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JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP to Comndt.26 BN PAC,
Gorakhpur

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

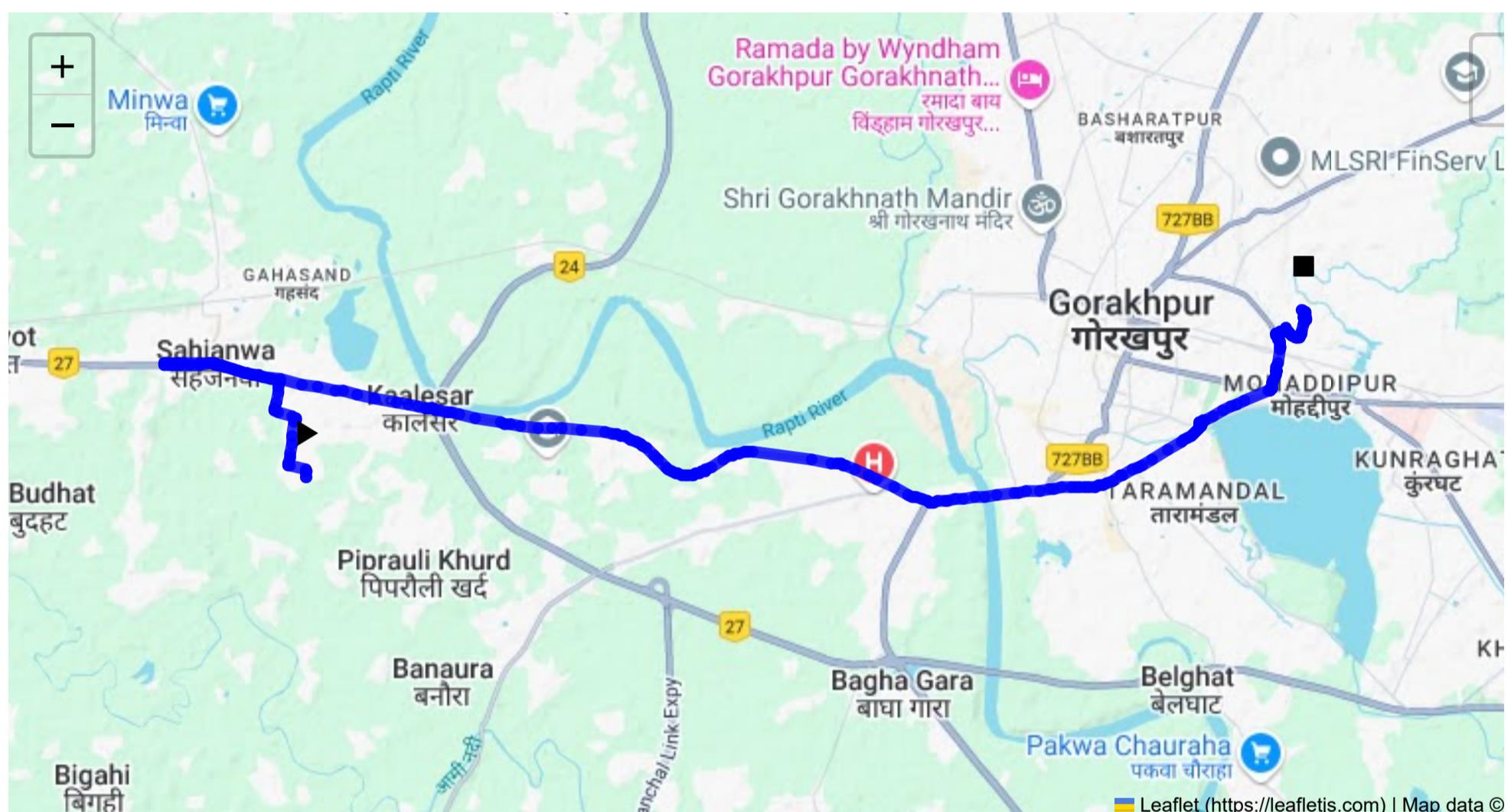
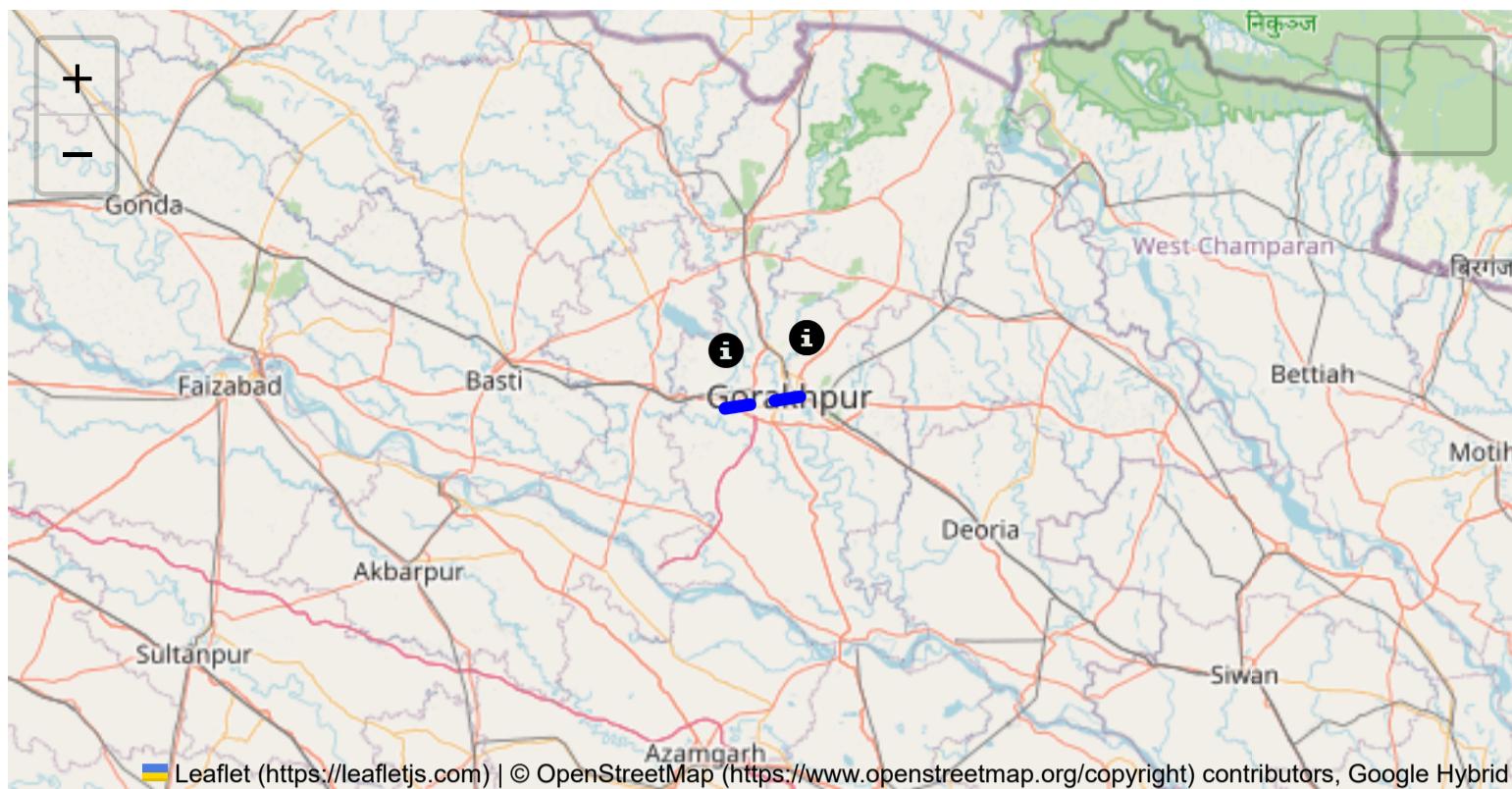
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 26.72 km

