

Research



The Grand Revival of
Mumbai's
Residential Market

Mumbai HO

Knight Frank (India) Pvt. Ltd.
Paville House, Near Twin Towers,
Off. Veer Savarkar Marg, Prabhadevi,
Mumbai 400 025, India
Tel: 022 6745 0101 / 4928 0101

Ahmedabad

Knight Frank (India) Pvt. Ltd.
Unit Nos. 407 & 408, Block 'C', The First,
Behind Keshav Baugh, Party Plot,
Vastrapur, Ahmedabad 380 015, India
Tel: 079 4894 0259 / 4038 0259

Bangalore

Knight Frank (India) Pvt. Ltd.
204 & 205, 2nd Floor, Embassy Square,
#148 Infantry Road,
Bangalore 560 001, India
Tel: 080 4073 2600 / 2238 5515

Chennai

Knight Frank (India) Pvt. Ltd.
1st Floor, Centre block, Sunny Side,
8/17, Shafee Mohammed Road,
Nungambakkam, Chennai 600 006, India
Tel: 044 4296 9000

Gurgaon

Knight Frank (India) Pvt. Ltd.
1505-1508, 15th Floor, Tower B,
Signature Towers South City 1,
Gurgaon 122 001, India
Tel: 0124 4782700

Hyderabad

Knight Frank (India) Pvt. Ltd.
Western Dallas Centre, 5th floor, Office #3,
Hyderabad Knowledge City,
Survey No. 83/1, Raidurg, Serilingampally Mandal,
Ranga Reddy District, Telangana, Hyderabad, 500032, India
Tel: 040 44554141

Kolkata

Knight Frank (India) Pvt. Ltd.
PS Srijan Corporate Park
Unit Number - 1202A, 12th Floor,
Block - EP & GP, Plot Number - GP 2,
Sector - V, Salt Lake, Kolkata 700 091, India
Tel: 033 6652 1000

Pune

Knight Frank (India) Pvt. Ltd.
Unit No.701, Level 7, Pentagon Towers P4,
Magarpatta City, Hadapsar,
Pune 411 013, India
Tel: 020 6749 1500 / 3018 8500

TABLE OF CONTENT

01

Mumbai Residential
Growth Cycle

Page no. 06

02

Robust Demand Crossing
Pre Pandemic Benchmarks

Page no. 10

03

Changing Home
Buyers Preference

Page no. 11

04

Big Infrastructure
Push

Page no. 19

FOREWORD



Shishir Bajaj

Chairman and Managing Director
Knight Frank India Pvt Ltd

The Mumbai residential market that had experienced a slowdown in demand for close to a decade, witnessed a remarkable renewal in the last ten quarters. In the past decade, the market started to recalibrate itself to become more demand oriented. Prices were corrected and interest rates reduced to be at a historical low in the early part of 2021. Aided by supply side reforms such as successful implementation of RERA, home buying became a better experience for end-users.

The most important development in the last thirty months was the shift in attitude towards home buying. The pandemic created a need for security and unequivocally, home ownership became the sign of stability. Those who believed in an 'uber' lifestyle gravitated to ownership and many who owned homes considered upgrading to make space for the changed lifestyle of 'work-from-home' and 'school-from-home'.

This shifting sentiment was brilliantly complemented by the State Government with the introduction of a stamp duty cut in 2020. It conclusively put to rest the challenges of affordability, and indeed became the turning point for latent demand to start converting to sales. Since then, Residential demand has remained buoyant despite the recent challenges and headwinds.

Since the beginning of 2021, emerging headwinds could have adversely impacted the momentum of home purchase. The rise in stamp duty in Mumbai followed by changes in the repo rate impacted home loan rates and the geo-political disturbances kept markets volatile. Yet, our firm belief is that the underlying demand drivers will continue to be in good shape. A key catalyst to help continue this momentum will be the supply side alignment with consumer needs on product price and promise.

In addition to the inherent strength of the housing market, the magnitude of infrastructure projects underway will connect the economic growth centers of the city to the affordable landscape of Mumbai Metropolitan Region (MMR) which will create a long runway for housing market growth in the city.

Our report attempts at capturing the essence of the recent growth of the Mumbai housing market and tracks the tangible and intangible factors affecting it.

I invite you to read the Knight Frank-NAREDCO Report 'The Grand Revival of Mumbai's Residential Market' which illuminates the performance highlights for the latest period. I hope you find it insightful.



Sandeep Runwal

President, NAREDCO - Maharashtra
Managing Director, Runwal

National Real Estate Development Council – Maharashtra (NAREDCO-Maharashtra) is the State chapter of the NAREDCO, an apex body of the Real Estate sector under the aegis of the Ministry of Housing & Urban Affairs, Government of India. Hon'ble Minister of Housing and Urban Affairs, Shri Hardeep Singh Puri ji, is its chief patron while six Joint Secretary level officers from the Central Government and Central PSUs are on the Governing Council of NAREDCO.

NAREDCO-Maharashtra has always been an advocate of holistic and collaborative growth of the real estate sector. COVID, as we all know, had a substantial impact on the real estate sector and infrastructure development across the world, bringing it to a complete standstill. However, with proactive support from both central and state governments, the real estate sector has shown an outstanding turnaround, bringing in a

fresh perspective to the sector in terms of consumer demands, technological adaptations, renewed vigour and improved awareness regarding sustainable practices and cutting-edge solutions etc.

Mumbai Metropolitan Region, which is always on the go, has experienced brilliant growth in the real estate sector in the past and we at NAREDCO - Maharashtra have been proactive in assessing the sector, carrying out various representations requiring interventions from various government authorities, conducting workshops, events, expos etc.

NAREDCO-Maharashtra in its continuous endeavours to promote knowledge awareness has partnered with Knight Frank India and is glad to present a report '**The Grand Revival of Mumbai's Residential Market**' analysing the real estate development in MMR. The report

brings in a fresh perspective for the real estate fraternity as a great knowledge enhancer for all stakeholders.

MUMBAI RESIDENTIAL GROWTH CYCLE

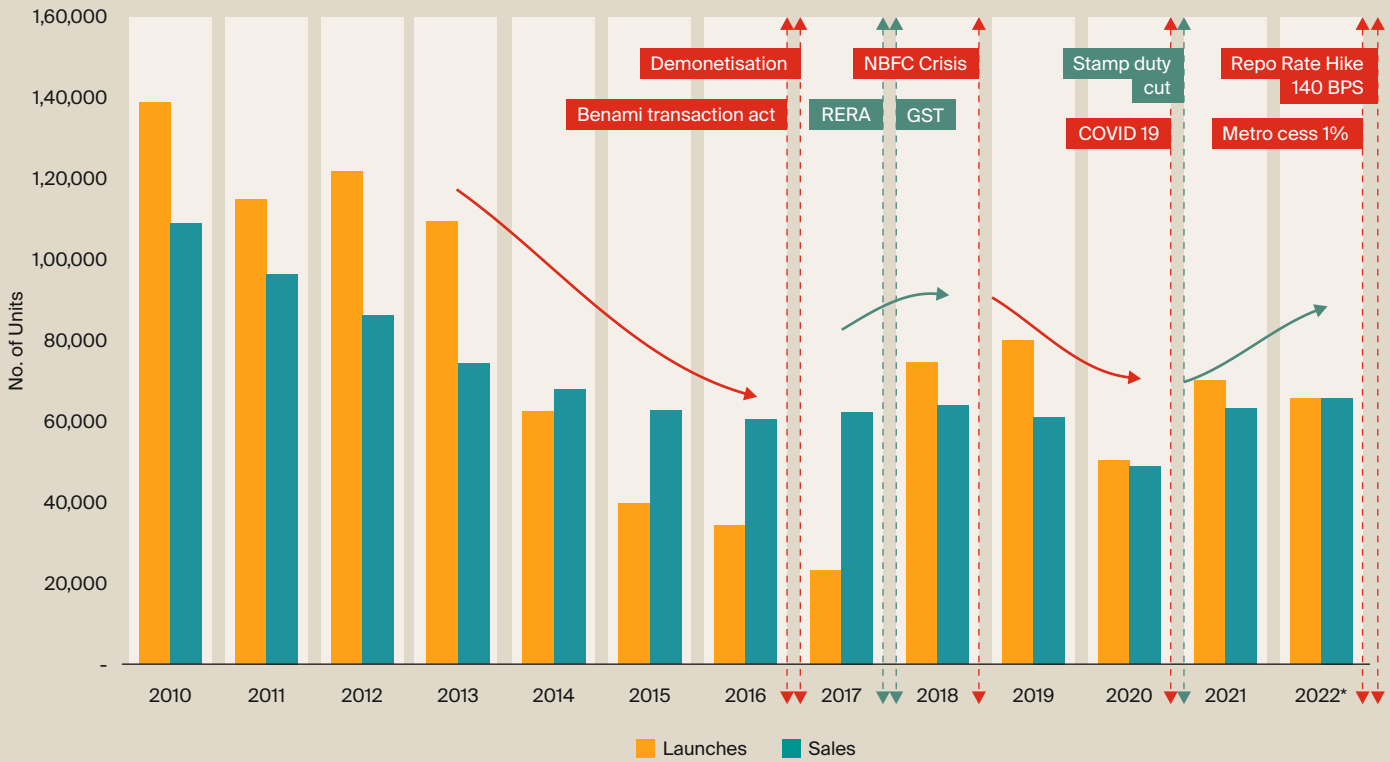
The Mumbai residential market (MMR region) has embarked on a new path of revival after a long down cycle since the pandemic had struck and the market is now poised to grow as we begin the new upcycle.

In 2010, the Mumbai market had logged its highest demand as well as supply volumes, with 0.11 mn (million) units sold and 0.14 mn units launched. However, in subsequent years, the residential market contracted sharply. Until 2013, the annual supply added outpaced the annual market demand, however post 2014, the new supply began to tumble as developers turned cautious considering the slowing demand and unsold inventory. The market further plummeted in the backdrop of demonetization and other government reforms like the introduction of the Benami Transaction Law, reaching its record lowest in 2016 and 2017. New policy initiatives like RERA and GST formalizing the real estate market were expected to help boost consumer and developer sentiment and led to a short revival in 2018. However, this upward trajectory was short lived as the sector was then inflicted with the NBFC crisis closely followed by the global pandemic in the subsequent year, bringing all activities to a standstill. To boost sales and restore consumer confidence, the Maharashtra government introduced a stamp duty waiver. Similarly, a reduction was made in development premiums to reinvigorate the supply side. Low home loan interest rates and multi-year low house prices also acted as a catalyst to reignite the country's most valuable market. 2021 witnessed the launch of 70,023 units, just 12% lower than the pre pandemic levels, and recorded housing sales of 62,989 units surpassing the pre pandemic sales level by 3%.

Starting 2022, the global supply chain disruption influenced rise in inflation pressures pushed the RBI to opt for repo rate hikes. This ultimately led to a rise in mortgage rates and affected home buyer affordability. The markets though have shown tremendous resilience throughout Q3 2022 with launches growing by 49% YoY (Year-on-Year) and sales by 35% YoY.

Figure 1

YoY Sales and Launches (2010-2022*)



Source: Knight Frank Research

* Note: 2022 (YTD) data updated until Q3 2022

Table 1

Micro-Market Classification

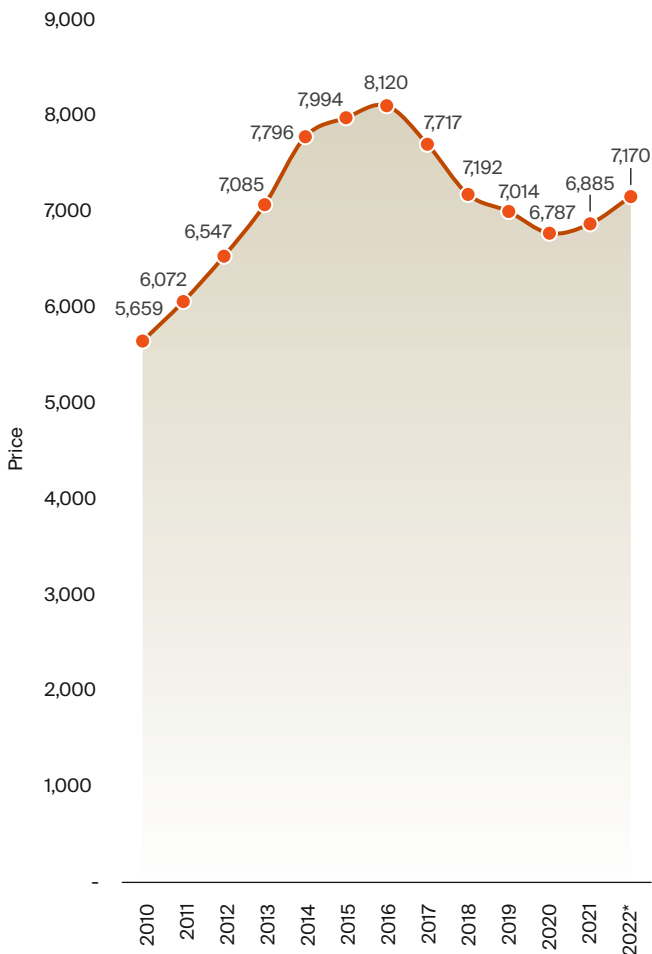
| Micro market | Locations |
|----------------------------|--|
| Central Mumbai | Dadar, Lower Parel, Mahalaxmi, Worli, Prabhadevi |
| Central Suburbs | Sion, Chembur, Wadala, Kurla, Ghatkopar, Vikhroli, Bhandup, Mulund |
| Navi Mumbai | Vashi, Nerul, Belapur, Kharghar, Airoli, Panvel, Ulwe, Sanpada |
| Peripheral Central Suburbs | Kalyan, Kalwa, Dombivli, Ambernath, Bhiwandi, Mumbra, Karjat |
| Peripheral Western Suburbs | Vasai, Virar, Boisar, Palghar, Bhayandar, Nalasopara |
| South Mumbai | Malabar Hill, Napean Sea Road, Walkeshwar, Altamount Road, Colaba |
| Thane | Naupada, Ghodbunder Road, Pokhran Road, Majiwada, Khopat, Panchpakhadi |
| Western Suburbs | Bandra, Andheri, Goregaon, Kandivali, Borivali, Santacruz, Vile Parle |

RESIDENTIAL PRICES MOVING UPWARDS

The weighted average prices in MMR recorded an upward movement since 2010 and peaked in 2016, recording an average housing price of INR 8,120 per sq ft. The rise is in tandem with the fall in housing sales between 2010 and 2016. The highest YoY growth in the weighted average housing prices was recorded at 10% in 2014. Post 2017, the housing prices started to ease in the MMR region. The timeline coincided with the implementation of RERA and GST. Supported by stamp duty waiver and all-time low mortgage rates, housing sales picked up in 2020. Changing global scenarios leading to a rise in raw material prices coupled with the robust sales momentum encouraged developers to opt for price rise in 2022.

Figure 2

Weighted Average Price (2010-2022*)



Source: Knight Frank Research

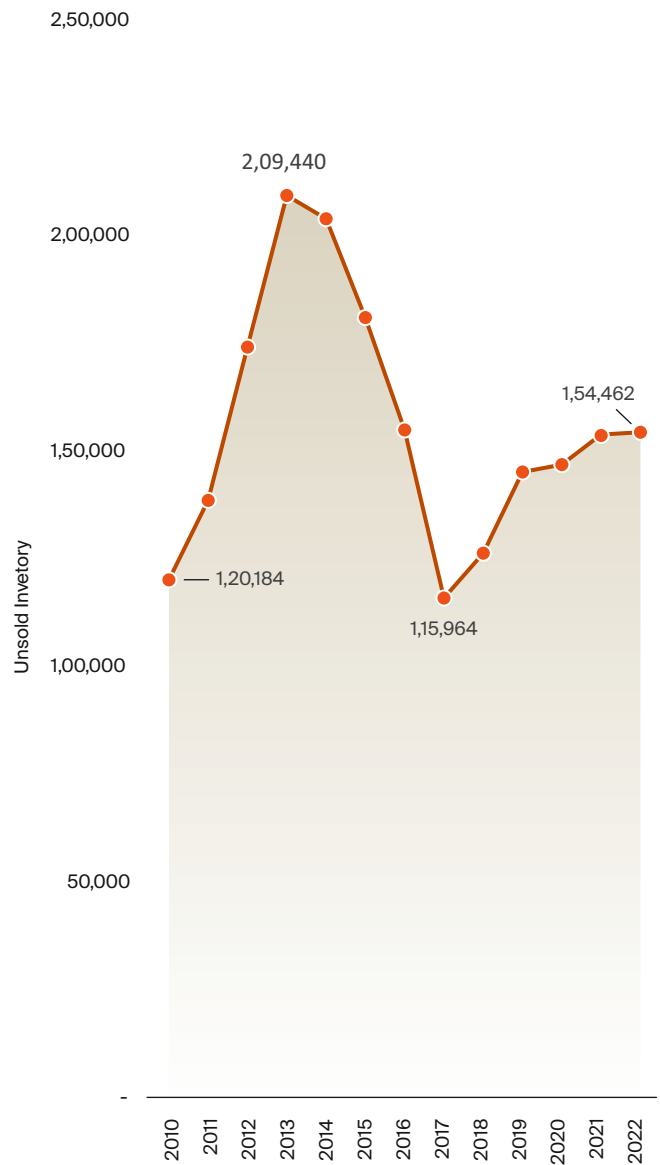
* Note: 2022 (YTD) data updated until Q3 2022

UNSOLD INVENTORY RISES MARGINALLY BY 5% YOY IN 2022*

The unsold inventory in MMR region had recorded an all-time high in 2013, which can be attributed to the supply level being consistently ahead of demand until this period. With the slowdown on the supply side since then, unsold inventory has recorded a decline. In 2022, unsold inventory remains above 5%, as both the supply and demand remain strong this year.

