



JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO CHANDRAWATI INDANE S

Objective of the JRM Report

This JRM report is designed to ensure compliance with the Central Motor Vehicle Rules, 1989 (CMVR), AIS 140 standards, and the Road Transport Safety Policy (RTSP). It provides a comprehensive risk assessment for the transportation of hazardous materials along specified routes. By integrating these legal frameworks, the report offers a broad strategy for identifying and mitigating route-specific risks.

Regulatory Compliance

The report complies with the Central Motor Vehicles (Eleventh Amendment) Rules, 2022, mandating safe transportation practices for N2 and N3 category vehicles carrying hazardous materials. These rules require detailed route assessments, especially regarding road conditions, speed limits, and risk areas, to ensure safety compliance.

Risk Management Strategy

This report categorizes transportation routes into high-risk and medium-risk areas, with a focus on factors such as sharp turns, accident-prone regions, and elevation changes. The goal is to provide actionable

recommendations to minimize these risks, including speed regulations, driver warnings for hazardous zones, and the option of alternate routes.

Compliance with the Road Transport Safety Policy (RTSP)

The report integrates RTSP provisions, including mandatory driving hours, rest periods, and nighttime driving restrictions. It ensures that drivers follow official guidelines, such as taking prescribed rest breaks and avoiding dangerous road conditions like poor visibility, heavy crowds, or high-traffic areas during peak hours.

Emergency Preparedness and Response

The report highlights the significance of predetermined emergency stops for refueling, rest, and overnight stays. It includes protocols for safe responses to road hazards, alternative routes, and rerouting processes if roads are closed or severe weather arises. This aligns with the RTSP emphasis on driver safety and rapid emergency response.

Environmental Considerations

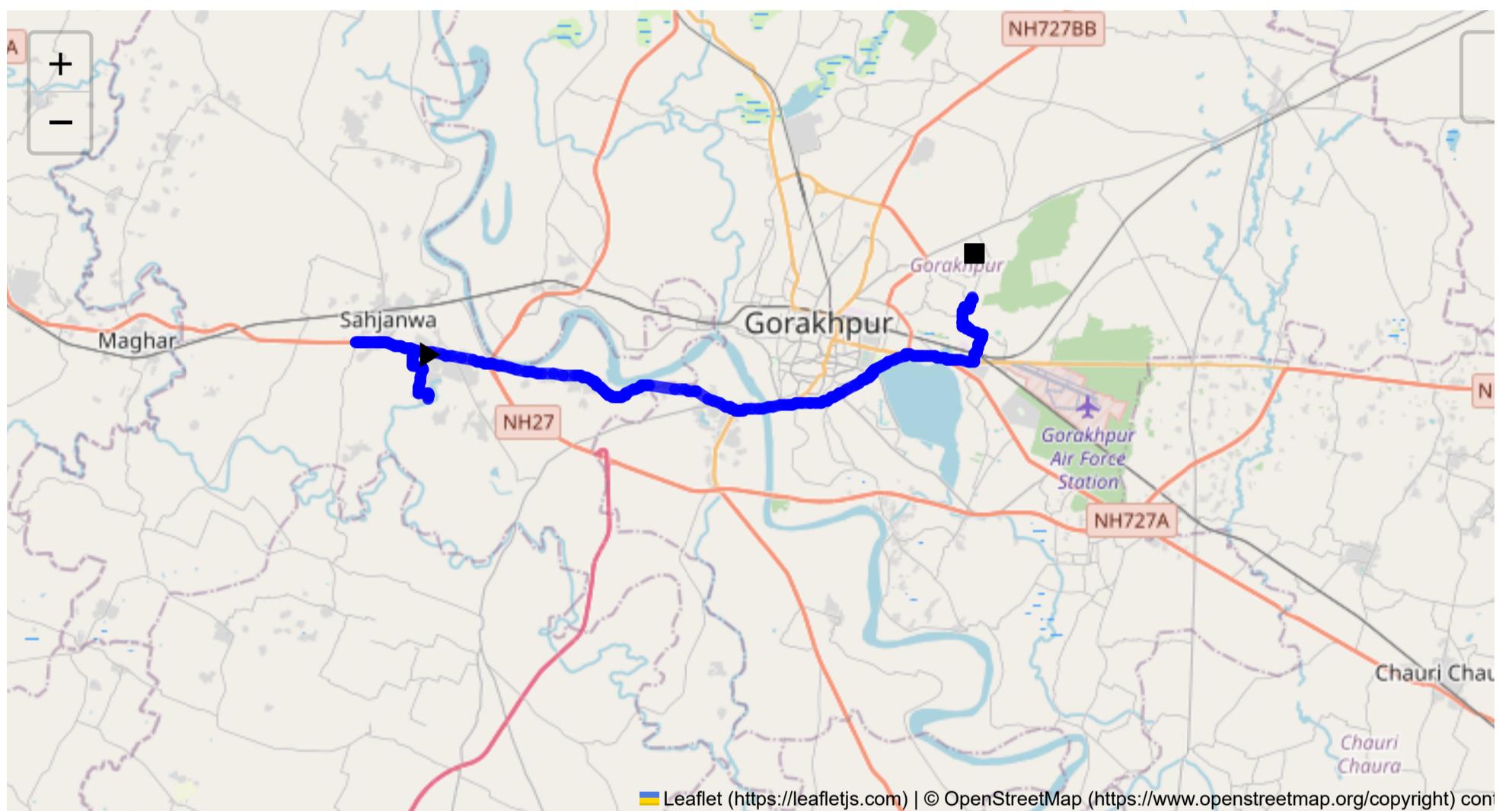
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental impacts during transport.

