No. 12037/71/2024/PM GatiShakti

By E-mail

Government of India
Ministry of Road Transport & Highways
Transport Bhavan, 1, Parliament Street, New Delhi - 110001
Dated 23rd July 2025

Office Memorandum

Subject: Standard Operating Procedures (SOP) for Data Layers Updation on the PM GatiShakti National Master Plan (NMP) Portal Reg...

Ref: Office Memorandum RW/NH-34066/03/PM-GatiShakti/2023-24-QCZ dated 5th June 2023

The undersigned is directed to refer the above OM regarding the Standard Operating Procedure (SOP for updation of data layers on the PM GatiShakti National Master Plan (NMP) portal and state that in supersession of OM dated 05.06.2023, the comprehensive revised SOP is attached herewith.

2. The SOP outlines the structure, attributes, and data-sharing mechanisms for various road transport infrastructure layers managed by the Ministry, including periodic updates. Annexure-I Comprises MoRT&H Data Layers Available on the GatiShakti Portal. Annexure-II contains Symbology of Allied Infrastructure based on Project Status and Annexure-III details the Data Update Mechanism & Portal Layers Structure.

3. The objective of this SOP is to ensure seamless and timely integration of relevant datasets with the NMP platform through APIs and standard data protocols, thereby enabling improved planning, monitoring, and inter-ministerial coordination under the GatiShakti framework.

It is requested to take note of the updated data layers as per the revised SOP.

Encl.: As above

23/07/2025

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To,

1. The Principal Secretaries/Secretaries of all States/UTs Public Works Department dealing with National Highways, other Centrally Sponsored Schemes.
2. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110010.

3. The Chairman, National Highway Authority of India, G-5 & G-6, Sector-10, Dwarka, New Delhi-110075.
4. The Managing Director, NHIDCL, Tower A, World Trade Centre, Naurojni Nagar Market, Block G, Nauroji Nagar, Safdarjung Enclave New Delhi-110029.
5. All Engineers-in-Chief and Chief Engineers of Public Works Department of States/UTs dealing with National Highways, other Centrally Sponsored Schemes.
6. Joint Secretary (Logistics), DPIIT
7. All Project Zone Chief Engineers
8. All ROs of the Ministry.
9. SE (EAP)
10. Shri Ajay Patel Project Director, BISAG-N, (bisagsp7@gujarat.gov.in)

Copy to:

1. AS(Highways)
2. All ADG in the Ministry of Road Transport & Highways
3. JS(EAP)
4. AFA
5. NIC for uploading on Ministry's website under "what's new"

Copy for kind information to:

1. The Secretary General, IRC
2. The Director, IAHE
3. Sr. PPS to Secretary (RT&H)
4. PPS to DG(RD)&SS
5. Sr. PPS to AS&FA

Annexure-I

MoRT&H Data layers to be made available on the Gatishakti Portal

This SOP outlines the data layers being hosted by the Ministry of Road Transport and Highways (MoRT&H) on the PM GatiShakti National Master Plan (NMP) portal, along with the mechanism for regular updates and API-based integration

A. Highway and Road Infrastructure

i. National Highways Network Layer

The Ministry has mapped about 1.45 Lakh km of the NH network. The NH network layer is categorized as:

a. National Expressway
b. Access-controlled High-Speed Corridors (HSCs)
c. National Corridors
d. Other National Highways

Each category of the NH Network layer to have the following attributes:

- NH Number
- Road Type
- Entrustment Agency
- Jurisdiction Mapping (PIU & RO)
- Toll Plaza Locations

The following additional attributes are to be added to the layer

- Lane Status
- ROW
- Road Network Chainage
- Interchanges, Entry & Exits
- Cross drainage structures

ii. State Highways

Network of state highways in India. The layer to have the following attributes:

- Name of State
- State Highway Number
- Lane status

iii. State Expressways

Network of State Expressways in India. The layer to have the following attributes:

- Name of State
- State Expressway Number
- Lane Status
- Toll Plaza Locations
- Number of lanes at Toll Plaza and User Fee

B. Non-Highway Infrastructure Layers

The following infrastructure layers have been added on the Gatishakti, with a plan to update the layers every 6 months:

i. Ropeways Network

The layer to have the following attributes:

