Embracing the Safe System Approach in New Mexico

Panelist:

Valerie Hermanson, City of Albuquerque Planning

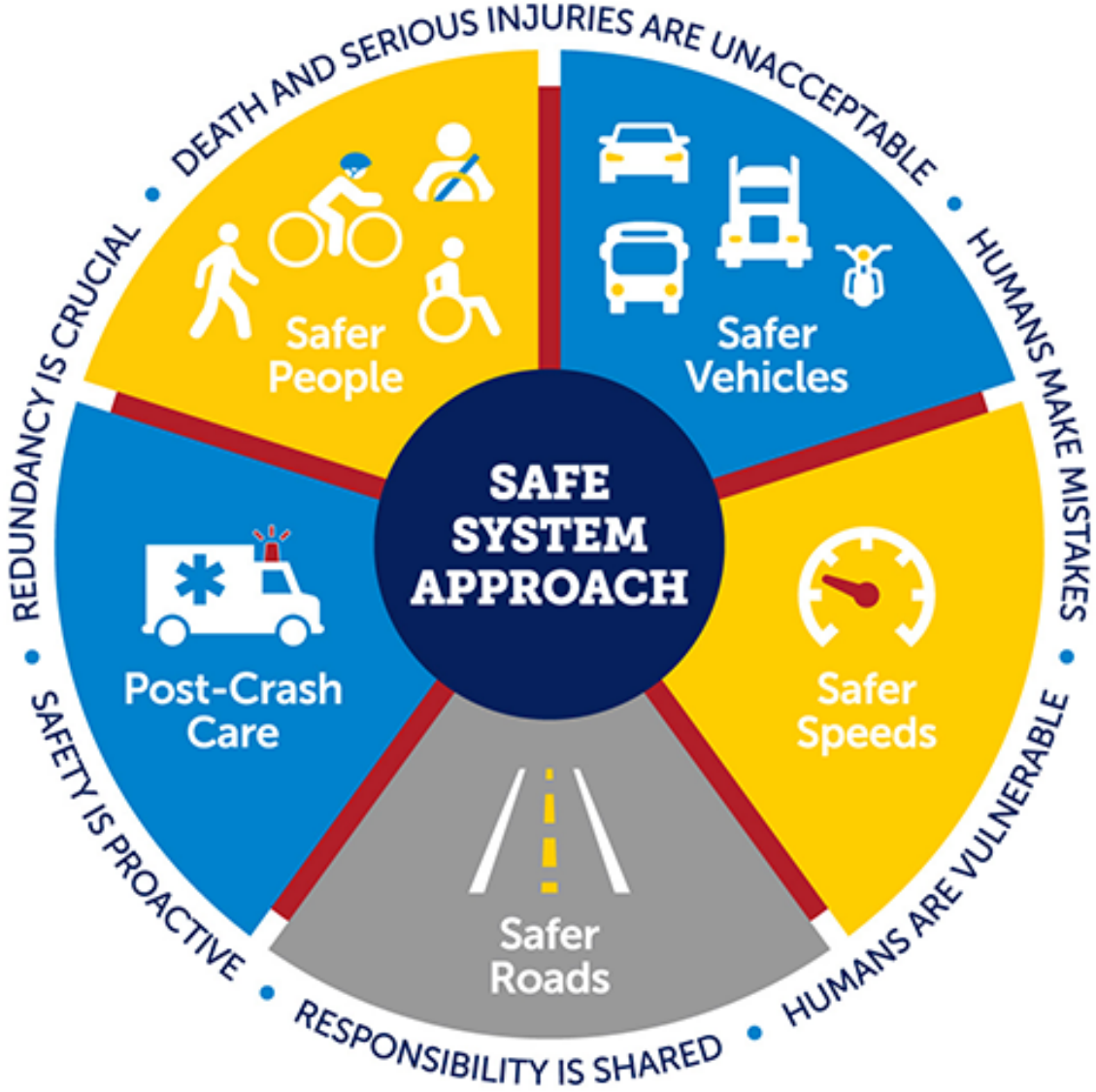
Kim Kolody, Jacobs Engineering

Barbara Penny, National Traffic Safety Administration (NTSA)

Charles Remkes, New Mexico Department of Transportation Intelligent Transportation Systems

Moderator:

Amy Whitfield, New Mexico Department of Transportation Target Zero


DEATH AND SERIOUS INJURIES ARE UNACCEPTABLE
HUMANS MAKE MISTAKES
HUMANS ARE VULNERABLE
RESPONSIBILITY IS SHARED
SAFETY IS PROACTIVE
REDUNDANCY IS CRUCIAL
SAFE SYSTEM APPROACH
Safer People
Safer Vehicles
Safer Speeds
Safer Roads
Post-Crash Care

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New Mexico 2024
Transportation Safety Summit

