



JOURNEY RISK MANAGEMENT (JRM) STUDY

Salem Terminal To SHREE HARI TRADERS

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

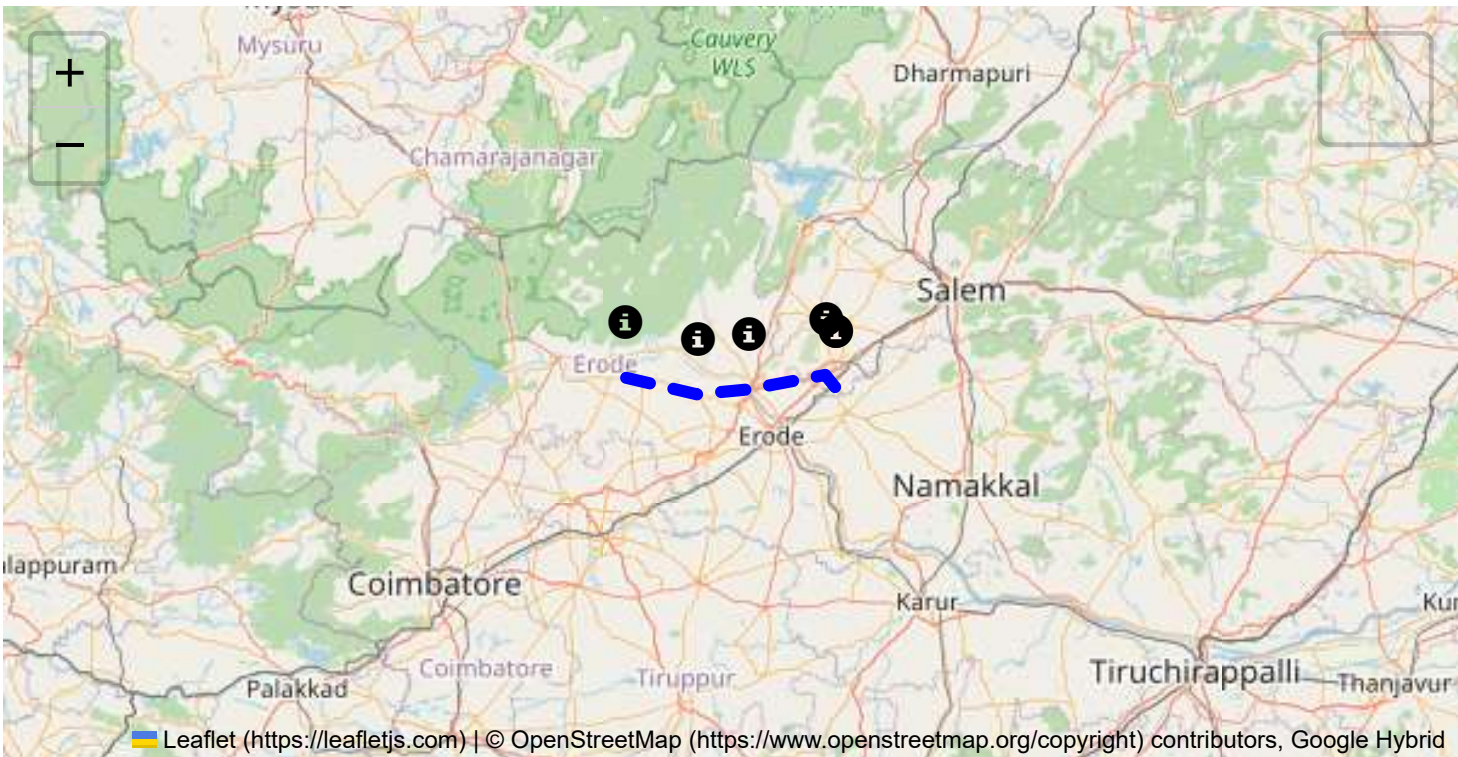
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

