

**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 18-061

**APPROVE AMENDMENT NO. 1 TO THE AGREEMENT WITH
COFIROUTE USA, LLC TO CLARIFY LANGUAGE REGARDING CONTINUED
COLLECTION ACTIVITIES**

WHEREAS, by Resolution No. 18-005, dated February 28, 2018, the Board approved an agreement with Cofiroute USA, LLC (the "Agreement") for pay by mail, violations processing, collections and customer services (the "Pay By Mail Program"); and

WHEREAS, Mobility Authority staff have worked with Cofiroute USA, LLC since the Agreement was approved to implement the Mobility Authority's Pay By Mail Program which launched on November 28, 2018; and

WHEREAS, during the course of the implementation process, the Mobility Authority determined that processing Non-Sufficient Funds and Out-of-State License Plate Lookups should be added to the Agreement and other pay items should be further clarified; and,

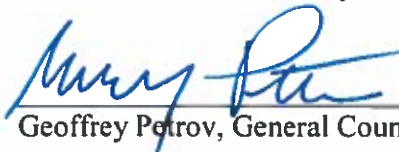
WHEREAS, the Executive Director and Cofiroute USA, LLC have negotiated proposed Amendment No. 1 to the Agreement to add terms for the processing Non-Sufficient Funds and Out-of-State License Plate Lookups and to clarify certain pay items currently outlined in the Agreement; and

WHEREAS, the Executive Director recommends that the Board approve proposed Amendment No. 1 to the Agreement in the form or substantially the form attached hereto as Exhibit A.

NOW THEREFORE, BE IT RESOLVED that proposed Amendment No. 1 to the Agreement with Cofiroute USA, LLC is hereby approved, and the Executive Director is authorized to finalize and execute Amendment No. 1 in the form or substantially in the same form attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 11th day of December 2018.

Submitted and reviewed by:



Geoffrey Petrov, General Counsel

Approved:



Ray A. Wilkerson
Chairman, Board of Directors

Exhibit A

**AMENDMENT NO. 1
TO THE
AGREEMENT FOR PAY BY MAIL, VIOLATIONS PROCESSING,
COLLECTIONS AND CUSTOMER SERVICE
BETWEEN
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY
AND
COFIROUTE USA, LLC**

This Amendment is effective on December 11, 2018 and amends that certain Agreement for Pay by Mail, Violations Processing, Collections and Customer Service between the Central Texas Regional Mobility Authority (“CTRMA”) and Cofiroute USA, LLC (“Cofiroute” or the “Contractor”), dated to be effective March 8, 2018 (the “Agreement”).

Pursuant to the authority granted by the CTRMA Board of Directors Resolution No.18-0____, dated October 31, 2018, the parties to this Amendment No. 1 agree as follows:

Attachment C of the Agreement is hereby amended to read in its entirety as described on page 2 of this amendment.

All other provisions of the Agreement, as amended, remain unchanged.

By their signatures below, CTRMA and Cofiroute USA, LLC evidence their agreement to the amendment set forth on page two.

COFIROUTE USA, LLC

CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

By: _____

By: _____

Name: _____

Name: Mike Heiligenstein

Title: _____

Title: Executive Director

Attachment C - Schedule 2 - Pay By Mail Pricing (BASE CONTRACT)

Pay Item	Description of Item	Unit	Volume ² (per month)	Unit Price		% of Toll Collected	
				Proposed Price (USD)	Maximum Allowed (USD)	Proposed Percentage (%)	Maximum Allowed (%)
1	Transactions Paid Prior to Notice Generation (example: plate-based pre-paid accounts, applied overpayments, etc.)	Transaction	0-150,000			18%	25%
			150,001-300,000			15%	25%
			>300,000			10%	25%
2	Paid First Video Bill (paid prior to issuance of 1st Notice of Non-Payment or plate-based post-paid accounts)	One Paid Bill (30 days of transactions)	0-50,000	\$ 0.54	\$ 1.00	17%	20%
			50,001-75,000	\$ 0.54	\$ 1.00	17%	20%
			> 75,000	\$ 0.54	\$ 1.00	17%	20%
3	Paid 1st Notice of Non-Payment (paid prior to issuance of Violation Notice)	One Paid Notice (30 days of transactions)	0-20,000	\$ 2.50		13%	15%
			20,001-40,000	\$ 2.50		13%	15%
			> 40,000	\$ 2.50		13%	15%
4	Paid Violation Notice	One Paid Notice (30 days of transactions)	0-10,000	\$ 5.60		8%	10%
			10,001-20,000	\$ 5.60		8%	10%
			>20,000	\$ 5.60		8%	10%
5	Paid in Collections	Each Transaction Paid	0-5,000	\$ 3.52		0%	5%
			5,001-10,000	\$ 3.52		0%	5%
			>10,000	\$ 3.52		0%	5%
6	Image Review ¹	Transaction	0-3,000,000	\$ 0.03			
			3,000,001-4,000,000	\$ 0.02			
			>4,000,000	\$ 0.02			
7	Court Packets	Packet	0-50	\$ 20.00			
			51-150	\$ 17.00			
			>150	\$ 15.00			
8	Legal Support (Liaisons)	Per Liaison	As Needed	\$ 16,360.00			
9	Non Sufficient Fund (NSF)	Per Paid Notice	Per Paid Notice	\$ 25.00			
10	Out of State Lookup Fee (OOS)	Per Paid Notice	Per Paid Notice	\$ 1.00			

NOTES:

A - Proposers should not make any changes to the format or structure of the spreadsheet.

B - Proposers are to fill in all green-shaded cells. Zero is an acceptable entry.

C - Each set of transactions on a bill or notice shall age together.

D - The Contractor shall only be paid for one of the pay items for each set of transactions. That is, once a set of transactions moves from the toll bill to the 1st Notice of Non-Payment, the unit prices in rows 21-23 are used to determine payment. The unit prices in rows 13-15 no longer apply to this set of transactions. Transactions shall only be charged once, according to the phase in which the transaction was paid.

E - ²The unit price shall be determined by the unit price listed next to the total number of units that occurred in the calendar month.

F - The prices above should include all costs for performance of all aspects of the Scope of Services, except Section 2.6 (Image Processing) and any costs associated with performing any required data migration.

G - ¹Image Processing (Review) is an optional service. The cost of reviewing all images associated with one transaction, including non-revenue transactions.

H - Data Migration will be treated as a negotiated change to the contract.

I - Court packet pricing will only apply when an Authority does not need the services of Court Liaisons but only needs the packages prepared.

J - Legal Support pricing should include all costs of the Liaisons, any support staff necessary, and the preparation of the court packages and all other functions necessary for the legal support.

**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 18-062

**APPROVE AMENDMENT NO. 8 TO THE AGREEMENT WITH GILA LLC, d/b/a
MUNICIPAL SERVICES BUREAU FOR VIOLATION PROCESSING AND COLLECTION
SERVICES**

WHEREAS, by Resolution No. 07-071, dated December 7, 2007, the Board of Directors ("Board") authorized the Executive Director to finalize and execute an Agreement for Violation Processing and Debt Collection Services effective January 15, 2008, (the "Agreement") with Gila Corporation, a Texas corporation subsequently converted to Gila LLC, a Texas limited liability company, d/b/a Municipal Services Bureau ("MSB") through January 14, 2013; and

WHEREAS, by Resolution No. 17-065, dated December 13, 2017, the Board approved Amendment No. 7 extending the Agreement with MSB to January 14, 2019; and

WHEREAS, by Resolution No. 17-066, dated December 13, 2017, the Board awarded a contract for Pay By Mail, Violations Processing, Collections and Customer Service to Cofiroute, USA LLC; and

WHEREAS, in order to maintain uninterrupted services and provide an orderly transition to the new Pay By Mail program, the Executive Director has determined it is in the best interests of the Mobility Authority to extend the Agreement with MSB on a month to month basis until December 31, 2019; and

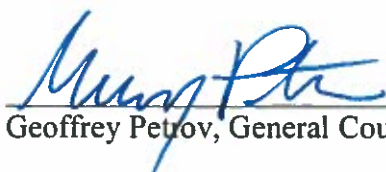
WHEREAS, the Executive Director recommends that the Board approve Amendment No. 8 to the Agreement in the form or substantially the form as is attached hereto as Exhibit A to extend the Agreement with MSB on a month-to-month basis until December 31, 2019.

NOW THEREFORE, BE IT RESOLVED that proposed Amendment No. 8 to the Agreement with Gila LLC, d/b/a Municipal Services Bureau is hereby approved; and

BE IT FURTHER RESOLVED that the Executive Director is authorized to finalize and execute Amendment No. 8 in the form or substantially in the same form attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 11th day of December 2018.

Submitted and reviewed by:



Geoffrey Petrov, General Counsel

Approved:



Ray A. Wilkerson
Chairman, Board of Directors

Exhibit A

**AMENDMENT NO. 8 TO
AGREEMENT FOR VIOLATION PROCESSING
AND DEBT COLLECTION SERVICES
BETWEEN
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY
AND
GILA CORPORATION, d/b/a
MUNICIPAL SERVICES BUREAU**

This Amendment is effective on January 1, 2019, and amends that certain Agreement for Violation Processing and Debt Collection Services Between Central Texas Regional Mobility Authority ("CTRMA") and Gila Corporation, d/b/a Municipal Services Bureau (the "Consultant" or "MSB"), dated to be effective January 15, 2008 (the "Agreement"), as that agreement has been subsequently amended.

Pursuant to the authority granted by the CTRMA Board of Directors in Resolution No. 18-_____, dated December 11, 2018, the parties to this Amendment No. 8 agree as follows:

ARTICLE 3 (TIME OF PERFORMANCE) of the Agreement is hereby amended to read in its entirety as follows:

**ARTICLE 3
TIME OF PERFORMANCE**

- a. **Term.** The term of this Agreement shall commence on January 15, 2008 and continue until December 31, 2018 (the "Expiration Date"), subject to the earlier termination of this Agreement pursuant to Articles 4 or 5 below, or further extension by CTRMA as follows. The initial period of performance shall be from January 15, 2008 through December 31, 2018, and there shall be twelve (12) successive one (1) month renewal terms following the expiration of the initial period of performance. In addition to any termination rights set forth in this Agreement, CTRMA may elect not to extend the term by one or more of the renewal months by providing thirty (30) days written notice to Consultant prior to the end of the then current monthly renewal term. Upon expiration of the term, this Agreement shall terminate of its own accord. If at any time during the contract term the Consultant cannot provide the requested Services within the time required by the CTRMA or for any other reason, the Authority reserves the unilateral right to procure the Services from any other source it deems capable of providing those Services.
- b. **No Further Rights, Etc.** Except as provided in Article 35, termination of this Agreement as described in this Article 3 shall extinguish all rights, duties, obligations and liabilities of the Authority and the Consultant under this Agreement, and this Agreement shall be of no further force and effect, provided however, such termination shall not act to release the Consultant from liability for any previous default either under this Agreement or under any standard of conduct set by common law or statute.
- c. **No Further Compensation.** If this Agreement terminates as provided in this Article 3, no fees of any type shall thereafter be paid to the Consultant, provided that the Authority shall not waive any right to damages incurred by reason of the Consultant's breach thereof. The Consultant shall not receive any compensation for Services performed by the Consultant

after expiration of the term, and any such Services performed shall be at the sole risk and expense of the Consultant.

All other provisions of the Agreement, as amended, remain unchanged.

By their signatures below, CTRMA and the MSB evidence their agreement to the amendment set forth above.

GILA CORPORATION, d/b/a
MUNICIPAL SERVICES BUREAU

CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

By: _____

By: _____

Name: _____

Name: Mike Heiligenstein

Title: _____

Title: Executive Director

**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 18-063

**AUTHORIZE THE EXECUTIVE DIRECTOR TO EXECUTE AN INTERLOCAL
AGREEMENT WITH THE TEXAS DEPARTMENT OF MOTOR VEHICLES FOR THE
APPLICATION OF REGISTRATION HOLDS TO HABITUAL VIOLATORS**

WHEREAS, pursuant to Chapter 372, Texas Transportation Code, a toll project entity may adopt and exercise habitual violator remedies when enforcing toll violations committed by “habitual violators” as defined by Section 372.106; and

WHEREAS, by Resolution No. 18-049, dated September 26, 2018, the Board approved an amendment to the Mobility Authority Policy Code to include the additional level of habitual violator enforcement as prescribed by Chapter 372, Texas Transportation Code (the “Habitual Violator Policy”); and

WHEREAS, the Habitual Violator Policy includes the potential for implementing vehicle registration blocks through the Texas Department of Motor Vehicles (“TxDMV”); and

WHEREAS, the current TxDMV form for an Interlocal Agreement for the implementation of vehicle registration blocks for a term five years is attached hereto as Exhibit A; and

WHEREAS, the Executive Director recommends that the Board authorize him to execute an Interlocal Agreement on behalf of the Mobility Authority for the implementation of vehicle registration blocks as described in the Habitual Violator Policy in the form provided by TxDMV at the time of execution.

NOW THEREFORE, BE IT RESOLVED that the Executive Director is hereby authorized to execute an Interlocal Agreement on behalf of the Mobility Authority for the implementation of vehicle registration blocks in the form provided by the Texas Department of Motor Vehicles at the time of execution.


Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 11th day of December 2018.

Submitted and reviewed by:



Geoffrey Petroy, General Counsel

Approved:



Ray A. Wilkerson
Chairman Board of Directors

Exhibit A

STATE OF TEXAS §

COUNTY OF TRAVIS §

INTERLOCAL COOPERATION AGREEMENT

THIS CONTRACT is entered into by the Contracting Parties under Government Code, Chapter 791.

I. CONTRACTING PARTIES:

The Texas Department of Motor Vehicles (TxDMV)

Central Texas Regional Mobility Authority (Toll Project Entity "TPE")

II. PURPOSE: Scofflaw Services contract for marking Texas Motor Vehicle Registration Records, and denying motor vehicle registration.

III. STATEMENT OF SERVICES TO BE PERFORMED: TxDMV will undertake and carry out services described in **Attachment A**, Scope of Services.

IV. CONTRACT PAYMENT: Contract payment shall conform to the provisions of **Attachment B**, Budget.

V. TERM OF CONTRACT: This contract begins when fully executed by both parties and terminates five years from the date this contract is executed by the state, or when otherwise terminated as provided in **Attachment C**, Article 5 of this Agreement.

VI. LEGAL AUTHORITY:

THE TEXAS DEPARTMENT OF MOTOR VEHICLES certifies that the services provided under this contract are services that are properly within its legal authority.

The parties further certify that this contract is to be performed in accordance within Sections 372.111 and 502.011 of the Texas Transportation Code.

This contract incorporates the provisions of **Attachment A**, Scope of Services, **Attachment B**, Budget, **Attachment C**, General Terms and Conditions, **Attachment D**, Resolution or Ordinance, **Attachment E**, Contact Information, and **Attachment F**, Account Information.

FOR THE Central Texas Regional Mobility Authority (TOLL PROJECT ENTITY)

By _____ Date _____

AUTHORIZED SIGNATURE

Mike Heiligenstein

TYPED OR PRINTED NAME AND TITLE

Title Executive Director

FOR THE STATE OF TEXAS

Executed for the Executive Director and approved by the Texas Department of Motor Vehicles Board for the purpose and effect of activating and/or carrying out the orders, established policies or work programs heretofore approved and authorized by the Texas Department of Motor Vehicles Board.

By _____ Date _____

Jeremiah Kuntz

Director, Vehicle Titles and Registration Division

Texas Department of Motor Vehicles

ATTACHMENT A
Scope of Services

TxDMV will:

1. Place “flags” on vehicle records based on submission data received from the TPE containing “flag” request codes. A flagged record will cause:
 - A. A "scofflaw" remark will be displayed on inquiry devices as part of the vehicle record when an inquiry is made on a "flagged" record.
 - B. Registration renewal notices to be printed with a "scofflaw" remark so the registration or re-registration of the vehicle may be denied.
2. Remove “flags” from vehicle records based on submission data received from TPE request codes.
3. Provide a report to the TPE showing successful "flag" and "clear" counts and errors after completion of the computer run.
4. Return to the TPE bad or corrupted data with no further action by TxDMV.

Toll Project Entity shall:

1. Provide information via secure ftp connection, or e-mail attachments, or through other method as directed by TxDMV (“data transmissions”) and in accordance with TxDMV specifications (see Attachment G) to TxDMV for computer runs for flagging of vehicle records ("flag") and removal of flags ("clear").
2. Provide information contained in “data transmissions” with the county number, vehicle identification number (VIN), registration plate number, and "flag" or "clear" code.
3. Submit “data transmissions” to TxDMV of a single source within the TPE.
4. Understand that submission of “data transmissions” to TxDMV constitutes a certification that the TPE has notified owners of vehicles whose records appear on the “data transmission” that past due tolls and fees are owed to the TPE.
5. Submit an application to establish the method of payment (see Attachment F), and establish an account prior to submitting requests for flagging of vehicle records.
6. Comply with Transportation Code, Section 501.147, Vehicle Transfer Notification, by which the TPE shall honor a vehicle transfer notice. If a date exists in the "vehsolddate" (Vehicle Sold Date) field, a transfer notice has been submitted; therefore, the registered owner on this record is no longer subject to civil and criminal liability on and after the vehicle sold date.

ATTACHMENT B

Budget

Fees for file submission and transactions shall be submitted to TxDMV in accordance with 43 TAC Chapter 217. All funds paid under this agreement must be paid from current revenues available to the TPE.

Payments shall be submitted to the following address:

Texas Department of Motor Vehicles
IT Services Division , Data Support Services
PO Box 5020
Austin, TX 78763-5020

The TPE will submit its input file as an e-mail attachment, and the attached "Account Information" form must be completed. The TPE shall establish a non-interest bearing escrow account ("Prepaid Account") with TxDMV. Upon agreement between the TPE and TxDMV and payment of applicable fees as described below, TxDMV will establish an account in the name of the TPE. Charges shall be deducted from the escrow account until the balance of that account reaches the minimum required balance for the TPE, as determined by TxDMV and provided herein.

A deposit of at least \$500 shall be maintained in a non-interest bearing escrow account. This initial deposit is to cover estimated service use. The escrow account shall be established with TxDMV prior to placing or removing "flags" from motor vehicle records for the TPE. Payment of the deposit shall be made by check or warrant, payable to the "Texas Department of Motor Vehicles" and is due upon execution of this contract. The \$500.00 minimum balance, to be maintained in the escrow account, may increase depending on established monthly usage by the TPE. When it becomes necessary to increase the TPE's escrow account minimum balance, as determined by TxDMV, the TPE agrees to pay the sum in increments of \$500. This additional funding is payable within fifteen (15) days from receipt of notification from TxDMV.

TxDMV will provide a statement to the TPE which indicates the remaining balance in the TPE's escrow account.

If the balance in the non-interest bearing escrow account falls below the \$500 minimum balance, TxDMV may suspend placing or removing "flags" from motor vehicle records for the TPE until such time as a deposit is made by the TPE, in an amount sufficient to increase the balance in the escrow account to the \$500 minimum balance.

ATTACHMENT C

General Terms and Conditions

Article 1. Amendments

This contract may only be amended by written agreement executed by both parties before the contract is terminated.

Article 2. Conflicts Between Agreements

If the terms of this contract conflict with the terms of any other contract between the parties, the most recent contract shall prevail.

Article 3. Disputes

TxDMV will be responsible for the settlement of all contractual and administrative issues.

Article 4. Ownership of Equipment

Except to the extent that a specific provision of this contract states to the contrary, all equipment purchased by TxDMV under this contract will be owned by TxDMV.

Article 5. Termination

This contract may be terminated by mutual written agreement, or 30 days after either party gives notice to the other party, whichever occurs first.

Article 6. Gratuities

Any person who is doing business with or who reasonably speaking may do business with TxDMV under this contract may not make any offer of benefits, gifts, or favors to employees of TxDMV.

Article 7. Responsibilities of the Parties

Each party acknowledges that it is not an agent, servant, or employee of the other party. Each party is responsible for its own acts and deeds and for those of its agents, servants, or employees.

Article 8. Compliance with Laws

The parties shall comply with all federal, state, and local laws, statutes, ordinances, rules, and regulations and with the orders and decrees of any courts or administrative bodies or tribunals in any manner affecting the performance of this agreement.

Article 9. Signatory Warranty

Each signatory warrants that the signatory has necessary authority to execute this agreement on behalf of the entity represented.

ATTACHMENT D

Resolution

On the 11th day of December 2018, the Central Texas Regional Mobility Authority Board of Directors passed Resolution No. 18-063, hereinafter identified by reference, authorizing the Toll Project Entity's participation in the Program.

ATTACHMENT E

Contact Information

Technical assistance regarding the placing and removing of “flags” from motor vehicle records or information regarding payments for your account may be obtained by contacting the IT Services Division, Data Support Services Branch at VTR_Scofflaw@txdmv.gov.

ATTACHMENT F

ACCOUNT INFORMATION

IT SERVICES DIVISION 4000 JACKSON AVENUE, AUSTIN, TEXAS 78731-6007 PLEASE PRINT OR TYPE		Contract Number <hr/> For Department Use Only
DATE:	ATTN: <i>(Name and Telephone Number of Person Responsible For Account)</i>	
October 1, 2018	Billy Blackman, CTRMA Toll Operations Manager, (512) 450-6293	
ACCOUNT NAME:	Central Texas Regional Mobility Authority (CTRMA)	
BILLING ADDRESS:		
3300 North IH-35, Suite 300 Austin, Texas 78705		
ATTENTION: <i>(Name and Mailing Address of the Person Responsible for Sending and Receiving Files.)</i>		
MAILING ADDRESS: Cofiroute USA Attention: Brandon Rich 14050 Summit Drive, Suite 113A Austin, Texas 78728		
E-MAIL ADDRESS: <i>(For Contact Purposes By E-mail)</i>		
brich@cofirouteusa.com		
BUSINESS TELEPHONE NUMBER:	BUSINESS FAX NUMBER:	
(949) 943-8521	(949) 754-0199	
<i>For Department Use Only</i>		
Escrow Amount _____		
Date Agreement Signed _____		
<u>Account Terminated/Canceled</u>		
Non-Payment	User Request	Account Number
_____	_____	_____

**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 18-064

**APPROVING CERTAIN EDITS TO THE CONTRACT WITH HDR ENGINEERING,
INC. FOR CONSTRUCTION ENGINEERING AND INSPECTION SERVICES**

WHEREAS, by Resolution 18-051, dated September 26, 2018, the Board authorized and directed the Executive Director to finalize and execute a contract and Work Authorization No. 1 with HDR, Inc. for Construction Engineering and Inspection Services for the Manor Expressway (290E) Phase III Project; and

WHEREAS, HDR, Inc. has requested approval to modify the contracting entity from HDR, Inc. to HDR Engineering, Inc.; and

WHEREAS, HDR Engineering, Inc. is a subsidiary firm that implements U.S. business operations under the parent company, HDR, Inc.; and

WHEREAS, the original proposal to provide construction engineering and inspection services to the Mobility Authority for the Manor Expressway (290E) Phase III Project was submitted by HDR Engineering, Inc.; and

WHEREAS, the Executive Director recommends re-executing the contract and Work Authorization No. 1 for the purpose of changing the contracting entity from HDR, Inc. to HDR Engineering, Inc., with no changes to the terms and conditions thereof.

NOW THEREFORE, BE IT RESOLVED that the Board authorizes the Executive Director to re-execute the contract and Work Authorization No. 1 for construction engineering and inspection services for the Manor Expressway (290E) Phase III Project for the purpose of changing the contracting entity from HDR, Inc. to HDR Engineering, Inc., with no changes to the terms and conditions thereof.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 11th day of December 2018.

Submitted and reviewed by:



Geoffrey Petrov, General Counsel

Approved:



Ray A. Wilkerson
Chairman, Board of Directors



December 4, 2018

Mike Heiligenstein
Executive Director
Central Texas Regional Mobility Authority
3300 N IH-35, Suite 300
Austin, TX 78705

RE: Request for Amendment to Agreement for Engineering Services

Dear Mr. Heiligenstein,

HDR, Inc. ("HDR") entered into an Agreement on October 4, 2018 with the Central Texas Regional Mobility Authority (the "Authority") to perform Construction Engineering and Inspection Services for the Manor Expressway (290E) Phase III Project. We are requesting to amend this Agreement to change the name of the engineering firm from HDR, Inc. to HDR Engineering, Inc.

The Agreement and the terms and conditions therein shall remain unchanged.

Please do not hesitate to contact me if you have any questions or need any additional information.

Sincerely,
HDR Engineering, Inc.

A handwritten signature in blue ink, appearing to read 'Mark Borenstein'.

Mark Borenstein, PE
Area Manager

**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 18-065

ACCEPT THE FINANCIAL STATEMENTS FOR OCTOBER 2018

WHEREAS, the Central Texas Regional Mobility Authority (Mobility Authority) is empowered to procure such goods and services as it deems necessary to assist with its operations and to study and develop potential transportation projects, and is responsible to insure accurate financial records are maintained using sound and acceptable financial practices; and

WHEREAS, close scrutiny of the Mobility Authority's expenditures for goods and services, including those related to project development, as well as close scrutiny of the Mobility Authority's financial condition and records is the responsibility of the Board and its designees through procedures the Board may implement from time to time; and

WHEREAS, the Board has adopted policies and procedures intended to provide strong fiscal oversight and which authorize the Executive Director, working with the Mobility Authority's Chief Financial Officer, to review invoices, approve disbursements, and prepare and maintain accurate financial records and reports;

WHEREAS, the Executive Director, working with the Chief Financial Officer, has reviewed and authorized the disbursements necessary for the month of October 2018, and has caused financial statements to be prepared and attached to this resolution as Exhibit A; and

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors accepts the financial statements for October 2018, attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 11th day of December 2018.

Submitted and reviewed by:



Geoffrey Petrov, General Counsel

Approved:



Ray A. Wilkerson
Chairman, Board of Directors

Exhibit A

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending October 31, 2018

	Budget Amount FY 2018	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
REVENUE				
Operating Revenue				
Toll Revenue - Tags	73,700,000	25,368,288	47.91%	20,313,611
Video Tolls	17,587,500	6,589,343	37.47%	4,102,572
Fee Revenue	6,762,500	1,923,230	28.44%	1,716,348
Total Operating Revenue	98,050,000	33,880,861	34.55%	26,132,530
Other Revenue				
Interest Income	950,000	1,468,269	154.55%	623,049
Grant Revenue	-	-	-	10,060,265
Misc Revenue	2,000	37,200	1860.00%	-
Total Other Revenue	952,000	1,505,469	158.14%	10,683,314
TOTAL REVENUE	\$99,002,000	\$35,386,329	35.74%	36,815,844
EXPENSES				
Salaries and Benefits				
Salary Expense-Regular	4,138,603	1,101,128	26.61%	1,117,446
Salary Reserve	80,000	-	-	-
TCDRS	579,405	147,403	25.44%	156,093
FICA	190,792	40,044	20.99%	43,114
FICA MED	65,880	16,043	24.35%	16,111
Health Insurance Expense	391,184	113,393	28.99%	111,467
Life Insurance Expense	11,165	1,237	11.08%	4,413
Auto Allowance Expense	10,200	2,975	29.17%	3,400
Other Benefits	136,476	21,783	15.96%	27,157
Unemployment Taxes	4,212	60	1.43%	3
Total Salaries and Benefits	5,607,917	1,444,066	25.75%	1,479,203

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending October 31, 2018

	Budget Amount FY 2018	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
Administrative				
Administrative and Office Expenses				
Accounting	10,000	2,452	24.52%	2,139
Auditing	125,000	74,000	59.20%	29,500
Human Resources	35,000	2,545	7.27%	1,077
IT Services	174,000	22,346	12.84%	34,451
Internet	4,550	2,150	47.26%	570
Software Licenses	85,700	16,353	19.08%	9,589
Cell Phones	16,100	4,175	25.93%	3,608
Local Telephone Service	12,000	2,502	20.85%	5,001
Overnight Delivery Services	500	15	2.97%	5
Local Delivery Services	600	12	2.05%	-
Copy Machine	24,000	4,910	20.46%	4,742
Repair & Maintenance-General	15,500	1,710	11.03%	131
Community Meeting/ Events	15,000	-	-	-
Meeting Expense	16,000	1,913	11.96%	3,356
Public Notices	100	-	-	-
Toll Tag Expense	3,150	752	23.86%	600
Parking / Local Ride Share	1,800	229	12.71%	218
Mileage Reimbursement	9,900	795	8.03%	1,464
Insurance Expense	251,000	64,458	25.68%	52,835
Rent Expense	650,000	187,650	28.87%	171,642
Legal Services	396,500	805	0.20%	15,126
Total Administrative and Office Expenses	1,846,400	389,772	21.11%	336,056
Office Supplies				
Books & Publications	5,700	1,162	20.38%	627
Office Supplies	16,000	2,066	12.91%	1,834
Misc Office Equipment	-	4,317	-	-
Computer Supplies	152,550	1,017	0.67%	4,374
Copy Supplies	3,000	413	13.76%	604
Other Reports-Printing	8,000	-	-	-
Office Supplies-Printed	2,600	1,088	41.84%	533
Misc Materials & Supplies	750	-	-	-
Postage Expense	800	51	6.41%	127
Total Office Supplies	189,400	10,113	5.34%	8,100

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending October 31, 2018

	Budget Amount FY 2018	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
Communications and Public Relations				
Graphic Design Services	55,000	8,259	15.02%	9,500
Website Maintenance	100,300	14,874	14.83%	9,060
Research Services	450,000	(56,385)	-12.53%	-
Communications and Marketing	800,000	40,281	5.04%	23,490
Advertising Expense	821,500	62,163	7.57%	48,810
Direct Mail	15,800	-	-	-
Video Production	258,820	8,820	3.41%	8,904
Photography	12,500	4,895	39.16%	1,965
Radio	75,000	-	-	2,893
Other Public Relations	60,000	21,475	35.79%	31,013
Promotional Items	20,000	-	-	-
Displays	5,000	-	-	2,124
Annual Report printing	5,000	2,728	54.57%	-
Direct Mail Printing	5,000	-	-	-
Other Communication Expenses	70,000	800	1.14%	1,467
Total Communications and Public Relations	2,753,920	107,911	3.92%	139,226
Employee Development				
Subscriptions	3,050	410	13.45%	574
Agency Memberships	53,500	3,978	7.44%	2,372
Continuing Education	15,500	250	1.61%	694
Professional Development	19,000	401	2.11%	249
Other Licenses	1,700	203	11.93%	208
Seminars and Conferences	41,000	4,940	12.05%	7,243
Travel	70,000	28,775	41.11%	11,918
Total Employee Development	203,750	38,957	19.12%	23,256
Financing and Banking Fees				
Trustee Fees	45,000	26,075	57.94%	21,525
Bank Fee Expense	6,500	1,846	28.40%	1,856
Continuing Disclosure	15,000	-	-	4,419
Arbitrage Rebate Calculation	13,000	1,225	9.42%	8,355
Rating Agency Expense	30,000	16,000	53.33%	15,500
Total Financing and Banking Fees	109,500	45,146	41.23%	51,655
Total Administrative	5,102,970	591,900	11.60%	558,293

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending October 31, 2018

	Budget Amount FY 2018	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
Operations and Maintenance				
Operations and Maintenance Consulting				
GEC-Trust Indenture Support	169,000	4,473	2.65%	8,905
GEC-Financial Planning Support	51,000	11,236	22.03%	-
GEC-Toll Ops Support	249,786	25,249	10.11%	-
GEC-Roadway Ops Support	1,129,978	100,630	8.91%	85,855
GEC-Technology Support	857,428	309,949	36.15%	-
GEC-Public Information Support	120,000	19,620	16.35%	22,304
GEC-General Support	1,443,568	150,740	10.44%	65,966
General System Consultant	500,000	72,201	14.44%	43,702
Traffic Modeling	590,000	22,549	3.82%	-
Traffic and Revenue Consultant	150,000	22,450	14.97%	36,909
Total Operations and Maintenance Consulting	4,670,760	716,548	15.34%	263,641
Roadway Operations and Maintenance				
Roadway Maintenance	4,507,900	736,181	16.33%	834,737
Maintenance Supplies-Roadway	117,800	17,476	14.84%	-
Tools & Equipment Expense	1,000	131	13.11%	129
Gasoline	18,700	5,483	29.32%	4,594
Repair & Maintenance-Vehicles	6,500	1,723	26.51%	2,138
Electricity - Roadways	200,000	45,878	22.94%	40,985
Total Roadway Operations and Maintenance	4,851,900	806,872	16.63%	882,582
Toll Processing and Collection Expense				
Image Processing	3,200,000	209,429	6.54%	520,923
Tag Collection Fees	6,633,000	3,463,337	52.21%	963,123
Court Enforcement Costs	49,080	6,475	13.19%	8,262
DMV Lookup Fees	500	75	15.00%	183
Total Processing and Collection Expense	9,882,580	3,679,316	37.23%	1,492,491