Safe System Approach Panel

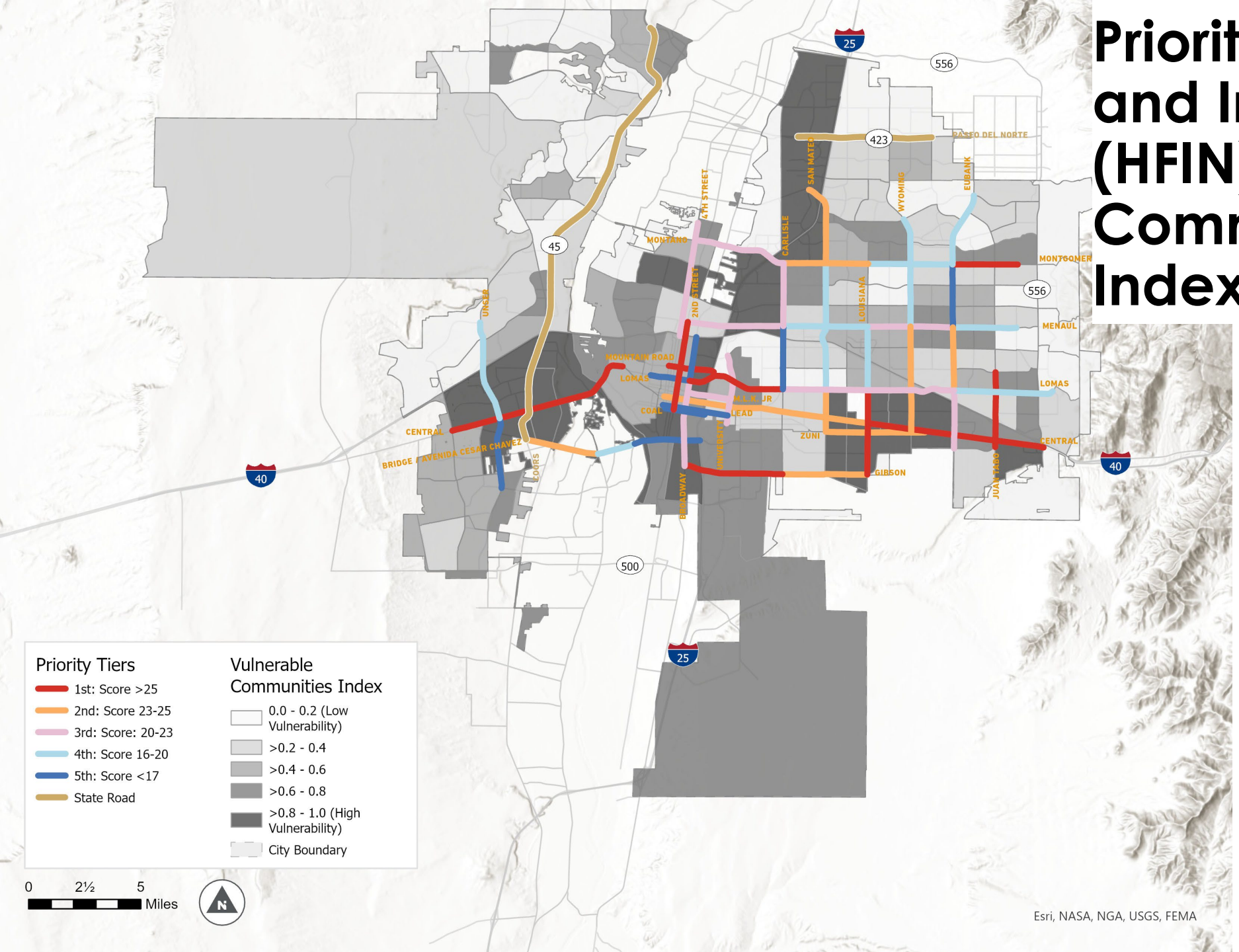
Valerie Hermanson

City of Albuquerque

Safe Systems Approach in ABQ

- Prioritizes
  - Safe Multimodal Street Design/Safe Speeds
  - Shifting to Active Modes
  - Culture of Safety
  - Data and Transparency
- 32 actions
- High Fatal and Injury Network (HFIN)/Vulnerability Communities

Prioritized High Fatal and Injury Network (HFIN) & Vulnerable Community (Equity) Index



41%

of fatalities occurred on these 24 corridors (2015-2019)

16%

of road miles in Albuquerque

90%

are Principal Arterials

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Safe Roads

Since 2021, the City of Albuquerque has completed…

Mid-block crossings

- **15** pedestrian hybrid beacons (PHBs) or rectangular rapid flashing beacons

Signal improvements

- **15** Leading Pedestrian Intervals
- Rest in red
- Pedestrian Activated Warning Signal (PAWs) – in design

