concrete test methods, at least one individual from the district laboratory must have the corresponding ACI Field and Strength certifications issued by MTD.

6.5 Required Certifications for Commercial Laboratory and Contractor Personnel

Non-TxDOT laboratory personnel performing sampling and testing for TxDOT, or as required by specification, must obtain and keep current the following certifications pertinent to their scope of testing:

- ACI Concrete Field Testing Technician – Grade I,
- ACI Concrete Strength Testing Technician,
- TXAPA HMA Level 1A – Plant Production Specialist,
- TXAPA HMA Level 1B – Roadway Specialist,
- TXAPA HMA Level 2 – Mix Design Specialist,
- TXAPA SB 101 – Property Specialist,
- TXAPA SB 102 – Field Specialist,
- TXAPA SB 103 – Materials Analysis Specialist,
- TXAPA SB 201 – Strength Specialist,
- TXAPA SB 202 – Compressive Strength Specialist, and
- TXAPA AGG101 -– Aggregate Specialists.

For testing procedures not covered by the above certifications, the following personnel may qualify an individual to perform the required sampling and testing of materials:

- district laboratory personnel who have been authorized by MTD to perform technician qualifications, and
- MTD personnel.

6.6 Qualification Procedure

To qualify, an authorized evaluator must witness an individual successfully perform the specific test and the necessary calculations required to determine specification compliance. Successful performance is defined as demonstrating the ability to properly perform the key elements for each test method. If the individual fails to demonstrate the ability to perform a test, the individual will be allowed one retest per test method at the evaluator's

convenience. The maximum number of attempts cannot exceed three trials in a 90-day period of time.

In addition to successful performance of a test method, the individual must pass a written examination (minimum score of 80%) administered by an authorized evaluator. The maximum amount of time allocated per test will be one hour. If an individual cannot complete the written test in an hour, it will result in failure. An individual failing the written examination may request a retest. The retest must be scheduled and administered within 30 days of notification of failure; however, the maximum number of attempts cannot exceed three trials in a 90-day period of time.

Under unique circumstances, the qualification authority may grant a verbal examination upon request. The reasons for requesting a verbal examination must be presented and documented before the individual is allowed to take the examination. Should the technician fail the retest examination, the technician will not be allowed to test again unless a written notification is received from the technician's employer or supervisor stating that the technician has received additional training. MTD or its representative will determine the adequacy of the additional training. Failure to pass the third written examination will be considered as failing the entire qualification.

Successful qualification is defined as passing both the written and performance examinations.

In addition, the individual must participate in split or proficiency samples administered by the qualifying authority to validate the qualification as defined in Appendix B. MTD determines the qualifying authority for the split or proficiency sample.

Unless otherwise stated, qualification of an individual is valid for not more than 3 years, after which the individual must be re-qualified. Under the IA system approach, annual split or proficiency evaluations will be required as specified in Section 3.2 – Required Frequencies and Activities. Failure to satisfactorily complete annual split or proficiency testing will result in certification revocation.

6.7 Provisional Certifications

If the required certifications, listed in the Section 6.5 – Required Certifications for Commercial Laboratories and Contractor Personnel, cannot be readily obtained due to course availability, schedule conflicts, or other extenuating circumstances, provisional certifications administered by MTD or TxDOT's district laboratory will be allowed, per the following stipulations:

- provisional certifications must be approved by MTD or TxDOT district laboratory supervisor;
- provisional certifications will be valid for one month after the TXAPA and ACI examination dates; and
- the candidate must show evidence of having enrolled in the required ACI or TXAPA course.

6.8 Responsibility and Documentation

MTD and the district materials engineer, laboratory supervisor, or designee are responsible for maintaining documentation of all individuals qualified under their authority who perform required tests for acceptance of materials. The CE&I firm shall identify a coordinator with the responsibility to communicate with the Area Office who will then coordinate with the district level person to satisfy the requirements for qualified testers. SiteManager shall be used to send email notification on certification status to the owner (technician) as well as the district level responsible person. TxDOT's SiteManager will be the official system of record for qualified or certified TxDOT and commercial laboratory personnel.

Issuance of qualification certificates by the TxDOT qualifying authority is not required. A qualification summary listing all tests for which an individual is qualified is available in SiteManager and may be printed and signed at the district's discretion. Documentation is to be maintained through the Object Linking and Embedding (OLE) attachment window. This function allows all qualified personnel supporting documentation to be viewed in SM which includes:

- copies of certificates issued by ACI and TXAPA; or
- copies of certificates issued by MTD or TxDOT district laboratory, if issued;
- Quality Assurance Test (QAT) report with clear identification of technician's name, qualifier's name, score, and date taken; and
- original performance examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, qualification status, and date.

Documentation retention will be for the life of the qualification, as detailed in the State of Texas Records Retention Schedule.

Results of annual proficiency testing administered by MTD or TXAPA will be stored in their respective central repositories through SharePoint. Annual split sample evaluations should be stored in SiteManager.

6.9 Disqualification

Accusations of misconduct by testing technicians are made to the responsible TxDOT district representative and reported to MTD. Table 2 defines the 3 levels of misconduct: neglect, abuse, and breach of trust.

Table 2
Levels of Misconduct

Term	Definition
Neglect	Unintentional deviations from testing procedures or specifications.
Abuse	Careless or deliberate deviation from testing procedures or specifications.
Breach of Trust	Violation of the trust placed in the certified technician including, but not limited to, acts such as: • falsification of records; • being aware of improprieties in sampling, testing, or production by others and not reporting them to appropriate supervisors involved in the project; • re-sampling or retesting without awareness and consent of appropriate supervisors involved in the project; and • manipulating compensation or production.

The certification steering committee will investigate accusations of misconduct with the assistance of the responsible district. Depending on the severity of the misconduct, MTD may impose penalties ranging from a written reprimand, a temporary suspension, or a permanent revocation of the certification, contingent upon the findings of the investigation. A technician with a revoked certification will be removed from the project and will not be allowed to be employed on any TxDOT project statewide.

SECTION 7 - LABORATORY QUALIFICATION PROGRAM

7.1 Purpose

This program provides uniform statewide procedures to ensure that laboratory facilities and equipment are qualified for the performance of required sampling and testing methods.

7.2 Laboratory Responsibility

The responsibilities are spread among varying roles and are defined below to achieve a level of quality and to maintain program compliance.

7.2.1 CE&I

The CE&I firm shall:

- determine all test methods and certification requirements for a project and submit to the area office coordinator within ten (10) days after the execution of the contract and before the kick off meeting;
- submit required technician certifications and commercial lab requests submittals to the AO; and
- provide a quality plan to the AO that will demonstrate how quality is to be achieved through acceptance testing, per project. Include how the firm will track and ensure that only certified technicians perform acceptance on equipment that is calibrated and in good working order.

7.2.2 District AO Personnel

The Area Engineer will delegate the District AO coordinator. The AO coordinator shall:

- provide the district lab personnel with monthly status of the CE&I projects;
- provide the district lab contacts for CE&I firms and their commercial labs;
- invite the district lab personnel to the kick off and associated preconstruction meetings;
- will forward all CE&I technician certifications and laboratory submittals or requests to the district lab;
- will review the CE&I project specific testing, certification, and equipment needs; and
- submit the CE&I's quality plan to the district lab.

7.2.3 District lab coordinator

The district lab coordinator shall:

- review and make recommendations to the AO coordinator for approval or rejection of the CE&I quality plan;
- coordinate the inspection of the commercial lab facility and equipment once the quality plan has been approved;
- communicate the status of the inspection with the CE&I firm;
- use SM to auto notify the owner (technician) and the district lab designee before certification expiration; and
- conduct an internal review for continual compliance for all levels of certifications annually.

7.3 Qualification

All laboratories performing sampling and testing for TxDOT require qualification. These include, but are not limited to the following:

- Materials and Tests Division (MTD) central laboratory;
- District laboratories;
- area or project laboratories (including field laboratories at hot mix and concrete plants);
- MTD field laboratories; and
- commercial laboratories.

7.3.1 District Lab Accreditation

MTD is responsible for accrediting the district and MTD field laboratories. Upon completion of the laboratory accreditation process, the district lab is assigned a rating. The rating system identified in Table 3 is based on the associated risks to the department.

Table 3
Rating Legend

Number	Rating Legend
1	Excellent review with minor or no deficiencies notated.
2	Several deficiencies or repetitive observation were notated.
3	A level of negligence was found programmatically violating compliance requirements.

Each laboratory inspection summarizes the accreditation visit where a finding is classified as either a deficiency or an observation, defined as follows:

Deficiency: A finding that indicates policy or practice contrary to the requirements of the applicable test methods or documented quality procedures.

Observation: Observations are intended as comments for improvements relating to specific technical information to offer recommendations for best practice. Specifically, observations are noted for any technically related deficiencies where judgment and experience indicate it is not likely to affect the laboratory's ability to produce valid and accurate test results.

Resolution of Findings

A corrective action report (CAR) and supporting documentation is collectively submitted to MTD to address the findings notated in the report. The CAR will document actions that have been taken to prevent reoccurrence and to show a formal resolution to the findings.

Deficiencies:
Deficiencies require a formal written response describing the corrective actions taken or planned and enough documentation, i.e., records, copies of new or revised procedures, equipment invoices, or photographs to substantiate actions taken. Corrective actions should be permanently implemented to prevent recurrence of the problem.

Observations:
No written response is required for findings identified as observations. The laboratory should; however, take necessary corrective action to address the observation to prevent possible recurrence. Repeat observations may result in deficiencies.

The resolution should be completed in 21 days from the issuance of the report. If the laboratory cannot satisfy the findings in the report, an extension may be requested for additional time to resolve any outstanding or pending findings. Additional time extensions may be granted on a case by case scenario but should not exceed 90 days. When the findings cannot be resolved within the 90-day period, the MTD Division Director (DD) will escalate the outstanding issues at his discretion to the DOC or DE as needed. See Section 7.5 – Non-Compliance.

7.3.2 Commercial Lab and CE&I Qualification Process

At the district level, the district laboratory will be the qualifying authority for area office and commercial laboratories, only in the areas for which the district laboratory is accredited. They are also responsible for participating and conducting a peer review that will include a minimum of two projects conducted by CE&I firms to ensure program compliance. The peer review shall be documented and conducted within 12-24 months after MTD conducts the QAP district accreditation.

When a district qualifies a commercial laboratory, they must notify MTD in writing and submit a copy of the laboratory qualification certificate. A directory of all TxDOT-qualified laboratories is available through the MTD crossroads intranet.

The laboratory qualifying authority will use Form 2682, "Quality System Inspection – Commercial Laboratory," to document the following:

- identify the scope of testing to be performed;
- verify that test methods used to perform tests are available and current;
- document that the laboratory has the required equipment to perform the tests;
- check the calibration or verification records for each piece of equipment, to include:
  - description of equipment,
  - identification of any traceable standard used,
  - frequency of calibration,
  - date of calibration,
  - date of last calibration,
  - date of next calibration,
  - calibrating technician,
  - procedure used to calibrate or verify equipment, and
  - detailed results of calibration; and
- verify that the laboratory has qualified or certified technicians to perform required testing.

In addition, all equipment may be subject to calibration verification or other inspection by the qualifying authority. Laboratories performing acceptance sampling and testing should use results from TxDOT's Material Producer List (MPL), and perform materials sampling and testing in accordance with TxDOT's DBB Guide Schedule. Materials that are not monitored or not pre-approved by TxDOT are subject to sampling and testing as part of the acceptance program, except as noted in the DBB Guide Schedule remarks.

NOTE—Project or field laboratories performing Tex-113-E, Tex-117-E, and Tex-242-F tests must be an approved laboratory from TxDOT's MPL.

Laboratories are qualified every 3 years, at a minimum, although accreditation may be an ongoing process. Calibration or verification is required whenever laboratory or equipment is moved or per the minimum laboratory standards defined in Section 7.4 – Calibration Standards and Frequencies for Laboratory Equipment.

An annual internal audit should be conducted by designated staff to ensure continual compliance with technician records and equipment intervals. The following are tools and resources available to aid in managing the program for compliance:

- SM Material Users Query that allows filtering to determine expiring certifications, and
- Form 2682.

7.4 Calibration Standards and Frequencies for Laboratory Equipment

The standards for calibration and the frequencies for laboratory equipment calibrations are shown in:

- Tex-198-E, "Minimum Standards for Acceptance of a Laboratory for Soils and Flexible Base Testing,"
- Tex-237-F, "Minimum Standards for Acceptance of a Laboratory for Hot Mix Testing,"
- Tex-498-A, "Minimum Standards for Acceptance of a Laboratory for Concrete and Aggregate Testing," and
- Tex-900-K Series, procedures for calibrating, verifying, and certifying equipment and devices.

7.5 Non-Compliance

A laboratory that does not meet all the above requirements is subject to disqualification or suspension.
Any equipment in a qualified laboratory failing to meet specified equipment requirements for a specific test method will not be used for that test method. MTD or the TxDOT district laboratory responsible for the certification or audit will immediately notify all applicable Area Offices of non-conformance for those test methods.

7.6 Documentation

The qualifying authority is responsible for verifying that laboratories are qualified to perform sampling and testing. Documentation will be required to be kept by the qualifying authority and the qualified laboratory. Calibration records will be maintained for a minimum of 10 years. Upon satisfactory completion of the laboratory qualification process, the qualifying authority will issue a certificate within 14 days covering the scope of testing in which the laboratory has been qualified, with a copy to MTD.

Laboratory qualification documentation to be maintained by the qualifying authority includes:

- availability and calibration or verification records for each piece of equipment;
- personnel qualified or certified to perform required testing; and

- copy of laboratory qualification certificate issued.

7.7 Dispute Resolution

The next higher qualification authority will resolve disputes concerning calibration and verification of equipment. For disputes that cannot be resolved at the district level, MTD will be the final authority.

Appendix A
Acronyms and Definitions

The following terms and definitions are referenced in this document and have the meanings set forth below.

AAP	AASHTO Accreditation Program (AASHTO re:source and CCRL)
AASHTO	American Association of State Highway Transportation Officials
ACI	American Concrete Institute
AO	Area Office
AQMP	Aggregate Quality Monitoring Program
CAR	Corrective Action Report
CCRL	Concrete and Cement Reference Laboratory
CE&I	Construction Engineering and Inspection
CFR	Code of Federal Regulations
MTD	Materials and Tests Division
CMEC	Construction Materials Engineering Council
FHWA	Federal Highway Administration
HMA	Hot-Mix Asphalt
HMAC	Hot-Mix Asphalt Center
IA	Independent Assurance
L-A-B	Laboratory Accreditation Bureau
MPL	Material Producer List
QAP	Quality Assurance Program
QAT	Quality Assurance Test
QC	Quality Control
SM	SiteManager
TXAPA	Texas Asphalt Pavement Association
TxDOT	Texas Department of Transportation

Abuse—Careless or deliberate deviation from testing procedures or specifications.

Acceptance Program—All factors that comprise TxDOT's program to determine the quality of the product as specified in the contract requirements. These factors include verification sampling, testing, and inspection and may include results of QC sampling and testing.

Accredited Laboratories—Laboratories that are recognized by a formal accrediting body as meeting quality system requirements including demonstrated competence to perform standard test procedures.

Breach of Trust—Violation of the trust placed in the certified technician including, but not limited to, acts such as: falsification of records; being aware of improprieties in sampling, testing, or production by others and not reporting them to appropriate supervisors involved in the project; re-sampling or retesting without awareness and consent of appropriate supervisors involved in the project; and manipulating compensation or production.

Certified Technician—A technician certified by some agency as proficient in performing certain duties.

Independent Assurance (IA) Program—Activities that are an unbiased and independent evaluation of all the sampling and testing procedures, equipment, and personnel qualifications used in the acceptance program.

Material Producer List (MPL)—TxDOT-approved products and materials from various manufacturers and producers are located at:
http://www.txdot.gov/business/resources/producer-list.html

Neglect—Unintentional deviations from testing procedures or specifications.

Proficiency Samples—Homogenous samples that are distributed and tested by 2 or more laboratories or personnel. The test results are compared to assure that the laboratories or personnel are obtaining the same results.

Qualified Laboratories—Laboratories that are capable as defined by appropriate programs established by TxDOT. As a minimum, the qualification program must include provisions for checking testing equipment, and the laboratory must keep records of calibration checks.

Qualified Sampling and Testing Personnel—Personnel who are capable as defined by appropriate programs established by TxDOT.

Quality Assurance (QA)—All planned and systematic actions necessary to provide confidence that a product or service will satisfy given requirements for quality.

Quality Control (QC)—All Contractor operational techniques and activities performed or conducted to fulfill the contract requirements.

TxDOT Standard Specifications—the *Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges* adopted by the Texas Department of Transportation, including all revisions thereto applicable on the effective date of the contract documents.

Verification Sampling and Testing—Sampling and testing performed to verify the quality of the product.

Appendix B
Test Methods for Split or Proficiency Evaluation

After observation and qualification, each qualified technician is required to participate annually in one proficiency or split sample test for each test method requiring independent assurance. Split sample test results must compare to the independent assurance test results below. Proficiency sample test results must be within ±2 standard deviations of the proficiency sample mean.

Laboratory Testing Procedures and Tolerance Limits

Test Procedure	Description	Tolerance
Tex-104-E	Liquid Limit of Soils	15% of mean[1]
Tex-105-E	Plastic Limit of Soils	15% of mean[1]
Tex-106-E	Plasticity Index of Soils	20% of mean[1]
Tex-107-E	Bar Linear Shrinkage of Soils	± 2%
Tex-110-E	Particle Size Analysis of Soils, Part I	> No. 4 sieve: ± 5% points
		≤ No. 4 sieve: ± 3% points
Tex-113-E	Moisture-Density Relationship of Base Materials	Density ± 2.0 PCF
		Moisture Content ± 0.5%
Tex-117-E	Triaxial Compression for Disturbed Soils and Base Materials, Part II	Strength ± 15 psi
		Moisture Content ± 0.5%
Tex-200-F	Asphaltic Concrete Combined Aggregate	>5/8" sieve: ± 5.0% points (individual % retained)
		≤5/8" sieve–No. 200: ± 3.0% (individual % retained)
		Passing No. 200: ± 1.6% points
Tex-206-F	Compacting Test Specimens of Bituminous Mixtures	± 1.0% laboratory-molded density in accordance with Tex-207-F
Tex-207-F	Determining Density of Compacted Bituminous Mixtures	Laboratory-Molded Density: ± 1.0%
		Laboratory-Molded Bulk Specific Gravity: ± 0.020
		In-place air voids (cores): ± 1.0%
Tex-227-F	Theoretical Maximum Specific Gravity of Bituminous Mixtures	± 0.020
Tex-236-F	Asphalt Content of Asphalt Paving Mixtures by the Ignition Method	± 0.3%

Test Procedure	Description	Tolerance
Tex-241-F	Compacting Bituminous Specimens Using the Superpave Gyratory Compactor (SGC)	± 1.0% laboratory-molded density in accordance with Tex-207-F
Tex-418-A	Compressive Strength of Cylindrical Concrete Specimens	17% of mean[1] (4 × 8" specimen)
		14% of mean[1] (6 × 12" specimen)

1. The difference between compared test results must not exceed the indicated percentage of the mean of the compared test results, where the mean is the average of the two test results.

EXAMPLE: Plasticity Index

Tolerance = 20% of the mean

Technician test value	18
IA technician test value	22
Mean	20
20% difference	4

Both values are within 20% of the mean.

Appendix C
IA Annual Report

{Date}

Thomas L. Smith
Independent Assurance Program Manager
Materials and Tests Division (MTD)
Texas Department of Transportation
125 East 11th Street
Austin, TX 78701

RE: Annual Report of Independent Assurance (IA) Program Results – {Project Name}

Dear Mr. Smith:

In accordance with the requirements set forth in the TxDOT Quality Assurance Program for Design-Bid-Build Projects, the information below summarizes the results of system approach independent assurance (IA) testing conducted by our firm on the {Project Name} project for calendar year {XXXX}.

Independent Assurance Program Results – {Year}	
IA Activities	**{Project Name}**
1. Number of personnel evaluated under system approach.	
2. Number of IA evaluations meeting tolerance.	
3. Number of IA evaluations not meeting tolerance.	
4. Corrective actions:	

cc: Jere A. Williams, P.E.
Materials and Tests, Division Director
TxDOT – MTD

Appendix D
Materials Certification Example Letter for Projects with Federal Oversight

{Date}

Al Alonzi
FHWA Texas Division Administration
FHWA Texas Division Office
300 East 8th Street
Austin, TX 78701

RE: Materials Certification Letter

Project: SH Contract No.:
CSJ:
HWY:
County:
Federal-Aid Project No.:

Dear Mr. Alonzi:

This letter is to certify:

The results of the tests used in the acceptance program indicate that the materials incorporated in the construction work, and in the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications.

Both the Acceptance and Verification results were evaluated by an independent assurance sampling and testing program, the results of which were submitted to FHWA by the department in the Annual Report of Independent Assurance Program Results and independent of this materials certification.

☐ Exceptions to the plans and specifications are explained on the back hereof (or on attached sheet).
☐ There are no exceptions to the plans and specifications on this project.

Sincerely,
{TxDOT District Area Engineer or Director of Construction), P.E.
{Title}

cc: Jere A. Williams, P.E.
Materials and Tests, Division Director
TxDOT – MTD

Appendix E
Materials Certification Example Letter for Projects with Non-Federal Oversight

{Date}

{TxDOT District Engineer}
{Title}

RE: Materials Certification Letter

Project: SH Contract No.:
CSJ:
HWY:
County:

Dear Mr. {District Engineer}:

This letter is to certify:

The results of the tests used in the acceptance program indicate that the materials incorporated in the construction work, and in the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications.

Both the Acceptance and Verification results were evaluated by an independent assurance sampling and testing program, the results of which were submitted to MTD in the Annual Report of Independent Assurance Program Results and independent of this materials certification.

☐ Exceptions to the plans and specifications are explained on the back hereof (or on attached sheet).
☐ There are no exceptions to the plans and specifications on this project.

Sincerely,
{TxDOT District Area Engineer or Director of Construction}, P.E.
{Title}

cc: Jere A. Williams, P.E.
Materials and Tests, Division Director
TxDOT – MTD

Appendix F
Archived Versions

The following archived versions of this document are available.

- Effective January 2016–April 2018:
  ftp://ftp.dot.state.tx.us/pub/txdot-info/cst/qap_dbb_0116.pdf

GUIDE SCHEDULE OF SAMPLING & TESTING FOR DESIGN BID-BUILD (DBB) PROJECTS - (DBB Guide Schedule)

JUNE 28, 2019

Texas Department of Transportation

Using the Guide Schedule

Research of sampling and testing rates, listed for project tests in the following Guide Schedule, show that the Department's and the Contractor's risk of either rejecting "good" material or accepting "bad" material range from 20% to 40%.

To reduce this risk, we recommend that the sampling rate be increased during initial production. A four-fold increase in testing frequency will generally reduce risk to approximately 5%. The intent of increasing testing, at the start of production, is to insure the Contractor's processes are in control and to establish acceptability requirements early.

There is a need to increase the frequency of testing for high-variability materials and when testing results do not meet specifications. The Engineer may require the Contractor to reimburse the Department for costs resulting from failing test results, in accordance with the specifications.

Materials incorporated in TxDOT projects are subjected to various quality assurance procedures such as testing (as outlined in this document), certification, quality monitoring, approved lists, etc. The Engineer and testing staff should familiarize themselves with materials to be used before work begins by reviewing the specifications and this document. Discuss material testing requirements with the Contractor.

Other testing required by the specifications, but not shown in the DBB Guide Schedule, should be performed at a frequency necessary to provide adequate confidence that materials meet specifications.

NOTE—The TxDOT District Area Engineer or Director of Construction must submit a "Materials Certification Letter" at final acceptance of the project. The intent of this letter is to ensure that the quality of all materials incorporated into the project is in conformance with the plans and specifications, thus ensuring a service life equivalent to the design life. Any material represented by an acceptance test, that does not meet the criteria contained in the plans and specifications, is considered an exception. Exceptions must be listed in the materials certification letter. For projects with federal oversight, submit the materials certification letter (See Appendix D of DBB QAP) to the FHWA division administrator, with a copy to the Materials and Tests Division (MTD). For non-federal oversight projects, submit the material certification letter (Appendix E of DBB QAP) to the TxDOT District Engineer, with a copy to MTD. Refer to section 4.1 of the "Quality Assurance Program for Design-Bid-Build Projects" (DBB QAP).

Assuring the quality of the product and proper incorporation of materials into the project begins with proper sampling practices. Sampling, testing, and construction inspection must be performed collaboratively to assure the specific attributes of the finished product reflect quality workmanship. Sampling guidance for hot-mix asphalt is contained in Tex-225-F, "Random Selection of Bituminous Mixture Samples," and the respective specification for that material. All remaining materials are covered by method and materials specifications, to which the following applies.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows:

- Soils/flexible base: Vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed.
- Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
- Concrete (structural and miscellaneous): Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled. Tests for slump, air, and temperature should be done often to ensure the consistent control of the concrete production (not applicable to miscellaneous concrete).

This Guide Schedule is applicable to all contracts associated with the 2014 Standard Specifications.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES

			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
EMBANKMENT (CUTS & FILLS)	Liquid Limit (A)	Tex-104-E	During stockpiling operations, from completed stockpile, or project site (B)	Materials with PI ≤ 15: 10,000 CY	For Type A embankment or when required by the plans. This test may be waived for embankment cuts as directed by the Engineer. Determine a new liquid limit and plasticity index for each different material or notable change in material. Sample in accordance with Tex-100-E.
	Plasticity Index (A)	Tex-106-E		Materials with PI > 15: 5,000 CY	
	Gradation	Tex-110-E		Each 10,000 CY	When shown on plans. This test may be waived for embankment cuts, as directed by the Engineer. Sample in accordance with Tex-100-E.
	Moisture/Density	Tex-114-E		As directed by the Engineer	Not required for ordinary compaction. Determine a new optimum moisture and maximum density for each different material or notable change in material. Sample in accordance with Tex-100-E.
	In-place Density (A)	Tex-115-E	As directed by the Engineer	Fill: each 5,000 CY min. 1 per lift	Not required for ordinary compaction. Determine a new optimum moisture and maximum density according to Tex-114-E for each different material or notable change in material. Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Materials such as RAP, gypsum, lime, cement, and iron ore tend to bias the counts for nuclear density gauges.
				Cut: each 6,000 LF	
RETAINING WALL (NON-SELECT BACKFILL)	As shown above for Embankment (Cuts and Fills)		As shown above for Embankment (Cuts and Fills)	As shown above for Embankment (Cuts and Fills)	Sample in accordance with Tex-100-E.
RETAINING WALL (SELECT BACKFILL)	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	Required only for Type CS backfill. Test the fraction of material finer than the No. 200 sieve. Sample in accordance with Tex-400-E.
	Gradation	Tex-110-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	Required only for Drainage Aggregate. Sample in accordance with Tex-400-A.
		Tex-401-A			Required only for Select Backfill. Sample in accordance with Tex-400-A.
	Resistivity (A)	Tex-129-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	For material with resistivity between 1,500 and 3,000 ohm-cm, determine chloride and sulfate content, as specified in Item 423. Sample in accordance with Tex-400-A.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
RETAINING WALL (SELECT BACKFILL) (continued)	pH (A)	Tex-128-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	Sample in accordance with Tex-400-A.
	Magnesium Soundness	Tex-411-A	During stockpiling operations, or from completed stockpile	1 per source, per project	Test when backfill sources appear to contain particles such as shale, caliche, or other soft, poor-durability particles. Sample in accordance with Tex-400-A.
	Micro-Deval	Tex-461-A	During stockpiling operations, or from completed stockpile	1 per source, per project	May be used as an alternate to the magnesium soundness only when the % loss from the micro-deval is not greater than 20%. When the % loss from the micro-deval is greater than 20%, the magnesium soundness governs aggregate verification. Sample in accordance with Tex-400-A.
	In-place Density (A)	Tex-115-E	As directed by the Engineer.	1 per backfill lift, per wall	Not required for rock backfill. For walls greater than 500 ft. in length, perform one test per lift for every 500 ft. in length. (F) Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E for each different material or notable change in material and adjust the density accordingly.
UNTREATED BASE COURSES	Liquid Limit (A)	Tex-104-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	Sample in accordance with Tex-400-A.
	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	
	Gradation (A)	Tex-110-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	Sample in accordance with Tex-400-A.
	Moisture/Density	Tex-113-E	From completed stockpile at the source (E)	Each 20,000 CY	Not required for ordinary compaction. Sample in accordance with Tex-400-A.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES

				PROJECT TESTS		
MATERIAL OR PRODUCT		**TEST FOR**	**TEST NUMBER**	**LOCATION OR TIME OF SAMPLING (D)**	**FREQUENCY OF SAMPLING (F)**	**REMARKS**
UNTREATED BASE COURSES (Continued)		Wet Ball Mill (A)	Tex-116-E	From completed stockpile at the source (E)	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. Sample in accordance with Tex-400-A.
		Strength (A)	Tex-117-E	From completed stockpile at the source (E)	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. When base material is from a source where the District has a record of satisfactory triaxial results, the frequency of testing may be reduced to one per 30,000 CY. If any one test falls below the minimum value required, the frequency of testing will return to the original frequency of 20,000 CY. Sample in accordance with Tex-400-A.
		In-place Density (A)	Tex-115-E	As directed by the Engineer	Each 3,000 CY, min. 1 per lift	Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Materials such as RAP, gypsum, lime, cement, and iron ore tend to bias the counts for nuclear density gauges.
		Thickness (A)	Tex-140-E	As directed by the Engineer	Each 3,000 CY	Not required where survey grade control documents are compliant.
		Ride Quality (A)	Tex-1001-S Surface Test, Type B	Final riding surface of travel lanes		This applies to the final travel lanes that receive a 1- or 2-course surface treatment for the final surface, unless otherwise shown on the plans.
TREATED SUBGRADE AND BASE COURSES	SUBGRADE BEFORE TREATMENT	Organic Content	Tex-148-E	As directed by the Engineer	1 per project, per source or as directed by the Engineer	Required for existing subgrade material and material imported from a borrow source. Soil survey and geologic maps may be used to determine sampling locations. Sample in accordance with Tex-100-E.
		Sulfate Content	Tex-145-E	As directed by the Engineer	1 per 500 feet or 5,000 CY	Required for existing subgrade material and material imported from a borrow source. Soil survey and geologic maps may be used to determine sampling locations. Sample in accordance with Tex-100-E.
	NEW BASE MATERIAL	Liquid Limit (A)	Tex-104-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	When central mix site or plant is used, windrow sampling may be waived. Sample in accordance with Tex-400-A.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
TREATED SUBGRADE AND BASE COURSES (Continued)	NEW BASE MATERIAL (Continued)	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	
		Gradation (A)	Tex-110-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	Sample in accordance with Tex-400-A.
		Wet Ball Mill (A)	Tex-116-E	From completed stockpile at the source (E)	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. Sample in accordance with Tex-400-A.
		Strength (A)	Tex-117-E	From completed stockpile at the source (E)	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. When base material is from a source where the District has a record of satisfactory triaxial results, the frequency of testing may be reduced to one per 30,000 CY. If any one test falls below the minimum value required, the frequency of testing will return to the original frequency of 20,000 CY.
	LIME	Compliance with DMS-6350	Tex-600-J	During delivery to project	Commercial Lime Slurry: each 200 tons of lime Carbide Lime Slurry: each 100 tons of lime	Sample in accordance with Tex-600-J. Verify the source is listed on the current Material Producer List for Lime. Only materials appearing on the Material Producer List will be accepted. Sample frequency for Carbide Lime Slurry may be increased as directed by the Engineer. For Hydrated Lime and Quick Lime, project testing is not required but it is encouraged to sample and test the material at a rate of 1 per project as a best practice.
	CEMENT	Compliance with DMS-4600		Railroad car, truck, or cement bins		Verify the source is listed on the current Material Producer List for Cement. If not, sample and test in accordance with DMS-4600. (C)
	FLY ASH MATERIAL	Compliance with DMS-4615		Project samples at location directed by the Engineer		Verify the source is listed on the current Material Producer List for Fly Ash. Only materials from MTD approved sources appearing on the Material Producer List for Fly Ash will be accepted. Project testing is not required but it is encouraged to sample and test the material at a rate of 1 per project as a best practice. (C)

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
TREATED SUBGRADE AND BASE COURSES (Continued)	COMPLETE MIXTURE	Pulverization Gradation	Tex-101-E, Part III	Roadway, after pulverization and mixing	As necessary for control	At the beginning of the project, one test must be made for each 4,500 CY or 6,000 tons until the Engineer is satisfied that acceptable pulverization results are being obtained. Sample in accordance with Tex-100-E.
		Moisture/Density Curve and Strength	Tex-120-E, Part II, or Tex-121-E, Part II	From roadway windrow after treatment (E)	Each 20,000 CY	Not required for ordinary compaction. Determine a new moisture/density curve for each different or notable change in material. Perform Tex-120-E, Part II, for Cement Treated Material, and Tex-121-E, Part II, for Lime, Lime-Fly Ash, or Fly Ash Treated Material. If Tex-120-E, Part I, Tex-121-E, Part I, or Tex-127-E is performed before the project, this test may be waived. Sample in accordance with Tex-100-E.
		Moisture/Density Curve and Strength	Tex-120-E, Part I, Tex-121-E, Part I, or Tex-127-E	From roadway before treatment	As necessary for control	Perform Tex-120-E, Part I, on cement treated material, and Tex-121-E, Part I, for lime-fly ash or fly ash treated material. Verifies the field strength by comparing results from the mix design. Performed at the direction of the Engineer and when notable change in material, as described above for Part II of the test procedures. Sample in accordance with Tex-100-E.
		In-place Density (A)	Tex-115-E	As directed by the Engineer	Each 3,000 CY, min 1 per lift	Determine the appropriate moisture/density curve for each different material or notable change in material. Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Stabilizers and materials such as RAP, gypsum, and iron ore tend to bias the counts for nuclear density gauges.
		Thickness (A)	Tex-140-E	As directed by the Engineer	Each 3,000 CY	Not required where survey grade control documents are used for compliance.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
RECLAIMED ASPHALT PAVEMENT (RAP), CRUSHED CONCRETE, and RECYCLED MATERIALS	Sulfate Content	Tex-145-E	During stockpiling operations, from completed stockpile, or windrow	Each 5,000 CY	Required only for contractor furnished recycled material, including crushed concrete. Not required for RAP. Sample in accordance with Tex-400-A.
	Deleterious Material	Tex-413-A		Each 5,000 CY	Required only for contractor furnished recycled material, including crushed concrete. Sample in accordance with Tex-400-A.
	Decantation	Tex-406-A	During stockpiling operations, from completed stockpile, or windrow	Each 5,000 CY	Required only for contractor furnished RAP. Sample in accordance with Tex-400-A.

TABLE I – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager (SM), in the remarks field, and on the end of the Project Materials Certification Letter.
B	Engineer will select any of these locations or any combinations thereof with the provision that the initial sample will be obtained from the completed stockpile at the source and at least one out of ten consecutive samples will be taken at the project site (from the windrow for treated and untreated bases and embankments when possible).
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Soils/Flexible Base: For gradation, liquid limit, and plastic limit, vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed. • Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
E	The Engineer will sample from the completed stockpile at the source and test before placement.
F	Each test performed that is based on a quantity of material is considered "or fraction thereof" for calculating number of tests.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE IA – ASPHALT TREATED BASE (Plant Mix)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
AGGREGATE	Liquid Limit **(A)**	Tex-104-E	During stockpiling operations, from completed stockpile, or before mixing	Each 5,000 CY	Sample in accordance with Tex-400-A.
	Plasticity Index **(A)**	Tex-106-E	During stockpiling operations, from completed stockpile, or before mixing	Each 5,000 CY	
	Wet Ball Mill **(A)**	Tex-116-E	During stockpiling operations, from completed stockpile, or before mixing	1 per project, per source	Sample in accordance with Tex-400-A. **(B)**
LIME	Compliance with DMS-6350		During delivery to the project	Hydrated Lime: 1 per project Commercial Lime Slurry: each 200 tons of lime **(D)** Carbide Lime Slurry: each 100 tons of lime **(D)** Quick Lime: 1 per project	On projects requiring less than 50 tons, material from MTD approved sources may be accepted on the basis of Producer's Certification without sampling.
RECLAIMED ASPHALT PAVEMENT (RAP), and RECYCLED AGGREGATE	Decantation	Tex-406-A, Part I	During stockpiling operations, from completed stockpile, or before mixing	Each 10,000 CY	Sample in accordance with Tex-400-A.
RECYCLED ASPHALT SHINGLES (RAS)	Decantation	Tex-217-F,Part III	During stockpiling operations, from completed stockpile, or before mixing	Each 10,000 CY	Sample in accordance with Tex-400-A.
ASPHALT BINDER	Compliance with Item 300		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SiteManager (SM) Assistant. The Engineer must associate one QM sample per project in SM.

This is a guide for minimum sampling and testing.
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TABLE IA – ASPHALT TREATED BASE (Plant Mix)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
TACK COAT	Compliance with Item 300		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample per project in SM.
COMPLETE MIXTURE	Gradation (A)	Tex-200-F, Part I	Plant Mix (C)	20,000 CY (25,000 tons)	Sample in accordance with Tex-222-F. Determine the gradation of the aggregate from the complete mixture tested in accordance with Tex-236-F.
	Laboratory Density (A)	Tex-126-E	Plant Mix (C)	20,000 CY (25,000 tons)	Sample in accordance with Tex-222-F.
	Percent Asphalt (A)	Tex-236-F	Plant Mix (C)	Each 1,500 CY (2,000 tons) or days production	Determine an asphalt content correction factor for ignition oven at a minimum of one per project. Sample in accordance with Tex-222-F.
	Indirect Tensile Strength – Dry	Tex-226-F	Plant Mix	1 per project, per design	Sample in accordance with Tex-222-F.
	Moisture Susceptibility	Tex-530-C	As directed by the Engineer	1 per project, per design	This test may be waived, when shown on the plans. Sample in accordance with Tex-222-F.
ROADWAY	In-Place Air Voids (A)	Tex-207-F	Roadway cores, as directed by the Engineer (C, D)	Each 3,000 CY, min 1 per lift	Not required for ordinary compaction or when air void requirements are waived. Sample in accordance with Tex-222-F.
	Ride Quality	Tex-1001-S Surface Test, Type A	On Finished Surface		Unless otherwise shown on the plans.

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TABLE IA – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager (SM), in the remarks field, and on the end of the Project Materials Certification Letter.
B	Engineer will select any of these locations or any combinations thereof with the provision that at least one out of ten consecutive samples will be taken at the project site (from the windrow for treated and untreated bases and embankments when possible).
C	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Soils/Flexible Base: Vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed. • Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

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TABLE II – SEAL COAT					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
AGGREGATE	Gradation (A)	Tex-200-F, Part I	Stockpile (At source or at point of delivery)	Each 1,000 CY	Rate may be reduced to each 2,000 CY if the Engineer approves a contractor quality control plan. Sample in accordance with Tex-221-F.
	L. A. Abrasion (A)	Tex-410-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use. Sample in accordance with Tex-221-F. (B)
	Magnesium Soundness (A)	Tex-411-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use. Sample in accordance with Tex-221-F. (B)
	Surface Aggregate Classification (A)	Tex-612-J, Tex-411-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use. Sample in accordance with Tex-221-F. (B)
	Pressure Slake (A)	Tex-431-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.
	Freeze Thaw (A)	Tex-432-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.
	Unit Weight	Tex-404-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.
	24 hr. Water Absorption (A)	Tex-433-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.
	Crushed Face Count	Tex-460-A, Part I	Stockpile	1 per 20,000 CY	Only required for crushed gravel. Sample in accordance with Tex-221-F.
	Deleterious Material (A)	Tex-217-F, Part I	Stockpile	1 per 10,000 CY	Not required for lightweight aggregate. Sample in accordance with Tex-221-F.
	Decantation (A)	Tex-406-A	Stockpile	1 per 10,000 CY	Sample in accordance with Tex-221-F.
	Flakiness Index	Tex-224-F	Stockpile	Frequency as directed by the Engineer	Sample in accordance with Tex-221-F.

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TABLE II – SEAL COAT					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
AGGREGATE (Continued)	Micro Deval	Tex-461-A	Stockpile	1 per project or as necessary for control	Compare result to published value listed on the current Material Producer List for BRSQC. Submit sample to MTD for Soundness and L.A. Abrasion testing when results differ by more than 3% points, unless otherwise directed by the Engineer. Sample in accordance with Tex-221-F.
	White Rock Count	Tex-220-F	Stockpile		Required only for Limestone Rock Asphalt. Not required when MTD provides inspection at the plant. Sample in accordance with Tex-221-F.
	Naturally Impregnated Bitumen Content	Tex-236-F	Stockpile		Required only for Limestone Rock Asphalt. Not required when MTD provides inspection at the plant. Sample in accordance with Tex-221-F.
PRECOATED AGGREGATE	Asphalt Content	Tex-210-F	Stockpile	Frequency as directed by the Engineer when a target value is specified	Sample in accordance with Tex-221-F.
ASPHALT BINDER	Compliance with Item 300		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample asphalt binder in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample per project in SM.

TABLE II – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
C	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

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TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS
MINERAL AGGREGATE	COARSE AGGREGATE	Decantation (B)	Tex-406-A	From stockpile at concrete plant	Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		Sieve Analysis (A) (B)	Tex-401-A		Each 1,000 CY of concrete (each source)	Test combined aggregate when used. Sample in accordance with Tex-400-A.
		Deleterious Materials (B)	Tex-413-A		1 per project or as necessary for control	Sample in accordance with Tex-400-A.
		Los Angeles Abrasion (A) (B)	Tex-410-A		One, each source	Verify the value of the source, as listed on the current Material Producer list for CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. (C)
		Magnesium Soundness (A) (B)	Tex-411-A		One, each source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. (C)
	FINE AGGREGATE	Sand Equivalent (B)	Tex-203-F	From stockpile at concrete plant	1 per project or as necessary for control	Test combined aggregate when used. Sample in accordance with Tex-400-A.
		Organic Impurities (B)	Tex-408-A		1 per project, per source	Sample in accordance with Tex-400-A.
		Sieve Analysis (A) (B)	Tex-401-A		Each 1,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		Fineness Modulus (B)	Tex-402-A		1 per project or as necessary for control	Test combined aggregate when used. Test to confirm material variability when strength values are in question. Sample in accordance with Tex-400-A.
		Deleterious Material (B)	Tex-413-A		1 per project or as necessary for control	Test to confirm material variability when strength values are in question. Sample in accordance with Tex-400-A.

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TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS
MINERAL AGGREGATE (Continued)	FINE AGGREGATE (Continued)	Acid Insoluble Residue **(A) (B)**	Tex-612-J		Two, each source	Only for concrete subject to direct traffic. Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. **(C)**
SILICA FUME		Compliance with DMS-4630 **(A)**		Railroad car, truck, bags or silos	1 per project, per class of concrete (For each type and brand)	Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume. Sample in accordance with Tex-300-D.
METAKAOLIN		Compliance with DMS-4635 **(A)**		Railroad car, truck or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D.
MIX DESIGN		Compliance with Standard Specification Item 421.4.A		At source (if not approved)	Min. 1 design per class, per source	Verify if cement, fly ash, slag cement, and chemical admixture sources are listed on the Material Producer Lists. If not, sample and submit to MTD for testing. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT). Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash.
JOINT MATERIAL		Compliance with DMS-6300				Verify the source is listed on the Material Producer List for Joint Sealers. If not, sample and test before use in accordance with DMS-6310. **(C)** Sample in accordance with Tex-500-C.
CURING COMPOUND		Compliance with DMS-4650		Sampled at jobsite; tested by MTD. See remarks.	When requested by MTD	Only products listed on the Material Producer List for Concrete Curing Compounds will be allowed. When sample is requested by MTD, sample in accordance with Tex-718-I. Ensure container has been agitated and mixed before sampling. **(C)**
EVAPORATION RETARDANTS		Compliance with DMS-4650				Only products listed on the Material Producer list for Evaporation Retardants will be allowed. **(C)**
REINFORCING STEEL		Compliance with the Std. Specifications & Spec. Provisions	As Specified			Only materials from MTD approved sources listed on the Material Producer Lists for Reinforcing Steel Mills and Seven Wire Steel Strand will be allowed. **(C)**

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TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS
MECHANICAL COUPLERS	Compliance with DMS-4510	Tex-743-I	Sampled at jobsite; Tested by MTD	3 couplers per lot (500 couplers) for each type, model, bar size, and grade	Only materials from MTD approved sources listed on the Material Producer List for Mechanical Couplers will be allowed. **(C)**
LATEX	Compliance with DMS-4640 for concrete chemical admixtures				Verify the Latex is listed on the Material Producer List for Chemical Admixtures.
EPOXY	Compliance with DMS-6100, unless otherwise specified		Sampled at jobsite if not pre-approved by MTD.	1 per batch or shipment	Verify the source is listed on the Material Producer List for Epoxies and Adhesives. If not, sample and test before use in accordance with DMS-6100. Sample in accordance with Tex-734-I. **(C)**
CONCRETE	Compressive Strength **(A)**	Tex-418-A	At point of concrete placement	4 cylinders for each 60 CY per class, per day (For bridge railing and traffic railing, testing may be reduced to 4 cylinders per 180 CY per class regardless of days)	Sampling must be in accordance with Tex-407-A. Making additional cylinders for 56 day testing should be considered when slow strength gain mixtures are being used, or when the approved mix design has a history of failing to meet design strength at 28 days. Test two cylinders at 7 days, and if the average value is below the design strength, as defined in Item 421, Table 8, test the remaining 2 cylinders at 28 days, or 56 days if additional cylinder were not made. If the average value of the 2 cylinders tested at 7 days meets the minimum design strength, listed in Item 421, Table 8, the remaining cylinders are not required to be tested. If the average value of the 7 and 28 day cylinders are below the design strengths, and 56 day cylinders were made, test the remaining set at 56 days.
	Slump	Tex-415-A		1 test, per 4 strength specimens	Sample in accordance with Tex-407-A. Perform slump and temperature tests on the same load from which strength test specimens are made. Perform entrained air test only when entrained air concrete is specified on the plans. Check temperature of every load for bridge slabs and mass concrete placements. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.
	Entrained Air **(A)**	Tex-416-A or Tex-414-A			
	Temperature of Concrete **(A)**	Tex-422-A			

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TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS
CONCRETE (Continued)	Bridge Deck or Culvert Top Slab Thickness and Depth of Reinforcement	Tex-423-A, Part II	During dry run and during concrete placement (Bridge decks and direct traffic culverts)	1 per span	Min 6–Max 18 locations per span.

TABLE III – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	These Project Tests may be used for one or more projects being furnished concrete from the same plant during the same period.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed. • Concrete (structural): Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled. Test often for slump, air, and temperature to ensure the consistent control of the concrete production.
E	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

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Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE IV – HYDRAULIC CEMENT CONCRETE – NON-STRUCTURAL CONCRETE (Classes: A, B, or E)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (B)	FREQUENCY OF SAMPLING (C)	REMARKS
CONCRETE	Compressive Strength (A)	Tex-418-A	At point of concrete placement	2 cylinders per 180 CY, per class	Sampling must be in accordance with Tex-407-A. Strength will be determined by 7-day specimens.
MIX DESIGN	Compliance with the Standard Specification		At source if not approved	Min. 1 design per class, per source	Verify if cement, fly ash, slag cement, and chemical admixture sources are listed on the Material Producer Lists. If not, sample and submit to MTD for testing. Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT).
SILICA FUME	Compliance with DMS-4630		Railroad car, truck, bags, or silos	1 test per project, per class (for each type and brand)	Sample in accordance with Tex-300-D. Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume.
METAKAOLIN	Compliance with DMS-4635		Railroad car, truck, or silos	1 test per project, per class (for each type and brand)	Sample in accordance with Tex-300-D.

TABLE IV – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Concrete (miscellaneous): Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled.
C	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

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Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS
MINERAL AGGREGATE	COARSE AGGREGATE	Decantation	Tex-406-A	From stockpile at concrete plant	Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		Sieve Analysis (A)	Tex-401-A		As necessary for control	Sample in accordance with Tex-400-A. Test combined aggregate when used.
		Deleterious Materials	Tex-413-A		Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		L.A. Abrasion (A)	Tex-410-A		One, each source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. (C)
		Magnesium Soundness (A)	Tex-411-A			
	FINE AGGREGATE	Sand Equivalent	Tex-203-F	From stockpile at concrete plant	Each 3,000 CY of concrete (Each source or combination of sources)	Sample in accordance with Tex-400-A. Test combined aggregate when used. At least one per week's production.
		Organic Impurities	Tex-408-A		1 per project, per source	Sample in accordance with Tex-400-A.
		Sieve Analysis (A)	Tex-401-A		As necessary for control	Sample in accordance with Tex-400-A. Test combined aggregate when used.
		Fineness Modulus (B)	Tex-402-A			
		Deleterious Material (B)	Tex-413-A		Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		Acid Insoluble (A)	Tex-612-J		1 per project, per source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. (C)
MIX DESIGN		Compliance with the Standard Specifications Item 421.4.A		At source, if not approved	Min. 1 design, per class, per source	Verify if cement, fly ash, ground granulated blast furnace slag, and admixture sources are listed on the Material Producer List. If not, sample and submit to MTD for testing. Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT).
SILICA FUME		Compliance with DMS-4630		Railroad car, truck, bags, or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D. Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS
METAKAOLIN	Compliance with DMS-4635		Railroad car, truck, or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D.
JOINT MATERIAL	Compliance with DMS-6310		Sampled at jobsite if not sampled at source by MTD; tested by MTD. See remarks.	1 per batch or shipment	Sample in accordance with Tex-500-C. Sampling may be waived when the source is listed on the Material Producer List for Joint Sealers. **(C)**
CURING COMPOUND	Compliance with DMS-4650		Sampled at jobsite; tested by MTD. See remarks.	When requested by MTD	Only products listed on the Material Producer List for Concrete Curing Compounds will be allowed. When sample is requested by MTD, sample in accordance with Tex-718-I. Ensure container has been agitated and mixed before sampling. **(C)**
EVAPORATION RETARDANTS	Compliance with DMS-4650				Only products listed on the Material Producer List for Evaporation Retardants will be allowed. **(C)**
REINFORCING STEEL	Compliance with the Std. Specifications & Spec. Provisions	As Specified			Only materials from MTD approved sources listed on the Material Producer List for Reinforcing Steel Mills and Seven Wire Steel Strand will be accepted. **(C)**
MULTIPLE PIECE TIE BARS	Compliance with DMS-4515	Tex-712-I	Sampled at jobsite if not sampled at source by MTD; tested by MTD. See remarks.	Refer to Tex-711-I for sampling rates	Only materials from MTD approved sources listed on the Material Producer List for Multiple Piece Tie-bars for Concrete Pavements will be allowed. Sample in accordance with Tex-711-I.
EPOXY	Compliance with DMS-6100		Sampled at jobsite if not pre-approved by MTD. See remarks.	1 batch per shipment	Verify the source is listed on the Material Producer List for Epoxies and Adhesives. If not, sample and test before use in accordance with DMS-6100. Sample in accordance with Tex-734-I. **(C)**
CONCRETE	Strength **(A) (B)**	Tex-448-A or Tex-418-A	At point of concrete placement	2 cylinders for every 10 contractor job control tests	Sample in accordance with Tex-407-A. When the contract requires the project testing to be by the Engineer, the frequency and job control testing will be in accordance with the item of work. Split sample verification testing used when contractor performs job control testing. When job control testing by the contractor is waived by the plans, the frequency of sampling will be one test (2 specimens) for each 3,000 SY of concrete or fraction thereof or per day and split sample verification testing will be waived. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS
CONCRETE (Continued)	Slump	Tex-415-A	At time and location strength specimens are made	1 test for every 10 contractor job control tests.	Sample in accordance with Tex-407-A. Slump is not required for slip-formed pavement. Perform slump and temperature tests on the same load from which the strength specimens are made. Perform entrained air test only when entrained air concrete is specified on the plans. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.
	Entrained Air (A)	Tex-416-A or Tex-414-A			
	Temperature	Tex-422-A			
	Pavement Texture	Tex-436-A	Final Riding Surface of travel lanes	1 per day, per driving lane	Perform when carpet drag is the only surface texture required on the plans.
	Thickness	Tex-423-A, Part I	Center of paving machine	Every 500 feet	Methods other than Tex-423-A may be shown on the plans.
	Ride Quality (A)	Tex-1001-S Surface Test, Type B	Final riding surface of travel lanes		Engineer may verify contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.

TABLE V – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	When a project test does not meet the specified strength requirements and a reduced pay factor is assigned, document the analysis on the Letter of Certification of Materials Used.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348) (All testing as noted in Table VI may be waived for exempt production as defined by specification.)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS
COARSE AGGREGATE	L. A. Abrasion (A)	Tex-410-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (C)
	Magnesium Soundness (A)	Tex-411-A			
	Surface Aggregate Classification (A)	Tex-499-A		1 per project, per source	
	Micro Deval	Tex-461-A		1 per project, per aggregate source	Not required when the Rated Source Soundness Magnesium loss is 15 or less as listed on the current published BRSQC. If testing is required, sample in accordance with Tex-221-F.
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per source, per design	Does not apply to Item 342. Sample in accordance with Tex-221-F. The timing of when the test is performed is at the discretion of the Engineer.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder at hot- mix plant in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 (A)		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348)
(All testing as noted in Table VI may be waived for exempt production as defined by specification.)

			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min 1 design, per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted on individual materials, as necessary, for control.
COMPLETE MIXTURE	Asphalt Content (A)	Tex-236-F	Engineer Truck Sample (D)	Minimum 1 per Lot	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project. When Tex-236-F does not yield reliable results, use alternative methods for determining asphalt content, such as, Tex-210-F (ASTM D2172/AASHTO T164) and Tex-228-F (ASTM D4125/AASHTO T287).
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced (D)	1 per Sublot	Sample in accordance with Tex-222-F. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #. Does not apply to Items 342 and 348.
	Gradation (A)	Tex-200-F	Engineer Truck Sample (D)	Minimum 1, per 12 Sublots (E)	Sample in accordance with Tex-222-F. Determine correction factors for ignition oven using Tex-236-F at a minimum of one per project.
	Moisture Susceptibility	Tex-530-C	Truck Sample	1 per project	Sample in accordance with Tex-222-F, unless waived by the Engineer.
	Indirect Tensile Strength – Dry	Tex-226-F			Sample in accordance with Tex-222-F, unless waived by the Engineer. Does not apply to Items 342, 346, 347, and 348.
	Moisture Content	Tex-212-F, Part II	Engineer Truck Sample		Sample in accordance with Tex-222-F.
	Lab Molded Density (A)	Tex-207-F, Part I, VI, VIII	Truck Sample (D)	1 per Sublot 1 per Lot for Item 347	Sample in accordance with Tex-222-F. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.
	Drain Down Test (A)	Tex-235-F	Engineer Truck Sample	1 per 12 Sublots	Sample in accordance with Tex-222-F. Not required for Items 341, 344, and 347.
	Hamburg Wheel Test (A)	Tex-242-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Sample during production. Does not apply to Item 348 PFC-C, PFCR-C, and Thin Bonded Wearing Course –All Types.

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Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348) (All testing as noted in Table VI may be waived for exempt production as defined by specification.)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS
COMPLETE MIXTURE (Continued)	Cantabro Loss (A)	Tex-245-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Sample during production. Does not apply to items 341, 344, 346, and 347.
	Overlay Test (A)	Tex-248-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Does not apply to Items 341, 344, and 348 PFC-C, PFCR-C, and Thin Bonded Wearing Course –All Types.
ROADWAY	In-Place Air Voids (A)	Tex-207-F, Part I, VI, VIII	Roadway (D)	2 cores per Sublot	Two cores taken per Sublot and averaged. Sample in accordance with Tex-222-F. Does not apply to Items 342, 347, and 348.
	Segregation Profile (A)	Tex-207-F, Part V	Roadway	1 per project	Not required when Contractor uses thermal imaging system. Does not apply to Items 342, 347, and 348.
	Joint Density (A)	Tex-207-F, Part VII	Roadway	1 per project	
	Thermal Profile	Tex-244-F	Immediately behind paver	1 per project	Not required when Contractor uses thermal imaging system.
	Ride Quality Test Type B (A)	Tex-1001-S	Final riding surface of travel lanes	1 per project	Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results for surface test Type A are not required to be reported.
	Permeability	Tex-246-F	Roadway	1 per project	Permeability is encouraged to use with items 342 and 348. Only applies to Item 347.
FABRIC UNDERSEAL	Compliance with DMS-6220		Sampled, tested, and approved by MTD		Sampling must be in accordance with Tex-735-I. Verify the source is listed on the current Material Producer List for Silt Fence, Filter Fabric, and Fabric Underseals. If not, sample and test before use in accordance with DMS-6220.

