

# PMGSY National GIS

## GIS DATA STANDARD

*(Version 5)*

*(Compared to the previous document version, additional explanations incorporated)*

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**All the States should follow this GIS data standard.**

For the spatial data creation/updating, the States may choose the methodologies in SRS (pmsy.nic.in/circulars/GIS\_SRS\_29052015.pdf) or adopt any methodologies convenient to them.

### 1. GIS EXPERT

Hire GIS person (in case not available with the State) for managing the activity of spatial data generation throughout the project duration.

### 2. DATA FORMAT

GIS layers should be provided in shape (.shp) format.

### 3. PROJECTION

All GIS layers should be in **WGS84** datum and **lat-long** coordinates. No map projection.

### 4. DATA VALIDATION/ACCURACY/QUALITY

All spatial features should be finally captured to the WGS84 datum and should be verifiable as per GPS. This means **the accuracy should be verifiable on the ground as per GPS and not directly as per Sol toposheets**. Therefore, any corrections on the data required should be carried out by the States.

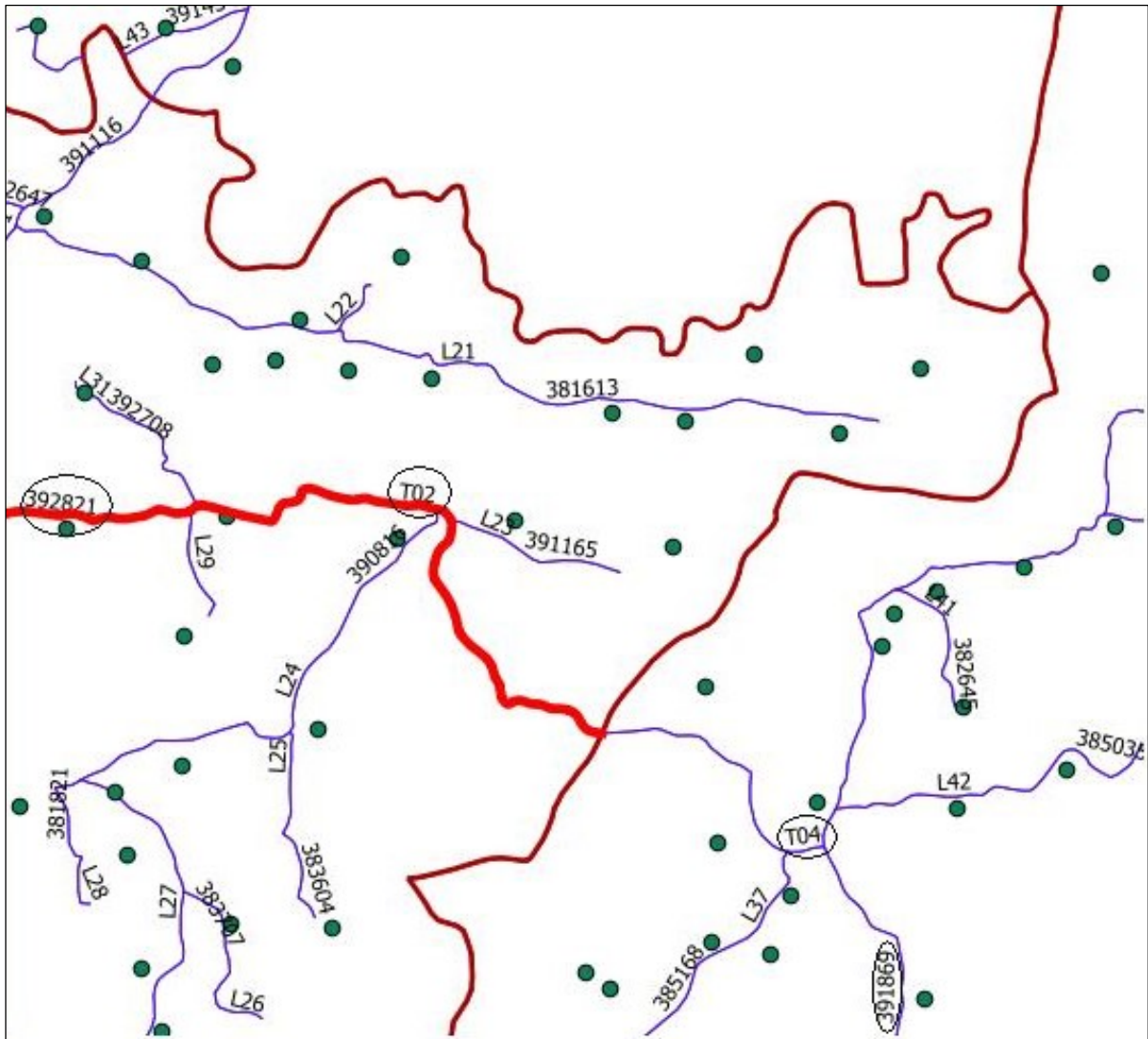
However, the States can initially capture the data from any available source and later update. Updating can be carried out over available map services from GoogleEarth, Bhuvan etc. In other words, the States need not carry out GPS survey to map the layers. GPS enabled mobiles can also be used for updating. GPS enabled mobile could be helpful in validation of the data on the ground, uploading photographs or any other visual information on to the database, etc.

