

Integrating Public Feedback into Traveler Info Design:

An Agile Multi-State,
Collaborative Approach

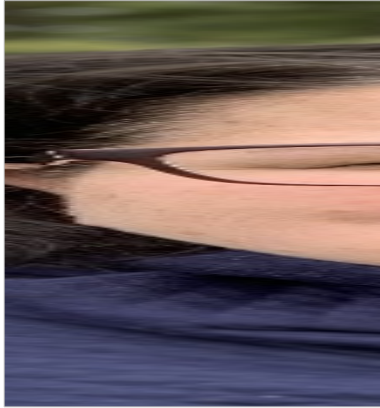
Co-presenters:

Sinclair Stolle, Iowa DOT

Mary Crowe, Castle Rock Associates



Introductions



Sinclair Stolle

Traffic Management Systems Engineer



Mary Crowe

Director of Product Design and Delivery



Why are we here?



Vision for
streamlining traveler
information website



Collaboration with
the transportation
agencies

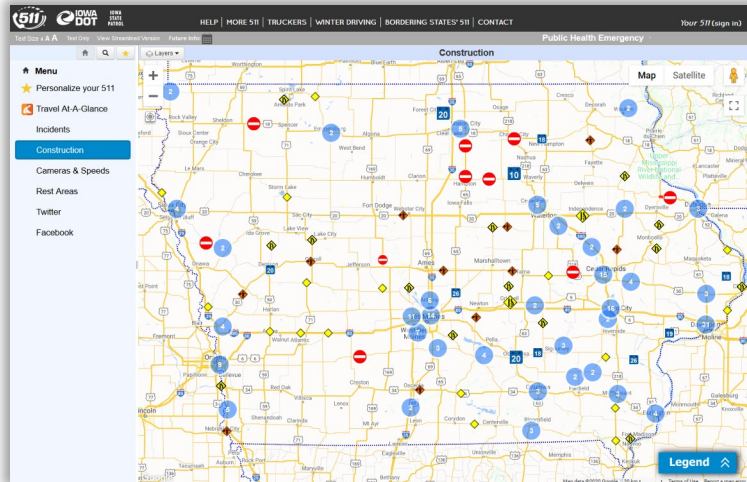


Active engagement
with the public

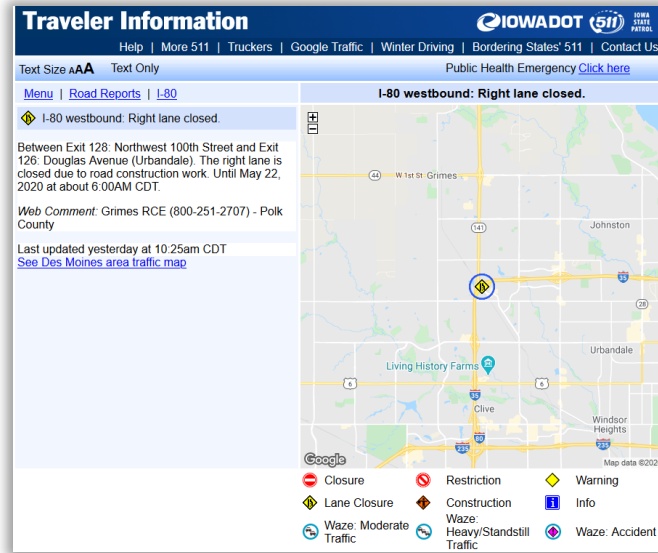


Wanted to use an
iterative, agile
approach to new
system

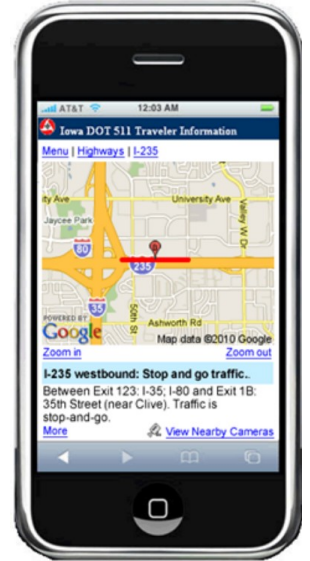
Where we started...