TABLE VI – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."
E	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VII – HOT-MIX ASPHALT PAVEMENT (Items 334) (Refer to DMS-9210, "Limestone Rock Asphalt (LRA)," for testing requirements for Item 330.)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY (Per Design) (F)	REMARKS
COARSE AGGREGATE	L. A. Abrasion (A)	Tex-410-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (D)
	Magnesium Soundness (A)	Tex-411-A			
	Micro Deval	Tex-461-A			Sample in accordance with Tex-221-F. Testing frequency may be reduced or eliminated based on a satisfactory test history.
	Surface Aggregate Classification (A)	Tex-499-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. SiteManager Quality Monitoring test documentation is accomplished by attaching an approved mix design.
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per source	Sample in accordance with Tex-221-F. The timing of when the test is performed is at the discretion of the Engineer.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 (A) (C)		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VII – HOT-MIX ASPHALT PAVEMENT (Items 334) (Refer to DMS-9210, "Limestone Rock Asphalt (LRA)," for testing requirements for Item 330.)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY (Per Design) (F)	REMARKS
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min 1 design per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted in individual materials as necessary for control.
COMPLETE MIXTURE	Asphalt Content (A)	Tex-236-F	Engineer Truck Sample (E)	Minimum of 1 per 5,000 tons	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced (E)	1 per 5,000 tons	Sample in accordance with Tex-222-F.
	Gradation (A)	Tex-236-F	Truck Sample	Minimum 1 per 5,000 tons	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Boil Test	Tex-530-C		1 per project	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.
	Moisture Content	Tex-212-F, Part II	Truck Sample	1 per 5,000 tons	Sample in accordance with Tex-222-F. Performed by MTD at the point of production for payment calculations.
	Hydrocarbon-Volatile Content	Tex-213-F		1 per 5,000 tons	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.
	Lab Molded Density (A)	Tex-207-F		1 per 5,000 tons	Sample in accordance with Tex-222-F.
	Hveem Stability (A)	Tex-208-F		1 per 5,000 tons	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.
ROADWAY	Ride Quality Test Type B (A)	Tex-1001-S	Final riding surface of travel lanes		Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VII – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project.
C	Or as called for in the Specifications.
D	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
E	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."
F	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VIII – HOT-MIX ASPHALT PAVEMENT (Item 340)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY	REMARKS
COARSE AGGREGATE	L. A. Abrasion (A)	Tex-410-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (C)
	Magnesium Soundness (A)	Tex-411-A			
	Micro Deval	Tex-461-A	Stockpile (B)	1 per project, per source	Sample in accordance with Tex-221-F. Testing frequency may be reduced or eliminated based on a satisfactory test history.
	Surface Aggregate Classification (A)	Tex-499-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (C)
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per design	Sample in accordance with Tex-221-F.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 (A)		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min. 1 design per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted in individual materials as necessary for control.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VIII – HOT-MIX ASPHALT PAVEMENT (Item 340)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY	REMARKS
COMPLETE MIXTURE	Asphalt Content	Tex-236-F	Truck Sample (D)	Minimum of 1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced (D)	1 per day	Sample in accordance with Tex-222-F.
	Gradation (A)	Tex-236-F	Truck Sample	Minimum 1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Boil Test	Tex-530-C		1 per project	Sample in accordance with Tex-222-F, unless waived by the Engineer.
	Indirect Tensile Strength – Dry	Tex-226-F		1 per project, per design	Sample in accordance with Tex-222-F, unless waived by the Engineer.
	Lab Molded Density (A)	Tex-207-F	Truck Sample	1 per day	Sample in accordance with Tex-222-F.
	Hamburg Wheel Tracker (A)	Tex-242-F		1 per project	Sample in accordance with Tex-222-F. Sample during production.
ROADWAY	Air Voids (A)	Tex-207-F	Selected by the Engineer (D)	1 per day (2 Cores)	Sample in accordance with Tex-222-F.
	Ride Quality Test Type B (A)	Tex-1001-S	Final riding surface of travel lanes		Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.
FABRIC UNDERSEAL	Compliance with DMS-6220		Sampled, tested, and approved by MTD		Sample in accordance with Tex-735-I. Verify the source is listed on the current Material Producer List for Silt Fence, Filter Fabric, and Fabric Underseals. If not, sample and submit to MTD for testing before use in accordance with DMS-6220.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VIII – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

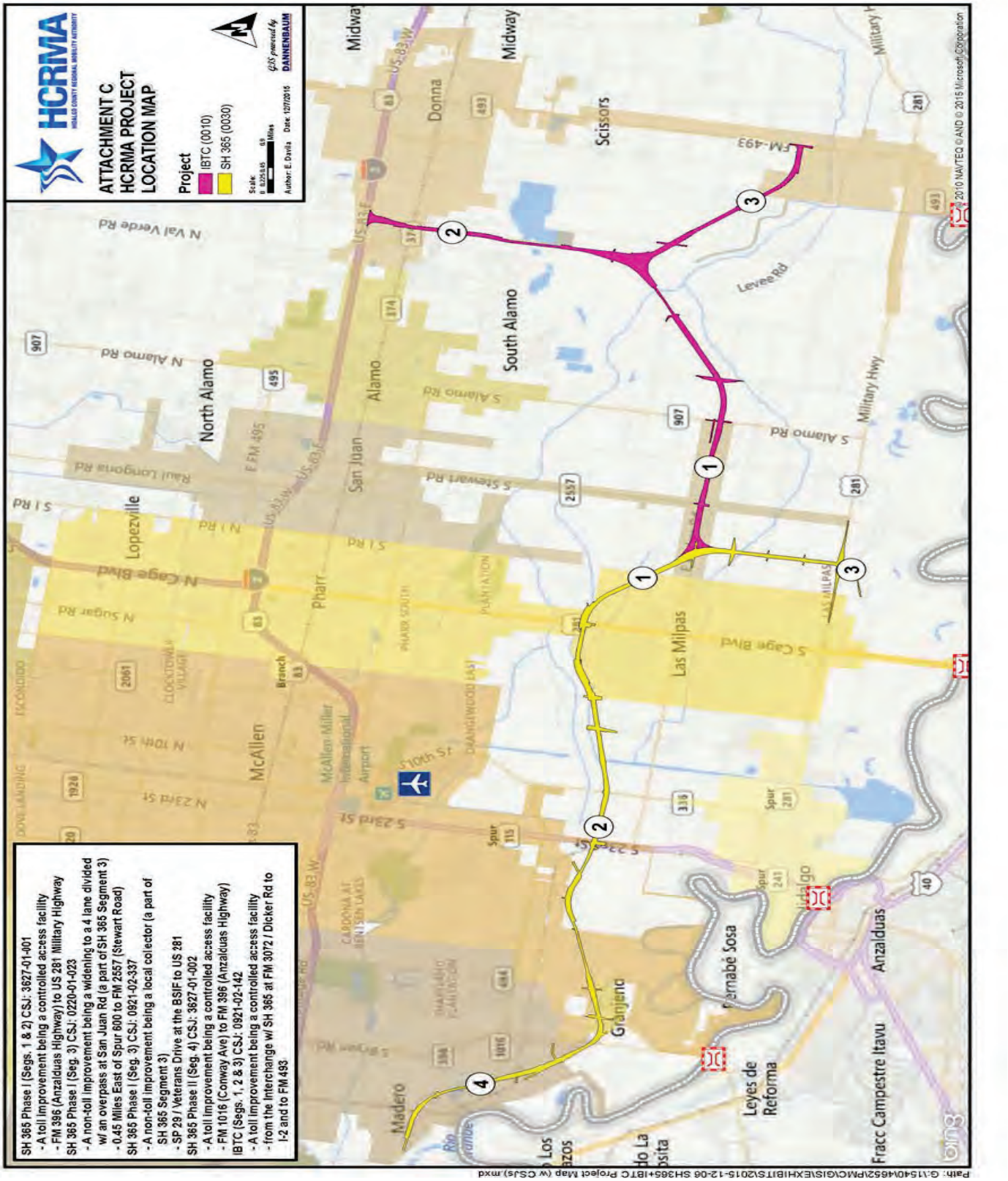
TABLE IX – MICROSURFACING (Item 350)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OF SAMPLING	FREQUENCY (Per Design)	REMARKS
AGGREGATE	Magnesium Soundness (A)	Tex-411-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing at 1 per project, per source. (C)
	Gradation	Tex-200-F, Part II		1 per project, per source	Sample in accordance with Tex-221-F.
	Crushed Face Count	Tex-460-A		1 per project, per source	Sample in accordance with Tex-221-F.
	Acid Insoluble (A)	Tex-612-J		1 per project, per source	Verify the value of the source, as listed on the current BRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-221-F. (C)
	Surface Aggregate Classification	Tex-499-A	Stockpile, or BRSQC (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing at 1 per project, per source. (C)
COMBINED BLEND	Sand Equivalent	Tex-203-F	Stockpile (B)	1 per project, per source	Sample in accordance with Tex-221-F.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 (A)		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE IX – MICROSURFACING (Item 350)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OF SAMPLING	FREQUENCY (Per Design)	REMARKS
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min. 1 design per project	Submit to MTD for approval.
CEMENT	Compliance with DMS-4600				Verify the source is listed on the current Material Producer List for Cement. If not, sample and submit to MTD for testing before use in accordance with DMS-4600.
COMPLETE MIX	Asphalt Content	Tex-236-F	During production	1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Gradation	Tex-200-F, Part II Tex-236-F			Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven use at a minimum of one per project.

TABLE IX – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

Project Limits Exhibit



APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

I. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, ***(Title o(Modal Operating Administration),*** as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21. *[Include Modal Operating Administration specific program* ***requirements.[***

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds ofrace, color, or national origin. ***[Include Modal Operating Administration specific program requirements.]***

4. **Information and Repo11s:** The contractor will provide all information and reports required by the Acts,the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the ***(Title o(Modal Operating Administration)*** to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the *(Title of Modal Operating Administration)*, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non- discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the ***(Title o(Modal Operating Administration)*** may determine to be appropriate, including, but not limitedto:

    a. withholding payments to the contractor under the contract until the contractor complies; and/or
    b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respectto any subcontract or procurement as the Recipient or the ***(Title o(Modal Operating Administration)*** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes andauthorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.,* 78 stat. 252), (prohibits discrimination on the basis ofrace, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.),* (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.),* as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.),* (prohibits discriminationon the basis of age);
- Airport and Airway Improvement Act of1982, (49 USC§ 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 - 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to -ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

North American Industry Classification System (NAICS) Work Codes
For Federally Funded Contracts

Texas Department of Transportation
Professional Engineering Procurement Services (PEPS) Division
Professional Services Contracts for Engineering, Surveying and Architecture
Pre-Certified Work Categories and North American Industry Classification System (NAICS) Work Codes for Federally Funded contracts

Work Category No.	Category Name	Applicable Disadvantaged Business Enterprise (DBE) NAICS Work Codes
1.1.1	Policy Planning	541330 or 541320
1.2.1	Systems Planning	541330
1.3.1	Subarea/Corridor Planning	541330
1.4.1	Land Planning/Engineering	541330
1.5.1	Feasibility Studies	541330
1.6.1	Major Investment Studies	541330
1.7.1	Traffic Demand Modeling	541330
1.8.1	Public Involvement	541820 or 541330
2.1.1	Traffic Noise Analysis	541330 or 541620
2.2.1	Air Quality Analysis	541330 or 541620
2.3.1	Wetland Delineation	541330 or 541620
2.3.2	Conditional/Functional Assessment	541330 or 541620
2.4.1	Nationwide Permit	541330 or 541620
2.4.2	Clean Water Act Sec. 404 Permits	541330 or 541620
2.4.3	U.S. Coast G. & U.S. Army Corps Of Engr. Permits	541330 or 541620
2.5.1	Geological Assessment for Edwards Aquifer Recharge Zone	541330 or 541360 or 541620
2.6.2	Impact Evaluation Assessments	541330 or 541620
2.6.4	Biological Evaluations/Assessments	541330 or 541620
2.7.1	Sec. 4(F)/6(F) Evaluations	541330 or 541620
2.7.2	Historic Sites Sec. 4(f) Evaluations	541330 or 541620 or 541310
2.10.1	Archaeological Surveys, Doc., Excavation, Testing Rpts	541330 or 541620
2.12.1	Socio-Economic and Environmental Justice Analysis	541330 or 541620
2.13.1	Hazardous Materials Initial Site Assessment	541330 or 541620
2.14.1	Environmental Document Preparation	541330 or 541620
2.15.1	Historical Research of Extant Bldgs, Struct. Landsc., & Obj.	541310 or 541620
2.15.2	Historical Surveys & Doc. of Bldgs, Struct, Landsc., & Obj.	541310 or 541620
3.2.1	Route Studies & Schematic Design	541330
4.2.1	Roadway Design	541330
4.4.1	Freeway Interchanges	541330
4.5.1	Constructability Review	541330
4.6.1	3-D Design Visualization Services	541330 or 541340
5.2.1	Bridge Design	541330
5.3.1	Multi-Level Interchange Design	541330
5.5.1	Bridge & Non-Bridge Class Culvert and Inlet Design	541330
6.1.1	Routine Bridge Inspection Team Leader	541330
6.1.2	Routine Bridge Inspection Project Manager	541330
6.2.1	Complex Bridge Inspection Team Leader	541330
6.2.2	Complex Bridge Inspection Project Manager	541330
6.3.1	Tunnel Inspection Team Leader	541330
6.3.2	Tunnel Inspection Project Manager	541330
6.4.1	Underwater Bridge Inspection Team Leader	541330
6.5.1	Non-Destructive Testing	541330 or 541380
7.1.1	Traffic Engineering Studies (Traffic Counting 541990)	541330
7.3.1	Traffic Signal Timing	541330
7.4.1	Traffic Control Systems Analysis, Design & Implementation	541330
7.5.1	Intelligent Transportation System	541330
8.1.1	Signing, Pavement Marking & Channelization	541330
8.2.1	Illumination	541330
8.3.1	Signalization	541330
8.4.1	ITS Control Systems Analysis, Design & Implementation	541330
8.6.1	Rail-Highway Design	541330

North American Industry Classification System (NAICS) Work Codes
For Federally Funded Contracts

Work Category No.	Category Name	Applicable Disadvantaged Business Enterprise (DBE) NAICS Work Codes
9.1.1	Bicycle & Pedestrian Facility Development	541330
10.1.1	Hydrologic Studies	541330
10.2.1	Roadway Hydraulic Design	541330
10.3.1	Bridge Hydraulic Design	541330
10.4.1	Storm Water Pump Station-Hydraulic Design	541330
10.4.2	Pump Stations-Electrical	541330
10.4.3	Pump Stations-Structures	541330
10.5.1	Bridge Scour Evaluations And Analysis	541330
10.6.1	Coastal Hydraulic Design	541330
10.7.1	Riverine Hydraulic Design	541330
10.8.1	FEMA Regulations and Permits	541330
11.1.1	Roadway Construction Management And Inspection	541330
11.2.1	Bridge Construction Management And Inspection	541330
11.3.1	Construction Superintendent	541330
11.4.1	Environmental Inspections	541330 or 541620
11.5.1	Construction Scheduling Project Manager	541330
11.6.1	Construction Schedule Support- General	541330
11.7.1	Construction Schedule Support- Relating to Scheduling of Roadway Design	541330
11.8.1	Construction Schedule Support- Relating to Construction Management of Projects Including Bridges or Multi-level Interchanges	541330
12.1.1	Asphaltic Concrete Production	541330 or 541380
12.1.2	Portland Cement Concrete	541330 or 541380
12.1.3	Materials Engineering	541330 or 541380
12.1.4	Asphaltic Concrete Placement	541330 or 541380
12.1.5	Portland Cement Concrete Placement	541330 or 541380
12.1.6	Embankment/Subgrade/Backfill/Base Production	541330 or 541380
12.1.7	Embankment/Subgrade/Backfill/Base Placement	541330 or 541380
12.2.1	Plant Inspection And Testing	541330 or 541380
12.3.1	Coatings Inspection and Material Testing Project Manager	541330 or 541380
12.3.2	Coatings Inspection and Material Testing Task Leader	541330 or 541380
14.1.1	Soil Exploration	541330 or 541380
14.2.1	Geotechnical Testing	541330 or 541380
14.3.1	Transportation Foundation Studies	541330 or 541380
14.4.1	Building Foundation Studies	541330 or 541380
14.5.1	Evaluation & Design of Geotechnical Related Structures	541330 or 541380
15.1.1	Right of Way Surveys	541370
15.2.1	Design Survey	541370
15.2.2	Construction Survey	541370
15.3.1	Aerial Photogrammetry	541370
15.3.2	Terrestrial Photogrammetry	541370
15.3.3	Terrestrial LiDAR	541370
15.3.4	Mobile and Airborne LiDAR	541370
15.3.5	Horizontal and Vertical Control	541370
15.5.1	State Land Surveying	541370
16.1.1	Architecture	541310
16.2.1	Building and Facilities Architecture	541310
16.3.1	Landscape Architecture	541320
17.1.1	Structural Engineering	541330
17.2.1	Mechanical Engineering	541330
17.3.1	Plumbing Engineering	541330
17.4.1	Electrical Engineering	541330
17.5.1	Civil Engineering	541330
17.6.1	Hazardous Building Materials Assessment (Asbestos)	541330 or 541620
17.6.2	Hazardous Building Materials Assessment (Lead)	541330 or 541620

North American Industry Classification System (NAICS) Work Codes
For Federally Funded Contracts

Work Category No.	Category Name	Applicable Disadvantaged Business Enterprise (DBE) NAICS Work Codes
18.2.1	Subsurface Utility Engineering	541330
18.3.1	Utility Adjustment Coordination	541330 or 541618
18.4.1	Utility Engineering	541330
18.5.1	Utility Construction Management and Verification	541330
18.6.1	Utility Management & Coordination Oversight	541330
19.1.1	Value Engineering	541330
	Services used to support work done under the precertification work categories	
Support	Drilling and Coring Services (for Engineering services)	541330
Support	Boring, Core Drilling, Foundation Drilling, and Soil Test Drilling	238910
Support	Materials Testing (for Engineering services)	541330
Support	Materials Testing (for testing laboratories)	541380
Support	Traffic Control - Flagging	561990
Support	Traffic Control - Sign erection, highway, road, street or bridge	237310
Support	Traffic Counting	541330 or 541990
	Non-listed categories (NLC)	
NLCs	NLC - for Engineering	541330
NLCs	NLC - for Materials Testing	541330 or 541380
NLCs	NLC - for Construction Record Keeper	541330
NLCs	NLC - for Non-engineering, Non-architecture, Non-surveying	To Be Determined

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Item 3E

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**3E**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/14/2021**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/2021**
TECHNICAL COMMITTEE			

1. Agenda Item: **RESOLUTION 2021-39 – APPROVAL OF WORK AUTHORIZATION 1 WITH TERRACON CONSULTANTS, INC. FOR MATERIAL TESTING FOR THE 365 TOLLWAY PROJECT.**

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

   Approval of WA 1 for CMT Services with Terracon Consultants, Inc.

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

4. Budgeted: ___Yes ___No X N/A

5. Staff Recommendation**: Motion to approve Resolution 2021-39 - Approval of Work Authorization 1 with Terracon Consultants, Inc. for Construction Material Testing Services for the 365 Tollway Project, as presented.**

6. Program Manager's Recommendation: ___Approved ___Disapproved **X** None

7. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: ___Approved ___Disapproved **X** None

9. Chief Auditor's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Financial Officer's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Development Engineer's Recommendation: ___Approved ___Disapproved **X** None

11. Chief Construction Engineer's Recommendation: **X** Approved ___Disapproved **X** None

12. Executive Director's Recommendation: **X** Approved ___Disapproved ___None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Memorandum

To: Pilar Rodriguez, P.E
HCRMA, Executive Director

From: Ramon Navarro, IV, P.E., C.F.M.
HCRMA, Chief Construction Engineer

Date: September 21, 2021

Subject: **RESOLUTION 2021-39 APPROVAL of WORK AUTHORIZATION 1 WITH TERRACON CONSULTANTS, INC. FOR MATERIAL TESTING IN THE 365 TOLLWAY PROJECT**

GOAL

Approval and authorization to enter into Work Authorization#1 for Construction Material Testing Services with Terracon Consultants, INC. .

BASIS

Terracon Consultants, INC. have agreed to provide construction materials testing to assure the materials incorporated into the 12.23 miles of concrete pavement section for Segment 1 [From McColl Road to us281] and segment 2 [from fm396, anzalduas highway/gsa connector] on Phase II of 365 Toll highway construction project highway construction project are subject to verification sampling and testing when required and meet project plans and specifications; and administering Quality Monitoring and Quality Assurance Program

RECOMMENDATION

Staff recommends award of Work Authorization #1 in the amount of $1,950,258.64 for a proposed three (3) year fixed period of time to conclude no later than December 13, 2025.

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

- [x] CMT Services — **Terracon Consulting Engineers**
- [ ] Environmental
- [ ] Engineering
- [ ] Geo-Technical
- [ ] Surveying

WORK AUTHORIZATION SUMMARY

RESOLUTION 2021-39

Work Authorization # 1 Supplemental # _____

Amount **$ 1,950,258.64**

Approved Work Authorizations:

Resolution No.	Description	Amount
2021-39	WA No. 1	
	WA No.	
	WA No.	
	WA No.	
	WA No.	

Subtotal from Cont. Page $ 0.00

Total Approved WA **$ 0.00**

Proposed Work Authorization and/or Supplemental

2021-39 WA No. 1 - **$ 1,950,258.64**

Goal and Options:

Approval of WA 1 for Construction Material Testing for the 365 Tollway Project.

Staff is recommending approval of this request in the amount of $ 1,950,258.64
Proposed total approved WA and/or Supplementals $ 1,950,258.64

R. Navarro IV, Cons Eng
Requested By:

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

BOARD RESOLUTION No. 2021-39

APPROVAL OF WORK AUTHORIZATION 1 WITH TERRACON CONSULTANTS, INC., FOR CONSTRUCTION MATERIAL TESTING IN THE 365 TOLLWAY PROJECT

THIS RESOLUTION is adopted this 28th day of September, 2021, by the Board of Directors of the HidalgoCounty Regional Mobility Authority at a regular meeting.

WHEREAS, the Hidalgo County Regional Mobility Authority (the "Authority"), acting through its Board of Directors (the "Board"), is a regional mobility authority created pursuant to Chapter 370, Texas Transportation Code, as amended (the "Act");

WHEREAS, the Authority is authorized by the Act to address mobility issues in and around Hidalgo County;

WHEREAS, on February 19, 2014, the Authority issued a solicitation for Statements of Qualification for Construction Material Testing Services for the Authority (the "Solicitation"); and

WHEREAS, on March 21, 2014 the Authority received responses to the Solicitation; and

WHEREAS, on April 23, 2014, Resolution 2014-38 authorized Authority staff to negotiate and enter into agreements with the top three scored firms (Raba Kistner Consultants Inc., L&G Laboratories and Terracon Consultants, Inc.) for Construction Material Testing Services (the "Services"); and

WHEREAS, on July 24, 2018, Resolution 2018-45 authorized Authority staff to procure one additional lab to provide additional Services; and

WHEREAS, on July 29, 2018, the Authority published a second Solicitation; and received three (3) responses, of which only one was deemed responsive;

WHEREAS, on September 25, 2018, the Authority authorized staff to negotiate contract terms for the Services to PaveTex Engineering LLC, dba PAVETEX, the sole responsive firm that met the professional services criteria set forth in the Solicitation;

WHEREAS, on August 21, 2020, the Authority received five (5) sealed statements of qualification packets. An internal committee of three HCRMA staff engineers ranked and reviewed; the Authority determined it necessary to negotiate contract terms to enter into negotiations with each of the ranked firms and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments; and

WHEREAS on October 27, 2020, the Authority approved Resolution 2020-28 Approval to enter into negotiations with each of the short-listed firms for Construction Material Testing for the Hidalgo County Regional Mobility Authority and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments; and

WHEREAS the Authority finds it necessary to approve Resolution 2021-38 Approval of Award of Contract by and between the Terracon Consultants, Inc., and the Hidalgo County Regional Mobility Authority for Construction Material Testing Services; and

WHEREAS the Authority finds it necessary to approve Resolution 2021-39 Approval of Work Authorization 1 to the Professional Service Agreement with Terracon, Inc., for Construction Material Testing in the 365 Tollway Project in the amount of $1,950,258.64.

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

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

Section 2. The Board hereby approves Work Authorization 1 to the Professional Service Agreement with Terracon Consultants, Inc., in the amount of $1,950,258.64 for the 365 Tollway Project, hereto attached as Exhibit A.

Section 3. The Board authorizes the Executive Director to execute Work Authorization 1 with Terracon Consultants, Inc., as approved by the Board.

*****

PASSED AND APPROVED AS TO BE EFFECTIVE IMMEDIATELY BY THE BOARD OF DIRECTORS OF THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY AT A REGULAR MEETING, duly posted and noticed, on the 28th day of September 2021, at which meeting a quorum was present.

S. David Deanda, Jr., Chairman

Ezequiel Reyna, Jr., Secretary/Treasurer

Exhibit A

Work Authorization 1
to the
Professional Service
Agreement with
Terracon Consultants, Inc.
For
Construction Material Testing Services

WORK AUTHORIZATION NO. 1___
AGREEMENT FOR ENGINEERING SERVICES

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of "Article V of that certain Professional Services Agreement for Engineering Services" (the Agreement) entered into by and between the Hidalgo County Regional Mobility Authority (Authority), and Terracon Consultants Inc. (the Engineer).

PART I. The Engineer will perform engineering design services generally described as in accordance with the project description attached hereto and made a part of this Work Authorization. The responsibilities of the Authority and the Engineer as well as the work schedule are further detailed in exhibits C, E, and F which are attached hereto and made a part of the Work Authorization.

PART II. The maximum amount payable under this Work Authorization is $1,950,258.64 and the method of payment is unit cost/specified rate basis as set forth in Attachment E of the Agreement. This amount is based upon fees set forth in Attachment E, Fee Schedule, of the Agreement and the Engineer's estimated Work Authorization costs included in Exhibit D, Fee Schedule, which is attached and made a part of this Work Authorization.

PART III. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with Articles III thru V of the Agreement, and Attachment A, Section 1.

PART IV. This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate on 12/13/25, unless extended by a supplemental Work Authorization as provided in Attachment A, Section 1.

PART V. This Work Authorization does not waive the parties' responsibilities and obligations provided under "Article V of that certain Professional Services Agreement for Engineering / Design Services 365 Tollway Project / Segment 1 & 2.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER	**THE AUTHORITY**
_____	_____
(Signature)	(Signature)
Jorge A Flores, P.G.	Pilar Rodriguez
(Printed Name)	(Printed Name)
Client Manager	Executive Director
(Title)	(Title)
_____	_____
(Date)	(Date)

SH 365 Phase I (Segs. 1 & 2) CSJ: 3627-01-001
- A toll improvement being a controlled access facility
- FM 396 (Anzalduas Highway) to US 281 Military Highway

SH 365 Phase I (Seg. 3) CSJ: 0220-01-023
- A non-toll improvement being a widening to a 4 lane divided w/ an overpass at San Juan Rd (a part of SH 365 Segment 3)
- 0.45 Miles East of Spur 600 to FM 2557 (Stewart Road)

SH 365 Phase I (Seg. 3) CSJ: 0921-02-337
- A non-toll improvement being a local collector (a part of SH 365 Segment 3)
- SP 29 / Veterans Drive at the BSIF to US 281

SH 365 Phase II (Seg. 4) CSJ: 3627-01-002
- A toll improvement being a controlled access facility
- FM 1016 (Conway Ave) to FM 396 (Anzalduas Highway)

IBTC (Segs. 1, 2 & 3) CSJ: 0921-02-142
- A toll improvement being a controlled access facility
- from the Interchange w/ SH 365 at FM 3072 / Dicker Rd to I-2 and to FM 493

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

EXHIBIT C
HCRMA PROJECT LOCATION MAP

Project
- IBTC (0010)
- SH 365 (0030)

Scale: 0 0.225 0.45 0.9 Miles

Author: E. Davila Date: 12/7/2015

GIS powered by DANNENBAUM

Path: G:\1540\4652\PMC\GIS\EXHIBITS\2015-12-06 SH365+IBTC Project Map (w CSJs).mxd

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ATTACHMENT C
SERVICES TO BE PROVIDED BY THE ENGINEER

APPLICABILITY:

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

ABBREVIATIONS, ABBREVIATIONS, and DEFINITIONS:

HCRMA OR AUTHORITY shall mean Hidalgo County Regional Mobility Authority
PMC (GEC) shall mean Program Management Consultant (General Engineering Consultant) (Dannenbaum Engineering Corporation)
ENGINEER shall mean B2Z Engineering, LLC
TxDOT shall mean Texas Department of Transportation
FHWA shall mean Federal Highway Administration
IBWC shall mean International Boundary and Water Commission
USFWS shall mean United States Fish & Wildlife Service
THC shall mean Texas Historical Commission
SHPO shall mean State Highway Preservation Office
USACE shall mean United States Army Corps of Engineers
GSA shall mean General Services Administration
HCMPO shall mean Hidalgo County Metropolitan Planning Organization
FAA shall mean Federal Aviation Administration
MTP shall mean Metropolitan Transportation Plan
TIP shall mean Transportation Improvement Program
MUTCD shall mean Manual of Uniform Traffic Control Devices
AASHTO shall mean American Association of State Highway and Transportation Officials
LRFD shall mean Load & Resistance Factor Design
PS&E shall mean Plans, Specifications and Estimate
ACP shall mean Asphaltic Concrete Pavement
CSJ shall mean Control Section Job (highway project designation number)
ADP shall mean Advance Project Development
AAP shall mean American Accreditation Program
AASHTO shall mena American Association of State Highway Transportation Officials
ACI shall mean American Concrete Institute
AO shall mean Area Office
AQMP shall mean Aggregate Quality Monitoring Program
CAR shall mean Corrective Action Report
CCRL shall mean Concrete and Cement Reference Laboratory
CE&I shall mean Construction Engineering and Inspection
CFR shall mean Code of Federal Regulations
MTD shall mean Materials and Tests Division
CMEC shall mean Construction Materials Engineering Council
FHA shall mean Federal Highway Administration
HMA shall mean Hot-Mix Asphalt
HMAC shall mean Hot-Mix Asphalt Center
IA shall mean Independent Assurance
L-A-B shall mean Laboratory Accreditation Bureau
MPL shall mean Material Producer List
QAP shall mean Quality Assurance Program
QAT shall mean Quality Assurance Test
QC shall mean Quality Control
SM shall mean SiteManager
TXAPA shall mean Texas Asphalt Pavement Association
TxDOT shall mean Texas Department of Transportation

ATTACHMENT C
SERVICES TO BE PROVIDED BY THE ENGINEER
PROJECT DESCRIPTION

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

County/HCRMA: Hidalgo County

CSJ number: 0921-02-368

Project/Description: Provide construction materials testing to assure the materials incorporated into 12.23 miles of Segment 1(from McColl Rod to US 281) and Segment 2 (from FM 396, Anzalduas Highway/GSA Connection) on Phase II of 365 Toll Highway Construction Project are subject to verification sampling and testing when required and meet project plans and specifications; And administering quality monitoring and quality assurance program. Overall project consists of construction of a 12.23 mile tolled facility from FM 396 & GSA Connector to US 281 (Military Highway), which consists of: Grading, flexible base, lime treated subgrade, asphaltic concreate pavement, concrete pavement, signing and pavement markings, cross culverts, bridge structures, retaining walls, illumination and toll equipment. (the "Project");

Length: 12.23 Miles (Approx)

Highway: 365 TOLL

Limits: (See Location Map Attached)

Contract is for "indefinite delivery/indefinite quantity [IDIQ] set for a proposed three (3) year fixed period of time, during that period of time the Engineer will be responsible for an unlimited number of separate projects, or additional work on a current project to be issued on an individual work order basis.

The Engineer agency(s) must be accredited by one of the following FHWA- and TxDOT-approved accrediting bodies:

A. AASHTO Accreditation Program (AAP);
B. Construction Materials Engineering Council (CMEC); or
C. Laboratory Accreditation Bureau (L-A-B)

The Engineer shall have Texas Department of Transportation or Toll Authority/Regional Mobility Authority as well U.S. Army Corps of Engineers' construction material testing experience and is expected to work directly with the HCRMA Construction Division, namely, the Chief Construction Engineer for the Authority. The selected Engineer(s) may also perform certain tasks under the oversight of the HCRMA's General Engineering Consultant (Currently HDR Engineering Inc.).

To avoid an appearance of a conflict of interest, any qualified Engineer agency (laboratory) shall perform only one of the following types of testing on the same project:

A. Quality control testing;
B. Quality acceptance testing;
C. Owner verification testing;
D. Independent assurance testing; or
E. Referee testing.

The selected Engineer(s) shall have adequate experienced staff and a workload free from constraints to provide the necessary construction material testing for the HCRMA. Staff expertise is to include a Licensed Professional

Engineer and certified, experienced staff proficient with TxDOT testing procedures, sampling and testing schedule, and the latest ASSHTO, ASTM and ACI testing requirements [Appendix A] performed and executed as per 2019 TxDOT Quality Assurance Program (~~DB-QAP~~ / DBB-QAP) / 2019 Guide Schedule of Sampling & Testing for Design Bid-Build Projects.

Engineer will compose and submit an annual report to the Federal Highway Administration (FHWA) summarizing the results of HCRMA's project specific systems approach program. This report identifies:

A. Number of sampling and testing personnel evaluated by the systems approach IA testing;
B. Number of IA evaluations found to be acceptable;
C. Number of IA evaluations found to be unacceptable; and
D. Summary of any significant system-wide corrective actions taken.

The Engineer will be responsible for maintaining documentation of all individuals qualified under their authority who perform required tests for acceptance of materials. A qualification summary listing all tests for which an individual is qualified will be available and printed at HCRMA's request. Documentation to be maintained for all qualified personnel includes:

A. Copies of any certificates issued by ACI and TXAPA ;
B. Original written examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, score, and date taken;
C. Original performance examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, qualification status, and date;
D. Results of annual split/proficiency testing administered by the TxDOT qualifying authority for each technician.

Engineer shall perform Quality Control / Quality Assurance sampling and testing and comply with Laboratory Qualification Program and will be evaluated under the Independent Assurance Program, as described in the 2019 QAPDBB [Attachment L]. Quality Control test results will be validated by verification test results obtained from independently taken samples. IA personnel or their designated agents will perform Quality Assurance verification sampling and testing.

1. The Engineer shall perform all sampling and testing of components and materials in accordance with the standard specifications, and all other standard and special specifications and special provisions applicable in this agreement. Meet the minimum sampling frequencies set out in the TxDOT 2019 Guide Schedule for Sampling and Testing forDesign Bid-Build Projects. The testing shall include the following materials and all the components of the materials listed. The estimated number of samples and tests are based on quantities in the executed construction contract.
2. The Engineer shall ensure the testing is completed and input into ProjectWise. NOTE: The General Contractor is responsible for Quality Control (QC) testing of Item 360, Concrete Paving. The Engineer shall be responsible for Quality Assurance (QA) testing of Item 360, Concrete Paving.
3. The Engineer shall provide certified personnel, outlined in their internal, AASHTO-approved, Quality Control (QC) Manual that are knowledgeable of all materials testing procedures. All personnel performing acceptance tests must provide certifications and must maintain the certifications throughout the project. The HCRMA reserves the right to require replacement of any technician during this contract if performance is determined to be unsatisfactory or the technician fails to maintain appropriate certifications.
4. Engineer's laboratory will be qualified by the HCRMA qualifying authority in accordance with Section 3, Laboratory Qualification Responsibility of the Texas Department of Transportation (TxDOT) Quality Assurance Program (Manual Notice: 2005-1), and be AASHTO accredited under the AASHTO Accreditation Program (AAP) throughout the life of the project. Engineer shall transmit, to the HCRMA, a copy of AAP accreditation certificate(s) upon receipt by the testing laboratory.
5. The Engineer shall provide technicians certified in accordance with TxDOT Quality Assurance Program for Construction (QAP) or other State approved programs, such as the Texas Asphalt Pavement Association (TxAPA) for Hot Mix Asphalt, and the Soils and Base Certification Program, as listed.

6. The Engineer shall provide certified technicians to perform the following tests:

A. Hot Mix Asphalt Testing:
   a. Level l-A
   b. Level l-B
   c. Hot Mix Asphalt Testing • Level II
   d. All other tests in the Manual of Testing Procedures 200-F Series or ASTM Procedures not covered in Level l-A, Level l-B, or Level II

B. Concrete Testing:
   a. QAP Program for Concrete Testing
   b. Other tests outlined in the Manual of Testing Procedures 400-A Series or ASTM Procedures that are not included in the QAP Program

7. The Engineer shall perform testing on the project. These tests include all tests listed in State's Guide Schedule of Sampling and Testing dated 2015. Follow the State's Guide Schedule of Sampling and Testing to establish testing frequencies. Testing frequencies may be increased as directed by the HCRMA.
8. The Engineer shall notify the HCRMA, to determine if any tests may be waived
9. The Engineer shall attend preconstruction QA and QC testing meetings prior to beginning work.
10. The Engineer shall:

A. Review and recommend approval or rejection of the Quality Control (QC) sampling and testing documentation submitted by the General Contractor for compliance with applicable State and Federal regulations, standards, and contract requirements.

B. Verify all tested materials used meet specifications or identify materials that do not meet specifications and recommend action which should be taken.

C. Certify that all tested materials used during construction meet the specifications as outlined in the APPIA Support System.

D. Work closely with the HCRMA to resolve all material discrepancies before the next monthly estimate is processed by utilizing the Reporting in APPIA.

E. Enter all test data in APPIA.

F. Enter all mix designs, concrete and asphalt, provided by the General Contractor into APPIA.

G. The Engineer shall report failing tests to the HCRMA within twenty-four (24) hours.

SUMMARY OF DELIVERABLES:

The Engineer shall provide the following:

1. Monthly Progress Reports
2. Quarterly Material Test Reports
3. Sampling and testing personnel qualification
4. Final document file (maintained in project control system during project execution. Final structure of file will be determined during project implementation, an example of content is provided below)

A. Construction Oversight Documentation
   a. Testing reports and Testing documentation as applicable
   b. Test Exception Letter
   c. Certification Verifications
   d. Photographs

B. Project Correspondence File (Design and Construction)
   a. E-mail files
   b. Letters
   c. Memos
   d. Meeting Minutes
   e. Monthly Deficiency Reports to track material issues (one (1) per month)
   f. Misc. correspondence

EXHIBIT D

BASIS OF LABOR ESTIMATE

Basis of Labor Estimate for HCRMA Bypass

Labor hours are based on the engineer provided schedule, and a 50 hour work week.

	Level of Effort Per Work Category Tech Hours	
Excavation & Embankment w/ Bridge Fills	7213	Field Technician on site for 100% of the anticipated construction time
Lime Treating	1575	Field Technician on site for 75% of the anticipated construction time
Cement Treating Base	1800	Field Technician on site for 100% of the anticipated construction time
Bond Breaker	500	Field Technician on site for 100% of the anticipated construction time
Concrete Paving	740	Field Technician on site for 20% of the anticipated construction time
Side Street Construction	1625	Field Technician on site for 50% of the anticipated construction time

Labor Category	Hours	Raw Rate	Contract Rate	Total
Field Technician	13453	$27.00	$68.02	$915,073.06
Project Engineer	1346	$58.00	$133.98	$180,337.08
Principal	135	$80.00	$186.90	$25,231.50
			Total Labor =	**$1,120,641.64**

Mileage		
Weeks on Project	272	
Days per Week	5.25	
Days on Project	1428	
Mileage per Day	49.5	
Mileage Rate	$ 6.00	
Total Miles Anticipated	70686	
Mileage Budget	**$ 424,116.00**	

Labor & Mileage Total =	**$1,544,757.64**
Total Testing =	**$405,501.00**
Grand Total =	**$1,950,258.64**

TEST NO.	CMT Firm: Terracon Date: 01/26/2021			Final as of 3/29/2021		
	Type		**Unit**		**QUANTITY**	**TOTAL**
1	Mobilization/Demobilization		Mile	$ 400.00		$ -
	Drilling, Logging, &Recovering Samples (**With** TCP)					$ -
2A	1. Depth ≤ 50 feet		Tex-132-E (every 5 feet)	$ 30.00		$ -
2B	2. Depth ≥ 50 feet		linear foot	$ 32.00		$ -
	Drilling, Logging, &Recovering Samples (**Without** TCP)					
3A	1. Depth ≤ 50 feet		linear foot	$ 27.00		$ -
3B	2. Depth ≥ 50 feet		linear foot	$ 29.00		$ -
4	Rock Coring (Soft Rock)[2]		linear foot	$ 12.50		$ -
5	Rock Coring (Hard Rock)[2]		linear foot	$ 16.00		$ -
6	Staking Borings and Utility Locations		hour	$ 115.00		$ -
	Standby Time (sampling)		hour	$ 272.00		$ -
7A	1. Hot Mix Asphalt (minumum of one hour)		each	$ 109.00		$ -
7B	2. Concrete (minumum of one hour)		each	$ 218.00		$ -
8	Piezometer - 2 inch (including well completion and installation)		linear foot	$ 44.00		$ -
9	Grouting of Borings		linear foot	$ 5.50		$ -
10	Traffic Control - Major		day	$ 2,500.00		$ -
	Laboratory Test	**Test Method**	**Unit**			
11	Volumetric Shrinkage	ASTM D427	each	$ 104.00		$ -
12	Standard Poor Test	ASTM D698	each	$ 98.00		$ -
13	Modified Poor Test	ASTM D1557	each	$ 340.00		$ -
14	Standard Penetration Test (SPT)	ASTM D1586	LF	$ 33.00		$ -
15	California Bearing Ratio (Single Sample without MD Curve)	ASTM D1883	test	$ 350.00		$ -
16	Unconfined Compressive Strength (Soil)	ASTM D2166	each	$ 75.00		$ -
17	Hydraulic Conductivity Permeability	ASTM D2434	each	$ 450.00		$ -
18	One Dimensional Consolidation Properties of Soil	ASTM D2435	each	$ 550.00		$ -
19	Unconfined Compressive Strength (Rock)	ASTM D2938	each	$ 98.00		$ -
20	Direct Shear Test of Soils Under Consolidated Drained Conditions	ASTM D3080	set of 3	$ 870.00		$ -
21	Direct Shear Test of Soils Under Consolidated Drained Conditions, SAND	ASTM D3080	set of 3	$ 490.00		$ -
22	Direct Shear Test of Soils Under Consolidated Drained Conditions, CLAY	ASTM D3080	set of 3	$ 655.00		$ -
23	Splitting Tensile of Intact Rock Core	ASTM D3967	each	$ 120.00		$ -
24	Water Stand Pipes	ASTM D4043	each	$ 40.00		$ -
25	Calcium Carbonate Content of Soils	ASTM D4373	LF	$ 62.00		$ -
26	Hydraulic Conductivity Permeability	ASTM D4511	each	$ 490.00		$ -
27	One Dimensional Swell, Methods A&B	ASTM D4546	each	$ 380.00		$ -
28	One Dimensional Swell, Method B Only	ASTM D4546	each	$ 327.00		$ -
29	One Dimensional Swell, Method C	ASTM D4546	each	$ 292.00		$ -
30	Permeability of Silt and Clays	ASTM D5084	each	$ 410.00		$ -
31	Suction Test (Filter Method)	ASTM D5298	each	$ 98.00		$ -
32	Casagrande Type Piezometers	N/A	each	$ 300.00		$ -
33	Casagrande Type Piezometers Installation	N/A	each	$ 55.00		$ -
34	Miscellaneous Testing	N/A	each	$ 55.00		$ -
35	Vertical Inclinometer	N/A	each	$ 490.00		$ -
36	Vertical Inclinometer Installation	N/A	each	$ 900.00		$ -
37	Vibrating Wire Piezometer	N/A	each	$ 980.00		$ -
38	Vibrating Wire Piezometer Installation	N/A	each	$ 1,200.00		$ -
39	Soil Boring with SPT	ASTM D1586	LF	$ 35.00		$ -
	Laboratory Test	**Test Method**	**Unit**			
	Soils & Base Testing					
40	Sampling	Tex-400-A	hour	$ 60.00	50	$ 3,000.00
41	Sample Preparation	Tex-101-E	each	$ 57.00	24	$ 1,368.00
42	Determining Slaking Time	Tex-102-E	each	$ 50.00		$ -
43	Moisture Content	Tex-103-E	each	$ 13.00	300	$ 3,900.00
44	Atterburg Limits	Tex-104,105&106-E	Set of 3	$ 75.00	224	$ 16,800.00
45	Linear Bar Shrinkage (per bar)	Tex-107-E	each	$ 65.00		$ -
46	Determining the Specific Gravity of Soils	Tex-108-E	each	$ 98.00		$ -
47	Sieve Analysis	Tex-110-E, Part I	each	$ 65.00	433	$ 28,145.00
48	Sieve Analysis (Hydrometer with Tex-108-E)	Tex-110-E, Part II	each	$ 82.00		$ -
49	Hydrometer with Tex-108-E (in conjunctin with Tex-110-E, Part II)	Tex-108-E	each	$ 55.00		$ -
50	Percent Passing No. 200 Sieve	Tex-111-E	each	$ 108.00	224	$ 24,192.00
51	Determining the Amount of Material in Solis Finer than the 75 mi	Tex-111-E	each	$ 49.00		$ -
52	Admixing Lime to Reduce Plasticity Index of Soils	Tex-112-E	each	$ 125.00		$ -
53	Moisture-Density Relationship	Tex-113-E	each	$ 245.00	20	$ 4,900.00
54	Moisture-Density Relationship	Tex-114-E	each	$ 218.00	73	$ 15,914.00
55	Field Density Measurements	Tex-115-E	hour	$ 55.00	0	$ -
56	Wet Ball Mill Test	Tex-116-E	each	$ 250.00	10	$ 2,500.00

57	Texas Triaxial Compression [6]	Tex-117-E, Part I	each	$ 1,650.00	10	$ 16,500.00
58	Texas Triaxial Compression [6]	Tex-117-E, Part II	each	$ 1,500.00		$ -
59	Quality Assurance (QA) Series for Flexible Base [7] [8]	See Foot Notes	each	$ 2,350.00		$ -
60	Soil- Cement Testing [7]	Tex-120-E, Part II	each	$ 436.00	9	$ 3,924.00
61	Soil- Lime Testing [7]	Tex-121-E, Part II	each	$ 436.00	19	$ 8,284.00
61.1	Soil-Lime Testing Determining Stabilization Ability of Lime by Soil pH	Tex-121-E, Part III	each	$ 250.00		$ -
62	Determining the Drainage Factor of Soil Materials (Not Field Test)	Tex-123-E ++	each	$ 600.00		$ -
63	Determining Modulus of Sub-grade Recaction (K Value) (Not Field Test)	Tex-125-E ++	each	$ 150.00		$ -
64	Molding, Testing, and Evaluation Bituminous Black Base Materials	Tex-126-E ++	each	$ 250.00		$ -
65	Lime-Fly Ash Compression [7]	Tex-127-E	each	$ 872.00	28	$ 24,416.00
66	Soil pH	Tex-128-E	each	$ 41.00	77	$ 3,157.00
67	Resistivity of Soils	Tex-129-E	each	$ 98.00		$ -
68	Slurry Testing	Tex-130-E	each	$ 103.00		$ -
69	Texas Cone Penetration	Tex-132-E	each	$ 49.00		$ -
70	Freezing and Thawing Tests oc Compacted Soil-Cement Mixture	Tex-135-E	each	$ 327.00		$ -
71	Thickness of Pavement Layers (4 hour minimum)	Tex-140-E	hour	$ 200.00	184	$ 36,800.00
72	Manual Procedure for Description and Identification of Soils	Tex-141-E	each	$ 55.00		$ -
73	Laboratory Classification os Soils for Engineering Purposes	Tex-142-E	each	$ 55.00		$ -
74	Sulfate Content in Soils	Tex-145-E	each	$ 71.00	77	$ 5,467.00
75	Conductivity Test for Field Detection of Sulfates in Soil	Tex-146-E	each	$ 65.00		$ -
75.1	Organic Content Using UV-VIS Method	Tex-148-E	each	$ 70.00	10	$ 700.00
76	Determining Cholride and Sulfate Contents in Soils	Tex-620-J	each	$ 81.00		$ -
77	Free Swell Test	EM1110-2-1906	each	$ 164.00		$ -
78	Pressure Swell Test	EM1110-2-1906	each	$ 272.00		$ -
79	One-Dimensional Swell	ASTM D4546	each	$ 380.00		$ -
80	One-Dimensional Swell (Method B Only)	ASTM D4546	each	$ 75.00		$ -
81	Potential Vertical Rise Calculation	Tex-124-E	each	$ 71.00		$ -
82	Volumetric Shrinkage	ASTM D4943	each	$ 104.00		$ -
83	Volumetric Shrinkage	ASTM D427	each	$ 98.00		$ -
84	Unconfined Compression Test (Soil)	ASTM D2166	each	$ 81.00		$ -
85	Unconfined Compression Test (Rock)	ASTM D2938	each	$ 98.00		$ -
86	Unconfined Compression Test (Rock) (Method D)	ASTM D7012	each	$ 60.00		$ -
	Unconsolidated Undrained (UU) Triaxial Compression Test					$ -
87	1. Set of Three	Tex-118-E	set	$ 300.00		$ -
88	2. Multistage	Tex-118-E	each	$ 273.00		$ -
	Consolidated Undrained (CU) Triaxial Compression Test					$ -
89	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 1,310.00		$ -
90	2. Multistage	Tex-131-E or ASTM D4767	each	$ 1,090.00		$ -
	Consolidated Drained (CD) Triaxial Compression Test					$ -
91	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 925.00		$ -
92	2. Multistage	Tex-131-E or ASTM D4767	each	$ 872.00		$ -
93	Direct Shear Consolidated Drained (CD), sand	ASTM D3080	set of 3	$ 1,400.00		$ -
94	Direct Shear Consolidated Drained (CD), clay	ASTM D3080	set of 3	$ 1,400.00		$ -
95	One-Dimensional Consolidation Test (7 load increments)	ASTM D2435	each	$ 600.00		$ -
96	Resilient Modulus (fine-grained soils)	AASHTO T307	each	$ 1,035.00		$ -
	Hot Mix Asphalt Testing					$ -
97	Sieve Analysis of Fine and Coarse Aggregates	Tex-200-F	each	$ 95.00	18	$ 1,710.00
98	Bulk Specific Gravity and Water Absorption of Aggregates	Tex-201-F	each	$ 95.00	18	$ 1,710.00
99	Apparent Specific Gravity of Material Finer Than 180 µm (No. 80) Sieve	Tex-202-F	each	$ 65.00		$ -
100	Sand Equivalent Test	Tex-203-F	each	$ 85.00	103	$ 8,755.00
101	Labortory Method of Mixing Bituminous Mixtures	Tex-205-F	Set of 3	$ 92.00		$ -
102	Compacting Specimens Using the Texas Gyratory Compactor (TG	Tex-206-F	Set of 3	$ 98.00		$ -
103	Determining Bulk Specific Gravity of Compacted Bituminuous Mixtures	Tex-207-F (I)	each	$ 27.00	186	$ 5,022.00
104	Determining In-Place Density of Compacted Bituminuous Mixtures (Nuclear Method)	Tex-207-F (III)	each	$ 27.00		$ -
105	Asphalt Rolling Pattern (Nuclear Method)	Tex-207-F (IV)	each	$ 87.00		$ -
106	Segregation Profile	Tex-207-F (V)	each	$ 175.00	3	$ 525.00
107	Joint Density	Tex-207-F (VII)	each	$ 175.00	3	$ 525.00
108	Test of Stabilometer Value of Bituminous Mixtures	Tex-208-F	set of 3	$ 120.00		$ -
109	Determining Asphalt Content of Bituminous Mixtures by Extraction	Tex-210-F	each	$ 155.00	20	$ 3,100.00
110	Recovery of Asphalt from Bituminou Mixtures by the Abson Pro	Tex-211-F	each	$ 218.00		$ -
111	Determining Moisture Content of Bituminous Mixtures	Tex-212-F	each	$ 55.00	3	$ 165.00
112	Determining Hydrocarbon-Volatile Content of Bituminous Mixture	Tex-213-F	each	$ 110.00		$ -
113	Determining Deleterious Material and Decantation Test for Coarse Aggregates	Tex-217-F	each	$ 82.00	10	$ 820.00
114	Indirect Tensile Strength Test	Tex-226-F	each	$ 545.00		$ -
115	Theoretical Maximum Specific Gravity of Bituminous Mixtures	Tex-227-F	each	$ 98.00	186	$ 18,228.00
116	Determining Asphalt Content of Bituminous Mixtures by the Nuclear	Tex-228-F	each	$ 190.00		$ -
117	Combined HMAC Cold-Belt Sampling and Testing Procedure	Tex-229-F	each	$ 55.00		$ -
118	Determining Draindown Characteristics in Bituminous Mixtures	Tex-235-F	each	$ 55.00		$ -

119	Determining Asphalt Content from Asphalt Paving Mixtures by the Ignition Method	Tex-236-F	each	$ 142.00	120	$ 17,040.00
120	Asphalt Release Agents	Tex-239-F	each	$ 50.00		$ -
121	Superpave Gyratory Compacting of Test Specimens of Bituminous	Tex-241-F	each	$ 125.00	30	$ 3,750.00
122	Hamburg Wheel Tracker	Tex-242-F	each	$ 245.00	3	$ 735.00
123	Tack Coat Adhesion	Tex-243-F	each	$ 109.00		$ -
124	Thremal Profile	Tex-244-F	each	$ 130.00	3	$ 390.00
125	Cantabro Loss	Tex-245-F	each	$ 190.00	3	$ 570.00
126	Permeability or Water Flow of Hot Mix Asphalt	Tex-246-F	each	$ 76.00		$ -
127	Overlay Test	Tex-248-F	set of 3	$ 545.00	3	$ 1,635.00
128	Flat and Elongated Particles	Tex-280-F	each	$ 61.00		$ -
129	Sampling Bituminous Materials, Pre-Molded Joint Fillers, and Joint	Tex-500-C	each	$ 55.00	4	$ 220.00
130	Asphalt Binder Water in Petroleum	Tex-501-C AASHTO T55	each	$ 93.00		$ -
131	Penetration of Bituminous Materials	Tex-502-C AASHTO T49	each	$ 163.00		$ -
132	Ductility of Asphalt Materials	Tex-503-C AASHTO T51	each	$ 120.00		$ -
133	Flash and Fire Points by Cleveland Open Cup	Tex-504-C AASHTO T48	each	$ 65.00		$ -
134	Softening Point of Bitumen (Riing and Ball Apparatus	Tex-505-C AASHTO T53	each	$ 110.00		$ -
135	Solubility of Bituminous Materials	Tex-507-C AASHTO T44	each	$ 110.00		$ -
136	Specific Gravity	Tex-508-C AASHTO T228	each	$ 82.00		$ -
137	Spot Test of Asphaltic Materials	Tex-509-C AASHTO T102	each	$ 158.00		$ -
138	Effect of Heat and Air on Asphalt Materials (Thin-Film Oven Test)	Tex-510-C AASHTO t179	each	$ 68.00		$ -
139	Flash Point with Tag Open-Cup Apparatus for Use with Material H	Tex-512-C AASHTO T79	each	$ 93.00		$ -
140	Saybolt Viscosity	Tex-513-C AASHTO T72	each	$ 82.00		$ -
141	Cutback Asphalts - Specific Gravity, API Gravity, or Density of Cutback Asphalts by Hdyrometer Method; Emulsified Asphalts - Weight per Gallon of Emulsified Asphalt	Tex-514-C ASTM D3142 ASTM D244	each	$ 136.00		$ -
142	Distillation of Cutback Asphalt Products	Tex-515-C AASHTO T78	each	$ 185.00		$ -
143	Float Test for Bituminous Materials	Tex-519-C AASHTO T50	each	$ 70.00		$ -
144	Standard Test Method for Emulsified Asphalts	Tex-521-C AASHTO T59	each	$ 190.00		$ -
145	Viscosity of Asphalts by Vacuum Capillary Viscometer	Tex-528-C AASHTO T202	each	$ 38.00		$ -
146	Kinematic Viscosity of Asphalts (Bitumens)	Tex-529-C AASHTO T201	each	$ 82.00		$ -
147	Boil Test (Effect of Water on Paving Mix)	Tex-530/531-C	each	$ 136.00	3	$ 408.00
148	Field Coring - ACP Thickness	ASTM D3549	each	$ 109.00		$ -
149	Pavement Thickness Determin. (Full Depth)	ASTM D3549	each	$ 136.00		$ -
150	Determining Polymer Additive Percentages in Polymer Modified	Tex-533-C	each	$ 65.00		$ -
151	Calculating Viscosity from Penetration	Tex-535-C	each	$ 76.00		$ -
152	Elastic Recovery of Tensile Deformation Using a Ductilometer	Tex-539-C	each	$ 65.00		$ -
153	Measurement of Polymer Separation on Heating in Modified Asphalat	Tex-540-C	each	$ 55.00		$ -
154	Rolling Thin Film Oven Test for Asphalt Binders	Tex-541-C ASSHTO T240	each	$ 110.00		$ -
155	Flexural Creep Stiffness Using the Bending Beam Rheometer	AASHTO T313	each	$ 110.00		$ -
156	Determining Rheological Properties of Asphalt Binder Using a Dy	AASHTO T315	each	$ 125.00		$ -
157	Determining Breaking Index for Asphalt Emulsions	Tex-542-C	each	$ 235.00		$ -
158	Resilience Test for Sealants and Repair Materials	Tex-547-C	each	$ 200.00		$ -
159	Tensile Strain to Failure	Tex-548-C	each	$ 65.00		$ -
160	Cone Flow Test	Tex-549-C	each	$ 60.00		$ -
161	Flexibility Test for Sealants and Repair Materials	Tex-550-C	each	$ 190.00		$ -
162	Settlement of Sealants and Repair Materials	Tex-551-C	each	$ 95.00		$ -
	Concrete & Aggregate Testing					
163	Sieve Analysis for Conc. Agg	Tex-401-A	each	$ 85.00	2	$ 170.00
164	Fineness Modulus for Conc. Agg	Tex-402-A	each	$ 75.00	2	$ 150.00
165	SSD Specific Gravity / Absorption Conc. Agg	Tex-403-A	each	$ 80.00		$ -
166	Unit Weight of Conc. Agg	Tex-404-A	each	$ 40.00	2	$ 80.00
167	Determining Pecent Voids and Solids in Concrete	Tex-405-A	each	$ 65.00		$ -
168	Decantation for Conc. Agg	Tex-406-A	each	$ 65.00	17	$ 1,105.00
169	Organic Impurities for Conc. Agg	Tex-408-A	each	$ 65.00	2	$ 130.00
170	Free Moisture and Water Absorption in Aggregate for Concrete	Tex-409-A	each	$ 35.00		$ -
171	L.A. Abrasion	Tex-410-A	each	$ 450.00	3	$ 1,350.00
172	5 Cycle Magnesium Soundness	Tex-411-A	each	$ 500.00	4	$ 2,000.00
173	Deleterious Material for Conc. Agg	Tex-413-A	each	$ 75.00	30	$ 2,250.00
174	Air Content of Fresh Concrete by Volumeteric	Tex-414-A	each	$ 33.00	141	$ 4,653.00
175	Slump of Fresh Concrete	Tex-415-A	each	$ 25.00	141	$ 3,525.00
176	Air Content of Fresh Concrete by Pressure	Tex-416-A	each	$ 27.00		$ -
177	Unit Weight, Yield and Air Content (Gravimetric) of Concrete	Tex-417-A	each	$ 30.00		$ -
178	Comp. Strength of Cyl. Conc. Specimen	Tex-418-A	each	$ 15.00	282	$ 4,230.00
179	Measure Temp. of Fresh Conc.	Tex-422-A	each	$ 20.00	141	$ 2,820.00
180	Obtaining & Testing Drilled Conc. Cores	Tex-424-A	each	$ 250.00		$ -
181	Absorption and Dry Bulk Specific Gravity of Lightweight Coarse	Tex-433-A	each	$ 95.00	2	$ 190.00
182	Test Flow of Grout Mixtures (Flow Cone Method)	Tex-437-A	each	$ 125.00		$ -
183	Accelerated Polish Test for Coarse Aggregate	Tex-438-A	each	$ 355.00		$ -
184	Det. Comp. Strength of Grouts	Tex-442-A	each	$ 18.00		$ -
185	Making & Curing Conc. Test Specimen	Tex-447-A	each	$ 18.00		$ -
186	Flexural Strength of Concrete Using Simple Beam Third-Point Load	Tex-448-A	each	$ 55.00		$ -
187	Capping Cyl. Conc. Specimen	Tex-450-A	each	$ 18.00		$ -
188	Degradation of Coarse Aggregate by Micro-Devel Abrasion	Tex-461-A	each	$ 350.00	2	$ 700.00

