



# IndianOil

## JOURNEY RISK MANAGEMENT (JRM) STUDY

**IOCL Coimbatore Terminal to Tamilnadu Magnesite  
Ltd**

### 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**

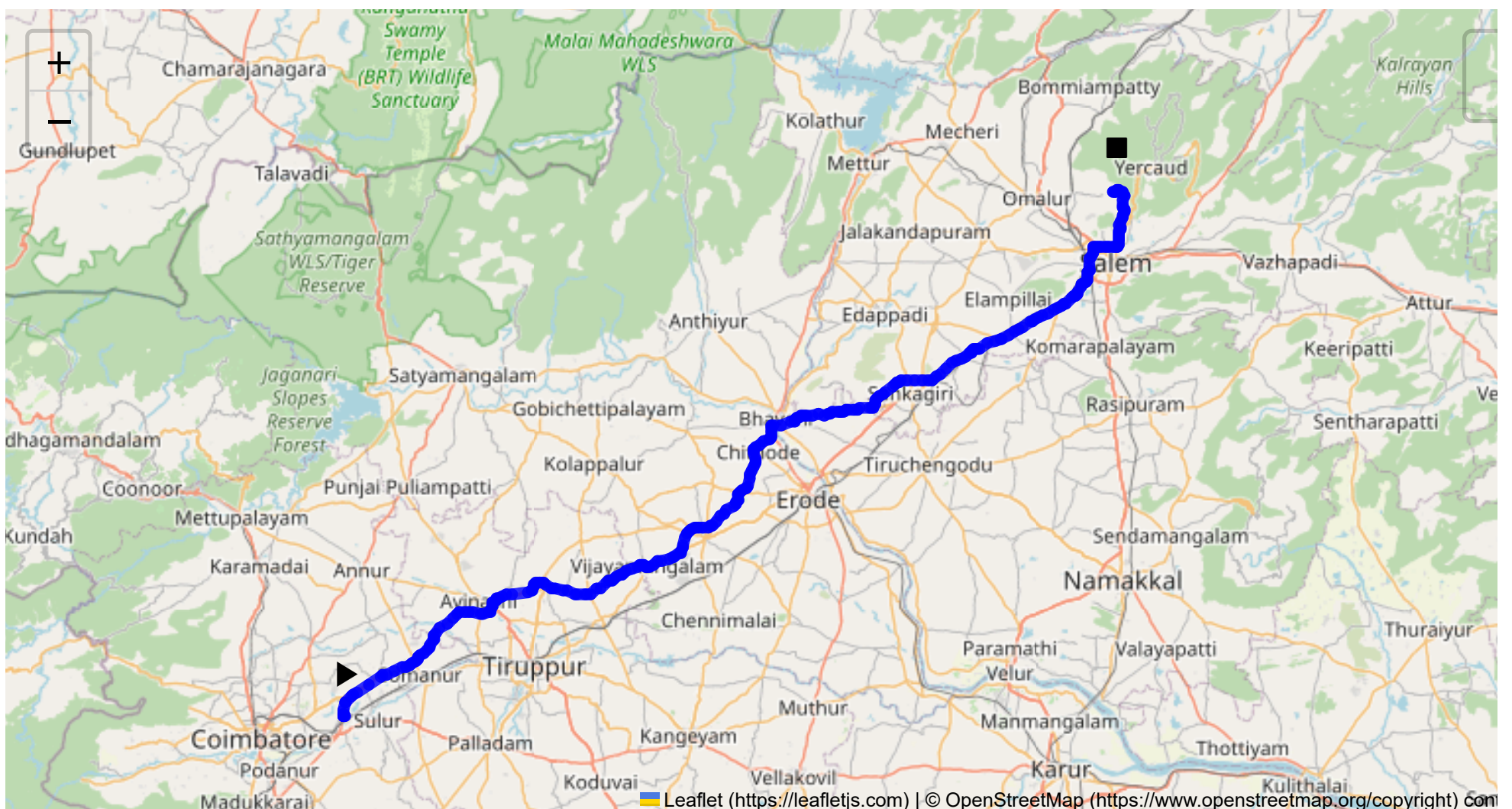
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 166.04 km**  
**Estimated Duration: 3.1 hours**  
**Adjusted Duration (Heavy Vehicle): 3.8 hours**  
**Start: (11.0315, 77.0797)**  
**End: (11.751827, 78.156306)**