Striping

- **6.6 miles+** road diets
- **35.2 miles+** of bike lanes (**25.8 are buffered)**
- **122+** daylight intersections
- **158+** new or refreshed high visibility crosswalks
- **41.9 miles+** narrowing driver lanes

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Safe Speeds: Automated Speed Enforcement

- **20 total cameras**
- **Changes in driver behavior**
  - **Between April 25, 2022 – May 26, 2024**, 20 cameras saw between a **42% to 89.2% decrease in drivers exceeding the posted speed** limit by 10+ miles per hour (mph)
  - 20 cameras saw between a **0.3 mph to 8.3 mph decrease in average driver speed**

- Remaining funds go toward Vision Zero traffic safety projects

Reducing speeds even by one mph can result in a **17% decrease in fatal crashes***

*National Association of City Transportation Officials (NACTO). City Limits. American Association of State Highway and Transportation Officials (2010). Highway Safety Manual.

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Where does transportation safety go next?

- Continuing prioritizing funding for traffic safety improvements
  - Lower cost/high impact
  - More costly/longer term projects

- **Item of Interest:** Intelligent speed assistance

Speed limiters arrive for all new cars in the European Union

Get ready for a cacophony of beeps at least if you're a bit heavy on the go pedal

Richard Speed — Thu 11 Jul 2024 // 08:35 UTC

SPEEDING

D.C. to Dangerous Drivers: We Will Slow You Down!

Dangerous drivers would be forced to slow down thanks to in-car technology under a first-in-the-nation bill that just passed in the Washington, D.C. City Council.

By **George Kevin Jordan**

12:02 AM EST on February 8, 2024

Why New York City's Car Safety Pilot Is a Big Deal

A new program that will test speed-limiting devices on city vehicles could pave the way for wider adoption of a lifesaving technology.

California bill advances that includes speed-assistance technology mandate

AUGUST 9, 2024 • Keith Goble |

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Transportation Safety Summit

Day 1
Safe System Approach Panel

Kim Kolody, PE, RSP2BI

Jacobs Engineering

Safe System Approach Implementation

- Perspective
  - Global Road Safety
  - Strategic Highway Safety Plan
  - Safety Program Management
  - AASHTO Guides, Manuals

Global Road Safety

American – *Haddon Matrix* – contributing factors and countermeasures (road user, vehicle, road environment)

↓

Dutch - *Sustainable Safety* – no road system should be designed such that deaths can be predicted

+

Swedish – *Vision Zero* – no-one should be seriously harmed from mistakes they make on the road

↓

Australian – *Safe System* – the design parametre of the road system is human tolerance to kinetic force

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Safe System Approach Implementation

- Focus on fatalities
- National Road Safety Strategy
- Increased Funding
  - Directly to local agencies

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What has changed?

- Focused more on impact of all roadway users
- Understanding of speed and crash severity
- System management focus
- Improved understanding of effectiveness

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What is next?

- Flexibility in design and planning
- Proactive use of additional data
- Policy, legislation
  - Prioritization throughout organizations

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NHTSA

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Safe System Approach on Rural Roads

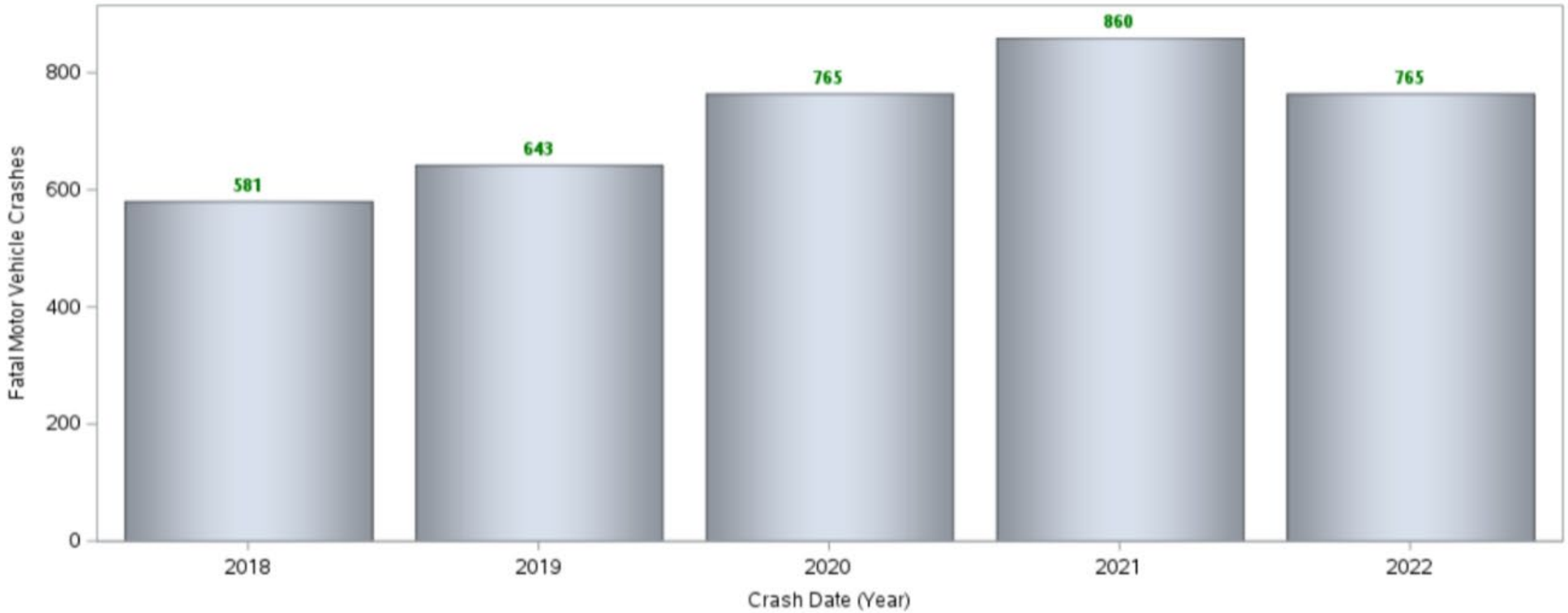
Barbara Penny
Highway Safety Specialist Team Lead
NHTSA Region 6

