



**Coordinated Highways Action Response Team**

## Estimation of Incident duration in real time

### Instruction for Incident duration prediction program



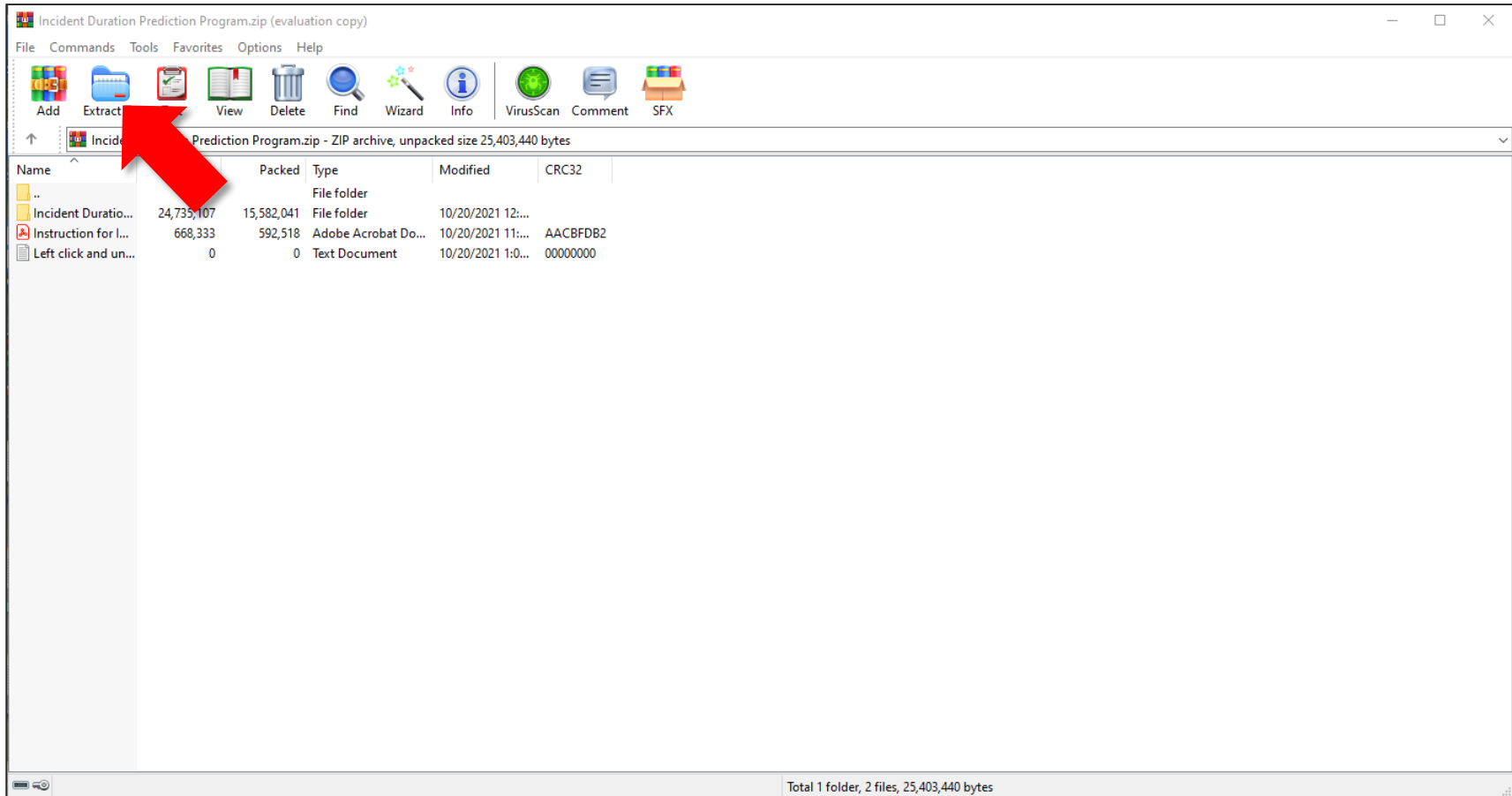
Traffic Safety and Operation Lab  
Dept. of Civil and Environmental Engineering  
University of Maryland, College Park