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending October 31, 2018

	Budget Amount FY 2018	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
Toll Operations Expense				
Generator Fuel	2,000	-	-	42
Fire and Burglar Alarm	500	123	24.67%	123
Refuse	1,500	383	25.56%	359
Telecommunications	120,000	21,913	18.26%	29,721
Water - Irrigation	10,000	1,302	13.02%	2,395
Electricity	2,500	383	15.33%	501
ETC spare parts expense	50,000	-	-	-
Repair & Maintenance Toll Equip	5,000	-	-	-
Law Enforcement	290,000	181,204	62.48%	92,932
ETC Maintenance Contract	1,988,386	341,614	17.18%	439,334
ETC Toll Management Center System Operation	360,000	-	-	-
ETC Development	1,636,000	-	-	-
ETC Testing	100,000	-	-	-
Total Toll Operations Expense	4,565,886	546,924	11.98%	565,408
Total Operations and Maintenance	23,971,126	5,749,659	23.99%	3,204,122
Other Expenses				
Special Projects and Contingencies				
HERO	148,000	-	-	226,108
Special Projects	500,000	-	-	-
71 Express Net Revenue Payment	3,635,405	1,306,139	35.93%	234,123
Technology Task Force	650,000	34,283	5.27%	-
Other Contractual Svcs	150,000	31,198	20.80%	27,999
Contingency	250,000	-	-	693
Total Special Projects and Contingencies	5,333,405	1,371,620	25.72%	488,923
Non Cash Expenses				
Amortization Expense	487,699	146,947	30.13%	168,646
Amort Expense - Refund Savings	1,027,860	344,845	33.55%	344,393
Dep Exp- Furniture & Fixtures	3,014	871	28.91%	871
Dep Expense - Equipment	15,999	5,333	33.33%	6,090
Dep Expense - Autos & Trucks	37,437	8,879	23.72%	5,558
Dep Expense-Buildng & Toll Fac	176,748	58,916	33.33%	59,008
Dep Expense-Highways & Bridges	22,541,478	5,736,417	25.45%	6,534,771
Dep Expense-Toll Equipment	2,485,026	708,148	28.50%	813,714
Dep Expense - Signs	326,893	108,631	33.23%	108,631
Dep Expense-Land Improvemts	884,934	294,978	33.33%	294,978
Depreciation Expense-Computers	20,317	3,955	19.47%	4,797
Total Non Cash Expenses	28,007,405	7,417,922	26.49%	8,341,458
Total Other Expenses	33,340,810	8,789,542	26.36%	8,830,381

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending October 31, 2018

	Budget Amount FY 2018	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
Non Operating Expenses				
Bond issuance expense	1,413,508	75,584	5.35%	75,584
Loan Fee Expense	-	13,500	-	-
Interest Expense	40,371,558	10,821,154	26.80%	10,446,857
CAMPO RIF Payment	2,000,000	2,000,000	100.00%	-
Community Initiatives	275,000	20,042	7.29%	5,000
Total Non Operating Expenses	44,060,066	12,930,281	29.35%	10,527,442
<hr/>				
TOTAL EXPENSES	\$112,082,889	\$29,505,448	26.32%	\$24,599,440
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Net Income	(\$13,080,889)	\$5,880,881		12,216,404
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Central Texas Regional Mobility Authority
Balance Sheet
as of October 31, 2018

	as of 10/31/2018		as of 10/31/2017	
ASSETS				
Current Assets				
Cash				
Regions Operating Account	\$ 924,015		\$ 468,758	
Cash in TexStar	729,890		1,058,507	
Regions Payroll Account	51,097		53,120	
Restricted Cash				
Goldman Sachs FSGF 465	109,039,230		122,503,337	
Restricted Cash - TexSTAR	158,188,307		208,468,422	
Overpayments account	280,365		178,281	
Total Cash and Cash Equivalents		269,212,903		332,730,425
Accounts Receivable				
Accounts Receivable	1,141,083		-	
Due From Other Agencies	23,759		3,206	
Due From TTA	286,018		2,226,005	
Due From NTTA	625,021		1,032,163	
Due From HCTRA	975,222		2,135,878	
Due From TxDOT	871,425		9,761,716	
Interest Receivable	518,250		227,529	
Total Receivables		4,440,779		15,386,496
Short Term Investments				
Treasuries	24,891,016		-	
Agencies	154,569,164		101,359,478	
Total Short Term Investments		179,460,180		101,359,478
Total Current Assets		453,113,861		449,476,400
Total Construction in Progress		654,357,943		604,534,435
Fixed Assets (Net of Depreciation and Amortization)				
Computer	26,178		40,329	
Computer Software	866,817		1,206,736	
Furniture and Fixtures	11,761		14,375	
Equipment	14,039		30,038	
Autos and Trucks	50,639		71,468	
Buildings and Toll Facilities	5,054,783		5,231,531	
Highways and Bridges	892,049,949		757,984,887	
Toll Equipment	17,948,627		15,176,280	
Signs	10,527,838		10,821,831	
Land Improvements	9,444,027		10,328,961	
Right of way	88,149,606		88,149,606	
Leasehold Improvements	126,990		142,171	
Total Fixed Assets		1,024,271,254		889,198,213
Other Assets				
Intangible Assets-Net	103,128,942		104,179,835	
2005 Bond Insurance Costs	4,216,788		4,430,296	
Prepaid Insurance	168,936		167,801	
Prepaid Expenses	275		-	
Deferred Outflows (pension related)	290,396		711,563	
Pension Asset	826,397		355,139	
Total Other Assets		108,631,735		109,844,634
Total Assets		\$ 2,240,374,793		\$ 2,053,053,682

Central Texas Regional Mobility Authority
Balance Sheet
as of October 31, 2018

	as of 10/31/2018	as of 10/31/2017
LIABILITIES		
Current Liabilities		
Accounts Payable	\$ 101,035	\$ (209,732)
Construction Payable	1,913,830	(135)
Overpayments	283,264	180,945
Interest Payable	17,267,300	17,326,883
Deferred Compensation Payable	142	142
TCDRS Payable	52,782	54,599
Medical Reimbursement Payable	-	1,735
Due to other Agencies	4,035,586	2,002,095
Due to TTA	3,262,153	531,185
Due to NTTA	294,518	216,834
Due to HCTRA	147,542	224,290
Due to Other Entities	1,346,066	5,857,562
71E TxDOT Obligation - ST	2,876,305	885,120
Total Current Liabilities	31,580,524	27,071,524
Long Term Liabilities		
Compensated Absences	282,775	182,441
Deferred Inflows (pension related)	278,184	286,449
Long Term Payables	560,959	468,891
Bonds Payable		
Senior Lien Revenue Bonds:		
Senior Lien Revenue Bonds 2010	75,204,171	70,414,840
Senior Lien Revenue Bonds 2011	15,743,844	14,801,753
Senior Refunding Bonds 2013	139,885,000	143,685,000
Senior Lien Revenue Bonds 2015	298,790,000	298,790,000
Senior Lien Put Bnd 2015	68,785,000	68,785,000
Senior Lien Refunding Revenue Bonds 2016	358,030,000	358,030,000
Sn Lien Rev Bnd Prem/Disc 2013	7,494,860	9,368,585
Sn Lien Revenue Bnd Prem 2015	20,378,514	21,575,019
Sn Lien Put Bnd Prem 2015	3,105,056	4,968,360
Senior lien premium 2016 revenue bonds	50,257,551	54,577,800
Total Senior Lien Revenue Bonds	1,037,673,996	1,044,996,357
Sub Lien Revenue Bonds:		
Sub Refunding Bnds 2013	100,530,000	101,530,000
Sub Debt Refunding Bonds 2016	74,305,000	74,690,000
Sub Refunding 2013 Prem/Disc	1,675,523	2,159,836
Sub Refunding 2016 Prem/Disc	8,867,601	9,732,756
Total Sub Lien Revenue Bonds	185,378,124	188,112,592
Other Obligations		
TIFIA note 2015	147,176,122	53,070
SIB loan 2015	32,175,412	30,925,951
State Highway Fund Loan 2015	32,175,442	30,925,951
State 45SW Loan	40,080,000	4,080,000
2013 American Bank Loan	-	3,570,000
71E TxDOT Obligation - LT	62,332,058	65,000,000
Regions 2017 MoPAC Note	17,000,000	-
Total Other Obligations	330,939,034	134,554,972
Total Long Term Liabilities	1,554,552,113	1,368,132,812
Total Liabilities	1,586,132,637	1,395,204,336
NET ASSETS		
Contributed Capital	121,202,391	136,725,550
Net Assets Beginning	527,229,757	508,907,392
Current Year Operations	5,810,007	12,216,404
Total Net Assets	654,242,155	657,849,346
Total Liabilities and Net Assets	\$ 2,240,374,793	\$ 2,053,053,682

Central Texas Regional Mobility Authority
Statement of Cash Flow
as of October 31, 2018

Cash flows from operating activities:

Receipts from toll fees	\$	34,418,499
Receipts from interest income		(325,766)
Payments to vendors		(9,013,837)
Payments to employees		(1,487,460)
Net cash flows provided by (used in) operating activities		23,628,636

Cash flows from capital and related financing activities:

Proceeds from notes payable		113,263,771
Receipts from Department of Transportation		(26,100)
Interest payments		(25,442,515)
Acquisitions of construction in progress		(46,279,278)
Net cash flows provided by (used in) capital and related financing activities		41,515,878

Cash flows from investing activities:

Interest income		1,468,269
Purchase of investments		(211,331,890)
Proceeds from sale or maturity of investments		85,843,068
Net cash flows provided by (used in) investing activities		(124,020,553)
Net increase (decrease) in cash and cash equivalents		(58,876,040)
Cash and cash equivalents at beginning of period		169,170,746
Cash and cash equivalents at end of period	\$	110,294,706

Reconciliation of change in net assets to net cash provided by operating activities:

Operating income		\$ 15,863,524
Adjustments to reconcile change in net assets to net cash provided by operating activities:		
Depreciation and amortization		7,073,076
Changes in assets and liabilities:		
(Increase) decrease in accounts receivable		133,886
(Increase) decrease in prepaid expenses and other assets		(122,693)
(Decrease) increase in accounts payable		(2,374,202)
Increase (decrease) in accrued expenses		3,055,045
Total adjustments		7,765,112
Net cash flows provided by (used in) operating activities	\$	23,628,636

Reconciliation of cash and cash equivalents:

Unrestricted cash and cash equivalents		\$ 1,255,476
Restricted cash and cash equivalents		109,039,230
Total	\$	110,294,706

INVESTMENTS by FUND

		Balance		
			October 31, 2018	
Renewal & Replacement Fund				TexSTAR 158,261,377.02
	TexSTAR	416,190.15		Goldman Sachs 104,056,857.44
	Goldman Sachs	6,373.95		Agencies & Treasury Notes 179,460,179.64
	Agencies/ Treasuries		422,564.10	
Grant Fund				\$ 441,778,414.10
	TexSTAR	4,321,355.76		
	Goldman Sachs	509,442.60		
	Agencies/ Treasuries	4,940,652.01	9,771,450.37	
Senior Debt Service Reserve Fund				
	TexSTAR	5,810,759.79		
	Goldman Sachs	5,978,980.08		
	Agencies/ Treasuries	69,731,594.22	81,521,334.09	
2010 Senior Lien DSF				
	Goldman Sachs	1,262,665.19		
	TexSTAR		1,262,665.19	
2011 Debt Service Acct				
	Goldman Sachs	765,662.70	765,662.70	
2013 Sr Debt Service Acct				
	Goldman Sachs	5,251,858.21	5,251,858.21	
2013 Sub Debt Service Account				
	Goldman Sachs	4,364,842.22	4,364,842.22	
2015 Sr Capitalized Interest				
	Goldman Sachs	10.98	39,347,016.67	
	TexSTAR	39,347,005.69		
2015A Debt Service Account				
	Goldman Sachs	-	-	
2015B Debt Service Account				
	Goldman Sachs	1,152,561.82	1,152,561.82	
2016 Sr Lien Rev Refunding Debt Service Account				
	Goldman Sachs	6,806,721.45	6,806,721.45	
2016 Sub Lien Rev Refunding Debt Service Account				
	Goldman Sachs	1,460,299.49	1,460,299.49	
2016 Sub Lien Rev Refunding DSR				
	Goldman Sachs	1,834,918.70		
	Agencies/ Treasuries	4,940,652.01	6,775,570.71	
Operating Fund				
	TexSTAR	729,889.71		
	TexSTAR-Trustee	3,366,021.93		
	Goldman Sachs	2,265.06	4,098,176.70	
Revenue Fund				
	Goldman Sachs	4,083,504.08	4,083,504.08	
General Fund				
	TexSTAR	25,276,700.88		
	Goldman Sachs	31,644,927.31		
	Agencies/ Treasuries	9,982,606.91	66,904,235.10	
2013 Sub Debt Service Reserve Fund				
	TexSTAR	5,125,615.97		
	Goldman Sachs	3,540,255.99	8,665,871.96	
71E Revenue Fund				
	Goldman Sachs	6,190,399.88	6,190,399.88	
MoPac Revenue Fund				
	Goldman Sachs	-	0.00	
MoPac Construction Fund				
	Goldman Sachs	13,803,962.23	13,803,962.23	
MoPac General Fund				
	Goldman Sachs	-		
MoPac Operating Fund				
	Goldman Sachs	465,446.63	465,446.63	
MoPac Loan Repayment Fund				
	Goldman Sachs	53,364.16	53,364.16	
2015B Project Account				
	Goldman Sachs	8,235,726.04		
	Agencies/ Treasuries	25,018,881.75		
	TexSTAR	7,737,049.55	40,991,657.34	
2015 TIFIA Project Account				
	Goldman Sachs	336,979.34		
	TexSTAR	48,356,028.08		
	Agencies/ Treasuries	64,845,792.74	113,538,800.16	
2015 SIB Project Account				
	TexSTAR	0.00		
	Goldman Sachs	282.40	282.40	
2011 Sr Financial Assistance Fund				
	Goldman Sachs	4.18	17,774,763.69	
	TexSTAR	17,774,759.51		
45SW Project Fund				
	Goldman Sachs	6,161,273.32	6,161,273.32	
45SW Trust Account Travis County				
	Goldman Sachs	144,129.43	144,129.43	
			\$ 441,778,414.10	

CTRMA INVESTMENT REPORT

	Month Ending 10/31/18					Rate October	
	Balance 10/1/2018	Additions	Discount Amortization	Accrued Interest	Withdrawals		Balance 10/31/2018
Amount in Trustee TexStar							
2011 Sr Lien Financial Assist Fund	17,742,188.31			32,571.20		17,774,759.51	2.1615%
2013 Sub Lien Debt Service Reserve	5,116,223.60			9,392.37		5,125,615.97	2.1615%
General Fund	25,230,382.85			46,318.03		25,276,700.88	2.1615%
Trustee Operating Fund	2,832,945.70	3,027,687.59		5,388.64	2,500,000.00	3,366,021.93	2.1615%
Renewal and Replacement	515,321.79			868.36	100,000.00	416,190.15	2.1615%
Grant Fund	4,313,437.13			7,918.63		4,321,355.76	2.1615%
Senior Lien Debt Service Reserve Fund	5,800,111.90			10,647.89		5,810,759.79	2.1615%
2015A Sr Ln Project Cap Interest	39,274,904.67			72,101.02		39,347,005.69	2.1615%
2015B Sr Ln Project	7,722,871.85			14,177.70		7,737,049.55	2.1615%
2015C TIFIA Project	48,881,877.59			89,150.49	615,000.00	48,356,028.08	2.1615%
2015E SIB Project Account	0.00			0.00		0.00	2.1615%
	157,430,265.39	3,027,687.59		288,534.33	3,215,000.00	157,531,487.31	
Amount in TexStar Operating Fund	828,268.96	2,500,000.00		1,620.75	2,600,000.00	729,889.71	2.1615%
Goldman Sachs							
Operating Fund	2,708.11	3,027,223.73		20.81	3,027,687.59	2,265.06	2.050%
45SW Trust Account Travis County	445,409.29			696.15	301,976.01	144,129.43	2.050%
45SW Project Fund	8,005,752.13			17,192.81	1,861,671.62	6,161,273.32	2.050%
2015B Project Account	8,222,930.87			12,795.17		8,235,726.04	2.050%
2015C TIFIA Project Account	270,239.05	808,750.00		320.83	742,330.54	336,979.34	2.050%
2015E SIB Project Account	0.00			282.40		282.40	2.050%
2011 Sr Financial Assistance Fund	4.17			0.01		4.18	2.050%
2010 Senior DSF	1,111,077.47	149,976.11		1,611.61		1,262,665.19	2.050%
2011 Senior Lien Debt Service Acct	764,469.14			1,193.56		765,662.70	2.050%
2013 Senior Lien Debt Service Acct	4,376,720.76	869,017.46		6,119.99		5,251,858.21	2.050%
2013 Subordinate Debt Service Acct	3,656,290.34	704,983.34		3,568.54		4,364,842.22	2.050%
2015 Sr Capitalized Interest	10.96			0.02		10.98	2.050%
2015B Debt Service Acct	865,573.61	285,871.46		1,116.75		1,152,561.82	2.050%
2016 Sr Lien Rev Refunding Debt Service Account	5,822,942.25	975,488.63		8,290.57		6,806,721.45	2.050%
2016 Sub Lien Rev Refunding Debt Service Account	1,146,454.86	312,311.05		1,533.58		1,460,299.49	2.050%
2016 Sub Lein Rev Refunding DSR	1,832,058.31			2,860.39		1,834,918.70	2.050%
Grant Fund	508,648.44			794.16		509,442.60	2.050%
Renewal and Replacement	88,429.49	100,000.00		138.06	182,193.60	6,373.95	2.050%
Revenue Fund	2,309,372.49	10,475,538.98		5,986.74	8,707,394.13	4,083,504.08	2.050%
General Fund	30,120,626.30	1,700,212.66		46,748.11	222,659.76	31,644,927.31	2.050%
Senior Lien Debt Service Reserve Fund	5,807,412.98	162,500.00		9,067.10		5,978,980.08	2.050%
71E Revenue Fund	6,035,875.06	174,199.43		8,818.11	28,492.72	6,190,399.88	2.050%
2013 Sub Debt Service Reserve Fund	3,534,737.23			5,518.76		3,540,255.99	2.050%
MoPac Revenue Fund	88,315.98	278,585.53		277.39	367,178.90	0.00	2.050%
MoPac General Fund	0.00			0.00		0.00	2.050%
MoPac Operating Fund	157,191.39	463,230.52		63.95	155,039.23	465,446.63	2.050%
MoPac Loan Repayment Fund	49,126.27	53,348.05		16.11	49,126.27	53,364.16	2.050%
MoPac Managed Lane Construction Fund	14,739,542.44			23,856.78	959,436.99	13,803,962.23	2.050%
	99,961,919.39	20,541,236.95	0.00	158,888.46	16,605,187.36	104,056,857.44	
Amount in Fed Agencies and Treasuries							
Amortized Principal	179,337,596.57		122,583.07			179,460,179.64	
	179,337,596.57	0.00	122,583.07	0.00	0.00	179,460,179.64	
Certificates of Deposit							
Total in Pools	158,258,534.35	5,527,687.59		290,155.08	5,815,000.00	158,261,377.02	
Total in GS FSGF	99,961,919.39	20,541,236.95		158,888.46	16,605,187.36	104,056,857.44	
Total in Fed Agencies and Treasuries	179,337,596.57	0.00	122,583.07		0.00	179,460,179.64	
Total Invested	437,558,050.31	26,068,924.54	122,583.07	449,043.54	22,420,187.36	441,778,414.10	

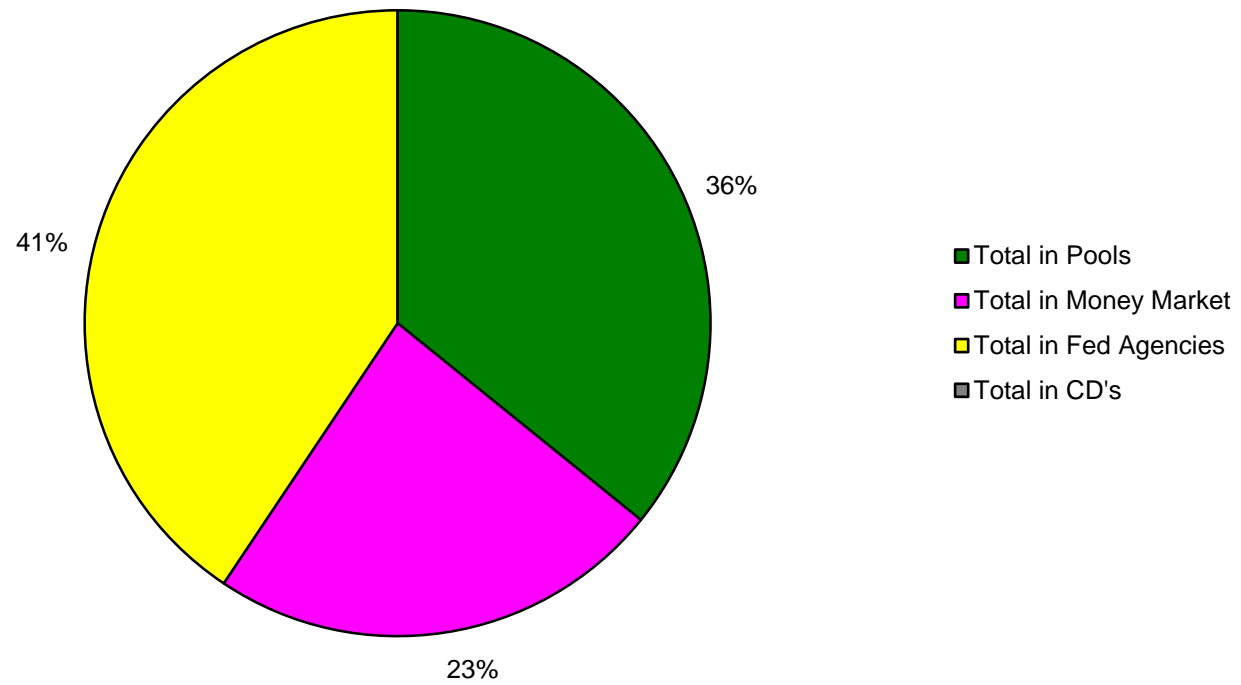
All Investments in the portfolio are in compliance with the CTRMA's Investment policy and the relevant provisions of the Public Funds Investment Act Chapter 2256.023

William Chapman, CFO

Mary Temple, Controller

10/31/2018

Allocation of Funds



Amount of Investments As of October 31, 2018

Agency	CUSIP #	COST	Book Value	Market Value	Yield to Maturity	Purchased	Matures	FUND
Federal Home loan Bank	313378QK0	10,253,642.07	10,034,306.86	9,981,590.00	1.0369%	2/8/2016	3/8/2019	2015B Sr Project
US Treasury Note	919828A34	9,952,900.00	9,993,271.43	9,992,187.50	2.0748%	5/2/2018	11/30/2018	2015B Sr Project
Federal Home loan Bank	3135G0P49sub	4,921,265.00	4,940,652.01	4,932,055.00	2.4520%	7/20/2018	8/28/2019	2016 Sub DSRF
Federal Home loan Bank	3135G0P49	19,685,060.00	19,762,608.04	19,728,220.00	2.4520%	7/20/2018	8/28/2019	Senior DSRF
Fannie Mae	3135G0G72	19,946,880.00	19,994,097.79	19,972,360.00	1.3401%	9/15/2017	12/14/2018	Senior DSRF
US Treasury Note	912828C65	19,929,687.50	19,974,888.39	19,928,125.00	1.9260%	1/25/2018	3/31/2019	Senior DSRF
Farmer Mac	3132X0W64	10,000,000.00	10,000,000.00	9,992,160.00	2.3297%	5/8/2018	5/15/2019	Senior DSRF
US Treasury Note	912828B33	4,981,640.63	4,991,303.46	4,987,890.65	2.1997%	7/20/2018	1/31/2019	2015B Sr Project
US Treasury Note	912828B33a	9,963,281.25	9,982,606.91	9,975,781.30	2.1997%	7/20/2018	1/31/2019	General
Fannie Mae	3135G0P49gnt	4,921,265.00	4,940,652.01	4,932,055.00	2.4520%	7/20/2018	8/28/2019	Grant Fund
US Treasury Note	912828D23	9,946,093.75	9,965,345.98	9,956,250.00	2.3250%	7/20/2018	4/30/2019	2015C TIFIA Project
Federal Home loan Bank	313385M78	19,884,444.44	20,000,000.00	20,000,000.00	2.0396%	7/20/2018	11/1/2018	2015C TIFIA Project
Federal Home loan Bank	3137EADZ9	19,824,200.00	19,890,539.62	19,872,040.00	2.3352%	7/20/2018	4/15/2019	2015C TIFIA Project
US Treasury Note	912828A34	14,929,350.00	14,989,907.14	14,988,281.25	2.0708%	5/2/2018	11/30/2018	2015C TIFIA Project
		<u>179,139,709.64</u>	<u>179,460,179.64</u>	<u>179,238,995.70</u>				

Agency	CUSIP #	COST	Cumulative Amortization	10/31/2018 Book Value	Maturity Value	Interest Income October 31, 2018		
						Accrued Interest	Amortization	Interest Earned
Federal Home loan Bank	313378QK0	10,253,642.07	219,335.21	10,034,306.86	10,000,000.00	15,625.00	(6,861.37)	8,763.63
US Treasury Note	919828A34	9,952,900.00	(40,371.43)	9,993,271.43	10,000,000.00	10,416.67	6,728.57	17,145.24
Federal Home loan Bank	3135G0P49sub	4,921,265.00	19,387.01	4,940,652.01	25,000,000.00	4,166.67	5,934.80	10,101.47
Federal Home loan Bank	3135G0P49	19,685,060.00	77,548.04	19,762,608.04	20,000,000.00	16,666.67	23,739.20	40,405.87
Fannie Mae	3135G0G72	19,946,880.00	(47,217.79)	19,994,097.79	20,000,000.00	18,750.00	2,951.11	21,701.11
US Treasury Note	912828C65	19,929,687.50	(45,200.89)	19,974,888.39	20,000,000.00	27,083.33	5,022.32	32,105.65
Farmer Mac	3132X0W64	10,000,000.00	-	10,000,000.00	10,000,000.00	19,416.67	-	19,416.67
US Treasury Note	912828B33	4,981,640.63	9,662.83	4,991,303.46	5,000,000.00	5,921.05	2,898.85	8,819.90
US Treasury Note	912828B33a	9,963,281.25	(19,325.66)	9,982,606.91	10,000,000.00	11,842.11	5,797.70	17,639.81
Fannie Mae	3135G0P49gnt	4,921,265.00	19,387.01	4,940,652.01	5,000,000.00	4,166.67	5,934.80	10,101.47
US Treasury Note	912828D23	9,946,093.75	19,252.23	9,965,345.98	10,000,000.00	13,541.67	5,775.67	19,317.34
Federal Home loan Bank	313385M78	19,884,444.44	115,555.56	20,000,000.00	20,000,000.00	-	34,666.67	34,666.67
Federal Home loan Bank	3137EADZ9	19,824,200.00	66,339.62	19,890,539.62	20,000,000.00	18,750.00	19,901.89	38,651.89
US Treasury Note	912828A34	14,929,350.00	(60,557.14)	14,989,907.14	15,000,000.00	15,625.00	10,092.86	25,717.86
		<u>179,139,709.64</u>	<u>333,794.60</u>	<u>179,460,179.64</u>	<u>200,000,000.00</u>	<u>181,971.51</u>	<u>122,583.07</u>	<u>304,554.58</u>

ESCROW FUNDS

Travis County Escrow Fund - Elroy Road

	Balance		Accrued		Balance
	10/1/2018	Additions	Interest	Withdrawals	10/31/2018
Goldman Sachs	2,027,756.94		3,308.75	115,517.97	1,915,547.72

Campo Regional Infrastructure Fund

	Balance		Accrued		Balance
	10/1/2018	Additions	Interest	Withdrawals	10/31/2018
Goldman Sachs	4,027,683.37		6,288.70	-	4,033,972.07

183S Utility Custody Deposit

	Balance		Accrued		Balance
	10/1/2018	Additions	Interest	Withdrawals	10/31/2018
Goldman Sachs	32,809.89		43.11		32,853.00
TexStar	655,615.73		1,203.55		656,819.28



183 South Design-Build Project
Contingency Status
October 31, 2018



Original Construction Contract Value: \$581,545,700

Total Project Contingency	\$47,860,000
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Obligations	CO#1 City of Austin ILA Adjustment	(\$2,779,934)
	CO#2 Addition of Coping to Soil Nail Walls	\$742,385
	CO#4 Greenroads Implementation	\$362,280
	CO#6 51st Street Parking Trailhead	\$477,583
	CO#9 Patton Interchange Revisions	\$3,488,230
	Others Less than \$300,000 (6)	\$549,576
	Executed Change Orders	\$2,840,120
Change Orders Under Negotiation	\$10,210,000	
Potential Contractual Obligations	\$10,590,000	

(-) Total Obligations	\$23,640,120
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Remaining Project Contingency	\$24,219,880
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**SH 45SW Construction
Contingency Status**
October 31, 2018



Original Construction Contract Value: \$75,103,623

Total Project Contingency		\$ 7,520,000
Obligations	CO #04 Installation of PEC and TWC Conduits	\$ 458,439
	CO #05 Installation of SSTR Drilled Shafts and Moment Slab	\$ 538,945
	Total of Others Less than \$300,000 (12)	\$ 326,264
	Executed Change Orders	\$ 1,323,648
	Change Orders in Negotiations	\$ 80,193
	Potential Contractual Obligations	\$ 2,203,734
	(-) Total Obligations	\$ 3,607,575
	Remaining Project Contingency	\$ 3,912,425



MOPAC Construction
Financial Status
 October 31, 2018



Original Construction Contract Value: \$ 136,632,100

Change Orders	CO#01B	5th & Cesar Chavez SB Reconfig (Construction)	\$593,031	Approved = \$11.7M
	CO#05B	FM 2222 Bridge NB Ret Wall Abutment Repair (Construction)	\$850,000	
	CO#07	FM 2222 Exit Storage Lane	\$426,000	
	CO#08C	Refuge Area: Added Shoulder Adjustment Sound Wall #1	\$2,508,548	
	CO#09	Westover SB Frontage Repairs	\$450,000	
	CO#12	Barrier Rail Opaque Seal	\$542,419	
	CO#17	Bike and Ped Improvements at Far West Blvd Bridge/FM 2222	\$971,889	
	CO#20	Northern Terminus Sound Wall #3	(\$1,210,540)	
	CO#32	Void of CO#05B, #09, #10, UPRR	(\$1,501,437)	
	CO#33	Shared Use Path at US 183	(\$1,000,000)	
	CO#34	Undercrossing Fire Protection	\$1,412,574	
	CO#35	TxDOT Duct Bank Interference	\$1,357,196	
	CO#36	Non-Compliant Existing Illumination	\$2,226,189	
	CO#37	NB Pavement Cross Slope and Profile Corrections	\$3,635,477	
	CO#38	SB Pavement Cross Slope and Profile Corrections	\$3,100,298	
CO#42	NB04, NB08, and Westminster Wall Revisions	(\$402,964)		
	Total of Others Less than \$300,000 (21)	\$1,572,258		
Executed Change Orders			\$ 15,530,938	
Revised Construction Contract Value			\$ 152,163,038	
Change Orders under Negotiation			\$ 3,268,266	
Potential Construction Contract Value			\$ 155,431,304	
Incentive/Milestone			\$ 21,500,000	
Potential Construction Contract Value with Incentive/Milestone			\$ 176,931,304	
Amount paid CH2M for Incentives/Milestones			\$ (16,825,210)	
Amount paid CH2M through October 2018 draw (as of 10/31/2018)			\$ (123,169,664)	
Assessed Liquidated Damages			\$ (20,000,000)	
Potential Amount Payable to CH2M			\$ 16,936,431	



Monthly Newsletter - October 2018

Performance

As of October 31, 2018

Current Invested Balance	\$6,581,942,899.40
Weighted Average Maturity (1)	43 Days
Weighted Average Maturity (2)	99 Days
Net Asset Value	0.999897
Total Number of Participants	884
Management Fee on Invested Balance	0.06%*
Interest Distributed	\$12,432,247.98
Management Fee Collected	\$335,809.50
% of Portfolio Invested Beyond 1 Year	6.43%
Standard & Poor's Current Rating	AAAM

Rates reflect historical information and are not an indication of future performance.

October Averages

Average Invested Balance	\$6,589,553,225.84
Average Monthly Yield, on a simple basis	2.1615%
Average Weighted Average Maturity (1)*	41 Days
Average Weighted Average Maturity (2)*	101 Days

Definition of Weighted Average Maturity (1) & (2)

- (1) This weighted average maturity calculation uses the SEC Rule 2a-7 definition for stated maturity for any floating rate instrument held in the portfolio to determine the weighted average maturity for the pool. This Rule specifies that a variable rate instrument to be paid in 397 calendar days or less shall be deemed to have a maturity equal to the period remaining until the next readjustment of the interest rate.
- (2) This weighted average maturity calculation uses the final maturity of any floating rate instruments held in the portfolio to calculate the weighted average maturity for the pool.