Journey Risk Mitigation

The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety norms.

Compliance with Government Directives

This report fully adheres to governmental directives regarding hazardous material transportation, implementing mandatory speed limits, nighttime driving restrictions, and comprehensive driver briefings and real-time alerts about route-related risks.



Route Summary:
Total Distance: 30.00 km
Estimated Duration: 1.0 hours
Adjusted Duration (Heavy Vehicle): 1.2 hours
Start: (26.735959, 83.229398)
End: (26.767466, 83.420271)

Welcome to the Journey Risk Management Study

Here is a detailed safety analysis for the specified route from P6PH+9Q GIDA Industrial Area Phase 1, Sahjanwa, Uttar Pradesh to QC8C+V46, Saraswati Puram, Gorakhpur:

- Route Overview:** The route spans a total of approximately 30 kilometers. It stretches from the GIDA Industrial Area in Sahjanwa, through Zero Point in Kaalesar, and Mohaddipur, then concludes at

Saraswati Puram in Gorakhpur. Key junctions include industrial areas and major intersections near urban centers.

2. Weather Conditions:

- **Typical Weather:** The region experiences a monsoon season (June to September), with heavy rainfall, possibly leading to waterlogging on roads. Winter (December to February) may cause fog, reducing visibility.
- **Hazards:** Rain can lead to slippery roads and potholes becoming more dangerous. Fog during winters could impact visibility significantly.

3. Traffic Patterns:

- **Peak Hours:** Expect increased traffic in the morning (8-10 AM) and evening (5-8 PM), especially in urban areas approaching Gorakhpur.
- **Congestion-Prone Areas:** Expect congestion near Mohaddipur and other central areas as these regions have high commercial activity.

4. Road Quality and Infrastructure:

- **General Condition:** Roads vary in quality, with urban areas generally better maintained than rural stretches. Potholes and uneven surfaces are possible in less populated areas.
- **Infrastructure:** There might be narrow bridges or road segments in rural areas, requiring cautious driving.

5. Alternative Routes for Emergencies:

- A possible diversion could be through SH64, depending on the starting and ending point of any incident. Local roads can be used with caution as alternatives.

6. Local Regulations on Hazardous Material Transport:

- Vehicles transporting hazardous materials need specific permits and should follow designated routes, avoiding densely populated areas whenever possible.

7. Historical Incidents:

- There have been occasional reports of accidents involving heavy vehicles due to road quality and visibility issues, especially near Gorakhpur.
- Past incidents often relate to poor weather or road conditions.

8. Environmental Considerations:

- The route crosses through areas near human residence and cultivation, which might be sensitive to spills or leaks from hazardous materials.
- Proper containment and adherence to environmental safeguards are essential.

