



## JOURNEY RISK MANAGEMENT (JRM) STUDY

### Gorakhpur LPG BP TO PADRAUNA GAS SERVICE

#### 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

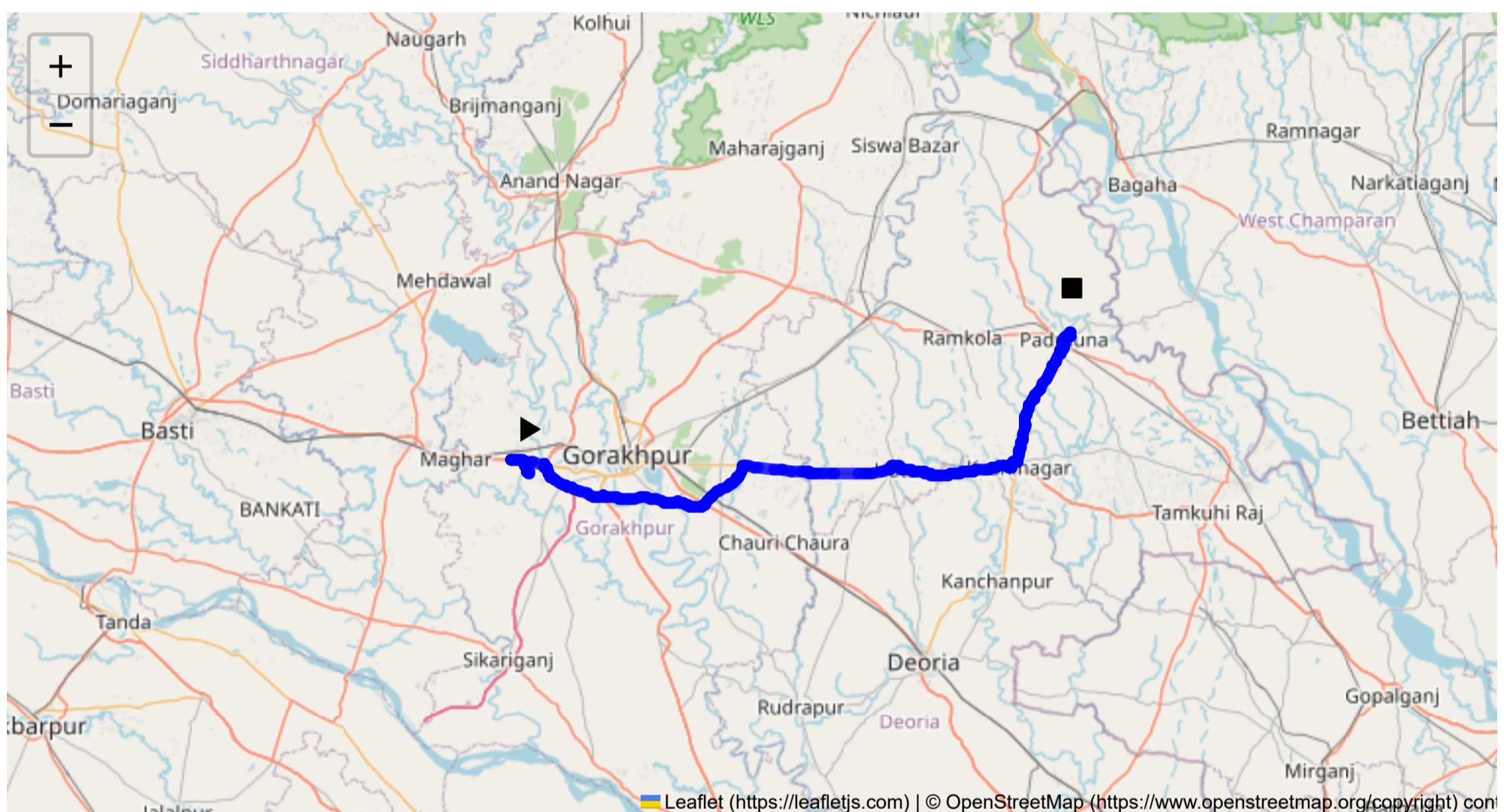
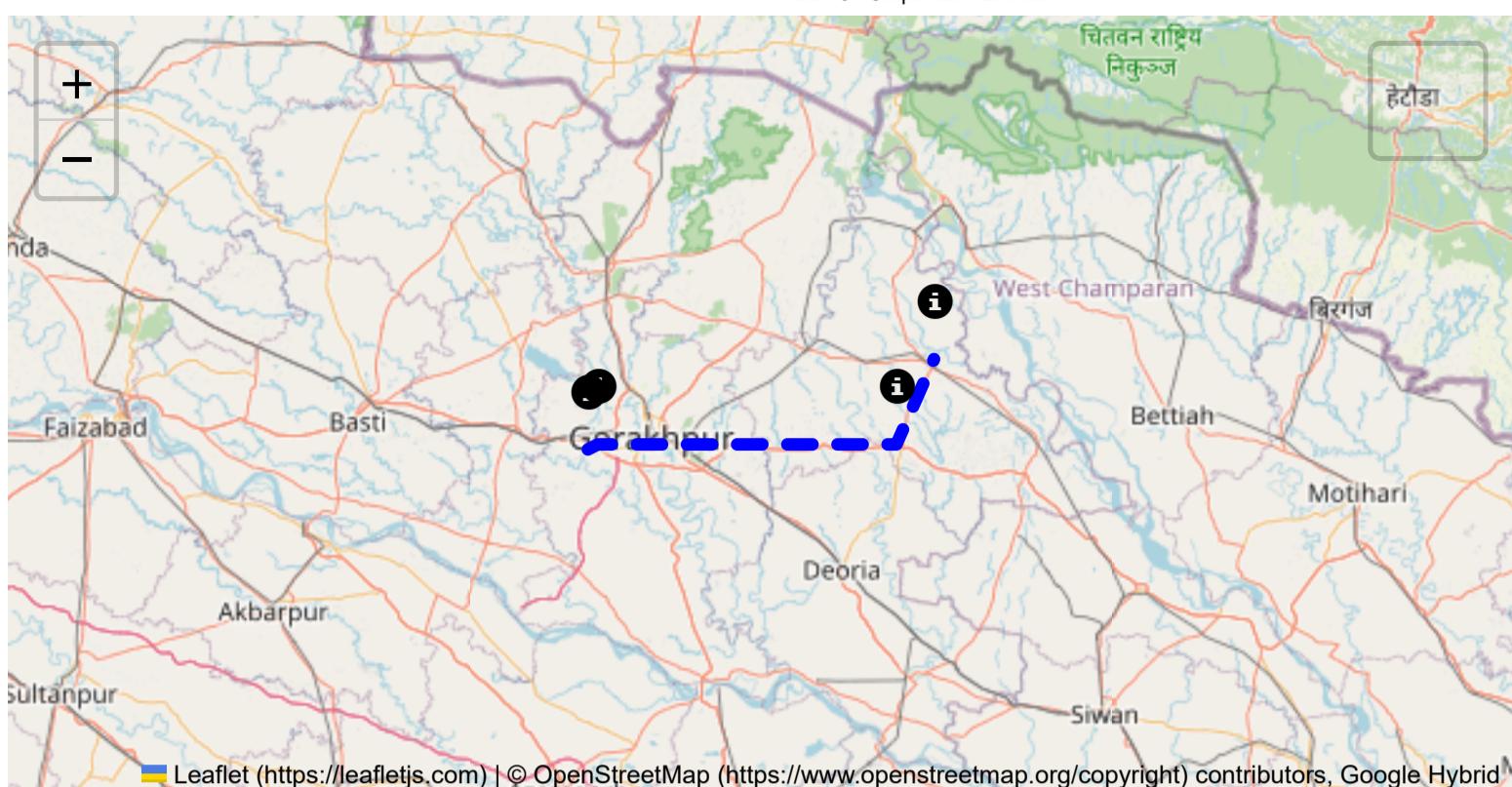
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 101.21 km**  
**Estimated Duration: 2.3 hours**  
**Adjusted Duration (Heavy Vehicle): 2.9 hours**  
**Start: (26.735959, 83.229398)**  
**End: (26.912234, 83.986934)**