* The maximum management fee authorized for the TexSTAR Cash Reserve Fund is 12 basis points. This fee may be waived in full or in part in the discretion of the TexSTAR co-administrators at any time as provided for in the TexSTAR Information Statement.

New Participants

We would like to welcome the following entity who joined the TexSTAR program in October:

★ City of Krugerville

Holiday Reminders

In observance of the **Veterans Day** holiday, **TexSTAR will be closed Monday, November 12, 2018**. All ACH transactions initiated on Friday, November 9th will settle on Tuesday, November 13th.

In observance of the **Thanksgiving Day** holiday, **TexSTAR will be closed Thursday, November 22, 2018**. All ACH transactions initiated on Wednesday, November 21st will settle Friday, November 23rd. Notification of any early transaction deadlines on the day preceding or following this holiday will be sent out by email to the primary contact on file for all TexSTAR participants.

Economic Commentary

October was a volatile month as concerns about the trade war escalated. Renewed angst over the impact of tariffs on corporate earnings, softer economic data in China and the ensuing implications for the business cycle weighed on sentiment, causing a sell-off in risk markets. U.S. equities plummeted, credit spreads widened sharply, and rates rallied across the curve despite ending the month higher. The U.S. economy grew at a 3.5% pace in the third quarter, led by robust consumer spending and increased government expenditures. We continue to expect 2018 GDP growth on the whole to average above 3%. On the monetary policy front, the market is pricing in over a 70% probability of a rate hike in December and roughly two rate hikes in the first half of 2019, while the Federal Open Market Committee (FOMC) has telegraphed three hikes in 2019 and one in 2020.

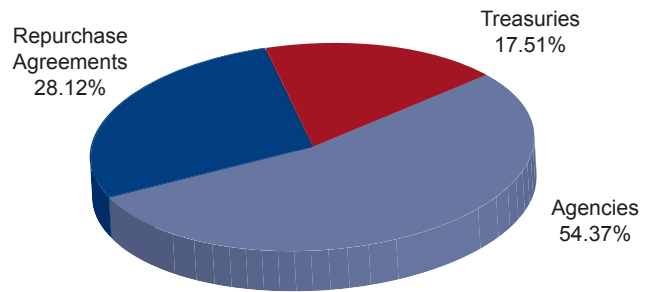
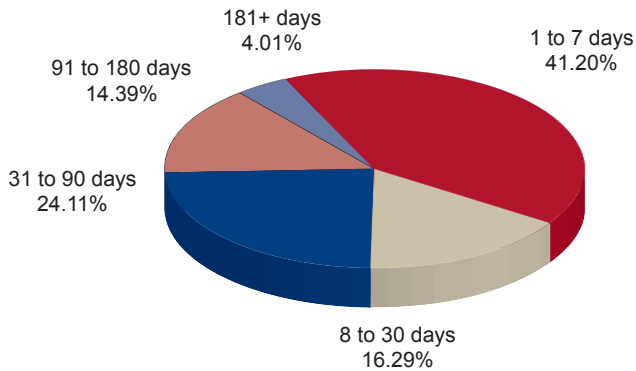
While the domestic drivers of U.S. growth remain intact, potential trade wars have already begun to slow down global trade and have put downward pressure on earnings growth forecasts for 4Q and beyond. Government spending should continue to contribute positively to growth in Q4 2018 and through the first half of 2019. This will occur in tandem with an increase in the budget deficit and Treasury issuance. Fiscal stimulus will provide a significant boost to growth both this year and in 2019, potentially reaching a magnitude upwards of 0.5 percentage points. Although wages are gradually rising as the U.S. economy moves closer to full employment, progress has been slow. We would expect the current gradual trend of wage growth to continue as additional hidden slack is yet to be fully removed from the labor market. Additionally, the pace of job growth is likely to gradually decelerate as average payroll growth of 100,000 is all that is needed to sustain the unemployment rate at 3.7%. Nevertheless, the unemployment rate is expected to continue to fall and the labor market may overheat marginally as Fed policy adjusts only gradually in response. This should eventually allow wages to rise at a faster clip.

This information is an excerpt from an economic report dated October 2018 provided to TexSTAR by JP Morgan Asset Management, Inc., the investment manager of the TexSTAR pool.

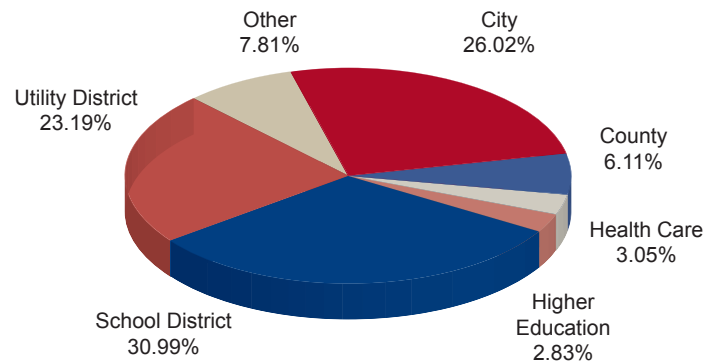
For more information about TexSTAR, please visit our web site at www.texstar.org.

Information at a Glance

Portfolio by Type of Investment As of October 31, 2018



Portfolio by Maturity As of October 31, 2018



Distribution of Participants by Type As of October 31, 2018

Historical Program Information

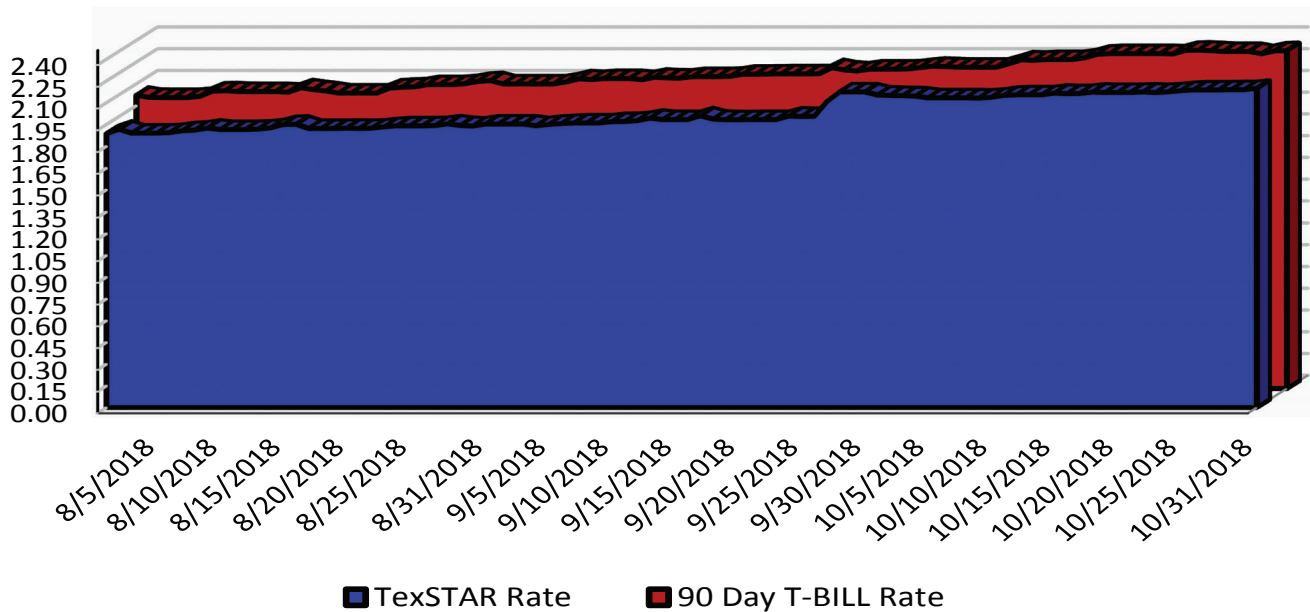
Month	Average Rate	Book Value	Market Value	Net Asset Value	WAM (1)*	WAM (2)*	Number of Participants
Oct 18	2.1615%	\$6,581,942,899.40	\$6,581,269,831.00	0.999897	41	101	884
Sep 18	1.9995%	6,458,418,968.50	6,458,002,746.78	0.999935	30	96	883
Aug 18	1.9225%	6,701,017,159.16	6,701,228,119.73	0.999971	24	91	879
Jul 18	1.8965%	6,837,425,331.68	6,837,427,966.67	1.000000	19	84	877
Jun 18	1.8300%	6,250,002,595.51	6,250,027,195.61	0.999991	26	99	874
May 18	1.7258%	6,489,773,533.02	6,489,474,005.73	0.999953	29	106	868
Apr 18	1.6304%	6,358,425,417.53	6,358,101,312.82	0.999949	18	99	861
Mar 18	1.4995%	6,461,363,510.56	6,460,804,379.93	0.999892	28	105	857
Feb 18	1.3518%	7,130,310,070.00	7,129,718,573.04	0.999917	28	97	854
Jan 18	1.2900%	7,090,345,755.93	7,090,199,741.00	0.999979	31	83	853
Dec 17	1.1762%	6,518,450,917.63	6,518,448,483.33	0.999984	36	82	853
Nov 17	1.0695%	6,157,485,042.89	6,157,068,439.39	0.999932	38	90	853

Portfolio Asset Summary as of October 31, 2018

	Book Value	Market Value
Uninvested Balance	\$ 1,370.71	\$ 1,370.71
Accrual of Interest Income	2,874,390.63	2,874,390.63
Interest and Management Fees Payable	(12,460,296.82)	(12,460,296.82)
Payable for Investment Purchased	0.00	0.00
Repurchase Agreement	1,854,282,999.72	1,854,282,999.72
Government Securities	4,737,244,435.16	4,736,571,366.76
Total	\$ 6,581,942,899.40	\$ 6,581,269,831.00

Market value of collateral supporting the Repurchase Agreements is at least 102% of the Book Value. The portfolio is managed by J.P. Morgan Chase & Co. and the assets are safekept in a separate custodial account at the Federal Reserve Bank in the name of TexSTAR. The only source of payment to the Participants are the assets of TexSTAR. There is no secondary source of payment for the pool such as insurance or guarantee. Should you require a copy of the portfolio, please contact TexSTAR Participant Services.

TexSTAR versus 90-Day Treasury Bill



This material is for information purposes only. This information does not represent an offer to buy or sell a security. The above rate information is obtained from sources that are believed to be reliable; however, its accuracy or completeness may be subject to change. The TexSTAR management fee may be waived in full or in part at the discretion of the TexSTAR co-administrators and the TexSTAR rate for the period shown reflects waiver of fees. This table represents historical investment performance/return to the customer, net of fees, and is not an indication of future performance. An investment in the security is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the issuer seeks to preserve the value of an investment at \$1.00 per share, it is possible to lose money by investing in the security. Information about these and other program details are in the fund's Information Statement which should be read carefully before investing. The yield on the 90-Day Treasury Bill ("T-Bill Yield") is shown for comparative purposes only. When comparing the investment returns of the TexSTAR pool to the T-Bill Yield, you should know that the TexSTAR pool consist of allocations of specific diversified securities as detailed in the respective Information Statements. The T-Bill Yield is taken from Bloomberg Finance L.P. and represents the daily closing yield on the then current 90-day T-Bill. The TexSTAR yield is calculated in accordance with regulations governing the registration of open-end management investment companies under the Investment Company Act of 1940 as promulgated from time to time by the federal Securities and Exchange Commission.

Daily Summary for October 2018

Date	Mny Mkt Fund Equiv. [SEC Std.]	Daily Allocation Factor	TexSTAR Invested Balance	Market Value Per Share	WAM Days (1)*	WAM Days (2)*
10/1/2018	2.1526%	0.000058974	\$6,576,637,301.35	0.999935	42	105
10/2/2018	2.1492%	0.000058881	\$6,598,262,157.92	0.999923	41	104
10/3/2018	2.1475%	0.000058836	\$6,629,905,486.51	0.999915	40	103
10/4/2018	2.1445%	0.000058753	\$6,675,993,255.48	0.999920	40	102
10/5/2018	2.1327%	0.000058429	\$6,574,903,297.82	0.999905	39	101
10/6/2018	2.1327%	0.000058429	\$6,574,903,297.82	0.999905	39	101
10/7/2018	2.1327%	0.000058429	\$6,574,903,297.82	0.999905	39	101
10/8/2018	2.1327%	0.000058429	\$6,574,903,297.82	0.999905	39	101
10/9/2018	2.1307%	0.000058376	\$6,568,833,676.52	0.999903	39	101
10/10/2018	2.1364%	0.000058532	\$6,675,067,476.65	0.999903	38	99
10/11/2018	2.1492%	0.000058883	\$6,656,449,507.65	0.999909	39	98
10/12/2018	2.1535%	0.000059000	\$6,690,883,440.55	0.999919	39	99
10/13/2018	2.1535%	0.000059000	\$6,690,883,440.55	0.999919	39	99
10/14/2018	2.1535%	0.000059000	\$6,690,883,440.55	0.999919	39	99
10/15/2018	2.1650%	0.000059315	\$6,705,125,491.79	0.999905	38	98
10/16/2018	2.1613%	0.000059215	\$6,717,274,732.07	0.999899	39	96
10/17/2018	2.1625%	0.000059247	\$6,660,045,912.78	0.999895	40	99
10/18/2018	2.1719%	0.000059505	\$6,633,657,705.81	0.999886	44	104
10/19/2018	2.1696%	0.000059440	\$6,587,737,912.89	0.999898	43	102
10/20/2018	2.1696%	0.000059440	\$6,587,737,912.89	0.999898	43	102
10/21/2018	2.1696%	0.000059440	\$6,587,737,912.89	0.999898	43	102
10/22/2018	2.1731%	0.000059537	\$6,598,217,270.49	0.999891	43	101
10/23/2018	2.1690%	0.000059426	\$6,566,360,142.17	0.999888	44	103
10/24/2018	2.1738%	0.000059555	\$6,539,638,795.83	0.999891	45	103
10/25/2018	2.1820%	0.000059782	\$6,538,604,635.11	0.999889	46	104
10/26/2018	2.1872%	0.000059922	\$6,435,426,643.38	0.999891	44	102
10/27/2018	2.1872%	0.000059922	\$6,435,426,643.38	0.999891	44	102
10/28/2018	2.1872%	0.000059922	\$6,435,426,643.38	0.999891	44	102
10/29/2018	2.1891%	0.000059976	\$6,441,977,543.03	0.999886	44	101
10/30/2018	2.1888%	0.000059966	\$6,470,398,828.66	0.999895	44	101
10/31/2018	2.1989%	0.000060243	\$6,581,942,899.40	0.999897	43	99
Average	2.1615%	0.000059219	\$6,589,553,225.84		41	101



TexSTAR Participant Services
1201 Elm Street, Suite 3500
Dallas, TX 75270
1-800-839-7827

TexSTAR Board Members

William Chapman	Central Texas Regional Mobility Authority	Governing Board President
Nell Lange	City of Frisco	Governing Board Vice President
Eric Cannon	City of Allen	Governing Board Treasurer
David Medanich	Hilltop Securities	Governing Board Secretary
Jennifer Novak	J.P. Morgan Asset Management	Governing Board Asst. Sec./Treas.
Monte Mercer	North Central TX Council of Government	Advisory Board
Becky Brooks	City of Grand Prairie	Advisory Board
Nicole Conley	Austin ISD	Advisory Board
David Pate	Richardson ISD	Advisory Board
James Mauldin	University of North Texas System	Advisory Board
Ron Whitehead	Qualified Non-Participant	Advisory Board



**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 18-066

**APPROVING A LEGISLATIVE PROGRAM FOR ISSUES AND PROPOSALS
AFFECTING THE MOBILITY AUTHORITY IN THE 86th TEXAS LEGISLATURE**

WHEREAS, the 86th Texas Legislature is scheduled to convene for the 2019 Regular Legislative Session at noon, Tuesday, January 8, 2019, and to adjourn on Monday, May 27, 2019; and

WHEREAS, action on legislation considered by the 86th Legislature can affect the powers, duties, and ability of the Mobility Authority to fulfill its statutory mission as a regional mobility authority existing and operating under Chapter 370 of the Texas Transportation Code; and

WHEREAS, the Board of Directors supports consideration and adoption by the 86th Legislature of legislation that addresses issues identified and supported by other regional mobility authorities throughout Texas, as well as issues that affect only the Mobility Authority, as set forth on the legislative program attached to this resolution as Exhibit A.

NOW THEREFORE, BE IT RESOLVED that the Board of Directors approves the legislative program set forth in Exhibit A to this Resolution.


Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 11th day of December 2018.

Submitted and reviewed by:



Geoffrey Petrov, General Counsel

Approved:



Ray A. Wilkerson
Chairman, Board of Directors

Exhibit A

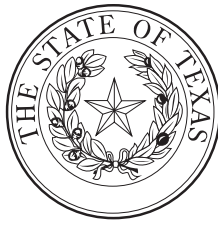
CTRMA Legislative Priorities 86th Texas Legislative Session

The following is a list of priorities for the 86th Texas Legislative Session:

1. **Preserve and Clarify Existing Financing Tools:** Current statutory authority for regional mobility authorities (“RMAs”) provides tools which facilitate the efficient and economic development, financing, and operation of transportation projects under local control, including the ability to develop a system of projects to maximize financial resources. Any effort to restrict or remove those tools will undermine the ability of RMAs to deliver critical infrastructure projects. In addition, there has been some uncertainty as to the types of projects for which state funds may be utilized. The CTRMA will work to assure that its financing tools are preserved and, where necessary, seek clarity in statutory provisions regarding the use of funds for transportation projects.
2. **Customer Service:** Currently, electronic toll collection customer account information, including contact information and trip data, is confidential and not subject to disclosure under the Public Information Act. This precludes toll project entities from sharing information that would streamline customer service and toll collection efforts. The CTRMA supports efforts to allow toll project entities to share customer contact information for the limited purpose of improving customer service and toll collection and enforcement efforts.
3. **Strengthen Toll Enforcement Tools:** The CTRMA has adopted a habitual violator program which provides additional enforcement measures for toll violations of customers who repeatedly refuse to pay toll charges. The CTRMA supports legislation that would strengthen this program, including, potentially, a lower threshold for the number of toll violations needed to designate a user as a habitual violator and to require county tax assessor collectors to honor vehicle registration blocks of habitual violators.
4. **Optional Vehicle Registration Fee and Other Local Funding Options (TRZs):** Currently only five counties in Texas are permitted to impose an additional fee for the registration of a vehicle, not to exceed \$10, to fund long-term transportation projects in the county. The arbitrary limitation to only five counties precludes other areas of the state from taking steps to implement local funding solutions for their mobility issues. Provided that Williamson and Travis Counties desire to have this tool available, the CTRMA will support legislation that would allow either or both of the counties to impose this additional fee in the same manner as is available to the current five counties. Additionally, the CTRMA supports efforts to enhance the use of local funding tools such as Transportation Reinvestment Zones (“TRZs”) by counties, and will support legislation, including a constitutional amendment, if necessary, to clarify the ability of counties to form a TRZ and to pledge TRZ revenues (or allow an RMA to pledge TRZ revenues) to secure bonds to pay the cost of a transportation project.
5. **Improve TxDOT Approval Processes to Increase Efficiency:** Current law requires RMAs to seek TxDOT approval for numerous items related to project funding and development. While it is important to ensure adequate state oversight in the proper circumstance, seeking certain approvals has become increasingly cumbersome or is altogether unnecessary. For example, RMAs must seek Commission approval for a project that connects with the state highway system before beginning construction. The lengthy Commission-approval process is not appropriate for this level

of review which can be performed efficiently at the TxDOT staff level. Additionally, RMAs are precluded from applying for federal highway or rail funds without the approval of TxDOT. Recent actions to increase funding (Prop 1 and Prop 7) have included restrictions on the use of state-controlled funds for toll projects, thus making reliance on federal funding more important. The CTRMA should be allowed to pursue funds from federal sources without requiring the consent of TxDOT.

6. **Public-Private Partnership Authority:** Public-Private Partnerships (“PPPs”) are a method to fund and deliver projects as the use of state funding to support toll projects is becoming increasingly restricted. A PPP may be the most feasible way to finance and develop certain projects in central Texas, including I-35. The CTRMA supports authorizing the use of PPPs to enhance project delivery options and to provide increased access to existing and proposed federal funding programs.



INTERIM REPORT
to the 86th Texas Legislature



HOUSE COMMITTEE ON
TRANSPORTATION

November 2018

**HOUSE COMMITTEE ON TRANSPORTATION
TEXAS HOUSE OF REPRESENTATIVES
INTERIM REPORT 2018**

**A REPORT TO THE
HOUSE OF REPRESENTATIVES
86TH TEXAS LEGISLATURE**

**REPRESENTATIVE GEANIE W. MORRISON
CHAIRMAN**

**COMMITTEE CLERK
MACGREGOR M. STEPHENSON**



Committee On
Transportation

November 27, 2018

Representative Geanie W. Morrison
Chairman

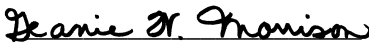
P.O. Box 2910
Austin, Texas 78768-2910


The Honorable Joe Straus
Speaker, Texas House of Representatives
Members of the Texas House of Representatives
Texas State Capitol, Rm. 2W.13
Austin, Texas 78701

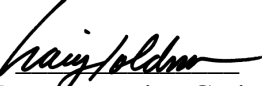
Dear Mr. Speaker and Fellow Members:

The Committee on Transportation of the Eighty-fifth Legislature hereby submits its interim report including recommendations and drafted legislation for consideration by the Eighty-sixth Legislature.


Respectfully submitted,

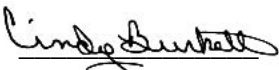

Representative Geanie W. Morrison


Vice-Chair Armando
"Mando" Martinez


Representative Craig
Goldman

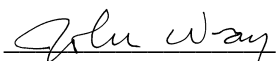

Representative Joseph Pickett


Representative Senfronia
Thompson



Representative Cindy Burkett


Representative Celia Israel


Representative Ron Simmons


Representative John Wray

Representative Yvonne Davis


Representative Ina Minjarez


Representative Ed Thompson

Armando "Mando" Martinez
Vice-Chair

Members: Cindy Burkett, Yvonne Davis, Craig Goldman, Celia Israel, Ina Minjarez, Joseph Pickett, Ron Simmons, Ed Thompson, Senfronia Thompson, John Wray

Armando "Mando" Martinez
Vice-Chair

Members: Cindy Burkett, Yvonne Davis, Craig Goldman, Celia Israel, Ina Minjarez, Joseph Pickett, Ron Simmons, Ed Thompson, Senfronia
Thompson, John Wray

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HOUSE COMMITTEE ON TRANSPORTATION

Introduction

The Honorable Joe Straus, Speaker of the House of Representatives, appointed thirteen members of the 85th Legislative to serve on the House Committee on Transportation. The following members were named to the committee: Chairman Geanie W. Morrison, Vice-Chairman Armando "Mando" Martinez, Representative Cindy Burkett, Representative Yvonne Davis, Representative Craig Goldman, Representative Celia Israel, Representative Ina Minjarez, Representative Larry Phillips, Representative Joseph Pickett, Representative Ron Simmons, Representative Ed Thompson, Representative Senfronia Thompson, and Representative John Wray. Representative Phillips resigned his seat in the House of Representatives on April 30, 2018.

Pursuant to House Rule 3, Section 36, The House Committee on Transportation has jurisdiction over all matters pertaining to:

- 1) commercial motor vehicles, both bus and truck, and their control, regulation, licensing, and operation;
- 2) the Texas highway system, including all roads, bridges, and ferries constituting a part of the system;
- 3) the licensing of private passenger vehicles to operate on the roads and highways of the state;
- 4) the regulation and control of traffic on the public highways of the State of Texas;
- 5) railroads, street railway lines, interurban railway lines, steamship companies, and express companies;
- 6) airports, air traffic, airlines, and other organizations engaged in transportation by means of aerial flight;
- 7) water transportation in the State of Texas, and the rivers, harbors, and related facilities used in water transportation and the agencies of government exercising supervision and control thereover;
- 8) the regulation of metropolitan transit; and
- 9) the following state agencies: the Texas Department of Motor Vehicles, the Texas Department of Transportation, and the Texas Transportation Commission.

Speaker Straus has charged the House Committee on Transportation to study nine distinct charges and make recommendations regarding any findings related to those charges to the 86th Legislature. The specific charges are as follows:

- 1) Review the state's response to Hurricane Harvey and natural disaster preparedness with respect to the transportation system and transportation infrastructure. Make recommendations for improving agency operations related to emergency preparedness and response.
- 2) Study the ability of the Texas Department of Transportation (TxDOT) to deliver highway construction projects that reduce congestion and improve mobility, including the Department's options and limitations related to contracting. Make recommendations to improve the Department's ability to complete complex projects on time and under cost.

-
- 3) Study the efficacy of existing transportation finance mechanisms from state, regional, and local perspectives. Identify opportunities to improve existing transportation finance mechanisms and investigate the feasibility of developing new ones.
 - 4) Study Texas' various toll road authorities and evaluate their transparency and stakeholder responsiveness. Make recommendations to improve the state oversight of toll authorities.
 - 5) Review the management of the oversize/overweight permitting system and ensure that the state is adequately protecting the driving public and road integrity. Make recommendations to improve operations.
 - 6) Study emerging issues in transportation related to technology and evaluate the state's preparedness for addressing challenges and opportunities posed by technological advances. Review the implementation of state and federal programs and legislation related to intelligent transportation systems, autonomous vehicles, unmanned aircraft systems (i.e. drones), and other technological changes.
 - 7) Review the current state of infrastructure at Texas' international shipping ports and border ports of entry in Texas. Identify transportation-related impediments to international trade and estimate the impact of those challenges, including border wait times, on the state's economy. Make recommendations for improvements to facilitate international trade and economic growth.
 - 8) Evaluate the impact energy exploration and production have on state and county roads and make recommendations on how to improve road quality in areas impacted by these activities.
 - 9) Monitor the agencies and programs under the Committee's jurisdiction and oversee the implementation of relevant legislation passed by the 85th Legislature. In conducting this oversight, the committee will also specifically monitor the implementation of the TxDOT Sunset legislation and related management actions.

The Committee held six public hearings to consider these charges and to take invited testimony. During the course of these hearings, the Committee heard from more than seventy-five witnesses addressing the nine specific charges. In addition to the oral testimony, written testimony was also provided on specific charges and was considered in the development of findings and recommendations.

Background Information

To understand the challenges facing Texas and its efforts to maintain and expand its transportation infrastructure, it is essential to also look at the population growth that the state has experienced. Between 2010 and 2016 Texas had the nation's largest population growth in each of those years.¹ The total population increased from 2010 to 2017 by three million, one-hundred fifty-eight thousand, four-hundred and ninety-six.² The metropolitan statistical areas of Austin-Round Rock, Dallas-Fort Worth-Arlington, Houston-The Woodlands-Sugar Land, and San Antonio-New Braunfels led the way in population growth during this time.³ Texas has five of the top fifteen most populous cities in the country as of July 1, 2017, and seven of the fifteen fastest growing cities with a population greater than fifty-thousand.⁴ These factors have led to population projections indicating that Texas will continue to grow to as many as 42 million residents by 2050⁵.

A longer look back at the population growth reveals that Texas's population increased by fifty-five percent between 1990 and 2013. The population grew from approximately seventeen million to approximately 26.4 million. During that same time period, the annual vehicle miles traveled (VMT) increased from 162.2 Billion VMT to two-hundred forty-three Billion VMT, an increase of 80.8 billion VMT, or 49.8%. By 2030, it is estimated that VMT will reach three-hundred four billion⁶.

Texas has also experienced a significant increase in commercial activity related to the shipping of goods and services on both state road systems as well as through the Maritime Ports and the Border Ports. In 2016 total Texas freight volume was 2.2 billion tons. By 2045, it is estimated that the total freight volume will grow to 4 billion tons. This increase will be fueled by a number of factors including Texas population growth, increased productivity from industry and businesses, and increased shipping through the Panama canal.⁷

Both the increase in population and the increase in freight volumes will have a direct impact on Texas' transportation infrastructure. Existing roadways will need to be maintained and upgraded, and new routes and roads will need to be developed to meet the dramatic increase in traffic volume and tonnage. These issues factor heavily in the charges that the committee sought to address.

CHARGE 1: *Review the state's response to Hurricane Harvey and natural disaster preparedness with respect to the transportation system and transportation infrastructure. Make recommendations for improving agency operations related to emergency preparedness and response.*

Committee Action:

The committee received testimony related to the impact of Hurricane Harvey on transportation systems and infrastructure as well as natural disaster preparedness on February 7th, 2018. Oral testimony was provided by individuals representing the following entities: Texas Department of Transportation, Texas Division of Emergency Management, Texas Ports Association, Union Pacific Railroad, and the County Judges for Harris, Orange, Fort Bend and Brazoria Counties. Written testimony was also provided by the County Judge of Aransas County.

Background:

TEXAS DEPARTMENT OF TRANSPORTATION

The Texas Department of Transportation (TxDOT) is responsible for critical operations prior to, during, and after natural disasters. Prior to disasters, TxDOT must ensure that there are sufficient roadways available for the use of the public to evacuate from an area expected to experience a natural disaster. These roads must be able to withstand the effects of the natural disaster to the best degree possible in order to protect the population in its movement away from the disaster.

One aspect of TxDOT's responsibilities at all times is to provide the public with highway conditions. One mechanism that is most efficient is the continually updated DriveTexas.org website. This website is designed to "provide accurate, timely highway conditions information." Through TxDOT employees and contractors, information of the status and conditions of roads throughout Texas are updated continually, twenty-four hours a day. During weather events and disasters, this website is a critical component of providing information to people in the affected area, to those who are attempting to bring supplies or rescue efforts into the area, to those seeking routes through or around the affected area, and for the identification of safe evacuation routes out of the area. DriveTexas.org received more than 5.1 million visits before, during and immediately after Hurricane Harvey. Testimony from Judge Sebesta of Brazoria County indicated that there needs to be a mechanism to allow for the roadway conditions from TxDOT's Drive Texas.org to be downloaded to the counties' Geographical Information Systems (GIS) to allow them to update their citizens regularly as well⁸.

During disaster response, TxDOT also operates a travel information phone line which is staffed by TxDOT employees. Recorded road conditions are also available on a twenty-four hour basis. During and after Hurricane Harvey, the phone line received more than 163,000 calls.

TxDOT uses its dynamic messaging signs along the roads to warn travelers of the potential for dangerous conditions due to major weather events. These signs are used to warn of road closures, the availability of fuel and shelter, and to direct citizens to evacuation routes. One key advantage to these signs is that they can be activated, and the message updated, as necessary without having to be at the location, allowing for much quicker response and providing timely warnings to travelers. Although highly effective, there are only eight-hundred eighty-five large signs and two-hundred smaller ones across the state.

Evacuation of areas in advance of a weather event is a decision made by local officials. Once a decision has been made, TxDOT in coordination with the Department of Public Safety will activate their preset plans for the areas affected. This effort can include using highway shoulders as additional lanes. TxDOT and DPS will also provide for guidance and signage should local officials direct that contraflows will be activated, allowing both sides of designated highways to be used to evacuate citizens.

During an evacuation, TxDOT also works closely with the fuel stations with backup generators to ensure that evacuees have sufficient fuel to escape from the path of the storm, and works with the fuel industry to ensure that adequate supplies are reaching the stations. TxDOT also prepositions its own fleet of thirty fuel tanks at strategic locations to enable them to support emergency crews and stranded motorists.

Both prior to and during the disaster, TxDOT must be positioning equipment, personnel and supplies to be able to respond to emergency requirements as quickly as the disaster allows. It also works to clear lane closures, abandoned vehicles, and suspends construction and road maintenance in these areas to facilitate movement of vehicles out of the path of the disaster and to reduce the impediments to emergency response into the area. Immediately after the disaster, TxDOT must be able to coordinate with the Texas Department of Emergency Management (TDEM) to provide high-water vehicles which may be used during rescue operations if other agencies' resources are insufficient.

TxDOT must also begin the assessment of roadways affected by the disaster to determine accessibility of impacted communities, and ensure that first responders and emergency vehicles can access these communities by initially clearing roadways to the affected areas. This is a critical component to restoring access to the communities, but is also necessary to allow the electrical power crews to safely access these areas and to conduct their repair operations. The restoration of electricity transmission is a crucial step in allowing citizens to return to their homes and lives.

Many communities also do not have the resources or the systems in place to remove the debris that may have resulted from the disaster. Although most communities have contracts with debris removal service companies, many of these companies sought to renegotiate their contracts with the cities or simply chose not to honor them due to receiving higher compensation from other contracts, either in Texas or in other areas of the country affected by hurricanes. TxDOT, again working through TDEM, responded with equipment and personnel to requests from local jurisdictions to assist with the clearing and removal of debris from impacted areas. After Hurricane Harvey, TxDOT removed approximately 20.5 million cubic feet of debris.

