

# FIRE EMERGENCY RESPONSE ACCESS AND TRANSPORTATION SAFETY COMMUNITY MEETING

Help identify strategies that achieve optimal balance of protection for fire emergencies and complete street design.



Monday, Sept. 17, 2018 | 6-7:30 p.m.  
Cepeda Branch Library  
651 North Pleasant Valley Rd.  
Austin, TX 78702

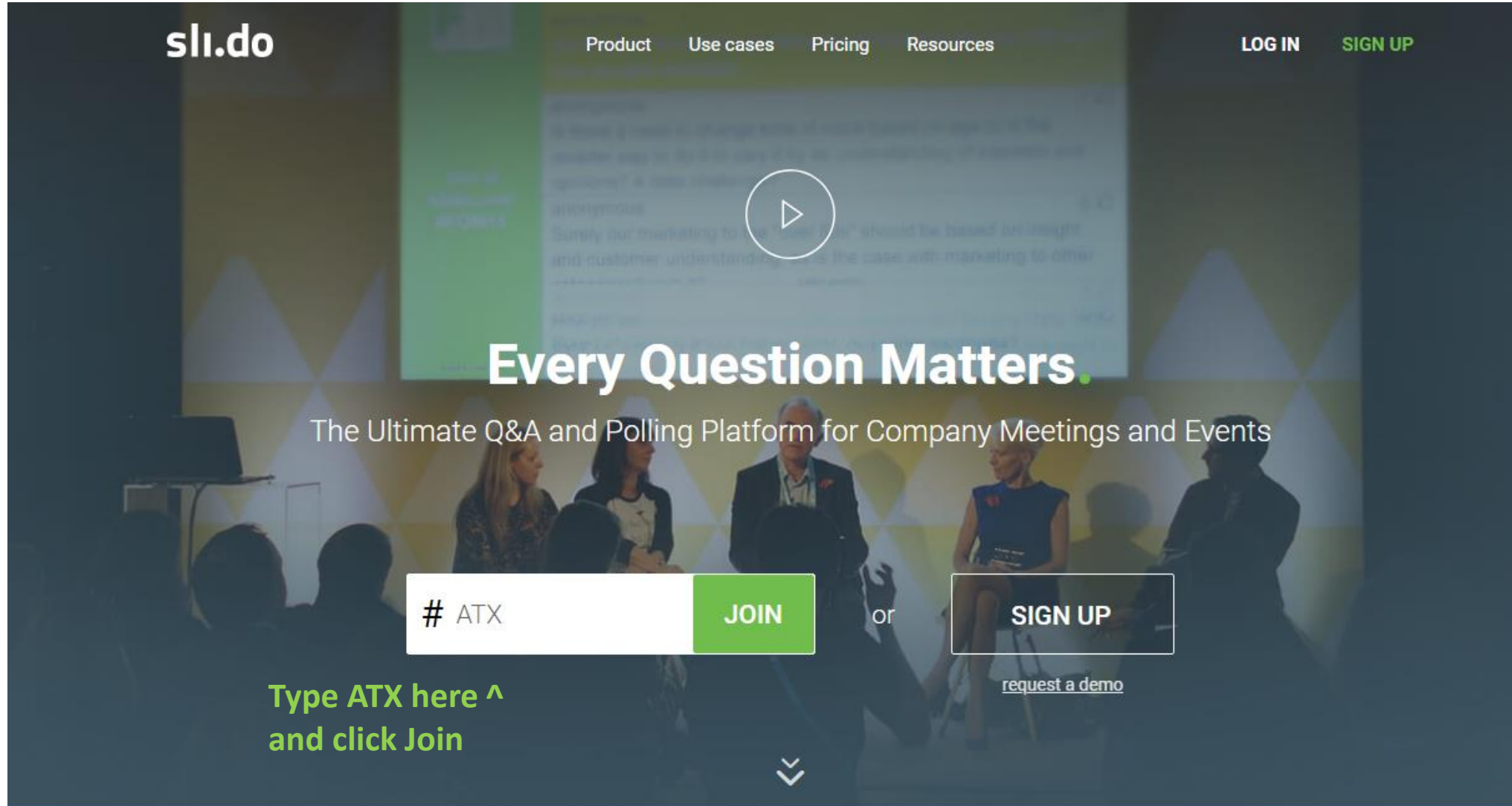


# Tonight's Agenda

- Welcome – Director Spillar and Chief Dodds
- Presentation
- Q&A
  - Slido.com
  - # ATX