Albuquerque, NM
August 27

Fatal Motor Vehicle Crashes
Filter Selected: NHTSA Region: *6 = LA, MS, NM, OK, TX*; Land Use (Rural/Urban): *Rural*; Involving Speeding: *Yes*
Years: *2018-2022*

Univariate Graph - Analysis Variable: *Crash Date (Year)*

Fatal Motor Vehicle Crashes[1]

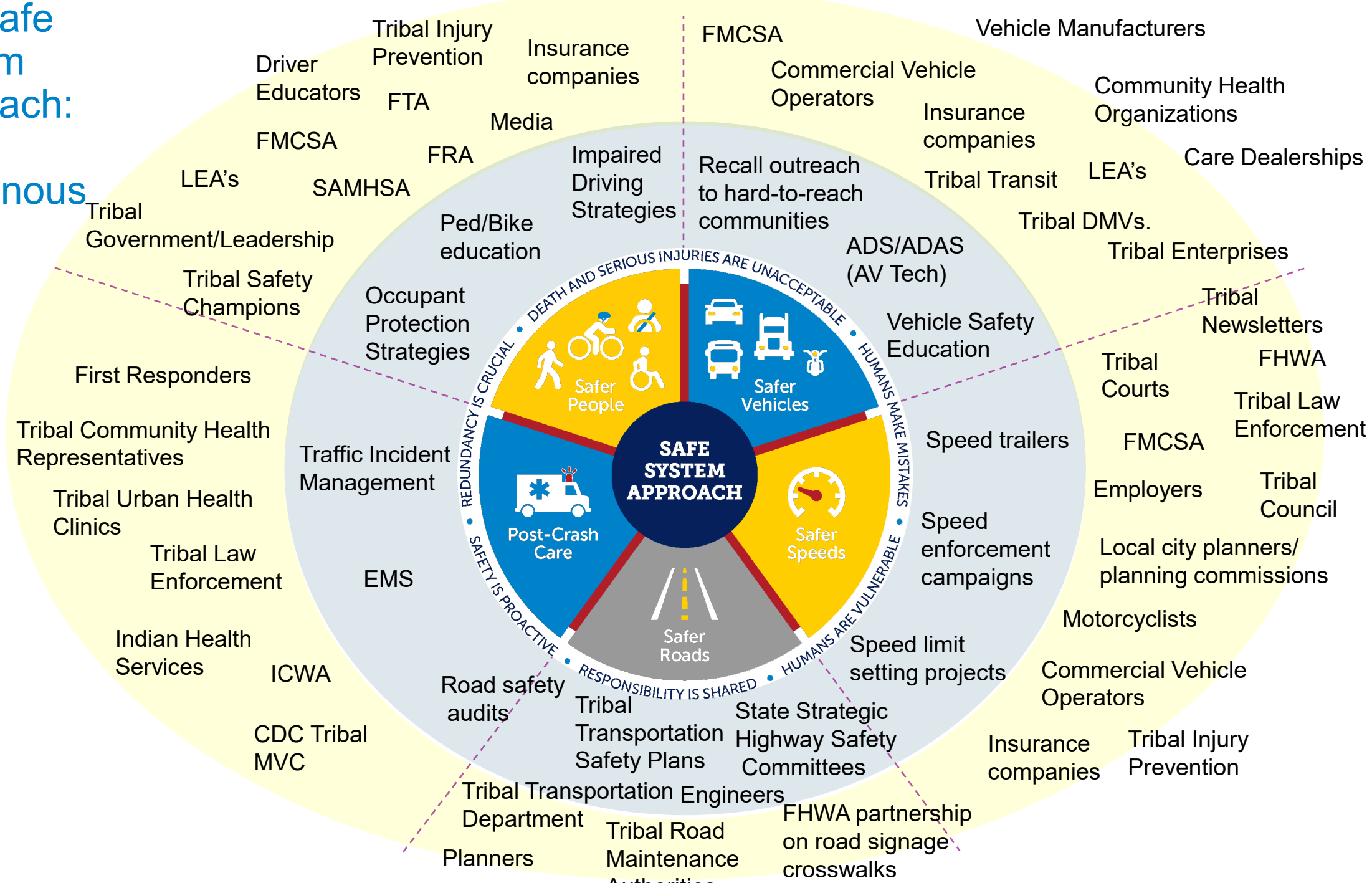


Data Sources:
[1]Fatality Analysis Reporting System (FARS): 2018-2021 Final File and 2022 Annual Report File (ARF)

Report Generated: Monday, August 5, 2024 (4:39:38 PM)

VERSION 7.5, RELEASED JUL 23, 2024

The Safe System Approach: An Indigenous Lens



Charles Remke, NMDOT ITS

Chief of ITS Operations – Using data and advanced communications toward having our surface transportation system operate safer and more efficiently

Collecting and sharing that data among stakeholders (agencies, responders, public, applications, ….) to assist in respective decision making (for coordinated responses, staging and allocation of resources, …) toward that goal

My POV of Safe System Approach

Let me relate this to a question from the public that was submitted to us during a winter event (via NMRoads the state's advanced traveler information system) …..

Is it safe to drive? *(with no reference to where the query was for)*

