



# IndianOil

## JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Vedhanayagam Oil  
Company

### 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.

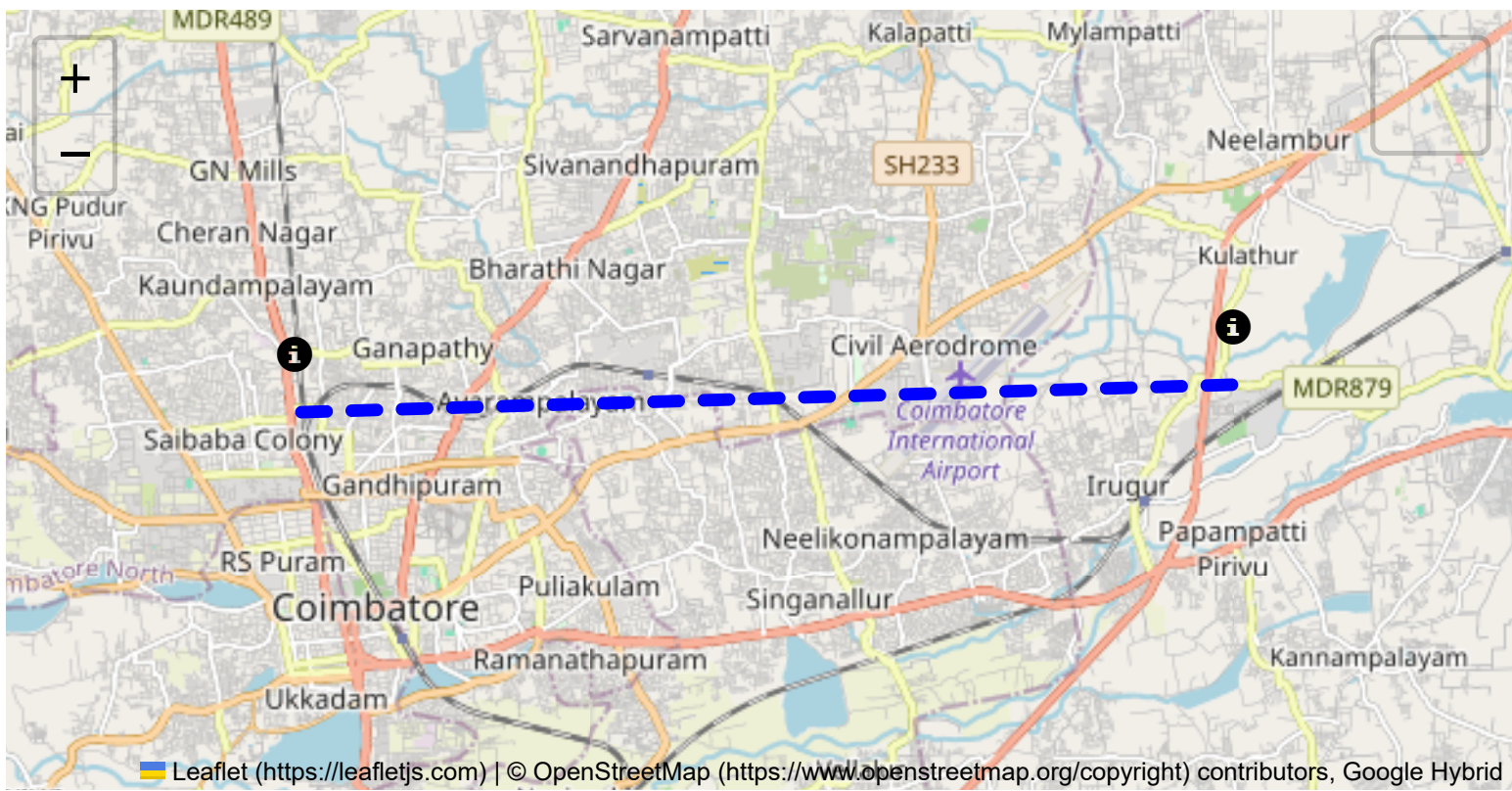
## **Journey Risk Mitigation**

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.