slido.com

# ATX

The image shows the Slido website landing page. At the top left is the 'slido' logo. To its right are navigation links: 'Product', 'Use cases', 'Pricing', and 'Resources'. Further right are 'LOG IN' and 'SIGN UP' links. The main visual is a video player with a play button icon. Below the video player, the headline 'Every Question Matters.' is displayed in large white font. Underneath this is the subtext 'The Ultimate Q&A and Polling Platform for Company Meetings and Events'. At the bottom, there is a search bar containing '# ATX' and a green 'JOIN' button. To the right of the 'JOIN' button is the word 'or' followed by a 'SIGN UP' button. Below the 'SIGN UP' button is a link that says 'request a demo'. In the bottom left corner, there is green text that reads 'Type ATX here ^ and click Join'. At the very bottom center, there is a small white double-downward arrow icon.

# Meeting Objectives

- Provide an update on staff work
- Educate about joint safety considerations
- Hear your questions, concerns, ideas

# Problem Statement

*The City of Austin government should ensure the health, safety, and welfare of the citizens. The best way to accomplish this is not always clear when there are two competing policy options that create a conflict of two public goods that both seek to increase the safety of our citizens.*

# Sharing Progress

- Dec. 7, 2017 – Council passed ordinance adopting the 2015 International Fire Code (IFC) and local amendments
- Jan. 2018 – Staff working group formed
- June 15, 2018 – Update memorandum issued
- Sep. 17, 2018 – Community meeting (today)
- Oct. 2018 – Staff to provide Council and City Manager with recommendations report

# IFC Recommendation

**“...we are not recommending any further amendments to the IFC nor to the Fire Chief’s authority as outlined in the Code.** Staff will continue to use the previously Page 2 of 3 adopted language in Sections 503.2.1 (*Dimensions and Exceptions*) and 503.2.2 (*Authority*) to identify solutions for street design, and will make decisions together on matters related to street widths and emergency response access. This will be accomplished through ongoing, collaborative discussions between AFD and ATD as well as various processes including development review, capital improvement project development, bond program initiatives, complete community partnerships, or other efforts that involve the design or redesign of streets.”

*-- From June 15, 2018 memo*

# Ongoing Coordination

- Visioning and Strategy Development
  - Established joint vision: “Find the optimal balance of protection for multi-modal transportation and fire emergencies that results in the fewest total deaths from all causes.”
- Colony Park and Mueller Development Projects; Local Area Traffic Management Projects; Other private developments (subdivision, site plan)
- Austin Strategic Mobility Plan & Transportation Criteria Manual



# Policy Analysis

Staffing Resources

Building Materials & Standards

Development Review Process

Street Connectivity

Traffic Calming

Street Trees

Fire Truck Design

Street Width

Performance Measures

Fire Stations

Enforcement

Vehicles and Operations for  
Non-Fire Emergencies

# Joint Safety Considerations

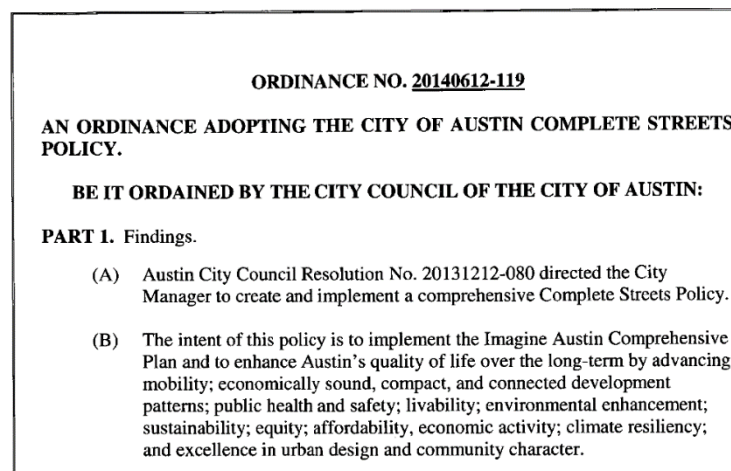
# Policy Direction



June 2012



May 2016



June 2014

Compact &  
Connected

Multimodal

Complete Streets

Vision Zero



# Multimodal transportation is necessary to manage congestion



(AP)

