



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Velmurugan Service Station

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

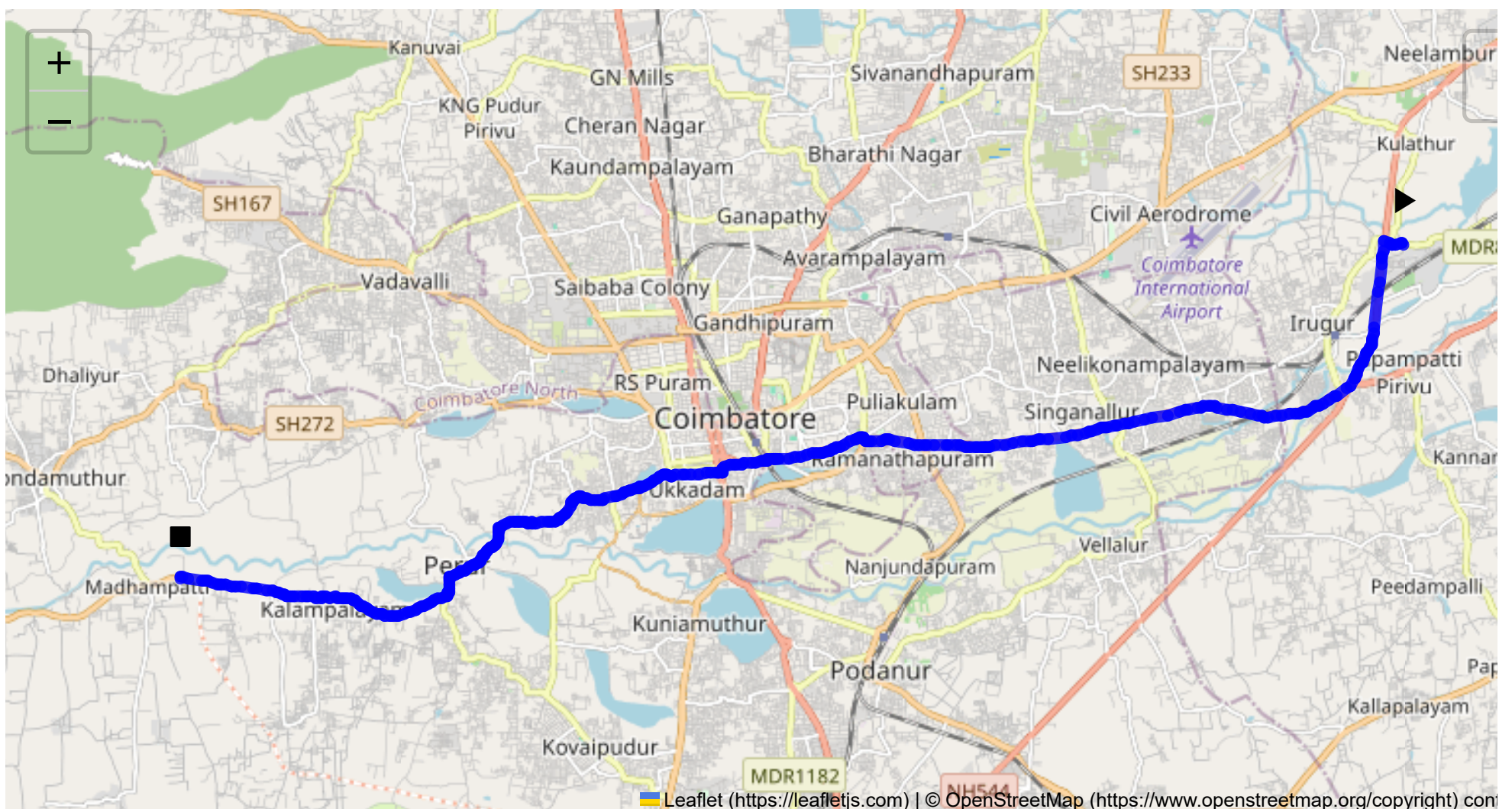
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 27.63 km
Estimated Duration: 1.0 hours
Adjusted Duration (Heavy Vehicle): 1.2 hours
Start: (11.0315, 77.0797)
End: (10.97395, 76.865585)



Welcome to the Journey Risk Management Study

Route Overview

The route from Athappagoundenpudur to Siruvani Main Road via the medical college on Trichy Road spans approximately 27.63 kilometers. This route travels through both urban and semi-urban areas, involving a mix of narrow streets, highways, and busy city roads. The journey typically takes around 59 minutes for heavy vehicles.