This prompted another question (besides where are you talking about) - what makes it safe (and what are the influences)?

Roadway conditions - Is it safe to drive on? Surface conditions, state of repair, restrictions, geometry, ….

Environmental conditions – Is it safe to drive in? Rain, snow, sleet, visibility, high winds, ….

Vehicle – Is it safe to use for the location and conditions at hand? Type, condition, state-of-repair….

Driver – Can I safely operate the vehicle in a responsible manner to negotiate the conditions at hand? Ability, behavior, condition (impaired)

All these considerations (and associated influences) are dimensions within the

Safe System Approach

Successes and Observations

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Dust storm kills 6 in 25-vehicle pileup at New Mexico-Arizona line

Associated Press

Published 12:17 p.m. ET June 20, 2017

Florida Times-Union

LORDSBURG, N.M. — Authorities in New Mexico say six people are dead after a 25-vehicle pileup on I-10 caused by sudden blowing dust in New Mexico near the Arizona state line.

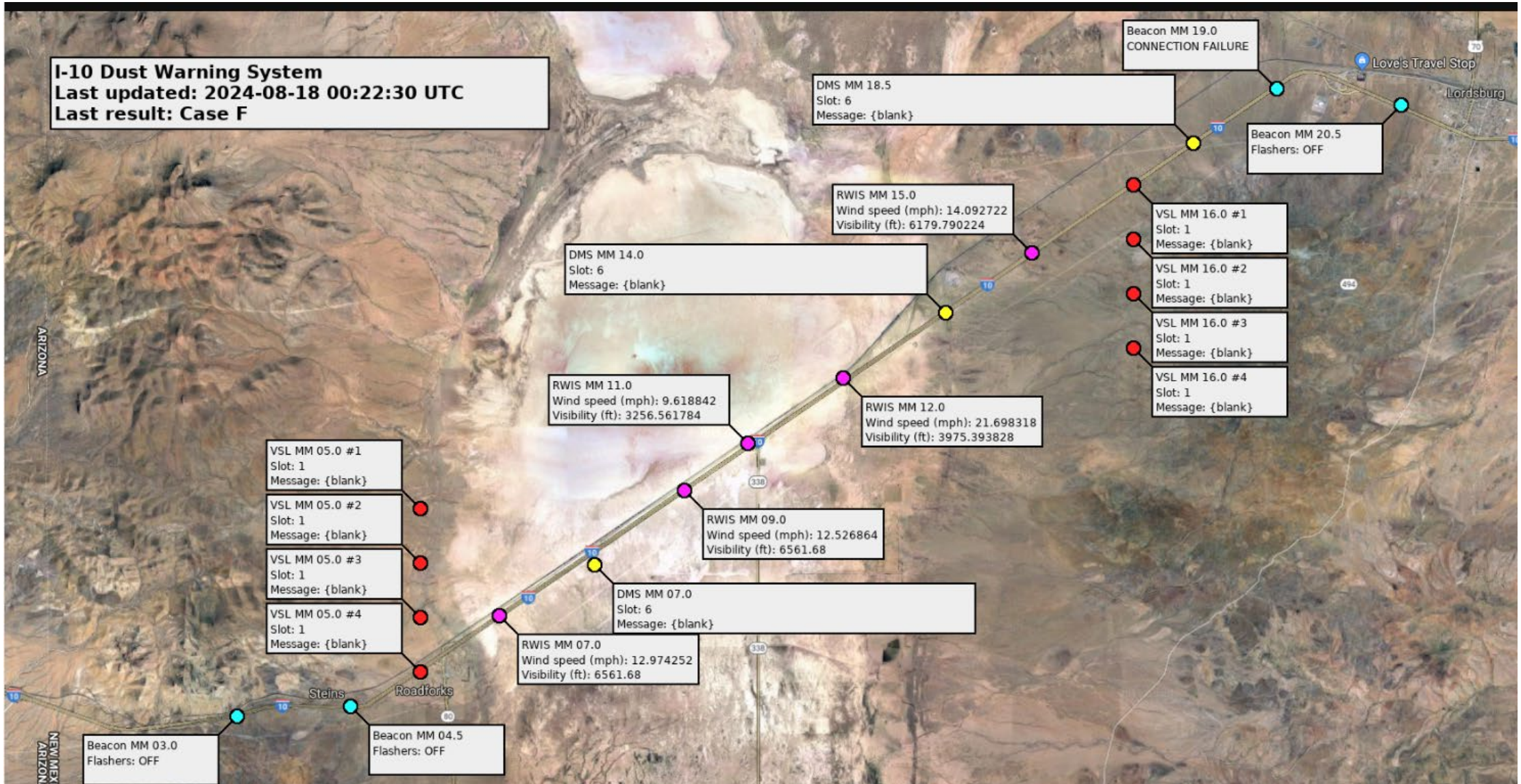
Those killed Monday include a 9-month-old girl and her parents from Phoenix, two people from El Paso, Texas, and a California woman.