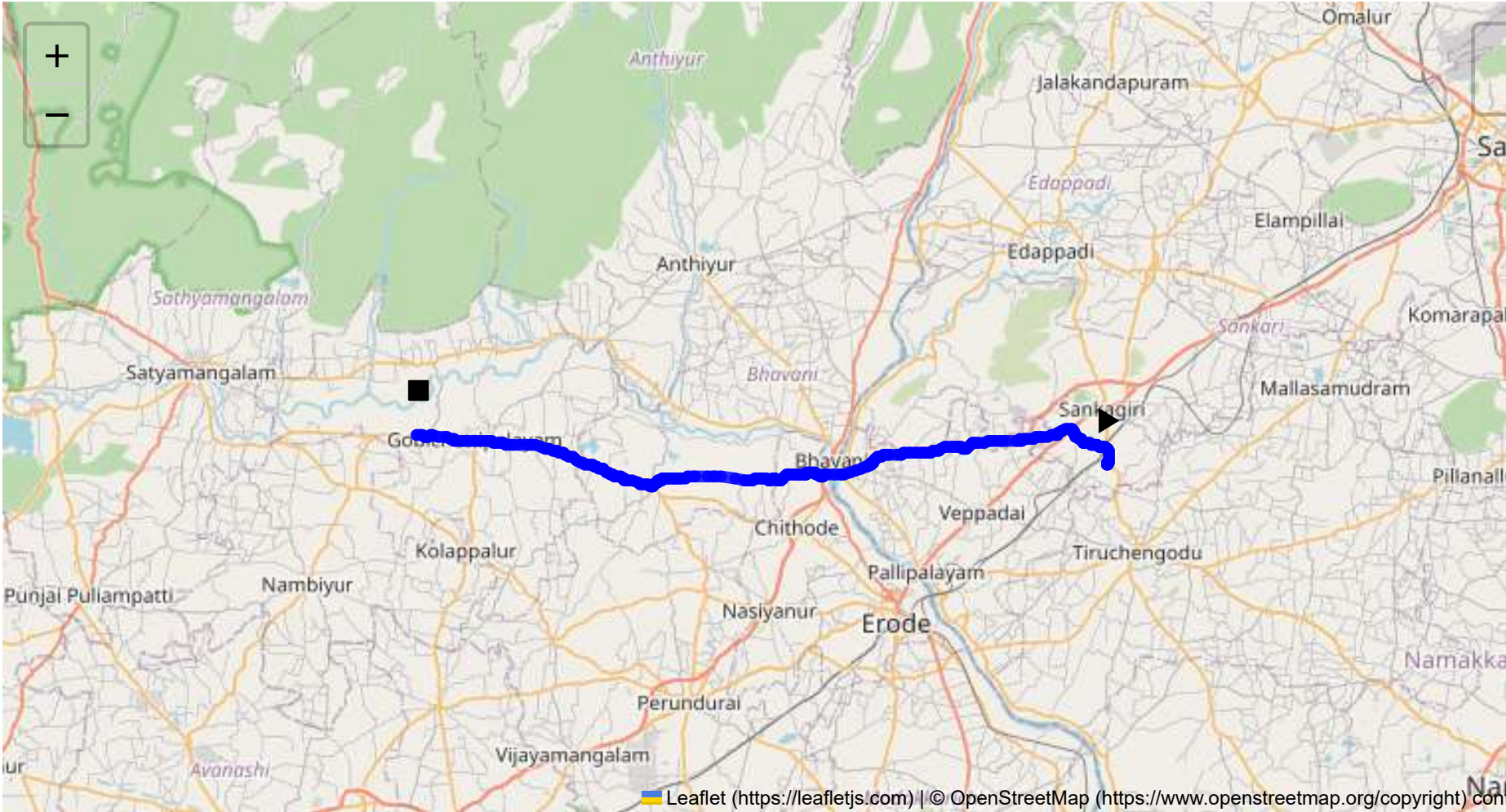
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 56.87 km
Estimated Duration: 1.2 hours
Adjusted Duration (Heavy Vehicle): 1.5 hours
Start: (11.4381, 77.8734)
End: (11.458153, 77.393986)



Welcome to the Journey Risk Management Study

Route Overview

The route from Sangagiri to Gobichettipalayam via Kavandapadi covers approximately 56.87 kilometers and typically takes around 1.23 hours, specifically for heavy vehicles transporting hazardous materials. The route traverses key towns and connects through State Highway 79A and Thoppur-Mettur Dam-Bhavani-Erode Road, which are significant for regional connectivity.

