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The Transport System of Solapur District, Maharashtra: A Multimodal Profile

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Abstract

This paper describes the transport system of Solapur district across its three modes, road, rail and air, using secondary data. Road transport dominates, carrying the great bulk of the district's movement over a network of about 21,090 kilometres in which rural roads make up nearly 45 per cent and national highways, though only about seven per cent of length, provide the district's long-distance spine along NH 65 and NH 52. Rail centres on Solapur Junction, a significant node on the Central Railway that links the district to Mumbai, Pune, Hyderabad and beyond. Air connectivity is minimal: the district has only a limited existing airport, and a proposed greenfield airport near Boramani remains on hold. The profile shows a district well connected externally by road and rail but heavily dependent on road transport for internal movement, with air playing no meaningful role. The paper reads this modal balance as typical of an interior Indian district and notes that the quality and reach of the rural road network remain the decisive factor for most of the district's population.

Keywords: transport system, road, rail, air, multimodal, connectivity, Solapur district

Introduction

A district's transport system is the set of arteries through which its economy and society move, and its balance among road, rail and air says a good deal about how the district connects to the wider world and to itself. This paper offers a descriptive profile of Solapur district's transport across all three modes, drawing on secondary sources. It is deliberately a profile rather than an analysis: the aim is to set out clearly what transport infrastructure the district has, mode by mode, and to characterise the overall balance among them, leaving detailed network analysis to other work.

The framing is straightforward. For each mode the paper describes the main infrastructure and the connectivity it provides, then steps back to consider what the modal balance means for the district. Solapur's position on major inter-state corridors gives it good external links, but the internal picture is more uneven, and it is the interplay between strong through-connections and weaker internal reach that gives the district's transport system its particular shape.

Road transport

Road is the dominant mode by a wide margin. The district's road network totalled about 21,090 kilometres in 2021–22, and it carries the overwhelming share of both passenger and freight movement, in line with the national pattern in which roads handle most traffic. The network is crossed by National Highway 65, which links Solapur to Pune, Hyderabad and Vijayawada, and by National Highway 52, along with state highways such as SH 158 and 158A that provide intra-district connectivity. Below these, a dense layer of district and rural roads reaches into the countryside.

The composition of the network, set out in Table 1 and Figure 1, is revealing. Rural roads make up the largest single category at nearly 45 per cent of length, reflecting the district's rural character and the reach of village-connectivity programmes. District roads, major and other combined, account for a further 41 per cent, forming the middle layer that links villages to towns and to the highways. National and state highways together make up only about 14 per cent of length but carry a disproportionate share of long-distance traffic, functioning as the district's spine rather than its capillaries.

Road category	Length 2021–22 (km)	Share (%)
National Highway	1,546.10	7.33
State Highway	1,434.02	6.80
Major District Roads	4,057.61	19.24
Other District Roads	4,659.09	22.09
Rural Roads	9,392.94	44.54
Total	21,089.76	100.00

Table 1. Road network of Solapur district by category, 2021–22.

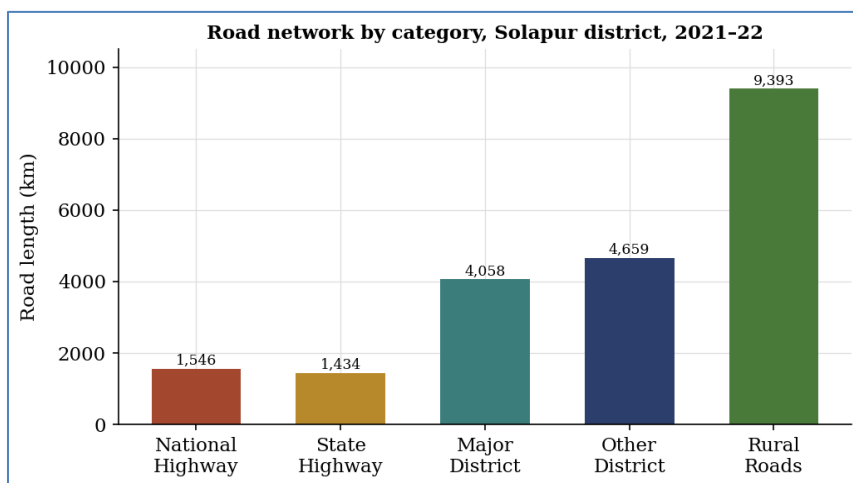


Figure 1. Road network by category, Solapur district, 2021–22.