Figure 3

Unsold Inventory (2010-2022*)



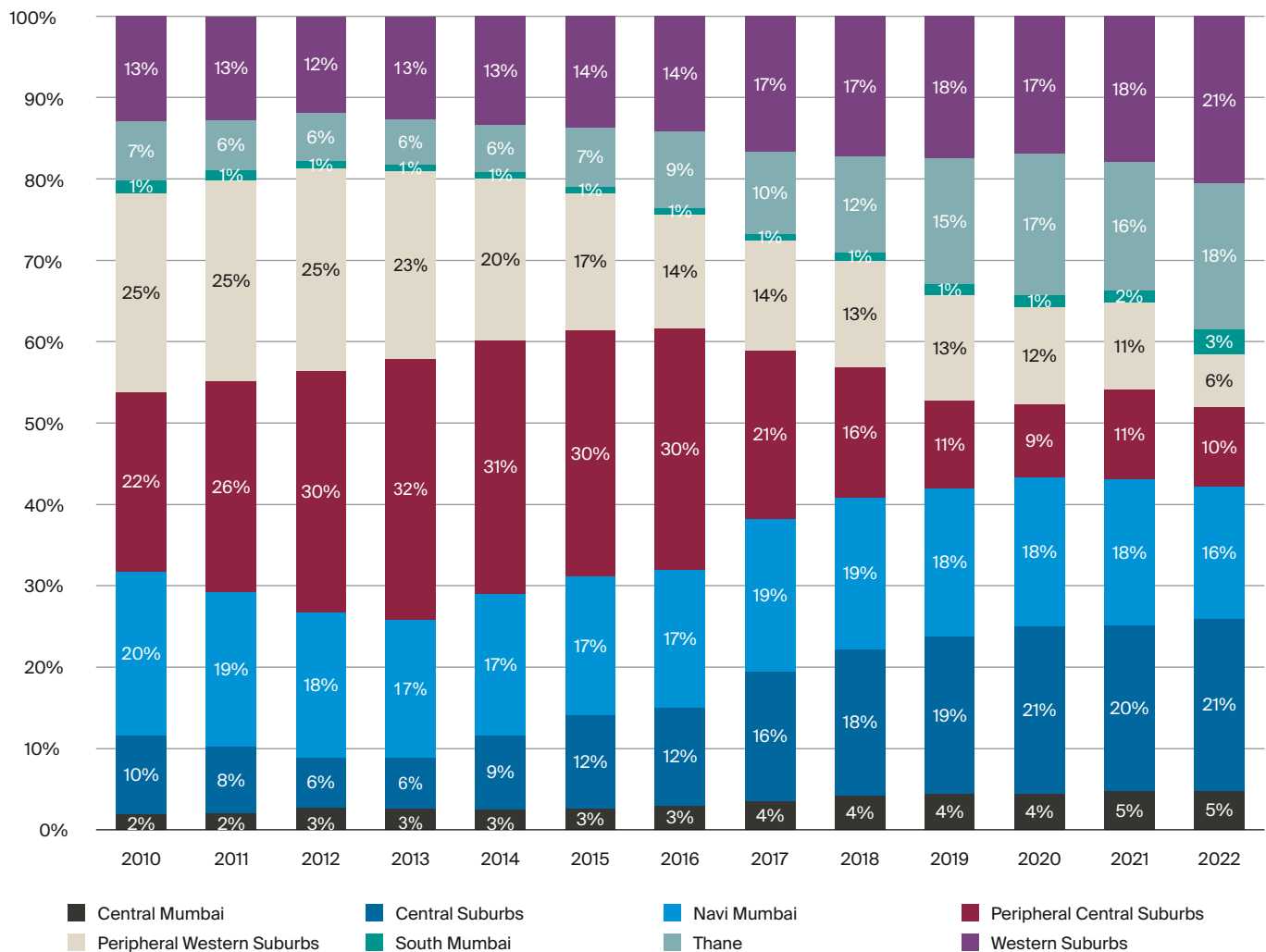
Source: Knight Frank Research

* Note: 2022 (YTD) data updated until Q3 2022

The peripheral suburban markets were the largest contributors to the unsold inventory in 2010. However, the increased infrastructure support coupled with the need for spacious homes led to improved consumer sentiment towards these markets. Consequently, their contribution to the unsold inventory declined over the years. In 2022, peripheral central suburbs and peripheral western suburbs had a contribution of a mere 10% and 6% respectively to the unsold inventory of the MMR region.

In contrast, central and western suburb markets are the largest contributors to the unsold inventory amounting to 21% each in 2022. This is followed by Thane & Navi Mumbai having a share contribution of 18% and 16% respectively.

Figure 4
Micro Market-wise Unsold Inventory (2010-2022)



Source: Knight Frank Research
Note: 2022 (YTD) data updated until Q3 2022

ROBUST DEMAND CROSSING PRE PANDEMIC BENCHMARKS

Government SOPs drove sales in 2020 & 2021

After a sluggish pandemic laden 2020, the MMR market has picked up pace and is growing robustly. In 2021, residential sales had expanded with government support; however notably, after the withdrawal of support, the market continues to grow representing the inherent strength of demand.

In an attempt to revive the market, the government had announced a stamp duty cut by 3 percentage points during 1st Sept 2020-31 Dec 2020, and by 2 percentage points during 1st Jan 2021-31 Mar 2021, which served its cause and spurred market traction. Apart from this stamp duty cut by the state government, the central government provided incentives to ease pressures and jump start market sales as also resumption of construction activity. RBI permitted all banks, housing finance companies and NBFCs to allow a moratorium of 3 months on the repayment of term loans outstanding on March 1, 2020. In addition, the premium charged for real estate development under DCPR was reduced by 50% for a year till January 31, 2021.

Strong consumer sentiment and affordability driving sales in 2022

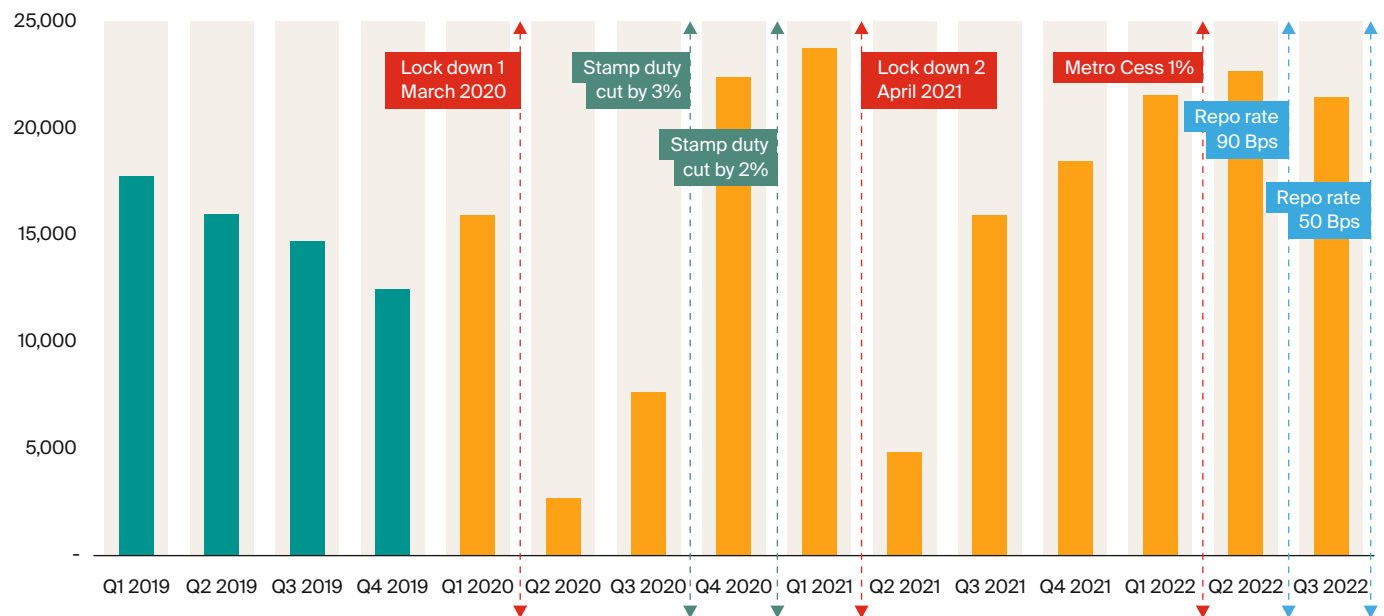
With government support, Q4 2020 and Q1 2021 sales surpassed the pre pandemic levels. The growth story continued in 2021, with sales being 3% above the pre pandemic levels of 2019.

Government sops and need for housing ownership remained the primary market drivers. The market's true bounce back can be seen in 2022, with Q3 2022 sales already surpassing 2019 volumes by 8%. Q3 2022 also recorded a 35% YoY rise in sales and 49% YoY rise in launches. Despite the changing economic condition, developers remain positive of the strong consumer sentiment and have opted for 6% YoY price rise in Q3 2022.

This jump in price has come in a period with no stamp duty benefits and with the levy of an additional 1% metro cess since April 2022. Further, to combat the rising inflation pressures, the RBI has opted to increase the repo rate by 140 bps until 29th September 2022, which has affected the homebuyer affordability. Despite strong headwinds, market demand continues to grow stoutly in 2022 with all three quarters recording housing sales above pre pandemic levels. Strong consumer sentiment, need for housing ownership and latent housing demand has pushed home buyers to continue purchasing. Now, with the festival season round the corner, sales are expected to grow further.

Figure 5

QoQ Sales (2019-2022)



Source: Knight Frank Research

Table 2

Residential Sales Growth 2019-2022

| Year | Sales (No. of Units) | Growth with reference to pre pandemic level |
|---------------------------|----------------------|---|
| 2019 (pre pandemic level) | 60,943 | |
| 2020 | 48,688 | -20% |
| 2021 | 62,989 | 3% |
| 2022 YTD (Q3 2022) | 65,650 | 8% |

Source: Knight Frank Research

* Note: 2022 (YTD) data updated until Q3 2022

CHANGING HOME BUYERS PREFERENCE

INR 10 mn and above ticket size gaining traction in 2022*

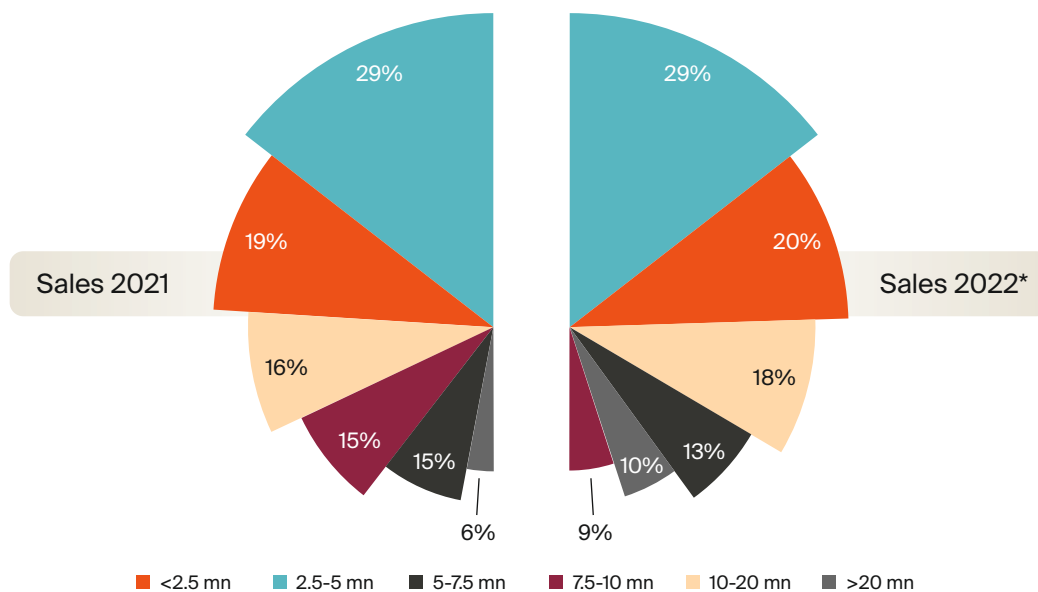
The share of housing sales for properties with ticket sizes in the range of INR 10-20 mn rose from 16% in 2021 to 18% in 2022 YTD, while premium housing gained traction with the share of above INR 20 mn ticket size growing from 6% in 2021 to 10% in 2022 YTD. This reflects the home buyer's inclination towards purchasing large sized homes. The demand for homes with ticket

sizes ranging from INR 5-10 mn however, has shrunk from 30% market share in 2021 to 22% in 2022 YTD.

The demand for residential properties with ticket size of INR 2.5-5 mn remained unchanged over the year with a share contribution of 29%. Under INR 2.5 mn ticket size properties saw a minor upward movement amounting to 20% of the total annual sales.

Figure 6

Ticket Size Split for Sales in 2021 and 2022*



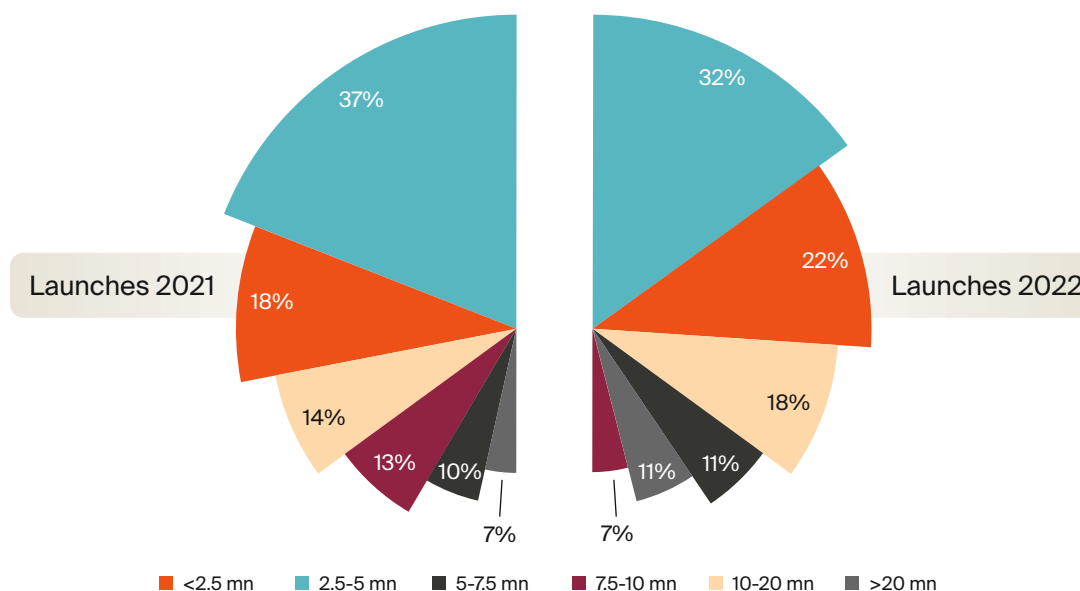
Source: Knight Frank Research

* Note: 2022 (YTD) data updated until Q3 2022

Supportive of housing demand, supply of homes in the ticket size of INR 10-20 mn grew substantially from 14% in 2021 to 22% in 2022 YTD. The premium category houses also recorded a rise in supply with its contribution from 7% of the total launches to 11%. INR 7.5-10 mn ticket size contracted its share of launches from 18% in 2021 to 11% in 2022 YTD.

