How KanDrive is Transforming US 83 Travel

ITS HEARTLAND 2025

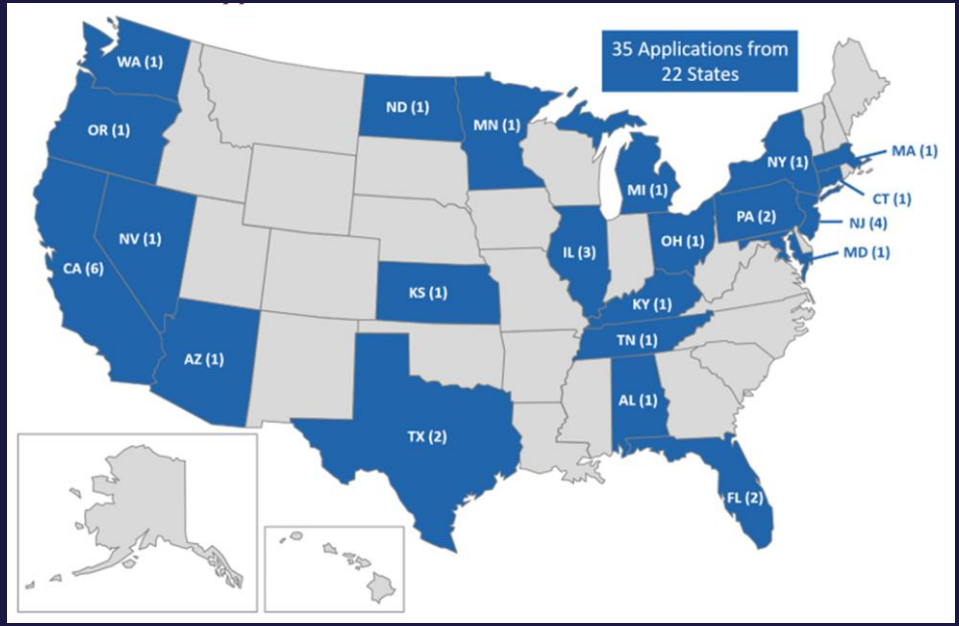
OVERLAND PARK, KS

APRIL 30, 2025

Project Overview

Great Plains Rural Freight Technology Corridor Project Grant

- September 2022, KDOT Awarded a $7 Million Grant by USDOT
- Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Grant
- Fixing America's Surface Transportation (FAST) Act funding

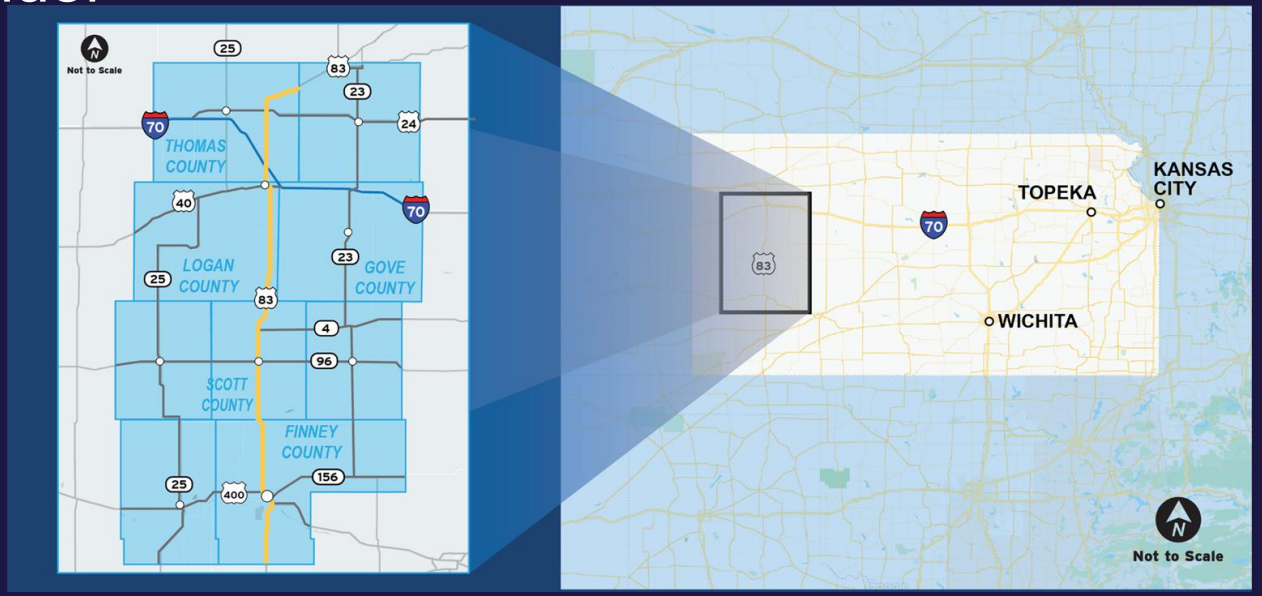


Out of 35 applications, 10 were selected

Project Overview

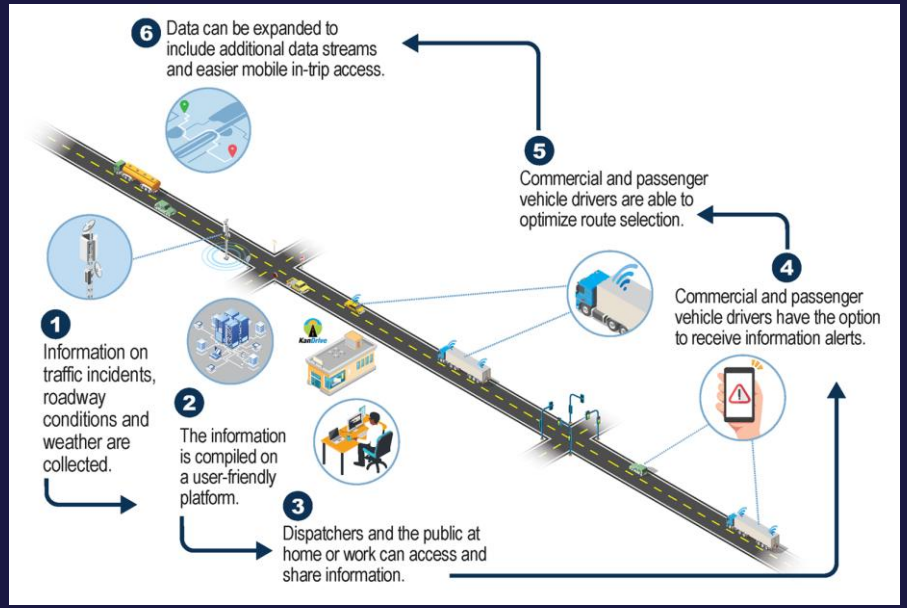
US 83 Project Corridor

- Thomas
- Logan
- Gove
- Scott
- Finney



System Goal

Enable users to optimize time critical routing and arrival/departure, improving safety and productivity while reducing shipping costs and delays.



System Users

- Agriculture Shippers
- Energy Industry
- Manufacturers
- Distributors
- Vehicle Drivers

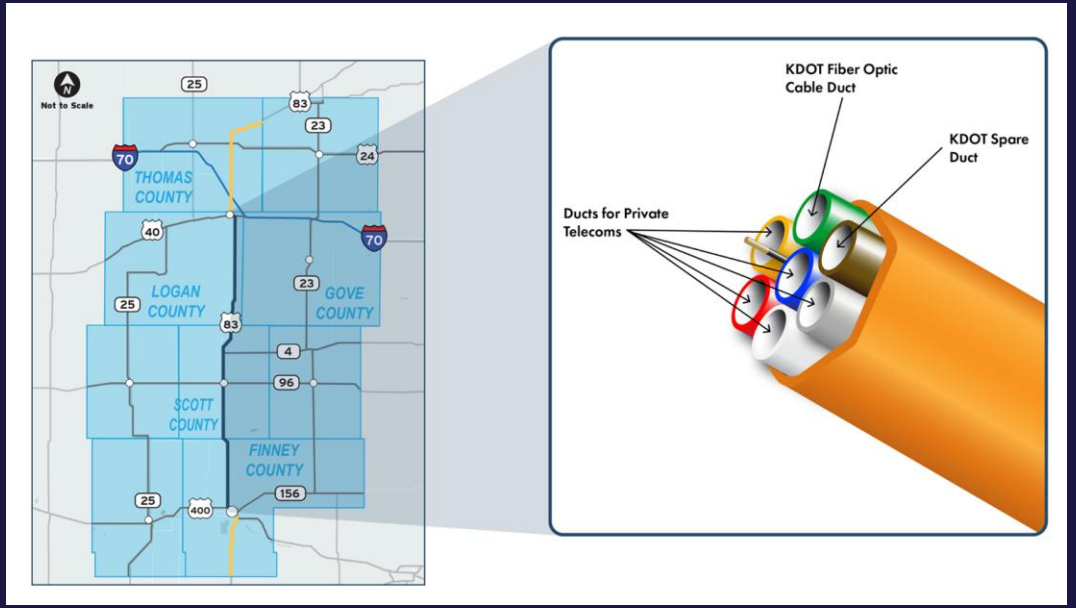
Proposed System

Phase 1	Phase 2
Install Fiber Optic Cable Along US 83 Between Garden City and I-70.	Install and Deploy Advanced Intelligent Transportation System (ITS) Technologies Including Connected Vehicle (CV) Technology Along the Corridor and Enhance Software.

