Interim Report

to the 85th Texas Legislature

House Committee on Transportation

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HOUSE COMMITTEE ON TRANSPORTATION
TEXAS HOUSE OF REPRESENTATIVES
INTERIM REPORT 2016

A REPORT TO THE
HOUSE OF REPRESENTATIVES
85TH TEXAS LEGISLATURE

JOE C. PICKETT
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Committee On
Transportation

January 4, 2017

Joe C. Pickett
Chairman

P.O. Box 2910
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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-fourth Legislature hereby submits its interim report including recommendations and drafted legislation for consideration by the Eighty-fifth Legislature.

Respectfully submitted,

Joe C. Pickett

Armando "Mando" Martinez

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Yvonne Davis

Allen Fletcher

Patricia Harless

Celia Israel

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Andrew Murr

Chris Paddie

Larry Phillips

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Introduction

During the last two sessions of the Texas Legislature (after many years of struggling to infuse new dollars into transportation infrastructure), the Legislature moved away from borrowing money and made one of the biggest attempts to return, somewhat, to the "pay as you go" method of funding transportation. As a result of the success of two constitutional amendments- Proposition 1, passed by the voters in November of 2014 and Proposition 7, passed in November of 2015- the Texas Transportation Commission allocated $38.3 billion of additional funding to the strategic program areas and objectives as part of the adoption of the 2017 Unified Transportation Plan, UTP.

Proposition 1 dedicates a portion of oil and gas severance tax revenue to be deposited to the State Highway Fund (SHF). Proposition 7 directs the comptroller to deposit (beginning in FY 2018) $2.5 billion of the net revenue derived from state sales tax and use tax that exceeds the first $28 billion collected in each fiscal year through FY 2032. It also directs (beginning in FY 2020) 35 percent of the revenues collected from the state motor vehicle sales and rental taxes that exceed $45 billion in each fiscal year through FY 2029.

Even with the success of these constitutional amendments, the additional dollars are because the legislature, prioritized transportation! Because the revenues are not necessarily "new" money, the Transportation Committee continues to search for efficiencies, ideas and suggestions for additional revenue without increased debt. The Texas Department of Transportation has been allowed to incur approximately $17.1 billion in debt, an amount that will cost the tax payers approximately $31.1 billion to repay.

In February of 2015, during the 84th Legislative Session, Speaker Joe Straus appointed 13 members to the House Committee on Transportation: Joe C. Pickett, Chairman, Armando "Mando" Martinez, Vice-Chairman, Cindy Burkett, Yvonne Davis, Allen Fletcher, Patricia Harless, Celia Israel, Ruth Jones McClendon, Jose Menendez, Andrew Murr, Chris Paddie, Larry Phillips, Ron Simmons, Laura Thompson.

Jose Menendez was later elected to the Texas Senate and his seat was filled by Representative Ina Minjarez. Ruth Jones McClendon retired from the House of Representatives during the interim and her seat was filled by Representative Laura Thompson.

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

1. commercial motor vehicles, both but 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. railroad, 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 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.

Pursuant to House Rule 3, Section 36 (b), "The chairman of the Committee shall appoint a permanent subcommittee on long-term transportation infrastructure planning consisting of not fewer than seven members."

Representative Ron Simmons was appointed sub-committee chair. Members named to the subcommittee are Representatives Burkett, Davis, Harless, Israel, Murr and Paddie.

The permanent subcommittee held interim hearings regarding:

1. Financial forecasting by Texas State Comptroller Hegar
2. Finance options used in other states, presented by Texas Transportation Institute.
3. Review of Design-build statues and budget requirements
4. Evaluation of Transportation Investment Zones (TRZ's)
5. Texas Emissions reduction plan funds
6. Motor fuels tax collection and Comptroller's administration and enforcement allowance thereof

Charge 1:
Study the Texas Department of Transportation's role in responding to natural disasters, specifically reviewing contraflow lane plans for major routes and technology that can minimize evacuation and travel times.

Committee Action:

The charge was referred to a committee chaired by Chairman Armando "Mando" Martinez. The sub-committee heard testimony related to natural disasters on September 28, 2016. Written and oral testimony was given by staff from the Texas Department of Transportation. Oral Testimony was given by the Texas Department of Public Safety.

Background:

TxDOT Disaster and Emergency Preparedness, Response and Recovery

The importance of safe and reliable transportation systems is heightened during emergency situations. In a catastrophic disaster, providing safe transportation systems is a critical function of the state, making evacuation, search and rescue, mass care and other essential response activities possible. TxDOT maintains readiness for all-hazards response with emphasized concentration on the state's imminent large-scale threats. Among other emergency response duties, TxDOT assists the public with getting out of harm's way and performing repair and debris removal to help stabilize an emergency situation. TxDOT also ensures safe and reliable transportation routes for the public's safe return home after an emergency situation.

TxDOT's Emergency Operations Center (EOC) oversees TxDOT's response to emergencies and disasters, including hurricanes, wildfires, tornadoes, winter weather and flooding. The EOC works closely with the Texas Division of Emergency Management, other state agencies, local governments and all districts and divisions within TxDOT. In addition, the EOC works with the State Operations Center, the Federal Emergency Management Agency (FEMA) and the Federal Highway Administration (FHWA) on state reimbursement issues for emergency and disaster response.

Interagency coordination of efforts is a key element in successful emergency management. Before, during and after a disaster, TxDOT partners with local officials, government agencies, law enforcement, contractors and relief organizations to minimize disaster impacts and maintain safety for the traveling public. TxDOT, as a member of the State Emergency Management Council, provides a representative to the State Operations Center as needed. TxDOT is also represented at Texas Department of Public Safety (DPS) Emergency Operations Centers located around the state.

Hurricane Preparedness and Recovery

TxDOT safely expedites traffic flow out of threatened areas in the event of a hurricane evacuation order by a mayor or county judge. TxDOT, in coordination with law enforcement agencies, provides signage, equipment and traffic control personnel. TxDOT also pre-stages

equipment in or near the affected areas to expedite clean-up upon re-entry into the areas after a hurricane. TxDOT currently uses three levels of response to a hurricane. Level 1 response is for a category 1 hurricane. Level 2 response is for a category 2 to 3 hurricane. Level 3 response is for a category 4 or 5 hurricane. A higher level response requires both additional personnel and equipment. Response personnel consist of debris, sign, signal and logistics crews.

After a hurricane strikes, TxDOT reminds the public to be aware of hazardous conditions, including high water, downed power lines and other debris. Depending on conditions, TxDOT crews may provide as much as a 24-hour, seven-day-a-week support.

Highway Preparation

In anticipation of an evacuation, TxDOT assesses and activates the most appropriate and safest evacuation methods based on the circumstances. Some examples of these methods are the reduction or elimination of road closures at construction and maintenance projects, the removal of obstacles such as abandoned vehicles and the suspension of construction and road maintenance. TxDOT also implements additional traffic control through construction areas and sweeps road shoulders as part of its preparation process.

Comfort Stations

When a heavy influx of evacuees is expected, TxDOT works with local officials, the Texas Division of The Salvation Army, and other organizations to support operations at TxDOT comfort stations along evacuation routes. These stations, which are located at TxDOT's travel information centers (shown below), have restrooms, water and ice for evacuees.

Evacu-Lanes

When needed, TxDOT coordinates with DPS to activate predesignated highway shoulders along evacuation routes to be used as travel lanes. These shoulders are called evacu-lanes (below left).

Contraflow

TxDOT may also work with DPS to initiate contraflow operations, which reverse the direction of traffic on some highway lanes. Contraflow lane reversal roughly doubles the number of lanes available for evacuation traffic. A designated local elected official must authorize the use of contraflow in the official's jurisdiction before contraflow can be activated.

Debris Removal/Repairs and Restoration

After a hurricane strikes, one of TxDOT's first priorities is to clear state roads of debris so that emergency response operations can proceed. TxDOT's convoys of trucks, front- end loaders, dump trucks, backhoes, sign trucks and signal trucks work to clear roads, remove tree limbs and repair traffic signals and highway signs. TxDOT works with the Texas Public Utility Commission and local power companies to address downed power lines in impacted areas.

TxDOT has several on-call debris removal contracts and monitoring contracts to reduce down-time and facilitate a more efficient re-entry process for the public.

As soon as practicable after an emergency or disaster, TxDOT assesses and repairs damage to roads, bridges and other transportation infrastructure. TxDOT crews look for damage to pavement, guardrails, signal lights, bridge supports and driving surfaces. If a bridge or road is unsafe, TxDOT closes the facility until it can be repaired and notifies the public. Local law enforcement officers assist in patrolling signalized intersections and clearing roads while signs and signals are being repaired.

Medical Evacuations

Communication support for medical evacuations is needed. This is a critical issue. The majority of the EMS companies do not have radio communication devices that are P25 compliant and therefore are not interoperable on the regional radio systems locally or across the state. these companies currently communicate patient information via telephone to receiving hospitals. Upgrading communication capabilities may not be fiscally possible for these organizations. The implementation of contraflow plans during a regional evacuation will be important to supporting the mass movement of citizens. Persons left stranded on a highway between cities for several days face extreme heat, lack of water and eventually fuel, which leads to many personal crisis situations such as death due to exposure, assaults, and onset of illness.

All-Hazards Public Information

TxDOT continuously keeps the public informed of road closures and changing weather conditions. During large-scale disasters, TxDOT provides emergency information through newspapers, television and other methods, warning the traveling public of weather conditions and notifying them of ongoing operations. In the large metro areas throughout the state TxDOT has access to various streaming video cameras to help view weather and traffic conditions in real time to assist in TxDOT's public outreach during disasters.

The Texas road condition and travel information phone line is staffed by trained operators during disaster response. Recorded information on road conditions is also available on a 24- hour basis. The phone number is 1-800-452-9292.

Also, TxDOT's networks of more than 730 dynamic message signs are permanently installed along state-wide roadways, including along evacuation routes. During emergencies, TxDOT makes full use of dynamic message signs across the state to convey up-to-date information about fuel and shelter and to warn the public about danger zones. If necessary, portable, changeable message signs may also be deployed to display information.

State Expenditures & Federal Reimbursement

Federal reimbursement programs for disasters are not designed to cover all TxDOT expenses during emergency or disaster situations. Often disasters and emergencies that require TxDOT assistance do not trigger a federal declaration. Due to the limitations of federal reimbursement

programs, not all activities or locations of those activities are eligible for federal reimbursement even when the activities are prudent and reasonable.

"Federal reimbursement programs for disasters are not designed to cover all TxDOT expenses during emergency or disaster situations."

From the beginning of Fiscal Year 2015 through September 2016, TxDOT incurred $79,657,664 in disaster-related expenses. TxDOT expects to receive $62,911,846 in federally approved reimbursements for the associated disaster-related expenses.

Committee Recommendation:

1. TxDOT's primary focus should continue to respond to emergencies and to restore roadways back to normal operating conditions. Regardless of whether federal reimbursement is available, there may be a need for TxDOT's assistance. TxDOT's decision to respond should not be based on the likelihood of its reimbursement.

2. Potentially dedicate one lane for medical evacuation until all patients requiring medical transportation are confirmed to be out of the region. This action will decrease the risk of a critical patient being stranded for long periods of time in traffic that may not be flowing well. In addition, decreased transport times allow for overall faster evacuation of medical patients.

Charge 2:
Examine the current framework for designating a project as a tolled road. Consider ways to reduce or eliminate the role of tolled roads in providing congestion relief given recent transportation funding measures approved by the Legislature.

Committee Action:

The committee heard testimony related to toll issues on the following dates: March 30, 2016, May 25, 2016, and August 30, 2016. Both written and oral testimony were given by staff from the Texas Department of Transportation.

Background:

HB 2612 was passed during the 84th Legislative Session. Alongside HB 2612, Rider 46 of the Department of Transportation (TxDOT) was passed in the general appropriations act. Both of these actions required TxDOT to conduct a study and submit a report to the Transportation Committees on the feasibility of eliminating toll roads and the payment of debt to accomplish this purpose.

The legislation required the report to: (1) list the amount of debt service on bonds issued for each toll project in this state; (2) identify, based on criteria provided by the Texas Transportation Commission, bonds that would be appropriate for accelerated or complete lump-sum payment of the debt service; and (3) propose a plan to eliminate all toll roads in this state, except for tolls on roads constructed, operated, or maintained only with proceeds from the issuance of bonds by a toll project entity other than the department, by methods including: (a) the accelerated or complete lump-sum payment of debt service on the bonds identified under Subdivision (1); or (b) requiring, as a condition on receipt of state financial assistance, a commitment by a toll project entity to eliminate toll collection on a project for which the financial assistance is provided.

The first step that the Legislature took towards creating the current tolling system that we currently have in the State of Texas was the passage of HB4 in 1953. HB4 created the Texas Turnpike Authority (TTA) and allowed them to pursue toll road and bridge projects throughout the state. The TTA was later abolished in 1997.

The Legislature has taken numerous actions to create the current toll system and framework that we have today in Texas. Some of the major steps were when the Legislature allowed for the creation of Regional Mobility Authorities (RMA), the use of Comprehensive Development Agreements (CDA), and the allowance for the Texas Transportation Commission (TTC) to issue state-owned bonds.

Currently in the State of Texas there are 53 tolled roads and 28 financial tolling systems. Of these roads, there are 671 total center-line tolled miles with 441 miles being non-state publicly-operated tolled roads and 230 miles of state toll roads.

Under Texas law there are now four types of governmental entities that may develop and operate

a toll project. These include: TxDOT, Regional Mobility Authorities, Regional Tollway Authorities, and County Toll Road Authorities. In addition to this, non-governmental entities may also develop and operate a toll road through a Comprehensive Development Agreement.

While over the course of the last 20 years the Legislature has relied on using toll roads as another tool in the box to increase capacity on congested roadways around the state, recently there has been some change in opinion on the necessity for additional or even current tolled roads. HB 2612 was one of the bills focused on removing or reducing the number of tolled miles on Texas highways. The bill required TxDOT to take an inventory of the amount of debt accumulated due to tolling projects and the costs that the state would have to incur to remove these tolls. The report is the first of its kind and the first time the state has done an accounting of what the toll system is really made of.

"Pay as You Go"

At this point in time in Texas, many people have forgotten the “pay as you go” regarding road building, development and maintenance funding of infrastructure that existed for nearly 90 years of the existence of the State Highway Department or as we now know TxDOT, Texas Department of Transportation. As the state’s needs outgrew the reliance on motor fuels tax and registration fees and the resistance to increasing those, the legislature authorized three different bonding programs over the last decade and reliance on expanding toll programs as a way to attempt to bridge the gap. This sometimes overzealous approach has made winners and losers. There was a theory of a divide and conquer attitude that was promoted for too long. However, a region would be able to keep surplus revenues for themselves and not have to share with the rest of the state- or, it was assumed the region would not have to rely on the state DOT. As the total debt of the three bonding programs grew to approximately $17 billion with a total pay back of nearly $31 billion, attention on the big push to toll without a statewide plan started to emerge.

Texas has a fractured system of 28 systems and 53 tolled facilities- operating, for the most part, independently of each other. It should be noted that certain toll projects may or may not have come to fruition even with doubling of the “pay as you go” method the state used to rely on, but those are few. The legislature began in earnest in 2013 to make transportation infrastructure a priority. Proposition 1 bases a dedication of oil and gas tax over certain amounts collected and is now dedicated to transportation. In the 2015 Legislative Session, Proposition 7 was a constitutional amendment taken to the voters. It now dedicates general revenue sales tax over a base amount and a portion of vehicle sales tax over a base amount to also be dedicated to transportation. An important note is that both initiatives restrict the use of these new dollars and they are not to be used for tolled projects. This reflects the sentiment, most believe, of the general public in Texas. TxDOT has increased their 10 year Unified Transportation Plan, UTP, by $38.3 billion in additional cash revenues above what was the normal assumptions going forward.