Figure 7

Ticket Size Split for Launches in 2021 and 2022*



Source: Knight Frank Research

* Note: 2022 (YTD) data updated until Q3 2022

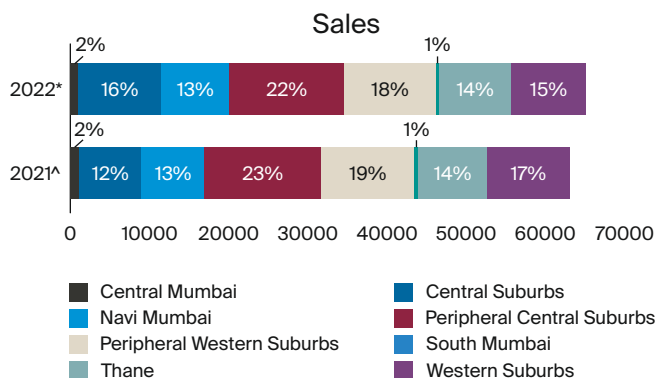
MICRO MARKET

Central suburbs emerged as a preferred market in 2022*

Peripheral suburban markets continue to dominate the housing sales; however, its share contribution has contracted in 2022 YTD amounting to 40% of the total demand as compared to 42% in 2021. While Central suburb has emerged as the next preferred in 2022 YTD. It is the only market that recorded a substantial YoY growth in 2022 YTD of 33%. On the contrary, the top 3 markets in 2021 i.e peripheral central suburbs, peripheral western suburbs and western suburbs recorded a degrowth. Sales has picked up marginally in Thane & Navi Mumbai markets.

Figure 8

Micro Market Split for Sales in 2021 and 2022*



Source: Knight Frank Research

* Note: 2022 (YTD) data updated until Q3 2022

Developers focus on western suburbs & peripheral central suburbs in 2022

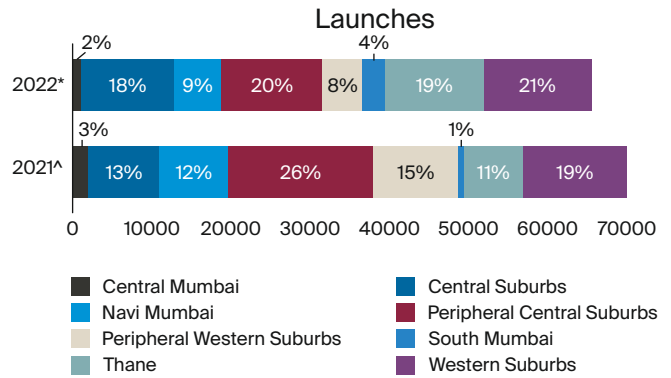
Developers remain cautious about adding new supply to the market due to the changing economic scenarios. Western suburbs held the largest market share amounting to 21% in 2022 YTD as compared to 19% in 2021. Targeting the largest demand market, developers have strategically added new supply to peripheral central suburbs amounting to 20% of the total supply of 2022 YTD.

Central suburbs have emerged as the next preferred location, having a share of 18% in 2022 YTD as compared to 13% in 2021. Central suburbs, South Mumbai, Thane and western suburbs have recorded a YoY growth in launches.

South Mumbai recorded a 319% YoY rise in launches and is contributing to 4% of the total market supply in 2022 as compared to 1% in 2021.

Figure 9

Micro Market Split for Launches in 2021 and 2022*



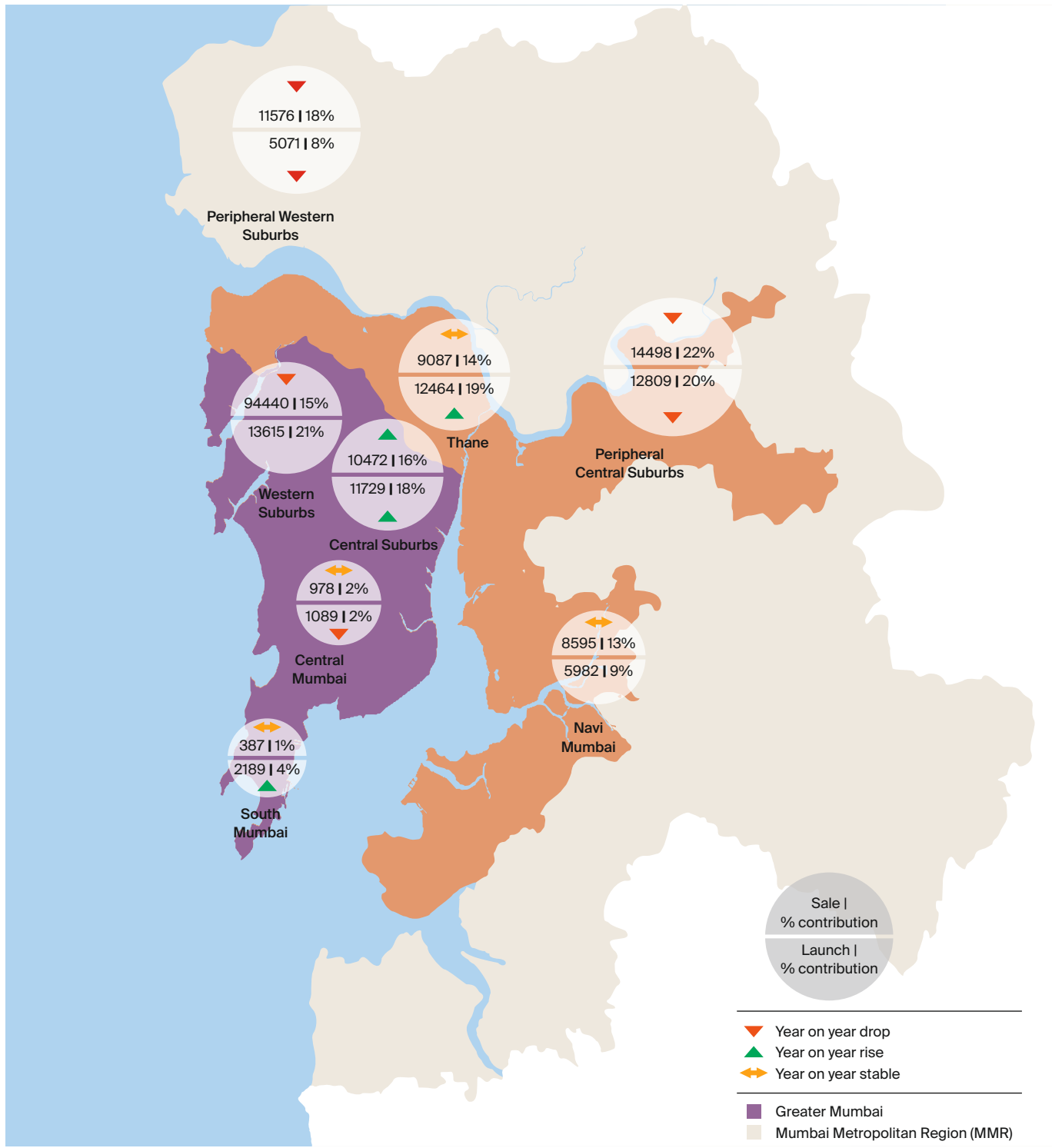
Source: Knight Frank Research

* Note: 2022 (YTD) data updated until Q3 2022



Figure 10

Micro Market-wise Sales and Launches in 2022*



Source: Knight Frank Research

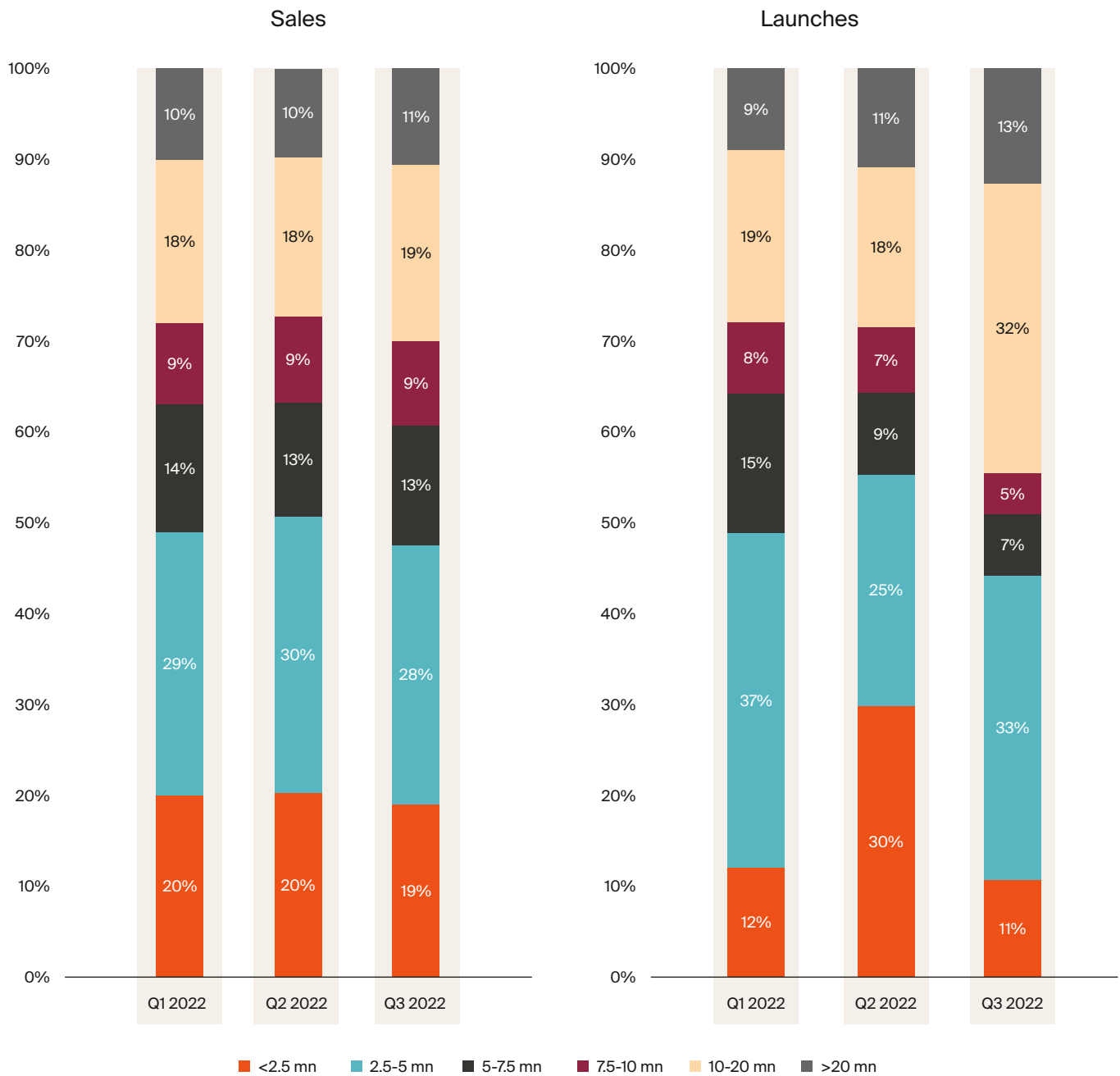
* Note: 2022 (YTD) data updated until Q3 2022

Demand for INR 10 mn and above homes increased marginally in Q3 2022

The housing demand in the MMR market is predominantly leaning towards homes with ticket size of INR 5 mn and under with a share contribution of 50% in Q2 2022. However, in Q3 2022, MMR recorded a dip in demand for homes in this category at a share of 47%, while demand for homes with INR 10 mn and above ticket size recorded an uptick. INR 10-20 mn category recorded a share take-up of 19% as compared to 18% in Q2 2022, while the above 20 mn ticket size category recorded a share take up of 11%

as compared to 10% in Q2 2022. The demand for 5-10 mn category remained unchanged.

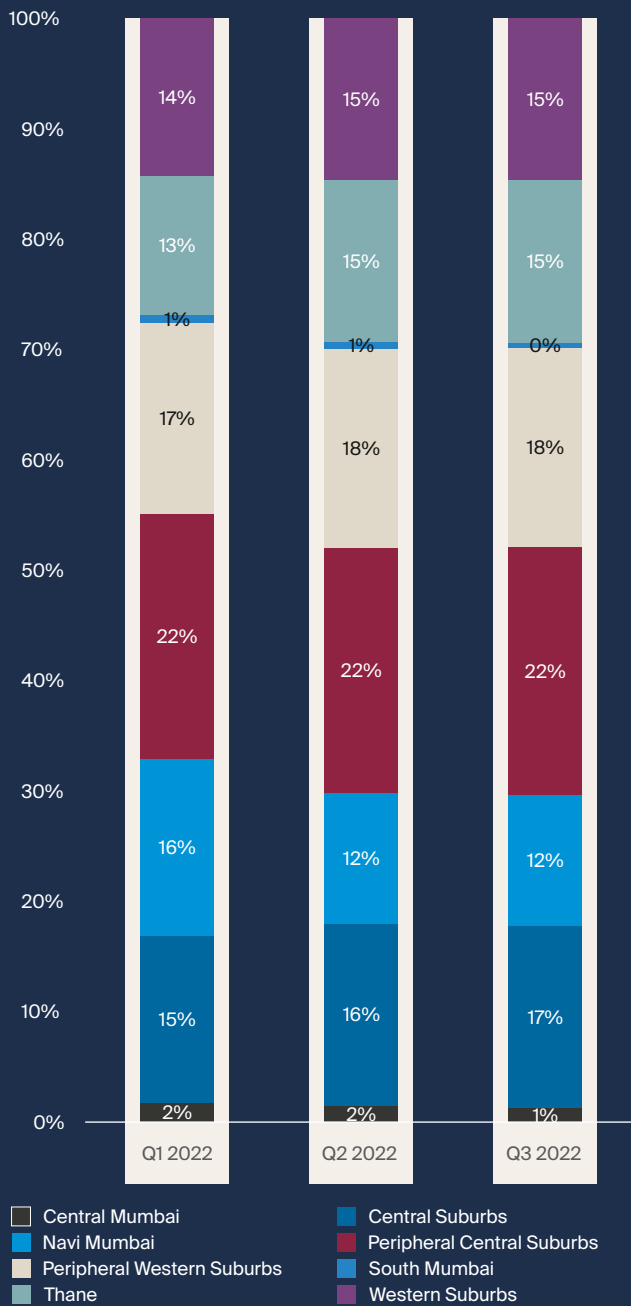
In Q3 2022, the supply of housing having ticket sizes ranging from INR 2.5-5 mn recorded the largest share take up of 33%, followed by ticket sizes ranging from INR 10-20 mn having a share take up of 32%. Developers took cognizance of changing economic and global conditions, however, as the festive season is round the corner, they remain confident of continued strong consumer sentiment.



Peripheral central and western suburbs continue to remain the preferred location for homebuyers in Q3 2022

Housing demand in Q3 2022 is mainly concentrated in the peripheral suburban micro markets. Peripheral central suburbs account for 22% of the housing demand in Q3 2022, followed by peripheral western suburbs accounting for 18%. Central suburbs have recorded a rise in demand, from 17% in Q2 2022 to 18% in Q3 2022.

Sales







THE BIG INFRASTRUCTURE PUSH

The transportation challenge of MMR – that of traveling long distances in reasonable time through affordable MRTS – would be met to a significant extent in the next decade. The Government is cognisant of the fact that travel time from places of employment to residential markets has increased progressively over the years and has become impractical. It is threatening to hinder the growth of the city and forcing companies to move out of MMR. To mitigate this problem, an unprecedented amount has been invested in creating new MRTS infrastructure in MMR over the past 5 years. MRTS projects worth over INR 2.1 trillion (excluding Navi Mumbai International Airport) are currently under execution.

To get a better perspective of the scale of investments committed to transport infrastructure projects currently underway in Mumbai, one needs to consider the investments made in major projects completed in the past 20 years. The Bandra-Worli Sea Link, Eastern Freeway and Metro Line One are the largest projects completed in the Mumbai region since the turn of the century and have entailed a total investment of INR 74 bn; this is a mere 4% of the enormous investments committed today. Some of the noteworthy projects are indicated in the adjoining table.