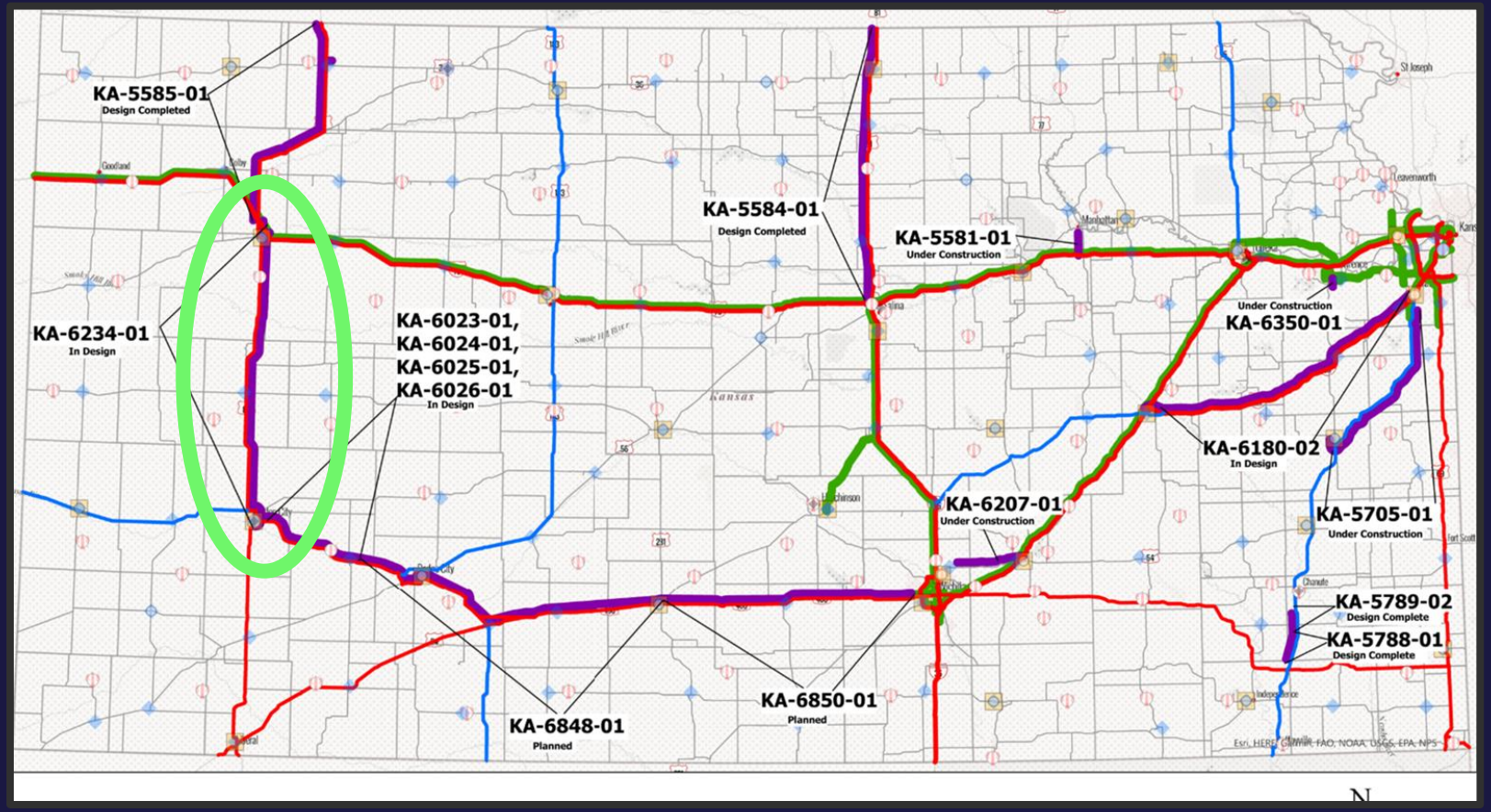
Phase 1 - Project Fiber Deployment

Seven-Way Duct and Fiber Backbone

- KDOT Network Connection Points
  - Three Offices
  - Two RWISs
  - Two Signs
  - Two Cameras
  - Two Radio Towers
- Incentivize Broadband Expansion
- Construction Nearly Complete

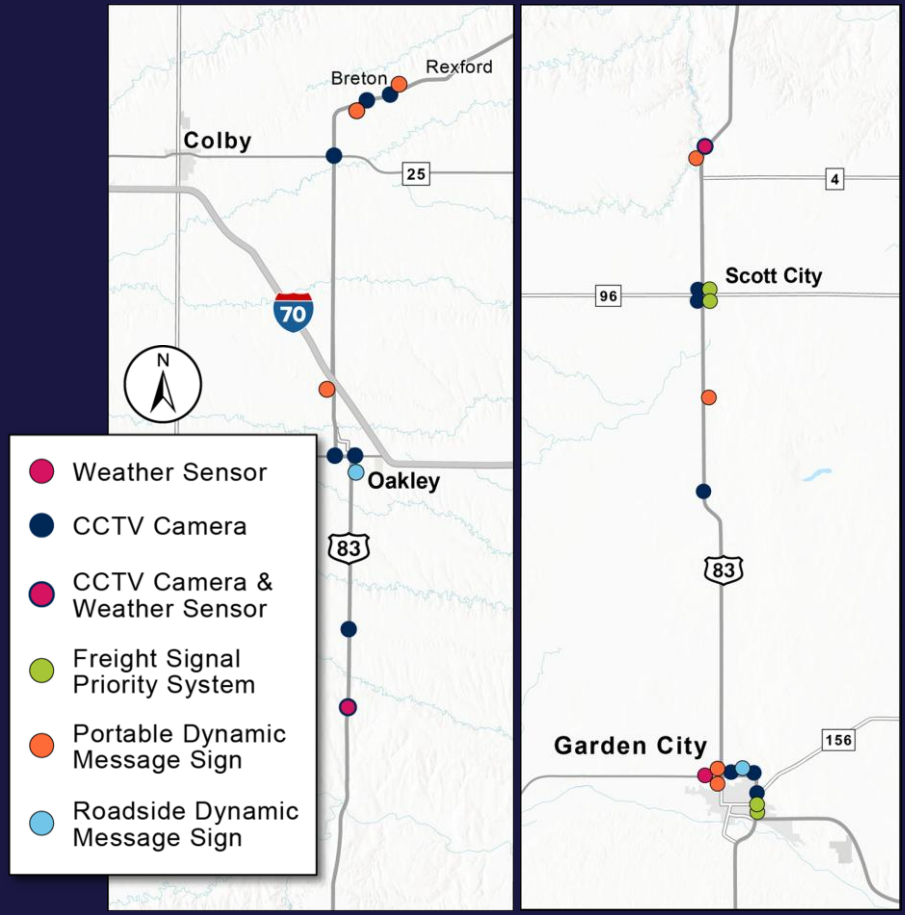


Statewide Fiber & Multi Duct



Phase 2 - Proposed System

- Software Enhancements
  - KanDrive
  - KaITS
- Roadside Hardware
  - Freight Signal Priority
  - Enhanced Roadway Weather Information Systems
  - Roadside Dynamic Message Signs
  - CCTV Cameras
  - Cameras with Video Analytics to Monitor Spot Congestion



Our mission

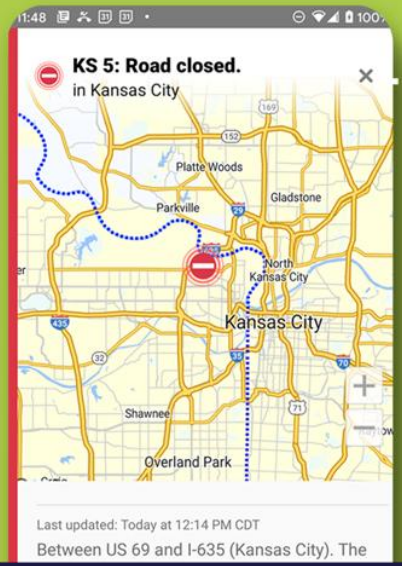
helping transportation agencies
capture and share
human-centered
roadway knowledge

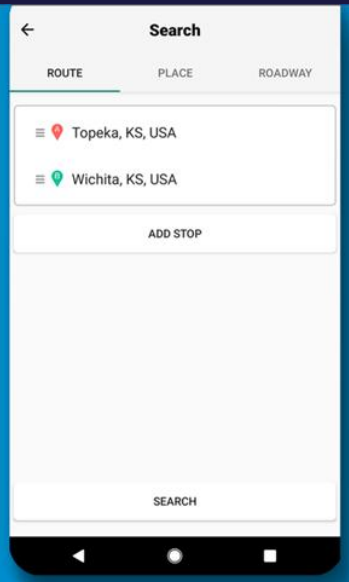
KanDrive

KanDrive

One-stop resource to see statewide traffic and commercial vehicle information.