189	Uniformity of Concrete	Tex-472-A	each	$ 165.00		$ -
	Additional Testing	**Test Method**	**Unit**			
190	Geogrid Testing	Tex-621-J	each	$ 806.00		$ -
191	Water Quality Testing	Tex-619-J	each	$ 158.00		$ -
192	Lime Testing	Tex-600-J	each	$ 450.00	11	$ 4,950.00
193	Operating Inertial Profilers and Evaluating Pavement Profiles	Tex-1001-S	each	$ 1,500.00	2	$ 3,000.00
194	Vane Shear Testing	ASTM D2573	each	$ 327.00		$ -
	Miscellaneous Testing	**Test Method**	**Unit**			
195	Structural Field Welding	**NA**	hour	$150.00		$ -
	Equipmemt & Supplies for MT & UT		day	$150.00		$ -
	Other Direct Expenses		**Unit**			
	Photocopies B/W (8 1/2" X 11")		each	$ 0.15		$ -
	Photocopies B/W (11" X 17")		each	$ 0.23		$ -
	Photocopies Color (8 1/2" X 11")		each	$ 0.82		$ -
	Photocopies Color (11" X 17")		each	$ 1.41		$ -
	Digital Ortho Plotting		sheet	$ 2.43		$ -
	CADD Plotting		linear foot	$ 1.00		$ -
	Plots (B/W on Bond)		linear foot	$ 0.91		$ -
	Plots (Color on Bond)		linear foot	$ 1.75		$ -
	Plots (Color on Photgraphic Paper)		linear foot	$ 2.72		$ -
	Reproduction of CD/DVD		each	$ 5.00		$ -
	Additional Testing	**Test Method**	**Unit**			
196	Pressure Slake	Tex-431-A	each		2	$ -
197	Freeze Thaw	Tex-432-A	each		2	$ -
198	Determining Crushed Face Particle Count	Tex-460-A	each	$ 91.00	2	$ 182.00
199	Determining Flakiness Index	Tex-224-F	each	$ 90.00	2	$ 180.00
200	White Rock Count	Tex-220-F	each		2	$ -
201	Voids in Mineral Aggregates (VMA)	Tex-204-F	each	$ 2,250.00	48	$ 108,000.00
202	Acid Insoluble Residue for Fine Aggregates	Tex-612-J	each	$ 187.00	3	$ 561.00
					TOTAL TESTING:	**$ 405,501.00**

ATTACHMENT E

FEE SCHEDULE

TEST NO.	CMT Firm:TERRACON CONSULTANTS Date: 09/13/2021			2020-23					
	Geotechnical Services		**Unit**	**20210830 FINAL RATES**					**COMMENTS**
1	Mobilization/Demobilization		each	$ 458.50					$6/mile for anything < 67 miles per trip or $400 > 67 miles
	Drilling, Logging, &Recovering Samples (**With** TCP)		per mile	$ 6.00					
2A	1. Depth ≤ 50 feet		Tex-132-E (every 5 feet)	$ 35.17					
2B	2. Depth ≥ 50 feet		linear foot	$ 37.36					
	Drilling, Logging, &Recovering Samples (**Without** TCP)								
3A	1. Depth ≤ 50 feet ( )		linear foot	$ 30.61					
3B	2. Depth ≥ 50 feet ( )		linear foot	$ 32.57					
4	Rock Coring (Soft Rock) [2]		linear foot	$ 17.52					
5	Rock Coring (Hard Rock) [2]		linear foot	$ 21.28					
6	Staking Borings and Utility Locations		hour	$ 121.67					
	Standby Time (sampling)		hour	$ 297.74					
7A	1. Hot Mix Asphalt (minumum of one hour)		each	$ 117.05					
7B	2. Concrete (minumum of one hour)		each	$ 171.98					
8	Piezometer - 2 inch (including well completion and installation)		linear foot	$ 48.36					
9	Grouting of Borings		linear foot	$ 6.86					
10	Traffic Control - Major		day	$ 1,957.92					
	Laboratory Test	**Test Method**	**Unit**						
11	Volumetric Shrinkage	ASTM D427	each	$ 105.24					
12	Standard Poor Test	ASTM D698	each	$ 205.74					
13	Modified Poor Test	ASTM D1557	each	$ 278.52					
14	Standard Penetration Test (SPT)	ASTM D1586	LF	$ 30.04					
15	California Bearing Ratio (Single Sample without MD Curve)	ASTM D1883	test	$ 302.03					
16	Unconfined Compressive Strength (Soil)	ASTM D2166	each	$ 67.44					
17	Hydraulic Conductivity Permeability	ASTM D2434	each	$ 391.33					
18	One Dimensional Consolidation Properties of Soil	ASTM D2435	each	$ 489.34					
19	Unconfined Compressive Strength (Rock)	ASTM D2938	each	$ 89.11					
20	Direct Shear Test of Soils Under Consolidated Drained Conditions	ASTM D3080	set of 3	$ 679.23					
21	Direct Shear Test of Soils Under Consolidated Drained Conditions, SAND	ASTM D3080	set of 3	$ 576.27					
22	Direct Shear Test of Soils Under Consolidated Drained Conditions, CLAY	ASTM D3080	set of 3	$ 708.79					
23	Splitting Tensile of Intact Rock Core	ASTM D3967	each	$ 131.11					
24	Water Stand Pipes	ASTM D4043	each	$ 37.69					
25	Calcium Carbonate Content of Soils	ASTM D4373	LF	$ 68.31					
26	Hydraulic Conductivity Permeability	ASTM D4511	each	$ 324.08					
27	One Dimensional Swell, Methods A&B	ASTM D4546	each	$ 249.47					
28	One Dimensional Swell, Method B Only	ASTM D4546	each	$ 324.66					
29	One Dimensional Swell, Method C	ASTM D4546	each	$ 247.52					
30	Permeability of Silt and Clays	ASTM D5084	each	$ 385.64					
31	Suction Test (Filter Method)	ASTM D5298	each	$ 91.51					
32	Casagrande Type Piezometers	N/A	each	$ 337.82					
33	Casagrande Type Piezometers Installation	N/A	each	$ 339.59					
~~34~~	~~Miscellaneous Testing~~	~~N/A~~	~~each~~	$ 188.62					No need for this rate.
35	Vertical Inclinometer	N/A	each	$ 575.22					
36	Vertical Inclinometer Installation	N/A	each	$ 917.26					
37	Vibrating Wire Piezometer	N/A	each	$ 960.25					
38	Vibrating Wire Piezometer Installation	N/A	each	$ 995.10					
39	Soil Boring with SPT	ASTM D1586	LF	$ 33.48					
	Laboratory Test	**Test Method**							
	Soils & Base Testing								
40	Sampling	Tex-400-A	hour	$ 66.15					
41	Sample Preparation	Tex-101-E	each	$ 67.65					
42	Determining Slaking Time	Tex-102-E	each	$ 72.20					
43	Moisture Content	Tex-103-E	each	$ 15.44					
44	Atterburg Limits	Tex-104,105&106-E	Set of 3	$ 93.10					
45	Linear Bar Shrinkage (per bar)	Tex-107-E	each	$ 69.04					
46	Determining the Specific Gravity of Soils	Tex-108-E	each	$ 80.67					
47	Sieve Analysis	Tex-110-E, Part I	each	$ 83.14					
48	Sieve Analysis (Hydrometer with Tex-108-E)	Tex-110-E, Part II	each	$ 94.61					
49	Hydrometer with Tex-108-E (in conjunctin with Tex-110-E, Part II)	Tex-108-E	each	$ 65.69					
50	Percent Passing No. 200 Sieve	Tex-111-E	each	$ 66.42					
51	Determining the Amount of Material in Solis Finer than the 75 mi	Tex-111-E	each	$ 63.71					
52	Admixing Lime to Reduce Plasticity Index of Soils	Tex-112-E	each	$ 145.84					
53	Moisture-Density Relationship	Tex-113-E	each	$ 274.07					
54	Moisture-Density Relationship	Tex-114-E	each	$ 259.06					
55	Field Density Measurements	Tex-115-E	hour	$ 61.22					
56	Wet Ball Mill Test	Tex-116-E	each	$ 260.00					
57	Texas Triaxial Compression [6]	Tex-117-E, Part I	each	$ 793.37					
58	Texas Triaxial Compression [6]	Tex-117-E, Part II	each	$ 1,451.89					
59	Quality Assurance (QA) Series for Flexible Base [7] [8]	See Foot Notes	each	$ 2,178.60					
60	Soil- Cement Testing [7]	Tex-120-E, Part II	each	$ 439.45					
61	Soil- Lime Testing [7]	Tex-121-E, Part II	each	$ 430.11					
61.1	Soil-Lime Testing Determining Stabilization Ability of Lime by Soil pH	Tex-121-E, Part III	each	$ 395.15					
62	Determining the Drainage Factor of Soil Materials (Not Field Test)	Tex-123-E ++	each	$ 332.34					
63	Determining Modulus of Sub-grade Recaction (K Value) (Not Field Test)	Tex-125-E ++	each	$ 139.15					
64	Molding, Testing, and Evaluation Bituminous Black Base Materials	Tex-126-E ++	each	$ 1,360.40					
65	Lime-Fly Ash Compression [7]	Tex-127-E	each	$ 719.39					
66	Soil pH	Tex-128-E	each	$ 53.94					
67	Resistivity of Soils	Tex-129-E	each	$ 118.20					
68	Slurry Testing	Tex-130-E	each	$ 109.14					
69	Texas Cone Penetration	Tex-132-E	each	$ 41.79					
70	Freezing and Thawing Tests oc Compacted Soil-Cement Mixture	Tex-135-E	each	$ 360.26					
71	Thickness of Pavement Layers (4 hour minimum)	Tex-140-E	hour	$ 107.04					
72	Manual Procedure for Description and Identification of Soils	Tex-141-E	each	$ 51.18					
73	Laboratory Classification os Soils for Engineering Purposes	Tex-142-E	each	$ 65.75					
74	Sulfate Content in Soils	Tex-145-E	each	$ 91.91					
75	Conductivity Test for Field Detection of Sulfates in Soil	Tex-146-E	each	$ 100.96					
75.1	Organic Content Using UV-VIS Method	Tex-148-E	each	$ 231.70					
76	Determining Cholride and Sulfate Contents in Soils	Tex-620-J	each	$ 88.16					
77	Free Swell Test	EM1110-2-1906	each	$ 192.31					
78	Pressure Swell Test	EM1110-2-1906	each	$ 292.08					
79	One-Dimensional Swell	ASTM D4546	each	$ 277.26					
80	One-Dimensional Swell (Method B Only)	ASTM D4546	each	$ 259.35					
81	Potential Vertical Rise Calculation	Tex-124-E	each	$ 85.14					
82	Volumetric Shrinkage	ASTM D4943	each	$ 111.43					
~~83~~	~~Volumetric Shrinkage~~	~~ASTM D427~~	~~each~~	$ 81.35					Repeated on Line 11
84	Unconfined Compression Test (Soil)	ASTM D2166	each	$ 66.79					
85	Unconfined Compression Test (Rock)	ASTM D2938	each	$ 97.80					
86	Unconfined Compression Test (Rock) (Method D)	ASTM D7012	each	$ 72.17					
	Unconsolidated Undrained (UU) Triaxial Compression Test								
87	1. Set of Three	Tex-118-E	set	$ 312.36					
88	2. Multistage	Tex-118-E	each	$ 286.21					
	Consolidated Undrained (CU) Triaxial Compression Test								
89	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 1,484.08					
90	2. Multistage	Tex-131-E or ASTM D4767	each	$ 1,286.81					
	Consolidated Drained (CD) Triaxial Compression Test								
91	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 1,128.69					
92	2. Multistage	Tex-131-E or ASTM D4767	each	$ 1,030.76					
93	Direct Shear Consolidated Drained (CD), sand	ASTM D3080	set of 3	$ 658.05					
94	Direct Shear Consolidated Drained (CD), clay	ASTM D3080	set of 3	$ 834.92					
95	One-Dimensional Consolidation Test (7 load increments)	ASTM D2435	each	$ 597.14					

96	Resilient Modulus (fine-grained soils)	AASHTO T307	each	$ 1,141.53				
	Hot Mix Asphalt Testing							
97	Sieve Analysis of Fine and Coarse Aggregates	Tex-200-F	each	$ 94.54				
98	Bulk Specific Gravity and Water Absorption of Aggregates	Tex-201-F	each	$ 91.88				
99	Apparent Specific Gravity of Material Finer Than 180 µm (No. 80) Sieve	Tex-202-F	each	$ 64.35				
100	Sand Equivalent Test	Tex-203-F	each	$ 95.22				
101	Labortory Method of Mixing Bituminous Mixtures	Tex-205-F	Set of 3	$ 163.82				
102	Compacting Specimens Using the Texas Gyratory Compactor (TG	Tex-206-F	Set of 3	$ 113.04				
103	Determining Bulk Specific Gravity of Compacted Bituminuous Mixtures	Tex-207-F (I)	each	$ 42.46				
104	Determining In-Place Density of Compacted Bituminuous Mixtures (Nuclear Method)	Tex-207-F (III)	each	$ 39.73				
105	Asphalt Rolling Pattern (Nuclear Method)	Tex-207-F (IV)	each	$ 88.69				
106	Segregation Profile	Tex-207-F (V)	each	$ 194.17				
107	Joint Density	Tex-207-F (VII)	each	$ 194.17				
108	Test of Stabilometer Value of Bituminous Mixtures	Tex-208-F	set of 3	$ 157.05				
109	Determining Asphalt Content of Bituminous Mixtures by Extraction	Tex-210-F	each	$ 182.13				
110	Recovery of Asphalt from Bituminou Mixtures by the Abson Pro	Tex-211-F	each	$ 289.11				
111	Determining Moisture Content of Bituminous Mixtures	Tex-212-F	each	$ 54.03				
112	Determining Hydrocarbon-Volatile Content of Bituminous Mixture	Tex-213-F	each	$ 131.76				
113	Determining Deleterious Material and Decantation Test for Coarse Aggregates	Tex-217-F	each	$ 99.09				
114	Indirect Tensile Strength Test	Tex-226-F	each	$ 495.02				
115	Theoretical Maximum Specific Gravity of Bituminous Mixtures	Tex-227-F	each	$ 105.31				
116	Determining Asphalt Content of Bituminous Mixtures by the Nuclear	Tex-228-F	each	$ 103.18				
117	Combined HMAC Cold-Belt Sampling and Testing Procedure	Tex-229-F	each	$ 79.85				
118	Determining Draindown Characteristics in Bituminous Mixtures	Tex-235-F	each	$ 69.93				
119	Determining Asphalt Content from Asphalt Paving Mixtures by the Ignition Method	Tex-236-F	each	$ 162.20				
120	Asphalt Release Agents	Tex-239-F	each	$ 86.83				
121	Superpave Gyratory Compacting of Test Specimens of Bituminous	Tex-241-F	each	$ 158.11				
122	Hamburg Wheel Tracker	Tex-242-F	each	$ 451.77				
123	Tack Coat Adhesion	Tex-243-F	each	$ 135.65				
124	Thremal Profile	Tex-244-F	each	$ 159.17				
125	Cantabro Loss	Tex-245-F	each	$ 219.67				
126	Permeability or Water Flow of Hot Mix Asphalt	Tex-246-F	each	$ 81.80				
127	Overlay Test	Tex-248-F	set of 3	$ 762.22				
128	Flat and Elongated Particles	Tex-280-F	each	$ 77.36				
129	Sampling Bituminous Materials, Pre-Molded Joint Fillers, and Joint	Tex-500-C	each	$ 82.52				
130	Asphalt Binder Water in Petroleum	Tex-501-C AASHTO T55	each	$ 120.50				
131	Penetration of Bituminous Materials	Tex-502-C AASHTO T49	each	$ 130.82				
132	Ductility of Asphalt Materials	Tex-503-C AASHTO T51	each	$ 139.55				
133	Flash and Fire Points by Cleveland Open Cup	Tex-504-C AASHTO T48	each	$ 70.56				
134	Softening Point of Bitumen (Riing and Ball Apparatus	Tex-505-C AASHTO T53	each	$ 120.27				
135	Solubility of Bituminous Materials	Tex-507-C AASHTO T44	each	$ 140.33				
136	Specific Gravity	Tex-508-C AASHTO T228	each	$ 94.34				
137	Spot Test of Asphaltic Materials	Tex-509-C AASHTO T102	each	$ 197.57				
138	Effect of Heat and Air on Asphalt Materials (Thin-Film Oven Test)	Tex-510-C AASHTO t179	each	$ 148.60				
139	Flash Point with Tag Open-Cup Apparatus for Use with Material H	Tex-512-C AASHTO T79	each	$ 108.75				
140	Saybolt Viscosity	Tex-513-C AASHTO T72	each	$ 89.02				
141	Cutback Asphalts - Specific Gravity, API Gravity, or Density of Cutback Asphalts by Hdyrometer Method; Emulsified Asphalts - Weight per Gallon of Emulsified Asphalt	Tex-514-C ASTM D3142 ASTM D244	each	$ 365.94				
142	Distillation of Cutback Asphalt Products	Tex-515-C AASHTO T78	each	$ 205.67				
143	Float Test for Bituminous Materials	Tex-519-C AASHTO T50	each	$ 85.65				
144	Standard Test Method for Emulsified Asphalts	Tex-521-C AASHTO T59	each	$ 238.65				
145	Viscosity of Asphalts by Vacuum Capillary Viscometer	Tex-528-C AASHTO T202	each	$ 46.17				
146	Kinematic Viscosity of Asphalts (Bitumens)	Tex-529-C AASHTO T201	each	$ 89.02				
147	Boil Test (Effect of Water on Paving Mix)	Tex-530/531-C	each	$ 147.94				
148	Field Coring - ACP Thickness	ASTM D3549	each	$ 119.16				
149	Pavement Thickness Determin. (Full Depth)	ASTM D3549	each	$ 147.94				
150	Determining Polymer Additive Percentages in Polymer Modified	Tex-533-C	each	$ 79.42				
151	Calculating Viscosity from Penetration	Tex-535-C	each	$ 87.06				
152	Elastic Recovery of Tensile Deformation Using a Ductilometer	Tex-539-C	each	$ 78.21				
153	Measurement of Polymer Separation on Heating in Modified Asphalat	Tex-540-C	each	$ 123.22				
154	Rolling Thin Film Oven Test for Asphalt Binders	Tex-541-C ASSHTO T240	each	$ 171.74				
155	Flexural Creep Stiffness Using the Bending Beam Rheometer	AASHTO T313	each	$ 253.00				
156	Determining Rheological Properties of Asphalt Binder Using a Dy	AASHTO T315	each	$ 218.06				
157	Determining Breaking Index for Asphalt Emulsions	Tex-542-C	each	$ 251.89				
158	Resilience Test for Sealants and Repair Materials	Tex-547-C	each	$ 305.36				
159	Tensile Strain to Failure	Tex-548-C	each	$ 81.65				
160	Cone Flow Test	Tex-549-C	each	$ 80.95				
161	Flexibility Test for Sealants and Repair Materials	Tex-550-C	each	$ 299.70				
162	Settlement of Sealants and Repair Materials	Tex-551-C	each	$ 115.78				
	Concrete & Aggregate Testing							
163	Sieve Analysis for Conc. Agg	Tex-401-A	each	$ 90.10				
164	Fineness Modulus for Conc. Agg	Tex-402-A	each	$ 37.69				
165	SSD Specific Gravity / Absorption Conc. Agg	Tex-403-A	each	$ 85.63				
166	Unit Weight of Conc. Agg	Tex-404-A	each	$ 58.30				
167	Determining Pecent Voids and Solids in Concrete	Tex-405-A	each	$ 75.94				
168	Decantation for Conc. Agg	Tex-406-A	each	$ 62.34				
169	Organic Impurities for Conc. Agg	Tex-408-A	each	$ 59.16				
170	Free Moisture and Water Absorption in Aggregate for Concrete	Tex-409-A	each	$ 62.94				
171	L.A. Abrasion	Tex-410-A	each	$ 403.12				
172	5 Cycle Magnesium Soundness	Tex-411-A	each	$ 520.48				
173	Deleterious Material for Conc. Agg	Tex-413-A	each	$ 73.27				
174	Air Content of Fresh Concrete by Volumeteric	Tex-414-A	each	$ 33.10				
175	Slump of Fresh Concrete	Tex-415-A	each	$ 29.90				
176	Air Content of Fresh Concrete by Pressure	Tex-416-A	each	$ 32.08				
177	Unit Weight, Yield and Air Content (Gravimetric) of Concrete	Tex-417-A	each	$ 55.25				
178	Comp. Strength of Cyl. Conc. Specimen	Tex-418-A	each	$ 20.43				
179	Measure Temp. of Fresh Conc.	Tex-422-A	each	$ 23.16				
180	Obtaining & Testing Drilled Conc. Cores	Tex-424-A	each	$ 303.62				
181	Absorption and Dry Bulk Specific Gravity of Lightweight Coarse	Tex-433-A	each	$ 105.40				
182	Test Flow of Grout Mixtures (Flow Cone Method)	Tex-437-A	each	$ 102.66				
183	Accelerated Polish Test for Coarse Aggregate	Tex-438-A	each	$ 790.55				
184	Det. Comp. Strength of Grouts	Tex-442-A	each	$ 24.84				
185	Making & Curing Conc. Test Specimen	Tex-447-A	each	$ 22.78				
186	Flexural Strength of Concrete Using Simple Beam Third-Point Load	Tex-448-A	each	$ 48.13				
187	Capping Cyl. Conc. Specimen	Tex-450-A	each	$ 19.40				
188	Degradation of Coarse Aggregate by Micro-Devel Abrasion	Tex-461-A	each	$ 252.89				
189	Uniformity of Concrete	Tex-472-A	each	$ 173.12				
	Additional Testing	**Test Method**	**Unit**					
190	Geogrid Testing	Tex-621-J	each	$ 800.20				
191	Water Quality Testing	Tex-619-J	each	$ 175.47				
192	Lime Testing	Tex-600-J	each	$ 367.59				
193	Operating Inertial Profilers and Evaluating Pavement Profiles	Tex-1001-S	each	$ 1,676.76				
194	Vane Shear Testing	ASTM D2573	each	$ 338.00				
	Miscellaneous Testing	**Test Method**	**Unit**					
195	Structural Field Welding	**NA**	hour	$ 150.00				
	Equipment & Supplies for MT & UT		day	$ 150.00				
	Other Direct Expenses		**Unit**					
	Photocopies B/W (8 1/2" X 11")		each	$ 0.15				
	Photocopies B/W (11" X 17")		each	$ 0.23				
	Photocopies Color (8 1/2" X 11")		each	$ 0.82				
	Photocopies Color (11" X 17")		each	$ 1.41				
	Digital Ortho Plotting		sheet	$ 2.43				
	CADD Plotting		linear foot	$ 1.00				
	Plots (B/W on Bond)		linear foot	$ 0.91				
	Plots (Color on Bond)		linear foot	$ 1.75				
	Plots (Color on Photgraphic Paper)		linear foot	$ 2.72				
	Reproduction of CD/DVD		each	$ 5.00				

L&G Personnel Classification	Hourly Base Rate	Contract Rate FY 2020-2023	20210830 FINAL RATES
Senior Project Manager / Principal	$ 83.00	$ 257.30	**$ 186.90**
Senior Geotechnical Engineer	$ 65.00	$ 210.50	**$ 166.32**
Geotechnical Engineer	$ 62.00	$ 192.20	**$ 136.40**
Project Engineer	$ 56.00	$ 173.60	**$ 133.98**
Engineering Lab Manager	$ 40.00	$ 124.00	**$ 94.71**
Utility Coordinator	$ 38.00	$ 117.80	**$ 110.98**
Senior Project Inspector	$ 38.00	$ 117.80	**$ 99.75**
Project Inspector	$ 30.00	$ 93.00	**$ 73.92**
EIT	$ 40.00	$ 124.00	**$ 88.00**
Engineer Tech / GIS	$ 27.00	$ 83.70	**$ 76.60**
Logger	$ 22.00	$ 68.20	**$ 62.00**
Field Technician (Soils, Aggr, Asph, Conc)	$ 22.00	$ 68.20	**$ 68.20**
CADD Operator	$ 22.00	$ 68.20	**$ 77.50**
Admin/Clerical	$ 22.00	$ 68.20	**$ 61.95**

ATTACHMENT E-1
Final Cost Proposal Form

This attachment provides the basis of payment and fee schedule**. The basis of payment for this Work Authorization is indicated by an "X" in the applicable box.** The basis shall be supported by the Final Cost Proposal (FCP) shown below and should identify maximum amount payable and basis of payment. If more than one basis of payment is used, each one must be supported by a separate FCP. The basis of payment will be determined by Work Authorization and may be by any of the methods listed below.

"X"	Basis	
____	Lump Sum	The lump sum shall be equal to the maximum amount payable. The lump sum includes all direct and indirect costs and fixed fee. The Engineer shall be paid pro rata based on the percentage of work completed. For payment the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.
__X__	Unit Cost	The unit cost(s) for each type of unit and number of units are shown in the FCP. The unit cost includes all direct and indirect costs and fixed fee. The Engineer shall be paid based on the type and number of units fully completed and the respective unit cost. For payment, the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or any other cost data. The FCP may include special items, such as equipment which are not included in the unit costs. Documentation of these special costs may be required. The maximum amount payable equals the total of all units times their respective unit cost plus any special direct items shown.
__X	Specified Rate Basis	The specified rates for each type of labor are shown in the FCP below. The FCP may include special items, such as equipment which are not included in the specified rates. Payment shall be based on the actual hours worked multiplied by the specified rate for each type of labor plus other agreed to special direct cost items. The specified rate includes direct labor and indirect cost and fixed fee. The Authority may request documentation of reimbursable direct costs including hours worked. Documentation of special item costs may be required. The specified rate is not subject to audit.
____	Cost Plus Fixed Fee	Payment shall be based on direct and indirect costs incurred plus a pro rata share of the fixed fee based on the ratio of labor and overhead cost incurred to total estimated labor and overhead cost in the FCP or the percentage of work completed. The invoice must itemize labor rates, hours worked, other direct costs and indirect costs. The Engineer may be required to provide documentation of hours worked and any eligible direct costs claimed. The provisional overhead rate charged is subject to audit and adjustment to actual rates incurred. The FCP below shows the hourly rates for labor, other direct expenses including but not limited to travel and allowable materials, provisional overhead rate and the fixed fee. __A. Actual Cost Plus Fixed Fee - Actual wages are paid (no minimum, no maximum. __B. Range of Cost Plus Fixed Fee – Actual wages must be within the allowable range shown on the Final Cost Proposal.

A. **REFER TO ATTACHMENT E-2 FOR HOURLY SPECIFIED / LUMP SUM RATE SCHEDULE FOR EACH FIRM**

EXHIBIT F

WORK SCHEDULE

EXHIBIT F

WORK SCHEDULE

HCRMA Construction & Materials Testing Services
TOLL365 (SH 365)

Task Name	Start	Finish
Material Testing	10/1/2021	12/13/2025
Geotechnical	10/1/2021	12/13/2025
Other Analyses	10/1/2021	12/13/2025
All sampling and testing of components and materials	10/1/2021	12/13/2025
Hot Mix Asphalt Testing	10/1/2021	12/13/2025
Concrete Testing	10/1/2021	12/13/2025
Construction Oversight Documentation	10/1/2021	12/13/2025
Project Correspondence File (Design and Construction)	10/1/2021	12/13/2025

ATTACHMENT H-2
Subprovider Monitoring System Commitment Agreement

This commitment agreement is subject to the award and receipt of a signed contract from the Hidalgo County Regional Mobility Authority (Authority). ***NOTE: Attachment H-2 is required to be attached to each contract that does not include work authorizations. Attachment H-2 is required to be attached with each work authorization. Attachment H-2 is also required to be attached to each supplemental work authorization. If DBE/HUB Sub providers are used, the form must be completed and signed. If no DBE/HUB Sub providers are used, indicate with "N/A" on this line:_____ and attach with the work authorization or supplemental work authorization.***

Contract #: 01-M07-21-02 Assigned Goal: 6.0% Prime Provider Terracon Consultants, Inc.

Work Authorization (WA)#: 1 WA Amount: **$1,950,258.64** Date: _____
Supplemental Work Authorization (SWA) #: _____ to WA #: _____ SWA Amount: _____
Revised WA Amount: _____

Description of Work *(List by category of work or task description. Attach additional pages, if necessary.)*	**Dollar Amount** *(For each category of work or task description shown.)*
FC	**$0**
FC	**$0**
Total Commitment Amount *(Including all additional pages.)*	**$0**

IMPORTANT: The signatures of the prime and the DBE/HUB and Second Tier Subprovider, if any (both DBE and Non-DBE) and the total commitment amount must always be on the same page.

Provider Name: Terracon Consultants, Inc. **Address: 1506 Mid-Cities, Pharr, Texas, 78577** **VID Number:** **PH: & FAX: 956-283-8254** **Email: jorge.flores@terracon.com**	**Name:** Jorge A. Flores, P.G. ***(Please Print)*** **Title:** Client Manager _____ **Signature** **Date**
DBE/HUB Sub Provider **Subprovider Name:** **VID Number:** **Address:** **PH:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ _____ **Signature** **Date**
Second Tier Sub Provider **Subprovider Name:** **VID Number:** **Address:** **Phone #& Fax #:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ _____ **Signature** **Date**

VID Number is the Vendor Identification Number issued by the Comptroller. If a firm does not have a VID Number, please enter the owner's Social Security or their Federal Employee Identification Number (if incorporated).

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Item 3F

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**3F**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/14/2021**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/2021**
TECHNICAL COMMITTEE			

1. Agenda Item: **RESOLUTION 2021-42 – APPROVAL OF AWARD OF CONTRACT WITH B2Z ENGINEERING, LLC FOR CONSTRUCTION MATERIAL TESTING SERVICES FOR THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY.**

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

   Approval of Award of Contract CMT Services with B2Z Engineering, LLC.

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

4. Budgeted: ___Yes ___No X N/A

5. Staff Recommendation**: Motion to approve Resolution 2021-42 - Approval of Award of Contract with B2Z Engineering, LLC for Construction Material Testing Services for the Hidalgo County Regional Mobility Authority, as presented.**

6. Program Manager's Recommendation: ___Approved ___Disapproved **X** None

7. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: ___Approved ___Disapproved **X** None

9. Chief Auditor's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Financial Officer's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Development Engineer's Recommendation: ___Approved ___Disapproved **X** None

11. Chief Construction Engineer's Recommendation: **X** Approved ___Disapproved **X** None

12. Executive Director's Recommendation: **X** Approved ___Disapproved ___None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Memorandum

To: Pilar Rodriguez, P.E
HCRMA, Executive Director

From: Ramon Navarro, IV, P.E., C.F.M.
HCRMA, Chief Construction Engineer

Date: September 21, 2021

Subject: **RESOLUTION 2021-42 APPROVAL OF AWARD OF CONTRACT WITH B2Z ENGINEERING, LLC FOR CONSTRUCTION MATERIAL TESTING SERVICES FOR THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY**

GOAL

Approval and authorization to enter into contract for 2020-2021 Construction Material Testing Services with B2Z Engineering, LLC.

HISTORY

October 27, 2020 the HCRMA Board authorized the Executive Director to enter into negotiations with each of the ranked firms and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments.

B2Z Engineering, LLC. have agreed to provide construction materials testing to assure the materials incorporated into 2.32 miles of levee work on Phase II of 365 Toll highway construction project are subject to verification sampling and testing when required and meet project plans and specifications; and administering the HCRMA Quality Monitoring and Quality Assurance Program.

RECOMMENDATION

Staff recommends award of contract in the amount of $201,143.26 for an “indefinite delivery/indefinite quantity [IDIQ]” set of rates for a proposed three (3) year fixed period of time, during that period of time the Engineer will be responsible for an unlimited number of separate projects, or additional work on a current project to be issued on an individual work order basis.

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

BOARD RESOLUTION No. 2021-42

APPROVAL OF AWARD OF CONTRACT WITH B2Z ENGINEERING, LLC FOR CONSTRUCTION MATERIAL TESTING SERVICES FOR THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

THIS RESOLUTION is adopted this 28th day of September, 2021, by the Board of Directors of the HidalgoCounty Regional Mobility Authority at a regular meeting.

WHEREAS, the Hidalgo County Regional Mobility Authority (the "Authority"), acting through its Board of Directors (the "Board"), is a regional mobility authority created pursuant to Chapter 370, Texas Transportation Code, as amended (the "Act");

WHEREAS, the Authority is authorized by the Act to address mobility issues in and around Hidalgo County;

WHEREAS, on February 19, 2014, the Authority issued a solicitation for Statements of Qualification for Construction Material Testing Services for the Authority (the "Solicitation"); and

WHEREAS, on March 21, 2014 the Authority received responses to the Solicitation; and

WHEREAS, on April 23, 2014, Resolution 2014-38 authorized Authority staff to negotiate and enter into agreements with the top three scored firms (Raba Kistner Consultants Inc., L&G Laboratories and Terracon Consultants, Inc.) for Construction Material Testing Services (the "Services"); and

WHEREAS, on July 24, 2018, Resolution 2018-45 authorized Authority staff to procure one additional lab to provide additional Services; and

WHEREAS, on July 29, 2018, the Authority published a second Solicitation; and received three (3) responses, of which only one was deemed responsive;

WHEREAS, on September 25, 2018, the Authority authorized staff to negotiate contract terms for the Services to PaveTex Engineering LLC, dba PAVETEX, the sole responsive firm that met the professional services criteria set forth in the Solicitation;

WHEREAS, on August 21, 2020, the Authority received five (5) sealed statements of qualification packets. An internal committee of three HCRMA staff engineers ranked and reviewed; the Authority determined it necessary to negotiate contract terms to enter into negotiations with each of the ranked firms and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments; and

WHEREAS on October 27, 2020, the Authority approved Resolution 2020-28 Approval to enter into negotiations with each of the short-listed firms for Construction Material Testing for the Hidalgo County Regional Mobility Authority and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments; and

WHEREAS the Authority finds it necessary to approve Resolution 2021-42 Approval of Award of Contract by and between the B2Z Engineering, LLC, and the Hidalgo County Regional Mobility Authority for Construction Material Testing Services in the amount of $201,143.26.

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

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

Section 2. The Board hereby approves Award of Contract by and between B2Z Engineering, LLC, and the Hidalgo County Regional Mobility Authority for Construction Material Testing Services in the amount of $201,143.26, hereto attached as Exhibit A.

Section 3. The Board authorizes the Executive Director to execute the Professional Service Agreement for Construction Material Testing with B2Z Engineering, LLC, as approved by the Board.

*****

PASSED AND APPROVED AS TO BE EFFECTIVE IMMEDIATELY BY THE BOARD OF DIRECTORS OF THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY AT A REGULAR MEETING, duly posted and noticed, on the 28th day of September 2021, at which meeting a quorum was present.

S. David Deanda, Jr., Chairman

Ezequiel Reyna, Jr., Secretary/Treasurer

Exhibit A

Main
Professional Service
Agreement with
B2Z Engineering, LLC
For
Construction Material Testing Services

STATE OF TEXAS §
COUNTY OF HIDALGO §

PROFESSIONAL SERVICES AGREEMENT FOR ENGINEERING / DESIGN SERVICES

THIS CONTRACT FOR ENGINEERING SERVICES is made by and between the Hidalgo County Regional Mobility Authority (HCRMA) (hereinafter the "Authority") and B2Z Engineering, LLC, Inc. Engineering, LLC. (hereinafter the "Engineer"), having its principal business address at 900 S. Stewart Rd., Suite 4 Mission, TX 78572 for the purpose of contracting for engineering services (hereinafter the "Agreement").

WITNESSETH

WHEREAS, Government Code, Chapter 2254, Subchapter A, "Professional Services Procurement Act" provides for the procurement of professional services of engineers;

WHEREAS, in compliance with the Professional Services Procurement Act and all federal requirements including those described in 23 CFR Part 172, the Authority procured professional engineering services (the "Procurement");

WHEREAS, pursuant to the Procurement and the Authority Board of Director's (the Board's) ranking of respondents thereto, the Board finds it to be in the best interest of the Authority to engage the Engineer to provide verification sampling and testing services as required by the 2019 TxDOT Guide Schedule of Sampling & Testing for Design Bid-Build Projects and adopted Quality Assurance Program (QAP) to assure that materials and workmanship incorporated into highway construction projects are in reasonable conformity with the requirements of the approved plans and specifications, including any approved changes as required for the development of the Project, as approved by the Authority to wit: the **PROVIDE CONSTRUCTION MATERIALS TESTING TO ASSURE THE MATERIALS INCORPORATED INTO 2.32 MILES OF LEVEE WORK ON PHASE II OF 365 TOLL HIGHWAY CONSTRUCTION PROJECT ARE SUBJECT TO VERIFICATION SAMPLING AND TESTING WHEN REQUIRED AND MEET PROJECT PLANS AND SPECIFICATIONS; AND ADMINISTERING QUALITY MONITORING AND QUALITY ASSURANCE PROGRAM. OVERALL PROJECT CONSISTS OF CONSTRUCTION OF A 12.4 MILE TOLLED FACILITY FROM FM 396 & GSA CONNECTOR TO US 281 (MILITARY HIGHWAY), WHICH CONSISTS OF: OF GRADING, FLEXIBLE BASE, LIME TREATED SUBGRADE, ASPHALTIC CONCRETE PAVEMENT, CONCRETE PAVEMENT, SIGNING AND PAVEMENT MARKINGS, CROSS CULVERTS, BRIDGE STRUCTURES, RETAINING WALLS, ILLUMINATION AND TOLL EQUIPMENT.**
(the "Project");

NOW, THEREFORE, the Authority and the Engineer, in consideration of the mutual covenants and agreements herein contained, do hereby mutually agree as follows:

AGREEMENT

ARTICLE I
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

1.1 The Engineer shall timely perform those engineering services for the fulfillment of the Agreement. All work shall be subject to review and approval by the Authority, and, if appropriate, the Texas Department of Transportation and the Federal Highway Administration. Notwithstanding anything to the contrary in this Agreement or in any other Agreement document relating to the project, in performing its work under this Agreement Engineer shall perform its services to the standard of care of a reasonable engineer that is performing the same or similar work, at the same time and locality and under the same or similar conditions faced by Engineer.

1.2 The Authority and the Engineer will furnish items and perform those services for fulfillment of the Agreement as identified in Attachment B, Services to be provided by the Authority and Attachment C, Services to be provided by the Engineer. All services provided by the Engineer will conform to standard engineering practices and applicable rules and regulations of the Texas Engineering Practices Act and the rules of the Texas Board of Professional Engineers.

ARTICLE II
AGREEMENT PERIOD

This Agreement becomes effective when fully executed by all parties hereto and it shall terminate at the close of business on December 13, 2025 unless the Agreement period is: (1) modified by written supplemental agreement prior to the date of termination as set forth in Attachment A, General Provisions, Section 6, Supplemental Agreements; (2) extended due to a work suspension as provided for in Attachment A, Section 3, Paragraph C; or (3) otherwise terminated in accordance with Attachment A, General Provisions, Section 14, Termination. Any work performed or cost incurred before or after the Agreement period shall be ineligible for reimbursement.

ARTICLE III
COMPENSATION

3.1 Maximum Amount Payable. The maximum amount payable under this contract is $201,143.26 unless modified (1) modified written supplemental agreement prior to the date of termination as set forth in Attachment A, General Provisions, Section 6, Supplemental Agreements or (2) modified through a work authorization as set forth in Article V, provided that such work authorizations is adopted by Board action.

3.2 **Basis of Payment.** The basis of payment is identified in Attachment E, Fee Schedule. Reimbursement of costs incurred under a work authorization shall be in accordance with Attachment E, Fee Schedule.

3.3 **Reimbursement of Eligible Costs**. To be eligible for reimbursement, the Engineer's costs must (1) be incurred in accordance with the terms of a valid work authorization; (2) be in accordance with Attachment E, Fee Schedule; and (3) comply with cost principles set forth at 48 CFR Part 31, Federal Acquisition Regulation (FAR 31). Satisfactory progress of work shall be maintained and evidenced as a condition of payment.

3.4 **Engineer Payment of Subproviders**. No later than ten (10) days after receiving payment from the Authority, the Engineer shall pay all subproviders for work performed under a subcontract authorized hereunder. The Authority may withhold all payments that have or may become due if the Engineer fails to comply with the ten-day payment requirement. The Authority may also suspend the work under this Agreement or any work authorization until subproviders are paid. This requirement also applies to all lower tier subproviders, and this provision must be incorporated into all subcontracts related to the project.

ARTICLE IV
PAYMENT REQUIREMENTS

4.1 **Monthly Billing Statements**. The Engineer shall request reimbursement of costs incurred by submitting the original and one copy of an itemized billing statement in a form acceptable to the Authority. The Engineer is authorized to submit requests for reimbursement no more frequently than monthly and no later than ninety (90) days after costs are incurred.

4.2 **Billing Statement**. The billing statement shall show the work authorization number for each work authorization included in the billing, the total amount earned to the date of submission, and the amount due and payable as of the date of the current billing statement for each work authorization. The billing statement shall indicate if the work has been completed or if the billing is for partial completion of the work. The lump sum fee will be paid in proportion to the percentage of work completed per work authorization.

4.3 **Overhead Rates**. The Engineer shall use the provisional overhead rate indicated in Attachment E. If a periodic escalation of the provisional overhead rate is specified in Attachment E, the effective date of the revised provisional overhead rate must be included. For lump sum agreements where a lump sum applies to a work authorization the overhead rate utilized shall correspond with the overhead rate specified in the year in which the work authorization is executed.

4.4 **Thirty Day Payments**. Upon receipt and acceptance of a billing statement that complies with all invoice requirements set forth in this Article, the Authority shall make a good faith effort to pay the amount which is due and payable within thirty (30) days.

4.5 **Withholding Payments**. The Authority reserves the right to withhold payment of the Engineer's billing statement in the event of any of the following: (1) If a dispute over the work or costs thereof is not resolved within a thirty day period; (2) pending verification of satisfactory work performed; (3) the Engineer becomes a delinquent obligor as set forth in Section 231.006 of the Family Code; or (4) required reports are not received. In the event that payment is withheld, the Authority shall notify the Engineer and give a remedy that would allow the Authority to release the payment.

4.6 **Required Reports.**

a) As required in Attachment H, Disadvantaged Business Enterprise or Historically Underutilized Business Program Requirements, the Engineer shall submit Progress Assessment Reports to report actual payments made to Disadvantaged Business Enterprises or Historically Underutilized Businesses. One copy shall be submitted with each billing statement and one copy shall be submitted to the address included in Attachment H, Disadvantaged Business Enterprise or Historically Underutilized Business Program Requirements.

b) Prior to Agreement closeout, the Engineer shall submit a Final Report (Attachment H-4) to the address set forth in Attachment H.

c) The Engineer shall submit a separate report with each billing statement showing the percent completion of the work accomplished during the billing period and the percent completion to date, and any additional written report requested by the Authority to document the progress of the work.

4.7 **Subproviders and Suppliers List**. Pursuant to requirements of 43 Texas Administrative Code §9.50 et seq., the Engineer must provide the Authority a list (Attachment H-5/DBE or Attachment H-6/HUB) of all Subproviders and suppliers that submitted quotes or proposals for subcontracts. This list shall include subproviders' and suppliers' names, addresses, telephone numbers, and type of work desired.

4.8 **Debt to the Authority.** If the Authority is prohibited by law from issuing a warrant or initiating an electronic funds transfer to the Engineer because of a debt owed to the Authority, the Authority shall apply all payments due the Engineer to the debt or delinquent tax until the debt or delinquent tax is paid in full.

4.9 **Audit.** The Authority auditor may conduct an audit or investigation of any entity receiving funds from the Authority directly under this Agreement or indirectly through a subcontract under this Agreement. Acceptance of funds directly under this Agreement or indirectly through a subcontract under this Agreement acts as acceptance of the Authority's right or the Authority's auditor right, to conduct an audit or investigation in connection with those funds. An entity that is the subject of an audit or investigation must provide the Authority auditor with access to any information the Authority auditor considers relevant to the investigation or audit.

ARTICLE V
WORK AUTHORIZATIONS

The Authority will issue work authorizations using the form included in Attachment D (Work Authorizations and Supplemental Work Authorizations) to authorize all work under this Agreement. The Engineer must sign and return a work authorization within seven (7) working days after receipt. Refusal to accept a work authorization may be grounds for termination of this Agreement. The Authority shall not be responsible for actions by the Engineer or any costs incurred by the Engineer relating to work not directly associated with or prior to the execution of a work authorization. Terms and conditions governing the use of work authorizations are set forth in Attachment A, General Provisions, Section 1. The work authorization shall not waive the Authority's or the Engineer's responsibilities and obligations established under this Agreement.

ARTICLE VI
SIGNATORY WARRANTY

The undersigned signatory for the Engineer hereby represents and warrants that he or she is an officer of the organization for which he or she has executed this Agreement and that he or she has full and complete Authority to enter into this Agreement on behalf of the firm. These representations and warranties are made for the purpose of inducing the Authority to enter into this Agreement.

ARTICLE VII
NOTICES

All notices to either party by the other required under this agreement shall be delivered personally or sent by certified or U.S. mail, postage prepaid, addressed to such party at the following addresses:

Engineer:	Authority:
B2Z Engineering, LLC 900 S. Stewart Rd, Suite 2 Mission, Texas 78572 Attn: Aisha Gonzalez, President	Hidalgo County Regional Mobility Authority (HCRMA) 118 South Cage Boulevard, 4th Floor Pharr, Texas 78577 Attn: Pilar Rodriguez, P.E., Executive Director

All notices shall be deemed given on the date so delivered or so deposited in the mail, unless otherwise provided herein. Either party may change the above address by sending written notice of the change to the other party. Either party may request in writing that such notices shall be delivered personally or by certified U.S. mail and such request shall be honored and carried out by the other party.

ARTICLE VIII
INCORPORATION OF PROVISIONS

Attachments A through L are attached hereto and incorporated into this Agreement as if fully set forth herein.

SIGNATORIES

IN WITNESS WHEREOF, the Authority and the Engineer have executed these presents in duplicate and acknowledge that this Agreement constitutes the sole and only Agreement of the Parties hereto and supersedes any prior understandings or written or oral agreements between the Parties respecting the within subject matter.

AUTHORITY	ENGINEER
By: _____	By: _____
Name: Pilar Rodriguez	Name: Aisha Gonzalez
Title: Executive Director	Title: President
Hidalgo County Regional Mobility Authority	B2Z Engineering, LLC.
Date: _____	Date: _____

:

LIST OF ATTACHMENTS TO AGREEMENT
FOR ENGINEERING SERVICES
INCORPORATED INTO THE AGREEMENT BY REFERENCE

Attachments	Title
A	General Provisions
B	Services to Be Provided by the Authority
C	Services to Be Provided by the Engineer
D	Work Authorization Forms
D-1	Work Authorization Form for Agreement for Engineering Services
D-2	Supplemental Work Authorization Form
E	Fee Schedule
E-1	Final Cost Proposal Form
E-2	Rate Sheets
E-3	Maximum Amount Payable
F	Work Schedule
G	Contract Deliverables/Computer Graphics Files for Document and Information Exchange, if applicable
H	DBE Participation
H-MOU	Memorandum of Understanding
H-Instructions	Instructions As per 49CFR 26.21
H-FG	Disadvantaged Business Enterprise (DBE) for Federal Funded Professional or Technical Services Contracts – See Attachment H Instructions
H–FN	Disadvantaged Business Enterprise (DBE) for Race-Neutral Professional or Technical Services Contracts – See Attachment H Instructions
H–SG	Historically Underutilized Business (HUB) Requirements for County Funded Professional or Technical Services Contracts – County of Texas HUB. Subcontracting plan required – See Attachment H Instructions
H–SN	Historically Underutilized Business (HUB) Requirements for County Funded Professional or Technical Services Contracts – No County of Texas HUB
H–1	Subprovider Monitoring System Commitment Worksheet
H–2	Subprovider Monitoring System Commitment Agreement
H–3	Monthly Progress Assessment Report
H-4	Subprovider Monitoring System Final Report
H-5	Federal Subproviders and Supplier Information
H-6	HUB Subcontracting Plan (HSP) Prime Contractor Progress Assessment Report
H-7	DBE Certifications
I	Certificate of Insurance
J	Conflicts of Certification
K	Debarment Certification
L	2019 Quality Assurance Program for Design Bid Build Projects
M	2019 Guide Schedule of Sampling & Testing for Design Bid-Build Projects

ATTACHMENT A
GENERAL PROVISIONS

INDEX TO PROVISIONS

Section	Title
1	Work Authorizations
2	Progress
3	Suspension of Work
4	Additional Work
5	Changes in Work
6	Supplemental Agreements
7	Ownership of Data
8	Public Information
9	Personnel, Equipment and Material
10	Subcontracting
11	Inspection of Work
12	Submission of Reports
13	Violation of Contract Terms (Breach of Agreement)
14	Termination
15	Compliance with Laws
16	Indemnification
17	Engineer's Responsibility
18	Non-collusion
19	Insurance
20	Gratuities
21	DBE/HUB Requirements
22	Maintenance, Retention and Audit of Records
23	Civil Rights Compliance
24	Patent Rights
25	Computer Graphics Files
26	Child Support Certification
27	Disputes
28	Successors and Assigns
29	Severability
30	Prior Agreements Superseded
31	Conflict of Interest
32	Office of Management and Budget (OMB) Audit Requirements
33	Certifications

ATTACHMENT A
GENERAL PROVISIONS

SECTION 1. WORK AUTHORIZATIONS

A. Use. The Engineer shall not begin any work until the Authority and the Engineer have signed a work authorization. Costs incurred by the Engineer before or after the completion date specified in the work authorization are not eligible for reimbursement. All work must be completed on or before the completion date specified in the work authorization, and no work authorization completion date shall extend beyond the Agreement period set forth in Article II of the Agreement (Agreement Period).

B. Contents. Each work authorization will include: (1) types of services to be performed; (2) a period of performance with a beginning and ending date; (3) a full description of the work to be performed; (4) a work schedule with milestones; (5) a cost not to exceed amount, (6) the basis of payment whether cost plus fixed fee, unit cost, lump sum, or specified rate; and (7) a work authorization budget calculated using fees set forth in Attachment E, Fee Schedule. The Engineer is not to include additional Agreement terms and conditions in the work authorization. In the event of any conflicting terms and conditions between the work authorization and the Agreement, the terms and conditions of the Agreement shall prevail and govern the work and costs incurred.

C. Work Authorization Budget. A work authorization budget shall set forth in detail (1) the computation of the estimated cost of the work as described in the work authorization, (2) the estimated time (hours/days) required to complete the work at the hourly rates established in Attachment E, Fee Schedule; (3) a work plan that includes a list of the work to be performed, (4) a stated maximum number of calendar days to complete the work, and (5) a cost-not-to-exceed-amount or unit or lump sum cost and the total cost or price of the work authorization. The Authority will not pay items of cost that are not included in or rates that exceed those approved in Attachment E.

D. No Guaranteed Work. Work authorizations are issued at the discretion of the Authority. While it is the Authority's intent to issue work authorizations hereunder, the Engineer shall have no cause of action conditioned upon the lack or number of work authorizations issued.

E. Incorporation into Agreement. Each work authorization shall be signed by both parties and become a part of this Agreement. No work authorization will waive the Authority's or the Engineer's responsibilities and obligations established in this Agreement. The Engineer shall promptly notify the Authority of any event that will affect the schedule or completion of the work authorization.

F. Supplemental Work Authorizations. Before additional work may be performed or additional costs incurred, a change in a work authorization shall be enacted by a written supplemental work authorization in the form identified and attached hereto as Attachment D. Both parties must execute a supplemental work authorization within the period of performance specified in the work authorization. The Authority shall not be responsible for actions by the Engineer or any costs incurred by the Engineer relating to additional work not directly associated with the performance or prior to the execution of the work authorization. The Engineer shall allow adequate time for review and approval of the supplemental work authorization by the Authority prior to expiration of the work authorization. Any supplemental work authorization must be executed by both parties within the time period established in Article II of the Agreement, (Agreement Period). Under no circumstances will a work authorization be allowed to extend beyond the Agreement's expiration date, unless a supplemental to the Agreement is approved by both parties extending the Agreement date.

F-1. More Time Needed. If the Engineer determines or reasonably anticipates that the work authorized in a work authorization cannot be completed before the specified completion date, the Engineer shall promptly notify the Authority. The Authority may, at its sole discretion, extend the work authorization period by execution of a supplemental to the work authorization, using the form attached hereto as Attachment D.

F-2. Changes in Scope. Changes that would modify the scope of the work authorized in a work authorization must be enacted by a written supplemental to the appropriate work authorization. The Engineer must allow adequate time for the Authority to review and approve any request for a time extension prior to expiration of the work authorization. If the change in scope affects the amount payable under the work authorization, the Engineer shall prepare a revised work authorization budget for the Authority's approval.

G. New Work Authorization. If the Engineer does not complete the services authorized in a work authorization before the specified completion date and has not requested a supplemental to the appropriate work authorization, the work authorization shall terminate on the completion date. At the sole discretion of the Authority, it may issue a new work authorization to the Engineer for the incomplete work using the unexpended balance of the preceding work authorization for the project. If approved by the Authority, the Engineer may calculate any additional cost for the incomplete work using the rates set forth in the preceding work authorization and in accordance with Attachment E, Fee Schedule.

H. Emergency Work Authorizations. The Authority, at its sole discretion, may accept the Engineer's signature on a faxed copy of the work authorization as satisfying the requirements for executing the work authorization, provided that the signed original is received by the Authority within five (5) business days from the date on the faxed copy.

I. Deliverables. Upon satisfactory completion of the work authorization, the Engineer shall submit the deliverables as specified in the executed work authorization to the Authority for review and acceptance.

J. Performance Standards. Unless authorized by the Authority and the Texas Department of Transportation, if applicable, work performed under this Agreement shall be developed in accordance with the latest version of the Texas Department of Transportation's manuals.

SECTION 2. PROGRESS

A. Progress meetings. The Engineer shall from time to time during the progress of the work confer with the Authority. The Engineer shall prepare and present such information as may be pertinent and necessary or as may be requested by the Authority in order to evaluate features of the work.

B. Conferences. At the request of the Authority or the Engineer, conferences shall be provided at the Engineer's office, the office of the Authority, or at other locations designated by the Authority. These conferences shall also include evaluation of the Engineer's services and work when requested by the Authority.

C. Inspections. If federal funds are used to reimburse costs incurred under this Agreement, the work and all reimbursements will be subject to periodic review by the Texas Department of Transportation and the U. S. Department of Transportation.

D. Reports. The Engineer shall promptly advise the Authority in writing of events that have a significant impact upon the progress of a work authorization, including:

1. Problems, delays, adverse conditions that will materially affect the ability to meet the time schedules and goals, or preclude the attainment of project work units by established time periods; this disclosure will be accompanied by Authority judgment of the action taken or contemplated, and any or federal assistance needed to resolve the situation; and
2. Favorable developments or events which enable meeting the work schedule goals sooner than anticipated.
3. Compose and submit an annual report for the Federal Highway Administration (FHWA) summarizing the results of TxDOT's systems approach IA program. See Attachment L, Appendix C for the annual report form.
   This report identifies:
   - number of sampling and testing personnel evaluated by the systems approach IA testing;
   - number of IA evaluations found to meet tolerances in Appendix B;
   - number of IA evaluations found to not meet tolerances in Appendix B; and
   - summary of any significant system-wide corrective actions taken.

E. Corrective Action. Should the Authority determine that the progress of work does not satisfy the milestone schedule set forth in a work authorization, the Authority shall review the work schedule with the Engineer to determine the nature of corrective action needed.

SECTION 3. SUSPENSION OF WORK AUTHORIZATION

A. Notice. Should the Authority desire to suspend a work authorization but not terminate the Agreement, the Authority may verbally notify the Engineer followed by written confirmation, giving ten (10) day notice. Both parties may waive the ten-day notice in writing.

B. Reinstatement. A work authorization may be reinstated and resumed in full force and effect within sixty (60) business days of receipt of written notice from the Authority to resume the work. Both parties may waive the sixty-day notice in writing.

C. Agreement Period Not Affected. If the Authority suspends a work authorization, the Agreement period as determined in Article II of the Agreement (Agreement Period) is not affected and the Agreement and the work authorization will terminate on the date specified unless the Agreement or work authorization is amended to authorize additional time.

D. Limitation of Liability. The Authority shall have no liability for work performed or costs incurred prior to the date authorized by the Authority to begin work, during periods when work is suspended, or after the completion date of the Agreement or work authorization.

SECTION 4. ADDITIONAL WORK

A. Notice. If the Engineer is of the opinion that any assigned work is beyond the scope of this Agreement and constitutes additional work, it shall promptly notify the Authority in writing, presenting the facts of the work authorization and showing how the work authorization constitutes additional work.

B. Supplemental Agreement. If the Authority finds that the work does constitute additional work, the Authority shall so advise the Engineer and a written supplemental agreement will be executed as provided in Attachment A, General Provisions, Section 6, Supplemental Agreements.

C. Limitation of Liability. The Authority shall not be responsible for actions by the Engineer or any costs incurred by the Engineer relating to additional work not directly associated with or prior to the execution of a supplemental agreement.

SECTION 5. CHANGES IN WORK

A. Work Previously Submitted as Satisfactory. If the Engineer has submitted work in accordance with the terms of this Agreement but the Authority requests changes to the completed work or parts thereof which involve changes to the original scope of services or character of work under the Agreement, the Engineer shall make such revisions as requested and as directed by the Authority. This will be considered as additional work and paid for as specified under Attachment A, General Provisions, Section 4, Additional Work.