Full featured sites for general travelers and truckers



Limited feature site for users with low bandwidth connections



Limited feature site optimized for viewing on small screens

Major goals of the redesign



Modern, **responsive** design for web browsers, tablets, and mobile devices

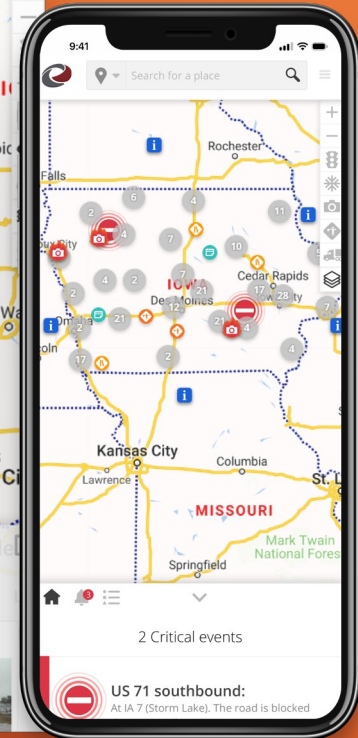
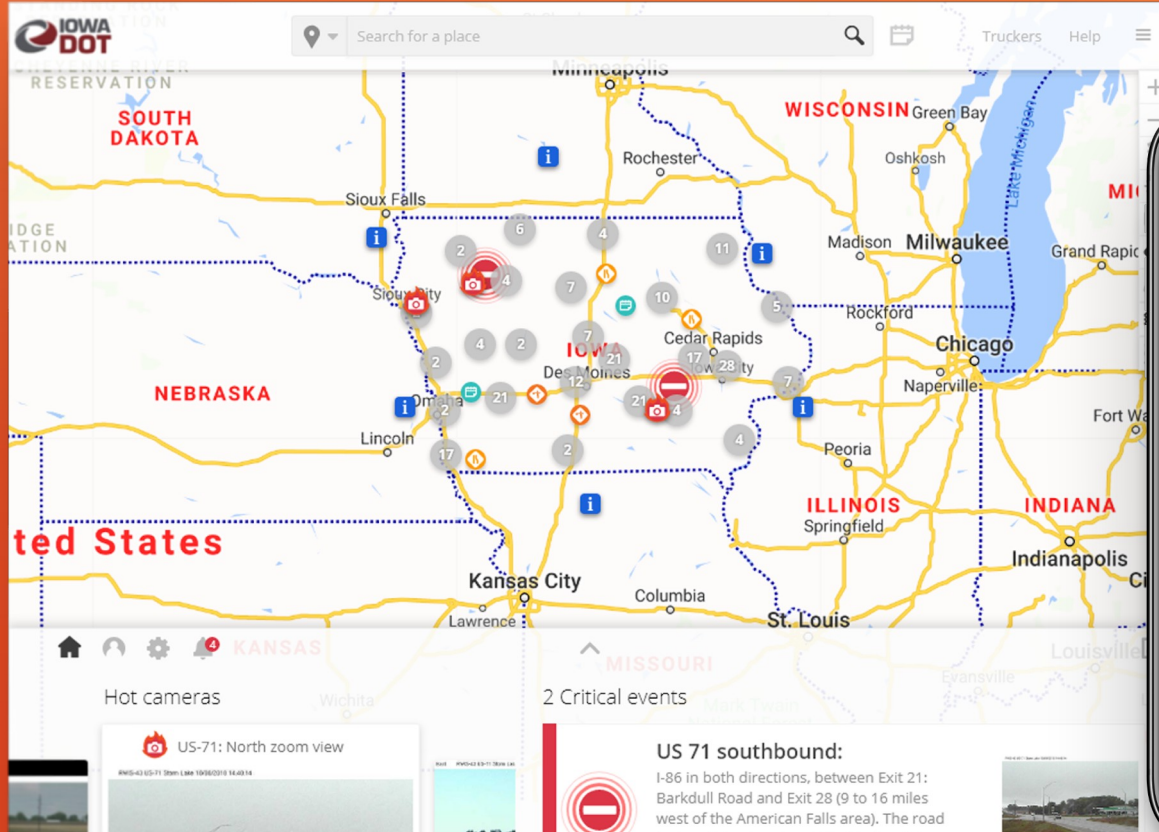


Serve multiple user groups on a **single site** without cluttering the map (merging general travelers, truckers, and low bandwidth users)



Improve **understanding of users** through website user feedback forms and enhanced site analytics