Office of Transportation Mobility and Operations  
Maryland Department of Transportation  
State Highway Administration

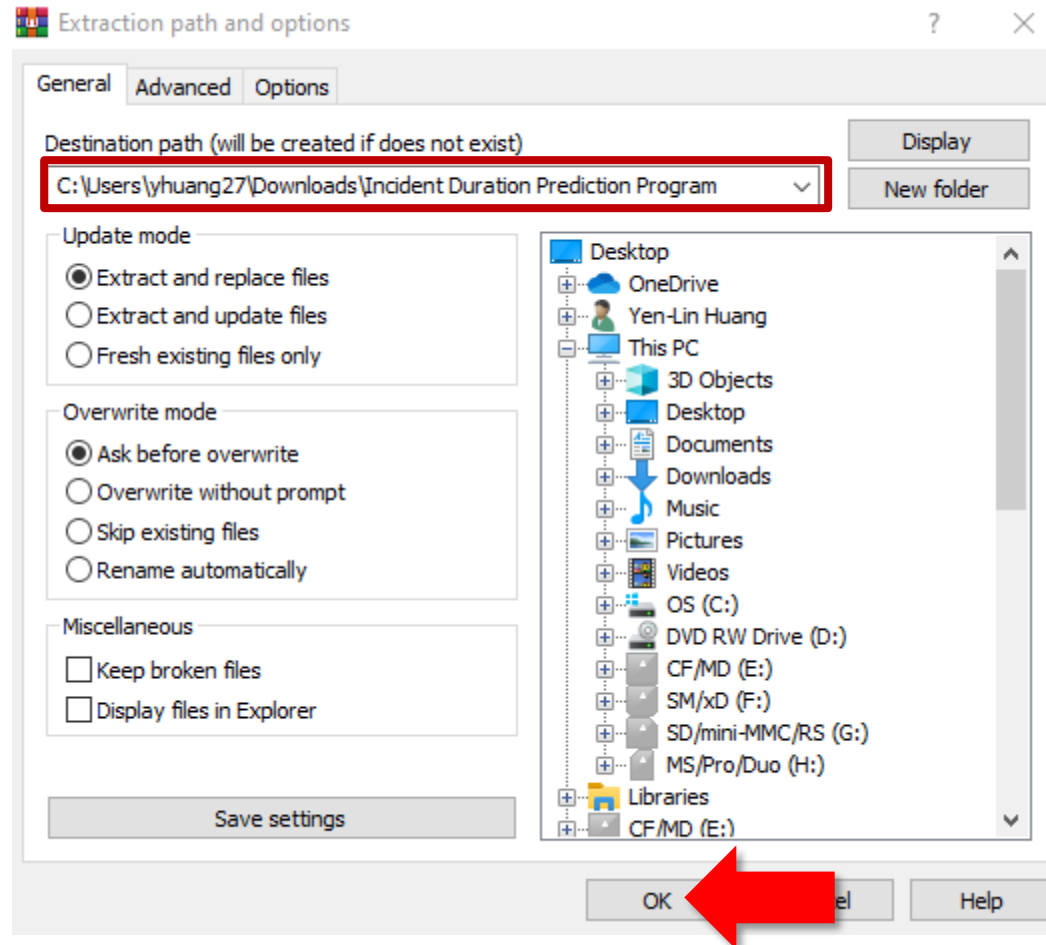
# Preparation for program

- ◆ Double click "Incident-Prediction-Program-Delivery.zip" file
- ◆ Click "Extract To" button