- Name of the Ropeway Project
- State, District
- Length (Km)
- Origin/ Intermediate/Destination Station
- No. of Cars (Gondolas)
- Passenger Capacity (Passengers Per Hour Per Direction)
- Project Status (Planned/ Under implementation/ Completed)
- Mode of implementation
- Total Project Cost
- Completion/ Expected Completion Date

ii. Multi-Modal Logistic Parks (MMLPs)

The layer to have the following attributes:

- Name of MMLP
- Project Status
- Mode of Implementation
- Availability of Other Transportation Modes
- Nearest Railway Station
- Nearest NH
- Nearest Port
- Nearest Airport
- Expected/ Actual Award Date
- Expected/ Actual Appointment Date
- Expected/ Actual Operationalization Date
- Physical Construction Progress till date (%)

iii. **Way-Side Amenities (WSAs)**

The layer to have the following attributes:

- WSA ID
- State
- NH No. (on which the WSA is present)
- Address
- Land Area (Ha.)
- Side of Road (LHS/RHS)
- Project Status
- Model for Development
- Operationalization/ Expected Operational Date
- Eateries (Restaurant/Food Court /Dhaba) availability
- EV charging availability
- Fuel Station availability
- Trucker Facilities availability

iv. **Registered Vehicle Scrapping Facilities (RVSFs)**

The layer to have the following attributes:

- RVSF Name
- RVSF Address
- RVSF Contact No
- Project Status
- Operationalization Date
- Capacity (Annual)

v. **Automated Testing Stations (ATS)**

The layer to have the following attributes:

- ATS Name
- Address
- District
- ATS Contact No
- Location (Latitude & Longitude)
- Stage
- Operationalization Date
- ATS Capacity

Traffic Data Layers

i. **Toll Traffic Data**

Traffic data for passenger and freight vehicles through API integration with IHMCL portal. The layer to have the following attributes:

- Toll plaza name
- NETC (National Electronic Toll Collection) Code
- Toll traffic data (Annualised): in Passenger Car Unit (PCU) by vehicle category
- Number of lanes at Toll Plaza
- User fee

ii. **Traffic Survey Points (TSP) Data**

Traffic data for passenger and freight vehicles. The layer to have the following attributes:

- TSP Location
- Road Type (on which survey was conducted)
- Traffic Survey data: in Passenger Car Unit (PCU) by vehicle category

C. MoRT&H Project Information

i. **MoRT&H Projects Ongoing/ Recently Completed**

Data layer with all the under implementation and completed projects of MoRT&H through API integration with Datalake and PMIS. The layer to have the following attributes:

- Project ID (Unique Project Code)
- Project Name
- Project Status (Planned/ Under implementation/ Completed)
- Greenfield/Brownfield project
- Length of project
- Total Cost of project
- Civil Cost of project
- End Lane status
- Estimated date of completion

ii. **MoRT&H NPG Projects**

Layer of all MoRT&H projects consulted in NPG meetings. The layer to have the following attributes:

- Project Name
- Project Length
- Total Project Cost
- State

Symbology of MoRT&H Projects Based on Project Status

Project Status	Project View	Colour Code
Completed	Green	#28A745
Under Implementation	Orange	#FD7E14
Under Planning/ Feasibility	Blue	#007BFF
No projects Planned/Ongoing	Grey	#6C757D

Road Safety Data

i. **Electronic Detailed Accident Report (eDAR)**
Layer of accident spots. The layer to have the following attributes:
- Accident ID
- Accident date and time
- Accident Location (Latitude & Longitude)

D. Master Plan Data (One time)

i. **Expected NH Network Congestion**
Layer to detail the expected modelled congestion on the NH network, and the additional lanes required by the years 2027, 2037, 2047. The layer to have the following attributes:
- 2 Lanes required
- 4 Lanes required
- 6 Lanes required
- 8+ Lanes required

ii. **Master Plan High Speed Corridors**
Layer to detail the planned High-Speed Corridors. The layer to have the following attributes:
- Corridor Name
- Planned Length

Annexure-II

Symbology of Allied Infrastructure based on Project Status

The symbology based on project status of allied infrastructure assets will be shown on the NMP portal as detailed in tables below.

