# NEXT YEAR, NAVI MUMBAI AIRPORT'S T1
## WILL BOOST MMR FLIGHT CAPACITY 40%

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The Navi Mumbai International Airport (NMIA), expected to become operational by 2024-end, will take off on a steep climb as its first terminal will have a capacity of 2 crore passengers per annum, double that of the original plan. It will be a game changer for the Mumbai Metropolitan Region (MMR) which is currently served by the space-starved Mumbai airport, which at its peak, handled 4.8 crore passengers per year. The new airport would shake up the demand-supply dynamics by adding 40% more passenger handling capacity overnight to the region's airports.

Unlike mega airports, Mumbai airport, hemmed in by slums, could not grow beyond single-runway operations in its over 80-year existence. Between 2015 and 2018, while airports across India had double-digit growth in domestic passenger traffic, Mumbai, the birthplace of Indian aviation, was held back due to infrastructure constraints. When NMIA debuts, passengers from Mumbai can expect more direct connections to destinations domestic and international and possibly better fares than what is on offer currently.

At NMIA, things changed dramatically when Adani Airport Holdings Ltd (AAHL) took over Mumbai International Airport Ltd (MIAL) from GVK Group in July 2021 and with that MIAL's NMIA project fell into Adani's hands. "On his first visit to the NMIA site after that acquisition, Adani Group founder and chairman Gautam Adani said the upcoming airport's projections should be revised given the massive requirement and potential of MMR. After that it was decided to execute Phases 1 and 2 together by creating a capacity of 2 crore passengers per annum (CPPA) at one go by December 2024 and the ultimate capacity was revised to 9-9.5 crore," said a senior group official.

Conceived in 1999, NMIA is finally taking shape. Nearly 4km of flattened land has received the first coat of bitumen to eventually become the first runway towards the south of the 2,860-acre site. Also, 400 meters of a hillock will be cleared by August to make way for the 3.7-km southern runway. Construction is on in full swing to build Terminal 1

(T1), with its roof expected to be in place before December. While the national bird, peacock, was the design inspiration for the Mumbai airport, NMIA's terminal will draw its features from the national flower, lotus.

Adani Airports CEO Arun Bansal told TOI that both Delhi and Mumbai airports used to handle about 3.5 crore passengers when they were handed over to private operators in 2006. In 2019, Delhi airport handled almost 7 crore passengers, with 4.8 crore being Mumbai's peak capacity. "As India's financial capital, Mumbai has significant pent up demand and travel requirement could have been more than Delhi by now. The combined capacity of CSMIA and NMIA will be 6.5 crore when the latter gets operational next December. So NMIA is needed today," Bansal said. The combined phases 1 and 2 are being built at a cost of Rs 15,980 crore, for which Adani has achieved financial closure from a consortium of eight banks.

Mumbai began losing at the turn of the century with the advent of low-cost carriers, airlines that operate with short turnaround times. The take off/landing time slots

and speed afforded by parallel runways of Delhi, Bengaluru, and Hyderabad are not available in Mumbai airport which has two cross runways. But NMIA eventually will have a parallel runway, making it the first such airport for MMR. "NMIA will be an integrated domestic-cum-international airport from day one," Bansal said. The airport will, like the upcoming Noida airport, have swing gates, meaning an airline would be able to operate both domestic and international flights from the same gate.

The 2 lakh square metre T1 is being designed as per LEED

Gold standards (LEED stands for Leadership in Energy and Environmental Design, a green building certification program used worldwide) As required by the Bureau of Civil Aviation Security, T1 will start operations with body scanners for passenger screening and 3D CTX (computer tomography X-ray) handbag scanners where flyers will not need to take out their personal electronic devices and liquids out of bags for checking. "We are looking at 17 CTX and may go up to 19," said an official.