Weather Conditions

Coimbatore experiences a tropical climate, with distinct wet and dry seasons. Monsoon season (June to September) can bring heavy rains, leading to potential flooding and road slipperiness. High temperatures during summer can affect vehicle performance, particularly tire conditions.

Traffic Patterns

- **Peak Hours:** Morning (8:00 - 10:00 AM) and evening (5:00 - 7:00 PM) are peak hours due to commute traffic.
- **Congestion-Prone Areas:** Trichy Road, particularly near the medical college and nearby shopping areas, can experience significant congestion. Plan to avoid city centers during peak hours to minimize delays.

Road Quality and Infrastructure

- **Urban Sections:** Streets are generally well-maintained, but repairs and construction could occur periodically.
- **Highways:** Expect smooth driving conditions; however, barriers or diversions due to maintenance work can occasionally arise.

Alternative Routes for Emergencies

- **NH 544:** In case of route blockages, using NH 544 (National Highway) can offer a faster, albeit longer, detour around the congested city center.
- **Perur Rd:** Another possible alternative via Perur, useful if there are issues in the city.

Local Regulations on Hazardous Material Transport

Coimbatore follows stringent checks for hazardous materials. Heavy vehicles must adhere to load limits, travel primarily during non-peak hours, and possess required permits for hazardous cargo.

Historical Incidents

There have been few recorded incidents of heavy vehicles causing major disruptions on this route, mainly minor traffic delays. Vigilance is essential, especially during peak traffic times and adverse weather conditions.

Environmental Considerations

- **Sensitive Areas:** Medical facilities and educational institutions along the route. Ensure transportation of hazardous materials follows safety guidelines to avoid incidents.
- **Wildlife and Forested Areas:** South of the route toward Siruvani Main Road is near forested regions, necessitating careful driving to avoid wildlife.

Communication Coverage

General mobile network coverage is good along the entire route, with potential minor dead zones in more remote areas approaching Siruvani.

Emergency Response Times

- **Urban Areas:** Emergency services usually arrive within 15-20 minutes.
- **Semi-urban/Remote Areas:** Response times may extend to 30-40 minutes due to distance from central city services.

Risk Assessment Summary

Overall, while the route presents some challenges, the risks can be managed through careful planning. Weather and traffic patterns are the principal factors affecting route safety. By employing strategic route planning and adherence to regulations, drivers can mitigate most risks associated with transporting hazardous materials. Regular checks of vehicle conditions and monitoring real-time traffic updates are recommended to ensure safe transit.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	U-Turn	High	10.9947329, 76.9695579	10 KM/Hr
1	U-Turn	High	10.9948308, 76.97018039999999	10 KM/Hr
2	U-Turn	High	10.9924704, 76.9606424	10 KM/Hr
3	Blind Spot	Blind Spot	11.03211, 77.07640	10 KM/Hr
4	Turn	Medium	11.00873, 77.07114	30 KM/Hr
5	Turn	Medium	11.00737, 77.07049	30 KM/Hr
6	Turn	High	10.99473, 76.96956	15 KM/Hr
7	Blind Spot	Blind Spot	10.99481, 76.96955	10 KM/Hr
8	Turn	High	10.99483, 76.97018	15 KM/Hr
9	Turn	High	10.99477, 76.97018	15 KM/Hr
10	Turn	High	10.99353, 76.96082	15 KM/Hr
11	Turn	High	10.99247, 76.96064	15 KM/Hr
12	Turn	High	10.99240, 76.96003	15 KM/Hr
13	Turn	High	10.99247, 76.96001	15 KM/Hr
14	Turn	Medium	10.99220, 76.95053	30 KM/Hr