Solapur city sits at the centre of this road system and enjoys strong connectivity to cities within and beyond Maharashtra. As Figure 2 shows, it lies roughly 45 kilometres from Tuljapur, 73 from Pandharpur, 95 from Paranda, 274 from Pune and 402 from Mumbai, with further road links to Hyderabad, Bengaluru and Chennai. Positioned on the Pune–Hyderabad corridor, road travel is the preferred means of reaching the district, and regular bus services run by the state and private operators tie the district into the regional network. This external road connectivity is a genuine strength.

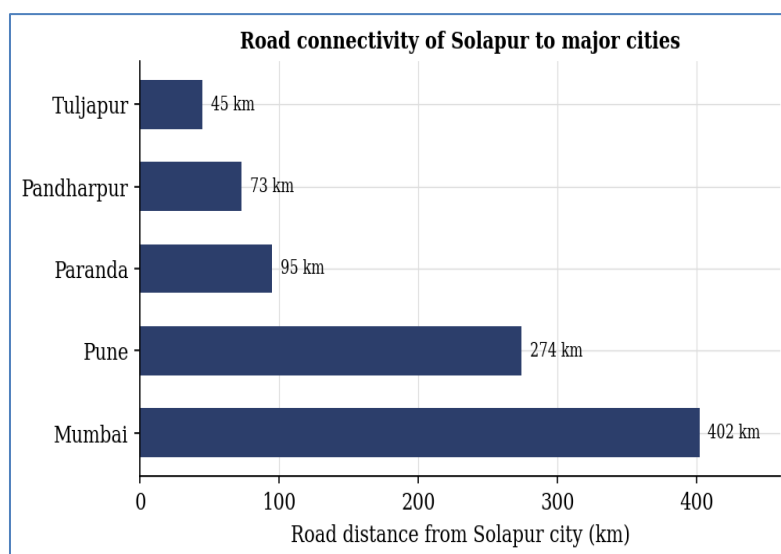


Figure 2. Road distance from Solapur city to selected cities.

Public road transport is the backbone of everyday mobility for most residents. State transport buses, supplemented by private operators, connect Solapur to the surrounding towns and villages and carry the bulk of

passenger movement, since private vehicle ownership, though rising, remains limited among the rural majority. Shared auto-rickshaws and jeeps fill the gaps on rural routes that scheduled buses do not reach. For freight, the road network carries agricultural produce from the countryside to market towns and industrial goods from the MIDC estates to distant markets, using the district and rural roads to feed the highway spine. The dependence of both passenger and freight movement on roads is near total for internal journeys, which is what makes the condition of the network so consequential.

Rail transport

Rail is the district's second mode, and it is anchored by Solapur Junction, an important station on the Central Railway. The junction lies on major routes and provides both short and long-distance services, connecting the district to Mumbai, Pune, Hyderabad, Bengaluru, Chennai, Nagpur and other cities through express, superfast and ordinary trains. For long-distance passenger travel and for certain freight, rail complements the road network and extends the district's reach across the country.

The significance of Solapur Junction goes beyond the district itself, since it functions as a node in the wider Central Railway system rather than merely a local station. Efforts to add services and improve connectivity to emerging industrial and commercial centres have aimed to keep pace with the district's changing needs. But rail, for all its importance to long-distance movement, does not reach most of the district internally; it links the main towns to distant cities rather than the villages to their tahsil headquarters. For internal circulation, the district falls back on roads.

