

MINUTES FOR THE TRANSPORTATION COMMISSION MEETING

TO BE HELD IN THE ODOT BUILDING COMMISSION MEETING ROOM OKLAHOMA CITY, OKLAHOMA

BE IT REMEMBERED that on Monday the 7th day of August, 2017, at the hour of 11:00 a.m., the Transportation Commission met in the Commission Meeting Room of the ODOT Building in Oklahoma City, Oklahoma.

NOTICE of the schedule of regular meetings of the Oklahoma Department of Transportation for the calendar year 2017 having been given in writing to the Oklahoma Secretary of State, and public notice and agenda having been posted in a prominent public view at or before 11:00 a.m. on Thursday, August 3, 2017, prior to the meeting, on the Atrium Informational Monitor in the ODOT building, and on the glass doors on the north side of the ODOT Building in accordance with Oklahoma Open Meeting Act, 25 O.S. Section 311.

ITEMS PRESENTED BY COMMISSION CHAIRMAN

CALL TO ORDER: Mr. David Burrage called the meeting to order at 11:03 a.m.

ROLL CALL:

Present:	John Fidler	Member
	David Burrage	Chairman
	Todd Huckabay	Secretary
	Bobby Alexander	Member
	Brad Burgess	Vice-Chairman
	Pete Regan	Member
Absent:	Dan Overland	
	Greg Love	
Presiding:	David Burrage	

The following items were presented and approved as written at the Transportation Commission meeting of August 7, 2017. For those items amended, deferred, or rejected, those notations were also made. Action taken by the Commission is noted here on these sheets.

Commissioner Burrage called the meeting to order.

ITEM PRESENTED BY THE SECRETARY TO THE COMMISSION

103. a) **Approval of the Minutes of the Transportation Commission Meeting of July 5, 2017**
b) **Approval of the Minutes of the Special Transportation Commission Meeting of July 10, 2017**

ACTION: Regan moved and Huckabay seconded that the Minutes be approved as presented.
MOTION: Carried by the following vote:
AYES: Fidler, Burrage, Huckabay, Alexander, Burgess and Regan
NAYES: None
ABSTAIN: None
ABSENT: Overland and Love

CONSENT DOCKET PRESENTED BY COMMISSION CHAIRMAN

104. Transportation Control Improvement Projects – Mr. Pendley

Beckham, Caddo, Custer, Jackson, Roger Mills and Washita Counties - District V - \$335,000

Installation of pavement markings at the following locations:

- a) On I-40B/US-283 in Beckham County beginning at the south end of the city limits, in the Town of Sayre, extending north approximately 2.50 miles;
- b) On I-40 in Caddo County beginning at the Custer County line extending east approximately 3.60 miles;
- c) On I-40B in Custer County beginning at Oliver St., in the City of Clinton, extending north and east approximately 4.00 miles;
- d) On US-283 in Jackson County beginning at Ridgecrest Rd., in the City of Altus, extending north approximately 1.73 miles to end of concrete section south of Falcon Rd.;
- e) On US-283 in Roger Mills County beginning approximately 1.00 mile north of the Junction of SH-47W and US-283, in the Town of Cheyenne, and extending north approximately 18.04 miles to the Ellis County line;
- f) On US-183 in Washita County beginning at the south end of Cavalry Creek Bridge, in the Town of New Cordell, extending north approximately 1.88 mile to the beginning of the 4 lane divided.

105. Land Sales – Mr. Phillips

- a) McClain County – District III – Land Sale – located 0.25 miles East of US-62 on Fox Lane in Newcastle - \$209,300.00
- b) Grady County – District VII – Land Sale – on the east side of SH-4 and 1 mile south of the South Canadian River in Tuttle - \$4,592.00
- c) Rogers County - District VIII – Land Sale - on the north side of SH-20, approximately 0.50 miles east of the intersection of SH-20 and US-169 in Collinsville - \$245,900.00

106. State Highway System Revision – Mr. Swift

- a) This item is necessitated by the proposed new construction of SH 6 through the City of Granite in Greer County. Project Number ACSTP-128B(008)SS; Job Piece Number 15023(07).

Add to the State Highway System, upon completion of construction, a segment of new highway to be designated SH 6, beginning at a tie with existing facility in Greer County south of Granite and extending north 2.25 miles through Granite and to a tie with the existing facility north of Granite in Section 25.