State	MMLPs (Phase 1)	Ropeways	Container Terminals	Toll Plazas
Operational				
Under Construction				
Under Planning				

State	WSAs	ATS'	RVSFs
Operational			
Under Construction			
Construction to be Initiated			

Project Status	Project View	Colour Code
Completed	Green	#28A745
Under Implementation	Orange	#FD7E14
Under Planning/ Feasibility	Blue	#007BFF

Annexure-III

Data Update Mechanism

Layer	Mode of Update	Frequency
NH Network	Manual Upload	As needed
Toll Traffic	API through IHMCL	Through API
Traffic Survey Points Data	Manual upload	Annual
MoRT&H Projects	API through PMIS/DataLake	Through API
NPG Consultation Projects	Updated on Portal	As needed
Ropeways	Manual Upload	Bi-Annual
MMLPs	Manual Upload	Bi-Annual
WSAs	Manual Upload	Bi-Annual
RVSFs	Manual Upload	Bi-Annual
ATS	Manual Upload	Bi-Annual

Portal Layers Status (as on 15th July 2025)

#	Layer Category	Layer	Status
1	**Highway & Road Infrastructure**	National Highway Network	Completed, Additional Attributes (Lane status & ROW, Interchanges - Entry & Exits) updation in progress
2		State Highways	Completed
3		State Expressways	Completed
4	**Non-Highway Infrastructure**	Ropeways	Completed
5		Multi-modal Logistic Parks (MMLPs)	Completed
6		Way-Side Amenities (WSAs)	Completed
7		Registered Vehicle Scrapping Facilities (RVSFs)	Completed
8		Automated Testing Facilities (ATS)	Completed
9		Optical Fiber Cable (OFC) Network	Completed
10	**MoRT&H Projects Information**	MoRT&H Projects Ongoing/ Recently Completed	API update in progress
11		NPG Projects	Completed
12	**Traffic Data**	Toll Traffic Data	Completed, Additional Attributes (User fee, Toll Plaza lanes) updation in progress
13		Traffic Survey Points Data	Completed
14	**Road Safety Data**	eDAR (Accident Spots)	Completed
15	**Master Plan Data**	Expected NH Network Congestion	Completed
16		Planned High Speed Corridors	Completed

Portal Layers Structure

A comprehensive overview of the data layer structure for integration on the MoRT&H PM GatiShakti NMP Portal is outlined below.

Sl. No.	Layer Category	Layer	Sub Layers	Layer Categorization
1	**Highway & Road Infrastructure**	National Highway Network	-	National Expressway, Access Controlled HSC, National Corridors, Other NHs
2		State Highways	-	-
3		State Expressways	-	-
4	**Non-Highway Infrastructure**	Ropeways	-	Planned, Sanctioned, Under-Implementation, Completed
5		Multi-modal Logistic Parks (MMLPs)	-	Planned, Sanctioned, Under-Implementation, Completed
6		Way-Side Amenities (WSAs)	-	Planned, Sanctioned, Under-Implementation, Completed
7		Registered Vehicle Scrapping Facilities (RVSFs)	-	Planned, Sanctioned, Under-Implementation, Completed
8		Automated Testing Facilities (ATS)	-	Planned, Sanctioned, Under-Implementation, Completed
9		Optical Fiber Cable (OFC) Network	-	-
10	**MoRT&H Projects Information**	MoRT&H Projects Ongoing/ Recently completed	NHAI	Planned, Sanctioned, Under-Implementation, Completed
			Roads Wing	Planned, Sanctioned, Under-Implementation, Completed
			NHIDCL	Planned, Sanctioned, Under-Implementation, Completed
11		NPG Projects	-	-
12	**Traffic Data**	Toll Traffic Data	-	-
13		Traffic Survey Points Data	(Year-wise TSP data)	-
14	**Road Safety Data**	eDAR (Accident Spots)	-	-
15	**Master Plan Data**	Expected NH Network Congestion	Additional lanes required in 2027	2L, 4L, 6L, 8L+
			Additional lanes required in 2037	2L, 4L, 6L, 8L+
			Additional lanes required in 2047	2L, 4L, 6L, 8L+
16		Planned High Speed Corridors	Planned High Speed Corridors	-

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