Version 1.0: Responsive Design + Single Site





Better understanding of user behavior

Feedback ✕

Email

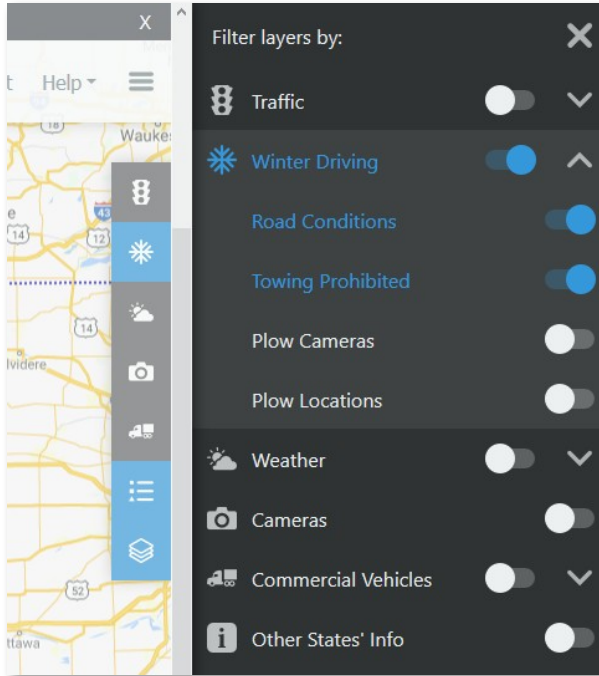
General Feedback ▾

When you zoom the camera in and then click on a road for information, it re-centers the camera, which is irritating. The way in which that information appears on the screen now makes sense, so keep that. I am viewing on a laptop.

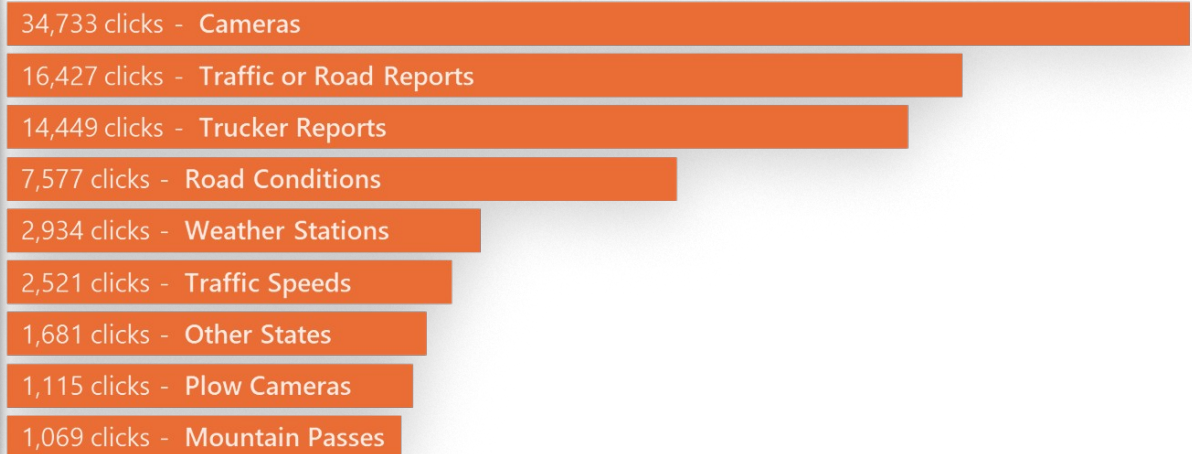
Cancel Save



Better understanding of user behavior



Their favorite layers?