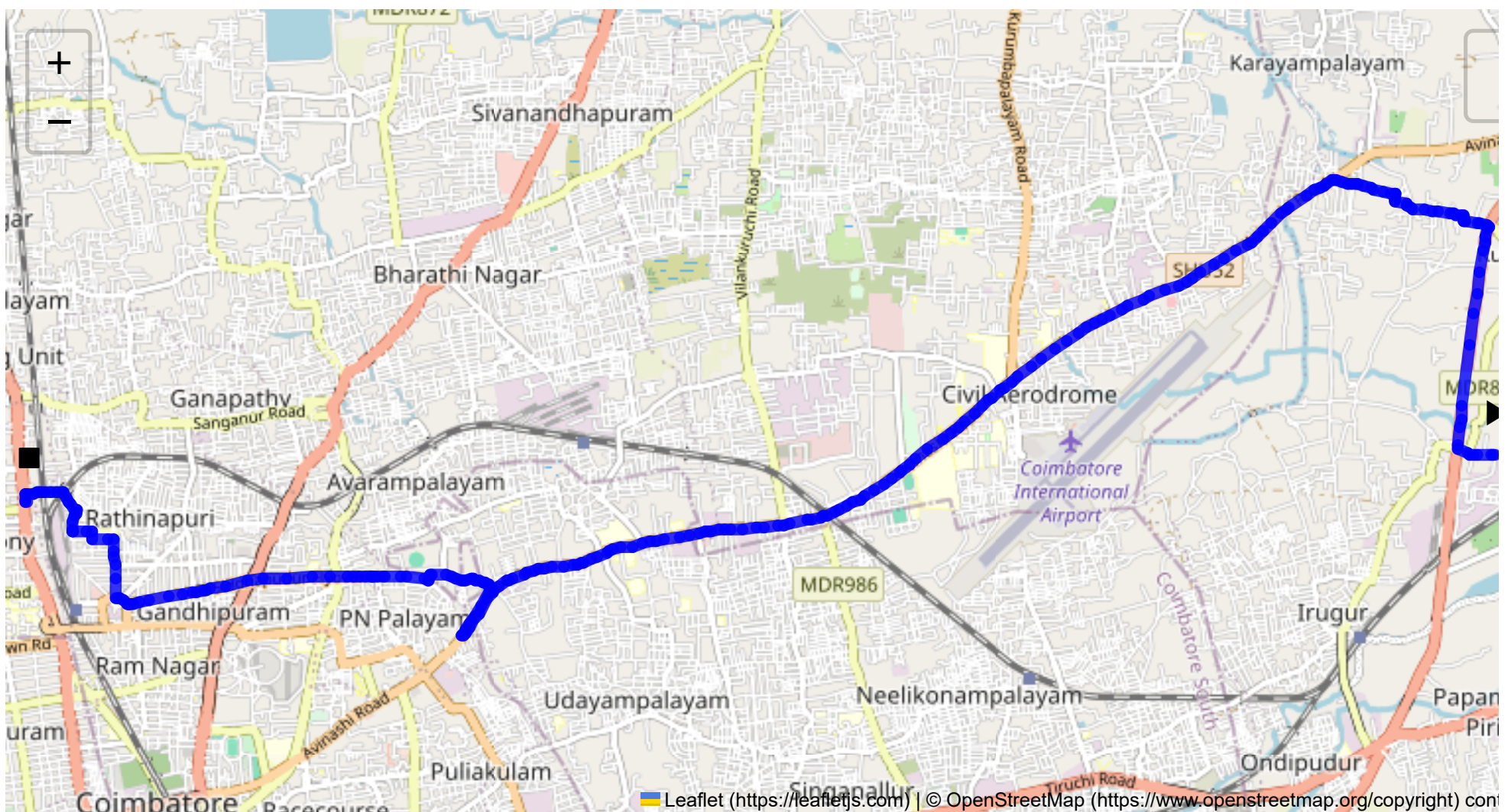
## **Compliance with Government Directives**

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: 19.98 km**  
**Estimated Duration: 0.7 hours**  
**Adjusted Duration (Heavy Vehicle): 0.9 hours**  
**Start: (11.0315, 77.0797)**  
**End: (11.027696723159664, 76.95155681103454)**



## Welcome to the Journey Risk Management Study

### 1. Overview of the Route Map

The route from Athappagoundenpudur to Kuppakonam Pudur in Coimbatore is approximately 20 kilometers long. It traverses through the urban and peripheral areas of Coimbatore, featuring a mix of village roads and major city roads.



