Presentation Overview

- CAV Background
- Federal Level Actions
- State Level Actions
- Trends Around the Country
Why CAV is important to Minnesota

- Safety
- Greater mobility and equity
- Economic and workforce development
- Efficiency
- Maximize health and environment
4 Priorities: ACES

- Connected
- Electric
- Automated
- Shared Mobility
NHTSA 3.0 Guidance

- Motor Vehicle Safety Standards
- Self Certification Approach
- Align multiple federal agencies “One DOT”
- Update MUTCD taking into account CAV
- Considers impact on freight
- Eliminates 10 designated pilot and proving grounds
NHTSA Best Practices – Local Governments

• Facilitate safe testing and operation of AV on local streets
• Understand near term technologies
• Consider how land use and curb space could be impacted
• Consider increased congestion management
• Engage with citizens
House of Representatives

Passed SELF DRIVE ACT

Senate

Considering AV START ACT

Pre-emption is similar, but several differences in the two bills

Eno Center for Transportation has a good summary of the differences
Technology Debate

5G vs DSRC
GM will focus on autonomous and electric vehicles

‘Platoons’ of autonomous Freightliner trucks will drive across Oregon

Waymo to Establish AV Manufacturing Facility in SE Michigan

Toyota and Lexus to introduce DSRC-based connected vehicles in the USA from 2021
They Are Here
Industry Needs

**Policy**

- Clear and uniform laws for testing and operation

**Infrastructure**

- Better pavement markings
- Real time information
  - Signals
  - Work Zones
  - Incident Management (weather events, closures)
Executive Order 18-04

**ADVISORY COUNCIL**

Report to Governor and Legislature by December 1, 2018

**TESTING AND DEPLOYMENT**

Requires MnDOT and DPS to establish testing and deployment programs

**COORDINATION**

Establishes Interagency CAV team (I-CAV)
Advisory Council
Report to Governor and Legislature by 12/01/18

- Infrastructure
- Vehicle Registration, Licensing and Training
- Accessibility and Equity
- Cyber Security & Data Privacy
- Economic Development & Workforce
- Planning and Land Use
- Traffic Regulations
- Insurance

Emphasis Areas:
- Rural Minnesota
- Low Income
- Elderly
- Disabled
- Tribal Nations
- Communities of Color
Key Themes

1. Modernize Policy
2. Equity
3. Proactive Leadership & Public Engagement
4. Education
5. Funding / Revenue
6. Partnerships
Modernize Policy

• MnDOT and DPS permit process to safely automated vehicle

• MnDOT and DPS permit process for connected vehicle platooning
Council Recommendations

Leadership and public engagement

• Continue CAV Advisory Council work

• Create a public engagement plan

• Expand Interagency CAV team to include tribes, local government and universities
Council Recommendations

Transportation Infrastructure

- Modernize signals, improve pavement markings, expand fiber optic network, improve traffic data
- Fund testing on existing publically owned facilities
- Assess infrastructure to support truck platooning and AV operations.
Council Recommendations

Revenue

- Create working group to review current and future revenue options to diversify and supplement transportation funding

Land Use and Planning

- Maintain current delegation of powers for local government planning and land use

- Assist local government, transit and MPOs to fund CAV pilots, training and research
CAV-X Major Areas of Focus

1. Facilitate statewide policy and planning
2. Advance national policy and standards
3. Develop a MnDOT CAV Strategic Plan
4. Lead CAV research and deployment
5. Develop public/private partnerships
Strategic Plan

- Long Range Planning
- Capital Needs
- Research
- Partners
- Regulation
- Operations
- Strategic Staffing
- Multi-Modal
- Outreach
TH 55 Connected Corridor

Signal Phasing and Timing

Snow Plow Priority

Signal Data to 3rd Parties

Receive and Process Data
Other CAV Related Activities

- Minnesota CAV Challenge
- TH 52 Rural Corridor
- Automated TMA Truck
- Rural Intersection Connectivity
- I-94 Pavement Markings
City Applications for CAV

Frisco Texas

Detroit

NYC CV App
Thank you again!

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