Remove from the State Highway System, upon completion of new construction, a total of approximately 2.14 miles of SH 6, beginning at the new construction in Greer County south of Granite in Section 36 and extending north 1.3 miles through Granite on Windle Street to Mountain Avenue, then east 0.15 mile to Brewer Street and north 0.69 miles to a tie with the new construction north of Granite in Section 25. This portion of SH 6 including right-of-way will be transferred to the appropriate local jurisdiction for further maintenance

or abandonment. In accordance with state law, a Public Removal Hearing was held Tuesday June 20th, 2017.

This revision will become effective upon approval by the State Transportation Commission, completion of new construction and completion of certification by Division V Engineer that the proposed removed roadways meet mandated criteria.

- b) This item is necessitated by the proposed new construction of SH 152 west of the City of Binger in Caddo County. Project Number STPY-008B(308)SS; Job Piece Number 01817(04).

Add to the State Highway System a segment of new highway to be designated SH 152, beginning at a tie with existing facility approximately 2.25 miles West of Binger and extending east 1.54 miles to a tie with the existing facility.

Remove from the State Highway System a segment of SH 152, beginning at the new construction and extending east 1.55 miles to a tie with the new facility. A portion of old SH 152, including right-of-way determined by the Department, will be transferred to the appropriate local jurisdiction for further maintenance or abandonment. In accordance with State law, a Public Removal Hearing was held Thursday June 22nd, 2017.

This revision will become effective upon approval by the State Transportation Commission and completion of the Surface Rating certification by the Division VII Engineer that the proposed removed roadway meets mandated criteria.

- c) This item is necessitated by the construction of US 169 on new alignment at the south edge of Oologah in Rogers County. Construction Project STP-66B(306); Job Piece Number 02285(04).

Add to the State Highway System a segment of new highway to be designated US-169, beginning at tie of existing facility in Section 5, T22N, R15E and extending northward 1.21 miles to a connection with present US-169 in Section 33, T23N, R15E.

Removal of Old Highway 169 from the State Highway System, beginning at tie of existing facility in Section 5, T22N, R15E southwest of Oologah, extending northeasterly 1.26 miles to a connection with present US-169 in Section 33, T23N, R15E. This portion of US-169 including right-of-way will be transferred to the appropriate local jurisdiction for further maintenance or abandonment. In accordance with state law, a Public Removal Hearing was held August 4th, 2017.

This revision to the State Highway System will become effective upon approval by the State Transportation Commission, and completion of certification by the Division VIII Engineer that the proposed removed roadways meet mandated criteria.

ACTION: Fidler moved and Alexander seconded that the Consent Docket be approved as presented.
MOTION: Carried by the following vote:
AYES: Fidler, Burrage, Huckabay, Alexander, Burgess and Regan
NAYES: None
ABSENT: Overland and Love

END OF CONSENT DOCKET

MOTION: Carried by the following vote:
AYES: Fidler, Burrage, Huckabay, Alexander, Burgess and Regan
NAYES: None
ABSENT: Overland and Love