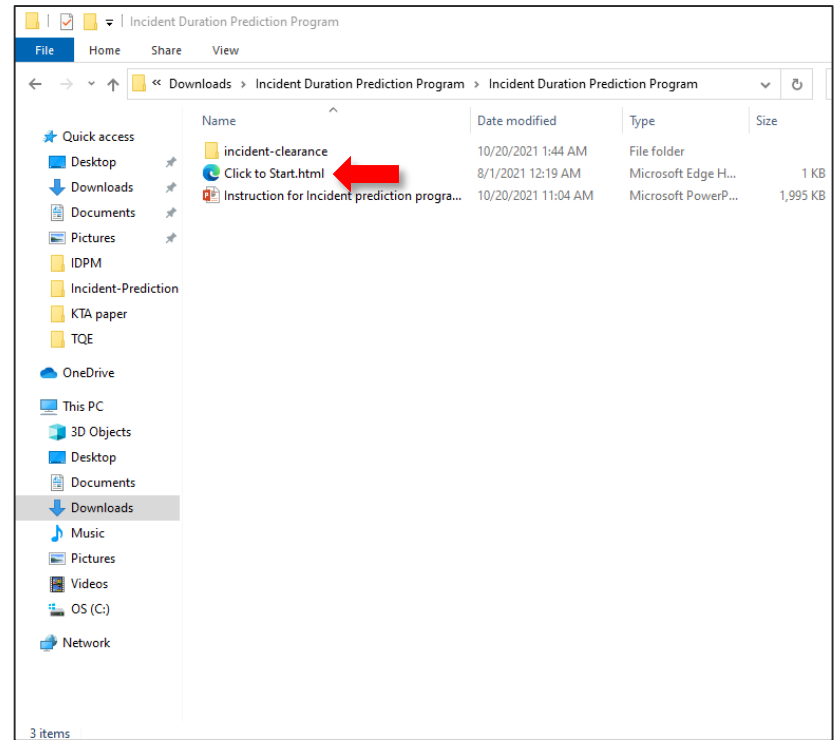
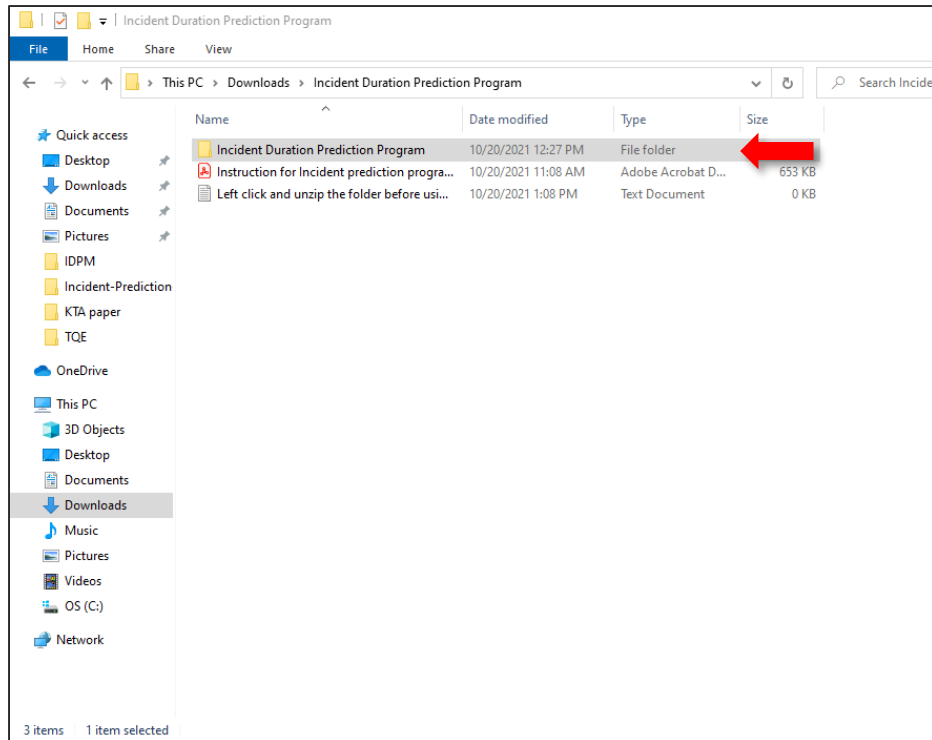
# Preparation for program