## Welcome to the Journey Risk Management Study

Route Safety Analysis: Athappagoundenpudur, Coimbatore to Kurumbampatti, Tamil Nadu

### 1. Route Overview:

- The route extends approximately 166.04 kilometers and is expected to take about 3.07 hours for heavy vehicles. It likely follows a combination of state highways and rural roads, passing through diverse terrains including urban areas, semi-urban regions, and rural stretches.



## 2. Weather Conditions:

- The region experiences a tropical climate with heavy monsoon rains from June to September. During these months, the risk of road flooding and landslides in hilly areas increases, which could pose significant hazards. Summers are hot, and possible heat-related issues should be considered. Fog might be prevalent in certain areas during winter mornings, affecting visibility.

## 3. Traffic Patterns:

- Urban congestion may be expected near major towns along the route, particularly during morning and evening peak hours. Key congestion-prone areas include major junctions and market areas. Rural sections might experience less traffic but could still encounter slow-moving agricultural vehicles.

## 4. Road Quality and Infrastructure:

- Varying road conditions from well-maintained highways to narrow, less-paved rural roads. Potholes and uneven surfaces are possible, especially post-monsoon. Pay attention to areas under construction or maintenance, typically marked but potentially dangerous if not well-signed.

## 5. Alternative Routes for Emergencies:

- Major highways nearby can be used for detours during emergencies, though care should be taken to avoid any potential rural detour that could lengthen the journey significantly. Ensure familiarity with major bypass roads around Coimbatore and Salem.

## 6. Local Regulations on Hazardous Materials:

- Local laws require permits for transporting hazardous materials. Specific routes may be designated for such transport to minimize risk to populated areas. Familiarize with check-post and inspection protocols.

## 7. Historical Incidents:

- Historical data suggests occasional road accidents due to poor visibility and road conditions, particularly involving heavy vehicles. Incidents are slightly higher during monsoon seasons.

## 8. Environmental Considerations:

- The route may pass near environmentally sensitive areas like water bodies and wildlife reserves. Compliance with environmental transport regulations is crucial to minimize ecological impact. Be aware of and respect buffer zones near such areas.

## 9. Communication Coverage:

- Most urban and semi-urban areas will have good mobile network coverage, but some rural expanses may have dead zones or weaker signals. It's strategic to keep alternative communication means and plan stops accordingly for updates.

## 10. Emergency Response Times:

- Urban segments might have quicker access to emergency services (30-45 minutes) compared to rural areas, where it might take over an hour. Identifying nearby towns with medical facilities can help in an emergency.

11. Overall Risk Assessment Summary:

- The route generally poses moderate risks due to variable traffic, weather, and road conditions. Adequate preparation, including checking weather forecasts, ensuring proper vehicle maintenance, and understanding local regulations, significantly mitigates potential hazards. Backup plans and alternative routes should be in place, with constant monitoring of road conditions and traffic updates. Prior clearance and compliance with environmental and hazardous material transport regulations are vital.