B. Work Does Not Comply with the Agreement. If the Engineer submits work that does not comply with the terms of this Agreement, the Authority shall instruct the Engineer to make such revision as is necessary to bring the work into compliance with this Agreement. No additional compensation shall be paid for this work.

C. Errors/Omissions. The Engineer shall make revisions to the work authorized in this Agreement which are necessary to correct errors or omissions appearing therein, when required to do so by the Authority. No additional compensation shall be paid for this work.

SECTION 6. SUPPLEMENTAL AGREEMENTS

A. Need. The terms of this Agreement may be modified if the Authority determines that there has been a significant increase or decrease in the duration, scope, cost, complexity or character of the services to be performed. A supplemental agreement will be executed to authorize such significant increases or decreases.

B. Compensation. Additional compensation, if appropriate, shall be calculated as set forth in Article III of the Agreement (Compensation). Significant changes affecting the cost or maximum amount payable shall be defined to include but not be limited to new work not previously authorized or previously authorized services that will not be performed. The parties may reevaluate and renegotiate costs at this time.

C. When to Execute. Both parties must execute a supplemental agreement within the Agreement period specified in Article II of this Agreement (Agreement Period).

SECTION 7. OWNERSHIP OF DATA

A. Work for Hire. All services provided under this Agreement are considered work for hire and as such all data, basic sketches, charts, calculations, plans, specifications, and other documents created or collected under the terms of this Agreement are the property of the Authority.

B. Disposition of Documents. All documents prepared by the Engineer and all documents furnished to the Engineer by the Authority shall be delivered to the Authority upon request by the Authority. The Engineer, at its own expense, may retain copies of such documents or any other data which it has furnished the Authority under this Agreement, but further use of the data is subject to permission by the Authority.

C. Release of Data. The Engineer (1) will not release any documentation created or collected under this Agreement except to its subproviders as necessary to complete this Agreement; (2) shall include a provision in all subcontracts which acknowledges the Authority's ownership of the documents and prohibits its use for any use other than the project identified in this Agreement; and (3) is responsible for any improper use of the documents by its employees, officers, or subproviders, including costs, damages, or other liability resulting from improper use. Neither the Engineer nor any subprovider may charge a fee for the portion of the design

plan created by the Authority.

D. Maintenance of Data. The Engineer and any subconsultant, subcontractor or vendor shall keep and maintain all Data and all other material relating to this Agreement and related projects, and shall make all such material available at any reasonable time during the term of the work on the Agreement and related projects and for five (5) years from the date of final payment to the Engineer for auditing, inspection, and copying upon the Authority's request or, if federal dollars are applied to the Agreement, upon request by the federal government.

SECTION 8. PUBLIC INFORMATION AND CONFIDENTIALITY

A. Public Information. The Authority will comply with Government Code, Chapter 552, the Public Information Act, and 43 Texas Administrative Code §3.10 et seq. in the release of information produced under this Agreement.

B. Confidentiality. The Engineer shall not disclose information obtained from the Authority under this Agreement without the express written consent of the Authority.

SECTION 9. PERSONNEL, EQUIPMENT AND MATERIAL

A. This Agreement is not intended to constitute, create, give up, or otherwise recognize a joint venture agreement or relationship, partnership, or formal business organization of any kind, and the rights and obligations of the parties shall be only those expressly set forth in this Agreement.

B. Engineer Resources. The Engineer shall furnish and maintain quarters for the performance of all services, in addition to providing adequate and sufficient personnel and equipment to perform the services required under this Agreement. The Engineer certifies that it presently has adequate qualified personnel in its employment for performance of the services required under this Agreement, or it will be able to obtain such personnel from sources other than the Authority.

C. Removal of Contractor Employee. All employees of the Engineer assigned to this Agreement shall have such knowledge and experience as will enable them to perform the duties assigned to them. The Authority may instruct the Engineer to remove any employee from association with work authorized in this Agreement if, in the sole opinion of the Authority, the work of that employee does not comply with the terms of this Agreement or if the conduct of that employee becomes detrimental to the work.

D. Replacement of Key Personnel. The Engineer must notify the Authority in writing as soon as possible, but no later than three business days after a project manager or other key personnel is removed from association with this Agreement, giving the reason for removal.

E. Authority Approval of Replacement Personnel. The Engineer may not replace the project manager or key personnel without prior consent of the Authority. The Authority must be satisfied that the new project manager or other key personnel is qualified to provide the authorized services. If the Authority determines that the new project manager or key personnel is not acceptable, the Engineer may not use that person in that capacity and shall replace him or her with one satisfactory to the Authority within forty-five (45) days.

F. Ownership of Acquired Property. Except to the extent that a specific provision of this Agreement states to the contrary, the Authority shall own all intellectual property acquired or developed under this Agreement and all equipment purchased by the Engineer or its subcontractors under this Agreement. All intellectual property and equipment owned by the Authority shall be delivered to the Authority when this Agreement terminates, or when it is no longer needed for work performed under this Agreement, whichever occurs first.

G. The Engineer shall furnish and maintain, at its own expense, office space for the performance of all services, and adequate and sufficient personnel and equipment to perform the services as required. All employees of the Engineer shall have such knowledge and experience as will enable them to perform the duties assigned to them.

H. The Engineer agrees to maintain (in sufficient detail as will properly reflect all work done and results achieved in the performance of this Agreement) tracings, plans, specifications, maps, basic survey notes and sketches, books, records, reports, research notes, charts, graphs, comments, plans, comparisons, computations, analyses, recordings, photographs, computer programs, and documentations thereof, and other graphic or written data or deliverables generated in connection with the work called for in the Agreement; all such information and documentations to be termed "Data" under this Agreement.

I. All Data is the exclusive property of the Authority and shall be furnished to the Authority upon request and shall not be used or released by the Engineer or any other person except with the prior approval of the Authority. All documents prepared by the Engineer and all documents furnished to the Engineer by the Authority shall be delivered to the Authority upon completion of the relevant milestone for payment and/or termination of this Agreement. Provided, however, that none of the documents or materials are intended or represented by Engineer to be suitable for reuse by the Authority, or others on extensions of the project or on any other project. Any reuse of Data without written verification or adaptation by Engineer for use beyond the specific purpose intended will be at Authority's sole risk and without liability or legal exposure to Engineer.

SECTION 10. SUBCONTRACTING

A. Prior Approval. The Engineer shall not assign, subcontract or transfer any portion of professional services related to the work under this Agreement without prior written approval from the Authority.

B. DBE/HUB Compliance. The Engineer's subcontracting program shall comply with the requirements of Attachment H of the Agreement (DBE/HUB Requirements).

C. Required Provisions. All subcontracts for professional services shall include the provisions included in Attachment A, General Provisions, and any provisions required by law. The Engineer is authorized to pay subproviders in accordance with the terms of the subcontract, and the basis of payment may differ from the basis of payment by the Authority to the Engineer.

D. **Prior Review.** All subcontracts for professional services shall be approved as to form in writing by the Authority and, if applicable, by the Texas Department of Transportation prior to its execution and performance of work thereunder.

E. Engineer Responsibilities. No subcontract relieves the Engineer of any responsibilities under this Agreement.

SECTION 11. INSPECTION OF WORK

A. Review Rights. The Authority and if appropriate, the Texas Department of Transportation, and when federal funds are involved, the U. S. Department of Transportation, and any of their authorized representatives shall have the right at all reasonable times to review or otherwise evaluate the work performed hereunder and the premises in which it is being performed.

B. Reasonable Access. If any review or evaluation is made on the premises of the Engineer or a subprovider, the Engineer shall provide and require its subproviders to provide all reasonable facilities and assistance for the safety and convenience of the Authority and if appropriate the Authority, State, or federal representatives in the

performance of their duties.

SECTION 12. SUBMISSION OF REPORTS

All applicable study reports shall be submitted in preliminary form for approval by the Authority before a final report is issued. The Authority's comments on the Engineer's preliminary report must be addressed in the final report.

SECTION 13. VIOLATION OF AGREEMENT TERMS (BREACH OF AGREEMENT)

A. Violation. Violation of the Agreement terms or breach of this Agreement by the Engineer shall be grounds for termination of the Agreement. Any additional costs to the Authority that arise from the Engineer's default, breach of Agreement, or violation of Agreement terms shall be paid by the Engineer. This Agreement shall not be considered as specifying the exclusive remedy for any default, but all remedies existing at law and in equity may be availed of by either party and shall be cumulative.

B. Venue. Venue for disputes related to this Agreement shall be Hidalgo County, Texas.

C. Applicable Laws. This Agreement shall be construed under and in accordance with the laws of the State of Texas.

SECTION 14. TERMINATION

A. Causes. The Agreement may be terminated before the stated completion date by any of the following conditions.

1. By mutual agreement and consent, in writing from both parties.
2. By the Authority by notice in writing to the Engineer as a consequence of failure by the Engineer to perform the services set forth herein in a satisfactory manner.
3. By either party, upon the failure of the other party to fulfill its obligations as set forth herein.
4. By the Authority for reasons of its own, not subject to the mutual consent of the Engineer, by giving ten business days notice of termination in writing to the Engineer.
5. By the Authority, if the Engineer violates the provisions of Attachment A, General Provisions Section 21, Gratuities.
6. By satisfactory completion of all services and obligations described herein.

B. Measurement. Should the Authority terminate this Agreement as herein provided, no fees other than fees due and payable at the time of termination shall thereafter be paid to the Engineer. Compensation for work at termination will be based on a percentage of the work completed at that time. Should the Authority terminate this Agreement under Paragraph A (4) or (5) above, the Engineer shall not incur costs during the ten-day notice period in excess of the amount incurred during the preceding ten (10) days.

C. Value of Completed Work. If the Engineer defaults in the performance of this Agreement or if the Authority terminates this Agreement for fault on the part of the Engineer, the Authority will give consideration to the following when calculating the value of the completed work: (1) the actual costs incurred (not to exceed the rates set forth in Attachment E, Fee Schedule) by the Engineer in performing the work to the date of default; (2) the amount of work required which was satisfactorily completed to date of default; (3) the value of the work which is usable to the Authority; (4) the cost to the Authority of employing another firm to complete the required work; (5) the time required to employ another firm to complete the work; and (6) other factors which affect the value to the Authority of the work performed.

D. Calculation of Payments. The Authority shall use the fee schedule set forth in Attachment E to the Agreement (Fee Schedule) in determining the value of the work performed up to the time of termination. In the case of partially completed engineering services, eligible costs will be calculated as set forth in Attachment E, Fee Schedule. The sum of the provisional overhead percentage rate for payroll additives and for general and administrative overhead costs during the years in which work was performed shall be used to calculate partial payments.

E. Excusable Delays. Except with respect to defaults of subproviders, the Engineer shall not be in default by reason of any failure in performance of this Agreement in accordance with its terms (including any failure to progress in the performance of the work) if such failure arises out of causes beyond the control and without the default or negligence of the Engineer. Such causes may include, but are not restricted to, acts of God or the public enemy, acts of the Government in either its sovereign or Contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather.

F. Surviving Requirements. The termination of this Agreement and payment of an amount in settlement as prescribed above shall extinguish the rights, duties, and obligations of the Authority and the Engineer under this Agreement, except for those provisions that establish responsibilities that extend beyond the Agreement period.

G. Payment of Additional Costs. If termination of this Agreement is due to the failure of the Engineer to fulfill its Agreement obligations, the Authority may take over the project and prosecute the work to completion, and the Engineer shall be liable to the Authority for any additional cost to the Authority.

SECTION 15. COMPLIANCE WITH LAWS

The Engineer shall comply with all applicable Authority, federal, County and local laws, statutes, codes, ordinances, rules and regulations, and the orders and decrees of any court, or administrative bodies or tribunals in any manner affecting the performance of this Agreement, including, without limitation, worker's compensation laws, minimum and maximum salary and wage statutes and regulations, nondiscrimination, and licensing laws and regulations. When required, the Engineer shall furnish the Authority with satisfactory proof of its compliance therewith.

SECTION 16. INDEMNIFICATION

A. THE ENGINEER SHALL SAVE AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, AND EMPLOYEES, FROM ALL CLAIMS, LIABILITY, ACTION, AND LOSS (INCLUDING DAMAGE OR INJURY INCLUDING DEATH TO PERSONS OR PROPERTY) DUE TO ACTIVITIES OF ITSELF, ITS AGENTS, SUBCONTRACTORS, OR EMPLOYEES PERFORMED UNDER THIS AGREEMENT AND WHICH ARE CAUSED BY OR RESULT FROM ERROR, OMISSION, OR NEGLIGENT ACT, INCLUDING ANY VIOLATION OF ANY STATUTES, ORDINANCES, BUILDING CODES OR REGULATIONS, OF THE ENGINEER OR OF ANY PERSON EMPLOYED OR ENGAGED BY THE ENGINEER, AND THE DEFENSE OF ANY SUCH CLAIMS, LIABILITY, ACTION, OR LOSS.

B. THE ENGINEER SHALL ALSO SAVE AND HOLD HARMLESS THE AUTHORITY FROM ANY AND ALL EXPENSE, INCLUDING, BUT NOT LIMITED TO, REASONBLE ATTORNEY FEES WHICH MAY BE INCURRED BY THE AUTHORITY OR LIABILITIES WHICH MAY BE IMPOSED ON THE AUTHORITY AS THE RESULT OF SUCH ERROR, OMISSION, OR NEGLIGENT ACT BY THE ENGINEER, ITS AGENTS, ITS SUBCONTRACTORS, OR EMPLOYEES.

SECTION 17. ENGINEER'S RESPONSIBILITY

A. Accuracy. The Engineer shall be responsible for the accuracy and completeness of work and shall promptly

make necessary revisions or corrections resulting from its errors, omissions, or negligent acts without compensation.

B. Errors and Omissions. The Engineer's responsibility for all questions arising from design errors and/or omissions will be determined by the Authority and all decisions shall be in accordance with the Authority's "Errors or Omissions Policy". The Engineer will not be relieved of the responsibility for subsequent correction of any such errors or omissions or for clarification of any ambiguities until after the construction phase of the project has been completed.

C. Seal. The responsible Engineer shall sign, seal and date all appropriate engineering submissions to the Authority in accordance with the Texas Engineering Practice Act and the rules of the Texas Board of Professional Engineers.

D. Resealing of Documents. Once the work has been sealed and accepted by the Authority, the Authority, as the owner, will notify the party to this Agreement, in writing, of the possibility that a Authority engineer, as a second engineer, may find it necessary to alter, complete, correct, revise or add to the work. If necessary, the second engineer will affix his seal to any work altered, completed, corrected, revised or added. The second engineer will then become responsible for any alterations, additions or deletions to the original design including any effect or impacts of those changes on the original engineer's design.

SECTION 18. NONCOLLUSION

A. Warranty. The Engineer warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Engineer and those consultants, subconsultants, and providers identified in the presentation to the Authority's Board, to solicit or secure this Agreement and that it has not paid or agreed to pay any company or engineer any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon or resulting from the award or making of this Agreement.

B. Liability. For breach or violation of this warranty, the Authority shall have the right to annul this Agreement without liability or, in its discretion, to deduct from the Agreement price or compensation, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift or contingent fee.

SECTION 19. INSURANCE

A. Insurance Liability Limits. The Engineer shall obtain and maintain insurance limits of liability for each of the types of insurance coverage identified as follows:

1. Workers' Compensation, endorsed with a waiver of subrogation in favor of the Authority in the amount of statutory obligations imposed under the Texas Workers' Compensation Law.
2. Commercial General Liability, endorsed with the Authority as an additional insured and endorsed with a waiver of subrogation in favor of the Authority to the extent of the liabilities assumed by Engineer under **Attachment A, Section 17** of this Agreement, in limits of liability of one million dollars ($1,000,000) combined single limit each occurrence and in the aggregate for bodily injury and property damage.
3. Professional Liability in limits of two million dollars ($2,000,000) each claim and in the aggregate.

The coverage and amounts designated herein are minimum requirements and do not establish limits of the Engineer's liability. Additional coverage may be provided at the Engineer's option and expense.

The issuer of any policy must have a rating of at least B+ and a financial size of Class VI or better according to the latest *Best's* rating.

B. Insurance Liability Limits. The Engineer shall furnish proof of insurance by means of a completed Attachment I – Certificate of Insurance - Hidalgo County Regional Mobility Authority, attached hereto and made a part thereof with the Project Name and the Engineer's name stated thereon, to be submitted prior to the beginning of the Project. The Engineer will be considered in breach of this Agreement should the Engineer fail to maintain the required insurance coverage during the term of this Agreement. The termination of this Agreement resulting from failure to maintain the required insurance will be carried out in accordance with the termination provisions herein.

C. Engineer's Risk. The services to be provided under this Agreement will be performed entirely at Engineer's risk and Engineer assumes all responsibility for the condition of vehicles or other instrumentalities used in the performance of this Agreement.

D. Work on Texas Department of Transportation Property. To the extent that the Texas Department of Transportation or this Agreement authorizes the Engineer or its subconsultants to perform any work on Texas Department of Transportation right of way, before beginning work the entity performing the work shall provide the Authority and the Texas Department of Transportation with a fully executed copy of the Department's Form 1560 Certificate of Insurance verifying the existence of coverage in the amounts and types specified on the Certificate of Insurance for all persons and entities working on Department right of way. This coverage shall be maintained until all work on the Department right of way is complete. If coverage is not maintained, all work on Department right of way shall cease immediately, and, the Authority may recover damages and all costs of completing the work.

SECTION 20. GRATUITIES

Employees of the Authority shall not accept any benefits, gifts or favors from any person doing business or who reasonably speaking may do business with the Authority under this Agreement. The only exceptions allowed are ordinary business lunches and items that have received the advance written approval of the Authority. Any person doing business with or who may reasonably speaking do business with the Authority under this Agreement may not make any offer of benefits, gifts or favors to departmental employees, except as mentioned herein above. Failure on the part of the Engineer to adhere to this policy may result in the termination of this Agreement.

SECTION 21. DISADVANTAGED BUSINESS ENTERPRISE OR HISTORICALLY UNDERUTILIZED BUSINESS REQUIREMENTS

The Engineer agrees to comply with the requirements set forth in Attachment H, Disadvantaged Business Enterprise or Historically Underutilized Business Subcontracting Plan Requirements with an assigned goal or a zero goal, as determined by the Authority. The Engineer will adhere to the commitment and to participation by certain Disadvantaged Business Enterprises (DBE) agreed to by the Authority during negotiations. Refer to Attachment H-7 for copies of DBE Certifications.

SECTION 22. MAINTENANCE, RETENTION AND AUDIT OF RECORDS

A. Retention Period. The Engineer shall maintain all books, documents, papers, accounting records and other evidence pertaining to costs incurred and services provided (hereinafter called the Records). The Engineer shall make the records available at its office during the Agreement period and for five (5) years from the date of final payment under this Agreement, until completion of all audits, or until pending litigation has been completely

and fully resolved, whichever occurs last.

B. Availability. The Authority or any of its duly authorized representatives and, if appropriate, the Texas Department of Transportation, the Federal Highway Administration, the United States, Department of Transportation, Office of Inspector General, and the Comptroller General shall have access to the Engineer's Records which are directly pertinent to this Agreement for the purpose of making audits, examinations, excerpts and transcriptions.

SECTION 23. CIVIL RIGHTS COMPLIANCE

(1) Compliance with Regulations: The Engineer shall comply with the regulations of the Department of Transportation, Title 49, Code of Federal Regulations, Parts 21, 24, 26 and 60 as they relate to nondiscrimination; 23 CFR 710.405(B); also Executive Order 11246 titled Equal Employment Opportunity as amended by Executive Order 11375.

The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible."

(2) Nondiscrimination: The Engineer, with regard to the work performed by it during this Agreement, shall not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

(3) Solicitations for Subcontracts, Including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the Engineer for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Engineer of the Engineer's obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, sex, or national origin.

(4) Information and Reports: The Engineer shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and facilities as may be determined by the Authority; and if appropriate, the Texas Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of the Engineer is in the exclusive possession of another who fails or refuses to furnish this information, the Engineer shall so certify to the Authority; and if appropriate, the Texas Department of Transportation or the Federal Highway Administration and shall set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of the Engineer's noncompliance with the nondiscrimination provisions of this Agreement, the Authority shall impose such Agreement sanctions as the Authority; and if appropriate, the Texas Department of Transportation or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

(a) withholding of payments to the Engineer under this Agreement until the Engineer complies and/or
(b) cancellation, termination, or suspension of this Agreement, in whole or in part.

(6) Incorporation of Provisions: The Engineer shall include the provisions of paragraphs (1) through (5) above in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The Engineer shall take such action with respect to any subcontract or procurement as the Authority and; if appropriate, the Texas Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance provided, however, that in the event an Engineer becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Engineer may request the Authority; or, if appropriate, the Texas Department of Transportation to enter into such litigation to protect the interests of the Authority; and, in addition, the Engineer, if appropriate, may request the United States to enter into such litigation to protect the interests of the United States.

SECTION 24. PATENT RIGHTS
The Authority; and if appropriate, the Texas Department of Transportation; and the U. S. Department of Transportation shall have the royalty free, nonexclusive and irrevocable right to use and to authorize others to use any patents developed by the Engineer under this Agreement.

SECTION 25. COMPUTER GRAPHICS FILES
The Engineer agrees to comply with Attachment G, Computer Graphics Files for Document and Information Exchange, if determined by the Authority to be applicable to this Agreement.

SECTION 26. CHILD SUPPORT CERTIFICATION
Under Section 231.006, Texas Family Code, the Engineer certifies that the individual or business entity named in this Agreement, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this Agreement may be terminated and payment may be withheld if this certification is inaccurate. If the above certification is shown to be false, the Engineer is liable to the Authority for attorney's fees, the cost necessary to complete this Agreement, including the cost of advertising and awarding a second Agreement, and any other damages provided by law or this Agreement. A child support obligor or business entity ineligible to receive payments because of a payment delinquency of more than thirty (30) days remains ineligible until: all arrearages have been paid; the obligor is in compliance with a written repayment agreement or court order as to any existing delinquency; or the court of continuing jurisdiction over the child support order has granted the obligor an exemption from Subsection (a) of Section 231.006, Texas Family Code, as part of a court-supervised effort to improve earnings and child support payments.

SECTION 27. DISPUTES
A. Disputes Not Related to Agreement Services. The Engineer shall be responsible for the settlement of all contractual and administrative issues arising out of any procurement made by the Engineer in support of the services authorized herein.

B. Disputes Concerning Work or Cost. Any dispute concerning the work hereunder or additional costs, or any non-procurement issues shall be settled by mediation and if mediation is unsuccessful then parties go to

trial under Texas State law.

SECTION 28. SUCCESSORS AND ASSIGNS
The Engineer and the Authority do each hereby bind themselves, their successors, executors, administrators and assigns to each other party of this agreement and to the successors, executors, administrators and assigns of such other party in respect to all covenants of this Agreement. The Engineer shall not assign, subcontract or transfer its interest in this Agreement without the prior written consent of the Authority.

SECTION 29. SEVERABILITY
In the event any one or more of the provisions contained in this Agreement shall for any reason, be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision thereof and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

SECTION 30. PRIOR AGREEMENTS SUPERSEDED
This Agreement constitutes the sole agreement of the parties hereto for the services authorized herein and supersedes any prior understandings or written or oral Agreements between the parties respecting the subject matter defined herein.

SECTION 31. CONFLICT OF INTEREST
A. Representation by Engineer. The undersigned represents that its firm has no conflict of interest that would in any way interfere with its or its employees' performance of services for the Authority or which in any way conflicts with the interests of the Authority. The firm shall exercise reasonable care and diligence to prevent any actions or conditions that could result in a conflict with the Authority's interests.

B. Certification Status. The Engineer certifies that it is not:

1. a person required to register as a lobbyist under Chapter 305, Government Code; or
2. a public relations firm other than the firms identified in the presentation to the RMA Board.

C. Environmental Disclosure. If the Engineer will prepare an environmental impact statement or an environmental assessment under this Agreement, the Engineer certifies by executing this Agreement that it has no financial or other interest in the outcome of the project on which the environmental impact statement or environmental assessment is prepared.

SECTION 32. OFFICE OF MANAGEMENT AND BUDGET (OMB) AUDIT REQUIREMENTS
The parties shall comply with the requirements of the Single Audit Act of 1984, P.L. 98-502, ensuring that the single audit report includes the coverage stipulated in OMB Circular A-133.

SECTION 33. CERTIFICATIONS
A. The parties are prohibited from making any award at any tier to any party that is debarred or suspended or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549, "Debarment and Suspension." By executing this Agreement, the Engineer certifies that it is not currently debarred, suspended, or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549. The parties to this Agreement shall require any party to a subcontract or purchase order awarded under this Agreement to certify its eligibility to receive Federal funds and, when

requested by the Authority, to furnish a copy of the certification.

B. In accordance with Department of Transportation, Title 49, Code of Federal Regulations, Part 29 and by signature on this Agreement and the Debarment Certification attached hereto as Attachment K, the Engineer certifies its compliance and the compliance of any subconsultants or subcontractors present or future, by stating that any person associated therewith in the capacity of owner, partner, director, officer, principal investor, project director, manager, auditor, or any position involving federal, state or Authority funds:

(1) is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;
(2) does not have a proposed debarment pending;
(3) has not been suspended debarred, voluntarily excluded, or determined ineligible by an federal agency within the past three (3) years; and
(4) has not been indicted, convicted, or had a civil judgment rendered against the firm by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years as specified by Title 49, Code of Federal Regulations, paragraph 29.305(a).

C. The Engineer agrees to comply with the provisions of Section 1352 of Title 31, U.S. Code as codified in Title 48, Federal Acquisition Regulations, Subpart 3.8 and subpart 52.203.11, prohibiting federal funds from being expended by a recipient or lower-tier subrecipient of a federal contract, grant, loan, or cooperative agreement to pay any person for influencing or attempting to influence a federal agency or Congress in connection with the award of any federal contract or cooperative agreement. If federal funds are applied to the services under this Agreement, the Engineer and any subconsultants or subcontractors would be required to complete the Certification of Federal Contracts and, if necessary, the Disclosure of Lobbying Activities.

D. If the Project is a federal aid project, Engineer is required to comply with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act (42 U.S.C. 1857 (h)), which prohibit the use under non-exempt federal contract, grants, or loans of facilities included on the EPA List of Violating Facilities. Violations shall be reported to the Federal Highway Administration and to the USEPA Assistant Administrator of Enforcement.

ATTACHMENT B
SERVICES TO BE PROVIDE BY THE AUTHORITY

The **AUTHORITY** will provide the following general items.

1. Authorization to begin work with issuance of Notice to Proceed [NTP].
2. Timely payment for work performed by the **Engineer** and accepted by the **AUTHORITY** on a monthly basis.
3. Assistance to the **Engineer**, as necessary, to obtain the required data and information from other local, regional, State and Federal agencies that the **Engineer** cannot easily obtain.
4. Provide any available relevant data the **AUTHORITY** may have on file concerning the project:
   A. Electronic copy of project plans.
   B. Electronic copy of contract Proposal and any Addendums per project.
   C. Limited Access to Appia and ProjectWise.
   D. Storm Water Pollution Prevention Plan (SW3P) information.
   F. SW3P Coordination procedures.
   G. Best Practices coordination procedures (Disadvantaged Business Enterprise, (Materials, General Bookkeeping).
5. Review and approve the **Engineer**'s progress schedule with milestone activities and/or deliverables.
6. The **AUTHORITY** will provide the Environmental Document and electronic Constraints map for the project for development of the Environmental Permits, Issues and Commitments (EPIC) sheets and any other compliance issues.

RIGHT-OF-WAY DATA:

The **AUTHORITY** will provide the following:

1. Assist the **Engineer**, as necessary, with coordination of any utility relocations that may be required.
2. Ownership Data
   a. Ownership Information shall be provided for the corridor width.
   b. All utility ownership shall be provided.
3. Utility Adjustments:
   AUTHORITY (TxDOT as necessary) will provide executed utility agreements to the Engineer for all required utility adjustments.
5. Survey and Stake Right-of-Way
6. Right of Entry to all affected properties located within the project limits.
7. Deliverables: Right of way Map in electronic format (PDF)

MANAGEMENT:

The **AUTHORITY** will provide the following:

1. Attend/participate in progress meetings as required.
2. Timely review of submittals as required.

ATTACHMENT C
SERVICES TO BE PROVIDED BY THE ENGINEER

APPLICABILITY:

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

ABBREVIATIONS, ABBREVIATIONS, and DEFINITIONS:

HCRMA OR AUTHORITY shall mean Hidalgo County Regional Mobility Authority
PMC (GEC) shall mean Program Management Consultant (General Engineering Consultant) (Dannenbaum Engineering Corporation)
ENGINEER shall mean B2Z Engineering, LLC
TxDOT shall mean Texas Department of Transportation
FHWA shall mean Federal Highway Administration
IBWC shall mean International Boundary and Water Commission
USFWS shall mean United States Fish & Wildlife Service
THC shall mean Texas Historical Commission
SHPO shall mean State Highway Preservation Office
USACE shall mean United States Army Corps of Engineers
GSA shall mean General Services Administration
HCMPO shall mean Hidalgo County Metropolitan Planning Organization
FAA shall mean Federal Aviation Administration
MTP shall mean Metropolitan Transportation Plan
TIP shall mean Transportation Improvement Program
MUTCD shall mean Manual of Uniform Traffic Control Devices
AASHTO shall mean American Association of State Highway and Transportation Officials
LRFD shall mean Load & Resistance Factor Design
PS&E shall mean Plans, Specifications and Estimate
ACP shall mean Asphaltic Concrete Pavement
CSJ shall mean Control Section Job (highway project designation number)
ADP shall mean Advance Project Development

AAP	AASHTO Accreditation Program (AASHTO re:source and CCRL)
AASHTO	American Association of State Highway Transportation Officials
ACI	American Concrete Institute
AO	Area Office
AQMP	Aggregate Quality Monitoring Program
CAR	Corrective Action Report
CCRL	Concrete and Cement Reference Laboratory
CE&I	Construction Engineering and Inspection
CFR	Code of Federal Regulations
MTD	Materials and Tests Division
CMEC	Construction Materials Engineering Council
FHWA	Federal Highway Administration
HMA	Hot-Mix Asphalt
HMAC	Hot-Mix Asphalt Center
IA	Independent Assurance
L-A-B	Laboratory Accreditation Bureau
MPL	Material Producer List
QAP	Quality Assurance Program
QAT	Quality Assurance Test
QC	Quality Control
SM	SiteManager
TXAPA	Texas Asphalt Pavement Association
TxDOT	Texas Department of Transportation

ATTACHMENT C
SERVICES TO BE PROVIDED BY THE ENGINEER
PROJECT DESCRIPTION

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

County/HCRMA: Hidalgo County

CSJ number: 0921-02-368

Project/Description: Provide construction materials testing to assure the materials incorporated into 2.32 miles of levee work on Phase II of 365 Toll highway construction project are subject to verification sampling and testing when required and meet project plans and specifications; and administering Quality Monitoring and Quality Assurance Program. Overall project consists of construction of a 12.4 mile tolled facility from FM 396 & GSA Connector to US 281 (Military Highway), which consists of: of grading, flexible base, lime treated subgrade, asphaltic concrete pavement, concrete pavement, signing and pavement markings, cross culverts, bridge structures, retaining walls, illumination and toll equipment.

Length: 2.32 Miles (Approx)

Highway: 365TOLL

Limits: (See Location Map Attached)

Contract is for "indefinite delivery/indefinite quantity [IDIQ] set for a proposed three (3) year fixed period of time, during that period of time the Engineer will be responsible for an unlimited number of separate projects, or additional work on a current project to be issued on an individual work order basis.

The Engineer agency(s) must be accredited by one of the following FHWA- and TxDOT-approved accrediting bodies:

A. AASHTO Accreditation Program (AAP);
B. Construction Materials Engineering Council (CMEC); or
C. Laboratory Accreditation Bureau (L-A-B)

The Engineer shall have Texas Department of Transportation or Toll Authority/Regional Mobility Authority as well U.S. Army Corps of Engineers' construction material testing experience and is expected to work directly with the HCRMA Construction Division, namely, the Chief Construction Engineer for the Authority. The selected Engineer(s) may also perform certain tasks under the oversight of the HCRMA's General Engineering Consultant (Currently HDR Engineering Inc.).

To avoid an appearance of a conflict of interest, any qualified Engineer agency (laboratory) shall perform only one of the following types of testing on the same project:

A. Quality control testing;
B. Quality acceptance testing;
C. Owner verification testing;
D. Independent assurance testing; or
E. Referee testing.

The selected Engineer(s) shall have adequate experienced staff and a workload free from constraints to provide the necessary construction material testing for the HCRMA. Staff expertise is to include a Licensed Professional Engineer and certified, experienced staff proficient with TxDOT testing procedures, sampling and testing

schedule, and the latest ASSHTO, ASTM and ACI testing requirements [Appendix A] performed and executed as per 2019 TxDOT Quality Assurance Program (~~DB-QAP~~ / DBB-QAP) / 2019 Guide Schedule of Sampling & Testing for Design Bid-Build Projects.

Engineer will compose and submit an annual report to the Federal Highway Administration (FHWA) summarizing the results of HCRMA's project specific systems approach program. This report identifies:

A. Number of sampling and testing personnel evaluated by the systems approach IA testing;
B. Number of IA evaluations found to be acceptable;
C. Number of IA evaluations found to be unacceptable; and
D. Summary of any significant system-wide corrective actions taken.

The Engineer will be responsible for maintaining documentation of all individuals qualified under their authority who perform required tests for acceptance of materials. A qualification summary listing all tests for which an individual is qualified will be available and printed at HCRMA's request. Documentation to be maintained for all qualified personnel includes:

A. Copies of any certificates issued by ACI and TXAPA ;
B. Original written examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, score, and date taken;
C. Original performance examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, qualification status, and date;
D. Results of annual split/proficiency testing administered by the TxDOT qualifying authority for each technician.

Engineer shall perform Quality Control / Quality Assurance sampling and testing and comply with Laboratory Qualification Program and will be evaluated under the Independent Assurance Program, as described in the 2019 QAPDBB [Attachment L]. Quality Control test results will be validated by verification test results obtained from independently taken samples. IA personnel or their designated agents will perform Quality Assurance verification sampling and testing.

1. The Engineer shall perform all sampling and testing of components and materials in accordance with the standard specifications, and all other standard and special specifications and special provisions applicable in this agreement. Meet the minimum sampling frequencies set out in the TxDOT 2019 Guide Schedule for Sampling and Testing forDesign Bid-Build Projects. The testing shall include the following materials and all the components of the materials listed. The estimated number of samples and tests are based on quantities in the executed construction contract.
2. The Engineer shall ensure the testing is completed and input into ProjectWise. NOTE: The General Contractor is responsible for Quality Control (QC) testing of Item 360, Concrete Paving. The Engineer shall be responsible for Quality Assurance (QA) testing of Item 360, Concrete Paving.
3. The Engineer shall provide certified personnel, outlined in their internal, AASHTO-approved, Quality Control (QC) Manual that are knowledgeable of all materials testing procedures. All personnel performing acceptance tests must provide certifications and must maintain the certifications throughout the project. The HCRMA reserves the right to require replacement of any technician during this contract if performance is determined to be unsatisfactory or the technician fails to maintain appropriate certifications.
4. Engineer's laboratory will be qualified by the HCRMA qualifying authority in accordance with Section 3, Laboratory Qualification Responsibility of the Texas Department of Transportation (TxDOT) Quality Assurance Program (Manual Notice: 2005-1), and be AASHTO accredited under the AASHTO Accreditation Program (AAP) throughout the life of the project. Engineer shall transmit, to the HCRMA, a copy of AAP accreditation certificate(s) upon receipt by the testing laboratory.
5. The Engineer shall provide technicians certified in accordance with TxDOT Quality Assurance Program for Construction (QAP) or other State approved programs, such as the Texas Asphalt Pavement Association (TxAPA) for Hot Mix Asphalt, and the Soils and Base Certification Program, as listed.

6. The Engineer shall provide certified technicians to perform the following tests:

A. Hot Mix Asphalt Testing:
   a. Level l-A
   b. Level l-B
   c. Hot Mix Asphalt Testing • Level II
   d. All other tests in the Manual of Testing Procedures 200-F Series or ASTM Procedures not covered in Level l-A, Level l-B, or Level II

B. Concrete Testing:
   a. QAP Program for Concrete Testing
   b. Other tests outlined in the Manual of Testing Procedures 400-A Series or ASTM Procedures that are not included in the QAP Program

7. The Engineer shall perform testing on the project. These tests include all tests listed in State's Guide Schedule of Sampling and Testing dated 2015. Follow the State's Guide Schedule of Sampling and Testing to establish testing frequencies. Testing frequencies may be increased as directed by the HCRMA.
8. The Engineer shall notify the HCRMA, to determine if any tests may be waived
9. The Engineer shall attend preconstruction QA and QC testing meetings prior to beginning work.
10. The Engineer shall:

A. Review and recommend approval or rejection of the Quality Control (QC) sampling and testing documentation submitted by the General Contractor for compliance with applicable State and Federal regulations, standards, and contract requirements.

B. Verify all tested materials used meet specifications, or identify materials that do not meet specifications and recommend action which should be taken.

C. Certify that all tested materials used during construction meet the specifications as outlined in the Site Manager Support System.

D. Work closely with the HCRMA to resolve all material discrepancies before the next monthly estimate is processed by utilizing the XiteReport in Site Manager.

E. Enter all test data in Site Manager.

F. Enter all mix designs, concrete and asphalt, provided by the General Contractor into Site Manager.

G. The Engineer shall report failing tests to the HCRMA within twenty-four (24) hours.

SUMMARY OF DELIVERABLES:

The Engineer shall provide the following:

1. Monthly Progress Reports
2. Quarterly Material Test Reports
3. Sampling and testing personnel qualification
4. Final document file (maintained in project control system during project execution. Final structure of file will be determined during project implementation, an example of content is provided below)

A. Construction Oversight Documentation
   a. Testing reports and Testing documentation as applicable
   b. Test Exception Letter
   c. Certification Verifications
   d. Photographs

B. Project Correspondence File (Design and Construction)
   a. E-mail files
   b. Letters
   c. Memos
   d. Meeting Minutes
   e. Monthly Deficiency Reports to track material issues (one (1) per month)
   f. Misc. correspondence

WORK AUTHORIZATION

ATTACHMENT D-1

WORK AUTHORIZATION NO. ____
AGREEMENT FOR ENGINEERING SERVICES

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of "Article V of that certain Professional Services Agreement for Engineering Services" (the Agreement) entered into by and between the Hidalgo County Regional Mobility Authority (Authority), and B2Z Engineering, LLC. (the Engineer).

PART I. The Engineer will perform engineering design services generally described as in accordance with the project description attached hereto and made a part of this Work Authorization. The responsibilities of the Authority and the Engineer as well as the work schedule are further detailed in exhibits A, B and C which are attached hereto and made a part of the Work Authorization.

PART II. The maximum amount payable under this Work Authorization is $_____ and the method of payment is _____as set forth in Attachment E of the Agreement. This amount is based upon fees set forth in Attachment E, Fee Schedule, of the Agreement and the Engineer's estimated Work Authorization costs included in Exhibit D, Fee Schedule, which is attached and made a part of this Work Authorization.

PART III. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with Articles III thru V of the Agreement, and Attachment A, Section 1.

PART IV. This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate on _____, unless extended by a supplemental Work Authorization as provided in Attachment A, Section 1.

PART V. This Work Authorization does not waive the parties' responsibilities and obligations provided under "Article V of that certain Professional Services Agreement for Engineering / Design Services 365 Tollway Project / Segment 1 & 2.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER	**THE AUTHORITY**
_____	_____
(Signature)	(Signature)
Aisha Gonzalez .	Pilar Rodriguez
(Printed Name)	(Printed Name)
President	Executive Director
(Title)	(Title)
_____	_____
(Date)	(Date)

ATTACHMENT D-2

SUPPLEMENTAL WORK AUTHORIZATION NO. ____
TO WORK AUTHORIZATION NO. ____
AGREEMENT FOR ENGINEERING SERVICES

THIS SUPPLEMENTAL WORK AUTHORIZATION is made pursuant to the terms and conditions of "Article V of that certain Professional Services Agreement for Engineering Design Services" hereinafter identified as the "Agreement," entered into by and between the Hidalgo County Regional Mobility Authority (Authority), and B2Z Engineering, LLC. (the Engineer).

The following terms and conditions of Work Authorization No. ____ are hereby amended as follows:

This Supplemental Work Authorization shall become effective on the date of final execution of the parties hereto. All other terms and conditions of Work Authorization No. ____ not hereby amended are to remain in full force and effect.

IN WITNESS WHEREOF, this Supplemental Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER	**THE AUTHORITY**
_____	_____
(Signature)	(Signature)
Aisha Gonzalez .	Pilar Rodriguez
(Printed Name)	(Printed Name)
President	Executive Director
(Title)	(Title)
_____	_____
(Date)	(Date)

ATTACHMENT E

FEE SCHEDULE

TEST NO.	CMT Firm: B2Z ENGINEERING Date: 09/13/2021			2020-23			
	Geotechnical Services		Unit	FINAL NEGOTIATED RATES 9/3/2021			COMMENTS
1	Mobilization/Demobilization		each	$ 400.00			$6/mile for anything < 67 miles per trip or $400 > 67 miles
	Drilling, Logging, &Recovering Samples (With TCP)		per mile	$ 6.00			
2A	1. Depth ≤ 50 feet		Tex-132-E (every 5 feet)	$ 28.63			
2B	2. Depth ≥ 50 feet		linear foot	$ 30.71			
	Drilling, Logging, &Recovering Samples (Without TCP)			$ -			
3A	1. Depth ≤ 50 feet ( )		linear foot	$ 26.02			
3B	2. Depth ≥ 50 feet ( )		linear foot	$ 28.03			
4	Rock Coring (Soft Rock) [2]		linear foot	$ 12.07			
5	Rock Coring (Hard Rock) [2]		linear foot	$ 16.00			
6	Staking Borings and Utility Locations		hour	$ 109.03			
	Standby Time (sampling)		hour	$ 250.00			
7A	1. Hot Mix Asphalt (minumum of one hour)		each	$ 100.00			
7B	2. Concrete (minumum of one hour)		each	$ 159.30			
8	Piezometer - 2 inch (including well completion and installation)		linear foot	$ 40.00			
9	Grouting of Borings		linear foot	$ 5.00			
10	Traffic Control - Major		day	$ 1,200.00			
	Laboratory Test	Test Method	Unit	$ -			
11	Volumetric Shrinkage	ASTM D427	each	$ 91.00			
12	Standard Poor Test	ASTM D698	each	$ 210.00			
13	Modified Poor Test	ASTM D1557	each	$ 250.00			
14	Standard Penetration Test (SPT)	ASTM D1586	LF	$ 30.04			
15	California Bearing Ratio (Single Sample without MD Curve)	ASTM D1883	test	$ 275.00			
16	Unconfined Compressive Strength (Soil)	ASTM D2166	each	$ 62.00			
17	Hydraulic Conductivity Permeability	ASTM D2434	each	$ 330.00			
18	One Dimensional Consolidation Properties of Soil	ASTM D2435	each	$ 450.00			
19	Unconfined Compressive Strength (Rock)	ASTM D2938	each	$ 76.00			
20	Direct Shear Test of Soils Under Consolidated Drained Conditions	ASTM D3080	set of 3	$ 625.00			
21	Direct Shear Test of Soils Under Consolidated Drained Conditions, SAND	ASTM D3080	set of 3	$ 475.00			
22	Direct Shear Test of Soils Under Consolidated Drained Conditions, CLAY	ASTM D3080	set of 3	$ 650.00			
23	Splitting Tensile of Intact Rock Core	ASTM D3967	each	$ 120.00			
24	Water Stand Pipes	ASTM D4043	each	$ 37.69			
25	Calcium Carbonate Content of Soils	ASTM D4373	LF	$ 62.00			
26	Hydraulic Conductivity Permeability	ASTM D4511	each	$ 260.00			
27	One Dimensional Swell, Methods A&B	ASTM D4546	each	$ 249.47			
28	One Dimensional Swell, Method B Only	ASTM D4546	each	$ 300.00			
29	One Dimensional Swell, Method C	ASTM D4546	each	$ 247.52			
30	Permeability of Silt and Clays	ASTM D5084	each	$ 350.00			
31	Suction Test (Filter Method)	ASTM D5298	each	$ 80.00			
32	Casagrande Type Piezometers	N/A	each	$ 325.00			
33	Casagrande Type Piezometers Installation	N/A	each	$ 420.00			
~~34~~	~~Miscellaneous Testing~~	~~N/A~~	~~each~~	~~$ 55.00~~			
35	Vertical Inclinometer	N/A	each	$ 400.00			
36	Vertical Inclinometer Installation	N/A	each	$ 700.00			
37	Vibrating Wire Piezometer	N/A	each	$ 760.00			
38	Vibrating Wire Piezometer Installation	N/A	each	$ 800.00			
39	Soil Boring with SPT	ASTM D1586	LF	$ 32.00			
	Laboratory Test	Test Method					
	Soils & Base Testing						
40	Sampling	Tex-400-A	hour	$ 55.00			
41	Sample Preparation	Tex-101-E	each	$ 53.00			
42	Determining Slaking Time	Tex-102-E	each	$ 50.00			
43	Moisture Content	Tex-103-E	each	$ 13.00			
44	Atterburg Limits	Tex-104,105&106-E	Set of 3	$ 75.00			
45	Linear Bar Shrinkage (per bar)	Tex-107-E	each	$ 61.84			
46	Determining the Specific Gravity of Soils	Tex-108-E	each	$ 65.00			
47	Sieve Analysis	Tex-110-E, Part I	each	$ 68.00			
48	Sieve Analysis (Hydrometer with Tex-108-E)	Tex-110-E, Part II	each	$ 78.00			
49	Hydrometer with Tex-108-E (in conjunctin with Tex-110-E, Part II)	Tex-108-E	each	$ 56.00			
50	Percent Passing No. 200 Sieve	Tex-111-E	each	$ 65.00			
51	Determining the Amount of Material in Solis Finer than the 75 mi	Tex-111-E	each	$ 49.00			
52	Admixing Lime to Reduce Plasticity Index of Soils	Tex-112-E	each	$ 110.00			
53	Moisture-Density Relationship	Tex-113-E	each	$ 240.00			
54	Moisture-Density Relationship	Tex-114-E	each	$ 215.00			
55	Field Density Measurements	Tex-115-E	hour	$ 50.00			
56	Wet Ball Mill Test	Tex-116-E	each	$ 230.00			
57	Texas Triaxial Compression [6]	Tex-117-E, Part I	each	$ 425.00			
58	Texas Triaxial Compression [6]	Tex-117-E, Part II	each	$ 1,050.00			
59	Quality Assurance (QA) Series for Flexible Base [7] [8]	See Foot Notes	each	$ 1,800.00			
60	Soil- Cement Testing [7]	Tex-120-E, Part II	each	$ 400.00			
61	Soil- Lime Testing [7]	Tex-121-E, Part II	each	$ 410.00			
61.1	Soil-Lime Testing Determining Stabilization Ability of Lime by Soil pH	Tex-121-E, Part III	each	$ 400.00			
62	Determining the Drainage Factor of Soil Materials (Not Field Test)	Tex-123-E ++	each	$ 70.00			
63	Determining Modulus of Sub-grade Recaction (K Value) (Not Field Test)	Tex-125-E ++	each	$ 110.00			
64	Molding, Testing, and Evaluation Bituminous Black Base Materials	Tex-126-E ++	each	$ 1,490.00			
65	Lime-Fly Ash Compression [7]	Tex-127-E	each	$ 750.00			
66	Soil pH	Tex-128-E	each	$ 45.00			
67	Resistivity of Soils	Tex-129-E	each	$ 100.00			
68	Slurry Testing	Tex-130-E	each	$ 97.00			
69	Texas Cone Penetration	Tex-132-E	each	$ 32.00			
70	Freezing and Thawing Tests oc Compacted Soil-Cement Mixture	Tex-135-E	each	$ 240.00			
71	Thickness of Pavement Layers (4 hour minimum)	Tex-140-E	hour	$ 53.00			
72	Manual Procedure for Description and Identification of Soils	Tex-141-E	each	$ 46.00			
73	Laboratory Classification os Soils for Engineering Purposes	Tex-142-E	each	$ 50.00			
74	Sulfate Content in Soils	Tex-145-E	each	$ 68.33			
75	Conductivity Test for Field Detection of Sulfates in Soil	Tex-146-E	each	$ 65.00			
75.1	Organic Content Using UV-VIS Method	Tex-148-E	each	$ 85.00			
76	Determining Cholride and Sulfate Contents in Soils	Tex-620-J	each	$ 80.00			
77	Free Swell Test	EM1110-2-1906	each	$ 155.00			
78	Pressure Swell Test	EM1110-2-1906	each	$ 255.00			
79	One-Dimensional Swell	ASTM D4546	each	$ 250.00			
80	One-Dimensional Swell (Method B Only)	ASTM D4546	each	$ 275.00			
81	Potential Vertical Rise Calculation	Tex-124-E	each	$ 68.00			
82	Volumetric Shrinkage	ASTM D4943	each	$ 95.00			

~~83~~	~~Volumetric Shrinkage~~	~~ASTM D427~~	~~each~~	~~$ 57.93~~			
84	Unconfined Compression Test (Soil)	ASTM D2166	each	$ 62.00			
85	Unconfined Compression Test (Rock)	ASTM D2938	each	$ 76.00			
86	Unconfined Compression Test (Rock) (Method D)	ASTM D7012	each	$ 57.25			
	Unconsolidated Undrained (UU) Triaxial Compression Test						
87	1. Set of Three	Tex-118-E	set	$ 275.00			
88	2. Multistage	Tex-118-E	each	$ 250.00			
	Consolidated Undrained (CU) Triaxial Compression Test						
89	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 1,220.00			
90	2. Multistage	Tex-131-E or ASTM D4767	each	$ 1,040.00			
	Consolidated Drained (CD) Triaxial Compression Test						
91	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 860.00			
92	2. Multistage	Tex-131-E or ASTM D4767	each	$ 820.00			
93	Direct Shear Consolidated Drained (CD), sand	ASTM D3080	set of 3	$ 475.00			
94	Direct Shear Consolidated Drained (CD), clay	ASTM D3080	set of 3	$ 650.00			
95	One-Dimensional Consolidation Test (7 load increments)	ASTM D2435	each	$ 589.80			
96	Resilient Modulus (fine-grained soils)	AASHTO T307	each	$ 950.00			
	Hot Mix Asphalt Testing						
97	Sieve Analysis of Fine and Coarse Aggregates	Tex-200-F	each	$ 68.33			
98	Bulk Specific Gravity and Water Absorption of Aggregates	Tex-201-F	each	$ 76.00			
99	Apparent Specific Gravity of Material Finer Than 180 µm (No. 80) Sieve	Tex-202-F	each	$ 52.00			
100	Sand Equivalent Test	Tex-203-F	each	$ 78.00			
101	Labortory Method of Mixing Bituminous Mixtures	Tex-205-F	Set of 3	$ 105.00			
102	Compacting Specimens Using the Texas Gyratory Compactor (TG	Tex-206-F	Set of 3	$ 90.00			
103	Determining Bulk Specific Gravity of Compacted Bituminuous Mixtures	Tex-207-F (I)	each	$ 30.00			
104	Determining In-Place Density of Compacted Bituminuous Mixtures (Nuclear Method)	Tex-207-F (III)	each	$ 30.00			
105	Asphalt Rolling Pattern (Nuclear Method)	Tex-207-F (IV)	each	$ 82.00			
106	Segregation Profile	Tex-207-F (V)	each	$ 175.00			
107	Joint Density	Tex-207-F (VII)	each	$ 175.00			
108	Test of Stabilometer Value of Bituminous Mixtures	Tex-208-F	set of 3	$ 120.00			
109	Determining Asphalt Content of Bituminous Mixtures by Extraction	Tex-210-F	each	$ 147.81			
110	Recovery of Asphalt from Bituminou Mixtures by the Abson Pro	Tex-211-F	each	$ 218.00			
111	Determining Moisture Content of Bituminous Mixtures	Tex-212-F	each	$ 54.00			
112	Determining Hydrocarbon-Volatile Content of Bituminous Mixture	Tex-213-F	each	$ 110.00			
113	Determining Deleterious Material and Decantation Test for Coarse Aggregates	Tex-217-F	each	$ 78.84			
114	Indirect Tensile Strength Test	Tex-226-F	each	$ 475.00			
115	Theoretical Maximum Specific Gravity of Bituminous Mixtures	Tex-227-F	each	$ 95.00			
116	Determining Asphalt Content of Bituminous Mixtures by the Nuclear	Tex-228-F	each	$ 60.00			
117	Combined HMAC Cold-Belt Sampling and Testing Procedure	Tex-229-F	each	$ 60.00			
118	Determining Draindown Characteristics in Bituminous Mixtures	Tex-235-F	each	$ 55.00			
119	Determining Asphalt Content from Asphalt Paving Mixtures by the Ignition Method	Tex-236-F	each	$ 130.00			
120	Asphalt Release Agents	Tex-239-F	each	$ 75.00			
121	Superpave Gyratory Compacting of Test Specimens of Bituminous	Tex-241-F	each	$ 130.00			
122	Hamburg Wheel Tracker	Tex-242-F	each	$ 236.51			
123	Tack Coat Adhesion	Tex-243-F	each	$ 104.09			
124	Thremal Profile	Tex-244-F	each	$ 126.14			
125	Cantabro Loss	Tex-245-F	each	$ 190.00			
126	Permeability or Water Flow of Hot Mix Asphalt	Tex-246-F	each	$ 68.00			
127	Overlay Test	Tex-248-F	set of 3	$ 675.00			
128	Flat and Elongated Particles	Tex-280-F	each	$ 58.29			
129	Sampling Bituminous Materials, Pre-Molded Joint Fillers, and Joint	Tex-500-C	each	$ 60.00			
130	Asphalt Binder Water in Petroleum	501-C AASHTO	each	$ 93.00			
131	Penetration of Bituminous Materials	502-C AASHTO	each	$ 75.00			
132	Ductility of Asphalt Materials	503-C AASHTO	each	$ 110.00			
133	Flash and Fire Points by Cleveland Open Cup	504-C AASHTO	each	$ 60.00			
134	Softening Point of Bitumen (Riing and Ball Apparatus	505-C AASHTO	each	$ 90.00			
135	Solubility of Bituminous Materials	507-C AASHTO	each	$ 100.00			
136	Specific Gravity	508-C AASHTO	each	$ 70.00			
137	Spot Test of Asphaltic Materials	509-C AASHTO	each	$ 155.00			
138	Effect of Heat and Air on Asphalt Materials (Thin-Film Oven Test)	510-C AASHTO	each	$ 63.00			
139	Flash Point with Tag Open-Cup Apparatus for Use with Material H	512-C AASHTO	each	$ 68.00			
140	Saybolt Viscosity	513-C AASHTO	each	$ 75.00			
141	Cutback Asphalts - Specific Gravity, API Gravity, or Density of Cutback Asphalts by Hdyrometer Method; Emulsified Asphalts - Weight per Gallon of Emulsified Asphalt	Tex-514-C ASTM D3142 ASTM D244	each	$ 130.00			
142	Distillation of Cutback Asphalt Products	515-C AASHTO	each	$ 170.00			
143	Float Test for Bituminous Materials	519-C AASHTO	each	$ 70.00			
144	Standard Test Method for Emulsified Asphalts	521-C AASHTO	each	$ 190.00			
145	Viscosity of Asphalts by Vacuum Capillary Viscometer	528-C AASHTO	each	$ 35.00			
146	Kinematic Viscosity of Asphalts (Bitumens)	529-C AASHTO	each	$ 75.00			
147	Boil Test (Effect of Water on Paving Mix)	Tex-530/531-C	each	$ 130.00			
148	Field Coring - ACP Thickness	ASTM D3549	each	$ 100.00			
149	Pavement Thickness Determin. (Full Depth)	ASTM D3549	each	$ 130.00			
150	Determining Polymer Additive Percentages in Polymer Modified	Tex-533-C	each	$ 60.00			
151	Calculating Viscosity from Penetration	Tex-535-C	each	$ 75.00			
152	Elastic Recovery of Tensile Deformation Using a Ductilometer	Tex-539-C	each	$ 65.00			
153	Measurement of Polymer Separation on Heating in Modified Asphalat	Tex-540-C	each	$ 95.00			
154	Rolling Thin Film Oven Test for Asphalt Binders	541-C ASSHTO	each	$ 110.00			
155	Flexural Creep Stiffness Using the Bending Beam Rheometer	AASHTO T313	each	$ 200.00			
156	Determining Rheological Properties of Asphalt Binder Using a Dy	AASHTO T315	each	$ 120.00			
157	Determining Breaking Index for Asphalt Emulsions	Tex-542-C	each	$ 215.00			
158	Resilience Test for Sealants and Repair Materials	Tex-547-C	each	$ 250.00			
159	Tensile Strain to Failure	Tex-548-C	each	$ 60.00			
160	Cone Flow Test	Tex-549-C	each	$ 55.00			
161	Flexibility Test for Sealants and Repair Materials	Tex-550-C	each	$ 250.00			
162	Settlement of Sealants and Repair Materials	Tex-551-C	each	$ 88.00			
	Concrete & Aggregate Testing						
163	Sieve Analysis for Conc. Agg	Tex-401-A	each	$ 73.58			
164	Fineness Modulus for Conc. Agg	Tex-402-A	each	$ 18.00			
165	SSD Specific Gravity / Absorption Conc. Agg	Tex-403-A	each	$ 78.00			
166	Unit Weight of Conc. Agg	Tex-404-A	each	$ 40.00			
167	Determining Pecent Voids and Solids in Concrete	Tex-405-A	each	$ 65.00			
168	Decantation for Conc. Agg	Tex-406-A	each	$ 54.00			
169	Organic Impurities for Conc. Agg	Tex-408-A	each	$ 52.00			
170	Free Moisture and Water Absorption in Aggregate for Concrete	Tex-409-A	each	$ 65.00			
171	L.A. Abrasion	Tex-410-A	each	$ 400.00			
172	5 Cycle Magnesium Soundness	Tex-411-A	each	$ 450.00			
173	Deleterious Material for Conc. Agg	Tex-413-A	each	$ 60.00			
174	Air Content of Fresh Concrete by Volumeteric	Tex-414-A	each	$ 30.00			
175	Slump of Fresh Concrete	Tex-415-A	each	$ 23.00			
176	Air Content of Fresh Concrete by Pressure	Tex-416-A	each	$ 26.28			
177	Unit Weight, Yield and Air Content (Gravimetric) of Concrete	Tex-417-A	each	$ 35.00			
178	Comp. Strength of Cyl. Conc. Specimen	Tex-418-A	each	$ 15.00			
179	Measure Temp. of Fresh Conc.	Tex-422-A	each	$ 20.00			
180	Obtaining & Testing Drilled Conc. Cores	Tex-424-A	each	$ 250.00			
181	Absorption and Dry Bulk Specific Gravity of Lightweight Coarse	Tex-433-A	each	$ 95.00			
182	Test Flow of Grout Mixtures (Flow Cone Method)	Tex-437-A	each	$ 65.00			
183	Accelerated Polish Test for Coarse Aggregate	Tex-438-A	each	$ 675.00			

184	Det. Comp. Strength of Grouts	Tex-442-A	each	$ 18.00			
185	Making & Curing Conc. Test Specimen	Tex-447-A	each	$ 14.00			
186	Flexural Strength of Concrete Using Simple Beam Third-Point Load	Tex-448-A	each	$ 40.00			
187	Capping Cyl. Conc. Specimen	Tex-450-A	each	$ 14.00			
188	Degradation of Coarse Aggregate by Micro-Devel Abrasion	Tex-461-A	each	$ 266.50			
189	Uniformity of Concrete	Tex-472-A	each	$ 110.00			
	Additional Testing	Test Method	Unit				
190	Geogrid Testing	Tex-621-J	each	$ 740.00			
191	Water Quality Testing	Tex-619-J	each	$ 150.00			
192	Lime Testing	Tex-600-J	each	$ 300.00			
193	Operating Inertial Profilers and Evaluating Pavement Profiles	Tex-1001-S	each	$ 1,750.00			
194	Vane Shear Testing	ASTM D2573	each	$ 300.00			
	Miscellaneous Testing	Test Method	Unit				
~~195~~	~~Structural Field Welding~~	~~NA~~	~~hour~~	$ 150.00			
	~~Equipment & Supplies for MT & UT~~		~~day~~	$ 150.00			
	Other Direct Expenses		Unit				
	Photocopies B/W (8 1/2" X 11")		each	$ 0.15			
	Photocopies B/W (11" X 17")		each	$ 0.23			
	Photocopies Color (8 1/2" X 11")		each	$ 0.82			
	Photocopies Color (11" X 17")		each	$ 1.41			
	Digital Ortho Plotting		sheet	$ 2.43			
	CADD Plotting		linear foot	$ 1.00			
	Plots (B/W on Bond)		linear foot	$ 0.91			
	Plots (Color on Bond)		linear foot	$ 1.75			
	Plots (Color on Photgraphic Paper)		linear foot	$ 2.72			
	Reproduction of CD/DVD		each	$ 5.00			

B2Z Personnel Classification	Hourly Base Rate	Contract Rate FY 2020	FINAL NEGOTIATED RATES 9/3/2021
Senior Project Manager / Principal	$ 80.00	$ 240.29	$ 186.90
Senior Geotechnical Engineer	$ 68.00	$ 204.25	$ 166.32
Geotechnical Engineer	$ 60.00	$ 180.22	$ 136.40
Project Engineer	$ 55.00	$ 165.20	$ 133.98
Engineering Lab Manager	$ 43.00	$ 129.16	$ 94.71
Utility Coordinator	$ 40.00	$ 120.14	$ 110.98
Senior Project Inspector	$ 40.00	$ 120.14	$ 99.75
Project Inspector	$ 32.00	$ 96.12	$ 73.92
EIT	$ 30.00	$ 90.11	$ 88.00
Engineer Tech / GIS	$ 28.00	$ 84.10	$ 76.70
Logger	$ 23.00	$ 69.08	$ 61.95
Field Technician (Soils, Aggr, Asph, Conc)	$ 23.00	$ 69.08	$ 68.02
CADD Operator	$ 23.00	$ 69.08	$ 78.20
Admin/Clerical	$ 22.00	$ 66.08	$ 61.95

EXHIBIT D

ESTIMATED MAN-HOURS AND TEST BREAKDOWN

Hidalgo County RMA 365 Tollway
Construction Materials Testing

Embankment (Test All Fill Material Including Cut From Job) (ITEM 132)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.
- Field density testing of soils and base materials to ensure proposer compaction as required by project plans and specifications.