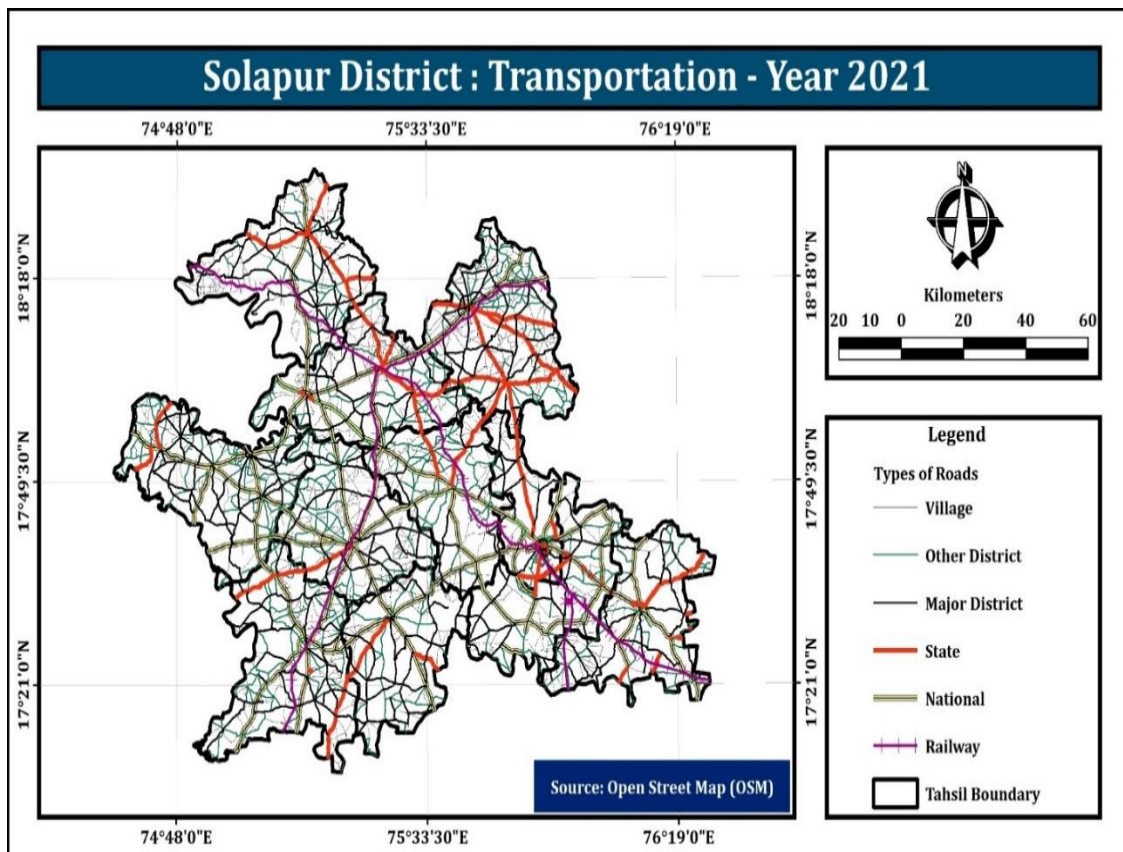


Figure 3. Solapur District Transportation

Air transport

Air transport plays essentially no role in the district's everyday movement. Solapur has only limited existing airport infrastructure, and the main prospect for improvement, a proposed greenfield airport near Boramani village about fifteen kilometres from the current site, involving the acquisition of some 650 hectares, remains on hold pending approvals. Until that project advances, air connectivity is not a meaningful part of the district's transport system, and residents and businesses relying on air travel must use airports elsewhere in the region. This is unremarkable for an interior district of Solapur's size and character. Air transport in India is concentrated in metropolitan and larger urban centres, and a district whose economy is agrarian and industrial rather than service-oriented has limited demand for it. The absence of functioning air connectivity is therefore a description of the

district's stage of development rather than a criticism of its planning, though the proposed airport, if built, could change the calculus for the district's newer industries.

Discussion: the modal balance

The overall balance is clear. Road transport dominates internal and much external movement; rail provides important long-distance connectivity centred on a single major junction; and air is effectively absent. This is a typical modal profile for an interior Indian district, and it has a straightforward implication. Because road transport carries almost everything that moves within the district, the reach and quality of the road network, and especially of the rural roads that make up nearly half of it, are the decisive factor in how well most of the district's population is served.

The strength of the district's external connections, by road and by rail, should not be allowed to obscure this. A district can be well linked to Mumbai and Hyderabad while its interior villages remain poorly connected to their own market towns, because the two depend on different parts of the network. Solapur's highways and its rail junction serve the first kind of connectivity well; the second depends on the district and rural roads, whose condition and completeness vary. For the majority of the district's people, who live in villages and rarely travel far, it is this internal road connectivity, not the highways or the junction, that shapes daily access to markets, schools and health care.

Conclusion

Solapur district's transport system is road-dominated, rail-supported and effectively without air. Its road network of some 21,090 kilometres, in which rural roads predominate and national highways form the long-distance spine, carries the bulk of the district's movement, while Solapur Junction ties it into the national rail network and a proposed airport remains unbuilt. The district is well connected externally but depends heavily on roads internally, so that the reach and quality of its rural road network remain the single most important determinant of how well its largely rural population is served. Strengthening that internal network, rather than adding new modes, is where improvements to the district's transport would do most good.

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Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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