# Street design tools can improve safety

- Better connectivity:
  - Short blocks
  - Connected street networks
  - Alleys
- Access management (limit driveways, turns)
- Street geometry:
  - Width
  - Number of lanes
  - Turn radii
- Bike lanes & sidewalks
- Traffic calming devices:
  - Medians
  - Speed humps
  - Etc.
- Signals
  - PHBs
  - RRFBs

# Wider lanes result in higher speeds



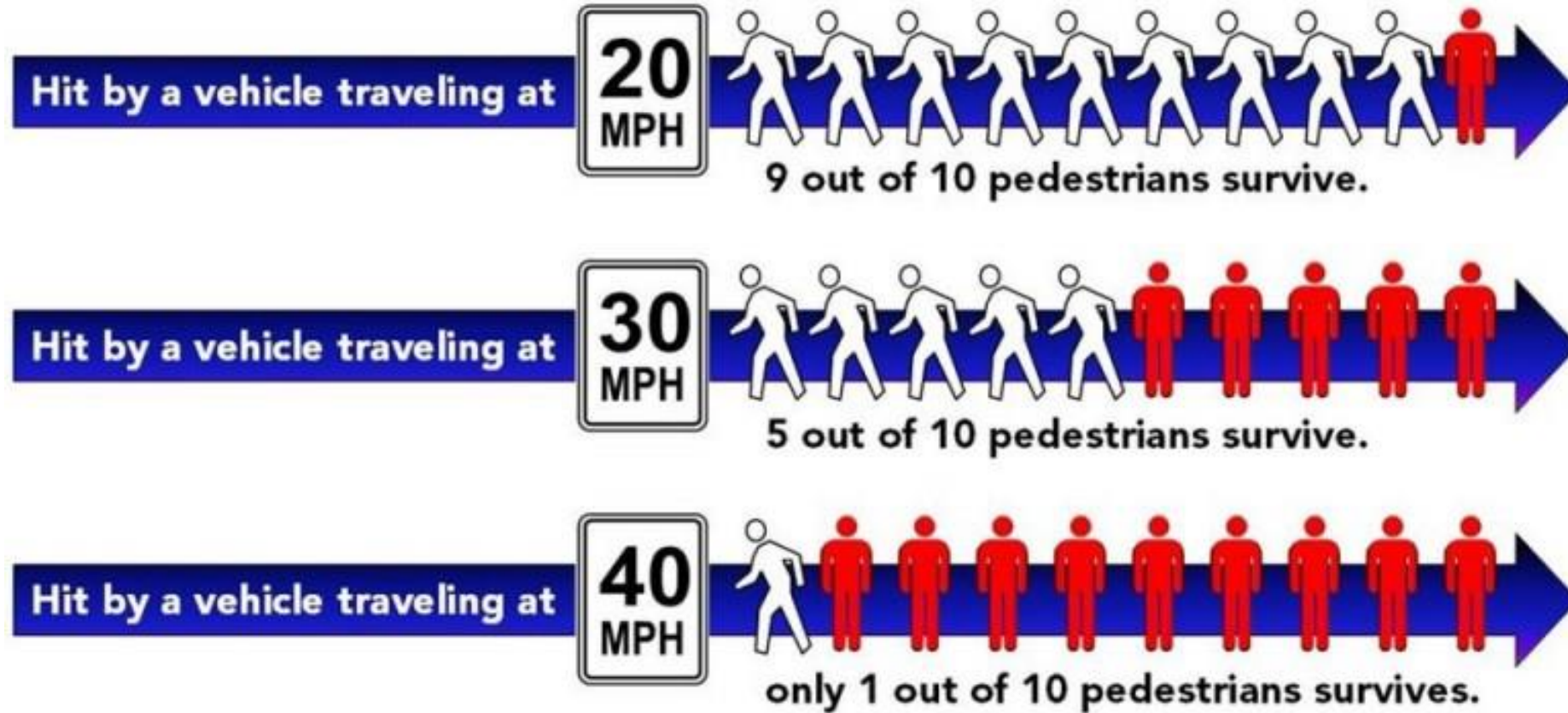
"As the width of the lane increased, the speed on the roadway increased... When lane widths are 1 m (3.3 ft) greater, speeds are predicted to be 15 km/h (9.4 mph) faster."