## 2. Typical Weather Conditions and Potential Weather-Related Hazards

Coimbatore experiences a tropical savanna climate. The weather is mostly moderate throughout the year, but the region can experience heavy rainfall from June to October due to the southwest monsoon. During the monsoon, visibility can be significantly reduced, and roads may become slippery or flooded, posing risks for heavy vehicles.

## 3. Analysis of Traffic Patterns

Traffic congestion is prevalent, particularly during morning (8:00 AM - 10:00 AM) and evening (5:00 PM - 7:00 PM) peak hours. The primary congestion-prone areas are near city centers and major intersections like the ones along Mettupalayam Road.

## 4. Assessment of Road Quality and Infrastructure

The initial sections of the road from Athappagoundenpudur may have narrower lanes and less maintenance. As you approach Coimbatore, the roads are better maintained with proper markings and signage. However, expect occasional potholes and patches in less urbanized areas.

## 5. Suggestions for Alternative Routes for Emergencies

In case of an emergency, alternative routes include:

- Taking the Avinashi Road as an alternative entry into Coimbatore city, which is broader and may offer a smoother journey at times of heavy congestion.

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

Transporting hazardous materials requires adherence to local and national guidelines, including time restrictions generally applied within city limits. Some routes may impose specific entry bans for heavy vehicles during peak hours.

## 7. Overview of Historical Incidents

Coimbatore has witnessed incidents involving heavy vehicles, mostly due to brake failures on downhill roads and congestion-related accidents. There are reports of hazardous material spills that have led to stricter enforcement of transport regulations in the city.

## 8. Environmental Considerations and Sensitive Areas

The route does not pass through any major eco-sensitive zones; however, it is close to residential and commercial areas where spillage of hazardous materials could pose severe health risks.

## 9. Analysis of Communication Coverage

The route generally has good mobile network coverage with notable providers offering robust connectivity. Potential dead zones could exist in the transitional areas between rural and urban sections.

## 10. Estimated Emergency Response Times

Emergency response times vary:

- Rural segments might experience a delay, averaging around 20-30 minutes.
- Urban segments benefit from quick access to hospitals and fire stations, averaging 10-15 minutes.

## 11. An Overall Summary of Risk Assessment

Overall, the route has moderate risk, primarily due to variable road conditions, weather impacts during the monsoon, and traffic congestion. Fast and efficient communication is mostly available. It is crucial for truck drivers to be aware of peak traffic times, maintain vigilance in less maintained sections, and adhere strictly to local transport regulations regarding heavy vehicles and hazardous materials. Additionally, always ensure that emergency contacts and response strategies are in place before commencing the journey.

### Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	U-Turn	High	11.0161282, 76.9896128	10 KM/Hr
1	Turn	High	11.03211, 77.07640	15 KM/Hr
2	Turn	High	11.05129, 77.07919	15 KM/Hr
3	Turn	Medium	11.05181, 77.07696	30 KM/Hr
4	Turn	High	11.05222, 77.07690	15 KM/Hr
5	Turn	Medium	11.05343, 77.07106	30 KM/Hr
6	Turn	Medium	11.05351, 77.07099	30 KM/Hr
7	Turn	Medium	11.05411, 77.07097	30 KM/Hr
8	Turn	High	11.05529, 77.06566	15 KM/Hr
9	Turn	High	11.01613, 76.98961	15 KM/Hr
10	Blind Spot	Blind Spot	11.01618, 76.98951	10 KM/Hr
11	Turn	High	11.02014, 76.99212	15 KM/Hr
12	Turn	Medium	11.02051, 76.99177	30 KM/Hr
13	Turn	Medium	11.02137, 76.98673	30 KM/Hr
14	Turn	High	11.02097, 76.98650	15 KM/Hr
15	Turn	Medium	11.02095, 76.98644	30 KM/Hr