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Liquid Limit		Tex-104-E	PI>15 ~ Every 5,000 CY	included with PI	Each			
Plasticity Index		Tex-106-E	PI>15 ~ Every 5,000 CY		Each	127	$75.00	$9,525.00
Gradation		Tex-110-E	Every 10,000 CY		Each	64	$68.00	$4,352.00
Moisture/Density		Tex-114-E	One per Each Material		Each	5	$215.00	$1,075.00
In-Place Density		Tex-115-E	Every 5,000 CY or 6,000 Linear Feet (Min. 1 per Lift)		Each	127	$50.00	$6,350.00
Tech Time (Soils)				PI,Gr,MD & FD	Hour	822	$68.02	$55,912.44
# of Trips (Tech)				106 Trips (40 Miles RT)	Mile	4,240	$6.00	$25,440.00
**Admin/Clerical					Hour	244	$61.95	$15,115.80
							Item Subtotal	$117,770.24

Lime (ITEM 260)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Compliance of Lime (DMS 6350)		Tex-600-J	1 per 200 Tons		Each	5	$300.00	$1,500.00
							Item Subtotal	$1,500.00

Existing Material (Lime Treated) (ITEM 260)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.
- Field density testing of soils and base materials to ensure proposer compaction as required by project plans and specifications.

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Pulverization Gradation		Tex-101-E (Part III)	Each 4,500 CY	Inc. to 5 - 1 per Leg (Job)	Each	7	$53.00	$371.00
Liquid Limit		Tex-104-E		included with PI	Each		$0.00	$0.00
Plasticity Index		Tex-106-E	Each 5,000 CY	Inc. to 5 - 1 per Leg (Job)	Each	6	$75.00	$450.00
Gradation		Tex-110-E	Each 5,000 CY	Inc. to 5 - 1 per Leg (Job)	Each	6	$68.00	$408.00
Moisture/Density		Tex-114-E	One per Each Material		Each	2	$215.00	$430.00
In-Place Density		Tex-115-E	Every 3,000 CY		Each	10	$50.00	$500.00
Tech Time (Soils)				PI,Gr,MD & FD	Hour	65	$68.02	$4,421.30
# of Trips (Tech)				15 Trips (40 Miles RT)	Mile	600	$6.00	$3,600.00
**Admin/Clerical					Hour	14	$61.95	$867.30
							Item Subtotal	$11,047.60

Flexible Base (Untreated - Stockpile Testing) (ITEM 247)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Liquid Limit		Tex-104-E		included with PI	Each		$0.00	$0.00
Plasticity Index		Tex-106-E	Each 5,000 CY		Each	2	$75.00	$150.00
Gradation		Tex-110-E	Each 5,000 CY		Each	2	$68.00	$136.00

Moisture/Density		Tex-113-E	Every 20,000 CY		Each	1	$240.00	$240.00
In-Place Density		Tex-115-E	Every 3,000 CY	Inc. to 10 - 2 per Leg (Job)	Each	10	$50.00	$500.00
Wet Ball Mill		Tex-116-E	Every 20,000 CY		Each	1	$230.00	$230.00
Triaxial		Tex-117-E	Every 20,000 CY		Each	1	$1,800.00	$1,800.00
Tech Time (Soils)				PI, MD & WB/Triax.	Hour	23	$68.02	$1,564.46
# of Trips (Tech)				10 Trip (40 Miles RT)	Mile	400	$6.00	$2,400.00
**Admin/Clerical					Hour	10	$61.95	$619.50
							Item Subtotal	$7,639.96

Hydraulic Cement Concrete Gatewell Structure & Foundation (Class C)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.				QA Test. (QC by Source)				
Decantation		Tex-406-A	Each 20,000 CY(or source)		Each	1	$54.00	$54.00
Sieve Analysis		Tex-401-A	Each 1,000 CY (ea source)	5 Sieve	Each	1	$73.58	$73.58
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$60.00	$60.00
Fine Aggr.				QA Test. (QC by Source)				
Sand Equivalent		Tex-203-F	Each 1,000 CY(ea source)		Each	1	$78.00	$78.00
Organic Imp.		Tex-408-A	One Per Project Per Source		Each	1	$52.00	$52.00
Sieve Analysis		Tex-401-A	Each 1,000 CY(ea source)		Each	1	$73.58	$73.58
Fineness Mod.		Tex-402-A	Each 1,000 CY(ea source)		Each	1	$18.00	$18.00
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$60.00	$60.00
Concrete								
*Strength		Tex-447-A & Tex-418-A	Each 60 CY(1 Sets = 5 Cyl.)		Each	40	$29.00	$1,160.00
Slump		Tex-415-A	One per Set		Each	8	$23.00	$184.00
Entrained Air		Tex-416-A	One per Set		Each	8	$26.28	$210.24
Temperature		Tex-422-A	One per Set		Each	8	$20.00	$160.00
Tech Time (Aggr)					Hour	16	$68.02	$1,088.32
Tech Time (Conc)					Hour	47	$68.02	$3,196.94
# of Trips (Tech)				22 Trips (40 Miles RT)	Mile	880	$6.00	$5,280.00
**Admin/Clerical					Hour	17	$61.95	$1,053.15
							Item Subtotal	$12,801.81

Hydraulic Cement Concrete Misc. - Riprap (Class A)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Concrete								
*Strength		Tex-447-A & Tex-418-A	Each 180 CY(1 Set = 2 Cyl.)	Adjust Per Str & Placement	Each	24	$29.00	$696.00
								$0.00
Tech Time (Conc)					Hour	66	$68.02	$4,489.32
# of Trips (Tech)				18 Trips (40 Miles RT)	Mile	720	$6.00	$4,320.00
**Admin/Clerical					Hour	34	$61.95	$2,106.30
							Item Subtotal	$11,611.62

Batching for Hydrulic Cement Concrete (Class C) & Asphalt Concrete Pavement (ACP) - Inspection of Batching at Plant (1 Tech per Plant, Reports)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Concrete								
Tech Time (Conc)					Hour	24	$68.02	$1,632.48

# of Trips (Tech)				**8 Trip (40 Miles RT)**	**Mile**			
****Admin/Clerical**					**Hour**	**12**	**$61.95**	**$743.40**
							Item Subtotal	**$2,375.88**

*** Concrete Strength testing includes strength testing of cylinder specimens (breaks) as well as preperation, holding and curing of strength specimen costs**
~ 1 Set is defined as 2 Cylinders (7-day or 28-day)
~ All Structural Concrete requires a minimum 2 Sets per Test Location (5 Cyl.)
**** Project Administrative Fee is assessed on a per invoice basis and involves engineering review, evaluation, management and administration**

Summary

Sub-Total (CMT Items) =	**$164,747.11**
Engineering Lab Manager (112 hrs x 94.71 Hr.)	**$10,607.52**
Project Engineer (QA/QC of CMT) (56 hrs x 133.98 Hr.)	**$7,502.88**
Total :	**$182,857.51**
Contingency (Estimated at 10%)	**$18,285.751**
Constuction Materials Testing Total	**$201,143.26**

ATTACHMENT E-1
Final Cost Proposal Form

This attachment provides the basis of payment and fee schedule**. The basis of payment for this Work Authorization is indicated by an "X" in the applicable box.** The basis shall be supported by the Final Cost Proposal (FCP) shown below and should identify maximum amount payable and basis of payment. If more than one basis of payment is used, each one must be supported by a separate FCP. The basis of payment will be determined by Work Authorization and may be by any of the methods listed below.

"X"	Basis	
____	Lump Sum	The lump sum shall be equal to the maximum amount payable. The lump sum includes all direct and indirect costs and fixed fee. The Engineer shall be paid pro rata based on the percentage of work completed. For payment the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.
__X__	Unit Cost	The unit cost(s) for each type of unit and number of units are shown in the FCP. The unit cost includes all direct and indirect costs and fixed fee. The Engineer shall be paid based on the type and number of units fully completed and the respective unit cost. For payment, the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or any other cost data. The FCP may include special items, such as equipment which are not included in the unit costs. Documentation of these special costs may be required. The maximum amount payable equals the total of all units times their respective unit cost plus any special direct items shown.
__X	Specified Rate Basis	The specified rates for each type of labor are shown in the FCP below. The FCP may include special items, such as equipment which are not included in the specified rates. Payment shall be based on the actual hours worked multiplied by the specified rate for each type of labor plus other agreed to special direct cost items. The specified rate includes direct labor and indirect cost and fixed fee. The Authority may request documentation of reimbursable direct costs including hours worked. Documentation of special item costs may be required. The specified rate is not subject to audit.
____	Cost Plus Fixed Fee	Payment shall be based on direct and indirect costs incurred plus a pro rata share of the fixed fee based on the ratio of labor and overhead cost incurred to total estimated labor and overhead cost in the FCP or the percentage of work completed. The invoice must itemize labor rates, hours worked, other direct costs and indirect costs. The Engineer may be required to provide documentation of hours worked and any eligible direct costs claimed. The provisional overhead rate charged is subject to audit and adjustment to actual rates incurred. The FCP below shows the hourly rates for labor, other direct expenses including but not limited to travel and allowable materials, provisional overhead rate and the fixed fee. __A. Actual Cost Plus Fixed Fee - Actual wages are paid (no minimum, no maximum. __B. Range of Cost Plus Fixed Fee – Actual wages must be within the allowable range shown on the Final Cost Proposal.

A. **REFER TO ATTACHMENT E-2 FOR HOURLY SPECIFIED / LUMP SUM RATE SCHEDULE FOR EACH FIRM**

ATTACHMENT F

WORK SCHEDULE

HCRMA Construction & Materials Testing Services
TOLL365 (SH 365)

Task Name	Start	Finish
Material Testing	10/1/2021	12/13/2025
Geotechnical	10/1/2021	12/13/2025
Other Analyses	10/1/2021	12/13/2025
All sampling and testing of components and materials	10/1/2021	12/13/2025
Hot Mix Asphalt Testing	10/1/2021	12/13/2025
Concrete Testing	10/1/2021	12/13/2025
Construction Oversight Documentation	10/1/2021	12/13/2025
Project Correspondence File (Design and Construction)	10/1/2021	12/13/2025

ATTACHMENT H-MOU

MEMORANDUM OF UNDERSTANDING REGARDING THE ADOPTION OF THE TEXAS DEPARTMENT OF TRANSPORATION'S FEDERALY-APPROVED DISADVANTAGED BUSINESS ENTERPRISE PROGRAM BY THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

This Memorandum of Understanding is by and between the **TEXAS DEPARTMENT OF TRANSPORTATION ("TxDOT"),** an agency of the State of Texas; and the Hidalgo County Regional Mobility Authority, a mobility authority created under the provisions of Chapter 370, Texas Transportation Code (the "RMA").

Whereas, from time to time from the Authority receives federal funds from the Federal Highway Administration ("FHWA") through TxDOT to assist the Authority with the construction and design of projects partially or wholly funded through FHWA; and

Whereas, the Authority, as a sub-recipient of federal funds, is required by 49 CFR 26, to implement a program for disadvantaged business enterprises ("DBEs"), as defined by 49 CFR 26 ("DBE Program"); and

Whereas, TxDOT has implemented a DBE Program that is approved by the Federal Highway Administration (FHWA) pursuant to 49 CFR part 26; and

Whereas, as a condition of receiving federal funds from FHWA through TxDOT, certain aspects of the Authority's procurement of construction and design services are subject to review and/or concurrence by TxDOT; and

Whereas, the Authority and TxDOT undertake substantially similar roadway construction projects and design projects and construct and design their respective projects using substantially the same pool of contractors; and

Whereas, the Authority desires to implement a federally compliant DBE Program by adopting the TxDOT approved program, as recommended by FHWA; and

Whereas, TxDOT and the Authority find it appropriate to enter into this Memorandum of Understanding to memorialize the obligations, expectations and rights each has as related to the Authority's adoption of the TxDOT DBE Program to meet the federal requirements;

Now, therefore, TxDOT and the Authority, in consideration of the mutual promises, covenants and conditions made herein, agree to and acknowledge the following:

(1) TxDOT has developed a DBE Program and annually establishes a DBE goal for Texas that are federally approved and compliant with 49 CFR 26 and other applicable laws and regulations.

(2) The Authority anticipates being a sub-recipient of federal assistance for construction projects and design projects and, in accordance with 49 CFR § 26.21, must implement a federally approved DBE Program. The Authority receives its federal assistance through TxDOT. As a sub-recipient, the Authority has the option of developing its own program or adopting and operating under TxDOT's federally approved DBE Program. The FHWA recommends that sub-recipients, such as the Authority, adopt the DBE program, administered through TxDOT, and the Authority by its prescribed protocol adopted the TxDOT DBE Program on August 8, 2007.

(3) This Memorandum of Understanding evidences FHWA's and TxDOT's consent to the adoption of the TxDOT DBE Program by the Authority to achieve its DBE participation in federally assisted Construction

158111-1 163.000

and Design Projects.

(4) The parties will work together in good faith to assure effective and efficient implementation of the DBE Program for the Authority and for TxDOT.

(5) the Authority and TxDOT have agreed upon the following delegation of responsibilities and obligations in the administration of the DBE Program adopted by the Authority:

(a) The Authority will be responsible for project monitoring and data reporting to TxDOT. The Authority will furnish to TxDOT any required DBE contractor compliance reports, documents or other information as may be required from time to time to comply with federal regulations. TxDOT will provide the necessary and appropriate reporting forms, if any, to the Authority.

(b) The Authority will recommend contract-specific DBE goals, if any, consistent with TxDOT's DBE guidelines and in consideration of the local market, project size, and nature of the good(s) or service(s) to be acquired. The Authority's recommendation may be that no DBE goals are set on any particular project or portion of a project or that proposed DBE goals be modified. The Authority and TxDOT will work together to achieve a mutually acceptable goal; however, TxDOT will retain final decision-making authority on those issues.

(c) TxDOT will cooperate with the Authority in an effort to meet the timing and other requirements of the Authority's projects.

(d) The Authority will be solely responsible for the solicitation and structuring of bids and bid documents to procure goods and services for its Construction and Design Projects and will be responsible for all costs and expenses incurred in its procurements.

(e) The DBEs eligible to participate on TxDOT construction projects or design projects also will be eligible to participate on the Authority's construction projects or design projects subject to the DBE Program, unless otherwise prohibited from bidding on a the Authority's project under applicable law or the Authority's procurement policy. The DBEs will be listed on TxDOT's website under the Texas Unified Certification Program (TUCP).

(f) The Authority will conduct investigations and provide reports with recommendations to TxDOT concerning any DBE Program compliance issues that may arise due to project specific requirements such as Good Faith Effort (GFE), Commercially Useful Function (CUF), etc. The Authority and TxDOT will work together to achieve a mutually acceptable goal; however, TxDOT will retain final decision-making authority on those issues and reserves the right to perform compliance reviews by TxDOT's Office of Civil Rights (OCR).

(g) The Authority will designate a liaison officer to coordinate efforts with TxDOT's DBE Program administrators and to respond to questions from the public and private sector regarding the Authority's administration of the DBE Program through TxDOT.

(h) The Authority will be responsible for providing TxDOT with DBE project awards and DBE Commitments, monthly DBE reports, DBE Final Reports, DBE shortfall reports, and annual and updated goal analysis and reports.

(i) TxDOT will be responsible for maintaining a directory of firms eligible to participate in the DBE Program, and providing business development and outreach programs. The Authority and TxDOT will work cooperatively to provide supportive services and outreach to DBE firms in the Hidalgo County area.

(j) The Authority will submit DBE semi-annual progress reports to TxDOT.

(k) The Authority will participate in TxDOT sponsored training classes to include topics on DBE Annual Goals, DBE Goal Setting for Construction Projects and Design Projects, DBE Contract Provisions, and DBE Contract Compliance, which may include issues such as DBE Commitments, DBE Substitution, and Final DBE Clearance. TxDOT will include DBE contractors performing work on the Authority projects in the DBE Education and Outreach Programs.

(6) In the event there is a disagreement between TxDOT and the Authority about the implementation of the TxDOT DBE Program by the Authority, the parties agree to meet within ten (10) days of receiving a written request from the other party of a desire to meet to resolve any disagreement. The parties will make good faith efforts to resolve any disagreement as efficiently as is reasonably possible in consultation with FHWA. Non-compliance by the Authority can result in restitution of federal funds to TxDOT and withholding of further federal funds upon consultation with FHWA.

(7) This Memorandum of Understanding becomes effective upon execution by all parties and automatically renews each year unless a party notifies the other parties of its intent to terminate the agreement.

(8) If this Memorandum of Understanding is terminated for any reason, the Authority will be allowed reasonable time in which to seek approval from FHWA for an alternative DBE Program, without being deemed non-compliant with 49 CFR Part 26.

(9) This Memorandum of Understanding applies only to projects for which the Authority is a sub-recipient of federal funds through TxDOT. The Authority may also implement a Minority and Women-Owned Small Business Enterprise (M/W/SBE) policy and program that applies to projects for which it is not a sub-recipient of federal funds through TxDOT and which are not subject to the TxDOT DBE Program. The Authority may, at its option, use some aspects of the TxDOT DBE Program and other similar programs in implementing its other policies and programs for its non-federally funded projects.

(10) The following attachments to this Memorandum of Understanding ("MOU") are incorporated as if fully set out herein for all purposes: Attachment A - FHWA Memorandum HCR-1/HIF-1 (relating to access required by the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973); Attachment B - SPECIAL PROVISION 000-461; Attachment C - Comprehensive Development Agreement (CDA) DBE Provisions (with TxDOT's DBE Program attached); and Attachment D - 49 CFR §26.13 (contractual assurances). In the case of any conflict between the SPECIAL PROVISION and CDA DBE Provisions and TxDOT's DBE Program, the provisions of the first two documents shall prevail in regard to CDAs only.

(11) The following procedure shall be observed by the parties in regard to any notifications:

(a) Any notice required or permitted to be given under this Memorandum of Understanding shall be in writing and may be effected by personal delivery, by hand delivery through a courier or a delivery service, or by registered or certified mail, postage prepaid, return receipt requested, addressed to the proper party, at the following address:

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY:

Dennis Burleson
Chairman
c/o LRGVDC
311 N. 15th Street

158111-1 163.000

McAllen, Texas 78501-4705

With a copy to:

Blakely L. Fernandez
Tuggey Rosenthal Pauerstein Sandoloski Agather LLP
755 E. Mulberry, Ste. 200
San Antonio, Texas 78212

TEXAS DEPARTMENT OF TRANSPORTATION

Amadeo Saenz, Jr. P.E.
Executive Director
125 E. 11th Street
Austin, Texas 78701

(b) Notice by personal delivery or hand delivery shall be deemed effective immediately upon delivery, provided notice is given as required by Paragraph (a) hereof. Notice by registered or certified mail shall be deemed effective three (3) days after deposit in a U.S. mailbox or U.S. Post Office, provided notice is given as required by Paragraph (a) hereof.

(c) Either party hereto may change its address by giving notice as provided herein.

(12) This Memorandum of Understanding may be modified or amended only by written instrument, signed by both the Authority and the TxDOT and dated subsequent to the date(s) of this MOU. Except as authorized by the respective parties, no official, employee, agent, or representative of the parties has any authority, either express or implied, to modify or amend this MOU.

(13) The provisions of this MOU are severable. If any clause, sentence, provision, paragraph, or article of this MOU, or the application of this MOU to any person or circumstance is held by any court of competent jurisdiction to be invalid, illegal, or unenforceable for any reason, such invalidity, illegality, or unenforceability shall not impair, invalidate, nullify, or otherwise affect the remainder of this MOU, but the effect thereof shall be limited to the clause, sentence, provision, paragraph, or article so held to be invalid, illegal, or unenforceable, and the application of such clause, sentence, provision, paragraph, or article to other persons or circumstances shall not be affected; provided, however, the Authority and TxDOT may mutually agree to terminate this Memorandum of Understanding.

(14) The following provisions apply in regard to construction of this MOU:

(a) Words of any gender in this MOU shall be construed to include the other, and words in either number shall be construed to include the other, unless the context in this MOU clearly requires otherwise.

(b) When any period of time is stated in this MOU, the time shall be computed to exclude the first day and include the last day of the period. If the last day of any period falls on a Saturday, Sunday, or national holiday, or state or county holiday, these days shall be omitted from the computation. All hours stated in this MOU are stated in Central Standard Time or in Central Daylight Savings Time, as applicable.

(15) This Memorandum of Understanding shall not be construed in any way as a waiver by the parties of any immunities from suit or liability that parties may have by operation of law, and the parties hereby retain all of their respective affirmative defenses.

158111-1 163.000

ATTACHMENT H-MOU

MEMORANDUM OF UNDERSTANDING
REGARDING THE ADOPTION OF THE TEXAS DEPARTMENT OF TRANSPORATION'S FEDERALY-APPROVED DISADVANTAGED BUSINESS ENTERPRISE PROGRAM BY
THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

EXECUTED by TxDOT and the Authority, acting through each duly authorized official and effective on the latest date signed.

The signatories below confirm that they have the authority to execute this MOU and bind their principles.

TEXAS DEPARTMENT OF TRANSPORTATION

By: _____
Amadeo Saenz, Jr. P.E.
Executive Director

Date: 3/13/08

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

By: _____
Dennis Burleson
Chairman

Date: 2/13/2008

158111-1 163.000

Attachment H-Instructions
As Per 49CFR 26.21

The following pages contain six (6) different Attachments to Attachment H covering participation of HUB and DBE providers and subproviders. The correct form to use is determined by whether the Agreement is funded in whole or part by federal funds State funds or Authority funds, and whether or not a HUB/DBE goal has been set for the Agreement. The following pages contain separate reporting forms for federally funded DBE participation and Authority funded HUB participation. **Select the forms that are appropriate for your Agreement and delete the rest along with these instructions from the final Agreement.**

Federally Funded Contracts
Attachment H-FG, Disadvantaged Business Enterprise (DBE) for Federal Funded Professional or Technical Services Contracts ♦ This provision is applicable to federally funded contracts with assigned DBE goals. ♦ The appropriate forms for this provision are Attachments H-1, H-2, H-3 and H-4 and H-5. A copy of each form is required in the contract. ♦ Note: if the contract requires work authorizations, a completed Attachment H-2 will be required with each Work Authorization, if a DBE will be performing work. If a non-DBE subprovider is used, insert N/A (not applicable) on the line provided on the H-2 form. ♦ Attachment H-3 must be submitted monthly to the AUTHORITY Office even if there is no invoice being submitted or subcontracting to report. ♦ Attachment H-3 must be submitted with each invoice to the appropriate agency contact for payment.
Attachment H-FN, Disadvantaged Business Enterprise (DBE) for Race Neutral Professional or Technical Services Contracts ♦ This provision is applicable to federally funded contracts with no DBE goal assigned. ♦ If no subcontractors will be used, the appropriate forms for this provision are Attachments H-3 and H-5. A copy of each form is required in the contract. ♦ Note: If subcontractors are used, the required forms would be Attachments H-1, H-2, H-3, H-4 and H-5. A copy of each form is required in the contract. ♦ Attachment H-3 must be submitted monthly to the AUTHORITY Office even if there is no invoice being submitted or subcontracting to report. ♦ Attachment H-3 must be submitted with each invoice to the appropriate agency contact for payment.
Attachment H-3, Texas Department of Transportation Subprovider Monitoring System for Federally Funded Contracts. This is a Monthly Progress Assessment Report. ♦ Required for all federally funded contracts. ♦ This form is required monthly and must be submitted to the AUTHORITY Office even if there is no invoice being submitted or subcontracting to report. ♦ This form must be submitted with each invoice to the appropriate agency contact for payment.
Attachment H-5, Federal Subprovider and Supplier Information Required for all federally funded contracts.

State Funded Contracts

Attachment H-SG, Historically Underutilized Business (HUB) for State Funded Professional or Technical Services Contracts, State of Texas HUB Subcontracting Plan Required

- This provision is applicable to state funded contracts with a HUB goal assigned.
- The appropriate reporting forms for this provision are Attachments H-1, H-2, H-4, and H-6 (Texas Building and Procurement Commission [TBPC] State of Texas HUB Subcontracting Plan (HSP), Prime Contractor Assessment Report). A copy of each form is required in the contract.
- Note: if the contract requires work authorizations, a completed Attachment H-2 will be required with each Work Authorization, if a HUB will be performing work. If a non-HUB subprovider is used, insert N/A (not applicable) on the line provided on the H-2 form.
- Attachment H-6 will be required monthly and must be submitted to the AUTHORITY Office even if there is no invoice being submitted or subcontracting to report.
- Attachment H-6 must be submitted with each invoice to the appropriate agency contact for payment.

Attachment H-SN, Historically Underutilized Business (HUB) Participation for State Funded Professional or Technical Services Contracts, No State of Texas HUB Subcontracting Plan Required

- This provision is applicable to state funded contracts with no HUB subcontracting plan required and no HUB goal assigned. If no subcontractors are used, the appropriate forms for this provision are Attachments H-1 and H-6.
- Note: If subcontractors are used, the required forms would be Attachments H-1, H-2, H-4 and H-6. A copy of each form is required in the contract.
- Attachment H-6 must be submitted monthly to the AUTHORITY Office even though there is no invoice being submitted or subcontracting to report.
- Attachment H-6 must be submitted with each invoice to the appropriate agency contact for payment.

Attachment H-6, HUB Subcontracting Plan (HSP) Prime Contractor Professional Assessment Report. This is a Monthly Progress Assessment Report. This is a Texas Building and Procurement Commission (TBPC) form and cannot be altered.

- Required for all State funded contracts.
- Attachment H-6 is required monthly and should be submitted to the AUTHORITY Office. This is a requirement even though there is no invoice being submitted or subcontracting to report.
- A copy of Attachment H-6 must be submitted when supplying an invoice to the appropriate agency contact for payment.
- The “Object Code” section(s) on this form should remain blank.

ATTACHMENT H-FG
Disadvantaged Business Enterprise (DBE)
for Federal-Aid Professional or Technical Services Contracts

1) **PURPOSE.** The purpose of this attachment is to carry out the Authority and the U.S. Department of Transportation's (DOT) policy of ensuring nondiscrimination in the award and administration of the AUTHORITY and DOT assisted contracts and creating a level playing field on which firms owned and controlled by minority or socially and economically disadvantaged individuals can compete fairly for the AUTHORITY and DOT assisted contracts.
2) **POLICY.** It is the policy of the AUTHORITY and DOT and the Texas Department of Transportation (henceforth the "Department") that Disadvantaged Business Enterprises (DBEs) as defined in 49 CFR Part 26, Subpart A and the Department's Disadvantaged Business Enterprise Program, shall have the opportunity to participate in the performance of contracts financed in whole or in part with Federal funds. Consequently, the Disadvantaged Business Enterprise requirements of 49 CFR Part 26, and the Department's Disadvantaged Business Enterprise Program, apply to this contract as follows.
   a. The Provider will offer Disadvantaged Business Enterprises, as defined in 49 CFR Part 26, Subpart A and the Authority/Department Disadvantaged Business Enterprise Program, the opportunity to compete fairly for contracts and subcontracts financed in whole or in part with Federal funds. In this regard, the Provider shall make a good faith effort to meet the Disadvantaged Business Enterprise goal for this contract.
   b. The Provider and any subprovider(s) shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Provider shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. The requirements of this Special Provision shall be physically included in any subcontract.
   c. When submitting the contract for execution by the Authority, the Provider must complete and furnish Attachment H-1 which lists the commitments made to certified DBE subprovider(s) that are to meet the contract goal and Attachment H-2 which is a commitment agreement(s) containing the original signatures of the Provider and the proposed DBE(s). For Work Authorization Contracts, Attachment H-1 is required at the time of submitting the contract for execution by the Authority/Department. Attachment H-2 will be required to be completed and attached with each work authorization number that is submitted for execution, if the DBE will be performing work**.** Any substitutions or changes to the DBE subcontract amount shall be subject to prior written approval by the Authority/Department. If non-DBE subprovider is performing work, insert N/A (not applicable) on the line provided.
   d. Failure to carry out the requirements set forth above shall constitute a material breach of this contract and may result; in termination of the contract by the Authority/Department; in a deduction of the amount of DBE goal not accomplished by DBEs from the money due or to become due to the Provider, not as a penalty but as liquidated damages to the Authority/Department; or such other remedy or remedies as the Authority/Department deems appropriate.
3) **DEFINITIONS.**
   a. "Authority/Department" means Hidalgo County Regional Mobility Authority (HCRMA) and the Texas Department of Transportation (TxDOT).
   b. "Federal-Aid Contract" is any contract between the Texas Department of Transportation and a Provider which is paid for in whole or in part with U. S. Department of Transportation (DOT) financial assistance.
   c. "Provider" is any individual or company that provides professional or technical services.
   d. "DBE Joint Venture" means an association a DBE firm and one (1) or more other firm(s) to carry out a single business enterprise for profit for which purpose they combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work

of the contract and whose share in the capital contribution, control, management, risks and profits of the joint venture are commensurate with its ownership interest.

e. "Disadvantaged Business Enterprise (DBE)" means a firm certified as such by the Authority/Department in accordance with 49 CFR Part 26.

f. "Good Faith Effort" means efforts to achieve a DBE goal or other requirement of this Special Provision which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement.

g. "Race-neutral DBE Participation" means any participation by a DBE through customary competitive procurement procedures.

4) **PERCENTAGE GOAL.** The goal for Disadvantaged Business Enterprise (DBE) participation in the work to be performed under this Agreement is **6.0%** of the Agreement amount.

5) **PROVIDER'S RESPONSIBILITIES.** A DBE prime may receive credit toward the DBE goal for work performed by his-her own forces and work subcontracted to DBEs. A DBE prime must make a good faith effort to meet the goals. In the event a DBE prime subcontracts to a non-DBE, that information must be reported to the Authority/Department.

a. A Provider who cannot meet the contract goal, in whole or in part, shall document the "Good Faith Efforts" taken to obtain DBE participation. The following is a list of the types of actions that may be considered as good faith efforts. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

(1) Soliciting through all reasonable and available means the interest of all certified DBEs who have the capability to perform the work of the contract. The solicitation must be done within sufficient time to allow the DBEs to respond to it. Appropriate steps must be taken to follow up initial solicitations to determine, with certainty, if the DBEs are interested.

(2) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Provider might otherwise prefer to perform the work items with its own forces.

(3) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

(4) Negotiating in good faith with interested DBEs by making a portion of the work available to DBE subproviders and suppliers and selecting those portions of the work or material needs consistent with the available DBE subproviders and suppliers.

(5) The ability or desire of the Provider to perform the work of a contract with its own organization does not relieve the Provider's responsibility to make a good faith effort. Additional costs involved in finding and using DBEs is not in itself sufficient reason for a Provider's failure to meet the contract DBE goal, as long as such costs are reasonable. Providers are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

(6) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities.

(7) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Provider.

(8) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials or related assistance or services.

(9) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, County, State and Federal minority/women business

assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

(10) If the Authority/Department's Director of the Business Opportunity Programs Office determines that the Provider has failed to meet the good faith effort requirements, the Provider will be given an opportunity for reconsideration by the Director of the appropriate Division.

NOTE: The Provider must not cause or allow subproviders to bid their services.

b. The preceding information shall be submitted directly to the Chair of the Hidalgo County Regional Mobility Authority (Authority) responsible for the project.

c. The Provider shall make all reasonable efforts to honor commitments to DBE subproviders named in the commitment submitted under Section 2.c. of this attachment. Where the Provider terminates or removes a DBE subprovider named in the initial commitment, the Provider must demonstrate on a case-by-case basis to the satisfaction of the Authority/Department that the originally designated DBE was not able or willing to perform.

d. The Provider shall make a good faith effort to replace a DBE subprovider that is unable or unwilling to perform successfully with another DBE, to the extent needed to meet the contract goal. The Provider shall submit a completed Attachment H-2 Form for the substitute firm(s). Any substitution of DBEs shall be subject to prior written approval by the Authority /Department. The Authority /Department may request a statement from the firm being replaced concerning its replacement prior to approving the substitution.

e. The Provider shall designate a DBE liaison officer who will administer the DBE program and who will be responsible for maintenance of records of efforts and contacts made to subcontract with DBEs.

f. Providers are encouraged to investigate the services offered by banks owned and controlled by disadvantaged individuals and to make use of these banks where feasible.

6) **ELIGIBILITY OF DBEs.**

a. The Authority/Department certifies the eligibility of DBEs, DBE joint ventures and DBE truck-owner operators to perform DBE subcontract work on DOT financially assisted contracts.

b. This certification will be accomplished through the use of the appropriate certification schedule contained in this Authority/Department's DBE program.

c. The Authority/Department publishes a Directory of Disadvantaged Business Enterprises containing the names of firms that have been certified to be eligible to participate as DBEs on DOT financially assisted contracts. The directory is available from the Authority's/Department's Business Opportunity Programs Office. The Texas Unified Certification Program DBE Directory can be found on the Internet at: http://www.dot.state.tx.us/services/business_opportunity_programs/tucp_dbe_directory.htm .

d. Only DBE firms certified at the time the contract is signed or at the time the commitments are submitted are eligible to be used in the information furnished by the Provider as required under Section 2.c. and 5.d. above. For purposes of the DBE goal on this contract, DBEs will only be allowed to perform work in the categories of work for which they were certified.

7) **DETERMINATION OF DBE PARTICIPATION.**

A firm must be an eligible DBE and perform a professional or technical function relating to the project. Once a firm is determined to be an eligible DBE, the total amount paid to the DBE for work performed with his/her own forces is counted toward the DBE goal. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the subprovider is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.

A DBE subprovider may subcontract no more than 70% of a federal aid contract. The DBE subprovider shall perform not less than 30% of the value of the contract work with assistance of employees employed and paid directly by the DBE; and equipment owned or rented directly by the DBE. DBE subproviders must perform a commercially useful function required in the contract in order for payments to be credited toward meeting the contract goal. A DBE performs a commercially useful function when it is responsible for executing the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself . When a DBE is presumed not to be performing a commercially useful function, the DBE may present evidence to rebut this presumption.

A Provider may count toward its DBE goal a portion of the total value of the contract amount paid to a DBE joint venture equal to the distinct, clearly defined portion of the work of the contract performed by the DBE.

Proof of payment, such as copies of canceled checks, properly identifying the Authority/Department's contract number or project number may be required to substantiate the payment, as deemed necessary by the Authority/Department.

8) **RECORDS AND REPORTS.**
   a. After submission of the initial commitment reported (Attachment H-1), required by Section 2.c. of this attachment, the Provider shall submit Monthly Progress Assessment Reports (Attachment H-3), after contract work begins, on DBE involvement to meet the goal and for race-neutral participation. One copy of each report is to be sent to the Authority/Department's Business Opportunity Programs Office monthly, in addition one copy is to be submitted with the Provider's invoice. **Only actual payments made to subproviders are to be reported.** These reports will be required until all subprovider activity is completed. The Authority/Department may verify the amounts being reported as paid to DBEs by requesting copies of canceled checks paid to DBEs on a random basis.
   b. DBE subproviders should be identified on the report by name, type of work being performed, the amount of actual payment made to each during the billing period, cumulative payment amount and percentage of the total contract amount. These reports will be due within fifteen (15) days after the end of a calendar month. Reports are required even when no DBE activity has occurred in a billing period.
   c. All such records must be retained for a period of four (4) years following final payment or until any investigation, audit, examination, or other review undertaken during the four (4) years is completed, and shall be available at reasonable times and places for inspection by authorized representatives of the Authority or Texas Department of Transportation or the DOT.
   d. Prior to receiving final payment, the Provider shall submit a Final Report (Attachment H-4), detailing the DBE payments. The Final Report is to be sent to the Authority/Department's Business Opportunity Programs Office and one (1) copy to be submitted with the Provider's final invoice. If the DBE goal requirement is not met, documentation of the good faith efforts made to meet the goal must be submitted with the Final Report.

9) **COMPLIANCE OF PROVIDER.** To ensure that DBE requirements of this DOT-assisted contract are complied with, the Authority/Department will monitor the Provider's efforts to involve DBEs during the performance of this contract. This will be accomplished by a review of Monthly Progress Assessment Reports (Attachment H-3), submitted to the Authority/Department's Business Opportunity Programs Office

by the Provider indicating his progress in achieving the DBE contract goal, and by compliance reviews conducted by the Authority/Department. The Monthly Progress Assessment Report (Attachment H-3) must be submitted at a minimum monthly to the Business Opportunity Programs Office, in addition to with each invoice to the appropriate agency contact.

The Provider shall receive credit toward the DBE goal based on actual payments to the DBE subproviders with the following exceptions and only if the arrangement is consistent with standard industry practice. The Provider shall contact the Authority/Department if he/she withholds or reduces payment to any DBE subprovider.

(1) A DBE firm is paid but does not assume contractual responsibility for performing the service;
(2) A DBE firm does not perform a commercially useful function;
(3) Payment is made to a DBE that cannot be linked by an invoice or canceled check to the contract under which credit is claimed;
(4) Payment is made to a broker or a firm with a brokering-type operation;
(5) Partial credit is allowed, in the amount of the fee or commission provided the fee or commission does not exceed that customarily allowed for similar services, for a bona fide service, such as professional, technical, consultant, or managerial services, and assistance in the procurement of essential personnel, facilities, equipment, materials, or supplies required for performance of the contract.

A Provider's failure to comply with the requirements of this Special Provision shall constitute a material breach of this contract. In such a case, the Authority/Department reserves the right to terminate the contract; to deduct the amount of DBE goal not accomplished by DBEs from the money due or to become due the Provider, not as a penalty but as liquidated damages to the Authority/Department; or such other remedy or remedies as the Authority/Department deems appropriate.

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ATTACHMENT H-FN

Disadvantaged Business Enterprise (DBE) for Race-Neutral Professional or Technical Services Contracts

It is the policy of the U. S. Department of Transportation (DOT) that DBEs as defined in 49 CFR Part 26, Subpart A, be given the opportunity to compete fairly for contracts and subcontracts financed in whole or in part with Federal funds and that a maximum feasible portion of the Department's overall DBE goal be met using race-neutral means. Consequently, if there is no DBE goal, the DBE requirements of 49 CFR Part 26, apply to this contract as follows:

The Provider will offer DBEs as defined in 49 CFR Part 26, Subpart A, the opportunity to compete fairly for contracts and subcontracts financed in whole or in part with federal funds. Race-Neutral DBE participation on projects with no DBE goal should be reported on the Attachment H-3 Form. Payments to DBEs reported on Attachment H-3 are subject to the following requirements:

DETERMINATION OF DBE PARTICIPATION.

A firm must be an eligible DBE and perform a professional or technical function relating to the project. Once a firm is determined to be an eligible DBE, the total amount paid to the DBE for work performed with his/her own forces must be reported as race-neutral DBE participation. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work should not be reported unless the subcontractor is itself a DBE.

A DBE subprovider may subcontract no more than 70% of a federal aid contract. The DBE subprovider shall perform not less than 30% of the value of the contract work with assistance of employees employed and paid directly by the DBE; and equipment owned or rented directly by the DBE. DBE subproviders must perform a commercially useful function required in the contract. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. When a DBE is presumed not to be performing a commercially useful function, the DBE may present evidence to rebut this presumption.

A Provider must report a portion of the total value of the contract amount paid to a DBE joint venture equal to the distinct, clearly defined portion of the work of the contract performed by the DBE.

Proof of payment, such as copies of canceled checks, properly identifying the Authority's contract number or project number may be required to substantiate the payment, as deemed necessary by the Authority.

The Provider and any subprovider shall not discriminate on the basis of race, color, national origin or sex in the award and performance of contracts. These requirements shall be physically included in any subcontract.

Failure to carry out the requirements set forth above shall constitute a material breach of this contract and, may result in termination of the contract by the Authority/Department or other such remedy as the Authority/Department deems appropriate.

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ATTACHMENT H-SG (NOT APPLICABLE)

Historically Underutilized Business
for State Funded Professional or Technical Services Contracts
HUB Goal Assigned-State of Texas Subcontracting Plan Required

1) **POLICY.** It is the policy of the Authority/Department to ensure that HUBs shall have an equal opportunity to participate in the performance of contracts; to create a level playing field on which HUBs can compete fairly for contracts and subcontracts; to ensure nondiscrimination on the basis of race, color, national origin, or gender in the award and administration of contracts; to help remove barriers to the participation of HUBs in department contracts; and, to assist in the development of firms that can compete successfully in the market place outside the HUB program. Consequently, the HUB requirements of the Authority/Department's HUB Program apply to this contract as follows:
   (1) The Provider agrees to insure that they shall take all necessary and reasonable steps to meet the HUB goal for this contract.
      a. The Provider and any subprovider(s) shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of contracts.
      b. When submitting the contract for execution by the Authority, the Provider must complete and furnish Attachment H-1 which lists the commitments made to all subproviders, including certified HUB subprovider(s) that are to meet the contract goal, and Attachment H-2 which is a commitment agreement(s) containing the original signatures of the Provider and HUB(s) that were indicated in the original submitted Authority/State of Texas HUB Subcontracting Plan (HSP) in Section 8. For Work Authorization Contracts, Attachment H-1 is required at the time of submitting the contract for execution by the Department. Attachment H-2 will be required to be completed and attach with each work authorization number that is submitted for execution, if the HUB will be performing work. If non-HUB subprovider is performing work, insert N/A (not applicable) on the line provided. A prime must allow a HUB maximum opportunity to perform the work by not creating unnecessary barriers or artificial requirements for the purpose of hindering a HUB's performance under the contract. Any substitutions or changes to the HSP, in addition to any changes to the original contract award, shall be subject to prior written approval by the Department. If there are any changes to the subproviders during the contract term, the Provider must furnish a Revised Attachment H-1 showing the revised commitment of all subproviders.
      c. Failure to carry out the requirements set forth above shall constitute a breach of contract and may result in a letter of reprimand; in termination of the contract by the Authority; in a deduction from money due or to become due to the Provider, not as a penalty but as damages to the Department's HUB Program; or such other remedy or remedies as the Department deems appropriate.
2) **DEFINITIONS.**
   g. "Authority/Department" means Hidalgo County Regional Mobility Authority (HCRMA) and the Texas Department of Transportation (TxDOT).
   a. "Agreement" is the agreement between the Authority and a Provider.
   b. "Provider" is any individual or company that provides professional or technical services.
   c. "Joint Venture" means an association of two or more businesses to carry out a single business enterprise for profit which combines their property, capital, efforts, skills and knowledge.
   d. "Historically Underutilized Business (HUB)" means any business so certified by the Texas Building and Procurement Commission.
3) **PERCENTAGE GOAL.** The goal for Historically Underutilized Business (HUB) participation in the work to be performed under this contract is **6.0 %** of the contract amount.

4) **PROVIDER'S RESPONSIBILITIES.** A Provider (HUB or non-HUB) must perform a minimum of 30% of the contract with its employees (as defined by the Internal Revenue Service). The contract is subject to the HSP Good Faith Effort Requirements.
   a. A Provider who cannot meet the contract goal, in whole or in part, should have documented any of the following and other efforts made as a "Good Faith Effort" to obtain HUB participation.
      (1) Whether the prime advertised in general circulation, trade association, and/or minority/women focus media concerning subcontracting opportunities.
      (2) Whether the prime provided written notice to at least three (3) qualified HUBs allowing sufficient time for HUBs to participate effectively.
      (3) Whether the prime documented reasons for rejection or met with the rejected HUB to discuss the rejection.
      (4) Whether the prime provided qualified HUBs with adequate information about bonding, insurance, the plans, the specifications, scope of work and requirements of the contract.
      (5) Whether the prime negotiated in good faith with qualified HUBs, not rejecting qualified HUBs who are also the lowest responsive bidder.
      (6) Whether the prime used the services of available minority and women community organizations, contractor's groups, local, state, and federal business assistance offices, and other organizations that provide support services to HUBs.

NOTE: The Provider must not cause or allow subproviders to bid their services.

   b. The preceding information shall be submitted directly to the Chair of the Authority responsible for the contract.
   c. The Provider shall make all reasonable efforts to honor commitments to HUB subproviders named in the original HSP in Section 8. Where the Provider terminates or removes a HUB subprovider named in the initial commitment, the Provider must demonstrate on a case-by-case basis to the satisfaction of the Authority/Department that the originally designated HUB was not able or willing to perform. The term "unable" includes, but is not limited to, a firm that does not have the resources and expertise to finish the work and/or a firm that substantially increases the time to complete the project.
   d. The Provider shall make all reasonable efforts to replace a HUB subprovider that is unable or unwilling to perform successfully with another HUB and must meet the HSP Good Faith Effort Requirements. Any substitution of HUBs shall be subject to prior written approval by the Authority. The Authority will request a statement from the firm being replaced concerning its replacement prior to approving the substitution. If there are any changes to the subproviders during the contract term, the Provider must furnish a Revised Attachment H-1 showing the revised commitment of all subproviders.
   e. The Provider shall designate a HUB liaison officer who will administer the Provider's HUB program and who will be responsible for maintenance of records of efforts and contacts made to subcontract with HUBs.

5) **ELIGIBILITY OF HUBs.**
   a. The Texas Building and Procurement Commission (TBPC) certifies the eligibility of HUBs.
   b. The TBPC maintains a directory of certified HUBs. The HUB Directory is available through the TxDOT Department's Business Opportunity Programs Office and through the Internet at the TBPC's Website (http://www2.tbpc.state.tx.us/cmbl/hubonly.html).
   c. Only HUB firms certified and identified in specific categories and classes at the time the contract is signed or at the time the commitments are submitted are eligible to be used in the information furnished by the Provider as required under Section 2.c. above.
   d. If during the course of the contract it becomes necessary to substitute another HUB firm for a firm named in the information submitted by the Provider as required by Section 2.c. above, then only certified HUBs will be considered eligible as a substituted firm. The Provider's written request for

substitutions of HUB subproviders shall be accompanied by a detailed explanation, which should substantiate the need for a substitution. The Authority/Department will verify the explanation with the HUB firm being replaced before giving approval of the substitution. If there are any changes to the subproviders during the contract term, the Provider must furnish a Revised Attachment H-1 showing the revised commitment of all subproviders.

e. The 73rd Legislature passed Texas Civil Statutes, Article 601i, relative to contracts between governmental entities and certain disadvantaged businesses. The Statute provides for civil penalties for persons who falsely claim disadvantaged business status and for the general contractor who knowingly contracts with a person claiming to be a disadvantaged business.

6) **DETERMINATION OF HUB PARTICIPATION.**

A firm must be an eligible HUB and perform a professional or technical function relating to the project. Proof of payment, such as copies of canceled checks, properly identifying the Authority's contract number or project number may be required to substantiate the payment, as deemed necessary by the Authority/Department. A HUB subprovider, with prior written approval from the Authority/Department, may subcontract 70% of a contract as long as the HUB subprovider performs a commercially useful function. All subcontracts shall include the provisions required in the subcontract and shall be approved as to form, in writing, by the Authority/Department prior to work being performed under the subcontract. A HUB performs a commercially useful function when it is responsible for a distinct element of the work of a contract; and actually manages, supervises, and controls the materials, equipment, employees, and all other business obligations attendant to the satisfactory completion of contracted work. If the subcontractor uses an employee leasing firm for the purpose of providing salary and benefit administration, the employees must in all other respects be supervised and perform on the job as if they were employees of the subcontractor.

7) **COMPLIANCE OF PROVIDER.**

To ensure that HUB requirements of this contract are complied with, the Authority/Department will monitor the Provider's efforts to involve HUBs during the performance of this contract. This will be accomplished by a review of the monthly Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) submitted to the AUTHORITY Office by the Provider indicating his/her progress in achieving the HUB contract goal, and by compliance reviews conducted by the Authority/Department. The Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) must be submitted at a minimum monthly to the Business Opportunity Programs Office, in addition to with each invoice to the appropriate agency contact.

The Provider shall receive credit toward the HUB goal based on actual payments to the HUB subproviders with the following exceptions and only if the arrangement is consistent with standard industry practice.

(1) Payments to brokers or firms with a brokering type operation will be credited only for the amount of the commission;
(2) Payments to a joint venture will not be credited unless all partners in the joint venture are HUBs;
(3) Payments to a HUB subprovider who has subcontracted a portion of the work required under the subcontract will not be credited unless the HUB performs a commercially useful function;
(4) Payments to a HUB will not be credited if the firm does not provide the goods or perform the services paid for;
(5) Payments made to a HUB that cannot be linked by an invoice or canceled check to the contract under which credit is claimed will not be credited.

A Provider must not withhold or reduce payments to any HUB without a reason that is accepted as standard industry practice. A HUB prime or subprovider must comply with the terms of the contract or subcontract. Work products, services, and commodities must meet contract specifications whether performed by a prime or subprovider.

A Provider's failure to meet the HUB goal and failure to demonstrate to the Authority/Department's satisfaction sufficient "Good Faith Effort" on his/her part to obtain HUB participation shall constitute a breach of contract. In such a case, the Authority/Department reserves the right to issue a letter of reprimand; to deduct the amount of HUB goal not accomplished by HUBs from the money due or to become due the Provider, not as a penalty but as damages to the Authority/Department's HUB program; or such other remedy or remedies as the Authority/Department deems appropriate.

8) **RECORDS AND REPORTS.**

a. After submission of the initial commitment (Attachment H-1), required by Section 2.c. of this attachment, the Provider shall submit State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) at a minimum monthly, after contract work begins, on subcontracting involvement. One copy of the State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) is to be sent to the Authority/Department's Office monthly. In addition, the Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) must be submitted with the Provider's invoice. All payments made to subproviders are to be reported. **The Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Reports are required monthly even during months when no payments to subproviders have been made.** The Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report will be required until all work on the contract has been completed. The Authority/Department may verify the amounts being reported as paid to HUBs by requesting copies of canceled checks paid to HUBs on a random basis.

b. Subproviders should be identified on the Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) by name, the amount of actual payment made to each during the billing period, cumulative payment amount and percentage of the total contract amount.

c. All such records must be retained for a period of four years following final payment, or until an investigation, audit, examination, or other review undertaken during the four years, and shall be available at reasonable times and places for inspection by authorized representatives of the Authority/Department and other agencies.

d. Prior to receiving final payment, the Provider shall submit a Final Report (Attachment H-4), detailing the subprovider payments to the AUTHORITY Office of the Authority, and one copy to the Authority/Department with the Provider's final invoice.

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ATTACHMENT H-SN (NOT APPLICABLE)

Historically Underutilized Business (HUB)
for State Funded Professional or Technical Services Contracts
No State of Texas HUB Subcontracting Plan Required

POLICY

It is the policy of the Authority/Department to ensure that HUBs shall have an equal opportunity to participate in the performance of contracts; to create a level playing field on which HUBs can compete fairly for contracts and subcontracts; to ensure nondiscrimination on the basis of race, color, national origin, or gender in the award and administration of contracts; to help remove barriers to the participation of HUBs in Authority contracts; and, to assist in the development of firms that can compete successfully in the market place outside the HUB program.

Subcontracting participation on projects with no HUB Subcontracting Plan Required should be reported on the Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report, the Attachment H-6 Form. Payment to non-HUBs subproviders must be reported on Attachment H-6. Payments to HUBs reported on Attachment H-6 are subject to the following requirements:

DETERMINATION OF HUB PARTICIPATION.

A firm must be an eligible HUB and perform a professional or technical function relating to the project. Once a firm is determined to be an eligible HUB, the total amount paid to the HUB should be reported as race-neutral HUB participation.

A HUB subprovider may subcontract no more than 70% of a contract. The HUB subprovider shall perform not less than 30% of the value of the contract work with assistance of employees employed and paid directly by the HUB; and equipment owned or rented directly by the HUB.

A provider must report a portion of the total value of the contract amount paid to a HUB joint venture equal to the distinct, clearly defined portion of the work of the contract performed by the HUB.

Proof of payment, such as copies of canceled checks, properly identifying the Authority/Department's contract number or project number may be required to substantiate the payment, as deemed necessary by the Authority/Department.

The provider and any subprovider shall not discriminate on the basis of race, color, national origin or sex in the award and performance of contracts. These requirements shall be physically included in any subcontract.

REQUIRED FORMS.

If subcontractors are used under the contract that has no stated HUB goal, Attachments H-1, H-2, H-4 and H-6 are required. Attachments H-1 and H-6 <u>are required</u> if no subcontractors are being used to perform work under this contract.

Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) **is required monthly even when no subcontracting activity has occurred.** In addition, Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report (Attachment H-6) should be submitted with the Provider's invoice.

ATTACHMENT H-1

Subprovider Monitoring System
Commitment Worksheet

Contract #:_____ Assigned Goal: 6.0% Federally Funded _____ County Funded _____
Prime Provider: B2Z Engineering, LLC Total Contract Amount: $201,143.26
Prime Provider Info: DBE____HUB ___ Both ___
Vendor ID #:_____ DBE/HUB Expiration Date: _____
(First 11 Digits Only)

If no subproviders are used on this contract, please indicate by placing "N/A" on the 1st line under Subproviders.

Subprovider(s) (List All)	**Type of Work**	**Vendor ID #** (First 11 Digits Only)	**D=DBE H=HUB**	**Expiration Date**	**$ Amount or % of Work ***
Subprovider(s) Contract or % of Work* Totals					

*For Work Authorization Contracts, indicate the % of work to be performed by each subprovider.

Total DBE **or** HUB Commitment Dollars $0.00 (DBE)

Total DBE **or** HUB Commitment Percentages of Contract 0% (DBE)
(Commitment Dollars and Percentages are for Subproviders only)

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ATTACHMENT H-2
Subprovider Monitoring System Commitment Agreement

This commitment agreement is subject to the award and receipt of a signed contract from the Hidalgo County Regional Mobility Authority (Authority). ***NOTE: Attachment H-2 is required to be attached to each contract that does not include work authorizations. Attachment H-2 is required to be attached with each work authorization. Attachment H-2 is also required to be attached to each supplemental work authorization. If DBE/HUB Subproviders are used, the form must be completed and signed. If no DBE/HUB Subproviders are used, indicate with "N/A" on this line: _____ and attach with the work authorization or supplemental work authorization.***

Contract #: _____ Assigned Goal: 6.0% Prime Provider B2Z Engineering, LLC

Work Authorization (WA)#: _____ WA Amount: **$0** Date: _____
Supplemental Work Authorization (SWA) #: _____ to WA #: _____ SWA Amount: _____
Revised WA Amount: _____

Description of Work *(List by category of work or task description. Attach additional pages, if necessary.)*	**Dollar Amount** *(For each category of work or task description shown.)*
FC	**$0**
FC	**$0**
Total Commitment Amount *(Including all additional pages.)*	**$0**

IMPORTANT: The signatures of the prime and the DBE/HUB and Second Tier Subprovider, if any (both DBE and Non-DBE) and the total commitment amount must always be on the same page.