MAJOR INFRASTRUCTURE PROJECTS IN MUMBAI METROPOLITAN REGION (MMR)

| Project | Approximate cost (INR bn) | Approximate length of the project (km) | | Expected completion by | Ridership by 2031 | |
|---|---------------------------|--|--------------------------|--------------------------------|--------------------------|---|
| Mumbai Metro Line 2 A – Dahisar to DN Nagar | 64 | 18.589 | 246 km of metro networks | 2022 ¹ | 609,000 | |
| Mumbai Metro Line 2 B – DN Nagar to Mandale | 110 | 23.643 | | 2024 ² | 1,049,000 | |
| Mumbai Metro Line 3 – Colaba – Bandra – SEEPZ | 320 ⁶ | 33.5 | | 2024 ³ (Delayed) | 1,600,000 | |
| Mumbai Metro Line 4 – Kasarvadavali (Thane) to Wadala | 145 | 32.32 | | 2025 ⁴ (Delayed) | 1,231,000 | |
| Mumbai Metro Line 4 A – Kasarvadavali to Gaimukh | 9 | 2.7 | | 2025 ⁵ (Delayed) | | |
| Mumbai Metro Line 5 – Thane – Bhiwandi – Kalyan | 84 | 24.9 | | 2025 ⁶ (Delayed) | 302,500 | |
| Mumbai Metro Line 6 – Lokhandwala to Vikhroli (EEH) | 67 | 14.477 | | 2024 ⁷ | 400,000 | |
| Mumbai Metro Line 7 – Dahisar East to Andheri East | 62 | 16.475 | | 2022 | 668,000 | |
| Mumbai Metro Line 9 – Dahisar East to Mira Bhayandar and Andheri East to CSIA | 65 | 13.581 | | 2024 ⁸ | 1,112,000 | |
| Mumbai Metro Line 10 – Gaimukh-Shivaji Chowk | 44 | 9.2 | | NA | NA | |
| Mumbai Metro Line 11 – Wadala and CSMT | 87 | 12.8 | | March 2026 | NA | |
| Mumbai Metro Line 12 – Kalyan to Taloja | 41 | 20.7 | | NA | 192,420 | |
| Navi Mumbai Metro Line 1 Phase I, II and III | 40 | 23.4 | NA | NA | | |
| Coastal Road – Marine Lines to Kandivali West | 307 | 29.8 | 196 km of road networks | 2023 ⁹ | 68,000 cars by 2023 | |
| Mumbai Trans-harbour Link (MTHL) | 178 | 21.8 | | 2023 ¹⁰ | 100,000 vehicles by 2032 | |
| Virar-Alihaug Multimodal Corridor | 400 | 128 | | NA | NA | |
| Bandra-Versova Sea Link | 70 | 17.17 | | 2026 ¹¹ | - | |
| Navi Mumbai International Airport | 167 | Not applicable | | Not applicable | 2024 ¹² | - |
| Belapur-Uran Suburban Rail Line | 18 | 27 | | | 2023 ¹³ | - |
| Panvel-Karjat Suburban Rail Line | 28 | 28 | | 2025 ¹⁴ | - | |
| Total | 2,306 | 498 | | | | |

Source: Knight Frank Research, MMRDA, CIDCO, Economic Survey of Maharashtra 2020-21

Note: 1. All the project completion timelines in the document are official estimates.

¹ <https://urbantransportnews.com/news/mmrda-to-launch-operations-of-mumbai-metro-line-2a-and-7-in-january-2022>

² <https://www.metrorailnews.in/j-kumar-wins-contract-worth-inr-1308-crores-for-balance-work-of-mumbai-metro-line-2b/>

³ <https://www.metrorailnews.in/mumbai-metro-line-3-updates/>

⁴ <https://www.hindustantimes.com/cities/mumbai-news/metro-lines-4-5-connecting-thane-to-different-cities-to-be-completed-only-by-2025-says-mmrda-official-101654263919973.html>

⁵ <https://www.hindustantimes.com/cities/mumbai-news/metro-lines-4-5-connecting-thane-to-different-cities-to-be-completed-only-by-2025-says-mmrda-official-101654263919973.html>

⁶ <https://www.hindustantimes.com/cities/mumbai-news/metro-lines-4-5-connecting-thane-to-different-cities-to-be-completed-only-by-2025-says-mmrda-official-101654263919973.html>

⁷ <https://mumbai.citizenmatters.in/mumbai-metro-progress-update-whats-on-the-cards-31189>

⁸ <https://mumbai.citizenmatters.in/mumbai-metro-progress-update-whats-on-the-cards-31189>

⁹ <https://www.youtube.com/watch?v=GKAZkBFrlQe>, <https://www.constructionweekonline.in/projects-tenders/18912-mumbai-coastal-road-the-coast-is-clear>

¹⁰ <https://www.freepressjournal.in/mumbai/mumbai-60-of-sewri-nhava-sheva-sea-link-work-finished-says-mmrda>

¹¹ <https://www.hindustantimes.com/cities/mumbai-news/slowpaced-work-delays-17km-bandra-versova-sea-link-project-by-3-years-101645448132956.html>

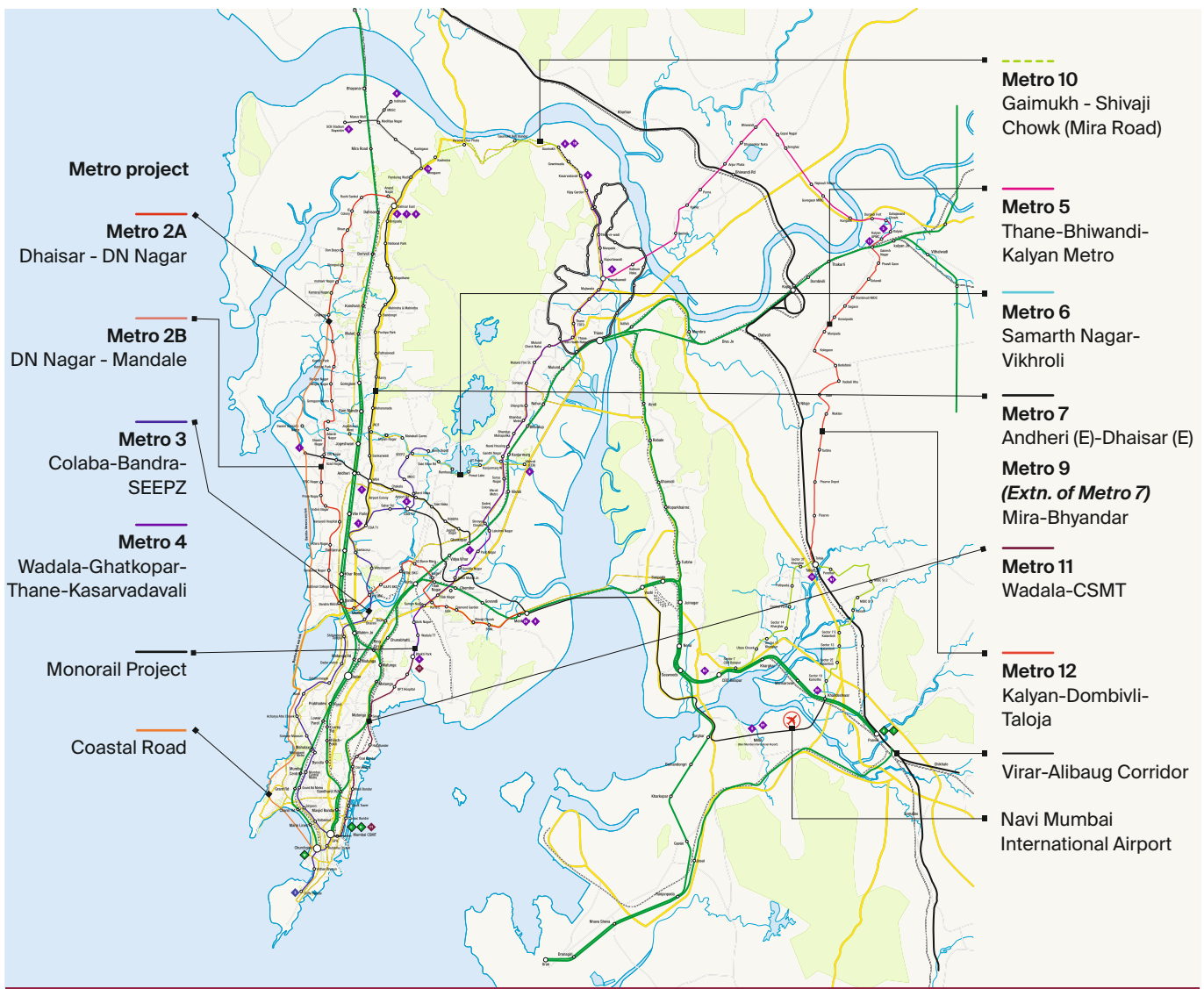
¹² <https://www.constructionweekonline.in/projects-tenders/18324-maharashtra-gov-gives-nod-to-adani-for-navi-mumbai-airport>

¹³ <https://www.mid-day.com/mumbai/mumbai-news/article/mumbai-uran-suburban-railway-line-gets-brand-new-deadline-23243844>

¹⁴ <https://www.hindustantimes.com/cities/mumbai-news/railway-line-doubling-to-reduce-csmt-karjat-commute-by-30-minutes-101655234349449.html>

Many of the projects mentioned in the table were expected to be operational 15 years ago. Had that been the case, MMR would not have faced some of the difficulties it is facing now. Due to challenges in policy implementation, these projects have faced an execution issue for a long time. However, learning from past mistakes, the emphasis is now on execution and completion of these projects. Once operational, they would transform the way residents in MMR travel. Connectivity across MMR would be seamless as most regions of MMR would come within a ring-based, closed structure as indicated in the map.

MAJOR TRANSPORT INFRASTRUCTURE PROJECTS UNDERWAY IN THE MUMBAI METROPOLITAN REGION (MMR)



INFRASTRUCTURE PROJECTS AND KEY INFLUENCE AREA

Approximately 250 km of metro and 70 km of road projects are in various stages of construction in MMR. These projects are expected to completely change the way citizens of MMR travel and this will influence real estate dynamics in the project corridor.

Work on all the under-construction metro lines in MMR are being executed much quicker compared to the pace at which Mumbai Metro Line 1 was constructed. There were shortcomings in terms of planning and execution during the construction of Mumbai Metro Line 1 (Versova-Andheri-Ghatkopar) which delayed the project by several years. The administrative authorities have learnt from their past mistakes and taken several precautions to avoid them.



MUMBAI METRO PROJECTS



2A

DAHISAR
→ **D N NAGAR**

Completion by
2022

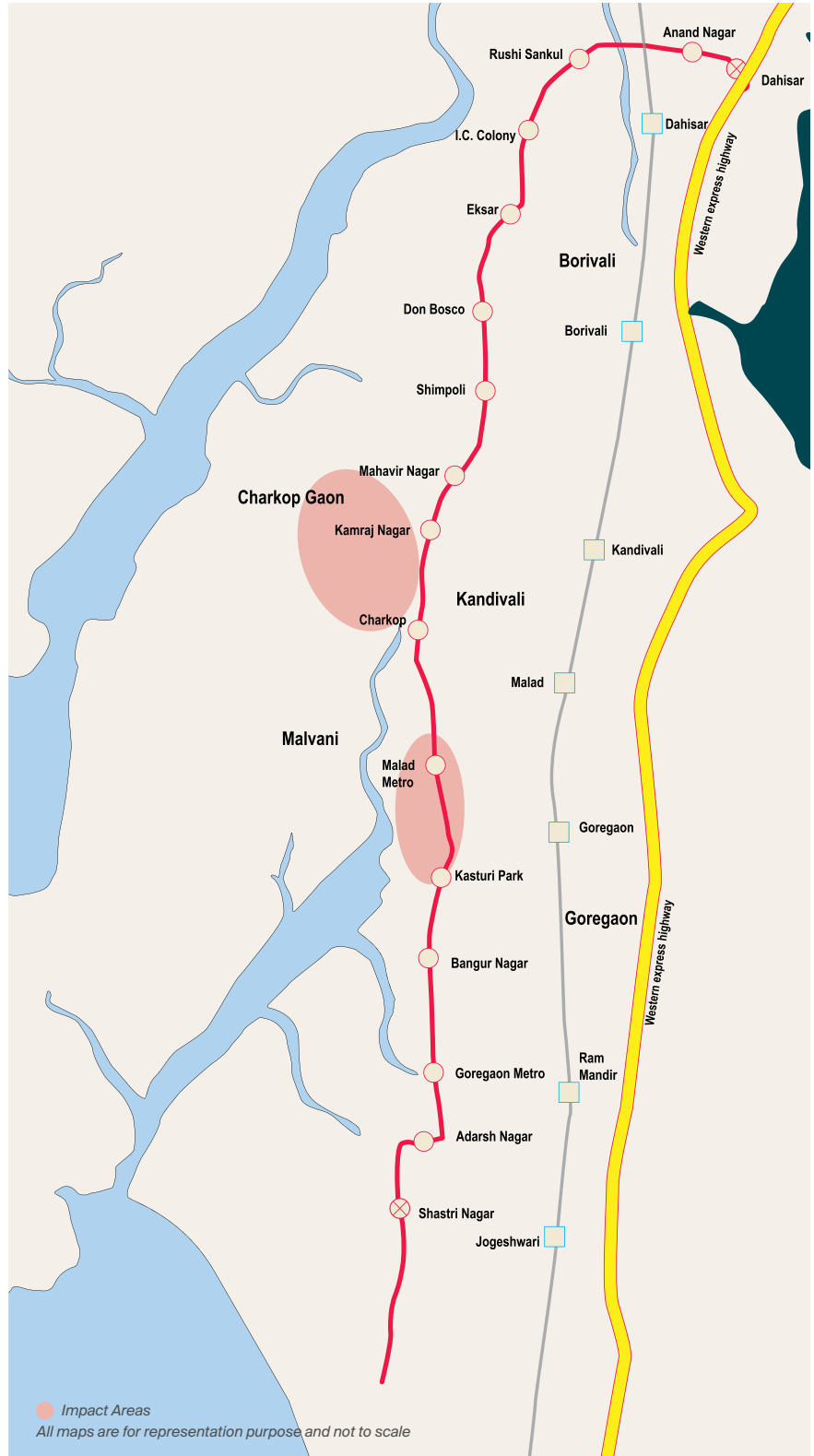
Length
18.589 Km (Elevated)

Stations
17 Nos. (All Elevated)

| | |
|---------------|----------------|
| Dahisar | Charkop |
| Anand Nagar | Malad Metro |
| Rushi Sankul | Kasturi Park |
| I C Colony | Bangur Nagar |
| Eksar | Goregaon Metro |
| Don Bosco | Adarsh Nagar |
| Shimpoli | Shastri Nagar |
| Mahavir Nagar | D N Nagar |
| Kamraj Nagar | |

Interchange stations for Metro at

1. D N Nagar (with Line 1: VAG metro)
2. Shastri Nagar (with Line 6: Lokhandwala - Vikroli)
3. Dahisar (with Line 7: Dahisar (E) - Andheri (E))
4. Dahisar (with Line 9: Dahisar (E) - Mira Bhayandar)



The Metro Line 2 is 42.2 km long and is divided into 2 phases – Line 2A and Line 2B. Line 2A is 18.6 km long with 17 stations between DN Nagar and Dahisar. Being built at an estimated cost of INR 64 bn, Line 2 B is 23.6 km long from DN Nagar to Mandale. Once the entire Line 2 is ready, it will become the longest metro line in MMR. The initial deadline for completion of Line 2A was second half of

2019; however, this has been revised to 2022. Trial runs in this stretch are expected to take place by October 2022 and commencement of commercial operation is planned by December 2022.¹⁵

The Metro Line 2A corridor passes through dense catchments along Link Road in Western suburbs from Dahisar to Andheri West. Apart from commercial

office spaces in the Goregaon-Malad region, this metro majorly caters to residential catchments.

It is proposed that this line would be extended in the future to connect with Navi Mumbai Metro which would further increase ridership on this line. However, this is still in proposal stage.

Key Impact

As per MMRDA, this metro line is expected to have a daily ridership of 609,000 by 2031. Presently, it takes over 1.5 to 2 hours during peak hours to travel along Link Road from Andheri West to Dahisar as the road has traffic signals at almost every junction. Post completion of the metro line, travel time is expected to come down by half as it would alleviate road traffic congestion to a large extent. An estimated 11 mn sq ft of office space can be added in just the Malad-Kasturi Park belt due to the impact of Metro Line 2A.