Once initial response has been completed, TxDOT must then begin the effort of determining the need for repairs to roads, bridges and other infrastructure and develop an appropriate plan to bring these systems back on line as quickly as possible. These efforts include evaluating pavement, guardrails, signal lights, bridge supports and driving surfaces. After Harvey, more than five hundred roads were closed due to high water, and more than four thousand bridges were impacted. During Hurricane Harvey, many state highways faced continuing flooding in the Houston and Beaumont areas, creating continuing traffic control and local access issues.

TxDOT's responsibilities to evaluate evacuation routes that use interstate and state highway systems are an ongoing requirement. To that end, testimony was received that certain counties were faced with significant issues when evacuation routes were flooded. In some cases, these evacuation routes were forced to close due to short stretches of road which were impassable. Fort Bend County was limited to one primary evacuation route due to this type of flooding. Fort Bend County Judge Robert Hebert indicated that these closures were a significant impediment to evacuating medical care facilities and nursing homes which necessitated airborne evacuation of many of these individuals⁹.

Another issue that was raised during Testimony from Judge Emmett of Harris County identified that truck traffic in Southeast Texas came to a standstill due to the flooding on the roadways. This precipitated a significant negative impact on commerce not only for Texas, but nationally. Judge Emmett also identified that concern that the Texas Medical Center was an island as the roads around it were all flooded. This required any critical movement of patients to be handled by helicopter which was limited due to the ongoing weather¹⁰.

Local governmental entities have also identified the replacement of signs, signals and lights along roadways as an important part of the recovery effort. Many times, these entities were not able to obtain the necessary replacement devices in a timely manner. While ongoing relationships between entities allowed for the distribution of available resources, a more comprehensive and coordinated effort would be beneficial.

The costs associated with disasters are generally initially funded out of the existing TxDOT budget. During events like Hurricane Harvey, state and federal disaster declarations were made by Governor Abbott and President Trump. These declarations trigger eligibility for reimbursement for some expenses by the federal government. Although these funds become available through a variety of current programs, they also receive supplemental funding through appropriations from Congress after the disaster. While these funds can cover specific parts of the costs attributable to TxDOT operations, actions taken outside the areas designated by the federal disaster declaration or beyond the specific allowable purposes tied to the funding leave some TxDOT expenses non-reimbursable.

During Hurricane Harvey and its aftermath, TxDOT estimates that it incurred expenses of \$66 Million for response mobilization, \$110 Million for roadway damage, \$10 Million for TxDOT building and ferry damage, and \$6.2 Million for equipment costs. These funds were used to repair roads, bridges, signals, signs, the Port Aransas Ferry, TxDOT centers in Port Aransas and Beaumont, and for debris removal. TxDOT is seeking to recover a significant portion of these

expenses through FEMA and the Federal Highway Administration. The TxDOT response included more than one million work hours from almost five thousand employees.¹¹

TEXAS MARITIME PORTS

Maritime ports in Texas represent one of the most significant economic drivers for its economy. Many of these ports faced significant impacts from Harvey, either through direct wind and/or surge impacts or through rainfall and flooding. Of significant concern is the amount of silt and debris that was carried down waterways to the various ports resulting in reduced depth of ship channels and a corresponding impact to the loading of ships and the availability of berths for deep draft ships that were fully loaded. This silting in of the ship channels results in limiting the cargo loads of ships so that they are not exceeding the restricted depth of the channels. To reduce weight, ships are required to travel without a full load, increasing costs, reducing efficiency, and increasing the number of vessels required. While these channels are under the primary jurisdiction of the U.S. Army Corps of Engineers, the impact to the state economy and future business growth is restricted by the reduced cargo capacity¹².

*Note: For additional Port Infrastructure Information, See also Charge 7.

Committee Recommendations:

- 1) TxDOT should identify existing evacuation routes on the state highway system which were impassable during Hurricane Harvey and determine whether limited elevation of flooded sections could alleviate evacuation concerns. If this is a viable solution, then elevation of these key sections should be incorporated into state highway planning and funding at the earliest possible time.
- 2) TxDOT should work with local governmental entities affected by disasters to ensure that traffic signs, signals and lights are able to be replaced as soon as possible following the event and to share available resources as necessary to fulfill this function.
- 3) TxDOT should work with city and county emergency management information systems to ensure that information regarding road conditions and closures is able to be relayed to these entities and shared with their citizens in an effective manner.
- 4) TxDOT in cooperation with the Texas Division of Emergency Management (TDEM) should identify and evaluate key civilian infrastructure such as the Texas Medical Center that must remain accessible to vehicle traffic and determine if there are any steps that could be taken on state highways to ensure that access. TxDOT should then incorporate these steps into state highway planning and funding.
- 5) Texas Maritime Ports should be supported in their efforts to obtain federal funding for the clearing and dredging of critical waterways that have been limited due to the effects of Hurricane Harvey.

Charge 2: *Study the ability of the Texas Department of Transportation (TxDOT) to deliver highway construction projects that reduce congestion and improve mobility, including the Department's options and limitations related to contracting. Make recommendations to improve the Department's ability to complete complex projects on time and under cost.*

Committee Action:

The committee received testimony related to this charge on April 17, 2018. Oral testimony was provided by individuals representing the following entities: Texas Department of Transportation, the Sunset Commission, the Association of General Contractors, the Metropolitan Planning Organization, and a representative of the Regional Mobility Authorities.

Background:

Currently, TxDOT maintains more than 80,000 miles of farm-to-market, ranch-to-market, state, U.S. and interstate highways¹³. In order to prioritize projects, TxDOT must weigh available funding with the existing and future transportation needs based upon population growth and traffic demands. The Texas Department of Transportation's (TxDOT) ability to deliver highway construction projects that reduce congestion and improve mobility is based upon the funding that is available for these projects, the types of contracts that can be utilized to develop, operate, maintain and fund the projects, and the management oversight and enforcement conducted by TxDOT.

TxDOT has significant challenges facing it with regard to contracting. It is second only to the Department of Health and Human Services in the number and amount of contracts awarded with more than \$32 Billion in active contracts. With the increase in funding provided by Proposition 1 and Proposition 7, TxDOT is realizing an increase of almost double the funding that they have previously received and the corresponding increase in the number of contracts required to carry out the funded projects¹⁴.

**Note: While Charge 2 addresses the issues related to the contracts that TxDOT may use, the sources of funding and alternatives are addressed in Charge 3.*

CONTRACT TYPES

Design-Bid-Build projects are separated into two distinct processes. The first provides a process by which TxDOT either develops internally, or contracts with a private contractor to develop, the plans, specifications, and estimate package and supporting documentation for the project. After this process has been completed, the design is then put out for bid to the contractors to actually construct the project¹⁵. This has been the traditional method for transportation construction projects since 1925. Design-Bid-Build contracts are anticipated to represent between \$5.5 Billion and \$6 Billion in the Unified Transportation Program in each year for the next ten years.

Design-Build contracts have been a more recent mechanism used to carry out transportation construction projects. In the design-build process, one contractor is hired to carry out both the design of the project; including plans, specifications, and estimates; and the build portion of actually constructing the project. This method shifts some risks to the contractor, and may expedite the construction project. The design-build method has been used for both straight design-build contracts and for comprehensive development agreements. Current statutory requirements for design-build projects limits the total number of projects to no more than three per year with a minimum project size of \$150 Million. TxDOT is also required to closely track these contracts to evaluate their effectiveness compared to traditional design-bid-build contracts¹⁶. TxDOT estimates that over the next ten years, between \$1 Billion and \$1.5 Billion will be expended per year through design-build contracts.

Beginning in 2003, the Legislature authorized the use of Comprehensive Development Agreements (CDAs) to provide for public-private partnerships between TxDOT and private entities for the construction, rehabilitation, expansion or improvement of a transportation project. These agreements may also set the conditions by which the private entity will provide financing, acquisition or right-of-ways, maintenance or operation of the project¹⁷. CDAs allow for the state or Regional Mobility Authority to maintain ownership of the roadway, while deferring some or all of the risk of the project to the private sector. In return the private sector is allowed to generate revenue from tolled lanes or bridges. Some of these projects included an upfront payment to the state or ongoing revenue sharing, and were limited to a maximum of fifty-two years duration. No new CDAs have been authorized since the 83rd Legislative Session, and any projects not already approved and in process by August 31, 2017 lost statutory authority to proceed.

SUNSET COMMISSION ISSUES

While additional funding was provided for TxDOT projects, the agency was also undergoing Sunset review. As a part of this review, the Sunset Commission Staff report identified several areas of critical improvement that needed to be taken with regard to its contracting function. The commission noted that delays to construction projects caused by the contractor were present in almost twenty-five percent of all projects, with seventeen projects delayed for more than one-hundred days. TxDOT also awarded new contracts to contractors whose existing contracts were behind schedule, resulting in the potential for further delays on either project as the contractor resources are further stretched. The past performance of a contractor is not used in an effective manner when reviewing bids for future contracts.

The Sunset Commission report also raised the issue that the contracts themselves contained limited remedies with which to redress delays or other issues with regard to successful project completion. Based upon the contracts that were previously issued by TxDOT, there were only two remedies for low-bid contracts, liquidated damages and default. Liquidated damages provided for a payment to TxDOT for each day beyond the contract specification. The liquidated damages also did not include the cost of traffic impacts in many of its enforcement actions, significantly reducing the potential recovery. In FY 2015 TxDOT assessed only \$6.2 Million in liquidated damages for project delays. As Sunset recognized, the minimal nature of

the liquidated damages sections of its contracts was not sufficient to have an effect on performance. With regard to default provisions, TxDOT used this operation on thirteen projects against four contractors in 2015. With a total of seven-hundred eighty-six contracts in effect that year, and more than one-hundred seventy-seven experiencing delays, the remedies were of limited impact.

The evaluation of contractor performance can be a key tool when determining the effectiveness of the contractor and its ability to carry out future contracts. Prior to the Sunset Commission Report, TxDOT only required an evaluation of the contractor's bidding capacity instead of a more thorough determination of its ability to meet quality, safety and timeliness standards¹⁸. The bidding capacity merely reflects a financial determination made by independent bonding companies whose bond helps protect the state in the event of default. Incorporating the past contractor performance evaluation into the bidding process for future contracts could have a significant impact on TxDOT's ability to ensure efficient and successful completion of new contracts.

Contractor sanctions is another method whereby TxDOT brings an administrative process against the contractor for delays in completion or other contract issues. This process is not specified in the contract in most cases, but rather is predicated on TxDOT rules. The challenge to this process is that it may take more than a year prior to resolution which has limited effect on a project being completed in a more timely manner. The sanctions that could be imposed include a letter or reprimand, prohibition from entering into a specific project, a limit on the contract or payment amount for up to thirty-six months, or debarment for up to thirty-six months. Even under the practice currently, TxDOT risks not applying the sanctions in a consistent manner as it does not have adequate guidelines for application.

While the sanction process, liquidated damages, and default are the types of mechanisms to hold a contractor accountable for project completion and delays, incentives may be included in the contract to encourage contractors to finish the project within a specific timeframe. TxDOT has the authority to implement these types of bids by allocating a cost per day and allowing the contractors to bid on both aspects, the cost and the time to completion. Milestone incentives could also be used to provide a supplemental payment for successfully meeting a deadline.

The challenge to using the incentive approach is to be able to identify which projects should have incentives applied and the appropriate amount of the incentive. TxDOT has not provided the necessary guidance to the districts on determining either the contracts which are viable for incentives, how to calculate the incentive amount, and how long the incentive period should be. The use of incentives can result in a higher cost for the project, but can also be balanced against the external economic costs of the project remaining uncompleted for a longer period of time.

With regard to the design-bid-build or design-build contracts, the Sunset Commission has recommended that TxDOT include a range of contract remedies to its traditional low-bid highway contracts. This is a critical mechanism for TxDOT to be able to meet its obligations to reduce congestion and improve mobility¹⁹.

The 85th Legislature passed Senate Bill 312, the TxDOT Sunset bill which enacted the

recommendations of the Sunset Commission with regard to contracting as described above. On August 30, 2018 the Texas Transportation Commission adopted the necessary rule changes to incorporate these recommendations and has ongoing activities to carry them forward. The implementation of these changes is essential to increase TxDOT's ability to effectively manage the increased number of construction projects in an efficient manner while protecting the taxpayers' investments.

CONGESTION PROJECTS

TxDOT was directed by Governor Abbott on September 23, 2015 to, "create a new focused initiative to identify and address the state's most congested chokepoints and work with transportation planners to get new roads built swiftly and effectively²⁰." Chairman Bruce Bugg in a Texas Transportation Commission Meeting on December 14, 2017 directed TxDOT senior staff to apply substantially more of the new funding sources on the top one-hundred congested roads to address the worst chokepoints. With the population growth that is anticipated in the major metropolitan areas, TxDOT's efforts will be critical to enabling the state's continued economic and population growth.

Based upon TxDOT's analysis, the cost to reduce the congestion for the top forty-eight most congested corridors would require thirty-one separate projects at a cost of more than \$35.9 Billion. The estimated positive economic impact from the reduced congestion includes time lost in traffic, fuel costs, vehicle operating costs, the economic impact of the construction, and the indirect business activity is more than \$135 Billion.

TxDOT initiated its Texas Clear Lanes project with \$1.3 Billion from the ending of diversions from the State Highway Fund. These funds went to fund congestion relief projects in the five major metropolitan areas of Austin, Dallas, Fort Worth, Houston, and San Antonio. Under the Unified Transportation Program (UTP) ten-year plan, there is more than \$24.4 Billion identified for congestion relief in the five major urban areas. The five metropolitan areas have designated funding in the following amounts: 1) Austin - \$2.7 Billion, 2) Dallas - \$6.8 Billion, 3) Fort Worth - \$3.2 Billion, 4) Houston - \$8.9 Billion, and 5) San Antonio - \$2.8 Billion²¹.

Committee Recommendations

- 1) TxDOT, Regional Mobility Authorities, and county and regional toll authorities should be able to enter into comprehensive development agreements for projects which are not included in TxDOT's Uniform Transportation Program and which have been approved by a vote of the designated elected local governmental entity or entities, or by a local referendum in the area(s) through which the highway will be built or expanded.
- 2) Regional Mobility Authorities, and county and regional toll authorities should be authorized to develop toll roads or tolled lanes for projects which have been approved by a vote of the designated elected local governmental entity or entities, or by a local referendum in the area(s) through which the highway will be built or expanded.
- 3) TxDOT should be authorized to increase the number of design-build contracts from the current number of three to a total of six per year with a minimum project value of \$250 Million and require that TxDOT track and report on the efficiencies developed through

this mechanism and report it to the Legislature in January of each year.

- 4) TxDOT should produce annually a report detailing the total traffic delays caused by the fault of the contractor including both administrative costs and traffic delay costs and the corresponding penalties that were imposed on the contractor for these delays including debarment, monetary penalties and such other penalties as TxDOT imposes. TxDOT shall also include a list of other projects on which the contractor is currently working and the status of the contract as well as the contractor's contracts for the previous five years and any delays in the completion of those contracts.

Charge 3: *Study the efficacy of existing transportation finance mechanisms from state, regional, and local perspectives. Identify opportunities to improve existing transportation finance mechanisms and investigate the feasibility of developing new ones.*

Committee Action:

The committee received testimony related to the charge on April 18, 2018. Oral testimony was provided by individuals representing the following entities: Texas Department of Transportation, the Bond Review Board, Regional Mobility Authorities, Toll Road Authorities, the Austin Chamber of Commerce, and the City Council of Dallas. Written testimony was also provided by the Texas Conservative Coalition Research Institute and the Reason Foundation.

Background:

STATEWIDE FUNDING

Funding for TxDOT comes from a variety of sources including federal funds, the State Highway Fund, Proposition 1, Proposition 7, comprehensive development fees, State Highway Fund surplus, bond proceeds, and the Texas Mobility Fund. TxDOT's ten year Uniform Transportation Plan includes more than \$70 Billion in projects with more than \$38 Billion of that funding coming from Propositions 1 and 7. This is a significant step forward for improving transportation infrastructure in Texas.

Federal funding for TxDOT comes primarily from the tax and fee revenue deposited to the Federal Highway Trust Fund from gasoline and diesel fuel taxes. The federal motor fuels tax rate is 18.4 cents per gallon on gasoline and 24.4 cents per gallon on diesel. In 2005 Congress voted to spend down the balance of the fund that had accrued over previous years, temporarily raising the state allocations for 2005-2009. After 2009 the higher levels of funding were continued using general funds to supplement the Federal Highway Trust Fund revenue.

The White House has identified \$200 Billion in direct federal investment in infrastructure that they have indicated would require significant new investment from state and local resources to match. The match may be difficult for the state and local governments to meet without a way to provide private sector funding to supplement these sources. Although no funding has been passed for this program, the ability of the state to compete for these funds could provide additional options for new infrastructure development.

The State Highway fund accounts for approximately thirty-three percent of the total TxDOT budget and is supported by several revenue sources including the motor fuels tax, motor vehicle registration fees, lubricant sales taxes, permit fees for special vehicles, local project participation funds, and federal highway reimbursements. In the 84th Legislative Session, the Legislature ended approximately \$1.3 Billion in diversions from the State Highway Fund to other projects

increasing TxDOT's budget correspondingly.

The Texas Motor Fuels tax is twenty cents per gallon on both gasoline and diesel fuel, fifteen cents of which is dedicated to the State Highway Fund and five cents is dedicated to the Available School Fund. The Texas motor fuels tax rate is ranked thirty-first among the states and has not been increased since 1991²². Based upon the value of the gas tax in 1992, it has been estimated that the current purchasing power of the tax revenue is less than half of its original value²³. The improvements in fuel efficiency and the incorporation of alternative fuels like natural gas and electric, are also eroding the revenue derived from the gas and diesel taxes²⁴.

In 2014 Texans approved Proposition 1 which authorized a constitutional amendment to allocate a portion of the oil and gas severance taxes to the State Highway Fund dependent upon insuring a "sufficient balance" in the Economic Stabilization Fund. For the 2018-19 Biennium Prop 1 provided 9.4 percent of the TxDOT budget. The funds could be spent on "constructing, maintaining, and acquiring rights-of-way for public roadways other than toll roads. The enabling act HB 1 of the 3rd Called Special Session of the 83rd Legislature provided that the distribution would end on December 31, 2024. This amendment has provided significant new revenue to TxDOT totaling more than \$4 Billion through Fiscal Year 2018 and is deposited in a subaccount of the State Highway Fund. The amounts distributed to this fund from the severance taxes are wholly dependent on the demand for these products, the price of these products, and the balance in the Economic Stabilization Fund. These funds will expire after the Fiscal Year 2025 transfer unless further action to extend the expiration is passed by the Legislature. This creates a measure of uncertainty to the budgeting process under TxDOT's Uniform Transportation Plan which projects funding out ten years and goes beyond the current expiration date for the funding.

Proposition 7, which allocates the first \$2.5 Billion in sales tax revenue above \$28 Billion to transportation funding, was passed by Texas voters in 2015. This fund accounts for approximately eleven percent of the TxDOT budget. The funds could be used to "construct, maintain, or acquire rights-of-way for public roadways other than toll roads; or to repay the principal of and interest on general obligation bonds issued under Proposition 12. The amendment also provides that thirty-five percent of any motor vehicle sales and rental tax revenue in excess of \$5 Billion be distributed to TxDOT beginning in September of 2019. These provisions will expire on August 31, 2032 and August 31, 2029 respectively unless future legislation is passed to extend them²⁵. The Legislature may also reduce the amount deposited to the State Highway Fund under either provision by a two-thirds vote of each chamber by up to fifty percent for a given biennium²⁶.

The Texas Mobility Fund is a revolving loan program that was created in 2001. In 2003 the legislature dedicated revenue to fund the bond payments. These bonds are not subject to the constitutional debt limit unless general revenue is required to make a debt service payment in which case, only the amount of the payment is counted against the constitutional limit. HB 2015 by Chairman Pickett was passed in the 84th Legislative Session and directed that no further debt may be authorized under the fund, and only actions to repay or refinance the current bonds may be taken.

A constitutional amendment entitled Highway Improvement General Obligation Bonds, or

Proposition 12, approved by voters in 2007, authorized the legislature to allow TxDOT to issue up to \$5 Billion in bonds to fund highway infrastructure. Under HB 1 of the 81st Legislature, TxDOT was authorized to issue the general obligation bonds. The Transportation Commission has committed the full \$5 Billion of bonds. No new bonds may be issued.

Proposition 14, State Highway Fund revenue bonds, were approved by the legislature and voters in 2003. The maximum of up to \$6 Billion in bonds is secured by State Highway Fund revenues. The Transportation Commission has committed the full amount to projects. No new bonds may be issued²⁷.

One aspect of project development and the decision regarding the source of funding for transportation infrastructure projects is the variable cost of the projects themselves. Estimating the overall cost of projects in the future is difficult as the cost of these materials does not correlate with inflation in the overall economy. TxDOT maintains the Highway Cost Index (HCI) which allows it to monitor the price changes in thirty-four items that are highly correlated to the highway construction industry. The HCI can be used to estimate the purchasing power of future transportation funding and to determine funding requirements for proposed projects²⁸. This is a critical tool in the development of the Unified Transportation Program to ensure that adequate resources are available for projects included in the plan. It can be used to evaluate decisions regarding the use of bond financing if the projected future costs of a project will rise sufficiently over time to exceed the cost of financing and developing the project at the present time and at the present cost.

REGIONAL AND LOCAL FUNDING

Transportation Reinvestment Zones (TRZs) were created by the legislature to provide a dedicated revenue source for local transportation projects. Since its origination in the 80th Legislative Session, TRZs have been revised a number of times to expand their utility, scope and applicability. A city, county or port authority may designate an area of the jurisdiction, which is underdeveloped, establish a base year for property and sales tax, and any incremental increases in tax revenue from within the zone from this base year may be applied to transportation projects in the zone²⁹. It differs from traditional Tax Increment Financing because it is not based on an increase in the tax rate and does not require a separate governing board. Funds from the TRZ may be combined with other sources of revenue to complete the project. Based upon the improved transportation infrastructure, additional growth in the underdeveloped area provides significant benefit to the local governmental entity and the citizens. Multiple cities and counties have implemented TRZs. A Texas A&M Transportation Institute research effort identified key unresolved issues that have limited TRZ use. Counties may face constitutional challenges if they use TRZ revenue to secure bond debt, and a recent Attorney General Opinion (KP-0004)³⁰ has indicated that merely collecting and using funds from a TRZ may subject the county to constitutional challenge³¹. County Energy Road TRZs (CETRZs) were repealed in the 85th Legislative Session. (Note: See Also Charge 8 on Energy Roads)

Vehicle registration fees are collected by the county tax assessor-collector and can include optional local fees added by the commissioners court of a county. These fees may not exceed

\$10 with certain county exceptions and are allocated to the county's road and bridge fund to provide funding for transportation projects within the jurisdiction.

Bond financing of transportation projects may be undertaken by Regional Mobility Authorities, County Toll Authorities, and Regional Tollway Authorities, which use revenue generated from toll roads to construct infrastructure either in place of, or supplementing, TxDOT funding³². However, any project by these entities must be approved by TxDOT if it connects to the state highway system.

Public/Private Partnerships and Comprehensive Development agreements have also been used as revenue sources to fund transportation projects in local jurisdictions. These have the added benefit that the private company may assume the risk of paying the cost of the project and is repaid with the revenue generated from the tolls on the road over time. These types of agreements have led to new road construction by entities authorized to create toll roads. The legislature has not authorized new CDAs since 2013. Mike Heiligenstein, Executive Director of the Central Texas Regional Mobility Authority stated, "We are currently at a disadvantage with other states because we are restricted from entering into P3s and CDAs."³³

The federal government has also provide the Transportation Infrastructure Finance and Innovation Act (TIFIA) which provided credit assistance for regional and national surface transportation projects. The Central Texas Regional Mobility Authority used TIFIA to help fund the 183 South and 183A Phase I projects. TIFIA was reauthorized by Congress in 2015 to continue through 2020.

The Infrastructure for Rebuilding America Grants (INFRA) is another federal program administered by the U.S. Department of Transportation. In order to apply for these grants, TxDOT must approve the application. The process is highly competitive and limited funding is available, making this program of limited access.

Six metropolitan transit authorities, two city transit departments, one county transit authority, and one advanced transportation district impose a sales and use tax which may be used to fund transportation projects in their respective areas³⁴. The majority of these funds are used to provide public support for transit solutions, but some of the resources, such as in Bexar County, are allocated to infrastructure projects on both county and state roads³⁵.

Cities and counties may also, at the request of property owners, create public improvement districts (PID) which are funded by property tax assessments on the property owners within the bounds of the district. The funds are then used specifically within the district to provide benefit to the property owners in the form of improvements to public facilities and infrastructure. In some cases the PID funds are used to supplement transportation projects that have not been funded through TxDOT and which are necessary for the maintenance or growth of areas within the PID³⁶.

ALTERNATIVE FUNDING OPTIONS

With the adoption by consumers of an increasing number of electric vehicles, which, by their nature, do not pay the gas tax, some states are either considering or, as in the cases of North Carolina and Virginia, implementing a registration fee on electric vehicles in place of the revenue received from the gas tax. While the number of electric vehicles in Texas in 2015 was approximately three percent, that number is expected to at least double by 2040³⁷. As the technology related to batteries continues to advance, and the range of battery-operated vehicles expands, the take up rate of these vehicles will also grow³⁸. There are a number of options for implementing an electric vehicle fee including a gas tax recovery fee which seeks to generate a comparable amount of funds per vehicle as is obtained from the gas tax; a tiered structure of fully electric, hybrid and alternative fuel vehicles; or a road usage recovery fee which estimates the damage caused by the vehicle and applies a relative fee. Each of these could also include an indexing option tied to the consumer price index or other related index to ensure that the value of the fee remains constant in relative terms.

A number of states have established specific funding programs to mitigate damage caused to state and county roads in areas with high levels of mining, energy production or timber harvesting. Pennsylvania has established Excess Use Maintenance Agreements that mandate that energy companies are required to repair the roads impacted by heavy-duty truck traffic and maintain the roads for the duration of the production. Ohio and West Virginia have developed Road Use Maintenance Agreements that hold companies accountable for improvements and maintenance of roads which they are using. These types of agreements have been implemented at the local level with counties able to require them for development within their jurisdictions. With these agreements, the companies are finding it more cost effective to rebuild the roads to meet traffic demands before the start of operations.³⁹

Committee Recommendations:

- 1) The Sunset provision from the enabling statute for Proposition 1 should be removed.
- 2) The Sunset provision from the enabling statute for Proposition 7 should be removed.
- 3) A Constitutional Amendment should be proposed to allow counties to create Transportation Reinvestment Zones and use the proceeds as necessary for the purposes set forth for the creation of the TRZ, including the authority to secure debt with TRZ revenues.
- 4) TxDOT, Regional Mobility Authorities, and county and regional toll authorities should be authorized to enter into comprehensive development agreements that would require Texas Transportation Commission approval for projects which are able to attract new federal funding made available through federal legislation and which require public/private partnerships.
- 5) TxDMV should study the most effective mechanism for collecting appropriate road use fees for owners of electric vehicles and the appropriate amount of those fees and report back to the legislature by October of 2020.

Charge 4: *Study Texas' various toll authorities and evaluate their transparency and stakeholder responsiveness. Make recommendations to improve the state oversight of toll authorities.*

Committee Action:

The committee received testimony related to the charge on April 18, 2018. Oral testimony was provided by individuals representing the following entities: Texas Department of Transportation, Texas Uniting for Reform & Freedom, Texans for Traffic Relief, Regional Mobility Authorities, and Tollway Authorities. Written testimony was also provided by the Hidalgo County Regional Mobility Authority.

Background:

The state of Texas recognized as early as 1953 that the revenue from the gas tax may be insufficient to meet all of the transportation infrastructure needs of the state. At that time it created the first statewide turnpike authority. Since that time, the legislature has created several different governmental entities which have limited authority to develop new infrastructure through the use of user fees or tolls imposed on the drivers accessing infrastructure and using the revenue to repay private investments, debt financing or for the construction of new roads.

Authorized toll road operators in Texas include the Texas Department of Transportation, nine regional mobility authorities (RMAs), one regional toll authority, and eight county toll authorities. While TxDOT's authority is statewide, each of the other entities is limited in its scope based upon the nature of its statutory authorization. These entities have the authority to finance, design, construct, operate and maintain toll roads as authorized by statute. For all toll entities, the Texas Transportation Commission must grant approval before construction begins on any project that is to be connected to the state highway system.

Texas toll entities provide a variety of payment options for their customers including the use of toll tags which allow for electronic identification of the vehicle and automated billing which can be sent electronically or by mail. For individuals who do not use the electronic identification, the systems can identify the vehicle and either mail or electronically send an invoice to the owner of the vehicle. Various authorities offer reduction of toll fees for using the electronic method as it reduces the cost to the toll operator as well.

Many toll operators have implemented system financing which allows the revenues from one toll project to be applied to any project that is included in the designated system. The advantage to the toll operator is the ability to use those funds to finance new construction. Many have challenged this practice as requiring toll users of one road to pay for the costs of a road that they are not using and that the public does not have the opportunity to approve this re-purposing of the toll revenue. This eliminates the concept that the toll is a user fee to pay for the costs of the road used.

Texas Department of Transportation Toll Operations

TxDOT operates approximately two-hundred thirty centerline miles of toll roads which include the Central Texas Turnpike System and several portions of the Grand Avenue Parkway in Harris, Montgomery and Chambers counties. For each of these roads, TxDOT is responsible for the marketing of TxTAG, web support, toll collection systems integration, back office operations, customer service center operations, RMA operational support, interoperability coordination with other toll authorities and toll management systems contracting and installations. TxDOT toll lanes in the Dallas-Fort Worth area are supported by the North Texas Toll Authority as prescribed in statute.

Users of TxDOT toll roads are able to use the roads and receive invoices in two ways. The users vehicle can be identified through photographic imaging and identification or through the use of TxTag. TxTag is a sticker which is placed in the windshield of a vehicle with a small identification chip that can be read by electronic tolling systems. When the vehicle travels through the toll booth, the chip is read electronically, and the account of the vehicle is charged for the toll. Users may deposit funds into their account and have the tolls automatically paid, or may receive bills electronically for their tolls. Federal legislation requires that all tolling authorities which received federal funds integrate their billing systems so that charges are consolidated. TxDOT has interoperability agreements with each of the toll agencies in Texas which allow for the user's account to be charged regardless of the toll road which is used. In addition TxDOT has signed agreements in place with toll agencies in Kansas and Oklahoma.

If they do not have a TxTag, the user's charges are sent to the address where the vehicle is registered. Pay by mail users can now also receive invoices electronically if they choose to do so. One of the key issues that pay-by-mail customers deal with is when they change addresses and do not notify TxTag. TxDOT has directed its contactor, Conduent, to implement a program which will allow them to track the individual's change of address to ensure that timely billing notification takes place. TxDOT and the other toll authorities are integrated on the toll tag issue, but have not coordinated their efforts on the pay by mail process. An individual could receive multiple pay-by-mail letters from various toll authorities in a single month.

The Harris County Toll Road Authority (HCTRA) was contracted to carry out the back office operations of the interoperability agreements. When the system was first initiated in May of 2017, users experienced significant issues related to billing. Users were sent multiple statements, were charged excessively, or were incorrectly identified. This was caused by issues within the computer systems which were being integrated across all of the toll agencies within the agreement. TxDOT reports that these errors have been corrected, and that the issues with individual toll patrons have been resolved. During this period, TxDOT did not require payment of the tolls that were charged inaccurately.

Texas, Oklahoma and Kansas have also signed interoperability agreements with Florida, Georgia, South Carolina and North Carolina. These entities should be integrated into the interoperability hub at HCTRA by the spring of 2019. As of May of 2018, TxDOT is also negotiating with the E-ZPass group which operates toll roads in the northeast and the west coast, however these tolling entities use an radio-frequency identification toll tag which is unable to be

read by the Texas, Kansas and Oklahoma toll booths. This issue is being addressed by the contractor providing the toll readers.

TxDOT currently contracts with an outside vendor, Conduent, to manage toll collection and customer service systems. Another contractor, Transcore, provides the technology infrastructure necessary for the tracking of toll users. Conduent is responsible for the call center which assists customers with establishing a TxTag account, billing questions, and payments.

In the event that a user does not pay their account, TxDOT is authorized to impose penalties for each transaction. Prior to March 1, 2018, TxDOT charged \$1.15 for each of up to two bill mailings. If the bill was not paid, they issued a \$5.00 violation fee. At this point if the bill was not paid, the total amount was sent to collections which was authorized to receive a \$25 collection fee. If the account was transferred to a court, the fees and fines could reach \$350. TxDOT toll operations treated each instance of a vehicle traveling underneath a toll gantry as a single transaction. This would create a situation whereby one trip on a toll road which crossed under three separate tolling stations would generate three charges, each of which could be charged a late fee with respect to non-payment and each of which would be subject to administrative penalties and collection costs.