"An important note is that both initiatives restrict the use of these new dollars and they are not to be used for tolled projects."

Double Taxation?

Concerns still exist over current tolled projects and programs. Gas tax and registration dollars have gone, and are still going into, tolled projects. This is not wholly accepted by all Texans, many of whom believe a tolled project should live on its own and not be subsidized by revenues generated statewide. At the same time most tolled projects that have benefited from mixed revenue sources including motor fuels tax and registrations do not pay back into the statewide system either. Tolled projects generate revenue, some of which is used for bonded indebtedness, but it also pays for operational costs that include toll collection and the varied systems collecting those tolls.

"Gas tax and registration dollars have gone, and are still going into, tolled projects."

TxDOT continues to encourage tolled projects and many regions are planning additional tolled roads. At this writing, an additional 150 miles of tolled or managed lane projects are in the pipeline.

Managed Lanes

Texas has seen an increase of tolled programs referred to as “Managed lanes”. Other similar initiatives mix high occupancy or dedicated commuter lanes if drivers are willing to pay a premium. These lanes are adjacent to non-tolled lanes and are billed as a way to relieve congestion. No definitive studies or information back up this theory, but new projects should provide more data and hopefully those that do not provide relief can be re-engineered to benefit all drivers if not supported by the data. Anecdotally, the opposite has been heard. When looking at the total number of vehicles and the capacity a roadway has, with both non-tolled and tolled lanes being one project, simple math says a larger number is on a the non-tolled portion and a smaller number, passing the vehicles to their right or left are on a “managed lane”. If the opportunity for all vehicular traffic was allowed to use all the lanes, the speed and time savings would not be as dramatic as the premium priced managed lane for those who can afford to pay, but the overall advantage is realized by all drivers. However, some traffic engineers say managed lanes could provide congestion-proof relief in areas with high amounts of latent demand.

Systems Too Large To Fail

There are many impediments to reducing and removing tolled roads in Texas. Very little foresight was given to a day when the public would start to object. Many of the financing packages and agreements in place have little or no ability to be singled out and removed. There was and still is a hurry to build “Systems”- which are too large to fail. As was mentioned, just managing millions of dollars and operating businesses of billing, collection and maintaining toll equipment is a big business. At this writing, it has been difficult to just separate out what those costs are. As you might think, that is information many would not like to share. To attempt for a region or community to removal a toll, it likely will require a wholesale pay off of an entire system. As an Example, SH-130 has a potential to carry a larger capacity of vehicular traffic, taking some pressure off of I-35, but to do so means paying off SH 45 toll project and more. TxDOT blessed a project of over $600 million. If the tolls from that project were to be removed, the State of Texas would be fined $178 million due to the poor planning and structure of the

financing. This poorly structured financing and poorly planned project evidences no consideration of tomorrow and a "just get it out the door" mentality.

Poorly Planned

There are a handful of tolled projects whose continued existence is not supported by logic. We have debt-free tolled roads, or tolled roads serving no purpose in providing congestion relief or safety enhancements. These should be immediately removed. TxDOT and Toll Authorities have done an extremely poor job of looking to the future as it relates to financing and separation of projects. It is very difficult to address congestion relief or removal of underperforming roads because one project is tied to several and an entire system would have to be paid off or refinanced. The State and other entities have built large and complicated systems. SH-130, for example, serves the driving public better as a non-tolled road, an alternative to I-35 for several miles in the corridor between San Antonio and Austin, but to devise a plan to removal the tolls off I-30, the agency would have to pay of SH-45, at approximately $3.19 billion. No thought has been given to the actual purpose of many of our tolled roads. It is clear that collecting tolls and making money of the mail-in-portion and unpaid debt, whether it pays off the toll road or not, doesn't seem to bother many of the toll entities. As long as their systems grow, there will always be a need for back room operations for collections, equipment purchases and financing, toll collection, promotion, an oversight.

"Executive directors of Metropolitan Planning Organizations or Regional Mobility Authorities and their staffs are left alone to package and sell the proposals to boards whose members have not the time or ability to dissect the implications of creating or adding to debt, question effects on congestion relief or safety or the awareness of no turning back."

Even though HB 2612 was to focus on a plan of removal of TxDOT operated tolls, the information gathered is important and essential for state wide consumption. It appears that decisions to develop tolled projects have the "perception" of local public and governmental participation- but there is no evidence that all pertinent information is being disseminated, discussed or questioned. In fact there are multiple funding sources necessary or complicated financing arrangements necessary. Executive directors of Metropolitan Planning Organizations or Regional Mobility Authorities and their staffs are left alone to package and sell the proposals to boards whose members have not the time or ability to dissect the implications of creating or adding to debt, question effects on congestion relief or safety or the awareness of no turning back.

Tolls Have A Purpose

This is not and should not be seen as a total condemnation of all tolled roads. Prior to the legislature's support of additional cash funding of late, the only support was with bonding ability. The Texas Transportation Commission at its August meeting amended their ten year plan to include $38.3 Billion dollars of additional funding above and beyond what was anticipated prior to the last to successful constitutional amendments the public supported. This funding, as stated in the offering to the public is to be used for non-tolled roads, maintenance and development. Any suggestions to shift or use these future monies for toll removal or debt reduction IS NOT a recommendation of the Committee. The HB2612 report totaled the outstanding debt on all toll roads TxDOT publicly operated and Non-TxDOT publicly operated, $7.1 billion and $17.1 Billion respectively. Ending all tolled roads by simply paying off the debt is not a short term viable option.

"Ending all tolled roads by simply paying off the debt is not a short term viable option."

What is clear is that future planned tolled projects should be subject to additional scrutiny and flexibility. Scrutiny in that is this project proposed as a way to grow a system and generate dollars that can't support the road itself but grow the power and authority of the toll operator? Flexibility in that, why only add to a system wide finance portfolio, regardless of the sometimes lower overall interest rates or refinance opportunities, maybe a standalone bond issuance with the ability to directly pay off and remove a toll from a road way that has local or regional support instead of one more perpetual addition to the continual growing all powerful "system"! There is a cost to managing money.

Absorb Maintenance

An agreement or sales pitch of the agency in the past decade was, "well we spend most of our revenue on maintaining the system". This may be a project that by itself is not sufficient to pay for the bonds issued. You still have the maintenance to consider. For the first time the facts are being put into context. The non-tolled system of centerline miles in Texas is 80,252. The total center line miles of the TxDOT operated toll roads in Texas is 230. With a biannual budget of $23.05 billion, the State of Texas could absorb an additional 230 miles with minimal financial impact.

"The non-tolled system of centerline miles in Texas is 80,252. The total center line miles of the TxDOT operated toll roads in Texas is 230."

Could Be Removed

Camino Columbia in South Texas is a road TxDOT purchased after the private developer went bankrupt. The agency has chosen to continue charging a toll for the last 12 years when the agency should have instead opened it up to all vehicular traffic. The road was constructed for a cost of $85 million and TxDOT purchased it for $20 million in 2004. It's a bargain that should be

passed on to the driving public. Cesar Chavez, in El Paso, known as the Border Highway was constructed with state funding, the Regional Mobility Authority operates it as a toll. It is a managed lane project that was a politically driven creation to promote state wide tolling. There are two adjacent non-tolled lanes that carry 94% of all the vehicular traffic utilizing the road. Only 6% of the vehicular traffic uses the managed land and only for two short peak times a day. The managed lane goes unused 21 hours a day, 7 days a week.

While the HB2612 report totaled the outstanding debt on all toll roads TxDOT publicly operated and Non-TxDOT publicly operated, $7.1 billion and $17.1 Billion respectively, ending all tolled roads by simply paying off the debt is not a short term viable option.

Recommendations:

1. Allow other than "system" financing so a future project could be developed as a toll, but remove the toll when the individual debt for a project is retired.
2. Immediately do away with at least two tolled projects: Camino Columbia in Laredo and Cesar Chavez, Loop 375 in El Paso, that have absolutely no debt associated with these projects where toll revenue has been pledged for any bonded indebtedness.
3. Safety and congestion mitigation should be part of any analysis before a project is developed as a toll.
4. Any monies advanced by TxDOT for a tolled project which generates revenue through tolls should pay back advanced monies to the state highway system.
5. A plan should be adopted by the Texas Transportation Commission to absorb the maintenance cost of the state tolled roads into the overall statewide system.

Charge 3:
Review the state's statutory and budgetary requirements for design-build contracts, including cost and quantity restrictions, and consider the effect of removing those restrictions.

Committee Action:

The Committee held a hearing on design-build contracts on May 25, 2016. Both written and oral testimony were provided.

Background:

Design-Build (D-B)

Texas has employed different project delivery methods in recent years in an effort to add capacity, reduce congestion, and improve the effectiveness and efficiency of the state's transportation system. Theses transportation improvement projects are also important to the state's economy.

Definition Of Design-Build In Texas

Many academics and government agencies have attempted to define what the term *design-build* means. Most scholars agree that the design-build method usually involves the greatest level of public-sector control among all P3 delivery method types, with the only significant departure from the traditional design-bid-build method being in how design and construction contracts are devised.
In Texas, due to each design-build project being unique, risk transfers and operations and maintenance responsibility vary. TxDOT maintains project oversight through auditing and monitoring during the design and construction phases. However, any day-to-day design/construction and management control is relinquished. In the traditional design-bid-build, TxDOT retains nearly all risks associated with a project.

Design-Build Delivery Method

A design-build contract allows for right-of-way acquisition, design, construction and maintenance to occur simultaneously, but does not include financial participation from the private sector or a long-term lease or operations of the facility. These agreements offer the following:

- A single point of responsibility for design and construction and concerted collaboration and goal between the design and construction to deliver a project;
- Fixed-priced contracting allowing for cost certainty;
- Expedited project delivery by overlapping portions of design, construction, utility relocations and right-of-way (ROW) acquisition;
- Developer innovation through close coordination between the construction contractor and designer;
- Transference of the responsibility of many of the inherent risks associated with design and construction to the private sector such as cost overruns due to design errors, schedule delays, inclement weather; and

- Reduction of future maintenance costs through different maintenance regime for warranty, capital maintenance agreements and comprehensive maintenance agreements.

Project Identification and Development Process

TxDOT considers several factors when evaluating whether to deliver a project using D-B method or develop the project using the traditional design-bid-build process. Considerations include project risk, cost, delivery schedule, complexity and opportunity for innovation.
TxDOT also evaluates the local region's desire to expedite project delivery and the potential time and cost savings a D-B may allow versus the design-bid-build delivery method. These time and money savings translate to total project cost savings and ultimately a better value to the state.

TxDOT has recently utilized a Project Delivery Decision-Support Tool developed by the University of Texas Center for Transportation Research to help TxDOT document transparent choices driven by project goals and document the supporting rational decisions for use of D-B as a project delivery method.

TxDOT works to identify projects years in advance of their actual funding and construction. TxDOT identifies and evaluates projects based upon funding availability and project readiness criteria. The project development process includes gathering both technical information and direct input from local stakeholders, Metropolitan Planning Organizations and TxDOT districts.

TxDOT's Project Identification and Development Process includes:
- consistent and transparent statewide tool for screening candidate projects early in the development process that satisfy legislative requirements for D-B;
- seamless integration with the existing Unified Transportation Program (UTP) process and makes extensive use of existing UTP data; and
- structured collaborative approach of combining existing data with local stakeholder inputs.

Procurement Process

Sections 223.245 (Request for Qualifications) and 223.246 (Request for Proposals), Texas Transportation Code, define the TxDOT D-B procurement process. TxDOT follows a two-step procurement process:

Step one, the Request for Qualifications (RFQ), begins when the Texas Transportation Commission (commission) approves the release of the RFQ for an identified project for development through a D-B contract. Through the RFQ process, TxDOT solicits qualification statements from proposers. Based on the responses, TxDOT creates a shortlist of the most qualified teams to participate in Step two, the Request for Proposals (RFP). Through the RFQ process, TxDOT: (1) clearly communicates selection criteria and relative weight that TxDOT used in the shortlisting process; (2) reduces the number of proposers to a reasonable number of the most qualified; and (3) reduces the cost of stipend payments due to fewer proposers equating to less stipends. The RFQ process also allows TxDOT to spend more time meeting with shortlisted proposers, which significantly improves best value proposals. The RFQ process

enables TxDOT to focus on the best price and the technical component at the selection phase.

Step two of the procurement process is the RFP. An RFP solicits detailed proposals from shortlisted teams. Proposals must meet requirements outlined in the instructions to proposers, technical provisions, and other related documents. TxDOT is required by law to select the proposer representing the best value (highest-ranked proposer) and attempt to negotiate a contract. Through the RFP process TxDOT: (1) clearly communicates relative weighting and criteria of the technical and cost proposals and the formula by which TxDOT evaluates and ranks the proposers; (2) uses performance-based specifications, which permit industry to offer innovation to reduce project cost and time; (3) allocates roles and responsibilities during project delivery; (4) efficiently allocates risk; and (5) leverages competition, maximizing the use of limited public funding.

Best Value Selection

The Best Value Selection is a process that allows TxDOT to consider price and other key factors, such as qualifications, schedule, quality, innovation savings and performance-based criteria to minimize impacts and enhance the long-term performance and value of the project. TxDOT and the public both benefit when TxDOT selects a best value proposer.

TxDOT follows a rigorous evaluation procedure to limit subjectivity. Prior to receiving proposals, the Evaluation and Selection Recommendation Committee (ESRC) with the assistance of the Select Advisory Committee (SAC) review the evaluation methodology and establish the weighting for the qualitative ratings. Specific subcommittees are established and are responsible for varying aspects of the procurement process.

Contract Negotiation

TxDOT has a standard template for D-B contracts. Most contracts are similar based on versions of previous contracts with project specifics and lessons learned incorporated. In many cases, TxDOT customizes contracts based on each project’s unique challenges, evolving market conditions and the appropriate assignment of risk.

Section 223.242(b-1), Transportation Code, provides that a D-B contract may include a maintenance agreement requiring a D-B contractor to maintain a project for an initial term of no longer than five years.

Legislative Authority

Texas law contains provisions that define the design-build contracting method and limit how governmental agencies can enter into the process. Texas Government Code Section 2269.353, for example, authorizes a governmental entity to "use the design-build method for the construction, rehabilitation, alteration, or repair" of road and highway projects but stipulates minimum requirements that governmental agencies must follow in soliciting and awarding such contracts. Provisions in Texas Transportation Code Sections 223 and 371 also stipulate how and under what conditions the design-build contracting method can be used to deliver transportation

projects.

Contrasting Design-Build and Comprehensive Development Agreement Legislation

Texas state law authorizes two major types of design-build project delivery methods: design-build and comprehensive development agreement (CDA) design-build. Few significant differences exist between the two delivery methods in practice. However, a few differences (e.g., differences in the level of design to be completed at the final RFP) are noteworthy. TxDOT has summarized the major differences between design-build and CDA legislation.

- Private financing is allowed for CDAs (Texas Transportation Code [TTC] 223 Subchapter E).
- Private financing is not allowed for DB (TTC Subchapter F).
- CDA projects are listed and defined by statutes under Senate Bill 1730 (83rd Legislative Session) and other legislative sessions, and have additional contract types. The recent 84th Legislative Session did not grant CDA extention or additional projects.