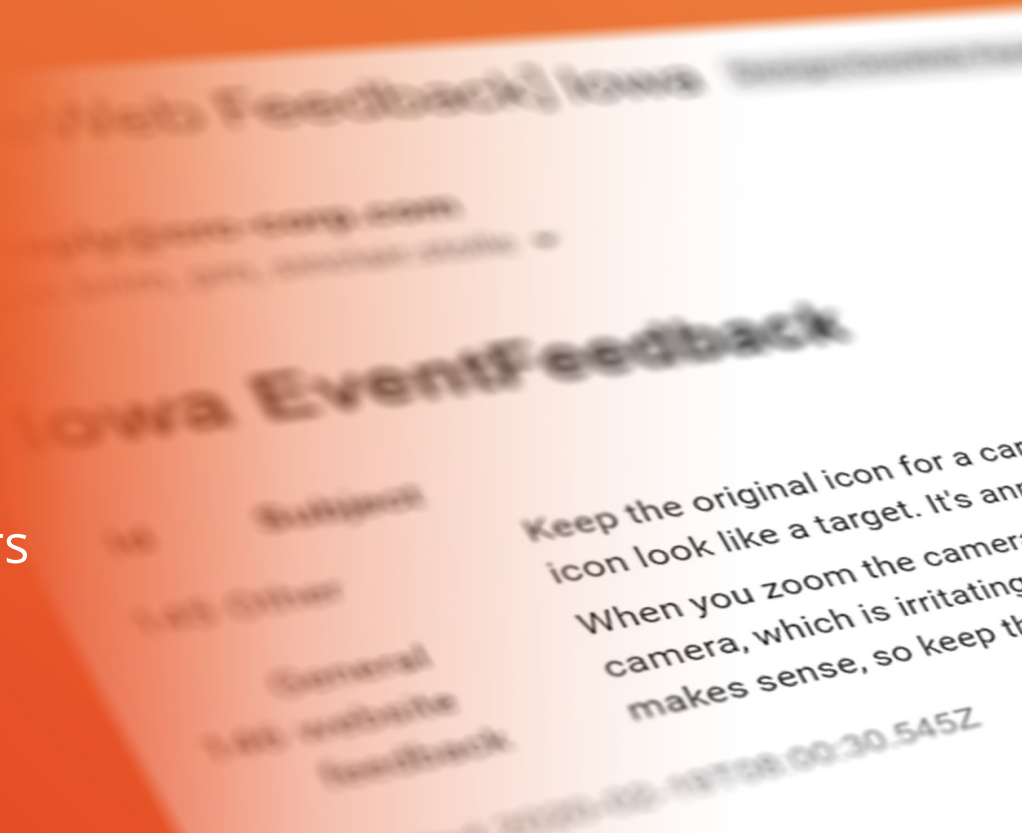
Agile approach to design & development

DOT	Submitter	Created	Component	Feedback Text
			🔍	
				('Unplanned Events' or 'Critical Disruptions') ?
Iowa	Iowa	03/16/20	Layer Panel	Redesign needed for the layers menu and legend. - Need text labels for each layer group. Currently the buttons are not recognizable or easy to understand. - Need to eliminate the animation that "pops out" the layer panel. Should be constantly visible on the map.
Iowa	Iowa	03/16/20	Event Tray	Should we move the tray from the bottom of the screen (horizontal) to the left side of the screen (vertical)? This would allow for more map real estate.
KDOT	KDOT	03/11/20	Navigation/Zooming	Why is it zoomed out so far on load - configurable per client
Minnesota	Minnesota	03/11/20	Icons	Can OneWeb show flooding? - yes
Idaho	Idaho	03/11/20	Layers	Does the default show layers that an occasional user would want to view or does the user always have to turn on the layers they want? - there are default layers, can configure diff layers seasonally

- Partnership with Iowa, Idaho, and Minnesota
- Interactive mock-ups for reviewing new designs before development
- Staging sites for live demos and testing of features as they were developed

Agile launch approach

- Used the **legacy sites** to push users to the new site to provide feedback
- Identified **common user feedback** to direct improvements to the website
- **Held interviews** with members of the public



Insights from Version 1.0 launch



Desktop layout with content along the bottom of the screen was disorienting and confusing to users