### 5. GIS DATA MOSAIC

Provide spatial data as a seamless mosaic of all blocks/districts (stitching should not be done, as explained under the next heading). In other words, there cannot have more than one layer of same map layer (eg, only one Habitation layer on the mosaic). Once the spatial data of the adjoining States are completed, if any editing/shifting, on feature or feature boundary required, shall be carried out by the States.

## 6. UNIQUE ID TO FEATURES

As per PMGSY guidelines, features such as habitation and road have a unique Id within its Block. At the same time, as per OMMAS2, each habitation/road has unique ID across the country. For example, there is only one habitation with id 50 in the country. Same is the case with roads. All disconnected roads within a Block having same ids should be joined together.



Similarly all the roads should be disconnected at the Block boundary (i.e., start node and end node of road line within the block only). Figure shows a road passing through two blocks with old and new road IDs. The road having ID: 392821(Old Id: T02) is a single entity/feature within the block. The same road becomes a separate entity/feature with ID: 391869 (Old Id: T03) in the next Block. However, as per PMGSY-II, a road may be continuous across blocks within a district. The applicable States need to keep that road as single feature and assign id that is followed in OMMAS2.

## 7. GIS LAYERS AND NAMING CONVENTIONS

All the GIS layers should be created as per the PMGSY guidelines. For example, the name/location of habitation (OMMAS2) may not always match with that of the habitation from other sources such as toposheets. The naming convention of each layer should be as given in the table.

No.	File name	Map layers	Type
1	Habitation	Habitation	Point
2	Bound_District	District Boundary	Polygon
3	Bound_Block	Block Boundary	Polygon
4	Bound_MPConst	MP Constituency Boundary	Polygon
5	Bound_MLAConst	MLA Constituency Boundary	Polygon
6	PWD_Division	PWD Division Boundary	Polygon
7	PWD_Circle	PWD Circle Boundary	Polygon
8	Bound_Forest	Forest Boundary	Polygon
9	Bound_InterNational	International Boundary	Line
10	Road_DRRP	DRRP Road	Line
11	Road_CN	CN Road	Line
12	Road_Package*	Package of Road* (optional/Future layer)	Line
13	Bridge	Bridges	Point
14	LevelCrossing	Level crossing (Manned & Unmanned)	Point
15	Const_Material	Construction Material Sites	Point
16	Waste_Material	Waste Material Sites	Point
17	Market	Market Centre	Point
18	HQ_Administrative	Administrative HQ (Revenue,Block,District,Panchayat)	Point
19	WaterBody	Water body	Polygon
20	Tourist	Tourist Place	Point
21	Drainage_Line Drainage_Poly	Drainage	Line & Polygon
22	Railway	Railway	Line

*Table: Naming conventions of spatial layers*

*[Mandatory layers: Habitation, Block Boundary, DRRP Road, CN Road. States should give priority to these 4 layers.]*

## 8. TABLE STRUCTURE

All the spatial layers should have standard fields as given below and IDs as entered in OMMAS2. All the fields should be of **integer** type, if not specified.