	Risk Type	Risk Level	Coordinates	Speed Limit
16	Turn	Medium	11.01886, 76.96047	30 KM/Hr
17	Turn	High	11.01891, 76.96036	15 KM/Hr
18	Turn	High	11.01889, 76.96035	15 KM/Hr
19	Turn	Medium	11.01889, 76.96029	30 KM/Hr
20	Turn	High	11.01893, 76.96023	15 KM/Hr
21	Turn	High	11.01895, 76.96023	15 KM/Hr
22	Turn	High	11.01944, 76.95923	15 KM/Hr
23	Turn	High	11.02444, 76.95905	15 KM/Hr
24	Turn	High	11.02446, 76.95713	15 KM/Hr
25	Turn	High	11.02504, 76.95710	15 KM/Hr
26	Turn	Medium	11.02503, 76.95553	30 KM/Hr
27	Turn	Medium	11.02514, 76.95541	30 KM/Hr
28	Turn	High	11.02696, 76.95577	15 KM/Hr
29	Turn	Medium	11.02700, 76.95569	30 KM/Hr
30	Turn	High	11.02838, 76.95130	15 KM/Hr
31	Blind Spot	Blind Spot	11.02760, 76.95134	10 KM/Hr

## Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	KGM, Chinnampalayam	11.0570076, 77.067239	30 km/h	Medium
1	hospital	Chinnampalayam Venkateshwara Hospital	11.0545152, 77.0652106	30 km/h	Medium
3	hospital	R V Hospital, Coimbatore	11.0546916, 77.0639178	30 km/h	Medium
5	hospital	Kovai Medical Centre,Coimbatore	11.0426077, 77.0406074	30 km/h	Medium
6	hospital	Lotus Eye Care Hospital Ltd, Coimbatore	11.0406116, 77.0401856	30 km/h	Medium
9	hospital	Park Hospital, Coimbatore	11.0419411, 77.0379131	30 km/h	Medium
13	hospital	St Lukes Hospital, Coimbatore	11.0335424, 77.0376261	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
15	hospital	Coimbatore Medical College Hospital	11.0289285, 77.0237553	30 km/h	Medium
17	hospital	Rajah Hospital, Coimbatore	11.0270299, 77.0187333	30 km/h	Medium
18	hospital	Sumith Hospital	11.0261493, 77.0176752	30 km/h	Medium
19	police	Peelamedu E2 Police Station	11.0253639, 77.0101634	30 km/h	Medium
25	hospital	Hindusthan Hospital, Coimbatore	11.019682, 76.9947731	30 km/h	Medium
26	hospital	Sri Ramakrishna Dental Hospital	11.0212988, 76.9883526	30 km/h	Medium
32	hospital	Sri Ramakrishna Hospital, Coimbatore	11.0231203, 76.9776419	30 km/h	Medium
33	hospital	Sri Ramakrishna Hospital	11.0236015, 76.976512	30 km/h	Medium
35	clinic	Shark Clinic	11.0188961, 76.9744842	30 km/h	Medium
36	hospital	Ramakrishna Hospital	11.0207084, 76.972413	30 km/h	Medium
37	hospital	Ellen Multispeciality Hospital	11.0213634, 76.9708723	30 km/h	Medium
38	hospital	GP Hospital	11.0201233, 76.9710726	30 km/h	Medium
39	pharmacy	Chinnaiah Medicals	11.0207714, 76.9688485	30 km/h	Medium
40	hospital	Becker Manual Hospital	11.020659, 76.968611	30 km/h	Medium
41	pharmacy	Pasumai Pharmacy	11.0203554, 76.966338	30 km/h	Medium
42	clinic	C.S.R. Nursing Home, Coimbatore	11.0209812, 76.9661131	30 km/h	Medium
43	hospital	Jeevan Clinic and Hospital, Coimbatore	11.019947, 76.9670891	30 km/h	Medium
44	hospital	Nithya Hospital	11.0210366, 76.9665217	30 km/h	Medium
48	hospital	Preethi Medical Centre	11.0208486, 76.9649585	30 km/h	Medium
49	clinic	Aiswarya Clinic	11.0228593, 76.9656034	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
50	hospital	City Hospital	11.0193391, 76.9635166	30 km/h	Medium
52	hospital	The Balakrishnan Hospital	11.0190567, 76.9625585	30 km/h	Medium
53	hospital	Bethel Hospital	11.0190021, 76.962084	30 km/h	Medium
54	hospital	Bethel Hospital Pvt. Ltd. - Coimbatore	11.0187223, 76.9612328	30 km/h	Medium
55	hospital	Lalitha Hospital	11.0174139, 76.9617565	30 km/h	Medium
56	hospital	Roselet Medical ObgandSurgical Centre	11.0177943, 76.9612482	30 km/h	Medium
57	pharmacy	Apollo	11.0187962, 76.9603231	30 km/h	Medium
58	hospital	Kongunad Hospital, Coimbatore	11.018058, 76.9604883	30 km/h	Medium
59	hospital	Sheela Clinic	11.01843, 76.9604642	30 km/h	Medium
60	pharmacy	arya vaidhya salai	11.0193537, 76.9603411	30 km/h	Medium
61	hospital	Sengottaiah Hospital, Coimbatore	11.0225148, 76.9601579	30 km/h	Medium
62	hospital	Eye Trust Hospital	11.0242987, 76.9582327	30 km/h	Medium
63	hospital	Sathya Medical Centre & Hospital	11.0238937, 76.9582121	30 km/h	Medium
64	hospital	Ganga Hospital	11.026129, 76.9524873	30 km/h	Medium
67	police	C-3 Saibaba Colony Police Station	11.0266348, 76.9515967	30 km/h	Medium
71	hospital	Dr.Sengaliappan Nursing Home, Coimbatore	11.0272375, 76.9501348	30 km/h	Medium
72	hospital	K T V R Group Hospital	11.026167, 76.9499384	30 km/h	Medium
74	clinic	Akshaya Clinic	11.0271033, 76.9496102	30 km/h	Medium
75	hospital	Onecare Ortho Hospital	11.026568, 76.948798	30 km/h	Medium
76	clinic	Shree Kanna Clinic	11.026359, 76.948803	30 km/h	Medium