- ◆ Specify a destination you want to extract files
- ◆ Click "OK" button



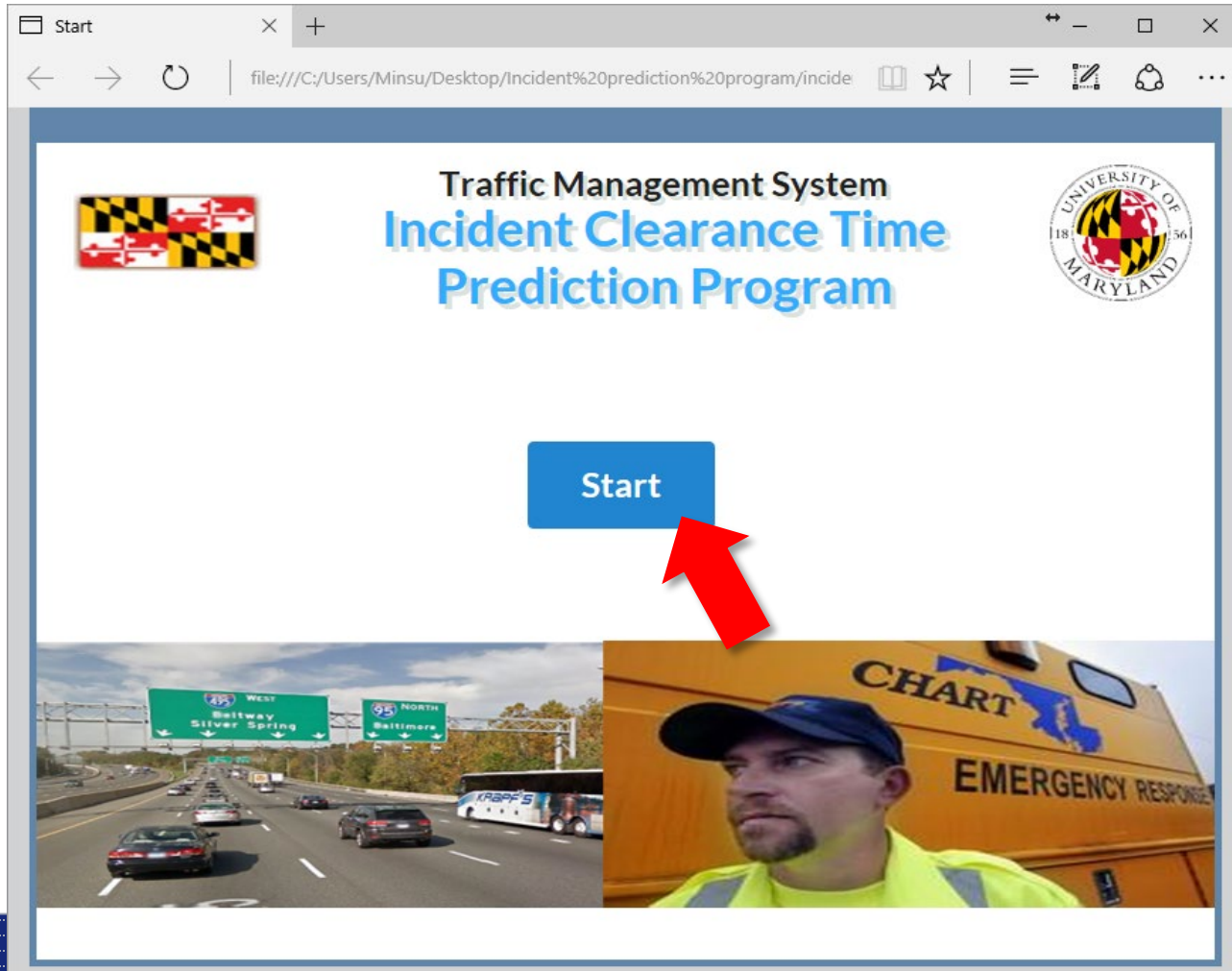
# Program execution

- ◆ Navigate to the folder where the file is extracted
- ◆ Click the folder "Incident Duration Prediction Program"
- ◆ Double click "Click to Start.html" file to start