Chart source: Fitzpatrick, Kay, Paul Carlson, Marcus Brewer, and Mark Wooldridge. 2000. "Design Factors That Affect Driver Speed on Suburban Streets." *Transportation Research Record* 1751: 18–25.

— Regression Line

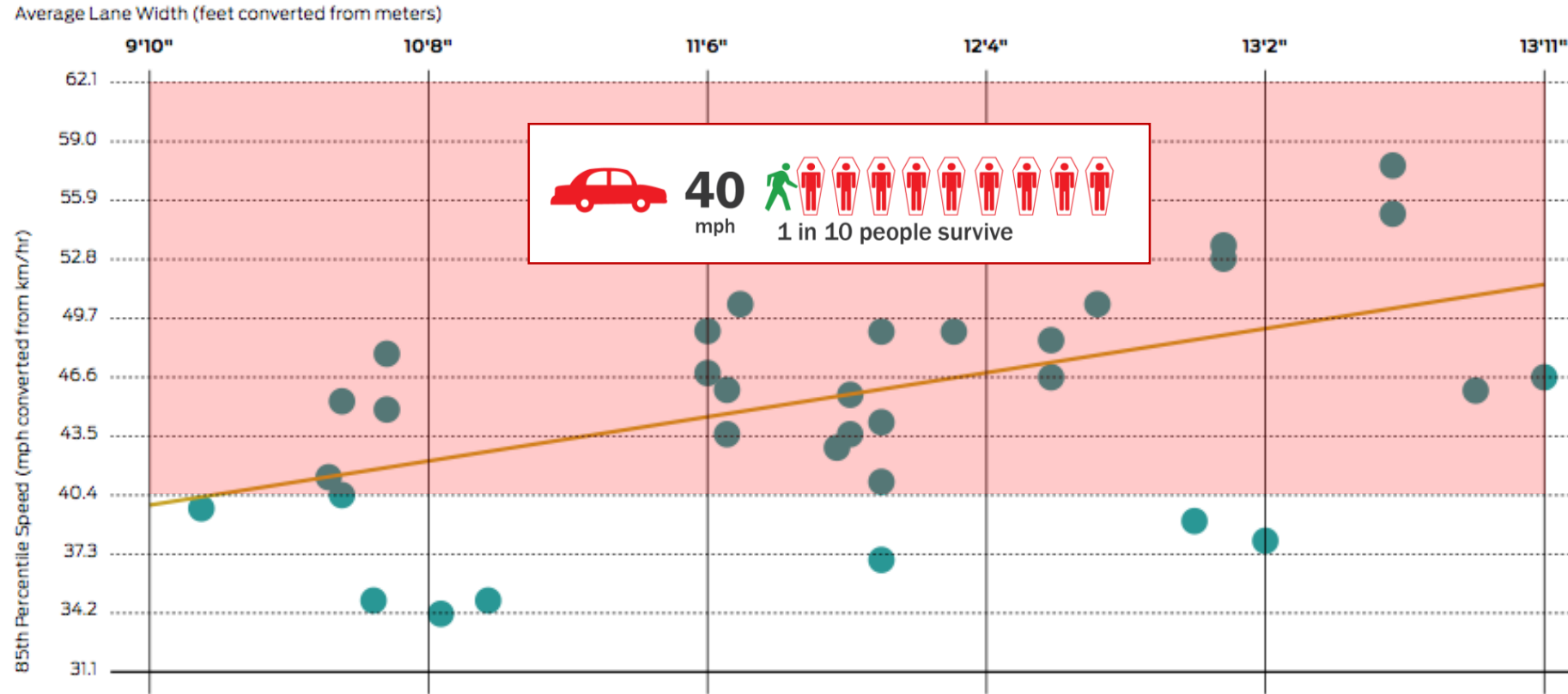
● 85th Percentile Speed of Traffic

# Speed Management is critical for safety





# Wider lanes result in higher speeds



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— Regression Line  
● 85th Percentile Speed of Traffic