The stretch of interstate in Lordsburg, New Mexico, was closed for several hours following crash. The closure extended through Willcox, Arizona, where local authorities helped manage traffic that was diverted through a small road. The closure ended Tuesday.

State police say sudden high winds caused limited visibility from blowing dust, causing 18 commercial trucks and seven passenger cars to crash on the westbound lanes of I-10.

I-10 Dust Storm Detection, Alert, Notification System

I-10 Dust Storm Detection, Alert, Notification System – Equipment Placement



I-10 Dust Storm Response - Roadway Improvements

I-10 Dust Storm Detection, Alert, Notification System – Decision Algorithm

I-10 Dust Storm Detection, Alert, Notification System – Notification Protocol

All Unread

From	Received	Size	Subject
I10-Dust-Warning@mhcorbin.com	Wed 8/7/2024 10:55 AM	49 KB	[EXTERNAL] I-10 Hidalgo County Dust Storm Warning is now case E

[EXTERNAL] I-10 Hidalgo County Dust Storm Warning is now case E

I10-Dust-Warning@mhcorbin.com
To DOT-ITS-I10Duststorm

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wind speed (mph): 43.0

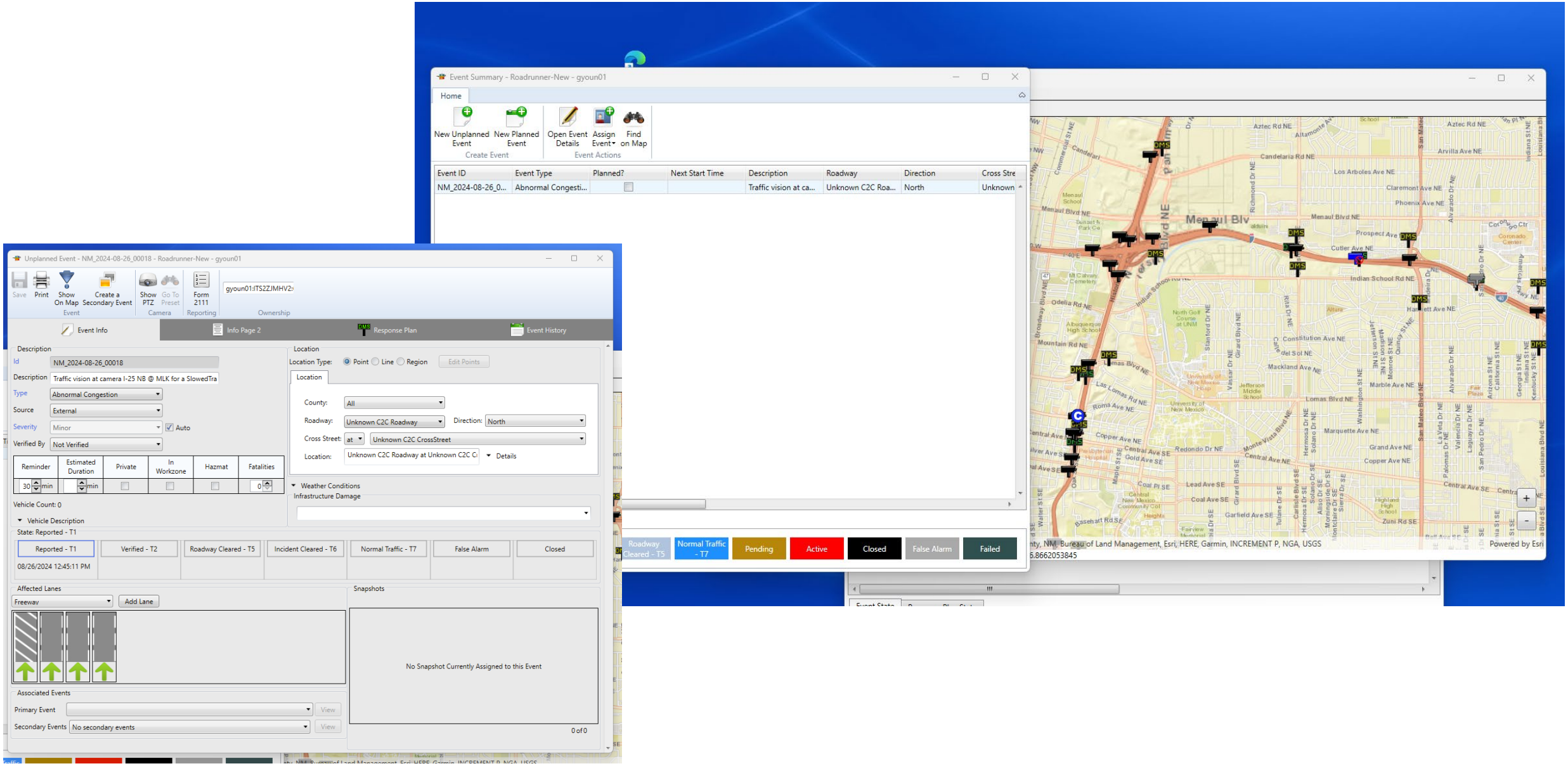