The 85th Legislature included in SB 312, the TxDOT Sunset Bill, a cap on the amount of fees that could be collected for an invoice to an individual. The amounts included a \$1.15 mail fee for each of three invoice mailings, a maximum of a \$6 late fee per month to a maximum of \$48 per year. TxDOT has implemented the system to include a monthly late fee of \$4 and a maximum of \$48 per year. At the time of the transition, TxDOT waived \$1.3 Billion in late toll fees which the department identified as unlikely to be collected.

Statute also allows drivers who fail to pay or refuse to pay a toll charge to be prosecuted for a misdemeanor offense. Since 2010, more than 14,737 cases have been filed against violators, and more than 4,908 have been convicted of the misdemeanor. SB 312 also limited the number of prosecutions for refusal or failure to pay a toll to one per year for a customer with two or more unpaid invoices.

The Texas Transportation Commission in 2017 revised the Unified Transportation Program ten-year funding plan to exclude any new toll projects using TxDOT funding for any portion of the project. This action will limit the ability of many toll entities to expand their toll projects, however several toll entities have system financing that allows them to continue new transportation infrastructure projects. The change in policy was initiated to respond to toll road opponents who have indicated that toll roads that use tax funds are being required to pay for the road twice, once with their tax payments and again when they use the road. In contrast to this view, the toll projects which receive TxDOT funds, excluding Prop 1 and Prop 7 which preclude their use on toll roads, may not be developed at all, or may be delayed by decades prior to development as the TxDOT funds alone would be insufficient to pay for the entire project.

REGIONAL MOBILITY AUTHORITIES

The basis for regional mobility authorities was created by the 77th Legislature in 2001 for the purpose of expanding opportunity for increased transportation infrastructure development at a local and regional level. RMAs may be formed from cities, counties, or combinations of local governmental entities. To be formed, each RMA must receive approval from the Texas Transportation Commission. In 2003, the RMA's received additional authority to conduct eminent domain proceedings, combine projects into systems, and transfer indebted turnpike projects to TxDOT. It also expanded their ability to construct additional types of transportation infrastructure, including, among others, bridges, ferries, airports, border crossing inspection stations, and port security. The current RMAs operating in Texas include: Alamo, Cameron County, Camino Real, Central Texas, Grayson County, North East Texas, Hidalgo County, Sulphur River, and Webb County.

The purpose for each RMA is unique to its area in that there are a wide variation of projects that have been and continue to be developed by them. The Cameron County RMA has been developing a new limited access toll route to connect the Port of Brownsville and state highway 48 to interstate 69E⁴⁰. This segment will help to alleviate congestion due to traffic created from the Port of Brownsville and expedite commerce. The Central Texas Regional Mobility Authority (CTRMA) has begun development of a four-lane toll road in southern Travis county that will reduce vehicle congestion on current roadways, reducing drive times significantly for commuters to central Austin. Each RMA works to develop projects based upon the needs of the community that they serve.

The governance of RMAs also varies significantly. Based upon the number of cities or counties involved in the RMA, the board of directors will reflect the various entities which make up the authority. The commissioners court of the county or counties served and/or the city council will appoint individuals to serve on the board, and the presiding officer is appointed by the governor. There is a strict prohibition on any elected official serving on the board of an RMA. The Alamo RMA has been subsumed by the Bexar County Commissioner's Court which appoints the operating board for the RMA.

RMAs have been of significant assistance to the development of transportation projects that intersect with multiple local governmental entities. Their efforts have yielded projects which include multiple cities, counties, TxDOT, New Mexico, and even Mexico. Projects that are developed are done so by coordinating with all of these entities and being responsive to the needs of the elected governmental bodies with which they cooperate. The RMAs can also serve as a means to develop a project across multiple jurisdictions which individually do not have the resources necessary to develop a project on their own, but can aid in the development of the project with the support from other jurisdictions. The end result is a completed project that benefits multiple areas.

One of the challenges that RMAs face is the perception that they are not transparent in their finances, project details, and plans. A study by the Texas A&M Transportation Institute found that the availability to the general public of documents relating to these issues was limited at some RMAs. The ability of the public to retrieve this information and understand the role that

the RMAs provide and the manner in which resources are being used could benefit the public's perception of the progress that is being made by the RMAs.

Specific RMAs have taken significant steps to provide information to the public in the most visible manner as possible and to ensure that their operations are in compliance with appropriate financial and ethical compliance. The CTRMA and Alamo RMA have both implemented annual internal and external audits and provide those on their websites. RMAs also work to respond to the need to ensure public awareness of their actions. CTRMA broadcasts its board meetings on their website. Individual RMAs have taken strong steps to publish as much information to the public as possible.

REGIONAL TOLL AUTHORITY

The North Texas Tollway Authority is the sole regional toll authority in Texas. It was initially created in 1953 as the Texas Turnpike Authority and was charged with building a turnpike between Dallas and Fort Worth. This project was transferred to TxDOT in 1977 when the project costs had been recovered and the outstanding bonds retired and re-designated as Interstate 30.. The Texas Turnpike Authority was eliminated when the legislature created the North Texas Tollway Authority in 1997 at which time all assets and liabilities were transferred to NTTA. The NTTA includes Collin, Denton, Dallas and Tarrant counties. Within these counties, the authority may construct, maintain, repair and operate toll projects. The funding for these projects may be raised from the sale of bonds, contributions from public and private entities, grants, and loans. The governance of the NTTA is through an operating board appointed by the Commissioner's Courts of the member counties.

Individuals who use a NTTA toll road and refuse to pay are subject to a maximum fine of \$250 plus any administrative costs. Administrative costs are limited to a maximum \$25 fee on the first notification of nonpayment, a maximum \$25 on the second notice of nonpayment for each unpaid toll to a maximum of \$200, and if nonpayment continues after the third notice is sent, the individual will be fined \$250 per unpaid toll and subject to misdemeanor prosecution.

COUNTY TOLL AUTHORITY

County Toll Authorities with active toll roads include Harris, Ft. Bend, Fort Bend Grand Avenue Parkway, and Montgomery Counties. The two Fort Bend authorities are managed and operated by the same individuals, but the Grand Avenue Parkway project was required to keep all funds distinct from those of the Fort Bend County Toll Authority. These types of authorities are a part of the county government and answerable to the County Commissioner's Court. The Commissioner's Court may appoint an operating board to oversee the projects if they choose. Because these are operated under the auspices of the elected county government, the public has the ability to impact the decisions made through the elected commissioners and county judges.

These entities may charge tolls for travel on specified roads within the jurisdiction of the county in which they operate. The tolls charged by these authorities are to be set by the commissioner's court or the operating board. Upon non-payment of the toll or tolls, an individual is, in addition to the toll amounts, responsible for administrative fees up to a combined amount of \$100. An

individual who fails to pay these tolls or the associated administrative fees is subject to a misdemeanor charge and a fine of not more than \$100⁴¹.

Committee Recommendations:

- 1) The same standards for administrative and civil penalties should be applied to toll violators for all Texas toll roads, including those not operated by TxDOT.
- 2) Unless otherwise approved by a vote of designated elected local governmental entity or entities, or by a local referendum in the area(s) through which the highway was built or expanded, any revenue generated on a toll road should only be used to repay the cost of the infrastructure, financing, maintenance and operation until the initial costs have been fully repaid at which time the entity responsible for the toll road should determine the necessary revenue to operate and maintain the roadway and set toll charges at the level necessary to cover those costs only.
- 3) All toll agencies should incorporate pay-by-mail billing in an integrated fashion as it does toll tag billing.
- 4) RMAs and the Regional Toll Authority should conduct independent audits at least biennially and post the results on their website.
- 5) RMAs, County Toll Authorities, and the Regional Toll Authority should post on their websites information detailing current project expenditures and sources of funds, updated completion schedules for ongoing projects, and estimated completion dates.

Charge 5: *Review the management of the oversize/overweight permitting system and ensure that the state is adequately protecting the driving public and road integrity. Make recommendations to improve operations.*

Committee Action:

The committee received testimony on February 8th, 2017 regarding the oversize and overweight permitting system from: the Texas Department of Transportation, the Texas Department of Motor Vehicles, the Precast-Concrete Manufacturers Association of Texas, the Texas Oil and Gas Association, the Texas Association of County Judges and Commissioners, the Texas A&M Transportation Institute, and the Texas Department of Public Safety. Written testimony was also received.

Background:

Traffic on the Texas State Highway System is restricted in terms of the size and weight that a vehicle may be in order to use this system. To carry out these functions, the legislature in 1927 authorized the Texas Highway Department (now TxDOT) to employ eighteen license and weight inspectors and one chief inspector. Today, the enforcement of commercial motor vehicles is handled by the Texas Department of Public Safety (DPS), Texas Highway Patrol through the Commercial Vehicle Enforcement Division. This division now employs more than five-hundred sixty-nine individuals to reduce commercial motor vehicle accidents, reduce damage to state highways, ensure payment of the registration fees, and protect the public through enforcement of traffic laws and regulations related to operation of a vehicle⁴².

The Department of Motor Vehicles (TxDMV) was directed by the 82nd Legislature to handle the permitting of oversize/overweight vehicles while TxDOT retained the responsibility for setting maximum vehicle and load weights, vertical clearance heights, signage for weight and load restrictions, and engineering and traffic studies regarding maximum width of vehicles. TxDMV also works with TxDOT to determine the routes that oversize/overweight vehicles may travel. The three agencies, DPS, TxDOT, and TxDMV work collaboratively on defining, permitting, and enforcement of oversize and overweight vehicles within the confines set by the legislature.

Currently, state law allows for maximum load dimensions of eight feet six inches width, fourteen feet height, and variable length according to the type of vehicle. The maximum weight allowed is based upon the number of axles on the vehicle. Any vehicle traveling on state highways with loads beyond these dimensions or exceeding eighty thousand pounds total weight requires an oversize/overweight permit.

The current restrictions on motor vehicles have been established to protect the safety of the public, prevent undue damage to the surfaces of roadways, and to prevent collisions with transportation infrastructure like bridges and overpasses. Due to the size of the state and the breadth of industries that operate in the state, Texas issues more oversize/overweight permits

than any other state. In 2017 TxDMV issued more than seven-hundred thousand oversize/overweight permits.

In 2011 TxDMV implemented the Texas Permitting and Routing Optimization System (TxPROS) to carry out much of the administrative requirements for issuing permits. This system allows for the permittee to submit their application for an oversize or overweight permit electronically. Within the system, checks are made to verify the information provided, and more than four-hundred thirty thousand permits were issued by the system without TxDMV personnel intervention. This system has reduced the amount of time that a permittee must wait to receive their permit, and reduces the cost to the state for the effective management of the permitting process. As a function of this system, loads that require routing instructions due to the size or weight of the load are provided with electronic maps showing the specified route that is required to be taken. This has also significantly improved the efficacy of the system and the safety of the public⁴³.

For vehicles which are not able to be processed automatically by TxPROS, TxDMV staff issue permits for over-width, over-length, over-height, or super-heavy loads. The legislature has authorized these types of permits to be issued for specific loads like agricultural products or manufactured homes, for specific vehicles like cranes or well-servicing trucks, for specific lengths of time, and for specific vehicles or companies as a whole. For companies that use the annual permit, information on the number of trips taken and the weight of the loads is not collected by TxDMV, so the actual number of overweight loads is not tracked. This permit system is continually reviewed for permit quality by TxDMV staff, and includes a compliance check of all relevant statutes, rules and policies.

TxDMV has the ability to identify commercial carriers that are Out-of-Service based upon Federal Motor Carrier Safety Administration standards. This allows TxDMV to review their materials for applications for oversize/overweight permits, and notify DPS of their identity. Current law does not allow TxDMV to deny the out-of-service carrier an oversize or overweight permit⁴⁴.

Enforcement of the restrictions related to oversize and overweight vehicles is limited to certain weight enforcement officers designated in statute. These would include: 1) a license and weight inspector of DPS, 2) a highway patrol officer, 3) a sheriff or sheriff's deputy, 4) a municipal police officer in certain counties, 5) a police officer certified by DPS, or 6) a constable or deputy constable in designated counties.

The penalties for overweight vehicles are assessed upon a sliding fine scale based on the amount an axle or tandem axle weight is over the legal limit. The driver may also be fined if the vehicle is over the vehicle's allowable weight. Should a driver operating under an overweight permit be found to have exceeded the permit weight, additional fines are automatically added. Overweight vehicles can be weighed in the field with portable scales, and drivers are only ticketed and required to reduce their load if it exceeds the maximum weight by five percent.

The Texas Department of Public Safety conducted more than forty-three thousand weight inspection in 2017. As a result of those inspections, eighteen-thousand seven-hundred forty

tickets for overweight vehicles were issued along with more than twenty-five thousand warnings. Local law enforcement agencies which have weight enforcement officers conducted an additional eight-thousand two-hundred seventy-three weight inspections and issued more than thirty-six hundred tickets⁴⁵.

In the event that TxDMV identifies a pattern of overweight tickets being brought against drivers for a particular company, it may initiate an investigation and impose further administrative penalties against the company including fines and suspension of registrations. In 2017, there were 337 cases against companies for overweight permit violations with more than \$1.1 Million in administrative penalties resulting and ten permitting system accounts were suspended. By suspending the account, companies are unable to request an overweight permit. TxDMV also brought actions against ten companies which load shipments that are overweight in 2017. However it does not have the authority to issue administrative penalties to loading companies which fail to provide a certificate of weight to the driver picking up the load. TxDMV also does not have the authority to address administrative penalties against companies which violate over size limitations.

During the 85th Legislative session, the legislature passed Senate Bill 1524 by Nichols which provided for an overweight permit to be issued to carriers for sealed intermodal shipping containers within thirty miles of a Texas port authority or port of entry along the gulf coast. The permit was restricted to requiring six axles for a load up to 93,000 pounds, or seven axles for up to 100,000 pounds. It also required that the truck have safety equipment including driver blind-spot system and a roll stability support system. The vehicles were also required to follow specific routes that were designated by TxDOT. The weight limitations and the increased axles were intended to keep the maximum per axle weight comparable to that of traditional five axle trucks which have a maximum of 80,000 without an overweight permit. The 85th Legislature also passed SB 1383 which authorized milk trucks to carry loads up to 90,000 pounds on six axles with roll stability support system and driver blind spot system.

The requirements in SB 1524 and SB 1383 allowed companies to move heavier loads than authorized without a permit, while keeping the impact to the roadways comparable to those of a truck without a permit carrying 80,000 pounds. While these requirements are limited to the two types of permits, the advantages to the roadways is significant compared to other overweight permits currently authorized.

Committee Recommendations:

- 1) Individual owner/operators and companies which operate vehicles with overweight permits should submit to TxDMV one report detailing the number of trips taken by each permitted vehicle and the weights of those loads over the course of one year. TxDMV should then prepare a report of the information including the average number of trips taken under the type of permit, the average weight per trip and such other information as may be relevant to future legislative action.
- 2) TxDMV should be authorized to deny oversize/overweight permits to applicants who are identified as out of service by the Federal Motor Carrier Safety Administration.
- 3) Every county commissioners' court should be authorized to designate constables or

deputy constables as weight enforcement officers on state and county roads in the county who would be subject to the same requirements imposed under Subchapter C, Chapter 644 of the Texas Transportation Code.

- 4) The requirements for overweight vehicles in SB 1524 should be considered in future legislation for overweight vehicles.
- 5) TxDMV should be authorized to administratively penalize companies which violate the size limitations in the same manner that they are able to do so for companies violating the weight limitations.
- 6) TxDMV should be authorized to administratively penalize loading companies which fail to provide a certificate of weight to the driver picking up the load.

Charge 6: *Study emerging issues in transportation related to technology and evaluate the state's preparedness for addressing challenges and opportunities posed by technological advances. Review the implementation of state and federal programs and legislation related to intelligent transportation systems, autonomous vehicles, unmanned aircraft systems (i.e. drones), and other technological changes.*

Committee Action:

The committee received testimony on February 8th, 2018 regarding intelligent transportation systems, unmanned aircraft systems, and autonomous vehicles from the following entities: the Texas Department of Transportation, the Texas Department of Motor Vehicles, General Motors, Smart Mobility Texas, the Consumer Electronics Association, the Lone Star Unmanned Aircraft Systems Center of Excellence and Innovation, the Texas A&M Transportation Institute, and the Texas Department of Public Safety. Written testimony only was also received from Chargepoint, Inc.

Background:

Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) relate to a wide array of technology which is intended to provide services related to vehicle movement and traffic management to allow them to make safer and better decisions related to travel. ITS can include currently implemented items like in-car navigation systems, traffic control systems, roadside dynamic message signs, automatic license plate recognition systems, speed cameras, and closed-circuit television systems. However, the rapid increase in technology has also increased the level of sophistication by which information is being shared across traffic control systems, driver information systems or applications, smart-phones, GPS routing systems, vehicle to vehicle information exchanges, and vehicle automation systems⁴⁶.

TxDOT Metro Districts expended \$279 Million on construction and \$55 Million on maintenance of state ITS infrastructure between 2011 and 2015. TxDOT uses dynamic messaging signs to provide traffic information to drivers including crashes, construction lanes, and maintenance lane closures. This information comes directly from TxDOT, from traffic sensors on the roadways, and from private sector data where sensors are unavailable. The use of these devices enables faster response from the Traffic management centers and reduced potential for secondary collisions. These dynamic messaging signs are also used to provide information on weather events, evacuations, Amber, Silver and Blue Alerts, and for traffic safety campaigns. TxDOT has eight-hundred eighty-five full size DMS and two-hundred smaller ones.

Over height vehicle detection systems can also be incorporated in approaches to bridges and overpasses to reduce the potential for a bridge strike. These systems provide a real time height

measurement of vehicles and their loads and provide roadside dynamic messaging to the driver to warn of impending crash and allow time to exit before the bridge or overpass. While the cost of these systems may be as much as \$400,000, the cost to repair a bridge or overpass may be as much as \$300,000 per bridge strike.

TxDOT has recently initiated a pilot program to warn drivers entering a highway in the wrong direction. The system not only warns the driver, but also engages dynamic messaging signs to oncoming traffic to warn of the oncoming driver. TxDOT reports that so far, the system has proven effective in preventing sixty-two accidents in the San Antonio pilot program. The systems have been set up in San Antonio, Houston, and Fort Worth.

Work has also been started on the Texas Connected Freight Corridor projects which will provide vehicle to vehicle and vehicle to infrastructure communications to allow for the timely sharing of traffic and roadway conditions, traffic accidents, weather conditions and a host of other safety and traffic management information. This effort could lead to improved traffic flow as trucks divert from routes that are congested onto routes that may be faster at the time. This will also help to reduce the number of follow on accidents that occur when traffic is suddenly halted due to an accident and vehicles approaching the scene are unable to slow quickly enough to avoid striking other vehicles. The Texas Connected Freight Corridor will include I-35, I-45, and the I-10 corridors⁴⁷.

Automated Vehicles

Since 1965 there have been more than 2.2 million motor-vehicle fatalities in the United States. The major factor in ninety-four percent of these deaths is due to human error or behavior. Removing the potential for human error from the transportation system, especially for passenger vehicles, could result in a significant decline in the number of accidents and fatalities⁴⁸. Through the advancement of computers, communication systems, global positioning systems, and other key technologies, the development of automated/autonomous vehicles is becoming reality.

Automated vehicles are those in which at least some aspects of a safety-critical control function; including steering, throttle, or braking; occur without driver input. Automated vehicles are classified by the National Highway Transportation Safety Administration according to six criteria: Level 0 requires no automation, Level 1 includes driver assistance, Level 2 has partial automation, Level 3 incorporates conditional automation, Level 4 adopts high automation, and Level 5 advances to full automation. Levels 0 through 3 require some level of human interaction, while levels 4 and 5 do not. Levels 4 and 5 are regarded as highly Automated Vehicles due to their ability to safely respond to accidents or failures in the system without the need for an operator.⁴⁹ Regulation of these vehicles is typically dependent on the level of automation that is included.

The U.S. Department of Transportation has been in the process of developing a Comprehensive National Plan for Automated Vehicle Initiatives for more than three years. In July of 2018 the department noted that, "...due to the nature of these technologies and the stage of development of the regulatory structure...it would be premature to publish a fully comprehensive plan at this time." It has indicated that the, "first iteration of this framework will be developed in 2019 and

will incorporate leading principles of comprehensive planning. During this period, President Trump directed that \$100 Million be expended on planning, research and demonstration grants for highly automated vehicles⁵⁰.

In 2017 the U.S. House passed the *SELF DRIVE* act which establishes the federal role in ensuring the safety of highly automated vehicles. It also preempts states from enacting laws which relate to the design, construction or performance of highly automated driving systems. The bill does require safety assessment certifications for the development of highly automated vehicles or driving systems, and also requires that the developers adopt a written cybersecurity and privacy plan before offering the vehicle for sale⁵¹. This bill has not been taken up by the Senate for a vote, and remains unpassed by Congress.

At the present time, the federal government is responsible for setting Federal Motor Vehicle Safety Standards for new motor vehicles and equipment, enforcing compliance with the standards, investigating and managing the recall and remedy of noncompliant or defective vehicles, and communicating and education the public. The states are responsible for licensing human drivers and registering motor vehicles, enacting and enforcing traffic laws and regulations, conducting safety inspections, and regulating motor vehicle insurance and liability⁵².

Texas was designated as one of only ten Automated Vehicle Proving Grounds in the country. The proving grounds are led by Texas A&M University, The University of Texas, and the Southwest Research Institute. These entities are engaged in conducting research for a variety of public and private entities. The Partnership includes DFW-Arlington, Austin, San Antonio, El Paso, Houston, Corpus Christi (Coastal Bend area), and Bryan/College Station. These areas have all been designated for testing of automated vehicles⁵³.

The 85th Legislature passed Senate Bill 2205 by Senator Hancock and provided a basic legal mechanism by which Level 4 and Level 5 automated vehicles may operate in Texas, either with, or without, a human operator and the conditions under which it may do so. This bill established the responsibilities for the owner of the vehicle and treats the owner as the responsible party for compliance with traffic and motor vehicle laws, regardless of whether an operator is in the vehicle. It required that automated vehicles operating on the public roadways must include a data recording device, comply with applicable federal laws and the Federal Motor Vehicle Safety Standards, be registered and titled in Texas, and be covered by insurance or self-insurance⁵⁴. Perhaps of most significance to entities working to develop Level 4 and 5 autonomous vehicles, the bill also preempts any political subdivision or state agency from imposing regulations or rules related to this issue.

In a study conducted by the RAND Corporation, automated vehicles could be introduced to roadways in 2020 with a slight improvement of ten percent on the level of safety compared to a human driver. If the vehicles improve over time, by 2035, the vehicles could be closer to ninety percent safer than human drivers. This improvement could result in saving as many as 1.1 million lives between 2020 and 2070. RAND argues that the introduction of automated vehicles should be undertaken when they are objectively safer than human drivers, even if they are not perfect.⁵⁵

One of the critical elements to the practical application of automated vehicles is the ability for it to securely send and receive communication signals and to remain impervious to external electronic interference with its operations. As the development of these systems moves forward, the cybersecurity aspect of its communications and software interface is even more important than the protections used in personal computers. The implications of an outside person having control of another person's vehicle raises significant issues for public safety and the potential use of these types of vehicles for terrorist acts raises the importance of ensuring system integrity and control⁵⁶.

Connected Vehicles

Connected vehicle technology allows vehicles to receive and share mobility and safety information between vehicles, people and transportation management systems. This technology could allow vehicles, smart phones and other devices to communicate information to vehicles and devices in proximate vehicles to allow them to warn drivers of dangerous circumstances such as a driver about to cause an accident or vehicles stopped in a roadway. The level of connection between vehicles is dependent upon the quality of the communications and the compatibility of the devices or applications used.

While newer technologies like radar, lidar, cameras and other sensors are increasingly used in individual vehicles, they are limited in their use to their range, and cannot warn of dangers beyond their operating range. The use of connected technologies increasing the range at which dangers can be identified, giving drivers additional time to react and take measures to protect themselves. The use of connected technologies also provides the basis upon which intelligent transportation systems can be incorporated to guide both automated vehicles and those with drivers to the best routes and speeds that will improve traffic flow and reduce the potential for accidents⁵⁷.

House Bill 1791 by Chairman Pickett, passed in the 85th Regular Legislative Session, granted authority for vehicles which have onboard communication systems to allow for the exchange of relative motion information to travel in closer proximity to each other than allowed under current roadway safety limits. This bill allows vehicles to communicate with each other and to have the act of braking by the vehicle in the lead automatically cause the trailing vehicle to initiate braking as well.

Unmanned Aerial Systems

Unmanned Aerial Systems (UAS); also known as drones, flying robots, unmanned aerial vehicles, and a host of other names; are becoming increasingly present in both the commercial and civilian sectors. These devices are remote-controlled flight systems which, due to not having to carry a pilot, can be smaller and are able to remain aloft for longer periods of time. With the inclusion of photographic or other recording and communication equipment, the drone can also be used to provide direct video links or recordings to its user. As a consequence of the increasingly fast-paced development of drones and their applications, the regulation of these devices has become an ongoing struggle for federal and state entities with responsibilities for the regulation of airspace, the protection of the public safety, and the securing of individual privacy.

Congress has designated the Federal Aviation Administration (FAA) with authority to regulate the areas of airspace use, management and efficiency, air traffic control, safety, navigational facilities, and aircraft noise at its source. The FAA is required to "...develop plans and policy for the use of the navigable airspace and assign by regulation or order the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace⁵⁸." The FAA is also directed to "...prescribe air traffic regulations on the flight of aircraft (including regulations on safe altitudes)" for navigating, protecting, and identifying aircraft; protecting individuals and property on the ground; using the navigable airspace efficiently; and preventing collision between aircraft, between aircraft and land or water vehicles, and between aircraft and airborne objects⁵⁹.

The FAA has established rules for the use of UASs through multiple avenues. UAS users may operate their device under the Special Rule for Model Aircraft or under the FAA's Small UAS Rule. Under the Model Aircraft, UASs under fifty-five pounds may be used for hobby or recreation if it is registered with the FAA, are required to fly within visual line-of-sight, avoid other aircraft, notify airports if flying within five miles, never fly near emergency response efforts, and the operator follows all of the regulations related to model aircraft. Under the Small UAS rule, the drone must be registered, under fifty-five pounds, flown within visual line-of-sight, not be flown near other aircraft or over people, not be flown in controlled airspace without FAA permissions, and only fly during daylight or civil twilight at or below four-hundred feet. Under the Small UAS rule, the operator of the drone must also get a remote pilot certificate from the FAA.

In order to avoid the development of a "patchwork" of laws and regulations, the FAA has made clear that Congress has preempted the field with regard to the issues addressed above, and that state regulation in these areas is not permissible. Within the framework of federal statutes and FAA regulations, the FAA has recommended that any state or local laws which would place restrictions on flight altitude, flight paths, operational bans, or any regulation of the navigable airspace be reviewed with the FAA prior to adoption. The FAA has also indicated that mandating equipment or training for UAS-related activities would likely be pre-empted.

Outside of the limitations suggested above, the FAA has indicated that legislation or regulations regarding a requirement to obtain a warrant prior to the use of UAS in police surveillance, proscribing the use of UAS for voyeurism, prohibitions on the use of UAS in hunting and fishing, and denying the use of UAS with firearms or similar weapons would be within the state's purview⁶⁰.

The state of Texas has implemented a number of statutes which apply to the use of UAS. In the 83rd Legislature Regular Session, HB 912 by Representative Gooden addressed privacy concerns of citizens that UAS operators could record pictures, videos, or conversations when the person had an expectation of privacy. The statute lays out a list of acceptable times when recordings could be taken and with specific individuals able to do so. Examples of items on the list include individuals such as researchers, UAS test sites, U.S. military operations, utility companies carrying out specific activities related to their industry, under the auspices of a search warrant, and for specific law enforcement purposes. Any individual who records another by the

use of UAS, outside of the individuals described in the code, would be in violation of the statute and subject to a class C misdemeanor and a person who disclosed, displayed, distributed or otherwise used the recording would be subject to a class B misdemeanor. A civil cause of action was also created. Finally, the statute requires law enforcement agencies in counties with a population of more than 150,000 to report on the use of drones on an annual basis⁶¹.

HB 1481 by Representative Murphy was also passed in the 84th Legislative Session and created a criminal offense for flying a UAS within four-hundred feet vertically of an identified piece of critical infrastructure or close enough to cause a disturbance. Critical infrastructure included refineries, power plants, chemical plants, water and wastewater facilities, TV and radio transmission facilities, and dams, among others. Exceptions were defined to include government agents, law enforcement officials, or the operators of the facility.

HB 2167 by Representative Smith added private or independent colleges to the academic purpose exception, and also added professional surveyors and engineers to the exception as long as no individual is identifiable in the image. HB 3628 by Chairman Geren authorized DPS to promulgate rules to either prohibit the use of UAS around the capitol, or to authorize limited UAS use around the capitol and makes an offense a class B misdemeanor.

HB 1643 by Representative Springer in the 85th Legislative Session was passed to expand the definition of critical infrastructure to include any telecommunication structure or concentrated animal feeding operation. The bill included a requirement that a fence or other physical barrier to exclude intruders around oil or gas drilling sites; crude oil storage tanks; any oil, gas or chemical production facility; an oil or gas wellhead; or any oil and gas facility that has an active flare would be considered critical infrastructure. The description of the exception allowing a commercial operator to be exempt from the statute was clarified to require that the operator be in full compliance with appropriate FAA regulations and have all required FAA authorizations. Perhaps most significantly, the bill also established preemption of state law over regulation by local governmental entities with limited exceptions. SB 840 by Senator Zaffirini added telecommunications providers to the list of entities excepted from the image capture limitations and included images taken by or for law enforcement solely for the purpose of border security on property within twenty-five miles of the border under the law enforcement exception.

Committee Recommendations:

- 1) The implementation of highly autonomous vehicles should be closely monitored to ensure that further action to protect the public may be taken as needed.
- 2) TxDOT should continue to expand its programs related to the use of dynamic messaging signs to improve safety and provide greater driver knowledge of road conditions, weather events and safety announcements.
- 3) Any regulation of unmanned aerial systems should provide the public with appropriate protections, while allowing the commercial development of new innovations.
- 4) The attachment, carrying, or use of weapons, explosives, or hazardous chemicals on Unmanned Aerial Systems by non-military individuals or entities should be prohibited.

Charge 7: *Review the current state of infrastructure at Texas' international shipping ports and border ports of entry in Texas. Identify transportation-related impediments to international trade and estimate the impact of those challenges, including border wait times, on the state's economy. Make recommendations for improvements to facilitate international trade and economic growth.* (Joint charge with the House Committee on International Trade & Intergovernmental Affairs)

Committee Action:

The Transportation Committee and the International Trade & Intergovernmental Affairs Committee met jointly in Weslaco, Texas and received testimony on March 20, 2018 from the Port of Victoria, the Port of Brownsville, the U.S. Customs and Border Protection Service, the Texas Department of Public Safety, the Texas Association of Manufacturers, Union Pacific, the Texas Trucking Association, TxDOT Maritime Division, and the U.S. Army Corps of Engineers.

Background:

MARITIME PORTS

Texas is a leader in the international maritime shipping industry. With eleven deep draft ports, and six shallow-draft ports, Texas handles approximately five-hundred million tons of freight each year. This figure represents more than twenty percent of the total shipping in the United States. With more than 116,000 jobs directly related to the shipping operations, it has a significant impact on the Texas economy.

Many ports in Texas are experiencing dramatic growth in recent years. The Port of Houston handles more imports and exports than any other U.S. port and handled 2.4 million twenty-foot equivalent units (TEUs) or shipping containers in 2017. The Port of Beaumont ranks fifth in total tonnage nationally and serves as the largest military outload port in the world. The Port of Corpus Christi has become the largest exporter of crude oil in the country and ranks sixth overall. The Port of Galveston is the fourth busiest cruise embarkation port in the U.S. and served more than 1.8 million passengers in 2017⁶².

One of the biggest advances for the Texas ports was the expansion of the Panama Canal. The expanded canal allows larger container ships, bulk vessels, liquefied natural gas tankers, and liquefied petroleum gas tankers to move through the canal and to Texas ports. The ability to service these vessels is of significant importance to the ports, and the requirements for them to safely traverse the passages into the ports and berth is of critical importance. The depth of waterways approaching the ports and the depth of the ports themselves is a continuing issue as these vessels can require drafts of up to fifty-five feet when fully loaded. Currently, to enter Texas ports, these vessels are required to lighten their loads due to the shallower port depths.

The Gulf Coast Intracoastal Waterway which is an eleven hundred mile shallow-draft, protected waterway that connects ports from Brownsville to St. Marks, Florida. Texas is home to three-hundred seventy-nine miles of the waterway, and handles sixty-three percent of the total traffic on the waterway. The waterway serves as a vital component for the petrochemical and manufacturing industries in Texas. While the waterway is important to Texas, the federal government and the United States Army Corps of Engineers (USACE) is responsible for its maintenance and operation. It is intended to have a minimum depth of twelve feet, but due to inadequate funding to the USACE, the depth is now only nine feet, forcing barges to lighten their loads to ensure passage.

