

**STUDY OF LAND ACQUISITION,
REHABILITATION AND RESETTLEMENT
AND ENVIRONMENT ISSUES TO
IMPLEMENT URBAN MASS PUBLIC
TRANSPORT PROJECT AND THEIR
APPROPRIATE MEASURES:- A CASE STUDY
OF DEVELOPMENT OF MUMBAI METRO
LINE-3 AS A MEASURE TO DE-CONGEST
MUMBAI AND PROVIDING ALTERNATE
MODE OF TRANSPORT TO THE PUBLIC.**

Project Purpose and Need

- Mumbai is the capital of State of Maharashtra and Commercial capital of India.
- Due to its geographical location it has scarcity of land resulting in upsurge of satellite towns.
- It has a large population of over 20 million people.
- The population density is around 30,000 person per sq. km.
- For catering to the transport need of the vast number of people the concept of development of Mumbai Metro Line-3 was made.

OBJECTIVES

The main emphasis is our project relates to the following issues:-

- Issues related to acquisition of land.
 - Total requirement of land is around 114 ha.
- Rehabilitation and Resettlement of project affected people (PAPs).
 - 2489 families has been displaced due to the development of Mumbai Metro Line-3.
 - These families are required to be provided with alternate dwelling units.
- For implementation of the project 2298 trees are required to be cut or transplanted.
- Environment clearances and forest clearances are also required for Mumbai Metro Line-3

PROJECT BACKGROUND

- Mumbai Metro Line-3 connecting Colaba-Bandra-SEEPZ will be of a length of 33.5 kms.
- It will connect Northern areas of Mumbai to Southern areas of Mumbai providing connectivity to large number of people.
- Mumbai Metro Line-3 will also connect domestic and international airport and other area not connected by sub-urban railways.
- Mumbai Metro Line-3 will also provide multi modal integration and interchange with other means of transport.
- It will allow passengers to smoothly travel to important places such as; Chhatrapati Shivaji Terminal, Domestic and International Airport etc.



PROJECT IMPLEMENTING AGENCY

- Project is being implemented by MMRCL.
- MMRCL is joint venture of Government of India and Government of Maharashtra.
- MMRCL was originally formed as State Government fully owned company in 2008.
- It has been transformed into a joint venture SPV of Government of India and Government of Maharashtra w.e.f. 12.08.2014.

Features of Mumbai Metro Line-3

Mumbai Metro Line-3 (Colaba-Bandra-Seepz)

Total length	33.5 kms (underground line)
Stations	26 UG + 1 At grade
Trains Capacity	2,500 (6 Coaches @ 8 pax/m2)
Rolling Stock	25 KV AC traction with regenerative braking system.
Signaling & Tran Operation	Communication Based Train Control (CBTC) system with Automatic Train Protection (ATP) (up to 90 sec headway). Inter-locked with automatic closing doors & Platform Screen Door (PSD).
Speed	80 kmph (average journey speed 32 kmph)
Peak Hour Peak Direction	42,000
Tunneling Technology	Tunneling Boaring Machine (TBM)

DAILY RIDERSHIP

Peak Hour Peak Direction Traffic (PHPDT) and Daily Ridership of Colaba-Bandra-SEEPZ corridor is as below:-

Corridor	2016		2025		2031	
	Max PHPDT	Daily Ridership (in Lakh)	Max PHPDT	Daily Ridership (In lakh)	Max PHPDT	Daily Ridership (in Lakh)
Colaba0-Bandra-SEEPZ	25700	10.06	39000	13.87	42000	16.99

FUNDING PATTERN

Source	Rs in Cr.
Equity by Centre	2,403
Equity by MMRC, State	2,403
Sub Debt by Central Govt.	1,025
Sub Debt by State Govt.	1,615
Property development + Impact fee	1,000
Stakeholder contribution (MIAL)	777
ASIDE funding/MMRDA Grant	679
JICA Loan	13,235
Total Project Completion Cost	23,136

RELATED PROBLEM FACED BY MMRCL

Land Issues

Primarily Land requirement based on DPR can be divided into 4 broad usage:-

- **Land Required for permanent activities** of the project; **RoW, Station, Entry/Exit and Ancillary facilities.**
- Temporary Land required for **casting yard for civil works, Construction depot near the project site** for employer/contractor/consultant office, yard for construction equipment, segment storage, temp. muck storage and buffer zone around etc
- **Muck Disposal sites.** It was initially identified that the abandoned quarries in Districts of Thane and Raigad be used as Muck Disposal Sites.

