



**2020 – 2045 Oklahoma Long Range Transportation Plan
(LRTP) Advisory Committee Meeting #3 Summary
January 29, 2020**

Oklahoma Department of Transportation (ODOT) staff hosted the third advisory committee meeting with the LRTP Advisory Committee on January 29, 2020 to discuss ODOT’s 2020-2045 Long Range Transportation Plan (LRTP).

Attendees

Committee Attendees

Name	Entity
John Sharp	ACOG
Leslie Gamble	AAA
Anthony Carfang	Bike Oklahoma
Rob Endicott	Cherokee Nation Planner
Jake Kimery	Chesapeake Energy
Troy Rigel	Equity Marketing Alliance
Viplav Putta	INCOG
Jared Schwennesen	ODOT Rail
John Heavrin	ODOT Public Transit & Mobility Services
Thaddeus Babb	ODOT Waterways
Jon Chiappe	OK Department of Commerce
Lori Peterson	OK Railroad Association
Jim Newport	OK Trucking Association
Derek Sparks	OKC Chamber of Commerce
Vicki Eggers	Rural Trans Plng Org - North Okla. Dev’t Ass’n.
Charla Sloan	Rural Transit Provider/OK Transit Association
Mike Kerr	Tulsa Airport
Conner Carroll	Tulsa Chamber

Guests

Name	Entity
Jennifer Sebesta	ACOG
Kenneth White	Tulsa Airport



Long Range Transportation Plan Consultant Team and Staff

Name	Entity
Jeff Carroll	High Street
Peter Hylton	High Street
Patrick Byrne	High Street
David Streb	Poe & Associates
John Bowman	Poe & Associates
Craig Moody	Poe & Associates
Linda Koenig	ODOT

ODOT Staff

Name	ODOT Division
Dawn Sullivan	Deputy Director
Rick Johnson	Capital Programs
Matthew Swift	Strategic Asset and Performance Management
Jeremy Planteen	Strategic Asset and Performance Management
Steve Jacobi	Bridge
Mitch Surrect	Legal
Taylor Henderson	Maintenance
Marty Farris	Maintenance, Intelligent Transportation Systems
Daniel Nguyen	Project Management
John Rosacker	Rail Programs
Braden Cale	Strategic Asset and Performance Management
Sam Coldiron	Strategic Asset and Performance Management
Adam Gentis	Strategic Asset and Performance Management
Kris Gibson	Strategic Asset and Performance Management
Sarah McElroy	Strategic Asset and Performance Management
Shelby Templin	Strategic Asset and Performance Management
David Glabas	Traffic Engineering
Rhonda Fair	Tribal Liaison

Invited Organizations Not Attending

Amazon	Greyhound	Seminole Nation
Alt Fuels	Heartland Flyer/Passenger Rail	TAFB
Amtrak	Lawton/Fort Still	Tulsa Transit
ACCO	New View Oklahoma	UPS
Devon Energy	ODEQ	Walmart
EMBARK	OK Highway Patrol	Webco Industries
Farmrail	OK Historical Preservation	
FedEx	OU Technology Center	
Fed. Motor Carriers Safety Assn	Port of Muskogee	
FHWA - OK Division	SWODA	



Appendix A of this document includes the meeting agenda.

Welcome and Introductions

The purpose of the third advisory committee meeting was to present the modal needs and associated costs, present the 2045 baseline revenue forecast, and conduct three breakout session to discuss policies and strategies to include in the 2045 LRTP.

Matt Swift, Strategic Asset & Performance Management Division Engineer, welcomed the members of the advisory committee and thanked Linda Koenig, ODOT subject matter experts, and the consultant team for all the hard work on developing the LRTP. Matt noted that this is the third of four advisory committee meetings and that the Committee would discuss the work completed by High Street and Poe & Associates on the 25-year needs and costs as well as the 25-year revenue forecast. Then we will breakup in groups and develop strategies.

Linda Koenig, ODOT's LRTP project manager, introduced herself; and advisory committee members and other meeting attendees introduced themselves. Linda then turned the meeting over to Jeff Carroll, the consultant project manager from High Street. Jeff thanked the subject matter experts and external partners for their assistance over the last couple of months in developing the LRTP. Jeff also reviewed the agenda and started the presentation.

25-Year Modal Needs and Associated Cost Estimates

Jeff began by explaining how needs were defined. Generally, needs were developed taking into consideration what it would take to keep the transportation system in a state of good repair. The team also considered federal performance measures and related activities. For pavement and bridges, the team followed the work completed for the Transportation Asset Management Plan (TAMP). The consultants worked with ODOT subject matter experts on safety, ITS, maintenance, etc. The consulting team updated the urban bicycle and pedestrian needs and costs to be consistent with the MPO's fiscally constrained long range metropolitan transportation plans (MTPs); and updated rural bike/ped needs utilizing historical Transportation Alternative Program (TAP) funding requests from counties and cities. Jeff introduced Peter Hylton from High Street to present the pavement, bridge, highway expansion, interchange, maintenance, and rest area needs and related cost estimates.