By addressing these factors, truck drivers can enhance safety and efficiency when transporting hazardous materials between Athappagoundenpudur and Kurumbampatti.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Roundabout	High	11.67557, 78.15976	15 KM/Hr
1	Turn	High	11.03255, 77.07645	15 KM/Hr
2	Turn	Medium	11.12749, 77.19755	30 KM/Hr
3	Turn	Medium	11.15332, 77.21111	30 KM/Hr
4	Turn	Medium	11.17621, 77.24067	30 KM/Hr
5	Turn	Medium	11.17650, 77.28271	30 KM/Hr
6	Turn	Medium	11.20521, 77.34049	30 KM/Hr
7	Turn	Medium	11.21423, 77.34480	30 KM/Hr
8	Turn	Medium	11.21586, 77.34724	30 KM/Hr
9	Turn	Medium	11.20738, 77.37188	30 KM/Hr
10	Turn	Medium	11.19889, 77.41911	30 KM/Hr
11	Turn	Medium	11.24024, 77.49505	30 KM/Hr
12	Turn	Medium	11.23746, 77.50706	30 KM/Hr
13	Turn	Medium	11.34049, 77.63123	30 KM/Hr
14	Turn	Medium	11.42890, 77.67519	30 KM/Hr
15	Turn	Medium	11.43091, 77.67598	30 KM/Hr
16	Turn	Medium	11.43243, 77.67851	30 KM/Hr
17	Turn	Medium	11.44972, 77.77315	30 KM/Hr
18	Turn	Medium	11.44973, 77.77550	30 KM/Hr
19	Turn	Medium	11.53590, 77.95827	30 KM/Hr
20	Turn	Medium	11.62382, 78.10875	30 KM/Hr

	Risk Type	Risk Level	Coordinates	Speed Limit
21	Turn	High	11.64144, 78.11791	15 KM/Hr
22	Turn	Medium	11.64302, 78.11976	30 KM/Hr
23	Turn	High	11.67582, 78.12786	15 KM/Hr
24	Turn	Medium	11.70717, 78.16253	30 KM/Hr
25	Turn	Medium	11.72063, 78.16902	30 KM/Hr
26	Turn	Medium	11.74613, 78.16939	30 KM/Hr
27	Turn	Medium	11.74944, 78.16861	30 KM/Hr
28	Turn	High	11.75289, 78.15576	15 KM/Hr
29	Blind Spot	Blind Spot	11.75138, 78.15534	10 KM/Hr

### Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Royal Care Hospital, Coimbatore	11.059106, 77.0893479	30 km/h	Medium
2	police	Karumathampatti Police Station	11.1093464, 77.1802095	30 km/h	Medium
5	hospital	Sri Renu Hospital	11.1990225, 77.4219937	30 km/h	Medium
6	clinic	P.M. Clinic	11.2281078, 77.4647296	30 km/h	Medium
8	hospital	Dr. N Viswanathan Hospital	11.2412783, 77.5005502	30 km/h	Medium
9	hospital	Vijayamangalm Government Hospital	11.2382827, 77.501687	30 km/h	Medium
10	hospital	Gen Siddha Hospital	11.2375033, 77.5059797	30 km/h	Medium
11	hospital	Irt Hospital	11.2803603, 77.5644118	30 km/h	Medium
13	clinic	Erode Cancer Centre	11.3732, 77.649152	30 km/h	Medium
14	hospital	Thanish Siddha Hospital	11.430003, 77.674964	30 km/h	Medium
15	clinic	Harshitha Clinic	11.4313207, 77.674718	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
16	clinic	G.K Clinic	11.4297244, 77.6749715	30 km/h	Medium
17	hospital	Sri Kaalangi Siddhar Mooligai Vaithiya Nilayam	11.432369, 77.674894	30 km/h	Medium
19	hospital	Shri Sathyanarayana Hospital	11.4291297, 77.6913408	30 km/h	Medium
20	hospital	Dhanvanthri Hospital	11.4496712, 77.7593772	30 km/h	Medium
21	hospital	Dhanvantri Multi Speciality Hospital	11.451362, 77.766602	30 km/h	Medium
22	hospital	Government Hospital	11.4525596, 77.7749426	30 km/h	Medium
27	hospital	C. N. Hospital	11.55724, 78.0096	30 km/h	Medium
28	hospital	Vinayaka mission Kirubananadah variyar medical college hospital	11.584984, 78.0618417	30 km/h	Medium
29	hospital	vims	11.5854239, 78.0639188	30 km/h	Medium
31	hospital	Vinayaka Mission's Kirupananda Variyar Medical College	11.5977669, 78.0850992	30 km/h	Medium
36	hospital	Bharathi Hospital, Salem	11.6492647, 78.1204131	30 km/h	Medium
37	hospital	Sisu Hospital Inida Ltd	11.6505276, 78.1205003	30 km/h	Medium
38	hospital	Aishwarya Hospital	11.6716291, 78.1267807	30 km/h	Medium
39	hospital	C.M. Hospital	11.6747345, 78.1255034	30 km/h	Medium
40	pharmacy	Healthy Pharmacy	11.6762714, 78.127744	30 km/h	Medium
41	pharmacy	Thulasi Pharmacy	11.6761991, 78.1277377	30 km/h	Medium
43	hospital	R.K. Hospital, Salem	11.6746905, 78.1339717	30 km/h	Medium
44	hospital	Venkatesh Hospital and Urology Centre	11.6759517, 78.1324029	30 km/h	Medium
45	hospital	Kurinji Hospital, Salem	11.6771806, 78.1351224	30 km/h	Medium
46	hospital	Bhavani Hospital	11.6745697, 78.1362683	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
47	clinic	Ayush Care Siddha Centre	11.6731195, 78.1351967	30 km/h	Medium
48	clinic	Bismillah Piles Clinic	11.6755285, 78.1343325	30 km/h	Medium
49	hospital	Gl Hospital	11.6742597, 78.1379092	30 km/h	Medium
50	clinic	Arunagiri Ent Nursing Home	11.6762823, 78.1369593	30 km/h	Medium
51	clinic	Srimaya Child Health Centre	11.6750852, 78.1370646	30 km/h	Medium
52	hospital	Balaji Skin Hospital	11.676166, 78.1379488	30 km/h	Medium
53	hospital	Dr. Sasi Eye Care	11.6743698, 78.1379234	30 km/h	Medium
54	police	Alagapuram Police station	11.6769953, 78.1422615	30 km/h	Medium
55	hospital	AP medical center	11.6774074, 78.1425988	30 km/h	Medium
56	hospital	Dr. Soodamani Hospital	11.6757031, 78.14473	30 km/h	Medium
57	hospital	M G Diabetes Speciality and Research Centre	11.6766146, 78.1422986	30 km/h	Medium
58	hospital	Devi Hospital	11.6786391, 78.1415731	30 km/h	Medium
59	hospital	Fairlands Eye Cure	11.677959, 78.1415897	30 km/h	Medium
60	hospital	Kavin Eniyan Hospital	11.677643, 78.144129	30 km/h	Medium
61	hospital	Krishna Speciality Hospital	11.676751, 78.145561	30 km/h	Medium
64	hospital	Sri Vaari Hospital	11.6763726, 78.1467277	30 km/h	Medium
66	hospital	Salem Gopi Hospitals	11.6745894, 78.1515482	30 km/h	Medium
67	hospital	Dr. P. Sundarrajan Neuro Hospital	11.6742791, 78.1499738	30 km/h	Medium
68	hospital	Gopi Memorial Hospital	11.673855, 78.1516078	30 km/h	Medium
70	clinic	Saraswathi Nursing Home	11.6746327, 78.1520981	30 km/h	Medium



	type	name	coordinates	speed_limit	risk_level
71	hospital	J S Hospital, Dharmapuri	11.6739064, 78.1521557	30 km/h	Medium
72	hospital	Shanmuga Hospital and Salem Cancer Institute	11.6770178, 78.1531844	30 km/h	Medium
73	hospital	Tms Eye Hospital	11.6772791, 78.1536202	30 km/h	Medium
74	hospital	Mahadevas Ayurvedic Hospital	11.6752045, 78.1517396	30 km/h	Medium
75	clinic	Akshaya Fertility Centre	11.6739088, 78.1518657	30 km/h	Medium
76	hospital	Sureka Hospital	11.676423, 78.1550511	30 km/h	Medium
78	hospital	Ramana Surgical Hospital	11.6731205, 78.15862	30 km/h	Medium
79	hospital	Salem Medical Centre	11.67607, 78.163014	30 km/h	Medium
80	clinic	Sindhu Eye Care Centre	11.6814684, 78.1625895	30 km/h	Medium
82	hospital	Kiran Diabetic Hospital	11.6957337, 78.1625792	30 km/h	Medium