ITEMS PRESENTED BY CONSTRUCTION DIVISION ENGINEER – Mr. Leonard

110. Change Orders with Cumulative Total of \$75,000.00 or Less – Information Only

- a) Bryan County - Ct. St. - NHPP-207N(064) / SSP-207N(066)SS / 32112(04), \$3,438.94
- b) Caddo County - Co. Rd. - CIRB-108C(182)RB / 24802(04), \$688.64
- c) Cleveland County - SH-77H - HSIP-214C(065)TR / 32404(04), \$2,679.41
- d) Comanche County - Co. Rd. - CIRB-216D(062)RB / 28426(04), \$2,000.00
- e) Creek County - SH-51 - ACSTP-219B(047)SS / 27071(04), \$1,596.85 Underrun
- f) Custer County - Ct. St. - ACSTP-220B(040)SS / 27911(06), \$31,416.62
- g) Ellis County - Co. Rd. - CIRB-123C(086)RB / 28456(08), \$3,148.94 Underrun
- h) Grady County - US-81 - NHPP-226N(038)3B / 31701(04), \$10,298.60
- i) Grant County - SH-11 - STP-127B(107)(108)(109)(110)SS / 24163(04)#3, \$18,575.75
- j) Grant County - SH-11 - STP-127B(107)(108)(109)(110)SS / 24163(04)#4, \$6,362.95
- k) Jefferson County - SH-89 - STP-234C(016)SS / 28801(04), \$7,625.21
- l) Kiowa County - SH-9 - SSP-138B(062)SS / 20806(04), \$278,516.41 Underrun
- m) Kiowa County - SH-44 - STP-275C(035)SS / ACSTP-238C(037)SS / 28999(04), \$8,061.50
- n) Love County - SH-32 - ACSTP-143C(063)SS / 10147(05), \$24,117.30
- o) Love County - US-77 - STP-243C(021)SS / 27047(04), \$7,794.30
- p) McClain County - SH-74 - NHPPI-244N(029)SS / 29572(04), \$4,077.84
- q) Muskogee County - US-62 - ACNHPP-251N(051)SS / 31245(04), \$903.64 Underrun
- r) Osage County - SH-18 - ACSTP-257B(033)SS / 27086(04), \$1,281.44
- s) Payne County - SH-51 - SSP-160B(190)SS / 26369(04), \$30,293.71
- t) Roger Mills County - Co. Rd. - STP-265C(016)CI / 30691(04), \$21,996.75
- u) Seminole County - Co. Rd. - STP-267C(044)CI / 30039(04), \$880.00
- v) Stephens County - US-81 - ACNHPP-011N(100)SS / 20316(04), \$5,390.06
- w) Stephens County - SH-53 - STP-269C(016)SS / 27045(04), \$2,594.55
- x) Tulsa County - Ct. St. - STP-272C(097)SS / NHPP-272A(125)SS / 28867(04), \$14,014.25
- y) Tulsa County - I-244 - NHPPI-2440-(005)SS / STP-272C(103)SS / 28869(04), \$926.30
- z) Tulsa County - US-64 - NHPP-272N(094)SS / 28883(04), \$33,246.41
- aa) Tulsa County - SH-11 - SBR-272N(186)SB / 30594(04)#1, \$17.69
- bb) Tulsa County - SH-11 - SBR-272N(186)SB / 30594(04)#2, \$41,150.19
- cc) Tulsa County - I-444 - ACNHPP-4440(006)SS / 31881(04), \$29,766.22
- dd) Washington County - Co. Rd. - CIRB-274D(017)RB / 30615(04), \$17,344.00
- ee) Woods County - US-281 - SSP-276B(008)SS / 27002(06), \$261.25

111. Change Orders with Cumulative Total Greater than \$75,000.00

- a) Beckham County - I-40 - ACNHPP-4000(028)(022)SS / 24354(04), \$166,320.00
- b) Carter County - I-35 - HSIPIG-3500(010)TR / 31558(04), \$2,757.00
- c) Cleveland County - I-35 - NHPPIY-0035-2(326) / 09031(11), \$85,606.04
- d) Cotton County - Co. Rd. - CIRB-117C(064)RB / 24859(04), \$242,995.84
- e) Craig County - Co. Rd. - STP-218C(041)CI / STP-218D(040)CI / 29405(04), \$2,814.66

- f) Garvin County - SH-76 - ACSTP-125B(137)SS / 23264(04), \$3,055.80
- g) Garvin County - I-35 - SBR-225N(059)SB / 29615(04), \$630,000.00
- h) Grant County - SH-11 - STP-127B(107)(108)(109)(110)SS / 24163(04), \$183,245.12
- i) Jackson County - US-62 - ACNHPP-233N(029)SS / 29528(04), \$161,896.20
- j) Kay County - SH-15 - ACNHPP-3500-(035)(039)(038)SS / 27891(04), \$436,898.61
- k) Lincoln County - SH-105 - ACSTP-241C(044)SS / 27060(04), \$99,050.58
- l) Love County - SH-32 - ACSTP-143C(093)SS / 26502(04), \$84,717.60
- m) Mayes County - Co. Rd. - CIRB-249D(027)RB / 30102(04), \$77,086.76
- n) McClain County - SH-74 - NHPP-244N(029)SS / 29572(04), \$205,500.00
- o) Pawnee County - US-64 - NHPP-259N(015)SS / 30320(04), \$2,583.93
- p) Payne County - SH-51 - SSP-160B(190)SS / 26369(04), \$66,850.55
- q) Pontotoc County - Co. Rd. - STP-162C(204)CI / 27267(04), \$8,548.29
- r) Pottawatomie County - SH-102 - STP-163C(165)SS / 21788(04), \$21,872.78
- s) Pottawatomie County - I-40 - NHPP-4000-(035)SS / 28928(04), \$486,157.86
- t) Tulsa County - I-244 - NHPP-0244-2(501)(504)(507) / 26300(06), \$228,985.04