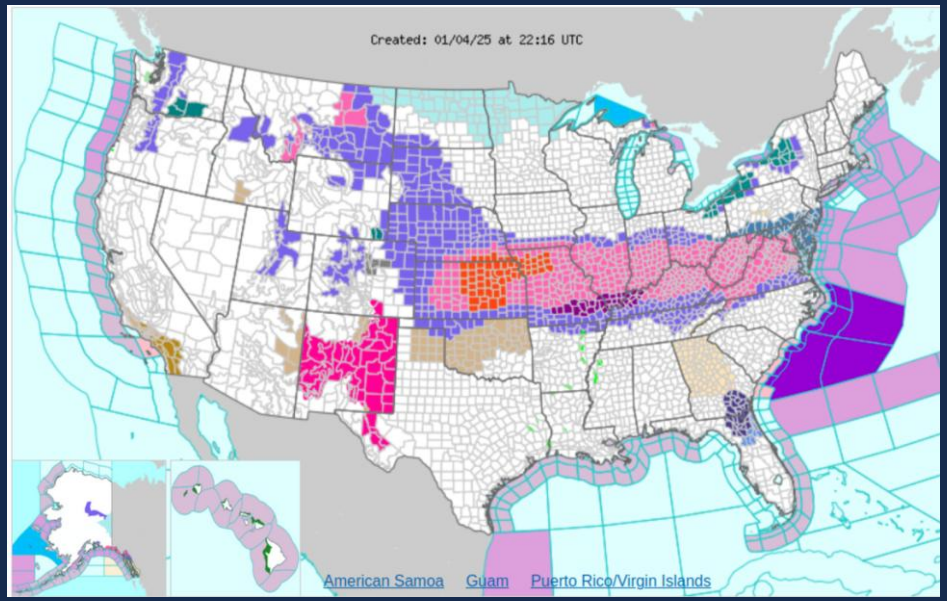
Get details about road closures, detours, traffic impacts, road conditions and more statewide.

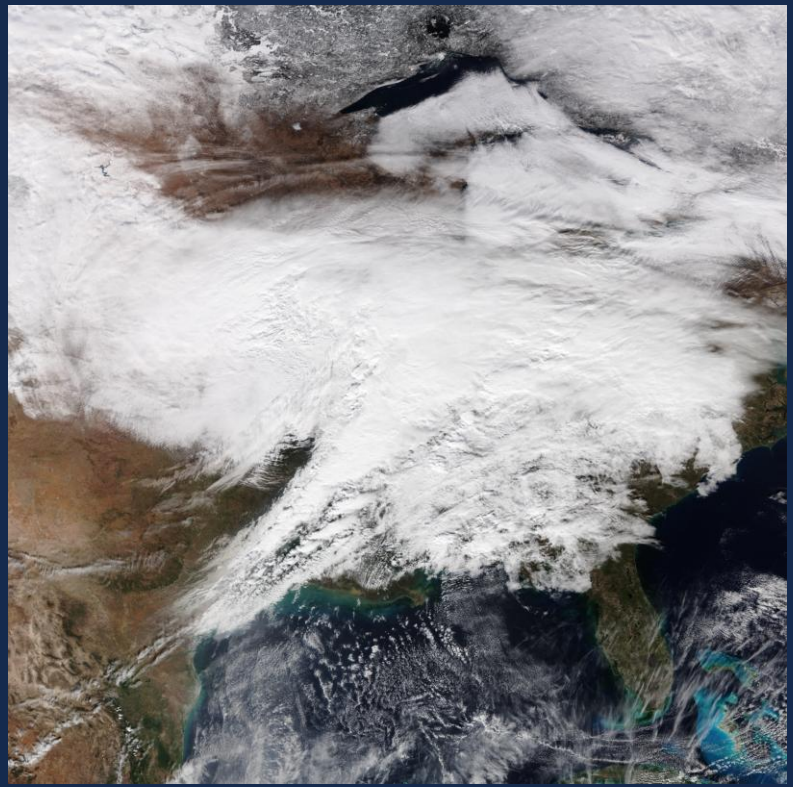




Use the new trip planner tool to help map your route.