The source of funding for the operation and maintenance of dredging and widening is typically one-hundred percent federal and comes from a 1/8 of one percent tax on the value of imported cargo. Although the USACE is responsible for the dredging and maintenance of the channels, funding from Congress is infrequent and insufficient to meet the needs. In FY 2017 the Galveston District had \$243 Million of projects and received funding for \$131 Million⁶³.

In 2015 the 84th legislature, recognizing the critical nature of the ports to Texas, authorized \$20 Million from the Texas Mobility Fund for port capital improvement projects. Due to constitutional restrictions, the funds were expended on public roadway projects that enhanced port connectivity. The 85th Legislature approved up to \$20 Million each year of the 2019-2020 biennium in Rider 45 of the General Appropriations Act. The funds were designated to be used to fund roadway projects to improve connectivity. The Port Authority Advisory Board has identified \$32.3 Million in projects for the biennium.

The 85th Legislature also passed Senate Bill 28 which created the Ship Channel Improvement Revolving Fund. The purpose of the fund is to finance qualified projects through a revolving loan program and finance projects to deepen or widen ship channels which meet certain criteria. Currently, there are four projects which meet the qualified criteria. While the fund was created, no funding source was provided to get the program established and operational.

The ports often face significant challenges receiving support for maintaining and expanding the ship channels. In the face of significant rain events which bring silt down the rivers and deposit them in the ship channels as the water moves into the gulf the dredging of the channels is of crucial importance.

This has a significant impact on Texas ports' ability to attract and service the large container ships and crude oil carriers that are now utilizing the expanded Panama Canal. As Tony Bennett from the Texas Association of Manufacturers said, "It's essential for Texas port infrastructure to be able to attract ships of this size to keep up with global competition."⁶⁴

In the aftermath of Hurricane Harvey, many Texas ports experienced significant silting of their channels and berths. The Calhoun Port Authority restricted vessels to a thirty-one feet draft as opposed the normal operations of thirty-six feet. Shippers are faced with the loss of \$25,000 to \$50,000 for each foot of draft lost. This can cause shippers to move from berthing at ports which cannot meet their loaded draft requirements and the corresponding loss of economic value to Texas. The Port of Freeport also noted that had the improvement project been completed prior to

Harvey, they would not have needed to divert deep-draft vessels or light-load crude oil tankers. The Port of Corpus Christi's deepening and widening project would have allowed two-way traffic earlier after the storm and increased their ability to return to normal operations.

At the Port of Houston tens of millions of tons of sediment were deposited in the channel, causing shoaling of up to ten feet in some areas. This will continue to impact the four-hundred ship and barge berths along the channel as the silt moves through the waterway or is pushed through by normal rain events. The port estimates that the economic impact of one foot of shoaling is \$281 Million to the U.S. economy⁶⁵.

The Army Corps of Engineers is also responsible for the Flood Risk Management program which works to reduce overall flood risks⁶⁶. The type of flooding that was experienced during and after Hurricane Harvey could have been mitigated through the development of additional flood control mechanisms. The construction of levees and floodwalls could lessen the dramatic nature of the flooding and reduce the amount of silt that was deposited in the ship channels. This again is a question of funding as the list of available projects is significant for the rivers feeding into Harris and Fort Bend Counties alone.

The Port Authority Advisory Committee through TxDOT is in the process of working with a consultant to develop the statutorily required maritime port mission plan. Within the plan are three distinct reports: the Texas Ports Capital Program Report, the Port Connectivity Report, and the Ship Channel Improvement Project Report. The capital report will provide a summary of the projects, plans or studies that could enhance trade, promote cargo and passenger cruise movement, enhance security, increase port revenues, provide economic benefit to the state, or connect maritime ports to another transportation route. The connectivity report will provide an overview of the road and rail links to Texas ports, determine future needs to improve multi-modal connectivity, and assess funding and financing options. The ship channel report will look at the four improvement projects that have been approved by Congress, as well as those projects that are currently in the feasibility study phase. This mission plan will be submitted to the Governor, Lt. Governor and the Speaker of the House on December 1, 2018⁶⁷.

Projects to widen and deepen existing ship channels and the Gulf Intracoastal Waterway also face challenges due to the lack of direct federal or state requirements to identify underwater infrastructure such as pipelines and cables, or requiring contractors working in these waterways to verify the locations of these facilities. This has led to incidents such as one near Port O'Connor, Texas in April of 2018 when a dredger working on the intracoastal waterway struck a gas pipeline causing an explosion and the closing of the GIWW and Matagorda Ship Channel.

BORDER PORTS OF ENTRY

The one-thousand two-hundred fifty-five mile border that Texas shares with Mexico is one of critical importance to the economy of Texas and the nation. Twenty-eight vehicle-crossing points, including fourteen for commercial vehicles, and four railroad crossings serve as key commerce and tourism links between the two countries. These crossing points handled more 3.8 million commercial vehicles representing \$318 Billion in trade between Texas and Mexico in 2016. This represents an increase of more than seventy-one percent from 2005.

The increase in trade has resulted in a predictable increase in the volumes of truck traffic between the two countries. As the volume has increased to seventy-three million tons in 2016, the wait times at the border inspection stations have risen accordingly. And, these volumes are only expected to rise further with estimates that by 2045 the tonnage volume will reach two-hundred eleven million tons⁶⁸.

To move across the border from Mexico into Texas, a truck must pass through U.S. Customs and Border Protection booth at which point they may be sent forward or diverted to a secondary inspection. During the inspection, the CBP may also have their inspection augmented by other federal agencies such as the U.S. Department of Agriculture, the Food and Drug Administration, and others. During this process, federal officials can inspect the truck and trailer, the contents of the load, and the documentation regarding the vehicle and the load. The purpose of the inspection is to prevent the transportation of terrorists, weapons, illegal substances, trafficked individuals, and to ensure that the vehicle and trailer meet U.S. Department of Transportation requirements. After this inspection, which generally takes a few minutes, but may take up to an hour, the truck is then routed to the Texas Department of Public Safety Border Safety Inspection Facility.

Once the vehicle arrives at the DPS facility, it is weighed and visually inspected while the cargo manifest and immigration documents are reviewed. Once this is accepted, the vehicle is allowed to proceed into the country. However, if the vehicle is not in appropriate working order, is overweight, or the documentation is not acceptable, the vehicle proceeds to a secondary inspection facility. The secondary DPS inspection station conducts more thorough inspections of engines, brake systems, axles and other evaluations to determine operational capability. Vehicles can be removed due to overweight status, issues related to the driver such as intoxication or immigration documentation problems, or the vehicle not meeting safety standards.

The CBP testified that the DPS facility at the Colombia Import lot adjudicates close to 100% of the traffic that leaves the CBP facility. This is a high variation from the number of DPS inspections at the World Trade Bridge (WTB). At the WTB DPS does not have a permanent inspection facility and conducts intermittent inspections throughout the week. The consequence is that shippers are incited to use the WTB rather than the Colombia checkpoint, increasing the volume at the WTB.

The increase in tonnage coming across has led to significant wait times which impede the flow of commerce and reduce the efficiency of operations⁶⁹. The hours of operation and staffing of the border facilities has also been argued to create additional limitations on the amount of traffic that can move through the crossings. However, CBP has indicated that expanded hours, starting at 7:00 a.m., have yielded limited success as the shippers choose not to begin movement of merchandise across the border until between 9:00 and 10:00 with the majority of those before that time being empty trailers. In Pharr the early hours yield about one-hundred trucks per hour which does not increase to two-hundred per hour until after 9:00⁷⁰.

The current one-time crossing fee for commercial vehicles is \$13.20, which may be paid online or at the port, and the annual user fee is \$404. Most carriers purchase the annual permit and many carriers choose to purchase the online one-time crossing pass. However, there are significant numbers of shippers that choose to pay the one-time fee at the port. This creates additional congestion and diverts personnel which could be used for other tasks.

The inspection process at the border crossings has been continually reassessed since the inception of NAFTA. California and Arizona inspection stations are co-located, allowing for the inspections to occur simultaneously. Texas is the only state which does not share facilities with the CBP. "After speaking to industry representatives, researchers and DPS officials the consensus is that the arrangement is inefficient and adds to overall crossing times. " However, in 2014 Captain Jessie Mendez, the head of the Border Truck Safety Inspection Program at the time also noted that those states have also expressed displeasure with the joint structure, and compensation variations between DPS and federal inspectors can cause friction⁷¹.

TxDOT has developed the Texas Freight Mobility Plan with the most recent iteration in 2017. Within the plan, TxDOT has identified more than two-hundred fifty projects costing \$3.56 Billion related to the movement of freight in the districts around the border ports of entry. Of these projects, TxDOT has planned forty-six projects costing \$415 Million in the period between 2016-2020. These projects should lead to increased traffic flow both to and from the border ports of entry and reduce the congestion due to truck traffic in these areas. The infrastructure necessary to alleviate current congestion and prepare for the continuing increased traffic through the ports remains a critical element of improved commerce across the border⁷².

Committee Recommendations:

- 1) The Ship Channel Improvement Revolving Fund should be funded to provide necessary resources for the deepening and widening of qualified ship channels at Texas Ports.
- 2) The Railroad Commission, the General Land Office and the Port Authority Advisory Committee should work with stakeholders and the appropriate federal agencies to make a recommendation to the legislature regarding the inclusion of underwater infrastructure in the Texas Underground Facility Notification program or a similar program.
- 3) The Department of Public Safety should continue efforts to work collaboratively with U.S. Customs and Border Protection to develop a revised inspection process which allows more efficient overall inspections and reduces wait times at the border and make such recommendations to the legislature by October 2020.
- 4) TxDOT should increase the prioritization of TxDOT funding that would be dedicated to the improved freight corridors proximate to the border ports of entry.

Charge 8: *Evaluate the impact energy exploration and production have on state and county roads and make recommendations on how to improve road quality in areas impacted by these activities. (Joint charge with the House Committee on Energy Resources)*

Committee Action:

The Transportation Committee received invited testimony on this charge on April 17, 2018. The committee heard testimony from the Texas Department of Transportation, Dewitt County, Victoria County, Karnes County, the Texas Oil and Gas Association, the Texas Independent Producers and Royalty Owners, the Association of Energy Service Companies, and the Permian Basin Roadway Safety Coalition.

Background:

Texas has been one of the critical areas of oil and gas production in the United States since the start of the 20th Century. The Comptroller reports that from 1935 to 2017, more than 62 Billion barrels of oil have been produced from Texas wells. This averages out to more than 763 million barrels produced per year during that period⁷³. While there have been many cycles of boom and bust in the Texas oil and gas industry, the most recent five year period from 2013 to 2017 produced an average of almost 922 million barrels of oil per year from an average of 186,000 producing wells.

Texas places a charge on oil production at a rate of 4.6 percent. In 2017 this generated more than \$2 Billion for the state. These funds were appropriated to three separate funds. 37.5 of the funds are distributed to both the State Highway Fund and the Economic Stabilization Fund. The remaining 25 percent is distributed to the Foundation School Program. This is a significant source of revenue for the state, but is as variable as the price of oil.

The most recent oil production is based predominantly on the use of hydraulic fracturing which uses high-pressure injection of water containing sand into a well to create fractures in the rock formations, allowing oil and gas to flow more readily. This fracking process requires significant resources in order to bring a well to production. A recent study found that each well in the Barnett Shale, Eagle Ford Shale, and Permian Basin required between nine-hundred eighty-eight and one-thousand seven-hundred eight truck loads to develop a well⁷⁴. Once the well is in production, it will require between sixty-six and four-hundred eighteen additional truck loads per year for the life of the well. In the event that the well requires re-fracturing, it may require between eight-hundred one and fifteen-hundred twenty-one additional truck loads.

Much of the development and production in the Barnett Shale, Eagle Ford Shale and the Permian Basin are conducted in locations that are accessible only through the county road systems. Most county roads were constructed with the expected agricultural and local traffic demands for a twenty year period. The engineers that design these roads base their efforts on historical trends

and project future demands from past use. This can lead to significant road degradation issues if the estimates are dramatically lower than the actual future usage. It is also very difficult for TxDOT and counties to estimate future infrastructure demand in the energy sector as the variability of the industry based upon the price of oil and gas results in significant traffic variation. In 2018 the Permian Basin recorded four-hundred forty-four rigs operating compared to one-hundred thirteen in 2017. The Eagle Ford Shale has seventy-three rigs in 2018 compared to one in 2017⁷⁵. There is also significant variation in the level of traffic as road use moves from development to production⁷⁶.

Roads that have been designed to handle regular light vehicle traffic and seasonal truck traffic have not been able to withstand the much more frequent and heavier load necessitated by the oil shale developments. An average personal vehicle weighs approximately four thousand pounds. The heaviest non-overweight eighteen wheel truck weighs eighty-thousand pounds. The simple mathematics suggests that the truck would have an impact twenty times greater than the personal vehicle. However, studies have shown that the actual impact to the road is based upon the weight to axel ratio. When this is taken into consideration, the overall impact to the road for the truck is eighteen thousand nine times greater than the impact from the four thousand pound vehicle. And overweight permit trucks that carry one-hundred thousand pounds have an impact that is forty-two thousand seven-hundred fifty-three times greater than the personal vehicle. If one assumes that the development of a fracking well requires one-thousand two hundred trucks weighing eighty-thousand pounds, it is the equivalent of more than twenty-one million four-thousand pound vehicles impacting the road⁷⁷.

As a result of the development of these areas for fracking, counties that have been impacted are seeing dramatic degradation of their roads and a significant negative impact on local traffic, as well as the development of the fields. Studies have estimated that the impact on secondary state highways and local roads between \$1.5 Billion and \$2.0 Billion per year. It has also been estimated that additional costs of between \$1.5 Billion and \$3.5 Billion per year, due to vehicle damage and lower operating speeds, has also been driven by road damage. In terms of individual impacts due to these conditions, the frequency of traffic accidents and fatalities have risen due to increased traffic volume in these areas. The Permian Basin currently has approximately two percent of the state's population, but has recorded ten percent of its traffic fatalities⁷⁸.

Since the fracking boom began, the Texas Department of Transportation has allocated significant resources to the secondary state highway systems in the oil and gas development areas. Of the thirty-seven and a half percent of the Oil and Gas Severance taxes that are directed to the State Highway fund, fifteen percent is statutorily allocated to road construction and maintenance related to the oil and gas activities⁷⁹. Under its Unified Transportation Program, TxDOT currently has \$2.1 Billion allocated to the energy sector state highways in the next ten years, or an average of \$210 Million per year. TxDOT continues to work with the oil and gas industry to prioritize projects in line with current transportation needs⁸⁰.

The 83rd Legislature in 2013 sought through Senate Bill 1747 to address the funding of county road improvements. SB 1747 created the Transportation Infrastructure Fund (TIF) which was funded by the legislature. These funds were to be used in counties which had experienced significant road degradation due to the energy sector traffic. Counties were required to provide

matching funds of either 10% (economically disadvantaged counties) or 20% from the remainder. The bill also created County Energy Transportation Reinvestment Zones (CETRZ) which allowed counties to determine a tax increment for areas affected by Energy Sector activities. Any tax increment was to be expended for matching funds to the (TIF) or for transportation infrastructure projects.

Since that time, the state has appropriated and counties have expended or encumbered to spend approximately \$224.5 Million in state funds on these energy road projects. However, no new state funding has been provided to this mechanism. And, after issues arose regarding the constitutionality of the CETRZ through Attorney General's Opinion KP-004 in 2015 which argues that under the Texas Constitution, Article VIII, Section 1-g, counties are not expressly allowed to establish Tax increments for the purposes of a reinvestment zone, the CETRZ was repealed by the 85th Legislature in SB 1305. The TIF fund was not included in the repeal, and remains a viable mechanism for the distribution of funding to the counties impacted by the oil shale development and production.

During the 85th Legislative Session, two other bills were proposed that could have provided additional revenue to the counties affected. HB 3614 by Chairman Morrison sought to change the ad valorem property tax methodology. Current law includes the increase in property value attributable to oil and gas well production in the first year in the county ad valorem tax rate calculation in contrast to the manner in which increases in property value for other improvements are excluded. This bill would treat the increase in property value due to production of oil or gas from wells like other property improvements and exclude it from the county ad valorem tax rate calculation in the first year of production, providing an additional source of revenue for counties to address degrading county roads.

Had HB 4231 by Representative White passed, it would have created a mechanism to take two percent of the revenue from oil and gas production taxes and allocated it proportionally to the counties based upon the amount of taxes generated by wells in those counties. This would have generated approximately \$66 Million to \$76 Million per year in additional support for the counties.

There have also been efforts in Texas and other states to increase the use of both rail lines and pipelines to transport both material for well development, such as frac sand, pipe, and injection water, and oil and gas from producing wells⁸¹. Rail lines already link to refineries and fracking sand mines, but the expansion of loading and unloading transfer points is necessary to improve this application. Railroads can also expand and contract operations quickly based upon the needs of the oil and gas industry. Texas currently has more than ten-thousand five hundred miles, making it the state with the largest number of miles⁸².

Texas also has more than four-hundred sixty thousand miles of pipelines, an increase of almost sixty thousand miles since 2012. These include both interstate and intrastate lines. Pipelines are used for many different purposes related to the oil and gas industry, including small diameter gathering lines from the well to a distribution point, crude oil transmission lines from producing areas to refineries, refined product lines, highly volatile liquid lines, carbon dioxide lines, and water lines for injection wells and recovered water. The oil and gas industry, including the

pipeline operators, continue to expand the development of additional capacity for both the transmission of oil and gas from wells but also to bring necessary water to the wells.

TxDOT has the authority to lease right-of-way to pipelines and has done so for more than two-hundred thirty-four separate leases for pipelines. The state has also authorized rural rail transportation districts (RRTDs) which are developed at the county level. RRTDs may carry out all activities, including bond issuance, necessary to establish and maintain railroad and intermodal facilities. While both pipelines and rail lines offer substantial opportunities for reducing the number of oil and gas-related vehicles on Texas roads, the "last-mile" of roads from the well location to the rail line or pipeline will still be predominantly on county roads⁸³.

Committee Recommendations:

- 1) A reliable funding source to provide transportation infrastructure funding to counties impacted by the energy sector traffic should be designated.
- 2) DPS should increase enforcement of oversize/overweight permits on the state highway system in the areas impacted by energy sector traffic.
- 3) The Railroad Commission should increase its efforts to encourage expansion of pipeline capacity in the oil and gas producing regions of the state to reduce the reliance on surface transportation infrastructure.

Charge 9: *Monitor the agencies and programs under the Committee’s jurisdiction and oversee the implementation of relevant legislation passed by the 85th Legislature. In conducting this oversight, the committee will also specifically monitor the implementation of the TxDOT Sunset legislation and related management actions.*

Committee Action:

The Committee received testimony on February 7, 2017 regarding implementation of legislation impacting the Texas Department of Transportation and the Texas Department of Motor Vehicles from the following entities: Texas Department of Transportation, the Texas Department of Motor Vehicles, and the Texas Sunset Commission. Written testimony was also received.

Background:

TEXAS DEPARTMENT OF TRANSPORTATION

The Texas Department of Transportation (TxDOT) provided an outline of the actions that they have taken to implement legislation from the 85th Legislature. As this included SB 312 by Nichols, the TxDOT Sunset Bill, seventy individual pieces of legislation, and significant riders in SB 1, there were numerous issues to be addressed.

SUNSET RECENT HISTORY

TxDOT was under Sunset Review in 2008-09 for the 81st Legislature at which time the Sunset bill did not pass, and the legislature continued TxDOT for another two year period. The 82nd Legislature in 2010-11 received recommendations from the Sunset Commission, passed the TxDOT Sunset legislation in Senate Bill 1420 and continued the agency for another four years. This was intended to allow an opportunity in the 85th Legislature to review the goals designated in the Sunset Reviews from both 2009 and 2011, assess the progress being made by TxDOT, and designate additional changes as necessary.

Senate Bill 1420 focused on the transparency, accountability and reliability of TxDOT. This included a long-range planning process that integrates all planning efforts into a singly 24-year plan with specific long-term goals. SB 1420 also established the Unified Transportation Program which provided a ten-year plan to develop and authorize construction of transportation projects within specific, defined categories of funding priorities.

TxDOT was also directed to increase public involvement within the decision-making process for the development of planning and projects. The legislature extended the authority of TxDOT to enter into a per year maximum of three design-build contracts for projects costing \$50 Million or more through 2015 and added additional requirements on private entities participation. Comprehensive development agreements (CDAs) were also authorized for specific TxDOT

projects listed in statute as were CDAs for certain Regional Mobility Authorities. These projects were required to have the appropriate environmental clearance by September of 2013 with the exception of Highway 99⁸⁴.

CURRENT SUNSET ACTIONS

The 85th Legislature passed the TxDOT Sunset Bill SB 312 by Nichols. Within the bill the legislature has directed TxDOT to take numerous actions that will impact their operations in the coming years. The following list of issues addressed in the Sunset Bill provides the respective action taken by TxDOT or the Texas Transportation Commission.

- TxDOT is required to include clearly defined system strategies and performance measures within the statewide long-range plan.
 - Rules Adopted July 2018
- TxDOT is required to incorporate transportation system strategies, goals and measurable targets in each plan or policy effort.
 - Rules Adopted July 2018
- TxDOT is required to conduct a comprehensive analysis of the effect of allocations on accomplishing the goals in the long-range transportation plan and publish the methodology and results on its website and to stakeholders.
 - Part of the Uniform Transportation Program annual development process.
- TxDOT required to develop a plan and rules to increase public involvement and transparency in the Unified Transportation Program and document any changes on the website and in a public meeting.
 - Rules adopted July 2018 and part of the Uniform Transportation Program (UTP) annual development process
- TxDOT is required to prioritize and approve all projects in the UTP before projects may be funded and requires it to prioritize the projects based on its potential toward achieving transportation goals.
 - Rules Adopted August 2018
 - 2019 UTP adopted August 2018
- TxDOT is required to develop performance measures for key steps in the project development process for the districts and track whether the districts are meeting the appropriate mix of projects. It is also required to provide stakeholder input into the planning, review and monitoring process.
 - Rules adopted July 2018 and part of the UTP annual development process
- The Commission is required to adopt rules related to the alignment of state and federal funding forecasts and project recommendation criteria for TxDOT and Metropolitan Planning Organizations. It also requires rules to govern the timeline and review process for the ten-year transportation plans and stakeholder involvement in the development.
 - Rules Adopted July 2018 and part of the UTP annual development process
- TxDOT required to update its long-term passenger rail plan every five years and includes additional analysis regarding proposed passenger rail lines on highway issues.
 - Management Action Completed by TxDOT

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- TxDOT required to publish on its website transportation system strategies, goals, measurable targets and performance measures, including the methodology used to determine progress.
 - Found in 2019 UTP.
 - TxDOT required to publish the statutorily-required statewide transportation progress report including analysis of funding decisions and project selections.
 - Found in 2019 UTP
 - TxDOT required to conduct a comprehensive review of the project information reporting system (Project Tracker) and develop a plan for improvement with internal and external users.
 - Rules adopted July 2018 and Project Tracker was updated during the Summer of 2018.
 - Law Enforcement are required to submit crash reports to TxDOT electronically.
 - Rules Adopted September 2018
 - TxDOT required to improve the development of its long-range plan for aircraft by including additional measures.
 - TxDOT revised and published the 2018 State Passenger Aircraft Fleet Replacement Plan in August 2018.
 - TxDOT is required to develop new contract provisions for low-bid construction, maintenance and building contracts to address unsatisfactory progress on the part of contractors and establish by rule the circumstances under which a particular contract remedy or sanction would be applied. The bill provides specific direction regarding the calculation and imposition of liquidated damages and requires TxDOT adopt additional contractor penalties for delayed highway projects. The bill also requires TxDOT to consider the number of work days in the contract and factors beyond the contractor's control before assessing a contractor penalty.
 - Rules Adopted August 2018
 - TxDOT is required to begin evaluating contractors and establish an appeal process for contractors who believe their ratings are unfair.
 - Rules Adopted August 2018
 - TxDOT is prohibited from awarding contracts unless the contractor participates in E-Verify.
 - TxDOT participates in E-Verify
 - TxDOT required to have a public hearing if a project is substantially changed.
 - Rules Adopted August 2018
 - TxDOT required to communicate with public officials in local municipalities when highway closures would be during periods of high commercial activity or increased travel. The provision also requires contracts to include specific days when the highway may not be closed.
 - Policy memo sent to TxDOT districts/
 - TxDOT must publish on its website semiannually the list of all completed highway projects by district and whether it was completed on schedule, ahead of schedule or behind schedule as well as whether it was on budget, over budget, or under budget.
 - Reports posted on TxDOT Construction Division website.

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- After September 1, 2017 TxDOT is required to be repaid for any assistance to a toll facility and prohibits toll equity grants. Requires the funds repaid to be used in the district from which the toll revenue was received.
 - Rules Adopted April 2018.
 - TxDOT is prohibited from adding a tolling element to any currently operating non-tolled HOV lane unless it meets the requirements of Section 228.201 of the Texas Transportation Code. It also prohibits the consideration of frontage roads when calculating the number of non-tolled lanes to be maintained under Section 228.201(a)(3).
 - Policy memo sent to TxDOT districts.
 - TxDOT prohibited from operating SH 255 in Webb County as a toll project.
 - Tolls have ceased.
 - TxDOT required to operate Cesar Chavez Freeway in El Paso as part of the state highway system and without tolls if the Camino Real Regional Mobility Authority Approves.
 - TxDOT waiting on CCRMA to approve the removal of the tolls.
 - TxDOT is required to revise its toll collection, enforcement and pay-by-mail processes. It reduces the total administrative fee for unpaid invoices with a maximum of \$6 per month or \$48 per year. It also limits the misdemeanor charge to one per year and allows electronic review of invoices if selected by the consumer.
 - Rules Adopted January 2018
 - TxDOT is allowed to approve outdoor signs up to 85 feet that existed before March 1, 2017 and allows the rebuilding of the sign at that height.
 - Rules Adopted February 2018

GENERAL APPROPRIATIONS ACT (SB 1)

Senate Bill 1 provided TxDOT with an appropriation of \$26.6 Billion which was an increase of more than \$3.5 Billion from the 2016-17 biennium. This included an increase of \$2.1 Billion in federal funding, and a decrease in bond proceeds of \$1.4 Billion. The largest increase was the addition of \$2.9 Billion in Proposition 7 funds of which \$613 Million was appropriated to debt service on Proposition 12 bonds.

- Rider 44 provides up to \$30 Million in authority to purchase land or other real property for the construction of buildings and facilities.
 - TxDOT is moving forward with its plans to consolidate staff into a central facility which will be developed in the coming years.
- Rider 45 directs TxDOT to spend up to \$20 Million per year on public roadway projects to improve port connectivity.
 - The Port Authority Advisory Committee has identified the projects to be funded, and TxDOT is moving forward with funding as needed.

OTHER KEY LEGISLATION

- HB 62 by Representative Craddick prohibits texting while driving and requires TxDOT to post notification signs on interstates and U.S. highways entering the state.
 - Management Action Completed by TxDOT
- SB 1877 by Senator Perry allows TxDOT to send notice to contractors by email as well

as traditional mail resulting in savings on printing and postage.

- Management Action Completed by TxDOT
- SB 1138 by Whitmire created the *Blue Alert* system to aid in the capture of suspects who have injured or killed a law enforcement officer through highway dynamic messaging signs.
 - Management Action Completed by TxDOT
- HB 2639 by Chairman Pickett establishes a *Silver Alert* to notify drivers of a search for a missing person with Alzheimer's through highway dynamic messaging signs.
 - Management Action Completed by TxDOT
- HB 3087 by Chairman Morrison requires TxDOT to establish standard lighting for highway maintenance vehicles and requires other entities to follow TxDOT standards.
 - Management Action Completed by TxDOT
- HB 1140 by Representative Anderson creates a new funding category for public transportation grants by splitting the current urbanized area category into two distinct units based upon size.
 - Management Action Completed by TxDOT
- SB 977 by Senator Schwertner and Rider 47 in the General Appropriations Act prohibits the use of state funds by TxDOT on private high-speed rail with limited exceptions based upon statutory obligations.
 - Management Action Completed by TxDOT - Will Require Ongoing Reporting
- SB 28 by Senator Creighton created the Ship Channel Improvement Revolving Fund for the deepening and widening of port access. It also increased the Port Authority Advisory committee from seven to nine members.
 - Management Action Completed by TxDOT - pending final review by TxDOT Compliance Division.
- SB 1523 by Senator Nichols designates TxDOT as the agency responsible for safety oversight of public transit rail systems which makes the state compliant with federal law.
 - Management Action Completed by TxDOT - pending final review by TxDOT Compliance Division.
- SB 1522 by Senator Nichols allows the Texas Transportation Commission to determine the number of members on the Aviation Advisory Committee and requires aviation experience for a majority of the members.
 - Management Action Completed by TxDOT - Rules Adopted July 2018
- HB 2646 by Representative Martinez allows TxDOT to acquire property for a project prior to the environmental clearance, excepting eminent domain.
 - Management Action Completed by TxDOT
- SB 2006 by Senator Watson continued the state's ability to regulate commercial signs after previous portions were challenged constitutionally in court.
 - Management Action Completed by TxDOT - Rules Adopted February 2018
- SB 1349 by Senator Watson allows TxDOT to transfer the Camp Hubbard property to the TxDOT.
 - TxDOT is moving forward with its plans to consolidate staff into a central facility which will be developed in the coming years.

TEXAS DEPARTMENT OF MOTOR VEHICLES

The Department of Motor Vehicles (TxDMV) is implementing several bills from the 85th Legislative Session. Key bills will be noted and the actions taken by the department will be included below the bill information.

- SB 1349 by Senator Watson granted TxDMV the authority to own and control real property. This effort is a coordinated one with TxDOT who is transferring the portion of Camp Hubbard, where TxDMV has its headquarters, to TxDMV.
 - TxDMV is working with TxDOT on a timeline for the transfer which is dependent upon TxDOT's ability to consolidate its personnel. This process could take up to five years.
- HB 2070 by Representative Smithee provides stronger protection for consumers by revising the vehicle "Lemon Law" and remove inconsistency in the code.
 - TxDMV has completed all necessary actions.
- HB 1790 by Chairman Pickett allows the replacement of a handicap placard that is seized by law enforcement through a simple application process rather than a previously required hearing.
 - Rules Adopted on February 8, 2018.
- HB 3254 by Chairman Phillips revised TxDMV authority with regard to motor carrier operations. The main change was to improve enforcement authority against "chameleon carriers" which attempt to avoid enforcement actions by changing the name of the company.
 - TxDMV is continuing to implement this legislation.
- Senate Bill 1524 and Senate Bill 1383 which address overweight vehicles has been previously discussed in the oversize/overweight section.
 - Rules adopted and fully implemented
- HB 2319 by Representative Paddie provides for an oversize permit for sealed intermodal shipping container on a limited portion of highway in Bowie County.
 - Fully implemented
- SB 1062 by Senator Perry permits electronic signatures on title transfer-related documents as well as electronic lien implementation.
 - Fully implemented
- HB 1247 by Chairman Pickett and SB 1501 by Senator Zaffirini changed the requirements by which a vehicle storage facility may foreclose its storage lien.
 - Both bills fully implemented
- HB 3131 by Representative Martinez provided additional transparency to the posting of certificates of authority to send vehicles to a demolisher.
 - Fully implemented
- SB 2075 by Senator Rodriguez related to the registration of motor vehicles. It allows for the online receipt from renewal to serve as proof of registration for thirty-one days.
 - Fully implemented
- HB 2663 by Chairman Pickett provides for the replacement of a lost registration sticker by counties.
 - Fully implemented

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- HB 1793 by Chairman Pickett allows a commercial motor vehicle registered in this state to be registered without a state inspection sticker if they have a valid inspection in compliance with federal standards.
 - Fully implemented.
 - SB 2076 by Senator Rodriguez requires the department to study with DPS the efficiency and necessity of the titling, registration, and inspection of vehicles in the state and determine if any portions can be eliminated.
 - The report is being prepared and will be complete by the December 31, 2018 deadline.
 - HB 1959 by Chairman Thompson required a study of alternative technologies for the registration of commercial vehicles and report the results by December 1, 2021. It also authorized TxDMV to initiate a pilot program to further study the technologies.
 - The study was originally specified to be completed by December of 2021, but due to legislative interest and the Sunset process in progress, the report will be completed by February 1, 2019.

Committee Recommendations:

- 1) TxDOT should report on its progress regarding the actions taken to meet the requirements in SB 312 to the House Committee on Transportation in the 86th Legislative Session
- 2) TxDOT should report on its progress regarding the actions taken to meet the requirements in HB 20 from the 84th Legislative Session to the House Committee on Transportation in the 86th Legislative Session.
- 3) TxDMV studies related to the titling, registration and inspection of vehicles should be presented to the House Committee on Transportation as soon as they are prepared to address potential efficiencies that may be gained.