ACTION: Fidler moved and Huckabay seconded that the Items be approved as presented.
MOTION: Carried by the following vote:
AYES: Fidler, Burrage, Huckabay, Alexander, Burgess and Regan
NAYES: None
ABSENT: Overland and Love

ITEM PRESENTED BY THE OFFICE ENGINEER – Mr. Delce

112. Awards

- a) Deferral from June 15, 2017 Regular Bid Opening
- b) July 20, 2017 – Regular Letting

ACTION: Huckabay moved and Regan seconded that the Items be approved as presented.
MOTION: Carried by the following vote:
AYES: Fidler, Burrage, Huckabay, Alexander, Burgess and Regan
NAYES: None
ABSENT: Overland and Love

ITEM PRESENTED BY THE DIRECTOR – Mr. Patterson

113. Director’s Report

Director Patterson said he had 3-4 things to discuss. The first one we are going to start off with is Steve Jacobi our ODOT Bridge Engineer, and talk about the ShakeCast Earthquake Bridge Inspection Software that ODOT is beginning to use. For the past several years, we’ve been dealing with earthquakes and bridges in our infrastructure; and one of the things that the Commission allowed us to move forward with, was a ShakeCast Model so that we could get a better determination of when we needed to go out and inspect our bridges after an earthquake. As you recall, we have an established protocol that we, the term I use is, “Roll On”, depending on the intensity of the earthquake, then we know how far out from the epicenter that we are going to have to inspect bridges. It should be noted that just last week there was a series of earthquakes on Wednesday and early Thursday morning with the epicenter near Edmond. Eventually there was one that was at 4.4, and so Division 4 had to roll out early in the morning, and check bridges to make sure that all infrastructures were in place and in good standing, and it was; there was no reported damage.

So as we look to embrace the ShakeCast Model, it may help us in some of these situations, so that we won't have to, what I call "Spring Into Action" so quickly, and give us a better read on what needs to be inspected and what priorities. With that being said, Mr. Chairman, I'll come back up after Steve makes his presentation, and we will discuss some other things. He recognized Steve Jacobi, and asked him to come up and do his presentation on ShakeCast.

Mr. Jacobi said, Commissioners. I'm here to present a little bit on where we've been with regards to our earthquake response protocol. I've got about a 7-8 slide PowerPoint presentation that I'm going to roll through. It will give us basically a brief history on where we were, where we are now, and where we're headed. The Oklahoma Department of Transportation has proactively worked with the U.S. Geological Survey, the Oklahoma Geological Survey and other partners to develop an earthquake bridge inspection protocol since the state's increased seismicity began in 2010. Today's presentation of the USGS ShakeCast software program highlights how the system will be used by ODOT personnel after any earthquake that indicates the possibility of structural damage. After an earthquake, crews will be notified of highway bridges that should be inspected based on several factors including magnitude, ODOT bridge data and USGS seismic movement data. Implementation of this system is part of the final phase of a 2-year, 2-phase \$645,000 dollar contract with Infrastructure Engineers Inc. of Edmond.

First of all, this project's been developed since, I believe, in April 2 years ago. You approved a contract to go into this with our consulting team. We've developed a response that's been nationally recognized, that's been presented at a few separate National Conferences. Our Project Team consists of Members of ODOT both here in the Central Office, people in Bridge Division, Senior Staff, and a number of valuable members from our Field Divisions; these are the people that have to deal with the inspections every time there's an earthquake. We've had a very capable team led by Gregg Hostetler of Infrastructure Engineers out of Edmond. They've incorporated people with the University of Oklahoma, Dr. Harvey and Dr. Muraleetharan, Kleinfelder and Associates', Karthik Radhakrishnan along with Dr. Zia Zafir. We've had participation with the Corps of Engineers through David Jarvis and Jeff Roberts there, and Dr. Jeremy Boak with the Oklahoma Geological Survey, he's been there to give us valuable insight. All in all, you heard me say Doctor a lot of times; these are all people that are key to this project going forward, very, very capable people.