# Neighborhood context varies



# Street Design is 24/7



KUT

# Emergency Response Data over last 5 years

	2012	2013	2014	2015	2016
<b>Emergency Related Calls</b>	69,231	70,701	72,239	68,321	63,213
<b>Fire</b>	3,138	3,394	3,350	3,416	3,310
<b>Cardiac Arrest Related Calls</b>	748	853	1,355	1,430	1,614
<b>Chest Pain</b>	5,822	5,803	5,813	5,285	5,614
<b>Stroke</b>	1,568	1,629	1,634	1,750	1,754

# Apparatus Dispatched for First Alarm

For a single/first alarm structure fire:

- 4 pumping apparatus (engine or quint)
- 2 aerial apparatus (ladder or quint)
- 1 rescue unit
- 2 battalion chiefs & vehicles
- 1 safety officer vehicle

# Pumping Apparatus/Fire Engine

- Equipped with a fire pump and hose
- Connect to fire hydrant and deploy hose
- Pump and flow water
- Fire attack





# Rescue Trucks

Carry specialized tools for Fires, pin-in collisions, and Hazardous Materials



# Aerial Apparatus/Ladder Truck

- Forcible entry
- Ventilation
- Search
- Check for fire extension
- Exposure protection
- Overhaul
- Salvage



# Measuring the Cab Width of a Fire Truck

## Mirror to Mirror- 10'2"





# Street design challenges that affect first responders

- The ability to deploy Aerial ladder stabilizers
- Opening apparatus doors so firefighters can exit
- Retrieving equipment from compartments
- Connecting fire hoses to apparatuses
- The capability to drive around other emergency vehicles on scene

19 ft. + for outrigger set up to support extension of the ladder



Difficulty in driver exiting vehicle  
No access to equipment in driver side compartments  
Unable to fully extend stabilizer on driver side



# Other challenges

- 14' curb-to-curb street
- Apparatus unable to make turn due to guard rail and bollards
- Bollards had to be cut down at ground level for vehicle to get out of neighborhood





# Potential solutions

- Bike lanes as part of fire lane
- Mountable curbs
- Grass Crete
- Parking placement strategies



# Response Times are Critical for Time-sensitive Medical Emergencies

- Trauma
- Cardiac arrest
- Heart attack
- Stroke
- Respiratory emergencies
- Severe allergic reactions
- ***Brain damage starts to occur within 4-6 minutes after cardiac arrest***

# Response Time Considerations

- A fire department apparatus is often going to be the first to arrive at a medical emergency
- Medical response is a two-way trip
- Present day furnishings = synthetic materials = faster flame spread + toxic smoke
  - Flashover can occur within a few minutes

# Emergency Response/Set Up Time...

- Is a critical factor for successful outcomes to medical and fire emergencies
- Increased response/set up times could result in less successful outcomes
- Response time is an important performance measurement for emergency services
- A quicker, effective fire response time generally results in a smaller, lower risk fire and allows offensive fire response mode



# Fire Truck (Apparatus) Considerations

- Pumping Apparatus/Fire Engine vs Aerial Apparatus/Ladder Truck
- Aerial Apparatus used to provide elevated master streams vs. ground level master stream
- Denser infrastructure creates greater chance of fire spreading to adjacent structures
- Aerial used for ventilation, rescue, exposure protection, extinguishment
- 19+ ft. for outrigger setup to support extension of the ladder
- Additional clearance may be needed to allow firefighters to access tools and equipment

# Joint Vision

*Find the optimal balance of protection for multi-modal transportation and fire emergencies that results in the fewest total deaths from all causes.*

# Next Steps

- Policy Analysis/Report
- Continue working group
- Reset policy in ASMP/TCM
- Administrative process improvements

# Questions?

[slido.com](https://slido.com)

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