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JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO SAHEED RAMPREET CHAU

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

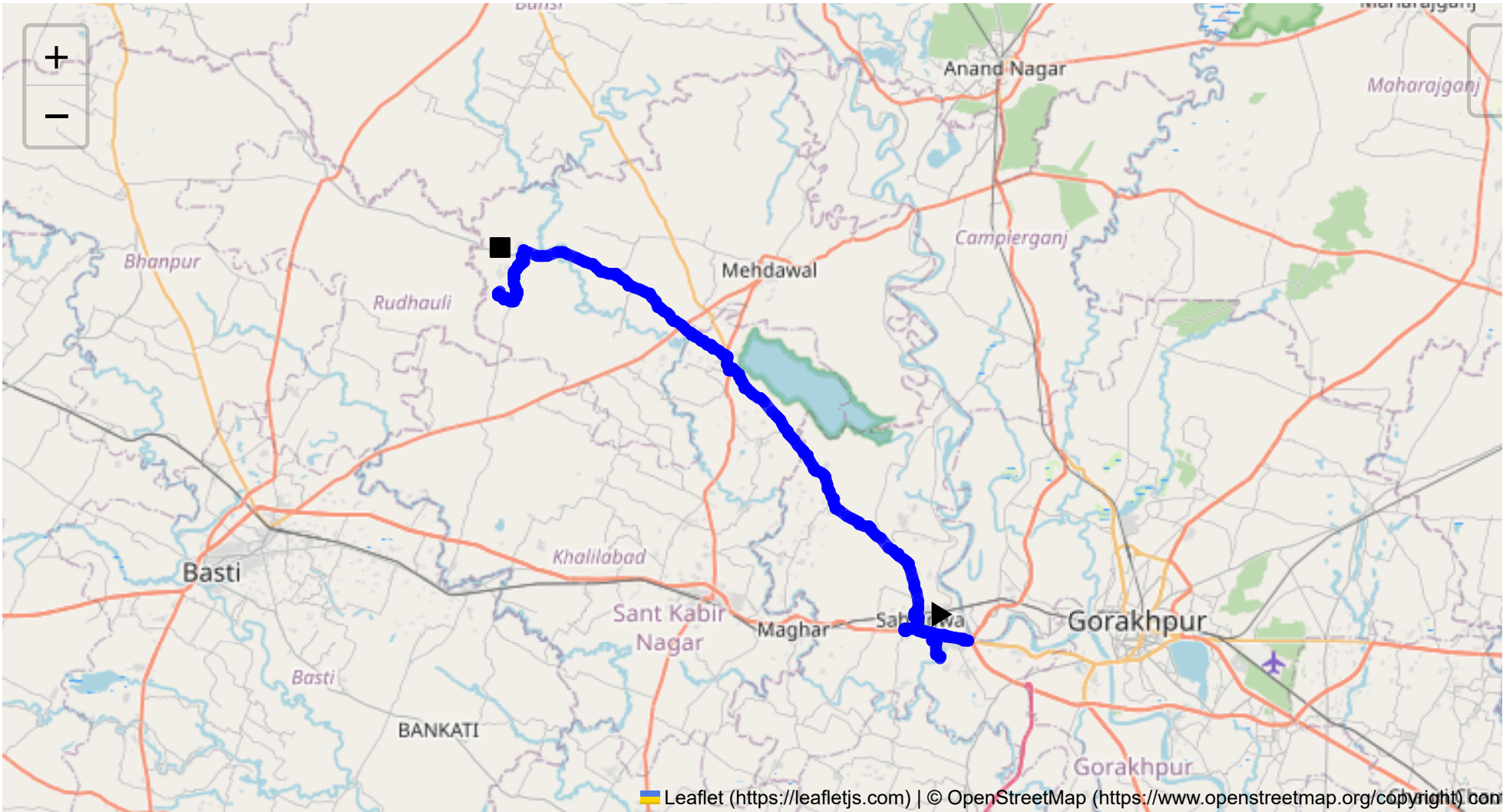
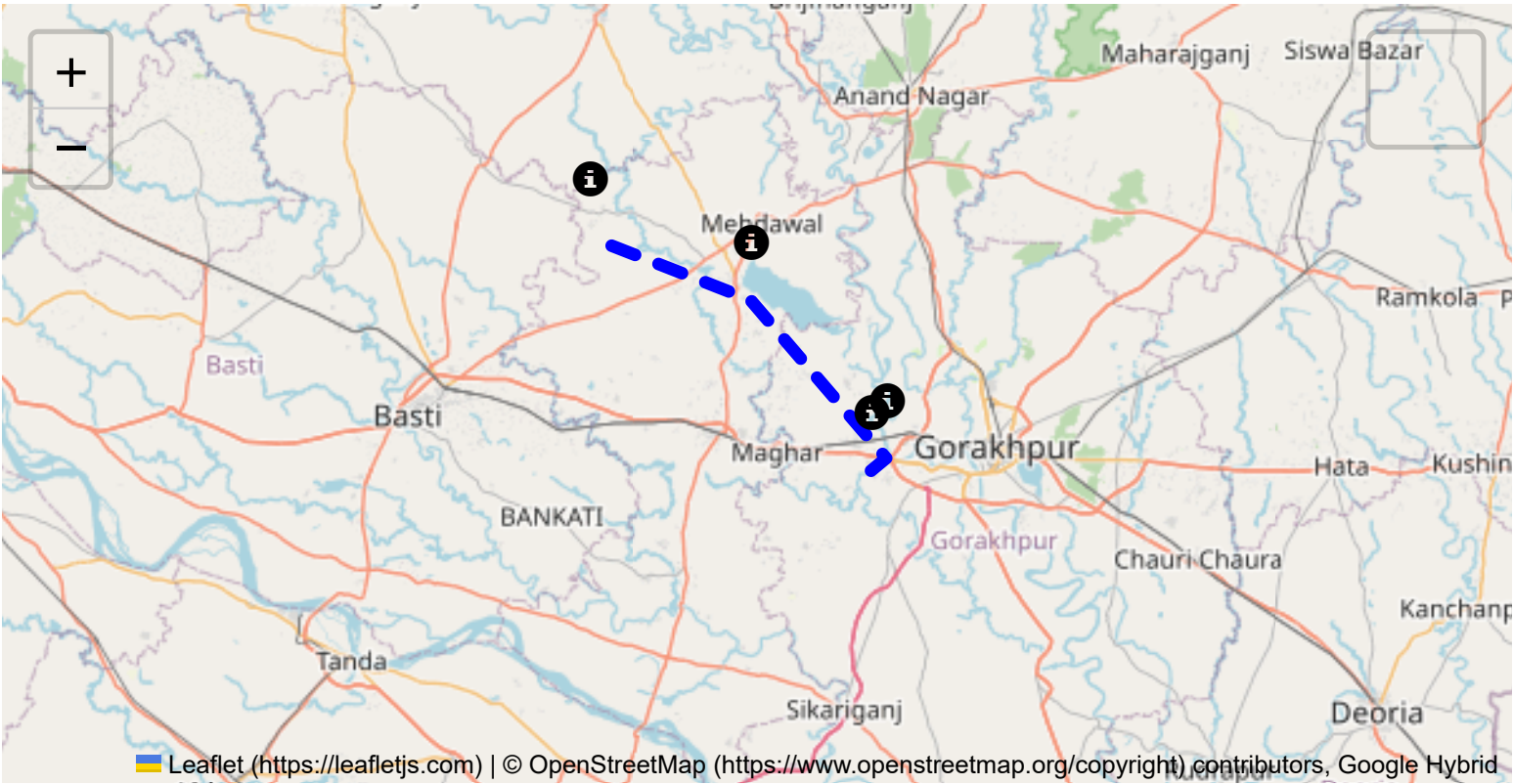
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 61.58 km
Estimated Duration: 1.7 hours
Adjusted Duration (Heavy Vehicle): 2.2 hours
Start: (26.735959, 83.229398)
End: (26.963359, 82.92268)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route spans approximately 61.58 kilometers and typically takes about 1.75 hours for heavy vehicles carrying hazardous materials. It connects the GIDA Industrial Area in Sahjanwa with Bhan Pur, passing through key waypoints including Zero Point in Kaalesar and Bakhira Khas in Surjajot.