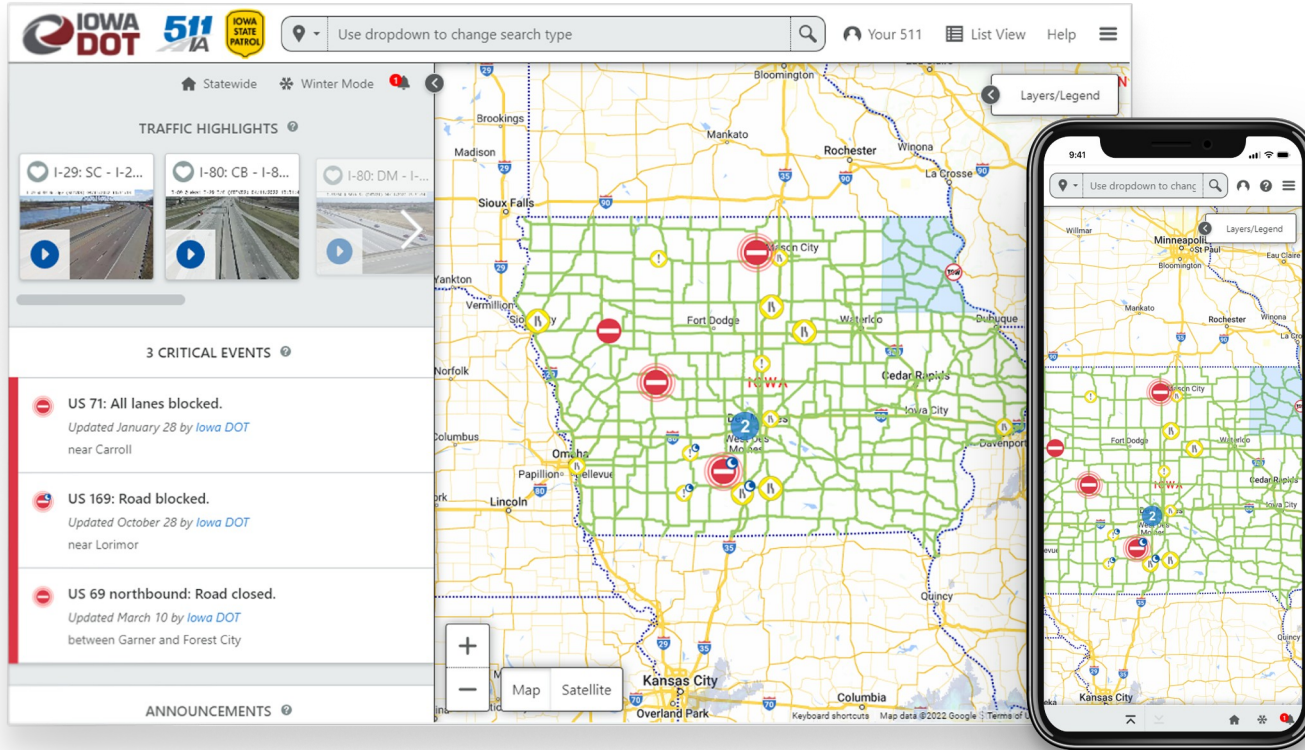


Users could not find the **layer control panel** to update the content shown on the map



Users **love** cameras and winter road conditions

Version 2.0: Acting on user feedback



Launch dates

- Version 1.0 - Jan 2020
- Version 2.0 - Nov 2020



Moved content to left side of screen on desktop views

The screenshot shows the Iowa DOT website interface. On the left side, there is a prominent traffic alert for I-80 westbound, stating that the right shoulder is blocked. The alert includes a '3 min Expected Delay' and a video thumbnail. The main content area is a map of the Des Moines area, centered on a yellow warning icon. The top navigation bar includes the Iowa DOT logo, a search bar for start and end cities, and user account information. The bottom of the page features social media icons and a keyboard shortcuts link.



User friendly layer panel

This close-up view of the Layers panel shows a list of map features with checkboxes. The 'Layers' tab is active, and the 'Select: Default / None' dropdown is visible. The following features are checked:

- Unplanned Traffic Events
- Construction
- Future Construction
- Roadside Cameras
- Waze Reports
- Traffic Speeds
- Message Signs
- Rest Areas
- Winter Road Conditions (Iowa)
- Winter Road Conditions (Regional)
- Towing Not Recommended
- Commercial Vehicles
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- Winter Road Conditions (Regional)
- Towing Not Recommended
- Plow Locations
- Plow Cameras
- Commercial Vehicles

Commercial vehicle mode



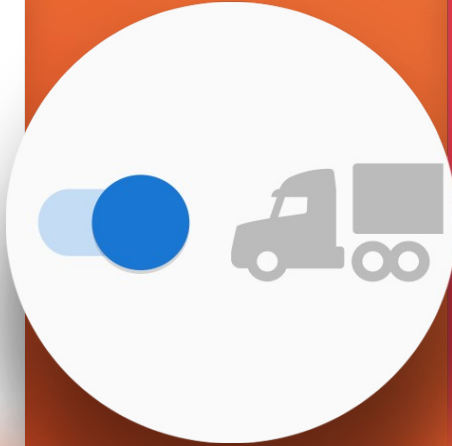
IA 117 southbound: Road construction.