ENDNOTES

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**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 18-067

**AUTHORIZE THE EXECUTIVE DIRECTOR TO IMPLEMENT
CERTAIN MEASURES OUTLINED IN THE 2019-2023 AUSTIN-ROUND ROCK METROPOLITAN
STATISTICAL AREA REGIONAL AIR QUALITY PLAN**

WHEREAS, the Austin-Round Rock Metropolitan Statistical Area (MSA), which consists of Bastrop, Caldwell, Hays, Travis, and Williamson Counties, has air pollution levels that are close to exceeding the federal standards for ground-level ozone (O₃); and

WHEREAS, the U.S. Environmental Protection Agency (EPA) sets federal air quality standards at levels it considers necessary to protect human health and public welfare from harm; and

WHEREAS, the Austin-Round Rock MSA's continued compliance with federal air quality standards is important to ensure public health, protect economic growth, and address the region's transportation needs;

WHEREAS, the Central Texas Clean Air Coalition (CAC), of which the Central Texas Regional Mobility Authority is a supporting member, is charged with the development and implementation of a clean air plan to maintain compliance with federal air quality standards; and

WHEREAS, the region's current air quality plan is set to expire at the end of 2018; and

WHEREAS, the CAC has requested that the Central Texas Regional Mobility Authority take action to formally participate in a new regional air quality plan for 2019-2023; and

WHEREAS, the goals of the new regional air quality plan are to: 1) maximize the probability of compliance with federal air quality standards, and 2) minimize health and environmental impacts associated with regional air pollution; and

WHEREAS, CAC has provided an emission reduction measure guide to assist entities to identify opportunities to take action to improve air quality; and

WHEREAS, the measures identified by Mobility Authority staff to help achieve the goals of the new air quality plan are attached hereto as Exhibit A; and


WHEREAS, controlling and reducing emissions and improving public awareness about air quality are critical to supporting the goals of the new regional air quality plan.

NOW, THEREFORE, BE IT RESOLVED that the Board endorses the goals of the new regional air quality plan and authorizes the Executive Director to implement the measures outlined in Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 11th day of December 2018.

Submitted and reviewed by:

Approved:



Geoff Petrov, General Counsel



Ray A. Wilkerson
Chairman, Board of Directors

Exhibit A

Exhibit A

The Central Texas Regional Mobility Authority commits to implement the following measures recommended by the Capital Area Council of Governments (CAPGOG):

Tier-1 Measures

- Promote awareness of air quality and reduce residents' exposure when air pollution levels are high:
 - Educate employees about regional air quality.
 - Encourage employees to sign up for daily air quality forecasts and Ozone Action Day alerts.
- Reduce air pollution from the use of personal vehicles, including:
 - Encourage energy conservation.
 - Encourage employees to take low-emission modes of transportation, such as carpooling, vanpooling, transit, biking, and walking.
 - Encourage employees to telecommute at least once a week.
 - Encourage flexible work schedules to minimize ozone emissions during peak traffic period.
- Reduce air pollution from the use of fleet/commercial vehicles and equipment, including:
 - Educate fleet users on driving and equipment operation practices that reduce nitrogen oxide emissions.

Tier-2 Measures

- Measures to reduce air pollution from the use of fleet/commercial vehicles and equipment, particularly those associated with new roadway construction and ongoing operations, including:
 - Continue to monitor "green" construction and contracting policies to lower nitrogen oxide and ozone emissions.

Other Measures:

- Pursue studies to quantify the emissions and fuel consumption impacts of CTRMA facilities and mode shifts to inform decision on project implementation and operations.

The Executive Director shall implement these measures in support of the new regional air quality plan and will report on the implementation of these and other measures supportive of the region's air quality goals annually to CAPCOG and the Central Texas Regional Mobility Authority Board of Directors.



Central Texas Clean Air Coalition of CAPCOG

6800 Burluson Road, Building 310, Suite 165, Austin, Texas 78744

(p) 512-916-6000 (f) 512-916-6001

www.capcog.org

September 12, 2018

Mike Heiligenstein, Executive Director
Central Texas Regional Mobility Authority (CTRMA)
3300 N Interstate 35 Frontage Rd. #300
Austin, TX. 78705

Dear Mr. Heiligenstein,

The Central Texas Clean Air Coalition (CAC) is requesting that CTRMA participate in a new regional 2019-2023 air quality plan for the five-County Austin-Round Rock Metropolitan Statistical Area (MSA) that consists of Bastrop, Caldwell, Hays, Travis, and Williamson Counties. The region's current air quality plan is set to expire at the end of 2018, and as a supporting member of the CAC, your organization's continued participation in the region's efforts to maintain and improve air quality is important.

The region's prior air quality plans have been critical to the region's ability to narrowly avoid being designated a "nonattainment" area for federal ground-level ozone (O₃) standards, but the Austin-Round Rock MSA's O₃ levels are still often high enough to cause health problems for significant portions of the population. Through the end of 2017, our region's O₃ levels were only 1% below the maximum allowable under federal standards, and our O₃ levels in 2017 and 2018 suggest that we still have a significant risk of violating federal standards if we do not remain vigilant. Apart from the health consequences of having air pollution levels above levels considered safe, violating federal air quality standards would put the region at risk of being designated "nonattainment," which has significant impacts on economic development and transportation planning. CAPCOG previously estimated that a nonattainment designation could cost the region as much as \$24 - \$42 billion in lost economic growth over the next three decades, and being designated nonattainment results in more than 20 years of regulatory consequences even if the region is able to come back into compliance the very next year.

The goals of the new regional air quality plan are to: 1) maximize the chances of compliance with federal air quality standards, and 2) otherwise minimize health and environmental impacts of regional air pollution. Your organization's participation in the new regional air quality plan will be important to achieving these goals. With this in mind, we are asking all existing CAC members including CTRMA to adopt a resolution or otherwise communicate to CAPCOG their intent to participate in the new air quality plan and identify what air quality measures CTRMA expects to implement in support of the plan by the end of September 2018. Enclosed are resources to help your organization as it considers its options, including sample resolutions, an emission reduction measure guide, and an explanation of expected reporting.

Chair
Judge Sarah Eckhardt
Travis County

Vice Chair
Commissioner Ray Whisenant
Hays County

Council Member Ann Kitchen
City of Austin

Council Member Lyle Nelson
City of Bastrop

Commissioner Mel Hamner
Bastrop County

Mayor Monty Parker
City of Bee Cave

Council Member Evan Ture
City of Bee Cave

Commissioner Terry Wright
Caldwell County

Council Member Heather Jeffs
City of Cedar Park

Mayor Pro Tem Jessica Bega
City of Elgin

Council Member Anna Eby
City of Georgetown

Mayor Doug Gaul
City of Hutto

Mayor Pro Tem Ron Massa
City of Lakeway

Council Member Andrea Navarrette
City of Leander

Mayor Lew White
City of Lockhart

Mayor Mike Hendricks
City of Luling

Council Member Mike Heath
City of Pflugerville

Council Member Tammy Young
City of Round Rock

Council Member Jane Hughson
City of San Marcos

Commissioner Terry Cook
Williamson County

Please contact Andrew Hoekzema, CAPCOG Director of Regional Services at ahoekzema@capcog.org or (512) 916-6043 for any questions or if you'd like a member of the CAPCOG staff to make a presentation to CTRMA's board on this topic. We also encourage you to discuss this request with your CAC Advisory Committee (CACAC) representative, Jeff Dailey. Please notify Andrew Hoekzema by September 28 if the CAC should be able to count on CTRMA's participation in the new regional air quality plan. Please provide an approved copy of any resolution or a signed letter, including identification of any air quality measures that CTRMA intends to implement within the 2019-2023 period covered by the plan. If CTRMA is not able to complete this process by the end of September, please provide notification to Andrew Hoekzema of whether it intends to consider this request at a future board meeting and if so, what date the board would be expected to take action.

Sincerely,



Sarah Eckhardt
Travis County Judge, CAC Chair



Ray Whisenant
Hays County Commissioner, CAC Vice-Chair

CC: CTRMA CACAC Representative - Jeff Dailey

Enclosures:

1. Emission Reduction Measure Guide
2. Explanation of Annual Air Quality Reporting
3. Sample Resolution

Regional Air Pollution Measure Guide for the Austin-Round Rock MSA 2019-2023 Air Quality Plan

August 31, 2018

1 General Information on Regional Air Pollution Measures

1.1 Purpose of this Guide

This purpose of this guide is to provide members of the Central Texas Clean Air Coalition with guidance on the selection and implementation of air pollution measures in support of the Austin-Round Rock MSA's 2019-2023 Air Quality Plan, the goals of which are to: 1) maximize the probability of compliance with the National Ambient Air Quality Standards (NAAQS), and 2) to otherwise minimize the health and environmental impacts of regional air pollution.

1.2 Primary Focus on NO_x Emissions

Since the air pollutant that the region is at most risk for violating a NAAQS is ground-level ozone (O₃), and NO_x emissions are by far the greatest contributor to ground-level O₃ levels in the region, this guide focuses primarily on measures to reduce NO_x emissions. However, while the primary driver for reducing NO_x emissions is the impact of NO_x on O₃, reducing NO_x emissions also helps reduce ambient nitrogen dioxide (NO₂) concentrations, fine particulate matter (PM_{2.5}) concentrations, and regional haze conditions in national parks. Ground-level O₃ is also a greenhouse gas, so reductions in ground-level O₃ can also help reduce the impact of climate change. And measures taken to reduce NO_x emissions often also reduce emissions of a host of other pollutants, including direct emissions of other criteria pollutants (PM_{2.5}, carbon monoxide (CO), sulfur dioxide (SO₂), and volatile organic compounds (VOC)) and greenhouse gases (carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and various fluorinated gases). Implementing these measures can also have various other environmental, economic, and social benefits, such as reducing resource consumption and improving transportation outcomes. Where possible, in this guide, CAPCOG identifies relevant co-benefits associated with measures targeted at impacting NO_x emissions. Measures designed to reduce air pollution from NO_x emissions support both goals of the region's air quality program.

1.3 Secondary Focus on Public Awareness and Notification

Apart from the region's efforts to control and reduce air pollution, the region periodically experiences air pollution levels that are "moderate" or worse, based on EPA's Air Quality Index (AQI). When these conditions occur, there are public health benefits that can be achieved by ensuring that members of the public are aware of the conditions and take appropriate steps to limit exposure. While increases in awareness about air quality generally should lead members of the public to take additional action to reduce emissions, there is a public health benefit to public awareness and notification associated with exposure avoidance even if these measures don't lead to any additional emission reductions.

1.4 Categorization of Measures

For the 2019-2023 plan, there are four broad categories of measures:

1. Measures to reduce air pollution from the use of personal vehicles
2. Measures to reduce air pollution from the use of fleet/commercial vehicles and equipment

3. Measures to reduce air pollution from power plants and other stationary combustion sources
4. Measures to promote awareness of air quality and reduce the public’s exposure when air pollution levels are high

1.5 Estimated Sources of NO_x Emissions within the Region

The following table shows the estimated ozone-season day (OSD) NO_x emissions for personal vehicles, fleet/commercial vehicles and equipment, and stationary sources for the region for 2017 - 2023.

Table 1. Estimated Anthropogenic Ozone Season Day NO_x Emissions, Austin-Round Rock MSA (tons per day)

Source	2017	2018	2019	2020	2021	2022	2023
Personal Vehicles	15.0002	13.4057	12.0961	10.9761	10.0249	9.2971	8.6878
Commercial Vehicles and Non-Road Equipment	32.1516	29.2648	26.9243	25.0379	23.4698	22.1678	21.0651
Stationary Sources	28.3722	28.3722	28.3722	28.3722	26.2085	24.3948	24.3948
TOTAL	75.5240	71.0427	67.3925	64.3861	59.7032	55.8597	54.1476

There are also “biogenic” NO_x emissions:

- 2011: 10.8475 tpd NO_x
- 2014: 4.8991 tpd NO_x

These emissions are from soils, and include emissions from nitrogen-enriched fertilizers. While biogenic NO_x emissions are not usually targeted as part of regional air quality plans, the 2019-2023 air quality plan for the Austin-Round Rock MSA includes measures designed to control NO_x emissions from the use of nitrogen-enriched fertilizers.

1.6 General Strategies for Reducing Ground-Level O₃ in the Region

There are four general strategies that can be used to reduce or control ground-level O₃ formation within the region:

- Reduce the NO_x rates for combustion equipment (i.e., lbs NO_x/VMT, lbs NO_x/kWh)
- Reduce the use of combustion equipment (i.e., reduce VMT, reduce electricity consumption)
- Modify the timing of NO_x emissions (i.e., postpone errands until the afternoon)
- Modify the location of NO_x emissions (i.e., encourage a new point source to locate downwind from the urban core rather than upwind from it)

1.7 Impact of Timing of NO_x Emissions on O₃ Formation

One important thing to understand is that, while reducing NO_x emissions year-round will undoubtedly reduce O₃ formation, there are ways that organizations can target actions for just those months when O₃ levels are expected to be highest and for times of the day when NO_x emissions contribute most to peak O₃ formation. By doing so, organizations can that can improve the effectiveness and cost-effectiveness of its air pollution reduction efforts. Sometimes, simply changing the time of day, day of week, or month when emissions occur can dramatically reduce the impact of those emissions.

The following summarizes the impact of timing of NO_x emissions on O₃:

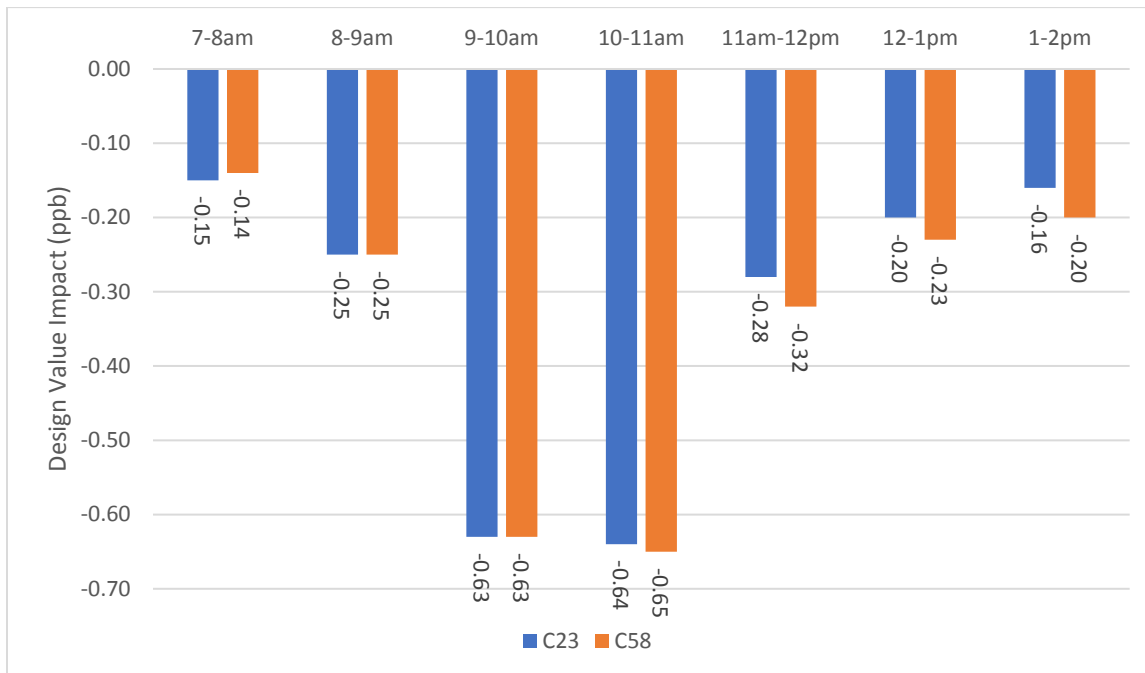
1. NO_x emissions that occur between 9 am and 11 am will have a much higher impact on that day's peak 8-hour O₃ average than NO_x emissions occurring in any other hour
2. NO_x emissions that occur between 7 am and 8 am have less of an impact on peak O₃ than NO_x emissions between 8 am and 9 am
3. For every hour after 10 am – 11 am, the impact of NO_x emissions on peak O₃ diminishes

1.7.1 Impact of Time of Day

The impact that NO_x emissions can have on peak 8-hour O₃ levels is heavily influenced by the time of day in which the emissions occur. Average 8-Hour O₃ concentrations exceeding 70 ppb have started as early as 9 am (through 5 pm) and as late as 1 pm (through 9 pm). Apart from whether a particular hour falls within an 8-hour O₃ concentration over 70 ppb, the impact of time of day can also be related to higher chemical reaction rates during certain hours of the day.

The following figure shows the impact of a 1 ton reduction in on-road NO_x emissions on the design values at monitoring stations in the San Antonio area. The impact would be similar in the Austin area.

Figure 1. Impact of a 1 ton reduction in on-road NO_x emissions on San Antonio O₃ design values

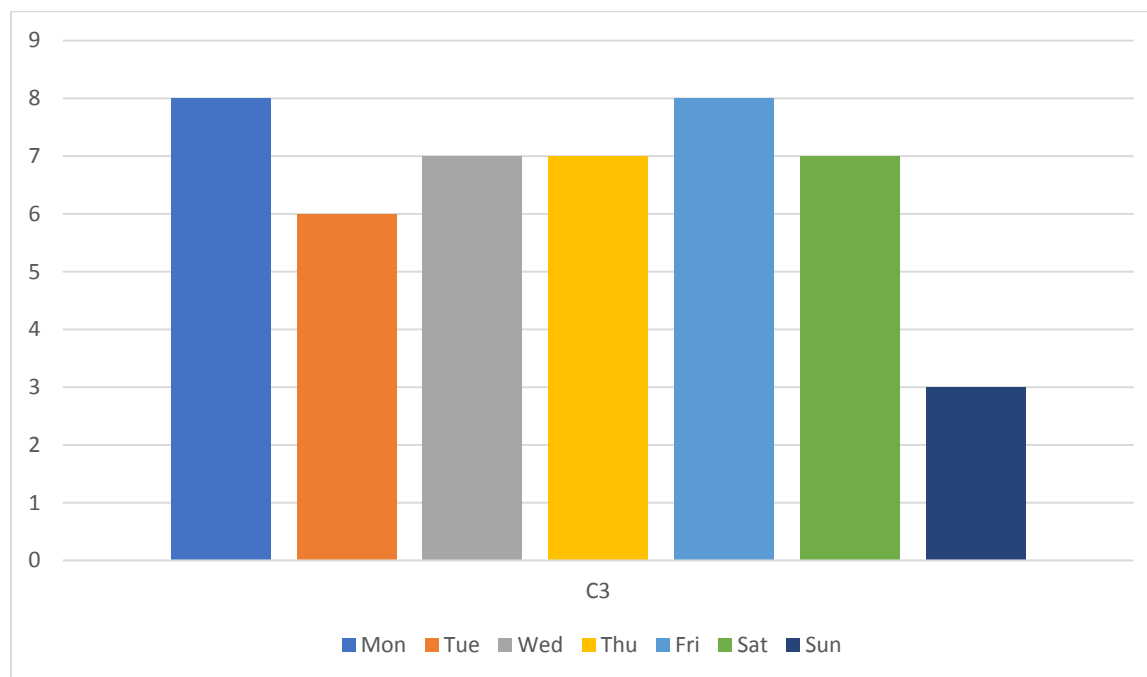


Based on this modeling, one ton of on-road NO_x emissions that occur between 7 am and 8 am has 40-44% effect on a day's peak O₃ levels as the same ton of on-road NO_x emissions if it occurred between 8 am and 9 am. Likewise, that same ton of NO_x has only 22-24% of the impact on the day's peak O₃ levels as it would if it occurred between 9 am and 10 am. Similarly, the impact of NO_x emissions from 11 am – 12 pm is much lower than the impact from 10 am – 11 am, and each hour thereafter has a smaller impact than the prior hour. The key take-away from this modeling is that avoiding or reducing NO_x emissions between 9 am and 11 am will have a much more significant impact on the region's ability to comply with the O₃ NAAQS than reducing NO_x emissions during any other hour of the day.

1.7.2 Impact of Day of Week

One of the other factors that can influence the impact of NO_x emissions on the region's chances of complying with the O₃ NAAQS is the day of the week in which the emissions occur. In general, NO_x emissions tend to be the highest on Friday, followed by Monday-Thursday, Saturday, and Sunday. Within the Austin-Round Rock MSA, data from January 2010-August 2018 clearly shows that the chances of O₃ levels exceeding 70 ppb are much lower on Sundays than any other day of the week at CAMS 3, the region's key regulatory O₃ monitor.

Figure 2. Number of Days with MDA8 O₃ >70 ppb at CAMS 3 and CAMS 38 by Day of Week, January 2010 - August 2018

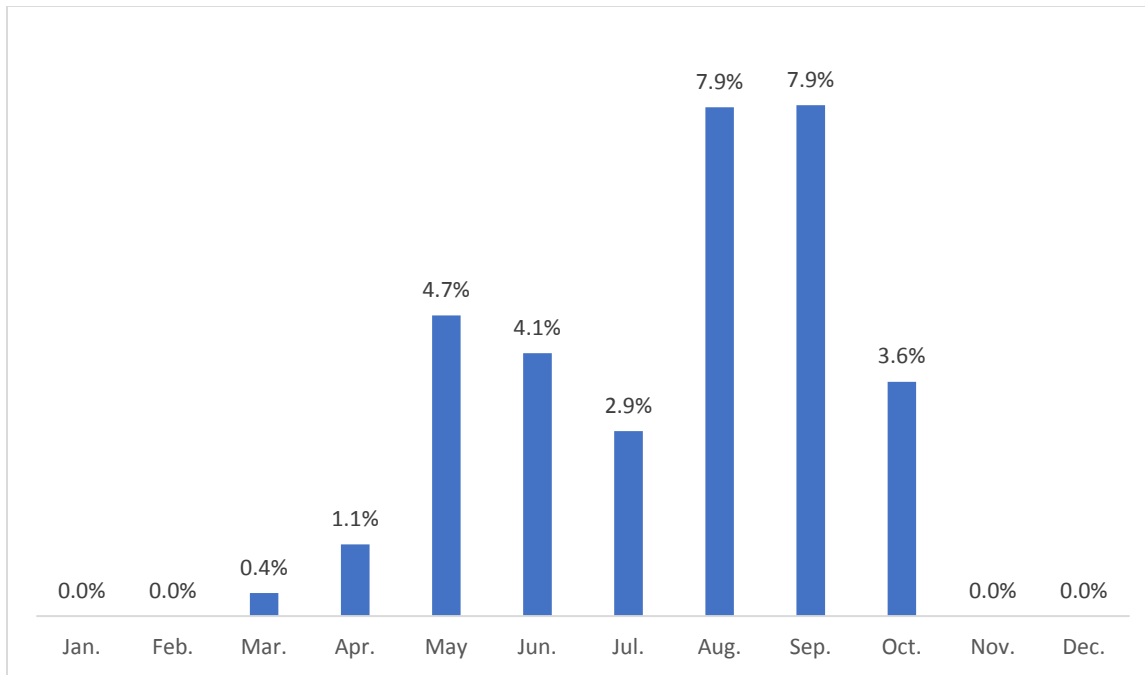


1.7.3 Impact of Month

The official “ozone season” for the Austin-Round Rock MSA is March 1 – November 30. This is the time frame in which EPA requires O₃ monitoring due to O₃ levels approaching 70 ppb as early as March and as late as November. As described in CAPCOG’s 2010-2015 O₃ conceptual model and in subsequent analyses of O₃ data collected in 2016 and 2017, 8-hour O₃ levels over 70 ppb have been recorded within the region as early as March 25 and as late as October 17. For the Austin-Round Rock MSA’s two regulatory O₃ monitors, dates with the four-highest maximum daily 8-hour O₃ averages (MDA8) have occurred as early as February 12 and as late as October 24. Based on these dates, reducing NO_x emissions in November, December, and January would not be expected to have any impact on the region’s ability to comply with the O₃ NAAQS.

Within these months, some months are much more likely to record high O₃ levels than others. Namely, O₃ levels over 70 ppb are much more likely to occur in August and September than in any other months. These two months have accounted for 48% of all instances in which 8-hour O₃ has exceeded 70 ppb within the region. The following chart shows the likelihood of O₃ exceeding 70 ppb somewhere in the region on any given day for each month from January 2010 -August 2018.

Figure 3. Likelihood of O₃ exceeding 70 ppb on any given day by month, January 2010-August 2018



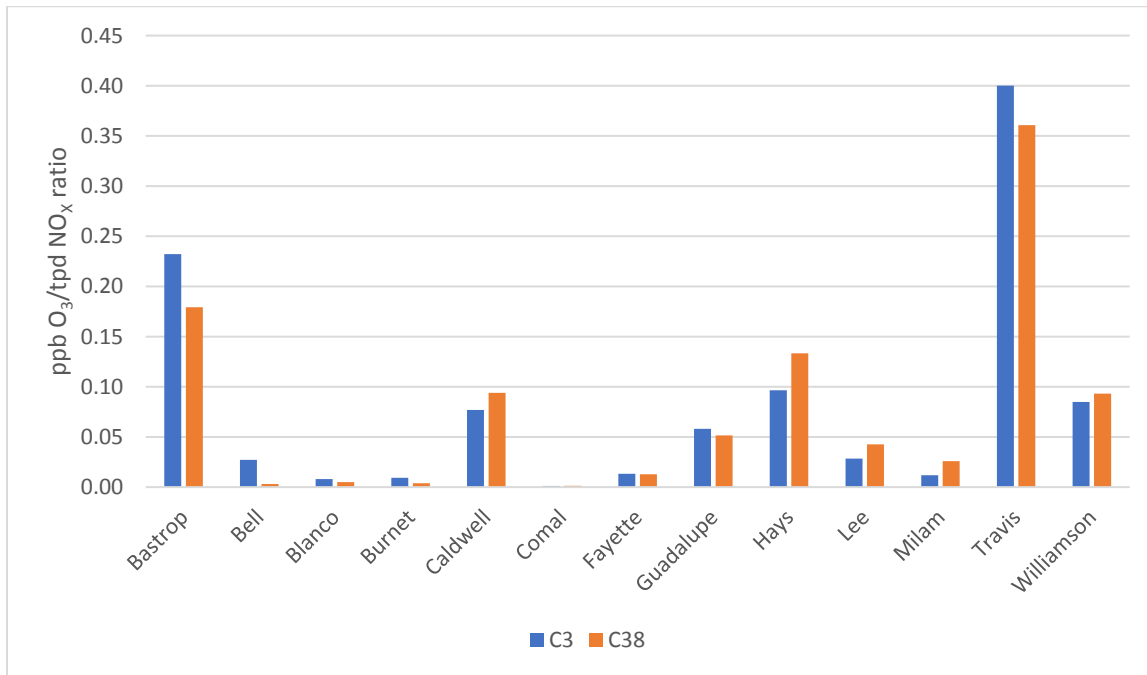
1.8 Impact of Location of NO_x Emissions on O₃ Formation

The geographic location of NO_x emissions is one of the major factors that affects the impact on the region's peak O₃ levels. In general:

- The closer NO_x emissions are to the Austin urbanized core, the higher of an impact they will have on the region's peak O₃ concentrations
- NO_x emissions that occur in or upwind of the Austin urbanized core will have a higher impact on the region's peak O₃ concentrations than NO_x emissions that occur elsewhere
- The more concentrated the geographic area over which NO_x emissions occur, the higher the potential impact on peak O₃ concentrations

The following figure shows the average O₃ impact of OSD NO_x emissions (ppb O₃/tpd NO_x) from each county in the MSA and each adjacent county on peak O₃ levels at CAMS 3 based on modeling conducted by CAPCOG and AACOG in 2017. This illustrates the extent to which the location of NO_x emissions impacts its impact on the region's O₃ levels.

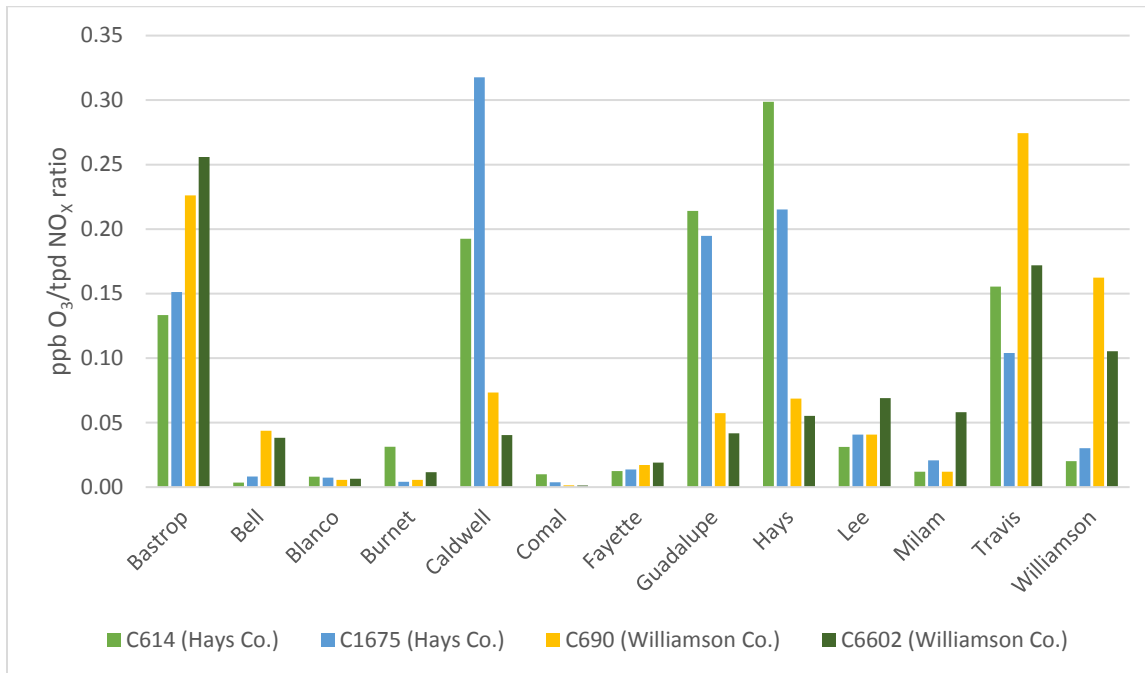
Figure 4. Average Peak 8-Hour O₃ Impact at C3 and 38 per TPD NO_x Emissions from 2017 Air Quality Modeling by County (ppb O₃/tpd NO_x)



All else being equal, a ton per day of NO_x emissions reductions that take place within Travis County would be expected to have 2-4 times the O₃ impact at CAMS 3 and 38 of NO_x emission reductions that take place within Bastrop, Caldwell, Hays, and Williamson Counties.

Similarly, NO_x reductions close to any of the non-regulatory monitors have a disproportionate impact on the O₃ levels at those monitoring stations. The following figure shows the results for non-regulatory stations in Hays and Williamson Counties.

Figure 5. Average Peak 8-Hour O₃ Impact at C614, 690, 1675, and 6602 per TPD NO_x Emissions from 2017 Air Quality Modeling by County (ppb O₃/tpd NO_x)



1.9 Tier 1-Level Measures Recommended for all CAC Members

CAPCOG has identified a package of basic “Tier 1” measures that are recommended for all CAC members. These measures are low-threshold measures should not necessarily require the use of financial resources, but instead involve an organization focus on air pollution.

- Measures to reduce air pollution from the use of personal vehicles:
 - Where feasible, encourage employees to telecommute at least once a week and on all Ozone Action Days;
 - When employees are not telecommuting, encourage them to take low-emission modes of transportation, such as carpooling, vanpooling, transit, biking, and walking;
 - Where flexible schedules are allowed, encourage employees to consider work schedules with start times earlier than 8 am rather than later in the morning due to the higher impact of emissions on O₃ levels later in the morning;
- Measures to reduce air pollution from the use of fleet/commercial vehicles and equipment:
 - Establish and enforce idling restriction policies for use of the organization’s vehicles, equipment, and property;
 - Establish fleet management policies that prioritize the use of vehicles and equipment with low NO_x rates;
 - Educate fleet users on driving and equipment operation practices that can reduce NO_x emissions;
 - Seek funding to accelerate replacement of older, higher-emitting vehicles and equipment with newer, cleaner vehicles and equipment, such as Texas Emission Reduction Plan (TERP) grants;
- Measures to reduce air pollution from power plants and other stationary combustion sources:

- Conserve energy, particularly on Ozone Action Days;
- Schedule discretionary emission-generating activities such as engine testing to the afternoon, particularly on Ozone Action Days;
- Measures to promote awareness of air quality and reduce residents' exposure when air pollution levels are high
 - Educating employees about regional air quality and encouraging them to sign up for daily air quality forecasts and Ozone Action Day alerts

Organizations that commit to implement all of these measures will be identified in the plan will be identified as "Tier 1" participants in the plan. Subsequently, organizations that in fact implemented all of these measures in the prior year will be identified as a "Tier 1" participant in that year's air quality report. Organizations committing to implement or implementing some but not all of these measures will be listed as "supporting" participants, but not as "Tier 1" participants.