## Welcome to the Journey Risk Management Study

Sure, I'll provide a comprehensive analysis of the route including potential hazards and considerations for truck drivers carrying hazardous material.

### 1. Overview of the Route Map:

The route spans approximately 101.21 kilometers, passing through various towns and rural areas in Uttar Pradesh. Starting at GIDA Industrial Area Phase 1, it moves through Kaalesar and Jhugwa, and

ends at Jungle Bakulha, Padrauna. The route includes highways and rural roads, with varying levels of traffic.

## 2. Typical Weather Conditions and Potential Weather-related Hazards:

The region experiences extreme temperatures, with hot summers (up to 40°C) and cool winters (as low as 5°C). Monsoon (June to September) brings heavy rains, causing flooding and slippery roads. Fog is common in winter, reducing visibility.

## 3. Analysis of Traffic Patterns:

Traffic is generally heavier during the morning (7-10 AM) and evening (5-8 PM) in urban areas and near city centers like Gorakhpur. Congestion is likely around market areas and intersections in towns.

## 4. Assessment of Road Quality and Infrastructure:

Major highways are well-paved but secondary roads and rural paths may have potholes and poor signage, particularly during monsoon. Some bridges and intersections need maintenance.

## 5. Suggestions for Alternative Routes for Emergencies:

In case of roadblocks or accidents, alternative routes include bypassing Gorakhpur via NH27 and utilizing minor roads around congested areas. However, these may increase travel time.

## 6. Summary of Local Regulations Affecting Hazardous Material Transport:

There are restrictions on transporting hazardous materials through densely populated areas. Transport is often limited to certain hours, typically outside peak traffic.

## 7. Overview of Historical Incidents:

The region has some history of vehicular accidents due to road conditions and dense traffic, particularly during monsoon. Specific data on hazardous material incidents is limited, but general caution during transit is advised.

## 8. Environmental Considerations and Sensitive Areas:

The route may pass near protected forests and agricultural lands sensitive to spills. It is crucial to prevent contamination from any leaks.

## 9. Analysis of Communication Coverage:

Major telecom providers have reasonable coverage in urban areas, but expect dropouts in remote rural stretches or forested terrain.

## 10. Estimated Emergency Response Times:

Urban areas may have quicker response times, around 30-45 minutes. Rural segments might experience delays, with response times extending beyond one hour due to longer distances to emergency facilities.

## 11. Overall Summary of Risk Assessment:

The route presents moderate risk, primarily from weather-related hazards, road quality variations, and occasional traffic congestion. Careful planning, including checking weather forecasts and potential alternative routes, is crucial. Regular communication checks and understanding local regulations will help mitigate risks related to the transport of hazardous materials. Staying alert to environmental sensitivities and preparing for variable emergency response times is also essential to ensure safe passage.

This assessment should assist in adequately preparing truck drivers and other stakeholders involved in the transportation of hazardous materials along this route.

## Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Turn	High	26.73746, 83.22938	15 KM/Hr	0.15 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
7	Turn	High	26.75377, 83.20465	15 KM/Hr	4.27 km
0	Roundabout	High	26.74681, 83.25111	15 KM/Hr	8.13 km
8	Turn	High	26.74278, 83.90519	15 KM/Hr	79.02 km
9	Turn	High	26.74943, 83.90688	15 KM/Hr	79.83 km
10	Turn	High	26.74995, 83.91445	15 KM/Hr	80.62 km
11	Turn	Medium	26.79568, 83.92322	30 KM/Hr	85.77 km
12	Turn	Medium	26.79612, 83.92341	30 KM/Hr	85.86 km
13	Turn	Medium	26.79691, 83.92515	30 KM/Hr	86.02 km
14	Turn	High	26.79719, 83.92535	15 KM/Hr	86.10 km
15	Turn	Medium	26.88968, 83.97520	30 KM/Hr	97.57 km
16	Turn	High	26.90471, 83.97911	15 KM/Hr	99.43 km
17	Turn	Medium	26.90464, 83.97991	30 KM/Hr	99.54 km
18	Turn	High	26.90682, 83.98223	15 KM/Hr	99.77 km
19	Turn	Medium	26.90647, 83.98284	30 KM/Hr	99.94 km
20	Turn	High	26.90636, 83.98666	15 KM/Hr	100.25 km
21	Turn	High	26.91224, 83.98813	15 KM/Hr	100.97 km

## Emergency Locations

Found: 5 hospital(s), 1 clinic(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Prakash Hospital	26.6957341, 83.4807387	30 km/h	Medium	33.22 km
1	hospital	RG Hospital	26.7372178, 83.5824469	30 km/h	Medium	45.79 km
2	hospital	Gautam Budha National Hospital	26.744396, 83.9016042	30 km/h	Medium	78.54 km
3	clinic	Qazi Poly Clinic	26.7503799, 83.9126991	30 km/h	Medium	80.34 km
4	hospital	Kodai Shukla Nidaan Kendra	26.8920488, 83.9769186	30 km/h	Medium	97.91 km
5	hospital	Government Hospital	26.9021839, 83.9763688	30 km/h	Medium	99.04 km

## Crowded Spots

## Route Photos of Risky Spots



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.16 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:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 4.27 km

**Coordinates:** 26.75377, 83.20465



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**Risk Type:** Roundabout**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 8.13 km**Coordinates:** 26.74681, 83.25111

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**Risk Type:** Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 79.02 km**Coordinates:** 26.74278, 83.90519



**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 79.83 km

**Coordinates:** 26.74943, 83.90688



**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 80.62 km

**Coordinates:** 26.74995, 83.91445



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 85.77 km

**Coordinates:** 26.79568, 83.92322



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 85.86 km

**Coordinates:** 26.79612, 83.92341



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**Risk Type:** Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 86.02 km**Coordinates:** 26.79691, 83.92515