¹⁵ <https://metrorailtoday.com/news/mmrda-likely-to-start-metro-services-on-remaining-sections-of-metro-2a-7-by-december>



7

DAHISAR
→ **ANDHERI (E)**

Completion by
2022

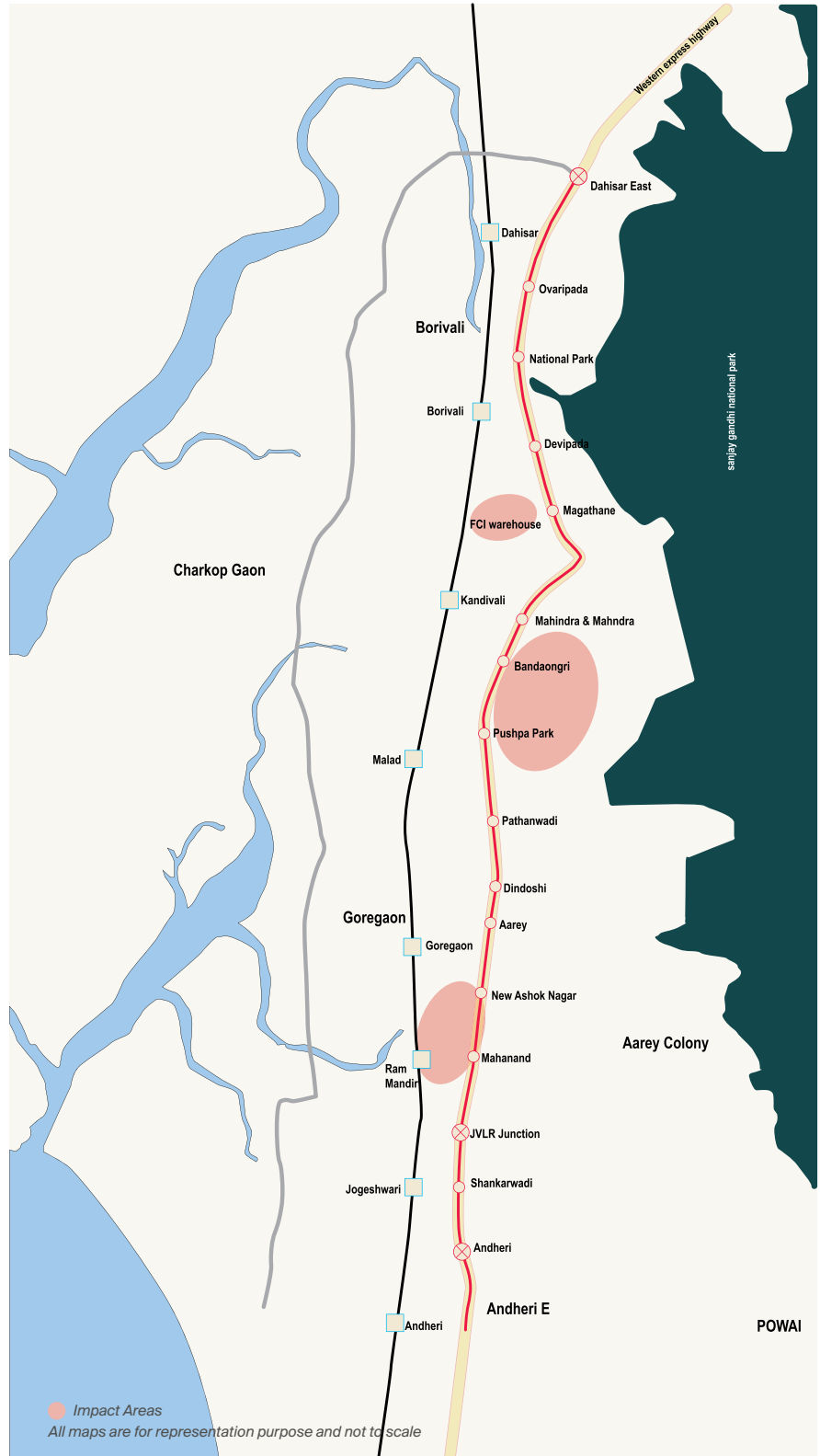
Length
16.475 Km (Elevated)

Stations
14 Nos. (All Elevated)

| | |
|---------------------|-------------------|
| Dahisar | Pushpa Park |
| Ovripada | Pathan Wadi |
| National Park | Aarey |
| Devipada | Mahanand |
| Magathane | JVLR Junction |
| Mahindra & Mahindra | Shankarwadi |
| Bandongri | Andheri Metro (E) |

Interchange stations for Metro at

1. Airport (with Line 3: Colaba - Bandra - SEEPZ) extended
2. Andheri Metro (with Line 1: WEH Station of VAG Metro)
3. JVLR Jn (with Line 6: Lokhandwala - Vikhroli)
4. Dahisar (with Line 9: (Dahisar (E) - Mira Bhayandar)
5. Dahisar (with Line 2A: Dahisar - D N Nagar)



Mumbai Metro Line 7 is 16.475 km long, connecting Dahisar East to Andheri East. Built at an estimated cost of INR 62 bn, this metro line will have 14 stations above. The initial deadline for completion of this line was second half of 2019; however, it has been revised to 2022. Trial runs in this stretch are expected to

take place by October 2022 and commencement of commercial operation is planned by December 2022.

This metro corridor passes through dense residential catchments and a major office catchment at Goregaon East. Presently, travelling through

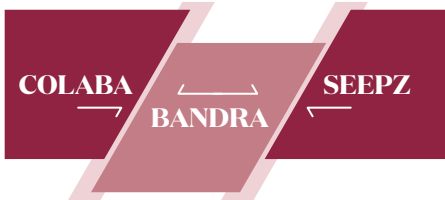
Western Express Highway from Andheri East to Dahisar East takes a minimum of 2 hours during peak hours on most days. As per MMRDA, the time required by metro to travel the same distance will reduce by 50% to 75%.

Key Impact

As per MMRDA, this metro line is expected to have a daily ridership of 668,000 by 2031. This metro is likely to increase development interest in the Food Corporation of India (FCI) warehouses in Borivali which are within city limits and in the slum clusters in the Malad East to Kandivali East belt. In fact, the FCI warehouses in Borivali, and the vacant land along with the industrial sheds near Mahanand Metro station, have the potential to add an estimated 30 mn sq ft of office space or a massive 20% to the existing inventory of the Mumbai market.



3



Completion by
Phase I (i.e. SEEPZ to Bandra route)
to start operations by 2024 (Delayed)¹⁶

Length
33.5 Km

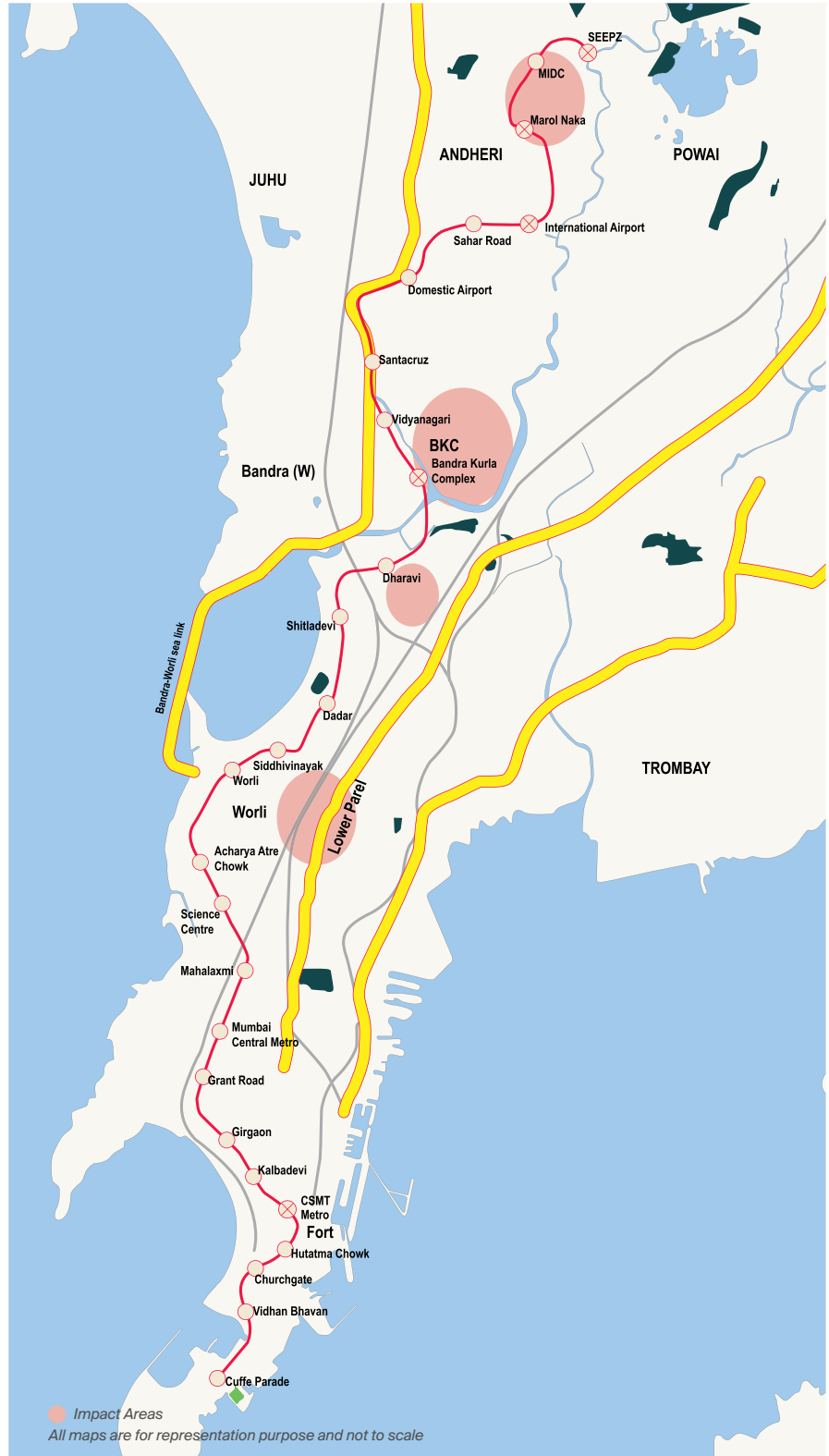
Stations
27 Nos.¹⁷

| | |
|----------------------|-----------------------|
| Cuffe Parade | Dadar |
| Vidhan Bhavan | Shitaladevi |
| Churchgate | Dharavi |
| Hutatma Chowk | BKC |
| CSMT Metro | Vidyanagari |
| Kalbadevi | Santacruz |
| Girgaon | Domestic Airport |
| Grant Road | Sahar Road |
| Mumbai Central Metro | International Airport |
| Mahalaxmi | Marol Naka |
| Science Museum | MIDC |
| Acharya Atre Chowk | SEEPZ |
| Worli | Aarey Car Depot |
| Siddhivinayak | |

Interchange stations for Metro at

1. SEEPZ (with Line 6: Lokhandwala - Vikhroli)
2. Marol Naka (with Line 1: VAG Metro)
3. Airport (with Line 7 extended: Dahisar (E) - Andheri (E))
4. BKC (with Line 2: Dahisar - Mandale)
5. CSMT (with Line 11: Wadala - CSMT)

¹⁶ <https://www.mmrc.com/sites/default/files/Press%20Release%20-%20Aarey%20Car%20Depot%20Work%20-%20A%20Brief%20by%20Mumbai%20Metro%20Rail%20Corporation%20%28MMRC%29.pdf>
¹⁷ <https://www.mmrc.com/en/project/project-route>



Impact Areas
All maps are for representation purpose and not to scale

The Mumbai Metro Line 3 is the city's first underground metro project connecting Colaba to Bandra (BKC) and SEEPZ. Being built at a cost of INR 320 bn, the Metro Line is 33.5 km long with 27 stations connecting 6 business districts, 30 educational institutions and 2 airports (domestic and international). Line 3 has faced several hurdles and has cost the state government over 70% of the total expenditure incurred in the nine ongoing Metro Rail projects. The cost for the rail link between Colaba-Bandra-Seepez has escalated by over INR 100 bn to INR 320 bn. The official completion date for Phase 1 of the project from SEEPZ to

Bandra was 2022. The project is delayed due to the finalization of the car shed location. The Bombay High Court in an interim order stayed the transfer of land to the MMRDA for a car shed at Kanjurmarg, however the Mumbai suburban district collector has withdrawn the allotted land. As per the new order the car shed location is now finalized at Aarey. MMRDA expects to complete the car depot work and start commercial operation of Phase 1 by the first quarter of 2024.

The metro line passes through some of the most congested markets of South

Mumbai, where the road capacity is limited and scope for road widening is very low. This metro line would be a boon to residents living in those areas and having offices in Lower Parel, BKC, Andheri East and SEEPZ. It would also aid those travelling to the airport. However, people living in suburbs and travelling to these business districts would use the Metro Line 3 much more compared to those living in South Mumbai, as they can travel to the business districts of Lower Parel, BKC and South Mumbai once the metro lines at interchange points are ready.

Key Impact

As per Mumbai Metro Rail Corporation Limited (MMRCL), 1.6 mn people would be using this metro daily. This metro line will increase occupier demand in established business districts of BKC and Lower Parel which could potentially add an estimated 2.8 mn sq ft of office space in BKC. Additionally, it could also spur development interest in the undeveloped mill lands of Lower Parel and vastly improve the potential of the Dharavi redevelopment project.



2B

DN NAGAR → **MANDALE**

Official deadline
2024¹⁸

Length
23.64 Km (Elevated)

Stations
22 Nos. (All Elevated)

| | |
|-------------------|-------------------------|
| D N Nagar | MTNL, BKC |
| ESIC Nagar | S G Barve Marg |
| Prem Nagar | Kurla Terminus |
| Indira Nagar | Kurla (East) |
| Nanavati Hospital | Eastern Express Highway |
| Khira Nagar | Chembur |
| Saraswat Nagar | Diamond Garden |
| National College | Shivaji Chowk |
| Bandra Metro | BSNL |
| MMRDA | Mankhurd |
| ITO, BKC | Mandale |
| IL&FS, BKC | |

Interchange stations for Metro at

1. D N Nagar (with Line 2A: Dahisar - D N Nagar)
2. BKC (with Line 3: Colaba - Bandra - SEEPZ)
3. Kurla (with Line 4: Thane - Wadala)



¹⁸ <https://www.metroailnews.in/j-kumar-wins-contract-worth-inr-1308-crores-for-balance-work-of-mumbai-metro-line-2b/>

The Metro Line 2 is 42.2 km long and divided into 2 phases – Line 2 A and Line 2 B. Line 2 A is 18.6 km long with 17 stations between DN Nagar and Dahisar. Being built at a cost of INR 110 bn, Line 2 B is 23.643 km long with 22 stations between DN Nagar to Mandale. However, there are a number of challenges that the

project will encounter on this corridor, from narrow roads to illegal structures to land acquisition to height restrictions.

It is proposed that this line be extended to Navi Mumbai in the future and connect with Navi Mumbai Metro which would further increase footfalls on this line.

However, the proposal is still in the evaluation stage. As per MMRDA, this metro line is expected to reduce travel time by 50% to 75%. Access to malls and other retail destinations along the corridor will improve once this metro line is operational.

Key Impact

As per MMRDA, Metro Line 2B is expected to have a daily ridership of 1,049,000 by 2031. Once complete, Metro Line 2 will be the longest metro line in MMR providing connectivity to several markets in a single corridor. Considering the length of the corridor and the high ridership, several markets along this corridor is likely to witness real estate traction. Metro Line 2 B and Metro Line 3 are the among the first projects which will bring MRTS right inside BKC and connect it to the dense residential catchment of western suburbs. This project, along with Metro Line 3, will further augment BKC's stature as one of the more important office markets of the city.