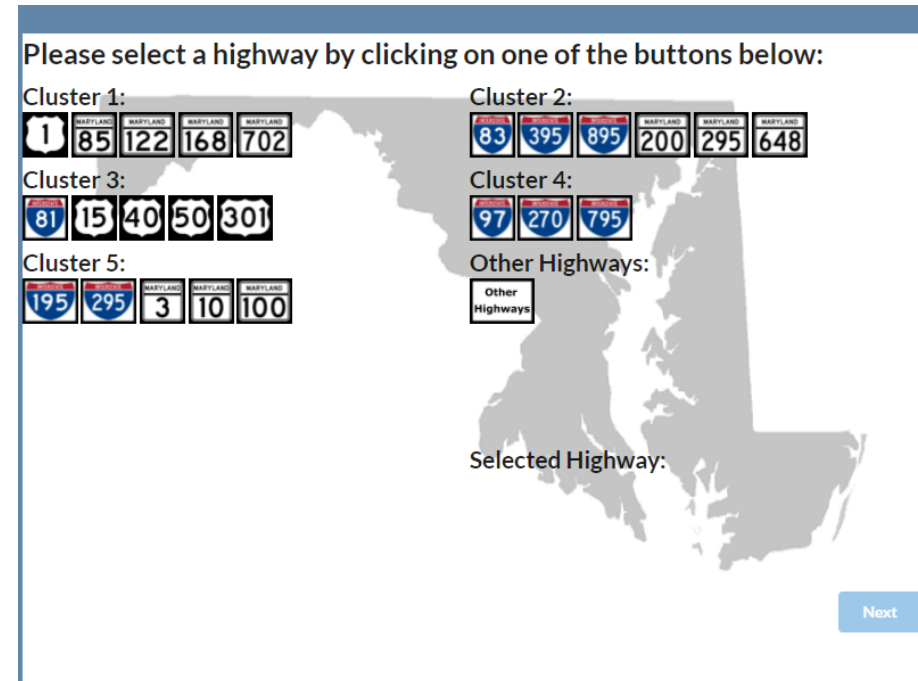
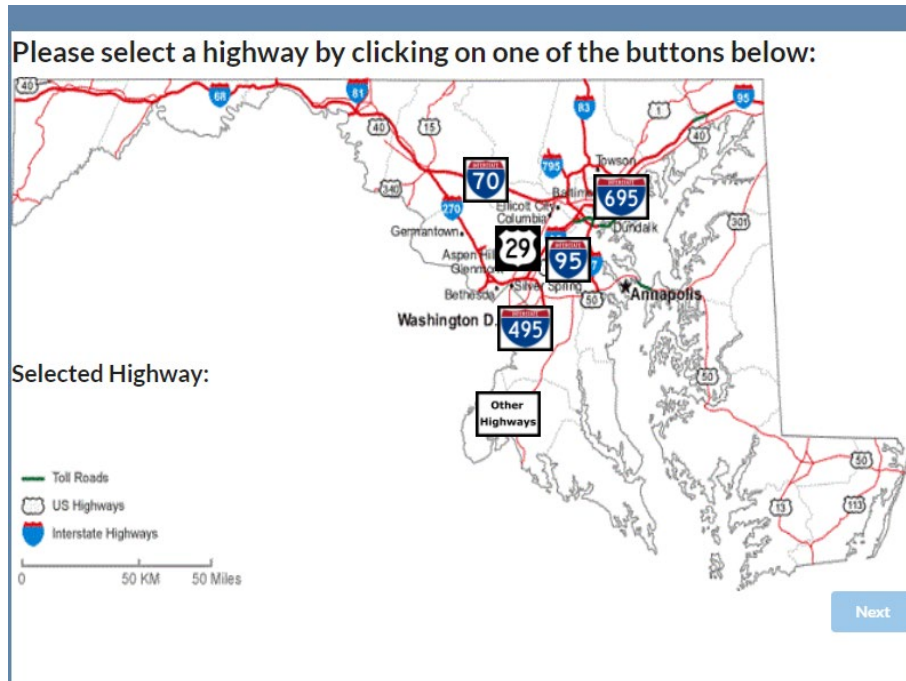
# Program execution

- ◆ Click "Start" button
- ◆ Follow the on-screen instructions to estimate incident clearance time