Details of Land Requirement

Sr. No.	Land Details/Functional	Permanent Land		Temporary Land	
		Pvt.	Govt./Semi Govt.	Pvt.	Govt./Semi Govt.
1.	Station and allied facilities (MCGM, Home Dept, MHADA, PWD, etc.)	0.55 ha	8.70 ha	2.90 ha	12.00 ha
2.	Traction Sub-Station (at 3 locations)	-	0.60 Ha	-	-
3	Car Shed/Depot at Aarey Colony	--	30 Ha.	--	--
4.	Construction Depot (12 pockets)	-	-	-	8.20 ha
5.	TBM worksites (12 pockets)	--	--	--	7.00 ha
6.	Casting yard (7 packages)*	--	--	--	35.00* ha
	Total	0.55 ha	39.30 ha	2.90 ha	62. 20 ha
7.	Muck Disposal (5 abandoned quarries at Thane, Raigad & Palghar Dist.)	--	--	--	114.00 ha

METHODS/ APPROACH ADOPTED BY MMRC FOR LAND ACQUISITION/ TRANSFER

Land ownership	Temporary	Permanent	Remarks
1. Lands owned by State Government/ State Government Undertakings.	<ul style="list-style-type: none"> MMRCL approached the State Govt. Nodal department and State Revenue with the land transfer proposal. Concerned Departments after examining the proposals have taken their competent authority approval and handed over the lands 	<ul style="list-style-type: none"> MMRCL approached the State Govt. Nodal department and State Revenue with the land transfer proposal. Concerned Departments after examining the proposal have taken their competent authority's approval and handed over the land along with subdivision of the plot. 	Hon'ble Chief Minister has taken up the Govt. land matters in the monthly War room meetings held at Mantralaya. Whenever a land proposal is held up specific instructions were issued to the concerned Department
2. Lands owned by MCGM/ULB	<ul style="list-style-type: none"> MMRC approached Municipal Corporation of Greater Mumbai (MCGM) with the land transfer proposal. MCGM has a 3 tire process in land transfer/handover MCGM user departments after examining the proposals have taken their competent authority approval. MCGM Improvements Committee comprising of group leaders considers and recommends the proposal to General Body. General Body considered the proposal but not approved the land transfer/handed over 		After allowing adequate time to the MCGM (ULB) State Govt. issued directives to MCGM invoking specific provisions of MMC Act; Sec. 522 (c) that allows state to give specific directives to ULB

Land ownership	Temporary	Permanent	Remarks
Lands owned by GOI agencies / Railway	<p>Proposals submitted through Local Departments. Final clearance awaited.</p> <ul style="list-style-type: none"> i. In case of AAI land handed over to MIAL (Airport concessioner) the lands have been handed over at no additional cost ii. In case the AAI lands is in litigation, the matter is being perused with AAI as per High court (interim) orders. iii. In case of Western Railway land required in-principal approval is given. WR demanded for compensation. MMRC submitted proposal for a reasonable compensation based on Ready-Reckoner rates. Railways yet to give possession of land awaiting resolution of amount of compensation. 		Intervention from MoUD is required

Land ownership	Temporary	Permanent	Remarks
Private Lands	<ul style="list-style-type: none"> •MMRC served notices through MMRDA to pvt. Land owners under sec.126 of Maharashtra Region & Town planning Act,that allows acquisition of pvt. Lands through negotiations. •A Compensation Committee (CC)has been constituted under the chairmanship of retired IAS officer to hold negotiations and finalize the compensation. •The CC held negotiations with authorized persons representing the land to explain the purpose and compensation payable •On successful conclusion of the negotiation, an MoU was signed between the authorized representatives of land and MMRC clearly mentioning the land area and compensation payable. 		<p>Before actual takeover of the land a public notification will be issued mentioning the Land details and the purpose of acquisition.</p> <p>In case, land ownership is in dispute in Court the compensation is deposited in the respective Court Registrar.</p> <p>In case, land required is a “lease - hold property”, the “one-time compensation” will be divided between the Lessee and Lesser as per Govt. directives in force.</p>

