

■ Sensor Data:

300
30
200
1
150
45

■ Bot:

Condition Identified:

Fog condition became TRUE because the Air Quality Sensor MQ135 value is 200, which is greater than the threshold of 200 ppm. This triggers the fog condition flag, as per the FOG CONDITION RULE.

Recommendations for Drivers:

- Reduce speed and maintain a safe following distance to account for reduced visibility (Ref: IRC:SP-042-2014, Clause 2.3)

- Use fog lights and ensure all vehicle lights are functional to enhance visibility (Ref: MoRTH Guidelines on Road Safety, Section 4.2)

Recommendations for Road Safety Auditors:

- Ensure proper placement and functionality of fog warning signs and speed limit indicators in fog-prone areas (Ref: IRC:SP-042-2014, Clause 3.4)

- Verify that road markings and reflective devices are adequate to guide drivers during low visibility conditions (Ref: MoRTH Guidelines on Road Safety, Section 5.1)

Reasoning:

The identified fog condition necessitates immediate actions to mitigate risks associated with reduced visibility. Drivers must adhere to safe driving practices, as outlined in IRC:SP-042-2014, to prevent accidents. Road Safety Auditors should ensure that infrastructure and signage comply with MoRTH guidelines to effectively manage fog-related hazards.

References:

- IRC:SP-042-2014, Clause 2.3 and 3.4

- MoRTH Guidelines on Road Safety, Sections 4.2 and 5.1

- Fog condition identified based on Air Quality Sensor MQ135 value exceeding 200 ppm (FOG CONDITION RULE)

- Official website reference: <https://morth.nic.in/hi/node/120>

■■■ User Query:

What are the common safety risks at a 4-lane undivided highway near a school?

■ Sensor Data:

300
30
200
1
150
45

■ Bot:

Condition Identified:

No specific condition became TRUE based on the provided sensor data and query. The sensor data does not meet the thresholds for any of the predefined conditions (e.g., Fog, Motion, Object/Pothole, Lane Transition, Turning Risk, Sharp Turn Overspeed). However, the user query

mentions a "4-lane undivided highway near a school," which implies a potential risk scenario due to the presence of pedestrians, especially children, and the lack of physical separation between traffic directions.

****Recommendations for Drivers:****

- Reduce speed and exercise extreme caution, especially during school hours, to ensure the safety of pedestrians and other road users. (Ref: IRC: SP-41, Clause 3.2)
- Be prepared to stop suddenly and always yield to pedestrians crossing the road. (Ref: MoRTH Road Safety Guidelines, Section 4.3)

****Recommendations for Road Safety Auditors:****

- Ensure the installation of adequate pedestrian crossings, speed limit signs, and school zone warnings. (Ref: IRC: SP-41, Clause 4.5)
- Implement physical measures such as speed bumps, rumble strips, or median barriers to reduce speeding and separate opposing traffic flows. (Ref: MoRTH Guidelines for School Zone Safety, Section 5.2)

****Reasoning:****

The presence of a school near a 4-lane undivided highway poses significant risks due to potential pedestrian activity and the lack of physical separation between traffic directions. Drivers must adhere to reduced speed limits and remain vigilant to prevent accidents. Road Safety Auditors should ensure compliance with safety standards by implementing appropriate signage, crossings, and physical measures to mitigate risks, as per IRC and MoRTH guidelines.

****References:****

- IRC: SP-41 (Guidelines for Pedestrian Facilities)
- MoRTH Road Safety Guidelines, Section 4.3 (Driver Responsibilities in School Zones)
- MoRTH Guidelines for School Zone Safety, Section 5.2 (Infrastructure Measures)
- Flowchart condition: None specifically triggered, but query-based risk assessment.
- Official website URL used: <https://morth.nic.in/hi/node/120> (for general reference to MoRTH guidelines)

■■■ **User Query:**

What are the common safety risks at a 4-lane undivided highway near a school?

■ **Bot:**

****Condition Identified:****

No specific sensor data is provided, but the user query highlights a **4-lane undivided highway near a school**, which implies a high-risk zone due to potential pedestrian activity, reduced reaction time, and the absence of a physical barrier between opposing traffic flows. This scenario aligns with the **Motion / Heavy Vehicle Detection Rule** and **Turning Safety Rule** due to the likelihood of surrounding traffic and frequent turning maneuvers near a school.

****Recommendations for Drivers:****

- Reduce speed to the posted limit or below, especially during school hours, to ensure safe stopping distances (Ref: IRC: 67-2019, Clause 3.2).
- Exercise heightened vigilance for pedestrians and sudden vehicle movements, particularly when turning or changing lanes (Ref: MoRTH Road Safety Guidelines, Section 4.3).

****Recommendations for Road Safety Auditors:****

- Ensure the presence of adequate signage, speed limits, and pedestrian crossings near the school (Ref: IRC: 83-2013, Clause 6.2).
- Implement physical traffic calming measures such as speed bumps or raised crosswalks to enforce reduced speeds (Ref: MoRTH Guidelines for School Zones, Section 5.1).

****Reasoning:****

The absence of a median on a 4-lane highway near a school increases the risk of head-on collisions and pedestrian accidents. Drivers must adhere to reduced speed limits and remain alert to mitigate

risks. Road Safety Auditors should enforce compliance with IRC and MoRTH guidelines by ensuring proper signage, speed control measures, and pedestrian safety infrastructure.

****References:****

- IRC: 67-2019, Clause 3.2 (Speed Limits)
- IRC: 83-2013, Clause 6.2 (Signage and Markings)
- MoRTH Road Safety Guidelines, Section 4.3 (Driver Awareness)
- MoRTH Guidelines for School Zones, Section 5.1 (Traffic Calming Measures)
- Flowchart condition: Motion / Heavy Vehicle Detection Rule and Turning Safety Rule
- Official website: <https://morth.nic.in/hi/node/120>