Peter noted that, after the last advisory committee meeting, we met with Sr. Staff and they indicated they would like to see a higher quality of pavement performance, particularly reducing the volume of "poor" pavement. Thus, estimated pavement costs increased to \$17.5 billion. The bridge needs and related cost estimate of \$2.7 billion remained about the same as we reported at the last meeting.

Question: Do the needs include projects that are included in the program?

Response: Yes, it does include projects that have been programmed in the Eight Year Construction Work Plan.

The highway expansion needs/costs are a bit lower than reported at the last meeting and total \$801 million; that represents 49 centerline miles of new roadways in urban areas of the state.



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Interchange needs include 50 simple and 10 complex interchanges, and the cost estimate remains the same as reported last time, at \$4.6 billion over 25 years. Maintenance needs total \$6.1 billion and are about the same as reported at the last meeting. Estimated cost of meeting rest area needs total \$10.4, the same as reported at the last meeting.

Jeff then reported that the safety needs are estimated at \$4 billion; with \$1.3 billion attributed to ODOT needs on the state highway system (SHS) and \$2.7 million attributed to costs by partner agencies such as DPS or the Oklahoma Highway Safety Office. The needs and related costs include implementing safety measures to improve intersections, installing countermeasures to reduce roadway departure crashes, making improvements for bicycle and pedestrian safety, improving safety enforcement and data analysis, and enhancing driver education.

Jeff noted that weigh station needs/cost of \$37.5 million remained the same as reported at the last meeting; and it covers renovation/update costs for seven weight stations and annual maintenance costs for nine weigh stations as well. (In total, there are 11 weigh stations; and since two will be renovated later in the plan period, those two have no anticipated maintenance cost.) Jeff noted that the annual maintenance costs were applied to all seven Ports of Entry facilities and summed with the cost of renovations and portable equipment at four locations. The cost to construct and maintain ODOT's Ports of Entry including the portable equipment totals \$64.1 million and that was the same as reported last time.

Jeff noted that the 25-year ITS needs/cost total an estimated \$281.93 million, and include expanding the statewide fiber optic cable network, implementing new Regional Traffic Management Center (RTMC) field devices, maintaining ITS software and data archives, implementing snowplow tracking, and deploying Vehicle to Infrastructure (V2I) technology.

Question: I heard you mentioned something about 4-foot shoulders, and I think the ODOT policy is 10-foot shoulders. Can you elaborate on this more?

Response: ODOT's responsibility is on the SHS. The standard shoulder on a new roadway is 8 foot. In the case of retro fitting, the minimum is 4-foot shoulders on the SHS. On local roads, entities work with the specific road and right of way; so shoulders can be in the range of 2 to 4 feet.

Jeff noted that to determine the bicycle and pedestrian needs of each region, the MPOs planned mileage of bike routes, bike lanes, and shared use paths or trails contained in their constrained MTP was used to identify the bike and ped needs. The Transportation Alternative Program (TAP) application process occurs every other year; and ODOT typically funds about \$7.5 million to address bicycle and pedestrian needs for small towns and counties through the TAP program. ODOT also provides approximately \$5.0 million to the ACOG and INCOG MPOs every two years. Jeff noted that the bicycle and pedestrian needs total an estimated \$900.5 million.

Craig Moody noted that some of the freight and passenger rail needs/costs were adjusted after our last meeting. The freight rail needs total \$1.2 billion and that includes upgrading to steel track, structures, and sidings. ODOT's work on railway-highway crossing safety is also included in the total.



Craig noted that the passenger rail needs total \$472.36 million and include continuing the existing OKC to DFW Heartland Flyer service, a stop in Thackerville, an additional trip per day between Oklahoma City and Dallas, and service going to Newton, KS.

Question: Does the passenger rail needs include maintenance and operation of existing system?

Response: Yes.

Comment: I would like to take a train to Saint Louis instead of flying.

Response: Among the items planned for the next 25 years is to work with the State of Kansas on possible connecting the Heartland Flyer to Newton. From there, it would be possible to connect to a route to St. Louis.

Craig noted that the public transportation needs total \$4.28 billion and include needs in urban, rural, and tribal areas.

Jeff then summarized the 25-year multimodal needs and noted that the State Highway System highway and bridge needs totaled \$25.6 billion. Transportation appurtenances totaled \$10.6 billion. The non-highway needs total \$7.1 billion, and most of these needs are the responsibility of partner entities such as the Army Corps of Engineers, private railroads, or local governments. Jeff noted that meeting the 25-year needs will cost an estimated \$43.3 billion over 25 years; and approximately \$34.9 billion of the total is for transportation improvements that are ODOT's responsibility.