Evolution Of Design-Build Legislation In Texas

During the 80th Legislation Session, lawmakers passed SB 792. This legislation prohibited most CDA projects. During the 82nd Legislative Session, lawmakers passed SB 1420 (otherwise known as the TxDOT Sunset Bill). This legislation is significant because it clarifies the meaning of a design-build project and establishes a framework by which TxDOT shall keep the legislature informed of project progress. This legislation also required the Texas Transportation Commission to adopt rules for considering a design-build project. Specifically, the legislation requires the Texas Transportation Commission to address project size, complexity, time constraints for delivery, staff training requirements, and other factors.

As was the case during previous sessions, during the 84th Legislative Session, lawmakers passed legislation that made several changes to how governmental agencies enter into highway design-build agreements. HB 20 (which amends parts of Section 223 of the TTC) increases the threshold by which TxDOT can enter into a design-build contract for a highway project from $50 million to $150 million. In addition, Rider 47 in the state's fiscal year 2016-2017 budget further increases this minimum threshold to $250 million. DB Projects are not listed in statutes but are in fact limited to three per year with a project cost estimate of $150 million or more. The response from the Office of Attorney General through opinion on differences between HB20 and Rider 47 indicates that $150 million prevails instead of $250 million. TxDOT, however, has indicated that it will abide by the $250 million higher minimum. HB 20 now prohibits TxDOT from using the DB method for the construction, expansion, extension, rehabilitation, alteration, or repair of a highway project if the project is substantially designed.

"DB Projects are not listed in statutes but are in fact limited to three per year with a project cost estimate of $150 million or more. The response from the Office of Attorney General through opinion on differences between HB20 and Rider 47 indicates that $150 million prevails instead of $250 million. TxDOT, however, has indicated that it will abide by the $250 million higher minimum."

Within TxDOT, the primary division responsible for administering design-build projects is the Project Finance, Debt and Strategic Contracts Division (PFD). Within this division, the Strategic Contracts Management Section focuses primarily on procurement and program administration. This section supports the districts in the delivery of design and construction, and operations and maintenance. Major design-build project activities performed under the districts and PFD include:

- Right-of-way acquisition.
- Selection and management of procurement engineering consultants.
- Traffic analysis.
- Project feasibility analysis in consideration of available funds and proposed project design.
- Life-cycle cost analyses.
- Procurement of design-build contractors (which can include pre-procurement plant, documentation, federal and local agency coordination, stakeholder participation, advertising, qualifications, shortlisting, proposal, evaluation and selection, etc.).
- Coordination of the execution of the design-build agreement.
- Operations and maintenance.

In addition, design-build contracts can include maintenance obligations with the design-build contractor after substantial completion of the project. To facilitate the pricing of the work, bonding, and insurance, TxDOT has included maintenance and operating obligations in a separate agreement executed by the design-build contractor concurrent with commercial close of the design-build contract. PFD typically includes one of three types of maintenance agreements.

Changes To Design-Build (D-B) Authority From The 84TH (2015) Legislature

House Bill 20 (HB 20), 84R, 2015, amended Section 223.242, Texas Transportation Code, to specify that TxDOT may enter into D-B contracts for a highway project with a construction cost estimate of $150 million or more, rather than $50 million or more under the previous law.1 The bill repealed the August 31, 2015, expiration date off the provision that prohibited TxDOT from entering into more than three design-build contracts in a fiscal year. Therefore, under current law TxDOT is prohibited from entering into more than three contracts each fiscal year.

In addition, HB 20 prohibits TxDOT from using the D-B method for the construction, expansion, extension, rehabilitation, alteration or repair of a highway project if the project is substantially designed by TxDOT or another entity other than the D-B contractor. HB 20 also prohibits TxDOT from including more than one highway project in a D-B contract and stipulates that a maintenance agreement requiring a D-B contractor to maintain a project may have an initial term of no longer than five years.

On April 28, 2016, the commission proposed amendments relating to D-B contracts, to be codified under Title 43, Texas Administrative Code, Part 1, to implement the changes made by House Bill 20, 84th Legislature.

Committee Recommendation:

1. It may be time for the Legislature to look at giving the Department of Transportation more flexibility with design-build (DB), while continuing the no private-sector financial contribution. Tight, specific project delivery and evaluation parameters should be considered more important than construction dollar minimums.

Charge 4:
Review the functions of all departments in the Texas Department of Transportation related to alternative modes of transportation and make recommendations to improve their efficiency.

Committee Action:

The Committee held a hearing on August 30, 2016. Written and oral testimony were provided.

Background:

Transportation Network Companies

Since 2010, a number of private companies have entered the transportation services market by offering new travel options that use digital technology to provide an on-demand and highly automated private ride service. TNCs, as these companies are frequently classified, have expanded rapidly in cities worldwide with the support of consumers and investors.

TNCs have faced criticism and even protests from opponents and taxicab representatives who argue that TNCs are operating illegally outside of otherwise highly regulated markets. TNCs and their proponents contend that TNCs provide innovative services that do not fit traditional approaches to transportation regulation.

Key policy questions that emerged from a review of state and municipal TNC legislation include whether to regulate TNCs; if so, at what level of government; how to harmonize TNC policies with existing taxi and transportation policies; and how to address public safety without stifling market competition.

What is a Transportation Network Company?

TNCs' primary business offering is to provide transportation services using digital technologies that connect passengers to drivers who use their personal vehicles to provide rides. This service is also called ride sourcing or ride hailing.

The definition of a TNC is itself a point of debate: TNCs have argued that they are not transportation providers, and opponents have argued that TNCs provide the same service as taxi companies. In Texas law (House Bill [HB] 1733, 84th Regular Session, codified as new Chapter 1954, Insurance Code), a TNC is defined as "a corporation, partnership, sole proprietorship, or other entity operating in this state that uses a digital network to connect a transportation network company rider to a transportation network company driver for a prearranged ride." In other states, TNC definitions typically include the following elements:

- Use of a digital platform or software application, typically accessed via smartphone.
- A prearranged ride between drivers and passengers.
- A driver using a personal vehicle to provide transportation.

Many cities and some states have existing laws to regulate private transportation services. Policies in some regions classify TNCs as a subset of the vehicles-for-hire industry, which includes taxis, car services, and limousines.

Prohibit Cash Payments
Sixteen states explicitly restrict TNCs from accepting cash payments.

Provide Electronic Receipt to Passengers
Twenty-four states require TNCs to provide an electronic receipt to a passenger that, typically, must include the origin and destination of the trip, the trip's total time and distance, and an itemized account of the total fare paid by the rider.

Display Trade Dress of Emblem on TNC Vehicle
Ten states require that a trade dress, company emblem, or logo be displayed on the TNC vehicle while in operation (see Figure 3 for an example). Similarly, taxi companies are typically required to meet specific requirements to post company and fare information on and in a taxi vehicle.

Impose Limitation on TNC Driver Hours
Four states restrict the number of hours that a TNC driver can operate. For example, drivers are limited to 12 or 13 hours of work during a 24-hour period. Although a small proportion of states enacted this rule for TNCs, taxi drivers and other transportation providers are typically held to similar standards.

Disclose Dynamic Pricing and Require Passenger's Consent
Dynamic pricing is a technique that Uber and Lyft developed as part of their business models to manage the supply of available drivers with the demand for rides. Both companies inform passengers and provide an opportunity to verify acceptance of the rate increase through the app in all U.S. markets as company policy.

Limit Dynamic Pricing in State of Emergency
Three states including Washington, D.C., place a limitation on a TNC's use of dynamic, or surge, pricing during a declared state of emergency.

Passenger Protections

Several elements of state TNC legislation aim to protect the rights of passengers using the services.

Implement Nondiscrimination Policy
Twenty-four states including Washington, D.C., require that a TNC must have or adopt a nondiscrimination policy. In addition, it was common for states to require TNCs to comply with existing nondiscrimination laws such as accommodation of service animals. Some states include geographic discrimination in the regulations, while others do not.
Protect Passengers' Personally Identifying Information
Twelve states require that TNCs follow a policy to safeguard TNC passengers' personally identifying information (PII). Typically, TNCs may not disclose a passenger's PII to a third

party, except in certain circumstances including:

- The customer knowingly consents.
- It is required by law.
- It is needed to investigate a complaint or violation against a TNC or TNC driver (41).

TNC apps enable many of the convenient features that draw users to the services but also allow access to the personal and location information of passengers.

Provide Passenger Opportunity to Request Wheelchair-Accessible Ride

Eighteen states required that TNCs have an accessibility policy.

How TNC Services Work

TNCs provide ride-sourcing services that operate much like traditional taxis: a traveler requests a ride and pays for a driver who provides that service. Potential passengers must download a TNC's application (typically for free) to a smartphone, tablet, or computer and register with a valid credit card. The TNC's software application facilitates the ride request, connects passengers to a driver, uses global positioning systems (GPS) to navigate to the pick-up and drop- off locations, and shares the vehicle's progress and estimated arrival with both driver and passenger. After the trip is complete, the application automatically charges the fare to the linked credit card, logs the trip, and generates a receipt.

Transportation Network Company Policy Review

The emergence of TNCs has generated uncertainty about the legal status of TNC services, criticism from the taxicab industry, and public safety concerns. TNCs have negotiated and clashed with policy makers as both parties navigate this new industry. Regulators and members of the public have made allegations that TNCs are illegally operating as unlicensed taxicabs, vehicles for hire, or other regulated transportation services across the country.

Shortly after ride-sourcing services launched in 2012, the California Public Utilities Commission (CPUC) sent cease-and-desist letters to three TNCs and fined them $20,000 each for operating unlicensed businesses that provide prearranged passenger transportation (17). In 2013, CPUC released the first state-level ruling to legalize TNC services statewide under its existing authority and define the term transportation network company. Since then, many states and cities have passed legislation authorizing TNC operations. TNCs continue to face challenges about the legality, safety, and equity of their operations.

TNC Policy in Texas

TNCs operate in dozens of Texas cities, both with and without local ordinances that regulate their services. TNCs have also suspended service in several Texas cities where ordinances were enacted. In May 2016, Uber and Lyft suspended operations in Austin after a public vote affirmed an ordinance that required fingerprint-based background checks, sparking further debate about the role of state and local policy makers in TNC operations.

As of May 2016, Texas lawmakers have passed one bill to regulate TNC operations in one regard: insurance. HB 1733 implemented a set of insurance liability requirements for TNCs and TNC drivers, effective January 1, 2016. The law requires the following:

- TNC drivers must have primary automobile insurance that allows them to

operate as TNC drivers. The TNC, TNC driver, or a combination can maintain the automobile insurance.

- When a TNC driver is logged in but not yet engaged in a ride ("between" rides), insurance must provide:
  - Minimum liability coverage of:
    - $50,000 for bodily injury/death per person per incident.
    - $100,000 for bodily injury/death per person per incident.
    - $25,000 for damage to or destruction of property of others per incident.
  - Uninsured/underinsured motorist coverage as required by Texas insurance code.
  - Personal injury protection coverage as required by Texas insurance code.
- From the time a driver accepts a ride until the passenger departs ("engaged" in ride), insurance must provide minimum coverage of:
  - $1 million total liability for death, bodily injury, and property damage per incident.
  - Uninsured/underinsured motorist coverage as required by Texas insurance code.
  - Personal injury protection coverage as required by Texas insurance code.
- TNC drivers must carry proof of insurance and provide that proof, and must disclose whether they were logged in and/or engaged in a prearranged ride.
- If a TNC driver's coverage lapses or is insufficient, a TNC shall provide the required coverage.
- TNCs must disclose to TNC drivers the limitations of the TNC insurance coverage and limitations, and must inform drivers that a driver's personal auto policy may not cover TNC services.

U.S. State-Level TNC Legislation

Permits and Fees
Twenty-four states require TNCs to apply for a permit to operate. Permitting agencies include state public utility regulators and transportation agencies.

Insurance and Financial Responsibility
Lawmakers in all 34 states and Washington, D.C., addressed insurance requirements and financial liability for TNCs and TNC drivers. Four states passed bills in 2015 that focused, almost exclusively, on insurance requirements: Minnesota, Louisiana, Washington, and Texas.

Eight states mention the employment classification of TNC drivers in legislation but do not specifically require TNCs to meet new or existing workers compensation standards. Indiana and Ohio explicitly state in statute that TNC drivers are not employees of the TNC. North Carolina lawmakers wrote that the "presumption that TNC drivers are contractors" can be refuted through a test of common law determining employment status. Colorado ruled that the director may, by

rule, determine if TNCs have an obligation to provide or offer workers compensation insurance for TNC drivers.

The classification of TNC drivers as contractors or employees can have implications for the benefits that drivers receive and the liability that TNCs sustain. While a job as a TNC driver may provide flexibility and independence, it may also allow companies to evade existing requirements designed to provide protections for workers such as participation in Social Security or catastrophic insurance coverage.

Driver and Vehicle Requirements

Thirty out of 35 states outline a set of requirements for drivers and/or require a driver application. Lawmakers typically limit who can be a TNC driver to ensure safety, but the specific requirements vary by state. Policies commonly require drivers to be at least a certain minimum age (ranging from 18 to 21 years) and have a valid driver's license, valid vehicle registration, and proof of automobile liability insurance. Current policies for Lyft and Uber require drivers to be 21 years or older; have a license, registration, and personal automobile insurance; comply with vehicle standards; and pass a background check.

"Policies commonly require drivers to be at least a certain minimum age (ranging from 18 to 21 years) and have a valid driver's license, valid vehicle registration, and proof of automobile liability insurance."

Thirty states require TNCs to have a background check conducted for a TNC driver before, or within a specified amount of time after, that driver is allowed to operate. State TNC legislation varies in terms of who conducts the background check, what databases are reviewed, and what disqualifies a driver from work eligibility. Different standards and expectations for background checks among TNCs, policy makers, the taxicab industry, and the public have led to some controversy.

Most states require a background check that evaluates applicants' history based on their name and identification. This typically includes a local and national criminal background check, conducted by a TNC or a third-party provider, that includes a multistate/multijurisdictional criminal records database, the national sex offender public database, and a driving history report. Most states specify violations that would exclude an individual from being permitted to operate as a TNC driver in the state.

TNCs have strongly opposed fingerprint-based background checks on the grounds that the company screening processes in place are adequate, if not superior. Uber halted operations in Kansas after a bill passed that required a background check by the Kansas Bureau of Investigation. This bill was vetoed by the governor and replaced by a new bill, which has since become law, that allows Uber to conduct background checks and face civil lawsuits if they hire ineligible drivers. Uber supported the compromise bill and resumed operations in Kansas within minutes of its signing. After the City Council in Austin, Texas, approved fingerprint-based background checks in May 2016, Uber and Lyft suspended operations in the city.

Prohibit Drug and Alcohol Use (Zero Tolerance Policy)

Twenty-six states require a TNC to establish and enforce a zero tolerance policy that prohibits drug and alcohol use for an individual operating as a TNC driver. Many states also specify that a TNC post the policy on its website or application, enable riders to report a complaint of a driver suspected of violating the zero tolerance policy, and conduct an investigation of every reported complaint.

Complete Vehicle Safety Inspection or Compliance Requirement
Twenty-three states require either a vehicle inspection or specify that a TNC is responsible for ensuring that TNC vehicles comply with a vehicle safety and emissions standard.

Operational Requirements

Thirty states institute requirements related to the operation of TNC services. Some of these restrictions differentiate TNCs from traditional taxicabs, such as prohibitions on street hails and cash payments, which have led to challenges from the taxicab industry. Several operational requirements reinforce features already employed by TNCs as part of their business model, such as the use of a TNC app to facilitate rides and payment.

Prohibit Street Hails
Twenty-three states explicitly prevent TNCs from accepting any solicitation for a ride that does not come through the TNC application. This policy serves to codify one difference in operations between TNCs and taxis.