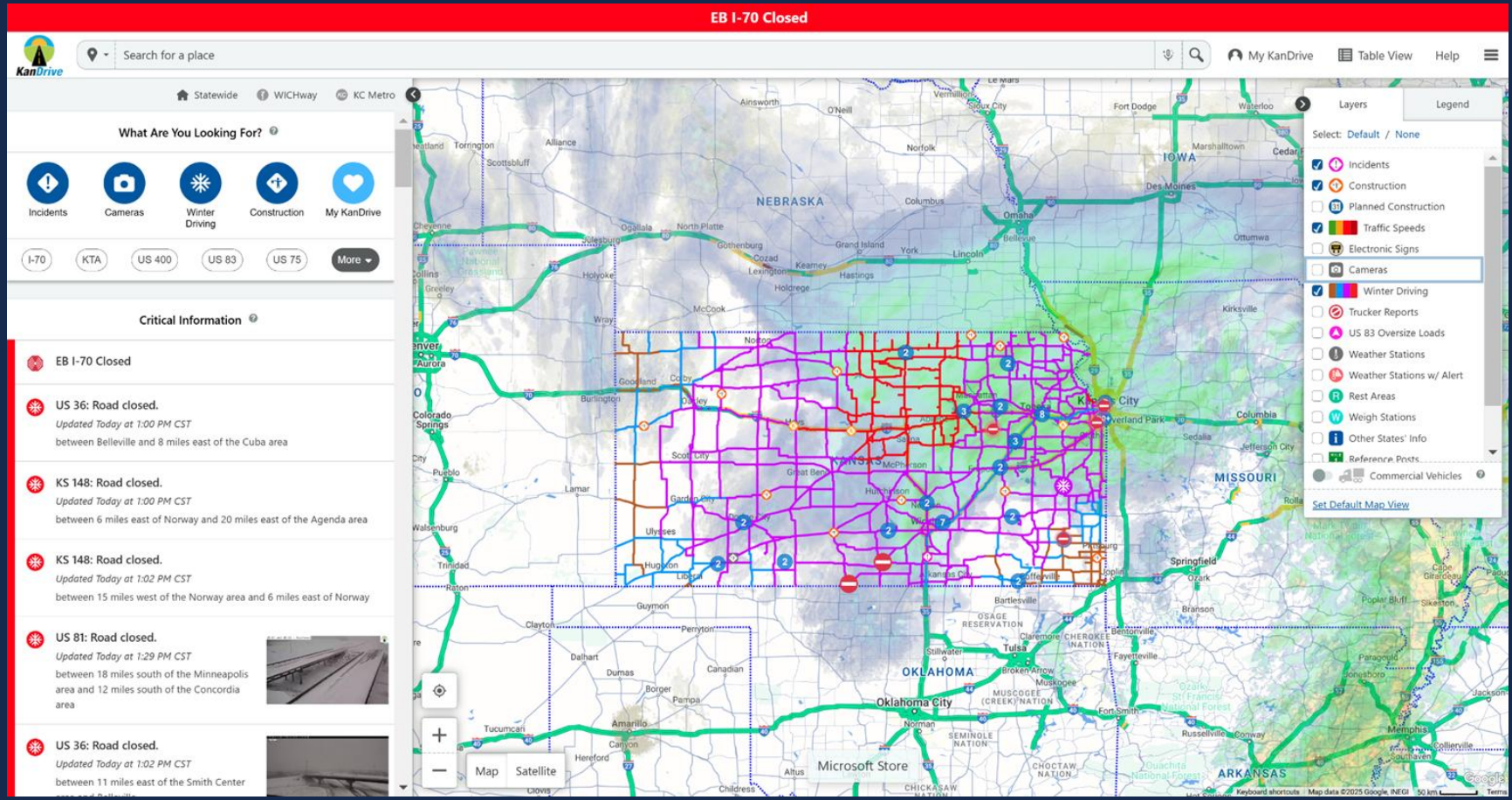
Jan 4-6 Winter Storm





https://en.wikipedia.org/wiki/January_5%E2%80%936,_2025_United_States_blizzard

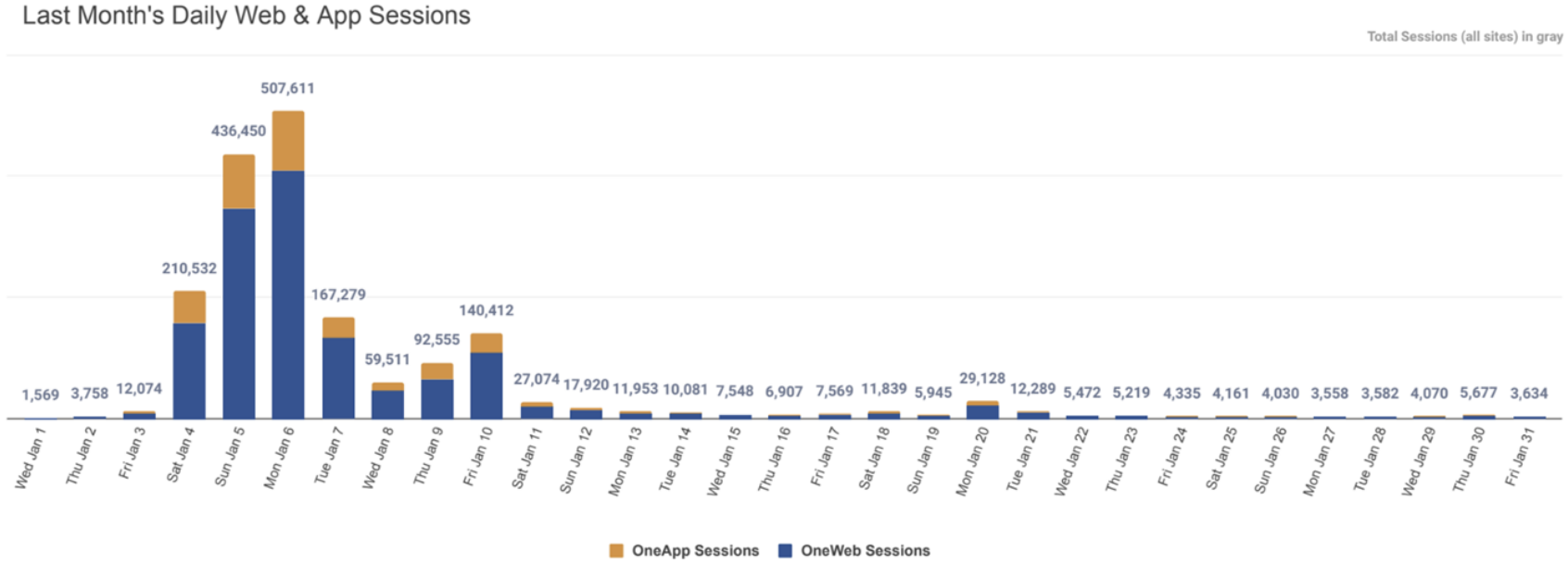
KanDrive Website



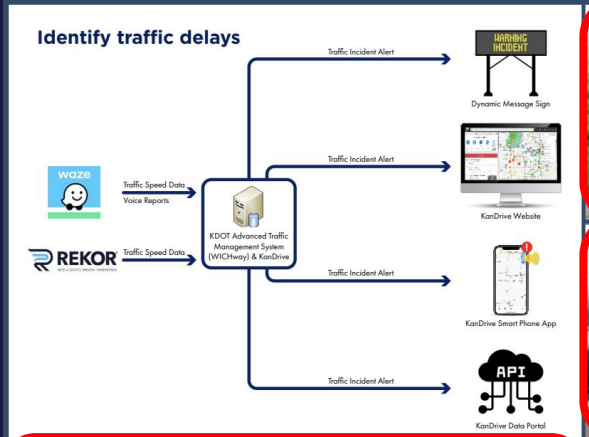
Usage Stats

KDOT Web & App Stats

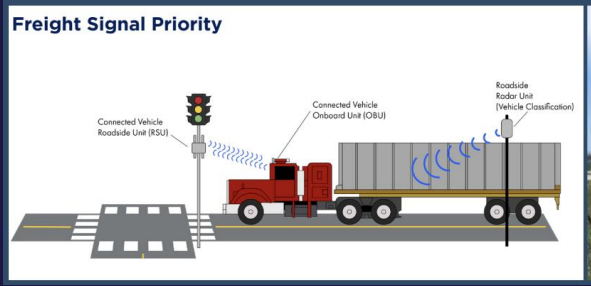
Last Month's Daily Web & App Sessions (January 2025)