25-Year Baseline Revenue Forecast

Patrick Byrne noted that he reviewed current legislation, gas taxes, licensing and registration act and then developed a revenue model using an Excel spreadsheet. It accounts for electric vehicle adoption, higher fuel economy, and Roads Act funds that sends general revenue into the transportation program. On the federal side, we assumed the FAST Act funding for FY 2019 and extended that flat to 2045. We discounted to 2% per year to discount the dollars to 2019.

Under current law, the model projects \$29.8 billion to ODOT in constant 2019 dollars (\$2019) - of which \$18.4 billion is state funds (62%) and \$11.4 is federal funds net of outstanding debt service (38%). The gap between the modal needs that are the responsibility of ODOT and the projected ODOT revenue totals \$5.1 billion.

Question: Does the model include reducing any of the state funds due to Legislative acts?

Response: No, we did not assume any reduction in state funding in the 2020-2045 forecast.

Question: Why is it useful to know about the vehicle fleet make up?

Response: It is quite important. Anticipated gas and diesel power vehicle changes over time are more critical than EV adoption. The average miles per gallon in Oklahoma is 16.4 MPG and that will change to 25.4 MPG. Based on a normal fleet turnover, the increase in fuel efficiency will have a dramatic impact on gas and diesel taxes collected in Oklahoma.



Comment: We have not finalized all the partner costs. And we don't have the partner revenue identified yet, but we'll work on that and expect that there will also be a gap in partner responsibilities.

Strategies Breakout Session

Jeff started the strategy session by showing the 2045 LRTP goal areas:

- Safety and Security
- Efficient Intermodal System Management and Operation
- Environmental Responsibility
- Infrastructure preservation
- Fiscal Responsibility
- Mobility and Accessibility
- Economic Vitality

Jeff noted that there would be three discussion groups (A, B, and C) to talk about six emerging trend areas:

- Connected and Autonomous Vehicles (CAV)
- Safety, Security and Cyber Security
- Electric Vehicles
- Severe Weather Events
- Mobility as a Service (Maas)
- Alternative Freight Movement: E-commerce and Truck Platoons

Group A discussed the following two questions, and proposed strategies:

1. Given the potential for *connected and automated vehicles* (CAVs) to remove the risk of human driver error and create a seamless automated driver and human driver interaction, what safety and security strategies does ODOT need to integrate into the LRTP?
 - a. Consider: will there be a lot more vehicles or a lot less?
 - b. Evaluate Oklahoma's connection with the aerospace industry
 - i. Drones
 - ii. Reduces impact on highways
 - c. Consider statement that 50% of Oklahomans say they would never get in a driverless car
 - i. Safety aspect – 80% to 90% of crashes are due to human error
 - ii. Gap in public awareness and education
 - d. CAVs may not be feasible in rural areas
 - e. Consider that there will be four types of vehicles on road
 - i. Autonomous trucks
 - ii. Combo personal vehicles
 - iii. Personal vehicles with no technology
 - iv. Uber/Lyft rideshare



- f. Why would you buy a CAV if where you live, it won't work?
- g. Manufactures of CAVs are not relying on road markers – vehicles are not infrastructure reliant
- h. How do we expand broadband access out to the rural communities?
 - i. ODOT has 3,000 miles of fiber
 - ii. Is there any policy in place to communicate between companies? Or could one be created?
 - iii. Is that an ODOT priority or a private company priority
- i. What can we learn from pilot cities such as Phoenix and Pittsburgh?
- j. *System* management of freight network is not, and should not, be affected by CAV vs. Non-CAV – we should think of specific corridors
- k. Transition to new system/type of technology can be a safety risk
- l. Develop fully integrated CAV system on clearly defined corridors so that public is 100% aware of new technology

2. Given the introduction of new technologies and the resulting reliance and risk to information and transportation-related networks, what *safety, security, or cybersecurity* strategies does ODOT need to integrate into the LRTP?

- a. Cybersecurity
 - i. ODOT does not currently save any video streams. It is all live stream
 - ii. ODOT just started working with Waze
 - iii. Data within a vehicle belongs to the vehicle owner
 - iv. Is data sharing a conscious choice by driver/person?
 - v. Does ODOT need guidance on how to share data?
 - vi. Can we work better with other state agencies for data sharing?
 - vii. Partnerships with Uber/Lyft (and Lime and Bird scooter companies) about data sharing for travel patterns
 - viii. Legislation about data collection and sharing
- b. Corridor approach
 - i. People have problem with the transition
 - ii. For data or AV, you can focus on rolling out a corridor at a time. Fully learn lesson for the next corridor

Group B discussed the following two questions, and proposed strategies:

3. Given the potential for *electric vehicles (EVs)* to benefit the environment and move operations away from well-integrated, revenue-generating fuels, what fiscal and environmental strategies does ODOT need to integrate into the LRTP to address growing EV sales?