Weather Conditions

Tamil Nadu generally experiences a tropical climate. The weather along this route can vary, with monsoon seasons (usually June to September) bringing heavy rains, leading to wet and slippery roads, potential flooding, and reduced visibility. Dry months (January to March) pose risks of dust and heat, necessitating caution for vehicle maintenance and driver hydration.

Traffic Patterns

Traffic congestion is typically moderate outside urban centers. Peak hours in Sangagiri and Erode occur between 8-10 AM and 5-7 PM. The SH 79A near Erode and the Bhavani-Erode stretch can become congested due to commuter traffic and regional markets. Drivers should plan travel times to avoid these peak periods.

Road Quality and Infrastructure

The road quality along this route is generally well-maintained, particularly on SH 79A. However, certain rural stretches may have potholes or narrower lanes, requiring vigilance. Adequate signage is available, but care should be taken at intersections and in urban areas where pedestrian crossings are common.

Alternative Routes

In emergencies, one alternative could be via the NH 47 towards Salem and then connecting to provincial roads leading to Gobichettipalayam. This could bypass Erode but may require longer travel time and involve less straightforward navigation through rural zones.

Local Regulations

Transport of hazardous materials in Tamil Nadu requires adherence to strict guidelines, including vehicle markings, documentation, and route permits. Awareness of restricted times for entry into urban areas, especially during peak hours, is essential.

Historical Incidents

There have been instances of accidents involving heavy vehicles on Tamil Nadu highways due to overloading and speeding. However, there is no specific history of hazardous material incidents along this specific route.

Environmental Considerations

Sensitive zones are primarily near populated or agricultural areas. Care must be taken to prevent spills or contaminations, particularly around water bodies and farm lands along the Thoppur-Mettur Dam-Bhavani-Erode Road.

Communication Coverage

Coverage is generally good along SH 79A and near towns like Erode. However, rural stretches might have spotty network reception, posing a risk for communication dead zones. Drivers should ensure their communication devices are fully charged and consider alternatives such as satellite phones.

Emergency Response Times

Emergency services in Tamil Nadu vary; Erode offers quicker response times (approximately 20-30 minutes) due to robust infrastructure, whereas rural areas might experience delays of up to an hour. Drivers should know local emergency contacts and nearest medical facilities.