So a couple of years ago, we established a protocol basically based on engineering judgment. This letter went out at the beginning of 2015; it specified earthquake inspections mandatory after a 4.0 earthquake. What we were finding then was that it was overly conservative at the time; we were inspecting bridges sometimes every week; our seismic activity at the time was pretty strong. From this we developed an interim Post-Earthquake Bridge Inspection Protocol. This was based on a procedure that incorporated ShakeMaps from the US Geological Survey. That gave us the seismic demand on our structures. Through ShakeMaps you could determine the ground accelerations at our bridge sites. With that it was combined with these Hazus fragility curves. Hazus is a product of FEMA. It was developed for a wide range of natural hazards, earthquakes being one of them. We developed fragility curves for our bridges in the state based on existing bridge inventory data. Different types of bridges behave differently when they have seismic demand put on them. Multiple span bridges are more fragile than single span bridges. Bridges that are skewed are more susceptible and bridges that are older are more susceptible. So what we wanted to ensure was that the demand, the seismic demand, on our bridges, the shaking, did not exceed the capacity of our bridges to withstand that. With this in place, we came up with this interim post-earthquake bridge inspection protocol. It bumped our magnitudes up a little bit, and our inspection radius is down. So that saved us substantial amount of resources on responding to earthquakes.

One thing I'd like to mention is the fragility curves. They have been validated through actual earthquakes in California; the 1989 Loma Prieta earthquake and the 1994 San Fernando Valley earthquake. So we feel pretty confident in their ability to predict our seismic resistance or seismic capacity.

As part of this contract we've developed a Post-Earthquake Inspection Manual. This has been shared with other states, such as Arkansas and Missouri. It's also been shared with the County Commissioners of

Oklahoma to aid them in their response to their local bridges. We also shared it with the Municipal League Members. I think it's a very valuable product of this contract.

We're also finalizing a Post-Earthquake Response Plan; a lot of that is how to mark bridges that have been damaged and establishing detour routes. It has a list of products that we can do to help stabilize bridges, falsework and shoring, in efforts to get bridges back open quickly. We've also done a lot of training with this contract; we have trained 262 field personnel, members of the Corps of Engineers, County, City, Emergency Management, Members at OTA. Then a year ago we did training for our 200 Certified Bridge Inspectors. These are inspectors that do our routine bridge inspections or fracture critical bridge inspections. So we've got them all trained up to notice things post-earthquake to see what types of damage. There are examples of damages, and how to go about looking at these bridges.

So this brings us to ShakeCast a product of the US Geological Survey. It's used for a lot of different resources. What it does is after an earthquake it evaluates your existing bridge inventory. It also looks at the ShakeMap, which is generated by the USGS. It is an indication of the magnitude of shaking. It's a situational awareness software, which allows you to immediately identify those bridges that need to be looked at. With our current protocol after an event of a specified magnitude, we have to find out where the epicenter of the earthquake is, strike a radius around it, and then identify the bridges that are within that radius, which is kind of cumbersome. This automatically delivers the list of bridges in a prioritized order to the end user. This will go out to our Field Division Engineers, our Assistant Division Engineers and our Bridge Engineers in the field; so they can look at the list of bridges, and get resources to look at the bridges that most need to be looked at most quickly, rather than kind of scattering around a pre-determined radius.

This also allows us to do, "what if" scenarios for emergency planning where you can specify a certain magnitude earthquake at whatever location, and then see what kind of damage you can expect. There are currently 3 states that use this; Utah, California, and Washington. Oregon is in the final stages of implementing this, and we hope to implement it, this week.

We are also participating in a pooled fund study; it's a research program with 9 other states. We're one of 10 states participating in this, and this is to increase the functionality of ShakeCast. Other states are looking at it for landslide potential, for liquefaction of soils. So we wanted a seat at the table to be able to help develop ShakeCast in the future.

I've got 2 examples of our 2 largest earthquakes that we've seen. The first one was the one that really opened everyone's eyes in November of 2011. Our original protocol for this was a 50 mile radius, and that generated inspections of 772 bridges. There were a lot of people out looking at a lot of bridges for a long time. The Prague earthquake the radius incorporated a lot of Oklahoma County. There are a number of bridges in Oklahoma County, and that's why that number is pretty large. With our interim protocol, which is more based on science of 30 miles that reduced to 189 bridges. With ShakeCast this brought forth that 32 bridges needed inspection. Again, this was a prioritized list of those that most needed inspection first. So what this does is it allows our field people to allocate resources accordingly to get out and look at the bridges that need to be looked at.