	type	name	coordinates	speed_limit	risk_level
77	hospital	Aswin Hospital	11.0255271, 76.9515108	30 km/h	Medium

## Crowded Spots

	type	name	coordinates	speed_limit	risk_level
2	school	Government school	11.0554435, 77.0653927	30 km/h	Medium
4	school	Sri Vivekananda Matriculation Higher Secondary School	11.054695, 77.0572126	30 km/h	Medium
7	school	Park Global School	11.0424178, 77.038601	30 km/h	Medium
8	traffic_signals	SITRA Junction	11.0380037, 77.0374143	30 km/h	Medium
10	college	South India Textile Research Association - SITRA	11.0396478, 77.0355493	30 km/h	Medium
11	college	PSG College of Arts and Science	11.0328471, 77.034909	30 km/h	Medium
12	school	RAK's Pallikoodam	11.0381253, 77.0329064	30 km/h	Medium
14	college	Government Polytechnic	11.0300874, 77.0308517	30 km/h	Medium
16	traffic_signals	Hope College Signal	11.0263851, 77.0208783	30 km/h	Medium
20	school	Sardar Vallabhbhai Patel International School of Textiles & Management	11.0253598, 77.0082319	30 km/h	Medium
21	college	PSG College of Technology	11.024807, 77.0029194	30 km/h	Medium
22	school	PSG Sarva Jana Higher Secondary School	11.0227214, 77.0040432	30 km/h	Medium
23	college	PSG Institute of Management	11.0228112, 77.0030943	30 km/h	Medium
24	college	PSG Grounds	11.0203887, 77.0047109	30 km/h	Medium
27	college	Sri Ramakrishna Dental College	11.0213038, 76.9883559	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
28	college	SNR College of Arts and Science	11.0219743, 76.9877109	30 km/h	Medium
29	college	Sri Ramakrishna College of Arts & Science	11.022171, 76.98703	30 km/h	Medium
30	school	Sri Ramakrishna Matric Higher Secondary School	11.023175, 76.9847233	30 km/h	Medium
31	college	Sri Ramakrishna Arts and Science College for Womens	11.0223964, 76.9780502	30 km/h	Medium
34	school	P.R.Sidha Naidu Memorial Matriculation School	11.0221084, 76.9765552	30 km/h	Medium
45	school	St. Mary's Primary School	11.0218649, 76.9672728	30 km/h	Medium
46	school	St. Mar's High School	11.0221987, 76.9674321	30 km/h	Medium
47	school	Brindisi Matric. Ir. Sec. School	11.0226114, 76.9672831	30 km/h	Medium
51	crossing	Six Corner	11.0222184, 76.9626743	30 km/h	Medium
65	marketplace	Saibaba Colony Vegetable Market	11.0261428, 76.951784	30 km/h	Medium
66	traffic_signals	Saibaba Temple Signal	11.0269695, 76.9513556	30 km/h	Medium
68	traffic_signals	Saibaba Temple Signal	11.0269678, 76.9512074	30 km/h	Medium
69	marketplace	M.G.R.Wholesale Market	11.0304613, 76.9497095	30 km/h	Medium
70	school	Amrit Special needs school	11.0298208, 76.9503161	30 km/h	Medium
73	school	Ramalingam Primary School	11.0256049, 76.9510321	30 km/h	Medium