Estimated Duration: 0.8 hours

Adjusted Duration (Heavy Vehicle): 1.0 hours

Start: (26.735959, 83.229398)

End: (26.762074, 83.402885)

Welcome to the Journey Risk Management Study

Route Overview

The route spans approximately 26.72 kilometers, initiating from GIDA Industrial Area Phase 1, passing through Bichhiya Railway Colony, and concluding at Maitripuram in Gorakhpur, Uttar Pradesh. The journey involves urban roads, intersections, and a railway crossing, which are frequently trafficked by both passenger and commercial vehicles.

Typical Weather Conditions and Hazards

The area experiences a tropical climate with high temperatures in summer months and moderate to heavy rainfall during the monsoon season (June to September). Weather-related hazards include:

- Reduced visibility and slippery roads during monsoon due to heavy rains and possible waterlogging.
- Dust storms during pre-monsoon months can affect visibility significantly.

Traffic Patterns

- **Peak Hours:** Typically, 8:00 AM to 10:00 AM and 5:00 PM to 8:00 PM.
- **Congestion-Prone Areas:** Urban intersections near railway crossings, particularly in the vicinity of Bichhiya Railway Colony, experience notable congestion.

Road Quality and Infrastructure

- Urban sections have asphalt roads that are generally maintained, though potholes are common post-monsoon.
- Some sections near the industrial area may have reduced road quality due to heavy vehicle usage.
- Traffic signals and road signs are present but adherence to traffic regulations can be lax.

Alternative Routes

For emergencies, consider using NH27 which bypasses heavily congested urban centers. This route is longer but may provide faster transit during peak congestion or emergencies.

Local Regulations on Hazardous Material Transport

Transport of hazardous materials is subject to regulations requiring:

- Proper labeling and documentation.
- Restrictions on travel during peak traffic hours in urban areas.
- Compliance with safety standards for vehicle condition and load securing.

Historical Incidents

- Historical data indicates occasional incidents of vehicle breakdowns and minor accidents involving heavy vehicles. There are sporadic reports of spills concerning hazardous materials, often related to inadequate securing of the load.

Environmental Considerations

- Areas near water bodies and dense residential zones need cautious navigation to prevent environmental contamination or accidents.
- Bichhiya Railway Colony and sections around the city are sensitive due to both residential density and ecological considerations.

Communication Coverage

- Mobile network coverage is generally reliable, though some potential dead zones exist on less trafficked, semi-rural sections leading into urban Gorakhpur.
- Regular communication checks are advised when transiting these zones.

Emergency Response Times

- Urban response times range between 15 to 30 minutes depending on traffic.
- In semi-rural areas, expect slightly longer response times, potentially up to 45 minutes.

Overall Summary of Risk Assessment

Considering the route's features, the primary risks include:

- Traffic congestion and delays, especially during peak hours.
- Weather-induced hazards like poor visibility and slippery roads.
- Infrastructure-induced risks, including potential road surface issues and traffic signal compliance.
- Emergency response delays in specific areas necessitate preemptive safety measures and route familiarity. Overall, this route requires careful navigation, particularly around identified congestion points and potential weather-related hazards. Consistent communication and adherence to local regulations are vital for minimizing risks.

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	8.97 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Roundabout	High	26.74441, 83.38540	15 KM/Hr	23.19 km
13	Turn	Medium	26.74986, 83.39766	30 KM/Hr	24.57 km
14	Turn	Medium	26.75261, 83.39859	30 KM/Hr	24.89 km
15	Turn	Medium	26.75264, 83.39862	30 KM/Hr	24.90 km
16	Blind Spot	Blind Spot	26.75854, 83.39844	10 KM/Hr	25.58 km
17	Turn	Medium	26.75852, 83.39853	30 KM/Hr	25.59 km
18	Turn	High	26.75833, 83.39865	15 KM/Hr	25.61 km
19	Blind Spot	Blind Spot	26.75932, 83.40022	10 KM/Hr	25.79 km
20	Turn	High	26.75777, 83.40187	15 KM/Hr	26.03 km
21	Turn	High	26.75799, 83.40207	15 KM/Hr	26.07 km
22	Turn	Medium	26.75799, 83.40212	30 KM/Hr	26.09 km
23	Turn	High	26.75781, 83.40241	15 KM/Hr	26.11 km
24	Turn	Medium	26.75807, 83.40269	30 KM/Hr	26.16 km
25	Turn	Medium	26.75819, 83.40273	30 KM/Hr	26.17 km
26	Turn	Medium	26.75823, 83.40277	30 KM/Hr	26.18 km
27	Turn	Medium	26.76070, 83.40387	30 KM/Hr	26.48 km
28	Turn	Medium	26.76083, 83.40385	30 KM/Hr	26.49 km
29	Turn	Medium	26.76090, 83.40378	30 KM/Hr	26.50 km
30	Turn	Medium	26.76096, 83.40350	30 KM/Hr	26.52 km
31	Turn	Medium	26.76099, 83.40348	30 KM/Hr	26.54 km
32	Turn	High	26.76190, 83.40365	15 KM/Hr	26.62 km
33	Turn	Medium	26.76206, 83.40297	30 KM/Hr	26.68 km