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Regulatory and Rule-Making Authority

Establish State Preemption of Local Authority
Twenty-one states include a policy to preempt or limit the authority of local municipalities to regulate, tax, or impose rules on TNCs.

Establish Airport Rule-Making Authority
Thirteen states authorize airports to impose rules, restrictions, and fees on TNCs that operate on their property.

Municipal-Level TNC Regulation in Texas

Ten cities in Texas passed ordinances to regulate TNCs between late 2014 and May 2016. Several cities where TNCs already operate, including Bryan, El Paso, and Lubbock, are planning or considering ordinances in 2016. Still other Texas cities, including Amarillo and Waco, have TNCs operating in their regions but have not yet passed bills to legalize or regulate their activity. Fort Worth passed an ordinance in 2015 to approve a resolution to amend the Code of Rules and

Regulations of the Dallas/Fort Worth International Airport Board to incorporate TNCs under the airport's existing authority. This ordinance, which does not directly regulate TNCs, is not included in the following review of TNC ordinances.

Among the 10 Texas cities with TNC ordinances, several have faced withdrawal of services from Uber and/or Lyft related to disagreements over policies such as background checks, reporting requirements, and vehicle restrictions. In March 2015, San Antonio amended the city's TNC ordinance, and Uber and Lyft suspended operations in the city. In October 2015, the City Council passed a temporary, compromise agreement, and Uber and Lyft returned to San Antonio. TNCs suspended operations in Austin, Corpus Christi, Galveston, and Midland in 2016. The other five cities passed TNC ordinances, and TNCs continue to operate in their jurisdictions.
Table 4 presents a summary of 26 TNC policies enacted by municipal ordinance in the same policy areas addressed in state-level TNC legislation. Some notable findings include:

- Permits are required in 10 Texas cities. Most fees are an annual lump sum, but several cities request a percentage of gross receipts: 2 percent in Corpus Christi and Houston. Five cities require an additional license or permit for each TNC driver, ranging in cost from $5 to $120 per vehicle.
- Six cities require that TNCs disclose the use of dynamic pricing to passengers. At the state level, this was required by only Nebraska. Four cities limit TNCs' ability to use dynamic pricing during "abnormal market disruptions" that result in a declaration of a state of emergency.
- In four Texas cities, TNCs Uber and/or Lyft halted operations because of disagreements about the nature of background check requirements. Houston successfully negotiated with TNCs to implement fingerprint-based background checks, but no other Texas municipality has implemented such a policy without facing opposition from TNCs. In early 2016, Corpus Christi and Galveston enacted TNC ordinances that required fingerprint-based background checks that led Uber to suspend operations. After the Austin City Council updated the city's TNC ordinance to include fingerprint background checks and other requirements, a lobby group with the support of TNCs forced a special election to redact the ordinance and replace it with policies that had TNC support. On May 7, 2016, Austin voters voted against the TNC-supported ordinance. Uber and Lyft "paused" operations in Austin in response.
- Many of the same policy areas and issues are addressed at the municipal level as at the state level. Municipal ordinances also included two policies to address the behavior of drivers in the roadways and a TNC vehicle age restriction

Taxicab Regulation

Taxicabs have traditionally been regulated at the local level, while TNCs are increasingly being regulated at the state level. TNCs and taxicab services exhibit some differences but serve similar, or at least overlapping, markets. In most regions, TNCs and taxicabs face different policies such as permitting requirements, insurance requirements, background checks, fare regulation, and fleet size restrictions.
Some states and cities are already considering TNC regulations in the context of existing taxi or vehicle-for-hire laws.

TxDOT Rural and Urban Transit

TxDOT supports public transportation programs in the rural and small to medium sized urban areas of Texas through a variety of state and federal funding programs. TxDOT's Public Transportation Division allocates funds, ensures compliance with program rules and provides technical assistance to sub-recipients of these programs. These programs address needs in more than 97 percent of the state's land area, which is home to 40 percent of the state's population. TxDOT funding focuses predominately on areas of the state with less than 200,000 in population. Areas over 200,000 receive most of their funding directly from the Federal Transit Administration (FTA).

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Rural Transit Districts (RTD) operate in 246 of the 254 counties in Texas, and Urban Transit Districts (UTD) operating in 30 of the state's 34 urbanized areas. In 2015, rural transit operations provided more than six million trips and urban transit districts provided over 24 million trips, operating a basic mobility network that principally takes transit dependent individuals to work, school, healthcare and shopping destinations. In many cases these programs partner with others to provide congestion relief and other more specialized services.

TxDOT administers a variety of state and federal grant programs supporting these operations and others in Texas. RTDs are county or multi-county based political subdivisions of the state. Decisions to form, join or change participation in an RTD are made by individual county commissioners courts. UTDs are created by action of the applicable city councils. TxDOT has no formal decision making role in either case but provides technical support and, on request, advice or recommendations to local decision makers.

TxDOT promotes public transportation projects in rural and urban areas statewide through a combination of formula and competitively selected project awards. Sub-recipients include rural and urban transportation providers, communities, non-profit organizations and other political subdivisions in the development and delivery of public transportation services to the general public. These funds provide for the allocation and monitoring of FTA grant program funds and state public transportation grant funds. It also includes training and technical assistance, support of regional planning for coordination of services as well as monitoring of state, federal and local legislation and regulations affecting public transportation. In each fiscal year, about 97% of the appropriation is expended in grants and 3% is used for administration, compliance support and planning activities.

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TxDOT's transit programs provide the funding authority for public transportation projects through the distribution of federal apportioned dollars and state funds. These programs include:

FTA §5311 Rural Formula Grants

- Assists with the transportation needs of individuals living in rural areas and supports rural transit activities in four categories: (1) training, (2) technical assistance, (3) research, and (4) related support services.
- Include the federal Intercity Bus Program, which funds vital links among otherwise-isolated rural communities and the rest of the nation.
- Apportioned to TxDOT by formula.
- Funds are allocated by the Texas Transportation Commission (Commission) to eligible recipients by formula, including rural population, land area and relative performance.

FTA §5310 Seniors and Disabled Capital Assistance Program

- Provides funds for enhanced mobility of seniors and individuals with disabilities, which are apportioned to TxDOT by formula.
- Funds are allocated by the Commission to eligible recipients for capital and operating projects. (The allocation is a formula based upon the TxDOT District's relative population of seniors and people with disabilities plus a locally-based cooperative process.)

FTA §5339 Bus and Bus Facilities Program

- Assists with the capital needs of transit systems.
- Is a fixed amount of $1,750,000 apportioned to each state.
- Funds are allocated based upon relative share of transit vehicle condition.

FTA §5304 Statewide Planning Program

- Assists with public transportation planning needs.
- Funds are apportioned to TxDOT by formula.
- Funds are allocated in support of regional coordinated public transportation planning and other planning and technical support projects.

State Transit Formula Program

- Funds are allocated to eligible rural recipients by formula, including rural population, land area and relative performance. (The formula for eligible urban recipients includes urban population and relative performance.)
- Supports rural and eligible urbanized public transportation.

Major Projects and Programs

TIGER Grants

In 2015, TxDOT submitted a successful proposal for a U.S. Department of Transportation TIGER grant call, and was awarded $20.8 million. These funds along with other prioritized funding identified by TxDOT are being used to replace 325 rural transit vehicles and to complete construction of four facilities serving rural areas.

EGrants

TxDOT recently expanded its EGrants grant management application system (used for other TxDOT grant programs) to include public transportation grants administered by TxDOT's Public Transportation Division. EGrants allows TxDOT to better comply with increasing requirements for grant management, to streamline project application and program requirements for sub-recipients and to provide for more efficient management of public transportation dollars.

Other Issues

Currently there is not sufficient funding to replace worn-out transit vehicles, procure vehicles for expanding service or construct or maintain transit facilities. The FTA §5339 rural formula is funded at $1,750,000 per year for each state in the nation, and the same program for small urban areas is based upon population and service provided. For Texas rural transit, that amount covers less than 10 percent of the annual transit vehicle wear- and-tear depreciation from providing rural transit service. This lack of funding causes some rural transit districts to choose between needed capital projects and operating expenses, such as driver salaries, benefits, insurance and fuel, to fulfil its obligations to provide service to their customers. The FTA §5339 program for urban areas is also inadequate to replace aging vehicles and facilities.

There are limited options for generating local funding support for rural transit. In addition to the need for additional capital funds, rural and urban transit districts are severely financially constrained regarding expanding service to meet their local needs.

TxDOT Rail Division

In 2009, the Texas Sunset Advisory Commission (Sunset Commission) adopted a recommendation to require TxDOT to establish a "Rail Transportation Division" to ensure that rail became an integral part of the transportation system for Texas. The recommendation called for coordinating and overseeing projects approved and funded through the Texas Rail Relocation and Improvement Fund, developing planning for improved rail passenger and freight service, and coordinating state, federal and private funding for further rail development in Texas.

"During 2014, Texas railroads moved an estimated 400 million tons of cargo, the equivalent of 21 million truck trips."

Although TxDOT's sunset bill did not pass during the 2009 legislative session, TxDOT implemented many of the Sunset Commission's recommendations, one of those being the creation of a Rail Division. TxDOT's Rail Division became fully operational on December 1, 2009, and is responsible for facilitating the continuing development, improvement and maintenance of a safe, reliable and integrated freight and passenger rail system for the state. TxDOT's current 2016-2017 rail related appropriations are approximately $42 million for then biennium.

Commerce and quality of life in Texas depend on the daily delivery of millions of tons of goods shipped by a network of highways, railways, waterways, ports, airports, pipelines and land ports-of-entry. The state's economy relies upon a multimodal freight transportation system to efficiently connect local, regional, national and global markets. Texas has more than 10,000

track miles of freight rail—more than any other state in the nation. Texas is served by three Class I railroads and 46 Class III (short line) railroads. Texas' short line railroads operate on nearly 2,000 miles of track providing critical links and serve as last- mile connectors and are an important alternative mode of transportation to the highway system. During 2014, Texas railroads moved an estimated 400 million tons of cargo, the equivalent of 21 million truck trips.

Passenger Rail

To facilitate the development and interconnectivity of passenger rail systems in the state, TxDOT is statutorily required to coordinate activities regarding the planning, construction, operation and maintenance of a statewide passenger rail system. As part of this effort, TxDOT is also required to maintain and annually update TxDOT's long-term plan for a statewide passenger rail system.2 The plan includes a description of existing and proposed passenger rail systems, information about the status of passenger rail systems under construction, an analysis of potential interconnectivity issues, and ridership projections for existing and proposed passenger rail systems.

Amtrak (Heartland Flyer)
Since 2007, TxDOT has funded approximately 50 percent of the annual operating losses of Amtrak's Heartland Flyer passenger rail service between Fort Worth, Texas and Oklahoma City, Oklahoma, with the state of Oklahoma funding the remainder. The rail service offers one daily trip in each direction and has seen a continued decline in ridership from In fiscal year (FY) 2016 TxDOT budgeted $2,464,894 for continued support of the Heartland Flyer. However, funding for the 2016 Heartland Flyer service was depleted by July of 2016, leaving two months of service remaining in the federal fiscal year. The Oklahoma Department of Transportation amended their contract with Amtrak to cover Texas' shortfall and continue operation of the service.

Major Passenger Rail Projects & Programs

South Orient Railroad (SORR)
The SORR is a TxDOT owned rail facility that is approximately 391 miles in length, which extends from the San Angelo Junction in Coleman County, through San Angelo to Presidio at the Texas - Mexico border (See Appendix). TxDOT, in partnership with Texas Pacifico and the city of San Angelo, has rehabilitated of the line from the San Angelo Junction to the west side of San Angelo through several projects that began in 2009.4 These rehabilitation projects have enabled the rail line to operate competitively with parallel truck routes and resulted in new businesses in the region using rail transportation for the movement of their goods.

TxDOT currently leases the SORR to Texas Pacifico on an annual fee plus a per carload charge. The lease also requires that the rail assets be returned to the state in the same or better condition as they existed at the time of the execution or during any subsequent enhancements. These rehabilitation projects have led to annual carload increase from an average of 2,031 (2001 – 2009) to 25,903 carloads in 2015. The 83rd Texas Legislature (2013) appropriated $5 million for additional rehabilitation work, which is currently under construction. Those funds are being repaid by Texas Pacifico through an annual carload fee. The 84th Legislature (2015) authorized TxDOT to reuse the carload fees for additional rehabilitation work, essentially creating a

"revolving" account for continued rehabilitation.

One major SORR issue that is currently being addressed is the damage caused by two fires to the International Rail Bridge. The first was south of the levee at Presidio on February 29, 2008, and the second was north of the levee at Presidio on March 1, 2009. The current lease requires Texas Pacifico to reconstruct the International Rail Bridge. Texas Pacifico presented to TxDOT plans for reconstruction on April 14, 2016. TxDOT will perform agency coordination to clear the project environmentally and apply for the necessary permits from the U.S. Coast Guard and the U.S. Army Corps of Engineers.

The project will include rebuilding the international bridge crossing and selective structural and drainage improvements, which will allow Texas Pacifico to provide international rail service and to interchange some international traffic with a class 1 railroad (the Union Pacific) at Paisano Junction, located 75 miles north of the border.

Tower 55
Tower 55 is an at-grade rail intersection in Fort Worth where major freight and passenger rail routes converge into two north-south main lines crossing two east-west main lines. This intersection was the second worse bottleneck in the U.S. rail network, and with nearly 100 trains crossing daily, it was operating at or above 90 percent of its volume capacity in 2013. Congestion at Tower 55 negatively impacted the regional economy, air quality and liveability within Fort Worth. TxDOT, North Central Texas Council of Governments (NCTCOG), Union Pacific, BNSF Railway and the City of Fort Worth worked together to secure a TIGER grant to make Tower 55 enhancements. For freight movement, the additional capacity and running speeds will continue to accommodate future volume growth, help mitigate train delays and reduce emissions that otherwise would be caused by rail and truck traffic.

Committee Recommendation:

Rail Recommendations:

- Closely monitor the reconstruction of the Texas Pacifico's requirement to reconstruct the International Rail Bridge.
- Have TxDOT determine if continued financial support of the Heartland Flyer is of economic and social benefit to Texas.

TNC's Recommendations:

- Any statewide attempt to pre-empt local ordinances should ensure safety, security for passengers, drivers and pedestrians.
- Equity concerns for those who do not have smart phones or credit cards.
- Level playing field for taxi and other transportation providers who are being regulated by local ordinances needs to be considered.
- Background checks need to be consistent across taxi and other transportation providers.

Rural and Urban Transit Recommendations:

- Amending statute to allow the Commission the flexibility by rule to use state public transportation grant funds on a limited (transitional) basis to address the impacts of the

current decennial census urbanized area boundary determinations that resulted in rural areas previously eligible for state funds to have to establish service coverage agreements with existing transit authorities within the urbanized area. For example, last census New Braunfels went from a rural service area to being included within the San Antonio urbanized area and needed transitional funding to continue services until they could finalize a service coverage agreement with VIA.

- Creating a new category of transit districts in statute and securing additional funding for the new category would allow TxDOT and the Commission to recognize those urbanized areas with established urban transit districts whose population has grown beyond 200,000 but have not yet chosen to exercise their ability under current statute to re-form themselves as a transit authority with local sales taxing authority. By providing a dedicated category and funding for districts over 200,000 in population, additional funding would be available for urban transit districts currently receiving state funds. This would also mitigate impacts from additional transit districts anticipated to become eligible for urban transit district funding after the next census.

Charge 5:
Evaluate local transportation funding mechanisms authorized by the state, such as transportation reinvestment zones, to determine their effectiveness. Identify methods for local entities to utilize these tools to improve congestion.