Provider Name: B2Z Engineering, LLC. **Address: 900 S. Stewart Rd. Suite 2** **Mission, Texas 78572** **VID Number:** **PH: & FAX: 956-585-3773** **Email: aisha@b2zeng.com**	**Name:** Aisha Gonzalez ***(Please Print)*** **Title:** President _____ **Signature** **Date**
DBE/HUB Sub Provider **Subprovider Name:** **VID Number:** **Address:** **PH:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ _____ **Signature** **Date**
Second Tier Sub Provider **Subprovider Name:** **VID Number:** **Address:** **Phone #& Fax #:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ _____ **Signature** **Date**

VID Number is the Vendor Identification Number issued by the Comptroller. If a firm does not have a VID Number, please enter the owner's Social Security or their Federal Employee Identification Number (if incorporated).

ATTACHMENT H-3
Subprovider Monitoring System for Federally Funded Contracts
Progress Assessment Report for month of (Mo./Yr.) _____/_____

Contract #: _____ Original Contract Amount: **$0**
Date of Execution: _____ Approved Supplemental Agreements: **$0**
Prime Provider: B2Z Engineering LLC. Total Contract Amount: **$0**
Work Authorization No. : _____ Work Authorization Amount: **$0**

If no subproviders are used on this contract, please indicate by placing "N/A" on the 1st line under Subproviders.

DBE	All Subproviders	Category of Work	Total Subprovider Amount	% Total Contract Amount	Amount Paid This Period	Amount Paid To Date	Subcontract Balance Remaining

Fill out Progress Assessment Report with each estimate/invoice submitted, *for all subcontracts*, and forward as follows:
1 Copy with Invoice - Hidalgo County Regional Mobility Authority Office
I hereby certify that the above is true and correct statement of the amounts paid to the firms listed above.

Print Name - Company Official /DBE Liaison Officer | Signature | Phone | Date

Email | | Fax

ATTACHMENT H-4

Subprovider Monitoring System
Final Report

The Final Report Form should be filled out by the Prime Provider and submitted to the Contract Manager and the Business Opportunity Programs Office for review upon completion of the contract. The report should reflect **all subcontract activity** on the project. The report will aid in expediting the final estimate for payment. If the HUB or DBE goal requirements were not met, documentation supporting good faith efforts must be submitted.

DBE Goal: 6.0 % **OR** HUB Goal: _____%

Total Contract Amount: **$0** Total Contract Amount: ${Contract Amt}

Contract Number:

Vendor ID #	**Subprovider**	**Total $ Amount Paid to Date**
TOTAL		

This is to certify that _____% of the work was completed by the HUB or DBE subproviders as stated above.

_____
By: Prime Provider

_____
Per: Signature

Subscribed and sworn to before me, this _____ day of _____, 20 __

_____Notary Public _____ County

My Commission expires:_____

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ATTACHMENT H-5

Federal Subprovider and Supplier Information

The Provider shall indicate below the name, address and phone number of all successful and unsuccessful subproviders and/or suppliers that provided proposals/quotes for this contract prior to execution. You may reproduce this form if additional space is needed.

Name	Address	Phone Number

The information must be provided and returned with the contract.

_____ _____

Signature Date

{Signatory Name, Position} _____ _____

Printed Name Email Phone #

ATTACHMENT H-6

Authority/State of Texas HUB Subcontracting Plan Prime Contractor Progress Assessment Report

HUB Subcontracting Plan (HSP)
Prime Contractor Progress Assessment Report

This form must be completed and submitted to the contracting agency each month to document compliance with your HSP.

Contract/Requisition Number: _____ Date of Award: _____ (mm/dd/yyyy) Object Code: _____ (Agency Use Only)

Contracting Agency/University Name: _____

Contractor (Company) Name: _____ State of Texas VID #: _____

Point of Contact: _____ Phone #: _____

Reporting (Month) Period: _____ Total Amount Paid this Reporting Period to $ _____ -

Report HUB and Non-HUB subcontractor information

Subcontractor's Name	Subcontractor's VID or HUB Certificate Number	*Texas Certified HUB? (Yes or No)	Total Contract $ Amount from HSP with Subcontractor	Total $ Amount Paid This Reporting Period to Subcontractor	Total Contract $ Amount Paid to Date to Subcontractor	Object Code (Agency Use Only)
			$ -	$ -	$ -	
			$ -	$ -	$ -	
			$ -	$ -	$ -	

ATTACHMENT H-7

DBE CERTIFICATIONS

ATTACHMENT I

CERTIFICATE OF INSURANCE

ATTACHMENT J

CONFLICTS CERTIFICATION

ATTACHMENT J

CONFLICTS CERTIFICATION

1. Business Relationships:

   The RMA has adopted a conflict of interest policy which generally requires disclosure of any business relationships with RMA board members or key personnel, as designated on the Authority's website. The Conflict of Interest Policy for Consultants, the list of Board Members and Key Personnel, and the Disclosure Form can be obtained from the RMA website (www.hcrma.net). Engineer all any sub consultants to Engineer shall adhere to this policy and provide any required disclosures.

2. Adverse Matters:

   Engineer must disclose conflicts of interest by identifying any matter in which the Engineer becomes adverse to the RMA or the Texas Department of Transportation or to the State of Texas or any of its boards, agencies, commissions, universities, elected or appointed officials, or Hidalgo County during the term of the Agreement.

3. Direct and Indirect Interest:

   The Engineer shall ensure that, during the term of the Agreement, the Engineer, including any of its principals, will have no interest, direct or indirect, that would conflict in any manner or degree with the performance of Engineer's obligations under the agreement, including, but not limited to, ownership of property in the right-of-way of any of the independent projects of the Hidalgo County Roadway System. The Engineer warrants that, in the performance of the Agreement, the Engineer shall not employ any person, or subcontract with any entity, having such known interest.

ENGINEER: B2Z Engineering, LLC

BY: _____

DATE: _____

ATTACHMENT K
DEBARMENT CERTIFICATION

Texas Department of Transportation

Quality Assurance Program for Design-Bid-Build Projects

May 2019

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TABLE OF CONTENTS

SECTION 1 - INTRODUCTION 4
1.1 Overview 4
1.2 Support 4
SECTION 2 - ACCEPTANCE PROGRAM 5
2.1 Overview 5
2.2 Sampling and Testing Frequency and Location 5
2.3 Documentation 5
2.4 Quality Control Sampling and Testing 5
2.5 Dispute Resolution 5
SECTION 3 - INDEPENDENT ASSURANCE 6
3.1 Overview 6
3.2 Required Frequencies and Activities 6
3.3 Testing Equipment 7
3.4 Testing Personnel 7
3.5 Comparing Test Results 8
3.6 Annual Report of IA Program Results 8
SECTION 4 - MATERIALS CERTIFICATION 9
4.1 Overview 9
SECTION 5 - CONFLICT OF INTEREST 10
5.1 Overview 10
SECTION 6 - TECHNICIAN QUALIFICATION PROGRAM 11
6.1 Purpose 11
6.2 Technician Qualification 11
6.3 Who Must Be Qualified? 11
6.4 Who Can Qualify Sampling and Testing Personnel? 11
6.5 Required Certifications for Commercial Laboratory and Contractor Personnel 12
6.6 Qualification Procedure 12
6.7 Provisional Certifications 13
6.8 Responsibility and Documentation 14
6.9 Disqualification 14
SECTION 7 - LABORATORY QUALIFICATION PROGRAM 16
7.1 Purpose 16
7.2 Laboratory Responsibility 16
7.2.1 CE&I 16
7.2.2 District AO Personnel 16
7.2.3 District Lab Coordinator 17

7.3 Qualification 17
7.3.1 District Lab Accreditation 17
7.3.2 Commercial Lab and CE&I Qualification Process 18
7.4 Calibration Standards and Frequencies for Laboratory Equipment 20
7.5 Non-Compliance 20
7.6 Documentation 20
7.7 Dispute Resolution 21

Appendix A – Acronyms and Definitions
Appendix B – Test Methods for Split/Proficiency Evaluation
Appendix C – IA Annual Report
Appendix D – Material Certification Example Letter for Projects with Federal Oversight
Appendix E – Material Certification Example Letter for Projects with Non-Federal Oversight
Appendix F – Archived Versions

SECTION 1 - INTRODUCTION

1.1 Overview

The Texas Department of Transportation (TxDOT) established the Quality Assurance Program (QAP) for Design-Bid-Build (D-B-B) Projects to ensure that materials and workmanship incorporated into highway construction projects are in reasonable conformity with the requirements of the approved plans and specifications, including any approved changes. This program conforms to the criteria in 23 CFR 637 B, where the Materials and Tests Division (MTD) central laboratory will be accredited under the AASHTO Accreditation Program (AAP) which oversees the statewide qualification program.

It consists of an "Acceptance Program" and "Independent Assurance (IA) Program" based on test results obtained by qualified persons and equipment.

The QAP allows for the use of validated Contractor-performed quality control (QC) test results as part of an acceptance decision. It also allows for the use of test results obtained by commercial laboratories in acceptance decisions. The acceptance of all materials and workmanship is the responsibility of the Engineer.

1.2 Support

For more information regarding the information and procedures in the program, contact the Materials and Tests Division (MTD) Administration at 512/506-5843.

SECTION 2 - ACCEPTANCE PROGRAM

2.1 Overview

The Quality Assurance Program (QAP) assures materials, incorporated into any highway construction project, are subject to verification sampling and testing, as well as quality control (QC) sampling and testing when required by the specifications.

The District Engineer will delegate an individual at the district level for the accountability of certification verification in SiteManager (SM) and at the laboratory for various project delivery options applicable to the DBB program.

The delegation of authority should encompass a mechanism that provides oversight authority and an audit function to ensure compliance. Additional information can be found in Section 6.7 – Dispute Resolution.

2.2 Sampling and Testing Frequency and Location

Verification sampling and testing will be performed at the location and frequency established in the Department's Guide Schedule of Sampling and Testing for Design-Bid-Build (DBB) Projects (DBB Guide Schedule) or specifications specific to each project.

2.3 Documentation

Testing will be documented within SiteManager on the department approved excel templates. When the tester does not enter test results directly into SM, the hardcopy will need to be scanned and attached to the SM sample documenting the tester's name.

2.4 Quality Control Sampling and Testing

Contractor-performed QC sampling and testing may be used as part of an acceptance decision when required or allowed by specification.

QC sampling and testing personnel, laboratories, and equipment will be qualified in accordance with Section 6 – Technician Qualification Program and Section 7 – Laboratory Qualification Program and will be evaluated under the Independent Assurance Program, as described in Section 3 of this document.

QC test results will be validated by verification test results obtained from independently taken samples. Qualified TxDOT personnel or their designated agents will perform verification sampling and testing.

2.5 Dispute Resolution

When QC test results are used in the acceptance decision, the MTD central laboratory or an accredited independent laboratory approved by MTD will perform the referee testing. The referee laboratory decision will be final.

SECTION 3 - INDEPENDENT ASSURANCE PROGRAM

3.1 Overview

The Independent Assurance (IA) program evaluates all sampling and testing procedures, personnel, and equipment used as part of an acceptance decision.

The IA program evaluates the qualified sampling and testing personnel and testing equipment and is established using the system approach. The system approach bases frequency of IA activities on time—regardless of the number of tests, quantities of materials, or numbers of projects tested by the individual being evaluated.

3.2 Required Frequencies and Activities

Table 1 gives the frequencies and activities required for evaluating sampling and testing personnel and equipment under the system approach to IA.

Table 1
Frequencies and Activities Required Under IA System Approach

Time	Activity
Before performing acceptance sampling and testing.	Qualification required under Section 6 and Section 7 of this QAP.
Within 12 months after Observation and Qualification, not to exceed 15 months.	Each qualified technician is required to participate in the first available proficiency or split sample for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.
Within 24 months after Observation and Qualification, not to exceed 27 months.	Each qualified technician is required to participate in one proficiency or split sample test for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.
Within 36 months of Qualification. (Only required for certifications issued by TxDOT or TXAPA with a 3-year cycle.)	Qualification is again required under Section 6 and Section 7 of this QAP.
Within 36 months after Observation and Qualification, not to exceed 39 months. (Only required for ACI, which has a 5-year certification cycle.)	Each qualified technician is required to participate in one proficiency or split sample test for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.
Within 48 months after Observation and Qualification, not to exceed 51 months. (Only required for ACI, which has a 5-year certification cycle.)	Each qualified technician is required to participate in one proficiency or split sample test for each test method requiring IA. Results must compare to the IA test results to within the established tolerance.

Within 60 months of qualification (Only required for certifications issued by ACI with a 5-year cycle.)	Qualification is again required under Section 6 and Section 7 of this QAP.

Maintaining technician qualification under the IA system approach requires continuation of the above cycle of qualification and successful split or proficiency sample testing.

3.3 Testing Equipment

MTD will qualify district laboratory testing equipment used for acceptance sampling and testing, in accordance with Section 7 – Laboratory Qualification Program. Any non-TxDOT commercial laboratory used for acceptance sampling and testing must be accredited in accordance with Section 7.3 – Qualification.

MTD may designate the district laboratory to qualify commercial laboratory testing equipment, used for acceptance sampling and testing, in accordance with corresponding calibration test procedures. MTD or TxDOT district laboratory may hire a third-party entity to perform calibration or verification in accordance with corresponding calibration test procedures.

The qualifying authority will qualify testing equipment in accordance with the following guidelines.

A. Frequency for qualifying sampling and testing equipment must not exceed 1 year.
B. Calibration or verification is required whenever the laboratory or equipment is moved.

The qualifying authority will evaluate any equipment used to perform verification and QC sampling and testing in making an acceptance decision. This evaluation includes calibration checks and split or proficiency sample tests. The Department test procedures referenced in Section 7.4 – Calibration Standards and Frequencies for Laboratory Equipment give the requirements for, and frequency of, equipment calibrations.

3.4 Testing Personnel

MTD will qualify district and commercial laboratory personnel performing IA activities, in accordance with Section 6 – Technician Qualification Program.

MTD may designate a district laboratory to qualify other Department personnel and accredited commercial laboratory personnel performing IA activities. When a district qualifies commercial laboratory personnel, they must notify MTD in writing.

Individuals performing IA activities will be other than those performing verification or QC testing.

IA personnel will evaluate any individual performing verification or QC sampling and testing. This evaluation includes observations and split or proficiency sample testing.

3.5 Comparing Test Results

Comparison of the split sample test results can be used if equipment or procedures issues are suspected. Appendix B gives the acceptable tolerance limits for comparing test results from split and proficiency samples.

If the comparisons of the test results do not comply with the tolerances, an engineering review of the test procedures and equipment will be performed immediately to determine the source of the discrepancy.

3.6 Annual Report of IA Program Results

MTD will compose and submit an annual report to the Federal Highway Administration (FHWA) summarizing the results of TxDOT's systems approach IA program. See Appendix C for the annual report form.

This report identifies:

- number of sampling and testing personnel evaluated by the systems approach IA testing;
- number of IA evaluations found to meet tolerances in Appendix B;
- number of IA evaluations found to not meet tolerances in Appendix B; and
- summary of any significant system-wide corrective actions taken.

SECTION 4 - MATERIALS CERTIFICATION

4.1 Overview

The TxDOT District Area Engineer or Director of Construction will submit a materials certification letter, conforming in substance to the examples shown in Appendix D or E, as applicable.

For projects with federal oversight, submit the materials certification letter (Appendix D) to the FHWA division administrator, with a copy to MTD.

For non-federal oversight projects, submit the material certification letter (Appendix E) to the TxDOT District Engineer, with a copy to MTD.

Either letter must be submitted at final acceptance of the project.

SECTION 5 - CONFLICT OF INTEREST

5.1 Overview

To avoid an appearance of a conflict of interest, any qualified non-TxDOT laboratory will perform only one of the following functions on the same project:

- verification sampling and testing;
- QC sampling and testing;
- IA testing; or
- referee testing.

SECTION 6 - TECHNICIAN QUALIFICATION PROGRAM

6.1 Purpose

This program provides uniform statewide procedures for technician qualification to ensure that tests required by the specifications are performed according to the prescribed sampling and testing methods.

6.2 Technician Qualification

Sampling and testing personnel will be qualified to perform sampling and testing for the acceptance of materials in the areas of soils, bituminous, aggregate, and concrete materials.

The test methods for which individuals can be qualified are included in the following series of the TxDOT Test Procedures.

- 100-E Series (Soils)
- 200-F Series (Bituminous)
- 400-A Series (Aggregates and Concrete)
- 500-C Series (Asphalt – Tex-500-C and Tex-530-C)

6.3 Who Must Be Qualified?

Any individual who performs sampling and testing on the materials listed in Section 6.2 – Technician Qualification, for acceptance, must be qualified in each test procedure they perform.

NOTE—Reciprocity may be granted to individuals who have been successfully qualified under another state's program. These situations will be considered on a case-by-case basis and must meet the approval of the Materials and Tests (MTD) Division Director.

6.4 Who Can Qualify Sampling and Testing Personnel?

The following personnel may qualify an individual to perform the required sampling and testing of materials:

- MTD personnel;
- qualified district materials engineer or laboratory supervisor (except as noted below);
- qualified district laboratory personnel who have been authorized by the district materials engineer or laboratory supervisor to qualify others; and
- department-approved entities such as the Texas Asphalt Pavement Association (TXAPA) and the American Concrete Institute (ACI). Certifications received from these institutions may be used to satisfy the written exam and observation part of the Technician Qualification Program.

NOTE—Each district laboratory will maintain a minimum of one individual qualified by MTD or its designated agent, for each test procedure performed within the district. To perform testing and qualify district personnel for TxDOT concrete test methods, at least one individual from the district laboratory must have the corresponding ACI Field and Strength certifications issued by MTD.

6.5 Required Certifications for Commercial Laboratory and Contractor Personnel

Non-TxDOT laboratory personnel performing sampling and testing for TxDOT, or as required by specification, must obtain and keep current the following certifications pertinent to their scope of testing:

- ACI Concrete Field Testing Technician – Grade I,
- ACI Concrete Strength Testing Technician,
- TXAPA HMA Level 1A – Plant Production Specialist,
- TXAPA HMA Level 1B – Roadway Specialist,
- TXAPA HMA Level 2 – Mix Design Specialist,
- TXAPA SB 101 – Property Specialist,
- TXAPA SB 102 – Field Specialist,
- TXAPA SB 103 – Materials Analysis Specialist,
- TXAPA SB 201 – Strength Specialist,
- TXAPA SB 202 – Compressive Strength Specialist, and
- TXAPA AGG101 -– Aggregate Specialists.

For testing procedures not covered by the above certifications, the following personnel may qualify an individual to perform the required sampling and testing of materials:

- district laboratory personnel who have been authorized by MTD to perform technician qualifications, and
- MTD personnel.

6.6 Qualification Procedure

To qualify, an authorized evaluator must witness an individual successfully perform the specific test and the necessary calculations required to determine specification compliance. Successful performance is defined as demonstrating the ability to properly perform the key elements for each test method. If the individual fails to demonstrate the ability to perform a test, the individual will be allowed one retest per test method at the evaluator's

convenience. The maximum number of attempts cannot exceed three trials in a 90-day period of time.

In addition to successful performance of a test method, the individual must pass a written examination (minimum score of 80%) administered by an authorized evaluator. The maximum amount of time allocated per test will be one hour. If an individual cannot complete the written test in an hour, it will result in failure. An individual failing the written examination may request a retest. The retest must be scheduled and administered within 30 days of notification of failure; however, the maximum number of attempts cannot exceed three trials in a 90-day period of time.

Under unique circumstances, the qualification authority may grant a verbal examination upon request. The reasons for requesting a verbal examination must be presented and documented before the individual is allowed to take the examination. Should the technician fail the retest examination, the technician will not be allowed to test again unless a written notification is received from the technician's employer or supervisor stating that the technician has received additional training. MTD or its representative will determine the adequacy of the additional training. Failure to pass the third written examination will be considered as failing the entire qualification.

Successful qualification is defined as passing both the written and performance examinations.

In addition, the individual must participate in split or proficiency samples administered by the qualifying authority to validate the qualification as defined in Appendix B. MTD determines the qualifying authority for the split or proficiency sample.

Unless otherwise stated, qualification of an individual is valid for not more than 3 years, after which the individual must be re-qualified. Under the IA system approach, annual split or proficiency evaluations will be required as specified in Section 3.2 – Required Frequencies and Activities. Failure to satisfactorily complete annual split or proficiency testing will result in certification revocation.

6.7 Provisional Certifications

If the required certifications, listed in the Section 6.5 – Required Certifications for Commercial Laboratories and Contractor Personnel, cannot be readily obtained due to course availability, schedule conflicts, or other extenuating circumstances, provisional certifications administered by MTD or TxDOT's district laboratory will be allowed, per the following stipulations:

- provisional certifications must be approved by MTD or TxDOT district laboratory supervisor;
- provisional certifications will be valid for one month after the TXAPA and ACI examination dates; and
- the candidate must show evidence of having enrolled in the required ACI or TXAPA course.

6.8 Responsibility and Documentation

MTD and the district materials engineer, laboratory supervisor, or designee are responsible for maintaining documentation of all individuals qualified under their authority who perform required tests for acceptance of materials. The CE&I firm shall identify a coordinator with the responsibility to communicate with the Area Office who will then coordinate with the district level person to satisfy the requirements for qualified testers. SiteManager shall be used to send email notification on certification status to the owner (technician) as well as the district level responsible person. TxDOT's SiteManager will be the official system of record for qualified or certified TxDOT and commercial laboratory personnel.

Issuance of qualification certificates by the TxDOT qualifying authority is not required. A qualification summary listing all tests for which an individual is qualified is available in SiteManager and may be printed and signed at the district's discretion. Documentation is to be maintained through the Object Linking and Embedding (OLE) attachment window. This function allows all qualified personnel supporting documentation to be viewed in SM which includes:

- copies of certificates issued by ACI and TXAPA; or
- copies of certificates issued by MTD or TxDOT district laboratory, if issued;
- Quality Assurance Test (QAT) report with clear identification of technician's name, qualifier's name, score, and date taken; and
- original performance examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, qualification status, and date.

Documentation retention will be for the life of the qualification, as detailed in the State of Texas Records Retention Schedule.

Results of annual proficiency testing administered by MTD or TXAPA will be stored in their respective central repositories through SharePoint. Annual split sample evaluations should be stored in SiteManager.

6.9 Disqualification

Accusations of misconduct by testing technicians are made to the responsible TxDOT district representative and reported to MTD. Table 2 defines the 3 levels of misconduct: neglect, abuse, and breach of trust.

Table 2
Levels of Misconduct

Term	Definition
Neglect	Unintentional deviations from testing procedures or specifications.
Abuse	Careless or deliberate deviation from testing procedures or specifications.
Breach of Trust	Violation of the trust placed in the certified technician including, but not limited to, acts such as: • falsification of records; • being aware of improprieties in sampling, testing, or production by others and not reporting them to appropriate supervisors involved in the project; • re-sampling or retesting without awareness and consent of appropriate supervisors involved in the project; and • manipulating compensation or production.

The certification steering committee will investigate accusations of misconduct with the assistance of the responsible district. Depending on the severity of the misconduct, MTD may impose penalties ranging from a written reprimand, a temporary suspension, or a permanent revocation of the certification, contingent upon the findings of the investigation. A technician with a revoked certification will be removed from the project and will not be allowed to be employed on any TxDOT project statewide.

SECTION 7 - LABORATORY QUALIFICATION PROGRAM

7.1 Purpose

This program provides uniform statewide procedures to ensure that laboratory facilities and equipment are qualified for the performance of required sampling and testing methods.

7.2 Laboratory Responsibility

The responsibilities are spread among varying roles and are defined below to achieve a level of quality and to maintain program compliance.

7.2.1 CE&I

The CE&I firm shall:

- determine all test methods and certification requirements for a project and submit to the area office coordinator within ten (10) days after the execution of the contract and before the kick off meeting;
- submit required technician certifications and commercial lab requests submittals to the AO; and
- provide a quality plan to the AO that will demonstrate how quality is to be achieved through acceptance testing, per project. Include how the firm will track and ensure that only certified technicians perform acceptance on equipment that is calibrated and in good working order.

7.2.2 District AO Personnel

The Area Engineer will delegate the District AO coordinator. The AO coordinator shall:

- provide the district lab personnel with monthly status of the CE&I projects;
- provide the district lab contacts for CE&I firms and their commercial labs;
- invite the district lab personnel to the kick off and associated preconstruction meetings;
- will forward all CE&I technician certifications and laboratory submittals or requests to the district lab;
- will review the CE&I project specific testing, certification, and equipment needs; and
- submit the CE&I's quality plan to the district lab.

7.2.3 District lab coordinator

The district lab coordinator shall:

- review and make recommendations to the AO coordinator for approval or rejection of the CE&I quality plan;
- coordinate the inspection of the commercial lab facility and equipment once the quality plan has been approved;
- communicate the status of the inspection with the CE&I firm;
- use SM to auto notify the owner (technician) and the district lab designee before certification expiration; and
- conduct an internal review for continual compliance for all levels of certifications annually.

7.3 Qualification

All laboratories performing sampling and testing for TxDOT require qualification. These include, but are not limited to the following:

- Materials and Tests Division (MTD) central laboratory;
- District laboratories;
- area or project laboratories (including field laboratories at hot mix and concrete plants);
- MTD field laboratories; and
- commercial laboratories.

7.3.1 District Lab Accreditation

MTD is responsible for accrediting the district and MTD field laboratories. Upon completion of the laboratory accreditation process, the district lab is assigned a rating. The rating system identified in Table 3 is based on the associated risks to the department.

Table 3
Rating Legend

Number	Rating Legend
1	Excellent review with minor or no deficiencies notated.
2	Several deficiencies or repetitive observation were notated.
3	A level of negligence was found programmatically violating compliance requirements.

Each laboratory inspection summarizes the accreditation visit where a finding is classified as either a deficiency or an observation, defined as follows:

Deficiency: A finding that indicates policy or practice contrary to the requirements of the applicable test methods or documented quality procedures.

Observation: Observations are intended as comments for improvements relating to specific technical information to offer recommendations for best practice. Specifically, observations are noted for any technically related deficiencies where judgment and experience indicate it is not likely to affect the laboratory's ability to produce valid and accurate test results.

Resolution of Findings

A corrective action report (CAR) and supporting documentation is collectively submitted to MTD to address the findings notated in the report. The CAR will document actions that have been taken to prevent reoccurrence and to show a formal resolution to the findings.

Deficiencies:
Deficiencies require a formal written response describing the corrective actions taken or planned and enough documentation, i.e., records, copies of new or revised procedures, equipment invoices, or photographs to substantiate actions taken. Corrective actions should be permanently implemented to prevent recurrence of the problem.

Observations:
No written response is required for findings identified as observations. The laboratory should; however, take necessary corrective action to address the observation to prevent possible recurrence. Repeat observations may result in deficiencies.

The resolution should be completed in 21 days from the issuance of the report. If the laboratory cannot satisfy the findings in the report, an extension may be requested for additional time to resolve any outstanding or pending findings. Additional time extensions may be granted on a case by case scenario but should not exceed 90 days. When the findings cannot be resolved within the 90-day period, the MTD Division Director (DD) will escalate the outstanding issues at his discretion to the DOC or DE as needed. See Section 7.5 – Non-Compliance.

7.3.2 Commercial Lab and CE&I Qualification Process

At the district level, the district laboratory will be the qualifying authority for area office and commercial laboratories, only in the areas for which the district laboratory is accredited. They are also responsible for participating and conducting a peer review that will include a minimum of two projects conducted by CE&I firms to ensure program compliance. The peer review shall be documented and conducted within 12-24 months after MTD conducts the QAP district accreditation.

When a district qualifies a commercial laboratory, they must notify MTD in writing and submit a copy of the laboratory qualification certificate. A directory of all TxDOT-qualified laboratories is available through the MTD crossroads intranet.

The laboratory qualifying authority will use Form 2682, "Quality System Inspection – Commercial Laboratory," to document the following:

- identify the scope of testing to be performed;
- verify that test methods used to perform tests are available and current;
- document that the laboratory has the required equipment to perform the tests;
- check the calibration or verification records for each piece of equipment, to include:
  - description of equipment,
  - identification of any traceable standard used,
  - frequency of calibration,
  - date of calibration,
  - date of last calibration,
  - date of next calibration,
  - calibrating technician,
  - procedure used to calibrate or verify equipment, and
  - detailed results of calibration; and
- verify that the laboratory has qualified or certified technicians to perform required testing.

In addition, all equipment may be subject to calibration verification or other inspection by the qualifying authority. Laboratories performing acceptance sampling and testing should use results from TxDOT's Material Producer List (MPL), and perform materials sampling and testing in accordance with TxDOT's DBB Guide Schedule. Materials that are not monitored or not pre-approved by TxDOT are subject to sampling and testing as part of the acceptance program, except as noted in the DBB Guide Schedule remarks.

NOTE—Project or field laboratories performing Tex-113-E, Tex-117-E, and Tex-242-F tests must be an approved laboratory from TxDOT's MPL.

Laboratories are qualified every 3 years, at a minimum, although accreditation may be an ongoing process. Calibration or verification is required whenever laboratory or equipment is moved or per the minimum laboratory standards defined in Section 7.4 – Calibration Standards and Frequencies for Laboratory Equipment.

An annual internal audit should be conducted by designated staff to ensure continual compliance with technician records and equipment intervals. The following are tools and resources available to aid in managing the program for compliance:

- SM Material Users Query that allows filtering to determine expiring certifications, and
- Form 2682.

7.4 Calibration Standards and Frequencies for Laboratory Equipment

The standards for calibration and the frequencies for laboratory equipment calibrations are shown in:

- Tex-198-E, "Minimum Standards for Acceptance of a Laboratory for Soils and Flexible Base Testing,"
- Tex-237-F, "Minimum Standards for Acceptance of a Laboratory for Hot Mix Testing,"
- Tex-498-A, "Minimum Standards for Acceptance of a Laboratory for Concrete and Aggregate Testing," and
- Tex-900-K Series, procedures for calibrating, verifying, and certifying equipment and devices.

7.5 Non-Compliance

A laboratory that does not meet all the above requirements is subject to disqualification or suspension.
Any equipment in a qualified laboratory failing to meet specified equipment requirements for a specific test method will not be used for that test method. MTD or the TxDOT district laboratory responsible for the certification or audit will immediately notify all applicable Area Offices of non-conformance for those test methods.

7.6 Documentation

The qualifying authority is responsible for verifying that laboratories are qualified to perform sampling and testing. Documentation will be required to be kept by the qualifying authority and the qualified laboratory. Calibration records will be maintained for a minimum of 10 years. Upon satisfactory completion of the laboratory qualification process, the qualifying authority will issue a certificate within 14 days covering the scope of testing in which the laboratory has been qualified, with a copy to MTD.

Laboratory qualification documentation to be maintained by the qualifying authority includes:

- availability and calibration or verification records for each piece of equipment;
- personnel qualified or certified to perform required testing; and

- copy of laboratory qualification certificate issued.

7.7 Dispute Resolution

The next higher qualification authority will resolve disputes concerning calibration and verification of equipment. For disputes that cannot be resolved at the district level, MTD will be the final authority.

Appendix A
Acronyms and Definitions

The following terms and definitions are referenced in this document and have the meanings set forth below.

AAP	AASHTO Accreditation Program (AASHTO re:source and CCRL)
AASHTO	American Association of State Highway Transportation Officials
ACI	American Concrete Institute
AO	Area Office
AQMP	Aggregate Quality Monitoring Program
CAR	Corrective Action Report
CCRL	Concrete and Cement Reference Laboratory
CE&I	Construction Engineering and Inspection
CFR	Code of Federal Regulations
MTD	Materials and Tests Division
CMEC	Construction Materials Engineering Council
FHWA	Federal Highway Administration
HMA	Hot-Mix Asphalt
HMAC	Hot-Mix Asphalt Center
IA	Independent Assurance
L-A-B	Laboratory Accreditation Bureau
MPL	Material Producer List
QAP	Quality Assurance Program
QAT	Quality Assurance Test
QC	Quality Control
SM	SiteManager
TXAPA	Texas Asphalt Pavement Association
TxDOT	Texas Department of Transportation

Abuse—Careless or deliberate deviation from testing procedures or specifications.

Acceptance Program—All factors that comprise TxDOT's program to determine the quality of the product as specified in the contract requirements. These factors include verification sampling, testing, and inspection and may include results of QC sampling and testing.

Accredited Laboratories—Laboratories that are recognized by a formal accrediting body as meeting quality system requirements including demonstrated competence to perform standard test procedures.

Breach of Trust—Violation of the trust placed in the certified technician including, but not limited to, acts such as: falsification of records; being aware of improprieties in sampling, testing, or production by others and not reporting them to appropriate supervisors involved in the project; re-sampling or retesting without awareness and consent of appropriate supervisors involved in the project; and manipulating compensation or production.

Certified Technician—A technician certified by some agency as proficient in performing certain duties.

Independent Assurance (IA) Program—Activities that are an unbiased and independent evaluation of all the sampling and testing procedures, equipment, and personnel qualifications used in the acceptance program.

Material Producer List (MPL)—TxDOT-approved products and materials from various manufacturers and producers are located at:
http://www.txdot.gov/business/resources/producer-list.html

Neglect—Unintentional deviations from testing procedures or specifications.

Proficiency Samples—Homogenous samples that are distributed and tested by 2 or more laboratories or personnel. The test results are compared to assure that the laboratories or personnel are obtaining the same results.

Qualified Laboratories—Laboratories that are capable as defined by appropriate programs established by TxDOT. As a minimum, the qualification program must include provisions for checking testing equipment, and the laboratory must keep records of calibration checks.

Qualified Sampling and Testing Personnel—Personnel who are capable as defined by appropriate programs established by TxDOT.

Quality Assurance (QA)—All planned and systematic actions necessary to provide confidence that a product or service will satisfy given requirements for quality.

Quality Control (QC)—All Contractor operational techniques and activities performed or conducted to fulfill the contract requirements.

TxDOT Standard Specifications—the *Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges* adopted by the Texas Department of Transportation, including all revisions thereto applicable on the effective date of the contract documents.

Verification Sampling and Testing—Sampling and testing performed to verify the quality of the product.

Appendix B
Test Methods for Split or Proficiency Evaluation

After observation and qualification, each qualified technician is required to participate annually in one proficiency or split sample test for each test method requiring independent assurance. Split sample test results must compare to the independent assurance test results below. Proficiency sample test results must be within ±2 standard deviations of the proficiency sample mean.

Laboratory Testing Procedures and Tolerance Limits

Test Procedure	Description	Tolerance
Tex-104-E	Liquid Limit of Soils	15% of mean[1]
Tex-105-E	Plastic Limit of Soils	15% of mean[1]
Tex-106-E	Plasticity Index of Soils	20% of mean[1]
Tex-107-E	Bar Linear Shrinkage of Soils	± 2%
Tex-110-E	Particle Size Analysis of Soils, Part I	> No. 4 sieve: ± 5% points
		≤ No. 4 sieve: ± 3% points
Tex-113-E	Moisture-Density Relationship of Base Materials	Density ± 2.0 PCF
		Moisture Content ± 0.5%
Tex-117-E	Triaxial Compression for Disturbed Soils and Base Materials, Part II	Strength ± 15 psi
		Moisture Content ± 0.5%
Tex-200-F	Asphaltic Concrete Combined Aggregate	>5/8" sieve: ± 5.0% points (individual % retained)
		≤5/8" sieve–No. 200: ± 3.0% (individual % retained)
		Passing No. 200: ± 1.6% points
Tex-206-F	Compacting Test Specimens of Bituminous Mixtures	± 1.0% laboratory-molded density in accordance with Tex-207-F
Tex-207-F	Determining Density of Compacted Bituminous Mixtures	Laboratory-Molded Density: ± 1.0%
		Laboratory-Molded Bulk Specific Gravity: ± 0.020
		In-place air voids (cores): ± 1.0%
Tex-227-F	Theoretical Maximum Specific Gravity of Bituminous Mixtures	± 0.020
Tex-236-F	Asphalt Content of Asphalt Paving Mixtures by the Ignition Method	± 0.3%

Test Procedure	Description	Tolerance
Tex-241-F	Compacting Bituminous Specimens Using the Superpave Gyratory Compactor (SGC)	± 1.0% laboratory-molded density in accordance with Tex-207-F
Tex-418-A	Compressive Strength of Cylindrical Concrete Specimens	17% of mean[1] (4 × 8" specimen)
		14% of mean[1] (6 × 12" specimen)

1. The difference between compared test results must not exceed the indicated percentage of the mean of the compared test results, where the mean is the average of the two test results.

EXAMPLE: Plasticity Index

Tolerance = 20% of the mean

Technician test value	18
IA technician test value	22
Mean	20
20% difference	4

Both values are within 20% of the mean.

Appendix C
IA Annual Report

{Date}

Thomas L. Smith
Independent Assurance Program Manager
Materials and Tests Division (MTD)
Texas Department of Transportation
125 East 11th Street
Austin, TX 78701

RE: Annual Report of Independent Assurance (IA) Program Results – {Project Name}

Dear Mr. Smith:

In accordance with the requirements set forth in the TxDOT Quality Assurance Program for Design-Bid-Build Projects, the information below summarizes the results of system approach independent assurance (IA) testing conducted by our firm on the {Project Name} project for calendar year {XXXX}.

Independent Assurance Program Results – {Year}	
IA Activities	{Project Name}
1. Number of personnel evaluated under system approach.	
2. Number of IA evaluations meeting tolerance.	
3. Number of IA evaluations not meeting tolerance.	
4. Corrective actions:	

cc: Jere A. Williams, P.E.
Materials and Tests, Division Director
TxDOT – MTD

Appendix D
Materials Certification Example Letter for Projects with Federal Oversight

{Date}

Al Alonzi
FHWA Texas Division Administration
FHWA Texas Division Office
300 East 8th Street
Austin, TX 78701

RE: Materials Certification Letter

Project: SH Contract No.:
CSJ:
HWY:
County:
Federal-Aid Project No.:

Dear Mr. Alonzi:

This letter is to certify:

The results of the tests used in the acceptance program indicate that the materials incorporated in the construction work, and in the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications.

Both the Acceptance and Verification results were evaluated by an independent assurance sampling and testing program, the results of which were submitted to FHWA by the department in the Annual Report of Independent Assurance Program Results and independent of this materials certification.

☐ Exceptions to the plans and specifications are explained on the back hereof (or on attached sheet).
☐ There are no exceptions to the plans and specifications on this project.

Sincerely,
{TxDOT District Area Engineer or Director of Construction), P.E.
{Title}

cc: Jere A. Williams, P.E.
Materials and Tests, Division Director
TxDOT – MTD

Appendix E
Materials Certification Example Letter for Projects with Non-Federal Oversight

{Date}

{TxDOT District Engineer}
{Title}

RE: Materials Certification Letter

Project: SH Contract No.:
CSJ:
HWY:
County:

Dear Mr. {District Engineer}:

This letter is to certify:

The results of the tests used in the acceptance program indicate that the materials incorporated in the construction work, and in the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications.

Both the Acceptance and Verification results were evaluated by an independent assurance sampling and testing program, the results of which were submitted to MTD in the Annual Report of Independent Assurance Program Results and independent of this materials certification.

☐ Exceptions to the plans and specifications are explained on the back hereof (or on attached sheet).
☐ There are no exceptions to the plans and specifications on this project.

Sincerely,
{TxDOT District Area Engineer or Director of Construction}, P.E.
{Title}

cc: Jere A. Williams, P.E.
Materials and Tests, Division Director
TxDOT – MTD

Appendix F
Archived Versions

The following archived versions of this document are available.

- Effective January 2016–April 2018:
  ftp://ftp.dot.state.tx.us/pub/txdot-info/cst/qap_dbb_0116.pdf

GUIDE SCHEDULE OF SAMPLING & TESTING FOR DESIGN BID-BUILD (DBB) PROJECTS - (DBB Guide Schedule)

JUNE 28, 2019

Texas Department of Transportation

Using the Guide Schedule

Research of sampling and testing rates, listed for project tests in the following Guide Schedule, show that the Department's and the Contractor's risk of either rejecting "good" material or accepting "bad" material range from 20% to 40%.

To reduce this risk, we recommend that the sampling rate be increased during initial production. A four-fold increase in testing frequency will generally reduce risk to approximately 5%. The intent of increasing testing, at the start of production, is to insure the Contractor's processes are in control and to establish acceptability requirements early.

There is a need to increase the frequency of testing for high-variability materials and when testing results do not meet specifications. The Engineer may require the Contractor to reimburse the Department for costs resulting from failing test results, in accordance with the specifications.

Materials incorporated in TxDOT projects are subjected to various quality assurance procedures such as testing (as outlined in this document), certification, quality monitoring, approved lists, etc. The Engineer and testing staff should familiarize themselves with materials to be used before work begins by reviewing the specifications and this document. Discuss material testing requirements with the Contractor.

Other testing required by the specifications, but not shown in the DBB Guide Schedule, should be performed at a frequency necessary to provide adequate confidence that materials meet specifications.

NOTE—The TxDOT District Area Engineer or Director of Construction must submit a "Materials Certification Letter" at final acceptance of the project. The intent of this letter is to ensure that the quality of all materials incorporated into the project is in conformance with the plans and specifications, thus ensuring a service life equivalent to the design life. Any material represented by an acceptance test, that does not meet the criteria contained in the plans and specifications, is considered an exception. Exceptions must be listed in the materials certification letter. For projects with federal oversight, submit the materials certification letter (See Appendix D of DBB QAP) to the FHWA division administrator, with a copy to the Materials and Tests Division (MTD). For non-federal oversight projects, submit the material certification letter (Appendix E of DBB QAP) to the TxDOT District Engineer, with a copy to MTD. Refer to section 4.1 of the "Quality Assurance Program for Design-Bid-Build Projects" (DBB QAP).

Assuring the quality of the product and proper incorporation of materials into the project begins with proper sampling practices. Sampling, testing, and construction inspection must be performed collaboratively to assure the specific attributes of the finished product reflect quality workmanship. Sampling guidance for hot-mix asphalt is contained in Tex-225-F, "Random Selection of Bituminous Mixture Samples," and the respective specification for that material. All remaining materials are covered by method and materials specifications, to which the following applies.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows:

- Soils/flexible base: Vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed.
- Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
- Concrete (structural and miscellaneous): Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled. Tests for slump, air, and temperature should be done often to ensure the consistent control of the concrete production (not applicable to miscellaneous concrete).

This Guide Schedule is applicable to all contracts associated with the 2014 Standard Specifications.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES

			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
EMBANKMENT (CUTS & FILLS)	Liquid Limit (A)	Tex-104-E	During stockpiling operations, from completed stockpile, or project site (B)	Materials with PI ≤ 15: 10,000 CY	For Type A embankment or when required by the plans. This test may be waived for embankment cuts as directed by the Engineer. Determine a new liquid limit and plasticity index for each different material or notable change in material. Sample in accordance with Tex-100-E.
	Plasticity Index (A)	Tex-106-E		Materials with PI > 15: 5,000 CY	
	Gradation	Tex-110-E		Each 10,000 CY	When shown on plans. This test may be waived for embankment cuts, as directed by the Engineer. Sample in accordance with Tex-100-E.
	Moisture/Density	Tex-114-E		As directed by the Engineer	Not required for ordinary compaction. Determine a new optimum moisture and maximum density for each different material or notable change in material. Sample in accordance with Tex-100-E.
	In-place Density (A)	Tex-115-E	As directed by the Engineer	Fill: each 5,000 CY min. 1 per lift	Not required for ordinary compaction. Determine a new optimum moisture and maximum density according to Tex-114-E for each different material or notable change in material. Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Materials such as RAP, gypsum, lime, cement, and iron ore tend to bias the counts for nuclear density gauges.
				Cut: each 6,000 LF	
RETAINING WALL (NON-SELECT BACKFILL)	As shown above for Embankment (Cuts and Fills)		As shown above for Embankment (Cuts and Fills)	As shown above for Embankment (Cuts and Fills)	Sample in accordance with Tex-100-E.
RETAINING WALL (SELECT BACKFILL)	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	Required only for Type CS backfill. Test the fraction of material finer than the No. 200 sieve. Sample in accordance with Tex-400-E.
	Gradation	Tex-110-E			Required only for Drainage Aggregate. Sample in accordance with Tex-400-A.
		Tex-401-A			Required only for Select Backfill. Sample in accordance with Tex-400-A.
	Resistivity (A)	Tex-129-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	For material with resistivity between 1,500 and 3,000 ohm-cm, determine chloride and sulfate content, as specified in Item 423. Sample in accordance with Tex-400-A.

This is a guide for minimum sampling and testing.
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TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
RETAINING WALL (SELECT BACKFILL) (continued)	pH (A)	Tex-128-E	During stockpiling operations, from completed stockpile, or project site (B)	Each 5,000 CY	Sample in accordance with Tex-400-A.
	Magnesium Soundness	Tex-411-A	During stockpiling operations, or from completed stockpile	1 per source, per project	Test when backfill sources appear to contain particles such as shale, caliche, or other soft, poor-durability particles. Sample in accordance with Tex-400-A.
	Micro-Deval	Tex-461-A	During stockpiling operations, or from completed stockpile	1 per source, per project	May be used as an alternate to the magnesium soundness only when the % loss from the micro-deval is not greater than 20%. When the % loss from the micro-deval is greater than 20%, the magnesium soundness governs aggregate verification. Sample in accordance with Tex-400-A.
	In-place Density (A)	Tex-115-E	As directed by the Engineer.	1 per backfill lift, per wall	Not required for rock backfill. For walls greater than 500 ft. in length, perform one test per lift for every 500 ft. in length. (F) Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E for each different material or notable change in material and adjust the density accordingly.
UNTREATED BASE COURSES	Liquid Limit (A)	Tex-104-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	Sample in accordance with Tex-400-A.
	Plasticity Index (A)	Tex-106-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	
	Gradation (A)	Tex-110-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	Sample in accordance with Tex-400-A.
	Moisture/Density	Tex-113-E	From completed stockpile at the source (E)	Each 20,000 CY	Not required for ordinary compaction. Sample in accordance with Tex-400-A.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
UNTREATED BASE COURSES (Continued)		Wet Ball Mill (A)	Tex-116-E	From completed stockpile at the source (E)	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. Sample in accordance with Tex-400-A.
		Strength (A)	Tex-117-E	From completed stockpile at the source (E)	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. When base material is from a source where the District has a record of satisfactory triaxial results, the frequency of testing may be reduced to one per 30,000 CY. If any one test falls below the minimum value required, the frequency of testing will return to the original frequency of 20,000 CY. Sample in accordance with Tex-400-A.
		In-place Density (A)	Tex-115-E	As directed by the Engineer	Each 3,000 CY, min. 1 per lift	Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Materials such as RAP, gypsum, lime, cement, and iron ore tend to bias the counts for nuclear density gauges.
		Thickness (A)	Tex-140-E	As directed by the Engineer	Each 3,000 CY	Not required where survey grade control documents are compliant.
		Ride Quality (A)	Tex-1001-S Surface Test, Type B	Final riding surface of travel lanes		This applies to the final travel lanes that receive a 1- or 2-course surface treatment for the final surface, unless otherwise shown on the plans.
TREATED SUBGRADE AND BASE COURSES	SUBGRADE BEFORE TREATMENT	Organic Content	Tex-148-E	As directed by the Engineer	1 per project, per source or as directed by the Engineer	Required for existing subgrade material and material imported from a borrow source. Soil survey and geologic maps may be used to determine sampling locations. Sample in accordance with Tex-100-E.
		Sulfate Content	Tex-145-E	As directed by the Engineer	1 per 500 feet or 5,000 CY	Required for existing subgrade material and material imported from a borrow source. Soil survey and geologic maps may be used to determine sampling locations. Sample in accordance with Tex-100-E.
	NEW BASE MATERIAL	Liquid Limit (A)	Tex-104-E	During stockpiling operations, from completed stockpile, or windrow (B)	Each 5,000 CY	When central mix site or plant is used, windrow sampling may be waived. Sample in accordance with Tex-400-A.

This is a guide for minimum sampling and testing.
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TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
TREATED SUBGRADE AND BASE COURSES (Continued)	NEW BASE MATERIAL (Continued)	Plasticity Index **(A)**	Tex-106-E	During stockpiling operations, from completed stockpile, or windrow **(B)**	Each 5,000 CY	
		Gradation **(A)**	Tex-110-E	During stockpiling operations, from completed stockpile, or windrow **(B)**	Each 5,000 CY	Sample in accordance with Tex-400-A.
		Wet Ball Mill **(A)**	Tex-116-E	From completed stockpile at the source **(E)**	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. Sample in accordance with Tex-400-A.
		Strength **(A)**	Tex-117-E	From completed stockpile at the source **(E)**	Each 20,000 CY	Required for Grades 1–2 and 5, and as shown on the plans for Grade 4. When base material is from a source where the District has a record of satisfactory triaxial results, the frequency of testing may be reduced to one per 30,000 CY. If any one test falls below the minimum value required, the frequency of testing will return to the original frequency of 20,000 CY.
	LIME	Compliance with DMS-6350	Tex-600-J	During delivery to project	Commercial Lime Slurry: each 200 tons of lime Carbide Lime Slurry: each 100 tons of lime	Sample in accordance with Tex-600-J. Verify the source is listed on the current Material Producer List for Lime. Only materials appearing on the Material Producer List will be accepted. Sample frequency for Carbide Lime Slurry may be increased as directed by the Engineer. For Hydrated Lime and Quick Lime, project testing is not required but it is encouraged to sample and test the material at a rate of 1 per project as a best practice.
	CEMENT	Compliance with DMS-4600		Railroad car, truck, or cement bins		Verify the source is listed on the current Material Producer List for Cement. If not, sample and test in accordance with DMS-4600. **(C)**
	FLY ASH MATERIAL	Compliance with DMS-4615		Project samples at location directed by the Engineer		Verify the source is listed on the current Material Producer List for Fly Ash. Only materials from MTD approved sources appearing on the Material Producer List for Fly Ash will be accepted. Project testing is not required but it is encouraged to sample and test the material at a rate of 1 per project as a best practice. **(C)**

This is a guide for minimum sampling and testing.
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TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
TREATED SUBGRADE AND BASE COURSES (Continued)	COMPLETE MIXTURE	Pulverization Gradation	Tex-101-E, Part III	Roadway, after pulverization and mixing	As necessary for control	At the beginning of the project, one test must be made for each 4,500 CY or 6,000 tons until the Engineer is satisfied that acceptable pulverization results are being obtained. Sample in accordance with Tex-100-E.
		Moisture/Density Curve and Strength	Tex-120-E, Part II, or Tex-121-E, Part II	From roadway windrow after treatment (E)	Each 20,000 CY	Not required for ordinary compaction. Determine a new moisture/density curve for each different or notable change in material. Perform Tex-120-E, Part II, for Cement Treated Material, and Tex-121-E, Part II, for Lime, Lime-Fly Ash, or Fly Ash Treated Material. If Tex-120-E, Part I, Tex-121-E, Part I, or Tex-127-E is performed before the project, this test may be waived. Sample in accordance with Tex-100-E.
		Moisture/Density Curve and Strength	Tex-120-E, Part I, Tex-121-E, Part I, or Tex-127-E	From roadway before treatment	As necessary for control	Perform Tex-120-E, Part I, on cement treated material, and Tex-121-E, Part I, for lime-fly ash or fly ash treated material. Verifies the field strength by comparing results from the mix design. Performed at the direction of the Engineer and when notable change in material, as described above for Part II of the test procedures. Sample in accordance with Tex-100-E.
		In-place Density (A)	Tex-115-E	As directed by the Engineer	Each 3,000 CY, min 1 per lift	Determine the appropriate moisture/density curve for each different material or notable change in material. Correct the moisture contents measured by nuclear density gauge in Tex-115-E with the moisture contents determined in accordance with Tex-103-E, as necessary for control, for each different material or notable change in material and adjust the density accordingly. Stabilizers and materials such as RAP, gypsum, and iron ore tend to bias the counts for nuclear density gauges.
		Thickness (A)	Tex-140-E	As directed by the Engineer	Each 3,000 CY	Not required where survey grade control documents are used for compliance.

This is a guide for minimum sampling and testing.
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TABLE I – EMBANKMENTS, SUBGRADES, BACKFILL, AND BASE COURSES					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (F)	REMARKS
RECLAIMED ASPHALT PAVEMENT (RAP), CRUSHED CONCRETE, and RECYCLED MATERIALS	Sulfate Content	Tex-145-E	During stockpiling operations, from completed stockpile, or windrow	Each 5,000 CY	Required only for contractor furnished recycled material, including crushed concrete. Not required for RAP. Sample in accordance with Tex-400-A.
	Deleterious Material	Tex-413-A		Each 5,000 CY	Required only for contractor furnished recycled material, including crushed concrete. Sample in accordance with Tex-400-A.
	Decantation	Tex-406-A	During stockpiling operations, from completed stockpile, or windrow	Each 5,000 CY	Required only for contractor furnished RAP. Sample in accordance with Tex-400-A.

TABLE I – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager (SM), in the remarks field, and on the end of the Project Materials Certification Letter.
B	Engineer will select any of these locations or any combinations thereof with the provision that the initial sample will be obtained from the completed stockpile at the source and at least one out of ten consecutive samples will be taken at the project site (from the windrow for treated and untreated bases and embankments when possible).
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Soils/Flexible Base: For gradation, liquid limit, and plastic limit, vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed. • Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
E	The Engineer will sample from the completed stockpile at the source and test before placement.
F	Each test performed that is based on a quantity of material is considered "or fraction thereof" for calculating number of tests.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE IA – ASPHALT TREATED BASE (Plant Mix)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
AGGREGATE	Liquid Limit **(A)**	Tex-104-E	During stockpiling operations, from completed stockpile, or before mixing	Each 5,000 CY	Sample in accordance with Tex-400-A.
	Plasticity Index **(A)**	Tex-106-E	During stockpiling operations, from completed stockpile, or before mixing	Each 5,000 CY	
	Wet Ball Mill **(A)**	Tex-116-E	During stockpiling operations, from completed stockpile, or before mixing	1 per project, per source	Sample in accordance with Tex-400-A. **(B)**
LIME	Compliance with DMS-6350		During delivery to the project	Hydrated Lime: 1 per project Commercial Lime Slurry: each 200 tons of lime **(D)** Carbide Lime Slurry: each 100 tons of lime **(D)** Quick Lime: 1 per project	On projects requiring less than 50 tons, material from MTD approved sources may be accepted on the basis of Producer's Certification without sampling.
RECLAIMED ASPHALT PAVEMENT (RAP), and RECYCLED AGGREGATE	Decantation	Tex-406-A, Part I	During stockpiling operations, from completed stockpile, or before mixing	Each 10,000 CY	Sample in accordance with Tex-400-A.
RECYCLED ASPHALT SHINGLES (RAS)	Decantation	Tex-217-F,Part III	During stockpiling operations, from completed stockpile, or before mixing	Each 10,000 CY	Sample in accordance with Tex-400-A.
ASPHALT BINDER	Compliance with Item 300		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SiteManager (SM) Assistant. The Engineer must associate one QM sample per project in SM.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE IA – ASPHALT TREATED BASE (Plant Mix)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
TACK COAT	Compliance with Item 300		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample per project in SM.
COMPLETE MIXTURE	Gradation (A)	Tex-200-F, Part I	Plant Mix (C)	20,000 CY (25,000 tons)	Sample in accordance with Tex-222-F. Determine the gradation of the aggregate from the complete mixture tested in accordance with Tex-236-F.
	Laboratory Density (A)	Tex-126-E	Plant Mix (C)	20,000 CY (25,000 tons)	Sample in accordance with Tex-222-F.
	Percent Asphalt (A)	Tex-236-F	Plant Mix (C)	Each 1,500 CY (2,000 tons) or days production	Determine an asphalt content correction factor for ignition oven at a minimum of one per project. Sample in accordance with Tex-222-F.
	Indirect Tensile Strength – Dry	Tex-226-F	Plant Mix	1 per project, per design	Sample in accordance with Tex-222-F.
	Moisture Susceptibility	Tex-530-C	As directed by the Engineer	1 per project, per design	This test may be waived, when shown on the plans. Sample in accordance with Tex-222-F.
ROADWAY	In-Place Air Voids (A)	Tex-207-F	Roadway cores, as directed by the Engineer (C, D)	Each 3,000 CY, min 1 per lift	Not required for ordinary compaction or when air void requirements are waived. Sample in accordance with Tex-222-F.
	Ride Quality	Tex-1001-S Surface Test, Type A	On Finished Surface		Unless otherwise shown on the plans.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE IA – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager (SM), in the remarks field, and on the end of the Project Materials Certification Letter.
B	Engineer will select any of these locations or any combinations thereof with the provision that at least one out of ten consecutive samples will be taken at the project site (from the windrow for treated and untreated bases and embankments when possible).
C	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Soils/Flexible Base: Vary sampling between stockpiling operations, completed stockpile, windrow, and project site. Vary the time of day sampling is performed. • Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE II – SEAL COAT					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
AGGREGATE	Gradation (A)	Tex-200-F, Part I	Stockpile (At source or at point of delivery)	Each 1,000 CY	Rate may be reduced to each 2,000 CY if the Engineer approves a contractor quality control plan. Sample in accordance with Tex-221-F.
	L. A. Abrasion (A)	Tex-410-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use. Sample in accordance with Tex-221-F. (B)
	Magnesium Soundness (A)	Tex-411-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use. Sample in accordance with Tex-221-F. (B)
	Surface Aggregate Classification (A)	Tex-612-J, Tex-411-A	Stockpile	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample and test at 1 per 20,000 CY before use. Sample in accordance with Tex-221-F. (B)
	Pressure Slake (A)	Tex-431-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.
	Freeze Thaw (A)	Tex-432-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.
	Unit Weight	Tex-404-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.
	24 hr. Water Absorption (A)	Tex-433-A	Stockpile	1 per 20,000 CY	Same as above. Required only for lightweight aggregate. Sample in accordance with Tex-221-F.
	Crushed Face Count	Tex-460-A, Part I	Stockpile	1 per 20,000 CY	Only required for crushed gravel. Sample in accordance with Tex-221-F.
	Deleterious Material (A)	Tex-217-F, Part I	Stockpile	1 per 10,000 CY	Not required for lightweight aggregate. Sample in accordance with Tex-221-F.
	Decantation (A)	Tex-406-A	Stockpile	1 per 10,000 CY	Sample in accordance with Tex-221-F.
	Flakiness Index	Tex-224-F	Stockpile	Frequency as directed by the Engineer	Sample in accordance with Tex-221-F.