2. Typical Weather Conditions and Potential Weather-Related Hazards

The climate in Uttar Pradesh experiences extreme temperatures, particularly during summer months (April to June), with highs reaching above 40°C (104°F). Monsoon season (July to September) brings heavy rainfall, potentially leading to flooding or waterlogging, which can impact road conditions. Fog can be a significant hazard during the winter months (December to February), reducing visibility and increasing the likelihood of accidents.

3. Analysis of Traffic Patterns

Traffic congestion is typically higher during morning (8-10 AM) and evening (5-8 PM) peak hours, particularly near industrial areas and town centers. Congestion-prone areas include intersections near larger towns or markets along the route. Truck drivers should be prepared for stop-and-go traffic in these segments, planning for potential delays.

4. Assessment of Road Quality and Infrastructure

The route mainly consists of state highways and district roads. Road quality can vary significantly, with some segments maintained well while others may have potholes or uneven surfaces. Attention should be given to signage and road markings, which might be insufficient in rural areas, increasing the risk of accidents.

5. Suggestions for Alternative Routes for Emergencies

In case of emergencies or road blockages, consider alternate routes such as the roads bypassing major towns, although these might be longer and less maintained. It is advisable to have a GPS-enabled device for real-time navigation and updates on road conditions.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Transporting hazardous materials in Uttar Pradesh is governed by regulations mandating specific permits and labeling of hazardous goods. Restrictions on transit through certain areas (such as near schools, hospitals, or residential zones) must be adhered to. It is crucial to verify compliance with the latest regulations from transport authorities before commencing travel.

7. Overview of Historical Incidents

While specific historical data for incidents along this route may not be readily available, reports indicate that heavy vehicles often encounter accidents due to poor road conditions and congestion. Past incidents have highlighted the importance of proper vehicle maintenance and adherence to speed limits.

8. Environmental Considerations and Sensitive Areas

The route passes near agricultural lands and small settlements, which require careful environmental considerations. Heavy vehicles must minimize noise and exhaust emissions to avoid disturbing local communities and ecosystems. Specific sensitive areas, like protected forests or wildlife areas, should be traveled with additional care.

9. Analysis of Communication Coverage

Mobile network coverage along the route can vary, with potential dead zones in more rural segments. Drivers are advised to carry communication devices with long-range capabilities or satellite communication options to ensure consistent connectivity in case of emergencies.

10. Estimated Emergency Response Times

Emergency response times can vary depending on the proximity to larger towns or cities. In urbanized areas, expect response times of 15-30 minutes, while more remote sections may have longer wait times due to less accessible locations.