Committee Action:

The Committee held a hearing on May 25, 2016 with written and oral testimony provided by witnesses.

Background:

Overview Of TRZS

TRZs are an innovative tool for generating transportation project funding by capturing and leveraging the economic growth that results from a transportation project. Development of new projects, and the expansion or improvement of existing projects, often spurs increased economic development in areas around a project. This economic development can be in the form of construction of new homes and businesses in previously undeveloped areas or through the redevelopment of existing areas which, as a result of a project, experience improved access to homes and businesses. As development or redevelopment occurs, property values in those areas increase. A TRZ allows a municipality, county, or a port authority to designate a geographic area around a transportation project and to capture the increase in ad valorem tax revenues resulting from the increase in property values for use in connection with the financing of the project. In this manner the economic growth attributable to the project is used to support the funding of the project.

A TRZ does not result in a tax increase — it is merely a specific dedication of the incremental tax revenues generated within the boundaries of a TRZ. A TRZ operates in a similar manner to a tax increment reinvestment zone ("TIRZ"), formed under Chapter 311 of the Texas Tax Code, and the related tax increment financing that is often used by local governments to support economic development within an area. However a TRZ is focused specifically on transportation project funding, and the process for forming and administering a TRZ is much simpler than for a TIRZ.

"A TRZ does not result in a tax increase"

The statutes governing TRZs are contained in Sections 222.105-.111 of the Texas Transportation Code. While there are general provisions applicable to all TRZs, there are separate sections addressing the formation and specific authority of municipal, county, and port authority TRZs.

Municipal TRZs

Municipal TRZs are governed primarily by Sec. 222.106 (the "Municipal TRZ Statute"), and one of the provisions that section contains is specific authority for municipalities to collect a tax increment and to pledge all or part of that increment to secure debt issued by the municipality. Unlike counties, municipalities have specific constitutional and statutory authority to engage in

tax increment financing. See TEX. CONST. art VIII, § 1-g(b). This represents a very powerful financing option for municipalities, and while it is not the only way in which TRZ revenues may be utilized, it is an option that allows a municipality to generate significant funding to dedicate to a transportation project.

County TRZs

The formation and operation of County TRZs is primarily governed by Sec. 222.107 (the "County TRZ Statute"). As noted above, counties do not have the constitutional authority to issue bonds secured by TRZ revenues because article VIII, section 1-g(b) of the Texas Constitution only grants that authority to "an incorporated city or town". But despite the lack of authority to issue bonds, it was previously believed that counties could nonetheless collect the tax increment and use it in a "pay-as-you-go" manner. Recently, as a result of Texas Attorney General Opinion KP-0004 (see additional discussion below), the belief that counties can collect and use tax increments in any manner has been called into question. In other words, the authority of counties to collect the increment and assign it to a developer or local government partner to contribute to the costs of a project no longer seems to be assured. A proposed constitutional amendment to "fix" the county debt issuance problem (and give counties the same authority as municipalities) was on the ballot in 2011, but the proposition failed.

Notwithstanding the limitations on leveraging, prior to Attorney General Opinion KP-0004, County TRZs had become increasingly viewed as a viable option for generating local funding for transportation projects. While the constitutional impediment to a county's ability to sell bonds secured by TRZ revenues undermined the maximum potential benefit of a County TRZ, the ability to collect and utilize TRZ revenues as direct contributions to support project funding had still proven valuable for certain projects. Now, the entire County TRZ concept has been called into question.

Although there is no official repository for data regarding the number of County TRZs which have been formed, it appears that there are approximately 15-20 in existence, with several others under active consideration. TxDOT has been active in providing assistance to municipalities and counties interested in using a TRZ in connection with a project also receiving TxDOT funding.

Significant Events Affecting TRZs

80th Legislature (2007)

- SB 1266 (Brimer) - Initial legislation creating the TRZ structure for counties and municipalities. TRZs were only available if a municipality or county was receiving pass-through funding from TxDOT for a transportation project.

82nd Legislature (2011)

- HB 563 (Pickett) - Amended the TRZ statutes to de-couple TRZs from the pass-through program; provided an alternative collection mechanism for county TRZs; allowed a municipality or county to capture the sales tax increment generated in a TRZ (but only in connection with a project receiving pass-through funding); prohibited reductions in traditional transportation funding to local governments as a result of a TRZ.

Attorney General Opinions (2012)

- Opinion No. GA-0953 (June 18, 2012) - The opinion recognized that a county may pay into a tax increment fund associated with a TIRZ established under Chapter 311 of the Texas Tax Code but may not pledge the tax increment to secure increment financing bonds.

- Opinion No. GA-0981 (Dec. 10, 2012) - The opinion concluded that a county's issuance of tax increment financing bonds secured by a pledge of the county's ad valorem tax increment would be subject to constitutional challenge as violating the equal and uniform taxation requirement in article VIII, section l(a) of the Texas Constitution.

83rd Legislature (2013)

- SB 1110 (Nichols) - Provided for the formation of a TRZ in an adjacent jurisdiction to support a project located outside of the TRZ boundaries; de-coupled the use of sales tax TRZs from the pass-through program; clarified that a TRZ may be formed for "one or more" projects within a zone; clarified language regarding the commitment of TRZ revenues to satisfy contractual obligations.

- SB 971 (Williams) - Amended the TRZ statutes by authorizing port authorities and certain navigation districts to form a TRZ after finding that the area within the TRZ is unproductive and underdeveloped and that forming the TRZ would "improve the security, movement, and intermodal transportation of cargo or passengers in commerce and trade".

- SB 1747 (Uresti) - Provided for the establishment of a Transportation Infrastructure Fund ("TIF") to address repair of roads affected by energy sector activity; established a County Energy Transportation Reinvestment Zone ("CETRZ") program modeled on the current TRZ framework; required counties seeking to access the TIF to form a CETRZ.

Attorney General Opinion (2014)

- Opinion No. GA-1076 (Aug. 14, 2014) - Concluded that a county's use of tax increment financing to fund transportation projects in a CETRZ could be subject to challenge under the equal and uniform taxation requirement in article VIII, section l(a) of the Texas Constitution and that a county creating a CETRZ may not place general revenue funds into the tax increment account.

Attorney General Opinion (2015)

- Opinion No. KP-0004 (Feb. 26, 2015) - Suggests that counties' ability to form a tax increment financing zone and collect a tax increment, even if no bonds are issued could be subject to challenge. This opinion appears to apply even if the tax increment funds are used to support the costs of a project that benefits the entire county.

Implications of AG Opinion KP-0004

While it has long been clear that counties (unlike cities) do not have the authority to issue debt

secured by a tax increment, KP-0004 goes farther than prior Attorney General opinions and suggests that counties may not be authorized to form a tax increment financing zone and collect a tax increment, even if no bonds are issued and regardless of whether the tax increment funds are used to support the costs of a project that benefits the entire county. The opinion concluded that: "absent a constitutional amendment, it is likely a court would conclude that a county may not form a CETRZ, a TIRZ, or a TRZ, to the extent that doing so utilizes a captured increment of ad valorem taxes to fund a county-created tax increment reinvestment zone."

Impacts on County TRZs

In addition to the conclusion that it is likely a court would find that a county may not form a TRZ and use a property tax increment to support a project, even though the increment is not pledged to secure debt, the opinion further suggests that counties cannot constitutionally commit this type of dedicated funding source to a project funding which might be part of a local match or which otherwise facilitates securing other funds.

The basis for the conclusion in KP-0004 was the equal and uniform taxation requirement in article VIII, section l(a) of the Texas Constitution. The equal and uniform taxation requirement is premised on the notion that property owners within a reinvestment zone pay a lower rate of taxes to be used for general county purposes because the tax increment collected from within the zone is earmarked for improvements that benefit property only within the zone. In other words, because such funds are not available for the general purposes of the county, property within the zone is not being taxed equally and uniformly with property outside the zone (even though the tax rate and amount collected remains the same).

Even though transportation projects may have county-wide benefits, the Attorney General continued to assert the all property located within a county creating a zone is not taxed alike, despite the possibility that a given transportation project in a TRZ may have impacts beyond the zone and throughout a county. See Tex. Att'y Gen. Op. No. KP-0004 (2016) at 6. The opinion closed in stating that "[a]s this office concluded in Opinions GA-0981 and GA-1076, this taxation disparity is the infirmity under article VIII, section l(a), which requires taxation to be equal and uniform---a mandate we cannot ignore." Id.

Impacts on CETRZs

A significant impact of the opinion is to potentially render counties affected by energy-sector activities unable to comply with requirements necessary to access $225 million in the Transportation Infrastructure Fund ("TIF") that the 83rd Legislature, in S.B. 1747 created to assist those Texas counties that have experienced significant damage to county road networks as a result of the movement of heavy equipment and supplies to support increased oil and gas activity. The formation of CETRZs was authorized in SB 1747 as a means for counties to raise matching funds required under the TIF program. In fact, counties seeking to access TIF funds are required to form a CETRZ and must pledge 100% of the captured appraised value of real property located in the CETRZ to transportation infrastructure projects. See TEX. TRANSP. CODE §222.1071(c).

KP-0004 suggests that forming a CETRZ, capturing the associated tax increment, and depositing the funds in a tax increment account to be used for transportation infrastructure projects (as required by statute) is unconstitutional, yet doing so is a requirement for counties to access the TIF. It therefore appears, under the reasoning of KP-0004, that a county cannot access the TIF without violating the constitution.

Recommendations

1. TRZs are a useful tool for local governments to commit funding for a transportation project without raising taxes. County TRZs face legal impediments which make their use (and the use of CETRZs) potentially subject to legal challenge. The Legislature should consider a constitutional amendment to address the constitutional issue and allow counties to fully utilize the potential of TRZs (and to be able to use CETRZs to access the TIF), and should consider any other statutory changes that can address the issues raised in Tex. Att'y Gen. Op. No. KP-0004 (2016).
2. A constitutional amendment that would provide the counties the ability to use TRZ's by removing uniform taxation requirement for funding or financial backing (for bonds issued) for infrastructure projects.

Charge 6:
Study the current statutory requirements for utility relocation and recommend modifications that will minimize delay times while protecting taxpayers and ratepayers.

Committee Action

The committee heard testimony related to utility relocation on the following dates: August 11, 2015; May 25, 2016; August 30, 2016. Written and oral testimony was given by staff from the Texas Department of Transportation.

Background

Currently, TxDOT's Utility Accommodation Policy prescribes allowances of public utilities within state rights of way (ROW) based on legal authority to operate and maintain their facilities. The right to occupy state ROW is premised with an understanding that both TxDOT and utilities use public lands in delivery of services for mutual benefit. Utilities right to occupy is subordinate to the state ROW for transportation purposes and requires utilities to adjust or relocate in a timely manner to allow the construction of the highway improvement project.

The process of identifying utility relocation conflicts in the preliminary phases of a project can be a lengthy and complex process due to coordination efforts among different entities. These efforts require a partnership between TxDOT and the utility industry in order to successfully move the projects forward to the construction phase.

Procedures for Accommodation
TxDOT's utility relocation overarching philosophy includes:

- Avoidance of conflicts
- Minimize impacts if possible
- Relocate if necessary

TxDOT lets, or accepts bids, from 900 to 1,000 projects annually, the majority of which do not have utility conflicts or issues. However, 20 percent of these projects, on average, continue to have outstanding utility adjustments and 10 percent have outstanding right of way to purchase or to clear, at the time of letting. TxDOT obtains the expected relocation clear dates from the utility, which then becomes a commitment from the utility for the work to be completed by the specified date. Contract provisions are then added to notify prospective bidders of the remaining utility relocations. These provisions place the contractor on notice to work around these known utility conflict areas and include an expected clear date provided by the utility.

When a conflict is identified, TxDOT and the utility jointly evaluate various design options to avoid the relocation of the utility. However, during the evaluation of design options it may be determined that conflicts cannot be eliminated. In these cases, both the utility and TxDOT will investigate options to minimize the impact of the conflict. Lastly, the utility will relocate to eliminate the transportation improvement conflict. This procedure is routinely accomplished prior to the construction phase of the project.

Challenges

As previously stated, the process can be complex and lengthy to resolve all utility concerns on transportation improvement projects, particularly along congested corridors common in urban and metropolitan areas of the state. The problems of utility clearance generally fall into three categories:

- Utilities not fully or effectively involved in early project planning and coordination
- Utilities have capital budget, material or labor limitations
- Some utilities will not begin work until the TxDOT contractor begins work

One or a combination of these points generally causes delays in transportation project delivery. The first point is the responsibility of both TxDOT and the utility to engage and communicate early in the project development activities. (Figure 1)

The second point is also jointly shared by TxDOT and the utility. Either late engagement in early coordination of the project or internal utility financial constraints cause delays. The third point considers delays by the utility to relocate and perform their work, which causes late clearances for the TxDOT contractor. During Fiscal Year (FY) 13, FY 14 and FY 15, TxDOT has paid highway contractors $30 million in additional costs and delay claims due to untimely utility relocations. Of this amount, **one** utility company is responsible for $23.1 million. At the same time, all of the utility companies collectively cost the state $30 million received in reimbursements. Of this $30 million, the **one** utility that was solely responsible for costing the state $23.1 million received $53.6 million in reimbursements. During this same period, the time delays caused prolonged safety risks to approximately 11,000 days for construction workers and the traveling public. These numbers reflect data through August 2016 and are for FY 2013, 14, 15, and 16. During FY 13-16, an additional $27 million in delay claims were identified.

"TxDOT has paid highway contractors $30 million in additional costs and delay claims"

The majority of utility relocation conflicts occur in the metropolitan areas of Texas, with the exception to Beaumont, Lufkin and Waco Districts of TxDOT. Metropolitan areas have a larger volume of construction work impacting more utilities in congested right of way corridors. Beaumont, Lufkin and Waco Districts have had significant reconstruction projects on IH 10, US 59 and IH 35 corridors. (See Appendix A for a complete list of transportation projects impacted by additional costs and delays associated with utility relocations.)

Reimbursable Utilities

Transportation Code, §203.092 outlines reimbursement eligibility for a utility's expenses relating to the relocation of their facility due to a highway project. If a utility is located within an Interstate Highway ROW or the utility has a compensable property interest in the ROW, relocations are eligible for 100% reimbursable expenses. If a utility is located within the ROW of a toll project, such relocations are entitled to a 50 percent reimbursement of their eligible expenses.

Oftentimes, on non-interstate projects, eligibility for reimbursement becomes a shared cost due to utility system upgrades or relocation activities extend outside the easement or direct construction conflict area. These complex situations require careful coordination and collaboration with the utility to clearly determine compliance with eligibility rules.
Reimbursable utility relocations are authorized by an agreement on eligible items of work and schedule for completion.

Transportation Code, §203.094(b) states that TxDOT may reduce the reimbursement to the utility by 10 percent for each 30-day period or portion of a 30-day period by which the relocation exceeds the limit specified in the relocation agreement. If TxDOT determines that a delay in relocation is the result of circumstances beyond the control of the utility, full reimbursement shall be paid. Unfortunately, this remedy requires a utility agreement to be executed, and in many cases, the untimely utility does not sign a utility agreement until their schedule is more certain considering procurement of manufactured materials and labor for installation. Oftentimes, multiple utilities are untimely making it difficult for TxDOT to implement Transportation Code, 203.094(b).

Unfortunately, this remedy requires a utility agreement to be executed, and in many cases, the untimely utility does not sign a utility agreement

On average, reimbursements total approximately $100 million per year on TxDOT projects. The process involves a public utility determining reimbursement eligibility in partnership with TxDOT, performing the relocation activity, and then submitting invoices to TxDOT for payment.