- a. Registration surcharges for EVs. Fairness issue.
- b. Road user charges
- c. Inconsistency across states – fuel taxes in one state vs. Vehicle Miles Travelled in another.

d. Charging infrastructure.



- i. Is this an ODOT responsibility?
 - ii. Private industry is taking the lead
 - iii. Facilitate interstate commerce powered by EVs with charging stations on Interstates (ODOT)
 - e. Signage needs
 - i. EV users have apps to find locations
 - f. Challenge for transit agency adoption due to limitations on rural power grids
- 4. With an increase in *severe weather events* drawing attention to resiliency planning, what infrastructure preservation strategies does ODOT need to integrate into the LRTP?
 - a. Flood prevention/mitigation
 - i. Bridges have been fine in Oklahoma during flooding events
 - ii. There were some highway failures
 - iii. Flatter areas of the state face greater risk of roadway begin submerged
 - b. Increase signage in low lying areas
 - c. Consider how severe weather could affect reliability of the system for Connected & Automated Vehicles
 - d. Seismic event mitigation
 - i. ODOT has modeled the seismic risk to all its bridges. Subsequently (coincidentally) the rate of seismic activity has decreased
 - ii. ODOT could lend expertise to local governments with off-system bridges
 - iii. Increase signage
 - e. Use ITS – variable message signs to alert drivers about severe weather conditions

Group C discussed the following two questions and proposed strategies:

- 5. Given the potential for *Mobility as a Service (MaaS)* to (1) be autonomous, (2) alleviate transit and mobility gaps, and (3) have limited reach in rural areas ... what mobility and accessibility strategies does ODOT need to integrate into the LRTP?
 - a. Not enough fleet vehicles for needs such as transit, rideshare, individuals with disabilities or special needs such as service animals, Uber, etc.
 - b. ODOT to lead policy
 - c. Make sure facilities can accommodate
 - d. Future needs – sidewalks/ramps
 - e. Scooter parking & bike parking – curb access
 - f. ODOT should provide guidelines for street and parking design
 - g. ITS statewide 5G
 - h. Rural Uber system
 - i. 800 MHz system – rural



- j. Look at alternate systems
 - i. possible broadband
 - ii. 911 system as a possible platform for expanding rural communications for transit services
 - k. Solutions for funding the system
 - l. Policy on bike/ped and rideshare in rural areas
6. Given the potential for (1) *e-commerce* to increase freight demand, (2) *truck platooning* and other emerging technology to address the industry driver shortage and operation hour limits, and (3) an increased number of trucks on the road, what system management strategies does ODOT need to integrate into the LRTP?
- a. Increase pavement depth for truck lanes
 - b. Support legislation to support truck platooning
 - c. Develop ODOT policy on truck platooning through urbanize areas
 - d. Look at platooning distribution points in urbanized areas
 - e. Legislate hours of delivery in city and towns and enforce
 - f. Consider rest areas – public/private
 - g. Increase truck parking
 - h. Consider tax break and/or incentives for parking areas – Love’s Flying J, etc.
 - i. Electronic logging provides more accurate and timely information

Next Steps

Jeff noted that the fourth advisory committee will probably be held in May. During that meeting, we’ll review the draft LRTP and you will have an opportunity to provide comments.

Jeff thanked everyone for participating in the meeting and highlighted that their input is critical to the development of the 2045 LRTP. Linda echoed those comments and noted that if anyone had any further questions they were invited to stay after the meeting, and the LRTP team would be happy to answer them after the meeting or in follow-up communication.

Meeting adjourned.



APPENDIX A

Advisory Committee Meeting Agenda and Presentation

Agenda		
1:30 PM	Welcome Opening Remarks from ODOT	Matt Swift, PE Strategic Asset & Perf. Mgt. Division Engineer
1:35 PM	Introductions October 2019 Advisory Committee Meeting Summary (Attachment #A)	Linda Koenig ODOT Project Manager
1:45 PM	Needs and related cost estimate discuss and identify strategies the following two questions:	Jeff Carroll High Street Project Manager
2:00 PM	Preliminary Revenue Estimate	Patrick Byrne High Street
2:10 PM	Policies and Strategies Breakout Exercise Attachment B	Jeff Carroll High Street Peter Hylton, Ph.D. High Street John Bowman, PE Poe & Associates
3:15 PM	Next Steps and Questions Concluding Remarks	Linda Koenig Jeff Carroll
3:30 PM	Adjourn – Thank You!	