Overall Summary

This route poses moderate risk primarily due to weather, traffic congestion, and occasional rural road conditions. Adequate preparation, route knowledge, and adherence to regulations mitigate most risks, ensuring safe transport of hazardous materials. Continuous monitoring of weather forecasts and traffic updates, paired with effective communication tools, can further enhance safety.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Turn	Medium	11.43822, 77.87348	30 KM/Hr
1	Turn	High	11.43961, 77.87341	15 KM/Hr
2	Turn	High	11.44029, 77.87544	15 KM/Hr
3	Turn	Medium	11.44893, 77.87413	30 KM/Hr
4	Turn	High	11.45350, 77.85700	15 KM/Hr
5	Turn	Medium	11.45845, 77.85141	30 KM/Hr
6	Turn	Medium	11.46046, 77.85037	30 KM/Hr
7	Turn	Medium	11.46303, 77.84945	30 KM/Hr
8	Turn	High	11.43001, 77.67575	15 KM/Hr
9	Turn	Medium	11.43000, 77.67564	30 KM/Hr
10	Turn	Medium	11.43009, 77.67540	30 KM/Hr
11	Turn	High	11.43026, 77.67525	15 KM/Hr
12	Blind Spot	Blind Spot	11.43073, 77.67536	10 KM/Hr
13	Turn	High	11.43278, 77.67024	15 KM/Hr
14	Turn	Medium	11.43271, 77.67014	30 KM/Hr
15	Turn	Medium	11.43346, 77.66705	30 KM/Hr
16	Turn	Medium	11.43234, 77.66572	30 KM/Hr
17	Turn	Medium	11.43223, 77.65335	30 KM/Hr
18	Turn	Medium	11.42707, 77.56407	30 KM/Hr
19	Turn	High	11.42329, 77.55798	15 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
3	hospital	Government Hospital	11.4525596, 77.7749426	30 km/h	Medium
4	hospital	Dhanvantri Multi Speciality Hospital	11.451362, 77.766602	30 km/h	Medium
5	hospital	Dhanvanthri Hospital	11.4496712, 77.7593772	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
6	hospital	J.K.K. Trust Hospital	11.4445841, 77.7307962	30 km/h	Medium
7	hospital	Shri Sathyanarayana Hospital	11.4291297, 77.6913408	30 km/h	Medium
9	hospital	Thanish Siddha Hospital	11.430003, 77.674964	30 km/h	Medium
10	hospital	Sri Kaalangi Siddhar Mooligai Vaithiya Nilayam	11.432369, 77.674894	30 km/h	Medium
11	clinic	G.K Clinic	11.4297244, 77.6749715	30 km/h	Medium
12	clinic	Harshitha Clinic	11.4313207, 77.674718	30 km/h	Medium
13	hospital	PST Mahaa Hospital	11.4312903, 77.6585751	30 km/h	Medium
14	hospital	Dharun Hospital	11.4223638, 77.5597735	30 km/h	Medium
15	hospital	Dr. Ramaswamy Hospital	11.4249065, 77.5535658	30 km/h	Medium
16	hospital	Dakshin Trauma Centre	11.454593, 77.4461819	30 km/h	Medium
17	hospital	Dakshin Hospital	11.4546301, 77.445905	30 km/h	Medium
18	hospital	Sri Varahi Herbal Research Centre and Hospital	11.4539333, 77.4427438	30 km/h	Medium
19	clinic	Germen Homeopathy Clinic	11.4536305, 77.4394692	30 km/h	Medium
20	hospital	KKS Hospital	11.4551792, 77.4392927	30 km/h	Medium
21	hospital	JP Hospital	11.454765, 77.438257	30 km/h	Medium
23	hospital	Siranjeeve Hospitals	11.453132, 77.4344382	30 km/h	Medium
24	clinic	Anandhan Clinic	11.4548037, 77.4349074	30 km/h	Medium
25	hospital	Ramachandran Hospital	11.452242, 77.434641	30 km/h	Medium
26	hospital	Kumaran Hospital	11.4533971, 77.4349621	30 km/h	Medium
27	hospital	Dr. Rathinasamy Hospital	11.457562, 77.4327752	30 km/h	Medium
28	hospital	Gobi Neuro Mind Care	11.4548344, 77.434649	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
29	hospital	Hariharan Hospital	11.4523578, 77.4299287	30 km/h	Medium
30	hospital	KKRS Hospital	11.45417, 77.430584	30 km/h	Medium
31	hospital	Sathya Hospital	11.4561856, 77.4298694	30 km/h	Medium
32	hospital	S K Hospital	11.4540106, 77.430108	30 km/h	Medium
33	hospital	Sivakami Hospital	11.4531846, 77.4299288	30 km/h	Medium
34	clinic	Sri Sudha Physiotherapy Clinic	11.4559915, 77.4300217	30 km/h	Medium
35	hospital	Arun Hospital	11.4538121, 77.4305743	30 km/h	Medium
36	clinic	Sairam Clinic	11.4560122, 77.4306716	30 km/h	Medium
37	clinic	Anand Nursing Home	11.4553169, 77.4296248	30 km/h	Medium
38	hospital	Sivasakthi Hospital	11.4544711, 77.4297229	30 km/h	Medium
39	clinic	NMS Cardio Care Clinic	11.4550147, 77.430786	30 km/h	Medium
40	hospital	SS Children's Hospital	11.4555386, 77.4296357	30 km/h	Medium