Emergency Locations

Found: 10 hospital(s), 4 clinic(s)

	type	name		coordinates	speed_limit	risk_level	Distance from Start
3	hospital	Amrawati Hospital		26.7372636, 83.3626921	30 km/h	Medium	20.54 km
2	hospital	Sangam Eye Hospital		26.7343271, 83.3640482	30 km/h	Medium	20.73 km

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Sanjay Fracture Clinic and Maternity Centre	26.7342168, 83.3665873	30 km/h	Medium	20.98 km
1	hospital	The Pride Hospital	26.734908, 83.3669987	30 km/h	Medium	20.98 km
8	hospital	Excel Ortho Care, Shri Hari Pathology	26.7310723, 83.3688339	30 km/h	Medium	21.10 km
5	hospital	Medispring Hospital & Research Centre	26.7327713, 83.3700866	30 km/h	Medium	21.21 km
7	hospital	Spectra Eye Centre	26.7366834, 83.3682564	30 km/h	Medium	21.21 km
4	hospital	Jagdish Hospital	26.7348828, 83.3712637	30 km/h	Medium	21.30 km
6	clinic	Apollo Clinic	26.738647, 83.367827	30 km/h	Medium	21.30 km
9	hospital	Aryan Hospital	26.7386077, 83.3733599	30 km/h	Medium	21.64 km
10	clinic	Ehsaas De-Addiction Cum Rehabilitation Centre	26.7398014, 83.3749512	30 km/h	Medium	21.89 km
11	clinic	Dularee Nursing Home	26.7416989, 83.3760304	30 km/h	Medium	22.02 km
12	clinic	Sardar Patel Clinic	26.7454607, 83.3793117	30 km/h	Medium	22.60 km
13	hospital	Raj Eye Hospital	26.7448169, 83.3789191	30 km/h	Medium	22.60 km

Crowded Spots

Route Photos of Risky Spots



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Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.17 km

Coordinates: 26.75126, 83.22476



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Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 4.23 km

Coordinates: 26.75353, 83.20457



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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: 8.97 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



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Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 24.57 km

Coordinates: 26.74986, 83.39766



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Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 24.89 km

Coordinates: 26.75261, 83.39859



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Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 24.90 km

Coordinates: 26.75264, 83.39862



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Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 25.61 km

Coordinates: 26.75833, 83.39865



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Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 25.79 km

Coordinates: 26.75932, 83.40022



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Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 26.03 km

Coordinates: 26.75777, 83.40187



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Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 26.07 km

Coordinates: 26.75799, 83.40207



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Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 26.09 km

Coordinates: 26.75799, 83.40212



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Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 26.11 km

Coordinates: 26.75781, 83.40241



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Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 26.16 km

Coordinates: 26.75807, 83.40269



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Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 26.17 km

Coordinates: 26.75819, 83.40273



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 26.18 km

Coordinates: 26.75823, 83.40277



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 26.48 km

Coordinates: 26.76070, 83.40387



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 26.49 km

Coordinates: 26.76083, 83.40385



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 26.50 km

Coordinates: 26.76090, 83.40378



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Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 26.62 km

Coordinates: 26.76190, 83.40365



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Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 26.68 km

Coordinates: 26.76206, 83.40297

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