4 / 4A



Official deadline
2025¹⁹ (Delayed)

Length
35.02 Km (Elevated)

Stations
32 Nos. (All Elevated)

| | |
|-----------------------|---------------------|
| Kasarvadavali | Bhandup Mahapalika |
| Vijay Garden | Naval Housing |
| Dongari Pada | Gandhi Nagar |
| Tikuji-Ni-Wadi | Surya Nagar |
| Manpada | Vikhroli Metro |
| Kapurbawdi | Godrej Company |
| Majiwada | Shreyas Cinema |
| Cadbury Junction | Lakshmi Nagar |
| Mahapalika Marg | Pant Nagar |
| RTO Thane | Garodia Nagar |
| Thane Teen Haath Naka | Amar Mahal Jn. |
| Maharana Pratap Chowk | Siddharth Colony |
| Mulund Fire Station | Suman Nagar |
| Dr Hedgewar Chowk | Anik Nagar Bus Dep. |
| Shangrila | Wadala TT |
| Bhandup Metro | Bhakti Park Metro |

Interchange stations for Metro at

1. Wadala (with Line 11: Wadala - CSMT)
2. Siddharth Colony (with Line 2: Dahisar - Mandale)
3. Pant Nagar (with Line 1: VAG Metro)
4. Vikhroli (with Line 6: Lokhandwala - Vikhroli)
5. Kapurbawdi (with Line 5: Thane - Bhiwandi - Kalyan)
6. Gaimukh (with Line 10: Gaimukh - Shivaji Chowk)

¹⁹ <https://www.hindustantimes.com/cities/mumbai-news/metro-lines-4-5-connecting-thane-to-different-cities-to-be-completed-only-by-2025-says-mmrd-official-101654263919973.html>



This metro line is also referred to as the Thane-Wadala metro line. The Metro Line 4 - Kasarvadavali to Wadala, is 32.32 km long with 32 stations between Kasarvadavali and Wadala. This line will

be extended from Kasarvadavali to Gaimukh in the north which would be a 2.7 km extension with 2 stations. The project has an official deadline of 2022. However, considering the size and

progress of the project, it is unlikely that the indicated deadline will be met²⁰. Project is expected to complete by 2025.

Key Impact

As per MMRDA, Metro Line 4 is expected to have a daily ridership of 1,231,000 by 2031. Being built at a cost of INR 145 bn and INR 9 bn respectively, Metro Line 4 and 4A, when complete, will become the second longest metro line in MMR.

As per an Urban Development Department (UDD) notification, the Wadala truck terminus will be developed as a commercial centre on the lines of BKC. The truck terminus is spread over 115 hectares (288 acres) while BKC is spread over 300 hectares. The Metro Line 4 will boost connectivity of this region to the central suburbs, and Metro Line 11 (Wadala to CSMT) will augment the connectivity of this market to South Mumbai. If this area is permitted the same FSI of 4 as BKC, real estate supply of around 50 million square feet can be expected in this region.

There are large undeveloped land parcels in the currently isolated Kasarvadavali to Gaimukh belt. The Metro Line 4 and 4A would establish connectivity of this region with central and southern parts of Mumbai, and the Metro Line 10 (Gaimukh to Shivaji Chowk) would bring it closer to the western suburbs.

²⁰ <https://constructionreviewonline.com/project-timelines/mumbai-metro-line-4-project-timeline-and-what-you-need-to-know/>



5



Official deadline
2025²¹

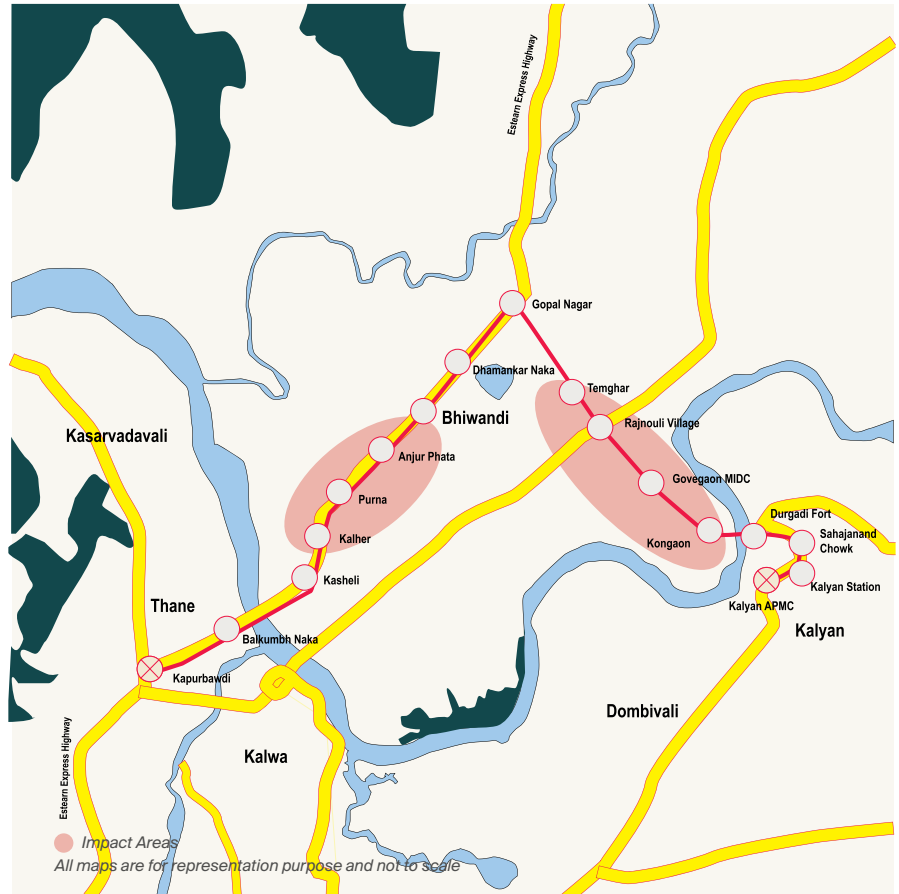
Length
24.9 Km (Elevated)

Stations
17 Nos. (All Elevated)

| | |
|----------------|---------------------|
| Kapurbawdi | Temghar |
| Balkum Naka | Rajnouli Village |
| Kasheli | Govegaon MIDC |
| Kalher | Kongaon |
| Purna | Durgadi Fort |
| Anjur Phata | Sahajanand Chowk |
| Dhamankar Naka | Kalyan Railway stn. |
| Bhiwandi | Kalyan APMC |
| Gopal Nagar | |

Interchange stations for Metro at

1. Kapurbawdi (with Line 5: Thane - Bhiwandi - Kalyan)
2. Kalyan (with Line 12: Kalyan - Taloja)



The Thane-Bhiwandi-Kalyan Metro is the first MRTS project for Bhiwandi. The metro line is 24.9 km long with 17 stations between Thane and Kalyan.

Key Impact

Bhiwandi is strategically located in MMR and enjoys good road connectivity to most parts of MMR. The well-established Bhiwandi warehousing market is now shifting further along the Mumbai-Nashik Highway due to increasing residential development in this location. Metro Line 5 would further accelerate Bhiwandi's transformation from a warehousing hub into an affordable housing destination by facilitating better connectivity to Thane city.

²¹ <https://www.hindustantimes.com/cities/mumbai-news/metro-lines-4-5-connecting-thane-to-different-cities-to-be-completed-only-by-2025-says-mmrda-official-101654263919973.html>



6

LOKHANDWALA → **VIRKHOLI (EEH)**

Official deadline
2024²²

Length
14.5 Km (Elevated)

Stations
13 Nos. (All Elevated)

| | |
|--------------------------------------|-------------------|
| Swami Samarth Nagar | Rambaug |
| Adarsh Nagar | Powai Lake |
| Jogeshwari (West) | IIT Powai |
| Jogeshwari-Vikhroli Link Road (JVLR) | Kanjurmarg (West) |
| Shyam Nagar | Vikhroli (EEH) |
| Mahakali Caves | |
| SEEPZ Village | |
| Saki Vihar Road | |

Interchange stations for Metro at

1. Shastri Nagar (with Line 2: Dahisar to Mandale)
2. JVLR Jn (with Line 7: Dahisar (E) - Andheri (E))
3. SEEPZ (with Line 3: Colaba - Bandra - SEEPZ)
4. Kanjurmarg (with Line 4: Thane - Wadala)

²² <https://mumbai.citizenmatters.in/mumbai-metro-progress-update-whats-on-the-cards-31189>



The Metro Line 6 is 14.5 km long with 13 stations between Lokhandwala and Vikhroli. Being built at a cost of INR 67 bn, the corridor will pass through dense residential catchments and a major office district of Powai. The Jogeshwari-Vikhroli Link Road is a high traffic route as it is one of the important road connectors for vehicles moving from western side of the city to the central and eastern side.

Key Impact

At present, it takes over 2 hours by road to travel from Lokhandwala to Vikhroli during peak hours and this metro line will cut the travel time by half. Most residential and office markets along JVLR lack MRTS connectivity. They are far from any railway stations on the Western Railway or Central Railway network and also from the Metro Line 1. This metro line will spur development interest in Andheri East and Kanjurmarg at the Vikhroli end, which could potentially see office space development upwards of 32 mn sq ft, adding approximately 20% to the existing stock of Mumbai.



9

**DAHISAR (E)
MIRA BHAYANDAR
ANDHERI EAST TO CSIA**

Official deadline
NA

Length
**11.386 Km (Elevated) -
2.195 km (Underground)**

Stations
8 Nos. (All Elevated)

- Dahisar (E)
- Pandurang Wadi
- Miragaon
- Kashigaon
- Sai Baba Nagar
- Meditiya Nagar
- Bhagat Singh Garden (Maxus Mall)
- Subhash Chandra Bose Stadium

Interchange stations for Metro at

1. Shivaji Chowk (with Line 10: Gaimukh - Shivaji Chowk)
2. Dahisar (E) (with Line 7: Dahisar (E) - Andheri (E))
3. Dahisar (E) (with Line 2: Dahisar to Mandale)



Metro Line 9 is an extension of Line 7 at either end, from Andheri to CSIA and Dahisar to Mira Bhayandar. Being built at a cost of INR 65 bn, the metro line is 13.6 km long (11.386 km elevated and 2.2 km underground) with 11 stations. The Andheri East to CSIA stretch of this metro is also referred to as Metro Line 7A.

Key Impact

As per MMRDA, Metro Line 9 will have a daily ridership of over 1,112,000 by 2031. Most markets in the project corridor are already developed and are dense residential catchments with little scope for new development. Residents living in Mira-Bhayandar would be integrated to the city through this metro line. They can travel along Western Express Highway till the International Airport using this metro.



10

GAIMUKH
→
SHIVAJI CHOWK

Official deadline
NA

Length
9 Km (Elevated)

Stations
5 Nos. (All Elevated)

- Gaimukh
- Gaimukh Reti Bunder
- Varsova Char Phata
- Kashimira
- Shivaji Chowk (Mira Road)



Interchange stations for Metro at

1. Gaimukh (with Line 4 and 4A: Gaimukh - Wadala)
2. Shivaji Chowk (with Line 9: Dahisar (E) - Mira Bhayandar)

The Metro Line 10 is around 9 km long connecting Gaimukh in Thane to Shivaji Chowk in Mira Road. This line is being constructed at a cost of INR 44 bn. This line will also be a crucial MRTS connector linking Thane to western suburbs and would also be used by commuters travelling from northern regions of Mumbai (Borivali East to Virar) to Thane and central suburbs (Mulund to Sion) and vice-versa.

Key Impact

This metro line is expected to spark development of the Kasarwadavli-Gaimukh belt and at Kashmirira which currently does not have access to any MRTS projects.



11

WADALA
→ **CSTM**

Official deadline
2026²³

Length
9 (Elevated+Underground)

Stations

11 Nos.

- Chhatrapati Shivaji Maharaj Terminus
- Carnac Bunder
- Clock Tower
- Wadi Bunder
- Darukhana
- Coal Bunder
- Hay Bunder
- Sewri Metro
- BPT Hospital
- Ganesh Nagar
- Wadala

Interchange stations for Metro at

1. Wadala (with Line 4: Thane - Wadala)
2. CSMT (with Line 3: Colaba - Bandra - SEEPZ)



The Metro Line 11 is an extension of Metro Line 4 (Thane to Wadala) and is being built at a cost of INR 87 bn. The line is around 12 km long and is likely to have 11 stations, of which 3 would be elevated and 8 underground.

Key Impact

This metro line passes through densely developed catchments with very little scope for new development except for Mumbai Port Trust. There have been multiple discussions on redeveloping the land under the ambit of Mumbai Port Trust (MbPT). If the plan fructifies, the Metro Line 11 will aid in augmenting real estate traction in that area.

²³ <https://www.thehindu.com/news/states/state-clears-three-metro-projects/article28693524.ece>



12

KALYAN
→
TALOJA

Completion by
2024²⁴

Length
20.7 Km (Elevated)

Stations
17 Nos. (All Elevated)

| | |
|----------------|---------------|
| Kalyan APMC | Vadavali |
| Ganesh Nagar | Bale |
| Pisvali Gaon | Waklan |
| Golavali | Turbhe |
| Dombivali MIDC | Pisarve Depot |
| Sagaon | Pisarve |
| Sonarpada | Taloja |
| Manpada | |
| Hedutane | |
| Kolegaon | |

Interchange stations for Metro at

1. Kalyan (with Line 5: Thane - Bhiwandi-Kalyan)
2. Taloja (with Navi Mumbai Metro Line 1: Belapur-Kharghar-Taloja-Pendhar)



The Metro Line 12 is estimated to be around 20.7 km long connecting Kalyan to Taloja. Being built at a cost of INR 41 bn, it will have 17 stations between Kalyan and Taloja.

The Kalyan-Taloja Metro Line will be amongst the first metro lines of MMR, the major portion of which passes through catchments which are undeveloped or underdeveloped. The Metro Line 12 will precede development in many areas along the route. MMRDA wants to develop these clusters under the Transit Oriented Development (TOD) model. A section of this corridor also falls under the Navi Mumbai Airport Influence Area (NAINA) zone of the City Industrial Development Corporation (CIDCO).

CIDCO will be planning authority for that section. There is tremendous scope for planned development along this corridor on the likes of Navi Mumbai or creation of something even better.

Key Impact

The Metro Line 12 is the first major project providing connectivity to several unconnected or isolated markets along the route. It is expected to have a daily ridership of over 192,420 by 2031.

²⁴ <https://www.thehindu.com/news/states/state-clears-three-metro-projects/article28693524.ece>



I (Navi Mumbai)

BELAPUR

**NAVI MUMBAI
INTERNATIONAL
AIRPORT (NMIA)**

Official deadline
NA

Length
11 Km (Elevated)

Stations
12 Nos. (All Elevated)

CBD Belapur
Sector 7 Station
CIDCO Science Park
Station
Utsav Chowk Station
Sector 11 Station
Sector 14 Station
Central Park Station
Pethpada Station
Sector 34 Station
Panchanand Station
Pendhar Station



The Navi Mumbai Metro is an urban Mass Rapid Transit System (MRTS) with 1 line being built to enhance connectivity between Belapur and NMIA in Navi Mumbai by the City and Industrial Development Corporation (CIDCO). Being built at an approximate cost of INR 32 bn, It is a 23.4 km long corridor, phase 1 or 11 km of which was expected to begin operations in 2022. However, it is further delayed and expected completion date is yet to be finalized. Phase 1 stretches from Belapur to Pendhar is awaiting final approval from the Commissioner of Metro Railway Safety's (CMRS) stage and ready to begin operations. Phase 2 extends from Pendhar to the NMIA and is under development.

Two more lines are being planned. The second line will connect the NMIA with Uran while the third line is expected connect the airport with Mumbai's Metro line at Mankhurd.

Key Impact

Line 1 is the first of three planned metro lines to become operational in Navi Mumbai. Phase 1 of this line will serve the dense residential catchments between Belapur, Kharghar and Taloje MIDC to the commercial nodes at Kharghar and Taloja. When eventually extended to the NMIA, line 1 will prove to be an important connector to the airport.

COASTAL ROAD

Official deadline
2023²⁵ (for Phase 1)

Length
29.8 Km

The Coastal Road is a 29.8 km long road network starting at Nariman Point in the south and culminating at Kandivali Junction of Link Road in the north. The project is divided into two phases, which are scheduled to be completed in 2023. The first phase is a 10.6 km stretch from Marine Drive to the Worli end of the Bandra-Worli Sea Link, to be executed by the Municipal Corporation of Greater Mumbai (MCGM). The stretch from Worli to Versova would be via sea link which includes the existing Bandra-Worli Sea link. The second phase involves constructing a 19.2 km northern extension between Bandra, Versova and Kandivali comprising of a 17.7 km Bandra-Versova Sea Link currently being undertaken by Maharashtra State Road Development Corporation (MSRDC).