visibility (ft): 2000.0

time: 2024-08-07 16:53:08.749713

https://gcc02.safelinks.protection.out-look.com/?url=https%3A%2F%2F192.119.42.193%2FNM_Dust%2Fcurrent.png&data=05%7C02%7CCharles.Remkes%40dot.nm.gov%7C00f0377098c344f8ea0c08dcb70176a6%7C04aa6bf4d436426fbfa404b7a70e60ff%7C0%7C0%7C638586464942383762%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C60000%7C%7C%7C&sdata=4jjcae-ciAyHlvY9VMJYPWBjd5Z%2Bd6Kf9AmithsMGmFY%3D&reserved=0

Smart Applications – Video Analytics

Roadway Operations Video Detection, Alert, Notification System – RTMC Operator Notification Protocol



Roadway Operations Video Detection, Alert, Notification System – Notification Protocol - Lite

noreply@trafficvision.com Mon 8/26/2024 8:10 AM 71 KB [EXTERNAL] Incident alert: Stopped vehicle/object @ FS-Z2 [PDN @ 4th St]

[EXTERNAL] Incident alert: Stopped vehicle/object @ FS-Z2 [PDN @ 4th St]

N noreply@trafficvision.com

To ○ Montano, Andrew, DOT; ○ Ortiz, Shyaela, DOT; ● Turner, Michael, DOT; ○ Young, Garrett, DOT; ○ 5054902488@vzwpix.com; ○ Tuttle, Skyler, DOT; ○ 5054903308@mms.att.net; ○ Lopez, Lisa, DOT; ● Remkes, Charles, DOT
○ 5057950173@vzwpix.com