	Risk Type	Risk Level	Coordinates	Speed Limit
15	Turn	Medium	10.98396, 76.92463	30 KM/Hr
16	Turn	Medium	10.97533, 76.91472	30 KM/Hr
17	Turn	Medium	10.97527, 76.91468	30 KM/Hr
18	Turn	Medium	10.97448, 76.91289	30 KM/Hr
19	Turn	High	10.97444, 76.86585	15 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Saraswathi Hospital	11.0069868, 77.071368	30 km/h	Medium
2	hospital	Dr. Muthu's Ortho Centre-Coimbatore	11.0026291, 77.0406497	30 km/h	Medium
3	hospital	Singanallur Government Hospital	11.0011, 77.033733	30 km/h	Medium
4	hospital	Dr. Felix Hospital	11.0044086, 77.0348661	30 km/h	Medium
5	hospital	Ortho One	11.0018351, 77.0328061	30 km/h	Medium
6	hospital	Vela Hospital, Singanallur, Coimbatore	11.0017873, 77.0300545	30 km/h	Medium
7	clinic	Nalam Child Care	11.0006287, 77.0306011	30 km/h	Medium
8	police	E1 Singanallur Police Station	11.0003996, 77.0296891	30 km/h	Medium
9	police	Out Post Police Station - Singanallur	11.0025957, 77.0288423	30 km/h	Medium
10	hospital	AB Child Care Hospital	11.0006913, 77.028744	30 km/h	Medium
11	hospital	Coimbatore Child Trust Hospital	10.9978875, 77.0170667	30 km/h	Medium
12	hospital	VGM Hospital	10.9986666, 77.0143291	30 km/h	Medium
13	hospital	VGM Hospital, Coimbatore	10.99819, 77.014447	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
14	hospital	Ortho One Orthopaedic Speciality Center(A Unit Of Spine Arthroscopic and Joint Replacement Center Pvt Ltd)	10.9962048, 77.0082217	30 km/h	Medium
15	hospital	Narmada Hospital	10.9967758, 77.0071075	30 km/h	Medium
16	hospital	Medwin Hospital, Coimbatore	10.9972946, 77.0051728	30 km/h	Medium
17	hospital	Deepam Hospital, Ramanathapuram	10.9965453, 77.0039274	30 km/h	Medium
19	pharmacy	Prakash medicals	10.9969248, 77.0008135	30 km/h	Medium
20	hospital	Sathyan Eye Care Hospital & Coimbatore Glaucoma Foundation	10.9980405, 77.0009615	30 km/h	Medium
21	pharmacy	Revathi medicals	10.9972171, 77.0003871	30 km/h	Medium
22	clinic	Sri Durga Poly Clinic	10.9980729, 77.0001926	30 km/h	Medium
23	clinic	Dr. Karthikeyan Clinic	10.9969119, 76.9995376	30 km/h	Medium
24	hospital	Leo Ortho care Hospital	10.9969428, 76.9993022	30 km/h	Medium
25	hospital	N.M. Hospital	10.9981558, 76.9994865	30 km/h	Medium
26	police	Ramanathapuram police station	10.9975827, 76.997871	30 km/h	Medium
28	hospital	Bala Hospital	10.9969296, 76.995705	30 km/h	Medium
29	pharmacy	Dheepmeena pharmacy	10.9969617, 76.9956179	30 km/h	Medium
30	hospital	Sri Bala Medical Centre Hospital	10.9967187, 76.9954568	30 km/h	Medium
31	hospital	Ramvel Hospital	10.9958212, 76.9963939	30 km/h	Medium
32	clinic	Lakshmi ENT Clinic	10.9973118, 76.9963622	30 km/h	Medium
33	hospital	Gem Hospital, Coimbatore	10.9996629, 76.9953933	30 km/h	Medium
35	hospital	Arya Vaidya Pharmacy	10.995609, 76.9917076	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
36	hospital	R. A. Hospital	10.998556, 76.9918562	30 km/h	Medium
37	hospital	The Arya Vaidya Chikitsalayam and Research Institue	10.9958401, 76.9915813	30 km/h	Medium
38	hospital	Clinic - Dr.Rajashree	10.9978977, 76.9893923	30 km/h	Medium
40	clinic	Karthick Polyclinic	10.9957861, 76.9876988	30 km/h	Medium
43	hospital	Masonic Medical Centre For Children	10.9997961, 76.9799441	30 km/h	Medium
44	hospital	Richmond Hospital	10.9946605, 76.9793813	30 km/h	Medium
45	hospital	Thayarammal poly clinic	10.9935069, 76.9756194	30 km/h	Medium
46	clinic	Sri Rani Poly Clinic	10.9949528, 76.9755752	30 km/h	Medium
47	hospital	Santhiya Hospital	10.9950877, 76.9746602	30 km/h	Medium
49	hospital	Coimbatore Medical College Hospital	10.9964129, 76.9702365	30 km/h	Medium
50	hospital	Moses Eye Hospital	10.9943793, 76.9664663	30 km/h	Medium
55	hospital	Immaculate Conception Convent Hospital	10.9943683, 76.9642074	30 km/h	Medium
56	hospital	I.C.C Hospital For Women & Children, Coimbatore	10.9958251, 76.9634777	30 km/h	Medium
59	pharmacy	Ganesh Medicals	10.9922978, 76.9598791	30 km/h	Medium
61	police	B1 POLICE STATION	10.9924847, 76.9591307	30 km/h	Medium
63	pharmacy	Chitra pharmacy	10.9905526, 76.9607735	30 km/h	Medium
64	clinic	Shajitha Anwaruddin Clinic	10.9905191, 76.9592219	30 km/h	Medium
66	hospital	Sri Guru Hospital	10.9920855, 76.9574858	30 km/h	Medium