1.10 Tier 2-Level Measures

There are also a number of Tier 2-level measures that CAPCOG has identified would go beyond the Tier 1 measures identified above, but would require some outlay of resources.

- Measures to reduce air pollution from the use of personal vehicles:
 - Provide incentives to employees to avoid single-occupancy vehicle commuting, particularly on Ozone Action Days
- Measures to reduce air pollution from the use of fleet/commercial vehicles and equipment:
 - Establish low-NO_x purchasing policies for new on-road vehicles, non-road equipment, and stationary equipment
 - Establish "green" contracting policies to encourage the use of low-NO_x vehicles and equipment and avoid the use of engines during the morning on Ozone Action Days
 - Purchase higher-grade gasoline with lower sulfur content in August and September
 - Enforce vehicle idling restrictions within the community [either through an ordinance if a city or a memorandum of agreement with TCEQ if a county]
- Measures to reduce air pollution from power plants and other stationary combustion sources:
 - Optimize combustion and pollution controls for NO_x reductions, particularly on Ozone Action Days and between 9 am and 3 pm
- Measures to promote awareness of air quality and reduce residents' exposure when air pollution levels are high
 - Educating the public about regional air quality and encouraging them to sign up for daily air quality forecasts and Ozone Action Day alerts

If an organization commits to implement all Tier 1 measures and at least one Tier 2 measure identified above, the organization will be identified as a Tier 2-Level participant in the plan. Similarly, if an organization in fact implements and reports on all Tier 1 measures and at least one Tier 2 measure in a particular calendar year, CAPCOG will identify the organization as a Tier 2-level participant in the plan in that year's air quality report.

1.11 Other Measures

The list above is not exhaustive of measures that CAC members can take in support of the region's air quality goals. To the extent that a jurisdiction wishes to identify a measure it is committing to implement or has implemented in support of these goals, CAPCOG encourages the CAC member to submit information on these measures to CAPCOG.

2 Details on Tier 1 and Tier 2 Air Pollution Measures

This section of the guide provides additional explanation and details on the Tier 1 and Tier 2 air pollution measures identified by CAPCOG.

2.1 Measures to reduce air pollution from the use of personal vehicles

Every organization has employees and can have an influence on their employees' commuting. Actions taken to reduce air pollution from the use of personal vehicles can have a disproportionate impact on O₃ formation due to the high concentration of personal vehicle use in the urban core during the morning hours when NO_x emissions have the highest impact. Personal vehicles remain the largest single source of NO_x emissions within the MSA.

2.1.1 Where feasible, encourage employees to telecommute at least once a week and on all Ozone Action Days

While there is an increasing number of people who primarily work from home, it is possible to achieve significant reductions in commuting-related emissions by encouraging employees who commute using a Single Occupancy Vehicle (SOV) to telecommute once or twice a week. Telecommuting has the benefit of entirely avoiding both the "start" emissions associated with trips of any length and the "running" emissions associated with traveling over a distance. By removing a vehicle from the road, telecommuting also has the added benefit of reducing congestion on the transportation system, which can reduce the percentage of time vehicles spend operating at the high NO_x rates associated with low vehicle speeds (i.e., below 20 mph).

2.1.2 When employees are not telecommuting, encourage them to take low-emission modes of transportation, such as carpooling, vanpooling, transit, biking, and walking

To the extent that employees need to be physically present at their work site, encouraging them to use modes other than a SOV helps reduce the impact of their commuting. Encouraging employees to commute by carpool, vanpool, transit, biking, and walking rather than SOV commuting, regularly or periodically, can significantly reduce the impact of their commuting on regional air pollution. These measures both reduce the emissions from the SOV itself, but also reduce emissions from other vehicles on the transportation system by reducing congestion and the percentage of time vehicles spend operating at the high NO_x rates associated with low vehicle speeds (i.e., below 20 mph).

2.1.3 Where flexible schedules are allowed, encourage employees to consider work schedules with start times earlier than 8 am rather than later in the morning due to the higher impact of emissions on O₃ levels later in the morning

Therefore, to the extent that employees are allowed to use flexible schedules, flexible schedules that involve an earlier start time are preferable to ones that have a later start time. Figure 1 above shows the impact of a 1 ton reduction in on-road NO_x emissions on monitoring stations in the San Antonio area – we would expect to see similar impacts in the Austin area.

2.1.4 Provide incentives to employees to avoid single-occupancy vehicle commuting, particularly on Ozone Action Days

Beyond simply encouraging employees to avoid single-occupancy vehicle commuting, organizations can take more tangible action to incentivize employees to reduce SOV commuting, particularly on ozone action days. Examples of such incentives include:

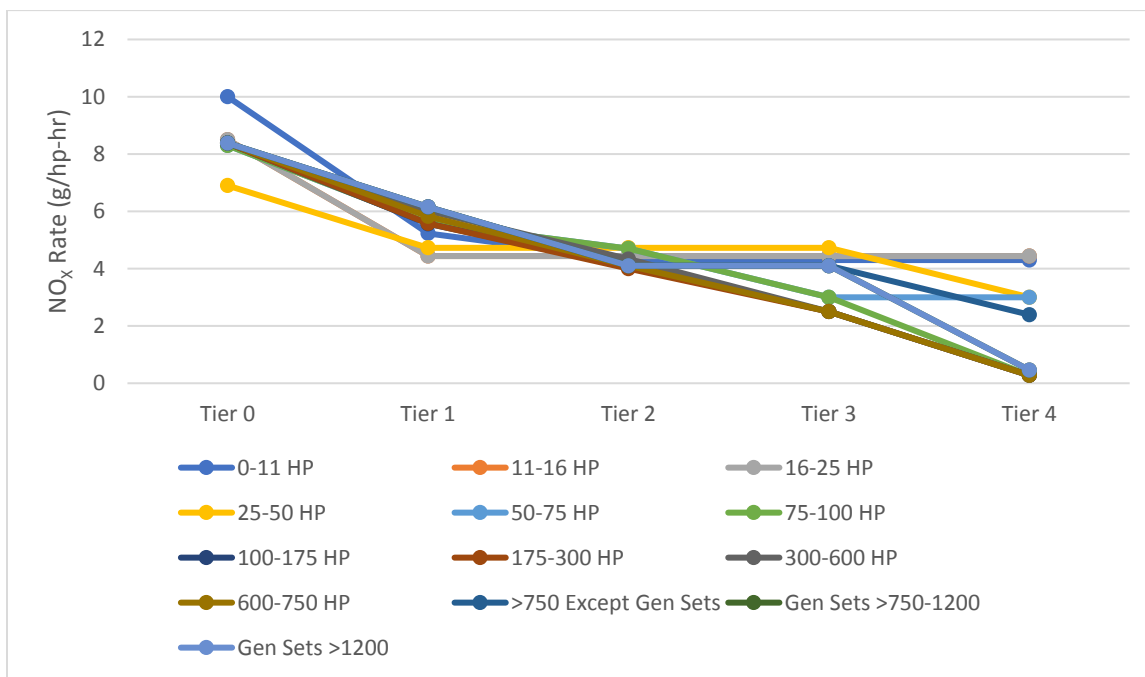
- The City of Austin's Smart Commute Rewards program, which involves awarding administrative leave to employees who regularly use a sustainable mode of commuting
- Travis County's subsidized bus pass program

- Travis County’s policy allowing certain employees to start their work day when they log onto their computer on a CapMetro commuter bus or train
- An organization providing an additional subsidy for the unsubsidized portion of the costs for participation in CapMetro’s MetroRideshare vanpool program
- A parking cash-out program that pays employees to forgo a parking pass
- Charging for parking if parking is currently free

2.2 Measures to reduce air pollution from the use of fleet/commercial vehicles and equipment

Reducing emissions from commercial equipment – either an organization’s own fleet of vehicles and equipment or the vehicles and equipment used by contractors – is one of the most direct ways that an organization can reduce its impact on air pollution. A large share of commercial vehicles and equipment are older and do not meet new, stringent NO_x standards, making strategies targeted at these vehicles one of the easiest ways to achieve large amounts of NO_x reductions. For example, the following figure shows the NO_x emissions rates (pounds of NO_x emitted per vehicle-mile traveled) for diesel-powered non-road equipment based on their emissions certification level.

Figure 6. Tier 0-4 Diesel Non-Road Equipment NO_x Standards (g/hp-hr)¹



2.2.1 Establish and enforce idling restriction policies for use of an organization’s own vehicles, equipment, and property

One way that organizations can have an immediate impact on air pollution is to establish and enforce restrictions on idling of vehicles or equipment owned by the organization or on the organization’s property. Posting signs in vehicles and around the property (similar to no-smoking signs) can be effective at ensuring that people are aware of these restrictions. For local governments that have idling

¹ <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P10081UI.pdf>

restrictions for the community at large in place, ensuring that their own fleet operators and any contractors are not idling can also be important to ensuring that the community adheres to any anti-idling ordinances as well.

2.2.2 Establish fleet management policies that prioritize the use of vehicles and equipment with low NO_x rates

Without needing to invest in any new equipment, organizations can reduce air pollution from their own operations by simply prioritizing the use of vehicles and equipment with low NO_x rates. In general, the following types of vehicles and equipment will have the lowest NO_x rates available:

- Light-duty vehicles and trucks: Tier 3 (model year 2017 and newer)
- Heavy-duty vehicles: Model Year 2010 and newer
- Diesel-powered non-road equipment: Tier 4 (model years 2014 and newer)
- Large gasoline, LPG, or CNG-powered non-road equipment: Phase 2 (model years 2007 and newer)
- Small hand-held gasoline, LPG, or CNG-powered non-road equipment: Phase 3 (model years 2012 and newer)

2.2.3 Educate fleet users on driving and equipment operation practices that can reduce NO_x emissions

Educating fleet users on driving and equipment operators on practices that can reduce NO_x emissions can be helpful in reducing NO_x emissions. Often, the same types of practices that reduce wear and tear on a vehicle – such as heavy acceleration and deceleration – also increase a vehicle’s NO_x emissions rate. Providing training or other types of education for fleet users to help them operate vehicles and equipment in ways that minimize NO_x emissions is a small but meaningful step that organizations can take to reduce air pollution.

2.2.4 Seek funding to accelerate replacement of older, higher-emitting vehicles and equipment with newer, cleaner vehicles and equipment, such as Texas Emission Reduction Plan (TERP) grants

One of the best ways that organizations can reduce NO_x emissions is by accelerating the replacement of older, higher-emitting vehicles and equipment with newer vehicles and equipment that meet much stricter emissions standards. The Texas Commission on Environmental Quality (TCEQ) and the U.S. Environmental Protection Agency (EPA) both have programs designed to incentivize this type of early retirement of older diesel-powered vehicles: the TCEQ’s Texas Emission Reduction Plan (TERP) grant program and the EPA’s Diesel Emission Reduction Act (DERA) grants. These grants can cover the incremental costs of moving up the retirement date of older equipment that would otherwise continue to be used. CAPCOG can assist CAC members in applying for these grants.

2.2.5 Establish low-NO_x purchasing policies for new on-road vehicles, non-road equipment, and stationary equipment

Organizations can also help reduce NO_x emissions from their operations by establishment procurement policies targeted at minimizing NO_x emissions from any new equipment acquired by the organization. EPA’s national emissions standards apply to vehicle and equipment manufacturers and require that they achieve average emissions rates across all of the vehicles or equipment that they sell, but they are allowed to sell some vehicles or equipment that have NO_x emissions rates above the fleetwide standards as long as they also sell an equivalent amount of vehicles or equipment that have NO_x emissions rates below the standards. The following table illustrates the differences between the

fleetwide average emissions standards and the emission limits for individual vehicles that are permitted under current standards.

Figure 7. Examples of Mobile Source Fleetwide Emission Standards and Not-to-Exceed Limits

Vehicle/Equipment Type	Fleetwide Average Standard	Not-to-Exceed Limits
Tier 4 Diesel Non-Road Equipment < 19 kW Except Gen. Sets²	7.5 g NO _x + HC/kW-hr	9.5 g NO _x + HC/hp-hr
Tier 4 Diesel Non-Road Equipment 19-56kW Except Gen Sets³	4.7 g NO _x + HC/kW-hr	7.5 g NO _x + HC/hp-hr
Tier 4 Diesel Non-Road Equipment 56-560 kW Except Gen. Sets⁴	0.40 g NO _x /kW-hr	3.8 g NO _x /hp-hr
Tier 4 Diesel Non-Road Generator Sets⁵	0.67 g NO _x /kW-hr	3.8 g NO _x /hp-hr
Model Year 2010 and Later Diesel Heavy-Duty Vehicles⁶	0.20 g NO _x /hp-hr	0.50 g NO _x /hp-hr
Model Year 2008 and Later Gasoline, LPG, or CNG Vehicles, GVWR 8,500 – 10,000	0.2 g NO _x /mile	0.9 g NO _x /mile
Model Year 2008 and Later Gasoline, LPG, or CNG Vehicles, GVWR 8,500 – 10,000	0.4 g NO _x /mile	1.0 g NO _x /mile
Full Phase-In of Tier 3 Light-Duty Vehicle Exhaust Standards⁷	0.030 g NMOG + NO _x /mile	0.160 g NMOG + NO _x /mile

As the table above shows, purchasing a new piece of non-road equipment does not guarantee that the NO_x emissions rate is going to be in line with the fleet-wide average. By establishing emissions specifications in a procurement, an organization can help avoid purchasing vehicles or equipment that have high NO_x rates despite being new. Examples of such specifications include:

- Requiring that the engine has a lower NO_x rate than the “not-to-exceed” limits;
- Requiring that the engine has a NO_x emissions rate that is at least as stringent as the fleetwide average standard; or

² 40 CFR 1039.101

³ Ibid

⁴ Ibid

⁵ Ibid

⁶ 40 CFR 86.007-11

⁷ 40 CFR 86.1811-17

- Requiring that the engine has a NO_x emissions rate that is more stringent than the fleetwide average standard.

When considering whether to purchase a new or used vehicle or piece of equipment, purchasing policies can also take account of the differences in emissions rates for newer and older engines. CAPCOG can assist any organization interested in establishing such policies.

2.2.6 Establish “green” contracting policies to encourage the use of low-NO_x vehicles and equipment and avoid the use of engines during the morning on Ozone Action Days

There are a number of ways that an organization can reduce its air pollution impact through contracting policies. Two key ways that this can be achieved are by specifying or incentivizing the use of low-NO_x vehicles and equipment and avoiding the use of engines during the morning on Ozone Action Days.

EPA’s Tier 4 NO_x emission standards for non-road diesel engines reduce NO_x emissions rates substantially below uncontrolled rates and even below rates for EPA’s Tier 1 – 3 standards. Tier 4 equipment rated at 75 – 750 HP have NO_x emissions rates 97% below uncontrolled rates, 95% below Tier 1 rates, 93% below Tier 2 rates, and 89-91% below Tier 3 rates.

When contracting for services that will require the use of non-road equipment, specifying or incentivizing the use of equipment that meets tier 4 standards if diesel or phase II standards if gasoline, LPG, or CNG, can achieve substantial reduction in NO_x emissions, as well as reductions in CO, PM_{2.5}, PM₁₀, VOC, and CH₄ emissions.

Another way that organizations can reduce the O₃ impact of these types of activities is to include provisions that avoid using this equipment between 9 am and 11 am in particular so as to avoid the impact of the emissions on peak 8-hour ozone averages. Contracts can also treat OADs as “bad weather days” similar to what happens if it rains.

2.2.7 Purchase higher-grade gasoline with lower sulfur content in August and September

CAC members can achieve NO_x reductions from on-road vehicles by purchasing higher-grade gasoline due to lower sulfur content in the gasoline. Sulfur interferes with the efficiency of a vehicle’s pollution control system and limits the amount of NO_x reductions that can be achieved from the use of newer, cleaner vehicles. The effects of sulfur contamination of pollution control systems can also persist over time.

The Austin area consistently had the highest gasoline sulfur levels in the state: TCEQ’s fuel sampling studies in 2011⁸, 2014⁹, and 2017¹⁰ all showed the Austin region having the state’s highest levels. The 2017 average fuel sulfur levels were substantially higher (30 ppm) than what TCEQ and EPA had previously modeled (10 ppm) for nation-wide gasoline fuel sulfur levels after new gasoline regulations took effect in January 2017. The following table shows the gasoline sulfur levels sampled at Austin-area gas stations in 2017.

⁸ https://www.tceq.texas.gov/assets/public/implementation/air/am/contracts/reports/mob/5821199776FY1103-20110831-ergi-summer_2011_fuels.pdf

⁹ https://www.tceq.texas.gov/assets/public/implementation/air/am/contracts/reports/mob/5821199776FY1420-20140815-ergi-summer_2014_fuels.pdf

¹⁰ <https://www.tceq.texas.gov/assets/public/implementation/air/am/contracts/reports/ei/582177149010-20170831-ergi-2017SummerFuelFieldStudy.pdf>

Table 2. Gasoline Fuel Sulfur Content from TCEQ 2017 Fuel Sampling Study (ppm)

Station	Regular	Medium	Premium
7-Eleven Store 36600, 1625 E. Parmer Ln., Austin, TX 78753	36	26	17
Discover Food Mart 1, 7200 N. IH 35, Austin, TX 78752	35	29	19
M & S Food Mart, 5511 Cameron Rd., Austin, TX 78723	35	26	20
Average	35.3	27.0	18.7

An analysis conducted by the Mid-Atlantic Regional Air Management Association (MARAMA) indicated that NO_x emissions from gasoline-powered vehicles are 35% lower when gasoline has 10 ppm sulfur content compared to 30 ppm sulfur content.¹¹ Based on these figures and the Austin-area data, the use of medium-grade gasoline in the region would be expected to reduce NO_x emissions by approximately 13% compared to regular grade, and the use of premium-grade gasoline reduces NO_x emissions by approximately 27% compared to regular-grade. The average prices for regular-grade, medium-grade, and regular-grade gasoline for March – July 2018 are shown below¹²:

- Regular: \$2.557 per gallon
- Medium: \$2.850 per gallon (\$0.293 more than regular)
- Premium: \$3.101 per gallon (\$0.544 more than regular)

Purchasing higher-grade gasoline is one way that CAC members can reduce their NO_x emissions, particularly during the key months of August and September.

2.3 Enforce vehicle idling restrictions within the community [either through an ordinance if a city or a memorandum of agreement with TCEQ if a county]

Cities and Counties can enforce idling restrictions within their jurisdiction and several jurisdictions within the Austin-Round Rock MSA currently have idling restrictions in place. Counties are able to enforce idling restrictions on heavy-duty vehicles by entering into a Memorandum of Agreement (MOA) with the Texas Commission on Environmental Quality (TCEQ). In the Austin-Round Rock MSA, Bastrop and Travis County have MOAs in place, but these agreements are set to expire at the end of 2018. For Bastrop and Travis County to be able to continue enforcing these rules, they will need to enter into new MOAs with TCEQ before the end of 2018. For more information on the TCEQ MOAs, visit TCEQ’s website at: <https://www.tceq.texas.gov/airquality/mobilesource/vehicleidling.html>

City governments may also enforce heavy-duty idling restrictions through an MOA with TCEQ, but they are also able to enact idling restrictions through municipal ordinances without an MOA with TCEQ. Municipal idling ordinances can be more stringent than the restrictions that local governments can enforce through an MOA with TCEQ. The following cities within the Austin-Round Rock MSA currently have municipal ordinances restricting idling:

- [City of Austin](#) (also has an MOA with TCEQ)
- [City of Bastrop](#)
- [City of Elgin](#)
- [City of Georgetown](#) (also has an MOA with TCEQ)
- [City of Hutto](#)

¹¹ <https://www.epa.gov/sites/production/files/2017-10/documents/mcdill.pdf>

¹² EIA. Weekly Retail Gasoline and Diesel Prices. Texas – Monthly. https://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_stx_m.htm

- [City of Lockhart](#)
- [City of Round Rock](#)
- [City of San Marcos](#)

Jurisdictions that adopt idling restrictions should also develop standard operating procedures and protocols for implementing these idling restrictions and keep track of warnings and citations issued for idling in order to ensure that these restrictions are actually achieving emission reductions.

2.4 Measures to reduce air pollution from power plants and other stationary combustion sources

CAC members can reduce NO_x emissions from stationary combustion sources, both directly by controlling emissions from their own stationary combustion equipment, or indirectly by conserving electricity and thereby reducing NO_x emissions from fossil-fueled power plants.

2.4.1 Conserve energy, particularly on Ozone Action Days

There are many ways that organizations can conserve energy, including:

- Reducing the temperature of hot-water heaters (whether heated by natural gas or electricity)
- Reducing demand for electricity by increasing thermostats
- Using energy-efficient appliances and equipment
- Generating electricity from zero-emissions sources locally (such as rooftop solar)
- Purchasing electricity from zero-emissions sources from the grid

While 100% of the NO_x emission reductions associated with an organization's efforts to conserve energy from its own fuel combustion will occur within the Austin-Round Rock MSA, the NO_x reduction benefit from conserving electricity is spread out across the entire ERCOT grid due to the distributed nature of electricity generation. For example, approximately 89% of the ozone season NO_x emissions associated with the City of Cedar Park's 2017 electricity consumption occurred outside of the Austin-Round Rock MSA based on modeling conducted using EPA's "AVERT" tool for estimating air quality benefits from energy efficiency/renewable energy (EE/RE) measures. While this percentage will fluctuate day to day and hour to hour, these efforts may be the only way to reduce NO_x emissions from local peaker plants in the short term. However, organizations should be aware that most of the NO_x reductions associated with electricity conservation measures will be occurring outside of the MSA.

2.4.2 Schedule discretionary emission-generating activities such as engine testing to the afternoon or night, particularly on Ozone Action Days

One of the simplest ways that organizations can reduce their air pollution impact is to reschedule discretionary use of combustion equipment from the morning to the afternoon, and particularly avoid the high-impact 9 am – 11 am period when NO_x emissions can have a disproportionate impact on high 8-hour O₃ averages. For example:

- Many organizations conduct weekly testing of backup generators in the morning on a set day of the week – these tests could instead be conducted in the late afternoon when they would have a much smaller impact on peak 8-hour O₃
- Scheduling landscaping activities for the afternoon rather than the morning can dramatically reduce the impact of those activities on peak 8-hour O₃
- Scheduling roadway construction activities during the evening and night entirely avoids the impact of these emissions on peak 8-hour O₃

2.4.3 Optimize combustion and pollution controls for NO_x reductions, particularly on Ozone Action Days and between 9 am and 3 pm

One way to reduce NO_x emissions is to optimize combustion and pollution controls for NO_x reductions. For example:

- Combustion sources tend to have lower NO_x emissions rates when operated at a steady load than when they are ramped up and down
- By shifting the timing for the demand for electricity, district cooling using chilled water can enable power plants to operate at a more stable load than if the cooling was powered directly by electricity during peak demand periods
- Reducing peak combustion temperature can reduce NO_x emissions for external combustion sources like heaters and boilers. This involves a slight reduction in combustion efficiency but a significant reduction in NO_x emissions. For example, an EPA guidance document suggests that a 1% reduction in combustion from efficiency can reduce NO_x emissions rates by over 35%¹³
- Point sources equipped with selective non-catalytic reduction (SNCR) can maximize NO_x reduction efficiency during periods that would have a significant impact on peak 8-hour O₃. For example, Texas Lehigh Cement Company maximizes NO_x reductions from 9 am to 3 pm on predicted high O₃ days.

This measure does not necessarily involve installation of any new equipment, but rather, operating the equipment in a way that minimizes NO_x emissions. Any measure that meets this description would be useful to be included in the region's air quality plan.

2.5 Measures to promote awareness of air quality and reduce public exposure when air pollution levels are high

Apart from reducing the region's air pollution levels, organizations can also help reduce public exposure to air pollution when it does reach high levels.

2.5.1 Educating employees about regional air quality and encouraging them to sign up for daily air quality forecasts and Ozone Action Day alerts

Organizations can educate employees about regional air quality and encourage them to sign up for daily air quality forecasts and ozone action day alerts from TCEQ's website and EPA's "AirNow" website.

- TCEQ: https://www.tceq.texas.gov/airquality/monops/ozone_email.html
- EPA: <https://www.airnow.gov/>

2.5.2 Educating others about regional air quality and encouraging them to sign up for daily air quality forecasts and Ozone Action Day alerts

Beyond their own employees, organizations can take additional actions to promote air quality awareness within the community through advertising and other activities.

3 Updates to this Document

CAPCOG will periodically update this document in order to reflect measures that organizations have implemented and new information. For questions about this guidebook, contact CAPCOG at

¹³ <https://www3.epa.gov/ttnca1c1/dir1/fnoxdoc.pdf>

**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 18-068

**APPROVING SUPPLEMENT NO. 2 TO WORK AUTHORIZATION NO. 14 WITH KAPSCH
TRAFFICOM USA FOR THE INSTALLATION OF WRONG-WAY DETECTION AND
NOTIFICATION SYSTEM ON THE SH 45 SW TOLL PROJECT**

WHEREAS, the Central Texas Regional Mobility Authority ("Mobility Authority") entered into a contract with Caseta Technologies, Inc. dated April 27, 2005, for the design, procurement, and installation of a toll collection system on the Authority's turnpike system (the "Contract"); and

WHEREAS, Kapsch TrafficCom USA (formerly Schneider Electric Mobility NA) is the successor in interest to the Contract with Caseta Technologies, Inc., and all rights and obligations of Caseta Technologies, Inc. under the Contract are now the rights and obligations of Kapsch TrafficCom USA ("Kapsch"); and

WHEREAS, by Resolution No. 17-015, dated March 29, 2017, the Board approved Work Authorization No. 14 with Kapsch to provide toll system integration services and intelligent transportation system services for development of the SH 45 SW Toll Project; and

WHEREAS, by Resolution No. 18-030, dated July 25, 2018, the Board authorized and directed the Executive Director to finalize and execute Supplement No. 1 to Work Authorization No. 14 with Kapsch increasing the original not to exceed amount by \$71,750.00 to pay for additional work required to incorporate the use of temporary power connections for the toll system; and

WHEREAS, the Mobility Authority desires to implement a wrong way driver detection system on the SH 45 SW Project in order to improve safety and to test the equipment for potential use on other Mobility Authority facilities; and


WHEREAS, the Executive Director and Kapsch have negotiated Supplement No. 2 to Work Authorization No. 14 in an amount no to exceed \$468,274.00 for the purchase and installation of a wrong-way detection and notification system on the SH 45SW Toll Project; and

WHEREAS, the Executive Director recommends that the Board approve proposed Supplement No. 2 to Work Authorization No. 14 in the form or substantially the same form attached hereto as Exhibit A.

NOW THEREFORE, BE IT RESOLVED that the Board authorizes the Executive Director to finalize and execute proposed Supplement No. 2 to Work Authorization No. 14 with Kapsch TrafficCom USA in an amount not to exceed \$468,274.00 and in the form or substantially the same form as Exhibit A for the purchase and installation of a wrong-way detection and notification system on the SH 45 SW Project.


Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 11th day of December 2018.

Submitted and reviewed by:



Geoff Petrov, General Counsel

Approved:



Ray A. Wilkerson
Chairman, Board of Directors

Exhibit A

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

SUPPLEMENTAL WORK AUTHORIZATION NO. 2

to

WORK AUTHORIZATION NO.14

TOLL SYSTEM IMPLEMENTATION

STATE HIGHWAY 45 SOUTHWEST PROJECT

THIS SUPPLEMENTAL WORK AUTHORIZATION NO. 2 (“SWA No. 2”) TO WORK AUTHORIZATION NO. 14 (“WA No. 14”) is made pursuant to the terms and conditions of Article 1 of the GENERAL PROVISIONS, Attachment A, to the original Contract for Toll System Implementation, dated April 27, 2005 (the Contract) entered into by and between the Central Texas Regional Mobility Authority (the “Authority” or “CTRMA”), and Kapsch TrafficCom Transportation NA, Inc. (the “Contractor,” also referred to in attachments to this SWA No. 2 and WA No. 14 as the “System Integrator” or “SI”).

Pursuant to this SWA No. 2, PARTS I and II of WA No. 14 are modified as follows:

PART I. The Scope of Work attached to WA No. 14 as **Attachment A** is amended to include the following additional services:

- All work required to contract with the Wrong Way Detection (WWD) System provider, in order to design, procure (e.g. system hardware and software, as well as civil infrastructure), install, test and maintain the WWD System at four (4) locations on the SH 45 SW corridor.
- All work required to coordinate with the WWD system provider, the Authority, General Engineering Consultant, other third-party contractors and Roadway Contractor (as necessary) to construct and install any necessary civil infrastructure (e.g. installation of poles for the system, new conduit for power and/or fiber optic communications and installation of fiber optic cable and/or power cables) needed to implement the WWD System.

PART II. This SWA No. 2 increases the maximum amount payable under this WA No. 14 by **FOUR HUNDRED SIXTY EIGHT THOUSAND TWO HUNDRED SEVENTY FOUR DOLLARS (\$468,274.00)**. The revised maximum amount payable is **TWO MILLION NINE HUNDRED FOUR THOUSAND TWO HUNDRED SEVENTY-SIX AND 06/100 DOLLARS (\$2,904,276.06)**.

IN WITNESS WHEREOF, this Supplemental Work Authorization No. 2 to Work Authorization No. 14 is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE CONTRACTOR: Kapsch TrafficCom Transportation NA, Inc.

Signature

Date

Typed/Printed Name and Title

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

Executed for and approved by the Central Texas Regional Mobility Authority for the purpose and effect of activating and/or carrying out the orders, established policies or work programs heretofore approved and authorized by the Texas Transportation Commission.

Signature

Date

Mike Heiligenstein, Executive Director

Typed/Printed Name and Title

**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 18-069

**EXECUTIVE DIRECTOR COST OF LIVING
AND PERFORMANCE PAYMENT**

WHEREAS, the Central Texas Regional Mobility Authority ("CTRMA") was created pursuant to the request of Travis and Williamson Counties and in accordance with provisions of the Transportation Code and the petition and approval process established in 43 Tex. Admin. Code § 26.1, *et. seq.* (the "RMA Rules"); and

WHEREAS, the Board of Directors of the CTRMA has been constituted in accordance with the Transportation Code and the RMA Rules; and

WHEREAS, Mike Heiligenstein has served as the CTRMA's Executive Director since 2004; and

WHEREAS, since that time the Board of Directors has approved various forms of, and revisions to, an employment agreement with the Executive Director; and

WHEREAS, pursuant to Resolution No. 17-070, dated December 13, 2017, the Board of Directors approved a revised form of the Executive Director's employment agreement (the "2018 ED Contract") incorporating contract terms approved by the Board of Directors in Resolution No. 17-070; and


WHEREAS, Section 4.3 of the 2018 ED Contract provides for a cost of living and performance payment in an amount set forth by the 2018 ED Contract prior to the first anniversary of the contract's effective date and as determined at the discretion of the Board of Directors thereafter; and

WHEREAS, the Board of Directors has reviewed cost of living increases and the Executive Director's performance and has concluded that he has served the CTRMA well.

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors of the CTRMA hereby approves payment of fourteen point nine percent (14.9%) of the Executive Director's 2019 base salary as a cost of living and performance payment to the Executive Director.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 11th day of December, 2018.

Submitted and reviewed by:



Geoff Petroy, General Counsel

Approved:



Ray A. Wilkerson
Chairman, Board of Directors

Exhibit A

The Central Texas Regional Mobility Authority commits to implement the following measures recommended by the Capital Area Council of Governments (CAPGOG):

Tier-1 Measures

- Promote awareness of air quality and reduce residents' exposure when air pollution levels are high:
 - Educate employees about regional air quality.
 - Encourage employees to sign up for daily air quality forecasts and Ozone Action Day alerts.
- Reduce air pollution from the use of personal vehicles, including:
 - Encourage energy conservation.
 - Encourage employees to take low-emission modes of transportation, such as carpooling, vanpooling, transit, biking, and walking.
 - Encourage employees to telecommute at least once a week.
 - Encourage flexible work schedules to minimize ozone emissions during peak traffic period.
- Reduce air pollution from the use of fleet/commercial vehicles and equipment, including:
 - Educate fleet users on driving and equipment operation practices that reduce nitrogen oxide emissions.

Tier-2 Measures

- Measures to reduce air pollution from the use of fleet/commercial vehicles and equipment, particularly those associated with new roadway construction and ongoing operations, including:
 - Continue to monitor "green" construction and contracting policies to lower nitrogen oxide and ozone emissions.

Other Measures:

- Pursue studies to quantify the emissions and fuel consumption impacts of CTRMA facilities and mode shifts to inform decision on project implementation and operations.

The Executive Director shall implement these measures in support of the new regional air quality plan and will report on the implementation of these and other measures supportive of the region's air quality goals annually to CAPCOG and the Central Texas Regional Mobility Authority Board of Directors.