Since demand for private aircraft remains high in this

region, phase 1 & 2 will have parking for 60 jets. The state-run Airports Authority of India, which provides air navigation services, is planning "joint air space operations" for Mumbai airport and NMIA. "Starting with T1, NMIA is planned to be one of the most energy efficient and environmentally sustainable airports in the world. We will have three dedicated aviation turbine fuel (ATF) supply lines to NMIA. The fuel farm here has provision for sustainable aviation fuel (SAF) and the number of those storages will depend on this fuel's availability," said a senior Adani

Group official. EV charging stations have been planned across the airport, on landside and airside as vehicles plying here airside will be electric.

NMIA will be a better habitat for low-cost carriers than Mumbai airport. The quick turnaround process is: land, deboard passengers, board and depart as quickly as possible. The take off/landing time slots and speed afforded by Delhi airport's parallel runways – both runways can be used simultaneously – turned it into a natural habitat for low-cost carriers (LCCs). But not Mumbai with its cross runways.

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Artist's impression

### 'AIRPORT WITHIN A RADIUS OF NINETY MINUTES'

> The Navi Mumbai site, with all its modes of connectivity, will fulfil global airport commute norms. The upcoming airport is not only for Mumbai, but also surrounding cities like Thane and Navi Mumbai — **An NMIA official**

Authorities concerned with the under-construction Navi Mumbai International Airport (NMIA) say:

**45-90 mins** Should be the travel time for any commuter of a city to reach a domestic airport terminal according to established global standards

**60-120 mins** Should be the travel time for any commuter to reach a terminal for international flights

**COMMUTE TIME TO NMIA**

| Place | Time |
|-------|------|
| Pune | 2 hours |
| Thane | 45 minutes |
| Mumbai | 1 hour |
| Alibaug | 1 hr 30 min |

Quick local connectivity to an airport is vital for passenger convenience, business activity, tourism, multi-modal transport integration, and regional development; it improves accessibility, enhances overall travel experience, and drives economic and social benefits for surrounding areas


**LEVIATHAN:** NMIA is proposed to house India's largest general aviation terminal, with parking for 360 aircraft. At commissioning, parking for 60 jets will be available, straightaway easing the region's parking bay shortage woes

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## Transport on ground to be challenge for passengers

With the commissioning of the Navi Mumbai airport on the horizon, it is anticipated that teething problems, common to most new airports, will soon emerge. One of the issues would be ground transportation, both between Mumbai and the airport, as well as between the existing Mumbai airport and the new Navi Mumbai airport for transit passengers (those who have connecting flights that require landing at one airport and departing from the other).

In major cities worldwide, multiple airports are often serviced with excellent airport-to-airport ground connectivity. However, this is not projected to be the case with the Mumbai region, at least by the time the new airport starts operations. As a result, passengers using the Navi Mumbai airport during the initial months are likely to face some challenges. The Mumbai Metropolitan Region Development Authority and City and Industrial Development Corporation have proposed building Metro Line 8 to connect both airports, but the planning is still in early stages, and no project management consultant has been appointed to work on the 32km stretch.

This leaves passengers with two options: road or rail. Local train travel is impractical due to complicated routing. Therefore, the question arises: How viable is the road transport option? Two factors come into play: The congested roads of Mumbai and surge pricing applied by ride-hailing services. For example, a Mumbai resident might find a comparatively cheaper fare for a flight from NMIA. But when factoring in the time and money spent on travelling to the city's outskirts, would that option still be attractive? Though dedicated transit taxis are bound to be provided to ease commute.

Currently, Mumbai airport serves a more densely populated catchment area than Navi Mumbai airport will. But for airlines, the ultimate consideration would be which airport offers a better passenger load factor. The answer may vary depending on time, flight, and season. The initial months will provide valuable insights. TNN

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## DRIVERLESS COACHES BETWEEN TERMINALS


Pics: Artists' impressions

### Navi Mumbai International Airport (NMIA)
Ulwe, Navi Mumbai

**Area** 2,860 acres
*Equivalent to 115 Azad Maidans. In contrast, Mumbai airport's area is 1,976 acres

**HIGHLIGHTS**
- It will be the first airport in India to offer dedicated sustainable aviation fuel (SAF) for aircraft refueling, catering to the operators of general aviation aircraft
- Terminals will be interconnected with 'automated people movers', one of them underground