KanDrive and KaITS Software Enhancements



Hardware Deployment



1. OVERSIZE LOAD TRACKING

2. PUBLIC INCIDENT REPORTING

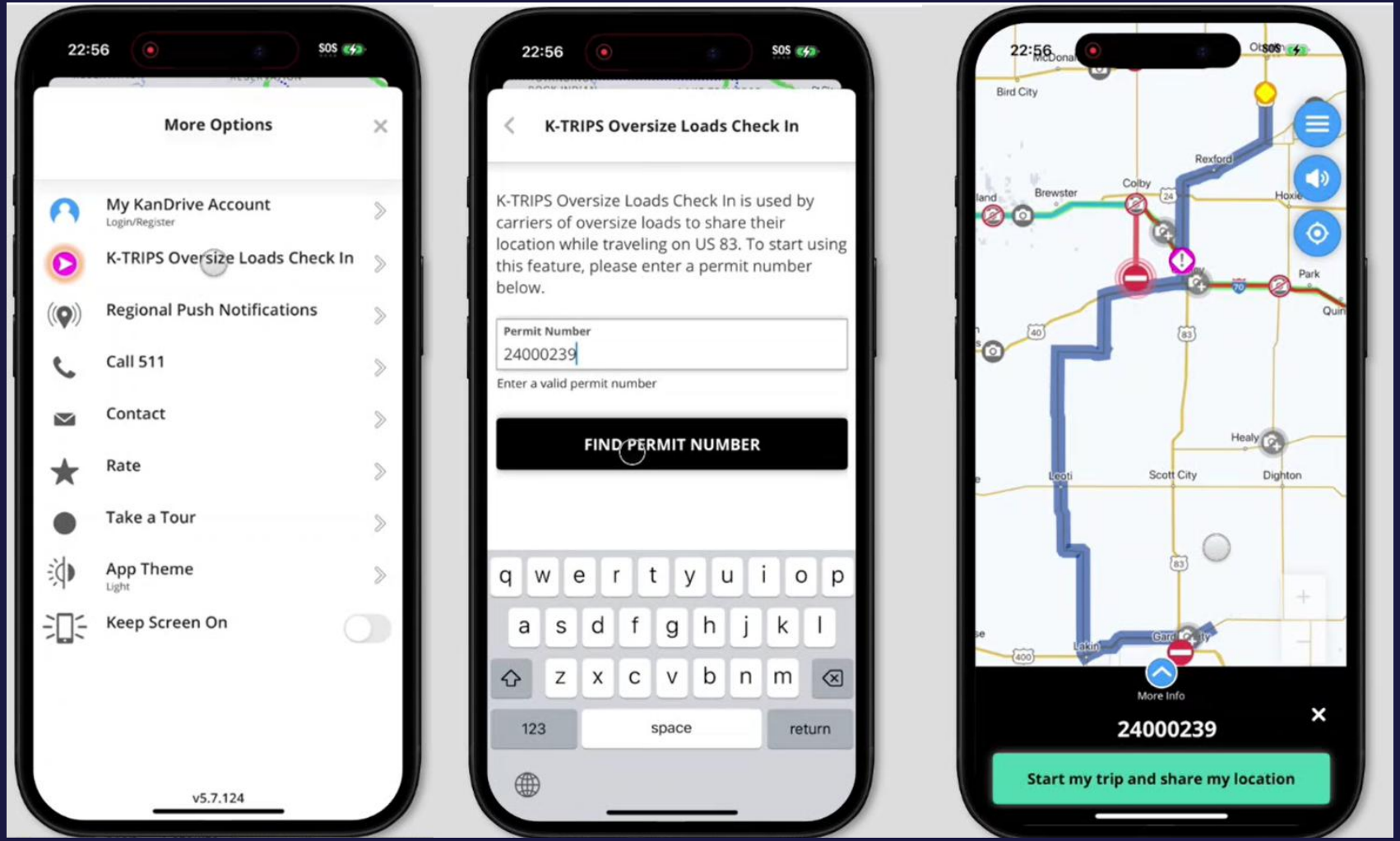
3. ENHANCED KANDRIVE INTERFACES

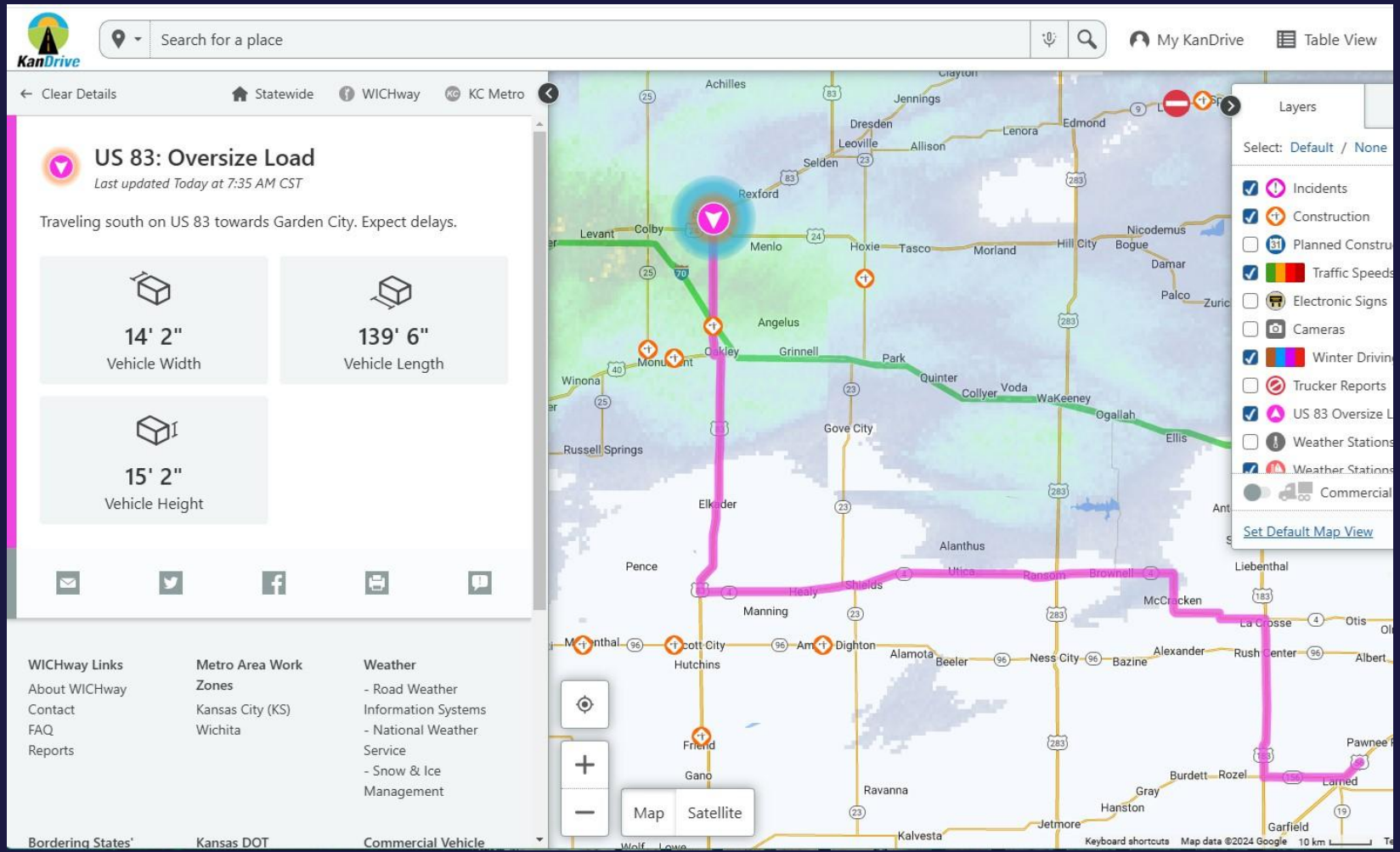
OVERSIZE LOAD TRACKING

OVERSIZE LOAD

Search for a roadway
My KanDrive
Table View
Help
Clear Search
Statewide
WICHway
KC Metro
1 Events For US 83
US 83 in both directions: Road construction.
between 1 mile north of the Garden City area and Scott City
15 mins
12'0"
WICHway Links
About WICHway
Contact
FAQ
Reports
Metro Area Work Zones
Kansas City (KC)
Wichita
Weather
- Road Weather Information Systems
- National Weather Service
- Snow & Ice Management
Bordering States' Travel Info
Colorado
Missouri
Nebraska
Oklahoma
Kansas DOT
- Download the KanDrive app
- All KDOT Social Media
- Contact Kansas DOT
- Kansas Turnpike Authority
- Various Kansas Maps
- Travel & Tourism
Commercial Vehicle Operators
- Truck Parking Information Management System (TPIMS)
- Trucking Through Kansas
- K-TRIPS
Help
Take a Tour
Website Help
Leave Website Feedback
Layers/Legend

Kansas
13954 US-83
Scott City, Kansas
Google Street View
Jul 2024
See more dates
US-83
E Rd 290
Google

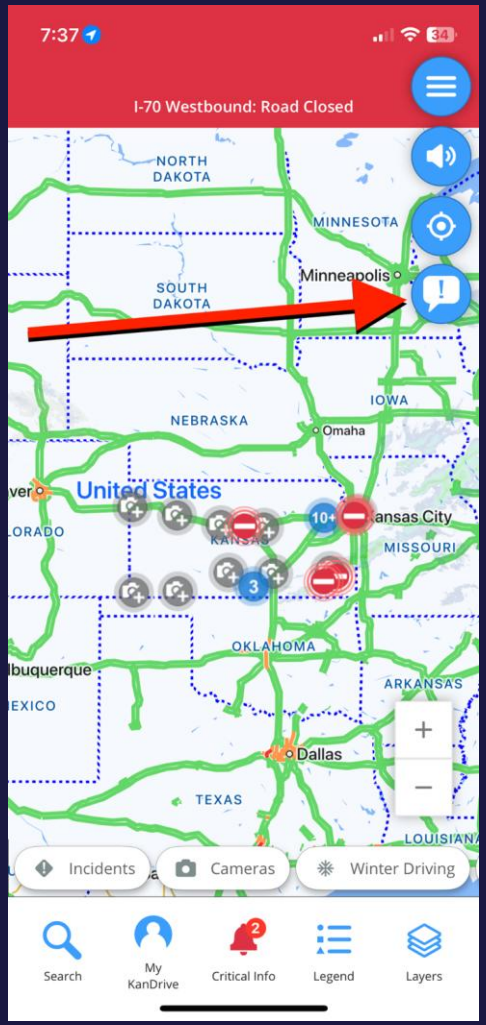

22:56
SOS
More Options
My KanDrive Account
Login/Register
K-TRIPS Oversize Loads Check In
Regional Push Notifications
Call 511
Contact
Rate
Take a Tour
App Theme
Light
Keep Screen On
v5.7.124
22:56
SOS
K-TRIPS Oversize Loads Check In
K-TRIPS Oversize Loads Check In is used by carriers of oversize loads to share their location while traveling on US 83. To start using this feature, please enter a permit number below.
Permit Number
24000239
Enter a valid permit number
FIND PERMIT NUMBER
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
123
space
return
22:56
SOS
Bird City
Rexford
Colby
Brewster
Hoxie
Park
Healy
Leoti
Scott City
Dighton
Lakin
More Info
24000239
Start my trip and share my location

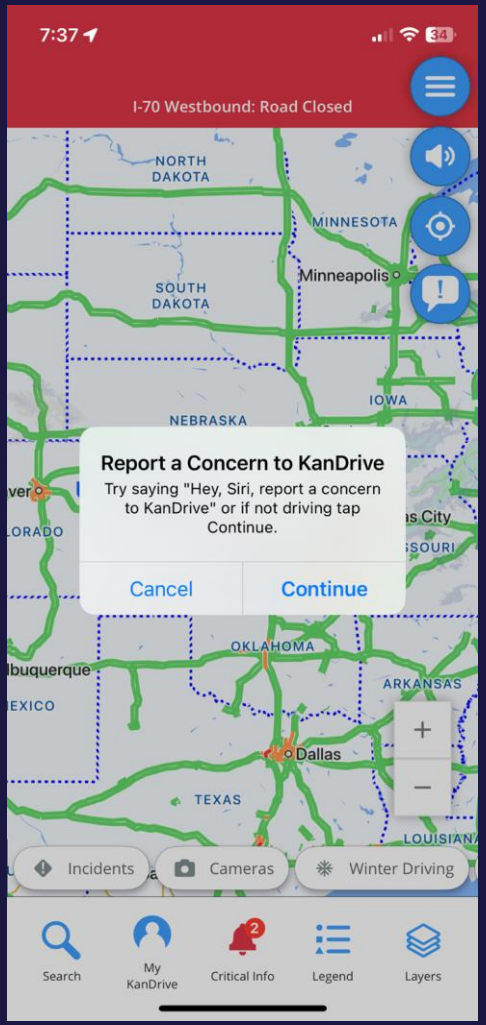

KanDrive
Search for a place
My KanDrive
Table View
Clear Details
Statewide
WICHway
KC Metro
US 83: Oversize Load
Last updated Today at 7:35 AM CST
Traveling south on US 83 towards Garden City. Expect delays.
14' 2"
Vehicle Width
139' 6"
Vehicle Length
15' 2"
Vehicle Height
WICHway Links
About WICHway
Contact
FAQ
Reports
Metro Area Work Zones
Kansas City (KS)
Wichita
Weather
- Road Weather Information Systems
- National Weather Service
- Snow & Ice Management
Bordering States'
Kansas DOT
Commercial Vehicle
Layers
Select: Default / None
Incidents
Construction
Planned Construc
Traffic Speeds
Electronic Signs
Cameras
Winter Drivin
Trucker Reports
US 83 Oversize L
Weather Stations
Weather Stations
Commercial
Set Default Map View
Map
Satellite
Keyboard shortcuts
Map data ©2024 Google
10 km