### 1. *Habitation*

Field Name	
HAB_ID	Habitation id (HAB_ID) is the Habitation system id in OMMAS

### 2. *Bound\_District*

Field Name	
DIST_ID	District Id in OMMAS

This layer can be created by *dissolving* Block boundary

### 3. *Bound\_Block*

Field Name	
BLOCK_ID	Block id in OMMAS

### 4. *Bound\_MPConst*

Field Name	
MP_CON_ID	MP Constituency id in OMMAS

### 5. *Bound\_MLAConst*

Field Name	
MLA_CON_ID	MLA Constituency id in OMMAS

### 6. *PWD\_Division*

Field Name	
DIV_ID	PWD Division Code. Not available in OMMAS. Can use serial number
DIV_NAME	PWD Division Name

### 7. *PWD\_Circle*

Field Name	
CIR_ID	PWD Circle Code. Not available in OMMAS. Can use serial number
CIR_NAME	PWD Circle Name

### 8. *Bound\_Forest*

Field Name	Type	Field Width	
FB_Type	String	1	Enter R/P (Reserved/Protected) for forest type

### 9. *Bound\_InterNational*

Field Name	Type	Field Width	
INTNAME	String	20	Name of Neighbour Country

### 10. Road\_DRRP

Field Name	
ER_ID	Existing road system id in OMMAS

### 11. Road\_CN

Field Name	
ER_ID	Existing road system id in OMMAS
PLAN_RD_ID	Core network system id in OMMAS

### 12. Road\_Package *\*(Optional, not used currently)*

Field Name	
PACKAGE_ID	Package Id as in OMMAS
ROAD_ID	Road Id as in OMMAS

### 13. Bridge

Field Name	
ER_ID	Existing road system id in OMMAS
BRIDGE_ID	**

\*\*BRIDGE\_ID is not incorporated in OMMAS and is not used in any of the queries. If the data is entered, it can be used for future implementations.

### 14. Level Crossing

Field Name	Type	Field width	
BLOCK_ID	Integer	-	Block id in OMMAS
LC_Type	String	1	M/U (Manned/Unmanned)

### 15. Construction Material

Field Name	Type	Field width	
BLOCK_ID	Integer	-	Block id in OMMAS
M_Type	String	1	Material Type
S_Name	String	20	Material Site Name

\* Construction material list/details to be provided by NRRDA

### 16. Waste Material

Field Name	Type	Field width	
BLOCK_ID	Integer	-	Block id in OMMAS
W_Type	String	1	Material Type
S_Name	String	20	Material Site Name

\* Waste material list/details to be provided by NRRDA

### 17. Market

Field Name	Type	Field Width	
BLOCK_ID	Integer	-	Block id in OMMAS
MarketName	String	25	Name of market
MarketDays	Integer	1	Number of market days

### 18. HQ\_Administrative

Field Name	Type	Field Width	
AHQ_Type	String	1	AHQ Type (R/B/D/P)
AHQ_Name	String	25	Name of administrative headquarter

Administrative Headquarter Types are R/B/D/P (Revenue, Block, District, Panchayat)

### 19. WaterBody

Field Name	Type	Field Width	
WB_Type	String	10	WB Type

### 20. Tourist

Field Name	Type	Field Width	
BLOCK_ID	Integer		Block id in OMMAS
TP_Name	String	25	Name of tourist place

### 21. Drainage\_Line /Drainage\_Poly

Field Name	Type	Field Width	
D_Name	String	20	Name (Major)

### 22. Railway

Field Name	Type	Field Width	
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