**PLANNED TERMINALS**
- The west side of the airport will comprise Terminals 1, 2 and 3 (T1, 2, and 3)
- The east side will have Terminal 4 (T4)

**3.5**

| T1 | T2 | T3 | T4 |
|----|----|----|----|
| 2 | 2 | 2 | 2 |

Terminal

**Total 9.5**

■ Capacity

**CONSTRUCTION PHASES**

**Dec 2024** | The southern runway and Terminal 1 (T1) will be operational

**March 2025** | Construction will commence on the northern runway and Terminal 2 (T2). Deadline: 2028
- Work will also start on an automated people mover between T1 and 2, and on preparing the site for Terminal 3 (T3)

- An underground automated people mover line will be laid to connect to the proposed Terminal 4 (T4)

**March 2029** | Construction will begin on T3

**2032** | Deadline for all phases, including T4

**SOARING NUMBERS**

**2** Number of runways (parallel to each other, unlike Mumbai's airport's cross-runways)

**42** Number of aircraft the airport can accommodate at a time

**5,500** Vehicles that can be accommodated in the airport parking lot at a time

**GREEN CONCERNS | Environmentalists say...**
- Airport site is located near or on parts of wetlands
- Construction work has resulted into loss of mangroves and mudflats
- Avian and marine life has been affected as a result
- Livelihoods of local populations dependent on fisheries have been affected
- The airport site is not far from the Karnala Bird Sanctuary, raising concerns about further effects on bird population
- Possible bird-strike incidents are also a spectre (though engineering experts say solutions are on the anvil; airport authorities say the concerns are unfounded)

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## Hill flattened, rivers diverted for a site most accessible
### Road Connectivity, Infra Access Shaped Choice

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Around 2009-10, a solitary blue-coloured board stood near the Panvel-Uran road, which said this was the site for the upcoming Navi Mumbai International Airport. With wetlands all around it, this was the time the greens began expressing concerns that the region would face an environmental impact as facilities were built to meet the needs of aviation traffic in the Mumbai region.

The second airport servicing Mumbai was originally to be in Mandwa-Rewas, but the proposed site could hold only a single runway. The City and Industrial Development Corporation (Cidco), which was the nodal agency, revised the plan and began scouting for a spot where two parallel runways could be built. The present 2,860-acre location was chosen based on the fact that: a) 78% of the land was already in Cidco's possession; b) it was close to Panvel town and power, water, communication lines would be easier to provide; c) nearest railway station at Panvel was 1.5km away, at least two highways—NH4B and SH54—were in proximity, and a road called Aamra Marg skirted the site's boundary.

The chief constraint was there were 10 settlements spread over seven villages within the proposed operational area with a population of 15,000. There was also the challenge of flattening Ulwe Hill and diverting two rivers, Ulwe and Gadhi, along the boundary. But the diversion of the rivers raised questions about the prospect of

flooding in extreme weather. Apart from this, greens raised concerns about mangrove patches along the tidal zones of the rivers and the Panvel creek. Since the area fell in the Coastal Regulation Zone, it required mitigating measures to prevent damage to marine and aquatic life. But as the site was accessible by all modes of transport and basic infrastructure, including housing, was easier to provide, it was finalised.

It's a decision that still raises questions. Executive trustee of Conservation Action Trust, Debi Goenka, said, "Mangroves form part of the site. This loss was supposed to be compensated by mangrove afforestation in Dahanu, but this has not happened more than 10 years after work commenced. In addition, more than 1,200 acres of the site was covered by mudflats...its destruction affects bird life and marine life, including fisheries on which local population depends."

B N Kumar of NatConnect Foundation said destruction of wetlands will impact the bird population. He also

raised concerns about the likelihood of bird-hits as the area borders sites rich in avian life including mangroves and mudflats on which flamingos thrive. Goenka also pointed to the proximity of the airport to Karnala Bird Sanctuary, which is about 10-12kms away.