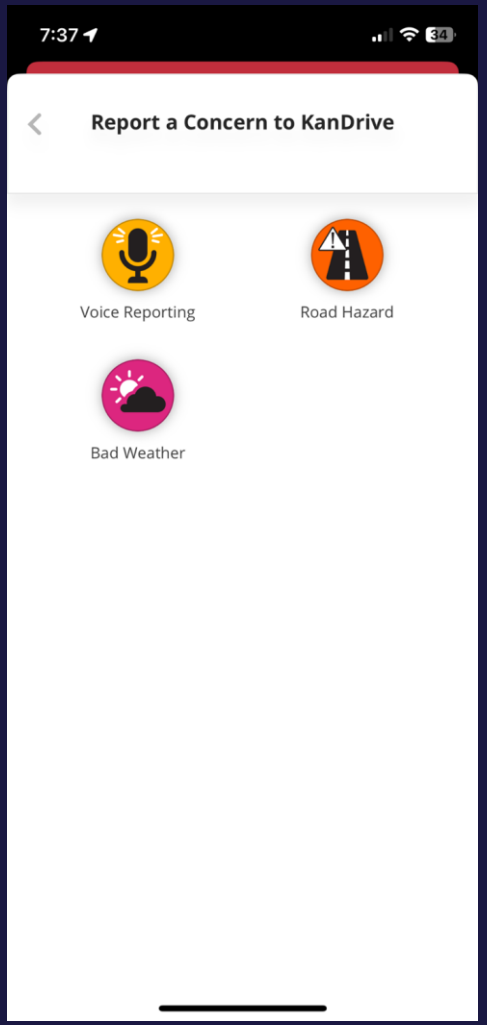
Lessons Learned

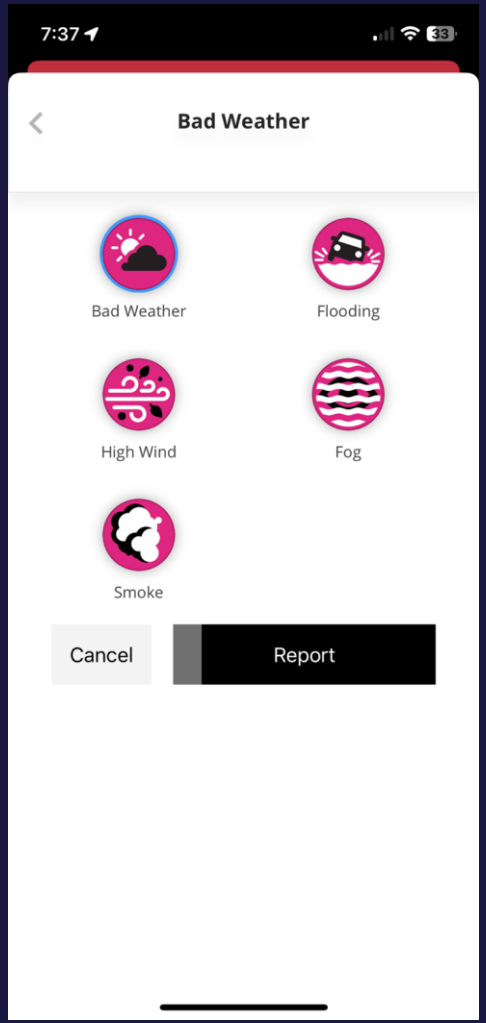
- Pre-launch concerns
- Communication and outreach
- Clarity about data usage
- Integration with Permits API
- Permit complexity
- Ongoing interest

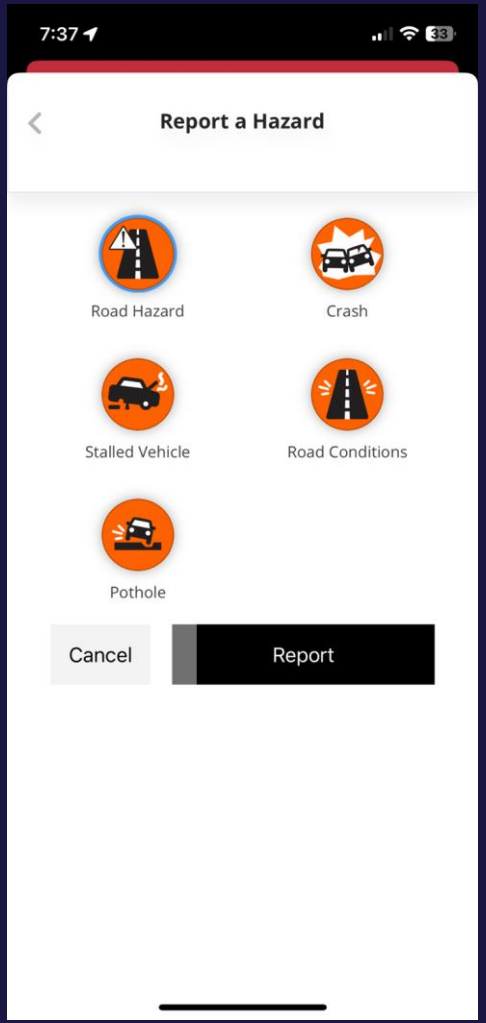
PUBLIC INCIDENT REPORTING


7:37
I-70 Westbound: Road Closed
NORTH DAKOTA
MINNESOTA
Minneapolis
SOUTH DAKOTA
IOWA
NEBRASKA
Omaha
United States
Kansas City
MISSOURI
OKLAHOMA
ARKANSAS
Dallas
TEXAS
Incidents
Cameras
Winter Driving
Search
My KanDrive
Critical Info
Legend
Layers

