

Smart Arrow Board (SAB)

Traffic and Safety Bureau; March 2, 2020

To provide Iowa DOT staff with real-time knowledge of active work zone lane closures, the Department will be requiring Smart Arrow Boards on all Interstate projects starting in October 2020 letting. Iowa DOT will become the 1st in the Nation with the statewide requirement.

Benefits

Situational awareness of lane closures for TMC, DOT staff and 3rd party apps.

Information on 511ia.org will be real-time and accurate.

Database for post construction reviews, research and be easily searched.

Figure 1 - Typical rural interstate lane closure with arrow board.



Definition: “Smart Arrow Board” – An arrow board that you normally see in a work zone; however, these will have a GPS antenna and a cellular modem to transmit real-time coordinates and status information to central software.

Iowa DOT has been working with the arrow board industry since 2017 to create requirements and communications specifications for deployment of this next generation of arrow boards. As of this update, five vendors claim they comply with Iowa DOT’s communication protocol.

Not only will DOT and 3rd parties such as WAZE, INRIX, HERE and Google Traffic be able to be informed instantly of traffic lane closures, but no additional effort or work will be required of the construction worker. The system is designed to transmit information automatically once the arrow board is turned on or is moved down the road.

Location and status information will update 511ia.org web page automatically with no intervention from TMC staff.

Advance notification/permission to the District and TMC by the contractor will still be required.

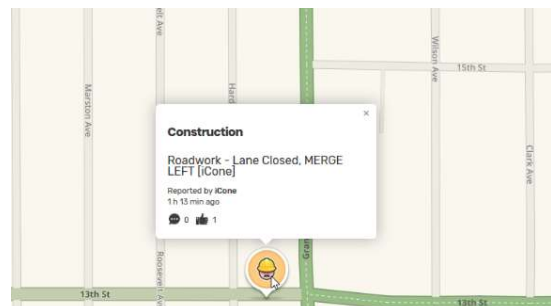


Figure 2 - Example of 3rd party app (WAZE) showing location of Smart Arrow board.

Deployment Schedule

All Interstate projects with lane closures, October 2020 letting

All other roadways with lane closures requiring an arrow board, October 2021 letting

Mobile Operations, October 2022 letting

DOT Operations – To be determined.