As for the resettlement question, residents of Chinchpada, Kolhi, Kopar, Owle, Varche Owle, Pargaon-Dungi, Ulwe, Kombadbhuje, Targhar and Waghivli Vada are being relocated to adjoining areas such as Wadghar, Wahal, Kunde Wahal among others. Those displaced are mainly fishermen, farmers, or daily wagers.

Landowners received Rs 1,000 per sq ft for building new homes, besides Rs 500 per sq ft as rent for 18 months, Rs 36,000 as one-time special assistance, Rs 1,24,500 one-time agri compensation, and Rs 50,000 transportation allowance. They were also allotted 22.5% of acquired agri land as developed plot 3 times of roof area of their homes with 1.5 base FSI at Pushpak Nagar close to the airport.


**NO ALTERNATIVE:** Only Ulwe was found with space for two runways

Times Special pages designed by Shridhar Baraskar

# 9.5cr passengers at NMIA by '32, just behind Delhi

## 1st Terminal To Take Off With 2Cr Flyer Capacity

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The construction of the second runway of the Navi Mumbai International Airport (NMIA) will commence in March 2025, with 2032 as the deadline for all phases.

The combined capacity of Mumbai Airport and NMIA's Terminal 1 (T1) is expected to be 6.5 crore passengers per annum (CPPA), which falls short of the projected demand in the Mumbai Metropolitan Region (MMR). In contrast, Delhi's Indira Gandhi International Airport (IGIA) had handled nearly 7 crore passengers in 2019, prior to Covid, with its three runways and three terminals.

### WEB STORY

Scan QR for a summary of how aviation in the region will soar with NMIA

In addition to the construction of the second NMIA runway, the third phase, which will commence in March 2025, will include work on T2, designed to accommodate 3.5 CPPA. A senior Adani Group official said the first of the two automated people movers (APMs), or air trains, will also be built during this phase. This will connect all four terminals, including T3 in the west, and an underground line till T4 in the east.

Meanwhile, millions of tons of rock from a 2km long hill on the southern side have been utilized to fill the swampy area to the south, raising its level by 8.5 metres. This measure aims to prevent flooding from Gadhi river, which connects to Panvel Creek. The second runway will be constructed in the north, allowing sufficient time for the site to settle down before construction begins.

"Work on T3, with a capacity of 2 CPPA, is scheduled to begin in 2029. At that time, we will also initiate the construction of the second APM, which will transport passengers to the proposed 'aerocity' featuring hotels and other commercial developments. The second APM will also facilitate the transportation of thousands of workers from MMR to their workplaces across NMIA, as they commute via various trains to the common Metro station. Our aim is to discourage the use of private vehicles and maximize the utilization of the infrastructure being established," officials stated.

The last phase, which involves the construction of T4 with a capacity of 2 CPPA, will be dependent on demand from airlines. If an airline requests a dedicated terminal, Adani may consider building T4 for that purpose. The commencement of work on each phase will be triggered by achieving 75% capacity of the preceding phase. Although there are no formal estimates yet, the development of all phases of NMIA, along with the necessary connectivity, could cost up to Rs 1 lakh crore.

The project's focus lies in providing multimodal connectivity through high speed trains, Metro, suburban trains, express ways, highways, heliports, and even a water terminal, with boats operating from the Gateway of India and near Vashi. By 2032, NMIA's four terminals and two runways are expected to cater to 9.5 crore passengers per annum. For comparison, Delhi's IGIA, India's busiest airport, plans to have a peak capacity of over 10 crore passengers annually with four runways and three terminals by 2030. The upcoming Noida Air port, scheduled to open around the same time as NMIA, anticipates a peak capacity of handling seven crore passengers with two runways.