67	hospital	Nataraj Medical Care Center Private Limited	10.994101, 76.9569379	30 km/h	Medium
68	hospital	Rajagambiram Dental Hospital	10.9923475, 76.9559691	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
69	hospital	Vasavi Hospital	10.9927872, 76.9550228	30 km/h	Medium
70	clinic	Karthic Nursing Home	10.99135, 76.95416	30 km/h	Medium
71	clinic	Karthic Nursing Home Pvt. Ltd.	10.9909191, 76.9529521	30 km/h	Medium
72	clinic	Annai Nursing Home	10.99386, 76.951744	30 km/h	Medium
73	clinic	G.K.P Clinics	10.9922284, 76.9516612	30 km/h	Medium
74	hospital	Subu Hospital	10.9920096, 76.9520898	30 km/h	Medium
75	hospital	Vennila Hospital	10.9901191, 76.9421502	30 km/h	Medium
76	hospital	Revathi Hospital, Selvapuram	10.9882483, 76.9400963	30 km/h	Medium
77	hospital	Rani Nursing Home, Selvapuram, Coimbatore	10.9871756, 76.9392029	30 km/h	Medium
78	hospital	Snekaram Multi Specality Hospital	10.987562, 76.9358088	30 km/h	Medium
79	hospital	Snekaram Hospital	10.9873439, 76.9357994	30 km/h	Medium
80	hospital	Seetharam Hospital	10.9868836, 76.9335496	30 km/h	Medium
81	hospital	Dr. Arjun Hospital	10.9843661, 76.930203	30 km/h	Medium
82	hospital	Telugupalayam Hospital	10.9842757, 76.9297655	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
1	school	Kadri Mills Higher Secondary School	11.0058181, 77.0664118	30 km/h	Medium
18	school	Alvernia Higher Secondary Matriculation School	10.9981807, 77.0027548	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
27	school	Trinity Boys High school	10.9976249, 76.9971414	30 km/h	Medium
34	school	Corporation Boys High School	10.9964338, 76.9941036	30 km/h	Medium
39	school	Carmel Garden Matriculation Higher Secondary School	10.9993669, 76.9876201	30 km/h	Medium
41	school	Bishop Ambrose College	10.9955885, 76.9844758	30 km/h	Medium
42	college	Niramla College for Women	11.0000423, 76.9837036	30 km/h	Medium
48	college	Government Arts College Campus	10.9985728, 76.9726412	30 km/h	Medium
51	school	CSI(Church of South India) Boys Higher Secondary School	10.9968977, 76.9648158	30 km/h	Medium
52	school	St.Michaels School	10.9945881, 76.9658375	30 km/h	Medium
53	school	Presentation convent	10.9945514, 76.9648609	30 km/h	Medium
54	school	St.Fathima's School	10.9944145, 76.9639944	30 km/h	Medium
57	college	Govt.Womens Arts College	10.9932946, 76.9630147	30 km/h	Medium
58	school	corporation Girls High school	10.9955422, 76.9601082	30 km/h	Medium
62	marketplace	Uppukinar Lane	10.9940372, 76.9589209	30 km/h	Medium
65	school	VASAVI VIDYALAYA	10.9925558, 76.9578433	30 km/h	Medium
83	college	SMS College of Arts & Science	10.9819257, 76.9225488	30 km/h	Medium

Route Photos of Risky Spots



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Coordinates: 10.9947329, 76.9695579



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Coordinates: 10.9948308, 76.97018039999999



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Coordinates: 10.9924704, 76.9606424



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.03211, 77.07640



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.00873, 77.07114



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.00737, 77.07049



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.99473, 76.96956



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 10.99481, 76.96955



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 10.99483, 76.97018



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 10.99477, 76.97018



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.99353, 76.96082



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.99247, 76.96064



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.99240, 76.96003



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.99247, 76.96001



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.99220, 76.95053



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.98396, 76.92463



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.97533, 76.91472



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.97527, 76.91468



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.97448, 76.91289



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 10.97444, 76.86585