This is a guide for minimum sampling and testing.
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TABLE II – SEAL COAT					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (C)	FREQUENCY OF SAMPLING (D)	REMARKS
AGGREGATE (Continued)	Micro Deval	Tex-461-A	Stockpile	1 per project or as necessary for control	Compare result to published value listed on the current Material Producer List for BRSQC. Submit sample to MTD for Soundness and L.A. Abrasion testing when results differ by more than 3% points, unless otherwise directed by the Engineer. Sample in accordance with Tex-221-F.
	White Rock Count	Tex-220-F	Stockpile		Required only for Limestone Rock Asphalt. Not required when MTD provides inspection at the plant. Sample in accordance with Tex-221-F.
	Naturally Impregnated Bitumen Content	Tex-236-F	Stockpile		Required only for Limestone Rock Asphalt. Not required when MTD provides inspection at the plant. Sample in accordance with Tex-221-F.
PRECOATED AGGREGATE	Asphalt Content	Tex-210-F	Stockpile	Frequency as directed by the Engineer when a target value is specified	Sample in accordance with Tex-221-F.
ASPHALT BINDER	Compliance with Item 300		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample asphalt binder in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample per project in SM.

TABLE II – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
C	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, belt sampling, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

This is a guide for minimum sampling and testing.
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TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS
MINERAL AGGREGATE	COARSE AGGREGATE	Decantation (B)	Tex-406-A	From stockpile at concrete plant	Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		Sieve Analysis (A) (B)	Tex-401-A		Each 1,000 CY of concrete (each source)	Test combined aggregate when used. Sample in accordance with Tex-400-A.
		Deleterious Materials (B)	Tex-413-A		1 per project or as necessary for control	Sample in accordance with Tex-400-A.
		Los Angeles Abrasion (A) (B)	Tex-410-A		One, each source	Verify the value of the source, as listed on the current Material Producer list for CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. (C)
		Magnesium Soundness (A) (B)	Tex-411-A		One, each source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. (C)
	FINE AGGREGATE	Sand Equivalent (B)	Tex-203-F	From stockpile at concrete plant	1 per project or as necessary for control	Test combined aggregate when used. Sample in accordance with Tex-400-A.
		Organic Impurities (B)	Tex-408-A		1 per project, per source	Sample in accordance with Tex-400-A.
		Sieve Analysis (A) (B)	Tex-401-A		Each 1,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		Fineness Modulus (B)	Tex-402-A		1 per project or as necessary for control	Test combined aggregate when used. Test to confirm material variability when strength values are in question. Sample in accordance with Tex-400-A.
		Deleterious Material (B)	Tex-413-A		1 per project or as necessary for control	Test to confirm material variability when strength values are in question. Sample in accordance with Tex-400-A.

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TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS
MINERAL AGGREGATE (Continued)	FINE AGGREGATE (Continued)	Acid Insoluble Residue (A) (B)	Tex-612-J		Two, each source	Only for concrete subject to direct traffic. Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. (C)
SILICA FUME		Compliance with DMS-4630 (A)		Railroad car, truck, bags or silos	1 per project, per class of concrete (For each type and brand)	Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume. Sample in accordance with Tex-300-D.
METAKAOLIN		Compliance with DMS-4635 (A)		Railroad car, truck or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D.
MIX DESIGN		Compliance with Standard Specification Item 421.4.A		At source (if not approved)	Min. 1 design per class, per source	Verify if cement, fly ash, slag cement, and chemical admixture sources are listed on the Material Producer Lists. If not, sample and submit to MTD for testing. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT). Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash.
JOINT MATERIAL		Compliance with DMS-6300				Verify the source is listed on the Material Producer List for Joint Sealers. If not, sample and test before use in accordance with DMS-6310. (C) Sample in accordance with Tex-500-C.
CURING COMPOUND		Compliance with DMS-4650		Sampled at jobsite; tested by MTD. See remarks.	When requested by MTD	Only products listed on the Material Producer List for Concrete Curing Compounds will be allowed. When sample is requested by MTD, sample in accordance with Tex-718-I. Ensure container has been agitated and mixed before sampling. (C)
EVAPORATION RETARDANTS		Compliance with DMS-4650				Only products listed on the Material Producer list for Evaporation Retardants will be allowed. (C)
REINFORCING STEEL		Compliance with the Std. Specifications & Spec. Provisions	As Specified			Only materials from MTD approved sources listed on the Material Producer Lists for Reinforcing Steel Mills and Seven Wire Steel Strand will be allowed. (C)

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TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS
MECHANICAL COUPLERS	Compliance with DMS-4510	Tex-743-I	Sampled at jobsite; Tested by MTD	3 couplers per lot (500 couplers) for each type, model, bar size, and grade	Only materials from MTD approved sources listed on the Material Producer List for Mechanical Couplers will be allowed. **(C)**
LATEX	Compliance with DMS-4640 for concrete chemical admixtures				Verify the Latex is listed on the Material Producer List for Chemical Admixtures.
EPOXY	Compliance with DMS-6100, unless otherwise specified		Sampled at jobsite if not pre-approved by MTD.	1 per batch or shipment	Verify the source is listed on the Material Producer List for Epoxies and Adhesives. If not, sample and test before use in accordance with DMS-6100. Sample in accordance with Tex-734-I. **(C)**
CONCRETE	Compressive Strength **(A)**	Tex-418-A	At point of concrete placement	4 cylinders for each 60 CY per class, per day (For bridge railing and traffic railing, testing may be reduced to 4 cylinders per 180 CY per class regardless of days)	Sampling must be in accordance with Tex-407-A. Making additional cylinders for 56 day testing should be considered when slow strength gain mixtures are being used, or when the approved mix design has a history of failing to meet design strength at 28 days. Test two cylinders at 7 days, and if the average value is below the design strength, as defined in Item 421, Table 8, test the remaining 2 cylinders at 28 days, or 56 days if additional cylinder were not made. If the average value of the 2 cylinders tested at 7 days meets the minimum design strength, listed in Item 421, Table 8, the remaining cylinders are not required to be tested. If the average value of the 7 and 28 day cylinders are below the design strengths, and 56 day cylinders were made, test the remaining set at 56 days.
	Slump	Tex-415-A		1 test, per 4 strength specimens	Sample in accordance with Tex-407-A. Perform slump and temperature tests on the same load from which strength test specimens are made. Perform entrained air test only when entrained air concrete is specified on the plans. Check temperature of every load for bridge slabs and mass concrete placements. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.
	Entrained Air **(A)**	Tex-416-A or Tex-414-A			
	Temperature of Concrete **(A)**	Tex-422-A			

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TABLE III – HYDRAULIC CEMENT CONCRETE – STRUCTURAL (Classes: C, F, H, S, CO, K, LMC, or SS)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (D)	FREQUENCY OF SAMPLING (E)	REMARKS
CONCRETE (Continued)	Bridge Deck or Culvert Top Slab Thickness and Depth of Reinforcement	Tex-423-A, Part II	During dry run and during concrete placement (Bridge decks and direct traffic culverts)	1 per span	Min 6–Max 18 locations per span.

TABLE III – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	These Project Tests may be used for one or more projects being furnished concrete from the same plant during the same period.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Aggregates: Sample aggregates nearest the point of incorporation into the work. Vary sampling between stockpiling operations, completed stockpile, and if deemed necessary, railroad cars/trucks. Vary the time of day sampling is performed. • Concrete (structural): Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled. Test often for slump, air, and temperature to ensure the consistent control of the concrete production.
E	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

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TABLE IV – HYDRAULIC CEMENT CONCRETE – NON-STRUCTURAL CONCRETE (Classes: A, B, or E)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING (B)	FREQUENCY OF SAMPLING (C)	REMARKS
CONCRETE	Compressive Strength (A)	Tex-418-A	At point of concrete placement	2 cylinders per 180 CY, per class	Sampling must be in accordance with Tex-407-A. Strength will be determined by 7-day specimens.
MIX DESIGN	Compliance with the Standard Specification		At source if not approved	Min. 1 design per class, per source	Verify if cement, fly ash, slag cement, and chemical admixture sources are listed on the Material Producer Lists. If not, sample and submit to MTD for testing. Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT).
SILICA FUME	Compliance with DMS-4630		Railroad car, truck, bags, or silos	1 test per project, per class (for each type and brand)	Sample in accordance with Tex-300-D. Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume.
METAKAOLIN	Compliance with DMS-4635		Railroad car, truck, or silos	1 test per project, per class (for each type and brand)	Sample in accordance with Tex-300-D.

TABLE IV – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	For acceptance testing, especially that which directly determines payment for the Contractor, sampling personnel should provide randomness in sampling by avoiding patterned sampling routines. Examples of such sampling practices are as follows: • Concrete (miscellaneous): Always sample as near as practicable to the point of placement. For strength testing, vary the time of day or the number of truck from which the concrete is sampled.
C	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

This is a guide for minimum sampling and testing.
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TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)						
				PROJECT TESTS		
MATERIAL OR PRODUCT		TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS
MINERAL AGGREGATE	COARSE AGGREGATE	Decantation	Tex-406-A	From stockpile at concrete plant	Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		Sieve Analysis (A)	Tex-401-A		As necessary for control	Sample in accordance with Tex-400-A. Test combined aggregate when used.
		Deleterious Materials	Tex-413-A		Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		L.A. Abrasion (A)	Tex-410-A		One, each source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. (C)
		Magnesium Soundness (A)	Tex-411-A			
	FINE AGGREGATE	Sand Equivalent	Tex-203-F	From stockpile at concrete plant	Each 3,000 CY of concrete (Each source or combination of sources)	Sample in accordance with Tex-400-A. Test combined aggregate when used. At least one per week's production.
		Organic Impurities	Tex-408-A		1 per project, per source	Sample in accordance with Tex-400-A.
		Sieve Analysis (A)	Tex-401-A		As necessary for control	Sample in accordance with Tex-400-A. Test combined aggregate when used.
		Fineness Modulus (B)	Tex-402-A			
		Deleterious Material (B)	Tex-413-A		Each 20,000 CY of concrete (each source)	Sample in accordance with Tex-400-A.
		Acid Insoluble (A)	Tex-612-J		1 per project, per source	Verify the value of the source, as listed on the current CRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-400-A. (C)
MIX DESIGN		Compliance with the Standard Specifications Item 421.4.A		At source, if not approved	Min. 1 design, per class, per source	Verify if cement, fly ash, ground granulated blast furnace slag, and admixture sources are listed on the Material Producer List. If not, sample and submit to MTD for testing. Sample in accordance with Tex-300-D for cement and in accordance with Tex-733-I for fly ash. Water testing is contracted by the concrete supplier (commercial lab report to be reviewed by TxDOT).
SILICA FUME		Compliance with DMS-4630		Railroad car, truck, bags, or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D. Provide MTD with one 4 x 8 concrete sample for silica fume dispersion verification. Verify the source is listed on the Material Producer List for Silica Fume.

ATTACHMENT M
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TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS
METAKAOLIN	Compliance with DMS-4635		Railroad car, truck, or silos	1 per project, per class of concrete (For each type and brand)	Sample in accordance with Tex-300-D.
JOINT MATERIAL	Compliance with DMS-6310		Sampled at jobsite if not sampled at source by MTD; tested by MTD. See remarks.	1 per batch or shipment	Sample in accordance with Tex-500-C. Sampling may be waived when the source is listed on the Material Producer List for Joint Sealers. **(C)**
CURING COMPOUND	Compliance with DMS-4650		Sampled at jobsite; tested by MTD. See remarks.	When requested by MTD	Only products listed on the Material Producer List for Concrete Curing Compounds will be allowed. When sample is requested by MTD, sample in accordance with Tex-718-I. Ensure container has been agitated and mixed before sampling. **(C)**
EVAPORATION RETARDANTS	Compliance with DMS-4650				Only products listed on the Material Producer List for Evaporation Retardants will be allowed. **(C)**
REINFORCING STEEL	Compliance with the Std. Specifications & Spec. Provisions	As Specified			Only materials from MTD approved sources listed on the Material Producer List for Reinforcing Steel Mills and Seven Wire Steel Strand will be accepted. **(C)**
MULTIPLE PIECE TIE BARS	Compliance with DMS-4515	Tex-712-I	Sampled at jobsite if not sampled at source by MTD; tested by MTD. See remarks.	Refer to Tex-711-I for sampling rates	Only materials from MTD approved sources listed on the Material Producer List for Multiple Piece Tie-bars for Concrete Pavements will be allowed. Sample in accordance with Tex-711-I.
EPOXY	Compliance with DMS-6100		Sampled at jobsite if not pre-approved by MTD. See remarks.	1 batch per shipment	Verify the source is listed on the Material Producer List for Epoxies and Adhesives. If not, sample and test before use in accordance with DMS-6100. Sample in accordance with Tex-734-I. **(C)**
CONCRETE	Strength **(A) (B)**	Tex-448-A or Tex-418-A	At point of concrete placement	2 cylinders for every 10 contractor job control tests	Sample in accordance with Tex-407-A. When the contract requires the project testing to be by the Engineer, the frequency and job control testing will be in accordance with the item of work. Split sample verification testing used when contractor performs job control testing. When job control testing by the contractor is waived by the plans, the frequency of sampling will be one test (2 specimens) for each 3,000 SY of concrete or fraction thereof or per day and split sample verification testing will be waived. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.

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TABLE V – HYDRAULIC CEMENT CONCRETE PAVEMENT (Classes: P or HES)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OR TIME OF SAMPLING	FREQUENCY OF SAMPLING (D)	REMARKS
CONCRETE (Continued)	Slump	Tex-415-A	At time and location strength specimens are made	1 test for every 10 contractor job control tests.	Sample in accordance with Tex-407-A. Slump is not required for slip-formed pavement. Perform slump and temperature tests on the same load from which the strength specimens are made. Perform entrained air test only when entrained air concrete is specified on the plans. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.
	Entrained Air (A)	Tex-416-A or Tex-414-A			
	Temperature	Tex-422-A			
	Pavement Texture	Tex-436-A	Final Riding Surface of travel lanes	1 per day, per driving lane	Perform when carpet drag is the only surface texture required on the plans.
	Thickness	Tex-423-A, Part I	Center of paving machine	Every 500 feet	Methods other than Tex-423-A may be shown on the plans.
	Ride Quality (A)	Tex-1001-S Surface Test, Type B	Final riding surface of travel lanes		Engineer may verify contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.

TABLE V – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	When a project test does not meet the specified strength requirements and a reduced pay factor is assigned, document the analysis on the Letter of Certification of Materials Used.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

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TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348) (All testing as noted in Table VI may be waived for exempt production as defined by specification.)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS
COARSE AGGREGATE	L. A. Abrasion (A)	Tex-410-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (C)
	Magnesium Soundness (A)	Tex-411-A			
	Surface Aggregate Classification (A)	Tex-499-A		1 per project, per source	
	Micro Deval	Tex-461-A		1 per project, per aggregate source	Not required when the Rated Source Soundness Magnesium loss is 15 or less as listed on the current published BRSQC. If testing is required, sample in accordance with Tex-221-F.
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per source, per design	Does not apply to Item 342. Sample in accordance with Tex-221-F. The timing of when the test is performed is at the discretion of the Engineer.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder at hot- mix plant in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 (A)		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

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TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348)
(All testing as noted in Table VI may be waived for exempt production as defined by specification.)

			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min 1 design, per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted on individual materials, as necessary, for control.
COMPLETE MIXTURE	Asphalt Content (A)	Tex-236-F	Engineer Truck Sample (D)	Minimum 1 per Lot	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project. When Tex-236-F does not yield reliable results, use alternative methods for determining asphalt content, such as, Tex-210-F (ASTM D2172/AASHTO T164) and Tex-228-F (ASTM D4125/AASHTO T287).
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced (D)	1 per Sublot	Sample in accordance with Tex-222-F. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #. Does not apply to Items 342 and 348.
	Gradation (A)	Tex-200-F	Engineer Truck Sample (D)	Minimum 1, per 12 Sublots (E)	Sample in accordance with Tex-222-F. Determine correction factors for ignition oven using Tex-236-F at a minimum of one per project.
	Moisture Susceptibility	Tex-530-C	Truck Sample	1 per project	Sample in accordance with Tex-222-F, unless waived by the Engineer.
	Indirect Tensile Strength – Dry	Tex-226-F			Sample in accordance with Tex-222-F, unless waived by the Engineer. Does not apply to Items 342, 346, 347, and 348.
	Moisture Content	Tex-212-F, Part II	Engineer Truck Sample		Sample in accordance with Tex-222-F.
	Lab Molded Density (A)	Tex-207-F, Part I, VI, VIII	Truck Sample (D)	1 per Sublot 1 per Lot for Item 347	Sample in accordance with Tex-222-F. Contractor's required testing will be in accordance with specification requirements for the appropriate specification Item #.
	Drain Down Test (A)	Tex-235-F	Engineer Truck Sample	1 per 12 Sublots	Sample in accordance with Tex-222-F. Not required for Items 341, 344, and 347.
	Hamburg Wheel Test (A)	Tex-242-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Sample during production. Does not apply to Item 348 PFC-C, PFCR-C, and Thin Bonded Wearing Course –All Types.

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TABLE VI – HOT-MIX ASPHALT PAVEMENT (Items 341, 342, 344, 346, 347 and 348) (All testing as noted in Table VI may be waived for exempt production as defined by specification.)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION (Per Design)	FREQUENCY OF SAMPLING (E)	REMARKS
COMPLETE MIXTURE (Continued)	Cantabro Loss (A)	Tex-245-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Sample during production. Does not apply to items 341, 344, 346, and 347.
	Overlay Test (A)	Tex-248-F	Engineer Truck Sample	1 per project	Sample in accordance with Tex-222-F. Does not apply to Items 341, 344, and 348 PFC-C, PFCR-C, and Thin Bonded Wearing Course –All Types.
ROADWAY	In-Place Air Voids (A)	Tex-207-F, Part I, VI, VIII	Roadway (D)	2 cores per Sublot	Two cores taken per Sublot and averaged. Sample in accordance with Tex-222-F. Does not apply to Items 342, 347, and 348.
	Segregation Profile (A)	Tex-207-F, Part V	Roadway	1 per project	Not required when Contractor uses thermal imaging system. Does not apply to Items 342, 347, and 348.
	Joint Density (A)	Tex-207-F, Part VII	Roadway	1 per project	
	Thermal Profile	Tex-244-F	Immediately behind paver	1 per project	Not required when Contractor uses thermal imaging system.
	Ride Quality Test Type B (A)	Tex-1001-S	Final riding surface of travel lanes	1 per project	Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results for surface test Type A are not required to be reported.
	Permeability	Tex-246-F	Roadway	1 per project	Permeability is encouraged to use with items 342 and 348. Only applies to Item 347.
FABRIC UNDERSEAL	Compliance with DMS-6220		Sampled, tested, and approved by MTD		Sampling must be in accordance with Tex-735-I. Verify the source is listed on the current Material Producer List for Silt Fence, Filter Fabric, and Fabric Underseals. If not, sample and test before use in accordance with DMS-6220.

TABLE VI – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."
E	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

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TABLE VII – HOT-MIX ASPHALT PAVEMENT (Items 334) (Refer to DMS-9210, "Limestone Rock Asphalt (LRA)," for testing requirements for Item 330.)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY (Per Design) (F)	REMARKS
COARSE AGGREGATE	L. A. Abrasion (A)	Tex-410-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (D)
	Magnesium Soundness (A)	Tex-411-A			
	Micro Deval	Tex-461-A			Sample in accordance with Tex-221-F. Testing frequency may be reduced or eliminated based on a satisfactory test history.
	Surface Aggregate Classification (A)	Tex-499-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. SiteManager Quality Monitoring test documentation is accomplished by attaching an approved mix design.
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per source	Sample in accordance with Tex-221-F. The timing of when the test is performed is at the discretion of the Engineer.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 (A) (C)		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VII – HOT-MIX ASPHALT PAVEMENT (Items 334) (Refer to DMS-9210, "Limestone Rock Asphalt (LRA)," for testing requirements for Item 330.)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	**TEST FOR**	**TEST NUMBER**	**LOCATION**	**FREQUENCY (Per Design) (F)**	**REMARKS**
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min 1 design per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted in individual materials as necessary for control.
COMPLETE MIXTURE	Asphalt Content **(A)**	Tex-236-F	Engineer Truck Sample **(E)**	Minimum of 1 per 5,000 tons	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced **(E)**	1 per 5,000 tons	Sample in accordance with Tex-222-F.
	Gradation **(A)**	Tex-236-F	Truck Sample	Minimum 1 per 5,000 tons	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Boil Test	Tex-530-C		1 per project	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.
	Moisture Content	Tex-212-F, Part II	Truck Sample	1 per 5,000 tons	Sample in accordance with Tex-222-F. Performed by MTD at the point of production for payment calculations.
	Hydrocarbon-Volatile Content	Tex-213-F		1 per 5,000 tons	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.
	Lab Molded Density **(A)**	Tex-207-F		1 per 5,000 tons	Sample in accordance with Tex-222-F.
	Hveem Stability **(A)**	Tex-208-F		1 per 5,000 tons	Sample in accordance with Tex-222-F. The timing of when the test is performed is at the discretion of the Engineer.
ROADWAY	Ride Quality Test Type B **(A)**	Tex-1001-S	Final riding surface of travel lanes		Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VII – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project.
C	Or as called for in the Specifications.
D	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
E	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."
F	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

ATTACHMENT M
2019 Guide Schedule of Sampling & Testing for Design Bid Build Projects

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VIII – HOT-MIX ASPHALT PAVEMENT (Item 340)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY	REMARKS
COARSE AGGREGATE	L. A. Abrasion (A)	Tex-410-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer List for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (C)
	Magnesium Soundness (A)	Tex-411-A			
	Micro Deval	Tex-461-A	Stockpile (B)	1 per project, per source	Sample in accordance with Tex-221-F. Testing frequency may be reduced or eliminated based on a satisfactory test history.
	Surface Aggregate Classification (A)	Tex-499-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC, meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing before use in accordance with Tex-499-A. (C)
COMBINED AGGREGATE	Sand Equivalent	Tex-203-F	Stockpiles, hot bins, or feeder belts	1 per project, per design	Sample in accordance with Tex-221-F.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 (A)		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min. 1 design per Mix Type and Asphalt Grade	Verify that aggregates, recycled asphalt pavement, recycled asphalt shingles, mineral filler, asphalt binder, anti-stripping additives, and warm mix systems are on the Material Producer List where applicable and that they meet project specification requirements. Project sampling and testing may be conducted in individual materials as necessary for control.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VIII – HOT-MIX ASPHALT PAVEMENT (Item 340)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION	FREQUENCY	REMARKS
COMPLETE MIXTURE	Asphalt Content	Tex-236-F	Truck Sample (D)	Minimum of 1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Voids in Mineral Aggregates (VMA)	Tex-204-F	Truck Sample Plant Produced (D)	1 per day	Sample in accordance with Tex-222-F.
	Gradation (A)	Tex-236-F	Truck Sample	Minimum 1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Boil Test	Tex-530-C		1 per project	Sample in accordance with Tex-222-F, unless waived by the Engineer.
	Indirect Tensile Strength – Dry	Tex-226-F		1 per project, per design	Sample in accordance with Tex-222-F, unless waived by the Engineer.
	Lab Molded Density (A)	Tex-207-F	Truck Sample	1 per day	Sample in accordance with Tex-222-F.
	Hamburg Wheel Tracker (A)	Tex-242-F		1 per project	Sample in accordance with Tex-222-F. Sample during production.
ROADWAY	Air Voids (A)	Tex-207-F	Selected by the Engineer (D)	1 per day (2 Cores)	Sample in accordance with Tex-222-F.
	Ride Quality Test Type B (A)	Tex-1001-S	Final riding surface of travel lanes		Engineer may verify Contractor's results for surface test Type B. For traditional design-bid-build TxDOT projects, MTD has contracted with TTI to perform random ride verification at 10% frequency. Results from surface test Type A are not required to be reported.
FABRIC UNDERSEAL	Compliance with DMS-6220		Sampled, tested, and approved by MTD		Sample in accordance with Tex-735-I. Verify the source is listed on the current Material Producer List for Silt Fence, Filter Fabric, and Fabric Underseals. If not, sample and submit to MTD for testing before use in accordance with DMS-6220.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE VIII – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Perform random sampling as specified in Tex-225-F, "Random Selection of Bituminous Mixture Samples."

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

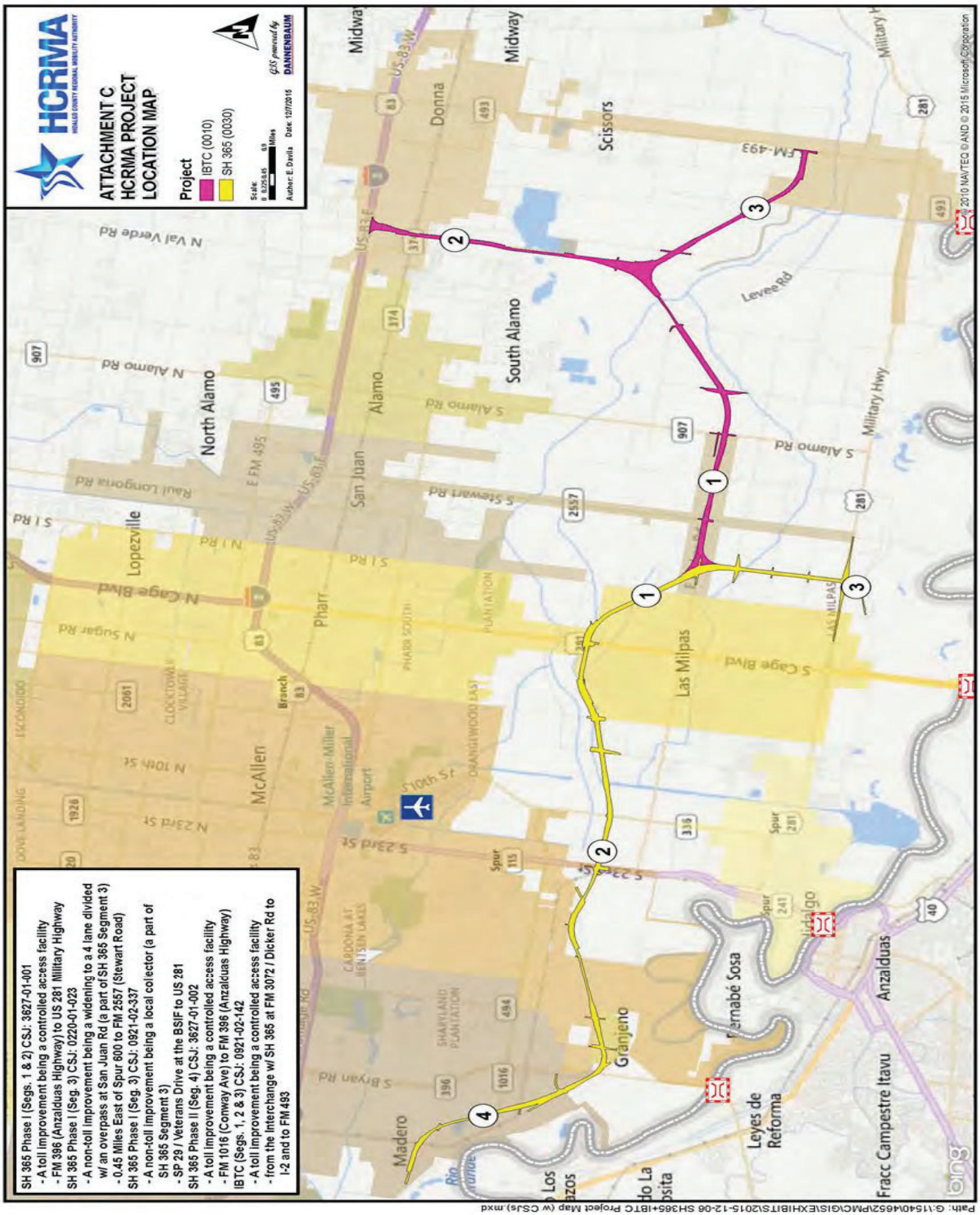
TABLE IX – MICROSURFACING (Item 350)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OF SAMPLING	FREQUENCY (Per Design)	REMARKS
AGGREGATE	Magnesium Soundness (A)	Tex-411-A	Stockpile (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing at 1 per project, per source. (C)
	Gradation	Tex-200-F, Part II		1 per project, per source	Sample in accordance with Tex-221-F.
	Crushed Face Count	Tex-460-A		1 per project, per source	Sample in accordance with Tex-221-F.
	Acid Insoluble (A)	Tex-612-J		1 per project, per source	Verify the value of the source, as listed on the current BRSQC, meets the project specifications. If not, sample and submit to MTD for testing before use in accordance with Tex-499-A. Sample in accordance with Tex-221-F. (C)
	Surface Aggregate Classification	Tex-499-A	Stockpile, or BRSQC (B)	1 per project, per source	Verify the published value of the source, as listed on the current Material Producer list for BRSQC meets the project specifications. If not, sample in accordance with Tex-221-F and submit to MTD for testing at 1 per project, per source. (C)
COMBINED BLEND	Sand Equivalent	Tex-203-F	Stockpile (B)	1 per project, per source	Sample in accordance with Tex-221-F.
ASPHALT BINDER	Compliance with Item 300 (A)		Sampling port nearest the storage tank	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample binder in accordance with Tex-500-C, Part II. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.
TACK COAT	Compliance with Item 300 (A)		Distributor	1 per project, per grade, per source	Test a minimum of one sample taken from the project. Sample tack coat in accordance with Tex-500-C, Part III. Verify that the binder is from a preapproved source when it arrives on the project, and that the lab number on the shipping ticket is within the valid dates shown on the MTD QM test report or in the SM Assistant. The Engineer must associate one QM sample, per project in SM.

This is a guide for minimum sampling and testing.
Testing frequency may need to be increased for high material variability or when test results approach specification limits.

TABLE IX – MICROSURFACING (Item 350)					
			PROJECT TESTS		
MATERIAL OR PRODUCT	TEST FOR	TEST NUMBER	LOCATION OF SAMPLING	FREQUENCY (Per Design)	REMARKS
MIX DESIGN	Compliance with applicable specification	Tex-204-F	At source (if not approved)	Min. 1 design per project	Submit to MTD for approval.
CEMENT	Compliance with DMS-4600				Verify the source is listed on the current Material Producer List for Cement. If not, sample and submit to MTD for testing before use in accordance with DMS-4600.
COMPLETE MIX	Asphalt Content	Tex-236-F	During production	1 per day	Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven using Tex-236-F at a minimum of one per project.
	Gradation	Tex-200-F, Part II Tex-236-F			Sample in accordance with Tex-222-F. Determine correlation factors for ignition oven use at a minimum of one per project.

TABLE IX – FOOTNOTES	
A	When this project acceptance test fails, but the product is accepted, document the reasons for acceptance in SiteManager, in the remarks field, and on the end of the Project Materials Certification Letter.
B	Sampling may be performed at the plant, quarry, or both. Aggregate properties may be re-tested at any time during the project. These project tests may be used for one or more projects furnishing hot mix with the same aggregate source.
C	Attach the corresponding QM test report for SiteManager projects to satisfy project sampling and testing requirements.
D	Each test performed, that is based on a quantity of material, is considered "or fraction thereof" for calculating number of tests.

Project Limits Exhibit



APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

I. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, ***(Title o(Modal Operating Administration),*** as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21. *[Include Modal Operating Administration specific program* ***requirements.[***

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds ofrace, color, or national origin. ***[Include Modal Operating Administration specific program requirements.]***

4. **Information and Repo11s:** The contractor will provide all information and reports required by the Acts,the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the ***(Title o(Modal Operating Administration)*** to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the *(Title of Modal Operating Administration)*, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non- discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the ***(Title o(Modal Operating Administration)*** may determine to be appropriate, including, but not limitedto:

    a. withholding payments to the contractor under the contract until the contractor complies; and/or
    b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respectto any subcontract or procurement as the Recipient or the ***(Title o(Modal Operating Administration)*** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes andauthorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.,* 78 stat. 252), (prohibits discrimination on the basis ofrace, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.),* (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.),* as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.),* (prohibits discriminationon the basis of age);
- Airport and Airway Improvement Act of1982, (49 USC§ 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 - 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to -ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

North American Industry Classification System (NAICS) Work Codes
For Federally Funded Contracts

Texas Department of Transportation
Professional Engineering Procurement Services (PEPS) Division
Professional Services Contracts for Engineering, Surveying and Architecture
Pre-Certified Work Categories and North American Industry Classification System (NAICS) Work Codes for Federally Funded contracts

Work Category No.	Category Name	Applicable Disadvantaged Business Enterprise (DBE) NAICS Work Codes
1.1.1	Policy Planning	541330 or 541320
1.2.1	Systems Planning	541330
1.3.1	Subarea/Corridor Planning	541330
1.4.1	Land Planning/Engineering	541330
1.5.1	Feasibility Studies	541330
1.6.1	Major Investment Studies	541330
1.7.1	Traffic Demand Modeling	541330
1.8.1	Public Involvement	541820 or 541330
2.1.1	Traffic Noise Analysis	541330 or 541620
2.2.1	Air Quality Analysis	541330 or 541620
2.3.1	Wetland Delineation	541330 or 541620
2.3.2	Conditional/Functional Assessment	541330 or 541620
2.4.1	Nationwide Permit	541330 or 541620
2.4.2	Clean Water Act Sec. 404 Permits	541330 or 541620
2.4.3	U.S. Coast G. & U.S. Army Corps Of Engr. Permits	541330 or 541620
2.5.1	Geological Assessment for Edwards Aquifer Recharge Zone	541330 or 541360 or 541620
2.6.2	Impact Evaluation Assessments	541330 or 541620
2.6.4	Biological Evaluations/Assessments	541330 or 541620
2.7.1	Sec. 4(F)/6(F) Evaluations	541330 or 541620
2.7.2	Historic Sites Sec. 4(f) Evaluations	541330 or 541620 or 541310
2.10.1	Archaeological Surveys, Doc., Excavation, Testing Rpts	541330 or 541620
2.12.1	Socio-Economic and Environmental Justice Analysis	541330 or 541620
2.13.1	Hazardous Materials Initial Site Assessment	541330 or 541620
2.14.1	Environmental Document Preparation	541330 or 541620
2.15.1	Historical Research of Extant Bldgs, Struct, Landsc., & Obj.	541310 or 541620
2.15.2	Historical Surveys & Doc. of Bldgs, Struct, Landsc., & Obj.	541310 or 541620
3.2.1	Route Studies & Schematic Design	541330
4.2.1	Roadway Design	541330
4.4.1	Freeway Interchanges	541330
4.5.1	Constructability Review	541330
4.6.1	3-D Design Visualization Services	541330 or 541340
5.2.1	Bridge Design	541330
5.3.1	Multi-Level Interchange Design	541330
5.5.1	Bridge & Non-Bridge Class Culvert and Inlet Design	541330
6.1.1	Routine Bridge Inspection Team Leader	541330
6.1.2	Routine Bridge Inspection Project Manager	541330
6.2.1	Complex Bridge Inspection Team Leader	541330
6.2.2	Complex Bridge Inspection Project Manager	541330
6.3.1	Tunnel Inspection Team Leader	541330
6.3.2	Tunnel Inspection Project Manager	541330
6.4.1	Underwater Bridge Inspection Team Leader	541330
6.5.1	Non-Destructive Testing	541330 or 541380
7.1.1	Traffic Engineering Studies (Traffic Counting 541990)	541330
7.3.1	Traffic Signal Timing	541330
7.4.1	Traffic Control Systems Analysis, Design & Implementation	541330
7.5.1	Intelligent Transportation System	541330
8.1.1	Signing, Pavement Marking & Channelization	541330
8.2.1	Illumination	541330
8.3.1	Signalization	541330
8.4.1	ITS Control Systems Analysis, Design & Implementation	541330
8.6.1	Rail-Highway Design	541330

North American Industry Classification System (NAICS) Work Codes
For Federally Funded Contracts

Work Category No.	Category Name	Applicable Disadvantaged Business Enterprise (DBE) NAICS Work Codes
9.1.1	Bicycle & Pedestrian Facility Development	541330
10.1.1	Hydrologic Studies	541330
10.2.1	Roadway Hydraulic Design	541330
10.3.1	Bridge Hydraulic Design	541330
10.4.1	Storm Water Pump Station-Hydraulic Design	541330
10.4.2	Pump Stations-Electrical	541330
10.4.3	Pump Stations-Structures	541330
10.5.1	Bridge Scour Evaluations And Analysis	541330
10.6.1	Coastal Hydraulic Design	541330
10.7.1	Riverine Hydraulic Design	541330
10.8.1	FEMA Regulations and Permits	541330
11.1.1	Roadway Construction Management And Inspection	541330
11.2.1	Bridge Construction Management And Inspection	541330
11.3.1	Construction Superintendent	541330
11.4.1	Environmental Inspections	541330 or 541620
11.5.1	Construction Scheduling Project Manager	541330
11.6.1	Construction Schedule Support- General	541330
11.7.1	Construction Schedule Support- Relating to Scheduling of Roadway Design	541330
11.8.1	Construction Schedule Support- Relating to Construction Management of Projects Including Bridges or Multi-level Interchanges	541330
12.1.1	Asphaltic Concrete Production	541330 or 541380
12.1.2	Portland Cement Concrete	541330 or 541380
12.1.3	Materials Engineering	541330 or 541380
12.1.4	Asphaltic Concrete Placement	541330 or 541380
12.1.5	Portland Cement Concrete Placement	541330 or 541380
12.1.6	Embankment/Subgrade/Backfill/Base Production	541330 or 541380
12.1.7	Embankment/Subgrade/Backfill/Base Placement	541330 or 541380
12.2.1	Plant Inspection And Testing	541330 or 541380
12.3.1	Coatings Inspection and Material Testing Project Manager	541330 or 541380
12.3.2	Coatings Inspection and Material Testing Task Leader	541330 or 541380
14.1.1	Soil Exploration	541330 or 541380
14.2.1	Geotechnical Testing	541330 or 541380
14.3.1	Transportation Foundation Studies	541330 or 541380
14.4.1	Building Foundation Studies	541330 or 541380
14.5.1	Evaluation & Design of Geotechnical Related Structures	541330 or 541380
15.1.1	Right of Way Surveys	541370
15.2.1	Design Survey	541370
15.2.2	Construction Survey	541370
15.3.1	Aerial Photogrammetry	541370
15.3.2	Terrestrial Photogrammetry	541370
15.3.3	Terrestrial LiDAR	541370
15.3.4	Mobile and Airborne LiDAR	541370
15.3.5	Horizontal and Vertical Control	541370
15.5.1	State Land Surveying	541370
16.1.1	Architecture	541310
16.2.1	Building and Facilities Architecture	541310
16.3.1	Landscape Architecture	541320
17.1.1	Structural Engineering	541330
17.2.1	Mechanical Engineering	541330
17.3.1	Plumbing Engineering	541330
17.4.1	Electrical Engineering	541330
17.5.1	Civil Engineering	541330
17.6.1	Hazardous Building Materials Assessment (Asbestos)	541330 or 541620
17.6.2	Hazardous Building Materials Assessment (Lead)	541330 or 541620

North American Industry Classification System (NAICS) Work Codes
For Federally Funded Contracts

Work Category No.	Category Name	Applicable Disadvantaged Business Enterprise (DBE) NAICS Work Codes
18.2.1	Subsurface Utility Engineering	541330
18.3.1	Utility Adjustment Coordination	541330 or 541618
18.4.1	Utility Engineering	541330
18.5.1	Utility Construction Management and Verification	541330
18.6.1	Utility Management & Coordination Oversight	541330
19.1.1	Value Engineering	541330
	Services used to support work done under the precertification work categories	
Support	Drilling and Coring Services (for Engineering services)	541330
Support	Boring, Core Drilling, Foundation Drilling, and Soil Test Drilling	238910
Support	Materials Testing (for Engineering services)	541330
Support	Materials Testing (for testing laboratories)	541380
Support	Traffic Control - Flagging	561990
Support	Traffic Control - Sign erection, highway, road, street or bridge	237310
Support	Traffic Counting	541330 or 541990
	Non-listed categories (NLC)	
NLCs	NLC - for Engineering	541330
NLCs	NLC - for Materials Testing	541330 or 541380
NLCs	NLC - for Construction Record Keeper	541330
NLCs	NLC - for Non-engineering, Non-architecture, Non-surveying	To Be Determined

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Item 3G

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

AGENDA RECOMMENDATION FORM

BOARD OF DIRECTORS	**X**	**AGENDA ITEM**	**3G**
PLANNING COMMITTEE		**DATE SUBMITTED**	**09/14/2021**
FINANCE COMMITTEE		**MEETING DATE**	**09/28/2021**
TECHNICAL COMMITTEE			

1. Agenda Item: **RESOLUTION 2021-43 – APPROVAL OF WORK AUTHORIZATION 1 WITH B2Z ENGINEERING, LLC FOR MATERIAL TESTING FOR THE 365 TOLLWAY PROJECT.**

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

   Approval of WA 1 for CMT Services with B2Z Engineering, LLC.

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

4. Budgeted: ___Yes ___No X N/A

5. Staff Recommendation**: Motion to approve Resolution 2021-43 - Approval of Work Authorization 1 with B2Z Engineering, LLC for Construction Material Testing Services for the 365 Tollway Project, as presented.**

6. Program Manager's Recommendation: ___Approved ___Disapproved **X** None

7. Planning Committee's Recommendation: ___Approved ___Disapproved **X** None

8. Board Attorney's Recommendation: ___Approved ___Disapproved **X** None

9. Chief Auditor's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Financial Officer's Recommendation: ___Approved ___Disapproved **X** None

10. Chief Development Engineer's Recommendation: ___Approved ___Disapproved **X** None

11. Chief Construction Engineer's Recommendation: **X** Approved ___Disapproved **X** None

12. Executive Director's Recommendation: **X** Approved ___Disapproved ___None

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

Memorandum

To: Pilar Rodriguez, P.E
HCRMA, Executive Director

From: Ramon Navarro, IV, P.E., C.F.M.
HCRMA, Chief Construction Engineer

Date: September 21, 2021

Subject: **RESOLUTION 2021-43 – APPROVAL OF WORK AUTHORIZATION 1 WITH B2Z ENGINEERING, LLC FOR MATERIAL TESTING FOR THE 365 TOLLWAY PROJECT**

GOAL

Approval and authorization to enter into contract for 2020-2021 Construction Material Testing Services with B2Z Engineering, LLC.

BASIS

B2Z Engineering, LLC. have agreed to provide construction materials testing to assure the materials incorporated into 2.32 miles of levee work on Phase II of 365 Toll highway construction project are subject to verification sampling and testing when required and meet project plans and specifications; and administering the HCRMA Quality Monitoring and Quality Assurance Program.

RECOMMENDATION

Staff recommends award of contract in the amount of $201,143.26 for a proposed three (3) year fixed period of time to conclude no later than December 13, 2025.

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- [x] CMT Services **B2Z Engineering, LLC**
- [ ] Environmental
- [ ] Engineering
- [ ] Geo-Technical
- [ ] Surveying

WORK AUTHORIZATION SUMMARY

RESOLUTION 2021-43

Work Authorization # 1 Supplemental # _____

Amount **$ 201,143.26**

Approved Work Authorizations:

Resolution No.	Description	Amount
	WA No. 1	
	WA No.	
	WA No.	
	WA No.	
	WA No.	

Subtotal from Cont. Page $ 0.00

Total Approved WA **$ 0.00**

Proposed Work Authorization and/or Supplemental
2021-43 **$ 201,143.26**

Goal and Options:

Approval of WA 1 for Construction Material Testing for the 365 Tollway Project.

Staff is recommending approval of this request in the amount of $ 201,143.26
Proposed total approved WA and/or Supplementals $ 201,143.26

R. Navarro IV, Cons Eng
Requested By:

HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

BOARD RESOLUTION No. 2021-43

APPROVAL OF WORK AUTHORIZATION 1 WITH B2Z ENGINEERING, LLC., FOR CONSTRUCTION MATERIAL TESTING IN THE 365 TOLLWAY PROJECT

THIS RESOLUTION is adopted this 28th day of September, 2021, by the Board of Directors of the HidalgoCounty Regional Mobility Authority at a regular meeting.

WHEREAS, the Hidalgo County Regional Mobility Authority (the "Authority"), acting through its Board of Directors (the "Board"), is a regional mobility authority created pursuant to Chapter 370, Texas Transportation Code, as amended (the "Act");

WHEREAS, the Authority is authorized by the Act to address mobility issues in and around Hidalgo County;

WHEREAS, on February 19, 2014, the Authority issued a solicitation for Statements of Qualification for Construction Material Testing Services for the Authority (the "Solicitation"); and

WHEREAS, on March 21, 2014 the Authority received responses to the Solicitation; and

WHEREAS, on April 23, 2014, Resolution 2014-38 authorized Authority staff to negotiate and enter into agreements with the top three scored firms (Raba Kistner Consultants Inc., L&G Laboratories and Terracon Consultants, Inc.) for Construction Material Testing Services (the "Services"); and

WHEREAS, on July 24, 2018, Resolution 2018-45 authorized Authority staff to procure one additional lab to provide additional Services; and

WHEREAS, on July 29, 2018, the Authority published a second Solicitation; and received three (3) responses, of which only one was deemed responsive;

WHEREAS, on September 25, 2018, the Authority authorized staff to negotiate contract terms for the Services to PaveTex Engineering LLC, dba PAVETEX, the sole responsive firm that met the professional services criteria set forth in the Solicitation;

WHEREAS, on August 21, 2020, the Authority received five (5) sealed statements of qualification packets. An internal committee of three HCRMA staff engineers ranked and reviewed; the Authority determined it necessary to negotiate contract terms to enter into negotiations with each of the ranked firms and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments; and

WHEREAS on October 27, 2020, the Authority approved Resolution 2020-28 Approval to enter into negotiations with each of the short-listed firms for Construction Material Testing for the Hidalgo County Regional Mobility Authority and further approach Board with recommended award and distribution of work in accordance to acceptable terms and conditions of assignments; and

WHEREAS the Authority finds it necessary to approve Resolution 2021-42 Approval of Award of Contract by and between the B2Z Engineering, LLC, and the Hidalgo County Regional Mobility Authority for Construction Material Testing Services; and

WHEREAS the Authority finds it necessary to approve Resolution 2021-43 Approval of Work Authorization 1 to the Professional Service Agreement with B2Z Engineering, LLC, for Construction Material Testing in the 365 Tollway Project in the amount of $201,143.26.

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

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

Section 2. The Board hereby approves Work Authorization 1 to the Professional Service Agreement with B2Z Engineering, LLC, in the amount of $201,143.26 for the 365 Tollway Project, hereto attached as Exhibit A.

Section 3. The Board authorizes the Executive Director to execute Work Authorization 1 with B2Z Engineering, LLC, as approved by the Board.

*****

PASSED AND APPROVED AS TO BE EFFECTIVE IMMEDIATELY BY THE BOARD OF DIRECTORS OF THE HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY AT A REGULAR MEETING, duly posted and noticed, on the 28th day of September 2021, at which meeting a quorum was present.

S. David Deanda, Jr., Chairman

Ezequiel Reyna, Jr., Secretary/Treasurer

Exhibit A

Work Authorization 1
to the
Professional Service
Agreement with
B2Z Engineering, LLC,
For
Construction Material Testing Services

WORK AUTHORIZATION NO. 1
AGREEMENT FOR ENGINEERING SERVICES

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of "Article V of that certain Professional Services Agreement for Engineering Services" (the Agreement) entered into by and between the Hidalgo County Regional Mobility Authority (Authority), and B2Z Engineering, LLC. (the Engineer).

PART I. The Engineer will perform engineering design services generally described as in accordance with the project description attached hereto and made a part of this Work Authorization. The responsibilities of the Authority and the Engineer as well as the work schedule are further detailed in exhibits C, E, and F which are attached hereto and made a part of the Work Authorization.

PART II. The maximum amount payable under this Work Authorization is $ 201,143.26 and the method of payment is unit cost/specified as set forth in Attachment E of the Agreement. This amount is based upon fees set forth in Attachment E, Fee Schedule, of the Agreement and the Engineer's estimated Work Authorization costs included in Exhibit D, Fee Schedule, which is attached and made a part of this Work Authorization.

PART III. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with Articles III thru V of the Agreement, and Attachment A, Section 1.

PART IV. This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate on 12/13/25, unless extended by a supplemental Work Authorization as provided in Attachment A, Section 1.

PART V. This Work Authorization does not waive the parties' responsibilities and obligations provided under "Article V of that certain Professional Services Agreement for Engineering / Design Services 365 Tollway Project / Segment 1 & 2.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER	**THE AUTHORITY**
_____	_____
(Signature)	(Signature)
Aisha Gonzalez .	Pilar Rodriguez
(Printed Name)	(Printed Name)
President	Executive Director
(Title)	(Title)
_____	_____
(Date)	(Date)

SH 365 Phase I (Segs. 1 & 2) CSJ: 3627-01-001
- A toll improvement being a controlled access facility
- FM 396 (Anzalduas Highway) to US 281 Military Highway

SH 365 Phase I (Seg. 3) CSJ: 0220-01-023
- A non-toll improvement being a widening to a 4 lane divided w/ an overpass at San Juan Rd (a part of SH 365 Segment 3)
- 0.45 Miles East of Spur 600 to FM 2557 (Stewart Road)

SH 365 Phase I (Seg. 3) CSJ: 0921-02-337
- A non-toll improvement being a local collector (a part of SH 365 Segment 3)
- SP 29 / Veterans Drive at the BSIF to US 281

SH 365 Phase II (Seg. 4) CSJ: 3627-01-002
- A toll improvement being a controlled access facility
- FM 1016 (Conway Ave) to FM 396 (Anzalduas Highway)

IBTC (Segs. 1, 2 & 3) CSJ: 0921-02-142
- A toll improvement being a controlled access facility
- from the Interchange w/ SH 365 at FM 3072 / Dicker Rd to I-2 and to FM 493

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

EXHIBIT C
HCRMA PROJECT LOCATION MAP

Project

- IBTC (0010)
- SH 365 (0030)

Scale: 0 0.225 0.45 0.9 Miles

Author: E. Davila Date: 12/7/2015

GIS powered by DANNENBAUM

Path: G:\1540\4652\PMC\GIS\EXHIBITS\2015-12-06 SH365+IBTC Project Map (w CSJs).mxd

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ATTACHMENT C
SERVICES TO BE PROVIDED BY THE ENGINEER

APPLICABILITY:

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

ABBREVIATIONS, ABBREVIATIONS, and DEFINITIONS:

HCRMA OR AUTHORITY shall mean Hidalgo County Regional Mobility Authority
PMC (GEC) shall mean Program Management Consultant (General Engineering Consultant) (Dannenbaum Engineering Corporation)
ENGINEER shall mean B2Z Engineering, LLC
TxDOT shall mean Texas Department of Transportation
FHWA shall mean Federal Highway Administration
IBWC shall mean International Boundary and Water Commission
USFWS shall mean United States Fish & Wildlife Service
THC shall mean Texas Historical Commission
SHPO shall mean State Highway Preservation Office
USACE shall mean United States Army Corps of Engineers
GSA shall mean General Services Administration
HCMPO shall mean Hidalgo County Metropolitan Planning Organization
FAA shall mean Federal Aviation Administration
MTP shall mean Metropolitan Transportation Plan
TIP shall mean Transportation Improvement Program
MUTCD shall mean Manual of Uniform Traffic Control Devices
AASHTO shall mean American Association of State Highway and Transportation Officials
LRFD shall mean Load & Resistance Factor Design
PS&E shall mean Plans, Specifications and Estimate
ACP shall mean Asphaltic Concrete Pavement
CSJ shall mean Control Section Job (highway project designation number)
ADP shall mean Advance Project Development

AAP	AASHTO Accreditation Program (AASHTO re:source and CCRL)
AASHTO	American Association of State Highway Transportation Officials
ACI	American Concrete Institute
AO	Area Office
AQMP	Aggregate Quality Monitoring Program
CAR	Corrective Action Report
CCRL	Concrete and Cement Reference Laboratory
CE&I	Construction Engineering and Inspection
CFR	Code of Federal Regulations
MTD	Materials and Tests Division
CMEC	Construction Materials Engineering Council
FHWA	Federal Highway Administration
HMA	Hot-Mix Asphalt
HMAC	Hot-Mix Asphalt Center
IA	Independent Assurance
L-A-B	Laboratory Accreditation Bureau
MPL	Material Producer List
QAP	Quality Assurance Program
QAT	Quality Assurance Test
QC	Quality Control
SM	SiteManager
TXAPA	Texas Asphalt Pavement Association
TxDOT	Texas Department of Transportation

ATTACHMENT C
SERVICES TO BE PROVIDED BY THE ENGINEER
PROJECT DESCRIPTION

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

County/HCRMA: Hidalgo County

CSJ number: 0921-02-368

Project/Description: Provide construction materials testing to assure the materials incorporated into 2.32 miles of levee work on Phase II of 365 Toll highway construction project are subject to verification sampling and testing when required and meet project plans and specifications; and administering Quality Monitoring and Quality Assurance Program. Overall project consists of construction of a 12.4 mile tolled facility from FM 396 & GSA Connector to US 281 (Military Highway), which consists of: of grading, flexible base, lime treated subgrade, asphaltic concrete pavement, concrete pavement, signing and pavement markings, cross culverts, bridge structures, retaining walls, illumination and toll equipment.

Length: 2.32 Miles (Approx)

Highway: 365TOLL

Limits: (See Location Map Attached)

Contract is for "indefinite delivery/indefinite quantity [IDIQ] set for a proposed three (3) year fixed period of time, during that period of time the Engineer will be responsible for an unlimited number of separate projects, or additional work on a current project to be issued on an individual work order basis.

The Engineer agency(s) must be accredited by one of the following FHWA- and TxDOT-approved accrediting bodies:

A. AASHTO Accreditation Program (AAP);
B. Construction Materials Engineering Council (CMEC); or
C. Laboratory Accreditation Bureau (L-A-B)

The Engineer shall have Texas Department of Transportation or Toll Authority/Regional Mobility Authority as well U.S. Army Corps of Engineers' construction material testing experience and is expected to work directly with the HCRMA Construction Division, namely, the Chief Construction Engineer for the Authority. The selected Engineer(s) may also perform certain tasks under the oversight of the HCRMA's General Engineering Consultant (Currently HDR Engineering Inc.).

To avoid an appearance of a conflict of interest, any qualified Engineer agency (laboratory) shall perform only one of the following types of testing on the same project:

A. Quality control testing;
B. Quality acceptance testing;
C. Owner verification testing;
D. Independent assurance testing; or
E. Referee testing.

The selected Engineer(s) shall have adequate experienced staff and a workload free from constraints to provide the necessary construction material testing for the HCRMA. Staff expertise is to include a Licensed Professional Engineer and certified, experienced staff proficient with TxDOT testing procedures, sampling and testing

schedule, and the latest ASSHTO, ASTM and ACI testing requirements [Appendix A] performed and executed as per 2019 TxDOT Quality Assurance Program (~~DB-QAP~~ / DBB-QAP) / 2019 Guide Schedule of Sampling & Testing for Design Bid-Build Projects.

Engineer will compose and submit an annual report to the Federal Highway Administration (FHWA) summarizing the results of HCRMA's project specific systems approach program. This report identifies:

A. Number of sampling and testing personnel evaluated by the systems approach IA testing;
B. Number of IA evaluations found to be acceptable;
C. Number of IA evaluations found to be unacceptable; and
D. Summary of any significant system-wide corrective actions taken.

The Engineer will be responsible for maintaining documentation of all individuals qualified under their authority who perform required tests for acceptance of materials. A qualification summary listing all tests for which an individual is qualified will be available and printed at HCRMA's request. Documentation to be maintained for all qualified personnel includes:

A. Copies of any certificates issued by ACI and TXAPA ;
B. Original written examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, score, and date taken;
C. Original performance examinations for test procedures administered to each technician by the TxDOT qualifying authority, with clear identification of technician's name, qualifier's name, qualification status, and date;
D. Results of annual split/proficiency testing administered by the TxDOT qualifying authority for each technician.

Engineer shall perform Quality Control / Quality Assurance sampling and testing and comply with Laboratory Qualification Program and will be evaluated under the Independent Assurance Program, as described in the 2019 QAPDBB [Attachment L]. Quality Control test results will be validated by verification test results obtained from independently taken samples. IA personnel or their designated agents will perform Quality Assurance verification sampling and testing.

1. The Engineer shall perform all sampling and testing of components and materials in accordance with the standard specifications, and all other standard and special specifications and special provisions applicable in this agreement. Meet the minimum sampling frequencies set out in the TxDOT 2019 Guide Schedule for Sampling and Testing forDesign Bid-Build Projects. The testing shall include the following materials and all the components of the materials listed. The estimated number of samples and tests are based on quantities in the executed construction contract.
2. The Engineer shall ensure the testing is completed and input into ProjectWise. NOTE: The General Contractor is responsible for Quality Control (QC) testing of Item 360, Concrete Paving. The Engineer shall be responsible for Quality Assurance (QA) testing of Item 360, Concrete Paving.
3. The Engineer shall provide certified personnel, outlined in their internal, AASHTO-approved, Quality Control (QC) Manual that are knowledgeable of all materials testing procedures. All personnel performing acceptance tests must provide certifications and must maintain the certifications throughout the project. The HCRMA reserves the right to require replacement of any technician during this contract if performance is determined to be unsatisfactory or the technician fails to maintain appropriate certifications.
4. Engineer's laboratory will be qualified by the HCRMA qualifying authority in accordance with Section 3, Laboratory Qualification Responsibility of the Texas Department of Transportation (TxDOT) Quality Assurance Program (Manual Notice: 2005-1), and be AASHTO accredited under the AASHTO Accreditation Program (AAP) throughout the life of the project. Engineer shall transmit, to the HCRMA, a copy of AAP accreditation certificate(s) upon receipt by the testing laboratory.
5. The Engineer shall provide technicians certified in accordance with TxDOT Quality Assurance Program for Construction (QAP) or other State approved programs, such as the Texas Asphalt Pavement Association (TxAPA) for Hot Mix Asphalt, and the Soils and Base Certification Program, as listed.