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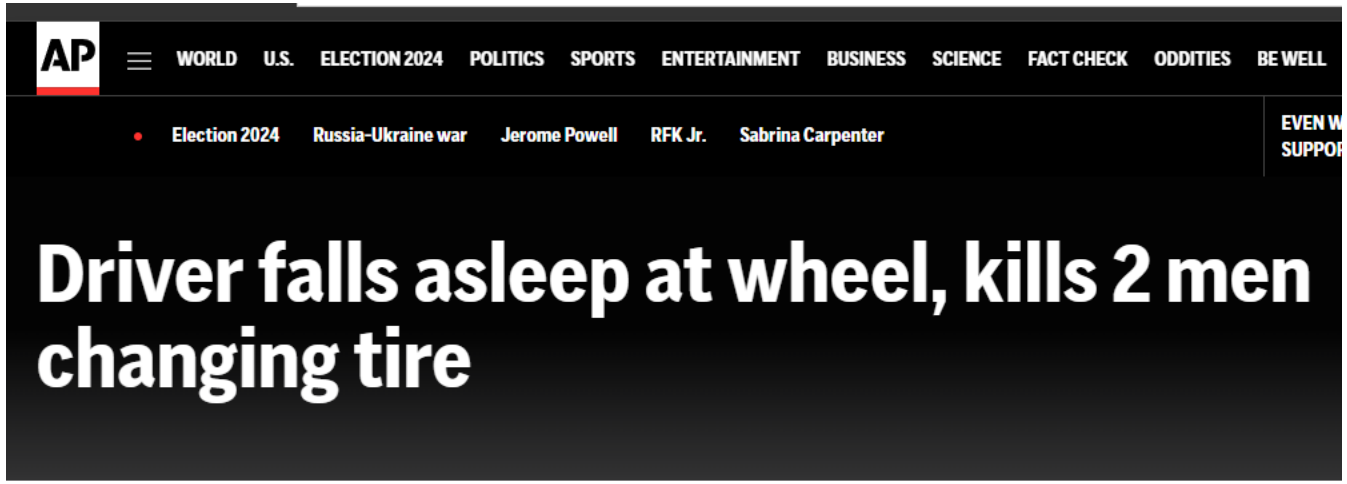
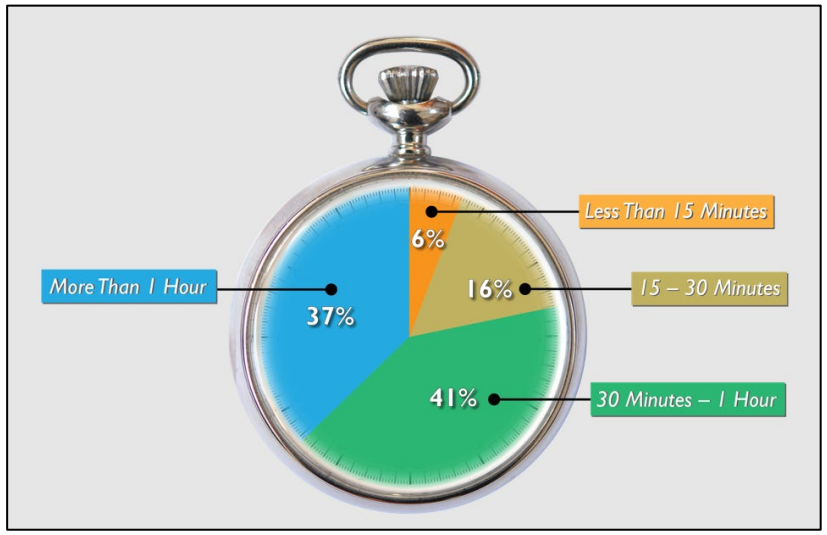
Snapshot: https://nmdot.trafficvision.com/pub-links/25d16919-d0b0-4b40-8e49-5c85c1dd8c19

Video: https://nmdot.trafficvision.com/playclip?src=/publinks/380e7504-3294-443c-8769-61c134eba6b8



Truck Parking - Background



- 78 percent of truck drivers are searching for parking for 30 minutes or longer
- Tired truck drivers can go over their required Hours of Service
- Fatigue accounts for over 12 % of all truck crashes

Truck Movements – Freight Analysis Framework

Average Daily Long-Haul Traffic on NHS

FMCSA LOS – 11 hours

To New Mexico via I-10	Hours*
From Los Angeles	~ 10 - 12
From Long Beach	~ 10 - 12
From Houston	~ 10 - 12

* From Google Maps and Averaging Typical Highway Driving Speeds

I10 TPAS – New Mexico Rest Areas

I-10 Truck Parking Availability System (TPAS)

YUCCA

Location:
I 10 E, 54, Eastbound

Truck Parking Spaces Available:
10

Information:
Services Available: Toilets, Handicap Accessible, Drinking Water, Tables & Shelters.

Comments:
In order do server you better please let us know about your visit to our Rest Area.

SANTA FE NEW MEXICAN

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State police: Wrong-way driver dies in crash near Eldorado

NEWS

Wrong way driver, victims of fatal I-25 crash identified

Posted: Jun 3, 2016 / 06:47 AM MDT
Updated: Jun 3, 2016 / 06:47 AM MDT

SHARE

BERNALILLO, N.M. (KRQE) – The victims of the deadly crash that shut down I-25 on Friday have been identified.

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CRIME

Man accused of wrong-way I-25 crash in Las Cruces that killed WSMR resident

Sun-News reports Las Cruces Sun-News

Where to Next

Utilization of AI and machine learning in streamlining the analyses of large pools of data to more efficiently manage and analyze historical and real time data toward endeavors such as predictive analytics and systems management and operations to best define inflection points where we can implement improvements that will have the biggest and most beneficial impact

This not only includes volumes of data, but also the different types of data to try to mine out correlations and relationships that are not readily apparent

Finish unfinished business. Bring devices into subsystems and subsystems into service systems and service systems into service enterprises.

Leverage opportunities – expand access