41	hospital	Poorani Ravichandran Hospital	11.4550863, 77.4307802	30 km/h	Medium
42	hospital	Kavitha Children's Hospital	11.4565402, 77.4310815	30 km/h	Medium
43	hospital	SP Dhanapal Hospital	11.4559935, 77.4304406	30 km/h	Medium
44	clinic	Gobi Siddha Health Centre	11.455616, 77.4307062	30 km/h	Medium
45	clinic	Sri Dhanvantari Siddha Clinic	11.4561216, 77.4295797	30 km/h	Medium
46	hospital	M.S Children's Hospital	11.4556012, 77.4301006	30 km/h	Medium
47	hospital	Gobi Diabetic Hospital	11.455394, 77.4301181	30 km/h	Medium
48	clinic	Dr. Ramesh Babu Clinic	11.4560871, 77.4296353	30 km/h	Medium
49	hospital	Dr. Moorthy Hospital	11.4546045, 77.4308533	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
50	hospital	SP Hospital	11.456607, 77.430302	30 km/h	Medium
51	pharmacy	Abirami Medicals	11.4550894, 77.4309286	30 km/h	Medium
52	hospital	Vasanth Hospital	11.4526864, 77.4292173	30 km/h	Medium
53	clinic	Jeeva Nursing Home	11.4533031, 77.4294145	30 km/h	Medium
54	hospital	Best Hospital	11.4543558, 77.4263617	30 km/h	Medium
55	clinic	Kanmani Child Care Clinic	11.4545273, 77.428668	30 km/h	Medium
56	hospital	Rajasekaran Hospital	11.454463, 77.4262	30 km/h	Medium
57	hospital	Samuel Hospital	11.4542555, 77.4271194	30 km/h	Medium
58	hospital	Neha Hospital	11.4560138, 77.4270219	30 km/h	Medium
59	hospital	Sankareswari Eye Hospital	11.4572997, 77.428765	30 km/h	Medium
62	hospital	Government Hospital	11.4565126, 77.4288768	30 km/h	Medium
63	hospital	U M Hospital	11.4544151, 77.4240386	30 km/h	Medium
64	hospital	Arun Hospital	11.4548852, 77.4250314	30 km/h	Medium
65	hospital	Sri Chakra Hospital	11.4544464, 77.4228363	30 km/h	Medium
66	hospital	Dr. Gopal Hospital	11.455258, 77.422901	30 km/h	Medium
67	clinic	VG Ortho Centre	11.4550504, 77.4225102	30 km/h	Medium
68	clinic	Palaniappa Clinic	11.4555925, 77.4202828	30 km/h	Medium
69	hospital	Abi SK Hospital	11.457163, 77.412487	30 km/h	Medium
70	clinic	Nalam Vazh S.K Siddha and Varma Clinic	11.457576, 77.412164	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
0	school	KRP Matric. Hr. Sec School	11.4546193, 77.8142445	30 km/h	Medium
1	college	Vivekanandha Engineering College	11.4589312, 77.7899284	30 km/h	Medium
2	marketplace	Monday market	11.452863, 77.775989	30 km/h	Medium
8	school	SSM Matriculation Higher Secondary School	11.4321653, 77.6880046	30 km/h	Medium
22	school	Shree Vidyalaya Matric Higher Secondary School	11.4536114, 77.4383163	30 km/h	Medium
60	school	Diamond Jubilee Higher Secondary School	11.4529541, 77.4280306	30 km/h	Medium
61	school	CKK Palaniammal School	11.4569211, 77.4276828	30 km/h	Medium

Route Photos of Risky Spots



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.44029, 77.87544



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.44893, 77.87413



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.45350, 77.85700



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.45845, 77.85141



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.46046, 77.85037



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.46303, 77.84945



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.43001, 77.67575



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.43000, 77.67564



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.43009, 77.67540



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.43026, 77.67525



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.43073, 77.67536



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.43278, 77.67024



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.43271, 77.67014



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.43346, 77.66705



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.43234, 77.66572



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.43223, 77.65335



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.42707, 77.56407



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.42329, 77.55798