Updated March 11 by Iowa DOT

Between County Road F48 and IA 163 (near Prairie City). Road construction work is in progress. Look out for temporary traffic lights. There is a height limit in effect. There is a width limit in effect. Height limit 15'0". Width limit 15'0". Until June 17, 2022 at about 4:00PM CDT. Full schedule below:

- March 21, 7:00AM - June 17, 4:00PM

Comment: Marshalltown RCE (800-251-2706) - Jasper County



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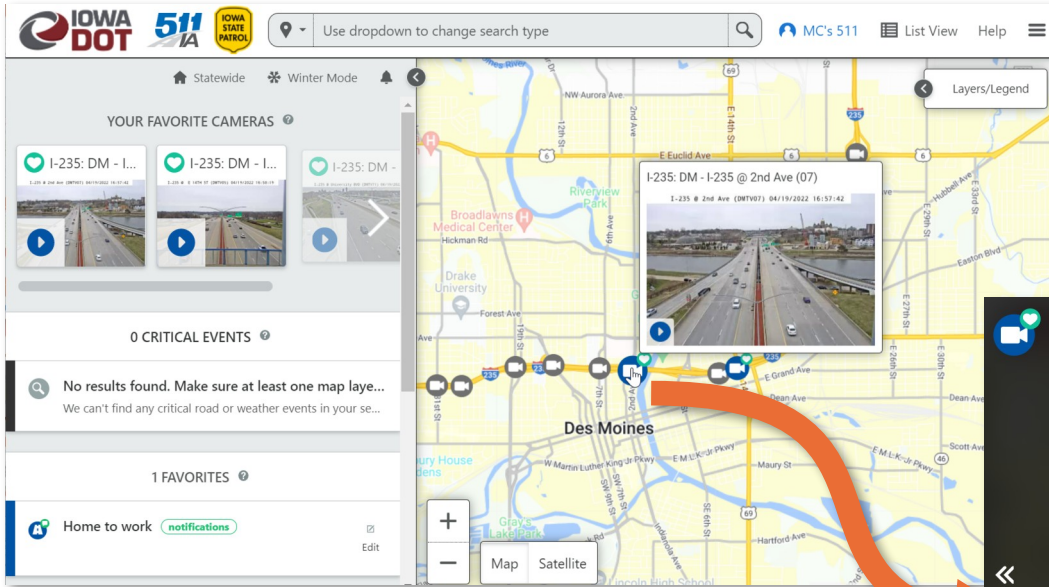
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Focus on Cameras



List views, too!

I-80

I-80: CB - I-80 @ MISSOURI RIVER BRIDGE (01)

East I-80 @ MO River Bridge (CBTV01) 04/14/2022 17:08:47



[Play Video](#) [View on map](#)

I-80: CB - I-80 @ WEST I-29 INTERCHANGE (WEST) (49)

East I-80 @ I-29 I/C (West) (CBTV49) 04/14/2022 17:08:49



[Play Video](#) [View on map](#)

I-80: CB - I-80 @ WEST I-29 INTERCHANGE (02)

East I-80 @ West I-29 I/C (CBTV02) 04/14/2022 17:08:47



[Play Video](#) [View on map](#)

I-80: CB - I-80 @ WEST I-29 INTERCHANGE (EAST) (50)

East I-80 @ West I-29 I/C (East) (CBTV50) 04/14/2022 17:08:36



I-80: CB - I-29/80 @ W OF S 24TH ST (46)

East I-29/80 @ W of S 24th St (CBTV46) 04/14/2022 17:08:49



I-80: CB - I-29/80 @ W OF S 24TH ST (51)

West I-29/80 @ W of S 24th St (CBTV51) 04/14/2022 17:08:50



Focus on winter road conditions



IA 9: Snow on roadway.