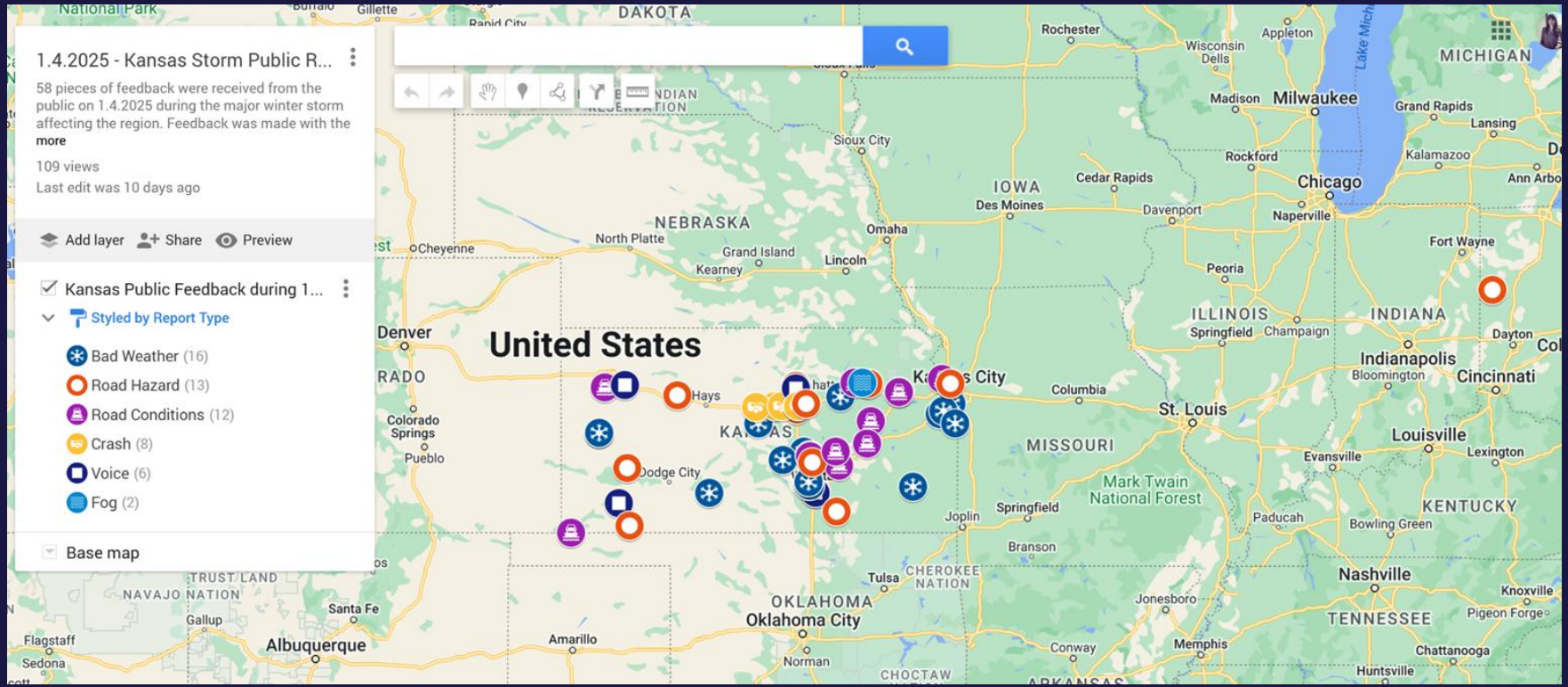

7:37
I-70 Westbound: Road Closed
Report a Concern to KanDrive
Try saying "Hey, Siri, report a concern to KanDrive" or if not driving tap Continue.
Cancel
Continue
Incidents
Cameras
Winter Driving
Search
My KanDrive
Critical Info
Legend
Layers


7:37
Report a Concern to KanDrive
Voice Reporting
Road Hazard
Bad Weather

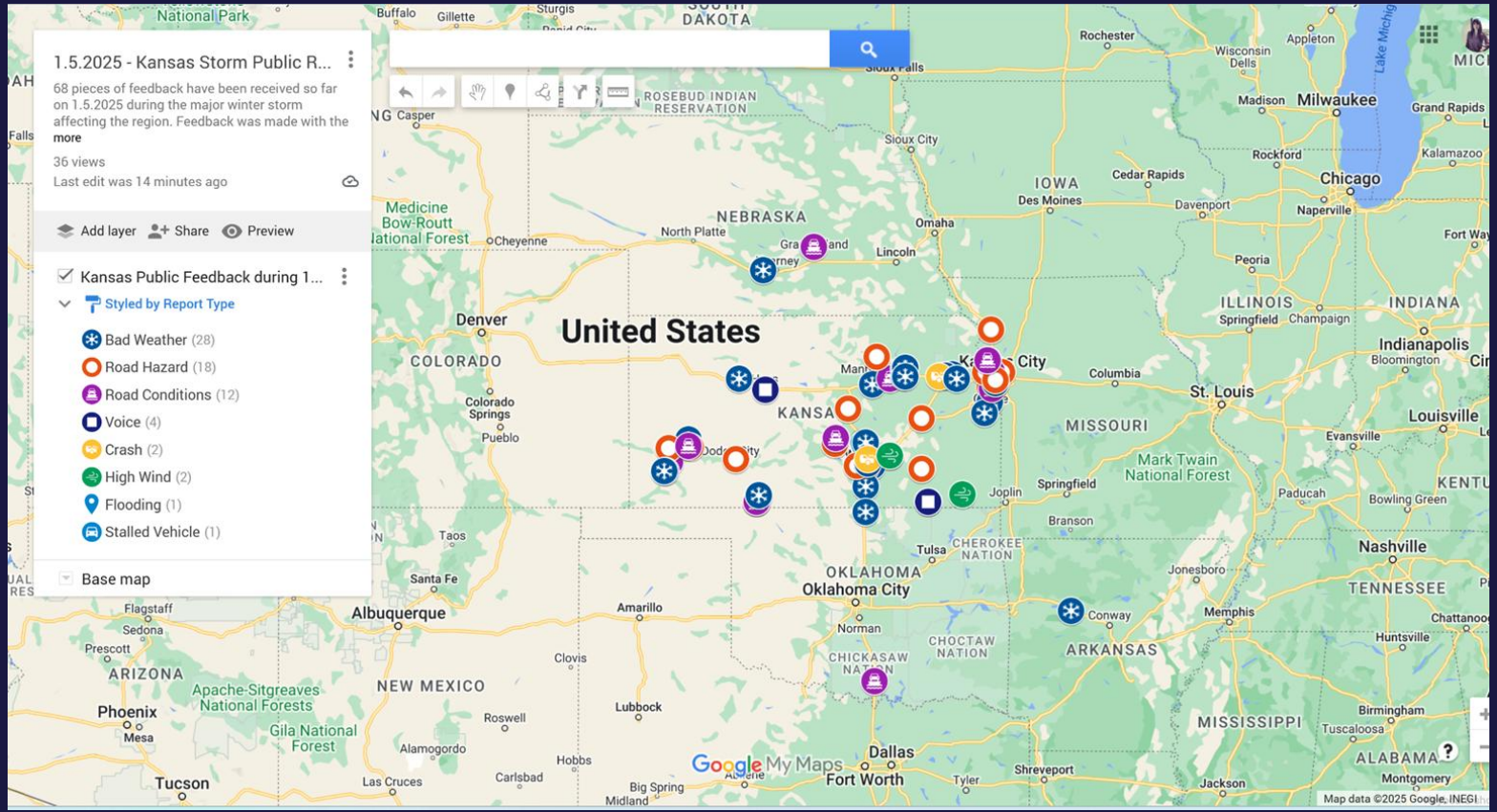

7:37
Bad Weather
Bad Weather
Flooding
High Wind
Fog
Smoke
Cancel
Report


7:37
Report a Hazard
Road Hazard
Crash
Stalled Vehicle
Road Conditions
Pothole
Cancel
Report

58 public reports on Jan 4



68 public reports on Jan 5



Lessons Learned

- Trade-offs

  Hands-free easy UI ⬆️ – Accidental Reports ⬆️

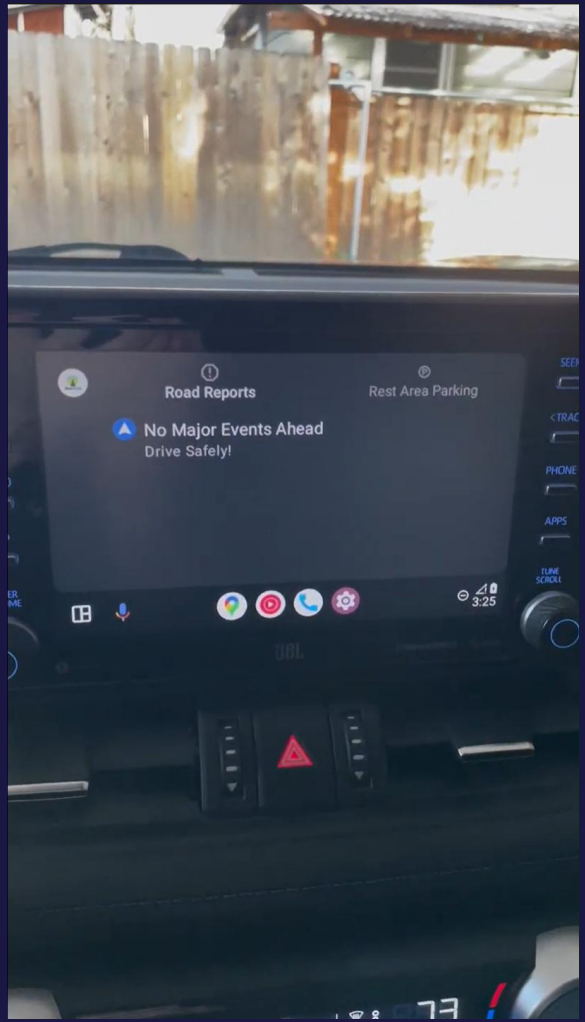
- Locations & areas of responsibility (KDOT roads)
- Comparison w/ Waze reports
- Actionability of reports