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**Risk Type:** Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 86.10 km**Coordinates:** 26.79719, 83.92535



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 97.57 km

**Coordinates:** 26.88968, 83.97520



**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 99.43 km

**Coordinates:** 26.90471, 83.97911



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 99.54 km

**Coordinates:** 26.90464, 83.97991



**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 99.77 km

**Coordinates:** 26.90682, 83.98223



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 99.94 km

**Coordinates:** 26.90647, 83.98284



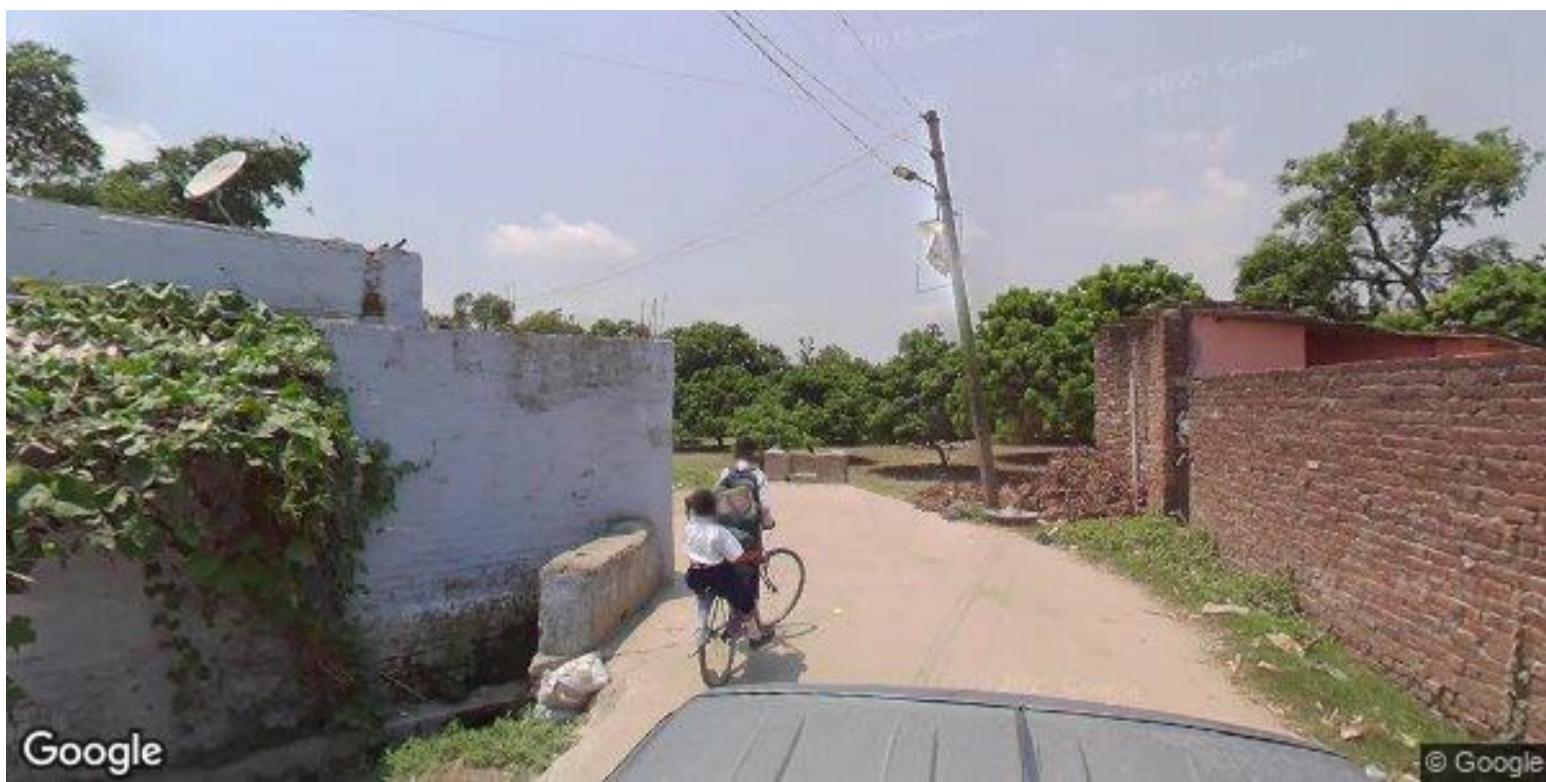
**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 100.25 km

**Coordinates:** 26.90636, 83.98666



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**Risk Type: Turn****Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 100.97 km****Coordinates: 26.91224, 83.98813**

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