The 8-lane freeway, with 2-lanes reserved for BRTS corridor, will have 22 entries and exits, two earthquake resistant undersea tunnels of 3.4 km each at Girgaum Chowpaty and Malabar Hill, and 13 cross tunnels to be used in an emergency. As per the current alignment, as we move north after Versova, the Coastal Road will come on land, merging with existing roads and later going on stilts. A 7.7 km seafront promenade with a lot of open spaces has been planned as part of this project.

This is a crucial project which would improve access to South Mumbai from Western Suburbs. The existing road networks connecting these markets are saturated. Further, the scope for widening of roads or to construct any new road in South Mumbai is limited, and

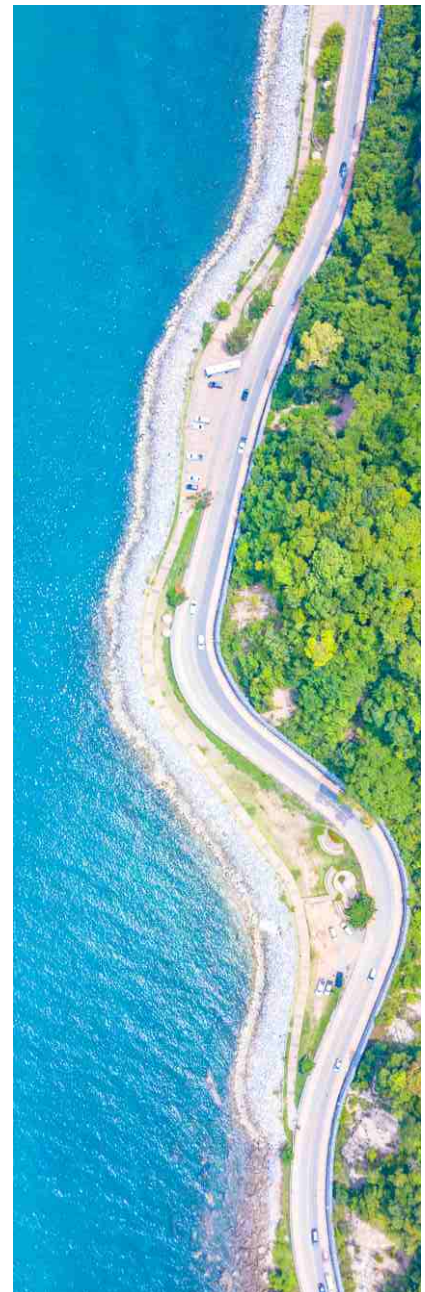
the possible solution is to construct underground roads which is expensive, or reclaim land from sea for the Coastal Road or construct a sea link.

The Coastal Road project involves reclamation of land from sea at many places and passes through no-development zones and mangroves. Currently, the work on the project has resumed after facing a delay due to the High Court stay order and the pandemic induced lockdown, and Phase 1 is on course to be completed by the end of 2023.

²⁵ <https://www.constructionworld.in/transport-infrastructure/highways-and-roads-infrastructure/mumbai-coastal-road-project-36--completed--bmc/28252>

Key Impact

With an estimated cost of INR 307 bn, this project is expected to reduce travel time between Nariman Point to Kandivali from over 2 hours now to under 40 minutes. When complete, the Coastal Road will be used by 100,000 cars per day and it will have the capacity to handle twice that volume. Considering that Mumbai has a car density five times more than that of Delhi, according to a 2019 study, the Coastal Road will play a pivotal role in de-congesting the city's roads.



BANDRA - VERSOVA SEA LINK

Official deadline
2026²⁶

Length
17.7 Km

The Bandra-Versova Sea Link is being constructed by MSRDC, the agency which constructed the first sea link of Mumbai – Bandra Worli Sea Link (BWSL). The Bandra-Versova Sea Link will be around 17.17 km long, connecting the Bandra end of BWSL to Versova. It will be almost 3 times the length of the existing BWSL being built at an estimated cost of INR 70 bn. The sea link is expected to have 3 interchange points at Bandra Bandstand, Carter Road and Juhu Koliwada. The MSRDC also has a plan to connect Versova to the Mumbai-Ahmedabad Expressway at a later date.²⁷

Key Impact

The sea link would be immensely beneficial to residents living in these catchments as it would reduce travel time considerably and provide access to business districts in Central Mumbai, South Mumbai and BKC. As per MSRDC, the Bandra Versova Sea Link is expected to have a daily traffic of 60,000 – 70,000 vehicles per day and will reduce travel time from 90 minutes to 10 minutes. Together with the Bandra Worli Sea Link, one can expect to commute between Worli and Versova in just 15 minutes, down from about 2 hours at present.

²⁶ <https://www.hindustantimes.com/cities/mumbai-news/slowpaced-work-delays-17km-bandra-versova-sea-link-project-by-3-years-101645448132956.html>

²⁷ <https://www.financialexpress.com/economy/bandra-versova-sea-link-cost-set-to-rise-60/1302969/>



CHATTRAPATI SHIVAJI MAHARAJ TERMINUS (CSMT) REDEVELOPMENT

Official deadline
2025²⁸

The CSMT is a UNESCO world heritage site that is slated for redevelopment which will entail a facelift of the existing premises and relocation of the Divisional Railway Manager's (DRM) office premises to Byculla. The moving of office premises will enable the shifting of the Harbour Line connecting South Mumbai to Navi Mumbai, to the east of the Central Line, and potentially allow for the elevation and construction of additional tracks on the Harbour Line. The project will be executed at a cost of approximately INR 15 bn and is expected to be completed in 2025.

²⁸ <https://mumbaimirror.indiatimes.com/mumbai/other/csmt-redevelopment-plans-to-levy-user-fee-shift-harbour-line/articleshow/77732544.cms>

Key Impact

Up to 1.8 mn sq ft of commercial development or 1 mn sq ft of residential development could be taken up at Byculla as a result of the redevelopment exercise. The shifting of the Harbour Line to an independent shed, away from the main terminus, elevated rail could potentially lay the foundation for an additional third line along the harbour route.

However, this development is also being met with resistance due to some issues. The proposed Harbour Line platform would be approximately 500 metres away from the main CSMT yard. More than 0.15 mn passengers use the Harbour Line daily. When this new development is complete, passengers would have to walk for approximately 15 minutes to reach the main entrance of the CSMT from the proposed new platforms, a significant inconvenience for those using this line. The shifting of the Harbour Line closer to P D'Mello Road could cause further congestion along this vital road which is already congested as it forms the south Mumbai exit of the Eastern Freeway.



NAVI MUMBAI – THE LARGEST PLANNED CITY IN INDIA

The scale of infrastructure development in Mumbai is unprecedented and will alleviate its connectivity problems to a great extent. However, the city is still constrained by its limited land mass and needs to expand toward its northern periphery. Navi Mumbai is half the size of Mumbai, with 6 per cent of its population. It occupies 344 sq km and has 1.3 mn residents compared to Mumbai's 603 sq km and 20.4 million. It was conceptualised and developed as a satellite city and the past three decades have seen it grow from a speculative investment for real estate punters to the closest it has ever been to fulfilling its

potential as the largest planned city of India.

Mega Infrastructure projects such as the Navi Mumbai International Airport, Navi Mumbai Metro and the MTHL that were conceived decades ago are on the verge of completion. These three projects alone entail a massive investment of INR 385 bn and are expected to be completed by 2024. The metro project will provide additional connectivity within the region along with links to the suburban railway system. The suburban railway system too has been expanded to the farther reaches of the region (Belapur-Uran and Panvel-Karjat lines) to

further augment its mass rapid transport footprint.

While the Navi Mumbai airport promises to be the game changer, other mega projects such as the MTHL, Virar-Alibaug Multimodal Corridor and the planned expansion of the suburban railway lines will vastly improve the region's connectivity with the central and western peripheral suburbs of Mumbai.

Apart from these transport infrastructure projects, the 300 hectare Aerocity abutting the new airport and the JNPT Logistics Hub could also truly spark the economic engine of this satellite city.

Aerocity

The Aerocity is planned as a commercial and residential district, spread over 300 hectares, adjacent to the new international airport. From financial services and corporate offices to residential and entertainment centres, hotels, hospitals, schools, and export-oriented services to aero-centric warehousing, the aerocity will accommodate and offer a range of activities and facilities. Approximately 40 mn sq ft of mixed-use real estate will be developed as part of the plan, including well-designed roads, metro lines and automated waste collection systems.

JNPT Logistics Hub

The City and Industrial Development Corporation (CIDCO) is considering setting up a logistics hub in the periphery of JNPT as the neighbourhood has witnessed unplanned expansion in activities that would result in massive traffic congestion in Navi Mumbai. The newly planned hub would be set up on a 414 hectare area in the Jawaharlal Nehru Port Trust Influence Area (JNPTIA).

The present port activities are being undertaken in an unplanned manner by stacking the empty containers in private land that has been purchased. The logistics hub would bring about a systematic parking yard for the containers and thereby reduce traffic congestion due to port's expansion activities.

The new hub would consist of 64 Container Freight Stations (CFS) and warehouses. At present, an economic feasibility report is being prepared by CIDCO to acquire the land for setting up the logistics hub.

Situated at a distance of 25 km from Mumbai and 127 kms from Pune along the Mumbai-Pune Express Highway, Navi Mumbai is proving to be an attractive growth location for business as well as the housing sector. With the Navi Mumbai International Airport at Ulwe, near Panvel, expected to be functional by 2024, Navi Mumbai is well positioned for future growth and development. Here are some of the major transport infrastructure projects that will define the growth trajectory of Navi Mumbai in the future:



NAVI MUMBAI INTERNATIONAL AIRPORT (NMIA)

Official deadline
2024 (Phase I)

Navi Mumbai International Airport at Panvel & Ulwe, Maharashtra is being developed by the Adani Group-led Navi Mumbai International Airport Limited (NMIAL) with a 4 phase master plan to handle over 60 million passengers per annum in future. The Adani Group acquired 23.5 percent stake held by two foreign firms ACSA Global and Bid Services Division (Mauritius) (Bidvest) for INR 16 bn. In total, it acquired 74 percent stake in the Mumbai International Airport, including the entire 50.5 percent stake held by the GVK Group. The airport is being built on 1,160 ha of land on PPP basis with CIDCO acting as the nodal agency.

Key Impact

This INR 167 bn project when completed, will be able to handle an annual passenger traffic load of 60 mn people, similar to Singapore's Changi airport which handled 68 mn passengers in 2019 (pre-COVID period), and approximately 31% more than that carried by the Chhatrapati Shivaji International Airport (CSIA) in FY 2020. The airport is also expected to generate huge opportunities for direct and indirect employment in the logistics, hospitality and as well as the IT industry that has a sizeable and growing presence in the Thane-Belapur belt.

The airport was first conceived in 1997 and has been the biggest driver of real estate development and homebuyer interest in Navi Mumbai over the past two decades. It is likely that Navi Mumbai will see another spate of increase in price as a result. The airport completion is expected shortly after that of the Mumbai Trans Harbour Link and will likely result in fresh development in relatively underdeveloped areas of Chirle and Ulwe.



MUMBAI TRANS HARBOUR LINK

Official deadline
2023

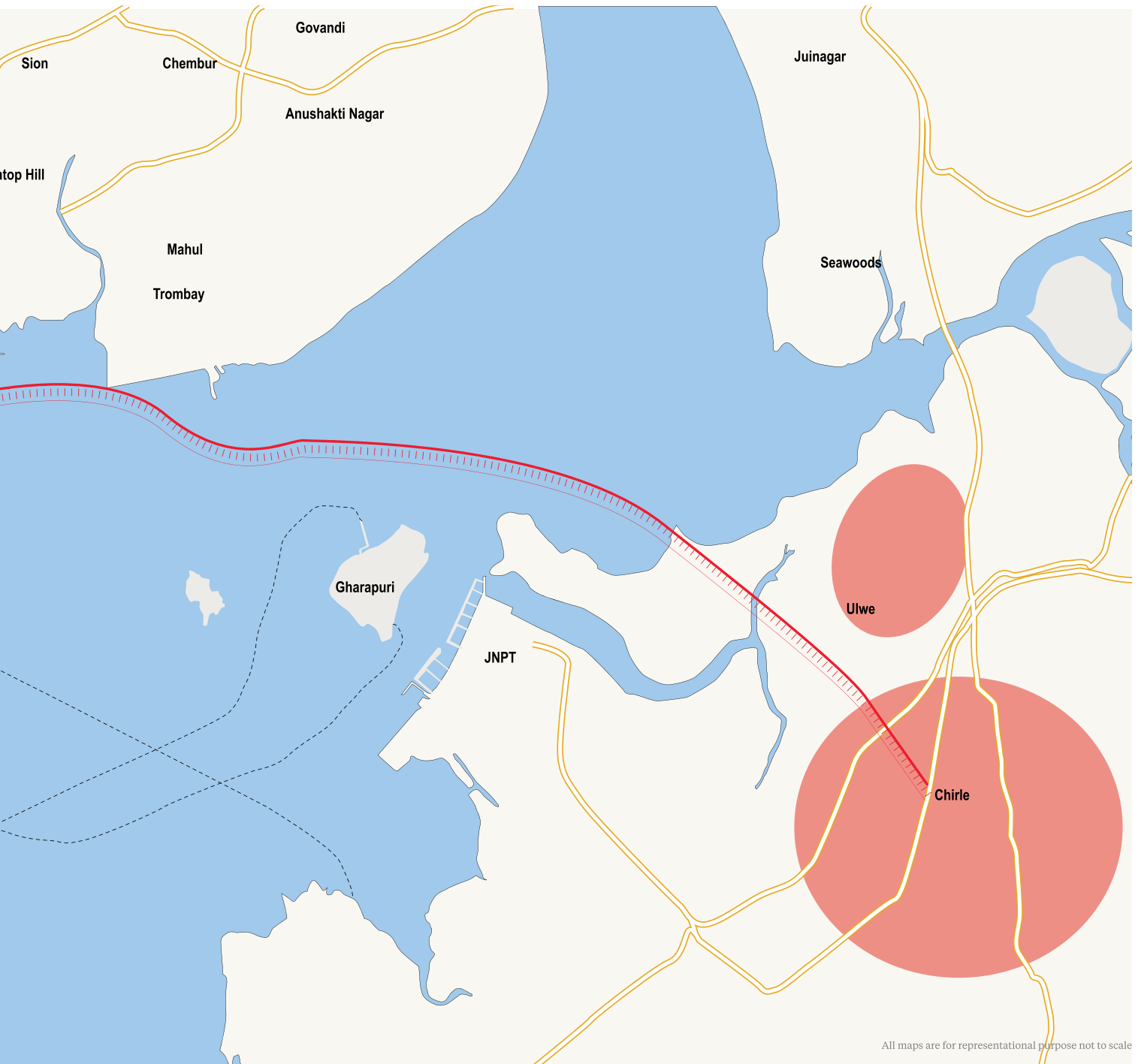
The Mumbai Trans Harbour Link was envisaged 35 years ago to facilitate decongestion between the island city and Navi Mumbai but failed to see the light of the day for almost three decades. Things have started moving now as it is crucial for the operations of the upcoming airport of Mumbai – the Navi Mumbai International Airport (NMIA). The Mumbai Metropolitan Region Development Authority (MMRDA) has undertaken the implementation of the Mumbai Trans-Harbour Link Project, connecting Sewri in Mumbai to Chirle in Navi Mumbai. Work has already commenced on both sides.

Being built at a cost of INR 178 bn, this 21.8 km bridge is expected to help commuters traveling from Mumbai towards Navi Mumbai, Navi Mumbai International Airport, Jawaharlal Nehru Port, Panvel, Alibaug, Pune and Goa.

Key Impact

As per MMRDA, 100,000 vehicles will use this road by 2032 and 150,000 by 2042. Several markets in Navi Mumbai will benefit from this bridge as they would get access to the office markets of South and Central Mumbai. Now in advanced stages of construction, the MTHL will connect Worli and Sewri in south-central Mumbai across the Arabian Sea to Chirle in Navi Mumbai in under 30 minutes for a journey which typically takes between 2-3 hours today. Apart from de-congesting the island city, this project will accelerate the growth in the farther reaches of Navi Mumbai with housing and commercial activity, with both getting a substantial boost. It will enable faster access to the Navi Mumbai International Airport and the Mumbai-Pune Expressway from South and Central Mumbai, bypassing the congested roads from Chembur to Vashi. This vast improvement in connectivity could well rationalise residential real estate prices across the city and Navi Mumbai, improving affordability particularly in the more expensive markets of the city.