Non-Reimbursable Utilities

Non-reimbursable utilities are authorized for relocation by a permit issued by TxDOT. The permit sets forth the utility's timeline for relocation.

Utility Industry Workshop

On September 14, 2015, TxDOT hosted a Utility Industry Workshop. The workshop was well attended by utilities and respective associations. Over the course of the workshop discussions were focused on the issues of construction delays and additional costs to our customers. Open communication and early engagement of utilities in the transportation project development process was also emphasized.

During the workshop, TxDOT staff discussed best practices, which included monthly coordination meetings for the metropolitan areas of the state. Among other best practices identified at the workshop, quarterly meetings were recommended for urban areas, while rural areas could meet on an as-needed basis. It was recommended that for most metropolitan areas and a number of other TxDOT districts, TxDOT staff host monthly coordination meetings with utilities. In addition to these best practices, TxDOT Administration offered to issue direction to District Engineers to initiate these coordination meetings with utilities in order to involve them in long-range project and corridor planning. TxDOT Administration noted that it is important to involve utilities during preliminary engineering phases of project development and have open

discussions on specific issues to minimize the relocation activities on each project in the district portfolio.

General consensus was reached that these information sharing opportunities will greatly improve coordination efforts between utilities and TxDOT.

The Path Forward

The path forward to improved coordination between TxDOT and utilities can be described as immediate and mid-term actions. Prescribed utility coordination meetings and periodic state-wide industry meetings with TxDOT are the best processes that need immediate action to manage construction delays and additional costs.

Mid-term improvements in procedures and processes are described herein. TxDOT will minimize the number of projects let without clear right of way and utility relocations. As stated, 10 percent of projects let are not clear with ROW acquisition and 20 percent are not clear of utility relocations. This practice has exasperated timeliness of utility relocations and is within TxDOT's control assuming there is industry cooperation. Better collaboration is paramount to success of the proposed model.

The standard operating procedures on major transportation projects includes the acquiring of ROW two years prior to letting. (Figure 2) This two-year period allows TxDOT designers to complete detailed construction plans while utilities begin their relocation efforts. Projects clear of ROW and utilities provides contractors unobstructed access to the project with a more efficient and streamlined sequencing of work. In this model, construction time will improve and minimize work zone risks for the traveling public and construction workers.

An additional benefit of this proposed model is to allow more A+B bidding on major transportation projects. Traditionally, projects are let with simply the A component which are the bid items of work. A+B bidding allows time to be bid thereby encouraging the contractors to bid construction duration. Following this model, the project is awarded to the contractor with the lowest aggregate bid of work items plus shortest construction duration.

Implementation of this model will not occur rapidly due to letting obligations already underway. Therefore, this method of improving coordination and timeliness of utility relocations falls in the mid-term action definition. However, TxDOT can immediately begin to incorporate this model into our business practices and performance measures.

As stated earlier, this model is contingent upon utility industry cooperation to use the available time prior to letting to relocate utilities. If utilities wait until the TxDOT contractor begins construction then this model fails to deliver the transportation improvements to the traveling public in a timely and efficient manner. Discussion among industry leaders at the recent workshop acknowledged this as being an issue.

The most fundamental incentive is the realization that TxDOT's customers are the same as customers of the utility industry. With this common ground, all parties involved should be

focused on the goals of timely delivery of infrastructure improvements. The Texas public deserves our best efforts in this process.

TxDOT does have the authority to make loans to utilities from the State Infrastructure Banks (SIB). The SIB was authorized in 1995, as part of the National Highway Designation Act (NHS) to help accelerate needed mobility improvements through a variety of financial assistance options made to local entities through state transportation departments. Texas was chosen as one of the 10 states to test the pilot program and the Texas Legislature authorized TxDOT to administer the SIB program in 1997. The overall goal of the SIB program is to provide innovative financing methods to communities to assist them in meeting their infrastructure needs. The SIB program allows borrowers to access capital funds at market interest rates with favorable terms. This has been advantageous to smaller utilities and municipalities who may have capital difficulty to relocate their facilities.

TxDOT continues to be willing to include utility relocations in our transportation contracts. This is fairly common in our metropolitan areas with water, wastewater and communication utilities. Specifications for each utility must be prepared and included in the contract for bidding purposes. TxDOT encourages this type of partnering because it places control of the utility relocation process largely in the prime contractor's responsibility. Additionally, many prime contractors will subcontract the utility relocation work to the same companies performing the work for the utility owner.

Transportation Code, §203.0935(e) provides TxDOT with the authority to relocate an uncooperative utility after due diligence and proper notice is provided to the utility. It is possible to seek restitution for TxDOT expenses through legal means. TxDOT may request the Office of Attorney General to seek an injunction requiring the utility company to relocate its property, if the utility fails to cooperate in a timely relocation. This legal remedy takes time to resolve and is rarely used in normal practice as TxDOT uses every opportunity to resolve these differences.

Transportation Code, §203.0922 allows the Texas Transportation Commission to enter into an agreement with a utility whereby the utility can prepay TxDOT for anticipated relocation expenses at 75 percent of the costs and be eligible for 100 percent reimbursement. The program allows TxDOT to hold the prepayment funds in an account to be applied for reimbursement to the utility at the time relocation occurs. This program has not been utilized for two main reasons. First, the utility must have the prepayment capital funds available which is not usually the case and second, a formal agreement must be executed.

TxDOT does not have statutory recourse to pass along construction delay damages for an untimely relocation. Nor does TxDOT have the authority to withhold utility permits if a utility is uncooperative or unwilling to relocate due to statutory authority of utilities to be within public right of way.

The Bigger Problem

The documented delays cost the state millions of dollars, and time delays affect the driving public as well as businesses, economies, and safety and congestion of local governments. The committee received information from Counties and Municipal governments complaining of similar situations. These delays and costs are carried by the same tax payer. Local government should have some of the same remedies as will be recommended for the state of Texas.

> ***"Local governments are having similar problems."***

Committee Recommendation

1. TxDOT should continue to hold workshops and early coordination on utility relocation. This is helping with certain utility companies.

2. Give TxDOT the authority to enter into third party contracts to do the actual utility relocation for those utilities that refuse to do the relocation in a timely manner and bill the utility for the work.

3. TxDOT should have the ability to withhold permits for any other utility work in any other part of the state when, delays are not for good cause.

4. Give local government the same ability as State Government with remedies for those utility companies who continue to ignore the delays and costs they cause that are not justified.

Charge 7:
Review the areas currently designated as oversize or overweight corridors. Make recommendations to ensure that consistent measures are used to determine fee amounts, bond requirements, and gross weights allowable. Identify measures that may be taken to protect the quality of the roadway.

Committee Action:

The Committee held a hearing on September 28, 2016 and written and oral testimony were provided.

Background:

In 1997, SB 1276 authorized port authorities in border counties adjacent to Mexico and the Gulf of Mexico to collect a fee for issuing single-trip permits for oversize or overweight trucks on designated corridors. Subsequent to SB 1276, certain marine ports along the Texas coast, and counties adjacent to the Texas-Mexico border received similar but separate statutory authorization to issue single-trip oversize/overweight permits on designated corridors through legislation. Single-trip permits on designated corridors allow businesses to access ports or nearby foreign trade zones efficiently and to avoid the cost of repacking containers to meet the 80,000 pound gross vehicle weight or 20,000 pound single axle weight tolerance on non-interstate roads in Texas.

Each corridor is authorized by an individual piece of legislation, and unlike similarly authorized local infrastructure methods, such as utility districts, there are no minimum requirements for local notice before consideration of legislation, designation, assessment and collection of fees, or performance measurement. The result is wide variation among the various corridors.

Designating Oversize/Overweight Corridors

Corridors designated to date have been created through passage of individual corridor-specific legislation. Legislation proposing to designate a corridor is typically analyzed by the Texas Department of Transportation for potential physical impacts associated with an assumed number of vehicles using the proposed corridor. Specifically, TxDOT estimates the portion of the amortized pavement and bridge costs attributable to the overweight loads. TxDOT also estimates the operation and maintenance costs imposed by the assumed number of oversize/overweight vehicles that will use the corridor. TxDOT is consistent in analyzing the different corridors in both the agency's traffic assumptions and the structural integrity of the pavements. TxDOT typically assumes a structural number of 3 -- fair quality -- for a flexible pavement and considers the thickness of the concrete in the case of concrete pavements. Based on this information, TxDOT estimates the percentage of the total loadings attributable to the overweight vehicles over the service life of the corridor. This percentage is then applied to the amortized cost to estimate the infrastructure impacts. This informal review is not mandated and does not consider

"This informal review is not mandated and does not consider safety or economic impacts."

safety or economic impacts. When legislation is passed, TxDOT updates the Texas Administrative Code to reflect the changes in law. As such, Texas Transportation Code Section 623 and 43 Texas Administrative Code Part 1 (Chapter 28) list all current oversize/overweight corridors in Texas.

TxDOT subsequently enters into an agreement with the entities interested in pursuing the issuance of permits on the designated corridors in accordance with the Texas Administrative Code and the Transportation Code. These agreements also state TxDOT's requirements in terms of the electronic transfer of fees collected, information on the number of permits sold, access to permit information, document retention policies, and agreement termination dates. Based on TxDOT's analysis of the anticipated pavement and bridge consumption impacts, the agency will also recommend a permit fee that supports the maintenance and preservation of the corridor on a cost neutral basis, considering only pavement amortization, maintenance and operations, and bridge consumption.

Oversize/Overweight Vehicle Corridors in Texas

Only the Port of Brownsville, Port Freeport, and Hidalgo County Regional Mobility Authority are currently issuing oversize/overweight permits. The Port of Harlingen and Chambers County are currently working with TxDOT on the agreements that will allow them to issue permits.

Oversize/overweight corridors have been created through the passage of individual corridor specific legislation and without a formal requirement for quantification or evaluation of the economic, safety, and infrastructure impacts associated with the designation of these corridors. TxDOT may not be consulted by those seeking corridor designation and there is no formal monitoring of the performance of corridors once designated.

"…there is no formal monitoring of the performance of corridors once designated."

Oversize/Overweight Permitting

Transporting a vehicle and load greater than 8.5 feet wide and 14 feet high or exceeding legal length limits, or greater than 80,000 pounds total weight requires an oversize/overweight permit from the Motor Carrier Division (MCD) of the Texas Department of Motor Vehicles (TxDMV). TxDMV issues oversize/overweight permits to protect the traveling public, transported loads, and highway pavement, bridges, and overpasses. Texas issues more oversize/overweight permits than any other state. Many of the permit types issued require the permittee to be a registered motor carrier or have a permit bond on file with TxDMV. The statutory authority for oversize/overweight permits is primarily found in Chapter 623 of the Transportation Code with some related sections in Chapters 621 and 622.

"Texas issues more oversize/overweight permits than any other state."

Customers can apply for oversize/overweight permits, pay fees and route trucks for most vehicles and loads 24 hours a day by using the TxDMV's Texas Permitting and Routing Optimization System (TxPROS). Currently, more than half of all permits issued by the TxDMV

are self-issued by customers through TxPROS. The system has dramatically reduced permit routing and issuance time, allowing TxDMV to meet increasing demand for services, enhance safety for the traveling public, and improve tracking of obstacles to oversize/overweight routing. The division also issues permits that require transport of the load on a set, predetermined route. TxPROS analyzes and generates a custom route with turn-by-turn directions for drivers.

Division permit officers issue permits through TxPROS for extra-long or high loads or super-heavy loads such as construction and oilfield equipment, bridge beams, generators, transformers, buildings, and wind tower components. Many of these loads require special routing to avoid overhead structures, weak bridges, construction zones, and other obstructions.

Summary of Oversize/Overweight Permit Revenues

Prior to FY 2017, permit revenues were deposited into either the State Highway Fund (SHF), the General Revenue (GR) fund or sent to Texas counties. Starting Sept. 1, 2016, permit revenues are now divided between the SHF, GR, Texas counties, and the newly created TxDMV Fund to recover the costs of issuing such permits. The TxDMV Fund is now the method of financing for almost all TxDMV appropriations. The TxDMV Fund was intended to be created starting FY 2014 but that did not occur due to funds consolidation. However, the revenues identified for deposit to the TxDMV Fund were redirected as of September 2, 2013 from the SHF to GR. Therefore, oversize/overweight permit revenue that is now deposited to the TxDMV Fund was previously being deposited into GR. To provide consistency about where revenues were and are now deposited, the amounts deposited to GR that would have gone to TxDMV fund in FY 2014 through FY 2016 are shown as TxDMV Fund deposits for those years.

Each oversize/overweight permit has its own fee structure and breakdown of where the collected fees are deposited, but for many of the permits 50% of each fee collected is deposited into GR, 45% is deposited into SHF and the remaining 5% goes to the TxDMV fund. There are three permits for which the TxDMV Fund receives no revenue: the Annual Utility Pole, the Ready-Mixed Concrete, and the Annual Timber permits. For a few permit types, 10% of the fee revenue is deposited into the TxDMV Fund and the other 90% is deposited into SHF. For Weight Tolerance, Ready-Mixed Concrete, and Annual Timber permits, the portion of fees deposited into GR is solely for distribution to the counties in which the permit will be eligible for use on county roads as selected by the permit purchaser.

Oversize/Overweight Enforcement

The Oversize/Overweight Enforcement Program was developed and implemented to meet statutory requirements and to support TxDMV goals.

Enforcement

The Oversize/Overweight Enforcement Program depends heavily on law enforcement and the citations issued roadside for OS/OW violations. TxDMV investigators review these citations and schedule an audit of a motor carrier showing excessive oversize/overweight citations. The audit will determine if the motor carrier has been violating the laws beyond those instances where citations were issued. If violations are found, the TxDMV can take administrative action,

including written warnings, administrative penalties, and revocation of oversize/overweight permits. Law enforcement has assisted the TxDMV in identifying significant areas of concern, such as the oil patch and logging operations, and individual companies that are problematic in regard to compliance with oversize/overweight laws. It is important to note that Section 621.503 of the Transportation Code allows the TxDMV to pursue an administrative enforcement action against a loader, in addition to the motor carrier, if the loader causes the vehicle to be loaded too heavy. Section 623.272 allows the same enforcement options if a shipper provides false information on a certificate of weight.

FY 2016 TxDMV Enforcement Activities

During FY 2016, the TxDMV oversize/overweight enforcement team worked with the Commercial Vehicle Information Systems Network (CVISN) Team to finalize the design and location of the Advance Bridge Collision Warning Project. This project is an early warning device that alerts motor carriers that a vehicle is too high for an approaching bridge and gives them a safe egress for their load before reaching the bridge. The oversize/overweight team has also continued to work with the CVISN Team on the Virtual Weigh Station project. These two projects will provide invaluable data for enforcement on oversize and overweight loads. During FY 2016, the TxDMV enforcement team conducted 5 Texas Commission on Law Enforcement certified Size & Weight training classes involving more than 60 municipal, county and state law enforcement personnel.

The TXDMV investigative staff uses the DPS violations database to identify repeat offenders or those motor carriers whose use of the Texas roadways poses a significant safety hazard as identified by DPS. The TxDMV staff also conducted investigations of “bridge hits” and incidents where the highways have been damaged.

Potential Metrics

To date, roads have been designated as OS/OW corridors without a formal requirement for promoters/proponents to quantify the economic, safety, and infrastructure impacts associated with OS/OW vehicles and, oftentimes, without consulting TxDOT. This is important because the potential benefits that OS/OW special permit corridors bring to local trade and economic development, the costs imposed on the transportation infrastructure, and safety conditions differ based on the characteristics of the freight traffic, a host of market and network connectivity factors,a nd the attributes of the OS/OW route and local transportation network. Furthermore, there is no formal monitoring of the performance of OS/OW corridors once designated.