9. Communication Coverage:

- Urban areas such as Gorakhpur maintain good mobile network coverage. However, certain rural stretches may experience brief dead zones.

10. Emergency Response Times:

- Urban segments near Gorakhpur usually have faster emergency response times (15-30 minutes). More remote areas may expect longer wait times (30-60 minutes).

11. Overall Risk Assessment Summary:

- The route presents moderate risk, particularly due to weather-related hazards and congestion in urban areas. Adequate precautions involving proper vehicle maintenance, adherence to regulations, and awareness of environmental impacts can mitigate these risks effectively. Planning for peak traffic and bad weather conditions can help in maintaining safety standards.

This analysis should assist in preparing for a safe trip for truck drivers handling hazardous materials on the stated route. Regular updates based on roadwork or changes in the environmental conditions should be expected for continued safety assessment.

Risk Assessment - Turns

| | Risk Type | Risk Level | Coordinates | Speed Limit | Distance from Start |
|----|------------|------------|--------------------|-------------|---------------------|
| 2 | Turn | High | 26.73690, 83.22947 | 15 KM/Hr | 0.07 km |
| 3 | Turn | High | 26.73697, 83.22939 | 15 KM/Hr | 0.11 km |
| 4 | Turn | High | 26.73746, 83.22938 | 15 KM/Hr | 0.15 km |
| 5 | Blind Spot | Blind Spot | 26.73791, 83.22625 | 10 KM/Hr | 0.48 km |
| 6 | Turn | Medium | 26.74524, 83.22746 | 30 KM/Hr | 1.30 km |
| 7 | Turn | Medium | 26.74532, 83.22740 | 30 KM/Hr | 1.32 km |
| 8 | Turn | Medium | 26.74654, 83.22390 | 30 KM/Hr | 1.69 km |
| 9 | Turn | Medium | 26.74661, 83.22388 | 30 KM/Hr | 1.70 km |
| 10 | Blind Spot | Blind Spot | 26.75126, 83.22476 | 10 KM/Hr | 2.17 km |
| 11 | Blind Spot | Blind Spot | 26.75353, 83.20457 | 10 KM/Hr | 4.23 km |
| 12 | Turn | High | 26.75381, 83.20466 | 15 KM/Hr | 4.30 km |
| 0 | Roundabout | High | 26.74681, 83.25111 | 15 KM/Hr | 8.99 km |
| 1 | Roundabout | High | 26.74441, 83.38540 | 15 KM/Hr | 23.19 km |
| 13 | Turn | High | 26.74981, 83.39758 | 15 KM/Hr | 24.56 km |
| 14 | Turn | High | 26.74761, 83.42098 | 15 KM/Hr | 26.86 km |
| 15 | Turn | Medium | 26.75076, 83.42213 | 30 KM/Hr | 27.29 km |
| 16 | Blind Spot | Blind Spot | 26.75596, 83.42408 | 10 KM/Hr | 27.89 km |
| 17 | Turn | Medium | 26.75713, 83.41993 | 30 KM/Hr | 28.33 km |
| 18 | Turn | High | 26.75802, 83.41859 | 15 KM/Hr | 28.51 km |
| 19 | Turn | Medium | 26.75811, 83.41855 | 30 KM/Hr | 28.52 km |
| 20 | Blind Spot | Blind Spot | 26.75865, 83.41859 | 10 KM/Hr | 28.55 km |
| 21 | Turn | High | 26.75862, 83.41783 | 15 KM/Hr | 28.65 km |

| | Risk Type | Risk Level | Coordinates | Speed Limit | Distance from Start |
|----|------------|------------|--------------------|-------------|---------------------|
| 22 | Turn | Medium | 26.75852, 83.41781 | 30 KM/Hr | 28.67 km |
| 23 | Turn | Medium | 26.75848, 83.41774 | 30 KM/Hr | 28.68 km |
| 24 | Blind Spot | Blind Spot | 26.75861, 83.41679 | 10 KM/Hr | 28.74 km |
| 25 | Turn | Medium | 26.75944, 83.41698 | 30 KM/Hr | 28.82 km |
| 26 | Turn | Medium | 26.75950, 83.41694 | 30 KM/Hr | 28.88 km |
| 27 | Turn | High | 26.75954, 83.41682 | 15 KM/Hr | 28.88 km |
| 28 | Turn | Medium | 26.76454, 83.41768 | 30 KM/Hr | 29.40 km |
| 29 | Turn | High | 26.76456, 83.41770 | 15 KM/Hr | 29.45 km |
| 30 | Turn | High | 26.76418, 83.41926 | 15 KM/Hr | 29.61 km |