11. Overall Summary of Risk Assessment

The route presents moderate risks primarily due to weather conditions, variable road quality, and congestion. Proper preparation and adherence to regulations can significantly mitigate these risks. Drivers should remain vigilant, particularly during poor weather and peak traffic hours. It is recommended to continuously monitor local traffic updates and weather conditions to adjust travel plans accordingly.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Turn	High	26.73746, 83.22938	15 KM/Hr	0.14 km
2	Blind Spot	Blind Spot	26.73791, 83.22625	10 KM/Hr	0.47 km
3	Turn	High	26.74524, 83.22746	15 KM/Hr	1.16 km
4	Turn	High	26.74654, 83.22390	15 KM/Hr	1.65 km
5	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.16 km
6	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.22 km
9	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.22 km
7	Turn	High	26.75377, 83.20465	15 KM/Hr	4.27 km
0	U-Turn	High	26.7471208, 83.2490873	10 KM/Hr	8.75 km
8	Blind Spot	Blind Spot	26.74712, 83.24909	10 KM/Hr	8.75 km
10	Turn	High	26.75381, 83.20466	15 KM/Hr	13.31 km
11	Blind Spot	Blind Spot	26.75377, 83.21355	10 KM/Hr	14.18 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
12	Turn	Medium	26.75640, 83.21275	30 KM/Hr	14.46 km
13	Turn	High	26.76132, 83.21435	15 KM/Hr	14.97 km
14	Turn	Medium	26.76119, 83.21159	30 KM/Hr	15.33 km
15	Turn	High	26.76131, 83.21143	15 KM/Hr	15.36 km
16	Turn	Medium	26.76403, 83.21129	30 KM/Hr	15.67 km
17	Turn	Medium	26.76555, 83.21385	30 KM/Hr	15.91 km
18	Turn	Medium	26.76593, 83.21408	30 KM/Hr	16.01 km
19	Turn	Medium	26.83008, 83.15664	30 KM/Hr	25.75 km
20	Turn	High	26.91593, 83.08458	15 KM/Hr	38.05 km
21	Blind Spot	Blind Spot	26.91433, 83.08351	10 KM/Hr	38.26 km
22	Turn	Medium	26.91856, 83.08098	30 KM/Hr	38.80 km
23	Turn	Medium	26.92248, 83.08193	30 KM/Hr	39.21 km
24	Turn	Medium	26.92322, 83.08164	30 KM/Hr	39.33 km
25	Turn	High	26.92450, 83.07843	15 KM/Hr	39.68 km
26	Turn	Medium	26.92538, 83.07790	30 KM/Hr	39.79 km
27	Turn	Medium	26.93059, 83.06757	30 KM/Hr	40.97 km
28	Turn	High	26.93307, 83.06425	15 KM/Hr	41.34 km
29	Turn	High	26.93320, 83.06423	15 KM/Hr	41.45 km
30	Turn	High	26.98894, 82.94055	15 KM/Hr	55.84 km
31	Turn	Medium	26.98597, 82.93910	30 KM/Hr	56.17 km
32	Turn	Medium	26.98265, 82.93954	30 KM/Hr	56.60 km
33	Turn	Medium	26.97673, 82.93449	30 KM/Hr	57.44 km
34	Turn	Medium	26.97665, 82.93422	30 KM/Hr	57.48 km
35	Turn	Medium	26.97674, 82.93397	30 KM/Hr	57.51 km
36	Turn	Medium	26.97669, 82.93380	30 KM/Hr	57.53 km
37	Turn	Medium	26.97470, 82.93281	30 KM/Hr	57.75 km
38	Turn	Medium	26.97436, 82.93288	30 KM/Hr	57.80 km
39	Turn	Medium	26.97410, 82.93321	30 KM/Hr	57.84 km
40	Turn	Medium	26.97390, 82.93325	30 KM/Hr	57.88 km
41	Turn	High	26.97182, 82.93288	15 KM/Hr	58.11 km
42	Turn	High	26.97171, 82.93319	15 KM/Hr	58.14 km
43	Turn	Medium	26.96637, 82.93453	30 KM/Hr	58.68 km
44	Turn	Medium	26.96194, 82.93529	30 KM/Hr	59.20 km
45	Turn	High	26.96091, 82.93471	15 KM/Hr	59.38 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
46	Turn	High	26.96055, 82.93482	15 KM/Hr	59.43 km
47	Turn	High	26.95791, 82.93331	15 KM/Hr	59.69 km
48	Turn	Medium	26.95788, 82.93299	30 KM/Hr	59.80 km
49	Turn	Medium	26.95823, 82.93209	30 KM/Hr	59.86 km
50	Turn	Medium	26.95817, 82.93194	30 KM/Hr	59.92 km
51	Blind Spot	Blind Spot	26.95739, 82.93153	10 KM/Hr	59.98 km
52	Turn	High	26.95966, 82.92704	15 KM/Hr	60.42 km
53	Turn	High	26.95924, 82.92659	15 KM/Hr	60.59 km
54	Turn	Medium	26.96082, 82.92333	30 KM/Hr	60.81 km
55	Turn	High	26.96095, 82.92328	15 KM/Hr	60.98 km
56	Blind Spot	Blind Spot	26.96135, 82.92353	10 KM/Hr	61.03 km
57	Blind Spot	Blind Spot	26.96189, 82.92169	10 KM/Hr	61.19 km
58	Turn	High	26.96235, 82.92187	15 KM/Hr	61.26 km
59	Turn	High	26.96229, 82.92219	15 KM/Hr	61.30 km