Participants in a workshop conducted by Texas A&M's Transportation Institute identified the following four potential metrics to inform the designation of OS/OW corridors in Texas:

- The estimated/expected economic impacts of the OS/OW corridor.
- The safety of the OS/OW corridor as measured using available crash statistics.
- The estimated infrastructure impacts (both pavements and bridges) associated with OS/OW vehicles using the proposed corridor.
- The local support for the proposed OS/OW corridor.

Three potential metrics could inform the monitoring of OS/OW corridors in Texas: the economic, safety, and infrastructure impacts of the corridors. The permit data currently collected are adequate to estimate the economic and infrastructure impacts of designated OS/OW corridors post implementation. Periodic quantification of the economic impacts of the designated OS/OW corridors could demonstrate to the public the benefits of these corridors. Similarly, by tracking the infrastructure impacts of the designated OS/OW corridors, TxDOT could determine if the permit fees cover the pavement and bridge costs imposed by OS/OW trucks using the corridor. In terms of safety impacts, monitoring available crash rates provides insight into the safety of OS/OW corridors.

Federal Commercial Vehicle Regulation

The Federal Government has enacted and administers national Commercial Motor Vehicle (CMV) legal size and weight limits as documented in Title 23 United States Code (U.S.C.) 127, U.S.C. Title 49, Section 31115, Title 23 Code of Federal Regulations (CFR) CFR 657 and Title 23 CFR 658. These laws establish nationwide standard conventional truck size and maximum weight limits that facilitate interstate commerce and enforcement requirements. In addition, other Code and Regulations have set maximum size and weight limits for vehicles operating on the Eisenhower Interstate Highway (IH) System.

It is important to understand federal standard size and weight limits and the purpose of federally designated highway systems when considering State Oversize/Overweight (OS/OW) permitting practices. This is because there are no Federal Laws specifically establishing nation-wide OS/OW vehicle limits, nor does the Federal Government issue OS/OW permits. Regarding vehicles travelling on the federally funded system, the states enact and enforce laws and issue OS/OW permits in compliance with Federal legal size and weight Code, regulations, definitions, regulatory exemptions and the Federal Bridge Formula (FBF - 1975). Pavement consumption is related to axle and axle group weights. Bridge consumption is a function of both axle /axle group weights and the spacing between axles. The FBF is used to calculate allowable axle and axle group loads for a specified axle spacing to protect overstressing of bridges. Short heavy trucks generally result in higher bridge consumption rates than a long truck of the same weight.

> ***"The states enact and enforce laws and issue OS/OW permits in compliance with Federal legal size and weight Code."***

The National (Truck) Network (referred to in literature as the NN or NTN)

Federal Code and rules apply to the Interstate Highway System and other Federal Aid System routes that comprise the NTN which was created in 1982 by the Surface Transportation Assistance Act (STAA). The NTN was developed to establish national limits on truck size and weight to facilitate interstate commerce. The NTN differs in extent and purpose from the NHS, which was created more than a decade later by the National Highway System Designation Act of 1995. The NTN and NHS also differ from the National Highway Freight Network (NHFN) which was created by the Fixing America's Surface Transportation (FAST) Act of December 4,

2015.

STAA baseline combinations include a truck tractor coupled with one semitrailer up to 48 feet in length or a tractor coupled with a 28-foot semitrailer and 28-foot trailer combination (STAA Double), with truck widths up to 102 inches. Every state must permit operation of these baseline configurations on designated portions of the NTN.

However, 48-feet is no longer the maximum length of a single trailer. Twenty-five states (including Texas) allow single 53-foot trailers without special permits and an additional 3 states permit 53-foot trailers subject to further limits. Texas allows up to 59-foot semi- trailers to operate based on 'grandfathered' state laws though 53-foot trailers are by far the most common. In addition, STAA established maximum truck weight limits for the Interstate Highway System.

- Gross Vehicle Weight: 80,000 lbs (maximum allowable weight of the truck and cargo)
- Single axle weight: 20,000 lbs
- Tandem axle weight: 34,000 lbs (2 closely spaced axles that act as an axle group)

It is important to note that though Texas and other states are required to permit and enforce the Federal maximum truck size and weights on the Interstate Highway System. Not every state has adopted the Federal maximum allowable truck size and weights on other portions of their highway networks. Other states enforce lower and higher maximum weight limits on non-Interstate portions of their state highway systems.

Texas enforces Federal allowable size and weight limits on both the Federal and State funded highway systems.

The Federal Bridge Formula further establishes weight limits for closely spaced axle groups and axle spacing.

- Tridem axle weight: 42,000 lbs (3 closely spaced axles that act as an axle group)
- Quad axle weight: 50,000 lbs (4 closely spaced axles that act as an axle group)

Texas Administrative Code (TAC) 621.11 4(b) incorporates the FBF exemption provided in U.S.C. 127 (2). In addition, though Texas has adopted the Federal Bridge Formula, Texas State law enacted by SB 89 March 18, 1975, sections (3) and (4) states:

> "(3)Nothing in this section shall be construed as permitting size or weight limits on the national system of interstate and defense highways in this state in excess of those permitted under 23 USC 127.
> (4)Nothing in this section shall be construed to deny the operation of any vehicle or combination of vehicles that could be lawfully operated upon the highways and roads of this state as of December 16, 1974."

These allowable loads and spacings guide Texas Department of Motor Vehicles (TxDMV) Motor Carrier Division (MCD) when considering permit weight and spacing requirements and by the Texas Department of Public Safety (DPS) during truck size and weight enforcement activities.

The National Highway System (NHS)

The NHS has been expanded since its original creation and now comprises a system of 223,668 miles of roadway (18,722 miles in Texas) important to the nation's economy, defense and mobility. Key NHS routes were initially designated in the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and finalized by the National Highway System Act of 1995. Texas has passed state statutes and exemptions and/or issues permits that allow OS/OW vehicles to operate on the non-Interstate portion of the NHS.

Federal Oversight of State Size and Weight Enforcement

Federal Legislation and policy governing the size and weight and safe operation of vehicles are administered by the Federal Highway Administration (FHWA) and the Federal Motor Carrier Safety Administration (FMCSA).

The FHWA requires each state to certify that it is enforcing its truck size and weight laws and that the state is complying with the regulatory freeze established by ISTEA in June 21, 1991 (known as the 'ISTEA Freeze'). The Freeze restricted future use of Longer Combination Vehicles (LCVs) by states that did not already allow LCV operations prior to this date. State laws pertaining to vehicle size and weight in place before the ISTEA Freeze were 'grandfathered', permitting continued operation of LCVs, which incorporate specific OS/OW vehicle configurations. However, states that did not have these statutes prior to June, 1991 are not permitted to operate LCVs on the Federally funded system; this restriction includes Texas. Other laws governing OS/OW vehicle operations vary by states based on additional 'grandfathered' state statutes included in Federal law as exemptions.

Failure to certify or enforce truck size and weights on highways that were designated Federal-aid Primary, Federal-aid Secondary, or Federal-aid Urban systems prior to October 1, 1991 will result in sanctions including a 10% reduction in NHS funding for the next fiscal year. Failure to enforce IH System size and weight laws may lead to sanctions including a 100% reduction in NHS funding for the next fiscal year. If state laws are found to be inconsistent with Federal Regulations, sanctions may include a federal suit in court for injunctions.

Federal Exemptions to legal size and weight

Pre-existing state laws

Federal law also provides truck size or weight exemptions applicable to specific U.S. states, to specific highway routes, or to particular types of vehicles or cargo. In part, these exemptions are based on state truck size and weight laws that existed prior to national implementation of lower size or weight limits by the Federal Government. In certain cases, higher state size and weight limits that existed prior to lower national limits are 'grandfathered' by the Federal Government, meaning that a state may continue to operate trucks under these pre-existing laws. This will be discussed in more detail in a later section.

Divisible and Non-Divisible Loads

In addition, exemptions to legal size and weight laws are based on the Federal, general definition of a 'divisible' or 'non-divisible' load and the application of these definitions to specific types of cargo or truck configurations. These Federal exemptions allow OS/OW trucks to operate on the Federal System contingent on state laws and state permitting processes based on these exemptions.

Definition: Divisible Load
A state cannot issue an OS/OW permit for a divisible load travelling on a federally funded route (IH, NHS). A divisible load is one that can be easily dismantled into smaller weight or size components (such as gravel or fuel); however, certain Federal exemptions to this definition apply as will be discussed.

Definition: non-Divisible Load
A state may issue an OS/OW permit for a non-divisible load for travel on a federally funded route. Depending on the OS/OW vehicle size / weight the state permitting agency will route the vehicle along specific highways to minimize consumption of or safety risks to bridges and pavements. A non-divisible load is defined as a load that would be damaged by dismantling or would require 8 or more hours dismantle (such as a bull dozer).

States may issue OS/OW permits for non-divisible loads without regard to Federal GVW, axle weight, axle group weights, axle spacing or the Federal Bridge Formula. TxDMV, TxDOT and DPS work together to route non-divisible loads to ensure the safety of the public and to protect Texas infrastructure assets. In addition, TxDPS enforces state laws through truck size, weight, maintenance, registration and permitting inspections.

Federal Exemptions for specific routes or types of cargo

The Federal Government has also defined the following types of trucks or cargo as a 'non-divisible load' or has enacted exemptions to allow operation of OS/OW vehicles on Federally Funded Routes based on pre-existing state laws and established permitting processes:

The FHWA has provided defined an OS/OW Ocean Container, moving in international commerce with a U.S. Customs Seal as a 'non-divisible' load. This is an interpretation of the definition and is not contained in Code or Federal Regulations. The FHWA further clarified that states are not required to consider sealed ocean containers as a non-divisible load.

"The FHWA further clarified that states are not required to consider sealed ocean containers as a non-divisible load."

Committee Recommendation

1. Develop metrics for designation and monitoring corridors that include, economic impacts, safety, infrastructure impacts and local support.

2. Require TxDOT to track infrastructure impacts of already designated OS/OW corridors and determine if the permit fees cover the pavement and bridge costs imposed by OS/OW trucks using the corridors.

3. Safety impacts should be studied using available crash rates.

4. Use permit data currently collected to estimate the economic impacts of designated OS/OW corridors.

5. Define through legislation "corridor" especially as it may pertain to OS/OW vehicles.

6. Minimum requirements for designation, assessment, collection of fees and performance measurement should be adopted. Safety concerns and congestion mitigation included.

7. Authorizing the creation of an OS/OW corridor should only become effective once TxDOT determines that the corridor is capable of handling the estimated number of OS/OW vehicles.

8. Caution should be paramount before any attempt, if any consideration to increase the allowance of oversize/overweight trucks due to the high degree of degradation to the roadway system in Texas is considered. Maintain the Federal Oversize / Overweight guidance for state and county roads as near as possible. Texas currently offers over 30 different OS/OW permits. Fees associated with OS/OW need a closer look at the direct wear on the road system commiserate with the charges.

Charge 8:

Examine innovative transportation technologies, such as autonomous vehicles, to evaluate potential cost savings and ways in which they may reduce traffic congestion, promote safety, and increase economic productivity.

Committee Action:

The Committee held a hearing on December 7, 2016 with invited testimony.

Background:

Self-driving, autonomous vehicles were something akin to an item from a futuristic movie five years ago. They are now shifting into a major point of transportation talk mainstream. Every major car manufacturer is offering prototypes or early models of cars. Startups and major tech companies are investing heavily in smart car technology, as are network ride-sharing companies such as Uber and Lyft.

The National Highway Traffic Safety Administration (NHTSA) and SAE have defined five levels of cars. There are multiple definitions for various levels of automation and for some time there has been need for standardization to aid clarity and consistency. For this reason, the NHTSA Policy adopts the SAE International (SAE) definitions for levels of automation. The SAE definitions divide vehicles into levels based on "who does what, when."
Generally:

- At SAE Level 0, the human driver does everything;

- At SAE Level 1, an automated system on the vehicle can sometimes assist the human driver conduct some parts of the driving task;

- At SAE Level 2, an automated system on the vehicle can actually conduct some parts of the driving task, while the human continues to monitor the driving environment and performs the rest of the driving task;

- At SAE Level 3, an automated system can both actually conduct some parts of the driving task and monitor the driving environment in some instances, but the human driver must be ready to take back control when the automated system requests;

- At SAE Level 4, an automated system can conduct the driving task and monitor the driving environment, and the human need not take back control, but the automated system can operate only in certain environments and under certain conditions; and

- At SAE Level 5, the automated system can perform all driving tasks, under all conditions that a human driver could perform them.

Using the SAE levels, DOT draws a distinction between Levels 0-2 and 3-5 based on whether the human operator or the automated system is primarily responsible for monitoring the driving environment. Throughout this Policy the term "highly automated vehicle" (HAV) represents SAE Levels 3-5 vehicles with automated systems that are responsible for monitoring the driving

environment.

An automated vehicle system is a combination of hardware and software (both remote and on-board) that performs a driving function, with or without a human actively monitoring the driving environment. A vehicle has a separate automated vehicle system for each Operational Design Domain such that a SAE Level 2, 3 or 4 vehicle could have one or multiple systems, one for each ODD (e.g., freeway driving, self-parking, geofenced urban driving). SAE Level 5 vehicles have a single automated vehicle system that performs under all conditions. This Policy defines "HAV systems" as automated vehicle systems that are capable of monitoring the driving environment as defined by SAE J3016. HAV systems are SAE Level 3 and higher by definition.

Autonomous vehicles will profoundly affect insurance, road design and construction, traffic management, taxi and limousine services, the materials and safety equipment in vehicles, and asset ownership (who needs to own a car when one can simply be summoned from the most efficient location?). All of these are heavily regulated, often by federal, state, and local agencies.

But typical of disruptive transformation in other industries, the U.S. legal system is already having trouble keeping up with the pace of developments in transportation. When Google first began testing its almost comical-looking prototype vehicles on California roads in 2009, lawmakers didn't even have a vocabulary to talk about the new technology, let alone any understanding of whether driving rules and accident liability laws dating back 100 years or more would need to be adapted or completely rewritten.

The U.S. Department of Transportation released a Federal Automated Vehicles Policy which sets out a proactive safety approach intended to bring lifesaving technologies to the roads safely while providing innovators the space they need to develop new solutions. The Policy is rooted in DOT's view that automated vehicles hold enormous potential benefits for safety, mobility and sustainability.

Model State Policy

Vehicles operating on public roads are subject to both Federal and State jurisdiction. This section defines Federal and State regulatory responsibilities and outlines a Model State Policy that if adopted can create a consistent, unified national framework for regulation of motor vehicles with all levels of automated technology, including highly automated vehicles (HAVs). Some States have already begun to pass laws and develop regulations concerning HAVs. The Model State Policy can help to avoid a patchwork of inconsistent laws and regulations among the 50 States and other U.S. jurisdiction, which could delay the widespread deployment of these potentially lifesaving technologies.

This Model State Policy outlines State roles in regulating HAVs, and lays out model procedures and requirements for State laws governing HAVs.

DOT strongly encourages States to allow DOT alone to regulate the performance of HAV technology and vehicles. If a State does pursue HAV performance-related regulations, that State should consult with NHTSA and base its efforts on the Vehicle Performance Guidance provided

in this Policy.