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Land ownership	Temporary	Permanent	Remarks
	<ul style="list-style-type: none"> •A joint measurement survey will be conducted before taking over of the land. •In case of temporary requirement of lands, compensation is in the form of rent @ Rs.11.61/sqm/day. •In case of permanent acquisition of lands, agreed compensation is in the form of one-time compensation equal to 2.0 times the ready reckoner rate +0.5 times RR as bonus for handing over through negotiations. •In case negotiations fail the standard Land acquisition process will be initiated. 		<p>In case, of temporary acquisition of land, the rent is fully paid to lessee</p>

By following the above process MMRCL has already got physical possession of 80% of Govt. and/Semi Govt. and ULB lands. Whereas process is completed in case of 98% of the lands.

DIFFICULTIES FACED DURING LAND ACQUISITION

- Total land required above ground belonging to private parties was 4288 Sq. mtr.
- Underground land requirement is to the tune of 4127 Sq. mtr.
- Further, land measuring 12,946 Sq. mtr. Is required to facilitate construction work.
- Private land owners have been issue notice under section- 126 (i) of Maharashtra Regional Planning Act, 1966.

The following difficulties have been observed while acquiring lands:-

- Paucity of land in Metro cities like Mumbai.
- Unwillingness of Private Land Owners to spare land for public project.
- Land Records are not updated as regards to ownership.
- Few litigations pending in different courts.
- Multiple owners, therefore difficult to build consensus and distribution of compensation.
- Land with encumbrances (encroachment and multiple leases)
- DP reservations
- Demand for in-situ rehabilitation.
- High expectations in compensation amount

REHABILITATION AND RESETTLEMENT

- Around 2489 families have been affected during development of MML-3.
- Of these 1780 families are of slum dwellers living in slums build on Government Lands.
- 709 families have a legal title holders of dwelling units located on Private Lands.
- 1780 families of slum dwellers have to be rehabilitated in an alternative area.
- For this purpose consultant have been appointed by the State Government.

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- A comprehensive redevelopment plan is being prepared by the State Government.
- State Government has allotted 3500 residential/ commercial tenements to be allotted to PAPs.
- Mumbai Metro Rail Corporation is also taking help of various NGO's in rehabilitation and resettlement process.

ENVIRONMENT ISSUES

- Around 2,298 trees are to be cut or transplanted at the site of the car depot at Kanjurmarg.
- Environmentalists and NGOs are agitating on the issue.
- State Government has submitted a committee to review the location.
- Various options are explored like reallocation of depot.
- A full service double decker car depot has also been proposed.

APPROVALS/CLEARANCES INCLUDING EC, FC, CRZC, WLC, SPCB CONSENTS, MINING LEASES.

Clearance obtained- In principle approvals have been obtained from concerned offices/agencies for alignment, utility shifting plan, traffic diversion work on /below the road.

Clearances under process-

- CRZ clearance from MCMA is required to utilize lands under CRZ mostly for temporary purposes during construction. Proposal has already been submitted.
- Forest clearance for 2 to 3 small “land parcels” under ‘Mangroves’ protected by forest notification. The proposal is being prepared by Consultants specially engaged for this activity and will be submit in 3 to 4 weeks’ time.

ROLE OF GOVERNMENT

- Government contribution essential for providing integrated, efficient Public Transport System.
- For keeping debt servicing level of Metro System flow for maintaining long term sustainability.
- To reduce the carbon- foot prints and clean the environment.
- Improve the overall health of citizen.

APPROACH FOR OVERCOMING PROBLEMS

- Prompt action should be taken for R&R issues so that PAPs are provided with alternate housing facilities.
- Action should be taken in advance to remove encroachment in the land to ensure smooth implementation of the project.
- There should be close coordination with various Departments/agencies so that transfer of land from one Department to other takes place in a smooth manner.
- Close coordination with Municipal Authorities for effective implementation of project.
- Granting various clearances such as environmental clearances, railway clearance, Airport Authority of India, etc. in time bound manner.
- Adequate funding and prompt disposal and utilization of funds.

THANK YOU