All maps are for representational purpose not to scale

NAVI MUMBAI SUBURBAN RAILWAY EXPANSION

Two railway projects have been planned to increase connectivity in Navi Mumbai and reduce the travel time from its extremities to the main city: Doubling of the railway line between Panvel and Karjat railway stations and construction of the second phase of Belapur and Uran railway lines. The two lines will cater to thousands of

commuters who are living or working in the farther reaches of Raigad district, which is being promoted as an important growth corridor of the city. Panvel as well as the Belapur-Uran belt will then be in close proximity of the airport which is under construction now.

Belapur - Uran Line

Official deadline – 2023²⁹

The new suburban railway corridor between Belapur and Uran in Raigad district is a crucial corridor for expansion of the local train network. Once completed, this 27 km long railway corridor will facilitate direct travel between Mumbai and Uran and will connect to the new Navi Mumbai International Airport and Jawaharlal Nehru Port Trust (JNPT). The railway line received sanction in 1967 and the first phase of the corridor between Belapur and Kharkopar (12.5km) railway stations opened in November 2018.

The project is being built at an estimated cost of INR 18 bn and is being executed by CIDCO and the Central Railway. The construction of the 14.5 km. long second phase of the corridor between Kharkopar and Uran is currently underway and is expected to be completed by 2023.

Panvel - Karjat Line

Official deadline – 2024³⁰

The area between Panvel and Karjat is developing fast and there is a growing demand for increasing services along this line. At present, a single line connects these locations and caters to

Goods trains and long distance passenger trains. The doubling of the railway line between Panvel and Karjat was sanctioned in 2016 and is part of the Mumbai Urban Transport Project (MUTP) III. This 28 km extension of the suburban railway line is being constructed at a cost of INR 28 bn and is expected to be completed by 2024.

²⁹ <https://www.mid-day.com/mumbai/mumbai-news/article/mumbai-uran-suburban-railway-line-gets-brand-new-deadline-23243844>

³⁰ <https://www.hindustantimes.com/cities/mumbai-news/2-railway-lines-lead-mmr-connect-in-right-direction-101624562810659.html>

Key Impact

Both these railway lines will vastly improve connectivity in Navi Mumbai and complement the development of the larger infrastructure projects in the region such as the new International Airport, MTHL and the Metro. The Belapur-Uran line will improve access to JNPT, Navi Mumbai Special Economic Zone (SEZ), the International Airport (NMIA) and also facilitate connectivity to Panvel, Pen, Roha and CSMT.

Currently, a passenger who wants to travel from Panvel to Karjat has to travel by local trains via Kalyan or Thane and takes nearly one hour. After construction of the railway line corridor, this commuting time will reduce by 30 minutes as passengers would be able to board direct local trains and avoid crossovers. Over 20 local train services will operate daily between Panvel and Karjat railway stations, vastly reducing congestion and increasing general productivity due to the reduction in travel time.



VIRAR ALIBAUG MULTIMODAL CORRIDOR

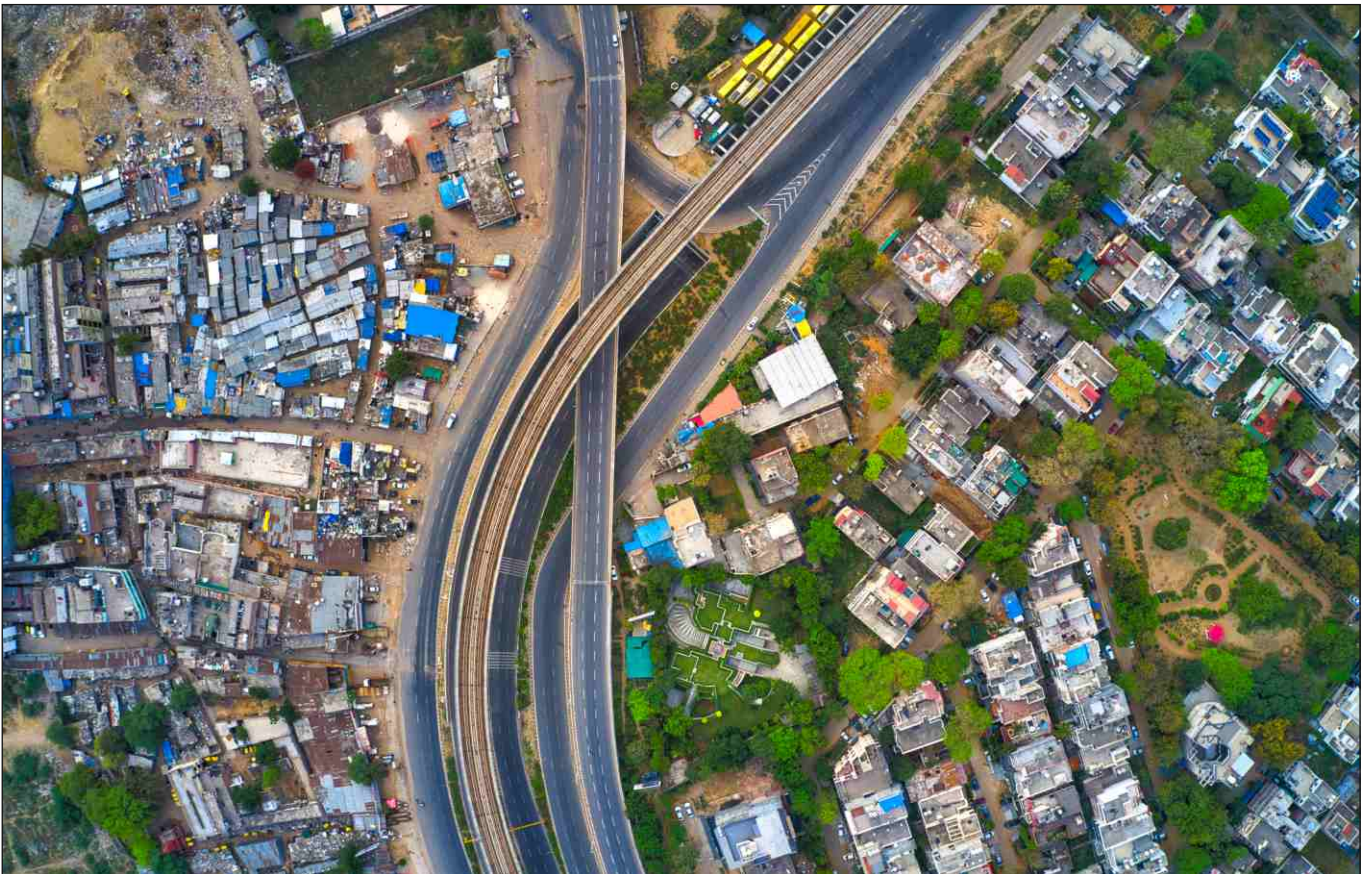
Official deadline
No official deadline

The 126-km long Virar-Alibaug Multi-Modal Corridor will connect NH-48 (Mumbai-Ahmedabad-Delhi), Bhiwandi Bypass, NH-52 (Mumbai-Agra) and NH-48 (Mumbai-Pune-Bengaluru). First envisioned in 2008, the project was initially being handled by the Mumbai Metropolitan Region Development Authority (MMRDA) before being handed over to the Maharashtra State Road Development Corporation (MSRDC). Currently at the approval stage for the major part, the project has an estimated cost of INR 190 bn.

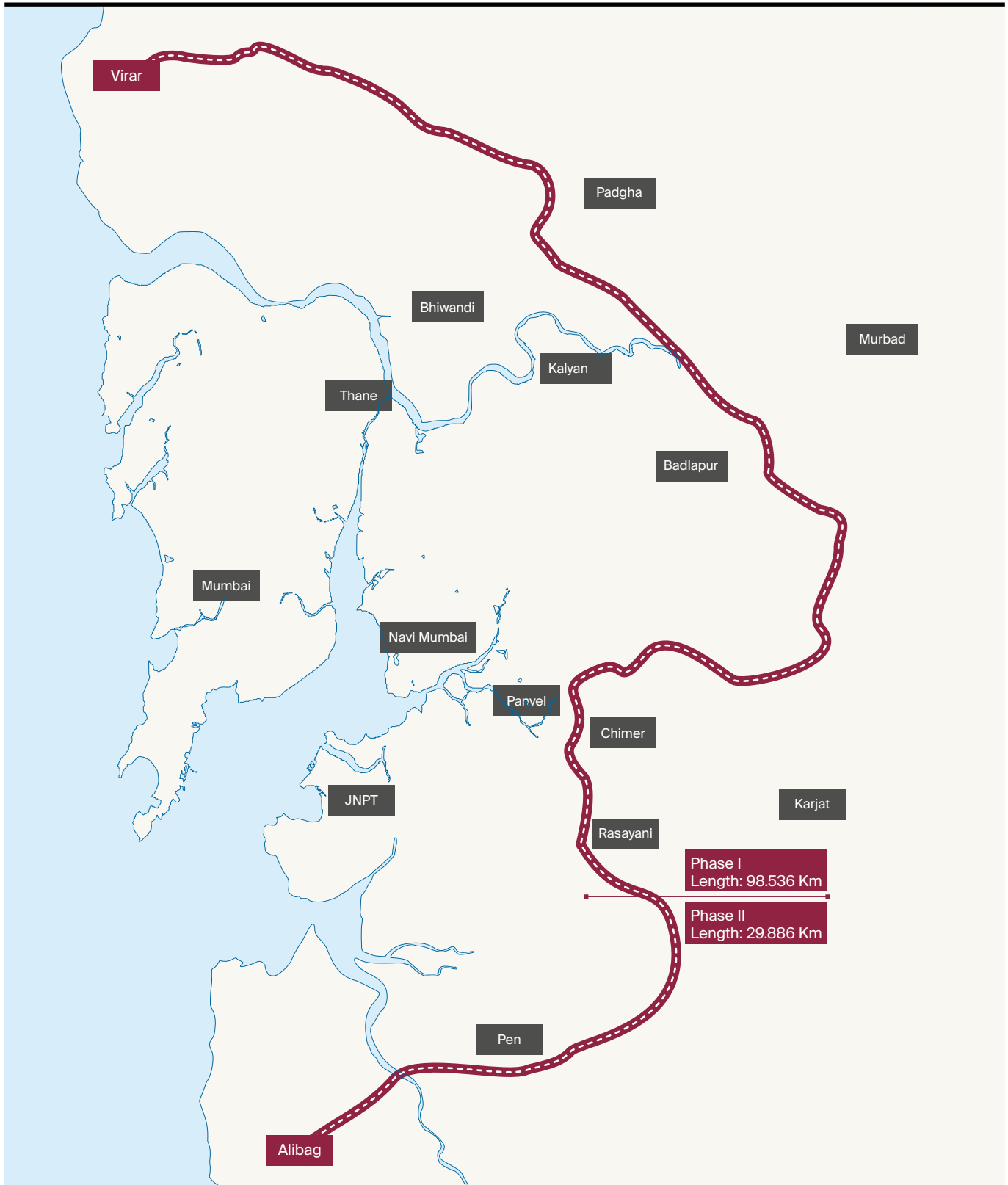
Key Impact

The Multi-Modal Corridor is a crucial step towards development, strengthening and creating job opportunities in seven growth centers in MMR namely Virar, Bhiwandi, Kalyan, Dombivali, Panvel, Taloja and Uran. The corridor will boost the development of the Navi Mumbai International Airport, Jawaharlal Nehru Port, Mumbai Trans-Harbour Link and Dedicated Freight Corridor.

This corridor will carry all the traffic from JNPT towards Navi Mumbai and Thane and help reduce traffic congestion within the city. The four-hour travel time between Virar to Alibaug will also be reduced by an estimated 50 per cent. The road will also help the Navi Mumbai Airport Influence Notified Area (NAINA) where a mega-township is being planned.



VIRAR-ALIBAUG MULTIMODAL CORRIDOR



KEY CONTACTS

Shishir Bajjal

Chairman & Managing Director
shishir.bajjal@in.knightfrank.com

RESEARCH, ADVISORY, INFRASTRUCTURE, & VALUATION

Gulam Zia

Senior Executive Director
gulam.zia@in.knightfrank.com

Saurabh Mehrotra

Executive Director - Valuation & Advisory
saurabh.mehrotra@in.knightfrank.com

Rajeev Vijay

Executive Director - Government & Infrastructure Advisory
rajeev.vijay@in.knightfrank.com

RESIDENTIAL (MUMBAI)

Reshmi Panicker

Executive Director
reshmi.panicker@in.knightfrank.com

OCCUPIER STRATEGY & SOLUTIONS

Viral Desai

Senior Executive Director - Transactions
viral.desai@in.knightfrank.com

INDUSTRIAL & LOGISTICS SERVICES

Balbirsingh Khalsa

Executive Director
balbirsingh.khalsa@in.knightfrank.com

Pinkesh Teckwani

National Director
pinkesh.teckwani@in.knightfrank.com

CAPITAL MARKETS

Viral Desai

Senior Executive Director - Transactions
viral.desai@in.knightfrank.com

LAND SERVICES

Reshmi Panicker

Executive Director
reshmi.panicker@in.knightfrank.com

PROJECT MANAGEMENT

Deben Moza

Senior Executive Director
deben.moza@in.knightfrank.com

FACILITIES & ASSET MANAGEMENT SERVICES

Sathish Rajendren

Senior Executive Director
sathish.rajendren@in.knightfrank.com

RESEARCH

Vivek Rathi

Director
vivek.rathi@in.knightfrank.com

AHMEDABAD

Balbirsingh Khalsa

Branch Director
balbirsingh.khalsa@in.knightfrank.com

BENGALURU

Shantanu Mazumder

Executive Director
shantanu.mazumder@in.knightfrank.com

CHENNAI

Srinivas Ankipatti

Senior Director - Tamil Nadu & Kerala
srinivas.ankipatti@in.knightfrank.com

HYDERABAD

Samson Arthur

Senior Branch Director
samson.arthur@in.knightfrank.com

KOLKATA

Shishir Bajjal

Chairman & Managing Director
shishir.bajjal@in.knightfrank.com

NCR

Mudassir Zaidi

Executive Director - North
mudassir.zaidi@in.knightfrank.com

PUNE

P Vilas

Branch Head
p.vilas@in.knightfrank.com

REPORT AUTHORS

Gaurashi Sawant

Consultant - Research
Gaurashi.Sawant@in.knightfrank.com

Yashwin Bangera

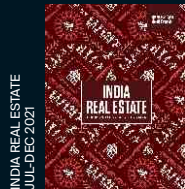
Senior Vice President - Research
Yashwin.Bangera@in.knightfrank.com

GRAPHICS & DESIGN

Nitin More

Senior Manager - Graphics & Design
Nitin.More@in.knightfrank.com

RECENT MARKET-LEADING RESEARCH PUBLICATIONS



We like questions, if you've got one about our research, or would like some property advice, we would love to hear from you.

RESEARCH

Vivek Rathi

Director

Vivek.Rathi@in.knightfrank.com

CORPORATE - MARKETING & PUBLIC RELATIONS

Piyali Dasgupta

Director - Corporate Marketing & Public Relations

Piyali.Dasgupta@in.knightfrank.com

Knight Frank Research Reports are available to download at knightfrank.com/research



The statements, information, data and opinions expressed or provided herein are provided on "as is, where is" basis and concerned parties clients are required to carry out their own due diligence as may be required before signing any binding document. Knight Frank (India) Private Limited (KFIPL) makes no warranties, expressed or implied, and hereby disclaims and negates all other warranties, including without limitation, implied warranties or conditions of merchantability, fitness for a particular purpose, or non-infringement of intellectual property or other violation of rights including any third party rights. Further, KFIPL does not warrant or make any representations concerning the accuracy, likely results, or reliability of the use of the statements, information and opinions as specified herein. The statements, information and opinions expressed or provided in this presentation / document by KFIPL are intended to be a guide with respect to the purpose for which they are intended, but in no way shall serve as a guide with regards to validating title, due diligence (technical and financial), or any other areas specifically not included in the presentation. Neither KFIPL nor any of its personnel involved accept any contractual, tortious or other form of liability for any consequences, loss or damages which may arise as a result of any person acting upon or using the statements, information, data or opinions in the publication, in part or full. The information herein shall be strictly confidential to the addressee, and is not to be the subject of communication or reproduction wholly or in part. The document / presentation is based on our understanding of the requirement, applicable current real estate market conditions and the regulatory environment that currently exists. Please note: Any change in any one of the parameter stated above could impact the information in the document/presentation. In case of any dispute, KFIPL shall have the right to clarify.