Route Photos of Risky Spots



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 2.16 km
Coordinates: 26.75126, 83.22476



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 4.22 km
Coordinates: 26.75353, 83.20457



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 4.22 km
Coordinates: 26.75353, 83.20457



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 4.27 km

Coordinates: 26.75377, 83.20465



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Distance from Start: 8.75 km

Coordinates: 26.7471208, 83.2490873



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 8.75 km
Coordinates: 26.74712, 83.24909



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 13.31 km
Coordinates: 26.75381, 83.20466



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 14.18 km

Coordinates: 26.75377, 83.21355



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 14.46 km

Coordinates: 26.75640, 83.21275



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 14.97 km

Coordinates: 26.76132, 83.21435



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 15.33 km

Coordinates: 26.76119, 83.21159



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 15.36 km

Coordinates: 26.76131, 83.21143



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 15.67 km

Coordinates: 26.76403, 83.21129



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 15.91 km

Coordinates: 26.76555, 83.21385



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 16.01 km

Coordinates: 26.76593, 83.21408



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 25.75 km
Coordinates: 26.83008, 83.15664



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 38.05 km
Coordinates: 26.91593, 83.08458



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 38.26 km
Coordinates: 26.91433, 83.08351



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 38.80 km
Coordinates: 26.91856, 83.08098



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 39.21 km
Coordinates: 26.92248, 83.08193



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 39.33 km
Coordinates: 26.92322, 83.08164



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 39.68 km

Coordinates: 26.92450, 83.07843



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 39.79 km

Coordinates: 26.92538, 83.07790



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 40.97 km
Coordinates: 26.93059, 83.06757



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 41.34 km
Coordinates: 26.93307, 83.06425



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 41.45 km
Coordinates: 26.93320, 83.06423



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 55.84 km
Coordinates: 26.98894, 82.94055



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 56.17 km

Coordinates: 26.98597, 82.93910



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 56.60 km

Coordinates: 26.98265, 82.93954



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 57.44 km
Coordinates: 26.97673, 82.93449



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 57.48 km
Coordinates: 26.97665, 82.93422



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 57.51 km
Coordinates: 26.97674, 82.93397



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 57.53 km
Coordinates: 26.97669, 82.93380



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 57.75 km
Coordinates: 26.97470, 82.93281



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 57.80 km
Coordinates: 26.97436, 82.93288



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 57.84 km
Coordinates: 26.97410, 82.93321



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 57.88 km
Coordinates: 26.97390, 82.93325



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 58.11 km
Coordinates: 26.97182, 82.93288



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 58.14 km
Coordinates: 26.97171, 82.93319



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 58.68 km

Coordinates: 26.96637, 82.93453



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 59.20 km

Coordinates: 26.96194, 82.93529



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 59.38 km

Coordinates: 26.96091, 82.93471



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 59.43 km

Coordinates: 26.96055, 82.93482



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 59.69 km
Coordinates: 26.95791, 82.93331



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 59.80 km
Coordinates: 26.95788, 82.93299



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 59.86 km
Coordinates: 26.95823, 82.93209



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 59.92 km
Coordinates: 26.95817, 82.93194



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 59.98 km
Coordinates: 26.95739, 82.93153

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