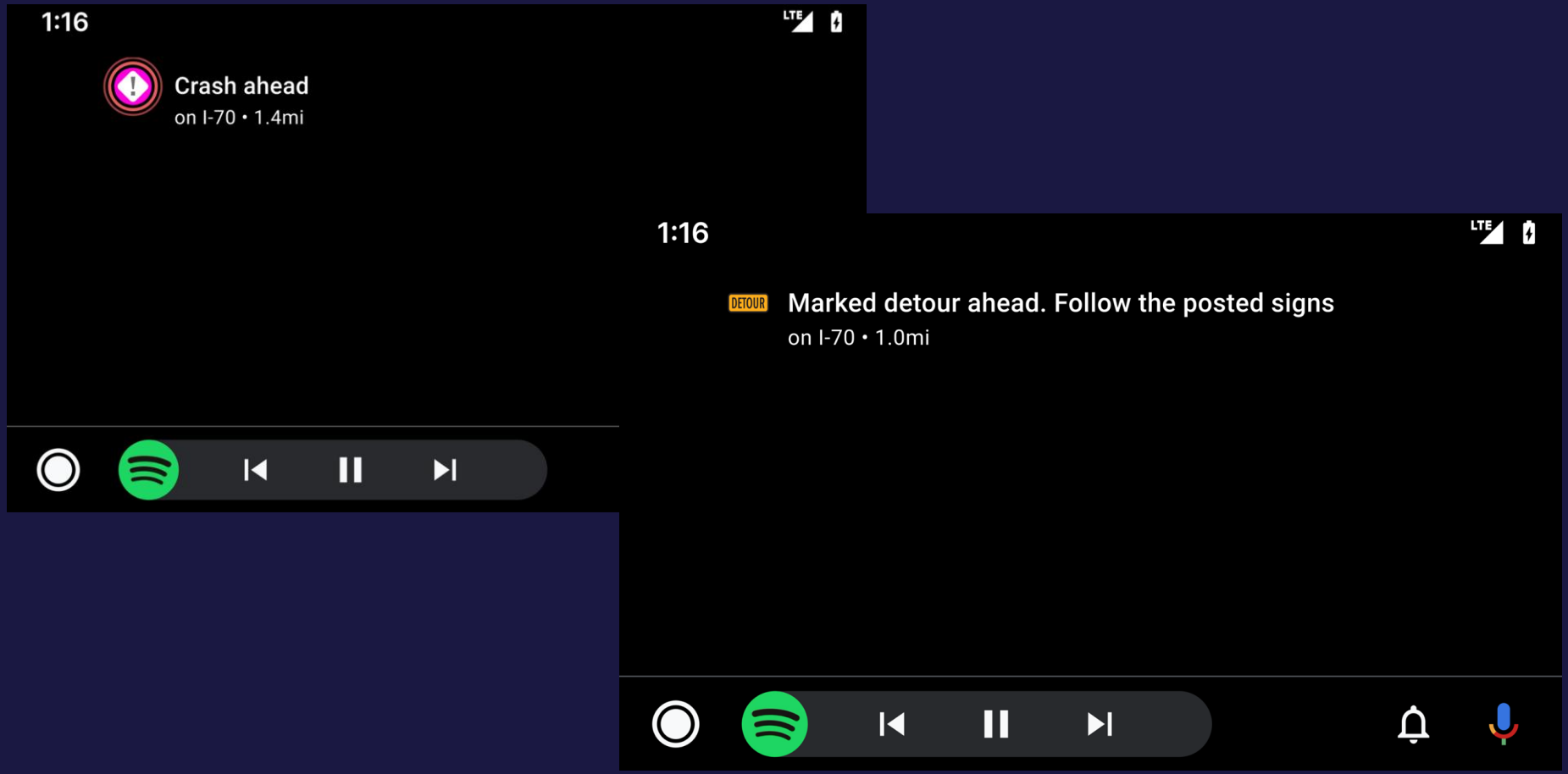
ENHANCED KANDRIVE INTERFACES

Source: MOTORTREND, June 6, 2023

Source: Top Gear, January 19, 2023

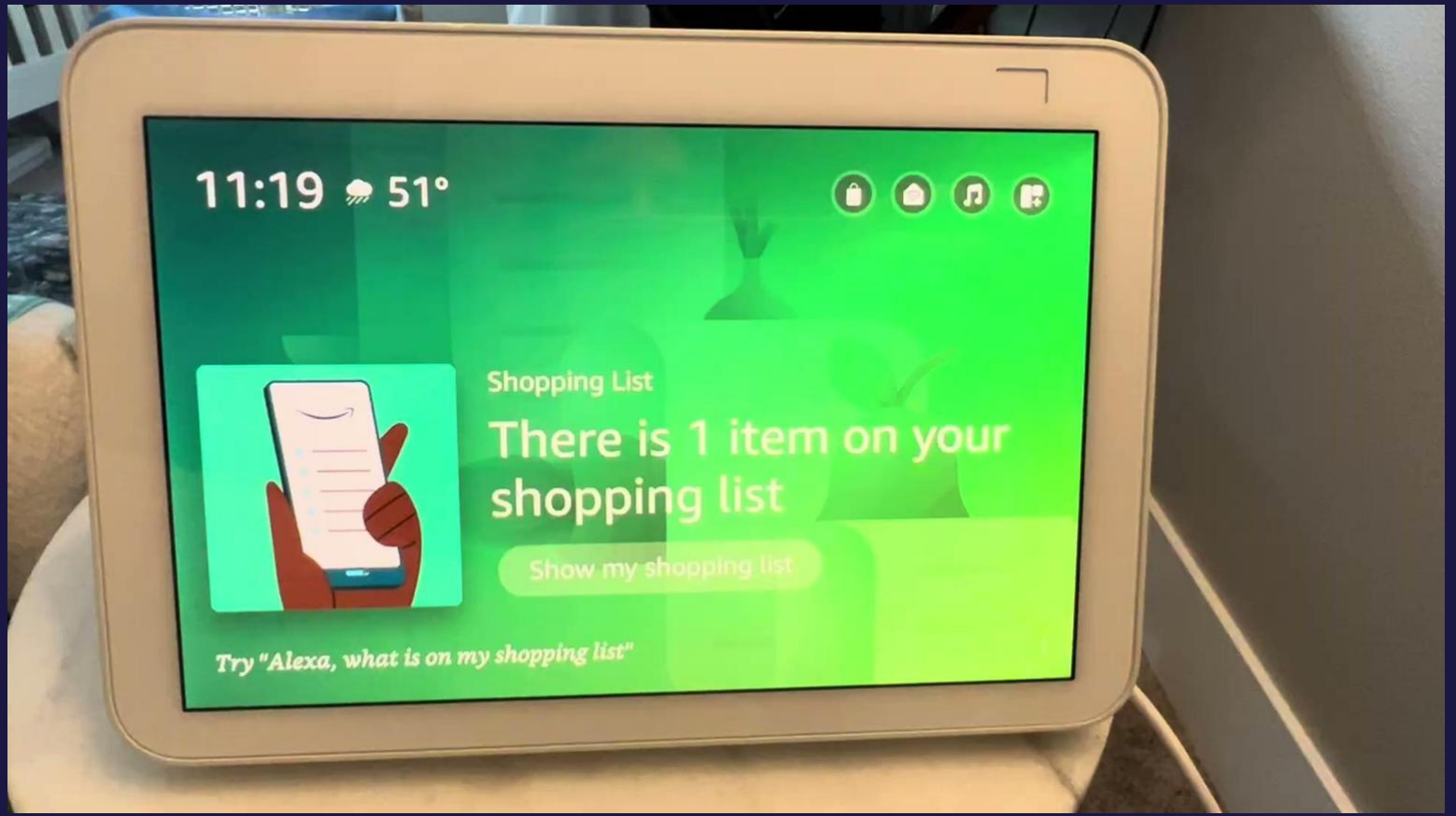
HOME
MENU
AUDIO
MAP
POWER VOLUME
Toyota
Calendar
GameSnac...
KanDrive
Maps
Messages
News
Phone
73


Road Reports
Rest Area Parking
No Major Events Ahead
Drive Safely!
3:25
PHONE
APPS
TUNE SCROLL


1:16
LTE
Crash ahead
on I-70 • 1.4mi
1:16
LTE
DETOUR
Marked detour ahead. Follow the posted signs
on I-70 • 1.0mi

5G+
DETOUR
Marked detour ahead. Follow the posted signs.
On I-5 • 2.0 miles south-southeast
KanDrive
HOME
MAP
SEARCH
MEDIA
SETUP

amazon


11:19
51°
Shopping List
There is 1 item on your shopping list
Show my shopping list
Try "Alexa, what is on my shopping list"

Lessons Learned

- Newer platforms, less standardization, less support
- Stricter development environments
- Differences in CarPlay & Android Auto
- Alexa – yet another dev environment
- Promotion of new features
- Open data was key to success

Homework!

Thank you!

Chuck Miller, Ph.D., P.E., PTOE
HNTB
cmiller@hntb.com
816-527-2696

Kristin Virshbo, CEO
Castle Rock Associates
kristin.virshbo@castlerockits.com
503-734-6493