## FINDING YOUR WAY TO THE NEW AIRPORT

The key connectors to NMIA will be rail and road. In the future, a metro line too will link it with the airport in the city

### Western/eastern suburbs

**Road:** Get to Sion-Panvel highway via Eastern Express highway or Ghatkopar-Mankhurd Link road. Get to Vashi toll post. The EEH can also take you to Airoli toll post. From both the toll posts, take Thane-Belapur Road or Palm Beach Road to Aamra Marg (Uran-Phata Road) which will take you to the airport. Can also use Eastern Freeway from Chembur or Mankhurd to reach MTHL

**Rail:** Come to Kurla station, take harbour line to Sewri (and then travel by MTHL) or proceed to Nerul or Seawoods, alight to take Uran railway line to Targhar station

**Metro:** As of now travel by metro can take you only as far as Ghatkopar. In the distant future, a metro connecting the two airports via Kurla and Mankhurd has been planned. That will have an intersecting point with the underground metro from Aarey to Colaba at BKC.

**Water:** Water taxis from Gateway (or as proposed from Thane, Airoli, Vashi) to Belapur or airport jetty (when it's ready)
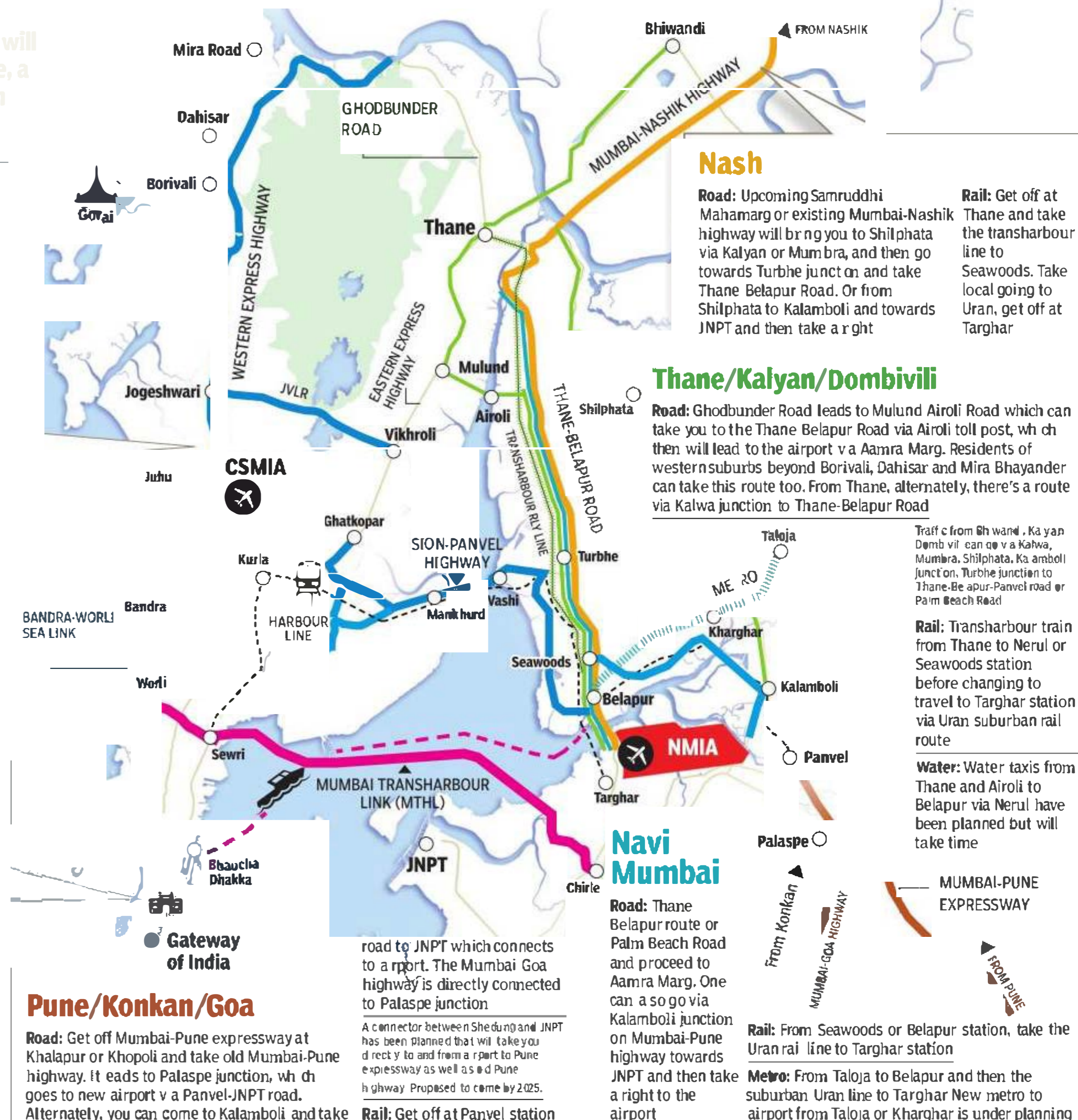
### South Mumbai (SoBo)