The Federal and State Roles

The division of regulatory responsibility for motor vehicle operation between Federal and State authorities is clear. NHTSA responsibilities include:

- Setting FMVSS for new motor vehicles and motor vehicle equipment (to which manufacturers must certify compliance before they sell their vehicles);
- Enforcing compliance with the FMVSS;
- Investigating and managing the recall and remedy of non-compliances and safety-related motor vehicle defects and recalls on a nationwide basis;
- Communicating with and educating the public about motor vehicle safety issues; and Issuing guidance for vehicle and equipment manufacturers to follow, such as the Vehicle Performance Guidance for HAVs presented in this Policy.

States' responsibilities include other aspects of motor vehicle regulations:

- Licensing (human) drivers and registering motor vehicles in their jurisdictions; Enacting and enforcing traffic laws and regulations;
- Conducting safety inspections, where States choose to do so; and Regulating motor vehicle insurance and liability.

These general areas of responsibility should remain largely unchanged for HAVs. DOT and the Federal Government are responsible for regulating motor vehicles and motor vehicle equipment, and States are responsible for regulating the human driver and most other aspects of motor vehicle operation. As motor vehicle equipment increasingly performs "driving" tasks, DOT's exercise of its authority and responsibility to regulate the safety of such equipment will increasingly encompass tasks similar to "licensing" of the non-human "driver" (e.g., hardware and software performing part or all of the driving task).

The Vehicle Safety Act expressly preempts States from issuing any standard that regulates performance if that standard is not identical to an existing FMVSS regulating that same aspect of performance. If NHTSA issued an FMVSS setting performance requirements for HAVs, then a State could not have its own performance standards on the same aspects of HAV performance unless they were identical to NHTSA's standards. The Supreme Court has also found that State laws may be preempted if they stand as an obstacle to the accomplishment and execution of a NHTSA safety standard.

"The Supreme Court has also found that State laws may be preempted if they stand as an obstacle to the accomplishment and execution of a NHTSA safety standard."

Model State Policy

States are charged with reducing traffic crashes and the resulting deaths, injuries, and property damage (Highway Safety Act, 23 U.S.C. § 401 et seq.). States may use their authority to establish and maintain highway safety programs addressing issues including: driver education and testing; licensing; pedestrian safety; law enforcement; vehicle registration and inspection; traffic control; highway design and maintenance; crash prevention, investigation, and record keeping; and emergency services.

States should evaluate their current laws and regulations to address unnecessary impediments to the safe testing, deployment, and operation of HAVs, and update references to a human driver as appropriate.

States may still wish to experiment with different policies and approaches to consistent standards, and in that way contribute to the development of the best approaches and policies to achieve consistent regulatory objectives. The goal of State policies in this realm need not be uniformity or identical laws and regulations across all States. Rather, the aim should be sufficient consistency of laws and policies to avoid a patchwork of inconsistent State laws that could impede innovation and the expeditious and widespread distribution of safety enhancing automated vehicle technologies.

States are also encouraged to work together to standardize and maintain road infrastructure including signs, traffic signals and lights, and pavement markings. This will support the safe operation of HAVs and ensure the safety of human drivers, who will continue to operate vehicles on the roads for years to come.

The following sections describe a model regulatory framework for States that wish to regulate procedures and conditions for testing, deployment, and operation of HAVs. For purposes of this section, "testing" refers to analyses and evaluations of HAV systems and vehicles conducted by a researcher, manufacturer, entity, or expert third party at the request of one of those entities. Deployment refers to use of HAV systems and vehicles by members of the public who are not employees or agents of researchers, manufacturers, or other entities. For purposes of State traffic laws that apply to drivers of vehicles (e.g., speed limits, traffic signs), States may wish to deem an HAV system that conducts the driving task and monitors the driving environment (generally SAE Levels 3-5) to be the "driver" of the vehicle. For vehicles and circumstances in which a human is primarily responsible for monitoring the driving environment (generally SAE Levels 1-2), NHTSA recommends the State consider that human to be the driver for purposes of traffic laws and enforcement.

A consistent set of laws and regulations would govern the testing and operation of HAVs. In such an approach NHTSA generally would regulate motor vehicles and motor vehicle equipment (including computer hardware and software that perform functions formerly performed by a human driver) and the States would continue to regulate human drivers, vehicle registration, traffic laws, regulations and enforcement, insurance, and liability. As discussed above, States also may wish to regulate HAV "drivers" for the limited purpose of enforcement of traffic laws with respect to vehicles with L3-L5 automation. This model framework envisions State

regulation of the procedures and requirements for granting permission to vehicle manufacturers and owners to test and operate vehicles within a State.

Administrative

- Each State should identify a lead agency responsible for consideration of any testing of HAVs.
- Each State should create a jurisdictional automated safety technology committee that is launched by the designated lead agency and which includes representatives from the governor's office, the motor vehicle administration, the State department of transportation, the State law enforcement agency, the State Highway Safety Office, office of information technology, State insurance regulator, the State office(s) representing the aging and disabled communities, toll authorities, and transit authorities.
- Other stakeholders should be consulted as appropriate, such as transportation research centers located in the State, the vehicle manufacturing industry, and groups representing pedestrians, bicyclists, consumers and other interested parties.
- The designated lead agency should keep its state automated safety technology committee informed of the requests from manufacturers to test in their jurisdiction and the status of the designated agency's response to the manufacturers.
- The designated lead agency should take necessary steps to use or establish statutory authority to implement a framework and regulations. Each jurisdiction should examine its laws and regulations in the areas of: (1) licensing/registration; (2) driver education/training; (3) insurance and liability; (4) enforcement of traffic laws/regulations; and (5) administration of motor vehicle inspections, in order to address unnecessary barriers to safe testing, deployment, and operation of HAVs.
- Each State should develop an internal process that includes an application for manufacturers to test in the jurisdiction as described in sections 2 and 3 below.
- The motor vehicle agency should establish an internal process for issuing test vehicle permits as described in sections 2 and 3 below.
- The designated lead agency should review State statutes to identify any legal issues that need to be addressed prior to the deployment and operation of automated vehicles.

Application for Manufacturers or Other Entities to Test HAVs on Public Roadways

- A "manufacturer" is an individual or company that manufactures HAVs for testing and deployment on public roadways. Manufacturers include original equipment manufacturers (OEMs), multiple- and final-stage manufacturers, alterers (individuals or companies making changes to a complete vehicle prior to first retail sale or deployment), and modifiers (individuals or companies making changes to existing vehicles after first retail sale or deployment).
- An "other entity" is any individual or company that is not a manufacturer, and is involved with designing, supplying, testing, selling, operating, deploying, or helping to manufacture HAVs.
- Each manufacturer or other entity should submit an application to the designated lead agency in each jurisdiction in which they plan to test their HAVs.

- The application should state that each vehicle used for testing by manufacturers or other entities follows the Performance Guidance set forth by NHTSA and meets applicable Federal Motor Vehicle Safety Standards.
- The application should include the name of the manufacturer or other entity, the corporate physical and mailing addresses of the manufacturer or other entity, the in-State physical and mailing addresses of manufacturer, if different than corporate address, the name of the program administrator/director and the contact information for the program administrator/director.
- The application should identify each vehicle that will be used on roadways for testing purposes by VIN, vehicle type, and other unique identifiers such as the year, make, and model.
- The application should identify each test operator, their driver's license number, and the jurisdiction or country in which the operator is licensed.
- The application should include the manufacturer's or other entity's safety and compliance plan for testing vehicles, which should include a self-certification of testing and compliance to NHTSA's Vehicle Performance Guidance for the technology in the test vehicles under controlled conditions that simulate the real-world conditions (various weather, types of roads, times of the day and night, etc.) to which the applicant intends to subject the vehicle on public roadways (e.g., a copy of the summary Safety Assessment submitted to NHTSA per the Vehicle Performance Guidance).
- The application should include evidence of the manufacturer's or other entity's ability to satisfy a judgment or judgments for damages for personal injury, death, or property damage caused by a vehicle in testing in the form of an instrument of insurance, a surety bond, or proof of self-insurance, for no less than 5 million U.S. dollars.
- The application should include a summary of the training provided to the employees, contractors, or other persons designated by the manufacturer or other entity as operators of the test vehicles. Approval should be granted by the designated lead agency if evidence of insurance, operator training, and self-certification is demonstrated.

Jurisdictional Permission to Test

- Each jurisdiction's lead agency should involve the jurisdictional law enforcement agency before responding to the request from the manufacturer or other entity.
- The lead agency may choose to grant authorization to test in a jurisdiction with restrictions, and/or may prohibit manufacturers or other entities from testing in certain areas or locations, such as school zones, construction zones, or other safety-sensitive areas.
- The authorization may be suspended if the manufacturer or other entity fails to comply with the State insurance or driver requirements, or fails to comply with its self-certification compliance plan.
- The lead agency may request additional information or require the manufacturer or other entity to modify its application before granting authorization.
- The lead agency should issue a letter of authorization to the manufacturer or other entity to allow testing in the State, and the State's motor vehicle agency should issue a permit to each test vehicle. The authorization and permits may be renewed

periodically. The jurisdiction may determine that it is appropriate to charge fees for the application and for each vehicle- specific permit.

- The vehicle-specific permit must be carried in the test vehicle at all times.
- Each test vehicle should be properly registered and titled in accordance with the State's laws.

Testing by the Manufacturer or Other Entity

- Manufacturers or other entities must comply with Federal law and applicable NHTSA regulations before operating vehicles on public roadways, whether or not they are in testing or in "normal" operation.
- b.The vehicle used in testing must be operated solely by persons designated by the manufacturer or other entity, who have received training and instruction concerning the capabilities and limitations of the vehicle. The training provided to the persons designated by the manufacturer or other entity must be summarized and submitted to the lead agency.
- The operators testing the vehicles must hold a valid State driver's license.55
- Before being allowed to operate a test vehicle, the persons designated by the manufacturer or other entity as operators of the test vehicles, may be subjected to a background check including, but not limited to, a driver history review and a criminal history check.
- The test operators are responsible for following all traffic rules and will be responsible for all traffic violations.
- All crashes involving test vehicles must be reported in accordance with the State laws in which the crash occurred.

Deployed Vehicles: "Drivers"

- States regulate human drivers. Licensed drivers are necessary to perform the driving functions for motor vehicles equipped with automated safety technologies that are less than fully automated (SAE Levels 3 and lower). A licensed driver has responsibility to operate the vehicle, monitor the operation, or be immediately available to perform the driving task when requested or the lower level automated system disengages.
- Fully automated vehicles are driven entirely by the vehicle itself and require no licensed human driver (SAE levels 4 and 5), at least in certain environments or under certain conditions. The entire driving operation (under specified conditions) is performed by a motor vehicle automated system from origin to destination.
- In order to make the transition from human-driven motor vehicles equipped with automated safety technologies to fully automated vehicles, gaps in current regulations should be identified and addressed by the States. Some examples are:

    - Law enforcement/emergency response
    - Occupant safety
    - Motor vehicle insurance
    - Crash investigations/crash reporting

- Liability (tort, criminal, etc.)
- Motor vehicle safety inspections
- Education and training
- Vehicle modifications and maintenance
- Environmental impacts

Deployed Vehicles: Registration and Titling

- HAV technologies that allow the vehicle to be operated without a human driver either at all times or under limited circumstances should be identified on title and registration documentation by States, using the code HAV in a new data field.
- When HAV technologies that allow the vehicle to be operated without a human driver either at all times or under limited circumstances is installed on a vehicle after the initial purchase of the vehicle, the motor vehicle agency should be notified by the installer. The vehicle registration and title should be marked with the code HAV in a new data field.
- Regulations governing labeling and identification for HAVs should be issued by NHTSA.

Law Enforcement Considerations

It is important for first responders and law enforcement to understand how HAVs may affect their duties. In addition, there will be a growing need for the training and education of law enforcement regarding their interaction with drivers/operators in both the testing and deployment of these technologies.

For vehicles that offer less than full automation capabilities, there is potential for increased distracted driving. Dangerous activities that contribute to distracted driving such as using an electronic device, eating, drinking, and conversing with passengers could significantly increase in HAVs. Regulations to limit these activities, especially in vehicles providing less than full self-driving capabilities, should be consistent across jurisdictions. The States should work together to develop a consistent regulatory scheme to limit potential driver distraction. In addition, States should develop methodologies for enforcement to discourage hazardous vehicle operation for the safety of the motoring public. Once HAVs are deployed and operated on roadways, State regulations need to keep pace with the changing technology.

Although HAVs are expected to provide significant safety benefits by reducing human errors, motor vehicles currently equipped with automation technologies are already involved in traffic crashes and will continue to be, especially during the years of initial introduction and integration with existing motor vehicles. Responders to crashes of HAVs may be placed at risk if they are not trained for unique hazards that they may encounter. These hazards may include, for example, silent operation, self-initiated or remote ignition, high voltage, and unexpected movement. In the interest of safety, it is essential that first responders—including those in police, fire, emergency medical services, and tow and recovery services— receive information and training regarding the potential hazards they may face.

Liability and Insurance

States are responsible for determining liability rules for HAVs. States should consider how to allocate liability among HAV owners, operators, passengers, manufacturers, and others when a crash occurs. For example, if an HAV is determined to be at fault in a crash then who should be held liable? For insurance, States need to determine who (owner, operator, passenger, manufacturer, etc.) must carry motor vehicle insurance. Determination of who or what is the "driver" of an HAV in a given circumstance does not necessarily determine liability for crashes involving that HAV. For example States may determine that in some circumstances liability for a crash involving a human driver of an HAV should be assigned to the manufacturer of the HAV.

Rules and laws allocating tort liability could have a significant effect on both consumer acceptance of HAVs and their rate of deployment. Such rules also could have a substantial effect on the level and incidence of automobile liability insurance costs in jurisdictions in which HAVs operate.

In the future, the States may identify additional liability issues and seek to develop consistent solutions. It may be desirable to create a commission to study liability and insurance issues and make recommendations to the States.

NHTSA's Enforcement Authority

NHTSA has broad enforcement authority to address existing and new automotive technologies and equipment. The Agency is commanded by Congress to protect the safety of the driving public against unreasonable risks of harm that may occur because of the design, construction, or performance of a motor vehicle or motor vehicle equipment, and to mitigate risks of harm, including risks that may be emerging or contingent. This authority and responsibility extends to cover defects and unreasonable risks to safety that may arise in connection with HAVs.

State Regulation

States are generally taking one of three approaches that address AV testing and operation.

The first approach involves setting up a testing and deployment regulatory structure that issues permits to test vehicles, licenses test drivers, sets operating requirements and defines data reporting. The states that have established a regulatory structure include California, Nevada, Michigan and Tennessee. These states justify this approach from a public safety perspective as a step toward preventing bad actors from putting the public at risk. In some early-adopter states there were also economic development motivations for passing legislation as a way to encourage new industry activity.

The second approach takes into account uncertainty in technology and a reluctance to limit local testing as a potential impediment to advancement of the technology. This approach facilitates common understanding and reduces potential duplication or conflict among regulatory approaches. This is the model currently used by Utah and North Dakota as a precursor to regulation. Under this approach, states have first focused on developing a flexible policy framework by engaging the many state agencies

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involved as well as industry stakeholders. In Texas, the list of affected state agencies would include the Texas Department of Transportation, Department of Motor Vehicles, Department of Public Safety, Department of Insurance, and possibly the Department of Licensing and Regulation.

The third approach involves executive action to allow or even invest in pilot projects and test corridors to gain firsthand knowledge of the technology before establishing a regulatory regime. States in this category include Virginia, Arizona, and Massachusetts.

Committee Recommendation

Develop a flexible policy framework by engaging the many state agencies involved as well as industry stakeholders. The state agencies involved would be the Texas Department of Transportation, Department of Public Safety, Department of Motor Vehicles, Department of Insurance, and the Department of Licensing and Regulation.