### Crowded Spots

	type	name	coordinates	speed_limit	risk_level
1	college	PSG Institute of Technology and Applied Research	11.0677118, 77.0945744	30 km/h	Medium
3	marketplace	Thekkalur Weekly market	11.1537037, 77.2126685	30 km/h	Medium
4	marketplace	Thekalur weekly market	11.1547211, 77.2140187	30 km/h	Medium
7	marketplace	Weekly Market (sandhai)	11.2287229, 77.4646676	30 km/h	Medium
12	college	Government polytechnic college	11.2907053, 77.5698726	30 km/h	Medium
18	school	SSM Matriculation Higher Secondary School	11.4321653, 77.6880046	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
23	marketplace	Monday market	11.452863, 77.775989	30 km/h	Medium
24	college	Vivekanandha Engineering College	11.4589312, 77.7899284	30 km/h	Medium
25	school	KRP Matric. Hr. Sec School	11.4546193, 77.8142445	30 km/h	Medium
30	school	Vinayaka Missions Annapoorani Matric School	11.5971662, 78.0839876	30 km/h	Medium
32	university	Vinayaka Missions Vinayaka Missions Research Foundation	11.5974056, 78.0843617	30 km/h	Medium
33	school	Dist Education Training	11.6133799, 78.1022409	30 km/h	Medium
34	school	DIET - Salem	11.6144158, 78.1025078	30 km/h	Medium
35	school	Diamond Rays Matric HR Sec School	11.6385629, 78.1206259	30 km/h	Medium
42	college	Sona College	11.6768, 78.1257052	30 km/h	Medium
62	school	Saradha College	11.6769525, 78.1481901	30 km/h	Medium
63	school	Saradha Balamandir School	11.6771182, 78.1472461	30 km/h	Medium
65	school	Sri Sarada Matriculation Higher Secondary School	11.6768969, 78.1488115	30 km/h	Medium
69	school	Holy flower matric hr.sec school	11.6748637, 78.1528099	30 km/h	Medium
77	school	CSI Hobart Edu Institute	11.673245, 78.1567934	30 km/h	Medium
81	college	Govt ITI	11.6919383, 78.1636731	30 km/h	Medium

## Route Photos of Risky Spots



**Risk Type:** Roundabout

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.67557, 78.15976



**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.03255, 77.07645





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.12749, 77.19755



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.15332, 77.21111



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.17621, 77.24067





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.17650, 77.28271



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.20521, 77.34049



**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.21423, 77.34480



**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.21586, 77.34724



**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.20738, 77.37188





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.19889, 77.41911



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.24024, 77.49505





**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.23746, 77.50706



**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.34049, 77.63123



**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.42890, 77.67519





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.43091, 77.67598



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.43243, 77.67851





**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.44972, 77.77315



**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.44973, 77.77550



**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.53590, 77.95827





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.62382, 78.10875



**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.64144, 78.11791





**Risk Type: Turn**

**Risk Level: Medium**

**Speed Limit: 30 KM/Hr**

**Coordinates: 11.64302, 78.11976**



**Risk Type: Turn**

**Risk Level: High**

**Speed Limit: 15 KM/Hr**

**Coordinates: 11.67582, 78.12786**



**Risk Type: Turn**

**Risk Level: Medium**

**Speed Limit: 30 KM/Hr**

**Coordinates: 11.70717, 78.16253**





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.72063, 78.16902

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