**Road:** Travel by Mumbai Transharbour Link (MTHL) via P D'Mello Road or Worli-Sewri connector

**Rail:** Harbour line to Sewri station and then take MTHL. Alternately, travel to Nerul or Seawoods station, switch to line going to Uran, get off at Targhar station which is near airport

**Metro/monorail:** Dr Ambedkar Nagar monorail station or Wadala TT metro station is close to Sewri from where MTHL begins. In the distant future, a metro from Mankhurd to airport has been planned

**Water:** Water taxis from Gateway of India or as proposed from Ferry Wharf (Bhaucha Dhakka) to Belapur or airport jetty

### Pune/Konkan/Goa

**Road:** Get off Mumbai-Pune expressway at Khalapur or Khopoli and take old Mumbai-Pune highway. It leads to Palaspe junction, which goes to new airport via a Panvel-JNPT road. Alternately, you can come to Kalamboli and take road to JNPT which connects to airport. The Mumbai Goa highway is directly connected to Palaspe junction

A connector between Shedung and JNPT has been planned that will take you directly to and from airport to Pune expressway as well as old Pune highway. Proposed to come by 2025.

**Rail:** Get off at Panvel station

### Nashik

**Road:** Upcoming Samruddhi Mahamarg or existing Mumbai-Nashik highway will bring you to Shilphata via Kalyan or Mumbra, and then go towards Turbhe junction and take Thane Belapur Road. Or from Shilphata to Kalamboli and towards JNPT and then take a right

**Rail:** Get off at Thane and take the transharbour line to Seawoods. Take local going to Uran, get off at Targhar

### Thane/Kalyan/Dombivili

**Road:** Ghodbunder Road leads to Mulund Airoli Road which can take you to the Thane Belapur Road via Airoli toll post, which then will lead to the airport via Aamra Marg. Residents of western suburbs beyond Borivali, Dahisar and Mira Bhayander can take this route too. From Thane, alternately, there's a route via Kalwa junction to Thane-Belapur Road

Traffic from Bhiwandi, Kalyan, Dombivili can come via Kalwa, Mumbra, Shilphata, Kalamboli junction, Turbhe junction to Thane-Belapur-Panvel road or Palm Beach Road

**Rail:** Transharbour train from Thane to Nerul or Seawoods station before changing to travel to Targhar station via Uran suburban rail route

**Water:** Water taxis from Thane and Airoli to Belapur via Nerul have been planned but will take time

### Navi Mumbai

**Road:** Thane Belapur route or Palm Beach Road and proceed to Aamra Marg. One can also go via Kalamboli junction on Mumbai-Pune highway towards JNPT and then take a right to the airport

**Rail:** From Seawoods or Belapur station, take the Uran rail line to Targhar station

**Metro:** From Taloja to Belapur and then the suburban Uran line to Targhar. New metro to airport from Taloja or Kharghar is under planning

### DISTANCE TO YOUR DESTINATION

| South Mumbai (SoBo) | | Pune/Konkan/Goa | | Thane/Kalyan/Dombivili | | Western/eastern suburbs | | Nashik |
|---|---|---|---|---|---|---|---|---|
| Gateway of India | Worli | Pune | Ratnagiri (Konkan) | Bhiwandi | Kalyan | Andheri(W) | Mira Road | |
| **49**km | **43**km | **115**km | **296**km | **46**km | **35**km | **49**km | **56**km | **170**km |

These distances are as per the present routes available