Lastly our 5.8 magnitude earthquake last Labor Day weekend; we had a similar deal; 366 bridges under the original inspection protocol, 167 under the interim protocol, and 38 bridges that were identified through ShakeCast. This time I'd like to take any questions that you might have.

Commissioner Alexander asked, "How soon do you get this from the Geological Survey after an earthquake".

Mr. Jacobi answered, so the USGS after an earthquake, they've got a system called the ENS, it's an Earthquake Notification System, and any user can get in there, and set up an account where they receive earthquake information based on geographic location and or magnitudes. It usually takes about 15 minutes after an event, and the ShakeCast report comes out almost at the same time.

So, for example, after the earthquake last week in Edmond, it was right at news time. I think it happened at 9:56, and there about, 10:08, 10:10 PM, during the news, they had word that it was a 4.4 earthquake. So it takes about 10 to 15 minutes for both the ENS to come out, and the ShakeCast report.

Commissioner Alexander asked, when we look at the list, do we prioritize them by our thoughts on the condition of how the bridges are; or do we base it on how new or old the bridges are.

Mr. Jacobi said, so one of the things that I'd like to bring up with this is, one of the things that goes into the fragility models is the age of the bridge, the condition of the bridge. With our emphasis on replacing our structurally deficient bridges over the past 14 years or so, the inventory that we currently have is far more robust than it was, say 10 years ago. So that would generate a ShakeCast report that has fewer and fewer bridges, because the quality of our bridges, the status of them, is far better than it was, say 10 years ago. But it will still give a prioritized report of bridges to be looked at.

Commissioner Huckabay asked, "In the ShakeCast report, are these the only bridges that will be looked at, or are they just the top priority bridges".

Mr. Jacobi said that it is our intention that they'd be the only bridges looked at. We've had a number of seismic events to date. We've had 2 instances of very minor cosmetic damage on our bridges. What this will do is; it gives us a system that's based on science, based on ground motion, and based on the condition of our bridges that will give us the best information available.

Commissioner Fidler asked, would that have picked up those cosmetic damages you're talking about; were they big enough for it to pick up.

Mr. Jacobi said, I'd have to run a scenario with that particular earthquake, and we've run it before, and see if it came up on the list. Let's look back at the list from the ShakeCast report. So I think one of the ones listed here is 177 at the Cimarron Turnpike, it's the one that's listed fifth; I believe that was the one that had some of the cosmetic damage, there was some spalling of concrete on that. The other report that we had, was that there was a roller bearing that needed reset, and that may or may not have been a result of that earthquake. But the 177 at the Cimarron Turnpike I believe was the bridge that had the cosmetic damage.

Commissioner Regan asked is the cosmetic damage from last week or just in the last couple of years aggregate total.

Mr. Jacobi said, that's just from the Pawnee earthquake, which was the strongest that we've had.

Commissioner Regan commented, "So the bridges are holding up".

Mr. Jacobi said, yes the bridges are holding up. We started detailing our bridges in a more robust manner than other states since I've started here 31 years ago. We've got large shelf distances on the top of our pier caps. I went to drive to other states and I looked at their bridges, they looked flimsy to me. I think we've been overly conservative in our approach on detailing our bridges, and it's borne good fruit with regards to how seismically sustainable they are.

Commissioner Burgess asked, on the fragility curve, "Hazus", what factors do these smart people look at? I'm guessing it has to do with the size of the quake, how long the ground shakes, where it's located, what kind of soil. I don't want a dissertation, but just kind of the factors that you would look at.

Mr. Jacobi said, so the Hazus side of the equation is how our bridges stand up to these seismic movements. A few of the factors that go into this is the length of the bridge, the number of spans, the length of the maximum length of span, whether the bridge is skewed or not, the age of the bridge, and whether it's

structurally deficient or not. So these factors go into this kind of aggregate look at our bridges, and how they resist seismic loads.

Commissioner Burgess said, so ODOT's position is basically that this Hazus system of fragility that is being used by California, Washington, and Utah, presents a better protocol than what we're currently doing, and it's much more cost effective without jeopardizing safety.

Mr. Jacobi answered, exactly. So the Hazus models have been validated through the years with each subsequent earthquake, whether it's the Loma Prieta earthquake or the San Fernando, which I noted. Also there's Napa, California 6.0, I think two years ago. And so all the time it's refined. But we feel that the data that we have from those earthquakes in California, along with the fact that we really haven't found anything from all the earthquakes we've had in Oklahoma to this point in time, that we feel it's a good approach going forward.