# Program execution

- ◆ Click the icon of one highway, and press “Next”
- ◆ Note that “Other Highways” are further divided into five clusters, and the routes that are not classified into those five clusters are stored in “Other Highways”



# Program execution

- ◆ Input the incident features and click “Save”, then click “Next” for the next features
- ◆ An initial estimated result would be updated every time an additional information associated with “Type” of incident is entered

The screenshot displays a web-based form for inputting incident features. The 'Type' section includes a diagram of a road with a central barrier and arrows indicating traffic flow. To the right of the diagram are input fields for '# of blocked TRAVEL lanes' and '# of blocked SHOULDERS', both set to 0. Below these are three checkboxes: 'An Auxiliary lane blocked', 'A lane in TUNNEL blocked', and 'A lane in TOLL blocked', all of which are unchecked. At the bottom of this section are four buttons: 'Home', 'Back', 'Save', and 'Next'. Below the input section is a 'Summary' box containing the text: 'Collision incident', 'Travel lane blockage', and 'Personal Injury'. To the right of the summary is a box titled 'Estimated Clearance Time' which is highlighted with a red border. This box contains a horizontal timeline with markers at 30min, 60min, and 120min. Below the timeline are three red bars representing probability ranges: '10~45' at 60%, '10~55' at 70%, and '5~70' at 80%. At the bottom of this box, it states 'Average CT = 33 mins'.

Type

0 # of blocked TRAVEL lanes

0 # of blocked SHOULDERS

☐ An Auxiliary lane blocked

☐ A lane in TUNNEL blocked

☐ A lane in TOLL blocked

Home Back Save Next

Summary

Collision incident  
Travel lane blockage  
Personal Injury

Estimated Clearance Time

30min 60min 120min

10~45 60%

10~55 70%

5~70 80%

Average CT = 33 mins

**Initial estimated result**

# Program execution

- ◆ In “Involved Vehicles”, one should first specify the number of involved vehicles then specify their status

Number of involved vehicles

Status

Type Involved Vehicles Responder Center Pavement & Hazmat Time Location

Car Truck Bus Pickup Van

1 Ja 0 N 0 N 0 N

Pedestrian Cyclist Motorcyclist

0 0 0

Home Back Save Next

**Summary**

Collision incident  
Travel lane blockage  
Personal Injury  
1 Travel lane blocked

**Estimated Clearance Time**

30min 60min 120min





# Program execution


- ◆ In “Responder”, the first arrived responder and the number of responders should be specified


TypeInvolved Vehicles**Responder**CenterPavement & HazmatTimeLocation


First Responder and # of responders


  
☐ CHART  
0

  
☒ POLICE  
1

  
☐ TOW  
1

  
☐ FIREBOARD  
0

  
☐ MEDICAL  
0

  
☐ OTHERS  
0

First arrived responder

Number of responders

HomeBackSaveNext

Summary

Collision incident  
Travel lane blockage  
Personal Injury  
1 Travel lane blocked  
1 Car (:jack ) involved  
First responder: POLICE  
1 POLICE unit 1 TOW unit are responding.

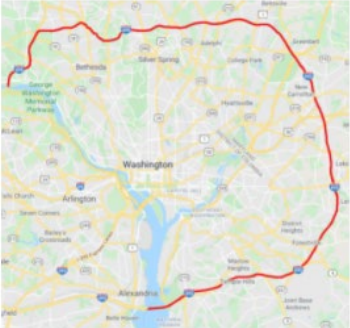
More inputs are needed for accurate estimation.

30min60min120min

# Program execution

- ◆ The final estimated result would be provided only when all the features have been inputted, otherwise it remains showing the initial estimated result

TypeInvolved VehiclesResponderCenterPavement & HazmatTimeLocation



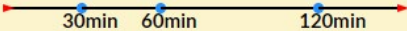
No Information  
No InformationOther Exits

HomeBackSave

Summary

Collision incident  
Travel lane blockage  
Personal Injury  
1 Travel lane blocked  
1 Car involved  
First responder: TOW  
1 TOW unit is responding.  
Other

All information has been recorded.



10-30 60%  
5-30 70%  
5-35 80%

Average CT = 22 mins

**Final estimated result**