6. The Engineer shall provide certified technicians to perform the following tests:

A. Hot Mix Asphalt Testing:
   a. Level l-A
   b. Level l-B
   c. Hot Mix Asphalt Testing • Level II
   d. All other tests in the Manual of Testing Procedures 200-F Series or ASTM Procedures not covered in Level l-A, Level l-B, or Level II

B. Concrete Testing:
   a. QAP Program for Concrete Testing
   b. Other tests outlined in the Manual of Testing Procedures 400-A Series or ASTM Procedures that are not included in the QAP Program

7. The Engineer shall perform testing on the project. These tests include all tests listed in State's Guide Schedule of Sampling and Testing dated 2015. Follow the State's Guide Schedule of Sampling and Testing to establish testing frequencies. Testing frequencies may be increased as directed by the HCRMA.
8. The Engineer shall notify the HCRMA, to determine if any tests may be waived
9. The Engineer shall attend preconstruction QA and QC testing meetings prior to beginning work.
10. The Engineer shall:

A. Review and recommend approval or rejection of the Quality Control (QC) sampling and testing documentation submitted by the General Contractor for compliance with applicable State and Federal regulations, standards, and contract requirements.

B. Verify all tested materials used meet specifications, or identify materials that do not meet specifications and recommend action which should be taken.

C. Certify that all tested materials used during construction meet the specifications as outlined in the Site Manager Support System.

D. Work closely with the HCRMA to resolve all material discrepancies before the next monthly estimate is processed by utilizing the XiteReport in Site Manager.

E. Enter all test data in Site Manager.

F. Enter all mix designs, concrete and asphalt, provided by the General Contractor into Site Manager.

G. The Engineer shall report failing tests to the HCRMA within twenty-four (24) hours.

SUMMARY OF DELIVERABLES:

The Engineer shall provide the following:

1. Monthly Progress Reports
2. Quarterly Material Test Reports
3. Sampling and testing personnel qualification
4. Final document file (maintained in project control system during project execution. Final structure of file will be determined during project implementation, an example of content is provided below)

A. Construction Oversight Documentation
   a. Testing reports and Testing documentation as applicable
   b. Test Exception Letter
   c. Certification Verifications
   d. Photographs

B. Project Correspondence File (Design and Construction)
   a. E-mail files
   b. Letters
   c. Memos
   d. Meeting Minutes
   e. Monthly Deficiency Reports to track material issues (one (1) per month)
   f. Misc. correspondence

ATTACHMENT C-1

IBWC REQUIREMENTS

International Boundary and Water Commission

United States and Mexico

United States Section

4191 N. Mesa, El Paso, TX 79902

Requirements for Projects On or Affecting a USIBWC Levee

The purpose of this document is to present additional criteria and guidelines for the application, review, approval, and inspection of construction activities not performed by or for the United States Section, International Boundary and Water Commission (USIBWC) which affects USIBWC levees or flood control structures. See document named *Design and Construction Requirements for Work within USIBWC ROW* for general requirements covering all projects within USIBWC's ROW.

General Conditions for all Projects

- Within this document, levee may mean earthen levee, concrete floodwall, or any combination of such which acts as a flood control structure.
- All materials used shall have National Science Foundation (NSF) 61 rating. Metals, concrete, rocks, and soil are not required to meet this requirement.
- All reports, drawings, specifications, and test results shall be signed and sealed by a professional engineer licensed to practice in the state where the work will be performed.

Work on Levees

Work impacting USIBWC levees and appurtenant structures cannot negatively affect their flood control abilities. Proponents are not required to analyze our levees beyond their project and its impacts, but work must ensure that USIBWC's levee meets and/or exceeds all of the requirements of the Federal Emergency Management Agency's (FEMA) 44 CFR §65.10(b) and of the US Army Corps of Engineers' Engineering Manual (EM) 1110-2-1913 entitled "*Design and Construction of Levees*."

- The entire levee portion impacted by Proponent's project shall be analyzed for concurrence with 44 CFR §65.10(b). All instances where Proponent's project causes or modifies a "break" in the levee caused by a bridge, roadway, or similar structure, Proponent shall certify in their design report that this break has been analyzed and will meet all 44 CFR §65.10(b) requirements.
  - If the "break" will not meet 44 CR §65.10(b) requirements, then modifications shall be designed to ensure compliance. These modifications shall be coordinated with the owner of said "break."
- All concrete structures in USIBWC levees or acting as a flood control structure shall be designed per American Concrete Institute (ACI) 350, Code Requirement for Environmental Engineering Concrete Structures.
- Structures shall not be placed within 15 feet (or USIBWC's ROW whichever is smaller) from the levee toe.
- A minimum of 15 feet (or USIBWC's ROW whichever is smaller) from the levee toe shall slope away from the levee to prevent ponding of water against the levee. Please note that it is not USIBWC's intention to create a "toe road" on the riverside of the levee.
- The Proponent project must meet and/or exceed all of the requirements of the US Army Corps of Engineers' Engineer Pamphlet (EP) 1110-2-18, "*Guidelines for Landscaping Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures*."
- Wherever work disturbs the levees, the levees side slopes shall be capped with 6 inches of topsoil. The topsoil shall be of sufficient quality to promote growth of native grasses.
- All areas disturbed by construction shall be revegetated. The areas shall be watered to ensure germination and to maintain vegetative growth until the plants have reached their full height or 6 inches, whichever is smaller. See document named *Project Seed Mixes* for details on required seed mixes and planting guidelines.

Minimum Height of Levee

- USIBWC will provide the base flood elevation (BFE) for the levee impacted by the Proponent's project. The BFE may exceed the 100 year flood water surface elevation.
- The top of the levee's impervious section shall be the higher of the existing ground surface or the calculated BFE plus 3 feet. The 3 feet is measured after settlement is taken into account.
- Hard structures such as floodwalls that cannot be raised if the BFE changes, must be set at least 4 feet above the calculated BFE.
- The gravel O&M road material shall not be considered as part of the impervious section, but shall be considered as part of the levee height when calculating overhead clearances.

Levee Closure Structures

- All levee openings shall be designed to meet 44 CFR §65.10(b). Culverts, pipes, utility crossing, road crossing, and bridges are considered levee openings. Design checks shall be included in the Design Report.
- All structures that pass through or under the levee shall be evaluated to determine if structure and closure device meets 44 CFR §65.10(b). If any closure device requires maintenance or rehabilitation, it shall be included in the construction documents.
- All closure devices must be able to be safely operated when water is at the BFE. If modification is required, it shall be included in the construction requirements.
- If any pipes or boxes that cross the levee require new closure devices, only slide/sluice type gates shall be used. Flap gates are not acceptable.

Levee Side Slopes

- The angle of the levee side slopes shall be determined by the design, but site constraints in some sections of the project must be taken into account. For maintenance, USIBWC prefers slopes 3H:1V or flatter. Slopes steeper than 3H:1V shall be minimized.
- USIBWC equipment cannot mow a slope steeper than 2.5H:1V. Proponent shall take this into account when designing the levee slopes. If slopes are steeper than 2.5H:1V, measures shall be taken whereby the slope does not require mowing.

Levee Alignment

- The levee may not be moved closer to the river without approval of USIBWC.
- Relocating the levee will require Proponent to provide a Drainage Report indicating the base flood water surface elevation does not increase and that the maximum deflection is 5%.
- If USIBWC agrees with the proposal to relocate the levee, concurrence with Mexico must be reached if the work is along an international reach of the levee. This concurrence may require weeks or months of communications. Proponent may continue working on the design during this period, but in no instance, shall construction proceed until concurrence is reached with Mexico.

Utilities

- Utilities include privately, publicly, or cooperatively owned lines, wires, pipelines, facilities, and systems for producing, transmitting, or distributing communications, power, heat, gas, oil, water, waste, stormwater, or irrigation water.
- In no instance shall a utility hinder or impair USIBWC's ability to perform maintenance or flood operations.
- Utilities may be routed on top of the levee. A utility on top of the levee shall be designed to withstand AASHTO HS25 loading and shall be protected from damage from grading and other levee maintenance. The utility or its

associated cover must allow passage of a loaded lowboy semi trailer. The Proponent must acknowledge that they will be required to raise their utility if the USIBWC raises the levee.

- Pipeline utilities crossing the levee shall include closure devices on the landside of each levee.
- Utility excavations shall meet the design and construction requirements for levees including the minimum testing requirements.
- Utilities shall not remain within the levee prism after construction. Proponent shall design for relocation of utilities including coordination with utility owners. The levee prism includes all components above the floodplain elevation as well as the floodplain/landside toe (can be assumed to be 15 feet from levee toe) and subsurface that carries flood seepage under the levee.
    - USIBWC may make rare exceptions when placement of the utility does not affect USIBWC's ability to operate, maintain, and raise the levee. In these instances, the utilities shall be located in the landside half of the levee or completely under the levee.
    - Utility must meet requirements of USACE's EM 1110-2-191 Chapter 8.
    - In no instances shall utility be "plowed" into levee. Installation by tunneling or jacking is also strictly prohibited.
    - The Design Report, including a seepage analysis, shall certify that the utilities within the levee do not expose the levee to any risks associated with 44 CFR §65.10(b)(3) and (4).
- Utilities running parallel to the levee shall be set at least 15 feet off of the existing levee toe. This includes underground utilities.
- Relocated utilities shall be completely removed from USIBWC's ROW instead of being abandoned in place.
    - USIBWC only leaves abandoned utilities within levees if they provide no risk to the levee and are extremely difficult to remove. If utility is abandoned in place, Design Report shall certify that the utility does not expose the levee to any risks associated with 44 CFR §65.10(b). Proponent may need to design changes to utility prior to abandonment (e.g. fill structure with flowable fill).
- The Proponent shall install and maintain suitable markers or signs indicating the location of the utility where it crosses the levee, pilot channel, or river and where the utility changes direction within USIBWC's ROW. The markers or signs should be a minimum height of 5 feet. No markers are to be installed on the levee slopes or within 15 feet from the toe of the levee.
- See document named *Design and Construction Requirements for Work within USIBWC ROW* for bridge and additional utility crossing requirements.

Overhead Wire Utility Crossings

- The overhead transmission lines shall be constructed and maintained in such a manner as to provide a minimum vertical clearance (at the temperature of 60° Fahrenheit) of not less than 28 feet above the levee height and at least 22 feet above the floodway BFE.
- No structure (poles or guy wires) shall be located closer than 35 feet from the toes of any levee. No structure (poles or otherwise) shall be located closer than 15 feet from the top of any channel bank.
- Guy wires may be anchored within the USIBWC ROW and shall be installed in such a manner that they do not interfere with the operation and/or maintenance of the channels, levees, or related structures. A witness post, not less than 5 feet high, shall be installed by each anchor or the cable shall be wrapped up to a point at least 5 feet above the ground with a brightly colored material to make it obviously visible.
- It shall be the Proponent's responsibility to maintain the areas clear of brush within a 10 foot radius of each pole, under the guy wires, and around the anchors on both sides of the levee and within the USIBWC ROW limits.

Utilities Crossing Under Levees

- The Design Report, including a seepage analysis, shall certify that the utilities below the levee do not expose the levee to any risks associated with 44 CFR §65.10(b)(3) and (4).
- When installing utilities by directional drilling, the Proponent shall furnish information addressing the following concerns and give specific dimensions, distances, pressures, weights, and all other pertinent data.

- Comprehensive understanding of the subsurface soil and groundwater conditions to a minimum depth of 20 feet below the lowest pipe elevation
- Locations of the pipe penetration entry and exit
- allowable uplift pressures
- Drilling procedure and onsite quality control monitoring during drilling operation
- Grouting of the pipe annulus, backfilling of any excavated areas, and repair of the construction-staging areas

- When utility installation is under both levees and the river or pilot channel, the entry and exit location, when located landside of a levee, shall be set back sufficiently from the landside levee toe to ensure that: (a) the utility reaches its maximum depth, and (b) the utility is no less than 300 feet landside from the levee centerline. The utility shall be constructed in a straight alignment for a minimum distance of 15 feet beyond the landside of the levee toe.

O&M Road on top of Levee

- The finished gravel O&M road shall be at least 16 feet wide. The O&M road shall be on top of any earthen levees or on the landside of any floodwalls as well as on all ramps.
- The gravel surface of the O&M road shall be a minimum of 6 inches thick and be designed as an aggregate roadway surface (i.e., gravel road), not as general flexbase below asphalt. USIBWC can provide our standard specifications for this gravel but use of this specification is not required. Slag is not allowed as gravel on USIBWC property.
- The finished gravel road shall slope 2% toward the riverside if on an earthen levee and 2% toward the landside if behind a floodwall. A consistent cross slope is preferred to a crown since the crown is not maintained during grading.
- Geotextile cannot be placed between the levee's impervious section and the gravel O&M road material.
- No structure may end within or adjacent to the edge of the O&M road unless it is safe for passing traffic (e.g. headwall parallel to levee) and can be regularly graded with a motor grader. USIBWC may require signs or reflectors (e.g. OM4-3, OM2-2V, or OM3) meeting Federal Highway Administration's (FHWA) Manual of Uniform Traffic Control Devices (MUTCD) adjacent to any such structures.

Ramps

Riverside ramps along the levee shall be designed as sections cut out of the levee instead of as roads skewed away from the levee. See USIBWC Standard Drawing SD-25084 for reference. Some ramps adjacent to structures will have different geometry due to site conditions. Licensed/permitted landside ramps shall be designed to meet the site conditions but in no way shall negatively affect the levees.

Minimum Soil Requirements

Project designers may establish more stringent standards, but soil (clay) used in construction or repair of the levees shall meet at these requirements:

- Soils - Clay (CL or CH per ASTM D2487)
- Flowable fill (controlled low strength materials, CLSM, flowfill, and soil cement) may be used as backfill as long as the Design Report evaluates the seepage through the levee around the flowable fill and it will not affect USIBWC's operations and maintenance of the levee.
- Crumb Test (ASTM D6572) - Grade 1 (non-dispersive)
- Pinhole Test (ASTM D4647) - ND1 or ND2
- Double Hydrometer (ASTM D4221) - Percent dispersive less than thirty (30)
- At least sixty percent (60%) passing a US Standard No. 200 sieve

- One hundred percent (100%) of the dry material passing the one (1) inch sieve
- Borrow source in situ clay shall not be blended with any other material if it meets USIBWC's minimum requirements.
- All material placed at or greater than optimum moisture

Required Reports

- A Design Report shall be provided proving that this project meets 44 CFR §65.10(b) and USACE EM 1110-2-1913 and that it will not negatively affect any USIBWC structures. See document named *Design Report Requirements for USIBWC Review* for guidance on Design Reports.
- If project, or part of project, is within a river floodplain, a Drainage Report is required indicating that the BFE does not increase and that the maximum deflection of flood flows by the project is 5% or less.
- Work within the floodplain will require concurrence with Mexico if work is on an international reach of a river. This concurrence may require weeks or months of communications. Design work may continue during this period, but in no instance, shall construction proceed until concurrence is reached with Mexico.
- See documents named *Technical Drainage Report Requirements for USIBWC Review* and *Two-Dimensional Hydraulic Modeling Methodology* for guidance on Drainage Reports and hydraulic modeling.

Drawings

- USIBWC property (ROW) boundary shall be clearly shown.
- Project coordinate system, survey units used, datum, and grid to ground conversion shall also be shown.
- Any drawings showing project or project component interaction with USIBWC structures shall be drawn to scale.

Geotechnical Testing/Boreholes in Levees

- All boreholes within USIBWC levees shall be backfilled with a bentonite slurry.
- Other geotechnical sampling locations shall be backfilled with existing levee material but Proponent shall remember than levees are topped with a gravel O&M road.
- If new material is required for backfill, it shall meet USIBWC's minimum soil requirements

Construction/Materials Testing

- Minimum Levee Testing Requirements are available in the document named *Minimum Levee Testing Requirements*. These requirements are the minimum; if the project designer determines that more frequent testing or more stringent is requirements are necessary, they shall govern. All tests shall be signed and stamped by a registered engineer. Upon completion of the construction, a copy of all completed tests and associated forms shall be provided to USIBWC.
- Method B shall be used on all Proctors (D698 and D1557).
- Grain Size Analysis (ASTM D7928) shall use sieves sized 2 inch, 1 inch, 3/8 inch, 4, 10, 20, 40, 60, 140 and 200 at a minimum.
- Grain size analysis (ASTM D7928) includes hydrometer testing of material below 200 sieve.

Levee Construction or Repair

- Construction shall be performed by excavating into the existing levee to create a series of keys and benches with the bench placed within the slope rather than constructed at the toe of the slope. Benches shall not exceed a two (2) foot high vertical section.

- Fill shall be placed in horizontal layers only. The levee embankment is to be raised in eight (8) inch loose (six [6] inch compacted) lifts. The fill material placed within the levee embankment slopes shall be compacted as required. If the minimum compaction is not achieved, the lifts shall be reworked. To ensure proper compaction of the sides of the levee, the compacted fill for the levee embankment is to be overbuilt a minimum of two (2) feet past the final slopes and grades and then trimmed to the finished grade. The overbuild is not required within 4 feet of any structure.
- Surfaces to receive fill shall be monitored for moisture content. Whenever the surface to receive fill is either too dry or too wet, the moisture content of the surface shall be appropriately adjusted prior to placing the next fill lift. Once the levee has been placed to required lines and grades and has passed all required soils and density tests, the material shall be allowed to dry out. Levee slopes shall be trimmed to final slopes and grades while clay is still within allowable moisture content for placement. To ensure a competent finished top lift, the completed top lift shall be at least 3 inches thick after compaction. If the final cut reduces the thickness of the top lift to less than 3 inches, re-scarify the top lift to a depth of at least 6 inches and then re-compact the section.
- Ramps shall be constructed in the same manner as the levee.
- The clay may not be covered until the surface has dried and a USIBWC representative has ensured that the requirements listed below are met:
    - The levee shall be cut, graded, and/or finished to a smooth plane surface. The finished levee embankment shall be a hard, competent, solid soil mass. The dried clay shall not be brittle, crumbly, or friable. The final product shall be a hard, competent, solid soil mass. There are some clayey materials that even though they fulfill the levee soil requirements, do not hold together after 24 to 36 hours of drying time. If the levee material becomes soft and/or friable after drying, it shall be removed and replaced with material that produces a hard, competent, solid soil mass.
    - The levee typical sections shall be maintained throughout the work zone. No deviations in cross section shall be greater than 3 inches longitudinally unless shown on the drawings. The sides of the levee shall not have a wavy appearance.
    - Placement practices throughout each fill zone of the levee shall be such that the embankment will be free from lenses, pockets, streaks, and layers of material differing in texture, gradation, or classification from surrounding material of the same material type. If within the same material type lenses, pockets, streaks, or layers are encountered, the clay shall be reworked in order to form a homogeneous blend of the materials.
    - The finished levee embankment shall be homogenous in material and compaction characteristics. No evidence of placement layers/lifts shall be visible in the final product. Each lift of fill shall be thoroughly bounded to the prior lift/subgrade. In no instance shall any two lifts be able to be easily separated.
    - No holes, pop-outs, pockmarks, grooves, depressions, or other voids greater than ½ inch in depth normal to the slope face shall be permitted. Separation of two lifts shall not be allowed. Pop-outs formed during cutting of the levee slope when there is nonuniform compaction of the levee embankment. Areas of holes, pop-outs, pockmarks, grooves, depressions, or other voids less than ½ inch in depth normal to the slope face that are numerous or frequent (longer than one foot or common across the slope) shall also be repaired. Cracking of clay is normal, however, cracking into small fragments that can easily be removed by hand from the levee are not acceptable. Acceptable clay embankment shall crack in a manner that "locks" the cracked pieces together.
- During ASTM D6938 nuclear density tests, the probe shall extend through both the newly added lift and the scarified prior lift (e.g., 6" lift plus 3" scarification equals probe of 9", minimum). Tests into scarified and compacted subgrade shall be taken at a 12 inch depth. Include IBWC Forms 241 for all days when nuclear density tests are performed.
- Excess fill brought on site, contaminated material, and material that does not meet requirements shall be hauled away from the project site and disposed of per Federal, state, and local requirements.
    - No soil or other material shall be left in the floodplain.

Completion of Construction

- Upon completion of any construction with USIBWC ROW, the worksite area shall be left in a clean and neat condition with all debris and excess material removed from the site.

- Upon completion of the construction, complete surveys, signed and stamped by a registered surveyor, shall be provided to USIBWC. Survey data shall be provided in pdf format with supporting data in a comma delimited ASCII file. Data shall be identified (point number, northing, easting, elevation, description) while the coordinate system, datum, name of the individual/company who performed the survey, and date of survey shall be noted. Survey boundaries, breaklines, and other relevant data shall be exported from an AutoCAD Civil 3D file to an xml file.
- Upon completion of construction, as built (record drawings) shall be provided for the whole project. Drawings shall be in pdf and shall be sized at least ANSI B (11"x17") although fullsize drawings are preferred. Drawings shall be provided at a resolution not less than 300 dpi.
- Upon completion of any levee construction work, a copy of all completed tests and associated USIBWC forms shall be provided to USIBWC.

Conditions

- Proponent's project shall not hinder or impair USIBWC's ability to perform maintenance or flood operations.
- The USIBWC does not assume any responsibility regarding damages that could be caused to the work, property, or persons in the project area as a consequence of river flood flows.
- Any damage caused by the proposed works to either the banks of the river, USIBWC's structures, or USIBWC's property shall be repaired by Proponent to the USIBWC's satisfaction.
- The USIBWC will not alter its our normal or flood operations criteria as a result of the proposed works.
- Proponent is responsible for keeping their structures free of debris accumulation at all times. Proponent shall dispose of all debris in accordance with all applicable environment laws and regulations. In addition, Proponent is responsible for all costs associated with debris removal.
- Proponent shall finalize and submit to the USIBWC an Operation and Maintenance (O&M) Plan for their project. It should be noted that the USIBWC will not be the agency responsible for performing operations and maintenance of the Proponent's project.

Forms and standard drawings are available on USIBWC's website at https://www.ibwc.gov/Organization/Engineering/construction.html.

International Boundary and Water Commission

United States and Mexico

United States Section

4191 N. Mesa, El Paso, TX 79902

Minimum Levee Testing Requirements

Established by Design Engineer	USIBWC Minimum	ASTM	Test Name	REQUIREMENT	Minimum Frequency	IBWC Required Forms
X	X	D698 D1557	Proctor	Required for quality control of construction	2,000 cy	
	X	D6913	Grain Size Analysis	≥ 60% passing 200, 100% < 1"	1,000 cy	
	X	D6572	Crumb	Grade 1	1,000 cy	
	X	D4647	Pinhole	ND1 or ND2	1,000 cy	
	X	D4221	Double Hydrometer	Less than 30	1,000 cy	
	X	D2487	USCS	CL or CH only *(CL-ML or any soils other than clay not allowed)*	1,000 cy	
	X	D4318	Atterberg Limits	PI ≥ 15 *(PI and LL range set by Design Engineer)*	1,000 cy	
	X	D6938	Field Density Measurement	Minimum of 95% of max dry density for D698. Minimum of 92% of max dry density for D1557.	2 per day or 1 per every 250 cy placed, whichever greater	
	X	D6938	Field Moisture Content	Minimum at optimum. Usually moisture content between optimum and +2 of optimum.	Whenever field density is taken	
	X	D6938	Nuclear Gauge Standard Count	Verify nuclear gauge readings/stability.	Prior to use of each gauge, each day onsite	Form 241
	X	D2216	Lab Moisture Content	Verify nuclear gauge readings	Every 20 ASTM D6938 tests	Form 240

1. Design Engineer shall increase USIBWC minimum requirements and frequency as required for their project. Requirements can not be reduced.
2. Method B shall be used on all Proctors (D698 and D1557). Use of ASTM D698 or ASTM D1557 shall be determined by Design Engineer.
3. Grain Size Analysis shall use sieves sized 2 inch, 1 inch, 3/8 inch, 4, 10, 20, 40, 60, 140 and 200 at a minimum. **Includes hydrometer testing of material below 200 sieve.**
4. Clay used shall not be blended with any other material if it meets these requirements.
5. Minimum frequency assumes a large project. Small projects shall increase frequency appropriately.
6. The most recent version of ASTM standards shall be used.
7. Forms are available at www.ibwc.gov/Organization/Engineering/construction.html.

ATTACHMENT E

FEE SCHEDULE

TEST NO.	CMT Firm: B2Z ENGINEERING Date: 09/13/2021			2020-23			
	Geotechnical Services		Unit	FINAL NEGOTIATED RATES 9/3/2021			COMMENTS
1	Mobilization/Demobilization		each	$ 400.00			$6/mile for anything < 67 miles per trip or $400 > 67 miles
	Drilling, Logging, &Recovering Samples (With TCP)		per mile	$ 6.00			
2A	1. Depth ≤ 50 feet		Tex-132-E (every 5 feet)	$ 28.63			
2B	2. Depth ≥ 50 feet		linear foot	$ 30.71			
	Drilling, Logging, &Recovering Samples (Without TCP)			$ -			
3A	1. Depth ≤ 50 feet ( )		linear foot	$ 26.02			
3B	2. Depth ≥ 50 feet ( )		linear foot	$ 28.03			
4	Rock Coring (Soft Rock) [2]		linear foot	$ 12.07			
5	Rock Coring (Hard Rock) [2]		linear foot	$ 16.00			
6	Staking Borings and Utility Locations		hour	$ 109.03			
	Standby Time (sampling)		hour	$ 250.00			
7A	1. Hot Mix Asphalt (minumum of one hour)		each	$ 100.00			
7B	2. Concrete (minumum of one hour)		each	$ 159.30			
8	Piezometer - 2 inch (including well completion and installation)		linear foot	$ 40.00			
9	Grouting of Borings		linear foot	$ 5.00			
10	Traffic Control - Major		day	$ 1,200.00			
	Laboratory Test	Test Method	Unit	$ -			
11	Volumetric Shrinkage	ASTM D427	each	$ 91.00			
12	Standard Poor Test	ASTM D698	each	$ 210.00			
13	Modified Poor Test	ASTM D1557	each	$ 250.00			
14	Standard Penetration Test (SPT)	ASTM D1586	LF	$ 30.04			
15	California Bearing Ratio (Single Sample without MD Curve)	ASTM D1883	test	$ 275.00			
16	Unconfined Compressive Strength (Soil)	ASTM D2166	each	$ 62.00			
17	Hydraulic Conductivity Permeability	ASTM D2434	each	$ 330.00			
18	One Dimensional Consolidation Properties of Soil	ASTM D2435	each	$ 450.00			
19	Unconfined Compressive Strength (Rock)	ASTM D2938	each	$ 76.00			
20	Direct Shear Test of Soils Under Consolidated Drained Conditions	ASTM D3080	set of 3	$ 625.00			
21	Direct Shear Test of Soils Under Consolidated Drained Conditions, SAND	ASTM D3080	set of 3	$ 475.00			
22	Direct Shear Test of Soils Under Consolidated Drained Conditions, CLAY	ASTM D3080	set of 3	$ 650.00			
23	Splitting Tensile of Intact Rock Core	ASTM D3967	each	$ 120.00			
24	Water Stand Pipes	ASTM D4043	each	$ 37.69			
25	Calcium Carbonate Content of Soils	ASTM D4373	LF	$ 62.00			
26	Hydraulic Conductivity Permeability	ASTM D4511	each	$ 260.00			
27	One Dimensional Swell, Methods A&B	ASTM D4546	each	$ 249.47			
28	One Dimensional Swell, Method B Only	ASTM D4546	each	$ 300.00			
29	One Dimensional Swell, Method C	ASTM D4546	each	$ 247.52			
30	Permeability of Silt and Clays	ASTM D5084	each	$ 350.00			
31	Suction Test (Filter Method)	ASTM D5298	each	$ 80.00			
32	Casagrande Type Piezometers	N/A	each	$ 325.00			
33	Casagrande Type Piezometers Installation	N/A	each	$ 420.00			
~~34~~	~~Miscellaneous Testing~~	~~N/A~~	~~each~~	~~$ 55.00~~			
35	Vertical Inclinometer	N/A	each	$ 400.00			
36	Vertical Inclinometer Installation	N/A	each	$ 700.00			
37	Vibrating Wire Piezometer	N/A	each	$ 760.00			
38	Vibrating Wire Piezometer Installation	N/A	each	$ 800.00			
39	Soil Boring with SPT	ASTM D1586	LF	$ 32.00			
	Laboratory Test	Test Method					
	Soils & Base Testing						
40	Sampling	Tex-400-A	hour	$ 55.00			
41	Sample Preparation	Tex-101-E	each	$ 53.00			
42	Determining Slaking Time	Tex-102-E	each	$ 50.00			
43	Moisture Content	Tex-103-E	each	$ 13.00			
44	Atterburg Limits	Tex-104,105&106-E	Set of 3	$ 75.00			
45	Linear Bar Shrinkage (per bar)	Tex-107-E	each	$ 61.84			
46	Determining the Specific Gravity of Soils	Tex-108-E	each	$ 65.00			
47	Sieve Analysis	Tex-110-E, Part I	each	$ 68.00			
48	Sieve Analysis (Hydrometer with Tex-108-E)	Tex-110-E, Part II	each	$ 78.00			
49	Hydrometer with Tex-108-E (in conjunctin with Tex-110-E, Part II)	Tex-108-E	each	$ 56.00			
50	Percent Passing No. 200 Sieve	Tex-111-E	each	$ 65.00			
51	Determining the Amount of Material in Solis Finer than the 75 mi	Tex-111-E	each	$ 49.00			
52	Admixing Lime to Reduce Plasticity Index of Soils	Tex-112-E	each	$ 110.00			
53	Moisture-Density Relationship	Tex-113-E	each	$ 240.00			
54	Moisture-Density Relationship	Tex-114-E	each	$ 215.00			
55	Field Density Measurements	Tex-115-E	hour	$ 50.00			
56	Wet Ball Mill Test	Tex-116-E	each	$ 230.00			
57	Texas Triaxial Compression [6]	Tex-117-E, Part I	each	$ 425.00			
58	Texas Triaxial Compression [6]	Tex-117-E, Part II	each	$ 1,050.00			
59	Quality Assurance (QA) Series for Flexible Base [7] [8]	See Foot Notes	each	$ 1,800.00			
60	Soil- Cement Testing [7]	Tex-120-E, Part II	each	$ 400.00			
61	Soil- Lime Testing [7]	Tex-121-E, Part II	each	$ 410.00			
61.1	Soil-Lime Testing Determining Stabilization Ability of Lime by Soil pH	Tex-121-E, Part III	each	$ 400.00			
62	Determining the Drainage Factor of Soil Materials (Not Field Test)	Tex-123-E ++	each	$ 70.00			
63	Determining Modulus of Sub-grade Recaction (K Value) (Not Field Test)	Tex-125-E ++	each	$ 110.00			
64	Molding, Testing, and Evaluation Bituminous Black Base Materials	Tex-126-E ++	each	$ 1,490.00			
65	Lime-Fly Ash Compression [7]	Tex-127-E	each	$ 750.00			
66	Soil pH	Tex-128-E	each	$ 45.00			
67	Resistivity of Soils	Tex-129-E	each	$ 100.00			
68	Slurry Testing	Tex-130-E	each	$ 97.00			
69	Texas Cone Penetration	Tex-132-E	each	$ 32.00			
70	Freezing and Thawing Tests oc Compacted Soil-Cement Mixture	Tex-135-E	each	$ 240.00			
71	Thickness of Pavement Layers (4 hour minimum)	Tex-140-E	hour	$ 53.00			
72	Manual Procedure for Description and Identification of Soils	Tex-141-E	each	$ 46.00			
73	Laboratory Classification os Soils for Engineering Purposes	Tex-142-E	each	$ 50.00			
74	Sulfate Content in Soils	Tex-145-E	each	$ 68.33			
75	Conductivity Test for Field Detection of Sulfates in Soil	Tex-146-E	each	$ 65.00			
75.1	Organic Content Using UV-VIS Method	Tex-148-E	each	$ 85.00			
76	Determining Choride and Sulfate Contents in Soils	Tex-620-J	each	$ 80.00			
77	Free Swell Test	EM1110-2-1906	each	$ 155.00			
78	Pressure Swell Test	EM1110-2-1906	each	$ 255.00			
79	One-Dimensional Swell	ASTM D4546	each	$ 250.00			
80	One-Dimensional Swell (Method B Only)	ASTM D4546	each	$ 275.00			
81	Potential Vertical Rise Calculation	Tex-124-E	each	$ 68.00			
82	Volumetric Shrinkage	ASTM D4943	each	$ 95.00			

~~83~~	~~Volumetric Shrinkage~~	~~ASTM D427~~	~~each~~	~~$ 57.93~~			
84	Unconfined Compression Test (Soil)	ASTM D2166	each	$ 62.00			
85	Unconfined Compression Test (Rock)	ASTM D2938	each	$ 76.00			
86	Unconfined Compression Test (Rock) (Method D)	ASTM D7012	each	$ 57.25			
	Unconsolidated Undrained (UU) Triaxial Compression Test						
87	1. Set of Three	Tex-118-E	set	$ 275.00			
88	2. Multistage	Tex-118-E	each	$ 250.00			
	Consolidated Undrained (CU) Triaxial Compression Test						
89	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 1,220.00			
90	2. Multistage	Tex-131-E or ASTM D4767	each	$ 1,040.00			
	Consolidated Drained (CD) Triaxial Compression Test						
91	1. Set of Three	Tex-131-E or ASTM D4767	set	$ 860.00			
92	2. Multistage	Tex-131-E or ASTM D4767	each	$ 820.00			
93	Direct Shear Consolidated Drained (CD), sand	ASTM D3080	set of 3	$ 475.00			
94	Direct Shear Consolidated Drained (CD), clay	ASTM D3080	set of 3	$ 650.00			
95	One-Dimensional Consolidation Test (7 load increments)	ASTM D2435	each	$ 589.80			
96	Resilient Modulus (fine-grained soils)	AASHTO T307	each	$ 950.00			
	Hot Mix Asphalt Testing						
97	Sieve Analysis of Fine and Coarse Aggregates	Tex-200-F	each	$ 68.33			
98	Bulk Specific Gravity and Water Absorption of Aggregates	Tex-201-F	each	$ 76.00			
99	Apparent Specific Gravity of Material Finer Than 180 µm (No. 80) Sieve	Tex-202-F	each	$ 52.00			
100	Sand Equivalent Test	Tex-203-F	each	$ 78.00			
101	Labortory Method of Mixing Bituminous Mixtures	Tex-205-F	Set of 3	$ 105.00			
102	Compacting Specimens Using the Texas Gyratory Compactor (TG	Tex-206-F	Set of 3	$ 90.00			
103	Determining Bulk Specific Gravity of Compacted Bituminuous Mixtures	Tex-207-F (I)	each	$ 30.00			
104	Determining In-Place Density of Compacted Bituminuous Mixtures (Nuclear Method)	Tex-207-F (III)	each	$ 30.00			
105	Asphalt Rolling Pattern (Nuclear Method)	Tex-207-F (IV)	each	$ 82.00			
106	Segregation Profile	Tex-207-F (V)	each	$ 175.00			
107	Joint Density	Tex-207-F (VII)	each	$ 175.00			
108	Test of Stabilometer Value of Bituminous Mixtures	Tex-208-F	set of 3	$ 120.00			
109	Determining Asphalt Content of Bituminous Mixtures by Extraction	Tex-210-F	each	$ 147.81			
110	Recovery of Asphalt from Bituminou Mixtures by the Abson Pro	Tex-211-F	each	$ 218.00			
111	Determining Moisture Content of Bituminous Mixtures	Tex-212-F	each	$ 54.00			
112	Determining Hydrocarbon-Volatile Content of Bituminous Mixture	Tex-213-F	each	$ 110.00			
113	Determining Deleterious Material and Decantation Test for Coarse Aggregates	Tex-217-F	each	$ 78.84			
114	Indirect Tensile Strength Test	Tex-226-F	each	$ 475.00			
115	Theoretical Maximum Specific Gravity of Bituminous Mixtures	Tex-227-F	each	$ 95.00			
116	Determining Asphalt Content of Bituminous Mixtures by the Nuclear	Tex-228-F	each	$ 60.00			
117	Combined HMAC Cold-Belt Sampling and Testing Procedure	Tex-229-F	each	$ 60.00			
118	Determining Draindown Characteristics in Bituminous Mixtures	Tex-235-F	each	$ 55.00			
119	Determining Asphalt Content from Asphalt Paving Mixtures by the Ignition Method	Tex-236-F	each	$ 130.00			
120	Asphalt Release Agents	Tex-239-F	each	$ 75.00			
121	Superpave Gyratory Compacting of Test Specimens of Bituminous	Tex-241-F	each	$ 130.00			
122	Hamburg Wheel Tracker	Tex-242-F	each	$ 236.51			
123	Tack Coat Adhesion	Tex-243-F	each	$ 104.09			
124	Thremal Profile	Tex-244-F	each	$ 126.14			
125	Cantabro Loss	Tex-245-F	each	$ 190.00			
126	Permeability or Water Flow of Hot Mix Asphalt	Tex-246-F	each	$ 68.00			
127	Overlay Test	Tex-248-F	set of 3	$ 675.00			
128	Flat and Elongated Particles	Tex-280-F	each	$ 58.29			
129	Sampling Bituminous Materials, Pre-Molded Joint Fillers, and Joint	Tex-500-C	each	$ 60.00			
130	Asphalt Binder Water in Petroleum	501-C AASHTO	each	$ 93.00			
131	Penetration of Bituminous Materials	502-C AASHTO	each	$ 75.00			
132	Ductility of Asphalt Materials	503-C AASHTO	each	$ 110.00			
133	Flash and Fire Points by Cleveland Open Cup	504-C AASHTO	each	$ 60.00			
134	Softening Point of Bitumen (Riing and Ball Apparatus	505-C AASHTO	each	$ 90.00			
135	Solubility of Bituminous Materials	507-C AASHTO	each	$ 100.00			
136	Specific Gravity	508-C AASHTO	each	$ 70.00			
137	Spot Test of Asphaltic Materials	509-C AASHTO	each	$ 155.00			
138	Effect of Heat and Air on Asphalt Materials (Thin-Film Oven Test)	510-C AASHTO	each	$ 63.00			
139	Flash Point with Tag Open-Cup Apparatus for Use with Material H	512-C AASHTO	each	$ 68.00			
140	Saybolt Viscosity	513-C AASHTO	each	$ 75.00			
141	Cutback Asphalts - Specific Gravity, API Gravity, or Density of Cutback Asphalts by Hdyrometer Method; Emulsified Asphalts - Weight per Gallon of Emulsified Asphalt	Tex-514-C ASTM D3142 ASTM D244	each	$ 130.00			
142	Distillation of Cutback Asphalt Products	515-C AASHTO	each	$ 170.00			
143	Float Test for Bituminous Materials	519-C AASHTO	each	$ 70.00			
144	Standard Test Method for Emulsified Asphalts	521-C AASHTO	each	$ 190.00			
145	Viscosity of Asphalts by Vacuum Capillary Viscometer	528-C AASHTO	each	$ 35.00			
146	Kinematic Viscosity of Asphalts (Bitumens)	529-C AASHTO	each	$ 75.00			
147	Boil Test (Effect of Water on Paving Mix)	Tex-530/531-C	each	$ 130.00			
148	Field Coring - ACP Thickness	ASTM D3549	each	$ 100.00			
149	Pavement Thickness Determin. (Full Depth)	ASTM D3549	each	$ 130.00			
150	Determining Polymer Additive Percentages in Polymer Modified	Tex-533-C	each	$ 60.00			
151	Calculating Viscosity from Penetration	Tex-535-C	each	$ 75.00			
152	Elastic Recovery of Tensile Deformation Using a Ductilometer	Tex-539-C	each	$ 65.00			
153	Measurement of Polymer Separation on Heating in Modified Asphalat	Tex-540-C	each	$ 95.00			
154	Rolling Thin Film Oven Test for Asphalt Binders	541-C ASSHTO	each	$ 110.00			
155	Flexural Creep Stiffness Using the Bending Beam Rheometer	AASHTO T313	each	$ 200.00			
156	Determining Rheological Properties of Asphalt Binder Using a Dy	AASHTO T315	each	$ 120.00			
157	Determining Breaking Index for Asphalt Emulsions	Tex-542-C	each	$ 215.00			
158	Resilience Test for Sealants and Repair Materials	Tex-547-C	each	$ 250.00			
159	Tensile Strain to Failure	Tex-548-C	each	$ 60.00			
160	Cone Flow Test	Tex-549-C	each	$ 55.00			
161	Flexibility Test for Sealants and Repair Materials	Tex-550-C	each	$ 250.00			
162	Settlement of Sealants and Repair Materials	Tex-551-C	each	$ 88.00			
	Concrete & Aggregate Testing						
163	Sieve Analysis for Conc. Agg	Tex-401-A	each	$ 73.58			
164	Fineness Modulus for Conc. Agg	Tex-402-A	each	$ 18.00			
165	SSD Specific Gravity / Absorption Conc. Agg	Tex-403-A	each	$ 78.00			
166	Unit Weight of Conc. Agg	Tex-404-A	each	$ 40.00			
167	Determining Pecent Voids and Solids in Concrete	Tex-405-A	each	$ 65.00			
168	Decantation for Conc. Agg	Tex-406-A	each	$ 54.00			
169	Organic Impurities for Conc. Agg	Tex-408-A	each	$ 52.00			
170	Free Moisture and Water Absorption in Aggregate for Concrete	Tex-409-A	each	$ 65.00			
171	L.A. Abrasion	Tex-410-A	each	$ 400.00			
172	5 Cycle Magnesium Soundness	Tex-411-A	each	$ 450.00			
173	Deleterious Material for Conc. Agg	Tex-413-A	each	$ 60.00			
174	Air Content of Fresh Concrete by Volumeteric	Tex-414-A	each	$ 30.00			
175	Slump of Fresh Concrete	Tex-415-A	each	$ 23.00			
176	Air Content of Fresh Concrete by Pressure	Tex-416-A	each	$ 26.28			
177	Unit Weight, Yield and Air Content (Gravimetric) of Concrete	Tex-417-A	each	$ 35.00			
178	Comp. Strength of Cyl. Conc. Specimen	Tex-418-A	each	$ 15.00			
179	Measure Temp. of Fresh Conc.	Tex-422-A	each	$ 20.00			
180	Obtaining & Testing Drilled Conc. Cores	Tex-424-A	each	$ 250.00			
181	Absorption and Dry Bulk Specific Gravity of Lightweight Coarse	Tex-433-A	each	$ 95.00			
182	Test Flow of Grout Mixtures (Flow Cone Method)	Tex-437-A	each	$ 65.00			
183	Accelerated Polish Test for Coarse Aggregate	Tex-438-A	each	$ 675.00			

184	Det. Comp. Strength of Grouts	Tex-442-A	each	$ 18.00			
185	Making & Curing Conc. Test Specimen	Tex-447-A	each	$ 14.00			
186	Flexural Strength of Concrete Using Simple Beam Third-Point Load	Tex-448-A	each	$ 40.00			
187	Capping Cyl. Conc. Specimen	Tex-450-A	each	$ 14.00			
188	Degradation of Coarse Aggregate by Micro-Devel Abrasion	Tex-461-A	each	$ 266.50			
189	Uniformity of Concrete	Tex-472-A	each	$ 110.00			
	Additional Testing	Test Method	Unit				
190	Geogrid Testing	Tex-621-J	each	$ 740.00			
191	Water Quality Testing	Tex-619-J	each	$ 150.00			
192	Lime Testing	Tex-600-J	each	$ 300.00			
193	Operating Inertial Profilers and Evaluating Pavement Profiles	Tex-1001-S	each	$ 1,750.00			
194	Vane Shear Testing	ASTM D2573	each	$ 300.00			
	Miscellaneous Testing	Test Method	Unit				
~~195~~	~~Structural Field Welding~~	~~NA~~	~~hour~~	$ 150.00			
	~~Equipment & Supplies for MT & UT~~		~~day~~	$ 150.00			
	Other Direct Expenses		Unit				
	Photocopies B/W (8 1/2" X 11")		each	$ 0.15			
	Photocopies B/W (11" X 17")		each	$ 0.23			
	Photocopies Color (8 1/2" X 11")		each	$ 0.82			
	Photocopies Color (11" X 17")		each	$ 1.41			
	Digital Ortho Plotting		sheet	$ 2.43			
	CADD Plotting		linear foot	$ 1.00			
	Plots (B/W on Bond)		linear foot	$ 0.91			
	Plots (Color on Bond)		linear foot	$ 1.75			
	Plots (Color on Photgraphic Paper)		linear foot	$ 2.72			
	Reproduction of CD/DVD		each	$ 5.00			

B2Z Personnel Classification	Hourly Base Rate	Contract Rate FY 2020	FINAL NEGOTIATED RATES 9/3/2021
Senior Project Manager / Principal	$ 80.00	$ 240.29	$ 186.90
Senior Geotechnical Engineer	$ 68.00	$ 204.25	$ 166.32
Geotechnical Engineer	$ 60.00	$ 180.22	$ 136.40
Project Engineer	$ 55.00	$ 165.20	$ 133.98
Engineering Lab Manager	$ 43.00	$ 129.16	$ 94.71
Utility Coordinator	$ 40.00	$ 120.14	$ 110.98
Senior Project Inspector	$ 40.00	$ 120.14	$ 99.75
Project Inspector	$ 32.00	$ 96.12	$ 73.92
EIT	$ 30.00	$ 90.11	$ 88.00
Engineer Tech / GIS	$ 28.00	$ 84.10	$ 76.70
Logger	$ 23.00	$ 69.08	$ 61.95
Field Technician (Soils, Aggr, Asph, Conc)	$ 23.00	$ 69.08	$ 68.02
CADD Operator	$ 23.00	$ 69.08	$ 78.20
Admin/Clerical	$ 22.00	$ 66.08	$ 61.95

ATTACHMENT E-1
Final Cost Proposal Form

This attachment provides the basis of payment and fee schedule**. The basis of payment for this Work Authorization is indicated by an "X" in the applicable box.** The basis shall be supported by the Final Cost Proposal (FCP) shown below and should identify maximum amount payable and basis of payment. If more than one basis of payment is used, each one must be supported by a separate FCP. The basis of payment will be determined by Work Authorization and may be by any of the methods listed below.

"X"	Basis	
____	Lump Sum	The lump sum shall be equal to the maximum amount payable. The lump sum includes all direct and indirect costs and fixed fee. The Engineer shall be paid pro rata based on the percentage of work completed. For payment the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.
__X__	Unit Cost	The unit cost(s) for each type of unit and number of units are shown in the FCP. The unit cost includes all direct and indirect costs and fixed fee. The Engineer shall be paid based on the type and number of units fully completed and the respective unit cost. For payment, the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or any other cost data. The FCP may include special items, such as equipment which are not included in the unit costs. Documentation of these special costs may be required. The maximum amount payable equals the total of all units times their respective unit cost plus any special direct items shown.
__X	Specified Rate Basis	The specified rates for each type of labor are shown in the FCP below. The FCP may include special items, such as equipment which are not included in the specified rates. Payment shall be based on the actual hours worked multiplied by the specified rate for each type of labor plus other agreed to special direct cost items. The specified rate includes direct labor and indirect cost and fixed fee. The Authority may request documentation of reimbursable direct costs including hours worked. Documentation of special item costs may be required. The specified rate is not subject to audit.
____	Cost Plus Fixed Fee	Payment shall be based on direct and indirect costs incurred plus a pro rata share of the fixed fee based on the ratio of labor and overhead cost incurred to total estimated labor and overhead cost in the FCP or the percentage of work completed. The invoice must itemize labor rates, hours worked, other direct costs and indirect costs. The Engineer may be required to provide documentation of hours worked and any eligible direct costs claimed. The provisional overhead rate charged is subject to audit and adjustment to actual rates incurred. The FCP below shows the hourly rates for labor, other direct expenses including but not limited to travel and allowable materials, provisional overhead rate and the fixed fee. __A. Actual Cost Plus Fixed Fee - Actual wages are paid (no minimum, no maximum. __B. Range of Cost Plus Fixed Fee – Actual wages must be within the allowable range shown on the Final Cost Proposal.

A. **REFER TO ATTACHMENT E-2 FOR HOURLY SPECIFIED / LUMP SUM RATE SCHEDULE FOR EACH FIRM**

EXHIBIT D

ESTIMATED MAN-HOURS AND

TEST BREAKDOWN

EXHIBIT D

ESTIMATED MAN-HOURS AND TEST BREAKDOWN

Hidalgo County RMA 365 Tollway
Construction Materials Testing

Embankment (Test All Fill Material Including Cut From Job) (ITEM 132)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.
- Field density testing of soils and base materials to ensure proposer compaction as required by project plans and specifications.

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Liquid Limit		Tex-104-E	PI>15 ~ Every 5,000 CY	included with PI	Each			
Plasticity Index		Tex-106-E	PI>15 ~ Every 5,000 CY		Each	127	$75.00	$9,525.00
Gradation		Tex-110-E	Every 10,000 CY		Each	64	$68.00	$4,352.00
Moisture/Density		Tex-114-E	One per Each Material		Each	5	$215.00	$1,075.00
In-Place Density		Tex-115-E	Every 5,000 CY or 6,000 Linear Feet (Min. 1 per Lift)		Each	127	$50.00	$6,350.00
Tech Time (Soils)				PI,Gr,MD & FD	Hour	822	$68.02	$55,912.44
# of Trips (Tech)				106 Trips (40 Miles RT)	Mile	4,240	$6.00	$25,440.00
**Admin/Clerical					Hour	244	$61.95	$15,115.80
							Item Subtotal	$117,770.24

Lime (ITEM 260)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Compliance of Lime (DMS 6350)		Tex-600-J	1 per 200 Tons		Each	5	$300.00	$1,500.00
							Item Subtotal	$1,500.00

Existing Material (Lime Treated) (ITEM 260)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.
- Field density testing of soils and base materials to ensure proposer compaction as required by project plans and specifications.

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Pulverization Gradation		Tex-101-E (Part III)	Each 4,500 CY	Inc. to 5 - 1 per Leg (Job)	Each	7	$53.00	$371.00
Liquid Limit		Tex-104-E		included with PI	Each		$0.00	$0.00
Plasticity Index		Tex-106-E	Each 5,000 CY	Inc. to 5 - 1 per Leg (Job)	Each	6	$75.00	$450.00
Gradation		Tex-110-E	Each 5,000 CY	Inc. to 5 - 1 per Leg (Job)	Each	6	$68.00	$408.00
Moisture/Density		Tex-114-E	One per Each Material		Each	2	$215.00	$430.00
In-Place Density		Tex-115-E	Every 3,000 CY		Each	10	$50.00	$500.00
Tech Time (Soils)				PI,Gr,MD & FD	Hour	65	$68.02	$4,421.30
# of Trips (Tech)				15 Trips (40 Miles RT)	Mile	600	$6.00	$3,600.00
**Admin/Clerical					Hour	14	$61.95	$867.30
							Item Subtotal	$11,047.60

Flexible Base (Untreated - Stockpile Testing) (ITEM 247)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Liquid Limit		Tex-104-E		included with PI	Each		$0.00	$0.00
Plasticity Index		Tex-106-E	Each 5,000 CY		Each	2	$75.00	$150.00
Gradation		Tex-110-E	Each 5,000 CY		Each	2	$68.00	$136.00

Moisture/Density		Tex-113-E	Every 20,000 CY		Each	1	$240.00	$240.00
In-Place Density		Tex-115-E	Every 3,000 CY	Inc. to 10 - 2 per Leg (Job)	Each	10	$50.00	$500.00
Wet Ball Mill		Tex-116-E	Every 20,000 CY		Each	1	$230.00	$230.00
Triaxial		Tex-117-E	Every 20,000 CY		Each	1	$1,800.00	$1,800.00
Tech Time (Soils)				PI, MD & WB/Triax.	Hour	23	$68.02	$1,564.46
# of Trips (Tech)				10 Trip (40 Miles RT)	Mile	400	$6.00	$2,400.00
**Admin/Clerical					Hour	10	$61.95	$619.50
							Item Subtotal	$7,639.96

Hydraulic Cement Concrete Gatewell Structure & Foundation (Class C)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.				QA Test. (QC by Source)				
Decantation		Tex-406-A	Each 20,000 CY(or source)		Each	1	$54.00	$54.00
Sieve Analysis		Tex-401-A	Each 1,000 CY (ea source)	5 Sieve	Each	1	$73.58	$73.58
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$60.00	$60.00
Fine Aggr.				QA Test. (QC by Source)				
Sand Equivalent		Tex-203-F	Each 1,000 CY(ea source)		Each	1	$78.00	$78.00
Organic Imp.		Tex-408-A	One Per Project Per Source		Each	1	$52.00	$52.00
Sieve Analysis		Tex-401-A	Each 1,000 CY(ea source)		Each	1	$73.58	$73.58
Fineness Mod.		Tex-402-A	Each 1,000 CY(ea source)		Each	1	$18.00	$18.00
Deleterious Matl.		Tex-413-A	Each 20,000 CY(or source)		Each	1	$60.00	$60.00
Concrete								
*Strength		Tex-447-A & Tex-418-A	Each 60 CY(1 Sets = 5 Cyl.)		Each	40	$29.00	$1,160.00
Slump		Tex-415-A	One per Set		Each	8	$23.00	$184.00
Entrained Air		Tex-416-A	One per Set		Each	8	$26.28	$210.24
Temperature		Tex-422-A	One per Set		Each	8	$20.00	$160.00
Tech Time (Aggr)					Hour	16	$68.02	$1,088.32
Tech Time (Conc)					Hour	47	$68.02	$3,196.94
# of Trips (Tech)				22 Trips (40 Miles RT)	Mile	880	$6.00	$5,280.00
**Admin/Clerical					Hour	17	$61.95	$1,053.15
							Item Subtotal	$12,801.81

Hydraulic Cement Concrete Misc. - Riprap (Class A)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Concrete								
*Strength		Tex-447-A & Tex-418-A	Each 180 CY(1 Set = 2 Cyl.)	Adjust Per Str & Placement	Each	24	$29.00	$696.00
								$0.00
Tech Time (Conc)					Hour	66	$68.02	$4,489.32
# of Trips (Tech)				18 Trips (40 Miles RT)	Mile	720	$6.00	$4,320.00
**Admin/Clerical					Hour	34	$61.95	$2,106.30
							Item Subtotal	$11,611.62

Batching for Hydrulic Cement Concrete (Class C) & Asphalt Concrete Pavement (ACP) - Inspection of Batching at Plant (1 Tech per Plant, Reports)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well a the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

		TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Concrete								
Tech Time (Conc)					Hour	24	$68.02	$1,632.48

# of Trips (Tech)				**8 Trip (40 Miles RT)**	**Mile**			
****Admin/Clerical**					**Hour**	**12**	**$61.95**	**$743.40**
							Item Subtotal	**$2,375.88**

*** Concrete Strength testing includes strength testing of cylinder specimens (breaks) as well as preperation, holding and curing of strength specimen costs**

~ 1 Set is defined as 2 Cylinders (7-day or 28-day)

~ All Structural Concrete requires a minimum 2 Sets per Test Location (5 Cyl.)

**** Project Administrative Fee is assessed on a per invoice basis and involves engineering review, evaluation, management and administration**

Summary

Sub-Total (CMT Items) =	**$164,747.11**
Engineering Lab Manager (112 hrs x 94.71 Hr.)	**$10,607.52**
Project Engineer (QA/QC of CMT) (56 hrs x 133.98 Hr.)	**$7,502.88**
Total :	**$182,857.51**
Contingency (Estimated at 10%)	**$18,285.751**
Constuction Materials Testing Total	**$201,143.26**

EXHIBIT F

WORK SCHEDULE

EXHIBIT F

WORK SCHEDULE

HCRMA Construction & Materials Testing Services
TOLL365 (SH 365)

Task Name	Start	Finish
Material Testing	10/1/2021	12/13/2025
Geotechnical	10/1/2021	12/13/2025
Other Analyses	10/1/2021	12/13/2025
All sampling and testing of components and materials	10/1/2021	12/13/2025
Hot Mix Asphalt Testing	10/1/2021	12/13/2025
Concrete Testing	10/1/2021	12/13/2025
Construction Oversight Documentation	10/1/2021	12/13/2025
Project Correspondence File (Design and Construction)	10/1/2021	12/13/2025

ATTACHMENT H-2
Subprovider Monitoring System Commitment Agreement

This commitment agreement is subject to the award and receipt of a signed contract from the Hidalgo County Regional Mobility Authority (Authority). ***NOTE: Attachment H-2 is required to be attached to each contract that does not include work authorizations. Attachment H-2 is required to be attached with each work authorization. Attachment H-2 is also required to be attached to each supplemental work authorization. If DBE/HUB Subproviders are used, the form must be completed and signed. If no DBE/HUB Subproviders are used, indicate with "N/A" on this line:_____ and attach with the work authorization or supplemental work authorization.***

Contract #:**01-M53-21-03** Assigned Goal: **6%** Prime Provider B2Z Engineering, LLC

Work Authorization (WA)#: **1** WA Amount: **$201,143.26** Date:_____
Supplemental Work Authorization (SWA) #:_____ to WA #:_____ SWA Amount: _____
Revised WA Amount: _____

Description of Work *(List by category of work or task description. Attach additional pages, if necessary.)*	**Dollar Amount** *(For each category of work or task description shown.)*
FC	**$0**
FC	**$0**
Total Commitment Amount *(Including all additional pages.)*	**$0**

IMPORTANT: The signatures of the prime and the DBE/HUB and Second Tier Sub-provider, if any (both DBE and Non-DBE) and the total commitment amount must always be on the same page.

Provider Name: B2Z Engineering, LLC. **Address: 900 S. Stewart Rd. Suite 2** **Mission, Texas 78572** **VID Number:** **PH: 956-585-3773 & FAX:** **Email: aisha@b2zeng.com**	**Name:** Aisha Gonzalez ***(Please Print)*** **Title:** President _____ **Signature** **Date**
DBE/HUB Sub Provider **Subprovider Name:** **VID Number:** **Address:** **PH:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ _____ **Signature** **Date**
Second Tier Sub Provider **Subprovider Name:** **VID Number:** **Address:** **Phone #& Fax #:** **Email:**	**Name:** _____ ***(Please Print)*** **Title:** _____ _____ **Signature** **Date**

VID Number is the Vendor Identification Number issued by the Comptroller. If a firm does not have a VID Number, please enter the owner's Social Security or their Federal Employee Identification Number (if incorporated).