Emergency Locations

Found: 10 hospital(s), 5 clinic(s)

| | type | name | coordinates | speed_limit | risk_level | Distance from Start |
|----|----------|--|---------------------------|-------------|------------|---------------------|
| 0 | hospital | Amrawati Hospital | 26.7372636, 83.3626921 | 30 km/h | Medium | 20.54 km |
| 3 | hospital | Sangam Eye Hospital | 26.7343271, 83.3640482 | 30 km/h | Medium | 20.69 km |
| 1 | hospital | Sanjay Fracture Clinic and Maternity Centre | 26.7342168, 83.3665873 | 30 km/h | Medium | 20.95 km |
| 2 | hospital | The Pride Hospital | 26.734908, 83.3669987 | 30 km/h | Medium | 20.95 km |
| 6 | hospital | Excel Ortho Care, Shri Hari Pathology | 26.7310723, 83.3688339 | 30 km/h | Medium | 21.12 km |
| 5 | hospital | Spectra Eye Centre | 26.7366834, 83.3682564 | 30 km/h | Medium | 21.21 km |
| 9 | hospital | Medispring Hospital & Research Centre | 26.7327713, 83.3700866 | 30 km/h | Medium | 21.21 km |
| 4 | clinic | Apollo Clinic | 26.738647, 83.367827 | 30 km/h | Medium | 21.27 km |
| 7 | hospital | Jagdish Hospital | 26.7348828, 83.3712637 | 30 km/h | Medium | 21.39 km |
| 11 | hospital | Park Hospital | 26.7403626, 83.3690208 | 30 km/h | Medium | 21.50 km |

| | type | name | coordinates | speed_limit | risk_level | Distance from Start |
|----|----------|---|---------------------------|-------------|------------|---------------------|
| 8 | hospital | Aryan Hospital | 26.7386077, 83.3733599 | 30 km/h | Medium | 21.72 km |
| 10 | clinic | Ehsaas De-Addiction Cum Rehabilitation Centre | 26.7398014, 83.3749512 | 30 km/h | Medium | 21.99 km |
| 12 | clinic | Dularee Nursing Home | 26.7416989, 83.3760304 | 30 km/h | Medium | 21.99 km |
| 13 | clinic | Sardar Patel Clinic | 26.7454607, 83.3793117 | 30 km/h | Medium | 22.63 km |
| 14 | clinic | Pragati Maternity Home and Surgical Clinic | 26.7477134, 83.4132269 | 30 km/h | Medium | 26.12 km |

Crowded Spots

Route Photos of Risky Spots



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.17 km

Coordinates: 26.75126, 83.22476



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 4.23 km

Coordinates: 26.75353, 83.20457



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 4.30 km

Coordinates: 26.75381, 83.20466



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Risk Type: Roundabout**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 8.99 km**Coordinates:** 26.74681, 83.25111

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Risk Type: Roundabout**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 23.19 km**Coordinates:** 26.74441, 83.38540



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 24.56 km

Coordinates: 26.74981, 83.39758



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 26.86 km

Coordinates: 26.74761, 83.42098



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 27.29 km

Coordinates: 26.75076, 83.42213



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 27.89 km

Coordinates: 26.75596, 83.42408



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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 28.33 km**Coordinates:** 26.75713, 83.41993