## Route Photos of Risky Spots



**Risk Type:** U-Turn

**Risk Level:** High

**Speed Limit:** 10 KM/Hr

**Coordinates:** 11.0161282, 76.9896128



**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.03211, 77.07640





**Risk Type:** Turn  
**Risk Level:** High  
**Speed Limit:** 15 KM/Hr  
**Coordinates:** 11.05129, 77.07919



**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.05181, 77.07696



**Risk Type:** Turn  
**Risk Level:** High  
**Speed Limit:** 15 KM/Hr  
**Coordinates:** 11.05222, 77.07690





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.05343, 77.07106



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.05351, 77.07099





**Risk Type: Turn**

**Risk Level: Medium**

**Speed Limit: 30 KM/Hr**

**Coordinates: 11.05411, 77.07097**



**Risk Type: Turn**

**Risk Level: High**

**Speed Limit: 15 KM/Hr**

**Coordinates: 11.05529, 77.06566**



**Risk Type: Turn**

**Risk Level: High**

**Speed Limit: 15 KM/Hr**

**Coordinates: 11.01613, 76.98961**





**Risk Type:** Blind Spot  
**Risk Level:** Blind Spot  
**Speed Limit:** 10 KM/Hr  
**Coordinates:** 11.01618, 76.98951



**Risk Type:** Turn  
**Risk Level:** High  
**Speed Limit:** 15 KM/Hr  
**Coordinates:** 11.02014, 76.99212





**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.02051, 76.99177



**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.02137, 76.98673



**Risk Type:** Turn  
**Risk Level:** High  
**Speed Limit:** 15 KM/Hr  
**Coordinates:** 11.02097, 76.98650





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.02095, 76.98644



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.01886, 76.96047





**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.01891, 76.96036



**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.01889, 76.96035



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.01889, 76.96029





**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.01893, 76.96023



**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.01895, 76.96023





**Risk Type:** Turn  
**Risk Level:** High  
**Speed Limit:** 15 KM/Hr  
**Coordinates:** 11.01944, 76.95923



**Risk Type:** Turn  
**Risk Level:** High  
**Speed Limit:** 15 KM/Hr  
**Coordinates:** 11.02444, 76.95905



**Risk Type:** Turn  
**Risk Level:** High  
**Speed Limit:** 15 KM/Hr  
**Coordinates:** 11.02504, 76.95710





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.02503, 76.95553



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.02514, 76.95541





**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.02696, 76.95577



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.02700, 76.95569



**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.02838, 76.95130



**Risk Type:** Blind Spot

**Risk Level:** Blind Spot

**Speed Limit:** 10 KM/Hr

**Coordinates:** 11.02760, 76.95134

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