Commissioner Burrage asked Mr. Jacobi to introduce our guests, since I failed to do so

Mr. Jacobi introduced Dr. Muralee Muraleetharan of the University of Oklahoma, and Gregg Hostetler with Infrastructure Engineers.

Commissioner Burrage said we really appreciate you guys coming today, and also the role that you've played; it's a big deal and very important for our State.

Director Patterson said we appreciate you taking note of the progress we are making; because we understand this is a real safety concern for our citizens to know that their infrastructure is holding up in these earthquakes. Thank you for allowing us to get even deeper into this program so that we can provide that safety element to the public.

With some of the questions, Commissioner Alexander brought up the number of bridges, and what we have done. We have talked about this in the past, what would our system have looked like if we had not made the strides that we had in our structurally deficient bridges with some of these earthquakes; what would have happened? Would those inspections have turned out differently; I would imagine they probably would have.

There was a report that came out late last week from ARTBA that went back 10 years; and 10 years is the anniversary of the bridge collapse on I-35 in the Minneapolis, St. Paul area. So they took that 10 year period, and Oklahoma leads the country in rehabilitation and reconstruction of our bridge system with 2,458. But our story really began about 5 years before that. If you'll recall, we had the bridge knocked down over the Arkansas River on I-40, and when we put people on those detour routes, we knew exactly then how bad our bridge system was. So that's when Director Ridley put us on that path to do something about our bridges, because we led the country, except for Pennsylvania, in structurally deficient bridges. So we got started, and then the public became very aware after the bridge collapsed in Minnesota, again that was 10 years ago. So it's that anniversary that ARTBA was looking at how many bridges have been reconstructed and rehabbed. And fortunately, thanks to you as a Commission, and thanks to the Legislature and the Governor for being able to provide us with additional funding, and the work ethic of this Agency to attack that problem. So congratulations all around for the success we have had in our bridge program.

Commissioner Burrage said, so you're saying good consistent planning, funded properly, works.

Director Patterson said, you mean, "Work the Plan"?

Commissioner Burrage said, "Work the Plan".

Director Patterson said, have the Plan and work the Plan; that's exactly right.

Speaking of the Plan, thanks to each one of you; we have got you scheduled to sit down and talk about our 8-Year Plan. We will do that in September and then bring the Plan back to you for your final approval in October at the October Commission Meeting. We continue to have meetings with the Division Engineers; I know they are meeting with their staff. We are having a meeting this afternoon with all the Division Engineers just to check in, answer any questions they might have; and make sure we are all moving toward getting to that place.

I can tell you that this may be one of the, if not the most frustrating, 8-year Plan that we will experience, because we have never taken a project out of the 8-year plan; but I fear that is going to happen this time. As hard as we work to keep all the projects in the plan, we may have to take some out. It's a product of money, and escalating cost, and other factors that play into environmental issues, and to move projects around, and make them fit; and then does the money fit? And so just know that we're working as hard as we can to keep all the projects in there, but don't be surprised if we come to you with a project or two cut out.

The last thing I want to talk about, just a short note. We want to give kudos to Division 8 on their quick response to the tornado the other evening. The folks at Tulsa DOT, rolled out, got the roadways clear so that emergency vehicles could get in, and people could get out. And that is just what ODOT does in the middle of night when others are resting, and getting ready for their day; we are hard after it. So kudos to Division 8!

Commissioner Burrage said, well, I think we ought to say it again, being able to plan, get those bridges on a schedule, and get them fixed. We will never know how much money we saved or how many people we kept out of peril, because we got ahead of the problem because of correct funding, correct planning (which you guys are excellent at); and our 8-Year Plan is the hero in all of it!

Director Patterson said, "That's exactly right".

Information Only: No Commission action required.

ITEM PRESENTED BY COMMISSION CHAIRMAN

114. Adjournment Motion

ACTION: Burgess moved and Regan seconded that the Meeting be adjourned.
MOTION: Carried by the following vote:
AYES: Fidler, Burrage, Huckabay, Alexander, Burgess and Regan
NAYES: None
ABSENT: Overland and Love

Meeting adjourned at 11:36 a.m.

Approval of the Minutes of the Transportation Commission Meeting August 7, 2017.

David Burrage - Chairman

Brad Burgess – Vice Chairman