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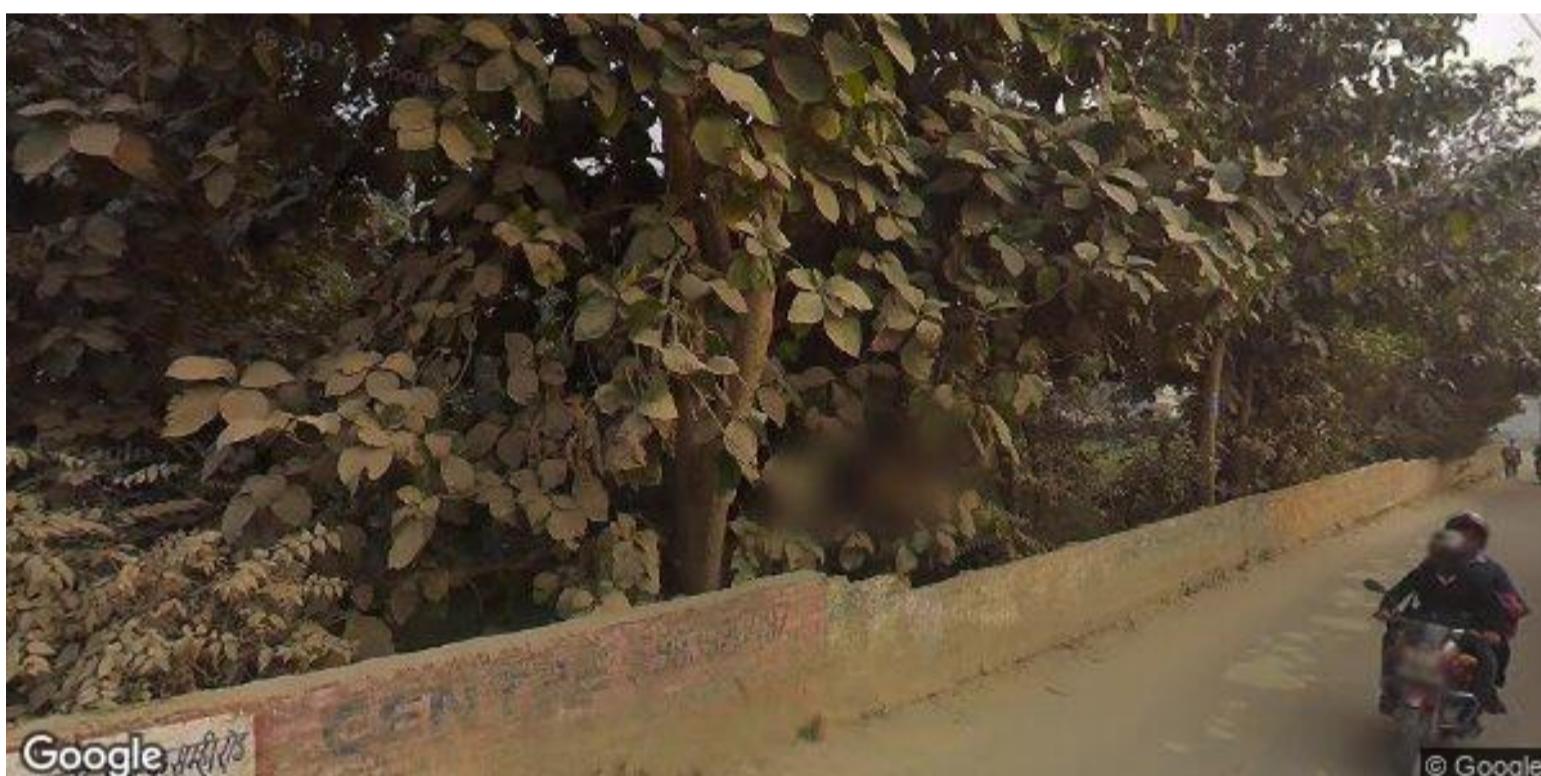
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Risk Type: Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 28.51 km**Coordinates:** 26.75802, 83.41859



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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 28.52 km**Coordinates:** 26.75811, 83.41855

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Risk Type: Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 28.55 km**Coordinates:** 26.75865, 83.41859



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Risk Type: Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 28.65 km**Coordinates:** 26.75862, 83.41783

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 28.67 km**Coordinates:** 26.75852, 83.41781



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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 28.68 km**Coordinates:** 26.75848, 83.41774

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Risk Type: Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 28.74 km**Coordinates:** 26.75861, 83.41679



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 28.82 km

Coordinates: 26.75944, 83.41698



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 28.88 km

Coordinates: 26.75950, 83.41694



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 29.40 km

Coordinates: 26.76454, 83.41768



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 29.45 km

Coordinates: 26.76456, 83.41770



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 29.61 km

Coordinates: 26.76418, 83.41926

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