Updated Today at 11:53 AM CST by Iowa DOT

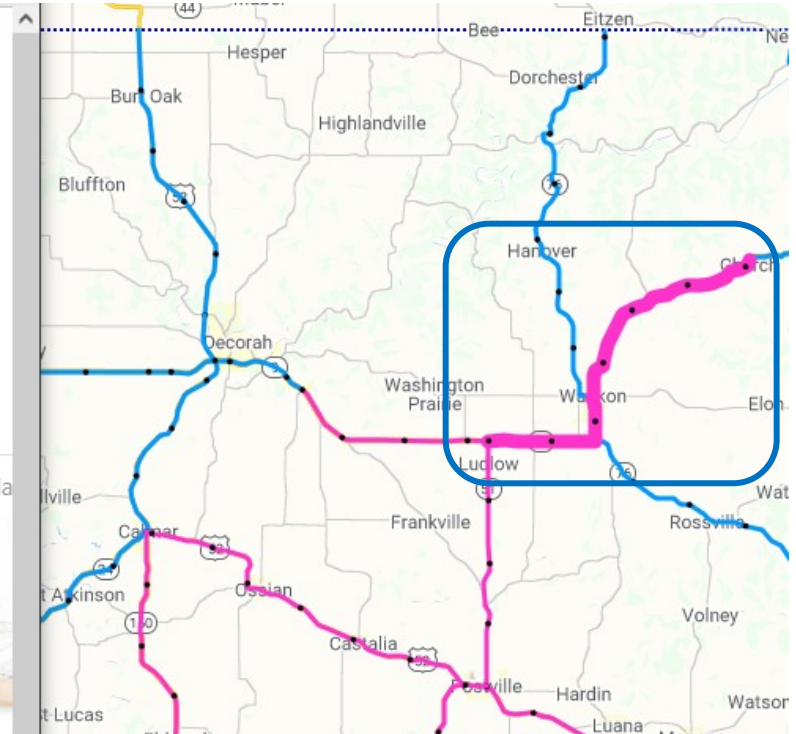
Between IA 51 (1 mile west of the Waukon area) and IA 26 (1 mile west of the Lansing area). There is snow on the roadway. Visibility is half a mile or less.

Forecast Weather (next 6 hours): Chance of Light Freezing Drizzle. Expect up to 2 inches of new snow accumulation. Wind gusts of up to 25 mph are expected.

Today at 11:29 AM CST, ...



Today at 11:24 AM CST, ...



Focus on winter road conditions - Regionally

The screenshot displays the Iowa DOT 511 website interface. At the top, the navigation bar includes the Iowa DOT logo, the 511 IA logo, and the Iowa State Patrol logo. A search bar contains the text "Use dropdown to change search type". On the right side of the navigation bar, there are links for "Your 511", "List View", and "Help".

The main content area is divided into several sections. On the left, there is a "WEATHER ALERT CAMERAS" section with three camera thumbnails labeled "IA 2: RWIS - I...". Below this is a "0 CRITICAL EVENTS" section with a message: "No results found. Make sure at least one map layer... We can't find any critical road or weather events in your sea...". At the bottom left, there is a "Help" section with links for "Take a Tour", "About 511", "Website Help", "Phone Help", and "Feedback". To the right of the help section are "More 511" and "Winter Driving" sections with various links.

The central part of the page is a map of the United States, with a focus on the Midwest region. The map shows various road conditions, with a red overlay indicating winter road conditions. A red box highlights the "Winter Mode" button in the top left corner of the map area. On the right side of the map, there is a "Layers" panel with a "Legend" tab. The "Layers" panel is also highlighted with a red box and contains the following options:

- Select: Default / None
- Unplanned Traffic Events
- Construction
- Roadside Cameras
- Waze Reports
- Traffic Speeds
- Message Signs
- Rest Areas
- Winter Road Conditions (Iowa)
- Winter Road Conditions (Regional)
- Towing Not Recommended
- Plow Locations
- Plow Cameras
- Weather Warnings
- Commercial Vehicles

The map shows a network of roads with different colors representing various conditions. The red overlay is most prominent in the central and eastern parts of the Midwest, covering areas like Minnesota, Wisconsin, and Illinois. Major cities like Minneapolis, St. Paul, Chicago, and Milwaukee are visible on the map.

We ♥ our end users

"I never thought I would give kudos to a federal/state website. Frankly, almost 100% of them are terribly thought out, poorly planned, and often useless. This is not the case with 511. **It is darn near perfect.** Great information, use of technology, easy to navigate, on and on. **Great job to the group who got this together.**"

Chris Dorsey Fargo, ND
2/21/22

The process continues...

- Other states have launched the new site including **County of Dubuque (Iowa), Kansas, Nebraska, Colorado, Indiana and Sacramento**
- **Frequent road mapping sessions** to discuss trends
- **Recent improvements** include camera hovering, winter mode button, and separate layer for future construction projects...more are coming soon!
- Applying **similar processes** to design and build the next versions of other traveler information products

Contact Info

Sinclair Stolle

Traffic Management Systems
Engineer

Iowa DOT

Sinclair.stolle@iowadot.us

Mary Crowe

Director of Product Design and
Delivery

Castle Rock Associates

mary.crowe@castlerockits.com